Touchscreen Autopilot Mode Control Panel

EFIS pilot inputs are most often autopilot mode and target settings. This applies to airplanes with and without autopilot when the pilot makes good use of the flight director to simplify hand flying. Recognizing this, the GRT Avionics touchscreen mode control panel is the most pilot-friendly and comprehensive in the industry.

Selecting the autopilot mode control panel is accomplished by pressing any of the areas shown by the white arrows. Touching other areas identifies autopilot touch areas with large white arrows.

(The legacy button and knob autopilot controls are retained. These controls have proven to be simple and efficient.)

Touching any of these areas will split the screen as shown below, and pre-selects the knob and shortcut sofkey functions.

In this example the pilot had touched the altimeter. The selected altitude box is highlighted in with a green square, allowing the right knob to set this value, and displaying altitude short-cuts.

Safe-Touch Protected

"Cancel" allows unintentional touches to be easily undone.

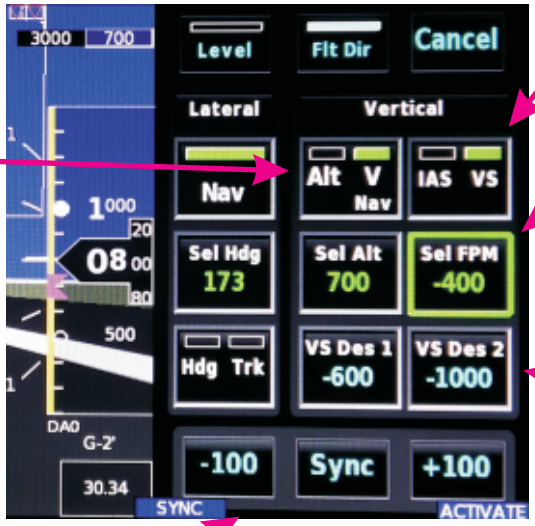
Changes are pending until activated by pressing the right "Activate" knob, making it impossible to inadvertently change autopilot mode or targets with touchscreen only inputs.

The cyan colored buttons provide shortcuts for the setting highlighted in the green box. In this case the selected altitude can be easily set to the missed approach or altitude preset, and the bottom row allows changing the altitude to 1000 foot increments. The "500" selection adds 500 feet for VFR recommended cruising altitudes.

Climb/Descent Rate Selection & Vertical Mode

Toggles vertical target from an altitude (Alt) to the current vertical navigation source (such as synthetic or ILS/GPS glideslope).

Altitude modes and targets and modes can be set while in VNav mode.



Toggles between climb/descent on indicated airspeed, vertical speed, and climb ias/descend VS modes.

The green highlight around the selected vertical speed box indicates the function of the knob and shortcuts.

User-defined presets provided for climb and descent on airspeed and vertical speed.

Touching these allows synchronizing to current rate, or changing by convenient increments for vertical speed and (not shown) airspeed.

Knob allows changing by 10/100 fpm, or 1 mph/knot increments.

Lateral Navigation Mode

Toggles lateral mode between navigation and Hdg/Trk mode.

When in navigation mode, the currently selected EFIS navigation mode will be used for coupling, such as GPS, VOR, ILS, or synthetic approach.

When the EFIS navigation mode is the internal GPS flight plan, Direct-To Reset will reset the flight plan origin to the present position. This allows going direct to the the next waypoint easily.

(This selection is grayed out, as shown here, when the EFIS navigation mode is not GPS with an internal flight plan.)

Heading/Track Selection

Toggles between “NAV” mode (coupling to navigation source, such as GPS flight plan), and Hdg/Trk.

The green highlight around the selected heading box indicates the function of the knob and shortcuts.

Toggles between heading and ground track select modes.

Touching these provides convenient 10 or 45 degree changes.

Real-time relative heading/track display. Touch and drag to change the selected heading.

The knob allows changing by 1 degree increments, and will immediately command heading changes, allowing the airplane to be steered with this knob.

Other Functions - Level, Flight Director, and activation of changes

Level sets altitude and heading bugs and mode to heading and altitude hold.

Single-cue flight director is selectable here, making hand flying is easier and more accurate with it.

Exit - No changes to autopilot modes/targets are pending. Pressing this exits the A/P mode control panel.

Cancel - Replaces “Exit” when a change is made. The pending change is not used until the right knob (Activate) is pressed. Touching “Cancel” discards changes.

Touching in this row selects the knob and shortcut functions, as indicated by the green highlight.

Arming of approaches GPS, ILS, Loc, and synthetic approach for automatic capture is made using the legacy autopilot mode selection via the right knob from PFD screen.