

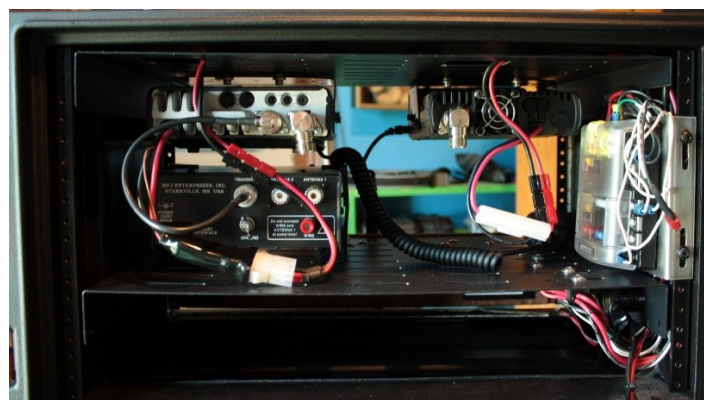
Note: The complete write-up can be viewed at <https://soliloquyforthefallen.net/?p=1003> STL files for all the 3d printed items are available, as well as full resolution pictures. This is an abbreviated release for the newsletter.

I am primarily a portable operator (as a result of my HOA) who must set up each and every time. Indoor HF qrp antennas are not quite a viable solution. By building a “shack-in-a-box” having all my radios are mounted in a single portable box. All the connections are left in place, so when it comes time to operate I only need to attach my coaxial feedline to the radios and the box’s main power supply to the wall. I was inspired to build my go-box after joining the [Ham Radio Go Box](#) group on facebook.



Go Box at W9CJN Field Day 2018

The gobox contains a yaesu 857d for HF + 2M/440. An MFJ 929 allows me to tune end-fed half waves for multiple bands. A dedicated 2m/70cm rig with crossbanding is provided by the Alinco DR-735t. Also included is built in illumination for dusk or after operations, cooling for both radios, 2 USB power points for keeping a phone charged up. While I’m able to connect the box to a battery, a Samlex SEC-1235 provides power for up to 30 amps continuous loads.

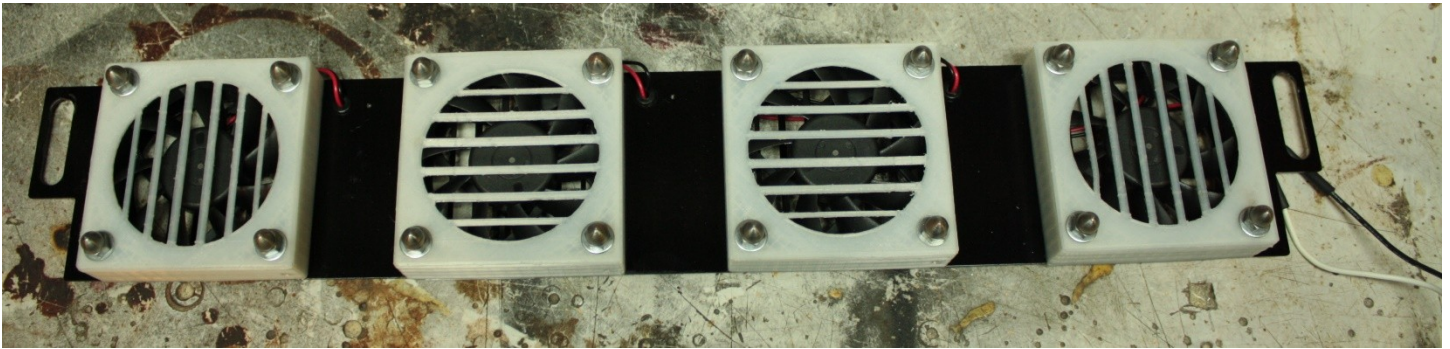


Rear view of go box without the cooling panel installed.

