



**Federal Aviation  
Administration**

# ***EN ROUTE RADAR FLIGHT DATA CONTROLLER TRAINING***

## **Lesson 4: Computer Operational Equipment**

**Version: 2019-12.1**

**FAA Course Number: 55053**

***INSTRUCTOR LESSON PLAN***

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# LESSON PLAN DATA SHEET

Course Name	Radar Flight Data Controller Training
Course Number	55053
Lesson Title	Computer Operational Equipment
Duration	1 hour 30 minutes plus TTL times <b>TTL exercises are estimated to take an additional 30 minutes per exercise and per student/instructor team.</b> Total duration will vary based on class size.
Version	2019-12.1
Reference(s)	TI 6110.100, En Route Automation Modernization (ERAM) Air Traffic Manual (ATM): R-Position User Manual TI 6110.101, En Route Automation Modernization (ERAM) Air Traffic Manual (ATM): RA-Position User Manual TI 6110.120, En Route Automation Modernization (ERAM) Hardware Maintenance Manual: Air Traffic Control Console
Prerequisites	Course 57071003 or current course, is available as supplemental training for this lesson. It is recommended students complete this eLMS training prior to attending classroom training.
Handout(s)	Electronic delivery requires printing of HO01_L04, which contains Practice Exercises 1 and 2.
Exercise / Activity	Practice Exercise 1: Loading FSP Paper, page 48; refer to HO01_L04. Practice Exercise 2: ERIDS Checklist, page 50, refer to HO01_L04.
Assessments	End-of-Lesson Test: ELT_V1_L04 <b>or</b> ELT_V2_L04  There will be a graded end-of-lesson test upon completion of this lesson. The score required for passing will be in accordance with current FAA directives.
Materials and Equipment	
Other Pertinent Information	Practice exercises 1 and 2 will be conducted in the Test and Training Lab. This lesson is based on ERAM EAE130. The lesson has been reviewed and reflects current orders and manuals as of December 2018.



**NOTE:** 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 PLAN ICONS

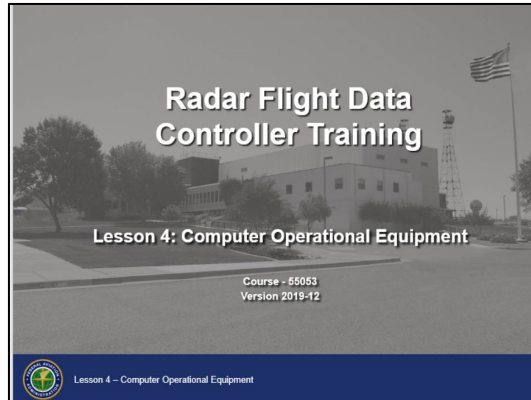
	Description
	The Activity icon indicates an exercise, lab, or hands-on activity.
	The Discussion Question icon signals a discussion question to be asked to the students.
	The Handout icon indicates a handout is to be distributed to the students.
	The Instructor Note icon is in hidden text and indicates 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 QA icon indicates a question to be asked to the entire class by the instructor.
	Warning icon indicates a safety critical note.
	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.

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# LESSON INTRODUCTION

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## Lesson Overview



Knowledge of the NAS Automation system is vital for your progression to Certified Professional Controller (CPC) status.

The more familiar you are with the equipment and its capabilities, the easier it will be for you to progress to the next step in training.

The previous lesson covered procedures for writing and distributing flight progress strips and calculating fix times.

This lesson will cover computer operational equipment used in air traffic control as well as the components and functions of the NAS Automation peripheral equipment.

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# LESSON INTRODUCTION *(Cont'd)*


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## Lesson Objectives

### Lesson Objectives

At the end of this lesson, you will be able to identify select functions of the:

- A Position equipment
- RA Position equipment
- R Position equipment



Lesson 4 – Computer Operational Equipment

2

At the end of this lesson, you will be able to identify select functions of:

- ⦿ Radar Flight Data Position equipment
- ⦿ Radar Associate Position equipment
- ⦿ Radar Position equipment



**NOTE:** *Introduce the lesson objectives.*

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# LESSON INTRODUCTION *(Cont'd)*

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## Control Position Consoles

TI 6110.100,  
par. 1.3

TI 6110.101,  
par. 1.3

TI 6110.120



En Route sectors can have up to three console positions:

- ⦿ Radar, or R Position
  - ⦿ Radar Associate, or RA Position
  - ⦿ Radar Flight Data, Assistant, or A Position
-



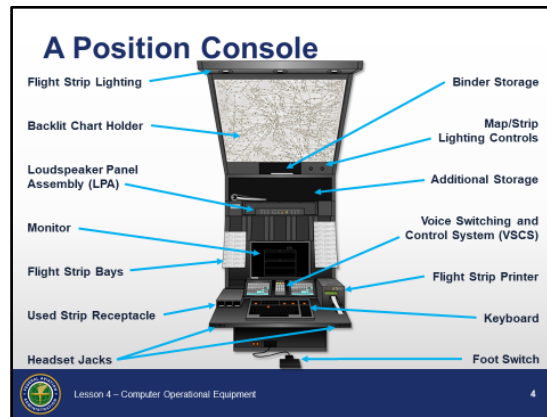
# A POSITION

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## A Position Console

TI 6110.100,  
par. 1.3

TI 6110.101,  
par. 1.3



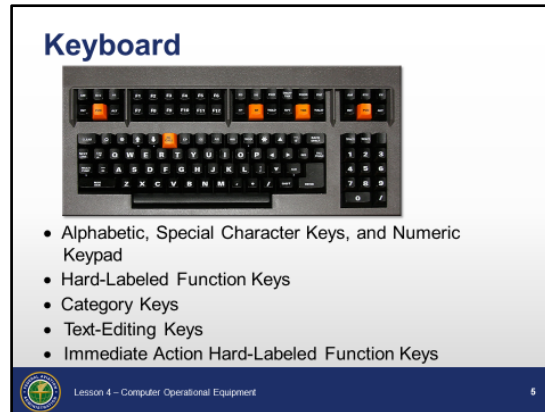
The A Position Console consists of:

- ⦿ Flight Strip Lighting - can be focused to light only flight strip bays
  - ⦿ Keyboard Lighting - can be focused to light only the keyboard area
  - ⦿ Backlit Chart Holder - backlit and tilted forward
  - ⦿ Binder Storage - used to store reference manuals
  - ⦿ Additional Storage - used to store items, such as printer paper or communication devices
  - ⦿ Loudspeaker Panel Assembly (LPA) - controls the power and volume of incoming transmissions
  - ⦿ Voice Switching and Control System (VSCS) - maps ground-to-ground and air-to-ground communications
  - ⦿ Monitor - has views that allow you to enter commands and receive messages from the system
  - ⦿ Flight Strip Bays
  - ⦿ Flight Strip Printer
  - ⦿ Used Strip Receptacle - storage area for used flight strips
  - ⦿ Keyboard
  - ⦿ Headset Jack
  - ⦿ Footswitch - located on the floor directly in front of the console; activates the VSCS PTT function
-

