Federal Aviation

Administration

55054003
EN ROUTE
RADAR ASSOCIATE
CONTROLLER TRAINING PART C:
ADVANCED CONCEPTS

Lesson 3: Introduction to En Route Decision Support Tool (EDST) Part 2

Version: 1.0 2022.08

INSTRUCTOR LESSON PLAN

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LESSON PLAN DATA SHEET

Course Name	En Route Radar Associate Controller Training Part C: Advanced Concepts
Course Number	55054003
Lesson Title	Review of En Route Decision Support Tool Part 2
Duration	2 hours 45 minutes (includes lesson, ELT, and part-task exercise)
Version	1.0 2022.08
Reference(s)	TI 6110.101, En Route Automation Modernization RA-Position User Manual; TI 6110.108, ERAM Quick Reference Controller Card; ERAM ATCHI MISC 230.05, ERAM SRS Air Traffic Computer-Human Interface; ERAM CONFLICT AD 220.03, ERAM Conflict Management, Off-Line Problem Determination, and Utility Algorithms; ERAM ADAPT AD 220.04, ERAM Adaptation Algorithms
Prerequisites	NONE
Handout(s)	⊙ Part-Task Exercise: *HO01_L03 (Print prior to class)* ⊙ TI 6110.108, ERAM Quick Reference Controller Card
Exercise / Activity	Refer to handout for: ⊙ Part-Task Exercise: Review of En Route Decision Support Tool Part 2
Scenario	⊙ Run scenario 55054003_L03_S## in the TTL
Assessments	⊙ YES - Written *(Refer to ELT01 L03, print prior to class)*
Materials and Equipment	⊙ Pen and/or pencil
Other Pertinent Information	⊙ **Ensure lesson materials are downloaded to the classroom computer** ⊙ Appendix A - TABLE 13-1-1, Clearance Abbreviations ⊙ Appendix B - TABLE 13-1-2, Miscellaneous Abbreviations ⊙ Appendix C - TABLE 13-1-3, EDST Equivalents for Control Information Symbols ⊙ Appendix D - Select Manual Strip Marking with EDST Equivalents ⊙ This lesson is based on ERAM EAE410 ⊙ The lesson has been reviewed and reflects current orders and manuals as of April 2022

👉 *As you prep for this lesson, recall and be prepared to talk about examples and personal experiences that illustrate or explain the teaching points in the lesson.*

LESSON ICON LEGEND

	Description
	The Activity icon indicates an exercise, lab, or hands-on activity.
	The Discussion Question icon signals a discussion question to be asked to the students.
	The Handout icon indicates a handout is to be distributed to the students.
	The Instructor Note icon is in hidden text and indicates text that is for the instructor only.
	The Multimedia icon indicates a video or audio clip is in the presentation.
	The Phraseology icon indicates that phraseology is in the content.
	The WBT icon indicates a component of web-based training.
	The Click icon indicates a PPT slide with click-based functionality to present additional information.
	The Definition icon indicates a published definition.

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LESSON INTRODUCTION

Overview
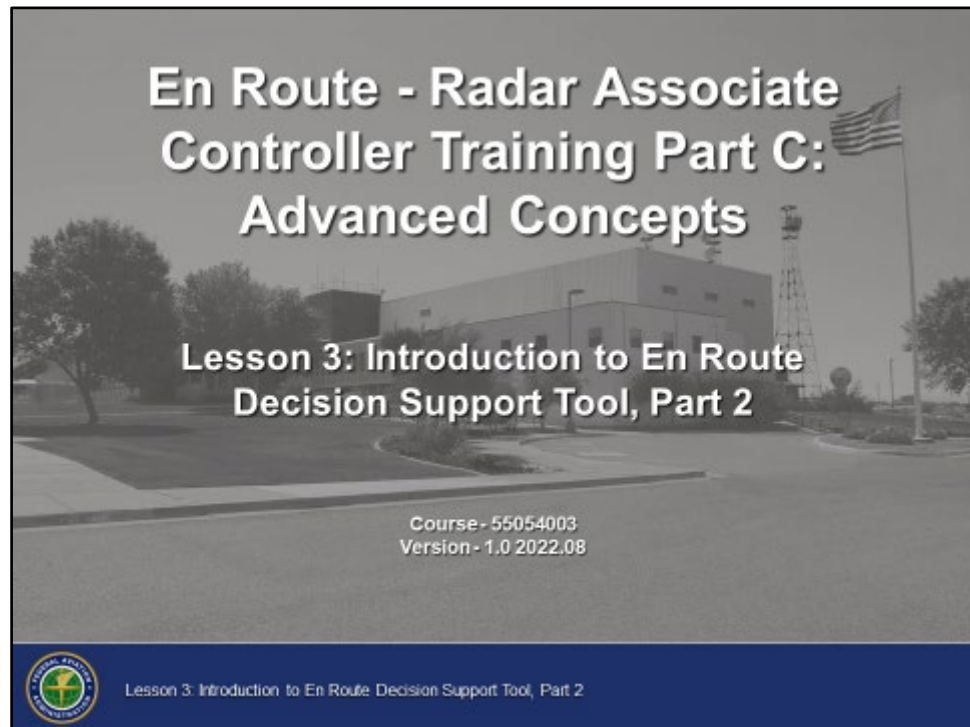
En Route Decision Support Tool (EDST) is the interface at the Radar Associate (RA) position. Sector teams use EDST in performing their strategic planning responsibilities.

In Lesson 2, Introduction to EDST Part 1, you learned how this tool derives expected aircraft trajectories to predict conflicts.

This lesson will cover the Tools Menu and how to manage airspace, airport stream filters, and restrictions. In addition you will learn about NOTAM, GI, and SIGMET views, the Wind Grid, the Graphic Plan Display, and free form text.

LESSON INTRODUCTION *(CONT'D)*

Lesson Objectives

> ## Lesson Objectives
>
> **At the end of this lesson, you will be able to identify:**
> - Features of the Tools Menu
> - Steps to interact with NOTAMs, GIs, and SIGMETs views
> - Weather and altimeter displays of EDST
> - Functions of the Graphic Plan Display
> - EDST free form text
>
> Lesson 3: Introduction to En Route Decision Support Tool, Part 2   1

☞   *Review the lesson objective.*

⊙   At the end of this lesson, you be able to identify:

- Features of the Tools Menu
- Steps to interact with NOTAMs, GIs, and SIGMETs views
- Weather and altimeter displays of EDST
- Functions of the Graphic Plan Display (GPD)
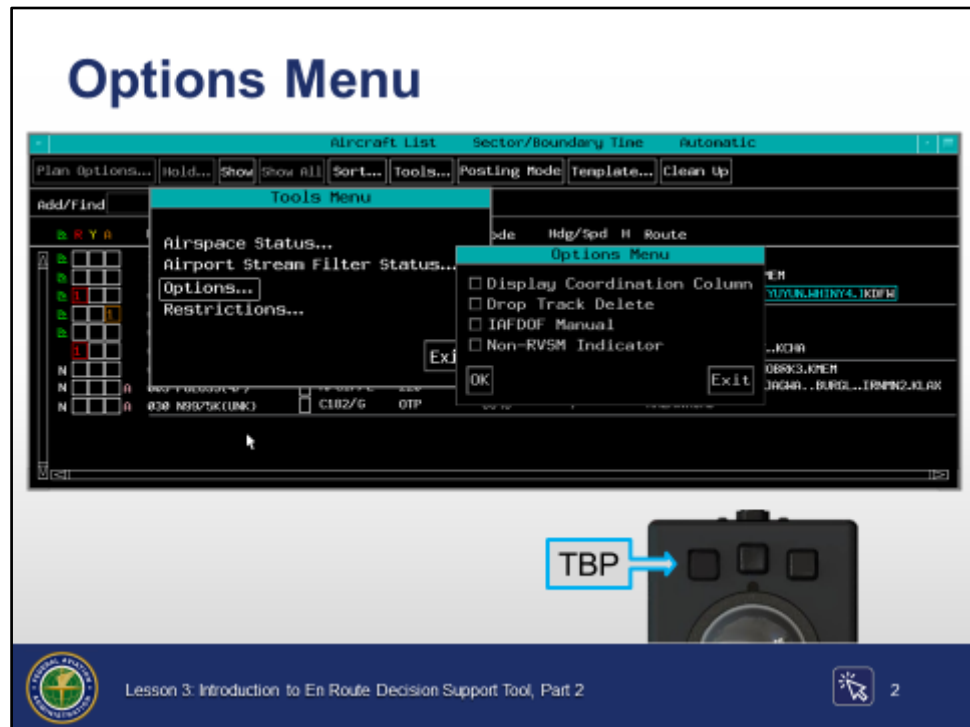- EDST free form text

NOTE: There will be a graded end-of-lesson test upon completion of the lesson. The passing score is 70%. If you do not achieve a score of 70%, you will be provided study time and one retake of an alternate end-of-lesson test.

TOOLS MENU

Options Menu

TI 6110.101,
sec. 4.21.3

ERAM ATCHI
MISC 230.05,
par. 3.7.17.6

👉 *Slide is animated, 2 clicks. Click where indicated by click icon.*

⊙ Tools… button on the ACL menu bar is used to open the Tools Menu

⊙ The Tools Menu is opened via:

🖱 *Click to open Tools Menu.*

🖱 *Click to open Options.*

  • TBP Tools…>Options…

⊙ Options Menu has four selection boxes:

  • Display Coordination Column

    – TBP to display the coordination column in the ACL

  • Drop Track Delete

    – TBP to specify whether dropped tracks are to be deleted immediately from the ACL vs. the default mode of timing out from the ACL

TOOLS MENU *(CONT'D)*

Options Menu (Cont'd)

TI 6110.101, sec. 4.21.3

JO 7110.65, par. 13-1-9

ERAM ATCHI MISC 230.05, par. 3.8.46

- IAFDOF Manual
  - TBP to change automatic IAFDOF indication to manual mode
  - In manual mode you apply or remove the two states of IAFDOF coding indicated by yellow and muted yellow colors
  - EDST Inappropriate Altitude for Direction of Flight (IAFDOF) feature must be used in the automatic mode (i.e., IAFDOF Manual must remain deselected) unless otherwise authorized in a facility directive
- Non-RVSM Indicator
  - When your sector does not contain RVSM altitudes, you have the option to display the non-RVSM indicator on the ACL for flights expected to enter RVSM airspace
  - The non-RVSM indicator is a coral box displayed to the right of the altitude field when a flight is not equipped for RVSM flight and the FP assigned altitude, interim altitude, or reported altitude (Mode C or pilot reported) is at or above FL290
  - TBP the Non-RVSM Indicator box to display non-RVSM coding on the ACL and GPD
  - If your sector contains RVSM altitudes, this menu item will be grayed out

TOOLS MENU *(CONT'D)*

Airspace Status View

TI 6110.101, sec. 4.21.1
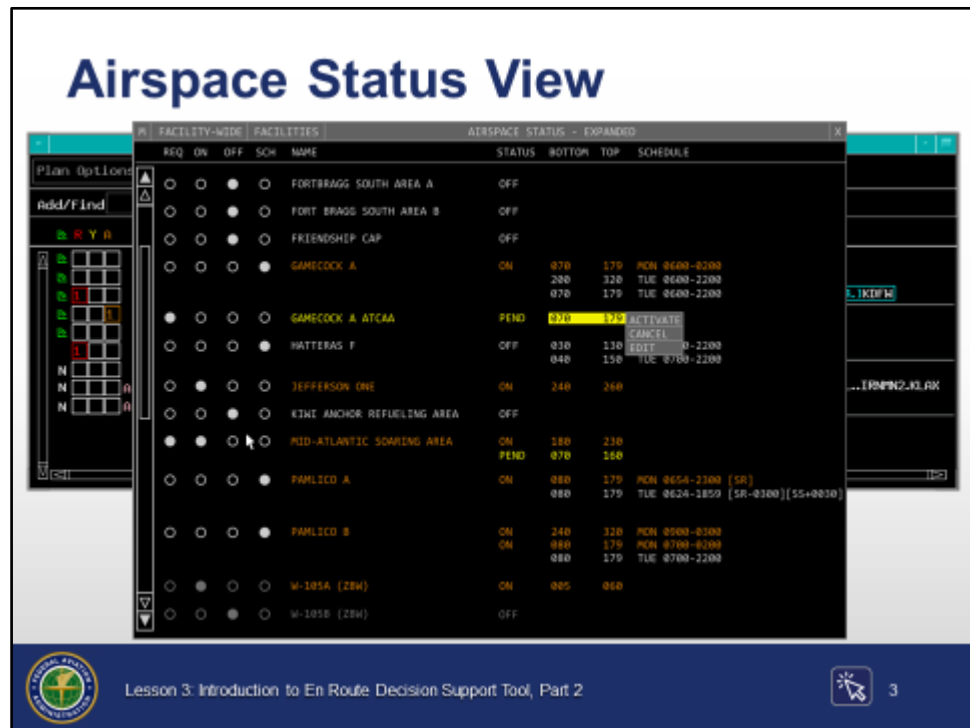
📌 *Slide is animated, 2 clicks. Click where indicated by click icon.*

⊙ The Airspace Status View is opened via:

🖱️ *Click to open Tools Menu.*

🖱️ *Click to open Airspace Status view.*

- TBP Tools…>Airspace Status
- This view allows you to see the current and planned use of Special Activity Airspace (SAAs)

⊙ Designated RA positions may have the capability to:

- Change the status of SAAs
- Modify the schedules of SAAs
- Change the altitude limits of SAAs

⊙ You may filter the display between SAAs that are of operational interest to the sector position and all the SAAs in the local facility

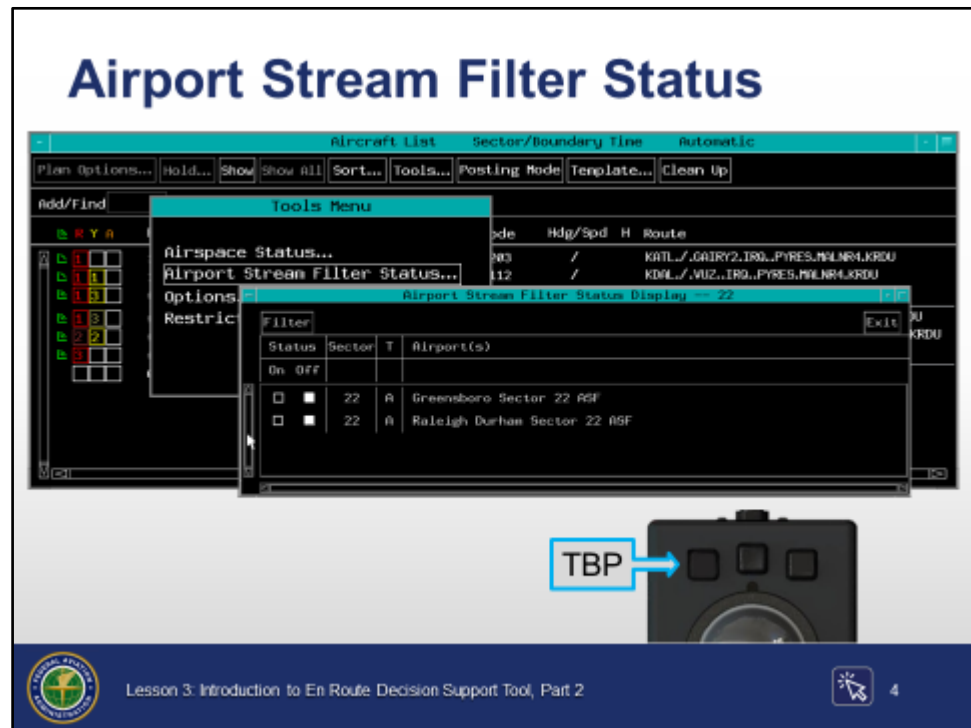- You may also be able to display SAAs of adjacent facilities

NOTE: The Airspace Status View will be covered in detail in a future lesson.

