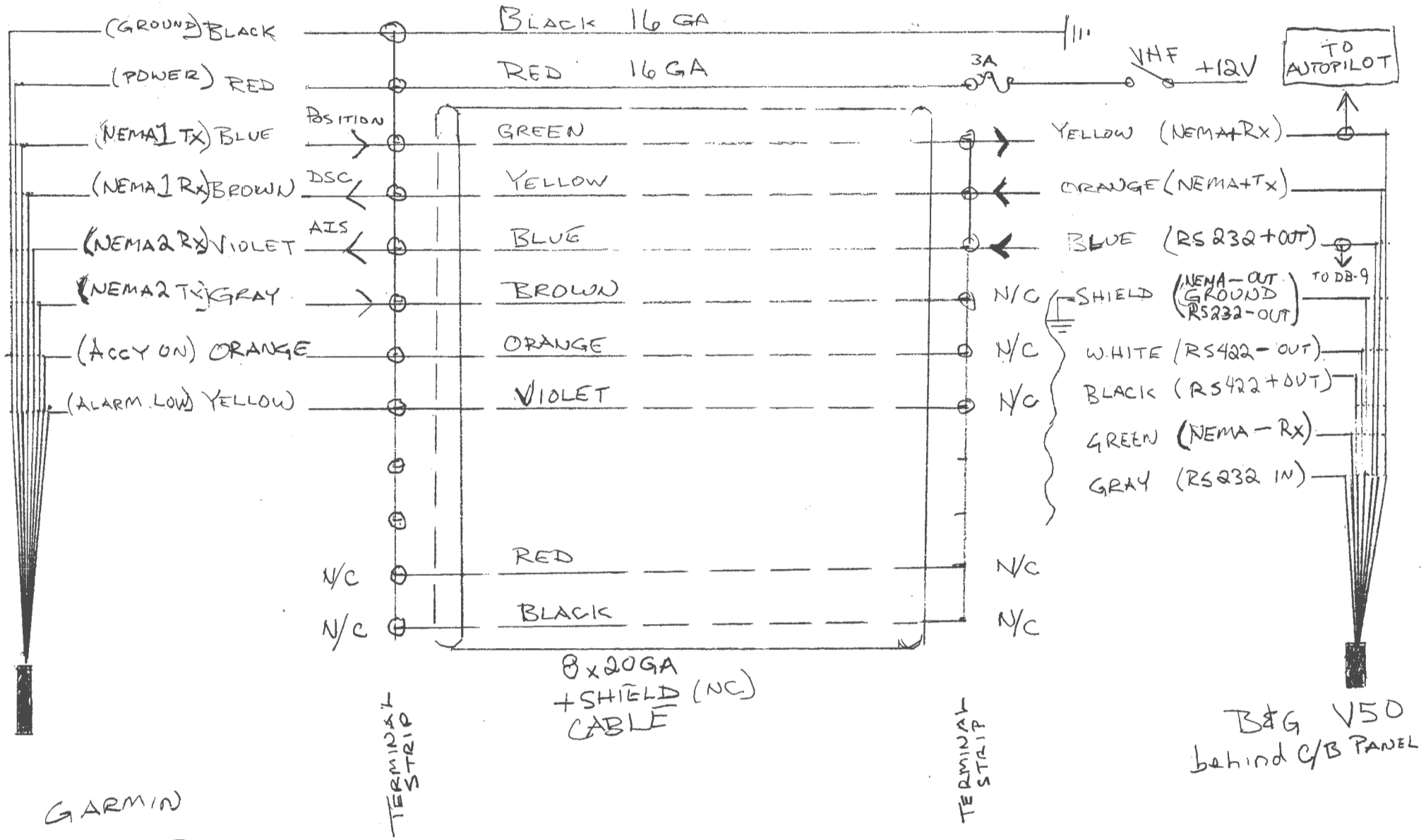
GPS/VHF/AIS INTERFACE, NEMA 0183



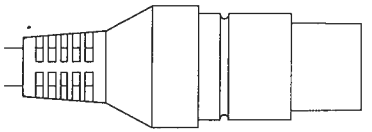
GARMIN
GPS MAP
547xs
AFT BERTH,
INSIDE QUADRANT
COVER

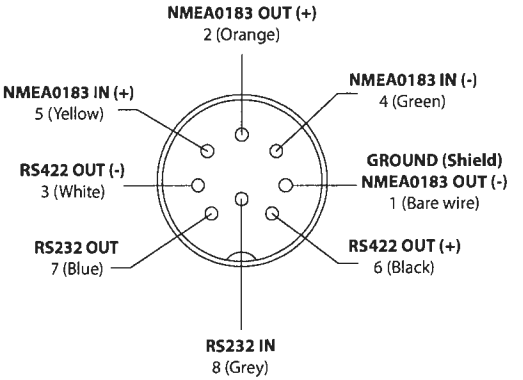
NETBOOK OPENCPN

DB-9 to USB	BLUE	2
	SHIELD	5

Pin / Socket	Wire color	Function (NMEA 2000)
1	Green	Can-D, Drain wire, Shield
2	Red	Can-S, Power, +12 V DC
3	Black	Can-C, Ground
4	White	Can-H, Data High
5	Blue	Can-L, Data Low

3 - GPS Connector and cable





Line up the arrow on the GPS connector with the arrow on the GPS cable and plug together. The pin details are shown for information.

