
20:24

Roof-top mounting for the Binary Acoustic Technology AR-125 bat detector

The main body of the housing is a 5.75 inch length of 4" schedule 40 PVC pipe. The black top is a Quik Cap (Fernco inc.) with a 2.5" hole cut in the middle for the microphone of the bat detector. The sched 40 pipe fits into a standard PVC reducer, which obviously fits the sched 40 pipe on the larger end and has a 4 inch outside diameter on the smaller end. All of this is available at Home Depot or most any decent plumbing supply place. These three parts are simply press-fit together. No PVC glue is necessary, and you need to take the top off to get access to the bat detector from time to time.

The following sketches show the metal bracket and foam padding, which cushions the AR125 inside the pipe. The bracket is made from 1.5" X 1/8" cold-rolled steel. The cushions are cut from 3/8" thick ensolite foam, sold as a sleeping pad in camping supply stores.

The handle of the bat detector must be removed, but this is easily done by extracting a couple of screws. The magnet used was removed from a commercially available antenna mount, model MFJ-336S from MFJ Enterprises (http://www.mfjenterprises.com/Product.php?productid=MFJ-336S). This product actually has three of these magnets and because we needed a bunch of them it was cheaper for us to buy them that way. You would probably be able to use a single-magnet product like MFJ's model MFJ-333BM, although I haven't actually had my hands on one of these to be certain it would work. The magnet is fastened to the bracket using 3/8" hardware scavenged from the antenna mount.

The magnet used is quite powerful, certainly more so than is necessary for driving at 20 mph. In fact experience suggests that this mount will work fine at speeds considerably greater than specified for this survey. As with any device being subject to vibration, the use of lock washers and/or thread lock compound on all hardware is a good idea.

The ty-wrap seen in the photo is holding a temperature logger (iButton http://www.embeddeddatasystems.com/Thermochrons-Hygrochron_c_29.html) which records the ambient temperature automatically. This could be eliminated if desired.

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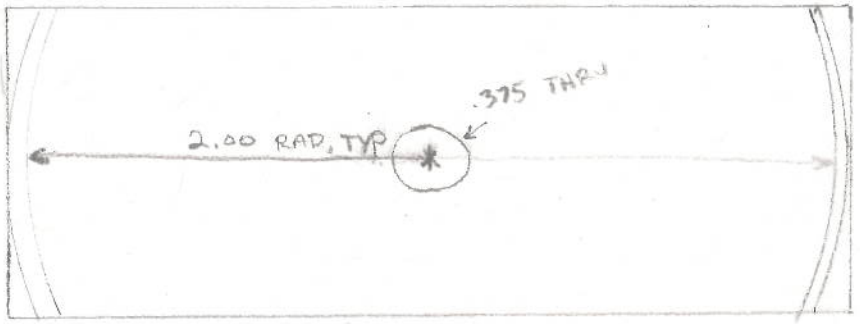
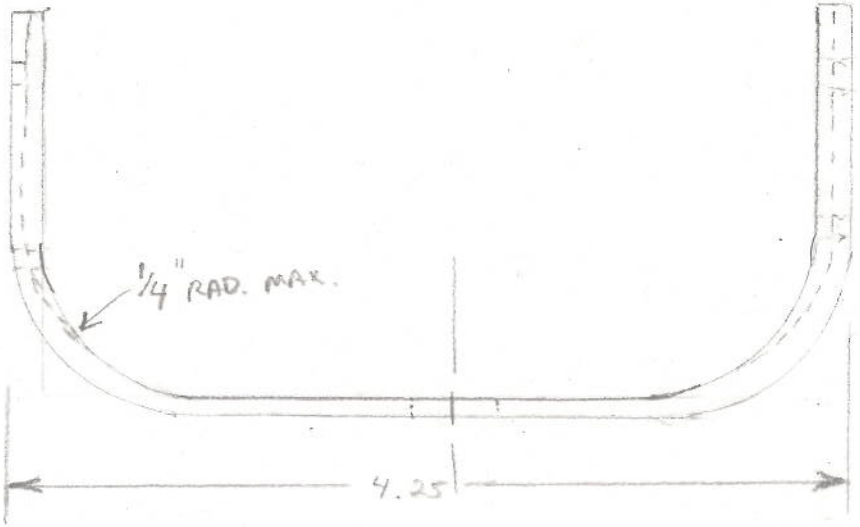
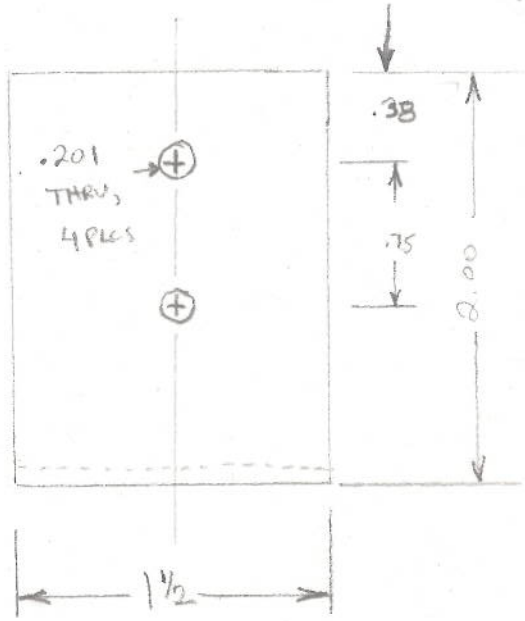
BAT DETECTOR MOUNTING BRACKET.

