

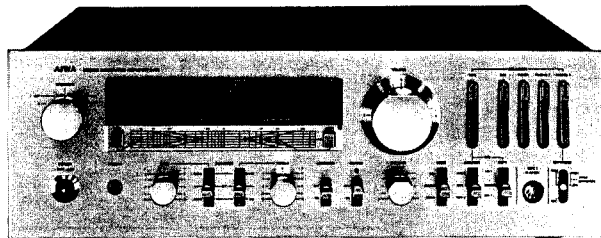
STEREO INTEGRATED AMPLIFIER

MODEL NO. **AA-8700H, E, K**

AIWA®

(SERVICE MANUAL)

Code No., 08-870-000-20



DATE OF ISSUE 10/1978

SPECIFICATIONS

Semiconductors:	4 IC's, 8 FET's, 51 transistors, 58 diodes, 7 LED'S	Input sensitivity and impedance:	PHONO1 (MC) 220mV/10 ohms PHONO1,2(MM) 2.5mV/47 k-ohms TUNER,AUX, 150mV/47 k-ohms TAPE,DIN 150mV/47 k-ohms MAIN IN 0.8V/47 k-ohms
Power source:	AC 120V/220V/240V (selectable with voltage selector)	Phono maximum input voltage:	280 mV ±0.2 dB (30 Hz ~ 15,000 Hz)
Power consumption:	550 W (E, K model) 260 W (H model)	RIAA deviation:	±0.2 dB (30 Hz ~ 15,000 Hz)
Dimensions:	448 (W) x 156 (H) x 375 (D) mm	Tone control:	
Weight:	16.5 kg	Bass	20 Hz ±8 dB (turnover frequency 200 Hz) 50 Hz ±8 dB (turnover frequency 400 Hz)
Power output		Treble	20 kHz ±10 dB (turnover frequency 2.5 kHz) 40 kHz ±10 dB (turnover frequency 5 kHz)
Dynamic power output:	170 W + 170 W (4 ohms) (at 1 KHz)	Filters:	Low: 30 Hz, 12 dB/oct. High: 10 kHz, 12 dB/oct.
Power output (FTC):	85 W + 85 W (4 ohms) (All channel driven 20 Hz~20 kHz, THD 0.02%)	Output voltage and impedance:	TAPE 150 mV/47 k-ohms DIN 30 mV/80 k-ohms PRE 0.8 V/1.3 k-ohms PHONES 4 ~ 16 ohms SPEAKER 4 ~ 16 ohms (A, B) 8 ~ 16 ohms (A+B)
Power output (DIN 45500):	(10 minutes driven 1 kHz, THD 1%)		
Total harmonic distortion (IHF):	0.01% (at 40 W, 8 ohms)		
Intermodulation distortion (IHF):	(at 50 Hz: 7 kHz = 4:1, 8 ohms)		
Power bandwidth (IHF):	5 Hz ~ 100 kHz (less than 0.03%) (both channel driven at 8 ohms)		
Signal to noise ratio:	PHONO (MC) 70 dB (30Ω) (IHF A curve)		
	PHONO (MM) 83 dB (short circuit) TUNER,AUX,TAPE 100 dB (short circuit)		
Damping factor:	More than 40 (at 8 ohms, 20 Hz ~20 kHz)		
Channel crosstalk (DIN):	50 dB (at 1 kHz)		

• The specifications and external appearance of this set are subject to change without prior notice.

DISASSEMBLY INSTRUCTIONS

To Remove Phono Amp Circuit Board
Remove 3 screws.

To Remove Lamp Circuit Board
Remove mounting screw.

To Remove Meter Amp Circuit Board
Remove 6 screws.

To Remove Front Panel

- 1) Remove 12 knobs.
- 2) Remove 6 screws.

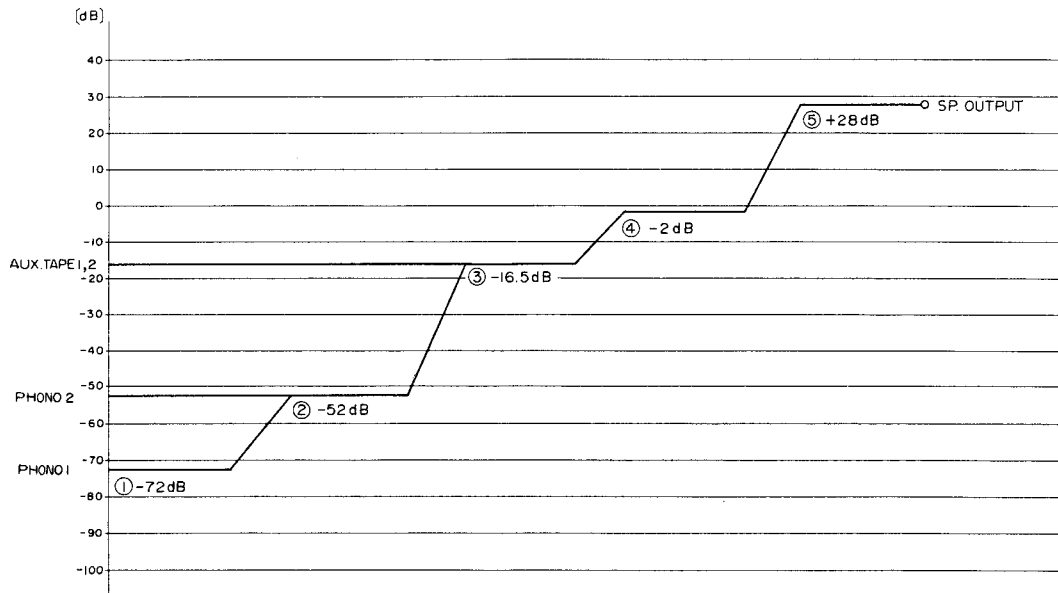
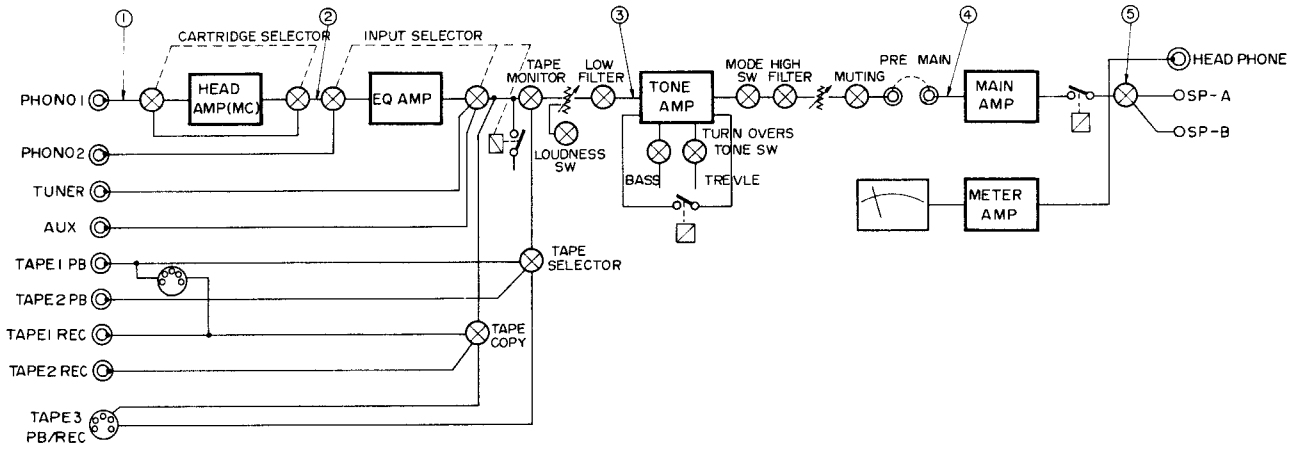
To Remove Pre Amp Circuit Board

- 1) Remove 7 screws.
- 2) Remove mounting nuts.

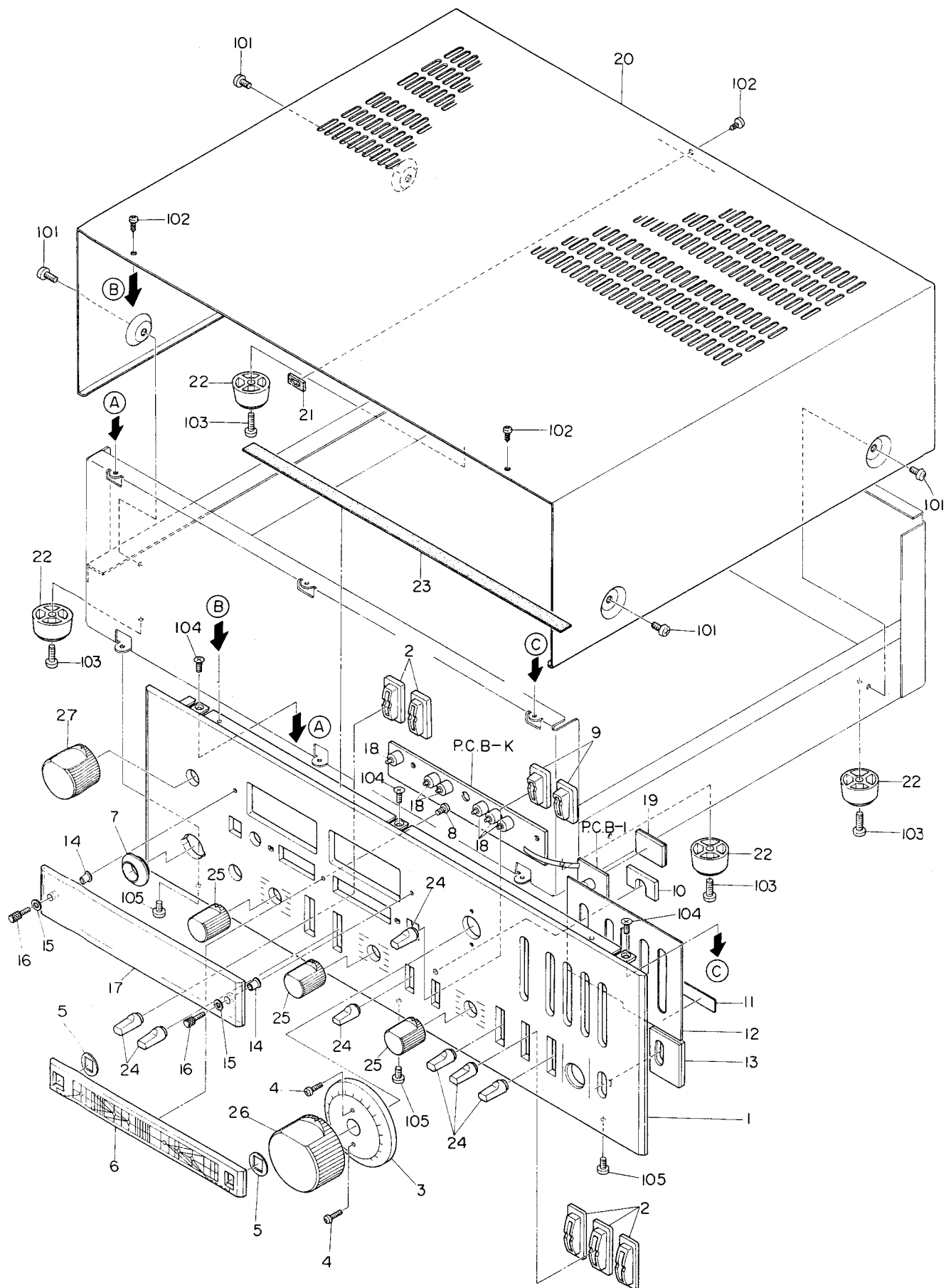
To Remove Tone Power Circuit Board

- 1) Remove 4 screws.
- 2) Remove 3 nuts.

