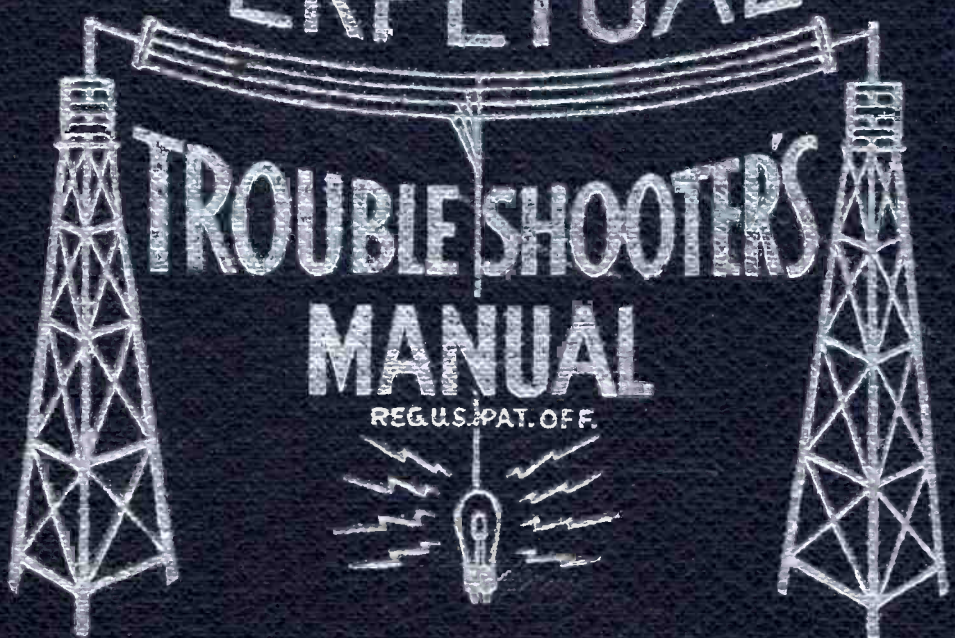
VOLUME XVII

PERPETUAL TROUBLE SHOOTER'S MANUAL

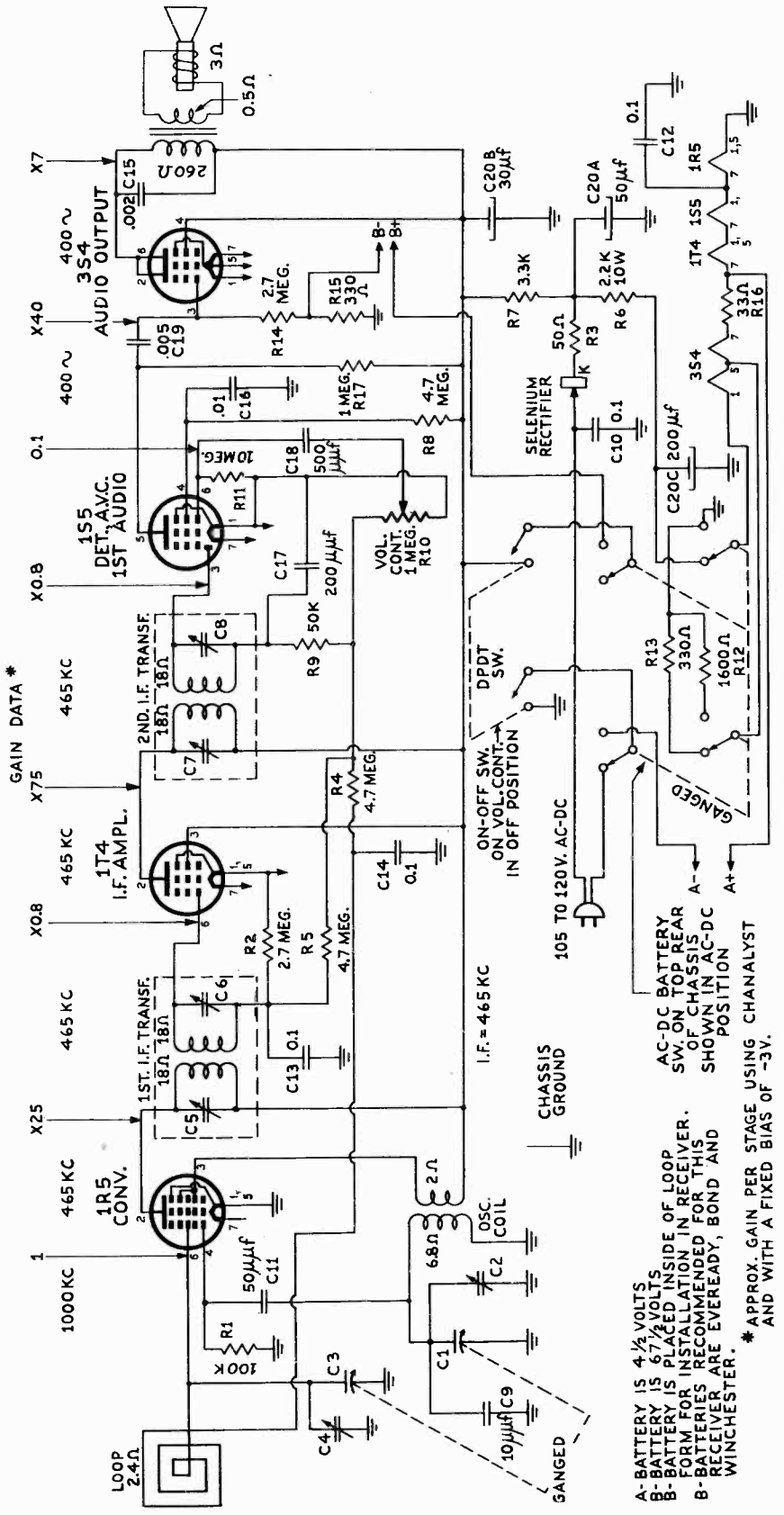


REG. U.S. PAT. OFF.

