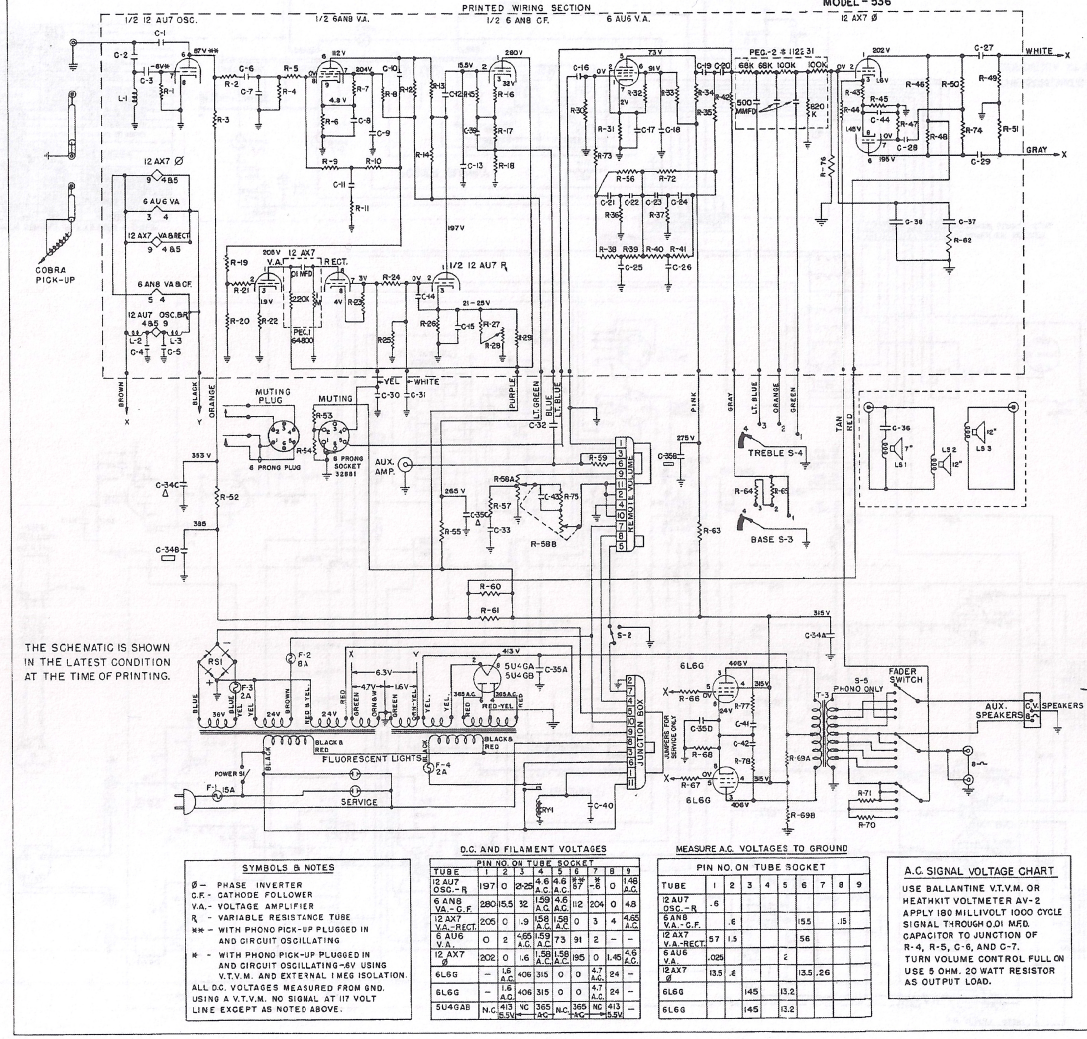
SCHEMATIC SOUND SYSTEM
MODEL-536



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	72233-31	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	72250-31	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	72286-31	120K	1W ± 5%
R-30	72240-32	100K	1/2W ± 10%
R-31	72188-31	680 Ω	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	72214-32	8.2K	1/2W ± 10%
R-53	72254-32	390K	1/2W ± 10%
R-54	72231-32	47K	1/2W ± 10%
R-55	72263-32	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	72351-32	4.7K	1W ± 10%
R-61	72352-32	4.7K	1W ± 10%
R-62	72250-32	270 K	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	72191-32	1K	1/2W ± 10%
R-67	72192-32	1K	1/2W ± 10%
R-68	70683- 2	250 Ω	5W W.W.
R-69A	70897	1650 Ω	15W W.W.
R-69B	70897	9K	10W W.W.
R-70	72202-32	2.7K	1/2W ± 10%
R-71	72193-32	1.8K	1/2W ± 10%
R-72	72233-31	33K	1/2W ± 5%
R-73	72226-31	27K	1/2W ± 5%
R-74	72257-31	510K	1/2W ± 5%
R-75	72205-32	3.9K	1/2W ± 10%
R-76	72202-32	820K	1/2W ± 10%
R-77	72336-32	1K	1W ± 10%
R-78	72336-32	1K	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 MFD	200 V
C-4	70745	.0033 MFD	CERAMIC
C-5	70745	.0033 MFD	CERAMIC
C-6	71227- 14	0.1 MFD	400 V
C-7	70534-130	100 MMFD	CERAMIC
C-8	73942- 51	25 MFD	25 V. ELECT.
C-9	71227- 12	0.1 MFD	200 V
C-10	70748	.01 MFD	CERAMIC
C-11	70526-230	47 MMFD	CERAMIC
C-12	71210- 14	.022 MFD	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 MFD	100 V.
C-17	73842- 51	25 MFD	25 V. ELECT.
C-18	73835- 55	4 MFD	200 V.
C-19	71227- 14	0.1 MFD	400 V.
C-20	71217- 14	.01 MFD	400 V.
C-21	71210- 14	.022 MFD	400 V.
C-22	71210- 14	.022 MFD	400 V.
C-23	71205- 16	.001 MFD	600 V.
C-24	71205- 16	.001 MFD	600 V.
C-25	71224- 12	.047 MFD	200 V.
C-26	71208- 16	.0022 MFD	600 V.
C-27	71224- 14	.047 MFD	400 V.
C-28	71224- 14	.047 MFD	400 V.
C-29	71224- 14	.047 MFD	400 V.
C-30	70634-220	1 MFD	200 V.
C-31	70637-	2 MFD	50 V. ELECT.
C-32	73293-110	20 MFD	25 V. ELECT.
C-33	71224- 12	.047 MFD	400 V.
C-34A	73474	20 MFD	400 V. ELECT.
C-34B	73474	20 MFD	400 V. ELECT.
C-34C	73474	10 MFD	400 V. ELECT.
C-34D	73474	20 MFD	50 V. ELECT.
C-35A	73475	30 MFD	500 V. ELECT.
C-35B	73475	20 MFD	400 V. ELECT.
C-35C	73475	20 MFD	400 V. ELECT.
C-35D	73475	25 MFD	50 V. ELECT.
C-36	116054-A	.4 MFD	25 V. NON-POLARIZED
C-37	71632-54	.001 MFD	CERAMIC
C-38	71618-44	270 MMF	CERAMIC
C-39	71120- 14	.022 MFD	400 V.
C-40	71195- 14	0.1 MFD	400 V.
C-41	71750- 27	.001 MFD	1000 W.V.
C-42	71750- 27	.001 MFD	1000 W.V.
C-43	71183- 14	.01 MFD	400 W.V.
C-44	73842- 51	25 MFD	25 W.V.

