GARMIN

æra™

models: 500, 510, 550, 560

Aviation Quick Reference Guide

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SECTION 1 OVERVIEW

1.1 UNIT OVERVIEW

The purpose of this document is to provide a resource with which to find operating instructions on the major features of the aera more easily. This Quick Reference Guide is not intended to be a comprehensive operating guide. Refer to the aera 500 Series Pilot's Guide for complete operating procedures and warnings.

⏻ *Power Button*

Headphone/audio-out Jack (Under Weather Cap)

Microphone

External Antenna Connector (Under Weather Cap)

Mini-USB Connector

MicroSD™ Slot

GPS Antenna

Battery Contacts

Speaker

Release Key: Slide and Release to Open the Battery Cover

Serial Number (Under the Battery)

Unit Overview

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1.2 GETTING STARTED

BATTERY INSTALLATION

Installing the battery:

1) Locate the lithium-ion battery that came in the product box.

2) Slide the release key until the battery cover on the back of the aera opens up.

3) Remove the battery cover.

4) Locate the metal contacts on the end of the lithium-ion battery.

5) Insert the battery so that the metal contacts on the battery line-up with the metal contacts inside the battery compartment.

6) Slide the top of the battery cover into the groove on the inside of the battery compartment, and press down.

Installing the Battery

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CHARGING THE BATTERY

NOTE: While in Charge Mode, the unit draws a current from the aircraft. To avoid discharging the aircraft's battery, disconnect the external power cable from the unit when not in use for several days.

Charging the unit's battery using the aircraft's power outlet:

1) Mount the aera in the aircraft (refer to Appendix D of the aera 500 Series Pilot's Guide), and connect the power cable to the aircraft power outlet (cigarette lighter receptacle).

2) Route the power cable so that it does not interfere with aircraft operation. The unit begins charging as soon as external power is applied.

CHANGING MODES

The aera offers two modes for transportation: automotive and aviation.

Changing modes:

1) Touch the automotive or aviation icon at the top of the '**Home**' Screen.

2) Touch **Yes**.

Aviation   Automotive

Or:

1) From the '**Home**' Screen, touch **Tools** > **Automotive** or **Aviation** (from automotive mode).

2) Touch **Yes**.

GPS RECEIVER STATUS

The ▁▂▃▄ bars on the '**Home**' Screen indicate the GPS signal strength.

Viewing the GPS status:

From the '**Home**' Screen, touch **Tools** > **GPS Status**.

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1.3 OPERATION

BASIC NAVIGATION CONTROLS

The controls on the touchscreen change dynamically depending on the function displayed.

Touch the following icons to perform the associated function:

Home   Returns to the '**Home**' screen.

Back   Displays the previous page; Returns '**Home**' (touch and hold).

OK   Commits a value edited or selected.

Menu   Displays the context sensitive option menu.

Menu/D▸   Displays the menu; Displays the **Direct-to** function (touch and hold).

Up   Scrolls up.

Down   Scrolls down.

Direct-to   Displays the **Direct-to** function.

Out   Zooms out.

In   Zooms in.

KEYPAD CONTROLS

OK   Exits the keypad function and accepts the changes.

BKSP   Erases the current data.

Numeric   Displays the numeric only keypad.

Alpha   Displays the alpha and numeric keypads.

Cancel   Cancels a value that has been edited.

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'HOME' SCREEN

Touch the 🏠 icon at any time to access the '**Home**' Screen.

'HOME' SCREEN ICONS

Touch the following icons to perform the associated function:

	Map	Displays the Navigation Map.
	Terrain	Displays the Terrain Map.
	HSI/Panel	Displays the Panel Mode.
	Nearest	Displays the second-level Nearest Icons.
	Numbers	Displays flight data.
	Active FPL	Displays the Active Flight Plan.
	WPT Info	Displays the Waypoint Information.
	Direct To	Displays the 'Direct To' function.
	Position	Displays the aircraft's Present Position.
	Weather	Displays second-level Weather Icons (aera 510 & 560).
	XM Radio	Displays XM Radio (aera 510 & 560).
	Tools	Displays second-level Tools Icons.

NEAREST ICONS

From the '**Home**' Screen, touch the **Nearest** Icon to access the second-level Nearest Icons.

Touch the following icons to perform the associated function:

	Airport	Displays nearest airports.
	Airport WX	Displays nearest airport weather.
	VOR	Displays nearest VORs.
	NDB	Displays nearest NDBs.

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	Intersection	Displays nearest intersections.
	VRP	Displays nearest Visual Reporting Point (VRP) (Atlantic).
	User WPT	Displays nearest user waypoints.
	City	Displays nearest cities.
	ARTCC	Displays nearest ARTCCs.
	FSS	Displays nearest Flight Service Stations (FSS).
	Airspace	Displays nearest airspace.

WEATHER ICONS (aera 510 & 560)

From the '**Home**' Screen, touch the **Weather** Icon to access the second-level Weather Icons.

Touch the following second-level Icons to display the weather product on the Weather Map:

	NEXRAD	Displays NEXRAD (NEXt-generation RADar).
	Satellite	Displays Satellite Mosaic cloud cover.
	Echo Tops	Displays Echo Tops.
	Winds	Displays Winds Aloft.
	Lightning	Displays Lightning.
	Storm Cells	Displays Storm Cells.
	METAR	Displays METARs.
	AIRMET	Displays AIRMETs.
	SIGMET	Displays SIGMETs.
	TFR	Displays TFRs (Temporary Flight Restrictions).
	PIREP	Displays PIREPs.

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	Freeze Lvl	Displays Freezing Levels.
	Turb Fcst	Displays the Turbulence Forecast.
	Icing Fcst	Displays the Icing Forecast.
	WX Frst	Displays Forecast Information (current, 12, 24, 36, & 48).
	Pressure	Displays Surface Pressure.
	Sea Temp	Displays Water Temperature.

TOOLS

From the '**Home**' Screen, touch the **Tools** Icon to access the second-level Tools Icons.

