What's new with R10.2.3.1?

IFD550/
IFD545

IFD540/
IFD510

IFD440/
IFD410

AVIDYNE®

REV03

R10.2.3.1 Overview

- R10.2.3.1 adds several new 3rd-party interfaces plus many new features and product enhancements:

R10.2.3.1 Overview

I. Interfaces

a) New GLAS Interface option for ProLine 21
b) ADS-B Trfc/Wx to Foreflight
c) Add support for NGT9000R remote transponder
d) Support for Heads-Up Technologies XMD-076A datalink
e) Support for Garmin GDL69A SXM datalink
f) Add support for Garmin G5 HSI
g) Garmin G3X compatibility (experimental only)

II. Map/SVS

a) Allow data blocks to be shown on the SVS pages*
b) Changed fuel range ring coloring
c) Enhance visibility of range-to-altitude arc*
d) Enhance visibility of the next waypoint on the map*

III. FMS

a) Improve display and editing features of Airways, SIDs, STARs, and Approaches*
b) Allow "No Transition" for SIDs and STARs*
c) Enhance Paste button capability across all FMS pages

IV. AUX

a) Added a “Zoom" mode for data blocks and button labels
b) ETE in data blocks goes to MM:SS when below 10 minutes*
c) Displays ADS-B stations received.
d) Adds ADS-B textual TFRs, AIRMETS and SIGMETS
e) Clarify temperature datablocks (TAT/SAT vs OAT)
f) Enhanced user interface for WiFi (networking) configuration
g) Enable touch control of Map Setup page for IFD4XX/5XX and IFD100
h) Adds capability for aircraft with only a fuel flow sensor to utilize IFD fuel related features
i) Eliminate nuisance "Datalink Data Not Rcvd" alerts*

V. Helicopter

a) Ability to configure IFD as GPS/COM only*
b) Improved access to Preset COM Frequencies *
c) “Circular Orbit” holding pattern now selectable down to .5nm*

VI. IFD Trainer App

- R10.2.3.1 features now incorporated into IFD Trainer App

* Denotes features implemented as a direct result of Customer feedback via AvidyneLive Forum

I. a) ‘G.L.A.S.’ Enablement

“GPS Legacy Avionics Support”

- Provides WAAS/SBAS GPS/FMS/LPV interface to legacy avionics (ProLine21) without the need for external interface box or expensive EFIS software upgrade.

Benefit:

- Reduced cost over OEM options
- Turnkey solution reduces aircraft downtime

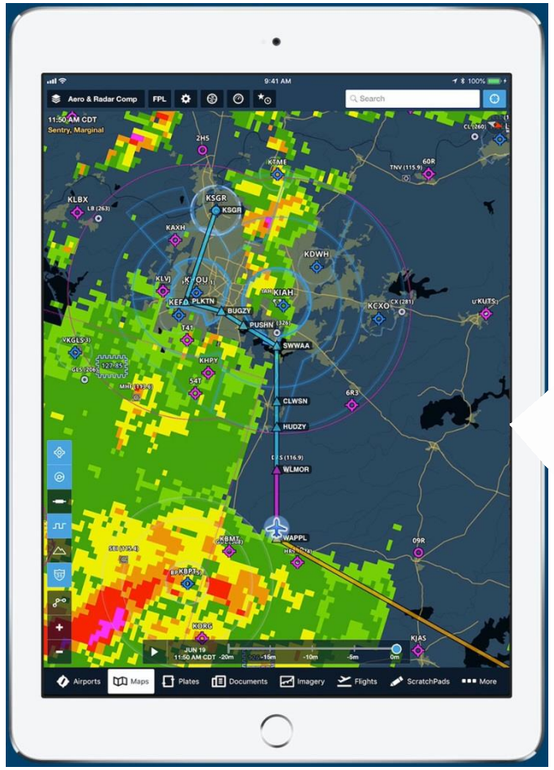
- Optional Paid feature enablement

IFD545

CJ with IFD550/IFD540

I. b) Enhanced communication with Foreflight

- R10.2.3.1 allows IFD to send ADS-B Traffic & FIS-B Weather to Foreflight via WiFi
- (Was already capable of transferring flight plans between Foreflight and IFD)



IFD550/540/440/545/510/410

Benefit:
Better situational awareness for Foreflight users by adding ADS-B Wx & Traffic data from IFD.

