



FRIENDLYPANELS EFD500 MFD MANUAL

For Microsoft® Flight Simulator FSX
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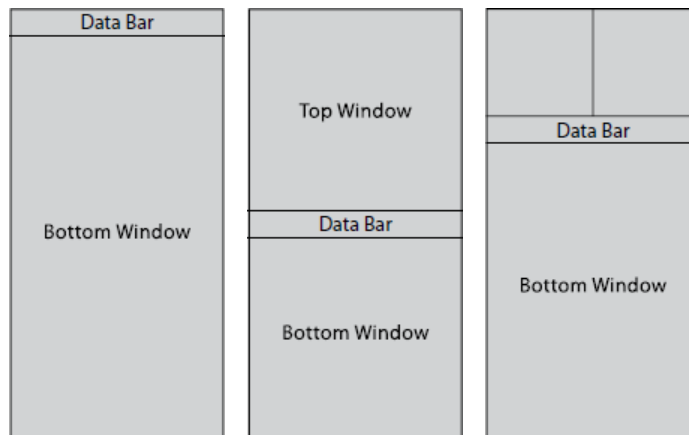
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1. INTRODUCTION

This guide uses the following terminology when referring to specific parts of the EFD500 MFD.

A PAGE is the arrangement of information shown on the screen of the EFD500 MFD. There are three pages available with the MFD. Each PAGE is based on one of the following three LAYOUTS.

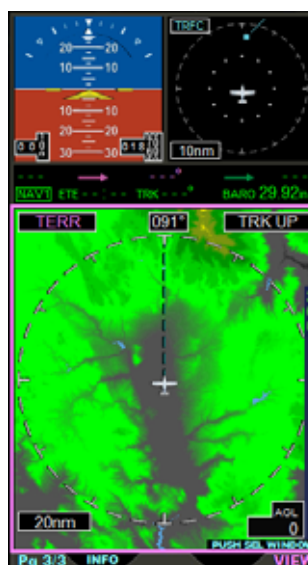
The LAYOUT defines how WINDOW and VIEW information are arranged on the EFD500 MFD screen. The pilot can select a one, two or three WINDOW display by rotating the Left Knob. The PAGE LAYOUT cannot be changed; however, the pilot can customize the VIEW displayed in a WINDOW. The EFD500 MFD displays information in one of three PAGE LAYOUTS as shown below:



A WINDOW is a section of a PAGE where a VIEW is displayed. The WINDOW “holds” the current VIEW.

A VIEW is the graphical content of a WINDOW. In this EFD500 version the VIEW presents specific information such as navigation map, terrain or traffic. A VIEW is the same size as the WINDOW which holds it. The VIEW name is displayed in the upper left corner of the VIEW.

FOCUS describes which WINDOW and VIEW are affected by pilot actions, i.e changing the VIEW or obtaining information. When a WINDOW and corresponding VIEW are selected they have the FOCUS, visually represented by a magenta border around the WINDOW as shown below.



When the FOCUS is on a WINDOW, content-sensitive controls such as the range button, Hot Keys, and knob actions apply to the WINDOW and VIEW with the FOCUS.

MENU KEY Refers to the five hot keys on the right side of the display when the Main Menu has been enabled.

HOT KEY Refers to the five hot keys on the right side of the display when the Main Menu is not enabled.



NORTH UP: True North-Up, i.e. in the direction of the geographic North Pole. All North-Up maps are true North-Up.

TRACK UP: Aircraft Magnetic track-up.