# KEYBOARD

## Keyboard

TI 6110.101 par  
1.3.3



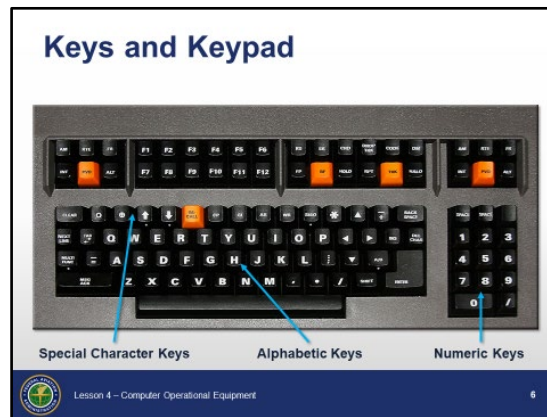
- ⊙ The keyboard provided at each position is used to enter data into and to request information from the computer.
- ⊙ The keyboard consists of:
  - Alphabetic, Special Character Keys, and Numeric Keypad
  - Hard-Labeled Function Keys
  - Category Keys
  - Text-Editing Keys
  - Immediate Action Hard-Labeled Function Keys

# KEYBOARD (Cont'd)

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## Keyboard (Cont'd)

TI 6110.101 par  
1.3.3, 1.2.1



### Alphabetic Keys, Special Character Keys, and Numeric Keypad

- ⦿ Default mode is overstrike, so that when you type, it overwrites the existing characters.
  - ⦿ All alphabetic, numeric, and special character keys will auto-repeat if held down.
  - ⦿ Special Characters include
    - Asterisk or splat (\*)
    - Hyphen or dash (-)
    - Colon (:)
    - Period or dot (.)
    - Comma (,)
    - Plus (+)
    - Equals Sign (=)
    - Semi-colon (;)
    - Up Arrow (↑)
    - Down Arrow (↓)
    - Clear Weather Symbol (O)
    - Overcast Weather Symbol (⊕)
-

# KEYBOARD (Cont'd)

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## Keyboard (Cont'd)

TI 6110.101 par  
1.3.3



### Hard-Labeled Function Keys

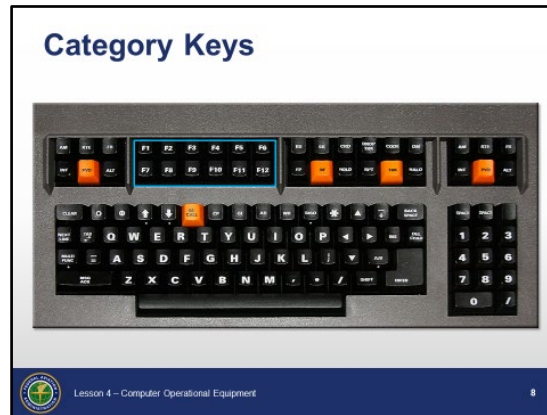
- ⦿ Used as command designators
  - ⦿ There are thirty (30) keys
    - Twenty-four (24) on the top two rows and six (6) above the QWERTY array
  - ⦿ If one of the hard-labeled function keys is pressed, with or without the MULTI-FUNC key, the Message Composition Area (MCA) View is raised.
-

# KEYBOARD (Cont'd)

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## Keyboard (Cont'd)

TI 6110.101 par  
6.2.3.4



There are 12 Category Keys (F1 through F12) - Any of these keys can be facility adapted to perform other functions such as inserting characters and or spaces to complete a command.

For example, a key adapted to insert a “/U”, uplink, and immediately execute the command becomes a Controller Pilot Data Link Communication (CPDLC) Enter key, which will be discussed in future lessons.

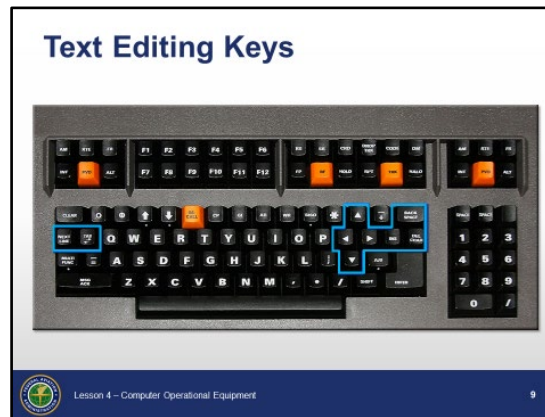
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# KEYBOARD (Cont'd)

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## Keyboard (Cont'd)

ERAM EDSM  
SRS  
V1B1, pars.  
3.2.2.9.2.1.7,  
3.2.3.2.2.2.1.2.1



### Text-Editing Keys

- ⦿ Insert (INS) key
  - Places the editor in insert mode, it acts as a toggle between the insert and overstrike modes
  - Keystrokes appear to the left of the keyboard cursor and existing information is not replaced
  - Cursor will change to a U-shaped outline around the character typed
- ⦿ Delete Character (DEL CHAR) key
  - Deletes the character at the location of the keyboard cursor
- ⦿ TAB key
  - Moves cursor to set position to the right and, when pressed in conjunction with the SHIFT key, moves cursor to set position to the left
  - On the RA Position keyboard, moves cursor from input box to input box within the showed data of any window that contains multiple input boxes
- ⦿ NEXT LINE key
  - Moves cursor to the first character position of the next line of the Preview Area
- ⦿ BACKSPACE key
  - Moves cursor one character position to the left, deleting the character in that position
- ⦿ Cursor arrow keys
  - Moves cursor within the Preview Area

# KEYBOARD (Cont'd)

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## Keyboard (Cont'd)



### Immediate Action Hard-Labeled Function Keys

- ⦿ RECALL key
    - Retrieves a previously entered command
    - Subsequent presses will display previous commands for a total of nine commands.
  - ⦿ Message Acknowledge (MSG ACK) key
    - Acknowledges the next message queued in the Update Area View at the RA Position
  - ⦿ Multifunction (MULTI-FUNC) key
    - Used in conjunction with other keyboard entries to complete the immediate action
  - ⦿ CLEAR key
    - Removes from display all information in the Preview Area and/or Feedback Area
-

# KNOWLEDGE CHECK



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## Knowledge Check

### Knowledge Check

Which key would you press to view a previously entered command?

- A. MULTI FUNC
- B. NEXT LINE
- C. RECALL

 Lesson 4 – Computer Operational Equipment  11



**Question:** Which key would you press to view a previously entered command?



**Answer:** C. RECALL

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# KNOWLEDGE CHECK



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## Knowledge Check

### Knowledge Check

Which key removes all information from the Preview Area and Feedback Area?

