

GARMIN GNS 530



The GARMIN GNS 530 represents the single biggest idea in integrated avionics in years. Traditionally, it would take a host of components to provide the capabilities represented in this one sophisticated box. It is a WAAS upgradeable IFR GPS, com, VOR, LOC and glide-slope with color moving map and MFD capabilities all rolled into one.

At the center of the system is GARMIN's own PhaseTrac12™ GPS — twelve parallel channel receiver. A TSO'd VHF comm offers a choice of 25 kHz or 8.33 kHz spacing for 760 or 3040 channel configuration respectively. A huge Jeppesen database (which can be updated with front-loading data cards) contains all airports, VORs, NDBs, Intersections, FSS, Approach, SIDs/STARs and SUA information. The GNS 530 makes practical use of this information with features like intelligent frequency nominating.

The brilliant colors of the GNS 530's 5" display make the pilot-critical information easy to read and interpret. It's especially true of the 530's basemap. You enjoy enhanced situational awareness by seeing your position relative to cities, highways, railroads, rivers, lakes and coastlines. But even more importantly, the appropriate use of color separates land data, terminal areas, route and approach information for easy pilot scanning and reduced pilot workload. Simply put, the GNS 530 incorporates advanced procedure types usually found only in high-end FMS systems.

The GNS 530's intuitive software and logical layout prove that this is a system built for pilots, by pilots. So much information. So easy to use. The GNS 530. It'll change the way you look at avionics.

Jeppesen Database

Coverage:	Americas, International or Worldwide
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
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
Runways:	Designation, length, width, surface, lighting, pilot-controlled lighting freq.
FSS:	Identifier, reference VOR, freq., usage
ARTCC:	Identifier, freq., usage
MSA:	Minimum safe altitude along and in proximity to active flight plan
Approaches:	Non-precision and precision approaches throughout the database coverage
SIDs/STARs:	Contains all pilot-nav SIDs and STARs
Airspaces:	Class B and C with sectors, International CTA and TMA with sectors; all special-use airspace, including MOAs, prohibited and restricted areas—with controlling agency and airport

GPS Performance

Receiver:	PhaseTrac12, twelve parallel channel receiver, simultaneously tracks and uses up to 12 satellites
Acquisition Time:	12 seconds (warm), 45 seconds (cold)
Update Rate:	Once per second, continuous
Accuracy:	Position—15 meters (49 feet) RMS Velocity—0.1 knot RMS steady state
Dynamics:	Velocity (max)—999 knots Acceleration (max)—6 g
Nav Features:	Pilot-defined Course Selection and Waypoint Hold, Closest Point of Flight Plan, Departure and Arrival Frequencies, Approach Navigation using published approach procedures stored on NavData card, Terminal Navigation using SIDs/STARs from NavData card
Planning Features:	True Airspeed, Density Altitude, Winds Aloft, RAIM Availability, Sunrise/Sunset Times, Trip and Fuel Planning, Vertical Navigation (VNAV)
Interfaces:	ARINC 429, Aviation RS-232, CDI/HSI, RMI (digital: clock/data); Superflag Out, Altitude (serial: Icarus, Shadin-Rosetta, encoded Gillham/Greycode), Fuel Sensor, Fuel/Air Data, BFG WX 500 StormScope, BFG SKY 497 SkyWatch and Ryan 9900B TCAD
Map Datums:	124

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Safety Features

Emergency Search:	9 nearest airports, VORs, NDBs, intersections, or user waypoints; 5 nearest FSS and ARTCC frequencies
Alarms:	Arrival timers; airspace alarms at 10 minutes, 2nm and inside airspace

User Customization

Waypoints:	1000 user-defined
Flight Plans:	20 reversible; up to 31 waypoints each

VOR Performance

Frequency Display:	Active and standby
Frequency Range:	108.00 MHz to 117.95 MHz
VOR/LOC Composite:	0.50Vrms/0.35Vrms
CDI Output:	±150mV Full Scale
Centering Accuracy:	±2.0°
Flag Sensitivity:	-103.5 dBm
DME Channeling:	2x5, BCD, Slip, Narco 890/891, King Serial
Audio Sensitivity:	-103.5 dBm for 6 dB S/N with 1 kHz 30% mod.
Audio Output:	100 mW minimum into 500 ohm load; External amplifier required

GS Performance

Frequency Range:	329.15 MHz to 335.00 MHz
CDI Output:	±150mV Full Scale
Centering Accuracy:	0 ddm ± .0091 ddm

LOC Performance

Frequency Range:	108.10 MHz to 111.95 MHz
CDI Output:	±150mV Full Scale
Centering Accuracy:	< 4.5mV
Flag Sensitivity:	-103.5 dBm
Audio Sensitivity:	-103.5 dBm for 6 dB S/N with 1 kHz 30% mod.
Audio Output:	100 mW minimum into 500 ohm load; External amplifier required

VHF COM Performance

Frequency Display:	Active and standby
Channels:	760 (25 kHz spacing); configuration for 2280 channels (8.33 kHz spacing) also provided
Frequency Range:	118.000 MHz to 136.975 MHz
Transmit Power:	10 watts minimum
Modulation:	70% minimum
Receive Sensitivity:	2.0 µV for 6 dB S/N with 1 kHz 30% mod.
Squelch Sensitivity:	2.0 µV typical
Audio Output:	100 mW minimum into a 500 ohm load; External amplifier required

Certifications

GPS:	TSO C129a, Class A1 (en route, terminal and approach)
VOR:	TSO C40c
LOC:	TSO C36e
GS:	TSO C34e
VHF COM:	Transmitter TSO C37d, Class 4 and 6 Receiver TSO C38d, Class C and E

Physical Specifications

Unit Size:	Unit Width = 6.25" Unit Height = 4.60" Depth = 11.00" behind panel, with connectors
Unit Weight:	8.5 pounds installed
Display:	Color LCD
Power:	27.5 VDC
Data Storage:	Separate internal battery protects stored data for up to five years

Environmental

Temperature:	-20°C to +55°C (operating range) -20°C to +70°C (short-term operation)
Humidity:	95% non-condensing
Altitude Range:	-1,500 ft to 50,000 ft

Components

Standard Package:	GNS 530 and NavData Card GPS Antenna Installation Rack and Connectors Pilot's Guide Quick Reference Guide Database Subscription Packet
Options:	User Data Card

Specifications are preliminary and subject to change without notice.

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