I. c) Support for NGT9000R Remote Transponder

- R10.2.3.1 adds compatibility with the NGT-9000R Remote Transponder.
- Remote Transponder controlled by IFD
- Single-box In/Out solution
- IFD displays ADS-B Traffic & FIS-B Wx from NGT-9000R

Benefit:

- Ideal where panel space is at a premium
- Provides full-diversity option for International requirements

Lynx NGT-9000R
Remote-mounted
ADS-B IN/OUT
Transponder

IFD550/540/440/545/510/410

IFD is already compatible with the NGT-9000
panel-mounted LYNX Transponder

I. d) Support for Heads-Up Technologies XMD076/A

- R10.2.3.1 adds compatibility with XMD076/A
- Adds ability to see XM weather from legacy XMD076/XMD076A which were installed in many Cirrus' and EX500/EX600-equipped aircraft
- IFD can be configured as primary display, or in passive mode if EX-Series MFD is already set up as master (control).

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XMD076/A

Benefit:
Saves cost and adds XMD data link display capability on the IFD for many existing Avidyne EX500/600/5000 MFD owners who already own an XMD076A.

I. e) Support for Garmin GDL69A

- R10.2.3.1 adds compatibility with GDL69A
- Adds ability to see SiriusXM weather from newer GDL69A (w/SXM)
  (IFD already works with legacy GDL69 Series with XM-Only rcvr.)

IFD550/540/440/545/510/410

Garmin GDL69A SXM

Benefit:
Allows compatibility for any GNS430W/530W owners who had upgraded to the SXM and now want an IFD.

I. f) Support for Garmin G5

- R10.2.3.1 adds compatibility with Garmin G5
- Documentation now included in IFD installation manual

Garmin G5
AI & HSI

IFD550/540/440/545/510/410

Benefit:
Gives G5 owners the ability to install an IFD and have best-in-class FMS in their aircraft.

I. g) Support for Garmin G3X

- R10.2.3.1 adds compatibility with Garmin G3X for experimental aircraft
- (Compatible but not listed in Install Manual with this revision)

Garmin G3X

IFD550/540/440/545/510/410

Benefit:
Gives G3X owners the ability to install an IFD and have best-in-class FMS in their aircraft.

II. a) Datablocks on SVS pages

R10.2.3.1 adds Datablock option on Egocentric SVS - IFD550/545

R10.2.3.1 adds Datablock option on Exocentric SVS of IFD5XX/4XX

This image shows Data Tab with Datablocks *not* in view – IFD550/545

Benefit:
Puts data block information in front of pilot while viewing SVS pages without the need for switching to Map page.

IFD550/540/440/545/510/410

II. b) Changed Fuel Range Ring coloring

- A Dashed Green Line shows range of aircraft to 45 minutes reserve (based on current fuel consumption)
- With R10.2.3.1, a Solid Yellow Line shows range limit of aircraft with NO reserve (based on current fuel consumption)

- With R10.2.3.1, the solid Yellow Line turns to solid RED when you are within the 45 minute reserve (based on current fuel consumption)

Fuel Range Rings on Map

IFD550/540/440/545/510/410

Benefit:
Provides better visual indication to the pilot to prevent potential fuel starvation event.

II. c) Enhanced Visibility of Range-to-Altitude Arc

- Range-to-altitude arc was thickened up for easier detection and viewing

Range-to-Altitude ARC

IFD550/540/440/545/510/410

Benefit:
Easier to see on busy map screen.

II. d) Enhanced visibility of Next Waypoint/ Next Leg

- Very slight change to enhance the way that legs are drawn on the IFD map.
- The candy cane ‘next leg’ used to start with a magenta segment. We switched that to start with a white segment so that it was distinct from the active magenta leg preceding it. (As shown in the screenshot below just below the VALKA waypoint.)

Next Leg on Map
IFD550/540/440/545/510/410

Benefit:
Easier to detect the start of ‘next leg.’

III. a) Improved display/editing of Airways, SIDs/STARs & Approaches

- Allows you to delete a waypoint from a published Arrival/Departure or Approach after it is entered into your flight plan

IFD550/540/440/545/510/410

Benefit:
Provides more flexibility for pilot to edit the flight plan based on assigned or preferred routing.

III. b) Allow “No Transition” for SIDs and STARs

- Added “None” as an option for a Transition.

IFD550/540/440/545/510/410

Benefit:
Provides more flexibility for pilot to enter the flight plan based on assigned or preferred routing.

