

## Contents

Contents..... 1

General Questions ..... 4

1. What is the IFD540? (Updated 3 January 2012) ..... 4
2. Why do I want to wait for the IFD540 when I can go buy a GTN right now? (Updated 3 January 2012)..... 4
3. With Garmin’s new GTN products, why would I want to buy the IFD 540 instead? (24 July 2011)... 4
4. Can you install two IFD540’s together? (24 July 2011)..... 4
5. Does the IFD540 crossfill with the Garmins? (24 July 2011) ..... 4
6. Is the IFD540 capable of acting as a "sole" source navigation device? (July 29, 2011) ..... 4
7. Does the IFD540 work in my existing cockpit? (24 July 2011)..... 5
8. Is it hard to transition from the 530 to the IFD540? (24 July 2011)..... 5
9. What is the size of the IFD540 display? (Updated 3 January 2012) ..... 5
10. What are all the buttons and knobs on the IFD540? (Updated 3 January 2012) ..... 5
11. Does the IFD540 have graphical flight planning? (24 July 2011)..... 6
12. Is there Procedure Preview like there is on Release 9? (Updated 3 January 2012)..... 6
13. Can I nominate frequencies to my radios? (Updated 3 January 2012)..... 6
14. Can I type numbers in for tuning a radio? (24 July 2011)..... 6
15. How do I update the IFD540 charts, navdata, software, etc? (Updated 3 January 2012)..... 6
16. Is the IFD540 software able to be updated in the field? (Updated 3 January 2012)..... 6
17. Is there data logging in the IFD540? (Updated 3 January 2012)..... 6
18. Is this the same GPS/SBAS receiver as R9? (Updated 3 January 2012)..... 7
19. Is it WAAS capable? (24 July 2011) ..... 7
20. Does the IFD540 work with my existing GPS antennas? (Updated 3 January 2012) ..... 7
21. What about your GPS and the G4 network? (Updated 3 January 2012) ..... 7
22. Is this the same digital radio that is in Release 9? (24 July 2011)..... 7
23. How many watts is the radio? (Updated 25 January 2012)..... 7
24. Are the IFD510 and IFD540 Touchscreen? What type of touch screen technology? (Updated 25 January 2012) ..... 7
25. Can I use gloves with the touch screen? (25 January 2012)..... 8
26. Does the IFD540 do VNAV? (Updated 25 January 2012)..... 8
27. What is the IFD540 HDG? Is it used as the heading source to the autopilot HDG? (24 July 2011)... 8
28. What if there is not a Heading input to the IFD540, will the FMS be able to fly Heading legs? (24 July 2011)..... 8
29. Does the Nav Source HDG contradict my autopilot HDG setting or my heading bug? (24 July 2011) 9
30. Can the IFD540 support a Track-Up map depiction? (3 January 2012)..... 9
31. How does the Nav Source knob equate to the 530/530W CDI and OBS buttons? (Updated 3 January 2012)..... 9
32. What are we depicting when the Nav Source VLOC is selected? (24 July 2011)..... 9
33. What is the PFD4000 story? (Updated 3 January 2012) ..... 9
34. What other display sizes will these IFD products be made in? (24 July 2011)..... 10
35. Are there any plans to make a IFD540 type of product that is the same size as the Garmin 430/430W? (3 January 2012)..... 10
36. What other features does Avidyne plan on releasing as part of this product? (Updated 3 January 2012)..... 10

