Radio Instrument Orientation Trainer for iPad (RIOT)

Version 1.0

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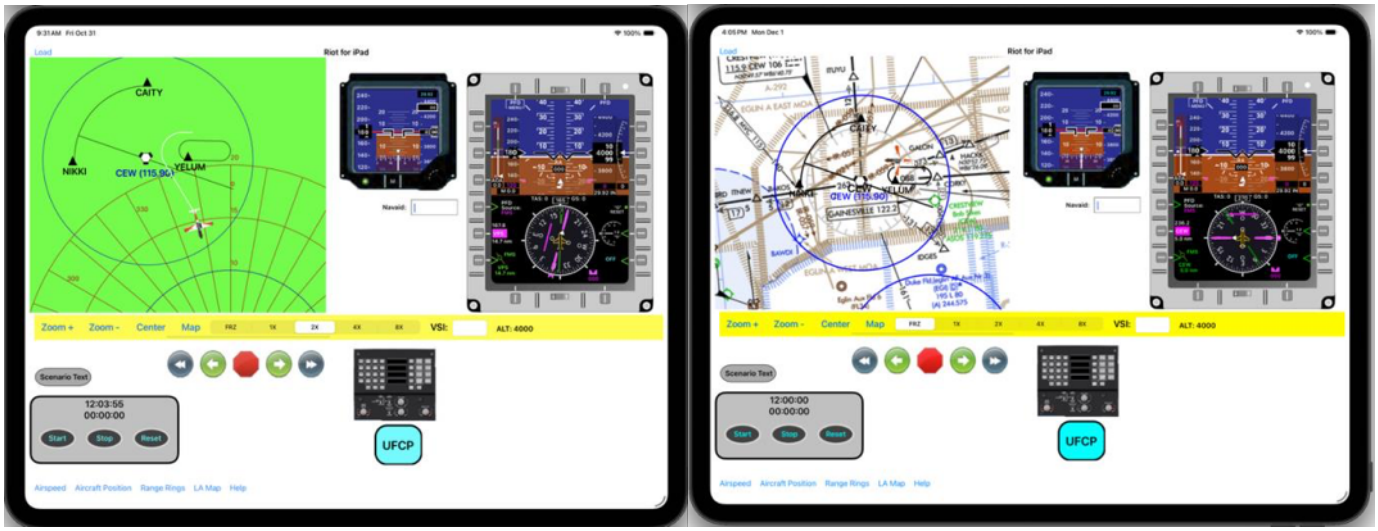

Riot T-6B Mode

Item	Description
Map	Scenario Data including Plane, Navaids, Waypoints, Radials and Holding Patterns
T6B MFD	Main Flight Instrument
T6B BFI	Backup Flight Instrument
T6B UFCP	Input Device for the T6B MFD
Stopwatch	System Time and Stop Watch Functions
Scenario Text Button	Toggle the Scenario Info Text.
Full Left Button	Starts a 3.0 degrees per second turn.
Half Left Button	Starts a 1.5 degrees per second turn.
Stop Button	Stops turning
Half Right Button	Starts a 1.5 degrees per second turn.
Full Right Button	Starts a 3.0 degrees per second turn.
Zoom + Button	Zooms in on the Map.
Zoom - Button	Zooms out on the Map.
Center Button	Centers the Map on the plane's location.
Map Button	Toggles the Map ON/OFF.
FRZ Button	Freezes the Simulation.
1X – 8X Buttons	Unfreezes and sets the speed of the simulation from 1X to 8X.
VSI Text Box	Used to enter the Vertical Speed. Positive for ascending Altitude and Negative for descending altitude.
ALT: Text	Static display of the current altitude.
Navaid: Text Box	Used to enter a Direct-To Navaid or waypoint in the FMS.
Load	Displays the Load Mission Screen
Airspeed	Selects a new airspeed
Aircraft Position	Move a new location
Range Rings	Toggles the Navaid Range Rings
Help	Opens this help Document
LA Map Button	Toggles the Low Altitude Map ON/OFF

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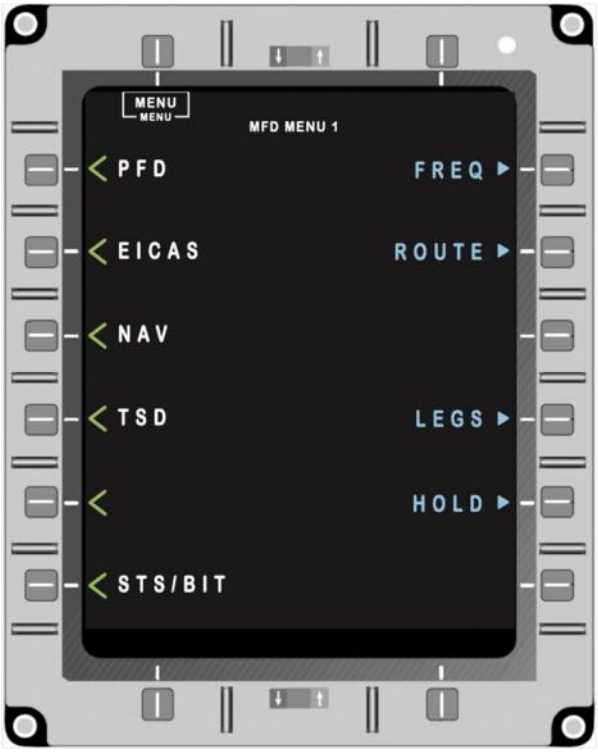
T-6B MFD Menu Page



Menu Page

Item	Description	Type
PFD	Opens the PFD page	Button
EICAS	Opens the EICAS page	Button
NAV	Opens the NAV page	Button
STS	Not supported	N/A
FREQ	Not supported	N/A
ROUTE	Opens the Flight Plans page	Button
LEGS	Opens the PFD page	Button
HOLD	Not supported	N/A
Menu	Return the previous page	Button

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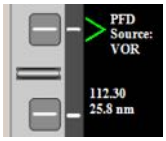
T-6B MFD PFD Page

T-6B Multi-Function Display Items		
Item	**Description**	**Display Type**
AOA Indicator	Angle of Attack	Static Display
Airspeed Indicator	Displays Airspeed	Text and Graphic Ribbon
Attitude Indicator	Attitude Ball & Wing	Pitch and Banks Indicator
Altitude Indicator	Aircraft Altitude	Text and Graphic Ribbon
TAS Indicator	Displays True Airspeed	Text
Ground Speed	Displays Aircraft Ground Speed	Text
VSI Indicator	Vertical Speed	Text and Graphic Gauge
Mach Speed	Displays Mach Speed	Text
G Force	G Force	Static Graphic Gauge
Compass Card	Magnet Heading	Graphic and Text
Min Airspeed	Used for alert of under speed	Text & Graphic
Min Altitude	Used for alert of under altitude	Text & Graphic
MFD Buttons		
PFD Source (L4)	VOR, FMS, LOC or OFF	Text & Graphic
BRG Pointer 1 (L6)	VOR, FMS, LOC or OFF	Text & Graphic
G Reset (R4)	Reset Max G	Static (does nothing)
G Meter (R5)	G Meter	Static (does nothing)
BRG Pointer 2 (R6)	VOR, FMS, LOC or OFF	Text & Graphic
PFD Menu	Displays the Menu Display	Text & Graphic

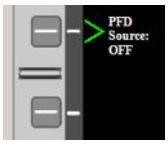
L1 is first button on left side of MFD from the top.
R1 is first button on right side of MFD from the top.
UL is first button on the top side of MFD from the Left
LL is left button on the bottom of MFD. If an MFD Waypoint is active pressing this button for 2 seconds will snap the selected course needle to the bearing pointer 1 needle. Less the 2 seconds will open the UFCP.
LR is right button on the bottom of the MFD. Pressing this button for 2 seconds will snap the Heading Bug to the current heading. Less the 2 seconds will open the UFCP.

FMS pages Routes (Flight Plans) are now supported. Nearest airports, User Waypoints, VHF & NDB Navaids are also supported. You can enter individual FMS Waypoints and Navaids in the FMS text box located next to the MFD. Examples are: KMOB for Mobile Regional Airport and NSE for Whiting Field TACAN.