ITEM	PART NO.	VALUE	REMARKS
L-1	64472		OSCILLATOR COIL
L-2	64470		FILTER CHOKE
L-3	64470		FILTER CHOKE
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	3PST	FADER SWITCH
T-1	68182		POWER
T-2	68183		JUNCTION POWER
T-3	62430		AUDIO OUTPUT
RY-1	56321	SPST	24 V.D.C. RELAY
F-1	52196	15 AMP.	250 V. FUSE
F-2	13845	8 AMP.	FUSE
F-3	56325	2 AMP.	SLO-BLO FUSE
F-4	56325	2 AMP.	SLO-BLO FUSE
LS-1	114054	3.5 ~	7" SPEAKER
LS-2	62492	16 ~	12" SPEAKER MID RANGE
LS-3	114006	16 ~	12" SPEAKER HEAVY DUTY
RS-1	64500	24 V.	SEL. RECT.
PEC-1	64800		PLATE - COUPLING
PEC-2	112231		TONE CONTROL - TREBLE

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	280	4.6 A.C.	4.6 A.C.	6.3 -85	0	1.48 A.C.	
6 AN8 V.A.-C.F.	280	155	32	1.59 A.C.	4.6 A.C.	112	204	0	1.48
12 AX7 V.A.-RECT.	205	0	19	1.58 A.C.	1.58 A.C.	0	3	4	4.65 A.C.
6 AU6 V.A.	0	2	4.65 A.C.	1.59 A.C.	73	91	2	–	–
12 AX7 Ø	202	0	1.6	1.58 A.C.	1.58 A.C.	185	0	1.48	4.6 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 6.3V	YC	365 A.C.	N.C.	365 A.C.	N.C.	413 6.3V	–

MEASURE A.C. VOLTAGES TO GROUND

TUBE	PIN NO. ON TUBE SOCKET 1	2	3	4	5	6	7	8	9
12 AU7 OSC.-R	.6								
6 AN8 V.A.-C.F.		.6				15.5		.15	
12 AX7 V.A.-RECT.	57	1.3				56			
6 AU6 V.A.	.025					2			
12 AX7 Ø	13.5	.6				13.5	.26		
6L6G			145	13.2					
6L6G			145	13.2					

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.

