Eggfinder LCD Case Assembly

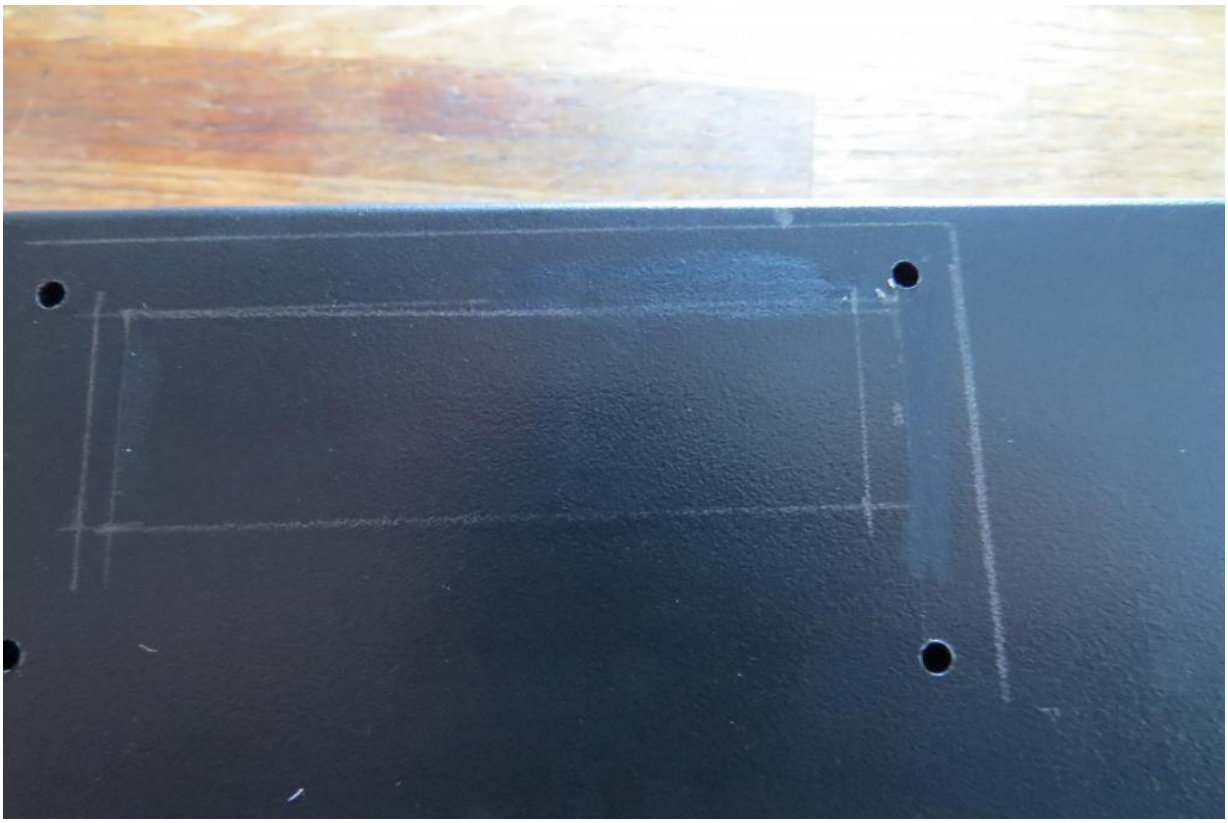
__ Drill/Cut the Case Top

Put the case top in front of you so that it's positioned horizontally (long side left and righ). Position the bare PC board on the case top so that the top edge is ¼" from the top of the case top, and the right edge is 2" from the right edge of the case top. Make sure it's square to the case top, then tape it down with some masking tape.

