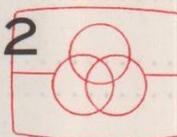




SERVICE MANUAL

STEREO INTEGRATED AMPLIFIER

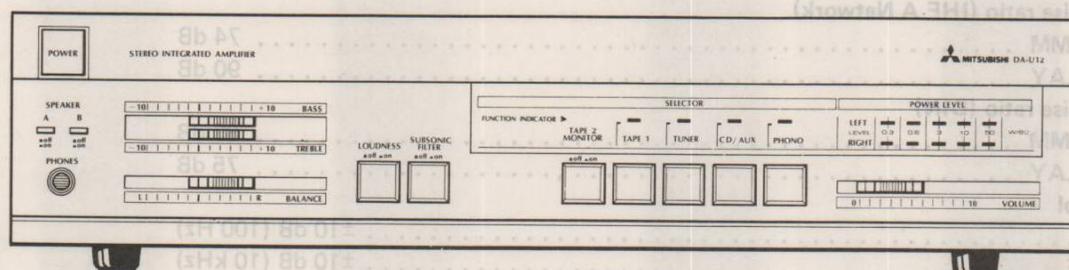
MODEL DA-U12



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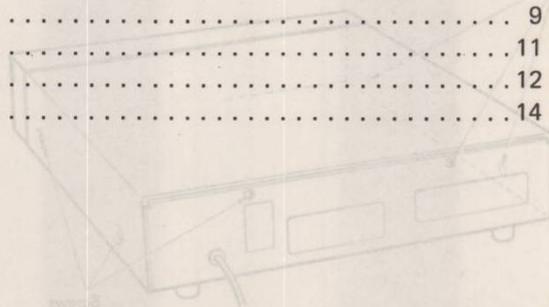
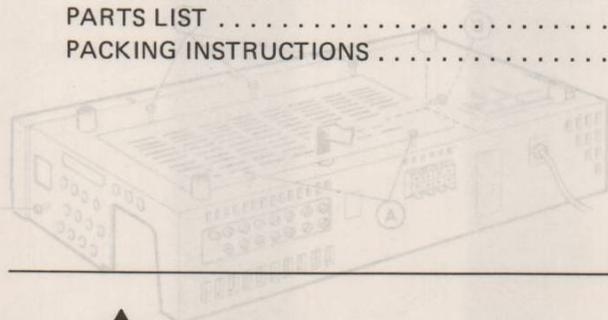
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SPECIFICATIONS

Min. RMS power output 25 watts 8 ohms 1 kHz
0.5% THD

Total harmonic distortion

PHONO MM 0.05% (half power)

AUX, PLAY 0.05% (half power)

Intermodulation distortion 0.05% (half power)

Frequency response

PHONO MM ±0.5 dB, 20 Hz to 20 kHz

AUX, PLAY ±0.2 dB, 20Hz to 20 kHz

Input sensitivity/impedance

PHONO MM 2.5 mV/50k ohms

AUX, PLAY 150 mV/50k ohms

Maximum input level

PHONO MM 100 mV

Output level/impedance

REC OUT 250 mV/600 ohms

HEADPHONES 15 mW/8 ohms

Signal to noise ratio (IHF A Network)

PHONO MM 74 dB

AUX, PLAY 90 dB

Signal to noise ratio (DIN)

PHONO MM 63 dB

AUX, PLAY 75 dB

Tone control

BASS ±10 dB (100 Hz)

TREBLE ±10 dB (10 kHz)

Loudness +7 dB (100 Hz), +5 dB (10 kHz)

Power consumption 110 W (IEC)

Dimensions (W x H x D) 424 x 105 x 260 mm
(16-11/16 x 4-1/8 x 10-1/4)

Weight 4.4 kg (9.7 lb)

Design and specifications are subject to change without notice for improvement.

DISASSEMBLING PROCEDURE

- 1) How to remove top cover
Remove six screws in Fig. 1 and remove top cover.

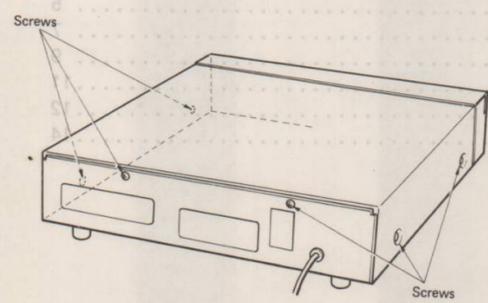


Fig. 1

- 2) How to remove bottom cover
Remove two screws A in Fig. 2 and pull bottom cover toward the rear panel for removal.

- 3) How to remove front panel
Remove five screws B in Fig. 2 and remove front panel with P.C.B. mounted.