37. What other products does Avidyne plan to release in the coming months/years? (24 July 2011) .....	10
38. Is this just a R9 on a smaller display? (Updated 3 January 2012) .....	10
39. How do I stay in touch with the progress of the IFD540? (Updated 3 January 2012) .....	10
40. Why is IFD540 better than what I have or any other system available today? (24 July 2011) .....	10
41. How can I learn more about IFD540? (24 July 2011) .....	10
42. How can I see IFD540 in-person? (24 July 2011) .....	10
INSTALLATION QUESTIONS .....	11
43. How long does an IFD540 installation take? (24 July 2011) .....	11
44. What is included in the installation kit? (Updated 3 January 2012) .....	11
45. What are the approved IFD540 Installation Sites? (24 July 2011) .....	11
46. Where can I get my IFD540 system serviced if/when it needs it? (Updated 3 January 2012) .....	11
47. How much does an IFD540 system weigh and what does that do to my useful load? (24 July 2011) .....	11
48. How much voltage does IFD540 require? (24 July 2011) .....	11
49. For which Aircraft will the IFD540 be certified? (24 July 2011) .....	11
50. Does the IFD540 have internal TAWS-B? (24 July 2011) .....	11
51. What does the TAWS-B use for an altitude? (24 July 2011) .....	12
52. Does the IFD540 Support TIS traffic? (24 July 2011) .....	12
53. Does the IFD540 Support TAS600 and SkyWatch traffic? (24 July 2011) .....	12
54. Does the IFD540 support WSI MLB weather? (24 July 2011) .....	12
55. Does the IFD540 support XM Wx from a Garmin GDL-69? (24 July 2011) .....	12
56. Does the IFD540 support satellite radio and channel changing? (24 July 2011) .....	12
57. Does this product display MLX international weather? (Updated 3 January 2012) .....	12
58. Does the IFD540 integrate with the new Avidyne audio panel? (24 July 2011) .....	12
59. Does the IFD540 integrate with the new Avidyne transponder? (24 July 2011) .....	12
60. Does the IFD540 support remote mounted transponders? (24 July 2011) .....	13
61. Does the IFD540 support fuel flow information? (Updated 3 January 2012) .....	13
62. Does the IFD540 support fuel on board information? (24 July 2011) .....	13
63. Does the IFD540 support the display of engine instruments? (24 July 2011) .....	13
64. Does the IFD540 show EVS or another video input? (Updated 3 January 2012) .....	13
65. Does the IFD540 work with my autopilot? (24 July 2011) .....	13
66. Does the IFD540 work with the Avidyne DFCs? Which one? (Updated 3 January 2012) .....	13
67. What is the difference between a Mode C transponder and a Mode S transponder and why should I care? (24 July 2011) .....	13
68. Should I do the WAAS modification to my aircraft now or wait until IFD540? (24 July 2011) .....	13
69. If I've already done the WAAS modification to my aircraft, will it work as is in IFD540? (24 July 2011) .....	14
70. Are there any other options or related products? (3 January 2012) .....	14
71. What if I don't want the touch-screen capability? (3 January 2012) .....	14
72. Is there an integrated audio panel control and display capability in the IFD540? (3 January 2012) .....	14
73. Will the IFD540 be able to interface with, and display all external data to specifically include the GDL69/69A, WX500, and Skywatch 497 using the existing connections to the 530 tray or will there really be re-wiring required as part of the installation? (3 January 2012) .....	14
74. If I have a G500 with a GAD43 autopilot adapter driving a KFC225 autopilot, will the IFD540 require the same "Enable Autopilot Approach Outputs" command when crossing the Final Approach Fix or will the IFD540 be able to drive the KFC225 without further intervention once the approach has been enabled? (3 January 2012) .....	14
75. Are there any plans for a Bluetooth or Wifi solution similar to Aspen's Connected Panel that will allow users to upload a ForeFlight flight plan to the IFD540? (3 January 2012) .....	14

76. Will the Schedulers, Timers and Checklists that are available in the Garmin 530/530W be available in the IFD540 and IFD510? (3 January 2012).....	14
SERVICE AND SUPPORT .....	15
77. What is the IFD540 warranty story? (24 July 2011) .....	15
78. If my IFD540 system needs service, what do I need to do? (24 July 2011).....	15
79. Is there any data logging in IFD540 that I can get access to? (Updated 3 January 2012).....	15
How do I get software updates for IFD540? How will I know they exist? Will there be a charge?.....	15
80. When will IFD540 be available and supported outside the continental US? (24 July 2011).....	15
Training Questions .....	15
81. Is there training that I can read for this product? (24 July 2011).....	15
82. Is there a simulator for IFD540? (24 July 2011) .....	15
Availability .....	16
83. When will the IFD540 be delivered? (Updated 3 January 2012) .....	16
Pricing .....	16
84. How much will the IFD540 cost me to install? (24 July 2011).....	16
85. I heard Avidyne has a deposit plan from a friend, how do I sign up? (03 Oct. 2011).....	16
86. What if I change my mind after placing a deposit for an IFD540 before it is installed in my airplane? (Updated 25 January 2012) .....	16

## **General Questions**

### **1. What is the IFD540? (Updated 3 January 2012)**

The IFD540 provides the same navigation, communication, and multi-function display capability as found in our Entegra Release 9 systems in a touch screen, panel-mounted avionics form factor. The IFD540's easy-to-use Flight Management System (FMS) that meets TSO-C146c for full SBAS/LPV approach guidance, easy-to-use flight planning, 'one-touch' victor airway and jet-route navigation, Avidyne's exclusive GeoFill™ waypoint nomination, and FMS Vectors™ capability for fully-coupled guidance through all phases of flight without all the typical manual autopilot interaction. In addition, it is a plug and play replacement for the GNS530/530W.

### **2. Why do I want to wait for the IFD540 when I can go buy a GTN right now? (Updated 3 January 2012)**

You want to wait because of the following:

- It has all the award-winning release 9 features like GeoFill, FMS Vectors, procedure preview, most likely frequency list, hold entry on any waypoint, to name a few.
- It will work with all your currently installed cockpit instruments
- It is easier to use than the GNS430, 430W, 530, 530W or the GTN products.
- There is no modification costs to install the IFD540 in the same location as your GNS530W.
- You are getting a good deal on the IFD540 if you were to sign up early. This price along with your 530 trade-in will result in very little of your cash to make this upgrade.

### **3. With Garmin's new GTN products, why would I want to buy the IFD 540 instead? (24 July 2011)**

Avidyne has continually been awarded the 'ease of use' winner over Garmin in almost every head-to-head evaluation. This product is no exception. The IFD540 provides the same highly-capable FMS navigation and communication functionality as found in our Entegra Release 9 systems, in a standard panel-mounted avionics form factor for easy retrofit into virtually any general aviation aircraft.