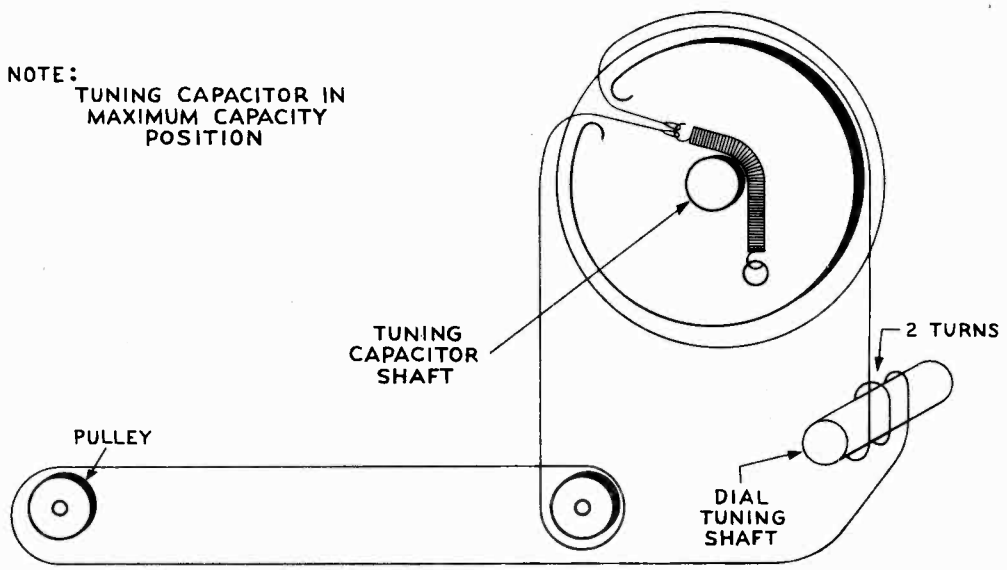
JOHN F. RIDER

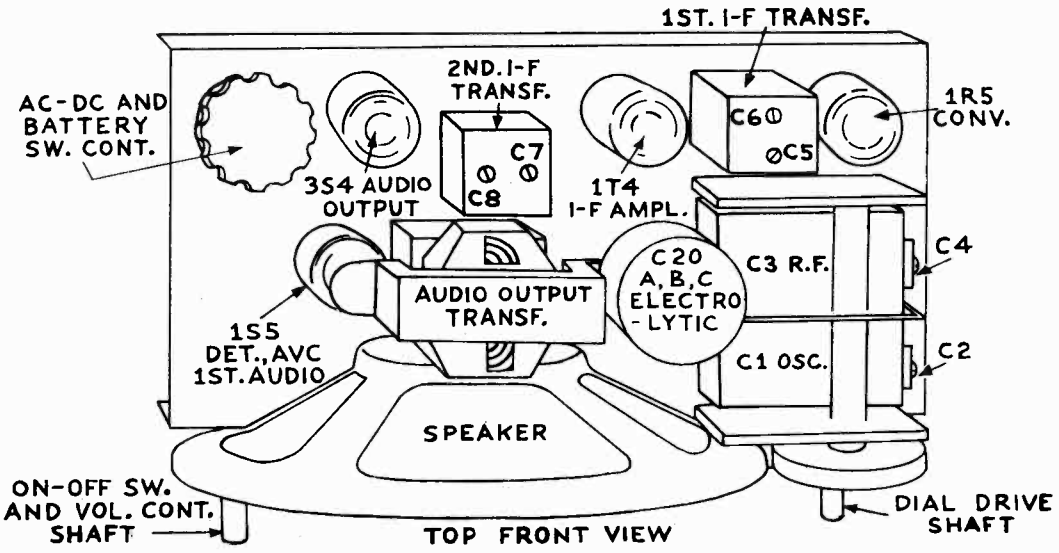
LEANDER ELECTRONICS CORP.

MODEL 707



MODEL 707 LEANDER ELECTRONICS CORP.





IF ALIGNMENT

CONNECT AN OUTPUT METER ACROSS THE VOICE COIL OF THE RECEIVER. CONNECT A SIGNAL GENERATOR TO THE STANDARD HAZELTINE LOOP MODEL 1150 AND COUPLE IT LOOSELY TO THE RECEIVER LOOP.

SET THE SIGNAL GENERATOR TO 465 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 I.F. TRIMMERS C8, C7, C6 AND C5.

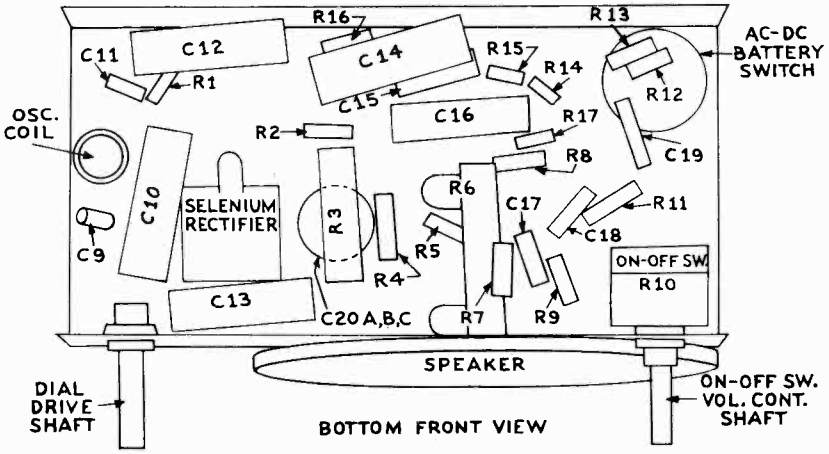
RF OSC. ADJUSTMENT

KEEPING THE SAME SETUP AS USED FOR I.F. ALIGNMENT, SET THE SIGNAL GENERATOR AND RECEIVER TO 1600 KC AND ADJUST OSCILLATOR TRIMMER C2 FOR MAXIMUM OUTPUT.

NEXT, SET THE SIGNAL GENERATOR AND RECEIVER TO 1400 KC AND ADJUST ANTENNA TRIMMER C4 FOR MAXIMUM OUTPUT.

LEANDER ELECTRONICS CORP.

