



# G500(H)/G600/G700 TXi Software v3.12

What's New



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## NOTE

This document is intended for informational purposes only and does not provide operating instructions for the features described. For operating instructions, refer to the applicable revision of *G500(H)/G600/G700 TXi Pilot's Guide*.

## Reference Manuals

DOCUMENT	P/N
<i>G500(H)/G600/G700 TXi Pilot's Guide, Rev. J</i>	190-01717-10

## Reference Websites

WEBSITE	ADDRESS
Garmin TXi	<a href="https://explore.garmin.com/en-US/txi/">https://explore.garmin.com/en-US/txi/</a>
Garmin TXi Trainers (iOS and Windows PC) <sup>1</sup>	<a href="https://www.garmin.com/apps/txitrainer#additional">https://www.garmin.com/apps/txitrainer#additional</a>

<sup>1</sup> Garmin trainers and simulators are provided free of charge.

## Available for Download

### Electronic Pilot's Guide

A version of this guide saved in Adobe Acrobat. Available for viewing on your computer or portable device.

### Upgrade Supplement

Details document changes for software enhancements.

Go to [garmin.com/manuals](https://garmin.com/manuals)

# System

## GDU 1060 DUAL MFD AND MFD/EIS LAYOUTS

### FEATURE LIMITATIONS/REQUIREMENTS

- GDU 1060 only
- Installer configuration

When configured as an MFD, a **Full/Split** key toggles between dual MFD pages and a full-screen MFD. An EIS strip may be added on either edge of the MFD display.

*PG Section 1.2 - Display Configurations*  
*PG Section 4.2 - MFD Display Size Options*



Dual MFD/EIS



Dual MFD

Full MFD/EIS

Full-Screen MFD

## MFD ENGINE PAGE ON NON-EIS UNITS

### FEATURE LIMITATIONS/REQUIREMENTS

- GDU 700P MFD, GDU 1060 MFD or PFD/MFD only
- Requires engine adapter (GEA 110 or GEA 71x) and installer configuration

MFDs include an engine page when an engine adapter is present and configured. This provides an option for displaying engine information on displays other than a full-time EIS during phases of flight when engine monitoring is more important. For units with both MFD and EIS, display layouts are configured independently.

*PG Section 8.1 - EIS Display (Reciprocating Engine)*

*PG Section 8.5 - EIS Display (Turbine)*



Engine Page, GDU 1060 PFD/MFD

## NEW INTERFACES

These components can now be interfaced with the TXi:

- GNC 355 GPS navigator with comm radio
- GI 275 multi-function display as standby attitude indicator
- Avidyne DFC90 digital autopilot (requires feature enablement)



GNC 355



GI 275

# PFD

## DUAL-KNOB PFD CONTROL

### FEATURE LIMITATIONS

- GDU 1060 PFD/MFD or PFD/MFD/EIS only

For aircraft with a cockpit configuration that makes it difficult to access the PFD knob, or simply for ease of use, both knobs may be used to control the PFD. Pushing and holding the inner knob toggles it between MFD and PFD control functions. The MFD can still be controlled with the touchscreen when the adjacent knob is being used to control the PFD.

*PG Section 1.7 - Control Knobs*



## GFC 500 LOCALIZER AUTOSWITCH

### FEATURE REQUIREMENTS

- GTN 650/750 with software v6.70 or later
- Installer configuration

The navigation source automatically switches from GPS to LOC when the autopilot captures the localizer.

*PG Section 2.10.6 - Automatic Source Selection*



## GPS HEIGHT ABOVE TERRAIN

### FEATURE REQUIREMENTS

- GPS altitude available
- Terrain database available

At altitudes lower than 2,500 ft AGL, calculated height above terrain is displayed adjacent to the altimeter strip.

Toggle on **AGL Field** in PFD Setup to enable the AGL display.

