



Avidyne's IFD540 FMS/GPS/NAV/COM combines the best Flight Management System available, with a multi-channel digital VHF radio, in an easy-to-use, plug & play design.

EVOLUTION OF THE WORLD'S BEST FLIGHT MANAGEMENT TECHNOLOGY

Avidyne's leadership in easy-to-use avionics takes the next step forward with the introduction of the IFD540 FMS/GPS/NAV/COM. As the newest member of Avidyne's integrated flight display family, the IFD540 provides the same powerful navigation, communication, and multi-function display capability as found in our award-winning Entegra Release 9 systems in a touch screen, panel-mounted avionics form-factor.

PLUG & PLAY REPLACEMENT FOR YOUR OLD 530



The IFD540 is designed as a plug & play replacement for the popular GNS530 & 530W navigators, but with bigger glass, a much larger screen area, 400% more pixels, and a much easier to use hybrid touch screen interface. And because it's the same physical size, uses the same tray & antennas, and can be installed with no wiring changes, it makes it an incredibly easy and affordable retrofit for general aviation aircraft.



Built on a dual databus architecture, the IFD540s are key components in Avidyne's new panel-mounted avionics suite, which also includes the AMX240 Audio Panel and AXP340 ADS-B Extended Squitter Mode S Transponder.

EASY. AT YOUR FINGERTIPS.



Pinch-Zoom with MultiTouch.

Actual size.

THE EASY CHOICE

Over the years, pilots have chosen Avidyne for our MFDs, PFDs, and safety sensors because we design great avionics products that make flying safer and more fun. It's no secret that 'Ease of Use' is truly the hallmark of all Avidyne products, and now with the IFD540, Avidyne is setting a new standard in easy user interface for FMS/GPS/NAV/COMs.

Advancements in touch screen technology have enabled the design team at Avidyne—virtually all of whom are pilots—to optimize our user interface for the new IFD540. Its powerful new MultiTouch interface allows pilots to gesture using two fingers on the capacitive touch screen to easily scroll and zoom the map range setting in and out. In addition to touch screen, we have maintained familiar knob and button controls. This 'Hybrid Touch' user interface provides pilots the choice when interacting with the IFD540 for such functions as flight planning, map control, and frequency management.

Leveraging the highly-intuitive Page & Tab user interface of our Entegra Release 9 system, the IFD540 provides plainly-labeled tabs, bi-directional keys, on-screen touch-sensitive labels, and a flat menu structure that make it much easier to access the information you want when you want it.

The IFD540 represents the next generation in FMS/GPS/NAV/COM systems, and is capable of providing precision position information to support ADS-B as part of the NextGen airspace initiative.

When it comes to panel-mounted avionics, you now have a choice and the choice is easy. Avidyne.



HYBRID TOUCH - IT'S YOUR CHOICE

In addition to the dedicated knobs and buttons that many pilots prefer for frequent pilot actions, the IFD540's Hybrid Touch capability allows pilots to perform virtually all of those same functions via the touch-screen interface, as well as providing additional MultiTouch functionality like pinch-zoom map panning and graphical flight plan editing.



MAKING FLYING SIMPLER

Featuring a super bright high-resolution LED-backlit 5.7-inch diagonal color liquid crystal MultiTouch touch-screen display, the IFD540 provides a simple user interface for full SBAS/LPV approach guidance capability, FMS Vectors™, advanced radio management including automated NAV frequency tuning and COM frequency nomination, automatic frequency identification, easy-to-modify graphical flight planning, and Avidyne's exclusive GeoFill™ waypoint nomination.



Versatile dual-sided Line Select Keys provide easy control of the thumbnail Hazard Display and map overlay settings. Dual-concentric knobs, dedicated function buttons, and a highly-intuitive touch-sensitive display combine to give pilots a datalink-enabled, map-centric view of their flight situation, while providing quick access to all of the IFD540's powerful functions.

Just as you can use the Page & Tab rocker switches to move between tabs, touching any of the tabs along the bottom of the screen allows you to jump directly to any of the available tabs in a single action, making operation even simpler.



Touching any of the symbols on the IFD540 map brings up a data box with all pertinent information including data on special use airspace, airports, VORs, NDBs, weather, etc.

NAVIGATION MADE SIMPLE.



