

Service Manual

Stereo Integrated Amplifier

SU-7200

(X), (XG), (XGH), (XE)



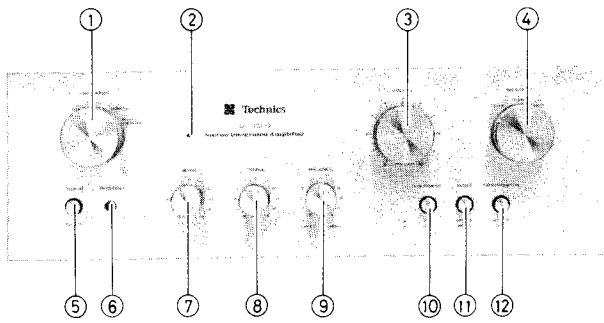
TECHNICAL SPECIFICATIONS (IHF) Specifications are subject to change without notice for further improvement.

1 kHz continuous power :	both channels driven	24W + 24W (4 Ω) 22W + 22W (8 Ω)	PHONO maximum input voltage (1 kHz RMS):	80mV
40Hz~20kHz continuous power :	both channels driven	21W + 21W (4 Ω) 20W + 20W (8 Ω)	Signal to noise ratio (IHF, A) :	PHONO 72dB TUNER, AUX 92dB
Total harmonic distortion :		0.8%	Frequency response :	PHONO RIAA standard curve ±1.0dB TUNER, AUX 10Hz~30kHz, +0dB, -3dB
Intermodulation distortion :		0.8%	Tone controls :	BASS 50Hz, +14dB~-14dB TREBLE 20kHz, +14dB~-14dB
Power bandwidth (both channels driven at 8 Ω) :	5Hz~100kHz,	-3dB	Loudness control (volume at -30dB) :	100Hz, +8dB
Residual hum and noise :		0.8mV	Output voltage :	REC OUT 150mV REC/PLAY output 30mV
Damping factor :	25 (8 Ω), 12.5 (4 Ω)		Power consumption :	200W
Load impedance :	MAIN or REMOTE 4~16 Ω MAIN + REMOTE 8~16 Ω		Power supply :	50/60Hz, 110/120/220/240V
Input sensitivity and impedance :	PHONO 2mV/47k Ω TUNER, AUX 150mV/47k Ω PLAYBACK, REC/PLAY input 150mV/47k Ω		Dimensions (W × H × D) :	410 × 140 × 332mm (16 1/8" × 5 1/2" × 13 1/8")
			Weight :	5.8kg (12.8 lb.)

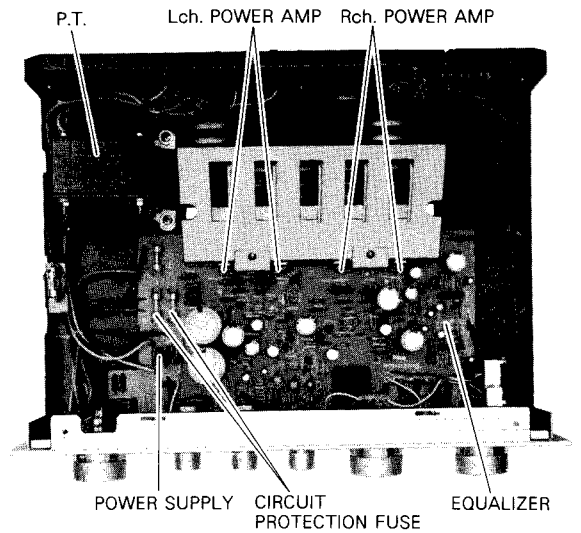
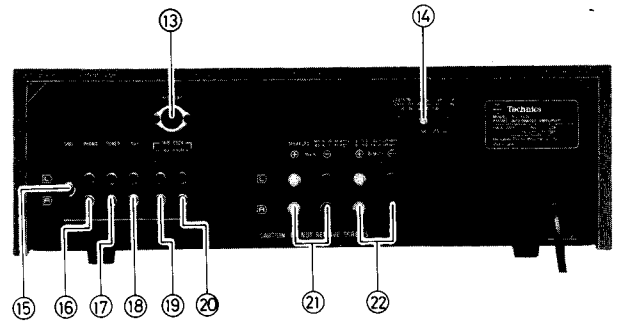
TECHNISCHE DATEN (DIN 45 500) Spezifikationen können infolge von Verbesserungen ohne Ankündigung geändert werden.