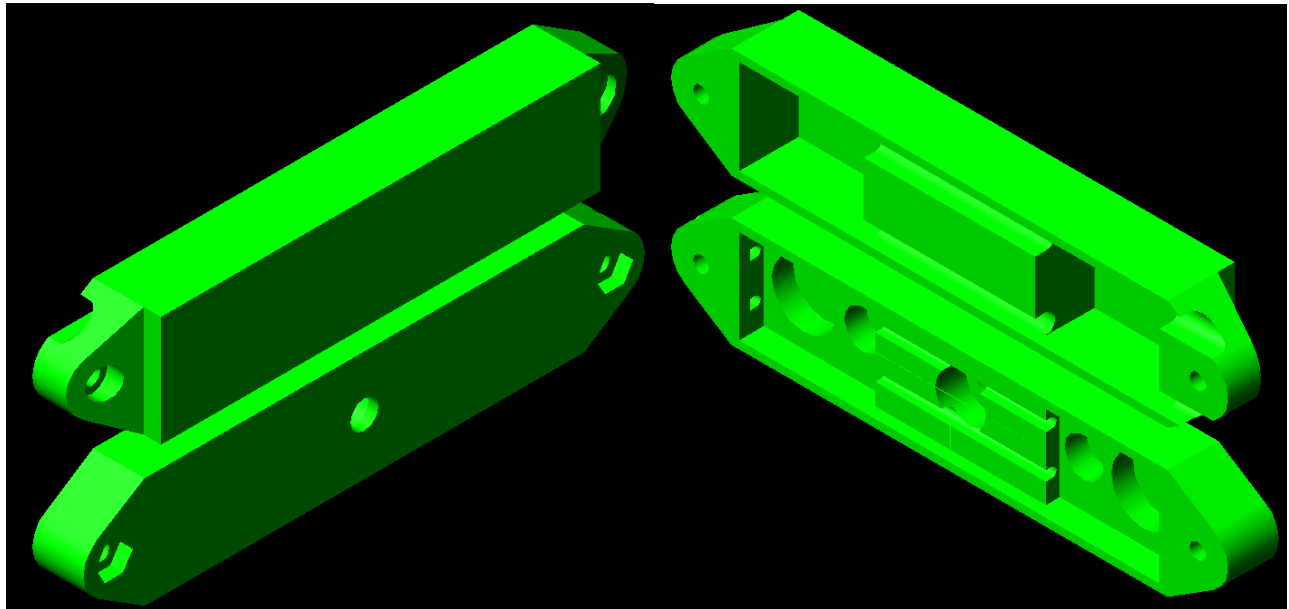
I heavily leveraged my new 3d printer for multiple items in the shack-in-a-box. All of the switches required a 3d printed mount to allow the switches to retain into the wood panel. The wiring underneath the bottom shelf is routed through



3d printed wire mounts. The DC shunt that allows me to monitor my power and system load is contained in a 3d printed box. The fan covers are also 3d printed. Each of these covers is a two-piece assembly with the grill as one printed part, and the sides as another. This will save print time should a grill become damaged.



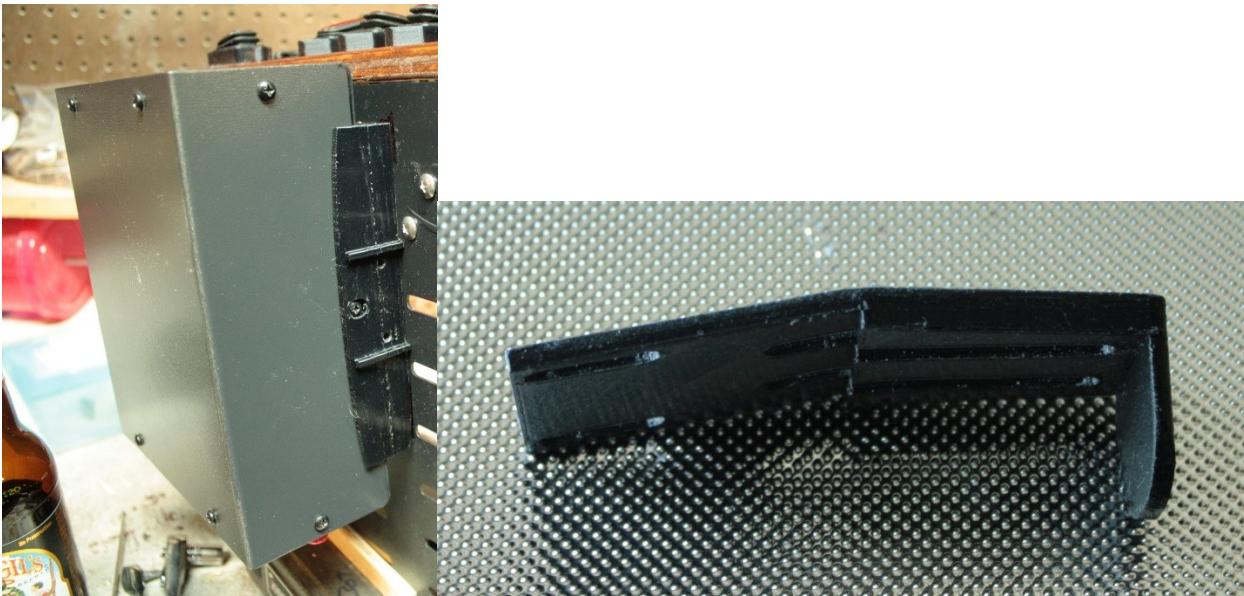
Rendered model of the DC Shunt container. I needed an insulated container for the shunt, so I designed and printed this container.



An interesting challenge was how to mount and retain the MFJ 929 tuner. I want to be able to put the shack-in-a-box in the car and go if needed so I needed a secure way to hold the tuner. The lip of the tuner covers pushes into the base of the stands and then an arm helps insure the tuner does not slip up and out. The benefit of this design is that I did not have to modify the tuner to mount in the box.







Here's a progress shop of the wiring under the bottom shelf. I was attempting to debug why my amp display did not read correctly. Turns out I had some wires flipped.