EASY DIRECT-TO NAVIGATION

For many flights, Direct-To provides the easiest and most efficient way to navigate to your destination or to a given waypoint. The IFD540 provides Direct-To operation that will be familiar to anyone flying with previous generation GPS navigators, except now you also have the option of touch screen data entry.



A pop-up QWERTY-style keyboard automatically appears when an alpha-numeric data field is highlighted, making data entry as familiar to you as your computer or smart phone. With GeoFill, the IFD540 will virtually always guess accurately your next waypoint after only entering one or two letters.



FLIGHT PLANNING MADE SIMPLE

In addition to basic Direct-To navigation, entering an IFR flight plan is easier than ever with the IFD540. Extensive testing and customer experience have proven that the IFD540 user interface reduces button pushes and knob twists required with previous navigators by 50%-75% or more. Drop-down menus are logically placed to provide touch-to-select data entry of airways, exit waypoints, destinations, and approach procedures.



GRAPHICAL FLIGHT PLAN EDITING

With the IFD540's graphical flight planning capability, you can easily edit your flight plan with the touch of the screen. The IFD540's 'rubber banding,' feature allows you to stretch any leg in the flight plan to make a deviation for weather or to accommodate an amendment from ATC.



FMS PREVIEW

Avidyne's exclusive FMS Preview™ is a powerful flight planning feature that makes it even more intuitive to load flight plans by showing you a real-time graphical depiction of each proposed modification in cyan prior to selection. FMS Preview makes it easy to visualize before selecting a desired waypoint, airway, hold or hold geometry, Direct-To, approach, approach transition and any other terminal procedures. In dual IFD540 installations, the dual-databus architecture allows pilots to enter the flightplan on one IFD540 while seeing the FMS Preview on the other.



EASY LOADING OF APPROACHES

The dedicated PROC (Procedure) button allows you to quickly load approaches at your destination airport by selecting from the pop-up list. FMS Preview allows you to view each of the available approaches graphically prior to selection. Unlike previous-generation navigators, the IFD540 allows you to quickly load any destination airports and multiple approaches into your flight plan.



FMSVECTORS™ - FLY THE MAGENTA LINE

The unique Nav Source knob in the upper right corner allows you to select between GPS, VLOC (i.e. VHF NAV), or HDG as the output signal source from the IFD540 to the moving map and to some autopilots. It is also used to slew and sync the course or heading.

GPS is the standard operating mode, providing roll steering commands to the autopilot, and VLOC is used when flying a VOR or ILS/Localizer. Heading mode (HDG), also known as FMS Vectors, is Avidyne's powerful new guidance tool for GPS/FMS navigation.

In legacy navigators the Vectors-to-Final approach transition was a separate procedure that the pilot performed by suspending the flight plan sequencing. With the IFD540, the pilot remains flying the FMS while getting ATC vectors for the final. This is achieved by adjusting the Nav Source Heading with the autopilot remaining coupled to the FMS the whole time. The FMS uses this pilot-set heading and presents a dashed magenta line on the map that is the projected ground track compensated for winds. With this vectors line and the FMS, you can clearly visualize the final approach course and how the aircraft is going to intercept it. This line is drawn as a curved intercept to final if you are "Armed" to intercept and it is only a single button press to Disarm or Arm Intercept according to whether ATC has given approval to "intercept final" or not.

The easily-modified FMS Vectors line gives the pilot GPS/FMS guidance for the entire route of flight, from 200 AGL at departure to 200 AGL at arrival, without the need to suspend or interrupt guidance to the autopilot, enhancing safety and eliminating "modes" confusion.

The pilot simply "flies the magenta line" all the time.

POWERFUL, YET SIMPLE.

EASY RADIO TUNING

Managing your radios is easy with the IFD540. A numeric keypad automatically appears when editing a COM or NAV frequency. The IFD540's quick-entry capability minimizes keystrokes by reducing the number of button pushes required. As an example, to enter the frequency 123.50, you need only enter 235. The leading one is always assumed, and it will auto fill the trailing zero for you.

The IFD540 is capable of simultaneously tuning both the active and standby frequencies, both of which can be easily monitored when coupled with Avidyne's AMX240 Audio Panel.

