

Practical projects

Great ideas and tips from PBO readers

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Mods for single-handed sailing

Sam Longley fits essential instruments and creature comforts for the benefit of himself, a mostly single-handed helmsman

PROJECT OF THE MONTH

Convenient plotter and autopilot position

My sailing, for the most part, is single-handed and I use my Aries Vane Gear self-steering system quite a lot. Unfortunately, this doesn't work when motoring or in light winds so I also have a Raymarine autopilot. I started with the ST2000 Tiller Pilot, which has the controls on the ram, but this was not really up to the job.

On moving to the EV100 there is a separate control unit which needs to be near the tiller as you have to hook the ram on to the tiller at the same time as setting the controls. When I purchased the autopilot, I added AIS and a chartplotter as well.

I quickly realised that apart from having nowhere to site all this gear, it needed to be as close to the helm as possible. If I wanted to use the chartplotter I could not stare at it six or seven feet away and I couldn't operate the buttons while sitting at the helm.

Behind the tiller

So I mounted both the plotter and the autopilot abaft the tiller. The position I chose is clear of all sheets, easy to see, easy to operate and, once I got used to looking backwards at the chartplotter, was easy to adjust.

Firstly I found a mounting plate which I bolted to the coaming. I looked for some polycarbonate but, thanks to my line of work, it was easier to lay my hands on a piece of Trespa plastic which is a very strong plastic used in cladding buildings and in vandal



A coaming shelf supported by a waterproof box makes a perfect position for helm instruments



resistant door entry systems. Epoxy-coated ply, polycarbonate, a sheet of aluminium or stainless steel would have worked just as well.

To the underside of the mounting plate I bolted a plastic waterproof electric box obtained from an electrical wholesaler. In the lid I cut a hole for the P70 autopilot control instrument. In the rear bottom corner, I drilled a hole for the exit wire, complete with cable gland. All I had to do then was screw the lid in place with the P70 attached.

My Lorenz chartplotter comes with a base station from which it can be detached. I bought two of these: one I mounted over the chart table on a removable bracket with a wandering lead so I could sit at the table or on the berth and plot courses below. The other I bolted onto



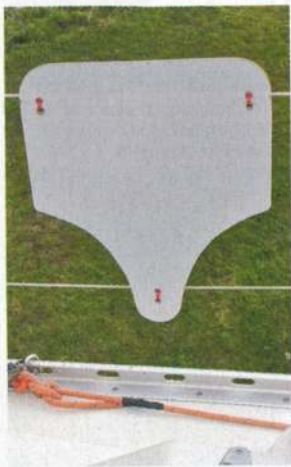
Waterproof box was sourced from an electrical wholesaler

the top of the plastic plate.

The cables pass through glands into the boat where they then route back to the main supplies. The autopilot ram plugs in here as well. I have had trouble with electrical equipment and plugs getting wet so I had Mantsbrite of Maldon, who supplied the gear, extend the wire to the ram and

then fit a two-pin plug. This does mean that I'm unable to use the system's steer to wind, steer to waypoint functionality etc, but quite honestly I'd rather not have the hassle of damp plugs causing failure in the system. For steer to wind I have the Aries anyway, so keeping it separate suits me. The plug is sited under the plastic mount as added protection from the elements.

Finally, this plotter model is not designed to be used in the open. So, when it rains, or there is spray, I have a rather crude acrylic box that I drop over it. It has a hole drilled in the side so I can put my finger in to operate any buttons. I can see the charts. Generally, I tend not to use the plotter for navigation, more for the AIS to access details of approaching vessels.



Tough plastic backrest is loosely attached to guardwires with cable ties

Backrest

This might, from a distance, look like Y-fronts drying on the rail, but it's actually a very comfortable DIY backrest!

The usual way to stop the wires of guardrails cutting into the helmsman's back when sitting on the side deck is to have horizontal padding on the wires. I found this uncomfortable and, as I actually only needed it in a limited spot, I devised a different support.

I originally used 9mm plywood coated in epoxy resin but this needed annual maintenance. I looked for some polycarbonate but found some very strong Trespa plastic as an alternative. Mine is 8mm thick but 6mm thick would work just as well.

... and it's a bat!

Initially, I cut the shape and tied them in place, but that was a mistake – I once found my wife and grandson had nicked them on arriving at a port and were using them like table tennis rackets to play bat and ball. Words were exchanged but as we all know grandmas are not to be reckoned with. I am not sure that I won the exchange!

Next time round, I drilled each one with three sets of two holes at the centre to suit the wires and attached them with strong cable ties. By not tying too tight they can be slid along the wires to the optimum position and give a nice flat surface to rest against. And when coming alongside a pontoon I can slide them clear of the deck cleats.

Beads, no sweat

Steve Leigh re-threads a halyard up a mast using a £1 set of plastic beads

Last autumn my newly acquired boat was hauled onto the causeway at Orwell Yacht Club. First thing to do I thought, let's get the genoa down. All halyards led to the cockpit through clutches so I released the right one, and went forward to gather up the sail which was falling surprisingly quickly. You guessed it, the halyard tail had disappeared inside the mast.

So I went up the mast where a bike chain mousing weight went neatly round the sheave and the line followed. I managed to fish the mousing line out through the bottom sheave with relative ease and tied it to the halyard. Up went the halyard with no problems until it got stuck. Pulling back and forth at various speeds yielded no result and I was forced to conclude that I had used too thin a mousing line and that it had slipped off the masthead sheave.

It was getting late, the weather was bad, I didn't fancy



Differing sizes of plastic bracelet beads helped this halyard over a mast sheave

going up again. What to do?

Trying to visualize what was going on, I concluded that the transition between the two rope diameters was too sudden for the halyard to roll up the side of the sheave to the right place. If something



slippery and tapered was added to the junction it just might work.

Off I went to the local corner shop and found just the thing: a set of children's plastic beads for making bracelets. I was full of hope as I strung a tapering series of beads onto the mousing line. Up went the halyard again but it stuck again and no amount of to-ing and fro-ing worked. Disillusioned, discouraged, disappointed, I drove the 70 miles back home.

I was back a couple of days later, prepared to ascend again. But before I did, I tried using the bead trick the other way. I reattached the halyard (using the beads) to the end of the mousing line on the foredeck and hauled in on the line at the foot of the mast until the halyard appeared. It worked first time!

Clothes peg on a pole

Alfie Mayrs suggests a low cost solution for passing lines ashore

How many times have you been embarrassed by a rope – either a poor throw or missed catch? Fitting a clothes peg to your boat hook can often remove the need for throwing rope at all.

I've found it particularly useful when going through locks, when you need to hand a line up to the lock-keeper or a friend. Throwing ropes vertically takes a bit of getting used to, but this way you can peg it on, hold the pole up and the person at the other end can simply pull the rope and it comes out of the peg.

Similarly when coming alongside, rather than risk the person ashore miss and have

to get the line coiled ready to throw again, this can help.

There's nothing complicated about the construction: I drilled a hole, screwed in a stainless steel self-tapping screw, and added a bit of epoxy glue to secure it. I've never had any bother with it coming off. I've been using it since last season. It's so cheap and handy and the cost was zero as I pinched the peg out of the wash basket!



Clothes peg is glued and screwed to the boathook pole to hold a line