RMS-Dauerleistung bei 1 kHz :	beide Kanäle zusammen angesteuert	2 × 24W (4 Ω) 2 × 22W (8 Ω)	Fremdspannungsabstand :	Nennleistung PHONO 60dB AUX 80dB 50mW Ausgangsleistung PHONO 55dB AUX 58dB
RMS-Dauerleistung bei 40Hz~20kHz :	beide Kanäle zusammen angesteuert	2 × 21W (4 Ω) 2 × 20W (8 Ω)	Eingangsempfindlichkeit & Impedanz :	PHONO 2mV/47k Ω AUX, TUNER 150mV/47k Ω PLAYBACK, REC/PLAY Wiedergabe 150mV/47k Ω
Leistungsbandbreite (beide Kanäle zusammen angesteuert bei 4 Ω) :	5Hz~100kHz,	-3dB	PHONO Maximale Eingangsspannungen (1kHz RMS) :	80mV
Intermodulationsverzerrung :	Nennleistung bei 250Hz: 8000Hz - 4:1 4 Ω	0.8%	Frequenzgang :	PHONO RIAA Standardkurve ±1dB AUX 10Hz~30kHz, +0dB, -3dB
Hum & Noise :		0.8mV	Klangregler :	BÄSSE 50Hz, +14dB, -14dB HÖHEN 20kHz, +14dB, -14dB
Harmonische Verzerrungen :	Nennleistung bei 1kHz, 4 Ω	0.8%	Gehörgerechte Lautstärkekorrektur (Lautstärke -30dB) :	100Hz, +8dB
	Nennleistung bei 40Hz~16000Hz, 4 Ω	0.8%	Ausgangsspannungen :	TAPE REC OUT 150mV REC/PLAY Aufnahme 30mV
Dämpfungsfaktor :	25 (8 Ω), 12.5 (4 Ω)		Leistungsaufnahme :	200W
Endimpedanz :	MAIN oder REMOTE 4~16 Ω MAIN + REMOTE 8~16 Ω		Netzspannung umschaltbar :	50/60Hz, 110/120/220/240V
Frequenzgang :	10Hz~30kHz, +0dB, -3dB		Abmessungen (B × H × T) :	410 × 140 × 332mm
			Gewicht :	5.8kg

LOCATION OF CONTROLS



- ① SPEAKERS SELECTOR SWITCH
- ② POWER INDICATOR
- ③ VOLUME CONTROL
- ④ SELECTOR SWITCH
- ⑤ POWER PUSH SWITCH
- ⑥ HEADPHONES JACK
- ⑦ BASS CONTROL
- ⑧ TREBLE CONTROL
- ⑨ BALANCE CONTROL
- ⑩ LOUDNESS PUSH SWITCH
- ⑪ MODE PUSH SWITCH
- ⑫ TAPE MONITOR PUSH SWITCH
- ⑬ TAPE DECK CONNECTION SOCKET (REC/PLAY)
- ⑭ VOLTAGE SELECTOR SWITCH
- ⑮ GROUND TERMINAL
- ⑯ PHONO TERMINALS
- ⑰ TUNER TERMINALS
- ⑱ AUX TERMINALS
- ⑲ TAPE DECK CONNECTION TERMINALS (REC OUT)
- ⑳ TAPE DECK CONNECTION TERMINALS (PLAYBACK)
- ㉑ MAIN SPEAKER TERMINALS
- ㉒ REMOTE SPEAKER TERMINALS



ALIGNMENT INSTRUCTIONS

The circuit protection fuses are included in set. F2 is protection fuse of left channel and F3 is protection fuse of right channel as shown in fig. 1.

- **Ico alignment** Note: () indicates in right channel.
- (1) Connect \ominus terminal of DC voltmeter to point A (point B), and \oplus terminal of DC voltmeter to test point TP1 (TP2).
- (2) If indication on DC VTVM becomes over 35mV when passing over 5 minutes after setting the power switch to the ON position, remove the jumper wires J14 (J15).

