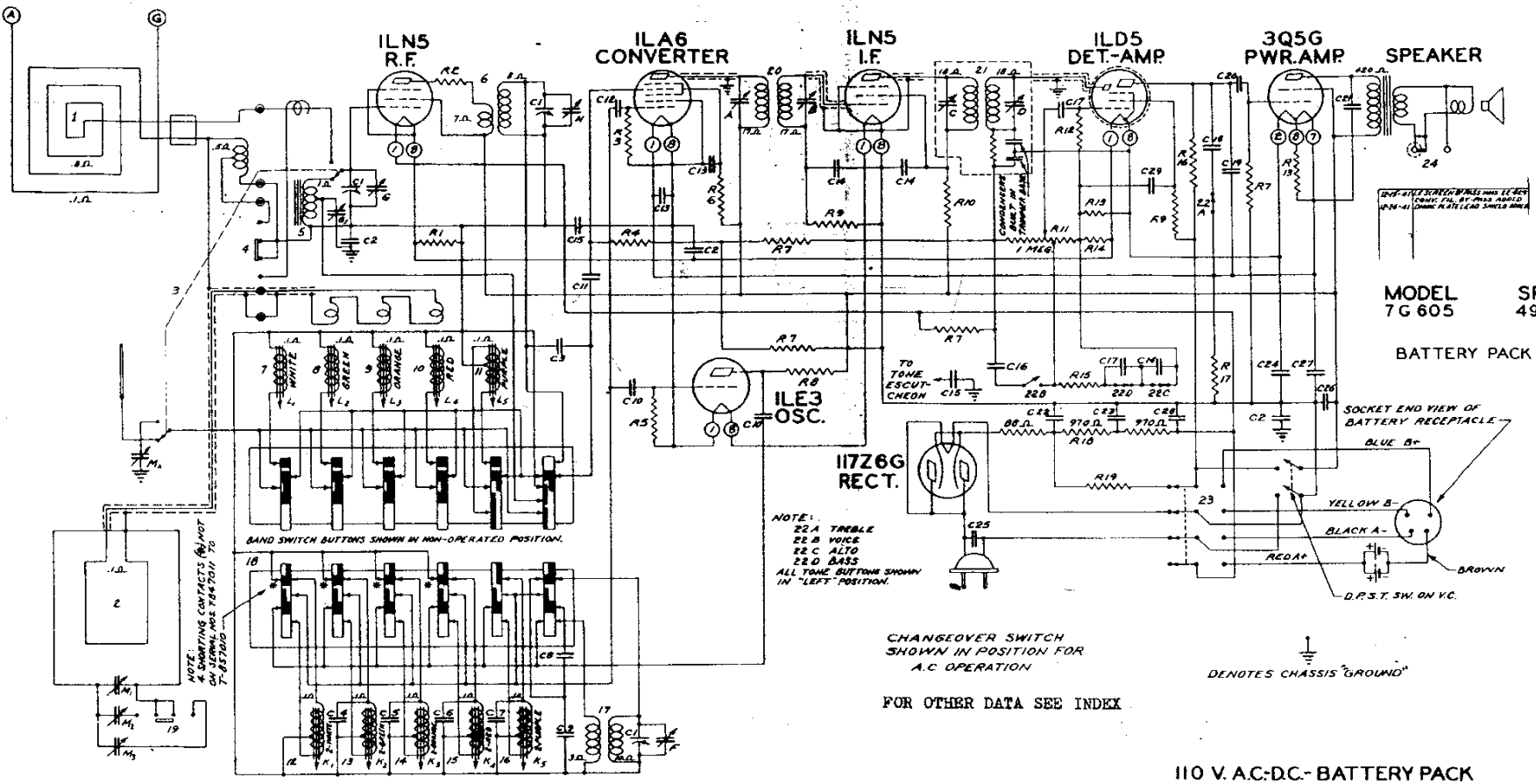
ZENITH RADIO CORP.



