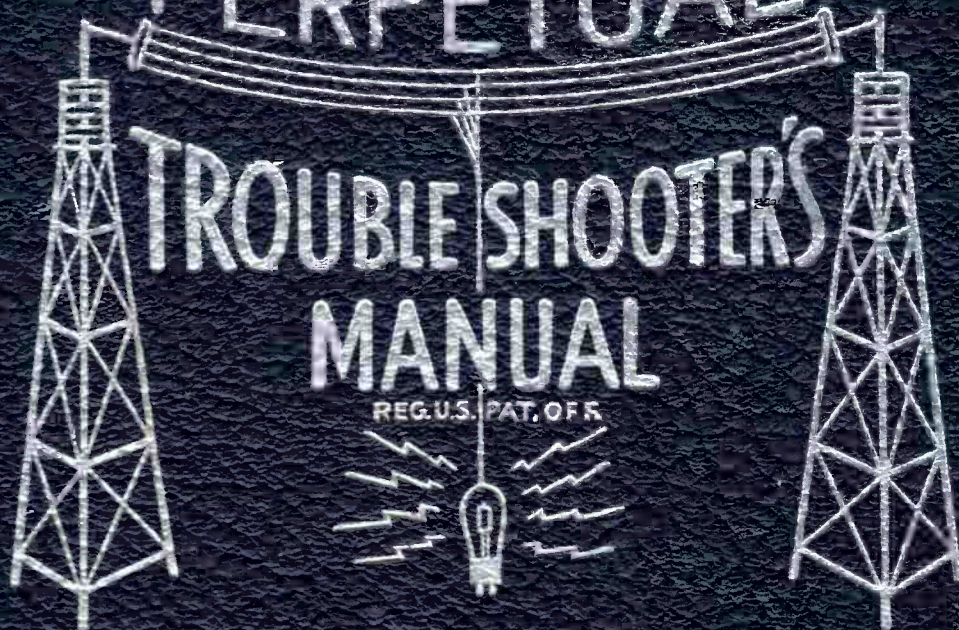


VOLUME XVIII

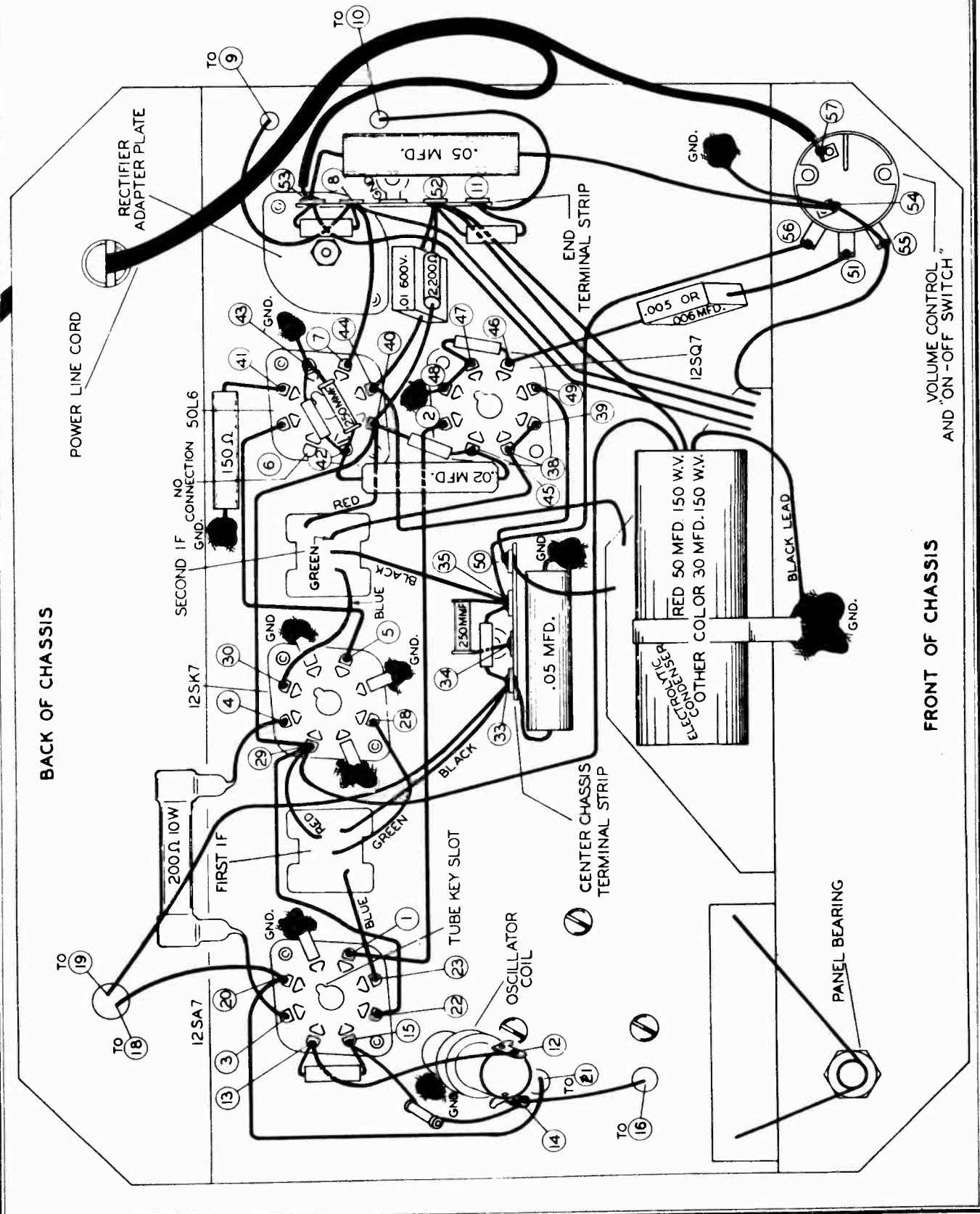
