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AVIONICS AND FLIGHT TECHNOLOGY

»» SETTING THE COURSE FOR NEXTGEN AIR NAVIGATION ««

AVIONICS DESIGNED WITH TOMORROW IN MIND

>>> There's a new wave of innovation sweeping through the avionics world. And Garmin systems are clearly at the forefront. We're continually introducing new products and creative technologies that reduce complexity, enhance efficiency, underscore safety, shorten learning curves, and vastly simplify cockpit management in all phases of flight.

From the industry's first IFR approach-certified GPS to today's newest touchscreen interfaces and advanced SBAS/WAAS systems that let pilots fly GPS LPV glidepath approaches into airports with no on-field electronic nav aids of any kind – Garmin avionics are setting the pace and building toward a future that will take us from today's ground-controlled and radar-limited ATC system to a vastly more space-based and interactive NextGen air traffic management environment.

As this vision takes shape, you can count on Garmin to keep building ever-higher levels of reliability, integration and pilot situational awareness into every panel- and remote-mount avionics system we offer. Our products are designed for pilots by pilots. And when you combine that with our uncompromising quality and leadership in manufacturing and service, it's easy to see why pilots have made us the #1 avionics company serving today's owner-flown aircraft market.

Garmin Avionics. Onboard with the future of flight. <<<

TOUCHSCREEN AVIONICS: THE FUTURE AT YOUR FINGERTIPS

Once again, Garmin breakthroughs in GPS/Nav/Comm technology are taking aviation in a whole new direction with the GTN 650/750 series of integrated touchscreen avionics.

Combining the latest in multi-function display (MFD) features with high-resolution TFT optics, detailed mapping and a new graphical user interface, the GTN design makes flight data appreciably easier to access. Page navigation is more intuitive, with a new "shallow" menu structure and helpful HOME and BACK keys to simplify orientation. In fact, you're rarely more than two taps away from all primary pages and functions. You can quickly pan across the map display by simply swiping your finger across the screen. And integration capability for a wide array of avionics and sensors not only streamlines tuning and mode selection – but, in effect, lets pilots utilize the GTN touchscreen as a virtual flight management system.

This is the future of "all-in-one" avionics design as we know it.

With every model in the new GTN product lineup, graphical flight planning capabilities allow you to preview your route on the map screen and easily enter new waypoints or modify existing ones. Victor Airways and high-altitude Jet Routes can be overlaid on the moving map. And for easy IFR route navigation, airway segments can be

selected onscreen for instant entry into one's flight plan. What's more, a handy "rubber band" feature lets you grab a flight plan leg on the screen, and then stretch or move it to accommodate a deviation or ATC amendment to your flight plan.

By referencing built-in terrain, mapping and obstacle databases, the GTN units provide a clear, MFD-like presentation of the visual landscape and airspace features beneath your aircraft – including topography, cities, airports, SUAs, and more. For added safety, there's a built-in terrain elevation database that provides color-coded display overlays when potential terrain conflicts loom ahead. Full Class B TAWS alerting is also available as an option. And standard SBAS/WAAS navigation enables pilots to fly GPS-guided LPV glidepath approaches down to ILS-comparable minimums, where suitable conditions exist. In addition, precise course deviation and roll steering outputs can be coupled to select autopilots, enabling virtually all IFR flight procedures to be flown automatically. Then, once you've landed, geo-referenced SafeTaxi® diagrams automatically provide easy directional orientation on nearly 1,000 U.S. airports.

Offered in two sizes and a variety of configurations, the GTN product family gives you plenty of stack-maximizing options. The more compact GTN 650 series is contained in a 2.65-inch tall

package that replicates the in-stack form factor of its popular GNS 430W predecessor – while the larger GTN 750 series bezel stands 6 inches tall and offers a screen that's nearly 100 percent larger than the previous GNS 530W design. There's room in the MFD-capable, 6.9-inch diagonal GTN 750 frame to display your approach plates and procedures – which come pre-installed on these units in the form of standard Garmin FliteCharts®². Or, if you prefer the Jeppesen format, you can elect to go with optional Garmin ChartView™ electronic charts on your big-screen GTN instead³.

Moreover, all the GTN series units can support a wide array of optional weather, lightning and traffic system inputs for overlay on the moving map. And optional XM WX™ Satellite Weather, with graphical NEXRAD, METARs, and more, can be accessed through Garmin's GDL 69 data link receiver (sold separately)¹. To save space in your avionics stack, any GTN unit can provide onscreen control/display for optional remote-mount Garmin transponders (sold separately). In addition, the larger-format GTN 750 screen can also be used as your control panel for an optional Garmin remote audio/intercom system (also sold separately). Thus, with GTN you're able to accommodate more screen area in less total stack height.

The Garmin GTN series: It's what being a touch smarter in avionics is all about.



¹XM subscription required (sold separately).
²Initial U.S. FliteCharts® will disable when data is over 6 months out-of-date. Updates available on single-cycle or annual basis.
³Requires Jeppesen JeppView™ subscription (sold separately).



Onscreen graphical flight plan editing makes it easy to add waypoints or modify your route. Handy “rubber band” feature lets you stretch a flight plan leg to divert or amend your routing.

Garmin FliteCharts® come pre-loaded on the large-format GTN 750 series². Optional Jeppesen-format electronic charts are also available with Garmin ChartView™³ – enabling graphical overlay of geo-referenced approach plate procedures on your moving map.

Victor Airways and high-altitude Jet Routes can be overlaid on the moving map – and airway segments can be selected onscreen for easy entry into a flight plan.

Icon-style graphical interface on the GTN “Home” page makes all operational functions easy to access. A quick tap of the dedicated HOME key on the bezel takes you back to the desktop from any active page in the data sequence.

Garmin SafeTaxi® airport diagrams come pre-installed on all GTN series units, providing geo-referenced aircraft guidance on nearly 1,000 U.S. airports.

Your GTN’s built-in elevation database provides an extra margin of safety in visualizing terrain/obstacle conflict situations. For even more comprehensive audible/visual alerting capability, optional TAWS-B functionality is also supported.

Optional XM™ WX Satellite Weather datalink enables your GTN unit to access live NEXRAD imaging, as well as the latest METARs, TAFs, lightning, and other meteorological data. (Requires GDL 69 receiver and XM subscription, sold separately.)

To save vital inches in your stack, any GTN touchscreen can serve as a digital control head for compatible Garmin remote-mount ATC transponders. In addition, the larger GTN 750 can also provide onscreen control for Garmin’s remote GMA 35 audio/intercom system (sold separately).

SPECIFICATIONS	
Safety	
Emergency Search:	Emergency Search: 25 nearest airports, VORs, NDBs, intersections, and user waypoints; 5 nearest ARTCC and FSS frequencies
Alarms:	TAWS-B (optional); airspace messages at 10 minutes, 2nm, and inside airspace; arrival timers
User Customization	
Waypoints:	1000 user-defined
Flight Plans:	99 reversible; up to 100 waypoints each
Physical	
Unit Size:	
GTN 650	2.65”h x 6.25”w x 11.25”d (6.7 x 15.9 x 28.6 cm)
GTN 750	6.00”h x 6.25”w x 11.25”d (15.2 x 15.9 x 28.6 cm) Depth is behind panel with connectors
Unit Weight:	
GTN 650	7.0 lb
GTN 750	9.3 lb
Display:	Color TFT LCD; sunlight readable
Power:	11-33 VDC
Data Storage:	Flash and non-volatile memory (augmented by separate internal battery) protects stored data
Performance	
GPS:	TSO-C146c, Class 3
VOR:	TSO-C40c
LOC:	TSO C36e
GS:	TSO-C36e
VHF COMM:	25 kHz and 8.33 kHz channel spacing Transmitter TSO C37d, Class 4 and 6 Receiver TSO C38d, Class C and E
GPS Receiver:	15 channel, including 3 WAAS
Acquisition Time:	TTFF 1:45 minute typical (cold), 10sec reacquisition
Update Rate:	5 per second
Accuracy:	<2 meters RMS typical with WAAS (horizontal/vertical)
Dynamics:	1000 knots max
Nav Features:	Navigation with flight plans and direct-to waypoints, approach navigation using published approaches stored in flash memory, terminal navigation using DPs and STARs, closest point of flight plan, arrival and departure frequencies, turn advisories and arrival annunciations
Planning Features:	Trip and fuel planning, true air speed, density altitude, winds aloft, flight timers, trip statistics, sunrise and sunset, RAIM availability, advisory vertical navigation (VNAV)
Interfaces:	ARINC 429, RS-232, RD-422, RS-485, HSDB, CDI/HSI, RMI (digital), altitude input (serial: Icarus, Shadin- Rosetta; fuel sensor, fuel / air data, GDL 69/69A XM, GTX 32/33/33D/330/330D, GTS 800/820/850, L-3 Stormscope, L-3 Skywatch, Avidyne TAS, GAD 42, and others.
Map Datums:	WGS-84