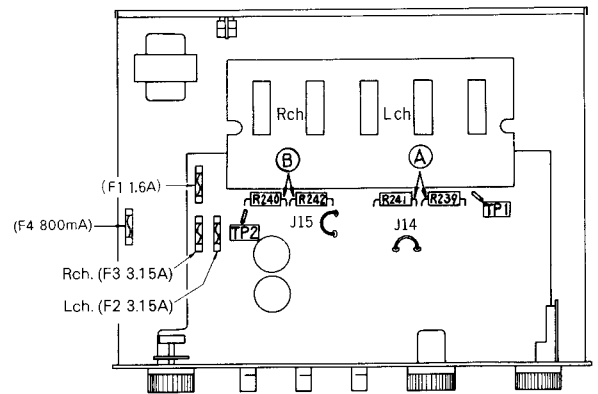
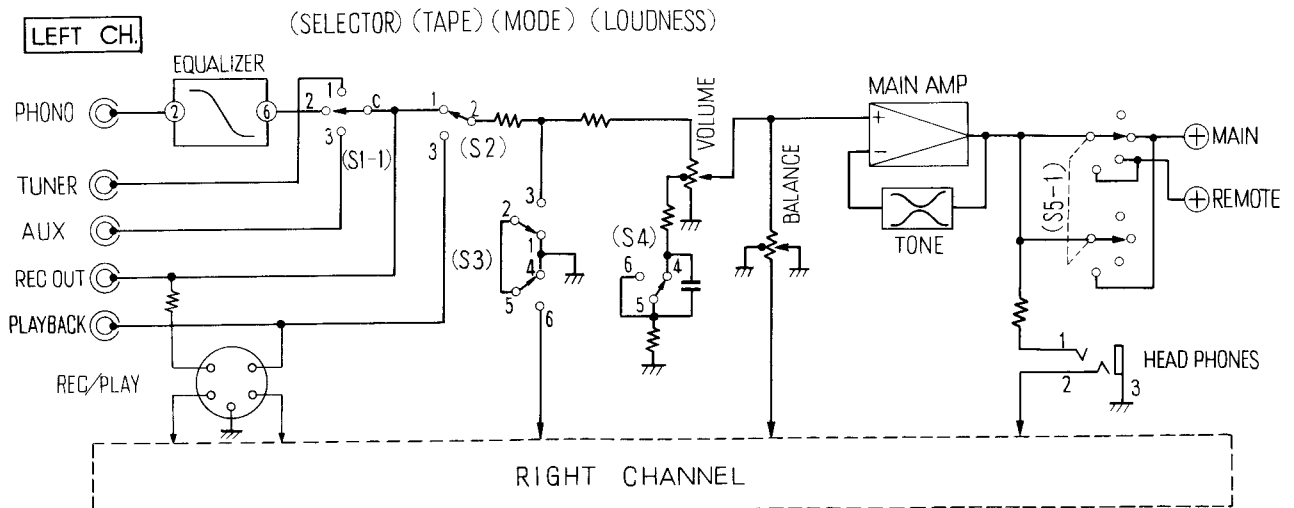


Fig. 1

BLOCK DIAGRAM



Parts Change Notice









EFFECTIVE FROM: Your next order

MODEL: SU-7200

FILE No. SU-7200-1

Subject: Part Number Change for Power Transistors

Please revise the original parts list in the Service Manual to conform to the change(s) shown herein. If new part numbers are shown, be sure to use them when ordering parts.

Reason for Change			
① Improve performance 2. Change of material or dimension 3. To meet approved specification 4. Standardization 5. Addition 6. Deletion 7. Correction 8. Other	This transistor has been changed to higher withstand voltage for improved performance.		
Interchangeability Code			
Parts Set Production A Original  Early New  Late	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.		
B Original  Early New  Late	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts where possible, then stock new parts.		
③ Original  Early New  Late	New parts only may be used in early or late production sets. Stock new parts.		
D Original  Early New  Late	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.		
E Other			
Part Number			
Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions
TR211, 212	2SD526-Y	2SD588-R	Power Amplifier } Power Amplifier } Use in pair ranks (0,P,Q or R)
TR213, 214	2SB596-Y	2SB618-R	

Parts Change Notice

Stereo Integrated Amplifier

SU-7200 (X),(XG)(XGH),(XE)

Re : Modification of Replacement Part

This is to advise you that part numbers of replacement parts have been changed on the following stereo models.

New part numbers (listed here in) are different from the replacement parts list of the stereo service manual.

Please revise the replacement parts list of the service manual or price list, and use new part numbers when placing replacement part orders.

Explanation of Notes :

Year	Month	Interchangeability		Reason of Change	New Suffix of set
5 1975	1 JAN.	A	Part (OLD) → Set (OLD)	1 To improve performance	
6 1976	2 FEB.		Part (NEW) → Set (NEW)	2 Change of material or dimension	
7 1977	3 MAR.	B	Part (OLD) → Set (OLD)	3 To meet approved specification	
8 1978	4 APR.		Part (NEW) → Set (NEW)	4 Standardization of parts	
• •	5 MAY.	C	Part (OLD) → Set (OLD)	5 Addition of part	
• •	6 JUN.		Part (NEW) → Set (NEW)	6 Deletion of part	
• •	7 JUL.	D	Part (OLD) → Set (OLD)	7 Correction	
	8 AUG.		Part (NEW) → Set (NEW)	8 Other	
	9 SEP.				
	J OCT.				
	K NOV.				
	L DEC.				

Notes :

How to use the interchangeability chart

- The arrows indicate which sets the part can be used in.
- For parts classified A, both the old and the new parts can be used in both the old and the new sets.
- For parts classified B, old parts cannot be used in new sets.
- For parts classified A and B, gradually new parts only should be stocked.
- For parts classified C, the use of old parts should be discontinued, for reasons of performance, etc.
- For parts classified D, both new parts and old parts should be stocked because old and new are not interchangeable.