B&G V50

	Pin / Socket	Wire color	GPS / MFD (NMEA 0183)		AIS (NMEA 0183 HS)		
✓	1	Shield	GROUND, NMEA 0183 OUT (-)	4800bps	RS232 OUT (-)	38.4 kbps	
✓	2	Orange	NMEA 0183 OUT (+)	4800bps			DSC out
	3	~~White~~			RS422 OUT (-)	38.4 kbps	
	4	Green	NMEA 0183 IN (-)	4800bps			
✓	5	Yellow	NMEA 0183 IN (+)	4800bps			Position in
	6	~~Black~~			RS422 OUT (+)	38.4 kbps	
✓	7	Blue			RS232 OUT (+)	38.4 kbps	AIS out
	8	Grey	RS232 IN	Not used			

Note: The GPS connector on the radio is provided with a protective cover. If this connector will not be used, please ensure the protective cover is fitted.

and the mounting holes, and cutting the hole too large could compromise the stability of the device after it is mounted.

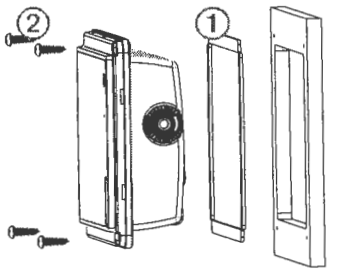
The included template and hardware can be used to mount the device in your dashboard.

If you want to mount the device using an alternative method where it appears flat with the front of the dashboard, you must purchase a flat-mount kit (sold separately, with professional installation recommended) from your Garmin dealer.

1. Trim the template and make sure it fits in the location where you want to mount the device.
2. Remove the protective liner from the back of the template and adhere it to the location where you want to mount the device.
3. Using a $^{3}/_{8}$ in. (9.5 mm) drill bit, drill one or more of the holes inside the corners of the solid line on the template to prepare the mounting surface for cutting.
4. Using a jigsaw, cut the mounting surface along the inside of the solid line indicated on the template.
5. Place the device in the cutout to test the fit.
6. If necessary, use a file and sandpaper to refine the size of the cutout.
7. After the device fits correctly in the cutout, ensure the mounting holes on the device line up with the pilot holes on the template.
8. If the mounting holes on the device do not line up, mark the new pilot-hole locations.
9. Using a $^{1}/_{8}$ in. (3.2 mm) drill bit, drill the pilot holes.
10. Remove the template from the mounting surface.
11. If you will not have access to the back of the device after you mount it, connect all necessary cables to the device before placing it into the cutout.

    NOTE: To prevent corrosion of the metal contacts, cover unused connectors with the attached weather caps.
12. Install the rubber gasket ① on the back of the device.

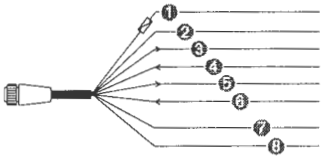
    The pieces of the rubber gasket have adhesive on the back. Make sure you remove the protective liner before installing them on the device.



13. Place the device into the cutout.
14. Secure the device to the mounting surface using the included screws ②.
15. Install the decorative bezel by snapping it in place around the edges of the device.

About the Wiring Harness

- The wiring harness connects the device to power, NMEA® 0183 devices, and a lamp or a horn for visible or audible alerts.
- The wiring harness is packaged without the locking ring installed. You should route the cable before you install the locking ring.
- After connecting a locking ring to the wiring harness, you should make sure the ring is securely connected and the o-ring is in place so the connection remains secure.
- The device has two internal NMEA 0183 ports that are used to connect to NMEA 0183 compliant devices. When connecting to a device for both transmitting and receiving, you must make sure to use wires from the same internal NMEA 0183 port.
- If it is necessary to extend the power and ground wires, you must use 16 AWG (1.31 mm²) wire.
- If it is necessary to extend the NMEA 0183 or alarm wires, you must use 22 AWG (.33 mm²) wire.



Item	Wire Color	Wire Function
①	Red	Power
②	Black	Ground (power and NMEA 0183)
③	Blue	NMEA 0183 internal port 1 Tx (out)
④	Brown	NMEA 0183 internal port 1 Rx (in)
⑤	Gray	NMEA 0183 internal port 2 Tx (out)
⑥	Violet	NMEA 0183 internal port 2 Rx (in)
⑦	Orange	Accessory on
⑧	Yellow	Alarm low

Connecting the Wiring Harness to Power

⚠ WARNING

When connecting the power cable, do not remove the in-line fuse holder. To prevent the possibility of injury or product damage caused by fire or overheating, the appropriate fuse must be in place as indicated in the product specifications. In addition, connecting the power cable without the appropriate fuse in place will void the product warranty.

1. Route the wiring harness to the power source and to the device.
2. Connect the red wire to the positive (+) battery terminal, and connect the black wire to the negative (-) battery terminal.
3. Install the locking ring and o-ring on the end of the wiring harness.
4. Connect the wiring harness to the device by turning the locking ring clockwise.

NMEA 0183 Connection Considerations

- The installation instructions provided with your NMEA 0183 compatible device should contain the information you need to identify the transmitting (Tx) and receiving (Rx) A (+) and B (-) wires. Each port may have one or two transmitting wires, or one or two receiving wires.
- When connecting NMEA 0183 devices to ports containing two transmitting (Tx) wires or two receiving (Rx) wires each, it is not necessary for the NMEA 0183 device to connect to a common ground.
- When connecting a NMEA 0183 device to ports containing one transmitting (Tx) wire or one receiving (Rx) wire each, the NMEA 0183 device must be connected to a common ground.