TOOLS MENU *(CONT'D)*

Airport Stream Filter Status Display

TI 6110.101, sec. 4.21.2

ERAM ADAPT AD 220.04, par. 2.7.1.2.2.1

👉 *Slide is animated, 3 clicks. Click where indicated by click icon.*

📖 AIRPORT STREAM FILTERS (ASF) - An on/off filter that allows the conflict notification function to be inhibited for aircraft-to-aircraft alerts approaching an adapted set of destination airport(s) or departing an adapted set of departure airport(s) to prevent nuisance alerts.

NOTE: Airport stream filters might not be adapted at your facility and/or sector position. If the ASF for a sector position is on, aircraft-to-aircraft alerts for the specified aircraft are inhibited when the initial points of violation are within airspace assigned to the sector position.

⊙ The Airport Stream Filter Status Display is opened via:

🖱 *Click to open Tools Menu.*

🖱 *Click to open Airport Stream Filter Status display.*

• TBP Tools…>Airport Stream Filter Status…

NOTE: Conflict probe can produce nuisance alerts at sectors with heavy arrival and/or departure traffic.

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TOOLS MENU *(CONT'D)*

Airport Stream Filter Status Display (Cont'd)

TI 6110.101, sec. 4.21.2

ERAM ATCHI MISC 230.05, par. 3.7.2

⊙ Airport stream filter status display columns:

- Status
  - Changes the status from on to off
- Sector
  - Displays sector number servicing the airport(s)
- "T"
  - Displays "A" for arrival or "D" for departure
- Airport(s)
  - Displays unique description for each filter

⊙ Airport stream filter status display buttons:

- Filter
  - Shows facility-wide ASF status
- Exit
  - Removes the filter display

👉 *Explain how multiple alerts for each aircraft are reduced after applying the filter.*

🖱 *Click to apply filter and close the display.*

⊙ To apply the filter to a specific airport:

- TBP "On" radio button
  - All aircraft-to-aircraft alerts between flights meeting the criteria are suppressed

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TOOLS MENU *(CONT'D)*

Restrictions View

TI 6110.101, sec. 4.21.4

ERAM ATCHI MISC 230.05, par. 19
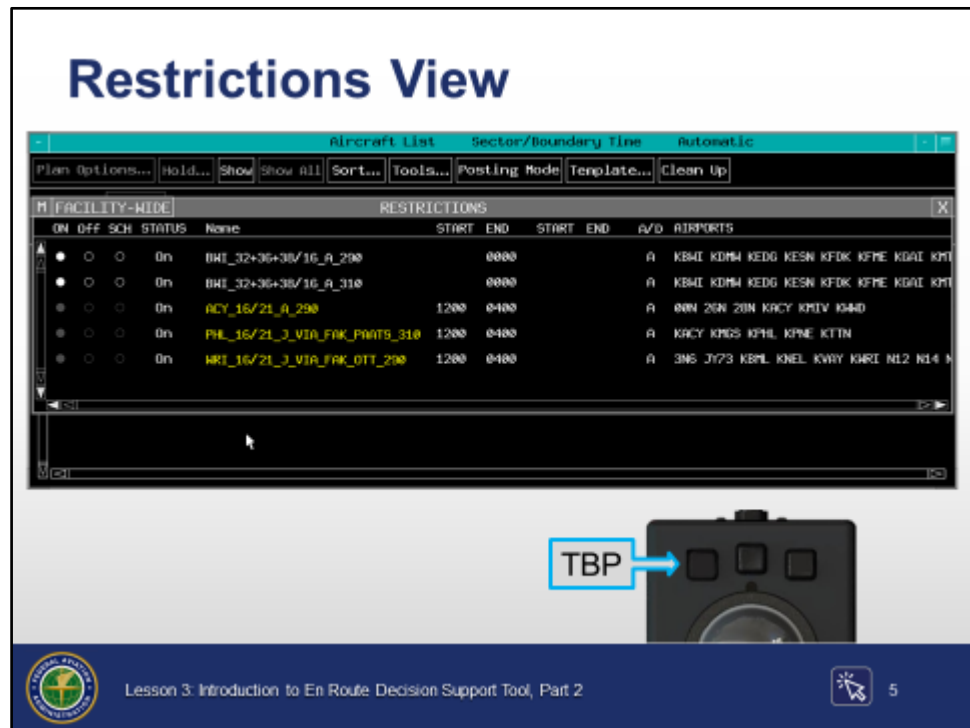
Slide is animated, 2 clicks. Click where indicated by click icon.

⊙ The Restrictions View:

- Is opened via:

Click to open Tools Menu.

Click to open Restrictions.

- – TBP Flight ID
- – TBP Tools…>Restrictions

- Provides altitude and speed restrictions to model the trajectory based on Letters of Agreement (LOAs) and Standard Operating Procedures (SOPs)

- Allows you to turn restrictions on/off or revert to the prior setting on the restrictions
    - – If FACILITY-WIDE is displayed
        - o View contains all of the restrictions that apply to the facility
    - – If SECTOR (sector ID) is displayed
        - o View contains only those restrictions for the sector

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TOOLS MENU *(CONT'D)*

Restrictions View (Cont'd)

TI 6110.101, sec. 4.21.4

ERAM ATCHI MISC 230.05, par. 19

⊙ If you cannot change the status of a restriction, its radio buttons are gray

⊙ The view has eight columns:

- ON
  - Restrictions are always on (overriding the scheduled restrictions)
- OFF
  - Restrictions off (overriding the scheduled restrictions)
- SCH
  - Time restrictions turn on and off based on adaptation
- STATUS
  - Current status of the restriction
    - ON (active)
    - OFF (not active)
- NAME
  - Name of the restriction in adaptation
- START END
  - Times the restrictions are scheduled to be on or active
    - A restriction can be scheduled to be active for two separate time periods
  - START indicates the time if set to scheduled SCH
  - END indicates the time restriction will no longer apply
- A/D
  - Indicates arrival and/or departure
- AIRPORTS
  - Displays the airports that are affected by the restriction

TOOLS MENU *(CONT'D)*

Current Restrictions Menu

TI 6110.101, sec. 4.21.4

ERAM ADAPT AD 220.04, par. 2.7.1.2.4.1
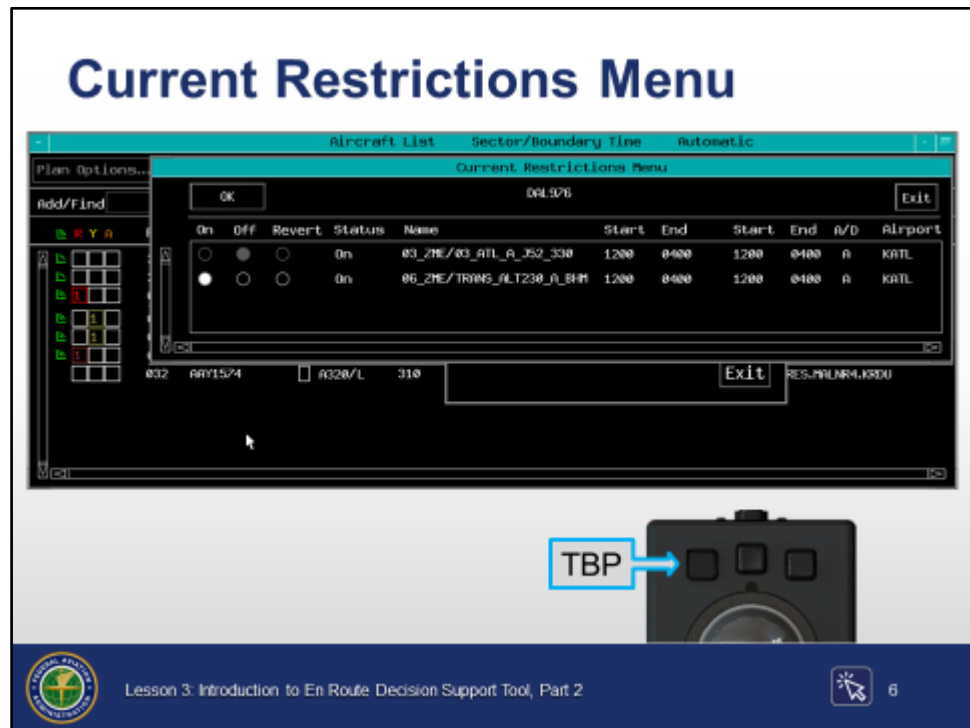
🖑 *Slide is animated, 3 clicks. Click where indicated by click icon.*

⊙ The Current Restrictions Menu:

- Opened via:

🖱 *Click to highlight Flight ID DAL976.*

🖱 *Click to open Tools Menu.*

🖱 *Click to open Restrictions.*

- TBP Flight ID
- TBP Tools…>Restrictions
- Provides altitude and speed restrictions modeled for a specific flight
  - Allows you to turn restrictions on/off or revert to the prior setting
- The radio buttons operate in a similar fashion as the Restrictions View except:
  - Revert is unique to the Current Restrictions Menu
    - When selected, the aircraft reverts back to the current restriction display schedule

TOOLS MENU *(CONT'D)*

Knowledge Check

Knowledge Check

What is displayed in the Current Restrictions view?

    A. Restrictions you have verbally placed on other sectors

    B. Center-wide restrictions

    C. Adapted restrictions for a specific flight

Lesson 3: Introduction to En Route Decision Support Tool, Part 2   7

Question: What is displayed in the Current Restrictions view?

Answer: C. Adapted restrictions for a specific flight

TOOLS MENU *(CONT'D)*

Knowledge Check

Knowledge Check

What is the purpose of Airport Stream Filters?

A. Suppresses aircraft-to-aircraft alerts for the specific airport(s)

B. Filters the display to only show flights for a single airport

C. Displays all entries following similar routes

Lesson 3: Introduction to En Route Decision Support Tool, Part 2   8

Question: What is the purpose of Airport Stream Filters?

***Answer:** A. Suppresses aircraft-to-aircraft alerts for the specific airport(s)*

TOOLS MENU *(CONT'D)*

**Knowledge
Check**

Knowledge Check

Which view displays the status of active Special Activity Airspace?

A. Flight Restrictions View

B. Special Activity Area View

C. Airspace Status View

Lesson 3: Introduction to En Route Decision Support Tool, Part 2   9

Question: Which view displays the status of active Special Activity
Airspace?

Answer: C. Airspace Status View

TOOLS MENU *(CONT'D)*

Knowledge Check

Question: What are the steps to set IAFDOF to manual?

 ***Answer:** B. TBP Tools…>Options…>IAFDOF Manual*

NOTAMS VIEW

**NOTAMS
View**

TI 6110.101,
secs. 2.2, 4.5.1
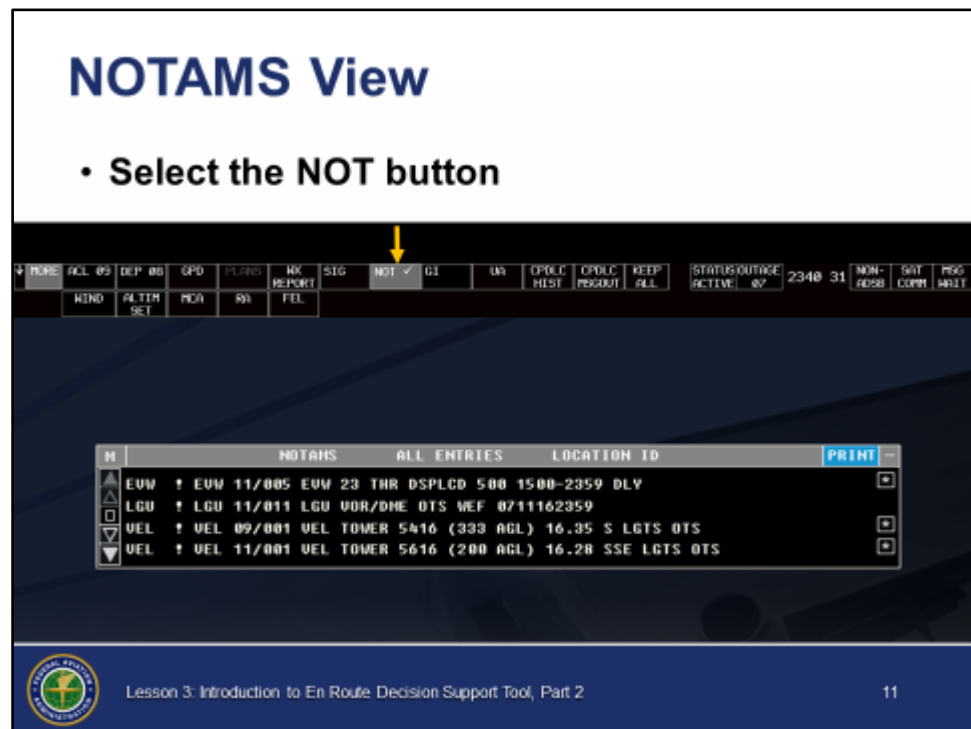
⊙ The NOTAMS view is accessed through NOT button on the EDST toolbar

- Initially displayed at a default location
- Suppressed via the EDST NOT toolbar button

NOTE: Currently this function is not used and another method is used for NOTAMs. Specific instruction will be given in a later lesson.