PERPETUAL



TROUBLE SHOOTER'S
MANUAL

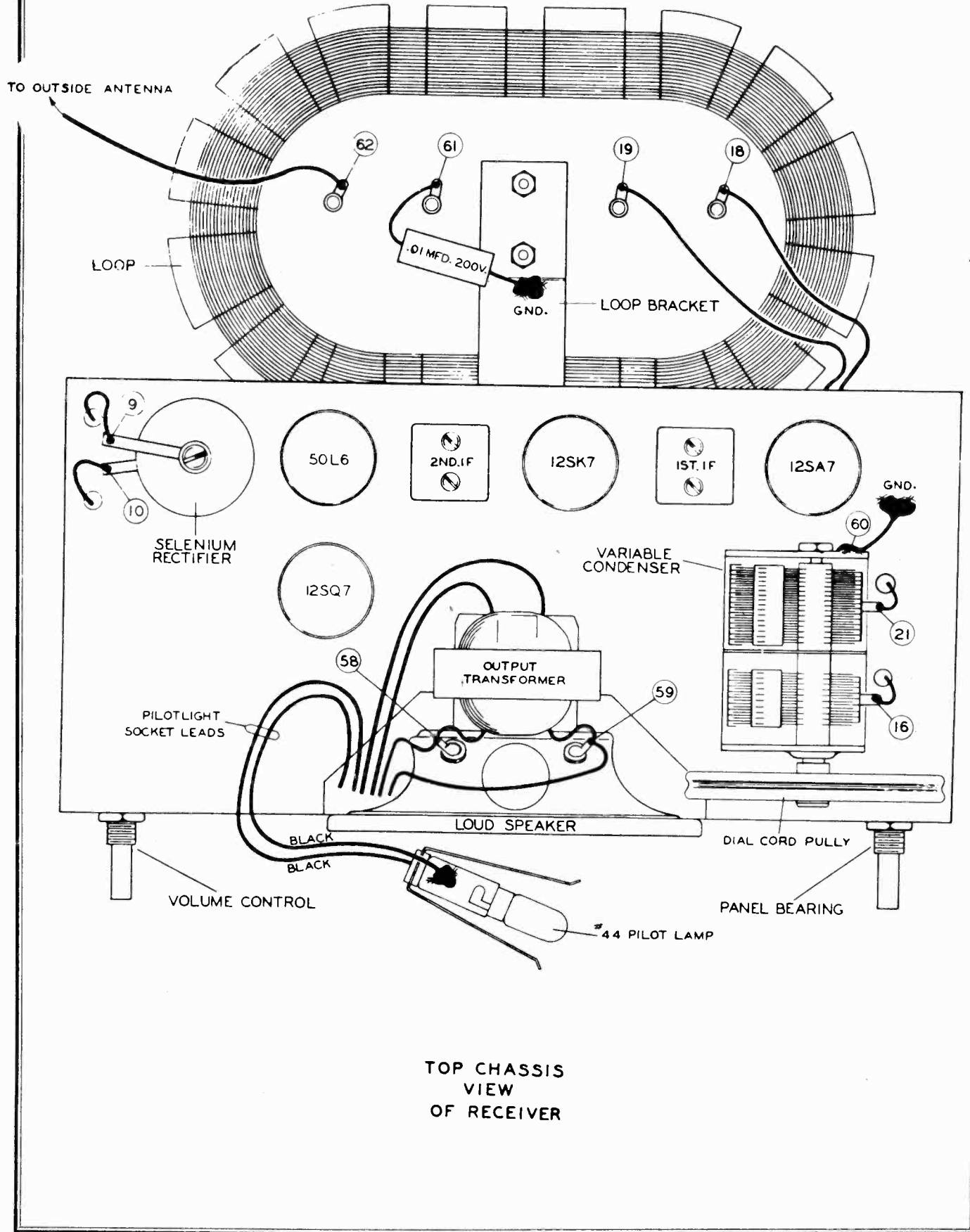
REG. U.S. PAT. OFF.