Navigation Source - FMS Course Needle controlled by FMS Waypoint/Navaid.



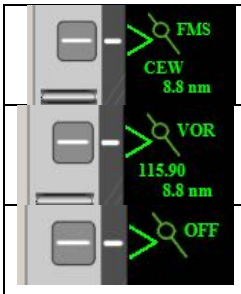
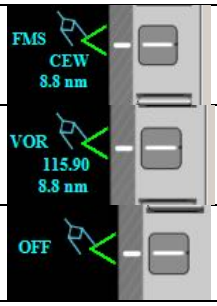
Navigation Source – VOR Course Needle controlled by VOR Navaid.



Navigation Source – OFF Course Needle Parked.

MFD - Bearing Pointers

Clicking the BP1 & BP2 Source button cycles through the possible sources (FMS, VOR/LOC & OFF)

	BP1 - FMS		BP2 - FMS
	BP1 – VOR/LOC		BP2 – VOR/LOC
	BP1 - OFF		BP2 - OFF

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EICAS Page

EICAS is just a static display in the Riot.

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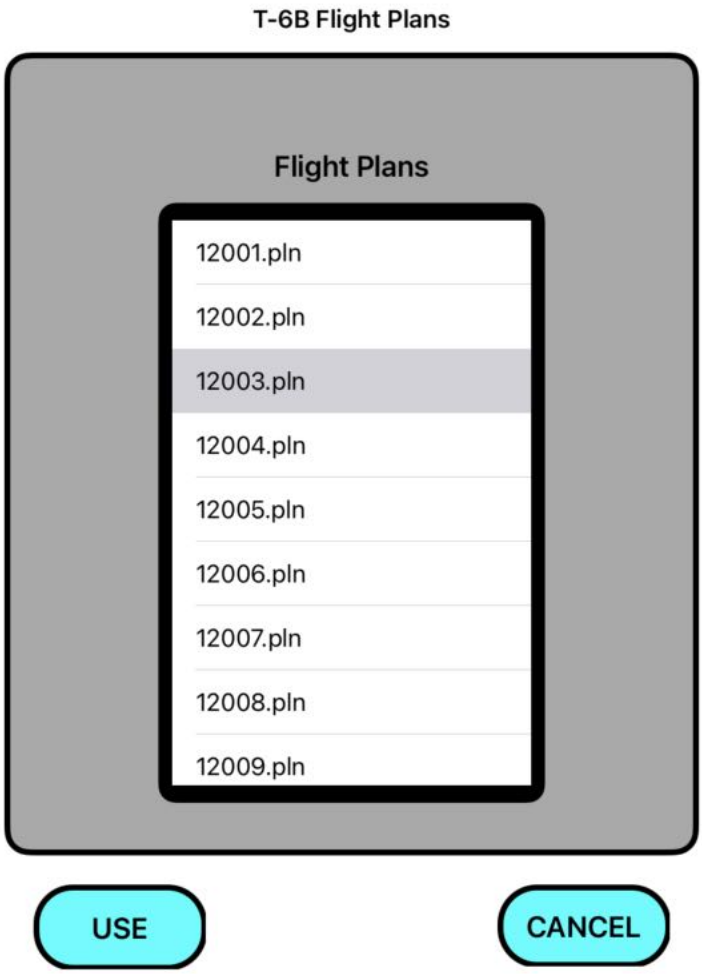
Route Page



The T-6B Flight Plan dialog is accessed from either the **Route** button on the **Menu** page or the **Route** button on the **Nav** page.

1. Click the **Route** button. The **Flight Plan** dialog appears.
2. Select the **Plan** from the **Flight Plan List.**
3. Click the **USE** button to activate the selected plan or the **CANCEL** button.
4. Click the **Nav Button** from the **Menu** page to enter **Nav Mode**.

Note: Flight Plans are not editable on the T-6B.

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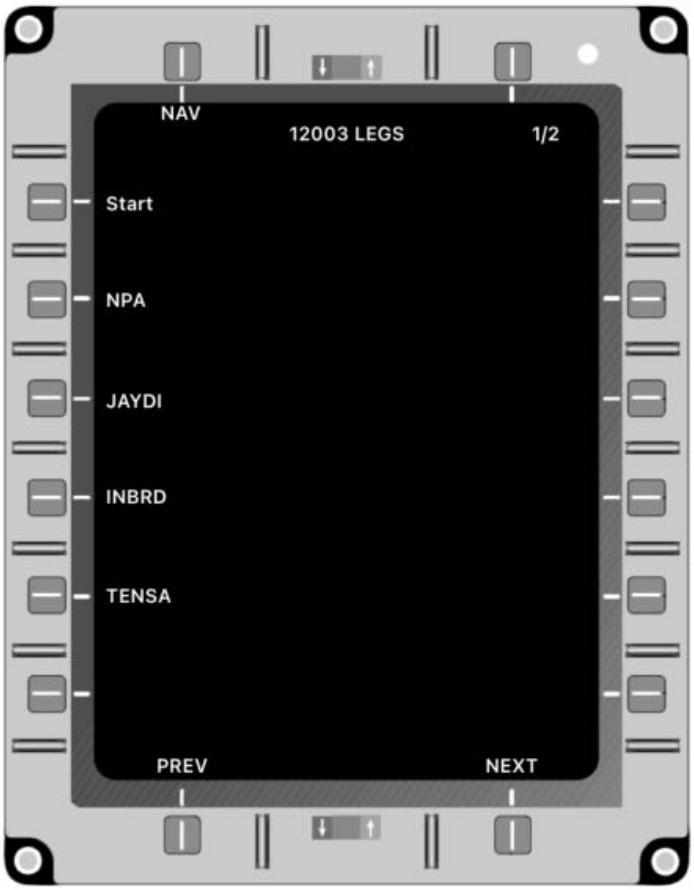
LEGS Page



LEGS Mode Page

To access the LEGS Page, Select LEGS from the Nav Page.	
L1 – L5 Buttons	Select to make that waypoint the current waypoint. This will also remove all prior waypoints from the current plan. The MFD will return to the Nav Page.
Next Button	Displays the next page of waypoints.
Prev Button	Displays the previous page of waypoints.
Nav Button	Clicking this button will return you to the Nav Page.

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NAV Page

T-6B NAV Page

Item	Description	Type
NRST	Changes to the Nearest Page	L1 Button
LEGS	Changes to the LEGS Page	L2 Button
PFD Source	Displays the Primary Source FMS or VOR	L3 Button
Route	Displays the Flight Plan Dialog to load a new plan	L5 Button
Bearing Pointer 1	Selects Bearing Pointer 1 source. FMS, VOR or OFF	L6 Button
Range Up/Down	Increase/Decrease Map range	R3 (Increase) Button R4 (Decrease) Button
Bearing Pointer 2	Selects Bearing Pointer 2 source. FMS, VOR or OFF	R6 Button
Menu Button	Returns to the Menu Page	UL Button

The top section displays the current waypoint data in **magenta**. Waypoint Name and Distance. The **TTG** and **ETA** fields are **not** supported.