*PG Section 2.20 - AGL Display*

## MACH NUMBER DISPLAY

### FEATURE LIMITATIONS

- Aircraft configured for variable  $V_{NE}/V_{MO}$  and  $M_{MO}$

At speeds greater than Mach 0.4, the Mach number is displayed above TAS.

Toggle on **Mach Field** in PFD Setup to enable the Mach display.

*PG Section 2.6 - Airspeed Indicator*

Mach



## CDI AND VDI INDICATIONS ON VFR MAP (ROTORCRAFT)

### FEATURE LIMITATIONS

- GDU 700L PFD
- VFR map
- Rotorcraft only

*PG Section 3 - Map Display, GDU 700L*



## CDI SOURCE MENU

### FEATURE REQUIREMENTS

- More than two CDI sources

Tapping the **CDI** source key opens a source selection menu, allowing direct selection of the desired source.

*PG Section 2.10.3 - CDI Source Selection*





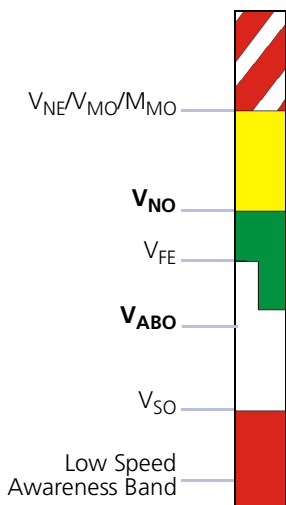
## VARIABLE $V_{NO}$ WITH PRESSURE ALTITUDE

### FEATURE REQUIREMENTS

- Installer configuration

For aircraft with a  $V_{NO}$  that varies with pressure altitude, the airspeed indicator ribbons are automatically adjusted.

*PG Section 2.6.1 - Reference Markings*



## THREE-CHARACTER V-SPEED BUGS

### FEATURE REQUIREMENTS

- Installer configuration

Bugs for V-speeds such as  $V_{ABO}$  and  $V_{WWO}$  can be displayed on the airspeed tape.

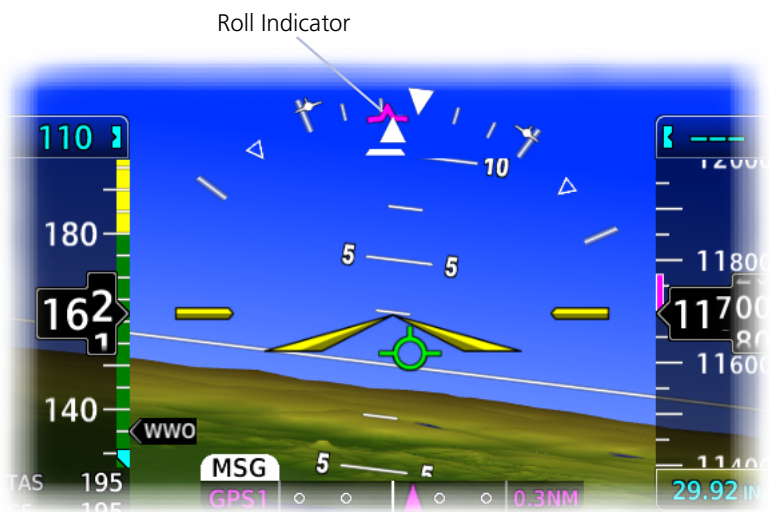
*PG Section 2.6.2 - Reference Speeds*

## GPS ROLL INDICATOR

A GPS roll indicator can provide roll steering guidance during GPS navigation.

Toggle on **GPS Roll Indicator** in PFD Setup to enable the indicator.

*PG Section 2.22 - GPS Roll Indicator*



# MFD



## MAP/WEATHER VIEWS

The **Map View** key in the Map or Weather menus may be used to select one of three user-configurable views.

Saved map settings include map overlays, map detail level, and map setup configuration. All settings configured in a weather product's menu are saved.

A custom name can be assigned to each view.

