SECTION VI
ACCESSORIES

6.1 2-AC CRYSTAL CALIBRATOR

The 100 KHz Crystal Calibrator is an oscillator so designed that it will inject into the 2-C Receiver a harmonic every 100 KHz throughout the receiver's range. THIS CORRESPONDS TO THE NUMBERED DIAL DIVISIONS ON THE RECEIVER.

The calibrator is used by plugging it into the 2-AC socket on top of the receiver chassis, puting the FUNCTION switch in CAL position and tuning in the 100 KHz harmonic nearest the desired operating frequency to zero beat the receiver BFO. The sliding pointer on the dial is then moved to calibrate the receiver.

6.2 2-CQ SPEAKER/Q-MULTIPLIER AND NOTCH FILTER

The 2-CQ is a Q-multiplier and notch filter combination housed in a matching speaker cabinet for use with the 2-C Receiver for providing increased selectivity and notching out interfering heterodynes and other interfering signals.

A socket on the rear of the 2-C chassis is provided for use with the 2-CQ. Operating controls are mounted on the front of the 2-CQ for tuning the Q-Multiplier or notch filter.

Installation with Model 2-C Receiver

1. Plug Q-Multiplier cable into 2-CQ socket on rear of 2-C.
2. Connect speaker lead to jack on 2-C marked SPKR.
3. When the Q-Multiplier is not being used, the PEAK-NOTCH switch should be on NOTCH and the ON-OFF switch should be on OFF.

Operating Instructions

Finding the notch setting of the 2-CQ controls for the first time may present a problem. However, practicing with a strong steady carrier such as our 2-AC Crystal Calibrator should enable the operator to obtain good results if the following procedure is carried out.

1. With the 2-CQ switches in the OFF and NOTCH positions, tune in a crystal calibrator signal on the 2-C Receiver.
2. Set the Q-BALANCE control to about 12 o'clock and turn ON-OFF switch to ON.
3. Carefully tune the TUNING knob for a slight null in S-meter reading. It will probably be shallow and rather broad.

4. When the null is found, readjust the Q-BALANCE for futher null. Alternately adjusting Q-BALANCE and TUNING controls should produce about 50 dB of attenuation. Leave Q-BALANCE control at this setting for all notching.

Notching out a Heterodyne on SSB or AM

1. With the Q-BALANCE control set as described above, turn ON-OFF switch to OFF.
2. Tune in the station you wish to hear in the normal manner as described in the 2-C manual.
3. When a heterodyne appears, turn the ON-OFF switch to ON and slowly turn TUNING knob to a position where the heterodyne is eliminated. NOTE: On AM a heterodyne is caused by a beat between desired carrier and an interfering carrier. Removal of either will stop the heterodyne but if you notch out the carrier of the desired signal, the audio will become greatly distorted.
4. If the interfering carrier drifts in frequency, follow it with the Q-Multiplier TUNING; i.e., you tune the receiver for the best signal and tune the Q-Multiplier to remove the interference.

Keep in mind that the Q-BALANCE control is a balancing device when the 2-CQ is used for notching and as such it has only one correct setting. Even a very slight movement of this control from its correct setting will result in a drastic reduction in attenuation.

Peaking a CW Signal

1. With the 2-CQ switches set for OFF and NOTCH, tune in a CW signal on the 2-C Receiver as described in the instruction book.
2. Now set the 2-CQ switches to ON and PEAK and tune the TUNING control to the signal by noting a marked increase in the S-meter reading.
3. Set the Q-BALANCE control for the desired sharpness of response. Adjusting the Q-BALANCE control clockwise to a point just short of where the unit breaks into oscillation will result in maximum selectivity for peaking purposes.

