

INSTRUCTIONS

For Installation and Operation

Bremer-Tully Model "6-40"

Proper understanding of your receiver will reduce the likelihood of trouble and by increasing your knowledge promote better results in operation.

Therefore, please read completely through these instructions, which are for your benefit.

Unpacking or Packing the Receiver

B-T receivers are packed in a specially designed air-cushion carton. To remove the set, open carton on side marked "TOP." Remove top cushion, then carefully remove the other side, front and back cushions and the cabinet may easily be removed from the carton.

If for any reason it should be necessary to re-ship this receiver, pack carefully in the original carton using the air cushion liners exactly as found when unpacking. Do not attempt to reship the receiver unless packed in the original carton or packed in a cushion container fully equivalent to this.

Caution

CAUTION No. 1. *Do not connect receiver to a direct current line, or serious damage will result.*

This model is built in two types, one for operation on 60 cycle 110 volt alternating current electric lines and one for use on 30 cycle 110 volt alternating current.

The 60 cycle type should be used on 60 cycle 110 volt line *only*.

The 30 cycle type may be used on either 25 cycle, 30 cycle, or 40 cycle 110 volt lines.

This receiver is designed for current as indicated on top and rear of power unit inside cabinet.

CAUTION No. 2. *Always disconnect the receiver from lighting circuit before touching any receiver or power unit connections.*

CAUTION No. 3. Do not place receiver on radiator or other metallic substance as any metal extending lengthwise of receiver and near it may affect operation.

Wrought iron tables as approved by this company and obtainable through authorized B-T dealers, however, may be used with absolute safety as a support for this receiver.

Tubes Required for Model "6-40"

- 4—UX226 or CX326—Amplifiers
- 1—UX171-A or CX371-A—Pwr. Amplifier
- 1—UY227 or C-327—Detector
- 1—UX280 or CX380—Rectifier

B-T receivers are designed for and tested with standard Radiotron or Cunningham tubes of the types indicated. The exact characteristics or value of a tube can be determined only by direct comparison, or by means of correctly designed tube testing apparatus. Full possibilities of a receiver can be attained *only by the use of the tubes* for which the set was designed.

The Speaker

The careful choice of a speaker cannot be too greatly stressed. Otherwise, perfect reproduction delivered by the receiver may be lost by limitations of the speaker.

For best results, we recommend the Bremer-Tully speaker, either magnetic or dynamic as preferred.

The fundamentals of B-T speaker mechanism have been developed by the best acoustical experts and the resultant design adapted to the characteristics of the B-T receivers will give results which we do not believe you will find surpassed.

Antenna

If receiver is located near one or more broadcasting stations use a short antenna. An antenna wire five to fifteen feet long extending as high as possible from receiver in many such cases will give the best results.

Under more favorable conditions a longer antenna may be used to advantage.

The ideal antenna would extend directly upward from the receiver to as great height as possible with short length of wire at top parallel to ground. It would be well insulated and away from buildings, trees, or other absorbing objects, especially metallic.

Usually an insulated wire placed along mouldings of room, or an attic antenna will be very satisfactory, except in steel, metal lath, or otherwise shielded buildings.

When distant reception is important, a good outdoor antenna not over fifty feet in length is preferable.

Ground Wire

The ground wire should be connected to secure a good earth connection. A connection to a water pipe at the point where it enters the building from the street offers the best ground, although any connection to a cold water pipe is usually good. Scrape or file surface of pipe to secure a clean contact and attach a good ground clamp firmly to the pipe, soldering the ground wire connection when possible.

Satisfactory ground connection can sometimes be secured by attaching ground wire with a clamp to steam or hot water heating pipe when better connection is not available.

When no other good connection is available a metal pipe may be driven into the ground to a depth that will insure permanent connection with moist earth or water.

Speaker Connections

MAGNETIC. Insert speaker cord terminals into phone tip jacks located in rear of 171-A socket inside cabinet.

See that terminals A and B at rear of Power Unit are connected by means of jumper wire furnished with receiver. (See Fig. No. 2.)

DYNAMIC. This receiver is arranged to supply filtered direct current to operate with B-T Dynamic Speaker.

Insert speaker cord terminals into phone tip jacks located in rear of 171-A socket inside cabinet. Remove jumper wire connecting terminals A + B at rear of Power Unit and connect energizing wires of speaker to terminals B + C. (See Fig. No. 2.)

Other Connections

1. Connect antenna to "Ant." post at rear center of set. Keep the antenna "lead-in" wire as far away from the left end of the set as possible. In other words, try to bring the "lead-in" wire to the antenna post in such way as to keep it away from the condensers and coils in the left end of the set.

2. Connect ground wire to a good clean ground connection. A ten-foot ground wire is furnished attached to set.

3. Insert Tubes by turning tube so that large prongs enter large socket holes and pressing tube down as far as it will enter. Each socket is marked with type number of tube to be used therein. Use great caution to install proper tube in each socket or damage may result.

4. Finally, insert lamp cord plug of receiver into an electric light socket of proper alternating current voltage. If connected to direct current line serious damage will result.

To Operate

1. Turn switch on set panel to "on" position (indicated by lighting of pilot lamp).
 Note:—The 227 detector tube is of indirect heater type and consequently does not become operative for about 30 seconds, but should glow immediately.

2. Rotate left hand or volume control to extreme left for full volume.
 3. Rotate right hand or station selector dial to tune in desired station, numbers on Indicator dial show approximate kilocycles to which receiver is tuned.

Antenna Compensator Adjustment

B-T 6-40 receivers are equipped with adjustable Antenna Compensator circuit. This exclusive feature enables us to build the receiver with a higher degree of sensitivity than would be possible if the set were restricted and *fixed* to try to meet all conditions and all variations in aerials. It also enables the operator to adjust sensitivity of the receiver to suit conditions and personal preference. In other words, the set may be adjusted to suit your antenna, *if necessary*, rather than having to try different lengths of antenna to get one that would suit the set, or using only an approximate adjustment.

To make adjustment, use a screw driver to rotate the compensator screw located just to right of indicator drum.

Greatest *selectivity* and *sensitivity* are obtained by rotating compensator screw as far as possible *toward the left*—(counter-clockwise). If rotated too far to left, oscillation will occur,—in which case rotate slightly to right until oscillation just stops, *with volume nearly full on*.

This adjustment need not be changed unless antenna, or ground are changed.

Best quality of reproduction is obtained by operating the receiver at as low sensitivity as conditions permit.

Care and Oiling

Condenser and control bearing should be oiled approximately every six months. Place one drop of good oil on each condenser bearing and in oil hole on top of indicator drive post.

Keep dust out of receiver, especially from between *condenser* plates.

If receiver drops off in performance check antenna and ground, also check tubes occasionally by replacing each tube in turn with a new tube and noting results.

The pilot lamp which illuminates dial is of $2\frac{1}{2}$ volt standard type. If necessary to replace it can be easily removed by unscrewing from receptacle.

Dealer Service and Repairs

Bremer-Tully dealers are chosen on the belief that they are equipped to properly install Bremer-Tully receivers and to furnish reliable advice.

The dealer will gladly instruct you as far as possible in the care and operation of your receiver and endeavor generally to treat with you in a manner similar to the practice of automobile sales and service stations.

Bremer-Tully apparatus is warranted against defects by the factory but the manufacturer cannot be bound by any particular additional claims that may be made by individual dealers. All matters should, therefore, be taken up first with the dealer from whom your purchase was made. If the dealer is unable to solve any problem that may arise, he will communicate promptly with the territorial representative of the manufacturer.