114317-3

Fig. 102. 536 SOUND SYSTEM . . . . . SCHEMATIC WIRING DIAGRAM

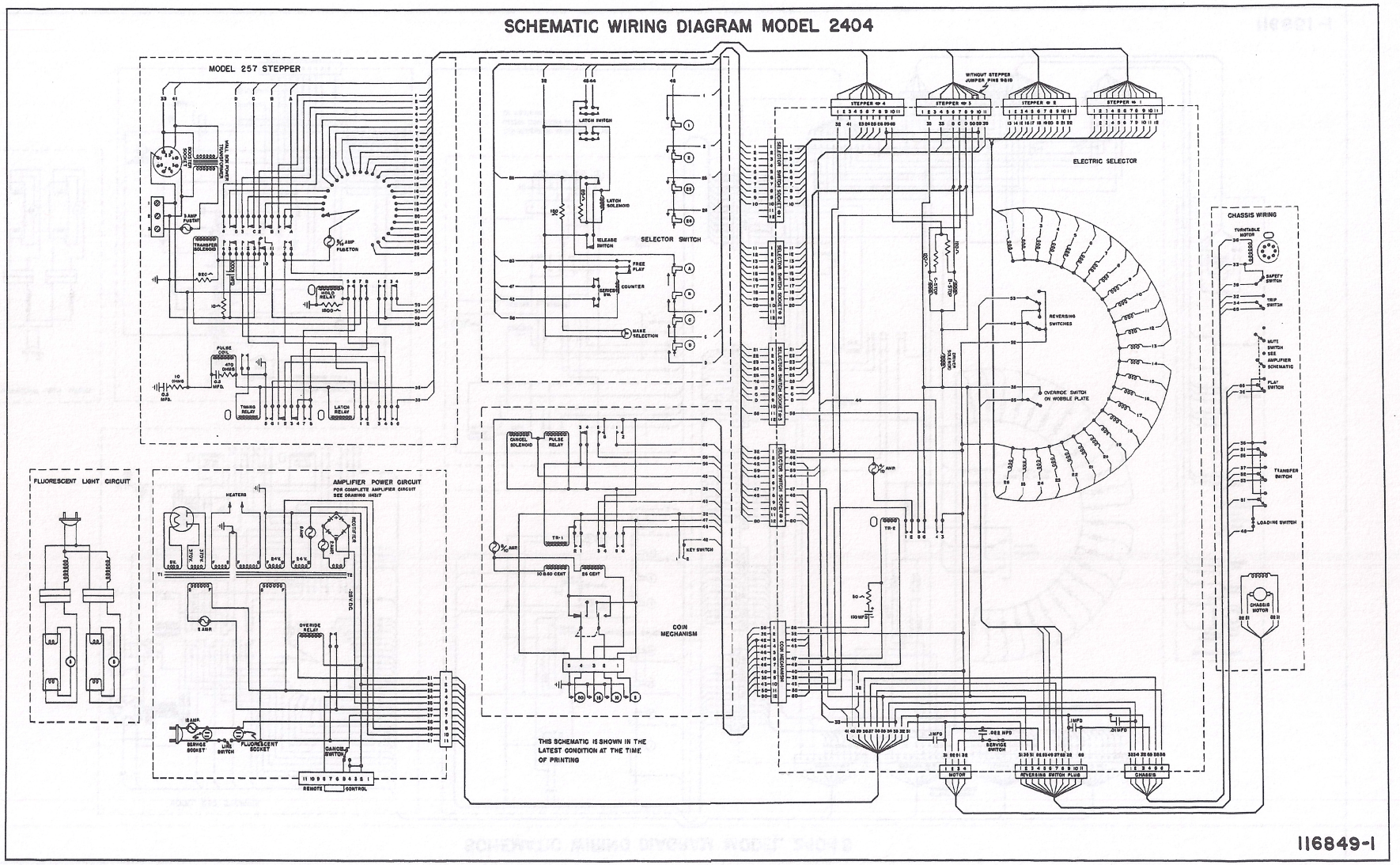


Fig. 106. MODEL 2404 . . . . . WIRING DIAGRAM

