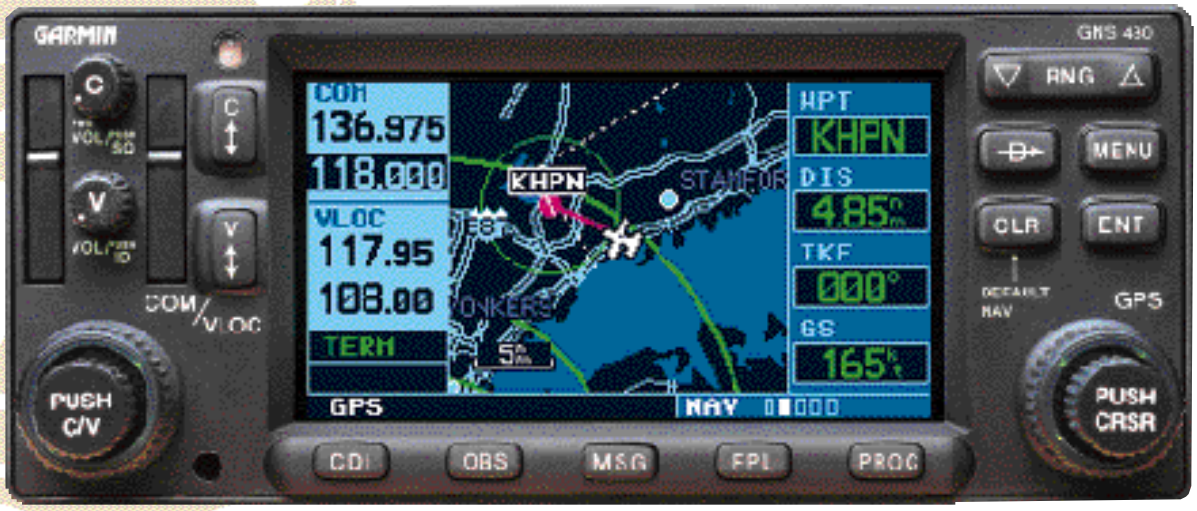
GARMIN GNS 430



The GARMIN GNS 430 has become known as the "one box". Because while many avionics components offer some of the capabilities of the GNS 430, it's the integration of so many different capabilities into a single unit that makes the GNS 430 unique. It's a com/nav/GPS with brilliant color map graphics all rolled into one.

The GNS 430 continues in the GARMIN tradition of easy operating software. Logic prevails to make sense of massive amounts of pilot-specific data. And to access this information you merely need to master two concentric knobs and a series of function buttons. All backlit. All right where you'd want them.

The most striking thing about the GNS 430 is how easy it is to read and interpret. At the heart of the on-screen data is a user-configurable color map. Of course, you can monitor your flight plan using navigation chart graphics. But you can also enjoy the greatest in situational awareness with a detailed cartography database that shows airports, cities, political boundaries, highways, railroads, rivers, lakes and coastlines.

The LAAS and WAAS capable GNS 430 is a box like no other. A single unit whose capabilities are far greater than the sum of its competitors' parts.

Jeppesen Database

Coverage:	Americas or International
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 MOA's, prohibited and restricted areas—with controlling agency and airport

Safety Features

Emergency Search:	9 nearest airports, VORs, NDBs, intersections, or user waypoints; 2 nearest FSS and ARTCC frequencies
Alarms:	Arrival and CDI; 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

Certifications

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

GPSPerformance

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*, 1-5 meters with differential corrections
	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 Approach, 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
Map Datums:	124, plus one user-defined

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GARMIN GNS 430

Map Display

Map Scale

Present Position

Data Fields

Map Page

Course Deviation Indicator (CDI)

Active Leg of Flight Plan

User-Selectable Data Fields

Default NAV Page

Active Frequency on top and
Standby on bottom (highlighted by cursor)

Arrival, Enroute or Departure Airport

Frequency List

NAVCOM Page

VORPerformance

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 available
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

GSPerformance

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

LOCPerformance

Frequency Range:	108.10 MHz to 111.95 MHz
CDI Output:	±150mV Full Scale
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 to drive cockpit speaker

VHFCOMPerformance

Frequency Display:	Upper left corner of active matrix LCD, 2-lines with active frequency above 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%
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 to drive cockpit speaker

Physical Specifications

Unit Size:	Width = 6.25" Height = 2.65" Depth = 11.00" behind panel, with connectors
Unit Weight:	6.6 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 430 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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