APPENDIX 3

FUNCTION OF DEVICES
75-507

Ref. No.	Type	Function
Q11	KRC104S	Mic Mute
Q31	KRC104S	RX/TX VCO Switching
Q32	2SC5084	O.S.C.
Q33	2SC5084	Buffer
Q35	2SC5084	TX Driver
Q36	MMBR951	TX Power Driver Amp.
Q38	BFG135A	TX Power Final Amp.
IC3	TMP87C807U	CPU
IC4	TB31202FN	PLL Frequency Synthesizer
IC6	KIA4558F	Pre-emphasis & Mic Amp Limiter

7. Alignment instructions

WARNING

Any repairs or adjustments should be made under the supervision of a qualified radio-telephone technician.

TRANSMITTER

1. Power Supply Voltage

The Power supply voltage should be set for 6.0 VDC measured at the radio during transmit. Periodically check the power supply voltage during the alignment procedure.

2. Frequency Setting

A. Connect a frequency counter or Communications Service Monitor to the antenna connector through an RF power attenuator (5 watt minimum rating, 20 dB minimum attenuation).
B. Depress the PTT switch.
C. Adjust the TCXO-1 trimmer capacitor such that the output frequency is equal to the channel frequency with a maximum error of +/- 200 Hz.
D. Release the PTT switch.

3. Output Power Alignment.

A. Set the power supply voltage for 6.0 VDC.
B. Connect a Communications Service Monitor or a watt meter and dummy load to the antenna connector.
C. Depress the PTT switch.
D. To be convinced for 0.5 Watt(50 ohm load) output power with a maximum error of +/- 0.15 Watts.
E. Release the PTT switch.

4. Deviation Adjustment.

A. Connect an audio generator .
The audio frequency should be set at 1 KHz.
B. Connect an FM deviation meter or Communications Service Monitor to the antenna connector through an RF power attenuator (5 watt minimum rating, 20 dB minimum attenuation). Set the monitor to read peak deviation.
C. Depress the PTT switch.
D. Adjust RV3 for +/- 2.5KHz maximum deviation.
E. Release the PTT switch.

APPENDIX 7

CIRCUITS AND DEVICES TO STABILIZE FREQUENCY

A PLL and 12.8 MHz TCXO determine and stabilize frequency.

APPENDIX 8

CIRCUITS TO SUPPRESS SPURIOUS RADIATION AND LIMIT MODULATION

CIRCUITS TO SUPPRESS SPURIOUS EMISSIONS

A low pass filter consisting of L23, C310, L25, C311, L26, C312, C313, L27, C315, and C316 attenuate spurious emissions.

CIRCUITS TO LIMIT MODULATION

IC6 provides mike gain, limiting and audio low pass filtering.