HOW THE UNITS COMPARE					
	GTN 625	GTN 635	GTN 650	GTN 725	GTN 750
Operational interface	Touchscreen	Touchscreen	Touchscreen	Touchscreen	Touchscreen
Unit size (height)	2.64”	2.64”	2.64”	6”	6”
Weight	5.4 lbs	6.2 lbs	7.0 lbs	7.7 lbs	9.3 lbs
Display resolution (pixels)	650 x 266	650 x 266	650 x 266	650 x 708	650 x 708
10-watt Comm radio	No	Yes	Yes	No	Yes
16-watt Comm radio	No	Optional	Optional	No	Optional
VOR/ILS/GS Nav radio	No	No	Yes	No	Yes
Gamma 3 WAAS GPS	Yes	Yes	Yes	Yes	Yes
Hi-res Terrain graphics	Yes	Yes	Yes	Yes	Yes
Internal TAWS-B terrain alerting	Optional	Optional	Optional	Optional	Optional
Preloaded initial U.S. FliteCharts®	NA	NA	NA	Yes	Yes
Garmin ChartView™	No	No	No	Optional	Optional
Preloaded U.S. SafeTaxi®	Yes	Yes	Yes	Yes	Yes
XM WX Satellite Weather capable¹	Yes	Yes	Yes	Yes	Yes
Can control remote transponder²	Yes	Yes	Yes	Yes	Yes
Can control remote audio processor³	No	No	No	Yes	Yes
Traffic System capable⁴	Yes	Yes	Yes	Yes	Yes

¹Requires GDL 69 (sold separately); XM subscription required.

²GTX 32/33 series remote transponders sold separately

³GMA 35 remote audio processor sold separately

⁴Requires GTS 800/820/850 or compatible 3rd party traffic alerting systems

A scaled version of Garmin's SVT™ 3-D synthetic vision renders terrain-alerting data into a realistic virtual landscape, showing obstacles, traffic, airports and more. SVT is standard on G600; optional on G500.



RETROFIT GLASS IS NOW WITHIN YOUR GRASP

If you love the idea of flying a glass cockpit – but hate to think of parting with your current aircraft – this is clearly the retrofit option you’ve been waiting for: The Garmin G600. Or its lookalike version for lighter aircraft, the G500.

Leveraging our industry-leading G1000™ integrated cockpit technology, these twin-screen Garmin units combine primary flight (PFD) and multifunction (MFD) display capabilities in one easy-to-install, 10-inch wide bezel – providing a perfect-fit replacement for the standard gyro cluster in your panel. The PFD’s attitude display is over 50% larger than those of traditional 3-inch flight instruments. And for easier scanning, both the PFD and MFD are paired directly in the pilot’s field of view.

Instrument data comes from ultra-reliable digital AHRS and Air Data Computer reference, while built-in terrain and mapping databases add graphic navigation detail. Garmin FliteCharts® and SafeTaxi® come pre-installed as standard. Or, if you prefer, optional geo-referenced

ChartView™ instrument approach plates and airport surface charts are also available (JeppView™ subscription required). All onscreen navigation functions are easily integrated with the WAAS-certified GTN 650/750 or GNS 430W/530W units in your stack. And optional inputs let you overlay XM™ satellite weather¹, TAWS-B terrain alerting, onboard radar, traffic alerts or other data. Support for optional radar altimeter control/display is provided. And there’s also a video input option that will even let the G500/G600 MFD function as a live-cam video monitor. ARINC 708 interface support for many popular GA weather radars is optionally available on both units. And for those flying outside the U.S., Garmin’s Iridium-based worldwide weather service – via the optional GSR 56 datalink system – can also provide satellite voice/data communications from virtually anywhere your aircraft might take you.

To further augment the units’ growth capabilities, interface support is offered for select autopilots and flight directors. A Garmin GAD 43 adapter unit (standard

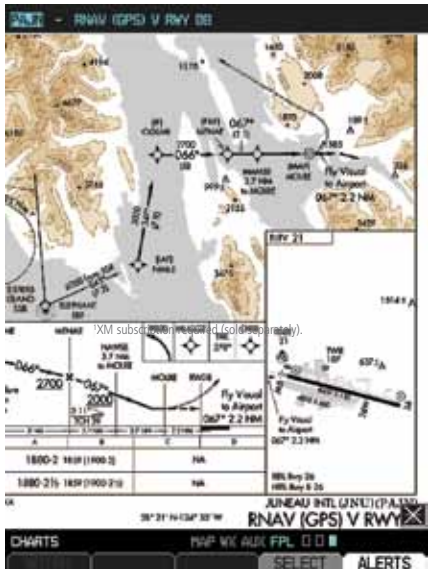
on G600; optional on G500), provides enhanced autopilot interface – allowing AHRS to drive your autopilot in place of a gyro-mechanical ADI (such as the familiar KI-256). The GAD 43 can emulate many existing gyro interfaces, using more accurate and reliable AHRS data to provide the required attitude, heading, yaw input, baro correction, and alerting information to the autopilot. This typically enables the system’s costly ADI to be replaced on the panel with a far more affordable (and space-saving) attitude indicator as one’s backup instrumentation.

Best of all, a scaled version of Garmin’s SVT™ Synthetic Vision Technology also comes standard on the G600 – or as an option on the G500. With SVT, pilots are offered a realistic 3-D virtual reality display of terrain, obstacles, runways and traffic information, all shown in context on the PFD. It’s like having a clear-day “out-the-window” view in any weather or flight situation. And it promises to bring a whole new level of situational awareness to your Garmin retrofit glass cockpit.

Garmin SafeTaxi® U.S. airport diagrams depict the current aircraft position in relation to runways, taxiways, hangars, etc.



Standard Garmin FliteCharts® provide over 14,000 NACO-format approach plates, which can be viewed on the G500/G600’s 6.5-inch MFD.



SPECIFICATIONS

Display Features

- Dual 6.5 inch diagonal color AMLCDs
- RGB backlighting technology
- High resolution 640x480 VGA (921,600 RGB dots)
- 65,536 simultaneous colors
- Direct sunlight readable
- Auto, manual or lighting bus inputs for dimming
- Field upgradeable software

Physical – GDU 620 display

- 6.7 inches high
- 10.0 inches wide
- 3.25 inches deep
- 6.4 lbs.

System Architecture

- Position source: Requires external SBAS/WAAS GPS, such as GTN 650/750, GNS 480 or 400W/500W series unit.
- Supported interfaces include: GDL 69/69A XM datalink weather, GSR 56 for global connectivity/WX, GWX 68 digital weather radar, GTX 330 Mode S transponder, various traffic sensors, and more
- Supported AHRS: GRS 77 (supplied)
- Supported Air Data Computer: GDC 74 (supplied)

Electrical

- 10-40 VDC, reverse polarity protected
- 55 watts typical

Environmental

- 20C to +55C operating temp
- 55C to +85C storage temp
- 2 degrees C per minute temp variation
- 95% at 50C humidity
- 35,000 feet max altitude
- internal cooling, external cooling not required

Certification Candidates

STC via Approved Model List (AML) for over 785 airframes
TSO-C2d, TSO-C3d, TSO-C4c, TSO-C6d, TSO-C8d, TSO-C10b, TSO-C34e, TSO-C36e, TSO-C40c, TSO-C41d, TSO-C43c, TSO-C52b, TSO-C63c, TSO-C118, TSO-C113, TSO-C147, TSO-C151b

HOW THE UNITS COMPARE

	G500	G600
Approved for Class 1 Aircraft (typically piston singles under 6,000 lbs.)	Yes	Yes
Approved for Class 2 Aircraft (typically piston twins and turbine aircraft under 6,000 lbs.)	Yes	Yes
Approved for Class 3 Aircraft (typically piston or turbine aircraft between 6,000 lbs. and 12,500 lbs)	No	Yes
Garmin SVT Synthetic Vision Technology	Optional	Standard
GAD 43 to replace select A/P attitude gyro, bootstrap heading, yaw, baro and other cues with AHRS reference	Optional	Standard
GWX 68 Radar interface (radar LRU sold separately)	Optional	Standard
ARINC 708 interface support for select GA radar units	Optional	Optional
RVSM compliance kits available for select aircraft	No	Optional
Internal TAWS-B terrain alerting	No	Optional
Video input	Optional	Optional
Radar altimeter interface (digital)	Optional	Optional



Optional ChartView™: Electronic display of Jeppesen® approach plates is enabled through Garmin's ChartView™ option (subscription required). Instrument approaches and airport surface diagrams can be viewed with the aircraft position overlaid on the GMX 200 display. Based on the flight plan, the GMX 200 will automatically load the approach charts for the destination airport. Standard Instrument Arrival and Departure procedures (STARs and DPs) are also provided.

