Thin Client Traffic Situation Display

TSD-U (Unfiltered)
TSD-F (Filtered)

Reference Manual

Version 9.0

September 8, 2012

Traffic Flow Management System (TFMS)

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TSD-U (Unfiltered)
TSD-F (Filtered)

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TRAFFIC FLOW MANAGEMENT SYSTEM(TFMS)

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U.S. Federal Aviation Administration

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This document contains information which is subject to change.
It is considered internal to the Traffic Flow Management System,
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for
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TFMS Reference Manual, Version 9.0 Changes

The following is a summary of changes in TFMS Version 9.0.

The latest version of the TSD will include enhancements that replace the current WSD (Web-based Situation Display) with a thin client Traffic Situation Display (TSD) capability using the Oracle Secure Global Desktop (SGD) product. Oracle Secure Global Desktop provides you with secure, remote access to TSD applications running on application servers over a secure network connection.

Modernization of the WSD/CCSD is desired to address the current performance problems with excessive response times and to expand the current capabilities provided.

The acronym WSD will be replaced with TSD-U (Unfiltered) and TSD-F (Filtered). This change is for all the menus and menu items that need to have their functionality made unavailable based on user role.

Limitations are placed on new and existing functionality by "graying out" interface selections that are not allowed based on the user's role.

> **Note:** For any TSD features that are restricted via role-based access, any associated quick key that launches the same feature shall also be restricted.

To support TSD-U/F operations, the TSD has added the following functionality:

FEA/FCA Combined List Support

The capability to submit an examine request for multiple FEAs simultaneously and display a single FEA/FCA dynamic flight list containing flights for all the selected FEAs. See Combined Examine on page 5-226, in Chapter 5, FEA/FCA Menu.

FEA/FCA Dynamic List Filter Carrier/Subcarrier

The capability to filter the FEA/FCA flight list display by airline carrier/subcarrier. The FEA/FCA Dynamic List dialog shall be modified to include an Airline drop-down list. See FEA/FCA Dynamic List Filter on page 5-281, in Chapter 5, FEA/FCA Menu.

Flight Search

Menu option Flight Search… shall be added to the Reroute menu on the primary TSD GUI. See Flight Search Command on page 5-212 in Chapter 5, Reroute Menu.

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Introduction

About the TFMS

The Traffic Flow Management System (TFMS) is a system that the Federal Aviation Administration (FAA) uses in performing traffic flow management. The Traffic Situation Display (TSD) functions that you will be accessing directly are described in the following paragraphs.

Traffic Situation Display

The Traffic Situation Display (TSD) allows the traffic manager to graphically display the current position of all instrument flight rule (IFR) flights that are in the air. The TSD also displays the current status of alerts and weather, as well as map overlays such as sectors, fixes, navaids, and airports.

Organization of this Manual

The TFMS Reference Manual consists of a Table of Contents,7 chapters, appendixes, a glossary, and an index. The TSD accounts for the bulk of this volume.

- **Chapter 1: TFMS Basics.** This chapter describes how to get started with the TFMS software, including instructions for using the Help menu.
- **Chapter 2: Secure Global Desktop.** This chapter guides you through the basics of using SGD. It describes how to log in and log out of the software, as well as how you can use SGD to run the TSD application.
- **Chapter 3: TSD Basics.** This chapter describes generally how to use TSD commands.
- **Chapter 4: TSD Menu Structures.** This chapter lists the names of all TSD commands arranged by function.
- **Chapter 5: TSD Menu Command Directory.** This is a complete description of all TSD menus.
  - Display Menu
  - Maps Menu
  - Flights Menu
  - Alerts Menu
  - Weather Menu
  - Reroute Menu: Normal Mode
  - FEA/FCA Menu
  - Tools Menu
- **Chapter 6: TSD Semicolon Commands.** This is a listing of the Semicolon command allowed for this role.

- **Chapter 7: Quick Keys.** This is a complete listing of all TSD quick key commands.
- **Appendix A: Request Command Reference.** This appendix contains an overview of the Request commands, and it describes options that are common to several or all of the Request commands, which can be invoked through the TSD or TM Shell.
- **Appendix B: Diagnostic Messages.** This appendix includes a list of all diagnostic messages that may appear while using the TSD.

Reference Manual Conventions

The following conventions are used in this manual.

Procedures

Step-by-step procedures are used when necessary to explain how to perform a specific task. Much procedural information is contained in tables explaining the various TSD dialog boxes.

TSD Menu Command Summary Boxes

Each TSD menu command (Chapter 5) and semicolon command (Chapter 6) description begins with a command summary box. Each type of summary box is shown in the following illustrations.

Show/Hide Flights Command	
Show Flights/Hide Flights command lets you toggle the flight icons on and off the TSD. Either Show or Hide Flights appears on the Flights menu, depending on whether flights are currently displayed.	
	Quick Key Method
1. Pull down the Flights Menu by clicking **Flights** on the main menu or pressing **<Alt> F**. 2. Click **Show/Hide Flights** or press **F.**	**F**
	Semicolon Method
	None

The instructions presented in these command summary boxes assume that you are familiar with the basic procedures for entering commands, including how to use menus, how to access the semicolon command line, and how quick keys and mnemonics function. These procedures are explained in Chapter 3: TSD Basics.

TSD Terminology

- The term **select** refers to making a choice among a group of options or list of items by clicking the option or item. You select text by highlighting it.
- **Preselect** refers to placing the pointer on a map item, such as an airport or navaid, causing that item to become highlighted. If the label is not currently displayed, preselecting also displays the label of the highlighted item.

  Note: When an item is preselected, clicking the left button selects it. When selected, the item has a dotted circle around it.

- **Browsing** is the process of preselecting an item and clicking the right button to open a pop-up menu.
- **Mouse buttons** refer to the buttons on either a mouse or a trackball. These buttons serve several purposes on the TSD:
  - The left button selects an item from a menu or dialog box.
  - The middle button drags a window or a selected item to another location.
  - The right button opens a pop-up menu.
- Click refers to depressing and releasing a mouse or trackball button.
  - Unless otherwise stated, click implies the left mouse button.
  - An instruction stating that you should click a mouse button also applies to a trackball button.
- **Press** refers to pressing and releasing a key on the keyboard.
- **Depress** refers to pressing and holding down a mouse button.
- A **dialog box** is a window that allows you to enter information to instruct the TSD. It allows you to enter text and/or click buttons to make choices. The text entry fields and various types of buttons on the TSD dialog box are discussed in Chapter 1, TSD Basics.
- **Focus** is defined in two ways.
  - Window focus determines which window will accept user input from the keyboard.
  - Keyboard focus determines which component within the window gets keyboard input.
- A **pointer** is an arrow, hourglass icon, or watch icon whose position is controlled by a trackball or mouse.
- **Cursor** is used in two ways throughout this document.
  - It is a rectangular box used to indicate which item currently has keyboard focus.

- It is the vertical bar in a text entry field that indicates where you should begin typing the text.

- **Mnemonics** are underlined letters on a menu. Pressing <**Alt**> and the mnemonic key displays a pull-down menu. Pressing the mnemonic key selects a menu item.

Related Documentation and Training Materials

In addition to this manual, the TFMS user documentation set includes the following documents:

TFMS Quick Start Guide

The TFMS Thin Client TSD-U/F/C Quick Start Guide is designed for all TSD-U/F/C users.

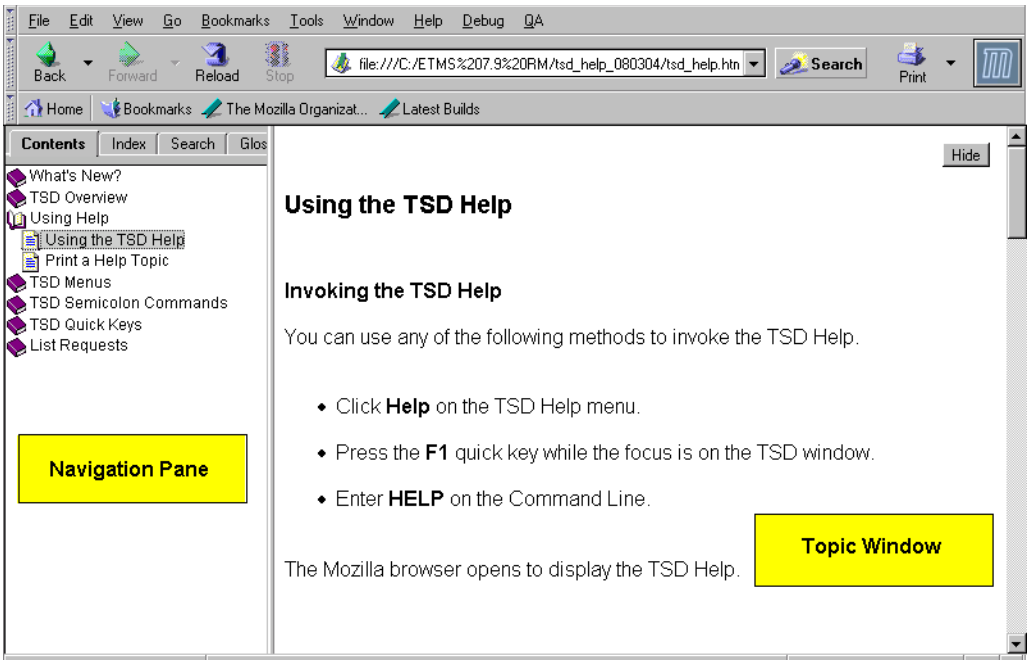
1. TFMS Basics

Getting Help

Invoking TSD Help

To access TSD help, open the TSD. Click **Help** on the TSD Help menu or press the **F1** key to launch the Mozilla browser and open the TSD Help. You can also get specific help by clicking the **Help** button on an individual dialog box. This dialog box feature will be explained later in this document.

The following example shows the Mozilla browser open to the default TSD Help screen.



Using Help

The TFMS Help contains a navigation pane and a topic window as shown above. The navigation pane, located on the left-hand side of the screen, allows you to navigate the help system. The topic window, located on the right-hand side of the screen, displays help topic content.

Navigation Pane

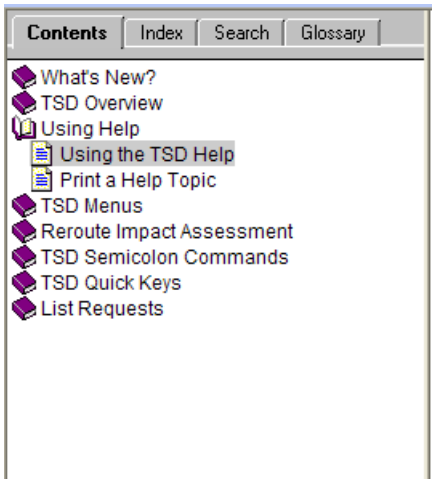
The navigation pane contains the following tabs:

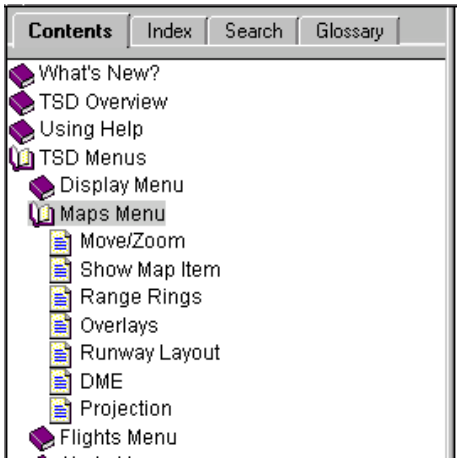
- Contents Tab
- Index Tab
- Search Tab
- Glossary Tab

Contents Tab

To scroll through the table of contents for Help, click the **Contents** tab. The Contents tab displays books and topic pages that represent the categories of information in the TSD Help. When you click a closed book, it opens to display its content (sub-books and topic pages). When you click an open book, it closes. When you click on a topic page, that topic page displays in the topic window.

In the following example, clicking the **Using Help** book closes the book. Clicking the **TSD Menus** book and the Maps Menu book opens the Maps Menu book.

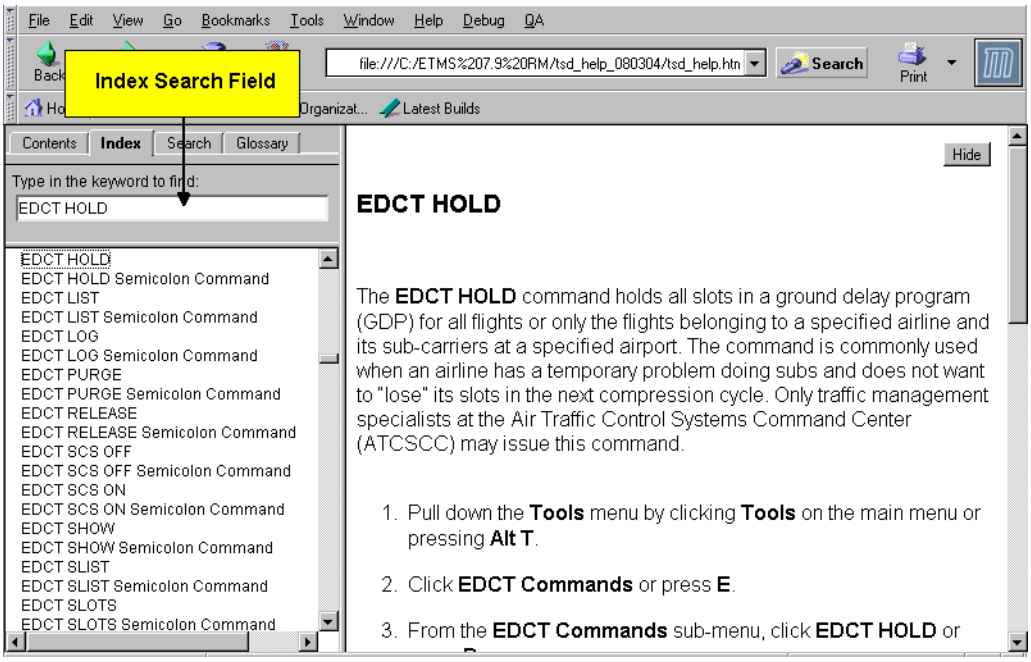




Index Tab

To scroll through or search the index, click the **Index** tab. Type in the search field to find a matching index term or scroll through the list of index terms. Clicking an index term displays its related topic(s). A help topic page will automatically open if there is only one topic related to the index term. If there is more than one related topic a pop-up menu will appear with a list of topics to choose from.

In the following example, **EDCT HOLD** was entered into the Index search field.

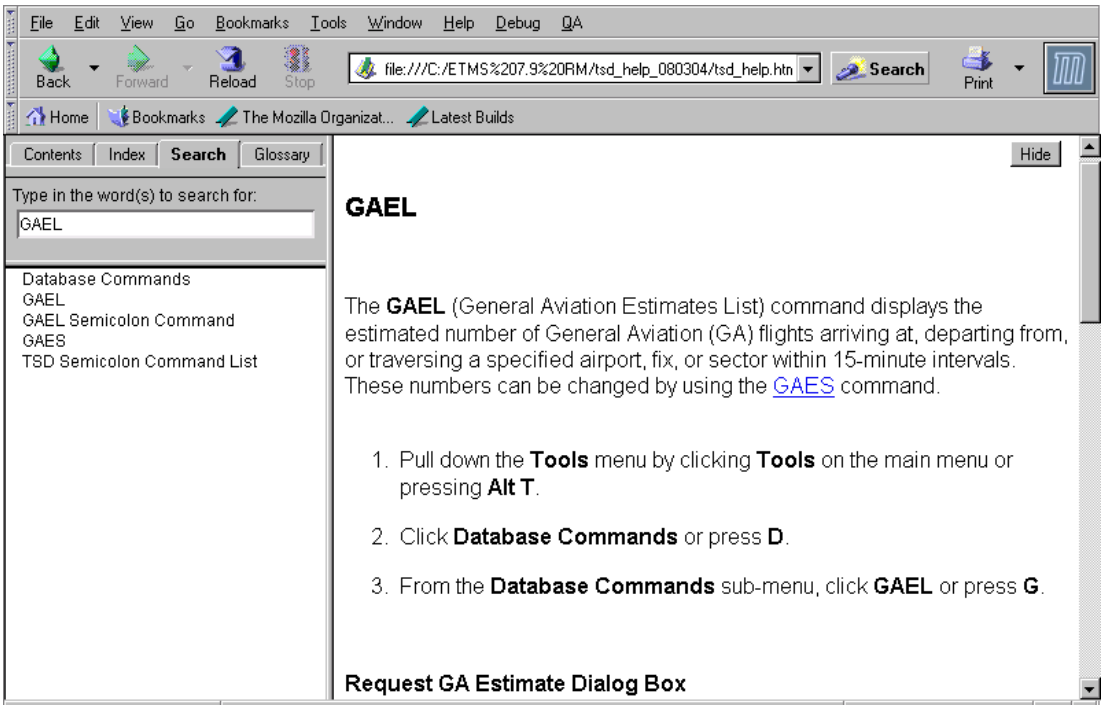


The index display automatically advances to the first entry in the index that matches EDCT HOLD. Clicking **EDCT HOLD** in the index opens the EDCT HOLD topic page in the topic window.

Search Tab

When you want to search for specific terms or phrases, click the **Search** tab. Type a search term in the search field and press the **<Enter>** key on your keyboard. A list of matching topics is generated. Click a topic title to open that topic.

In the following example **GAEL** was entered into the search field.

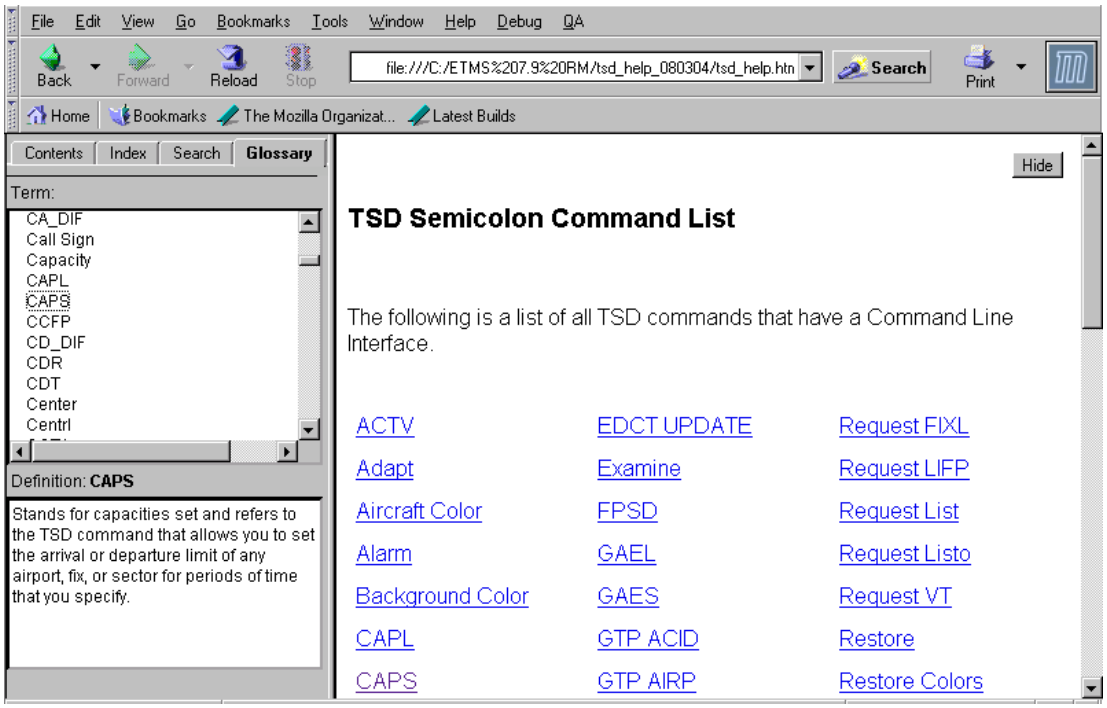


The search generated a list of topics related to GAEL. Clicking **GAEL** opened the GAEL help topic in the topic window.

Glossary Tab

For TSD terms and definitions click the **Glossary** tab. The glossary is split into two windows. Click a term in the Term window to view its definition in the Definition window.

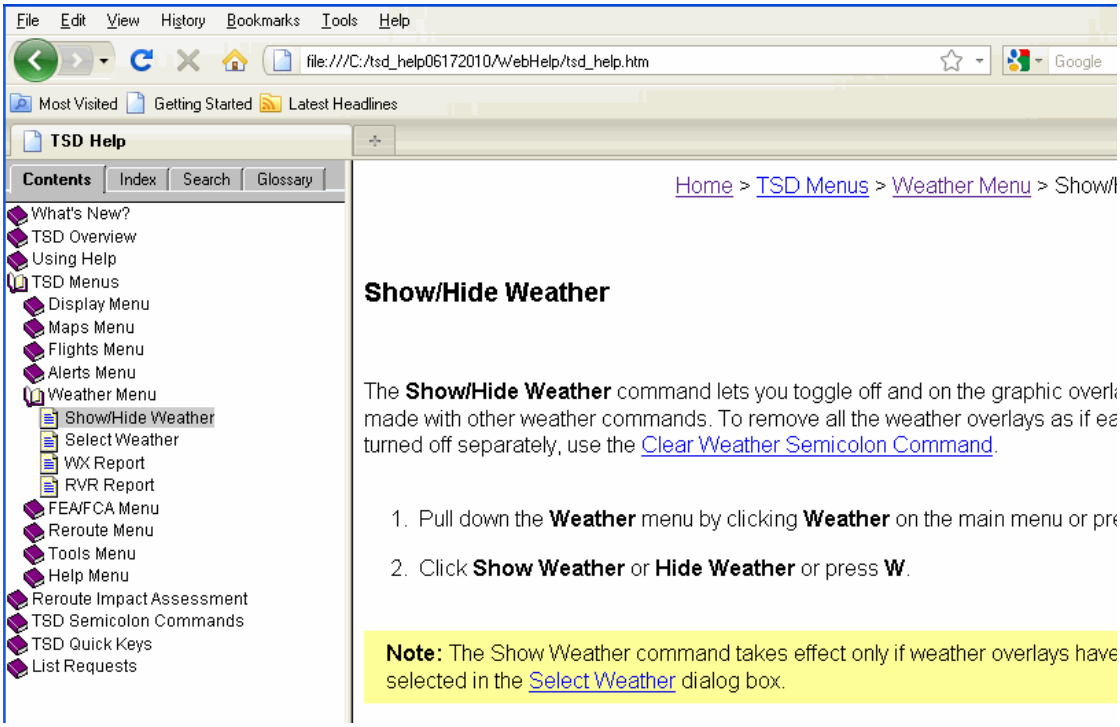
In the following example **CAPS** is selected in the Term window and the definitions for CAPS is displayed in the Definition window.



Viewing Related Topics

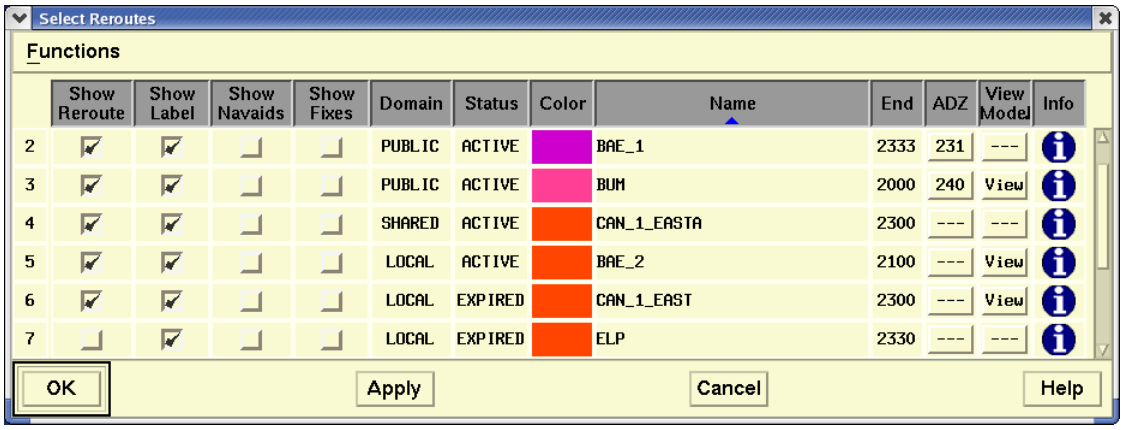
To view information related to a particular help topic, click the **Related Topics** button at the bottom of a topic page. A related help topic page will automatically open if there is only one related topic. If there is more than one related help topic, a pop-up menu will appear with a list of related topics to choose from.

The following example shows the related topics pop-up menu for the Show/Hide Weather command.

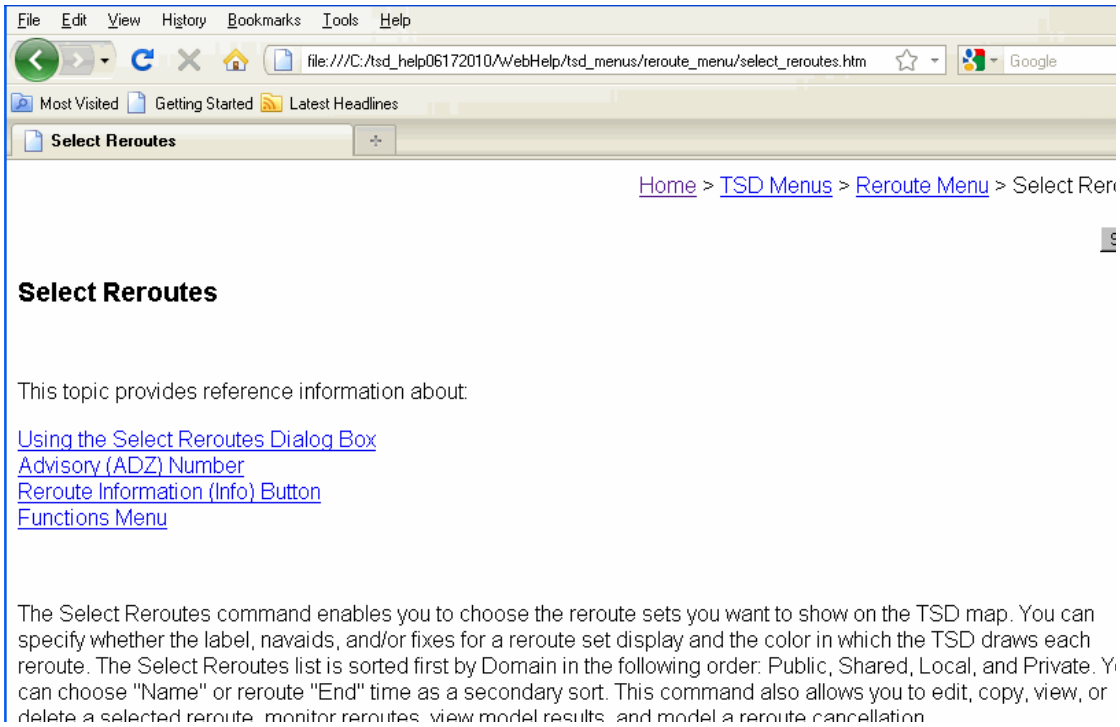


Getting Help from a TSD Dialog Box

As you work in the TSD, you can obtain information about dialog boxes by using the context-sensitive Help. Clicking the **Help** button on a dialog box opens the TSD help for the topic associated with that dialog box. The help topic explains how to use the fields and controls in that dialog box. The following example shows the Select Reroutes dialog box.

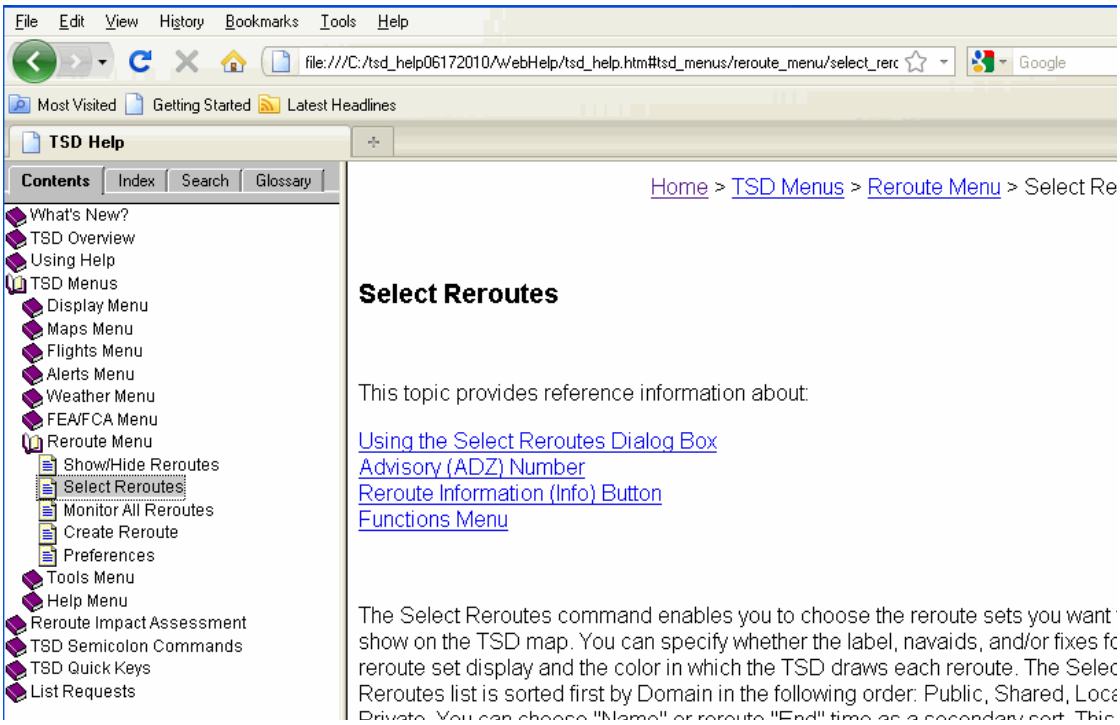


Clicking **Help** in the Select Reroutes dialog box will open the TSD Help to the Select Reroutes topic page.



After viewing a specific help topic, you can open the help navigation pane by clicking the **Show** button in the top-right corner of the topic window.

When you click the **Show** button, the navigation pane opens, as in the following example.



Note: When you click the **Show** button, the navigation pane opens and the Hide button appears. To close the navigation pane again, click the **Hide** button.

2. Secure Global Desktop (SGD)

Thin-client TSD uses Oracle Secure Global Desktop (SGD) to provide secure, remote access to TSD functions. To access thin-client TSD, you need an account and a compatible browser with Java™ technology enabled.

This section guides you through the basics of using SGD. It describes how to log in and log out of the software, as well as how you can use SGD to run the TSD application.

Obtaining Access

Contact the TFM Consolidated Service Desk (TCSD), (609) 485-9601, to request a new account or modification to an existing user account. The TCSD will provide an application form for you to complete and submit through the appropriate management chain. Once approved, the TCSD will provide a user name, password and the URL through appropriate channels.

How to Log In to SGD

Before you log in to SGD, ensure the following requirements are met:

- You have a compatible browser installed:
  - Web Browsers – Firefox, Internet Explorer, Safari

SGD supports the following Operating System/Browser versions:

Microsoft Windows XP, Vista	Internet Explorer 7 & Internet Explorer 8, Mozilla Firefox 3
Microsoft Windows 7	Internet Explorer 8, Mozilla Firefox 3
Red Hat Linux 5.5 Desktop	Mozilla Firefox 3
Mac OS X 10.6	Safari 4 & 5, Mozilla Firefox 3

Note: Other Browsers may work, but if a problem arises, there may be no support to correct the issue.

- JavaScript™ software is enabled in your browser;

  Note: If Java technology is not enabled in your browser, a warning message is shown. You must enable Java technology in your browser before proceeding. If JavaScript is not enabled in your browser, a warning message is displayed beneath the login dialog box.

- You have a user name and password for the SGD server. Contact your local administrator or the TCSD if you do not know your user name and password. Refer to Section 8 for the rules governing accounts and passwords.

- You know the Web Address for the login - the Uniform Resource Locator (URL) for the SGD server. Contact your local administrator or the TCSD if you do not know the Web Address / URL.

RSA Authorization

You may be required to have an RSA account to access thin client (RSA stands for "Rivest, Shamir and Adleman", who created the public key algorithm). If this additional authorization is required, you will be prompted for your RSA User ID and passcode, prior to seeing the SGD login, as illustrated in Figure 1.

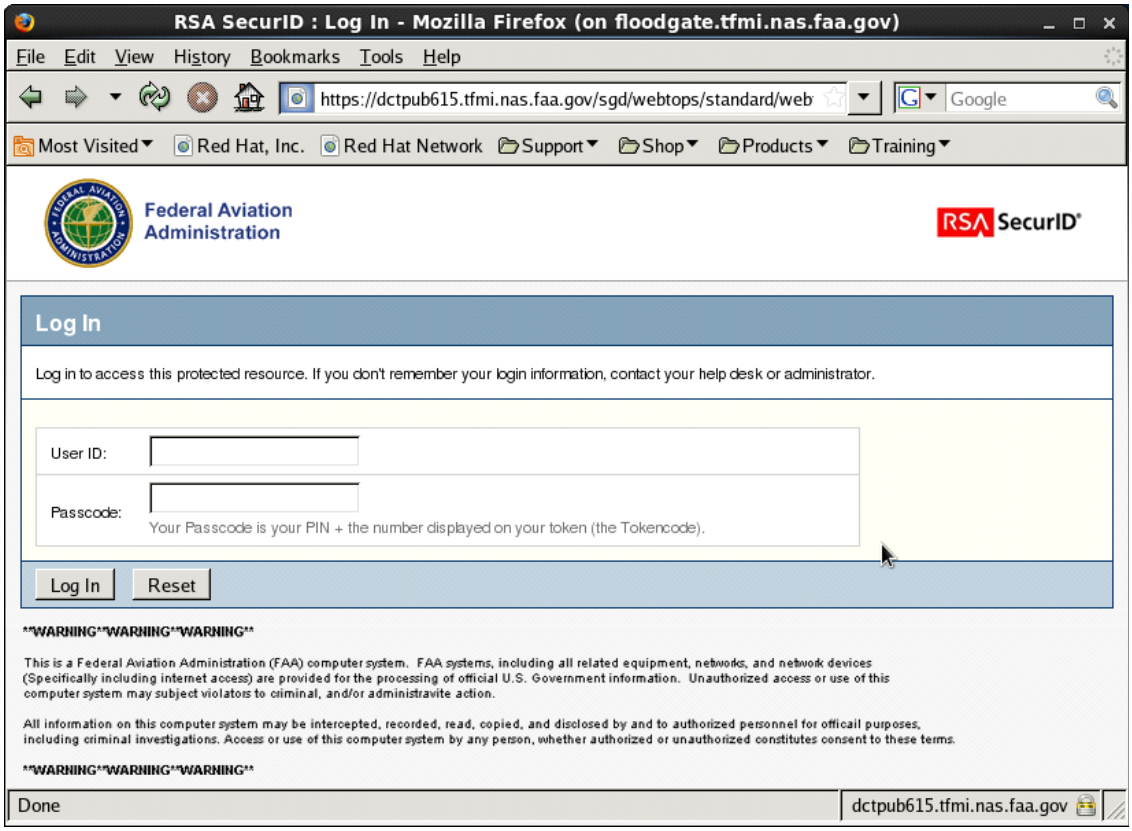


Figure 1. RSA Login

RSA Login screen.

1. Enter your assigned RSA User ID and SecureID token into the User ID and passcode fields, respectively.
2. Click the **Log In** button.
3. If verified, the system will proceed to the SGD Login.

Secure Global Desktop (SGD) Login

1. Using your browser, go to the SGD login URL. The Secure Global Desktop Login dialog box will be displayed as shown in Figure 2.

Figure 2. SGD Login Dialog Box

2. Type in your SGD user name and password.
3. Click the Login button.

While SGD is starting up, the splash screen is shown (Figure 3).

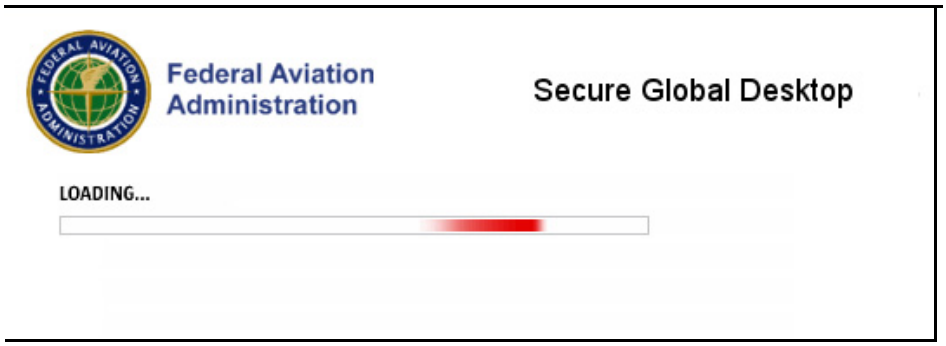


Figure 3. SGD Splash Screen

The Initial Connection dialog box is shown (see Figure 4). This is a security message that is displayed the first time you connect to an SGD server.

Note: This may not open in front – check the Taskbar.

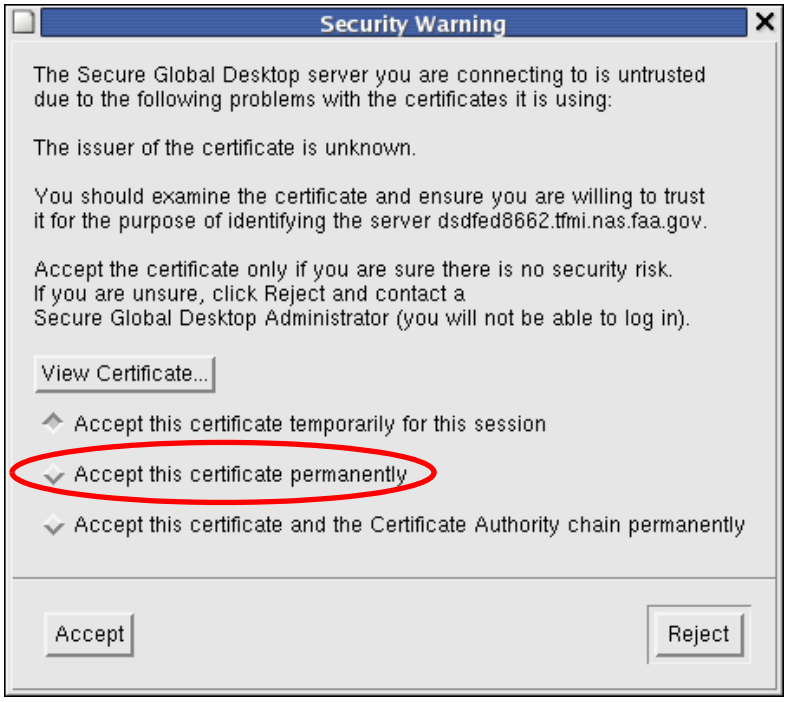


Figure 4. Java Technology Security Warning Dialog Box

1. Select the **Accept this certificate permanently** radio button**.**
2. Click the **Accept** button.

   Note: Once you have accepted, you will not see the security message again unless there is a problem with the connection.

A Java technology security warning is shown (see Figure 5). This is a security message that is shown the first time you connect to an SGD server.

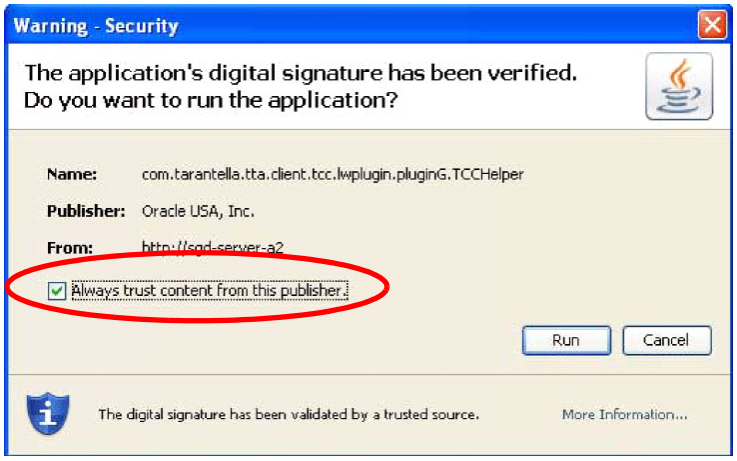


Figure 5. Java Technology Security Warning Dialog Box

1. Select **Always trust content from this publisher**.
2. Click **Run** to agree to the connection.

A Potentially Unsafe Connection message may be displayed.

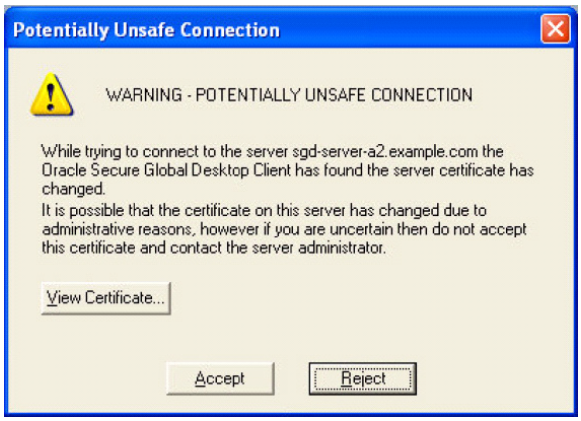


Figure 6. Potentially Unsafe Connection Message

Click the **Accept** button to proceed.

The SGD Webtop

Your webtop is a special web page that lists the applications you can initiate through SGD. Figure 7 outlines the webtop.

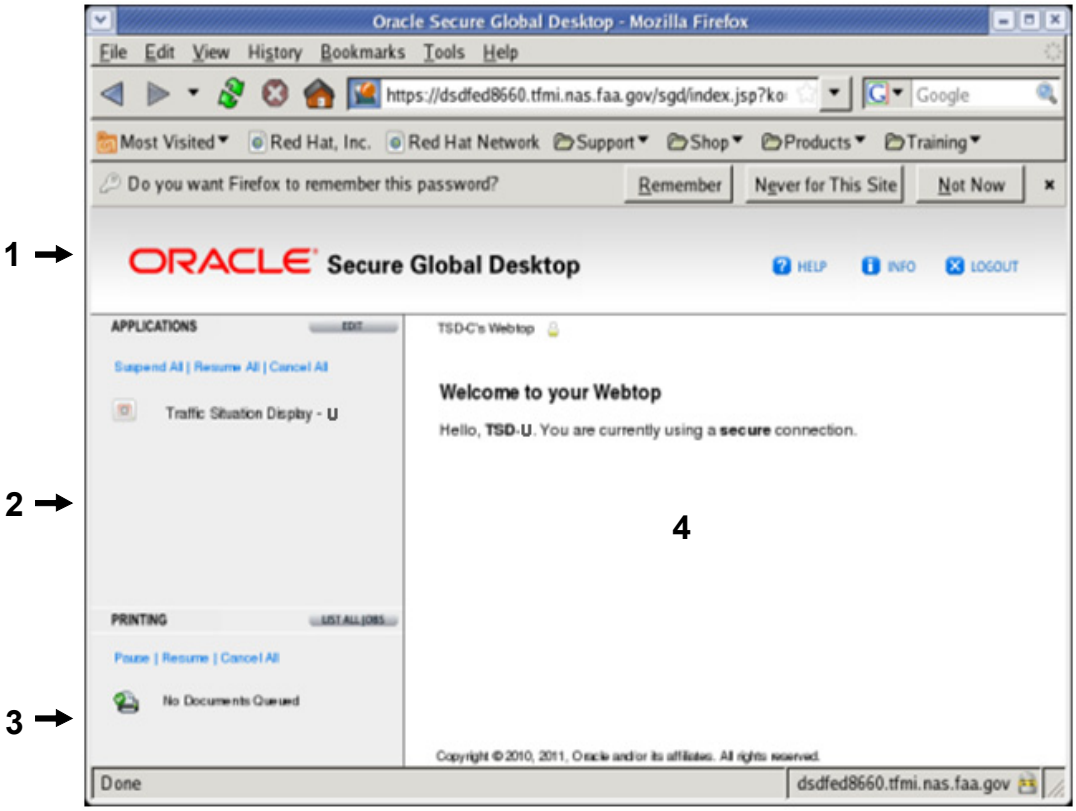


Figure 7. SGD Webtop

#	Name	Description
1	Menu bar	Includes HELP, INFO, and LOGOUT buttons
2	Applications area	Lists the applications that you can run
3	Printing area	When you print from the TSD, your print file will be displayed in PDF format in an Adobe Reader. You can then either save the file or print to your local printer. The name of the print file will appear momentarily in the Printing area of the webtop.
4	Information area	Displays error messages and system information

Using Applications

Use the Applications area of the webtop to start, stop, and manage your applications.

Running Applications

To start an application, you click its link on your webtop, as shown in figure 8. In a few moments the application is shown, ready for you to use.

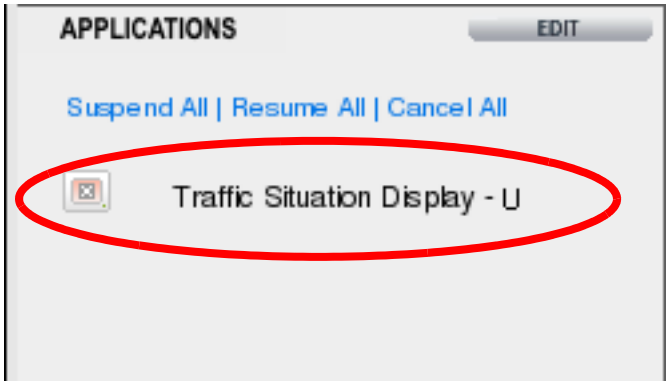


Figure 8. Application Area

Toolbars for Controlling Application

When an application is running, a triangle appears in front of the application's name on the webtop. A session toolbar also appears below the application name as shown in Figure 9.

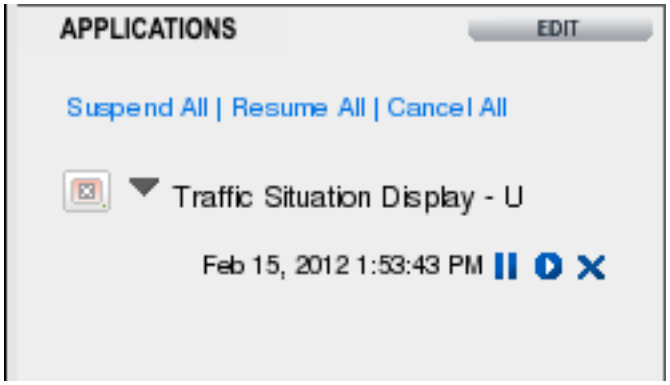


Figure 9. Session Toolbar

Session Toolbars for Controlling an Application

The session toolbar allows for you to:

- Click to suspend an application
- Click to resume an application
- Click to end an application

To Log Out of SGD

Before you log out of SGD, ensure that you:

- Exit out of the application (Click "X" as illustrated for the Traffic Situation Display application in Figure 9 or close the TSD by hitting the X on the top right of the TSD window).
- Click the Logout button (Figure 10) on your webtop and click OK when prompted for confirmation
- Always log out of SGD before closing your browser

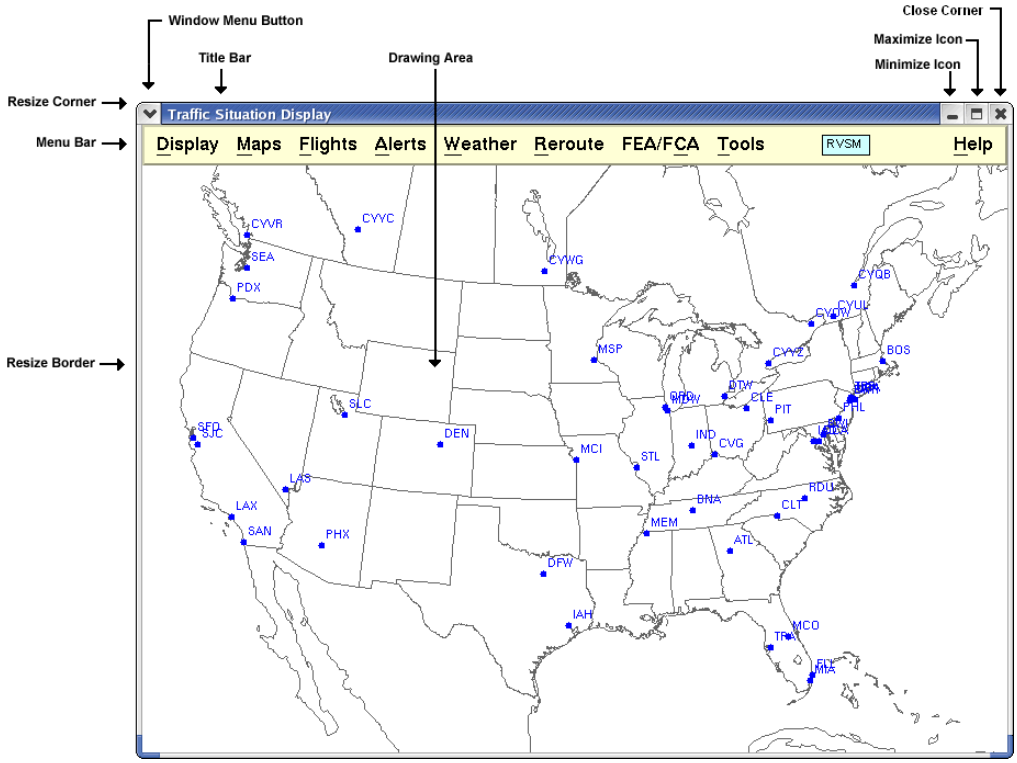
Figure 10. Logout Button

3. TSD Basics

This chapter provides an introduction to the TSD and includes information about issuing TSD commands and using dialog boxes. It is the first of five chapters devoted entirely to the TSD.

Starting the TSD

To start the TSD application, whatever procedure has been determined by your System Administrator. The default TSD screen is shown below.



Issuing TSD Commands

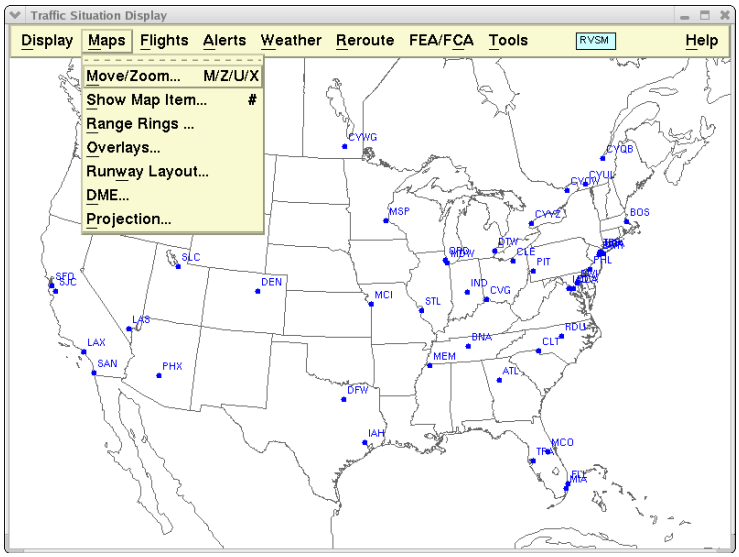
Once the TSD is running on your node, you are ready to issue commands. There are three different ways to issue these commands: menu, quick key, and semicolon. Menu commands are discussed in Chapter 5; semicolon commands are discussed in Chapter 6. Quick keys (also known as hot keys) for each TSD menu and semicolon command appear within the context of the command summary boxes and are listed in Chapter 7.

TSD Pull–Down Menus

Menus graphically depict a list of command options. At the top of the TSD display is a title bar with the title Traffic Situation Display. Directly below the title bar is the main menu bar with pull-down menus of selectable commands, organized by groups of commands that have something in common. Below the menu bar is the TSD drawing area. To display a pull-down menu, move your pointer to one of the menu items and click on it with the left button. To leave a menu without issuing a command, move the pointer off the menu and click the left button.

Another way to display a pull-down menu on the TSD is to use mnemonics. To display a TSD Main menu item using a mnemonic, press **<Alt>** and the appropriate underlined letter. For example, to display the Maps pull-down menu from the TSD window press **<Alt> M**. With the pull-down menu displayed, you can use these keys to open another menu. For example, with the Maps menu on the display, you can press **<Alt> W** to display the Weather menu.

The following graphic shows a sample pull-down menu for the Maps function. Notice that the mnemonic letter for each command is underlined.



Move the pointer to any menu item and click the left button to issue the command. You can also press the mnemonic key, the underlined letter in the command name.

Some commands take effect immediately. Other commands display a solid arrow on the right of the command name, indicating that a sub-menu is available with additional items. Still other menu commands display three dots after the command name. Issuing one of these commands displays a dialog box with further choices. Dialog boxes are explained later in this chapter.

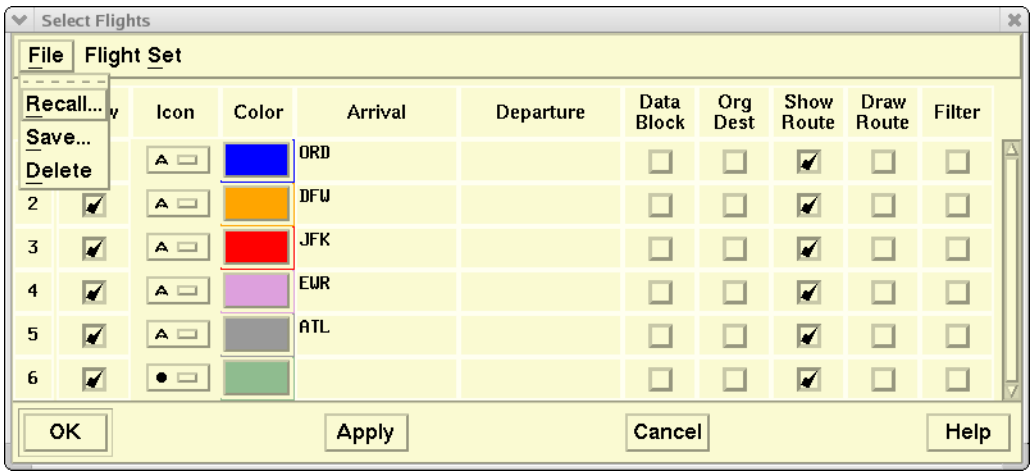
Note: When pressing a mnemonic key on a pull-down menu, press only the key without **<Alt>**, which is used only with mnemonic keys on the TSD Main menu.

File Pull–Down Menu

An important feature of the TSD is that after you have set up the TSD display the way you want it, you can save the setup for later retrieval. The following settings can be saved using the File/Save command.

Flights	FEAs and FCAs
Weather dialog box	Map items added to the Show Map Items
Alerts	Overlays and their labels
Alarms	Reroute Preferences
Range Rings	Projection, zoom level
Colors	
Command Line Request	

The File pull-down menu appears on several TSD dialog boxes.



The Select Flights dialog box shown above is an example of a dialog box with the File pull-down menu. The following menu items are available on all File pull-down menus throughout the TSD and explained in detail in this section.

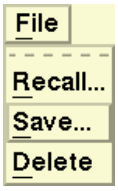
- **Save**
  The **Save** command allows you to save current settings for flights, weather, alerts, alarms, Reroute Monitor settings, range rings, or colors to a file.

- **Recall**
  The **Recall** command retrieves saved files of settings that you previously saved and displays them immediately on the screen.
- **Delete**
  The **Delete** command erases saved files of settings that you no longer want from the hard disk.

Each of these menu commands is explained in more detail on the following pages.

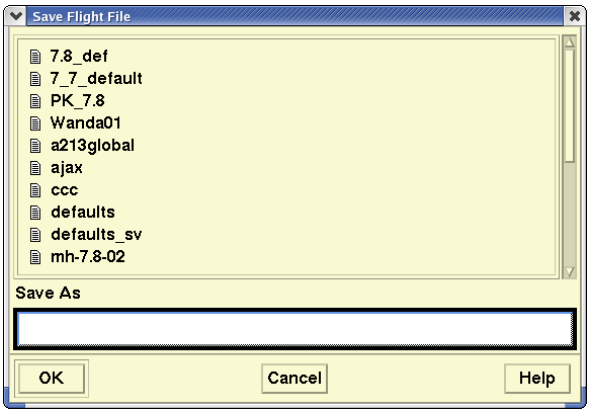
Save Command

With the menu displayed, click **Save** or press **S**



Save Flight File Dialog Box

After you click **Save**, a dialog box opens with a list of directory and file names.



To save a file, highlight the filename in the list by clicking on it with the left mouse button, or type it at the **Save As** prompt. Click **OK.**

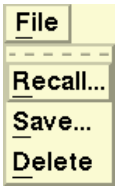
If you just type in a filename, the settings are saved to the standard directory for these settings. You can create a subdirectory by including a slash in the text field. For example, if you enter **pk/ad2**, the settings are saved in a file named ad2 in the pk subdirectory. Subdirectories are represented by folder icons.

> **Note:** The defaults file contains the TSD defaults and should not be changed. A warning appears if you attempt to save the defaults file or if you save a file as a name that already exists.

Recall Command

The Recall Flight Sets dialog box shows files in the standard directory, as well as any subdirectories under the standard directory. To see the files in a subdirectory, you click on the subdirectory name.

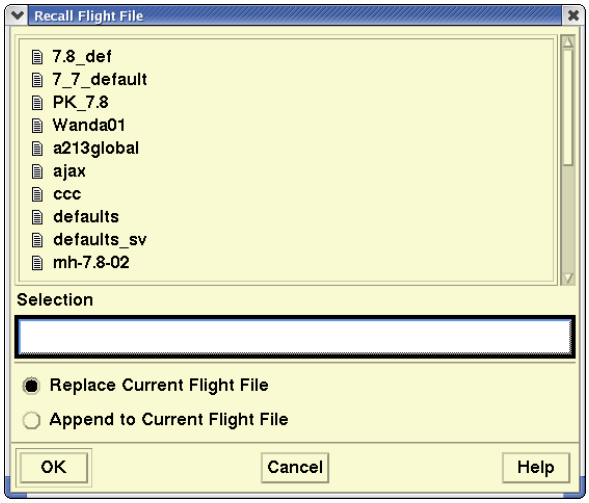
With the menu displayed, click **Recall**, or press **R**.



Recall Flight File Dialog Box

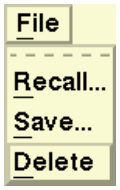
After you click **Recall**, a dialog box opens with a list of file names.

To recall a file, click on its filename in the list or type it in the Selection text field. You may choose to replace or append to the current file. Click **OK**.



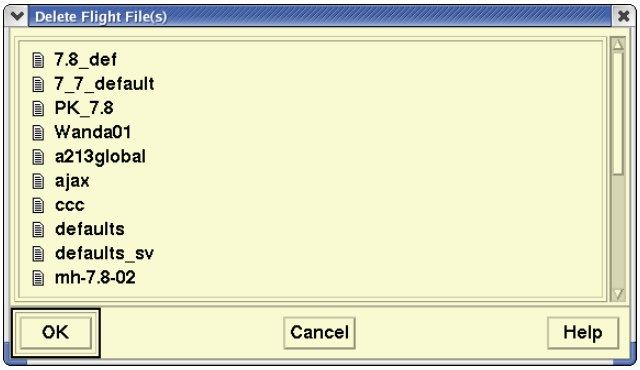
Delete Command

With the menu displayed, click **Delete** or press **D**.



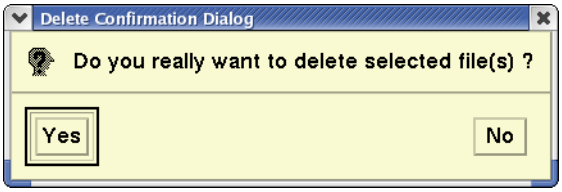
Delete Flight File Dialog Box

After you click **Delete**, a dialog box opens with a list of file names.



Note: A file named defaults cannot be deleted.

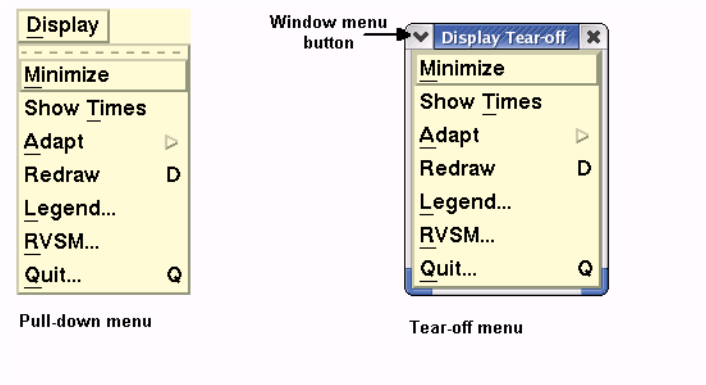
To delete a file, click on the filename in the list. Click **OK.** To select multiple files for deletion, press **<Ctrl>** or **<Shift>**. The Delete Confirmation Dialog box opens. Click **Yes** in this box to delete selected files.



Tear–Off Menus

TSD menus are tear-off menus, meaning they can be moved to other locations. Place your pointer on the dashed line of the menu and click the left mouse button. The menu changes to a tear-off menu, as shown below. With the pointer in the title bar of the tear-off menu, depress the middle mouse button, drag the menu to the desired location, and drop it by releasing the button.

To close this menu, click on the **Window Menu Button** and click **Close**. You may also close this window by pressing **Esc** when the window has focus.



Right-Click Menus

Once the pointer is on an item (and in certain other cases), you can click the right mouse button to access right-click menus, which vary according to the item. Like pull-down menus, right-click menus contain a selectable list of command options.

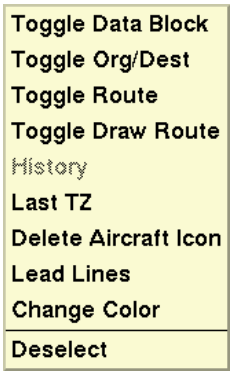
The right-click menu items change according to the item that the pointer is on. There is also a generic right-click menu that appears when the pointer is not on any item and no item is selected. Each type is discussed in this section.

Use Right-click Menus

1. Move your pointer to a flight icon or map item to highlight (preselect) the item.
2. Press and hold down (or click firmly and release) the right mouse button to display a right-click menu for that particular item.
3. Once the right-click menu appears, move the pointer to select the appropriate menu item. Release the right mouse button to issue the command.

Flight Icon Right-click Menu

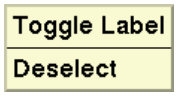
The right-click menus vary according to what item you select or preselect. For example, if you select a flight icon and depress the right button, you see the following menu.



- **Toggle Data Block**
  Toggles a flight's data block on and off.
- **Toggle Org/Dest**
  Shows the origin and destination airports in the data block.
- **Toggle Route**
  Shows the complete route of a flight.
- **Toggle Draw Route**
  Draws a line on the display representing the route of selected flights.
- **History**
  A dash is drawn each time flights are updated. This allows a flight's track to be displayed.
- **Last TZ**
  Draws an asterisk on the display at the last reported position of the flight and draws a dotted line from the asterisk to the flight icon.
- **Delete Aircraft Icon**
  Removes the icon from the display.
- **Lead Lines**
  Displays dotted lines extending from the airplane icons. This dotted line points in the direction in which the airplane is currently flying. The length of this dotted line is specified in the Customize Flight Display dialog box, discussed in Chapter 5.
- **Change Color**
  Displays the color palette so you can choose a new aircraft icon color.
- **Deselect**
  Deselects the flight.

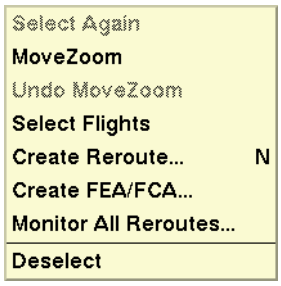
Map Item Right-click Menu

If you select a map item, such as a major airport, and depress the right mouse button, the right-click menu appears with menu items that are self-explanatory.



Generic Right-click Menus

If you have not preselected or selected a flight or map item, you can access the generic right-click menu:



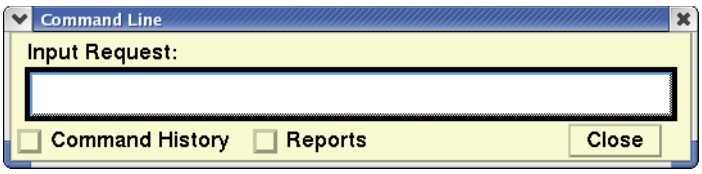
- **Select Again**
  Selects (highlights) flights and map items that you recently deselected.
- **Move/Zoom**
  Displays the Move/Zoom dialog box, which enables you to change the current location and zoom scale. This function is discussed in detail in Chapter 5, Maps Menu.
- **Undo Move/Zoom**
  Returns the TSD to its previous location and zoom scale, before the **Move/Zoom** command was issued.
- **Select Flights**
  Displays the Select Flights dialog box, which enables you to specify parameters for flight sets. This function is discussed in detail in Chapter 5, Flights Menu.
- **Create Reroute**
  Displays the Create Reroute dialog box, which enables you to name and define a reroute. This function is discussed in detail in Chapter 5, Reroute Menu.
- **Create FEA/FCA**
  Creates a new FEA or FCA and designates it Private, Shared, or Public. FCAs are public and can be created only at the Command Center.

- **Monitor All Reroutes**
  Displays the Reroute Monitor dialog box, which enables you to monitor the flights involved in public reroutes.

  Note: Because the first item on each of the right-click menus is selected by default, you can execute that function without clicking the right button to open the menu. Simply preselect the item and double click the left button. For example, if you preselect a map item and double click, you toggle the item's label on or off.

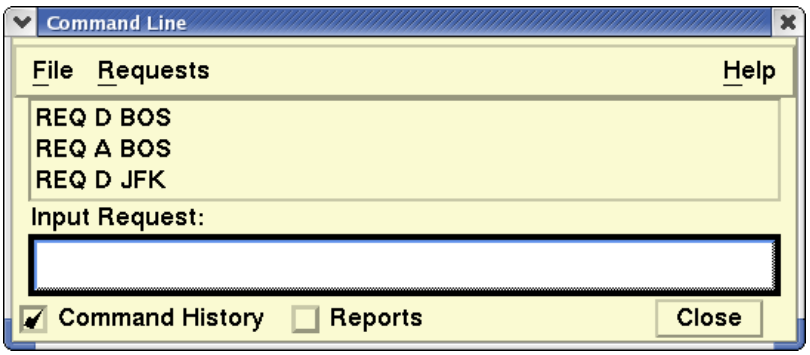
Semicolon Commands

To issue a semicolon command in the TSD, position the pointer on the TSD display and press the semicolon key. After you press the semicolon key, the Command Line dialog box opens. You enter your command at the prompt, as in the sample.



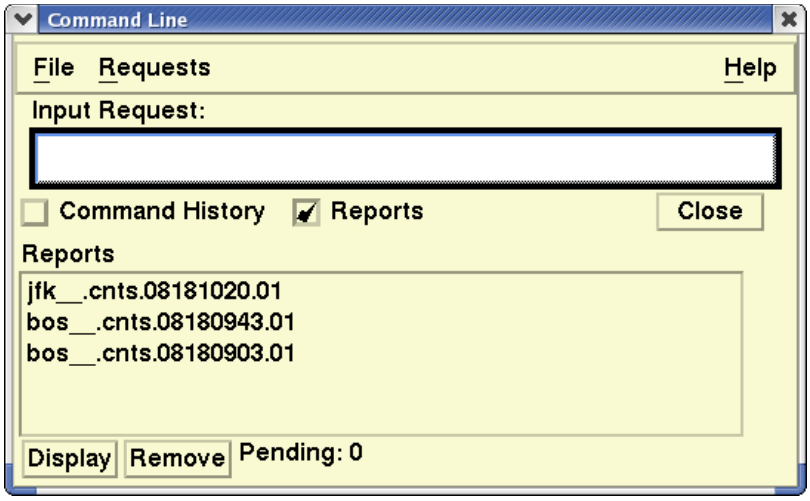
Command History Button

The Command History and Reports toggle buttons are located at the bottom of the dialog box. Click on **Command History** to display a list of recently issued commands, as shown in the sample below. Clicking on one of these commands copies it to the command line, where you can edit or issue the command.



Reports Button

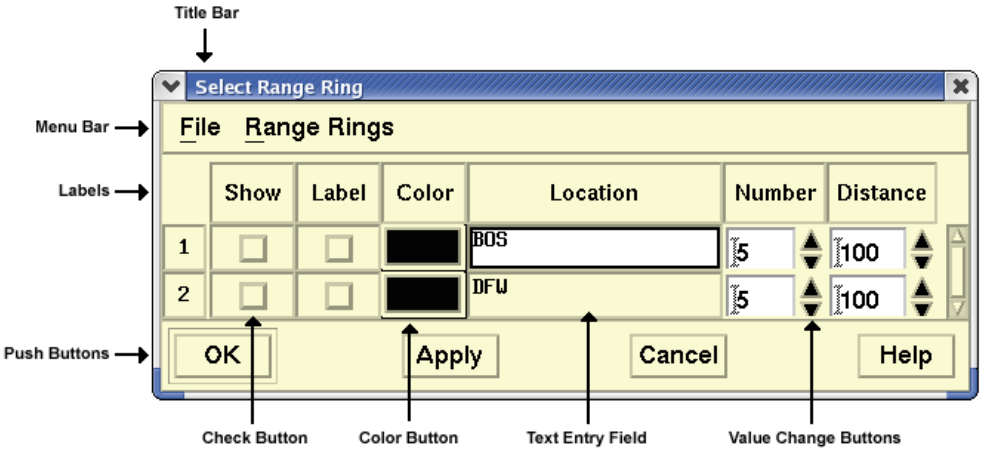
Click **Reports** to display a list of reports generated during the current session, as in the following sample.



The buttons and the use of the Command Line dialog box are discussed in Chapter 6 and in the Tools Menu section of Chapter 5.

TSD Dialog Boxes

Dialog boxes are windows that let you enter information instructing the TSD on what to do. Dialog boxes enable you to specify choices before issuing a command. The text entry fields in TSD dialog boxes have a white background, letting you know at a glance where you can enter data directly The following graphic shows a sample dialog box that appears after you issue the Range Rings command on the Maps menu. This dialog box is used here as a representative of the dialog boxes throughout the TSD. Although there are differences, all dialog boxes require some form of user response.

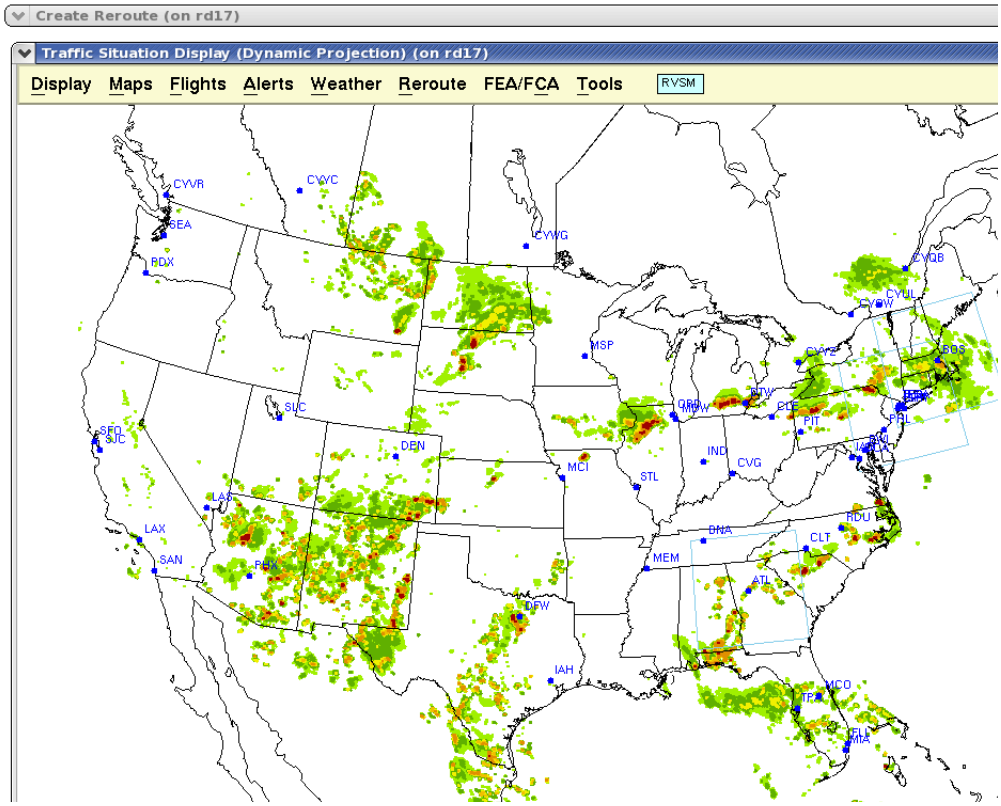


Title Bar

The title bar displays the name of the dialog box and can be used to drag the dialog box to a different location. To do this, with your pointer in the title bar, depress either the left or middle button and drag the dialog box to a new location.

> **Note:** To save space on your screen, you can double click the title bar to "roll up" TSD dialog boxes. By doing this, the dialog boxes are left open and active but reduced to the size of the title bar while you view changes on the TSD main screen.

The rolled up dialog boxes would appear similar to Create Reroutes in the following example:



Note: To restore the dialog box, double click the title bar.

To enable window rollup action on dialog boxes in Linux, click the Red Hat icon on the Gnome Bottom Edge Panel to open the Red Hat menu. Select **System**, then **Preferences**, then **Windows** to open the Window Preferences dialog box. In the Titlebar Action section, select Rollup from the picklist.

Menu Bar

The menu bar shows the pull-down menus available on a specific dialog box. Each menu is discussed in the context of the command itself except for the File menu, which is common to several dialog boxes and discussed on page 2-2. In the sample Select Range Ring dialog box above, the two pull-down menus are File and Range Rings. You can issue commands by clicking on the menu name, moving the pointer to the desired menu item, and clicking the left button.

You can also issue menu commands by pressing their mnemonic keys. For example, pressing **<Alt> F** on the TSD main window pulls down the Flights menu, and pressing **S** opens the Select Flights dialog box.

Text Entry Field

The text entry field allows you to use the keyboard to type in information. Entries may consist of filenames, locations, or other types of information appropriate to a specific command. The text cursor, a small vertical line, shows where you enter the appropriate values. If you make an error, backspace to remove characters.

Double clicking on a word in a text field highlights it; triple clicking selects the entire entry. If you type while any or all of the text field is highlighted, you overwrite the highlighted portion. You can also highlight text by dragging the pointer over the text while holding down the left button. When finished entering text, you can press **<Tab>** to move to the next field.

Value Change Buttons

Some entry fields have up and down arrow buttons that allow you to increase or decrease the value in the field. Click the **up** arrow button to increase the value or the **down** arrow button to decrease.

Time Entry

Not shown in the sample dialog box, a time entry field allows you to type in a time range, expressed in Universal Coordinated Time (UTC). Some time entry fields provide a default value. The time entered is in hhmm format, where the hour value is represented by the first two digits and the minute values by the last two. Some dialog boxes let you enter relative time periods. See the **CAPS** command in on page 6-20.

Checkboxes

Checkboxes allow you to choose from predefined selections. To choose a checkbox, move the pointer to either the text string or the box at the left of the selection and click the left mouse button. The checkbox changes to a contrasting color with a check mark, showing it has been selected. Checkboxes are deselected in the same way.

Radio Buttons

Not shown in the sample dialog box, radio buttons are used to select one option exclusively from a group of options. When one of these buttons is selected, it automatically deselects the other options.

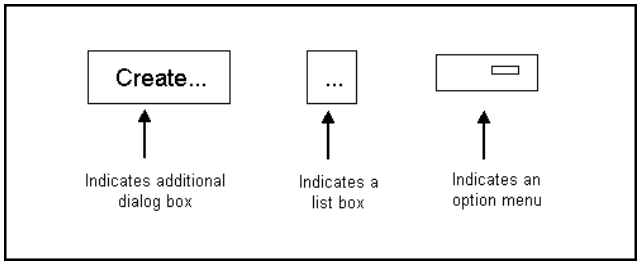
Push Buttons

Push buttons perform a specific action when selected, indicated by the label on the button. To select a push button, move the pointer onto the button and click the left mouse button. The push buttons defined below are common to many dialog boxes.

- **OK** Issues the command, including any changes you have made in the dialog box, and removes the dialog box.
- **Apply** Issues the command, but leaves the dialog box up so you can make additional changes
- **Cancel** Removes the dialog box. Any changes you have made in the dialog box are discarded and not applied.
- **Help** Displays information on using the dialog box.

Some push buttons have specialized functions, as explained below.

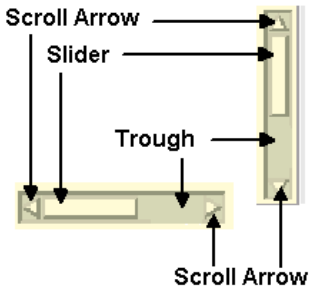
- **Additional dialog boxes**
  Push buttons with three dots after the button name lead to additional dialog boxes. Selecting the button displays the dialog box for you to make further choices.
- **List boxes**
  Push buttons that have three dots and are located next to a text entry field lead to a list of options from which you may select one or more with the left mouse button. Options you select will appear in the text entry field.
- **Option menus**
  Push buttons that have a small rectangle on the right side have pop-up menus that allow you to choose one option, such as the color of the aircraft icons.



Scroll Bar

Some lists of options or data are too long to be displayed in a dialog box, so only a portion of the entire list is displayed at any time. On the right side and/or below the list is a scroll bar, as shown in the following illustration

:



- To scroll using the arrows for a long list, click the up arrow to move up one line in the list and the down arrow to move down one line. To view data, click the up and down arrows or the left and right arrows to reveal data.
- To scroll using the slider, move the pointer onto the slider, click and drag the slider up or down (or left or right) to move through the list or data and release the button. The position of the slider indicates the relative position of the items displayed within the list.
- To scroll using the trough region, click in the trough above the slider to move up one window or below the slider to move down one window. Click to the left or right of the slider to view data to the left or right in the dialog box.

Focus

The term focus is used in two senses. First, a window has focus, meaning that this window accepts input from the keyboard. To move the focus from one window to another, move the pointer. Depending on how your system administrator has configured your node, you might need to click in the window to get focus. You can tell which window has focus by watching the color of the title bar. If a window has focus, its title bar is shown in its true color rather than a dull color.

The second meaning of the term refers to a text field or button in a dialog box having focus. The item that has focus is the one that receives input from the keyboard.

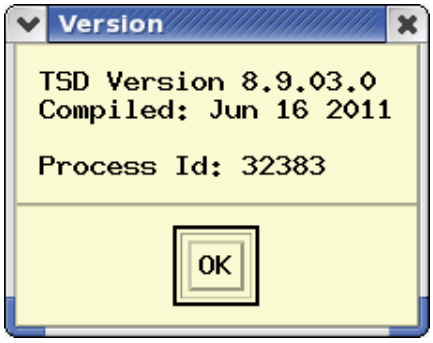
If a text field has focus, you can enter data into it directly from the keyboard. If a button has focus and you press the <spacebar>, the result is the same as if you had clicked on the button.

The previously shown dialog box depicts a rectangle drawn around the OK button, indicating that this button is the default. While this dialog box has focus, pressing **<Enter>** has the same effect as clicking the **OK** button.

- To move the focus forward through a dialog box, press **<Tab>**.
- To move backward through a dialog box, press **<Shift> <Tab>.**

Information and Query Boxes

Other types of dialog boxes are information and query boxes. An information box gives you a brief message and asks for an acknowledgement, as shown in the example below which results from selecting **Version** on the Tools menu.

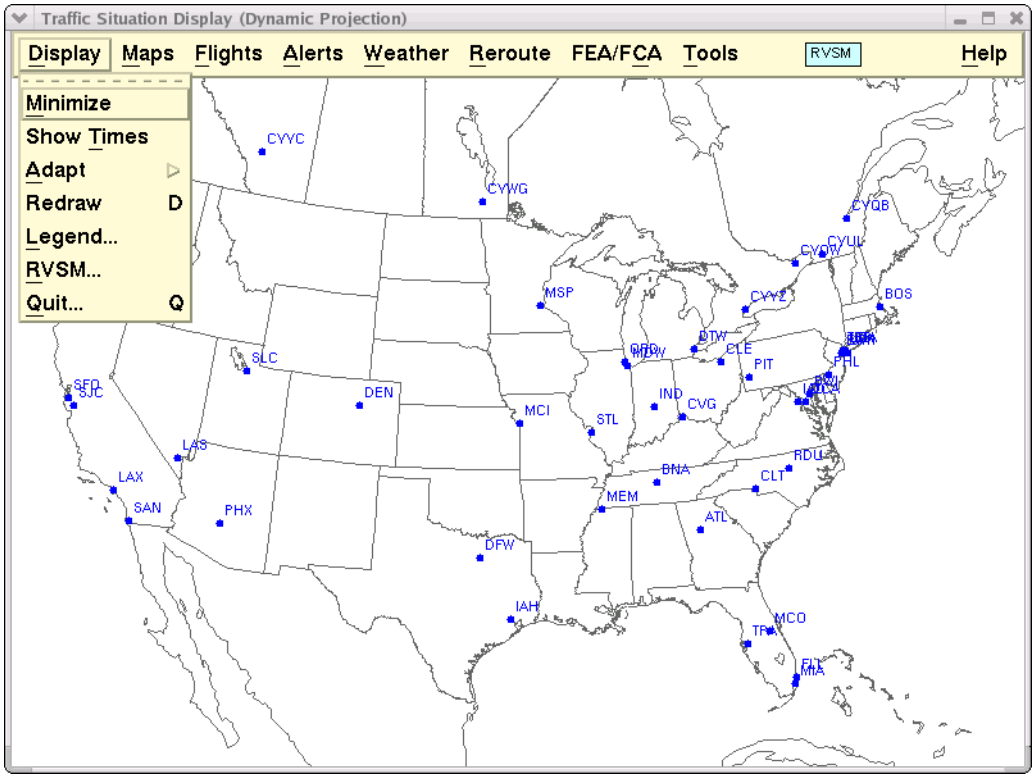


A query box is similar to an information box, but it asks you to choose to perform an action or to cancel it. The dialog box that results from selecting **Quit** in the Display menu is typical of a query box.

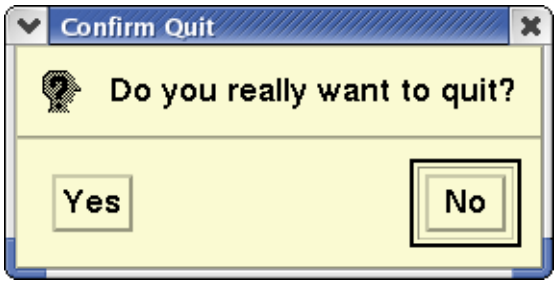
> **Note:** Information and query boxes are referred to as dialog boxes within this Reference Manual.

Quitting the TSD

You can exit from the TSD by selecting **Quit** on the Display menu or by pressing **Q**.



Clicking **Yes** on the Confirm Quit dialog box lets you exit the TSD; clicking **No** keeps the TSD on your screen.



Note: Pressing **<Ctrl>Q** will quit the TSD without displaying the Confirm Quit dialog box.

4. TSD Menu Structures

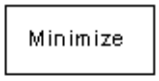
This chapter helps you see at a glance the relationships between TSD main menus, pull-down menus, and dialog boxes. Organized by the Main menu, each diagram depicts an individual main menu item, its pull-down menu commands, and the paths, if any, that these commands follow in performing their functions.

The diagrams use certain conventions that are explained here.

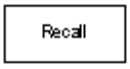
The TSD Main menu item is located at the top of the graphic and is presented in a shaded box. For example:

- Pull-down menus are presented in shaded boxes that are smaller than that of the TSD Main Menu items. For example:

- The pull-down menu commands are shown beneath the main menu item and are shown in rectangular boxes. For example:

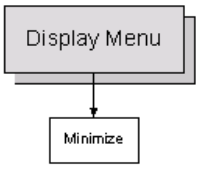


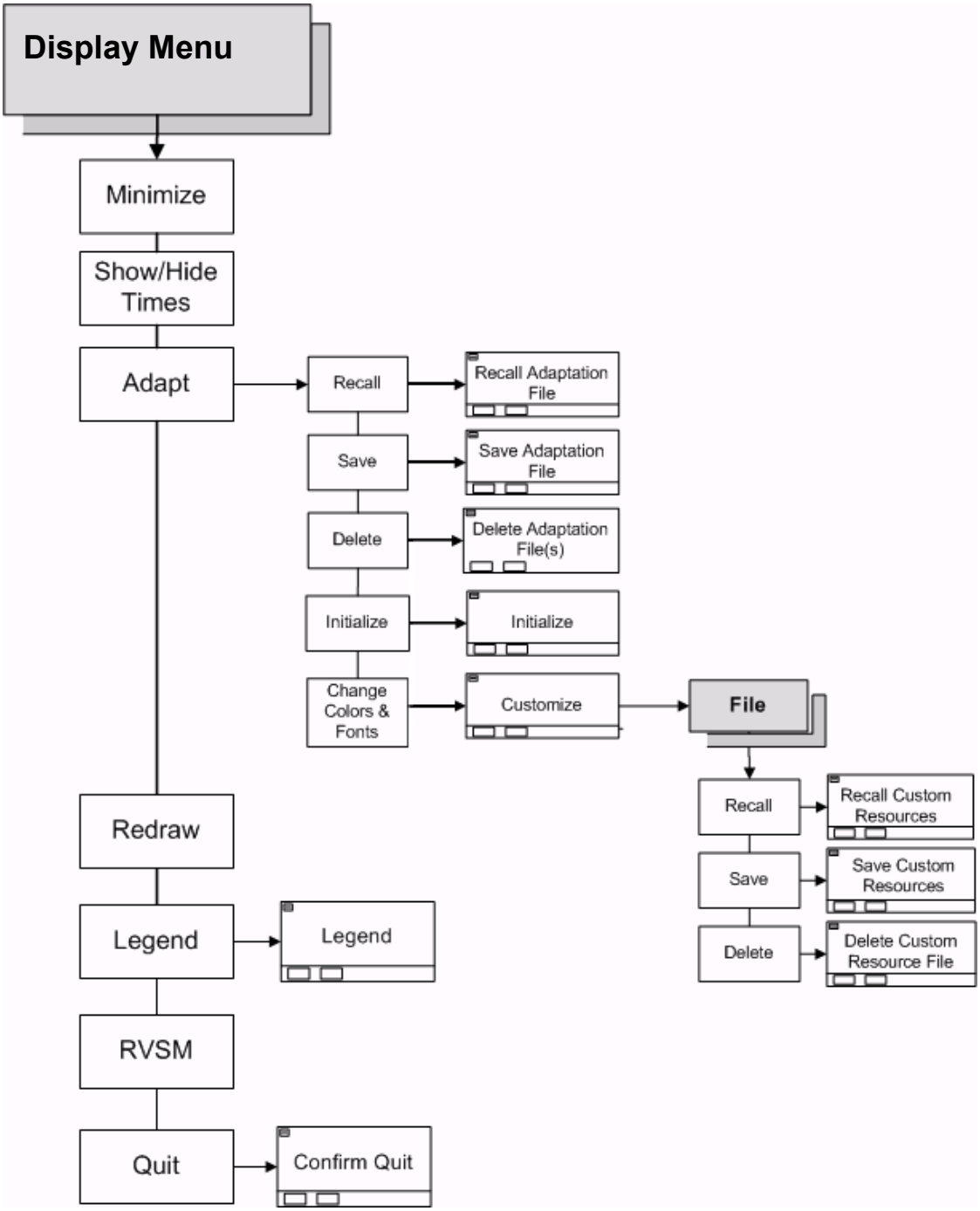
- Sub-menu commands are displayed to the right of their commands and are shown by smaller rectangular boxes. For example:

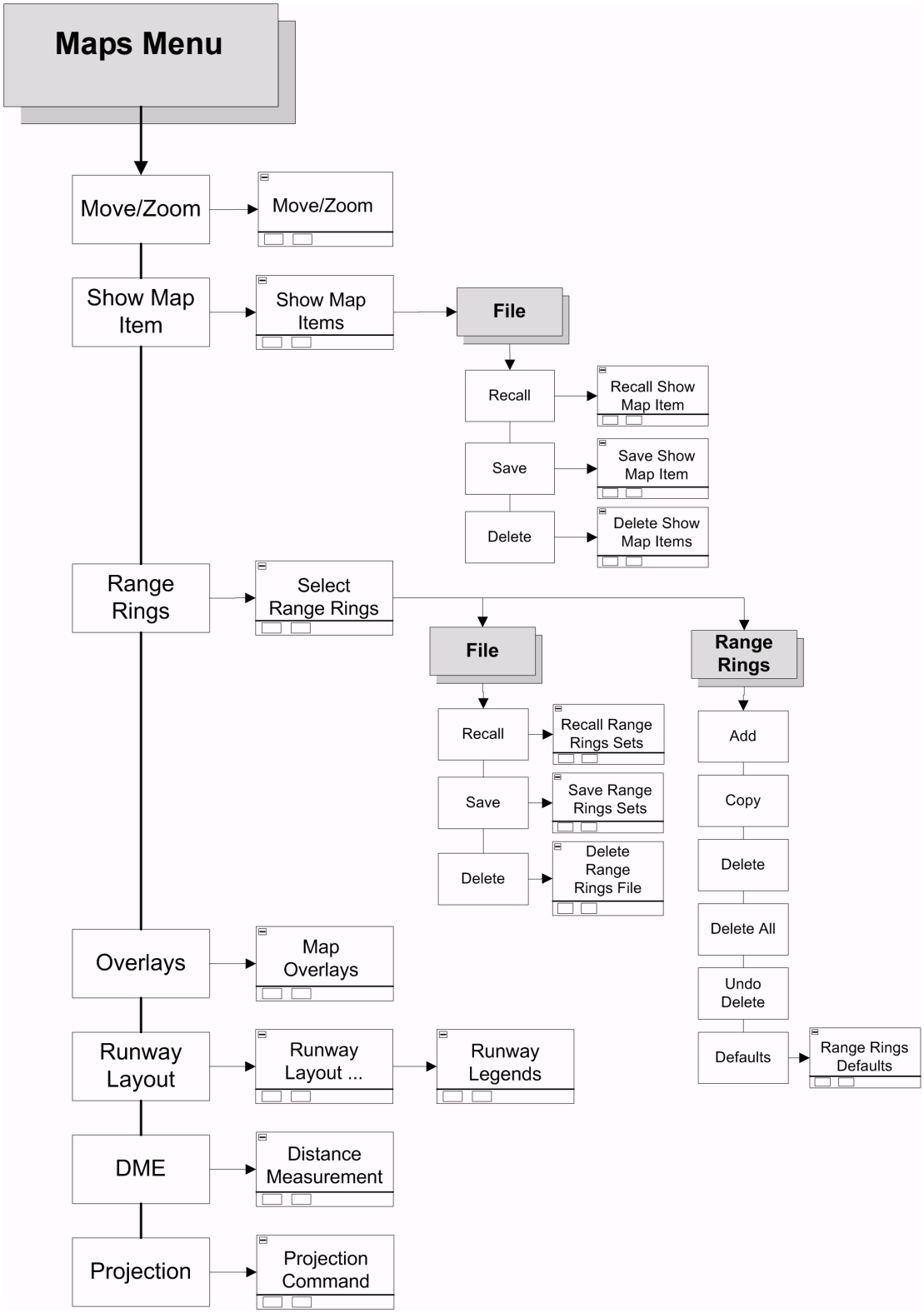


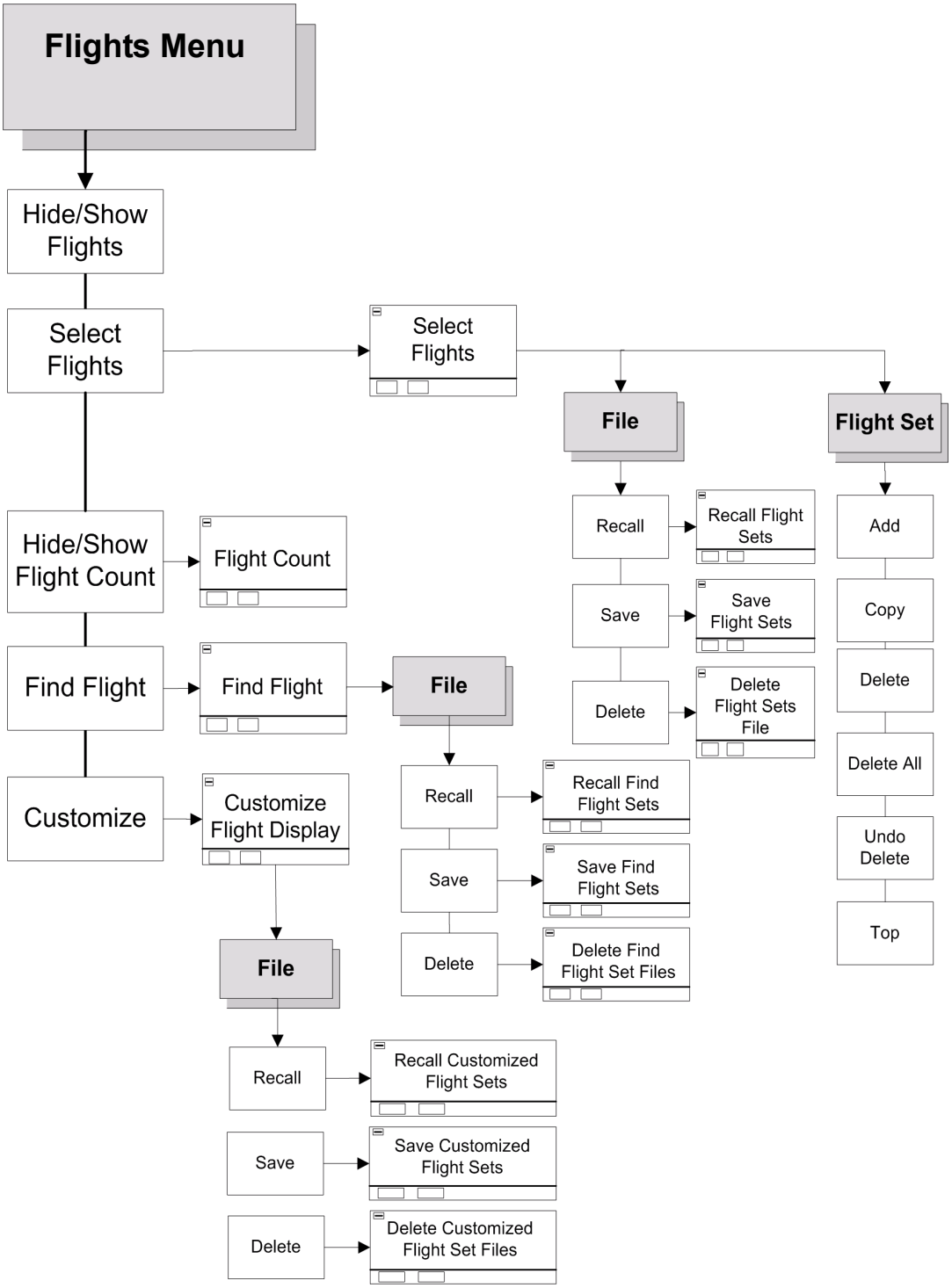
- Dialog boxes are shown by special graphical representations. For example:

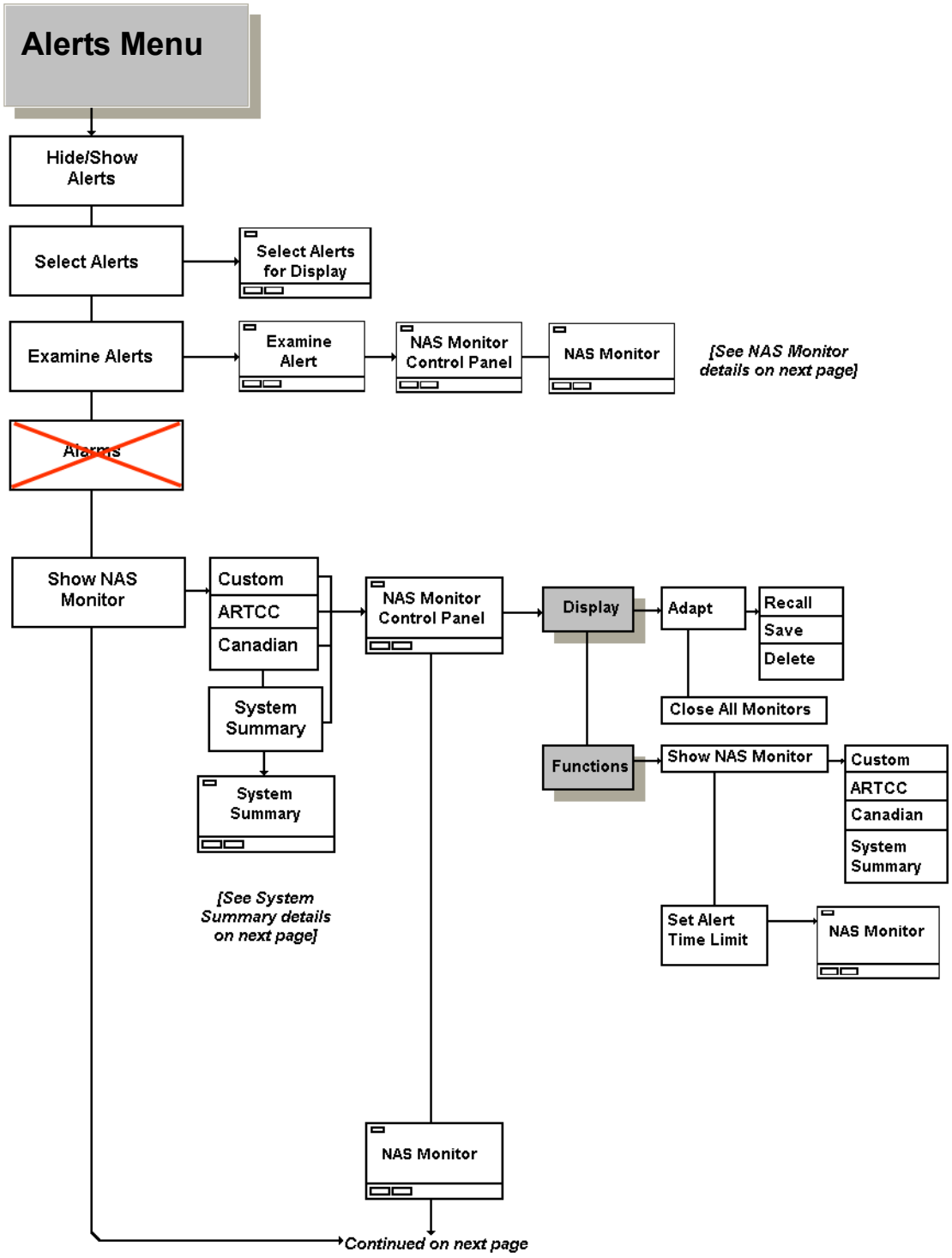
- Arrows represent the connections between menu items and dialog boxes and menu items and sub-menu items. For example:



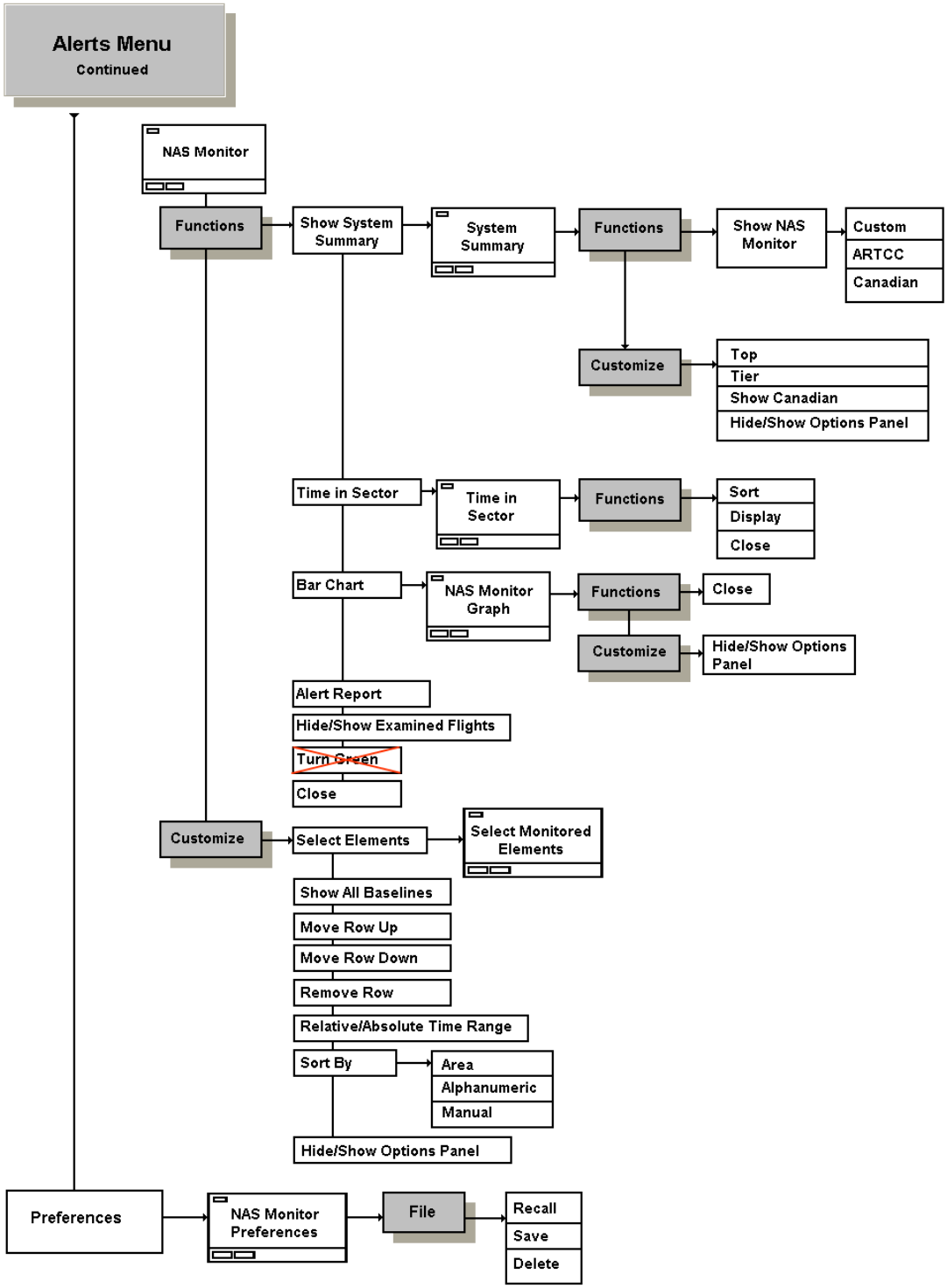

Display Menu
Minimize
Show/Hide Times
Adapt
Recall
Recall Adaptation File
Save
Save Adaptation File
Delete
Delete Adaptation File(s)
Initialize
Initialize
Change Colors & Fonts
Customize
File
Recall
Recall Custom Resources
Save
Save Custom Resources
Delete
Delete Custom Resource File
Redraw
Legend
Legend
RVSM
Quit
Confirm Quit

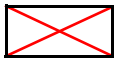

Maps Menu
Move/Zoom
Move/Zoom
Show Map Item
Show Map Items
File
Recall
Recall Show Map Item
Save
Save Show Map Item
Delete
Delete Show Map Items
Range Rings
Select Range Rings
File
Range Rings
Recall
Recall Range Rings Sets
Save
Save Range Rings Sets
Delete
Delete Range Rings File
Add
Copy
Delete
Delete All
Undo Delete
Defaults
Range Rings Defaults
Overlays
Map Overlays
Runway Layout
Runway Layout ...
Runway Legends
DME
Distance Measurement
Projection
Projection Command


Flights Menu
Hide/Show Flights
Select Flights
Select Flights
File
Flight Set
Recall
Recall Flight Sets
Save
Save Flight Sets
Delete
Delete Flight Sets File
Add
Copy
Delete
Delete All
Undo Delete
Top
Hide/Show Flight Count
Flight Count
Find Flight
Find Flight
File
Recall
Recall Find Flight Sets
Save
Save Find Flight Sets
Delete
Delete Find Flight Set Files
Customize
Customize Flight Display
File
Recall
Recall Customized Flight Sets
Save
Save Customized Flight Sets
Delete
Delete Customized Flight Set Files

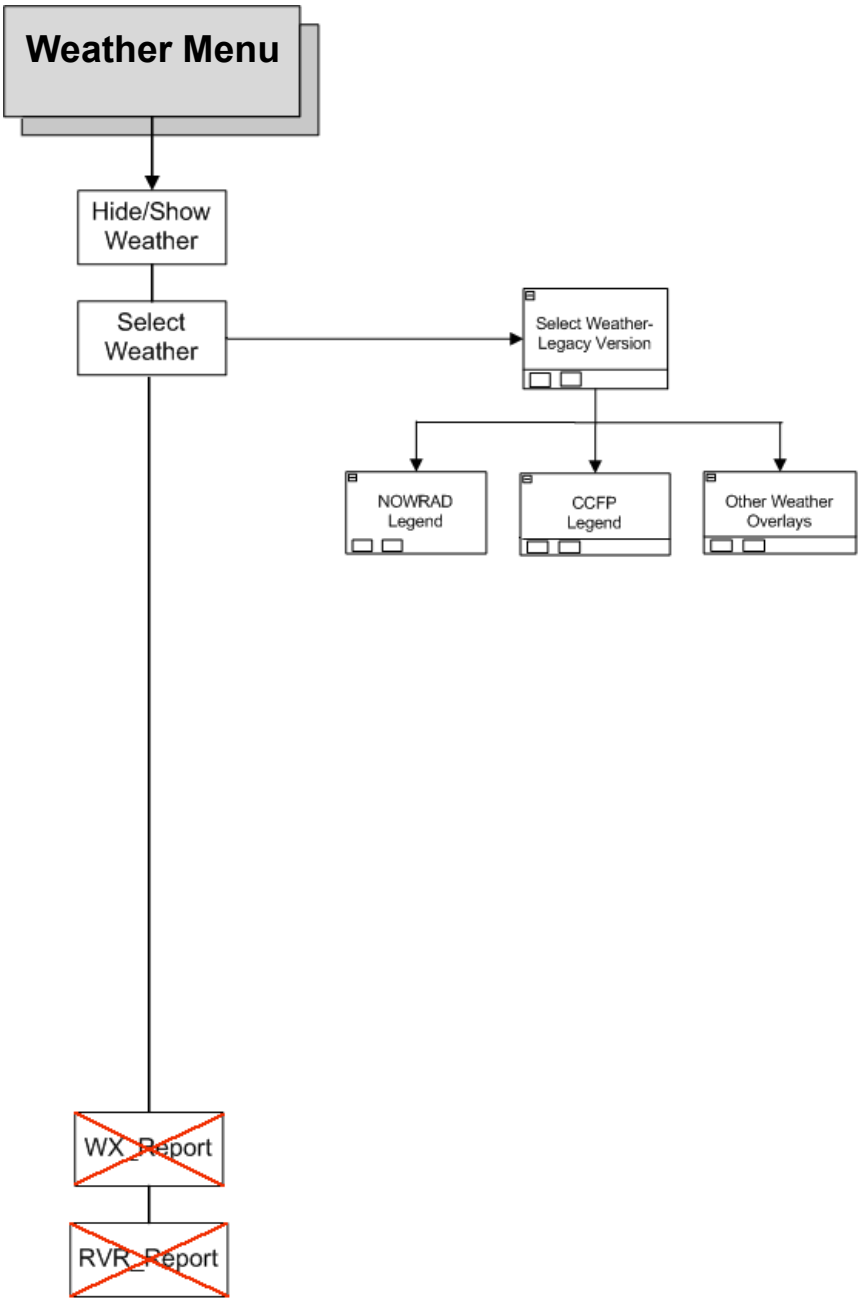

Alerts Menu
Hide/Show Alerts
Select Alerts
Select Alerts for Display
Examine Alerts
Examine Alert
NAS Monitor Control Panel
NAS Monitor
[See NAS Monitor details on next page]
Alarms
Show NAS Monitor
Custom
ARTCC
Canadian
System Summary
System Summary
[See System Summary details on next page]
NAS Monitor Control Panel
Display
Adapt
Recall
Save
Delete
Close All Monitors
Functions
Show NAS Monitor
Custom
ARTCC
Canadian
System Summary
Set Alert Time Limit
NAS Monitor
NAS Monitor
Continued on next page

Inactive

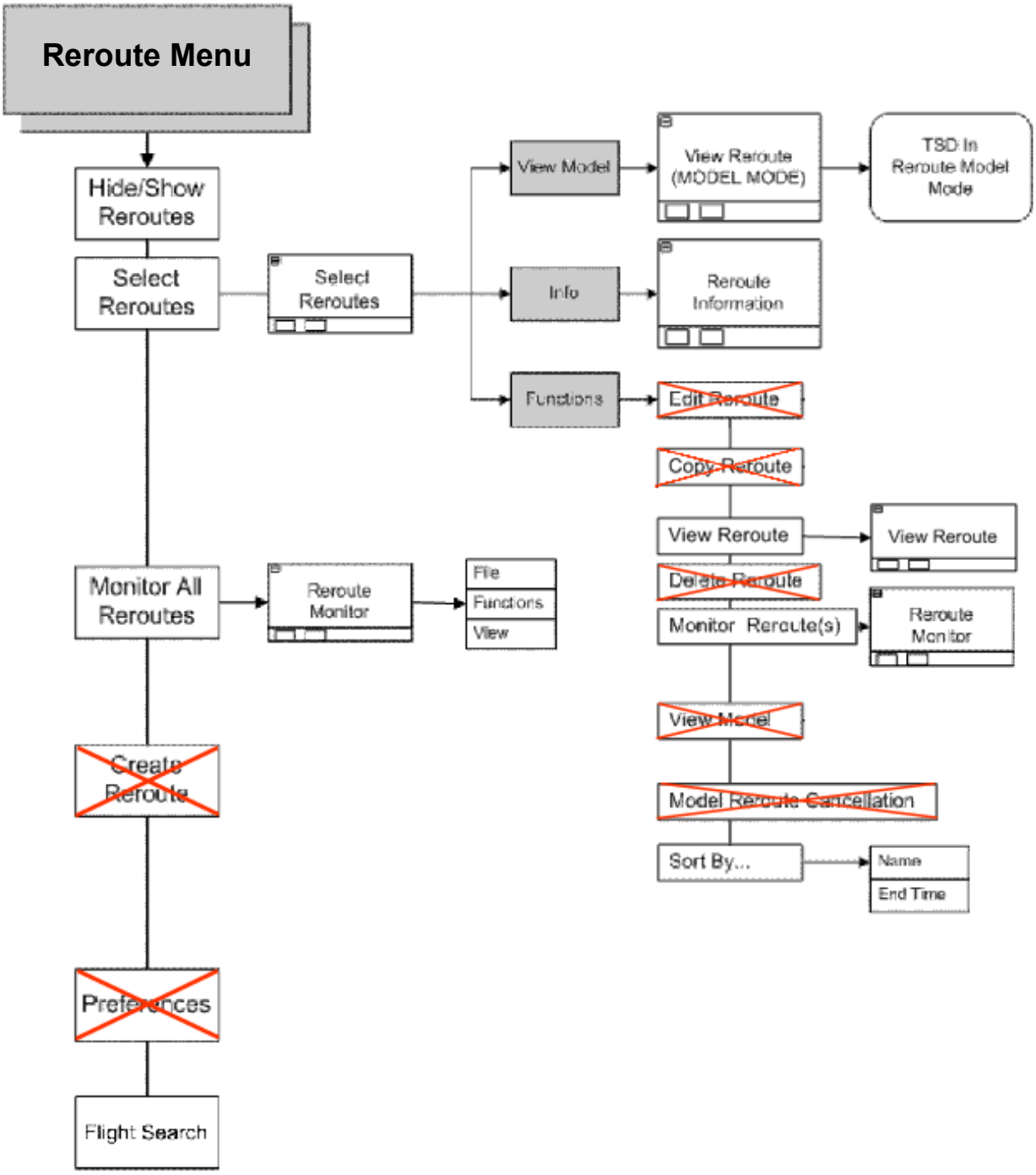

Alerts Menu
Continued
NAS Monitor
Functions
Show System Summary
System Summary
Functions
Show NAS Monitor
Custom
ARTCC
Canadian
Customize
Top
Tier
Show Canadian
Hide/Show Options Panel
Time in Sector
Time in Sector
Functions
Sort
Display
Close
Bar Chart
NAS Monitor Graph
Functions
Close
Customize
Hide/Show Options Panel
Alert Report
Hide/Show Examined Flights
Turn Green
Close
Customize
Select Elements
Select Monitored Elements
Show All Baselines
Move Row Up
Move Row Down
Remove Row
Relative/Absolute Time Range
Sort By
Area
Alphanumeric
Manual
Hide/Show Options Panel
Preferences
NAS Monitor Preferences
File
Recall
Save
Delete



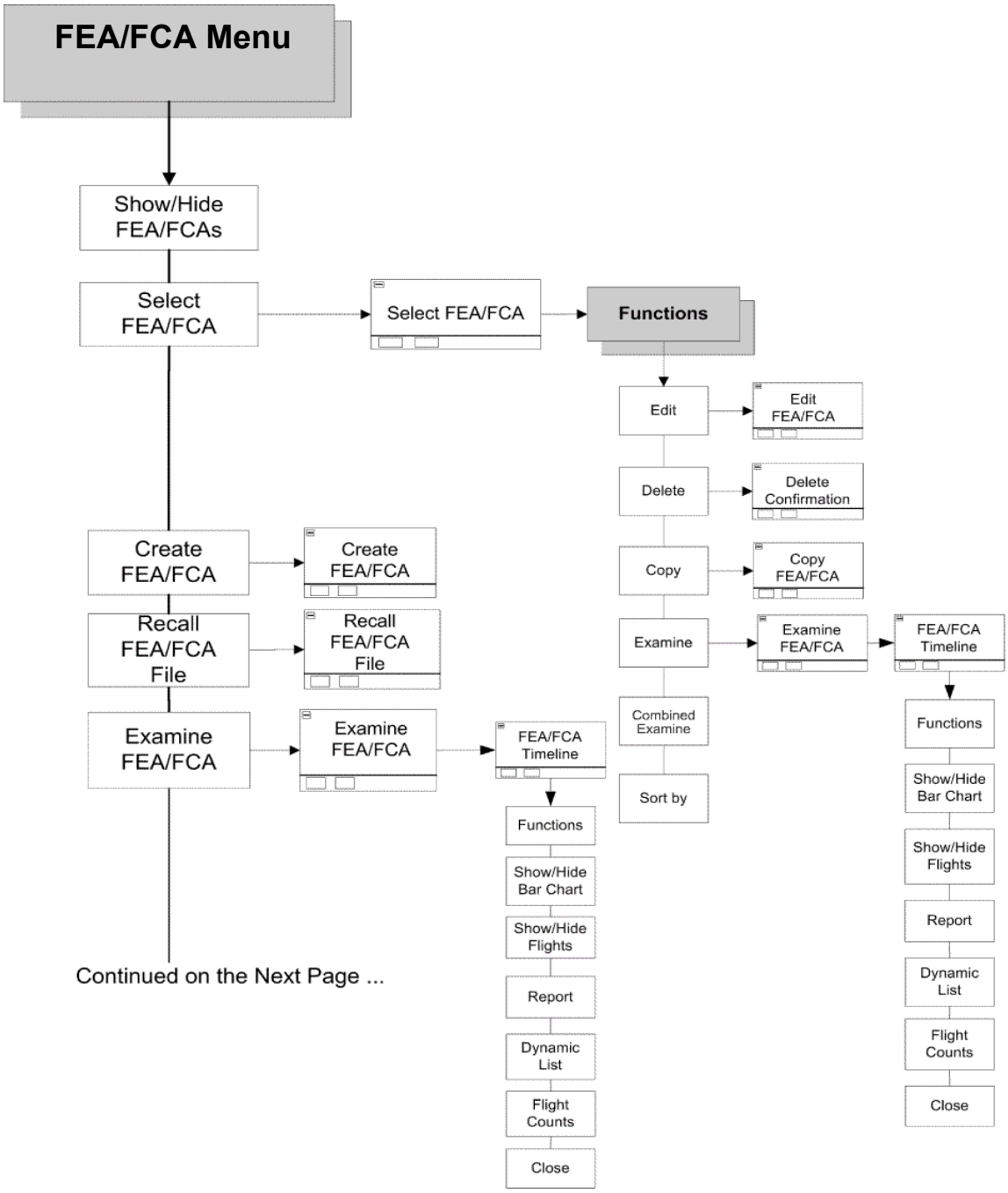
Inactive

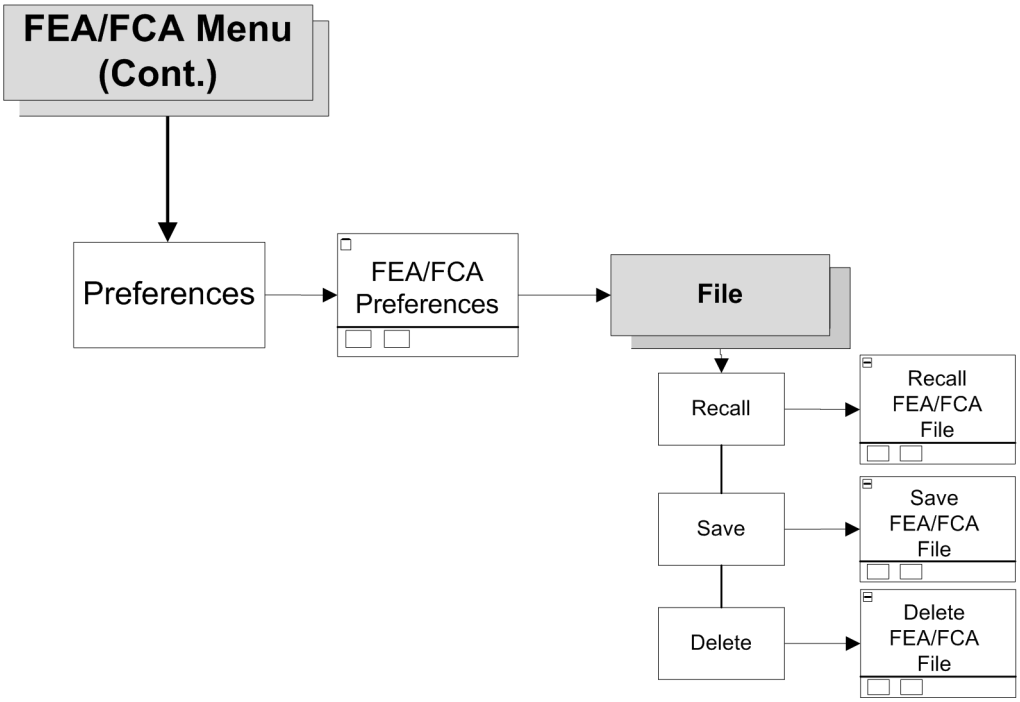

Weather Menu
Hide/Show Weather
Select Weather
Select Weather-Legacy Version
NOWRAD Legend
CCFP Legend
Other Weather Overlays
WX_Report
RVR_Report

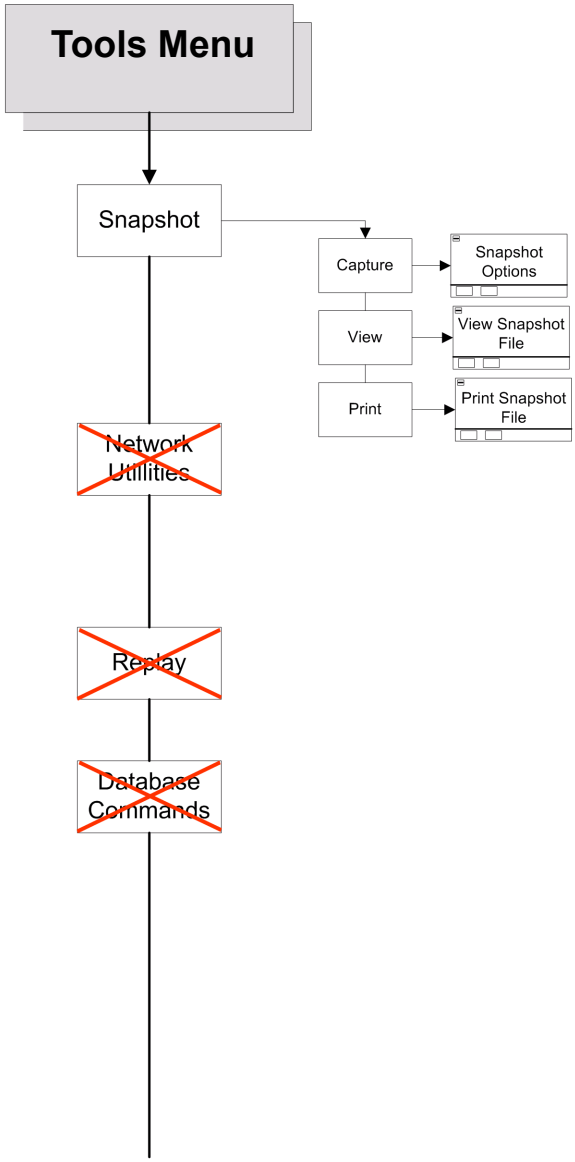
Inactive


Reroute Menu
Hide/Show Reroutes
Select Reroutes
Select Reroutes
View Model
View Reroute (MODEL MODE)
TSD In Reroute Model Mode
Info
Reroute Information
Functions
Edit Reroute
Copy Reroute
View Reroute
View Reroute
Delete Reroute
Monitor Reroute(s)
Reroute Monitor
View Model
Model Reroute Cancellation
Sort By...
Name
End Time
Monitor All Reroutes
Reroute Monitor
File
Functions
View
Create Reroute
Preferences
Flight Search

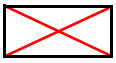
Inactive


FEA/FCA Menu
Show/Hide FEA/FCAs
Select FEA/FCA
Select FEA/FCA
Functions
Edit
Edit FEA/FCA
Delete
Delete Confirmation
Copy
Copy FEA/FCA
Examine
Examine FEA/FCA
FEA/FCA Timeline
Combined Examine
Sort by
Create FEA/FCA
Create FEA/FCA
Recall FEA/FCA File
Recall FEA/FCA File
Examine FEA/FCA
Examine FEA/FCA
FEA/FCA Timeline
Functions
Show/Hide Bar Chart
Show/Hide Flights
Report
Dynamic List
Flight Counts
Close
Functions
Show/Hide Bar Chart
Show/Hide Flights
Report
Dynamic List
Flight Counts
Close
Continued on the Next Page ...