*PG Section 4.4 - Map Views*

*PG Section 5.3 - Weather Map Views*

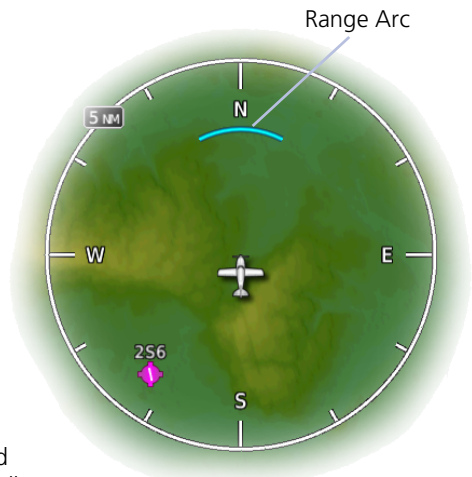
## SELECTED ALTITUDE RANGE ARC (ANY MFD EXPANSION)

### FEATURE REQUIREMENTS

- TXi system with at least one PFD

An arc representing the location at which the aircraft is expected to reach the selected altitude is displayed on the MFD map when **Selected ALT Range Arc** is toggled on in Map Setup.

*PG Section 4.7.1 - Map Selections*



## MFD START PAGE PRE-SELECT

The MFD can be set to start up on a desired MFD page or hidden in order to display a full-screen PFD. Startup page selection is accessed through the System Setup menu.

*PG Section 4 - MFD Setup*



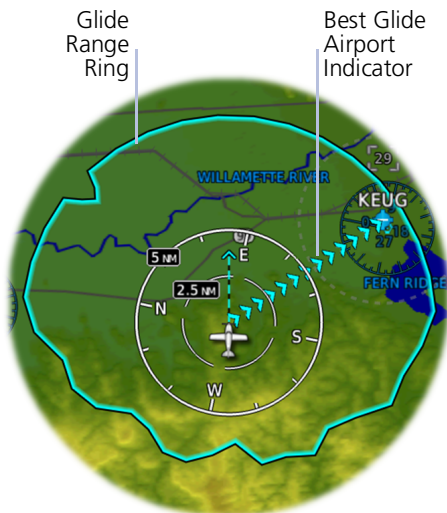
## GLIDE RANGE RING

### FEATURE LIMITATIONS/REQUIREMENTS

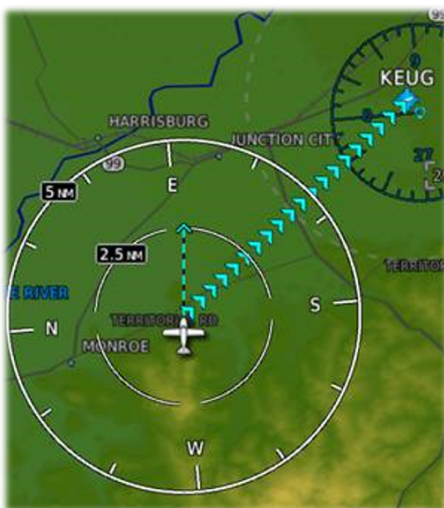
- Fixed-wing aircraft only
- GTN Xi series navigator (host) configured for Glide Range Ring
- Datalink winds or compatible PFD (Glide Range Ring wind compensation)

On Map, the Glide Range Ring overlay identifies the map region and features within gliding distance. A cyan border indicates where the glide path reaches 50 ft above terrain. Calculations are performed by the host GTN Xi navigator.

Enable Glide Range Ring to stay aware of all airports within gliding distance. This feature is extremely helpful should you experience engine failure.



### Glide Only Option



If configured, Glide Range Ring is available in the Map Setup menu. Options include:

- Ring Only
- Glide Only
- Ring and Glide

Select **Ring and Glide** or **Glide Only** to show the best glide airport at any given time.