GETTING THE BIG PICTURE JUST GOT EASIER

Offering a versatile array of features and nav graphic interfaces, the GMX 200 multifunction display is an impressive “big picture” pilot information center.

The large color AMLCD display expands a full 6 inches diagonally, with 640 x 480 pixels for outstanding clarity and resolution. Multiple charting options provide an extra margin of safety. Affordable Garmin FliteCharts® let pilots quickly find and view all U.S. terminal procedures and approaches on the MFD. Or, with the optional ChartView™ format – available through a JeppView™

subscription – pilots can track their progress with a geo-referenced aircraft symbol that's overlaid on the electronic approach procedure or airport diagram.

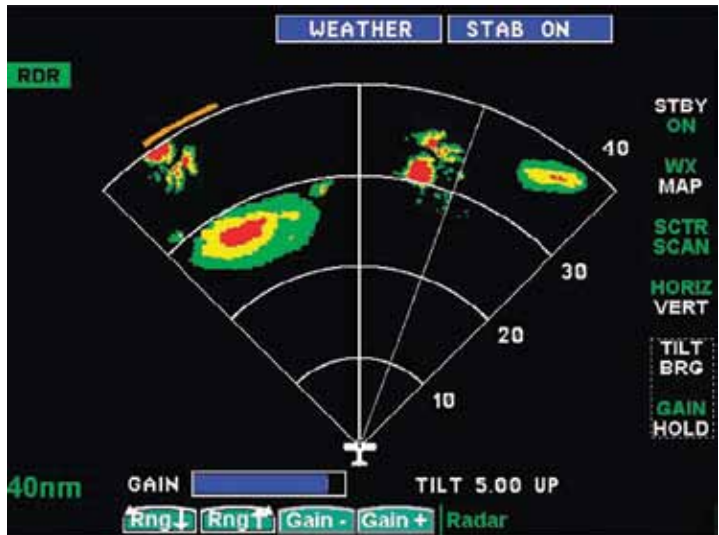
While enroute, flight progress is displayed on a realistic moving map display. The system's built-in terrain database color-codes relevant ground features in relation to your aircraft altitude, alerting you as you approach rising terrain. For added capability, the GMX 200 will also integrate with various onboard weather radar systems (see Garmin's GWX 68 or other compatible digital radar units), plus

lightning, traffic awareness, and datalink systems that enable uploading of real-time graphical weather information and NEXRAD radar summaries.

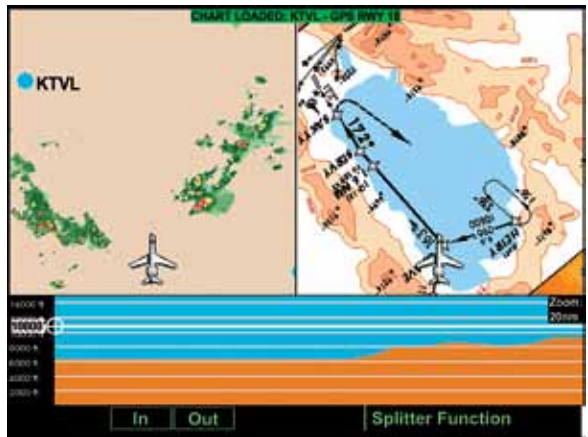
The GMX 200 will interface with most manufacturers' GPS navigation equipment. When coupled to Garmin GPS and VHF nav systems, the GMX 200 provides extra features and levels of convenience that help optimize pilot decision-making and situational awareness in the cockpit.



For help in navigating unfamiliar U.S. airports, Garmin SafeTaxi® airport diagrams identify runways, taxiways and hangars, as well as the aircraft's location on the field.



The GMX 200 is designed to interface with most manufacturers' GPS navigation equipment, as well as other onboard sensors and data systems. Four versions of the GMX 200 – Standard, Traffic, Radar/TAWS, and Radar/Traffic – are available to support various sensor configurations.



For added situational reference, the latest GMX 200 software offers a unique split-screen view – allowing side-by-side displays of any two GMX 200 charting functions. In addition, a vertical profile view of terrain peaks and obstructions relative to the current flight level can be displayed across the lower portion of the screen.

SPECIFICATIONS	
Display Features	
6.5" Diagonal color AMLCD	
Ultra-High resolution 640x480 (921,600 RGB dots)	
65,536 simultaneous colors	
Direct sunlight readable	
Auto/Manual dimming	
Field upgradable software	
Position Source	
External GPS via RS-232	
4 bi-directional high speed RS-232 ports	
1 bi-directional high speed RS-422 port	
4 ARINC 429 high/low speed (with Traffic and Radar models)	
Physical	
5.00 inches high	
6.25 inches wide	
8.00 inches deep	
4.30 lbs. GMX 200 Standard	
4.60 lbs. GMX 200 Traffic, Radar, & Radar/Traffic	
Performance	
Interfaces:	Displays optional TIS, TAS and TCAS-I traffic from compatible systems on GMX 200 Radar/Traffic versions; accepts optional TAWS-B terrain alerting with GMX 200 Radar/TAWS and Radar/Traffic versions; displays optional weather radar with GMX 200 Radar/TAWS and Radar/Traffic versions.
Radar interfaces include: Garmin GWX 68, Bendix/King RDR 2000, RDR 2100, Allied Signal RS 181-A (does not support vertical profile with RS-181A)	
Electrical	
10VDC to 40VDC, reverse polarity protected	
40 watts typical	
Environmental	
-20C to +55C operating temperature	
-55C to +85C storage temperature	
2 degrees C per minute temperature variation	
95% at 50C humidity	
50,000 feet maximum altitude	
Internal cooling, external cooling not required	
Certification Candidates	
AML STC for over 800 airframes	
TSO-C110a, TSO-C113, TSO-C63c, TSO-C118, TSO-C147	



TECHNOLOGY EVERYONE CAN IDENTIFY WITH

With all solid-state designs and powerful 200- to 250-watt transmitters, the Garmin family of GTX series transponders brings ATC aircraft surveillance to new levels of precision, reliability, and performance.

What's more, since receiving TSO-C166a authorization for 1090 MHz Extended Squitter (ES) transmission capabilities, Garmin has taken a leading role in providing an affordable pathway to ADS-B compliance for the FAA's proposed Next Generation airspace system. Automatically transmitting aircraft flight ID, position, altitude, velocity, climb/descent, and heading information, Garmin's ES capable GTX 330 and GTX 33 series transponders provide precise dynamic reference to Air Traffic Control, as well as to other ADS-B equipped aircraft sharing the airspace.

The 1090 MHz ES upgrade preserves all of the existing GTX 330 and GTX 33 features, including a Mode

S Traffic Information Services (TIS-A) interface that allows you to keep an eye on traffic in or near some of the busiest airports in the U.S. For customers who have already purchased a GTX 330/33 series, there's a factory upgrade available to add the ES functionality.

The Garmin GTX 33 is a remote-mount unit designed for use with the GTN 650/750 series, which allow for built-in transponder mode and code selection. The GTX 330 is a panel-mount unit. Another option, the Garmin GTX 328 is similar to the GTX 330, but is designed to satisfy the European mandate for a VFR/Class 2 Mode S solution. It does not offer TIS traffic or ADS-B datalink functionality.

For Mode C operation, Garmin offers the affordable GTX 327 panel-mount transponder with dedicated pushbutton keys for code selection. A remote-mount version, the GTX 32, is also available for integrated systems that offer remote code selection capabilities.

