

1.5 Volt / 90 Volt A-B Farm Radio Battery Instructions

Many farm radios used a 1.5 volt/90 volt A-B battery. The A supply of 1.5 volts powered the tube filaments, and the 90 volt B supply powered the tube plates. The generic Eveready box will hold ten 9 volt batteries in series for the B supply and one or two D cells for the A supply. If you are constructing a battery of different voltages, you will need to modify the instructions accordingly.

Step 1. If you are using a connector, install it in your box. You can fabricate your own or use a connector from an old battery if you have one available.

Step 2. Connect the ten 9 volt cells for the B power supply in series. There are two ways to connect the batteries. The simplest method is to simply daisy chain the batteries as shown in Figure 1. For this method, you will only need one 9 volt snap connector, cut in half. Or you can connect the ten cells in series using ten snap connectors as shown in Figure 2. You can purchase 9 volt snap connectors at Radio Shack. Use 26 AWG wire or larger to connect your battery holders. Cover soldered joints with shrink tubing or electrical tape.

Step 3. Connect 1 single D holder, or two D battery holders in parallel, for the A power supply in series as shown in the wiring diagram. Using two D cells in parallel provides a longer lasting A power supply.

Step 4. Arrange the A and B cell holders in the battery box as shown in Figures 4 and 5.

Step 5. Connect the A power supply to the A+ and A- leads of the radio connector, observing correct polarity.

Step 6. Connect the B power supply to the B+ and B- leads of the radio connector, observing correct polarity.

Step 7. Install batteries in the cell holders, making sure to install the batteries correctly. With fresh batteries, B voltage will measure 96 volts, and A voltage 1.6 volts. If you are making a battery with different voltages, your voltages will be different.

Step 8. Slide the battery box into the battery compartment of your radio. A piece of ribbon around the box makes it easier to remove from the battery compartment if it is a tight fit.

Step 9. Set your radio to the BC band and turn on the on/off/volume switch. Your radio should start playing within a few seconds.

If your radio does not work, please refer to the troubleshooting section of these instructions.

Figure 1. Ten 9 volt cell daisy chain.



Figure 2. Diagram for connecting 9v battery clips in series

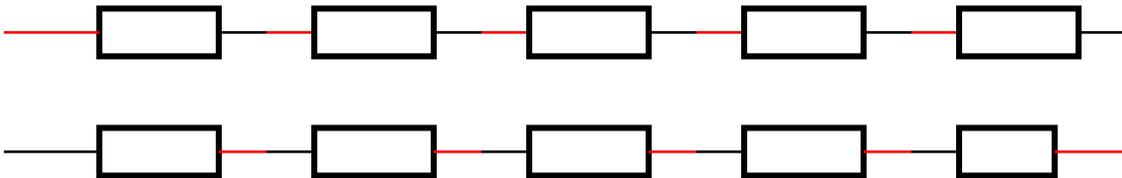


Figure 3. Two single D cell holders connected in parallel for the 1.5 volt A supply. You will need two Radio Shack 270-403 single D cell holders. For a simpler and neater installation, use a 2x1 D holder, but you will have to rewire it for a parallel circuit.

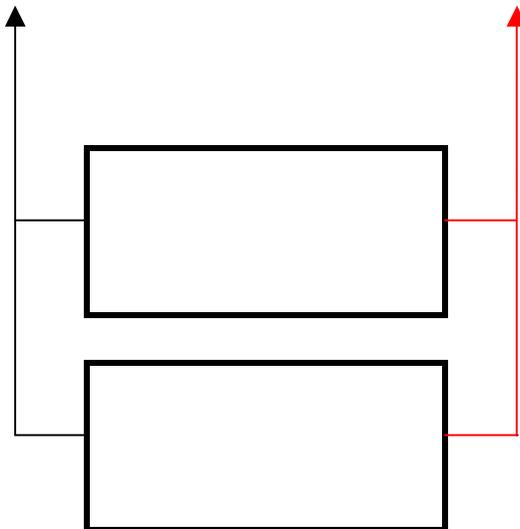


Figure 4. Ten 9 volt cells and 2 D cells ready to be installed in battery box.

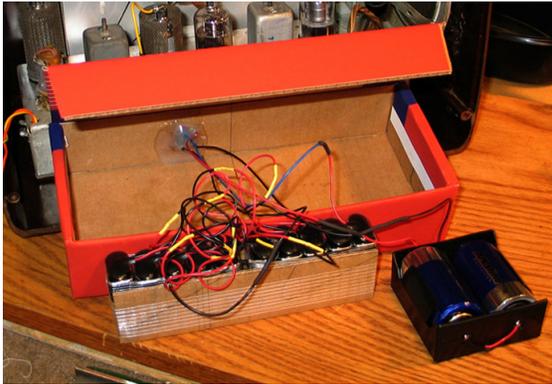


Figure 5. A and B supply installed in battery box.



Figure 6. AB Battery installed in radio. Cell holders and snap connectors are available at Radio Shack.



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