DIAG Nº	PART Nº	DESCRIPTION		DIAG Nº	PART Nº	DESCRIPTION		DIAG Nº	PART Nº	DESCRIPTION	DIAG Nº	PART Nº	DESCRIPTION
C1	22-1308	THREE GANG VARIABLE		C26	22-1128	40MFD. ELECTROLYTIC	150 V.				24	44-17	HEADPHONE JACK
C2	22-827	.1 MFD.	200 V.	C27		40 MFD. "	25 V.						
C3	22-1134	15 MMFD.	600 V.	C28	22-1139	20 MFD. "	25 V.	1	S10680	BROADCAST WAVEMAGNET	A		1st I.F. TRANS. PRI.
C4	22-1312	100 MMFD. COMP.		C29	22-326	.003 MFD.	400 V.	2	S10682	SHORTWAVE WAVEMAGNET	B		1st I.F. " SEC.
C5	22-1332	200 MMFD. COMP.						3	85-334	ANTENNA POLE SWITCH	C		2nd I.F. TRANS. PRI.
C6	22-705	150 MMFD. COMP.						4	85-225	WAVEMAGNET SWITCH	D		2nd I.F. " SEC.
C7	22-702	250 MMFD. COMP.		R1	63-596	330M OHM	½ W.	5	S10670	ANTENNA COIL ASSEM.	F		BROADCAST OSC. (ON GANG)
C8	22-1311	75 MMFD. COMP.		R2	63-641	10M OHM	½ W.	6	S10298	DETECTOR COIL ASSEM.	G		BROADCAST ANT. (ON GANG)
C9	22-1310	50 MMFD. COMP.		R3	63-773	150M OHM	½ W.	7	S10284	6MC. ANTENNA COIL ASSEM	N		BROADCAST DET. (ON GANG)
C10	22-162	.0001 MFD.	600 V.	R4	63-325	150M OHM	½ W.	8	S10289	9 MC. " " "	K_1		SHORTWAVE OSC. 6 MC.
C11	22-327	.02 MFD.	600 V.	R5	63-648	47M OHM	½ W.	9	S10288	12 MC. " " "	K_2		SHORTWAVE OSC. 9 MC.
C12	22-289	50 MMFD.	600 V.	R6	63-592	33M OHM	½ W.	10	S10295	15MC. " " "	K_3		SHORTWAVE OSC. 12 MC.
C13	22-859	.05 MFD.	200 V.	R7	63-600	2.2 MEGOHM	½ W.	11	S10297	18MC. " " "	K_4		SHORTWAVE OSC. 15 MC.
C14	22-826	.01 MFD.	600 V.	R8	63-761	10M OHM	½ W.	12	S10281	6MC. OSCILLATOR COIL ASSEM.	K_5		SHORTWAVE OSC. 18 MC.
C15	22-1207	.07 MFD.	200 V.	R9	63-602	4.7 MEGOHM	½ W.	13	S10290	9 MC. " " "	L_1		SHORTWAVE DET. 6 MC.
C16	22-887	.001 MFD.	600 V.	R10	63-583	1000 OHM	½ W.	14	S10285	12 MC. " " "	L_2		SHORTWAVE DET. 9 MC.
C17	22-492	.002 MFD.	600 V.	R11	63-1245	VOLUME CONTROL		15	S10293	15MC. " " "	L_3		SHORTWAVE DET. 12 MC.
C18	22-953	.0002 MFD.	600 V.	R12	63-976	15 MEGOHM	½ W.	16	S10294	18MC. " " "	L_4		SHORTWAVE DET. 15 MC.
C19	22-470	.00015 MFD.	600 V.	R13	63-580	330 OHM	½ W.	17	S10295	ANT. " " "	L_5		SHORTWAVE DET. 18 MC.
C20	22-1346	.01 MFD.	600 V.	R14	63-577	100 OHM	½ W.	18	85-312	AUTOMATIC BAND SWITCH	S_1		VARIABLE TRIMMER (SEE NOTE)
C21	22-148	.004 MFD.	600 V.	R15	63-594	68M OHM	½ W.	19	85-325	SHORTWAVE LOOP SWITCH	M_A		VARIABLE COMPENSATOR (SEE NOTE)
C22	22-1301	40 MFD. ELECTROLYTIC	150 V.	R16	63-271	1 MEGOHM	½ W.	20	95-868	1st I.F. TRANSFORMER	M_1		SHORTWAVE ANT. 12 M.
C23	OR	20 MFD. "	150 V.	R17	63-941	390 OHM WIREWOUND	1 W.	21	95-863	2nd I.F. TRANSFORMER	M_2		SHORTWAVE ANT. 21 M.
C24	22-1330	40 MFD. "	25 V.	R18	63-1264	THREE SECTION CANDOHM		22	85-319	TONE CONTROL SWITCH	M_3		SHORTWAVE ANT. 31 M.
C25	22-869	.05 MFD.	400 V.	R19	63-1156	1800 OHM	½ W.	23	85-311	POWER CHANGE-OVER SWITCH	NOTE: TRIMMERS "M" ARE MOUNTED ON STATOR BASE		