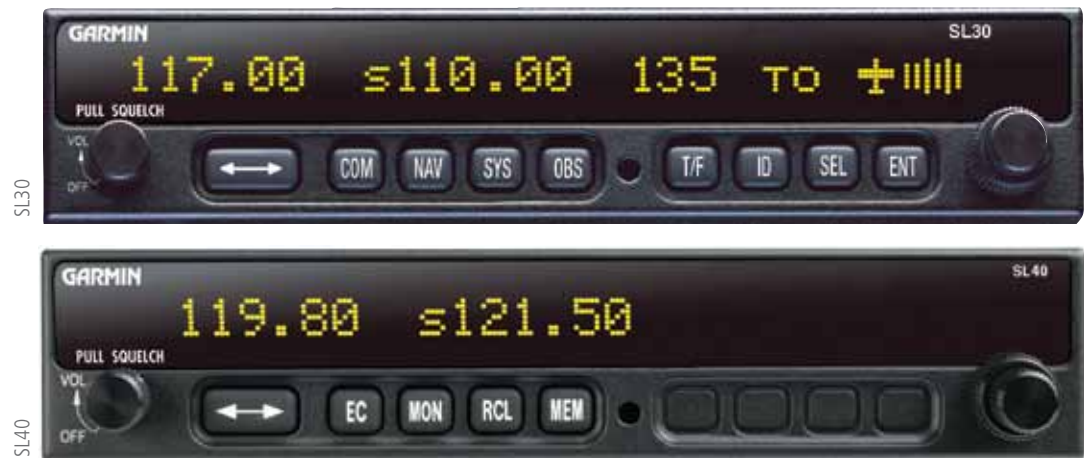
SPECIFICATIONS	
GTX 330 / GTX 328 / GTX 33	
TSO compliance:	C112; C166a (optional)
Temperature Range:	-20°C to +55°C
Altitude:	55,000 Feet
Transmitter Freq.:	1090 MHz
Transmitter Power:	250 watts Nominal at unit
Receiver Frequency:	1030 MHz
Receiver Sensitivity:	-74dBm nominal for 90% replies
Mode A Capability:	4096 ident codes
Mode S Capability:	25 foot resolution with suitable serial data from -1000 to 62,700 feet
Ext. Suppression Input:	Lo < 0.5V; High > 8V
Weight (GTX 330):	4.2 lbs. (1.9 kg) installed with rack and connectors
Dimensions (GTX 330):	Bezel Width = 6.25" (159 mm) Bezel Height = 1.65" (42mm) Depth = 11.25" (286 mm) behind panel, with connectors
GTX 327 / GTX 32	
TSO compliance:	C74c Class 1A
Temperature Range:	-20° C to +55oC (Continuous Operation)
Power Requirements:	11-33 VDC; Max Power Input: 15 Watts
Humidity:	95% @ +55°C for 16 Hours; 85% @ +38°C for 32 Hours
Altitude:	50,000 Feet
Transmitter Freq.:	1090 MHz
Transmitter Power:	200 Watts Nominal
Receiver Frequency:	1030 MHz
Receiver Sensitivity:	-74dBm Nominal for 90% replies
Mode A Capability:	4096 ident codes
Mode C Capability:	100 Foot Increments from -1000 to 63,000 feet
Ext. Suppression Input:	Lo<0.5V; High > 8V
Weight:	3.1 lbs (1.4 kg) installed with rack & connectors
Dimensions:	Bezel Width = 6.25" (159 mm) Bezel Height = 1.65" (42mm) Depth = 8.73" (222 mm)

THINK SLIM

When panel space is at a premium, these Slimline comm and nav/comm transceivers fit a lot of capability into a surprisingly small package.

The Garmin SL30 is a full-function nav/comm, featuring a 760-channel VHF comm transceiver and 200-channel VOR/LOC/GS nav receiver with DME display. Its handy standby frequency monitoring feature essentially provides the utility of two nav/comms in one. With the primary VOR/LOC frequency providing guidance to your HSI or CDI, the standby frequency can be tuned to a second VOR to display the current radial on which your aircraft is flying. This allows the pilot to cross check position fixes with just one receiver.

The companion SL40 comm transceiver is packed with innovative features not found on competitive units, including: active and standby flip-flop frequency tuning, direct sunlight-readable alphanumeric display, easy access to NWS broadcasts, a two-place intercom, and more. Its frequency monitor function allows you to monitor ATIS or emergency frequencies – without leaving your assigned ATC channel. So you never miss a transmission. With 8 watts of transmit power and only 35-watt DC input, the SL40 is cool and efficient. Maximum sophistication in minimum space: that's the Garmin Slimline series.



SPECIFICATIONS	
Navigation Radio Features	Comm Radio Features
(SL30 NAV/COMM) 200 channel Nav with solid state DSP technology. With VOR/Localizer and Glideslope receivers. Built-in VOR/Localizer converter. VOR receiver displays to/from and radial. Digitally decoded OBS setting. Sunlight readable full alphanumeric display. User selectable back course approach mode that provides "chase the needle" operation. Automatic display of station ID by decoding Morse code. Interfaces to most CDI (w/resolver), HSI, and autopilot systems. TSO: C34e; C36e; C40c. Accepts 10 to 40 VDC input.	(SL30 and SL40) 760 Communications channels. Frequency Range 118 to 136.975 MHz. Active and Standby Flip/Flop Frequencies. Volume Control. Tunes to National Weather Service Broadcasts. Transmit Status Indicator. Back-lit Keypad Control. Automatic Display Intensity Control. 2X8 Frequency Memory and Recall: Stores/Recalls 8 User Defined Frequencies Stores/Recalls Previous 8 Frequencies Used Frequency Monitor Function (listens to standby while monitoring active). Dedicated Emergency Channel Selector. Squelch Test Function. Stuck Mic Time-out. 12 Watt Audio Amplifier. Includes Two Place VOX intercom.
Physical Specifications	Comm Radio Performance Specifications
Size: 1.3"(H) x 6.25" (W) x 10.5" (D) Weight: 2 lbs., SL40; 3.3 lbs., SL30	(SL30 and SL40) Transmit Power: 8 Watts (Carrier Power). Input Voltage Range: 10 to 40 VDC. Operating Temperature Range: -20°C to +55°C. Certified TSO C37d (transmitting). Certified TSO C38d (receiving). Certified TSO C128 (stuck mic).



BETTER COMMUNICATION STARTS HERE

The Garmin family of innovative audio panels offer the latest in digital features to help streamline cockpit management, enhance safety of flight, and improve communications between flight crews, ground controllers and passengers.

Our newest top-of-the-line model, the GMA 350, is the most technologically advanced audio switching system we've ever introduced. Featuring breakthrough 3-D audio technology, this all-digital unit adjusts audio in the pilot's stereo headset so that it mirrors how the human ear naturally "locates" sound in space. Thus, it's easier to identify, focus on, and understand one particular source from among many in a busy cockpit. Other first-in-class GMA 350 features include ambient

noise level sensing for automatic volume adjustment, enhanced auto-squelch capability, and a variety of workload-reducing integrated control features.

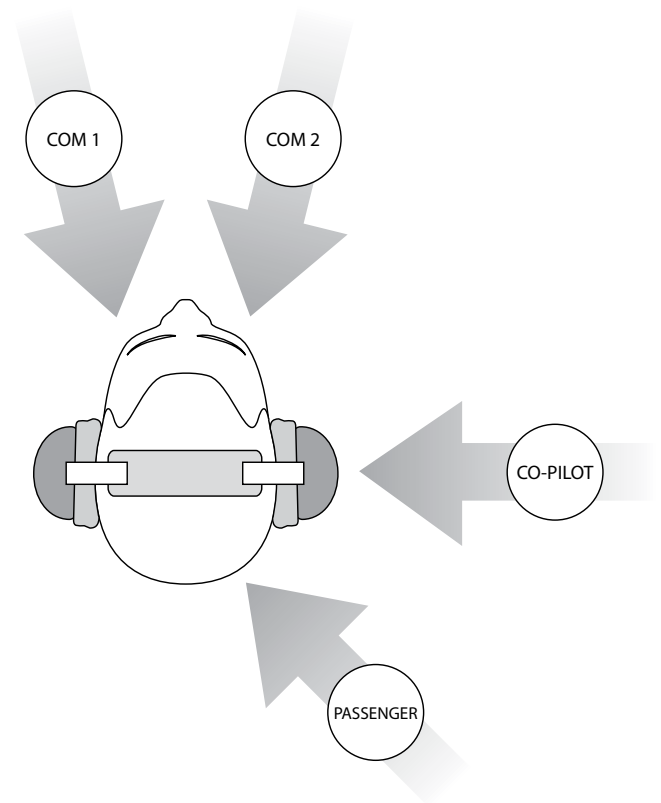
Both the GMA 350 and our lower-cost GMA 340 (without the 3-D audio or clearance recorder) come equipped with convenient, LED-illuminated button controls for audio selection – as well as split comm capability for pilot and co-pilot.

For helicopter cockpits or others that need to address multiple-comm installations, Garmin also offers the GMA 350H. It includes the same core features as the standard GMA 350, plus it offers night vision goggle (NVG) compatibility with green annunciation

and backlighting – as well as three-com radio support and corresponding split-comm modes (1/3 and 2/3) to accommodate a third transceiver.

And finally, for pilots of experimental and light sport (LSA) aircraft, there's our lowest-cost option: the GMA 240. It's a non-TSO'd unit that will support dual COMM, dual NAV, dual AUX receivers, and dual music audio inputs – plus up to three unswitched inputs for telephone ringers or other alerts. A multifunction phone/audio mini jack on the front allows cellphone calls or iPod®/MP3/XM Radio players to be routed through the pilot's headset – with selectable instant muting when radio transmissions are received from ATC.

With Garmin 3-D audio processing, sound reception in your stereo headset can have a directional effect. For example, Comm 1 may sound as if it's coming from your 11 o'clock position; Comm 2 from your 1 o'clock, copilot intercom from 3 o'clock, and so on. (GMA 350/350H systems only.) The 3-D feature can be enabled/disabled to suit pilot's preference.



