

Two suggestions for installing ARDFrx2 v16 PCB in a screening cabinet. Pa0nhc 20171217

This page gives you two ideas for installing the ARDFrx2-v16 PCB in a screening housing, and completing the construction. But of course you can do that according to your own insight.

R5 and R21 are Vishay precision potentiometers 50k, type 249 : **Conrad 424196**. Not cheap, but they are small, accurate, sturdy, and 10 turn knobs with scale and lock fit onto them.

On the potentiometers R5 and R21 a 23mm 10 turns knob with lock is installed : **Conrad 183464**.

Absolutely necessary for accurate bearings by the antenna : Fp1 and Fp2 are 9,5 x 9,5mm ferrite pipes : **Würth 710-74270033 (www.distrelec.com)**.

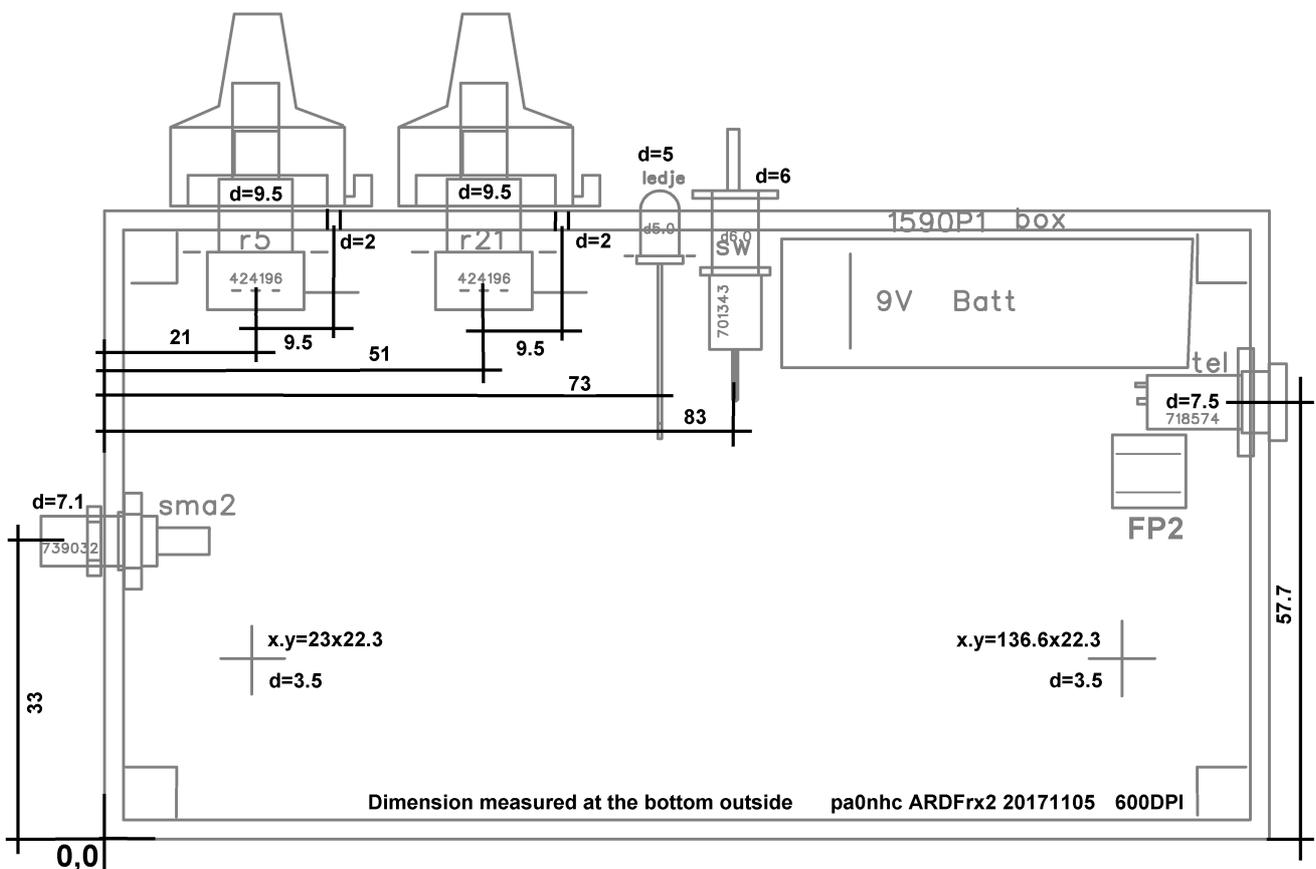
Through Fp1 three or two turns 2.5mm coax is wound.

Through Fp2 three or two turns twisted thin wire or thin twin lead is wound.

S1 is a micro miniature tumbler switch 1x on/on : **Conrad 700568**

HpH is a 3,5mm jack plug bus : **Conrad 718574**. Good quality.