Touch the following second-level icons to perform the associated function:

	Setup	Displays third-level Setup Icons.
	User WPT	Displays User Waypoints and Proximity Waypoints.
	Flight Log	Displays Flight Logs.
	Track Log	Displays Track Logs.
	FPL List	Displays the Flight Plan List.
	VNAV	Displays Vertical Navigation.
	Profile	Displays Aircraft Profiles.
	E6B Calc	Displays the E6B Calculator.
	Weight/Bal	Displays the Weight & Balance.
	Database	Displays database and software version information.
	Automotive	Activates automotive mode.
	GPS Status	Displays GPS status information.

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From the '**Home**' Screen, touch the **Tools** > **Setup** to access the third-level Setup Icons.

Touch the following third-level icons to perform the associated function:

	Display	Displays backlight intensity/timeout and color mode settings.
	Sound	Displays sound settings.
	Units	Displays unit settings.
	Date/Time	Displays date & time settings.
	Map	Displays Navigation Map settings.
	Position	Displays position settings.
	Interface	Displays interface settings.
	Alarms	Displays alarm settings.
	SUA Alarms	Displays Special Use Airspace alarm settings.
	Power	Displays power settings

SELECTING A FUNCTION

Touch the desired icon. The icon will momentarily turn blue when selected.

Terrain Icon Selected ('Home' Screen)

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SCROLLING

Scrolling up/down on the touchscreen:

Touch the **Up** or **Down** Arrow Icons (if available).

Or:

If the arrow icons are present, touch and drag your finger up or down.

Scrolling (Weather Icons)

1.4 ACCESSING SYSTEM FUNCTIONALITY

OPTION MENUS

The aera has a dedicated **Menu** Icon that displays a context-sensitive list of options for the function displayed.

Navigating the option menu:

❶ If available, touch the **Menu** or **Menu/Ð►** Icon

❷ Touch the **Up**/**Down** Icons if necessary to scroll through the Option Menu.

❸ Touch the desired menu option.

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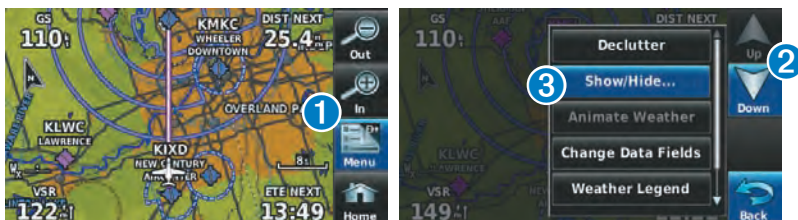
DATA ENTRY

Entering alphanumeric data:

❶ When alphanumeric data can be entered, a keypad will appear after touching the desired button.

❷ Touch the keypad to enter the desired data.

❸ Touch **OK**.
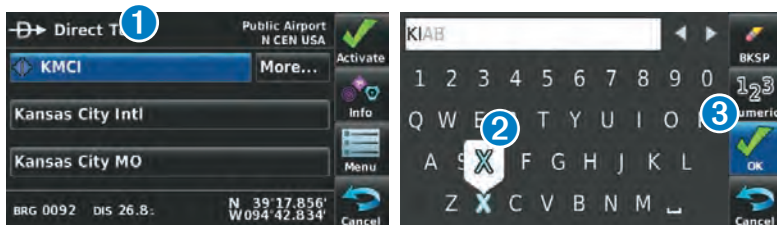
Numeric data may also be entered using ◀▶ or '+/-' buttons (if applicable).

Entering predetermined data options:

❶ Touch the Data Option Button to display a vertical list of data options (if applicable), or to toggle two data options (i.e., On/Off).

Or:

Touch the ◀▶ buttons to cycle through a horizontal list (if more than two data options are available).

❷ If using the vertical list, touch the desired data option from the list.

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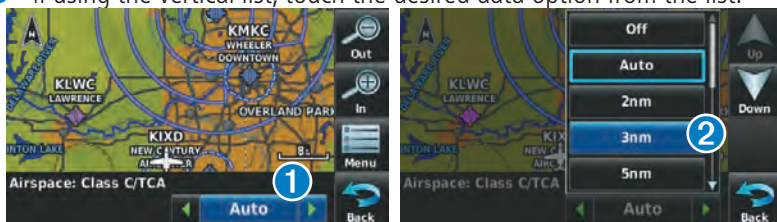
1.5 USING MAP DISPLAYS

MAP PANNING

Activating the map pointer:

While viewing a Map Display, touch anywhere on the map to activate the map pointer. Touch the **Cancel** Icon to remove the map pointer.

Panning the map:

While viewing a Map Display, touch anywhere on the map and drag. Touch the **Cancel** icon to remove the map pointer.

Reviewing information for a map feature:

❶ While viewing a Map Display, touch anywhere on the map to activate the map pointer. When the Map Pointer is over a map feature, the map feature is highlighted, an information box appears on the map, and the highlighted map feature is displayed on the Map Feature Button at the bottom of the screen. If multiple features are present at the Map Pointer position, green arrows will appear on the Map Feature Button.

❷ If necessary, touch the ◀ ▶ buttons to cycle through the list of map features present at that position.

❸ Touch the Map Feature Button to review information for the Map Feature.

❹ Touch the **Back** Icon to return to the map or touch and hold the **Menu**/Ð► Icon to navigate to the map feature. Touch the **Cancel** Icon to remove the map pointer.

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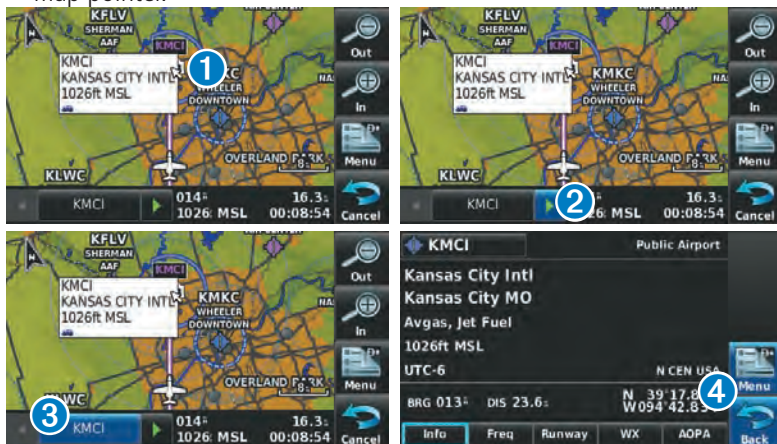
MAP RANGE

There are 23 different map ranges available, from 200 feet to 800 nm. The current map range is indicated in the lower right. The scale bar represents the map scale. To change the map range on any map, use the **Out** or **In** Icons to zoom 'out' (increasing), or zoom 'in' (decreasing).