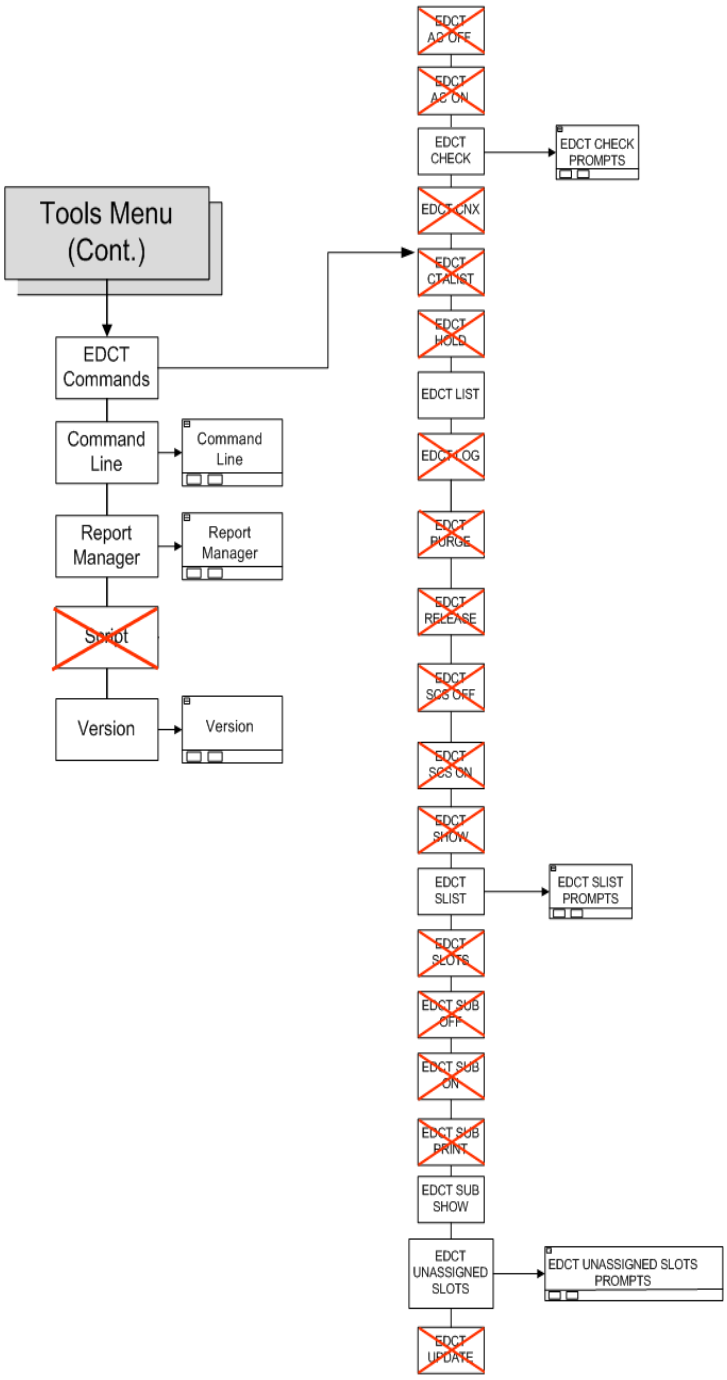

FEA/FCA Menu (Cont.)
Preferences
FEA/FCA Preferences
File
Recall
Save
Delete
Recall FEA/FCA File
Save FEA/FCA File
Delete FEA/FCA File



Continued on the Next Page ...



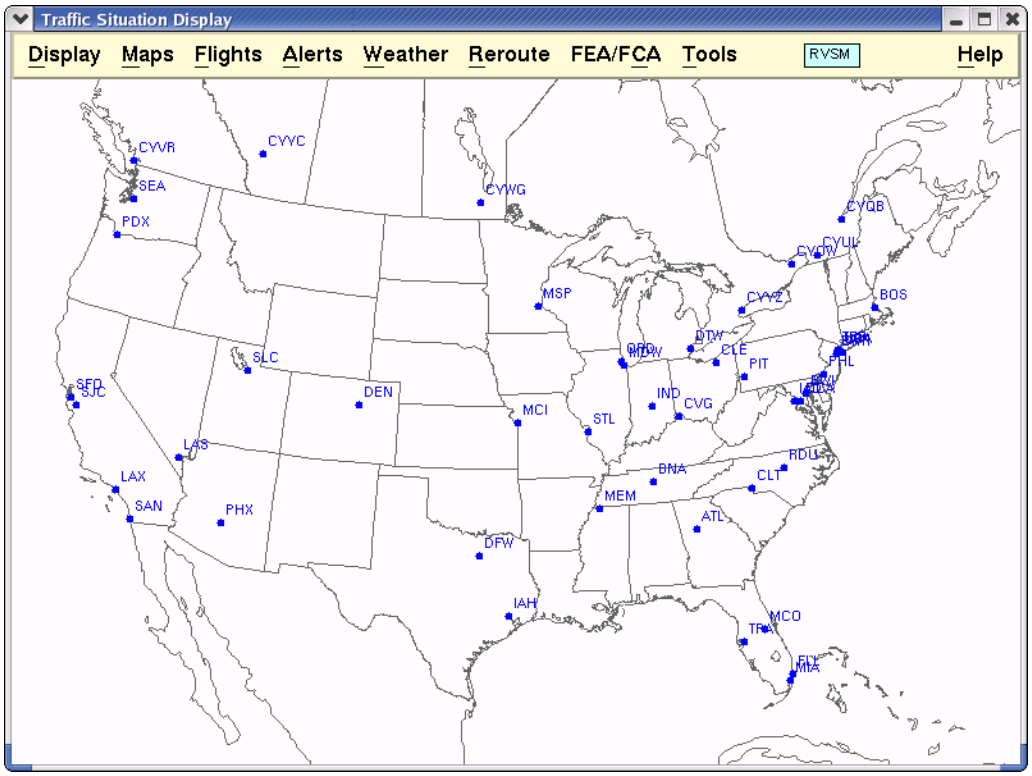
Inactive


Tools Menu (Cont.)
EDCT Commands
Command Line
Command Line
Report Manager
Report Manager
Script
Version
Version
EDCT AS OFF
EDCT AS ON
EDCT CHECK
EDCT CHECK PROMPTS
EDCT CNX
EDCT CTALIST
EDCT HOLD
EDCT LIST
EDCT LOG
EDCT PURGE
EDCT RELEASE
EDCT SCS OFF
EDCT SCS ON
EDCT SHOW
EDCT SLIST
EDCT SLIST PROMPTS
EDCT SLOTS
EDCT SUB OFF
EDCT SUB ON
EDCT SUB PRINT
EDCT SUB SHOW
EDCT UNASSIGNED SLOTS
EDCT UNASSIGNED SLOTS PROMPTS
EDCT UPDATE

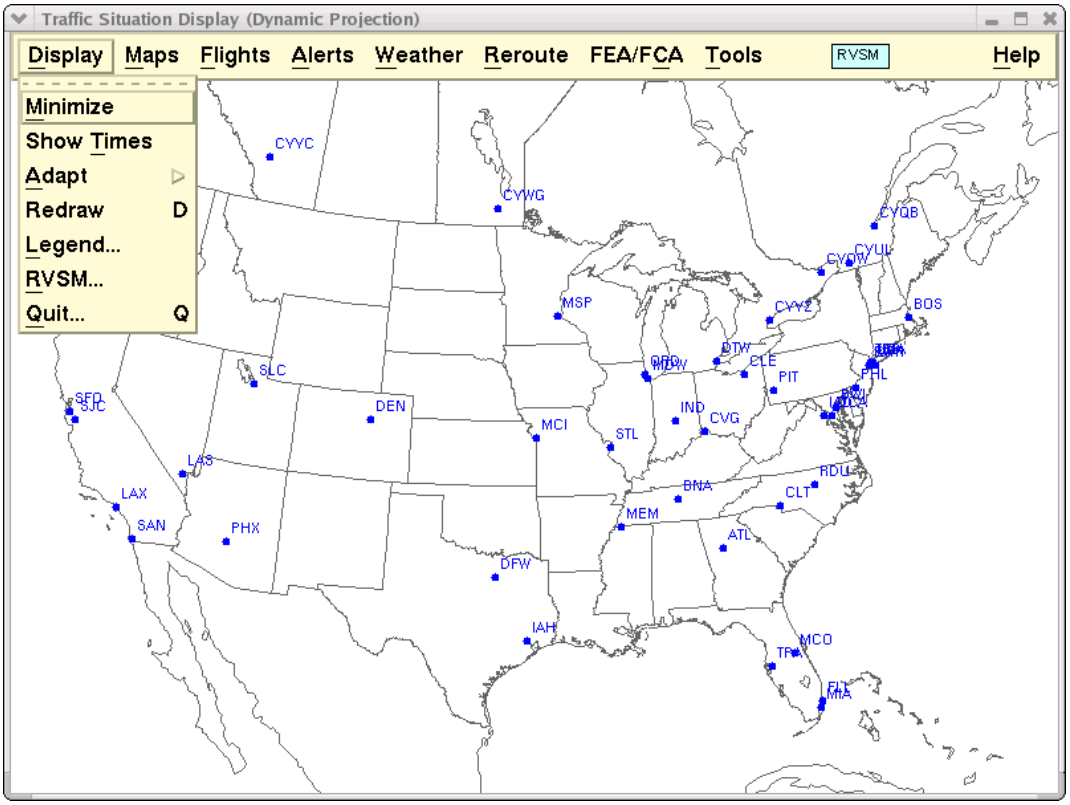
Inactive

5. TSD Menu Command Directory

This chapter covers all TSD pull-down menus, shown below on the TSD display. The individual menus, with their sub-menus and dialog boxes, are explained in detail in this chapter.



Display Menu



Overview

In this section you will learn how to use the commands available on the Display pull-down menu and sub-menus. The section begins with information on resizing, layering, and moving the TSD. Next, it explains the Adapt sub-menu items, which include recalling, saving, and deleting previously created files, as well as changing the colors and fonts of map items. You will learn how to refresh the TSD screen, add text to the bottom of the screen, exit the TSD, and show/hide the Times box.

Each of the following topics corresponds to an item on the Display pull-down menu.

- **Show/Hide Times Command** **Page 5-4**

  Toggles the Times box on and off. When toggled on, this box displays the current time and also the most recent update time for flights, alerts, and each displayed
  type of weather

- **Adapt Commands** **Page 5-6**

  Lets you change many aspects of the TSD and save your specified settings to adaptation files
- **Redraw Command** **Page 5-16**

  Lets you redraw the TSD display. This function removes any lat/lon points and spurious characters or graphic objects
- **Legend Command** **Page 5-17**

  Lets you write text on the bottom of the TSD window
- **RVSM Command** **Page 5-18**

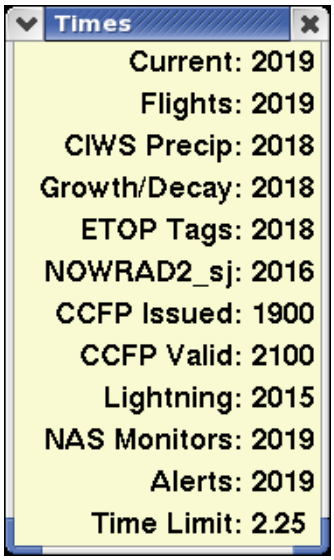
  Lets you select **Reduced Vertical Separation Minimums (RVSM)** display options for the TSD.
- **Quit Command** **Page 5-21**

  Exits the TSD

Show/Hide Times Command	
Show/Hide Times command lets you toggle the display of the Times box on and off. The Times box shows the current time of day and the last update time for any selected overlays of flights, weather, or alerts. Either **Show Times** or **Hide Times** appears on the Display menu.	
	Quick Key Method
1. Pull down the Display menu by clicking **Display** on the main menu or pressing **<Alt> D**. 2. Click **Show Times** or press **T**.	**None**
	Semicolon Method
	None

Times Box

After you issue the **Show Times** command, the Times box, which looks like this sample, appears.



Note: If no overlays are selected, the Times box shows the current time only. You can drag this box to any other place on the display.

When weather data goes out of date, the time values change. The TSD indicates time expirations by displaying them in red. Item labels and times flash in red and black for one minute when they expire.

If valid weather data is unavailable for any weather item except CCFP and NCWF, the Times box shows that weather item's last update time as N/A for Not Available.

If you display a CCFP weather overlay, the Times box shows both the time that the CCFP was issued and the time for which it is valid. If no valid CCFP forecast data is available, the Times dialog box shows N/A as both the Issued and Valid times. The TSD indicates on the Times dialog box that CCFP data has expired if a time interval of 2.5 hours passes after the last data update.

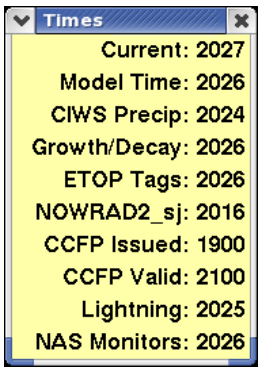
If you display an NCWF weather overlay, the Times box shows the time for which it is valid. If no valid NCWF forecast data is available, the Times dialog box shows N/A as the Valid time.

If any weather file is received more than 30 minutes early, the TSD will display the time in red in the Times dialog box. Weather data that is more than 12 hours old is considered obsolete and is unavailable for display, except in Replay mode.

When you deselect any of the elements currently shown in the Times box, that element disappears from the display as well as from the Times box. If you pull down the Display menu again, the command name is **Hide Times**. Issuing this command removes the Times box and changes the command name back to **Show Times**.

Times Dialog Box in Model Mode

When you model a reroute, the Times dialog box displays a bright yellow background color to indicate Model mode as show in the following image. In this example, weather overlays remain selected to show on the map. Since flights and alerts are disabled during Model mode, the Flights and Alerts times that were previously shown are removed from the dialog box and Model Time displays.

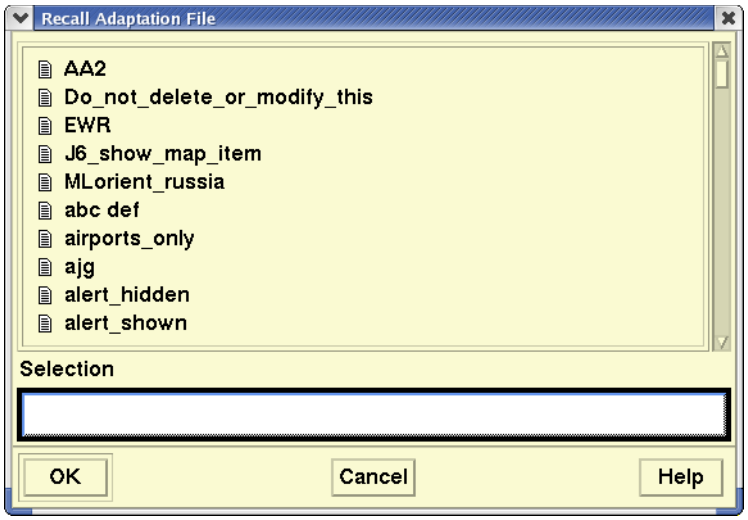


Adapt Commands

The Adapt commands let you change many aspects of the TSD. When you click **Adapt**, you display a sub-menu with several command options that let you recall a previously created file, save a file, delete a file, return the TSD to its default state, and change the color and font size of map overlays.

<table>
<tr><th colspan="2">Recall Command</th></tr>
<tr><td colspan="2">The Recall command lets you change your TSD settings to settings that have been saved to a file.</td></tr>
<tr><th></th><th>Quick Key Method</th></tr>
<tr><td rowspan="3">1. Pull down the Display menu by clicking Display on the main menu or pressing <Alt> D.
2. Click Adapt or press A.
3. Click Recall or press R.</td><td>K</td></tr>
<tr><th>Semicolon Method</th></tr>
<tr><td>None</td></tr>
</table>

After you issue **Recall** using the menu method, the Recall Adaptation File dialog box opens, listing all the current subdirectories and files. The subdirectories are represented by the folder icons.



To access a file within a subdirectory, click the subdirectory icon twice to display the filenames within that subdirectory.

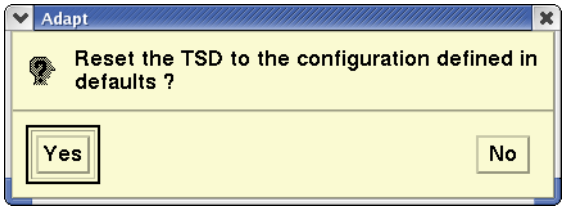
When you click a file icon, that filename appears in the text field. You can also type the name directly into the text field. When you click **OK**, the TSD changes to display the settings you previously specified and saved to that filename.

> **Note:** For information on creating a subdirectory, see the **Adapt/Save** command in the following section.

Quick Key Method to Reset TSD to its Initial State

When you use the **K** quick key to change the TSD to its initial settings, the TSD displays the following confirmation query.

:



Clicking **Yes** returns you to the TSD display with the same settings that appeared when the TSD was started.

Save Command	
The **Save** command lets you save your current TSD settings to an adaptation file with a name you specify. You can choose to put the file into a subdirectory, which is represented by a folder icon.	
	Quick Key Method
1. Pull down the Display menu by clicking **Display** on the main menu or pressing **<Alt> D**. 2. Click **Adapt** or press **A**. 3. Click **Save** or press **S**.	**None**
	Semicolon Method
	None

Settings that can be saved to an Adaptation File

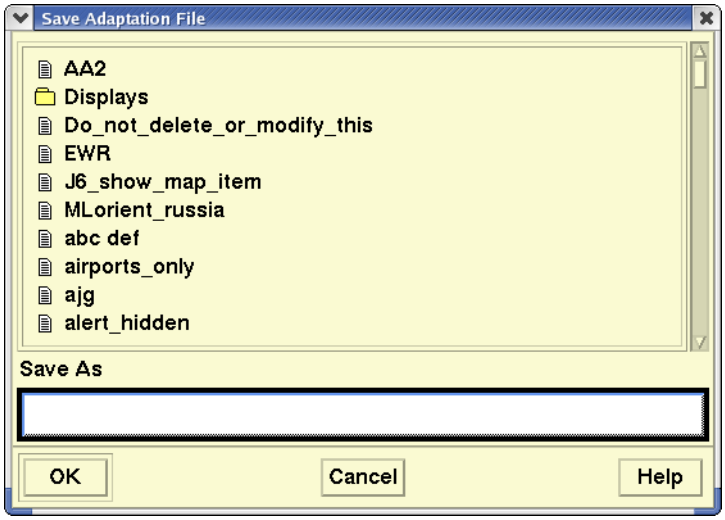
You can save the following settings to an Adaptation file and specify a filename for later use:

- Map overlays
- Legacy Weather overlays
- Flight sets and their properties
- Items currently specified by the Show Map Item command
- Range rings
- Current center point of the map display
- Zoom scale
- Data block contents
- Alert settings
- Colors and fonts for overlays
- NAS Monitor and FEA/FCA Timeline settings
- Default settings for flight sets and reroutes

Note: An FEA/FCA Timeline that was saved to an adaptation file will display when you recall the adaptation file if an FEA/FCA of the same name exists and the FEA/FCA has not expired.

Save Adaptation File Dialog Box

After you issue **Save**, the Save Adaptation Files dialog box opens.



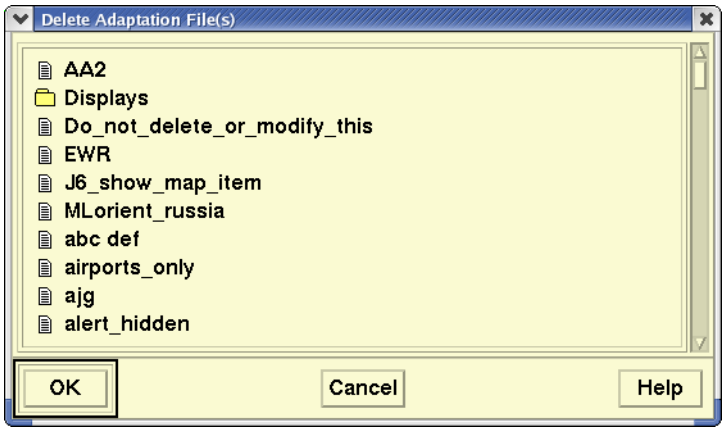
Saving an Adaptation File

You can also save a file by clicking a filename displayed in the Save Adaptation File dialog box. The filename is displayed in the Save As field, with its subdirectory if there is one. After you click **OK**, a warning dialog box opens to notify you that the existing file will be overwritten. To overwrite the existing file click **OK**.

Delete Command	
The **Delete** command lets you remove an adaptation file from the list of adaptation files.	
	Quick Key Method
1. Pull down the Display menu by clicking **Display** on the main menu or pressing **<Alt> D**. 2. Click **Adapt** or press **A**. 3. Click **Delete** or press **D**.	**None**
	Semicolon Method
	None

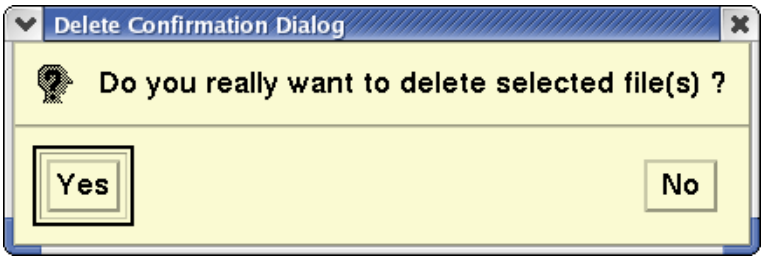
Delete Adaptation File Dialog Box

After you issue **Delete**, the Delete Adaptation File dialog box opens.



You can select a file by clicking its icon to the left of the filename and clicking **OK**. Pressing **<Ctrl>** or **<Shift>** lets you select multiple files for deletion.

After you issue the Delete command, you see a dialog box asking you to confirm the delete request. Click **Yes** to confirm.

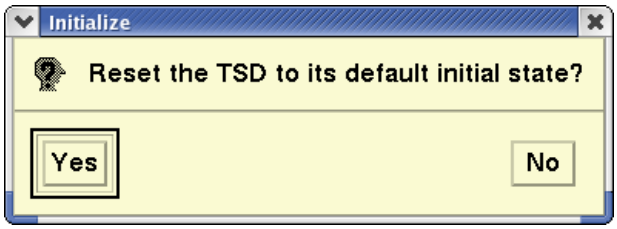


Note: Subdirectories cannot be deleted if they contain files. To delete a file within a subdirectory, you need to open the subdirectory by clicking the folder icon twice and clicking the file icon.

Initialize Command	
The **Initialize** command restores the TSD to its default state.	
	Quick Key Method
1. Pull down the Display menu by clicking **Display** on the main menu or pressing **<Alt> D**. 2. Click **Adapt** or press **A**. 3. Click **Initialize** or press **I**.	**I**
	Semicolon Method
	None

Initialize Dialog Box

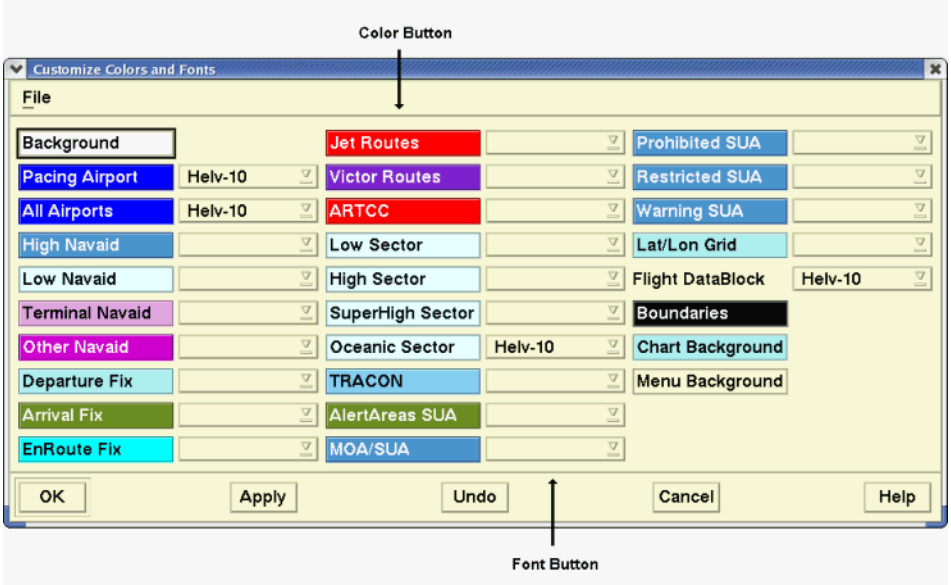
After you issue **Initialize**, the following dialog box opens. Click **Yes** to confirm or **No** to cancel.



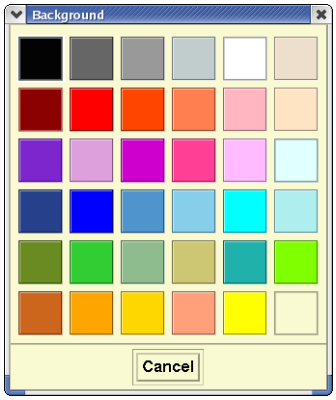
<table>
<tr><th colspan="2">Change Colors and Fonts Command</th></tr>
<tr><td colspan="2">The Change Colors and Fonts command lets you change the appearance of your display by changing the colors and font sizes of map overlays.</td></tr>
<tr><th></th><th>Quick Key Method</th></tr>
<tr><td rowspan="3">1. Pull down the Display menu by clicking Display on the main menu or pressing <Alt> D.
2. Click Adapt or press A.
3. Click Change Colors and Fonts or press C.</td><td>None</td></tr>
<tr><th>Semicolon Method</th></tr>
<tr><td>None</td></tr>
</table>

Customize Colors and Fonts Dialog Box

After you select **Change Colors and Fonts**, the Customize Colors and Fonts dialog box opens. The map overlays shown in the Customize dialog box are further described in the Maps/Overlays section of the Maps menu. The Flight Data Block item is further described in the Select Flights section of the Flights menu.



The Change Colors and Fonts command lets you change the colors and font sizes of the TSD map items shown in the Customize Colors and Fonts dialog box. Clicking in the color box of any map item displays a palette of color selections like the example below.

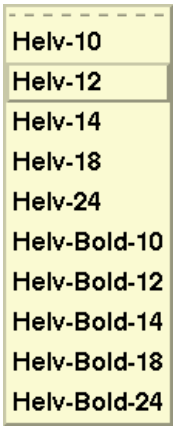


When you click in any of the color boxes on the palette, that box changes to the selected color. Clicking **OK** or **Apply** redraws the TSD and changes the map item to your selected color. Clicking the font button to the far right of the map item and clicking **OK** or **Apply** changes the font style and size of the map item label.

Changing Fonts

You can use the Customize Colors and Fonts dialog box to change the fonts used in the overlay displays. The font for the particular overlay is listed next to the color box containing the overlay's name and color. Click the font button to open the menu of available fonts.

When you have displayed the fonts menu, select the font you wish that overlay to use. Repeat this procedure for as many overlay elements as necessary, and click **OK** or **Apply**. The overlays redisplay using the font you selected.



Using the File Menu

The File menu in the Customize dialog box lets you recall another file, save a file with your customized colors, styles, and fonts, or delete a current file. This menu functionality is similar to that in several other dialog boxes and is explained in detail in Chapter 3.

Click **Recall** to open a previously saved file; click **Save** to save the current settings to a new or existing file; click **Delete** to delete one or more custom settings files. Each of these functions operates using a dialog box that lists the currently stored files.

File Menu

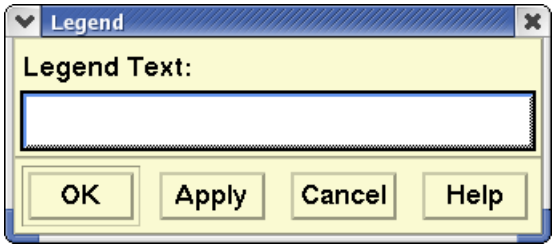
You use the File pull-down menu to save your custom settings to a custom resources file, and to recall or delete a previously saved custom resources file. For more information, refer to the section on File Pull-Down Menu, on page 3-3 in Chapter 3, TSD Basics.

<table>
<tr><th colspan="2">Redraw Command</th></tr>
<tr><td colspan="2">The Redraw command redraws the TSD screen, causing any spurious characters or graphic objects to disappear. Any latitude/longitude identifiers that have been placed with the Lat/Lon Point command also disappear. All other TSD features remain on the screen.</td></tr>
<tr><th></th><th>Quick Key Method</th></tr>
<tr><td rowspan="3">1. Pull down the Display menu by clicking Display on the main menu or pressing <Alt> D.
2. Click Redraw or press D.</td><td>D</td></tr>
<tr><th>Semicolon Method</th></tr>
<tr><td>None</td></tr>
</table>

Legend Command	
The **Legend** command allows you to display text at the bottom of a TSD window. This command may be used to display a legend of colors selected for map elements or flight groups. You may enter up to 256 characters. The legend text is left justified at the bottom of the window and wraps according to the size of the display. The legend text remains on the display until you enter the command again or quit the TSD. Reissuing the command with no text or with one or more spaces deletes any previous legend text.	
	Quick Key Method
1. Pull down the Display menu by clicking **Display** on the main menu or pressing **<Alt> D**. 2. Click **Legend** or press **L**.	**None**
	Semicolon Method
	None

Legend Dialog Box

After you click **Legend** or press the mnemonic key from the Display menu, the Legend dialog box opens. You can edit the current legend text or enter your text at the Legend Text prompt and click **OK**.



RVSM Command	
The **RVSM** command lets you select **Reduced Vertical Separation Minimums (RVSM)** display options for the TSD.	
	Quick Key Method
1. Pull down the Display menu by clicking **Display** on the main menu or pressing **<Alt> D**. 2. Click **RVSM** or press **R**.	**None**
	Semicolon Method
	None

RVSM Functions

RVSM allows controllers to separate properly equipped aircraft in the FL290 to FL410 airspace by as little as 1000 feet vertically, rather than the 2000 foot minimum that is currently required. The term *conformant* is used to characterize properly equipped aircraft.

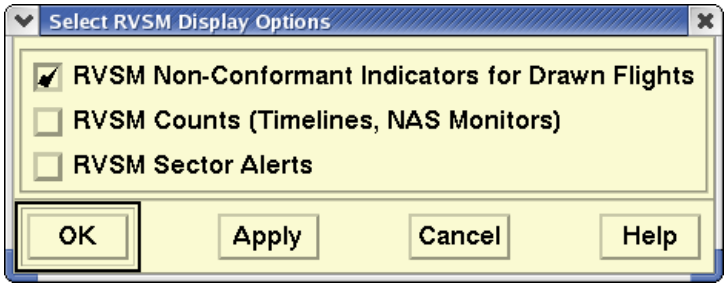
Note: FL stands for “Flight Level”

With FAA approval, unequipped aircraft will be able to enter the RVSM airspace, but these aircraft must be vertically separated from all other aircraft by at least 2000 feet. The term *non-conformant* is used to characterize any unequipped aircraft in the RVSM airspace.

The following TSD functions are enhanced by RVSM: Flights, Alerts, and FEA/FCA. These RVSM enhancements are discussed in their appropriate menu sections.

Select RVSM Display Options Dialog Box

Selecting the **RVSM** command on the Display menu opens the Select RVSM Display Options dialog box..



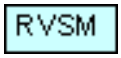
Select RVSM Display Options

Item	Description
RVSM Non-Conformant indicators for Drawn flights	When this option is selected, squares are drawn around non-conformant flights when they are displayed on the TSD. **Note:** This option is also available on the Customize Flight Display dialog box.
RVSM Counts (Timelines, Center Monitor)	When this option is selected, RVSM flight counts are displayed on the Timelines and Center Monitor.
RVSM Sector Alerts	When this option is selected, the TSD displays RVSM sector alerts. To see the RVSM Sector Alerts, you must issue the Show Alerts command. **Note:** This option is also available on the Select Alerts dialog box.

RVSM Status Icon

The RVSM Status icon changes colors to reflect which of the options shown above are on or off.

- Blue: All three display options are **ON**



- Orange with a diagonal stripe Any option is **OFF**.

When you place the mouse pointer on the icon, the TSD displays a tool tip that lists the status of each of the RVSM options. Two examples are shown below.

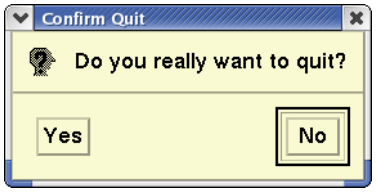
Clicking the **RVSM Status** icon, like selecting the **RVSM** option on the Display menu, opens the Select RVSM Display Options dialog box, shown on the preceding page.

Quit Command	
The **Quit** command lets you end your session on the TSD.	
	Quick Key Method
1. Pull down the Display menu by clicking **Display** on the main menu or pressing **<Alt> D**. 2. Click **Quit** or press **Q**.	**Q**
	Semicolon Method
	None

Confirm Quit Dialog Box

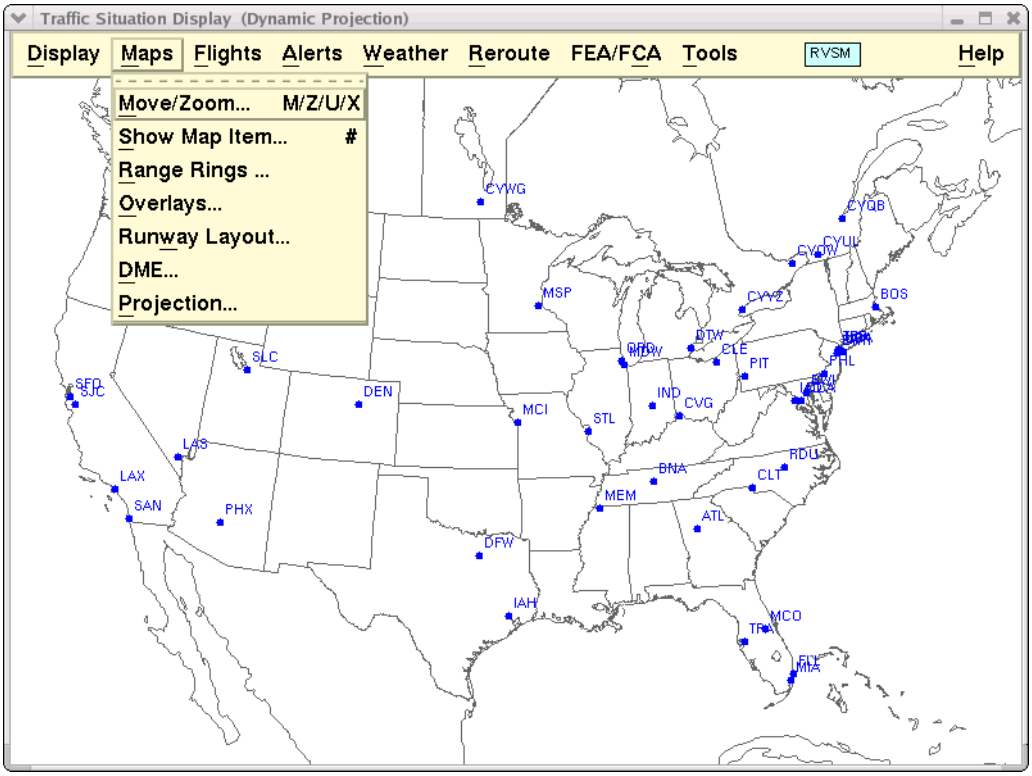
After you click **Quit** or press the mnemonic key from the Display menu, a confirmation box opens.

Click **Yes** to exit the TSD.



Note: Pressing **<Ctrl>Q** will quit the TSD without displaying the Confirm Quit dialog box.

Maps Menu



Overview

This section explains how to use TSD menus to access Maps commands and is divided into the following topics, each of which corresponds to an item on the Maps pull-down menu.

- **Move Zoom Command** **Page 5-24**

  Changes the center point and scale of the display
- **Show Map Item Command** **Page 5-26**

  Locates and displays map items on the TSD
- **Range Rings Command** **Page 5-29**

  Displays a series of concentric rings around specified locations
- **Overlays Command** **Page 5-34**

  Shows graphic displays of map items with fixed locations
- **Runway Layout Command** **Page 5-39**

  Displays a map of a specified runway

- **DME Command** **Page 5-41**

  Displays the distance between specified points
- **Projection Command** **Page 5-43**

  Changes the orientation of the display to another geographic region

Move Zoom Command	
The **Move/Zoom** command lets you change the center point of your display to any ARTCC, TRACON, sector, airport, navaid, fix, SUA, lat/lon point, fix-radial-distance, or specific flight ID you want. You may also change the scale of your display from 20 to 12,800 nautical miles. There are three ways of issuing this command, each working slightly differently.	
	Quick Key Method
1. Pull down the Maps menu by clicking **Maps** on the main menu or pressing **<Alt> M**. 2. Click **Move/Zoom** or press **M.**	**M** Move **Z** Zoom **U** Unzoom **X** Undo Move/Zoom
	Semicolon Method
	None

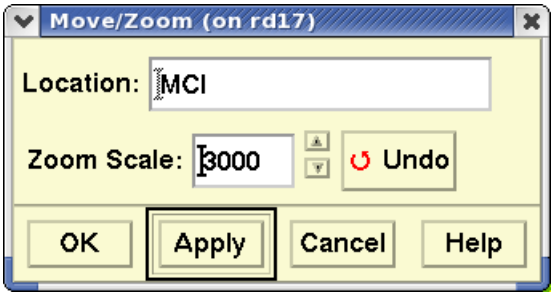
Dynamic Sectorization

The TSD centers the display at the center point of the sector as defined by dynamic sectorization if the sector exists. If the sector has been combined into another sector, the TSD centers the display at the center point of the baseline sector.

If the sector is combined, the TSD re-centers the display as specified above and displays a warning dialog box with the appropriate message.

Move/Zoom Dialog Box

After you click **Move/Zoom** or press the mnemonic key from the Maps menu, the Move/Zoom dialog box opens.



Enter a location identifier in the Location field and the nautical miles you want in the Zoom Scale field. You can also use the up and down arrows next to the zoom scale field. Click **OK** to put your changes into effect. The TSD is redrawn with the location and range you entered. Clicking **Undo** returns the TSD display to its previous settings.

> **Note:** You can also open the Move/Zoom dialog box by placing the pointer on the TSD with nothing selected, clicking the right mouse button to display the generic right-click menu and clicking **Move/Zoom**.

Location Identifiers

You can change the center of your display to any ARTCC, TRACON, sector, airport, navaid, fix, SUA, specific flight ID, lat/lon point, or fix-radial-distance. Formats for the last two items are explained below.

Lat/Lon point Latitude/longitude. Latitude may be followed by **N** or **S**; Longitude may be followed by **E** or **W**. If these letters are missing, the program assumes N and W. If latitude is following by N or S, longitude *must* be followed by E or W. For example, 3911/09343W is not valid.

Valid entries include: **3911N/09343W** and **3911/09343**

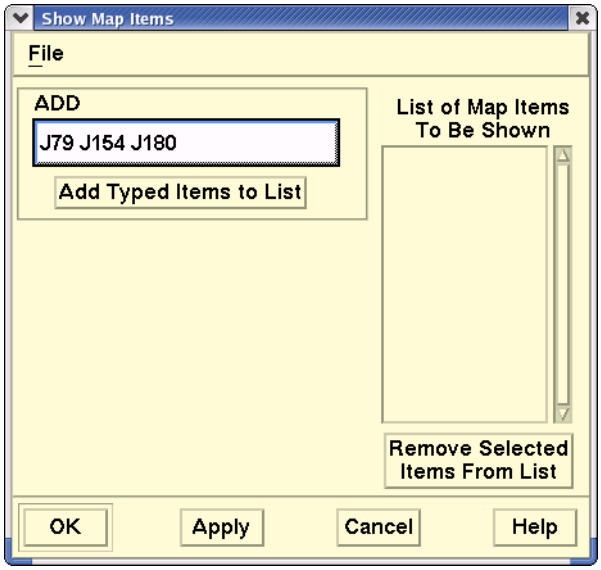
Use the format: **Fix-radial-distance**Fix-radial-distance with no spaces or markers.

For example: **M DCA360010**

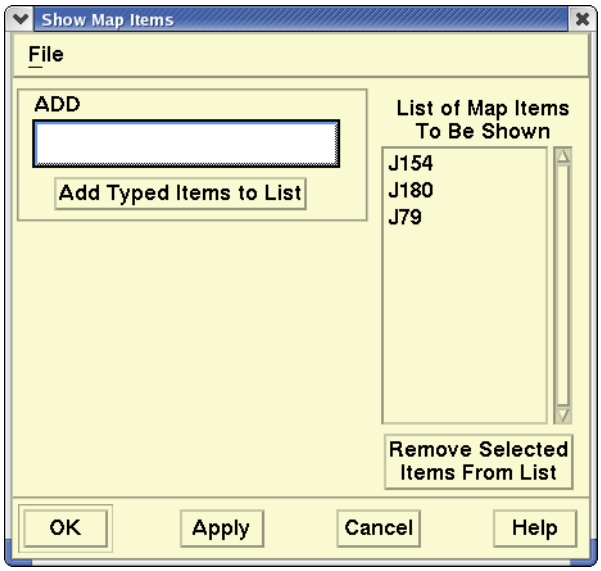
Show Map Item Command	
The **Show Map Item** command allows you to display overlays for individual sectors, TRACONS, fixes, pacing airports, terminals, navaids, or ARTCCs.	
	Quick Key Method
1. Pull down the Maps menu by clicking **Maps** on the main menu or pressing **<Alt> M**. 2. Click **Show Map Item** or press **S.**	**#**
	Semicolon Method
	None

Show Map Items Dialog Box

After you click **Show Map Item** or press the mnemonic or quick key from the menu, the Show Map Items dialog box opens. In the Add field, enter the name of the map item you want to locate. You can enter more than one item in the field by separating each item with a space, as in the example below.



To display these map items, click **Add Typed Items to List**. This moves the items to the List of Map Items to be Shown field.

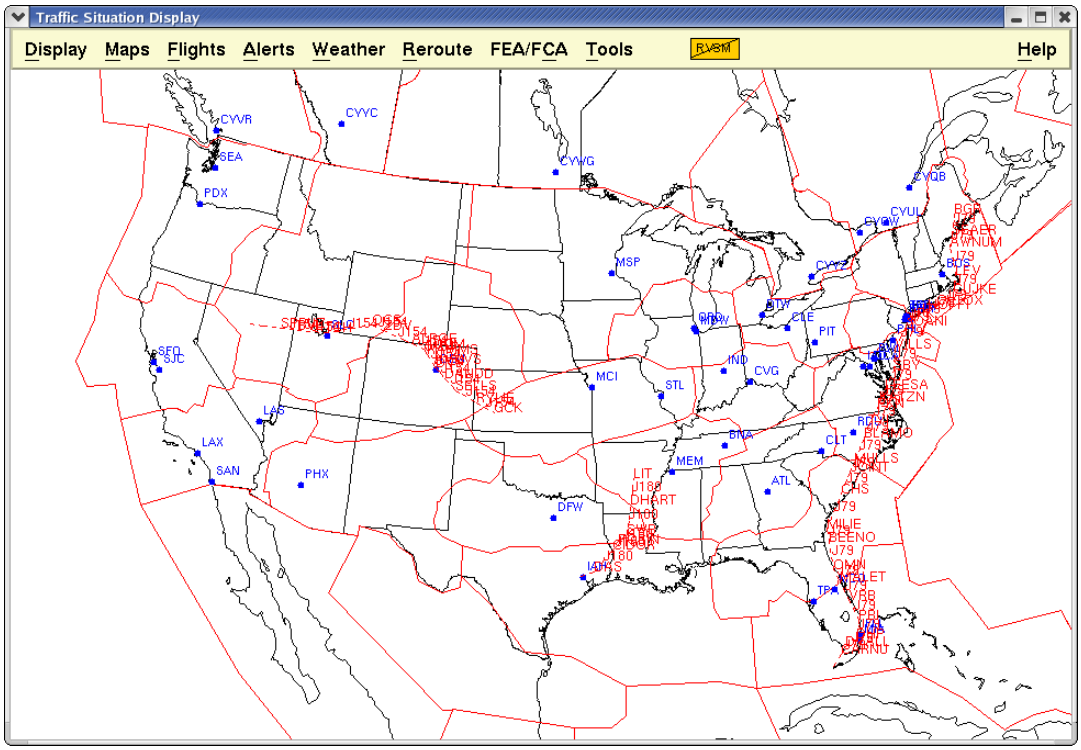


Whenever you open the Show Map Items dialog box, the List of Map Items to be Shown field shows the items that are currently displayed on the TSD. For example, if airways J79, J154, and J180 appear in the dialog box, and you add or remove airways from this list, the corresponding lines and labels are displayed or removed from the TSD. If you remove airway J79 from this list and add airways J10 and J12, there would be four airways on the current TSD display: J10, J12, J154, and J180. The airway J79 would no longer appear in the list or on the TSD display.

To delete shown map items, two steps are necessary. First, select one or more items and click the **Remove Selected Items from List** button. Click an item to select it and deselect all others. Control-click an item to toggle its selection state. **<Shift>**-click an item to select a range of items. Second, click the **OK** or **Apply** button to complete the process of deleting shown map items. In short, you can manipulate the List of Map Items to be shown by using the **ADD** and **REMOVE** features so that the list contains exactly the items you want shown. Click **OK** or **Apply** to cause this list to be displayed on the TSD.

About the Display

After you enter the airway of your choice in the Show Map Items dialog box, the TSD is redrawn and displays a line of labels for each item entered in the dialog box. A sample display is shown below.



The map items remain on the screen after you click **OK**, but the dialog box closes. The map items and the dialog box remain on the screen after you click **Apply**. Clicking **Cancel** removes all current entries that you have not applied from the list and removes the dialog box from the screen.

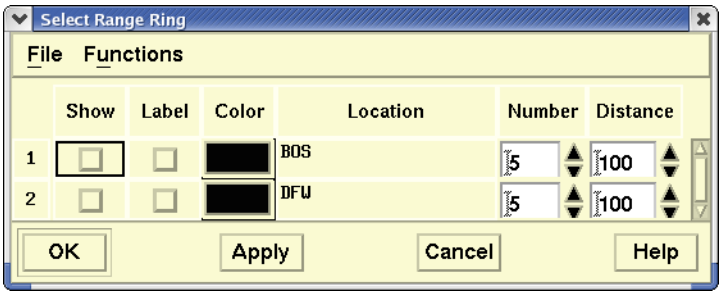
File Menu

You can use the File pull-down menu to save map items, recall them later, and delete them. Clicking the appropriate menu item opens a dialog box. For more information, refer to Chapter 3.

Range Rings Command	
The **Range Rings** command displays one or more sets of range rings around specified locations on the TSD. The locations may be airports, fixes, navaids, lat/lon points, or fix-radial-distances. You may specify the number of rings you want displayed, up to 200, and the distance between the rings, up to 3,000 nautical miles.	
	Quick Key Method
1. Pull down the Maps menu by clicking **Maps** on the main menu or pressing **<Alt> M**. 2. Click **Range Rings** or press **R.**	Place the pointer on the overlay icon that represents the location for which you want rings displayed to issue the command. • To display rings: **<Insert>** • To remove rings: **<Delete>** • To toggle labels on and off: **<Ctrl> <Insert>**
	Semicolon Method
	None

Select Range Rings Dialog Box

After you click **Range Rings** or press the mnemonic key from the Maps menu, the Select Range Ring dialog box opens with focus in the Location field of the first range rings set.



Each row in the dialog box defines a range rings set. The dialog box holds at least 64 range rings sets and expands as you define new sets. You can scroll the rows of sets or resize the dialog box.

After you select **Show** and enter your specifications, click **OK** or **Apply** to display the set of range rings. The following table describes each item in the dialog box.

Select Range Ring

Item	Description	What you do
Show	Toggles specified sets of range rings on and off the display.	Click the button to select or deselect it.
Label	Toggles labels for the center point and distance of each range rings set.	Click the button to select or deselect it.
Color	Specifies the colors in which the range rings are displayed.	Click the button to display the color palette and select the desired color.
Location	Specifies the center point around which the range rings are drawn.	Enter an airport, fix, navaid, lat–lon, or fix–radial–distance. For example: **ORD MALTA JOT 3545/ 14059 M DCA360010**
Number	Specifies the number of rings you want displayed. The default value is five.	Enter a number (1-200) of rings for display. You can also click the up and down arrows to the right of the field. Each click increases or decreases the number of range rings by one. (Hold the <Shift> key while clicking the up or down arrow to increase or decrease the value by 10.) For example: **5**
Distance	Specifies the distance in nautical miles that you want to separate each ring from the next. The default value is 20 miles.	Click in the field and enter up to four characters (1-3000) for the number of miles. You can also click the up and down arrows to the right of the field. Each click increases or decreases the distance by 10. For example: **20**

Selecting Range Rings Sets

Select a range rings set by clicking the row number. That row becomes selected while the other rows are deselected. There are two ways to select a group of sets. One way is to place the pointer on the first row in the group, click and hold the left mouse button, drag the pointer to the last row in the group, and release the mouse button. Another way is to select the first row in the group by clicking the row number, moving the pointer to the row number of the last set in the group, and pressing **<Shift>** while clicking the left button. All the rows between the first and last set become selected. Pressing **<Ctrl>** while clicking the row number toggles the row of the selected set.

File Menu

Under the title bar at the top of the dialog box are two pull-down menus: File and Functions. Through the File pull-down menu, you can save the contents of the Select Range Rings dialog box, recall them later, and delete them if desired. For information about the File menu, refer to Chapter 3.

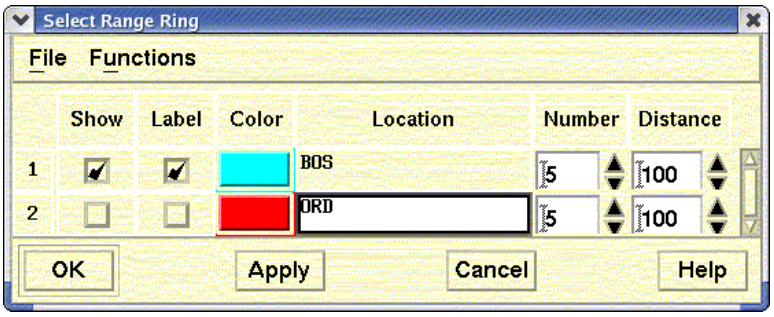
Functions Menu

After you have defined a list of range rings sets, you can use the Range Rings pull-down menu to modify the list. The Functions menu items are explained in this section.

- Add
- Copy
- Delete
- Delete All
- Undo Delete
- Defaults...

Add

Add provides additional rows on the Select Range Ring dialog box for more sets of range rings. The default range rings color and label parameters for the number and distance of range rings are selected. The following sample dialog box shows an added row where you would enter another set of range ring requirements.



Complete the entries in this row and click **OK**. The new set appears on the TSD.

Copy

Copies the selected rows of range rings sets and adds them to the top of the current list of sets. If more than one range rings set is selected, the sets are copied in the order that they were selected. The contents of the copied and original sets are identical.

Delete

Removes all selected sets of range rings from the Select Range Ring dialog box temporarily. The row clears, and the range rings disappear from the display.

Delete All

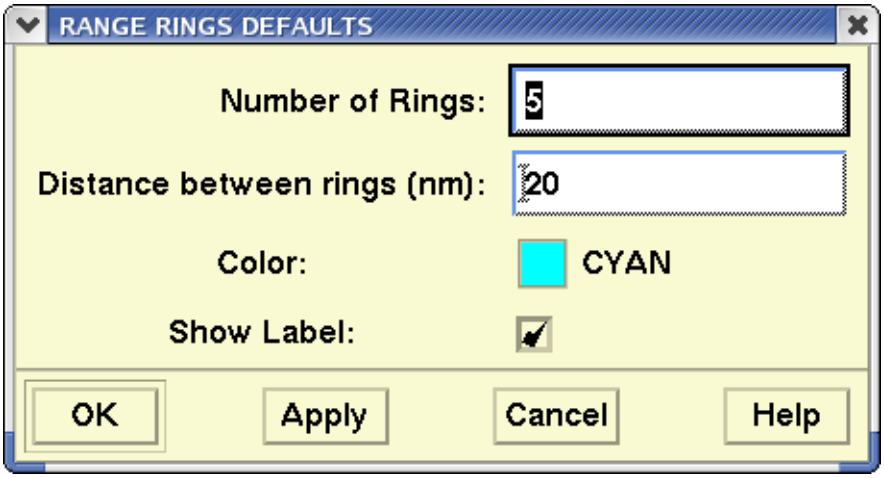
Erases all sets of range rings from the dialog box and allows you to make a new entry. The rows clear, and the range rings disappear from the display.

Undo Delete

Restores the last range rings set(s) that was deleted.

Defaults

Displays the Range Rings Defaults dialog box, which lets you define and save the default parameters of range rings sets that are added to the list of range rings. When the Range Rings Defaults dialog box opens, it contains the current default parameters. If no default parameters are defined, the default values in the following sample dialog box are used.



Range Ring Labels

The labels represent the distance of each ring from the center point, as well as the distance between rings. If the labels are on and obscure your view of traffic, toggle the labels off using the quick key method. To do so, press **<Ctrl> <Insert>**.

Error Message

If the program does not recognize your specifications, an Error dialog box opens with an appropriate message. Click **OK** or press **Esc** to close the Error dialog box. See Appendix B for a list of possible TFMS diagnostic messages.

Overlays Command	
The **Overlays** command lets you produce background overlays of map features for display on the TSD.	
	Quick Key Method
1. Pull down the Maps menu by clicking **Maps** on the main menu or pressing **<Alt> M**. 2. Click **Overlays** or press **O.**	See the Map Overlays Quick Key table on page 5-37 in this section
	None

Map Overlays Dialog Box

After you click **Overlays** or press the mnemonic key from the Maps menu, the Map Overlays dialog box opens.

The Map Overlays dialog box lets you select whether **Current** or **Baseline** sector boundaries will be drawn when sector overlays are shown. This selection only affects the drawing of sector overlays. It does not affect the drawing of Alert icons on the display.

> **Note:** You cannot display a label without selecting its icon. You can, however, display an icon without its label.

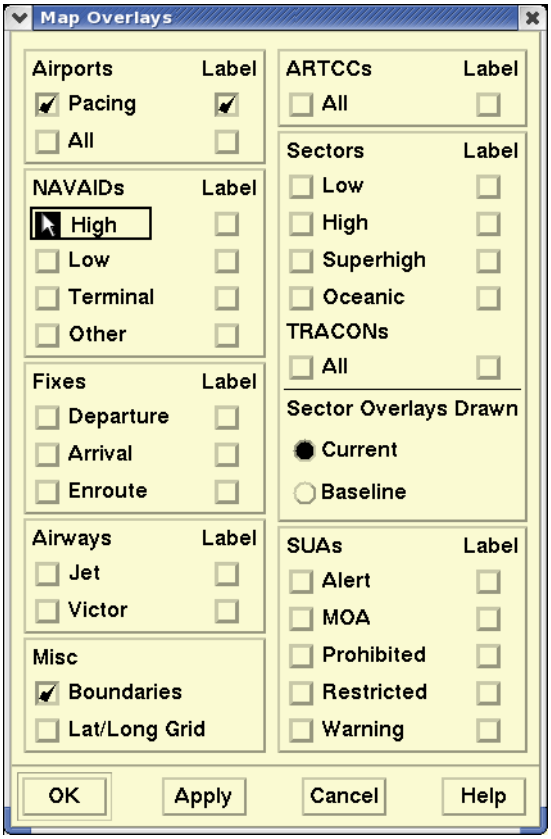
For most of the overlay map features available for display, you have the option to Show in the normal way or you can select to Show on Browse when you move the cursor over the map location with your mouse. In the Show on Browse state, map elements that are in the Hide state will be shown when you move the cursor over the map location with your mouse.

In the Map Overlays, successive clicking toggles the selection among Show, Show on Browse and Deselected, as shown in the table below.

Map Overlays

Button Appearance	Effect on Map Overlay
	Show checkmark: the selected item will be displayed constantly on the map overlay.
	Show on Browse arrow: the selected item will be displayed when the mouse cursor browses over its location on the map overlay. The browse option is available for Airports, Navaids, Fixes, Airways, Sectors and SUAs.
	Deselected button: the corresponding item will not be displayed on the map overlay.

If desired, select **Label** to display identifiers for overlay elements. Click **OK** to display your selections on the TSD.



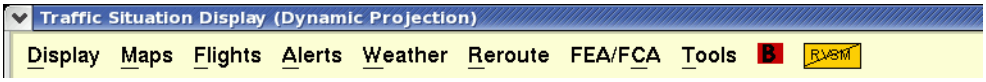
Drawing Sector Overlays

When you select sector overlays to be drawn on the map, an icon appears on the TSD main menu indicating whether the overlays are drawn with Current or Baseline boundaries. The TSD main menu displays the "Current" boundaries icon located at the right of the Tools menu when the Current option is selected.

The tool tip shown below is displayed on the TSD when you hover the cursor over the Current sector overlay icon.

```
Sector overlays are drawn with
current boundaries.
Use the Maps Overlays dialog box to switch
overlays to baseline boundaries
(Alerts are always drawn using current boundaries)
```

The Baseline icon displays when the Baseline option is selected.



The tool tip shown below is displayed on the TSD when you hover the cursor over the Baseline sector overlay icon.

```
Sector  overlays are drawn with
baseline boundaries.
Use the Maps Overlays dialog box to switch
overlays to current boundaries
(Alerts are always drawn using current boundaries)
```

Note: The Sector Overlays Drawn section of the Map Overlays dialog box affects the drawing of sector overlays only. It does not affect the drawing of Alert icons on the display.
Note also that when you are modeling a reroute and overlays are drawn with Current boundaries, the TSD draws sector overlays based on the sector configuration in the "snapshot" of data generated at the time reroute modeling was started.

Using Quick Keys

Most of the map item commands available on the Map Overlays dialog box can be accessed by using quick keys, as shown below. Pressing the quick key for a map overlay toggles its display state to show the overlay, hide the overlay, or show only when the element is browsed.

Map Overlays dialog box

Map Overlay	Overlay Quick Key	Label Quick Key
All Map Labels		~
Pacing Airports	P	<Ctrl> P
All Airports	Y	<Ctrl> Y
High NAVAIDs	F4	<Ctrl> F4
Low NAVAIDs	F5	<Ctrl> F5
Terminal NAVAIDs	F6	<Ctrl> F6
Other NAVAIDs	F7	<Ctrl> F7
Departure Fixes	F3	<Ctrl> F3
Arrival Fixes	F2	<Ctrl> F2
Enroute Fixes	F8	<Ctrl> F8
Jet Airways	J	<Ctrl> J
Victor Airways	V	<Ctrl> V
Boundaries	B	None
Lat/Lon Grid	[L	None
ARTCCs	A	<Ctrl> A
Low Sectors	L	<Ctrl> L
High Sectors	H	<Ctrl> H
Superhigh Sectors	S	<Ctrl> S
Oceanic Sectors	O	<Ctrl> O
TRACONs	^	<Ctrl> <Shift> ^
Alert Areas	[A	<Ctrl> [A
MOAs	[M	<Ctrl> [M
Prohibited Areas	[P	<Ctrl> [P
Restricted Areas	[R	<Ctrl> [R
Warning Areas	[W	<Ctrl> [W
All SUAs on	[+	None
All SUAs off	[`	None

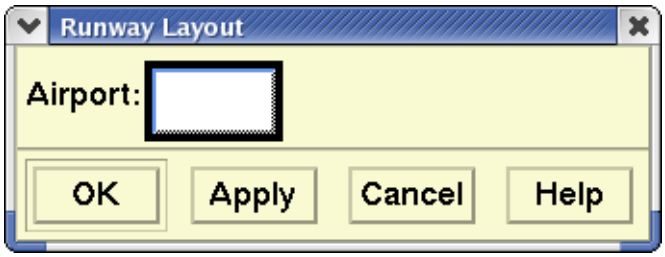
Note: When using quick keys, the TSD displays Current or Baseline sector overlays as specified in the Map Overlays dialog box.

<table>
<tr><th colspan="2">Lat/Lon Point Command</th></tr>
<tr><td colspan="2">The Lat/Lon Point command displays the latitude and longitude coordinates of the geographical location at which the cursor currently points. The values remain until the quick key is pressed to turn them off and the display is refreshed.</td></tr>
<tr><th></th><th>Quick Key Method</th></tr>
<tr><td rowspan="3">None</td><td>1. Move the cursor to the point whose coordinates you wish to find.
2. Press.
To turn the coordinates off:
1. Press D
2. This will permanently remove the coordinates from the display.</td></tr>
<tr><th>Semicolon Method</th></tr>
<tr><td>None</td></tr>
</table>

Runway Layout Command	
The **Runway Layout** command displays an enlarged map of the runways for an airport you specify, as well as the airport's official name and location. If a certain airport's runway layout is unavailable to the TSD, only the official airport name and location appear.	
	Quick Key Method
1. Pull down the Maps menu by clicking **Maps** on the main menu or pressing **<Alt> M**. 2. Click **Runway Layout** or press **W**.	**None**
	Semicolon Method
	None

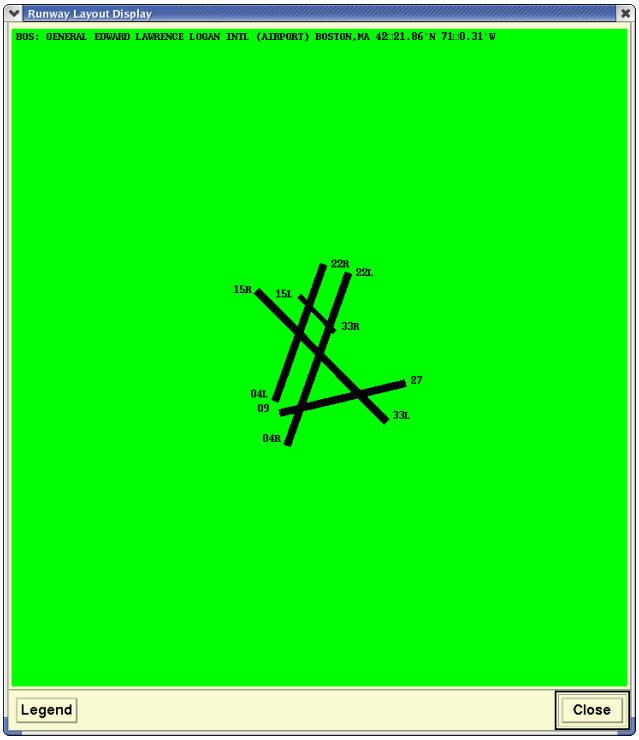
Runway Layout Dialog Box

After you click **Runway Layout** or press the mnemonic key from the Maps menu, the Runway Layout dialog box opens. Enter the airport location identifier in the Airport field.



About the Display

Runways are displayed against a green background. The runways are labeled and color-coded. They are numbered in relation to their magnetic direction, rounded to the nearest 10 degrees. The labels include standard designations for parallel runways: L (left), C (center), and R (right).

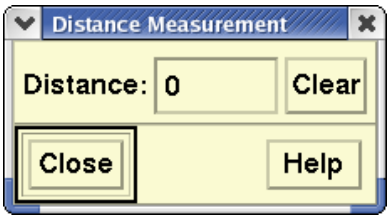


When you click **Legend**, you see the colors and materials they symbolize.

DME Command	
The **DME** command displays the distance in nautical miles between specified points on the TSD and draws a line connecting the points. You can use this command to measure the distance between two points or to measure the cumulative distance along connected line segments.	
	Quick Key Method
1. Pull down the Maps menu by clicking **Maps** on the main menu or pressing **<Alt> M**. 2. Click **DME** or press **D**.	**None**
	Semicolon Method
	None

Distance Measurement Dialog Box

After you click **DME** or press the mnemonic key from the Maps menu, the Distance Measurement dialog box opens.

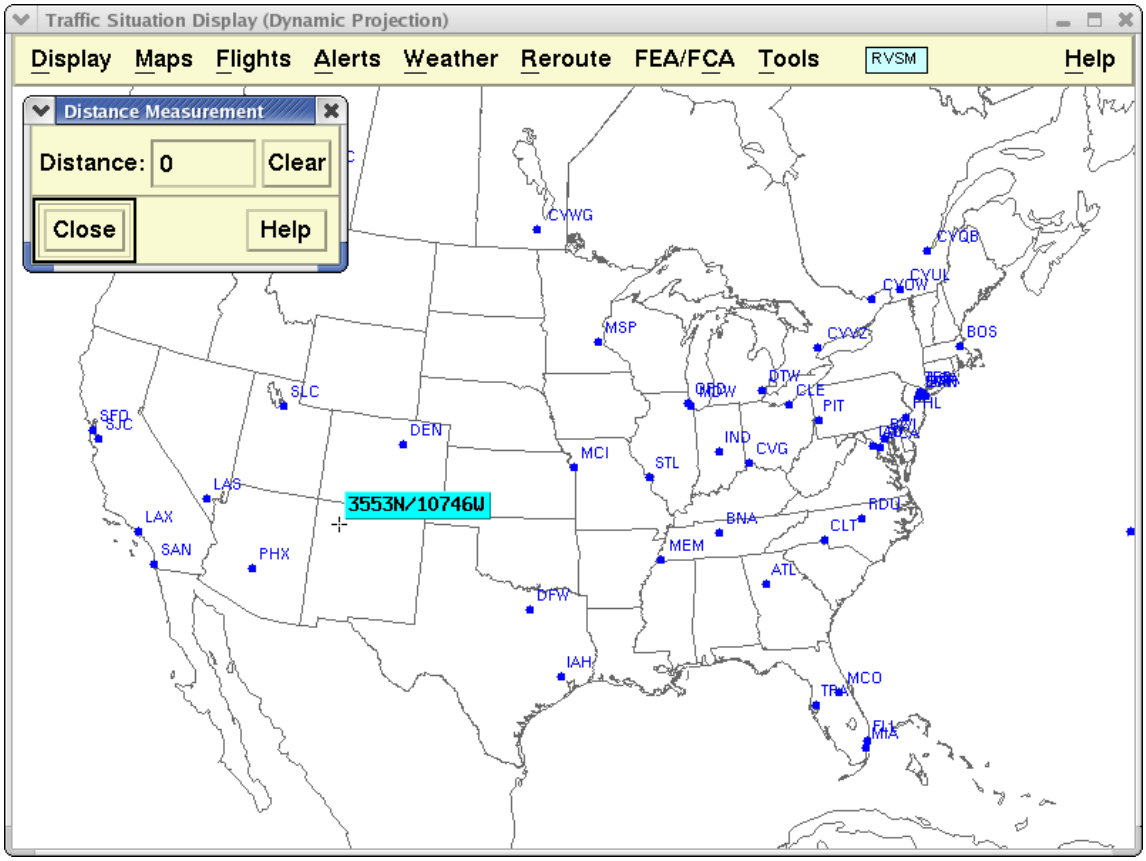


To measure the distance between two points, place the pointer on one point and click the left mouse button once. Place the pointer on the second point and click the left mouse button again. A line is drawn between the two points while the value, in units of nautical miles, appears in the Distance field in the dialog box.

To measure the cumulative distance along connected line segments, place the pointer on a third point and click the left button once. A line extends from the second point to the third point. The total distance along the two line segments appears in the Distance field. Click on additional points to extend the line as desired. Clicking **Close** removes the line and the dialog box from the display.

Lat/Lon Position

When the Distance Measurement dialog box is open the lat/lon position is displayed in a tool tip on the TSD as shown below. As you move the cursor around the TSD display the lat/lon coordinates change accordingly.



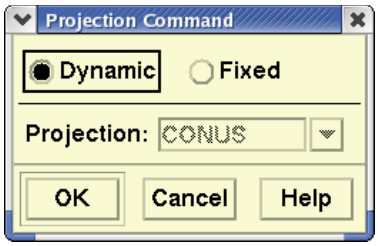
Projection Command	
The **Projection** command allows you to choose the geographic region—CONUS, London, Canada, Atlantic, Alaskan, or Chile —around which you would like your display to be oriented or allows the TSD to dynamically change the projection as needed. After you issue the command, the TSD redraws the display so that the geographical boundaries are most accurately represented around the selected region. For most TSD sites the CONUS is the default region.	
	Quick Key Method
1. Pull down the Maps menu by clicking **Maps** on the main menu or pressing **<Alt> M**. 2. Click **Projection** or press **P**.	**None**
	Semicolon Method
	None

Projection Command Dialog Box

After you click **Projection** or press the mnemonic key from the Maps menu, the Projection Command dialog box opens.

Dynamic Projection

Dynamic projection is selected by default in the Projection command dialog box. The Projection field is disabled.

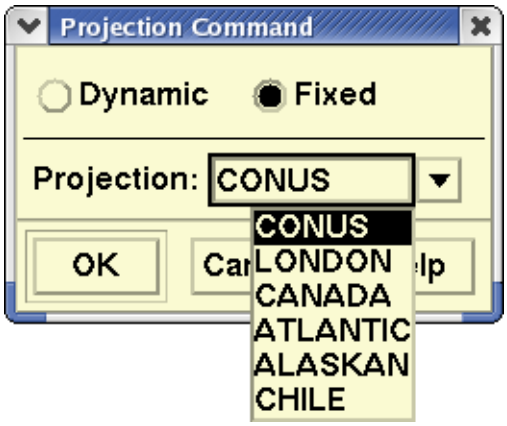


The TSD title bar displays (Dynamic Projection), when Dynamic projection is selected with no named projection.

When the Dynamic Projection is selected, the projection center point automatically changes to be equal to the display center point. As you move the display center point, the projection center point also changes.

Fixed Projection Option

Clicking **Fixed** on the Projection Command dialog box and clicking on the down arrow in the Projection field lets you choose from a pick list of projection center points. The list of projection points is shown below.



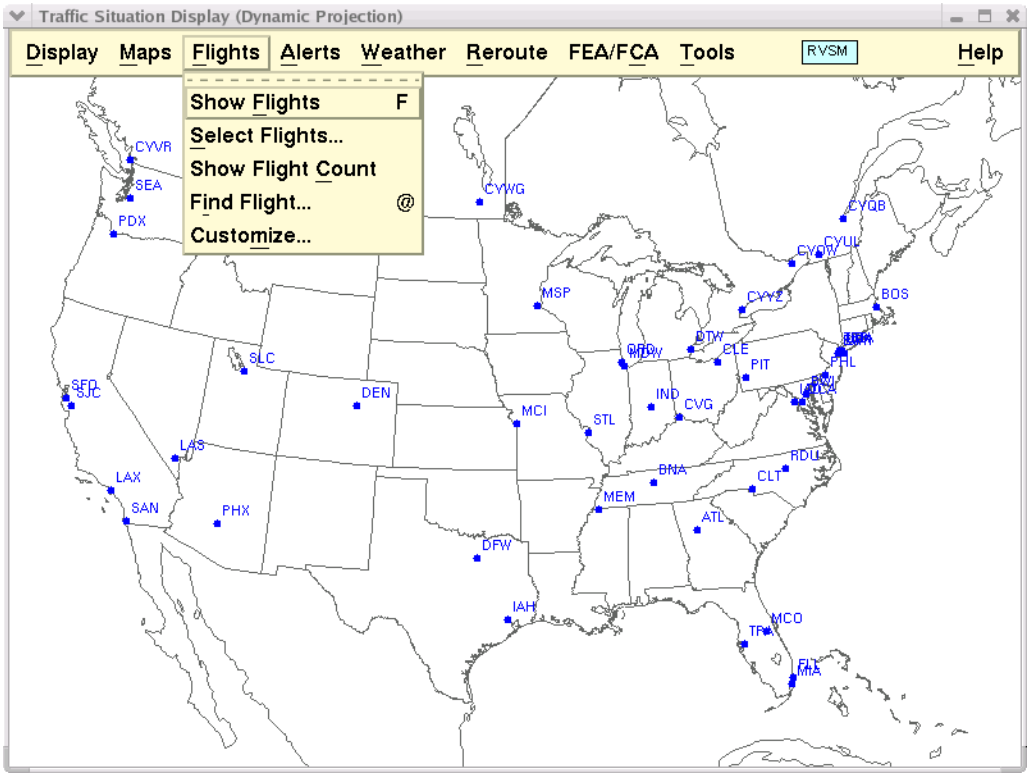
Click **OK** to change the projection. The center point of the display changes and the TSD title bar displays the projection you choose. For example, if CONUS is the selected projection the title bar displays CONUS in parentheses.

Error Message

If you enter the command incorrectly, or ask for a region that is not available in the dialog box, you get an Error message.

Check the command spelling, verify that the region exists (CONUS, LONDON, CANADA, ATLANTIC, ALASKAN, or CHILE) and reissue the command.

Flights Menu



Overview

This section explains how to use TSD menus to display flights and flight counts, select and filter groups of flights, find a specific flight or flights, and supplement the flight display with additional information. The section is divided into the following topics, each of which corresponds to a selection from the Flights pull-down menu.

- **Show/Hide Flights Command** **Page 5-46**

  Turns flight icons off and on
- **Select Flights Command** **Page 5-49**

  Limits the appearance of flight icons to a group of flights you select
- **Show/Hide Flight Count Command** **Page 5-59**

  Toggles the Flight Count window off and on
- **Find Flight Command** **Page 5-60**

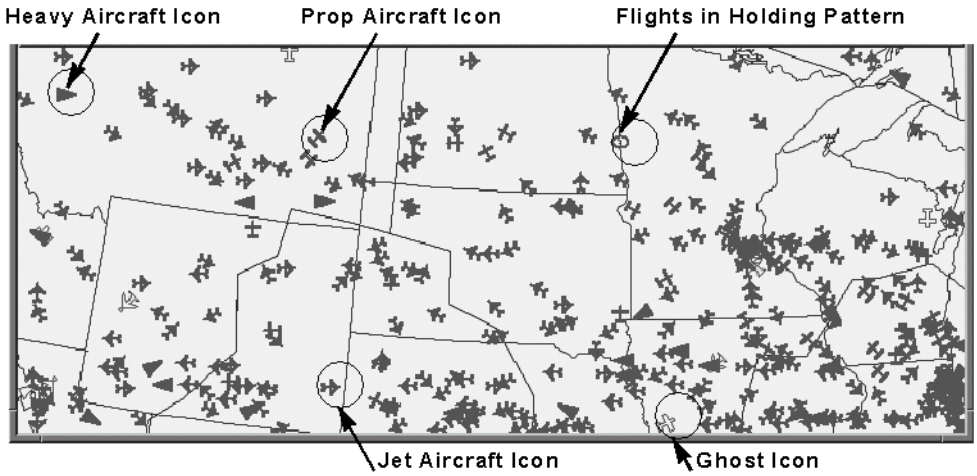
  Locates a specific flight icon on the display
- **Customize Command** **Page 5-63**

  Lets you add additional lines of text and graphics to selected flight icons

Show/Hide Flights Command	
Show Flights/Hide Flights command lets you toggle the flight icons on and off the TSD. Either Show or Hide Flights appears on the Flights menu, depending on whether flights are currently displayed.	
	Quick Key Method
1. Pull down the Flights menu by clicking **Flights** on the main menu or pressing **<Alt> F**. 2. Click **Show Flights** or **Hide Flights** or press **F**	**F**
	Semicolon Method
	None

Resulting Display

When you issue Show Flight, if a flight set has been selected, a display like the following appears.



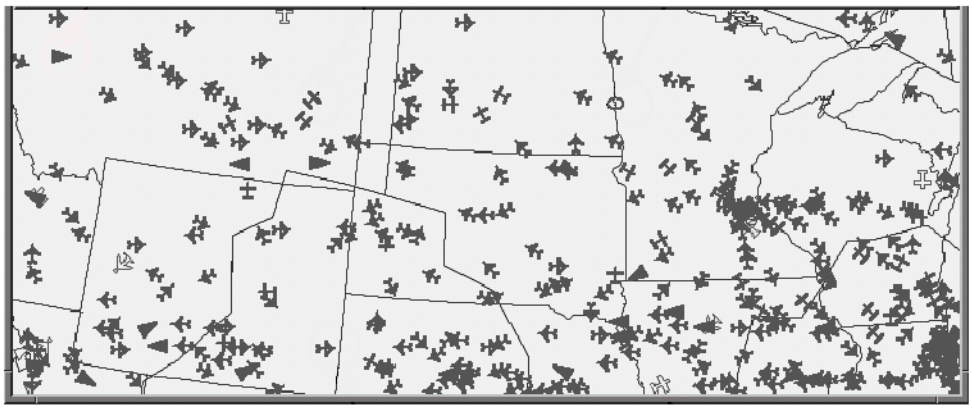
Depending on the flight set, there are several icons that can appear on the display. The following table explains each icon type.

Flight Icon Symbols	
Icon	**Meaning**
•	Dot icon. Changes to a jet aircraft icon when zoomed in.
✈	Jet aircraft icon.
✈	Ghost aircraft. No data received for seven minutes.
▼	Heavy aircraft icon.*
H	Props aircraft icon.*
	RVSM non-conformant flight icon.
○	If Monitor Alert is on, this icon represents either proposed flights or flights estimated to have landed; if Monitor Alert is off, it represents only flights estimated to have landed. A flight estimated to have landed is removed from the display after the next update if no new information has been received.
⬭	Racetrack icon. Flights in a holding pattern. *This icon appears only when you select the Automatic flight icon.

* This icon appears only when you select the Automatic flight icon in the Select Flights dialog box

Solid airplane icons and hollow airplane icons (ghosts) can point in up to16 directions to show the general direction the flight is traveling in. The solid airplane icons represent flights whose positions have been reported through actual data. If the FTM has not received information about a flight for over seven minutes, its solid airplane icon becomes a ghost, meaning that the flight's exact position cannot be determined. If the FTM estimates that the flight has landed, its ghost disappears.

The circle icons may appear when Monitor Alert is active and you are showing Examined Flights for an element you are examining. One circle icon can stand for many flights, all of which are scheduled to depart from the same airport between the present time and the time interval for which you are viewing alerted flights.



Data Updates

During transmission of near real-time flight data, updated information transmits to the flight server node at least once every five minutes. However, the positions are estimated between data updates so that the screen display changes every minute.

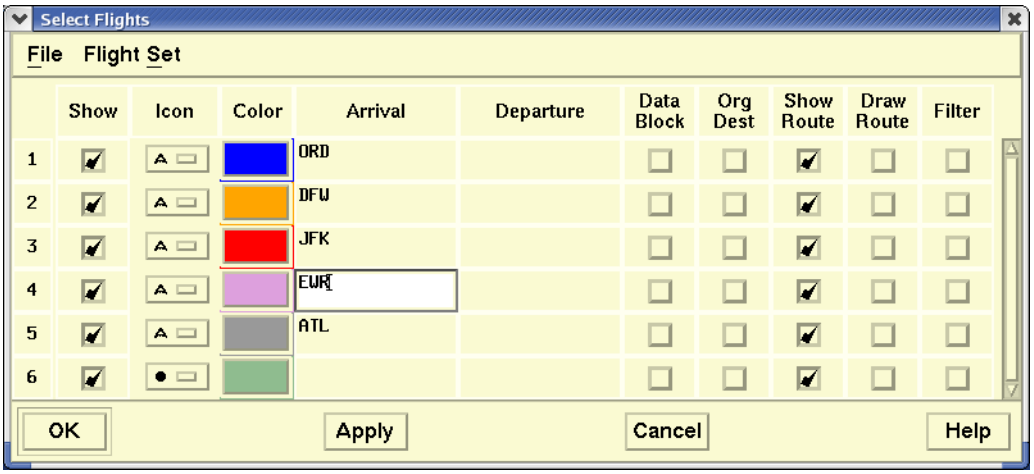
No Radar Symbol

If no flight data is received from one or more ARTCCs (via the host computer) a No Radar symbol appears at the ARTCC designation on the display. The icon looks like this:

<table>
<tr><th colspan="2">Select Flights Command</th></tr>
<tr><td colspan="2">**Select Flights** command lets you create and manipulate flight sets for display on the TSD. You can:
• limit the set of flight icons to one or more groups of flights
• use colors to highlight one or more groups of flights
• specify which icons should represent the flight sets
• save your flight sets for future use
After you issue **Select Flights**, all non-selected flights disappear from the display. Show Flights must be turned on to see your selected flight sets.</td></tr>
<tr><th></th><th>Quick Key Method</th></tr>
<tr><td rowspan="3">1. Pull down the Flights menu by clicking **Flights** on the main menu or pressing **<Alt> F**.
2. Click **Select Flights** or press **S.**</td><td>None</td></tr>
<tr><th>Semicolon Method</th></tr>
<tr><td>None</td></tr>
</table>

Select Flights Dialog Box

When you click **Select Flights** or press the mnemonic key from the Flights menu, the Select Flights dialog box opens. The focus is in the **Arrival** field. To move from one field to another, press **<Tab>**.



Note: You can also opens the Select Flights dialog box by placing the pointer on the TSD with no flights selected, clicking the right mouse button to display the generic right-click menu and clicking **Select Flights**.

Each type of button and text entry field is explained in the following table.

Select Flights

Item	Description	What you do
Show	Toggles on and off a display of the flight set specified on the line.	Click the button to toggle a check mark on or off.
Icon	The Icon choice set lets you choose a flight icon: dot, airplane, or A (Automatic). When automatic is selected, the TSD changes automatically all flight icons in the selected flight set to a symbol representing the aircraft type: **Heavy**, **Jet**, or **Prop**.	Click the button with the left mouse button and click the desired icon type.

Select Flights (Continued)

Item	Description	What you do
Color	Lets you select a color for the flight set icons.	Click the button to display a color palette. Click your choice of color for the flight icons in the selected flight set.
Arrival	Limits the selection to flights traveling to any listed airport or to any airport within listed ARTCCs.	Enter one or more airport or ARTCC designators, separated by a space. Enter **UNKW** for unknown destination points. You may enter a maximum of 256 characters.
Departure	Limits the selection to flights departing from any listed airport or from any airport within listed ARTCCs.	Enter one or more airport or ARTCC designators, separated by a space. Enter **UNKW** for unknown departure points.You may enter a maximum of 256 characters.
Data Block	Toggles data blocks on and off.	Click the button to toggle a check mark on and off.
Org Dest	Toggles on and off an additional data block line indicating a flight's origin and destination. Automatically turns off the Show Route option.	Click the button to toggle a check mark on and off.
Show Route	Toggles on and off an additional data block line showing the entire flight route text. Automatically turns off the org/dest option.	Click the button to toggle a check mark on and off.
Draw Route	Toggles on and off a drawing of the route.	Click the button to toggle a check mark on and off.

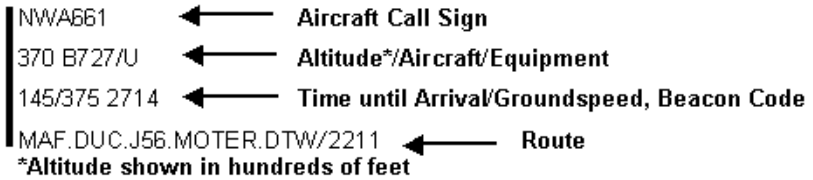
Select Flights (Continued)

Item	Description	What you do
Filter	Displays another dialog box from which you can limit the flight display to specific flights, rather than all flights traveling to and from specified locations.	Enter filter option data from the Flight Set Filter table.

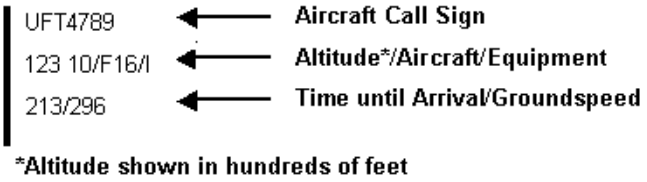
Data Block Displays

The following example illustrates a data block with the origin and destination line.

The next example illustrates a data block with the flight text route. In this example, the numbers at the end of the flight text [2211] represent the ETA for the flight based on TFMS calculations.

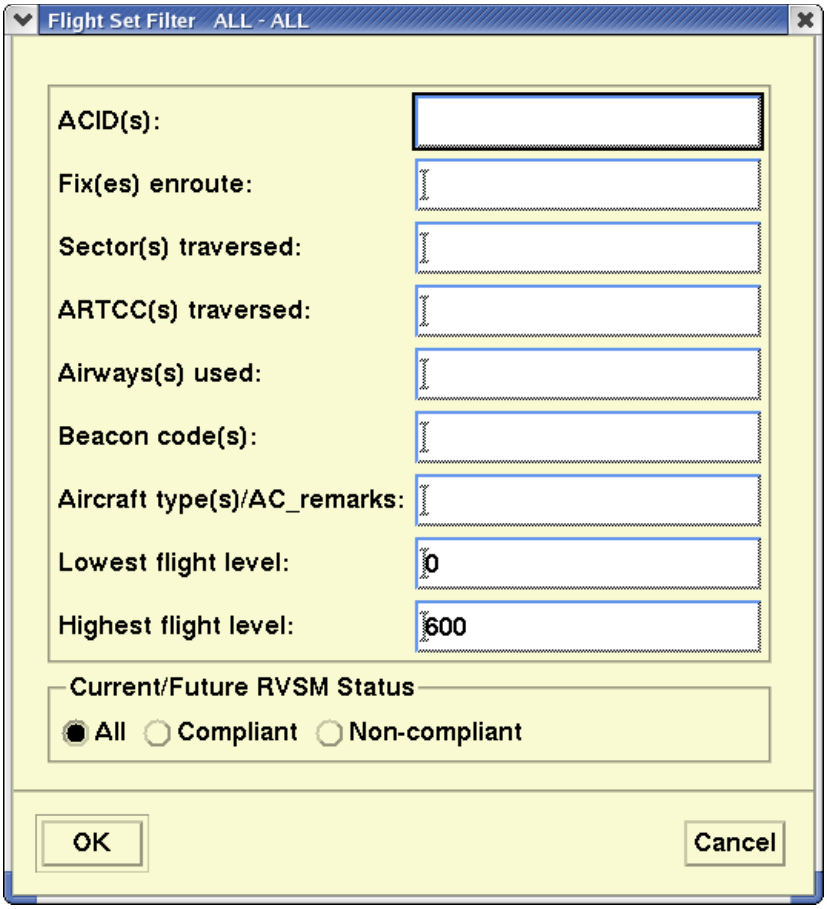


The next example illustrates a data block for a military flight with a two-digit prefix preceding the aircraft information. This field shows the number of aircraft flying in formation with this single call sign. Typically, this prefix is observed for military flights only.



Filter Button

Click the **Filter** button to the right of the row containing the selected flight set. The Flight Set Filter dialog box opens, similar to the one shown below.



The following table explains the items the Flight Set Filter dialog box.

You may enter a maximum of 256 characters into the text fields in the Flight Set Filter dialog box, except for the lowest and highest Flight Level fields, which are restricted to a maximum of four characters each.

Flight Set Filter

Filter option	Description	What you do	Example
ACIDS	Limits the selection to flights of any listed airline.	Click in the field and enter one or more ACID(s) designators, (including designators ending with the * wildcard) separated by a space.	**UAL1191 TWA25* TWA2?**
Fixes Enroute	Limits the selection to flights traversing any listed fix.	Click in the field and enter one or more fix designators separated by a space.	**BUCKS**
Sectors Traversed	Limits the selection to flights traversing any listed sector.	Click in the field and enter one or more sector designators, separated by a space.	**ZNY10**
ARTCCS Traversed	Limits the selection to flights traversing any listed ARTCC.	Click in the field and enter one or more ARTCC designators, separated by a space.	**ZNY ZBW**
Airways Used	Limits the selection to flights using any listed airway.	Click in the field and enter one or more airway designators, separated by a space.	**J80**
Beacon Codes	Limits the selection to flights whose beacon codes begin with the specified value(s).	Click in the field and enter one or more beacon codes, including codes ending with the * wildcard, separated by a space. If the beacon code designator has four or more digits (exclusive of the * character), the TSD limits the selection to flights whose Beacon Code exactly matches the designator. The * wildcard character should be used for all beacon codes of fewer than four digits. The text field accepts up to 256 characters, including spaces.	**1234 123***

Flight Set Filter (Continued)

Filter option	Description	What you do	Example
Aircraft Types	Limits the selection to flights with specific types of aircraft, equipment, and remarks keyword.	Click in the field and enter one or more specific aircraft types, equipment prefix and suffix data, and remarks keywords.	See the A/C Type Filter Options section.
Lowest Flight Level	Limits the selection to flights with current filed, reported, or both filed and reported Altitudes at or above a specified altitude.	Click in the field and specify the flight's altitude as **F** (filed), **R** (reported), or **B** (both filed and reported). Enter altitude in hundreds of feet.	**F200** **R250** **B250**
Highest Flight Level	Limits the selection to flights with current filed, reported, or both filed and reported altitudes at or below a specified altitude.	Click in the field and specify the flight's altitude as **F** (Filed), **R** (reported), or **B** (both filed and reported). Enter altitude in hundreds of feet.	**F350** **R375** **B375**
Current /Future RVSM Status	Limits the selection to current and future flights that RVSM conformant or RVSM non-conformant.	Click **Non-conformant** to eliminate from the flight set any flights that are RVSM conformant, both currently and in the future. Click **Conformant** to eliminate from the flight set any flights that are RVSM non-conformant currently and/or in the future. If you select **All**, the TSD does not filter flights based upon their RVSM status.	
* After clicking **OK** in the Flight Set Filter dialog box, you are returned to the Select Flights dialog box. You need to click **OK** again to limit your flight selections to the filtered display.			

A/C Type Filter Options

The A/C Type filter option includes aircraft and equipment types. Refer to Appendix A for tables listing sample entries and their descriptions for Remarks Keywords (Appendix A, Page A-22) and Equipment Types including Aircraft Types, Equipment Type Prefix and Equipment Type Suffix (Appendix A, Page A-23).

Flight Set Menu Options

The Flight Set menu lets you perform additional functions, which are defined in the following table.

Flight Set Menu

Item	Description	What you do
Add	Creates an extra line on the Select Flights dialog box. You can create another flight set on this line for display on the TSD.	Click **Flight Set** and click **Add**.
Copy	Adds a copy of a defined flight set to the first line of the Select Flights dialog box. You can edit the fields in the flight set to match your specifications.	Click the number to the left of the row that contains the defined flight set that you want to copy. Click **Flight Set** and **Copy**.
Delete	Removes a defined flight set from the Select Flights dialog box and from the TSD.	Click the number to the left of the row that contains the defined flight set that you want to delete. Click **Flight Set** and click **Delete**.
Delete All	Deletes all flight sets from the Select Flights dialog box and from the TSD.	Click **Flight Set** and **Delete All**.
Undo Delete	Returns the flights just deleted with Delete or Delete All.	Click **Flight Set** and **Undo Delete**.
Top	Establishes the priority order in which flights that meet criteria for more than one flight set are displayed.	Click the number to the left of the defined flight set you want to give top priority to. Click **Flight Set** and **Top**.

Saving the Flight Sets

After you select a flight set for display on the TSD, you can save that flight set and recall it later by issuing the Save command on the File pull-down menu on the Select Flights dialog box. The File menu is discussed in Chapter 2.

Ordering Flight Sets

Flight sets are ordered entities in the TSD, with the order of precedence being from the top of the list. Flights that belong to two or more sets are displayed according to the attributes of the top most set. The flight set at the top of the list takes precedence over all other flight sets in that list.

Copy a Flight Set

You can use the Copy command to create a new flight set based on a current flight set.