SU-7200(X), (XG), (XGH), (XE)

Stereo Department

Additional changes: see ↴

Refer to cover page

Line	Description	Ref. No.	Service Manual	Notes	Change - 1, (3)		Notes	Change - 2, (4)		Line / Page
			Part No.		Part No.	Price		Part No.	Price	
1	Capacitors	C205,206	ECKW1H821KB	6LC6	Deletion					
2	Resistors	R213,214	ERD18ZJ102B	6LC6	Deletion					
3	AC Plug (X Only)	A2	RJP16AS	63C2	SJP5213					
4	Transistors	TR211,212	2SD526-Y	77C1	2SD588-R					
5	Transistors	TR213,214	2SB596-Y	77C1	2SB618-R					
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										

■ TO REMOVE CABINET

- (1) Remove four (4) cabinet mounting screws (side) Nos 1~4, as shown in fig. 2.
- (2) Remove metal fitting of cabinet from holes A and B of front panel in arrow direction ①, as shown in fig. 2.
- (3) Remove cabinet from chassis in arrow direction ②, as shown in fig. 2.
- (4) To reassemble, reverse above procedure.

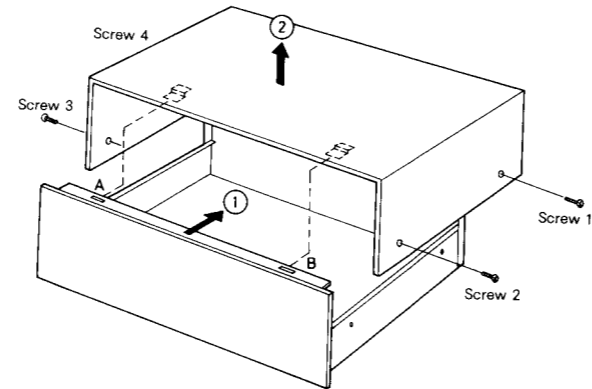


Fig. 2

■ TO REMOVE PC BOARD

Note: When checking the circuit and replacing the parts, follow these steps.

- (1) Remove the cabinet.
- (2) Loosen two screws ① and ② holding the front panel.
- (3) Loosen two screws ③ and ④ holding the heat sink as shown in fig. 3.
- (4) Remove the P.C.B. with panel.
- (5) When installing the front panel, insert the bottom chassis into groove of panel, and tighten screws after checking to fit the headphone jack and push switch button to hole of panel as shown in fig. 4.

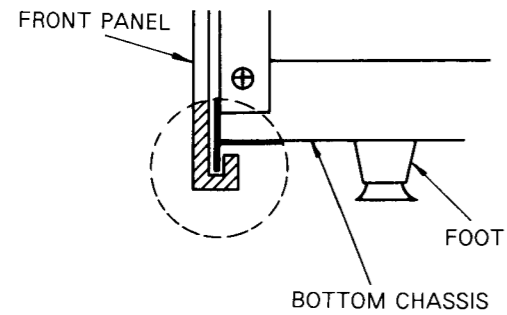


Fig. 4

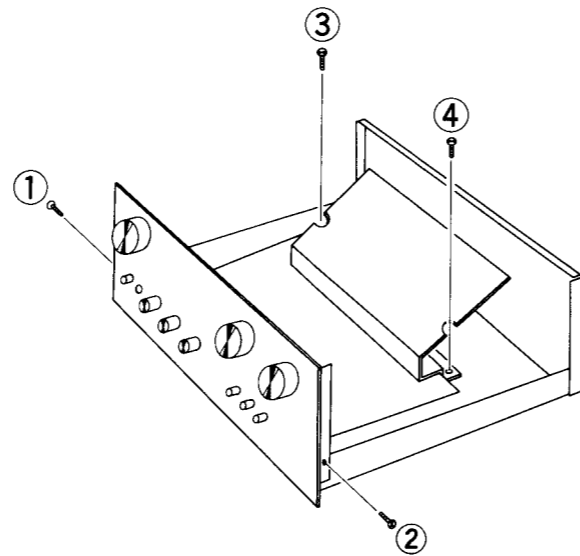


Fig. 3

■ TO REMOVE POWER TRANSISTOR

- (1) Remove the P.C.B. (See the "To remove P.C.B.").
- (2) Loosen one screw ① holding the spring to cover transistor as shown in fig. 5.
- (3) Pull out the spring from the P.C.B.
- (4) Remove the defective transistor.