- The NOT button is facility adaptable and might not be displayed in the toolbar

GENERAL INFORMATION (GI) MESSAGES VIEW

GI Messages View

TI 6110.101, secs. 2.2, 4.6.1
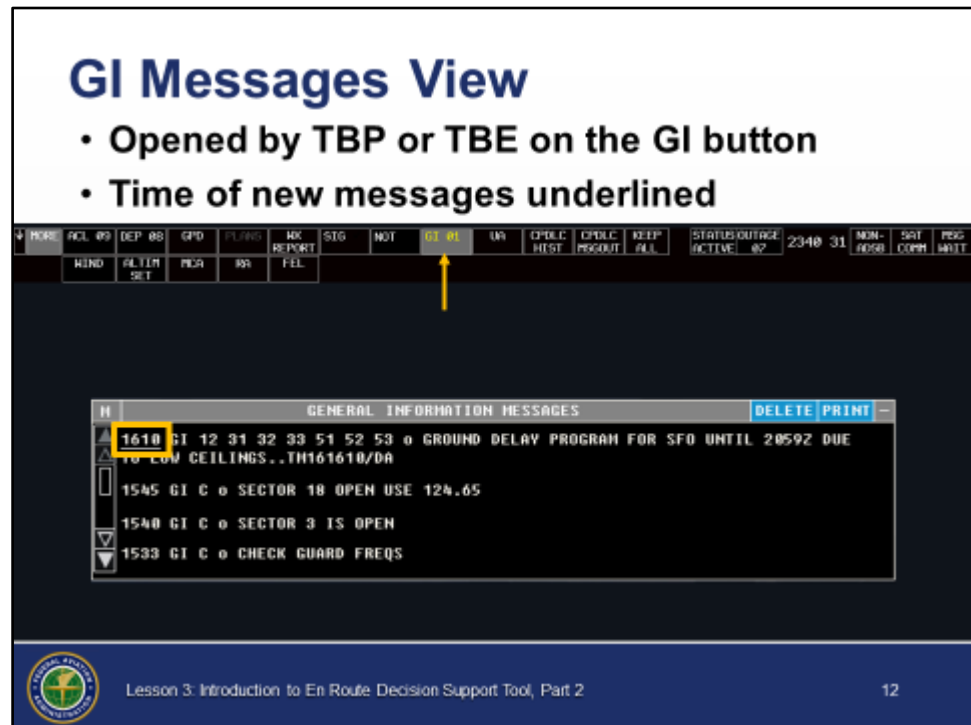
- ⊙ Toolbar GI button yellow text and number indicate new General Information (GI) message(s)

- ⊙ General Information Messages view is opened by TBP or TBE on the GI button

  - The view will be displayed at:
    - The previous location, or
    - The default location if the GI Messages view has not been displayed previously

- ⊙ A new GI message is indicated by an underline of the time the GI was sent

- ⊙ A new GI message may be acknowledged by TBP or TBE on the time GI was sent

  - New message coding for that message is removed
  - When all new GI messages have been acknowledged:
    - A white check mark "✓" replaces the number in the toolbar GI button
    - GI button text changes from yellow to white

GI MESSAGES VIEW *(CONT'D)*

Forwarding GI Messages

TI 6110.101, sec. 4.6.2.1

Forwarding GI Messages

Lesson 3: Introduction to En Route Decision Support Tool, Part 2   13
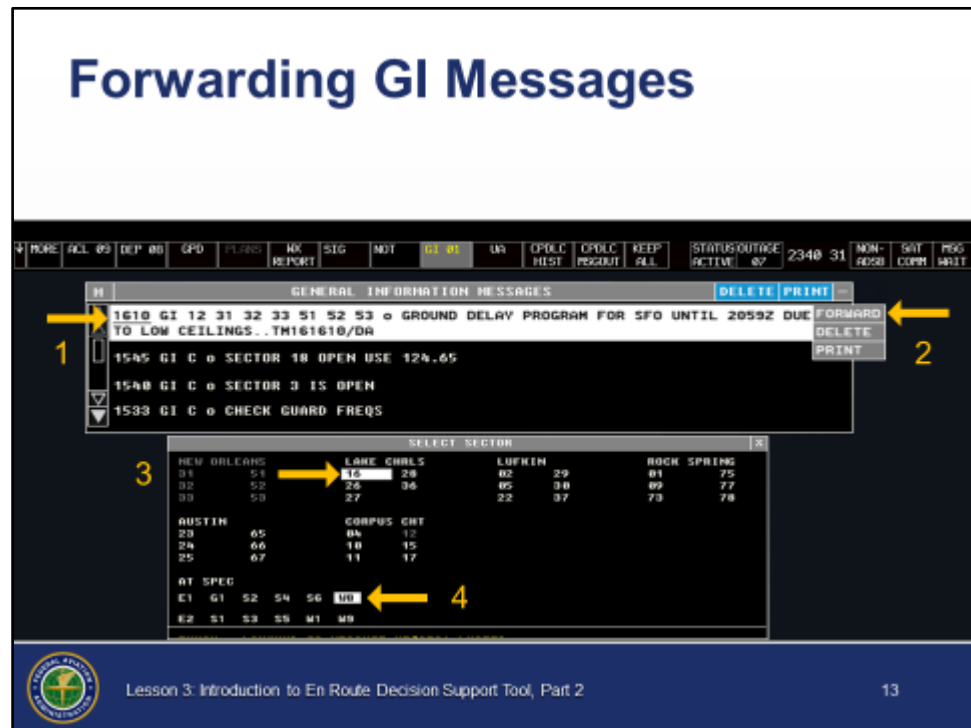
⊙ GI messages may be forwarded to internal facility areas, sectors, and AT Specialist positions which have not previously received the message

⊙ To forward a GI message:

- TBP on the message to be forwarded

- When pop-up menu appears, TBP or TBE FORWARD

- When SELECT SECTOR pop-up appears, TBP all but last sector, area, or AT Specialist position

- TBE the last sector, area, or AT Specialist position

  - If the GI Message is being forwarded to a single position, TBE that position to forward the message

GI MESSAGES VIEW *(CONT'D)*

Deleting Single GI Message

TI 6110.101, sec. 4.6.3.4

Slide is animated, 1 click. Click where indicated by click icon.

Click to show the amendment steps and resulting GI Message View.

⊙ To delete a single message:

- TBP or TBE entry to be deleted
- When pop-up menu appears TBP or TBE DELETE

NOTE: Deleting a GI Message removes the message from display at your sector only.

GI MESSAGES VIEW *(CONT'D)*

Deleting Multiple GI Messages

TI 6110.101, sec. 4.6.3.4

Slide is animated, 1 click. Click where indicated by click icon.

Click to show the amendment steps and resulting GI Message View.

⊙ To delete multiple messages:

- TBP or TBE DELETE in the view header
- TBP on all entries to be deleted except the last entry
- TBE the last entry to be deleted

GI MESSAGES VIEW *(CONT'D)*

Knowledge Check

Question: How are new GI Messages indicated on the GI button in the toolbar?

 ***Answer:** C. Yellow text and number*

GI MESSAGES VIEW *(CONT'D)*

Knowledge Check

Knowledge Check

How can you delete multiple GI messages at one time?

A. TBP or TBE each GI>TBE DELETE in the header

B. TBP or TBE DELETE in the header>TBP each GI but the last>TBE the final GI

C. TBH or TBE SELECT in header>TBE on each GI>TBE on final GI

Lesson 3: Introduction to En Route Decision Support Tool, Part 2   17

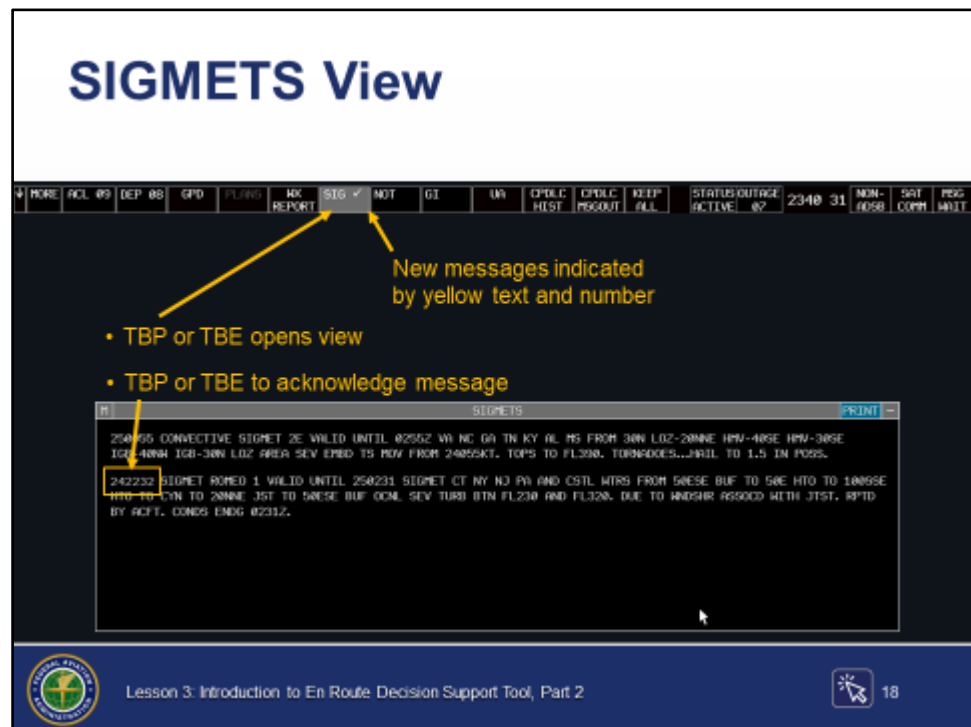**Question:** How can you delete multiple GI messages at one time?

***Answers:** B. TBP or TBE DELETE in the header>TBP each GI but the last>TBE the final GI*

SIGMETS VIEW

SIGMETS View

TI 6110.101, secs. 4.4.1, 4.4.3.4, 4.4.3.8

👉 *Slide is animated, 2 clicks. Click where indicated by click icon.*

⊙ Toolbar SIG button yellow text and number indicate new message(s)

🖱️ *Click to highlight SIG on toolbar.*

⊙ SIGMETS view is opened by TBP or TBE on the toolbar SIG button

- The view will be displayed at:
  - The previous location, or
  - The default location, if the SIGMETS view has not been displayed previously

⊙ SIGMETS view entries include messages as follows:

- SIGMETs (SIGMET/WS)
- Convective SIGMETs (SIGMET/WST)
- Airmen's Meteorological Information (AIRMET/WA)
- Center Weather Advisories (CWA)
- Urgent Pilot Weather Reports (Urgent PIREP/UUA)
- Meteorological Impact Statements (MIS)

SIGMETS VIEW *(CONT'D)*

SIGMETS View (Cont'd)

TI 6110.101, secs. 4.4.3.4, 4.4.3.5, 4.4.3.8, 4.4.3.9

- A new SIGMET message is indicated by an underline of the time the message was sent

Click to highlight time on acknowledged SIGMET.

- A new SIGMET message may be acknowledged by TBP or TBE on the time the message was sent

    – New message coding is removed

    – When all new messages have been acknowledged:

        o A white check mark "✓" replaces the number in the toolbar SIG button

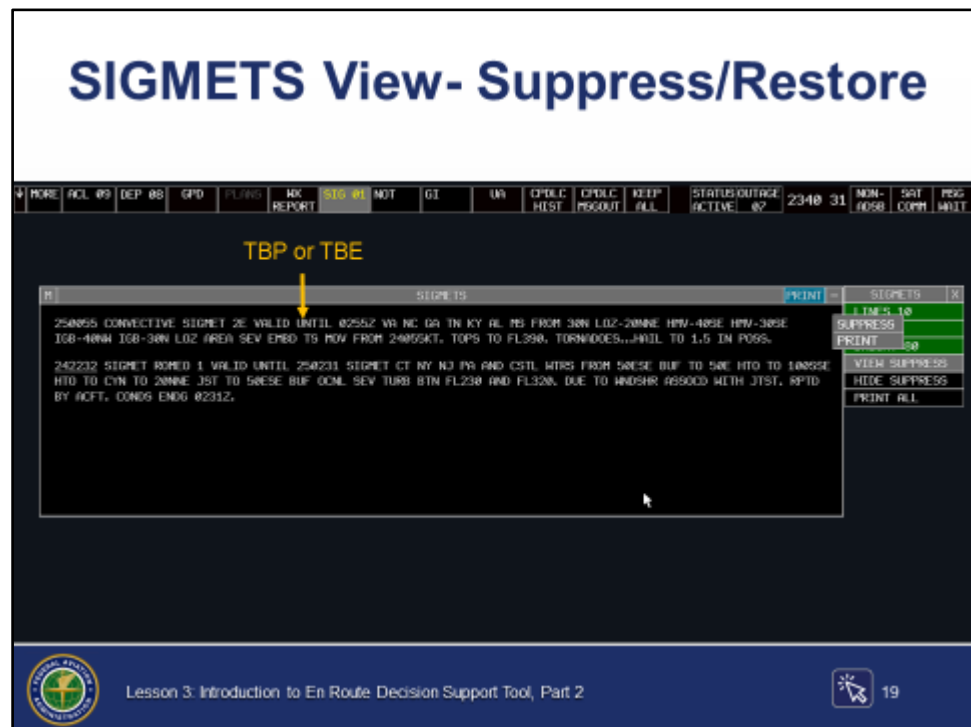   o SIG button text changes from yellow to white

Point out to the students the changes in the slide to the SIG button and removal of the underline of the message sent time.

SIGMETS VIEW *(CONT'D)*

SIGMETS View - Suppress/ Restore

TI 6110.101, secs. 4.4.3.4, 4.4.3.5, 4.4.3.7, 4.4.3.8, 4.4.3.9

👉 *Slide is animated, 7 clicks. Click where indicated by click icon.*

⊙ SIGMETs cannot be removed, only suppressed

⊙ Suppressing a SIGMET

🖱 *Click to highlight, i.e., select, top SIGMET.*

- Use TBP or TBE to select a SIGMET

    – Two pop-up pick areas appear: SUPPRESS and PRINT

🖱 *Click to suppress highlighted SIGMET.*

- TBP SUPPRESS

⊙ SIGMET entry is moved to suppressed area

- The suppressed area is above the unsuppressed area and a gray line separates the areas

- Dependent upon user setting, suppressed entries may be in view or hidden

Continued on next page

SIGMETS VIEW *(CONT'D)*

SIGMETS View- Suppress/ Restore (Cont'd)

TI 6110.101, secs. 4.4.3.4, 4.4.3.5, 4.4.3.8, 4.4.3.9

⊙ Restore a suppressed SIGMET

Click to move cursor to menu "M".
- If the VIEW SUPPRESS not activated

Click to open view menu.
- − TBP or TBE the "M" in the view header

Click to view suppressed SIGMETS.
- o TBP or TBE VIEW SUPPRESS, all suppressed entries now appear above the gray line

Click to highlight suppressed SIGMET.
- − TBP or TBE the desired SIGMET
  - o Two pop-up pick areas appear: RESTORE and PRINT

Click to restore SIGMET.
- − TBP or TBE RESTORE
  - o SIGMET entry is restored to the Unsuppressed SIGMET Entry Area

PRINTING - NOTAMS, GENERAL INFORMATION MESSAGES, AND SIGMETS

Printing - NOTAMs, GI Messages, and SIGMETs

TI 6110.101, secs. 4.4.3.5, 4.5.3.7, 4.6.3.6

Printing - NOTAMs, GI Messages, and SIGMETs

Lesson 3: Introduction to En Route Decision Support Tool, Part 2   20

⊙ You may print from all three views using the following options:

- Print a single entry
- Print multiple entries
- Print all entries

PRINTING - NOTAMS, GENERAL INFORMATION MESSAGES, AND SIGMETS *(CONT'D)*

Printing a Single Entry

TI 6110.101, sec. 4.5.3.7

Slide is animated, 1 click. Click where indicated by click icon.

Click to show the steps.

⊙ To print a single entry:

- TBP or TBE on entry
- Within entry pop-up, TBP or TBE PRINT
  - Entry will print on a flight strip printer

NOTE: All entries are eligible for printing, including suppressed entries.

PRINTING - NOTAMS, GENERAL INFORMATION MESSAGES, AND SIGMETS *(CONT'D)*

Printing Multiple Entries

TI 6110.101, sec. 4.4.3.5

Slide is animated, 1 click. Click where indicated by click icon.

Click to show the steps.

⊙ To print multiple entries:

- TBP or TBE PRINT button in title bar
- TBP all entries, except last entry, to be printed
- TBE last entry to be printed

PRINTING - NOTAMS, GENERAL INFORMATION MESSAGES, AND SIGMETS *(CONT'D)*

Printing All Entries

TI 6110.101, sec. 4.4.3.5

👉 *Slide is animated, 1 click. Click where indicated by click icon.*

🖱 *Click to show the steps.*

⊙ To print all entries:

- TBP or TBE the "M" pick area in the view header
- TBP or TBE PRINT ALL button

PRINTING - NOTAMS, GENERAL INFORMATION MESSAGES, AND SIGMETS *(CONT'D)*

Knowledge Check

Knowledge Check

When printing more than one GI message, _____ on all except _____ on the last entry.

    A. TBP; TBE

    B. TBP; TBP

    C. TBE; TBE

Lesson 3: Introduction to En Route Decision Support Tool, Part 2   24

Question: When printing more than one GI message, _____ on all except _____ on the last entry.