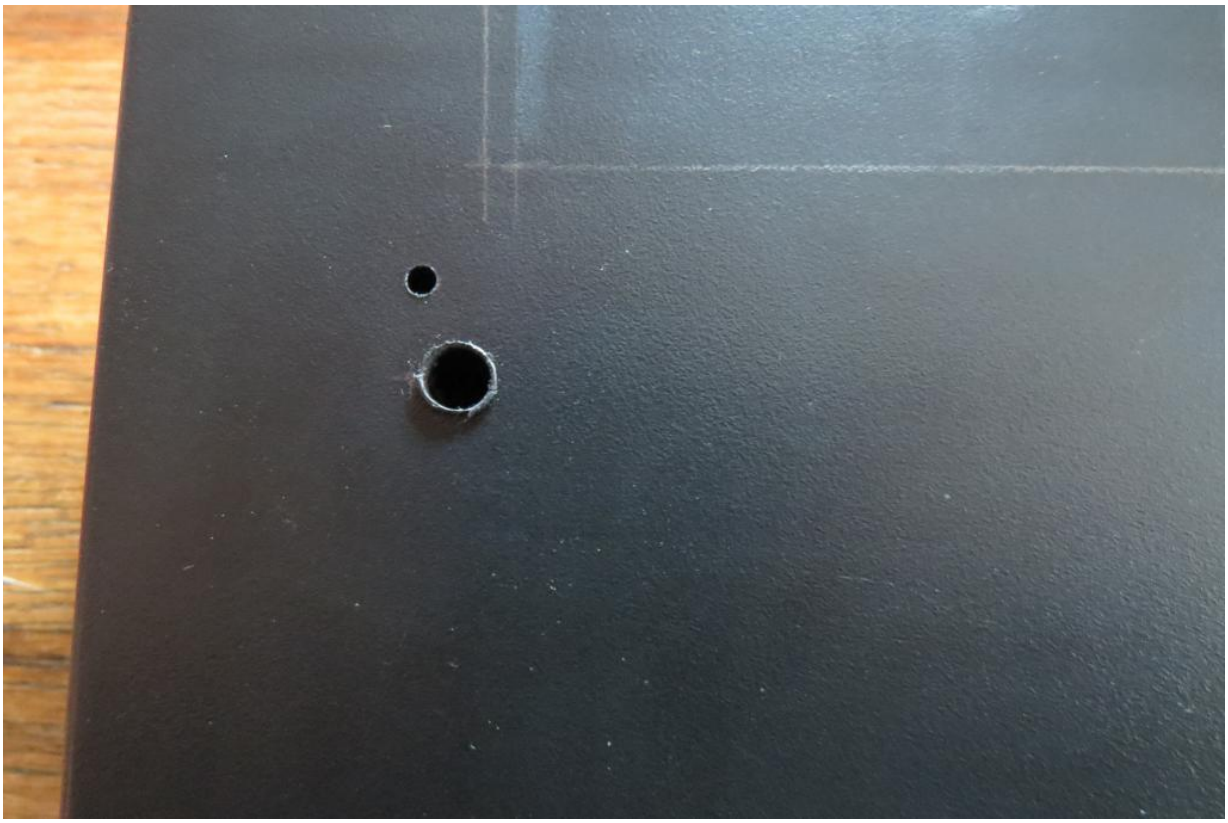
With a sharp #2 pencil, trace the outline of the PC board, then mark the four mounting holes on the case top. Make sure that these lines and marks can be seen clearly. Mark a vertical line at the antenna lead, it's the middle of the three adjacent vertical pads near the right edge of the board. Remove the board from the case top.

Note: You're done with the bare PC board now, so if you can't wait you may now start building your Eggfinder LCD board. But since you've got your tools out anyway, you might as well finish up with the case…

