Federal Aviation Administration

En Route ERAM Ghost Pilot (GP) Training

Lesson 3: Routine Target Simulation Tasks

Course FAA55149002

Version: V.2019-05

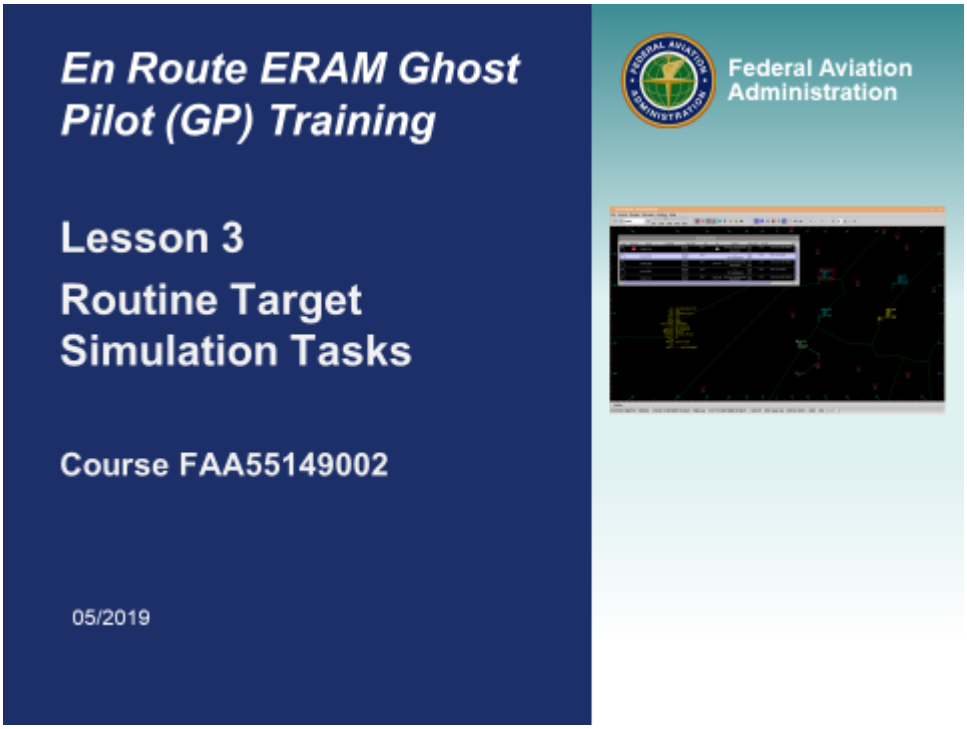
Page intentionally left blank

LESSON PLAN DATA SHEET

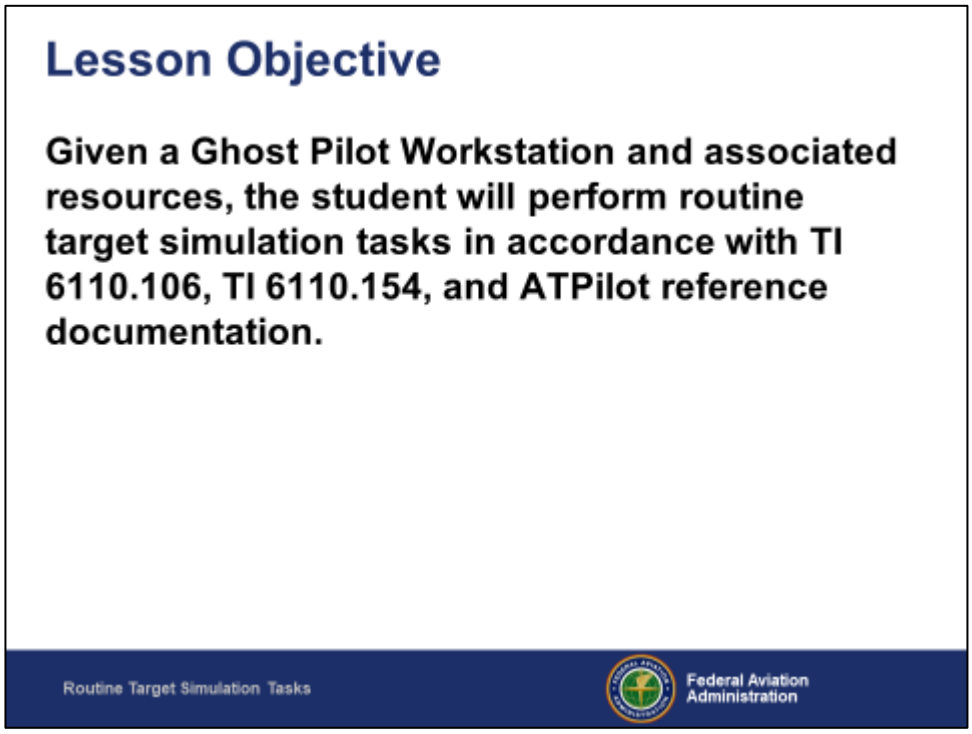
Section	Description
Course Name	En Route ERAM Ghost Pilot (GP)
Course Number	FAA55149002
Lesson Title	Routine Target Simulation Tasks
Duration	1 Hour 30 minutes
Date Revised	May 2019
Version	V.2019-05
Software Compatibility	Microsoft Word, Power Point
Reference(s)	• TI 6110.106, ERAM Ghost Pilot Quick Reference Card • TI 6110.154, ERAM ARTCC System Support Manual: Simulation User's Guide • ATPilot Situational Display Data (SDD) User Manual
Handout(s)	None
Exercise(s)/ Activity(s)	Part Task Scenario 3
Assessments	End-of-course Knowledge and Performance Tests
Materials and Equipment	Projector
Other Pertinent Information	None

Page intentionally left blank

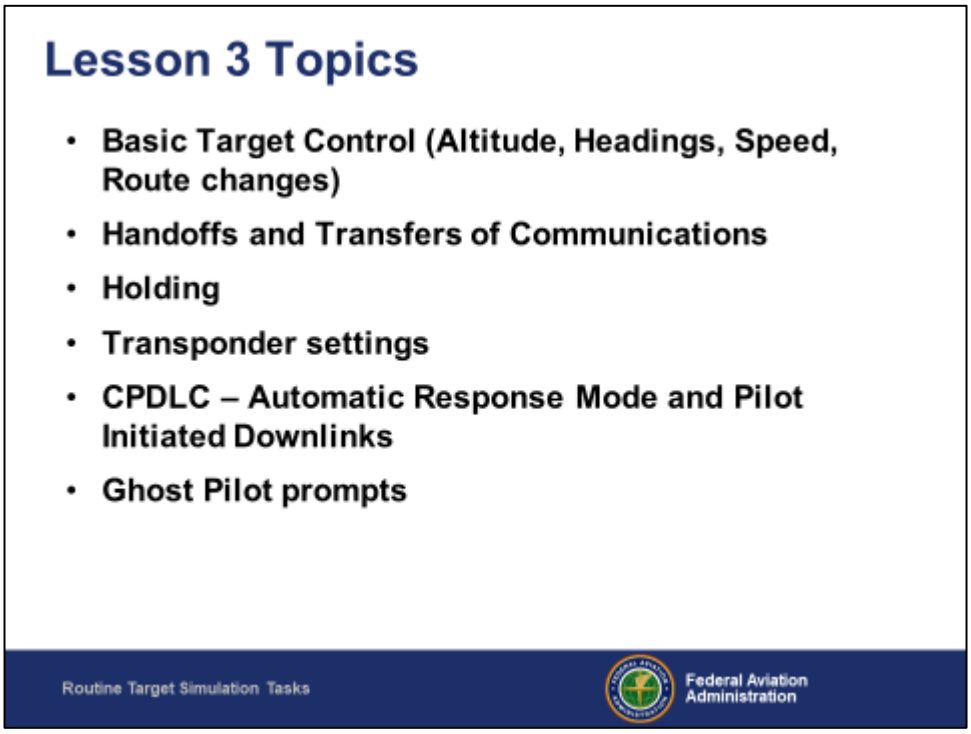
Slide - 1.


En Route ERAM Ghost Pilot (GP) Training
Lesson 3
Routine Target Simulation Tasks
Course FAA55149002
05/2019
Federal Aviation Administration

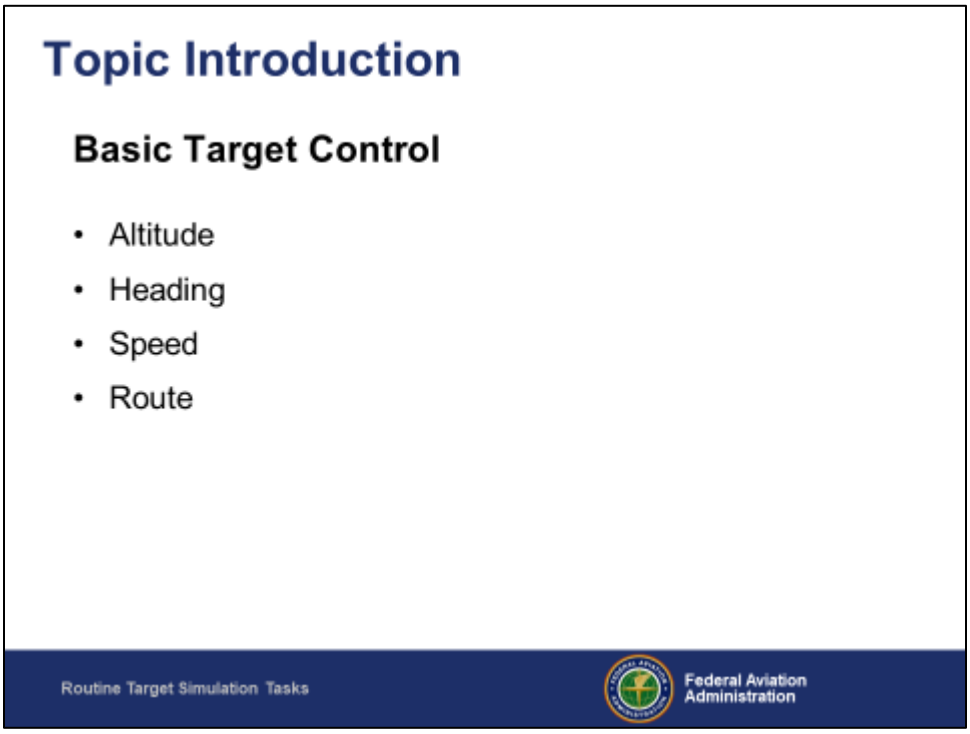
Slide - 2.


Lesson Objective
Given a Ghost Pilot Workstation and associated resources, the student will perform routine target simulation tasks in accordance with TI 6110.106, TI 6110.154, and ATPilot reference documentation.
Routine Target Simulation Tasks
Federal Aviation Administration

Slide - 3.


Lesson 3 Topics
• Basic Target Control (Altitude, Headings, Speed, Route changes)
• Handoffs and Transfers of Communications
• Holding
• Transponder settings
• CPDLC – Automatic Response Mode and Pilot Initiated Downlinks
• Ghost Pilot prompts
Routine Target Simulation Tasks
Federal Aviation Administration

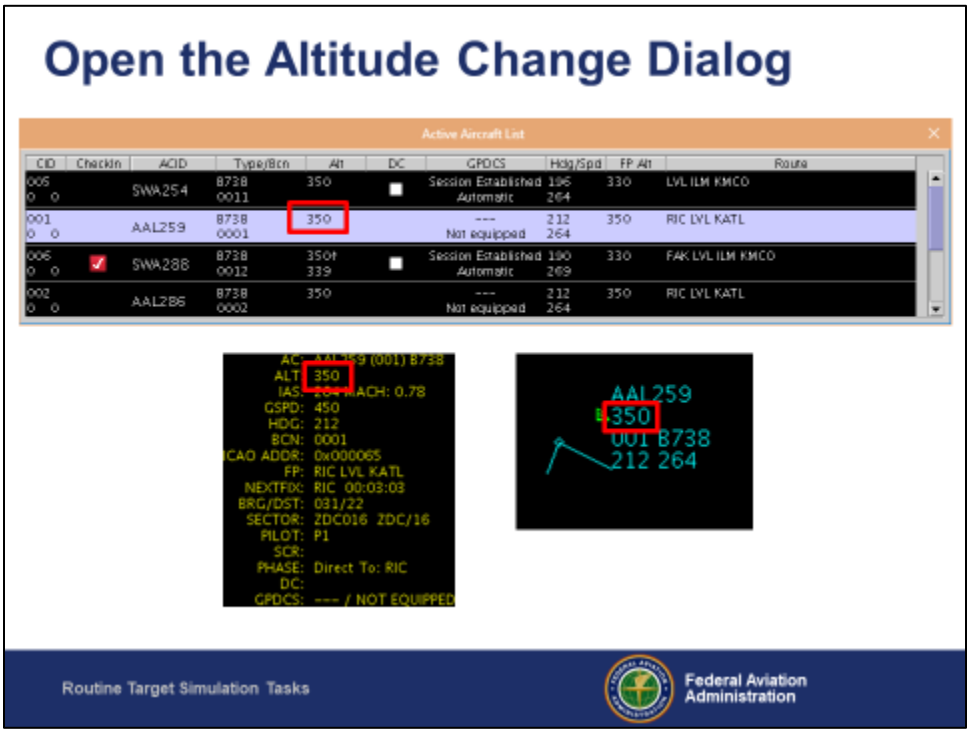
Slide - 4.



This section covers the most frequently performed target control tasks. They are:

- Altitude changes
- Heading changes
- Speed changes
- Route changes

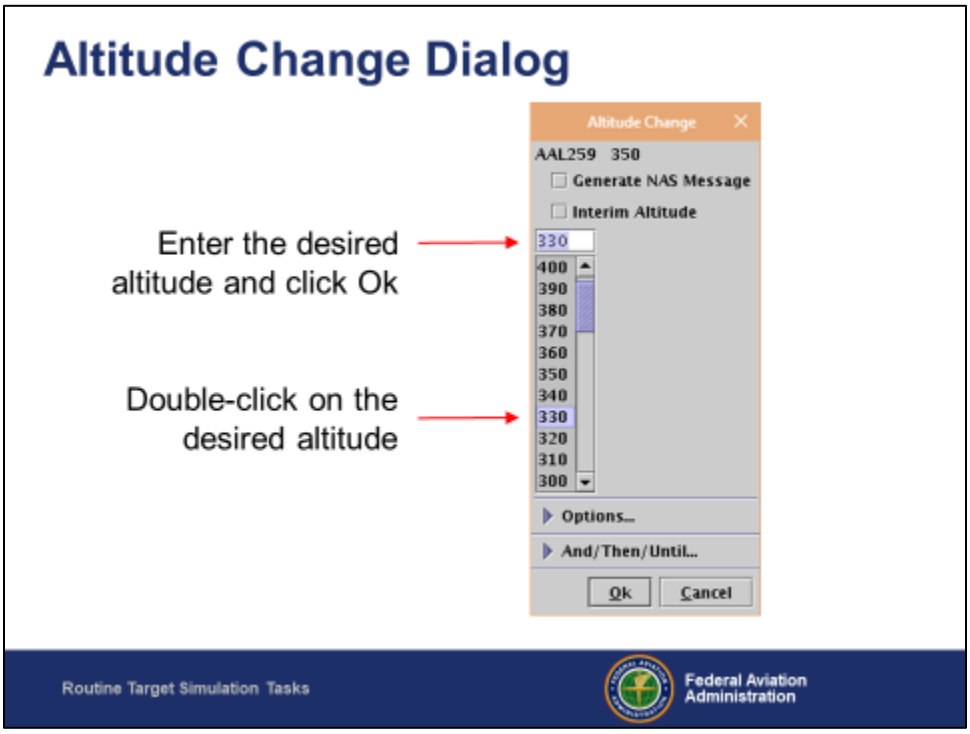
Slide - 5.



The Altitude Change dialog is used to change a target's altitude. There are multiple options for opening the dialog:

- Click on the altitude field in the data block.
- Click the Alt field on the Active Aircraft List (AAL) or Future Aircraft List (FAL).
- Click the ALT field in the Selected Aircraft Information Area (SAIA).

Slide - 6.



A target's current altitude is displayed at the top of the dialog.

There are two basic ways to make an altitude change:

- Double-click on the desired altitude. Use the scroll bar if the desired altitude is not initially displayed.
- Enter the desired altitude in the input box and click **Ok**.
    - If the entered altitude is outside the target characteristics, an error message will be generated, and the altitude will change to the maximum allowable altitude.

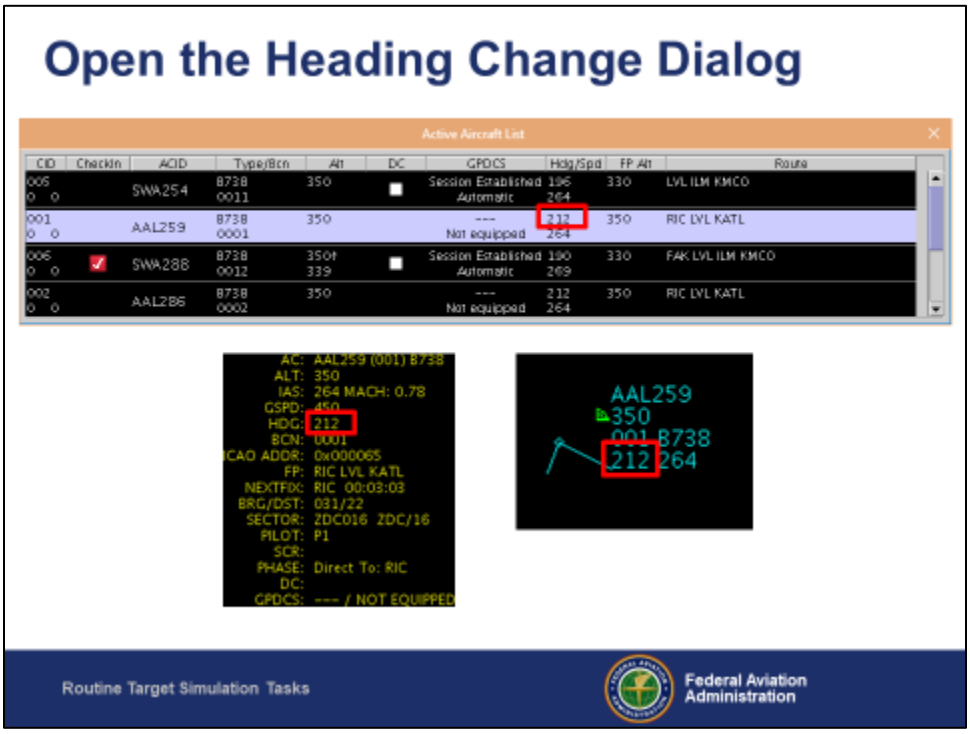
An altitude change only affects the simulated surveillance data for that target. To make the corresponding ERAM altitude amendment:

- For an assigned altitude amendment, check the **Generate NAS Message** checkbox prior to making the altitude change.
- For an interim altitude amendment, check the **Generate NAS Message** checkbox and **Interim Altitude** checkboxes prior to making the altitude change.

The checkbox options are intended to simulate an entry by an adjacent sector/facility controller and will be grayed out if the target is under control of the training sector.

The **Options…** and **And/Then/Until…** panels will be covered in a later lesson.