The IFD540's powerful FMS automatically nominates, auto-tunes, identifies, and monitors the NAV radio frequencies, so you may never have to tune another VOR or ILS frequency again! Should you choose to do so, manual tuning is easily completed with the pop-up numeric keypad or by simply typing the identifier for the VOR.

STATION READOUT

The IFD540 decodes the active and standby frequencies based on proximity in the database, and display the names of the stations in plain English, providing a handy reminder of the agency to which you will be transmitting when pressing the push-to-talk button.



MAKING RADIO TUNING EVEN EASIER

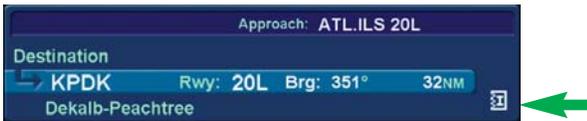
The preferred tuning method is by using the Frequency (FREQ) button. Pressing the Frequency button provides a list of the most likely frequencies you will need based on your current location in your flight plan. When close to your origin it will nominate the origin frequencies, when enroute it will provide the most likely center and flight service frequencies and when near your destination those frequencies will be provided for easy nomination. In fact, any frequency that is displayed can be touch-nominated to your radios.





ELECTRONIC APPROACH CHARTS & AIRPORT DIAGRAM

The IFD540 includes CMax™ Approach Charts & Airport Diagrams. Utilizing Jeppesen's Jeppview® charts subscription services, CMax provides Worldwide approach charts and a database of over 6,000 airport diagrams, most of which are geo-referenced, allowing for the display of your ownship and flight plan position right on the chart or airport diagram.



Touch the Chart icon in the flight plan to automatically load and view the appropriate approach plates and airport diagrams.



EASY NEAREST FUNCTION

Cycling through the NRST button provides easy access to a full list of airports nearest to your present position and airports nearest to your destination, along with nearest VORs, NDBs, Intersections, ARTCC, and Flight Service Stations (FSS). Frequencies can be loaded into the radio standby window with a single touch. Color METAR flags show a graphical presentation of the weather at each reporting airport.



TERRAIN AWARENESS & ALERTING

The IFD540 includes Terrain Awareness and Alerting which can be displayed over the color-contoured terrain base map for easy pilot recognition of an imminent encounter with nearby terrain.



TAWS-B OPTION

In addition to its standard Terrain Alerting capability, the IFD540 also offers an affordable option for TAWS-B, which is mandated for business jets and turboprops with six or more passenger seats. It's Forward Looking Terrain Alerting (FLTA) capability provides a solid yellow or red impact point based on flight path projection. Caution Alerts are provided when a collision with terrain is projected within approximately 60 seconds, and Warning Alerts are provided for terrain projected within approximately 30 seconds. FLTA provides aural alert messaging as well.

PLUG & PLAY COMPATIBILITY.

SPECIFICATIONS

Display

- 5.7" Diagonal w/Touch Screen
- Full VGA - 640 x 480 pixels
- 65,535 colors
- Ultrabright sunlight readable w/LED Backlighting

Dimensions

- Width: 6.30" (16.0cm)
- Height: 4.60" (11.7cm)
- Depth: 11.00" (27.5cm) behind panel including connectors

Weight

- 8.50 lbs (3.79kg) including rack & connector

Power Requirements

- 11 - 33VDC

Environmental

- DO 160E
- To 50,000 ft.
- -20C to +55C Operating
- +70C Short Term

Warranty

- 2 Years parts & labor included
- FlexCare™ extended warranty service available

Applicable TSO

- TSO-C34e ILS Glide Slope Receiving Equipment
- TSO-C36e Airborne ILS Localizer Receiving Equipment
- TSO-C40c VOR Receiving Equipment
- TSO-C110a Airborne Passive Thunderstorm Detection
- TSO-C113 Airborne Multipurpose Electronic Display
- TSO-C118 Traffic Alert & Collision Avoidance (TCAS)
- TSO-C146c Stand-Alone Airborne Navigation Equipment Using GPS, Class 1, 2, 3 (LPV)
- TSO-C147 Traffic Advisory System (TAS)
- TSO-C151b Class B TAWS (Optional)
- TSO-C157 Flight Information System - Broadcast (FIS-B)
- TSO-C165 Electronic Map Display
- TSO-C169a VHF Radio Transceiver Equipment

