

With the loading unit between terminal B of A-7595-B and ground (capacitor of loading unit should always go to ground) tune the top core of A-7595-B for maximum output. Reconnect the loading unit to terminal C on A-7595-B and tune the bottom core of A-7595-B for maximum output. Reconnect the loading unit to terminal A on A-7594-B and tune the top core of A-7594-B for maximum output. Reconnect the loading unit to terminal D of A-7594-B and tune the bottom core for maximum output. Repeat EE and FF. Remove the loading unit and disconnect the instruments. The converter is now ready for use.

GG. If activity is of interest in only a small portion of the band, tune to the center of that part of the band instead of 1.3 Mc. up the band as described above.

12 VOLT OPERATION

If it is desired to use 12 volts instead of 6.3 volts for the filaments of the converter, the following changes must be made:

1. At the 6ES8 tube socket - add a 75 ohm, 1 or 2 watt resistor from pin 4 to ground (the chassis).
2. At the 6U8A tube socket - unsolder pin 5 from the shield. Shift the wire coming from the power plug to pin 4, from pin 4 to pin 5. Add insulating tape or sleeve, if necessary.

SELECTING THE OUTPUT IF FREQUENCY

This converter may be adjusted so that it will provide any output frequency between .5 Mc. and 35 Mc. This feature of the converter will prevent it from becoming obsolete should the receiver be changed to a different type.

If there is a choice as to what output frequency to use, it is recommended that a low output IF be used, preferably 7-11 Mc. This is because most receivers perform best in this range. Their oscillator stability (drift), image and spurious rejection become progressively poorer as the frequency goes up.

On receivers covering ham bands only, the 28-30 Mc. band gives the most coverage for use with a 6-meter converter.

The following information specifically explains how to set up the converter, Model CB-6, so as to provide the various output frequencies:

- A. FOR 7-11 Mc. IF OUTPUT - Use a 43 Mc. crystal. Tune oscillator coil as per alignment instructions. Remove any jumper wire from pin B of the output r-f transformer (A-7596-C) to any other pin of this transformer. See Fig. 2. The only thing going to pin B should be the 5000 mmfd. condenser coming from the center terminal of the output jack. Tune the output transformer as per alignment instructions. There should be a 0.1 mmfd. condenser between pin 1 of the 6U8A and pin C of A-7595-C. A-7595-C pin D must be grounded to chassis. 50 Mc. will come in at 7 Mc. on the receiver dial, 52 Mc. will come in at 9 Mc. and 54 Mc. will come in at 11 Mc.
- B. FOR 10-14 Mc. IF OUTPUT - Use a 40 Mc. crystal. Tune the oscillator coil as per alignment instructions. Remove any jumper wire from pin B of the output r-f transformer (A-7596-C) to any other pin of this transformer. See Fig. 2. Place a jumper wire between pin B and pin A of the output r-f transformer (A-7596-C). Tune the output transformer as per alignment instructions. There should be no condenser between pin 1 of the 6U8A and pin C of A-7595-C. The only lead from pin D of A-7595-C should be one going to pin 1 of S-180. 50 Mc. will come in at 10 Mc. on the receiver dial, 52 Mc. will come in at 12 Mc. and 54 Mc. will come in at 14 Mc.
- C. FOR 14-18 Mc. IF OUTPUT - Use a 36 Mc. crystal. Tune the oscillator coil as per alignment instructions. Remove any jumper wire from pin B of the output r-f transformer (A-7596-C) to any other pin of this transformer. See Fig. 2. Place a jumper wire from pin B to pin F of the output transformer (A-7596-C). Tune the output transformer as per alignment instructions. There should be no condenser between pin 1 of the 6U8A and pin C of A-7595-C. The only lead from pin D of A-7595-C should go to pin 1 of S-180. 50 Mc. will come in at 14 Mc. on the receiver dial, 52 Mc. will come in at 16 Mc. and 54 Mc. will come in at 18 Mc.
- D. FOR 28-30 Mc. IF OUTPUT - Use a 22 Mc. crystal. Add a 22 mmfd. NPO ceramic or silver mica condenser across the oscillator coil and tune the oscillator coil, CS-1, as per alignment procedure. Remove any jumper wire from pin B of the output r-f transformer (A-7596-C) to any other pin of this transformer. See Fig. 2. Place a jumper connection from B to E of the output transformer A-7596-C. Tune the output transformer as per the alignment procedure. Tuning the output coil at this frequency is more critical than the lower frequencies. 50 Mc. will come in at 28 Mc. on the receiver dial, 51 Mc. will come in at 29 Mc. and 52 Mc. will come in at 30 Mc. There should be no condenser between pin 1 of the 6U8A tube and pin C of the A-7595-C r-f transformer. The only lead from pin D of the A-7595-C r-f transformer should be one going to pin 1 of S-180.
- E. FOR 30.5-34.5 Mc. IF OUTPUT (NC-300, 303, SX-101A Receivers) - Use a 19.5 Mc. crystal. Add a 50 mmfd. NPO ceramic or silver mica condenser across the oscillator coil, CS-1. From this point on, the procedure is the same as for D above - 28-30 Mc. IF output. Also remove the 10 mmfd. on S-171B pin 6, 100 mmfd. and 330 ohm on S-190B, lift one end of 4.7K from A-7596-C pin C and solder