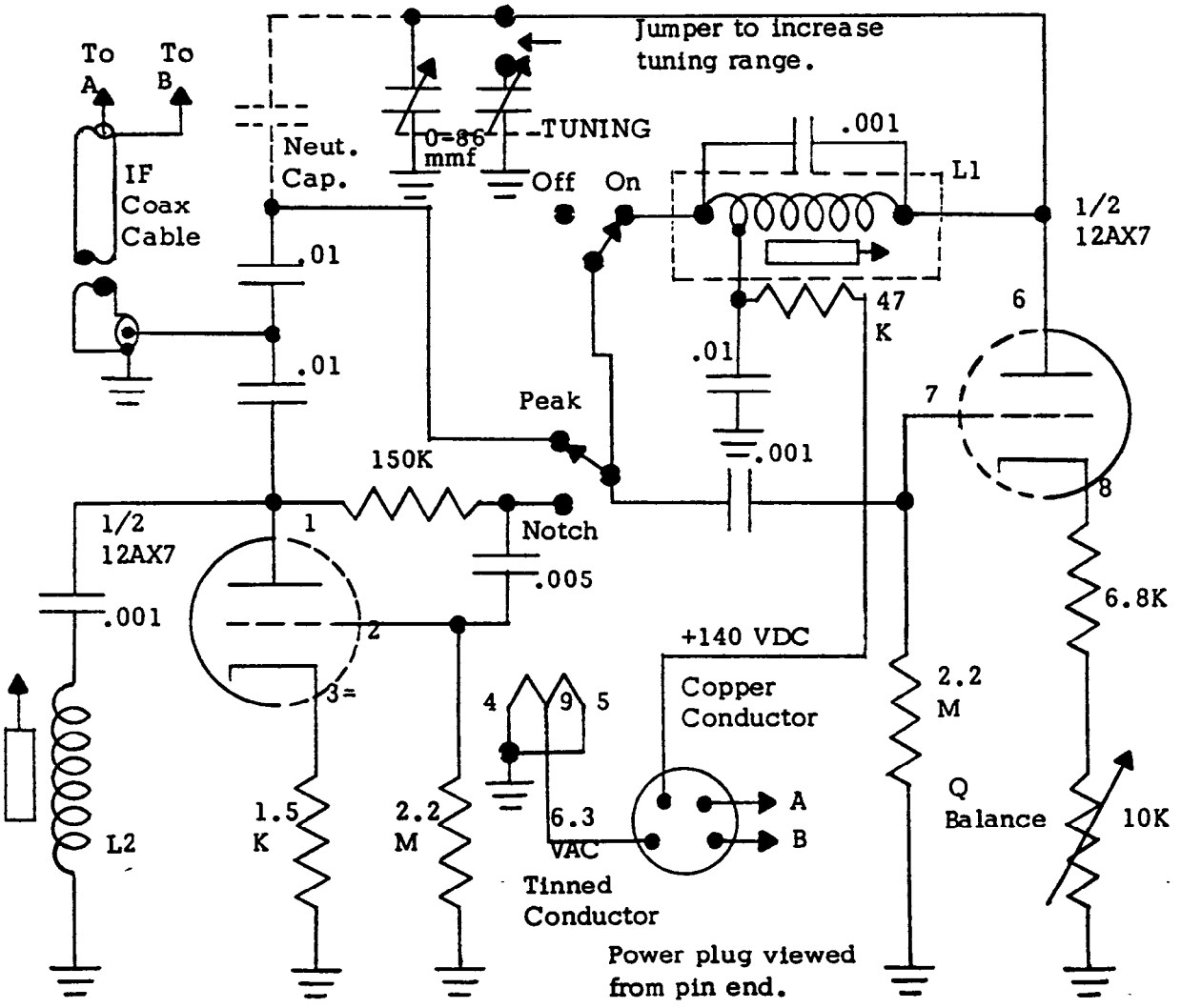
ALIGNMENT

To remove the 2-CQ from the cabinet, remove the 3 bottom screws. Pull the bottom of the unit to the rear until it is in a horizontal plane. Rotate the unit about 45° and pull straight back out of the case.

1. Plug the 2-CQ into the receiver.
2. Turn the receiver on and tune in a strong steady carrier or a signal such as the crystal calibrator, zero beating it against the BFO.
3. Make sure the 2-CQ is switched to OFF and NOTCH and adjust L2 of the 2-CQ to peak S-meter reading.
4. Switch the 2-CQ to ON and PEAK, turn the TUNING control until it points to the center of its scale, and tune the Q-BALANCE control anywhere below the point of oscillation.

5. Then adjust L1 (the coil in the aluminum can) for peak S-meter reading.

This completes the alignment procedure. Return the 2-CQ to its case by reversing the removal procedure.



SCHEMATIC DIAGRAM - 2-CQ