PG Section 4.7.1 - Map Selections

**NOTE:** For best glide performance, the aircraft must be configured in accordance with POH guidance.

# EIS

## PIPER MERIDIAN AND CIRRUS SR20/SR22 SUPPORT

Alternate gauge layouts and a new percent power gauge allow TXi EIS to replace primary engine gauges for Piper Meridian and Cirrus SR20/SR22 aircraft.

### 11-INDICATOR TURBOPROP LAYOUT

#### FEATURE LIMITATIONS/REQUIREMENTS

- Turbine aircraft only
- Available on GDU 1060 EIS
- Requires installer configuration

The alternate 11-indicator layout is designed for aircraft that require more gauges than are available in the standard layout, such as the Piper Meridian. It provides seven secondary bar gauges, four of which are in a special narrow bar format.

*PG Section 8.5 - EIS Display*

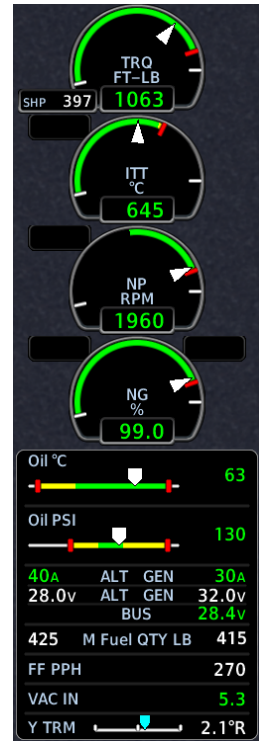
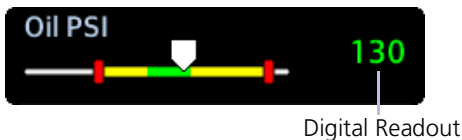
### BAR GAUGE DIGITAL READOUT

#### FEATURE REQUIREMENTS

- Installer configuration

Bar gauges can be configured to display a digital value to the right of the bar indicator.

*PG Section 8.3.1 - Gauge Types*



11-Indicator Turboprop Layout

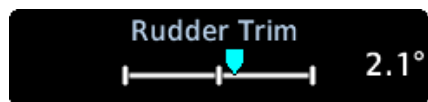
### DIGITAL READOUT COLOR

When an indication is within a colored gauge range, the color of the digital readout will be the same as the range.

### RUDDER TRIM GAUGE

#### FEATURE REQUIREMENTS

- Compatible trim sensors
- Installer configuration



Original aircraft voltage-driven gauges may be replaced with a rudder trim gauge.

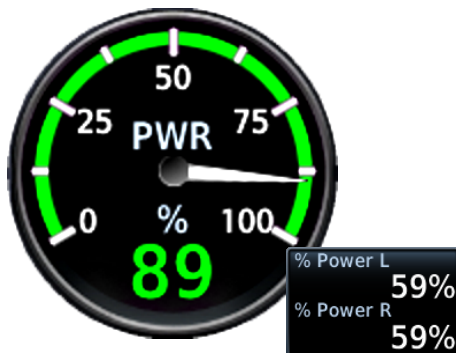
## Gauges

### PISTON ENGINE PERCENT POWER

#### FEATURE REQUIREMENTS

- Manifold pressure, RPM, fuel flow, and OAT sensors
- Installer configuration

Percent power gauges are available as primary gauges for both normally-aspirated and turbocharged Cirrus aircraft, and as user-selectable gauges for other piston aircraft.



*PG Section 8.3.1 - Gauge Types*

*PG Section 8.3.5 - Selectable User Fields*

### TURBINE ENGINE POWER INDICATORS



*PG Section 8.7.4 - Selectable User Fields*

#### FEATURE LIMITATIONS/REQUIREMENTS

- Turbine aircraft only
- Torque and propeller RPM sensors
- Requires installer configuration

Shaft Horsepower (SHP) and Percent Power (%PWR) may be displayed in user-selectable MFD engine page gauges or EIS gauge insets.