- A. BACKSPACE Key
- B. CLEAR Key
- C. RECALL Key

 Lesson 4 – Computer Operational Equipment  12



**Question:** Which key removes all information from the Preview Area and Feedback Area?



**Answer:** B. CLEAR Key

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# A POSITION VIEW

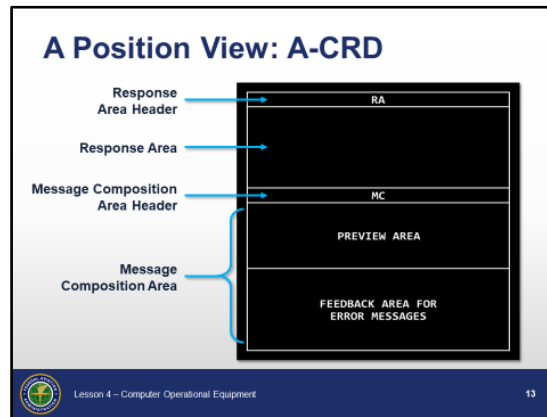
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## A-CRD

TI 6110.100,  
par. 1.3

TI 6110.101,  
par. 1.3

TI 6110.120



The A Position Computer Readout Device (A-CRD) consists of the:

- ⦿ Response Area Header
- ⦿ Response Area
  - System feedback messages, such as ACCEPT, REJECT, or ERROR will be displayed in the Response Area
- ⦿ Message Composition Area Header
- ⦿ Message Composition Area - Typed text will appear here
  - Preview Area
  - Feedback Area

**NOTE:** The A-CRD is used for command entry and system response functions. The available commands at the A-CRD are a subset of the commands that are available at the RA position.

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# KNOWLEDGE CHECK



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## Knowledge Check

### Knowledge Check

**From top to bottom, the areas of the A-CRD are:**

- A. Response Area, Preview Area, Feedback Area
- B. Preview Area, Response Area, Feedback Area
- C. Preview Area, Feedback Area, Response Area

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Q&A

**Question:** From the top to bottom, the areas of the A-CRD are:



**Answer:** A. Response Area, Preview Area, Feedback Area

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# KNOWLEDGE CHECK



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## Knowledge Check

### Knowledge Check

The result of an accepted command would appear in which area of the A-CRD?

- A. Response Area
- B. Preview Area
- C. Feedback Area

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**Question:** The result of an accepted command would appear in which area of the A-CRD?



**Answer:** A. Response Area

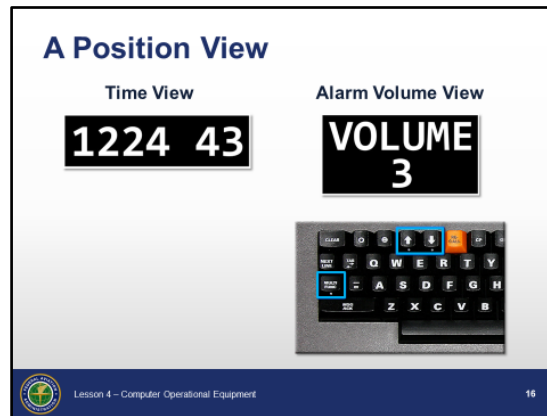
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# A POSITION VIEW (Cont'd)

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## Time and Alarm Volume Views

ERAM EDSM  
SRS 210.04  
V2B1, pars.  
3.2.2.2.2.1.2,  
3.2.2.2.2.1.3,  
3.2.3.2.1



### A Position View

- ⦿ Time View displays the time in hours, minutes, and seconds
    - Coordinated Universal Time (UTC), also known as "Zulu" time
    - Always displayed and cannot be removed
  - ⦿ Alarm Volume View displays the audible alarm volume.
    - Sounds to indicate keyboard input errors
    - To increase the volume, hold down the MULT-FUNC key and press the up arrow key repeatedly.
    - To decrease the volume, hold down the MULT-FUNC key and press the down arrow key repeatedly.
    - Volume can be set from 1-5; the default setting is 3.
-

# FLIGHT STRIP PRINTER

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## Flight Strip Printer

SSM-ERAM-279



The Flight Strip Printer (FSP) is a thermal printer that uses a fanfold paper supply and cuts the paper after each strip is printed. The front of the printer contains a strip receptacle tray, called a hopper, to receive printed strips.

The FSP has the following status lights and control buttons:

- ⦿ PAPER OUT light
- ⦿ JAM light
- ⦿ DATA light
- ⦿ READY light
- ⦿ MENU Button - Not used
- ⦿ ON/OFF LINE button
  - Pressing this button takes the printer online or offline as indicated by the status light.
- ⦿ BLANK STRIP button
  - Pressing this button produces a blank strip:
    - With field separator lines when the printer is in an online status
    - Without any lines when the printer is in an offline status
  - Simultaneously pressing the ON/OFF LINE and the BLANK STRIP buttons produces a diagnostic strip.

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*Cont'd on next page*

# FLIGHT STRIP PRINTER (Cont'd)

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## Flight Strip Printer (Cont'd)

### Steps for loading paper into the flight strip printer:

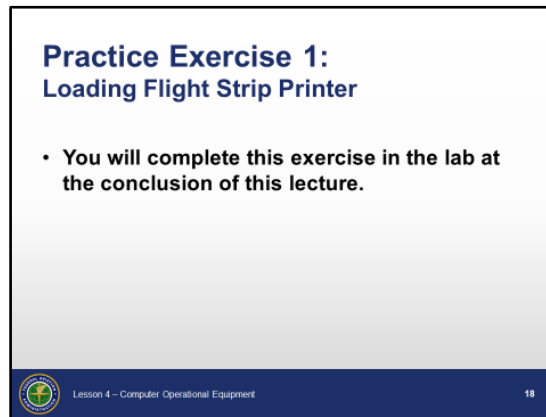
The flight strip paper is available in a cardboard box that opens from the top. To refill the printer with flight strip paper, take the following steps:

- 1) Ensure the printer is on and empty of flight strip paper. The **PAPER OUT** status light should also be on.
  - 2) Remove all printed strips from the flight strip hopper to prevent jamming when loading the paper.
  - 3) Open the flap on the top of the flight strip paper cardboard box and remove the long flap from the top of the box, leaving the two side flaps open. The side flap on the box of paper acts as a guide for the strips.
  - 4) Take the first flight strip from the box and turn the box so the white side of the paper is down and the red arrow feed direction on the bottom side of the paper is pointing toward the feed slot.
  - 5) Keeping the same alignment, insert the box into the tray behind the printer.
  - 6) Insert the first flight strip from the box into the white plastic slot opening located in the back of the printer.
  - 7) Ensure that the white side is down and the red 'FEED DIRECTION' arrow is pointing towards the feed slot.
  - 8) Manually push the paper into the printer until it automatically advances. NOTE: If a paper jam occurs, cycle the FSP power, repeat this step as necessary.
  - 9) Press the BLANK STRIP button on the printer panel to advance one strip through the printer. (The blank strip aligns the cutting mechanism for strip ejection).
  - 10) Press the ON/OFF LINE button and make sure the READY status light comes on.
-

# INTRODUCTION: PRACTICE EXERCISE 1

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## Introduction - Practice Exercise 1: Loading Flight Strip Printer



### Practice Exercise 1

- ⦿ Completed at a FSP in the Test and Training Lab (TTL) at the conclusion of classroom instruction
- ⦿ Exercise is the loading of paper into a FSP.
- ⦿ You will be given a copy of the procedure to load a FSP.
- ⦿ The instructions for this exercise are located after the lesson summary.
- ⦿ Your instructor will provide direction.