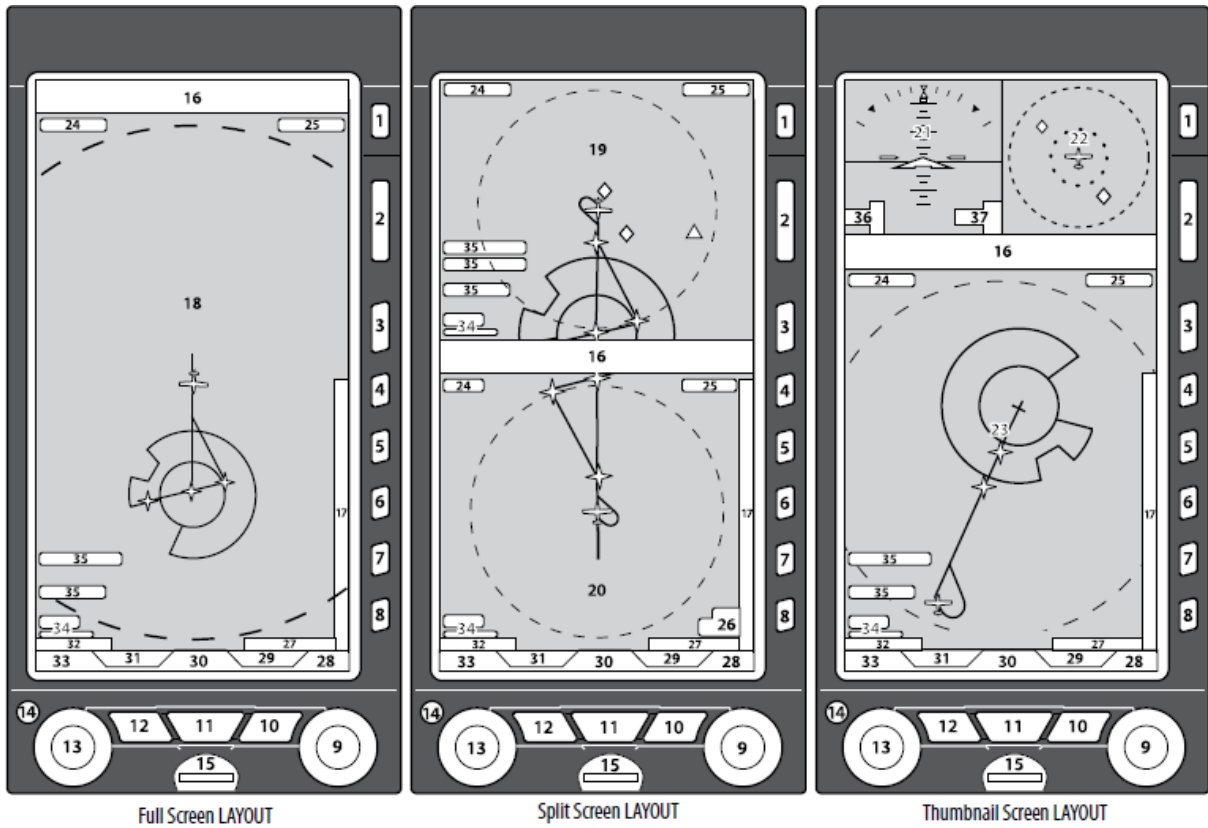


2. PILOT INTERFACE MODES

- The EFD500 MFD has several interface modes described below. The current mode determines the functionality of the content-sensitive pilot controls.
- **PAGE SELECTION:** When the EFD500 MFD first initializes it is in PAGE (and VIEW) Selection mode. Rotating the Left Knob selects different PAGES. When PAGE Selection mode is active the Pg # / 3 label above the Left Knob is magenta color (# indicates the current page number). PAGE and VIEW selection mode deactivates automatically after 10 seconds of inactivity.
- **CHANGE WINDOW:** Pressing the Right Knob activates WINDOW Select mode and moves the FOCUS to different WINDOWS on the currently displayed PAGE. When WINDOW Selection mode is active, the magenta border around the selected WINDOW shows and the VIEW label above the Right Knob is magenta in color. WINDOW selection mode deactivates automatically after 10 seconds of inactivity.
- **CHANGE VIEW:** Rotating the Right Knob selects different VIEWS within the WINDOW with the FOCUS. VIEW selection mode deactivates automatically after 10 seconds of inactivity.
- **VIEW CONTROL:** When VIEW Control Mode is activated, the function of the Right and Left Knobs changes. VIEW Control Mode is available for those VIEWS that support additional functionality, such as map panning. A button or knob is usually pressed to activate VIEW Control Mode and must be pressed to deactivate VIEW control mode.
- **MENU:** Pressing the MENU Button activates the Main Menu and displays a list of options, putting the MFD in MENU Mode. The five Hot Keys function as menu selection keys (Menu Keys). The pilot must press the MENU button to deactivate MENU mode. In this version menu mode is not context-sensitive. All pages are affected by its settings.

3. DISPLAY & CONTROLS

This is a quick overview of the display and Pilot Controls.



1	Power Button	20	Lower Split Screen Window
2	Range Buttons	21	Upper Left Thumbnail Window
3	Menu Button	22	Upper Right Thumbnail Window
4	Hot Key/Menu Key 1	23	Lower Thumbnail Window
5	Hot Key/Menu Key 2	24	VIEW Name
6	Hot Key/Menu Key 3	25	Heading
7	Hot Key/Menu Key 4	26	Terrain AGL
8	Hot Key/Menu Key 5	27	Right Knob Label
9	Right Control Knob	28	Right Knob Status
10	Lower Right Button	29	N/A
11	Lower Center Button	30	Traffic Notification
12	Lower Left button	31	Display Info Label (Nav Map only)
13	Left Control Knob	32	Left Knob Label
14	Automatic Dimming Photocell	33	Left Knob Status
15	microSDHC Card Slot	34	Map Range and Declutter Level
16	Data Bar	35	Annunciations
17	Hot Key Legend	36	Airspeed
18	Full Screen Window	37	Altitude
19	Upper Split Screen Window		

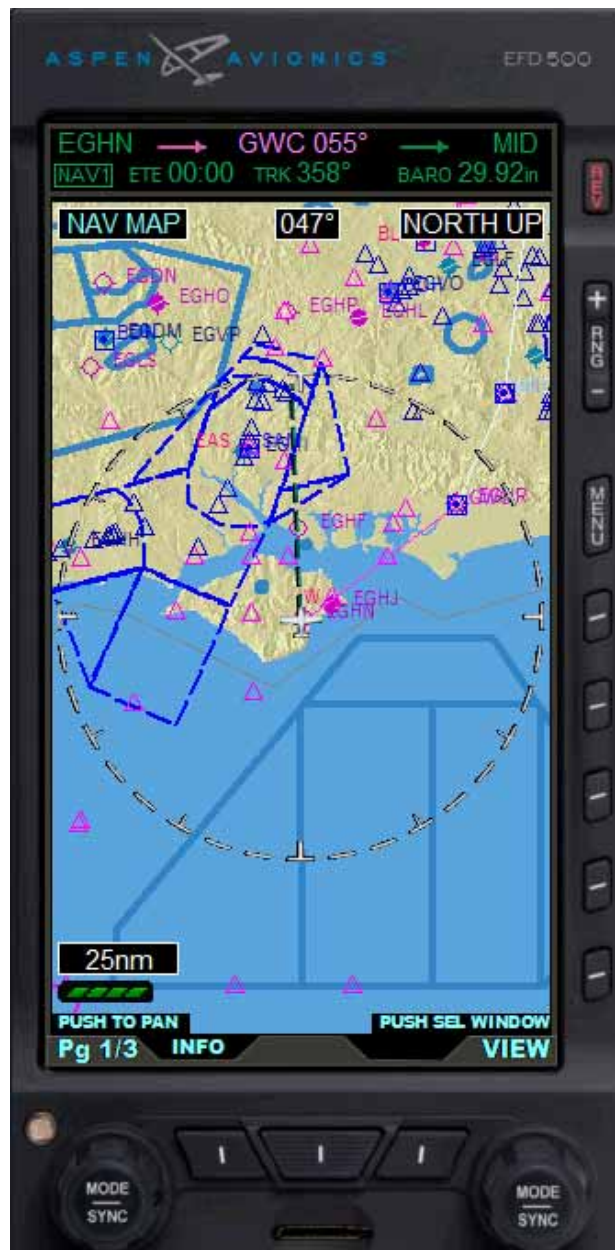
3.1 Default Display

The EFD500 MFD offers three different display options as described in the following paragraphs.

The default VIEWS and other settings can be changed at any time. Any changes made to the PAGE are automatically saved and displayed over the power cycle of the unit. All three display options show the data bar.



The first PAGE is a one WINDOW, Full Screen LAYOUT, and the Left Knob label reads 1/3. The default display is the VFR Navigation Map VIEW.



The display order of the VIEWS in the Full Screen LAYOUT WINDOW is: Map (NAV MAP), Terrain (TERR) and Traffic (TRFC).

The second PAGE of the display is a two WINDOWS, Split Screen LAYOUT, and the Left Knob label reads 2/3. The TRAFFIC VIEW is displayed in the top WINDOW while the Terrain VIEW is displayed in the bottom WINDOW:



The VIEWS that will display in each of the Split Screen LAYOUT WINDOW are:

Top window: Terrain (TERR) and Traffic (TRFC).

Bottom window: Map (NAV MAP), Terrain (TERR) and Traffic (TRFC).

The last PAGE of the display is a three WINDOW, Thumbnail LAYOUT, and the Left Knob label reads 3/3. The Secondary Attitude Indicator VIEW is displayed in the top left WINDOW, Traffic VIEW in the top right WINDOW, and Navigation Map VIEW in the bottom WINDOW. Only top right and bottom windows are customizable in this version.