1. Using a Hammond 1590P1 die cast aluminum box.



Advantages of this box are the width, and a top lid. The installation and adjustment of the receiver PCB are therefore simpler. The wiring can be shorter and more stable.

For each locking Mentor knob an extra 2mm hole has to be drilled.

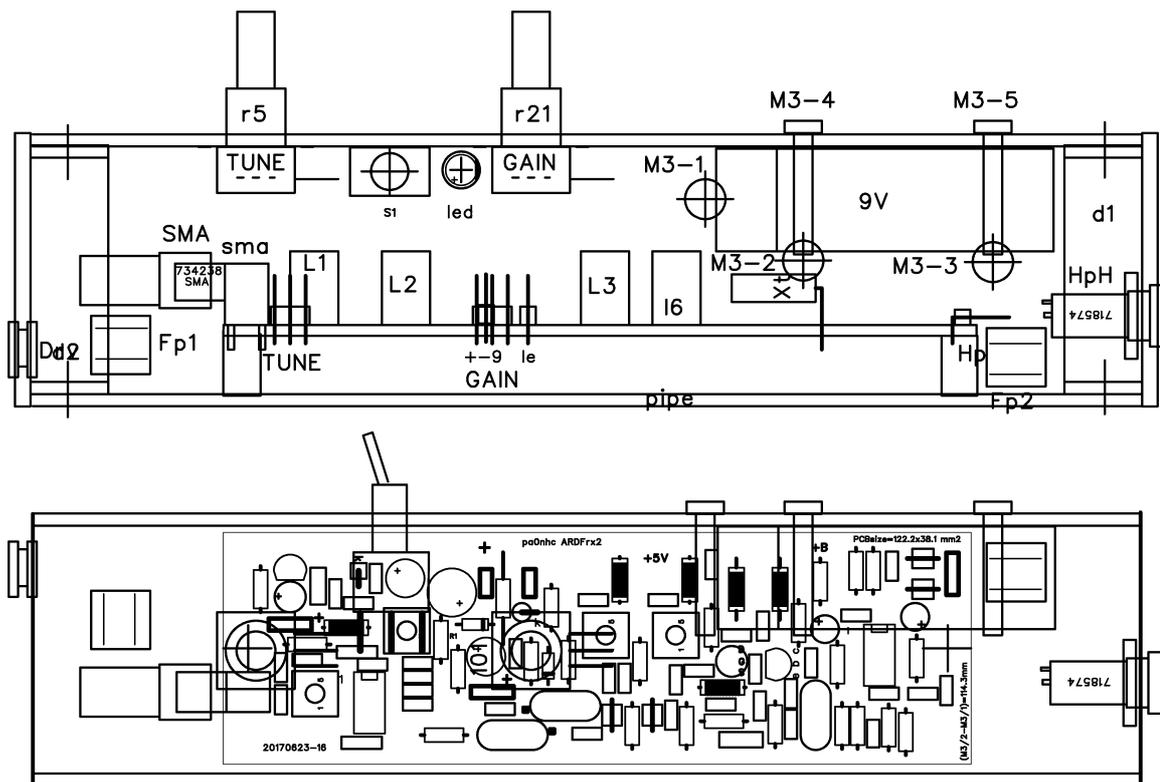
At the headphone connection, a ferrite choke must be installed with a few windings thin wire wound through it.

The antenna is connected to an SMA or BNC connector in the side of the box. A short piece of coax connects it to the PCB.

The 9V battery fits between the switch, headphone connector, and a box side. It will be clamped to the bottom by gluing a piece of soft plastic foam to the inside the lid, cut from a sponge.

The box could be screwed onto the antenna boom by two screws in the bottom of the box.

2. Using a piece of square 45x45 mm aluminum pipe.



Download the PDF and print it on A4 in size 100%.

With the above PDF drawing printed in original size, you can extract accurate locations and distances for drilling all holes. It gives a 1:1 idea for using a 181mm long 45x45x2 mm square aluminum tube. It is closed by two plastic end caps, fastened in the ALU tube by means of two small self tapping screws. When choosing parts, remember the small free space of 18mm above the PCB.

Here the crystal Xt has to be positioned horizontally, in order to let enough free space for the battery. Its wires have to be bend to 90 degr, and the crystal house should be connected to mass, to prevent radiation and instability.

To be able to adjust the frequency range after closing the housing, you could drill a 3.2mm hole exactly above the core of L2, and close it by a M4 screw.

The PCB is fitted with two 10mm long distance bushes. With connected wires, it makes shifting the PCB easier into the tube easier.

See to it that these connecting wires cannot come near the PCB surface around L1 and L2, to prevent oscillator instability when shaking during running.

From the right hand end cap seen, the 9V battery could be placed in the top-right or top-left. The 3 mm x 20 mm screws M3-1 to M3-5 act as a battery compartment. They should be tapped, screwed and glued into the ALU pipe. A piece of soft plastic foam in the end cap presses the battery rattle-free into its location. This construction is easy to complete, space saving and problem-free while participating ARDF in rough terrain.