MAP OVERLAYS

The ❶Weather, ❷Topography, ❸Terrain, and ❹Satellite Imagery map overlays can be displayed or removed.
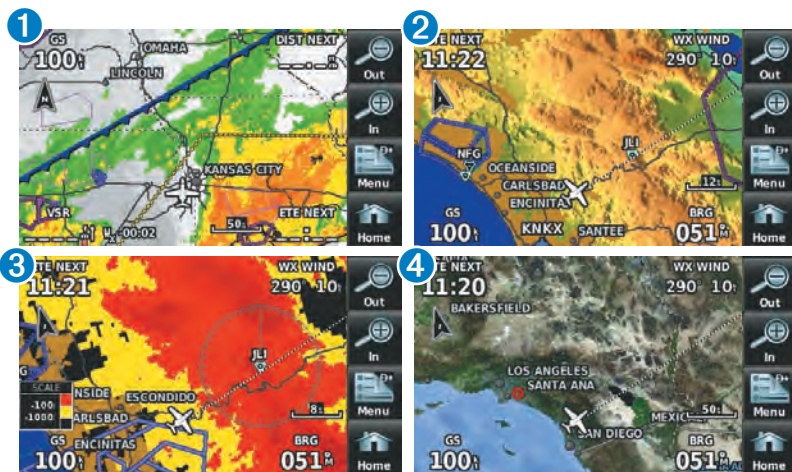
Displaying/removing map overlays:

1)   From the '**Home**' Screen, touch **Map** > **Menu** > **Show/Hide**.

2)   Touch the '**Show**/**Hide**' Data Option Button for the desired overlay.

Satellite View only displays satellite imagery at and above the 20nm range. Below the 20nm range, 'no sat view' is displayed below the map range.

SECTION 2 GPS NAVIGATION

2.1 FLIGHT DATA

DATA FIELDS

 Changing the information shown in the data fields:
1) From the '**Home**' Screen, touch the **Map** Icon.
2) Touch the **Menu** Icon.
3) Touch the '**Change Data Fields**' menu option.
4) Touch the desired Data Field to change. A list of available Data Field Options is displayed.
5) Touch the desired Data Field Option.
6) Touch the **OK** Icon.

NUMERIC FLIGHT DATA

The numeric flight data can be independently configured by the user.

 Accessing numeric flight data:
From the '**Home**' Screen, touch **Numbers**.

 Changing numeric flight data fields:
1) From the '**Home**' Screen, touch **Numbers**.
2) Touch the desired data field to change. The available data fields are displayed.
3) Touch the desired data field.
4) Touch **OK**.

 Restoring default numeric flight data:
From the '**Home**' Screen, touch **Numbers** > **Menu** > **Restore Default**.

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2.2 HSI/PANEL

CHANGING THE CDI SCALE

The CDI scale can be set by touching the **In** or **Out** Icons from the **HSI/Panel** Screen (if the CDI scale is NOT set to 'Automatic') or from the HSI/Panel option menu.

Changing the CDI scale:

1) From the '**Home**' Screen, touch **HSI/Panel** > **Menu** > **Set CDI Scale**.

2) Touch the desired CDI Scale (' **Automatic**', ' **0.25 nm**', ' **1.25 nm**', or '**5.00 nm**').

SETTING THE BUG INDICATOR

The Bug Indicator can be set from the HSI/Panel option menu.

Setting the Bug Indicator:

1) From the '**Home**' Screen, touch **HSI/Panel** > **Menu** > **Set Bug Indicator**.

2) Touch the desired menu option ('**User Selected**', '**Bearing**', '**Course to Steer**', or '**Off**').

MANUALLY SETTING A COURSE

Use the 'Set OBS and Hold' menu option to manually set your course to the destination.

Manually setting a course to the destination waypoint:

1) From the '**Home**' Screen, touch the **HSI/Panel** or the **Active FPL** Icon.

2) Touch the **Menu** Icon

3) Touch the ' **Set OBS and Hold**' menu option (only available when navigating a Direct To or Flight Plan).

4) Touch the '**+**' or '**-**' Buttons to increase/decrease the value

   Or:

Touch the Radial Button to enter the desired radial using the keypad and touch the **OK** Icon.

Returning to automatic sequencing of route waypoints:

1) From the '**Home**' Screen, touch the **HSI/Panel** or the **Active FPL** Icon.

2) Touch the **Menu** Icon

3) Touch the '**Release Hold**' menu option (only available when navigating a Direct To or Flight Plan).

2.3 VERTICAL NAVIGATION (VNAV)

USING THE VNAV FEATURE

Enabling/disabling the VNAV indicator:

1) From the '**Home**' Screen, touch the **HSI/Panel** Icon.

2) Touch the **Menu** Icon

3) Touch the '**Enable VNAV Indicator**' or '**Disable VNAV Indicator**' menu option (only available when navigating a Direct To or Flight Plan).

Capturing/cancelling VNAV profile:

1) Enter a valid VNAV profile (see 'Configuring a VNAV Profile' below) and begin navigation.

2) From the '**Home**' Screen, touch the **HSI/Panel** Icon.

3) Touch the '**Capture VNAV Profile**' or '**Cancel Capture**' menu option (only available when navigating a Direct To or Flight Plan).

Configuring a VNAV profile:

1) From the '**Home**' Screen, touch **Tools** > **VNAV**

2) Touch the desired fields ('**Profile**', '**Altitude**', etc) to enter the VNAV profile.

3) Touch and hold the **Back** Icon to return to the '**Home**' Screen.

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2.4 WAYPOINTS

Selecting an airport for review by identifier, facility name, or city:

1) From the '**Home**' Screen, touch **WPT Info** > **Info** Tab (if necessary).

2) Touch the Waypoint Identifier Button.