Multi-channel VHF Voice/Data Transceiver

- 10 Watt transmitter (Class 3, 5)
- Optional 16 Watt (28VDC Only)
- Capable of simultaneous reception of up to four channels, voice or data
- 8.33KHZ or 25KHZ Operation (Class C, E) including offset carrier
- 118.000 MHZ to 136.975 MHZ operation

GPS

- 16-Channel GPS/SBAS Receivers
- 1,000 user-defined Waypoints
- 99 Flight plans , Up to 128 waypoints each
- RTCA DO-178B and DO-254 Level B,
- RTCA DO-160E
- Meets DO-229D, Beta Class 3
- Accuracy:
 - Autonomous Position
 - 3 meters (CEP 50%)
 - 5 meters (95%)
 - SBAS Differential Position
 - 1 meter (CEP)
 - 3 meters (95%)
 - Velocity Accuracy 0.1 knots (95%)
- Dynamics:
 - Acceleration - 10g max.
 - Speed - 1,000 knots
 - Altitude - 50,000 ft

VOR Receiver

- Flag sensitivity Set to -103dBm (Actual sensitivity exceeds -107dBm)
- 108.0 MHZ to 117.95 MHZ operation
- Meets RTCA DO-196 requirements
- CDI output: ±150 mV full scale
- DME channeling: 2x5, BCD, Slip Code Narco 890/891, King Serial
- Audio sensitivity: -103.5 dBm for 6 dB S/N with 1 kHz 30% mod.
- Audio output: 100 mW minimum into 500 ohm load; external amplifier required

VHF Localizer Receiver

- Flag sensitivity set to -101dBm (Actual sensitivity exceeds -107dBm)
- 108.1 MHZ to 111.95 MHZ operation
- Meets RTCA DO-195 requirements
- CDI output: ±150 mV full scale
- Centering accuracy: < 4.5 mV
- Flag sensitivity: -103.5 dBm
- Audio sensitivity: -103.5 dBm for 6 dB S/N with 1 kHz 30% mod.
- Audio output: 100 mW minimum into 500 ohm load; external amplifier required to drive cockpit speaker

UHF Glideslope Receiver

- Flag Sensitivity Set to -86dBm (Actual Sensitivity Exceeds -107dBm)
- 329.15 MHZ to 335.00 MHZ operation
- Meets RTCA DO-192 requirements
- CDI output: ±150 mV full scale
- Centering accuracy: 0 ddm ± .0091 ddm

FUNCTIONALITY

Satellite Datalink Weather Interface

- Avidyne MLB700/WSI AV-300 Broadcast Datalink Receiver
 - Using WSI InFlight® Aviation Weather & SIRIUS® Satellite Radio
- Garmin GDL69/A Broadcast Datalink Receiver
 - Using Baron Services Weather & XM Satellite Radio

Electronic Approach Charts & Airport Diagrams

- CMax™ – Jeppesen Electronic Airway Manual Charts

Lightning Interface

- Avidyne TWX670 Tactical Lightning Detection
- L3 WX-500 Stormscope® Weather Mapping Sensor

Traffic Interface

- Avidyne TAS600/605/610/615/620/A TAS
- Ryan 9900B/BX TAS
- Honeywell KTA870/KMH880 TAS/IHAS
- L3 Skywatch 497 / HP TAS
- Garmin GTS800/820 TAS
- Honeywell CAS66A TCAS I
- L3 791 TCAS I
- Garmin GTS850 TCAS I

ADS-B Interface

- Avidyne TAS600A/TAS605A/TAS615A/TAS620A (Traffic)
- Garmin GTS800/820 (Traffic)

Terrain Awareness

- Color-Contoured Terrain Base Map Built in
 - Americas Terrain & US Obstacle Data
 - International Terrain Data – Optional
 - Integrated Class B TAWS – Optional

406 ELT Interface

- Aviation RS-232
- NMEA 0183

Charts, Nav Data, and other software updates are easily field loadable via USB.



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Avionics installations require special skills and test equipment. Avidyne's limited warranty is valid only for equipment installed by an Authorized Avidyne Distributor. Avidyne reserves the right to make changes to product specifications and design features without notice.

Some products may require additional hardware for full feature capability.

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