

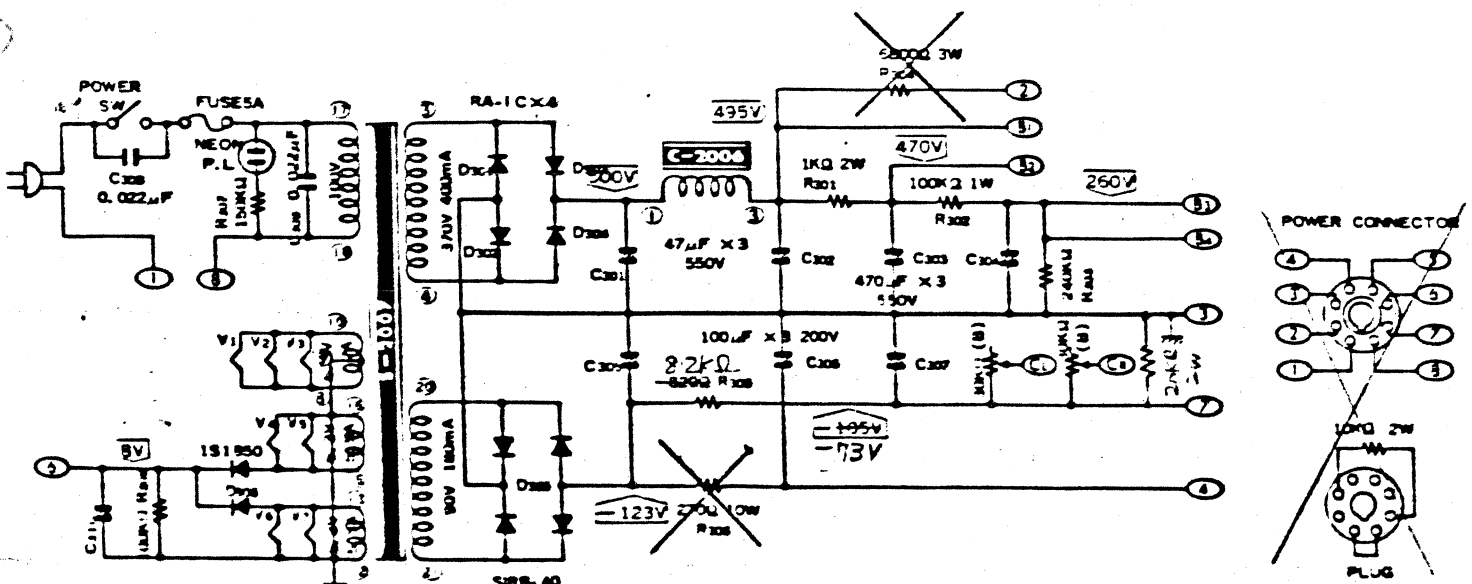
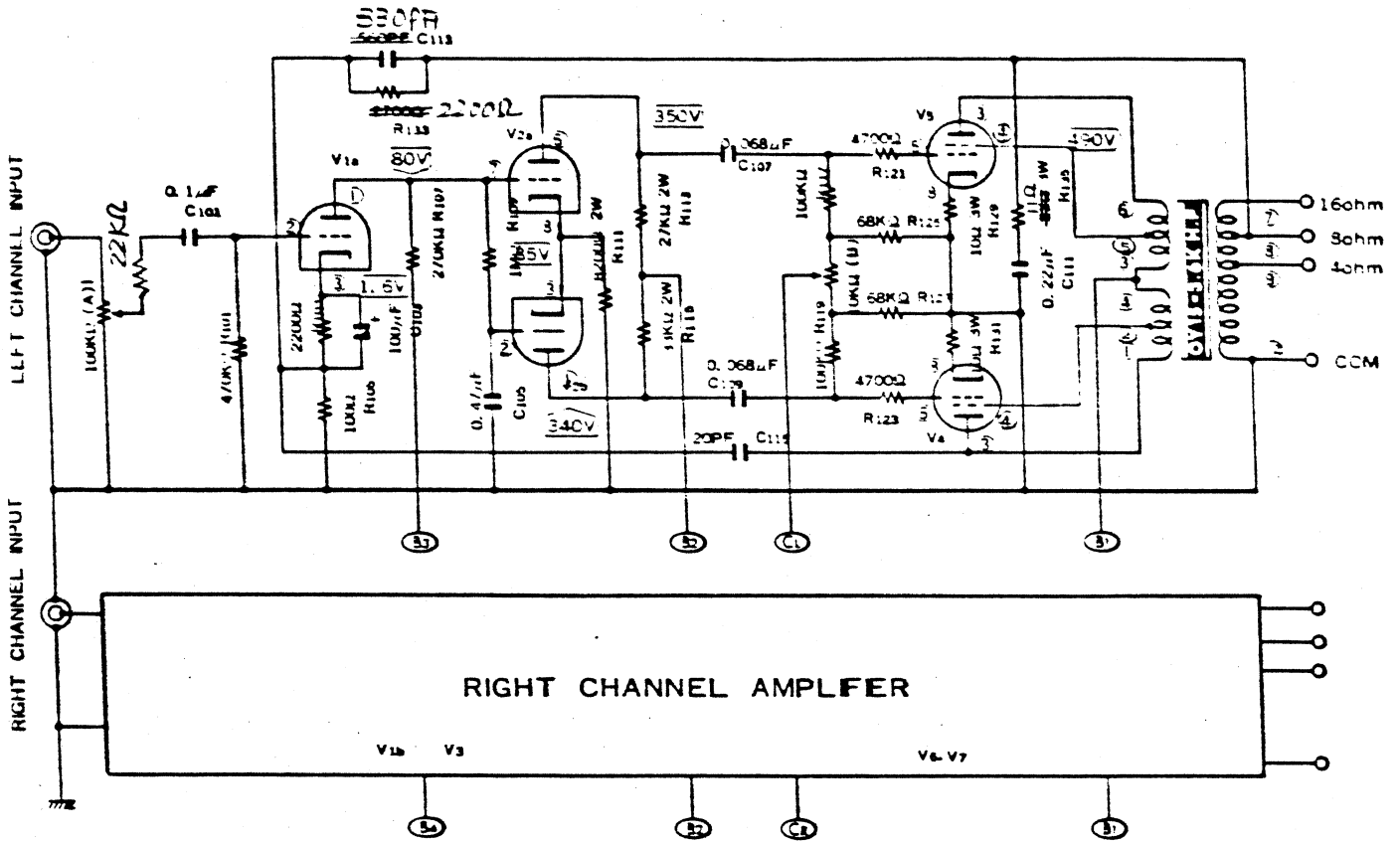
LX33