JOHN F. RIDER



JEWEL RADIO CORP.

MODEL 500

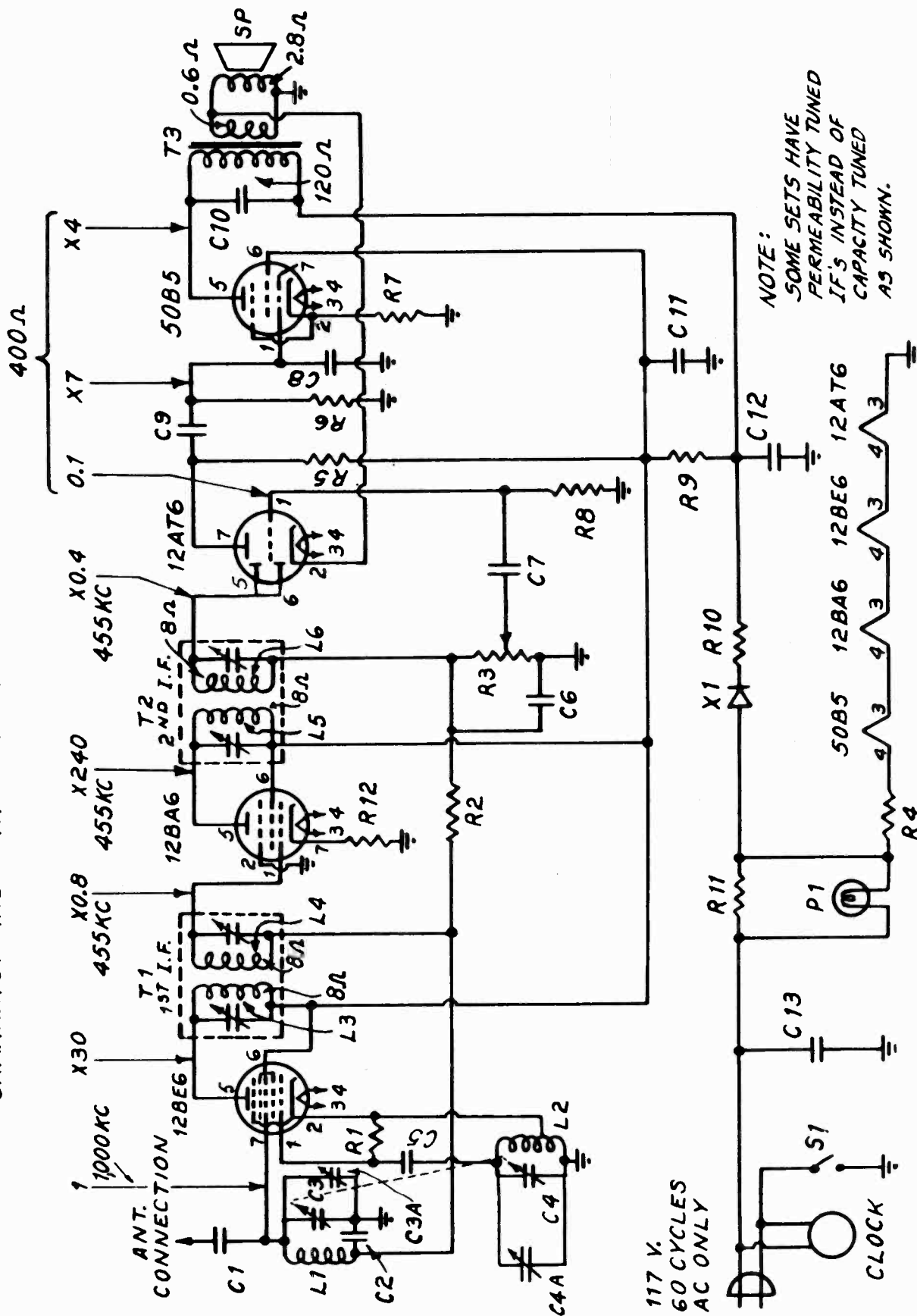


JEWEL RADIO CORP.