LEVEL DIAGRAM



EXPLODED VIEW-1



PARTS LIST

MECHANICAL PARTS

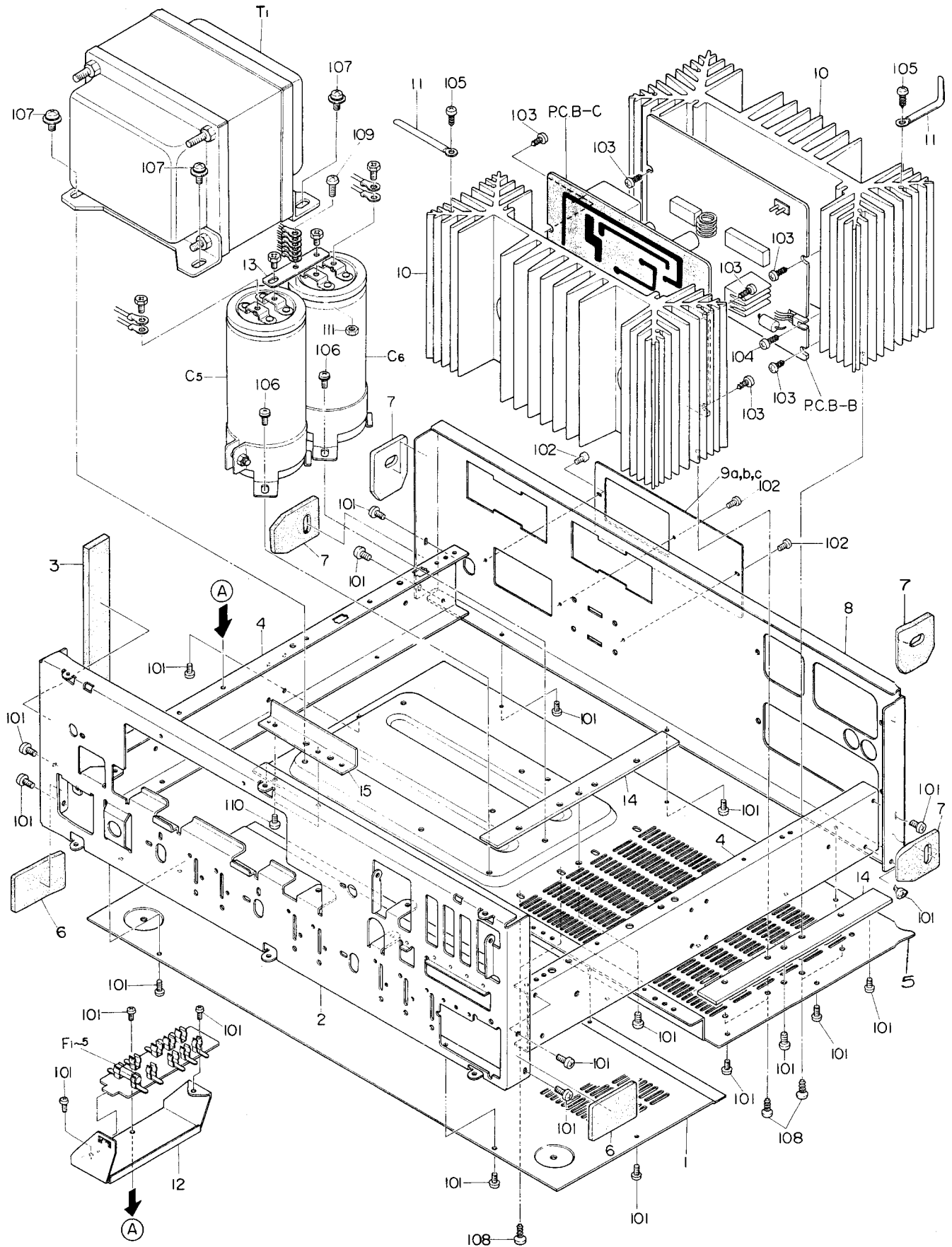
* mark in this part list shows exclusive part (which is used) for only Model AA-8700.

Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
1~13	09-047-120-01		Panel assembly		
1-1	82-478-033-01		Front sash	*	1
1-2	82-478-023-01		Guide, Lever switch	*	3
1-3	82-478-007-01		Ring, Volume	*	1
1-4	87-231-096-21		Q + 3-10		2
1-5	82-478-214-01		Button guide	*	2
1-6	82-478-005-01		Decorative plate, Front	*	1
1-7	82-478-012-01		Ring, Power button	*	1
1-8	87-231-095-01		Q + 3-8		1
1-9	82-478-027-01		Guide, Lever switch	*	2
1-10	82-478-217-01		Cushion A, LED	*	1
1-11	82-478-219-01		Cushion felt, Selector button	*	1
1-12	82-478-213-01		Guide, Selector button	*	1
1-13	82-478-212-01		Lever guide	*	1
1-14	82-488-023-01		G sleeve		2
1-15	82-488-024-01		G washer		2
1-16	82-488-016-01		Screw, Window		2
1-17	82-478-045-01		Window, Meter	*	1
1-18	82-478-206-01		Rubber bushing, LED	*	6
1-19	82-478-218-01		Cushion	*	1
1-20	82-478-048-01		Steel cabinet ass'y	*	1
1-21	82-380-439-01		Spacer, Back panel	AD-6500	1
1-22	87-085-162-01		Foot		4
1-23	82-397-245-01		Himeron cloth, Cabinet	AD-6550	1
1-24	82-399-024-01		Knob, Selector	AD-6400	7
1-25	82-478-031-01		Tone knob ass'y	*	3
1-26	82-478-028-01		Volume knob ass'y	*	1
1-27	82-478-008-01		Selector knob ass'y	*	1

Ref. No.	Part No.	Description	Q'ty
1-101	87-257-169-11	U + 4-6 (Black)	4
1-102	87-340-095-01	UT ₁ + 3-8 (Black)	3
1-103	87-251-171-21	V + 4-10	4

Ref. No.	Part No.	Description	Q'ty
1-104	87-081-531-01	QTT + 3-6	3
1-105	87-081-511-01	VTT + 3-6	3

EXPLODED VIEW-2



Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
2-1	82-478-004-01		Bottom plate	*	1
2-2	82-478-201-01		Front chassis	*	1
2-3	82-473-271-01		Spacer E, Side panel	AX-7500	1
2-4	82-478-202-01		Side chassis	*	2
2-5	82-478-255-01		Amp. chassis	*	1
2-6	82-473-270-01		Spacer D, Side panel	AX-7500	2
2-7	82-473-245-01		Spacer A, Side panel	AX-7500	4
2-8	82-478-034-01		Panel E, Back	*	1
2-9 a	82-478-025-01		Name plate, Spec. (E model only)	*	1
2-9 b	82-478-040-01		Name plate, Spec. (K model only)	*	1
2-9 c	82-478-045-01		Name plate, Spec. (H model only)	*	1
2-10	82-478-602-01		Heat sink B	*	2
2-11	87-064-080-01		Wire binder, 4 ϕ		2
2-12	82-478-224-01		Holder, Circuit board	*	1
2-13	82-478-659-01		Earth plate	*	1
2-14	82-478-229-01		Spacer, Heat sink	*	2
2-15	82-487-222-11		Auxiliary plate L		1

Ref. No.	Part No.	Description	Q'ty
2-101	87-081-511-01	VTT + 3-6	22
2-102	87-257-033-01	U + 2-4 (Black)	3
2-103	87-341-094-21	UT ₁ + 3-6	8
2-104	87-342-096-21	UT ₂ + 3-10	2
2-105	87-352-169-21	VT ₂ + 4-6	2
2-106	87-480-169-11	VS + 4-6	4



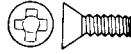
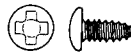
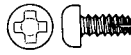
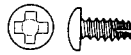
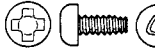
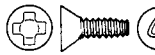
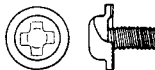
Ref. No.	Part No.	Description	Q'ty
2-107	87-490-170-11	VWS + 4-8	4
2-108	87-352-171-21	VT ₂ + 4-10	8
2-109	87-261-170-21	V + 4-8	1
2-110	87-261-095-21	V + 3-8	2
2-111	87-391-035-11	N-4	1





Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
3-1	82-397-054-01		Cover, DIN	AD-6550	1
3-2	82-380-355-01		Holder, DIN jack	AD-6500	1
3-3	82-478-220-01		Himeron cloth A, Blind	*	2
3-4	82-478-221-01		Himeron cloth B, Blind	*	5
3-5	82-478-205-01		Holder, Meter	*	2
3-6	82-399-025-01		AC switch button ass'y	AD-6400	1
3-7	82-478-016-01		Cap, Filter button	*	2
3-8	82-478-015-01		Filter button	*	2
3-9	82-478-222-01		Himeron C, Lever	*	1
3-10	87-038-039-01		Wire binder		1
3-11	82-478-215-01		Brass post B, Circuit board	*	1
3-12	82-478-208-01		Brass post A, Circuit board	*	1
3-13	87-032-860-01		Pin, 5P		1
3-14	82-478-204-01		Holder, Circuit board	*	3
3-15	82-478-211-01		Blind B, Pilot lamp	*	1
3-16	82-478-209-01		Blind A, Pilot lamp	*	2
3-17	87-033-148-01		Screw, Speaker terminal		2
3-18	87-064-088-01		Holder, Circuit board		2
3-19 a	87-034-884-01		AC power cord (E model only)		1
3-19 b	87-034-872-01		AC power cord (K model only)		1
3-19 c	87-034-885-01		AC power cord (H model only)		1
3-20	87-085-101-01		Cord bushing (H model only)		1
3-21	82-478-207-01		Holder, Cord bushing (E, K model only)	*	1
3-22	87-085-095-01		Holder B, AC power cord (E, K model only)		1
3-23	87-085-094-01		Holder A, AC power cord (E, K model only)		1
3-24	87-056-008-01		Label, AC power cord (K model only)		1
3-25	87-056-016-01		Tag, Main voltage (K model only)		1
3-26	87-085-102-01		Nylon rivet		7
3-27	82-478-603-01		Shield plate		1
3-28	87-034-920-01		Push switch, REMOTE wire		1
3-29	87-034-919-01		Wire, Lever switch		1
3-30	87-031-452-01		Lever switch, REMOTE		1
3-31	82-478-228-01		SW holder (MC)	*	1
3-32	82-478-038-01		Cartridge selector ass'y	*	1
3-33	82-478-022-01		Knob plate	*	1
3-34	82-478-019-01		Window, Selector indication	*	5
3-35	82-478-210-01		Shaft, Selector button	*	1
3-36	82-478-017-01		Selector button	*	5
3-37	82-478-018-01		Cap, Selector button	*	5
3-38	82-365-294-01		Pressure plate spring, Cassette		5

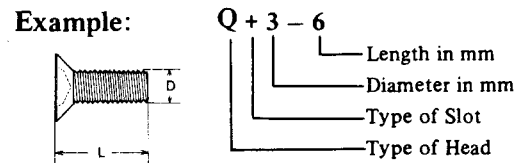
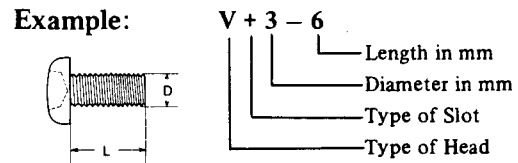
Ref. No.	Part No.	Description	Q'ty
3-101	87-081-511-01	VTT + 3-6	16
3-102	87-261-092-21	V + 3-4	7
3-103	87-231-035-21	Q + 2-6	2
3-104	87-081-501-01	VTT + 2.6-4	5
3-105	87-081-871-01	Special screw + 3-8 (Black)	4

Ref. No.	Part No.	Description	Q'ty
3-106	87-251-097-21	U + 3-12	2
3-107	87-261-099-21	V + 3-15	2
3-108	87-231-094-21	Q + 3-6	2
3-109	87-441-006-01	STE-2.3	1

HARDWARE NOMENCLATURE

- V: Pan head screw 
- U: Binding head screw 
- Q: Flat countersunk head screw 
- UT1: Binding head tapping screw 
- VT2: Pan head tapping screw 
- UT2: Binding head tapping screw 
- VTT: Pan head tap-tight screw 
- QTT: Pan head tap-tight screw 
- Special screw 

- VS: Pan head screw with spring washer 
- VWS: Pan head tapping screw with spring washer and washer 
- N: Nut 
- STE: E ring 