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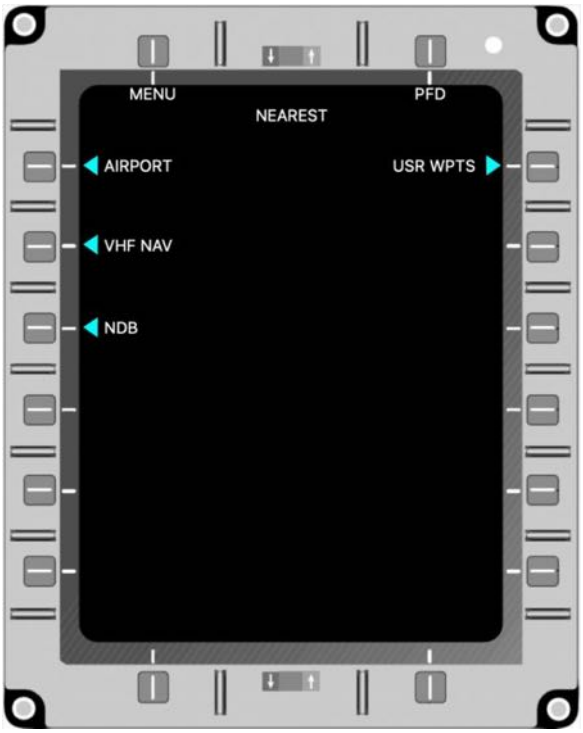
Nearest Page



T-6B Nearest Menu Page

Item	Description	Type
AIRPORT	Loads the Nearest airports page.	L1 Button
VHF NAV	Loads the Nearest VHF Navaids Page	L2 Button
NDB	Loads the Nearest NDB navaids Page	L3 Button
USR WPTS	Loads the User Waypoints Page.	R1 Button
MENU	Returns you to the Menu page.	UL Button
PFD	Returns you to the PFD Page	UR Button

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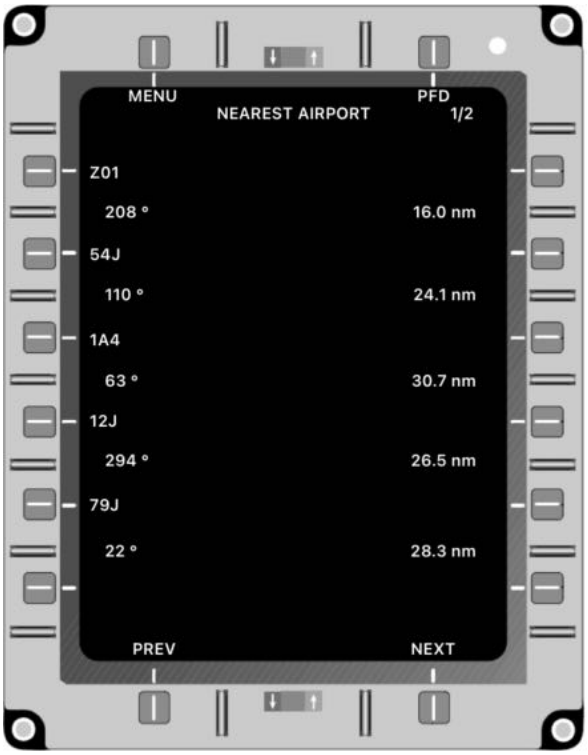
Airport Page



Nearest Airports

Item	Description	Type
L1 – L5	Select the button to go direct to that airport. You will auto return to the Nav Page.	Button
PREV	Go to the previous page. Wraps to the Last page if you are on the first page.	Button
NEXT	Go to the next page. Wraps to the first page if you are on the last page.	Button
MENU	Returns you to the Menu Page.	Button
PFD	Returns you to the PFD Page.	

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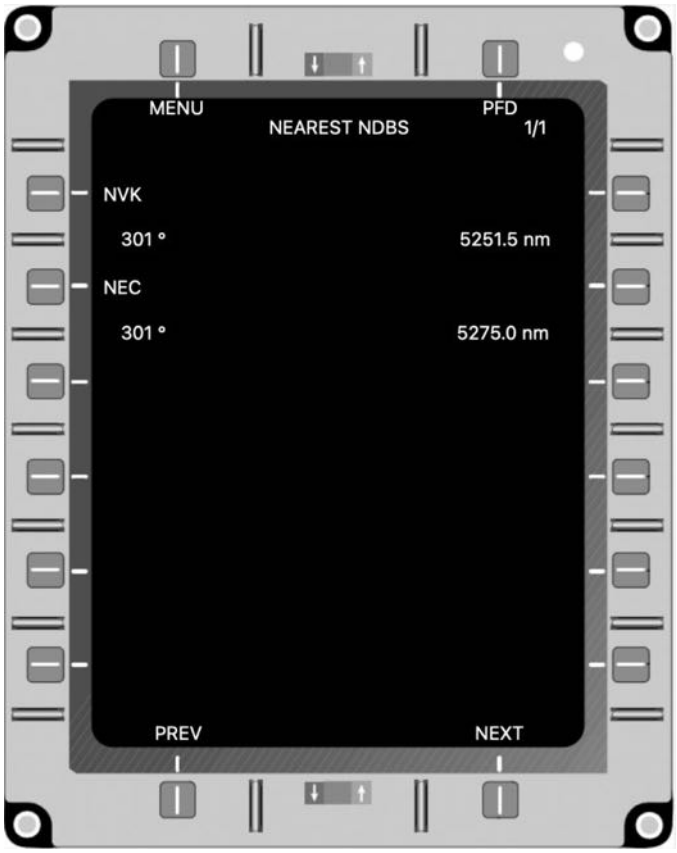
NDB Page



Nearest NDBS

Item	Description	Type
L1 – L5	Select the button to go direct to that NDB. You will auto return to the Nav Page.	Button
PREV	Go to the previous page. Wraps to the Last page if you are on the first page.	Button
NEXT	Go to the next page. Wraps to the first page if you are on the last page.	Button
MENU	Returns you to the Menu Page.	Button
PFD	Returns you to the PFD Page.	

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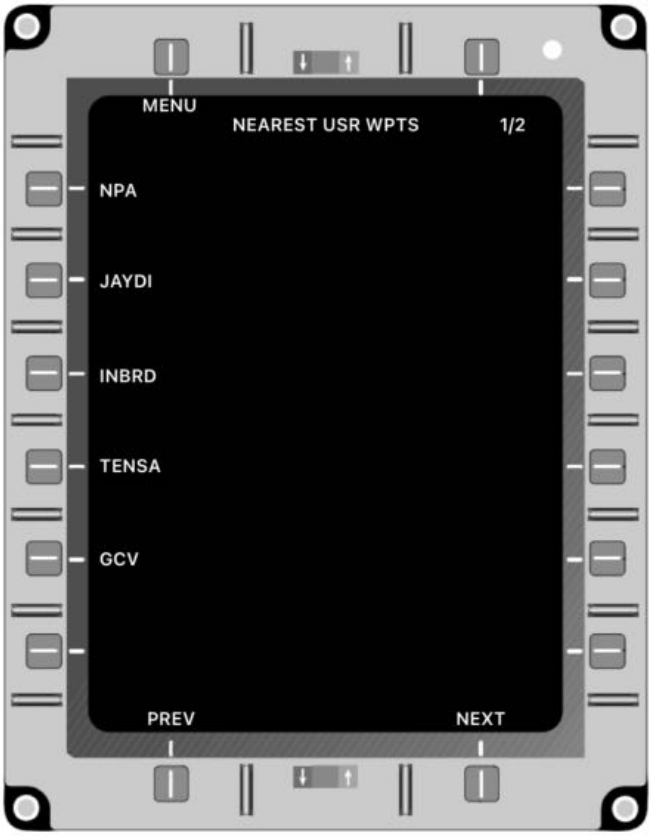
USR WPTS



Nearest User Waypoints

Item	Description	Type
L1 – L5	Select the button to go direct to that Waypoint. You will auto return to the Nav Page.	Button
PREV	Go to the previous page. Wraps to the Last page if you are on the first page.	Button
NEXT	Go to the next page. Wraps to the first page if you are on the last page.	Button
MENU	Returns you to the Menu Page.	Button

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T-6B UFCP

Figure 3: T-6B Up Front Control Panel (UFCP)

NAV TUNE VOR/LOC		W1 - Displays as one of VOR (if NAV is a VOR/ILS tuned to a VOR frequency), LOC (if NAV is a VOR/ILS tuned to a localizer frequency). If the tuned frequency is part of the preset frequency library the corresponding preset (01 to 99) number is shown. If the frequency has no associated number, ## is shown. Changing the preset number in this window using the alphanumeric keyboard and ENT buttons, or UFCP data entry knob, automatically retunes NAV to the frequency or channel corresponding to that preset. W2 - Displays the station IDENT from the FMS database. If no match to frequency is found, ### is displayed. Navaids may be tuned by entering the IDENT in this field using the data entry knob. W3 - If NAV is manually tuned in this window to a frequency or channel corresponding to a preset, that preset number is automatically displayed in W1. If NAV is tuned to a frequency or channel that does not correspond to a preset, the characters ## displays in place of the preset number in W1 W4 - Blank