Answer: A. TBP; TBE

WEATHER AND ALTIMETER DISPLAYS

**Weather
Station
Report View**

TI 6110.101,
sec. 4.3

Weather Station Report View

Lesson 3: Introduction to En Route Decision Support Tool, Part 2
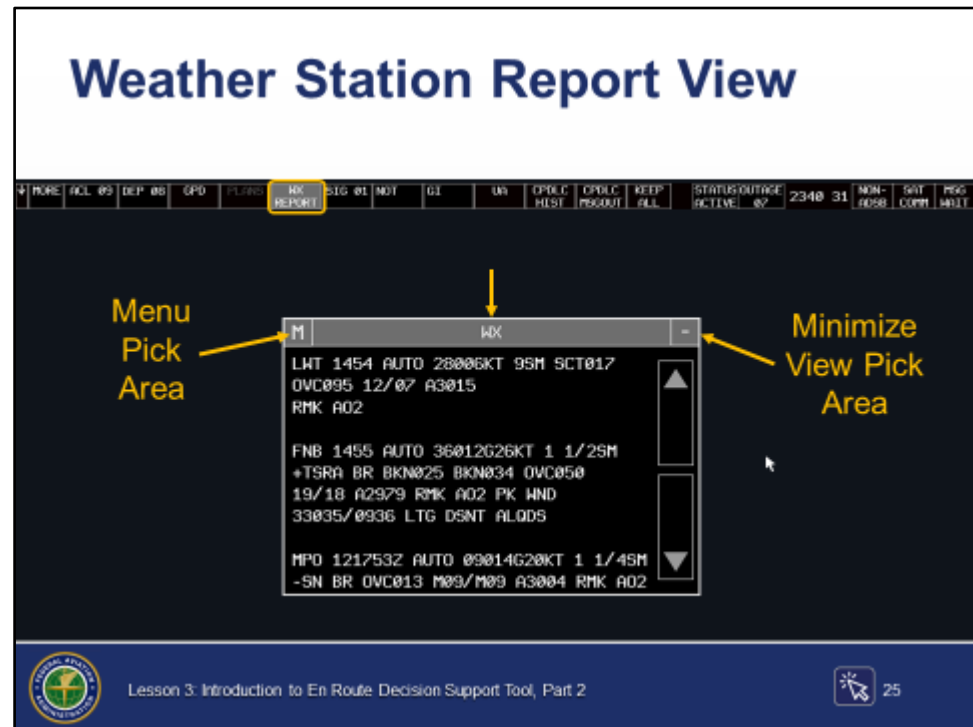
👉 *Slide is animated, 3 clicks. Click where indicated by click icon.*

◉ The Weather Station Report View provides weather station reported information

- The view is opened via the WX REPORT button on the EDST toolbar

◉ Add weather station with keyboard command

- WR (station ID) KBE
    - The entry of a typed station ID acts as a toggle
        - o If the station ID is not in the list, the report is added
        - o If the station ID matches an existing station ID, the report is deleted

◉ A single weather reporting station can be added to or deleted via the WX pop-up input box

- TBP or TBE "M" in the header
    - The view menu appears

Continued on next page

WEATHER AND ALTIMETER DISPLAYS *(CONT'D)*

**Weather
Station
Report View
(Cont'd)**

TI 6110.101,
sec. 4.3

- Type a weather station ID and press the Enter key
  - If the station ID is not in the list, it will be added
  - If the station ID matches an existing station ID it will be deleted
  - If the station ID syntax is not valid, the input box remains displayed and an INVALID indicator is displayed below box
    - o The box remains open for you to edit the station ID and resubmit
  - The entry of a typed station ID acts as a toggle

Click to move cursor to FNB report.

⊙ Deleting a station with the trackball

- Place the cursor over the station to be deleted
  - Station has dwell emphasis

Click to show highlight and display DELETE pop-up.

- TBP or TBE
  - Station is highlighted
  - DELETE pop-up appears

Click to delete FNB report.

- TBP or TBE the DELETE pop-up
  - Station is deleted

WEATHER AND ALTIMETER DISPLAYS *(CONT'D)*

Altimeter Settings View

TI 6110.101, sec. 4.8

TI 6110.108, p. 4

ERAM ATCHI MISC 230.05, par. 6.8.1
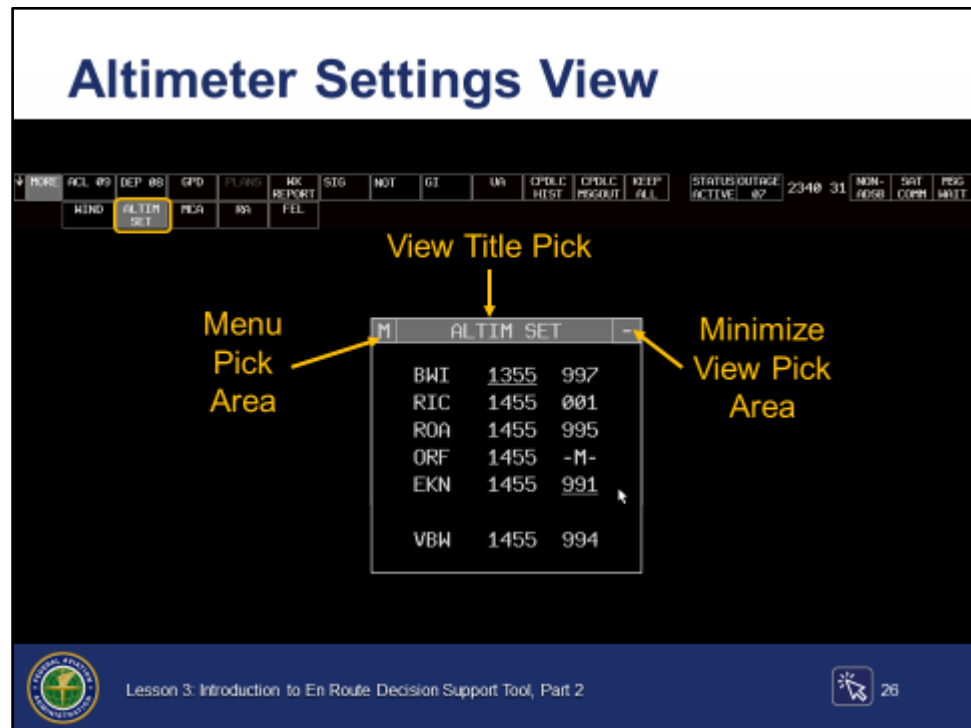
Slide is animated, 7 clicks. Click where indicated by click icon.

⊙ The Altimeter Settings View provides altimeter station(s) name, time, and setting

- The view is opened via the ALTIM SET button on the EDST toolbar

⊙ Station Identifier - The two to five letter identifier of the station where the observation was taken

⊙ Altimeter setting

- The altimeter setting is underlined if it is below 29.92
- If the station report is missing, an "-M-" will be displayed

⊙ Add altimeter station using the keyboard

- AR (station ID up to 4) KBE
  - The entry of a typed station ID acts as a toggle
    - o If the station ID is not in the list, it will be added
    - o If the station ID matches an existing station ID it will be deleted

Syntax: AR <LOC ID> (LOC ID) (LOC ID) (LOC ID)

WEATHER AND ALTIMETER DISPLAYS *(CONT'D)*

Altimeter Settings View (Cont'd)

TI 6110.101, sec. 4.8, 4.8.1

ERAM ATCHI MISC 230.05, par. 6.8.1

⊙ Add altimeter station using the menu

Click to delete highlight and move cursor to menu "M".

Click to open view menu.

- TBP or TBE "M" in the header
    – The view menu appears

Click to open template and move cursor to new location.

- TBP or TBE TEMPLATE
    – The template appears and replaces the view menu
    – The template contains 24 cells

Click to make cursor active in new cell.

- TBP or TBE template cell to type in
    – The cell has selection emphasis

Click to type station ID.

- Type the altimeter station name
    – Selection emphasis is removed
    – Typed characters are echoed in the template cell

Click to simulate KBE. Cursor will disappear.

- Press the enter key
    – Altimeter Station name is submitted for system processing
- There are three possible outcomes:
    – The altimeter setting is added to the view
    – INVALID
        o If command processing fails the syntax check
    – NOT FOUND
   o If command processing passes the syntax check but the station name is not found in adaptation

WEATHER AND ALTIMETER DISPLAYS *(CONT'D)*

Altimeter Settings View (Cont'd)

TI 6110.101, sec. 4.8, 4.8.1

ERAM ATCHI MISC 230.05, par. 6.8.1

Click to close template.

- Close the template
    - Station ID(s) and the layout in the template are reflected in the Altimeter Settings View
- Deleting a station with the trackball

    - Place the cursor over the station to be deleted
        - Station has dwell emphasis
    - TBP or TBE
        - Station is highlighted
        - DELETE pop-up appears
    - TBP or TBE the DELETE pop-up
        - Station is deleted
- The following information is provided for each altimeter station entry:

    - Observation time is underlined when it is more than 65 minutes old
    - Setting is underlined if it is below 29.92
    - "-M-" is displayed if the report is missing

WEATHER AND ALTIMETER DISPLAYS *(CONT'D)*

Knowledge Check

Question: What will happen if you enter WR DCA on the keyboard and the WX view already contains the DCA report?

Answer: *C. DCA report will be deleted from the view*

WEATHER AND ALTIMETER DISPLAYS *(CONT'D)*

Knowledge Check

Knowledge Check

How do you access the template for the ALTIM SET view?

A. TBP or TBE "M" in the header

B. TBP or TBE Tools>Template

C. TBP or TBE ALTIM SET on the view

Lesson 3: Introduction to En Route Decision Support Tool, Part 2   28

Question: How do you access the template for the ALTIM SET view?

Answer: *A. TBP or TBE "M" in the header*

WEATHER AND ALTIMETER DISPLAYS *(CONT'D)*

Knowledge Check

Knowledge Check

You attempt to enter an altimeter station into the ALTIM SET template and you get an invalid response. What does this mean?

    A. The altimeter setting is missing

    B. The altimeter is more than one hour old

    C. The station ID entered is incorrect

Lesson 3: Introduction to En Route Decision Support Tool, Part 2   29

Question: You attempt to enter an altimeter station into the ALTIM SET template and you get an invalid response. What does this mean?

Answer: *C. The station ID entered is incorrect*

WEATHER AND ALTIMETER DISPLAYS *(CONT'D)*

Knowledge Check

Knowledge Check

How do you remove a weather report with the trackball?

A. TBP or TBE DELETE in the header>TBP or TBE the report

B. TBP or TBE the report>TBP or TBE DELETE

C. TBP or TBE "M" in the header>TBP or TBE the report

Lesson 3: Introduction to En Route Decision Support Tool, Part 2   30

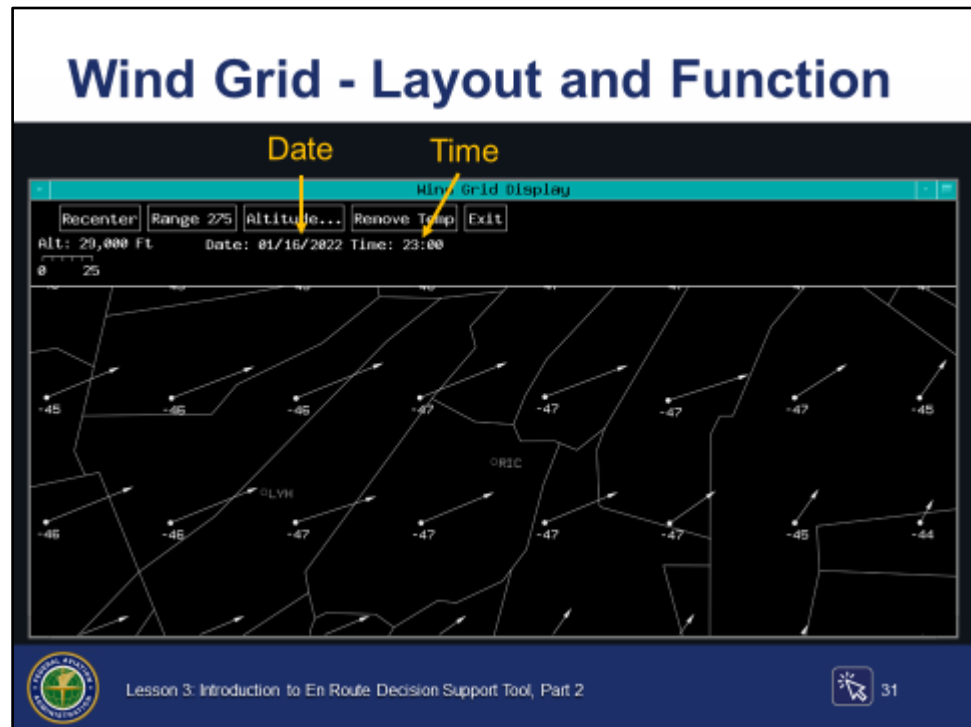**Question:** How do you remove a weather report with the trackball?

Answer: B. TBP or TBE the report>TBP or TBE DELETE

WIND GRID

Wind Grid Layout and Function

TI 6110.101, sec. 3.3

Wind Grid - Layout and Function

Date   Time

Wind Grid Display

Recenter | Range 275 | Altitude... | Remove Temp | Exit

Alt: 29,000 Ft   Date: 01/16/2022 Time: 23:00

0   25

Lesson 3: Introduction to En Route Decision Support Tool, Part 2   31

👉 *Slide is animated, 1 click. Click where indicated by click icon.*

⊙ The Wind Grid Display contains wind and temperature data

- The view is opened via the WIND button on the EDST toolbar
- Date and time of the National Weather Service prediction for the specified altitude level is in the menu bar area
- Wind and temperature data is overlaid on a map of the center sectors
  - Arrows depict wind direction
    - Longer arrows depict stronger speeds
  - Speed is shown in knots
  - Temperature is displayed in degrees Celsius
- Keyboard commands
  - UU W
    - Forces wind display at default or last displayed altitude
  - UU W <altitude>
    - Forces wind display at a specified altitude

Continued on next page

WIND GRID *(CONT'D)*

Wind Grid Layout and Function (Cont'd)

TI 6110.101, sec. 3.3.3.5

- When the Show Temp button is visible, winds are displayed
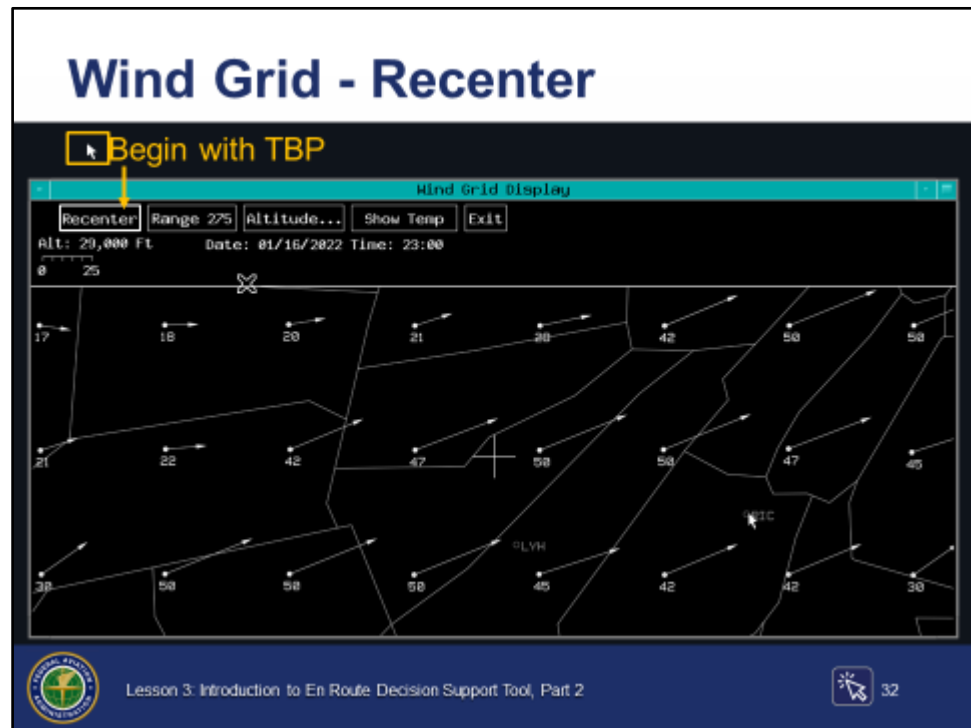 - TBP to toggle between wind and temperature data

Click to demonstrate TBP on Show Temp button and resulting temperatures displayed.