110 V. A.C.-D.C. - BATTERY PACK
UNIVERSAL PORTABLE
I.F. FREQUENCY 455KC.
7 TUBE SUPERHETERODYNE
CHASSIS Nº 7B04 6 BAND

Tuning ranges:

540 to 1620 Kc.

6.0 to 6.5 Mc.

9.4 to 9.8 Mc.

11.7 to 11.9 Mc.

15.1 to 15.3 Mc.

17.6 to 18.0 Mc.

Stage Gains
Bc. and I.F.

Ant. to R.F. grid 5X at 1000 Kc.

R.F. grid to conv. grid 9X at 1000 Kc.

Conv. grid to I.F. grid 66X at 455 Kc.

Overall audio 900X at .05 watt. 400 cycles.

MODEL 7G605
MODEL 14H697
MODELS 22H698, 22H699

ZENITH RADIO CORP.

Model 7G605

ALIGNMENT PROCEDURE

Operation	Connect Oscillator to	Dummy Antenna	Input Signal Frequency	Band	Set Dial At	Trimmers	Purpose
1	Conv. grid	.1 mfd.	455 Kc.	BC	600 Kc.	A. B. C. D	Align I.F.
2	One Turn Loop Coupled		1600 Kc.	BC	1600 Kc.	F	Set oscillator to scale
3	Loosely to Broadcast		1400 Kc.	BC	1400 Kc.	H	Alignment of detector section
4	Wavemagnet		1400 Kc.	BC	1400 Kc.	G	Alignment of B.C. Wavemagnet
5	3 Feet of Wire		1400 Kc.	BC	1400 Kc.	G_1	B.C. waverod alignment
6	Approximately		6.2 Mc.	49 Met.	6.2 Mc.	K_1-L_1	Alignment of S.W. Oscillators and Antenna Trimmers
7	1 Foot from		9.6 Mc.	31 Met.	9.6 Mc.	K_2-L_2	
8	Extended		11.8 Mc.	25 Met.	11.8 Mc.	K_3-L_3	
9	Waverod		15.2 Mc.	19 Met.	15.2 Mc.	K_4-L_4	
10			17.8 Mc.	16 Met.	17.8 Mc.	K_5-L_5	
11	One Turn Loop Coupled Loosely to Shortwave Magnet, Waverod Collapsed		15.2 Mc.	19 Met.	15.2 Mc.	M_4-M_5	Alignment of shortwave magnet
12			11.8 Mc.	25 Met.	11.8 Mc.	M_3	
13			9.6 Mc.	31 Met.	9.6 Mc.	M_2	