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NAV TUNE DME		W1 - Display window titled DME. W2 - Consists of the current DME frequency corresponding to the VOR/ILS where NNN.NNA is the current DME frequency and A is H or blank. Pressing W2 toggles between Hold On and Off by alternately displaying an H or blank in the right-most character position. W3 - Blank W4 - Blank

NAV TUNE XPDR **(Not supported)**		W1 - Displays XPDR and the options ACT and SBY. Selecting W1 toggles between the active(XPDRACT) or standby (XPDRSBY) mode. If the XPDR is 'not responsive' and W1 button is pushed in an attempt to switch to ACT mode, the system reverts to SBY if the XPDR equipment remains 'not responsive', where 'not responsive' is defined as no ARINC 429 labels being received from the XPDR for 1 second. W2 - Displays data indicating the current transponder mode code. Pressing W2 activates the W2 data entry mode and allow the transponder mode code to be changed via the alphanumeric keyboard and pressing ENT button. When the transponder mode code is changed, the change is reflected on the displays of both crew stations (front and aft). The data entry range for Transponder Mode Code is 0000 to 7777. W3 - Displays ALT and the options ON and OFF. Pressing W3 toggles IFF mode 3 and altitude encoding between ON and OFF. W4 - Blank

PF		W1 W2 W3 W4

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W1 - Is a data entry window with the label SET and data consisting of a number with up to four digits that indicates the current altimeter setting, either in inches of mercury (IN HG) (with no decimal point shown) or in millibars (MBAR). W2 - Is a data entry window with the label AB (Altitude Bug) and data consisting of a 3-, 4-, or 5-digit number representing height above sea level to the nearest foot from -1000 to 55,000 feet. Pressing W2 allows the barometric altitude caret setting to be changed via the UFCP data entry knob and alphanumeric keyboard and ENT buttons. The increment/decrement step value when using the UFCP data entry knob is 10 feet. Pressing and holding the W2 key automatically enters the current altitude as the new altitude bug setting.
The setting has an allowable range of 27.00 to 32.00 inches of mercury or 915 to 1083 millibars. Rotating BARO SET knob (BCSK) one click increments or decrements the barometric correction setting by one, regardless of whether it is inches or millibars. The pilot is also able to insert a new Barometric Correction setting using the alphanumeric keyboard followed by a press of the ENT button. When the barometric correction setting is changed (via the UFCP), the change is reflected on the displays of both crew stations (front and aft). Pressing W1 for 1 second or more will set the Barometric Correction to 29.92 in. Hg.

W2 - Is a data entry window with the label AB (Altitude Bug) and data consisting of a 3-, 4-, or 5-digit number representing height above sea level to the nearest foot from -1000 to 55,000 feet. Pressing W2 allows the barometric altitude caret setting to be changed via the UFCP data entry knob and alphanumeric keyboard and ENT buttons. The increment/decrement step value when using the UFCP data entry knob is 10 feet. Pressing and holding the W2 key automatically enters the current altitude as the new altitude bug setting.

W3 - Is a data entry window with the label RA (radar altimeter) and data consisting of a number with up to four digits that indicates the current radar altimeter setting in feet, with an allowable range of 0-2500 feet. The radar altimeter setting is displayed on the attitude indicator. Pressing W3 allows the radar altimeter setting to be changed via UFCP data entry knob, alphanumeric keyboard, and ENT button. Upon data entry mode activation, the pilot is able to increase/decrease the radar altimeter setting by rotating the UFCP data entry knob clockwise or counterclockwise. To change the radar altimeter, the increment/decrement step value when using the UFCP data entry knob is 10 feet. The pilot is able to insert a new radar altimeter setting using the alphanumeric keyboard followed by a press of the ENT button.

W4 - Is a data entry window with the label SPD and data consisting of a number with up to three digits that indicates the current airspeed bug setting in knots indicated airspeed, with an allowable range of 40 to 360 knots. Pressing W4 allows the speed caret reference setting to be changed via UFCP data entry knob, alphanumeric keyboard, and ENT buttons. Upon data entry mode activation, the pilot is able to increase/decrease the speed caret reference setting by rotating the UFCP data entry knob clockwise or counterclockwise. Rotating the UFCP data entry knob one click increments or decrements the speed caret reference setting by 1 knot. The pilot is able to insert a new speed caret reference setting using the alphanumeric keyboard followed by a press of the ENT button. Pressing and holding the W4 key automatically enters the current airspeed as the new airspeed bug setting.

In the case of an FMS failure, W4 displays the transponder mode code left-justified and operational mode right-justified and has no control functionality.

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Persistent Display	

NAV MASTER MODE

The persistent display for the NAV master mode allows the pilot to view and change the current frequencies of the COM1 and COM2 radios and the NAV navaid, as well as view the current transponder code and mode and access the transponder control page.

COM1 and COM2 radios NOT supported.

W1- displays COM1 UHF frequency and pressing W1 activates the W1 data entry mode and displays an outward facing filled triangle in the left-most character location. In the case of an FMS failure, W1 has no control functionality.

W2- displays COM2 VHF frequency. Pressing W2 activates the W2 data entry mode and displays an outward facing filled triangle in the left-most character location. In the case of an FMS failure, W2 displays the COM2 frequency left justified. If the standby VHF control head is powered, W2 displays REMOTE, indicating control at the standby VHF.

W3- displays the radio navigation frequency. Pressing W3 activates the W3 data entry mode and displays an outward facing filled triangle in the left-most character location. In the case of an FMS failure, W3 displays the NAV frequency left justified.

W4- displays the current transponder code and mode. When the W4 key is pressed, the UFCP displays the transponder control page. The transponder code is displayed starting in the second character position of the window, and consists of a four-digit octal number. The transponder mode is displayed right justified as one of SBY (standby) or ALT (altitude) when the radio is in active mode and ALT is selected.

In the case of an FMS failure, W4 displays the transponder mode code left-justified and operational mode right-justified and has no control functionality.

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T-6 BFI

T-6B BFI

This instrument provides the basic flight information. It is a backup for the main MFDs.

Item	Description	Display Type
Airspeed Indicator	Displays Airspeed	Text and Graphic Ribbon
Attitude Indicator	Attitude Ball & Wing	Pitch and Banks Indicator
Altitude Indicator	Aircraft Altitude	Text and Graphic Ribbon
Heading	Aircraft Heading	Graphic Ribbon
VSI Indicator	Vertical Speed	Text
Barometric Setting	Barometric altimeter Setting	Text

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T-6A Mode

T-6A Mode Display

Item	Description	Display Type
Map	Scenario Map	Graphic
EHSI	Electronic Horizontal Situation Indicator	Digital Display
EADI	Electronic Attitude Indicator	Digital Display
Altitude	Aircraft Barometric Altimeter	Digital Display
Wet Compass	Simulates a Wet Compass	Analog Display
VSI	Vertical Velocity	Digital Display
EFIS Panel	Navigation Panel, selects the input data for EHSI.	Buttons and Knobs
GPS Button	Opens the KLN-900	Button
Radio Button	Opens the RMU 556 Radio Management Unit	Button
Load	Displays the Load Mission Screen	Button
Airspeed	Selects a new airspeed	Button
Aircraft Position	Move a new location	Button
Range Rings	Toggles the Navaid Range Rings	Button
Help	Opens this help Document	Button
LA Map	Toggles the Low Altitude Map ON/OFF	Button

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T-6A KLN-900 EFIS Panel

HEADING SELECT (HDG) KNOB

The heading select (HDG) knob is used to set the heading on the EHSI at the desired position. Pulling out on the HDG knob (double click) resets the HDG bug on the EHSI to the present aircraft heading (lubber line). Increase the HDG by clicking the + sign on the knob and decrease HDG by clicking the - sign. You can input the HDG directly by typing it into the text box and hitting enter.