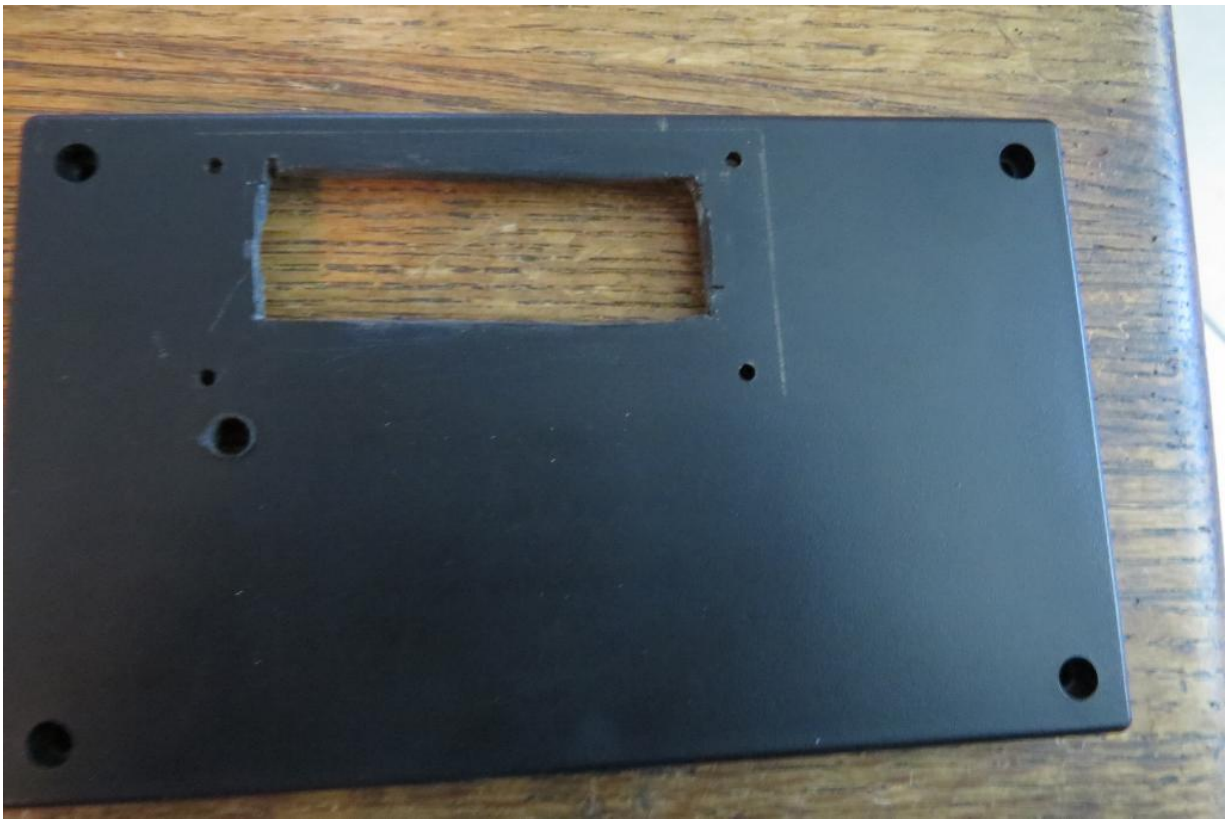
Mark a rectangle 2 5/8" wide x ¾" high, with the top edge ¼" from the top of the board outline that you marked earlier, and the right edge ¼" from the right edge of the board outline. This is the "window" for the LCD display.



With a 1/8” drill bit, drill out the four mounting holes. Cut a ¼” sound hole 5/16” below and 1/8” to the right of the bottom-left mounting hole.