**NOTE:** Each student will complete exercises 1 and 2 in the Test and Training Lab (TTL) and then complete the end-of-lesson test.

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# RA POSITION

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## RA Position Console

TI 6110.101,  
par. 1.3

TI 6110.120

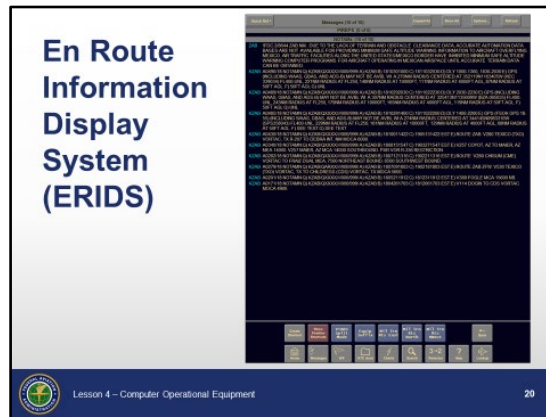


The RA Position Console has four components that are different from the A Position Console:

- ⦿ En Route Information Display System (ERIDS)
    - Electronic means for accessing important operational information, such as fixes, airport and Navigational Aid (NAVAID) data, approaches, Standard Instrument Departures (SIDs) and Standard Terminal Arrival Routes (STARs), Letters of Agreement (LOAs), etc.
    - Provides automated delivery of Notices to Airmen (NOTAMS) to individual sectors and a flexible ATC information environment customizable to the needs of the facility and the controller
  - ⦿ RA Display Monitor
    - En Route Decision Support Tool (EDST) - Electronic means to manage flight plan data, plan and make amendments to flight plans, view outages, activate Special Activity Airspace, enter traffic restrictions, access hazardous weather information, etc.
  - ⦿ Tracker Panel - During heavy traffic periods, some facilities may have an additional controller in the Radar Coordinator/Tracker/Handoff position to provide increased situational awareness. If used, the tracker panel provides a communication position for this position.
  - ⦿ Trackball - Initiates actions by selecting items from displays and menus
-

# ERIDS

## ERIDS Introduction



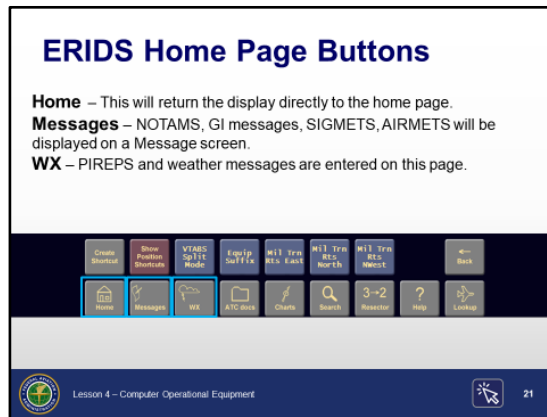
### En Route Information Display System (ERIDS)

- ⦿ Data storage and search system containing many of the documents needed for air traffic control
- ⦿ Displays are touch screens
- ⦿ Searchable items include:
  - NAVAIDS and location identifiers
  - Aircraft types and manufacturer
  - NOTAMS, PIREPS, and GI messages
  - Letters of Agreement
  - Approach plates
  - SIDs and STARs
  - Charts
  - FAA Orders (e.g., JO 7110.65)

# ERIDS (Cont'd)

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## ERIDS Home Page Buttons



The ERIDS Home page contains several buttons to help you complete your task.



*This slide is animated (2 clicks).*

- ⦿ Home - Takes you to the home page from any other screen



*Click to reveal Messages button and definition.*

- ⦿ Messages - Takes you directly to the Messages page, which will display Notice to Airmen (NOTAMS), General Information (GI) messages, Significant Meteorological Information (SIGMET) and other messages.

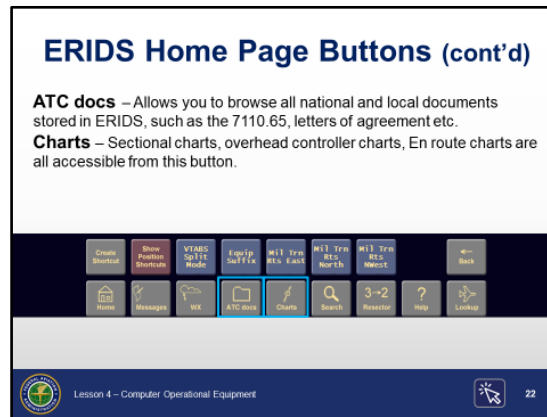


*Click to reveal WX button and definition.*

- ⦿ WX - Goes to a page to create Pilot Reports (PIREPS) and enter weather messages.

# ERIDS (Cont'd)

## ERIDS Home Page Buttons (Cont'd)



*This slide is animated (1 click).*

- ⦿ ATC docs - Includes many of the documents needed by controllers, Including Letters of Agreement, FAA orders, Aeronautical Information Manual (AIM) and others

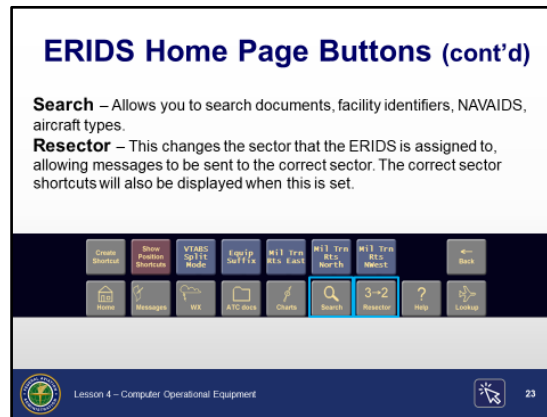


*Click to reveal Charts button and definition.*

- ⦿ Charts - Enables the controller to view sectional charts, overhead controller charts, en route charts

# ERIDS (Cont'd)

## ERIDS Home Page Buttons (Cont'd)



*This slide is animated (1 click).*

- ⦿ Search - Search documents, facility identifiers, NAVAIDS, aircraft types

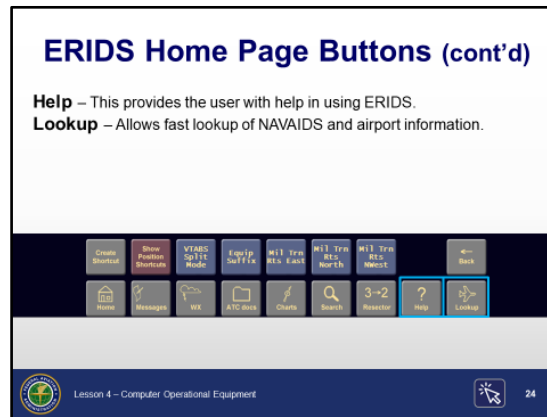


*Click to reveal Resector button and definition.*

- ⦿ Resector - Changes the assigned sector for this ERIDS display when combining or decombining sectors, ensuring messages are delivered to the proper position.

