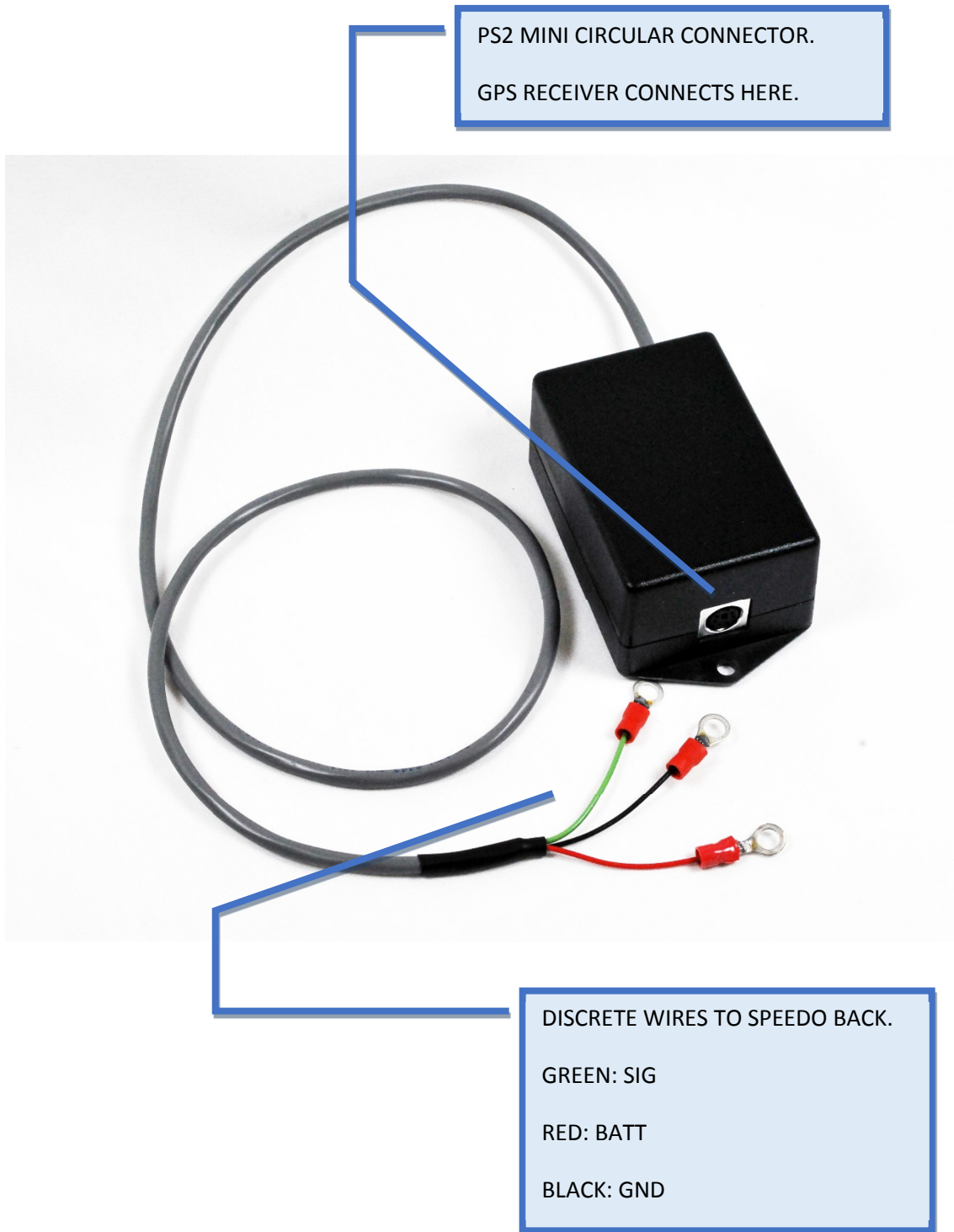


NL4-FA INSTALLATION and OPERATION GUIDE

→→→ FOR THOSE BOATS WITH Faria™ Speedometers using Paddle Wheels ←←←

→→→ Optional PerfectPass Patch Cable ←←←



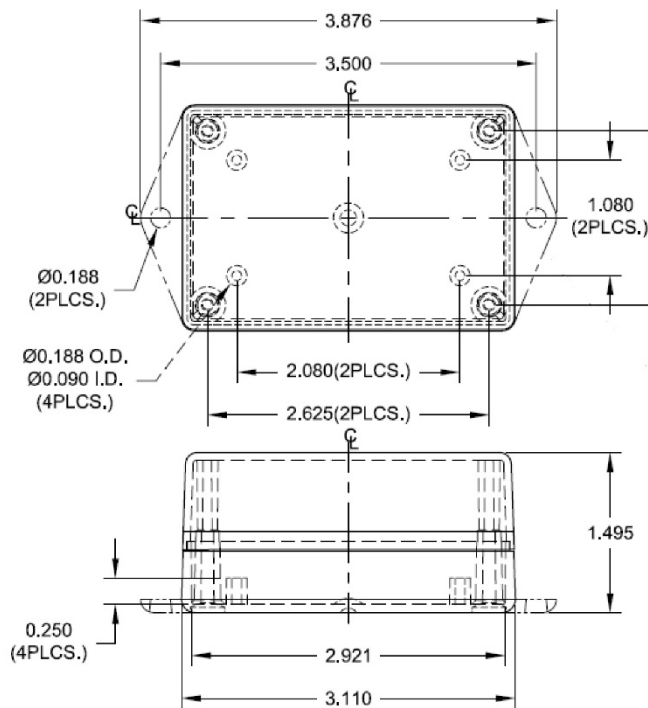
NL4-FA INSTALLATION and OPERATION GUIDE

The installation of the NL4 is simple. This is a retro-fit. The NL4's power and signal wires connect right to the back of the speedometer. Your tasks are basic: locate the GPS pod, mount the NL4, and attach the NL4 to the speedo.

TURN OFF THE POWER and DISCONNECT THE BATTERY.

Locate the GPS Receiver.

The NL4 compatible GPS Receiver is waterproof with great reception. It's resilient and tolerant in marine surroundings. These following constraints are key: the GPS requires a clear line-of-sight to the sky; the windshield and/or cloth top shouldn't present a problem. Keep it away from other electronics / antenna's that may interfere with the receiver. Every boat is different, so experiment with varied Receiver locations to find the best (before mounting it permanently). Route the GPS cable / connector to under the dash.



NL4 Mounting Considerations.

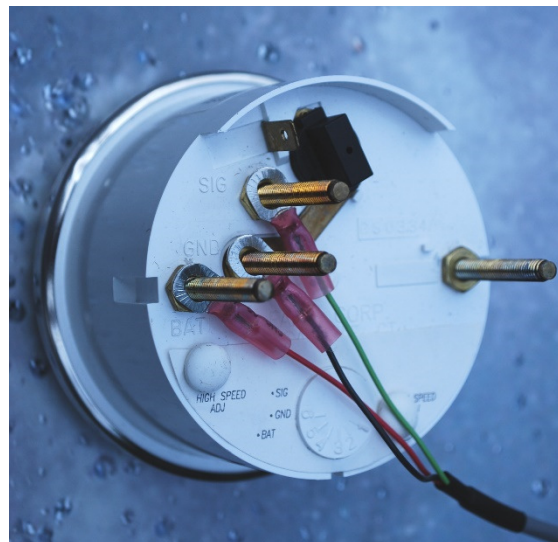
The case provides two mounting flanges with #8 screw holes. Use these to secure the NL4 to a flat surface adjacent to the backside of the speedometer. Locate it so the NL4's Grey cable easily reaches the Speedo's wire studs. (The #8 screws are not provided.)

Attach the NL4.

Remove the Speedo's mounting bracket if required. Loosen the nut, and remove the paddlewheel wire from the Speedo Signal (*SIG*) stud. In its place, attach the NL4's Green wire. Secure the Red wire (along with any existing wires) under the nut at the Battery (*BAT*) stud. Repeat for the Black wire on the Ground (*GND*) stud.