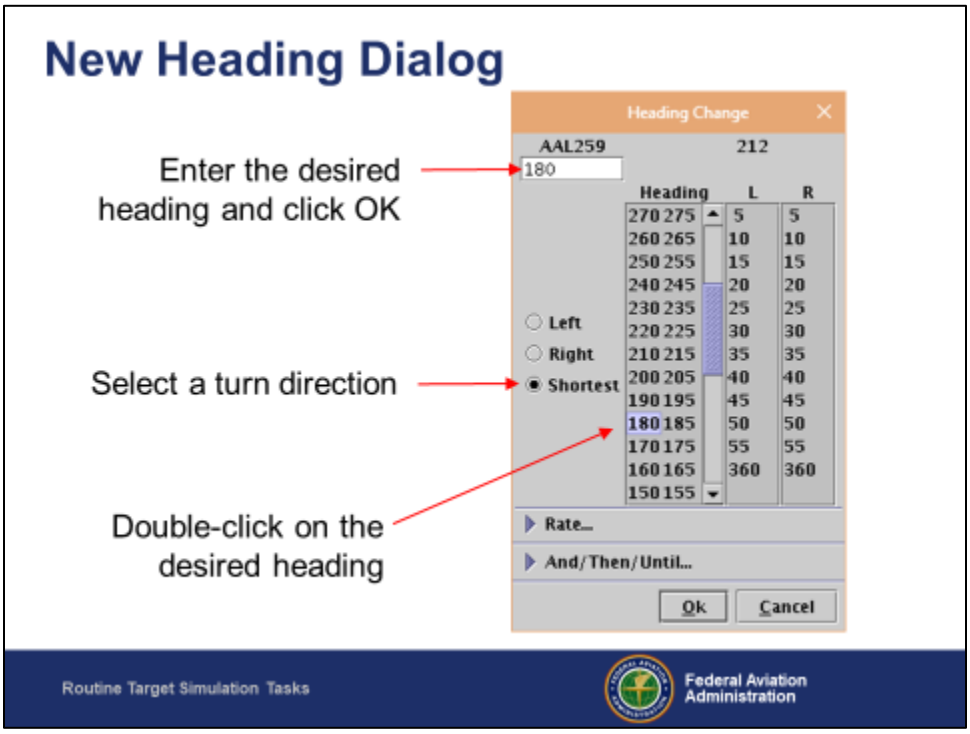
Slide - 7.



The Heading Change dialog is used to change a target's heading. There are multiple options for opening the dialog:

- Click on the heading field in the data block.
- Click the Hdg field on the Active Aircraft List (AAL) or Future Aircraft List (FAL).
- Click the HDG field in the Selected Aircraft Information Area (SAIA).

Slide - 8.



A target's current heading is displayed at the top of the dialog.

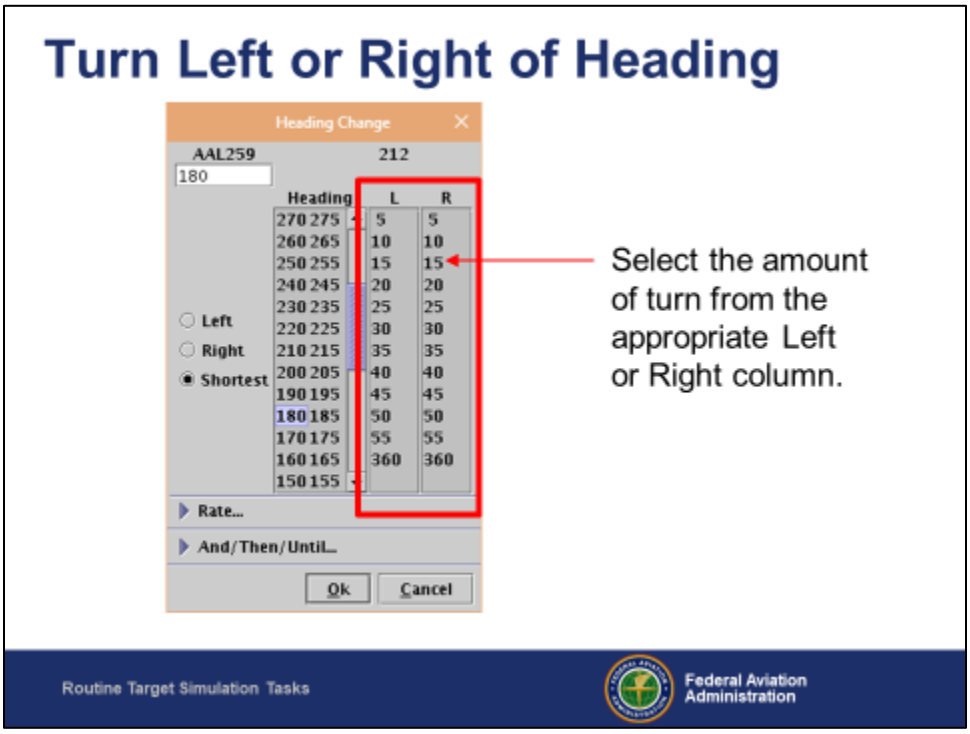
There are two basic ways to select a specific heading:

- Double-click on the desired heading. Use the scroll bar if the desired altitude is not initially displayed.
    - Heading values change in increments of 5 degrees.
- Enter the desired heading in the input box and click **Ok**.
    - The current heading will be prepopulated in the input box when the dialog is initially opened.

With either option, a turn direction must be specified. Click on the desired radio button to select the turn direction. **Shortest** is the default selection.

The **Rate…** and **And/Then/Until…** panels will be covered in a later lesson.

Slide - 9.



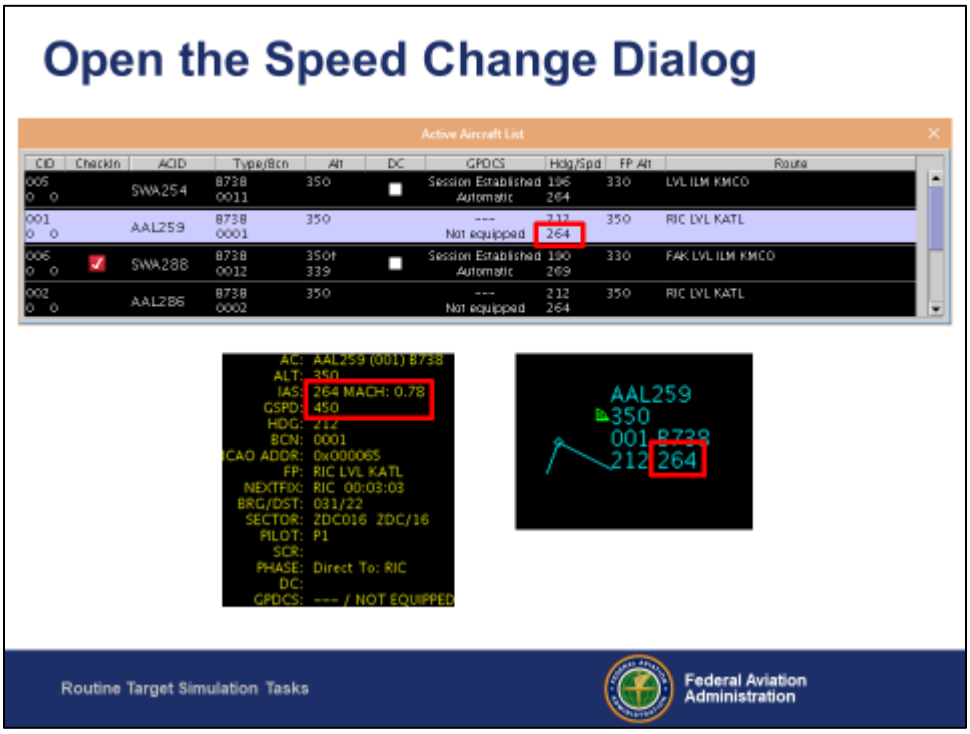
It is also possible to make a heading change by selecting an offset from the present heading. For example, if the clearance is to turn right 20 degrees. To do so:

- Double-click on the desired offset amount.

Note that there are separate columns for Left (L) and Right (R) turns.

The 360 option has the target perform a 360 degree turn, then proceed on course. This is the only heading option that will return the target to its original route.

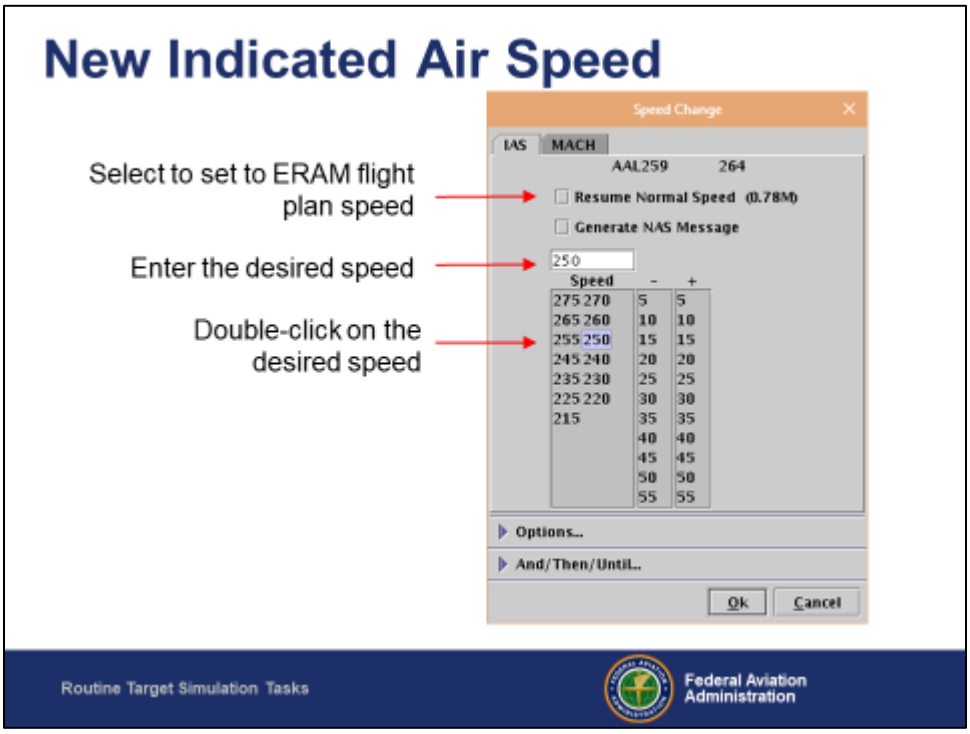
Slide - 10.



The Speed Change dialog is used to change a target's speed. There are multiple options for opening the dialog:

- Click on the speed field in the data block.
- Click the speed field on the Active Aircraft List (AAL) or Future Aircraft List (FAL).
- Click on either the IAS or GSPD field in the Selected Aircraft Information Area (SAIA).

Slide - 11.



A target's current speed is displayed at the top of the dialog.

The dialog has two tabs:

- IAS – For Indicated Air Speed (FL290 and below)
- MACH – For Mach speeds (above FL290)

The default tab displayed is determined by the altitude of the target.

There are two basic ways to make a speed change to a specific speed:

- Double-click on the desired speed. The values presented are based on the target characteristics for that aircraft type at the current altitude.
- Enter the desired speed in the input box and click **Ok**.
    - The current speed will be prepopulated in the input box when the dialog is initially opened.
    - If the entered speed is outside the target characteristics, an error message will be generated, and the speed will change to the minimum/maximum speed.

A speed change only affects the simulated surveillance data for that target. To make the corresponding ERAM amendment:

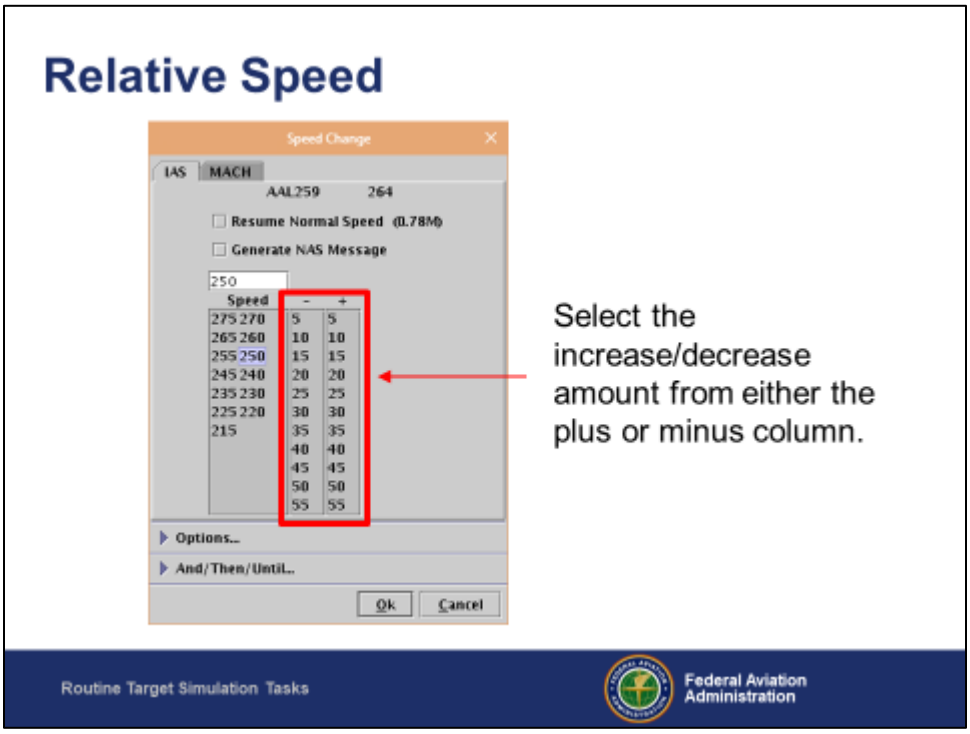
- Check the **Generate NAS Message** checkbox.

The Generate NAS Message option is intended to simulate an entry by an adjacent sector and will be grayed out if the target is under control of the training sector.

Select the **Resume Normal Speed** checkbox to return the speed to that specified in the ERAM flight plan.

The **Options…** and **And/Then/Until…** panels will be covered in a later lesson.

Slide - 12.

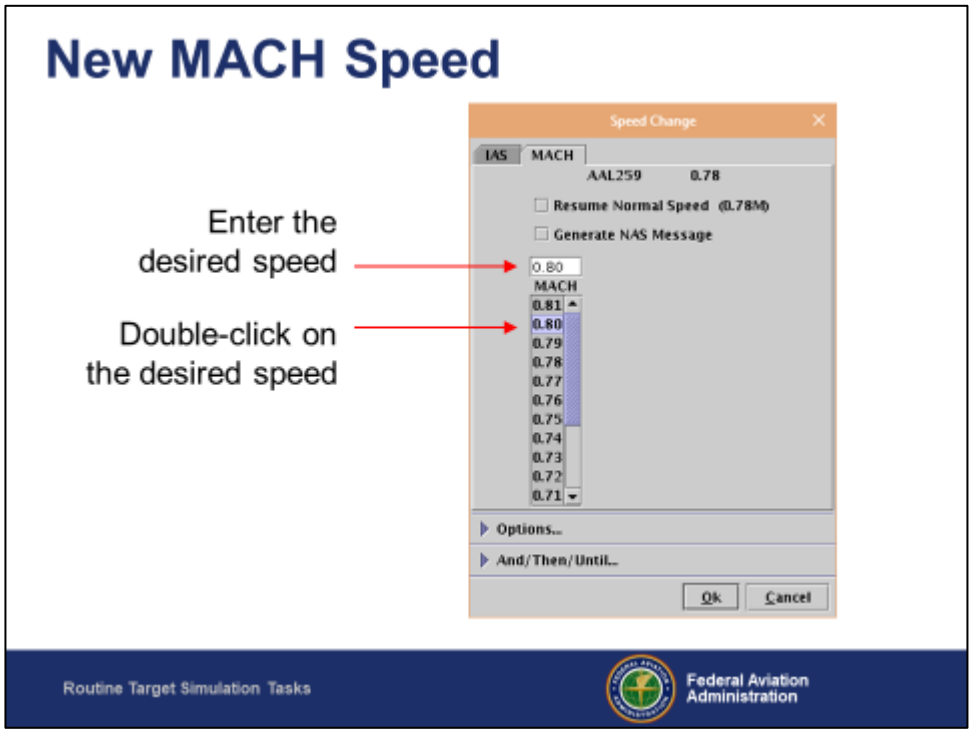


It is also possible to make a relative speed change by selecting an offset from the current speed. For example, if the clearance is to increase speed by 20 knots. To do so:

- Double-click on the desired offset amount.

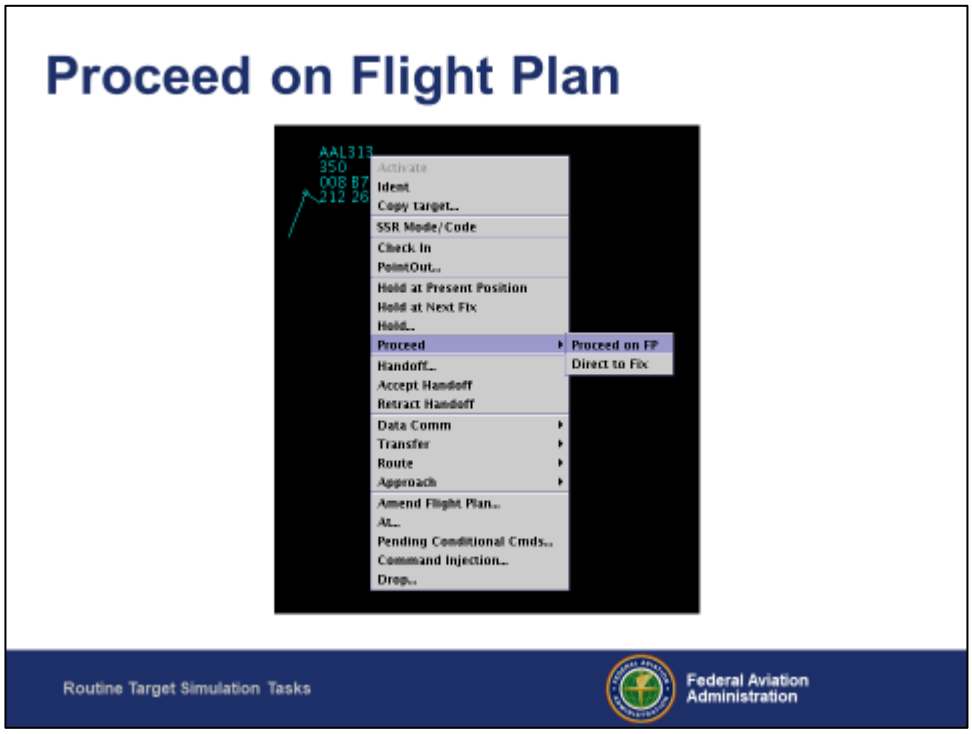
Note that there are separate columns for Minus and Plus.

Slide - 13.



The MACH speed tab behaves in the same manner as the IAS tab.

Slide - 14.



There are four options to change the target path. This is equivalent to the route programmed into an aircraft's Flight Management System (FMS). The options are:

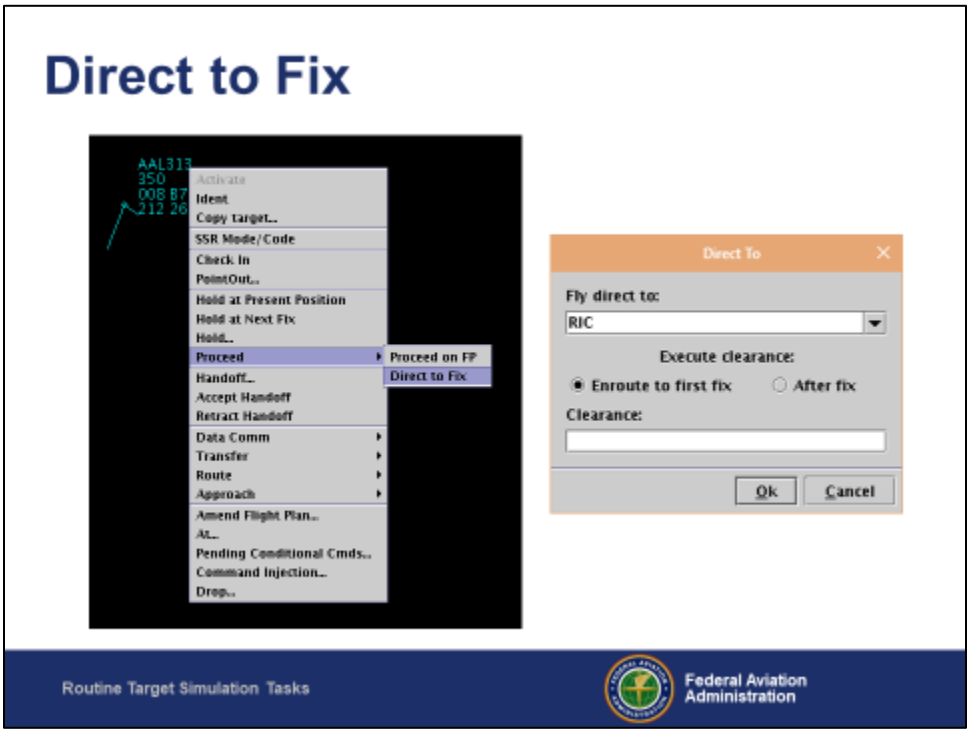
- Proceed on FP
- Direct to Fix
- A Route dialog where a route can be entered using text
- A graphical route editor

The **Proceed on FP** option is used when the target is on a vector, or in hold, and is cleared to return to the current route. The target will proceed to the first fix remaining in the current route. To execute:

1. Right-click on the data block callsign to open the Target Control menu.
2. Select the **Proceed** option to open a sub-menu.
3. Select the **Proceed on FP** option on the sub-menu.