CL32 ALIGNMENT PROCEDURE

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1 & 2 pages: alignment procedure
2 : drawings
3 : circuit diagramme

MQ3600 UL (Ultra Linear) connection with KT88



Pattern of P.C.B. (front)

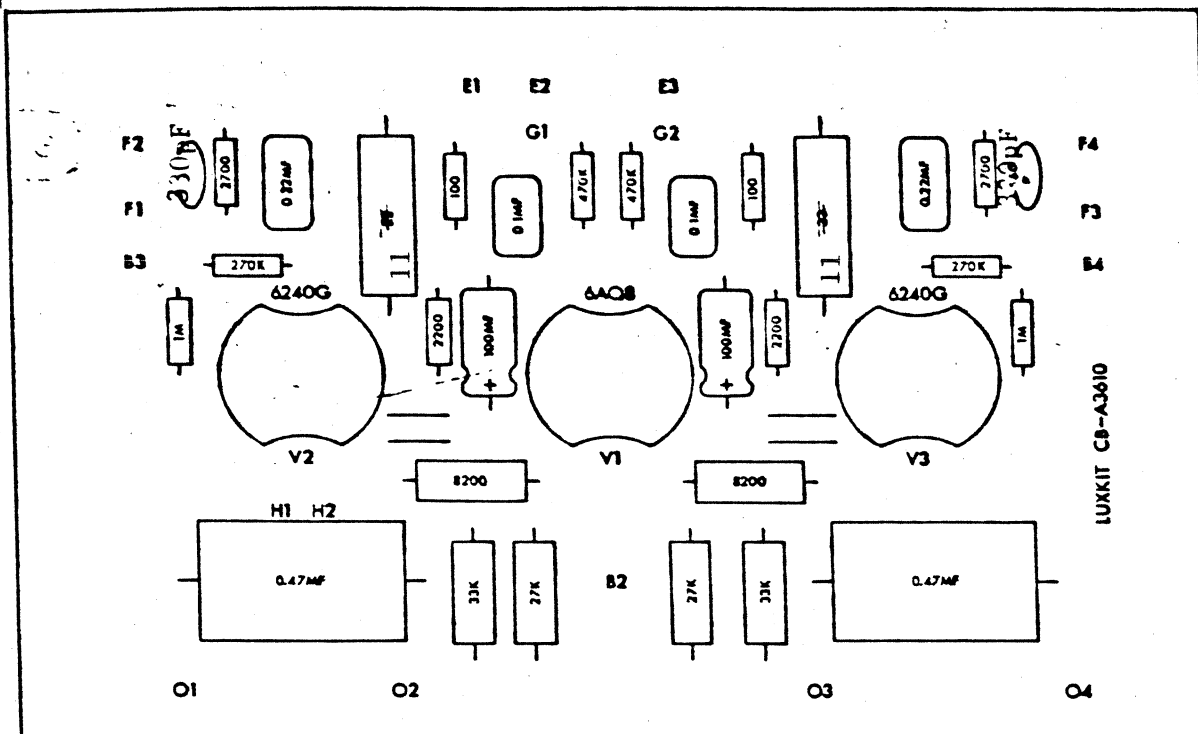


Fig. (C)

Pattern of P.C.B. (reverse)

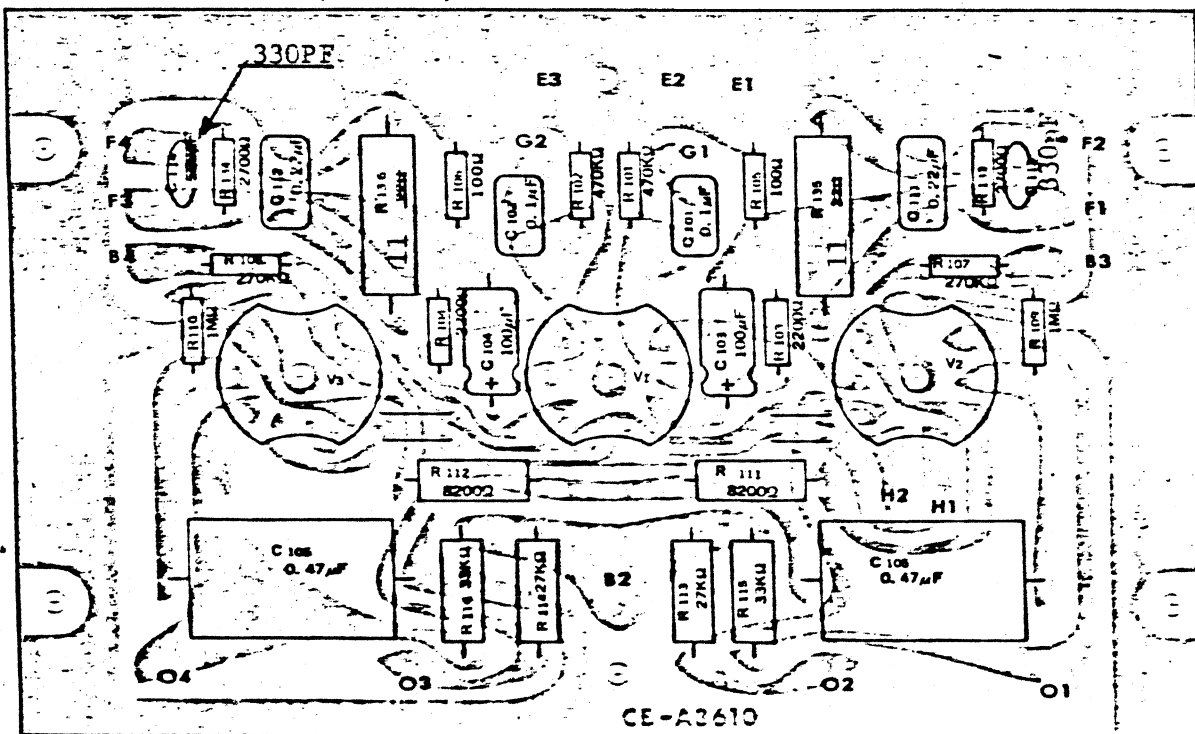
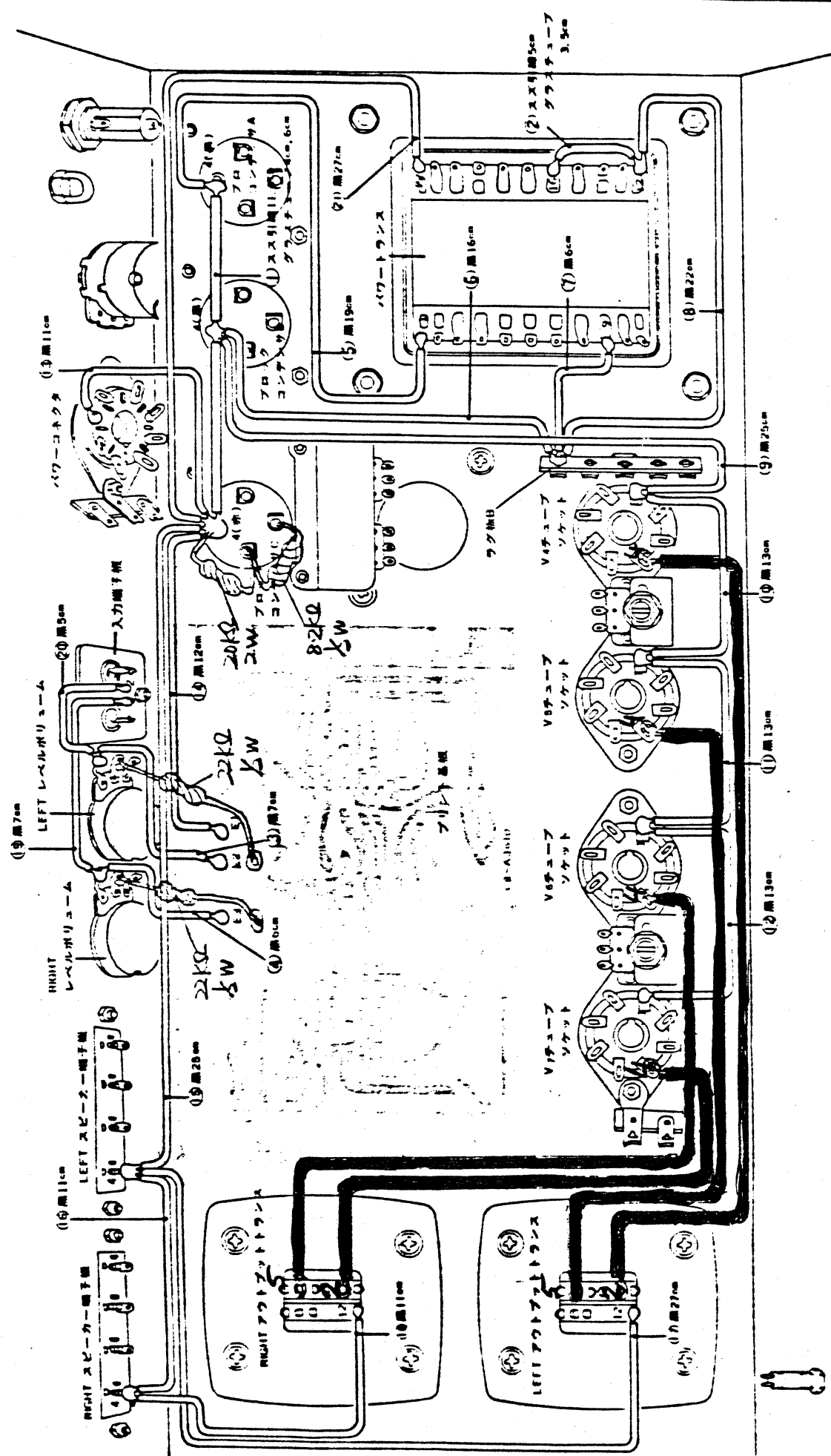