3) Enter the desired waypoint:

    a) Touch the ◀ ▶ buttons to '**Search by Identifier**', '**Search by Facility Name**', or '**Search by City**' using the keypad.

    b) Enter the desired waypoint.

    c) Touch the **OK** Icon.

    Or:

    a) Touch the ◀ ▶ buttons to cycle through the waypoint categories ('**Flight Plan Waypoints**', '**Nearest Airports**', or '**Recent Waypoints**'.)

    b) Touch the desired waypoint from the list.

4) If duplicate entries exist for the entered facility name or location, duplicate waypoints are displayed. Touch the desired waypoint from the list.

Selecting a runway:

1) From the '**Home**' Screen, touch **WPT Info** > **Runway** Tab.

2) Touch the Waypoint Identifier Button.

3) Enter the desired waypoint:

    a) Touch the ◀ ▶ buttons to '**Search by Identifier**', '**Search by Facility Name**', or '**Search by City**' using the keypad.

    b) Enter the desired waypoint.

    c) Touch the **OK** Icon.

    Or:

    a) Touch the ◀ ▶ buttons to cycle through the waypoint categories ('**Flight Plan Waypoints**', '**Nearest Airports**', or '**Recent Waypoints**'.)

    b) Touch the desired waypoint from the list.

4) If duplicate entries exist for the entered facility name or location, duplicate waypoints are displayed. Touch the desired waypoint from the list.

5) If multiple runways exist, touch the Runway Button, and touch the desired runway from the vertical list.

> **Or**:

Touch the ◀ ▶ buttons to cycle through the runways.

Selecting additional information for a frequency:

1) From the '**Home**' Screen, touch **WPT Info** > **Freq** Tab.

2) Touch the frequency denoted with an *.

NEAREST INFORMATION

Viewing nearest information:

1) From the '**Home**' Screen, touch the **Nearest** Icon to display the second level Nearest Icons.

2) Touch the desired Nearest Icon (**Airport**, **Airport WX**, **VOR**, **NDB**, **Intersection**, **User WPT**, **City**, **ARTCC**, **FSS**, or **Airspace**).

3) Touch the desired nearest option from the list for additional information.

> **Or**:

If viewing Nearest ARTCCs or FSSs, touch the ◀ ▶ buttons to cycle through the list.

4) If desired, touch **Menu** > **Show Map** (except for ARTCC, FSS, or Airspace).

5) Touch the **Back** Icon to return to the second level Nearest Icons.

> **Or**:

Touch the **Direct** Icon (if applicable), then the Activate Button to navigate Direct-to the selected waypoint.

WEATHER INFORMATION

Viewing airport weather information:

1) From the '**Home**' Screen, touch the **WPT Info** Icon.

2) Enter the desired waypoint identifier.

3) Touch the **WX** Tab.

> **Or**:

1) From the '**Home**' Screen, touch the **Nearest** > **Airport WX**.

2) Touch the desired Nearest Airport Weather from the list.

> **Or**:

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1) From the '**Home**' Screen, touch the **Weather** > **METAR**.

2) Touch the desired METAR flag.

3) Touch the Map Feature Button with the desired identifier displayed (refer to 'Map Panning' in the Overview Section for more information). The weather information is displayed.

   Or:

1) From the '**Home**' Screen, touch the **Map** Icon.

2) Touch the desired METAR Flag (If the METAR flags are not displayed, adjust the settings from the 'Set Up Map' menu option).

3) Touch the Map Feature Button with the desired identifier displayed (refer to 'Map Panning' in the Overview Section for more information). The weather information is displayed.

USER WAYPOINTS

Creating user waypoints:

1) To create a new user waypoint at the current location or using the Map Pointer:

   a) From the '**Home**' Screen, touch **Tools** > **User WPT** > **Menu**.

   b) Touch '**Create Waypoint**'.

   Or:

   a) With a map displayed, touch an empty area without any map features.

   b) Touch the Map Feature Button.

   c) Touch '**Save**'.

   Or:

   a) With a map displayed, touch a map feature.

   b) Touch the **Menu** Icon.

   c) Touch '**Create Waypoint**'.

   Or:

   a) From the '**Home**' Screen, touch the **Position** Icon.

   b) Touch the **Mark Waypoint** Button.

2) Enter the desired user waypoint name (up to 10 characters). Refer to the Overview Section on 'Data Entry' for more information.

3) Touch the **OK** Icon. If changing the User Waypoint settings (symbol, altitude, location, or reference waypoints) continue with Step 4.

4) If desired, touch the **Symbol** Field to change the symbol that will appear on the map.

   a) Touch the desired symbol.

   b) Touch the **OK** Icon.

5) If desired, touch the **Altitude** Field

   a) Enter the desired altitude using the keypad or the **+/-** buttons. Refer to the Overview Section on 'Data Entry' for more information.

   b) Touch the **OK** Icon.

6) If desired, touch the **Location** Field.

   a) Enter the desired latitude and longitude by touching the left/right arrows to move the cursor, and the up/down arrows to change the value.

   b) Touch the **OK** Icon.

7) If desired, touch the **Menu** Icon and touch 'Reference Waypoints' to enter a bearing and distance from another waypoint or the bearing from two other waypoint to define a new waypoint location.

   a) Touch the **Waypoint Field**(s) to enter the desired waypoint.

   b) Touch the **Bearing** and/or **Distance** Fields to enter the desired values.

   c) Touch the **OK** Icon.

8) Touch and hold the **Back** Icon to return to the '**Home**' Screen.

2.5 DIRECT-TO NAVIGATION

Entering a waypoint identifier, facility name, or city as a direct-to destination:

1) From the '**Home**' Screen, touch the **Direct To** ⮞ Icon.

   Or:

   Touch and hold the **Menu**/⮞ Icon (when available).

2) Touch **Menu** > **Resume Navigation.**

   Or:

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a) Touch the '**Search by Identifier**', '**Search by Facility Name**', or '**Search by City**' fields.'.

b) Enter the desired Identifier, Facility Name, or City using the keypad. Refer to the Overview Section on 'Data Entry' for more information.

c) Touch the **OK** Icon.