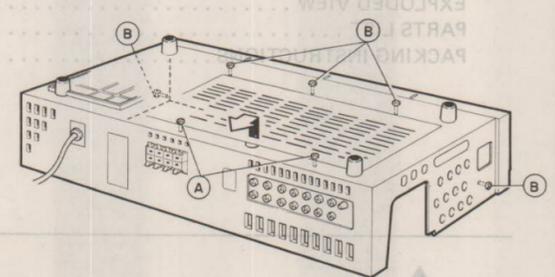
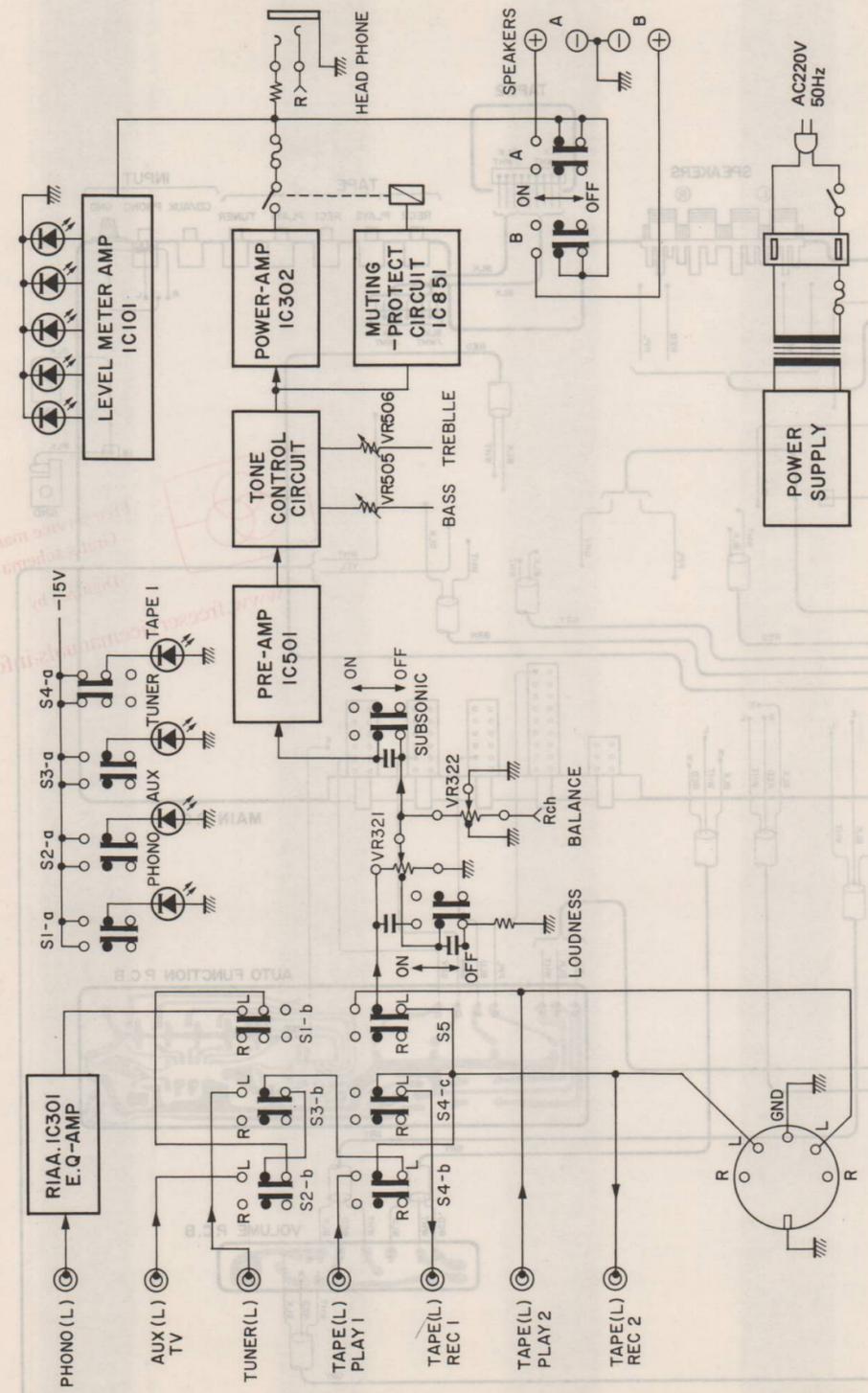