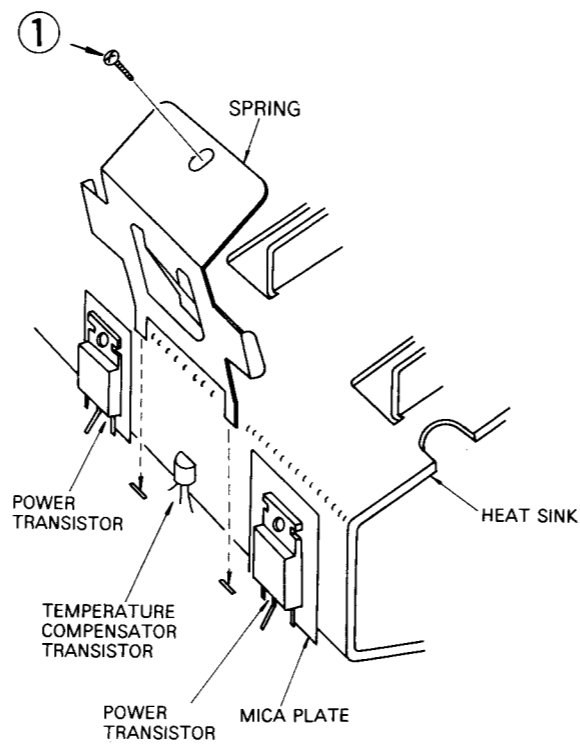


Fig. 5

■ TO INSTALL THE POWER TRANSISTOR

- (1) Insert the feet of transistor into the holes of P.C.B.
- (2) Contact the mica plate painting silicon pound to the heat sink.
- (3) Contact the power transistor to the heat sink as shown in fig. 6.
- (4) Solder the feet of transistor contacting the heat sink.
- (5) Insert the spring into P.C.B. and install the spring to press against the transistor by screw.
- (6) Contact the temperature compensator transistor to the heat sink as same as the power transistor.