Leveraging the highly-intuitive Page & Tab user interface of our Entegra Release 9 system, the IFD540 provides plainly-labeled tabs, bi-directional keys, and on-screen, touch-sensitive labels that make it much easier to access the information you want when you want it, while avoiding the notion of home pages, nested-menus, unfamiliar icons and magic handshakes associated with other navigators.

### **4. Can you install two IFD540's together? (24 July 2011)**

Yes, all the features that your GNS530/530Ws had for cross-filling flight plans, etc are available with dual IFD540s.

### **5. Does the IFD540 crossfill with the Garmins? (24 July 2011)**

No, the crossfill will only work between two IFD540s.

### **6. Is the IFD540 capable of acting as a "sole" source navigation device? (July 29, 2011)**

Yes, it can. Just like a GNS530/530W.

### 7. Does the IFD540 work in my existing cockpit? (24 July 2011)

Yes, the IFD540 was designed to be a plug in replacement for the GNS530/530W so it must integrate with all the existing equipment that the 530/530W previously operated with. This includes a long list of PFDs, EFIS, CDIs, HSI, remote sensors, discrete, autopilots, MFDs, etc.

### 8. Is it hard to transition from the 530 to the IFD540? (24 July 2011)

No, Avidyne has continually been awarded the ‘ease of use’ winner over Garmin in almost every head-to-head evaluation. We made the transition from any of the GNS products to the IFD540 simple by maintaining the most commonly used functions of the 530/530W. The functions are exactly the same between the two units.

1. Direct To – you can still do <Direct To> <ENTER> <ENTER>
2. Com tuning is performed with the dual concentric knob (Outer = MHz, Inner = kHz)
3. Procedure entry by pressing PROC

Others include

- Flip-flop with a dedicated button
- Volume knob

### 9. What is the size of the IFD540 display? (Updated 3 January 2012)

The IFD540 display features a LED-backlit 5.7” diagonal color liquid crystal touch-screen display with 65,535 colors and a 640x480 pixels (Full VGA) display. Your 530/530W was a 5” diagonal, 8-color TFT LCD with 320 x 234 pixels. This increased number of pixels will provide better visibility of the data as well as allowing more information and colors than what you are replacing.

### 10. What are all the buttons and knobs on the IFD540? (Updated 3 January 2012)



### ***11. Does the IFD540 have graphical flight planning? (24 July 2011)***

Yes, the IFD540 allows touching waypoints on the map to insert them anywhere in your flight plan. It also has rubber-banding flight planning. The pilot may select any flight plan leg and stretch it to another waypoint on the map or create a temporary user waypoint if there are no waypoints where the pilot stretched the leg.

### ***12. Is there Procedure Preview like there is on Release 9? (Updated 3 January 2012)***

Yes, 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 by displaying it on the moving map.

### ***13. Can I nominate frequencies to my radios? (Updated 3 January 2012)***

Yes, any frequency that you see, you can touch to nominate to the standby. There is also a FREQ function that will provide the most likely frequencies that you'll need based on your phase of flight. Press FREQ and press a row to nominate the frequency.

- Airport tab allows selection of either origin frequencies if you are on the ground or within 5 nm of the origin and it shows the destination frequencies when you are within 40 nm of your destination.
- Enroute shows the frequencies from the nearest ARTCC, and the nearest FSS as well as approach and departure control frequencies along your route.

### ***14. Can I type numbers in for tuning a radio? (24 July 2011)***

When you touch the standby frequency location the IFD540 assumes that you want to type in a frequency. A numerical keypad is launched for entering numbers. The same rules as the R9 keyboard apply, which are the leading '1' is optional, '.' is optional, the frequency fills in after a certain timeout (3 seconds), pressing ENTR puts it in the Standby and pressing the flip-flop button puts it in the Active.

### ***15. How do I update the IFD540 charts, navdata, software, etc? (Updated 3 January 2012)***

There is a USB port on the front bezel of the IFD540 that allows a single step uploading of subscription NavData, Charts and Obstacles. This data is available from Jeppesen JSUMs and there are programs for a single subscription per airplane. The details of how to get the data from JSUMs to the USB port are in development.

### ***16. Is the IFD540 software able to be updated in the field? (Updated 3 January 2012)***

Yes, the IFD540 can be updated without the need to return it to Avidyne. Periodically, there will be new features added to the IFD540 that you have the option to receive. These updates will need to be loaded by a certified installation shop or service center. The process is very quick and will include loading it through the USB port on the front of the bezel. The shop will verify the installation according to a service bulletin, and will update the aircraft log books.

### ***17. Is there data logging in the IFD540? (Updated 3 January 2012)***

Yes, there is logging of all parameters that you see and more in the IFD540. There are user logs for position, altitudes, deviations, time, flight plan waypoints, etc that you can download for plotting. There are also logs for the installers and Avidyne tech support to use to resolve any issues that may arise on your unit.

**18. Is this the same GPS/SBAS receiver as R9? (Updated 3 January 2012)**

No, this is the next generation GPS/SBAS receiver from Avidyne. It is being developed for this and many future Avidyne products. It is a 16-channel, fast acquisition, GPS/SBAS TSO-C146c/DO-229D Beta Class 3 receiver.