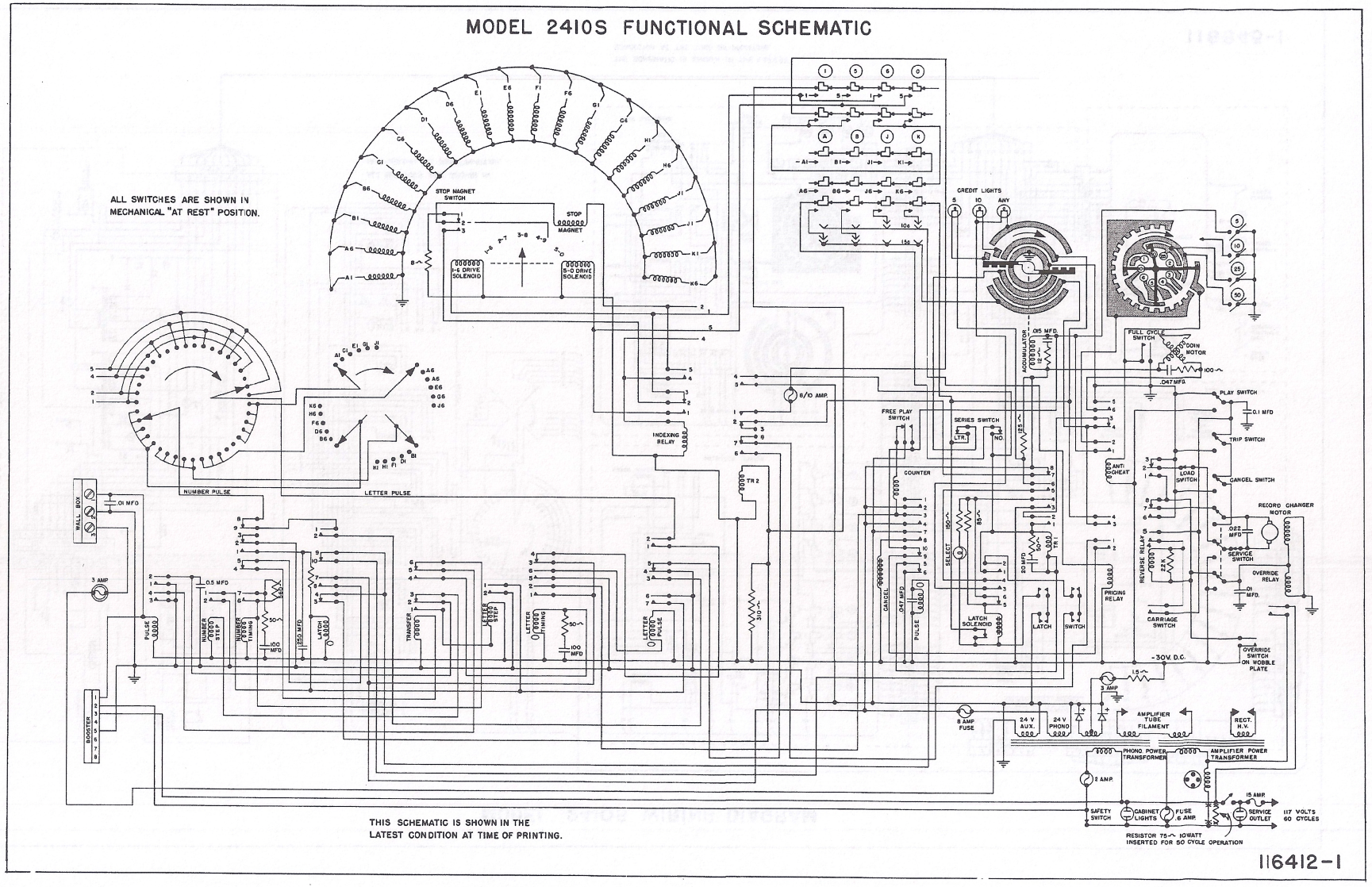


Fig. 110. MODEL 2410S . . . . . FUNCTIONAL SCHEMATIC

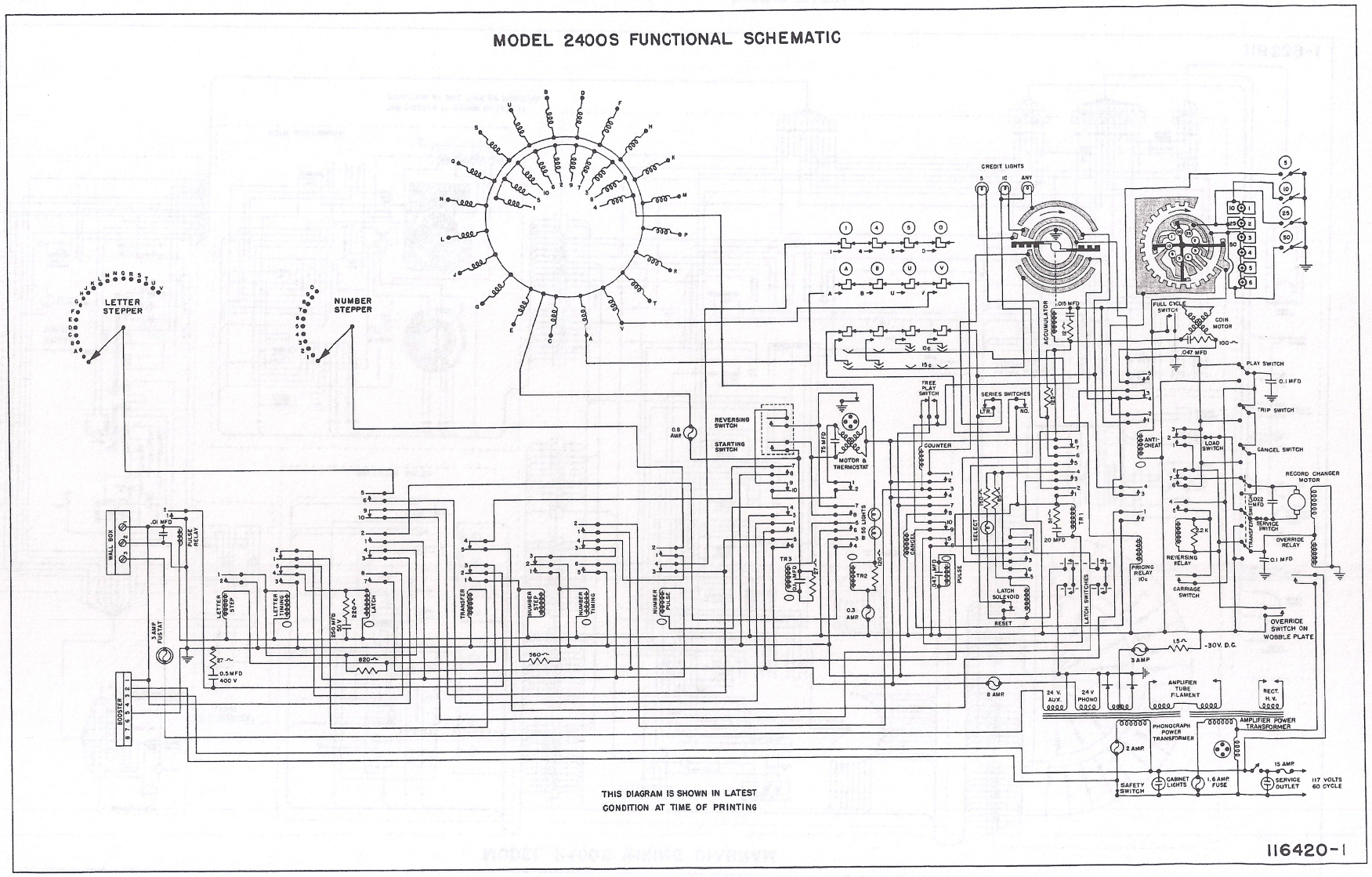


