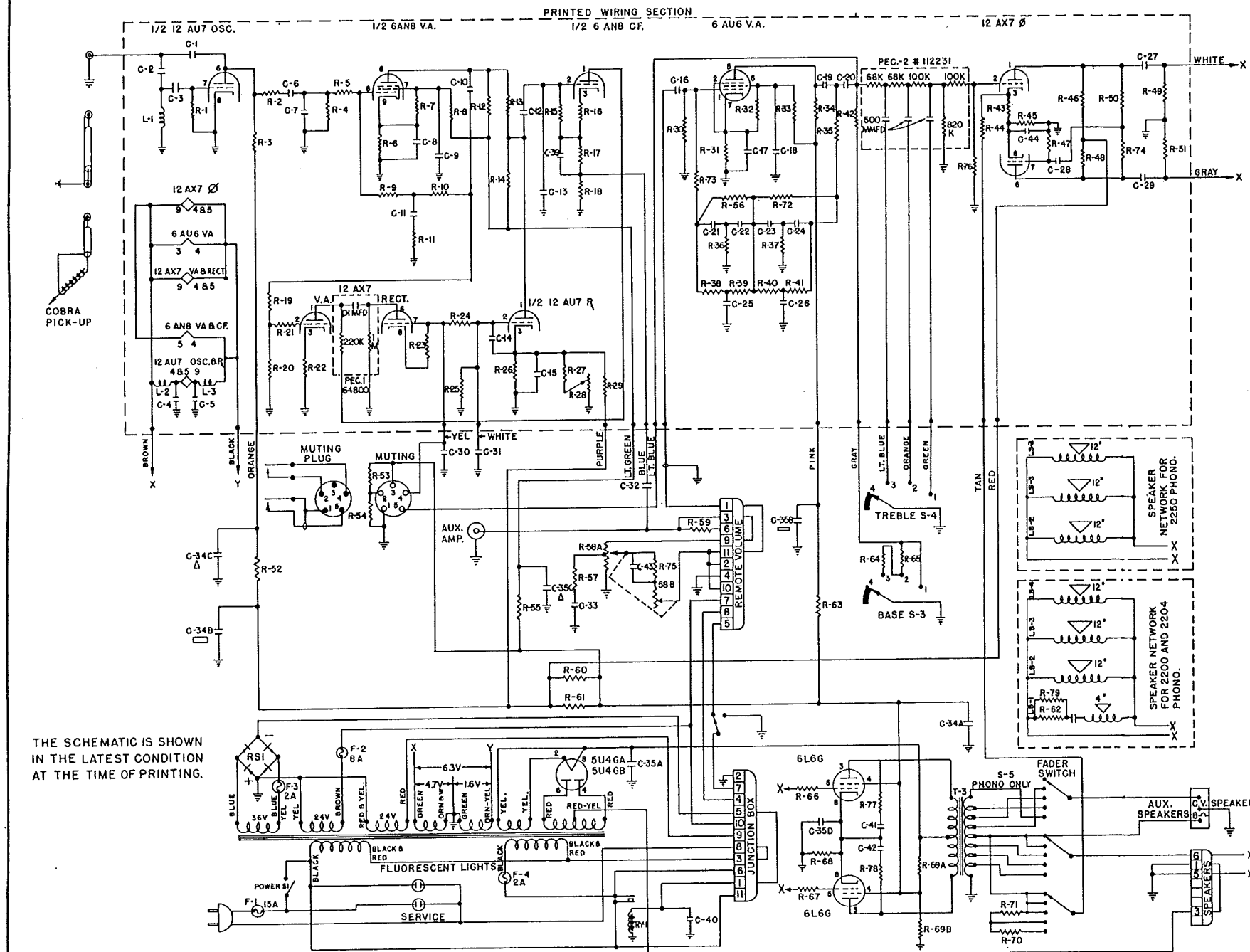


MODEL 2250 SCHEMATIC SOUND SYSTEM



THE SCHEMATIC IS SHOWN IN THE LATEST CONDITION AT THE TIME OF PRINTING.

A.C. SIGNAL VOLTAGE CHART

USE BALLANTINE V.T.V.M. OR HEATHKIT VOLTMETER AV-2 APPLY 180 MILLIVOLT 1000 CYCLE SIGNAL THROUGH 0.01 MFD. CAPACITOR TO JUNCTION OF R-4, R-5, C-6, AND C-7. TURN VOLUME CONTROL FULL ON USE 5 OHM, 20 WATT RESISTOR AS OUTPUT LOAD.

SYMBOLS & NOTES

Ø - PHASE INVERTER
 C.F. - CATHODE FOLLOWER
 V.A. - VOLTAGE AMPLIFIER
 R - VARIABLE RESISTANCE TUBE
 ** - WITH PHONO PICK-UP PLUGGED IN AND CIRCUIT OSCILLATING
 * - WITH PHONO PICK-UP PLUGGED IN AND CIRCUIT OSCILLATING -6V USING V.T.V.M. AND EXTERNAL 1 MEG ISOLATION.
 ALL D.C. VOLTAGES MEASURED FROM GND. USING A V.T.V.M. NO SIGNAL AT 117 VOLT LINE EXCEPT AS NOTED ABOVE.