Fig. (D)

MO3600 KT88 Change of Wiring for III, Connection



MODIFICATION PROCEDURES FOR SLTERNATIVE USE OF KT88 VACUUM TUBE ON MQ-3600In case of UL(Ultra Linear) Connection with KT88

- (1) Change the value of R133 and R134 from 2,700-ohm (1/4W) to 2,200-ohm (1/4W) due to the change of NF amount. See Fig. F & G
- (2) Change the value of C113 and C114 styrol condensors from 560pF to 330pF for stability. See Fig. F & G
- (3) Change the value of R135 and R136 from 22-ohm 3W to 11-ohm 3W (a resistor of 22-ohm 2W can be fixed in parallel with the resistor of 22-ohm 3W) for stability. See Fig. F & G.
- (4) Add to fix a resistor of 22K-ohm 1/2W between the center termianl of the level control volume and the circuit board. G and G for stability. See Fig. E.
- (5) Change the value of R305 from 820-ohm to 8.2K-ohm 1/2W for change of bias voltage. See Fig. E.
- (6) Change a resistor in the bias circuit from 10K ohm 2W to 20K ohm 2W for change of bias voltage.
- (7) Add wires to connect in between the output SG taps and the output tube SG. (4 wires) See Fig. E.
- (8) Adjustment of non signal current: Adjust to make cathode current 50mA per tube.