- When the Remove Temp button is visible, temperatures are displayed

WIND GRID *(CONT'D)*

Wind Grid - Recenter

TI 6110.101, sec. 3.3.3.3

👉 *Slide is animated, 1 click. Click where indicated by click icon.*
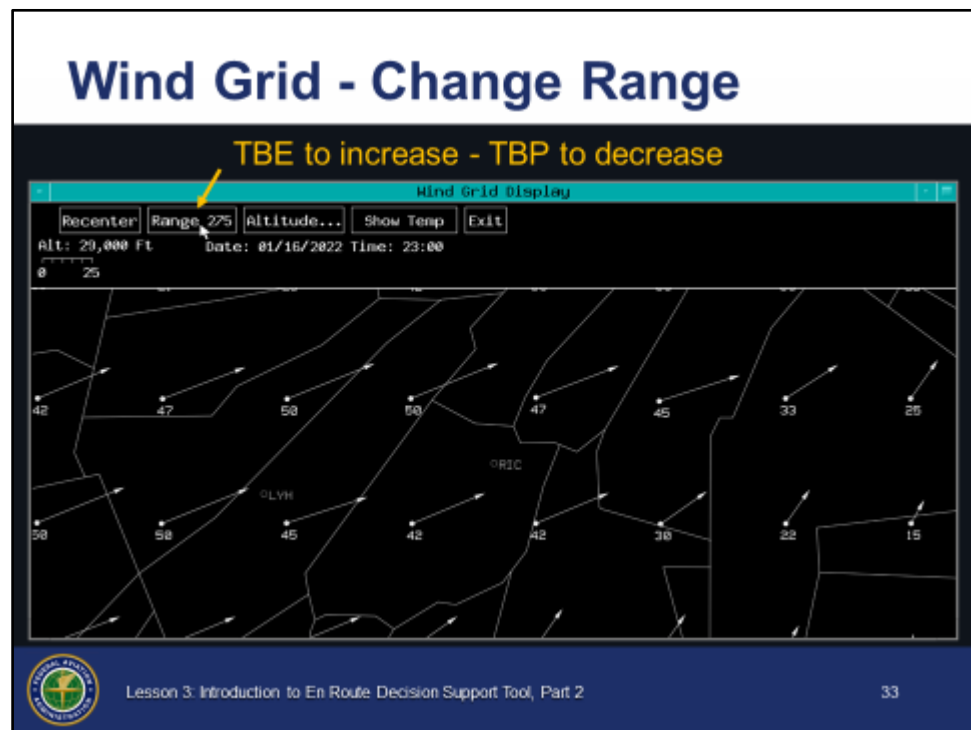
⊙ To recenter the map:

🖱 *Click to recenter the map on the Wind Grid display over the EKN airport symbol.*

- TBP on the Recenter button
- TBP over the desired map center point

WIND GRID *(CONT'D)*

Wind Grid - Change Range

TI 6110.101, sec. 3.3.3.4

- ⊙ The current Wind Grid range value is displayed in the Range button
  - A single TBE will increase the range by 25 miles
  - A single TBP will decrease the range by 25 miles
  - If you try to adjust the range lower than the lowest setting or higher than the highest setting, an alarm tone will sound

WIND GRID *(CONT'D)*

Wind Grid - Change Display Altitude

TI 6110.101, sec. 3.3.3.6
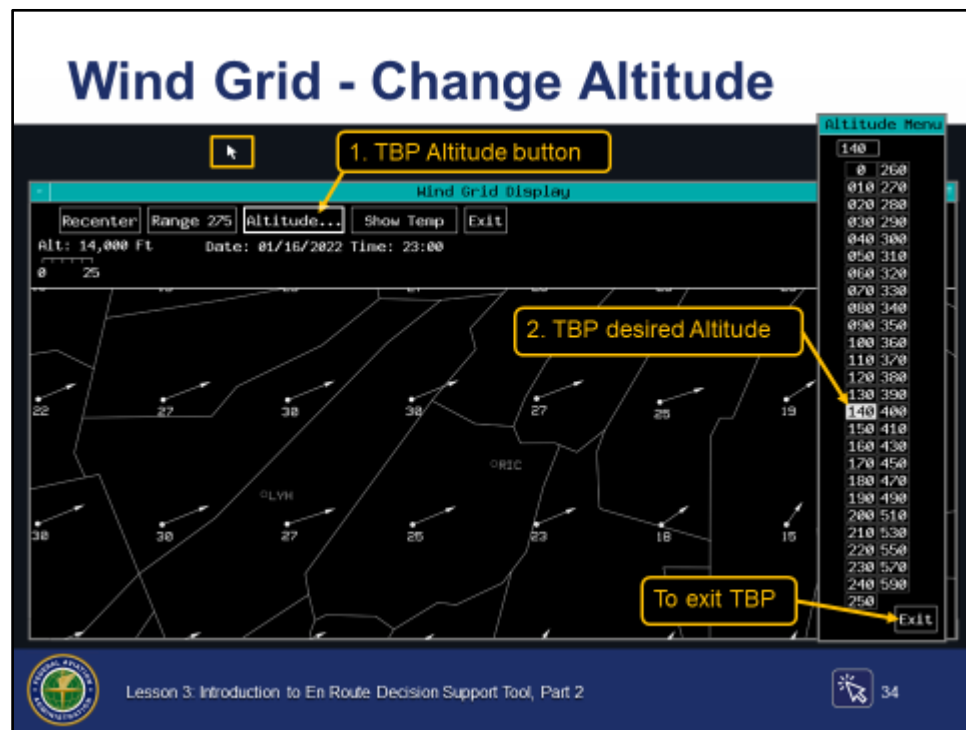
👆 *Slide is animated, 2 clicks. Click where indicated by click icon.*

⊙ The Wind Grid is initially displayed at the default altitude of 29,000'

⊙ The displayed altitude can be changed to any value from zero to 59,000'

⊙ To change the altitude displaying wind or temperature values

- TBP on the Altitude button
  - The Altitude Menu is opened

🖱️ *Click to open the Altitude Menu.*

- TBP on the desired altitude in the Altitude Menu
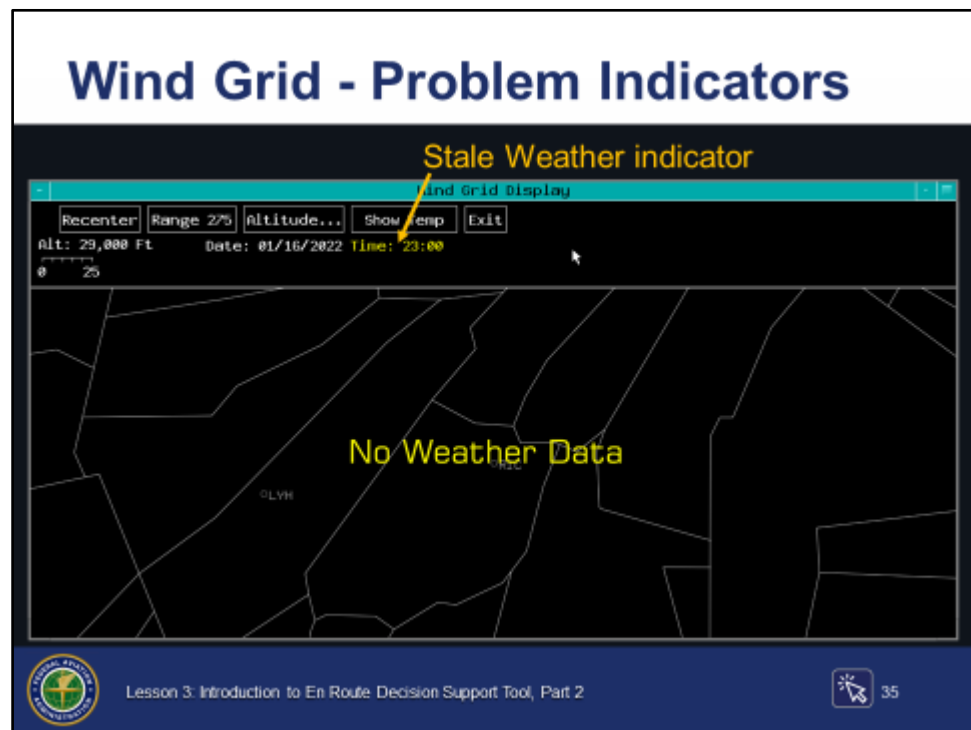 - Desired altitude data is displayed

🖱️ *Click to select 140 as the altitude displaying wind values.*

⊙ To exit the Altitude Menu

- TBP the EXIT button

WIND GRID *(CONT'D)*

Wind Grid - Problem Indicators

TI 6110.101, secs. 3.3.1.2, 3.3.1.3

> 👆 *Slide is animated, 1 click. Click where indicated by click icon.*

⊙ When weather data is unavailable for display:

  • NO WEATHER DATA is displayed in yellow text across the display

⊙ If the weather data available for display for the selected altitude is older than the hour for which it was forecast

  • Time indicator is displayed in yellow indicating stale weather data

> 🖱 *Click to show the indication of stale weather.*

WIND GRID *(CONT'D)*

**Knowledge
Check**

Knowledge Check

**What is the keyboard command to show the
wind grid display at a specified altitude?**

    A. UU <altitude> W

    B. UU <altitude>

    C. UU W <altitude>

Lesson 3: Introduction to En Route Decision Support Tool, Part 2   36

Question: What is the keyboard command to show the wind grid display at a
specified altitude?

Answer: C. UU W <altitude>

WIND GRID *(CONT'D)*

Knowledge Check

Knowledge Check

After TBP on Recenter, how do you recenter the map over an intersection?

```
Wind Grid Display
Recenter  Range 275  Altitude...  Show Temp  Exit
Alt: 29,000 Ft        Date: 01/16/2022 Time: 23:00
0    25
```

A. TBP over intersection where you want the map centered

B. TBE over intersection where you want the map centered

C. TBH the intersection where you want the map centered

Lesson 3: Introduction to En Route Decision Support Tool, Part 2   37

Question: After TBP on Recenter, how do you recenter the map over an intersection?

Answer: A. TBP over intersection where you want the map centered

WIND GRID *(CONT'D)*

Knowledge Check

Knowledge Check

How do you decrease the range by one 25 mile increment?

Wind Grid Display

Recenter | Range 275 | Altitude... | Show Temp | Exit

Alt: 29,000 Ft   Date: 01/16/2022 Time: 23:00

0   25

A. TBE on Range button

B. TBP on Range button

C. TBH on Range button

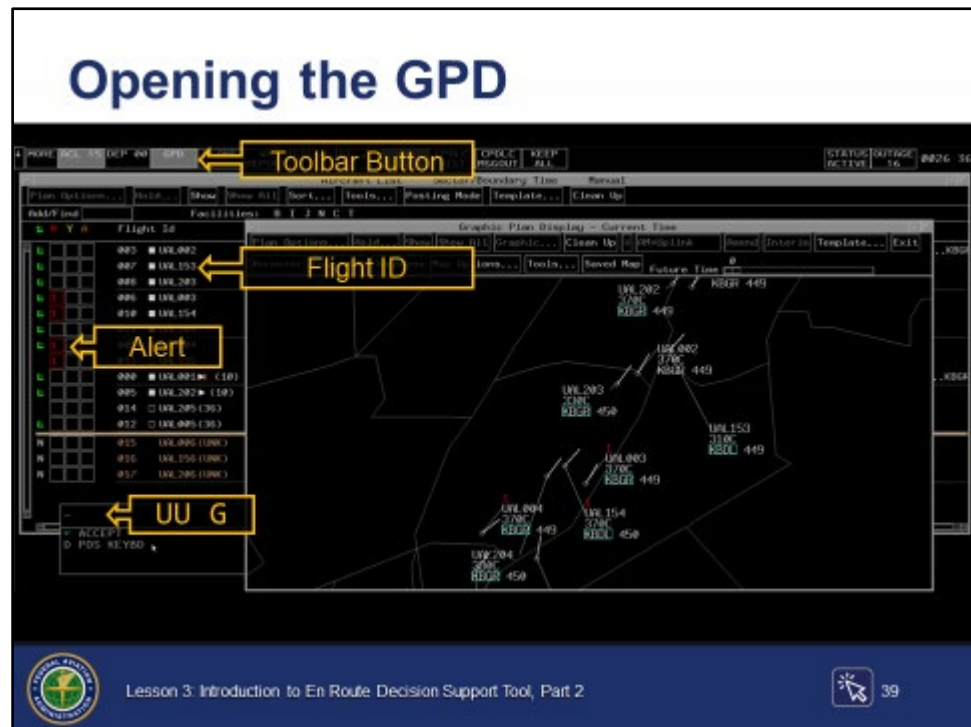Lesson 3: Introduction to En Route Decision Support Tool, Part 2   38

Question: How do you decrease the range by one 25 mile increment?

