

OPERATING INSTRUCTIONS [U.S. BC-9-A, SCR-77-B transceiver]

Connect one BA-2 battery inside set box. Connect two BA-2 batteries in the battery box to the 40-volt terminals, and six BA-2 batteries in a CS-17 case to the 120 volt terminals. Connect 4 volt storage battery by means of set box cord, with careful attention to correct polarity. Place three VT-1 tubes in the sockets of the set box.

Place battery box firmly on ground. Place set box on battery box so that it is over the battery compartment. Secure the set box to the battery box by means of the fasteners provided. Place 120 volt battery cord plug in jack of battery box.

Connect up loop. Be sure to jam the socket joints in rigidly and screw up all wing nuts tightly.

With filament circuit switch turned to "ON", turn the potentiometer clockwise from "OFF" until a loud click is heard when the loop is touched and again when the finger is removed. This indicates that the circuit has started oscillating. Moving the potentiometer further will cause unnecessary interference with other sets, and also will usually cause weakening of received signal. The interference from this standby oscillation can be reduced still more by turning the potentiometer back in a counterclockwise direction while receiving a signal, until the strength of the received signal begins to weaken. The plate current will then be between [0].5 and 1.0 milliamperes. The meter deflection drops to zero when the key is pressed for sending.

With the key up the set is then adjusted for receiving. To transmit simply press the key. To "break" a station that is transmitting, press the key or send a series of dots and the beat note signal will be heard by the transmitting operator during the intervals between the dots and dashes he is making. When "standing by" touch the loop occasionally in order to obtain the click indicating that the circuit is still oscillating. This is unnecessary if signals from another station are heard satisfactorily.

A single pole switch is mounted on the face of the panel for the purpose of shortcircuiting the [0].5 ohm resistance in series with the oscillating tube filament. This switch should be closed when exchanging messages over the maximum distance range of the set in order to provide maximum radiated energy. It is also necessary to close this switch when the storage battery has been nearly discharged, as the radiated energy decreases rapidly with decrease in oscillator filament current. When "standing by" for a considerable period the switch should be opened in order to conserve the life of the oscillator tube and prevent unnecessarily rapid discharge of the storage battery. As the storage battery becomes discharged, the potentiometer adjustment must be changed slightly to keep the circuit oscillating. The set will usually continue to oscillate after the amplifier ceases to function due to low filament battery voltage. Tapping the panel or the tubes in order to obtain the usual microphonic ring will show whether the amplifier is still working.

A small percentage of tubes will not operate satisfactorily in the oscillator socket (socket next to BA-2 battery). If unsatisfactory operation is obtained, try another tube in this socket. Some tubes will produce noise, especially when placed in the oscillator socket. If the set is noisy and the noise stops when the key is pressed, the noise is produced in the oscillator circuit. A new oscillator tube should then be tried.

Operation in net. When operating a number of sets in a net, the net control station (NCS) should be adjusted to the tuner setting assigned the net. The operator should hold down his key while the other station operators adjust their tuners to zero beat and mark on the dials with pencil the point located. They should then slightly move their tuner pointers until each operator receives a satisfactory beat note with the NCS. The NCS can then work each other station without readjustment of the tuners. If one station has a message for a station other than the NCS, the station desired can usually be called directly. If the station desired is in another net, the calling operator should move his tuner adjustment slowly past the scale marking assigned to that net. If the net is silent, he

can then call the desired station. All stations in the net should copy all messages heard, no matter for whom intended.

To close station turn filament circuit switch to “OFF”. This is necessary in order to open the grid battery circuit. RL-C-5551-A

[transcribed from box BC-9-A, 06 IX 2020 de K6VK]



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