Or:

a) Touch '**More...**'.

b) Touch the ◄ ► buttons to view '**Flight Plan Waypoints**', '**Nearest Airports**', or '**Recent Waypoints**'.

c) Touch the desired waypoint from the list.

4) Touch the **Activate** Icon (if necessary).

Selecting a nearby airport as a direct-to destination:

1) From the '**Home**' Screen, touch **Nearest** > **Airport**.

2) Touch the desired nearest airport.

3) Touch and hold the **Menu**/Đ► Icon.

4) Touch the **Activate** Icon.

Selecting a waypoint as a direct-to destination using the pointer:

1) With a map displayed, activate the map pointer by touching the desired waypoint. If no airport, NAVAID, or User Waypoint exists at the desired location, a temporary waypoint named 'MAP' is automatically created at the location of the map pointer.

2) Touch and hold the **Direct** Đ► Icon.

3) Touch the **Activate** Icon.

Cancelling a direct-to:

1) From the '**Home**' Screen, touch the **Direct To** Đ► Icon.

Or:

From the '**Home**' Screen, touch the **Active FPL** Icon.

Or:

Touch and hold the **Menu**/Đ► Icon (when available).

2) Touch the **Menu** Icon.

3) Touch '**Stop Navigation**'.

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SECTION 3 FLIGHT PLANNING

3.1 FLIGHT PLAN DATA FIELDS

The Active and Saved Flight Plan Data Fields can be changed by touching the to Data Field Buttons at the top of the flight plan.

Changing the information shown in the flight plan data fields:

1) From the '**Home**' Screen, touch the **Active FPL** Icon.

   Or:

   a) From the '**Home**' Screen, touch **Tools** > **FPL List**.

   b) Touch the desired Saved Flight Plan from the list. An option menu appears.

   c) Touch the '**Review Flight Plan**' menu option.

2) Touch the desired Data Field Button at the top of the Flight Plan.

3) Touch the desired Data Field. The currently selected Data Field is outlined blue.

4) Touch the **OK** Icon.

5) If desired, repeat Steps 2-4 for the remaining Data Field.

3.2 FLIGHT PLAN CREATION

The active flight plan is the flight plan to which the aera is currently providing guidance, and is shown on the navigation maps. Stored flight plans are flight plans available for activation (becomes the active flight plan).

Creating an active flight plan:

1) From the '**Home**' Screen, touch the **Active FPL** Icon.

2) Touch the '**Touch to add Waypoint**' Button.

3) Enter the desired waypoint:

   a) Touch the ◀ ▶ buttons to '**Search by Identifier**', '**Search by Facility Name**', or '**Search by City**' using the keypad.

   b) Enter the desired waypoint.

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  c) Touch the **OK** Icon.

  Or:

  a) Touch the ◀ ▶ buttons to cycle through the waypoint categories ('**Flight Plan Waypoints**', '**Nearest Airports**', or '**Recent Waypoints**'.)

  b) Touch the desired waypoint from the list.

4) If duplicate entries exist for the entered facility name or location, duplicate waypoints are displayed. Touch the desired waypoint from the list.

5) Repeat Steps 2-5 to enter each additional waypoint.

Creating a stored flight plan:

1) From the '**Home**' Screen, touch **Tools** > **FPL List** > **Menu** > **New Flight Plan**.

2) Touch the '**Touch to add Waypoint**' Button.

3) Enter the desired waypoint:

  a) Touch the ◀ ▶ buttons to '**Search by Identifier**', '**Search by Facility Name**', or '**Search by City**' using the keypad.

  b) Enter the desired waypoint.

  c) Touch the **OK** Icon.

  Or:

  a) Touch the ◀ ▶ buttons to cycle through the waypoint categories ('**Flight Plan Waypoints**', '**Nearest Airports**', or '**Recent Waypoints**'.)

  b) Touch the desired waypoint from the list.

4) If duplicate entries exist for the entered facility name or location, duplicate waypoints are displayed. Touch the desired waypoint from the list.

5) Repeat Steps 2-5 to enter each additional waypoint.

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3.3 ADDING FLIGHT PLAN WAYPOINTS

Adding a waypoint to an active or stored flight plan:

1) With an active or saved flight plan displayed, touch the desired point of insertion. The new waypoint will be added in front of the selected waypoint. An option menu will appear.

2) Touch the '**Insert Waypoint**' menu option.

3) Enter the desired waypoint:

    a) Touch the ◀ ▶ buttons to '**Search by Identifier**', '**Search by Facility Name**', or '**Search by City**' using the keypad.

    b) Enter the desired waypoint.

    c) Touch the **OK** Icon.

    Or:

    a) Touch the ◀ ▶ buttons to cycle through the waypoint categories ('**Flight Plan Waypoints**', '**Nearest Airports**', or '**Recent Waypoints**'.)

    b) Touch the desired waypoint from the list.

4) If duplicate entries exist for the entered facility name or location, duplicate waypoints are displayed. Touch the desired waypoint from the list.

Loading an approach procedure into a stored flight plan:

1) With an active or saved flight plan displayed, touch the **Menu** Icon

2) Touch the '**Select Approach**' menu option. A vertical list of available approaches is displayed.

3) Touch the desired approach. The designated transition waypoints are added to the flight plan.

3.4 FLIGHT PLAN STORAGE

Viewing information about a stored flight plan:

1) From the '**Home**' Screen, touch **Tools** > **FPL List**

2) Touch the desired saved flight plan. An option menu is displayed.

3) Touch the '**Review Flight Plan**' menu option.

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Storing an active flight plan:

1) With the Active Flight Plan displayed, touch the **Menu** Icon.

2) Touch the '**Save Flight Plan**' menu option. A confirmation window appears.

3) Touch **Yes**. A copy of the flight plan is stored in the next available position in the Flight Plan List.

3.5 FLIGHT PLAN ACTIVATION

Activating a stored flight plan:

1) From the '**Home**' Screen, touch **Tools** > **FPL List**

2) Touch the desired saved flight plan. An option menu is displayed.

3) Touch the '**Activate Flight Plan**' menu option. A confirmation window appears.

4) Touch **Yes**.

Activating a Flight Plan Leg:

1) From the '**Home**' Screen, touch the **Active FPL** Icon.