Answer: B. TBP on Range button

Graphic Plan Display

Opening the GPD

TI 6110.101, secs. 2.5.6, 3.1.1

👉 *Slide is animated, 7 clicks. Click where indicated by click icon.*

⊙ Graphic Plan Display depicts Trial Plans, FPs, and surrounding traffic

⊙ Access the GPD by using one of the following:

- 🖱 TBP or TBE GPD button in EDST toolbar
    - 🖱 Click again to close the GPD or use the Exit button in the GPD
- TBE flight ID
    - 🖱 Click on a flight ID to open the GPD with the trajectory highlighted
    - 🖱 TBP or TBE Exit button to close the GPD
- TBE an ACL Alert
    - 🖱 Click on any ACL alert to open the GPD with that conflict highlighted
    - 🖱 TBP or TBE Exit button to close the GPD
- UU G
    - 🖱 Enter UU G in MCA to open the GPD

GRAPHIC PLAN DISPLAY *(CONT'D)*

GPD Title Bar

TI 6110.101,
sec. 3.1.1.1

![hand icon] *Slide is animated, 1 click. Click where indicated by click icon.*

⊙ Title bar is at the top of the GPD and contains the following:

- Window Menu button
- Display minimize and maximize or restore buttons
- Display Title
- The text Current Time or Future Time is displayed after the GPD title

![cursor icon] *Click to highlight Future Time +2 title bar.*

- – In the case of future time
  - o The number of minutes the GPD has been moved into the future appears after Future Time label
  - o GPD border highlighted in white

Example: `Graphic Plan Display - Future Time +2`

Continued on next page

GRAPHIC PLAN DISPLAY *(CONT'D)*

GPD Menu Bar - General

TI 6110.101, sec. 3.1.1.2
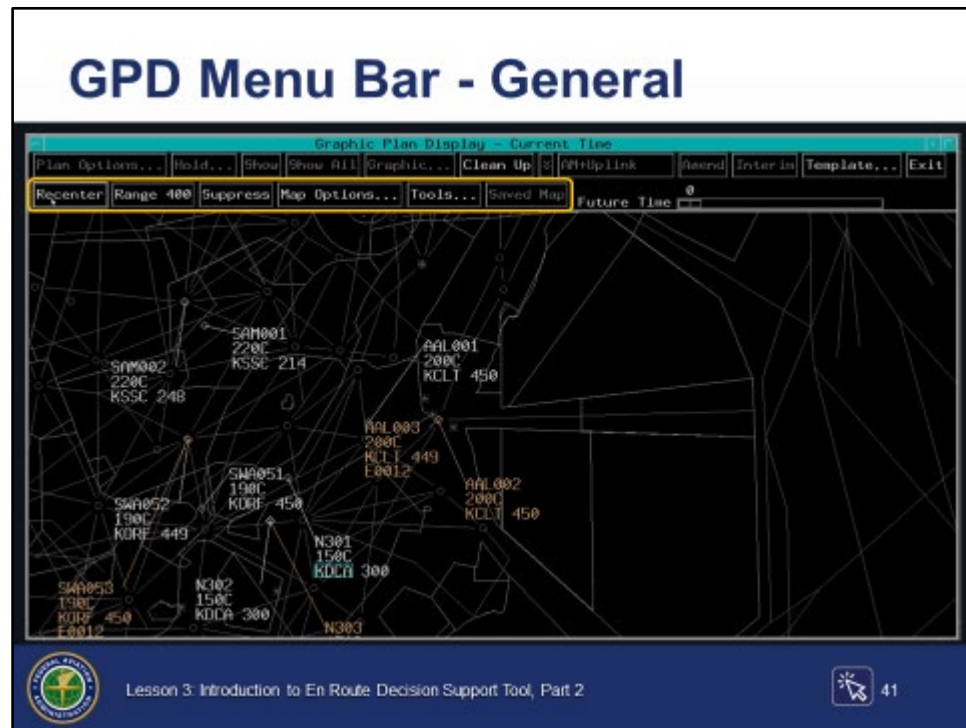
👆 *Slide is animated, 16 clicks. Click where indicated by click icon.*

⊙ Menu Bar buttons access options and menus for managing the GPD map and flight display features

⊙ Recenter button

• Used to recenter the map

– Function is similar to the Wind Grid Display

🖱 *Click to show Range callout.*

⊙ Range button

• Used to change the scale of the GPD

• A single TBE will increase the range by 25 miles

• A single TBP will decrease the range by 25 miles

GRAPHIC PLAN DISPLAY *(CONT'D)*

GPD Menu Bar - General (Cont'd)

TI 6110.101, sec. 3.1.1.2

Click to show Suppress callout.

⊙ Suppress or Restore button

- • TBP to suppress the display of data blocks on the GPD that are not displaying current or trial plan route data
- • TBP to restore the display of data blocks

⊙ Map Options... button

- • TBP to open Map Options Menu
- • TBP Map Features… pick area
  - – Displays the Map Features Menu
    - ○ TBP to select different map elements and associated labels for display or removal
    - ○ Removing a map element will also remove its label; however, the label may still be selected for display

    NOTE: Labels are only viewable if the map features are selected for display.

  - – Map Features Menu options
    - ○ Sector Boundaries

Click to suppress Low Sector Boundaries.

Click to restore Low Sector Boundaries.

  - ○ Center Boundaries
  - ○ Approach Control Boundaries
  - ○ Special Activities Airspace
  - ○ Airways

Click to suppress "V" victor airways

Click to restore "V" victor airways

GRAPHIC PLAN DISPLAY *(CONT'D)*

**GPD Menu
Bar - General
(Cont'd)**

TI 6110.101,
sec. 3.1.1.2

     o   Airports and Airport Labels

     o   NAVAIDs and NAVAID Labels

Click to display NAVAID Labels.

Click to suppress NAVAID Labels.

     o   Waypoints and Waypoint Labels

Click to display Waypoints.

Click to display Waypoint Labels.

     o   Scale - if selected, the scale indicator is located in the last line of the menu bar area, on the left side.
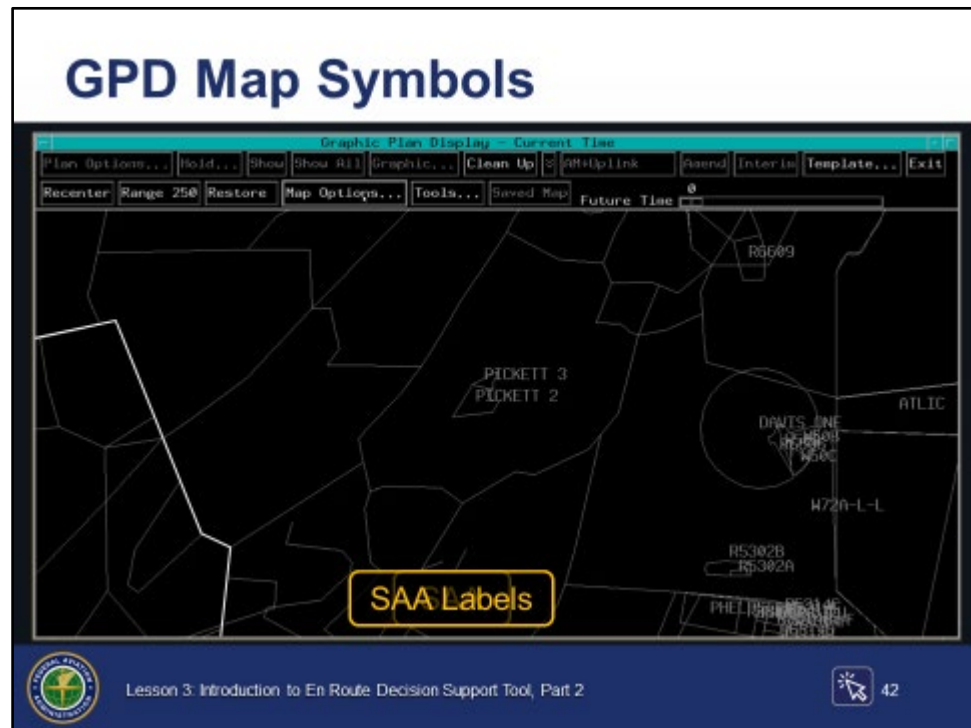
Click to suppress waypoint labels and exit Map Features Menu.

GRAPHIC PLAN DISPLAY *(CONT'D)*

**GPD Map
Symbols**

TI 6110.101,
sec. 3.1.1.3

👆 *Slide is animated, 7 clicks. Click where indicated by click icon.*

⊙ The GPD uses a set of map symbols that are typical of ATC radar or
Situation Displays

- Symbols include sector boundaries, center boundaries, airports, fixes,
approach control boundaries, airways, and intersections

- Labels can be displayed for fixes, intersections, airports, and Special
Activity Airspace (SAA)

- Special symbols used in the GPD include the following items:
  - Sector Boundaries
    - White line
  - Center Boundaries
    - Bold white line
  - Approach Control Boundaries
    - Gray dashed line
  - 🖱️ Airports
    - White box

GRAPHIC PLAN DISPLAY *(CONT'D)*

GPD Map Symbols (Cont'd)

TI 6110.101, sec. 3.1.1.3

- ⬛ NAVAIDs
  - – VOR and VORTAC
    - o White circle
  - – TACAN
    - o White splat
- ⬛ Intersections, Waypoints
  - – White plus
- ⬛ Victor airways
  - – White line
- ⬛ Jet routes and Q routes
  - – White line
- ⬛ Special Activity Airspace Boundaries
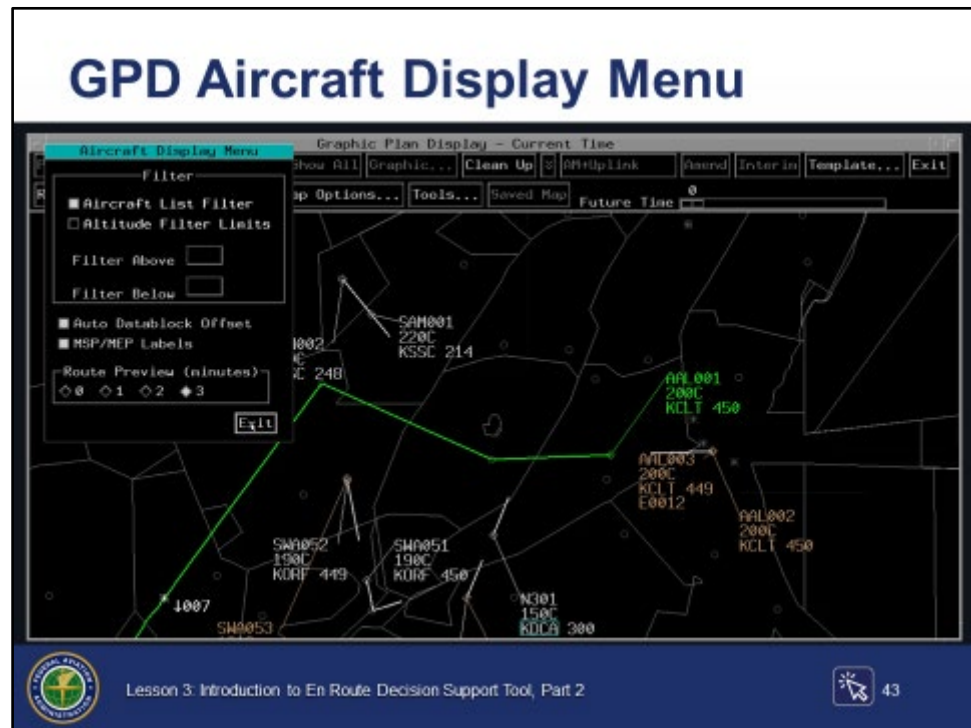 - – Solid white line, cold
  - – Solid orange line when an airspace alert is displayed

⬛ *Click to show SAA labels callout.*

GRAPHIC PLAN DISPLAY *(CONT'D)*

GPD Aircraft Display Menu

TI 6110.101, sec. 3.1.2.5

👆 *Slide is animated, 10 clicks. Click where indicated by click icon.*

⊙ The AC Display Menu pick area is found in the Maps Options Menu

⊙ 🖱️ TBP AC Display Menu… pick area

- Aircraft Display Menu options:
  - Aircraft List Filter
  - Altitude Filter Limits
  - Filter Above and Filter Below
  - Auto Datablock Offset
  - Route Preview
    - 🖱️ TBP to show 1 minute route preview
    - 🖱️ TBP to show 2 minute route preview
    - 🖱️ TBP to show 3 minute route preview

Continued on next page

GRAPHIC PLAN DISPLAY *(CONT'D)*

GPD Aircraft Display Menu (Cont'd)

TI 6110.101, sec. 3.1.2.5

Click to close Aircraft Display Menu with Exit and open Aircraft Display Menu on the left of screen with AAL001 route showing.

- o MSP and MEP Labels
- o TBP to suppress MSP label

Click to suppress AAL001 MSP label.

- o TBP to restore MSP label

Click to restore AAL001 MSP label.

MANEUVER START POINT (MSP) - Symbology (asterisk) displayed on the projected route of flight to indicate when an altitude maneuver is predicted to start. Also displays an Up or Down arrow to indicate the direction of the maneuver.

MANEUVER END POINT (MEP) - Symbology (asterisk) displayed on the projected route of flight to indicate when the altitude maneuver is predicted to be completed.

NOTE: The maneuver start and end points are only predictions made by the system based on computed trajectory and may not accurately predict what the aircraft will fly.

Click to exit Aircraft Display Menu.

⊙ TBP Tools... button

- • Displays the Tools Menu
- • TBP Save GPD Map button
  - – Tools…>Save GPD Map pick area
    - o Saves current range and center of the GPD map
    - o Exiting the GPD without saving causes the map center and range to be lost

⊙ Saved Map button

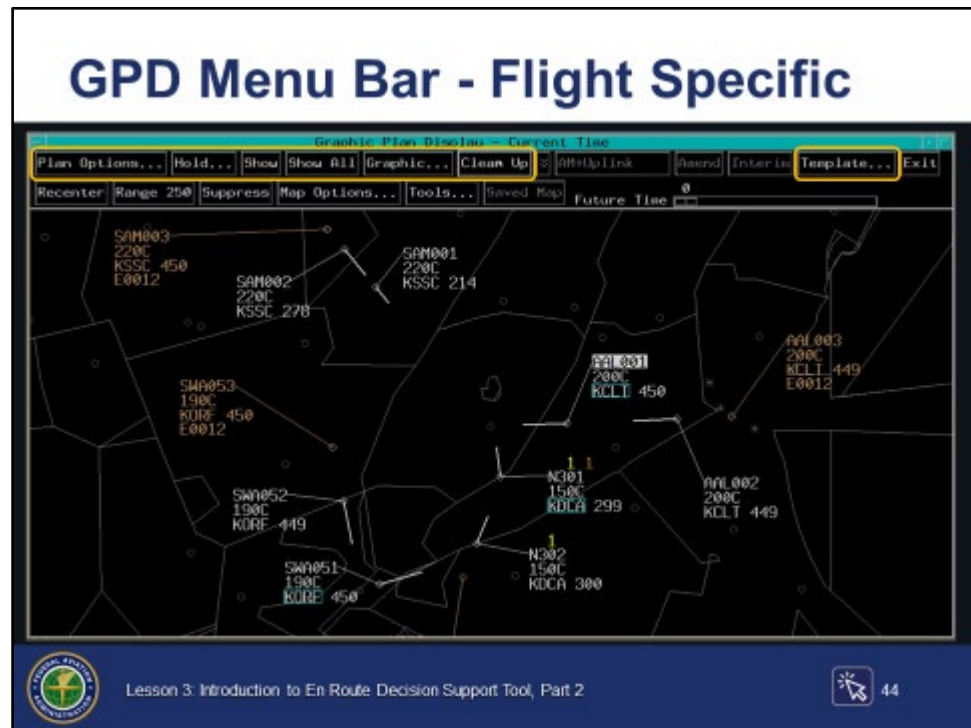- • Used to display the most recently saved Graphic Plan Display range and map center

GRAPHIC PLAN DISPLAY *(CONT'D)*

GPD Menu Bar - Flight Specific

TI 6110.101, sec. 3.1.1.2

Slide is animated, 15 clicks. Click where indicated by click icon.

⊙ Flight specific Menu Bar buttons become active only when a flight ID is selected

⊙ Plan Options… button

  • Displays the Plan Options Menu for the GPD
  • TBP flight ID

Click to highlight AAL001 flight ID.