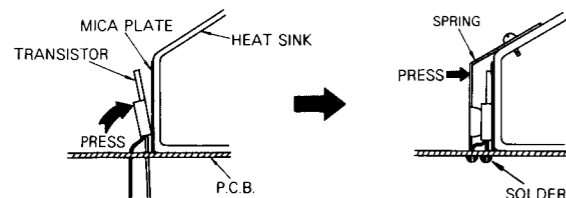
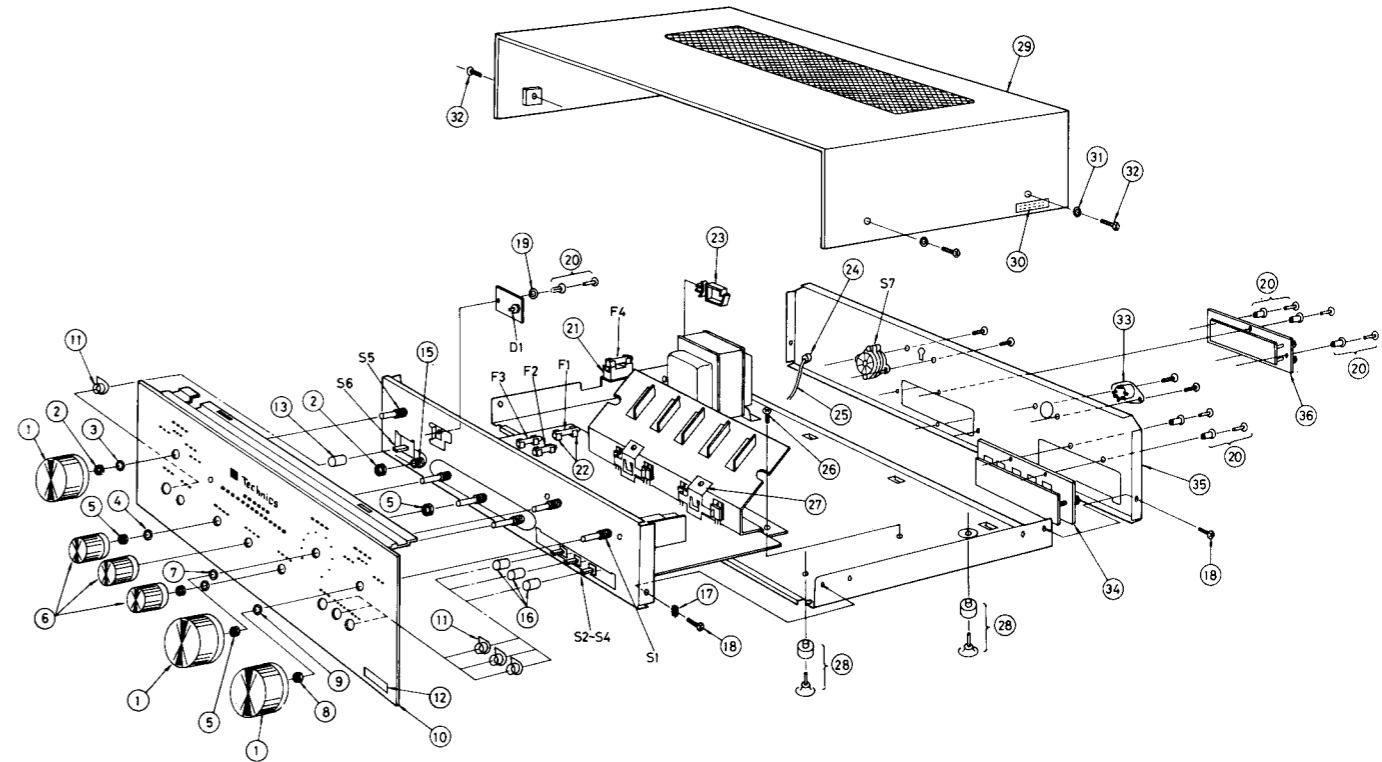
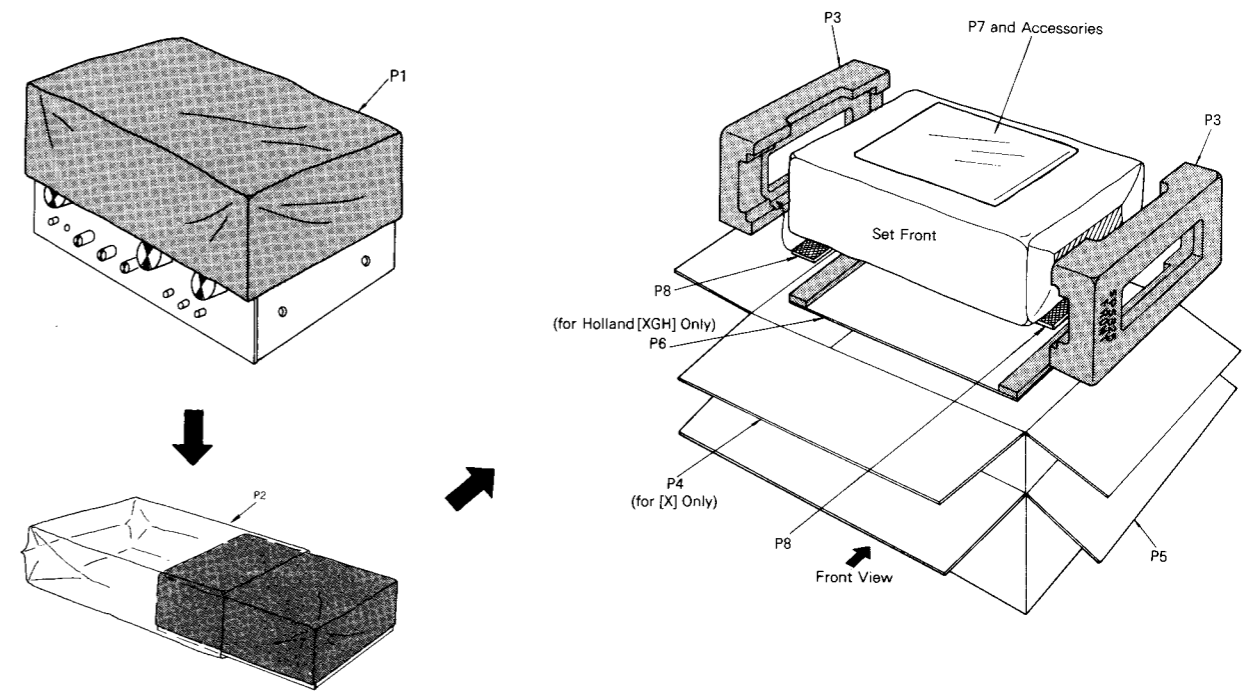


Fig. 6

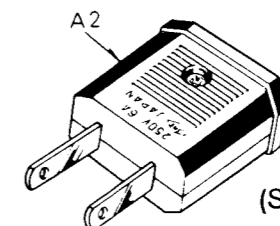
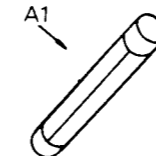
■ CABINET & CHASSIS PARTS LOCATIONS