The VIEWS that will display in each of the Split Screen LAYOUT WINDOWS are:

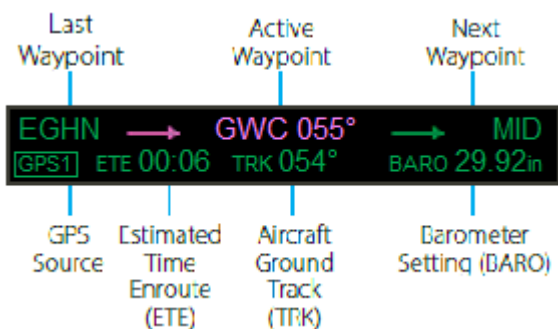
Top left window: Secondary Attitude Instrument.

Top right window: Terrain (TERR) and Traffic (TRFC).

Bottom window: Map (NAV MAP), Terrain (TERR) and Traffic (TRFC).

3.2 Data Bar

The Data Bar displays the information about the current flight plan and other relevant flight information.



The Data Bar is not editable. The first line of the Data Bar displays flight plan information:

- Last flight plan waypoint
- Active flight plan waypoint and desired track
- Next non-active flight plan waypoint

The second line of the Data Bar displays:

- GPS Source
- Estimated Time En route (ETE)
- Aircraft ground track (TRK)
- Barometer setting (BARO)

The active flight plan leg and TRK text are displayed in magenta text. All other information is displayed with green text. The ETE is displayed in the format HH:MM (where HH is hours and MM is minutes). Active waypoint and ground track are displayed numerically with a resolution of 1 and a range of 001° to 360°.

4. CONTROLS

The display bezel has two dual rotary knobs with a push feature, three lower buttons, five context sensitive Hot Key buttons along the lower right, a MENU Button, RNG+/- Button, and a REV Button which in this version is an on-off button. Most of the controls are content sensitive, i.e. the functionality of the control changes depending on the current selected VIEW and the current Interface Mode.

4.1 Lower Controls

The EFD500 MFD has two dual rotary knobs with a push feature. The knobs are used to select a different PAGE, WINDOW, or VIEW or move horizontally and vertically when panning the map or, in this version, browse through nearest airports, VORs or NDBs, and their respective information pages. The three buttons at the bottom of the MFD have various functions as described in the following sections. All of the buttons and knobs are labeled on the display as shown below.



4.1.1 Left Knob

Rotating the Left Knob selects a different PAGE for display. The initial rotation of the knob activates the selection process, and continued rotation will select different PAGES. Pressing the Left Knob activates panning mode if the window have focus). When panning mode is active the Left Knob scrolls horizontally across the map.

4.1.2 Left Button

In this version, when the INFO button is pressed rotating the Left Knob selects different objects on the Navigation Map (Airports/VORs/NDBs). Pressing the Left Knob after the INFO button has been pressed will display the nearest airports, VORs or NDBs textual information, when available.

4.1.3 Middle Button

Has no function in this version.

4.1.4 Right Button

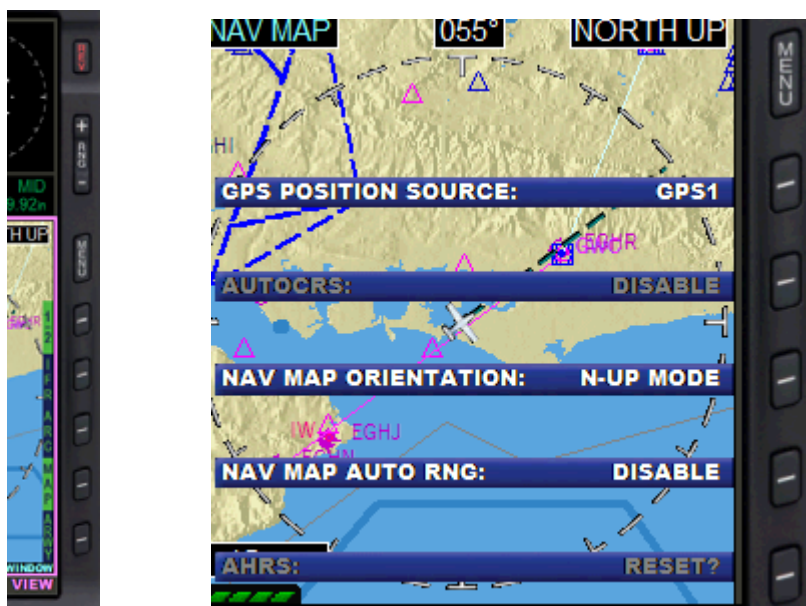
Has no function in this version.

4.1.5 Right Knob

Pressing the Right Knob moves the FOCUS and selects different WINDOWS on a PAGE. When a WINDOW has FOCUS, rotating the Right Knob changes the VIEW of the WINDOW. If the Right Knob is not pushed (to activate WINDOW selection) the initial rotation of the Right Knob will activate the selection process, and continued rotation will select different WINDOWS. The Right Knob is also used to browse through multiple information pages. The label PUSH FOR BACK displays above the Right Knob when this feature is available. Pushing the Right Knob will back the EFD500 MFD out of information and panning, to return to the basic VIEW.

4.2 Side Buttons

There are several buttons along the right side of the EFD500 MFD display. There is a REV button only for power control in this version, two range buttons that allow the pilot to zoom in or out of the selected VIEW, a MENU button that activates the Main Menu, and five Hot Keys that provide access to VIEW content sensitive functionality or Main Menu options, as shown below.



4.2.1 Reversion (REV) Button

The REV Button is used to manually turn off the MFD in this version, as said before.

4.2.2 Range +/- Button

The RNG+/- Button changes the map scale range for the selected VIEW. Press the RNG+ Button to zoom out (i.e. from 20nm to 30nm) or press the RNG- Button to zoom in (i.e. from 30nm to 20nm).

4.2.3 Menu Button

The MENU Button is used to activate or exit the Main Menu. The first time the Main Menu is accessed the GENERAL SETTINGS menu page displays; subsequently, the last viewed menu page will display.

Not all Hot Keys are used in each VIEW or MENU mode. If a Hot Key does not have a label or is gray color, it does not perform any function for that VIEW or MENU. The Navigation Map VIEW has two levels of Hot Keys; the first Hot Key is labeled 1/2 or 2/2 designating the Hot Key level currently displayed.

4.2.4 Hot Keys/Menu Keys

The five buttons along the lower right side of the EFD500 MFD display offer either Hot Key functionality, to rapidly select a common command, or to select a menu option when the Main Menu is activated.

The functionality of the Hot Key is content sensitive based on which WINDOW/VIEW has the current FOCUS. The label to the left of the Hot Key changes to reflect the current functionality available.

5. USING THE EFD500 MFD

5.1 Select Different PAGE or WINDOW

As previously mentioned, a PAGE displays information on the EFD500 MFD screen. When you make any changes to a PAGE, the PAGE settings are automatically updated and saved for that session or until you the REV button. Changes are made to the current PAGE by selecting the WINDOW and changing the VIEW or other options as desired. If you view another PAGE, then return to the previous PAGE you made changes to, it will have the same settings as when it was last displayed. PAGES can be modified at any time.