2) While navigating an active flight plan, touch the desired leg to be activated. An option menu automatically appears.

3) Touch the '**Activate Leg**' menu option.

4) Touch **Yes**.

3.6 FLIGHT PLAN DELETION

Deleting a stored flight plan:

With the desired Stored Flight Plan displayed, touch the **Menu** > **Delete Flight Plan** > **Yes**

Or:

With the Flight Plan List displayed, touch the desired flight plan to delete, and touch **Delete Flight Plan** > **Yes**.

Deleting all stored flight plans:

From the '**Home**' Screen, touch **Tools** > **FPL List** > **Menu** > **Delete All** > **Yes**.

3.7 APPROACHES

⚠ *WARNING: The aera is not designed to be independently used for flight into instrument meteorological conditions (IMC) or other conditions in which aircraft control is based solely upon flight instruments. The approaches provided are for monitoring purposes only. Only the final course segment (final approach fix (FAF) to missed approach point (MAP)) of the published approach is available for monitoring.*

An approach can be selected using the Direct-to, Active Flight Plan, and the Saved Flight Plan functions.

Selecting an approach from the active or saved flight plan:

1) From the '**Home**' Screen, touch the **Active FPL** Icon.

Or:

a) From the '**Home**' Screen, touch the **Tools** Icon.

b) Touch the **FPL List** Icon.

c) Touch the desired Saved Flight Plan from the list. An option menu appears.

d) Touch the '**Review Flight Plan**' menu option.

2) With the flight plan displayed, touch the **Menu** Icon.

3) Touch the '**Select Approach**' menu option (only available if the destination airport has a published approach). A vertical list of available approaches is displayed.

4) Touch the desired approach. The 'Vectors to Final?' window appears.

5) Touch '**Yes**' or '**No**'. The procedure is added to the end of the flight plan. If activating an approach from the Active Flight Plan, the aera immediately begins to provide guidance to the first waypoint in the approach.

Selecting an approach using the Direct To function:

1) From the '**Home**' Screen, touch the **Direct To** Icon.

2) Touch the **Menu** Icon.

3) Touch the '**Select Approach**' menu option (only available when navigating a flight plan. A vertical list of available approaches is displayed.

4) Touch the desired approach. The 'Vectors to Final?' window appears.

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5) Touch '**Yes**' or '**No**'. The procedure is added to the end of the flight plan. If activating an approach from the Active Flight Plan, the aera immediately begins to provide guidance to the first waypoint in the approach.

Resuming the Flight Plan after selecting an approach:

Whenever an approach is selected the aera automatically activates the approach. The procedure is added to the end of the flight plan and immediately begins to provide guidance to the first waypoint in the approach. Follow the steps below to resume the flight plan after activating the approach.

1) From the '**Home**' Screen, touch the **Active FPL** Icon.

Or:

From the '**Home**' Screen, touch the **Direct To** Icon.

Or:

Touch and hold the **Menu**/ᴅ➤ Icon (when available).

2) With a flight plan and an approach loaded, touch the **Menu** Icon.

3) Touch the '**Resume Flight Plan**' menu option.

Removing an approach:

1) From the '**Home**' Screen, touch the **Active FPL** Icon.

Or:

a) From the '**Home**' Screen, touch the **Tools** Icon.

b) Touch the **FPL List** Icon.

c) Touch the desired Saved Flight Plan from the list. An option menu appears.

d) Touch the '**Review Flight Plan**' menu option.

2) Press the **Menu** Icon.

3) Touch the '**Remove Approach**' menu option (only available if an approach is loaded).

Activating/Cancelling Vectors-to-Final:

1) From the '**Home**' Screen, touch the **Active FPL** Icon.

2) While navigating an Active Flight Plan (with an approach activated), touch the **Menu** Icon.

3) Touch the '**Activate Vectors-to-Final**' or '**Cancel Vectors-to-Final**' menu option.

SECTION 4 HAZARD AVOIDANCE

4.1 XM® WEATHER (aera 510 & 560)

Viewing XM Weather products on the Navigation Map:

1) From the '**Home**' Screen touch the **Map** Icon.

2) Touch the **Menu** Icon.

3) Touch the '**Show/Hide...**' menu option.

4) Touch the **Weather** '**Show**/**Hide**' Button.

Viewing XM Weather products on the Weather Map:

1) From the '**Home**' Screen touch the **Weather** Icon.

2) Touch the desired second-level Weather Icon.

3) If necessary, touch the ◀ ▶ buttons to scroll through the list of available altitudes, AIRMET types, or forecast times.

4) Touch the desired weather product to get abbreviated information about the selected weather product (if available).

5) With the desired weather product highlighted, touch the Map Feature Button to get detailed information (if available).

4.2 TERRAIN

Enabling/Disabling Terrain Shading on the Navigation Map:

1) From the '**Home**' Screen touch the **Map** Icon.

2) Touch the **Menu** Icon.

    a) Touch the '**Show/Hide...**' menu option.

    b) Touch the **Terrain** '**Show**/**Hide**' Button to toggle the terrain overlay on/off.

    Or:

    a) Touch the '**Set Up Map**' menu option.

    b) Touch the ◀ ▶ buttons until the '**Map**' Category is displayed.

    c) Touch the **Terrain Shading** Field.

    d) Touch the **On**/**Off** Button.

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Enabling/Disabling terrain alerts:

1) From the '**Home**' Screen touch the **Terrain** Icon.

2) Touch the **Menu** Icon.

3) Touch the '**Enable Alerts**' or '**Disable Alerts**' menu option.

4.3 TRAFFIC INFORMATION SERVICE (TIS)

Adjusting TIS audio:

1) From the '**Home**' Screen, touch **Tools** > **Setup** > **Sound.**

2) Touch the **TIS Audio On**/**Off** Button to toggle the terrain audio on/off, or touch the **Alerts** [] Icon to mute both TIS and Terrain alerts.

   Or:

   Touch the **Alerts** ◀ ▶ buttons to select an alert volume (0-10).

Adjusting TIS settings on the navigation map:

1) From the '**Home**' Screen, touch **Map** > **Menu** > **Set Up Map**.

2) Touch the ◀ ▶ buttons to select the **Map** Category.