# ERIDS (Cont'd)

## ERIDS Home Page Buttons (Cont'd)



*This slide is animated (1 click)*

- ⦿ Help - Provides access to help pages on the functions of ERIDS

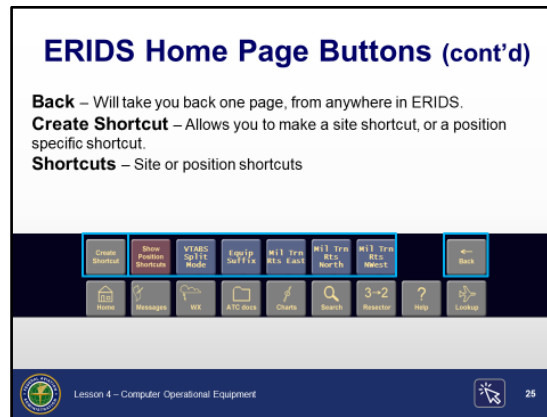


*Click to reveal Lookup button and definition.*

- ⦿ Lookup - A fast and easy way to lookup location identifiers, airports and airport information, such as approaches and departures.

# ERIDS (Cont'd)

## ERIDS Home Page Buttons (Cont'd)



*This slide is animated (2 clicks).*

- ⦿ Back - Takes you back one page from the current location



*Click to reveal Create Shortcut button and definition.*

- ⦿ Create Shortcut - Enables you to create position shortcuts which are only available at the assigned position. ERIDS administrators may create site shortcuts which are available center-wide.



*Click to reveal Shortcut buttons and definition.*

- ⦿ Shortcuts - Toggles the display of position or site shortcut buttons

# KNOWLEDGE CHECK



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## Knowledge Check

### Knowledge Check

Which button is used to find the JO 7110.65 and other FAA orders?

- A. ATC docs
- B. Orders
- C. WX

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**Question:** Which button is used to find JO 7110.65 and other FAA orders?

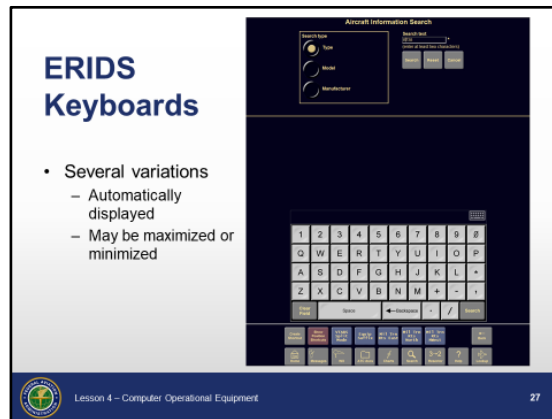


**Answer:** A. ATC docs



# ERIDS (Cont'd)

## ERIDS Keyboards

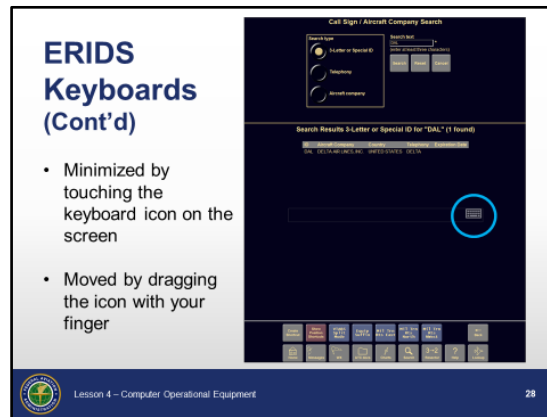


- ⊙ The ERIDS keyboard has several variations
  - Appropriate keyboard will automatically be displayed.
  - May be maximized or minimized
- ⊙ Depicted is the maximized QWERTY keyboard, which is laid out like a standard computer keyboard.

# ERIDS (Cont'd)

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## ERIDS Keyboards (Cont'd)



- ⦿ The keyboard may be minimized by touching the keyboard icon.
  - ⦿ To move the keyboard, drag the keyboard icon with your finger.
    - Can be moved when maximized or minimized
-

# KNOWLEDGE CHECK



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## Knowledge Check

### Knowledge Check

What do you touch to minimize or maximize the ERIDS keyboard?

- A. The minimize key
- B. The keyboard icon
- C. The keyboard can't be changed

 Lesson 4 – Computer Operational Equipment  29



**Question:** What do you touch to minimize or maximize the ERIDS keyboard?



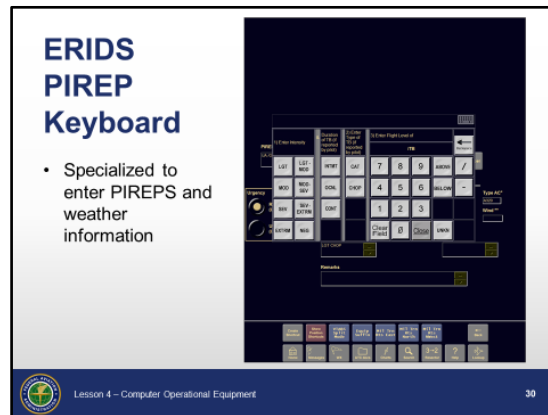
**Answer:** B. The keyboard icon

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# ERIDS (Cont'd)

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## ERIDS PIREP Keyboards



### ERIDS PIREP keyboard

- ⦿ Specialized keyboard used to enter PIREPS and weather messages
  - ⦿ Sixteen keys are adapted for entering weather related events.
    - Used to enter the type of turbulence and severity, and/or the type of icing and severity reported by the pilot
-

# ERIDS (Cont'd)

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## ERIDS Create PIREP

**Creating a PIREP**

- Required Field
  - Urgency
  - Location
  - Time
  - Flight level
  - Type aircraft

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Create a new PIREP by touching the WX button.