Ghost Pilots should always be aware of the target's position relative to the route. An aircraft vectored past a fix still in the target's route may reverse course to cross that fix when the **Proceed on FP** command is used. If that is the case, the **Direct to Fix** option may be more appropriate.

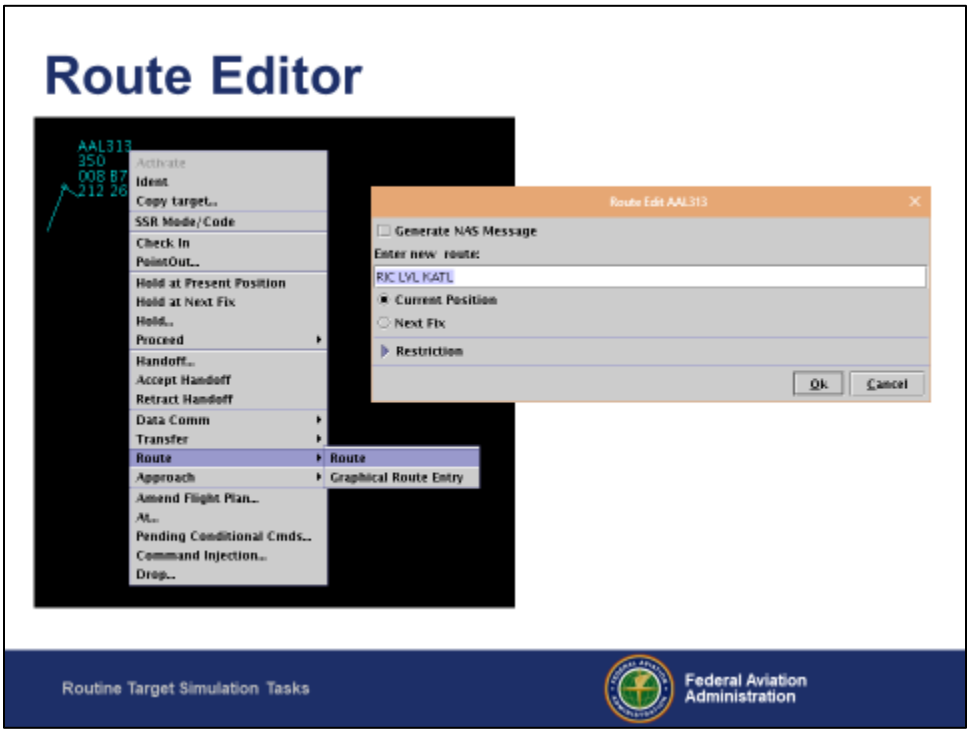
Slide - 15.



The **Direct to Fix** option is used when the target is cleared to a fix in the current route. The target will proceed to the specified fix. To execute:

1. Right-click on the data block callsign to open the Target Control menu.
2. Select the **Proceed** option to open a sub-menu.
3. Select the **Direct to Fix** option on the sub-menu. The Direct To dialog will open.
4. Select the fix from the **Fly direct to:** pull down list or type the fix name in the input box.
5. Select when the clearance should be executed.
   - **Enroute to first fix** will execute the maneuver immediately.
   - **After fix** will execute the maneuver after crossing the next fix on the current route.
6. An optional ATCoach command can be entered in the **Clearance:** input box (to be covered in a later lesson).
7. Click **Ok**.

Slide - 16.



The Route Edit dialog is used to edit an existing route or to specify a new route. To execute:

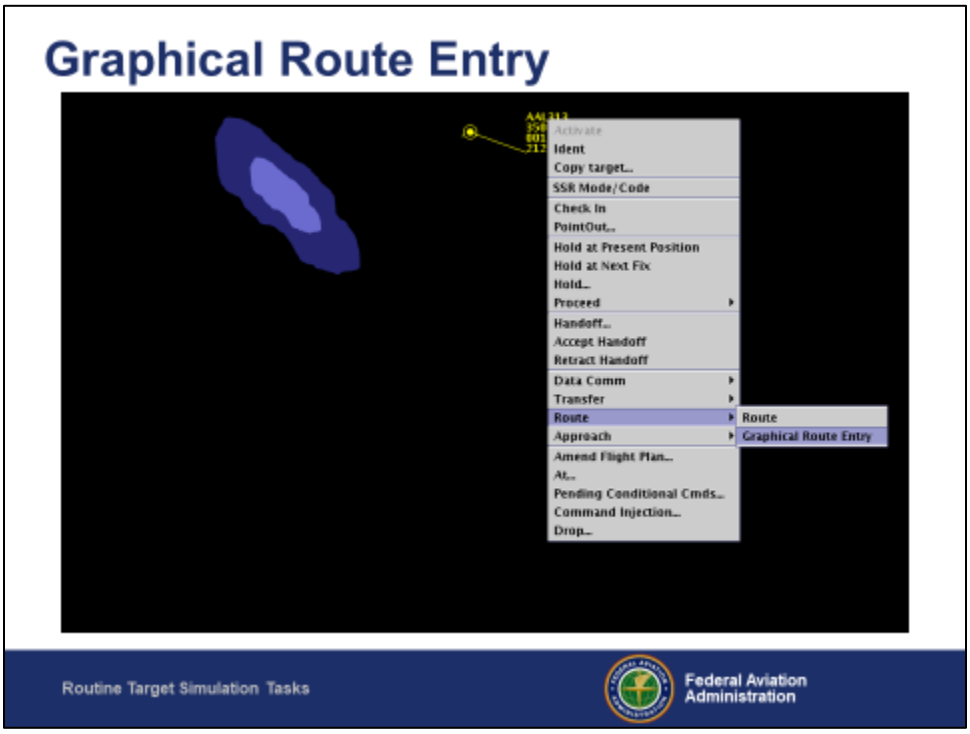
1. Right-click on the data block callsign to open the Target Control menu or select the Route field on the AAL or SAIA.
2. Select the **Route** option to open a sub-menu.
3. Select the **Route** option in the sub-menu. The Route dialog will open.
4. Type the new route in the input box.
5. Select when the clearance should be executed.
   - **Current Position** will execute the maneuver immediately.
   - **Next Fix** will execute the maneuver after crossing the next fix on the current route.
6. The route change only affects the simulated surveillance data for that target. Check the **Generate NAS Message** checkbox to make the corresponding ERAM amendment. The option is grayed out if the target is being controlled by the training sector.

7. Specify a time or distance restriction, if desired.
8. Click **Ok**.

There are some rules for route changes:

- The Ghost Pilot must include the command DROP at the end of the route if a new destination within the training sector is specified.
    - If DROP is not appended, the target will not drop off the display at the airport and will continue to fly along its last assigned heading.
- Airways like Victor routes, Jet routes, and Q routes can be used.
- STARs, DPs and Military Routes require a prefix before they can be used in this editor; i.e., MR_AR307C.
    - It is often easier to input fixes along the route rather than deal with the difficulties of entering a STAR, etc.

Slide - 17.

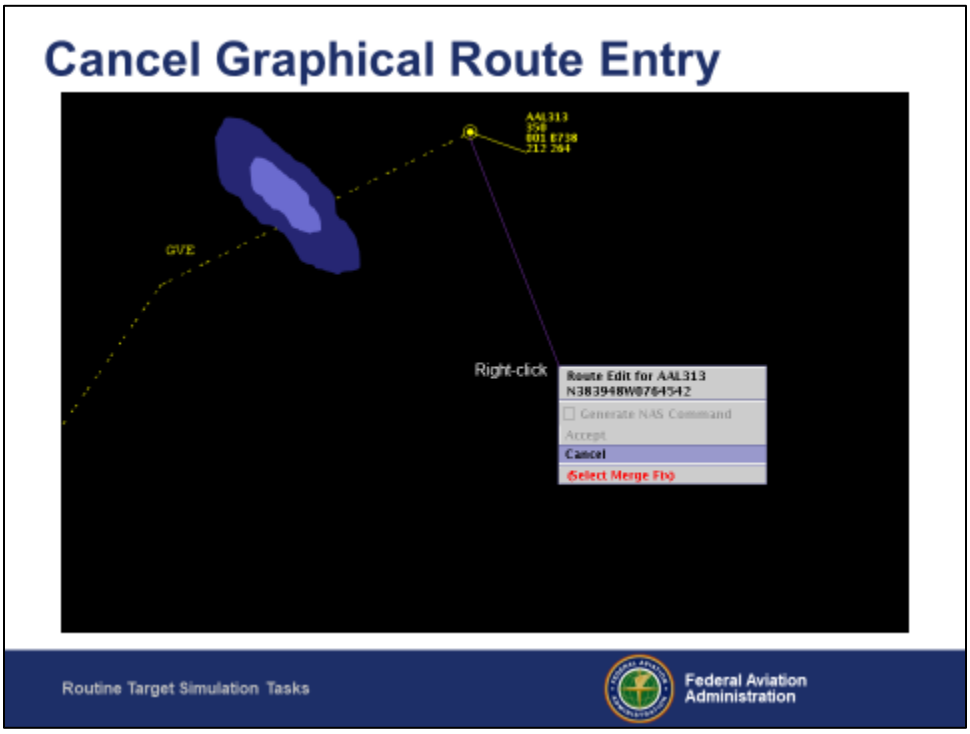


The Graphical Route editor is used to edit the existing route by clicking on the map. To execute:

1. Right-click on the data block callsign to open the Target Control menu or select the Route field on the AAL or SAIA.
2. Select the **Route** option to open a sub-menu.
3. Select the **Graphical Route Entry** option in the sub-menu.
    - A small dialog listing the three key steps required to complete the reroute will appear.
    - The target route will be represented by a dashed yellow line without any navigational points depicted.
        - If you move the cursor along the route line, navigational points will be depicted as the cursor passes over them.

4. Select the start point for the deviation. To do so, click on either the target symbol (to begin the maneuver at the current position) or a fix on the current route (to begin the maneuver at that fix).
    - A diverge fix cannot be the final element in the route.
5. Select optional intermediate fixes. To do so, click on a fix to add that fix to the route, or click on an unmarked area of the map to add that lat/long to the route.
    - There is a limit of seven elements (fixes and/or lat/longs) between the divergent point and the merge point.
6. Select the merge fix. To do so click on the desired fix.
    - The last point or fix selected must merge with the route.
    - If you move the cursor along the route line, navigational points will be depicted as the cursor passes over them.
7. Right-click anywhere on the map. A pop-up dialog will appear.
8. The **Generate NAS Command** checkbox will be active if the training sector does not have track control of the target. If it is active and you so desire, click on it to generate the corresponding route amendment.
9. Select the **Accept** option to complete the reroute.

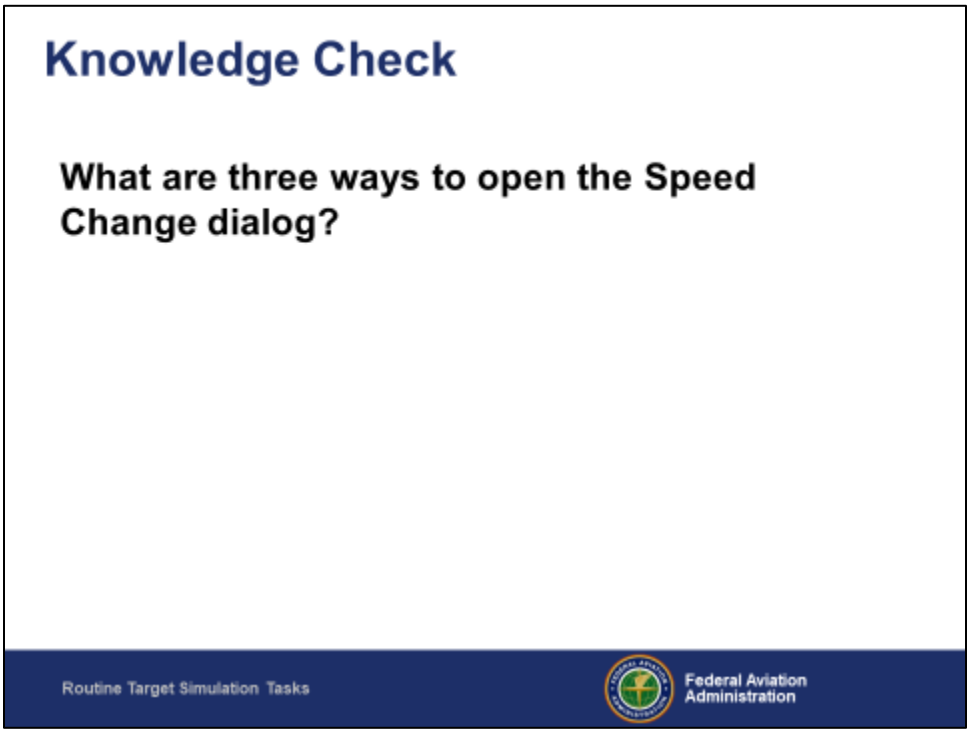
Slide - 18.



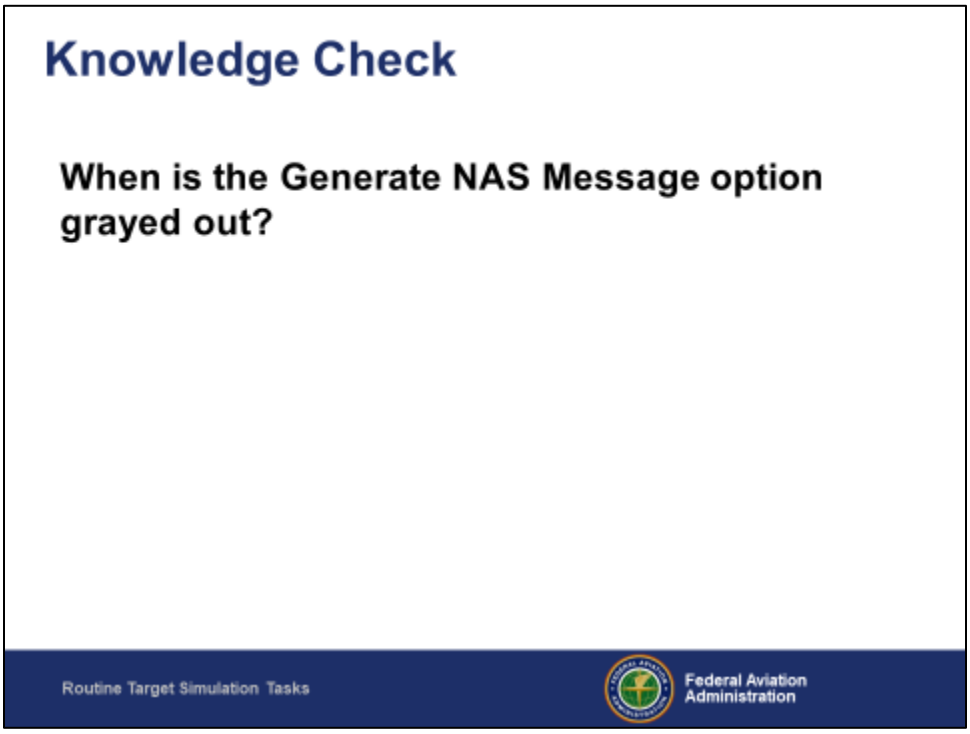
The cancel a graphical reroute:

1. Right-click anywhere on the map. A pop-up dialog will appear.
2. Select the **Cancel** option.

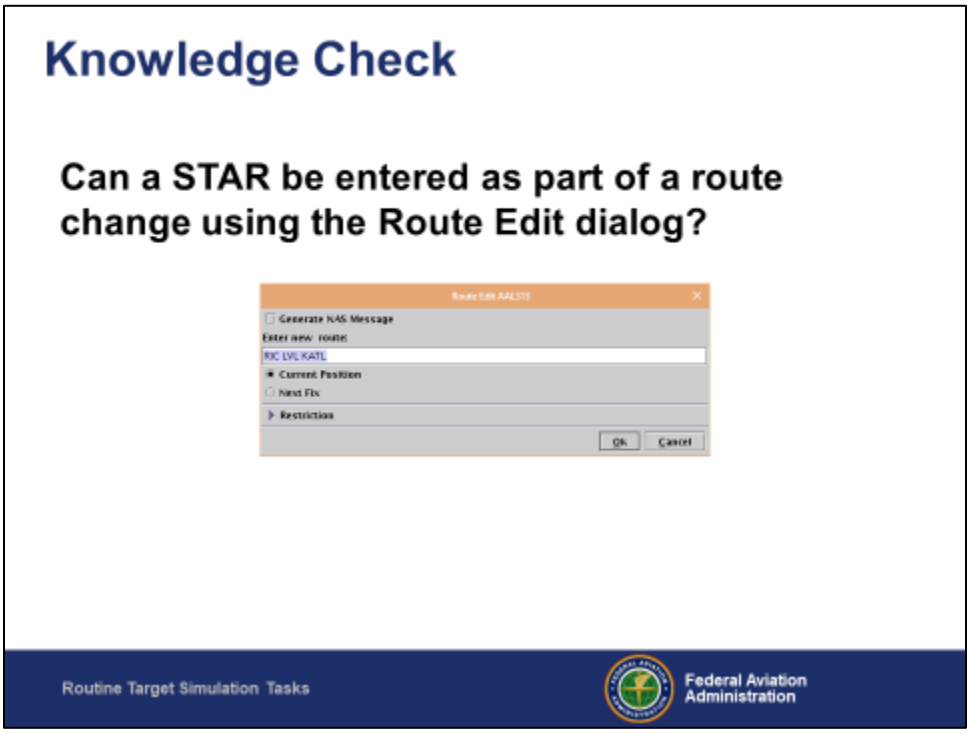
Slide - 19.


Knowledge Check
What are three ways to open the Speed Change dialog?
Routine Target Simulation Tasks
Federal Aviation Administration

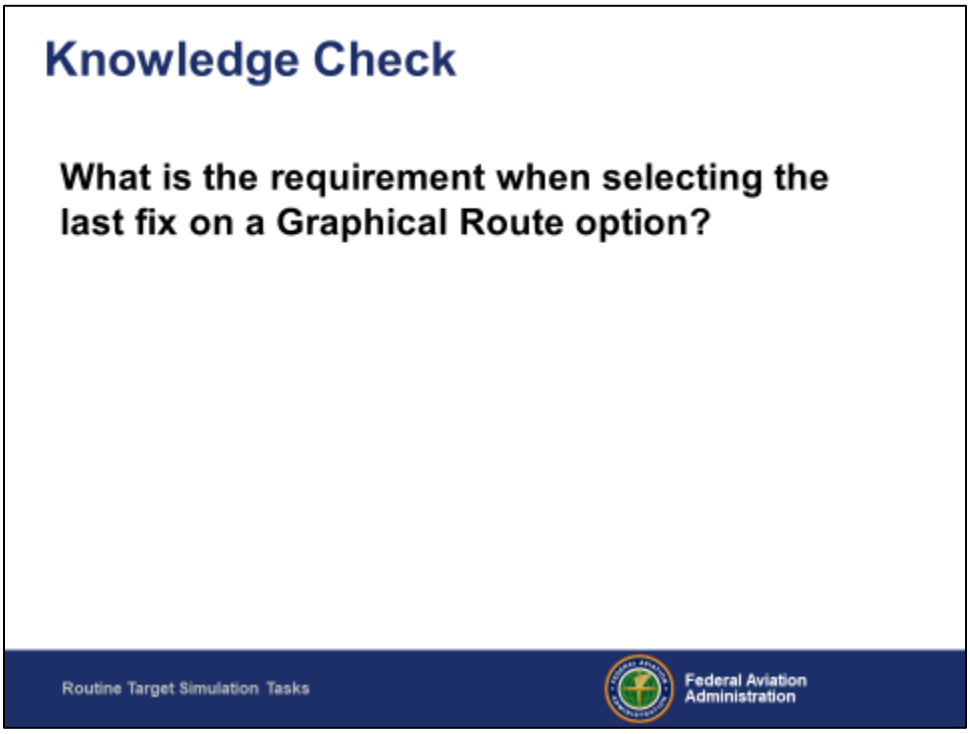
Slide - 20.