What To Do
Copy a flight set
1. Click the left mouse button on the number of the row that contains the flight set you want to copy. This action selects the flight set. 2. Select **Copy** from the Flight Set menu. The system copies the selected flight set and places the new copy at the top of the list. You can now add additional criteria that define the flight set.

Drag and Drop Functions

You can reorder the position of the flight sets in the Select Flights dialog box by using a function called drag and drop.

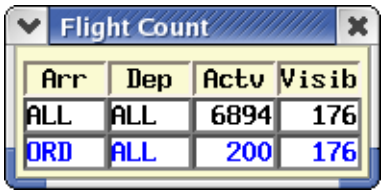
What To Do
Reorder a flight set
1. Click the left mouse button on the number of the row that contains the flight set you want to move. This action selects the flight set. 2. Hold down the middle mouse button. The pointer changes to a drag icon. 3. Move the drag icon to reposition it to a new row location. 4. Release the middle mouse button. The flight set moves to a row directly above the row number you pointed to. For example, if you drag Row 1 to Row 4 with the drag icon and release the middle mouse button, the flight set would be displayed in Row 3.

Note: If you drag a row below Row 4, that row will be displayed as Row 4.

Show/Hide Flight Count Command	
Show Flights/Hide Flight Count command lets you toggle the Flight Count window on and off the TSD. Either Show or Hide Flight Count appears on the Flights menu, depending on whether the Flight Count window is currently on the display.	
	Quick Key Method
1. Pull down the Flights menu by clicking **Flights** on the main menu or pressing **<Alt> F**. 2. Click **Show** or **Hide Flight Count** or press **C.**	**None**
	Semicolon Method
	None

Flight Count Dialog Box

When you issue the Show Flight Count command, the Flight Count dialog box opens, showing the total number of active flights in the air, the number of active flights in each currently shown flight set, and the number of those active flights that are visible on the TSD.

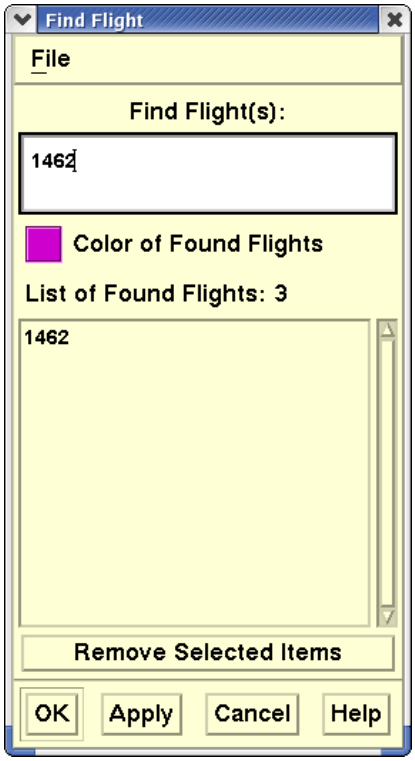


In the sample above the first line contains the number of all departing and arriving active flights in the TFMS database. Below that is a flight set previously selected in the Select Flights dialog box. Each flight set shows the number of active flights arriving at and departing from specified airports and the number of those flights that are currently visible on the TSD. Flight icons within each flight set are displayed in the same color. The sample above shows 200 flights arriving at O'Hare Airport, with 176 of those flights visible on the TSD. From Boston, 68 flights are departing, with 65 of those flights visible.

<table>
<tr><th colspan="2">Find Flight Command</th></tr>
<tr><td colspan="2">The Find Flight command lets you specify the aircraft identification number (ACID) or beacon code of flights to locate on the display. When the flight is located, an airplane icon with a data block appears on the display for all occurrences of flights with the specified ACID. In the Find Flight dialog box you can use the File function to save, recall and delete lists of flights.</td></tr>
<tr><th></th><th>Quick Key Method</th></tr>
<tr><td rowspan="3">1. Pull down the Flights menu by clicking Flights on the main menu or pressing <Alt> F.
2. Click Find Flight or press I.</td><td>@</td></tr>
<tr><th>Semicolon Method</th></tr>
<tr><td>None</td></tr>
</table>

Find Flight Dialog Box

When you issue Find Flight from the Flights menu or press the quick keys, the Find Flight dialog box opens. You can find a flight based on its beacon code, as well as its ACID. In the dialog box below, the beacon code 1462 has been entered. The number of found flights for a beacon code entry will be displayed. In the sample below, the number of found flights with beacon code 1462 is 3.



When you click **OK** or **Apply**, the TSD displays the found flights with their data blocks.

File Menu

The Find Flight dialog box has File Menu options which allows you to save, recall and delete lists of flights.

The following table explains how to use the Find Flight dialog box.

Find Flight

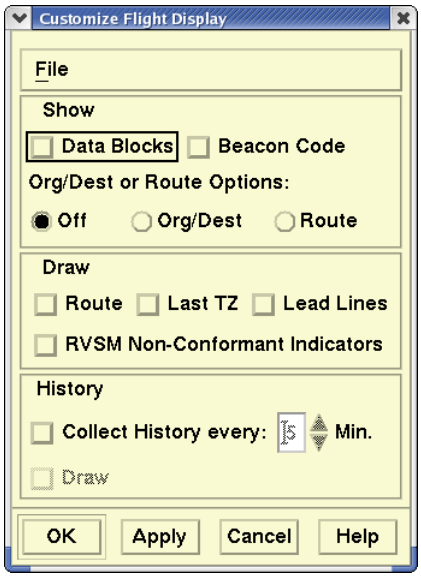
Item	Description	What you do	Example
Find Flight(s)	Specifies the ACID or Beacon Code for the flight or flights to locate on the display. When the flight is located, a flight icon with a data block appears on the display. The flight identifier also appears in the Selected Flights column in the dialog box.	Enter a flight number or Beacon Code. Flight number may be entered with a wild card character for all flights for a specified airline, or all flights for a specified airline beginning with specific flight numbers. Click **OK**. Wild card characters are: * - any character string ? - any single character	**ACID:** **UAL214** **UAL2*** **UAL28?** **Beacon Code:** **1462**
Color of Found Flight	Specifies the color in which the flights and data blocks should appear.	Click the button to display a color palette and click the desired color. The color box changes to the new color and after you click **OK**, all the flights listed in the Found Flights window change to your chosen color.	
Remove Selected Flight From List	Removes the data blocks from the flights specified by Find Flight and removes the flight identifiers from the Found Flights window.	Click the button to remove the flights from the list.	

Note: If a flight is a member of a shown flight set, it is displayed in the color that is defined in Select Flights. However, its data block will be shown.

Customize Command	
Customize command lets you determine some aspects of how flights appear on the TSD by clicking buttons in a dialog box. This command lets you display data blocks and add lines of information to them. Also, you can draw routes, the history for flights currently on the TSD, an asterisk at the position of the last TZ received for a flight, and a lead line for all displayed flights.	
	Quick Key Method
1. Pull down the Flights menu by clicking **Flights** on the main menu or pressing **<Alt> F**. 2. Click **Customize** or press **M**.	**None**
	Semicolon Method
	None

Customize Flight Display Dialog Box

After you have issued Customize, the Customize Flight Display dialog box opens. The dialog box is divided into three areas: Show, Draw, and History



Note: This function also affects flights found through the Find Flights command.

The following table explains how to use the Customize Flight Display dialog box

Customize Flight Display

Item	Description	What you do	Explanation
Show			
Data Blocks	Identifies the flight, the flight's altitude, the aircraft type, the ground speed, and the time (in minutes) until arrival. This time is based on the TFMS Estimated Time of Arrival.	Click the button to display a check. Click **OK** to display data blocks for all flights on display. To remove the data blocks, click the button to remove the check and click **OK**.	Leader lines connect each data block with the flight to which it refers.
Beacon Code	Controls whether the beacon code is shown in the data block.	Click the **Beacon Code** checkbox to display the beacon code in the third line of the flight data block.	One or more data blocks must be displayed to see the effect of this command.
Org/Dest	Displays an additional line of data block information identifying the flight's origin and destination. When the command is issued, any data blocks currently displayed are appended with an additional line showing the airports of origin and destination for the flight. The Org/Dest and Route options cannot be selected simultaneously.	Click the **Org/Dest** button, and click **OK** to append the origin/destination information to all data blocks that are currently displayed. To remove the appended lines, click the **Off** button and click **OK**.	One or more data blocks must be displayed to see the effect of this command.

Customize Flight Display (Continued)

Item	Description	What you do	Explanation
Show Route	Adds the textual flight route as part of a standard data block. When the command is issued, any data blocks currently displayed are appended with an additional line showing the flight route.	Click the **Route** button, and click **OK** to add the flight route text information to the data blocks. To remove the appended line, click the **Off** button and click **OK**.	One or more data blocks must be displayed to see the effect of this command.

Customize Flight Display (Continued)

Item	Description	What you do	Explanation
Draw			
Draw Route	Draws the route of every flight which is currently displayed.	Click in the field to display a check. Click **OK** to draw the routes on the display.	Each route looks like a solid line and appears in the same color as the airplane icon and its data block.
Last TZ	Graphically identifies the last reported position of each flight and draws a dotted line from that point to the appropriate flight icon.	Click the button and click **OK**. To remove the dotted line from the display, click **Last TZ** again. Make sure Show Flights is on.	If no TZ has been received for a flight, the TSD draws nothing for that flight.
Lead Lines	Displays dotted lines leading from the noses of the airplane icons to forecast the position of flights over a period of time or a distance that you specify.	Click **Lead Lines** to expand the dialog box to include the Lead Lines Specifications section.	See the following Lead Line section (page 5-68) for procedures on using this section.
RVSM Non-Conformant Indicators	Draws squares around non-conformant flights when they are displayed on the TSD.	Click in the **RVSM Non-Conformant Indicators** checkbox.	See the RVSM Non-Conformance Indicators section (page 5-68).
History			
Collect History every:	Tells the TSD to begin collecting historical data.	Click to display a check. Click the up or down arrow to set the minutes. To stop collecting history, click **Collect Histor**y every again.	The default frequency in minutes that the TSD should collect the history is 5. You can increment or decrement this number of minutes.

Customize Flight Display (Continued)

Item	Description	What you do	Explanation
Draw	Shows the successive positions of a flight at each of the flight's updates that you established in the Collect History every field.	Click **Draw** to display a check. If necessary, issue Show Flights. To remove the drawing from the TSD, click **Draw** again.	The TSD draws a dashed line connecting the flight's previous locations. The history appears in the same color as the flight icon.

If you turn on Data Blocks using the Customize command, the Org/Dest or Route selections override those selected in the Select Flights dialog box. However, if you do not turn Data Blocks on using the Customize command, the Select Flights dialog box takes precedence.

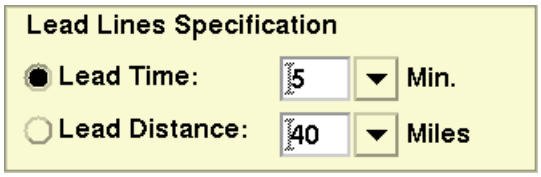
Using the Lead Lines Specification Section

The Lead Lines Specification section of the dialog box lets you specify the lead time in minutes and the lead distance in nautical miles. The default value for Lead Time is five minutes; the default value for Lead Distance is 40 miles. The following procedure illustrates how to change the values in either the lead time in minutes field or the lead distance in nautical miles field.

What To Do

Change the values

1. In the Customize Flight Display dialog box, select **Lead Lines** to activate the Lead Lines Specification portion of the dialog box.



2. Enter the values for either Lead Time or Lead Distance.

- To change the Lead Time value, click the down arrow and on one of the values that appear on the display. You can also type the value in the text field to the right of the Lead Time button.
- To change the Lead Distance value, click the down arrow and on one of the values that appear on the display.You can also type the value into the text field.

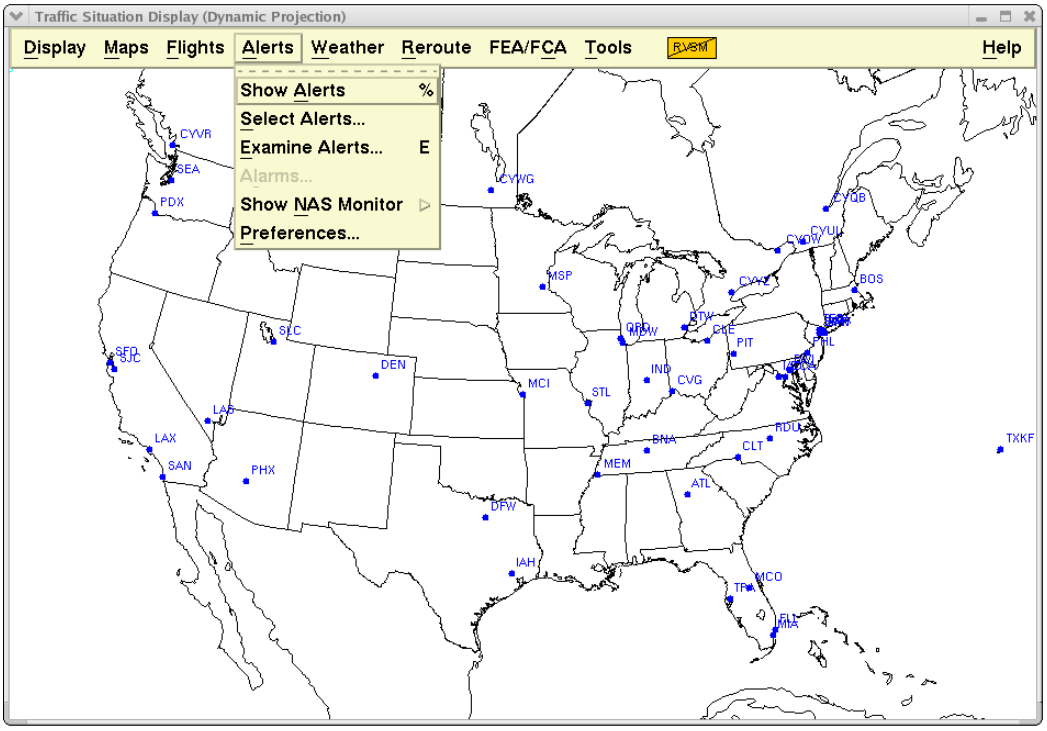
3. Click **OK** to implement your changes and to close the Customize Flight Display dialog box.

RVSM Non-Conformant Indicators

When you select the **Non-Conformant Indicators** option, the TSD displays data for non-conformant flights as follows:

- At each airport with inactive flights on the ground, the TSD displays the number of inactive flights predicted to be RVSM non-conformant when they are in any of the objects (sectors or FEA/FCAs) for which flights are being drawn.
- If the data block is shown for examined flights on the ground, the TSD inserts “NC” before each flight that is RVSM non-conformant in at least one of the objects (sectors or FEA/FCAs) for which flights are currently being drawn.

Alerts Menu



Overview

In this section you will learn how to use the commands available on the Alerts menu and sub-menus in Normal mode. The section presents information on displaying alert symbols, selecting and examining alerted elements, acquiring additional information on traffic demands of airports, sectors, and fixes using the NAS Monitor and System Summary, and setting preferences for displaying alerts.

Each of the following topics corresponds to an item on the Alerts pull-down menu.

- **Show/Hide Alerts Command** **Page 5-71**

  Toggles the alert symbols on and off the TSD
- **Select Alerts Command** **Page 5-75**

  Lets you limit the display of alerted elements to a selected group or groups
- **Examine Alerts Command** **Page 5-77**

  Lets you obtain more details about traffic demands on a particular airport, sector, or fix

- **Show NAS Monitor Command** **Page 5-81**

  Lets you view in one display the alert status of all sectors within selected Centers

- **Preferences** **Page 5-132**

  Lets you define preferences for displaying alerts

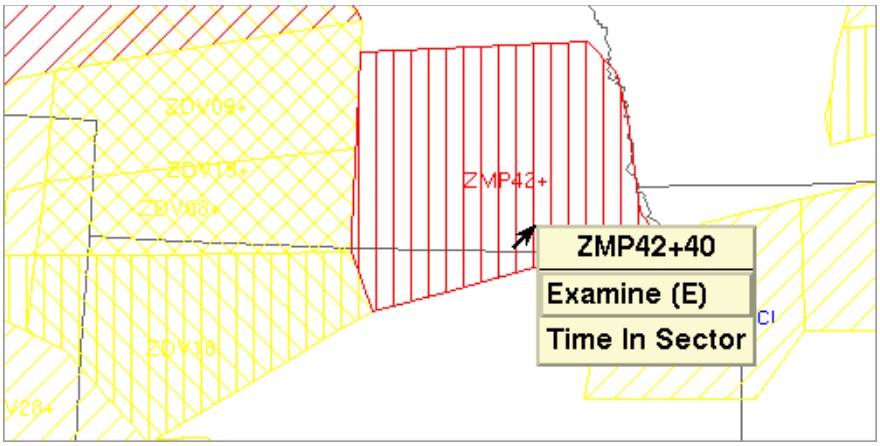
<table>
<tr><th colspan="2">Show/Hide Alerts Command</th></tr>
<tr><td colspan="2">Show Alerts/Hide Alerts command lets you toggle alert icons for airports, sectors, and fixes. Alerted elements must first be selected. See Select Alerts Command on page 5-75 for additional information.</td></tr>
<tr><th></th><th>Quick Key Method</th></tr>
<tr><td rowspan="3">1. Pull down the Alerts Menu by clicking Alerts on the main menu or pressing <Alt> A.
2. Click Hide Alerts or Show Alerts or press A.</td><td>%</td></tr>
<tr><td>Semicolon Method</td></tr>
<tr><td>None</td></tr>
</table>

About the Display

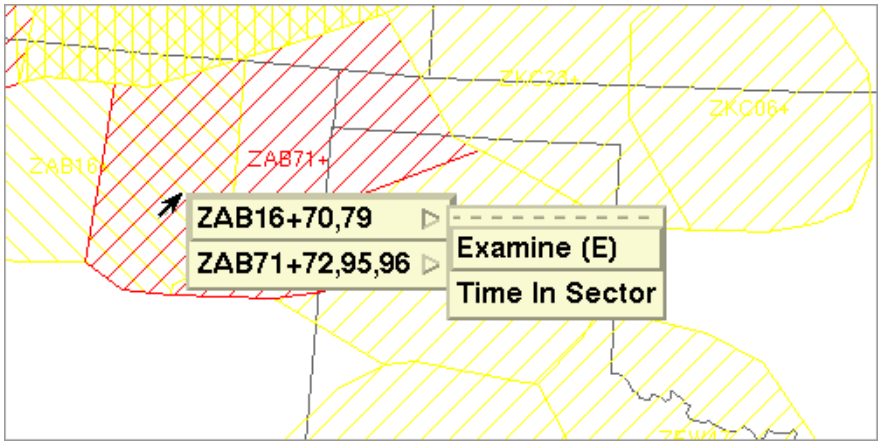
The term alerts refers to areas in which the traffic demand is projected to exceed a pre-defined Monitor Alert Parameter (MAP). The following three types of display elements can be placed on alerted status:

1. **Airports**
   Traffic demands are based on the projected numbers of flight arrivals and departures during a time interval. Excessive arrivals or departures trigger alerts independently.
2. **Sectors**
   Traffic demands are based on the greatest number of flights projected to be within the sector at any instant during a particular time interval (peak load.)

A plus (+) or minus (-) sign is appended to a sector label if that sector is not in its baseline form. Right-clicking an alerted sector opens a right-click menu.

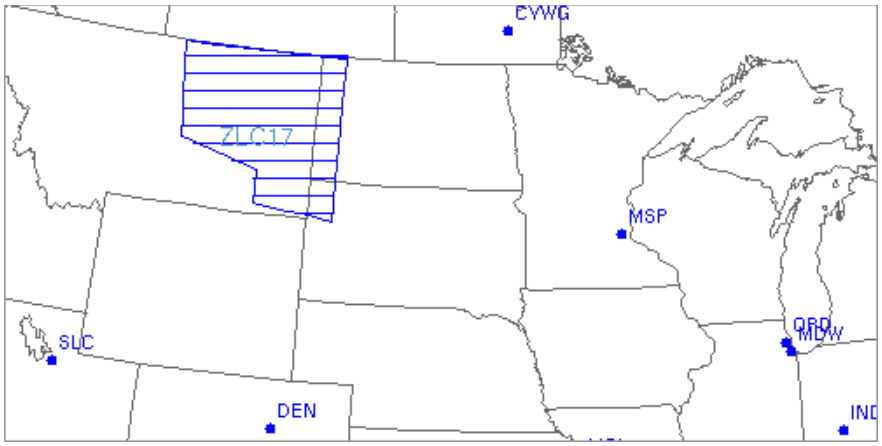


If more than one sector is alerted at the pointer location, right-clicking opens a cascading menu with options for all sectors alerted at that location. Each option contains a description of the current configuration for the sector. In the example below, sector ZAB16 currently has sectors ZAB70 and ZAB79 combined into it. The label for sector ZAB16 includes its 3-character Center prefix and the expanded description displays as ZAB16+70,79.

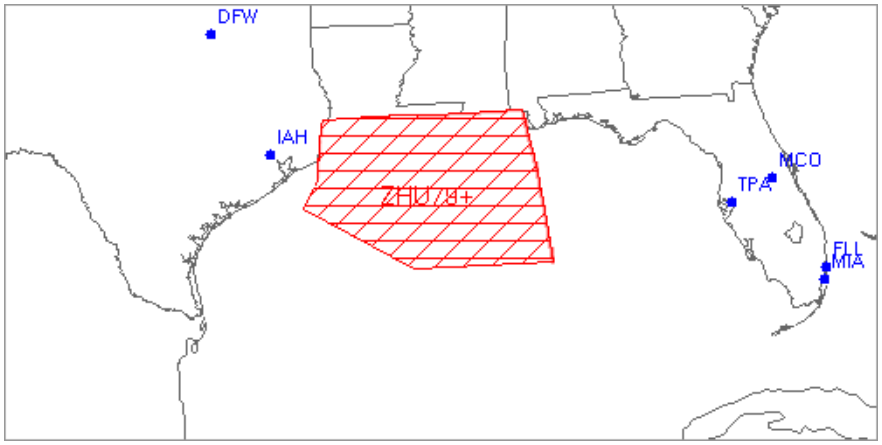


If the **RVSM** option is selected in the Select Alerts for Display dialog box (Select Alerts menu) or if the **RVSM Sector Alerts** option is selected in the Select RVSM Display Options dialog box (Display menu, RVSM option), RVSM alerts are displayed on the TSD.

If the sector does not meet the conditions for drawing a standard alert, the TSD draws the sector with a blue horizontal line fill as shown below. The label is displayed with a lighter blue.

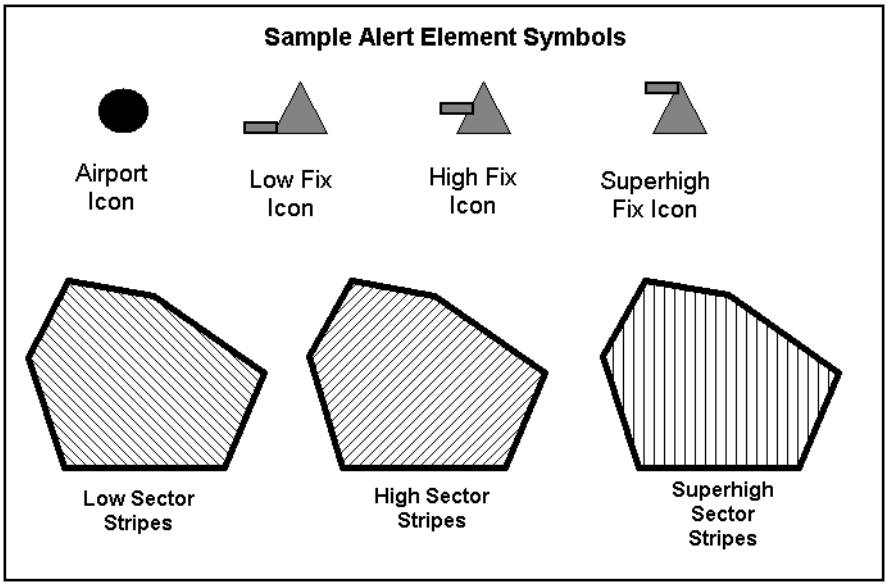


If the sector does meet the conditions for drawing a standard alert, the TSD draws the sector as before, but with the addition of a horizontal line in the same color as the sector alert.



3. **Fixes**
   Traffic demands are grouped according to the sector altitude limits into which they fall, and are based on the total number of flights projected to encounter the fix during a specific time period and within a certain altitude range.

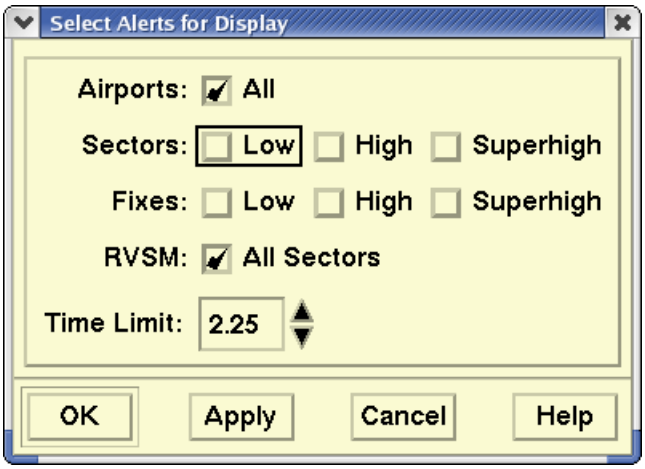
The following illustration shows the alert element symbols:



Select Alerts Command	
The **Select Alerts** command lets you limit the display of alerted airports, sectors, and fixes to a selected group or groups.	
	Quick Key Method
1. Pull down the Alerts Menu by clicking **Alerts** on the main menu or pressing **<Alt> A**. 2. Click **Select Alerts** or press **S**.	**None**
	Semicolon Method
	None

Select Alerts for Display Dialog Box

After you click **Select Alerts** or press the mnemonic key from the Alerts menu, the Select Alerts For Display dialog box opens.



The following table explains each item in the Select Alerts For Display dialog box. Make your selections and click **OK** or **Apply**.

Select Alerts

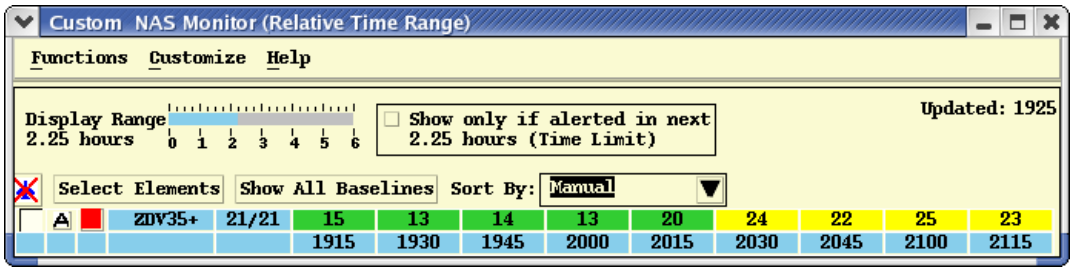
Item	What you do
Airports: All	Click in the checkbox to display all alerted airports. All airports are selected by default.
Sectors: Low, High, Superhigh	Click in one or more checkboxes to specify which type of alerted sectors you want to display.
Fixes: Low, High, Superhigh	Click in one or more checkboxes to specify which type of alerted fixes you want to display.
RVSM	Click the button to display RVSM alerts.
Time Limit	Click in the **Time Limit** field and enter the hours directly, or click the up or down arrows to increment or decrement hours and minutes. The standard default time limit is 2.25 hours, but this depends on what has been saved in the defaults file. The maximum time limit is six hours. **Note**: Any changes you make to the Alert Time Limit through the Select Alerts command are reflected in Set Alert Time Limit through the NAS Monitor.

Note: Clicking **OK** or **Apply** will automatically Show Alerts. However, if Hide Alerts has been issued, you will not see your selected alerted elements on the TSD when you save and close the Select Alerts for Display dialog box. If alerts are currently drawn on the display, the TSD redraws alert icons to reflect the new time limit.

Examine Alerts Command	
The **Examine Alerts** command lets you obtain more details about traffic demands on a particular airport, fix, or sector.	
	Quick Key Method
1. Pull down the Alerts Menu by clicking **Alerts** on the main menu or pressing **<Alt> A**. 2. Click **Examine Alerts** or press **E**.	Press **E** with the pointer on the alerted element.
	Semicolon Method
	None

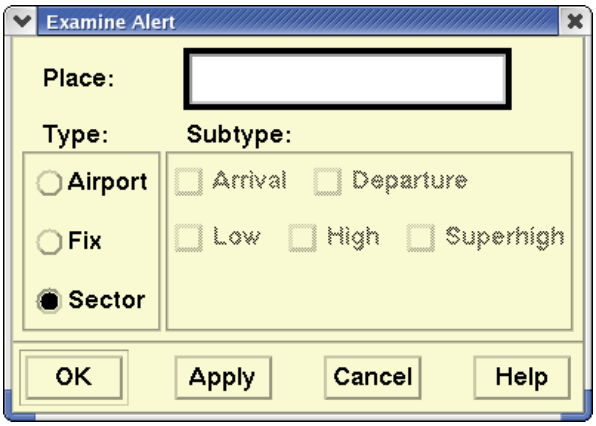
Using the Quick Key Option

To display a NAS Monitor with a row showing the alert status for a particular alerted element, place your pointer on that element and press the mnemonic key for the Examine Alerts function. This opens the NAS Monitor that is specified in the NAS Monitor Preference dialog [see the Preferences command on page 5-132] and displays a row for that alert element, as shown below, without first opening the Examine Alert dialog box.



Using the Menu Option

After you click **Examine Alerts**, the Examine Alert dialog box opens. Enter the name of an airport, fix, or sector in the Place field and click the appropriate button to specify the element type.



Click **OK** or **Apply**. A NAS Monitor appears for your selected item along with a NAS Monitor Control Panel.

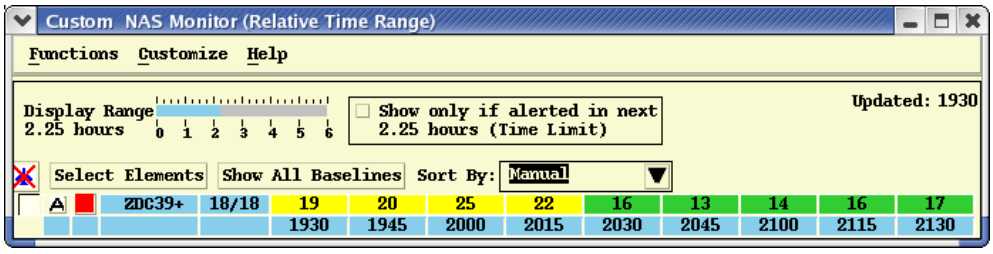
Map On and Map Off Parameters

The alert status for sectors is controlled by two Monitor Alert Parameters: MAP On and MAP Off. A sector will become alerted when the peak traffic count exceeds the MAP On value. It will not become unalerted until the peak traffic count becomes equal to or less than the MAP Off value.

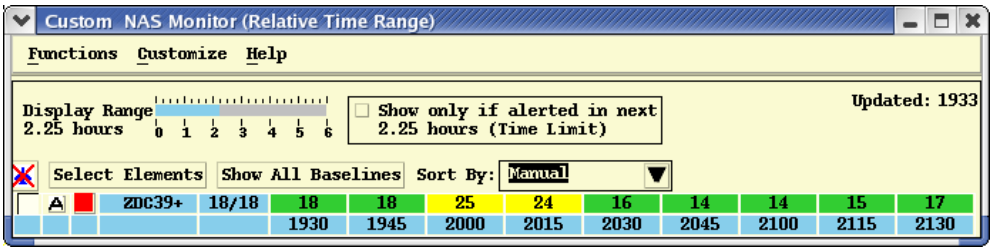
If the MAP On and MAP Off parameters are different, you must be careful to interpret the alert status of sectors correctly. In some cases, sectors with the same peak counts and map parameters may have different alert statuses.

Same MAP On and MAP Off Parameters

In the example below, the MAP On/MAP Off parameters are the same. The 1930, 1945, 2000, and 2015 intervals are alerted since they are all above the 18 MAP On and MAP Off.

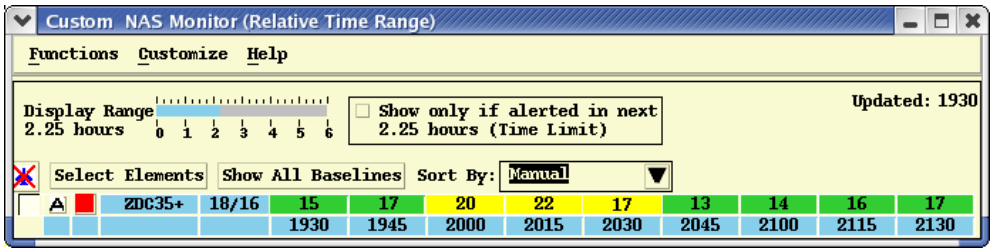


In the next example, notice that the 1930 and 1945 intervals are now unalerted, as the peak count returns to 18.



Different MAP On and MAP Off Parameters

In the next example, the MAP On parameter for sector ZDC35 is 18, and the MAP Off parameter is 16.



The 2030 interval for sector ZDC35 is alerted even though the peak count of 17 is less than the MAP On count of 18. The reason is that this interval was previously alerted. It stays alerted until the peak count is still equal to or less than the MAP Off value of 16.

> **Note:** The 2130 interval for ZDC35 has a count of 17 and is not alerted. The reason is that it never reached a peak count above 18 and, therefore, was never alerted.

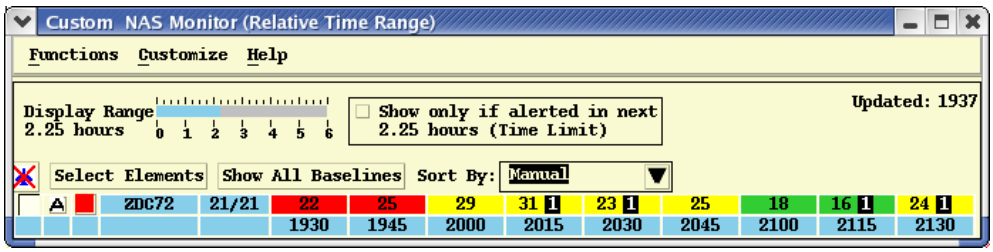
Show/Hide Baseline

The NAS Monitor identifies a sector into which one or more other sectors have been combined by displaying a + sign in its row label and displays alert data for the sector in its current configuration. To show a row of data for the sector, and each sector combined into the sector, in its baseline configuration, right-click the row label and select the **Show Baseline** menu option. Rows of alert data displayed in gray with their element labels in parentheses indicate baseline data. The counts in these rows represent the peak 1-minute counts predicted for the sectors in their baseline configuration. When Hide Baseline is selected after right-clicking the row label, the additional rows are removed from the NAS Monitor and a single row of alert data for the sector in its current configuration displays.

Note: You can also toggle the Show/Hide Baselines option by clicking the **Show/Hide All Baselines** button or selecting the **Show All Baselines** option on the Customize menu.

RVSM

If you select **RVSM** on the Display menu and select **RVSM Counts** in the resulting Select RVSM Display Options dialog box, the RVSM counts are displayed on the NAS Monitor. The TSD displays the peak one-minute counts of flights that are predicted to be RVSM non-conformant at any time when they are in the examined sector, based on the current configuration of the sector. The TSD displays this count as a white number over a square black background in the cell as shown below.



Alerted Element Colors

The significance of each of the various colors is represented in time bars for each element.

NAS Monitor Colors

Color of time bar segment	What it represents
Green	No alerts
Yellow	Alert for proposed flights
Red	Alert for active flights
Green with yellow stripe	Previous alert for proposed flights-alert resolved by a Traffic Management Unit (TMU)*
Green with red stripe	Previous alert for active flights-alert resolved by a Traffic Management Unit (TMU)*
Uncolored	No data available, or data are being requested

The total number of flights projected to arrive at, or depart from, or traverse the specified alerted element appears in the dialog box at 15-minute intervals.

Show NAS Monitor Command	
The **Show NAS Monitor** command provides access to menu options that let you display peak counts and the alert status for NAS elements. The process that creates NAS Monitor and System summary is the Almon process, an optional process started by each user's TSD when these monitors are displayed.	
	Quick Key Method
1. Pull down the Alert menu by clicking **Alerts** on the main menu or pressing **<Alt> A**. 2. Click **Show NAS Monitor** or press **N**. 3. Click one of the commands from the **Show NAS Monitor** sub-menu or press its mnemonic key. See page 5-84 for sub-menu choices.	**None**
	Semicolon Method
	None

Note: This section describes how to use the NAS Monitor in Normal mode.

Managing NAS Monitor Windows

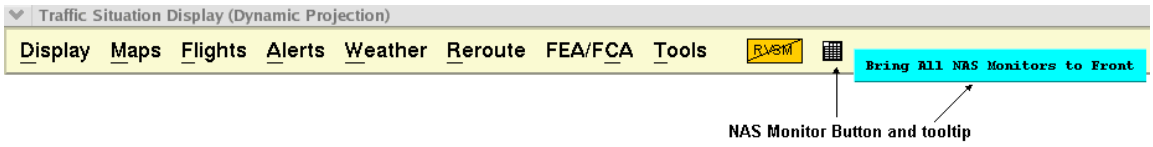
NAS Monitor windows are managed separately from their "parent" TSD providing users flexibility working with limited screen space. For example, if a user minimizes the TSD display, the action will have no effect on any open NAS Monitor windows associated with the TSD. If the NAS Monitor Control Panel is minimized, all windows that belong to the NAS Monitor process are minimized together and have no effect on the TSD display.

To manage multiple windows and efficiently move between an active TSD display and any associated NAS Monitor dialog boxes, the following methods are available.

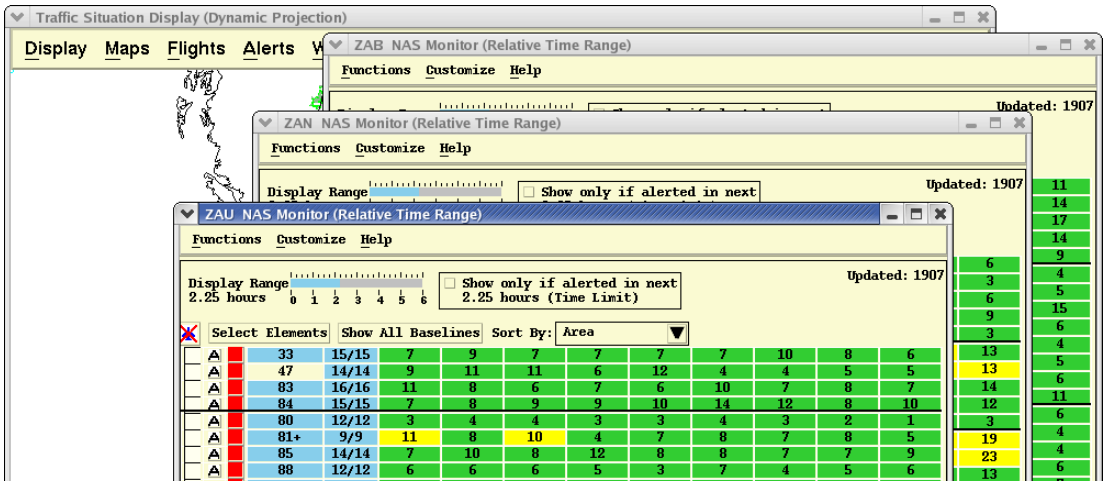
- NAS Monitor Button
- Quick Keys
- Window List

NAS Monitor Button

Use the NAS Monitor button if the TSD display overlays all open NAS Monitor windows and you want to bring all of the windows to the front. The NAS Monitor button displays to the right of the RVSM Status icon on the menu bar when a NAS Monitor is opened. If you position the cursor over the NAS Monitor button, the TSD displays the tool tip, "Bring NAS Monitors to Front," as shown below.

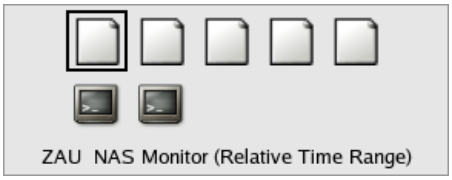


After you click on the NAS Monitor button, any open NAS Monitor windows overlay the display in the order in which they are listed in the NAS Monitor Control Panel with focus on the top most monitor.



Quick Keys

Use the quick keys <**Alt**> and <**Tab**> to display a palette with icons representing all open windows and to give a particular focus.



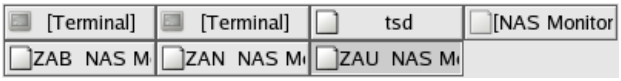
Do the following:

1. While holding down the <**Alt**> key, press the <**Tab**> key once to display the palette. The palette displays an icon for each open window. A black line outlines the currently selected window.
2. Hold the <**Alt**> key down and press the <**Tab**> key once to select the next icon on the palette. As you move from one icon to the next, the name of the selected window displays at the bottom of the palette.
3. Release the <**Alt**> key to bring a selected application into focus.

Window List

The Window List on the Bottom Edge Panel displays a button for each open application. You can use the Window List to give a window focus by clicking on its button.

In the following example there are seven open windows in the Window List - two Terminal windows, a TSD, a NAS Monitor Control Panel, and three NAS Monitors. The ZAU NAS Monitor has focus on the display screen so its button is shaded in the Window List.



Note: A typical GNOME setup includes the Bottom Edge Panel. Your System Administrator may set your default Bottom Edge Panel according to your local requirements, so your display may appear slightly different

Opening a NAS Monitor

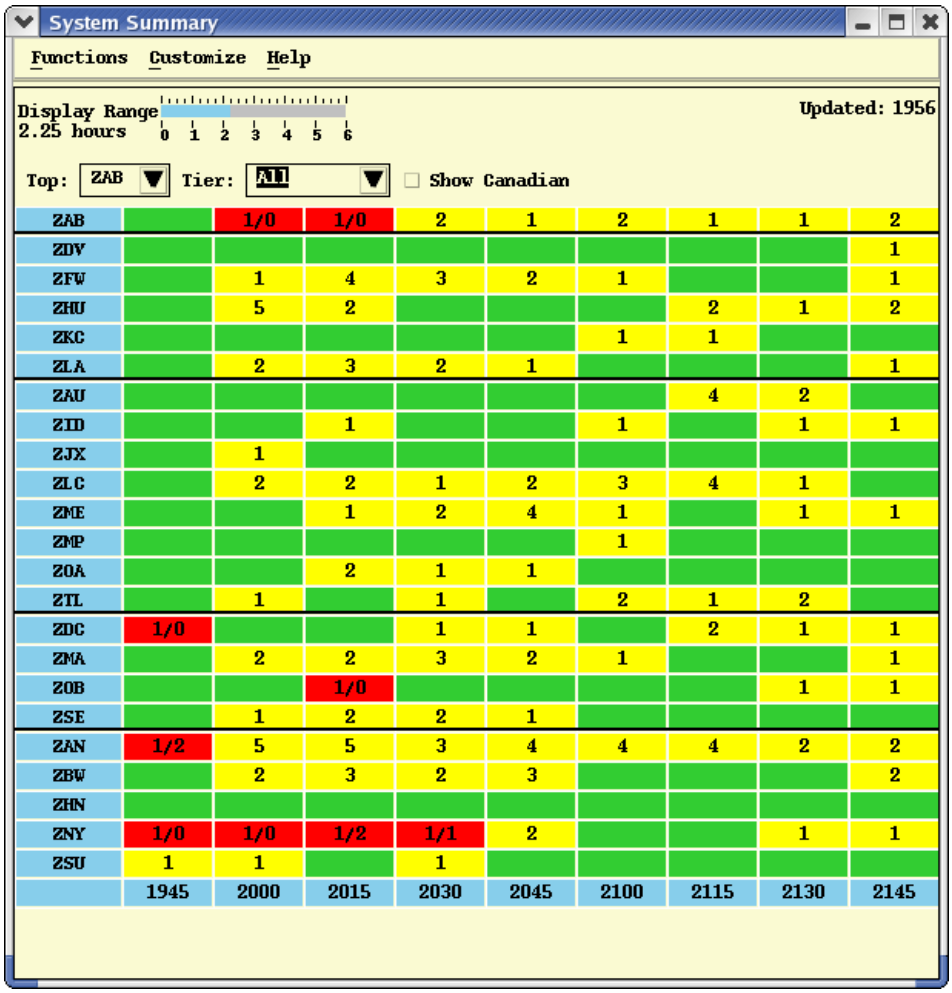
The NAS Monitor command lets you display peak counts and the alert status for NAS elements that may include all sectors in a Center, selected sectors in a Center, airports, or fixes. Clicking **Show NAS Monitor** on the Alerts menu opens a sub-menu from which you can choose the following NAS Monitor options: Custom, ARTCC, Canadian, and System Summary. Clicking one of the sub-menu options opens the NAS Monitor dialog box and the NAS Monitor Control Panel. The sub-menu options are described as follows:

- **Custom**
  Use the Custom option if you want to manually create a list of sectors, airports, and/or fixes for display on the NAS Monitor. After you select **Custom**, the NAS Monitor dialog box opens with no alert data displayed. Click the **Select Elements** button to access the Select Monitored Elements dialog box and select the elements you want to monitor. See page 5-102 for more information on the Select Monitored Elements dialog box.
- **ARTCC**
  Use the ARTCC option to monitor all sectors in a center selected from an alphabetical list of US centers. The alphabetical list of US centers is a sub-menu of the ARTCC option.
- **Canadian**
  Use the Canadian option to monitor all sectors in a center selected from an alphabetical list of Canadian centers. The alphabetical list of Canadian centers is a sub-menu of the Canadian option.
- **System Summary**
  Use the System Summary option to view a system-wide summary of alert status by ARTCC. You can display the NAS Monitor from the Systems Summary dialog box by clicking on a Center name in the left column of the Systems Summary. The System Summary is discussed in detail on page 5-111.

System Summary Dialog Box

Selecting **System Summary** opens the System Summary dialog box and the NAS Monitor Control Panel. The NAS Monitor Control Panel is displayed whenever a System Summary Dialog or NAS Monitor is displayed. See the section on NAS Monitor Control Panel on page 5-89 for detailed information.

From the Control Panel you can open an additional NAS Monitor or System Summary or bring focus to a selected NAS Monitor or System Summary dialog box.



ZAB		1/0	1/0	2	1	2	1	1	2
ZDV									1
ZFW		1	4	3	2	1			1
ZHU		5	2				2	1	2
ZKC						1	1		
ZLA		2	3	2	1				1
ZAU							4	2	
ZID			1			1		1	1
ZJX		1							
ZLC		2	2	1	2	3	4	1	
ZME			1	2	4	1		1	1
ZMP						1			
ZOA			2	1	1				
ZTL		1		1		2	1	2	
ZDC	1/0			1	1		2	1	1
ZMA		2	2	3	2	1			1
ZOB			1/0					1	1
ZSE		1	2	2	1				
ZAN	1/2	5	5	3	4	4	4	2	2
ZBW		2	3	2	3				2
ZHN									
ZNY	1/0	1/0	1/2	1/1	2			1	1
ZSU	1	1		1					
	1945	2000	2015	2030	2045	2100	2115	2130	2145

Using the System Summary Dialog Box

The colors in the System Summary dialog box indicate the highest alert status for any sector in the Center for that 15-minute interval. The numbers indicate how many sectors have a red and/or yellow status within the 15-minute interval. A single number on a yellow interval indicates the number of sectors that have a yellow alert. The two numbers on a red interval indicate the

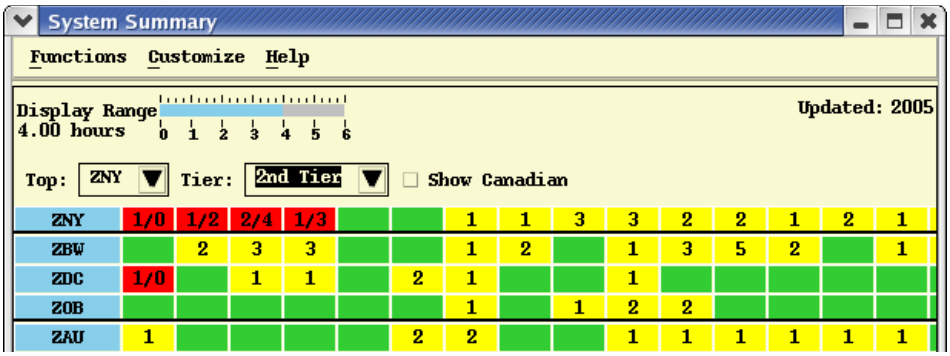
number of sectors with a red alert status followed by the number with a yellow alert status.

To open a NAS Monitor with the selected center as the primary center, click on a **System Summary** row label.

> **Note:** When alert data goes out of date on the System Summary dialog box, the last update time in the upper right corner displays in red and flashes for one minute.

Display Range

The System Summary dialog box lets you change the amount of alert data displayed by using the display range. To change the display range, click on the number of hours you would like to display, or click anywhere on the blue shaded segment and drag it to the number of hours you would like to display. The display range in the sample below is four (4.00) hours.



Functions Menu

Selecting **Functions** opens the Functions menu with the following options.

- Show NAS Monitor
  This option has the following submenu.
  - Custom
  - ARTCC
  - Canadian
- Close

You can use the Show NAS Monitor sub-menu to open a NAS Monitor.

Customize Menu

The Customize menu provides the options for customizing the display of data on the System Summary. The following options are available.

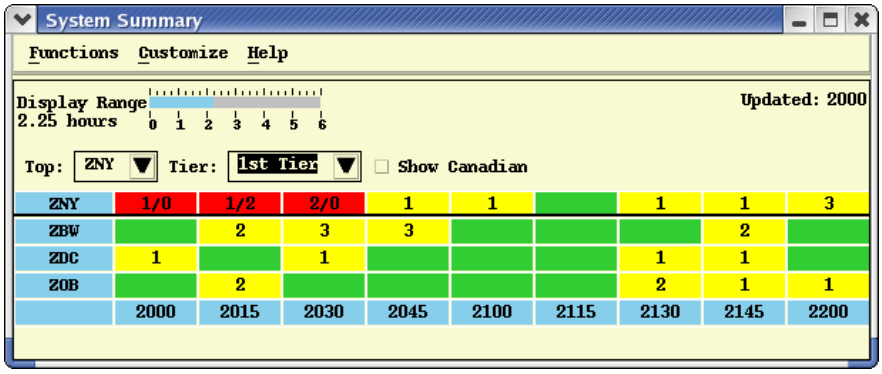
- Top
- Tier
- Show Canadian
- Show/Hide Options Panel

Top

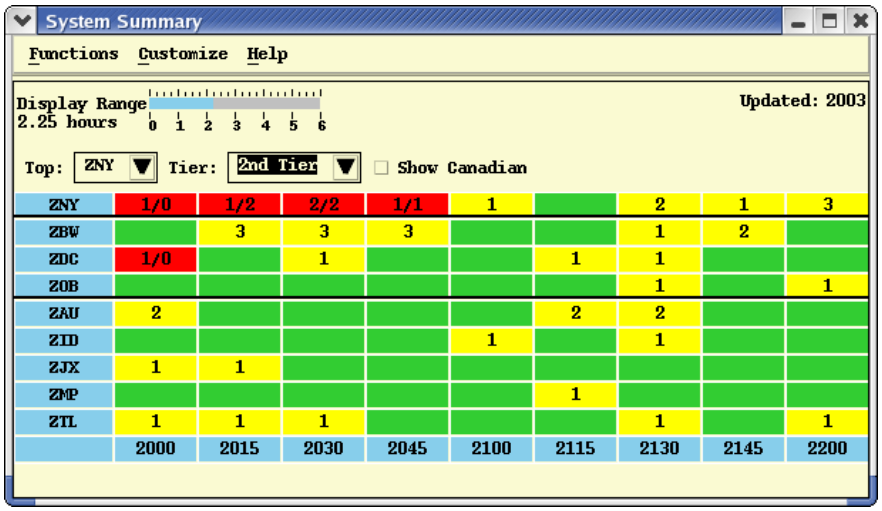
Use the Top option to select the Center to be shown at the top of the Systems Summary dialog box. You can click the pull-down button in the Top field on the System Summary dialog box to display a list of Centers or select the **Top** option from the Customize menu and select a center from the submenu. The remaining Centers are arranged by tier from the top center and then alphabetically within each tier.

Tier

Use the Tier option to select a group of Centers in geographical proximity to the Top Center. To select a tier, click the pull-down button in the Tier field on the System Summary dialog box or select the **Tier** option from the Customize menu and select a tier from the submenu. For example, if you select ZNY in the Top field and then click on the **Tier** arrow and select **1st Tier**, you will see ZNY and its first tier Centers.



Selecting **2nd Tier** would open a window like the following, with the addition of the second tier Centers.

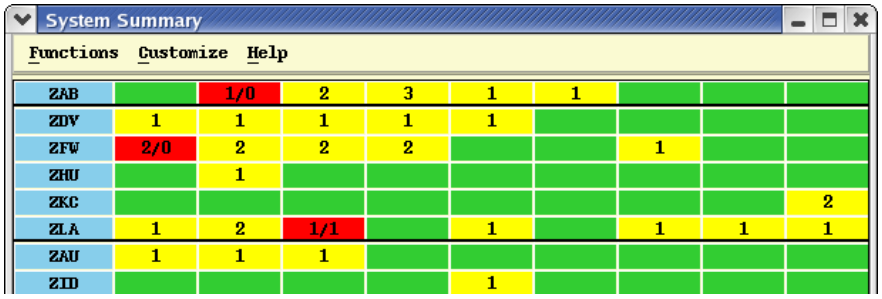


Show Canadian

To select or deselect Canadian Centers, click in the **Show Canadian** checkbox on the System Summary dialog box or select the **Show Canadian** option on the Customize menu.

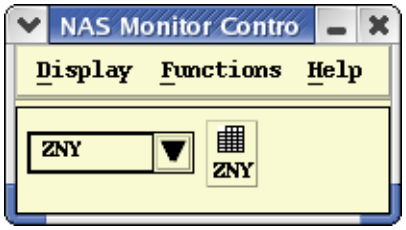
Show/Hide Options Panel

To show or hide the Options Panel, select or deselect the **Show/Hide Options Panel** option on the Customize pull-down menu at the top of the NAS Monitor window. The NAS Monitor with the Options Panel hidden looks like the sample below with the ZAB row shown in the top position, and with the options panel hidden.



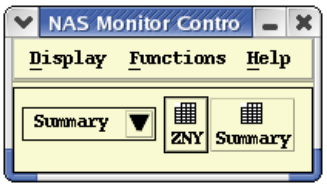
NAS Monitor Control Panel

Clicking any option on the **Show NAS Monitor** sub-menu opens both the selected option and the NAS Monitor Control Panel. In the example shown below, the sub-menu option ARTCC and the center ZNY were selected. The name of the selected center is displayed as an icon on the NAS Monitor Control Panel.



On the NAS Monitor Control Panel, you can click the pull-down arrow button to display a list of US Centers presented in alphabetical order followed by Canadian centers in alphabetical order. Clicking a Center name opens the NAS Monitor dialog box for that selection and adds that Center's icon to the open NAS Monitor Control Panel. Clicking a Center icon brings focus to that Center's NAS Monitor if it is already displayed but covered by another window.

The pull-down list also provides a Custom entry at the top and a Summary entry at the bottom of the list. Select **Custom** to open a NAS monitor for which you want to manually create a list of NAS elements for display. Select **Summary** to open the Systems Summary dialog box. The sample below shows the NAS Monitor Control Panel displaying the ZNY and System Summary icons.



Display and Functions Pull–Down Menus

There are three menu items on the Control Panel: Display, Functions and Help.

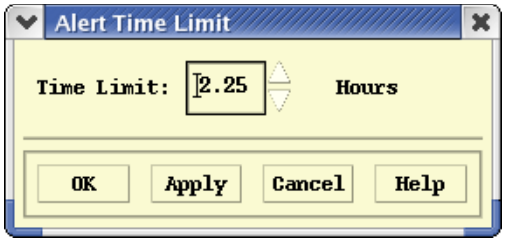
The **Display** menu contains two menu items:

1. **Adapt**
   The Adapt command has a sub-menu of commands: **Recall**, **Save**, and **Delete**. These work in the same manner as the Adapt sub-menu items on other TSD dialog boxes. After you establish your preferences on the NAS Monitor dialog box, explained in the **Preferences** command, you can save to a file, recall the file, or delete the file.

2. **Close All Monitors**
   Close All Monitors closes all NAS Monitors and System Summaries currently open on your screen.

The **Functions** pull-down menu on the NAS Monitor Control Panel contains the two menu items: **Show NAS Monitor** and **Set Alert Time Limit**.

1. **Show NAS Monitor**
   The Show NAS Monitor command has a sub-menu from which you can choose the following NAS Monitor options: Custom, ARTCC, Canadian, and System Summary. These options are described on page 5-84.
2. **Set Alert Time Limit**
   Clicking the **Set Alert Time Limit** command opens the following dialog box:



The **Set Alert Time Limit** command allows you to change the time limit for displaying alerted NAS elements on the NAS Monitor.

Clicking on the up or down arrows changes the time limit in quarter-hour increments. You can select a minimum time limit value of 0.25 and a maximum of 6.0 hours

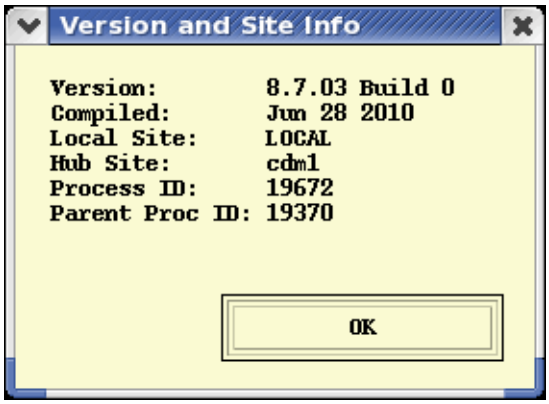
Note: After you change the Alert Time Limit through the Set Alert Time Limit command, the Alert Time Limit in Select Alerts reflects the change.

The **Help** menu on the NAS Monitor Control Panel provides Help and Version and Site Info options.

The **Version and Site Info** command lets you display a dialog box showing what version of the TSD is associated with an ALMON process. The Version and Site Info dialog box displays the version number, build number, and compile date for the currently running ALMON process. Additionally, the dialog box provides the ALMON process ID, the source sites (local and hub) for alert data, and the process ID of the parent TSD.

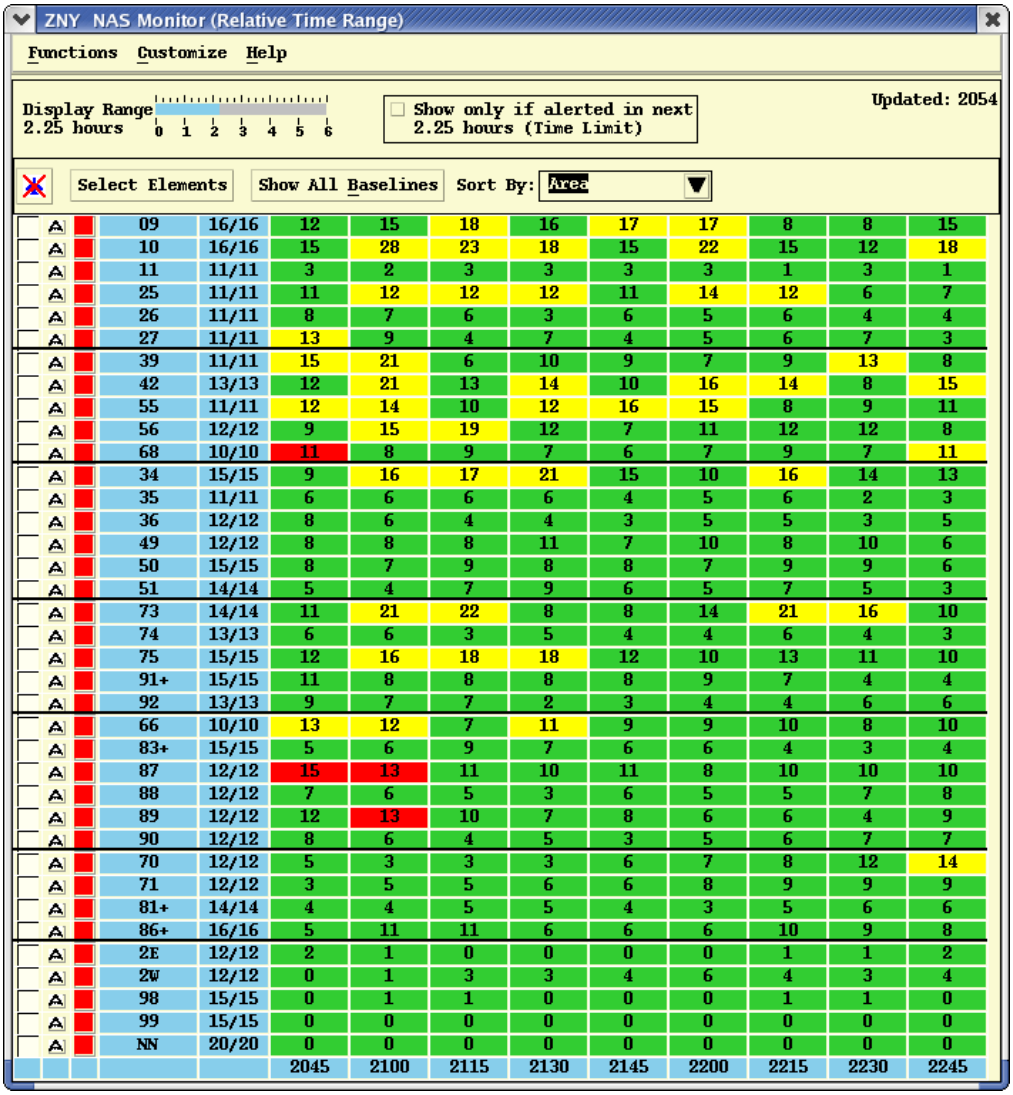
1. Pull down the Help menu by clicking **Help** on the NAS Monitor Control Panel or pressing **<Alt> H**.
2. Click **Version and Site Info** or press **V**.

After you click **Version and Site Info** or press the mnemonic key from the Help menu, the Version and Site dialog box displays.



Using the NAS Monitor Dialog Box

The NAS Monitor dialog box displays alert information in table form with NAS elements along one axis and 15-minute time intervals along the other. Each row in the table displays a NAS element label. Monitor/Alert Parameter (MAP) values display to the right of the row label and apply to the first time interval in a row. The rows for sectors display both upper and lower MAP values. Each cell in the table displays the alert status of the corresponding NAS element during the corresponding time interval. The time when Alert data was last updated displays in the Updated field. If Alert data times out, the update time displays in red and flashes for one minute.



		09	16/16	12	15	18	16	17	17	8	8	15
		10	16/16	15	28	23	18	15	22	15	12	18
		11	11/11	3	2	3	3	3	3	1	3	1
		25	11/11	11	12	12	12	11	14	12	6	7
		26	11/11	8	7	6	3	6	5	6	4	4
		27	11/11	13	9	4	7	4	5	6	7	3
		39	11/11	15	21	6	10	9	7	9	13	8
		42	13/13	12	21	13	14	10	16	14	8	15
		55	11/11	12	14	10	12	16	15	8	9	11
		56	12/12	9	15	19	12	7	11	12	12	8
		68	10/10	11	8	9	7	6	7	9	7	11
		34	15/15	9	16	17	21	15	10	16	14	13
		35	11/11	6	6	6	6	4	5	6	2	3
		36	12/12	8	6	4	4	3	5	5	3	5
		49	12/12	8	8	8	11	7	10	8	10	6
		50	15/15	8	7	9	8	8	7	9	9	6
		51	14/14	5	4	7	9	6	5	7	5	3
		73	14/14	11	21	22	8	8	14	21	16	10
		74	13/13	6	6	3	5	4	4	6	4	3
		75	15/15	12	16	18	18	12	10	13	11	10
		91+	15/15	11	8	8	8	8	9	7	4	4
		92	13/13	9	7	7	2	3	4	4	6	6
		66	10/10	13	12	7	11	9	9	10	8	10
		83+	15/15	5	6	9	7	6	6	4	3	4
		87	12/12	15	13	11	10	11	8	10	10	10
		88	12/12	7	6	5	3	6	5	5	7	8
		89	12/12	12	13	10	7	8	6	6	4	9
		90	12/12	8	6	4	5	3	5	6	7	7
		70	12/12	5	3	3	3	6	7	8	12	14
		71	12/12	3	5	5	6	6	8	9	9	9
		81+	14/14	4	4	5	5	4	3	5	6	6
		86+	16/16	5	11	11	6	6	6	10	9	8
		2E	12/12	2	1	0	0	0	0	1	1	2
		2W	12/12	0	1	3	3	4	6	4	3	4
		98	15/15	0	1	1	0	0	0	1	1	0
		99	15/15	0	0	0	0	0	0	0	0	0
		NN	20/20	0	0	0	0	0	0	0	0	0
				2045	2100	2115	2130	2145	2200	2215	2230	2245

A Show Flights checkbox, a flight icon button, and a color button displays to the left of every row in the monitor. Used with the Show Examined Flights button, the Show Flights checkboxes let you select the individual sectors, fixes, or airports for which you want to display flights.

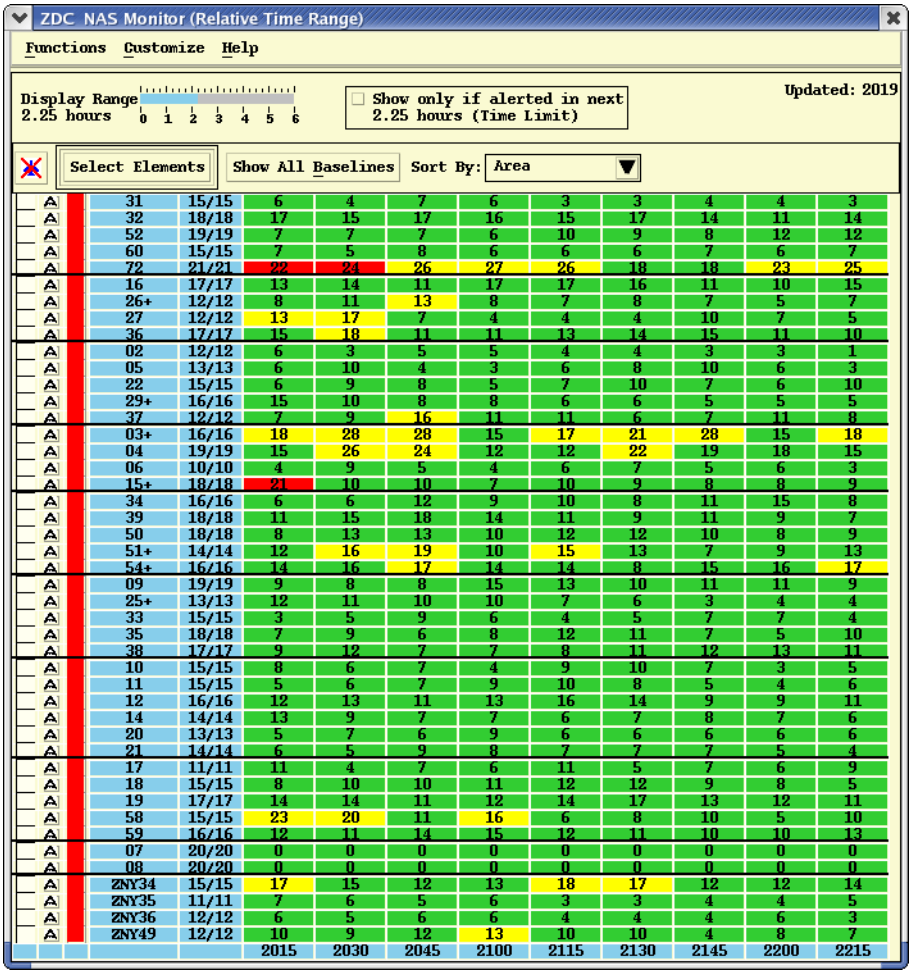
The NAS Monitor title bar displays the name of the selected center or "**Custom**," if the Custom menu option was selected. The title bar also indicates whether the monitor is set to Relative Time Range or Absolute Time Range. In the previous example, the NAS Monitor title bar indicates that data displays for the center ZNY and that the monitor is set to Relative Time Range.

NAS Monitor Element Labels

NAS element labels identify the sectors, fixes, and airports for which alert data displays in the NAS Monitor. NAS element labels are formatted as follows.

Sectors

If you open a NAS Monitor selecting a primary US center, the row labels for the sectors display without their 3-character center prefix. The rows for all other US or Canadian centers added to the monitor display a label that includes the 3-character center prefix. In the following example, ZDC was selected as the primary center and sectors from center ZNY were added through the Select Elements option. The labels for the sectors in primary center ZDC display without their prefix.

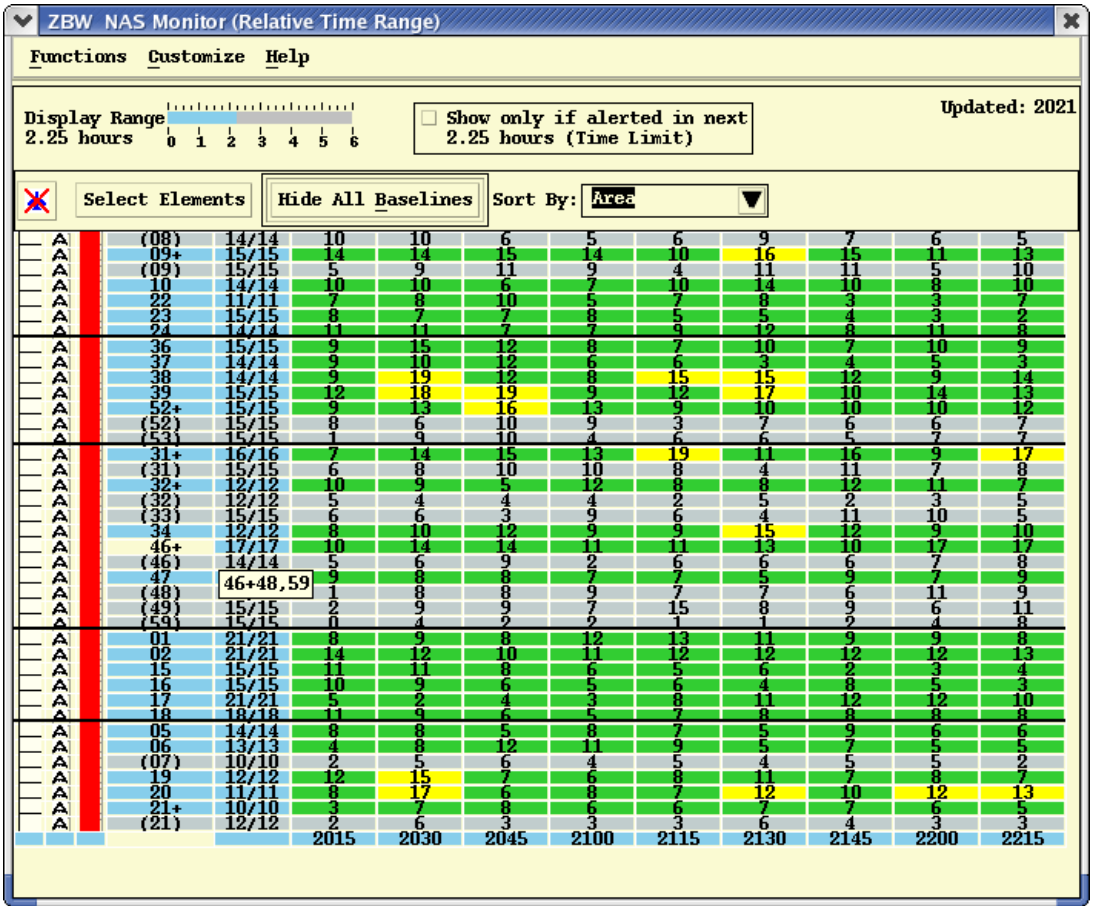


31	15/15	6	4	7	6	3	3	4	4	3
32	18/18	17	15	17	16	15	17	14	11	14
52	19/19	7	7	7	6	10	9	8	12	12
60	15/15	7	5	8	6	6	6	7	6	7
72	21/21	22	24	26	27	26	18	18	23	25
16	17/17	13	14	11	17	17	16	11	10	15
26+	12/12	8	11	13	8	7	8	7	5	7
27	12/12	13	17	7	4	4	4	10	7	5
36	17/17	15	18	11	11	13	14	15	11	10
02	12/12	6	3	5	5	4	4	3	3	1
05	13/13	6	10	4	3	6	8	10	6	3
22	15/15	6	9	8	5	7	10	7	6	10
29+	16/16	15	10	8	8	6	6	5	5	5
37	12/12	7	9	16	11	11	6	7	11	8
03+	16/16	18	28	28	15	17	21	28	15	18
04	19/19	15	26	24	12	12	22	19	18	15
06	10/10	4	9	5	4	6	7	5	6	3
15+	18/18	21	10	10	7	10	9	8	8	9
34	16/16	6	6	12	9	10	8	11	15	8
39	18/18	11	15	18	14	11	9	11	9	7
50	18/18	8	13	13	10	12	12	10	8	9
51+	14/14	12	16	19	10	15	13	7	9	13
54+	16/16	14	16	17	14	14	8	15	16	17
09	19/19	9	8	8	15	13	10	11	11	9
25+	13/13	12	11	10	10	7	6	3	4	4
33	15/15	3	5	9	6	4	5	7	7	4
35	18/18	7	9	6	8	12	11	7	5	10
38	17/17	9	12	7	7	8	11	12	13	11
10	15/15	8	6	7	4	9	10	7	3	5
11	15/15	5	6	7	9	10	8	5	4	6
12	16/16	12	13	11	13	16	14	9	9	11
14	14/14	13	9	7	7	6	7	8	7	6
20	13/13	5	7	6	9	6	6	6	6	6
21	14/14	6	5	9	8	7	7	7	5	4
17	11/11	11	4	7	6	11	5	7	6	9
18	15/15	8	10	10	11	12	12	9	8	5
19	17/17	14	14	11	12	14	17	13	12	11
58	15/15	23	20	11	16	6	8	10	5	10
59	16/16	12	11	14	15	12	11	10	10	13
07	20/20	0	0	0	0	0	0	0	0	0
08	20/20	0	0	0	0	0	0	0	0	0
ZNY34	15/15	17	15	12	13	18	17	12	12	14
ZNY35	11/11	7	6	5	6	3	3	4	4	5
ZNY36	12/12	6	5	6	6	4	4	4	6	3
ZNY49	12/12	10	9	12	13	10	10	4	8	7
		2015	2030	2045	2100	2115	2130	2145	2200	2215

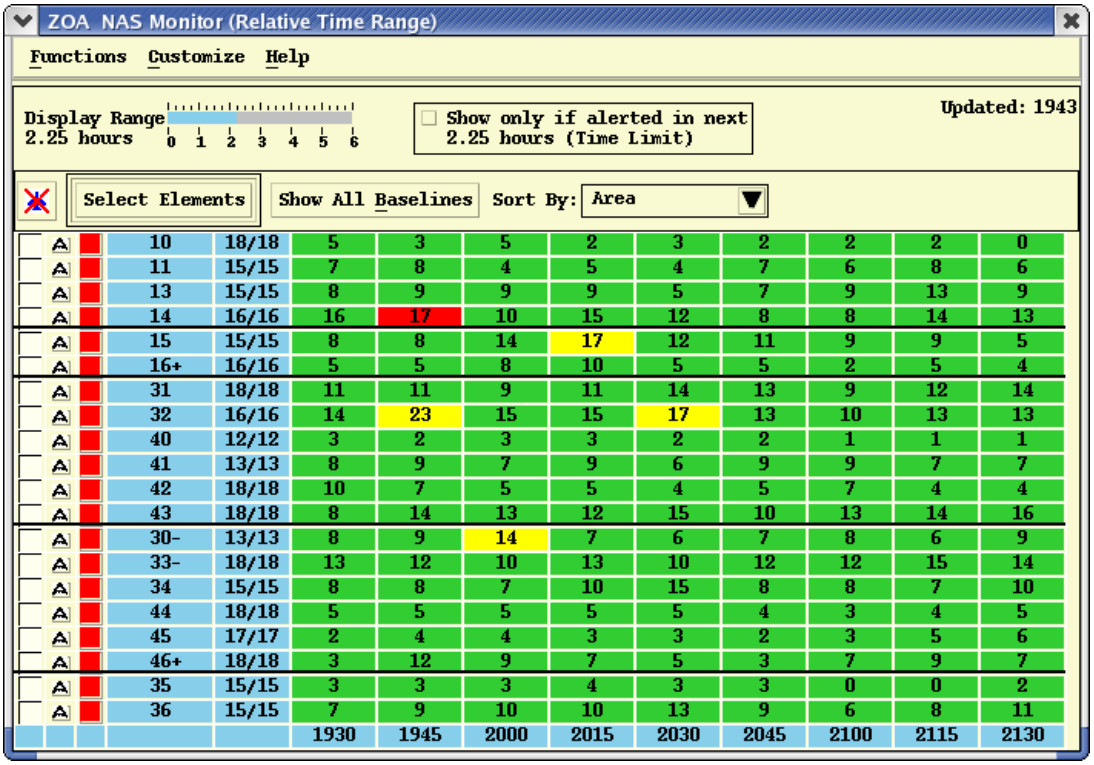
Current and Baseline Sectors

The NAS element label for a current sector may display a + or - sign. A label containing a + sign indicates that the sector contains at least one other sector fully or partially combined into it. If you place the cursor over the label, a tool tip displays with an expanded description of the current configuration of the sector. The tool tip displays the sector ID, a plus symbol, and a comma-separated list of sector IDs for each sector combined into the "parent." In the example below, ZBW48 and ZBW59 is combined into ZBW46. The tool tip for ZBW46 therefore displays as "46+48,59."

If the Show All Baselines option is toggled on, the monitor displays an additional row in gray for the "parent" sector and each sector combined into it. The sector labels for these rows display in parentheses indicating that alert data displays for the sector in its baseline configuration.


ZBW NAS Monitor (Relative Time Range)
Functions Customize Help
Display Range
2.25 hours
0 1 2 3 4 5 6
Show only if alerted in next
2.25 hours (Time Limit)
Updated: 2021
Select Elements
Hide All Baselines
Sort By: Area
46+48,59
2015 2030 2045 2100 2115 2130 2145 2200 2215

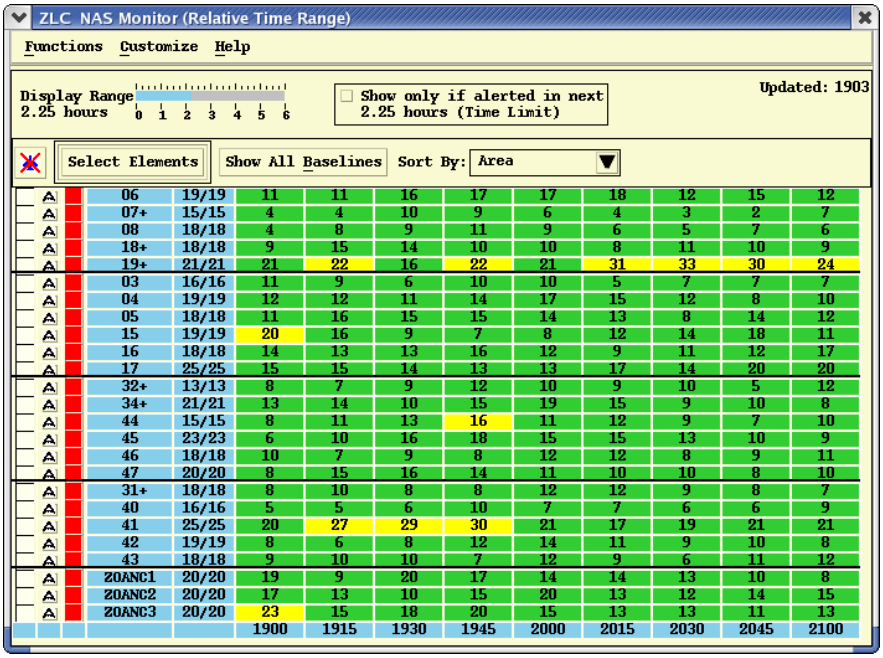
If a portion of a sector has been combined into another sector but the rest of the sector remains open, the NAS element label displays a - sign to the right of the sector ID. In the example below, sectors ZOA30 and ZOA33 each have a portion combined into another sector.



Note: If a selected sector is partially or fully combined with another sector or sectors, the NAS Monitor will display a row for the "parent" sector into which it is combined, even if the "parent" sector is not specified in Select Elements.

TRACONS

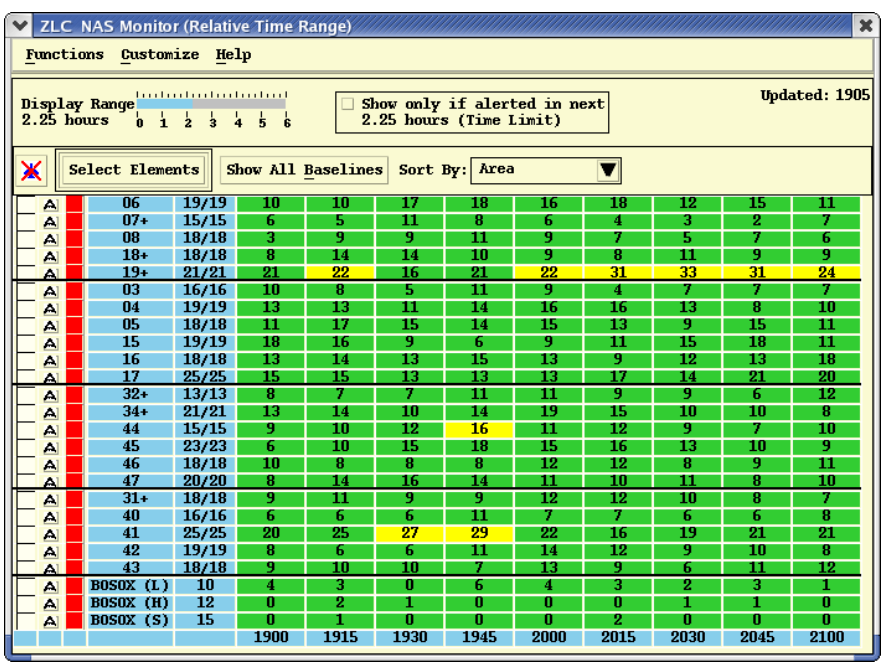
The row for a TRACON on the NAS Monitor displays a label that includes the 3-character TRACON prefix.



06	19/19	11	11	16	17	17	18	12	15	12
07+	15/15	4	4	10	9	6	4	3	2	7
08	18/18	4	8	9	11	9	6	5	7	6
18+	18/18	9	15	14	10	10	8	11	10	9
19+	21/21	21	22	16	22	21	31	33	30	24
03	16/16	11	9	6	10	10	5	7	7	7
04	19/19	12	12	11	14	17	15	12	8	10
05	18/18	11	16	15	15	14	13	8	14	12
15	19/19	20	16	9	7	8	12	14	18	11
16	18/18	14	13	13	16	12	9	11	12	17
17	25/25	15	15	14	13	13	17	14	20	20
32+	13/13	8	7	9	12	10	9	10	5	12
34+	21/21	13	14	10	15	19	15	9	10	8
44	15/15	8	11	13	16	11	12	9	7	10
45	23/23	6	10	16	18	15	15	13	10	9
46	18/18	10	7	9	8	12	12	8	9	11
47	20/20	8	15	16	14	11	10	10	8	10
31+	18/18	8	10	8	8	12	12	9	8	7
40	16/16	5	5	6	10	7	7	6	6	9
41	25/25	20	27	29	30	21	17	19	21	21
42	19/19	8	6	8	12	14	11	9	10	8
43	18/18	9	10	10	7	12	9	6	11	12
ZOANC1	20/20	19	9	20	17	14	14	13	10	8
ZOANC2	20/20	17	13	10	15	20	13	12	14	15
ZOANC3	20/20	23	15	18	20	15	13	13	11	13
		1900	1915	1930	1945	2000	2015	2030	2045	2100

Fixes

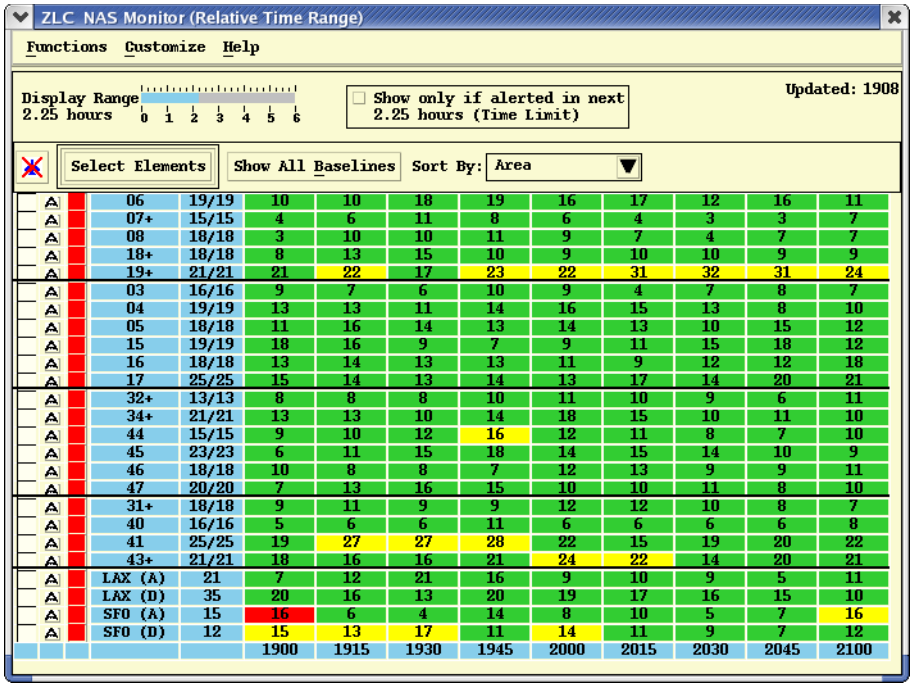
The row for a fix on the NAS Monitor displays a label that includes the fix ID with the altitude level (L,H,S) in parentheses.



06	19/19	10	10	17	18	16	18	12	15	11
07+	15/15	6	5	11	8	6	4	3	2	7
08	18/18	3	9	9	11	9	7	5	7	6
18+	18/18	8	14	14	10	9	8	11	9	9
19+	21/21	21	22	16	21	22	31	33	31	24
03	16/16	10	8	5	11	9	4	7	7	7
04	19/19	13	13	11	14	16	16	13	8	10
05	18/18	11	17	15	14	15	13	9	15	11
15	19/19	18	16	9	6	9	11	15	18	11
16	18/18	13	14	13	15	13	9	12	13	18
17	25/25	15	15	13	13	13	17	14	21	20
32+	13/13	8	7	7	11	11	9	9	6	12
34+	21/21	13	14	10	14	19	15	10	10	8
44	15/15	9	10	12	16	11	12	9	7	10
45	23/23	6	10	15	18	15	16	13	10	9
46	18/18	10	8	8	8	12	12	8	9	11
47	20/20	8	14	16	14	11	10	11	8	10
31+	18/18	9	11	9	9	12	12	10	8	7
40	16/16	6	6	6	11	7	7	6	6	8
41	25/25	20	25	27	29	22	16	19	21	21
42	19/19	8	6	6	11	14	12	9	10	8
43	18/18	9	10	10	7	13	9	6	11	12
BOSOX (L)	10	4	3	0	6	4	3	2	3	1
BOSOX (H)	12	0	2	1	0	0	0	1	1	0
BOSOX (S)	15	0	1	0	0	0	2	0	0	0
		1900	1915	1930	1945	2000	2015	2030	2045	2100

Airports

The row for an airport on the NAS Monitor displays a label that includes the airport ID and indicates Departures (D) or Arrivals (A).



A		06	19/19	10	10	18	19	16	17	12	16	11
A		07+	15/15	4	6	11	8	6	4	3	3	7
A		08	18/18	3	10	10	11	9	7	4	7	7
A		18+	18/18	8	13	15	10	9	10	10	9	9
A		19+	21/21	21	22	17	23	22	31	32	31	24
A		03	16/16	9	7	6	10	9	4	7	8	7
A		04	19/19	13	13	11	14	16	15	13	8	10
A		05	18/18	11	16	14	13	14	13	10	15	12
A		15	19/19	18	16	9	7	9	11	15	18	12
A		16	18/18	13	14	13	13	11	9	12	12	18
A		17	25/25	15	14	13	14	13	17	14	20	21
A		32+	13/13	8	8	8	10	11	10	9	6	11
A		34+	21/21	13	13	10	14	18	15	10	11	10
A		44	15/15	9	10	12	16	12	11	8	7	10
A		45	23/23	6	11	15	18	14	15	14	10	9
A		46	18/18	10	8	8	7	12	13	9	9	11
A		47	20/20	7	13	16	15	10	10	11	8	10
A		31+	18/18	9	11	9	9	12	12	10	8	7
A		40	16/16	5	6	6	11	6	6	6	6	8
A		41	25/25	19	27	27	28	22	15	19	20	22
A		43+	21/21	18	16	16	21	24	22	14	20	21
A		LAX (A)	21	7	12	21	16	9	10	9	5	11
A		LAX (D)	35	20	16	13	20	19	17	16	15	10
A		SFO (A)	15	16	6	4	14	8	10	5	7	16
A		SFO (D)	12	15	13	17	11	14	11	9	7	12
				1900	1915	1930	1945	2000	2015	2030	2045	2100

NAS Monitor Right-Click Menu

Pressing the right mouse button on a cell in the NAS Monitor opens the NAS Monitor right-click. When you invoke the Right-Click menu, the location of the mouse pointer when you press the right mouse button and the state of the Show Flights checkbox determine how the NAS Monitor responds.

If the Pointer is located:	The NAS Monitor process
In a selected row over a cell that is within the selected cell range or on the row label of the selected row that has the Show Flights checkbox unchecked	Preserves the row and cell selection.
In a selected row over a cell that is outside the selected cell range of the row that has the Show Flights checkbox unchecked	Preserves the row selection and changes the cell selection to the cell being pointed to.
On a row label of an unselected row that has the Show Flights checkbox unchecked	Selects the row by highlighting the row label and displays all the visible cells in the row with "Level 2" highlighting
On a row label in an unselected row that has the Show Flights checkbox checked	Selects the row by highlighting the row label, preserves the Level 1 cell selection but changes the cell highlighting to Level 2
On a cell in an unselected row that has the Show Flights checkbox unchecked	Selects the row by highlighting the row label and sets the cell highlighting to Level 2
On a cell within a Level 1 selected cell range of a row that has the Show Flights checkbox checked	Selects the row by highlighting the row label, preserves the Level 1 cell selection but changes the cell highlighting to Level 2
On a cell outside the Level 1 selected cell range of a row that has the Show Flights checkbox checked.	Selects the row by highlighting the row label and sets the cell highlighting to Level 2
Somewhere other than a row label or cell in a row	Ignores the right-click mouse button

Note: For more information on Level 1 and 2 highlighting and the Show Flights checkbox, see the topic Show/Hide Examined Flights.

The right-click menu provides the following options.

- **Time in Sector** - Opens the Time in Sector chart for that particular sector.

- **Show/Hide Baseline** - Allows you to add or hide rows to the display that show the baseline counts for that selected sector and any sectors that have been added to the sector. Baseline counts are displayed in gray.
- **Bar Chart** - Opens a NAS Monitor Bar Chart for an examined sector.
- **Alerts Report** - Creates a flight list for an examined sector.
- **Remove Row** - (Disabled (grayed out) if the row is not in the Select Monitored Elements list or is a baseline sector.) Removes a selected row from the NAS Monitor.
- **Move Row Up** - (Disabled (grayed out) if the sort order is not Manual, the row is a baseline sector, or if the row is the first row.) Allows you to move a selected row up a row.
- **Move Row Down** - (Disabled (grayed out) if the sort order is not Manual, the row is a baseline sector, or if the row is the last row.) Allows you to move a selected row down a row.

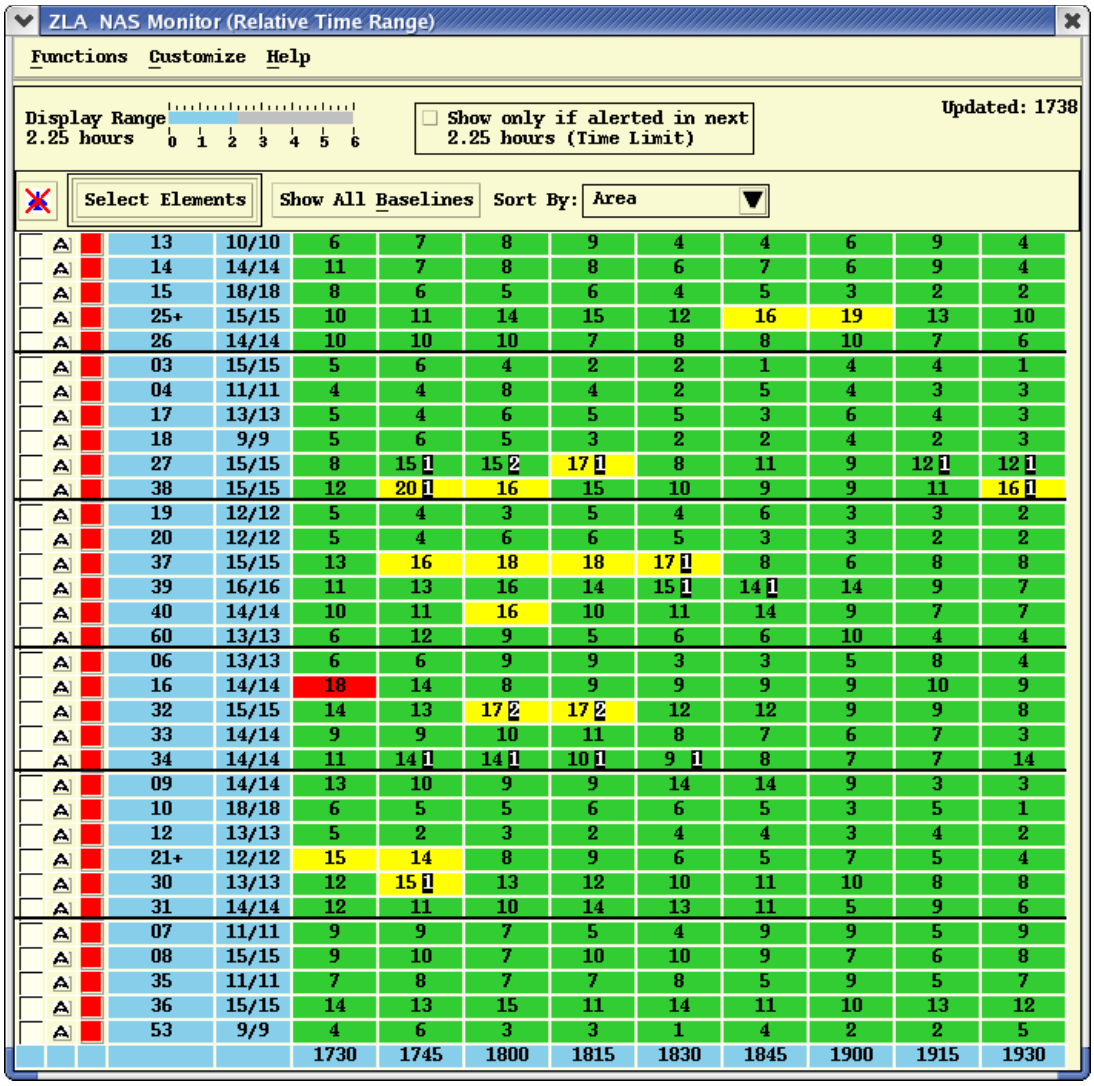
  Note: The parent sector that contains all or a portion of a child sector that is listed in the Monitored Elements list will be shown in the NAS Monitor even if the parent sector is not in the Monitored Elements list.

RVSM

In any current sectorization row in the NAS Monitor, the TSD displays the peak one-minute counts of flights predicted to be RVSM non-conformant at any time when they are in the sector, based on current sectorization.

> **Note:** RVSM counts display on the NAS Monitor if the **RVSM Counts Display** option is checked in the Select RVSM Display Options dialog box. See page 5-18.

The TSD shows the total number of RVSM non-conformant flights as a white number over a square black background to the right of the count as shown below.



A		13	10/10	6	7	8	9	4	4	6	9	4
A		14	14/14	11	7	8	8	6	7	6	9	4
A		15	18/18	8	6	5	6	4	5	3	2	2
A		25+	15/15	10	11	14	15	12	16	19	13	10
A		26	14/14	10	10	10	7	8	8	10	7	6
A		03	15/15	5	6	4	2	2	1	4	4	1
A		04	11/11	4	4	8	4	2	5	4	3	3
A		17	13/13	5	4	6	5	5	3	6	4	3
A		18	9/9	5	6	5	3	2	2	4	2	3
A		27	15/15	8	15 1	15 2	17 1	8	11	9	12 1	12 1
A		38	15/15	12	20 1	16	15	10	9	9	11	16 1
A		19	12/12	5	4	3	5	4	6	3	3	2
A		20	12/12	5	4	6	6	5	3	3	2	2
A		37	15/15	13	16	18	18	17 1	8	6	8	8
A		39	16/16	11	13	16	14	15 1	14 1	14	9	7
A		40	14/14	10	11	16	10	11	14	9	7	7
A		60	13/13	6	12	9	5	6	6	10	4	4
A		06	13/13	6	6	9	9	3	3	5	8	4
A		16	14/14	18	14	8	9	9	9	9	10	9
A		32	15/15	14	13	17 2	17 2	12	12	9	9	8
A		33	14/14	9	9	10	11	8	7	6	7	3
A		34	14/14	11	14 1	14 1	10 1	9 1	8	7	7	14
A		09	14/14	13	10	9	9	14	14	9	3	3
A		10	18/18	6	5	5	6	6	5	3	5	1
A		12	13/13	5	2	3	2	4	4	3	4	2
A		21+	12/12	15	14	8	9	6	5	7	5	4
A		30	13/13	12	15 1	13	12	10	11	10	8	8
A		31	14/14	12	11	10	14	13	11	5	9	6
A		07	11/11	9	9	7	5	4	9	9	5	9
A		08	15/15	9	10	7	10	10	9	7	6	8
A		35	11/11	7	8	7	7	8	5	9	5	7
A		36	15/15	14	13	15	11	14	11	10	13	12
A		53	9/9	4	6	3	3	1	4	2	2	5
				1730	1745	1800	1815	1830	1845	1900	1915	1930

In any baseline sectorization row in the NAS Monitor, the TSD displays the peak one-minute count of flights predicted to be RVSM non-conformant at any time when they are in the sector, based on baseline sectorization.

Display Range

You can change the amount of alert data displayed on the NAS Monitor by using the Display Range option. The current display range is shown in blue. To change the display range click on the number of hours you would like to display or click anywhere on the blue shaded segment and drag it to the number of hours you would like to display.

Select Monitored Elements

The Select Monitored Elements command lets you select NAS elements for display on the NAS Monitor. You can access the Select Monitored Elements dialog box using either method below.

- Pull down the Customize menu in the NAS Monitor dialog box by clicking **Customize** or pressing <**Alt> C**. Click **Select Elements** or press **E**.

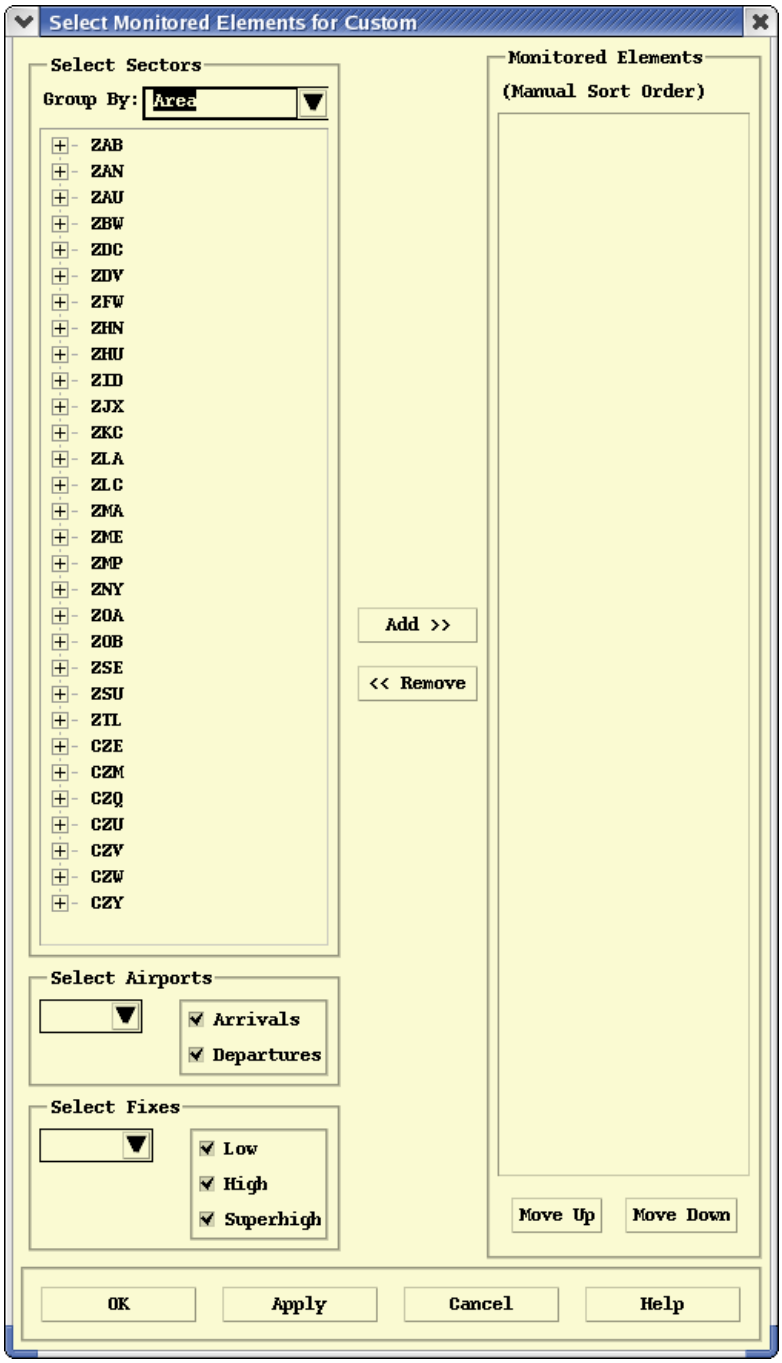
  OR

- Click the **Select Elements** button on the NAS Monitor dialog box.

  Note: Upon opening the Select Monitored Elements dialog box, the Monitored Elements section will reflect any changes that were made manually to the sort order of the NAS Monitor.
  If you select the **Manual** sort option, you can use the Monitored Elements section of the Select Monitored Elements dialog box to reorder the list.

Using the Select Monitored Elements Dialog Box

The Select Monitored Elements dialog box provides Select sections for selecting NAS elements and a Monitored Elements section that lists the selected elements.



Select Sectors

The Select Sectors section displays a pick list from which you can select sectors and TRACONS and provides an options menu for sorting the list. Select a **Group By** option to indicate how you want to sort the list. The Area sort option is the default sort.

Sorting Sectors

Sort Mode	Sort Order
Area	Alphabetically by center, area of specialization and sector number within each area, then by TRACON.
Type	Alphabetically by center, sector type (low, high, superhigh, and TRACON), then sector number.
Alphanumerically	Alphabetically by center, then sector number, then by TRACON.

To open the pick list and select sectors or TRACONS, do the following:

- Click the plus (+) symbol for a center to expand the pick list for that center.
- Click the plus (+) symbol for a folder to expand the pick list and display a list of sectors or TRACONs.

Select sectors or TRACONS using one of the following methods:

- To select an element, left-click the element label.
- To select an element without deselecting any other selected elements, simultaneously press the <**Ctrl**> key while left-clicking the element label.
- To select a range of elements, left-click the first item in the range. Simultaneously press the shift key while left-clicking the last item in the range.
- To select all elements under a higher-level item in the list, left-click the item. You can select all sectors in a Center by selecting the center or all sectors in an area by selecting the area.

  Note: Click the minus (-) symbol for a center or folder to collapse the pick list.

Select Airports

The Select Airports section provides a text field in which you can enter the airport you want to display or click an arrow button to display a pull-down list of choices. The list of airports is sorted alphabetically. If you type in an entry or a partial entry and click the arrow button, the list automatically scrolls to the first entry that begins with the characters you typed.

This section also displays checkboxes labeled arrivals and departures. By default, all checkboxes are selected. To specify whether you want arrival and/or departure airports to display, select or deselect the appropriate checkboxes.

> **Note:** The Airports and Fixes picklists contain only elements that are monitored by the TFMS Traffic Database (TDB) process.

Select Fixes

The Select Fixes section provides a text field in which you can enter the name of a fix you want to display or click an arrow button to display a pull-down list of choices. The list of fixes is sorted alphabetically. If you type in an entry or a partial entry and click the arrow button, the list automatically scrolls to the first entry that begins with the characters you typed.

This section also displays checkboxes labeled low, high, and superhigh. By default, all checkboxes are selected. To specify whether you want the low, high, and/or superhigh strata of the fix to display, select or deselect the appropriate checkboxes.

Adding/Removing Elements

After selecting the NAS element(s) you want to display, click the **Add>>** button to move the items to the Monitored Elements section. To remove an element from the Monitored Elements list, select the element and click the **<<Remove button**.

Monitored Elements

The Monitored Elements section of the Select Monitored Elements dialog box displays the elements you select for display on the NAS Monitor. After adding an element or elements, the element(s) displays at the bottom of the Monitored Elements list. The vertical scroll bar allows you to see all entries.

There are certain instances in which the NAS Monitor will not reflect the exact list of NAS elements chosen through Select Monitored Elements. For example, if a selected sector is partially or fully combined with another sector or sectors, the NAS Monitor will display a row for the "parent" sector into which it is combined even if the parent sector is not specified in Select Monitored Elements.

Reordering Elements

To reorder a NAS element in the Monitored Elements list, use the **Move Up** or **Move Down** buttons or drag and drop the element. The order in which elements display in the Monitor section is the order, from top to bottom, in which they display on the NAS Monitor when the NAS Monitor sort order is Manual. To move an element up or down and reorder the list, do the following:

- Select the element and then click the **Move Up** or **Move Down** button as many times as necessary to move the element to the desired location.

  OR

- Select the element and use the drag-and-drop method (middle mouse button) to move the element to the desired location.
  - Click **OK** to close the Select Monitored Elements dialog box and display the selected NAS elements on the NAS Monitor.
  - Click **Apply** to display the selected NAS elements on the NAS Monitor without closing the Select Monitored Elements dialog box.
  - Click **Cancel** to close the dialog box without saving any changes.