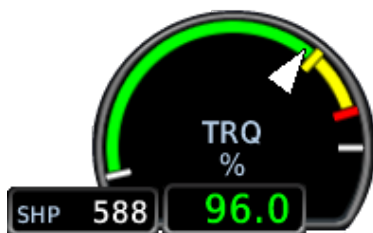
*Refer to Gauge Insets for additional display information.*

### GAUGE INSETS

#### FEATURE LIMITATIONS/REQUIREMENTS

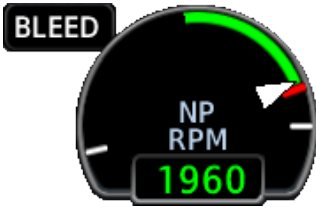
- Turbine aircraft only
- Torque and propeller RPM sensors
- Requires installer configuration

Torque and NP sunrise gauges can display engine Shaft Horsepower (SHP) or Percent Power (%PWR) in an inset window.



*PG Section 8.7.3 - Optional Gauge Features*

## BLEED VALVE AND INERTIAL SEPARATOR TEXT LAMPS



*PG Section 8.7.3 - Optional Gauge Features*

### FEATURE LIMITATIONS/REQUIREMENTS

- Turbine aircraft only
- Requires installer configuration

The text lamps available for sunrise gauges now include Bleed Valve (BLEED) and Inertial Separator (INSEP) lamps in addition to Starter On, Ignition On, and Reverse Thrust.

## VACUUM/PRESSURE GAUGE

### FEATURE REQUIREMENTS

- Vacuum/pressure sensor
- Installer configuration

Up to two vacuum or pressure sources can be monitored on a round or bar gauge.

This gauge may be configured with a custom gauge title.



*PG Section 8.3.1 - Gauge Types (Reciprocating Engine)*

*PG Section 8.3.1 - Gauge Types (Turbine)*



## HOBBS AND TACH HOURS

### FEATURE LIMITATIONS

- Tach Hours counter available for piston aircraft only

Counters record Hobbs, tachometer (piston only), and flight hours.



Tach hours are logged separately for each engine on twin engine aircraft.

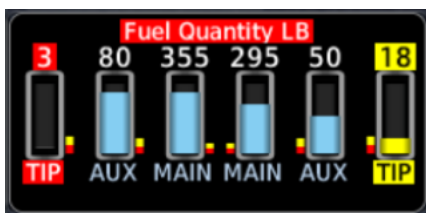
*PG Section 8.14 - Record Keeping*

## EXPANDED FUEL SENDER SUPPORT

### FEATURE REQUIREMENTS

- Compatible engine adapter version (GEA 110 or GEA 71x)
- Installer configuration

Most common resistive fuel senders are supported as well as CiES probes. Select capacitive fuel senders and fuel conditioners are also approved.



Merged Square Displays



Single Bar Display

## ADVANCED FUEL QUANTITY GAUGE

### FEATURE REQUIREMENTS

- Fuel quantity sensors
- Installer configuration

Up to six fuel quantities can be shown by merging two adjacent display slots with three quantities per slot.

Tank order and labels are customizable to match aircraft configuration.

*PG Section 8.9 - Fuel Gauges*

## SELECTABLE FUEL QUANTITY GAUGES (TWIN CESSNA)

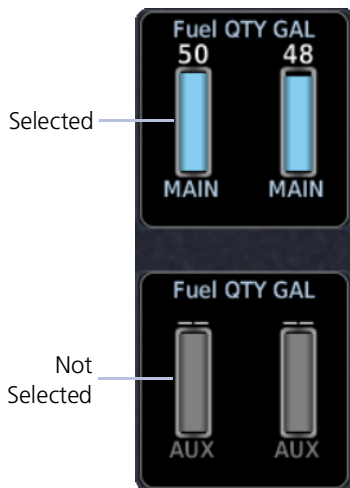
### FEATURE REQUIREMENTS

- Fuel quantity sensors
- Selection switch interface
- Installer configuration

For aircraft with more than two fuel tanks, but with aircraft indicators which can only display two tank quantities at a time, the TXi system simultaneously displays current fuel quantities for selected tanks and last known fuel quantities for other tanks.