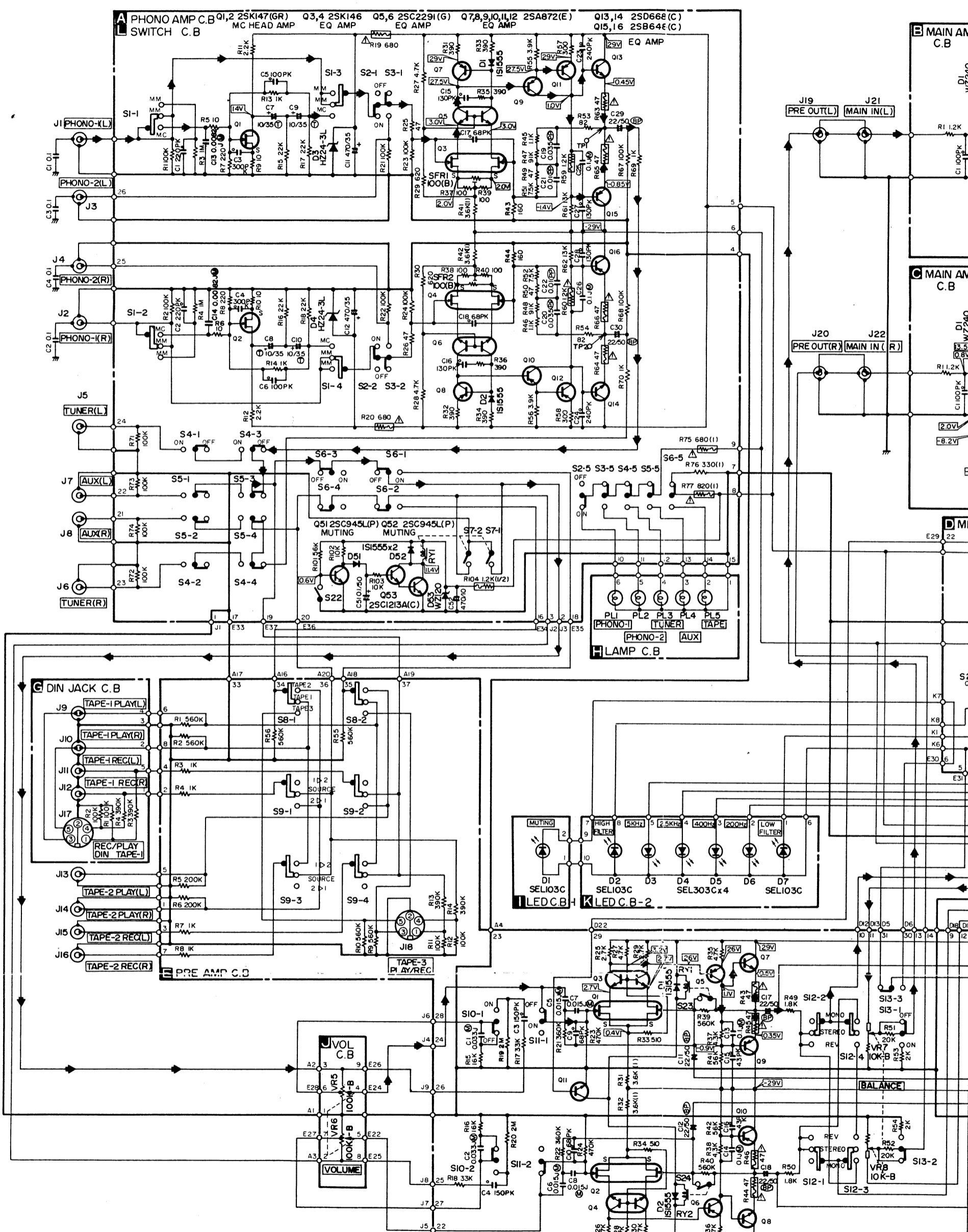
ACCESSORIES/PACKAGE

Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
1	82-478-851-01		Printed indiv., Packing	*	1
2	82-478-852-01		Cushion L, Printed indiv.	*	1
3	82-478-853-01		Cushion R, Printed indiv.	*	1
4	87-051-131-01		Poly-vinyl sack (for AC power cord) (K, H model only)		1
5	87-051-183-01		Poly-vinyl sack (for AC power cord) (E model only)		1
6	87-056-564-01		Curly stopper		2
7	87-056-607-01		Poly-vinyl sack (for case)		1
8 a	82-478-901-01		Instructions booklet (E model only)	*	1
8 b	82-478-902-01		Instructions booklet (K model only)	*	1
8 c	82-478-905-01		Instructions booklet (H model only)	*	1
9	87-056-008-01		Label, AC power cord (K model only)		1
10	87-056-009-01		Distributors list		1
11	87-056-016-01		Tag, Main voltage (K model only)		1
12	87-056-608-01		Poly-vinyl sack (for instruction)		1
13	87-032-930-01		Siemens plug (H model only)		1
14	87-058-023-01		Cord binder		1



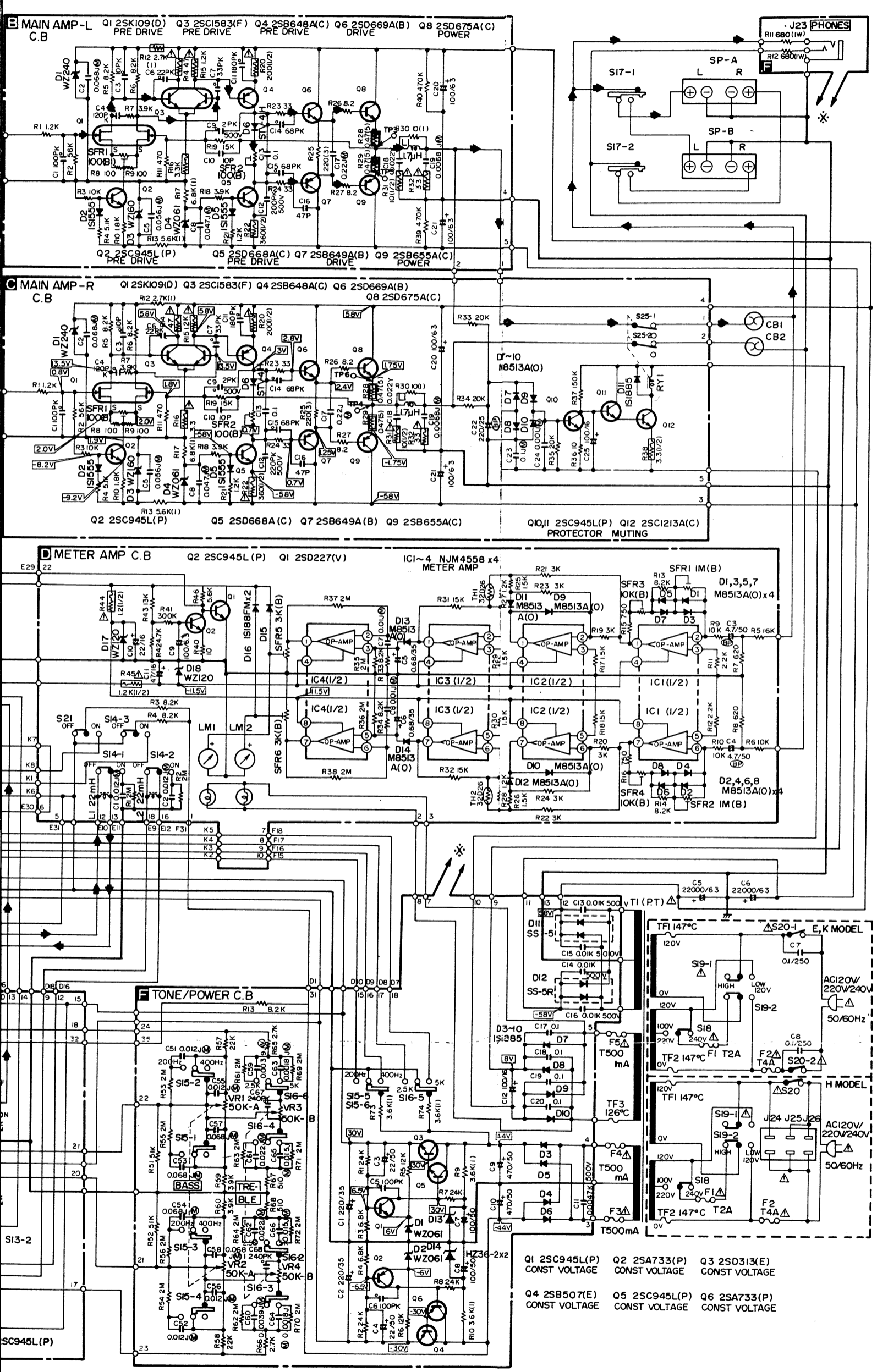
SCHEMATIC DIAGRAM

A
B
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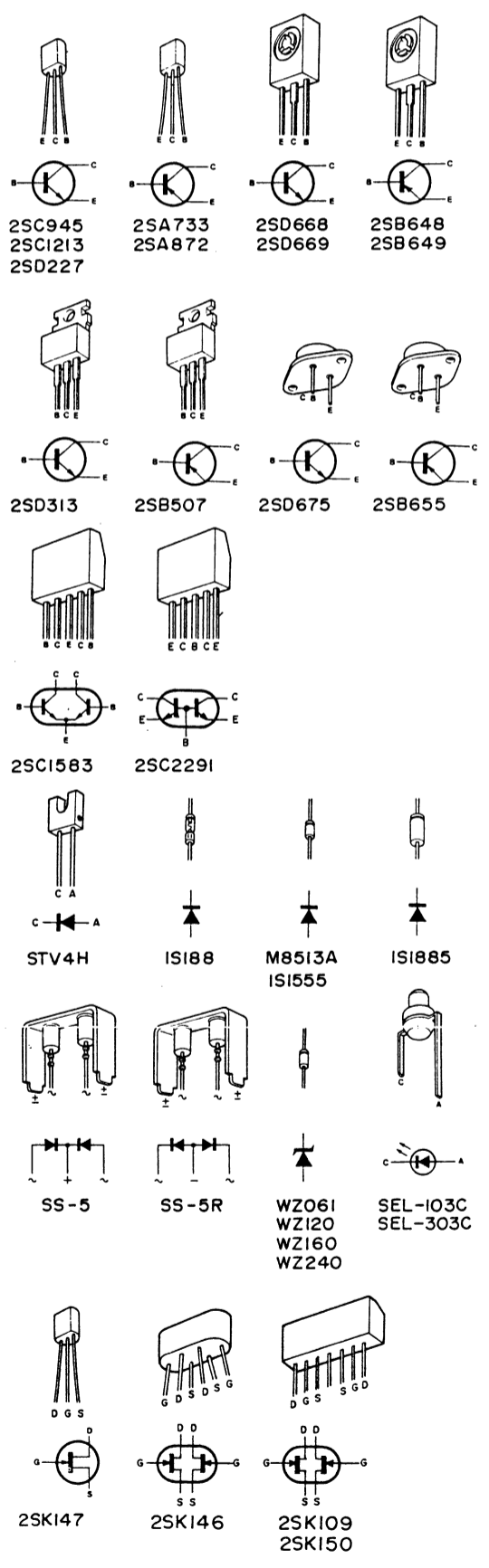


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|---------|-------------------------------|----------|-------------------|---------|-------------------------|---------|------------------------------|
| SI-1~4 | CARTRIDGE (MM) | SI11-1,2 | LOW FILTER (OFF) | SI6-1~6 | TURNOVER (OFF) | S21 | LOW FILTER (OFF) |
| S2-1~6 | PHONO-1 (ON) | SI2-1~4 | MODE (STEREO) | SI7-1,2 | SPEAKERS (A) | S22 | SELECTOR SW MUT (RELAY) (ON) |
| S3-1~6 | PHONO-2 (OFF) | SI3-1~4 | MUTING (OFF) | SI8 | VOLTAGE SELECTOR (240V) | S23 | MUTING SW (RELAY) (ON) |
| S4-1~6 | TUNER (OFF) | SI4-1~4 | HIGH FILTER (OFF) | SI9 | VOLTAGE SELECTOR (HIGH) | S24 | MUTING SW (RELAY) (ON) |
| S5-1~6 | AUX (OFF) | SI5-1~6 | TURNOVER (OFF) | S20 | POWER (ON) | S25-1,2 | PROTECTOR, MUTING (RELAY) |
| S6-1~6 | TAPE (SOURCE) | | | | | | |
| S7-1,2 | SELECTOR SW MUT (RELAY) (OFF) | | | | | | |
| S8-1,2 | MONITOR (TAPE 1) | | | | | | |
| S9-1~4 | COPY (SOURCE) | | | | | | |
| SI0-1,2 | LOUDNESS (OFF) | | | | | | |

Q1,2 2SK150(GR) PRE AMP Q3,4 2SC2291(G) PRE AMP Q5,6 2SA872(E) PRE AMP Q7,8 2SD668(C) PRE AMP Q9,10 2SB648(C) PRE AMP Q11 2SC945L(P) PRE AMP



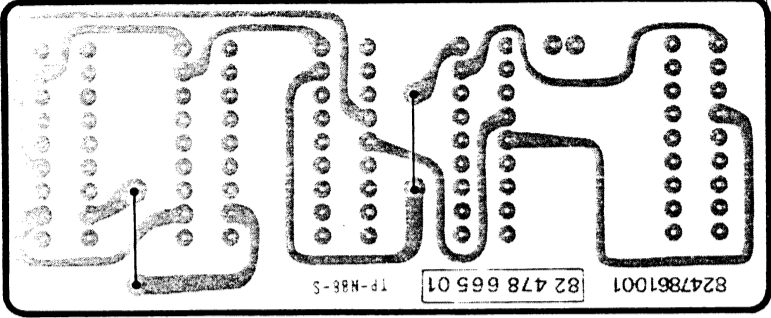
- NOTES:**
- 1) — B (+) power supply — B (-) power supply
 - 2) — Signal path
 - 3) The voltage is the reference value measured with a tester (20 k-ohms/V DC) when there are no signals.
 - 4) Resistors with no designation have a rated power of 1/4W and a tolerance of ±5%.
 - 5) Capacitors with no designation have a dielectric strength of less than 50WV.
 - 6) The only capacitor tolerances indicated are ±5% (J) and ±10% (K).
 - 7) Ceramic-capacitor symbols:
 □ For temperature compensation (SL)
 □ High dielectric constant system (YY)
 □ High dielectric constant system (YW, YP, YZ)
 - 8) Explanation of symbols:
 (M) Mylar capacitor
 (PP) Polypropylene film capacitor
 (BP) Bi-polarized capacitor
 (T) Tantalum capacitor
 (F) Fuse resistor
 (NF) Nonflammable resistor
 ⚠ Safety component symbol
- This symbol is given to important parts which serve to maintain the safety of the product, and which are made to conform to special safety specifications. Therefore, when replacing a component with this symbol, make absolutely sure that you use a designated part.
- This schematic diagram is subject to change without notice in the interests of improved performance.



