



Adding a speedometer cable to a Direct Plug-In Cycle Analyst

Tools Needed:

1. Phillips head screwdriver
2. Speedometer cable
3. Direct Plug-In Cycle Analyst
4. Soldering Iron + Solder

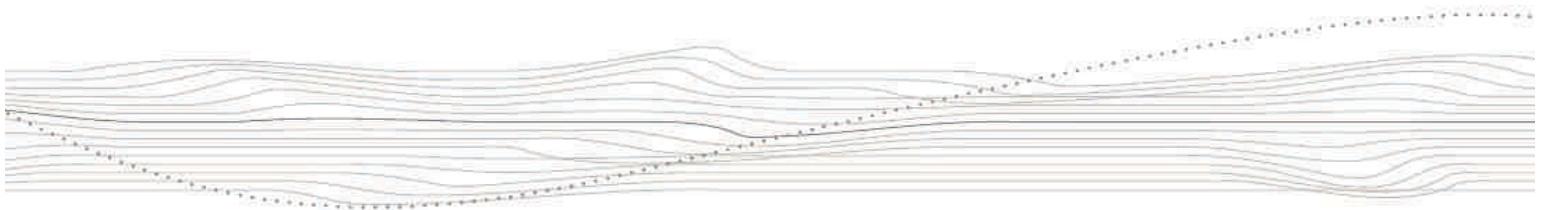
Optional:

1. Tweezers
2. Heatshrink
3. Silicone Rubber Sealant



First you need to open the Cycle Analyst by unscrewing the 4 screws on the underside. Once open you will notice a sealant that is added during manufacturing to better protect the Cycle Analyst from water ingress. Pull all the sealant away from the enclosure and dispose of it.

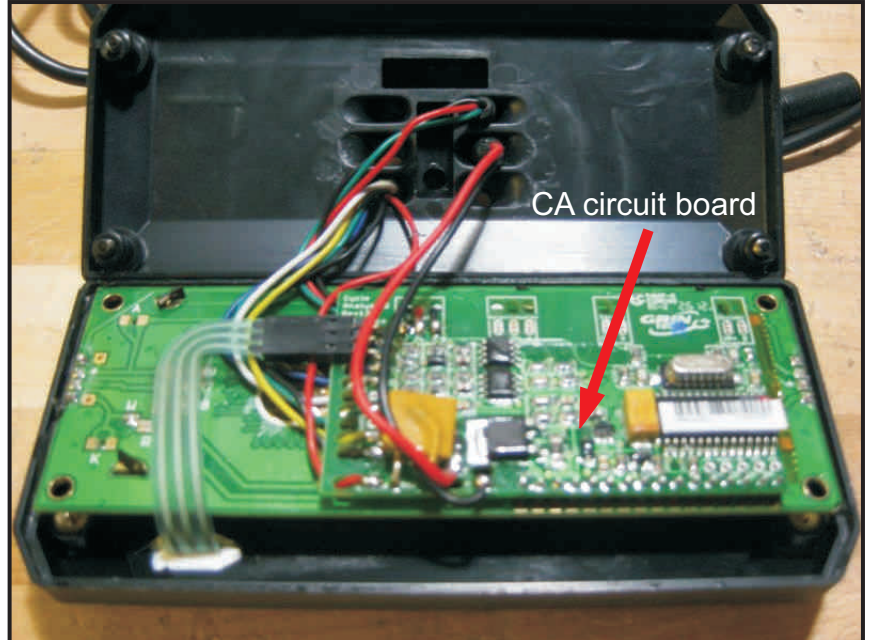
You'll also notice that each screw has a rubber grommet on the end. This holds the Cycle Analyst firmly inside the enclosure. If you do not fully remove the screws from the enclosure these grommets will conveniently stay on the end of the screw even after you have taken apart the Cycle Analyst.





