

OPERATING AND INSTALLATION INSTRUCTIONS FOR THE BRAMCO SIMULTANEOUS TRANSMITTER

The Bramco simultaneous transmitter is a new type of transmitter designed especially for use with reed type multi-channel receivers. It contains a highly stabilized and well balanced binaural audio section. Although considerably more complicated than most of the presently available transmitters, with the proper attention it can be operated and maintained by anyone. Before attempting to do anything with this transmitter, read all of the following instructions very carefully.

A diagram for the installation of the batteries in the transmitter is given. When connecting the B battery, always connect the positive side of the battery first to avoid possibility of getting a "shock". After the batteries have been installed, the transmitter is ready for tuning.

A transmitter can only be accurately tuned if a field strength meter is used. All Bramco transmitters are factory tuned before shipping and further tuning should not be necessary. However, if after the transmitter has been used for a while and appears to be losing its range, the tuning may have drifted enough to require retuning in which case the following procedure must be followed. Extend the antenna to its full height, then turn on the switch. No tone is necessary during tune up and the control box may be left disconnected. The first adjustment is the oscillator tuning. This adjustment is located near the front of the printed circuit chassis between the oscillator and amplifier tubes. It may be tuned with a small screw driver. With the aid of a field strength meter, turn the slug until the maximum output level is reached. This is the only adjustment here. Then the amplifier must be tuned. Watch the field strength meter carefully and turn the trimmer condenser closest to the front of the chassis until a peak is obtained. (Note: a standard metal screw driver may be used on all of the adjustments; no special tools are required). Then advance the antenna trimmer, which is the closest to the back of the chassis, a half a turn at a time. With each adjustment of the antenna trimmer, repeat the tuning trimmer. Repeat this procedure until a point is reached where the output is greatest. This will occur at some point on the antenna trimmer and is the point of greatest efficiency in the transmitter. Therefore, this adjustment should be made carefully and accurately. This completes the adjustment of the radio frequency section of the transmitter, but the case should be left open to allow access to the audio balance control which is the next to be adjusted.

To start the alignment of the audio section, your receiver must be connected up and operating. The location of the pots for each channel are given in the enclosed diagrams. DO NOT ATTEMPT TO CHANGE THE SEQUENCE OF CHANNELS AROUND SINCE EACH POT WILL NOT HIT MORE THAN TWO CHANNELS. The procedure for tuning the pots is the same as on any standard transmitter. But before attempting to tune them, the antenna should be in the fully retracted position and if possible, it should be grounded to the case by a short jumper wire. This eliminated the effects of swamping at close range. Note the pot mounted in the center of the transmitter chassis. This is the balance control. Start out by turning this pot to its midpoint. It will be retouched later. The channels are now tuned. Start with the pot on the high side of the reed. Then bring the frequency gradually downward until the reed just starts to vibrate. Keep turning the pot just a tiny bit further. Throw the switch several times and see if the reed starts quickly. After a little practice, this adjustment becomes very easy and it should be possible to hit the reed right on the first try. Do this for all of the reeds. If this transmitter is not used with a Bramco receiver, do not expect it to hit all of the reeds since it was designed exclusively for use with the Bramco receivers.

Once the channels have been tuned, the balance control must be adjusted. This control is an extra feature of the Bramco transmitter. It permits the operator to compensate for frequency response curves of any receiver and allow a careful adjustment of the amplitude of each reed so that one reed will not try to cancel another. To adjust the control, hit two channels simultaneously, then watching the reeds very carefully, turn the pot which ever way necessary to obtain a balance between the two reeds; Example: both reeds will vibrate equal amplitude. This completes the adjustment of the transmitter and it may be put back together.

The batteries must be changed periodically and it is a good idea to check them often. Always change the A battery when it is down to 1.25 volts and the B batteries when they are down to 100 volts.

If you own two control boxes, after the initial tuning it should be possible to use whenever necessary. Thus, if you have a five channel and an eight or six channel receiver, and the corresponding control boxes, each can be used whenever necessary without further tuning.

Tube Lineup:	1 - 3V4 - Crystal Oscillator
	1 - 3V4 - R.F. Amplifier
	2 - 3V4 - Binaural Audio Modulators
	2 - 3V5 - Stabilized Audio Oscillators

Battery Complement:	A - 2 Burgess 2D - 1 1/2 Volts each
	B - 3 Burgess M30 - 45 Volts each

Note: These numbers are given for easy reference; actually any brand of battery is acceptable.