MODEL 500

Item No.	Description	Quantity	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69			
1	Antenna, Loop	1																																		
2	Wearing, Panel	1																																		
3	Bracket, Speaker	1																																		
4	Cable, Dial	4 feet																																		
5	Chassis	1																																		
6	Coil, Oscillator	1																																		
7	Condenser, Electrolytic	1																																		
8	Condenser, ceramic	1																																		
9	Condenser, ceramic	2																																		
10	Condenser, paper - .005 or .006 mfd., 400 or 600 working volts	1																																		
11	Condenser, paper - .01 mfd., 400 or 600 working volts	2																																		
12	Condenser, paper - .02 mfd., 200 or 400 working volts	1																																		
13	Condenser, paper - .05 mfd., 200 or more working volts	1																																		
14	Condenser, paper - .05 mfd., 400 to 600 working volts	1																																		
15	Condenser, variable - dual section with 3" dial cord pulley attached	1																																		
16	Cord, Power Line (rubber covered for 110 volt Model 500KZ) and fabric covered for 220 volt Model 500KZ)	1																																		
17	Grommets, Rubber (for shock mounting variable condenser)	3																																		
18	Knobs, Plastic (for tuning and volume control adjustments)	2																																		
19	Light, Pilot (#44 single bayonet, 6-8 volts at 150 milliamperes)	1																																		
20	Lockwashers, Steel - #6 for 6-32 machine screws - used as follows: 2 for speaker to dial plate; 4 for I. F. transformer	6																																		
21	Lockwashers, Steel - #8 for 8-32 machine screws - used as follows: 2 for speaker to chassis; 2 for loop to loop bracket	4																																		
22	Lockwashers, Steel - 3/8" inside diameter-used as follows: 1 for potentiometer volume control; 1 for panel bearing	2																																		
23	Lockwasher, Steel - #4 for 4/40 screws - used as follows: 2 for loop bracket to chassis; 8 for sockets; 2 for adaptor plate; 1 for selenium rectifier	13																																		
24	Nuts, Steel - 4/40 hexagon - used same as 4/40 lockwashers	6																																		
25	Nuts, Steel - 6-32 hexagon - used same as #6 lockwashers	6																																		
26	Nuts, Steel - 8-32 hexagon - used same as #8 lockwashers plus 2 additional for speaker to dial plate	6																																		
27	Nuts, Steel - 3/8" by 36 thread hexagon - used same as 3/8" lockwashers	2																																		
28	Plate, Dial - for mounting dial scale and idler pulleys	1																																		
29	Plate, Selenium Rectifier Adaptor - for mounting over socket hole and then for mounting selenium rectifier	1																																		
30	Pointer, Dial Scale	1																																		
31	Dial Scale	1																																		
32	Potentiometer or Volume Control with power supply "on-off" switch - 500,000 ohms	3																																		
33	Pulleys, Idler - for dial cable and dial scale pointer assembly - rivet to back of dial plate	1																																		
34	Washer, Selenium	1																																		
35	Washer, Grip Strain - 2 pieces - plastic - for relieving strain on soldered connections when power supply cord is plugged in to power supply outlets	2																																		
36	Resistor, Carbon 22 ohms 1 watt - (red-black color code)	1																																		
37	Resistor, Carbon 56 ohms 1 watt - (green-blue-black color code)	1																																		
38	Resistor, Carbon 150 ohms 1 watt - (brown-green color code)	1																																		