III. c) Enhanced PASTE button across all FMS pages

- The paste button now appears on the FPL page, INFO page, and when inserting a waypoint into a stored route.
- See it here on LSK L2 on the FPL page.
  - In this shot, I first went to the nearest page and put the cursor on KCOI. Then I went to the FPL page and started to insert a waypoint.
    (Be sure to use the knob to select Waypoint from the dropdown. If you use touch, the virtual keyboard will appear over the top of the LSK. The LSK will still work, but it won't be visible.)

IFD550/540/440/545/510/410

Benefit:
Provides another way to reduce key strokes and head down time.

IV. a) Zoom Mode

- R10.2.3.1 adds “Zoom Mode”
  - Enabled on Aux→Setup page
- Increases font sizes on Map/SVS/CHART pages
  - Datablocks
  - Tabs
  - Line Select Keys (LSK) labels

ZOOM MODE ON

ZOOM MODE OFF

ZOOM MODE ON

ZOOM MODE OFF

ZOOM MODE OFF

Benefit:
Easier to read for pilots who prefer it.

IFD550/540/440/545/510/410

IV. b) ETE in Datablocks goes to M:SS below 10 min

- R10.2.3.1 allows ETE to read in M:SS when time drops below 10 minutes.
- When ETE is >10 min, reads in H:MM

IFD550/540/440/545/510/410

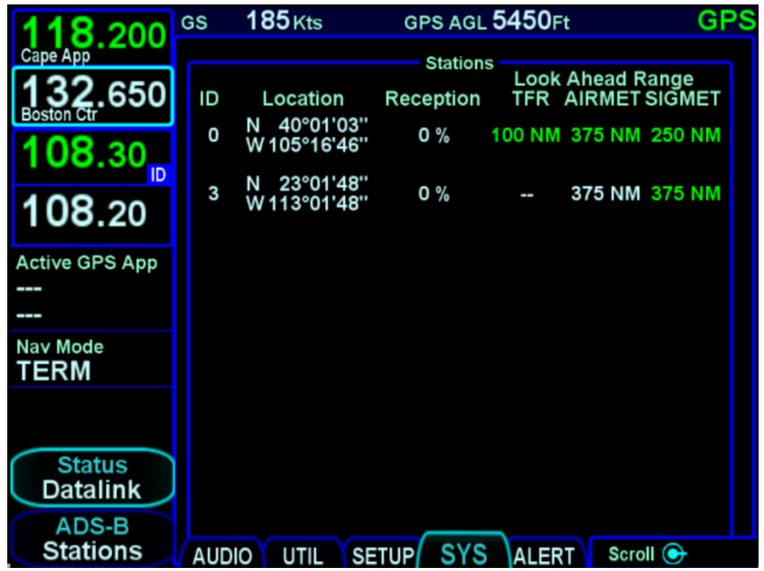
Benefit:
Enhances resolution of time count down — especially valuable on approaches.

IV. c) Adds display of ADS-B Stations Received

- R10.2.3.1 allows pilot to view list of the ADS-B Stations

AUX→SYS→Datalink Status

IFD550/540/440/545/510/410



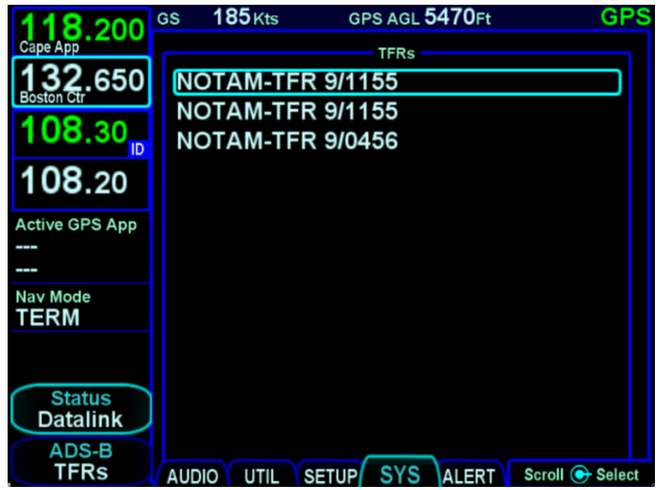
Benefit:
Pilot can verify signal reception and wx products received.