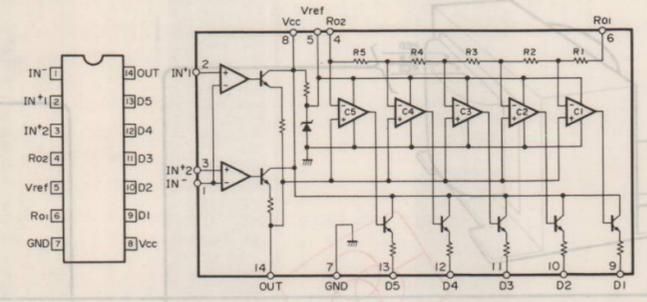
Fig. 2

BLOCK DIAGRAM

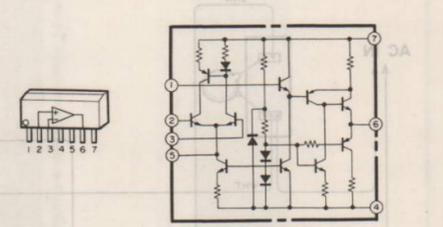


INTERNAL DIAGRAMS AND PINOUT OF INTEGRATED CIRCUITS

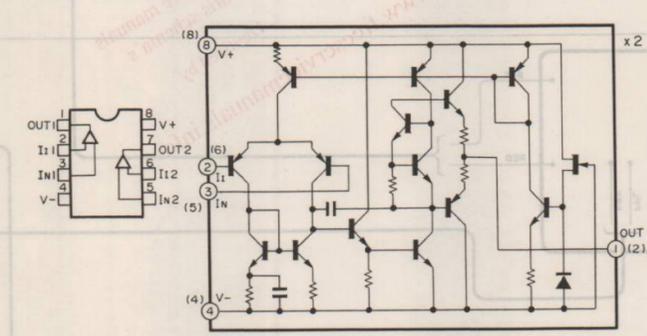
IC101 / 201 : LB1416



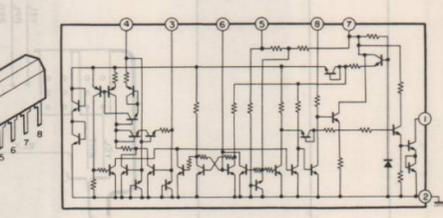