MODEL 707

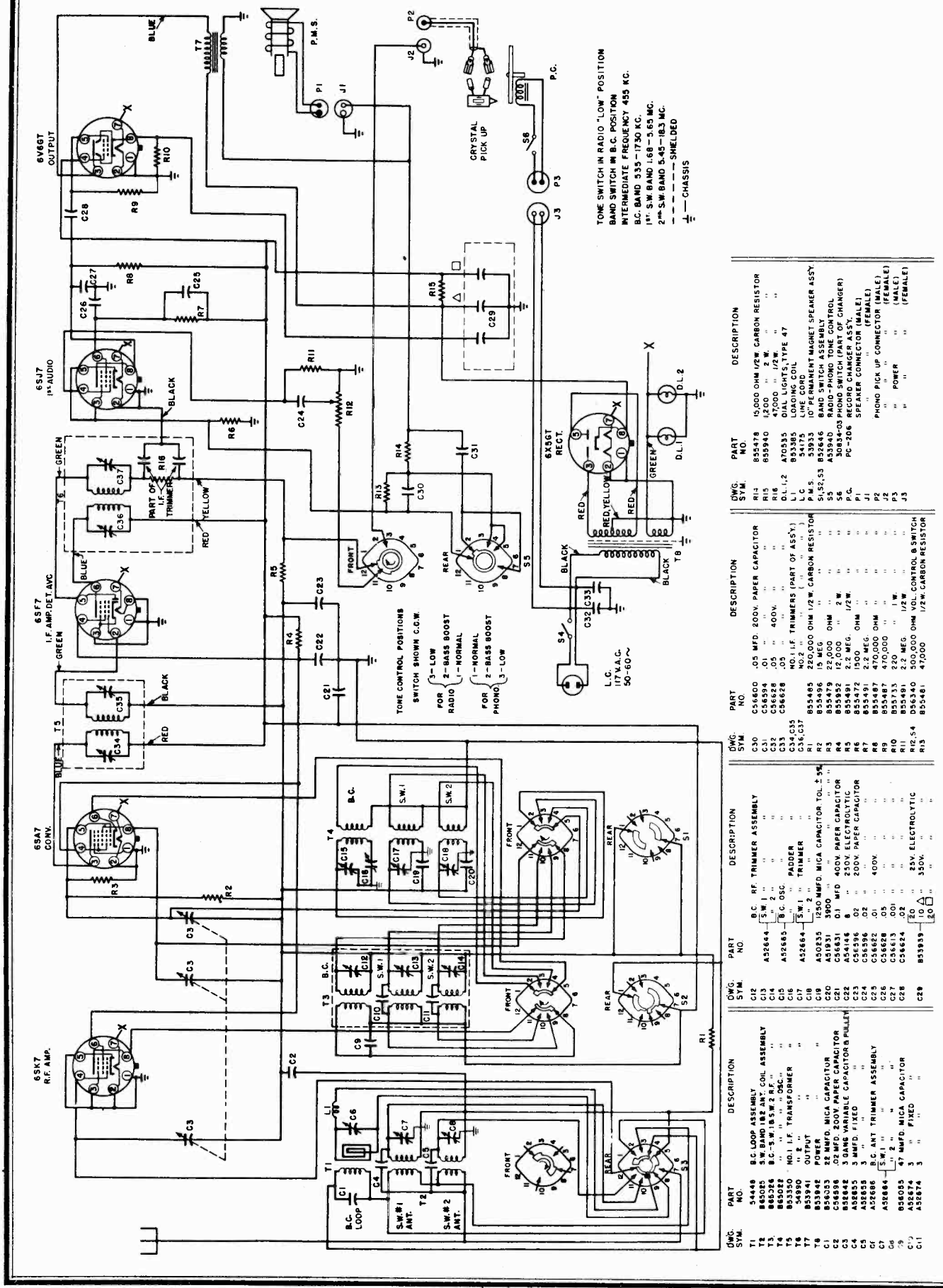


TUBE	PIN	VTVM	20,000 OHM P.V.	1,000 OHM P.V.	RESISTANCE
1R5	1	0	0	0	0
CONV.	2	+66	+66	+66	5.5 K
	3	+66	+66	+66	5.5 K
OSC. VOLTAGE	4				
	550 KC	-10	-5	-0.5	100 K
	1600 KC	-20	-12	-4.5	100 K
	5	--	--	--	--
	6	+0.4	0	0	5.5 MEG
	7	+1.2	+1.2	+1.2	12 OHM
1T4	1	+2.3	+2.3	+2.3	26 OHM
I.F. AMPL.	2	+66	+66	+66	5.5 K
	3	+66	+66	+66	5.5 K
	4	-0.4	0	0	5.5 MEG
	5	+2.3	+2.3	+2.3	26 OHM
	6	-1.3	-0.2	0	1.75 MEG
	7	+3.5	+3.5	+3.5	36 OHM
1S5	L	+1.2	+1.2	+1.2	12 OHM
DET. AVC	2	+0.6	-0.2	0	900 K
1st AUDIO	3	+0.6	-0.2	0	900 K
	4	+17	+14	+2	4.5 MEG
	5	+38	+36	+6	800 K
	6	0	0	0	9 MEG
	7	+2.3	+2.3	+2.3	26 OHM
3S4	1	+7.4	+7.4	+7.4	75 OHM
AUDIO	2	+64	+64	+64	5.5 K
OUTPUT	3	0	0	0	2.5 MEG
	4	+66	+66	+66	5.5 K
	5	+5.6	+5.6	+5.6	60 OHM
	6	+64	+64	+64	5.5 K
	7	+4.6	+4.6	+4.6	55 OHM
SELENIUM RECTIFIER	K	+125	+125	+125	2.2 K

NOTE: ALL VOLTAGE AND RESISTANCE MEASUREMENTS MADE WITH RESPECT TO CHASSIS GROUND AND WITH A LINE VOLTAGE OF 116 V.A.C. AC-DC BATTERY SWITCH IS IN AC-DC POSITION

LEAR, INC.

MODELS 6610, 6611, 6612,
6610PC, 6611PC, 6612PC
Early production



DWG. SYM.	PART NO.	DESCRIPTION
T1	54448	B.C. LOOP ASSEMBLY
T2	865025	S.W. BAND 1 & 2 ANT. COIL ASSEMBLY
T3	865026	B.C.-S.W.1 & S.W.2 R.F. " " "
T4	865022	" " " " " OSC. " " "
T5	865350	NO.1 I.F. TRANSFORMER " " "
T6	865349	NO.2 " " " " " " "
T7	853941	OUTPUT " " "
T8	853848	POWER " " "
C1	856053	22 MMFD. MICA CAPACITOR
C2	056936	.02 MFD. 200V PAPER CAPACITOR
C3	852842	3 GANG VARIABLE CAPACITOR & PULLEY
C4	852855	3 MMFD. FIXED " "
C5	852853	3 " " " "
C6	852686	B.C. ANT TRIMMER ASSEMBLY
C7	852864	S.W.1 " " " "
C8		" 2 " " " "
C9	856053	47 MMFD. MICA CAPACITOR
C10	852874	3 " " FIXED " "
C11	852874	3 " " " " "