D.C. AND FILAMENT VOLTAGES

TUBE	PIN NO. ON TUBE SOCKET	1	2	3	4	5	6	7	8	9
12 AU7 OSC.-R	197	0	21.25	4.6	4.6	1.87	1.87	0	1.48	A.C.
6 AN8 VA.-G.F.	280	15.5	32	1.59	4.6	1.12	204	0	4.8	A.C.
12 AX7 VA.-RECT.	205	0	1.9	1.58	1.58	0	3	4	4.65	A.C.
6 AU6 V.A.	0	1.9	4.65	1.59	1.59	73	91	2	-	-
12 AX7	202	0	1.6	1.59	1.59	0	1.95	0	1.45	A.C.
6L6G	-	1.6	A.C.	406	315	0	0	4.7	A.C.	24
6L6G	-	1.6	A.C.	406	315	0	0	4.7	A.C.	24
5U4GAB	N.C.	413	N.C.	365	N.C.	365	N.C.	413	-	-

MEASURE VOLTAGES TO GROUND

TUBE	1	2	3	4	5	6	7	8	9
12 AU7 OSC.-R	.6								
6 AN8 VA.-G.F.	.6				155		.15		
12 AX7 V.A.-RECT.	57	1.5			56				
6 AU6 V.A.	.025				2				
12 AX7	13.5	.8			13.5	.26			
6L6G			145	13.2					
6L6G			145	13.2					

ITEM	PART NO.	VALUE	REMARKS
R-1	72264-32	1M	1/2W ± 10%
R-2	72234-32	56K	1/2W ± 10%
R-3	72377-31	51K	1W ± 5%
R-4	72250-32	270K	1/2W ± 10%
R-5	72240-32	100K	1/2W ± 10%
R-6	72196-31	1.5K	1/2W ± 5%
R-7	72254-31	330K	1/2W ± 5%
R-8	72333-31	51K	1/2W ± 5%
R-9	72278-31	3.9M	1/2W ± 5%
R-10	72278-31	3.9M	1/2W ± 5%
R-11	72248-32	220K	1/2W ± 10%
R-12	72240-32	100K	1/2W ± 10%
R-13	72260-31	680K	1/2W ± 5%
R-14	72256-31	470K	1/2W ± 5%
R-15	72264-32	1M	1/2W ± 10%
R-16	72206-32	3.9K	1/2W ± 10%
R-17	72206-32	3.9K	1/2W ± 10%
R-18	72196-32	1.5K	1/2W ± 10%
R-19	72264-32	1M	1/2W ± 10%
R-20	72259-31	620K	1/2W ± 5%
R-21	72264-32	1M	1/2W ± 10%
R-22	72208-32	4.7K	1/2W ± 10%
R-23	72226-31	27K	1/2W ± 5%
R-24	72268-31	1.5M	1/2W ± 5%
R-25	72274-31	2.7M	1/2W ± 5%
R-26	72218-31	12K	1/2W ± 5%
R-27	72232-32	47K	1/2W ± 10%
R-28	64880	500K	BIAS CONTROL
R-29	72386-31	120K	1W ± 5%
R-30	72240-32	100K	1/2W ± 10%
R-31	72188-31	680K	1/2W ± 5%
R-32	72254-31	330K	1/2W ± 5%
R-33	72244-31	150K	1/2W ± 5%
R-34	72242-31	120K	1/2W ± 5%
R-35	72232-32	47K	1/2W ± 10%
R-36	72237-31	75K	1/2W ± 5%
R-37	72220-31	15K	1/2W ± 5%
R-38	72244-31	150K	1/2W ± 5%
R-39	72244-31	150K	1/2W ± 5%
R-40	72226-31	27K	1/2W ± 5%
R-41	72226-31	27K	1/2W ± 5%
R-42	72237-31	75K	1/2W ± 5%
R-43	72176-32	220	1/2W ± 10%
R-44	72198-32	1.8K	1/2W ± 10%
R-45	72192-32	1K	1/2W ± 10%
R-46	72240-32	100K	1/2W ± 10%
R-47	72256-32	470K	1/2W ± 10%
R-48	72240-32	100K	1/2W ± 10%
R-49	72256-32	470K	1/2W ± 10%
R-50	72256-32	470K	1/2W ± 10%
R-51	72256-32	470K	1/2W ± 10%
R-52	72192-32	8.2K	1/2W ± 10%
R-53	72254-32	390K	1/2W ± 10%
R-54	72232-32	47K	1/2W ± 10%
R-55	72362-32	12K	1/2W ± 10%
R-56	72260-32	680K	1/2W ± 10%
R-57	72210-32	5.6K	1/2W ± 10%
R-58A	64966	50K	VOLUME CONTROL
R-58B	64966	50K	VOLUME CONTROL
R-59	72208-32	4.7K	1/2W ± 10%
R-60	72352-32	4.7K	1W ± 10%
R-61	72352-32	4.7K	1W ± 10%
R-62	72288-32	10	1W ± 10%
R-63	72362-32	12K	1/2W ± 10%
R-64	72242-32	120K	1/2W ± 10%
R-65	72240-32	100K	1/2W ± 10%
R-66	72192-32	1K	1/2W ± 10%
R-67	72192-32	1K	1/2W ± 10%
R-68	70682-2	250	5W W.W.
R-69A	70897	1650	15W W.W.
R-69B	70897	9K	10W W.W.
R-70	72202-32	2.7K	1/2W ± 10%
R-71	72198-32	1.8K	1/2W ± 10%
R-72	72228-31	33K	1/2W ± 5%
R-73	72226-31	27K	1/2W ± 5%
R-74	72257-31	510K	1/2W ± 5%
R-75	72206-32	3.9K	1/2W ± 10%
R-76	72262-32	820K	1/2W ± 10%
R-77	72336-32	1K	1/2W ± 10%
R-78	72336-32	1K	1/2W ± 10%
R-79	72288-32	10	1W ± 10%