(F) (RELAY) (OFF)
 (Y) (ON)
 (Y) (ON)
 (RELAY)

WIRING-1

SWITCH C.B



3 Phono Amp. DC Balance Adjustment

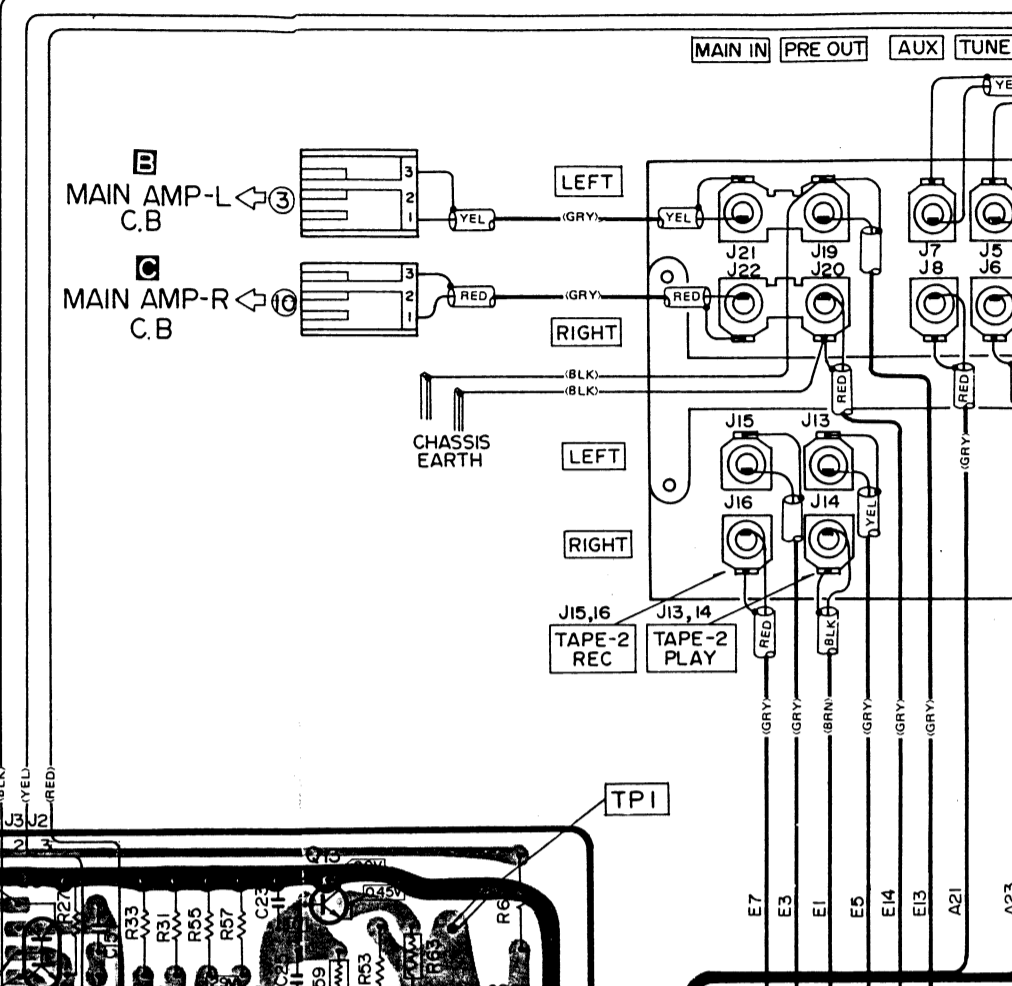
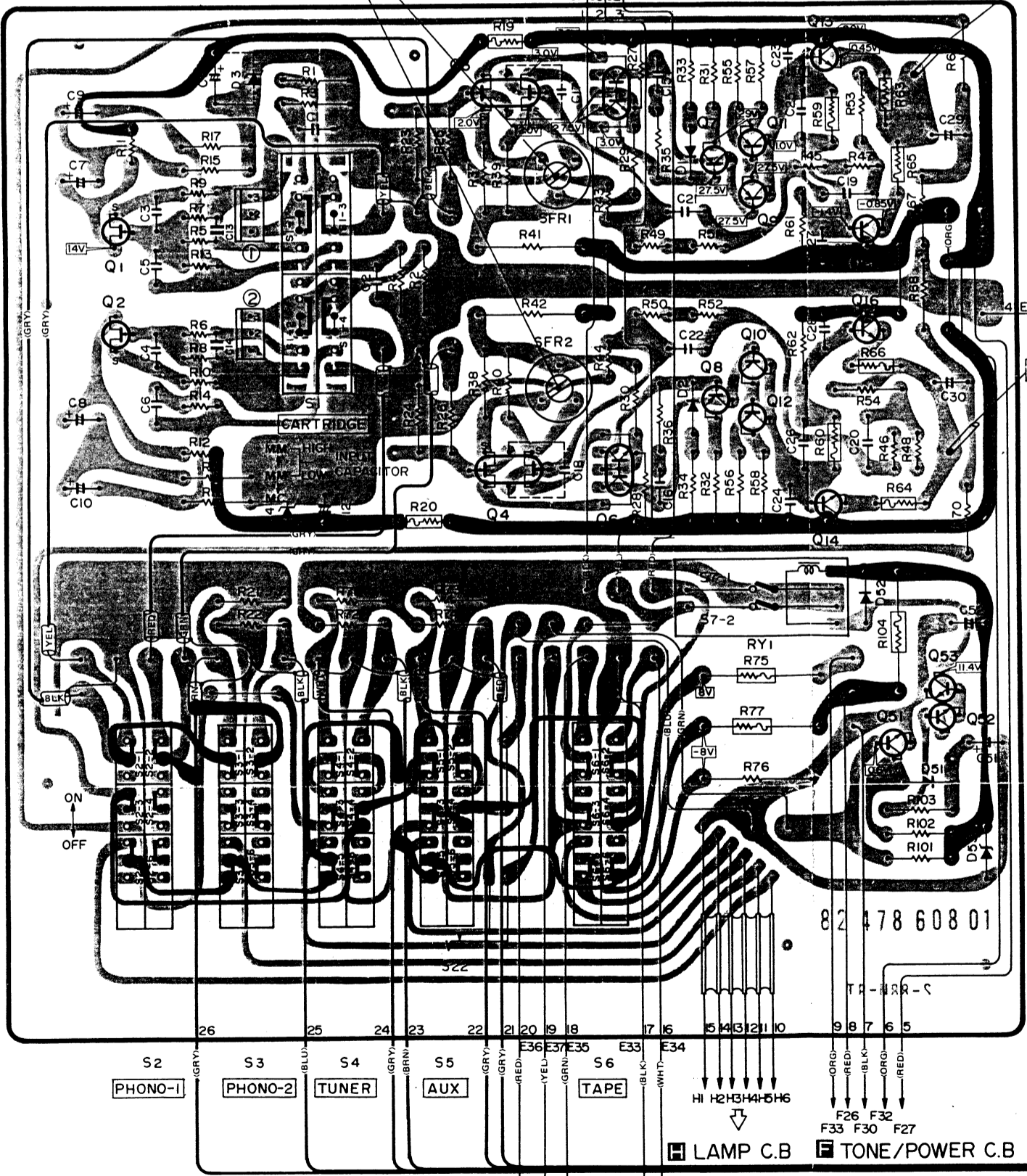
Settings:

- PHONO Input: PHONO 1, (2) short
- SELECTOR Switch: PHONO 1, (2)
- Test point: TP1 (L-ch), TP2 (R-ch)
- Adjustment location: SFR1 (L-ch), SFR2 (R-ch)

Method: Adjust SFR1 and SFR2 so that the voltage level is less than $\pm 0.5V$.