Knowledge Check
When is the Generate NAS Message option grayed out?
Routine Target Simulation Tasks
Federal Aviation Administration

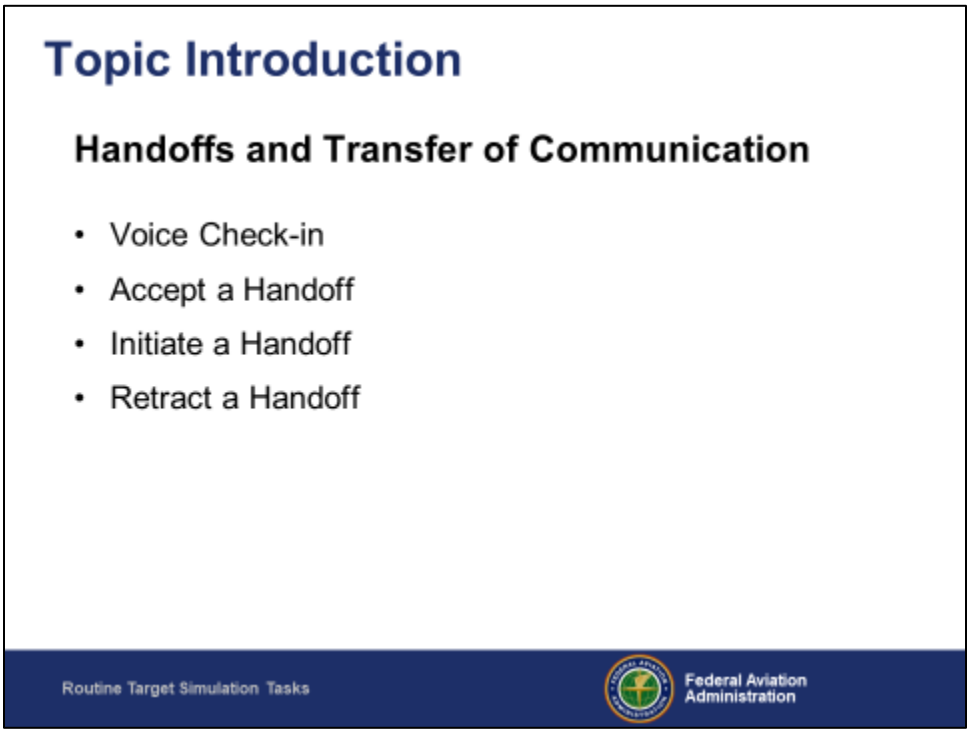
Slide - 21.


Knowledge Check
Can a STAR be entered as part of a route change using the Route Edit dialog?
Generate NAS Message
Enter new route:
Current Position
Next Fix
Restriction
Ok
Cancel
Routine Target Simulation Tasks
Federal Aviation Administration

Slide - 22.


Knowledge Check
What is the requirement when selecting the last fix on a Graphical Route option?
Routine Target Simulation Tasks
Federal Aviation Administration

Slide - 23.



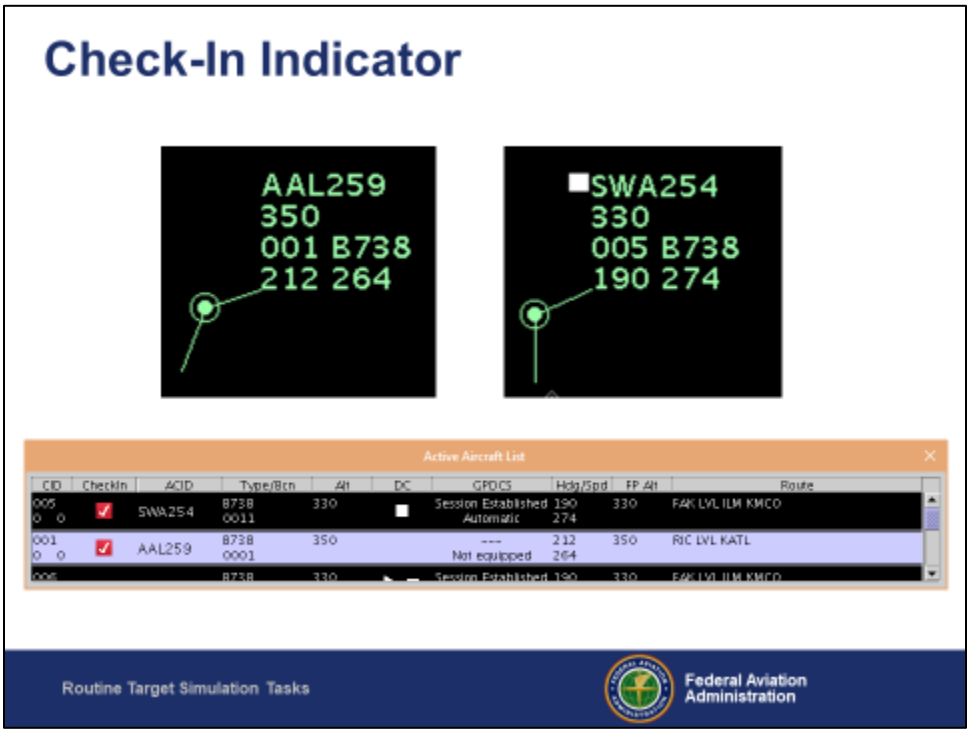
Another frequently performed set of tasks revolve around handoffs and transfer of communication. Although these are adjacent sector tasks rather than target control tasks, transfers of communication and handoffs are such an integral part of any exercise that they are included in this lesson.

The tasks covered are:

- Check-in to the training sector via voice.
- Accept a handoff, most typically from the training sector.
- Initiate a handoff.
- Retract a handoff.

Of these four tasks, voice check-ins and accepting handoffs are the most frequently performed.

Slide - 24.

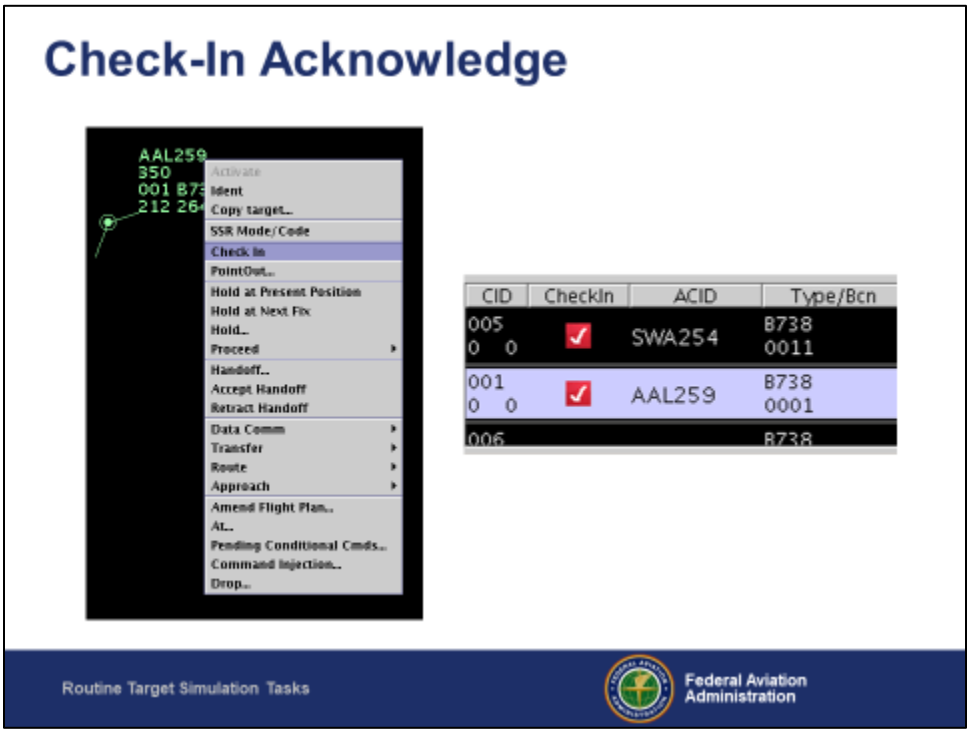


As described earlier, a Check-in indicator will alert the Ghost Pilot that a voice check-in is required. The indicator is displayed for non-CPDLC targets as well as CPDLC targets that received a CONTACT instruction.

The data block indicator is a color change. The default color is light green.

On the AAL, a checkmark appears in the CheckIn column, if that column is being displayed.

Slide - 25.



Once the voice check-in is complete, the Ghost Pilot must acknowledge it.

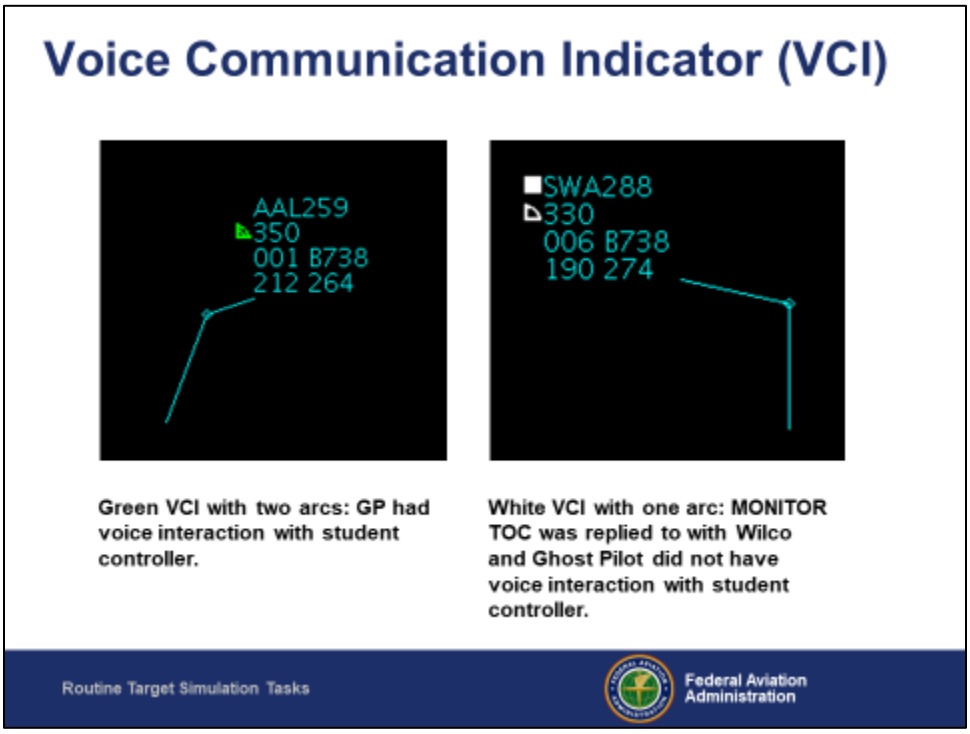
To do so from the AAL:

1. Click on the desired check mark.

To do so from the Target Control menu:

1. Right-click on the data block callsign to open the Target Control menu.
2. Select the **Check In** option.

Slide - 26.



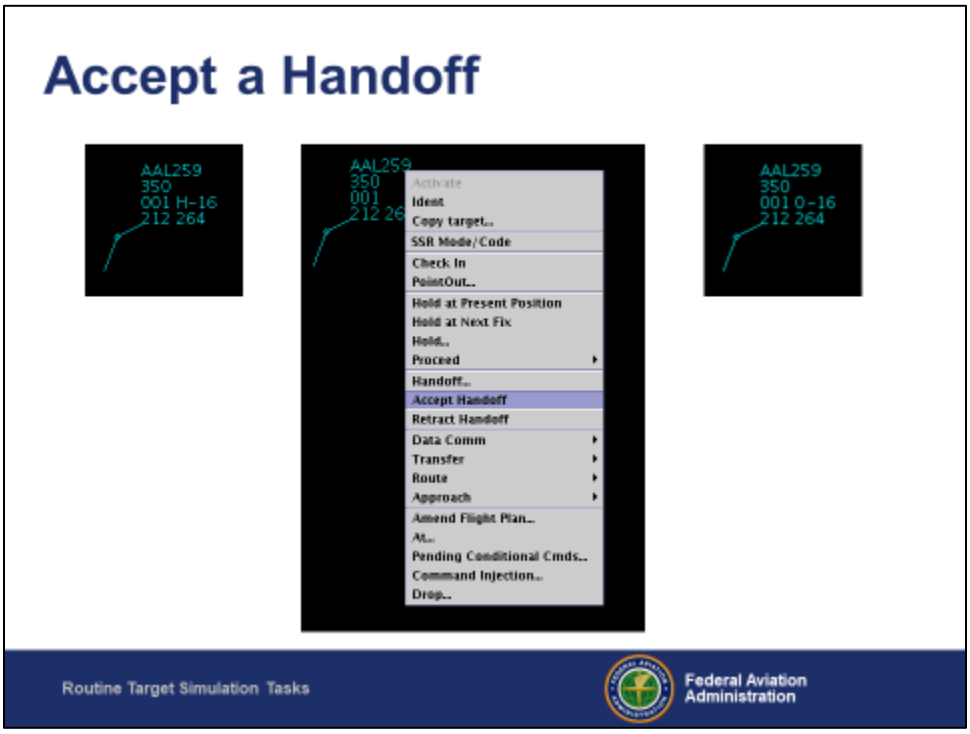
After the voice check-in is acknowledged, the Check-in Required indicators will be removed and a green Voice Communication Indicator (VCI) will be displayed.

- Click on the green VCI to remove it.
- Select the Check In option on the Target Control menu to redisplay.

Note that for CPDLC equipped targets who received a MONITOR instruction, a white VCI will be automatically displayed to indicate that the transfer of communication is complete. No further action is required.

- Select the Check In option in the Target Control menu or click on the VCI to cause the white VCI to become a green VCI.

Slide - 27.



Ghost Pilots must scan for and accept handoffs from the student sector.

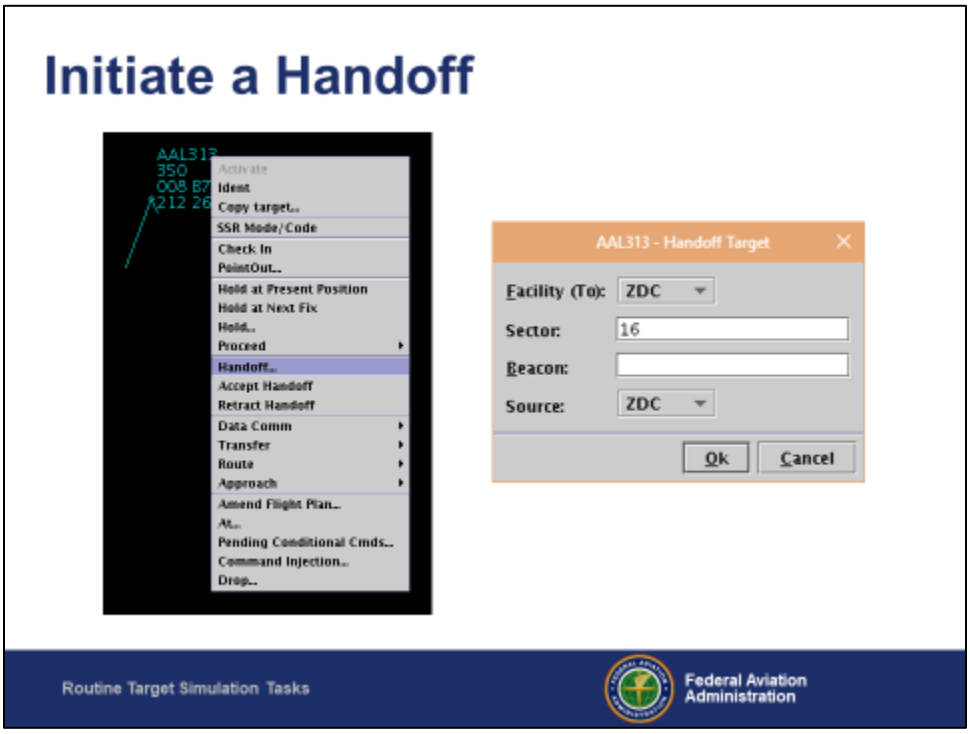
On the data block, the aircraft type will be replaced by a flashing H followed by the receiving sector number when a handoff has been initiated. Ghost Pilots should not accept handoffs to the training sector.

To accept a handoff:

1. Right-click on the data block callsign to open the Target Control menu.
2. Click on **Accept Handoff**.

On the data block, the flashing H will be replaced by a flashing O followed by the sector number after a handoff is accepted.

Slide - 28.



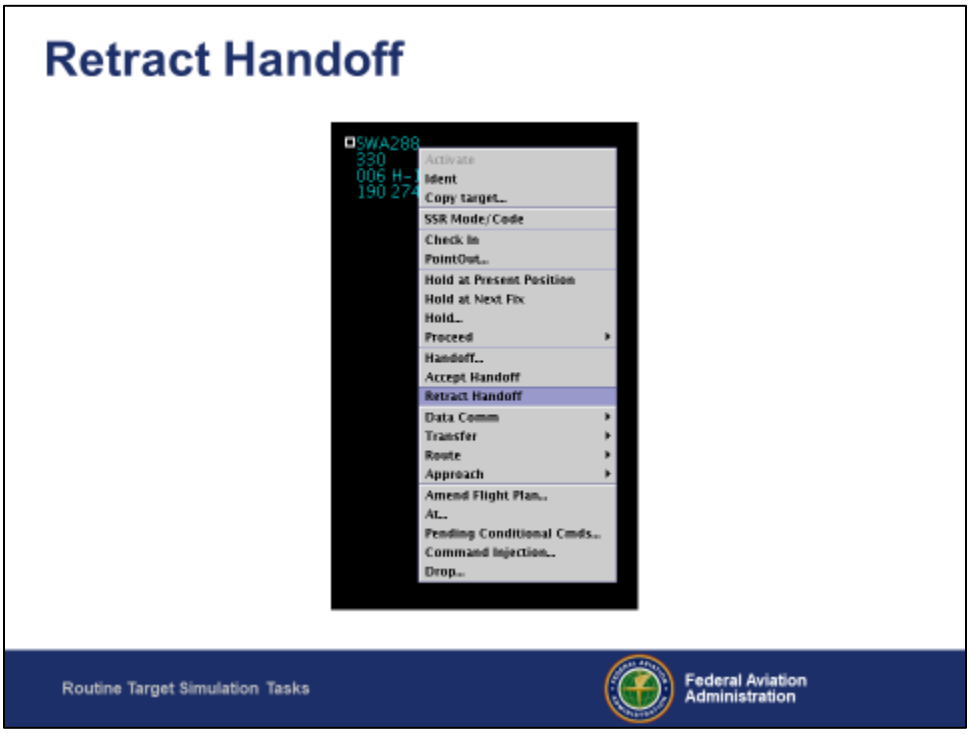
Most handoffs to the training sector will be initiated automatically.

In the rare case that a Ghost Pilot needs to initiate a handoff:

1. Right-click on the data block callsign to open the Target Control menu.
2. Click on **Handoff**. The Handoff Target dialog will open.
3. Select the destination facility (i.e., the facility receiving the handoff).
4. Enter the receiving sector number.
5. Select the source facility (i.e., the facility initiating the handoff). The destination and source facility are frequently the same.
6. Click **Ok**.

The Beacon field is not required.

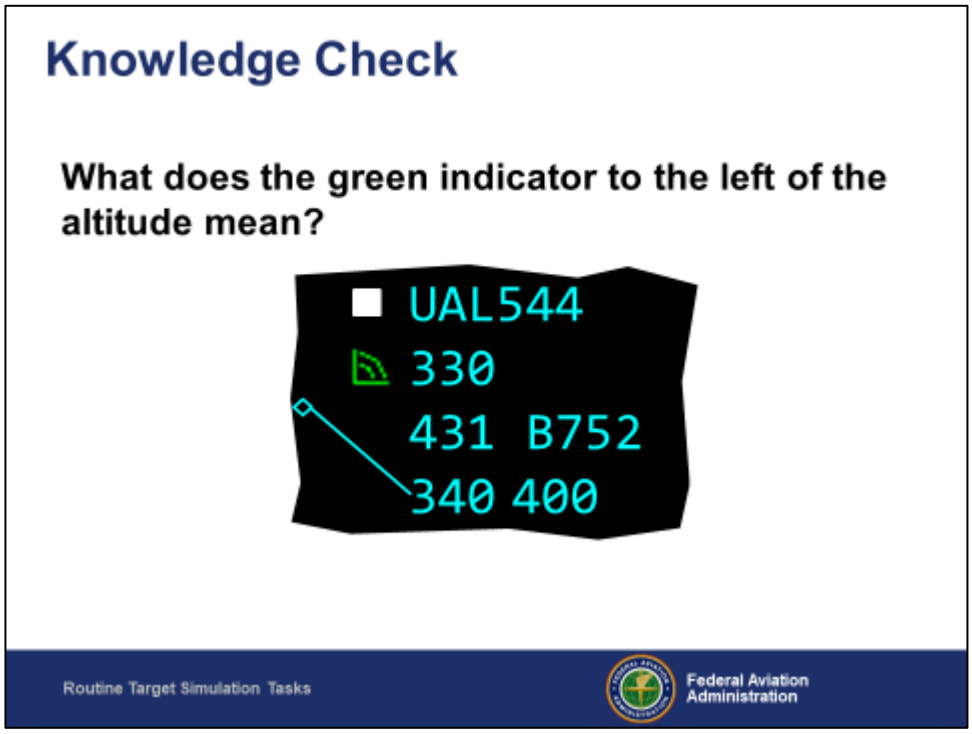
Slide - 29.