■ PACKING PARTS



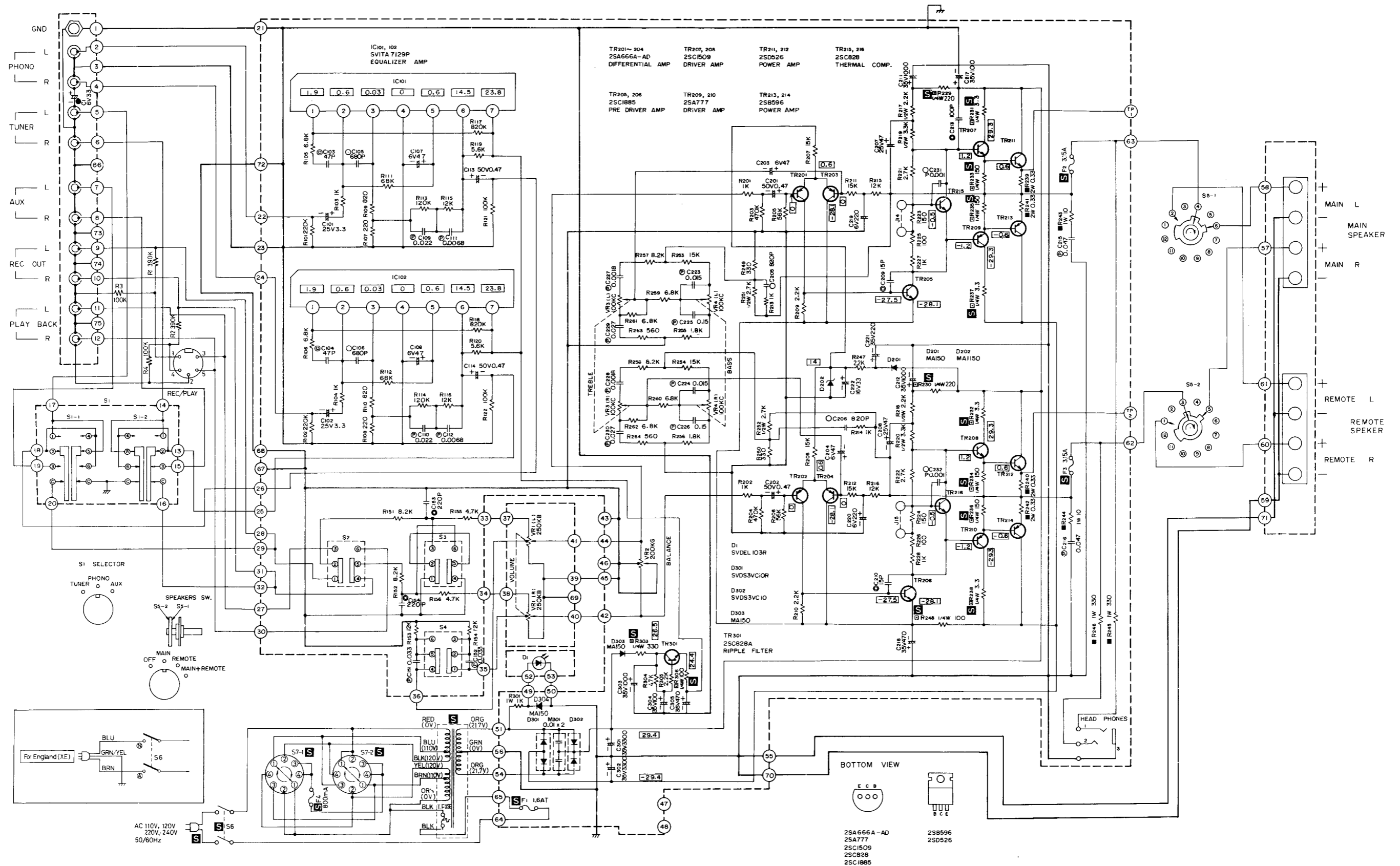
■ ACCESSORIES



(Set for [X] only)

Schematic Diagram.....Model SU-7200

(This schematic diagram may be modified at any time with the development of new technology.)