**19. Is it WAAS capable? (24 July 2011)**

Yes, it meets the latest GPS/SBAS TSO-C146c and is capable of receiving satellite based GPS corrections (WAAS/EGNOS/MSAS) worldwide. It has been tested for the new EGNOS satellite corrections.

**20. Does the IFD540 work with my existing GPS antennas? (Updated 3 January 2012)**

Yes, it will work with your existing GPS antennas but in order to use the IFD540 for precision GPS approaches (LPVs) you'll need to have either TSO-C190 antennas or antennas on the following list or others that are included at certification:

Antenna Type	TSOA
Comant CI428-200	TSO-C144a
Garmin GA-56	TSO-C129a
Garmin GA-56A	TSO-C144a
Garmin GA-56W	TSO-C144a
Garmin GA-57	TSO-C144a

Most of the existing approved Garmin GNS530W approved antennas are on that list. This list may be expanded to accommodate other antennas that meet the strict TSO-C146c requirements (especially low horizon view angle requirements). Otherwise you can use your existing antennas but it is not legal to fly LPVs.

**21. What about your GPS and the G4 network? (Updated 3 January 2012)**

Our GPS is being built to filter out the issues with the Lightspeed 4G data network. We are investigating the developments of this interference over the next year but our system should not be affected by the 4G network.

**22. Is this the same digital radio that is in Release 9? (24 July 2011)**

Yes, it is the same radio as R9 with some minor modifications to fit in this mechanical package of the IFD540. It has 2 VHF communication receive channels and 4 navigation channels.

**23. How many watts is the radio? (Updated 25 January 2012)**

The standard unit will contain a 10-watt radio and there is a 16-watt option for an extra charge. Note that the 16-watt variants require 28VDC power buses in the airplane.

**24. Are the IFD510 and IFD540 Touchscreen? What type of touch screen technology? (Updated 25 January 2012)**

Yes, both the IFD510 and IFD540 are a capacitive touch screen display with Multi-Touch. Almost everything that you can do with the touchscreen can be performed with the knobs and buttons. Some pilots like knobs while others will enjoy the new features of the touch screen, like graphical flight planning, rubber banding, keyboard entry, frequency nomination, map panning, etc.

*Multi-Touch* allows pilots to gesture using two or more fingers to easily zoom the map range setting in and out. This makes it familiar to anyone using Smartphone or Tablet PC/iPad

**25. Can I use gloves with the touch screen? (25 January 2012)**

Yes, many gloves will work just fine on the capacitive touch screen displays. Since the capacitive technology senses a change induced by the proximity of a finger, differences in glove size, thickness and type may affect the performance and responsiveness of the touch screen glass. As you can imagine, thinner gloves will typically work better than thicker gloves. Leather gloves will also tend to work better and special made-for-touch screen operations gloves are also becoming increasingly available. In all cases, a brief and informal qualification of a given glove will be recommended and procedures will be included in the Pilot Guide.

**26. Does the IFD540 do VNAV? (Updated 25 January 2012)**

The FMS has a much more integrated and useful VNAV than what the 530/530Ws has. In the 530/530W you could do enter a vertical constraint on a single waypoint. In comparison, the IFD540 lets you put altitude constraints on multiple waypoints in your flight plan. These altitude constraints are located in the bottom row of each waypoint. The type of constraint (at, at or below, at or above) and an offset prior to the waypoint is also easily entered. All this is done within the same flight plan view.

A vertical speed required (VSR) value can be configured in the datablock to show what vertical speed the aircraft needs to be flown at to meet the current altitude constraint. This constraint could be on your active waypoint or a downpath waypoint. The VSR is only available on the Avidyne digital Databus at this time.

If the IFD540 is interfaced to a remote air data computer then it will use this altitude. If baro altitude is not available then the system will use the GPS MSL altitude (same altitude as the TAWS function).

**27. What is the IFD540 HDG? Is it used as the heading source to the autopilot HDG? (24 July 2011)**

The IFD receives remote heading inputs either over ARINC429, synchro heading input (ARINC407) or from another sensor (e.g. Stormscope). This heading is used for guidance within the FMS and the moving map has a “Heading Up” view. The IFD540 Nav Source selection knob HDG selection is a pilot entered heading but the FMS uses winds and speed information to create a track leg. This leg is either a Vector to Intercept (VI) leg or a Vectors with a Manual Termination (VM) leg depending on whether it is armed to intercept or not, respectively. A dashed magenta line is generated when this mode is selected and represents the projected course over ground. The dashed line shows whether the line will intercept a flight plan leg or not by its display of a curved leg (on-ramp) when armed or passing through the leg when disarmed.

Guidance commands from the HDG selection are generated from the FMS so that if you are using an autopilot with FMS input, like GPSS, you’ll want to set the autopilot mode to FMS/GPSS to have the autopilot couple to this vectors/heading leg.

**28. What if there is not a Heading input to the IFD540, will the FMS be able to fly Heading legs? (24 July 2011)**

Sort of, the FMS is using the heading input for guidance commands according to this heading. When there is no heading then the IFD540 is using a FMS generated course to fly this leg and the guidance output is according to this course. The pilot must be aware of this difference between the heading and course as specified in the pilot’s guide.