The EFD500 MFD must be in Change VIEW Mode to change the current PAGE or WINDOW display. When the EFD500 MFD is in Change VIEW Mode, the Right Knob label reads PUSH SEL WINDOW. When panning; viewing Airport, VOR or NDB information the EFD500 MFD is in VIEW Control Mode. When in VIEW Control Mode the Right Knob label changes to PUSH FOR BACK to allow the pilot to quickly exit VIEW Control Mode and return to Change VIEW Mode.

Rotate the Left Knob clockwise to select the next PAGE, counter-clockwise to select the previous PAGE. The label above the Left Knob will change to indicate the page number currently displayed, as shown below.



Push the Right Knob to activate WINDOW selection mode. The magenta border around the current WINDOW with FOCUS shows and the VIEW label above the Right Knob turns magenta. Each consecutive push of the Right Knob selects the next WINDOW on the PAGE and the magenta border will outline the selected WINDOW as in the picture below.



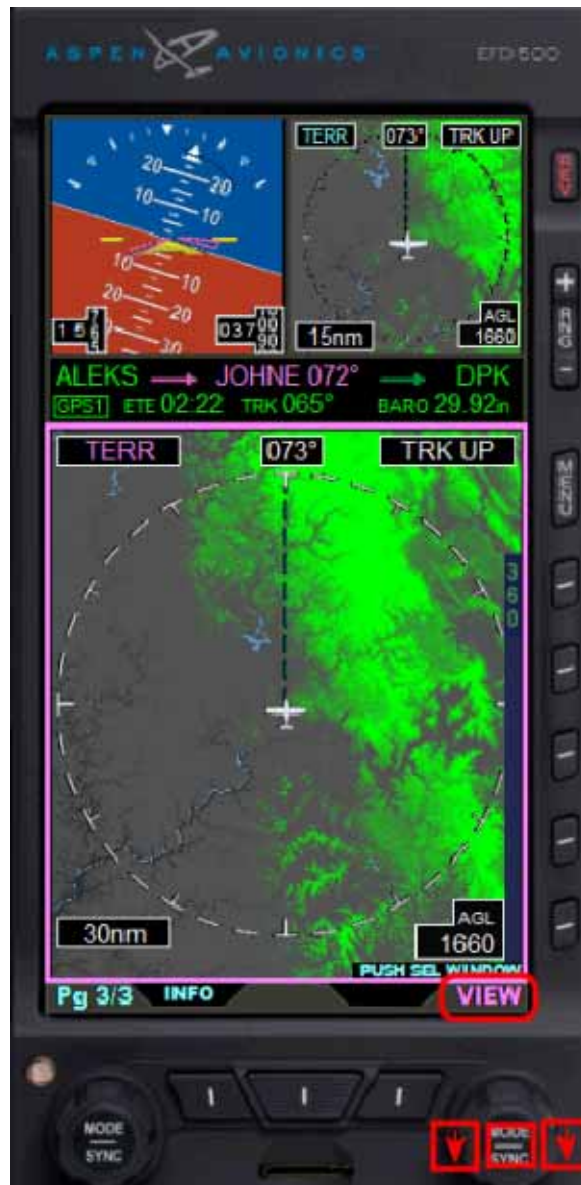
5.2 Change VIEW

A WINDOW can display different VIEWS. To select a different VIEW in any WINDOW you must first move the FOCUS to the WINDOW you want to change, and then select a different VIEW. The current VIEW name displays in the upper left of the WINDOW as shown in table below.

VIEW	NAME
Navigation Map	NAV MAP
Terrain Awareness	TERR
Traffic	TRFC

Change the VIEW of a WINDOW

1. Push the Right Knob until you select the WINDOW you want to change. The Magenta border will move from WINDOW to WINDOW as the Right Knob is pressed to indicate which WINDOW is selected. *The selected VIEW's name also displays in magenta.*
2. Rotate the Right Knob to display the available VIEWS for that WINDOW until the VIEW you want displays (**below is page 3 showing the same VIEW in two WINDOWS**).



5.3 Panning

The Navigation Map VIEW support a panning feature that allows the pilot to view areas away from the aircraft's current position.

Use the Panning Feature

1. Select the WINDOW that contains the VIEW you want to pan. The PUSH TO PAN label displays in cyan above the Left Knob (**see below**).



2. Press the Left Knob to activate panning. The PUSH TO PAN label changes to PUSH TO CANCEL PAN, the Left Knob label changes to HORZ. The Right Knob label changes to VERT with PUSH FOR BACK above the label. All labels are magenta (**see below**).



3. Rotate the Left Knob to pan to left or right and rotate the Right Knob to pan up or down.

4. Push the Left Knob to exit panning mode and return the VIEW to the original position with the aircraft centered in the VIEW. You can also push the Right Knob to return back to the original VIEW mode.

5.4 Main Menu

The MENU Button is used to access the EFD500 MFD's Menu system to change options and also to change the EFD1000's LCD brightness controls.

5.4.1 Using the Menus

You enter MENU mode by pressing the MENU Button. The Main MENU has several pages of information that allow the pilot to fully customize the EFD500 MFD display. Pilot can view, manage, and change the settings of the EFD500 MFD. Some EFD500 MFD Main MENU options available are:

- Change VIEW settings
- Change declutter settings
- Check the battery status
- Restart the system

The first MENU page is the default page. Rotating the Right Knob navigates to different menu pages.

The current Menu Page Name displays on the bottom center of the Display. Directly below the Menu Page Name is a segmented menu page bar, giving a graphical representation of the current page relative to the total number of menu pages. The current menu page number displays in the lower right of the Navigation Display.

The Menu system operates either in Navigation or Edit mode, as indicated by the label directly above the Right Knob. When the MENU Button is first pressed, the Menu system is in Navigation mode, indicated by the magenta label SEL PAGE directly above the Right Knob (**see below**).



When in Navigation mode, rotating the Right Knob navigates through the menu pages. Rotate the Right Knob clockwise to advance to the next menu page. Rotate the Right Knob counterclockwise to return to previous menu page.

Each Menu page provides up to five selectable options, each adjacent to one of the five Menu Keys. After navigating to the Menu Page containing the option you want to change, press the Menu Key adjacent to that option label, which initiates the menu's Edit mode. When the menu is in Edit mode, the label EDIT VALUE, displays above the Right Knob in magenta (**see below**), and the label of the item selected for editing is also shown in magenta. Rotate the Right Knob to change the value of the selected item.



When done, either select another displayed option to change, or push the Right Knob to exit Edit mode and return to Navigation mode to select another menu page. When you are finished changing menu options, press the MENU Button again to exit the menu system (**see below**).