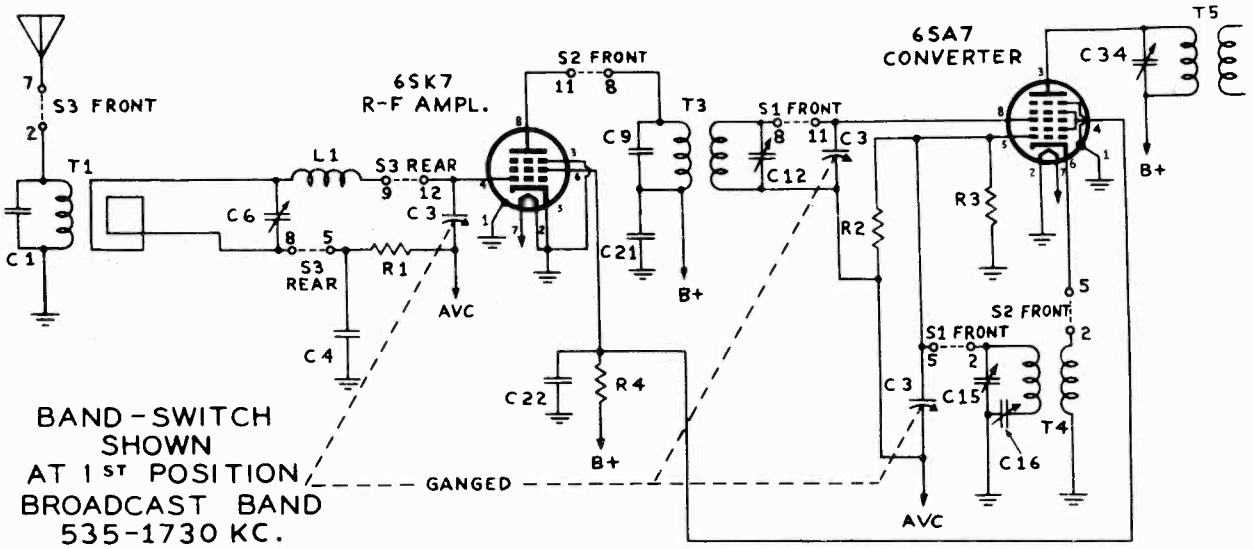
DWG. SYM.	PART NO.	DESCRIPTION
C12		B.C. R.F. TRIMMER ASSEMBLY
C13	852644	S.W.1 " " " "
C14		" 2 " " " "
C15	852685	B.C. OSC. " " "
C16		PADDER " " "
C17	852664	S.W.1 " " " "
C18		" 2 " " " "
C19	850235	250 MMFD. MICA CAPACITOR TOL. ± 5%
C20	851931	3900 " " " " "
C21	056831	.01 MFD 400V PAPER CAPACITOR
C22	854146	8 " 250V. ELECTROLYTIC
C23	056936	.02 " 200V. PAPER CAPACITOR
C24	056936	.02 " " " "
C25	056822	.01 " 400V. " "
C26	056828	.05 " " " "
C27	056813	.001 " " " "
C28	056824	.02 " " " "
C29	853939	20 " 25V. ELECTROLYTIC
		10 " 350V. " "
		20 " " " "

DWG. SYM.	PART NO.	DESCRIPTION
C30	056600	.05 MFD. 200V. PAPER CAPACITOR
C31	056594	.01 " " " " "
C32	056828	.05 " 400V. " "
C33	056828	.05 " " " "
C34,C35		NO.1 I.F. TRIMMERS (PART OF ASS'Y.)
C36,C37		NO.2 " " " (" " " ")
R1	855485	220,000 OHM 1/2 W. CARBON RESISTOR
R2	855496	15 MEG " " "
R3	855492	22,000 OHM " " "
R4	855932	47,000 " 2 W. " "
R5	855491	2.2 MEG. 1/2 W. " "
R6	855472	1500 OHM " " "
R7	855491	2.2 MEG. " " "
R8	855487	470,000 OHM " " "
R9	855487	470,000 " " " "
R10	855733	220 " 1 W. " "
R11	855491	2.2 MEG 1/2 W " "
R12,S4	D56340	500,000 OHM VOL. CONTROL & SWITCH
R13	855481	47,000 1/2 W. CARBON RESISTOR

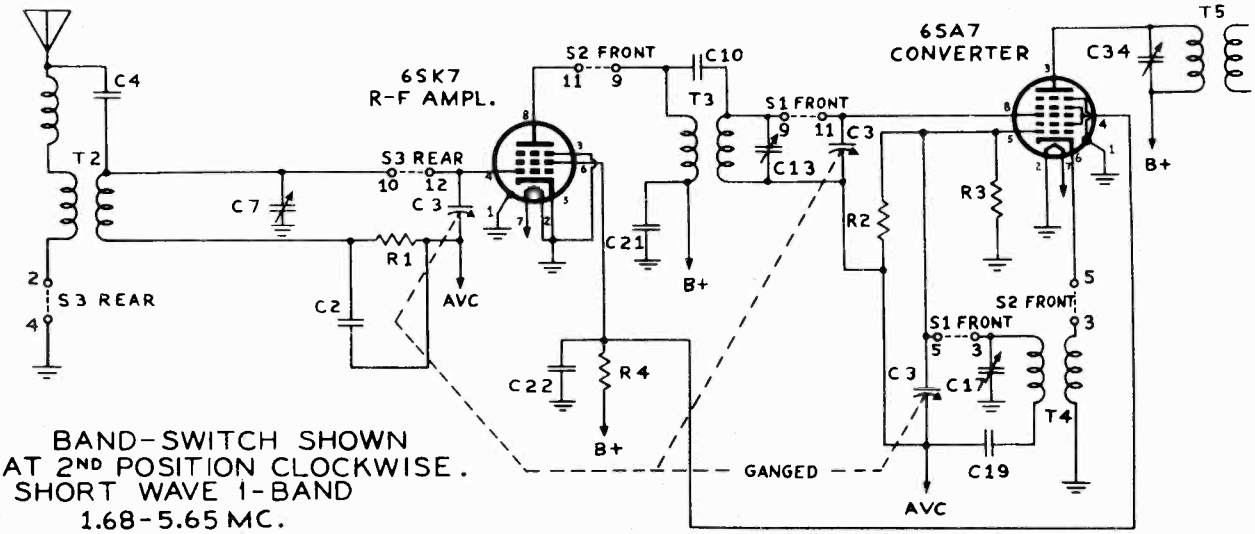
DWG. SYM.	PART NO.	DESCRIPTION
R14	855478	15,000 OHM 1/2 W CARBON RESISTOR
R15	855940	1,200 " 2 W. " "
R16		47,000 " 1/2 W. " "
D.L.1,2	A70535	DIAL LIGHTS, TYPE 47
L1	B53385	LOADING COIL
L C	54175	LINE CORD
P.M.S.	53933	10" PERMANENT MAGNET SPEAKER ASS'Y.
S1,S2,S3	852646	BAND SWITCH ASSEMBLY
S5	A53940	RADIO-PHONO TONE CONTROL
S6	30834-03	PHONO SWITCH (PART OF CHANGER)
P.C.	PC-206	RECORD CHANGER ASS'Y.
P1		SPEAKER CONNECTOR (MALE)
J1		" " " (FEMALE)
P2		PHONO PICK UP CONNECTOR (MALE)
J2		" " " " (FEMALE)
P3		" POWER " (MALE)
J3		" " " (FEMALE)

