

CFI Bootcamp

Flight Instructor Training

Airplane Systems

Let's Talk Avionics

What should I do before stepping into the airplane?

Old vs. New

Lack of Standardization in Audio Panels

Audio Panels are Used to Control the Use of the Radios and Where the Audio will be delivered



Old vs. New

Lack of Standardization in Audio Panels

Audio Panels Differ but most have some commonalities



Old vs. New

Lack of Standardization in Audio Panels

Off – Speaker - Phone



Old vs. New

Lack of Standardization in Audio Panels

Auto



Old vs. New

Lack of Standardization in Audio Panels

Transmit Select Knob with 1, 2 XMIT



Old vs. New

Lack of Standardization in Audio Panels

Transmit Knob with 1, 2 XMIT select

Old vs. New

Older GPS Units

Bendix King, Avidyne, Garmin



Old vs. New

Older GPS Units

Limited Simulators Exist for Older Units

Old vs. New

Older GPS Units

Become proficient – Battery Cart Usage



Old vs. New

Coming our Way

Garmin discontinuing support for 430/530s



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Old vs. New

Coming our Way

Avidyne – Garmin Slide In Replacement



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Old vs. New

Coming our Way

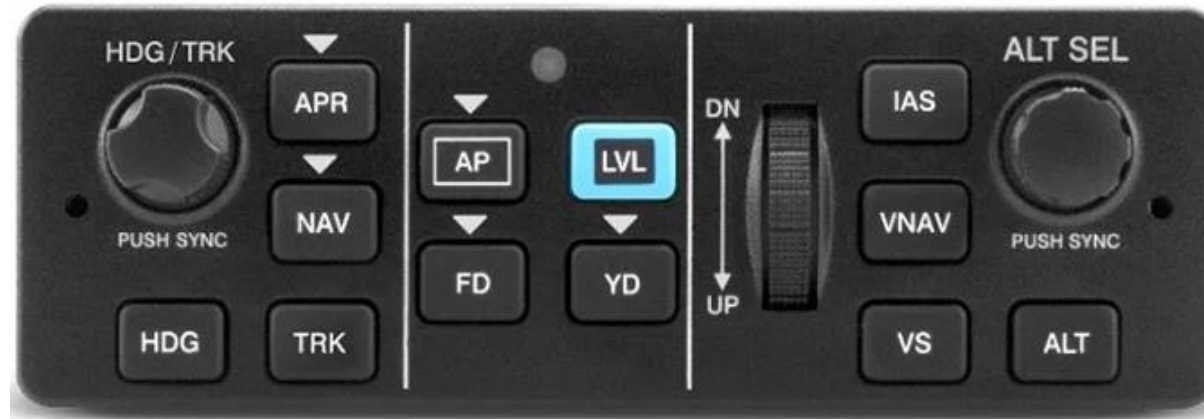
GTN 650 Slide in Replacement for 430 - Almost



Old vs. New

Autopilots

So many different systems



Old vs. New

Autopilots

2. LIMITATIONS

2.15 LIMITATION PLACARDS

The following limitation placard is in the forward view of the pilot:

Limitations for KAP 140 Autopilot System:	
Do not use AP if any window is open.	
Do not use AP during single engine operation.	
Autopilot DISC during take-off and landing.	
Maximum speed for autopilot operation is 185 KIAS.	
Minimum speed for autopilot operation is 90 KIAS.	
<u>Minimum Altitude for Autopilot Operation:</u>	
Cruise, Climb, Descent and Maneuvering	: 800 feet AGL
Approach (130 KIAS or less)	: 200 feet AGL
Approach (above 130 KIAS)	: 250 feet AGL
Departure	: 200 feet AGL

Old vs. New

Autopilots

Changing NAV source – AP goes to Rol Mode

- Wing Leveler



Old vs. New

Autopilots

The Supplements Section of the POH
- Required Preflight



Old vs. New

New Avionics

G1000 System with NXi



Old vs. New

New Avionics

G5 Displays – The round gauge makeover



Old vs. New

Apps

iPad apps

GTN Trainer

GTN TXI Trainer

Simionic – G1000 PDF, MDF and NXI

Best Practices

Unfamiliar Avionics Are a Real Risk

Training both on the ground/sim and in flight

Best Practices

Automation Philosophy

Autopilots don't do the following well:

Turn immediately

Climb or descend immediately

Maneuver around traffic or terrain when close

Best Practices

Automation Philosophy

Autopilots don't do the following well:

Track a Localizer that has “Wiggle”

Use intuition and past experience

Best Practices

Automation Philosophy

When in doubt disengage to the lowest mode – usually OFF

Best Practices

Automation Philosophy

Re engage only when situation awareness allows you to validate the AP actions

Best Practices

Automation Philosophy

Re engage from the simplest mode to complex
validating as you go

Best Practices

How many ways are there to turn OFF the Autopilot?

1. AP Disconnect on the control wheel or stick

Best Practices

How many ways are there to turn OFF the Autopilot?

2. AP switch or button on the unit

Best Practices

How many ways are there to turn OFF the Autopilot?

3. Engaging both sides of the elevator trim switches

Best Practices

How many ways are there to turn OFF the Autopilot?

4. Turning OFF the avionics master switch

Best Practices

How many ways are there to turn OFF the Autopilot?

5. Pulling out the AP circuit breaker

Best Practices

How many ways are there to turn OFF the Autopilot?

6. Turning OFF the master switch