COURSE SELECT (CRS) KNOB

The course select (CRS) knob is used to set the desired course pointer and digital course readout on the EHSI. Pulling out on the CRS knob (double click) resets the, CRS pointer and digital course readout to a direct course to the selected navaid (VOR) or waypoint (GPS). Increase the CRS by clicking the + sign on the knob and decrease CRS by clicking the - sign. You can input the CRS directly by typing it into the text box and hitting enter.

Note: In GPS mode, the KLN-900 GPS must be in OBS mode or double clicking the CRS knob will have no effect.

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NAV SOURCE SELECTOR BUTTON

The NAV source selector button. placarded NAV is used to select the primary navigation source. Press the NAV switch to toggle through the available sources. Once a sensor is selected, the sensor type (VOR or GPS) is annunciated on the left side of the display. Both navigation sources, VOR and GPS. are available with or without time-to-go (TTG) and groundspeed (GS) displayed. The distance display, TTG and GS information in the upper left corner, selected course, course pointer and deviation bar are all referenced to the primary navigation source. To deselect distance, TTG or GS, press the NAV button until the desired display is presented.

RMI SINGLE NEEDLE AND DOUBLE NEEDLE SOURCE BUTTONS

The RMI single needle source button, placarded with a single needle graphic, and the RMI double needle source button, placarded with a double needle graphic, are used to toggle between the available navigation sources for the single needle and double needle RMI indicators on the EFIS system. The RMI single needle indicator is an upward, pointing arrow with a single tail, while the RMI double needle indicator is an upward pointing arrow with two tails. Each depression of the RMI source button sequences to the next nav source selection. The three navigation display options are: VOR, GPS and None selected (nav source indicator blank).

Item	Description	Display Type
HDG	Heading Bug	Text Box
CRS	Selected Course Heading	Text Box
Single Needle	Selects the source for Left side Needle	Button
Double Needle	Selects the source for Right side Needle	Button
NAV	Nav Button, toggles between VOR/GPS/LOC	Button
All other buttons	Not supported	Buttons

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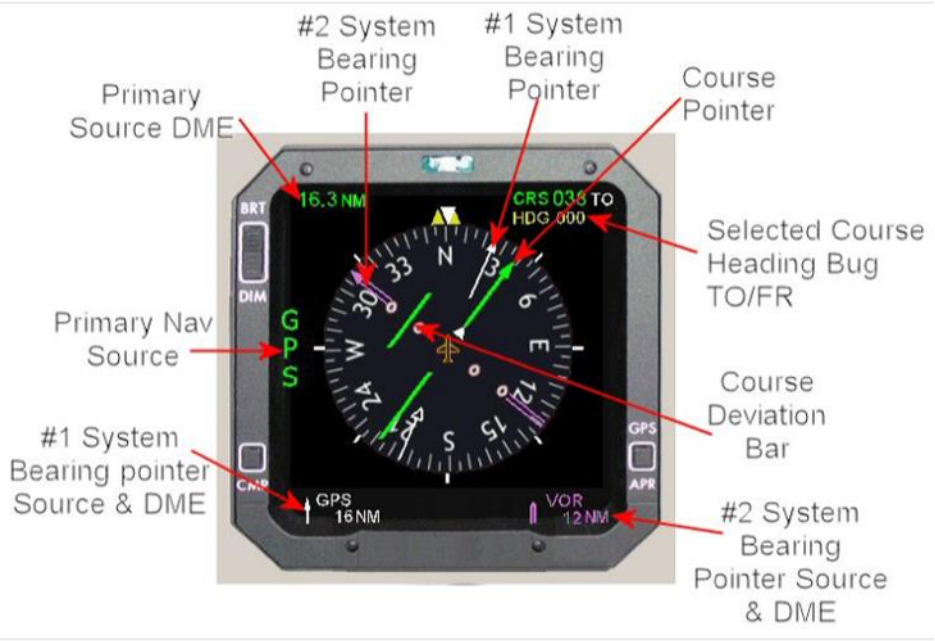

T-6A EHSI

The EHSI compass card display is a 360° rotating white compass scale which indicates the aircraft heading referenced to a white triangular heading index (lubber line). The compass scale is divided into 5° and 10° increments. Fixed 45° index marks are adjacent to the compass scale.

The system selected as the primary navigation source is indicated by a vertical three letter alphanumeric readout, located on the left side of the screen. The annunciation is green for the VOR/ILS and GPS approach mode and cyan (light blue) for GPS enroute mode.

A notched amber heading bug is manually set by the HDG knob on the EFIS control panel. Once set, the heading bug rotates with the compass card and is used to display desired heading in both cockpits. A digital readout of the selected heading is shown on the display in the upper right corner of the display.

The movable course pointer is manually set by the CRS control knob on the EFIS control panel. Once set, the course pointer rotates with the compass card. The course pointer indicates the desired navigational course to be flown. In the upper right corner of the display, an alphanumeric readout annunciates the letters CRS and indicates selected navigational course in degrees.

Distance and ground speed or DME held frequency of the primary navigation source will be displayed in the upper left hand corner of the display, while distance alone is displayed in the RMI/DME fields located along the bottom of the display.

Note: Ground Speed & TTG displays are disabled. Enroute mode is the only mode supported.

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T-6A EADI

T-6A Altitude, Wet Compass and VSI

EADI – Displays the Pitch and Bank angles of the aircraft.

Altitude – Displays the aircrafts current altitude, barometric pressure in millibar and inches.

Wet Compass – Displays the analog heading of the aircraft.

VSI – Displays the aircrafts current vertical speed.

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Radio Management Unit for the T-6A

Figure 1 T-6A RMU

This page describes the operation of the RMU 556 Radio Management Unit of the T-6A aircraft. Select the RMU by clicking the RMU button.

T-6 RMU

The RMU provides remote tuning and mode selection for the VHF communications, UHF communications, transponder, VOR navigation, and DME.

Control and display functions of the RMU are multifunctional and page defined. Page defined fields and field select keys are used in conjunction with a rotary knob to set operating frequencies, codes and modes of operation. See figures 1 through 10 below.

Nav frequencies can be quickly input via the NAV Frequency text box at the bottom left side of the RMU dialog box. Just enter the frequency and hit the enter key.

Example 112.3 for NPA VORTAC.

The RMU controls include:
Five field select keys along the left side of the display.
Three transfer switches with a diamond mark, along the right side of the display.
Three mode select switches with a rectangle mark along the right side of the display.
A dedicated page switch placarded PAGE. Used to select displays such as memory programming pages and to access message and special function pages.
A dedicated DME hold switch, placarded DMEH. Used to slave DME frequency to current active NAV frequency.
A dedicated transponder ident switch, placarded IDT. Used to command the transponder to transmit the identification pulse when requested by ATC. (Switch functions, but Ident is NOT supported.)

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A dedicated squelch disable switch, placarded SQ, is used to enable/disable UHF/VHF transceiver squelch. (NOT supported)

A dedicated memory switch, placarded DIM, used to select the memory pages for selected UHF, VHF and NAV systems.

A dedicated dimming switch, placarded DIM, used to select and adjust the brightness of the RMU display. (NOT supported)

A rotary data entry knob, consisting of two concentric knobs, below the display that is used to change frequencies, codes or any other information highlighted by the cursor box. The large knob typically tunes the first field or two, while the smaller knob tunes the smaller fields. The small knob may be pulled out (double click) to access quarter frequency tuning for UHF and NAV. Rotating either knob when the memory mode is active will scroll through available memory presets. The following describes knob function for each radio system (underline indicates field being tuned):

Radio

CONTROL	UHF	VHF	ATC	NAV
Large Knob	227.50	118.20	6543	113.80
Small	227.50	118 20	6543	113.80
Small Know (Pulled Out)	227.50	118 20	6543	113. 80

Note: The Upper +/- over knob simulates the Large Knob. The Lower +/- simulates the Small knob.

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RMU Normal Operating Page

Normal Operating Page

The normal operating page displays tuning and mode selections for UHF communications in the first field. VHF communications in the second field, transponder (ATC) in the third field, nothing in the fourth field, and NAV and DME in the fifth field. By using the page defined keys, frequency and functions are controlled in any of the active fields. An active field is enclosed within a box cursor. The box cursor can be tuned using the rotary turning knob, or other function keys. If no inputs are attempted for 20 seconds, the box cursor automatically reverts to the top field (UHF).