Fig. 114. MODEL 2400S . . . . . FUNCTIONAL SCHEMATIC

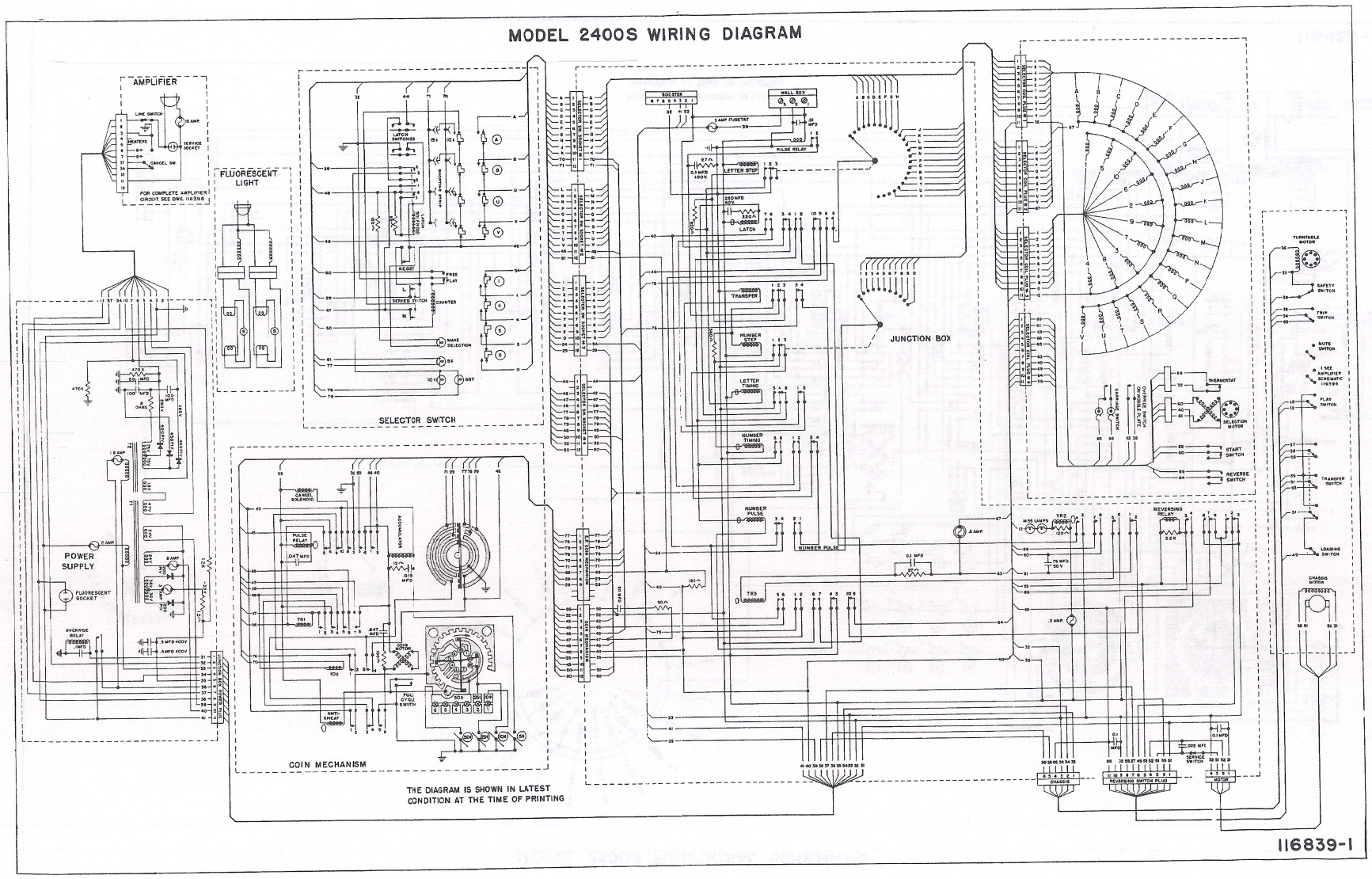


Fig. 115. MODEL 2400S . . . . . WIRING DIAGRAM