SPECIFICATIONS			
General		Audio Panel	Headphone Outputs
TSO Compliance: GMA 350/350H, GMA 340: TSO-C50c, TSO-C35d GMA 240: Non-TSO'd		Transceiver inputs: GMA 350: 2; GMA 350H: 3; GMA 340 3; GMA 240: 2	Output amplifiers: GMA 350, 340: 3, stereo (pilot, copilot, passengers) GMA 240: 2, stereo (pilot, copilot/passengers)
Power Requirements: Supply voltage: 11V-33V Vdc Operating current: GMA 350/350H: 3.75A max (13.75V, spkr on) GMA 340: 2.2A max (13.8V, spkr on); GMA 240: 0.54A max (13.8V)		Additional Receiver inputs: GMA 350: 5 GMA 340: 5 GMA 240: 4	Power: GMA 350, 340: 100 mW per stereo channel, each headset, into 150 ohms with not more than 5% distortion, any normal supply voltage. GMA 240: 100 mW per stereo channel, each headset, into 150 ohms with not more than 7% distortion, any normal supply voltage.
Temp. range: GMA 350/350H: -45°C to +70°C (normal operation) GMA 340: -20°C to +55°C (normal operation) GMA 240: -20°C to +55°C (normal operation)		Unswitched inputs: GMA 350: 5 GMA 340: 2 GMA 240: 3	Frequency response: Music: GMA 350: 50 Hz to 20 kHz nom GMA 340: 100 Hz to 15kHz nom; A/C radio: GMA 350: 200 Hz to 6 kHz nom GMA 340: 100 Hz to 6 kHz nom
Altitude: GMA 350/350H: 55,000 MSL unpressurized GMA 340: 50,000 MSL unpressurized GMA 240: 55,000 MSL unpressurized		Input impedance: 500 ohms Input isolation: 60 dB min	MASQ™: Processing for noise reduction Special functions: PA Mode, pilot selectable
Physical		Intercom	Speaker Outputs (GMA 350, 340 only)
Weight: GMA 350/350H: 2.4 lbs. installed GMA 340: 1.7 lbs. installed GMA 240: 15.5 oz		Positions: GMA 350: 6-7 (pilot, copilot, passengers) GMA 340: 6 (pilot, copilot, 4 passengers) GMA 240: 4 (pilot, copilot, 2 passengers)	Outputs selectable: One, pilot selectable Output power: 10 Watts into 4 or 8 ohms, any normal supply voltage.
Depth behind panel: GMA 350/350H: 7.80" (with connectors) GMA 340: 7.12" (with connectors) GMA 240: 7.12" (with connectors)		Volume controls: GMA 350 with volume indicator: 3 (pilot, copilot, passengers) GMA 340: 3 (pilot, copilot, passengers) GMA 240: 3 (pilot, copilot/passengers, music) VOX level controls: 2 (pilot, copilot/passengers)	Freq. response: 350 Hz to 6kHz nom Special functions: PA Mode, pilot selectable
Bezel width: 6.25" Bezel height: 1.3"		VOX circuits: GMA 350: 6-7, (one per mic input) GMA 340: 6 (one per mic input) GMA 240: 4 (one per mic input)	Marker Beacon Receiver (GMA 350, 340 only) Frequency: 75 MHz Sensitivity: LO: 1000 uV hard HI: 200 uV hard Selectivity: 6 dB @ +/- 10kHz min. 40 dB @ +/- 200kHz max.
		Music inputs (stereo): 2 (one input mutable) Intercom isolation modes: GMA 350: 5 (all, pilot, copilot, crew/pass, none) GMA 340: 3 (pilot, crew, all) GMA 240: 2 (pilot, all; or crew,all)	Input impedance: 50 ohms External lamp drive: 125 mA max each output SmartMute™: Marker audio muting Other outputs: Middle MKR sense



GI 106A



MD200



GI 102A

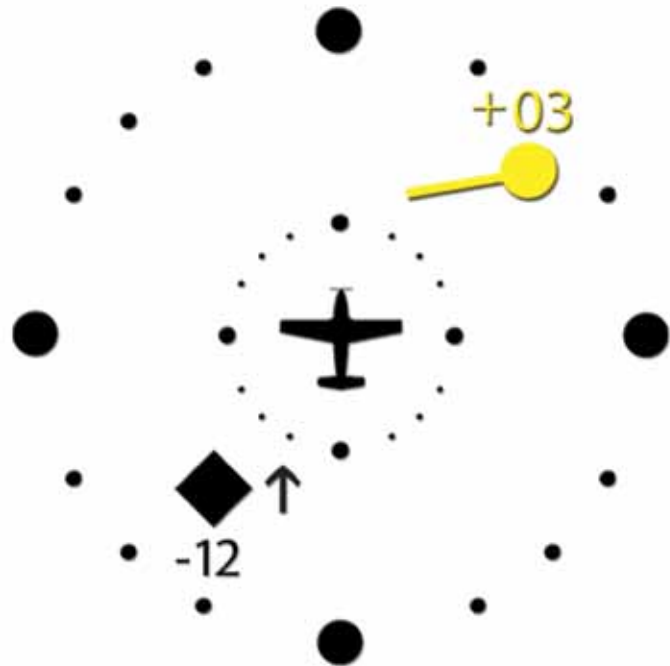
LEADING INDICATORS TO KEEP YOU ON COURSE

These high-quality Course Deviation Indicators (CDIs) display rectilinear needle movements and contain integral GPS, NAV and VLOC mode annunciators. The Garmin GI 102A boasts a VOR/LOC/GPS needle, TO/FROM indicator and NAV warning flag. The GI 106A and MD 200 units build on these capabilities by adding a Glideslope needle and flag.

The GI 102A/106A can be used for GNS 430/530 and GTN 650/750 system certification. The MD 200 is designed for use with Garmin SL 30 nav/comm installations.

SPECIFICATIONS	
Performance	
To/From Flag Input:	±40 mV flag in view; load resistance 200 ohms ±10%
NAV Flag Input:	In view at 125 mV, out of view at 260 mV; load resistance 1,000 ohms ±10%
Annunciation:	Green for "GPS" course deviation; white for "VLOC" or "NAV" course deviation; yellow for "SC"
Deviation Indications:	Rectilinear movements for ease of interpretation
VOR Deviation Input:	±150 mV for 5 dot deflection; meter resistance 1,000 ohms ±10%
OBS Resolver:	30Hz, ORZ'd at 300
Glideslope Deviation	±150 mV for 5 dot deflection; meter resistance 1,000 ohms ±10% (GI 106A only)
Input:	In view at 125 mV, out of view at 260 mV; load resistance 1,000 ohms ±10% (GI 106A only)
Glideslope Flag Input:	In view at 125 mV, out of view at 260 mV; load resistance 1,000 ohms ±10% (GI 106A only)
Physical	
Size:	3.25"Wx3.25"Hx4.75"L (82.6 mm x 82.6 mm x 120.7 mm)
Weight:	GI 102A —1.4 lbs (0.64 kg) GI 106A —1.4 lbs (0.64 kg)
Display Lighting:	4.3 W at max intensity, 14 VDC at 0.31 A (typical) or 28 VDC at 0.155 A (typical)
Operating Current:	0.1 A (with one annunciator illuminated)
Environmental	
Temperature:	−55°C to +70°C (−67°F to +158°F)
Altitude:	16,764 m (55,000 ft) operating
Cooling:	Convection
Relative Humidity:	95% non-condensing
Shock: Operational:	6 g (11 ms duration)
Crash safety:	15 g (11 ms duration)





SEPARATION SOLUTIONS FOR HIGH-TRAFFIC AIRSPACE

In busy, high-density airspace, pilots need every possible advantage when it comes to “seeing and avoiding” traffic conflicts. That’s why Garmin developed the GTS™ family of ADS-B enhanced Traffic Advisory (TAS) and Traffic Collision Avoidance (TCAS I) Systems. Featuring exclusive Garmin CLEAR CAS™ technology, these attractively priced systems provide accurate, dynamic surveillance of nearby transponder-equipped aircraft – with spoken audio alerts similar to those given by ATC to help pilots quickly respond to potential flight path encroachments.

The GTS systems use a synthesis of both active and passive surveillance (including 1090 MHz ADS-B “In”) to correlate target data and pinpoint traffic threats. Thus, they’re able to provide advanced real-time traffic information to the cockpit – and augment reports from radar-based air traffic control.

The systems can display traffic symbols and advisories on a variety of compatible navigation or multi-function display

products. Passive surveillance with ADS-B “In” capability is available with installation of Garmin’s GTX 33 ES or GTX 330 ES transponders (sold separately). On compatible displays, the system is able to receive and display the target aircraft’s flight ID, GPS position, relative altitude and direction of flight. Also, display of course trend vectors and vertical climb or descent information (if available) can be accommodated. Thus, instead of just seeing random targets, pilots will ultimately be able to identify and track specific aircraft flight trajectories with much greater precision. So, in busy airspace, they’ll be able to fly with a much clearer tactical picture of their immediate traffic situation.