APPROX. GAIN PER STAGE USING
CHANALYST AND WITH A FIXED BIAS OF -3 VOLTS



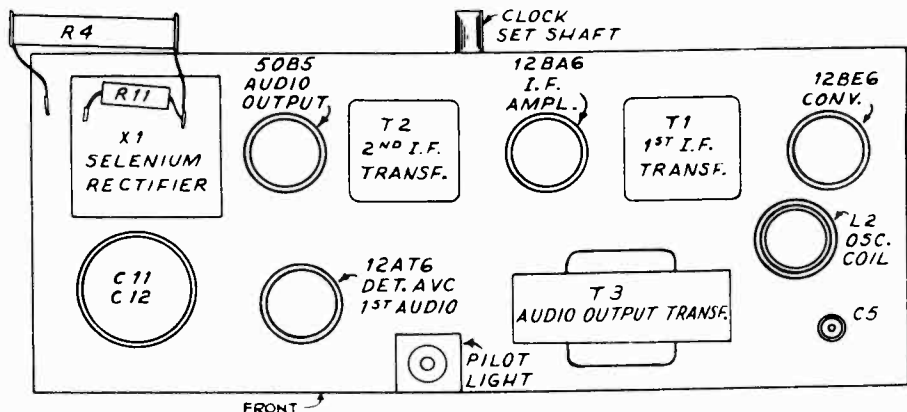
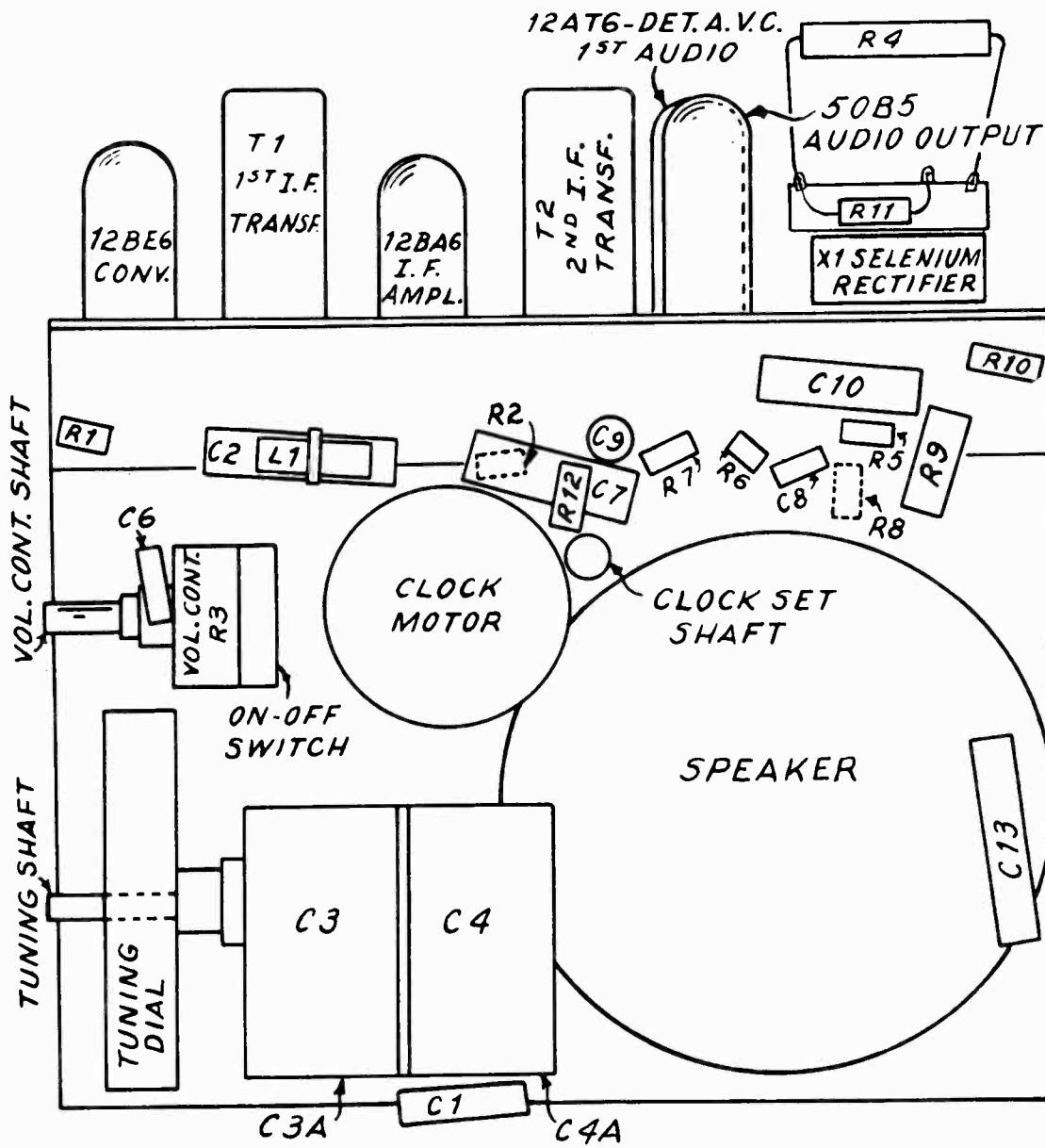
NOTE:
SOME SETS HAVE
PERMEABILITY TUNED
IF'S INSTEAD OF
CAPACITY TUNED
AS SHOWN.

117 V.
60 CYCLES
AC ONLY

CLOCK

MODEL 505
CLOCK RADIO

JEWEL RADIO CORP.



JEWEL RADIO CORP.

MODEL 505,
CLOCK RADIO

TUBE	PIN	VTVM	20,000/V	1,000/V	RESISTANCE
12 BE6 Conv. 600 KC	1	-4.5	-3.8	-2	20K
		-5	-4.8	-2.4	
	2	0	0	0	0.4Ω
	3	AC	AC	AC	10Ω
	4	AC	AC	AC	24Ω
	5	+84	+84	+84	over 100K
	6	+84	+84	+84	over 100K
	7	-0.3	0	0	3 megs.
12 BA6 IF AMPL	1	-0.3	0	0	3 megs.
	2	0	0	0	0
	3	AC	AC	AC	24Ω
	4	AC	AC	AC	38Ω
	5	+84	+84	+84	over 100K
	6	+84	+84	+84	over 100K
	7	+1	+1	+1	100Ω
12AT6 DET. AVC 1st AUDIO	1	-0.4	-0.2	0	10 megs.
	2	0	0	0	0.4Ω
	3	AC	AC	AC	0
	4	AC	AC	AC	10Ω
	5	-0.5	-0.4	-0.2	500K
	6	-0.5	-0.4	-0.2	500K
	7	+60	+60	+28	over 100K
50B5 Audio Output	1	0	0	0	500K
	2	+5	+5	+5	150Ω
	3	AC	AC	AC	38Ω
	4	AC	AC	AC	85Ω
	5	+125	+125	+125	over 100K
	6	+85	+85	+85	over 100K
	7	0	0	0	500K

ALL VOLTAGE AND RESISTANCE MEASUREMENTS MADE WITH RESPECT TO CHASSIS GROUND. AND WITH A LINE VOLTAGE 116 V.A.C.