**29. Does the Nav Source HDG contradict my autopilot HDG setting or my heading bug? (24 July 2011)**

Yes, the IFD540 HDG is a subset of GPS and not truly a heading mode. If the pilot selects HDG on his autopilot he is not following the bug displayed on the IFD540. For the pilot to utilize IFD540 HDG mode he must hand fly the bug on the IFD540 and not his primary HDG bug or his AP must be in GPSS (or NAV with GPS selected) as the nav source.

**30. Can the IFD540 support a Track-Up map depiction? (3 January 2012)**

Yes, this capability was recently added to the baseline definition of the initial release of the IFD540 due to customer requests.

**31. How does the Nav Source knob equate to the 530/530W CDI and OBS buttons? (Updated 3 January 2012)**

The IFD540 is using the nav select (PUSH/CRS) knob as the corollary to the Garmin VLOC/OBS button but it does more than the 530/530W. The Garmin implementation only applies to GPS legs. In the GNS530 there is no means to adjust a VLOC OBS other than the airplane's primary nav indicator CP/OBS knob which is not depicted anywhere on the GNS (except in a cal mode). The IFD540 uses this primary indicator course and displays the VLOC leg on the map. Changes to the VLOC course on the IFD540 are not sent to the primary nav indicator so the IFD540 displays an alert to the pilot indicating that the two are not synchronized. When the pilot presses the Nav Source knob it will sync the IFD540 course with the primary deviation source (not the current aircraft radial).

When VLOC is selected, the display on the map shows the inbound radial as a green line and the outbound radial as a white line to the tuned navaid frequency. The FMS flight plan is removed when in this mode.

**32. What are we depicting when the Nav Source VLOC is selected? (24 July 2011)**

Garmin 530/530Ws have always displayed the GPS flight plan (map page) whether VLOC or GPS is selected. This is a significant deficiency that has become more accepted because of wide application. The G-series even displays a GPS CDI (on the correct page) whether VLOC or GPS is selected. To correct Garmin's (deficient) design we use the implementation that we developed for our R9 CRS (OBS) mode. This design is that when VLOC is selected and the tuned navaid station Morse code is identified, then the map depiction of the navaid can be used as the anchor for a green line to and white line from that station. This line is the inbound and outbound radial to/from the station. A pilot can change the course/radial but the IFD540 course is not sent back to the primary indicator. When the IFD540 course is changed an alert is posted alarming the pilot that the course on the IFD540 and the CDI courses are different. A deviation scale is not possible on the IFD540 since we don't want to present a deviation indication that is different than the primary indicator that is going to the autopilot. VLOC nav depiction on the IFD540 significantly improves your situational awareness by providing a visual indication of where you are from the radial.

**33. What is the PFD4000 story? (Updated 3 January 2012)**

The PFD4000 is our future aftermarket PFD that tightly integrates with the IFD540, DFC90 and the rest of the Avidyne radio rack equipment. We are working on the development of the PFD4000 but it is queued up behind the IFD540 initial release. The PFD4000 integrated with the IFD540 will be a great complement since all autopilot bugs and flight plans are synchronized between the units. Changes to heading bugs, courses and altitudes are reflected on both units at all times.

**34. What other display sizes will these IFD products be made in? (24 July 2011)**

The product is scalable to this size or could be to other sizes. According to the demand, Avidyne will investigate other display sizes for future products. What size would be of interest to you?

**35. Are there any plans to make a IFD540 type of product that is the same size as the Garmin 430/430W? (3 January 2012)**

Avidyne has not announced any plans to make a 430-sized product at this time.

**36. What other features does Avidyne plan on releasing as part of this product? (Updated 3 January 2012)**

Avidyne may be announcing additional features prior the release of the product. Since we are announcing it a year ahead of time we don't want to let our competition know all the features it will have.

**37. What other products does Avidyne plan to release in the coming months/years? (24 July 2011)**

Avidyne is continually improving the Entegra Release 9, traffic products, ADS-B developments and DFC90 certifications.

**38. Is this just a R9 on a smaller display? (Updated 3 January 2012)**

Yes it is a derivative of Release 9 without the ADAHRS and with a different I/O board and new features like multi-touch. The same software is contained in the IFD540 as the award winning Release 9.

**39. How do I stay in touch with the progress of the IFD540? (Updated 3 January 2012)**

If you get on our mailing list, follow Twitter (Username: AviJake) and keep in touch with [www.ifd540.com](http://www.ifd540.com) and [www.avidynelive.com](http://www.avidynelive.com), you'll see news and updates on the product. We'll also likely be announcing some new features, improvements and reasons for jumping onto the IFD540.

**40. Why is IFD540 better than what I have or any other system available today? (24 July 2011)**

Entegra Release 9 was a clean paper design that was designed to make you a safer pilot in all conditions. The R9 ease of use has evolved into the IFD540 so it will also reduce your workload even in the most challenging of environmental or airspace conditions. You will spend much more time managing your aircraft or enjoying the flight instead of managing your avionics and aircraft systems. It will give you the confidence to use your airplane the way it was meant to be used, whether that is day VMC or single-pilot heavy IFR. Simply put, it improves your Safety and Utility.

