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## OLD RADIO

### The BC-474-A

One of the nicest surplus radios to become available after WW-II was the well designed "BC-474—A Radio Receiver and Transmitter," manufactured by RCA. Without any modification, it covers the entire 80-meter band using AM or CW. The transmitter VFO covered from 3500 to 6300 kHz and the receiver tuned from 2300 to 6500 kHz. Of course over the years, with a little adjusting, hams put them on 160 and 40 meters.

#### The Transmitter

The Army repair manual for this radio says the 3-tube transmitter's range is 15 miles for CW and 8 miles for AM phone. The manual recommended an antenna of 35 feet with a 35-foot counterpoise.

It has all 6V6 type tubes, one for the VFO, one for the power amplifier stage, and one for the AM plate modulator. The controls are standard for a transmitter of that time: VFO Oscillator tuning, PA tuning, and Coarse and Fine antenna controls. To help with the tuning, a PA plate meter and Antenna Current meter are provided. Standard jacks for the key and microphone are built in.

Power for the transmitter was originally provided by a hand-crank generator, GN-44-A, which produced a high voltage of 290 V dc for the plate and 6.6 V dc for the filaments. It has a seat

on one leg for the person doing the cranking and two additional legs. This hand-crank generator is extremely hard to find today.

#### The Receiver

A four tube superheterodyne circuit is used for the reception of CW or AM. The tubes are a low drain type for use with battery power. The controls are minimal but adequate. They are: a Phone-CW switch, Receiver Tuning and Volume controls, and Receive-Transmit and Emission Selector (mode) switches. Two jacks are provided for two sets of earphones.

Power is provided by a battery pack, which fits inside the cabinet, just under the receiver section. Power can also be provided by the hand-crank generator with an additional filter, FL-10, attached. Battery power requirements are 90 volts B and 1.5 volts A for the filaments.

I found an interesting, but unusual, ac power supply located inside the battery section of the cabinet in mine. It is a "Model CV-45 Power Unit." It was obviously designed for the receiver unit, as it matched the receiver plug perfectly. The size and design allows for a great fit within the battery shelf. My guess is—it was used in the repair shop. There were also two adapter plugs to allow a more modern set of loose batteries to be used. I'm wondering if anyone else has these?



A 1942 US Army photo showing the proper use of the BC-474. Note the soldier on the right turning the generator crank, while the operator receives a message. The soldier behind the radio, an officer, is waiting for the message.

The watertight case is painted Army green, inside and out, except for the front panel. The frequencies align with the BC-611 Walkie-talkies, so I'm assuming they were designed to be used together. Today you could have a lot of fun at a public event using BC-611's and the BC-474, instead of 2-meter handie-talkies.

#### Conclusion

There should be renewed interest in using this radio when we get our new 60-meter band near 5 MHz. It would then cover 80 and 60 meters "without modification," which is important to collectors. It is a nice low power rig that should work very well there.

For use in today's ham shack, a small power supply can be built using junk box parts. The two cables provided with the radio makes it easy to plug in. Any dc voltage from 250 to 325 V will do for the transmitter. A separate power supply for the receiver can also be built or incorporated within the transmitter supply. Coupled to a good ham antenna, this radio will provide many hours of low-power fun.

#### GETTING READY FOR WINTER

Well it's time to make sure you have your antennas ready for winter. You should also have a good supply of parts ready for those restoration projects you said you would start, once the weather turned colder. I'll see you at the hamfests in a couple of months.

—K2TQN

QST