ALIGNMENT PROCEDURE

Connect output meter across Voice Coil.

Connect the signal generator to the standard Hazeltine Loop Model 1150 and couple it loosely to the receiver loop. Set the volume control at maximum, and fully mesh the tuning capacitor.

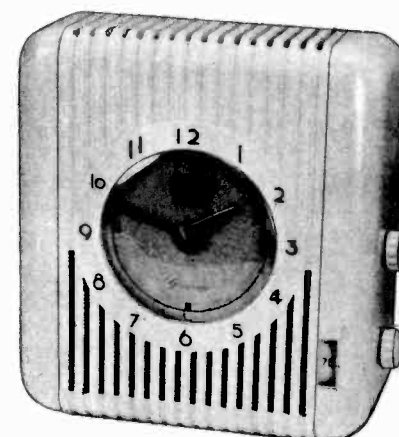
The output of the signal generator should be just sufficient to give a readable deflection on the output meter.

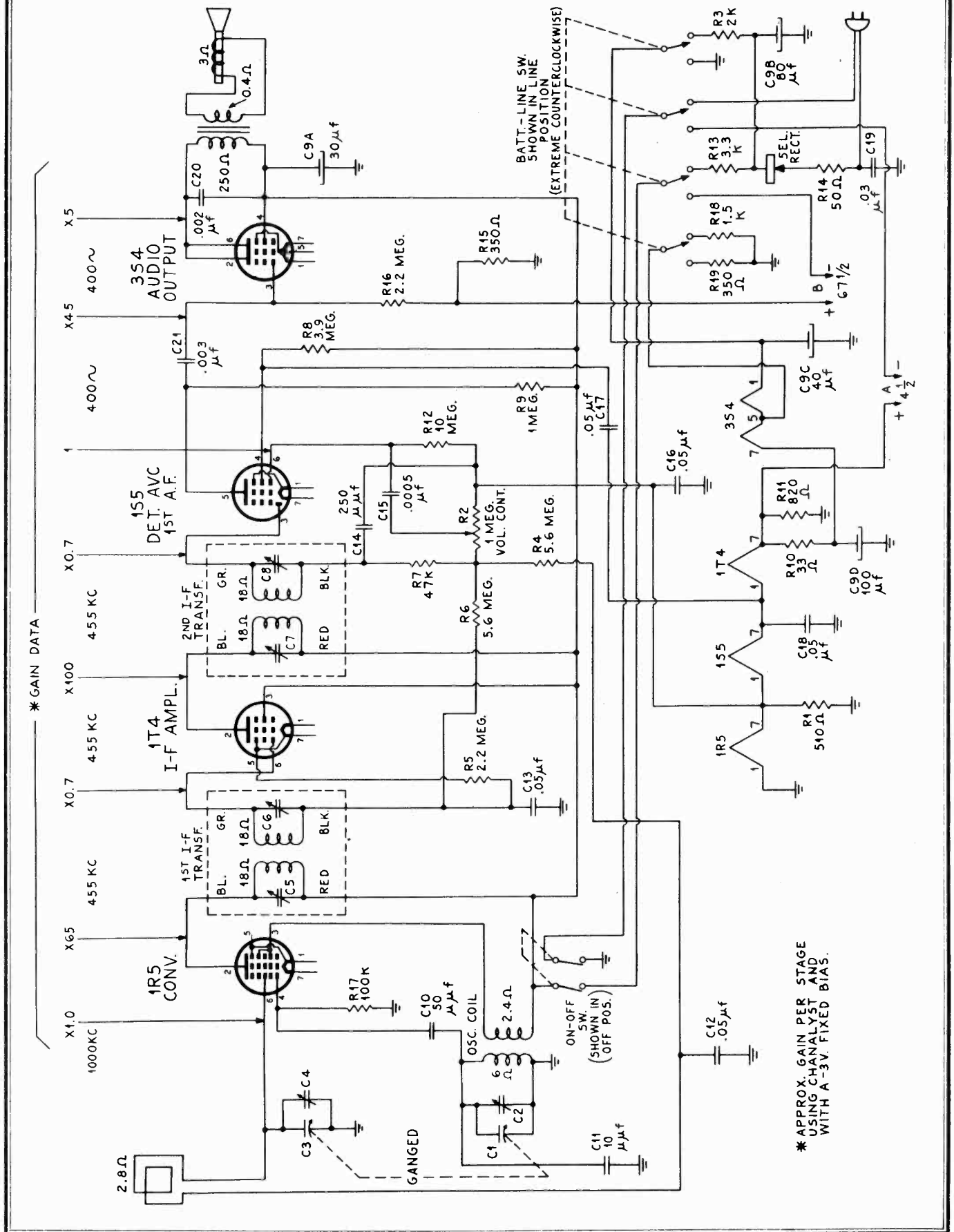
Set the signal generator to 455 kc and adjust i-f trimmers for maximum output in the following order: L6, L5, L4, L3. Repeat sequence if trimmers were badly maladjusted.