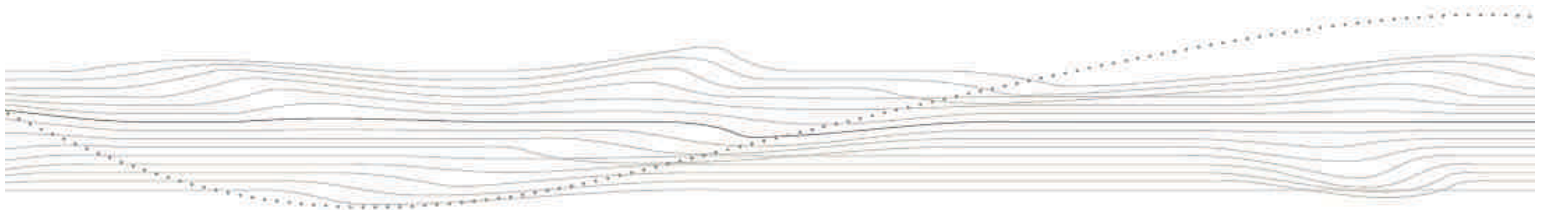
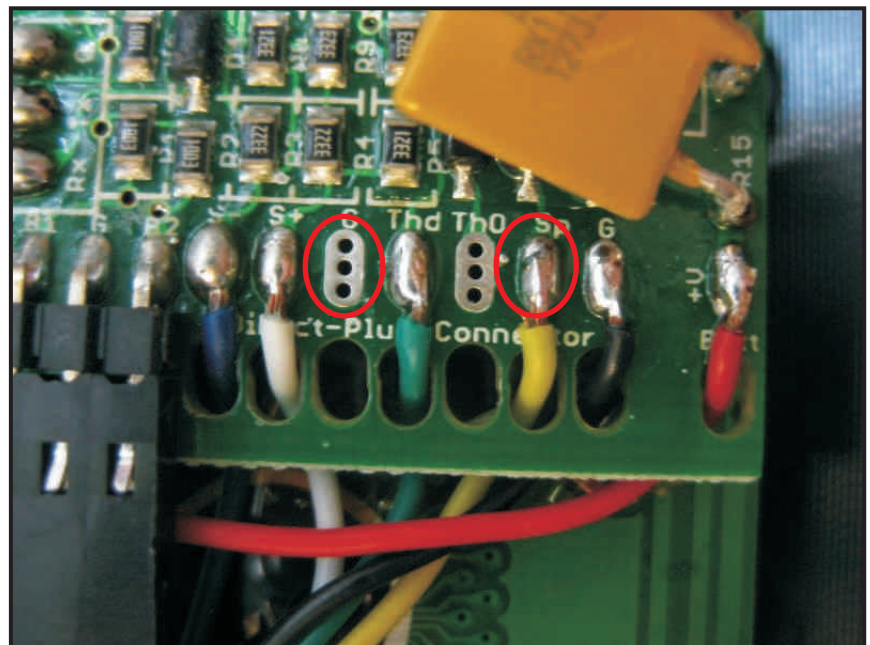
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Once you have the Cycle Analyst open you'll notice the small circuit board soldered to the LCD screen. This is the Cycle Analyst circuit board.



The two pads on this board that we need to pay attention to are "Sp" and the "G" pad 3 spaces to the left of the "Sp" pad. The "Sp" pad will already have the yellow wire from the CA-DP cable soldered to it. The first thing to do is to desolder the yellow wire from the circuit board. Be careful not to damage the pad when removing the wire by ensuring that the solder is fully melted before tugging on the cable.

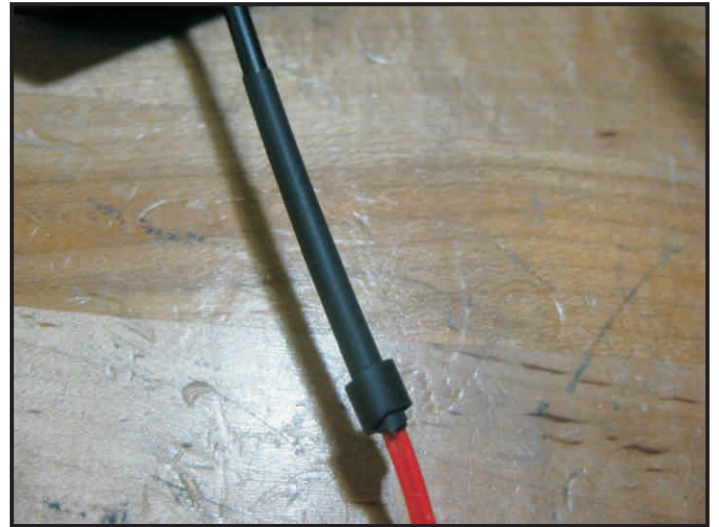
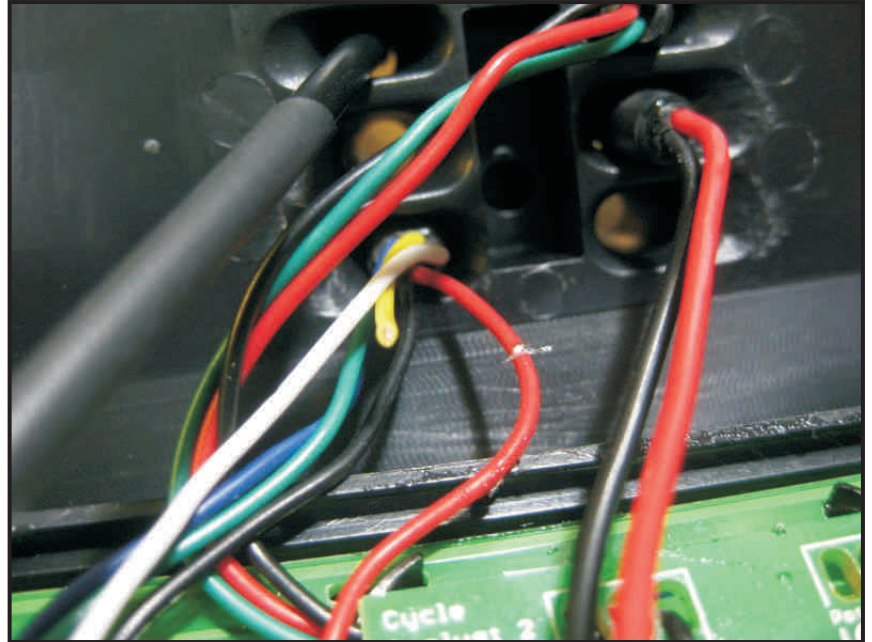
Note: earlier Cycle Analysts may have a different board layout - the same idea still applies: desolder the yellow wire from the "Sp" pad and find a "G" or "Gnd" pad on the board that you can use for the other speedometer wire.