IC301 / 401 : M5213L



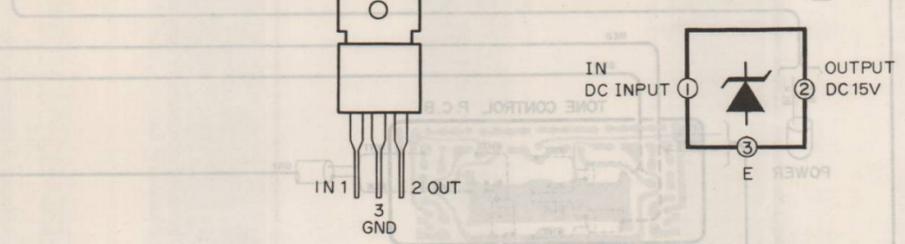
IC501 / 601 : MPC4558



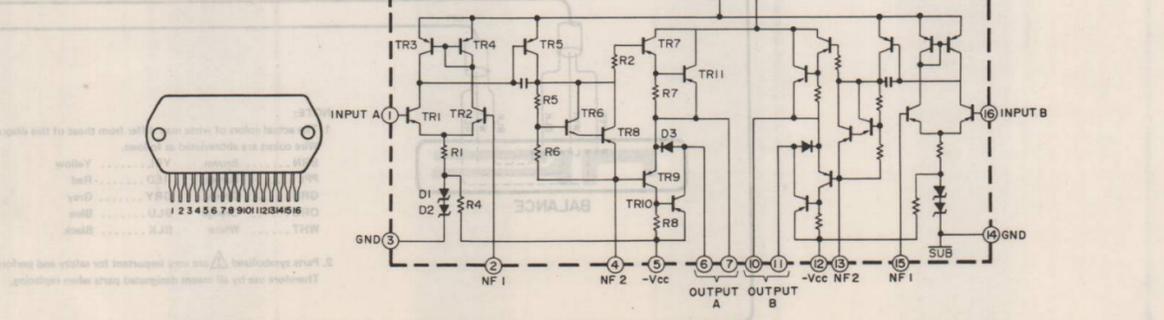
IC851 : HA12002



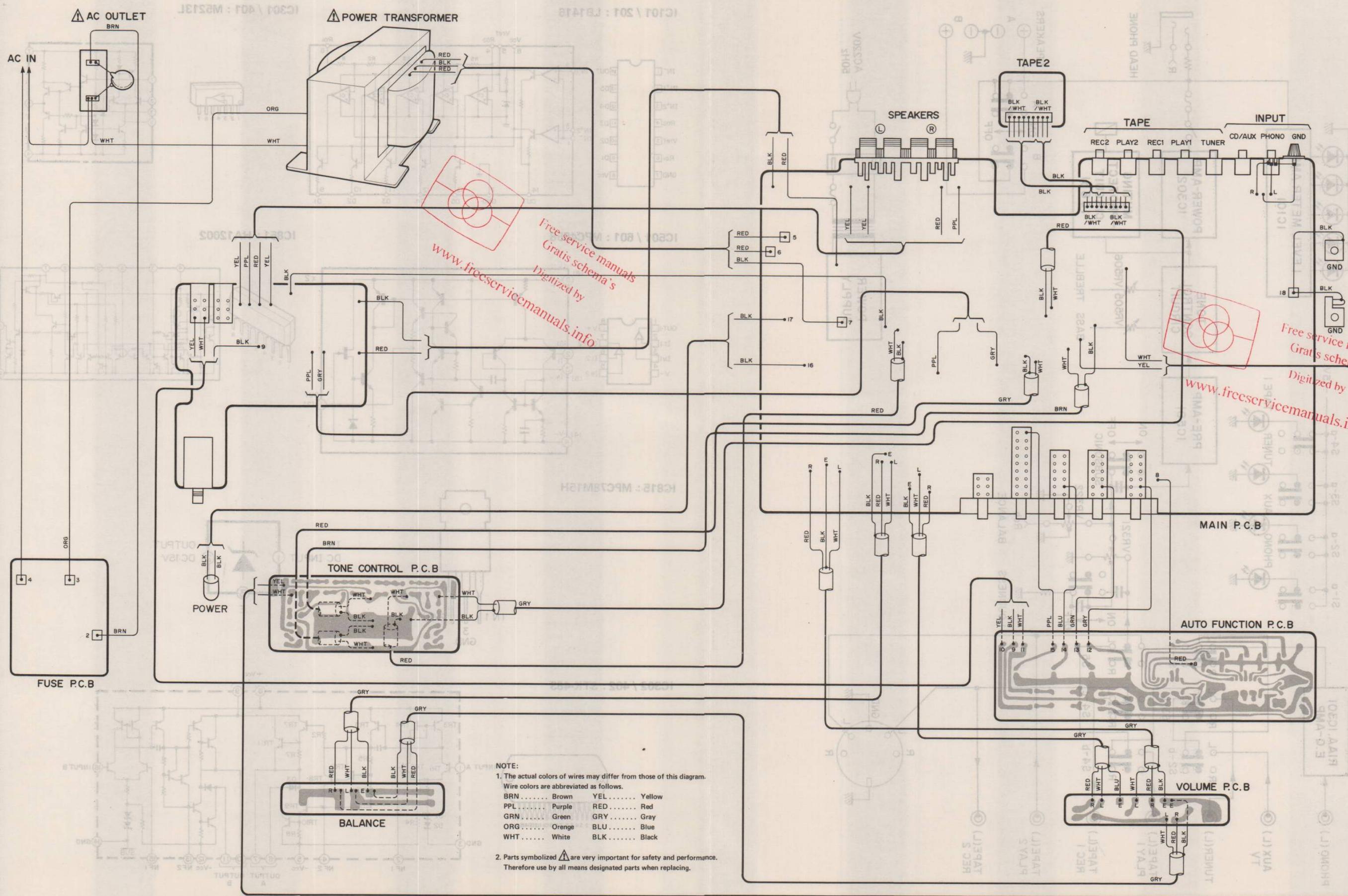
IC815 : MPC78M15H



IC302 / 402 : STK-463



WIRING DIAGRAM



