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## Helmsman, Wheelhouse Roof and Fittings

This document was written by Paul Naylor and is published here for FMES online viewing, and was written during 2025.

## Sundowner - 17

When you think of 'making a boat' in your (my?) mind is a hull and big things. Not the 1001 little things that make the difference between a powered float and a 'model boat'. My time lately has been spent with lots of little tasks, nothing really to write home about, however, a few brief sentences might be appropriate to pass on the results of my endeavours.

The carpet alluded to earlier turned out fine. It compromises a layer of white towelling, stuck with diluted PVA to some fine weave cotton. This ended up quite stiff and resistant to shedding bits. The hard part was cutting it to fit the unusual shape, but paper patterns helped and the carpet is now installed (see photos below).

I found a 1/12<sup>th</sup> scale resin 'man' of 'appropriate age' and garb and a suitable standing gait to reduce the modifications needed. In fact, apart from epoxying some M3 studding



to his feet for fastening him down to the wheelhouse floor, I only needed to chop an arm off at the elbow and replace it at a better angle to allow him to be nonchalantly steering the boat. He came grey in colour so needed painting...judge as you see fit! The

photo also shows the printed plaques, they are too small to read really but

the impression is there: they were printed (by Rymans) on good quality matt paper, glued in and then varnished over.

The wheelhouse hatches were made in similar fashion to the other deck furniture and glued in place, and the final bit of dark wood on the deck was made: the lidded box behind the wheelhouse. This was made separately and bolted to the lower part of the wheelhouse... yes, it is supposed to be offset to one side, but I don't know why.

Other bits and pieces on the wheelhouse roof included the handrails that bore a lot of similarity to 5" gauge loco commercial handrail stanchions, and as it 'appens, I had 9 left over from the last loco: 8 required here and one was a manufacturing defect – the gods favour the lucky. These are epoxied into the deck roof. The foghorn was turned from a piece of stainless steel, mounted on wire and epoxied down. The three black vents were turned from a piece of black nylon and glued down.



The modern boat has an inflatable life raft on the wheelhouse roof, so I thought I had better provide one. This coincided with thinking about providing power to the wheelhouse lights (when I find something bright enough) for seeing the contents when 'on show'. The rub is that the main batteries might not be there at these times, and I needed something easy to switch on and off without dismantling the hatches. The size of the life raft container was such that, when hollowed out, could hold 4 AAA batteries or a PP9 battery (ie 6 or 9 volts according to lighting needs), so I decided to make it for this purpose. I had some bits of tufnol 15mm thick and I was able to make a 'clam shell' type container mounted on a bent up stainless steel wire 'cradle'.

The last items on the roof were the navigation lights, red and green one on each side (I nearly got them wrong: red on the port or left side). The housings are easy of course, but do I make them to light up or not? Until my experience with 'ultrabright' LEDs, the answer was yes...but now I wonder if it is worth the bother? One way to find out is to make them... I superglued four 25mm diameter discs of 8mm thick clear Perspex I had in my bin: two for the height of the lamps and two to hold in the lathe chuck. I turned these to be like the grooved glass you see on these sort of lights and polished them to restore some transparency. The two lights will each be a quarter of this turned cylinder after I have made holes for LEDs etc. Fortunately, I was able to utilise all four quadrants as in the first two I mounted the LEDs vertically, forgetting that the light mainly comes out of the top! The other two have the LEDs arranged to shine forwards....

The COB LEDs came, with some resistors that I had calculated to be suitable based on the forward voltage, likely battery and current needed. These fitted well in the housings I made for the other type of LED and behold! Much light in the wheelhouse and what I needed. So, I re-assembled the lights and mounted them in the wheelhouse roof...then I thought I had better get the meter out to check the measurements. Oh dear: although it all worked OK, the resistors were 0.5W ones (larger will not fit in the housings) and all the measurements showed them dissipating around 0.75W, and this is a way to a short life. How to reduce the power then? If you believe the specifications, the LEDs need 300mamps each and a forward voltage (ie that required to turn them on) of 3-3.5volts and that is what the circuit was based on. In fact, the forward voltage appears to be around 2.45volts and they work well down to 180mamps, so this allowed me to add a 10 ohm resistor in series (ie outside the housing), thus halving or less the power dissipation.

I have also decided that at this amperage, it will cost a fortune in AA batteries, so I have abandoned the

idea of batteries in the lift raft container and will use the rechargeable set for the radio receiver and rudder servo in the hull. The life raft container is completed, but bereft of batteries...