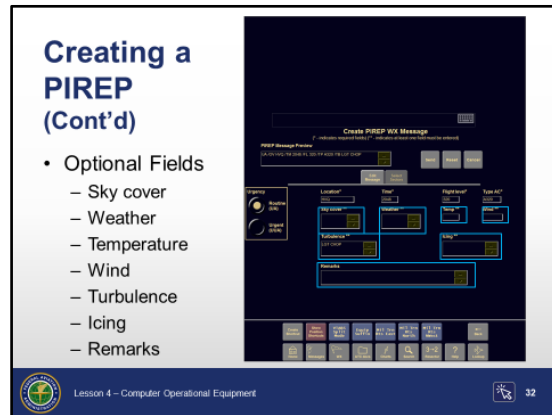
⦿ Required fields:

- Urgency - May be Routine (UA) or Urgent (UUA), this tells the weather service how to process this message
  - Location - Location identifier, Fix Radial Distance (FRD), or Lat/Long
  - Time - System will insert the current time, however, that may be changed if the PIREP was not entered when the report came in
  - Flight level - Altitude of aircraft in hundreds of feet
  - Type AC - Identifier for the type of aircraft, typically four alphanumeric characters (e.g., B739 or C182)
-

# ERIDS (Cont'd)

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## ERIDS Create PIREP (Cont'd)

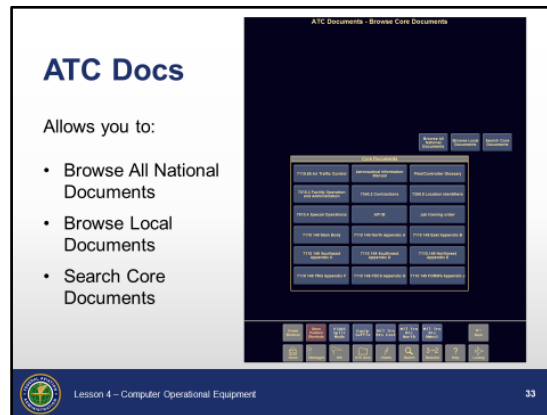


- ⦿ Optional Fields - At least one must be entered:
    - Sky cover - Either the amount of sky covered by weather, or a statement such as “overcast” or “sky obscured”
    - Weather - Rain, hail, fog, or other weather phenomena
    - Temp - Outside air temperature
    - Wind - Wind direction and speed
    - Turbulence - Intensity and duration
    - Icing - Intensity and type
    - Remarks - Any additional information
-

# ERIDS (Cont'd)

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## ERIDS ATC Docs



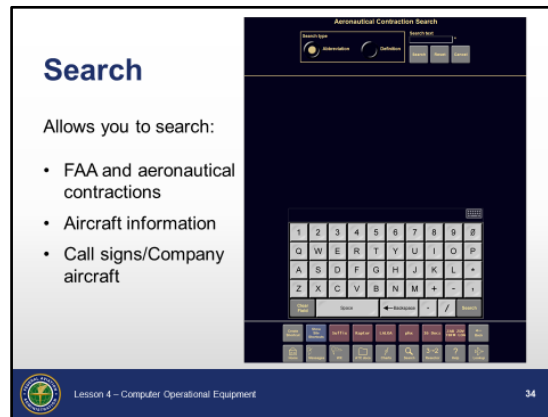
Many FAA orders, letters of agreement and other ATC documents are found in "ATC docs". There are two ways to view these documents: browsing or searching. You can browse all of the documents in the system, but search only applies to the core documents.

- ⦿ Browse All National Documents - Allows selection and display of any of the national documents or orders in the system
  - ⦿ Browse Local Documents - Allows selection and display of local documents, such as letters of agreement, local procedures, and other documents
  - ⦿ Search Core Documents - Allows search within national and locally adapted orders and documents
    - A document or group of documents is selected and search text entered.
-

# ERIDS (Cont'd)

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## ERIDS Search



The search features will allow you to search for specific text. Select from the following categories:

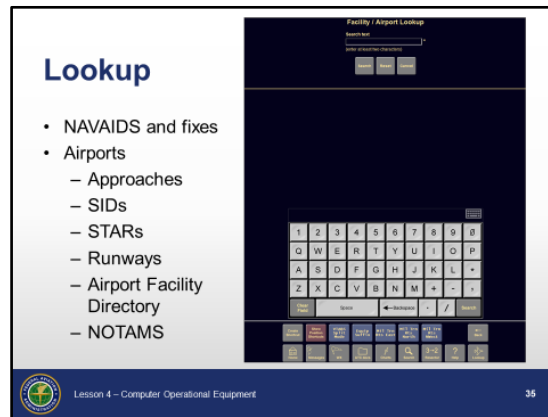
- ⊙ FAA and aeronautical contractions
  - Abbreviation
  - Definition
- ⊙ Aircraft information
  - Type
  - Model
- ⊙ Call signs/Aircraft company
  - Aircraft manufacturer
  - Telephony
  - Aircraft company



# ERIDS (Cont'd)

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## ERIDS Lookup



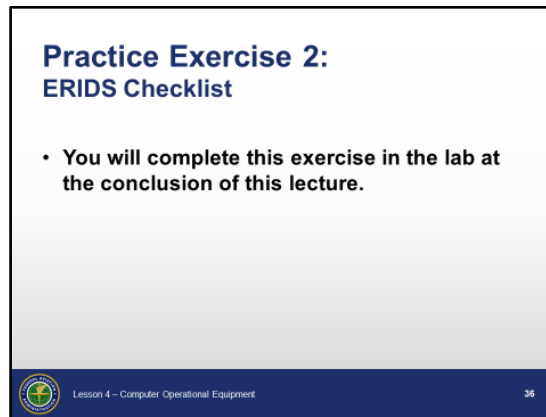
Lookup allows you to find:

- ⊙ NAVAIDs and fixes
  - ⊙ Airports
    - Approaches
    - Standard Instrument Departures (SIDs)
    - Standard Terminal Arrival Routes (STARs)
    - Runways
    - Airport Facility Directory (AFD)
    - NOTAMs
-

# INTRODUCTION: PRACTICE EXERCISE 2

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## Introduction - Practice Exercise 2: ERIDS Checklist



### Practice Exercise 2

- ⦿ Completed in the Test and Training Lab (TTL) at the conclusion of classroom instruction
- ⦿ Exercise is the completion of an ERIDS checklist.
- ⦿ You may use notes and references to complete the exercise.
- ⦿ The instructions for this exercise are located after the lesson summary.
- ⦿ Your instructor will provide direction.



**NOTE:** Each student will complete exercises 1 and 2 in the Test and Training Lab (TTL) and then complete the end-of-lesson test.

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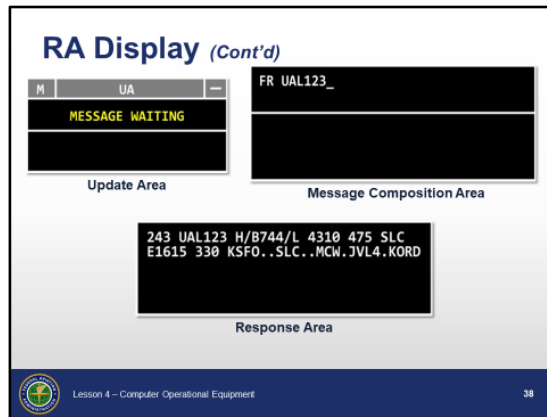


## RA POSITION (Cont'd)

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### RA Display (Cont'd)

TI 6110.101 par  
4.12, par 4.13,  
par 4.7



The RA display has three views for commands and updates. Each is accessed by a button in the RA position toolbar corresponding to their abbreviation. These views open automatically when an amendment is started or a response is created.