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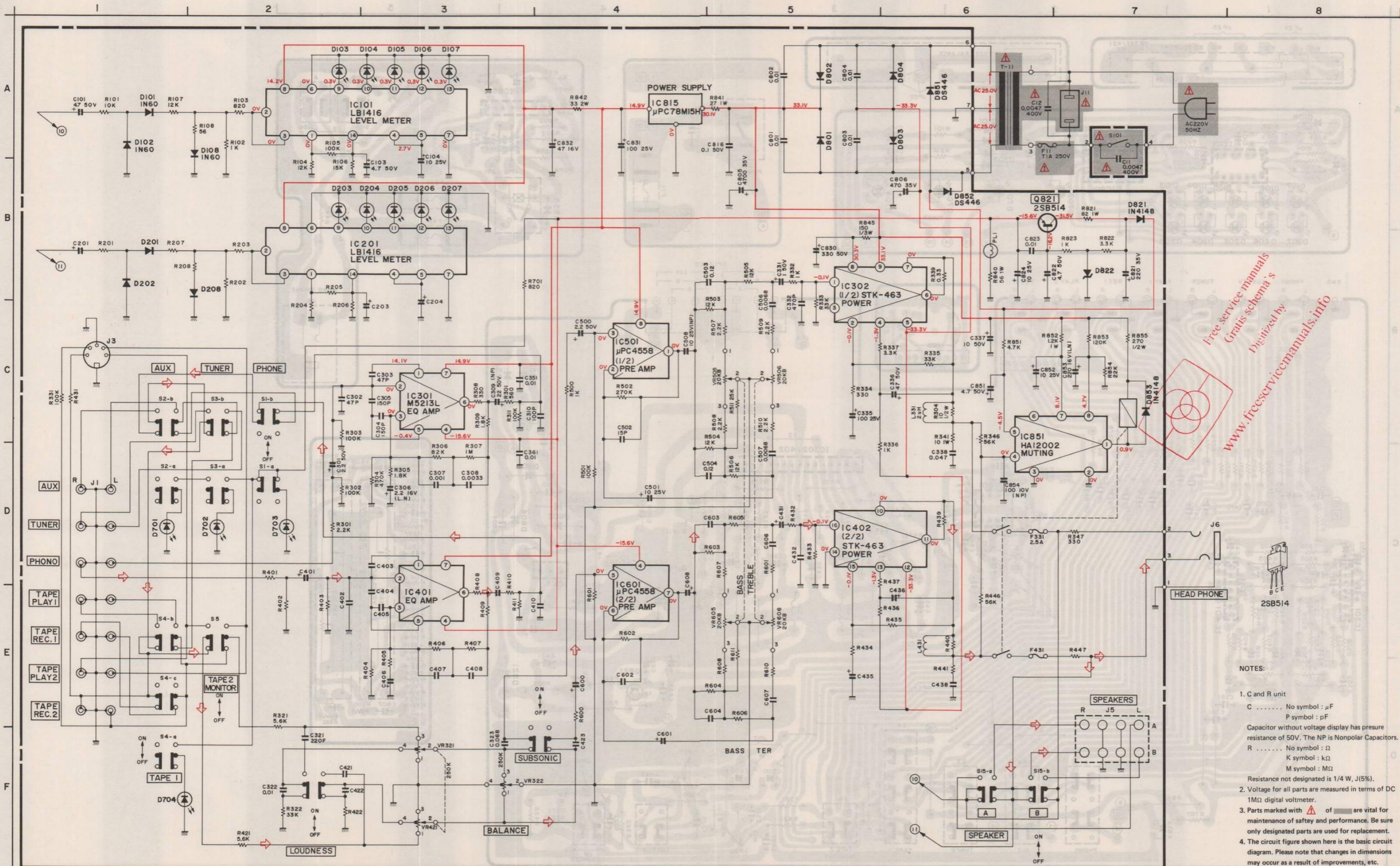
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NOTE:

- The actual colors of wires may differ from those of this diagram. Wire colors are abbreviated as follows.

