Drifter Projects: *Poor-man's Autopilot Remote*

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Description

I wanted a remote for the autopilot so that I could go outside the pilothouse and have some steering ability when conditions and traffic allowed (not all of us have a flybridge, Phat Girl!).

I have a 10-year-old Navionics NavPilot autopilot. After searching the "interwebs", I found a few wired remote controls for the nearly antiquated autopilot for something around $800 !!! After digging some more, I found that the internals of this $800 piece of magic consisted of three switches and some wire. That's it! Maybe it was the fact that the massive CABLE that you would have to lug around everywhere had that much copper in it – it sure looked that way!

Knowing that there were only some switches involved and the NavPilot was already set up for them, got me to thinking – surely I can do better than $800! …………and it better not have a CABLE!

Note: *I would rate this project as a medium difficulty due to the schematic interpretations, etc. Don't try this unless you know what you are doing.*

Parts Ordered

2 of Owfeel DC 12V One Transmitter 2X 1 Channel Smart Wireless Remote Control Switch Inching Self-locking Black Round Transmitter
Sold by: Owfeel®
$14.92
[Buy it Again]

DPST On-Off Round Hole Rocker Switch, Rectangular Face (1 Per Quantity)
Sold by: delcitydirect
$6.42
[Buy it Again]

Blue Sea Systems 8 Circuit 20A Terminal Block
Sold by: Amazon.com LLC
Return window closed on Sep 21, 2016
$6.99
[Buy it Again]

Replacement for Honeywell 18/6 Shielded Plenum Rated Wire - 18 Gauge 6 Conductor - 15 Foot
Sold by: AirstarSupply
$20.50
[Buy it Again]

Various other electrical stuff – crimp terminals, heat shrink, etc.

Process

I got back on the "interwebs" and tried to find the innards of the NavPilot to figure out where the switch inputs go. I found the schematic for the $800 remote I found with the schematic for the NavPilot "black box" and matched up the signal names.
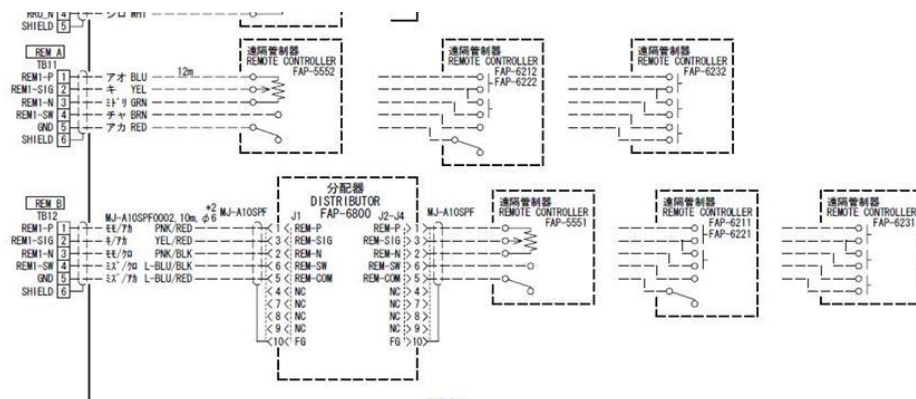

Navpilot Interface
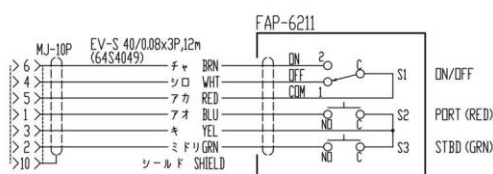
Navionics Remote Schematic

Hey! This looked really easy to me – how hard could it be?

I found a nifty universal wireless remote with two buttons that had a dual relay box that could serve as the port and starboard controls. Based on the schematics I found, the other switch basically was just an on/off switch for the remote. To duplicate this, I could just cut power to the whole thing with a rocker switch. Since the "switches" were going to be powered relays, this was a second layer of safety because, without power, they could not erroneously steer the NavPilot.