- ⦿ Update Area

- Displays updates sent through the computer, e.g., remove strips, departure messages, time updates, altitude updates

- ⦿ Message Composition Area

- Used to input commands
- Consists of Preview and Feedback Areas

- ⦿ Response Area

- Displays Flight Plan Readouts and Route Readout Requests for amendments

**NOTE:** These three views will either create a scroll arrow or expand when needed.

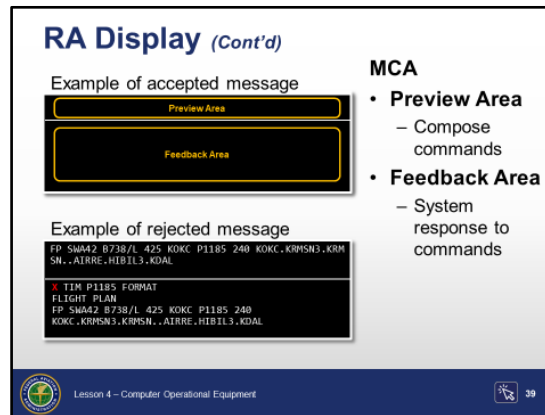
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# RA POSITION (Cont'd)

## RA Display (Cont'd)

TI 6110.101 par  
4.12

TI 6110.101  
figure 4-128



- ⦿ MCA
  - Preview Area
    - Compose commands
  - Feedback Area
    - System response to commands



*This slide is animated (4 clicks).*



*Click to show a valid entry in the Preview Area – A flight plan for SWA42 appears.*



*Click to show the accept message for entering the flight plan.*



*Click to show a flight plan entry for SWA42.*



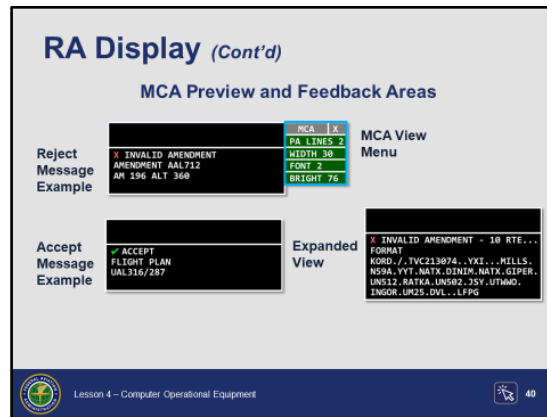
*Click to show the reject message. The message is rejected due to an incorrect time of 1185.*

**NOTE:** Once the command is ready, press **ENTER** on the keyboard. The flight plan has been accepted and is identified by a green check or a red X indicating reject or error.

# RA POSITION (Cont'd)

## RA Display (Cont'd)

TI 6110.101 par  
4.12



*This slide is animated (2 clicks).*



*Click to show the accept message*



*Click to show an expanded view reject message*

- ⦿ MCA menu is used to set:
  - Number of lines displayed in the Preview Area (2-10 lines)
  - Width of the MCA (30 or 50 characters)
  - Font size
  - Brightness
- ⦿ The Preview Area of the MCA is initially displayed as two lines and can be expanded to six lines using the MCA View Menu.
  - Commands are composed here allowing you to view/check format and syntax
- ⦿ The Feedback Area of the MCA is initially displayed as four lines and expands when needed.

## RA POSITION (Cont'd)

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### RA Trackball

TI 6110.101 par  
1.3.2



The trackball is used to initiate actions by selecting items from displays and menus using three buttons.

- ⦿ Pick (left) button:
    - Selects an object for subsequent command action
    - Executes an immediate action
    - Used to make all selections (unless the Enter or Home trackball buttons are specified)
  - ⦿ Enter (middle) button activates an implied command such as resubmitting a trial plan.
  - ⦿ Home (right) button removes information from the display.
-

# R POSITION

## R Position Console

TI 6110.100 par  
1.3



This slide is animated (1 click).

The R Position Console has two components that are different from the RA Position Console:

- ⦿ Situation Display - Primary tool used for separating aircraft
  - Flat panel monitor that displays position targets for aircraft, weather data, flight plan information, mapping, etc.
- ⦿ Keypad Selection Device (KSD) - allows the sector team access to some of the controls for the Situation Display



Click to show an enlargement of the KSD

- Filter buttons are site-specific and adapted at each facility.
- Vector (VECT) and Range (RNG) buttons change vector and range settings.



# KNOWLEDGE CHECK



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## Knowledge Check

### Knowledge Check

Which position has a Situation Display?

- A. A Position
- B. R Position
- C. RA Position

 Lesson 4 – Computer Operational Equipment  43



**Question:** Which position has a Situation Display?

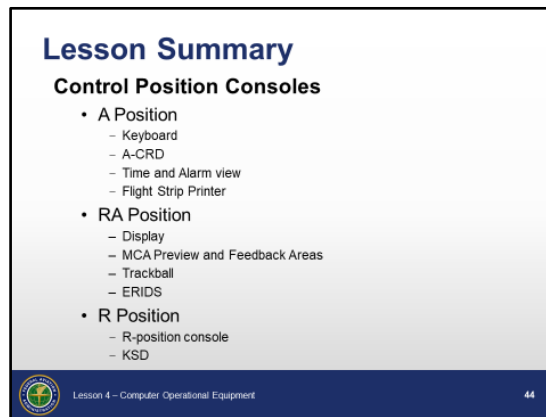


**Answer:** *B. R Position*

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# SUMMARY

## LESSON SUMMARY



**NOTE:** Review and elaborate briefly on the following:

Control Position Consoles:

- ⦿ A Position
  - Monitor
  - Keyboard
  - A-CRD
  - Time and Alarm View
  - Flight Strip Printer
- ⦿ RA Position
  - Display
  - MCA Preview and Feedback Areas
  - Trackball
  - ERIDS
- ⦿ R Position
  - Situation Display
  - KSD

**NOTE:** Each student will complete Exercises 1 and 2 in the Test and Training Lab (TTL) and then complete the end-of-lesson test.



**NOTE:** Ask students if there are any questions.

- Have the students complete Practice Exercises 1 and 2 in TTL.
- Administer end of lesson test (ELT01\_L04), explain test passing score requirements, time allowed for completing the test, and other procedures for administering test.

**NOTE:** The score required for passing the end-of-lesson test will be in accordance with current FAA directives.

- Provide feedback on missed questions, including a discussion to explain why particular answers are correct or incorrect.

# PRACTICE EXERCISE 1: LOADING FSP

## Practice Exercise 1 Purpose

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Demonstrate the steps to refill the FSP with paper.

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## Materials



Handout - Practice Exercise 1:: Loading FSP

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## Directions



*At the conclusion of classroom instruction, take the students to an available flight strip printer. Demonstrate the steps of loading the FSP with paper. Give each student an opportunity to complete the exercise. This exercise takes approximately 30 minutes per student.*

At the conclusion of classroom instruction, complete the handout for Exercise 1: Loading FSP.