Show/Hide All Baselines

The NAS Monitor identifies a sector into which one or more other sectors have been combined by displaying a + sign in its row label and displays alert data for the sector in its current configuration. To show a row of data for the sector, and each sector combined into the sector, in its baseline configuration, click the **Show All Baselines** toggle button. Rows of alert data displayed in gray with their element labels in parentheses indicate baseline data. The counts in these rows represent the peak 1-minute counts predicted for the sectors in their baseline configuration. When **Hide All Baselines** is selected, the additional rows are removed and a single row of alert data for the sector in its current configuration displays.

> **Note:** Selecting the **Show All Baselines** toggle button displays baseline data for the entire monitor. To show or hide baseline data for an individual sector, right-click on the element label and select the **Show/Hide Baseline** menu option.

Show Only if Alerted in Next...

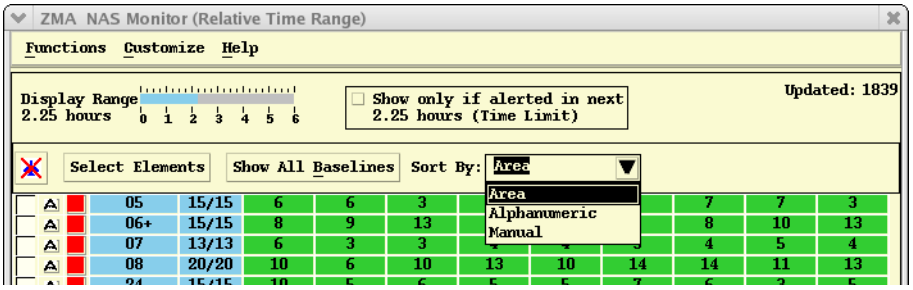
This option determines whether a NAS Monitor time limit applies to the display of alert data for the NAS Elements being monitored. If you select this checkbox, the NAS Monitor displays a row of alert data for each NAS element that attains alert status within the time limit set in the Set NAS Monitor Time Limit option.

If you leave this checkbox unselected, no NAS Monitor time limit applies to the display of alert data.

Changing the time limit in the Set NAS Monitor Time Limit option will dynamically update the NAS Monitor checkbox text to display the new time limit. The default time limit is 2.25 hours. If you change the Time Limit to 4.00 hours, the label in the NAS Monitor will change to "Show only if alerted in next 4.00 hours."

Sort By

The Sort By section of the NAS Monitor lets you sort alert data by area, alphanumerically, or manually. Click the down-arrow button to select a sort option.



Area

Select Area sort mode to display rows of alert data sorted in the following order:

Sort by Area

Sort	Sort Description
First	Sectors/TRACONs in the primary center (if any), sorted alphanumerically by area name and then sector name, with any TRACONs at the end.
Second	Sectors/TRACONs in other centers sorted alphanumerically by center, then area name, and then sector label.
Third	Airports sorted alphabetically by airport name, with the arrival row for an airport appearing above the departure row if both are displayed.
Fourth	Fixes sorted alphabetically by fix name, and within each fix by type (low first, high next, super-high next).

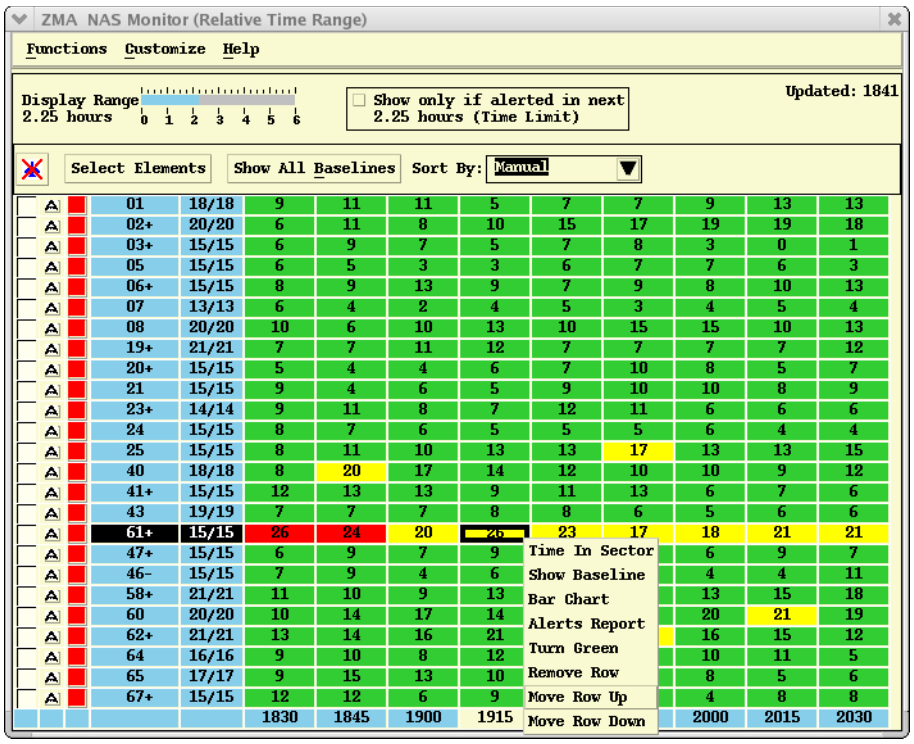
The NAS Monitor displays a thick, black, horizontal line separating each area in the sector section of the display and separating the sector section, the airport section, and the fix section.

Alphanumeric

Select Alphanumeric sort mode to display rows of alert data sorted alphanumerically regardless of the element.

Manual

Select Manual sort mode to manually reorder rows of alert data on the NAS Monitor. To move a row and change the sort order, click on any cell in the row and select the **Move Row Up** or **Move Row Down** option on the Customize or Right-Click menu. The example below displays a selected cell and the Right-Click menu.



Any changes you make manually to the sort order are reflected in the Select Monitored Elements dialog box when that dialog box is opened.

> **Note:** You can toggle back and forth between the sort order you set manually and another sort option without recreating your sort order.

Selecting Cells and Rows

Some alert data, such as the Alerts Report, is specific to the time interval or intervals you select on the NAS Monitor.

- To select a specific time interval on the monitor, click the cell.

- To select a range of time intervals use the click-and-drag method. When you select a cell or a range of cells in a row, the row label becomes highlighted.
- To select an entire row, click on the row label. If you select an entire row or a range of cells within a row, the range of selected cells is highlighted by a thick, line border around each cell in the range.

NAS Monitor Functions and Customize Pull–Down Menus

The **Functions** pull-down menu on the NAS Monitor contains the following menu items:

- Show System Summary
- Time in Sector
- Bar Chart
- Alerts Report
- Show/Hide Examined Flights
- Close

The **Customize** pull-down menu on the NAS Monitor contains the following menu items:

- Select Elements
- Show All Baselines
- Move Row Up
- Move Row Down
- Remove Row
- Relative/ Absolute Time Range
- Sort By
- Show/Hide Options Panel

These functions are discussed on the pages that follow.

NAS Monitor Functions Menu

Show System Summary

The **Show System Summary** option lets you view in one display the alert status of all sectors within selected Centers.

1. Pull down the Functions menu on the NAS Monitor dialog box by clicking Functions or pressing <**Alt F**>.
2. Click **Show System Summary** or press **S**.

   Note: You can access the System Summary by the following alternate methods:

   1. Pull down the **Alerts** menu by clicking **Alerts** on the main menu or pressing <**Alt> A**.
   2. Click **Show NAS Monitor** or press **N**.
   3. Click **System Summary** on the Show NAS Monitor sub-menu or press **S**.

   OR

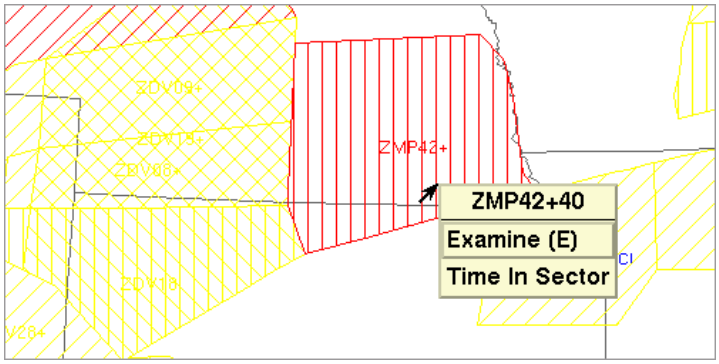
   1. Pull down the Functions menu in the NAS Monitor Control Panel by clicking Functions or pressing **<Alt>-F**.
   2. Click **Show NAS Monitor** or press **N**
   3. Click **Show System Summary** or press **<Alt>-S**

For detailed information on using the System Summary dialog box, see Page 5-85

Time In Sector

To open a Time in Sector chart from the NAS Monitor, choose one of the following methods:

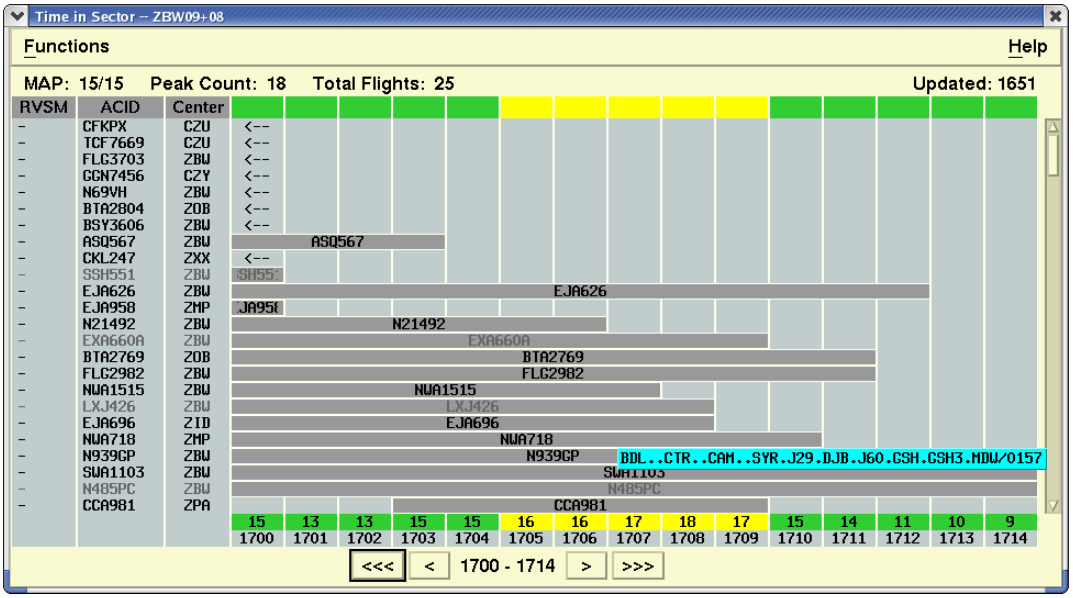
- Right-click on a cell that represents the sector and time interval. This will display a right-click menu. Select the **Time in Sector** option from the right-click menu.
- Select a row in the NAS Monitor, pull down the **Functions** menu on the NAS Monitor dialog box (or press **<Alt>-F**), and click the **Time in Sector** option (or press **T.**)
- Right-click on an alerted sector on the TSD display. Select the **Time in Sector** option from the right-click menu. The right-click menu displays a menu title containing a description of the current configuration of the selected sector.



If you right-click on two or more overlapping alerted sectors on the display, a right-click menu displays with an entry for each sector. Each entry contains a description of the current configuration for the sector. Click on one of the sector menu entries to display a sub-menu containing the Time in Sector option.

Reading the Time in Sector Chart

The Time in Sector chart graphically depicts the flights that cross the sector during a 15-minute interval. Each flight is represented as a horizontal bar from its entry into the sector to its exit out of the sector. By default, the flights are sorted by entry time, then by exit time. The Sector name is displayed in the title bar. When you place the cursor over a bar in the chart, a tool tip displays the flight's full route. The following is a sample Time in Sector chart with a tool tip displayed for ACID SWA1103.



Notice that the horizontal line near the bottom of the chart shows one-minute intervals. Above the time intervals are the counts of flights expected to be in the sector during that one-minute interval. The Time in Sector chart displays 15-minute segments of data. To see other 15-minute segments, use the back and forward arrow buttons at the bottom of the chart.

> **Note:** When alert data goes out of date on the NAS Monitor, the last update time in the upper right corner displays in red and flashes for one minute.

The Time in Sector chart columns are explained in the following table.

Time in Sector Chart Columns

Column	Description
RVSM	Indicates the within-sector RVSM conformance status of each flight in the list. "NC" is displayed if the flight is non-conformant or a dash "-" is displayed otherwise.
ACID	Displays a flight's unique alphanumeric aircraft identifier. The Aircraft IDs in the ACID column are dark or light. The dark items represent active flights; the light represents inactive flights. Sort order: Alphabetically by the first three characters of the ACID and then numerically by the remaining characters.
ORIG	If the Sort by Origin option is chosen, then the origin airport is displayed in the third column with an "ORIG" column heading. Sort order: Origin airport, entry time, then exit time.
DEST	If the Sort by Destination option is chosen, then the destination airport is displayed in the third column with an "DEST" column heading. Sort order: Destination airport, entry time, then exit time.
Center	Displays the ARTCC where the flight is currently located (or the Departure ARTCC for inactive flights). Sort order: Center in which the flight is currently located (or the departure Center for inactive flights), Entry Time, then Exit time. **Note:** The Center column is displayed unless either the "Sort by Origin" or Sort by Destination option is chosen.

Note: A plus sign (+) or minus sign (-) is appended to the sector name in the title bar of the Time in Sector chart if that sector is not in its baseline configuration.

Above the chart are the following data:

- Upper and lower MAP threshold values.
- Peak one-minute flight counts.
- Total number of flights occupying the sector at any time during the 15-minute interval.
- Time the chart was last updated.

Aircraft Identifiers

The Aircraft IDs in the ACID column are dark or light. The dark items represent active flights; the light represents inactive flights.

Interval Colors

Time intervals in the Time in Sector chart are in one of the following colors.

Time Interval Colors

Color	Description
Red	Indicates that the number of active flights predicted to be in the sector during that minute exceeds the MAP On value.
Yellow	Indicates that the total number of flights predicted to be in the sector during that minute exceeds the MAP On value.
Green	Indicates that the number of flights predicted to be in the sector during that minute is equal to or less than the MAP On/Off values.

Functions Menu

The Functions menu on the Time in Sector chart has three options:

1. **Sort**
   Submenu options allow you to sort by Entry Time, Active/Inactive, ACID, Origin, Destination, Center and RVSM.
2. **Display**
   Submenu options let you display the ACID, Truncated Route, or Full Route.
3. **Close**

   Note: Regardless of the Display option you choose, the TSD displays a tool tip with the flight's full route when you place the cursor over a bar in the chart.

Scrolling

There are four buttons at the bottom of the chart that let you move within the time intervals.

Time in Sector Chart Scroll Buttons

Button	Description
<<<	Clicking this button goes back to the previous 15-minute time interval.
<	Clicking this button goes back one minute.
>>>	Clicking this button goes forward to the next 15-minute time interval.
>	Clicking this button goes forward one minute.

When the chart is sorted by Entry Time, moving forward or backward on the Time in Sector chart will cause the vertical scroll bar to auto-scroll if no bars are displayed for any flights. The chart will automatically scroll vertically to show the flights that are predicted to be in the sector during the 15-minute time period.

> **Note:** When the chart is sorted by Entry Time, the Time in Sector chart displays arrows on the left and right sides of the chart. These arrows indicate that there is flight data beyond that point in the chart, either before or after the current time period.

NAS Monitor Bar Chart

The Bar Chart option lets you generate a bar chart comparing the traffic demands for a NAS element with its traffic thresholds. The illustrations that follow display a bar chart for an examined airport, sector, and fix.

1. Pull down the Functions menu on the NAS Monitor dialog box by clicking **Functions** or pressing <**Alt F**>.
2. Click **Bar Chart** or press **C**.

   Note: You can open a bar chart for any element in the NAS Monitor by selecting the row and selecting the **Bar Chart** option from the Functions menu.

   You can also open a bar chart by selecting a row and the **Bar Chart** option from the right-click menu. After issuing the Bar Chart command, the NAS Monitor Bar Chart dialog box opens.

Using the "C" Quick Key

When you use the "C" quick key to display the NAS Monitor Bar Chart, the location of the mouse pointer when you press the quick key and the state of the Show Flights checkbox determine how the NAS Monitor responds.

If the Pointer is located	The TSD does the following
In a selected row over a cell that is within the selected cell range or on the row label of the selected row that has the Show Flights checkbox unchecked	Preserves the selection and displays the Bar Chart for the selected element and time range
In a selected row over a cell that is outside the selected cell range of the row that has the Show Flights checkbox unchecked	Preserves the row selection, changes the cell selection to the cell being pointed to, and requests a Bar Chart for the selected element and time interval
On a row label of an unselected row that has the Show Flights checkbox unchecked	Selects the row by highlighting the row label, highlights all the visible cells in the row, and displays the Bar Chart for the selected element and time range
On a row label in an unselected row that has the Show Flights checkbox checked	Selects the row by highlighting the row label, preserves the Level 1 cell selection but changes the cell highlighting to Level 2, and displays the Bar Chart for the selected element and time range.
On a cell in an unselected row that has the Show Flights checkbox unchecked	Selects the row by highlighting the row label, sets the cell highlighting to Level 2, and displays the Bar Chart for the selected element and time interval.

If the Pointer is located	The TSD does the following
On a cell within a Level 1 selected cell range of a row that has the Show Flights checkbox checked	Selects the row by highlighting the row label, preserves the Level 1 cell selection but changes the cell highlighting to Level 2, and displays the Bar Chart for the selected element and time range.
On a cell outside the Level 1 selected cell range of a row that has the Show Flights checkbox checked.	Selects the row by highlighting the row label, sets the cell highlighting to Level 2, and displays the Bar Chart for the selected element and time interval.
Somewhere other than a row label or cell in a row	Ignores the quick key

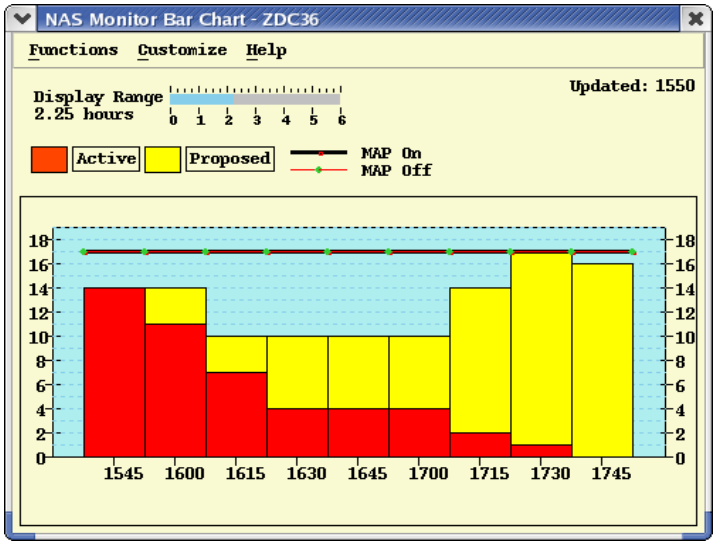
Note: For more information on Level 1 and 2 highlighting and the Show Flights checkbox, see the topics NAS Monitor and Show/Hide Examined Flights

Reading the NAS Monitor Bar Chart

The NAS Monitor Bar Chart dialog box displays a bar chart showing the relationship between alert (MAP) thresholds and projected traffic demand.

Note: This section describes using the NAS Monitor Bar Chart in Normal mode.

The bar chart shows the active, proposed, and total flights projected for each 15 minute time interval. A two-color bar indicates the portion of the projected demand that is based on proposed flights. The dialog box provides a legend showing the colors used for active and projected flights and the symbols used to represent alert thresholds.



Airport Bar Chart Colors

Color	Meaning
Red	Number of active flights projected to arrive at or depart from the airport in that interval
Yellow	Number of proposed flights projected to arrive at or depart from the airport in that interval

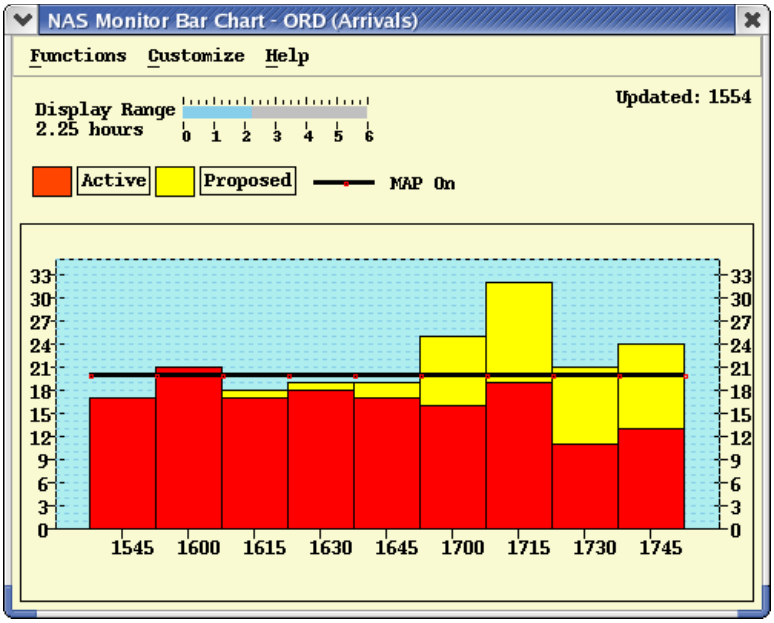
Note: You can use the Chart Background button in the Change Colors and Fonts option (Display Menu, Adapt commands) to change the background color of the Bar Chart.

Display Range

The Display Range option at the top of the dialog box determines the time range represented by the NAS Monitor bar chart. The current display range is shown in blue. When the NAS Monitor Bar Chart dialog box is first opened, the Display Range option is set to the display range specified for the NAS Monitor. To change the display range, click on the number of hours you would like to display or click anywhere on the blue shaded segment and drag it to the number of hours you would like to display. You can set the display range for up to 6 hours.

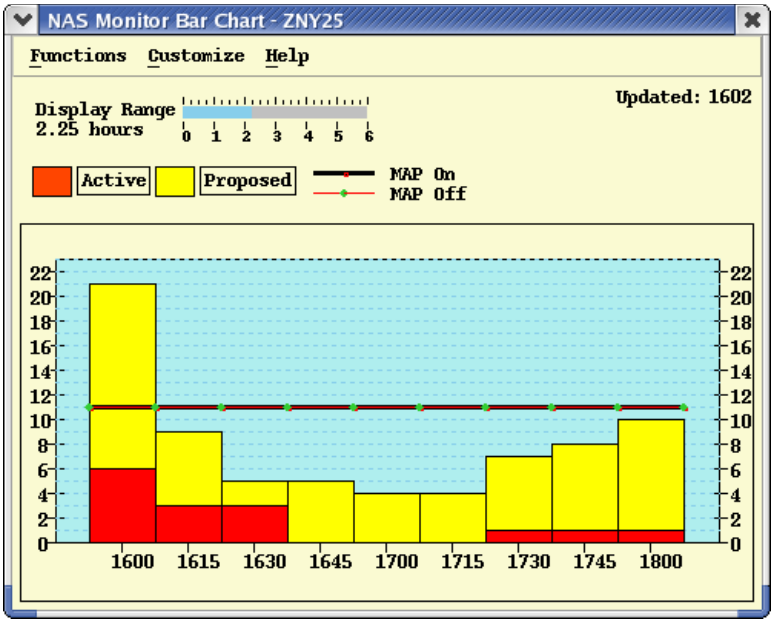
Bar Chart for an Examined Airport

In the following example the NAS Monitor Bar Chart dialog box opens showing the bar chart for an examined airport. The MAP value is represented by a thick, black line with red dots. In this example Arrivals was selected for the specified airport. To view a bar chart for departures from this airport, select Departures for the airport and open a second bar chart.



Bar Chart for an Examined Sector

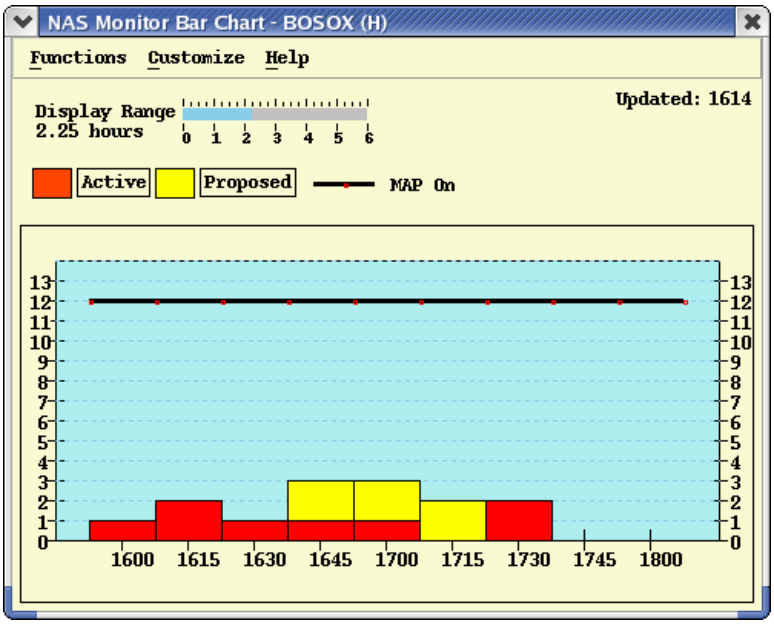
In the following example, the NAS Monitor Bar Chart dialog box opens showing the bar chart for an examined sector. The MAP On value is represented by a thick, black line with red dots and the MAP Off value is represented by a thin, red line with green diamonds. The Map On and Map Off values are the same.



Note: A plus sign (+) or minus sign (-) is appended to the sector name in the title bar of the Bar Chart if that sector is not in its baseline configuration.

Bar Chart for an Examined Fix

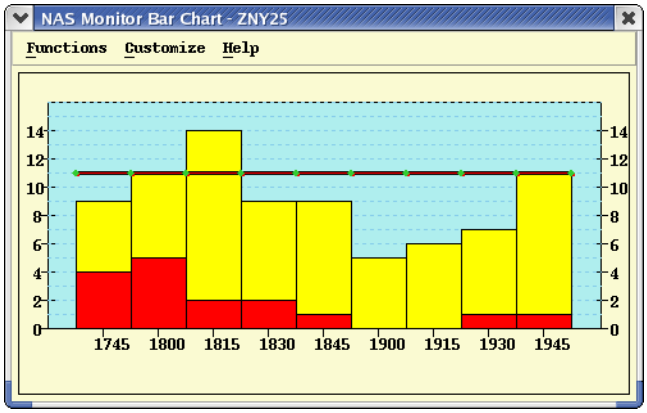
In the next example, the NAS Monitor Bar Chart dialog box opens showing the bar chart for an examined fix. The MAP value is represented by a thick, black line with red dots.



Functions and Customize Menus

The **Functions** pull-down menu provides an option to close the NAS Monitor Bar Chart dialog box and return to the NAS Monitor.

The **Customize** pull-down menu provides the menu item, Show/Hide Options Panel. The NAS Monitor Bar Chart with the Options Panel hidden looks like the sample below.



Alerts Report

The Alerts Report command lets you create a flight list report for any selected NAS element on the NAS Monitor. The report includes all flights projected to arrive at, depart from, or traverse an alerted element for each 15-minute interval during the selected time range. You can open an Alerts Report for any row in the NAS Monitor by highlighting the row and selecting the Alerts Report option as described below:

1. Pull down the Functions menu in the NAS Monitor dialog box by clicking Functions or pressing <**Alt F**>.
2. Click **Alerts Report** or press **R**.

You can also right-click on the row label or on a cell that represents the NAS element and time interval and select the **Alerts Report** option from the right-click menu, or use the Quick Key method, pressing **R**.

Using the "R" Quick Key

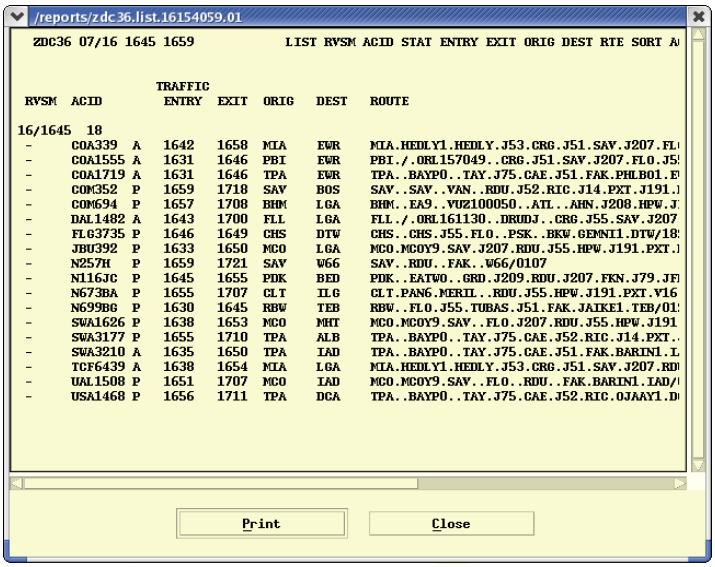
When you invoke the "R" quick key to display the Alerts Report, the location of the mouse pointer when you press the quick key and the state of the Show Flights checkbox determine how the NAS Monitor responds.

If the Pointer is located	The NAS Monitor process
In a selected row over a cell that is within the selected cell range or on the row label of the selected row that has the Show Flights checkbox unchecked	Preserves the selection and requests an Alert Report for the selected element and time range.
In a selected row over a cell that is outside the selected cell range of the row that has the Show Flights checkbox unchecked	Preserves the row selection, changes the cell selection to the cell being pointed to, and requests an Alert Report for the selected element and the selected time interval.
On a row label of an unselected row that has the Show Flights checkbox unchecked	Selects the row by highlighting the row label, displays all the visible cells in the row with Level 2 highlighting, and requests an Alert Report for the selected element and time range.
On a row label in an unselected row that has the Show Flights checkbox checked	Selects the row by highlighting the row label, preserves the Level 1 cell selection but changes the cell highlighting to Level 2, and requests an Alerts Report for the selected element and time range.

If the Pointer is located	The NAS Monitor process
On a cell in an unselected row that has the Show Flights checkbox unchecked	Selects the row by highlighting the row label, sets the cell highlighting to Level 2, and requests an Alerts Report for the selected element and time interval.
On a cell within a Level 1 selected cell range of a row that has the Show Flights checkbox checked	Selects the row by highlighting the row label, preserves the Level 1 cell selection but changes the cell highlighting to Level 2, and requests an Alerts Report for the selected element and time range.
On a cell outside the Level 1 selected cell range of a row that has the Show Flights checkbox checked.	Selects the row by highlighting the row label, sets the cell highlighting to Level 2, and requests an Alerts Report for the selected element and time range.
Somewhere other than a row label or cell in a row	Ignores the quick key

Displaying an Alerts Report

After issuing the Alerts Report command, a message stating that the request has been sent displays and the Alerts Report opens.



The Alerts Report provides the following buttons at the bottom of the report:

- **Print**
  Opens the Print dialog box. The Print dialog box displays the pathname of the standard print script and allows you to specify the number of copies you want to print.
- **Close**
  Closes the NAS Monitor Alerts Report and returns you to the NAS Monitor dialog box.

Show/Hide Examined Flights

The Show/Hide Examined Flights option lets you display or hide the current location of flights predicted to arrive at, depart from, or traverse any element(s) you are examining during a selected time interval in the NAS Monitor.

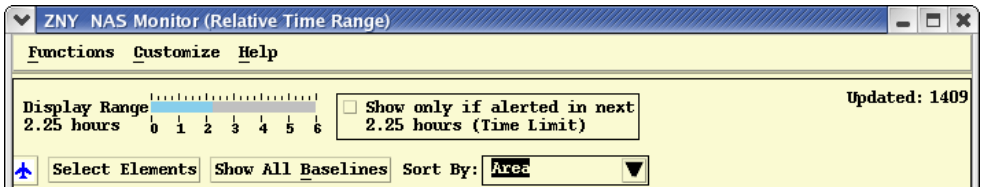
1. Pull down the Functions menu on the NAS Monitor dialog box by clicking **Functions** or pressing <**Alt F**>.
2. Select **Show Examined Flights** or **Hide Examined Flights** from the pull-down menu or press F.

OR

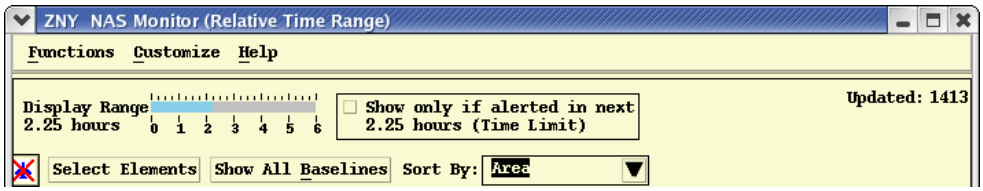
Click the **Show/Hide Examined Flights** icon button on the NAS Monitor dialog box.

Note: You can only show Examined Flights for one monitor at a time. Showing Examined Flights in one monitor will turn off the display of Examined Flights in another monitor.

After you issue the command, the Show/Hide Examined Flights button indicates that the Show Examined Flights display is toggled "on" by displaying a blue airplane icon on a white background.



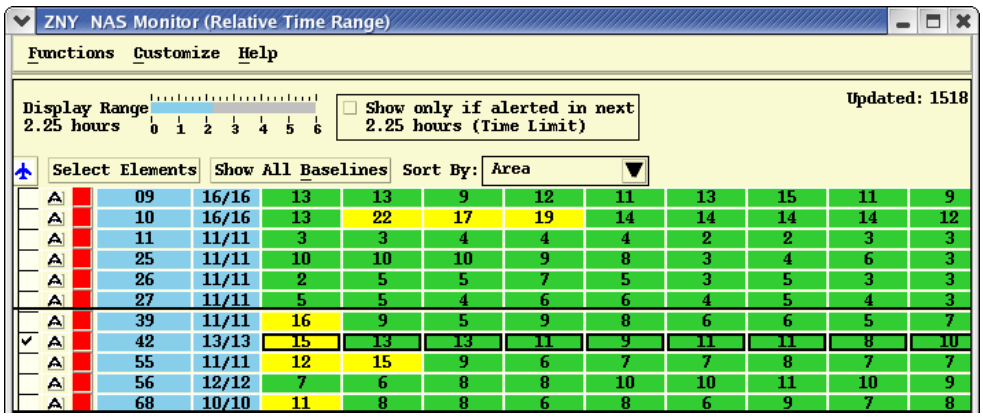
If the Show Flights display is turned "off" and flights are hidden, the icon has a red "**x**" through it.



Using the Show Flights Command

To show Examined Flights for a specific NAS element during a selected time interval, use the checkbox to the left of the row to select the element. Do the following.

1. After toggling the Show Flights command on, select the NAS element for which you want flights drawn by clicking the **Show Flights** checkbox to the left of the row. You can draw flights for up to nine NAS elements at time.
2. The time intervals you select determine the flights displayed. When you click the **Show Flights** checkbox for a row, all time intervals are selected by default and the row is highlighted with a "Level 1" line border. Level 1 highlighting is illustrated in the following example. However, if the Show Flights checkbox had been previously checked for that row, TFMS remembers the cell selection that existed when the checkbox was checked and restores that cell selection when the checkbox is again checked. This allows you to toggle the flights display for that element without resetting the cell selection.



You can also select a single time interval or a range of intervals in a row. To select an individual time interval, hold the pointer over the cell and left-click. To select more than one cell, use the <**Shift**> and <**Ctrl**> keys or the click-and-drag method. When you select an individual time interval or a range of intervals in a row, the row label becomes highlighted.

You can also select an entire row by clicking on the row label. When you select a cell, a range of cells, or an entire row by clicking on the row label, the range of selected cells is displayed with "Level 2" highlighting. Level 2 highlighting displays as a thick line border around each selected cell and is illustrated in the following example.

3. Click the icon button to select the icon type you want to use for drawn flights. Three icon types are available.

4. Click the color button to display a color palette and select the color you want to use for drawn flights.

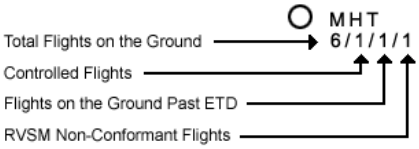
   Note: The color and icon type for flights in more than one drawn flight set are determined by row order. The color you select will take precedence over colors specified for flights in Select Flights, Create/Edit FEA/FCA flights, and Monitor All Reroutes.

5. To hide flights, click the **Hide Flights** toggle button or menu option. If you subsequently click the **Show Flights** button, the same time intervals previously selected display highlighted.

   Note: Clicking the **Show/Hide Flights** toggle button or menu option does not deselect any selected NAS elements.

Flights That Have Not Departed

Flights that have not yet departed are indicated by flight counts at each airport, including a count of all flights still on the ground, controlled flights on the ground past the original departure time, flights on the ground past their Estimated Time of Departure (ETD), and flights on the ground that are RVSM non-conformant. Those flights that meet these selection criteria are represented by small, empty circles at the airports where they are originating. Beside each circle icon are the airport identifier and a set of four numbers, as shown and explained below:



- **Total flights on ground**
  This is the total number of flights represented by this icon, that is, the number waiting to depart from this airport that will depart from, arrive at, or traverse the examined element within the indicated time limit.
- **Controlled flights**
  Of the total number of flights represented by this icon, this is the number of flights that are currently controlled by a ground delay program and whose original departure time is already past.
- **Flights on ground past ETD**
  Of the total number of flights represented by this icon, this is the number of flights whose ETD is already past but which have not departed.
- **RVSM Non-Conformant Flights**
  This is the total number of RVSM non-conformant flights on the ground.

> **Note:** This number is displayed if the "RVSM Non-Conformant Indicators for Drawn Flights" option is on and flights are drawn for an examined sector, fix, airport and/or FEA/FCAs, and some of the examined flights are inactive

You can display data blocks for flights that have not departed by selecting the circle icons. Note that a data block for a circle icon may describe multiple flights. The data block lists the Estimated Time of Departure for each flight and, if controlled, the original (proposed) departure time.

> **Note:** If the "RVSM Non-Conformant Indicators for Drawn Flights" option is on and a data block is shown for examined flights on the ground, the TSD inserts the string "NC" before each flight that is RVSM non-conformant in at least one of the sectors or FEA/FCAs for which flights are currently being drawn, or that is predicted to be non-conformant at any future time if the flight is a member of an examined fix or airport flight set.

As with any other data blocks, data blocks for circle icons may also show the origin and destination or route of each flight, and routes may be drawn, depending on whether those items had been selected when you issued the Select Flights command.

Other Flights

Issuing the Hide Examined Flights command does not turn off other flights that are already displayed. Issue Hide Flights on the TSD Flights Menu to turn off other flights before issuing Show Examined Flights.

Using the "G" Quick Key

When you use the "G" quick key to toggle the Turn green option, the location of the mouse pointer when you press the quick key and the state of the Show Flights checkbox determine how the NAS Monitor responds.

If the Pointer is located	The NAS Monitor process
In a selected row over an alerted cell that is within the selected cell range of the row that has the Show Flights checkbox unchecked	Preserves the selection and invokes the Turn Green option for the cell being pointed to
In a selected row over an alerted cell that is outside the selected cell range of the row that has the Show Flights checkbox unchecked	Preserves the row selection, changes the cell selection to the cell being pointed to, and invokes the Turn Green option for that cell
On an alerted cell in an unselected row that has the Show Flights checkbox unchecked	Selects the row by highlighting the row label, displays Level 2 highlighting around the cell being pointed to, and invokes the Turn Green option for that cell.
On an alerted cell within the "Level 1" selected cell range of a row that has the Show Flights checkbox checked	Selects the row by highlighting the row label, preserves the "Level 1" cell selection but changes the highlighting around the cell to Level 2, and invokes the Turn Green option for that cell
On an alerted cell outside the "Level 1" selected cell range of a row that has the Show Flights checkbox checked.	Selects the row by highlighting the row label, displays Level 2 highlighting around the cell being pointed to (deselecting other cells in the row if any), and invokes the Turn Green option for that cell
Somewhere other than a cell in any row	Ignores the G quick key

Note: For more information on Level 1 and 2 highlighting and the Show Flights checkbox, Show/Hide Examined Flights.

NAS Monitor Customize Menu

Select Elements

The Select Elements option lets you add NAS elements to or remove NAS elements from the NAS Monitor. Click **Select Elements** (or press **E**) on the NAS Monitor Customize menu to open the Select Monitored Elements dialog box. If you select the **Manual** sort option, you can use the Monitored Elements section of the Select Monitored Elements dialog box to reorder the list. For more information on using the Select Monitored Elements dialog box, see page 5-103.

Show/Hide All Baselines

This option allows you to add or hide rows to the display that show the baseline counts for a selected sector and any sectors that have been added to the sector. The NAS Monitor identifies a sector into which one or more other sectors have been combined by displaying a + sign in its row label and displays alert data for the sector in its current configuration. Click **Show All Baselines** or **Hide All Baselines** (or press **B**) on the NAS Monitor Customize menu. Rows of alert data displayed in gray with their element labels in parentheses indicate baseline data. The counts in these rows represent the peak 1-minute counts predicted for the sectors in their baseline configuration. When **Hide All Baselines** is selected, the additional rows are removed and a single row of alert data for the sector in its current configuration displays.

> **Note:** Selecting the **Show All Baselines** menu option displays baseline data for the entire monitor. To show or hide baseline data for an individual sector, right-click on the element label and select the Show/Hide Baseline menu option from the right-click menu.

Reordering Rows

You can access the **Move Row Up**, **Move Row Down,** and **Remove Row** commands on the Customize and Right-Click Menus of the NAS Monitor. You can click the menu selection or use the mnemonic keys:

- For Move Row Up, press **U**.
- For Move Row Down, press **D**.
- For Remove Row, press **R**.

To move rows up or down and thereby change the sort order, you must set the Sort By option to **Manual** Sort. You can remove rows from the NAS Monitor regardless of the sort mode. To use any of these commands, you must first select the row. The changes you make to the NAS Monitor using these commands are reflected in the Select Monitored Elements dialog box.

Relative/ Absolute Time Range

The Relative/Absolute Time Range command determines the time range mode with which selected time intervals in a timeline or a range of time intervals display. Selected time intervals can display in Relative or Absolute time. To toggle the NAS Monitor between Relative and Absolute Time Range, use the Relative/Absolute Time Range command on the Customize pull-down menu of the NAS Monitor dialog box. Click **Relative Time Range** or **Absolute Time Range** or press **T**.

- **Relative Time Range**
  With Relative Time Range mode, a selected time range displays relative to the current time and shifts forward as current time advances. When the beginning of the first time interval in a timeline or range of time intervals increments by 15 minutes, the start and end times of the selected time range are also incremented by 15 minutes so that the same intervals, by their position in the timeline, remain selected.
- **Absolute Time Range**
  With Absolute Time Range mode, a selected time range remains the same as current time advances. As current time is updated and the left most time bucket drops off the timeline, the selected time range eventually diminishes until the last time bucket selected is the current time. As time advances and the last selected time bucket drops off the timeline, the TSD displays the new current time interval as selected, even if it was not selected before.

Sort By

The Sort By option of the NAS Monitor customize menu lets you sort alert data by Area, Alphanumerically, or Manually. Each sort option is accessed by clicking its name on the Sort By submenu or by pressing its mnemonic letter. For Area, press **R**, for Alphanumeric, press **L** and for Manual, press **M**. This option can also be accessed by clicking the **Sort By** button on the NAS Monitor. For more information on the Sort By function, see page 5-107.

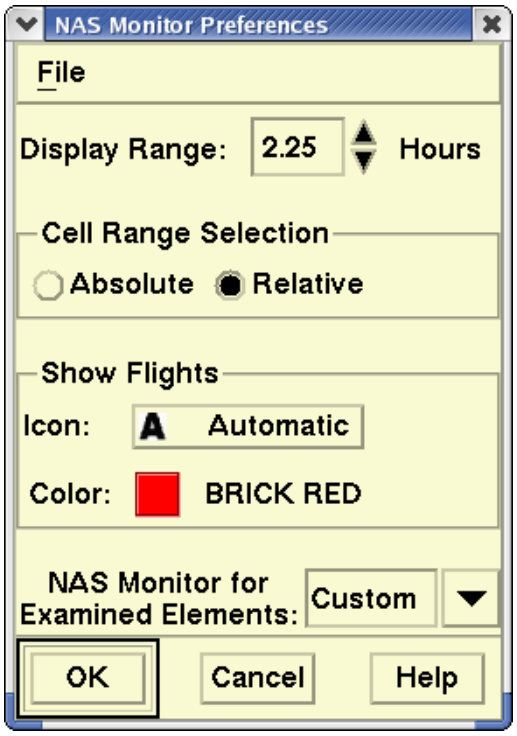
Show/Hide Options Panel

This option allows you to show or hide the NAS Monitor Options Panel. To toggle between showing or hiding the Options Panel on the NAS Monitor, use the Show/Hide Options Panel command on the Customize pull-down menu of the NAS Monitor dialog box. Click **Show Options Panel** or **Hide Options Panel** or press **T**.

Preferences Command	
The NAS Monitor Preferences command enables you to define your preferences for displaying alerts.	
	Quick Key Method
1. Pull down the Alert menu by clicking **Alerts** on the main menu or pressing **<Alt> A**. 2. Click **Preferences** or press **P**.	**None**
	Semicolon Method
	None

NAS Monitor Preferences Dialog Box

After you click **Preferences**, the NAS Monitor Preferences dialog box opens.



The following table explains the fields in the NAS Monitor Preferences dialog box.

NAS Monitor Preferences

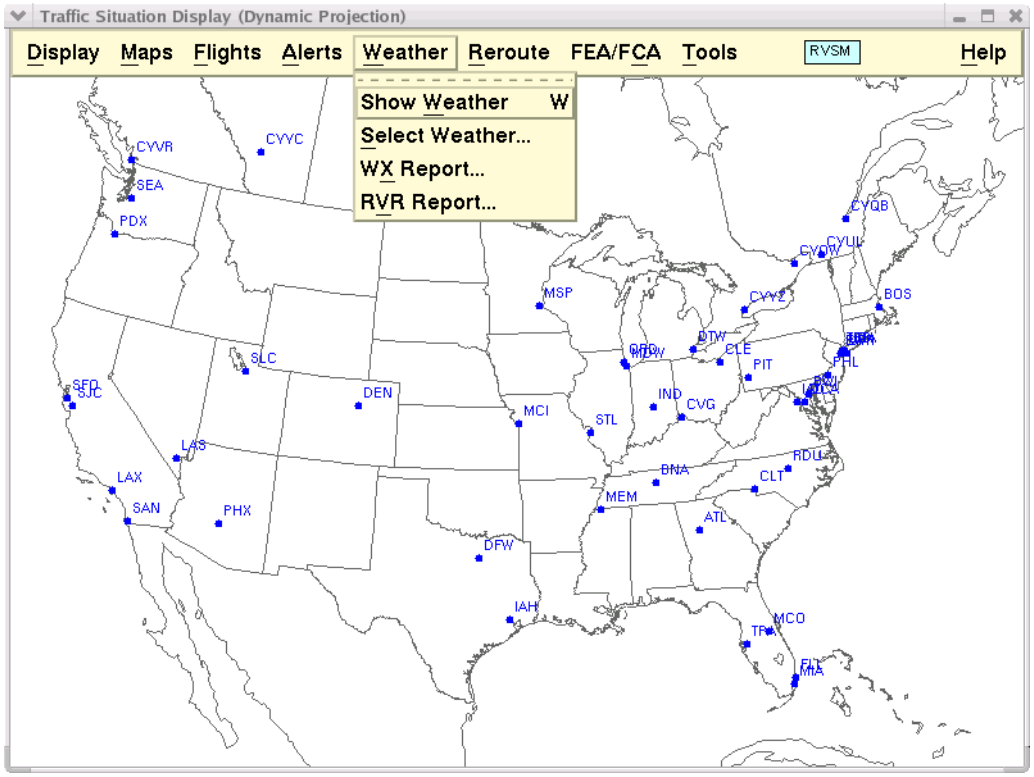
Item	Description	What You Do
Display Range	Allows you to set the default range of hours displayed in the NAS Monitor.	Click the up or down arrow or use the keyboard arrow keys to change the default time range in quarter hours from .25 hour to 6 hours. The default display range is 2.25 hours.
Cell Range Selection	Allows you to select the default cell range selection in the NAS Monitor.	Click the **Relative** or **Absolute** radio button. The default is **Relative**.
Show Flights Icon	Allows you to select the default icon type with which you want NAS Monitor flights to be drawn.	Click on the icon button to select an icon type. You can select from three options - **Automatic**, **Airplane**, or **Dot**. The default is **Automatic**.
Show Flights Color	Allows you to select the default color with which you want NAS Monitor flights to be drawn. The color you select displays in the box in each NAS Monitor row.	Click the button to display a color palette. Click on your choice of color for alerts. The default color is red.
NAS Monitor for Examined Elements	Allows you to select the default NAS Monitor where elements examined with the Examine function are displayed.	Click on the down arrow to open a pick list. The default is **Custom**.

When you finish using the NAS Monitor Preferences dialog box and click **OK**, your preferences for displaying alerts are saved.

File Menu

You can use the File pull-down menu to save NAS Monitor preferences to a file, recall a file, or delete a file. Clicking on the appropriate menu item opens a dialog box. For more information, refer to the section on File Pull-Down Menu, on page 3-3 in Chapter 3, TSD Basics.

Weather Menu



Overview

In this section, you will learn how to use the commands available on the Weather pull-down menu. The section discusses hiding and showing weather on the TSD, selecting weather from the legacy overlay, obtaining a weather report, and a runway visual range report. Each of the following topics corresponds to an item on the Weather menu.

- **Show/Hide Weather Command** **page 5-135**

  Toggles weather on or off.
- **Select Weather Command** **Page 5-136**

  Lets you select weather overlay for display.
- **WX Report Command** **Page 5-154**

  Displays and prints weather information.
- **RVR Report Command** **Page 5-157**

  Displays and prints runway visual range information.

Show/Hide Weather Command	
The **Show Weather/Hide Weather** command lets you toggle off and on the graphic overlays that are made with other weather commands. To remove all the weather overlays as if each one was turned off separately, use the Clear Weather semicolon command.	
	Quick Key Method
1. Pull down the Weather menu by selecting **Weather** on the main menu or pressing **<Alt> W**. 2. Click **Show Weather** or **Hide Weather** or press **W**.	**W**
	Semicolon Method
	None

Note: The **Show Weather** command takes effect only if weather overlays have been selected in the Select Weather dialog box. For information about this dialog box, see the **Select Weather** command in the next section.

When Show Weather is selected, the Weather menu option displays Hide Weather; When Hide Weather is selected, the Weather menu option displays Show Weather.

Select Weather Command	
The **Select Weather** command lets you select the Select Weather dialog box. There is only one Weather product available for display for TSD-U/F user roles.	
	Quick Key Method
1. Pull down the Weather menu by clicking **Weather** on the main menu or pressing **<Alt> W**. 2. Click **Select Weather** or press **S**.	**None**
	Semicolon Method
	None

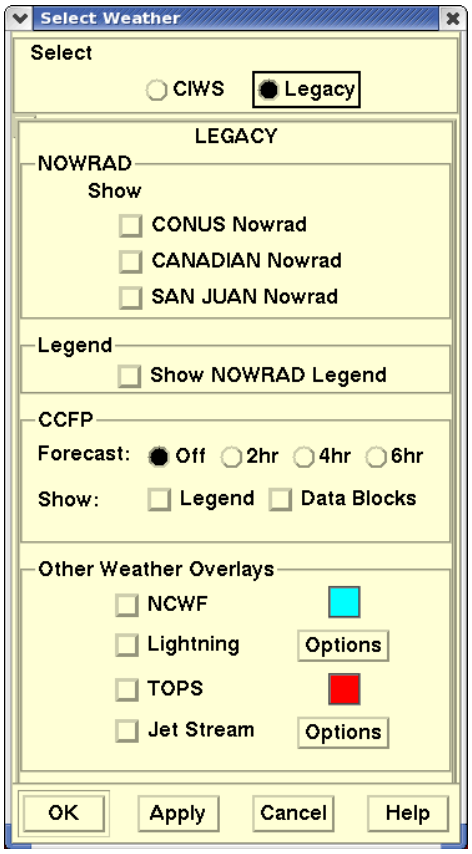
Select Weather Dialog Box

After you click **Select Weather** or press the mnemonic key from the Weather menu, the Select Weather dialog box opens with the Legacy set of weather products.

Note: The CIWS option is grayed out for user role TSD-U/F.

Select Weather Dialog Box - Legacy Version

If you click the **Legacy** radio button, you will see the Legacy version of Select Weather dialog box.



Note: When you save, The TSD will save the currently selected state of all of the options in the Legacy version of the Select Weather dialog box. These saved values will be recalled when the dialog is reopened and they will be saved in adaptation when those files are saved.

The Legacy Select Weather dialog box lets you select an overlay and change that overlay to meet your specifications. The following weather overlays are available in the Legacy version of the Select Weather dialog box:

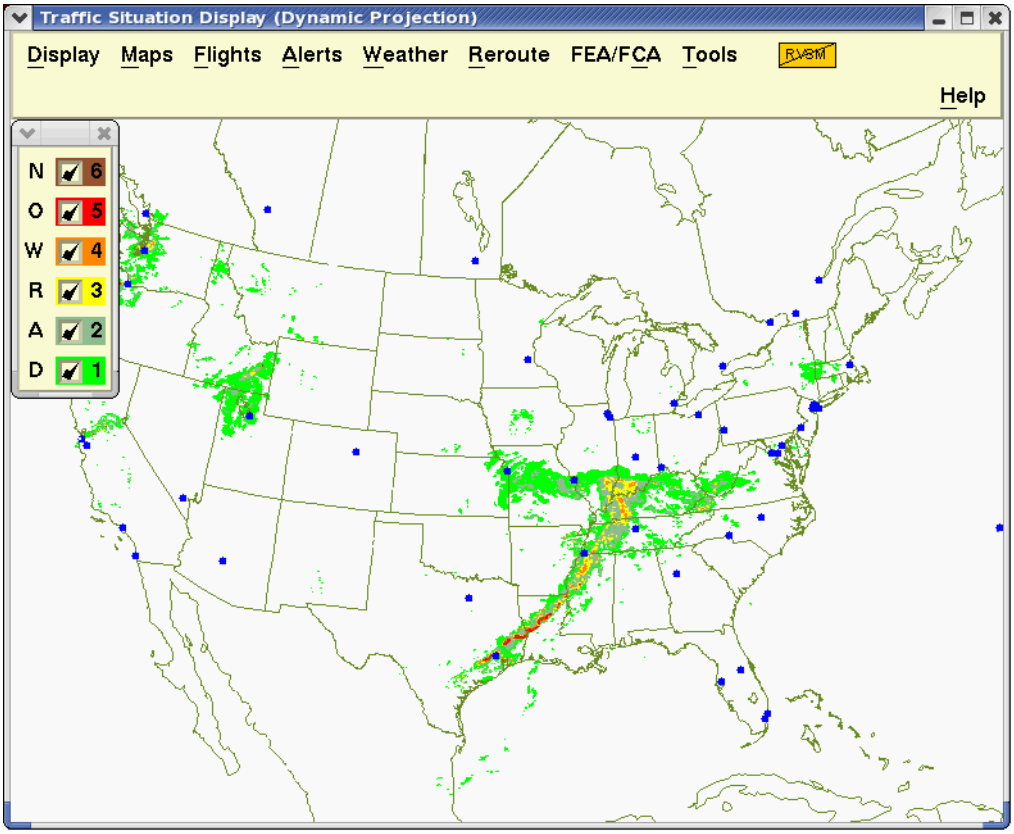
- **NOWRAD**
  National Operational Weather Radar (NOWRAD) shows precipitation areas and levels of intensity for CONUS, Canada, and San Juan.
- **NOWRAD Legend**
  A numbered color-coded dialog box that controls the six precipitation level for NOWRAD overlays that appear on the TSD.
- **CCFP (Collaborative Convective Forecast Product)**
  Identifies areas for predicted thunderstorms**.**
- **CCFP Legend**
  Contains colors and codes for thunderstorm coverage, growth, and confidence.
- **NCWF (National Convective Weather Forecast)**
  NCWF provides one-hour extrapolation forecasts of thunderstorm locations.
- **Lightning**
  Weather Services International (WSI) Lightning. Shows current and historical lightning strikes for CONUS and Canada. This product is available for display with both the CIWS and Legacy products.
- **TOPS**
  Altitude of cloud echo tops in precipitation areas.
- **Jet Stream**
  Weather Services International (WSI) Jet Stream. Shows wind speed, altitude, and direction. This product is available for display with both the CIWS and Legacy products.

NOWRAD Overlay and Legend

The NOWRAD overlay shows areas of precipitation and precipitation intensity using a 2 km grid. The overlay shows levels of precipitation intensity in six colors. You can display NOWRAD data for the CONUS, Canada, and San Juan individually or at the same time. The TSD updates NOWRAD data for the CONUS every five minutes. To select a NOWRAD Overlay, click the check box for **CONUS Nowrad**, **CANADIAN Nowrad** and/or **SAN JUAN Nowrad**. Data for Canada and San Juan is updated every 15 minutes.

The Legacy version of the Select Weather dialog box allows you to display a legend with the NOWRAD overlay. To display the NOWRAD legend, click the **Show NOWRAD Legend** check box and click **OK** or **Apply**. The legend displays with six levels of precipitation selected. The levels of precipitation on the NOWRAD legend represent the lightest, Level 1, to the heaviest, Level 6.

The following sample shows the CONUS NOWRAD overlay with the NOWRAD Legend. The legend indicates that all six levels of precipitation are selected for display and the overlay shows all levels of precipitation intensity.



The NOWRAD legend appears with six levels of precipitation selected. The levels of precipitation represent a range from the lightest, level1 to the heaviest, level 6. You can deselect lower levels of precipitation by clicking a level that is selected which deselects all levels that represent lower levels of

precipitation. For example, clicking level **3** deselects levels **1** and **2**. If you click a deselected level, you select that level and all levels representing higher levels of precipitation. After you click the levels you want selected or deselected, the TSD redraws your changes. To remove the legend, click the **Legend** check box to deselect it or click the close corner on the legend dialog box; otherwise, the legend remains displayed after you close the Select Weather dialog box.

CCFP Display

The Collaborative Convective Forecast Product (CCFP) overlay shows forecast areas where convective weather might occur. The CCFP forecast season typically runs from March 1 through November 30. During the CCFP forecast season, meteorologists at the Aviation Weather Center (AWC) produce a set of three CCFP forecasts every two hours, taking into account information provided by FAA and airline weather specialists.

The CCFP Weather product is available on the CIWS and the Legacy versions of the Select Weather dialog box.

The CCFP section of the Legacy Select Weather dialog box allows you to display a CCFP overlay and associated information for a 2, 4, or 6 hour forecast by clicking on the button for the desired forecast. You can also choose to hide or show CCFP data blocks and the CCFP Legend on the TSD display.

> **Note:** The Canadian CCFP forecast season runs from April 1 through September. During March, October and November, when Canadian CCFP forecasting is not operational, the CCFP section of the Select Weather dialog box displays the message "Canadian CCFP is NOT AVAILABLE."

The TSD receives CCFP data updates every two hours and displays only the most recently issued data. If you display a CCFP overlay along with the Times dialog box, the Times box shows the time that the CCFP was issued and the time for which it is valid. The TSD indicates on the Times dialog box that CCFP data has expired if a time interval of 2.5 hours passes after the last data update.

CCFP Forecast Polygons

Each CCFP forecast area displays as a two-dimensional area or polygon and has associated with it the following attributes: coverage, confidence, speed and direction of movement, echo tops, and growth.

Convective Coverage and Confidence

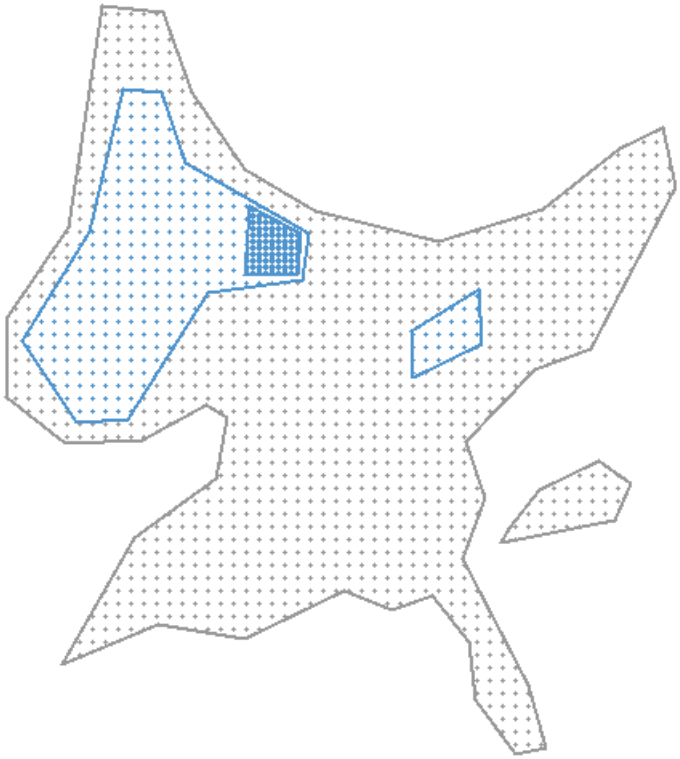
For each CCFP polygon, the TSD depicts convective coverage using the following fill patterns:

- Solid fill : high forecast coverage
- Medium fill : medium forecast coverage
- Sparse fill : low forecast coverage

Forecast confidence is depicted in each polygon in the following colors:

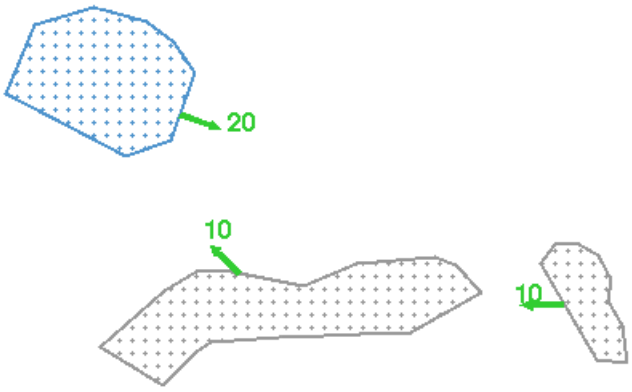
- Slate blue: high confidence
- Gray: low confidence

The following image shows five forecast areas. Sparse fill indicating mostly low convective coverage dominates. One small polygon shows medium fill indicating medium coverage for that area. A slate blue color shows those areas assigned a high confidence forecast.



Direction and Speed of Movement

The direction of a forecast area is indicated by a green arrow that points from the polygon in the direction that the forecast is moving. The speed of movement in knots is indicated by a value near the tip of the direction-of-movement arrow. In the image below two polygons indicating low coverage and low confidence are moving at 10 knots per hour in a westerly and north westerly direction. A third polygon indicating low coverage and high confidence is moving at 20 knots per hour in a south easterly direction.



Echo Tops and Growth Rate

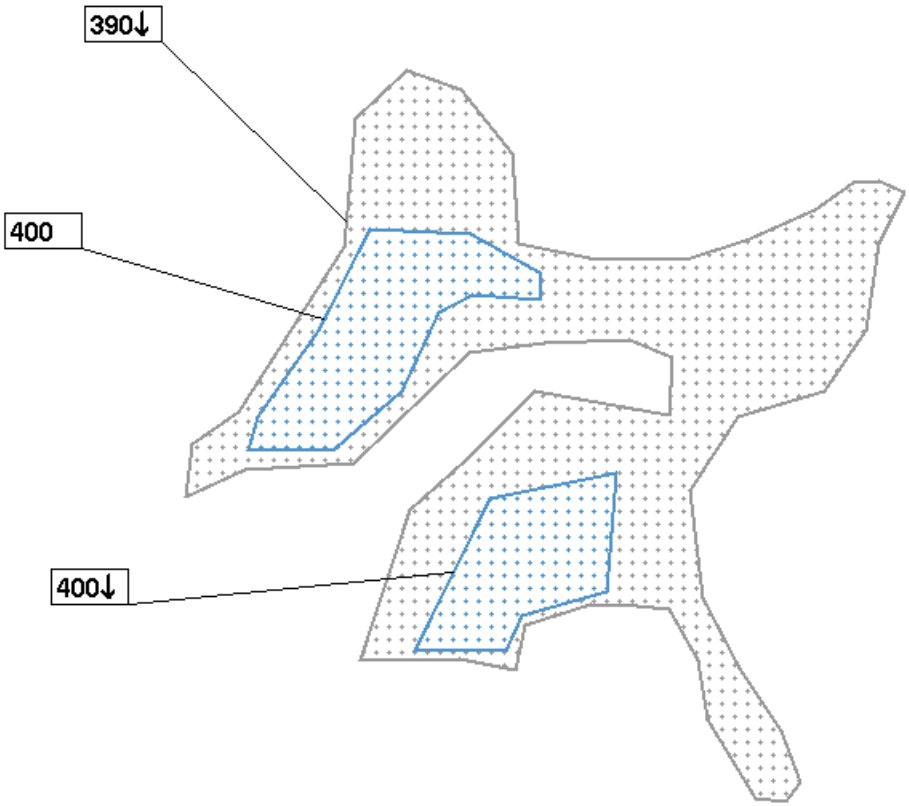
Echo tops information displays in the data block for a forecast area as a three digit number with possible values of 290, 340, 390, or 400. These numbers represent the maximum value of the forecast tops for the area with the exception of 400. A value of 400 represents tops forecast at or above 40,000 feet.

Growth rate information displays to the right of the echo tops value in the data block for a forecast area as an up arrow representing positive growth or a down arrow representing negative growth. A data block that displays no arrow represents no change in growth rate. For more information, see CCFP Data Blocks and CCFP Legend on page 5-140.

CCFP Data Blocks

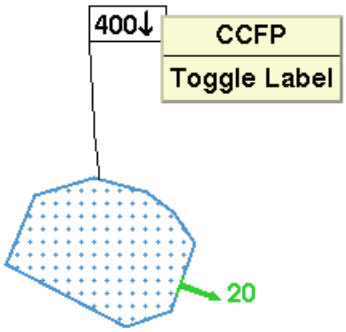
CCFP data blocks contain echo tops and growth rate information for a CCFP forecast area. To prevent confusion about which data block applies to a particular forecast area, the TSD displays a leader line connecting the polygon with its data block. If a data block is positioned within a forecast area, no leader line displays.

In the following image, a low coverage/low confidence forecast area contains two areas assigned a low coverage/high confidence forecast. The low coverage/low confidence forecast polygon (in gray) shows a data block indicating forecast tops with a maximum value of 390 (39,000 feet) and a negative growth rate. Data blocks for the two areas assigned a low coverage/high confidence forecast (the polygons in slate blue) show tops that are forecast at or above 40,000 feet. One of these data blocks shows a negative growth rate and the other shows no change in growth rate.



You can show or hide all CCFP data blocks or any individual data block. To display all CCFP data blocks on the TSD, click the **Data Blocks** check box in the CCFP section of the Select Weather Legacy dialog box. Click to uncheck the Data Blocks check box to turn off the display of CCFP Data Blocks.

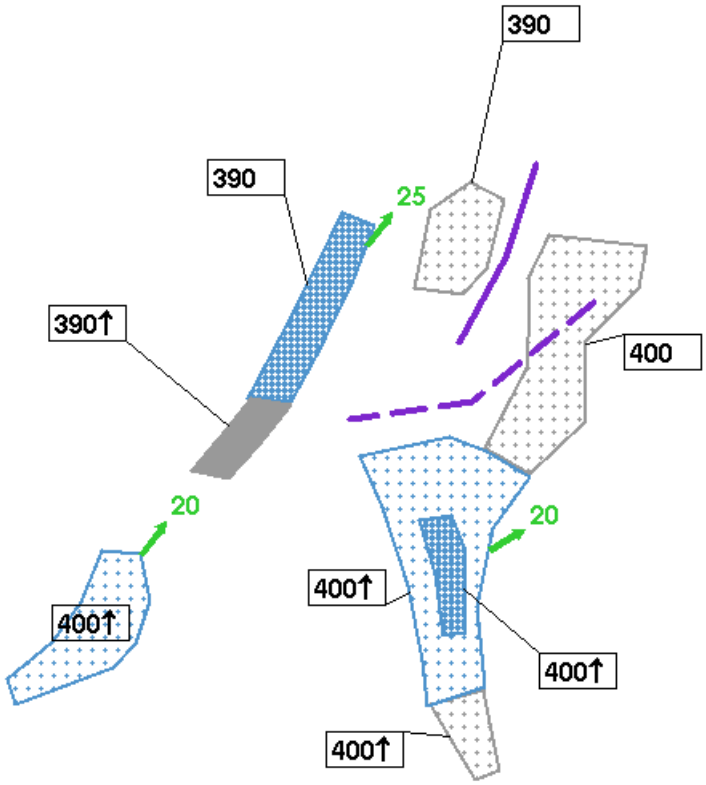
To show or hide an individual data block, right-click on the CCFP polygon and select **Toggle Label** from the right-click menu. If desired, drag-and-drop the data block to a new location on the TSD.



CCFP Forecast Lines of Convection

A CCFP forecast can also contain forecast lines of convection. The TSD displays CCFP forecast lines of convection in the color purple. High coverage lines appear as solid lines and medium coverage lines appear as dashed lines.

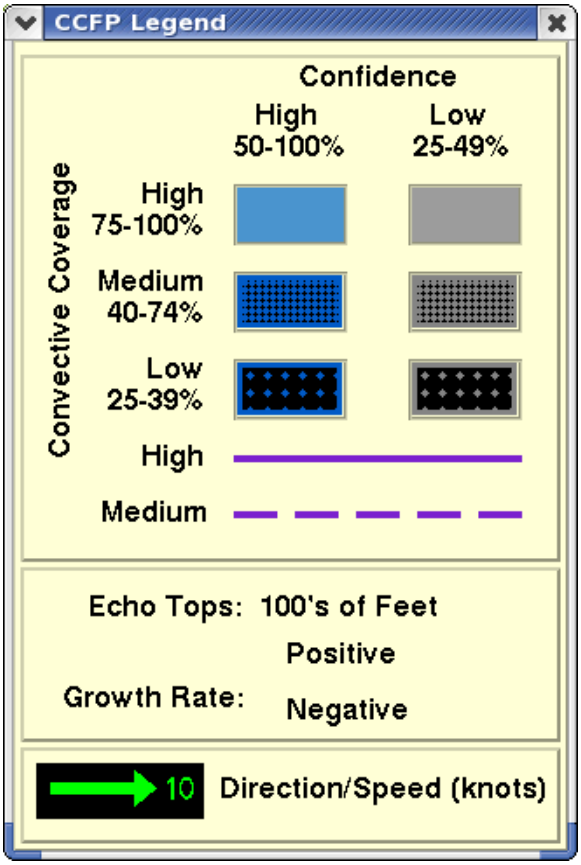
The example below shows several CCFP polygons and illustrates medium and high forecast lines of convection; low, medium, and high forecast coverage; low and high confidence forecasts; speed and direction of movement; and echo tops and growth rate information.



CCFP Legend

Clicking on the **CCFP Legend** check box in the Select Weather Legacy dialog box displays a legend for the CCFP forecast.

> **Note:** If you close the legend, the Legend check box in the Select Weather dialog box toggles off automatically and is deselected.



The CCFP legend shows the convective coverage fill patterns and the colors used to indicate confidence in the CCFP forecast polygons. Note that the fill patterns on the legend display as they would look using black for the TSD background color.

The table below explains the convective coverage areas and the confidence levels determined by the weather specialists in their forecasts of convective activity.

CCFP Convective Coverage and Confidence Chart

Polygon Fill / Polygon Color	Coverage	Confidence
Solid Fill / Slate Blue	High 75 - 100%	High 50 - 100%
Solid Fill / Gray	High 75 - 100%	Low 25 - 49%
Medium Fill / Slate Blue	Medium 40 - 74%	High 50 - 100%
Medium Fill / Gray	Medium 40 - 74%	Low 25 - 49%
Sparse Fill /Slate Blue	Low 25 - 39%	High 50 - 100%
Sparse Fill /Gray	Low 25 - 39%	Low 25 - 49%

The CCFP Legend also shows the following:

- The color and thickness of the forecast lines of convective coverage as well as how high and medium coverage forecast lines are drawn.
- What the echo tops value in a data block represents.
- How the positive and negative growth rate of a forecast area is represented.
- How the direction of movement of a forecast area, as well as the speed in knots, is indicated.

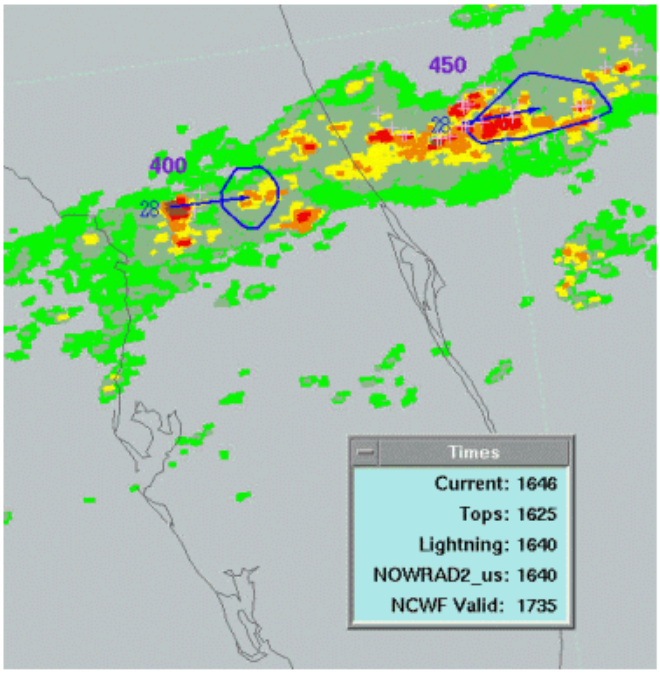
Other Weather Overlays

NCWF – National Convective Weather Forecast

To display the NCWF option, click the **NCWF** check box on the Select Weather dialog box and click **OK** or **Apply**. NCWF data updates every 5 minutes.

The National Convective Weather Forecast (NCWF) uses polygons to depict a one-hour forecast of the location of currently existing thunderstorms. NCWF does not forecast the initiation of new storms or the growth or decay of existing storms. Each forecast polygon is simply an extrapolation of the storm's current shape, direction, and speed. As the storm's shape, direction, or speed changes, its polygon, arrow, and number will change, too, every five minutes.

Each polygon represents the size and shape of the core of the storm, roughly speaking, the level 3 and higher precipitation. It is not intended to encompass the lower-intensity, outer boundaries of the storm. Each polygon is accompanied by an arrow and a number that indicate the storm's current direction of motion and speed, in knots. The length of each storm's arrow corresponds to the speed of that storm. A storm moving 50 nautical miles per hour has an arrow that is 50 nautical miles long. The base of the arrow is located at the center of the currently existing storm. The tip of the arrow is located at the center of its forecasted location. The number near the base of the arrow is the storm's current speed.



NCWF Polygons, Arrows, and Numbers

Each polygon represents the size and shape of the core of the storm, roughly speaking, the level 3 and higher precipitation. It is not intended to encompass the lower-intensity, outer boundaries of the storm.

The length of each storm's arrow corresponds to the speed of that storm. A storm moving 50 nautical miles per hour has an arrow that is 50 nautical miles long. The base of the arrow is located at the center of the currently existing storm. The tip of the arrow is located at the center of its forecasted location. The number near the base of the arrow is the storm's current speed. Arrows appear only for storms with forecast polygons.

Which Storms Have Forecast Polygons?

NCWF will not issue forecast polygons for every storm. In order to have a forecast polygon, a storm must:

- Have echo tops of at least 15,000 feet and be at least 500 square miles in area, and
- Be convective with significant vertical development rather than stratiform, and
  - Have a stable track vector in the NCWF algorithm

    Or
  - Have a significant cloud-to-ground lightning flashrate
- Have a stable track vector in the NCWF algorithm

Most storms will not have forecast polygons early in their lifetimes because it can take 20 minutes or more for the algorithm to develop a stable track vector once the storm fulfills the other criteria. When the storm no longer meets the criteria listed above, the NCWF stops issuing forecast polygons for that storm.

The presence of an NCWF polygon does not guarantee that the storm will persist for one hour. The absence of an NCWF polygon does not mean that the storm will not persist for one hour. The presence and absence of polygons is based simply upon whether the storms meet the criteria listed above.

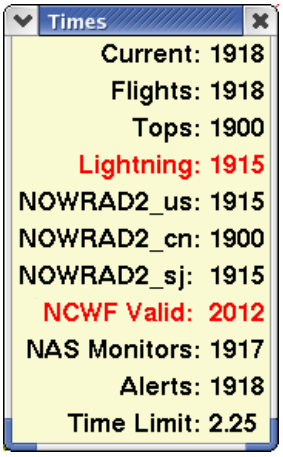
NCWF Performance

Analysis of all of the NCWF polygons from 2002 shows that the forecasts were correct about 30% of the time (i.e., storms did occur inside the forecast polygons at the forecast valid time) and the forecasts were incorrect about 70% of the time (i.e., storms did not occur in the forecast polygon at the valid time or the storms that did occur were not strong enough to meet the forecast validation criteria). Indeed, most individual thunderstorms do not last for more than an hour so a one-hour forecast of their location should be evaluated carefully.

Thunderstorms of the air-mass or 'popcorn' variety usually do not persist long enough to reach their one-hour forecast locations. Nevertheless, the NCWF storm motion information for those storms may be valuable to TFMS users for tactical purposes. Storms that persist for more than one hour may be described as 'organized' convection associated with a cold front or a dry line or some other long-lived causal factor. NCWF polygons are more accurate for organized storms than for air-mass storms.

The Times Box

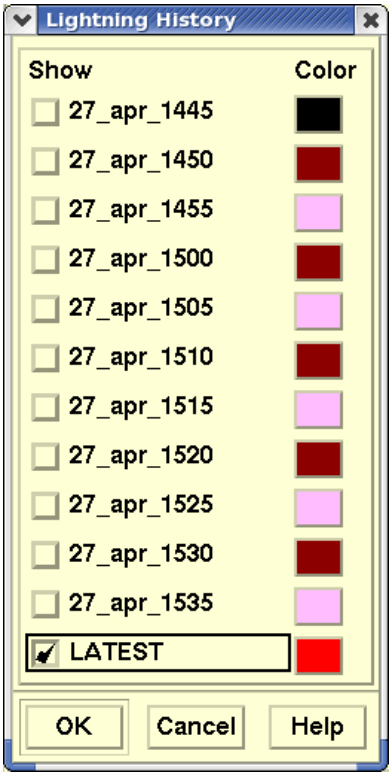
The Times Box indicates the time for which the NCWF forecast is valid. (e.g., NCWF Valid: 2012) The valid time is one hour in the future with respect to the time that the weather radar data were collected. It takes several minutes to collect the data and several more minutes to process it, so the valid time will usually be 45-55 minutes in the future with respect to the current time.



When weather data goes out of date, the time values change. The TSD indicates time expirations by displaying them in red. Item labels and times flash in red and black for one minute when they expire and remain red after the lapse of one minute. If current weather data is unavailable, the Times box shows that weather item's time as 0000, N/A for Not Available, or blank spaces. The TSD will not display that overlay or a Jet Stream overlay more than 12 hours old. If any weather file including CCFP is received more than 30 minutes early, the TSD will display the time in red in the Times Dialog box.

Lightning

The Lightning overlay displays the most recent lightning strikes for CONUS. With this overlay you can also display lightning strikes that occurred at an earlier time. To select the latest strikes or the strikes that occurred earlier, click the **Lightning** check box on the Select Weather dialog box and click the **Options** button to open the Lightning History dialog box. The Lightning History dialog box, shown below, also allows you to open the color palette and change the overlay color.



The Lightning History dialog box lets you select the latest lightning strikes, or strikes from an earlier time, and allows you to specify the color in which a lightning overlay is displayed on the TSD. The Show checkboxes represent the overlays for lightning strikes during the past hour. Click a check box to select the overlay for a specific time. You can select more than one lightning overlay. For example, you can show how the lightning has changed over the past hour by selecting several overlay times.

To change the color of the lightning icons, click the Color button for an overlay, select a color from the color palette that displays, and click **OK**.

After you select the Lightning option on the Select Weather dialog box, make your selections on the Lightning History dialog box, and click **OK** or **Apply**, the overlay appears on the TSD. The Lightning overlay displays each lightning strike as a cross icon (+) in the color specified. The TSD updates lightning data every 5 minutes.

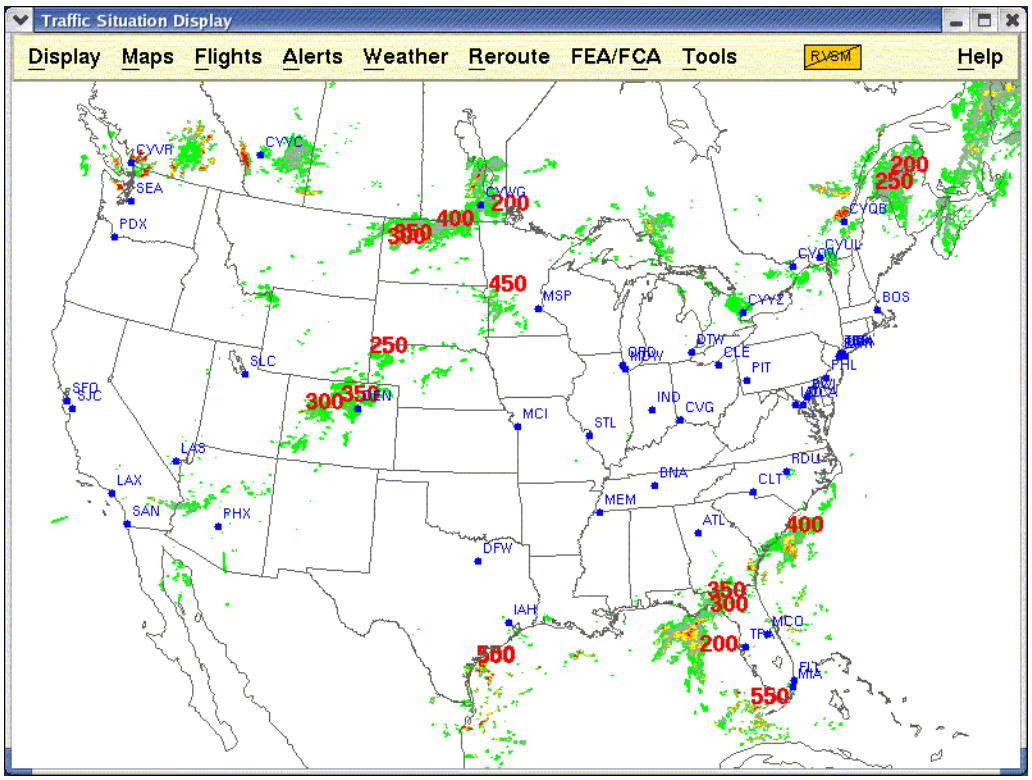
Tops

To display the Tops overlay, click the **TOPS** check box on the Select Weather dialog box and click **OK** or **Apply**. The radar Tops overlay updates every 10 minutes.

The radar **Tops** overlay displays the altitude of cloud tops within precipitation areas. Labels indicate the altitude of cloud tops in hundreds of feet. For example, the number **300** indicates 30,000 feet. The three digit values show the flight level associated with the maximum height of the tops.

You can change the color of the altitude labels. In the Select Weather dialog box, click the **Tops** check box and click the color button to display a color palette. Click the color you want the tops to appear. The button changes to reflect the new color. Click **OK** or **Apply**. The TSD redraws with radar tops appearing in the color of your choice.

You can also use the TOPS Quick Key, by pressing **T** to toggle on and off the display of Legacy Radar Tops.



Note: When displaying radar tops, it is useful to issue the **NOWRAD** command, which displays areas and levels of precipitation.

Jet Stream

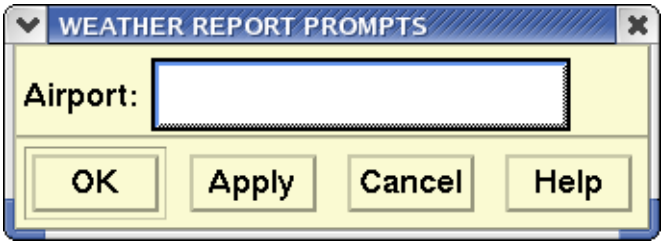
The **Jet Stream** overlay, updated every three hours, shows areas where winds are strongest or greater than 70 knots. Within these areas, the overlay displays wind speed, altitude, and direction. After you click the **Jet Stream check box** and click **OK** or **Apply** in the Select Weather dialog box. An Options button allows you to open the Legacy Jet Stream Options dialog box, shown below, select which elements of the jet stream overlay to show and specify the colors for the overlay.

Note: At least one Jet Stream option must be selected in the Jet Streams Options dialog box. You will see an error message if you try to deselect all of the options.

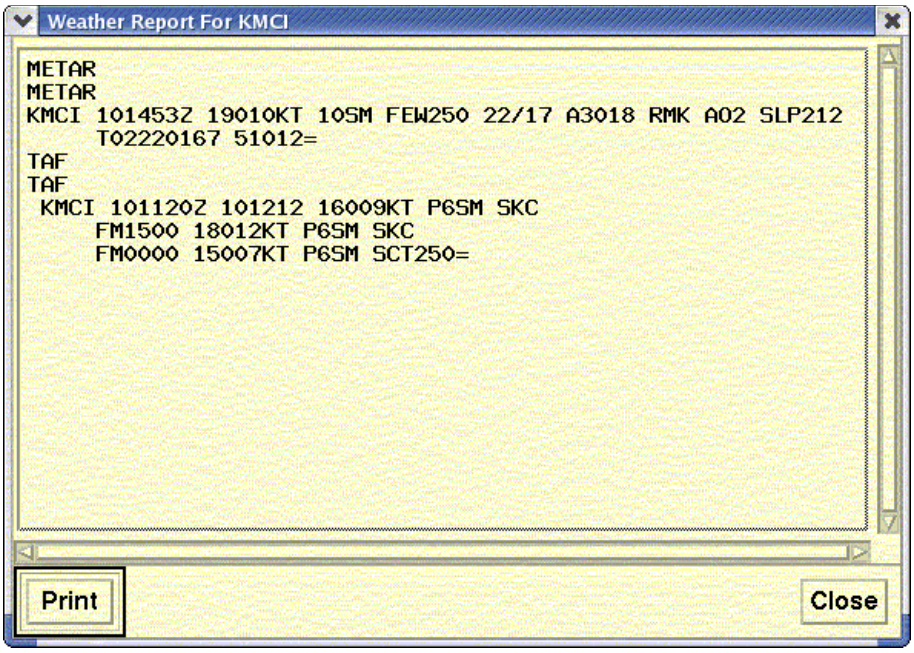
WX Report Command	
The **WX Report** command lets you display and print weather information. You can generate a weather report for any airport you specify.	
	Quick Key Method
1. Pull down the Weather menu by clicking **Weather** on the main menu or pressing **<Alt> W**. 2. Click **WX Report** or press **X**.	**None**
	Semicolon Method
	None

Weather Report Prompts Dialog Box

After you click **WX Report** or press the mnemonic key from the Weather menu, the Weather Report Prompts dialog box opens.



Enter a 3- or 4-character location identifier. For example, to specify a weather report for MCI airport, enter **MCI** or **KMCI**. After you click **OK** or **Apply**, the report opens.



About the Display

The TSD displays reports in two sections. The first part contains Aviation Routine Weather Report (METAR) data and the second part contains International Aerodrome Forecast (TAF) weather data.

The following table describes METAR and TAF weather data.

Weather Report

Report data	Description
METAR	Weather report.
TAF	Aerodrome forecast.
KJFK	Location identifier. Both LID and KLID are accepted.
091451Z	Two-digit day of month and four-digit time. Z=UTC time.
32006KT	Wind direction (in degrees). KT=knots. G=gusts.
105M or P65M	Visibility (in miles and fractions). P=prevailing.
FEW036	Cloud height and type. Three-digit height in hundreds of feet. SCT=scattered; BKN=broken; OVC=overcast; TCU or CB=towering cumulus; CLR=clear below 12,000 feet.
10/02	Temperature/dew point.
A3030	Altimeter in inches of mercury.
RMK A02 SLP261	Remark data. Remarks can include information such as lightning behavior, tornadoes, and funnel clouds.

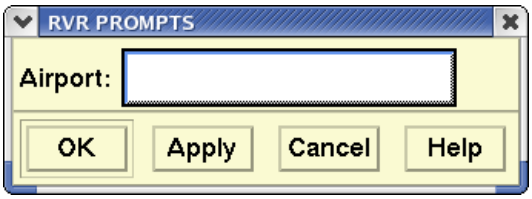
You can print a copy of these reports before closing the windows and returning to the TSD screen.

> **Note:** Use the scrolling arrows to scroll through the weather report if it contains more information than the window can display at one time.

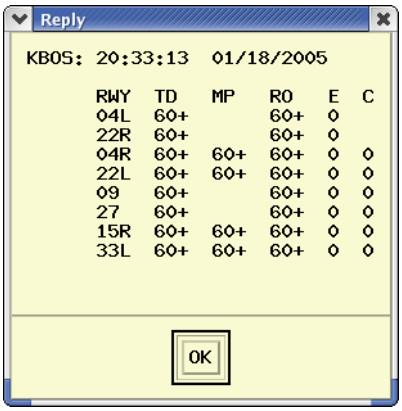
RVR Report Command	
The **RVR Report** command lets you display and print Runway Visual Range information. You can generate an RVR report for any airport you specify.	
	Quick Key Method
1. Pull down the Weather menu by clicking **Weather** on the main menu or pressing **<Alt> W**. 2. Click **RVR Report** or press **V**.	**None**
	Semicolon Method
	None

RVR Prompts Dialog Box

After you click **RVR Report** or press the mnemonic key from the Weather menu, the RVR Prompts dialog box opens.



Enter a three or four character location identifier, such as **BOS** or **KBOS** to specify a report. After you click **OK** or **Apply**, the report opens.



About the Display

The TSD displays the RVR report, which looks like the following sample.

RVR Data Report

Column Header	Description
RWY	Runway identifier. Numeric values from 01 through 36. A sub-runway value might be appended to the RWY. The sub-runways are defined as **L** (left), **R** (right), or **C** (center). A blank in this field indicates there is no sub-identifier.
TD MP RO	Runway Visual Range at the **touchdown, middle** and **rollout** points. Values range from 0000 to 6000, representing feet. A trend indicator is displayed directly to the right of each displayed RVR value to indicate the trend of the RVR value over the previous five-minute window. A **plus sign [+]** indicates an increasing trend, a **minus sign [-]** indicates a decreasing trend and a steady trend is indicated by the absence of an indicator. A **blank** value indicates that no RVR system visibility sensor is needed for that precision point on the runway based on the instrumentation and landing category of that runway. A value of **FFF** indicates that a corresponding RVR sensor is off-line or data is invalid.
E	Runway **Edge** Light Setting. Values range from **0** (off) to **5** (maximum intensity), or **F** (sensor is off-line or data is invalid).
C	Runway **Centerline** Light Setting. Values range from **0** (off) to **5** (maximum intensity), **blank** (no centerlines are configured for the runway), or **F** (sensor is off-line or data is invalid).

Note: If data is not currently being received for an airport, the message, “Data Not Available” is displayed.

Reroute Menu

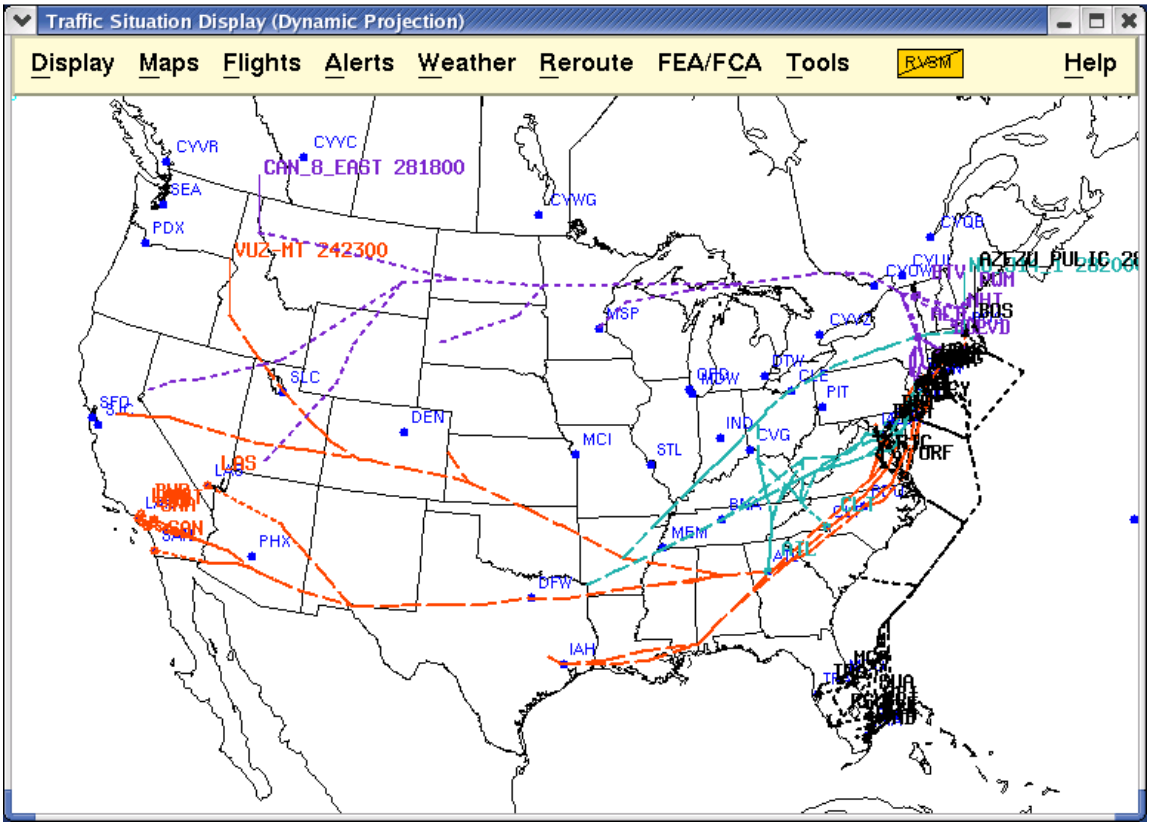
Overview

This section contains information on the commands available on the Reroute menu. Reroutes are graphic overlays showing areas where flight reroutes have been suggested due to severe weather conditions.

- **Show/Hide Reroutes** **page 5-160**
  Toggles display of reroutes on and off.
- **Select Reroutes** **page 5-164**
  Defines reroutes that are to be shown on the display.
- **Monitor All Reroutes** **page 5-173**
  Monitors the flights involved in public reroutes and also lets you obtain periodic updates.
- **Flight Search** **page 5-212**
  Searches for flights in a reroute set by exact flight identifications.

<table>
<tr><th colspan="2">Show/Hide Reroutes Command</th></tr>
<tr><td colspan="2">Show Reroutes/Hide Reroutes command lets you turn on or off the display of reroute sets that have been selected for display in the Select Reroutes dialog box. You must have selected a reroute set before reroutes will appear on your display. See Select Reroutes Command on page 5-164 in the next section. Either Show Reroutes or Hide Reroutes appears on the Reroute menu.</td></tr>
<tr><th></th><th>Quick Key Method</th></tr>
<tr><td rowspan="3">1. Pull down the Reroute menu by clicking Reroute on the TSD Main Menu or pressing <Alt> R.
2. Click Hide Reroutes or Show Reroutes or press R.</td><td>None</td></tr>
<tr><th>Semicolon Method</th></tr>
<tr><td>None</td></tr>
</table>

When you select Show Reroutes, if a reroute set has been selected, a display similar to the following is displayed.



Reroute Line Styles

The reroutes graphic shows the four distinct appearances of reroute sets as they appear on the TSD.

Public Reroutes: - - - - - - - - -

Shared Reroutes: — — — — — —

Local Reroutes: — — — —

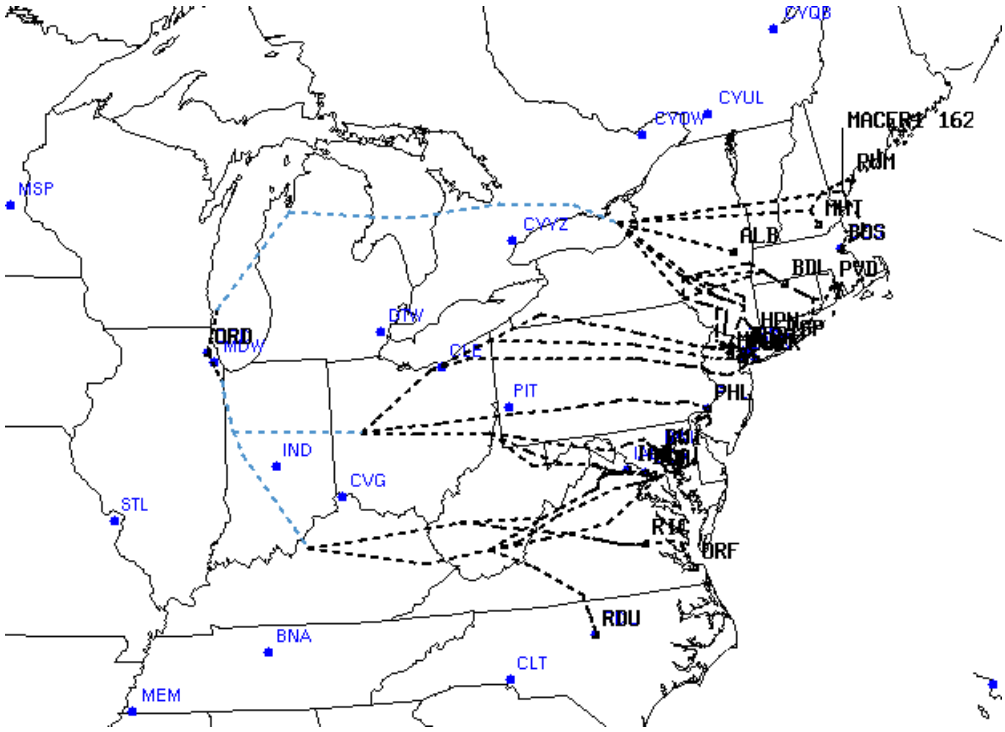
Private Reroutes: — — —

- Public reroute sets are created by specialists at the ATCSCC and are shared with all TFMS users.
- Shared reroute sets can be created by any TFMS user and can be viewed by users at sites specified in the reroute definition.
- Local reroutes are created by users at TFMS field sites and are shared with other TFMS users within their facility.

- Any TSD user may create private reroutes for viewing on their workstation only.

Viewing Protected Segments

You can view protected segments that have been defined for a reroute by browsing the displayed reroute. When you browse the reroute, the TSD draws the protected portion of the route in a slate blue color using the same 2 pixel line style as the non-protected portion. The example below shows a browsed Public reroute. The protected portions display in a slate blue color.



Dragging and Dropping Reroute Names

Reroute set names are sometimes difficult to see when several other map items are displayed on the TSD. You can drag the labels to a location where you can see them more easily. When the pointer moves over any segment of the reroute or the reroute label name, the TSD highlights both the segment and the label name. With the reroute highlighted, click and hold the middle mouse button, drag the reroute name to the new location, and release the button. The reroute name separates from the reroute and appears in the new location with a lead line connecting the label to the reroute. The reroute itself does not move.

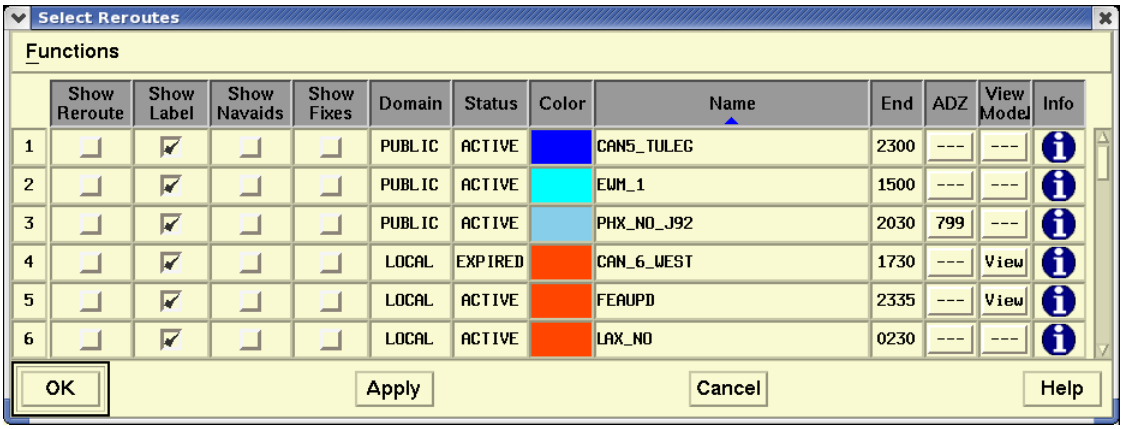
Save and Recall Reroutes Parameters

The Adapt⇨Save and Adapt⇨Recall commands were covered in the Display Menu section. Using these commands you can save such items as map overlays and flight sets. You can also save and recall your preferences for creating and displaying reroute sets.

Select Reroutes Command	
The **Select Reroutes** command enables you to choose the reroute sets you want to display on the TSD map. You can specify whether the label, navaids, and/or fixes for a reroute set display and the color in which the TSD draws each reroute. The Select Reroutes list is sorted first by Domain in the following order: Public, Shared, Local, and Private. You can choose "Name" or reroute "End" time as a secondary sort. This command also allows you to edit, copy, view, or delete a selected reroute, monitor reroutes, view model results, and model a reroute cancellation.	
	Quick Key Method
1. Pull down the Reroute menu by clicking **Reroute** on the TSD Main Menu or pressing **<Alt> R**. 2. Click **Select Reroutes** or press **S**.	**None**
	Semicolon Method
	None

Select Reroutes Dialog Box

After you click **Select Reroutes** or press **S**, the Select Reroutes dialog box, which contains a list of all reroutes in the database, opens. A sample dialog box is shown below, with the reroutes sorted by Domain - Public, Shared, Local and Private - and next sorted in alphabetical order by Name. Public reroutes are always listed first.



	Show Reroute	Show Label	Show Navaids	Show Fixes	Domain	Status	Color	Name	End	ADZ	View Model	Info
1		✓			PUBLIC	ACTIVE		CAN5_TULEG	2300	---	---	
2		✓			PUBLIC	ACTIVE		EWM_1	1500	---	---	
3		✓			PUBLIC	ACTIVE		PHX_NO_J92	2030	799	---	
4		✓			LOCAL	EXPIRED		CAN_6_WEST	1730	---	View	
5		✓			LOCAL	ACTIVE		FEAUPD	2335	---	View	
6		✓			LOCAL	ACTIVE		LAX_NO	0230	---	---	

You may also sort the Reroute list within each Domain by End/Date time, with earliest end time. Click the **End** column label button to change the sort from Name to End/Date time. To change back, click the **Name** column label button. Sort order can also be changed using the Sort By option on the Function menu.

> **Note:** The sort order is maintained in the state you select when you close the Select Reroute dialog box. Also, the sort order is saved with the adaptation file when you select Display ⇨ Adapt ⇨ Save.

The following table explains how to use the Select Reroutes dialog box checkboxes and fields. The Functions menu and Info button are discussed later in this section. Press **<Tab>** to move forward and **<Shift> <Tab>** to move backward between fields.

Select Reroutes

Item	Description	What you do
Show Reroute	Toggles the display of the reroute on the TSD map after you have selected the Show Reroutes command. For information on viewing protected segments, see the section on Viewing a Reroute's Protected Segments.	To toggle a check mark and display the reroute on the TSD map after the Show Reroutes command is issued, click the checkbox. The reroute line segments are drawn using a dashed line of 2 pixel width.
Show Label	Toggles a display of the label for the reroute set.	Click the checkbox to toggle a check mark. *
Show Navaids	Toggles a display of the navaids for the reroute set.	Click the checkbox to toggle a check mark. *
Show Fixes	Toggles a display of the fixes for the reroute set.	Click the checkbox to toggle a check mark. *
Domain	Defines reroute set domains: Public, Shared, Local, or Private. Only users at designated sites, ATCSCC for example, can create Public reroute sets. Reroute set domains are sorted by Domain in the following order: Public, Shared, Local, and Private.	You cannot edit the Domain field in this dialog box. You must use the Functions Menu/Edit Reroute option on the Select Reroutes dialog box to make a change. The Functions menu is discussed later in this section.

Select Reroutes (Continued)

Item	Description	What you do
Status	Displays the status of the reroute: Active or Expired. • If the reroute is not monitored, the Status is Expired if the End Time is in the past; otherwise the Status is Active. • If the reroute is monitored, the Status is Expired if the End Time is in the past and RMP has stopped monitoring the reroute as indicated by the lack of a dynamic list for the reroute. Otherwise the Status is Active.	You cannot edit the Status field.
Color	Lets you determine the color for each reroute set.	Click the button to display a color palette. Click your choice of reroute color. Your selection of color will not affect display of reroutes for other users. *
Name	User-specified name for the reroute set. By default, the name of the reroute set appears as a label.	The reroute name cannot be changed in this dialog box. You must use the Functions Menu/Edit Reroute option on the Select Reroutes dialog box to make a change. The Functions menu is discussed later in this section.
End	Four-character end time in UTC, depending upon your Preference setting.	The end time cannot be changed in this dialog box. You must use the Functions Menu/Edit Reroute option on the Select Reroutes dialog box to make a change. The Functions menu is discussed later in this section.
ADZ	Lets you view the text of a public reroute advisory. Also available on the Reroute Monitor.	This column displays the advisory number button associated with a public reroute. Click the **ADZ** number button to display the Reroute Advisory dialog box, showing the text of the advisory. If there is no advisory associated with the reroute, the button displays dashes (“---”).

Select Reroutes (Continued)

Item	Description	What you do
View Model	Switches the TSD into reroute modeling mode and displays the View Reroute dialog box with model results for the selected reroute.	If model data is available for the reroute, the button displays "View"; otherwise the button displays dashes ("---"). After you click a reroute row's **View** button, you will see an information dialog with the message: "Please wait while the TSD requests model results." For information on viewing Reroutes in Model Mode, see
Info	Allows you to see additional information about the reroute.	Click the **Info** button to display the Reroute Information dialog box which shows additional information about the selected reroute. See page 5-170. for more information.