All GTS 800/820/850 units will operate to 55,000 feet – so they’re not constrained by the much lower altitude limits imposed on some competitive TAS/TCAS systems. The Garmin GTS equipment can track up to 60 traffic targets simultaneously – and display up to 30 intruder threats at a time, depending on the specific capabilities of

the display system being used. (There is no dedicated panel instrument for Garmin TAS; it interfaces with your existing navigation displays.) Targets are depicted using familiar TCAS-defined symbology. And selectable horizontal display ranges let pilots configure the presentation to their specific flight requirements.

Instead of the generic “Traffic, traffic” voice alerts of some earlier-generation systems, the GTS series’ exclusive CLEAR CAS technology provides for expanded audio messaging in an ATC-like verbal format: “Traffic. One o’clock. High (or Low or Same Altitude). Two miles.” If surveillance bearing information is not available on the intruder, “Traffic, No Bearing” is annunciated.

By vocalizing more specific traffic-spotting information, the GTS 800 series lets pilots know instantly where to look without going “eyes-down” to focus on the cockpit display. This can save vital split-seconds in a fast-converging situation. And sometimes split-seconds can mean all the difference.



With Garmin’s SVT-capable flight displays, traffic can be depicted in a 3-D format. As targets get closer, the symbols get larger.



Integration of traffic, terrain and obstacle alerting on a Garmin moving-map display gives pilots a comprehensive picture of potential flight path conflicts.



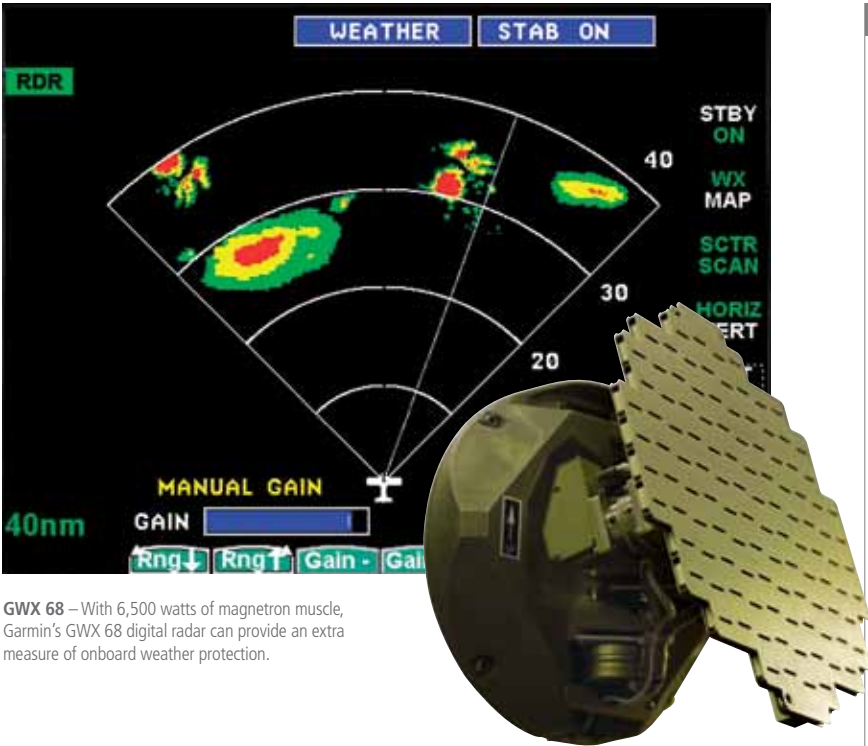
GTS series traffic alerts can be displayed on Garmin’s GTN 650/750 and 430W/530W series avionics.

SPECIFICATIONS	
GTS 800/820/850 Processor LRU	
Unit Size:	6.25"W x 2.7"H x 12.7"D (15.87 x 6.86 x 32.25 cm)
Weight:	9 lb (4.08 kg) LRU; Vert. Rack 1.05 lb (0.48 kg); Horiz. Rack 1.94 lb (0.88 kg); excludes connectors
Temperature:	-55°C to +70°C
Operating Altitude:	To 55,000 feet
Power Input:	14 or 28 VDC 40 watts max. (GTS 800) 45 watts max. (GTS 820, 850)
Cooling Input:	Integrated
Environmental Compliance:	RTCA DO-160E
Software Compliance:	RTCA DO-178B Level C
Hardware Compliance:	RTCA DO-254, Level C
TSO Compliance:	GTS 800,820 TAS: TSO-C147, TSO-C166a, DO-197A, DO-260A GTS 850 TCAS I: TSO-C118, TSO-C166a, DO-197A, DO-260A
GA 58 Directional Antenna	
Unit Size:	4.03"W x 2.97"H x 5.63"D (10.24 x 7.54 x 14.30 cm)
Weight:	0.8 lb (0.36 kg); excludes connectors
Omni-Directional Antenna (optional)	
Unit Size:	0.98"W x 3.30"H x 4.00"D (2.49 x 8.38 x 10.16 cm)
Weight:	0.24 lb (0.10 kg); excludes connectors
GPA 65 PA/LNA Module (GTS 820/850 only)	
Unit Size:	4.25"W x 1.00"H x 8.00"D (10.8 x 2.54 x 20.32 cm)
Weight:	1.75 lb (0.79 kg); excludes connectors

Garmin TAS/TCAS Comparison

	GTS 800	GTS 820	GTS 850
Traffic system type	TAS	TAS	TCAS 1
Transmitter power output	40 watt	200 watt	200 watt
Active surveillance range (typical)	12 nm	40 nm	40 nm
Number of targets tracked	60	60	60
Number of targets displayed (dependent on display system capability)	30	30	30
Display range	2/6/12	2/6/12/24/40	2/6/12/24/40
Range accuracy	+/- .05 nm	+/- .05 nm	+/- .05 nm
Bearing accuracy	5° RMS	5° RMS	5° RMS
Altitude accuracy	+/- 200 ft	+/- 200 ft	+/- 200 ft
Altitude resolution	+/- 100 ft	+/- 100 ft	+/- 100 ft
Max vertical separation	+/- 10,000 ft	+/- 10,000 ft	+/- 10,000 ft
Audible target threat position callouts	Yes	Yes	Yes
1090ES ADS-B receiver*	Yes	Yes	Yes
Correlated display capability	Yes	Yes	Yes
Selective Mode-S interrogation	No	Yes	Yes
Maximum Operating Altitude	55,000 ft	55,000 ft	55,000 ft

*Requires ADS-B “Out” capability



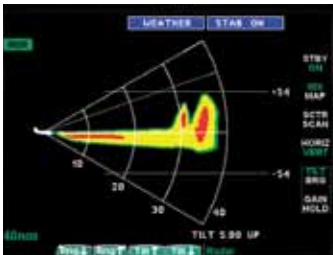
GWX 68 – With 6,500 watts of magnetron muscle, Garmin's GWX 68 digital radar can provide an extra measure of onboard weather protection.

SWEEPING IMPROVEMENT TO WEATHER AVOIDANCE

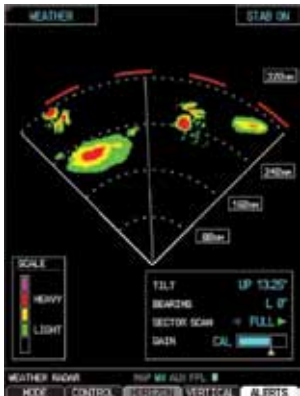
Bringing 4-color storm cell tracking to your compatible Garmin MX 20, GMX 200, G600, G500 or G1000 multifunction display, the GWX 68 digital radar is a powerful weather avoidance tool.

It combines excellent range and adjustable scanning profiles with high-definition target display – for reliable, easy-to-interpret, real-time weather analysis. Available with either a 10-inch or 12-inch phased array antenna, the GWX 68 fits a wide variety of aircraft radome configurations. The compact, all-in-one antenna/receiver/transmitter unit saves space and simplifies installation. Also, to keep your weather picture tracking smoothly during climbs or turns, the system offers full radar stabilization to 30 degrees of pitch and roll (when interfaced with your aircraft's analog gyro or AHRS system.)

To focus radar scanning on the areas you want to watch, the GWX 68 offers pilot-adjustable horizontal scan angles of up to 90 degrees. What's more, the system also includes a vertical scanning function to help you analyze storm tops, gradients and cell buildup activity at various altitudes.



A vertical scanning function on the GWX 68 lets pilots analyze cloud tops and storm gradients to see a more complete weather picture.



Garmin's WATCH™ weather attenuation feature highlights areas where radar energy may be partially absorbed by precipitation and, thus, not fully reflect storm intensity. The radar interface is included with the G600 system, an optional enabling card is available for the G500.