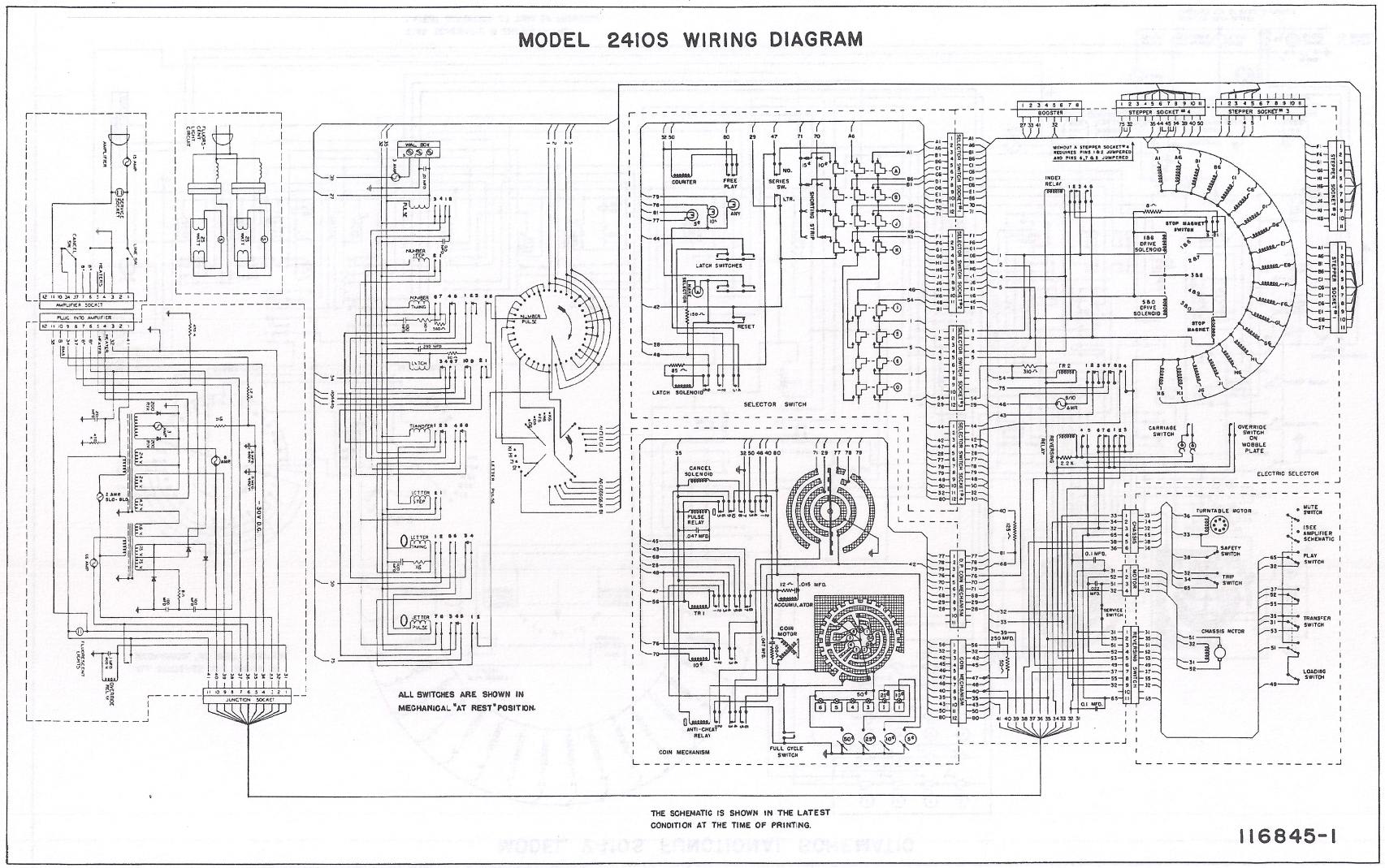


Fig. 111. MODEL 2410S . . . . . WIRING DIAGRAM

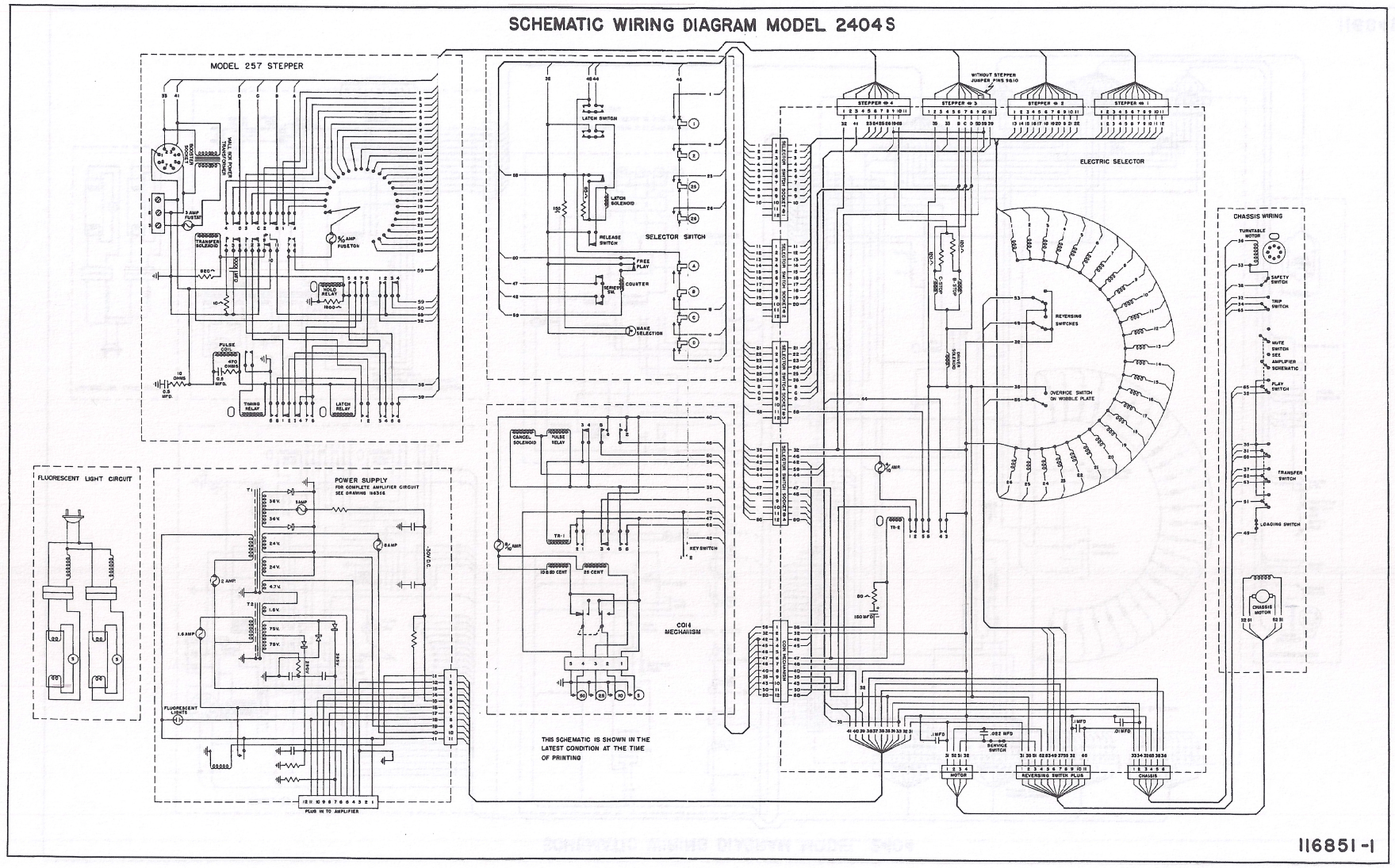
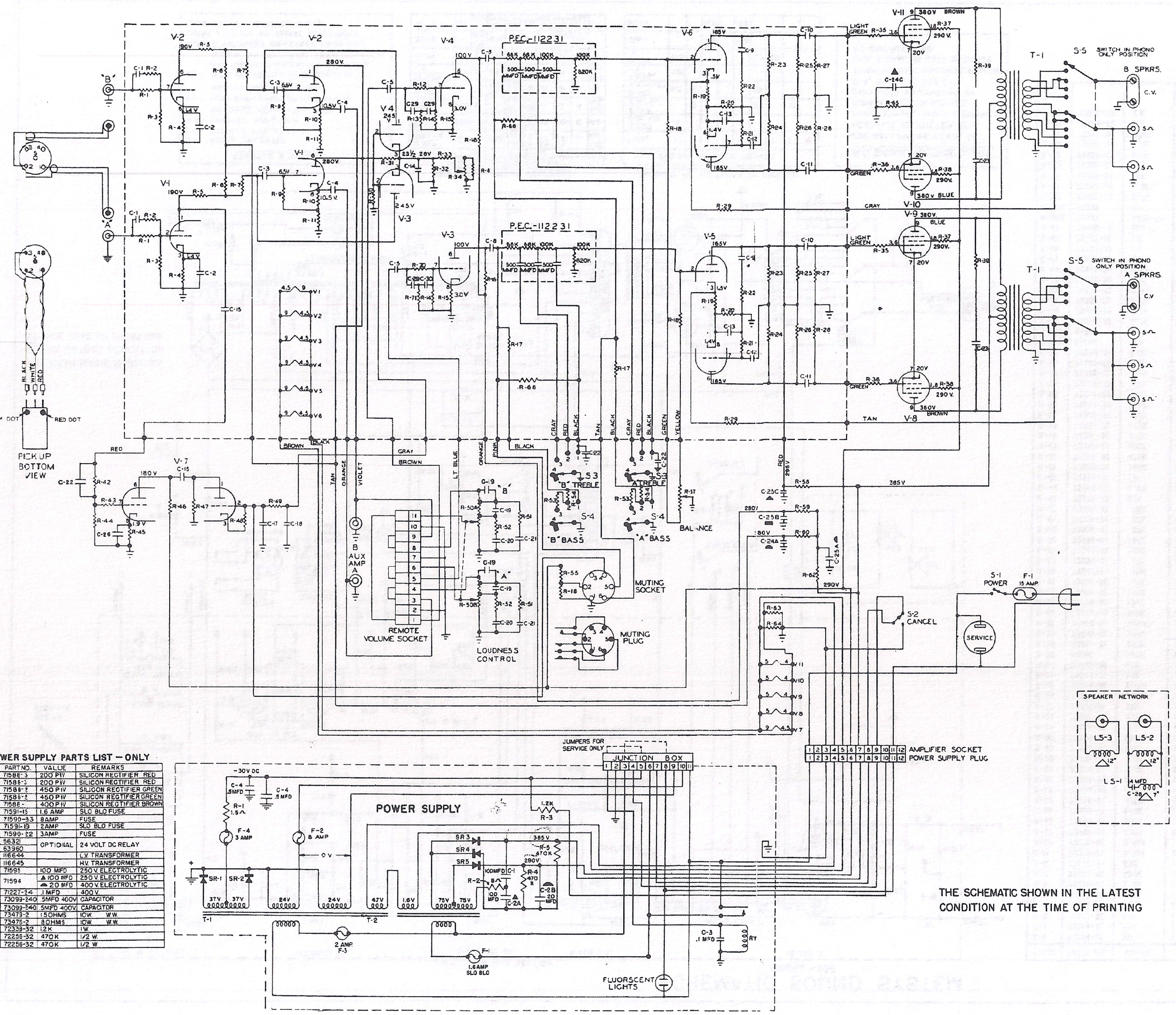