- ⦿ To be completed at an FSP
  - ⦿ Your instructor will provide direction
-

# PRACTICE EXERCISE 1: LOADING FSP


## Practice

### Exercise 1: FSP

DIRECTIONS: Use the following procedure to load paper into the FSP.

STEP	ACTION
1	Ensure that the printer is powered on and empty of flight strip paper. (When the printer is empty of flight strip paper, the PAPER OUT status light is on.)
2	Remove all printed strips from the flight strip hopper to prevent jamming when loading the paper.
3	Open the top of the flight strip paper box and remove the long flap, leaving the two side flaps attached.
4	Take the first flight strip from the box. Rotate the box so the red "FEED DIRECTION" arrow is down and pointing toward the printer.
5	Keeping this same alignment, insert the box into the tray behind the printer. (The side flap on the box of paper acts as a guide for the strips.)
6	Insert the first flight strip from the box into the white plastic slot opening located in the back of the printer.
7	Ensure that the white side is down and the red 'FEED DIRECTION' arrow is pointing towards the feed slot.
8	Manually push the paper into the printer until it automatically advances. NOTE: If a paper jam occurs, cycle the FSP power, repeat this step as necessary.
9	Press the BLANK STRIP button on the printer panel to advance one strip through the printer. (The blank strip aligns the cutting mechanism for strip ejection).
10	Press the ON/OFF LINE button and make sure the READY status light comes on.

# PRACTICE EXERCISE 2: ERIDS CHECKLIST

<b>Practice Exercise 2 Purpose</b>	Demonstrate ERIDS functions
<b>Materials</b>	<p>You will need the following materials for this exercise:</p> <p>Handout - Practice Exercise 2: Computer Operational Equipment</p>
<b>Directions</b>	<p>At the conclusion of classroom instruction, your instructor will demonstrate how to use ERIDs prior to you completing the exercise.</p> <p> <i>Take the students to an available ERIDS console.</i></p> <p><i>Step 1: Demonstrate using ERIDS to complete the following:</i></p> <ul style="list-style-type: none"><li>⊙ Lookup <b>ABQ</b> NAVAID</li><li>⊙ Lookup <b>ABQ</b> airport<ul style="list-style-type: none"><li>• Display a Standard Instrument Departure</li><li>• Display a Standard Terminal Arrival Route</li><li>• Display an instrument approach procedure</li><li>• Drag to resize the approach plate window to show and hide the NOTAMS<ul style="list-style-type: none"><li>▪ <b>emphasize the importance of the NOTAMS</b></li></ul></li><li>• Display the runway information</li><li>• Display the Airport Facility Directory (AFD)<ul style="list-style-type: none"><li>▪ <b>Instructor - briefly explain the information in the AFD</b></li></ul></li><li>• Display the NOTAMS using the NOTAM tab</li></ul></li><li>⊙ Demonstrate how to fill out a PIREP</li><li>⊙ Using <b>Browse National Documents</b>, display the contents of the <b>AP/1B</b><ul style="list-style-type: none"><li>• Display an AR or IR Route</li></ul></li><li>⊙ Using <b>Browse Local Documents</b>, display any local letter of agreement</li><li>⊙ Demonstrate how to look up contractions</li><li>⊙ Demonstrate How to search a call sign using Call signs/Aircraft Company</li><li>⊙ Using Aircraft Type, search for <b>pa28</b> and discuss items shown</li></ul> <p><i>Step 2: Give students an opportunity to complete the exercise individually. Assist student as needed to complete the exercise. This exercise takes approximately 30 minutes per student.</i></p> <p>Complete the handout for Exercise 2:</p> <ul style="list-style-type: none"><li>⊙ ERIDS Checklist<ul style="list-style-type: none"><li>• To be completed at an ERIDS console</li><li>• Your instructor will provide direction</li></ul></li></ul>

## PRACTICE EXERCISE 2: ERIDS CHECKLIST (Cont'd)

DIRECTIONS: Complete the following actions using the ERIDS console.

Number	Action	Observed
	<b>Lookup Page</b>	
1.	Lookup PXR NAVAID	
2.	Lookup PHX airport	
a.	Display <b>a</b> Standard Instrument Departure	
b.	Display <b>a</b> Standard Terminal Arrival Route	
c.	Display an instrument approach procedure	
d.	Drag to resize the approach plate window to show and hide the NOTAMS <b>Instructor - emphasize the importance of the</b>	
e.	Display the runway information for <b>PHX</b>	
f.	Display the Airport Facility Directory (AFD) - <b>Instructor - briefly explain the information in the AFD</b>	
g.	Display the NOTAMS using the NOTAM tab	
	<b>Home Page</b>	
3.	Using the <b><u>WX</u></b> button, create a PIREP using: <b>C210; Light rime ice; 12000 feet; 15 miles NW of RBL; Outside Temp Minus 15; RMK- "TEST PIREP"</b>	
4.	Create a PIREP for turbulence using: <b>B738; Continuous light occasional moderate chop; FL340; 20 SW SGF; RMK- "TEST PIREP"</b>	
	<b>ATC docs</b>	
5.	Using <b>Browse National Documents</b> , display the contents of the <b>AP/1B</b> . Using that, display <b>IR207</b> information	
6.	Using <b>Browse Local Documents</b> , display any local letter of agreement	

## PRACTICE EXERCISE 2: ERIDS CHECKLIST (Cont'd)

Number	Action	Observed
	<b>Lookup Page</b>	
7.	Lookup PXR NAVAID	
8.	Lookup PHX airport	
h.	Display <b>a</b> Standard Instrument Departure	
i.	Display <b>a</b> Standard Terminal Arrival Route	
j.	Display an instrument approach procedure	
k.	Drag to resize the approach plate window to show and hide the NOTAMS <b>Instructor - emphasize the importance of the</b>	
l.	Display the runway information for <b>PHX</b>	
m.	Display the Airport Facility Directory (AFD) - <b>Instructor - briefly explain the information in the AFD</b>	
n.	Display the NOTAMS using the NOTAM tab	
	<b>Home Page</b>	
9.	Using the <b>WX</b> button, create a PIREP using: <b>C210; Light rime ice; 12000 feet; 15 miles NW of RBL; Outside Temp Minus 15; RMK- "TEST PIREP"</b>	
10.	Create a PIREP for turbulence using: <b>B738; Continuous light occasional moderate chop; FL340; 20 SW SGF; RMK- "TEST PIREP"</b>	
	<b>ATC docs</b>	
11.	Using <b>Browse National Documents</b> , display the contents of the <b>AP/1B</b> . Using that, display <b>IR207</b> information	
12.	Using <b>Browse Local Documents</b> , display any local letter of agreement	

## PRACTICE EXERCISE 2: ERIDS CHECKLIST *(Cont'd)*

Number	Action	Observed
	<b>Contractions</b>	
13.	Search for the contraction <b>LGTD</b> and read the results	
14.	Using Call signs/Aircraft Company, search for <b>JNY</b> and observe the results	
	<b>Search</b>	
15.	Using Aircraft Type, search for <b>C17</b> and observe the number of items shown.	