

ECHOPHONE RADIO CORPORATION
201 East Twenty-Sixth Street
Chicago, U.S.A.

INSTRUCTIONS FOR INSTALLATION, OPERATION AND SERVICE

MODEL EC 1
Echophone Commercial

6 TUBE AC-DC THREE BAND 545KC-30.5 MC RADIO RECEIVER



Installing The Radio

IMPORTANT: This receiver, unless otherwise marked, must be operated from 115-125 volts - 50/60 cycles - Alternating Current, or the same D.C. voltage. If you are in doubt, phone your electric light company. Be sure all tubes are in their sockets before inserting plug in receptacle. If the set does not operate in one minute when connected to direct current, reverse the power plug in the receptacle. DO NOT remove the chassis from the cabinet without first removing the power plug from the light socket.

ANTENNA: This receiver will require a piece of wire connected to A-1 terminal of the antenna terminal strip appearing on the rear apron of the receiver's chassis. Very satisfactory operation of the receiver throughout its 3 band tuning range will be secured by using an outside antenna approximately 50 to 75 feet long including leadin. This antenna should be erected as high as possible and removed from surrounding objects. Be sure the antenna is insulated from the ground at all points. For minimum interference it should be at right angles to street car lines, power lines and other electrical apparatus in the vicinity. When using this type of antenna the jumper between A2 and G terminals should remain connected. A doublet antenna can be used and should be connected to terminals A1 - A2. The jumper can remain connected between A2 and G or removed depending upon its favorable effect on reception. A ground can be connected to the G terminal and should be used only when it materially improves the operation of the receiver.

TUBES: The Model EC-1 receiver is shipped from the factory with the tubes in their proper sockets. The types of tubes required and the position of these tubes are clearly shown in the top chassis drawing. Each tube has the type number stamped on it. Should it be necessary to replace any tubes

insert the center guide pin on the tube base into the center hole in the socket. Rotate the tube until the key on the guide pin drops into the notched portion of the socket hole. Push down on the tube until its base is flush with the socket.

Operating The Radio

CONTROLS

VOLUME: The ON-OFF switch is a part of the Volume Control. Turning the knob to the right turns the receiver ON and increases the volume. Turning it all the way to the left decreases the volume until the switch clicks and the receiver goes off. The pilot light which indirectly lights the dial scale will indicate when the receiver is connected to its source of power.

MAIN TUNING: After the receiver has reached operating temperature and sound is coming from the loud speaker, the main tuning control, when rotated, will adjust the receiver to any frequency throughout its tuning range indicated on the translucent dial.

BAND SWITCH: Turning this knob connects the proper coils in the circuit to receive the desired frequencies. The frequencies covered by each band are:

Band 1 - 545 kc to 2100 kc

In this range you will hear broadcast stations, police, aircraft, amateurs and other services.

Band 2 - 2.10 mc to 8.15 mc

This range covers marine, aircraft and amateur frequencies as well as international short wave broadcast transmissions. Operation on the high frequency end of this band will be better after nightfall.

Band 3 - 7.9 mc to 30.5 mc

Most satisfactory operation on this band will be during the daylight hours. Only stations removed by a considerable distance from your location will be heard due to high frequency "skip effect". Commercial, short wave broadcast, aircraft, mobile broadcast, police and amateur signals will be heard on this band.

BANDSPREAD: This control will be of most help on the higher frequencies covered by bands 2 and 3. The bandspread control varies in much smaller quantities the capacity of the main tuning condenser. For fine adjustment the bandspread control will prove to be of great help. When this control is adjusted a pointer moves horizontally in front of a numbered scale which is at the bottom of the main dial. This scale can be used for reference points and should be used in conjunction with the logging scale appearing on the outer edge of the main dial. **NOTE:** The bandspread pointer should be left at 0 if the main dial calibration is to be accurate. When the bandspread control is used the main tuning dial pointer should be left at a frequency slightly higher than the desired signal - operating the bandspread control will then enable you to easily and accurately tune in the signal.

PHONES - SPEAKERS: On the rear apron of the chassis will be found two phone tip jacks. Headphones can remain permanently connected to the receiver. The phones - speaker switch makes it possible to select either.

BFO - ON-OFF: CODE-VOICE switch in the ON position disconnects the automatic volume control or AVC circuit and also supplies a beat note for the copying of code or CW stations. This feature will be of help in locating weak broadcasting or phone signals. After they are located the switch should be thrown to the VOICE position which will remove the BFO whistle.

NOTE: The EC-1 Receiver can be used as a test code oscillator by connecting a Mackey in series with the phones. The BFO switch should be placed in the CODE position and a broadcast station carrier tuned in. Operation of the key will then provide a signal which will sound like CW code transmission.

STANDBY: This switch is used should the receiver be operated in conjunction with a transmitter and makes the receiver inoperative during transmission periods by removing the plate voltage from the tubes.

Should at any time your receiver become inoperative check -

First: See that the tubes are in their sockets correctly. Make sure the tubes are lighted by seeing if the filament is hot in the glass tubes. If the metal tubes are warm it can be assumed they are operating.

Second: Be sure there is power at the socket. This can be checked by inserting the plug from a lamp to see whether the lamp lights.

Third: If the receiver is being used on direct current, reverse the plug.

Fourth: Check antenna to see whether it is in good order and not grounded at some point. See that the antenna wire is properly connected to the antenna terminal on the rear of the receiver.