In case of Triode Connection with KT88

- (1) Change the value of C113 and C114 from 560pF to 330pF. See Fig. C & D.
- (2) Change the value of R135 and R136 from 22-ohm 3W to 11-ohm 3W (a resistor of 22-ohm 2W can be fixed in parallel.) See Fib. C & D.
- (3) Add to fix resistors, 22K-ohm 1/2W in between the center terminal of the level control volume and P.C.B., G & G
- (4) Change the value of R305 from 820-ohm to 8.2K-ohm 1/2W. See Fig. B.
- (5) Change a resistor in the bias circuit form 10K ohm 2W to 20K ohm 2W for change of bias voltage.
- (6) Wiring of Output Tube SG Circuit: Connect with 100-ohm 1/2W resistors in between Pin 3 and Pin 4 of the sockets for triode connection of the output tubes. See Fig. B.
- (7) Change the value of R115 and R116 from 33K-ohm 2W to 30K-ohm 2W for improvement of distortion. See Fig. C & D
- (8) Adjustment of non signal current: Adjust to make cathode current 50mA.

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CL32(A3032) Alignment procedure

- 1) Put the power switch on, and ensure that the pilot lamp lights up.
- 2) Check the voltage at the points shown in the attached sheet (page 2) Fig.1 and 2 each voltage is within $\pm 20\%$ deviation of the specified value.
- 3) Set each operation knob and switch as per the following standard condition.

Front Panel

A. Input selector switch	at Phone 1.
B. Monitor switch	Source
C. Tape dubbing switch	Source
D. Mode switch	Stereo
E. Liner Equalizer switch	Center
F. Filter switch	Defeat
G. Balance control Knob	Center
H. Attenuator Switch	Normal
I. Output Selector switch	A+B
J. Volume switch	Minimum

Rear Panel

- A. Input impedance adjustment switch at 50Kohms
- B. Input level set volume (tuner) at Max (clockwise to the maximum)
- C. Input level set volume (Aux 2) at Max (counter-clockwise to the maximum)

- 4) Connect the millivolt meter and oscilloscope to the output terminal A and gradually turn the volume control in clockwise direction to check residual noise increase accordingly.
- 5) Insert the short-pin plug to the phono 2 input terminal.
- 6) Set the input selector to the Phono 2 position.
- 7) Ensure that the noise level is within the rated specification.
- 8) Set the input selector to AUX 1 and AUX 2 and ensure the noise level is within the rated specifications respectively.
- 9) Set the input selector to the tuner position and ensure the selector switch to the tuner position and connect an audio signal generator to the tuner terminal. Then, ensure that the frequency response, distortion and input sensitivity and Liner equalizer satisfy the specifications.
- 11) Repeat the step (10) on the AUX 1 and AUX 2 terminals.
- 12) Connect a millivolt meter, oscilloscope and distortion meter to the Rec-out terminal. Then, ensure that the distortion, frequency response and input sensitivity of the equalizer stage satisfy the required specifications.