IV. d) Adds textual TFRs/AIRMET/SIGMET from ADS-B

- R10.2.3.1 allows pilot to access textual TFRs, textual AIRMETS/SIGMETS

AUX→SYS→Datalink Status

IFD550/540/440/545/510/410



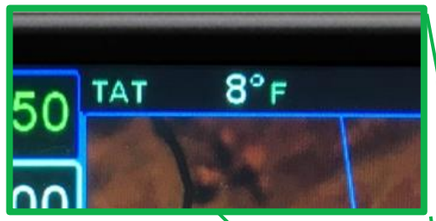
Benefit:
Gives pilot the additional information associated with these data types for better decision making.

IV. e) Clarify OAT temperature datablock (SAT vs TAT)

- R10.2.3.1 now displays outside air temperature (OAT) labeled as:
  - SAT – Static Air Temperature

    -or-

  - TAT – Total Air Temperature



AUX→SETUP→Datablock Setup

IFD550/540/440/545/510/410

Note: Outside Air Temp display requires OAT input from an external device like an EFIS or appropriate fuel flow system. It prioritizes Static Air Temperature (SAT) over Total Air Temperature (TAT) input. (R10.2.3.1 properly labels as SAT or TAT rather than just as OAT)

Benefit:
More descriptive presentation of temp information

IV. f) Enhanced User Interface for WiFi Network Config

- With R10.2.3.1, the desired network configuration can be selected from the SETUP→User Options page without having to return to Maintenance Mode.

AUX→Setup→User Options

IFD550/540/440/545/510/410

Gives the pilot ability to select Networking setting from SETUP page, especially valuable when connecting with a Stratus (or some other 3rd-party network TBD) in the aircraft:

- "LIO WIFI" (or whatever you have named your IFD network)
  - This is the normal setting for connecting an iPad via WiFi to the IFD
- "Stratus123456"
  - This option is selectable from this page only when the IFD is configured to connect to a remote Stratus (Stratus SN has to have been entered in Mx Mode).
  - Allows the IFD to be a client on a 3rd party (Stratus) network in order to share information
    (Example: Allows IFD100 and/or Foreflight to receive GPS position/Flight Plan etc from panel-mounted IFD while also receiving ADS-B Weather & Traffic from the Stratus).
  - With multi-owner aircraft, different Stratus units can be added and selectable.

Benefit:
Gives pilot easier access to customize network connection.
Especially valuable in multi-owner aircraft and/or with Stratus.

IV. g) Enable touch control of Map Setup Page

- You can now change map settings on the IFD100 App
  (In prior releases, there was no way to adjust the factory settings on the IFD100.)

- The IFD's Map Setup page settings can now be controlled with Touch
  (Previously only editable via the knobs)

IFD550/540/440/545/510/410/100

Benefit:
Enables control of Map Config on IFD100 App, plus adds another way to config Map on IFD for those who prefer Touch over Knobs.

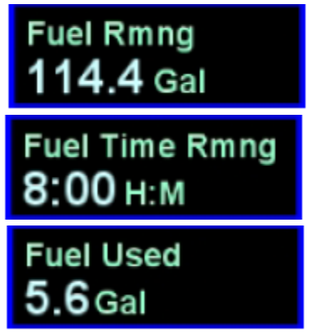
IV. h) Adds capability for aircraft with only a fuel flow sensor to utilize IFD fuel related features

- For aircraft installations that have only a fuel flow sensor, the IFD will use fuel flow to determine "fuel used" and that will allow those installations to take advantage of the fuel related features. (Previously, fuel related features were unavailable in those installations).

Flight Plan showing Fuel Remaining at each waypoint

IFD550/540/440/545/510/410

Fuel-related Datablocks



Benefit:
Allows aircraft with only a fuel flow sensor to take advantage of the fuel related features for improved safety.

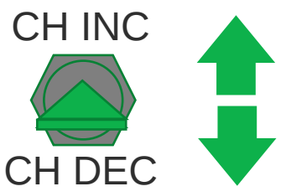
V. a) Ability to configure IFD as GPS/COM only

- R10.2.3.1 adds configuration option in Maintenance Mode to disable the VHF NAV
- Many VFR helicopter operators do not have VHF NAV antennas on some of their aircraft and want GPS/COM only functionality.
- Allows mixed-fleet operators to keep one version IFD for spares to service both GPS/NAV/COM- and GPS/COM-equipped aircraft.