  – Plan Options…, Hold…, Show, Show All, Graphic… buttons become active

  • ⌖ TBP Plan Options button to open that menu

  • ⌖ TBP Exit to close

Continued on next page

GRAPHIC PLAN DISPLAY *(CONT'D)*

GPD Menu Bar, Flight Specific (Cont'd)

TI 6110.101, sec. 3.1.1.2

⊙ Hold... button

- Displays the Hold Data Menu

- 🖱 TBP to open Hold Menu

- 🖱 TBP Exit to close

⊙ Clean Up button

- Used to remove projected route lines for current and trial plans as well as alerts from the GPD

🖱 *Click to cleanup the display. AAL001 highlight removed.*

⊙ Show... button

- Used to graphically display or remove a selected aircraft's current plan and any specific alert assigned to the users sector

- TBP alert

🖱 *Click to select orange SAA alert for N301*

– Show button becomes active

- 🖱 TBP Show to display the alert

- 🖱 TBP Clean Up to clear

⊙ Show All... button

- Used to graphically display or remove a selected aircraft's current plan and all the alerts associated with the selected aircraft

- TBP the flight ID

🖱 *Click to select N301 flight ID.*

– Plan Options…, Hold…, Show, Show All, Graphic… buttons become active

- 🖱 TBP Show All to display all alerts

- 🖱 TBP Clean Up to clear

GRAPHIC PLAN DISPLAY *(CONT'D)*

GPD Menu Bar, Flight Specific (Cont'd)

TI 6110.101, sec. 3.1.1.2

⊙ Graphic... button

- Used to create graphical trial plans for route amendments
- TBP the flight ID

🖱️ *Click to select SAM001 flight ID*

  – Plan Options…, Hold…, Show, Show All, Graphic… buttons become active

- 🖱️ TBP Graphic… to enter graphic mode

  – Covered in future lesson

⊙ 🖱️ Template... button

- Opens the Flight Plan Template to create a FP if no entry is selected, or
- Opens the Amendment Template to amend a FP if an entry is currently selected

GRAPHIC PLAN DISPLAY *(CONT'D)*

GPD Menu Bar - Plan Specific

TI 6110.101, sec. 3.1.1.2
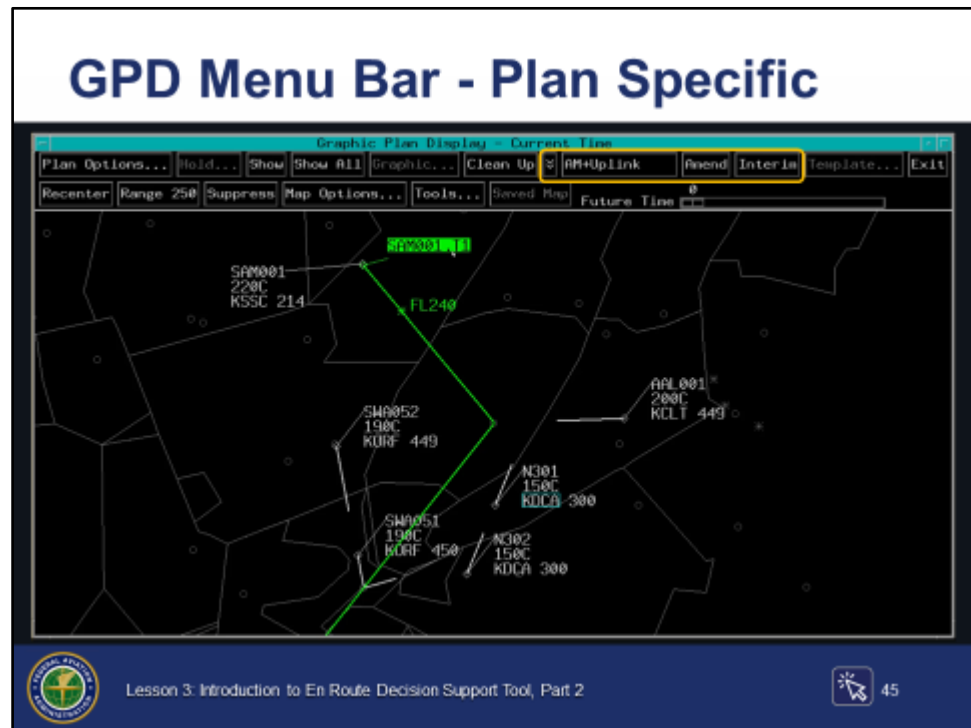
👆 *Slide is animated, 1 click. Click where indicated by click icon.*

⊙ Due to Reason Chevron, AM+Uplink, Amend, and Interim buttons become active once a specific trial plan or amendment plan is selected

Example: SAM001 has a trial plan for FL240.

🖱️ *Click to show a TBP on the trial plan ID.*

⊙ TBP the trial plan ID to activate the following Menu Bar buttons:

- Due to Reason Chevron
  - Due to Reason buttons are messages that can be appended to the uplink request
- AM+Uplink
  - Used to send and uplink an amendment
- Amend
- Interim
  - Used to send an interim altitude message to the system based on a Trial Plan

GRAPHIC PLAN DISPLAY *(CONT'D)*

GPD Main Display Area, Route Symbols

TI 6110.101, sec. 3.1.1.3

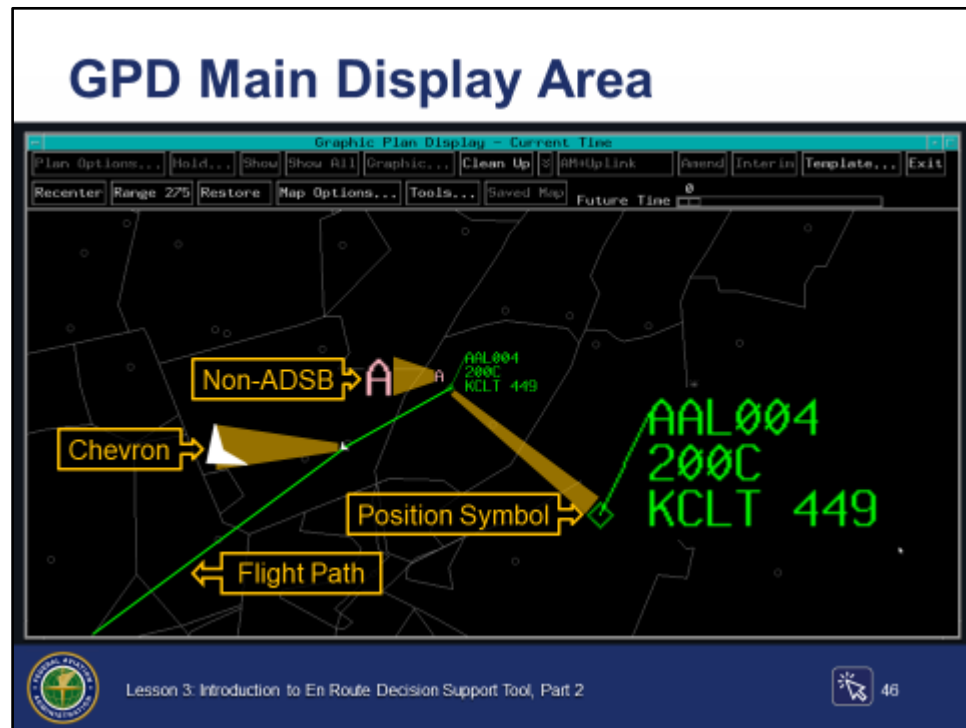👆 *Slide is animated, 2 clicks. Click where indicated by click icon.*

⊙ Each aircraft is represented by a position symbol and if selected, a projected flight path

CAUTION: The GPD may resemble radar, but it is not radar. The GPD uses coding techniques to draw your attention to a particular data block, FP, or one of its components.

🖱️ *Click to show white chevron.*

⊙ White chevrons

- Used to mark the location of the beginning and end points of the TFM-protected segment of a route

  - Bisect the route line, pointing inward towards the protected segment of the route

Continued on next page

GRAPHIC PLAN DISPLAY *(CONT'D)*

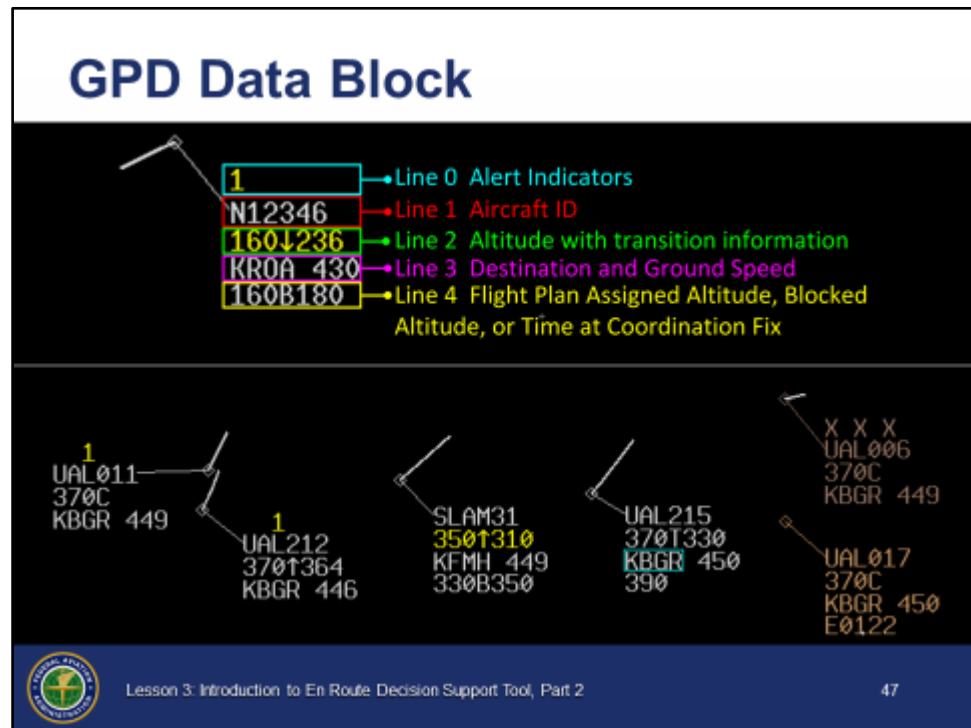**GPD Main Display Area, Route Symbols (Cont'd)**

TI 6110.101, sec. 3.1.1.3

Click to show coral "A".

⊙ Coral "A"

- A Non-Automated Dependent Surveillance-Broadcast (ADS-B) indicator is displayed when the track indicates that there is no ADS-B, and the NON-ADSB button in the Toolbar is selected

GRAPHIC PLAN DISPLAY *(CONT'D)*

GPD Data Block

TI 6110.101, sec. 3.1.1

GPD Data Block

Line 0 Alert Indicators
`1`

Line 1 Aircraft ID
`N12346`

Line 2 Altitude with transition information
`160↓236`

Line 3 Destination and Ground Speed
`KROA 430`

Line 4 Flight Plan Assigned Altitude, Blocked Altitude, or Time at Coordination Fix
`160B180`

```
1
UAL011
370C
KBGR 449

        1
     UAL212
     370↑364
     KBGR 446

            SLAM31
            350↑310
            KFMH 449
            330B350

                    UAL215
                    370T330
                    KBGR 450
                    390

                            X X X
                            UAL006
                            370C
                            KBGR 449

                            UAL017
                            370C
                            KBGR 450
                            E0122
```

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⊙ The GPD data blocks look similar to full data blocks displayed on the R Position Situation Display

⊙ Data Block Lines

- Line 0 - Alert Indicators
- Line 1 - Aircraft ID
- Line 2 - Altitude
- Line 3 - Destination and Ground Speed
- Line 4 - Flight Plan Assigned Altitude, Block Altitude, or Time at Coordination Fix

Continued on next page

GRAPHIC PLAN DISPLAY *(CONT'D)*

GPD Data Block (Cont'd)

TI 6110.101, sec. 3.1.1

ERAM ATCHI MISC 230.05, pars. 2.1.3, 3.6-3.6, 11.4

👉 *Review the data block examples.*

Examples: UAL011 and UAL212, line 0, yellow alerts

SLAM31, line 4, climbing to a block altitude

UAL215, Line 2 and line 4, interim altitude with assigned altitude
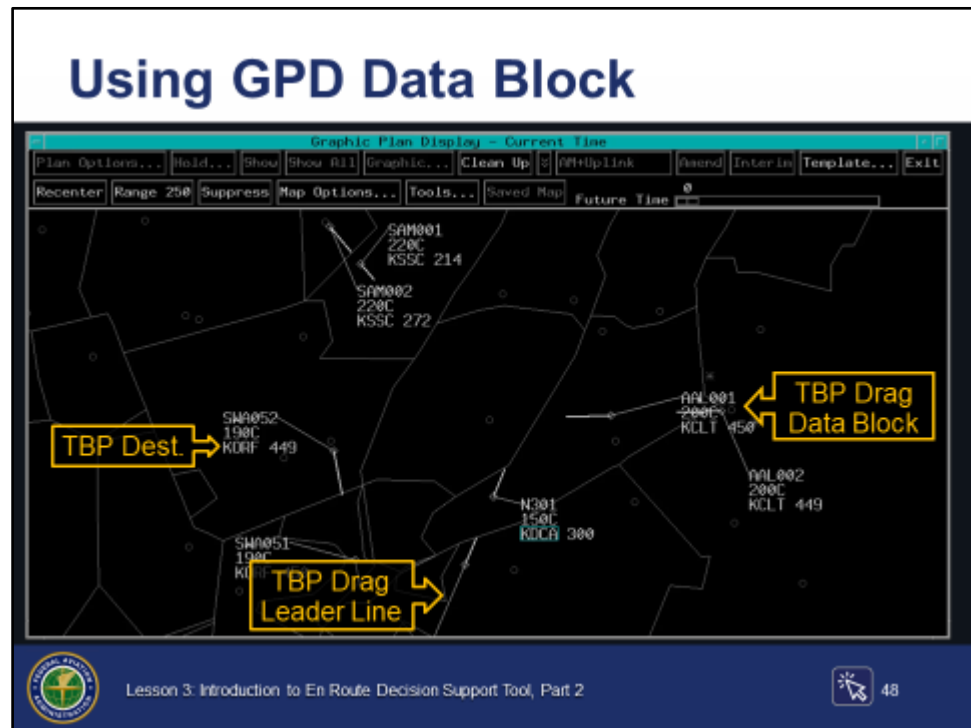
UAL006, Line 0, not probed

UAL017, line 4, inadequate track data, time at coordination fix

GRAPHIC PLAN DISPLAY *(CONT'D)*

Using the GPD Data Block

ERAM_ATCHI_ MISC_230.05, par. 11.8.13

TI 6110.101, secs. 3.1.2.7, 3.1.3.5.2

👉 *Slide is animated, 5 clicks. Click where indicated by click icon.*

⊙ Using the GPD data block

- TBP and hold the data block, leader line, or projected route line and drag

🖱 *Click to move AAL001 data block.*

🖱 *Click to move off screen data block of N302.*

  – Moves the data block to a new location
  – Release TBP to place the data block

- TBP on the altitude field in the data block

🖱 *Click to open altitude menu SWA052.*

  – The altitude field in the GPD data block is highlighted
  – The Altitude Menu is displayed

Continued on next page

GRAPHIC PLAN DISPLAY *(CONT'D)*

Using the GPD Data Block (Cont'd)

ERAM_ATCHI_ MISC_230.05, pars. 11.7.22.1, 11.7.23.1

- TBP on the destination field in the data block

Click to open route menu SWA052.

