GARMIN

G500(H)/G600/G700 TXi Software v3.10

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
G500(H)/G600/G700 TXi Pilot's Guide, Rev. J	190-01717-10

Reference Websites

WEBSITE	ADDRESS
Garmin TXi	https://explore.garmin.com/en-US/txi/
Garmin TXi Trainers (iOS and Windows PC) [1]	https://www.garmin.com/apps/txitrainer#additional

1 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

System

GDU 1060 DUAL MFD AND MFD/EIS LAYOUTS

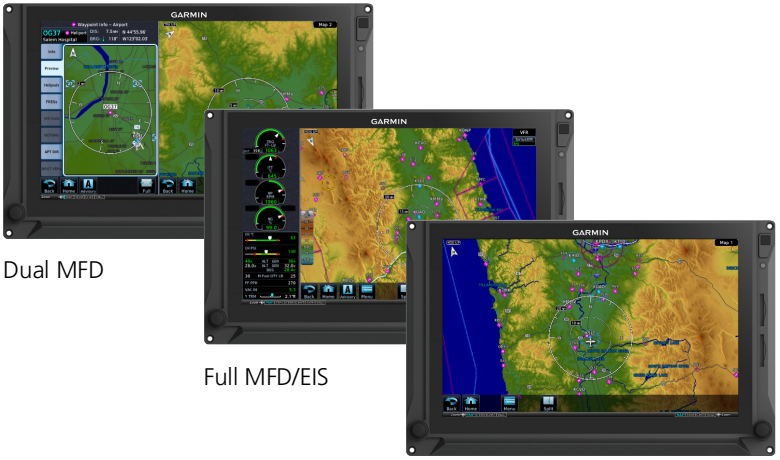
FEATURE LIMITATIONS/REQUIREMENTS

- *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)*

GI 275

GNC 355

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

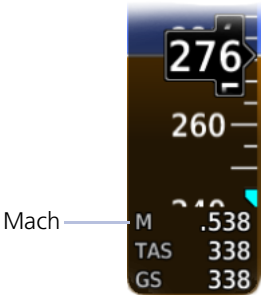
FEATURE LIMITATIONS

- *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



CDI AND VDI INDICATIONS ON VFR MAP (ROTORCRAFT)

FEATURE LIMITATIONS

- *GDU 700L PFD*
- *Rotorcraft only*
- *VFR map*

PG Section 3 - Map Display, GDU 700L

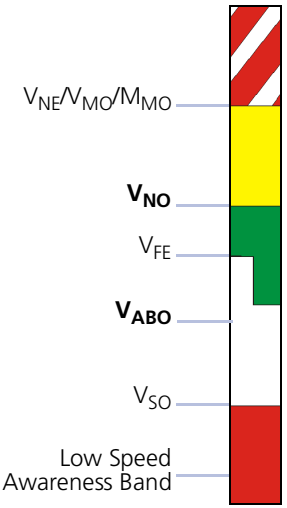
CDI SOURCE MENU

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.

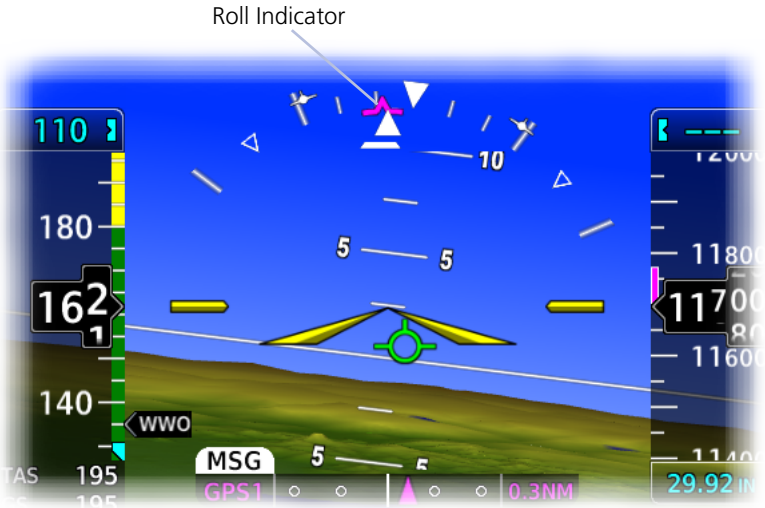
PG Section 2.6.2 - Reference Speeds

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

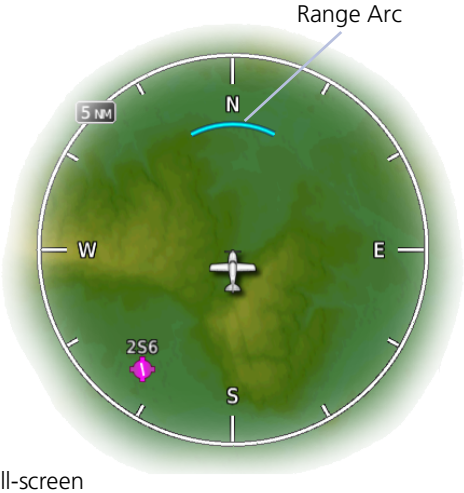
SELECTED ALTITUDE RANGE ARC (ANY MFD EXPANSION)

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

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.