1. Main Menu
2. Menu Page number and mode (Edit mode shown)
3. Menu Page Name and Menu Page graphical bar
4. Brightness Control (not available in this version)

The menu text will display in one of the four colors listed and described below:

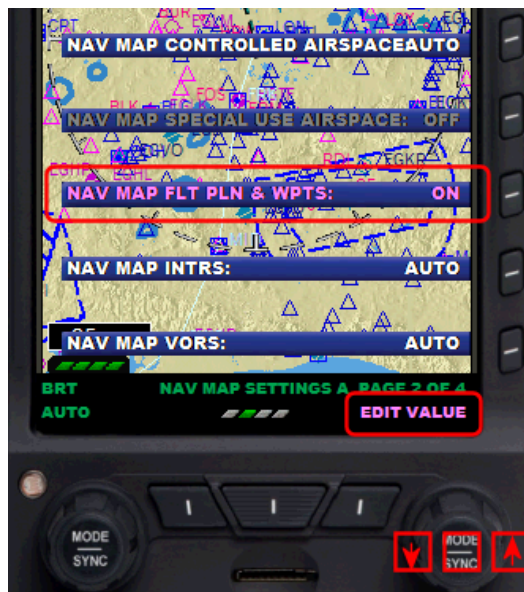
DISPLAY TEXT	DESCRIPTION	DISPLAY EXAMPLE
WHITE	Editable option	NAV MAP AIRPORTS: AUTO
MAGENTA	Editable option enabled	NAV MAP FLT PLN & WPTS: ON
GREEN	Non-Editable or "Status Only"	BAT: CHARGING
GRAY	Disabled	NAV MAP SPECIAL USE AIRSPACE: OFF

5.4.2 Access and Navigate the Main Menu

1. Push the MENU Button. The Main Menu displays adjacent to the Hot Keys.
2. Rotate the Right Knob to navigate through the different pages of the menu. Rotating the Right Knob clockwise advances forward one menu page at a time. Rotating the Right Knob counterclockwise reverses one menu page at a time.
3. When finished, press the MENU Button to exit the Main Menu.

5.4.3 Edit Main Menu Items

1. Access the Main Menu.
2. Navigate to the desired menu page.
3. Push the Menu Key of the desired option. The menu label turns magenta and the EDIT VALUE label displays above the Right Knob (see below).



4. Rotate the Right Knob to the desired value.
5. Push the Right Knob to save the value and return to menu navigation mode.
6. Push the MENU Button to exit the Main Menu.

Pressing the Right Knob returns to navigation mode and allows selection of other menu options on different pages. Pressing another menu key on the current menu page saves any changes made, and activates the newly selected option for editing.

5.5 Range Button

The RNG (Range) button is used to zoom in or out in scale to display more or less of the map. The map range available depends on the VIEW. Press the top or (+) of the RNG key to increase map range. Press the bottom or (-) of the RNG key to decrease map range. Additionally an Auto Range feature is available.

6. REFERENCE GUIDE

The EFD500 MFD is a panel-mounted Electronic Flight Instrument System (EFIS) that presents the pilot with a full-color moving Navigation Map VIEW and a dedicated Terrain VIEW. Additionally, in this version of the gauge, there is one VIEW that provide Traffic.

The Navigation Map VIEW displays aviation data (e.g., Nav aids, intersections, airports, etc.) topographic information, boundaries, and GPS flight plan information. Each VIEW is clearly labeled in the upper left corner of the window.

The MFD500 MFD also has a Secondary Attitude Indicator which provide the safety and confidence of the PFD instrument redundancy.

The Reference Guide offers detailed information about each of the available VIEWS and step-by-step instructions to guide the pilot in the use and operation of each VIEW.

6.1 Navigation Map

The Navigation Map VIEW is a pilot configurable, moving map. The Navigation Map VIEW's default map style is a VFR map, oriented North-Up with the Ownship symbol located at the center of rotation of the map displaying a 360° range ring. The pilot can select either an IFR or VFR style map via a Hot Key. The remaining Hot Keys provide the pilot options to select the range ring type, change the map declutter settings, and will display airways and traffic overlays (see below).



Navigation Map VIEW, IFR Style Map, Showing Hot Key Menu 1/2



Navigation Map VIEW, VFR Style Map, Showing Hot Key Menu, Page 2/2

The Navigation Map VIEW has six Hot Keys (two menus) with the first Hot Key labeled 1/2 or 2/2 (depending on the menu you are viewing) as outlined in next table.

Hot Key	Menu 1/2	Hot Key	Menu 2/2
VFR IFR	Selects the Navigation Map type.	TERR	Goes to TERRAIN VIEW
360 ARC	Selects the range ring type		
MAP	Selects declutter level.		
ARWY LO HI	Turns the Airways overlay on (HI or LO) or off.	TRFC	Turns the Traffic overlay on or off.

The Range +/- button and the Map Hot Key allow the pilot to control the map range and provide feature declutter. The current map range and declutter settings are shown in the lower left corner of the VIEW. Additionally, more detailed customization is available from the main menu, giving the pilot control over the symbols that can be shown on the map:

- Airports
- Boundaries
- Airspace Boundaries
- Etc...

The map range scale settings are 0.5, 1, 2, 3, 5, 10, 15, 20, 30, 40, 60, 80, 100, 200, 500, 1000 and 2000 nautical miles from the ownship position to the range ring.

NOTE.- The data source for Navigation Map is obtained from FSX internal database and cannot be updated in this version of the gauge.

6.2 General Map Settings

There are several options available to customize the Navigation Map VIEW. The default settings for the Navigation Map VIEW are found in the Main Menu on the GENERAL SETTINGS page and two MAP SETTINGS pages. Based on your flying preferences you may want to change the Navigation Map orientation and other items you want to display. The default Map General Settings options are described in the table below.

Main Menu Page	Menu Label	Available Settings	Default Setting
GENERAL SETTINGS	NAV MAP ORIENTATION	N-UP MODE TRK-UP MODE	N-UP MODE
	AUTO RANGE	ENABLE/DISABLE	DISABLE
MAP SETTINGS A	CONTROLLED AIRSPACE	AUTO / OFF	AUTO
	N/A		
	FLT PLN & WPTS	ON / OFF	ON
	INTRS	AUTO / OFF	AUTO
	VORS	AUTO / OFF	AUTO
MAP SETTINGS B	NDBS	AUTO / OFF	AUTO
	APTS	AUTO / OFF	AUTO
	N/A		
	N/A		
	BOUNDARIES	AUTO / OFF	AUTO
Main Menu Navigation Map Settings			

Change Map Orientation

1. Access the Main Menu.
2. Navigate to the GENERAL SETTINGS menu page.
3. Push the NAV MAP ORIENTATION Menu Key. The menu label turns magenta and the EDIT VALUE label displays above the Right Knob.



4. Rotate the Right Knob to the desired value, N-UP, or TRK-UP.

North-Up	Track-Up
NORTH-UP label displays in the upper right corner of the VIEW.	TRK UP label displays in the upper right corner of the VIEW.
Navigation Map VIEW is oriented North Up, aligned with the vertical axis of the display.	Navigation Map VIEW is oriented with the aircraft's current GPS ground track, aligned with the vertical axis of the display.

