SCT - 110 TRANSMITTER

1.0 Tune-up

Each board is carefully adjusted at the factory for minimum spurious and maximum power output. In some cases however, it may be necessary to "tweak" the output network for optimum performance with the exact antenna or power amplifier in use. The two trimmer capacitors, C252 and C253, near the final amplifier Q208 may be adjusted for this purpose. In most applications, the trimmers will be carefully adjusted for maximum output power consistent with minimum current. In some applications, however, it might be necessary to reduce the power output slightly. The best way to achieve small power reductions is to adjust the C252 and C253. Turn these trimmers in the direction which produces the maximum drop in current consumption consistent with the desired power output. Power output can also be adjusted down to about 6 watts by adding a 5-10 wt.W.W. resistor in series with Q208's collector B+ lead as shown on the schematic. (Appx. 4.5 ohms typ.) Pads are provided on PC board for this. Note: Applies to 10wt. boards only. See Note ①.

2.0 Interconnections - See Figure 7.

2.1 DC Input: Terminal E205 is the main 13.5VDC Input.

2.2 PTT - This terminal is used to "key" the transmitter by connecting it to ground. Whatever device is used to switch this terminal should be able to "sink" up to 25mA. The terminal voltage must be allowed to rise to the full supply voltage to turn the transmitter off. (A small switching transistor such as 2N2222 may be used to switch this point, or a relay, etc.).

2.3 RF Output - E208 at rear of board. (Solder coax shield to P.C. board ground.)

2.4 AF Input - High Impedance, > 30K ohm. (Additional A.F. Inputs may be coupled - in through 20K ohm (or greater) resistors in parallel with the main A.F. Input.

2.5 Sub-Audible Tone Input - For "PL" sub-audible tones only! (Less than 200Hz). Terminal E202.

2.6 Ground - Solder a ground wire to the top (ground-plane) side of the P.C. board.

2.7 Relative Output - to 1mA DC Meter. Terminal E207. (Optional)

3.0 Modulation

Audio input to this board should be adjusted by means of R218 the AF Input Level Adjust Pot. The function of this pot is similar to that of the "mic gain" control found on many