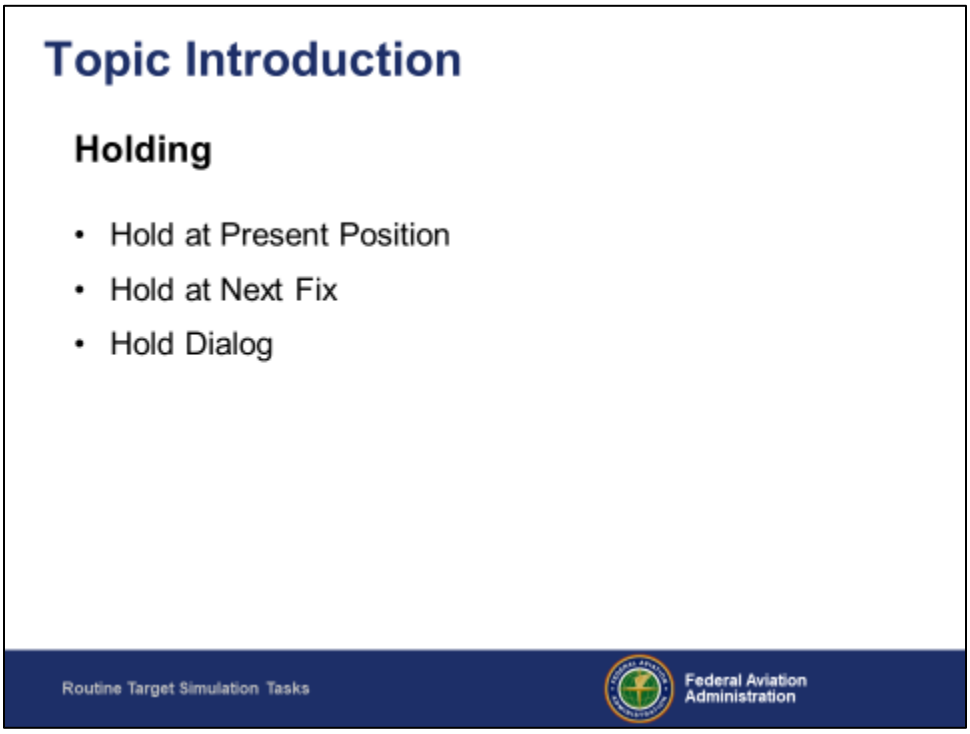
If a Ghost Pilot inadvertently initiates a handoff, the handoff should be retracted. To retract a handoff:

1. Right-click on the data block callsign to open the Target Control menu.
2. Click on **Retract Handoff**.

Slide - 30.


Knowledge Check
What does the green indicator to the left of the altitude mean?
UAL544
330
431 B752
340 400
Routine Target Simulation Tasks
Federal Aviation Administration

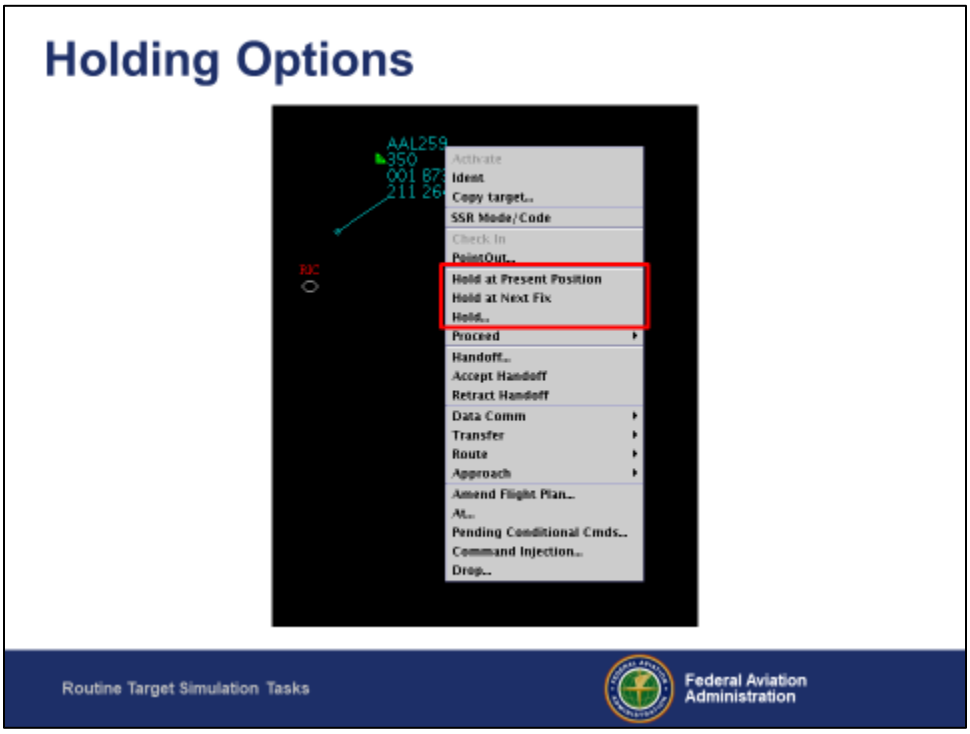
Slide - 31.



There are three Hold options in the Target Control menu:

- Hold at Present Position
- Hold at Next Fix
- Hold Dialog

Slide - 32.



To hold at the present position:

1. Right-click on the data block callsign to open the Target Control menu.
2. Click on **Hold at Present Position**.

The target will immediately start a standard hold maneuver (i.e., right turns and one-minute legs).

To hold at the next fix on the route:

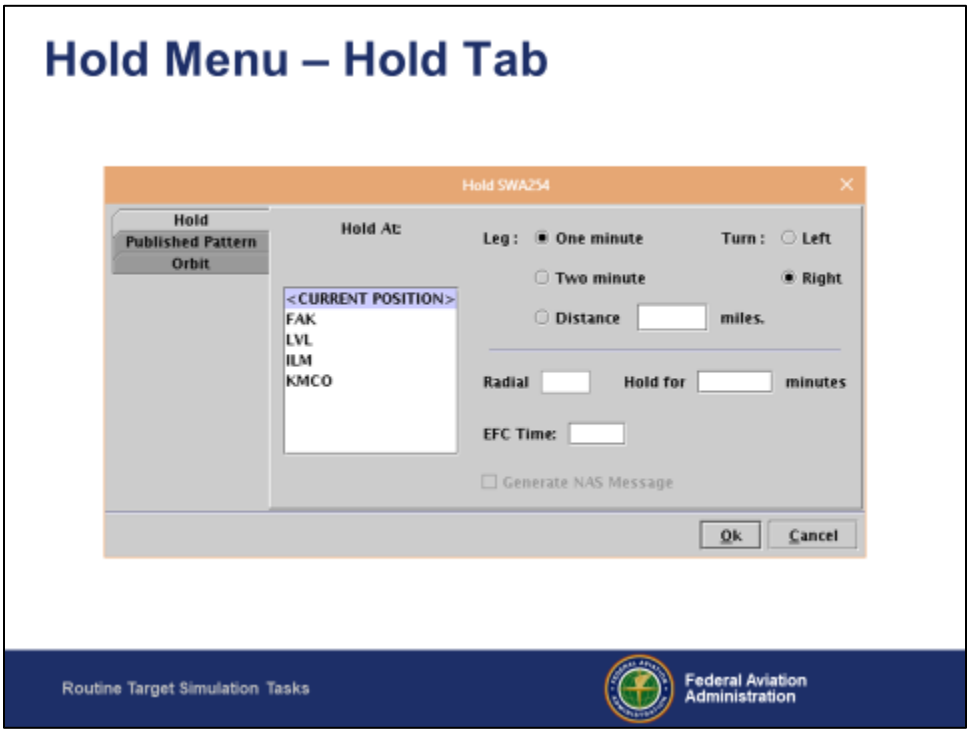
1. Right-click on the data block callsign to open the Target Control menu.
2. Click on **Hold at Next Fix**.

The target will start a standard hold maneuver at the next fix in the route (i.e., right turns and one-minute legs).

To open the Hold dialog:

1. Right-click on the data block callsign to open the Target Control menu.
2. Click on **Hold…**.

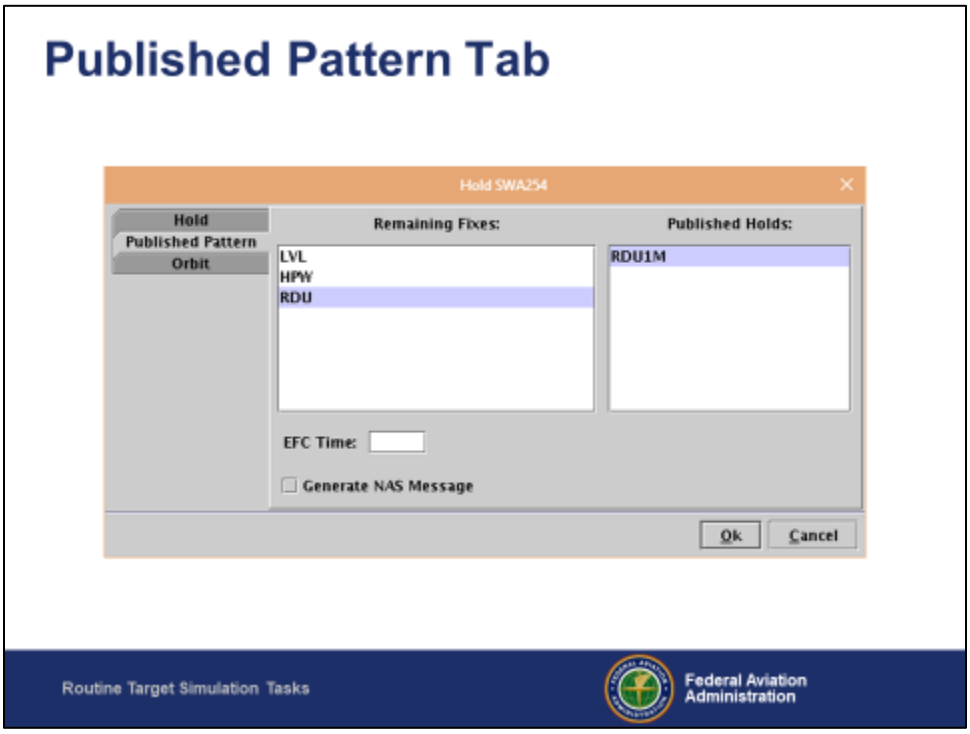
Slide - 33.



The Hold dialog has three tabs. To create a holding pattern for a target:

1. Click on the **Hold** tab.
2. Select a location from the list presented in the **Hold At:** area. (Required)
3. Select the radio button for the desired type of leg. (Required)
   - One minute
   - Two minutes
   - Distance – If distance is selected, enter the desired distance in the input box.
4. Select the radio button for the desired turn direction. (Required)
5. If desired, enter the radial that the holding pattern will be based on at the selected fix.
6. If desired, enter the duration of the hold, in minutes.
7. If desired, enter an Expect Further Clearance (EFC) time. The format is HHMM.
8. If desired, check the **Generate NAS Message** box to enter an ERAM Hold message. (Generate NAS Message will be grayed out if the target is controlled by the training sector.)
9. Click **Ok**.

Slide - 34.



To hold as published:

1. Click on the **Published Pattern** tab.
2. Select the fix from the **Remaining Fixes:** area. All adapted published patterns for that fix will be displayed.
3. Select the desired published pattern from the **Published Holds:** area.
4. If desired, enter an Expect Further Clearance (EFC) time. The format is HHMM.
5. If desired, check the **Generate NAS Message** box to enter an ERAM Hold message. (Generate NAS Message box will be grayed out if the target is controlled by the training sector.)
6. Click **Ok**.

The **Published Pattern** tab will be grayed out if no published patterns are available.

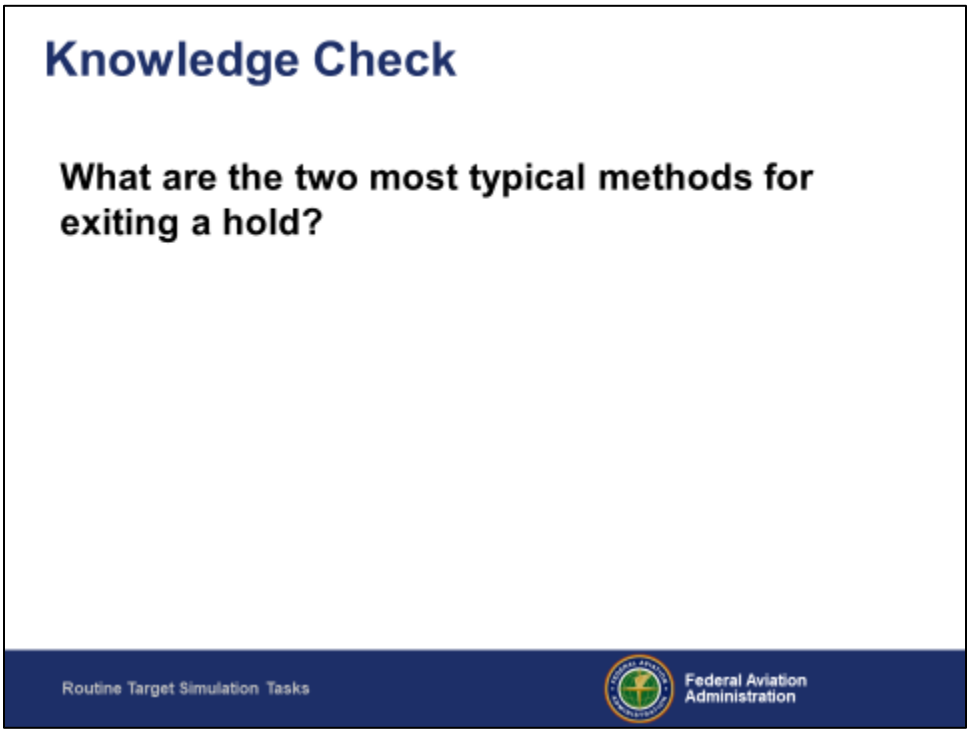
Slide - 35.

To place a target in an orbital hold at the current location:

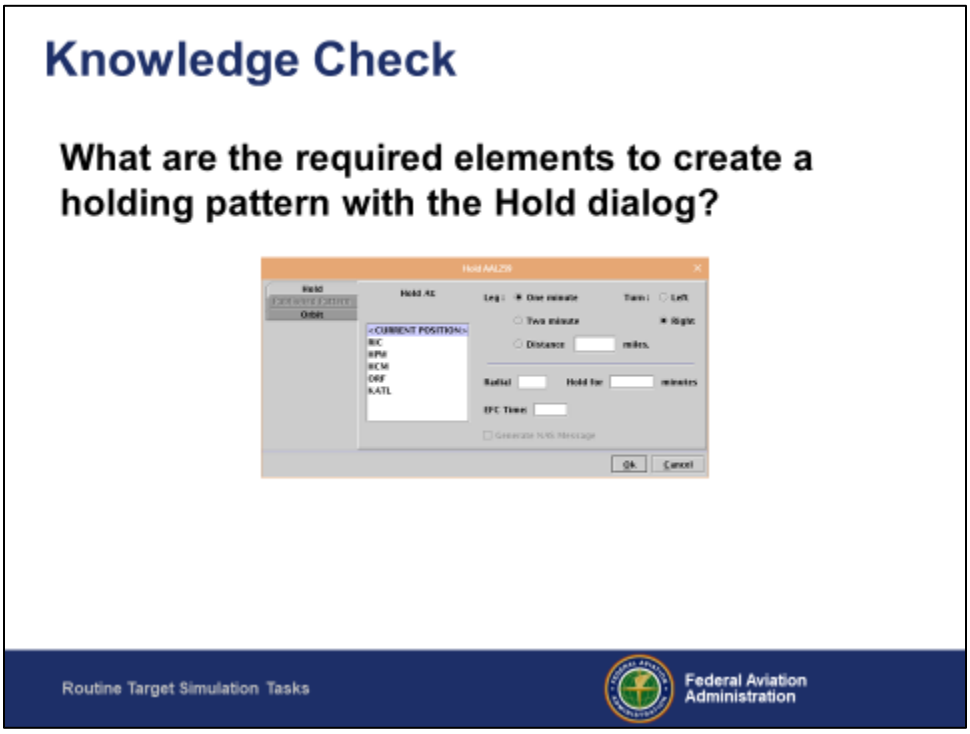
1. Click on the **Orbit** tab.
2. Select the desired orbit type. Types are defined by turn speed (based on target characteristics for the aircraft type) and direction.
   - Standard Left
   - Half-standard Left
   - Standard Right
   - Half-standard right
   - Stop – When this option is used, the target will continue on its heading at the time the command is entered.
3. If desired, check the **Generate NAS Message** box to enter an ERAM Hold message. (Generate NAS Message box will be grayed out if the target is controlled by the training sector.)
4. Press Enter or click **OK**.

Ghost Pilots typically use the **Proceed on FP** or **Direct to Fix** options in the Target Control menu to exit a hold or orbit.

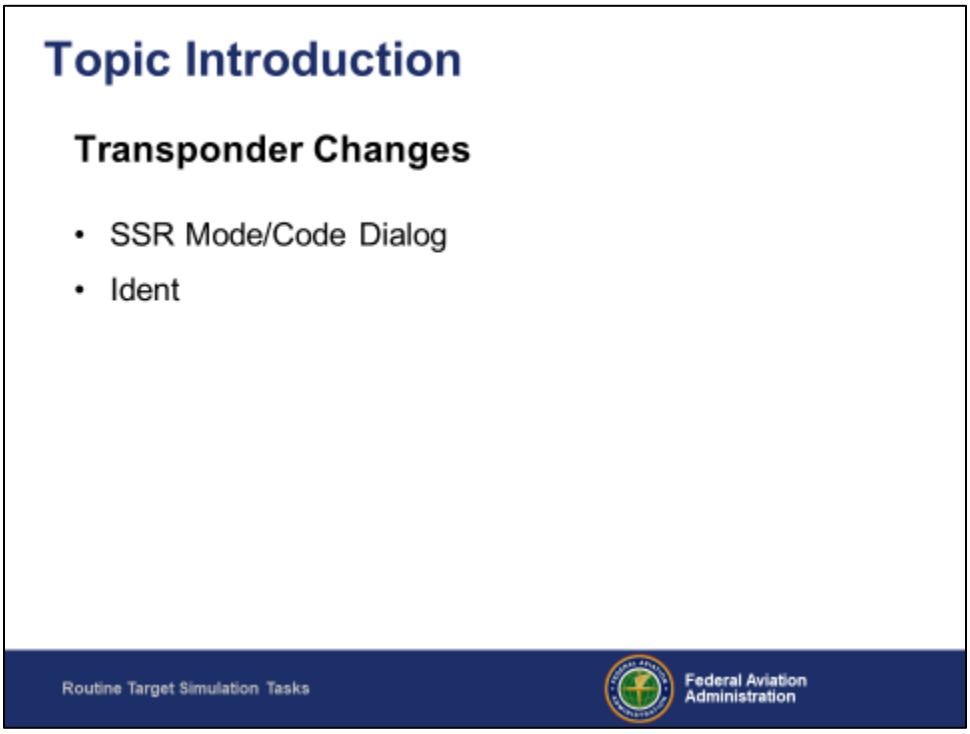
Slide - 36.