5. Push the Right Knob to return to menu navigation mode.
6. Push the MENU Button to exit the Main Menu

6.3 Map Symbols

The EFD500 MFD Navigation Map VIEW offers several feature groups that display as symbols on the map. The data source for rendering all is the FSX internal Database information. The symbols are layered on the map as shown in next table:

Flight Plan Legs and Waypoints	Yes	Yes	Yes	Yes
Airports	Yes	Yes	Yes	No
Airspace	Yes	No	No	No
NDBs	Yes	Yes	Yes	No
VORs	Yes	Yes	Yes	No
Intersections	Yes	Yes	No	No

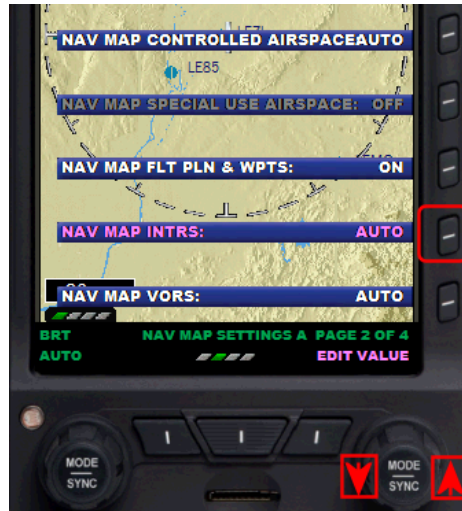
The declutter options for each feature group is pilot selectable from the Main Menu as either automatic (AUTO), or always off (OFF). Feature groups that are set to AUTO will display based on the Declutter settings selected by the pilot and the selected Range as outlined in

table above. When a feature group is turned OFF, the feature group will not display, regardless of the map range or declutter settings.

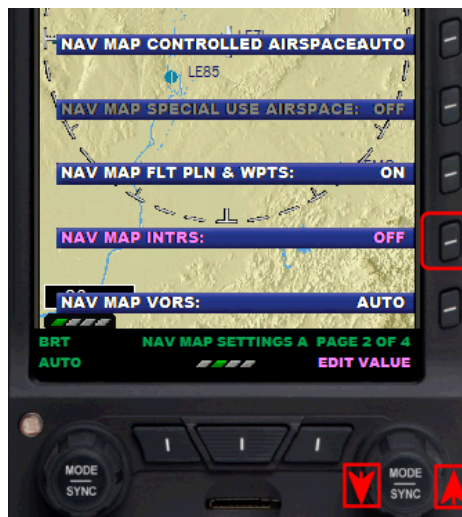
Changing Feature Group Display Setting

You can change multiple feature group settings without exiting the Main Menu.

1. Access the Main Menu.
2. Navigate to the MAP SETTINGS A or B page that lists the feature group you want to change.
3. Push the Menu Key that corresponds to the name of the feature group you want to change. The feature group menu label turns magenta and the EDIT VALUE label displays above the Right Knob.



4. Rotate the Right Knob to the desired value, AUTO/ OFF.



5. If you want to change other feature group settings, push the corresponding Menu Key. Your selection for the feature group changed in step 4 is saved and the new feature group label turns magenta.
6. Rotate the Right Knob to the desired value, AUTO or OFF.
7. Repeat steps 5 and 6 as desired.
8. Push the Right Knob to return to menu navigation mode.
9. Push the MENU Button to exit the Main Menu.

6.4 Map Range

The RNG +/- Button on the right of the EFD500 MFD display is used to zoom in or out (respectively) to display more or less of the map. The pilot can select map ranges from 0.5 to 2000 nautical miles, incrementing one range value with each press of the RNG +/- button. The current map range is shown as a numeric value on the lower left of the Navigation Map VIEW.



Change the Map Range

Press the RNG +/- Button until the desired map range is acquired. Press the RNG + Button to increase map range. Press the RNG - Button to decrease map range.

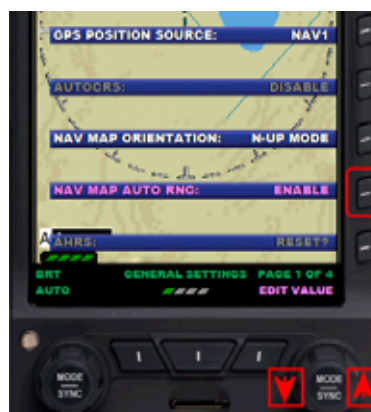
The EFD500 MFD has an Auto-Range feature that automatically scales the range (to the closest range setting) to two times the distance between the ownship and the active waypoint, i.e. if the active waypoint is 84 miles away, auto-range will go to 200 nm ($84 \times 2 = 168$, closest range setting is 200).

When Auto-Range is active an inverted white A displays next to the numeric range value.



Turn Auto Range Off or On

1. Access the Main Menu.
2. Navigate to the GENERAL SETTINGS menu page.
3. Push the NAV MAP AUTO RNG Menu Key. The NAV MAP AUTO RNG label turns magenta.



4. Rotate the Right Knob to the desired value, either ENABLE or DISABLE.

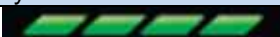




5. Push the Right Knob to return to menu navigation mode.
6. Push the MENU Button to exit the Main Menu.

Deactivate Auto-Range

When Auto-Range is active, press the RNG +/- Button once to deactivate Auto-Range mode. The inverted white A next to the numeric range value is removed. Pressing RNG + moves to the next higher range, pressing RNG - moves to the next lower range.

6.3 Map Declutter

There are four map feature declutter levels available that work in conjunction with the map range to aid in map declutter. Each level is represented by a graphical bar below the numerical range display.

Declutter Range	Display
High (H)	
Med-High (MH)	
Med-Low (ML)	
Low (L)	
Off	

Change the Map Feature Declutter Level

Press the MAP Hot Key until the desired map declutter level is selected.

6.4 GPS Information

The GPS navigation source is selected from the Main Menu.

Change the GPS Navigation Source

1. Press the Menu Key to enter the Main Menu.
2. Display the General Settings page if it is not already displayed.
3. Press the first Hot Key, GPS POSITION SOURCE. The menu label turns magenta.
4. Rotate the Right Knob to select the desired GPS navigation source.
5. Press the Menu Key to exit the Main Menu and save your selection.

6.5 Airport/VOR/NDB Information

The Navigation Map provides detailed information about airports and VORs that are shown on the display. The lower left button is labeled INFO and when pressed, the EFD500 MFD displays additional information for airport, VOR and NDB.



The label text displays text as follows (when data available):

Airports:

- Airport elevation and runway length
- Tower frequency
- ATIS frequency

VORs and NDBs:

- VOR or NDB frequency.