3) Touch **TIS Traffic**.

4) Touch the ◀ ▶ buttons to select the desired settings ('**Off**', '**Auto**', or range settings).

Displaying TIS information using the map pointer:

With traffic displayed on the Navigation Map, touch the desired TIS symbol on the map. The traffic range and altitude separation is displayed.

TRAFFIC WARNING WINDOW

When a traffic threat is imminent, the Traffic Warning Window is shown. The Traffic Warning Window shows a small pop-up thumbnail map in the lower left corner. The Range Rings on the pop-up alert are spaced every whole mile/kilometer/nautical mile. Touch the Traffic Warning Window to acknowledge and remove it.

SECTION 5 UTILITIES

5.1 FLIGHT LOG

Viewing details for a flight:

1) From the '**Home**' Screen, touch **Tools** > **Flight Log**.

2) Touch the desired flight log. Route, date, hours, distance, and the flight path are displayed.

Deleting flight records:

1) From the '**Home**' Screen, touch **Tools** > **Flight Log**.

2) Touch the desired flight log (if applicable).

3) Touch **Menu**.

4) Touch '**Delete Flight**' or '**Delete All**'.

5) Touch **Yes**.

5.2 TRACK LOG

Showing/hiding the track log on the Navigation Map:

1) From the '**Home**' Screen, touch **Map** > **Menu** > **Set Up Map**.

2) Touch the ◀ ▶ buttons to display the '**Line**' Category.

3) Touch **Track Log**.

4) Touch the **Show**/**Hide** Button.

Changing track log settings:

1) From the '**Home**' Screen, touch **Map** > **Menu** > **Set Up Map**.

2) Touch the ◀ ▶ buttons to display the '**Line**' Category.

3) Touch **Track Record Mode**, **Track Interval**, or **Track Color**.

4) Touch the ◀ ▶ buttons to select the desired setting.

Clearing the track log:

1) From the '**Home**' Screen, touch **Tools** > **Track Log**.

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2) Touch the desired track log (if applicable).

3) Touch **Menu**.

4) Touch '**Delete Saved Track**' or '**Delete All Saved Tracks**'.

5) Touch **Yes**.

Saving a track log:

1) From the '**Home**' Screen, touch **Tools** > **Track Log** > **Menu** > **Save Active Track**.

2) Touch the ◀ ▶ buttons to select '**Entire Active Track**', '**Past 24 Hours**', '**Past 7 Days**', or '**Specific Dates**'.

3) Touch **OK**.

Editing a track log:

1) From the '**Home**' Screen, touch **Tools** > **Track Log**.

2) Touch the desired track log.

3) Touch desired field to edit (**Track Name**, **Show On Map**, or **Color**).

5.3 E6B CALCULATOR

The E6B Calculator calculates Density Altitude, True Airspeed, Tail Wind, Wind From, and Wind Speed, based on information you enter.

Accessing the E6B calculator:

From the '**Home**' Screen, touch **Tools** > **E6B Calc**.

Calculating true airspeed and density altitude:

1) From the '**Home**' Screen, touch **Tools** > **E6B Calc**, enter the altitude shown on the altimeter into the 'Indicated Altitude' field.

2) Repeat for 'Calibrated Airspeed', 'Baro Pressure', and 'Total Air Temperature' fields. (For Calibrated Airspeed, use the speed shown on the airspeed indicator. Use the current altimeter setting for Baro Pressure. Total Air Temperature is the temperature of the outside air including the heating effect caused by speed. For most aircraft, this is the temperature reading on a standard outside air temperature gauge.) The calculated figures for True Airspeed and Density Altitude are shown in the designated fields.

Calculating winds aloft:

1) From the '**Home**' Screen, touch **Tools** > **E6B Calc**, calculate or enter the true airspeed into the 'True Airspeed' field.

2) Enter the aircraft heading shown on the directional gyro or compass into the 'Heading' field. Tail Wind, Wind From, and Wind Speed are calculated.

> **NOTE:** *If True North is selected as the heading reference, a heading referenced to True North must be used to calculate winds accurately.*

Restoring E6B calculator defaults:

From the '**Home**' Screen, touch **Tools** > **E6B Calc** > **Menu** > **Restore Default**.

5.4 AIRCRAFT PROFILE

Accessing the aircraft profile:

From the '**Home**' Screen, touch **Tools** > **Profile**

Entering an aircraft profile:

1) From the '**Home**' Screen, touch **Tools** > **Profile** > **Menu** > **New**

2) Enter the Aircraft Name using the keypad, and touch **OK**.

3) Enter the **Cruise Speed**, **Maximum Speed**, or **Fuel Flow** using the **+/-** buttons or the keypad.

4) Touch **Map Symbol**.

    a) Touch the ◀ ▶ buttons to cycle through the available symbols.

    b) Touch **OK**.

Selecting a saved aircraft profile:

1) From the '**Home**' Screen, touch **Tools** > **Profile**

2) Touch the Aircraft Name Button to access a vertical list of saved profiles.

3) Touch the desired profile from the list.

Renaming a saved aircraft profile:

1) From the '**Home**' Screen, touch **Tools** > **Profile**

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2) Touch the Aircraft Name Button to access a vertical list of saved profiles.

3) Touch the desired profile from the list.

4) Touch **Menu** > **Rename**

5) Enter the new Aircraft Name using the keypad, and touch **OK**.

Deleting a saved aircraft profile:

1) From the '**Home**' Screen, touch **Tools** > **Profile**

2) Touch the Aircraft Name Button to access a vertical list of saved profiles.

3) Touch the desired profile from the list.

4) Touch **Menu** > **Delete**

5) Touch **Yes**.

5.5 WEIGHT & BALANCE

To perform weight and balance calculations:

1) From the '**Home**' Screen, touch **Tools** > **Weight/Bal**

2) Touch the fields to enter the desired weights and arms (or "stations"). The calculated moment, weight, and CG figures appear at the bottom of the screen. Keep in mind that the "Aircraft" (empty weight/arm) figures must be entered as a reference to calculate a valid moment, weight, and CG.

3) To empty the aircraft, touch **Menu** > **Empty Aircraft**.