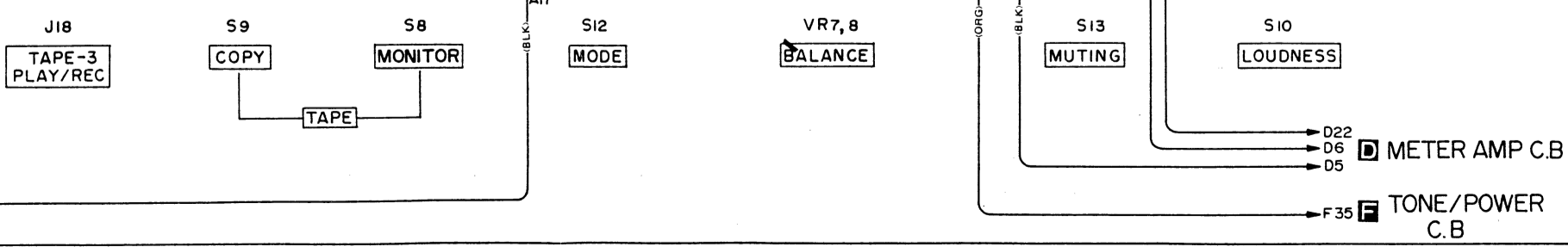
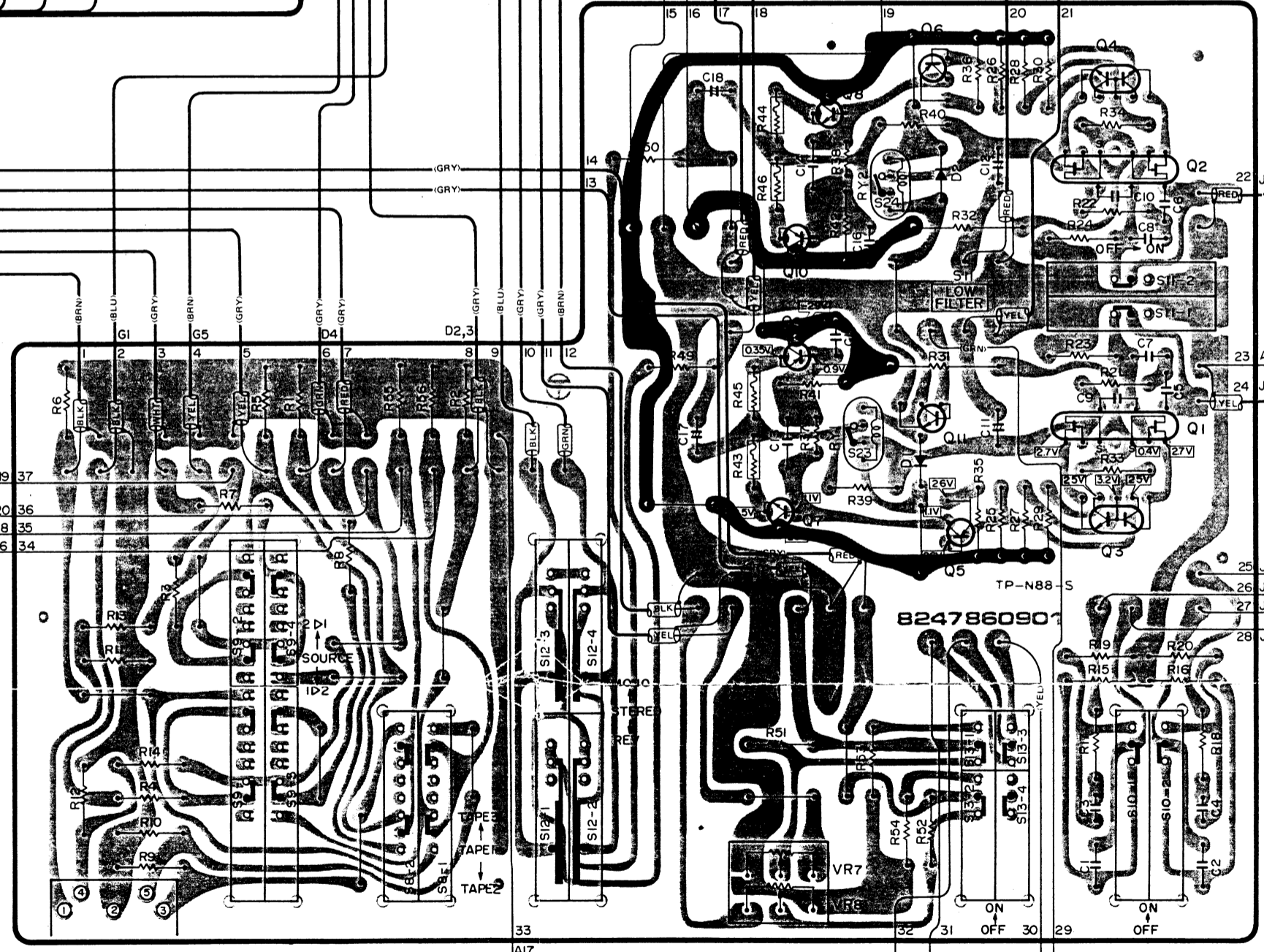
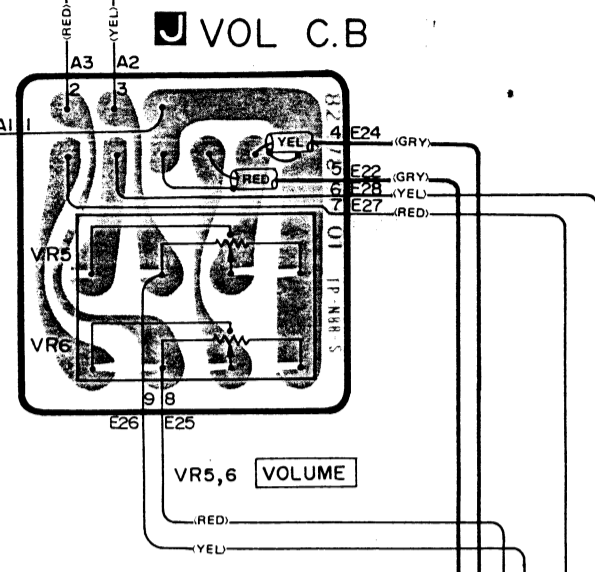
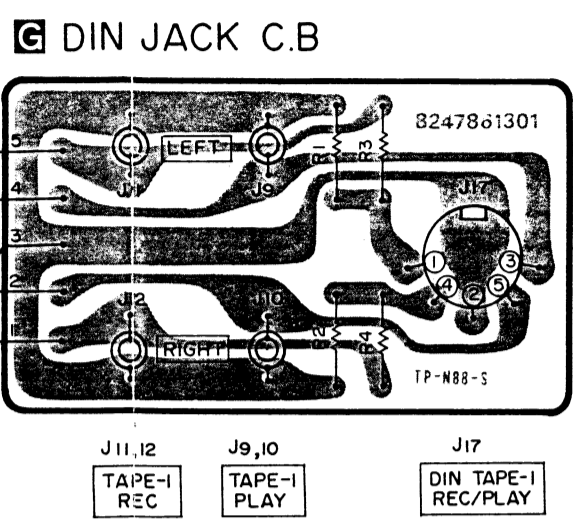
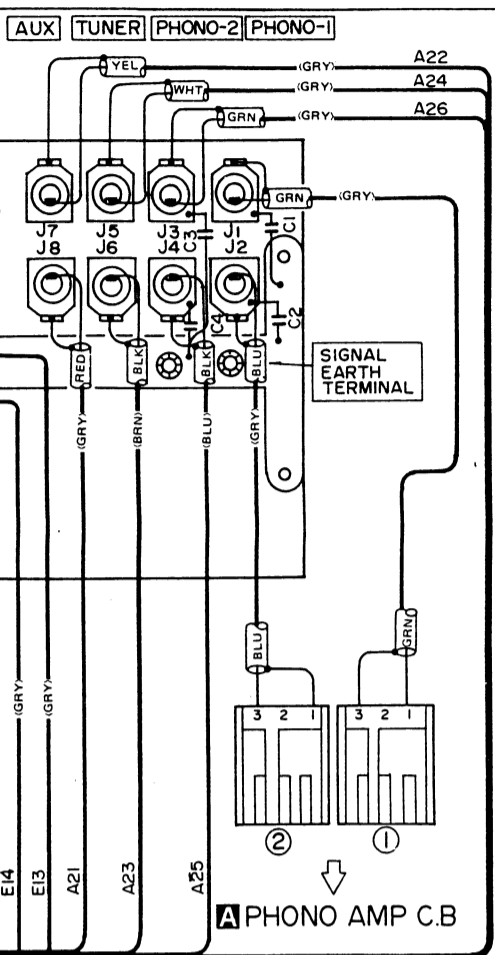
Rating: Less than $\pm 0.5V$.

PHONO AMP C.B



- YEL- A19 37
- RED- A20 36
- GRN- A18 35
- WHT- A16 34

11 12 13 14 15 16 17 18 19 20 21



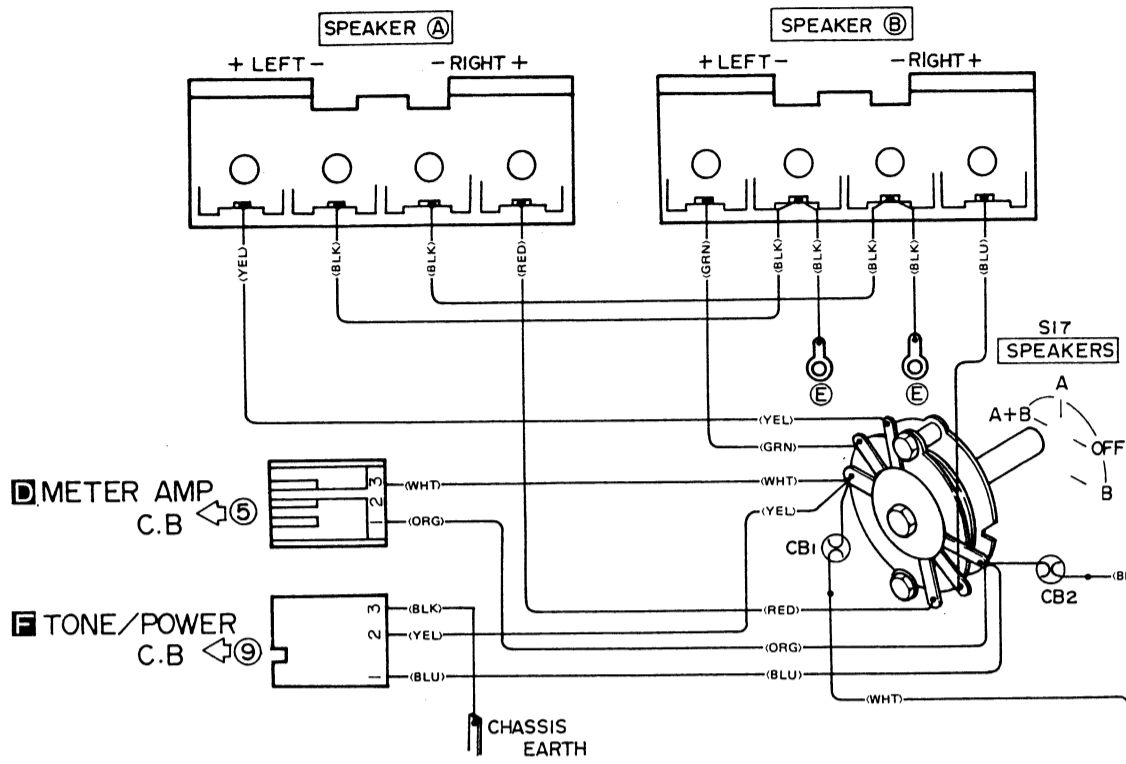
a tester (20 K ohms/V DC) when there are no signals.



1 2 3 4 5 6 7 8 9 10 11

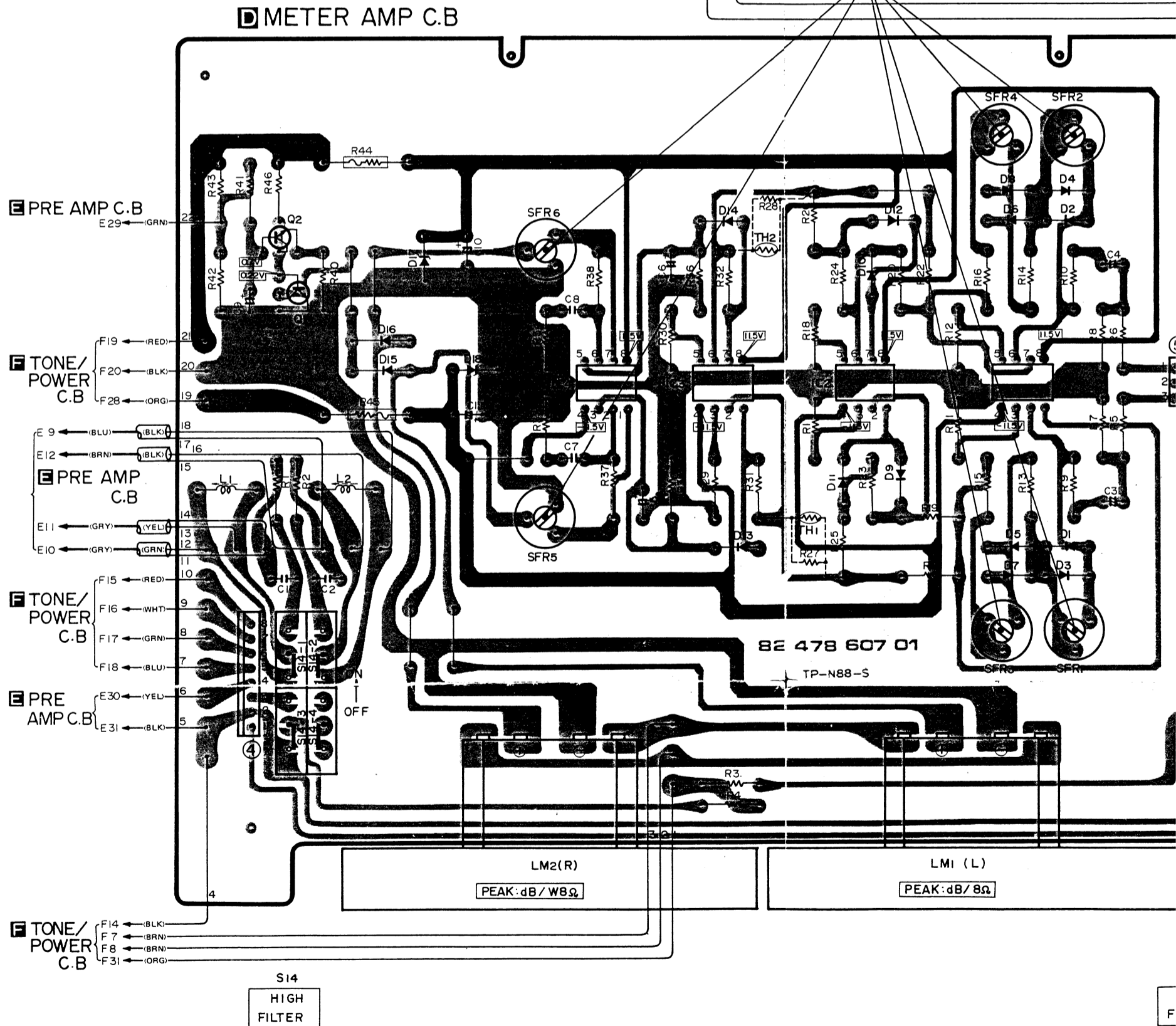
WIRING-2

A B C D E F G H I J K L M N O



- 1 Idling Current Adjustment**
- Settings: • Test point: TP5 (L)
 - Adjustment location: SFR2,4,6 (R-ch)
 - Method: Connect a DC voltmeter to TP5. Adjust SFR2 so that the output level is less than ±5 mV.
- 2 Zero potential (DC Balance) Adjust**
- Settings: • Test point: TP3 (L)
 - Adjustment location: SFR1,3,5 (L-ch)
 - Method: Connect a DC voltmeter to TP3. Adjust SFR1 so that the output level is less than ±5 mV.
 - Rating:

- 4 Meter Amp. Adjustment**
- Settings: • Input signal level: Aux, 150mV (-16.5 dB), 1kHz, -56.5 dB
 - Output level: 0 dB (10 W), -20 dB, -40 dB
 - SELECTOR Switch: AUX
 - Adjustment location: SFR1,3,5 (L-ch) SFR2,4,6 (R-ch)
 - Method: Adjust SFR1 and SFR2 so that the output level is 0 dB (10 W). Adjust SFR3,4 and SFR5,6 so that the output level is -20 dB (0.1 W) and -40 dB (0.01 W).