SPECIFICATIONS	
General	
Operational Mode:	Weather (WX): Green, Yellow, Red, Magenta Mapping (MAP): Cyan, Yellow, Magenta, Blue
Display Ranges:	Selectable 2.5, 5, 10, 20, 40, 80, 160, and 320 nm (MX 20; GMX 200). Selectable 2.5, 5, 10, 20, 40, 60, 80, 100, 120, 160, 240 and 320 nm (G1000, G600/G500/G500H).
Performance Index:	12-Inch Antenna: 217 dB (Nominal per DO-173) 10-Inch Antenna: 214 dB (Nominal per DO-173)
Weather Avoidance Range:	12-Inch Antenna: 305 nm max. 10-Inch Antenna: 270 nm max.
Rx Sensitivity:	-110 dBm MDS
Manual Gain:	+12 to -64 dB (G1000; G600/G500/G500H) +3.5 to -28 dB (MX 20; GMX 200)
Antenna Beamwidth:	12-Inch Antenna: 7.8 degrees 10-Inch Antenna: 9.0 degrees
Horizontal Scan Angle:	Pilot adjustable; 20, 40, 60 or 90 degrees (G1000; G600/G500/G500H); 20 or 90 degrees (MX 20; GMX 200)
Scan Centerline:	Pilot adjustable
Scan Rate:	12 looks per minute
Manual Tilt:	+/- 15 degrees
Vertical Scan Angle:	60 degrees (G1000; G600/G500/G500H); 10 – 60 degrees (MX 20, GMX 200)
Antenna/Receiver/Transmitter	
Mechanical:	
Size:	Width: 10.0 in. (25.4 cm.) diameter at base Depth: 6.3 in. (16.0 cm.) Antenna: 10 in. or 12 in. diameter flat-plate
Unit Weight:	12-Inch Antenna: 9.1 lbs. (4.13 kg) 10-Inch Antenna: 9.0 lbs. (4.08 kg)
Environmental:	
Operating temperature range:	-55°C to +70°C
Humidity:	95% non-condensing
Altitude Range:	-1,500 feet to 50,000 feet
TSO Compliance:	C63c, Class 7
Environmental Category:	RTCA DO-160D
Electrical	
Power Requirements:	28 VDC; 2.0 amps
Magnetron Power:	6.5 kW nominal, 5.0 kW minimum
Output Frequency Range:	X-Band
Pulse Width:	4 Microseconds (nominal)
STC Logic:	Effective to 80 nm
Extended STC:	80 nm to 320 nm (Modifies targets from end of STC to maximum range)
Stabilization:	+/- 30 degrees combined pitch, roll and manual tilt
Max. Altitude:	50,000 feet (unpressurized)
Target Alert:	(G1000 and G600/G500/G500H only) Annunciates targets (between 80 and 320 nm) that are beyond displayed range on radar screen
Interface:	Garmin HSDB (G1000 and G600/G500/G500H installations); ARINC 429/453 (MX 20, GMX 200 installations)



TAKING WEATHER AWARENESS TO NEW HEIGHTS

You can't control the weather. But at least you can stay on top of it – with the help of satellite updates from Garmin's GDL 69 datalink receiver.

Supplying graphical and textual weather information to Garmin's panel-mount GTN 650/750 and GNS 400/500 series avionics, as well as the GMX 200, G500/G600 and G1000 multifunction displays, the GDL 69 helps pilots make timelier, safer, and more strategic weather avoidance decisions.

Data uplink service is provided through XM Satellite Radio's XM WX Weather Service, using location-specific WxWorx information. XM's powerful S-band geostationary satellites deliver seamless, near real-time coverage at any altitude across the continental United States and parts of Canada¹. Thus, you're able

to receive and view high-resolution color graphics offering detailed NEXRAD and METARs data, as well as current reports on precipitation, lightning, winds-aloft, echo tops, TFRs and more.

For pilots who want the latest in XM Satellite Radio capability, Garmin offers the sound-enabled GDL 69A. This receiver combines XM WX's weather link with a complete XM digital audio package – so passengers can enjoy over 170 channels of continuous news, sports, music and entertainment, while flying anywhere in the XM coverage area². The GDL 69A will interface through a variety of Garmin panel-mount cockpit displays. And for even more flexibility, Garmin's optional GRC 10/GRT 10 wireless remote system lets listeners control XM Radio channels and volume from anywhere in the cabin.

SPECIFICATIONS	
Physical	
Dimensions:	7.20" D x 6.15" W x 1.05" H
Mounting:	Mounting rack and hardware supplied
Weight:	1.86 lbs. unit, 2.81 lbs. unit and rack
Environmental	
Temperature:	-55° C to +70° C (Operating) -55° C to +85° C (Storage)
Humidity:	95% non-condensing
Altitude range:	-15,000 ft. to +55,000 ft
Power requirements:	9 to 33 VDC input; 4.2 watts maximum
Other Specifications	
Satellite receiver frequency:	2332.5 to 2345 MHz
Downlink data rate:	38.4K bits per second
Software Certification:	RTCA DO-178B Levels B and D
Environmental Certification:	RTCA DO-160D

¹Display compatibility for Canadian WX support varies by unit. See display product configuration for details.
²GPS 400W, GNC 420W, GNS 430W, GPS 500W and GNS 530W units will only display products with Aviator Light Package of XM Subscription and Music.



IRIDIUM: YOUR LINK TO WEATHER AND COMMUNICATIONS WORLDWIDE

Datalink weather has quickly changed the way pilots fly in North America. And now, with Garmin's GSR 56 transceiver, those operating throughout the world can enjoy the safety-enhancing benefits of on-demand satellite weather data – as well as onboard text/voice communications, aircraft position tracking and more – via the Iridium satellite network.

Available weather products include Meteorological Aviation Reports (METARs) that provide current temperature, dew point, precipitation, wind speed and more, as well as Terminal Aerodrome Forecasts (TAFs) that show predicted weather for up to 30 hours in advance. Throughout most of Europe, Canada and the U.S., the GSR 56 can also receive high-resolution radar imagery, which displays in full color on the G1000 and G600/G500 series of displays. Additional radar coverage areas are being added continuously.

Moreover, for pilots and passengers who want to stay in touch from the far-reaching corners of the earth, Garmin offers a full range of phone and

messaging options with the GSR 56. The Iridium datalink can be used to provide two-way text messaging via Short Message Service (SMS) to any compatible phone or e-mail address (currently available on select systems only). In addition, it's easy to make and take voice calls while in flight: The GSR 56 integrates into your aircraft's audio/intercom system, enabling you and your passengers to speak and listen directly through a headset.

To further enhance the safety and security of global operations, the GSR 56 can also serve as an affordable asset tracking solution that continuously monitors your aircraft's status enroute. In this mode, the GSR 56 automatically provides GPS-referenced position reports at predetermined intervals – so those on the ground can easily track your mission's progress.

Efficient and cost effective, Garmin's GSR 56 Iridium transceiver provides the messaging and voice solutions you need to do business in today's non-stop, globally connected world.

SPECIFICATIONS

Physical

Unit Size:	6.96" h x 2.08" w x 12.96" d Depth is behind panel with connectors
Mounting:	Mounting rack and hardware supplied
Unit Weight:	2.45 lb.

Environmental

Temperature:	-15° C to +70° C (Operating) 55° C to +85° C (Storage)
Humidity:	95% non-condensing
Altitude range:	-15,000 ft. to +55,000 ft
Power requirements:	14 or 28 VDC input; 16 watts maximum

Other Specifications

Satellite receiver frequency:	1616 to 1626.5 MHz
Downlink data rate:	2.4K bits per second
Software Certification:	RTCA DO-178B Level E
Environmental Certification:	RTCA DO-160E



ChartView also depicts airport surface diagrams and Jepp enroute charts on the GTN 750 display.

COCKPIT EFFICIENCY GOES OFF THE CHARTS

A valuable feature of the Garmin G600, G500, GTN 750 and GMX 200 MFDs is the ability to display approach plates and airport surface diagrams. Affordable Garmin FliteCharts®, which feature electronic versions of AeroNav™ (formerly NACO) terminal procedures charts, come standard with many Garmin navigators. In addition, Garmin SafeTaxi® airport diagrams are included to help pilots navigate nearly 1,000 U.S. airports with confidence – by clearly depicting their aircraft's exact location on the field. As an alternative, pilots can select optional Garmin ChartView™ instrument approach plates and airport surface charts powered by Jeppesen (subscription required). The ChartView format has the ability to overlay a geo-referenced aircraft symbol on the electronic approach chart, providing a visual crosscheck of your progress inbound. With both the Garmin

GTN 750 series and GMX 200 navigation displays, ChartView takes geo-referencing even further – enabling a graphical view of your approach plate to be overlaid on the MFD moving map for integrated guidance cues throughout the procedure. Based on the active flight plan, each compatible Garmin MFD automatically loads the approach plates for the destination airport, allowing the pilot to quickly select the ATC-assigned approach procedure. Upon landing, ChartView will automatically display the destination airport's surface diagram – a real help at unfamiliar airports. In addition to the airport and approach charts, Standard Instrument Arrival and Departure charts (STARs or DPs) are also incorporated. ChartView functions and updates for the G600, G500, GTN 750 and GMX 200 are available through Jeppesen's JeppView® subscription service.