MAT'L : 1½ x ⅛ CRS.







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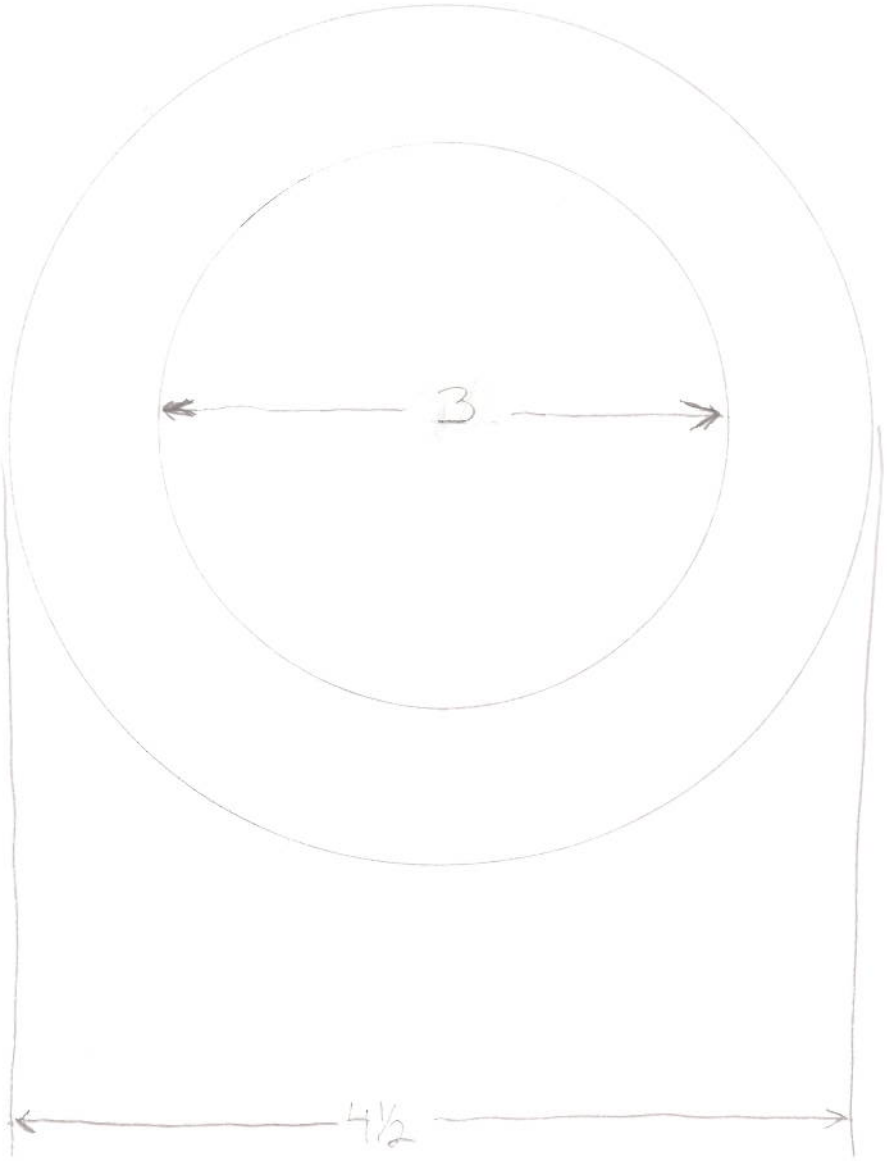