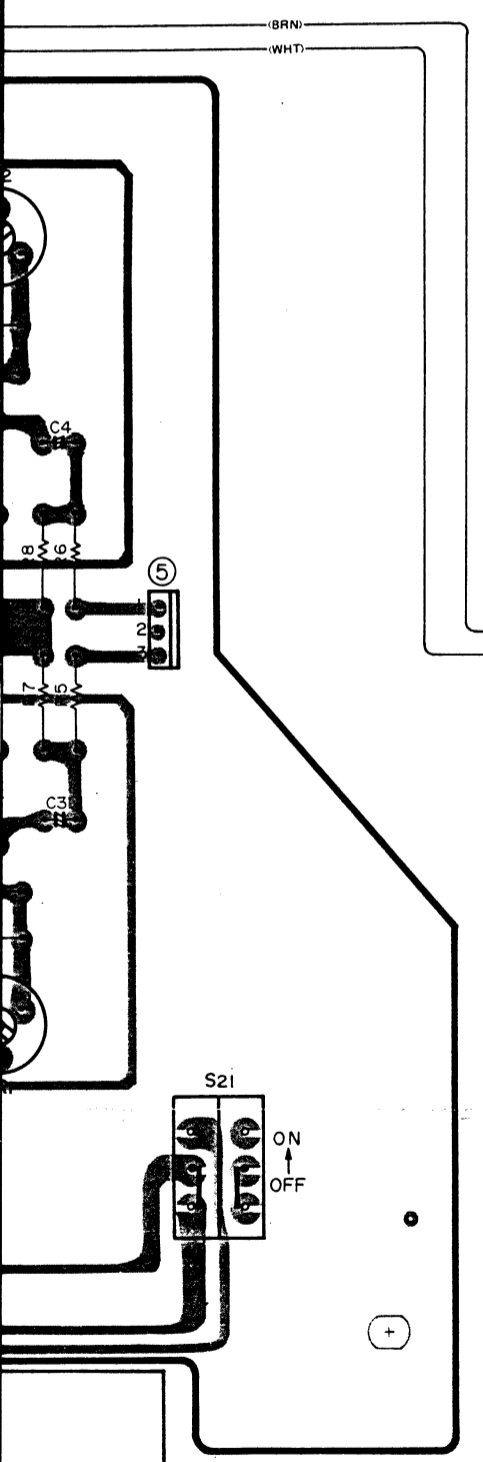
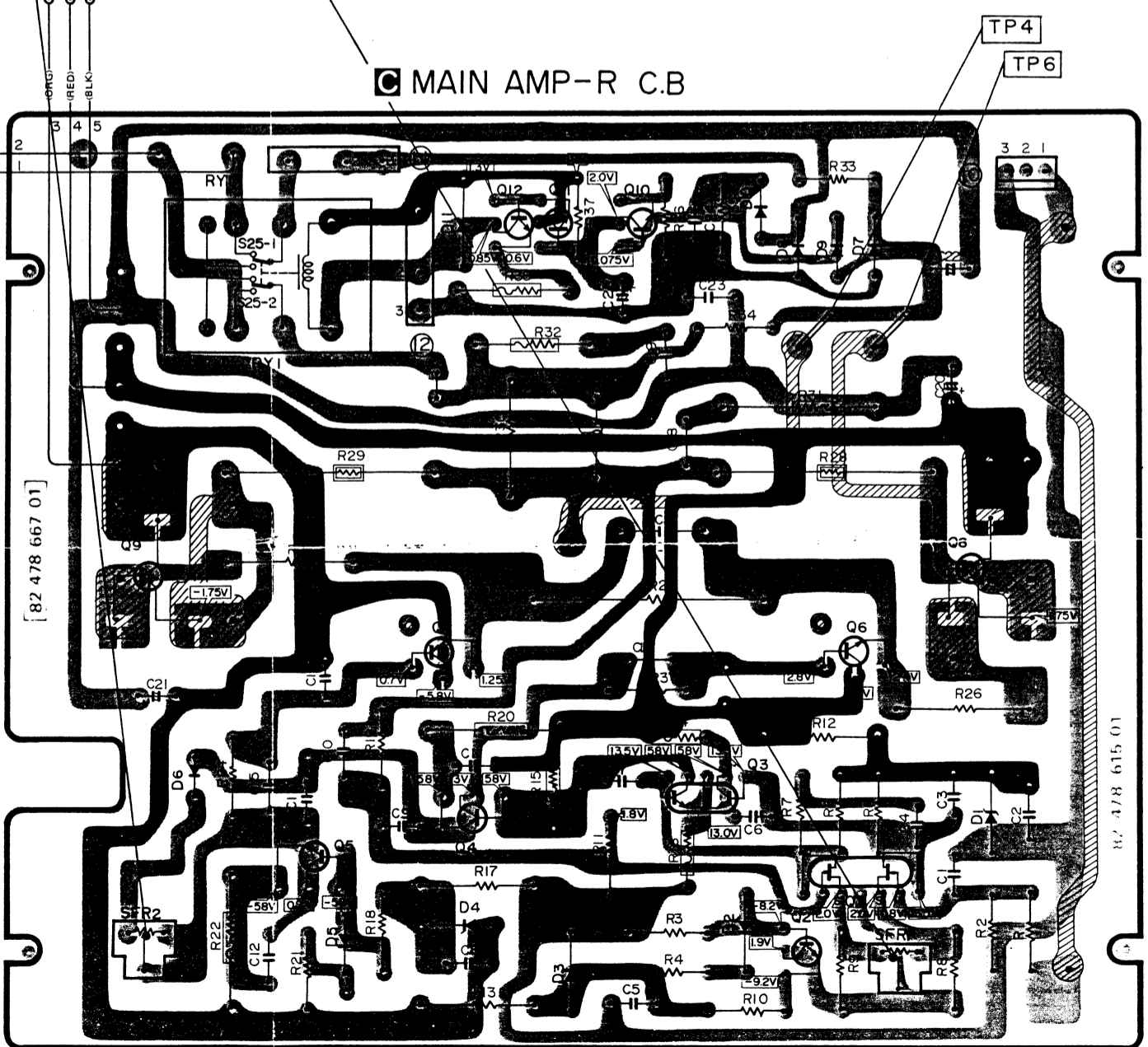
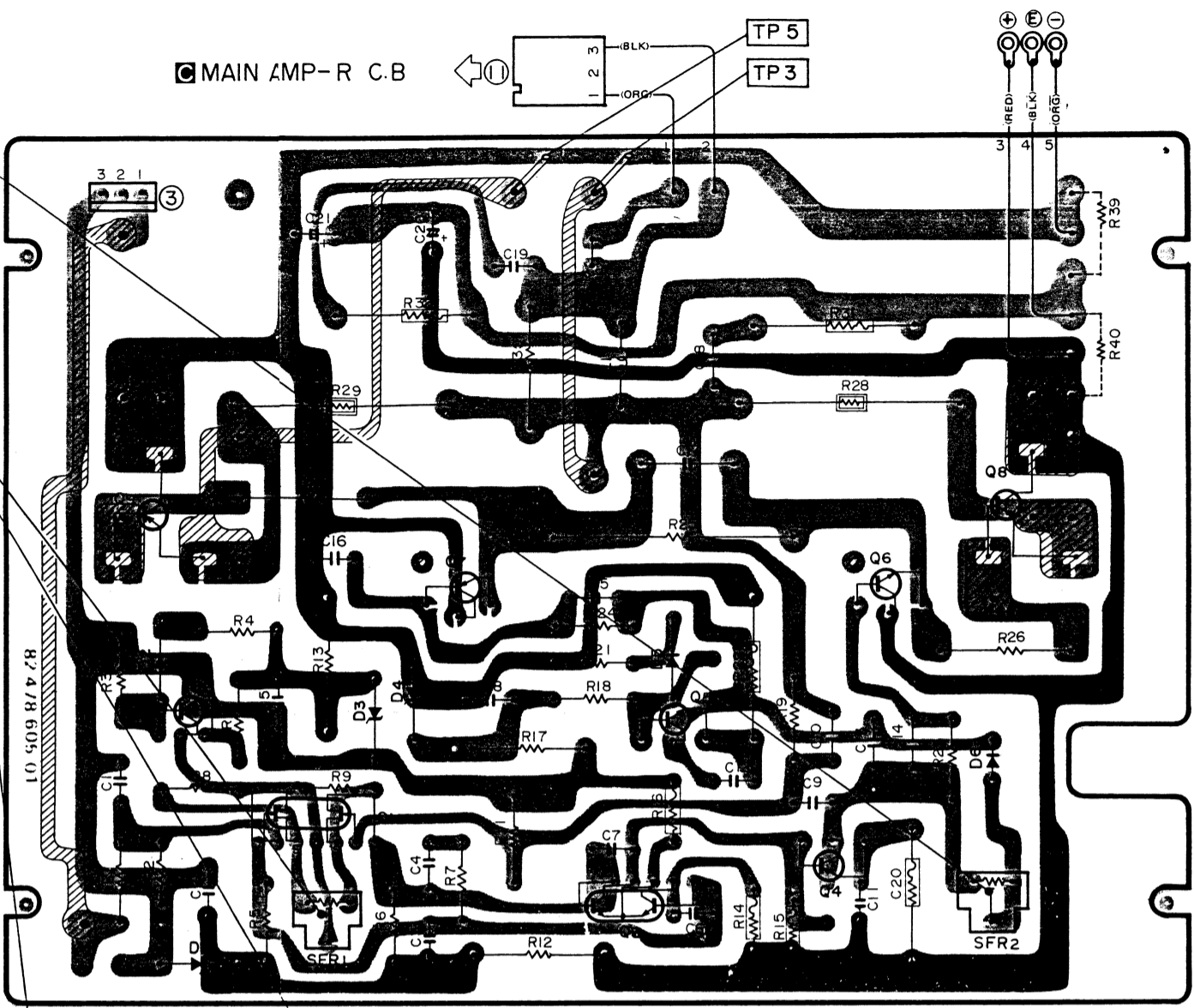


NOTES (1) [Pattern] B (+) Pattern [Pattern] B (-) Pattern [Pattern] Component side pattern [Pattern] Others pattern (2) The voltage is the reference (20 K ohms/V DC) when th

Adjustment
 Test point: TP5 (L-ch), TP6 (R-ch)
 Adjustment location: SFR2
 Connect a DC voltmeter across test points TP 5,6.
 Adjust SFR2 so that the level is 23 mV (50 mA)