- – The destination field is highlighted
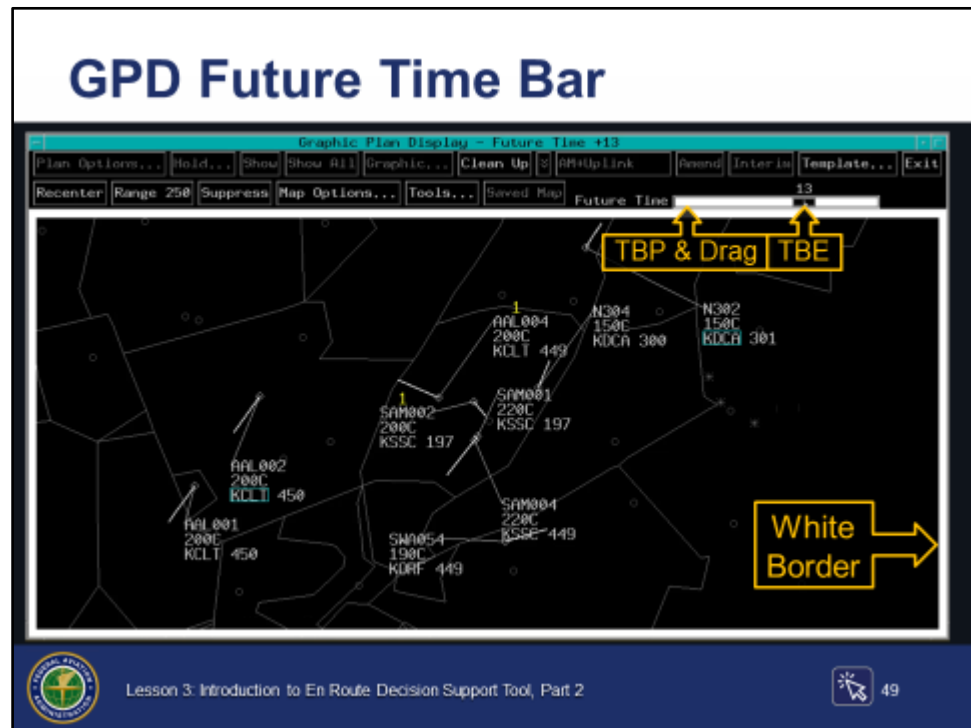- – The Route Menu is displayed
- TBP on the speed field in the data block

Click to open speed menu SWA052.

- – The speed field is highlighted
- – The Speed Menu is displayed

GRAPHIC PLAN DISPLAY *(CONT'D)*

GPD Future Time Bar

TI 6110.101, sec. 3.1.1.2

👆 *Slide is animated, 5 clicks. Click where indicated by click icon.*

⊙ The GPD Future Time bar scrolls time into the future

- This allows you to look at and evaluate the graphical situation up to 20 minutes out

- Use the trackball to select a future time in any of the following ways:

  – TBP and hold on the slider and move it across the bar and release at the desired time increment

🖱 *Click to simulate dragging time bar slider to 3 minutes.*

  – TBP anywhere on the Future Time bar to move the slider towards the cursor in one-minute increments

🖱 *Click 3 times to move time to 6 minutes.*

  – TBE anywhere on the Future Time bar and the slider will automatically move to that time increment

Continued on next page

GRAPHIC PLAN DISPLAY *(CONT'D)*

**GPD Future
Time Bar
(Cont'd)**

TI 6110.101,
sec. 3.1.1.2

Click to move time to 13 minutes

⊙ When the Future Time bar is used to display projected GPD data at a specified time in the future, the white border around the entire GPD becomes a wider whiter border

⊙ Alert coding is not impacted by future time display

GRAPHIC PLAN DISPLAY *(CONT'D)*

Knowledge Check

Knowledge Check

How can you determine if a GPD track has no ADS-B?

A. Red ADS-B in line 0 of the GPD data block

B. Coral "A" adjacent to the track symbol

C. GPD data block will not display a projected route

Lesson 3: Introduction to En Route Decision Support Tool, Part 2   50

Question: How can you determine if a GPD track has no ADS-B?

Answer: B. Coral "A" adjacent to the track symbol

GRAPHIC PLAN DISPLAY *(CONT'D)*

**Knowledge
Check**

Question: What does 280 mean in this GPD data block?

***Answer:** C. Assigned altitude*

GRAPHIC PLAN DISPLAY *(CONT'D)*

Knowledge Check

Knowledge Check

How can you determine if the GPD is displaying future time?

A. Future time is displayed in the GPD header

B. EDST clock will indicate plus time in minutes

C. GPD target symbols look like an hourglass

Lesson 3: Introduction to En Route Decision Support Tool, Part 2   52

Question: How can you determine if the GPD is displaying future time?

Answer: *A. Future time is displayed in the GPD header*

GRAPHIC PLAN DISPLAY *(CONT'D)*

**Knowledge
Check**

Question: What is the keyboard command to open the GPD?

Answer: B. UU G

GRAPHIC PLAN DISPLAY *(CONT'D)*

Knowledge Check

Question: How would you access the menu to display or remove SAA labels on the GPD?

***Answer:** C. TBP Map Options>Map Features*

GRAPHIC PLAN DISPLAY *(CONT'D)*

Knowledge Check

Question: How are TFM-protected routes depicted on the GPD?

Answer: *A. White chevrons bisecting the route*

FREE FORM TEXT

Record Data

JO 7110.65, par.
13-1-8,
TBL 13−1−1,
TBL 13−1−2,
TBL 13−1−3

👆 *Slide is animated, 2 clicks. Click where indicated by click icon.*

⊙ Control information not otherwise recorded via automation recordings or voice recordings must be manually recorded using approved methods

🖱 *Click to open free text area LN352HS.*

⊙ When an ACL or DL entry's free text area is used to enter control information, you may use:

🖱 *Click to show control instructions for LN352HS.*

- Clearance abbreviations
- Miscellaneous abbreviations
- EDST equivalents for control information symbols
- Plain language markings when it will aid in understanding information
- Locally approved abbreviations

Continued on next page

FREE FORM TEXT *(CONT'D)*

Record Data (Cont'd)

JO 7110.65, par. 13-1-8,
TBL 13–1–1,
TBL 13–1–2,
TBL 13–1–3

👍 *Review example from slide below.*

Example: D-A -TFD RV 50 *400 AF10 MIN* V0040 *45* C132.9

D-A Cleared to depart KCGA (Casa Grande Municipal Airport) to CYKA (Kamloops)

-TFD Direct to TFD (Stanfield VORTAC)

50 Climb and maintain 5,000'

400 AF10 MIN Expect FL400 after 10 minutes

V0040 *45* Clearance void 0040, advise by 0045

C132.9 Contact frequency 132.9

- ⊙ Free text area must remain open and visible when it contains control information

- ⊙ When no longer relevant, the information entered into the free text area must be updated or deleted

- ⊙ Control information entered in the free text area must be used for reference purposes only

- ⊙ Information entered into the free text area is not forwarded and, if necessary, must be coordinated

FREE FORM TEXT *(CONT'D)*

Authorized Abbreviations

- Free Text Areas cannot accept all manual strip marking symbols

Lesson 3: Introduction to En Route Decision Support Tool, Part 2   57

⊙ ACL and DL free text areas cannot accept all manual strip marking symbols for control information, but instead use the following:

- Appendix A, Clearance Abbreviations
- Appendix B, Miscellaneous Abbreviations
- Appendix C, EDST Equivalents for Control Information Symbols

NOTE: Appendix D, compares select manual strip marking with approved free text control instructions

👉 *Explain how strip marking annotations, shown in blue, can be abbreviated in the free text area.*

FREE FORM TEXT *(CONT'D)*

Knowledge Check

Knowledge Check

When must the free text area be open and visible?

    A. Any time a flight is within your sector

    B. When a flight is nonradar

    C. If it contains control instructions

Lesson 3: Introduction to En Route Decision Support Tool, Part 2   58

Question: When must the free text area be open and visible?

Answer: *C. If it contains control instructions*

FREE FORM TEXT *(CONT'D)*

Knowledge Check

Knowledge Check

When can plain language be used in the free text area for control instructions?

A. Never

B. To aid in understanding information

C. When free text is automatically forwarded at handoff

Lesson 3: Introduction to En Route Decision Support Tool, Part 2   59

Question: When can plain language be used in the free text area for control instructions?

 Answer: *B. To aid in understanding information*

PART-TASK EXERCISE: EDST PART 2

Part-Task Exercise
- **Purpose**
  - Perform the following tasks:
    - Identify features of the Tools Menu
    - Demonstrate GI Message View and SIGMETS View features
    - Identify weather and altimeter displays
    - Interact with the GPD
- **Materials**
  - TTL part-task exercise: EDST Part 2
- **Directions**
  - This exercise takes approximately 45 minutes to complete. Each student must complete the checklist tasks. No headsets are required.

Lesson 3: Introduction to En Route Decision Support Tool, Part 2   60

Purpose	Perform the following tasks:
	⊙ Identify features of the Tools Menu
	⊙ Demonstrate GI Message View and SIGMETS View features
	⊙ Identify weather and altimeter displays
	⊙ Interact with the GPD

Materials

📄 Handout: *HO01_L03*

⊙ TTL part-task exercise: EDST Part 2

🔧 TTL Scenario*: 55054003_L03_S##*

Directions

This exercise takes approximately 45 minutes to complete. Each student must complete the checklist tasks. No headsets are required.

👉 *Provide instruction as required. Check off each task after completion. No Ghost Pilots are required.*

CONCLUSION

**Lesson
Summary**

Lesson Summary

This lesson covered:

- Features of the tools menu
- Steps to interact with NOTAMs, GIs, and SIGMETs views
- Weather and altimeter displays of EDST
- EDST free form text

Lesson 3: Introduction to En Route Decision Support Tool, Part 2   61

👉 *Review and elaborate briefly on the following topics. Ask students if they have questions about any of the concepts covered in the lesson.*

⊙ Features of the Tools Menu

- Options Menu
- Airspace Status View
- Airport Stream Filter Status Display
- Restrictions View
- Current Restrictions View

⊙ Steps to interact with NOTAMs, GIs, and SIGMETs Views

- NOTAMS View - access
- GI Messages View - access
  - Forwarding GI messages
  - Deleting single GI message
  - Deleting multiple GI messages
- SIGMETS View - access

CONCLUSION *(CONT'D)*

Lesson Summary (Cont'd)

- Printing - NOTAMs, GI messages, and SIGMETs
  - Printing a single entry
  - Printing multiple entries
  - Printing all entries
- ⊙ Weather and altimeter displays

  - Weather Station Report View
  - Altimeter Settings View
  - Wind grid
    - Layout and function
    - Recenter
    - Change range
    - Change display altitude
    - Problem indication
- ⊙ Graphic Plan Display

  - Access
  - Layout
  - Map symbols
  - Aircraft Display Menu
  - Menu bar
    - General
    - Flight specific
    - Plan specific
  - Main display area and route symbols
  - GPD data block
  - Future Time bar
- ⊙ EDST free form text

🖐 *Hand out and administer the End-of-Lesson Test. Provide feedback on missed items, including why particular answers are correct, as well as why some responses are incorrect.*

APPENDIX A

Clearance Abbreviations

Abbreviation	Meaning
A	Cleared to airport (point of intended landing)
B	Center clearance delivered
C	ATC clears (when clearance relayed through non-ATC facility)
CAF	Cleared as filed
D	Cleared to depart from the fix
F	Cleared to the fix
H	Cleared to hold and instructions issued
N	Clearance not delivered
O	Cleared to the outer marker
PD	Cleared to climb or descend at pilot's discretion
Q	Cleared to fly specified sectors of a NAVAID defined in terms of courses, bearings, radials, or quadrants within a designated radius
T	Cleared through (for landing and takeoff through intermediate point)
V	Cleared over the fix
X	Cleared to cross (airway, route, radial) at (point)
Z	Tower jurisdiction

APPENDIX B

Miscellaneous Abbreviations

Abbreviation	Meaning
BC	Back course approach
CT	Contact approach
FA	Final approach
FMS	Flight management system approach
GPS	GPS approach
I	Initial approach
ILS	ILS approach
MA	Missed approach
NDB	Nondirectional radio beacon approach
OTP	VFR conditions-on-top
PA	Precision approach
PT	Procedure turn
RA	Resolution advisory (Pilot's reported TCAS event)
RH	Runway heading
RNAV	Area navigation approach
RP	Report immediately upon passing (fix/altitude)
RX	Report crossing
SA	Surveillance approach
SI	Straight-in approach
TA	TACAN approach
TL	Turn left
TR	Turn right
VA	Visual approach
VR	VOR approach

APPENDIX C

EDST Equivalents for Control Information Symbols

Abbreviation	Meaning
T *dir*	Depart (direction if specified)
↑	Climb and maintain
↓	Descend and maintain
CR	Cruise
AT	At
X	Cross
M	Maintain
/ *airway*	Join or intercept (airway, jet route, track, or course)
=	While in controlled airspace
WICA	While in control area
dir ECA	Enter control area
dir OOCA	Out of control area
dir ESA	Cleared to enter surface area. Indicated direction of flight by appropriate compass letter(s)
TSA *alt*	Through surface area and altitude indicated direction of flight by appropriate compass letter(s). Maintain special VFR conditions (altitude if appropriate) while in surface area
250 K	Aircraft requested to adjust speed to 250 knots
-20 K	Aircraft requested to reduce speed 20 knots
+30 K	Aircraft requested to increase speed 30 knots
SVFR	Local Special VFR operations in the vicinity of (name) airport are authorized until (time). Maintain special VFR conditions (altitude if appropriate)
B4	Before
AF	After or Past
/	Until
instructions	Alternate instructions
REST	Restriction
AOB	At or Below
AOA	At or Above
-	From-to (route, time, etc.)
(Alt)B(Alt)	Indicates a block altitude assignment. Altitudes are inclusive, and the first altitude must be lower than the second (Example 310B370)

Continued on next page

APPENDIX C

EDST Equivalents for Control Information Symbols

| Abbreviation	Meaning
V time	Clearance void if aircraft not off ground by time
CL	Pilot canceled flight plan
+*info*+	Information or revised information forwarded
∗∗*alt*∗∗	Other than assigned altitude reported Example: ∗∗50∗∗
ARC mi. dir.	DME arc of VORTAC or TACAN
C *freq.*	Contact (facility) or (freq.), (time, fix, or altitude if appropriate). Insert frequency only when it is other than standard
R	Radar contact
R alt	Requested altitude
R/	Radar service terminated
RX	Radar Contact Lost
RV	Radar vector
RVX	Pilot resumed own navigation
HO	Handoff completed
E	Emergency
W	Warning
P	Point out initiated. Indicate the appropriate facility, sector, or position.
FUEL	Minimum fuel
EFC *time*	Expect further clearance at (time)
- *fix*	Direct to fix
FRC	Full route clearance
IAF	Initial approach fix
NORDO	No Radio
PT	Procedure turn
RLS	Release
REQ	Request
SI	Straight in

APPENDIX D

Table compares select manual strip marking with EDST Equivalents for Control Information Symbols.

Manual Strip Marking	EDST Free Text	Meaning
T→	T *dir*	Depart
( )	*∗instr∗*	Alternate Instructions
<	AF	After
>	B4	Before
V<(Time)	V *time*	Void after
₵	CL	Cancel IFR
———	REST	Restriction Bar
↕	AOA	At or Above
↧	AOB	At or Below
(Alt.)	∗∗alt∗∗	Other than assigned
⟶	CR	Cruise
Ⓡ	HO	Radar Handoff Complete
Ⓧ	RX	Radar Contact Lost
Ⓡ	R/	Radar terminated
7	/ *airway*	Join
(Miles) (Direction)	ARC *mi. dir.*	DME Arc
C (Time/Fix/Altitude)	C *freq*	Contact Communications
@	AT	At
=	=	While in controlled airspace
△	WICA	While in control area
△	*dir* ECA	Enter control area
△↗	*dir* OOCA	Out of control area
W-⊙	*dir* ESA	Cleared to enter surface area. Indicated direction of flight by appropriate compass letter(s)
W-⊖⇒	TSA *alt*	Through surface area and altitude indicated direction of flight by appropriate compass letter(s). Maintain special VFR conditions (altitude if appropriate) while in surface area
Ⓦ	SVFR	Local Special VFR operations in the vicinity of (name) airport are authorized until (time). Maintain special VFR conditions (altitude if appropriate)
	–	From-to (route, time, etc.)
⬭	+info+	Information or revised information forwarded
	EFC *time*	Expect further clearance at