**41. How can I learn more about IFD540? (24 July 2011)**

There are several ways. One of the best ways is to sign up for the Avidyne Insider electronic newsletter. This is your way to receive periodic email posts that contain valuable nuggets about IFD540 and other related Avidyne news. Additionally, you can log on to the IFD540 website at [www.ifd540.com](http://www.ifd540.com) for more information. Finally, don't hesitate to call one of our sales representatives at 1-800-AVIDYNE.

**42. How can I see IFD540 in-person? (24 July 2011)**

Avidyne will be showing the IFD540 at multiple trade shows. If you are planning on going to a trade show and want to know if Avidyne is going to be there with the IFD540 then call Avidyne sales at 1-800-AVIDYNE. Also, there's a full list of the remaining 2011 Tradeshow is on our website at: <http://www.avidyne.com/news/shows.asp>

## **INSTALLATION QUESTIONS**

### **43. How long does an IFD540 installation take? (24 July 2011)**

This depends heavily on what configuration you are starting out with and what you want to end with. If you are replacing a GNS530W then it is very quick. It would be the time to pull out the 530W, slide in the IFD540, test out the interfaces and add entries in the aircraft log book. This is true for single or dual 530W replacements.

If you are not replacing a GNS530W, then it will take about the same amount of time to install a GNS530W. If you have a 530 then it will take about the same time as if you are upgrading your 530 to a 530W. This time is highly variable and depends on the experience of the shop and the interfaces involved in the installation. Avidyne recommends contacting your local Avidyne dealer to provide you with the time and cost for the installation. Please visit <http://www.avidyne.com/dealers/index.asp> to find an Avidyne dealer near you.

### **44. What is included in the installation kit? (Updated 3 January 2012)**

For installation where a 530 or 530W is being replaced, the IFD540 is supplied with a pilot's guide.

For new installations, the installation kit will include the tray, backplate, connectors and pins.

If WAAS antennas are required then they can either be purchased through Avidyne or directly from the antenna supplier but they are not part of the installation kit.

### **45. What are the approved IFD540 Installation Sites? (24 July 2011)**

Avidyne recommends contacting your local Avidyne dealer to provide you with the time and cost for the installation. Please visit <http://www.avidyne.com/dealers/index.asp> to find an Avidyne dealer near you.

### **46. Where can I get my IFD540 system serviced if/when it needs it? (Updated 3 January 2012)**

There are more than 800 qualified shops across the globe where service will be able to be conducted on the IFD540 system.

### **47. How much does an IFD540 system weigh and what does that do to my useful load? (24 July 2011)**

IFD540 is equal to the weight of the GNS530/530W so your weight and balance will not change. Each IFD540 is approximately, 8.5 lbs.

### **48. How much voltage does IFD540 require? (24 July 2011)**

The IFD540 is powered from 11 – 33 VDC.

### **49. For which Aircraft will the IFD540 be certified? (24 July 2011)**

Avidyne is applying for an Approved Model List (AML) STC for installation of the IFD540. You can expect it to be almost identical to Garmin's AML for the GNS530/530W.

### **50. Does the IFD540 have internal TAWS-B? (24 July 2011)**

Yes, there is an optional upgrade for full TAWS-B on the IFD540. This will be available at the initial product certification. The TAWS-B upgrade retails for \$7,995. The standard IFD540 has integrated terrain awareness and alerting that meets AC20-167, Appendix 7.

The terrain awareness and alerting includes:

1. A one-minute caution and 30-second warning if the airplane's current flight path will collide with terrain or an obstacle.
2. Aural call-out for both the caution and the warning (CAUTION - TERRAIN, TERRAIN; WARNING - TERRAIN, TERRAIN).
3. Terrain impact region highlighted on the moving map indication on your map displays to show.

**51. What does the TAWS-B use for an altitude? (24 July 2011)**

The TAWS system uses GPS position and altitude from calculating the TAWS alerts. This GPS altitude is used with the database terrain and geoid information to determine a mean sea level (MSL). The accuracy of the GPS altitude is based on the GPS satellite geometry and whether SBAS/WAAS corrections are available. The GPS altitude is not subject to temperature or pressure differences so this altitude does not require a local altimeter setting.

**52. Does the IFD540 Support TIS traffic? (24 July 2011)**

Yes.

**53. Does the IFD540 Support TAS600 and SkyWatch traffic? (24 July 2011)**

Yes, the IFD540 will support all traffic products that the 530/530W currently supports, this includes the Avidyne TAS600, 605, 610, 615 and 620, Ryan TCAD products and the L3 Skywatch products.

**54. Does the IFD540 support WSI MLB weather? (24 July 2011)**

Yes, the IFD540 supports the full WSI MLB weather broadcast over the Sirius/XM satellite network. There are all the broadcast weather data products displayed, which include, NOWrad®, Graphical METARs, Textual METARs, TAFs, TFRs, Lightning, Storm Tracker (Cell Movement), Echo Tops (Cell Height), Winds Aloft, Temps Aloft, Graphical AIRMETs, Graphical SIGMETs, Canadian - Radar, METARs & TAFs and Caribbean - METARs & TAFs.