The wireless relays that came looked to be better quality than I anticipated (I set my standards pretty low at that price). I had bought _two_ kits, so when (not if) the first one died, I would have a replacement.
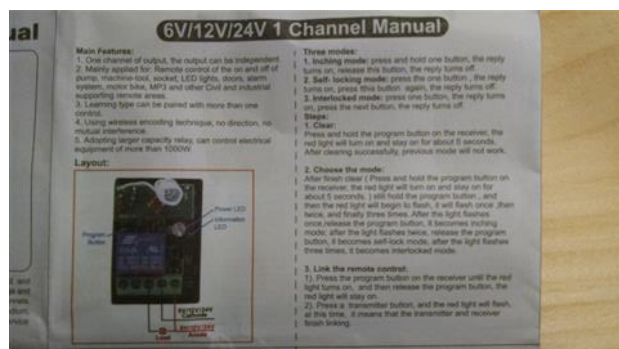
Next, I built up a sub-assembly with all of the parts wired up to go into the boat. The relay boards were going to use the battery power that was feeding the autopilot, so it would be a) right there where I needed it, and b) able to be cut off in an emergency along with the autopilot (3rd level of safety).
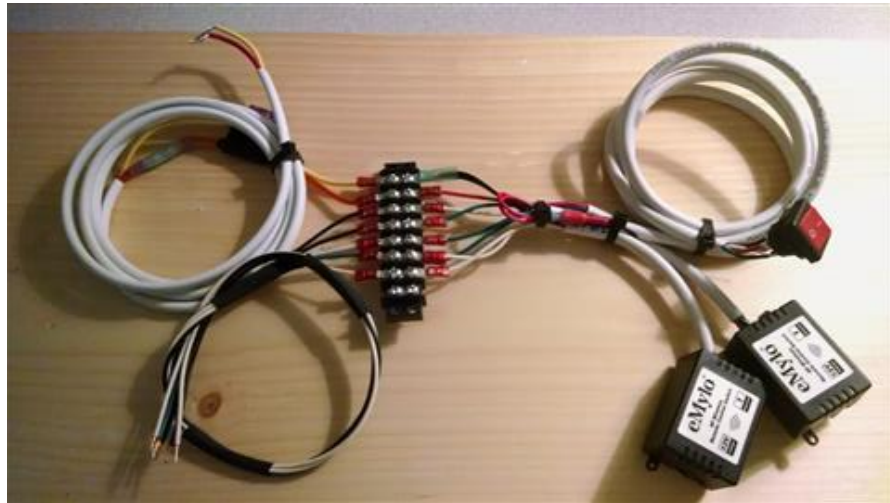
I took the sub-assembly to the boat and installed it next to the autopilot "black box" which was right under the helm station kick-panel. The NavPilot remote input switch connectors were really easy to find and hook up to.
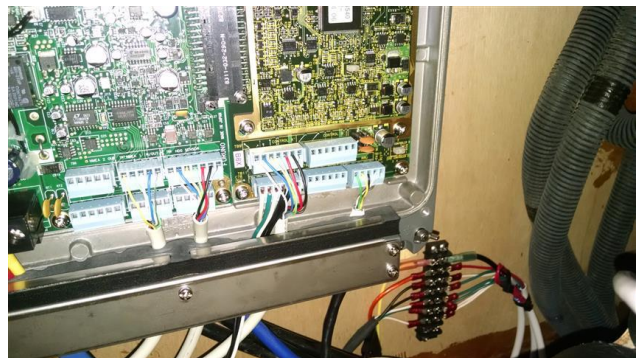
Completion

Oh my! This was one of the best projects I did to date. As an ex-sailor, I was just dying to get outside most of the time when the weather is nice, and having to tweak the steering intermittently underway on the ICW, I was stuck in the pilothouse.

So instead of an $800 massive plastic box and dragging a cable around out the window, I have a tiny wireless steering remote for a little more than $50!

I added an "ON" LED and splurged on a custom Blue Sea label for the helm station.

I made a little lanyard for the "Keyfob" (note the red button on the left, for port!).