

SCOUT Projects:

Bow Awning – Generation 2

m/v SCOUT (Great Harbour N37)

Ray Henry

Description

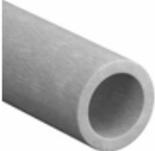
The first bow awning was really nice --- once it was up.

The problems we were having with it were two-fold. First, it was a bit small. We really wanted more coverage aft – towards the pilothouse. Second, the support poles were WAY over-engineered. They were heavy, had damaging metal pieces, and were really an ordeal to remove from the lazarette and deploy. Having used the awning in various conditions, it was apparent that I really didn't need the massive posts originally used.

Back to the drawing board 😞

Critical Parts Ordered

1. Fiberglass tubes (grainger.com)

Item	Price	Qty	Total
 Fiberglass Round Tube: 1 in OD, 5 ft Lg, Dark Gray, 1 in Outer Dia, 3/4 in Inner Dia, 1/8 in Wall Thickness Item # 826R554	\$19.88 Each	4	\$79.52

2. Rod clamps (fiberglass pole)



4 of [GS Power Tube Clamp Brackets \(Choices 1/1.25/1.75/2 inch\). Mount LED Light Bar Radio Whip Antenna Safety Flag on Bar Rack Roll Cage Bumper on Can-Am RZR Rhino Teryx Boat ATV UTV Bike \(2 pc\)](#)

4

Sold by: [GSpower/12Vmax](#) | Product question? [Ask Seller](#)
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\$10.99

[Buy it again](#)

3. Rod clamps (boat stantion)



4 of GS Power's Bracket Clamp | choice of 1/1.25/1.75/2 inch. Mount LED Light Bar, Safety Flag, Antenna onto Bar Tube Rack Roll Cage Bumper on Boat Truck ATV Can-Am Bike (2 pc)

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\$12.95

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4. Pole end caps



Prescott Plastics 1 Inch Round Plastic Plug, Pipe Tubing End Cap, Durable Chair Glide (16)

Sold by: [Prescott Plastics, LLC](#)

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\$13.95

Buy it again

5. Stantion-side clamp knob (McMaster Carr)



Cap Color

● Black

● Gray

● Red

● Yellow

Each

ADD TO ORDER

1-9 Each \$3.31

10 or more \$2.98

3855K63

6. Retention lanyards



Stainless Steel Cabinet Door Restraint Kit (Packs of 2, 5, 10 or 50) 8 Inch Cupboard Hinge Limiter, Restrict Door Swing, Flexible Braided Cable, Limit Door Opening Angle, Made in USA (5 Pack)

Sold by: [Salt Life Solutions](#)

Return window closed on Oct 20, 2019

\$12.98

Buy it again

7. New awning covering a larger area 13' x 14' (ebay) – to be modified to trapezoid shape

8. OTHER: Epoxy, PVC plumbing pieces, screws/bolts, spacer material, etc.

Design

I decided first that the poles didn't need to go all the way to the deck as they did in the first version. This would make them easier to handle and stow. Since they were flexible fiberglass, there would be less tendency to pull on the stantion/rails.

At a high level, the assembly was pretty straightforward like the other version – bolt the clamps together, permanently mount one to the pole and allow the other (stantion) clamp to be removed. Lots of tedious details, however, to procure a thumbscrew for the stantion clamp, create a retaining system so that pieces are not dropped overboard, and create a spacer to go from the 1.75" diameter clamp to the 1.625" stantion diameter.

Instead of a variable tie-off arrangement on the top of the poles like the earlier version, I wanted to use the flexibility of the fiberglass to "pre-tension" the awning and just have a fixed-length loops to put around the pole tops somehow.

Finally, since the awning would extend aft over part of the pilothouse, the fabric would have to be cut to allow the mast to be encompassed, and then a mechanism to retain tension along the webbing edge at the back.

Completion

I wanted to pre-tension the corner attachments and have fixed length loops attached to the pole tops. To do this, I epoxied a couple of rings made from nested PVC pipe (to increase the thickness) to the tops of the fiberglass poles. A tensioned loop of line around these would stay in place at the top. The plastic tube insert is installed here as well.