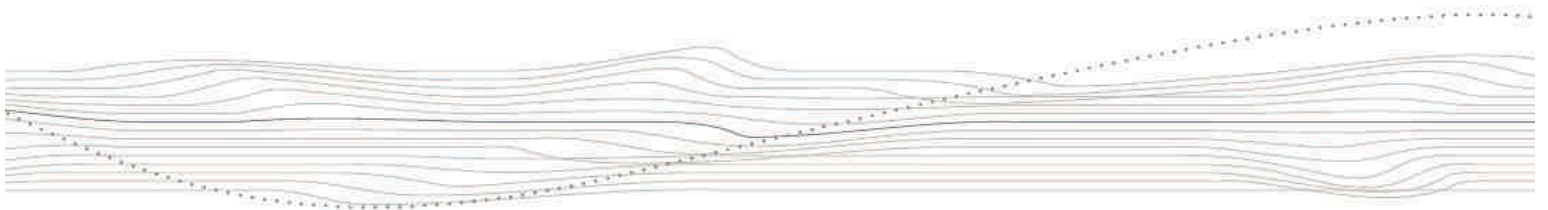


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Because the yellow wire is now loose inside the Cycle Analyst it is a good idea to trim it back so that it doesn't short against the circuit board.



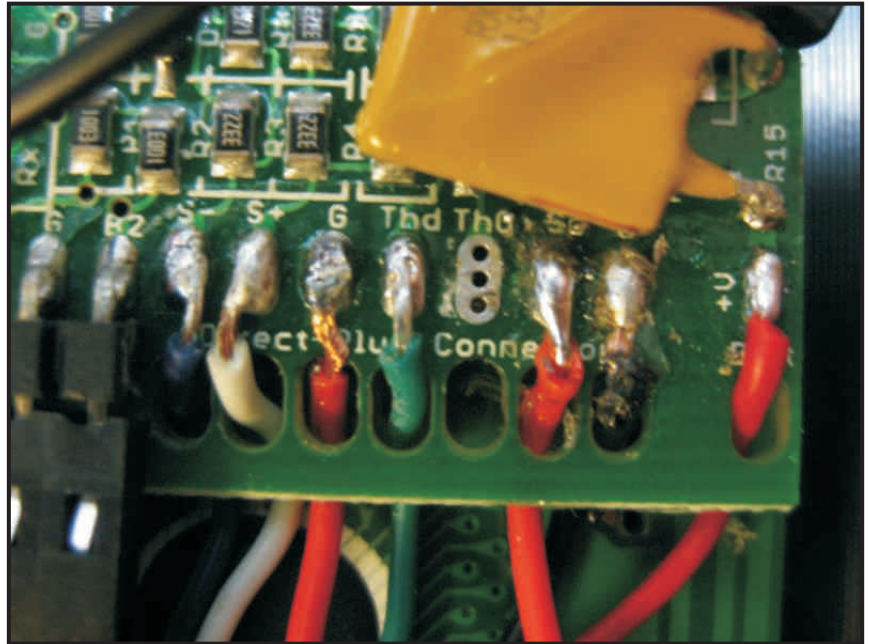
Next you will want to insert the speedometer cable red wires into the back of the Cycle Analyst in the bottom left spot as shown in the picture. Pull the cable through and then if you have some adhesive heatshrink you can add it to the speedo cable to help with stress relief (if the speedometer cable is unexpectedly tugged etc.) as shown in the pictures. This is not essential but if the speedometer cable is pulled on it can help to prevent damage to the Cycle Analyst circuit board pads.





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Now you can solder the two speedometer cable wires to the circuit board. It does not matter which way round they go. Cycle Analysts after version 2.3 have small holes that the wires are threaded through to help with strain relief - try to get the wire through these holes if you can (needlenose pliers help!) otherwise just solder on top of the pads.



Close up the Cycle Analyst once complete - be careful not to crush the wires against the button ribbon cable or to get a wire caught in the edge of the enclosure and don't forget the rubber grommets. You can use a silicone rubber adhesive sealant (such as RTV100) to reseal the edge of the enclosure box if you have some available.

The final step is to change the number of poles in the advanced setup menu of the Cycle Analyst to 1.

Congratulations - you have converted your Direct Plug-In Cycle Analyst to use a speedometer cable!