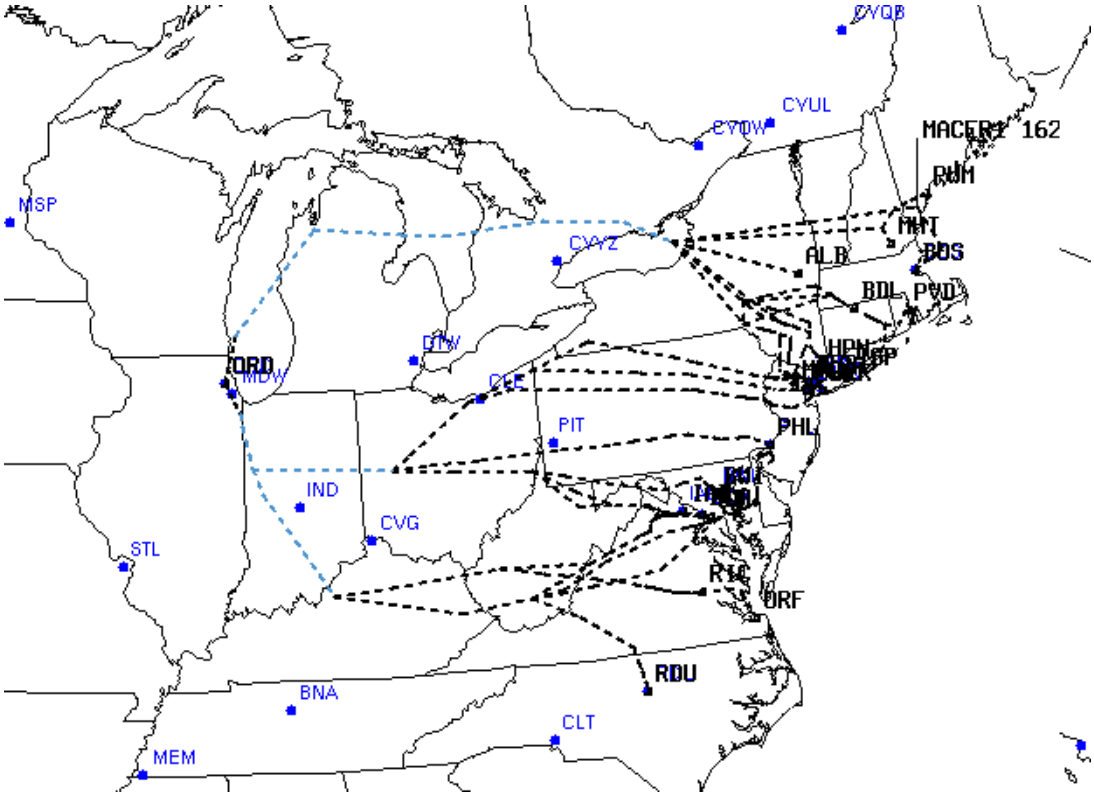
Note: * You can change the display attributes for each reroute using the Show Label, Show Navaids, Show Fixes and Color options, but the change in display will not change the reroute database when these attributes are changed in the Select Reroutes dialog box.

You can toggle all of the checkboxes in a column on or off by clicking the column label.

Viewing a Reroute's Protected Segments

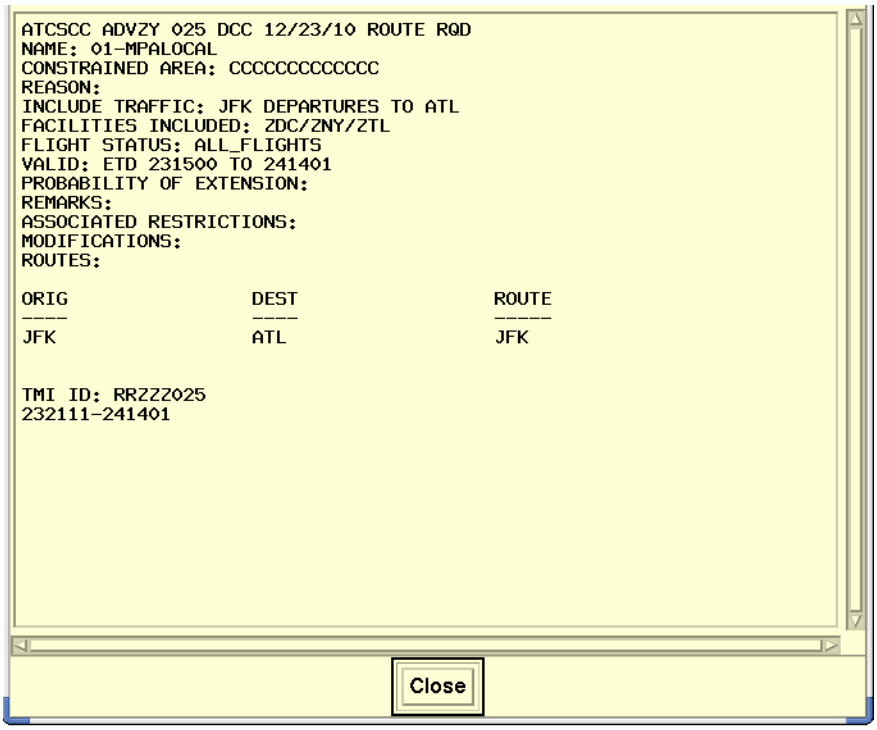
You can view the protected segments for a reroute if the Show Reroute checkbox on the Select Reroute dialog box is checked and the Show Reroutes command has been issued. To view the protected segments for the reroute, browse the shown reroute on the map. When you browse the protected portion or portions, the TSD highlights the segment by coloring it a slate blue color and displays the protected portion using the same 2 pixel line style as the non-protected portion.

The example below shows a browsed Public reroute with it's protected segments highlighted in slate blue.



Advisory (ADZ) Button

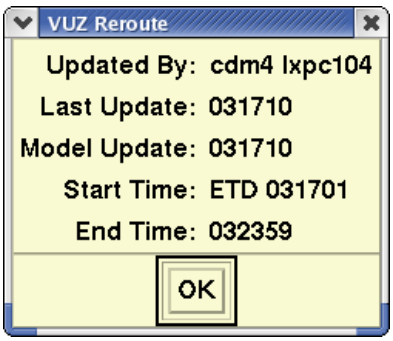
The ADZ column shows the advisory number associated with each public reroute. Click the Advisory number button associated with a public reroute to view Reroute Advisory text.



When you create and save a reroute, the TSD automatically constructs and saves a Traffic Management Initiative (TMI) ID with the reroute definition. The TMI ID is included in the reroute advisory and informs en route controllers that a flight is in a reroute and which reroute the flight is in. The TMI ID for a reroute consists of the following three elements: the letters "RR", a three character facility ID of the facility where the reroute was created, and the advisory number if an advisory was issued for the reroute; otherwise a unique 3-digit sequence number. For example, RRZZZ025.

Reroute Information (Info) Button

All of the information about a specific reroute is not shown on the Select Reroutes dialog box. If you want additional information, click the **Info** button for that reroute set. After you click the **Info** button, a dialog box is displayed with information for that reroute. This dialog box displays additional information about the reroute including the reroute name (in the title bar), the site and workstation that updated the reroute, the date and time the reroute was last updated, and the date and time model results, if available, were generated. The dialog box also displays Start and End times for the reroute. If the reroute was defined to identify flights based on a public FEA/FCA flight list, Entry From and To times display. The reroute start time displays a prefix of ETD or ETA depending on how the reroute set was defined.



Click **OK** to close the dialog box and return to the Select Reroutes dialog box.

Select Reroute Dialog Box Functions Menu

Use the Functions menu, located on the upper left side of the Select Reroutes dialog box, to perform the following reroute functions options. Select a reroute by clicking the row number button to the left of the reroute row, then select one of the options from the Functions menu.

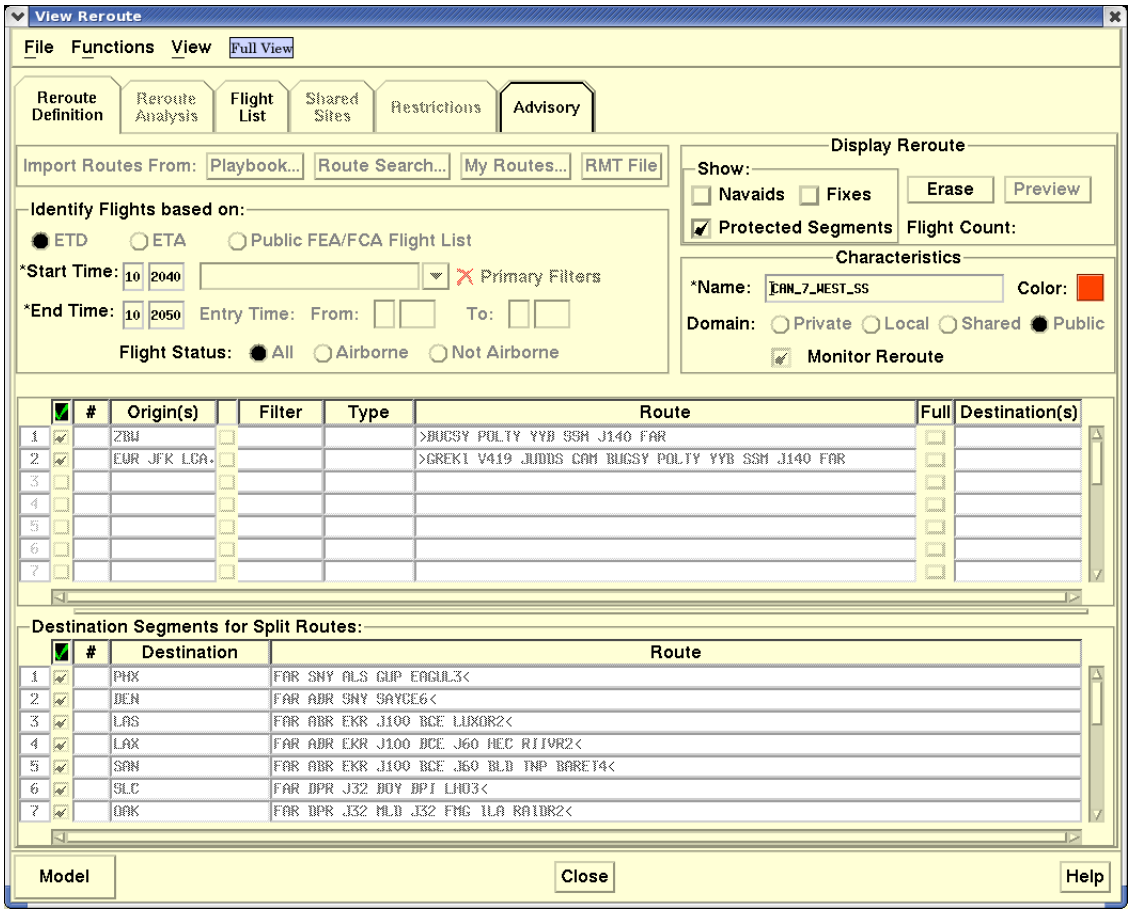
The following options are available on the Functions menu:

- Edit Reroute (grayed out for user roles TSD-U/F)
- Copy Reroute (grayed out for user roles TSD-U/F)
- View Reroute page 5-172
- Delete Reroute (grayed out for user roles TSD-U/F)
- Cancel Reroute (grayed out for user roles TSD-U/F)
- Monitor Reroute(s)... page 5-173
- View Model (grayed out for user roles TSD-U/F)
- Model Reroute Cancellation
  (grayed out for user roles TSD-U/F)
- Sort by page 5-173

Note: If no reroute is selected on the Select Reroute dialog box, or if the Create/Edit Reroute dialog box is already open, only Sort by is enabled and all other options are disabled (grayed out). The availability of each option depends on row selection(s) made in the Select Reroute dialog box and whether you are authorized to make changes to a selected reroute. For details on whether a particular function is available or disabled, refer to the function option sections, as listed above.

View Reroute

The following is an example of the View Reroute dialog box:



Using the View Reroute Dialog Box

Most of the fields and buttons that are active in Create/Edit Reroute are disabled on the View Reroute dialog box. If the entire text for a route is not visible in the route grid of the Reroute Definition tab, you can browse over the row to display a tooltip with the full route text.

File Menu

The File Menu on the View Reroute dialog box provides two options: Save My Routes and Manage My Routes.

Functions Menu

The menu items in the Functions Menu on the View Reroute is inactive for TSD-C users.

View Menu

The View Menu provides the following options

- Show POI Counts...
  - Total
  - Hour
  - 15 Minutes
- Hide POI Counts
  Use the Show POI Counts option to set how you want POI counts to display when you are in model mode.

Monitor Reroute(s)

The **Monitor Reroute(s)** option lets you view the Reroute Monitor for one or more active Public reroute sets. The Monitor Reroute(s) function is disabled if you have not selected a Public reroute row in the Select Reroute dialog box

For more information on how to use the Reroute Monitor, see page 5-174 in this chapter.

Sort By

The Sort by function lets you sort the list of reroutes by Name or End time.

Reroutes are sorted in the list first by Domain in this order: Public, Shared, Local, and Private. The Sort by menu item lets you sort by Name or End Time. You can change the sort order in two ways:

1. Pulling down the Functions menu and select **Sort by**, **Name**, or **End Time**.

   or

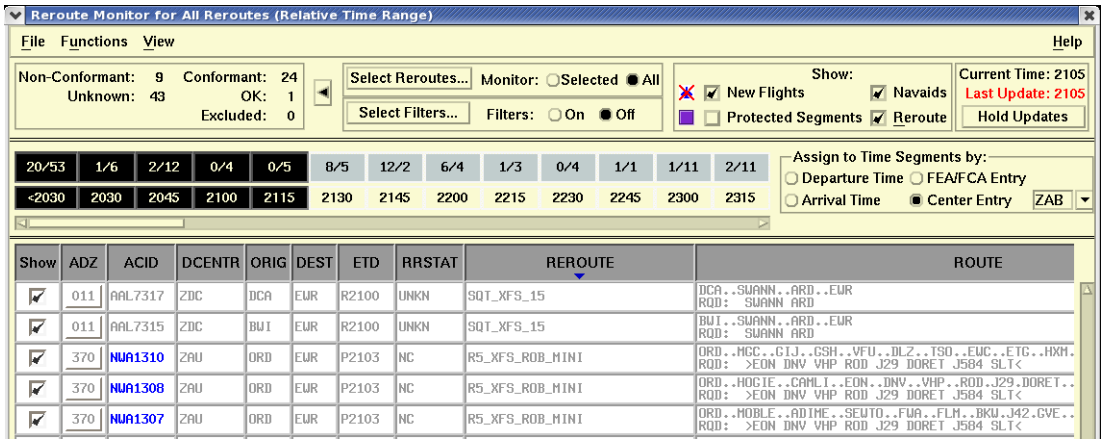
2. Clicking **Name** or **End** column headings on the Select Reroutes dialog box.

<table>
<tr><th colspan="2">Monitor All Reroutes Command</th></tr>
<tr><td colspan="2">The Monitor All Reroutes command lets you monitor the flights involved in public, shared and local reroutes and get periodic updates. You will be able to see which flights are affected by a reroute, which flights have filed flight plans that comply with the reroute, and which flights have not filed flights plans that comply with the reroute. Authorized users can also grant exceptions to an individual flight’s planned deviations from the specified reroute.</td></tr>
<tr><th></th><th>Quick Key Method</th></tr>
<tr><td rowspan="3">1. Pull down the Reroute menu by clicking Reroute on the TSD Main Menu or pressing <Alt> R.
2. Click Monitor All Reroutes or press M.</td><td>None</td></tr>
<tr><th>Semicolon Method</th></tr>
<tr><td>None</td></tr>
</table>

Note: You can also access the Monitor All Reroutes command from the generic right-click menu. Without pre-selecting or selecting a flight or map item, right-click on the TSD display to open the generic right-click menu.

Reroute Monitor Dialog Box

After you click **Monitor All Reroutes** or press **M**, the Reroute Monitor dialog box opens. The title bar in the following Reroute Monitor dialog box contains the text "Relative Time Range." Relative and Absolute Time Range are discussed in the Timeline section, beginning on page 5-180.



Reroute Monitor Functions

You can perform several functions using the Reroute Monitor.

- You can monitor one or more public, local or shared reroutes.
- You can hide or show the Timeline and Flight List. You can also shrink the dialog box to show only the Counts Panel and Time Panel.
- You can highlight an individual flight and view its assigned route.
- You can control which flights appear in the Flight List and on the TSD display by using the Filter option and/or the Timeline.
    - You can filter the flights by various criteria such as reroute status, domain, or advisory action. Click the **Select Filter** button to access the Reroute Flight Filters dialog box and define the criteria.
    - You can set the timeline to Relative or Absolute Time Range selection. You can also choose which time is to be represented by the Timeline: Departure Time, Arrival Time, Entry Time for a specified Center, or FEA/FCA Entry Time. You select time intervals on the timeline using standard selection methods.
- You can control which columns are shown in the Reroute Monitor Flight List and define how the columns are sorted.
- You can show or hide reroute flights on the TSD display.
- You can highlight an individual flight and view its assigned route.
- You can approve or disapprove an exception by selecting a row and then using the right-click menu.

- You can submit route amendments for non-conforming flights.

  Note: Filters will be turned ON if you select **Filters** and click **OK** or **Apply** in the Reroute Flight Filters dialog box. You can also use the Select Filters option on the Functions menu.

Many of the Reroute Monitor functions can be performed in more than one way. You can use a menu command as well as a push button command to do the same thing. For example, clicking on **Select Filters** on the Functions menu or clicking the **Select Filters** button in the Control Panel has the same effect of opening the Reroute Flight Filters dialog box.

Reroute Monitor Dialog Box

The Reroute Monitor dialog box contains three major sections.

1. **Control Panel**
   Located near the top of the dialog box, the Control Panel has three subsections:
   - Counts Panel
   - Selection Panel
   - Time Panel
2. **Timeline**
   This section of the Reroute Monitor is located under the Control Panel. You can use the Timeline to select a time range of flights shown in the Flight List and drawn on the TSD. The time range selection can be Relative or Absolute.
3. **Flight List**
   The Flight List, located on the lower part of the dialog box, lists the flights involved with the reroute.

Control Panel

The three major sections of the Control Panel are discussed below.

Counts Panel

The Counts Panel, located on the left side of the Control Panel, displays the number of flights by conformance status. For explicit routes (routes for which no route type has been selected in the Create/Edit Reroute dialog box), TFMS determines a flight's conformance status by checking the protected segment of its assigned route. The Counts panel appears as follows:

Non-Conformant:	9	Conformant:	24
Unknown:	43	OK:	1
		Excluded:	0

The Counts Panel displays the following data:

- **Conformant:**
  Number of flights that meet either of the following conditions:
  - A reroute advisory requires the flight to follow the protected segment of an explicit route and the flight's current route from a flight plan or early intent message matches one of the assigned routes shown for the flight in the reroute advisory.
  - A reroute advisory requires the flight to avoid an FCA and provides no explicit route assignment and the flight's current route from a flight plan or early intent message bypasses the FCA.
- **Non-Conformant:**
  Number of flights that meet either of the following conditions:
  - A reroute advisory requires the flight to follow the protected segment of an explicit route and the flight's current route from a flight plan or early intent message does not match one of the assigned routes shown for the flight in the reroute advisory.
  - A reroute advisory requires the flight to avoid an FCA and provides no explicit route assignment and the flight's current route from a flight plan or early intent message intersects the FCA.
- **Unknown:**
  Number of flights with no flight plan filed or early intent message submitted. This count may include flights with an assigned route that has no protected segment defined or flights in a reroute that was issued using the option not to include protected segments.
- **OK:**
  Number of flights that were manually approved for an exception to remain on their current route after a reroute was issued.

- **Excluded:**
  Number of flights that were excluded from the reroute when it was issued.

  Note: If a flight is in one or more monitored reroutes, the TSD counts the flight as non-conformant with at least one of its monitored reroutes. The TSD counts it as conformant if it is conformant with all of its monitored reroutes.

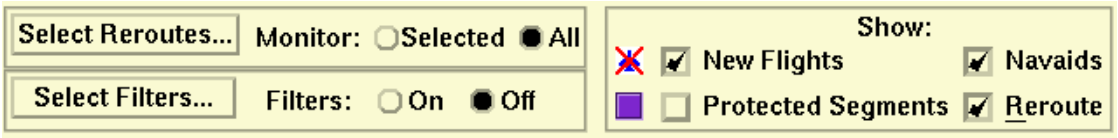
Selection Panel

The buttons located in the Selection Panel let you select the reroutes you want to display on the Reroute Monitor and to view and edit flight filters.

To display all monitorable reroutes, click the **All** radio button in the Monitor field of the Selection Panel. To open the Select Monitored Reroutes dialog box and select specific reroutes you want to display and monitor, click the **Select Reroutes** button. After you select individual reroutes and close the Select Monitored Reroutes dialog box, the Monitor field in the Selection Panel is toggled to **Selected**.

If you define filters in the Reroute Flight Filters dialog box, the Filters field of the Selection Panel is toggled **On**.

Note: If you hover over the Select Reroutes button, a tool tip displays containing a list of the reroutes selected for monitoring. If the All radio button is selected, all monitorable reroutes display in the tool tip.



If the Reroute flights are hidden, the Show/Hide Reroute Flights icon in the Selection Panel has a red X through it, as shown above. The Show New Flights checkbox lets you specify whether the TSD displays a check mark in the Show checkbox for new flights that are added to the Flight List after the Reroute Monitor is refreshed. The Show New Flights option is checked by default.

Click the **Protected Segments** checkbox to display the protected portion of any assigned route that is drawn using the Reroute Monitor Show function. The TSD highlights protected segments on the display in a slate blue color. The Protected Segments checkbox is unchecked by default.

Click the **Show Navaids** and Show Reroute checkboxes to display the navaids and reroutes for selected flights. The color button lets you select the color of the flight icons, reroutes, and navaids.

Note: To toggle the display of flights on and off, you can use the "=" quick key.

Time Panel

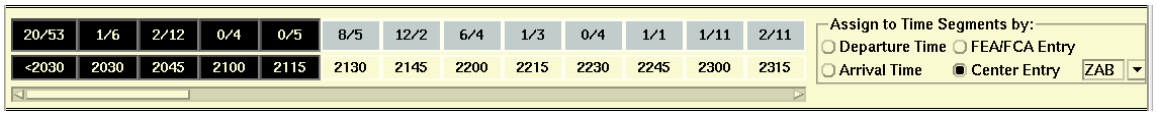
The Time Panel segment of the Control Panel displays the current time. It also indicates whether updates to the Reroute Monitor are being held or whether the window is being updated. The example below shows that updates are being updated. Click **Hold Updates** to hold the Reroute Monitor updates.

The Time Panel below shows that updates are being held. Click **Resume Updates** to resume the Reroute Monitor updates.

> **Note:** This function is also available through the Hold/Resume Updates command on the Functions menu.

Reroute Monitor Timeline

The Timeline section of the Reroute Monitor displays flight counts in quarter-hour time periods. You can use the Timeline to display a time range of flights shown in the Flight List and drawn on the TSD. The summary counts reflect the counts within the selected intervals in the Reroute Monitor timeline, rather than the entire time period of the reroute.



The Timeline is in quarter-hour intervals. In each time interval the Timeline displays a count of the number of flights in the interval whose reroute status is either non-conformant or unknown. This count is followed by a slash (/) and a count of the number of flights whose reroute status is conformant, OK, or Excluded. In other words, the counts on the left of the / represent Non-Conformant or Unknown status; the counts on the right of the / represent Conformant, OK, or Excluded status.

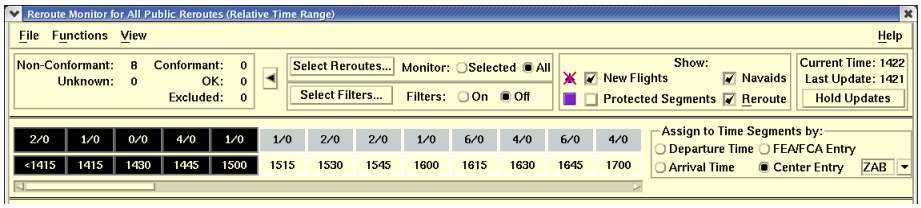
If the time range is Relative, as in the example above, a left carat (<) is displayed at the beginning of the segment. This segment contains a count of flights that are in one of the monitored reroutes that would not otherwise be counted in one of the other time intervals. Relative and Absolute time ranges are explained in the following pages.

Relative and Absolute Time Range

An option on the Reroute Monitor View menu lets you select Relative or Absolute Time Range.

Relative Time Range

If you select Relative Time Range from the View menu, the TSD keeps the same block of cells highlighted, even though the times associated with those cells have shifted to the next 15-minute time segment. In other words, the Relative option lets you highlight/examine a range of time relative to the current time. When the Relative Time Range is selected, there is a prior to current time segment on the left end of the timeline, identified by the < sign.

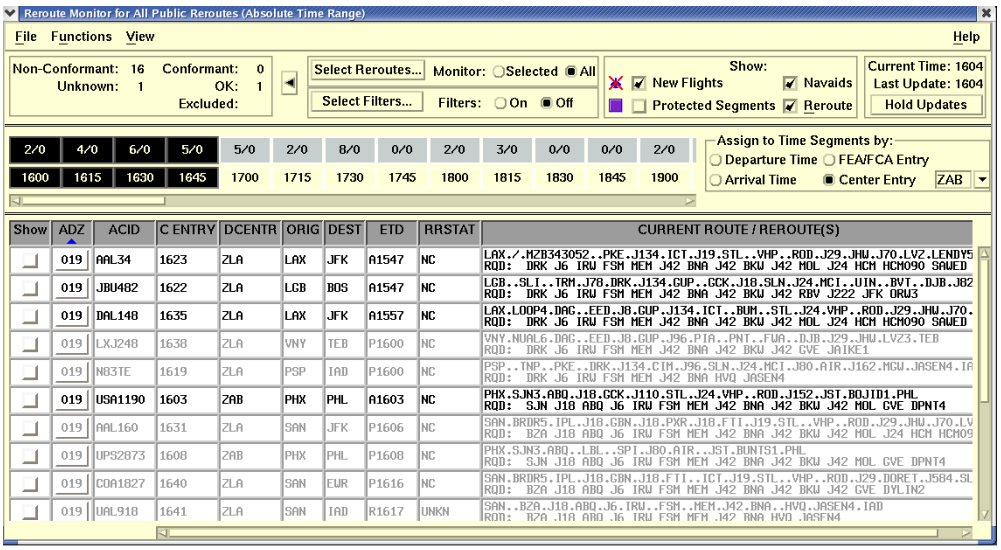


In the example above, the current time is 1415, and the 1415, 1430, 1445, and 1500 time segments are selected. When the current time becomes 1430, the 1430, 1445, 1500, and 1515 segments become selected. In both cases, the relative time range is the current time plus 45 minutes.

If Arrival Time is selected in the “Assign to Time Segments” section of the Reroute Monitor, the prior to current time segment is not available since it would apply to flights that had already landed.

Absolute Time Range

If you select Absolute Time Range on the View menu of the Reroute Monitor, the TSD shifts all cell highlighting one cell to the left as the current time advances. If, for example, you choose to highlight/examine fixed clock times such as 1600 to 1700, when the current time becomes 1615, the 1615, 1630, and 1645 segments remain highlighted and the 1600 segment is dropped from the Timeline. In other words, the time range is now 45 minutes rather than the original 60 minutes. At 1645, only the 1645 segment remains highlighted. At 1700, the 1700 segment becomes selected, ensuring that there is always at least one time segment selected.



If the Timeline is in the Absolute Time Range mode the prior to current time segment is not shown for any of the “Assign to Time Segments” options.

Assign to Time Segments

The Assign to Time Segments section allows you to select the time that is represented by the Timeline: Departure Time, Arrival Time, FEA/FCA Entry, or Center Entry. The default setting is Departure Time. Click the radio button for the time you want to represent in the timeline. If you select Center Entry, click the Center arrow button to specify the Center. For information on how this setting affects the Reroute Monitor Flight List, see the Reroute Monitor Flight List on page 5-182.

> **Note:** The Assign to Time Segments by FEA/FCA Entry option is not available in Monitor All mode if any of the monitored reroutes are not based on an FEA/FCA.

Reroute Monitor Flight List

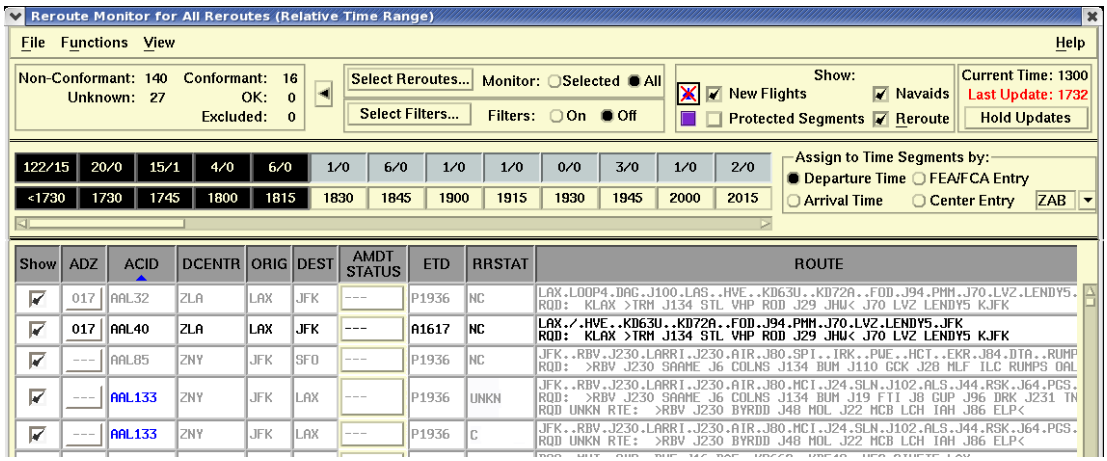
The Flight List section of the Reroute Monitor displays data for each flight that is included in at least one of the monitored reroutes, that satisfies any filter conditions that may have been specified, and that has been assigned to a time segment in the timeline.

For a given monitored reroute, a flight might have more than one assigned route. The airline may review the options and choose which route to fly. If the Flight List has been set to display assigned routes through the Customize Columns function, the Flight List will display more than one assigned reroute for such flights.

To indicate that a flight is in more than one reroute, the Flight List displays the ACID for that flight in blue. Each of the flight's monitored reroutes displays on a separate line. The conformance status of the flight for each of its monitored reroutes displays on its respective line if the Flight List has been set to display reroute status (RRSTAT) through the Customize Columns function. If the Flight List is filtered to show Non-Conformant (NC) flights only, the Reroute Monitor displays the flight and all of its monitored reroutes if it is NC in at least one of them. A flight is considered conformant only if it is conformant in all of its monitored reroutes.

In the following example, the Reroute Monitor Flight List indicates that flight AAL133 is in two monitored reroutes and that it has a conformance status of Unknown in one and Conformant in the other. In this instance, the flight is not considered conformant because it is conformant in only one reroute.

After you specify how you want flight counts to be displayed in the Timeline, the columns in the Flight List are updated to reflect your selection. With Departure Time as the default selection, the Flight List automatically displays the ETD column. You can also add Arrival Time (ETA), Center Entry (C Entry), and FEA/FCA Entry by selecting those buttons. These columns are added only if they are not already displayed. To remove columns, use the Customize Columns function.



> **Note:** The first three columns of the Flight List - Show, ADZ, and ACID - are fixed in the positions shown and cannot be removed.

The columns available for display in the Reroute Monitor Flight List are described in Customize Columns (Reroute Monitor) on page 5-198.

When you add the columns, they are displayed to the right of the ACID column. The added columns are not removed if you subsequently choose another option. As you can see in the sample above, adding the C Entry column does not cause the Departure Time and Arrival Time columns to be removed from the Flight List.

To add the FCA ENTRY column, select the **FEA/FCA Entry** button in the **Assign to Time Segments by** panel. The FEA/FCA Entry time option is not available if any of the monitored reroutes are not based on an FEA/FCA.

> **Note:** To view a pop up tool tip displaying the Advisory number (or three dashes if there is no number) and the names of a flight's monitored reroutes, browse over the ACID of the flight.

Route Prefixes

The route prefix that displays on the Reroute Monitor Flight List for an assigned route depends on the reroute's advisory action and segment type. The Assigned Route column displays route prefixes as follows:

Route Prefix Depending on Advisory Action

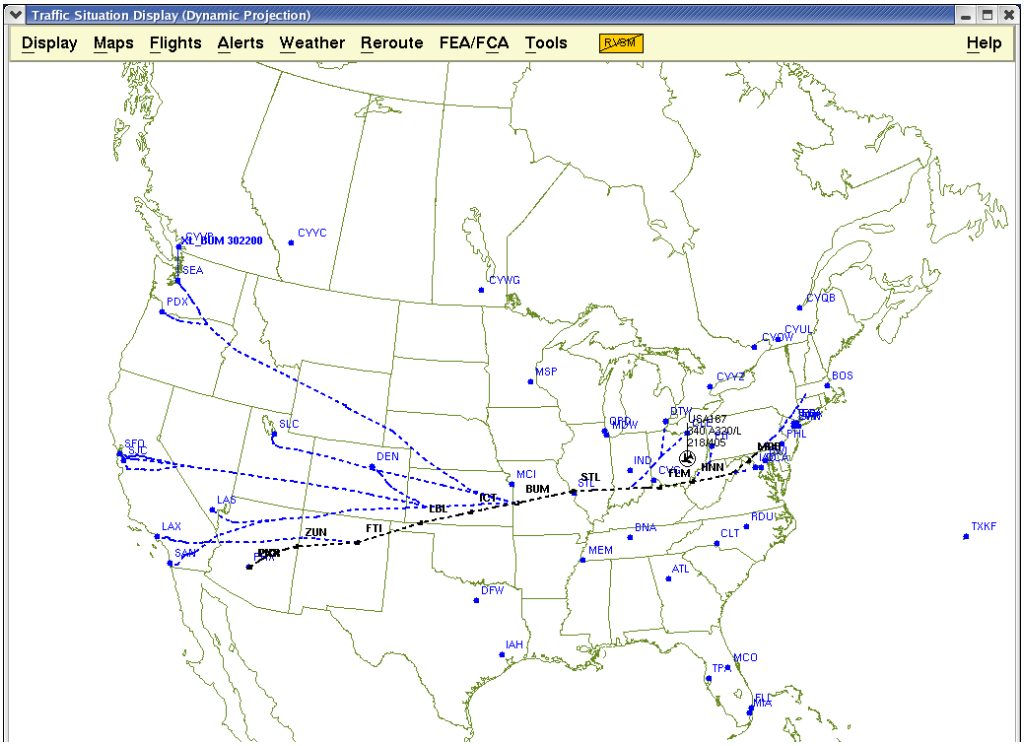
Route Segment Type	RQD	RMD	PLN	FYI
No Type	Required RQD:	Recommended RMD:	Planned PLN	Information FYI
UPT RTE	RQD UPT RTE	RMD UPT RTE	PLN UPT RTE	FYI UPT RTE
CDR RTE	RQD CDR RTE	RMD CDR RTE	PLN CDR RTE	FYI CDR RTE
RERTE	RQD RERTE	RMD RERTE	PLN RERTE	FYI RERTE
UNKN RTE	RQD UNKN RTE	RMD UNKN RTE	PLN UNKN RTE	FYI UNKN RTE

Viewing Assigned Routes for Individual Flights

You can view assigned routes for individual flights on the TSD map. If the reroute is being shown, the TSD highlights the assigned route for individual flights when those flights are browsed (highlighted). The flight icons and their assigned route(s) are both highlighted.

To see an individual flight, click on the **Show** column header to deselect the Show checkboxes for all flights. Click **Show** to the left of the flight you want to monitor.

> **Note:** Both the Show airplane icon and the Show Reroutes checkbox need to be selected.



The entire reroute is displayed on the map. Browsing the flight icon for AAL160, which was the selected flight in this case, highlights the assigned route for the specified flight.

If you select Hide Reroutes on the Reroute menu, the highlighted reroute segment for the specified flight remains displayed while the rest of the reroute is hidden.

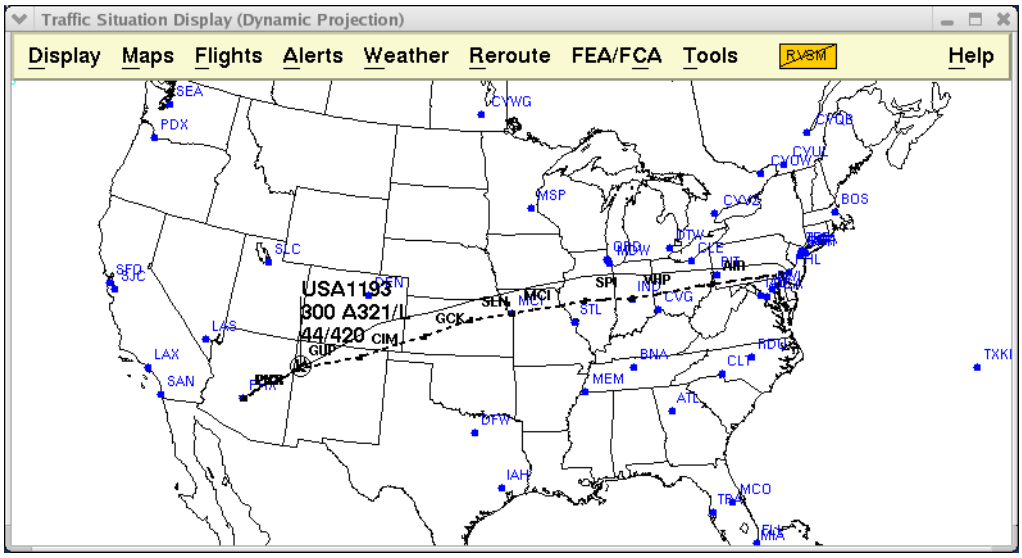
Highlighting a Single Flight

You can highlight a single flight while continuing to draw other flights. To do this,

1. Select the flight's row in the Reroute Monitor flight list.
   You can do this by clicking on the **ACID** field for the flight.

2. If needed, click the **Show Flights** (airplane) icon to show the flight. You can also select Show Flights on the Reroute Monitor View menu to show the flight.

   The sample TSD window below shows a highlighted single flight. Both the current route and the selected assigned route(s) are shown for the flight, even if these features are not toggled on for other drawn flights.



Note: The selected flight, active or inactive, is drawn on the TSD even if the Show button on the Reroute Monitor Flight list has not been checked for that flight.

Monitoring a Single Reroute in Reroute Monitor

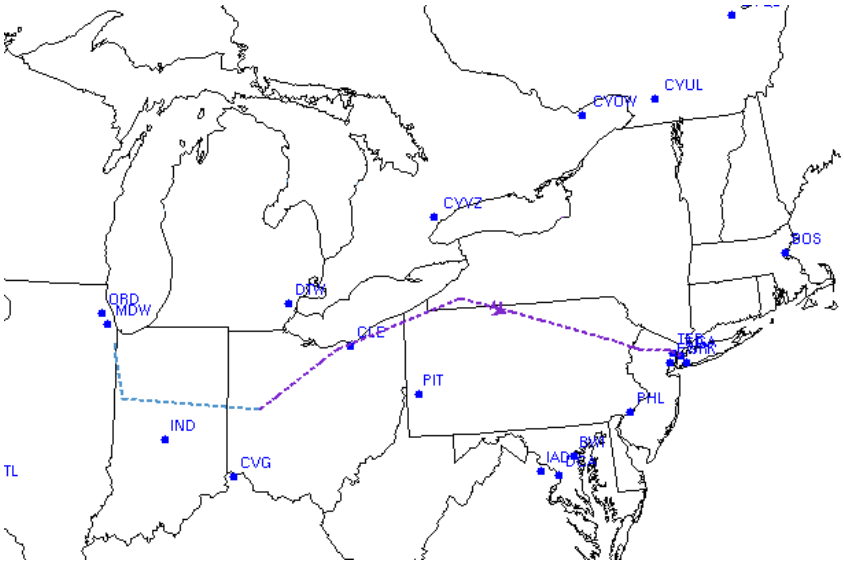
When you monitor a single reroute in the Reroute Monitor, the name of the reroute is shown on the title bar. To display the flight icon, click the flights icon to the left of the New Flights checkbox, in the Showselections panel of the Reroute Monitor.

Click the **Select Reroutes** button on the Selection panel to display the Select Monitored Reroutes dialog box. Click in the checkbox corresponding to the reroute and click **OK**. The name of the reroute is displayed on the title bar of the Reroute Monitor, and only that reroute is displayed in the Flight List. Select a route segment with its flight from that list to be displayed on the TSD. On the Selection Panel, change the color to delineate this reroute segment from the rest of the reroute.

> **Note:** You can match the ADZ number of the route listed in the Select Reroutes dialog box with the ADZ number in the Reroute Monitor dialog box to display the appropriate reroute.

Viewing Protected Segments for Assigned Routes

You can view the protected portion of an assigned route on the TSD display if the assigned route for the flight is drawn using the Reroute Monitor Show function and the Protected Segments checkbox in the Selection Panel is checked. The system highlights the protected portion of each assigned route by coloring it a slate blue color. The protected portion is drawn using the same line style as the non-protected portion. The following example shows the protected portion of a flight's assigned route highlighted in blue. The flight is currently flying along the non-protected portion of the route.



> **Note:** You define the protected segments for a reroute on the Reroute Definition tab of the Create or Edit Reroute dialog box.

To enable drawing of protected segments, the Protected Segments checkbox in the Display Reroute section of the Reroute Definition tab must be checked.

Reroute Monitor Menus

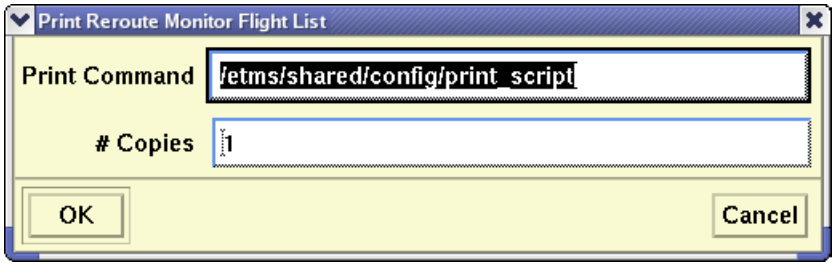
Three menus are available in the top section of the dialog box: File, Functions, and View.

File Menu

The File menu lets you print a Reroute Monitor Flight List; adapt (save, recall, or delete) a Reroute Monitor adaptation file; or close the Reroute Monitor dialog box.

Print

The Print command lets you print a Reroute Monitor Flight List. After you click **Print**, the Print Reroute Monitor Flight List dialog box opens.



Adapt

The Adapt command lets you recall a previously saved reroute monitor adaptation file, save a reroute monitor adaptation file, or delete a previously saved reroute monitor adaptation file. This command also lets you save the states of the Show New Flights command and the Absolute/Relative Time Range selection. When you save or recall an adaptation file you can change the defaults to the settings defined in this file. The **Save**, **Recall**, and **Delete** options work exactly the same way as they do on the Adapt menu option on the TSD Display menu.

The **Recall As Defaults** command allows you to recall the settings that you had previously saved to an adaptation file and change the default settings for subsequent Reroute Monitors to the recalled settings.

The **Save As Defaults** command saves the current settings to an adaptation file. Additionally this option makes the current settings the default settings for the Reroute Monitors that you subsequently invoke in your current TSD session. Each time you open the Reroute Monitor during your TSD session, the current settings will be the default settings for these Reroute Monitors.

Save and Recall Reroute Monitor Settings

When you save an adaptation file for the Reroute Monitor, the following settings will be saved.

- State of the Show/Hide Timeline toggle
- State of the Show/Hide Flight List toggle
- State of the Draw/Hide Flights toggle
- Range of selected cells in the Timeline
- State of the Assign to Time Segments setting
- Center name for the Center Entry Time option (if selected)
- Names of the Data Columns displayed in the Flight List
- Order in which the data columns are displayed from left to right
- Width of each displayed data column
- State of the Show Current/Assigned/Both Route radio buttons
- State of the Full/Truncate Route radio buttons
- State of the Filters On/Off radio button
- All filter settings
- Primary, secondary, and tertiary sort specification, including whether each sort is in ascending or descending order
- Color for drawn flights
- State of the Show Reroute checkbox
- State of the Navaids checkbox
- State of the Show New Flights checkbox
- State of the Absolute/Relative Timeline toggle
- State of the Protected Segments checkbox

Close

Clicking **Close** on the File Menu closes the Reroute Monitor dialog box.

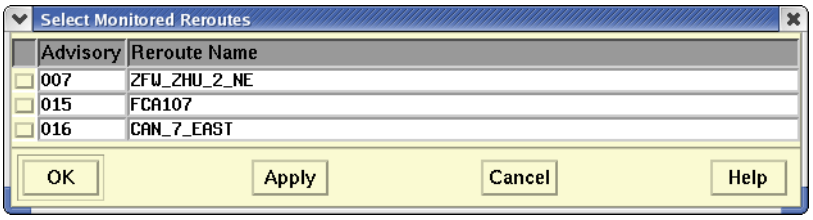
Functions Menu

The Functions menu on the Reroute Monitor dialog box contains the following options:

- Select Reroutes
- Select Filters
- Customize Columns
- Advanced Sort
- Hold/Resume Updates
- Approve Exception (grayed out for user roles TSD-U/F)
- Revoke Exception (grayed out for user roles TSD-U/F)
- General Amendment (grayed out for user roles TSD-U/F)

Select Reroutes

The Select Reroutes option on the Functions menu of the Reroute Monitor opens the Select Monitored Reroutes dialog box. The dialog box displays a list of reroutes that can be monitored, as shown below. To display a list of selected reroutes, in the Select Monitored Reroutes dialog box, click in the checkbox to the left of the Advisory number. The Reroute Monitor lists only the reroutes you selected.



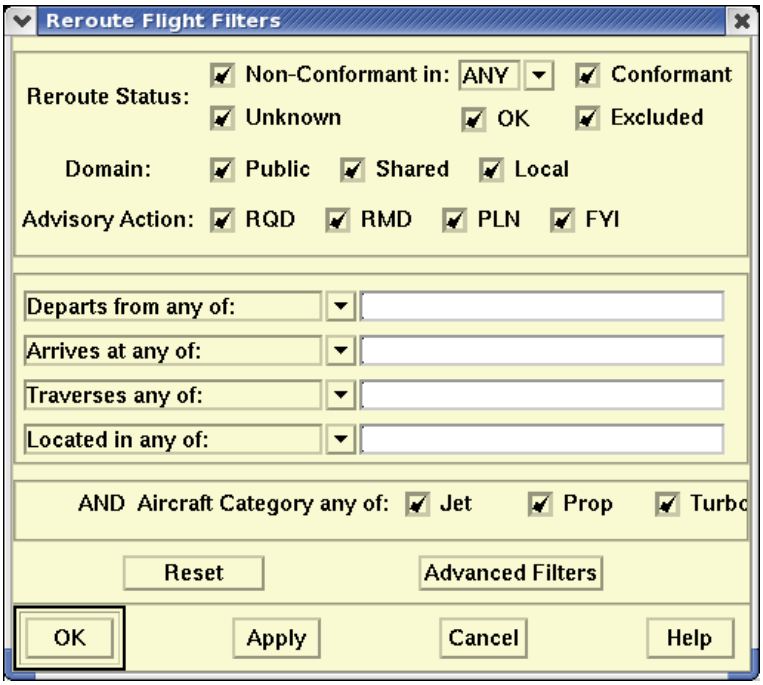
Note: You can also open this dialog box by clicking the **Select Reroutes** button on the Control Panel.

If a new monitorable reroute is created while a Reroute Monitor window is open, the default state for that reroute is unselected.

Select Filters

Selecting **Select Filters** on the Functions menu opens the Reroute Flight Filters dialog box, shown below.

> **Note:** Clicking the **Select Filters** button on the Control Panel also opens the Reroute Flight Filters dialog box.



The Reroute Flight Filters dialog box is similar to the Create FEA/FCA Primary Filter tab and the Secondary Filter dialog box except for the Advanced Filters button, which provides additional filter options. The abbreviated version of the Reroute Flight Filters dialog box has the options that are most often used. However, if you want to specify one of the Advanced Filters options, click the **Advanced Filters** button to expand the Reroute Flight Filters dialog box.

> **Note:** If you define filters in the Reroute Flight Filters dialog box, the Filters field in the Selection Panel on the Reroute Monitor is toggled On.

Filtering on Non-Conformant

You can filter on Non-Conformant in a specified Center.

To do so,

1. Leave Non-Conformant checked and uncheck all other Reroute Status options.
2. Click the arrow to the right of the Non-Conformant checkbox and select the appropriate Center from the drop-down list.

The following sample shows a flight list filtered by Non-Conformant flights.

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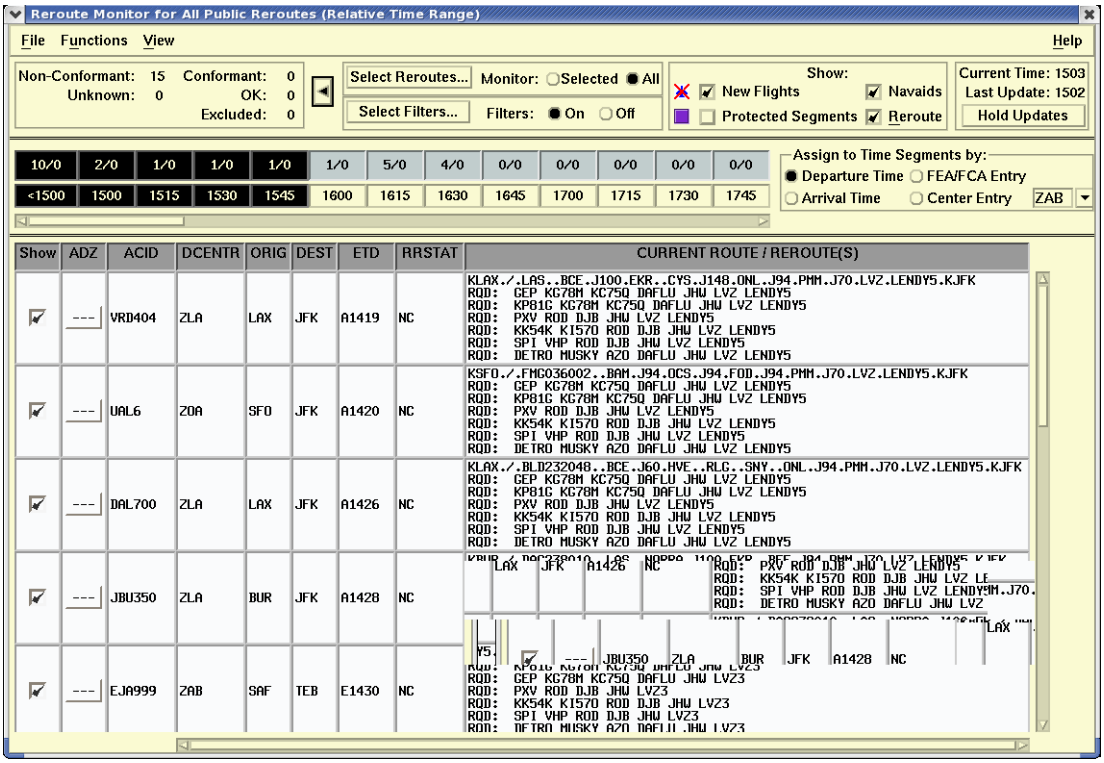
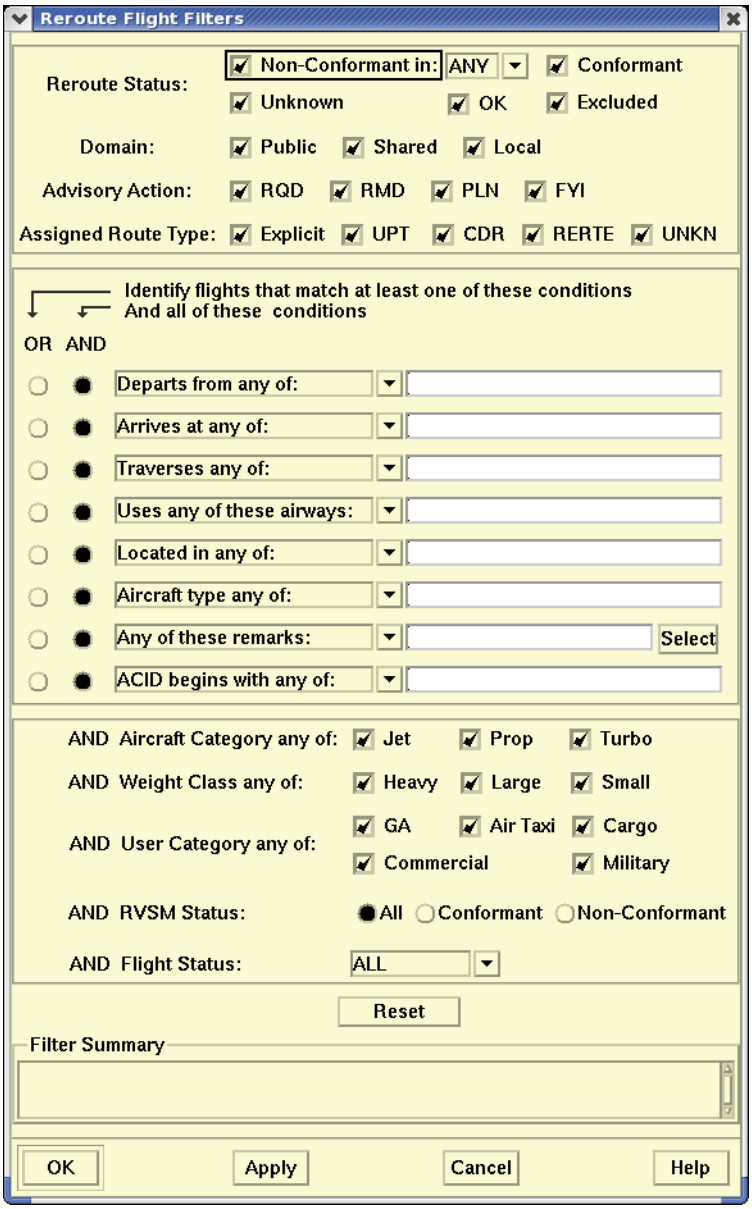


Advanced Filters

The expanded dialog box has all available filter options, including the ones on the abbreviated version of the Reroute flight Filters dialog box. Clicking the **Advanced Filters** button on the Reroute Flight Filters dialog box displays additional filter fields, as shown below.



Note: If you specify advanced filter options, this expanded version of the Reroute Flight Filters dialog box will open when you issue the Select Filters command.

The following table describes the fields in the expanded Reroute Flight Filters dialog box.

Reroute Flight Filters

Reroute Status	Limits the selection to reroute conformance status - Conformant, Non-Conformant, OK, Unknown, or Excluded. **Note:** If the Reroute Monitor Flight List is filtered to show Non-Conformant (NC) flights only and a flight is in more than one monitored reroute, the Reroute Monitor displays the flight and all of its reroutes if it is NC in at least one of them. A flight is considered conformant only if it is conformant in all of its monitored reroutes.
Domain	Limits the selection to flights in monitored reroutes that are available to the TFMS site and that meet the domain criteria of Public, Shared, or Local. All Domain checkboxes are checked by default. Note that if Public is selected, all Advisory Action checkboxes are automatically checked. If Public is deselected, all Advisory Action checkboxes are automatically unchecked. If Shared or Local are selected, the Reroute Monitor includes any Shared or Local reroutes that are available at the site if a reroute dynamic list was generated for the reroute. The TSD generates a reroute dynamic list for a local or shared reroute only if the Monitor Reroute checkbox on the Create or Edit dialog box was checked when the reroute was last saved.
Advisory Action	Limits the selection to flights that have an advisory action of RQD, RMD, PLN, or FYI.
Assigned Route Type	Limits the selection to assigned route type - Explicit, UPT (User-Preferred Trajectory), CDR (Code Departure Route), RERTE, UNKN. **Note**: An Explicit route is one for which no route type has be selected in the Create Reroute dialog box.
Departs from any of/ Departs from none of/ City Pairs any of	Limits the selection to flights that depart from any or none of the listed airports or an airport in the listed ARTCC(s). The "City Pairs any of" option lets you specify up to 20 city pairs. This option is discussed more fully on the following page.

Reroute Flight Filters (Continued)

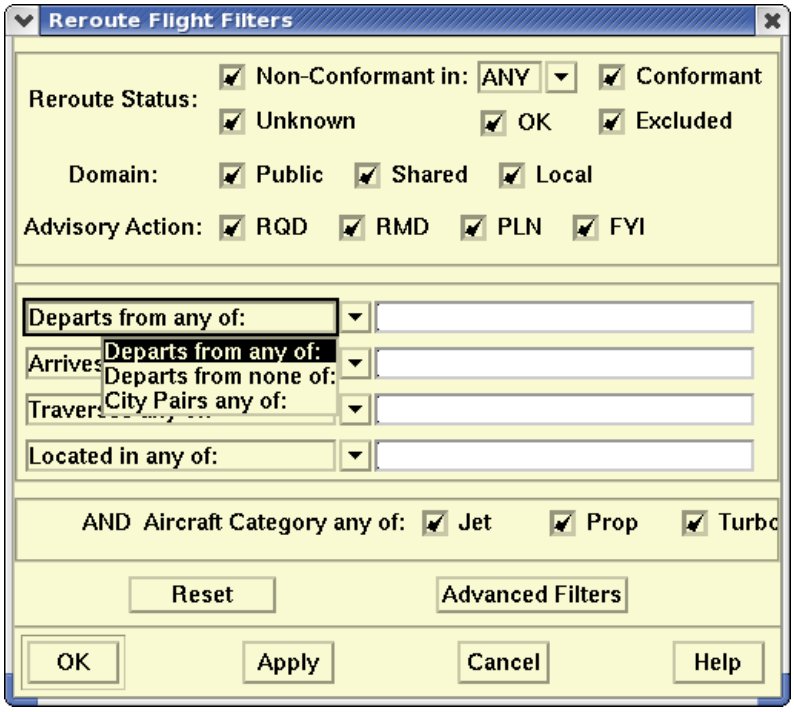
Arrives at any of/ Arrives at none of/ City Pairs any of	Limits the selection to flights that arrive at any of or none of the listed airports or an airport within the listed ARTCC(s). City Pairs any of" lets you specify up to 20 city pairs. This option is discussed more fully on the following page.
Traverses any of/ Traverses none of/ Traverses all of	Limits the selection to flights that traverse any, all, or none of the listed sectors, fixes, or ARTCCs.
Uses any of these airways/Uses none of these airways/Uses all of these airways	Limits the selection to flights that use any, all, or none of the listed airways.
Located in any of/ Located in none of	Limits the selection to flights that are, or are not, currently located in the specified sectors or ARTCCs.
Aircraft type any of/ Aircraft type none of	Limits the selection to flights that are, or are not, of specific aircraft types.
Any of these remarks/ None of these remarks/ All of these remarks/	Limits the selection to flights with any, all, or none of the specified remarks keywords.
ACID begins with any of/ACID begins with none of/ ACID is any of/ ACID is none of	For the first two options, limits the flight list to flights with aircraft IDs (Stripped ACID) that begin, or do not begin with, the characters specified by each entry. For the last two options, limits the flights with aircraft IDs (Un-stripped ACID with leading zeros) that exactly match, or do not match, the characters specified by each entry.
Aircraft category any of	Limits the selection to flights that have an aircraft category that matches one of the selected categories. The default is all categories selected, indicating that no filtering is required.
Weight class any of	Limits the selection to flights that have a weight class that matches one of the listed categories. The default is all categories selected, indicating that no filtering is required.
User category any of	Limits the selection to flights that have a user category that matches one of the listed categories. The default is all categories selected, indicating that no filtering is required.
RVSM status	Limits the selection to all flights, flights that are RVSM conformant, or flights that are RVSM non-conformant.

Reroute Flight Filters (Continued)

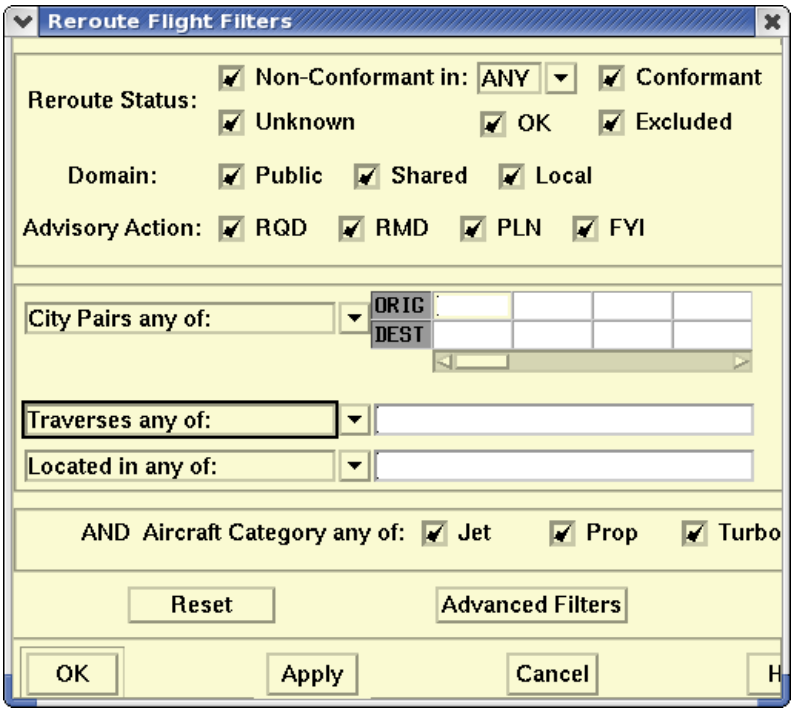
Flight Status	Clicking on the arrow displays three choices: All, Active, or Proposed. • If **Proposed** is selected, limits the selections to flights that are not yet airborne, which includes those that have a status of Scheduled, Filed, Airline Created, or Controlled. • If **Active** is selected, limits the selection to airborne flights. • **All** indicates that no filtering is required. **All** is the default.
Reset	Resets the filter fields to their defaults.
Filter Summary	Displays a read-only version of the filter as it is constructed.

City Pair Option

Both the abbreviated and advanced filters versions of the Reroute Flight Filters dialog box include a City Pair option for the Departure and Arrival filter fields. The sample below shows the options for the Departure filter fields. To return to the default dialog box, click on the City Pairs arrow and select **Departs/Arrives** filters.

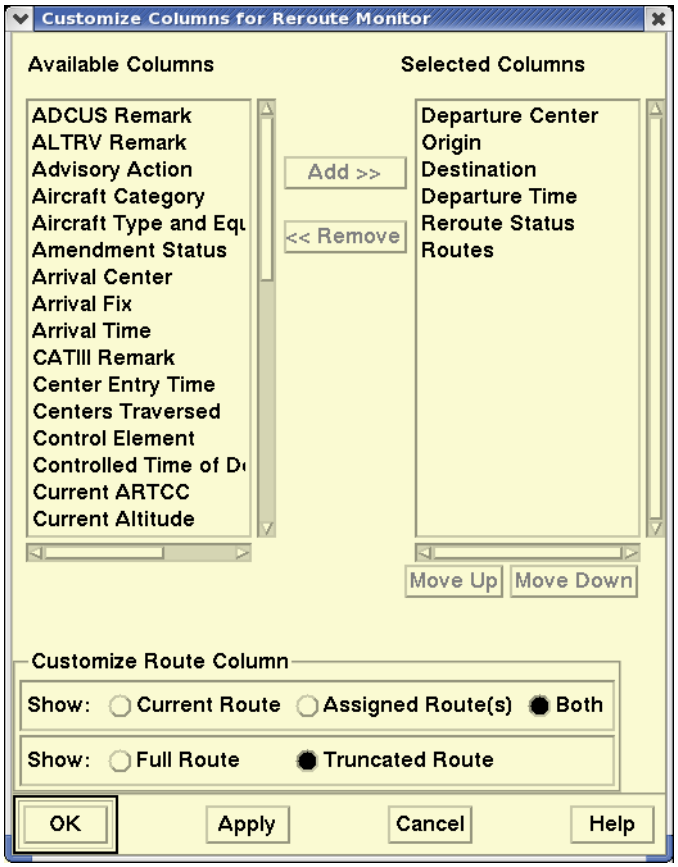


When you select the City Pairs any of option from either the Departure or Arrival filter fields, the Reroute Flight Filters dialog box changes to display origin and destination fields. The origin and destination fields let you specify up to 20 city pairs as shown below. You can view additional fields by moving the horizontal scroll bar to the right. The Reroute Monitor displays only those flights that depart from and arrive at the city pairs shown in the Reroute Flight Filters dialog box.



Customize Columns (Reroute Monitor)

The Customize Columns option on the Functions menu of the Reroute Monitor dialog box lets you add and remove columns from the Reroute Monitor Flight List. After you select Customize Columns on the Functions menu, the Customize Columns for Reroute Monitor dialog box opens.



The Selected Columns field shows the columns that are currently displayed on the Reroute Monitor Flight List. The Available Columns field shows the columns that can be added to the Reroute Monitor Flight List.

To Customize Columns:

1. To move a column name out of the Selected Columns, click on the column name and then click the **<< Remove** button. The column name appears in the Available Columns list.
2. Click **OK**. You are returned to the Reroute Monitor. Notice that the column is no longer displayed in the Reroute Monitor Flight List.
3. To return the column to the Reroute Monitor Flight List, select Customize Columns again and select the name in the Available List column, click the **Add >>** button and then **OK**. You are returned to the Reroute Monitor, and the column is re-displayed.
4. To move the selected column names up and down within the list of Selected Columns, select the name and then click **Move Up** or **Move**

Down. The order in which they appear in Selected Columns is the order, from left to right, in which they appear on the Reroute Monitor Flight List.

5. Click **OK** to move the column header to the left if you selected Move Up, or to the right if you selected Move Down.

   Note: The columns Show, ADZ, and ACID are fixed columns and cannot be added, moved, or removed from the Reroute Monitor Flight List.

The following table includes the column names available in the Customize Columns option, the column headers that display on the Reroute Monitor Flight List, and a description of each column.

Customize Columns for Reroute Monitor

Column Name	Flight List Header	Column Description
ADCUS Remark	ADC	Advise Customs about this flight. Displays a **Y** if the remark exists for a flight, or "-" if there is none.
ALTRV Remark	ATV	Altitude Reservation. Displays a **Y** if the remark exists for a flight, or "-" if there is none.
Advisory Action	ACTION	Action associated with the advisory that applies to the flight. This can be any of the action values assigned when the advisory is issued, such as RQD, RMD, or FYI.
Aircraft Category	CAT	Aircraft Category code. Possible values are J, P, and T.
Aircraft Type and Equipment	TYPE	Aircraft Type and Equipment.

Customize Columns for Reroute Monitor (Continued)

Column Name	Flight List Header	Column Description
Amendment Status	AMDT STATUS	The status of a flight's submitted route amendment. Possible values are: • **SENT** - A route amendment was submitted to ERAM but no response has been received. This status is displayed as soon as the amendment has been sent. • ~~**SENT**~~ (with strikethrough) - Timeout: a configurable period has elapsed since a route amendment was submitted to ERAM but no response has been received. • **ACPT** - A route amendment was submitted to ERAM and accepted. • **RJCT** - A route amendment was submitted to ERAM and rejected. **Note:** A dashed line ("---") displays if no amendment message was submitted for a flight or if an amendment cancellation message was sent and successfully processed and no new amendment has been submitted.
Arrival Center	ACENTR	Arrival Center.
Arrival Fix	AFIX	Arrival Fix.
Arrival Time	ETA	TFMS estimate of wheels-down time.
CATIII Remark	III	Flight has CATIII landing equipment. Displays a **Y** if the remark exists for a flight, or "-" if there is none.
Center Entry Time	C ENTRY	If Center Entry Time option is selected on timeline, then this is the time when the flight enters the specified center.

Customize Columns for Reroute Monitor (Continued)

Column Name	Flight List Header	Column Description
Centers Traversed	CENTRS	Space separated list of centers that the flight traverses. • The Center name displays in red if the center can move the flight onto its assigned route. • The name displays in black if the center will be traversed by the flight but will not be able to or will not need to move the flight onto its assigned route.
Control Element	CTL ELEM	Name of the airport or FCA that is controlling the flight or a "-" if the flight is not controlled.
Controlled Time of Departure	CTD	Controlled Departure Time, or "-" if none.
Current Altitude	CALT	Current altitude in hundreds of feet.
Current ARTCC	ARTCC	ARTCC where flight is currently located or departure ARTCC for inactive flights.
DVRSN Remark	DVT	Diversion recovery leg. Displays a **Y** if the remark exists for a flight, or "-" if there is none.
Departure Center	DCENTR	Departure Center.
Departure Fix	DFIX	Departure Fix.

Customize Columns for Reroute Monitor (Continued)

Column Name	Flight List Header	Column Description
Departure Time	ETD	TFMS estimate of wheels-up time. The ETD prefix indicates both the status of a flight and the source of data for a flight as follows: • **A** - Actual departure time, usually based on a NAS departure message. • **E** - Estimated Actual departure time. No departure message was received, but the flight is known to be airborne because NAS messages indicating this have been received. • **T** - Flight is off the gate and may be taxiing. A gate departure time has been received. • **P** - P-time from the NAS flight plan message. • **N** - P-time from the airline-provided early intent message. • **S** - Departure time estimated from the Official Airline Guide scheduled time. • **R** - The historical route has been replaced by the assigned route. **Note:** If you place the pointer over a cell in the ETD column of the flight list, a tool tip displays that defines the ETD value in the cell.
Destination	DEST	Arrival Airport.
FCA Remark	FCA	Flight has been rerouted around a Flow Constrained Area. Displays a **Y** if the remark exists for a flight, or "-" if there is none.
FEA/FCA Entry Time	FCA ENTRY	Time when the flight is predicted to first intersect the FEA/FCA, if the reroute that applies to the flight is an FEA/FCA-based reroute. Otherwise "-."

Customize Columns for Reroute Monitor (Continued)

Column Name	Flight List Header	Column Description
FEA/FCA Exit Time	FCA EXIT	Time when the flight is predicted to exit the FEA/FCA for the last time if the reroute that applies to the flight is an FEA/FCA-based reroute. Otherwise "-."
FEA/FCA Name	FEA/FCA Name	FEA/FCA name, if the reroute that applies to the flight is an FEA/FCA-based reroute. Otherwise "-." The FCA name is displayed in parentheses if the flight was originally in the FCA but has since dropped out.
Filed Speed	SPD	Filed speed.
Flight Status	FSTAT	Both the status of a flight and the source of data for a flight as follows: • **S** - **Scheduled**. TFMS has received no flight plan. Data is based on the OAG and/or user-provided schedule updates. The route is based on historical data. • **P - Proposed**. TFMS has received a NAS flight plan. • **T - Taxi.** TFMS has received a message indicating the flight has pushed off the gate and may be taxiing. • **A - Active**. TFMS has received a NAS or user-provided departure message. • **E - Estimated.** TFMS has received a message indicating the flight was active, but no departure message was received. • **R - Replaced** The historical route has been replaced by the assigned route.
GUFI	GUFI	Global Unique Flight Plan Indentifier
HAR Remark	HAR	High-Altitude Airspace Redesign. Displays a **Y** if the remark exists for a flight, or "-" if there is none.

Customize Columns for Reroute Monitor (Continued)

Column Name	Flight List Header	Column Description
ICR Remark	ICR	Integrated Collaborative Rerouting. Displays a **Y** if the remark exists for a flight, or "-" if there is none.
LIFEGUARD Remark	LFG	Lifeguard or MEDEVAC. Displays a **Y** if the remark exists for a flight, or "-" if there is none.
NRP Remark	NRP	National Route Program flight. Displays a **Y** if the remark exists for a flight, or "-" if there is none.
Origin	ORIG	Departure Airport.
Proposed Gate Time of Departure	P-Time	Flight plan P-Time.
PTP Remark	PTP	Point to Point. Displays a **Y** if the remark exists for a flight, or "-" if there is none.
RR Remark	RR	Reroute. Displays a **Y** if the remark exists for a flight, or "-" if there is none.
Requested Altitude	ALT	Requested altitude in hundreds of feet.
Reroute Name	REROUTE	Name of the reroute that applies to the flight.
Reroute Status	RRSTAT	Reroute conformance status • C = Conformant • NC = Non-Conformant, • NC/OK = Non-Conformant but previously OK • UNKN = Unknown, • OK = Exception Granted • EXC = Excluded
Routes	CURRENT ROUTE / REROUTE(S)	Current and assigned routes. If several route options have been assigned, they will all be listed. The route prefix that displays for an assigned route is based on the reroute's advisory action and segment type.
RVSM Status	RVSM	RVSM conformance status.

Customize Columns for Reroute Monitor (Continued)

Column Name	Flight List Header	Column Description
SWAP Remark	SWP	Swapping flight from a standard to a nonstandard route. Displays a **Y** if the remark exists for a flight, or "-" if there is none.
Time to Intersect	TIME TO	Time to intersect the FCA, if the reroute that applies to the flight is an FCA-based reroute. Otherwise "-." The value shall be '00:00' if the flight has already intersected the FCA.
TMI ID	TMI ID	Traffic Management Initiative ID. The TSD determines the TMI ID associated with each assigned route from the reroute definition. The TMI ID for a reroute consists of the following three elements: the letters "RR", a three character facility ID of the facility where the reroute was created, and the advisory number if an advisory was issued for the reroute; otherwise a unique 3-digit sequence number. For example, RRDCC345.
WXRTE Remark	WXR	Severe weather reroute. Displays a **Y** if the remark exists for a flight, or "-" if there is none.

Customize Route Column

The Show buttons in the Customize Route Column section of the Customize Columns for Reroute Monitor dialog box, lets you show the current route, the assigned route(s), or both in the Current Route/Reroute(s) column on the Reroute Monitor window. You also have the option of showing the full route or the truncated* route in the Current Route/Reroute(s) column.

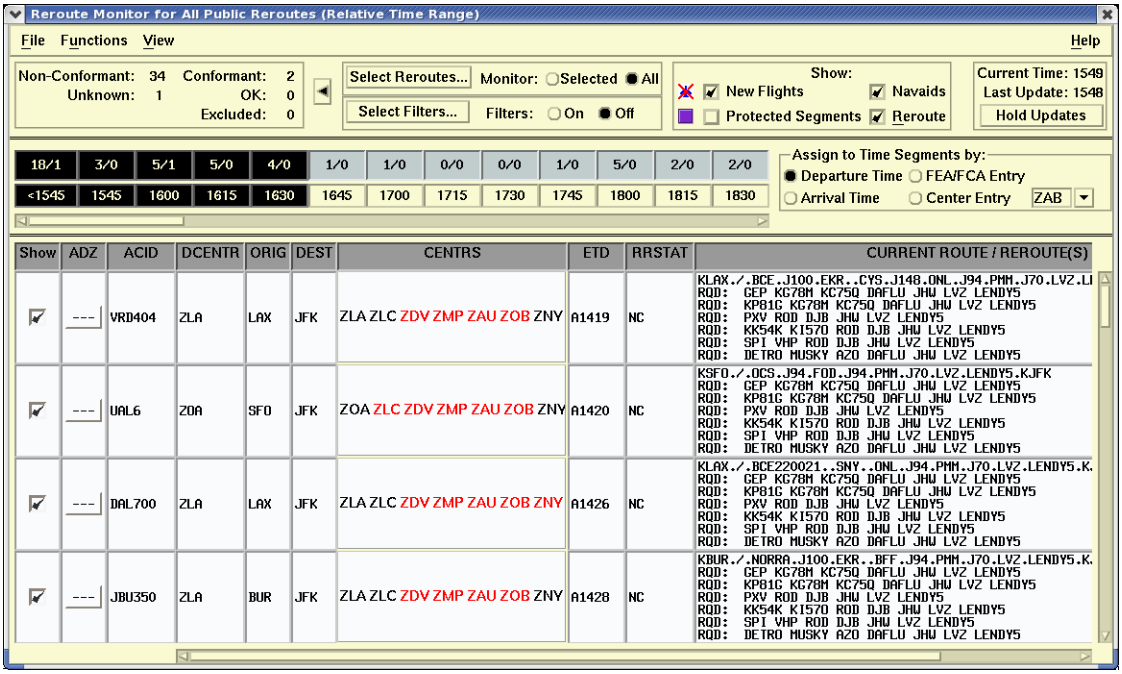
*The word “truncated” in this case means not word-wrapped.

> **Note:** When Truncated Route is selected, you can see the Full Route by moving the mouse pointer over the current route. A tool tip shows the full route without word wrapping. If you select Full Route on the Customize Columns dialog box, moving the pointer over the route has no effect.

Centers Traversed Column

The Centers Traversed column in the Reroute Monitor Flight List shows the Center name in red if the flight will be non-conformant while it is in the Center and if the Center can move the flight onto its assigned route. Center names that are listed in black are Centers that will be traversed by the flight, but the flight will either be conformant in those Centers or those Centers will not be able to or need to move the flight onto its assigned route. This condition will exist if the flight has already traversed the Center or if the flight will be on the assigned route when it is within control of the Center.

In the sample below, the CENTRS column displays several reroutes showing centers displayed in red, indicating that those centers can move the corresponding flights onto their assigned routes.



Show Buttons

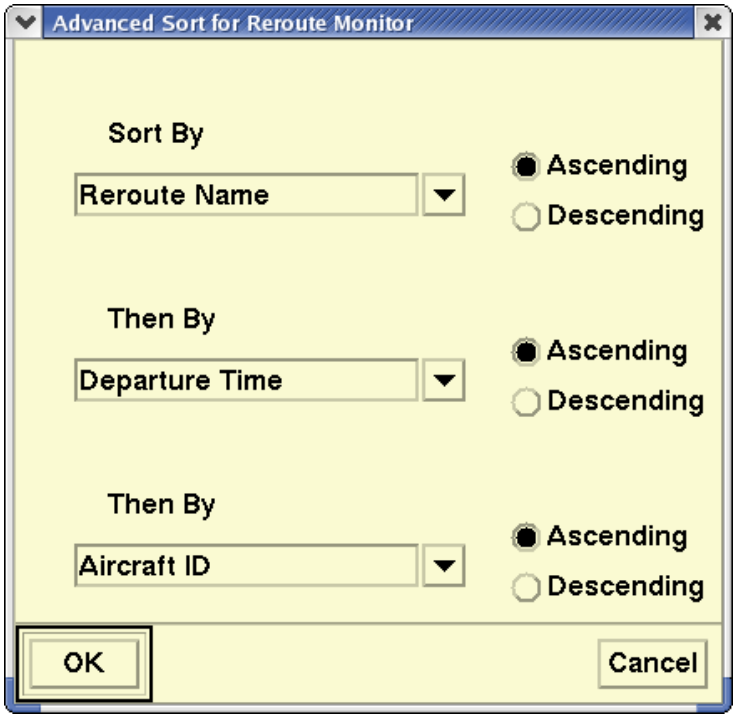
The **Show** buttons in the Customize Route Column section of the Customize Columns for Reroute Monitor dialog box, shown on the preceding page, let you show the current route, the assigned route(s), or both in the Current Route/ Reroute(s) column on the Reroute Monitor window. You also have the option of showing the full route or the truncated* route in the Current Route/ Reroute(s) column.

*The word "truncated" in this case means not word wrapped.

> **Note:** When Truncated Route is selected, you can see the Full Route by moving the mouse pointer over the current route. A tool tip shows the full route without word wrapping. If you select Full Route on the Customize Columns dialog box, moving the pointer over the route has no effect.

Advanced Sort

The **Advanced Sort** option on the Functions menu of the Reroute Monitor dialog box lets you sort the Reroute Monitor Flight List by specifying Primary, Secondary, and Tertiary sort criteria.



1. Click on the arrow next to the criteria field to select from a pick list of sort options.
2. Click in the radio buttons to select either ascending or descending order.
3. Click **OK**.

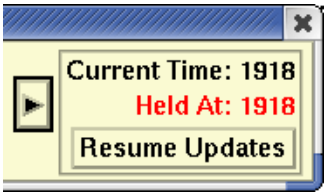
Clicking on the column header also lets you sort the list in ascending or descending order alphabetically by the value in that column. When you select a column header to sort, an arrow is displayed showing whether the sort is ascending or descending. For example, the window below shows DEST is sorted in descending order.

ADZ	ACID	DCENTR	ORIG	▼DES	ETD	RRSTAT	CURRENT ROUTE / REROUTE(S)
015	DAL292	ZLA	LAX	ATL	A1523	C	LAX./.MEI.MEITRANS.LGC.LGC1.ATL ASSIGNED: DRK J6 IRW FSM MEM RMG2
015	DAL632	ZOA	SFO	ATL	A1532	C	SFO./.MEM264016..RMG.RMG2.ATL ASSIGNED: LIN J84 MVA MLF J28 GCK ICT J182 RZC MEM RMG2
015	DAL656	ZOA	SMF	ATL	A1518	C	SMF./.MEM.MEMTRANS.RMG.RMG2.ATL ASSIGNED: LIN J84 MVA MLF J28 GCK ICT J182 RZC MEM RMG2
015	DAL1067	ZLA	ONT	ATL	A1520	C	ONT./.MEI.MEITRANS.LGC.LGC1.ATL ASSIGNED: DRK J6 IRW FSM MEM RMG2
015	DAL1894	ZOA	OAK	ATL	A1511	C	OAK./.MEM.MEMTRANS.RMG.RMG2.ATL ASSIGNED: LIN J84 MVA MLF J28 GCK ICT J182 RZC MEM RMG2

Hold/Resume Updates

When a Reroute Monitor is displaying several reroutes, it is refreshed several times during each update, once for each reroute. Selecting **Hold Updates** on the Functions menu stops the Reroute Monitor from updating. Clicking the **Hold Updates** button on the Time Panel also stops the Reroute Monitor from updating. When you use either method to hold the updates, a **Held At:** label is displayed in red in the Time Panel section of the Control Panel. The Hold Updates option on the Functions menu changes to Resume Updates. The Hold Updates button becomes Resume Updates. The Reroute Monitor window below shows the Time Panel when data is being held.

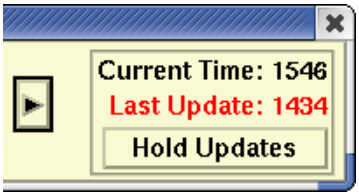
To resume updating, select **Resume Updates** on the Functions menu or click the **Resume Updates** button on the Time Panel.



Missing or Out-of-Date Data

Flight List data is updated independently for each reroute, so the data may be up to date for some reroutes but missing or out-of-date for others. The Last Update time field in the Time Panel is displayed in red with a value of N/A if flight list data is unavailable for all of the reroutes being monitored.

If one or more of the monitored reroutes is out of date, the Last Update Time field is shown in red like the following sample. Moving the pointer over the Last Update field displays a list of reroutes being monitored. You can check the list to see which reroute(s) are out of date.



If the data is available and up to date for a single monitored reroute or multiple reroutes, the Last Update time would look like the following.

Approve Exception

Note: The menu item Approve Exception in the Monitor All Reroutes dialog Functions menu will be grayed out for user roles TSD-C.

Revoke Exception

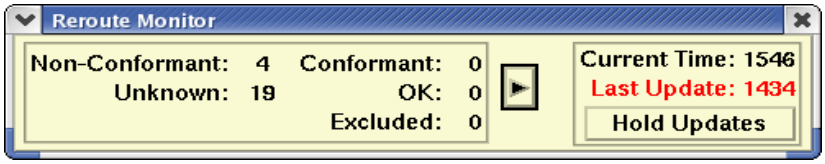
Note: The menu item Revoke Exception in the Monitor All Reroutes dialog Functions menu will be grayed out for user roles TSD-C.

Generate Amendment

Note: The menu item Generate Amendment in the Monitor All Reroutes dialog Functions menu will be grayed out for user roles TSD-C.

Shrink/Expand

When you click **Shrink** on the View Menu, the Reroute Monitor is reduced in size.



You can also reduce the size of the Reroute Monitor by clicking the arrow to the right of the Counts Panel. When the Reroute Monitor is full size, the arrow points to the left. Click this arrow to reduce the Reroute Monitor to the size show above.

To expand the Reroute Monitor, click the right arrow.

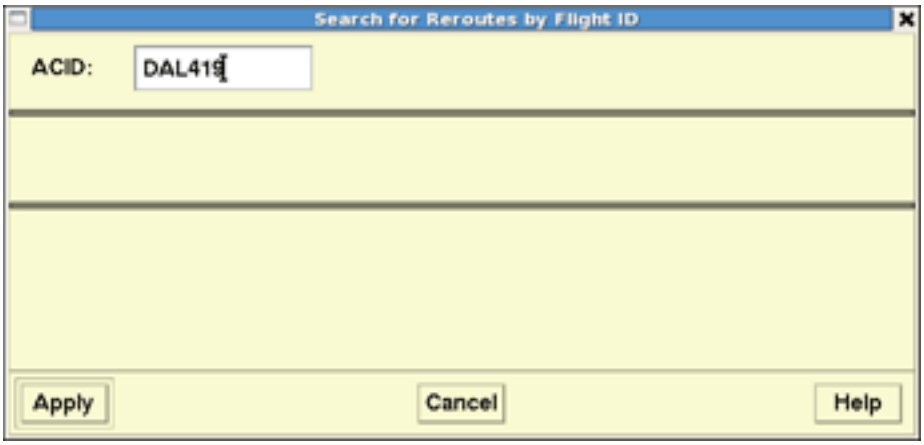
The window expands to the state it was in before it was reduced. For example, if you had previously hidden the Timeline, when you expand the window, the Reroute Monitor opens with the Timeline hidden.

Note: Passing the cursor over the arrow displays a tool tip: **Expand** when the window is reduced and **Shrink** when the window is expanded.

<table>
<tr><th colspan="2">Flight Search Command</th></tr>
<tr><td colspan="2">The Flight Search command lets you search for flights in a reroute.</td></tr>
<tr><th></th><th>Quick Key Method</th></tr>
<tr><td rowspan="3">1. Pull down the Reroute menu by clicking Reroute on the TSD Main Menu or pressing <Alt> R.
2. Click Flight Search.</td><td>None</td></tr>
<tr><th>Semicolon Method</th></tr>
<tr><td>None</td></tr>
</table>

Reroute Flight Search Dialog Box

After you select Flight Search from the Reroute menu, the Search Reroute for Flight ID dialog box opens.

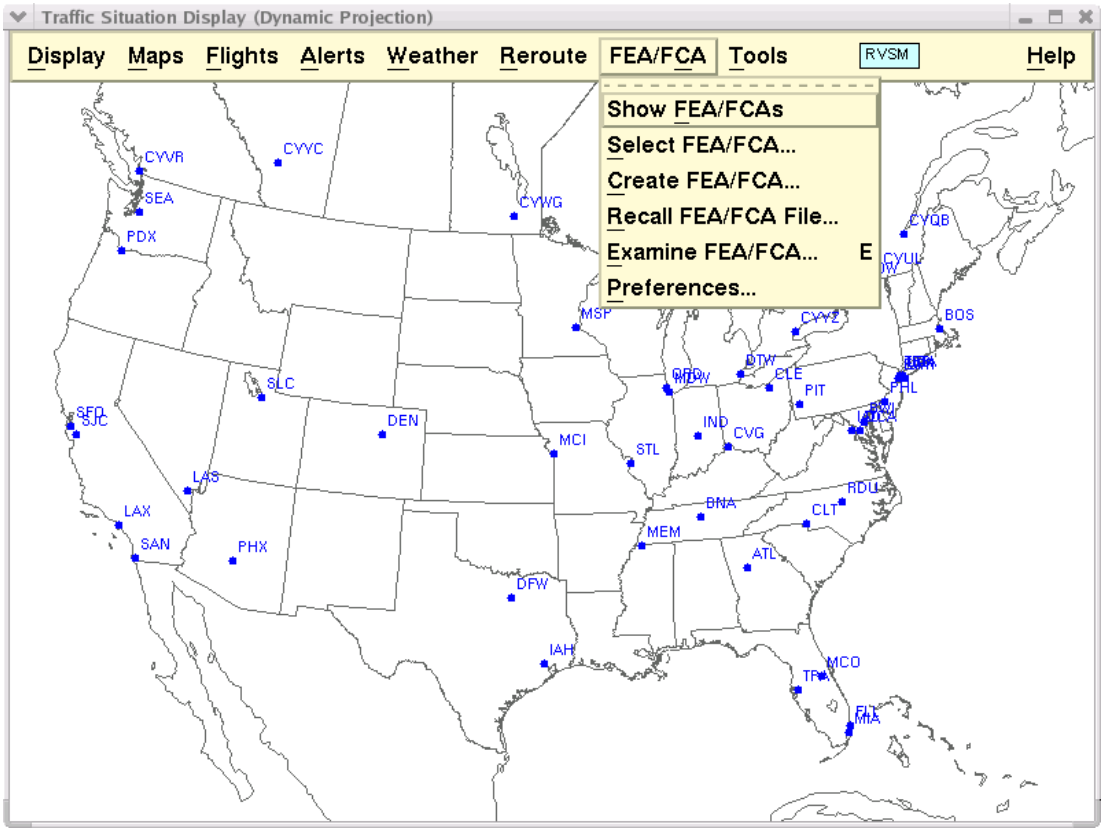


Selecting an ACID of DAL419 and clicking **Apply** results in a dialog box similar to the following.

> **Note:** Flight Search only displays flights associated with users airline.

The user can then initiate a new search by entering another ACID and clicking on the **Apply** button.

FEA/FCA Menu



Overview

This section describes the functionality of the Flow Evaluation Areas (FEA) and Flow Constrained Areas (FCA) commands. FCAs are produced at the ATCSCC (Command Center) only; FEAs are created at the TFMS sites. Features of the commands let you produce one or more graphic overlays showing areas where the Traffic Management Specialist wishes to evaluate the traffic flow or where flight rerouting has been suggested due to severe weather conditions. The FEA/FCA function defines the flight filter and includes the ability to combine filter criteria using AND/OR logic and to define multiple filters.

This section is divided into the following topics, each of which corresponds to an item on the FEA/FCA pull-down menu.

- **Show/Hide FEA/FCAs Command** **Page 5-216**

  Lets you show or hide all FEA/FCAs defined in the Select FEA/FCA dialog box

- **Select FEA/FCA Command** **Page 5-218**

  Lets you define the FEA/FCAs for display on the TSD

- **Create FEA/FCA Command** **page 5-228**

  Lets you create a new FEA or FCA and designate whether it is Private, Shared, Local or Public

- **Recall FEA/FCA File Command** **Page 5-266**

  Lets you recall an FEA/FCA that you previously saved

- **Examine FEA/FCA Command** **Page 5-269**

  Lets you display details about traffic demands for an FEA/FCA

- **Preferences Command** **Page 5-290**

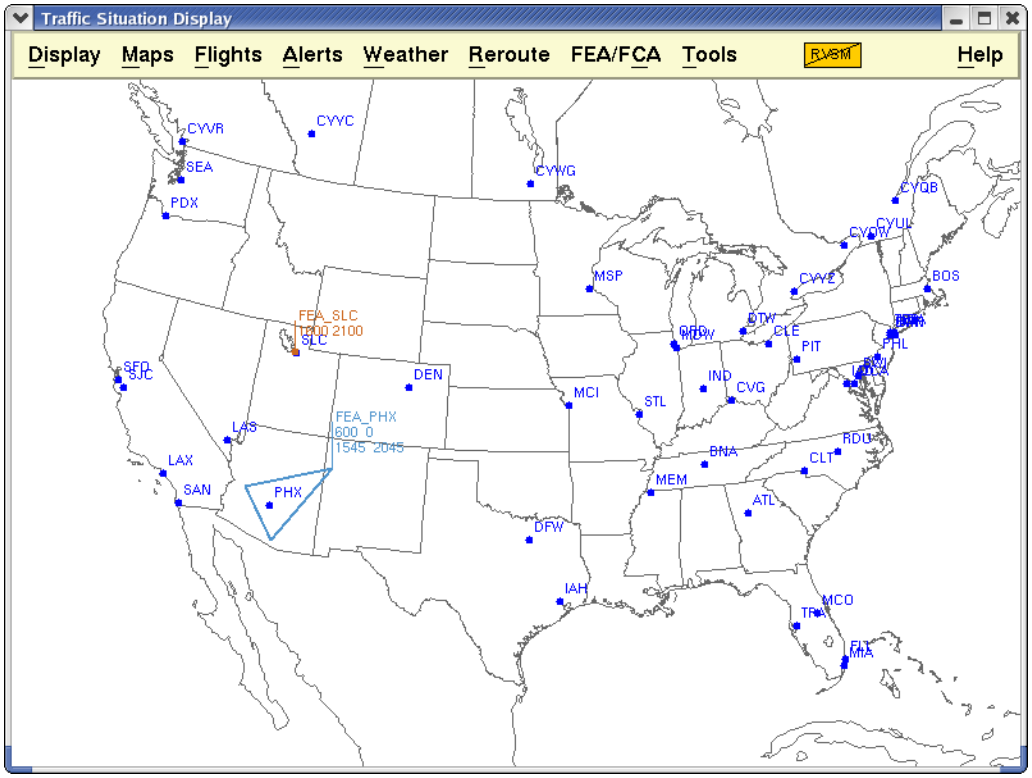
  Lets you set the defaults for the Create FEA/FCA dialog box

In addition to the FEA/FCA menu commands, the FEA/FCA Request Count and Request List are included at the conclusion of this chapter.

Show/Hide FEA/FCAs Command	
The **Show/Hide FEA/FCAs** command lets you turn on or off the display of FEA/FCAs. You must have created an FEA/FCA before you can show it.	
	Quick Key Method
1. Pull down the FEA/FCA menu by clicking **FEA/FCA** on the TSD Main Menu or by pressing **<Alt> C**. 2. Click **Hide FEA/FCAs** or **Show FEA/FCAs** or press **F**.	**None**
	Semicolon Method
	None

Note: If no FEA/FCAs have been created, this menu item will not be available.

When you issue Show FEA/FCAs, all FEA/FCAs with the Show buttons checked in the Select FEA/FCA dialog box appear on the TSD display and look like the sample below. Note that one of the FEAs is a drawn polygon and one is entered as a NAS element.



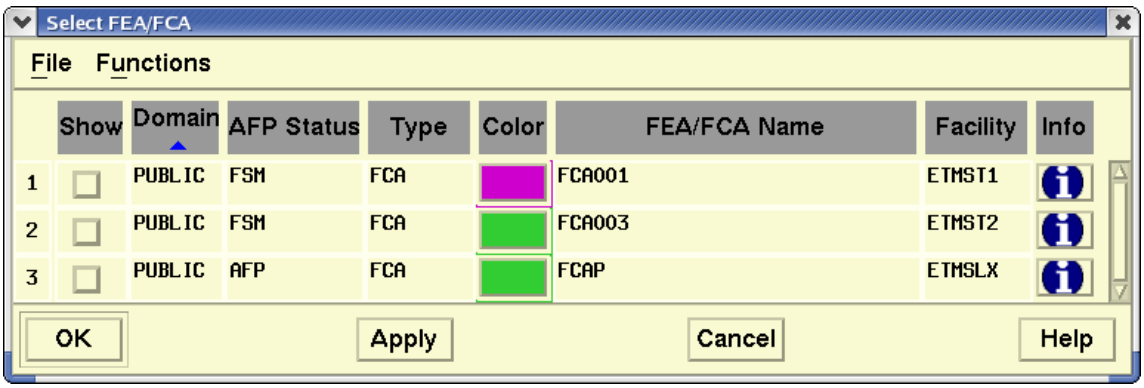
When you select **Hide FEA/FCA**, all FEA/FCAs are removed from the display.

Select FEA/FCA Command	
The **Select FEA/FCA** command enables you to define which FEA/FCAs you want to display on the TSD. This function also lets you edit, copy, delete, or choose colors for an FEA/FCA. The Functions menu lets you view or edit FEA/FCA filters.	
	Quick Key Method
1. Pull down the FEA/FCA menu by clicking **FEA/FCA** on the TSD Main Menu or by pressing <Alt> **C**. 2. Click **Select FEA/FCA** or press **S**.	**None**
	Semicolon Method
	None

Note: If no FEA/FCAs have been created, this menu item will not be available.

Select FEA/FCA Dialog Box

After you click **Select FEA/FCA** or press **S**, the Select FEA/FCA dialog box, which contains a list of all FEA/FCAs in the database that are available to you, opens.



The following table explains the Select FEA/FCA dialog box. Only the Show, Color, and Info fields can be edited in this dialog box.

Select FEA/FCA Dialog Box

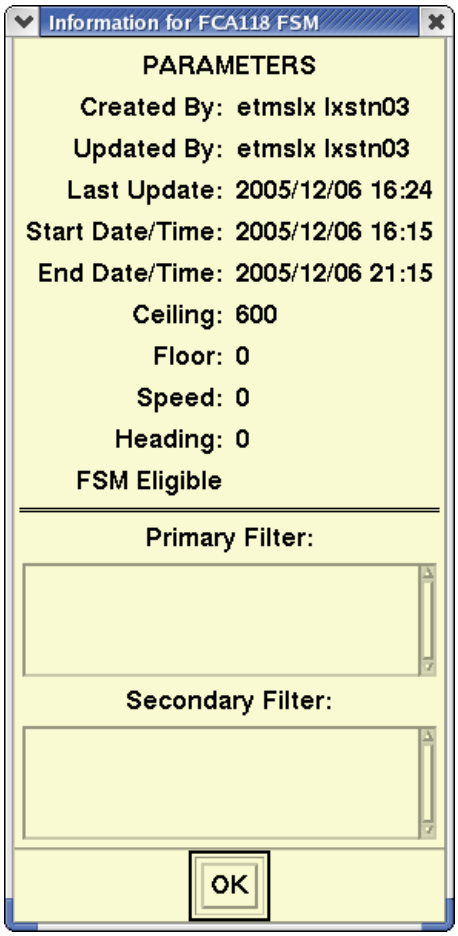
Item	Description	What you do
Show	Displays and removes FEA/FCAs from the TSD.	Click the checkbox to toggle a check mark on or off. Click the Show column header to toggle on or off all Show checkboxes. **Note**: When the TSD starts up, all Show checkboxes are turned off if the Auto-Show Status is set to OFF in the FEA/FCA Preferences dialog box. If set to ON, when the TSD starts up, the Show checkbox displays a check mark for any existing FEA/FCAs that match the categories selected in the Preferences dialog box.
Domain	Displays the following domains: Public, Shared, Local or Private.	You cannot edit this field.
AFP Status	Indicates whether FEA/FCA is FSM-Eligible or has an active AFP (Airspace Flow Program)	You cannot edit this field.
Type	This field displays the types, FEA, FCA, and Expired. Users at the Command Center create the FCAs.	You cannot edit this field.
Color	Changes the color of the FEA/FCA boundary. Also, the flight icon color will be changed to the same color as the FEA/FCA.	Click the button to display a color palette. Click your color choice.
FEA/FCA Name	User-specified name for the FEA/FCA. Maximum of 30 characters.	You cannot edit this field.

Select FEA/FCA Dialog Box (Continued)

Item	Description	What you do
Facility	TFMS site where the FEA/FCA was created.	You cannot edit this field.
Info	Displays the Information dialog box for the selected FEA/FCA name.	Click the **Info** button for the specific FEA/FCA.

FEA/FEA Information Dialog box

Clicking the **Info** button located on the Select FEA/FCA dialog box displays the Information dialog box for the selected FEA/FCA. The following sample shows the parameters for the FEA/FCA, a summary of the Primary Filter criteria, and the name and site of Secondary filters that were added.



> **Note:** The FEA/FCA Info dialog box will have “FSM” or “AFP” appended to the FEA/FCA name if it is FSM-Eligible or has an active AFP.

There are two pull-down menus on the Select FEA/FCA Dialog Box: File and Functions.

File Menu

The File menu on the Select FEA/FCA dialog box lets you

- Save your FEA/FCA definition to a file
- Recall the file
- Delete the file

These functions are described in detail in Chapter 3, TSD Basics.

Functions Menu

The Functions Menu on the Select FEA/FCA dialog box lets you perform the following functions:

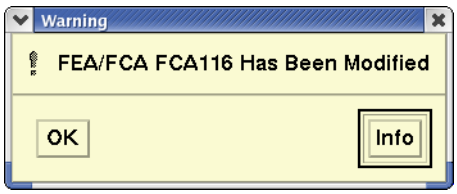
- Edit: Edit FEA/FCA definitions
- Filters: View or edit FEA/FCA filters
- Delete: Delete FEA/FCAs that are no longer relevant
- Copy: Copy a selected FEA/FCA
- Examine: Examine an FEA/FCA
- Combined Examine: Submit an examine request for multiple FEAs
- Sort By Domain, AFP Status, Type, Name, or Facility

Note: Only ATCSCC users can edit or delete FCAs.
.

Edit

The Edit function lets you edit the selected FEA/FCA definition and update the database with the edited definition. If the selected FEA or FCA is Public and if you are not authorized to edit a Public FCA, you will not be able to edit or delete it.

Note: If an FEA/FCA is edited while you are examining it, a warning dialog box opens to inform you that it has been edited. Clicking **Info** opens the Information dialog box for the FEA/FCA



1. On the Select FEA/FCA dialog box, click the number of the FEA/FCA you want to edit. You can select only one row at a time to be edited. Otherwise, the Edit options will be disabled.
2. Click **Functions**.
3. Click **Edit**. The Edit FEA/FCA dialog box opens.
4. Enter data in the Edit FEA/FCA dialog box in the same way you would in the Create FEA/FCA dialog box. For instructions on using this dialog box, see the Create FEA/FCA Command section on page 5-228.

Note: You do not have to edit the Start Date/Time fields when editing an FEA/FCA. TFMS ignores Start Date/Time values that are before the beginning of the current 15-minute interval.

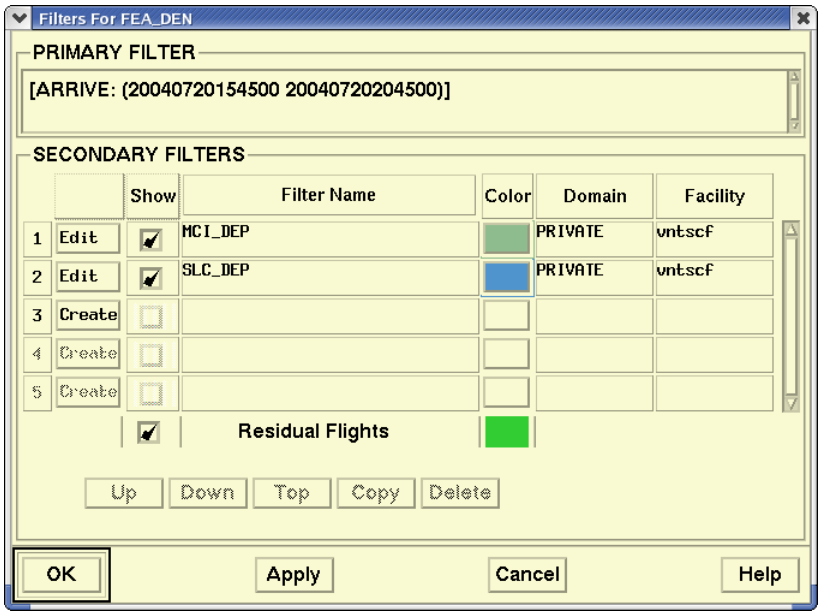
Filters

The Filters dialog box lets you view or edit the FEA/FCA filters.

1. Click **Functions** and **Filters**.
2. The Filters dialog box opens showing any Primary and Secondary filters you created using the Create FEA/FCA function.

A single primary filter can be set up as part of the FEA/FCA definition. It is used to narrow down the list of FEA/FCA flights to only those that match the primary filter conditions.

Any TSD user can create and save secondary filters for an FEA/FCA. Each user can select which secondary filters will be applied to their view of FEA/FCA flights. A secondary filter can be private and viewable on the creator's workstation only, or it can be shared with the same set of users with whom its parent FEA/FCA is shared. However, only specialists at the ATCSCC can create Public secondary filters.



Other methods of opening the Filters dialog box include

- Clicking **Filters** on the FEA/FCA Timeline.
- Clicking **Filters** on the Functions menu on the Timeline.
- Clicking **Filters** on the FEA/FCA Dynamic List.

All of these methods are discussed in the Examine FEA/FCA section later in this document.

Delete

The Delete function lets you remove current FEA/FCAs from the database.

1. On the Select FEA/FCA dialog box, click the number of the FEA/FCA you want to delete.

   If you want to delete multiple FEA/FCAs, click the number of the first one you want to delete. Use the **<Ctrl>** and **<Shift>** keys to select others.

2. Click **Functions** and **Delete**.
3. The Delete Confirmation dialog box opens, asking you to confirm your delete request.
4. Click **Yes** to delete.

   A message is briefly displayed telling you that your request has been sent to the server. If the deletion request is rejected, an Error dialog box is displayed. If the request is confirmed, the TSD applies the deletion to the Select FEA/FCA dialog box as though you had clicked **Apply**.

   Note: FEA/FCAs that have expired by more than 60 minutes will be automatically deleted.

Copy

The Copy option on the Functions menu lets you create a new FEA/FCA definition by copying an existing one and modifying it to your specifications.

1. On the Select FEA/FCA dialog box, click the number of the FEA/FCA you want to copy.
2. Click **Functions** and **Copy**. The Copy FEA/FCA dialog box opens.

   There are four versions of the dialog box. Three are for custom FEA/FCAs and are accessed when you copy an FEA/FCA that was created as a Polygon, Line or Circle. The fourth is accessed when you copy an FEA/FCA that was created by selecting a NAS element.

3. Enter data in the Copy FEA/FCA dialog box in the same way you would in the Create FEA/FCA dialog box. For instructions on using this dialog box, see the Create FEA/FCA Command section on page 5-228.

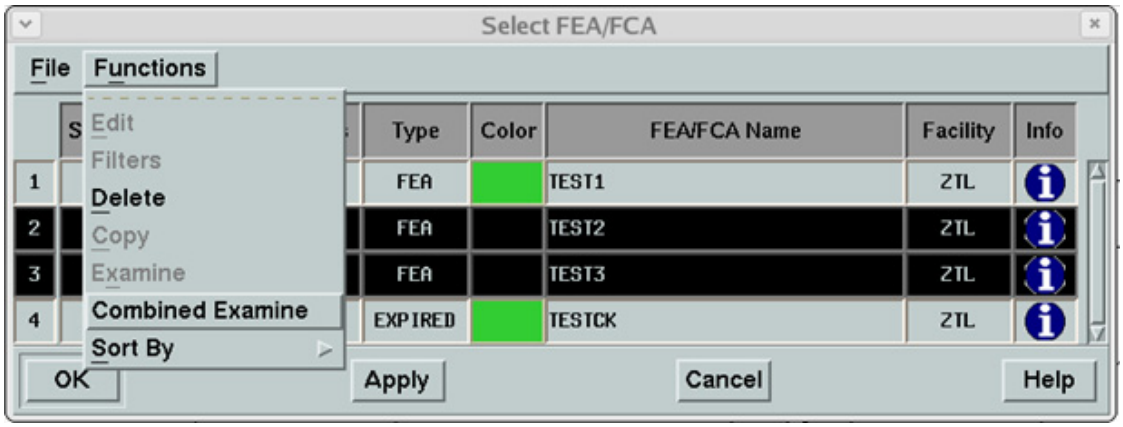
Examine

The Examine option on the Functions menu works in the same way as the Examine FEA/FCA command, which is described in the Examine FEA/FCA command section.