The field select keys are used to select which system is to be used. Once a system has been selected, it is possible to change frequencies, select or deselect modes, and transfer between active, memory and special functions pages.

The normal operating page includes the direct tuning display. Active frequencies can be traded with the standby frequency or set through direct tuning.

Direct tuning is accomplished by pressing and holding for three or more seconds the transfer switch adjacent to the field to be tuned. The standby frequency will disappear from the field and the cursor box will highlight the active frequency. The tuning and data entry knobs are then used to set the desired frequency. Once the tuning is complete, pressing the transfer switch momentarily will display the previous standby frequency.

To use a preset frequency, first select the desired system (UHF, VHF, ATC or NAV) with the appropriate field select key. Next, press the memory switch. Once the cursor box is visible. rotate the outer knob clockwise or counterclockwise to scroll through the preset frequencies first to last or last to first, respectively. When the desired preset frequency is displayed, press the appropriate transfer switch to select the preset as the active frequency. The preset will then be displayed in both the active and standby fields. To return to direct tuning mode, press the memory switch. The current active frequency and the preset in standby will be displayed and direct tuning may be accomplished normally.

To quickly set the transponder to 1200, press and hold the transponder field select key for three seconds. The transpon-der will replace the previous setting with 1200 (if ATC pre-set is set to 1200), while remaining in the mode (STBY ON. or ALT) previously selected.

Note: Although you can select UHF, VHF and Transponder frequencies and codes, T6Nav does not support them. Only NAV frequencies are supported and used by T6Nav.

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UHF Communications Special Functions Page (Figure 3)

The UHF special functions page is accessed from the normal operating page. Select the UHF field with the appropriate field select key. then depress the PAGE switch. The UHF special functions page is then displayed. If the MSG annunciation is flashing. pressing the PAGE switch brings up the message page, so the PAGE switch must be pressed a second time to access the special functions page. The special functions page is used to select the normal operating mode to activate the guard mode, and to transmit a 1000 Hz test tone on the active frequency.

The MODE message switch cycles between the main and both transceiver modes. The selected mode (MAIN or BOTH) is displayed below the MODE message and the active frequency. In the BOTH mode, the transceiver monitors both the guard receiver and the main receiver. When a signal is detected in either receiver, the transceiver will stop on the active receiver.

The second portion of the special functions page shows the active and standby frequencies for the UHF main transceiver, allowing the changing of frequencies from the special functions page. The field select key and transfer switch operate the same from this display as from the normal oper-ating page.

The GUARD function switch allows the guard receiver to be turned off and on. The TONE function switch causes the transceiver to generate a tone as long as the switch is held down.

UHF Memory Pages (Figure 4)

Memory channels or programmed frequencies are available for the communications and navigation systems. Editing is accomplished from the memory pages, which are accessed from the normal operating page. If there is no message label present in the UHF field, pressing the PAGE switch displays the memory page. Once the memory page is displayed, rotating the tuning and data entry knobs cycles through all the UHF memory pages. Pressing the field select key adja-cent to the memory channel to be edited moves the cursor to highlight the current stored frequency: The tuning and data entry knobs are used to enter the new frequency, which is temporarily stored until the switch adjacent to the ACCEPT message is pressed. Pressing the switch permanently stores the new frequency in place of the old frequency. If the ACCEPT message switch is not pressed, the old frequency reappears when the cursor is moved.

The INSERT message switch allows an additional memory channel to be inserted in memory at any selected location. All memory channels below the inserted one are moved down. If all memory locations are full, inserting an addi-tional memory channel causes the last channel to be lost.

Similarly, the CLEAR message switch is used to remove a selected memory channel from memory. All memory chan-nels below the cleared channel are moved up, leaving at least one empty channel at the bottom.

The ACCEPT message switch is used to enter the changes into the permanent memory and must be pressed following either editing an existing memory channel, inserting a new memory channel. or clearing an existing memory channel.

The RETURN message switch or the PAGE switch is used to exit the memory programming page and return to the nor-mal operating page.

The UHF communications memory pages will store 20 fre-quencies.

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VHF Memory Pages (Figure 5)

Memory programming for VHF communications is similar to the UHF except once the memory page is displayed, pressing the transfer switch adjacent to this page field moves the cursor box to the page field. To access the VHF memory pages, press the field select key adjacent to the VHF field and press the PAGE key. Memory functions are the same as for UHF memory.

The VHF communications memory pages will store 20 fre-quencies.

UHF Special Functions Page
Figure 3

UHF Memory Pages Figure 4

VHF Memory Pages Figure 5

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This page continues the description the operation of the RMU 556 Radio Management Unit of the T-6A aircraft.

Memory programming for NAV is similar to the UHF except once the memory page is displayed, pressing the transfer switch adjacent to this page field moves the cursor box to the page field. To access the NAV memory pages, press the field select key adjacent to the NAV field and press the PAGE key. Memory functions are the same as for UHF memory.

Transponder Special Functions Page

The transponder special functions page is used to store a single transponder code for recall. The transponder test function is also initiated from this page. The transponder special functions page is accessed by placing the cursor on the transponder field of the normal operating page, and then pressing the PAGE switch. Editing the single transponder code is done using the tuning and data entry knobs. The ACCEPT message switch is used to store the new code.

The ATC self test is initiated by pressing the START TEST message switch. The message changes to TEST STARTED, indicating the self test of ATC is in-process. The page defined RETURN message switch or the PAGE switch is used to return to the normal operating page.

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GUARD FREQUENCY

During flight operations, it may be desirable to transmit on GUARD frequency after one or two steps. There are two methods for setting GUARD frequency for single step oper-ation. The first method is to set the UHF backup control unit to 243.00 MHz when UHF backup control function is tested before flight. To access GUARD using this method, turn on the UHF backup control. The RMU will display REMOTE in the UHF box, and GUARD becomes the selected fre-quency. The second method is to set GUARD (243.00 MHz) as the standby frequency on the active tuning page on the RMU. To access GUARD, press the transfer switch to flip the current active frequency and the standby frequency to transmit on GUARD. GUARD frequency can also be entered as a preset frequency on the memory page and then accessed like any other memory preset.

Note: Although you can select UHF, VHF and Transponder frequencies and codes, they are not supported. Only NAV frequencies are supported and used.

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T-6A Nav KLN900 GPS

Figure 1 KLN-900 GPS

The KLN900 GPS supports a sub-set of the full GPS system. The navaid database only contains data for navaids, no airport or runway data is available.

The Left Mode display supports Nav 1 & 2 pages, FPL page, Direct-To page and Mode page.

Note: If the Left Mode is set to FPL and you need to change to a different flight plan, you will have to select a different mode and then select FPL again since pressing an option that is already selected will not generate a new event on the iPad.

The following Left Mode functions are **not supported**: CALC, STAT, SETUP, OTHER and TRIP.

The ALT, NRST, MSG and Save buttons are not supported.

The Right Mode display supports Nav 1 & 2 pages, VOR page, Direct-To data entry pages.