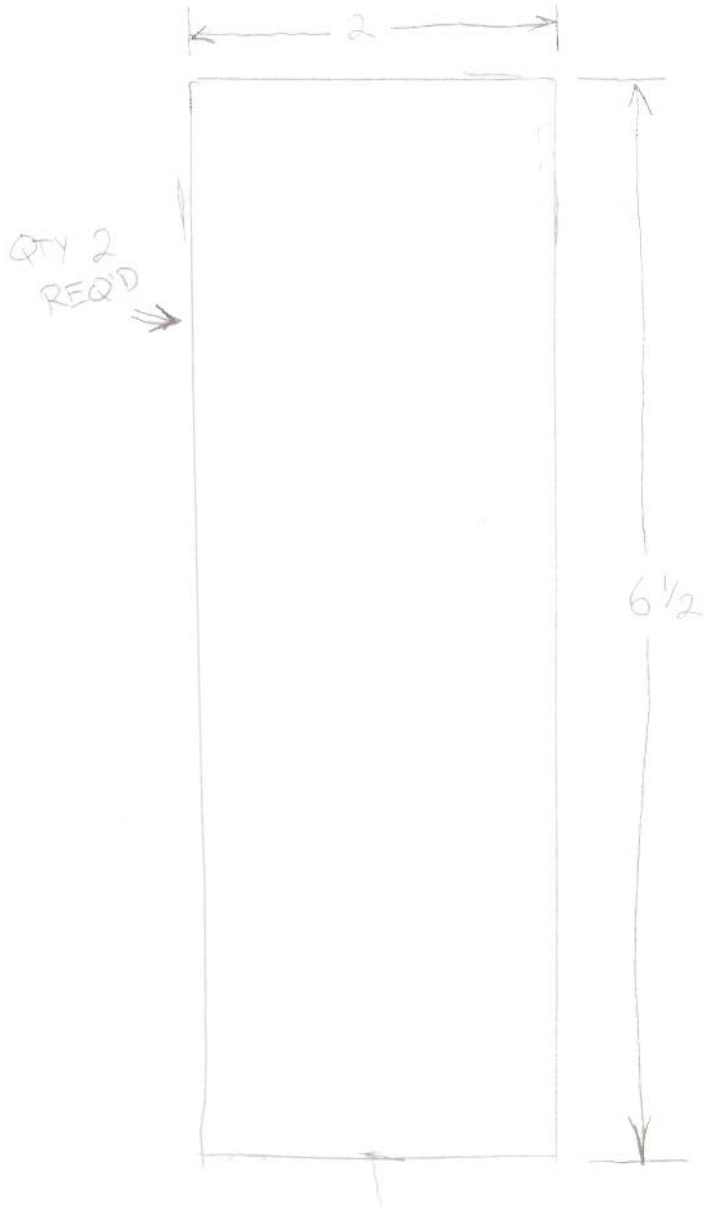
BAT DETECTOR PADDING





MAT'L: 3/8" ENSOLITE FOAM