Knowledge Check
What are the two most typical methods for exiting a hold?
Routine Target Simulation Tasks
Federal Aviation Administration

Slide - 37.


Knowledge Check
What are the required elements to create a holding pattern with the Hold dialog?
Routine Target Simulation Tasks
Federal Aviation Administration

Slide - 38.



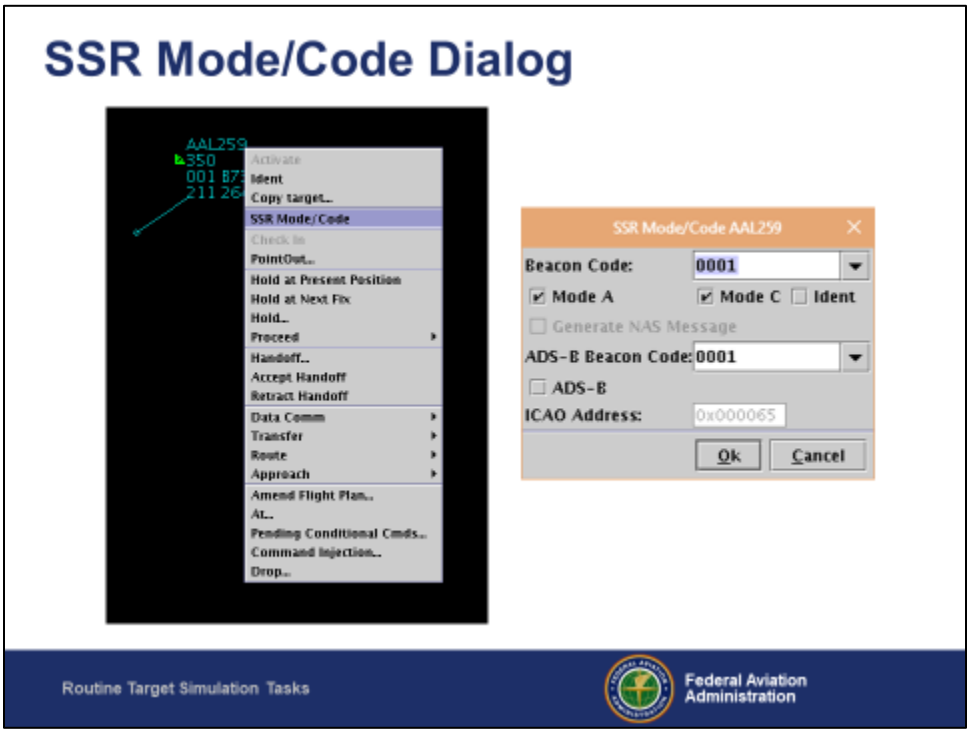
Ghost Pilots perform various transponder related tasks. For example:

- A controller may request that a target squawk a new beacon code.
- A controller may request the Ghost Pilot use the transponder to identify the target on the R position (Ident).
- A prompt may instruct the Ghost Pilot to disable a Mode C transponder.

The most common options for performing these transponder related tasks are:

- SSR Mode/Code Dialog
- Ident option on the Target Control menu

Slide - 39.



To open the SSR Mode/Code dialog:

1. Right-click on the data block callsign to open the Target Control menu.
2. Click on **SSR Mode/Code**.

A number of functions can be performed using the dialog. To squawk a new beacon code:

1. Type the new beacon code or click the arrow to select a Special Beacon Code from the pull down list.
2. Click **Ok**.

The default state of a target's Mode A or Mode C transponder is on. To disable or enable a target's Mode A or Mode C transponder:

1. Uncheck or check the boxes for Mode A and Mode C.
2. Click **Ok**.

The Mode A transponder transmits a beacon code that uniquely identifies a target. If Mode A is disabled, only primary radar data will be generated so the controller will see a primary target on the situation display.

The Mode C transponder transmits a target's current altitude. If it is disabled, no current altitude is available for display at the controller positions.

To cause the target to Ident:

1. Check the **Ident** box.
2. Click **Ok**.

If a target is ADS-B equipped, both the beacon code and the ADS-B beacon code will need to be changed. To change the ADS-B beacon code:

1. Type the new beacon code or click the arrow to select a Special Beacon Code from the pull down list.
2. Click **Ok**.

The default state of a target's ADS-B transponder (Mode S) is on. To disable or enable a target's ADS-B transponder:

1. Uncheck or check the ADS-B box.
2. Click **Ok**.

Aircraft equipped with a Mode S transponder are assigned an ICAO 24-bit address that uniquely identifies the aircraft. Ghost Pilots should have no reason to change the ICAO address. However, to do so:

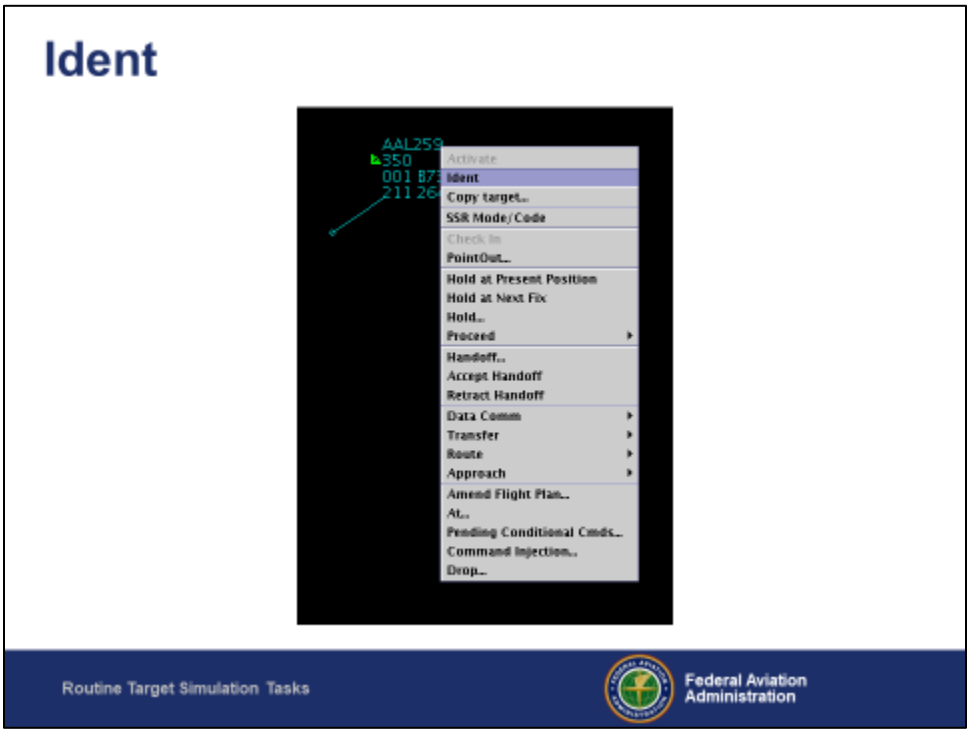
1. Check the ADS-B box.
2. Change the ICAO address (hexadecimal format).
3. Click **Ok**.

You can generate an ERAM amendment to modify the assigned beacon code. To do so:

1. Make all other desired changes.
2. Click the **Generate NAS Message** checkbox.
3. Click **Ok**.

The checkbox is grayed out if the target is controlled by the training sector.

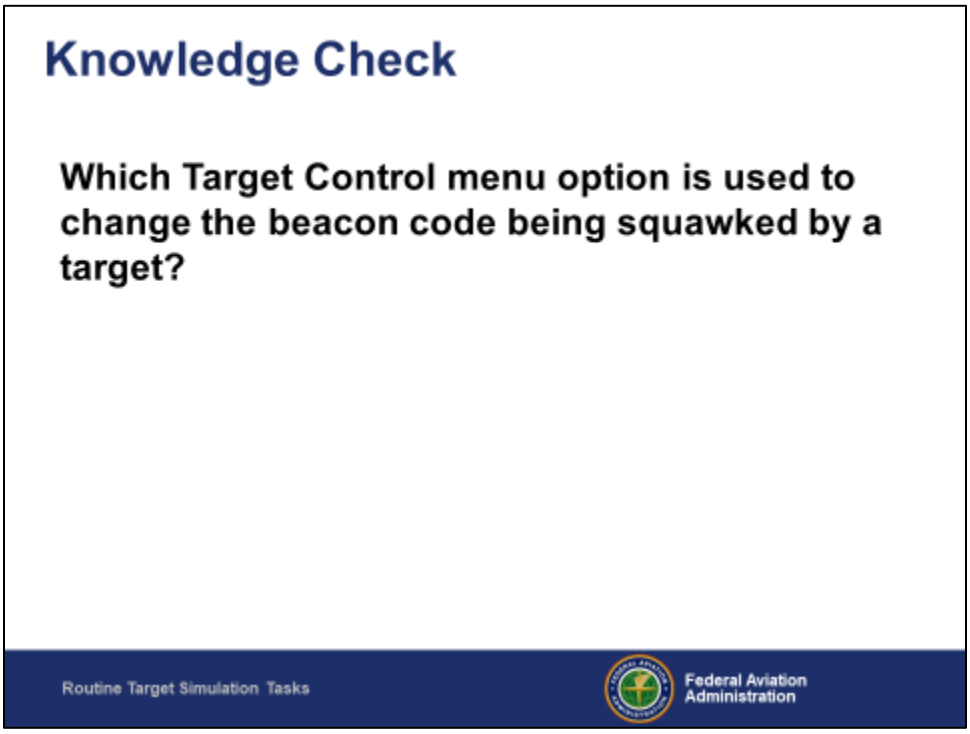
Slide - 40.



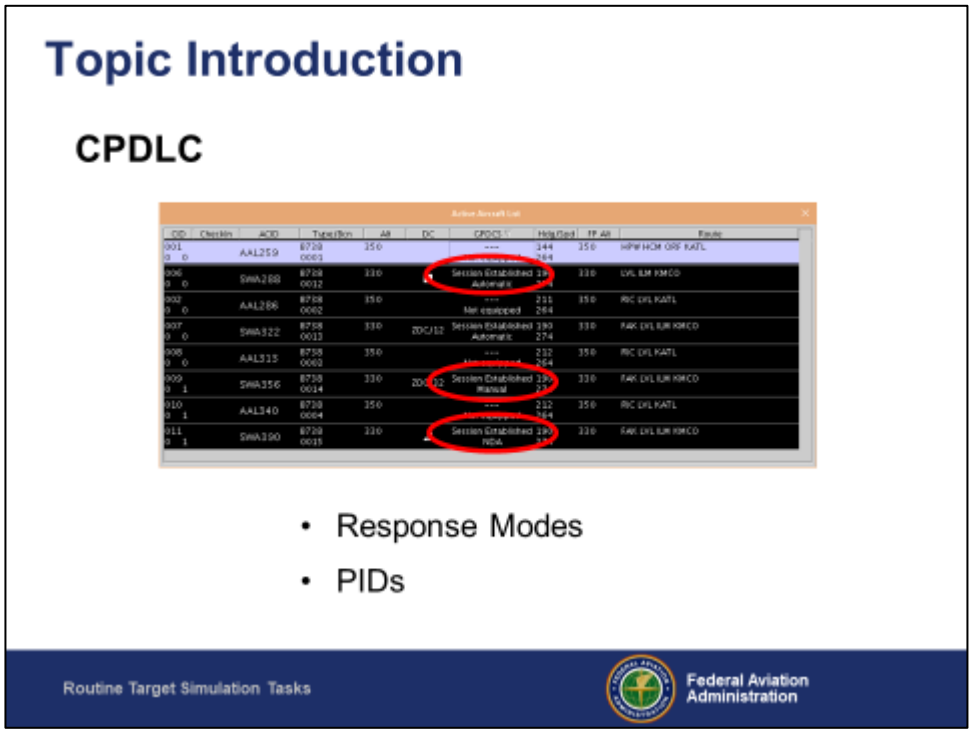
Another option to “ident” is using the Target Control menu. To do so:

1. Right-click on the data block callsign to open the Target Control menu.
2. Click on **Ident**.

Slide - 41.


Knowledge Check
Which Target Control menu option is used to change the beacon code being squawked by a target?
Routine Target Simulation Tasks
Federal Aviation Administration

Slide - 42.



As previously stated, CPDLC is a digital message communication option available to controllers. A scenario developer can select one of three CPDLC response modes for each CPDLC equipped target in a scenario.

The most frequently selected CPDLC response mode is Automatic. In Automatic response mode, ATPilot handles sending the required CPDLC response and executing the clearance instruction. This reduces Ghost Pilot workload.

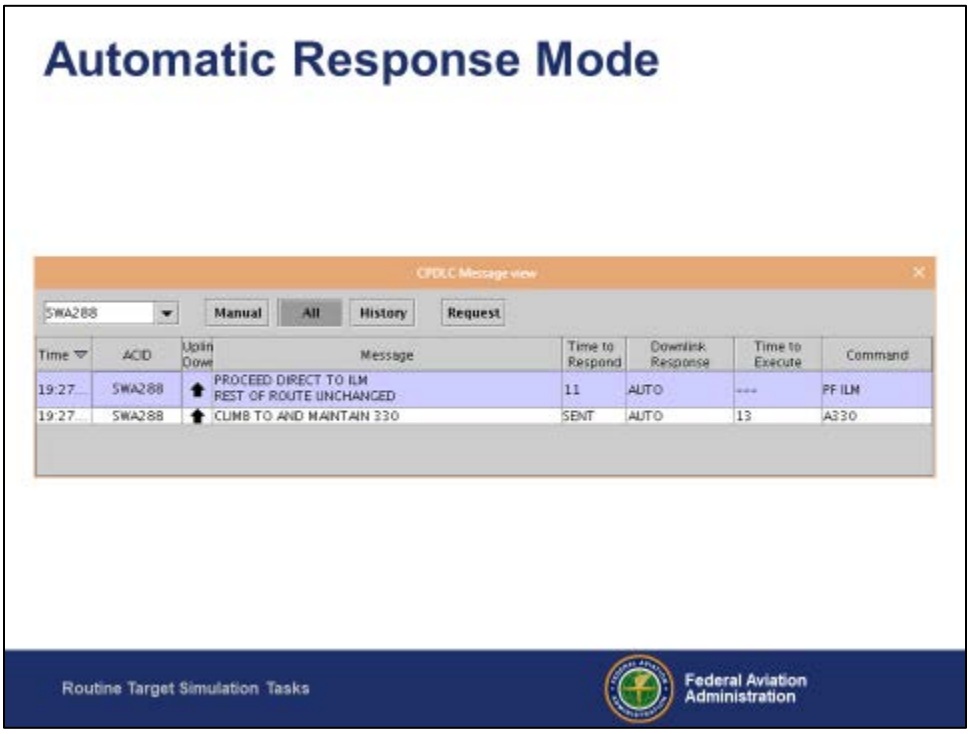
In Manual mode, the Ghost Pilot will need to send the appropriate response and execute the instruction. This function will be covered in a later lesson.

CPDLC communications are not possible for a target in NDA response mode. This mode is used for system testing or very specialized situations.

Ghost Pilots may also send a limited set of CPDLC messages to the controller. These are called Pilot Initiated Downlinks (PIDs). Normal PIDs are used to request an altitude, direct-to routing, or voice communication. PIDS can also be used to send an emergency message.

In this section, we will describe Automatic response mode and PIDs.

Slide - 43.



The sequence of steps when a CPDLC equipped target set to Automatic response mode receives an uplink is as follows:

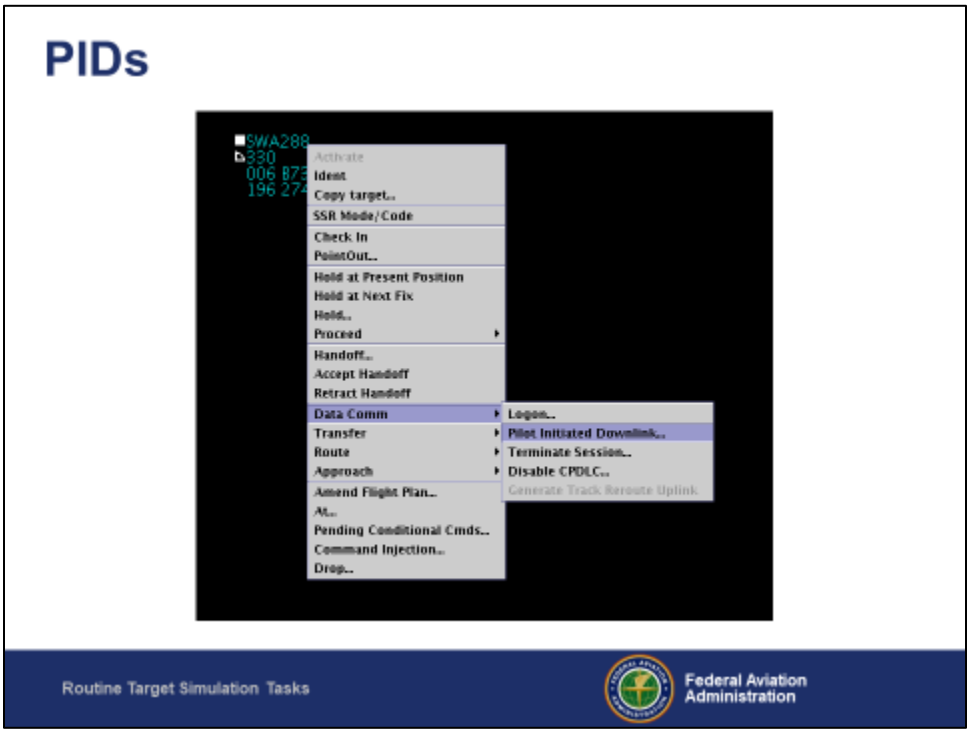
- ATPilot will derive the appropriate ATCoach command to comply with the CPDLC clearance.
- ATPilot will evaluate whether the ATCoach command can be executed. For example, is the assigned altitude within the performance characteristics of the target?
- If the command can be executed, WILCO (or ROGER in some cases) will be selected as the response.
    - ATPilot will start a countdown timer to simulate the time it takes to read and respond to the uplink.
        - The time remaining will be displayed in the Time to Respond column.
        - When the timer reaches zero, the response will be automatically sent.
        - The delay timer value is randomly generated, but based on ranges set up by the scenario developer.

  - After the response is sent, ATPilot will start the Time to Execute timer. When that timer reaches zero, the ATCoach command will be executed.

- If ATPilot determines the command cannot be executed successfully, UNABLE will be selected as the response,
  - The Time to Respond timer will start.
  - When the timer reaches zero, the UNABLE response will be automatically sent.
  - The ATCoach command will not be injected.
  - An Attention Required Indicator will be displayed to the Ghost Pilot. The Ghost Pilot must acknowledge the indicator to clear it. Steps to accomplish that are covered in a later lesson.
  - The Ghost Pilot should expect the controller to contact them via voice to determine the reason for the UNABLE response.

Note that with some route clearance uplinks, the ghost pilot may need to take action even if the aircraft is in Automatic response mode. This will also be covered in a later lesson.

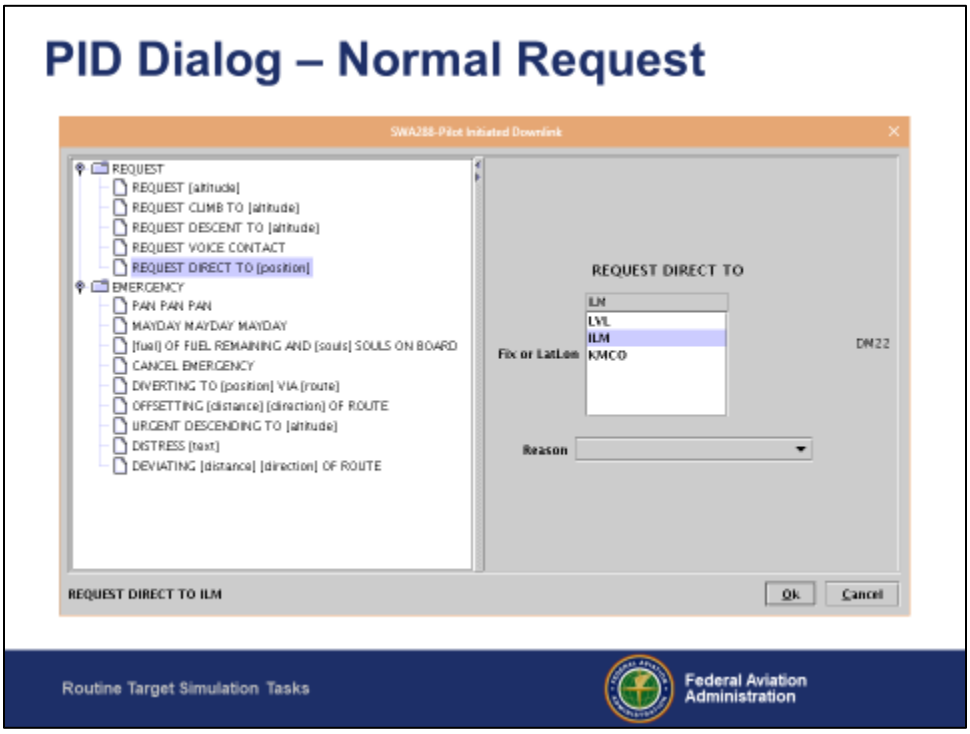
Slide - 44.