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Figure 2 Direct To Button

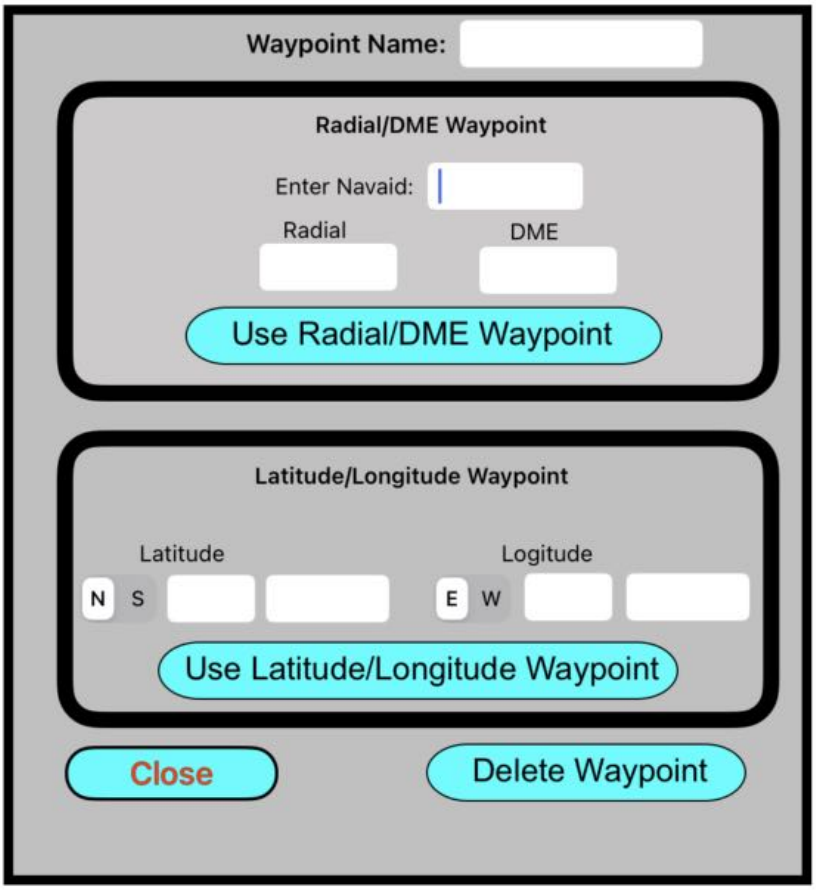

Figure 3 Direct-To Waypoint Editor

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To go directly to a navaid, do the following:

1. Click the Direct-To button (Figure 2). The Waypoint Editor (Figure 3) will appear.

2. You can enter waypoints by Navaid ID, Latitude/Longitude or by Radial/DME.

3. The top half of the editor (figure 3) is used for entering a waypoint by Radial/DME. Use the following steps to create a waypoint based on Radial and DME:

4. Enter the Waypoint ID. If you are using just a navaid, then enter the navaid call sign into the waypoint ID field and zero in the Radial and DME fields or leave then blank.

5. If you are going to base this waypoint on a Radial/DME offset then enter the Radial and DME into the Radial and DME fields.

6. When you are finished entering the waypoint, press the Use Radial/DME based Waypoint button to exit the waypoint editor. Go to step 9.

7. If you base your waypoint on a latitude & longitude then enter the latitude & longitude in the lower half of the editor after entering the Waypoint ID.

8. When you are finished entering the waypoint, press the Use Lat/Lon based Waypoint button to exit waypoint editor.

9. The GPS is now using the selected navaid.

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Figure 6 Super Nav 1

Figure 6a Left NAV 5 Display

Figure 6b Right NAV 5 Display

Super NAV 5 Display

To Select a Nav page, do the following:

1.	Use the Page Selector to select either Nav 1 – Nav 5 (Figure 1)
2.	If both Left & Right have Nav 1 selected then the KLN900 displays the Super Nav 5 screen. (Figure 6)
3.	If both Left & Right have Nav 5 selected then the KLN900 displays the Right Nav 5 screen. (Figure 6b)
	Note: Nav 3 Page is not functional.

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Flight Plan Mode

The following steps are used to enter, edit or load a flight plan:

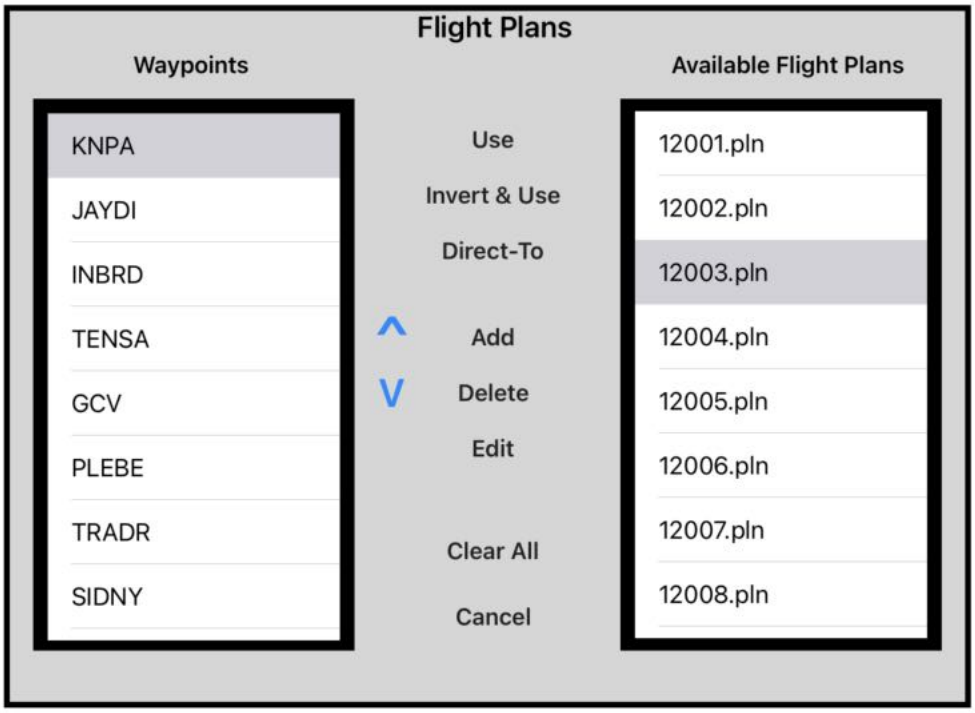
1.	Select the **FPL** on the left Page Selector. (Figure 1)
2.	 The T-6A KLN900 Flight Plan Dialog is displayed.
3.	Select the desired plan on the right list box. The selected plan is displayed in the left list box.
4.	Click the desired starting point in the left list box. (the first is the default)
5.	Click the Use button to start the plan.
6.	Click the Add button to add a new waypoint to the plan.
7.	Click the Edit button to edit the selected waypoint.
8.	Click the Delete button to remove the selected waypoint.
	Note: Adding, Editing or Deleting waypoints does **NOT** change the stored plan.

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Figure 7 Flight Plan Editor

Direct-To	Make selected waypoint the active waypoint.
Add Waypoint	Add a new waypoint to the bottom of the list
Delete Waypoint	Delete the currently selected waypoint from the Waypoints list.
Edit Waypoint	Edit the currently selected waypoint. (Double Clicking a waypoint in the waypoint list does the same)
Clear All Waypoints	Delete all the waypoints from the waypoint list.
Up Arrow	Move current waypoint up one position.
Down Arrow	Move current waypoint down one position.
Available Flight Plans	Select one of the listed plans and it will be loaded into the Waypoints List.

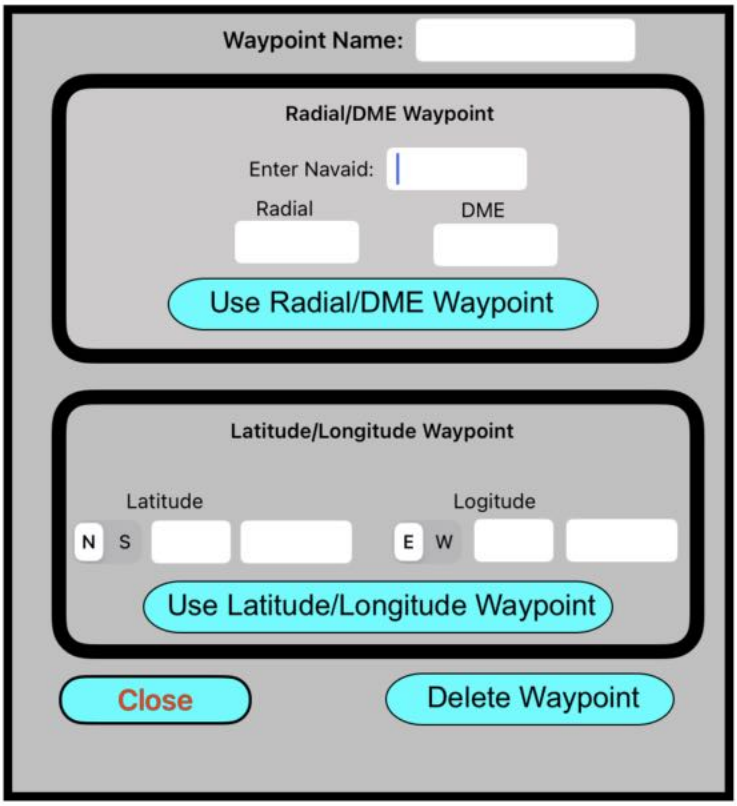

Figure 8 Waypoint Editor

(The Delete Waypoint button does not work in Flight Plan mode.)