NOTE: *This information is only for flight planning purposes. Consult the aircraft's pilot operating handbook for the official weight and balance data.*

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SECTION 6 APPENDIX

MISCELLANEOUS MESSAGE ADVISORIES

Message	Comments
Approaching Target Altitude	Within 200 feet of final VNAV target altitude.
Approaching VNAV Profile	The aircraft is within one minute of reaching the initial VNAV decent point.
Arriving at XXX	The aircraft is nearing the destination.
Battery Low	The battery needs to be recharged.
Can't Unlock Maps	No applicable unlock code for one or more maps was found. All MapSource maps are not accessible.
Check XM Antenna	Internal problem with the GXM antenna. Contact Garmin Product Support.
Database Error	Internal problem with the system. Contact your dealer or Garmin Product Support to have the unit repaired.
Fuel Tank	A reminder for switching fuel tanks. The reminder message repeats at the specified interval after the beginning of each trip.
Lost Satellite Reception	The system is unable to receive satellite signals.
Memory Full	System memory is full, no further data can be saved.
Near Proximity Point	You have reached the distance set for a proximity waypoint.
Next DTK XXX	The aircraft is nearing a turn in a route.
Proximity Memory Full	No additional proximity waypoints can be saved.
Proximity Radius Overlaps	The radius of two proximity waypoints overlap.
Route Already Exists	A route name that already exists has been entered.
Route Memory Full	No additional routes can be saved.

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MISCELLANEOUS MESSAGE ADVISORIES (CONT.)

Message	Comments
Route Truncated	Uploaded route from another device has more than 300 waypoints.
Route Waypoint Memory Full	No additional route waypoints can be saved.
Steep Turn Ahead	Approaching a turn that requires a bank angle in excess of 25 degrees to stay on course.
Track Already Exists	A saved track with the same name already exists.
Track Log Full	The track log is full and track recording was turned off. To record more track points, you need to clear the track log and turn track recording on.
Track Memory Full	No more track data can be stored. Delete the old track data to store the new data.
Track Truncated	A complete uploaded track will not fit in memory. The oldest track log points have been deleted.
VNAV Cancelled	VNAV function has been cancelled due to a change in the active route.
Waypoint Already Exists	A waypoint with the same name already exists.
Waypoint Memory Full	The unit has stored the maximum number of waypoints.

AIRSPACE MESSAGES

Message	Comments
Inside Airspace	Inside the boundaries of the airspace.
Airspace Near and Ahead	Within two nautical miles of an airspace and your current course takes you inside the airspace.
Airspace Ahead, Within 10 Minutes	The projected course takes you inside an airspace within the next 10 minutes or less.
Airspace Near, Within 2 nm	Within two nautical miles of an airspace but not projected to enter it.

DATA FIELD & NUMERIC DATA OPTIONS

Data Field/Numeric Data	Definition
Accuracy	The current accuracy of the GPS determined location.
Altitude	The current altitude in geometric height above Mean Sea Level (MSL).
Bearing	The compass direction from the present position to a destination waypoint.
Course to Steer	The recommended direction to steer in order to reduce cross-track error and return to the course line.
Crosstrack Error	The distance the aircraft is off a desired course in either direction, left or right.
Desired Track	The desired course between the active "from" and "to" waypoints.
Distance (Destination)	The distance to the destination waypoint in the Active Flight Plan
Distance (Next)	The distance to the next waypoint in the Active Flight Plan.
En Route Safe Altitude	The recommended minimum altitude within ten miles left or right of the desired course on a active flight plan or direct-to.
Flight Timer	Total time in-flight (HH:MM).
Fuel Timer	Elapsed time since the Fuel Tank Reminder Alarm was last issued (HH:MM).
Glide Ratio	The estimated distance an aircraft will move forward for any given amount of lost altitude.
Ground Speed	The velocity that the aircraft is traveling relative to a ground position.
Ground Track	The direction of aircraft movement relative to a ground position.

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DATA FIELD & NUMERIC DATA OPTIONS (CONT.)

Data Field/Numeric Data	Definition
Minimum Safe Altitude	Uses Grid MORAs to determine a safe altitude within ten miles of the aircraft's present position.
Next Waypoint	The next waypoint in the flight plan or direct-to route.
Sunrise	The time at which the sun rises on this day (current location).
Sunset	The time at which the sun sets on this day (current location).
Estimated Time En Route (Destination)	The estimated time it takes to reach the destination waypoint from the present position, based upon current ground speed.
Estimated Time En Route (Next)	The estimated time it takes to reach the next waypoint form the present position, based upon current ground speed.
Estimated Time of Arrival (Destination)	The estimated time at which the aircraft should reach the destination waypoint, based upon current speed and track.
Estimated Time of Arrival (Next)	The estimated time at which the aircraft should reach the next waypoint, based upon current speed and track.
Estimated Time to VNAV	The estimated time it takes to reach the VNAV waypoint form the present position, based upon current ground speed.
Time of Day (Local)	The current time and date in 12-hour or 24-hour format.
Time (UTC)	The current time and date in Universal (UTC) time.
Vertical Speed	The rate of climb or descent (GPS-derived).
Vertical Speed Required	The vertical speed necessary to decend/climb from a current position and altitude to the previously selected VNAV position and altitude, based upon current groundspeed.

DATA FIELD & NUMERIC DATA OPTIONS (CONT.)

Data Field/Numeric Data	Definition
Weather (Altimeter)	The altimeter setting at the nearest METAR reporting station.
Weather (Dew Point)	The dew point at the nearest weather reporting station.
Weather (Rel. Humidity)	The relative humidity at the nearest weather reporting station.
Weather (Temperature)	The temperature at the nearest weather reporting station.
Weather (Wind)	The wind speed and direction at the nearest weather reporting station.

AURAL ALERTS

Refer to Hazard Avoidance Section.

LOSS OF GPS POSITION

When the aera loses the GPS signal for any reason, the following will occur:

- A blinking red question mark will appear over the airplane icon on the map.

- The 'Lost Satellite Reception' message will display.

- Any GPS dependent data fields will not be available.

HAZARD DISPLAY WITH LOSS OF GPS POSITION

If the Terrain function doesn't have at least a 3D fix (i.e. altitude unknown), a Red X will be displayed.

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