Model 14H697

ALIGNMENT PROCEDURE

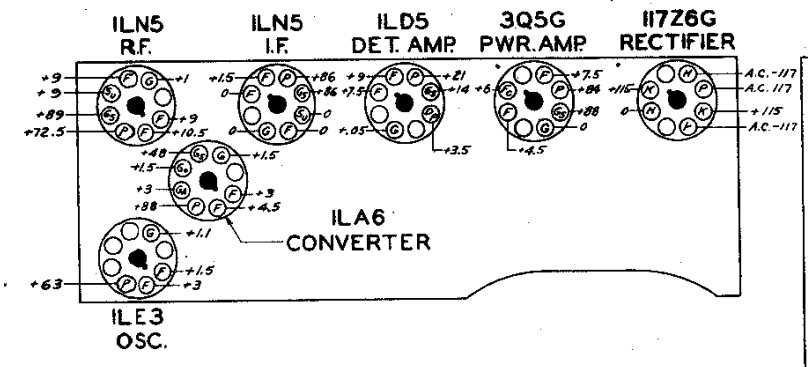
Operation	Connect Oscillator to	Dummy Antenna	Input Signal Frequency	Band	Set Dial At	Trimmers	Purpose
1	Conv. grid	.5 mfd.	455 Kc.	BC	600 Kc.	A. B. C. D	Align BC I. F.
2	R.F. grid	"	"	"	"	E	I.F. trap adjustment for minimum I.F. signal
3	Ant. Gnd.	400 ohm	18 Mc.	SW	18 Mc.	K	Scale osc. at 18 Mc.
4	"	"	15 Mc.	"	15 Mc.	M	Align SW antenna
5	ONE TURN		1600 Kc.	BC	1600 Kc.	F	Set BC osc. to scale at 1600 Kc.
6	LOOP WITH		1400 Kc.	"	1400 Kc.	H	Align BC R.F. stage
7	GENERATOR		1400 Kc.	"	1400 Kc.	G	Align BC loop
8	LEADS		600 Kc.	"	600 Kc.	I	Rock gang to track BC padder
9	7C7 2nd I.F. Grid Pin Jack III	.5 mfd.	8.3 Mc.	FM	42.5 Mc.	A_1	Align for maximum deflection across ½ discrim. load
10		"	"	"	"	B_1	Align for zero deflection across full discrim. load. Repeat operation No. 9
11		"	"	"	"	A_2-B_2	Align for maximum deflection across ½ discrim. load
12	6SD7 1st I.F. grid Pin Jack III	"	"	"	"	A_2-B_2	Align for maximum deflection across ½ discrim. load
13	Conv. grid Pin Jack I	"	"	"	"	A_1-B_1	Align for maximum deflection across ½ discrim. load
14	F.M. Ant. Ter.	100 ohms	46 Mc.	"	46 Mc.	Adjust osc. cam gang shaft to scale osc.	Align for zero deflection across full discrim. load
15	"	"	"	"	"	Adjust R.F. cam for F.M. tracking	Align for max. deflec. across ½ discrim. load
16	Adjust Tuning Meter			"	Clear of Signals	Bias control	Adjust bias for tuning meter

Remove 2nd I.F. tube (7C7) from socket. Adjust bias control until meter reads exactly center.
Replace I.F. tube and check meter behavior on F.M. and A.M. signals.

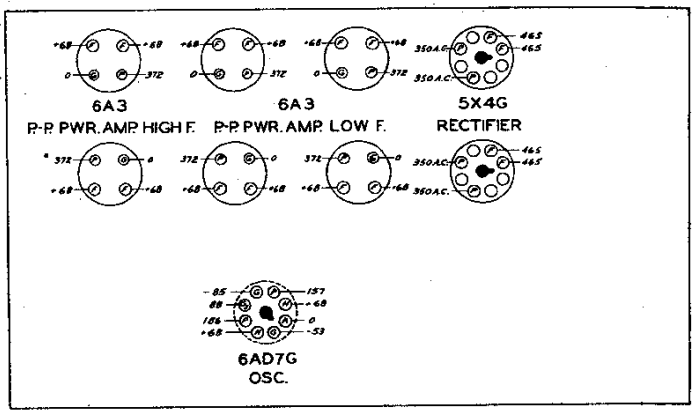
Models 22H698 and 22H699

ALIGNMENT PROCEDURE

Operation	Connect Oscillator to	Dummy Antenna	Input Signal Frequency	Band	Set Dial At	Trimmers	Purpose
1	Conv. grid	.5 mfd.	455 Kc.	BC	600 Kc.	A. B. C. D	Align B.C. I.F.
2	R.F. grid	"	"	"	"	E	I.F. trap adjustment for minimum I.F. signal
3	Ant.-Gnd.	400 ohm	18 Mc.	SW	18 Mc.	K	Scale osc. at 18 Mc.
4	"	"	15 Mc.	"	15 Mc.	M	Align SW antenna
5	ONE TURN		1600 Kc.	BC	1600 Kc.	F	Set BC osc. to scale at 1600 Kc.
6	LOOP MADE WITH		1400 Kc.	"	1400 Kc.	H	Align BC R.F. stage
7	GENERATOR		1400 Kc.	"	1400 Kc.	G	Align BC loop
8	LEADS		600 Kc.	"	600 Kc.	J	Rock gang to track BC padder
9	7C7 2nd I.F. grid Pin Jack III	.5 mfd.	8.3 Mc.	F.M.	42.5 Mc.	A_1	Align for maximum deflection across ½ discrim. load
10	"	"	"	"	"	B_1	Align for zero deflection across full discriminator load. Repeat operation No. 9
11	"	"	"	"	"	A_2-B_2	Align for maximum deflection across ½ discrim. load
12	6SD7 1st I. F. grid Pin Jack III	"	"	"	"	A_2-B_2	Align for maximum deflection across ½ discrim. load
13	Conv. grid Pin Jack I	"	"	"	"	A_1-B_1	Align for maximum deflection across ½ discrim. load
14	F.M. Ant. Ter.	100 ohm	46 Mc.	"	46 Mc.	Adjust osc. cam gang shaft to scale osc.	Align for zero deflection across full discriminator load
15A	"	"	49 Mc.	"	49 Mc.	Z	Align for maximum deflection across ½ discriminator load
15B	"	"	43 Mc.	"	43 Mc.	P	Align for maximum deflection across ½ discriminator load
16	Adjust Tuning Meter			"	Clear of Sigs	Bias control	Adjust bias for tuning meter
	Remove 2nd I.F. tube (7C7) from socket. Adjust bias control until meter reads exactly center. Replace I.F. tube and check meter behavior on F.M. and A.M. signals.						
17	Set hum adjustment for minimum hum level. (Page 317)						