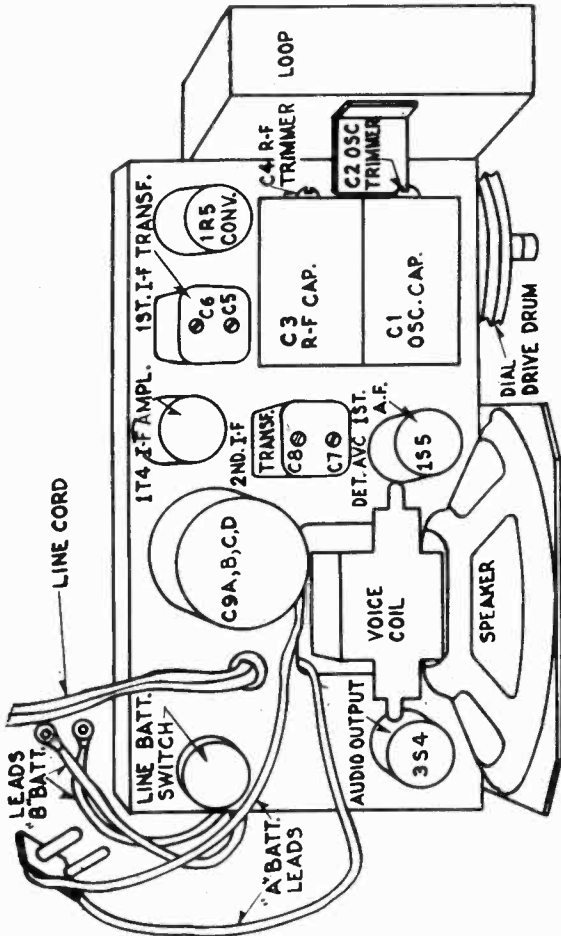
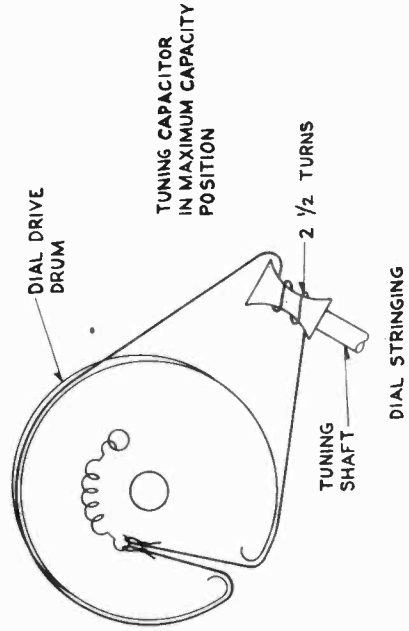
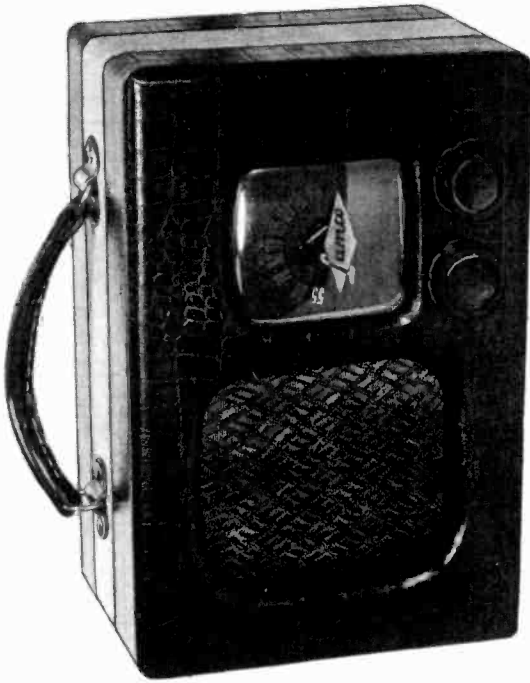
Set the signal generator and receiver to 1600 kc and adjust the oscillator trimmer C4A for maximum output.

Set the signal generator and receiver to 1400 kc and adjust the antenna trimmer C3A for maximum output.

