The following information is supplied for the use of a technician in servicing the transceiver.

TYPICAL TUBE SOCKET VOLTAGES

VOLTAGES MEASURED TO CHASSIS WITH VTVM (RCA VOLTOHMYST OR EQUIVALENT) AND ARE POSITIVE EXCEPT WHERE NOTED.
TRANSMITTER TUNED AND LOADED, WITH NO SIGNAL INPUT TO RECEIVER.
ALL MEASUREMENTS TAKEN WITH 117 VOLTS A.C. 60 CYCLE INPUT.

SYMBOL, TUBE TYPE AND FUNCTION	TYPE OF OPERATION	PIN NUMBERS								
		1	2	3	4	5	6	7	8	9
V1- 12BA6 R.F. AMPLIFIER	RECEIVE	.15V	0	FIL	FIL	160V	35V	.45		
	TRANSMIT	.45V	0	FIL	FIL	175	80	.15		
V2- 6EA8 MIXER-OSCILLATOR	RECEIVE	127	.65	68	FIL	FIL	28	0	0	.3
	TRANSMIT	128	-3.8	93	FIL	FIL	44	0	0	-3.2
V3- 12AU6 1ST. I.F. AMPLIFIER	RECEIVE	.15V	0	0	12VAC	200	124	.7V		
	TRANSMIT	-32V	0	0	12VAC	220	220	.1V		
V4- 6EA8 2ND I.F. AMPLIFIER / MICROPHONE AMP.	RECEIVE	45	0	90	FIL	FIL	195	15	0	-.6
	TRANSMIT	45	-.3	183	FIL	FIL	196	35	0	-.83
V5- 6CR7 NOISE LIMITER / AF. AMPLIFIER	RECEIVE	-.06	-.05	.05	FIL	FIL	0	-6	59	0
	TRANSMIT	-.2	0	-.05	FIL	FIL	0	-.55	83	0
V6- 7868 AUDIO OUTPUT AND MODULATOR	RECEIVE	310	0 HC	102	12VAC	6VAC	0	130	0	300
	TRANSMIT	280	0	22	12VAC	6VAC	0	200	0	270
V7- 6EA8 CRYSTAL OSCILLATOR / DOUBLER/DOUBLER	RECEIVE	260	-.92	200	FIL	FIL	206	0	0	-.68
	TRANSMIT	65	-4.1	148	FIL	FIL	160	0	.05	-.2
V8- 2E26 R.F. POWER OUTPUT	RECEIVE		FIL	250	-.45		FIL			
	TRANSMIT		FIL	165	+225		FIL			

2E26 PLATE VOLTAGE MEASURED AT POINT MARKED ✱ RECEIVE 250V
TRANSMIT 220V

REMOVING THE LAFAYETTE HE-45B FROM CABINET FOR SERVICING

1. Remove the (2) screws holding the front panel to the top shell.
2. Remove the (2) screws, on each side piece, holding bottom base to top shell.
3. Slide shell upward to remove top shell.
4. Remove the (4) screws, on cabinet bottom, holding the chassis to the bottom plate.
5. Remove bottom base plate.

TRANSCEIVER ADJUSTMENTS AND CALIBRATION

The following adjustment is to be made every time a new crystal, whose frequency is more than 0.5 Mc than the replaced crystal, is inserted into the front panel crystal holder.

ADJUSTING THE TRANSMITTER

When tuning up the transmitter, it is recommended that a dummy antenna be used. A simple dummy load antenna for transmitter adjustments is shown in sketch. NOTE: For those with access to the proper equipment, and knowledge of its use, the following information is provided. Maximum efficiency of power transfer to the antenna can be achieved if a 52 ohm, non-inductive load, capable of dissipating at least 15 watts, is connected to the antenna input socket. With a suitable R.F. voltmeter measure the voltage drop across the 52 ohm load. Alternately readings of output can be taken with a SWR bridge or RF voltmeter, while loading directly into the proper antenna.

1. Adjust crystal selector knob to position No. 1 or to any other position in which the 50.124 Mc crystal has been installed.
2. Insert dummy load antenna into antenna input socket.
3. Push, and hold in position, the microphone button for transmitting.
4. Adjust antenna condenser (C2) fully tight, then back out ½ turn.

5. Adjust oscillator tripler coil slug (L1) for maximum RF power output meter reading or maximum lamp brilliance.
6. Adjust doubler coil slug (L6) for maximum RF power output meter reading or maximum lamp brilliance.
7. Adjust TANK condenser (C1) for maximum lamp brilliance or max. reading of front panel PRF meter.
8. Adjust C2 condenser for max. meter reading on front panel.
9. Adjust C1 condenser for maximum lamp brilliance or maximum reading of PRF meter.
10. After above adjustments have been made, switch the microphone button momentarily to receive position, and then back to transmit. If the lamp will not light, or the RF power output meter has a minimum reading, repeat adjustments. Use care in performing these adjustments, so that maximum oscillator drive is obtained with stability.

NOTE: Before making any adjustments set the crystal coil slug (L1) ½ way in; Doubler coil slug (L6) all the way out; Tank condenser (C1) ¾ way out. Meter switch on PRF position.
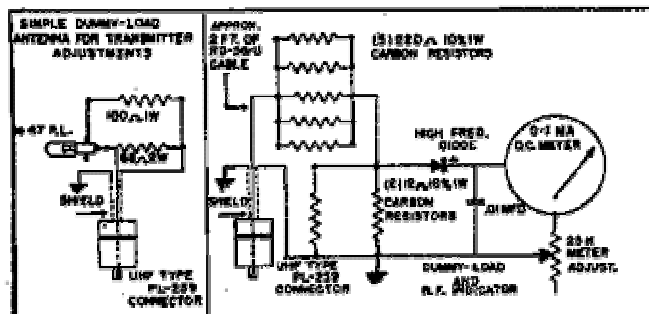
ADJUSTING THE RECEIVER I.F. SECTION

1. Turn Volume control knob fully "ON". (Max. clockwise).
2. Turn Noise Limiter control fully counterclockwise.
3. Connect an A.C. voltmeter, having a 2.5 volt scale, between chassis and speaker voice coil lug near side of chassis (or Pin #5 of microphone socket on chassis).
4. Connect a signal generator to Pin #2 of the V2 Mixer tube 6EA8. Low side of generator to chassis. High side of generator, through a 0.1 Mfd condenser to pin #2.
5. Adjust signal generator to 1650 Kc and peak I.F. transformers T3-T2-T1 for maximum gain on output meter.
6. The signal generator, modulated 30% with 400 cycles, should have an output as low as possible when making these adjustments.

ADJUSTING THE RECEIVER R.F. SECTION

1. Follow paragraphs 1-2-3- under adjusting the receiver I.F. section.
2. Turn RF peaking control knob so that RF peaking variable condenser is half meshed.
3. Connect a signal generator that has the 6 meter band (50.1 to 54 Mc) spread out so that the peaking frequencies may be directly read. If possible, a crystal controlled signal generator is more desirable. The signal generator is to have a 52 ohm output impedance and is to be connected to the antenna input receptacle.
4. Adjust signal generator to 52 Mc and peak the top and bottom tuning slugs of L3 for maximum gain on "S" meter or output meter.
5. The signal generator, modulated 30% with 400 cycles should have an output as low as possible when making these adjustments.

The receiver alignment is now complete. Do not change the adjustment of L2 in the input circuit as this is factory set for proper operation of the transmitter.