MODELS 6610, 6611, 6612
6610PC, 6611PC, 6612PC
Early production

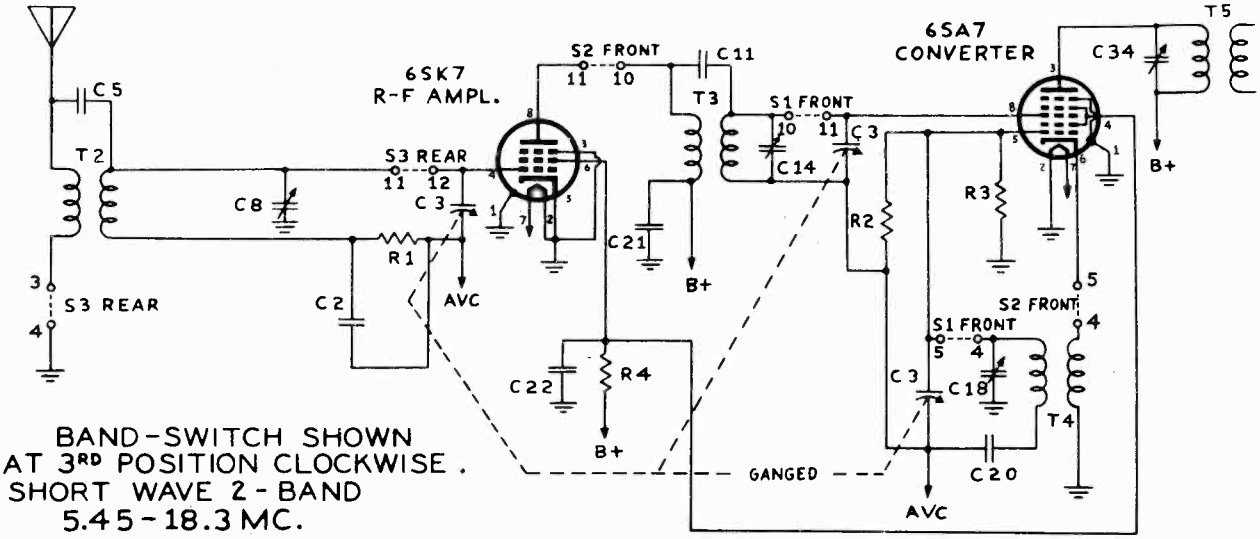
LEAR, INC.



BAND-SWITCH SHOWN AT 1ST POSITION BROADCAST BAND 535-1730 KC.



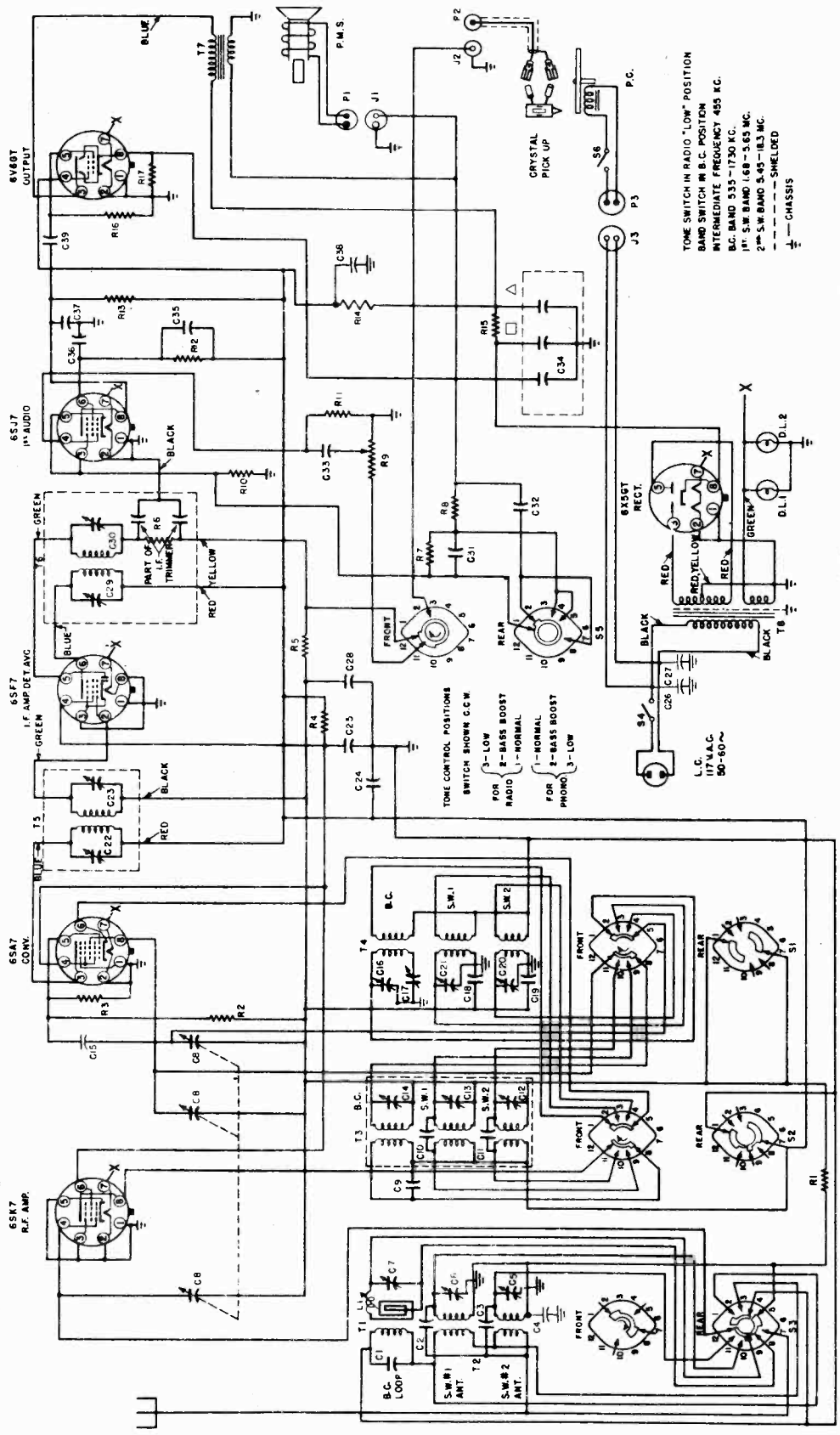
BAND-SWITCH SHOWN AT 2ND POSITION CLOCKWISE. SHORT WAVE 1-BAND 1.68-5.65 MC.



BAND-SWITCH SHOWN AT 3RD POSITION CLOCKWISE. SHORT WAVE 2-BAND 5.45-18.3 MC.

LEAR, INC.