Combined Examine

The Combined Examine option on the Functions menu lets you submit an examine request for multiple FEAs simultaneously and displays a single FEA/FCA dynamic flight list containing flights for all the selected FEAs.

1. On the Select FEA/FCA dialog box, select the FEA/FCAs by Cntrl/Shift clicking.



2. Click **Functions** and **Combined Examine.**
3. The FEA/FCA Dynamic Flight Lists opens, containing one consolidated list of flights predicted to intersect the selected FEA/FCAs.

Sort By

The Sort By option on the Functions menu lets you sort the items in the Select FEA/FCA dialog box by Domain, AFP Status, Type, Name, or Facility.

- Sorting by Domain sorts the items in the dialog box in the following order: Public, Shared, Local and Private, next in alphabetical order by name.
- Sorting by AFP Status sorts the items in the dialog box in the following order:
  - AFP FCAs
  - FSM FCAs
  - FSM FEAs

- Other FCAs
- Other FEAs
- Any FEA/FCAs whose Type has expired

- Sorting by Type sorts the items in the dialog box in the following order: FCA, FEA, and Expired, next by AFP Status in the following order: AFP, FSM, None, and next in alphabetical order by name.
- Sorting by Name sorts the items in the dialog box in alphabetical order by the names that have been entered.
- Sorting by Facility sorts the items in the dialog box in alphabetical order by the facility that created the FEA/FCA and next in alphabetical order by name.

Note: Clicking the column header of the Domain, Type, AFP Status, Name, or Facility column sorts the items in the dialog box in the manner described above.

Create FEA/FCA Command

The **Create FEA/FCA** command lets you create an FEA and designate it as Shared or Private. Shared FEAs can be viewed by all TSD-U/F/C users and with users at the Command Center.

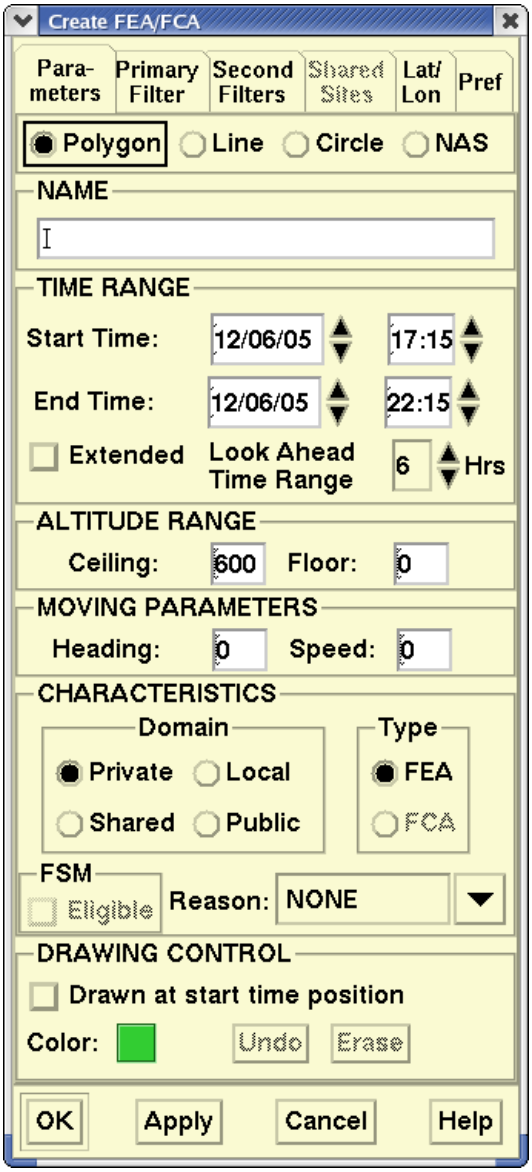
- Shared and Local FEAs are created by users at TFMS field sites and are shared with TFMS users within their facility. Shared FEAs are shared automatically within the ATCSCC and other designated TFMS sites.
- Private FEAs can be created by all TSD-U/F users and can be viewed on their workstations and other user's workstations that have been pre-configured to view it.

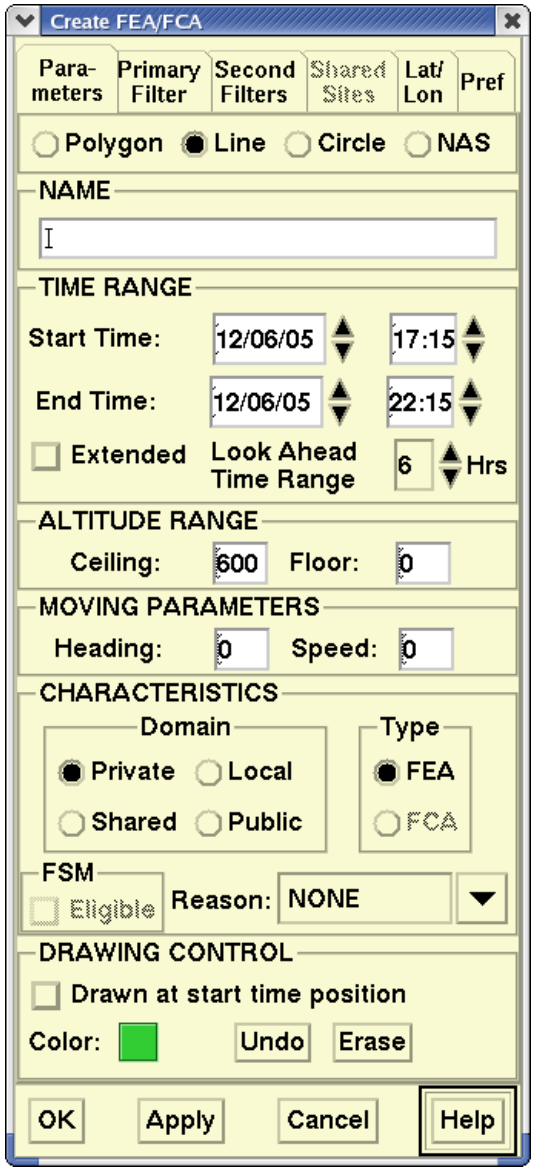
Menu Method	Quick Key Method
1. Pull down the FEA/FCA menu by clicking **FEA/FCA** on the TSD Main Menu or by pressing **<Alt> C**. 2. Click **Create FEA/FCA** or press **C**.	**None**
	Semicolon Method
	None

Note: Only the FAA Command Center can create a public FEA or FCA.

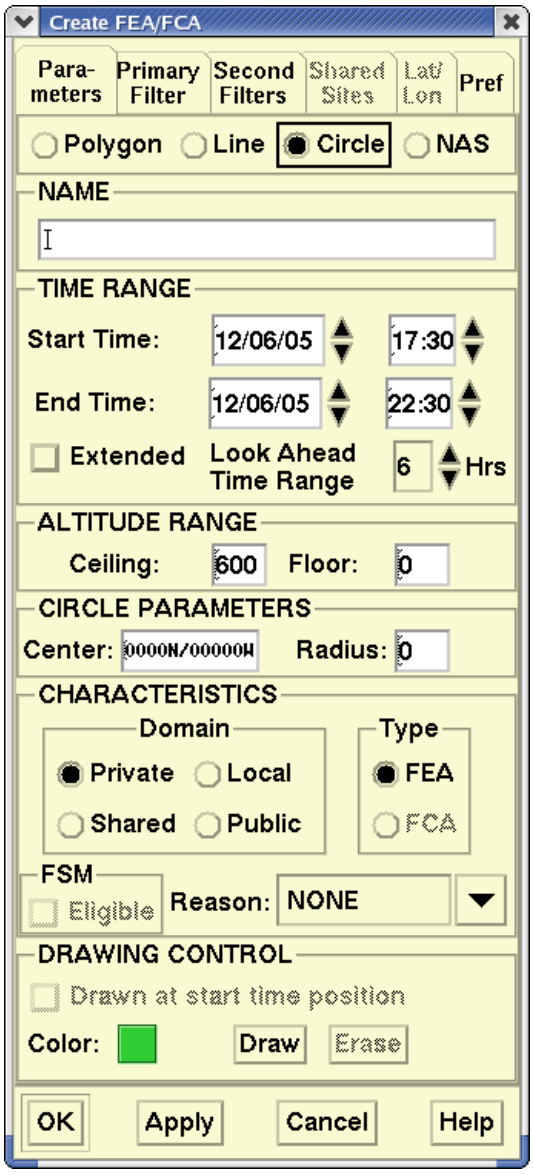
Create FEA/FCA Dialog Box

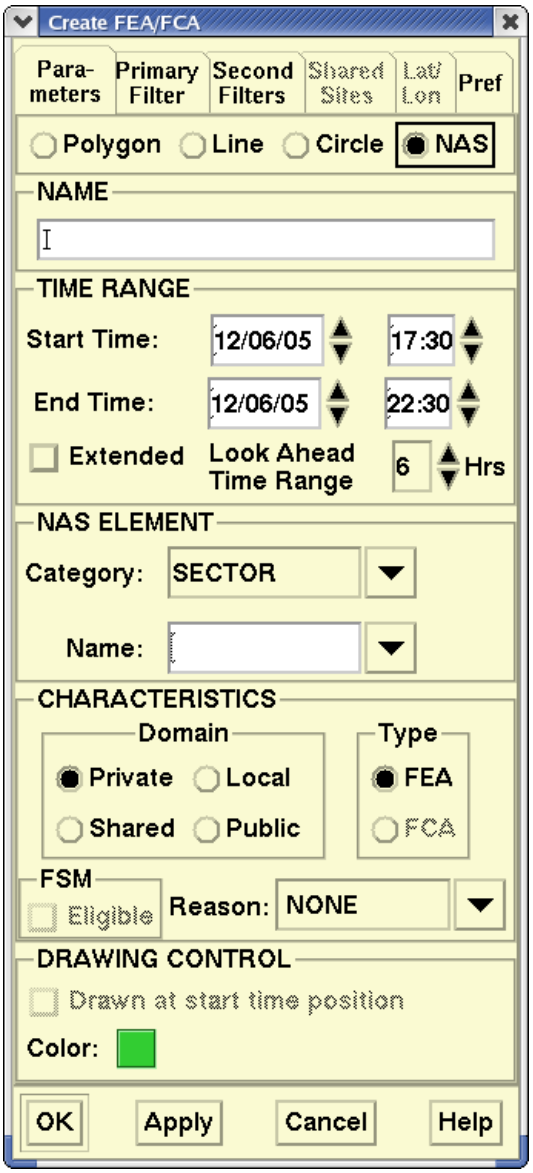
After you click **Create FEA/FCA** or press **C** from the FEA/FCA menu, the Create FEA/FCA dialog box opens, like the following samples for a custom Polygon FEA and custom Line FEA with the Parameters tab selected. The default selection for the Create FEA/FCA dialog box is Polygon FEA.





The next two samples show the Create FEA/FCA dialog boxes for Circle and NAS selections.





FEA/FCA Tabs

The Create FEA/FCA dialog box has six tabs:

- **Parameters**
  Lets you enter the parameters for the FEA/FCA definition.
- **Primary Filter**
  Lets you define a primary filter.
- **Secondary Filters**
  Displays summary information about all the filters that have been defined for an FEA/FCA. Also, allows you to open the Create Secondary Filter and Edit Secondary Filter dialog boxes to create or edit secondary filters.
- **Shared Sites**
  Lets you enter the names of sites that will share the FEA/FCA definition.
- **Lat/Lon Edit**
  Lets you enter the latitude and longitude of the points of a custom polygon or line. This tab is only available for the polygon and line options.
- **Preferences**
  Lets you set preferences that are saved with the FEA/FCA definition.

Parameters Tab

The following table explains how to use the Parameters Tab in the Create FEA/FCA dialog box. The table includes dialog box sections for Polygon, Line, Circle, and NAS FEA/FCAs. Click in each field to make an entry and press <**Tab>** to move from one field to another.

Create FEA/FCA Dialog Box: Parameters Tab

Item	Description	What you do
Polygon	This selection lets you draw a custom FEA/FCA polygon on the TSD.	Click the **Polygon** button to select this option.
Line	This selection lets you draw a custom multi-segment FEA/FCA line on the TSD.	Click the **Line** button to select this option.
Circle	This selection lets you draw a custom FEA/FCA circle, specifying the center point and radius.	Click the **Circle** button to select this option.

Create FEA/FCA Dialog Box: Parameters Tab (Continued)

Item	Description	What you do
NAS	This selection lets you designate a NAS element as an FEA/FCA.	Click the **NAS** button.This button is discussed further in "NAS Element FEA" section.
Name	User-specified name for the FEA/FCA. Maximum of 30 characters. FEA/FCA Names are restricted to alphanumeric, dash, and underscore characters. Spaces and other special characters are not allowed. **Note**: The name of an FSM-Eligible FEA/FCA cannot match the name of an airport.	Click in the text entry field and enter a name. Private, Local or Shared FEAs cannot start with FCA. Public FCAs are automatically designated using a sequence of names starting with FCA001. The system resets the sequence number at 0900Z. Scroll horizontally if you need to enter more than 14 characters.
Time Range		
Start Time	Initially filled in with the date and time of the current 15-minute time interval. The start date is formatted *mm/dd/yy*. The start time is formatted as *hh:mm*.	Place the pointer in the year, month, day, hours, or minutes value. Type in the date or time values, click the arrow to the right of the **Start Time** field to increment or decrement the values, or use the keyboard arrow keys.
End Time	Initially filled in with the start time plus the duration specified in the FEA/FCA Preferences dialog box. The end date is formatted *mm/dd/yy*. The end time is formatted as *hh:mm*.	Place the pointer in the year, month, day, hours, or minutes value and type in the date or time values, click the arrow to the right of the **End Time** field to increment or decrement the values, or use the keyboard arrow keys.
Extended	This checkbox lets you extend the FEA/FCA up to 7 days from the current day. If left unchecked, the FEA/FCA can exist up to 24 hours.	Click the **Extended** checkbox. **Note**: This option is not available for Moving FEAs.

Create FEA/FCA Dialog Box: Parameters Tab (Continued)

Item	Description	What you do
Look Ahead Time Range	This checkbox lets you extend 24 hours in the future from the current time. The time parameter set by the **Look Ahead Time Range** determines the maximum future time range for which flight data will be available for display on the TSD in the Timeline or in the Dynamic List.	Click the arrow to the right of the **Look Ahead Time Range** field to increment or decrement the values from one to 24 hours or use the keyboard arrow keys.
Altitude Range		
Ceiling	This field is initially filled in with the default value for Ceiling, as defined in the FEA/FCA Preferences dialog box. You can enter one to three digits for the ceiling, from 000 to 600, which represents hundreds of feet.	Click in the **Ceiling** box and enter a one to three digit number. This field is available only when the Polygon, Line, or Circle button is selected.
Floor	This field is initially filled in with the default value for Floor, as defined in the FEA/FCA Preferences dialog box. You can enter one to three digits for the floor, from 000 to 600, which represents hundreds of feet.	Click in the **Floor** box and enter a one to three-digit number. This field is available only when the Polygon, Line or Circle button is selected. **Note**: If the Floor value is higher than that of the Ceiling, an error message is displayed.
Moving Parameter		
Heading	This field is initially set to zero. You can enter one to three digit values from 000 to 359 degrees. Note that 000 = north.	Click in the **Heading** box and enter a one to three digit number. This field is available only when the Polygon or Line button is selected.

Create FEA/FCA Dialog Box: Parameters Tab (Continued)

Item	Description	What you do
Speed	This field is initially set to zero. You can enter one to two digit values from 00 to 99 knots. You need to enter data in this field if you want to see a moving FEA/FCA.	Click in the **Speed** box and enter a one to three digit number. This field is available only when the Polygon or Line button is selected.
Circle Parameters		
Center	The Center field lets you enter the latitude and longitude of the center of the circle. The format for this data is: *ddmmN/ dddmmW*. (**Note**: This format is also used in the Move/Zoom dialog box.)	The format for the Center values is *ddmmN/dddmmW*. This field is available only when the Circle button is selected. **Note**: This format is also used in the Move/Zoom dialog box.
Radius	The Radius field lets you enter the radius of the circle in nautical miles.	Enter values from one to 999. This field is available only when the Circle button is selected.
NAS Element		
Category	This is the category of NAS elements: Airport, Center, Sector, Base Sector, Fix, TRACON, Base TRACON, and Special Use Area (SUA).	Click the arrow to the right of the Type field. Click one of the NAS elements on the resulting pick list. This field is available only when the NAS button is selected.

Create FEA/FCA Dialog Box: Parameters Tab (Continued)

Item	Description	What you do
Name	This is the name of the NAS element you selected in the Type field. If an invalid name is typed in the field the name field will highlight in red. When **OK** or **Apply** is pressed the TSD validates the element name against the database and displays an error if it is not valid.	Click on the arrow to the right of the Name field. In the resulting pull-down list, click on the NAS element Type you selected. There is an automatic fill-in feature in the Name field. If you type in the Name field rather than selecting from the pick list, the TSD fills in the field with the first match that is found in the list for the Type you selected. This field is available only when the **NAS** button is selected. **Note**: If the Sector or TRACON type is selected, Sectors or TRACONs that are closed will not appear in the list. Sectors that are not in their baseline state will have a +/- symbol after their name in the pull-down list.

Create FEA/FCA Dialog Box: Parameters Tab (Continued)

Item	Description	What you do
Characteristics		
Domain	This field lets you define the FEA/FCA type: Public, Private, Local, Shared. • Only users at ATCSCC can create Public FCAs or Public FEAs, which are shared with all TFMS users. • Users at TFMS field sites can create Shared FEAs, which are shared with users at that facility, at the ATCSCC, and at other designated sites. • Users at TFMS field sites can create Local FEAs, which are shared with users at that facility but not shared with the ATCSCC. • All users can create Private FEAs, which are viewed only at the specific workstation where they were created.	Click in the appropriate radio button to select the domain you want.
Type	Lets you create an FEA or FCA. **Note**: If you are not authorized to create an FCA, the FCA option will not be available.	Click in the appropriate radio button to create an FEA or FCA.
Reason	The reason that the FEA/FCA was created.	Click the arrow for a pull-down list of pre-defined reasons and select the appropriate reason.

Create FEA/FCA Dialog Box: Parameters Tab (Continued)

Item	Description	What you do
FSM Eligible	This checkbox lets you designate the FEA/FCA as FSM Eligible and it will be available to be monitored using FSM. Authorized users can create an AFP based on Public FCAs that have been designated FSM-Eligible. The name of an FEA that is to be designated as FSM-eligible cannot exceed six characters. **Note**: If you are not an authorized user, the FSM-Eligible option will not be available.	Click the **FSM Eligible** checkbox to select this option.
Drawing Control		
Drawn at start time position	This checkbox lets you specify whether you have drawn the FEA/FCA at the position associated with the current time or the position associated with the start time you entered in the Create FEA/FCA dialog box.	This checkbox only applies to moving FEA/FCAs. Leave unchecked if you have drawn the FEA/FCA at its current position. Check if you have drawn the FEA/FCA where you project it will be located at the FEA/FCA start time. **Note**: When NAS Element is selected, this field is disabled (grayed out).
Color	Lets you determine the color of each FEA/FCA.	Click the button to display a color palette. Click a color that you want for the FEA/FCA.
Erase	Lets you delete the FEA/FCA polygon or line you just created.	Click **Erase** to delete the FEA/FCA polygon or line you just created. This field is available only in custom Polygon, Line, or Circle FEA/FCAs.

Create FEA/FCA Dialog Box: Parameters Tab (Continued)

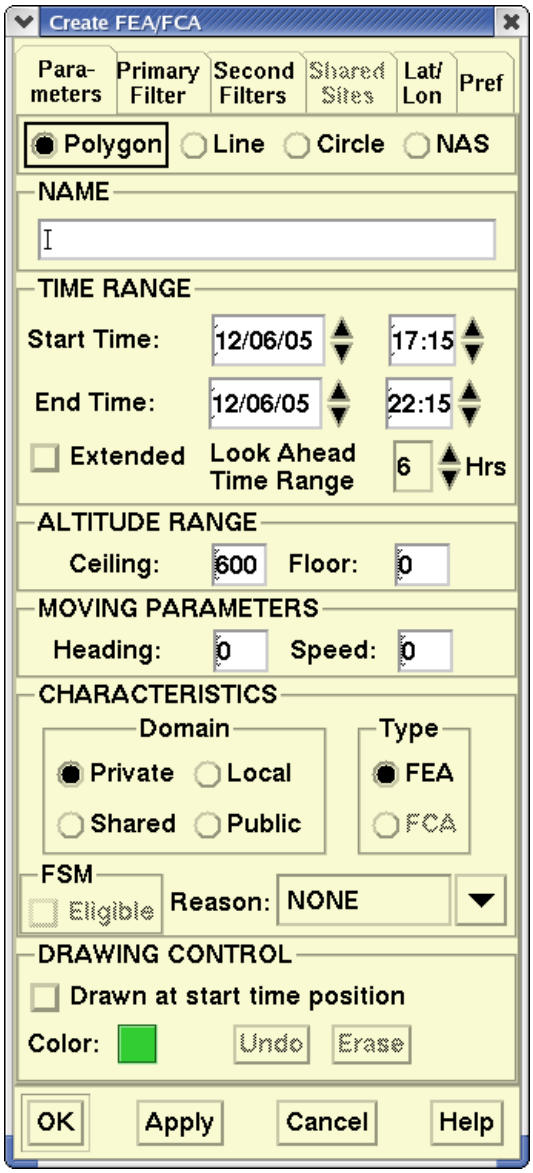
Item	Description	What you do
Undo	Lets you delete the last point of the polygon or line you are drawing.	Click **Undo** to delete the last point of the polygon or line. Continue clicking **Undo** to delete previously defined points of the polygon or line. You can continue clicking **Undo** until all the previously defined points are deleted. This field is available only when Polygon or Line is selected. **Note**: Clicking the right mouse button while the pointer is on the TSD has the same effect as clicking Undo.
Draw	Lets you draw the circle When you select Draw in the Circle Parameters section, the TSD approximates the circle by defining up to 60 polygon points and redraws the circle on the TSD display using these polygon points.	Enter the center and radius parameters into the fields in the Circle Parameters fields and click **Draw**.

Custom FEA/FCAs

The Polygon, Line, and Circle options let you draw custom FEA/FCAs. The Polygon and Line dialog boxes share the same features. The basic difference between the Polygon and Line options and the Circle option is that the Polygon and Line options contain the Moving Parameters section and the Circle option contains the Circle Parameters section. Each of these sections is discussed in the following pages.

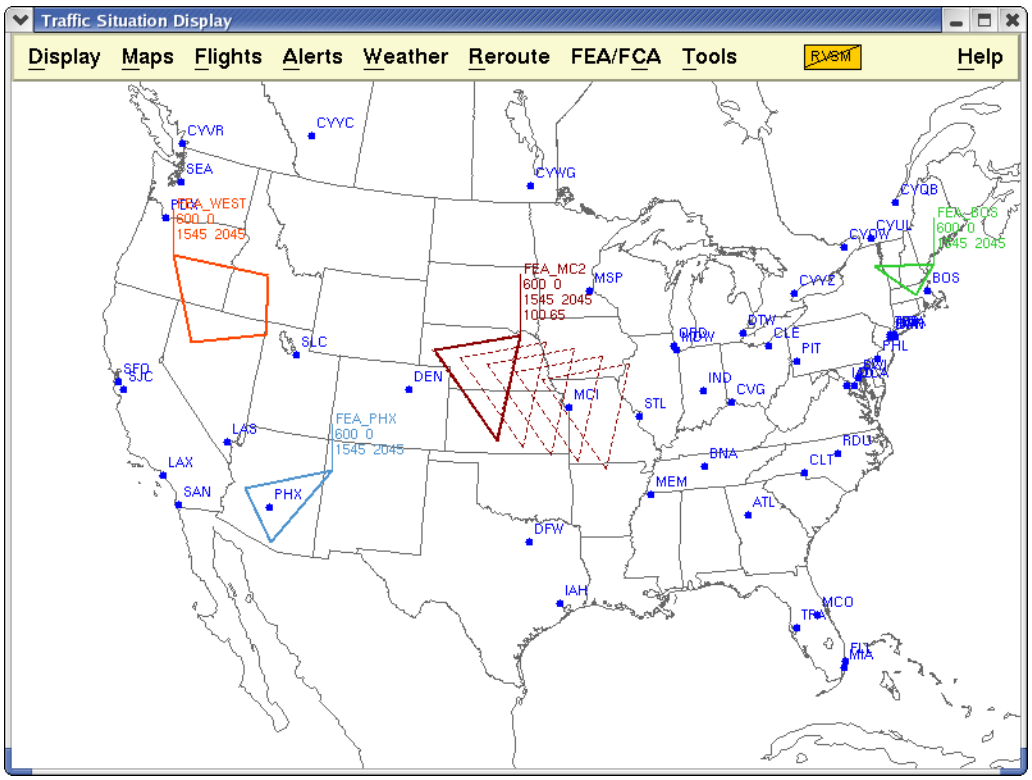
Moving Parameters Section

The Moving Parameters fields (Heading and Speed) must be filled in on the Create FEA/FCA dialog box if you want to create a moving FEA/FCA, which is discussed on the following page. The default values are set to 0. You may also fill in the Altitude Range (Ceiling and Floor) fields. The value for the Floor field must be less than the value for the Ceiling field; otherwise, you will get an error message.



Moving FEA/FCAs

When you create or edit a custom FEA/FCA polygon or line segment (see next section), you can make it move to show where the FEA/FCA started and how it is moving during the course of the time limits you have specified. For example, the graphic below shows several FEA polygons and one Moving FEA polygon. The Moving FEA has shadows of the original FEA, the shadows appearing as dotted lines. These shadows represent past and future locations of the FEAs. The shadows are drawn at the starting location and at the one-quarter, one-half, three-quarter and ending locations. The solid line indicates the current location of the FEA.



Note: FEA/FCAs using NAS elements cannot move.

Drawing an FEA/FCA Polygon

You can draw a custom FEA/FCA polygon on the TSD using the following procedure. You can also draw the polygon by clicking and holding the left button. As you drag the pointer, additional points are defined. To draw a polygon,

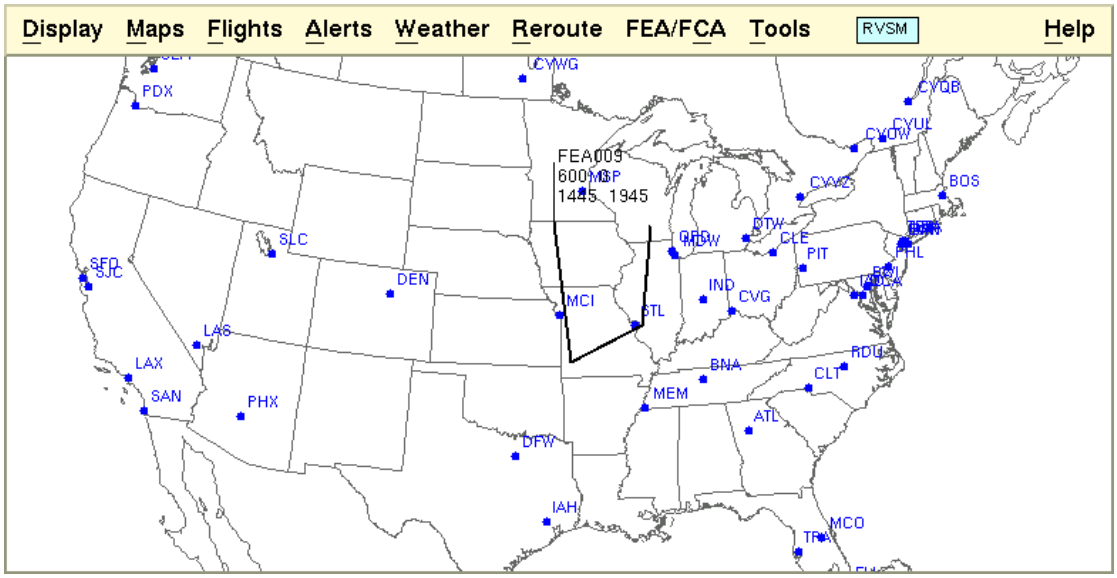
1. Make sure you have entered a name for the FEA/FCA in the Create FEA/FCA dialog box.
2. In the Drawing Control section of the Create FEA/FCA dialog box, check the **Drawn at start time position** checkbox if you are creating a moving FEA/FCA. This checkbox only applies to moving FEA/FCAs. Leave unchecked if you have drawn the FEA/FCA at its current position. Check if you have drawn the FEA/FCA where you project it will be located at the start time.
3. Click the left mouse button to begin the polygon.
4. Click the left mouse button again to establish the next point. Continue this process until you have established all the points you want.
5. Click **OK** to close the dialog box. The polygon remains on the TSD and a line is drawn from the last point you defined to the first point.

Drawing an FEA/FCA Line Segment

You can draw a custom FEA/FCA line on the TSD by defining two or more points.

1. Make sure you have entered a name for the FEA/FCA in the Create FEA/FCA dialog box.
2. In the Drawing Control section of the Create FEA/FCA dialog box check the **Drawn at start time position** checkbox if you are creating a moving FEA/FCA. This checkbox only applies to moving FEA/FCAs. Leave unchecked if you have drawn the FEA/FCA at its current position. Check if you have drawn the FEA/FCA where you project it will be located at the start time.
3. Click the left mouse button to begin the line segment.
4. Click the left mouse button again to establish the next point. Continue this process until you have established all the points you want for a single- or multi-segment line.
5. Click **OK** to close the dialog box.

After you create a multi-segment line FEA/FCA, the typical TSD window would be similar to the following.



Circle Parameters

After you select Circle, the Circle option lets you specify the center point and the radius of the circle in the methods described below:

1. Make sure you have entered a name for the FEA/FCA in the Create FEA/FCA dialog box.
2. Enter the parameters in the Circle Parameters section of the dialog box by clicking in the field and changing the values. Click **Draw**.

   OR

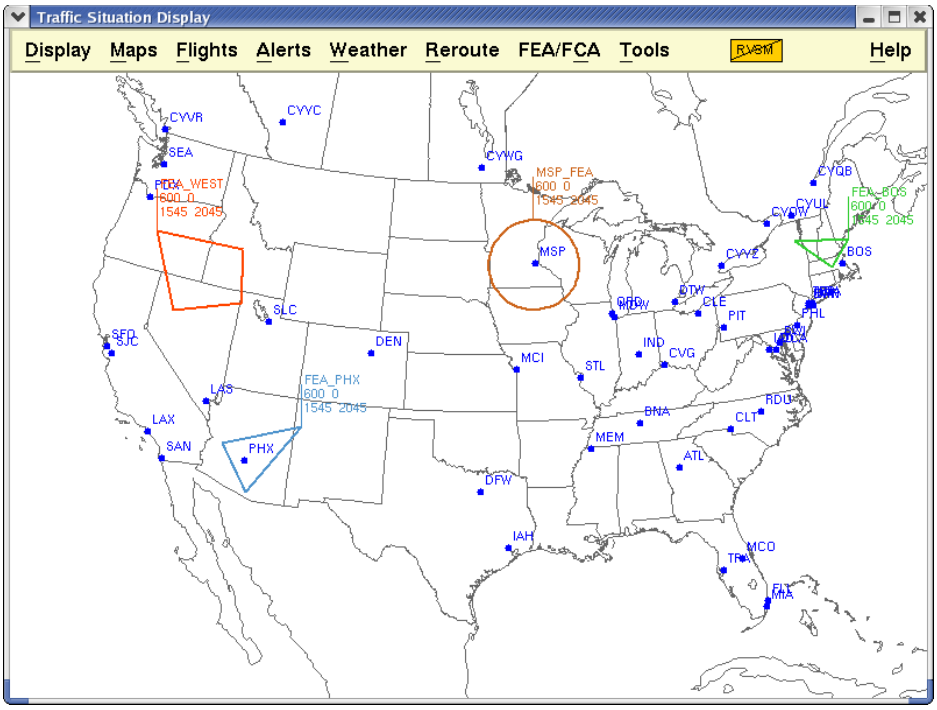
3. Place the pointer on the TSD display.

   The latitude and longitude of the pointer is displayed as you move the pointer.

4. Click and hold the left mouse button to specify the center point and radius.
5. While holding the left mouse button, drag the pointer to specify the radius.

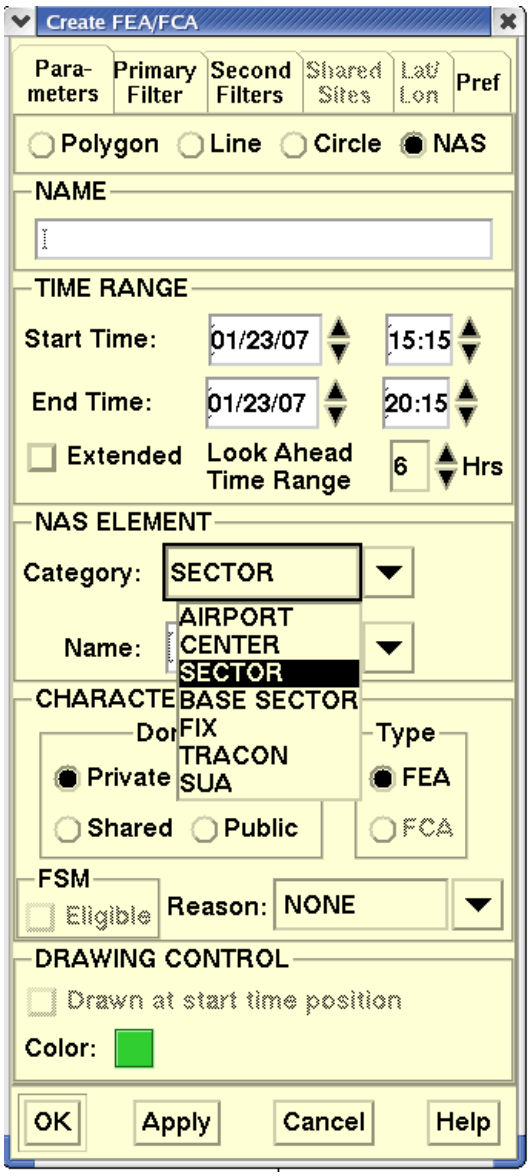
   Note: The circle is continuously being redrawn to assist you in specifying the desired radius and the value of the radius, in nautical miles, is shown on the display and in the Circle Parameters fields on the Create FEA/FCA dialog box.

After you create a circle FEA/FCA, the typical TSD window would be similar to the following, showing custom FEA/FCAs created with both polygons and circles.



NAS Button

Selecting NAS Element on the Create FEA/FCA dialog box changes the dialog box to display the NAS ELEMENT portion of the dialog box. The dialog box no longer shows the Altitude Range and Moving Parameters sections.



Clicking the **Category** arrow in the NAS ELEMENT section of the dialog box Opens a pick list of NAS Element types:

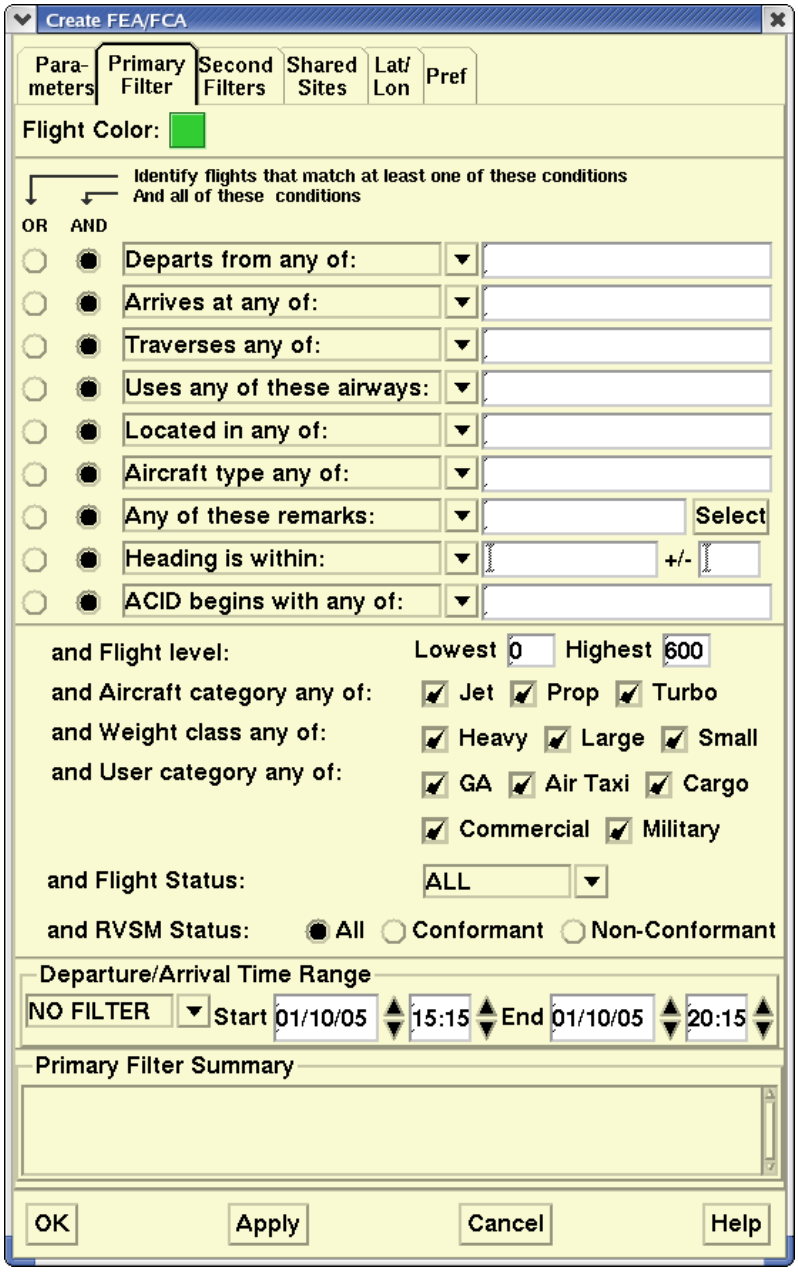
NAS Elements

NAS Element	Description
Airport	When this option is selected, TFMS will identify all flights that depart from or arrive at the specified airport. **Note**: You can specify filters to restrict the flights to only arrival or departure.
Center	When this option is selected, TFMS will identify all flights that depart from, arrive at, or traverse the specified center.
Sector	When this option is selected, TFMS will identify all flights that intersect the specified sector.
Base Sector	When this option is selected, TFMS will identify all flights that intersect the specified sector in its baseline state, regardless of whether it is currently open, closed, or combined.
Fix	When this option is selected, TFMS will identify all flights that traverse the specified Fix.
TRACON	When this option is selected, TFMS will identify all flights that intersect the specified TRACON.
SUA	When this option is selected, TFMS will identify all flights that traverse the specified SUA.

Note: If an FEA/FCA is created by specifying the name of a sector using the NAS element Sector option, the FEA/FCA's volume of airspace is always the same as the current sector boundaries, even when those boundaries change. The FEA/FCA, therefore, changes boundaries and flight loading dynamically. However, if the FEA/FCA is created using the Base Sector, the volume of airspace will not change dynamically.

Create Primary Filter

Selecting the Primary Filter tab opens the following dialog box.



The Primary Filter tab allows you to define the Primary filter parameters for the flights that intersect the FEA/FCA. The first nine conditional fields of the Create Primary Filter dialog box let you choose between flights matching all of the filter conditions or flights that match at least one of the conditions. By default, the "And all of these conditions" radio button is selected. The Flight Color button is the color of the FEA/FCA. If you change the color in this dialog box, you will change the color of the FEA/FCA.

> **Note:** If you do not want to filter the flights by any of the fields shown in the dialog box, leave the field empty.

Each conditional field also provides a pick list of possible states. Click the down arrow in each field to view the pick list. The text entry fields accept multiple entries with a space separating each entry. If your entries surpass the visible area of the entry field, a scroll bar becomes available. The following table explains the buttons and fields in the Create Primary Filter dialog box.

Create Primary Filter Dialog Box

Filter Selections	Description
Color of Residual Flights	Allows you to specify a color for Residual Flights. Displays the color assigned to the FEA/FCA. Any change you make to the flight color is reflected in the Color field on the Parameters tab. Flights that match this Primary filter, but do not match any secondary filters, are drawn using this color.
Departs from any of / Departs from none of	Limits the selection to flights that depart from any or none of the listed airports or an airport in the listed ARTCC(s).
Arrives at any of / Arrives at none of	Limits the selection to flights that arrive at any of or none of the listed airports or an airport within the listed ARTCC(s).
Traverses any of / Traverses all of / Traverses none of	Limits the selection to flights that traverse any (or all or none) of the listed sectors, fixes, or ARTCCs.
Uses any of these airways / Uses all of these airways /Uses none of these airways	Limits the selection to flights that use any (or all, or none) of the listed airways while traversing the FCA.
Located in any of / Located in none of	Limits the selection to flights that are, or are not, currently located in the specified sectors or ARTCCs.

Create Primary Filter Dialog Box

Filter Selections	Description
Aircraft type any of / Aircraft type none of	Limits the selection to flights that are, or are not, of specific aircraft types.
Any of these remarks/ All of these remarks/ None of these remarks	Limits the selection to flights with any, (or all or none) of the specified remarks keywords.
Heading is within / Heading is not within	Limits the selection to flights whose heading upon entry into the FEA/FCA is, or is not, within the specified heading ± the range. The Heading field accepts values from 000 to 359. The Range field accepts values from 000 to 180.
ACID begins with any of /ACID begins with none of	Limits the selection to flights with aircraft IDs that begin, or do not begin, with the characters specified by each entry.
Flight level	Limits the selection to flights whose altitude anywhere within the FEA/FCA is predicted to be between the lowest and highest flight levels. The maximum entry for both fields is 600, and the minimum entry for both fields is 000 inclusive. These levels are expressed in hundreds of feet. One entry in each field only.
Aircraft category any of	Limits the selection to flights that have an aircraft category that matches one of the selected categories. The default is all categories selected, indicating that no filtering is required.
Weight class any of	Limits the selection to flights that have a weight class that matches one of the selected categories. The default is all categories selected, indicating that no filtering is required.
User category any of	Limits the selection to flights that have a user category that matches one of the selected categories. The default is all categories selected, indicating that no filtering is required.
Flight status	Clicking on the arrow displays three choices: All, Active, or Proposed. If Proposed is selected, limits the selections to flights that have a status of Scheduled, Filed, Airline Created, or Controlled. If Active is selected, limits the selection to airborne flights. All indicates that no filtering is required. All is the default.

Create Primary Filter Dialog Box

Filter Selections	Description
RVSM status	Limits the selection to All flights, flights that are RVSM conformant, or flights that are not RVSM conformant.
Departure/Arrival Time Range	Limits the selection to flights that depart or arrive within the specified time period. The Option menu provides three choices: No Filter, Departure, or Arrival. You can enter start and end time. Time values 00:00 to 23:59 are accepted. The default is No Filter.
Primary Filter Summary	Displays a read-only version of the filter as it is constructed.

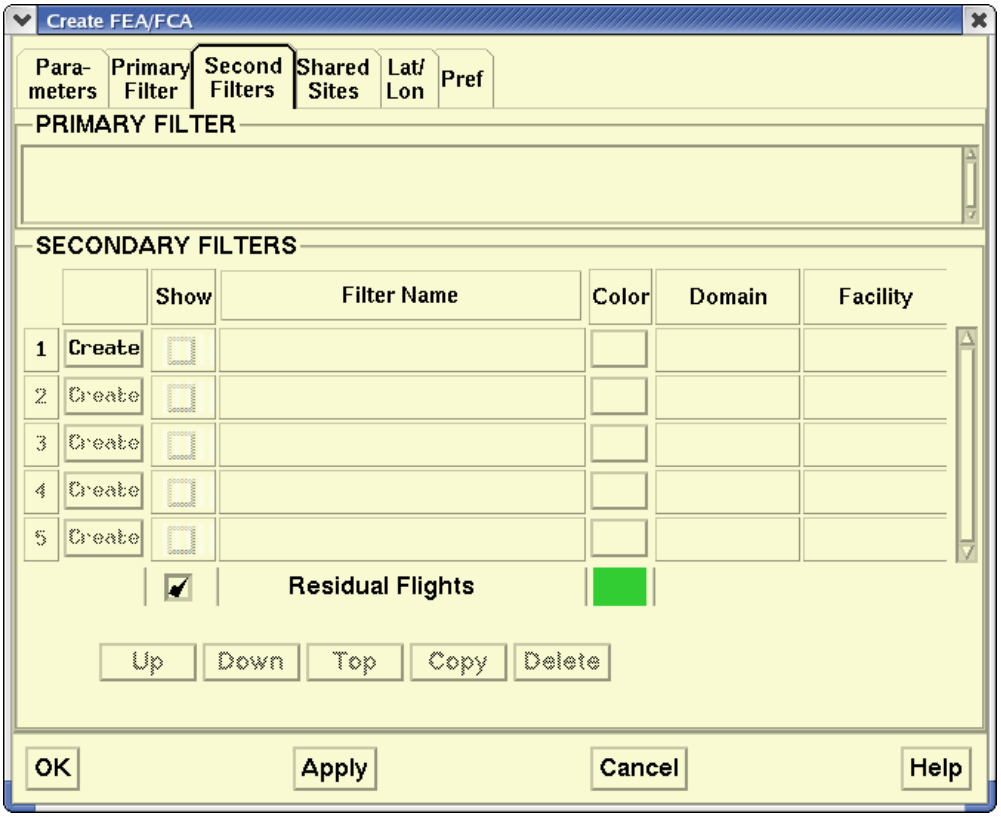
Edit a Primary Filter

You can use the Edit FEA/FCA dialog box to edit a primary filter. You can only edit a primary filter if you have editing rights for the FEA/FCA. Other users can add or manipulate secondary filters using a separate Filters dialog box, explained on the following page. The Edit Primary Filter function works in the same way as the Create Primary Filter function.

Create Secondary Filters

All TSD users can create secondary filters and apply them to their view of FEA/FCA flights. A secondary filter can be private and viewable on the user's workstation only, or it can be shared with the same set of users with whom its parent FEA/FCA is shared. Only authorized users, such as Command Center users, are allowed to add public secondary filters to a public FEA or FCA. When a primary filter is defined, the filter criteria is summarized in the Primary Filter field at the top of the secondary Filters tab.

Clicking the **Second Filters** tab on the Create FEA/FCA dialog box, opens the following window.



The following table describes the fields in the Secondary Filters dialog box section of the Create FEA/FCA dialog box.

Secondary Filters Dialog Box

Item	Description	What You Do
Create/Edit/ View	Allows you to create or edit a secondary filter. **Note**: The Create, Edit/ View button(s) are disabled (grayed out) if a filter definition dialog box is open. You are only allowed to open one filter definition dialog box at a time.	Click **Create** to open the Create Secondary Filter dialog box. If a secondary filter is already defined, click **Edit** to open the Edit Secondary Filter dialog box, discussed later in this section. **Note**: If the filter is editable at your workstation, an Edit button is displayed; otherwise a View button is displayed.
Show	Lets you include flights that match the secondary filter criteria in the flight shown on the display.	Click in the checkbox to toggle a check mark on or off.
Filter Name	Name of the filter	You cannot edit this field. To edit the Secondary Filter name, click **Edit** and change the name in the resulting Edit Secondary Filter dialog box.
Color	Lets you determine the color of the flight icons for each filter.	Click the **Color** button to open the Color Selector dialog box. Select a color.
Domain	Displays the following domains: Public, Local, Shared, Private.	You cannot edit this field. To edit the Secondary Filter domain, click **Edit** and change the domain in the Edit Secondary Filter dialog box.
Facility	TFMS site where the filter was created.	You cannot edit this field.
Residual Flights	Lets you include flights that do not match any of the “shown” secondary filters.	Click in the checkbox to toggle a check mark on or off.

The following buttons are found in the Secondary Filter section of the Create FEA/FCA dialog box.

Secondary Filter section

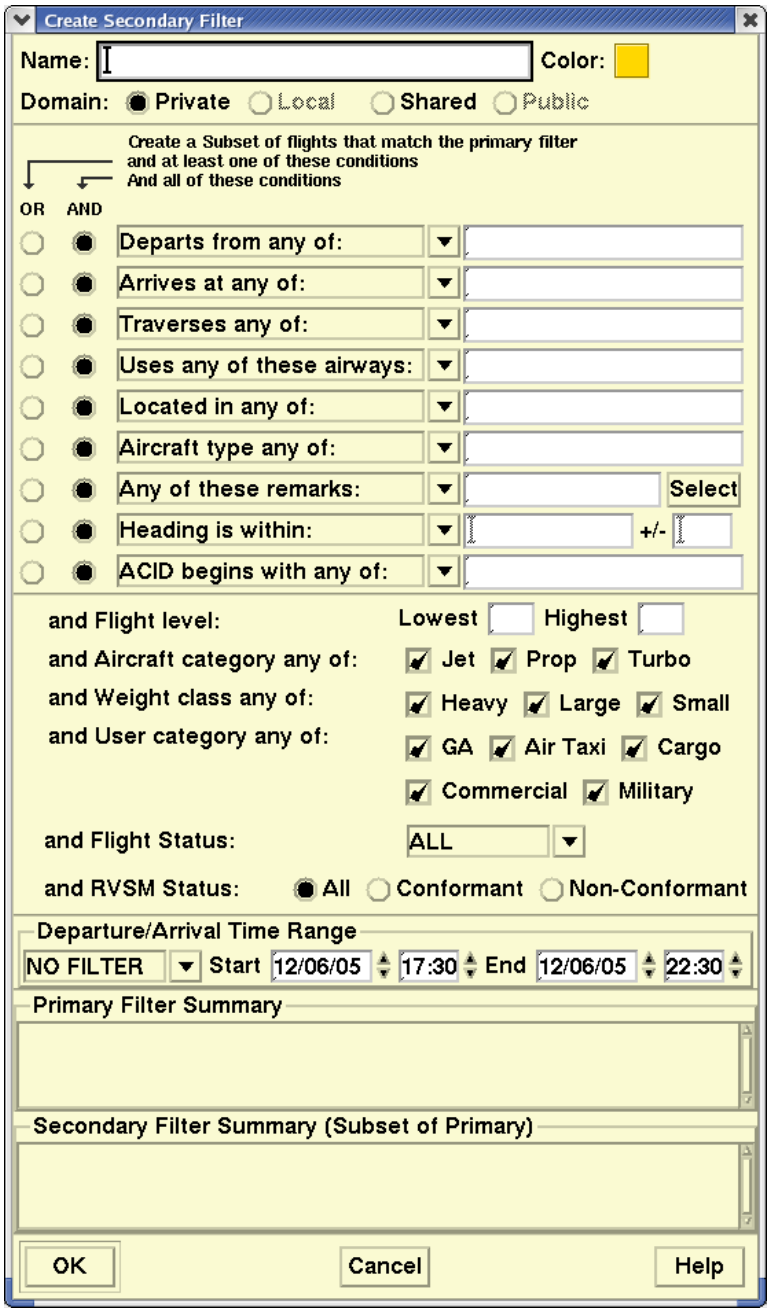
Button	Description
Up	Moves a selected row up one position in the Secondary Filters list.
Down	Moves a selected row down one position in the Secondary Filters list.
Top	Moves a selected row to the top of the Secondary Filters list.
Copy	Opens the Copy Secondary Filter dialog box to create a new secondary filter that is a copy of the selected secondary filter.
Delete	Marks the secondary filters for deletion. They will be deleted from the database when you click **OK**.

Create Secondary Filter Dialog Box

The Create Secondary Filter dialog box enables you to define a subset of flights within the set of flights that match the Primary Filter. The first nine conditional fields of the Create Secondary Filter dialog box let you choose between flights that match all of the filter conditions or flights that match at least one of the conditions. By default, the “And all of these conditions” radio button is selected.

Each conditional field also provides a pick list of possible states. Click the down arrow in each field to view the pick list. The text entry fields accept multiple entries with a space separating each entry. If your entries surpass the visible area of the entry field, a scroll bar becomes available.

After clicking **Create** on the Create FEA/FCA dialog box, the Create Secondary Filters dialog box opens.



Note: If you do not want to filter the flights by any of the fields shown in the dialog box, leave the field empty.

The following table describes the fields in the Create Secondary Filter dialog box.

Create Secondary Filter

Filter Selections	Descriptions
Name	Allows you to provide a name for the secondary filter.
Color	Allows you to specify a color for the secondary filter flights. The TSD chooses a unique color to assign to the filter by default. The default color is different from the FEA/FCA color or any other existing secondary filter colors.
Domain	Allows you to create a Private, Local, Shared, or Public secondary filter. Private is always a domain option and is the default. Local is an option if the FEA domain is local; otherwise it is disabled (grayed out). Shared is an option if the FEA domain is shared; otherwise, it is disabled (grayed out). Public is an option if the FEA/FCA domain is public and the user is authorized to create public FEA/FCAs and filters.
Departs from any of/ Departs from none of	Limits selection to flights that depart from any or none of the listed airports or an airport in the listed ARTCC(s).
Arrives at any of/ Arrives at none of	Limits the selection to flights that arrive at any of or none of the listed airports or an airport in the listed ARTCC(s).
Traverses any of/ Traverses all of/ Traverses none of	Limits the selection to flights that traverse any, (or all or none) of the listed sectors, fixes, or ARTCCs.
Uses any of these airway/ Uses all of these airways/ Uses none of these airways	Limits the selection to flights that use any, (or all or none) of the listed airways within the FEA/ FCA.
Located in any of/ Located in none of	Limits the selection to flights that are, or are not, currently located in the specified sectors or ARTCCs.
Aircraft type any of/ Aircraft type none of	Limits the selection to flights that are, or are not, of specific aircraft types.

Create Secondary Filter (Continued)

Filter Selections	Descriptions
Any of these remarks/ All of these remarks/ None of these remarks	Limits the selection to flights with any, (or all or none) of the specified remarks keywords.
Heading is within/ Heading is not within	Limits the selection to flights whose heading upon entry into the FEA/FCA is, or is not, within the specified heading ± the range. The Heading field accepts values from 000 to 359. The Range field accepts values from 000 to 180.
ACID begins with any of/ ACID begins with none of	Limits the selection to flights with aircraft IDs that begin, or do not begin, with the characters specified by each entry.
Flight Level	Limits the selection to flights whose altitude anywhere within the FEA/FCA is predicted to be between the lowest and highest flight levels inclusive. The maximum entry for both fields is 600, and the minimum entry for both fields is 000. These levels are expressed in hundreds of feet. **Note**: Only one entry is accepted in each field.
Aircraft category any of	Limits the selection to flights that have an aircraft category that matches one of the selected categories. The default is all categories selected, indicating that no filtering is required.
Weight class any of	Limits the selection to flights that have a weight class that matches one of the selected categories. The default is all categories selected, indicating that no filtering is required.
User category any of	Limits the selection to flights that have a user category that matches one of the selected categories. The default is all categories selected, indicating that no filtering is required.
Flight Status	Clicking the arrow displays three choices: All, Active, or Proposed. If Proposed is selected, limits the selections to flights that have a status of Scheduled, Filed, Airline Created, or Controlled. If Active is selected, limits the selection to airborne flights. All indicates that no filtering is required. All is the default.

Create Secondary Filter (Continued)

Filter Selections	Descriptions
RVSM Status	Limits the selection to All flights, flights that are RVSM conformant, or flights that are RVSM non-conformant.
Departure/Arrival Time Range	Limits the selection to flights that depart or arrive within the specified time period. The Option menu provides three choices: No Filter, Departure, or Arrival. You can enter start and end time. Time values 00:00 to 23:59 are accepted. The default is No Filter.
Primary Filter Summary	Displays a read-only version of the primary filter.
Secondary Filter summary	Displays a read-only version of the secondary filter as it is constructed.

When you have selected filter criteria, click **OK** to create the secondary filter and close the Create Secondary Filter dialog box. The secondary filter is summarized in the Secondary Filters section of the Create FEA/FCA dialog box.

Edit Secondary Filters

Clicking **Edit** on the row of the secondary filter you want to edit opens the Edit Secondary Filter dialog box. The secondary filter fields and buttons function in the same way as they do on the Create Secondary Filter dialog box.

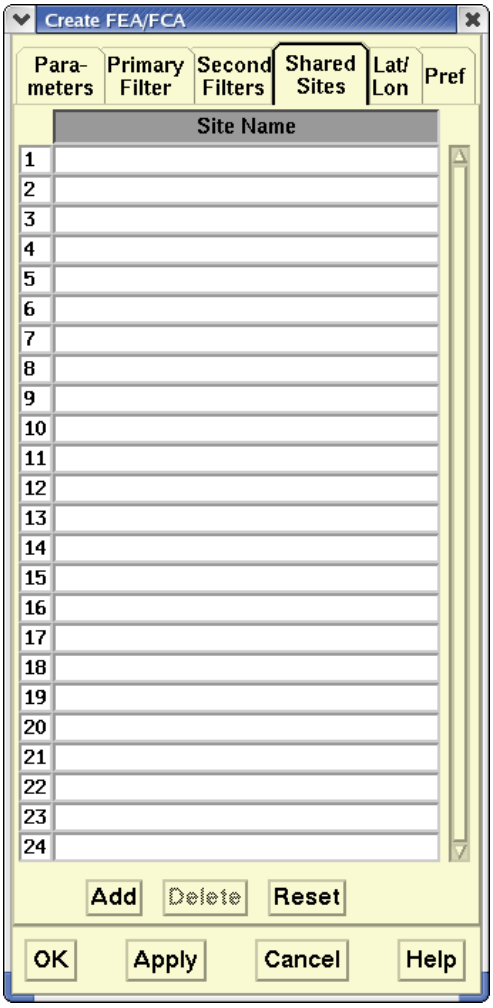
Copy a Secondary Filter

You can copy a secondary filter by opening the Second Filters tab on the Create FEA/FCA dialog box, selecting the number of the secondary filter you want to copy, and clicking **Copy**. The Copy Secondary filter dialog box opens. The secondary filter fields and buttons function in the same way as they do on the Create Secondary Filter dialog box.

Shared Sites Tab

If you are creating a Private FEA/FCA, you do not need to use the Shared Sites tab. If you are creating a Shared FEA/FCA that you want to share with users at other TFMS sites, you will need to list the sites you want to share the FEA with. The Shared Sites tab lets you specify the TFMS sites that will share the FEA definition.

Clicking **Shared Sites** opens a dialog box like the following.



Note: If no sites are specified, the FEA will be shared with all TSD users at your site. You do not need to specify your site name.

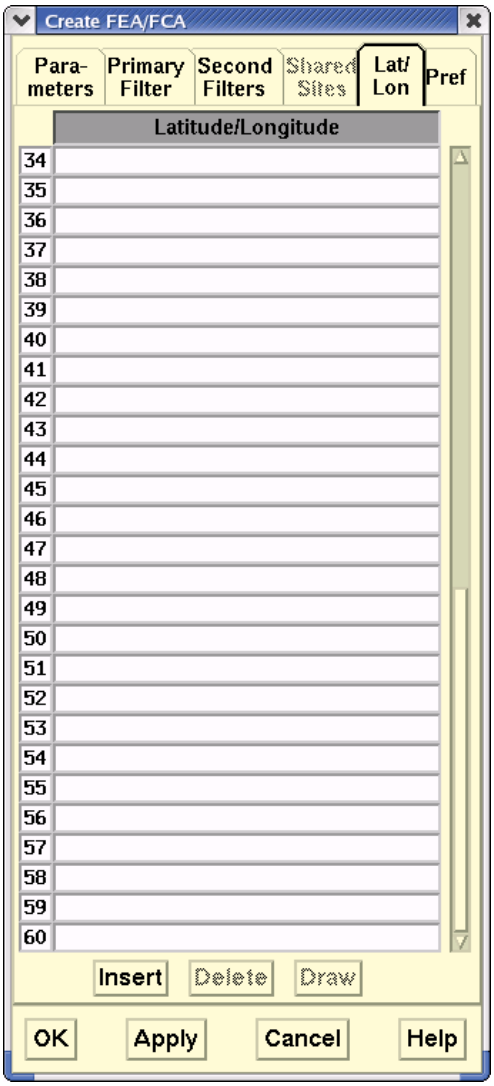
Entering Shared Sites

Each row of the Shared Sites dialog box lets you enter a site name. You can enter the site name directly in the text entry field or click the arrow to display a pick list of site names and click your choice. There is an automatic fill-in feature in the rows of the dialog box. When you type the first character of the site name in the text entry field, the TSD fills in the field with the first match in the list for that character. Clicking the arrow displays a pick list of all operational TFMS sites, sorted alphabetically.

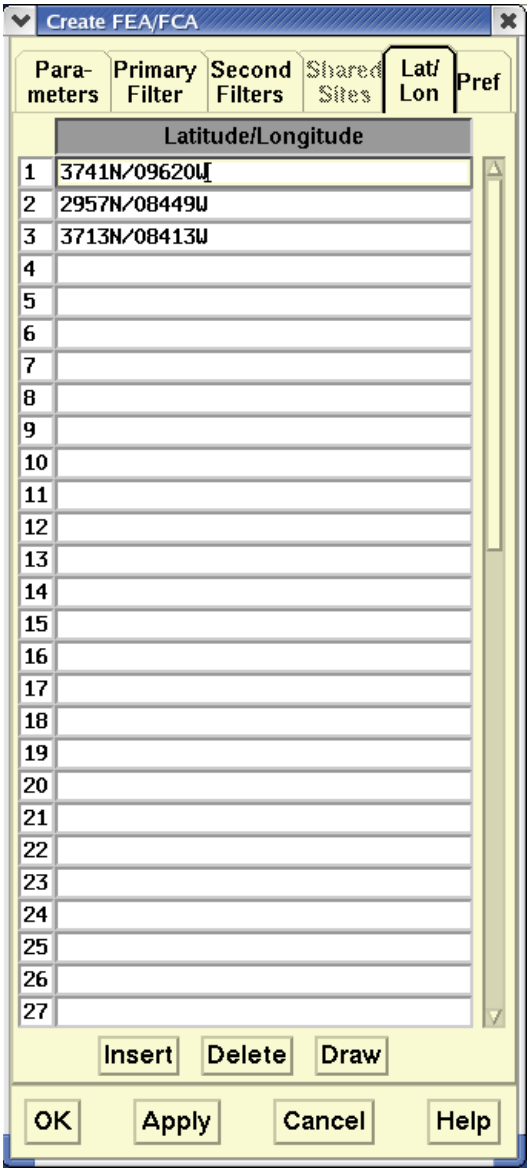
You can click **Reset** to restore the list to the previously saved values.

Lat/Lon Tab

This tab is available only on polygons and lines. Clicking **Lat/Lon Edit** on the Create FEA/FCA dialog box opens the following dialog box. You can enter the latitude and longitude in the text boxes.



The Lat/Lon tab displays 60 rows at all times. The vertical scroll bar on the right lets you see all 60 rows. Enter latitude and longitude in the numbered rows of text boxes, as in the following example.



Latitude may be followed by **N** or **S.** Longitude may be followed by **E** or **W**. If these letters are missing, the program assumes N and W. If latitude is following by N or S, longitude *must* be followed by E or W or W or E. For example, 3911/09343W is not valid.

Valid entries include: **3911N/09343W** and **3911/09343**

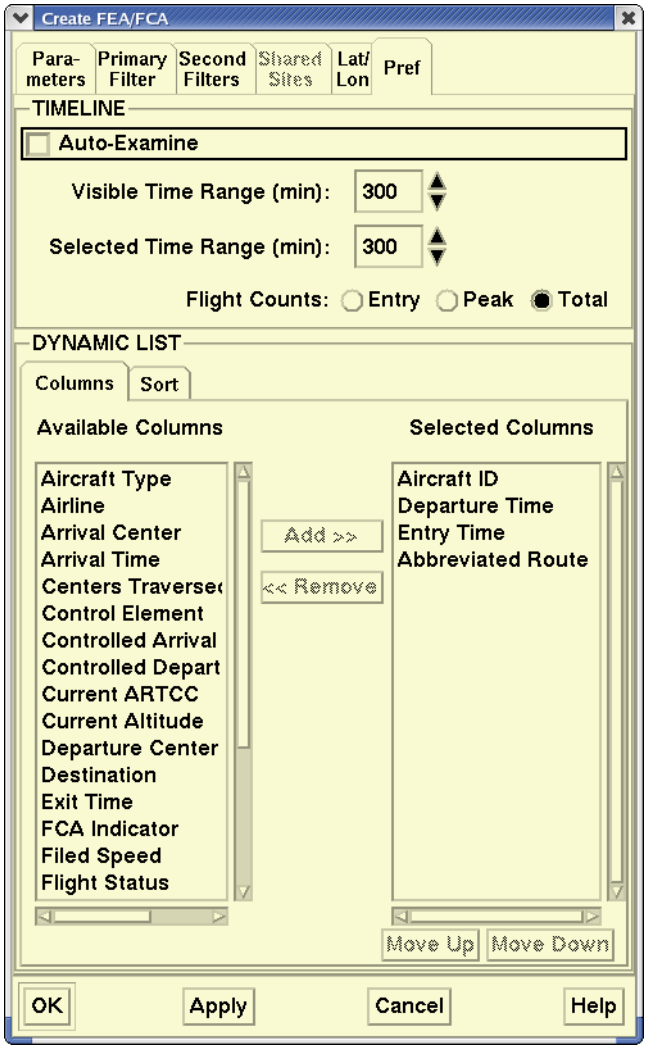
Window Buttons

The following window buttons are found on the Shared Sites and Lat/Lon Edit dialog boxes.

- **Insert** — **Lat/Lon only.** With a row selected, clicking this button inserts a row above the selected row, and subsequent Lat/Lon entries are moved down one row. If 60 rows are already specified, the Insert button is not available.
- **Add** — **Shared Sites only.** Clicking this button adds a row to the 24 rows shown in the sample Shared Sites window.
- **Delete** — Clicking the row number and clicking **Delete** removes the row from the window. The TSD displays a fixed number of rows on this window, however, so there cannot be fewer than 14 rows for Shared Sites and 60 rows for Lat/Lon.
- **Reset** — Clicking this button changes the shared sites list to the list of sites specified in the FEA/FCA Preferences dialog box. This button is found only on the Shared Sites tab.
- **Draw** — Clicking this button draws the polygon on the TSD. This button is found only on the Lat/Lon Edit tab.

Pref (Preferences) Tab

Clicking **Pref** on the Create FEA/FCA dialog box lets you define the preferences for the display of the FEA/FCA Timeline and the Dynamic List for the FEA/FCA you are creating. The preferences are saved with the FEA/FCA definition. The TSD will use these preferences as the default values for displaying the Timeline and Dynamic List for the FEA/FCA. In the example below, Auto-Examine is not checked, so a Timeline would not automatically be displayed for this FEA/FCA.



Note: When an FEA/FCA is examined, these preferences will take precedence over the default preferences defined for each TSD. This change also applies to the Edit FEA/FCA and Copy FEA/FCA dialog boxes.

The following table describes the fields of the Preferences tab.

Preferences Tab

Item	Description	What you do
Timeline		
Visible Time Range	Allows you to specify the visible time range between 60 and 330 minutes (inclusive) of the FEA/FCA Timeline.	Click the up or down arrow to the right of the field to increment or decrement the values, or use the keyboard arrow keys.
Selected Time Range	Allows you to specify the time range of the selected intervals.	Click the up or down arrow to the right of the field to increment or decrement the values, or use the keyboard arrow keys.
Flight Counts	Lets you specify whether you want to see peak flight counts, total flight counts, or flight counts by entry time on the Timeline.	Click **Entry**, **Peak,** or **Total**.
Dynamic List		
Columns tab	Lets you add and remove columns from the Dynamic List.	Procedures for using the Columns tab are the same as those for using the Customize Columns dialog box.
Sort tab	Lets you sort the Dynamic List by specifying primary, secondary, and tertiary sort criteria.	Procedures for using the Sort tab are the same as those for using the Sort dialog box.

Saving an FEA/FCA

You can save an FEA/FCA in two ways.

1. Clicking **Apply** on the Create FEA/FCA dialog box saves the FEA/FCA to the database and leaves the dialog box open.
2. Clicking **OK** saves the FEA/FCA to the database and closes the Create FEA/FCA dialog box.

Browsing the FEA/FCA

As with map items and flights on the TSD, you can browse an FEA/FCA.

To browse an FEA/FCA place the pointer on the FEA/FCA to highlight it. The data block displays. If the FEA/FCA is stationary, the data block is abbreviated and does not show the speed and heading.

FEA/FCA Right-Click Menu

Highlighting an FEA/FCA and right-clicking it opens a right-click menu with the following menu options.

Note: The FEA/FCA data block and right-click menu will have "FSM" or "AFP" appended to the FEA/FCA name if it is FSM-Eligible or has an active AFP.

FEA/FCA Right-Click Menu

Menu Option	Description
Toggle Data Block	Toggles the FEA/FCA's data block on and off.
Toggle Data Block Size	Toggles the FEA/FCA's data block between the short form and the long form.
Hide	Hides the FEA/FCA and deselects the "show" option in the Select FEA/FCA dialog for the FEA/FCA.
Examine	Displays the FEA/FCA Timeline for the FEA/FCA. **Note**: The Examine menu option is disabled (grayed out) if the FEA/FCA cannot be examined because it has expired.
Examine Flights	Displays the FEA/FCA Timeline for the FEA/FCA and turns on the flights display using the default Selected Time Range setting defined in the FEA/FCA's preferences.

FEA/FCA Right-Click Menu (Continued)

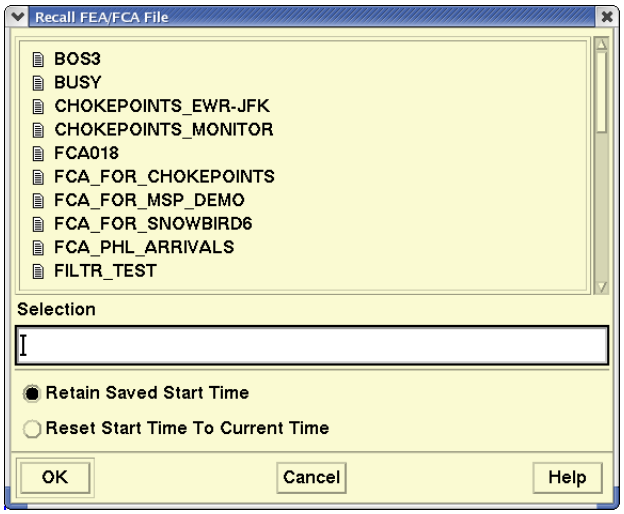
Menu Option	Description
Dynamic List	Displays the FEA/FCA Timeline and displays the Dynamic List using the default Selected Time Range setting defined in the FEA/FCA's preferences.
Copy	Opens the Copy FEA/FCA dialog box for the FEA/FCA.
Edit	Opens the Edit FEA/FCA dialog box for the FEA/FCA. **Note:** The Edit menu option is disabled (grayed out) if you are not allowed to edit the FEA/FCA.
Delete	Displays the Delete Confirmation dialog for the FEA/FCA.
Filters	Opens the Filters dialog box for the FEA/FCA.
Save FEA/FCA File	Opens the Save FEA/FCA File dialog for the FEA/FCA with the name of the FEA/FCA displayed in the Save As field.
Information	Opens the FEA/FCA Information Dialog for the FEA/FCA.

Recall FEA/FCA File Command	
The **Recall FEA/FCA File** command lets you recall a previously saved file. It works in the same way it does on the File pull-down menus on the Select FEA/FCA and FEA/FCA Preferences dialog boxes.	
	Quick Key Method
1. Pull down the FEA/FCA menu by clicking **FEA/FCA** on the TSD Main Menu or by pressing **<Alt> C**. 2. Click **Recall FEA/FCA File** or press **R**.	**None**
	Semicolon Method
	None

You may have FEA/FCAs that you use over and over again. However, because those that have expired will be deleted from the database once a day, you need to be able to save the definition that you want to re-use. You can recall that saved FEA/FCA as needed. You can also delete an FEA/FCA when you no longer need it.

Recalling an FEA/FCA File

After you click **Recall FEA/FCA File** or press **R** from the FEA/FCA menu, the Recall FEA/FCA File dialog box opens.



Clicking a file name in the dialog box or entering the name in the Selection text entry field recalls the saved FEA/FCA definition. The files are recalled from the workstation that is specified in the FEA/FCA Preferences dialog box.

There are two options near the bottom of the dialog box:

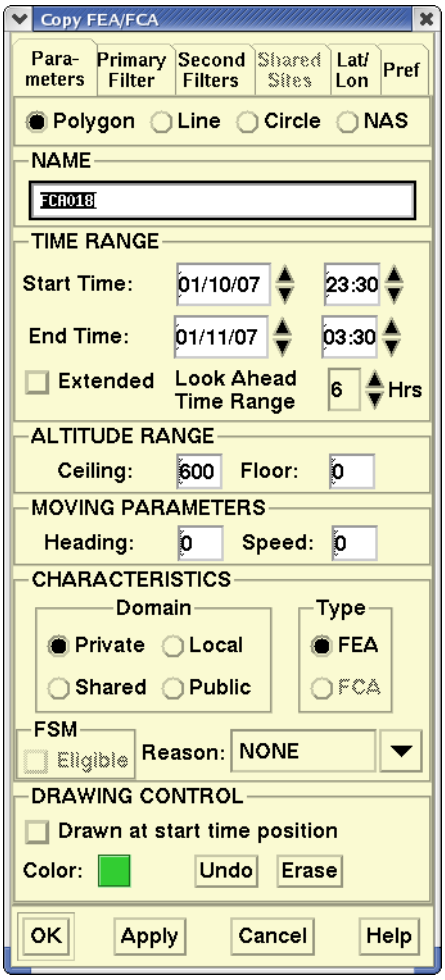
1. Retain Saved Start Time
2. Reset Start Time to Current Time.

Retain Saved Start Time

The Retain radio button is selected by default. If you choose this option, the start time and end time of the original saved FEA/FCA is retained. The start date of the original FEA/FCA will be reset to the current date if the start time is after the current time.

The start date of the original FEA/FCA will be reset to the following day if the start time is before the current time.

The example below shows a recalled FEA file with a start time of 23:30. If the current time is earlier than 23:30 (for example, 10:30), the start date is the current date (in this example, 01/10/07), and the end date in this case is the following day. If the current time is later than 23:30, the start date is the following day, and the end date is set to preserve the original duration.



Reset Start Time to Current Time

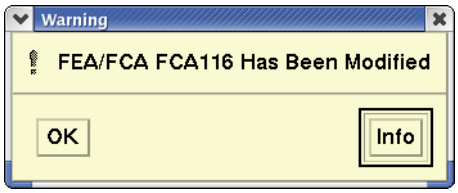
If you select this option, the start date and time will be set to the current date, and the start time will be set to the beginning of the current 15-minute interval. The end date and time will be set to preserve the original duration.

Examine FEA/FCA Command	
The **Examine FEA/FCA command** lets you request reports and view the flights that are predicted to intersect the FEA/FCA. You can examine multiple FEA/FCAs and display their timelines on the TSD. If you are examining multiple FEA/FCAs, the color of the flight icon that is associated with the multiple FEA/FCAs is determined by the FEA/FCA that is highest in the Select FEA/FCA dialog box when the FEA/FCAs are sorted according to the default sort order. The default sort order sorts first by Domain (Public, Shared, Local, Private) and next alphabetically by name. You will not be able to examine an FEA/FCA that is based on a sector that is currently closed. If you are examining such an FEA/FCA and the sector upon which it is based is combined into another sector, the TSD will close the timeline and display an error message. If no FEA/FCAs have been created, this menu item will not be available.	
	Quick Key Method
1. Pull down the FEA/FCA menu by clicking **FEA/FCA** on the TSD Main Menu or by pressing **<Alt> C**. 2. Click **Examine FEA/FCA** or press **E**.	**With the FEA/FCA selected, press E**
	Semicolon Method
	None

Note: This section describes using the Examine FEA/FCA command in Normal mode. For information on using the Examine FEA/FCA command in Model mode, see page 5-438 in Chapter 5, FEA/FCA Menu section.

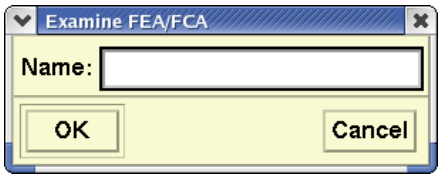
FEA/FCA Alert

If an FEA/FCA is edited while being examined, a warning dialog box opens to inform you that it has been edited. Clicking **Info** opens the Information dialog box for the FEA/FCA.

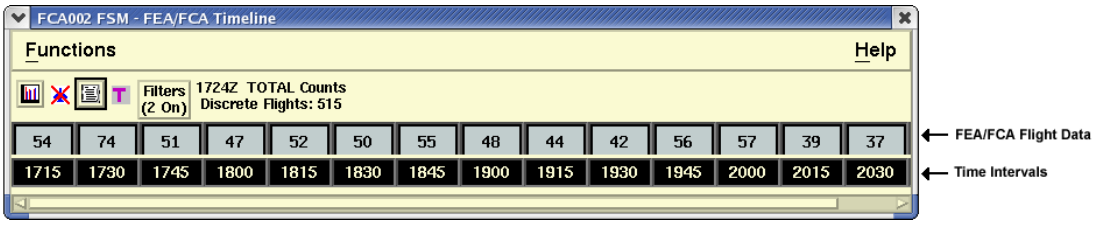


Examine FEA/FCA Dialog Box

After you click **Examine FEA/FCA** or press **E** from the FEA/FCA menu, the Examine FEA/FCA dialog box opens, requesting the name of the FEA/FCA you want to examine.



After you enter the FEA/FCA Name and click **OK**, the FEA/FCA Timeline dialog box opens, looking like the sample below. The numbers in the upper row indicate the maximum number of flights expected to occupy the FEA/FCA during any 1-minute interval within the 15-minute interval. These numbers do not appear immediately, but take a short period to be displayed on the dialog box. The numbers on the bottom row indicate the 15-minute intervals.



> **Note:** The FEA/FCA Timeline will have "FSM" or "AFP" appended to the FEA/FCA name if it is FSM-Eligible or has an active AFP.

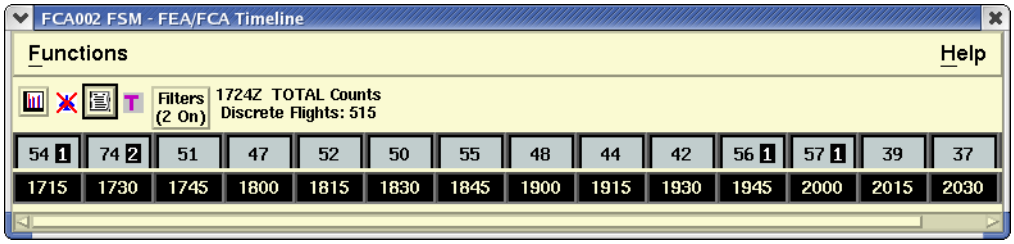
The timeline also displays the number of Secondary filters that are turned on, as shown in the example above.

> **Note:** You can also access the FEA/FCA Timeline dialog box from the Select FEA/FCAs dialog box. Click the row number of the FEA/FCA you want to examine. Click the **Functions** pull-down menu and select **Examine**.

RVSM

If the RVSM Counts option is selected in the Select RVSM Display Options dialog box, the RVSM counts are displayed on the FEA/FCA Timeline. The TSD displays the peak one-minute counts (or total counts) of flights that are predicted to be RVSM non-conformant at any time when they are in the examined FEA/FCA. The TSD displays this counts as a white number over a square black background in the Timeline cell.

The example below shows an FEA/FCA Timeline with total RVSM counts displayed.



Selecting Time Intervals on the FEA/FCA Timeline

You can select the time intervals in several ways:

- Click a single time interval.
  You can click either the flight data field or the time interval field. Both fields become selected for that interval.
- With one interval selected, press and hold the <Shift> key and click another interval. All time intervals, the beginning and end as well as those in between, are selected.
- With the pointer on either the flight data field or the time interval, press and hold the left mouse button, moving it over to another interval. All time intervals from the first to the last are selected. If the pointer is on the flight data field row, the timeline will scroll when the pointer is moved to the right of the last visible interval.

  Note: To return to a single interval, click that interval again. Only that one is selected.

FEA/FCA Timeline Functions

You can use the FEA/FCA Timeline dialog box to perform the following functions:

- Show or Hide an FEA/FCA Bar Chart
- Generate the Dynamic List
- Toggle between Relative and Absolute Time Range selections
- Show or Hide FEA/FCA Flights
- Generate an FEA/FCA Report
- Toggle among Total Counts, Entry Counts, and Peak Counts
- View or edit FEA/FCA Flight Filters

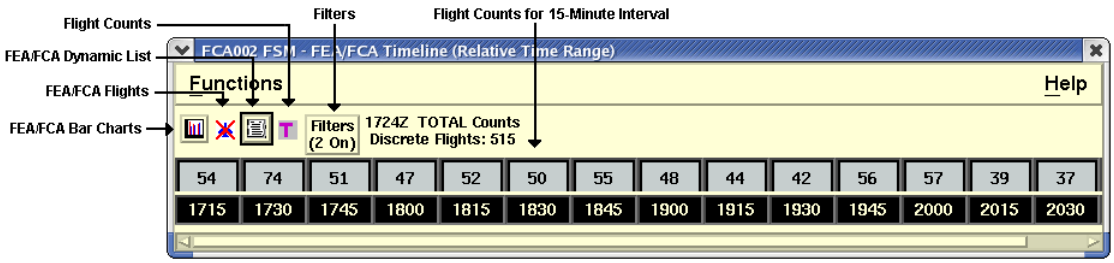
You can use one of three methods to perform these functions: the icons on the dialog box, the Functions pull-down menu, and FEA/FCA quick keys. Each of these methods are shown on the following pages.

Timeline Toolbar Icons

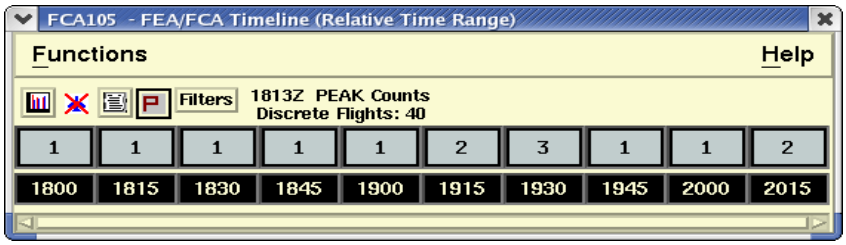
Clicking one of the toolbar icons shown below generates a Dynamic List, shows or hides FEA/FCA flights, shows or hides a bar chart, or opens the FEA/FCA flight filters.

> **Note:** When the cursor is positioned over the Filters button, the TSD pops up a tool tip with a list of the currently selected secondary filters.

There is another icon on the Timeline, which lets you toggle between the display of peak occupancy counts for each minute within the 15-minute time interval or total flights that traverse the FEA/FCA within the 15-minute time interval. The figure below shows the Timeline with the Total Counts icon toggled on.



Clicking the **Flight Counts** button toggles the Total Counts, Entry Counts, and Peak Counts display. The sample below shows the Timeline with the Peak Counts icon toggled on.



FEA/FCA Quick Keys

When focus is on the FEA/FCA Timeline, you can use the following quick keys to perform the Examine FEA/FCA functions:

Examine FEA/FCA Quick Keys

Quick Key	Function
=	Toggles the display of FEA/FCA flights
R	Requests an FEA/FCA report
C	Displays the FEA/FCA Bar Chart

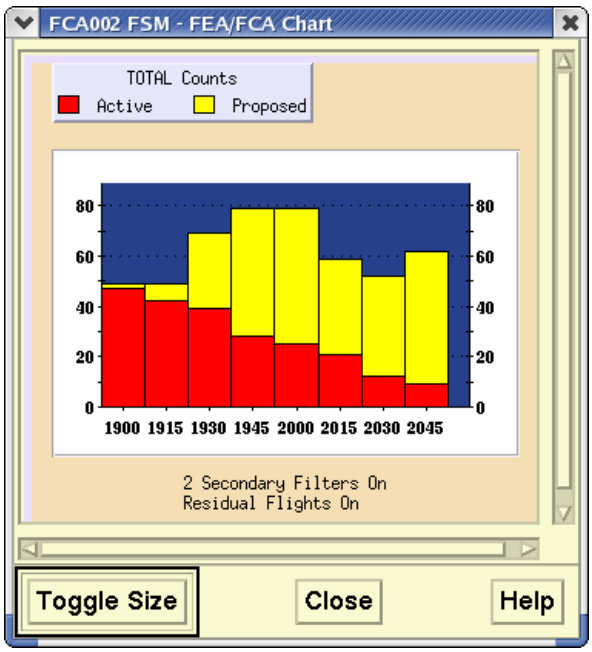
Timeline Functions Menu

The Functions pull-down menu lets you perform the same functions as the tool bar icons: Show/Hide Bar Chart, Show/Hide Flights, generate a report, or toggle peak and total counts. In addition, you can display the Dynamic List and open the Filters dialog box.

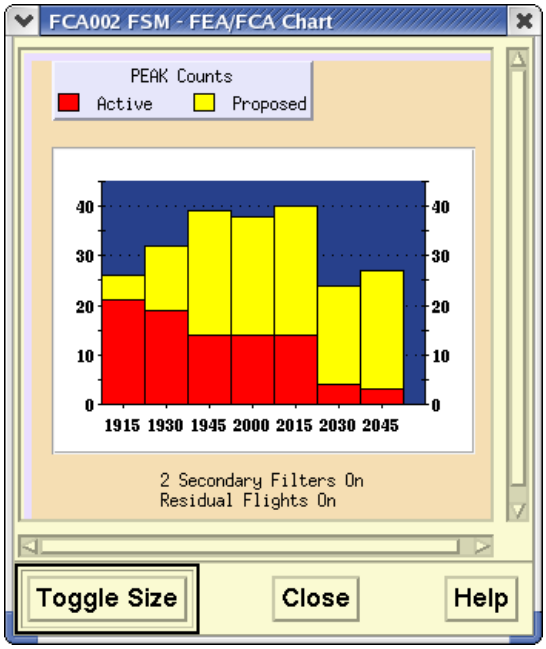
Functions Menu: Show/Hide Bar Chart

The Show/Hide Bar Chart option on the FEA/FCA Timeline Functions menu lets you generate a bar chart displaying the number of flights expected to traverse an element during 15-minute intervals and indicates the number of secondary filters applied and also whether residual flights are On or Off.

After you issue the Show Bar Chart command using the Functions menu, quick key, or icon, the FEA/FCA Chart dialog box for the examined FEA/FCA opens. The bar chart indicates whether peak counts or total counts were selected on the FEA/FCA Timeline dialog box. The screen below show a bar chart with Total Counts.



The screen below shows a bar chart with Peak Counts.



Fixes and airports are best represented by Total counts, which is consistent with the Total counts of Monitor Alert.

> **Note:** The FEA/FCA Bar Chart will have “FSM” or “AFP” appended to the FEA/FCA name if it is FSM-Eligible or has an active AFP.

Using the Bar Chart

You can display information for each interval by clicking and holding the left mouse button in a time interval bar on the chart. Each bar provides the following information:

- **Time Interval**
  Displays the selected 15-minute time interval in hhmm format. For example: 1915
- **Total Flights**
  Displays the total number of flights, active and proposed, expected to be in the FEA/FCA during the peak one-minute traffic count within the specific time interval or the total number of flights expected in the FEA/FCA during the interval.
- **Active Flights**
  Displays the number of flights currently in the air expected to be in the FEA/FCA during the peak 1-minute traffic count within the specific time interval or the total number of flights expected in the FEA/FCA during the interval.

- **Proposed Flights**
  Displays the number of flights that have not yet left the ground and that are expected to be in the FEA/FCA during the peak one-minute traffic count within the selected time interval or the total number of flights expected in the FEA/FCA during the interval.

Filters

The filter information is displayed below the bars on the graph. The FEA/FCA Chart indicates the number of secondary filters applied, and whether residual flights are On or Off.

Bar Chart Colors

The FEA/FCA Chart uses a 2-color bar to indicate what portion of the flights in each interval is proposed and what portion is active, as follows:

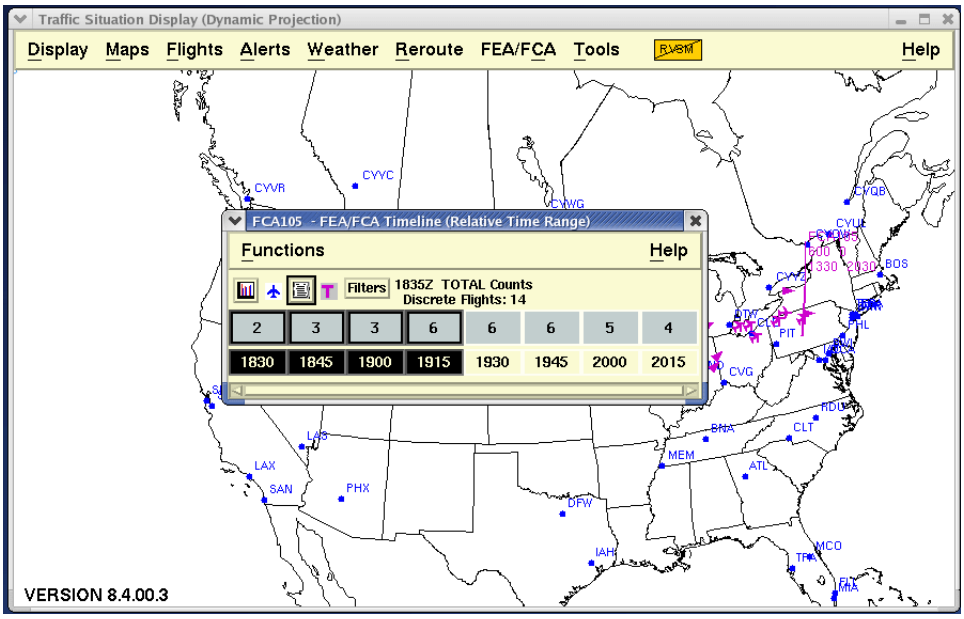
- **Red** -- Number of active flights projected to be in the FEA/FCA during the peak one-minute count or the total number of active flights projected to be in the FEA/FCA for the 15-minute intervals.
- **Yellow** -- Number of proposed flights projected to be in the FEA/FCA during the peak one-minute traffic count or the total number of proposed flights projected to be in the FEA/FCA for the 15-minute intervals.

There are three buttons at the bottom of the FEA/FCA Chart:

1. **Toggle Size**
   Clicking this button lets you resize the Chart. Clicking it again returns it to its original size.
2. **Close**
   Clicking this button closes the Chart.
3. **Help**
   Clicking this button displays help text for this dialog box.

Functions Menu: Show Flights

The Show FEA/FCA Flights options on the Functions menu lets you show the flights that are predicted to intersect the FEA/FCA during the time intervals that are selected in the FEA/FCA Timeline, and that match at least one of the selected secondary filters. If Residuals are selected in the Filters dialog box, all FEA/FCA flights will be shown.



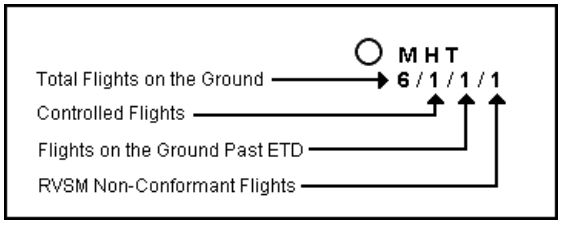
Active Flights

After you issue Show Flights, the flights that are currently active appear as regular flight icons in the color of the FEA/FCA. You can display data blocks for these flights through the Customize Flight Display dialog box. The color of the flight icons is determined by the color that is associated with the highest secondary filter in the Filters dialog box that matches the flight's characteristics.

If you are examining multiple FEA/FCAs, the color of the flight icon that is associated with the multiple FEA/FCAs is determined by the FEA/FCA that is highest in the Select FEA/FCA dialog box when the FEA/FCAs are sorted according to the default sort order. The default sort order is first by Domain (Public, Shared, Local, Private) next by name.

Flights on the Ground

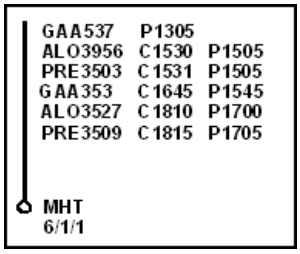
Flights that have not yet departed are indicated by flight counts at each airport, including a count of all flights still on the ground, controlled flights on the ground past the original departure time, and flights on the ground past their Estimated Time of Departure (ETD). Small, empty circles at the airports where they are originating represent those flights that meet these criteria. Beside each circle icon are the airport identifier and a set of three numbers, as shown and explained here:



- **Total flights on ground**
  This is the total number of flights represented by this icon, that is, the number waiting to depart from this airport that will traverse the examined FEA/FCA within the indicated time limit and that match at least one of the secondary filters that has been turned on.
- **Controlled flights**
  Of the total number of flights represented by this icon, this is the number of flights that are currently controlled by a ground delay program and whose original departure time is already past.
- **Flights on ground past ETD**
  Of the total number of flights represented by this icon, this is the number of flights whose ETD is already past, but have not departed.
- **RVSM Non-Conformant Flights**
  This is the total number of RVSM non-conformant flights on the ground.

  Note: This number is displayed if the "RVSM Non-Conformant Indicators for Drawn Flights" option is on and flights are drawn for an examined sector, fix, airport and/or FEA/FCAs, and some of the examined flights are inactive.

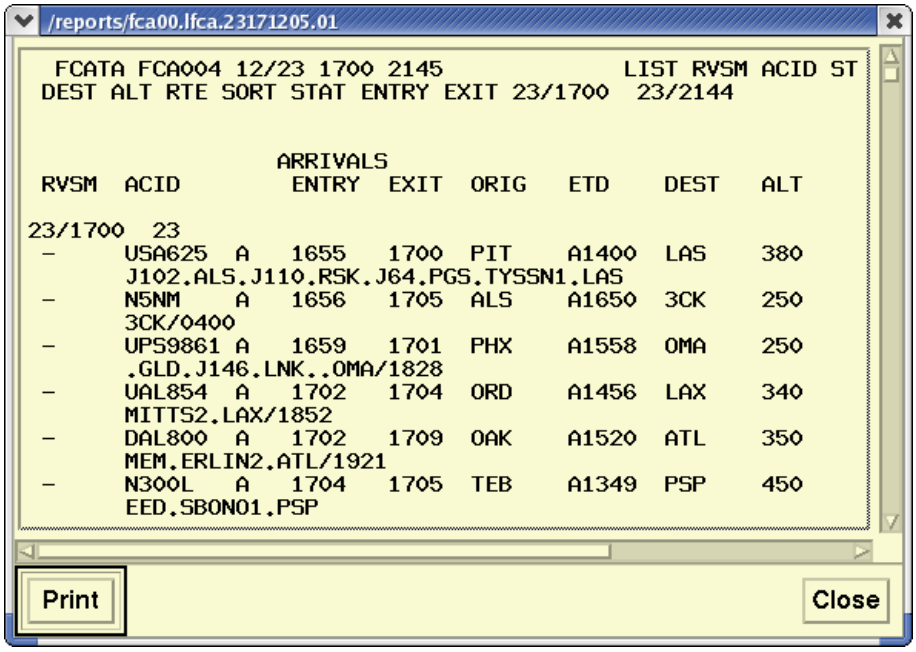
You can display data blocks for flights that have not departed by selecting the circle icons. Note that a data block for a circle icon may describe multiple flights. The data block lists the Estimated Time of Departure for each flight and, if controlled, the original (proposed) departure time, as follows:



As with any other data blocks, data blocks for circle icons may also show the origin and destination or route of each flight, and routes may be drawn, depending on whether those items had been selected when you selected Customize on the Flights menu.

Functions Menu: Report

The FEA/FCA Report option on the Functions menu lets you generate a report that lists the flights predicted to intersect with the selected FEA/FCA during the selected time intervals. Using the Functions menu, the quick key, or the icon method opens a report like the following example.

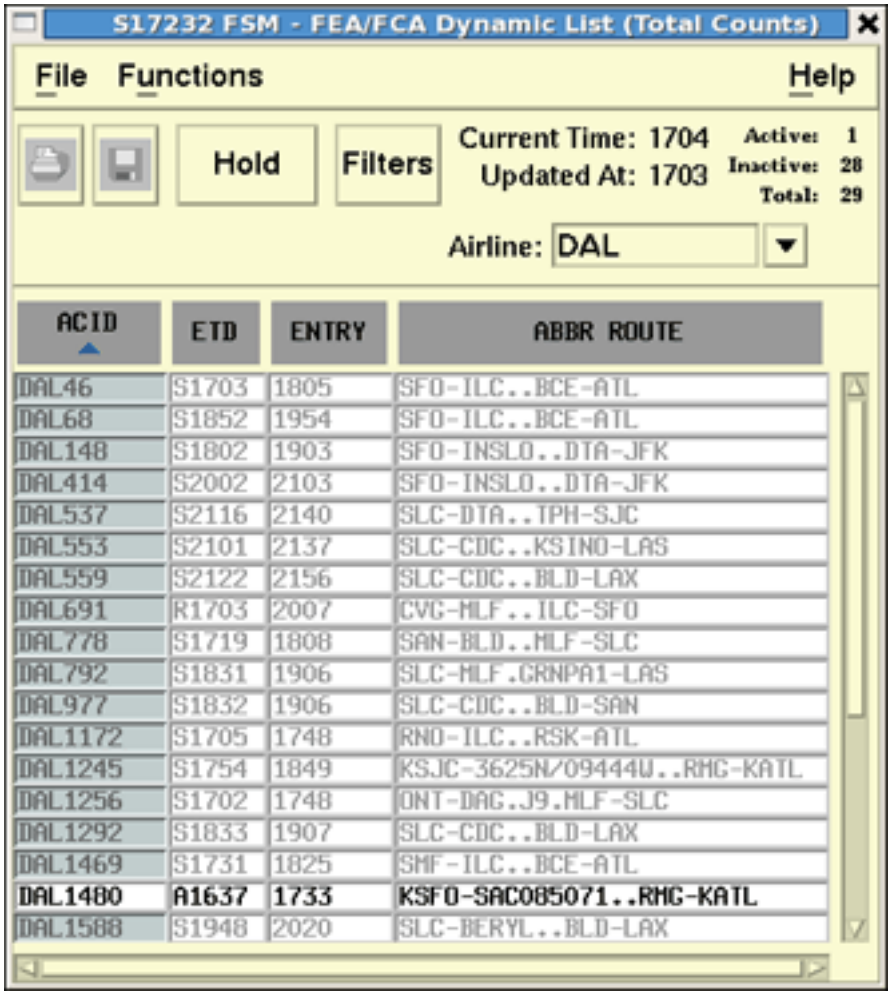


Functions Menu: Dynamic List

When you select **Dynamic List** from the Functions menu, a dialog box that looks like a spreadsheet is displayed. The Dynamic List includes only flights that are predicted to intersect the FEA/FCA during the selected time intervals and, if residuals are off in the Filters dialog box, that match at least one of the secondary filters that are turned on.

The sample Dynamic List shows only those columns selected in the Customized Columns dialog box, which is explained later in this section. Active flights are shown in black text on a white background. Inactive flights are shown in gray text, and the aircraft ID column also has a gray background.

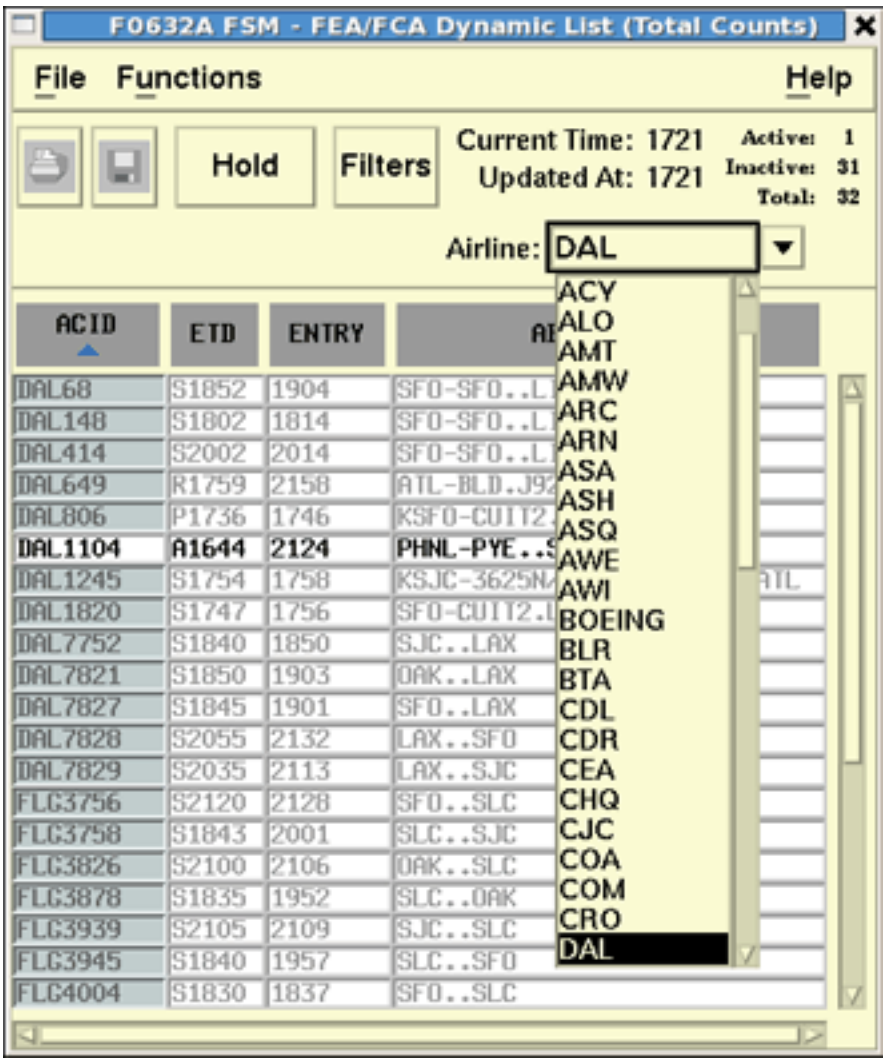
The FEA/FCA title bar displays the flight count option selected in the timeline.



Note: The FEA/FCA Dynamic List will have “FSM” or “AFP” appended to the FEA/FCA name if it is FSM-Eligible or has an active AFP.

FEA/FCA Dynamic List Filter

The FEA/FCA Dynamic List by default shows information for all airlines and any associated subcarriers. The Airline dropdown menu lets you select a specific airline for the report. When you select a specific airline, the display will show flights for the selected airline and its associated subcarriers.



1. Click the arrow to the right of the Airline field.
2. Select the airline you want from the pick list, or select **All Flights** to show flights for all airlines in the FEA/FCA.

The following table describes all the columns of information in the Dynamic list.

Dynamic List Columns

Data Item	Header	Description
Abbreviated Route	ABBR ROUTE	Route that has been abbreviated using the CRCT algorithm, up to 15 characters. Abbreviated Route is a default column in the Dynamic List.
Aircraft ID	ACID	Alphanumeric aircraft identifier. Aircraft ID is a default column in the Dynamic List.
Aircraft Type	TYPE	Flight's aircraft type. Example: DC10 or B727
Airline	AIRLINE	Airline Identifier (leading alphabetic characters of the ACID).
Arrival Center	ACENTR	Arrival Center.
Arrival Time	ETA	TFMS estimate of wheels down time.
Centers Traversed	CENTERS	Space separated list of centers that the flight traverses.
Control Element	CTL ELEM	FCA or Airport for the AFP or GDP or “-” if none.
Controlled Arrival Time	CTA	Controlled Arrival Time or “-” if none.
Controlled Departure Time	CTD	Controlled Departure Time or “-” if none
Current ARTCC	ARTCC	ARTCC where flight is currently located or departure ARTCC for inactive flights.
Current Altitude	CALT	TFMS reported altitude in hundreds of feet.
Departure Center	DCENTR	Departure Center.

Dynamic List Columns (Continued)

Data Item	Header	Description
Departure Time	ETD	Estimated time of departure, based on the best available time data. **A** - Actual departure time, usually based on a NAS departure message. **E** - Estimated actual departure time. No departure message was received, but the flight is known to be airborne because NAS messages indicating this have been received. **N** - P-time from the airline-provided early intent message. **P** - P-time from the NAS flight plan message. **R** - The historical route has been replaced by the assigned route. **S** - Departure time estimated from the Official Airline Guide scheduled time. **T** - Flight is off the gate and may be taxiing. A gate departure time has been received. Departure Time is a default column in the Dynamic List. **Note:** If you place the pointer over a cell in the ETD column of the flight list, a tool tip displays that defines the ETD value in the cell.
Destination	DEST	FAA designator showing the destination airport. If you are reviewing the arrival portion of the report, this column should be the original airport name.
Entry Time	ENTRY	Time when the flight is predicted to first intersect the FEA/FCA. Entry Time is a default column in the Dynamic List.
Exit Time	EXIT	Time when the flight is predicted to exit the FEA/FCA for the last time.
FCA Indicator	RMK	Indicator if this is a flight that has FCA in Remarks
Filed Speed	SPD	Filed speed.
Flight Status	FSTAT	Value of the flight status field. Same as the ETD prefix.
Full Route	FULL ROUTE	Complete field 10 route, up to 30 characters.
Initial Gate Time of Departure	IGTD	Value of the Gate Departure Time when the flight is first entered into TFMS.

Dynamic List Columns (Continued)

Data Item	Header	Description
NRP Indicator	NRP	Indicates whether the flight is a National Route Program flight.
Origin	ORIG	FAA designator showing the departure airport.
RVSM	RVSM	Indicates the within-sector RVSM compliance status of each flight in the list. "NC" is displayed if the flight is non-conformant or a dash "-" is displayed otherwise.
Requested Altitude	ALT	Requested Altitude. TFMS Filed Altitude in hundreds of feet.
Secondary Filter	FILTER	Displays the name of the highest priority matching secondary filter, or residual if no secondary filters match and the residuals option was selected.
Time to Intersect	TIME TO	Time to intersect the FEA/FCA. The value shall be 00:00 if the flight has already intersected the FEA/FCA.

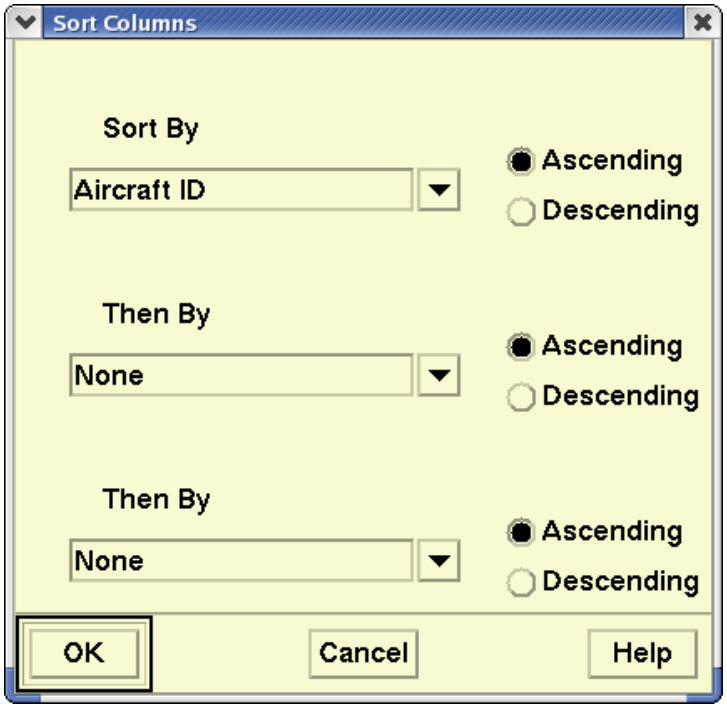
Hold Button

You can stop the Dynamic List from updating by clicking **Hold**. The list stops updating and the Hold button changes to Resume. To update the list, click **Resume**.