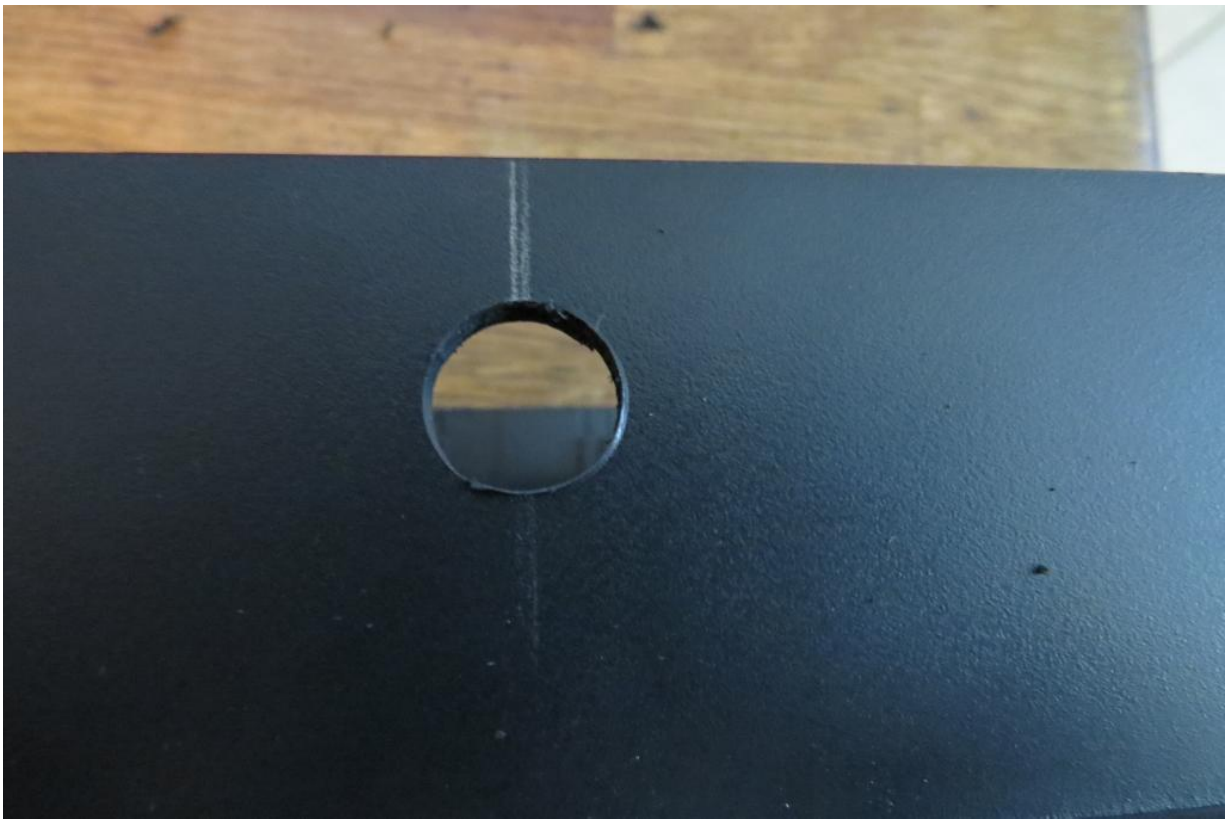


You will now need to cut a hole for the LCD window. The ideal way to do this is with a router or roto-zip tool on a table, but a rotary tool with a cutting bit works fine too. If you have none of the above, you can also drill a hole in one of the corners and use a small coping saw or X-Acto saw, but that's going to be more work. Regardless, after you have cut out the window, take some fine sandpaper and sand the edges smooth. We guarantee that other people will want to see your Eggfinder LCD, so you might as well take your time and make it look nice.



__ Drill the Case Bottom

Place the case top on the case bottom. Locate the mark that you made for the antenna, and draw a vertical line on the case bottom meeting it. Make a mark on this line 11/16” below the case seam, then drill a 1/16” pilot hole there. If you are going to use the wire antenna, drill a 1/8” hole over the pilot hole; if you are going to use an external antenna, drill a ½” hole over the pilot hole. A ½” spade bit works fine, you don’t need to use an expensive twist drill bit for this. Remove the case top.



Now you need to drill a hole for the battery box switch. Drill a pilot hole in the bottom of the case bottom, 1" from the left edge and 1" from the bottom edge. Drill it out to ½" with a spade bit.

You are now finished with hacking up the case. If you are doing this before building the board (as recommended) you can start building it now, and come back here to mount the board into the case after you've tested it.