MODELS 6610, 6611, 6612,
6610PC, 6611PC, 6612PC
Late production

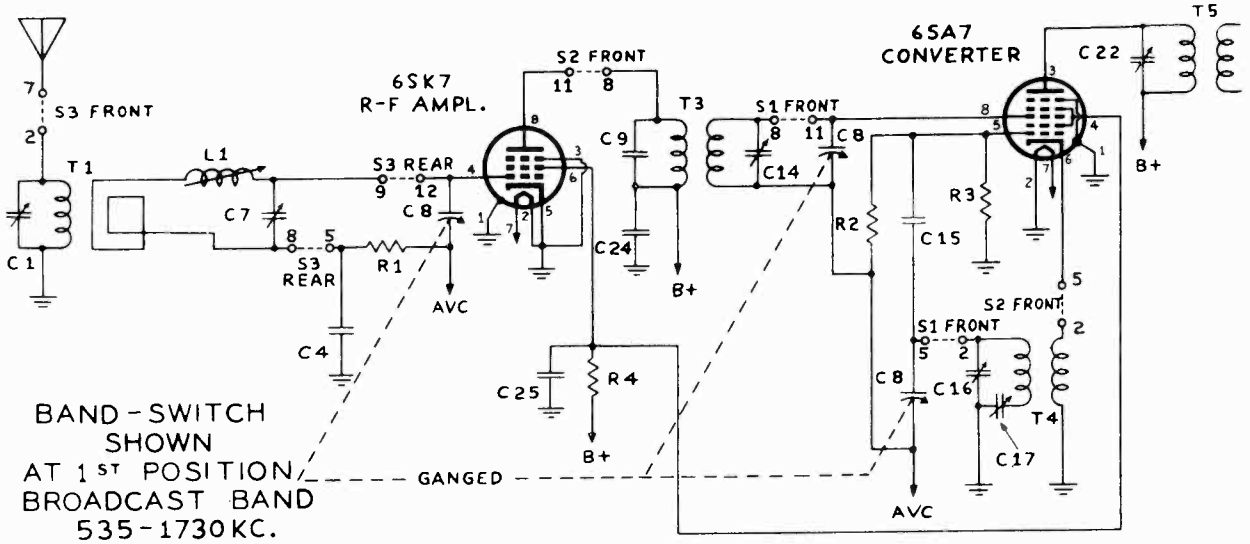


DWG. SYM.	PART NO.	DESCRIPTION
T1	882651	B.C. LOOP ASSEMBLY
T2	885025	S.W. BAND 1&2 ANT. COIL ASSEMBLY
T3	868068	B.C.-S.W. 1 & S.W. 2 R.F. "
T4	868082	" " " " " OSC. "
T5	853350	NO. 1 I.F. TRANSFORMER
T6	853341	" 2 " "
T7	853941	OUTPUT " "
T8	853942	POWER " "
C1	856055	15 MMFD MICA CAPACITOR
C2	856055	15 MMFD " "
C3	A52635	3 MMFD FIXED "
C4	C56596	.02 MFD. 200V PAPER CAPACITOR
C5	A52664	SW. 2 ANT. TRIMMER ASSEMBLY
C6	"	" " " "
C7	A52686	B.C. ANT. TRIMMER ASSEMBLY
C8	B52642	3 GANG VARIABLE CAPACITOR & PULLEY
C9	856057	100 MMF. MICA CAPACITOR
C10	A52674	3 MMFD. FIXED "
C11	A52674	3 " " "
C12	A52644	SW. 2 R.F. TRIMMER ASSEMBLY
C13	"	" " " "
C14	B56057	B.C. R.F. TRIMMER ASSEMBLY
C15		100 MMF. MICA CAPACITOR
C16	A52663	B.C. OSC. TRIMMER ASSEMBLY
C17	"	" " PADDER "
C18	A50235	1250 MMFD MICA CAPACITOR TOL. ±5%
C19	A51931	500 MMFD " " "
C20	"	SW. 2 OSC. TRIMMER ASSEMBLY
C21	A52664	" " " "
C22, C23		NO. 1 I.F. TRIMMER (PART OF ASS'Y)
C24	C56631	.01 MFD. 400V PAPER CAPACITOR
C25	A54146	.10 " 350V ELECTROLYTIC
C26	C56628	.05 MFD. 400V PAPER CAPACITOR
C27	C56628	.05 " " "
C28	C56596	.02 " 200V " "
C29, C30		NO. 2 I.F. TRIMMER (PART OF ASS'Y)
C31	C56600	.05 MFD. 200V PAPER CAPACITOR
C32	C56594	.01 " " " "
C33	C56596	.02 MFD. 200V PAPER CAPACITOR
C34	853939	20 " 25 V ELECTROLYTIC
		10 " 350 V "
		20 " "
C35	C56622	.01 " 400V PAPER CAPACITOR
C36	C56628	.05 " " "
C37	C56615	.001 " " "
C38	856446	350V ELECTROLYTIC
C39	C56604	.02 MFD. 400V PAPER CAPACITOR
R1	855465	220,000 OHM 1/2 W CARBON RESISTOR
R2	855496	1.5 MEG " " "
R3	855479	22,000 " " "
R4	853932	12,000 " 2 W "
R5	855491	2.2 MEG 1/2 W "
R6	955481	47,000 " " " (PART OF I.F. ASS'Y)
R7	855481	47,000 " " "
R8	855478	15,000 " " "
R9, S4	D56340	500,000 OHM VOL. CONTROL & SWITCH
R10	855472	1500 OHM 1/2 W CARBON RESISTOR

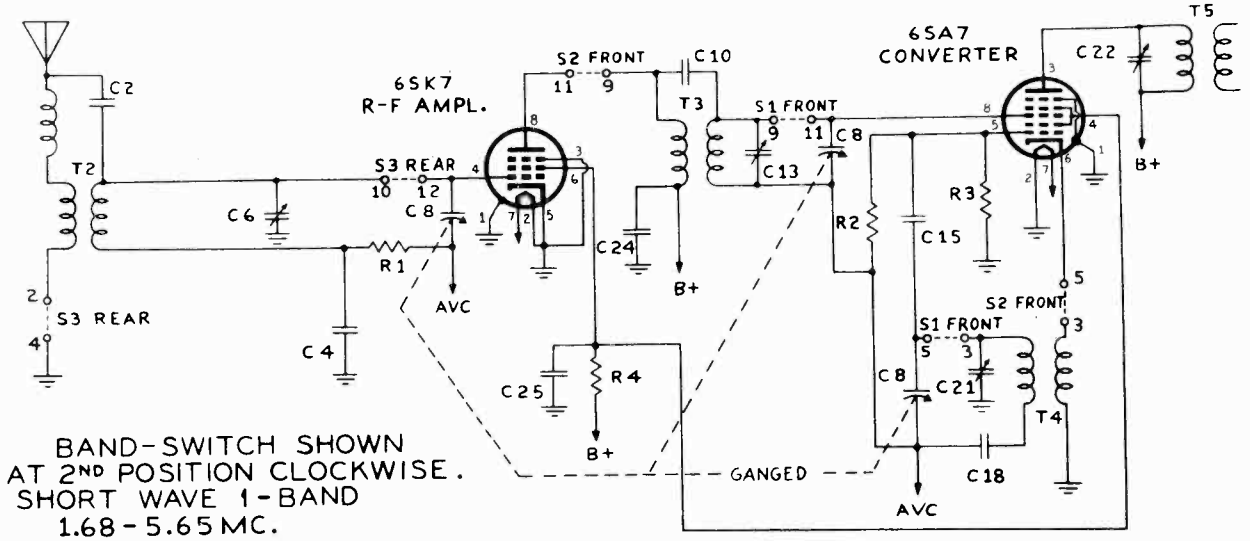
DWG. SYM.	PART NO.	DESCRIPTION
R11	855491	2.2 MEG 1/2 W CARBON RESISTOR
R12	855491	" " " "
R13	855487	470,000 OHM " "
R14	855940	1200 OHM 2 W "
R15	855999	200 " 2 W "
R16	855487	470,000 " 1/2 W "
R17	855733	220 " 1 W "
D.L.1,2	A70355	DIAL LIGHT TYPE 47
L.C.	B61732	LOADING COIL "
L.C.	B61732	" " "
P.M.S.	B55933	10" PERMANENT MAGNET SPEAKER
S1, S2, S3	B32646	BAND SWITCH ASS'Y
S5	A53940	RADIO, PHONO TONE CONTROL
S6	30834-03	PHONO SWITCH (PART OF CHANGER
P.C.	PC-206	RECORD CHANGER ASS'Y
P1		SPEAKER CONNECTOR (MALE)
J1		" " (FEMALE)
P2		PHONO PICK UP CONNECTOR (MALE)
J2		" " " (FEMALE)
P3		" POWER " (MALE)
J3		" " " (FEMALE)