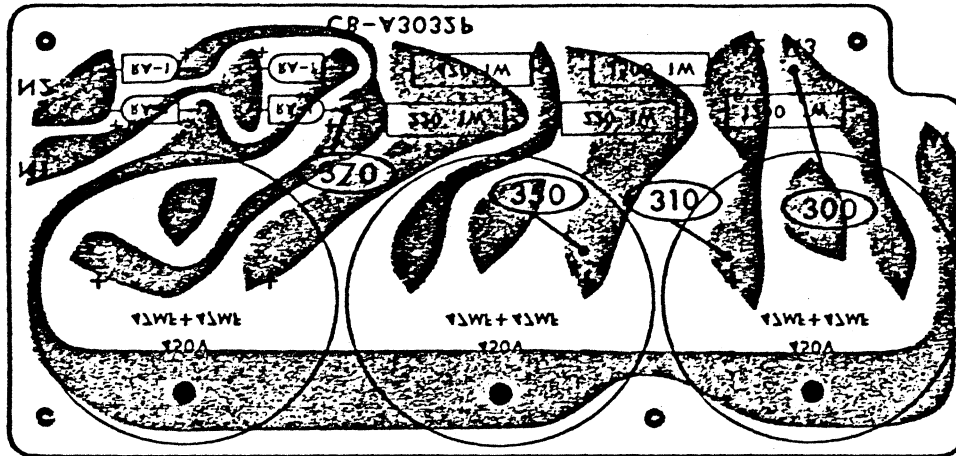
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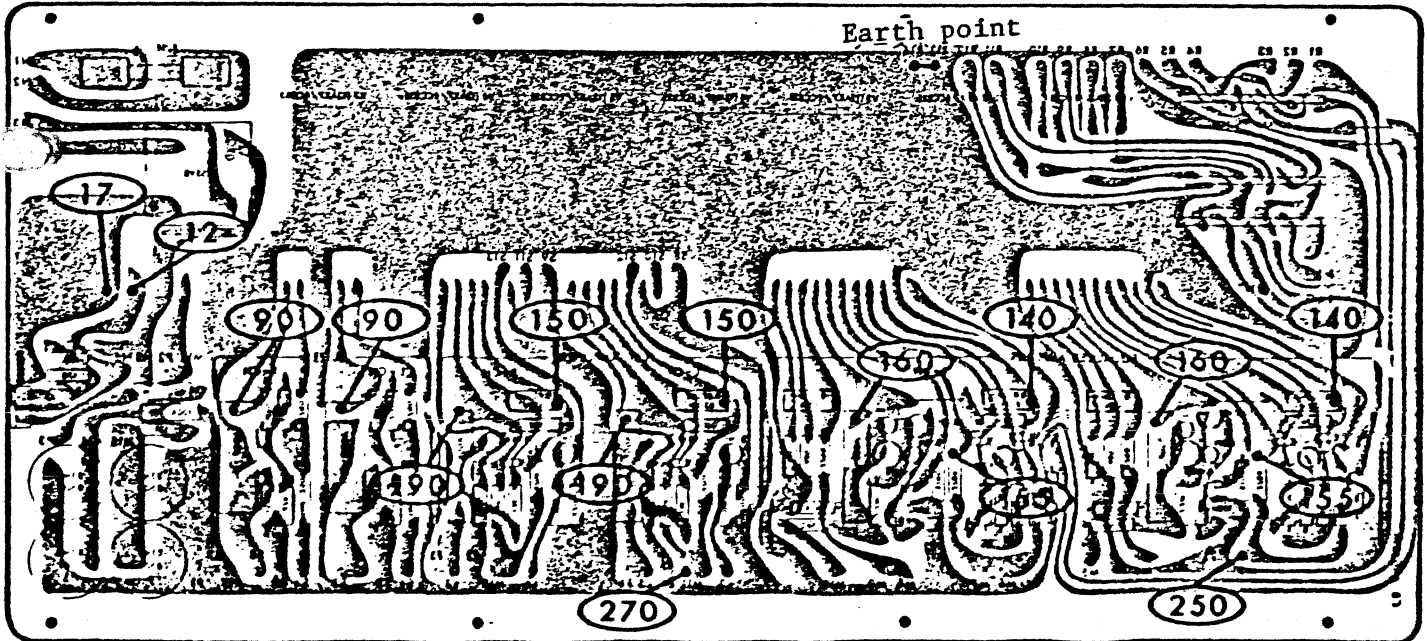
Besides the aforementioned procedures, please be careful in the following points.

