



GTN650 for KLN94 Pilots

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Introduction to new Garmin Avionics

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- GTN 650 and GDL 88 installed in N5344K
- State-of-the-art touch screen WAAS GPS
- ADS-B “Out” for 1/1/2020 mandate, 91.225
- ADS-B “In” for TIS-B traffic and FIS-B WX
- Transition away from 1990s KLN94 GPS technology

As of January 2012, the LCD module (P/N 043-05012-0001) for the KLN-94 is no longer available from Honeywell. Honeywell has not advised of any conditional replacement or alternate solution for display replacement. In addition, as of January 2012, Honeywell does not offer any other panel mount IFR GPS navigators in their Bendix/King product line. Therefore, a different IFR navigator from a different manufacturer should be considered to replace your KLN-94.

- Provide GPS navigation in non-GPS BEFA aircraft

GTN650 Differences From KLN94

- GTN 650 is an Integrated GPS/NAV/COM (similar to the GNS 430 and GNS 480)
- GTN 650 is touch screen – only two knobs and two buttons on the device



GTN650 Differences From KLN94

- GTN 650 replaces GPS/COM/NAV functions provided by two King units: KLN 94 GPS and KX 155 / 155(A) COM/NAV





GTN650 Differences From KLN94

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- Total Height of KLN94/KX155 is 4"; GTN 650 is 2.64"; 4.46"W x 1.98"H display
- [Big brother GTN 750 is 6" high; 4.46"W x 5.27"H display]
- NAV/GPS switch associated with KLN 94 is logically integrated into unit, as it is with the 430W or 480, but is not a physical button



GTN650 Differences From KLN94

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- GTN 650 is WAAS GPS and supports LPV approaches including the KRNT GPS Z 16
- GTN 650 has built in Terrain Proximity display
- GTN 650 supports “SafeTaxi” diagrams
- Flight Plan supports entry of Airways (like the GNS 480 and some G1000 units)



GTN650 Differences From KLN94

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- GTN 650 supports data display from devices such as GDL 88 for ADS-B Traffic and Weather
- Traffic and Weather have dedicated display pages, but can also be overlaid on the primary MAP display page



ADS-B Out FIS-B

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- FIS-B displays weather products from ADS-B ground stations including
 - NEXRAD
 - AIRMETs
 - SIGMETs
 - METARs
 - Winds and Temperatures Aloft
 - PIREPs
 - TAFs
 - TFRs
 - NOTAMs



ADS-B Out TIS-B

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- TIS-B displays traffic received directly from other aircraft via 1090 ES and 978 UAT and from ADS-B ground stations (will include non-ADS-B equipped traffic that is transponder equipped and is in radar contact)
 - Relative Position
 - Relative Altitude
 - Climb/Descent Trend
 - Relative Vector Motion



GTN650 Pilot Interface

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- GTN 650 pilot interface is similar to Garmin 796 and Aera Portable touch screen interface
- GTN 650 pilot interface is “intuitive” but is quite different from KLN 94, GNS 430/480, or G1000



GTN650 Pilot Interface

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- HOME button will access Home Screen that allows selection of one of 12 subscreens
 - Map / Traffic / Terrain / Weather
 - Default NAV / Flight Plan / PROC / Nearest
 - Waypoint Info / Services / Utilities / System
- All screens except Home Screen have “BACK” button to return to previous screen
- All screens allow access and control of Primary and Standby COM and NAV frequencies

GTN650 Pilot Interface

- Data in fields, such as COM STBY, can be updated by touching the field
- Data update is done by selecting characters from a screen rather than by twisting knobs





GTN650 Documentation

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- **Cockpit Reference Guide:**
http://static.garmincdn.com/pumac/190-01004-04_0E_Web.pdf
- **Pilot's Guide:**
http://static.garmincdn.com/pumac/190-01004-03_0D_Web.pdf



GTN650 Training

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- **Training Powerpoint:**
<http://www8.garmin.com/aviation/powerpoints/GTNTraining.ppsx>
- **Excellent training simulator is available on the iPad2 (or newer) in the App Store for \$25**
- **Demo Mode available on ground: Press Direct Key while Powering On (strongly suggest using a 24v external power unit!)**
- **Ground training with BEFA CFI required before flying BEFA GTN 650 airplane VFR**
- **Flight training with BEFA CFI required before flying BEFA GTN 650 airplane IFR**



GTN650 Demonstration

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A demonstration of the GTN 650 interface and functions, using the simulator available on the iPad, will be completed at this point in this presentation

Scenario:

VFR from KRNT to KFHR

Return IFR from KFHR to KRNT



Summary

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