MODELS 6610, 6611, 6612,
6610PC, 6611PC, 6612PC
Late production

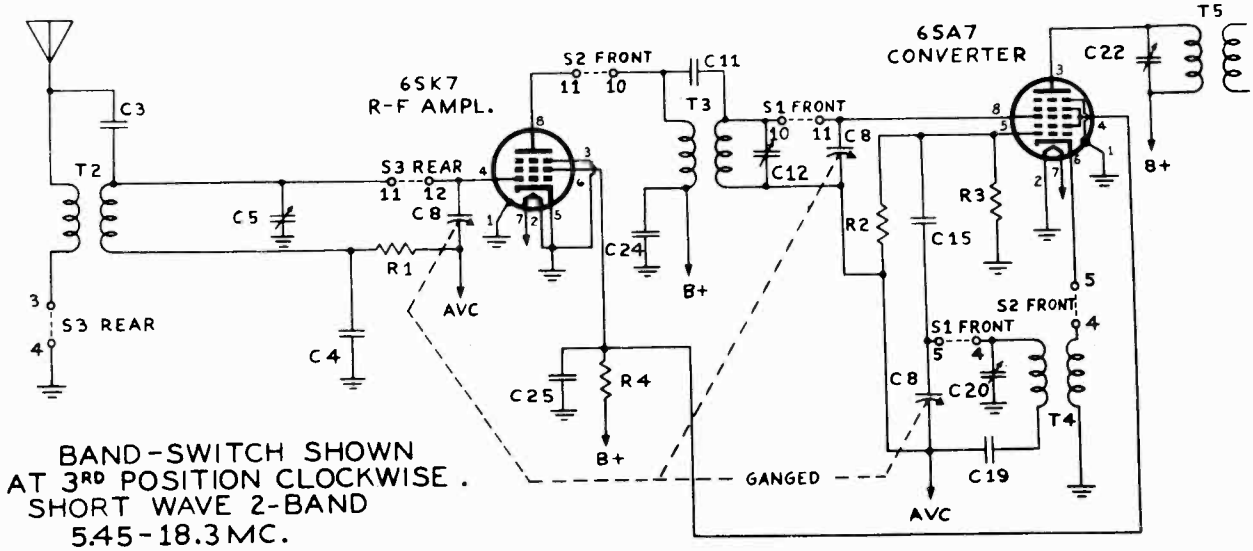
LEAR, INC.



BAND-SWITCH SHOWN AT 1ST POSITION BROADCAST BAND 535-1730 KC.



BAND-SWITCH SHOWN AT 2ND POSITION CLOCKWISE. SHORT WAVE 1-BAND 1.68-5.65 MC.



BAND-SWITCH SHOWN AT 3RD POSITION CLOCKWISE. SHORT WAVE 2-BAND 5.45-18.3 MC.

ALIGNMENT CHART

OPERATION	ALIGNMENT OF	GENERATOR CONNECTED TO	DUMMY ANTENNA	GENERATOR FREQUENCY	BAND SWITCH SETTING	DIAL AND CONDENSER SETTING	TRIMMER	REMARKS
1	Set dial pointer to last mark at Low frequency end of dial with gang condenser closed.							
2	2nd. I.F.	6SA7 Grid and Gnd.	.05 Mf.	455 KC	BC	Open	C29 & C30	Max. Output
3	1st. I.F.						C22 & C23	Max. Output
4	BC	Antenna Lead & Gnd.	200 mmf.	1500 KC	BC	1500 KC	C16*, C12, C7	Max. Output
5				600 KC		600 KC	C17	(osc. padder)
6				Repeat operations 4 and 5 until alignment frequencies fall on correct calibration points				
7				600	BC	600	L1	Max. Output
8				Recheck C7 at 1500 KC and L1 at 600 KC				Max. Output
9	SW1	Antenna Lead &Gnd.	400 ohms (res)	5 MC	1	5 MC	C21, C13, C6	Max. Output
10				1800 KC		1800 KC	* *	* * *
11	SW 2	Antenna Lead &Gnd.	400 ohms (res)	16 MC	2	16 MC	C20*, C14, C5	Max. Output
12				6 MC		6 MC	**	**

NOTES: * Rock dial while trimming C20 at 16 MC. ** Check sensitivity and dial calibration
C7 and L1 are located on Loop Antenna.

VOLTAGE CHART

Line Voltage: 117 volts, 60 cycles AC
Position of Band Switch: Broadcast Band
Position of Volume Control: Full (with no signal)
Position of Tone Switch: Radio - "Normal"

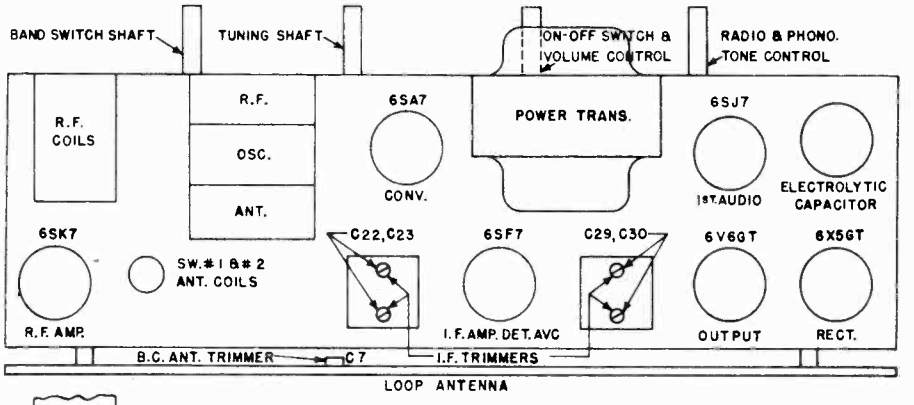
TUBE	FUNCTION	Voltage of each socket prong to Ground (Chassis)							
		No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8
6SK7	R-F Amplifier	0	0	0	0	0	76.B	6.1*	220.A
6SA7	Oscillator-Converter	0	0	220.A	76.B	0	0	6.1*	0
6SF7	I-F Amp. -Detector-AVC	0	0	0	76.B	0	220.A	6.1*	0
6SJ7	1st Audio Amplifier	0	0	.5D	0	.5D	15.A	6.1*	25.A
6V6GT	Beam Power Amplifier	0	0	235.A	220.A	0	—	6.1*	9.C
6X5GT	Rectifier	0	0	250. *	—	250.*	—	6.1*	250.A