Airport surface diagrams are automatically displayed prior to takeoff and after touchdown at the flight's destination.



ChartView overlays aircraft position on Jeppesen approach charts.



KEEP YOUR DATA CURRENT WITH EASY ONLINE UPDATES

Your Garmin panel-mount GPS comes complete with an extensive database, powered by Jeppesen®, that serves as the mainstay of your unit's moving map navigation capabilities. In addition, other databases found on select Garmin units include: Garmin FliteCharts® (electronic terminal procedures charts) and Garmin SafeTaxi® (airport taxiway diagrams), plus terrain alerting and towers/obstacles databases.

Over time, as information changes, your databases will require updating.

Fortunately, Garmin makes the process easy – by offering online updates via our website: fly.garmin.com.

And now, to make updating even more affordable, Garmin and Jeppesen have teamed up to create PilotPak™: A new bundled pricing option for GTN 650/750 series and G500/G600 equipped cockpits. With PilotPak, all the databases within a selected package are provided for a single annual price. Each PilotPak option

includes Garmin's popular SafeTaxi®, Obstacle, Terrain and AOPA Airport Directory – with additional combo choices that may encompass Navigation Data, Jeppesen JeppView™ and/or Garmin FliteCharts®. Initially, only the Lite, Standard, and Standard + Garmin FliteCharts packages can be purchased and downloaded at flygarmin.com. Additionally, Lite, Standard and Standard + Jeppesen JeppView can be purchased and downloaded from Jeppesen's website, www.Jeppesen.com/GTN.

Using the Internet connection from your home computer and a compatible datcard programmer, you can easily select and update your database by following the online prompts. After logging onto fly.Garmin.com, the home page will give you a quick synopsis of your registered products and whether or not the databases are current. If a database needs updating, you can purchase and download directly from the site in a matter of minutes. Simply follow the online prompts.

SPECIFICATIONS	
Navigation Data	
Coverage:	Varies by product; Navigation Database includes Jeppesen® NavData™
Airports:	Identifier, city/state, country, facility name, lat/long, elevation, fuel service, control, approach information
VORs:	Identifier, city/state, country, facility name, lat/long, frequency, co-located DME/TACAN, magnetic variation, weather broadcast
NDBs:	Identifier, city/state, country, facility name, lat/long, frequency, weather broadcast
Intersections:	Identifier, country, lat/long, nearest VOR
Runways:	Designation, length, width, surface, lighting, pilot-controlled lighting freq.
FSS:	Identifier, reference VOR, freq. usage
Frequencies:	Approach, arrival, control area, departure, Class B, Class C, TMA, TRSA with sector, altitude and text usage info; also, ASOS, ATIS, AWOs, center, clearance delivery, ground, pre-taxi, tower, unicom, localizer and ILS
ARTCC:	Identifier, freq. usage
MSA:	Minimum safe altitude along and in proximity to active flight plan
Approaches:	Non-precision and precision approaches from FAF to MAP
Airspaces:	Class B and C with sectors, International CTA and TMA with sectors; all special-use airspace, including MOA's, prohibited and restricted areas with controlling agency and airport

What could be easier?
Computer geniuses and net novices alike will appreciate online database updates. Whether you opt for an annual subscription or individual updates, Garmin offers the system resources you need – to assure the latest and best in navigation from your GPS. And it all comes to you with the speed and convenience of the Internet. Check it out at fly.garmin.com.

Save and simplify with PilotPak™: For a single annual price, PilotPak provides all the databases within a selected package to be used with any combination of GTN™, G600, and G500 series systems installed in one aircraft. Initially, only the Lite, Standard, and Standard + Garmin FliteCharts packages will be available for purchase and downloaded at flygarmin.com. However, Lite, Standard and Standard + Jeppesen JeppView may also be purchased and downloaded from Jeppesen's website, www.Jeppesen.com/GTN. Note: Airport Directory available for select displays.

PilotPaks	Garmin Obstacles	Garmin SafeTaxi	Garmin Terrain	Garmin Airport Directory	Garmin FliteCharts	Navigation Data	Jeppesen JeppView
Lite							
Standard							
Standard w/Garmin FliteCharts							
Standard w/Jeppesen JeppView							



TURN YOUR WIRELESS DEVICE INTO A MINI-MFD

Now, your wireless mobile device or tablet computer can help you get airborne faster – by putting detailed weather briefings, navigation mapping, airport diagrams and flight plan filing right at your fingertips.

Pilot My-Cast® by Garmin is ingenuity on the go: You can use the app to check current and forecasted National Weather Service data at your departure airport, at your destination, and all along your route. Then, by accessing DUAT(S), you can file a flight plan right from your mobile keypad. Pilot My-Cast makes it easy to view live color radar imagery for the U.S. and Canada – or scan through surface meteorological reports, terminal forecasts, observations and advisories, instantly as they become available. What's more, users of Android- and iOS®- based devices (including the iPhone®, iPod Touch®, iPad® and numerous Android phones and tablets) are now provided with an array of electronic flight bag capabilities, as well as powerful MFD-like moving map functionality.

See more on your smart device.
Simply enter your flight information to view your entire route onscreen. Then, you can easily overlay a wide range of weather options to see how cloud cover, precipitation, winds aloft and more will affect your flight. As you advance along your route of flight using the sliding-reference NavTrack feature or via your device's built-in GPS (or optional external GPS receiver), customizable widgets at the bottom your screen will update to give you local METARS, TAFs, nearest airport information, fuel prices and more.

The app's electronic flight bag capabilities even include IFR high- and low-altitude enroute charts and VFR sectional charts. Plus, you can even pull up geo-referenced approach plates to see a graphical representation of your exact position in relation to the airport.

For real-time weather updates while you're in the air, Garmin Pilot My-Cast can display ADS-B and XM® satellite weather data when used with supported third-party receivers with Wi-Fi® connectivity¹. Plus, if you need

to reroute or deviate around threatening weather conditions, the handy "rubber band" graphical flight plan feature lets you simply touch a leg of your journey on the screen and drag it over to a new waypoint.

Pilot My-Cast was developed by pilots. And it shows. The information-rich features are easy to access. The user interface is intuitively simple and efficient. And unlike other web-based services, Garmin's Pilot My-Cast weather engine receives a direct data stream from the National Weather Service, plotting both current and predicted weather. As a result, commercial and general aviation pilots can now instantly access the precise, personalized reports they need to make better-informed flying decisions.

Adding Garmin Pilot My-Cast to your existing wireless plan is easy. The app is supported by all major providers, and it's compatible with most data-enabled phones, as well as Android- and iOS-based smart devices and tablets².

Pilot My-Cast. It's the wireless way to flight plan on the go.

¹XM WX subscription required. ²Fees for Pilot My-Cast® weather services only; does not include voice/data charges billed separately by the carrier. Depending on the carrier, Pilot My-Cast charges are either included on your mobile phone bill or paid directly via credit card. May require a data plan from your wireless carrier.

»»»»»» **FLITELEVEL EXTENDED WARRANTY™ PROTECTION** ««««««

ADD EXTRA PEACE OF MIND TO YOUR
LONG-TERM PRIDE OF OWNERSHIP

Your Garmin avionics products represent a significant investment in your aircraft and its operation. They're built to bring the highest possible levels of safety, simplicity and value to your long-term ownership experience. Yet, even the most reliable avionics can sometimes need attention. And when the unexpected does happen, it's great to have the reassurance that you won't face hundreds or thousands of dollars in unplanned expenses – thanks to the total system safety net offered by Garmin's factory-backed FlightLevel Extended Warranty™ program.

All Garmin equipment in current production is eligible for coverage under the FliteLevel coverage plan. It picks up where your standard 2-year factory warranty leaves off – allowing you to extend that industry-leading Garmin peace-of-mind protection for an additional 2-3 years (up to a total of 5 years in all).

Just like your original factory warranty, the Garmin FliteLevel Extended Warranty plan assures you of comprehensive “no hassle” protection against unexpected service issues or failures. Within the applicable coverage period, Garmin

will either replace any components that fail in normal use – or will repair them, upon the owner's request. Garmin retains the exclusive right to choose whether to repair or replace the affected unit. Thus, you're assured of the fastest possible service response to get you back in the air right away. And wherever you fly, Garmin's acclaimed network of Authorized Sales & Service outlets provides easy access to priority field support at hundreds of locations around the globe. For the protection you need – at a price you can afford – Garmin FliteLevel has the long-term warranty plan to keep you flying with confidence.