If you are in PAGE 1 the Left Knob label changes to read Apt/Vor in magenta, with PUSH FOR DETAILS directly above the Left Knob label. When the Left Knob is pushed once the first nearest airport textual information is displayed, use Left Knob to browse the other nearest airports information. Pushing Left Knob twice will do the same for VORs and three times for NDBs, you can also use the Left Knob to browse through nearest nav aids (**see below**).



NOTE: Remember, in this version, only from page 1 is this information available.

The Navigation Map hot keys are replaced with either a VOR, NBD, or Airport Hot Key(s). There is only one page of textual information for VORs and NBDs, and the Hot Key has no function. Airports have three pages of information (APT, COM and RWY) to view, selectable by the hot keys as outlined in next table.

HOT KEY	Information Displayed (if available)
VOR	<ul style="list-style-type: none"> • VOR Identifier • Name and Type of VOR • VOR Frequency • Bearing To and FROM VOR • Distance To VOR • Estimated Time En route (ETE) to VOR • Latitude and Longitude to VOR • Elevation of VOR • Magnetic Variation to VOR • Type of VOR
NDB	<ul style="list-style-type: none"> • NDB Identifier • Name of NDB • NDB Frequency • Bearing To and FROM NDB • Distance To NDB • Estimated Time En route (ETE) to NDB • Latitude and Longitude • Elevation of NDB • Type of NDB
APT	<ul style="list-style-type: none"> • Airport Identifier • Name of Airport • Location of Airport (city, state, and country) • Elevation of Airport • Bearing To and FROM Airport • Distance To Airport • Estimated Time En route (ETE) to Airport • Latitude and Longitude
COM	<ul style="list-style-type: none"> • Selected airport's frequencies
RWY	<ul style="list-style-type: none"> • Airport Identifier • Name of Airport • Runway • Runway Lengths and Widths • Runway Surface Type • Type of Runway Lighting

When you're in the COM or RWY pages of an airport you can use the Right Knob to browse through different frequency or runway pages. If there is more than one page you'll see the  symbol in the Right Knob label.

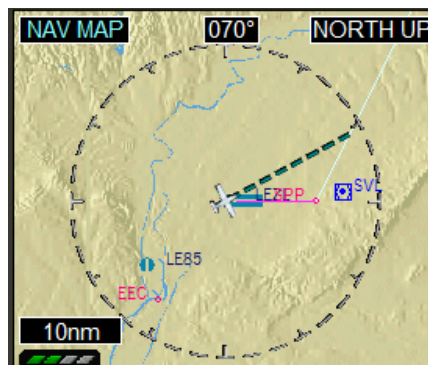


View Airport/VOR Information

1. With the Navigation Map VIEW selected (magenta border), press the lower Left Button labeled INFO. The Left Knob label changes to Apt/Vor and both the Left Knob and Left Button label turn magenta.
2. Press the Left Knob to display the selected airport's, VOR's or NDBs pop-up information.
3. Rotate the Left Knob to scroll through each displayed airport, VOR or NDB.
4. Rotate the Right Knob to scroll through COM or Runway pages.
5. Press the lower Left Button as necessary (could be several times) or the Right Knob, to exit this information mode. Both the Left Knob and Left Button label turn cyan. When you exit INFO mode, airport, VOR and NDB labels in the MAP VIEW turn to normal information.

6.6 Flight Plan

When the EFD1000/500 MFD display the current flight plan, it overlays all other symbology on the Navigation Map VIEW except for the ownship, GPS track, and traffic. The basemap will display all waypoints and legs. The active leg and waypoint are magenta, and all other waypoints and legs are white:



6.7 Map Styles

The Navigation Map basemap is displayed as either an IFR or VFR style map.



Airways and Traffic are available as overlays via Hot Keys.

The VFR Map Style is a topographical style map similar to VFR Sectional Aeronautical Charts, coloring absolute terrain background based on MSL. The VFR Map Style shows data such as water and boundaries. The pilot can control the data displayed via the Main Menu.

The IFR Map Style is a blank map background similar to IFR En Route Charts, showing navaids, airports, and controlled airspace. Topographical data, highways, roads, and railroads are not shown.

Change the Map Style

- With the Navigation Map VIEW selected, push the IFR/VFR Hot Key.

6.8 Overlays

There are two additional map features that can be displayed on the Navigation Map VIEW, Airways and Traffic. Each of these overlays is enabled or disabled via Hot Keys (**Figure 5-23**).

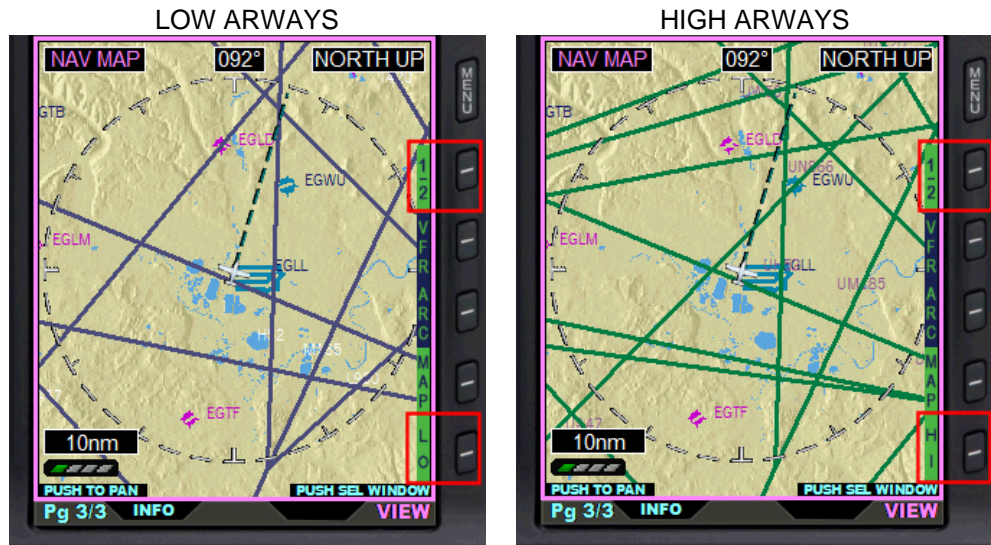
6.8.1 Airways Overlay

The Airways Hot Key enables airway display and allows the pilot to select the type of airways that overlay the Navigation Map VIEW. When enabled, the Airway overlay displays airway legs and identifiers. Airways will display for 10 seconds, to provide orientation, and then they are removed. The Hot Key label will display either LO, HI, or ARWY (OFF):

- Selecting LO displays Low Level (Victor) Airways
- Selecting HI displays High Level (Jet) Airways

Show the Airways Overlay

With the Navigation Map VIEW selected, press the ARWY Hot Key until the desired Airway setting (LO/HI/ARWY) is displayed on the Hot Key label.



