

# SCOUT Projects: *Grill Cabinet*

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*m/v SCOUT (Great Harbour N37)*

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## Description

Install a built-in electric grill and cockpit cabinet.

## Parts Used

1. Fiberglass dock box (ebay)
2. Kenyon Frontier 120V electric grill
3. Starboard access hatch (overstock – Great Lakes Skipper)
4. Remnant piece of Corian counter top (<http://www.solidsurface.com>)
5. Fiberglass angle (<http://www.mcmaster.com>)
6. Rust Oleum paint
7. 120V electrical wire and outlet box
8. Various screws, sealant, electrical tie-wraps, etc.

## Assembly / Construction

I have had a litany of rail-mounted propane grills on our other boats – the usual Magma, West Marine, etc. They all seemed to have several things in common; they didn't work well (or at all) in wind, they only had two heat settings (no matter what you did with the knob) – “OFF” and “SCORCH”, and when mounted to the aft rail, they were not much fun to use in the rain.

I wanted to make use of the space at the back wall of our deck house to build in a grill that was covered by the overhang and would be (mostly) out of the wind. We also wanted to retain some storage capability both inside and below the cabinet. We also wanted to retain enough overall cockpit space for two chairs and a small table for sitting.

I had envisioned all kinds of hours spent building fiberglass molds and forming my own cabinet just the way I wanted. But that sounded like a lot more than what I wanted to undertake, sort of 'at risk'. I also thought about making a drawing and having a boat yard build one for me, but when I got the first few quotes from my rough description, I scrapped that idea.

I poked around on the 'interwebs' and looked at electronics boxes for large T-Top fishing boats. These were really close in size to what I was looking for, but none of them were 'just right'. Even those that were almost right were quite expensive. I spent far too many hours on this part.....

I finally stumbled across a guy on ebay selling a “mini” dock box for \$300. Bingo! It was just about the perfect dimensions and would not be so expensive that I would feel bad when my “experiment” failed miserably (as so many of them do.....).



Pictures from ebay ad

The only “issue” with this is that the sides for a fiberglass product are necessarily angled so that it can be removed from the mold. I would have to take this into account when mounting it to the vertical wall. I also wanted to take into account the 2-3 degree angle of the boat (you Great Harbour folks know what I am talking about), sloping aft. I wanted the grill surface to be, well.... flat. So I got to cutting.....

I measured all the mounting angles and flat surfaces and then cut the back off the box, straight down. I also cut the lip off the top, assuming I would mount a top of some sort at the end. Finally, I cut an opening in the front to be used for storage, matching a surplus hatch I found online.



Dock box cut



Front hatch

I found some fiberglass “angle iron” at McMaster and used that to frame up the back and sides for rigidity and to provide some mounting flanges to screw the cabinet to the back wall of the deckhouse. At the top, they would also provide some extra surface for the countertop attachment. I fiberglassed these onto the dock box with epoxy and cloth. Since the attachment was mostly inside, it didn’t have to be real pretty 😊



Fiberglass angles and test fit of hatch

I found some basic “marine” enamel paint from Rust Oleum that matched really well to the Awlcraft “Oyster White” of the boat. I didn’t want to spend \$200 on Awlcraft paint and supplies for just this little cabinet.



Painting

For the top, I found a web site that sold overstock and remnants of Corian countertops for a reasonable price with shipping. I found a piece that was slightly larger than I needed and would allow me some “practice” area with the router, etc. before actual cutting began.



Corian overstock

Corian is somewhat soft, scratches easily, and doesn't do well with hot items being set on it. I decided to make a small recessed area that I could put replaceable boards into and allow them to take any punishment. It turns out that I had enough material left from the grill cutout to make two replaceable boards for this area out of matching Corian!



Grill cutout and side recess



The install was pretty straightforward. The mounting angles seemed good and the cabinet felt really rigid.



Mounted to bulkhead

I then glued and screwed the top onto the cabinet and installed the hatch door.

I ran the electrical connection through the bulkhead into the settee base in the salon. This is where one of the air conditioners lives. I ran an AC tap from the same breaker and circuit as the dinghy crane (not likely to be using both at the same time) and put an outlet inside. I then plugged the GFCI-rigged plug from the grill into that.

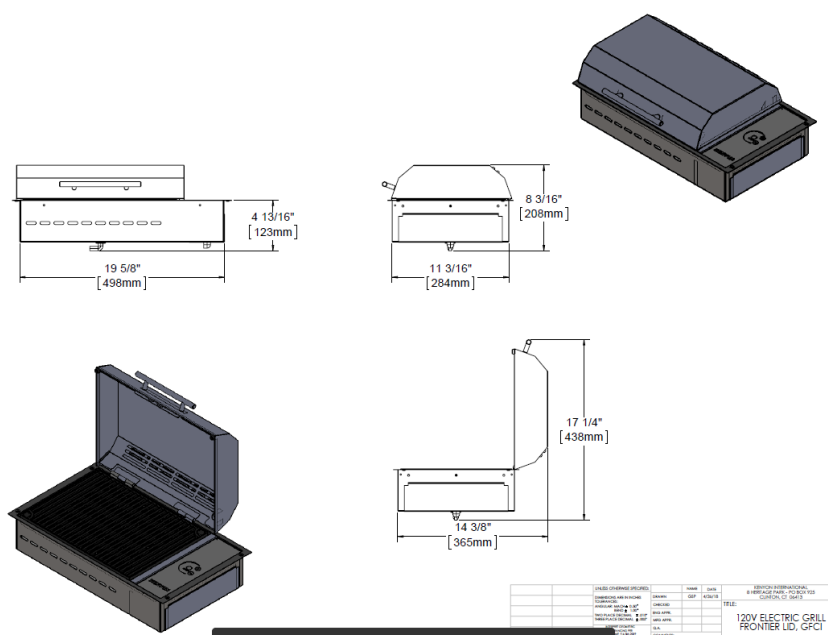


Outlet connection

## Electric Rationale

From my research, the electric Kenyon gills looked to be a good solution for me. The idea that I wouldn't need to deal with propane on board was a big plus, and the variable temperature control and the way the heating element was recessed into the grate looked like a great set up. Reviews were all outstanding.

The grill had a very narrow depth and a flat"-ish" lid (space needed when open) that would allow a shallow cabinet to be used and preserve the already small cockpit area.



I installed a separate cheap thermometer in the front of the lid.

After installation, I measured some of the lower temperature settings. When heating, the heating occurs at full power, about 10.5-11A at 117V (measured). The heating (at 11A) is turned on at off at different rates depending on temperature settings. I measured the first three settings in the table below to see what it would do to the battery bank/inverter. I added 15% extra for inverter inefficiency when calculating average 12V amps from the measured 117V.

Step	Temp Gauge	kW for 1hr	Ave amps at 117V	Ave amps at 12V +15%
1	250	0.30	2.56	29
2	345	0.40	3.42	39
3	410	0.66	5.64	64

For the higher settings, all bets are off for battery use, of course. Shore power or generator would be needed.

It appears though, as an example, slow cooking something at 345 degrees for two hours would use about 80 Ah from the batteries. All in all, this doesn't look too bad given we have 1400W of solar on the roof.

## Completion

The finished project came out really well. I was a bit worried about it cramping the cockpit space, but it really is unobtrusive – I made it as narrow as the grill would allow.



Installed cabinet



Replacement side boards



Hatch opening



Overly-expensive cover