__ Cut the Spacers

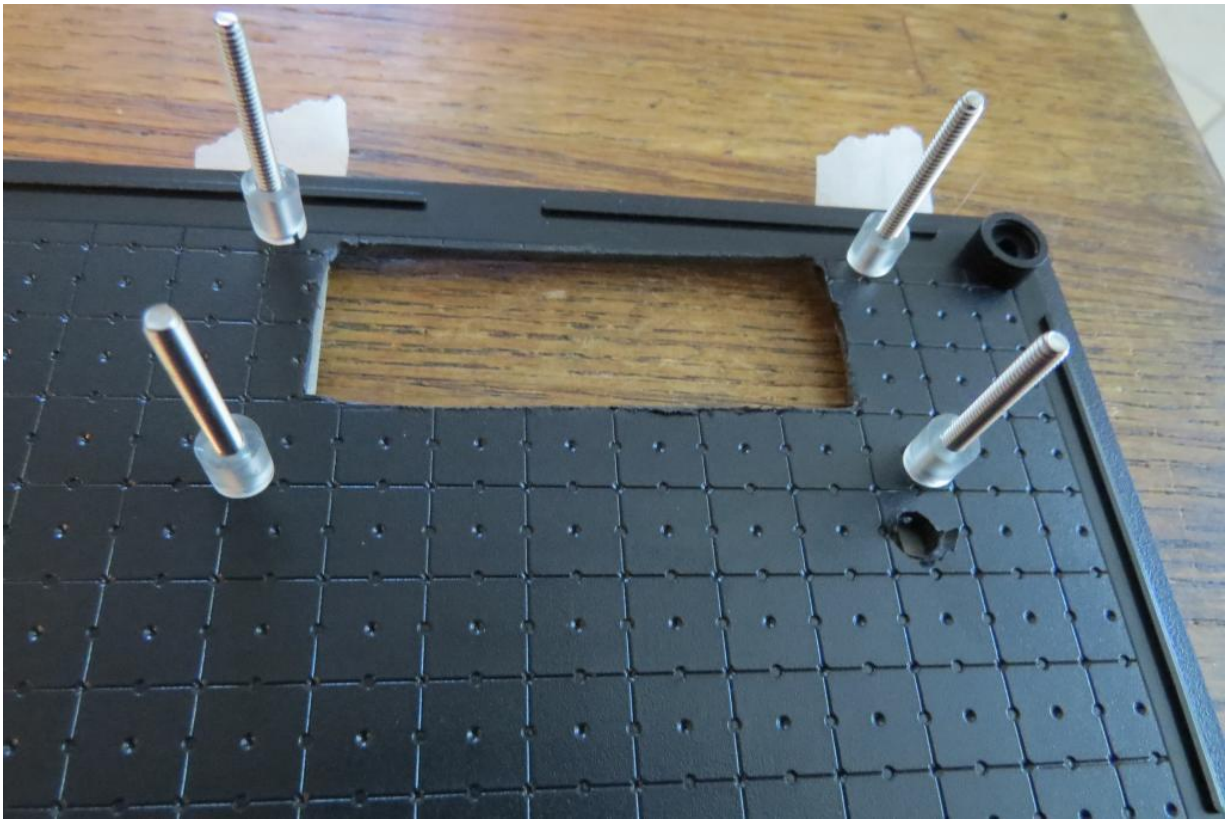
With a sharp hobby knife or single-edged razor blade, cut the vinyl tubing as follows:

4 pieces, ¼"
4 pieces, 7/16"
4 pieces, 1/8"