Fig. 107. MODEL 2404S . . . . . WIRING DIAGRAM

SCHEMATIC DIAGRAM MODEL 538 AMPLIFIER — STEREO



ITEM	PART NO.	VALUE	REMARKS
R-1	72264-32	1 MEG	1/2 W ±10%
R-2	72250-32	270 K	1/2 W ±10%
R-3	72264-32	1 MEG	1/2 W ±10%
R-4	72198-32	1.8 K	1/2 W ±10%
R-5	72238-31	82 K	1/2 W ±5%
R-6	72236-31	68 K	1/2 W ±5%
R-7	72261-31	750 K	1/2 W ±5%
R-8	72238-32	82 K	1/2 W ±10%
R-9	72264-32	1 MEG	1/2 W ±10%
R-10	72192-32	1 K	1/2 W ±10%
R-11	72210-32	5.6 K	1/2 W ±10%
R-12	72248-32	220 K	1/2 W ±10%
R-13	72226-32	27 K	1/2 W ±10%
R-14	72264-32	1 MEG	1/2 W ±10%
R-15	72192-32	1 K	1/2 W ±10%
R-16	72376-32	47 K	1 W ±10%
R-17	72237-31	75 K	1/2 W ±5%
R-18	72234-32	56 K	1/2 W ±10%
R-19	72176-32	220 Ω	1/2 W ±10%
R-20	72192-32	1 K	1/2 W ±10%
R-21	72248-32	220 K	1/2 W ±10%
R-22	72212-32	6.8 K	1/2 W ±10%
R-23	72248-32	220 K	1/2 W ±10%
R-24	72248-32	220 K	1/2 W ±10%
R-25	72240-32	100 K	1/2 W ±10%
R-26	72240-32	100 K	1/2 W ±10%
R-27	72256-32	470 K	1/2 W ±10%
R-28	72256-32	470 K	1/2 W ±10%
R-29	72200-31	2.2 K	1/2 W ±5%
R-30	72274-32	2.7 MEG	1/2 W ±10%
R-31	72384-31	100 K	1 W ±5%
R-32	72218-31	12 K	1/2 W ±5%
R-33	72232-32	47 K	1/2 W ±10%
R-34	64880	500 K	BIAS CONTROL
R-35	72192-32	1 K	1/2 W ±10%
R-36	72192-32	1 K	1/2 W ±10%
R-37	72160-32	47 Ω	1/2 W ±10%
R-38	72160-32	47 Ω	1/2 W ±10%
R-39	72368-32	22 K	1 W ±10%
R-42	72264-32	1 MEG	1/2 W ±10%
R-43	72264-32	1 MEG	1/2 W ±10%
R-44	72250-32	270 K	1/2 W ±10%
R-45	72208-32	4.7 K	1/2 W ±10%
R-46	72248-32	220 K	1/2 W ±10%
R-47	72264-32	1 MEG	1/2 W ±10%
R-48	72226-32	27 K	1/2 W ±10%
R-49	72268-32	1.5 MEG	1/2 W ±10%
R-50A, R-50B	114264	39 K	LOUDNESS CONTROL
R-51	72184-32	470 Ω	1/2 W ±10%
R-52	72192-32	1 K	1/2 W ±10%
R-53	72252-32	330 K	1/2 W ±10%
R-54	72237-32	75 K	1/2 W ±10%
R-55	72254-32	390 K	1/2 W ±10%
R-57	114483	500 K	BALANCE
R-58	72368-32	22 K	1 W ±10%
R-59	72352-32	4.7 K	1 W ±10%
R-60	72352-32	4.7 K	1 W ±10%
R-62	71900-2	5000 Ω	5 WATT
R-63	72158-32	39 Ω	1/2 W ±10%
R-64	72158-32	39 Ω	1/2 W ±10%
R-65	71883-2	150 Ω	5 WATT
R-66	72246-32	180 K	1/2 W ±10%
R-70	72248-32	220 K	1/2 W ±10%
R-71	72226-32	27 K	1/2 W ±10%