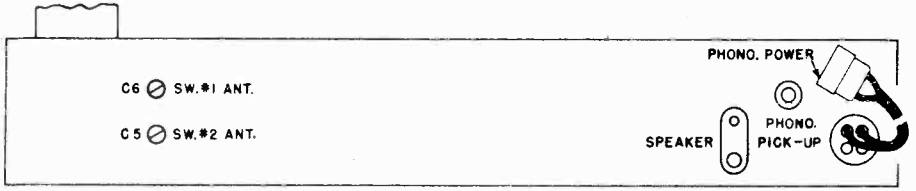
* AC Volts A-250 Volt Scale B-100 Volt Scale C-25 Volt Scale D-5 Volt Scale

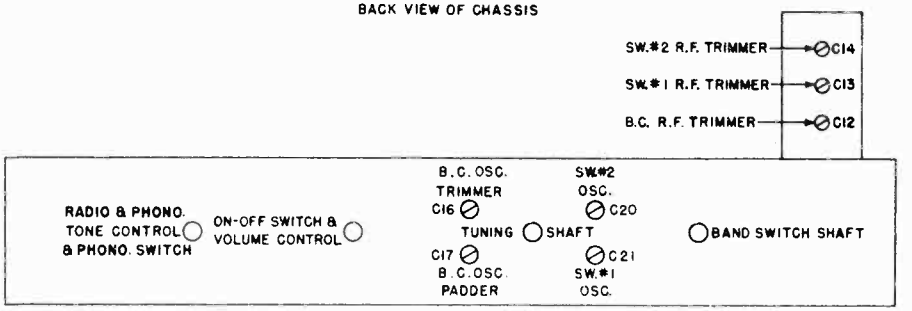
Voltage readings are for schematic diagram in this bulletin. Allow 10% ± on all measurements

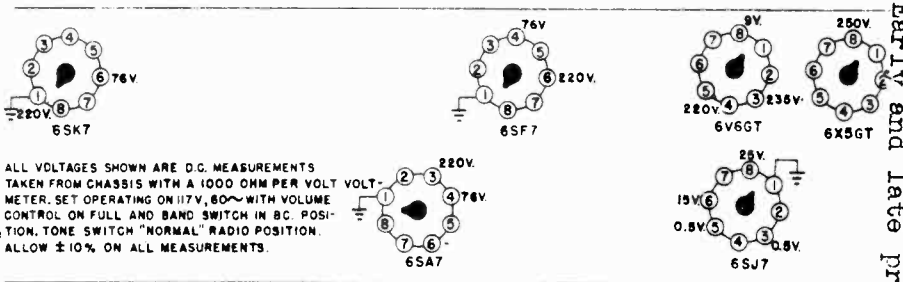
All DC voltages made with 1000 ohms per volt voltmeter

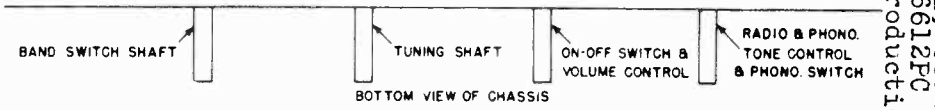
Voltages are DC unless otherwise specified.







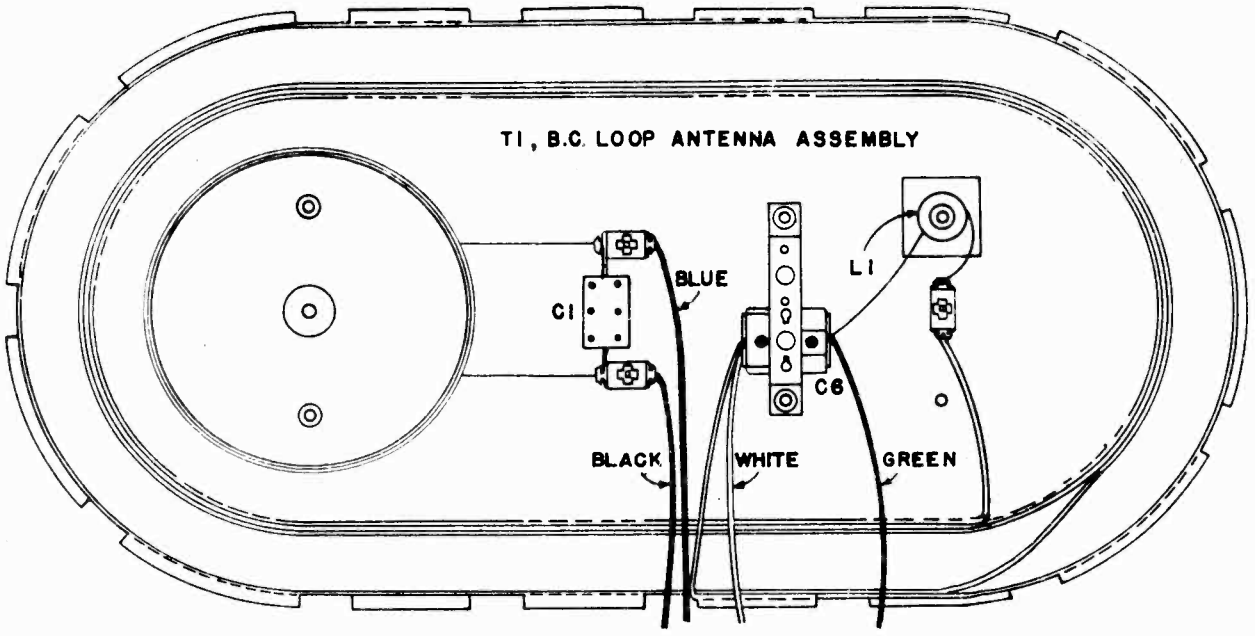




MODELS 6610, 6611, 6612,
6610PC, 6611PC, 6612PC
Early and late production

LEAR, INC.

LOOP WIRING DIAGRAM



DIAL DRIVE DIAGRAM