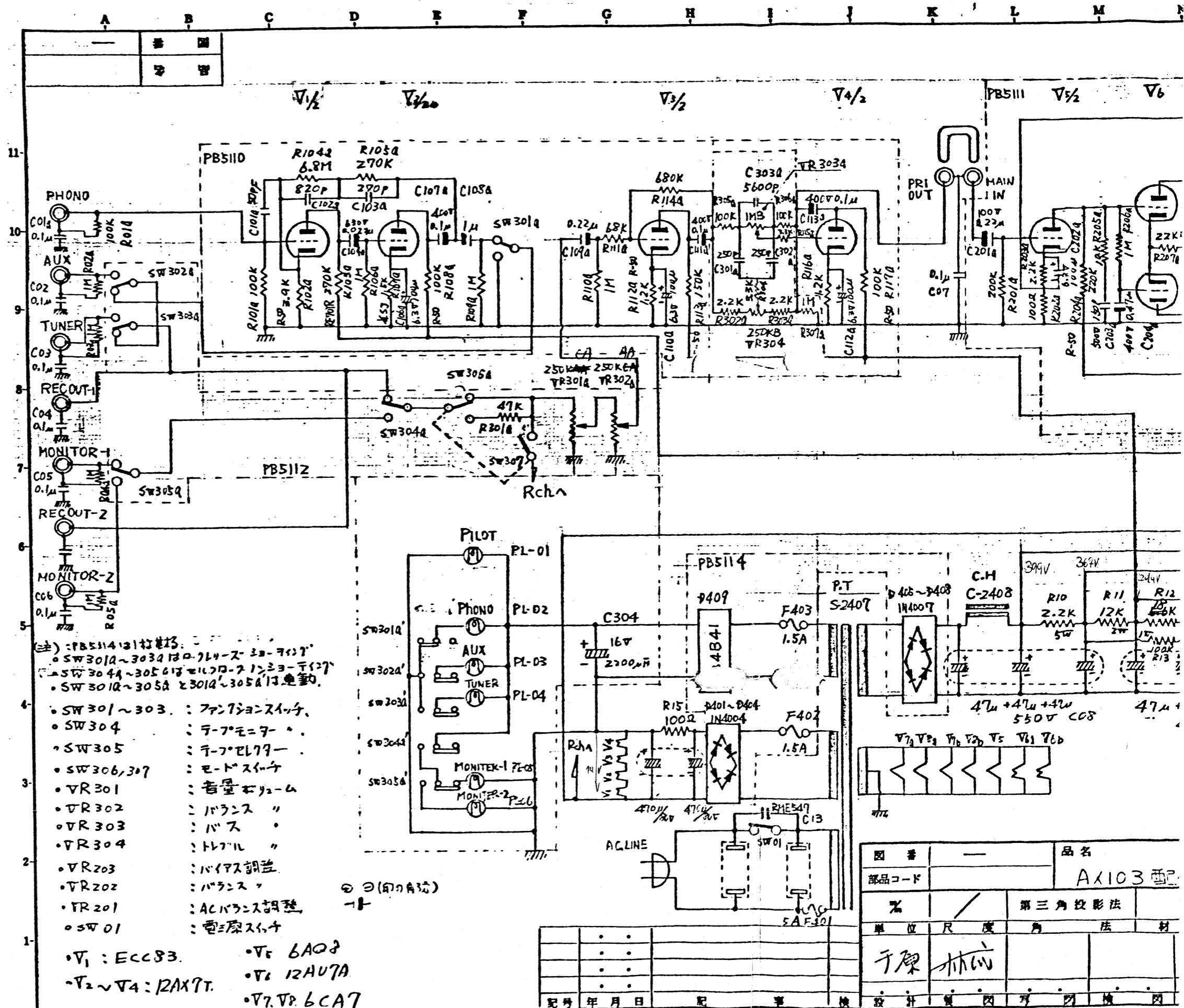
- A. Ensure the correct connection of the L and R channels.
- B. Ensure the correct working of each function, say, Filter, Tape monitor, tape dubbing, Attenuator, Output selector, each volume control; tuner input level, phono 1 impedance adjustment, AUX 2 input level, Balance control.

CB-A3032P voltage value (Fig.1)



CB-A3032M voltage value (Fig.2)





(注) PB5114は1打電圧。
 SW301A~303Aは0.7L4-S 30-717
 SW304A~305Aは0.7L4-S 30-717
 SW301R~305Rは0.7L4-S 30-717