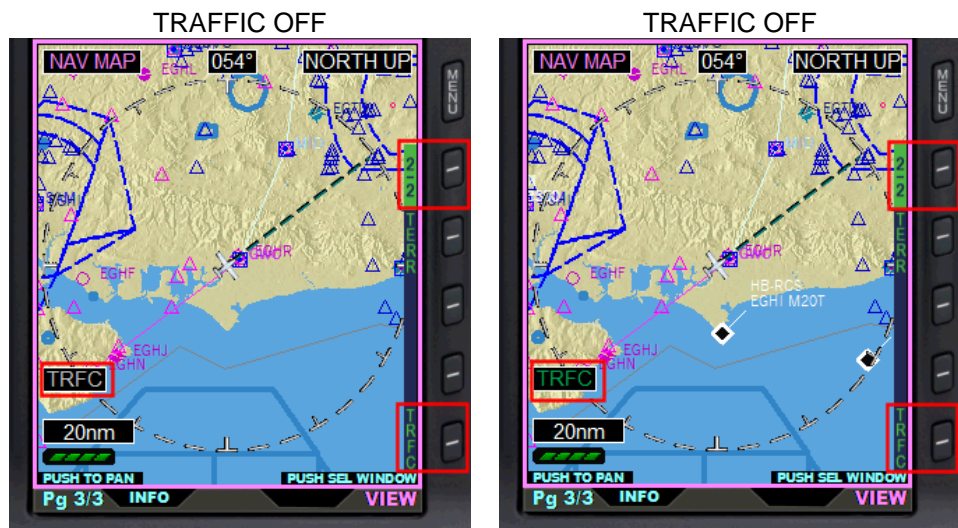
6.8.2 Traffic Overlay

The Traffic Hot Key enables the traffic display overlaid on the Navigation Map VIEW.

When enabled, the Traffic overlay displays traffic around you. The Hot Key label TRFC is green when enabled and gray when disabled.

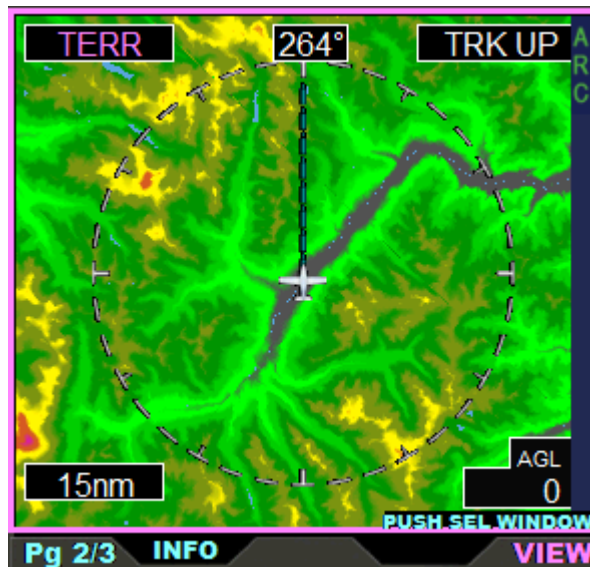
Show the Traffic Overlay

- With the Navigation Map VIEW selected, display the 2/2 Hot Key menu.
- Press the TRFC Hot Key to turn Traffic on (label turns green) or off (label turns gray) and the TRFC annunciation displays in the lower left of the display



6.9 Terrain and Obstructions

Relative terrain is displayed on a black background, with a 360° or ARC range ring, and is overlaid by the current flight plan if available. The displayable range is 5 – 100 nm with a default display of 15 nm.



Change Terrain Range Ring

- Press the 360/ARC Hot Key to select a different range ring.

Terrain VIEW is oriented Track-Up with the aircraft's magnetic heading aligned with the vertical axis of the display. The label TRK UP displays in the upper right corner of the display and the current heading is displayed in the upper middle of the display.

This FSX version of the EFD 500 display the terrain map based on the following table color codes:

Terrain Height (feet)	Color Code
0 - 2000	Black
2000 – 4000	Grey
4000 – 6000	Light Green
6000 – 8000	Green
8000 – 10000	Dark Green
10000 – 12000	Olive Green
12000 – 14000	Yellow
14000 – 16000	Orange
> 16000	Red

The current height above ground (AGL) is shown in the AGL box in the lower right of the display (in red if AGL is under 1000 feet and the aircraft is not on ground).

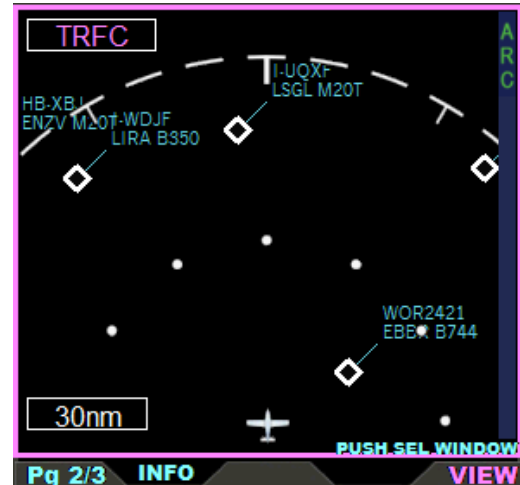
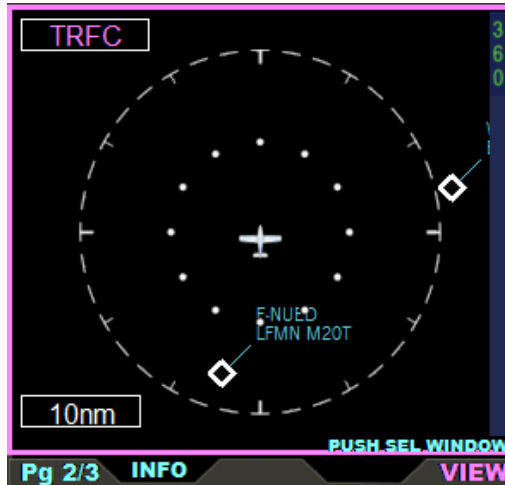
Note.- The real instrument terrain data color coding and display is based on the difference between the terrain height (MSL) and the aircraft height (MSL). The relative terrain height is determined by computing the altitude difference between the terrain height and the computed Baro Corrected Altitude. As far as FSX seems not to update the map with the required frequency (as least we couldn't make it) we decided to use the method described above for terrain map.

6.10 Traffic Display

The Traffic VIEW is oriented Track-Up, with either a 360° or ARC compass view. The pilot selects the compass view by pressing the 360/ARC Hot Key; 360° is the default when not previously set. The range is pilot-selectable.

Change Traffic Range Ring

- Press the 360/ARC Hot Key to select a different range ring.



7. SUPPORT

If you have any question, please contact FriendlyPanels at:

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Web page:

www.friendlypanels.com