**55. Does the IFD540 support XM Wx from a Garmin GDL-69? (24 July 2011)**

Yes, the IFD540 will receive the same XM weather data from the GDL-69 and 69A as the GNS530/530W currently receives.

**56. Does the IFD540 support satellite radio and channel changing? (24 July 2011)**

The initial release of the IFD540 will not support channel selection on the display. A remote control, like the GRC 10 (for the GDL69A) or the Avidyne Sirius remote will need to be used.

**57. Does this product display MLX international weather? (Updated 3 January 2012)**

No, the initial release will not integrate with the MLX product.

**58. Does the IFD540 integrate with the new Avidyne audio panel? (24 July 2011)**

Yes, it will integrate with the AMX240 audio panel.

**59. Does the IFD540 integrate with the new Avidyne transponder? (24 July 2011)**

Yes, the IFD540 will be approved as a position source for the transponder. This WAAS GPS position is the position that is used for the ADS-B out messages. If there is altitude available to the IFD540 then it could be used as the altitude source for the transponder.

**60. Does the IFD540 support remote mounted transponders? (24 July 2011)**

No, the IFD540 will not initially support the remote mounted transponders. We will be evaluating whether we should add integration with remote mounted transponders in a future release.

**61. Does the IFD540 support fuel flow information? (Updated 3 January 2012)**

Yes, the IFD540 will support a fuel flow sensor input. The pilot will enter the total fuel on board amount during the boot-up of the IFD540. The supported sensors are the ARNAV, EI and Shadin fuel flow units (all the same sensors are supported that work with the Garmin 530/530W).

**62. Does the IFD540 support fuel on board information? (24 July 2011)**

Yes, if the fuel on board is being received from a fuel totalizer source then this information is displayed.

**63. Does the IFD540 support the display of engine instruments? (24 July 2011)**

No

**64. Does the IFD540 show EVS or another video input? (Updated 3 January 2012)**

As of January 2012, this is TBD.

**65. Does the IFD540 work with my autopilot? (24 July 2011)**

Yes, the IFD540 provides VHF radio and FMS guidance commands to the same autopilots that the GNS530/530W is interfaced with.

For the VHF Radio deviations, the IFD540 interfaces with the compatible 530/530W analog and digital indicators. These include CDIs, VOR/ILS indicators, discrete and annunciators, electronic HSI's and PFDs. The autopilot are configured either to measure these signals in parallel with the indicators or the indicator are the source of the deviations.

For the FMS, there are ARINC429 roll steering command outputs that it transmits to the autopilot and/or flight displays.

**66. Does the IFD540 work with the Avidyne DFCs? Which one? (Updated 3 January 2012)**

Yes, the DFC90 is available for integration with the IFD540 for aircraft that are currently on the DFC90 STC list. In order to use the DFC90 you need an Avidyne Entegra EXP5000 PFD or an Aspen EFD. The DFC90 provides a digital, attitude-based capability to your aircraft.

The DFC100 is our autopilot for the Entegra Release 9 system only.

**67. What is the difference between a Mode C transponder and a Mode S transponder and why should I care? (24 July 2011)**

Among other things, Mode S transponders encode your aircraft registration (e.g. N-number) in its stream and is required for flight in Europe under many conditions. ATC can also send information to your Mode S transponder so as the Mode S and ADS-B functionality matures there are more features that could be sent up to you through your transponder (e.g. traffic, weather).

**68. Should I do the WAAS modification to my aircraft now or wait until IFD540? (24 July 2011)**

If you haven't already upgraded to WAAS, Avidyne recommends now that you wait until IFD540. IFD540 are WAAS enabled so you won't need to incur the extra costs of upgrading your 530 to a 530W. You could upgrade your antennas if they are not on the WAAS antenna list. While the composite and antenna work is

reusable, it is unlikely that you would recoup all the expense in upgrading to 530Ws when you go to resell them as part of the IFD540 modification.

***69. If I've already done the WAAS modification to my aircraft, will it work as is in IFD540? (24 July 2011)***

Yes, it will. We have engineered our WAAS solution to use the exact same antennas as those in the 530W installations. Therefore, you are able to leave the WAAS antennas, mounting, and coax all in place, saving several thousands of dollars of installation expense.

***70. Are there any other options or related products? (3 January 2012)***

Yes, we've also announced the IFD510 product which is best described as the touch-screen plug-and-play replacement to the Garmin GPS500 (similar to 530 but without Com/Nav). Both the IFD540 and the IFD510 come in black or grey bezel variations.

***71. What if I don't want the touch-screen capability? (3 January 2012)***

For those customers who do not want any touch screen functions, there is a selection that can be made in the setup pages that turns all touch-screen functionality off.

***72. Is there an integrated audio panel control and display capability in the IFD540? (3 January 2012)***

No, we've found that the majority of customers prefer dedicated controls for the audio tuning and it isn't feasible to put that dedicated control space on the IFD540, remembering that the IFD540 was designed to be the same form factor as the 530/530W, albeit with a larger display.

***73. Will the IFD540 be able to interface with, and display all external data to specifically include the GDL69/69A, WX500, and Skywatch 497 using the existing connections to the 530 tray or will there really be re-wiring required as part of the installation? (3 January 2012)***

The IFD540 truly is a slide-in replacement for the 530/530W in that sense. No re-wiring will be required.