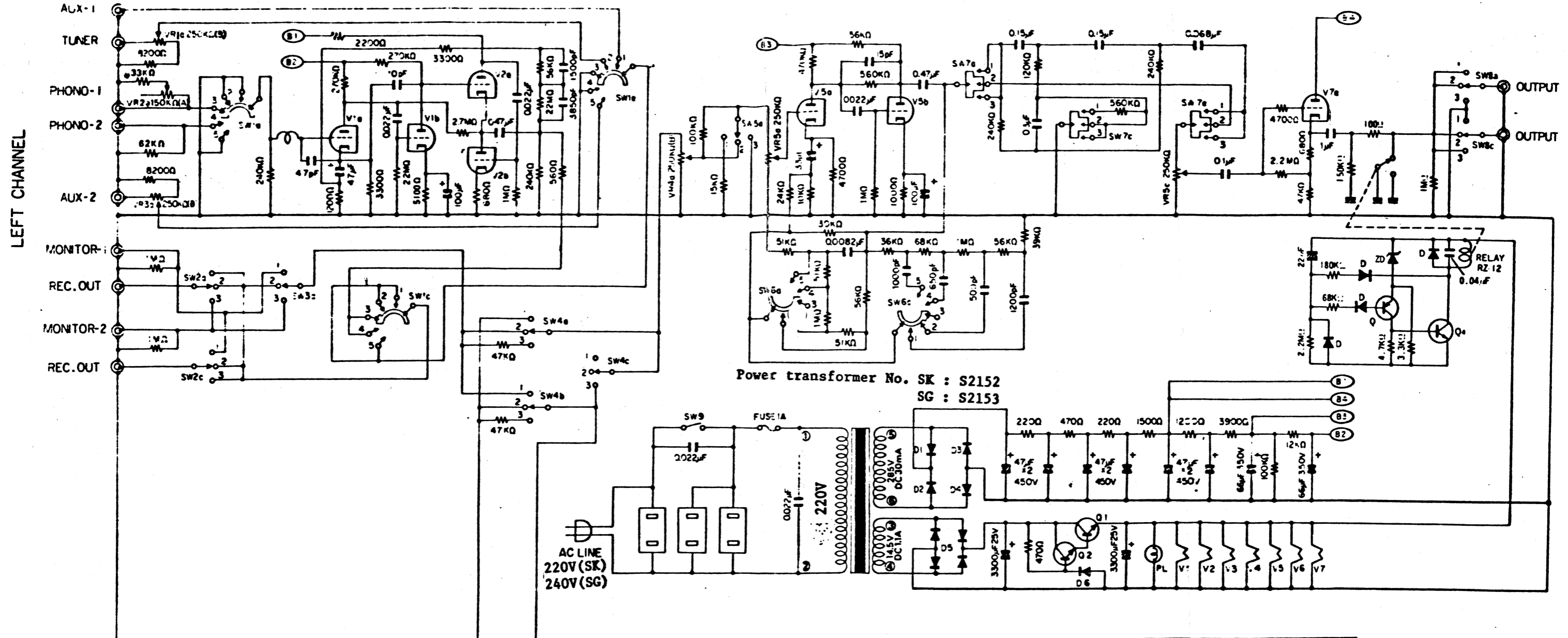
- SW301~303 : ファンクションスイッチ
- SW304 : テープレコーダ
- SW305 : テープレコーダ
- SW306, 307 : モードスイッチ
- TR301 : 音量ボリューム
- TR302 : バランス
- TR303 : バス
- TR304 : トリプル
- TR203 : ハイパス調整
- TR202 : バランス
- TR201 : ACバランス調整
- SW01 : 電源スイッチ

- V1 : ECC83
- V2~V4 : 12AX7T
- V5 : 6AQ5
- V6 : 12AU7A
- V7, V8 : 6CA7

◎ ◎ (印の有効)
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標準規格 A3

図番	—			品名
部品コード	—			AX103 型
%	/	第三角投影法		
単位	尺	度	角	法
手原 林心				
設計	製	図	写	印
記号	年月日	記	事	検



Power transformer No. SK : S2152
SG : S2153

RIGHT CHANNEL	SWITCHES	VOLUMES	OTHER	OUTPUT A	OUTPUT B
AUX-1	SA1a,b,c,d,e,f	VR1a,b	V1, 3, 5, 6, 7	⊙	⊙
TUNER	SA2a,b,c,d	VR2a,b	V2, 4		
PHONO-1	SA3a,b	VR3a,b	O1		
PHONO-2	SA4a,b,c	VR4a,b	O2		
AUX-2	SA5a,b	VR5a,b,c,d	D1, 2, 3, 4		
MONITOR-1	SA6a,b,c,d		D5		
REC. OUT	SA7a,b,c,d,e,f		D6		
MONITOR-2	SA8a,b,c,d				
REC. OUT	SA9				

SA1a,b,c,d,e,f INPUT SELECTOR (1:AUX-1, 2:TUNER, 3:PHONO-1, 4:PHONO-2, 5:AUX-2)
 SA2a,b,c,d TAPE DUBBING (1:1-2, 2:SOURCE, 3:2-1)
 SA3a,b MONITOR (1:TAPE-1, 2:SOURCE, 3:TAPE-2)
 SA4a,b,c MODE (1:REVERSE, 2:NORMAL, 3:MONO)
 SA5a,b ATTENUATE (1:-20dB, 2:NORMAL, 3:SIGAL OFF)
 SA6a,b,c,d LF-EAREQUALIZER (1:2UP TLT, 3:FLAT 4-5:DOWN TLT)
 SA7a,b,c,d,e,f FILTER (1:SUBSONIC, 2:DEFEAT, 3:LOW CUT)
 SA8a,b,c,d OUTPUT SELECTOR(1A, 2A+B, 3B)
 SA9 POWER

Due to continued research for improvements, LUX reserves the right to alter the circuit and specification without notice.

ULTIMATE FIDELITY **CL-32**