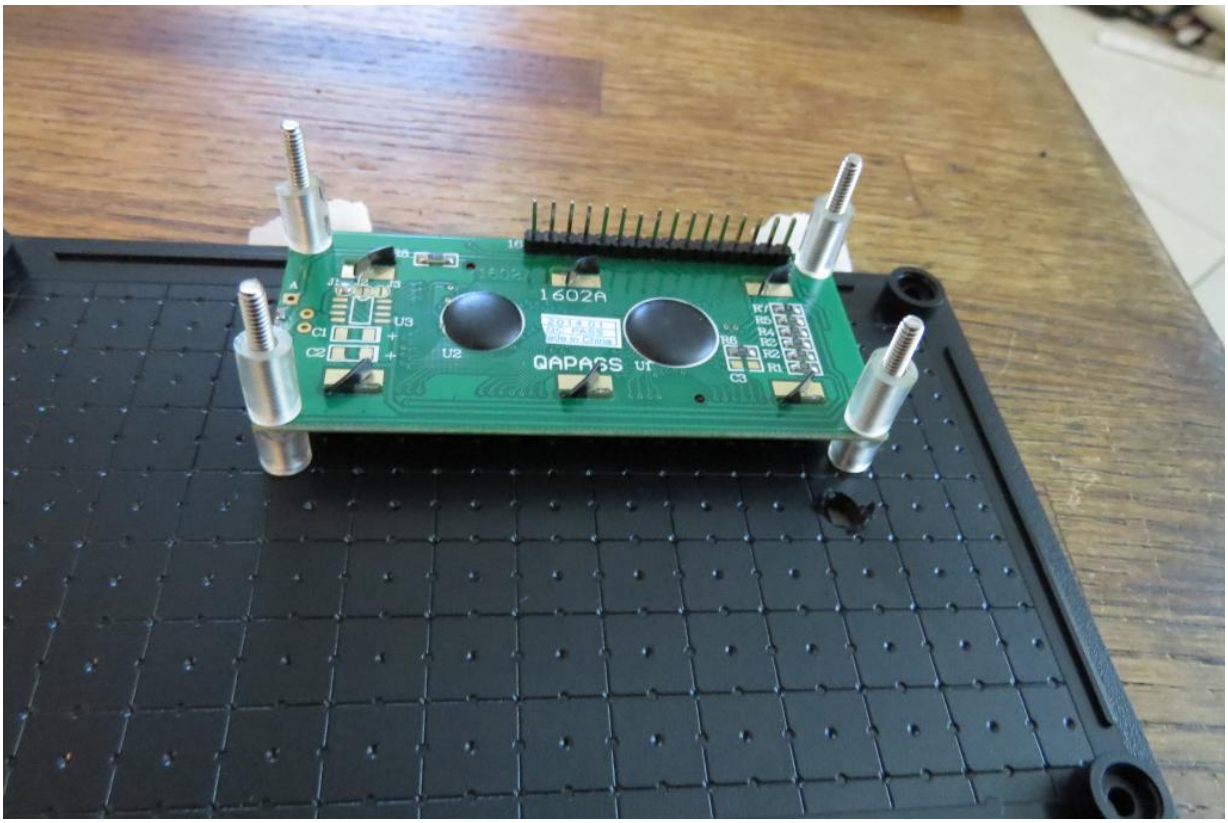
__ Mount the LCD Module

Put the four #4 machine screws into the holes that you drilled for them from the top of the case, and put a piece of masking tape over the heads to temporarily hold them in place. Turn over the case top and place it on a table, then slide the four ¼" pieces of tubing onto the screws.

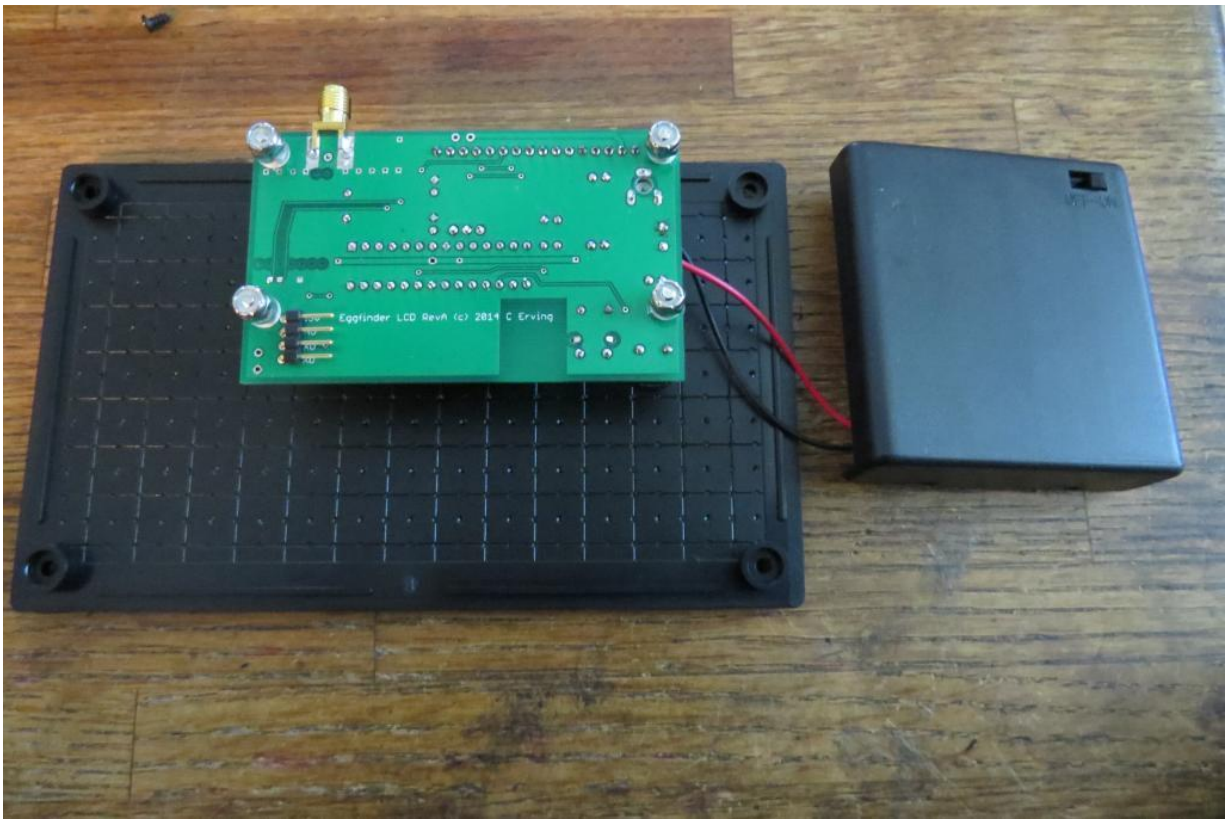
Slide the LCD module over the screws, so that the header strip is at the top of the case top (nearest the edge). Slide the four 7/16” pieces of tubing over the exposed screws.