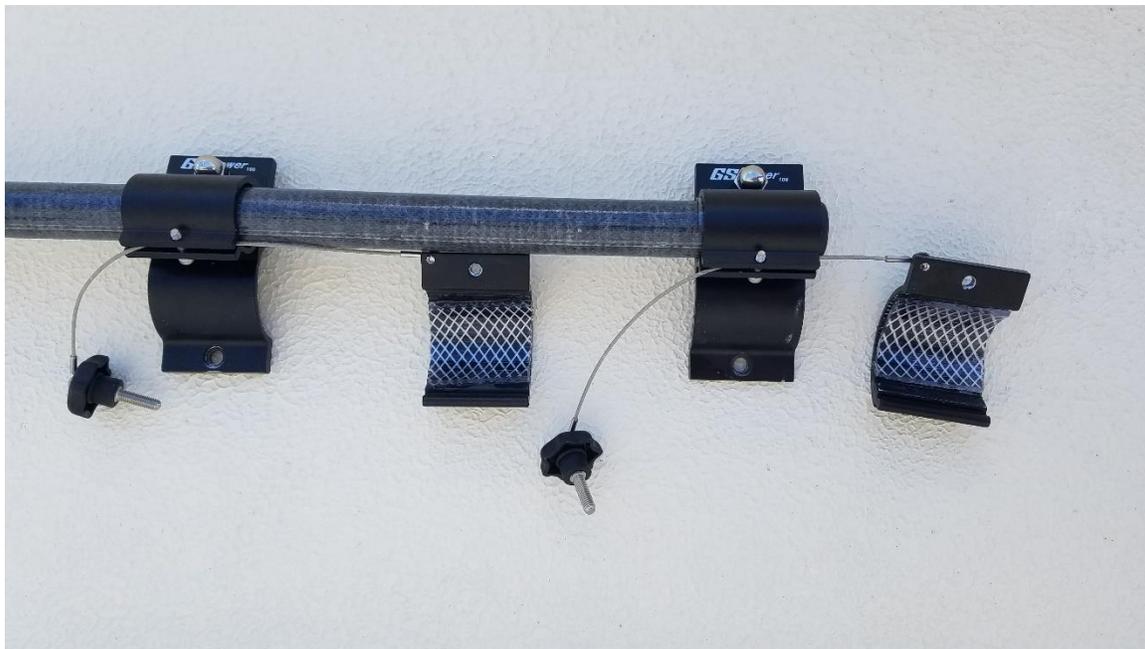


At the bottom of the pole, the 1" clamps are permanently attached to the pole and the other clamp (permanently bolted to the first) is left open with a thumbscrew replacing the original bolt for clamping to the stantion.

I could not find a good solution using a hinged clamp, so these have a captive element where the one half slides into a slot in the other, prior to screwing them down tight.

I drilled and tapped both the clamp shell and the thumbscrew and put a lanyard through everything to prevent the certainty of dropping one of the pieces overboard at some point.

Finally, I glued a piece of hose that had the right thickness to each half of the clamp to take up the difference in diameter of the smaller stantion. This had an unanticipated benefit of protecting the stantion from being scratched or dented by the clamp (aluminum).



Here is the new pole installed on the station.



Having a shorter pole allows a lot more adjustment up and down along the station for fine tuning regarding wind and sun angle. They are also much lighter and simpler to move around.

Here is a photo of the fixed-length attachments to the poles. The poles bend in slightly (exaggerated in the photo below) when attached, keeping tension across the four corners of the awning. Attachment is as simple as slipping the loop into the groove at the top of the pole.



The poles are now MUCH easier to handle, stow, and deploy. I made some hooks to hold them up out of the way under the lazarette. This also saved a lot of space in there.



Next, we cut the standard 13'x 14' awning down to a trapezoid with 8' across the bow end. This involved ripping out the webbing edges, re-creating the curved shape, and then re-sewing the webbing. In addition, we had to cut a slot in the aft edge for the mast and put two D-rings in place to allow tensioning along that edge.

Here are some photos of the finished awning.



Watching the action in a stiff breeze, it seems much better that the fiberglass poles flex and sway as the awning tugs on them rather than a stiff aluminum pole trying to bend the railings.

Do-Overs and Comments

No more do-overs on this one. Period.