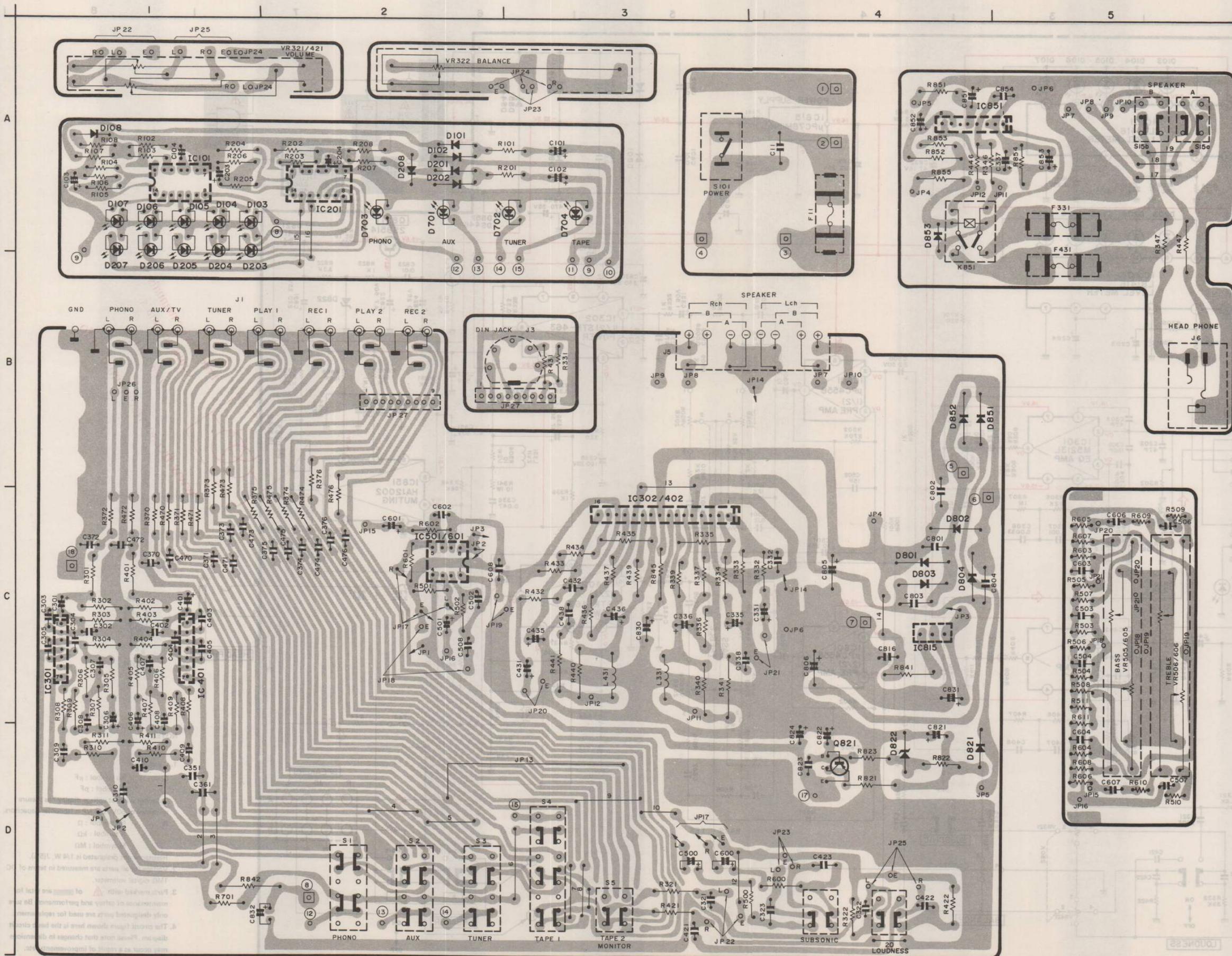
BRN Brown	YEL Yellow
PPL Purple	RED Red
GRN Green	GRY Gray
ORG Orange	BLU Blue
WHT White	BLK Black
- Parts symbolized are very important for safety and performance. Therefore use by all means designated parts when replacing.

SCHEMATIC DIAGRAM



- NOTES:
1. C and R unit
 C No symbol : μ F
 P symbol : pF
 Capacitor without voltage display has pressure resistance of 50V. The NP is Nonpolar Capacitors.
 R No symbol : Ω
 K symbol : k Ω
 M symbol : M Ω
 Resistance not designated is 1/4 W, J(5%).
 2. Voltage for all parts are measured in terms of DC 1M Ω digital voltmeter.
 3. Parts marked with Δ of \square are vital for maintenance of safety and performance. Be sure only designated parts are used for replacement.
 4. The circuit figure shown here is the basic circuit diagram. Please note that changes in dimensions may occur as a result of improvements, etc.