PIDs are created using the Pilot Initiated Downlink dialog. To open the dialog:

1. Right-click on the data block callsign to open the Target Control menu.
2. Select the **Data Comm** option to open a sub-menu.
3. Select the **Pilot Initiated Downlink…** option in the sub-menu.

Slide - 45.



The left side of the Pilot Initiated Downlink dialog contains the list of all available PID message types. The right side of the dialog contains one or more entry fields specific to the selected PID type. To send a PID:

1. Select the desired PID type.
2. Specify the required field values.
3. Specify any optional field values.
4. Click **Ok**.

The fields for Altitude, Climb to Altitude and Descend to Altitude requests are as follows:

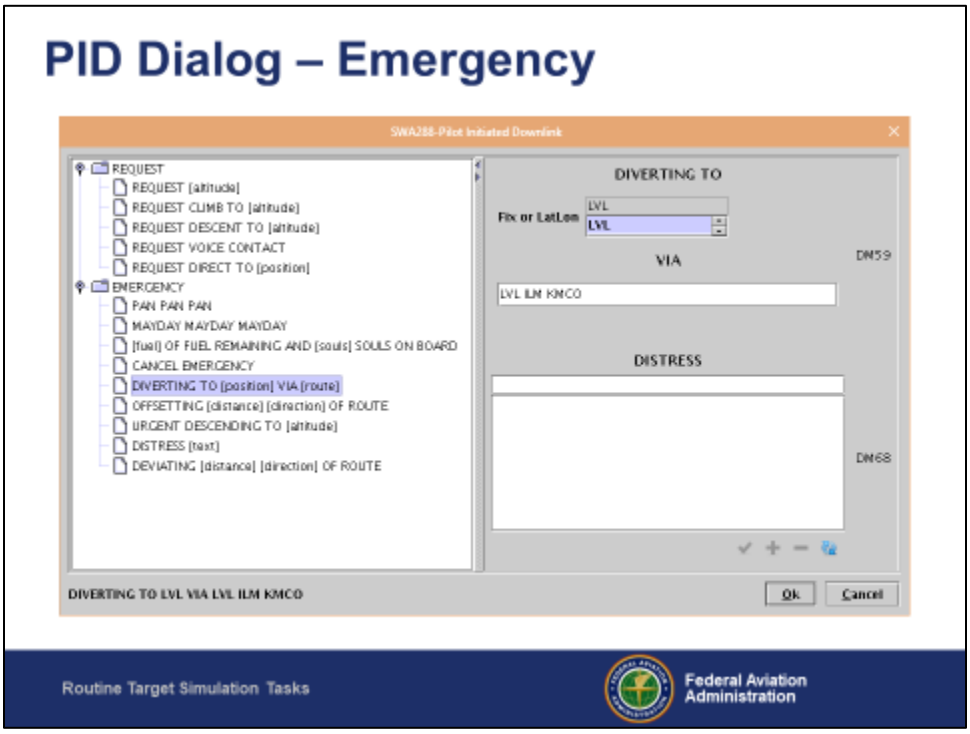
- Desired altitude – Required
- Reason for the request – Optional

The fields for Direct To requests are:

- Desired destination fix – Required
- Reason for the request – Optional

There are no fields needed for a Voice Contact request. The expectation is that a controller will respond by uplinking the sector frequency.

Slide - 46.



No mandatory fields are required for PAN PAN PAN, MAYDAY MAYDAY MAYDAY, CANCEL EMERGENCY, and DISTRESS messages.

The required fields for (fuel amount) OF FUEL REMAINING AND (number of souls) SOULS ON BOARD are:

- Amount of fuel remaining, in hours and minutes (hhmm).
- Number of individuals on board (1 to 1024).

The required fields for DIVERTING TO (position) VIA (route) are:

- Fix or lat/long of destination
    - Can only be selected from the pull-down menu.
    - If a new destination is required, you must first edit the target route, so the new destination appears in the pull-down menu.
- New route

The required fields for OFFSETTING (distance) (direction) OF ROUTE are:

- Distance (1-3 digits, 1 through 128, in nautical miles)
- Direction

The required field for URGENT DESCENDING TO (altitude) is:

- Altitude (3 digits, hundreds of feet)

The required fields for DEVIATING [distance] [direction] OF ROUTE are:

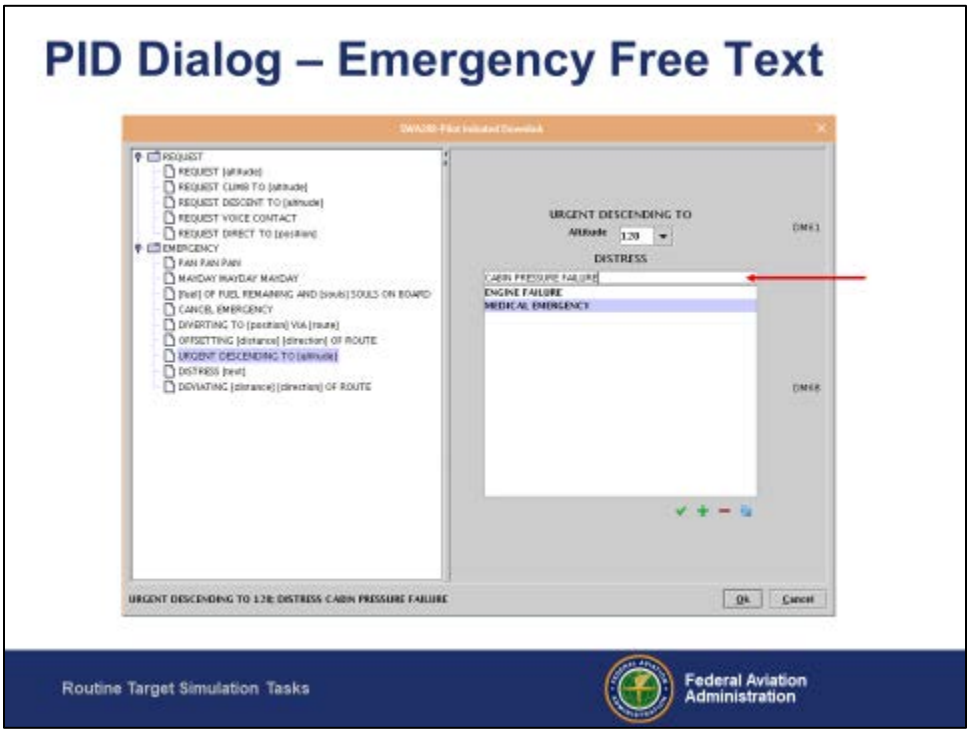
- Distance (1-3 digits, 1 through 128, in nautical miles)
- Direction

The CANCEL EMEREGENCY PID option will send a cancel emergency downlink to the controller and will remove the emergency PID indicator for the Ghost Pilot.

- An additional method to remove the emergency PID indicator from the Ghost Pilot display is to Acknowledge/Send to History the original emergency PID.

Sending an emergency PID with Diverting To, Offsetting, Urgent Descending To, or Deviating does not cause the target to perform the maneuver. The Ghost Pilot will need to do it manually.

Slide - 47.



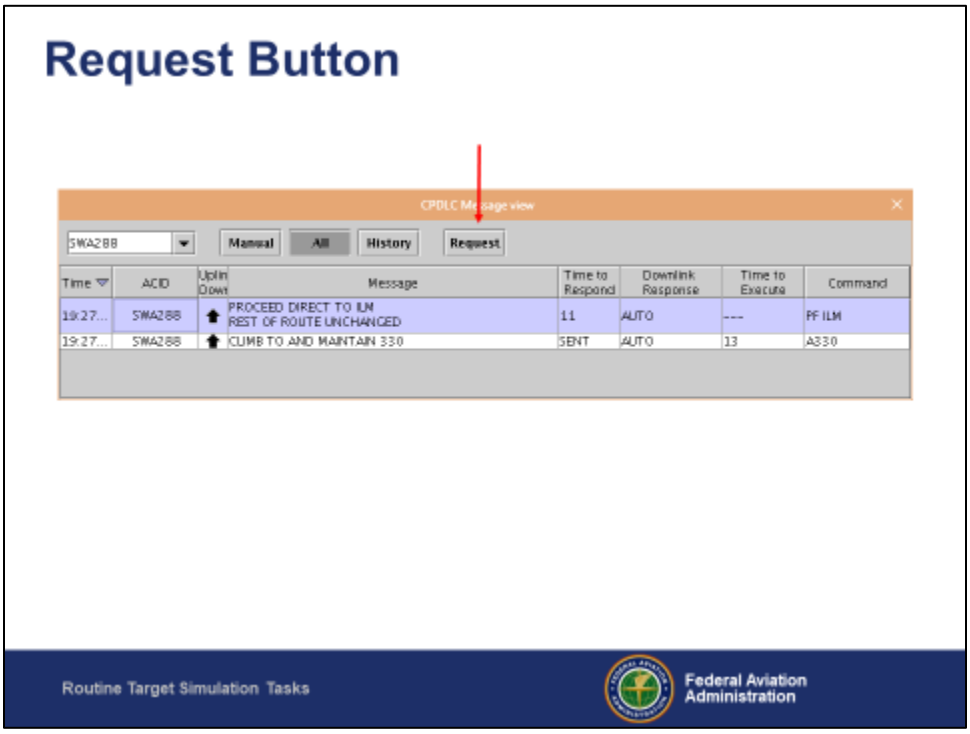
All Emergency PID types allow the entry of free text. To do so:

1. Type the desired text, or select from the message list, to populate the input area.
2. Click **Ok**.

Below the input box is a panel with a list of free text messages available for selection. The Ghost Pilot manages the list using the four icons below the panel.

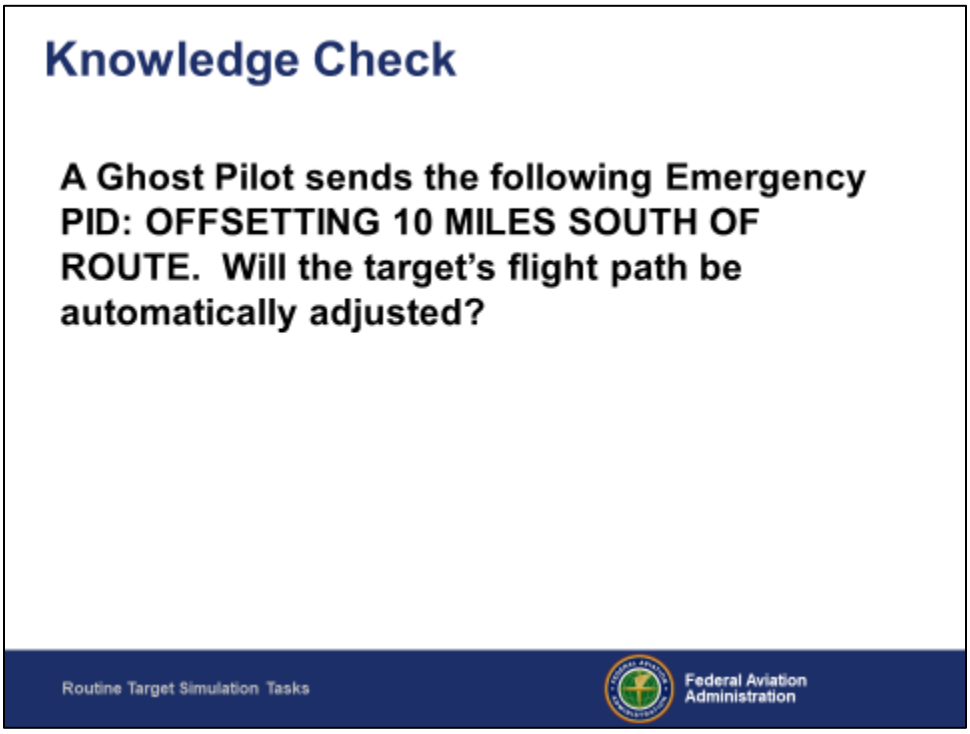
- Click the green plus sign to add the current contents of the input box to the list.
    - The contents of the input box are visible to all Ghost Pilots in all scenarios.
- Click on the red minus sign to delete a selected message.
- If a message has been selected from the list, then modified in the input box, click on the green checkmark to update the selected message.
- Click the two blue arrows to clear the input box.

Slide - 48.

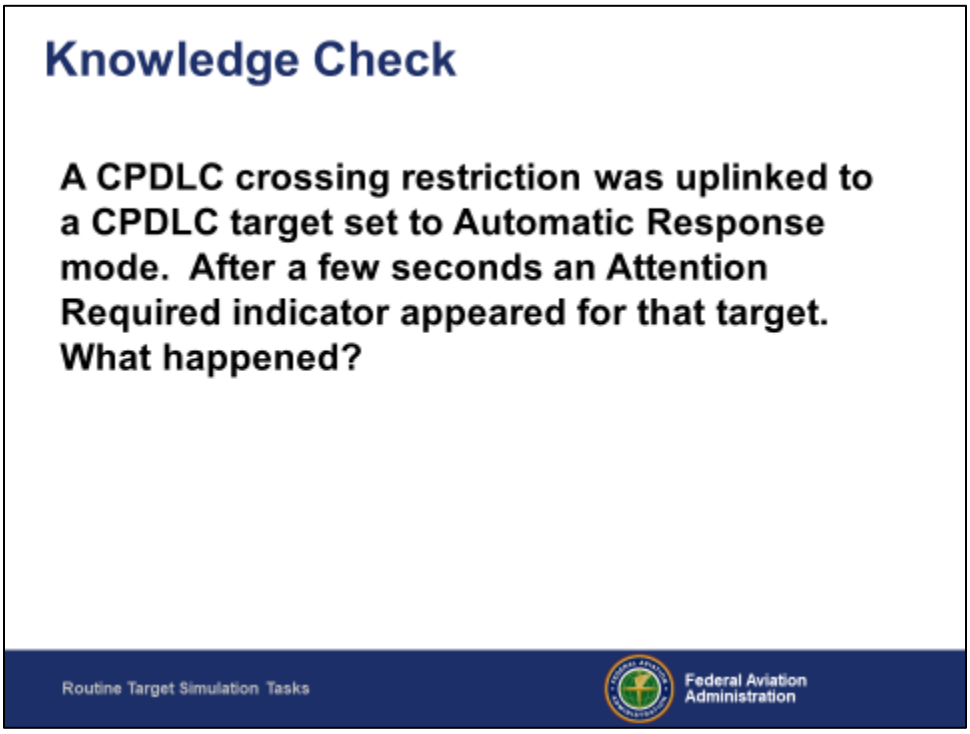


The Pilot Initiated Downlink dialog can also be accessed by clicking on the Request button on the CPDLC Message view. The Request button is only available if an entry in the view is selected.

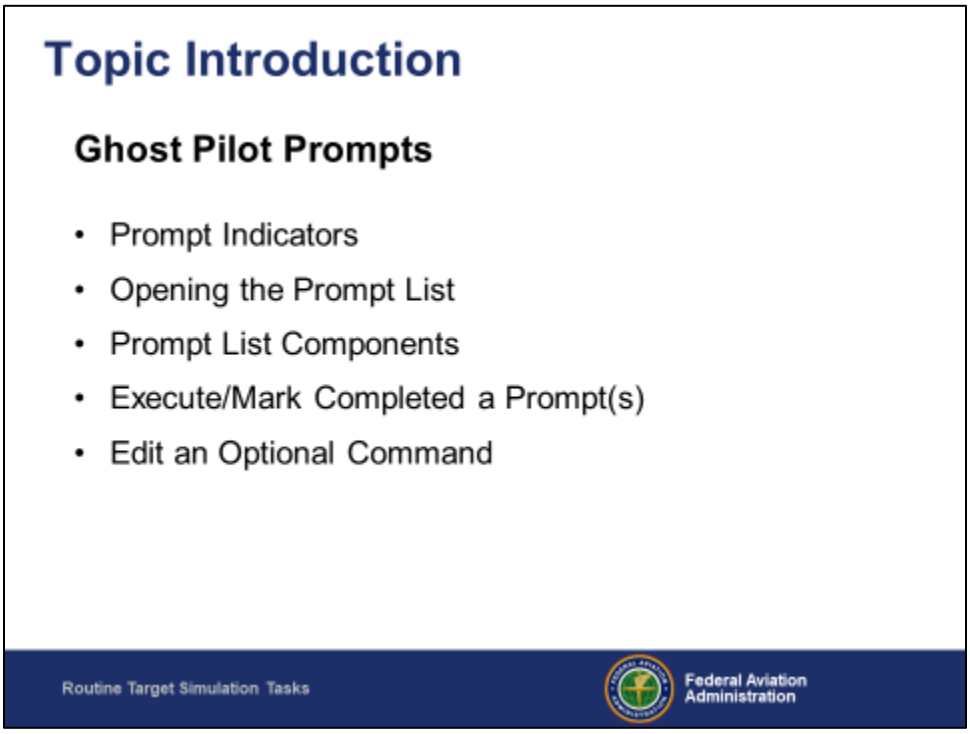
Slide - 49.


Knowledge Check
A Ghost Pilot sends the following Emergency PID: OFFSETTING 10 MILES SOUTH OF ROUTE. Will the target's flight path be automatically adjusted?
Routine Target Simulation Tasks
Federal Aviation Administration

Slide - 50.


Knowledge Check
A CPDLC crossing restriction was uplinked to a CPDLC target set to Automatic Response mode. After a few seconds an Attention Required indicator appeared for that target. What happened?
Routine Target Simulation Tasks
Federal Aviation Administration

Slide - 51.



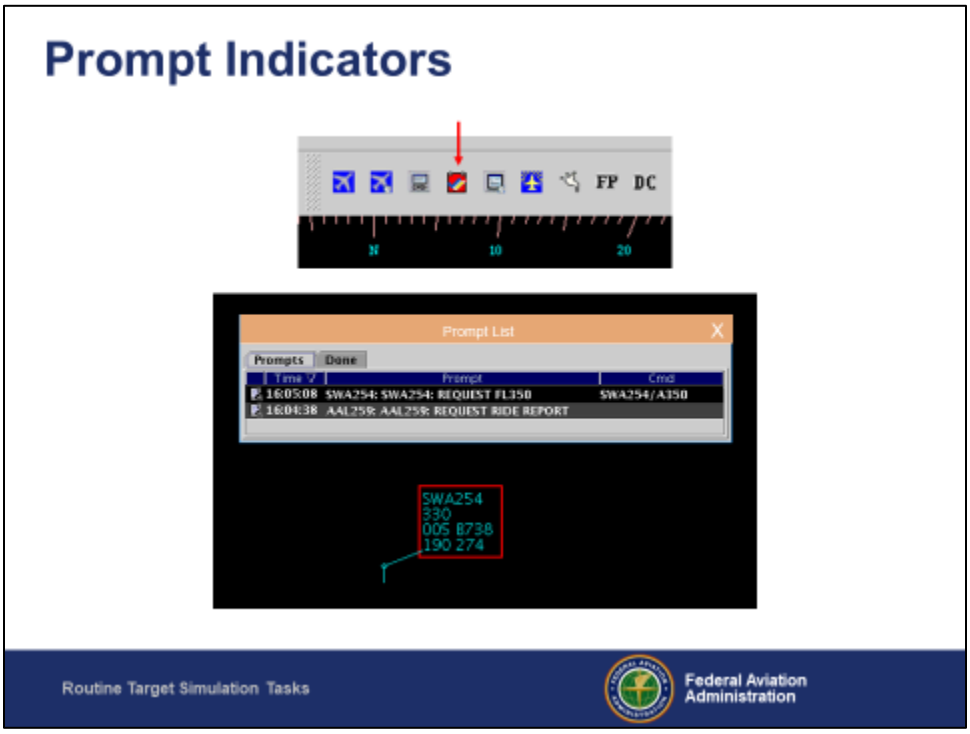
Ghost Pilot prompts are instructions from the scenario developer to the Ghost Pilot to take an action at a specified time. Examples include requesting a new altitude, declaring an emergency, or requesting a departure clearance from an uncontrolled airport (i.e., independent release). Ghost Pilots should read the prompt and perform the instructed action.