ITEM	PART NO.	VALUE	REMARKS
C-1	70527-265	51 MMFD	± 2.5% CERAMIC
C-2	70527-265	51 MMFD	± 2.5% CERAMIC
C-3	71227-12	0.1 MF	200 V
C-4	70745	.0033 MF	CERAMIC
C-5	70745	.0033 MF	CERAMIC
C-6	71227-14	0.1 MF	400 V
C-7	70534-130	100 MMFD	CERAMIC
C-8	73842-51	25 MFD	25 V. ELECT.
C-9	71227-12	0.1 MF	200 V
C-10	70748	.01 MF	CERAMIC
C-11	70526-230	47 MMFD	CERAMIC
C-12	71220-14	.022 MF	400 V.
C-13	70526-230	47 MMFD	CERAMIC
C-14	70742	1000 MMFD	CERAMIC
C-15	73810-52	20 MFD	50 V. ELECT.
C-16	70498	.22 MF	100 V.
C-17	73842-51	25 MFD	25 V. ELECT.
C-18	73835-55	4 MF	200 V.
C-19	71227-14	0.1 MF	400 V.
C-20	71217-14	.01 MF	400 V.
C-21	71220-14	.022 MF	400 V.
C-22	71220-14	.022 MF	400 V.
C-23	71205-16	.001 MF	600 V.
C-24	71205-16	.001 MF	600 V.
C-25	71224-12	.047 MF	200 V.
C-26	71208-16	.0022 MF	600 V.
C-27	71224-14	.047 MF	400 V.
C-28	71224-14	.047 MF	400 V.
C-29	71224-14	.047 MF	400 V.
C-30	70634-220	1 MF	200 V.
C-31	70637-650	2 MF	50 V. ELECT.
C-32	73293-110	20 MF	25 V. ELECT.
C-33	71224-12	.047 MF	400 V.
C-34A	73474	20 MF	400 V. ELECT.
C-34B	73474	20 MF	400 V. ELECT.
C-34C	73474	10 MF	400 V. ELECT.
C-34D	73474	20 MF	50 V. ELECT.
C-35A	73475	30 MF	500 V. ELECT.
C-35B	73475	20 MF	400 V. ELECT.
C-35C	73475	20 MF	400 V. ELECT.
C-35D	73475	25 MF	50 V. ELECT.
C-36		4 MF	25 V. NON-POLARIZED
C-37			
C-38			
C-39	71220-14	.022 MF	400 V.
C-40	71195-14	0.1 MF	400 V.
C-41	71750-27	.001 MF	1000 W.V.
C-42	71750-27	.001 MF	1000 W.V.
C-43	71183-14	.01 MF	400 W.V.
C-44	73842-51	25 MFD	25 W.V.

ITEM	PART NO.	VALUE	REMARKS
L-1	64872		OSCILLATOR COIL
L-2	64870		FILTER CHOK
L-3	64870		FILTER CHOK
S-1	53648	SPST	POWER SWITCH
S-2	68770	SPDT	CANCEL SWITCH
S-3	64857	4 POS. SHORTING	BASS SWITCH
S-4	64857	4 POS. SHORTING	TREBLE SWITCH
S-5	64995	5P3T	FADER SWITCH
T-1	68182		POWER
T-2	68182		JUNCTION POWER
T-3	62430		AUDIO OUTPUT
RY-1	56321	5P5T	24 V.D.C. RELAY
F-1	52196	15 AMP.	250 V. FUSE
F-2	15845	8 AMP.	FUSE
F-3	56325	2 AMP.	SLO-BLO FUSE
F-4	56325	2 AMP.	SLO-BLO FUSE
LS-1	112052		4" SPEAKER
LS-2	62493	15	12" SPEAKER
LS-3	65192	16	12" SPEAKER
LS-4	111691	16	12" SPEAKER
RS-1	64500	24 V.	SBL. RECT.
PEC-1	64800		PLATE - COUPLING
PEC-2	112231		PLATE - COUPLING

112238-1

Fig. 24. SCHEMATIC WIRING DIAGRAM MODEL 2250 SOUND SYSTEM