ITEM	PART NO.	VALUE	REMARKS
C-1	71618-44	270 MMFD	CERAMIC
C-2	73842-51	25 MFD	25V ELECT
C-3	70748	.01	CERAMIC
C-4	73842-51	25 MFD	25V ELECT.
C-5	71227-12	.1 MFD	200VOLT
C-8	71217-14	.0047MMFD	CERAMIC
C-9	71624-64	470 MMFD	CERAMIC
C-10	71224-14	.047 MFD	400 VOLT
C-11	71224-14	.047 MFD	400 VOLT
C-12	71224-14	.047 MFD	400 VOLT
C-13	73842-51	25 MFD	25 V ELECT
C-14	73840-12	20 MFD	50 V ELECT
C-15	70748	.01 MFD	CERAMIC
C-16	70748	.01 MFD	CERAMIC
C-17	70634-220	1. MFD	200 VOLT
C-18	73876	2 MFD	50 VOLT
C-19	71178-12	.0039 MFD	200 VOLT
C-20	71548-11	.39 MFD	100 VOLT
C-21	71548-11	.39 MFD	100 VOLT
C-22	71618-44	270 MMFD	CERAMIC
C-23	73002-48	.0005 MFD	1600 VOLT
C-24A	74150	20 MFD	450 V ELECT
C-24B		20 MFD	450 V ELECT
C-24C		▲ 150 MFD	50 V ELECT
C-25A	73475	30 MFD	500 V ELECT
C-25B		20 MFD	400 V ELECT
C-25C		▲ 20 MFD	400 V ELECT
C-26	71224-12	.047 MFD	200 VOLT
C-28	114054-A	4 MFD	25V NON POLORIZED
C-29	71649-64	.0047 MFD	CERAMIC
C-30	71651-74	.0056 MFD	CERAMIC
S-1	53648	S.P.S.T.	POWER SW.
S-2	68770	S.P.D.T.	CANCEL SW.
S-3	64857	4 POS. SHORTING	TREBLE SW.
S-4	64857	4 POS. SHORTING	BASS SW.
S-5	113936		FADER SW.
T-1	114259		OUTPUT TRANS.
LS-1	114054	3.5 OHM	7 IN. SPEAKER
LS-2	62492	16 OHM	12 IN. SPEAKER
LS-3	114006	8 OHM	12 IN SPEAKER
F-1	52196	1.5 AMP	250V FUSE
P.E.C.	112231		TREBLE TONE

POWER SUPPLY PARTS LIST — ONLY

ITEM	PART NO.	VALUE	REMARKS
SR1	71588-3	200 PIV	SILICON RECTIFIER RED
SR2	71588-3	200 PIV	SILICON RECTIFIER RED
SR3	71588-2	450 PIV	SILICON RECTIFIER GREEN
SR4	71588-2	450 PIV	SILICON RECTIFIER GREEN
SR5	71588-1	400 PIV	SILICON RECTIFIER BROWN
F1	71591-15	1.6 AMP	SLO BLO FUSE
F2	71590-33	8 AMP	FUSE
F3	71591-19	2 AMP	SLO BLO FUSE
F4	71590-22	3 AMP	FUSE
RY	56321 / 63960	OPTIONAL	24 VOLT DC RELAY
T1	116644		L.V. TRANSFORMER
T2	116645		H.V. TRANSFORMER
C1	71595	100 MFD	250 V. ELECTROLYTIC
C2A	71594	▲ 100 MFD	250 V. ELECTROLYTIC
C2B		20 MFD	400 V. ELECTROLYTIC
C3	71227-24	.1 MFD	400 V.
C4	73099-240	.5 MFD 400V	CAPACITOR
C5	73099-240	.5 MFD 400V	CAPACITOR
R1	73479-2	15 OHMS	10W. W.W.
R2	73476-2	8 OHMS	10W. W.W.
R3	72339-32	1.2 K	1 W.
R4	72256-32	470 K	1/2 W.
R5	72256-32	470 K	1/2 W.

A.C. SIGNAL CHART

USE BALLANTINE A.C.-VTVM OR HEATHKIT VOLTMETER AV-2
APPLY 10 MILLIVOLT AT 1000 CPS SIGNAL TO INPUT JACKS A & B
VOLUME CONTROL, BASS & TREBLE CONTROLS FULL CLOCKWISE
BALANCE CONTROL SET IN MIDDLE. USE 5 Ω 20 W RESISTOR AS
OUTPUT LOAD FOR EACH CHANNEL.

TUBE		FUNCTION	PIN No. 1	2	3	4	5	6	7	8	9
V1	7025	VA-CF	.35	.004					.07	.1	
V2	7025	VA-CF		.07	.1			.35	.004		
V3, V4	12AU7	R-VA	.07					.45	.04	.01	
V5, V6	12AX7	Ø	2.0	.18	.19			2.3	.045		
V7	12AX7	VA-RECT	2					2	.035	.09	
V8, V9, V10, V11	6973	POWER AMP	.07		2.1			2.1		.07	46

A.C. VOLTAGES MEASURED FROM GROUND
LINE VOLTAGE 117V
✳ MEASURED WITH VTVM

116396-4

Fig. 103. 538 SOUND SYSTEM . . . . . . SCHEMATIC WIRING DIAGRAM