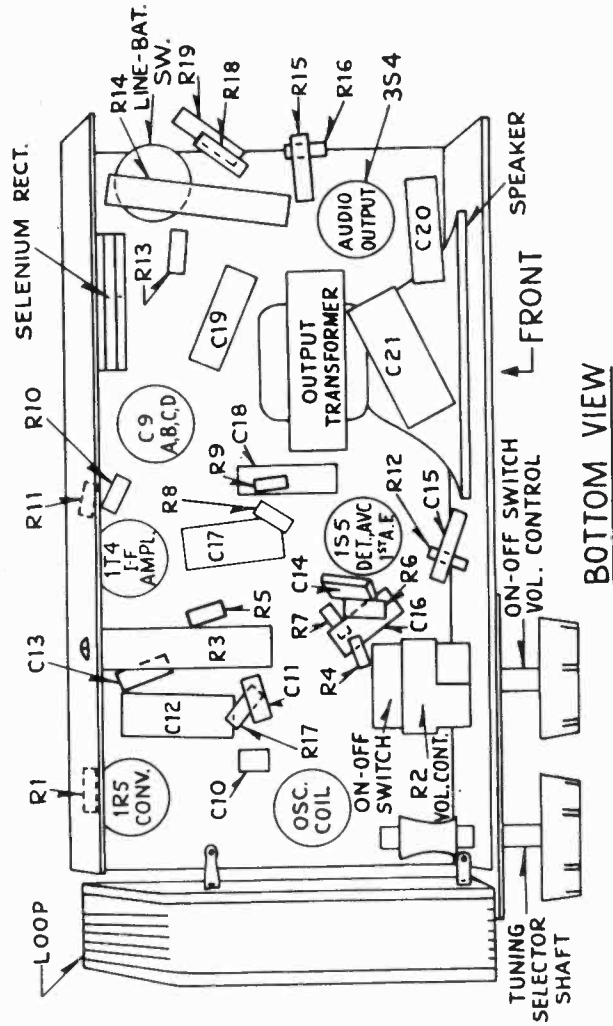
Set the signal generator and receiver to 1400 kc and readjust oscillator trimmer C3A for maximum output.







TOP VIEW



BOTTOM VIEW

LA MAGNA MFG. CO.

MODELS LAMCO,
3000

Alignment Procedure

IF ALIGNMENT

Remove chassis from cabinet. Connect an output meter across the voice coil. Connect the signal generator to the standard Hazeltine loop, Model 1150 and couple it loosely to the receiver loop.

Set the signal generator to 455 KC and fully mesh the receiver tuning capacitor. Keep the receiver volume control at maximum and the output of the signal generator sufficient to give a readable deflection on the output meter. Adjust for maximum IF trimmers, C8, C7, C6, C5.

RF OSC ADJUSTMENT

Keeping the same setup as used for the IF Alignment, set the signal generator and receiver to 1600 KC and adjust oscillator trimmer C2 for maximum output.

Set the signal generator and receiver to 1400 KC and adjust RF trimmer C4 for maximum output.

TUBE	PIN	VTVM	20,000Ω/V	1,000Ω/V	RESISTANCE	
IR5 60NV OSC Volt	1	0	0	0	0	
	2	+71V.	+71	+71	over 5 Meg.	
	3	+71V.	+71	+71	over 5 Meg.	
	4	550KC	-20	-12	-5.4	100K
		1600KC	-37	-23	-22	100K
	5	0	0	0	0	
	6	0	0	0	0	7 Meg.
	7	+1.4	+1.4	+1.4	17Ω	
IT4	1	+2.75	+2.75	+2.75	31Ω	
	2	+71	+71	+71	over 5 Meg.	
	3	+71	+72	+71	over 5 Meg.	
	4	--	--	--	---	
	5	+2.75	+2.75	+2.75	21Ω	
	6	+1.9	+0.3	0	1.6 Meg.	
	7	+4	+4	+4	41Ω	
IS5 DET AVC 1st AF	1	+1.4	+1.4	+1.4	17Ω	
	2	+1.0	+1.0	0	0.9 Meg.	
	3	+1.1	+0.3	0	0.9 Meg.	
	4	+20	+17	+0.2	over 5 Meg.	
	5	+17	+14	+0.8	over 5 Meg.	
	6	+0.8	0	0	9 Meg.	
	7	+2.8	+2.8	+2.8	31Ω	
3S4	1	+9	+9	+9	95Ω	
	2	+70	+70	+70	over 5 Meg.	
	3	0	0	0	2.1 Meg.	
	4	+71	+71	+71	over 5 Meg.	
	5	+7.5	+7.5	+7.5	80Ω	
	6	+70	+70	+70	over 5 Meg.	
	7	+6	+6	+6	65Ω	

(Bolt-line switch in line position)

All voltage and resistance measurements are made with respect to chassis ground and with a line voltage of 116V. AC