“Stale” fuel quantities are shown as gray bars without digital readouts.

*PG Section 8.9 - Fuel Gauges*



# Advanced Features

## FUEL IMBALANCE MONITOR

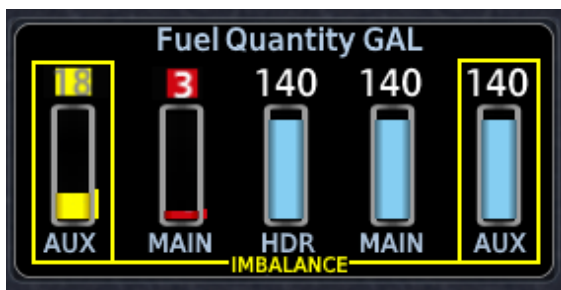
### FEATURE LIMITATIONS/REQUIREMENTS

- *Not compatible with selectable gauges*
- *Requires installer configuration*

An advisory message and optional discrete output signals can be triggered by out of balance fuel loads. Fuel gauges for imbalanced tanks are outlined in yellow. The discrete signals may be used to control fuel pumps, external annunciators, or other systems.

Up to three pairs of fuel tanks and total imbalance minimum and maximum system activation thresholds are fully configurable. The discrete outputs function may be switched on and off with an additional discrete input.

*PG Section 8.11 - Fuel Balance Monitoring*



Fuel Imbalance Indication

## AUTO IGNITION

### FEATURE LIMITATIONS/REQUIREMENTS

- *Turbine aircraft only*
- *Requires applicable sensors and installer configuration*

Engine ignition systems may be automatically switched on and off based on ITT, NG, NP, torque, condition lever position, and air/ground state. Activation and deactivation conditions are configured separately.

*PG Section 8.12 - Automatic Ignition*



## GAUGE-DRIVEN DISCRETE OUTPUTS EXPANSION

### FEATURE REQUIREMENTS

- *Installer configuration*

The TXi system can be configured to send a discrete signal to annunciators, relays, or other aircraft systems based on gauge values or ranges. This feature has been expanded to include these gauges:

- |                     |                   |                                |
|---------------------|-------------------|--------------------------------|
| • ITT               | • Oil Pressure    | • Battery Amps                 |
| • Torque            | • Oil Temperature | • Battery Volts                |
| • Propeller RPM     | • Vacuum Pressure | • Fuel Quantity                |
| • NG                | • Alt/Gen Amps    | • Engine Power                 |
| • Manifold Pressure | • Alt/Gen Volts   | • Flight Control Trim Position |
| • Fuel Flow         | • Bus Volts       |                                |

### *PG Section 8.13 - Gauge Driven Discrete Outputs*



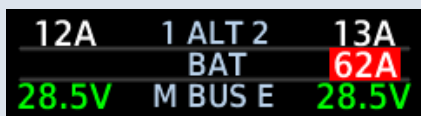
### SOFTWARE v3.10 UPGRADE SUMMARY

For systems using software versions prior to v3.00, upgrading to v3.10 adds:



- TAWS-A terrain
- Display of TCAS II traffic and resolution advisories
- Turbine EIS support
- EIS gauge dynamic markings
- Exceedance timers (turbine)

- Electrical gauges with up to six parameters
- Airspeed tape configurable bugs
- GPS 175 and GNX 375 support
- Emergency Descent Mode
- Additional FIS-B product support: Turbulence, Icing, G-AIRMET, Cloud Tops, Lightning, Center WX Advisories



**Contact your authorized Garmin dealer to request additional details about these features and your new TXi installation or software upgrade: <https://www.garmin.com/en-US/dealerlocator>.**

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