Prompts can include an ATCoach command that will be executed when the prompt is acknowledged.

In this section, we will discuss the following:

- Indicators that a prompt has been received.
- How to open the Prompt List
- The components of the Prompt List
- How to execute and mark completed a prompt or all prompts.
- How to edit an optional ATCoach command associated with a prompt.

Slide - 52.



There are two visual indicators that a prompt has been added to the Prompt List. They are:

1. The Prompt icon on the Views toolbar will flash a red alert.
2. The Attention Required indicator (ARI) will appear for the target specified in the prompt.

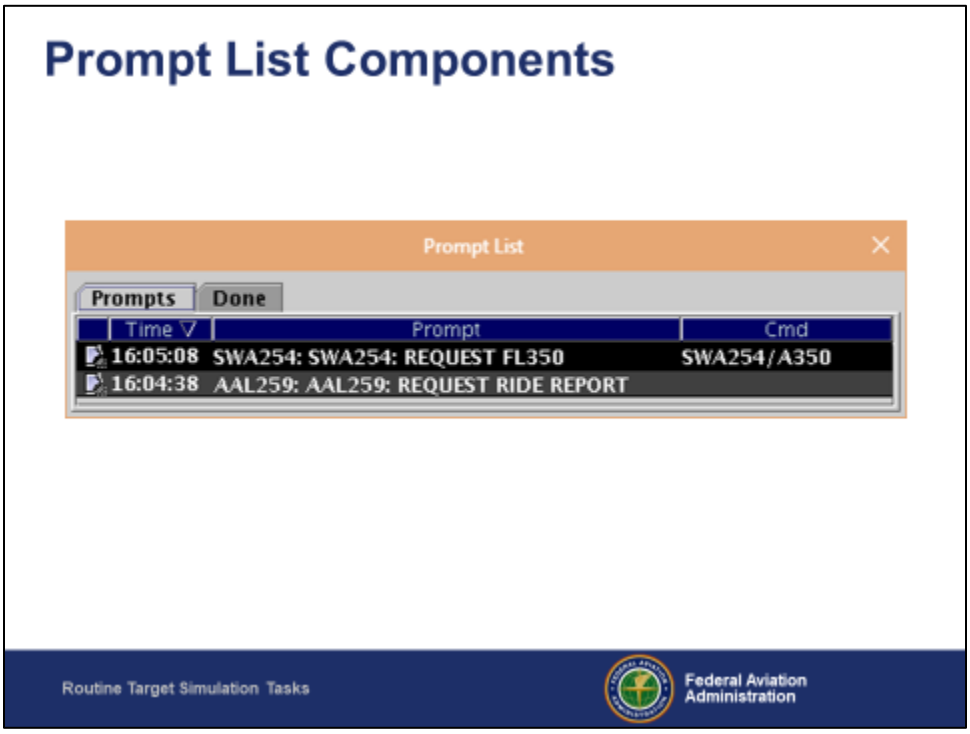
There is also an optional audible tone. We will describe how to select that option later in this lesson.

The easiest way to view the prompt of a target with an ARI is to click on the target's callsign.

- The Prompt List will open and the new prompt for that target will be highlighted.
- If the Prompt List is already open the new prompt will be highlighted.

Clicking on the Prompt icon on the views toolbar will open, or close, the Prompt List but will not highlight the new prompt.

Slide - 53.



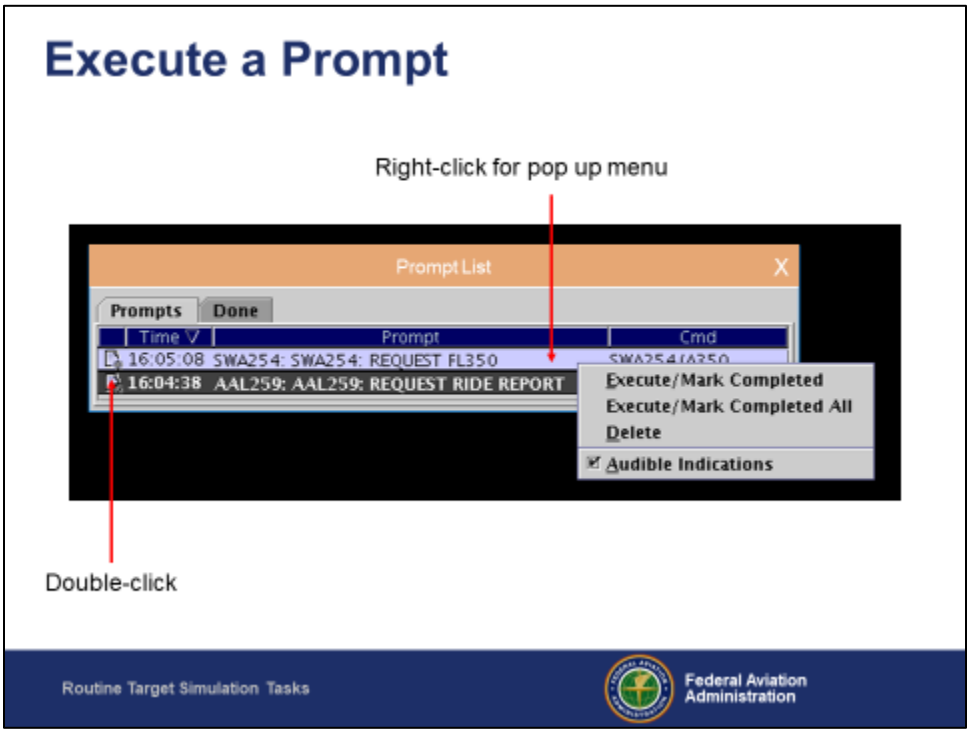
The Prompt List has two tabs:

- Prompts – Includes all unexecuted prompts.
- Done – Includes all executed prompts.

Both tabs always contain the same four columns:

- A column containing a prompt icon. The prompt icon is used to acknowledge the required action was completed and to execute any associated ATCoach command.
- The Time column shows the time the prompt will be available for execution.
- The Prompt column contains the instructions from the scenario developer.
- The Cmd column contains the optional ATCoach command.

Slide - 54.

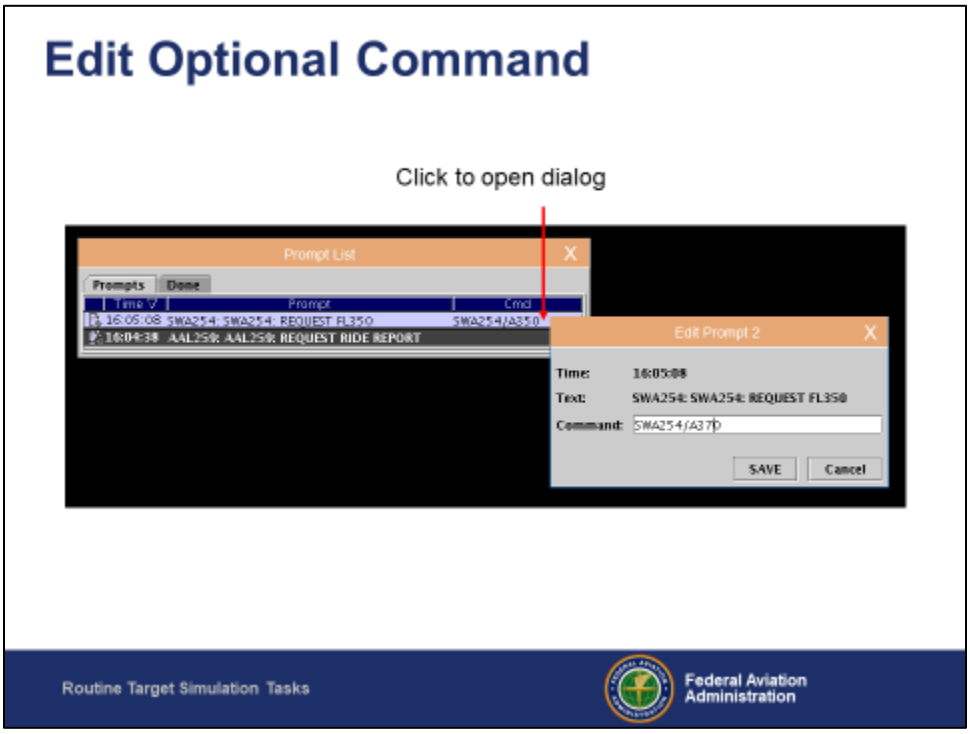


Double-click on the prompt icon to execute and mark the prompt complete. The prompt will then be moved to the Done list.

Another option is to select an entry (clicking anywhere other than the Cmd field), then right-click. This will cause a pop-up menu to appear. The pop up menu has four options:

- **Execute/Mark Completed** will execute the command, if there is one, for the selected entry. The prompt will then be moved to the Done tab.
- **Execute/Mark Completed All** will execute all commands, if there are any, currently in the view. All entries will be moved to the Done tab. This is not a typical choice.
- **Delete** will delete the entry from the list. If there is an optional ATCoach command, it will not be executed. This is not a typical choice.
- The **Audible Indications** checkbox is used to enable or disable an audible alert when a new prompt is added to the list.

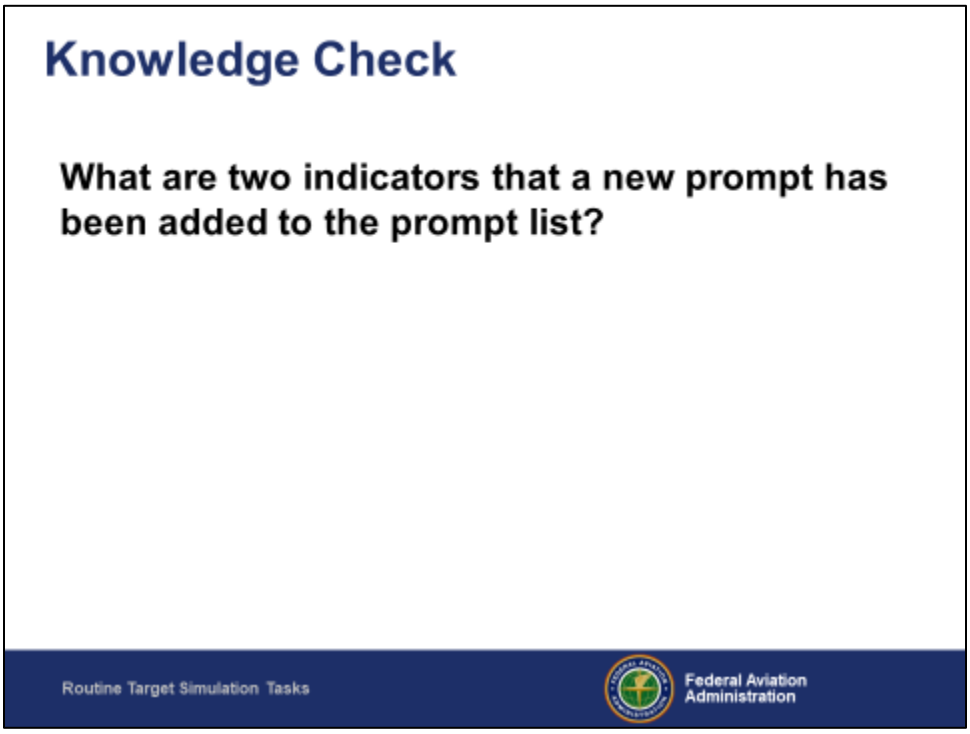
Slide - 55.



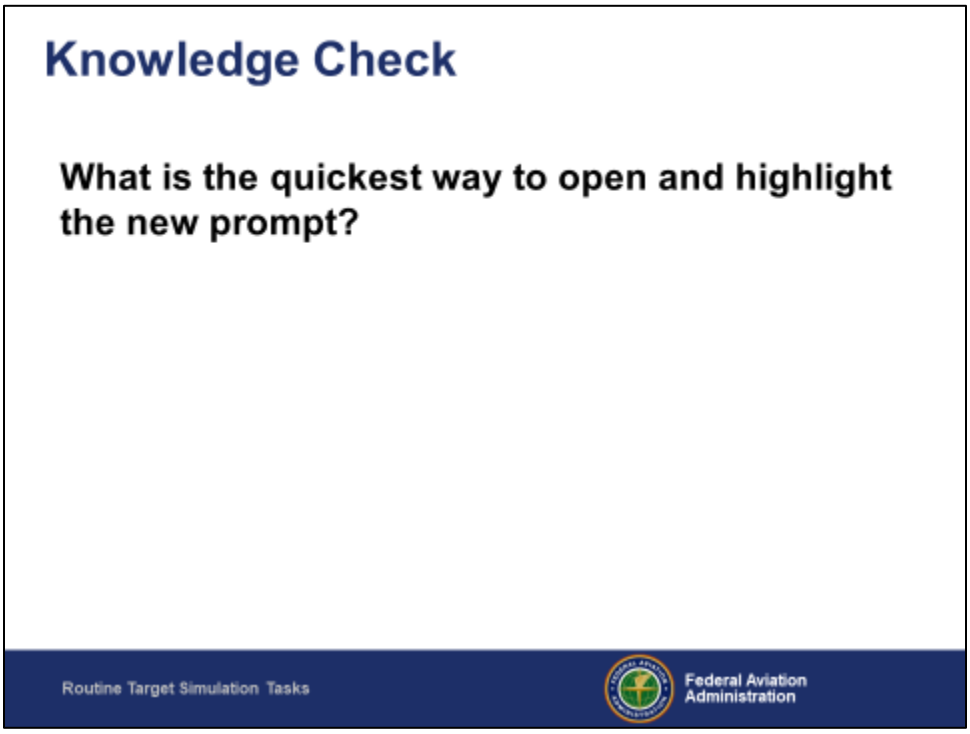
A Ghost Pilot can edit the command associated with a prompt. To do so:

1. Click anywhere on the desired command field. The Edit Prompt dialog will appear.
2. Edit the command (ATCoach format).
3. Click the **Save** button on the Edit Prompt dialog. The Edit Prompt dialog will close and the edited command will be displayed in the command field.
4. Execute the prompt when desired.

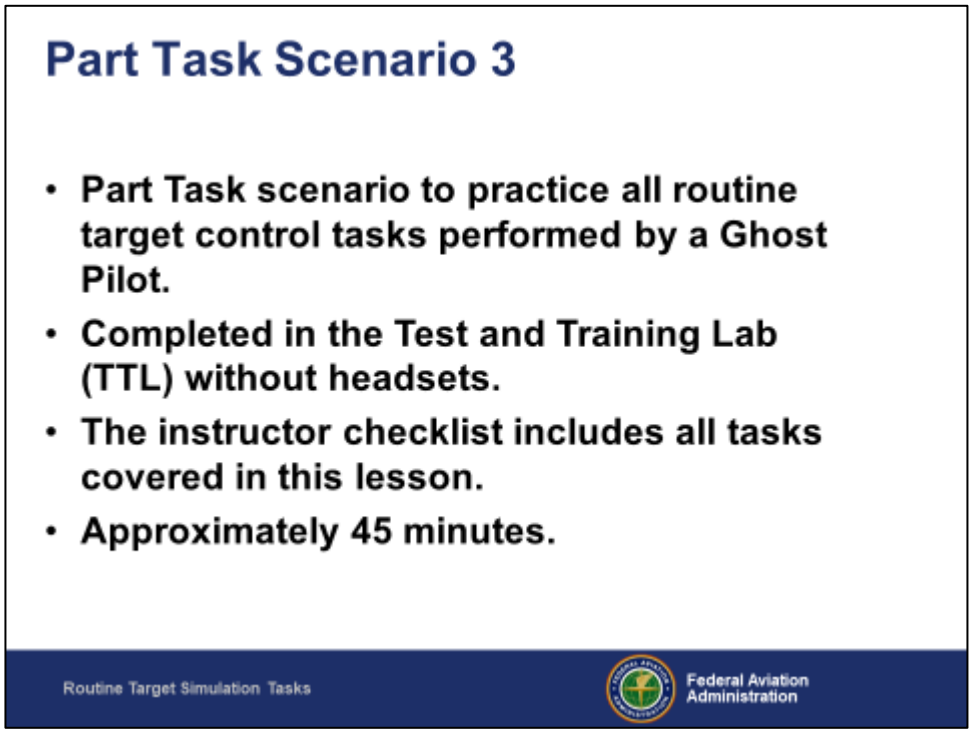
Slide - 56.


Knowledge Check
What are two indicators that a new prompt has been added to the prompt list?
Routine Target Simulation Tasks
Federal Aviation Administration

Slide - 57.


Knowledge Check
What is the quickest way to open and highlight the new prompt?
Routine Target Simulation Tasks
Federal Aviation Administration

Slide - 58.

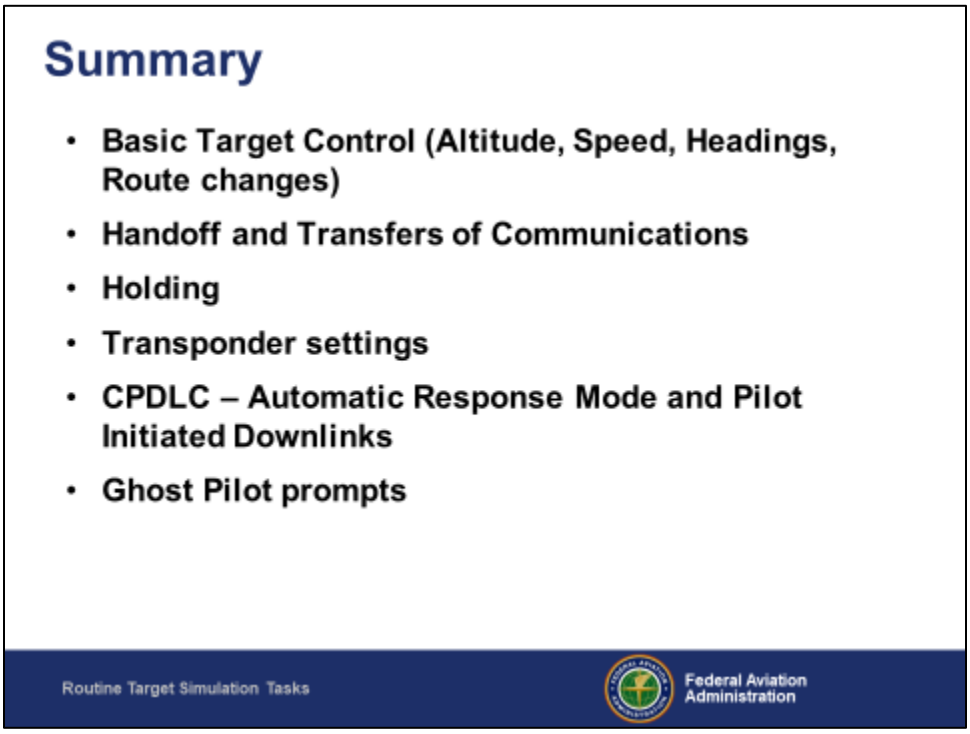


After completion of this exercise, this lesson will resume in the classroom. Your instructor will provide the details.

Part Task Scenario 3:

Purpose	To practice all routine target control tasks performed by a Ghost Pilot.
Materials	The instructor will use the Part Task Scenario 3 checklist. No student handouts are required.
Directions	A locally developed scenario should be loaded and ready to start in the TTL. Requirements for the scenario have been provided to the facility. No controllers are needed. No headsets are needed. Instructors should use the checklist to step through all the functionality to be practiced. Instructors should assist students as necessary. Approximate duration of the exercise is 45 minutes.

Slide - 59.


Summary
• Basic Target Control (Altitude, Speed, Headings, Route changes)
• Handoff and Transfers of Communications
• Holding
• Transponder settings
• CPDLC – Automatic Response Mode and Pilot Initiated Downlinks
• Ghost Pilot prompts
Routine Target Simulation Tasks
Federal Aviation Administration

Slide - 60.


THE END
Introduction to the Ghost Pilot Situation Display
Federal Aviation Administration
29