> **Note:** When the Dynamic List is updated, the previous scroll position stays the same. The same rows are displayed before and after the update.

Sort the Dynamic List

You can sort the list by specifying primary, secondary, and tertiary sort criteria. Clicking the column header will continue to sort the list in ascending or descending order alphabetically.



File Menu: Dynamic List

The File Menu on the Dynamic List lets you save the Dynamic List to the Reports directory. You can view the report in the Report Manager on the Tools menu. You can also Print it to your designated printer or Close the report and return to the Alerts Timeline dialog box.

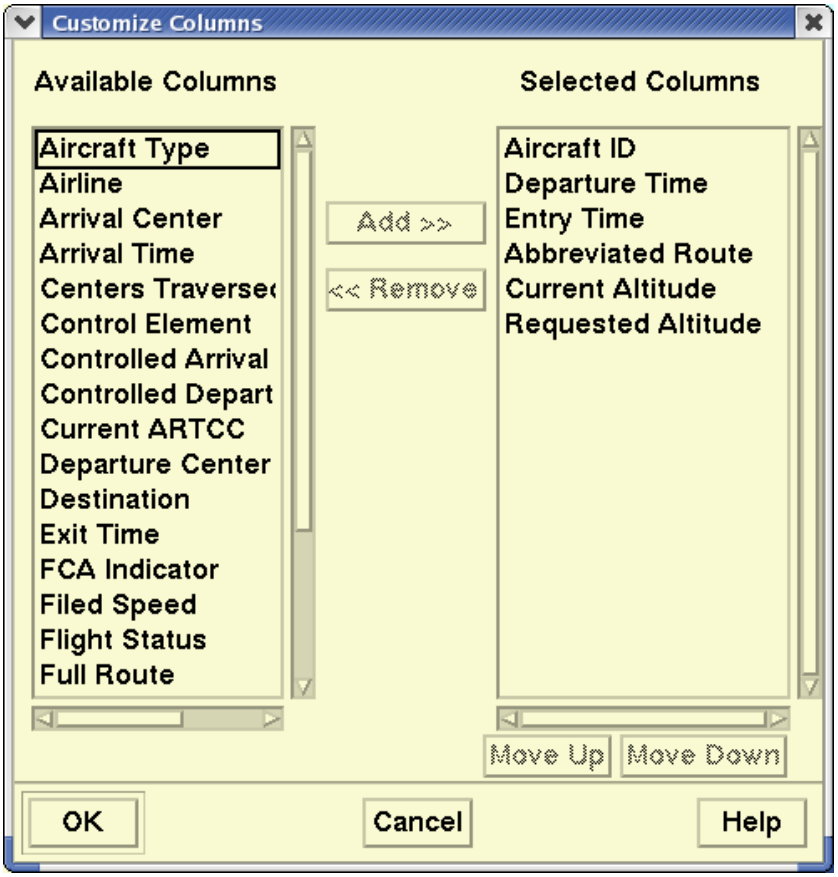
Tool Bar Icons: Dynamic List

The icons near the top of the Dynamic List perform the Print and Save functions in the same way that the File menu items do.

> **Note:** The Dynamic List includes all flights that are predicted to intersect the FEA/FCA during the entire life time of the FEA/FCA, not just the intervals selected.

Functions Menu: Customize Columns

The Customize Columns option on the Functions menu lets you add and remove columns from the Dynamic List. Clicking **Functions** on the Dynamic List Window and on Customize Columns opens the following dialog box.



To customize columns

1. To move a column name out of the Selected Columns, click the column name and click **Remove**. The column name now appears in the Available Columns list.
2. Click **OK**. You are returned to the Dynamic List. Notice that the column is no longer displayed.
3. To return the column to the Dynamic List, select **Customize Columns** again and select the name in the Available List column, click **Add** and click **OK**. You are returned to the Dynamic List, and the column is redisplayed.
4. To move the selected column names up and down within the list of Selected Columns, select the name and click **Move Up** or **Move Down**. The order in which they appear in Selected Columns is the order, from left to right, in which they appear on the Dynamic List.
5. Click OK to move the column header to the left if you selected Move Up, or to the right if you selected Move Down.

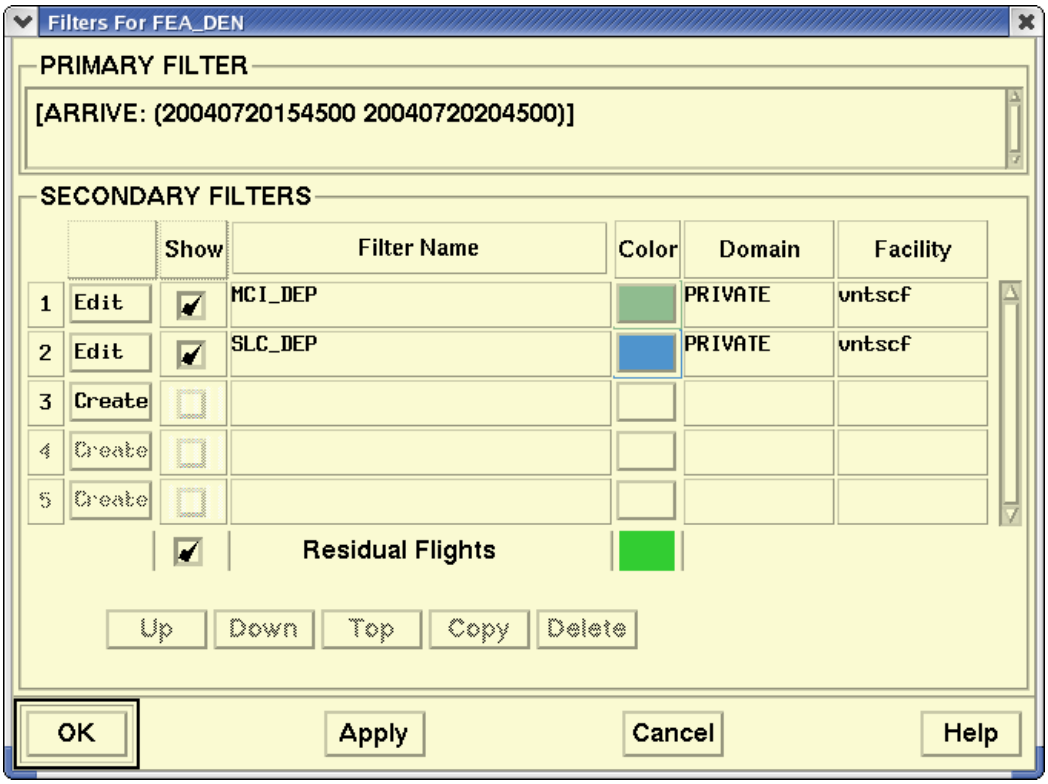
Functions Menu: Filters

Selecting Filters on the Functions menu or pressing the Filters button opens the Filters dialog box. The sample Filters dialog box below shows the Primary filter and two Secondary filters for the FEA/FCA.

This dialog box can also be opened by other methods.

- Click **Filters** on the Functions menu of the Select FEA/FCA dialog box.
- Click **Filters** on the FEA/FCA Timeline Functions menu.
- Click the **Filters** button on the FEA/FCA Timeline dialog box.
- Click the **Filters** button on the FEA/FCA Dynamic List.

The sample Filters dialog box below shows the primary filter and two secondary filters for the FEA/FCA.



Only authorized users can edit the Primary Filter. That process is discussed in the Select FEA/FCA section. You can edit the secondary filters by clicking the **Edit** button next to the appropriate secondary filter. The secondary filter fields and buttons function the same as they do on the Secondary Filters tab of the Create FEA/FCA dialog box. This function is discussed in the Create FEA/FCA section.

> **Note:** You can deselect a selected row by pressing and holding the **<Ctrl>** key and clicking on the row number.

Functions Menu: Flight Counts

Clicking **Flight Counts** on the Functions menu opens a sub-menu that lets you choose between Entry Time, Peak Occupancy, and Total Flights.

Functions Menu: Close

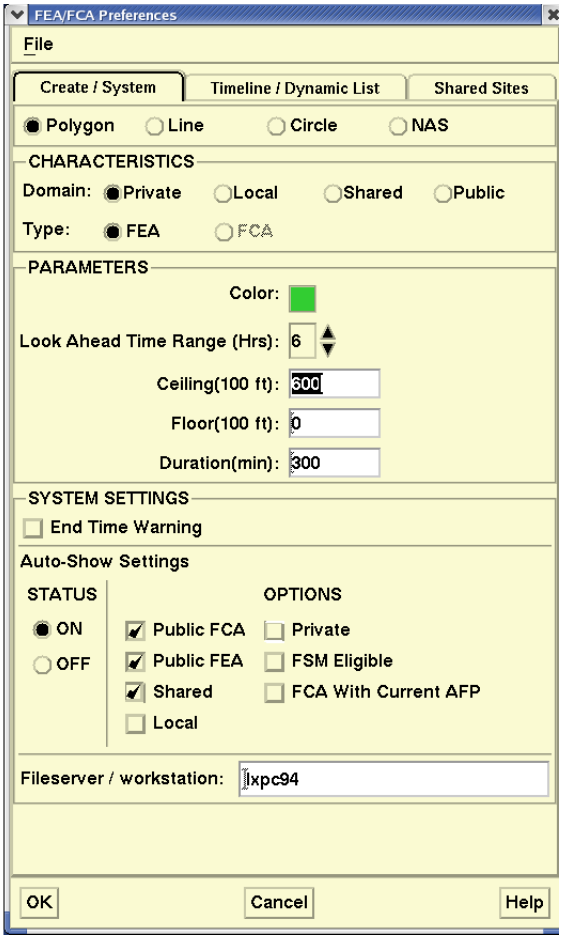
Clicking **Close** on the Functions menu closes the Timeline dialog box.

<table>
<tr><th colspan="2">Preferences Command</th></tr>
<tr><td colspan="2">The Preferences command lets you define the defaults you want for the Create FEA/FCA dialog box.</td></tr>
<tr><th></th><th>Quick Key Method</th></tr>
<tr><td rowspan="3">1. Pull down the FEA/FCA menu by clicking FEA/FCA on the TSD Main Menu or pressing <Alt> C.
2. Click Preferences or press P.</td><td>None</td></tr>
<tr><th>Semicolon Method</th></tr>
<tr><td>None</td></tr>
</table>

Note: If you entered preferences values in the Create FEA/FCA Preferences tab for a defined FEA/FCA, those values take precedence over your entries in the Preferences dialog box shown on the following page.

FEA/FCA Preferences Dialog Box

After you select **Preferences** from the FEA/FCA menu, the FEA/FCA Preferences dialog box opens, looking like the sample below.



Using the FEA/FCA Preferences Dialog Box

Using the Preferences dialog box, you can disable the automatic showing of newly defined shared or public FEA/FCAs. When you disable this feature by clicking OFF in the Auto-Show Settings Status section, the TSD does not display newly defined FEA/FCAs that are created by another user.

The FEA/FCA Preferences dialog box contains three tabs: Create/Systems, Timeline/Dynamic List, and Shared Sites. The Create/System tab provides the fields for specifying the default FEA/FCA parameters. The Timeline/Dynamic List tab provides the fields for specifying the default Timeline and Dynamic List parameters. The Shared Sites tab provides fields for specifying the default sites for sharing a Shared FEA/FCA.

Create/System Tab

The following table describes the fields on the Create / System tab.

FEA/FCA Preferences

Item	Description	What you do
Create System Tab		
Polygon	Selecting this button lets you define a custom FEA/FCA as a polygon.	Polygon is selected by default. Either leave it selected, or click Line, Circle, or NAS to change the default.
Line	Selecting this button lets you define a custom FEA/FCA as a line.	Click the Line radio button to select this option.
Circle	Selecting this button lets you define a custom FEA/FCA as a circle.	Click Circle radio button to select this option.
NAS	Selecting this button means that when you create a new FEA/FCA, the NAS Element button will be selected. You will be able to select an element from a pick list. See the Create FEA/FCA section (page 5-228) for more details.	Click NAS radio button to select this option.

FEA/FCA Preferences

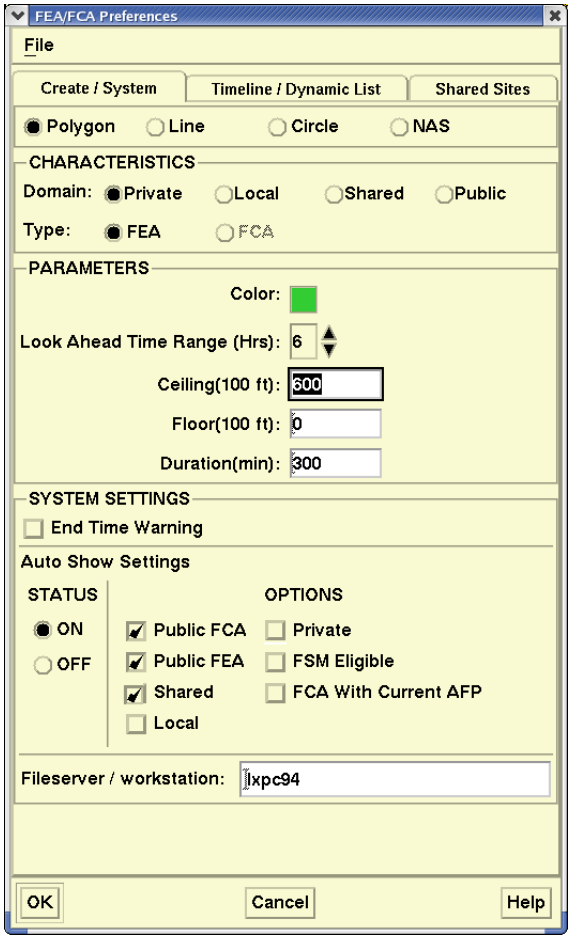
Item	Description	What you do
Characteristics		
Domain	This field lets you define the FEA/FCA domain: Private, Local, Shared, or Public. All users can create Private FEAs, which are viewed only at the specific workstation where they were created. Local FEAs are shared with all workstations at the creator's site. Users at TFMS field sites can create Shared FEAs. Only users at ATCSCC can create Public FEAs or FCAs, which are shared with all TFMS users.	Click the Private, Local, Shared, or Public radio button.
Type	Select Either FEA (Flow Evaluation Area) or FCA (Flow Constrained Area). Only users at ATCSCC can select the FCA option and only if the Public domain was also selected.	Click the FEA or FCA radio button.
Parameters		
Color	Lets you determine the default color of the FEA/FCA and flight icon.	Click on the button to display a color palette. Click a color that you want for the FEA/FCA.
Look Ahead Time Range	Allows you to determine the maximum future time range for which flight data will be available for display on the TSD in the Timeline or Dynamic List. You can choose values from one to 24 hours.	Click the up or down arrow to the right of the field to increment or decrement the values, or use the keyboard arrow keys.
Ceiling	This field is initially filled in with the default value for Ceiling. You can enter one to three digits for the ceiling, from 000 to 600, which represents hundreds of feet.	To change the default value, click in the Ceiling box and enter a one to three digit number.
Floor	This field is initially filled in with the default value for Floor. You can enter one to three digits for the floor, from 000 to 600, which represents hundreds of feet.	To change the default value, click in the Floor box and enter a one to three digit number.
Duration (min)	This field specifies the amount of time that the FEA/FCA is valid.	Click in the Duration box and enter a one to four digit number.

FEA/FCA Preferences

Item	Description	What you do
System Settings		
End Time Warning	This checkbox lets you specify whether the FEA/FCA End Time warning is to be displayed for FEAs and FCAs. Enabling the End Time Warning for FEA/FCAs causes the TSD to send out a warning message 30 minutes before the end time is up. This warning message is displayed in the FEA/FCA End Time Warning dialog box.	Click in the End Time Warning checkbox if you want the warning displayed. To disable the 30-minute warning, remove the check in the End Time Warning checkbox
Auto-Show Settings	See page 5-295.	Click in the ON or OFF button.
Fileserver / workstation	Fileserver or workstation where the FEA/FCA files are stored.	Click in the text box and enter the name of the workstation. The default workstation is *wkstn01*.

Auto-Show Feature

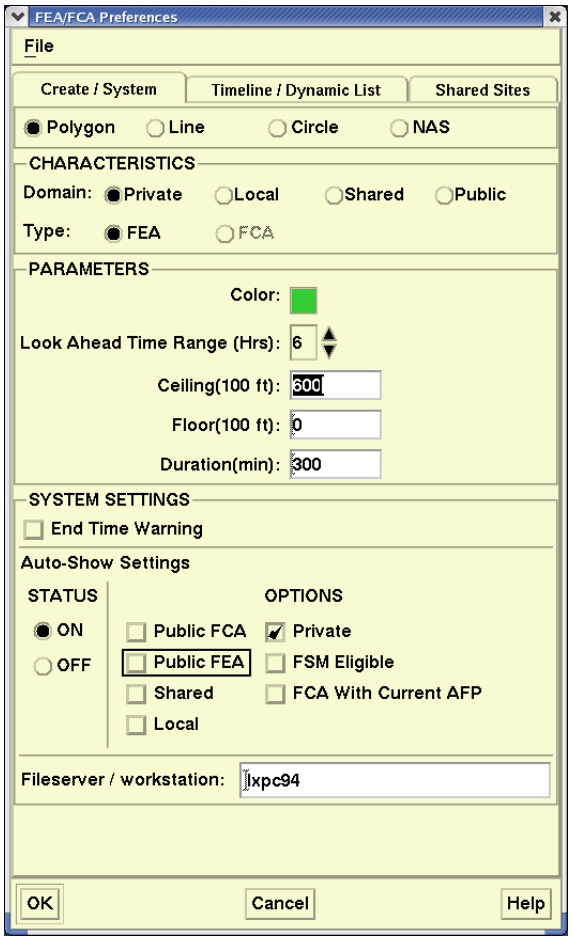
The Auto-Show feature on the Create/System tab on the FEA/FCA Preferences dialog box has been modified to let you automatically show all FEA/FCAs that match the criteria shown in the Auto-Show Settings section of the FEA/FCA Preferences dialog box.



The default options are Auto-Show Status ON and Public FCA, Public FEA, and Shared categories checked, unless you have defined other settings in your TSD Adaptation file. If the TSD is started with the Auto-Show Status ON, the TSD places a check in the Show checkbox in the Select FEA/FCA dialog box for all existing FEA/FCAs that match the Auto-Show criteria.

> **Note:** If Hide FEA/FCAs is selected on the FEA/FCA menu, the FEA/FCAs are not drawn on the TSD, even though the Show buttons are checked in the Select FEA/FCA dialog box.

You can select Auto-Show criteria other than the default options mentioned on the previous page. In the example below, the Auto-Show status is on for Private FEAs only. Therefore, any private FEAs you create or edit will have the Show button selected in the Select FEA/FCAs dialog box. However, the FEA will not be displayed on the TSD if Hide FEA/FCAs has been selected.

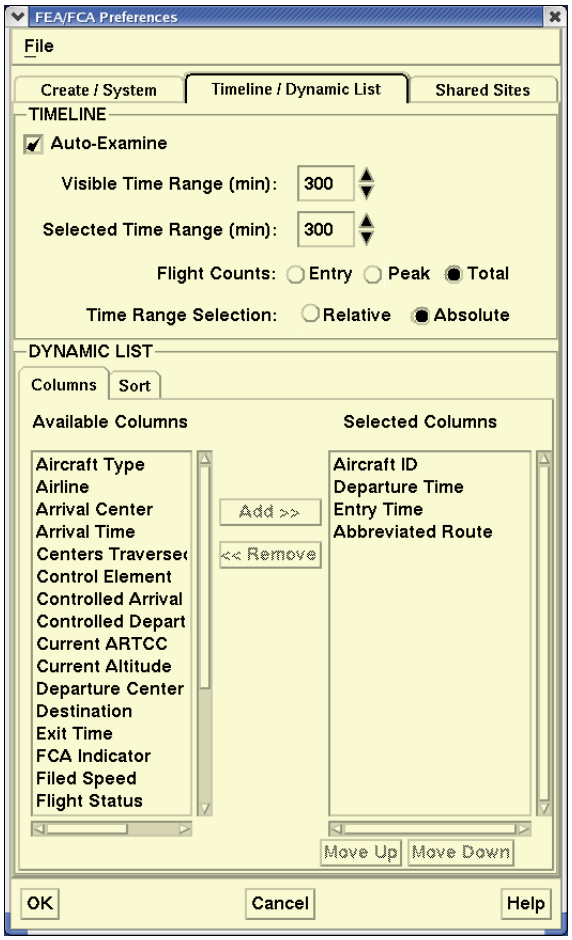


If you select the OFF Auto-Show setting, FEA/FCAs created or edited from that point on will not have their Show buttons automatically checked in the Select FEA/FCA dialog box.

> **Note:** Any FEA/FCA that you create will always have its Show button checked in the Select FEA/FCA dialog box in the TSD used to create the FEA/FCA regardless of the Auto-Show status or settings.

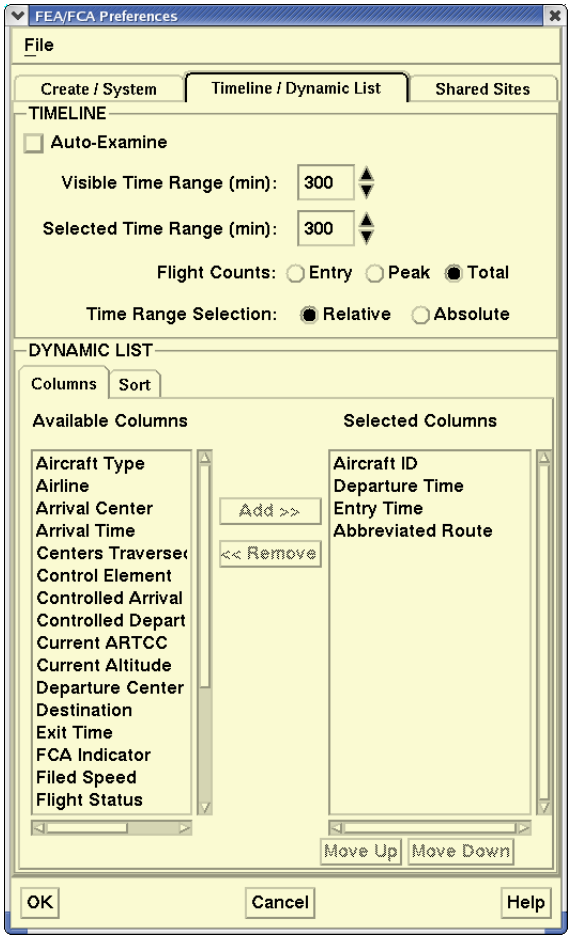
Timeline/Dynamic List Tab

The Timeline / Dynamic List tab allows you to specify the default Timeline and Dynamic List parameters when creating an FEA/FCA. Clicking Timeline / Dynamic List opens a dialog box like the following.



Auto-Examine Function

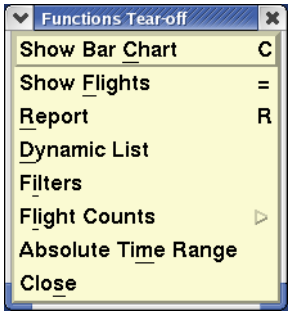
Clicking in the **Auto-Examine** checkbox in the Timeline section of the FEA/FCA dialog box lets you establish the default setting for the Auto-Examine option on the Pref tab of the Create/Edit FEA/FCA dialog box. In the example below, the Auto-Examine checkbox is unchecked. Therefore, the Pref tab on the Create/Edit FEA/FCA dialog box would have its Auto-Examine checkbox unchecked and any FEA/FCA you create or edit would not automatically open a Timeline.



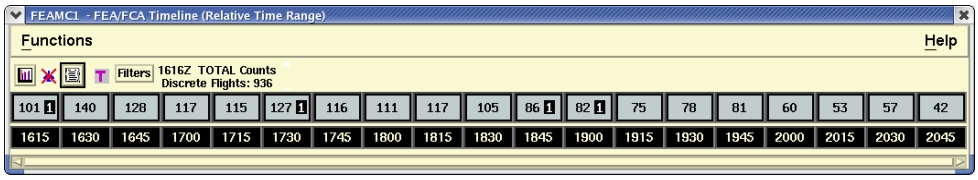
Checking the Auto-Examine checkbox in the FEA/FCA Preferences dialog box causes the Auto-Examine checkbox on the Pref tab on the Create/Edit dialog box to be checked. In that case, unless you change it, the FEA/FCAs you create or edit during the current TSD session will automatically open a Timeline.

FEA/FCA Relative and Absolute Time Range

The Time Range on the FEA/FCA Timeline can be Relative or Absolute. The FEA/FCA Time Range selection determines the Time Range mode the FEA/FCA Timeline displays. The Timeline initially opens with the Time Range Selection set to the mode specified in the FEA/FCA Preferences dialog box. The default setting is Relative unless Absolute is specified in an Adaptation file. The Functions menu on the Preferences dialog box below specifies Absolute Time Range, indicating that the Time Range is in Relative mode.



The FEA/FCA Timeline title bar displays the Time Range mode.



Relative Time Range

As was mentioned above, Relative Time Range is the default time range mode unless otherwise specified in an adaptation file or a Preference Set file used to start the TSD. When the Timeline is set to Relative Time Range mode, the selected time range displays relative to the current time and shifts forward as the current time advances. When the beginning of the first time interval on the Timeline increments by 15 minutes, the start and end times of the selected time range are also incremented by 15 minutes so that the same intervals, by position in the Timeline, remain selected.

Absolute Time Range

When the FEA/FCA Timeline is set to Absolute Time Range mode, the selected time range remains the same as the current time advances. When the beginning of the first time interval increments by 15 minutes, the start and end times of the selected time range are retained unless the start time is now in the past. If the start time is in the past, the TSD sets the start time to be equal to the beginning of the current 15 minute interval. As time continues to advance, the TSD sets an end time that is now in the past to be equal to the start time plus 15 minutes.

If, for example, you select fixed clock times such as 1600 to 1700, when the current time becomes 1615, the 1615, 1630, and 1645 segments remain highlighted and the 1600 interval is no longer displayed. In other words, the time range is now 45 minutes rather than the original 60 minutes. At 1645, only the 1645 segment remains highlighted. At 1700, the 1700 segment becomes selected, ensuring that there is always at least one time segment selected.

As time continues to advance, the TSD sets an end time that is now in the past to be equal to the start time plus 15 minutes.

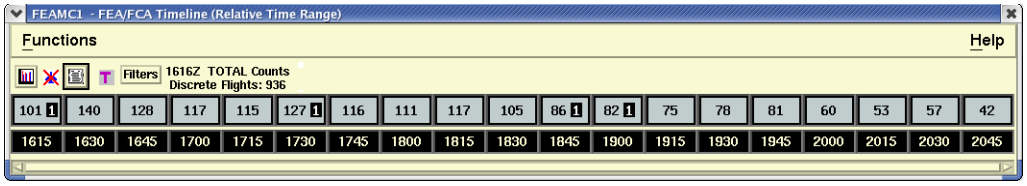
Selecting a Time Range for Individual FEA/FCAs

The Relative/Absolute Time Range command on the Functions menu on the FEA/FCA Timeline enables you to toggle the time range selection for an FEA/FCA you are examining.

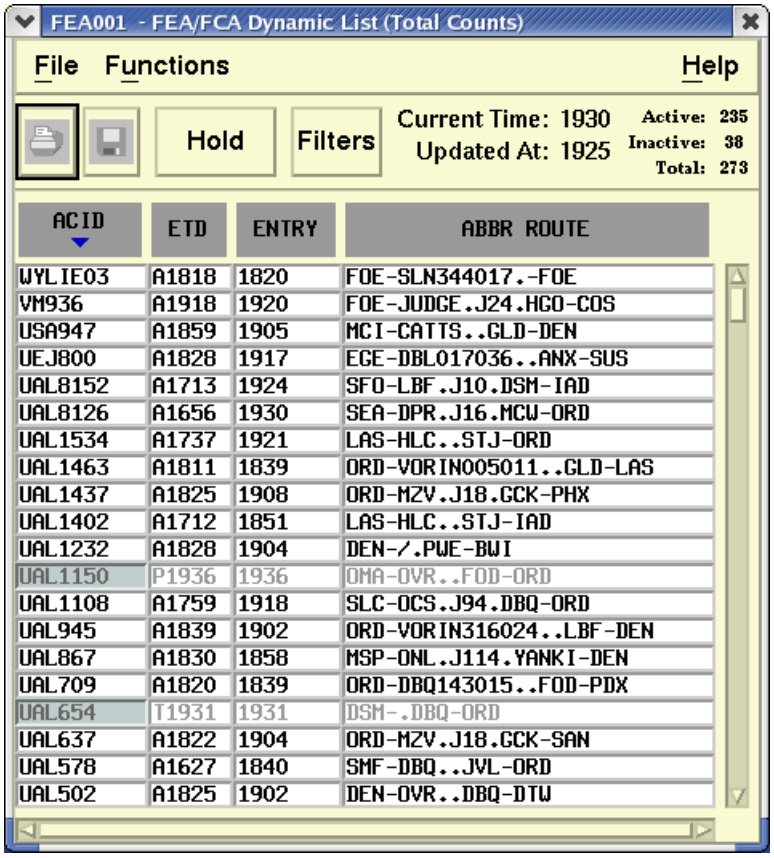
If the Timeline is then closed and later redisplayed, that Timeline will be restored as it had been for the FEA/FCA when it was closed.

Dynamic List

The Dynamic List icon on the Timeline displays the Dynamic List report for the FEA/FCA.



Clicking the **Dynamic List** icon opens a report like the following.



ACID	ETD	ENTRY	ABBR ROUTE
WYLIE03	A1818	1820	FOE-SLN344017.-FOE
VM936	A1918	1920	FOE-JUDGE.J24.HGO-COS
USA947	A1859	1905	MCI-CATTS..GLD-DEN
UEJ800	A1828	1917	EGE-DBL017036..ANX-SUS
UAL8152	A1713	1924	SFO-LBF.J10.DSM-IAD
UAL8126	A1656	1930	SEA-DPR.J16.MCW-ORD
UAL1534	A1737	1921	LAS-HLC..STJ-ORD
UAL1463	A1811	1839	ORD-VORIN005011..GLD-LAS
UAL1437	A1825	1908	ORD-MZV.J18.GCK-PHX
UAL1402	A1712	1851	LAS-HLC..STJ-IAD
UAL1232	A1828	1904	DEN-/.PWE-BWI
UAL1150	P1936	1936	OMA-OVR..FOD-ORD
UAL1108	A1759	1918	SLC-OCS.J94.DBQ-ORD
UAL945	A1839	1902	ORD-VORIN316024..LBF-DEN
UAL867	A1830	1858	MSP-ONL.J114.YANKI-DEN
UAL709	A1820	1839	ORD-DBQ143015..FOD-PDX
UAL654	T1931	1931	DSM-.DBQ-ORD
UAL637	A1822	1904	ORD-MZV.J18.GCK-SAN
UAL578	A1627	1840	SMF-DBQ..JVL-ORD
UAL502	A1825	1902	DEN-OVR..DBQ-DTW

If Total Flight Counts was selected on the Timeline, the title bar on the Dynamic List would show Total Counts, as it does in the example above. If E (Entry Counts) or P (Peak Counts) is selected, the title bar would show one of those flight count types.

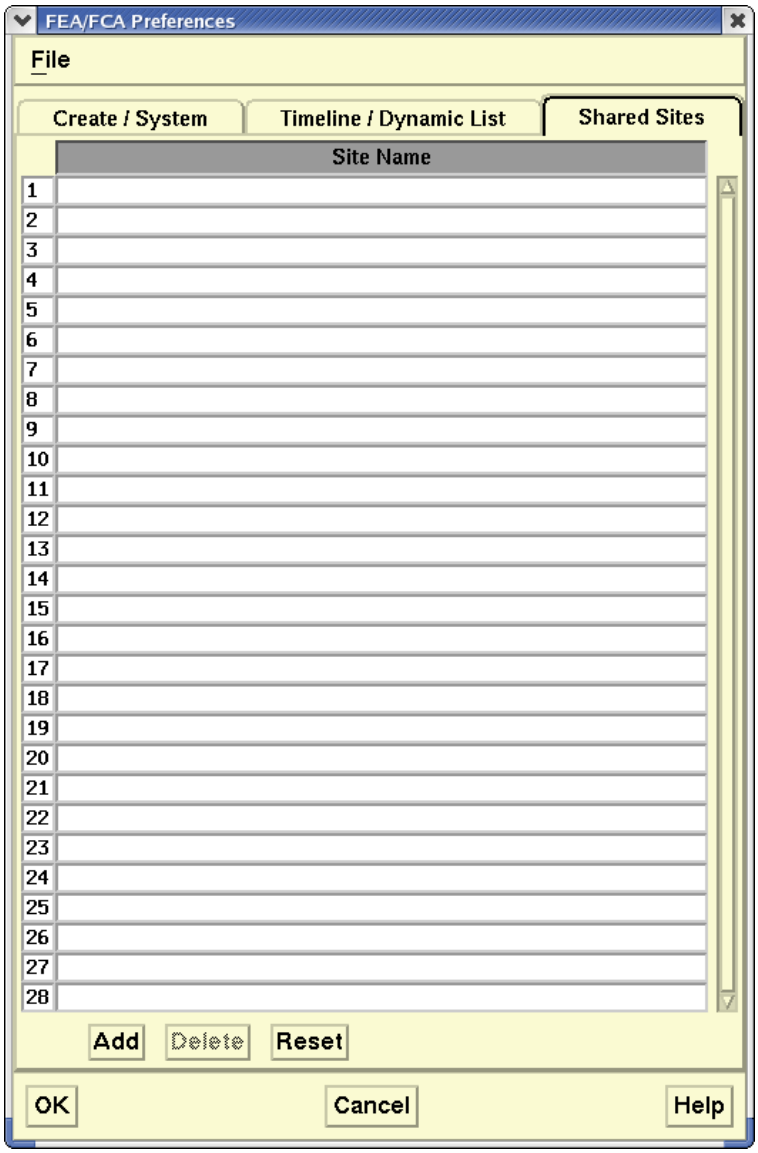
Changing Flight Count Types

To change the type of flight counts from Total Flights to Peak Occupancy, or Entry Time, click **Flight Counts** on the Functions menu and move the cursor to the right to select one of the three types.

You can also click the **Flight Counts** button on the Timeline toolbar. For example, clicking the T icon changes the flight counts to E (Entry) or P (Peak).

Shared Sites Tab

The Shared Sites tab lets you specify the TFMS sites that will share the FEA/FCA definition. The sites you enter will be default sites and will be listed in the Create FEA/FCA dialog box the next time you open it. Clicking on **Shared Sites** opens a dialog box like the following.



Each row of the Shared Sites tab lets you enter a site name. You can enter the site name directly in the text entry field or click the arrow to display a pick list of site names and click your choice. There is an automatic fill-in feature in the rows of the dialog box. When you type the first character of the site name in the text entry field, the TSD fills in the field with the first match in the list for that character. Clicking the arrow displays a pick list of all operational TFMS sites, sorted in alphabetical order.

There are two buttons near the bottom of the Shared Sites dialog box:

- **Add**
  Clicking this button adds a row to the 15 rows shown above in the sample Shared Sites dialog box.
- **Delete**
  Clicking the row number and clicking Delete removes the row from the dialog box. The TSD displays a fixed number of rows on this window, however, so there cannot be fewer than 15 rows.
- **Reset**
  Clicking **Reset** in the FEA/FCA Preferences dialog box resets the list of sites to the previously saved list.

File Menu

The File menu on the FEA/FCA Preferences dialog box lets you:

- Recall an adaptation file
- Save your defaults to a file
- Delete the file

These functions are discussed in Chapter 3, TSD Basics.

Requesting Reports

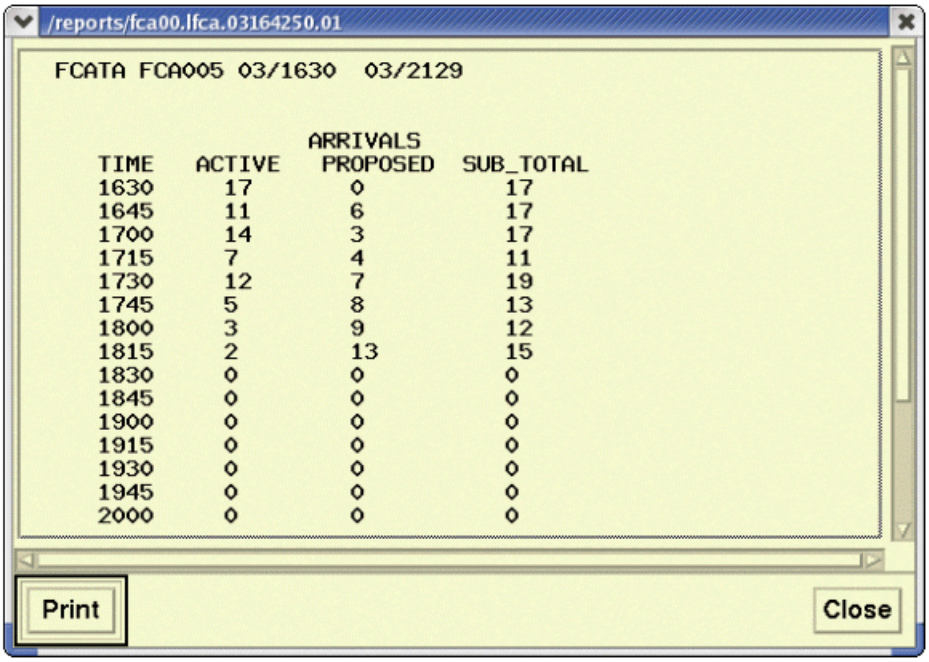
You can request FEA/FCA flight count and list reports using the semicolon command method by requesting FCATA as a data source.

The following examples show the command line format and the resulting report for each of these request reports.

Request Count

Request FCATA fea_fca_name

Example: **REQ FCATA FCA005**



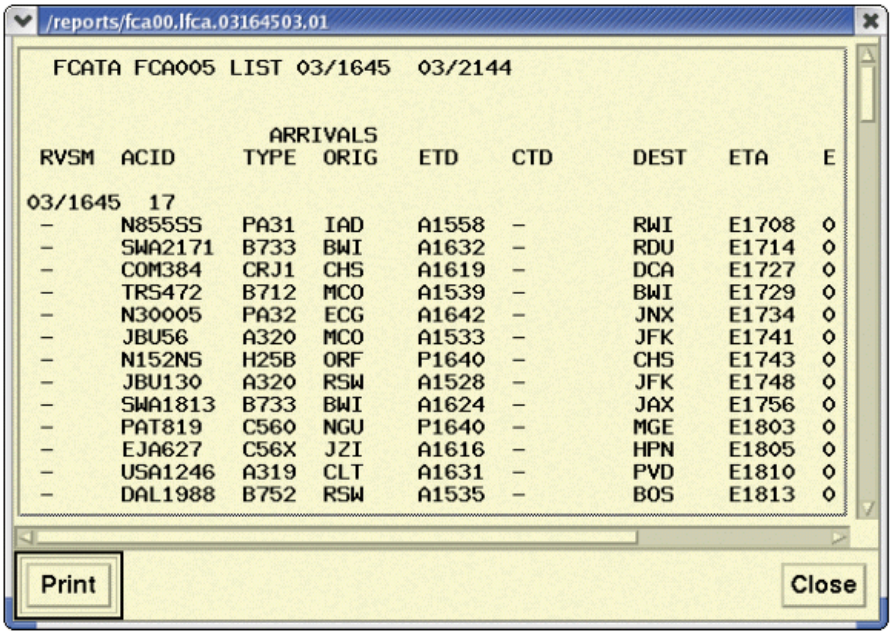
FCATA FCA005 03/1630 03/2129

TIME	ACTIVE	ARRIVALS PROPOSED	SUB_TOTAL
1630	17	0	17
1645	11	6	17
1700	14	3	17
1715	7	4	11
1730	12	7	19
1745	5	8	13
1800	3	9	12
1815	2	13	15
1830	0	0	0
1845	0	0	0
1900	0	0	0
1915	0	0	0
1930	0	0	0
1945	0	0	0
2000	0	0	0

Request List

Request FCATA fea_fca_name

Example: **REQ FCATA FCA005 LIST**



/reports/fca00.lfca.03164503.01

```
FCATA FCA005 LIST 03/1645  03/2144

                    ARRIVALS
RVSM  ACID      TYPE  ORIG   ETD    CTD      DEST   ETA    E

03/1645  17
 -     N855SS    PA31  IAD    A1558  -        RWI    E1708  0
 -     SWA2171   B733  BWI    A1632  -        RDU    E1714  0
 -     COM384    CRJ1  CHS    A1619  -        DCA    E1727  0
 -     TRS472    B712  MCO    A1539  -        BWI    E1729  0
 -     N30005    PA32  ECG    A1642  -        JNX    E1734  0
 -     JBU56     A320  MCO    A1533  -        JFK    E1741  0
 -     N152NS    H25B  ORF    P1640  -        CHS    E1743  0
 -     JBU130    A320  RSW    A1528  -        JFK    E1748  0
 -     SWA1813   B733  BWI    A1624  -        JAX    E1756  0
 -     PAT819    C560  NGU    P1640  -        MGE    E1803  0
 -     EJA627    C56X  JZI    A1616  -        HPN    E1805  0
 -     USA1246   A319  CLT    A1631  -        PVD    E1810  0
 -     DAL1988   B752  RSW    A1535  -        BOS    E1813  0
```

Print Close

FCATA Reports with Secondary Filters

Specifying the FCATA data source in the Request command line lets you obtain a list and count report of the flights predicted to traverse the FEA/FCA that match one or more of the secondary filters. The command uses the following formats.

Request List:

REQ FCATA fea_fca_name date start_time end_time filters SECONDARY secondary_filter_name(s) LIST

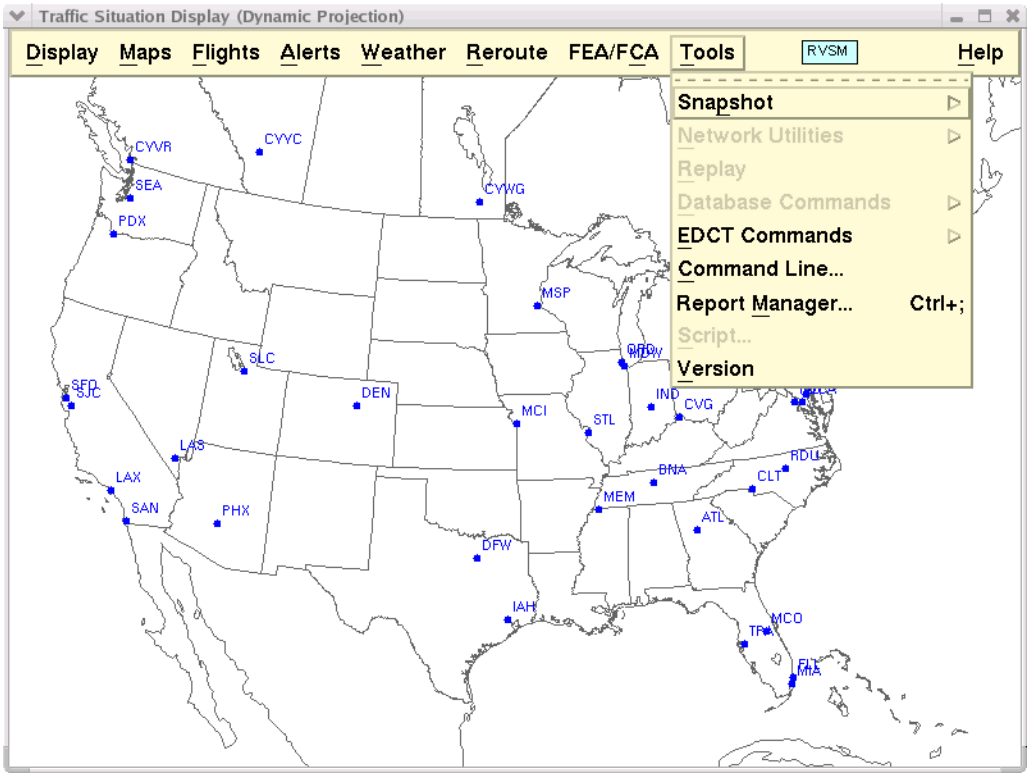
Example: **REQ FCATA FCA005 08/10 1200 1400 AIRL AAL SECONDARY SLC_DEP LIST**

Request Count:

REQ FCATA fea_fca_name date start_time end_time SECONDARY secondary_filter_name(s)

Example: **REQ FCATA FCA005 08/10 1200 1400 SECONDARY SLC_DEP**

Tools Menu



Overview

This section describes commands available on the Tools pull-down menu and sub-menus. The section is organized by the following topics, each of which corresponds to an item on the Tools menu.

- **Snapshot Commands** **Page 5-307**

  Saves the TSD screen image to an xwd formatted file.

- **EDCT Commands** **Page 5-311**

  Enables you to view departure times of flights controlled by EDCT programs.

- **Command Line Command** **Page 5-313**

  Enables you to issue commands through a command line interface dialog box.

- **Report Manager Command** **Page 5-317**

  Enables you to manage reports in the Reports directory.

- **Version Command** **Page 5-320**

  Displays the current TSD version number and date of compilation.

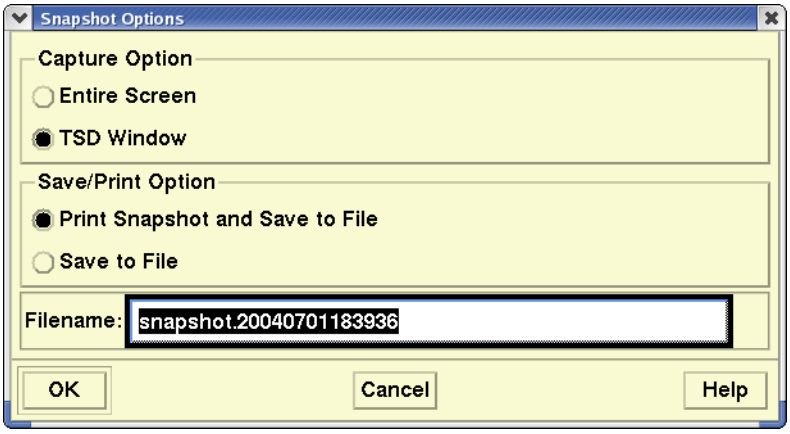
Snapshot Commands

The Snapshot commands let you save the TSD screen to an **xwd** file. You can choose one of three options from the pull-down sub-menu to capture, view and print an image of the TSD display.

Capture Command	
The **Capture** command lets you take a screen capture of the TSD display.	
	Quick Key Method
1. Pull down the Tools menu by clicking **Tools** on the main menu or pressing **<Alt> T**. 2. Click **Snapshot** or press **P**. 3. Click **Capture** or press **C**.	Press **Print Scrn**
	Semicolon Method
	None

Snapshot Options Dialog Box

To capture a TSD screen image to a file, click the **Snapshot Capture** command. The Snapshot Options dialog box opens, as shown below.



The Snapshot Options dialog box contains three main sections:

- The top portion of the dialog box is the Capture Option, which by default is set to capture the entire screen. You click TSD Window to change the option and capture only the TSD window.
- In the middle of the dialog box is the Save/Print Option section, which by default is set to print and save the snapshot. You can change that to save without printing by clicking the **Save to File** button.
- The bottom section contains a text field where you enter the name of the snapshot file to be saved.

  Note: If you do not specify a filename before you click **OK**, you get an error message telling you to do so.

When you click **OK** on the Snapshot Options dialog box, the TSD starts a screen capture routine. You know the routine is running because you hear one beep when it starts. This process may take several seconds. When the screen capture routine has completed, you hear two beeps, and a dialog box opens telling you that the screen was successfully captured and saved to file <*filename*>.

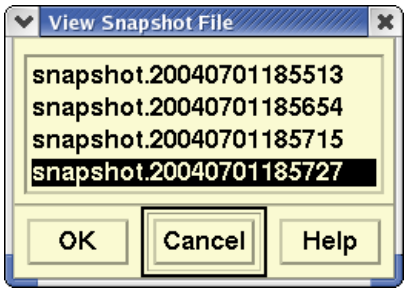
Click **OK**, or wait for the dialog box to time out and disappear (approximately five seconds). You can now view or print the captured file.

When the captured screen appears, it will now have a default file name of s*napshot.mmddhhmmss*, which you may change if you desire.

View Command	
The **View** command lets you view an image of the TSD display.	
	Quick Key Method
1. Pull down the Tools menu by clicking **Tools** on the main menu or pressing **<Alt> T**. 2. Click **Snapshot** or press **P**. 3. Click **View** or press **V**.	**None**
	Semicolon Method
	None

View Snapshot Dialog Box

To view your captured TSD snapshot, click **View** from the Snapshot sub-menu. The View Snapshot File dialog box opens:

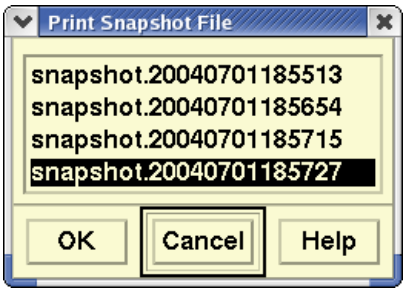


Click the file you wish to view; this selects the file. Click **OK**. The file you selected appears. You may close the snapshot display window using the Window Menu button or by pressing **Q** or **<Ctrl> C**.

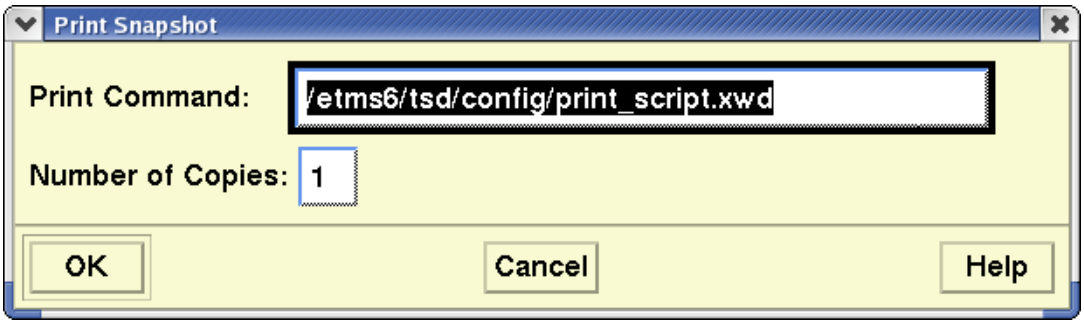
Print Command	
The **Print** command lets you print a hard copy of the TSD screen captured.	
	Quick Key Method
1. Pull down the Tools menu by clicking **Tools** on the main menu or pressing **<Alt> T**. 2. Click **Snapshot** or press **P**. 3. Click **Print** or press **P**.	**None**
	Semicolon Method
	None

Print Snapshot Dialog Box

You can print a hard copy of any captured file by clicking **Print** on the Snapshot sub-menu. When you do, the Print Snapshot File dialog box opens.



Click on the file name you want to print and click **OK**. Another dialog box opens.

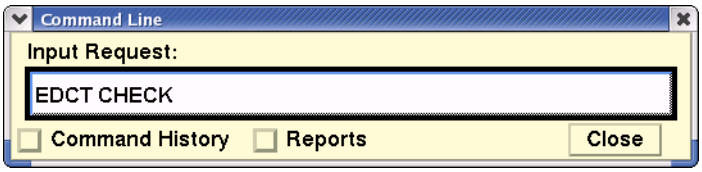


After you enter the path name in the text field, the file is sent to the printer.

EDCT Commands	
The **EDCT** Commands (Estimated Departure Clearance Time) allow you to view controlled departure times of flights.	
	Quick Key Method
1. Pull down the Tools menu by clicking **Tools** on the main menu or pressing **<Alt> T**. 2. Click **EDCT Commands** or press **E**. 3. Click a command from the sub-menu or press its mnemonic key.	**None**
	Semicolon Method
	None

Command Line Dialog Box

After you click **EDCT Commands** or press the mnemonic key from the Tools menu, a Command Line dialog box opens for the individual command that you select from the EDCT Commands sub-menu, as in the following example.



The following table lists commands currently available on the sub-menu. For detailed information, each command in listed alphabetically in Chapter 6, Semicolon commands.

EDCT Commands

Item	Description	Mnemonic Key	Chapter 6 Page no.
EDCT CHECK	Displays the current status of a single flight controlled by an EDCT program.	K	page 6-33

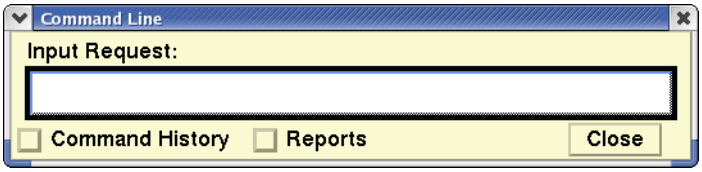
EDCT Commands (Continued)

Item	Description	Mnemonic Key	Chapter 6 Page no.
EDCT LIST	Creates a report containing a list of all airports currently controlled by EDCT programs.	L	page 6-44
EDCT SLIST	Provides a slot list for a specified airport or an FCA. If you specify an airline, the list will include only those slots for the airline and its sub-carriers at the specified airport or FCA in the exact format that goes to the airlines.	S	page 6-61
EDCT SUB SHOW	Creates a report showing the status of Substitution processing for all airports/FCAs. Only users at authorized sites can use this command.	W	page 6-72
EDCT UNASSIGNED SLOTS	Creates a report listing all unassigned slots at a specified airport or FCA.	O	page 6-74

Command Line Command	
The **Command Line** command lets you issue TSD commands, display previously issued commands, and display a list of reports that have been received during the current TSD session.	
	Quick Key Method
1. Pull down the Tools menu by clicking **Tools** on the main menu or pressing **<Alt> T**. 2. Click **Command Line** or press **C**.	**None**
	Semicolon Method
	None

Command Line Dialog Box

After you click **Command Line** or press the mnemonic key from the Tools menu, the Command Line dialog box opens, looking like the sample below.



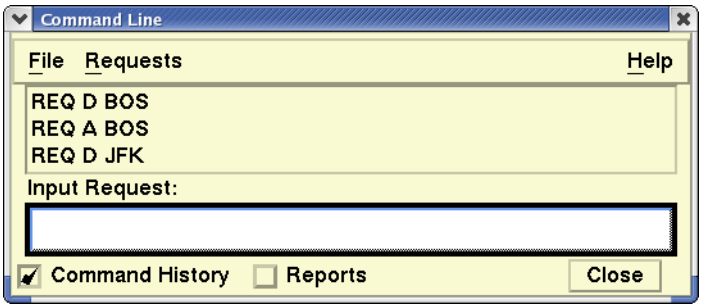
The sample Command Line dialog box has nothing entered in the Input Request field. If a semicolon command has been entered during the current TSD work session, that command name is displayed and highlighted in the field. You can enter the new command by typing in the command name over the highlighted current command.

Command History Button

Click the **Command History** button to display a list of previously entered commands. Any command that you select from this list appears in the Input Request field.

> **Note:** You can also type the command name in the Input Request field.

A sample dialog box with Command History selected follows.

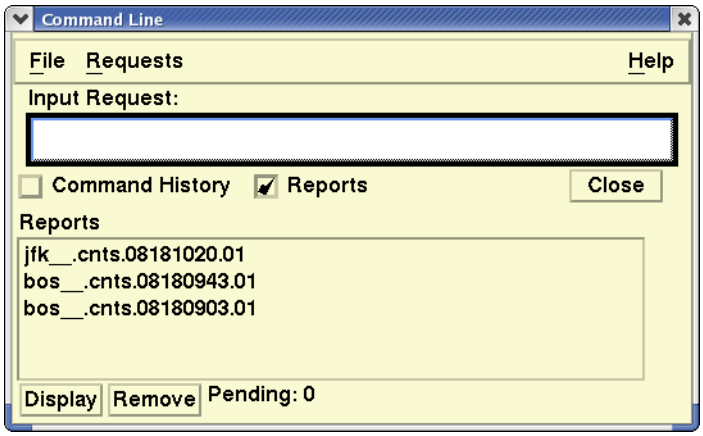


When focus is on the Input Request field and the **Return** key is pressed, the command is issued.

If the command you issued is a request command, a report is generated. If the command is not a request command, the TSD is redrawn with the results of the command displayed on the screen.

Reports Button

The Reports button lets you display a list of reports that have been received during the current TSD session. Click **Reports** to display a current list of reports, which are shown below along with a list of previously issued commands.



To view a specific report in the list, you may click the report name and click **Display**. You may also double-click the report name. After viewing the report you can print it to your specified printer or close the report and return to the Command Line dialog box.

File Menu

The File menu lets you save the contents of the Command History list to a file and to recall a previously saved list to replace the current Command History list. You may also delete a previously saved file using the Delete option in the File menu. The Command Line dialog box may be closed using the Exit option on the File menu.

Requests Menu

The Requests pull-down menu, shown on the following page, makes other menu options available.

- **Send Secondary**
  Uses information requested in an original report to generate subsequent Flight List, Flight Count, or Flight Plan reports for the same location. See page 4-162 for specific details on using this procedure.
- **Remove**
  To remove a previously issued command from the displayed list of commands, click the command and click **Remove**.
- **Clear**
  To clear a command from the Input Request field, click **Clear**. You may also highlight the command in the Input Request field by triple-clicking the command and pressing **<Delete>**.

Secondary Reports

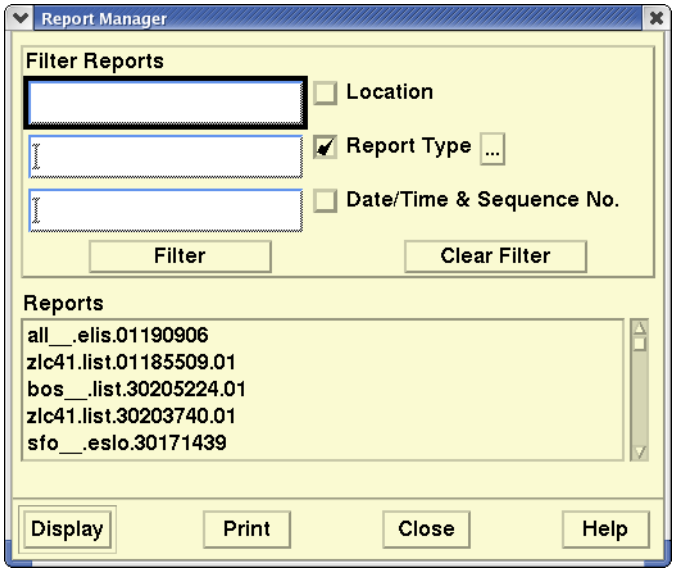
You use the Requests pull-down menu to generate a secondary report.

What To Do
Make a secondary request 1. Click a report name in the Reports window; For example: **dfw_.cnts.16174023,02** 2. Type the name of the secondary command for the same location in the Input Request field. For example: **REQ DFW** 3. Click **Requests** and click **Send Secondary.** 4. Wait until the secondary report is displayed in the Reports window. 5. Click the report name and click **Display**. 6. Click **Print** to send a copy of the report to your printer or **Close** to exit the display window.

Report Manager Command	
The **Report Manager** command lets you find and view reports in the Reports directory.	
	Quick Key Method
1. Pull down the Tools menu by clicking **Tools** on the main menu or pressing **<Alt> T**. 2. Click **Report Manager** or press **M**.	**<Ctrl> ;**
	Semicolon Method
	None

Report Manager Dialog Box

After you click **Report Manager** or press the mnemonic key from the Tools menu, the Report Manager dialog box opens.



You can use the dialog box to display, remove, search, or filter reports in the Reports directory. The lower section of the Report Manager dialog box looks like the Reports window in the Command Line dialog box. In the Report Manager dialog box, however, all reports in the Reports directory appear in

the Reports window, not just those reports generated during the current TSD session.

Report Manager

Item	Description	What you do
Location	Filters reports by location identifier.	Enter the location identifier for an airport, ARTCC, a sector, or fix in the text field to the left of the **Location** button. Note that the Location checkbox is selected when an entry is made in the Location field.
Report Type and List Buttons	Filter reports by type.	Enter a report type, or select one from the list of report types that is displayed when the **Report Type List** button is clicked. Click the appropriate report type, which is displayed in the text field to the left of the Report Types button.
Date/Time	Filter by date and time.	Click the **Date/Time** button and enter your specified timeframe. Your entry must use the following format: ddhhmmss (day/hour/minute/seconds); however, you only need to enter as much of the Date/Time value as is appropriate. That is, enter only the day value to find all reports for a day.
Filter	Searches for all reports or a list of reports filtered to your specifications. If you filter without specifications, all reports in the Reports directory are listed.	Select the filter options that you wish to be used in filtering the list of reports and click the **Filter** button. To display all reports in the Reports directory, click **Filter** without selecting any of the three filter options.
Clear Filter	Removes entries from the filter fields, which are described above.	Click the **Clear Filter** button.
Display	Displays an individual report from the Reports directory.	Click the name of the desired report and click **Display**. After reading the report, you can close it or print it.

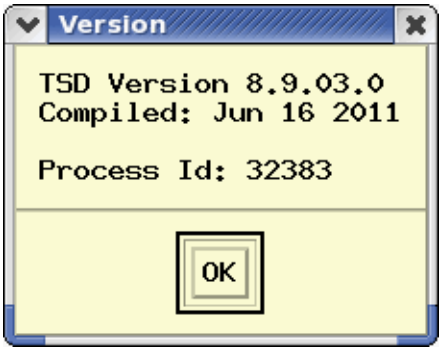
Report Manager

Item	Description	What you do
Print	Prints an individual report from the Reports directory.	Click the name of the desired report and click **Print**. Another dialog box opens with the default print path displayed. You can edit the path to meet your own specifications. Enter the number of copies you want in the Copies field. The default number is 1. Click **OK** to print.

Version Command	
The **Version** command lets you display a dialog box showing what version of the TSD you are currently running and the process Id for the version. The process Id is helpful when troubleshooting the TSD.	
	Quick Key Method
1. Pull down the Tools menu by clicking **Tools** on the main menu or pressing **<Alt> T**. 2. Click **Version** or press **V**.	**None**
	Semicolon Method
	None

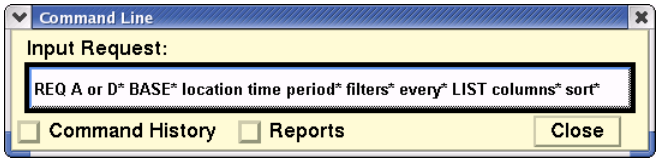
Version Dialog Box

After you click the **Version** command or press the mnemonic key from the Tools menu, the Version dialog box opens. Click **OK** to close the box. The Version command is also available on the Help menu.



6. TSD Semicolon Commands

This chapter covers the TSD command that has a Command Line Interface.

Request List	
The **Request List** command allows you to request a flight list report that gives you a list of various types of flight information in columns. You define the standard or default report by specifying a location. In addition, you may use filter options and format options to specify optional information and formatting criteria.	
Press **;** and enter your command using the following syntax:  (* Indicates optional entry) **Note:** The keyword **BASE** is optional and can only be used with sectors. For example: **REQ DFW 4/12 2000 0000 AIRL EVERY 30 LIST SORT DEST** Press **<Enter>.**	
	Quick Key Method
None	None

Specifying Arrivals or Departures

Enter **A** or **D** to limit the report to arrivals or departures, respectively. If you do not enter **A** or **D**, the report will include both.

Specifying the Location

To specify the location for a **Request List** command you must at least include a Primary Place of Interest (PPI). This may be the FAA designator for an airport, ARTCC, sector, high fix, low fix, or superhigh fix. If the report is for a fix or a sector, only a PPI is allowed; however, for airports and sectors, Secondary Places of Interest (SPI) may be added. Multiple PPIs and SPIs may be designated by enclosing the places in brackets. If you include an SPI, the report will be limited to flights traveling between any PPI and any SPI. You may also exclude airports and ARTCCs from either category by using a **–** sign.

Note: If you specify both a primary and a secondary place of interest in your location designator (see the next section), the **A** or **D** refers to arrivals or departures at the primary place of interest.

The following table describes the various methods you may use to designate locations. This table does not show all PPI/SPI combinations; for more information, see Appendix A, page A-6.

Location Designators

Element	Description	What you do	Example
Airport and ARTCC	Flights going to and from one element (one PPI).	Enter the FAA Designator.	**REQ DFW**
	Flights going to and from more than one element (more than one PPI).	Enter each FAA designator, all within brackets or parentheses.	**REQ [BWI DCA]**
	Flights between a primary element and selected others (flights between a PPI and SPIs).	Enter the primary FAA designator, followed by the secondary FAA designator (within brackets if more than one).	**REQ ZBW [DFW LAX]**
	Flights between a primary element and anywhere except selected others (exclusions from the SPI).	Enter the primary FAA designator, and the secondary elements, each preceded by a minus sign (within brackets if more than one).	**REQ JFK [-DFW-ATL]**
Sector	Flights passing through a sector.	Enter the FAA designator.	**REQ ZDV32 or** **REQ [ZFW28 ZFW92]**
High fix	Flights passing a high fix.	Enter **HIFIX**, and the FAA designator.	**REQ HIFIX GUP or** **REQ [HIFIX GUP HIFIX ABQ]**
Low fix	Flights passing a low fix.	Enter **LOFIX**, and the FAA designator.	**REQ LOFIX GUP or REQ [LOFIX TAS LOFIX SAF]**
Superhigh fix	Flights passing a superhigh fix.	Enter **SUFIX**, and the FAA designator.	**REQ SUFIX GUP REQ [SUFIX LFK SUFIX LCH]**

Note: The flight level designator that you enter with a fix must correspond to the actual airspace associated with that fix. For

example, the command **REQ SUFIX LIN** is an invalid request, because there is no superhigh sector associated with **LIN**. Entering an invalid designator results in a report with no data, or with zeroes.

Specifying Data Source

The default data source for request commands is the Traffic Database (TDB). Because the TDB is the default, you cannot specify the TDB as the data source in a request command. If you want a different source of data, you can specify one of the following.

- OAG allows you to specify that the report use only schedule data as the data source.
- BASE allows you to show the flight count report based on baseline sectors rather than current sectors.
- FCATA allows you to show the flight count or flight list report based on the flights predicted to traverse the FEA/FCA.

For more information on these data sources, see Appendix A, page A-2.

If you wish your reports to come from Hubsite data rather than your own local server, specify HUBSITE or HUB in your requests.

Request List Options

Time Period

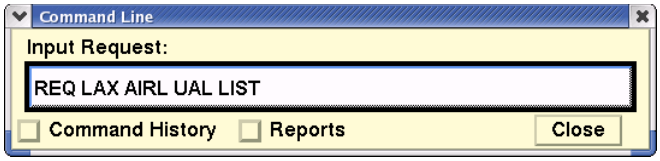
The time period option allows you to change the date and/or the time span for the report data. By default, the report covers a time period of five hours beginning at the current time on the current day. If you use this option with other command options, you must place it first (immediately after the airport) in the command line. For more information about using dates and times, see Appendix A, page A-9.

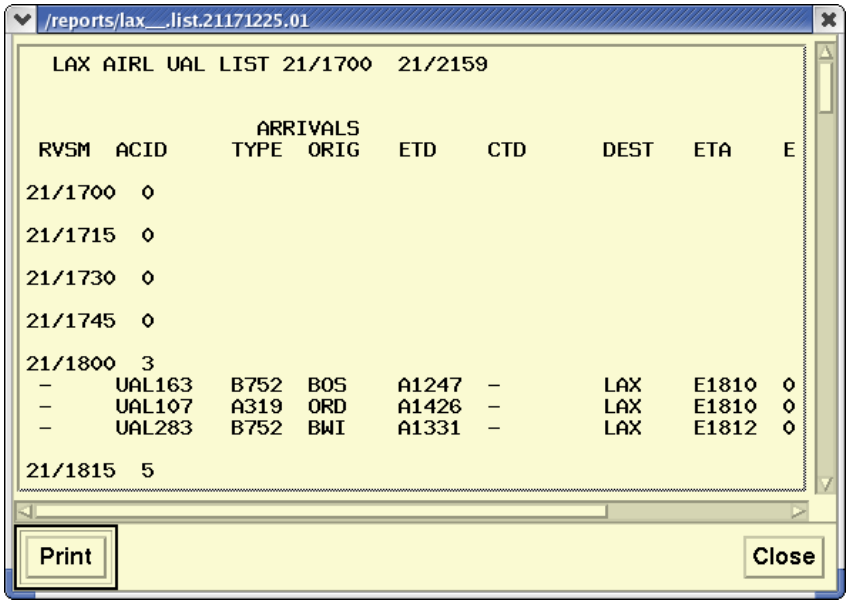
Filter

The default flight counts report covers all flights going to and from the location you indicate. However you can filter the information to reflect only specific flights you want included in the report. There are many options available, and you may use as many as you want for your purposes. For a complete description, see Appendix A, page A-12.

Using Filter Option

This following sample report retains the default data, but filters information for only United Airline flights going to and from Los Angeles Airport.





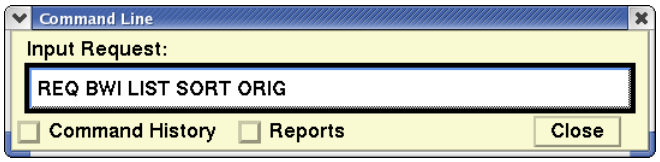
Every

The default flight counts report displays flight data in 15-minute intervals. However, you can use the every option (also known as the time interval option) to specify a different time interval format. For more information, see Appendix A, page A-25.

Columns and Sort Options

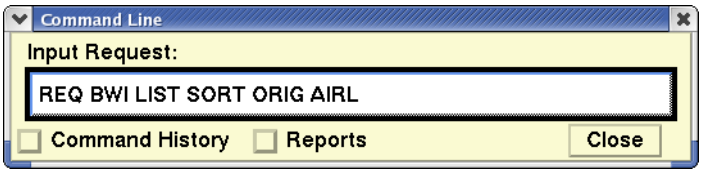
The flight list report displays columns of information by default in the following order: **ACID**, **TYPE**, **ORIG**, **ETD**, **DEST**, **ETA**, **ETE**, and **CENTER**. If you want to override the default format, you can request other columns of information and change the order in which you want them to be displayed. To do this, specify the other columns after the keyword list.

The order in which you list the columns determines the order in which the columns appear on the report. For instance, if you wanted to display a flight list report for Baltimore/Washington International Airport and you wanted columns of information (reading left to right) on the aircraft identifier, aircraft type, combined aircraft/equipment type, equipment type, origin airport, destination airport, and remarks data, your command would look like this:



By default, the list of flights appears in chronological order under **ETA** (for arrivals) and **ETD** (for departures) for each 15-minute interval. You can specify that the list be ordered under a different category by using the sort option. The items under each category are sorted in alphabetical, numerical, or chronological order, according to what is appropriate for that category.

The first item you enter after the word **SORT** determines the primary sort criterion. If you enter a second item, that item becomes the secondary sort within the first criterion, and so on. For example, to show lists of flights for BWI organized first alphabetically according to origin airports, and next alphabetically by airline within the origin category, you would enter this command:



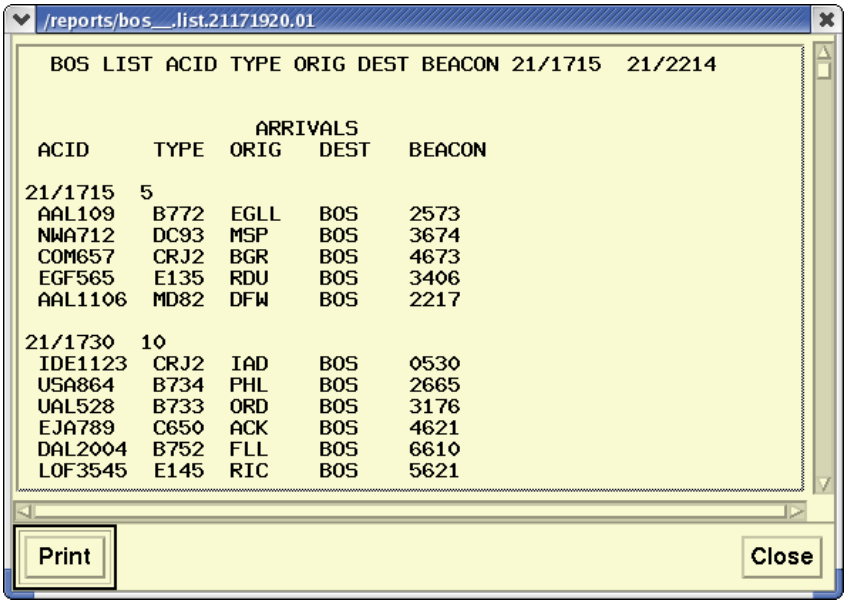
The third and subsequent sort criterion would have similar results. The system allows you to sort up to ten levels deep.

You can sort on most of the column options. The Columns and Sort Options table lists all of the column options and specifies which ones are not available as sort options. Generally, each entry represents one column; however, some entries cause two columns to be displayed.

> **Note:** The Column and Sort Options table lists all of the available columns and sort options. This table is available in Appendix A on page A-18.

Using Columns Option

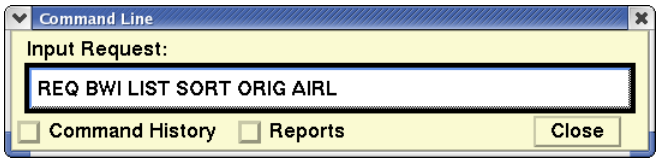
For this sample the default format has been altered by requesting other column headers. Note that the columns appear left to right in the order they were specified in the following command:



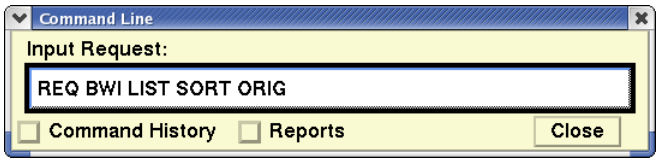
Using Sort Option

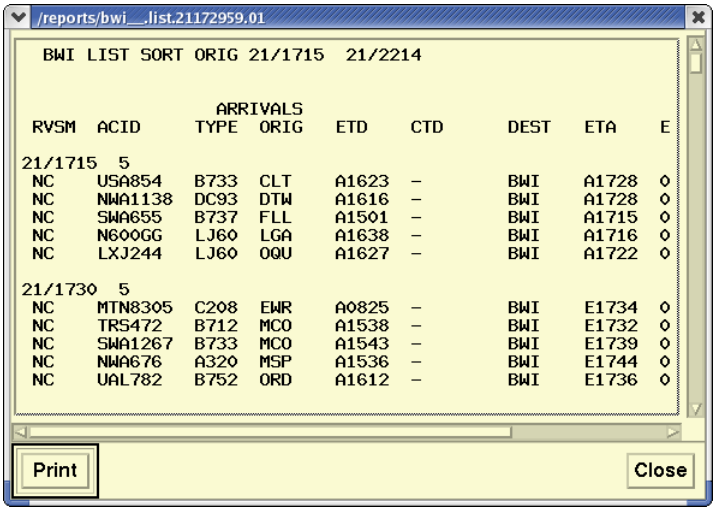
By default, the list of flights appears in chronological order under ETA (for arrivals) and ETD (for departures) for each 15-minute interval. You can specify that the list be ordered under a different category by using the sort option. The items under each category are sorted in alphabetical, numerical, or chronological order, according to what is appropriate for that category.

The first item you enter after the word SORT determines the primary sort criterion. If you enter a second item, that item becomes the secondary sort within the first criterion, and so on. For example, to show lists of flights for BWI organized first alphabetically according to origin airports, and next alphabetically by airline within the origin category, you would enter this command:



The third and subsequent sort criteria would have similar results. The system allows you to sort up to ten levels deep. You can sort on most of the column options. See the Columns and Sort Options in Appendix A on page A-18 for a chart which lists all of the column options and specifies which ones are not available as sort options. In the following sample the default columns are used, but the flights are sorted alphabetically by the airport of origin within each default time interval.

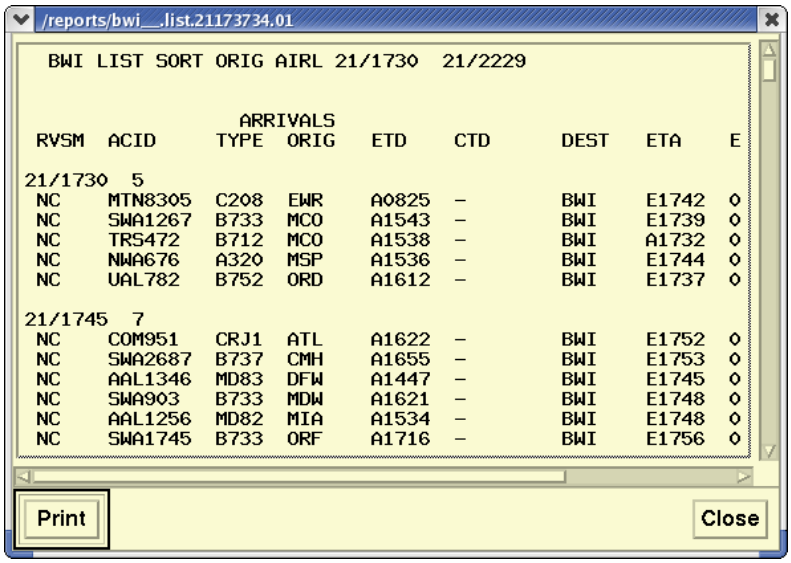




Displaying the Reports

Immediately after you issue the command, you receive a confirmation message indicating that the request has been sent. At this time you may continue to use other TSD functions. After a short time, the program emits a beep and displays a dialog box like the following.

Click **Display** to see the report.



Reading the Reports

The flight list report separates report information into arrivals and departures. Arrivals are listed at the top, and departures are listed below. Scroll down if necessary, to view all of the data. The header echoes the request you typed in, followed by the day of the month, and the user-defined time stamp. The report groups flight data in 15-minute intervals (UTC) beginning at the current time. The number next to each time indicates the flight count for that interval. The columns of data for each flight are as follows:

- **ACID** The unique alphanumeric aircraft identifier (AAL101, for example).
- **TYPE** The flight's aircraft type (DC10 or B727, for example).
- **ORIG** The FAA designator showing the origin airport. If you are reviewing the departure portion of the report, this column should be the original airport name (DFW, for example).
- **ETD** Estimated time of departure, based on best available time from among the other departure time types.

  A prefix is used to indicate the source of the data that is used to set the ETD; the user can judge the reliability of the data partly on the basis of the prefix, explained below.

  - S - Scheduled. TFMS has received no flight plan. Data is based on the OAG and/or user-provided schedule updates.
  - P - Proposed. TFMS has received a NAS flight plan.
  - T - Taxi. TFMS has received a message indicating the flight has pushed off the gate.
  - A - Active. TFMS has received a NAS or user-provided departure message.
  - E - Estimated. TFMS has received a message indicating the flight was active, but no departure message was received.
  - R - The historical route has been replaced by the assigned route.
- **CTD** Stands for controlled time of departure. Formerly CGTD.
- **DEST** The FAA designator showing the destination airport. If you are reviewing the arrival portion of the report, this column should be the original airport name (DFW, for example).
- **ETA** The estimated time of arrival based on the best available time data. The ETA is marked with one of the following prefixes to indicate whether the flight has actually arrived:
  - **A** Actual arrival time (completed flight)
  - **E** Estimated arrival time (proposed or active flight)
- **ETE** The estimated time en route, expressed in minutes.

- **DCENTR or ACENTR**
  In the arrival section, the FAA designator showing the departure ARTCC. In the departure section, the FAA designator showing the arrival ARTCC.
- **BEACON** Beacon code. A four-digit transponder code assigned to an aircraft by a NAS center.

Secondary Requests

Secondary requests allow you to use the report name to quickly request additional reports with different specifications for the same location specified in the original report. This feature is very useful when you need detailed information for a specific airport.

Secondary requests can be made from any original report except for arrival delay prediction (ARRD) reports. However, to make a secondary request, you must use the **Request List** command. (The resulting secondary report will be either a flight counts or flight list report.) For information about using secondary requests see Appendix A, page A-26.

7. Quick Keys

Function Name	Quick Key
Airports - All*	**Y**
Airports - Pacing*	**P**
Airways - Jet*	**J**
Airways - Victor*	**V**
Alerts	**%**
Alerts Report and FEA/FCA Report	**R**
ARTCCs*	**A**
Areas - Alert*	**[A**
Areas – Prohibited*	**[P**
Areas – Restricted*	**[R**
Areas - Warning*	**[W**
Bar Chart for Alerts and Bar Chart for FEA/FCA**	**C**
Boundaries*	**B**
Capture (Snapshot)	**<PrintScrn>**
Command Line - Close	**<Esc>**
Command Line - Display	**;**
Command Line - Display	**:**
Data Blocks	**|**
Delete Flight Icon	****
Examine Alert and Examine FEA/FCA	**E**
Examine Flights - Alerts and Examine Flights - FEA/FCA	**=**
Fixes - Arrival*	**F2**
Fixes – Departure*	**F3**
Fixes - Enroute*	**F8**
Flights – Find	**@**

Function Name	Quick Key
Help - TSD	**F1**
History (Trace)	**_**
Initialize	**I**
Interrupt Script Processing	**<Ctrl><End>**
Last TZ	*****
Lat/Lon Grid	**[L**
Lat/Lon Point	**.**
Lead Lines	**/**
Map Labels - All*	**~**
MOAs*	**[M**
Move	**M**
NAVAIDS - High*	**F4**
NAVAIDS - Low*	**F5**
NAVAIDS - Other*	**F7**
NAVAIDS - Terminal*	**F6**
Quit	**Q**
Quit (without Confirm dbox)	**<Ctrl>Q**
Radar Tops	**T**
Range Rings - Create*	**<Insert>**
Range Rings - Hide	**<Delete>**
Range Rings - Labels	**<Ctrl><Insert>**
Recall	**K**
Reconnect	**"**
Redraw	**D**
Remove Lat/Lon point	**D**
Report Manager	**<Ctrl> ;**
Route - Draw	**-**

Function Name	Quick Key
Route - Show	**&**
Sectors - High*	**H**
Sectors - Low*	**L**
Sectors - Oceanic*	**O**
Sectors - Superhigh*	**S**

Show Map Item	**#**
Show Org/Dest	**+**
Snapshot	**<PrintScrn>**
SUA - Hide All	**[-**
SUA - Show All	**[+**

TRACONS*..... **^**

Undo Move/Zoom ..... **X**

Unzoom..... **U**

Weather ..... **W**

Zoom ..... **Z**

* To toggle labels, press <**Ctrl**>, then the key(s)

** Timeline must be displayed

The following section lists quick keys in alphabetical and numerical order by quick key.

By Quick Key Order

Function Name	Quick Key(s)		Description
ARTCCs *	**A**	**<Ctrl> A**	Toggles display of ARTCC boundaries
Areas - Alert *	**[A**		Toggles outlines of all Special Use Areas (SUAs).
Boundaries*	**B**		Toggles the display of perimeters of all the continents, United States and national boundaries.
Bar Chart for Alerts and Bar Chart for FEA/ FCA**	**C**		For Alerts: Toggles a graph that compares demands for an airport, sector, or fix with its traffic thresholds. For FEA/FCA: Toggles display of the bar chart
Redraw Or Remove Lat/Lon Point	**D**		Refreshes the TSD screen Or Removes Lat/Lon coordinates from display
Examine Alert and Examine FEA/FCA	**E**		Opens Alert or FEA/FCA Timeline bar for the element in focus.
Flights	**F**		Toggles current display of flight icons
Turn Green	**G**		Toggles the color of the item bar segment to let other users know an alert situation is being resolved.
Sectors - High *	**H**	**<Ctrl> H**	Toggles overlay of high sector boundaries.
Initialize	**I**		Restores the TSD to its default state.
Airways - Jet *	**J**	**<Ctrl> J**	Toggles jet routes

By Quick Key Order (Continued)

Function Name	Quick Key(s)		Description
Recall	**K**		Changes the current TSD to customized configuration, previously saved to an adaptation file.
Sectors - Low *	**L**	**<Ctrl> L**	Toggles overlay of low sector boundaries.
Lat/Lon Grid*	**[L**		Toggle display of labels of latitude and longitude lines.
Move	**M**		Moves the center point of the display to the location of the pointer.
MOAs*	**[M**		Toggles display of all Military Operations Areas.
Reroute - Create	**N**		Defines and displays reroutes.
Sectors- Oceanic *	**O**	**<Ctrl> O**	Toggles overlay of oceanic sector boundaries.
Airports - Pacing *	**P**	**<Ctrl> P**	Toggles pacing airport codes
Areas - Prohibited *	**[P**		Toggles the outline of all prohibited areas on the TSD.
Capture	**<PrintScrn>**		Takes screen shots of the TSD.
Quit	**Q**	**<Ctrl> Q**	Shuts down the TSD. **<Ctrl>Q** shuts down the TSD without opening the Confirm Quit dialog box.
Alerts Report and FEA/FCA Report	**R**		For Alerts: creates a flight list for any sector, fix, or airport being examined. For FEA/FCA: creates a flight list for any FEA/FCA being examined.
Areas - Restricted *	**[R**		Toggles all restricted areas on the TSD.
Sectors - Superhigh *	**S**	**<Ctrl> S**	Toggles overlay of superhigh sector boundaries.

By Quick Key Order (Continued)

Function Name	Quick Key(s)		Description
Radar Tops	**T**		Displays the altitude of cloud tops in precipitation areas.
Unzoom	**U**		Returns the TSD display to the settings before zooming in.
Airways - Victor *	**V**	**<Ctrl> V**	Toggles Victor airways
Weather	**W**		Toggles display of weather data.
Areas - Warning *	**[W**	**<Ctrl> [W**	Toggles all prohibited areas on the TSD.
Undo Move/Zoom	**X**		Returns to the original center point of the TSD display.
Airports - All *	**Y**	**<Ctrl> Y**	Toggles display of all airports
Zoom	**Z**		Changes the center point of the TSD and reduces the scope.
Show Org/Dest	**+**		Toggles origin/destination on data blocks.
SUAs - Show All	**[+**	**<Ctrl> [+**	Outlines all Special Use Areas.
History (Trace)	**_**		Toggles history (trace) data on the display. Flight icons display with trace tracks to show most heavily traveled flight paths
SUAs - Hide All	**[-**	**<Ctrl> [-**	Removes outlines of all Special Use Areas.
Command Line - Close	**<Esc>**		Closes the Command Line dialog box.
Range Rings - Create *	**<Insert>**		Displays concentric rings around a specified airport, fix,navaid, lat/lon point, or fix-radial-distance.
Range Rings - Hide	**<Delete>**		Deletes range rings.

By Quick Key Order (Continued)

Function Name	Quick Key(s)		Description
Interrupt Script Processing	**<Ctrl><End>**		Stops the script from processing.
Command Line - Display	**; or :**		Opens the Command Line dialog box.
Lat/Lon Point	**.**		Displays the latitude and longitude coordinates for the geographical location where the cursor currently points.
Alerts	**%**		Toggles alert icons for airports, fixes, and sectors.
Help - TSD	**F1**		Opens help files for the TSD.
Fixes - Arrival *	**F2**		Toggles overlay of arrival fix designators
Fixes - Departure *	**F3**		Toggles overlay of departure fix designators
NAVAIDS - High *	**F4**		Toggles overlay of high navigational aids.
NAVAIDS - Low *	**F5**		Toggles overlay of low navigational aids.
NAVAIDS - Other *	**F7**		Toggles overlay of other navigational aids.
NAVAIDS - Terminal *	**F6**		Toggles overlay of terminal navigational aids.
Fixes - Enroute *	**F8**		Toggles overlay of enroute fix designators
Examine Flights - Alerts and Examine Flights - FEA/FCA	**=**		Displays current locations of flights scheduled to arrive at, depart from, or traverse the element being examined in the Alerts or FEA/FCA time line.
Show Map Item	**#**		Locates and displays map
Map Labels -All*	**~**	**~**	Toggles all map item labels.
TRACONS*	**^**	**<Ctrl> ^**	Toggles display of TRACON boundaries.

By Quick Key Order (Continued)

Function Name	Quick Key(s)		Description
Last TZ	*		Toggles last reported position of all displayed flights and draws a line from that point to the appropriate flight icon.
Flights - Find	@		Displays a specified flight with its data block
Delete Flight Icon	\		Removes a single flight icon from the display.
Lead Lines	/		Shows the projected path of all displayed flights based on the current position and speed.
Data Blocks	|		Toggles on all data blocks
Route -Show	&		Toggles route data on the data blocks.
Route - Draw	-		Toggles the routes line drawings on the data block.
Report Manager	**<Ctrl> ;**		Toggles the Report Manager dialog box on and off the display.
Reconnect	"		Reconnects all network addresses used by your TSD.

* To toggle labels, press <**Ctrl**>, then the key(s)

In this section the quick keys are presented as they correspond to the TSD menu items and dialog boxes.

Display Menu Commands

The following table lists the quick keys that correspond to the commands on the TSD Display menu.

Function Name	Quick Keys	Results
Quit	**Q**	Opens Confirm Quit dialog box
Quit	**<Ctrl> Q**	Quit TSD without Confirm Quit dialog box
Recall	**K**	Opens Recall file dialog box
Initialize	**I**	Opens Initialize dialog box
Redraw	**D**	Refreshes the screen

Maps Menu Commands

The following tables list the quick keys that correspond to commands on the Maps menu.

Function Name	Quick Keys	Results
Move	**M**	Moves center point of display to pointer location
Zoom	**Z**	Magnifies center point of display by a factor of 2
Unzoom	**U**	Acts to toggle with Zoom
Undo move/ zoom	**X**	Returns to original center point
Range Rings - Create*	**<Insert>**	Displays range rings around pointer location
Range Rings - Hide	**<Delete>**	Removes range rings
Range Ring Labels	**<Ctrl><Insert>**	Displays labels representing distance between rings
Show Map item	**#**	Opens Show Map Item dialog box
Lat/Lon Point	**.**	Displays latitude/longitude coordinates at pointer location

Remove Lat/Lon point	**D**	Removes latitude/longitude coordinates

Map Overlays Dialog Box

The following table lists the quick keys that toggle map overlays and their labels on and off.

Map Items	Quick Key	Labels
Map Labels - All	**~**	
Airports - Pacing	**P**	**<Ctrl> P**
Airports - All	**Y**	**<Ctrl> Y**
NAVAIDs - High	**F4**	**<Ctrl> F4**
NAVAIDs - Low	**F5**	**<Ctrl> F5**
NAVAIDs - Terminal	**F6**	
NAVAIDs- Other	**F7**	**<Ctrl> F7**
Fixes - Arrival	**F2**	**<Ctrl> F2**
Fixes - Departure	**F3**	**<Ctrl> F3**
Fixes - Enroute	**F8**	**<Ctrl> F8**
Airways - Jet	**J**	**<Ctrl> J**
Airways - Victor	**V**	**<Ctrl> V**
Boundaries	**B**	
Lat/Lon Grid	**[L**	
ARTCCs	**A**	**<Ctrl> A**
Sectors - Low	**L**	**<Ctrl> L**
Sectors - -High	**H**	**<Ctrl> H**
Sectors - Superhigh	**S**	**<Ctrl> S**
Sectors - Oceanic	**O**	**<Ctrl> O**
TRACONs	**^**	**<Ctrl> ^**
Areas - Alert	**[A**	**<Ctrl> [A**
MOAs	**[M**	**<Ctrl> [M**
Areas - Prohibited	**[P**	**<Ctrl> [P**
Areas - Restricted	**[R**	**<Ctrl> [R**
Areas - Warning	**[W**	**<Ctrl> [W**
SUAs - Show All	**[+**	**<Ctrl> [+**
SUAs - Hide All	**[`**	**<Ctrl> [`**

Flights Menu

The following table lists the quick keys that correspond to the commands on the TSD Flights menu.

Function Name	Quick Keys	Results
Flights	**F**	Toggles current display of flight icons.
Flight - Find	**@**	Displays specified flight with its data block.
Delete Flight Icon	****	Removes a single flight icon from the display.

Customize Flight Display Dialog Box

The following table lists the quick keys that correspond to the Customize Flight Display dialog box.

Function Name	Quick Keys	Results
Data Blocks	**|**	Toggles on all data blocks.
Show Org/Dest	**+**	Toggles origin/destination lines on the data blocks.
Route - Show	**&**	Toggles route data on the data blocks
Route - Draw	**-**	Toggles the routes line drawings on the data block.
History	**–**	Toggles history (trace) data off the display.
Last TZ	*****	Toggles last TZ data off the display
Lead Lines	**/**	Toggles last lead lines off the display

Alerts Menu

The following table lists the quick keys that correspond to the commands on the TSD Alerts menu.

Function Name	Quick Keys	Results
Alerts	**%**	Toggles live alerts on and off.
Examine Alert	**E**	Opens the NAS Monitor for the element in focus.
Examine Flights	**=**	Displays current locations of flights scheduled to arrive at, depart from, or traverse the element being examined in the Alerts time line.
Bar Chart	**C**	Toggles the display of the bar chart that compares the demands for an airport, sector, or fix with its traffic thresholds. If multiple elements are being examined, position the pointer on the Timeline or Bar Chart of the desired element before pressing the quick key.
Alerts Report	**R**	Creates a flight list for any airport, sector, or fix you are examining with Examine Alerts.

Weather Menu

The following table lists the quick keys that correspond to the commands on the TSD Weather menu.

Function Name	Quick Keys	Results
Weather	**W**	Toggles weather overlays currently selected on the Weather Maps dialog box.
Radar Tops	**T**	Toggles the Radar Tops weather overlay.

FEA/FCA Menu

The following table lists the quick keys that correspond to the commands on the TSD FEA/FCA menu.

Function Name	Quick Keys	Results
Examine FEA/FCA	**E**	Opens the FEA/FCA Timeline bar for the element where the pointer is pointed
Examine Flights	**=**	Displays current locations of flights scheduled to arrive at, depart from, or traverse the element being examined in the FEA/FCA time line.
Display	**+**	Toggles display of FEA/FCA flights
FEA/FCA Report	**R**	Creates a flight list for any FEA/FCA you are examining.
Bar Chart for FEA/FCA	**C**	Toggles the display of the bar chart. If multiple elements are being examined, position the pointer on the Timeline or Bar Chart of the desired element before pressing the quick key.

Tools Menu

The following table lists the quick keys that correspond to the commands on the TSD Tools menu.

Function Name	Quick Keys	Results
Reconnect	**"**	Opens a Command Line dialog box
Command Line	**;**	Opens a Command Line dialog box
Interrupt Script Processing	**<Ctrl><End>**	Stops script processing
Report Manager	**<Ctrl> ;**	Toggles the Report Manager dialog box on and off the display

TFMS Basic Commands

The following table lists the quick keys that correspond to the basic commands used on the TSD.

Function Name	Quick Keys	Results
Capture (Snapshot)	**<PrintScrn>**	Takes screen shots of the TSD.
Help - TSD	**F1**	Opens help files for the TSD

Appendix A: Request Command Reference

This appendix describes the following data sources, options and features, which are common to several or all of the **Request** commands:

Data Source Alternatives

- OAG data page A-2
- Base (baseline) data page A-2
- FCATA data page A-4

Request Command Options

- Arrivals/Departures option page A-5
- Multiple Locations page A-6
- Time Period option page A-9
- Filter options page A-12
- Count options page A-16
- Column and Sort options page A-18
- Remarks Keywords page A-22
- Equipment Types page A-23
- Every option page A-25
- Setlen option page A-25
- Secondary Requests page A-26
- Request Scripts page A-28

You should use this appendix in conjunction with the references for the individual **Request** commands in Chapter Six of this manual. Chapter Six includes a complete description of each command and options that are unique to individual commands.

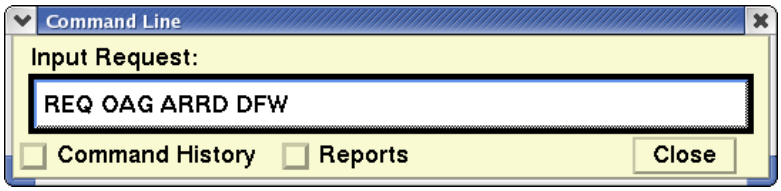
Data Source Alternatives

The default data source for request commands is the Traffic Database (TDB). Because the TDB is the default, you cannot specify the TDB as the data source in a request command. If you want a different source of data, you can specify one of the following:

OAG

The **OAG** data source applies only to **Request ARRD**, **Request Count**, **Request List**, and **Request Listo**.

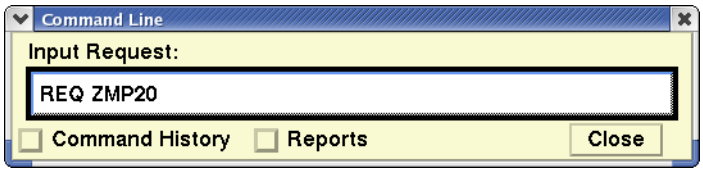
You can specify OAG data (from the Schedule Database) as the source of data regardless of the time of the request. (Normally, data comes from the Schedule Database only if the time period for your request is beyond the scope of the Flight Database; that is, if it is more than 15 hours in the future.) To specify the OAG as the data source, type **OAG** immediately after the word **REQ**. For example:



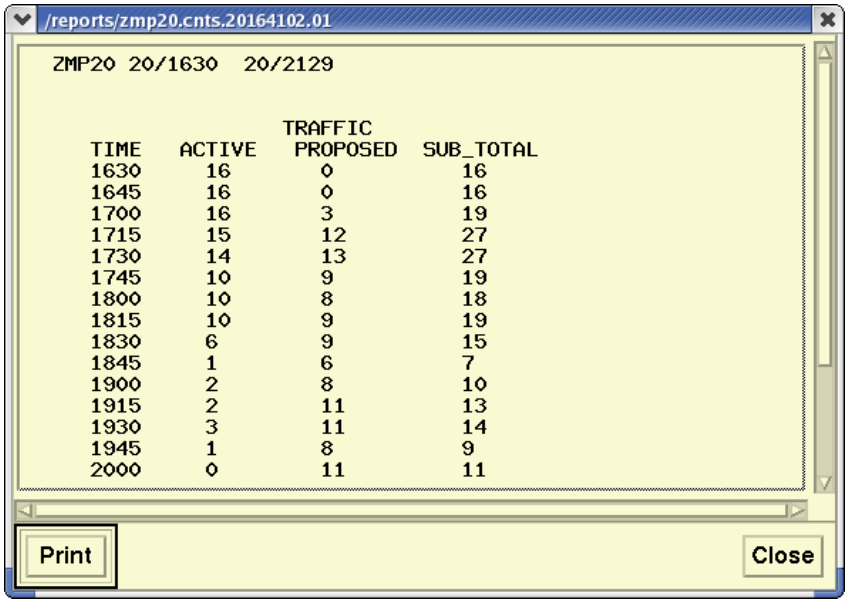
BASE

The Base (Baseline) data source allows you to show the flight count or flight list report based on baseline sectors rather than current sectors. Current sectors are shown by default in the flight count or list reports.

The following example provides a request for a sector flight count. Without a data source identified, the report will provide data on the current sectors.

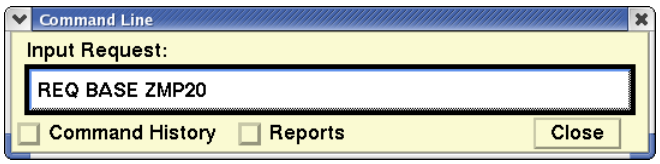


The default flight count report is shown below.

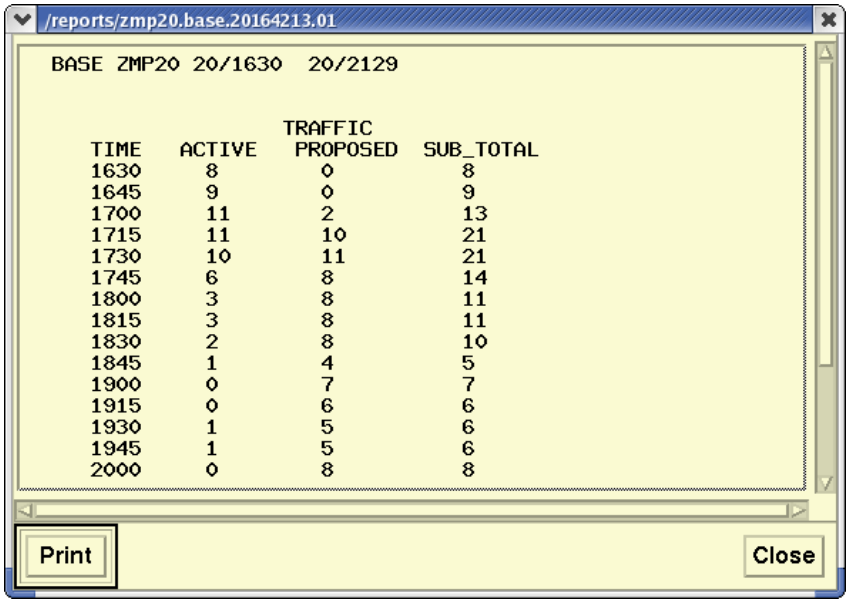


TIME	ACTIVE	TRAFFIC PROPOSED	SUB_TOTAL
1630	16	0	16
1645	16	0	16
1700	16	3	19
1715	15	12	27
1730	14	13	27
1745	10	9	19
1800	10	8	18
1815	10	9	19
1830	6	9	15
1845	1	6	7
1900	2	8	10
1915	2	11	13
1930	3	11	14
1945	1	8	9
2000	0	11	11

Adding the word **BASE** before the sector name allows you to show the flight count report based on Baseline sectors. The following sample shows a request for a flight count of sector ZMP20 in its baseline configuration.



The baseline flight count report is shown below.



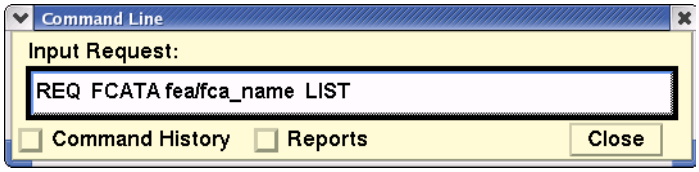
TIME	ACTIVE	TRAFFIC PROPOSED	SUB_TOTAL
1630	8	0	8
1645	9	0	9
1700	11	2	13
1715	11	10	21
1730	10	11	21
1745	6	8	14
1800	3	8	11
1815	3	8	11
1830	2	8	10
1845	1	4	5
1900	0	7	7
1915	0	6	6
1930	1	5	6
1945	1	5	6
2000	0	8	8

To request a default flight list using current sector data, you would issue a command like the following: **REQ ZMP20 LIST**. To request a flight list based on Baseline sector data, you would issue a command like the following: **REQ BASE ZMP20 LIST**.

FCATA

The FCATA data source allows you to show the flight count or flight list report based on the flights predicted to traverse the FEA/FCA.

To specify the FCATA as the source, type **FCATA** immediately after the word **REQ**. For example:



Secondary Option

Selecting FCATA as the data source allows you to obtain a report of the flights predicted to traverse the FEA/FCA that match one or more of the secondary filters using the following formats.

REQ FCATA fea/fcaname date (mm/dd) start_time (hhmm) end_time (hhmm))

SECONDARY name(s) of secondary filters

REQ FCATA fea/fcaname date (mm/dd) start time (hhmm) end time (hhmm)

filters **SECONDARY** name(s) of secondary filters **LIST**

Request command filter parameters must be specified before the **SECONDARY** keyword, as in the following examples.

REQ FCATA FCA_DEN 0622 0130 0530 SECONDARY SLC_DEP
REQ FCATA FCA_DEN 0622 0130 0530 SECONDARY SLC_DEP LIST

You can enter options with requests using FCATA in the same way that you would in other Request commands. For information on using options and additional information about the specific reports, see the Request List Options section, starting below.

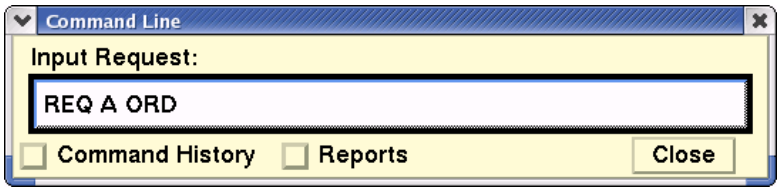
If you wish your reports to come from Hubsite data rather than your own local server, specify HUBSITE or HUB in your requests.

Request Report Options

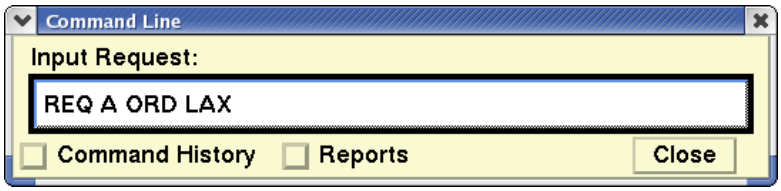
Arrivals/Departures Option

This section applies to **Request Count, Request List**, **Request Listo**, and **Request VT**.

If you are requesting a report on an airport or Air Route Traffic Control Center (ARTCC), you can limit the report to arrivals only or departures only by entering **A** or **D** on the command line. If you do not enter **A** or **D**, the report includes both. If you include this option, it should appear immediately before the location identifier, as shown here:



If you specify both a primary and a secondary place of interest in your location designator (see the next section), the **A** or **D** refers to arrivals or departures at the primary place of interest. For example, the following command is requesting a report for arrivals to ORD which are departing from LAX:



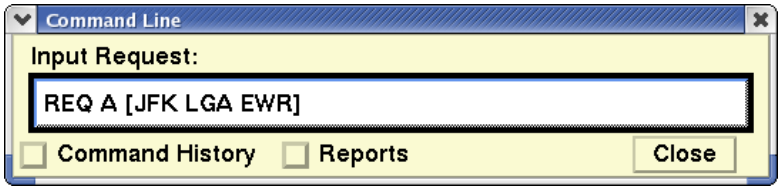
Multiple Locations

For flight counts, flight list, and time verification reports, you can specify multiple locations by enclosing them in brackets. This section applies to **Request Count**, **Request List**, **Request Listo**, and **Request VT**.

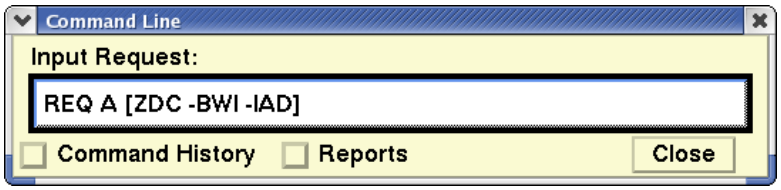
The location in a **Request** command has a two-part structure; a primary place of interest, and a secondary place of interest. These terms are described below.