Now, carefully slide the Eggfinder board onto screws, and firmly press the 16-pin header socket on the Eggfinder board into the LCD panel’s header. If everything was cut and positioned properly, the board should rest nicely on the pieces of tubing.

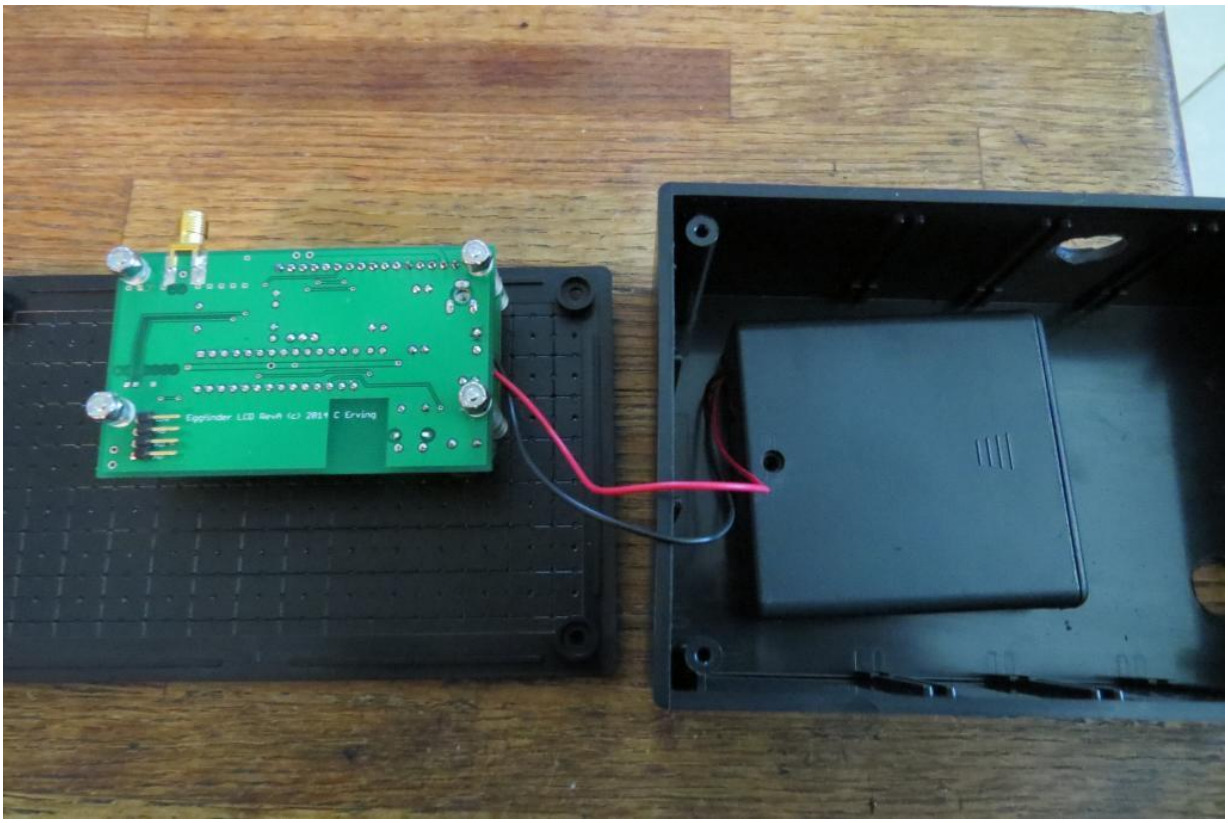


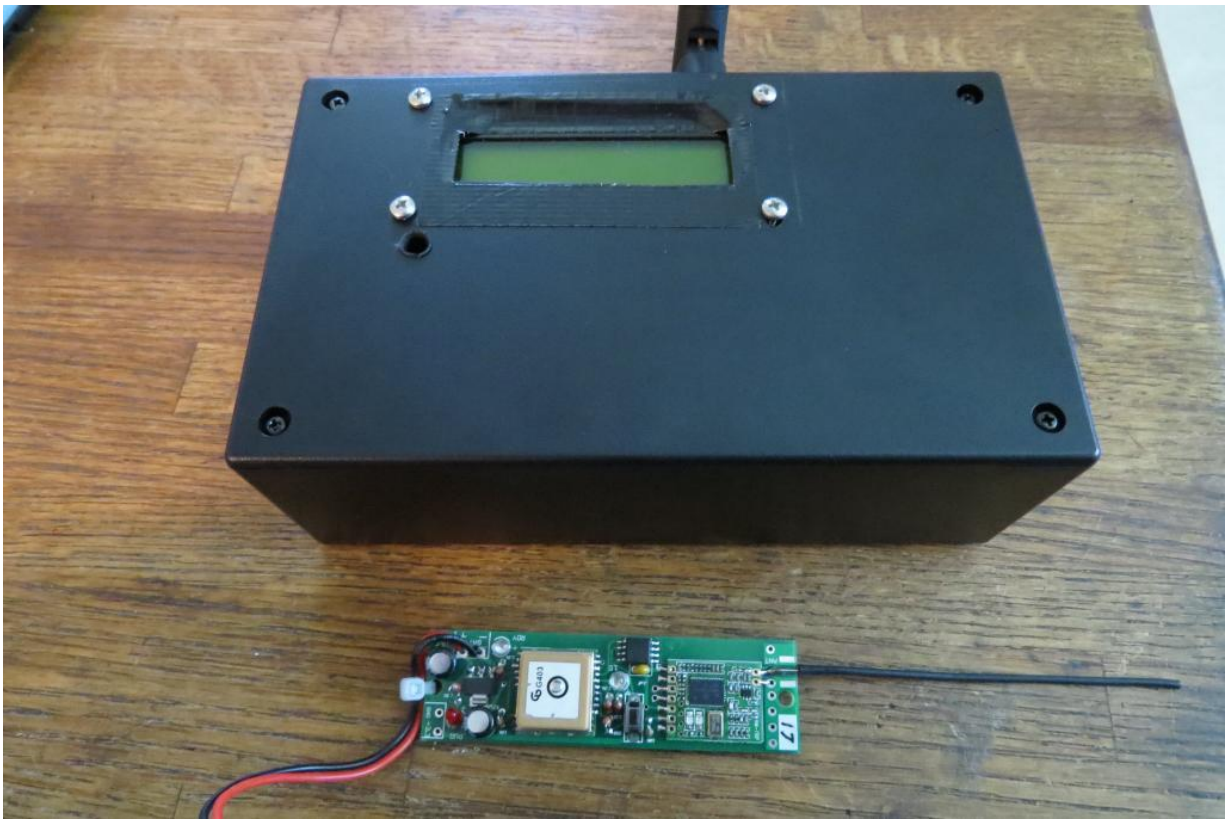
Slide the four 1/8” pieces of tubing onto the exposed screw ends, on the back side of the Eggfinder PC board, then hand thread the locking nuts onto the screws. Once you have all four nuts on, remove the masking tape from one screw, hold the nut with some pliers, and tighten the screw until it’s firmly mounted against the case top. The tubing will “give” just a little as you tighten it, this is fine; it helps provide some shock resistance for the display. Don’t over-tighten, just enough so there’s no play is fine. Similarly, tighten the other three screws.



__ Mount the Battery Box

Check-fit the battery box in the bottom of the case so that the slide switch is accessible from the opening that you cut in the bottom. Mark the edges of the battery box on the bottom of the case using tape or a marker. With some double-sided servo tape, tape the battery box to the case bottom. Note that servo tape is very strong and sticky, so once you place it you will have a difficult time removing it… make sure that it's correct before you put it in place!



__ Final Assembly

Slide the end of the antenna/RP-SMA into the hole that you cut, slide the case top into the recess in the case, then secure the case top to the case with the four included screws. Turn on the switch and make sure that it's still working… if you tested it first like we recommend, that shouldn't be an issue.