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9.	You can enter waypoints by Latitude/Longitude or by Radial/DME.
10.	The top half of the editor (figure 8) is used for entering a waypoint by Radial/DME. Use the following steps to create a waypoint based on Radial and DME:
11.	Enter the Waypoint ID. If you are using just a navaid, then enter the navaid call sign into the Navaid ID field and zero in the Radial and DME fields. **If you enter a Navaid ID that does not exist you will get an error message!**
12.	If you are going to base this waypoint on a Radial/DME offset then enter the radial and DME into the Radial and
13.	When you are finished entering the waypoint, press the Use Radial/DME based Waypoint button to exit waypoint editor.
14.	If you base you waypoint on a latitude & longitude then enter the latitude & longitude in the lower half of the editor after entering the **Waypoint ID.**
15.	When you are finished entering the waypoint, press the Use Lat/Lon based Waypoint button to exit waypoint editor.
16.	Repeat steps 6 - 15 to add additional waypoints to the flight plan.

You click on the one that you wish to load and it will appear in the Waypoint list on the left side of the dialog box. At this point, you can select one of the waypoints and select **Use, Invert & Use or Direct-To**.

Invert & Use inverts the waypoints in the list and then starts with the first waypoint in the now inverted list.

Note: Editing a flight plan does not change the stored plan. It only changes the currently loaded plan.

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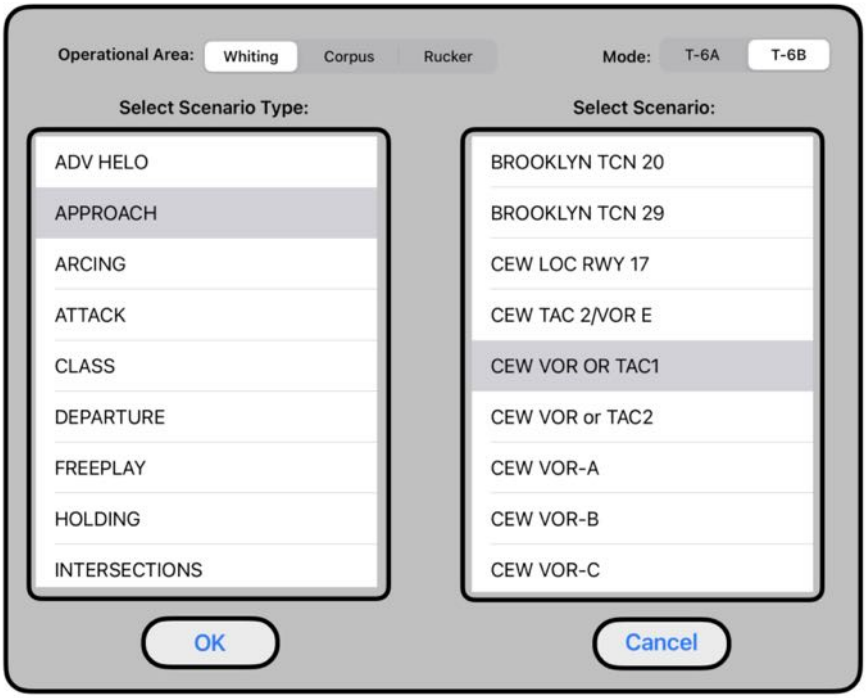
Load Mission Page



Item	Item Description	Information
Scenario Types List	List of available scenario types	Displays the scenario Types in the selected area.
Scenario List	List of available scenarios	Displays the scenarios in the selected area.
Operational Area Selector	Populates the Scenario Types list for the selected area.	Corpus, Whiting and Rucker
Mode Selector	Change Aircraft Type	T-6A or T-6B
OK Button	Loads the selected Scenario	
Cancel Button	Exits to the previous scenario.	Does nothing on Application Load.

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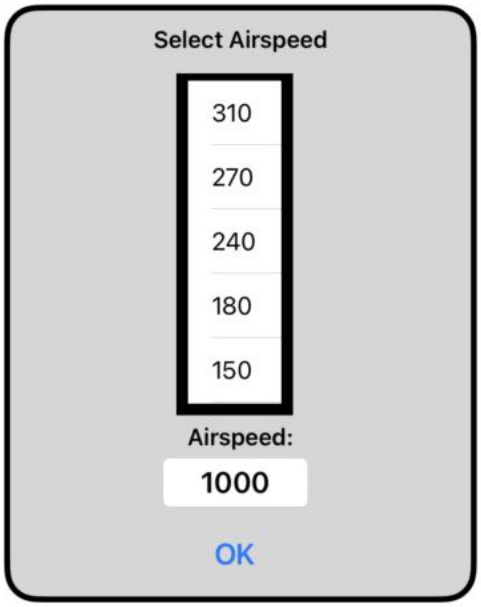
Airspeed Dialog Page



Select the new airspeed from the airspeed list or enter it into the text box.
Click the **OK** button to activate the new airspeed.

If you press **Enter Button** on the keypad while entering a speed in the text box, then the speed will be set and the dialog box will close automatically.

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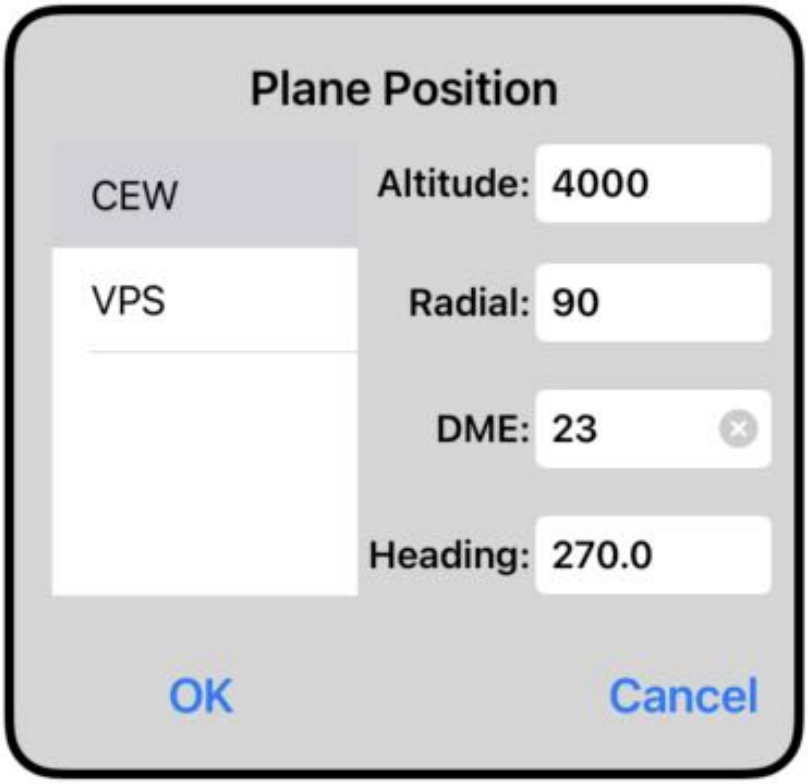
Plane Position Dialog Box



Select a new position for your aircraft.	
1.	Select the Navaid
2.	Enter the aircraft's altitude
3.	Enter the Radial (0 – 360) from selected Navaid.
4.	Enter the distance (DME) from selected Navaid.
5.	Enter the aircraft's heading (0 – 360)
6.	Click the **OK** button to use the new position.
7.	Click the Cancel button to close the dialog box without changing the position.

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