GPS Serial Compatibility and Configuration Settings

From DynonDocs

Many GPS units have serial data streams that publish enough data to display a basic HSI page on Dynon products, and can provide groundspeed and waypoint information to enhance the EMS fuel computer. The following products may be connected to the serial inputs on any Dynon product, including the HS34. If your system includes the HS34, your GPS must be connected to it.

EFIS/EMS settings are made in:

- EFIS > SETUP > HSI > EFIS SERIAL
- EMS > SETUP > GLOBAL > EMS SERIAL

HS34 settings are made in:

- EFIS > SETUP > HSI > -HS34- > SERIAL

The following two GPS serial output formats are supported:

NMEA format

- It does not matter what version of NMEA you are using.
- Baud rate must be 4800 or 9600. The baud rate will be auto detected.
- Must provide the following sentences.
    - GPRMB - This sentence is needed always. It contains core position, speed, and satellite data.
    - GPRMC - This sentence is needed always. It contains basic navigational data, including information about origin/destination waypoints and course deviation
    - GPGGA - Only needed if you want GPS altitude
    - GPBOD or GPAPB - One of the two sentences must be present, but you don't need both. Contains course direction information. If neither are present, the OBS will always indicate 360.

Aviation format

- Any GPS that outputs the Aviation format can be used.
- Baud rate must be 9600.
- Some GPSs have a "MAPCOM" setting. This is usually equivalent to Aviation format.
- Apollo GPSs may or may not work. They need to be set to MAP mode. (Some Apollo GPSs can only be set to MAPCOM mode.)

GPS and/or Nav Model Compatibility

Product	Product Settings / Notes	Serial	ARINC	EFIS/EMS Settings	HS34 Settings	Known to work?
Anywhere Map	Does not output all needed sentences, time output is wrong.	X				Possibly. Consult Anywheremap for details.
Avmap 2000C	WAAS must be off or frequent drops may occur	X				Yes
AvMap EKP-IV	NMEA "Processed", firmware version 2.06.116R or greater	X				Yes (http://dynonavionics.com /cgi-bin/yabb2 /YaBB.pl?num=1168298819 /56#56)
Bendix/King AV8OR	NEMA Port=Serial:9600 >NEMA Output Setup>Output Rate=1Hz;	X		Auto		Yes-verified to work with the EFIS D10/D100/D180. As of

	Baud Rate=9600; Lat/Lon Precision=XX.XX; Transmit GPBOD=ON (Remaining transmit words listed in the menu are OFF.					12/16/2010 there is an AV8OR software bug that prevents the AV8OR from interfacing to the Skyview. There will be a software fix by Honeywell in Jan 2011.
Bendix/King KLN90B	ARINC confirmed to work. Serial may but unconfirmed.	unknown	X			Yes
Bendix/King KLX-135A COM/GPS	Unknown - Reports needed	Unknown	Unknown	Unknown	Unknown	Unknown
Bendix/King Skymap	AR NAV 9600 output	X		AVIATION:9600	Aviation:9600	Yes
Garmin 96, 96c	NMEA 0183	X				Yes
Garmin Aera Series	Aera Settings: TIS in/NMEA & VHF Out or Aviation in/NMEA & VHF OUT are both 9600 Baud output; NMEA Ouput Mode should be set to Normal	X		Auto	NMEA:9600	Yes. Bug in SkyView v2.6 - settings not retained through power cycle, fixed in next version. Temporary workaround is to set to Generic NMEA GPS.
Garmin 150XL		X				yes (http://dynonavionics.com/cgi-bin/yabb2/YaBB.pl?num=1168518756/4#4)
Garmin 300XL	I/O CHANEL 1 In:icarus alt out:Aviation - ARINC 429 in:OBS/Heading out:Collins PL2 EFS (http://dynonavionics.com/cgi-bin/yabb2/YaBB.pl?num=1253918528/8#8)	X	X		GAMA GPS:SLOW	yes (http://dynonavionics.com/cgi-bin/yabb2/YaBB.pl?num=1203300216/5#5)
Garmin 195		X				
Garmin 196	NMEA or NMEA & VHF Out. Advanced:Normal	X		Auto	NMEA:9600	Yes
Garmin 295	NMEA or NMEA & VHF Out. Advanced:Normal	X		Auto	NMEA:9600	Yes
Garmin 296	NMEA or NMEA & VHF Out. Advanced:Normal	X		NMEA:9600	NMEA:9600	Yes
Garmin 396	NMEA or NMEA & VHF Out. Advanced:Normal	X		Auto	NMEA:9600	Yes
Garmin 400	Aviation	X	X	Auto	Aviation:9600	Yes
Garmin 420	Aviation	X	X	Auto	Aviation:9600	Yes
Garmin 430/430W	Aviation	X	X	Auto	Aviation:9600	Yes
Garmin 495/496	NMEA or NMEA & VHF Out. Advanced:Normal	X		Auto	NMEA:9600	Yes
Garmin 500	Aviation	X	X	Auto	Aviation:9600	Yes
Garmin 520	Aviation	X	X	Auto	Aviation:9600	Yes
Garmin 530/530W	Aviation	X	X	Auto	Aviation:9600	Yes
Garmin 696	NMEA or NMEA & VHF Out. Advanced:Normal	X			NMEA:4800 Aviation/NMEA:9600	Yes - (NMEA Only works at 4800 aviation/NMEA or TIS/NMEA works at 9600)
Garmin GNS480	MAPCOM 9600 (Serial, GPS Only); GAMA 429 Low + VOR/ILS Low (HS34 present). Requires latest firmware. Use only *ARINC with HS34; only **Serial without	X	X	(GPS Only, Untested but should work)	GAMMA GPS Low/GAMMA Nav Low	Yes - both GPS & Nav including Glide Slope (http://wiki.dynonavionics.com/Garmin_480_Wiring)
Garmin GNS580	May work with newest firmware; requires manual configuration. (Sometimes referred to as "Apollo")	X	X			Untested

Garmin GX50	Aviation	X		Auto	Aviation:9600	No, but this GPS is very similar to the GX65 below, which is known to work
Garmin GX55	Unknown - Reports needed	Unknown	Unknown	Unknown	Unknown	Unknown
Garmin GX60	Aviation	X		Auto	Aviation:9600	Yes (http://dynonavionics.com /cgi-bin/yabb2 /YaBB.pl?num=1196272940/0#0)
Garmin GX65	Aviation	X		Auto	Aviation:9600	Yes (http://dynonavionics.com /cgi-bin/yabb2 /YaBB.pl?num=1193420490/0#0)
Garmin SL30	Indicator Head Type: NONE	X		SL30		Yes
Lowrance handhelds		X				Yes
PocketFMS (Oudie)	NMEA Port=Serial:9600	X		Auto		Yes-verified to work with the EFIS D10/D100/D180. SkyView testing is in progress

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