

## **Autohelm and Chart Table Fitting to 8m**

After a number of comments at some recent "Meet and Eat's" I thought I would try and put together a little note for the Newsletter showing how I fitted the Autohelm to Scubacat.



First, here is a picture of the finished product: The Autohelm drive unit is fitted conventionally to the wheel, with three fittings on my six spoke wheel. In the background, you can see the Control unit, which has been fitted in a GlassFibre box.

The key difference from "normal" fittings is that the motor drive unit has to be fitted through a hole in the console. (In a normal fitting, the wheel is on a pedestal, and so the motor is in the open).

On the Catalac, 8, or at least on Scubacat, the space above the wheel was the location of a ship's compass, and we also have the outboard remote

controls to the left of the wheel.

The photo at the right shows the space inside the console before I drilled the hole for the autohelm motor.

I decided to have the motor "at the top" of the wheel because I have made a Chart table fitting that replaces the normal access panel, and putting the motor at the top keeps it out of the way of the "bookshelf" I made for the Almanacs.

Unfortunately this then places the motor right next to the ships compass, which then permanently pointed north, so I took out the compass and I now use the Electronic Compass built into the Autohelm.



Aaron at Hayling Marine Services made me the glassfibre box for the autohelm control, and also glassed in the hole where the compass was. With his usual skill it is now impossible to see where the compass was.

You can also see the Garmin GPS holder.

Drilling the hole for the motor was very much a case of measuring twice and then drilling once. I think it took half an hour to measure and check before cutting the hole.

I am very pleased with the positioning, as it is almost perfectly located, but to provide a bit of resilience, the hole is about 3mm greater in diameter than the motor, and I have some "o" rings around the motor that fit tightly in the hole. They serve a dual purpose of allowing a small amount of movement to the motor when its working, and keeping the wet out.

The inside view of the console shows just how

“high” I managed to fit the motor.



To the right, you can see the switch panel that I fitted some years ago. This is simply made of plywood, I glued and pinned some “L” shaped battens around the edge of the original hole so that the panel then slides in and out for maintenance (from the left).

The switches are simple 2A lever switches from CPC, and were one of the cheapest I could find with circular holes (easy to cut!) and integral LEDs. The “button” to the left of each switch is a Circuit Breaker made by Tyco Electronics, (also bought from CPC). (I much prefer a circuit breaker to blowing up pieces of wire, and then not having spares on board)

The circuit breakers have worked fine, but the switches have proved a bit weak for this sort of use. The contacts are very simple, and although they are working OK, the actual switch mechanism can pop out if the switch is knocked sideways. Also, on a couple, the fine wiring to the LED has broken, so the lights are now out on a couple.

You may also note that I have fitted a very simple Perspex chain guard over the steering wheel pinion and chain. This prevents any wiring from interfering with the steering, and vice versa – most important!. I found out the hard way that the wires can actually lift the chain off the pinion if they get caught. Fortunately we were not near anyone, and it was easy to remove the access panel and refit the chain.- But the guard has prevented any reoccurrence!



When the rest of the chart table modification (/access panel!) is replaced, the whole lot forms a very nice backwards facing chart table. It has 12V power for an internal red light for chartwork at night, and the “library” was designed deep enough to take a Reeds Almanac. There are also USB connections for when I put the PC on the table, and the PC can then be connected to the GPS, and AIS (but not the Autohelm – yet!). Lighting for the switches, so that you can read the labels at night, is provided by a length of special fluorescent wire.

This is mounted under the Left “L” wood panel to give a recessed lighting effect. You can just see a bit of the (lit) white wire disappearing behind the light panel at the top.

My finishing details leaves something to be desired occasionally, but overall I am very pleased with the results and I hope you liked reading about it.