V. b) Improved access to Preset COM Frequencies

- HOTAS enhancement for Helicopters
  (Hands on Throttle and Stick)

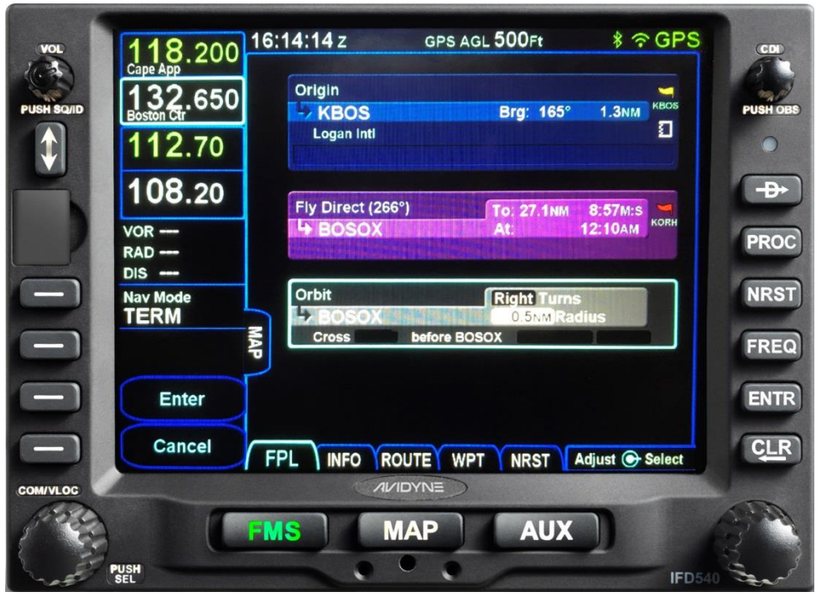
- R10.2.3.1 adds remote “Channel Decrement” input on P1001 Pin 75.
  - IFDs already had a remote Channel INCREMENT input on P1001 Pin 74.
  - IFDs also already have a Remote Freq XFER input on P1002 Pin 15
- Gives pilot the ability to not only “Channel Up” but also to “Channel Down” through up to16 COM Preset Frequencies
  - Activated through remote switch on yoke/cyclic
  - Step through the list of preset com frequencies in either direction loading selected Frequency into the Standby slot



V. a) “Circular Orbit” holding patterns now selectable down to .5nm

- R10.2.3.1 allows the pilot to enter circular orbit holds down to 0.5nm

- Allows for tighter holds for slower moving aircraft and especially valuable for helicopters.



VI. New IFD Trainer App

- New IFD Trainer App for iPad has all R10.2.3.1 features plus improved Simulation software
  - Much more flexibility in "flying" the simulated IFD
  - Easier database loading
  - Linked tutorials
- Provides free-play simulation of any of the 6 IFD models
- Free of charge from the iTunes® App Store.
- Emulates all functions
- Low cost way to provide Demo

Benefit:
Allows you to train the way you fly & fly the way you train.

IFD550/540/440/545/510/410

R10.2.3.1 Summary

- Adds GLAS (GPS Legacy Avionics Support) for support of Pro Line 21 in CJ and King Air
- Adds wireless ADS-B Weather and Traffic integration with Foreflight
- Adds support for Lynx NGT-9000 Remote Transponder
- Adds support for Heads-Up Technologies XMD-076A datalink
- Adds ADS-B textual TFRs, AIRMETS and SIGMETS.
- Adds display of data blocks on the Synthetic Vision (SVS) pages
- Adds Zoom mode which provides the ability to display large data blocks and button label text
- Adds support for Garmin G5 HSI
- Add support for Garmin GDL69A SXM datalink
- Improves display and editing features of Airways SIDS and STARS and approaches
- Adds capability for aircraft with only a fuel flow sensor to utilize IFD fuel related features
- Improved Wi-Fi configuration to ease integration with Stratus, Foreflight and other Wi-Fi connected devices.
- Enhancements for Helicopter-specific operations
- R10.2.3.1 also now incorporated into IFD Trainer App
- More – visit AvidyneLive.com for complete list and description.

R10.2.3.1 Summary

- With certification, all new IFD units will immediately begin shipping with R10.2.3.1.
- For existing IFD owners, R10.2.3.1 will be available as a field-loadable upgrade through authorized Avidyne dealers. (for all IFDs with R10.1 or greater)
- The R10.2.3.1 software is available from Avidyne at no charge, but labor is not included.
- The ‘GLAS’ Enablement is a $24,999 option per aircraft.
- Pricing does not include any labor charges.