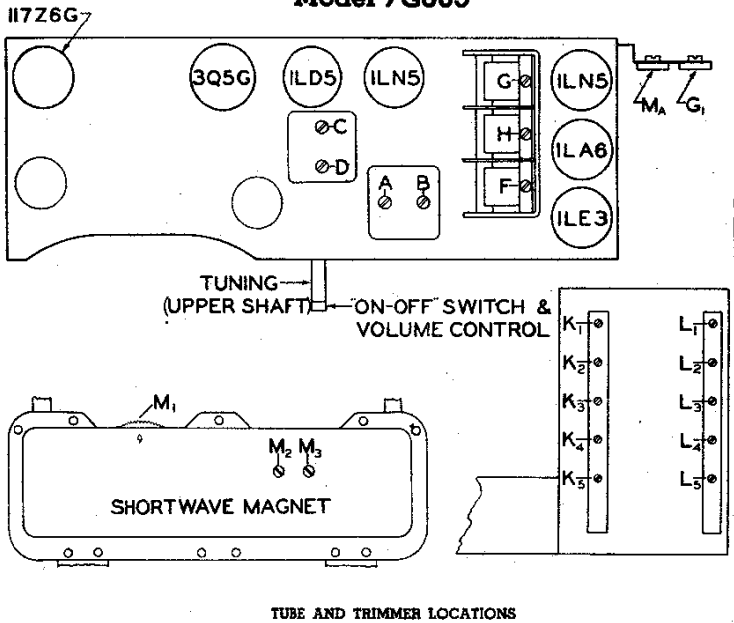


SOCKET VOLTAGES—BOTTOM SIDE UP



SOCKET VOLTAGES—BOTTOM SIDE UP

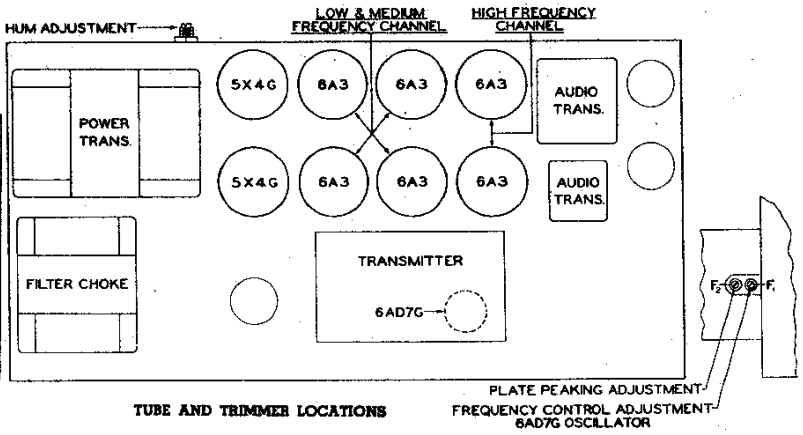
Model 7G605



TUBE AND TRIMMER LOCATIONS

Models 22H698 and 22H699

Chassis 22B1—Phono
Audio Amplifier Section



TUBE AND TRIMMER LOCATIONS