

The restoration of Áine

Rejuvenating a Pearson 323

Updated VHF radio gets a new home and brought family

Tuesday May 23, 2017 – I met with Ed and Joan Criscuolo, fellow owners of a Pearson 323, who were returning home after a cruise in the Exumas, great people by the way. Ed and I got to talking about the best things to have on-board since I will be making a similar trip this fall. He asked if I had a remote mic at the helm? I said no, I had been using a portable. Ed said to me, your are single handing right? I say yes. He says let's pretend you are in trouble and you have a choice between a 1 watt portable VHF radio or a 25 watt radio with the antenna 55 feet in the air, which would you choose? Well that got me to thinking...



I decided to replace the 20 year old Standard Horizon VHF, which was still in good condition, with a new model 1700 and added the RAM3+ remote mic for the helm. The 1700 has an internal GPS and sends position coordinates with the distress call to all DSC VHF radios. The 1700 is only slightly bigger then the old one and I could have just mounted it in the same location, but I never really like it there, right next to the companion way ladder. I decided that easy access to the radio controls from within the cabin or seated at the navigation station would be best. When I tried my first test fit I found a number of short comings with this approach; 1) the mounting surface is a complex curve, 2) with a fixed mounting the screen and controls can be accessed easily from either the cabin or the nav station, **but not both**. So what to

do... I designed a VHF mounting dolly to fit the complex curve of the nav station and be able to rotate 45 degrees for good access regardless of position. I took some measurements and went to work at the 3D CAD station to design the dolly parts. The front and back radiuses as well as the sides of the dolly was calculated to match the 1700's



mounting bracket with a 1/8" reveal. Once the design looked good in the virtual world, I took the STL file over to my CNC 3D machining software which converts a 3D shape into G codes for the CNC Mill to use.

3D CAD output



The new radio will be mounted at the forward end of the nav station by the existing light. The top piece is machined to match the complex curves of that location and creates a flat parallel mounting surface of the rotational dolly (bottom piece). The rotation is restricted to about 45 degrees by a socket head screw mounted in the dolly which fits into a slot in the top piece. A 1/4 - 20 flat head stainless steel screw passes through the pivot point of both pieces. The top piece is held in place by two flat head screws. Once the top piece is attached the pivot hole is then drilled in the fiberglass that holds the light and is accessible through the removable panel in the nav station. The pivot screw is passed through this hole and a flat washer and locking nut are used to adjust for proper tension between the top and bottom pieces of the dolly. Along with the 3D profiles of each part the CNC also machined all the mounting holes, pivot hole, and rotational slot for both pieces. A little bit of deburring and they were ready to assembly.

Machined Parts



The G code program to machine the two parts was over 7500 lines long and took about 90 minutes to machine both the top and bottom. Each piece is .300" at its thickest point and were each produced from 3/4" white starboard.

Finished Install



View from Ladder (Dolly Straight) - View from Nav Station (Dolly Straight)



View from Nav Station (Dolly Rotated) - Internal GPS antenna picking up 12 Stats.

This entry was posted in Uncategorized on May 23, 2017 [<http://selds.com/Pearson323/?p=144>] .