***74. If I have a G500 with a GAD43 autopilot adapter driving a KFC225 autopilot, will the IFD540 require the same "Enable Autopilot Approach Outputs" command when crossing the Final Approach Fix or will the IFD540 be able to drive the KFC225 without further intervention once the approach has been enabled? (3 January 2012)***

This is the kind of detailed integration testing we'll be conducting in our labs in the coming months but we are certainly designing the IFD540 to support an automatic cutover from GPS or HDG to ILS CDI. That's one of the nice benefits of the Avidyne FMS system that is baseline in the IFD540.

***75. Are there any plans for a Bluetooth or Wifi solution similar to Aspen's Connected Panel that will allow users to upload a ForeFlight flight plan to the IFD540? (3 January 2012)***

Avidyne has announced our participation in the Aspen Connected Panel consortium. The specific functions and capabilities will be revealed prior to IFD540 product launch.

***76. Will the Schedulers, Timers and Checklists that are available in the Garmin 530/530W be available in the IFD540 and IFD510? (3 January 2012)***

Yes, the IFD540 and IFD510 will have all the same capabilities for schedulers, timers and user checklists.

## ***SERVICE AND SUPPORT***

### ***77. What is the IFD540 warranty story? (24 July 2011)***

IFD540 is warranted for 2 years from date of install. You have the opportunity to buy extra years of warranty via the FlexCare program.

### ***78. If my IFD540 system needs service, what do I need to do? (24 July 2011)***

In many cases, IFD540 will tell you what is wrong. Through the extensive human-readable diagnostics that are available, you and/or your avionics shop are able to very quickly diagnose a problem and identify any part that may need replacement. Your quickest path to service is via your Avidyne Dealer or Service Center.

### ***79. Is there any data logging in IFD540 that I can get access to? (Updated 3 January 2012)***

Yes, quite a bit. Each IFD has a data recorder provided at no charge. While you can access much of the data, the data does remain the property of Avidyne. Flight logs are available for download via the front USB port during ground operations. The type of data available will be described in greater detail in the IFD540 Pilot's Guide.

### ***How do I get software updates for IFD540? How will I know they exist? Will there be a charge? (Updated 3 January 2012)***

With very few exceptions, all software inside the IFDs is capable of being updated via the bezel USB port as well. This means the IFD does not need to be returned to the factory for any future software updates. This updating however requires that an authorized Avidyne Service Center perform the updates because of various FAA conformity requirements. This is not a service that an individual owner is allowed to perform him or herself. We are using a number of overlapping means to notify owners that a software update is available, the nature of the update, if it is considered mandatory or optional and if there is a fee associated with the update. Some new features should be expected to come with a fee but other sustaining engineering type of software changes may be no-charge.

### ***80. When will IFD540 be available and supported outside the continental US? (24 July 2011)***

Avidyne is working as quickly as we can to simultaneously launch the IFD540 within the US and beyond. This is a time consuming process as we must apply for a number of individual regional certifications (e.g. Europe, Brazil, South Africa, Australia, New Zealand, etc) all require separate certifications. In addition to having a certified system in those regions, we also need to ensure there is an accompanying service and support plan for those customers not operating in the US.

## ***Training Questions***

### ***81. Is there training that I can read for this product? (24 July 2011)***

Avidyne is developing information material, videos and PIREPs of the IFD540. Many of these will be posted on Avidyne Live, [www.avidynelive.com](http://www.avidynelive.com) and [www.ifd540.com](http://www.ifd540.com).

### ***82. Is there a simulator for IFD540? (24 July 2011)***

Not at the current time. Avidyne is working on a PC simulator for IFD540. This software will be available around the time of the availability of the IFD540. When it's available and you are interested in getting a copy of the IFD540 PC simulator please call Avidyne Sales (1-800-AVIDYNE) and request to be added to the IFD540 PC Simulator Mailing List.

## ***Availability***

### ***83. When will the IFD540 be delivered? (Updated 3 January 2012)***

The IFD540 is currently in development and in flight test so we don't have a specific delivery date but we are driving to a late 2012 completion date.

## ***Pricing***

### ***84. How much will the IFD540 cost me to install? (24 July 2011)***

This depends on what configuration you are starting out with and what you want to end with. If you are replacing a GNS530W then it are very quick. It would be time to pull out the 530W, slide in the IFD540, test out the interfaces and add entries in the aircraft log book. This is true for a single or dual 530W replacements.

If you are not replacing a GNS530W then it will take about the same amount of time as it would take to install a GNS530W if you have a GNS530 it will take about the same time as doing the 530W WAAS upgrade.

### ***85. I heard Avidyne has a deposit plan from a friend, how do I sign up? (03 Oct. 2011)***

Contact Avidyne Sales directly at 1-800-Avidyne to learn more about our deposit plan.

### ***86. What if I change my mind after placing a deposit for an IFD540 before it is installed in my airplane? (Updated 25 January 2012)***

Avidyne offers a full deposit refund for any IFD540 deposit placed before certification. The full amount of the IFD540 deposit will be refunded per the terms of the deposit agreement, currently one year.