Option: Adding a new Speedometer Gauge.

If you're adding a Faria E-Speedo, that's new to your dash, then more wiring is required. To Energize the Speedo gauge and NL4, locate a source of *Key-switched* 12Vdc power. This must be connected to the *BAT* stud; search the other dash devices for a good tap-in point. Also wire the speedo's *GND* stud to boat's power Common or Battery-. Finally, connect the Dash-Lights to the speedo's Spade or Blade post; again search for a tie-in source from the other Dash gauges.



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Option: PerfectPass Patch Cable.

Remove the paddlewheel connector from the PerfectPass Module; *Paddle Input* is clearly marked on the Module's Face or Harness. In its place, insert the NL4's five-position Female connector into PerfectPass Module. Make sure the mating connector latches engage.

Insert the free paddlewheel connector into the NL4's five-position male connector. This will reconnect the paddlewheel's temperature sensor with the PerfectPass Module. Make sure the mating connector latches engage.

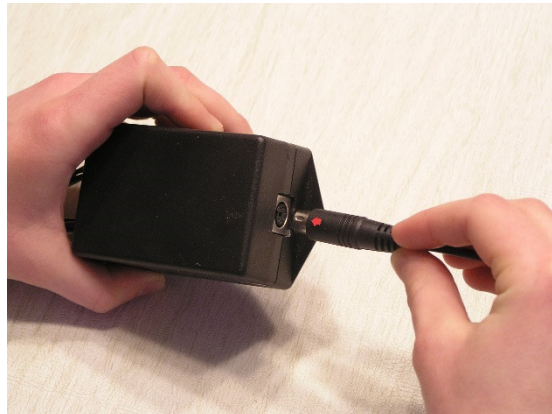
Attach GPS Receiver.

Plug the GPS Receiver into the NL4's PS2 connector. Note the 'ARROW' embossed into the connector. Orient the arrow at 12 o'clock, or away from the mounting flange. Be sure to strain relief the GPS Receiver cable/connector, with a cable tie to a nearby fixed provision.

Re-connect the Battery.

Operation.

The NL4's sole function is to communicate speed data from the GPS Receiver to the Speedometer. The NL4 will in NO-WAY interfere or meddle with normal boat functions. The format of the NL4's speed output is an exact match to the paddlewheels, and is a seamless integration into the speed measuring system.



On a 'cold start' (power turned on after a prolonged off period) the GPS Receiver may require 1 - 2 minutes to sync to the satellites. With a warm start, expect the satellite sync within seconds.

The GPS Receiver is equipped with an internal Status Light.

1. THE LIGHT FLASHES: When the Receiver has power.
2. THE LIGHT REMAINS SOLID: When the Receiver has a Satellite Sync. This is required for normal operation.

Speedometer Calibration.

Using a hand-held GPS as a speed reference, place the boat at a steady 18 mph. Tune the speedometer (via its tuning knob or **Low Speed Adj**) until the needle position matches the reference. Increase the speed to a steady 36 mph. Again fine tune the needle with the tuning knob or **High Speed Adj**. Repeat the entire process to confirm and/or further calibrate to a 'best-fit' between the low and high speeds.

Option: PerfectPass Settings and Calibration. A Speed Calibration is required! Follow instructions outlined in the PerfectPass Instruction Manual. Typically, the Paddlewheel's speed will register 1 to 2 mph slower than the faster NL4. The handheld GPS is an excellent speed reference.

For crisper speed control, significantly reduce the 'NN' PaddleWheel Filter. The NL4's output signal is ultra-clean and this filter is not needed: Should you do decide to change the NN filter, do it in incremental steps. For example: drop the value by 20%. Run the boat for 1 hr. If there was an improvement or none, then drop it by another 20%. Run it for an hour. Repeat. If the response ever degrades, then bump the value back up 10%.

Warranty. Nautic Laugic warranties the NL4 for one year.

Should this product malfunction or fail, please return it so we can make it right!! Please see our policies page at www.nauticlaugic.com

THANK YOU FOR BUYING OUR PRODUCT!!