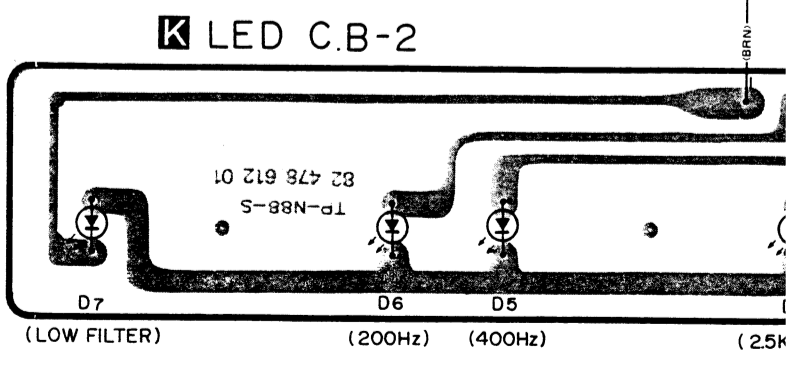
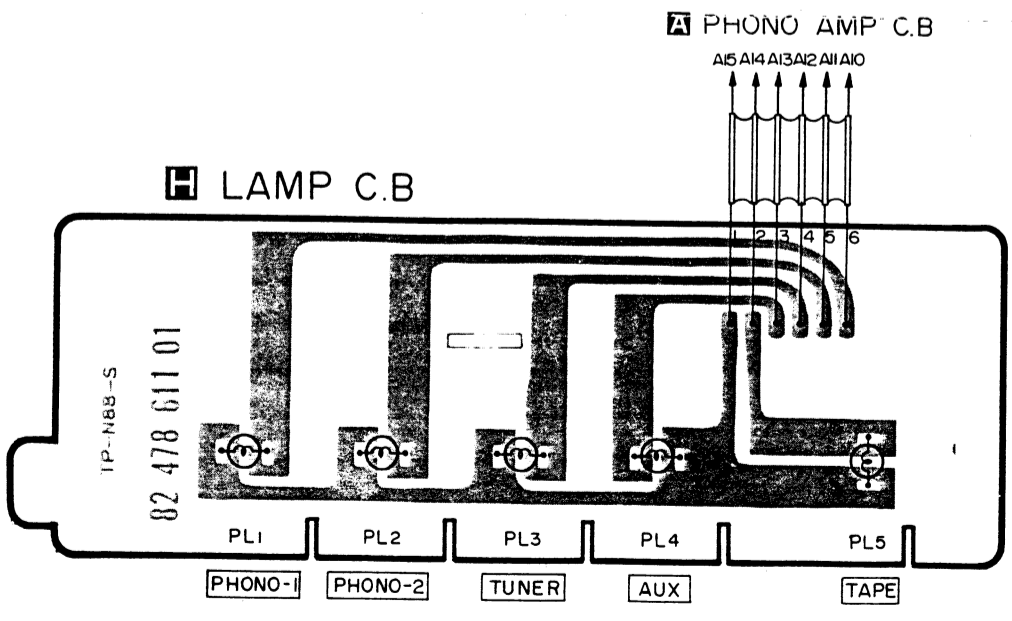
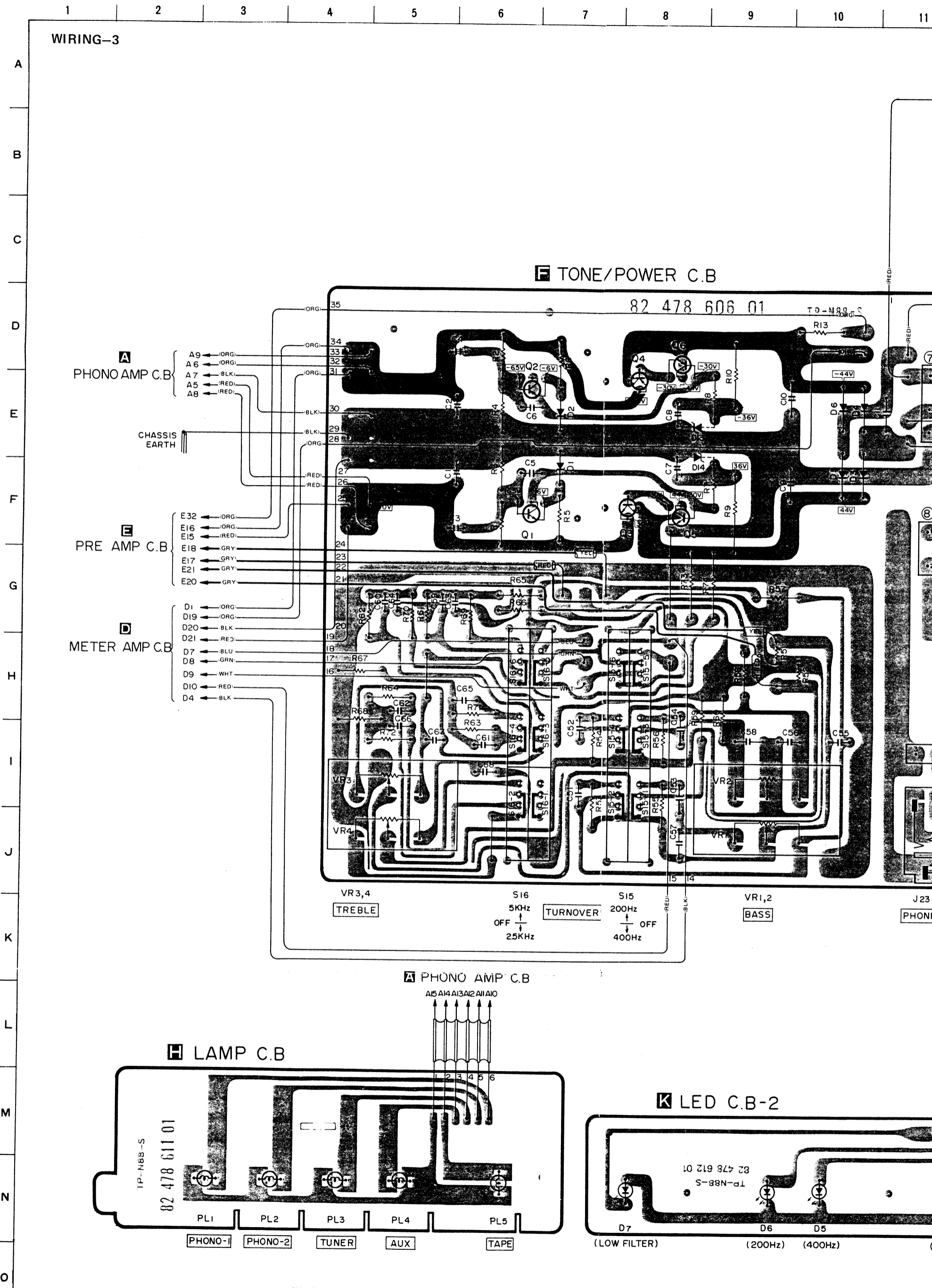
Balance Adjustment
 Test point: TP3 (L-ch), TP4 (R-ch)
 Adjustment location: SFR1
 Connect a DC voltmeter across test point TP3,4.
 Adjust SFR1 so that the level is less than ± 5 mV.
 Balance ± 5 mV.

6.5 dB, 1kHz, -36.5
 -40 dB
 (L-ch)
 (R-ch)
 output level is 0 dB
 the output level is -20



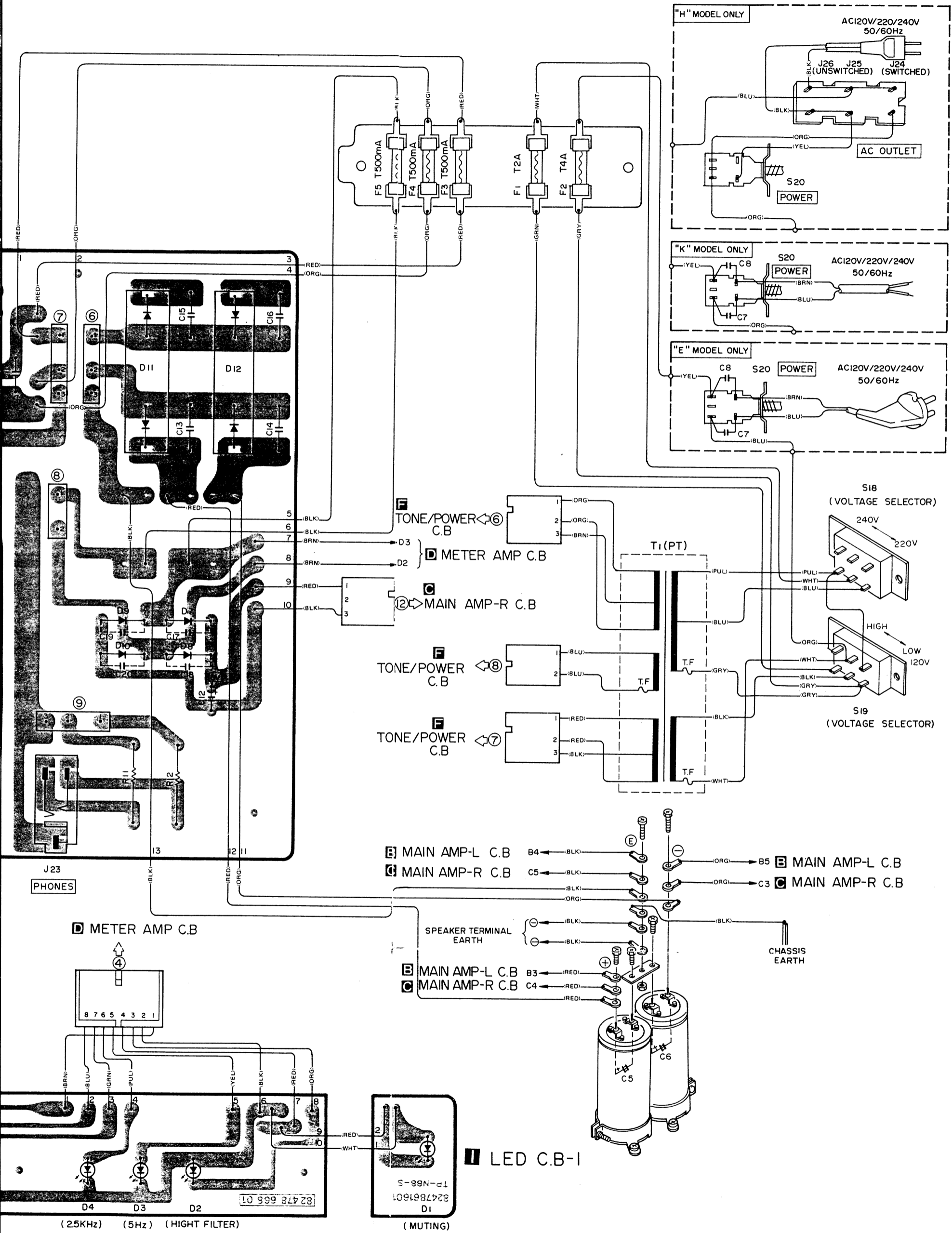
is the reference value measured with a tester
 (V DC) when there are no signals.

WIRING-3



NOTES (1) B (+) Pattern B (-) Pattern Others pattern (2) The voltage is the reference value measured with a tester (20

11 12 13 14 15 16 17 18 19 20 21



with a tester (20 K ohms/V DC) when there are no signals

ELECTRICAL MAIN PARTS LIST


Symbol No.	Part No.	Description
« PHONO AMP CIRCUIT BOARD SECTION »		
PCB-A	82-478-608-11	Phono amp circuit board
Q1,2	89-501-475-01	FET, 2SK147 (GR)
Q3,4	89-501-460-01	FET, 2SK146
Q5,6	89-322-915-01	Transistor, 2SC2291 (G)
Q7,8,9,10	89-108-725-01	Transistor, 2SA872 (E)
11,12		
Q13,14	89-406-683-01	Transistor, 2SD668 (C)
Q15,16	89-206-483-01	Transistor, 2SB648 (C)
Q51,52	89-309-456-01	Transistor, 2SC945L (P)
Q53	89-312-133-01	Transistor, 2SC1213A (C)
D1,2,51,52	87-027-097-01	Diode, 1S1555
D3,4	87-027-390-01	Zener diode, HZ24-3L
D53	87-027-234-01	Zener diode, WZ-120
RY1,S7	87-045-112-01	Reed relay, HA-212S
S1	87-031-462-01	Lever switch (CARTRIDGE)
S2,3,4,5,22	87-031-410-01	Push switch (PHONO 1,2, TUNER, AUX)
S6	87-031-484-01	Push switch (TAPE)
SFR1,2	87-021-553-01	Semi-fixed resistor, 100Ω-B
PIN-1,2	87-032-903-01	Pin, 3P
PCB-L	82-478-610-01	Switch circuit board
<Resistors>		
R5,6,9,10	87-025-201-01	10Ω 1/4W Metal film
R49,50	87-025-216-01	47Ω 1/4W Metal film
R43,44	87-025-202-01	160Ω 1/4W Metal film
R7,8	87-025-203-01	220Ω 1/4W Metal film
R76	87-025-156-01	330Ω 1W Metal film
R13,14	87-025-204-01	1kΩ 1/4W Metal film
R45,46	87-025-215-01	1.1kΩ 1/4W Metal film
R11,12	87-025-205-01	2.2kΩ 1/4W Metal film
R41,42	87-025-181-01	3.6kΩ 1W Metal film
R51,52	87-025-207-01	7.5kΩ 1/4W Metal film
R47,48	87-025-208-01	91kΩ 1/4W Metal film
△ R63,64,65	87-029-063-01	47Ω 1/4W Fuse resistor
66		
△ R19,20	87-029-072-01	680Ω 1/4W Fuse resistor
△ R75	82-478-670-01	680Ω 1W Fuse resistor
△ R77	82-478-671-01	820Ω 1W Fuse resistor
△ R59,60	87-029-071-01	1.2kΩ 1/4W Fuse resistor
△ R104	87-029-049-01	1.2kΩ 1/2W Fuse resistor
<Capacitors>		
C29,30	82-478-677-01	22μF 50V Electrolytic BP
C21,22	87-014-083-01	0.01μF PP
C19,20	87-014-084-01	0.035μF PP
C7,8,9,10	82-478-626-01	10μF 35V Tantalum
« MAIN AMP-L CIRCUIT BOARD SECTION »		
PCB-B	82-478-605-01	Main amp-L circuit board
Q1	89-501-094-01	FET, 2SK 109 (D)
Q2	89-309-456-01	Transistor, 2SC945L (P)
Q3	89-315-834-01	Transistor, 2SC1583 (F)
Q4	87-026-126-01	Transistor, 2SB648A (C)
Q5	87-026-127-01	Transistor, 2SD668A (C)
Q6	87-026-125-01	Transistor, 2SD669A (B)
Q7	87-026-124-01	Transistor, 2SB649A (B)
Q8	87-026-151-01	Transistor, 2SD675A (C)
Q9	87-026-150-01	Transistor, 2SB655A (C)
D1	82-481-636-01	Zener diode, WZ-240
D2,5	87-027-097-01	Diode, 1S1555
D3	87-027-287-01	Zener diode, WZ-160
D4	82-415-637-01	Zener diode, WZ-061
D6	87-026-135-01	Diode, STV-4H
L1	82-478-632-01	Coil, 1.7μH
SFR1,2	87-021-559-01	Semi-fixed resistor, 100Ω-B