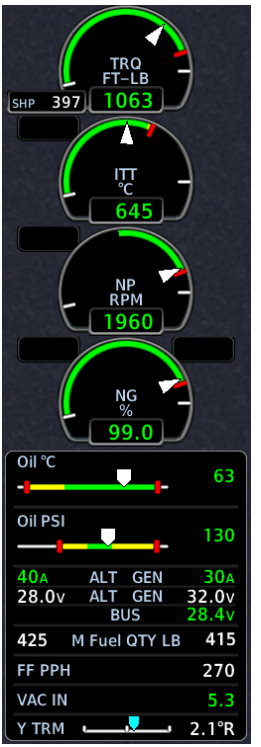
11-INDICATOR TURBOPROP LAYOUT

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



11-Indicator Turboprop Layout

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

Digital Readout

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.

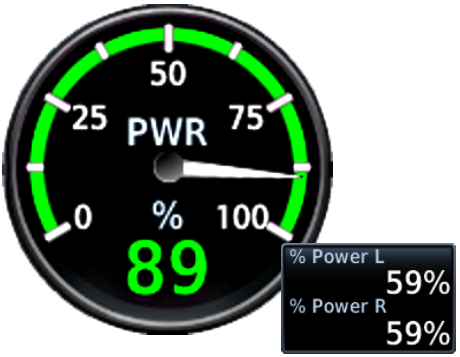
Gauges

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 turbonormalized 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.

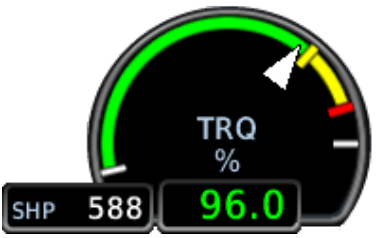
Refer to Gauge Insets for additional display information.

GAUGE INSETS

FEATURE LIMITATIONS/REQUIREMENTS

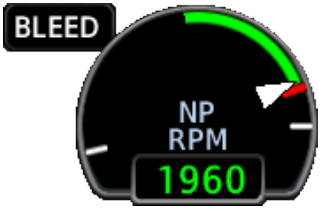
- *Turbine aircraft only*
- *Torque and propeller RPM sensors*
- *Requires installer configuration*

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)

TWIN ENGINE HOUR METER

FEATURE LIMITATIONS

- *Twin engine aircraft only*

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

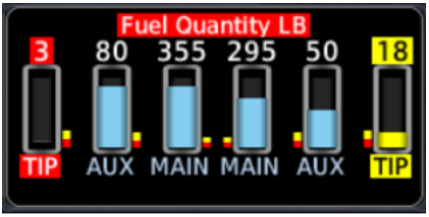
PG Section 8.14 - Record Keeping

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)

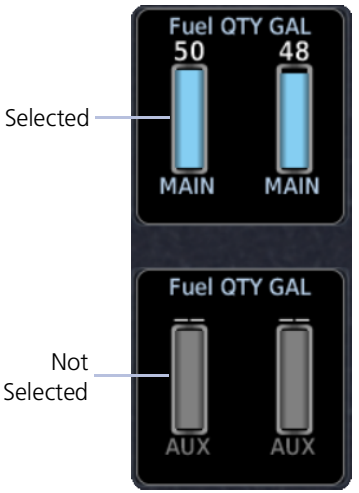
FEATURE REQUIREMENTS

- *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

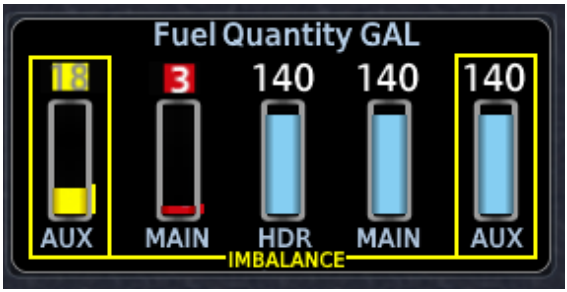
FEATURE LIMITATIONS/REQUIREMENTS

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

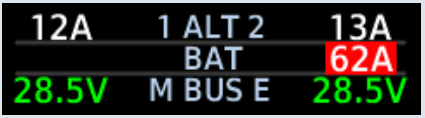
PG Section 8.13 - Gauge Driven Discrete Outputs

SOFTWARE v3.10 UPGRADE SUMMARY

For systems using earlier software versions, 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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