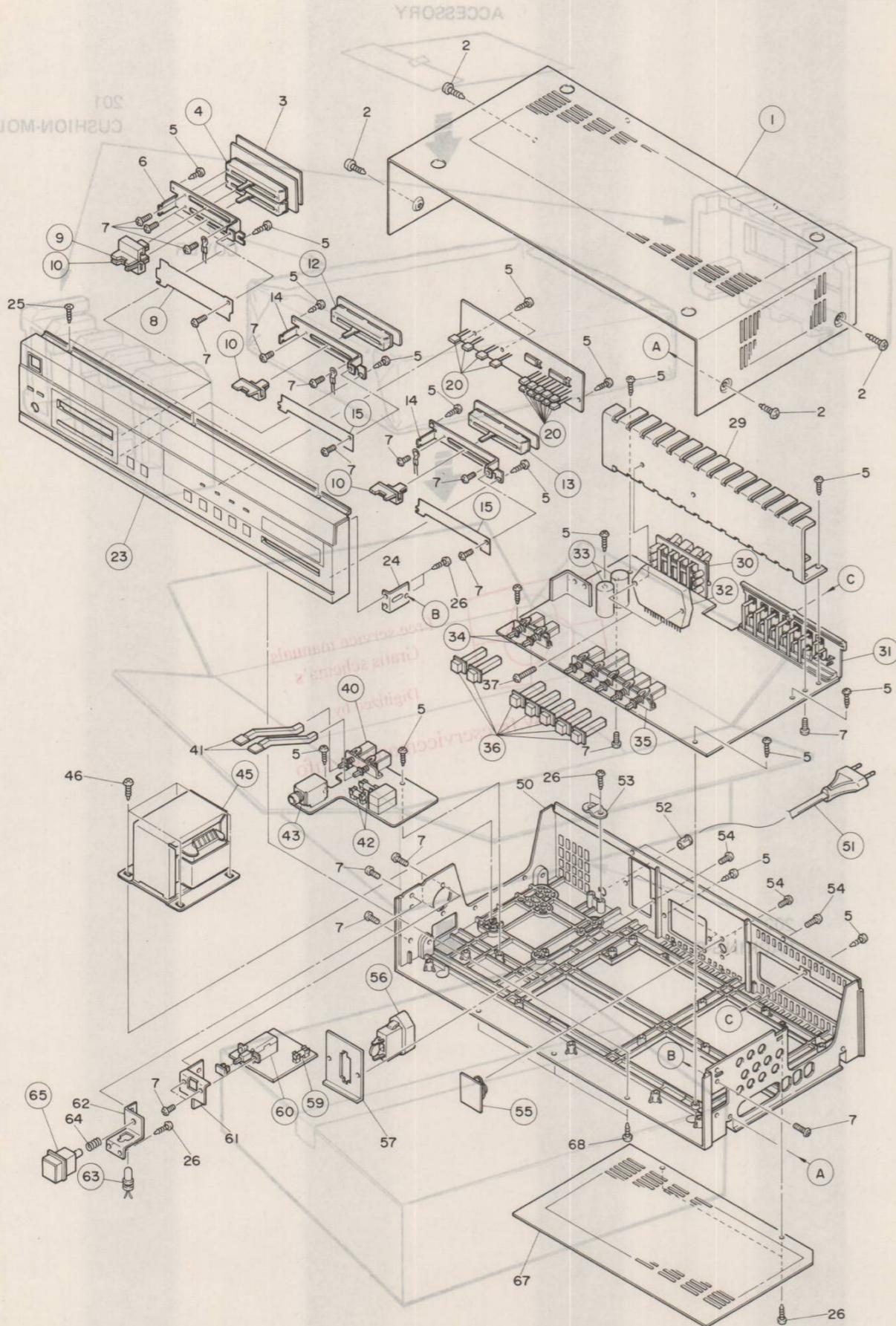
PRINTED CIRCUIT BOARDS



EXPLODED VIEW

PACKING INSTRUCTIONS

PARTS LIST



Symbol No.	Part No.	Description
1	L561B003H23	Case-Top
2	—	T-Screw 1-4 x 10
3	—	Shield
4	L131Y002H01	VR-Slide (TONE)
5	—	T-Screw 1-3 x 10
6	—	Holder
7	—	Screw-B M3 x 5
8	L703D008H12	Cover-VR
9	L704C002H04	Knob-Slide (BASS)
10	L704C002H14	Knob-Slide (VOLUME, BALANCE, TREBLE)
11	—	—
12	L130Y001H01	VR-Slide (BALANCE)
13	L131Y001H01	VR-Slide (VOLUME)
14	—	Holder-U-VR
15	L703D009H12	Cover-VR
16	—	—
17	—	—
18	—	—
19	—	—
20	L268Y005H01	LED(LEVEL,FUNCTION)
21	—	—
22	—	—
23	L702B004G01	Panel-PL-Ass'y
24	—	Holder-L
25	—	T-Screw 1-3 x 10
26	—	T-Screw 1-3 x 8
27	—	—
28	—	—
29	—	Radiator
30	U440S006H01	Terminal (SPEAKER)
31	U440B002H26	Terminal-Board (INPUT)
32	U262S095H02	IC (STK-463S)
33	U180S016H04	C-Elect 35V 4700
34	L432Y010H01	SW-Push (SUBSONIC, LOUDNESS)
35	L432Y009H01	SW-Push (FUNCTION)
36	L704D031G01	Knob-Push-Ass'y (FUNCTION)
37	—	Screw-B M3 x 16
38	—	—
39	—	—
40	L432Y011H01	SW-Push (SPEAKER)
41	—	Link
42	U283S021H25	Fuse 2.5A SEMKO
43	U451S015H33	Jack (PHONE)
44	—	—
45	L350Y006H01	Trans-Power
46	—	T-Screw 2-4 x 12
47	—	—
48	—	—
49	—	—
50	L700A002H23	Cabinet
51	U242C809H15	Power-Cord
52	—	Bush-Mold
53	—	Clamper
54	—	Screw-B M3 x 5 (BLK)
55	U452S012H01	Connector (DIN)
56	U449S008H01	Soket (AC)
57	—	Holder
58	—	—
59	U283S022H17	Fuse 1A SEMKO

Symbol No.	Part No.	Description
60	U432S101H05	SW-Push (POWER)
61	—	Holder-SW
62	—	Holder-Z
63	U253C031H55	Lamp (POWER)
64	—	Spring-W
65	L704D514G01	Knob-Power-Ass'y
66	—	—
67	—	Base
68	—	T-Screw 2-3 x 14

NOTE: marks components on Parts list have special characteristics to keep safety performance of this unit. When replacing any of these parts, be sure to use only specified parts.