Symbol No.	Part No.	Description
PIN-3	87-032-903-01	Pin, 3P
<Resistors>		
R30	87-025-120-01	10Ω 1W Metal film
R25	87-025-195-01	220Ω 3W Metal film
R12	87-025-178-01	2.7kΩ 1W Metal film
R13	87-025-186-01	5.6kΩ 1W Metal film
R17	87-025-188-01	6.8kΩ 1W Metal film
R28,29	87-025-200-01	0.47Ω 5W Cement resistor
△ R31	87-029-083-01	10Ω 1/2W Fuse resistor
△ R32	87-029-380-01	33Ω 1/4W Fuse resistor
△ R14	87-029-063-01	47Ω 1/4W Fuse resistor
△ R20	87-029-043-01	200Ω 1/2W Fuse resistor
△ R22	87-029-044-01	360Ω 1/2W Fuse resistor
△ R15	87-029-071-01	1.2kΩ 1/4W Fuse resistor
△ R16	87-029-073-01	3.3kΩ 1/4W Fuse resistor
<Capacitor>		
C20,21	87-015-397-01	100μF 63V Electrolytic
« MAIN AMP-R CIRCUIT BOARD SECTION »		
PCB-C	82-478-615-01	Main amp-R circuit board
Q1	89-501-094-01	FET, 2SK109 (D)
Q2,10,11	89-309-456-01	Transistor, 2SC945L (P)
Q3	89-315-834-01	Transistor, 2SC1583 (F)
Q4	87-026-126-01	Transistor, 2SB648A (C)
Q5	87-026-127-01	Transistor, 2SD668A (C)
Q6	87-026-125-01	Transistor, 2SD669A (B)
Q7	87-026-124-01	Transistor, 2SB649A (B)
Q8	87-026-151-01	Transistor, 2SD675A (C)
Q9	87-026-150-01	Transistor, 2SB655A (C)
Q12	89-312-133-01	Transistor, 2SC1213A (C)
D1	82-481-636-01	Zener diode, WZ-240
D2,5	87-027-097-01	Diode, 1S1555
D3	87-027-287-01	Zener diode, WZ-160
D4	82-415-637-01	Zener diode, WZ-061
D6	87-026-135-01	Diode, STV-4H
D7,8,9,10	87-026-066-01	Diode, M8513A (O)
D11	87-027-083-01	Diode, IS1885
L1	82-478-632-01	Coil, 1.7μH
SFR1,2	87-021-559-01	Semi-fixed resistor, 100Ω-B
PIN-10	87-032-903-01	Pin, 3P
PIN-11,12	87-032-897-01	Pin, 3P
RY1,S25	82-473-610-11	Relay
<Resistors>		
R30	87-025-120-01	10Ω 1W Metal film
R25	87-025-195-01	220Ω 3W Metal film
R12	87-025-178-01	2.7kΩ 1W Metal film
R13	87-025-186-01	5.6kΩ 1W Metal film
R17	87-025-188-01	6.8kΩ 1W Metal film
R28,29	87-025-200-01	0.47Ω 5W Cement resistor
△ R38	87-029-048-01	3.3Ω 1/2W Fuse resistor
△ R31	87-029-083-01	10Ω 1/2W Fuse resistor
△ R32	87-029-380-01	33Ω 1/4W Fuse resistor
△ R14	87-029-063-01	47Ω 1/4W Fuse resistor
△ R20	87-029-043-01	200Ω 1/2W Fuse resistor
△ R22	87-029-044-01	360Ω 1/2W Fuse resistor
△ R15	87-029-071-01	1.2kΩ 1/4W Fuse resistor
△ R16	87-029-073-01	3.3kΩ 1/4W Fuse resistor
<Capacitors>		
C20,21	87-015-397-01	100μF 63V Electrolytic
C22	87-015-450-01	220μF 25V Electrolytic BP

Symbol No.	Part No.	Description
« METER AMP CIRCUIT BOARD SECTION »		
PCB-D	82-478-607-11	Meter amp circuit board
IC1,2,3,4	87-027-183-01	IC, NJM-4558
Q1	89-402-275-01	Transistor, 2SD227 (V)
Q2	89-309-456-01	Transistor, 2SC945L (P)
D1,2,3,4	87-026-066-01	Diode, M8513A (O)
5,6,7,8		
9,10,11,12		
13,14		
D15,16	88-052-188-11	Diode, IS188 (FM)
D17,18	87-027-234-01	Zener diode, WZ-120
L1,2	82-371-644-01	Coil, 22mH
LM1,2	82-478-638-01	Level meter (PEAK/DB)
S14	87-031-448-01	Push switch (HIGH FILTER)
S21	87-031-449-01	Push switch (LOW FILTER)
TH1,2	82-304-720-01	Thermister, 32D26
SFR1,2	87-021-518-01	Semi-fixed resistor, 1MΩ-B
SFR3,4	87-021-366-01	Semi-fixed resistor, 10kΩ-B
SFR5,6	87-021-423-01	Semi-fixed resistor, 3.3kΩ-B
PIN-5	87-032-903-01	Pin, 3P
PIN-4	87-032-908-01	Pin, 8P
<Resistor>		
△ R44,45	87-029-049-01	1.2kΩ 1/2W Fuse resistor
<Capacitors>		
C3,4	82-473-681-01	4.7μF 50V Electrolytic BP
C5,6	82-478-640-01	0.68μF 35V Tantalum
« PRE AMP CIRCUIT BOARD SECTION »		
PCB-E	82-478-609-11	Pre amp circuit board
Q1,2	89-501-505-01	FET, 2SK150 (GR)
Q3,4	89-322-915-01	Transistor, 2SC2291 (G)
Q5,6	89-108-725-01	Transistor, 2SA872 (E)
Q7,8	89-406-683-01	Transistor, 2SD668 (C)
Q9,10	89-206-483-01	Transistor, 2SB648 (C)
Q11	89-309-456-01	Transistor, 2SC945L (P)
D1,2	87-027-097-01	Diode, IS1555
RY1,S23	87-045-121-01	Reed relay, S5124
RY 2,S24		
J18	87-032-873-01	DIN jack 5P (TAPE-3 PLAY/REC)
VR7,8	87-021-515-01	Volume, 10kΩ-B (BALANCE)
S8	87-031-483-01	Lever switch (MONITOR)
S9	87-031-477-01	Lever switch (COPY)
S10	87-031-414-01	Lever switch (LOUDNESS)
S11	87-031-463-01	Push switch (LOW FILTER-2)
S12	87-031-455-01	Lever switch (MODE)
S13	87-031-413-01	Lever switch (MUTING)
<Resistors>		
R31,32	87-025-181-01	3.6kΩ 1W Metal film
R37,38	87-025-206-01	4.3kΩ 1/4W Metal film
△ R43,44,45,46	87-029-063-01	47Ω 1/4W Fuse resistor
C11,12,17,18	82-478-677-01	22μF 50V Electrolytic BP
« TONE/POWER CIRCUIT BOARD SECTION »		
PCB-F	82-478-606-11	Tone/Power circuit board
Q1,5	89-309-456-01	Transistor, 2SC945L (P)
Q2,6	89-107-336-01	Transistor, 2SA733 (P)
Q3	89-403-135-01	Transistor, 2SD313(E)
Q4	89-205-075-01	Transistor, 2SB507(E)
D1,2	82-415-637-01	Zener diode, WZ-061
D3,4,5,6	87-027-083-01	Diode, 1S1885
7,8,9,10		
D11	87-027-230-01	Diode, SS-5
D12	87-027-231-01	Diode, SS-5R
D13,14	87-027-391-01	Zener diode, HZ36-2

Symbol No.	Part No.	Description
VR1,2	87-021-551-01	Volume, 50kΩ-A (BASS)
VR3,4	87-021-552-01	Volume, 50kΩ-B (TREBLE)
J23	87-032-874-01	Jack, 6.3φ (PHONES)
S15,16	87-031-412-01	Lever switch (BASS, TREBLE)
PIN-8	82-481-649-01	Pin, 2P
PIN-6,7,9	87-032-897-01	Pin, 3P
<Resistor>		
R9,10,73,74	87-025-181-01	3.6kΩ 1W Metal film
« DIN JACK CIRCUIT BOARD SECTION »		
PCB-G	82-478-613-01	DIN JACK circuit board
J1,2,3,4	82-478-680-01	Jack ass'y, 20P (PHONO-1L,R, PHONO-2L,R, TUNER-L,R, AUX L,R, TAPE-1 PLAY-L,R, TAPE-1 REC-L,R, TAPE-2 PLAY-L,R, TAPE-2 REC L,R, REC/PLAY DIN TAPE-1 PRE OUT L,R, MAIN IN L,R)
5,6,7,8, 9,10,11,12, 13,14,15,16, 17,19,20,21, 22		
« LAMP CIRCUIT BOARD SECTION »		
PCB-H	82-478-611-01	Lamp circuit board
PL1,2,3,4	82-478-619-01	Pilot lamp (PHONO 1,2, TUNER, AUX)
PL5	82-478-620-01	Pilot lamp (TAPE)
	82-478-618-01	Pilot lamp socket
« LED CIRCUIT BOARD-1 SECTION »		
PCB-I	82-478-616-01	LED circuit board-1
D1	87-026-143-01	Light emitting diode, SEL-103C (RED) (MUTING)
« VOL CIRCUIT BOARD SECTION »		
PCB-J	82-478-614-01	VOL circuit board
VR5,6	87-021-549-01	Volume, 100kΩ-B (VOLUME)
« LED CIRCUIT BOARD-2 SECTION »		
PCB-K	82-478-612-01	LED circuit board-2
D2,7	87-026-143-01	Light emitting diode, SEL-103C (RED) (HIGH FILTER, LOW FILTER)
D3,4,5,6	87-026-142-01	Light emitting diode, SEL-303C (GRN) (5KHz, 2.5KHz, 400Hz, 200Hz)
« MISCELLANEOUS »		
△ T1	82-478-643-01	Power transformer (E, K model only)
△ T1	82-478-641-11	Power transformer (H model only)
△ F1	87-035-190-01	Fuse, "T" 2A (E, K model only)
△ F1	87-035-113-01	Fuse, "T" 2A (H model only)
△ F2	87-098-019-01	Fuse label, "T" 2A
△ F2	87-035-192-01	Fuse, "T" 4A (E, K model only)
△ F2	87-035-246-01	Fuse, "T" 4A (H model only)
△ F3,4,5	87-098-022-01	Fuse label, "T" 4A
△ F3,4,5	87-035-219-01	Fuse, "T" 500mA
△ F3,4,5	87-098-013-01	Fuse label, "T" 500mA
△ J24,25,26	82-473-717-01	Fuse holder, 5P
△ S17	87-031-453-01	ULAC outlet 3P (SWITCHED, UNSWITCHED) (H model only)
△ S18,19	87-031-489-01	Rotary switch (SPEAKERS)
△ S18,19	87-031-364-01	Slide switch (VOLTAGE SELECTOR) (E model only)
△ S18,19	87-031-364-01	Slide switch (VOLTAGE SELECTOR) (K,H model only)

Symbol No.	Part No.	Description
S20	87-031-408-01	Push switch (POWER)
CB1,2	82-478-631-01	Circuit breaker
CON-3	82-478-649-01	Connector ass'y, 3P
CON-10	82-478-650-01	Connector ass'y, 3P
CON-2	82-478-651-01	Connector ass'y, 3P
CON-1	82-478-652-01	Connector ass'y, 3P
CON-5	82-478-653-01	Connector ass'y, 3P
CON-9	82-478-655-01	Connector ass'y, 3P
CON-12	82-478-656-01	Connector ass'y, 3P
CON-11	82-478-657-01	Connector ass'y, 3P
CON-4	82-478-654-01	Connector ass'y, 8P
	87-033-148-01	Speaker terminal screw (SPEAKER (A), (B))
	82-473-677-11	Transistor socket (Q8,9)
	87-034-884-01	AC power cord (E model only)
	87-034-872-01	AC power cord (K model only)
	87-034-885-01	AC power cord (H model only)

Symbol No.	Part No.	Description
C5,6	82-478-646-01	<Capacitors> 22000 μ F 63V Electrolytic
 C7,8	84-190-622-01	0.1 μ F 250V Line capacitor



Safety component symbol

This symbol is given to important parts which serve to maintain the safety of the product, and which are made to conform to special safety specifications. Therefore, when replacing a component with this symbol, make absolutely sure that you use a designated part.