Primary Place of Interest (PPI)—required

This is the location for which the report is being requested. It may consist of a single location or multiple locations. If the PPI consists of more than one location name, enclose the entire PPI expression in a single set of brackets, for example:



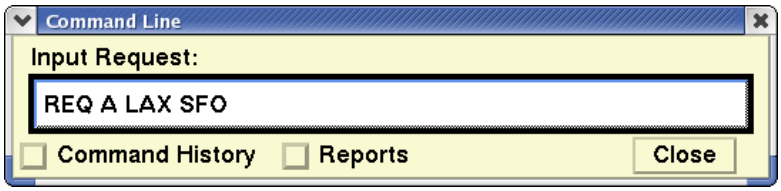
In this example, the report will show all flights arriving at any of the three airports listed. If the first element in the PPI expression is an ARTCC, you may exclude one or more airports within that ARTCC by preceding the airport name with a minus sign (-), for example:



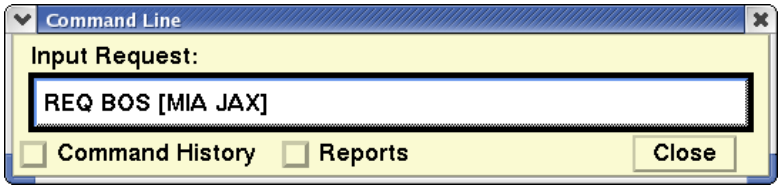
In this example, the report will show all flights arriving at the airport in the ZDC center except BWI or IAD. The minus (-) sign does not work with fixes or sectors.

Secondary Place of Interest (SPI)—optional

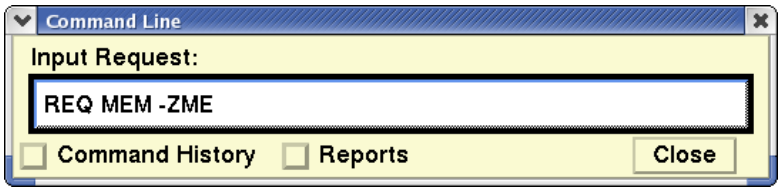
The SPI expression follows the PPI expression and limits the flights included in the report. If an SPI is included, the report will include only those flights that travel between any PPI and any SPI location. The SPI may be a single location name, for example:



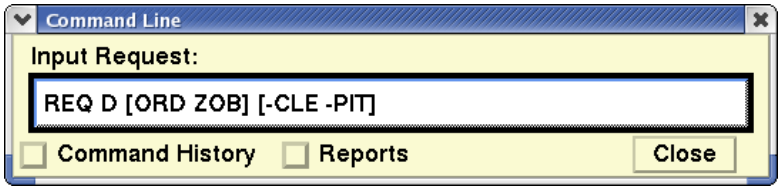
In this example, the report will show all flights arriving at LAX (the PPI) from SFO (the SPI). If the SPI consists of more than one location name, enclose the entire SPI expression in brackets, for example:



In this example, the report will show all flights between BOS and MIA and between BOS and JAX. If each location name in the SPI expression is preceded by a minus sign (-), the report will be for flights between the PPI and any location except those listed in the SPI. The next two examples show the use of the minus sign to exclude airports and ARTCCs.



In this example, the report will include flights between MEM and any airport except those in the ZME center. In the next example, the report will include all flights departing from ORD and all flights departing from ZOB, except those that will be arriving at CLE or PIT.

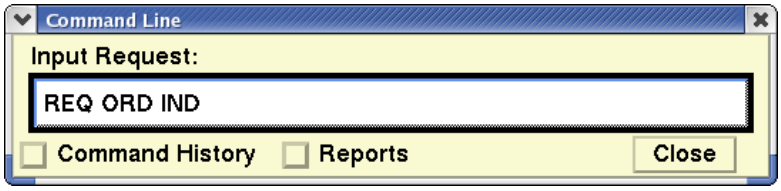


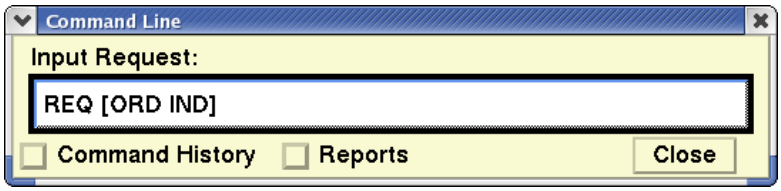
Note: The minus (-) sign does not work with fixes and sectors.

Using Brackets

As the preceding examples show, you must use brackets to group locations together into PPI and SPI expressions whenever you have multiple locations in either expression. Locations with and without minus signs (-) may appear in the same set of brackets. Never use more than two sets of brackets in the same request. Only one set of brackets may be used with fixes or sectors, and the minus (-) sign does not apply.

The following two examples illustrate the importance of using brackets to distinguish between PPI and SPI expressions. In the first example, both airports are part of the PPI expression, and all flights to and from ORD or IND are included in the report. In the second example, IND is considered an SPI and all flights between ORD and IND are included.





Time Period Option

This section applies to all Request commands except Request LIFP.

Days and Dates

Specifying days and dates does not apply to **Request ARRD** or **Request Fixl**.

By default, each of these reports covers a time period of five hours beginning at the current time on the current day. The time period option allows you to change these default values for report data.

You may specify a different day. Days can be entered in any one of the following ways:

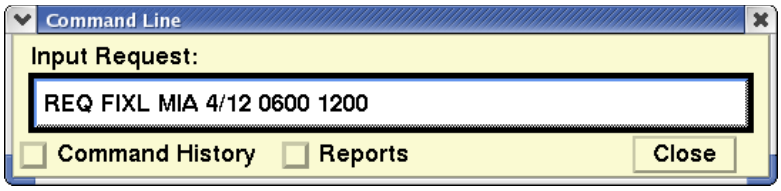
- Numerical (mm/dd) 4/12
- Abbreviated month NOV. 23
- Abbreviated Day of week WED.
- Yesterday YESTERDAY
- Tomorrow TOMORROW

Hourly Periods

You may also specify an hourly period within the current day, which must be expressed in terms of a four-digit Universal Coordinated Time (UTC). Time periods can be entered with any one of the following:

- Space — 1800 2300
- **To** in the middle — 1800 to 2300
- **From** and **To** — From 1800 to 2300
- **From** in the front — From 1800 (five hours after **time**)
- **To** in the front — To 1800 (five hours before **time**)

For example, if you want a FIXL report on Miami International Airport for April 12 from 0600 to 1200, your request would look like this:



Only one day and one date may be specified for each request. If the report period is to span two days, use the day when the report period starts.

If a day of week is given but no date is specified, the system assumes that the request is made for the current or an upcoming date. For example, if a request is made for **THU**., and the current day is Thursday, information is provided for that day. If on Thursday, however, a request is made for **WED**., information is provided for the Wednesday following the current day.

If you specify **YESTERDAY** or yesterday's date, be sure that the specified time is within 15 hours in the past, as explained in the next section.

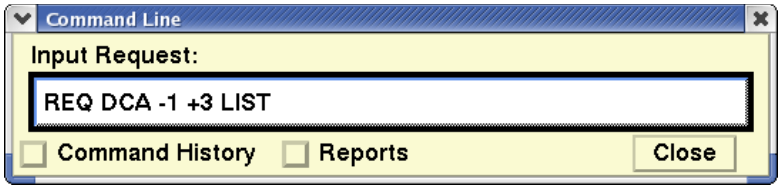
Time Periods and Data Availability

There are practical time limits within which you should restrict your requests when using the Time period option. You may not request flight information further than 15 hours in the past. Also, any requests beyond 15 hours in the future will not return information about fixes or sectors. Requests beyond the scope of the Schedule Database (approximately 45 days in the future) will generate an empty report.

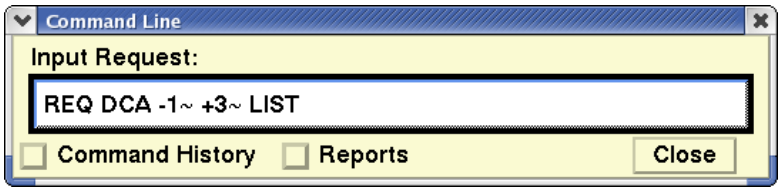
Relative Time Periods

You can specify times relative to the current time (rounded down to the previous hour). To do so, type a plus sign (**+**) followed by the number of hours after the current hour or a minus sign (**-**) followed by the number of hours before the current hour. This is sometimes referred to as an offset from the current time.

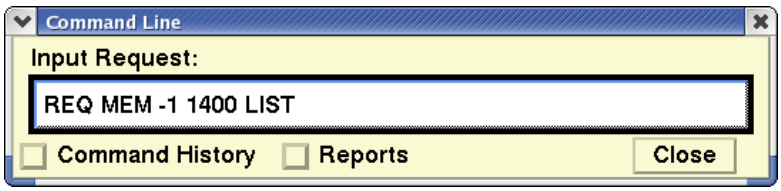
For example, if the current time is 1449, the following command generates a report for the four-hour time period from 1300 (one hour before 1400) to 1700 (three hours after 1400):

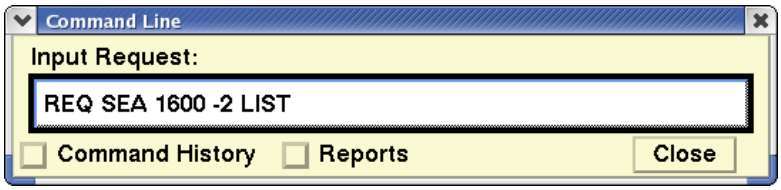


To specify times relative to the current quarter hour (rounded down), include the tilde character (**~**). For example, if you add a tilde to the previous example (using the same current time of 1449), the command generates a report for the period from 1345 to 1645.



Relative times can be mixed with absolute times, as shown in the following examples:





In any request, the two times specified must be in chronological order (the second time must fall later than the first). If using relative times would otherwise cause the second time to be earlier than the first, the system interprets the second time as falling on the following day. (For example, if the current time is 1800, the system interprets **1700 -2** to be the period from 1700 today to 1600 tomorrow.)

Filter Options

This section applies to **Request Count**, **Request List**, **Request Listo**, and **Request VT**. The default reports for the commands listed above display flight data for all flights traveling to or from the place or places you indicate. However, you can filter the information to reflect only specific flights you want included in the report.

Many different filter options are available. These options should appear after the location designator(s) and, if included, the time period option. Filter options are described in the two tables that follow. (The examples in the table show **Request Count** commands.)

Filter Options

Option	Description	What you do	Example
Airway	Includes only flights that use specified airway(s) [or excludes flights that use specified airway(s) from report].	Enter **AIRWAY**, then the name of one or more airways, each separated by a space. (To exclude, precede each airway with -.)	**REQ SFO AIRWAY J80** **REQ SFO AIRWAY - J80**
Center	Includes only flights that traverse specified center(s) (ARTCCs) [or excludes flights that traverse specified center(s) from report].	Enter **CENTER**, then one or more ARTCC designators, each separated by a space. (To exclude, precede each ARTCC with -.)	**REQ MEM CENTER ZAU** **REQ MEM CENTER -ZAU**
Destination Unknown	Includes only flights whose destination airports are unknown (or excludes flights whose destinations are unknown).	Enter **DEST UNKW**. (To exclude, precede UNKW with **-**.)	**REQ LAX DEST UNKW** **REQ LAX DEST –UNKW**
DFIX	Includes flights departing from a specified departure fix	Enter **DIFX**, then the name of the fix	**REQ D BOS DFIX LUCOS**

Filter Options (Continued)

Option	Description	What you do	Example
DVALL	Includes all flights that have been diverted.	Enter **DVALL** and an airport identifier in a Request Count, List/Listo or VT report.	**REQ A MIA DVALL LIST**
DVREC	Includes airborne and grounded flights that are recoveries of flights that have been diverted.	Enter **DVREC** and an airport identifier in a Request Count, List/Listo or VT report.	**REQ A JFK DVREC A LIST** **REQ A JFK DVREC G LIST** **REQ A JFK DVREC A G LIST**
Fix	Includes only flights traversing specified fix(es) [or excludes flights that traverse specified fix(es) from report].	Enter **FIX**, then the name of one or more fixes, each separated by a space. (To exclude, precede each fix with -.)	**REQ BOS FIX MHT** **REQ BOS FIX -MHT**
Origin Unknown	Includes only flights whose origin airports are unknown (or excludes flights whose origin airports are unknown).	Enter **ORIG UNKW**. (To exclude, precede UNKW with -)	**REQ ORD ORIG UNK W REQ ORD ORIG –UNKW**
Sector	Includes only flights traversing specified sector(s) [or excludes flights that traverse specified sector(s) from report].	Enter **SECTOR**, then the name of one or more sectors, each separated by a space. (To exclude, precede each sector with -.)	**REQ IAD SECTOR ZDC17** **REQ IAD SECTOR -ZDC17**
Arrival Fix	Includes flights arriving at a specified arrival fix.	Enter **AFIX**, then the name of the fix.	**REQ A BOS AFIX PVD**
Aircraft Categories	Includes specified categories only (or excludes specified categories from report).	Enter **AC_CAT**, then the category designator(s): J for jet, P for propeller, and T for turbo prop. (To exclude, precede designator with -.)	**REQ BOS AC_CAT J REQ JFK AC_CAT -J**

Filter Options (Continued)

Option	Description	What you do	Example
Aircraft Classes	Includes specified classes only (or excludes specified classes from report).	Enter **CLASS**, then the class designator(s): **H** for heavy, **L** for large, and **S** for small. (To exclude, precede designator with -.)	**REQ DCA CLASS H** **REQ DCA CLASS -L**
Flight times and conditions	Includes flights for only specified arrival/departure time types and actual time periods.	Enter Specific time type, then a time qualifier (see next table).	**(See Table below)**
Aircraft Types	Includes specified aircraft types only (or excludes specified types from report.)	Enter **TYPE**, then the aircraft type designator(s), each separated by a space. (To exclude, precede designator with -.)	**REQ IAH TYPE B747**
Airlines	Includes flights for specified airlines only (or excludes specified airlines from report).	Enter **AIRL**, then the airline identifier(s), separated by a space. (To exclude, precede each identifier with -.)	**REQ JFK AIRL USA** **REQ ATL AIRL -DAL**
RVSM	Includes RVSM flights that are either conformant or non-conformant.	Enter **RVSM**, then a space, followed by **C** to include conformant flights and –C to include non-conformant flights.	**REQ A BOS RVSM -C**
User Categories	Includes flights for specified user categories only (or excludes specified user categories from report.)	Enter **USER**, then the user designator(s): **T** for air taxi, **F** for cargo, **C** for commercial, **G** for General Aviation, and **M** for Military, (To exclude, precede each designator with -.)	**REQ IAH USER M F** **REQ BWI USER -M -F**

Flight Times and Conditions

You can filter reports according to the flight times and conditions by using one of the options listed below, in combination with the **LT** (less than) or **GT** (greater than) flight time condition. The resulting report will include only those flights with times less than or greater than a time you specify (in UTC). To use the **ETE** option, enter the estimated time enroute in minutes instead of specifying a UTC. You may use this option with any of the other filter options.

Flight Times and Conditions

What you enter	Description	Example
ARTA time condition	Actual runway time of arrival	**REQ A IAD ARTA LT 1400**
ARTD time condition	Actual runway time of departure	**REQ D IAD ARTD GT 1400**
CTA time condition	Controlled gate time of arrival	**REQ A SFO CTA GT 1200**
CTD time condition	Controlled gate time of departure	**REQ D SFO CTD GT 1200**
ETA time condition	Estimate based on best available time from among the other arrival time types	**REQ A IAH ETA LT 1400**
ETD time condition	Estimate based on best available time from among the other departure time types	**REQ D IAH ETD GT 1400**
ETE condition	Estimated time en route, in minutes	**REQ DCA ETE LT 120**
ORTA time condition	Original runway time of arrival	**REQ A BOS ORTA LT 1100**
ORTD time condition	Original runway time of departure	**REQ D BOS ORTD GT 1100**
PGTA time condition	Proposed gate time of arrival	**REQ A JFK PGTA LT 1100**
PGTD time condition	Proposed gate time of departure	**REQ D JFK PGTD GT 1100**
SGTA time condition	Scheduled gate time of arrival	**REQ A ZLA SGTA LT 0900**
SGTD time condition	Scheduled gate time of departure	**REQ D ZLA SGTD LT 0900**
TGTA time condition	Gate time of arrival based on TFMS Total Traffic Model (TTM).	**REQ A DFW TGTA GT 0900**
TGTD time condition	Gate time of departure based on TFMS Total Traffic Model (TTM).	**REQ D DFW TGTD LT 0900**

Count Options

You may use the count option to designate a category of columns for an Area report that differs from the default format. To use this option, enter the word **COUNT**, then one of the options described in the following table.

Count Options

Count by	What you do	Examples
Aircraft Category	Enter **COUNT AC_CAT** You may limit the display to selected categories by adding J for jet, P for propeller, and/or T for turbo prop. Precede with - to exclude.	**REQ IAH COUNT AC_CAT** **REQ IAH COUNT AC_CAT T** **REQ IAH COUNT AC_CAT -P -T**
Standard keywords representing flight remarks data	Enter **COUNT AC_RMK**	**REQ ORD COUNT AC_RMK** **REQ ORD COUNT AC_RMK |NRP** **REQ ORD COUNT AC_RMK - |LIFEGUARD**
Airline	Enter **COUNT AIRL** You may limit the display to selected airlines by adding a list of airlines. Precede with - to exclude.	**REQ BWI COUNT AIRL** **REQ BWI COUNT AIRL AAL** **REQ BWI COUNT AIRL -UAL -AAL**
Airport (by origin for arrivals, by destination for departures)	Enter **COUNT AIRP** You may limit the display to selected airports by adding a list of airports. Precede with - to exclude.	**REQ ZMA COUNT AIRP** **REQ ZMA COUNT AIRP [DCA ATL** **]REQ ZMA COUNT AIRP [-LAX -SFO]**
Aircraft Class	Enter **COUNT CLASS** You may limit the display to selected classes by adding H for heavy, L for large, and/or S for small.Precede with - to exclude.	**REQ DCA COUNT CLASS** **REQ DCA COUNT CLASS H S** **REQ DCA COUNT CLASS -S -L**
Destination Airport	Enter **COUNT DEST**	**REQ ZSE COUNT DEST**
Origin Airport	Enter **COUNT ORIG**	**REQ ZNY COUNT ORIG**
Departure Center	Enter **COUNT DCENTR**	**REQ ZNY COUNT DCENTR**

Count Options (Continued)

Count by	What you do	Examples
Aircraft Type	Enter **COUNT TYPE** You may limit the display to selected types by adding a list of types.Precede with - to exclude.	**REQ JFK COUNT TYPE** **REQ JFK COUNT TYPE DC10** **REQ JFK COUNT TYPE -DC10 -B747**
User Category	Enter **COUNT USER** You may limit the display to selected user categories by adding **T** for air taxi, **F** for freight/ cargo, **C** for commercial, **G** for general aviation, and **M** for military. (Category labeled **O** for Other appears if no user category listed above applies). Precede with - to exclude.	**REQ JFK COUNT USER** **REQ JFK COUNT USER T G** **REQ ZSE COUNT USER -F -C**
Estimated Time Enroute	Enter **COUNT ETE SPAN ##*** (Specify time in hours and minutes.The example on the right is for one hour and 20 minutes.)	**REQ JFK COUNT ETE SPAN 120**

* If you use the ete span option, the report will not be displayed by time intervals.

Column and Sort Options

The following is a list of all of the columns and sort options available with the **Request List** and **Request VT** commands.

Columns and Sort Options

Label	Column Description
AC_CAT	Aircraft categories (jet, propeller, turbo prop).
ACTR**	Arrival Center.
ACID	Unique alphanumeric aircraft identifier (Same as IDENT option).
AC_RMK	Standard keywords representing flights remarks data. See Remarks Keywords in this section.
AFIX	Arrival fixes.
AIRL	Airline(s).
AIRP	Two columns: Origin and Destination airports.
AIRWAY*	A listing of airways traversed.
ALT	Altitude (hundreds of feet).
ARTA	Actual runway time of arrival. Formerly called AGTA.
ARTD	Actual runway time of departure. Formerly called AGTD.
ASECTR	Arrival sector.
BEACON*	A four-digit transponder code assigned to an aircraft by a NAS center. It is forwarded to the TFMS in a Beacon code (BZ) message subsequent to a flight plan and usually prior to a departure message (DZ). It is also transmitted to the TFMS prior to a center hand-off message (UZ).
CALT*	Current Altitude
CA_DIF*	The difference between ARTA and CTA, with a designator showing the status of the comparison.
CD_DIF*	The difference between ARTD and CTD, with a designator showing the status of the comparison.
CENTER **	Departure center for arrivals. Arrival center for departures.
CENTRL*	Listing of centers traversed.
CLASS	Aircraft classes (heavy, large, and small).
CTA	Controlled time of arrival. Corresponds to a runway arrival time. Formerly called CGTA.

Columns and Sort Options (Continued)

Label	Column Description
CTD	Controlled time of departure. Corresponds to a runway departure time. Formerly called CGTD.
CTL_ELEM	Controlled element. Shows controlled airport, sector, or fix.
DCTR**	Departure Center.
DEST	Destination airport.
DFIX	Departure Fix.
DP*	Departure Procedures.
DSECTR	Departure sector.
DTRSN*	DP transition fixes.
DV_REC*	Diversion recovery.
EAFT	Estimated Arrival Fix Time.
EDFT*	Estimated Departure Fix Time.
EFTA	Estimated fix time of arrival.
ENTRY	Sector entry times (use with sectors only).
EQUIP	Equipment type, represented by prefix or suffix. (Equipment Type Prefixes and Suffixes are explained in a table on page A-23.)
ETA	Estimated time of arrival, based on best available time from among the other arrival time types. A prefix is used to indicate whether the flight has actually arrived: • A -Actual arrival time (completed flight) • E- Estimated arrival time (proposed or active flight)
ETD	Estimated time of departure, based on best available time from among the other departure time types. A prefix is used to indicate the source of the data that is used to set the ETD; the user can judge the reliability of the data partly on the basis of the prefix, explained below. • A - Active. TFMS has received a NAS or user-provided departure message. • E - Estimated. TFMS has received a message indicating the flight was active, but no departure message was received. • P - Proposed. TFMS has received a NAS flight plan. • R - The historical route has been replaced by the assigned route. • S - Scheduled. TFMS has received no flight plan. Data is based on the OAG and/or user-provided schedule updates. • T - Taxi. TFMS has received a message indicating the flight has pushed off the gate.
ETE	Estimated time enroute.

Columns and Sort Options (Continued)

Label	Column Description
E_TYPE	Complete aircraft equipment type. Includes both aircraft type (TYPE) and equipment type data (F/B757/A).
EXIT	Sector exit times (use with sectors only).
FIX*	A listing of fixes traversed.
GS*	Stands for Ground Stop, a traffic management action that halts departures for a given airport. Also refers to ground speed.
IDENT	Flight identifier (same as ACID option).
IGTA*	Initial Gate Time of Arrival
IGTD*	Initial Gate Time of Departure.
IN*	Actual time reported by the airlines for gate arrival.
LGTA	Airline gate time of arrival.
LGTD	Airline gate time of departure.
LRTA	Airline runway time of arrival.
LRTD	Airline runway time of departure.
OA_DIF*	The difference between ARTA and ORTA, with a designator showing the status of the comparison.
OD_DIF*	The difference between ARTD and ORTD, with a designator showing the status of the comparison.
OETA	Indicates a previously saved ETA. Formerly called OGTA
OETD	Indicates a previously saved ETD. Formerly called OGTD.
OFF*	Actual time reported by the airlines for wheels up.
ON*	Actual time reported by the airlines for wheels down.
ORIG	Origin airport.
OUT*	Actual time reported by the airlines for gate pushback.
PA_DIF*	The difference between ARTA and PGTA, with a designator showing the status of the comparison.
PD_DIF*	The difference between ARTD and PGTD, with a designator showing the status of the comparison.
PGTA	Proposed gate time of arrival.
PGTD	Proposed gate time of departure.
RAL	Last reported altitude, as displayed in a data block.
RTE*	Flight route.

Columns and Sort Options (Continued)

Label	Column Description
RVSM	Reduced Vertical Separation Minimums. RVSM flights are conformant or non-conformant.
SA_DIF*	The difference between ARTA and SGTA, with a designator showing the status of the comparison.
SD_DIF*	The difference between ARTD and SGTD, with a designator showing the status of the comparison.
SECTOR*	A listing of sectors traversed.
SGTA	Scheduled gate time of arrival.
SGTD	Scheduled gate time of departure.
SPD	Air speed filed in a flight plan.
STAR*	Standard Terminal Arrival Route.
STRSN*	STAR Transition fixes.
STAT	Two columns: active and proposed flights.
TRTA	Gate time of arrival based on TFMS Total Traffic Model (TTM). Formerly called TGTA.
TRTD	Gate time of departure based on TFMS Total Traffic Model (TTM). Formerly called TGTD
TIME	Two columns: ETD and ETA.
TT_FCA*	Displays for custom FEA/FCAs the Time to Reach FCA data, which is estimated in minutes.
TYPE	Aircraft type (B747, etc.)
USER	User Category (air taxi, cargo, commercial, general aviation, military, and other).

* indicates the option is not available as a Sort option.
** ZXX in column means no FS or FZ message has been received.

Remarks Keywords

The following table contains the standard keywords for flight remarks data.

Remarks Keywords

What you enter	Description
NRP	National Route Program flight
CAT3	Flight has CATIII landing equipment
LIFEGUARD	Lifeguard or MEDEVAC flight
SWAP	Swapping flight from a standard to a nonstandard route. Usually done due to inclement weather
WXRTE	Flight has been rerouted due to severe weather
DVRSN	Diversion recovery leg
ADCUS	Advise Customs about this flight
ALTRV	Altitude Reservation. Usually a military request
FCA	Flight has been rerouted around a Flow Constrained Area.
HAR	High-altitude Airspace Redesign
PTP	Point to Point

Using Remarks Keywords

You can display columns of information for all Remarks keywords or columns for only one or more keywords. You can also exclude keywords.

Examples:

Display all remarks columns: **REQ BFI LIST ACID AC_RMK**

Display remarks column(s): **REQ BFI LIST ACID AC_RMK |NRP**

REQ BFI LIST ACID AC_RMK |NRP |SWAP

Exclude remarks column(s): **REQ BOS LIST ACID AC_RMK -|NRP**

REQ BOS LIST ACID AC_RMK -|NRP |SWAP

Equipment Types

A/C Type Filter Options	
What you enter	**Description**
Aircraft Types	
H	Heavy
L	Large
S	Small
M	Military
C	Civilian
J	Jet
P	Prop
T	Turbo–prop
Equipment Type Prefix	
T/	TCAS
H/	Heavy
B/	Both Heavy and TCAS
L/	B757 with TCAS
F/	B757 without TCAS

Equipment Type Suffix

Suffix	Description
NO DME	
/X	No transponder
/T	Transponder with no Mode C
/U	Transponder with Mode C
DME	
/D	No transponder
/B	Transponder with no Mode C
/A	Transponder with Mode C
TACAN ONLY	
/M	No transponder
/N	Transponder with no Mode C

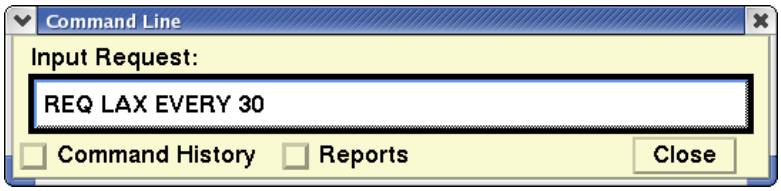
Equipment Type Suffix (Continued)

Suffix	Description
/P	Transponder with Mode C
AREA NAVIGATION (RNAV)	
/Y	LORAN, VOR/DME, or INS with no transponder
/C	LORAN, VOR/DME, or INS, transponder with no Mode C
/I	LORAN, VOR/DME, or INS, transponder with Mode C
ADVANCED RNAV WITH TRANSPONDER AND MODE C (If an aircraft is unable to operate with a transponder and/or Mode C, it will revert to the appropriate code listed above under Area Navigation.)	
/E	Flight Management System (FMS) with DME/DME and IRU position updating
/F	Flight Management System (FMS) with DME/DME position updating
/G	Global Navigation Satellite System (GNSS), including GPS and WAAS, with enroute and terminal capability
/R	Required Navigational Performance. The aircraft meets the RNP type prescribed for the route segment(s), route(s) and/or area concerned.
Reduced Vertical Separation Minimum (RVSM). Prior to conducting RVSM operations within the U.S., the operator must obtain authorization from the FAA or from the country of registry, as appropriate.	
/H	RVSM conformant with a transponder problem.
/J	/E with RVSM
/K	/F with RVSM
/L	/G with RVSM
/Q	/R with RVSM
/W	RVSM

Every

This section applies to all **Request** commands except **Request LIFP**.

The every (or time interval) option allows you to change the time interval into which flights are grouped and counted in the various reports. You can specify a time interval different from the default for each report type by entering **EVERY** followed by the number of minutes you would like to set as the time interval. For example, to specify 30-minute time intervals in a flight counts report on Los Angeles International Airport, enter this command:

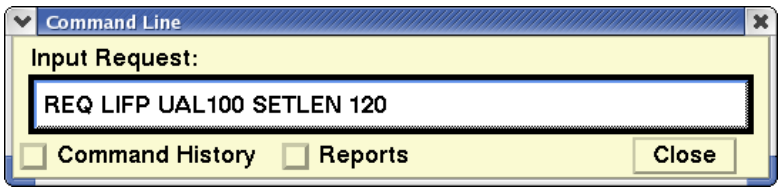


For the following commands; **Request Count**, **Request List**, **Request Listo**, **Request Area**, and **Request VT**, the default interval is 15 minutes. You can set the time interval to any value in increments of one minute. For **Request ARRD** the default time interval is 60 minutes. However you are restricted to the following interval options: 5, 10, 15, 20, 30, 45, or 60.

Setlen

The setlen option affects reports generated by **Request LIFP**, **Request List**, **Request Listo**, and **Request VT**. Flight counts, arrival delay prediction reports, and the counts portion of the time verification reports override the setlen option and are not affected by what you enter.

This option allows you to set the length (in characters) of each line in the report being generated and for all subsequent reports. This determines the point at which each line wraps to the next line (default is 80 characters). Use this option by entering **SETLEN** anywhere after **REQ** on the command line, followed by a space and the desired line length in characters. For example, if you wanted a LIFP report on United Airlines flight 100 set in a line length of 120 characters, your response would look like this:



Once you use this option, it will stay in effect for subsequent reports until you reissue it or quit the TSD.

Secondary Requests

This section applies to the **Request Count**, **Request List**, and **Request Listo** commands.

Secondary requests allow you to use information requested in an original report to generate subsequent flight list or flight counts reports for the same location. The TFMS retrieves and saves all of the information that is available for the flights included in your report, even if that information does not appear on the original report. This feature is useful when, for example, you make a request about an airport for which you need a lot of information. Detailed information can be formulated much faster using a secondary request because the source information has already been retrieved and stored.

Secondary requests can be made from any original report except for arrival delay prediction (ARRD) reports. However, to make a secondary request, you must use the **Request Count**, **Request List**, or **Request Listo** command. (The resulting secondary report will be either a flight counts or flight list report.)

You may use any filter and format options that apply to either of these commands. However the secondary report cannot include information on flights that were filtered out by the original request.

> **Note:** Secondary requests cannot be created on reports created with the hubsite option.

What To Do

Issue a secondary request on a flight count report

1. Press **;** to access the command prompt.
2. Enter the input request in the Command Line dialog box and press <**Enter**>.
3. Click **Display** in the Report dialog box when it appears.

Note: The original report shows **.01**, indicating that this is the first report for the request. For secondary requests, the version number at the end of the report name increments according to each additional request.

4. Click the **Reports** checkbox in the Command Line dialog box.
   The dialog box drops down to display a list of reports.
5. Highlight the report in the list to select it.
6. Enter another command in the Input Request field.
7. Click the **Command History** checkbox.
8. Click **Send Secondary** from the Requests pull-down menu.
   The secondary Report dialog box opens with **.02** appended to the report name.
9. Click **Display** in the Report dialog box to display the secondary report

Request Scripts

This section applies to **ALL Request** commands.

Request scripts are **Request** commands that have been stored as text files on your user node. Each request script can either be a complete **Request** command just as you would enter it on your command line (except for the word **REQ**) or it can be any part of the command after the word **REQ**.

Standard Request Scripts

A number of standard request scripts are provided with the TSD. Three of these scripts are automatically invoked by the system when you are examining an element and you issue the **Alerts Report** command. The rest are provided for you to invoke for your use in any request. Each of these scripts is described in the following table.

> **Note:** These are standard scripts used throughout the system, and the originals should not be edited. If you need to edit one of these scripts, make a copy of it first and then edit the copy.

Other request scripts, created by personnel at your site, may also be available on your node. Ask your System Administrator about using these scripts.

Standard Request Script

Script name	Text of script	Description
airfmt	list acid time airp rte sort time	Invoked by Alerts Report if you are examining an airport.
all	list acid type alt orig dcentr dsectr egtd sgtd pgtd tgtd ctd artd dest acentr asectr afix egta sgta pgta tgta cta arta ete	Creates a flight list report that includes more information (more columns) than the standard report.
ete	list acid orig egtd dest egta ete	Creates a flight list report that includes the ETE of each flight.
fcafmt	list acid stat entry exit orig dest rte sort stat entry exit	Invoked by FCA Report if you are examining an FCA.
fixfmt	list acid stat efta orig dest rte sort stat efta	Invoked by Alerts Report if you are examining a fix.
fixl	list acid type orig etd afix eta ete dcentr ctd cta sort eta afix	Creates a flight list report with fix loading information, including a column identifying the arrival fix that each incoming flight traverses, and columns showing controlled arrival and departure times.

Standard Request Script (Continued)

Script name	Text of script	Description
fp	every 60 list acid type speed orig etd alt rte	Creates a flight list report that includes the route text of each flight.
gstop.c	a every 15 count dcentr gstop	Creates a flight counts report of arrivals to show flights still on the ground at each departure center. Shows the total count, controlled flights, and flights past their ETD at each center.
gstop.l	every 15 list acid etd ortd dest eta dcentr sort dcentr ortd	Creates a flight list report that includes the original departure times, sorted by departure center and original departure time.
gstop.o	a every 15 count orig gstop	Creates a flight counts report of arrivals to show flights still on the ground at each origin airport. Shows the total count, controlled flights, and flights past their ETD at each airport.
ltimes	list acid orig egtd artd sgtd pgtd tgtd ctd dest egta arta sgta pgta tgta cta	Creates a flight list report with information about the various departure and arrival times assigned to each flight by the system.
ltype	list acid type orig egtd artd dest egta arta	Creates a flight list report that shows both actual and estimated times of departure and arrival.
rte	list info acid type orig etd dest eta ete rte every 60 setlen 93	Creates a flight list report that includes the route text of each flight and also the etd, eta, and ete. Sets a line length slightly longer than default.
scdt	every 60 list acid type orig etd dest eta ete dcentr ctd cta sort eta	Creates a flight list report in the format needed for input to the SCDT program, used by ATCSCC.
secfmt	list acid stat entry exit orig dest rte sort stat entry exit	Invoked by Alerts Report if you are examining a sector.
x	list info acid type orig sgtd pgtd ortd ctd artd dest eta arta ete dcentr ac_cat every 60	Creates a flight list report that includes all possible departure times, estimated and actual times of arrival, departure center, and aircraft category. Could be used to analyze effects of ground delay programs.

For the *gstop.c* or *gstop.o* scripts, do not include the **A** or **D** option.

Appendix B: Diagnostic Messages

The diagnostic messages that appear in this appendix are those associated with the TSD.

Sources of Help

Whenever you run into trouble while using the TFMS, you should keep these sources of help in mind:

- Your System Administrator is the person at your site responsible for keeping the TFMS configured and running properly. He or she should be your first source of help when trouble arises. If your System Administrator is not available, contact the TFM Consolidated Service Desk (TCSD).

The following table is an alphabetical list of the diagnostic messages that you might receive while using the TSD, including an explanation of each message and, where applicable, instructions on what to do when you see each message. For syntax errors, check the command entry carefully, referring if necessary to the appropriate section in the TFMS Reference Manual or even the TFMS Tutorial, and reissue the command. If you try a command again and it still does not work, contact your System Administrator.

Variable names that appear in diagnostic messages (such as specific server names, element names, or in some cases command names) are represented in this table by italic typeface between angle brackets (<>). For example, if you see this message:

it would appear in this table as "Cannot connect to <*server*>."

> **Note:** Several entries in the What to Do column of this table ask you to contact your System Administrator. If your System Administrator is not available or unable to solve the problem, call the TFMS Hotline for assistance.

TFMS Diagnostic Messages

Diagnostic Message	Explanation	What to Do
A character may not be placed after an *	The system finds that a character has been placed after the *.	
A time period must be selected in the Examine Timeline for the **Turn Green** command	A time period was not indicated by positioning the cursor over a timeline button in a Timeline Dialog box when the "**G**" key is pressed.	
Active EDCT string not responding	EDCT process on active string is not answering requests or a timeout condition occurred when an EDCT message was sent.	Wait a few minutes and try again, same for 2nd condition

TFMS Diagnostic Messages

Diagnostic Message	Explanation	What to Do
ACTV FAILED: Can't open map file for cancel, add, or inhibit linked list	The system cannot process your request due to a communication error.	Notify your System Administrator and try again later.
ACTV FAILED: Invalid type: not add, cancel, or inhibit	The system cannot process your request due to an invalid parameter.	Reissue the command, checking the syntax of your entry.
ACTV FAILED: The flight ID was not found in the list map file	The system cannot find the flight you requested.	Reissue the command, checking the flight ID.
ACTV FAILED: The list map file is empty	The system has no data to process your request.	Notify your System Administrator and try
Adding all items would cause the list to exceed its limit of 256	The system determines that the number of items added to the list exceeds 256.	
At most 256 flights can be found	The system determines that the number of found flights exceeds 256.	
Beep parameter must be an integer from one to 10	Beep parameter is invalid.	
Cannot connect to Delay Advisor	The TSD could not access the Delay Advisor on the active string.	
Cannot connect to SDB	The TSD could not access the SDB on the active string.	
Cannot connect to TDB	The TSD could not access the TDB on the active string.	
Cannot create adaptation files of that name	The TSD tries to create an adaptation file using a specified file name that already exists as the name of an adaptation subdirectory.	
Cannot unzoom any further	Current unzoom scale is already at the maximum 12,800.	
Cannot zoom any further	Current zoom scale is already at the minimum 20.	
Command is not valid at this time	One of the **Replay** semicolon commands was issued when the command is disabled	
CXSD FAILED: Can't open cancel list map file	The system cannot get the data it needs to process your request.	Notify your System Administrator and try again later.
CXSD FAILED: Flight ID mismatch	The system does not recognize the flight you entered.	Reissue the command, using a different flight ID.
CXSD FAILED: Flight is not effective within 12 hour range	You have entered an unacceptable parameter.	Reissue the command, using a different time range.
CXSD FAILED: Can't open cancel list map file	The system cannot get the data it needs to process your request.	Notify your System Administrator and try again later.
CXSD FAILED: Flight ID mismatch	The system does not recognize the flight you entered.	Reissue the command, using a different flight ID.

TFMS Diagnostic Messages

Diagnostic Message	Explanation	What to Do
CXSD FAILED: Flight is not effective within 12 hour range	You have entered an unacceptable parameter.	Reissue the command, using a different time range.
CXSD FAILED: Unknown flight leg	You have entered an unacceptable parameter.	Reissue the command, using a different
EDCT check failed. Data not available: <*ident airport*>	The system is having a problem accessing the data for this flight.	Check your request entry data and reissue the command.
EDCT check failed. Flight not controlled: <*ident airport*>	You have requested a report on a flight which is not controlled.	N/A
EDCT LOG - No data found	You are requesting flight data that does not exist in the data file.	N/A
EDCT LOG - Unable to decode supplied date	You have entered an invalid date in your request.	Check the date and reissue the command.
EDCT NOT PURGED ON ALL STRINGS-RESEND	Requested action could not be executed on all strings.	Wait a few minutes and resend.
EDCT PURGE ALL - No current programs found	You have tried to purge controls for uncontrolled airports.	N/A
EDCT PURGE - <*airport*> is not currently controlled	You have tried to purge controls for an uncontrolled airport.	N/A
EDCT purge failed: Bad controlled airport	The system does not recognize the entered airport name.	Check the airport name entry and reissue the command.
EDCT purge failed: Bad controlled time	You are entering an unacceptable parameter in your request.	Change the time entry and reissue the command.
EDCT purge failed: No flight controls for any airports	You have tried to purge all controls but none exist.	N/A
EDCT purge failed: PURGE ALL requires word ”PROGRAMS”	You have left a necessary parameter out of your request.	Reissue the command, and include the word PROGRAMS.
EDCT purge failed: Unable to decode purge time	You are entering an unacceptable parameter in your request.	Reissue the command, changing the time.
EDCT <*command*> failed: Logical error in processing for <*airport*>	The system has made an error in completing your request.	Reissue the command, checking the syntax.
EDCT <*command*> failed: No EDCT programs for airport	There are no programs for the airport, so your request is invalid.	N/A
EDCT <*command*> failed: No flight controls for <*airport*>	No controls exist for this airport.	N/A
EDCT <*command*> failed: No flight controls for today	You have tried to get a report, but no data exists.	N/A
EDCT <*command*> failed: No airports controlled	No controls exist for any airports.	N/A
EDCT <*command*> failed: No valid data in EDCT headers for <airport>	You are making a request for which there is no information.	N/A
EDCT <*command*> failed: Problem building datafile for <*airport*>	The system is having a problem creating an output file.	Contact your System Administrator.

TFMS Diagnostic Messages

Diagnostic Message	Explanation	What to Do
EDCT SUB NOT DONE ON ALL STRINGS-RESEND.	Requested action could not be executed on all strings.	Wait a few minutes and resend.
EDCT SUB PRINT failed	You have tried to print, but the system is unable to open the file.	Contact your System Administrator.
Element <*illegal entry*> is invalid	The TSD could not find the NAS element specified in the Alarms Specification dialog box or in the **ALARM ON/OFF** command.	
Element <*illegal entry*> is not in the Alarm Database	The element specified in the **ALARMS OFF** command is not included in the current Alarm Database and hence cannot be removed.	
Element Name must be followed by an A, F, or S	The **ALARM ON/OFF** command is invalid.	
<*entry 1*>, <*entry2*> not found	The system finds one or more entries are invalid or one or more entries in the Add text field it cannot identify.	
ERROR: An error was encountered deleting FCA: <*list of FCAs not deleted*> You may not be authorized to delete the FCA or the FCA may not exist.	The RRHUB sends this message if no FCAs could be deleted.	
ERROR: FCA <*fca name*> already exists.	If the request message will create an FCA that has the same name as an existing FCA of the same type, the RRHUB returns this message.	
ERROR: failed to find Listserver	The system cannot locate Listserver on your node.	Start up Listserver.
ERROR: from Listserver	The system does not recognize the Listserver file.	Contact your System Administrator.
ERROR: from TDB.text	Specific problem within the TDB.	Wait a few minutes and restart.
ERROR: Invalid FCA ID <*fca_id*>	The RRSVR returns this error when the request message from the TSD contains an invalid fca_id.	Check the FCA ID for validity and try to re-enter it.
Error reading file: <*file name*>	An error occurs when the TSD attempts to read and display a file.	
Error, unmatched bracket or parenthesis	You are specifying more than one airport in your **request** command, therefore, the airports must be enclosed in brackets or parentheses.	Verify that all brackets or parentheses are consistent and reissue the command.

TFMS Diagnostic Messages

Diagnostic Message	Explanation	What to Do
ERROR: You are not authorized to modify FCA <*FCA name*>	The RRHUB returns this message if it rejects an Update message from the TSD because the TSD is not authorized to modify the Public FCA database.	
F must be followed by an S, H, or L	The **ALARM ON/OFF** command is invalid.	
File Cannot Be Deleted	The system encounters problems deleting a file or attempts to delete a subdirectory that is not empty.	
File Cannot Be Found or Accessed	The file name specified cannot be found or accessed,	
File name not found: pathname	The script file or alarm file specified by the user does not exist.	
File Name (filename) Not Found	Script file does not exist.	
FPSD FAILED: Bad aircraft type found in request	You have entered an unacceptable parameter.	Reissue the command, using a different aircraft type.
FPSD FAILED: Bad ETE found in request	You have entered an unacceptable parameter.	Reissue the command, using a different estimated time enroute.
FPSD FAILED: Cannot perform simultaneous editing to [dep/arr times operational days effective period equipment]	You have entered too many parameters for the command to be effective.	Reissue the command, changing only one parameter at a time.
FPSD FAILED: Flight ID already exists	The command has already been used on this flight.	N/A
FPSD FAILED: It is past scheduled departure time for flight	This command will not work, since the flight has taken off.	N/A
FPSD FAILED: Map file is full	You cannot add any more commands to the database until some information is deleted.	Notify your System Administrator and try again later.
Invalid alarm file: pathname	The file specified by the user is not a valid alarm file.	
Invalid capacity specification	You are using the **CAPS** command to set flight capacities at a value that is invalid.	Try setting the capacity at a different value and reissuing the command.
Invalid Color Name	The color name entry does not match any of the valid color names: the TSD substitutes the default aircraft color.	
Invalid <*command*> syntax	The system cannot read your request the way it was entered.	Check the syntax of your request and reissue the command.
Invalid day for given month	You are using the **request** command to request data based on a day and month that do not match.	Use a current calendar to verify the day and month and reissue the command.

TFMS Diagnostic Messages

Diagnostic Message	Explanation	What to Do
Invalid Date/Time	Either the Start/Date time is not before the current time or the Stop Date/Time is not after the Start Date/Time.	
Invalid EDCT server response. Please inform operations.	The EDCT server is not connecting properly.	Contact the operations people.
Invalid Entry	The TSD detects an error when validating the entries in the fields in the Select Flights or the Flight Set Filter dialog boxes.	
Invalid File	The TSD detects that the file specified by the user is not an adaptation file or the TSD has problems reading or processing the file.	
Invalid File Name File name cannot begin with ”/”	File name specified in the Snapshot Options dialog box begins with a ”/”.	
Invalid File Name.	The TSD displays this message when the file name specified in the File Save dialog box indicates a space or is invalid.	
Invalid File Name.	The file name specified in the File Save dialog box includes a space or is otherwise invalid.	Specify a valid file name.
Invalid list or sort phrase	You are using the **request** command to request a list report that is sorted in a specific order, but one or all of the elements used in the request are invalid element options.	Make sure all phrase elements come after the sort element. If they do, then check the remaining elements in that phrase.
Invalid location for <*data type*> data files	The TSD cannot access the pathname specified for the Node or Directory prompt.	
Invalid stack size in ARRD request	You are using the request ARRD stak option to set stacked flights at a value that is invalid.	Change the value and reissue the command.
Invalid stack time in ARRD request	You are using the request ARRD stak option to specify a time to set a stack size, but the time period is invalid.	Time periods must be entered in whole hours and in Universal Coordinated Time. Check the time, then reissue the command.
Invalid time specification in Caps phrase	You are using the CAPS command to set capacities for a start time or end time that is invalid.	Make sure both time periods are in Universal Coordinated Time, then reissue the command.
Invalid type for examined element	The location type specified in the **Examine** semicolon command is invalid.	

TFMS Diagnostic Messages

Diagnostic Message	Explanation	What to Do
Invalid zoom scale	Specified zoom scale was greater than 12,800 or less than 20.	
Location not found	The TSD could not find the location specified in the **Move**/ **Zoom** command.	
Location is invalid	The TSD cannot find the location specified for the center point of range rings in the Static Database.	
No flight data to replay	The TSD can access all of the pathnames specified but cannot locate any flight data files that match the time period specified.	
No Flight Set Has Been Selected	The Flight Set> Copy or the Flight Set> Top menu option is invoked and no flight sets have been selected.	
No flights matching XXXXXX can be found	No active flights match the entry in the Find Flight field.	
No locations for undo move/ zoom	The Undo Move/Zoom quick key is pressed when there are no locations stored in the Move/ Zoom stack.	
No more than 256 characters are allowed in a field	User entered more than 256 characters in a text field in the Alarms Specification dialog box.	
No Range Rings set has been selected.	The TSD finds no range rings sets selected in the Range Rings dialog box for any function that requires selection.	
No report selected	No report was selected when the user clicked on the Display or Remove buttons in the Reports section of the Command Line Interface.	
No report selected for secondary request. Request canceled	No report was selected when the user requested that a secondary request be sent.	
No reports match the filter criteria	No reports are found that match the filter criteria.	
No response from WX Server	The WX Report request timed out.	
No Snapshot files were found	No files are found in the standard snapshot directory that have an ”xwd” extension.	
No Timeline dialog box has focus	The ”=” quick key is pressed when no Timeline dialog box has focus.	

TFMS Diagnostic Messages

Diagnostic Message	Explanation	What to Do
Original request not saved--cannot process	You are making a secondary request on a report that was not saved; therefore, the secondary request has no source data and cannot be processed.	Recreate the original report and try your secondary request again.
Print command must be provided	A print command is not provided.	
Problem accessing data	The system cannot access the data you requested.	Contact your System Administrator or call the TFMS Hotline.
Redundant exclusion in airl or type phrase	You are using a **request** command to exclude information that has already been excluded in another phrase element.	Check each airline or aircraft type element in your request for redundancy and reissue the command.
Replay cannot extend into the future	The Stop Date/Time is after the current time.	
Replay Date/Time is outside the range specified	The user entered a Date/Time that is before the Start Date/Time or after the End Date/Time.	
REQ ERR: AFIX must be preceded by airport name	The request syntax is unacceptable as is.	Enter the required airport name before AFIX.
REQ ERR: A sector cannot be mixed with non–sectors as a place of interest	The request syntax is unacceptable as is.	Enter either a sector or a non–sector as a place of interest.
REQ ERR: Bad time in < > data file	The data file for the FTM, SDB, or TTM cannot be read.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Bad time or time range	You have entered an unacceptable parameter.	Reissue the command, changing the time.
REQ ERR: CANNOT CONNECT TO NODESWITCH, ERROR INQUIRING CLASS ON SITE	Without a connection to nodeswitch, the system cannot process your request.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: CANNOT CONNECT TO NODESWITCH, ERROR ON CLASS LOOKUP	Without a connection to nodeswitch, the system cannot process your request.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Conflicting inclusion/exclusion in equipment phrase	You have included or excluded contradictory equipment data.	Check each element in your request and reissue your request command.
REQ ERR: Conflicting inclusion/exclusion in remark phrase	You have included or excluded contradictory remark data.	Check each element in your request and reissue your request command.
REQ ERR: Data analysis type not specified for VT function	You have not entered a necessary parameter.	Check each element in your request and reissue your request command.
REQ ERR: Data base request message undeliverable. Request canceled	The system is having a communication problem.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Data file contained no data for given request	No information is available for this request.	N/A

TFMS Diagnostic Messages

Diagnostic Message	Explanation	What to Do
REQ ERR: Empty brackets ”[]” found- no data between brackets	You have entered an unacceptable parameter.	Reissue the command, entering something between the brackets or remove them from the request.
REQ ERR: Entered date does not fall on given day	You have entered an unacceptable parameter.	Reissue the command, checking the date.
REQ ERR: Error establishing a report number	The system is having a communication problem.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Error in < > data retrieval, request canceled	The system is having a communication problem.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Error initializing the Parser	The system is having a communication problem.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Error in LSTNET request to FTM. Request canceled.	The system is having a communication problem.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Error in request to HUBSITE LSTNET. Request canceled.	The system is having a communication problem.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Error opening airline file.	The system is having a communication problem.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Error opening channel to the Com Server	The system is having a communication problem.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Error opening FIXL data file	The system is having a communication problem.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Error opening report or data dump file	The system is having a communication problem.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Error setting logical name	The system is having a communication problem.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Error processing ARRD request	The system is having a communication problem.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Error transmitting response. Request canceled.	The system is having a communication problem.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Error, unmatched Brackets or Parentheses	You have entered an unacceptable parameter.	Reissue the command, carefully entering the brackets or parentheses.
REQ ERR: Error with ios open	The system is having a communication problem.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Fault in DB Interface Module -- Exiting LP34	The system is having a communication problem.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Fault in Parser Module -- Exiting LP	The system is having a communication problem.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Found an unexpected right bracket ”]”	You have entered an unacceptable parameter.	Reissue the command, removing the extra bracket.
REQ ERR: FTM timed out building response file. Request canceled.	The system is having a communication problem.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: HUBSITE LSTNET file transfer failed. Request canceled.	The system is having a communication problem.	Contact your System Administrator or call the TFMS Hotline.

TFMS Diagnostic Messages

Diagnostic Message	Explanation	What to Do
REQ ERR: HUBSITE requests are obsolete; request canceled	The system no longer allows HUBSITE requests.	N/A
REQ ERR: Invalid < > file supplied to LSTSRV. Request canceled.	The system is not accepting the file being supplied to the Listserver.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Invalid aircraft type specification	You have entered an unacceptable parameter.	Reissue the command, changing the aircraft type.
REQ ERR: Invalid airline specification	You have entered an unacceptable parameter.	Reissue the command, changing the airline.
REQ ERR: Invalid Primary Place of Interest specification, UNKW	UNKW is valid only as a Secondary Place of Interest (SPI).	Reissue the command, entering UNKW as an SPI.
REQ ERR: Invalid airway name	You have entered an unacceptable parameter.	Reissue the command, changing the airway name.
REQ ERR: Invalid AREA format option specified	You have specified an option not supported by this command.	Reissue the command, using valid option.
REQ ERR: Invalid ARRD format option specified.	You have specified an option not supported by this command.	Reissue the command, using valid option.
REQ ERR: Invalid arrival fix name	You have entered an unacceptable parameter.	Reissue the command, changing the fix name.
REQ ERR: Invalid capacity specification in Caps phrase	You have entered an unacceptable parameter.	Reissue the command, changing the capacity specification.
REQ ERR: Invalid center name	You have entered an unacceptable parameter.	Reissue the command, changing the center name.
REQ ERR: Invalid data file name	You have entered an unacceptable parameter.	Reissue the command, changing the data file name.
REQ ERR: Invalid day for given month	You have entered an unacceptable parameter.	Reissue the command, changing the day.
REQ ERR: Invalid end time in request	You have entered an unacceptable parameter.	Reissue the command, changing the end time.
REQ ERR: Invalid ete span value, format HHMM	You have entered an unacceptable parameter.	Reissue the command, changing the format to hours and minutes.
REQ ERR: Invalid fix name	You have entered an unacceptable parameter.	Reissue the command, changing the fix name.
REQ ERR: Invalid FTM file supplied to LSTNET. Request canceled.	You have entered an unacceptable parameter.	Reissue the command, changing the FTM file name.
REQ ERR: Invalid hash table type.	You have entered an unacceptable parameter.	Reissue the command, changing the type.
REQ ERR: Invalid interval specification in ARRD report Request	You have entered an unacceptable parameter.	Reissue the command, changing the interval.
REQ ERR: Invalid interval specification in request	You have entered an unacceptable parameter.	Reissue the command, changing the interval.
REQ ERR: Invalid LIFP cmd; no airline name entered	You have not entered an airline name.	Reissue the command, entering an airline name.
REQ ERR: Invalid LIFP file supplied to LSTNET. Request canceled.	You have entered an unacceptable parameter.	Reissue the command, changing the LIFP file name.

TFMS Diagnostic Messages

Diagnostic Message	Explanation	What to Do
REQ ERR: Invalid list/sort phrase. Precede by LIST cmd.	You have made a request with an entry the system does not accept.	Reissue the command, entering the word LIST before the modifiers.
REQ ERR: Invalid month in date	You have entered an unacceptable parameter.	Reissue the command, entering a proper month.
REQ ERR: Invalid request	You have entered an unacceptable parameter.	Check each element in your request and reissue your request command.
REQ ERR: Invalid SDB file supplied to LSTNET. Request canceled	You have entered an unacceptable parameter.	Reissue the command, changing the SDB file name.
REQ ERR: Invalid sector name	You have entered an unacceptable parameter.	Reissue the command, entering a proper sector name.
REQ ERR: INVALID **SETLEN** command. No line length given.	You have not entered a necessary parameter.	Check each element in your request and reissue your request command.
REQ ERR: Invalid stack size in ARRD request	You have entered an unacceptable parameter.	Reissue the command, changing the stack size.
REQ ERR: Invalid stack time in ARRD request	You have entered an unacceptable parameter.	Reissue the command, changing the stack time.
REQ ERR: Invalid start time in request	You have entered an unacceptable parameter.	Reissue the command, changing the start time.
REQ ERR: Invalid TDB file supplied to LSTNET. Request canceled.	You have entered an unacceptable parameter.	Reissue the command, changing the TDB file name.
REQ ERR: Invalid time or date phrase	You have entered an unacceptable parameter.	Reissue the command, changing the time or date phrase.
REQ ERR: INVALID time period, too far in PAST	You have entered an unacceptable parameter.	Reissue the command, changing the date to a more current one.
REQ ERR: Invalid time specification in Caps phrase	You have entered an unacceptable parameter.	Reissue the command, changing the time.
REQ ERR: LOCAL/REMOTE FLAG NOT SET, EXITING LSTNET	The system is having a communication problem.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Location duplicated	You have entered an unacceptable parameter.	Check each element in your request and reissue your request command.
REQ ERR: Location in FIXL is not an Airport or a Fix	You have entered an unacceptable location.	Reissue the command, changing the location.
REQ ERR: LSTNET has no data after timeout. Request canceled.	The system is having a communication problem.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: More than two places of interest- use brackets to clarify	You must enter information in order to have your request acted upon.	Add brackets where necessary to specify your places of interest.
REQ ERR: No airport associated with given fix	You have entered a fix not associated with a monitored airport.	Reissue the command, changing the fix.
REQ ERR: No data has been supplied to process request	You must enter information in order to have your request acted upon.	Reissue the command, entering the required data.

TFMS Diagnostic Messages

Diagnostic Message	Explanation	What to Do
REQ ERR: No data supplied to process Secondary Request	You must enter information in order to have your request acted upon.	Reissue the command, entering the required data.
REQ ERR: No fix level specified; REQUEST canceled	You must enter information in order to have your request acted upon.	Reissue the command, entering the required data.
REQ ERR: No fix names available for given airport	You are requesting fix information on an airport without available fixes.	N/A
REQ ERR: No location specified in ARRD Request	You must enter information in order to have your request acted upon.	Reissue the command, entering the required location.
REQ ERR: < > not responding, request canceled	Either the Schedule Database, the Traffic Demands Database or the Flight Table Manager is having a connection problem.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR : Only primary places of interest are allowed in REQ AREA	You have entered an unacceptable parameter.	Check each element in your request and reissue your request command.
REQ ERR : Only sectors are valid in a REQ AREA	You have entered an unacceptable parameter.	Check each element in your request and reissue your request command.
REQ ERR : Original request not saved - cannot process current	The system is having a communication problem.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Place of interest included and excluded in same list	You have entered an unacceptable parameter.	Check each element in your request and reissue your request command.
REQ ERR: Primary place of interest missing or is exclusion only	You have entered an unacceptable parameter.	Reissue the command, specifying a primary place of interest.
REQ ERR: (LIST) Program Fault trap. Request canceled.	List Server crashed or someone killed the process using sigp or ctrl q. Message appears if there is an outstanding request.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: (LSTHUB) Program Fault trap. Request canceled.	List Server crashed or someone killed the process using sigp or ctrl q. Message appears if there is an outstanding request.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: (LIST) Rcvd QUIT cmd. Request canceled.	Outstanding request was being processed by List Server as a **reconfigure QUIT** command took place.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: (LSTHUB) Rcvd QUIT cmd. Request canceled.	Outstanding request was being processed by List Server as a **reconfigure QUIT** command took place.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Redundant exclusion in airl or type phrase	You have excluded data twice, causing the system confusion.	Check each element in your request and reissue your **request** command.

TFMS Diagnostic Messages

Diagnostic Message	Explanation	What to Do
REQ ERR: Redundant exclusion in equipment phase	You have excluded equipment data more than once, causing the system confusion.	Check each element in your request and reissue your **request** command.
REQ ERR: Redundant exclusion in remark phrase	You have excluded remark data more than once, causing the system confusion.	Check each element in your request and reissue your **request** command.
REQ ERR: Redundant inclusion in equipment phrase	You have included equipment data more than once, causing the system confusion.	Check each element in your request and reissue your **request** command.
REQ ERR: Redundant inclusion in remark phrase	You have included remark data more than once, causing the system confusion.	Check each element in your request and reissue your **request** command.
REQ ERR: Request type conflict-two request types were used	You have entered an unacceptable parameter.	Check each element in your request and reissue your **request** command.
REQ ERR: Script file not found. Request canceled.	The system is having a communication problem.	If the default file is not satisfactory, contact your System Administrator to get the proper script file.
REQ ERR: Script file not found; using REQ defaults	The system is having a communication problem.	If the default file is not satisfactory, contact your System Administrator to get the proper script file.
REQ ERR: SDB file transfer failed, request canceled	The system is having a communication problem.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Secondary requests can only be made using local reports.(CR)	Secondary requests cannot be made off this primary report type.	N/A
REQ ERR: Sectors in the PPI cause a SPI to be invalid	You have entered an unacceptable parameter.	Check each element in your request and reissue your **request** command.
REQ ERR: Sectors in the PPI cause exclusions to be invalid	You have entered an unacceptable parameter.	Check each element in your request and reissue your **request** command.
REQ ERR: TDB file transfer failed, request canceled	The system is having a communication problem with the Traffic Demands Database file.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Transmitted file cannot be accessed. Request canceled.	The system is having a communication problem.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Unable to process request; HUBSITE LSTNET not responding	No LSTHUB process is running at the hubsite, or request timed out waiting for LSTHUB.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Unable to process request; LOCAL LSTNET not responding	No List process is currently running at a remote site.	Contact your System Administrator or call the TFMS Hotline.
REQ ERR: Unclear use of brackets- must be non-imbedded pairs	You have entered an unacceptable parameter.	Check each element in your request and reissue your **request** command.

TFMS Diagnostic Messages

Diagnostic Message	Explanation	What to Do
REQ ERR: Unknown word in request	You have made a request with an entry the system does not accept.	Check each element in your request and reissue your **request** command.
REQUEST FAILED: Unknown command found in request	You are using an invalid command.	Check each element in your request and reissue your **request** command.
REQ ERR: Use of location specifier is invalid after LIST or LISTO	You have entered an unacceptable parameter.	Check each element in your request and reissue your **request** command.
Request Server is not up yet	You cannot get request information until the system has communication with the Request Server.	Wait for the "Request Server Up" message or try again later.
Request Server not running. Make request again.	The system did not make the connection with the Request Server, which processes your request.	Try making the request again. If the Request Server is still not running, contact your System Administrator.
REQ STATUS: Waiting on Missing Data being Filled	The system needs more time to complete your request.	Wait for the system to process your request.
REQ USER INFO: This is a complex request and may take longer than usual	The system needs more time to complete your request.	Wait for the system to process your request.
REQ WARNING: End time out of range, bounds reset by LSTNET.	You have entered an unacceptable parameter.	Accept the reset bounds or reissue the command and choose a different time.
REQ WARNING: LIST/COUNT report has partial FTM data	The system is having a communication problem.	Contact your System Administrator or call the TFMS Hotline.
REQ WARNING: Start time out of range, bounds reset by LSTNET.	You have entered an unacceptable parameter.	Accept the reset bounds or reissue the command and choose a different time.
Runway data is not available for XXXX	The identifier entered does not match an airport for which the database has runway data.	
S must be followed by an S, H, or L	The **ALARM ON/OFF** command is invalid.	
Sent request to <*server*>	This is a message notifying you that your request has been sent to the appropriate server. There are five different types of servers: flight, schedule, request, communications, and weather.	The message you receive is based on the type of command you issue. If you are using the **request** command, for example, your message should say "Sent request to Request Server."
Starting Request Server	You cannot yet issue your request, since the server is just beginning to process.	Soon you will receive a message that says the Request Server is up, then you will be able to send your request.
TDB Not RespondingRequest has timed out	A request for TFMS data times out.	
The defaults files cannot be deleted.	The TSD defaults files have been specified for deletion.	Do not delete the defaults file.

TFMS Diagnostic Messages

Diagnostic Message	Explanation	What to Do
The folder cannot be deleted because it is not empty.	The TSD recognizes that a folder has been specified for deletion but it is not empty.	Empty the folder before deleting it.
The following actions have been taken:<FCA Name>: Not deleted-authorization failed<FCA Name>: Not deleted-FCA doesn't exist<FCA Name>: Successfully deleted	The RRHUB receives this FCA Delete message from the TSD, sends a confirmation message back to the TSD using the same message ID used in the request, and logs the event. This confirmation message lists all FCAs that were deleted and any that were not.	N/A
The maximum number of range rings sets cannot exceed 64.	The TSD recognizes the maximum number of defined range rings sets in the Create Range Rings and the Add Range Rings dialog box.	Do not define more than 64 range rings sets in a single dialog box.
Time Limit value must be in the range from 0.25 to 9.0 hours	The time limit value specified in the **Time Limits** semicolon command or the Time Limits function for examined elements is invalid.	
Unknown projection	The projection region specified by the user does not uniquely match one of the valid projections.	
Warning: Existing file <*file name*> will be overwritten! Proceed?	The TSD displays this warning if a file may be overwritten by the **File Save** command.	Select **OK** to overwrite the file or **Cancel** not to overwrite it.
Warning: DEFAULTS file will be overwritten! This is NOT recommended! Proceed?	An existing defaults file may be overwritten.	Select **OK** to overwrite the defaults file or **Cancel** not to overwrite it.
WX timeout	The system was checking files for information, but did not find them within a specified time.	Try again and if it happens once more, contact your System Administrator.

Glossary

Many of the terms included in this glossary have more than one meaning, and the definition given may not always be the most common one. These definitions refer to how the terms are used in relation to the TSD.

A

Stands for arrival.

AAR

Stands for Airport Arrival Rate, the number of arriving aircraft an airport can accomodate during a certain period of time.

Absolute Time Range

With Absolute Time Range mode, a selected time range remains the same as current time advances. The TSD provides users the capability to determine whether selected time intervals display in Relative or Absolute time in the NAS Monitor, Monitor All Reroutes, and Examine FEA/FCA.

AC

Stands for Adaptive Compression.

accelerator

A shortcut method that uses a key combination shown on the X window control menu to select options.

AC_CAT

Stands for aircraft categories (jet, propeller, turbo prop).

ACENTR

Stands for arrival center.

ACID

Unique alphanumeric aircraft identifier. Also known as call sign.

AC_RMK

Stands for standard keywords representing flights remarks data.

active

Refers to flights in the air.

ACTV

Activates a flight or airline in the TFMS airline database, thus removing a restriction that was previously set with the INHB command.

adaptation file

An external file you can create in order to tailor the initial TSD appearance to your own needs by including TSD command instructions in the file.

Adaptive Compression

Intended to avoid slots being wasted. Moves flights up to fill those slots.

Ad Hoc

Reroutes class letting you create reroutes from scratch, from the Coded Departure Routes (CDR) database, or from a combination of both.

adjust colors palette

A row of six colored blocks, each of which may be moved up or down in order to alter the intensity of the color within the TSD display.

ADL

Stands for Aggregate Demand List. When TFMS receives updated flight schedules and other NAS information from partcipating DCDM AOCs, Volpe send the information back to the users in the form of an Aggregate Demand List.

ADR

Stands for Airport Departure Rate, the number of departing aircraft an airport can accomodate during a certain period of time.

AFIX

Stands for arrival fixes.

AFP

Stands for Airspace Flow Program. Controls departure times of flights arriving at a Flow Contrained Area (FCA)

AGT

Stands for actual ground time, the difference between the ARTD and the PGTD.

AGTA / AGTD

Stands for actual gate time of arrival / actual gate time of departure. Renamed to ARTA and ARTD.

aircraft type

An FAA abbreviation for a particular make of aircraft; appears as one of the fields in a flight data block and as one of the request command options.

AIRL

Stands for airline.

AIRP

Stands for airport.

airplane icon

The representation of an aircraft by the illustration of a small airplane on the TSD, either when you have zoomed in significantly far, or when you have distinguished a flight or group of flights from the others in some way. See also automatic icon, dot icon, flight icon heavy icon, and prop icon.

Air Route Traffic Control Center

See ARTCC.

Air Traffic Control System Command Center

See ATCSCC.

airway

Refers to a listing of airways traversed; also a pre-defined route over which flights may travel. See also jet airways and victor airways.

Alert

Indicates area of concern to traffic management. It occurs when the TSD software projects that the amount of air traffic will exceed a pre-defined threshold for a given element.

alert area

A type of Special Use Airspace in which pilot training or other non-hazardous flight activities occur.

alerted elements

Elements over which the amount of air traffic is projected to exceed a pre-defined threshold.

alerted flights

See examined flights.

Altitude (ALT)

Altitude listing on the TSD designate where the strongest winds are measured, in hundreds of feet. Thus, 338 represents an altitude of 33,800 feet.

ARINC

Stands for Aeronautical Radio Inc.

ARRD

Stands for Arrival Delay prediction.

arrival fix

The point at which responsibility for control of arriving flights passes from an Air Route Traffic Control Center to a Terminal Control Area.

arrivals/departures option

Allows the user to limit information in reports to arrivals only or departures only.

ARTA / ARTD

Stands for Actual Runway Time of Arrival (formerly AGTA) and Actual Runway Time of Departure (formerly AGTD).

ARTCC

Stands for Air Route Traffic Control Center, a facility devoted to air traffic control of en route aircraft operating on IFR flight plans. There are 20 ARTCCs within the CONUS.

ASD

Stands for Aircraft Situation Display, the former TFMS function that allowed you to communicate with the TFMS databases. Replaced by the TSD, the Traffic Situation Display.

ASECTR

Stands for arrival sector.

ASLOT

Arrival slot currently assigned to a flight. Includes the arrival airport and slot time in six-digit format.

AT

Refers to Atlantic Ocean, one of three geographic regions around which the display can be oriented.

ATCSCC

Stands for Air Traffic Control System Command Center, the national traffic management facility located at FAA headquarters in Washington, D.C. It is known informally as Central Flow. The top of the traffic management hierarchy, it manages air traffic problems on a national level and coordinates and approves actions taken by other traffic management facilities.

ATMS

Stands for Advanced Traffic Management System, a research and development program.

audible alarm file

Specifies elements that, when alerted, cause the TSD to sound an audible alarm or flash an alert signal. This file may also contain information defining how the alarm sounds or appears.

automatic icon

When the automatic icon (A) is specified for a flight set under the Select Flights dialog box, a flight is represented by one of three icons, whichever is appropriate: heavy icon for heavy aircraft, prop icon for prop aircraft, or airplane icon for all other aircraft.

bar chart

A graphical method of comparing an element's demands with its traffic thresholds. This comparison is displayed for each 15-minute time interval in the current time bar. In the case of airports, two bars appear for each time interval: one for arrivals and one for departures.

Beacon Code

A four-digit transponder code assigned to an aircraft by a NAS center. It is forwarded to the TFMS in a Beacon code (BZ) message subsequent to a flight plan and usually prior to a departure message (DZ). It is also transmitted to the TFMS prior to a center hand-off message (UZ).

BETA / BETD

Stands for Beginning Estimated Time of Arrival (wheel time) and Beginning Estimated Time of Departure (wheel time).

BLKT

Refers to Blanket, which is a type of control applied to all flights that are part of a specific ground delay program.

boundaries

Within the TSD, refers to geographical boundaries. These depict national boundaries as well as state borders within the United States.

BZ

See Beacon Code.

C

Refers to Runway Centerline Light Setting. Its values range from 0 (off) to 5 (maximum intensity), ASCII blank (no centerlines are configured for the runway), or F (sensor failure).

CA_DIF

Refers to the difference between ARTA and CTA, with a designator showing the status of the comparison.

call sign

See ACID.

CALT

Stands for Current Altitude.

capacity

The demand threshold at an airport, sector, or fix. When exceeded by a projected demand, causes an alert status. See also demand data, threshold.

CAPL

Stands for capacities list and refers to the TSD command that shows you the current capacity settings for any airport, fix, or sector.

CAPS

Stands for capacities set and refers to the TSD command that allows you to set the arrival or departure limit of any airport, fix, or sector for periods of time that you specify.

CCFP

Stands for Collaborative Convective Forecast Product which identifies areas for predicted thunderstorms..

CD_DIF

Refers to the difference between ARTD and CTD, with a designator showing the status of the comparison.

CDR

Stands for Coded Departure Routes.

CDM

Stands for Collaborative Decision Making, a joint government/industry initiative with the goal of improving air traffic management through increased information sharing, common situational awareness, and equitable resource allocation.

CDT

See controlled departure time.

center

Refers to departure center for arrivals; arrival center for departures.

centrl

Refers to a listing of centers traversed.

CGTA / CGTD

Stands for Controlled Gate Time of Arrival and Controlled Gate Time of Departure. Renamed to CTA and CTD.

CIWS

Stands for Corridor Integrated Weather System, a suite of weather display products that provide short-term accurate convective weather forecasts and storm depiction.

class

Refers to aircraft classes (heavy, large, and small).

close

A menu control option that exits the TSD window. This function shuts down any program running in this window. It is not recommended that you close the TSD this way. When you want to exit the TSD, you should use the TSD's Quit command for a more orderly shutdown.

CNX

A report listing all flights cancelled in EDCT programs for a selected airport of FCA.

color palette

Refers to a checkerboard-like display of 30 colors from which you may choose to depict a variety of TSD icons including those for flights, lightning, and jet stream.

color set name

A name that you specify when saving a color set.

columns option

Allows user to request columns of information other than the default columns in the flight list report. With this option the user can also specify the order of display.

command history

Refers to a function that lets you display a list of previously entered commands. When the list of commands is selected, you can click on one of them to highlight it and place it in the Input Request field.

command line

A command that lets you issue TSD commands, display previously issued commands, and display a list of reports that have been received during the current TSD session.

command line interface

Refers to pressing the semicolon (;) key or selecting Command Line from the Tools menu to display the command line dialog box and entering a command in it to generate TSD functions.

COMP

Stands for compression, a process for filling open slots with available aircraft or for moving aircraft to later slots they can use, when aircraft are unable to use an earlier slot.

connection status indicator

The small red or green box located to the right of the Send button that indicates the status of the connection between Autosend and the communications software.

controlled airport

Airport currently controlled by ground delay programs.

controlled arrival time

The time of arrival for a flight currently controlled at an airport by ground delay programs.

controlled departure time

The time of departure for a flight currently controlled at an airport by ground delay programs.

controlled flight

Flight currently controlled by ground delay programs.

CONUS

Stands for both CONtinental United States and CONtiguous United States. Refers to the TSD graphic representation of the U.S. borders with the state outlines shown.

CT messages

Stands for control time messages issued by the TSD to implement the control time for each flight.

CTA / CTD

Stands for Controlled Time of Arrival. (formerly CGTA) and Controlled Time of Departure (formerly CGTD).

CTL-ELEM

Stands for Controlled Element.

customize

A dialog box that allows you to change the colors and font sizes of the TSD.

CX

Stands for cancel flag identifier.

CXSD

Stands for cancel flight from schedule database and refers to the TSD command that allows you to cancel the current day's flight plan for a flight number you specify. A flight canceled with the CXSD command will not appear in alert or request server reports.

D

Stands for Departure.

DAS

Stands for Delay Assignment, The default delay assignment mode, formerly known as FA Delay.

database commands

Let you display and revise airport, fix, and sector capacity settings; display and revise airport General Aviation estimates; and maintain the airline schedule database.

data block

A collection of flight information for each aircraft that can be displayed on the TSD. It includes the aircraft call sign, altitude, aircraft type, number of minutes to arrival, and the groundspeed.

data source option

A combination of actual and scheduled flight times used to calculate report data.

DCENTR

Stands for departure center.

default

A command that restores the display to the customized configuration that appeared when the TSD was started, or to another specified adaptation.

Delay Advisor

A tool that provides access to the Ground Time Predictor (GTP), a system that predicts flight departures based on historical data.

demand data

Figures representing the amounts of air traffic for airports, sectors, or fixes. They can be illustrated on the TSD in the form of either charts or reports. Demands are defined as the numbers of arrivals and departures at an airport, the number of flights in a sector at the same time, or the number of flights crossing a fix.

Dep

Departure airport.

departure fix

The point at which responsibility for control of departing flights passes from a Terminal Control Area to an Air Route Traffic Control Center.

DEST

Destination airport.

DFIX

See departure fix.

display–only fixes

Fixes whose FAA designators can be displayed on the TSD but will not be recognized by the TSD when specified in Move, Zoom, Range Rings, or other TSD commands. Any named fix that is not a navaid, airport, arrival fix, or departure fix is probably a display-only fix. Most display-only fix designators can be seen only when the airways along which they appear have been displayed.

distance

A button in the Create Manual Reroutes dialog box used to display the distance (in nautical miles) along a reroute.

DME

A command that displays the distance in nautical miles between specified points on the TSD and draws a line connecting the points.

dot icon

The representation of an aircraft by a small dot on the TSD, appearing when you have unzoomed so far that aircraft icons would obliterate the screen. The dot icon also appears on the .

DP

Stands for Departure Procedure.

Draw Reroute

The capability available in the Create and Edit Reroute commands that allows you to draw a reroute on the TSD map.

DSECTR

Stands for departure sector.

DTRSN

Stands for DP (Departure Procedure) Transition Fixes.

DV_REC

Stands for Diversion Recovery.

DVT

Stands for Diversion Recovery.

Dynamic List

An FEA/FCA Report that includes only flights that are predicted to intersect the FEA/FCA during the selected time intervals. The Dynamic List is updated each time the FEA/FCA is updated.

Dynamic Projection

Dynamic Projection can be selected in the Projection command in the Maps menu to reduce disortion of the map overlay. This enables the projection center point to change automatically to be equal to the display center point and to change accordingly.

E

Refers to Runway Edge Light Setting. Its values range from 0 (off) to 5 (maximum intensity), or F (sensor failure).

EAFT

Stands for Estimated Arrival Fix Time.

ECR

Stands for EDCT Change Request, used to view and update an arriving flight's control time during a GDP.

EDCT commands

The Estimated Departure Clearance Time commands control the departure times of flights that will arrive at a specific airport and provide information about controlled flights and airports.

EDCT server

The Estimated Departure Clearance Time server keeps track of all ground delay programs and allows the user to review their status. This function can be accessed through the TSD.

EDFT

Stands for Estimated Departure Fix Time.

EDT

Stands for Estimated Departure Time, based on either actual departure time or proposed departure time.

EFTA

Stands for Estimated Fix Time of Arrival.

EGT

Stands for Estimated Ground Time, predicted by Ground Time Predictor (GTP).

element

A named NAS facility or airspace component that can be displayed on the TSD. Examples are sectors, airports, fixes, and airways.

element name

The FAA name used to identify a NAS element on the TSD. For instance, BWI is the element name of the Baltimore Washington National Airport.

element type

Identifies a class of NAS elements displayed on the TSD (for example, sector, fix, and airport).

EMA

Stands for Equity Metric for Airlines, a metric that indicates how equitable a proposed initiative is for the airlines.

EMail

Electronic Mail (EMail) allows you to send advisories or general messages to addresses on the National Airspace Data Interchange (NADIN) Network and Aeronautical Radio Inc. (ARINC) Network or to other workstations.

EMF

Stands for Equity Metric for Flights, a metric that indicates how equitable a proposed initiative is for all the flights.

ENTRY

Refers to sector entry times.

EQUIP

Refers to equipment type, represented by prefix or suffix (H/R).

ERAM

Stands for En Route Automation Modernization.

ERTA / ERTD

Stands for the Earliest Runway Time of Arrival and Earliest Runway Time of Departure. This is the earliest CTA or CTD that the airline would accept for the flight.

ETA / ETD

Stands for Estimated Time of Arrival and Estimated Time of Departure, based on a flight's actual or estimated time of arrival or departure.

ETE

Stands for Estimated Time Enroute.

E_TYPE

Refers to complete aircraft equipment type. Includes both aircraft type (TYPE) and equipment type data.

EX

Exempt flag. Indicates whether the flight was considered exempt when the last controls were computed by FSM. Values are Y or N.

examined flights

Flights predicted to arrive at, depart from, or traverse any element being examined during the time range currently selected on the alerts time bar.

EXIT

Refers to sector exit times.

external file

A file that you create from outside the TSD.

FAA

Stands for Federal Aviation Administration.

FAA designator

Abbreviation or other identifier assigned by the FAA to an individual location or item.

FA Delay

See DAS (Delay Assignment)

FADT

Stands for Fuel Advisory Delay Table, which specifies delays that apply to pop-up flights arriving at a controlled airport during a controlled interval.

fake data

A TSD flight data representation based on a stored file of static flight positions.

FCA

Stands for Flow Constrained Area, a graphic overlay showing an area where flight rerouting may be necessary.

FDB

Stands for Flight Database.

FEA

Stands for Flow Evaluation Area, a graphic overlay showing an area where flight rerouting may be necessary.

file server node

The node on which TSD programs and data files are stored.

filter options

Allow users to select for display and inclusion in reports flights that meet specified criteria.

fix

A referable position on the surface of the earth. May be identified by latitude and longitude, an adapted name, or a fix-radial-distance.

FIXL

Stands for Fix Loading.

fix loading report

Counts flights traversing a specified arrival fix or all arrival fixes for a specified airport.

fix–radial–distance

A fix defined by reference to a navaid. The fix location is determined by following the given heading (radial) from the given navaid (fix) for the given distance.

flagpole

The line that connects a data block with the flight icon it describes.

flight counts report

Displays the number of flights departing from, arriving at, or traversing an airport, fix, or sector.

flight data update

The time at which flight icons disappear from the TSD display and reappear in their newly reported positions.

flight icon

Either of four graphic representations of flights. Airplane icons look like swept-wing airplanes and represent flights either when you have zoomed in beyond a certain point or when you have specified the icon for a particular flight set. Dot icons are smaller and appear only when you have unzoomed to a certain point. Heavy icons look like wedges and represent heavy aircraft when the automatic icon has been specified for a flight set. Prop icons look like straight-wing airplanes and represent prop aircraft.

flight level

Means of describing the altitude at which planes fly, expressed in hundreds of feet. Thus, a flight level of 250 is equal to 25,000 feet.

flight list report

Includes all flights projected to traverse an alerted area for each 15-minute interval during the alert time period denoted by the time bar.

flight path

A graphic depiction of a flight's route on the TSD.

FPSD

Stands for Flight Plan Schedule Database and refers to the TSD command that allows you to add a flight plan record to the Official Airline Guide (OAG) database. The flight plan will remain in the database marked as an “added flight” until the next OAG update.

FSM

Stands for Flight Schedule Monitor.

FTM

Stands for Flight Table Manager and is a program that maintains the database of flight information used for the TSD display.

full application modal

Means that users can interact with any window except those that are part of the same application as the modal window.

FZ messages

NAS flight plan messages, which are received by the TFMS and include the proposed departure time of each flight.

GA

Stands for General Aviation and refers to the category of flights that is unscheduled and non-commercial. For example, both civilian and military flights are General Aviation flights.

GAAP

Stands for General Aviation Airport Program, a delay assignment mode used during a GDP when current demand does not meet capacity but it believed that unknown traffic will meet or near capacity.

GAEL

Stands for General Aviation Estimates List and refers to the TSD command that allows you to view the estimated number of General Aviation (GA) flights that will arrive and depart within each 15-minute interval from an airport you specify.

GAES

Stands for General Aviation Estimates Set and refers to the TSD command that allows you to change the estimated number of General Aviation (GA) flights that will arrive and depart during each 15-minute interval from an airport you specify for periods of time that you specify.

GCD

Stands for Great Circle Distance, the distance between the origin airport and arrival airport.

GDP

Stands for Ground Delay Program, a specific operation that assigns delay (control times) to the departure times of flights that will be arriving at a specific airport.

GDT

Stands for Ground Delay Tools, components that aid users in looking at various operational or air traffic scenarios.

general aviation

See GA.

ghost

An outline of an aircraft icon, representing a flight about which no position information has been received for over seven minutes.

GOES

Stands for Geostationary Operational Environmental Satellite data, used in satellite mosaic in weather displays.

graphic image format

See Snapshot.

ground speed

Flight speed measured relative to the ground, expressed in knots.

GS

Stands for Ground Stop, a traffic management action that halts departures for a given airport. Also refers to ground speed.

gstop option

Allows user who is generating reports of counts by origin airport or center to show counts of all flights that have not yet departed and those flights held past their original departure times.

GTM

Stands for ground time method, a method for making predictions of flights.

GTP

Stands for ground time predictor.

GTP ACID

Stands for ground time predictor aircraft identifier. Lets you display information about as many as 14 of the most recent departures for a specified flight from a specified airport.

GTP AIRP

Stands for ground time predictor airport. Lets you display a summary overview of ground times experienced by flights at specified airports over a 24-hour period.

GUFI

Stands for Global Unique Flight Identifiers. GUFI makes it possible for all flight data systems to have consistent, accurate data about what flights are operating, when, on what routes, and under what constraints. ERAM assigns the GUFI to the flight when a flight plan is received and then provides it to TFMS along with the flight plan.

heavy icon

The representation of a heavy aircraft by the illustration of a small wedge on the TSD. These icons only appear when the automatic icon (A) has been specified for a flight set on the Select Flights dialog box.

high sectors

Volumes of airspace defined for controlling high altitude flights. High sector altitude limits generally cover from 24,000 to 33,000, or 24,000 to 60,000 feet.

history

Displays a dotted line that traces the flight path from the time the tracing begins until either the flight lands or you turn the function off.

HP

Stands for Hewlett Packard, the source of the computer hardware used by the TSD.

Hubsite

Also referred to as Hub, it is the source of request data in Cambridge, Massachusetts. Used as a data source with request commands.

Icon

See flight icon.

IDENT

Stands for flight identifier (same as ACID option).

IFR

Stands for Instrument Flight Rules, and indicates flights that are positively tracked and controlled by en route air traffic control.

IGTA / IGTD

Stand for Initial Gate Time of Arrival and Initial Gate Time of Departure, the arrival time (or departure time) when the flight was first created. It is used to positively identify a flight leg.

import

Lets you import reroute definitions from one TSD to another.

IN

Actual Time reported by the airlines for gate arrival.

information boxes

Similar to a query box but it gives you a brief message and asks for an acknowledgement.

INHB

Stands for inhibit flight in schedule database and refers to the TSD command that allows you to inhibit (or cancel temporarily) either a specific flight or all flights for a specific airline in the schedule database.

initialize

Returns TSD display to its default state.

input device

Hand-held input devices, the mouse and the trackball, provide an alternative to the keyboard as a means of communicating with the computer.

intersections

A button in the Create Manual Reroutes dialog box employed to label all points where jet routes used in the reroute intersect ARTCC boundaries and other jet routes.

item settings

Refers to a number of map overlays whose colors and font sizes can be changed.

jet airways

Pre-defined airways to be used by flights at altitudes of 18,000 feet and above. Also known as jet routes.

keyboard

A checkerboard-like display of 30 different colors from which you may choose when issuing one of the colors commands.

lat/lon

Refers to latitude/longitude coordinates that may be entered in the Move or Zoom commands to center the point of the display.

leader line

The line that connects a data block with the flight icon it describes.

lead lines

Dotted lines leading away from the noses of the aircraft icons on the TSD. They indicate where the flights will be either in a certain period of time or at a certain distance from their current positions, assuming the flights continue traveling in the same direction and at the same speed.

legend

A command that allows you to display text at the bottom of a TSD window.

LGTA / LGTD

Stands for Airline Gate Time of Arrival and Airline Gate Time of Departure.

LIFP report

Lists flight plans of selected aircraft.

locid

Stands for location identifier and refers to a prompt often used to request a place name. It can refer to an airport, navaid, fix, sector, ARTCC, or other FAA place designator.

low sectors

Volumes of airspace defined for controlling low altitude flights. Low sector altitude limits generally cover from ground level to 23,000 feet, unless over a TRACON, where the low sector limits cover from 18,000 to 23,000 feet.

LRTA / LRTD

Stands for Airline Runway Time of Arrival and Airline Runway Time of Departure.

main menu

The main menu displayed at the top to the TSD display.

MAP

Monitor Alert Parameter refers to the threshold that determines the alert status of sectors, airports, and fixes.

METAR

Stands for Aviation Routine Weather Report, a type of weather report produced through the Report command in the Weather menu.

military areas

A term used within the TSD program to mean Special Use Airspace (SUA); SUA does not refer only to Military Operations Areas.

military operations area

See MOA.

minutes to arrival

One of the fields in a data block. It indicates how many minutes are expected to pass from the time currently displayed in the time box until the flight is projected to land.

MIT (Miles In Trail) Restriction

An MIT Restriction is an air traffic management initiative used to space aircraft.

mnemonics

Underlined letters on a menu indicating that pressing one or more keys can display a pull-down menu from the keyboard or can select a menu option from the pull-down menu.

MOA

Stands for military operations area and is a type of Special Use Airspace reserved for military activities.

Modeling

The TSD capability to display the impact of a proposed reroute on the projected state of the NAS.

Monitor Alert

This function displays and enables analysis of the airports, sectors, and fixes on alert status.

Moving FEA/FCA

Shows how the FEA/FCA started and how it moves during the course of the time limit you specified. Contains shadows of the original FEA/FCA representing past and future locations of the FEA/FCA.

MP

Refers to Runway Visual Range from the middle point of the runway. Its values range from 00 to 60+, representing hundreds of feet.

NADIN

Stands for National Airspace Data Interchange.

NAS

Stands for National Airspace System.

NAS Monitor

Displays peak counts and the alert status for NAS elements.

Navaids

Stands for NAVigational AIDS, usually fixes at which visual devices, radio beacons, or other electronic devices have been placed to help pilots identify their flight positions.

NCWF

Stands for National Convective Weather Forecast, a weather service that provides one-hour extrapolation forecasts of thunderstorm locations.

nodename

A name of a computer, beginning with two slashes usually followed by a combination of letters and numbers. Typical node names include //fs01, //ws06, and //ETMS10.

no radar symbol

Appears in the upper left corner and in the ARTCC designation if the overlay is on and indicates that no TZ messages have been received from one or more ARTCCs for three successive updates.

NOWRAD

The NOWRAD command displays a color-coded graphic overlay of areas of precipitation. The display, updated every five minutes, shows up to six levels of precipitation, ranging from very light to very heavy.

NRP

Stands for National Route Program, a flight that files for a more direct route, but is considered to be a preferred route (as designated by the FAA).

OA_DIF

Refers to the difference between ARTA and ORTA, with a designator showing the status of the comparison.

OAG

Stands for Official Airline Guide and refers to the publisher of the standard airline schedule information. Used as a data source with request commands.

oceanic sectors

Volumes of airspace defined for controlling air traffic, beginning three miles offshore and extending further out over the oceans.

OCTA / OCTD

Stands for Original Control Time of Arrival and Original Control Time of Departure.

OD_DIF

Refers to the difference between ARTD and ORTD, with a designator showing the status of the comparison.

OETA / OETD

Stands for Original Estimated Time of Arrival (wheel time) and Original Estimated Time of Departure (wheel time).

OFF

Actual time reported by airlines for wheels up.

OGTA / OGTD

Stands for Original Gate Time of Arrival and Original Gate Time of Departure. Renamed to ORTA and ORTD.

ON

Actual time reported by airlines for arrival on the runway.

ORIG

FAA designator showing the airport of origin.

ORTA / ORTD

Stands for Original Runway Time of Arrival (formerly OGTA) and Original Runway Time of Departure (formerly OGTD).

OUT

Actual time reported by airlines for gate pushback.

overlay

A map illustration that can be displayed on the TSD. Because many of these maps can appear on the display at one time without obliterating the others, they are called overlays: you can increase the amount of information on the display by laying another map over the ones you have already displayed.

pacing airport

One of approximately 30 larger airports whose arrival and departure traffic sets the pace for all air traffic throughout the CONUS.

PA_DIF

Refers to the difference between ARTA and PGTA, with a designator showing the status of the comparison.

palette

See color palette.

pathname

A pathname identifies not only a file name, but also the name of the directory and node in which the file is stored. For example, the following pathname indicates that the file adaptation is stored in the static_data subdirectory, which is located in the graphic.

directory on node //ws10://ws10/graphic/static_data/adaptation.

PD_DIF

Refers to the difference between ARTD and PGTD, with a designator showing the status of the comparison.

peak demand

The greatest number of flights projected to be within a sector at any instant during a given time period. Also called peak load.

PGTA / PGTD

Stands for Proposed Gate Time of Arrival and Proposed Gate Time of Departure.

Playbook

Categories of plays, displayed on Create Reroute, Edit Reroute, and Copy Reroute dialog boxes.

POI (Point of Interest)

A tern referring to the location on a reroute segment at which the pointer is browsing.

POI Count

The number of flights that will cross a Point of Interest (POI) on a reroute segment.

POI Timeline

A POI Timeline displays a single number representing the total number of flights in a reroute that would cross the POI or as a timeline showing the hourly or quarter-hourly flight counts over the POI.

Pop-up menu

See Right-click menu.

PPI

Stands for Primary Place of Interest, used in some Command Line requests.

preselect

Refers to placing the pointer on a map item, such as an airport or navaid, causing that item to become highlighted. If the label is not currently displayed, preselecting also displays the label of the highlighted item. When an item is preselected, clicking the left button selects it, which means that a dotted line is drawn around the item and its label.

preview

Found in the Customize Dialog Box. Allows you to view the changes you make to TSD map items before permanently applying these changes to the TSD. If you want to make adjustments, you can then use the Undo button and restore the previous color.

Preview Mode

The TSD state of operation when previewing a reroute.

Preview Reroute

The capability available in the Create and Edit Reroute commands that allows you to draw a reroute in the TSD map and generate flight counts.

pri

Stands for print in an EDCT Sub Print command.

primary place of interest (PPI)

Refers to the location(s) specified for the Request Count command.

prohibited area

Special Use Airspace in which no flight is allowed.

projection

This command allows the user to choose a specific geographic region to appear in an accurate perspective on the TSD.

prompt

Character, word, or phrase the computer displays to let you know that it is ready to receive your response or command.

prop icon

The representation of a prop aircraft by the illustration of a straight-wing on the TSD. These icons only appear when the automatic icon (A) has been specified for a flight set on the Select Flights dialog box.

proposed flights

Flights that have a filed flight plan but have not yet left the ground.

protected segment

Used in the definition and monitoring of reroutes and refers to that portion of an assigned route that should be adhered to carefully in order to achieve the goal of the Traffic Management Initiative (TMI).

quick key command

A command that can be issued through one or two keystrokes and is usually not interactive.

QWERTY keyboard

Name given to a standard typewriter keyboard, whose top line of letter keys reads Q, W, E, R, T, Y, etc.

radar labels overlay

A summary of information provided to the TFMS by the Forecast Systems Laboratory (FSL) to show detailed information about precipitation areas.

radar tops

Displays the altitude of cloud tops within precipitation areas in hundreds of nautical feet. This information is updated every ten minutes.

radio button

A push button that the user clicks to select the item corresponding to that button. Only one button in a group of radio buttons can be selected at any time.

RAL

Stands for last reported altitude, as displayed in a data block.

range rings

A set of concentric circles, drawn at specified distances from a given location that facilitate the determination of how far flights are from location.

reconnect

A command that disconnects from all TFMS and other servers and then connects with the servers. You can use this function to reestablish communication with TFMS services in case a connection is lost and the automatic reconnection is not successful.

relative time

Time made relative to the current time by entering a plus sign (+) followed by the number of hours after the current hour. Relative time may be used in commands.

replay

A command that lets you display past flight, weather, and alert data. You can specify the amount of time by which the replay clock increases at each update.

report manager

A command from the Tools menu that lets you find, view, and manage reports in the reports directory.

report name icon

A boxed name given to your report, appearing as an icon in the upper right hand corner of the display. It identifies the directory, the element, time/date, and version number.

reports

A function that lets you display a list of reports that have been received during the current TSD session.

request commands

Enable you to request reports on specific groups of flights. You define these groups by specifying the elements, report types, times, dates, airlines, flight times, and other criteria you want to include in the report.

request script file

A special data file containing specifications to be accessed through the request commands.

request server

TFMS process that takes flight list, flight counts, and ARRD report requests and formats them as specified through the request command.

resize

A method of changing the size of a window by using the Window Control size option or moving the pointer to any corner of the window and resizing the window.

restore

A menu control option that returns the window to its previous size.

restricted area

Special Use Airspace through which flight must be authorized.

Right-click menu

Once an item is preselected or selected, you can click the right mouse button to access right-click menus, which vary according to the item.

RMGR

Stands for Route Manager.

RO

Refers to Runway Visual Range from the Rollout point of the runway. Its values range from 00 to 60, representing hundreds of feet.

route

Can refer either to an airway or to an individual aircraft's path of flight. If it refers to an individual aircraft's route of flight, it can mean either the written notation of the route or a graphic depiction of the flight path. See also airway, jet airway, victor airway, flight path.

route text

The written description of a route, usually as taken from field 10 of a NAS message.

RTE

Stands for flight route.

RVR

Refers to Runway Visual Range.

RVSM

Refers to Reduced Vertical Separation Minimums. RVSM allows controllers to separate properly equipped aircraft in the FL290 and FL410 airspace by as little as 1000 feet vertically, rather than the 2000 foot minimum that is currently required.

RWY

Refers to Runway identifier. Its numeric values are from 01 through 36. A sub-runway value might be appended to the RWY. The sub-runways are defined as L (left), R (right), or C (center).

SA_DIF

Refers to the difference between ARTA and SGTA, with a designator showing the status of the comparison.

SGD (Secure Global Desktop)

Provides a secure, remote access to TSD-U/F applications running on application servers over a secure network connection.

SD_DIF

Refers to the difference between ARTD and SGTD, with a designator showing the status of the comparison.

save

A function on some TSD dialog boxes that allows you to save selected values to a specified filename.

schedule database

Database of airline schedule information based on information received from the Official Airline Guide (OAG). The schedule database is updated with new OAG data every two weeks.

SCS

Stands for Slot Credit Substitution, a situation that commonly occurs during GDPs where an operator has a flight f0 with a slot at time t0, and flight f0 cannot use its slot because it is delayed or cancelled. In these situations, SCS provides a mechanism for an operator to substitute other operator's flights to bridge the slot from an unusable time to a time that the operator can use to his/her advantage.

secondary request

Allows user to use the report name icon to quickly request additional reports with different specifications for the same location specified in the original report.

sector

A volume of air space corresponding to one air traffic control area of responsibility. There are many sectors within an ARTCC. Generally, one team of air traffic controllers is responsible for each sector.

semicolon commands

A class of interactive commands that usually require you to respond to a series of prompts and give detailed instructions. They are called semicolon commands because you must press the semicolon key in order to tell the TSD you want to issue one of these more detailed commands.

send secondary

A menu option that allows you to use information requested in an original report to generate subsequent flight list, flight count, or flight plan reports for the same location.

SGTA / SGTD

Stands for Scheduled Gate Time of Arrival / Scheduled Gate Time of Departure.

SH

Refers to the Slot Hold Flag.

SI messages

Stands for Substitution processing messages received from airlines.

site

This command displays the network address sites to which your TSD is currently connected. The sites identified by this command are the groups of nodes that your node uses as the source for various types of data.

site identifier

The local site identifier corresponds to a fileserver node at your physical site. (If you have only one fileserver, then your site identifier is always the same.) The hubsite site identifier refers to a specific group of nodes at the hubsite in Cambridge, Massachusetts.

size

A menu control option that changes the pointer to a cross icon. You can then place it on a window border and resize by moving the pointer in another direction and clicking and releasing the left mouse button.

snapshot

A command that lets you save the TSD screen to a graphic image format (GIF).

sort option

Allows user to order a list of flights in a report in alphabetical, numeric, or chronological order under ETA (arrival) and ETD (departure) for each 15-minute interval.

SPD

Refers to the ground speed filed in a flight plan.

special use airspace

See SUA.

SPI

Stands for Secondary Place of Interest, used in some command line requests.

Stak

The stak option sets up an initial condition involving a specified number of arrivals held over the airport.

STAR

Stands for Standard Terminal Arrival Route.

STAT

Refers to flights status.

streamlines

A display of the Jet Stream command that indicate the direction of high winds.

SUA

Stands for special use airspace and refers to volumes of airspace for which aircraft flight has been limited for one reason or another. They include alert areas, MOAs, prohibited areas, restricted areas, and warning areas.

Subs

Data from the EDCT Sub Show command, showing you the status of Substitution processing (SI) for all airports.

superhigh sectors

Defined volumes of airspace, which in general, have altitudes greater than 35,000 feet.

system modal

Users are unable to interact with any window in any application except the modal window.

TAF

Stands for International Aerodrome Forecast, a type of weather report produced through the Report command in the Weather menu.

TCA

Stands for terminal control area and refers to a volume of airspace above an airport in which all flights are subject to operating rules and pilot and equipment requirements.

TD

Refers to Runway Visual Range at the touchdown point. Values range from 00 to 60+, representing hundreds of feet.

TDB

Refers to Traffic Database.

Tear-off menus

A feature that enables you to treat menus as separate windows and move them.

terminals

Another term for airports.

TFMS

Stands for Traffic Flow Management System and is an automated data processing system which supports the FAA traffic management functions.

threshold

The level of demand at an airport, sector, or fix which, when exceeded by a projected demand, will cause an alert to be indicated. See demand data.

TIME

Refers to two columns, ETD and ETA.

time bar

An illustration that appears at the bottom of the TSD display when live alerts are displayed. When an alerted element is examined, the time bar indicates which intervals are alerted.

time interval

The segments of time for which the monitor/alert projects and displays traffic demands. The default size of the time intervals is currently defined as 15 minutes.

time interval option

Allows user to specify a time interval format different from that of the default flight counts report.

time in sector

Graphically depicts the flights that cross the sector during a six-hour interval.

Time Limit

Governs the interval of time, set between one-quarter of an hour and six hours, for the display of alert icons.

timeline

Refers to a graphic display of the total number of flights projected to arrive at, depart from, or traverse the specified alerted element at 15-minute time intervals. The color of the button denotes the status of the alert for that time interval.

time period option

Allows user to change the default time period of five hours for reports.

time range

Appears in the NAS Monitor dialog box and the corresponding bar chart. (maximum is 6 hours)

time types

The time verification report includes four time types for arrivals and departures: scheduled, proposed, original (defined by TFMS traffic model processing without regard to ground delay controls or actual times), and controlled (assigned by ground control program).

time verification report

Shows discrepancies between actual arrival and departure times and those predicted by a specified time type.

title bar

Displays the name of the dialog box and can be used to drag the dialog box to a different location.

TMI

Stands for Traffic Management Initiative.

TMU

Stands for Traffic Management Unit. Each ARTCC TMU manages air traffic problems within the range of its center. Each TRACON TMU manages air traffic problems specific to the one or more airports under its control.

Tool Manager

The TFMS Tool Manager is the program that displays an icon for each main TFMS function. It allows the user to start an TFMS function by clicking on the appropriate icon.

top

A function that establishes the priority order in which flights that meet criteria for more than one flight set are displayed.

Top-down search

The act of finding a certain word or other combination of characters by searching from the beginning of the file to the end of the file until it finds the first occurrence of the character combination.

trace

See history.

TRACON

Stands for Terminal Radar Approach Control facilities. These facilities control arriving and departing flights at a terminal or set of terminals.

Traffic Management Unit

See TMU.

Traffic Model functions

Sometimes called Total Traffic Management Model (TTM), these functions perform detailed flight modeling and determine traffic demands and alerts based on NAS messages. The functions consist of the Parser, the FDB, and the TDB.

TRTA / TRTD

Stands for Gate time of arrival and Gate Time of Departure based on TFMS Total Traffic Model (TTM). Formerly called TGTA and TGTR.

TSD

Stands for Traffic Situation Display, the function of the Enhanced Traffic Management System that allows you to communicate with the TFMS

databases through a graphic display representing flight positions and NAS elements such as ARTCCs, sectors, and fixes.

TSD-C

Refers to the TSD CDM user.

TSD-F

Refers to the TSD Filtered user.

TSD-U

Refers to the TSD Unfiltered user.

TSTM

Thunderstorm.

TT-FCA

For custom FEA/FCAs, displays the Time To Reach FCA data, which is estimated in minutes.

TYPE

Refers to type of control last applied to this flight. Types include GDP, GS, SUB, UPD, FA, COMP, BLKT; or refers to aircraft type (B747, DC10, etc.).

TZ messages

Messages transmitted from the ARTCCs, which update the position and speed of each airborne flight every five minutes. Based on the NAS track tables.

Unified (Ground) Delay Program (UDP)

UDP applies the desirable properties of the *DAS* and *GAAP* programs while addressing *reserve capacity recovery* and *fair delay assignment balancing issues*.

Undo

Found in the Customize Dialog Box. Allows you to remove or reverse any changes that you make to a map item. This button is available only after you have used the Preview button.

Universal Coordinated Time

See UTC.

unnamed point

A non-labeled point along an experimental route that when added to the route as a fix will be identified by its longitude/latitude coordinates.

UPD

Stands for Update in an EDCT Update command.

update

Usually refers to a flight data update, the time at which flight icons disappear from the TSD display and reappear in their newly reported positions.

USER

Refers to the User Category (air taxi, cargo, commercial, general aviation, military, and other.)

UTC

Stands for Universal Coordinated Time, the time zone used as the basis of worldwide standard time. Formerly called Greenwich Mean Time.

version

A command that displays a dialog box showing what version of the TSD you are currently running.

victor airways

Pre-defined airways to be used by flights at altitudes below 18,000 feet. Also known as Victor routes.

void time

A field in the Create Manual Reroutes dialog box used to designate a time (in four-digit UTC) at which you want the route definition to expire.

VTstats

In the Verify Time command this entry produces the summary statistics portion of the Verify Time report.

warning area

Special Use Airspace that has been defined as potentially hazardous international airspace.

Webtop

The webtop is a special web page that lists the applications you can run through SGD and enables you to run them.

weather symbol menu

Display of weather symbols that depict current weather conditions. Included in this menu are weather, precipitation, and storm symbols that can be used for drawing a weather map.

wind speed

Contour lines and numbers identify wind speed in knots. The outermost lines define the areas within which winds aloft have been measured at 70 knots or more. Within these areas contour lines define areas of even higher winds, placed at intervals of 20 knots.

WSI

Stands for Weather Services International

WX

Refers to a report command that lets you display and print weather information; abbreviation for weather.

XFS

Stands for Execution of Flow Strategies, a function that enables the amending of a flight's route to make it conformant with a reroute. The XFS function lets traffic managers use the TSD to submit route amendments for non-conformant flights to En Route Automation Modernization (ERAM) and provides other features related to monitoring and executing reroutes.

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