NOTE: Δ and \square marks components on Parts list have special characteristics to keep safety performance of this unit. When replacing any of these parts, be sure to use only specified parts.

Symbol No.	Part No.	Description	Symbol No.
Diodes			
D101	U264D006H11	1N60	83
D102	U264D006H11	1N60	83
D103	L268Y005H01	LT-3233G	84
D104	L268Y005H01	LT-3233G	88
D105	L268Y005H01	LT-3233G	88
D106	L268Y005H01	LT-3233G	87
D107	L268Y005H01	LT-3233G	88
D108	U264D006H11	1N60	
D201	U264D006H11	1N60	
D202	U264D006H11	1N60	
D203	L268Y005H01	LT-3233G	
D204	L268Y005H01	LT-3233G	
D205	L268Y005H01	LT-3233G	
D206	L268Y005H01	LT-3233G	
D207	L268Y005H01	LT-3233G	
D208	U264D006H11	1N60	
D701	L268Y005H01	LT-3233G	
D702	L268Y005H01	LT-3233G	
D703	L268Y005H01	LT-3233G	
D704	L268Y005H01	LT-3233G	
D801	U264C025H09	GP-20B	
D802	U264C025H09	GP-20B	
D803	U264C025H09	GP-20B	
D804	U264C025H09	GP-20B	
D821	U264S003H01	10E1	
D822	U264C012H08	MZ-316B	
D851	U264S003H01	10E1	
D852	U264S003H01	10E1	
D853	U264D037H01	1N-4148	
Transistor			
Q821	U260P050H20	2SB514	
ICs			
IC101	U262S030H01	LB1416	
IC201	U262S030H01	LB1416	
IC301	U262S017H01	M5213L	
IC302	U262S095H02	STK-463S	
IC401	U262S017H01	M5213L	
IC402	U262S095H02	STK-463S	
IC501	U262S012H01	MPC-4558C	
IC601	U262S012H01	MPC-4558C	
IC815	U262S096H15	MPC-78M15H	
IC851	U262S037H01	HA12002	
Electrical Parts			
C805	U180S016H04	C-ELECT-35V 4700	
C806	U180S016H04	C-ELECT-35V 4700	

Symbol No.	Part No.	Description	Symbol No.
F11	U283S022H17	FUSE-SEMKO-1A Δ	1
F331	U283S021H25	FUSE-SEMKO-2.5A Δ	2
F431	U283S021H25	FUSE-SEMKO-2.5A Δ	3
J1	U440B002H26	TERMINAL-BOARD	4
J3	U4525012H01	CONNECTOR (DIN)	5
J5	U440S006H01	TERMINAL-BOARD (SPEAKER)	6
J6	U451S015H33	JACK (PHONES)	7
J11	U449S008H01	SOCKET (AC) Δ	8
K851	U287S007H01	RELAY	10
PL-1	U253C031H55	LAMP (POWER)	11
	L432Y009H01	SW-PUSH (SELECTOR, TAPE 2 MONITOR)	12
	L432Y010H01	SW-PUSH (SUBSONIC LOUDNESS)	13
S15	L432Y011H01	SW-PUSH (SPEAKER A, B)	14
S101	U432S101H05	SW-PUSH (POWER) Δ	15
T11	L350Y006H01	TRANS-POWER Δ	17
VR321	L131Y001H01	VR-SLIDE-38M250Kx2 (VOLUME)	18
VR421	L130Y001H01	VR-SLIDE-B250K (BALANCE)	19
VR322	L131Y002H01	VR-SLIDE-B20Kx2 (BASS, TREBLE)	20
VR505			21
VR506			22
VR605			23
VR606			24
	U242C809H15	POWER-CORD Δ	25
Packing			
201	L813B006H03	CUSHION-MOLD	26
202	L800B008H82	PACKING-BOX	27
203	L840D001H01	COVER	28
	L871C001H28	INSTRUCTION BOOKLET	29

PACKING INSTRUCTIONS