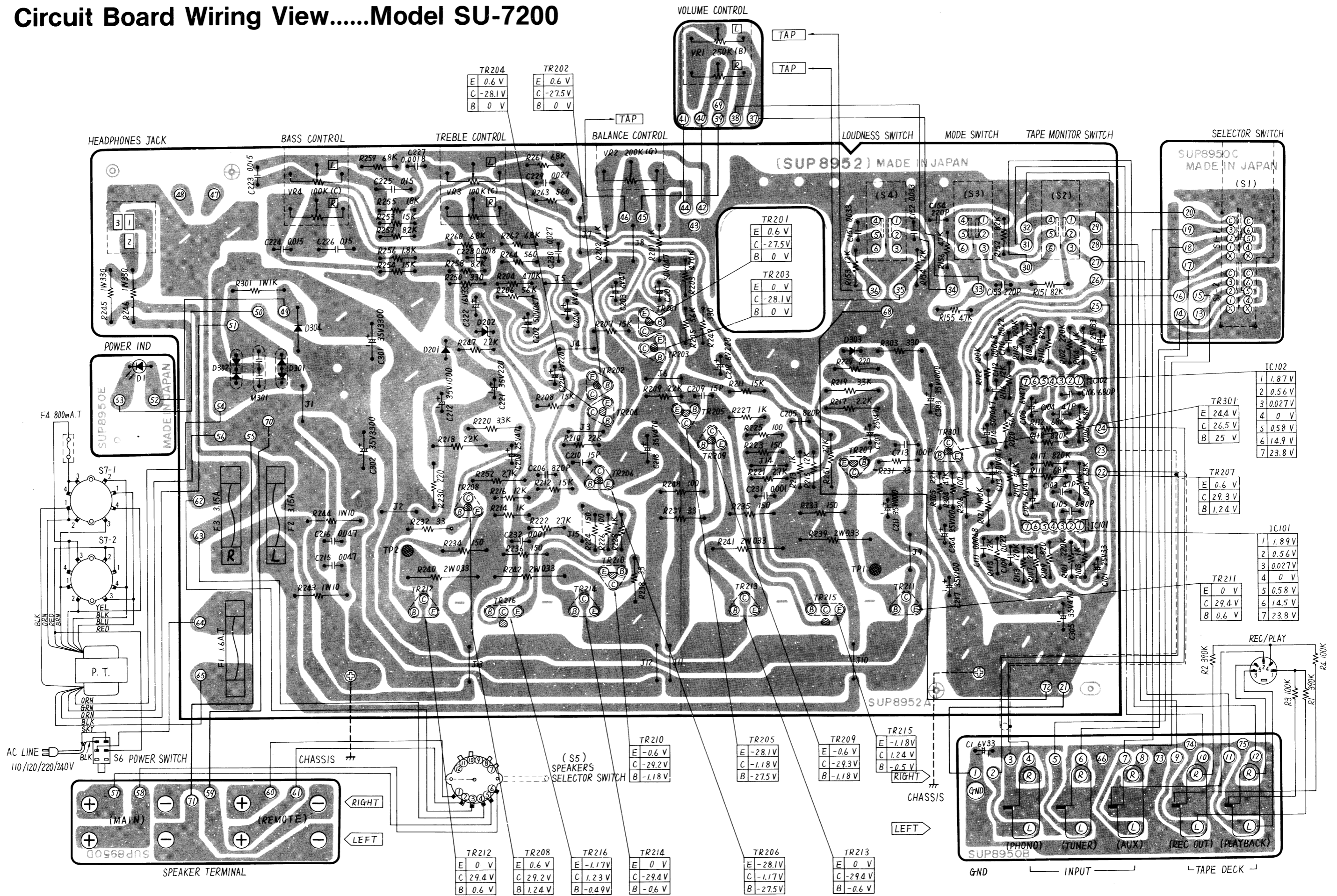


- Notes: 1. S1-1, S1-2: Selector switch in "PHONO" position.
 ① TUNER ↔ ② PHONO ↔ ③ AUX
 2. S2: Tape monitor switch in "SOURCE" position.
 3. S3: Mode switch in "STEREO" position.

4. S4: Loudness switch in "OFF" position.
 5. S5-1, S5-2: Speakers selector switch in "MAIN" position.
 OFF ↔ MAIN ↔ REMOTE ↔ MAIN + REMOTE
 6. S6: Power source switch in "OFF" position.

7. S7-1, S7-2: Voltage selector switch in "110V" position.
 ① 110V ↔ ② 120V ↔ ③ 220V ↔ ④ 240V
 8. DC voltage measurements are taken with DC VTVM from chassis ground.

Circuit Board Wiring View.....Model SU-7200



REPLACEMENT PARTS LIST

NOTES : 1. Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
2. **SAFETY** Indicates, for safety reasons, that only parts specified in service manual be used for replacement.

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
INTEGRATED CIRCUITS				
IC101,102	SVITA7129P	IC, Equalizer Amplifier	2	○
TRANSISTORS				
TR201~204	2SA666A-AD	Differential Amplifier Use in pair ranks (1,2,3,4,5)	4	
TR205,206	2SC1885-R	Pre Driver Amplifier	2	○
TR207, 208	2SC1509-R	Driver Amplifier Use in pair ranks	2	
TR209,210	2SA777-R	Driver Amplifier (Q,R)	2	
TR211,212	2SD526-Y	Power Amplifier Use in pair ranks	2	○
TR213,214	2SB596-Y	Power Amplifier (Q, Y)	2	○
TR215,216	2SC828-R	Thermo Compensation	2	
TR301	2SC828A-S	Ripple Filter	1	
DIODES				
D1	SVDEL103R	Power Indicator, LED	1	○
D201,303,304	MA150	Shock Noise Canceler & Rect.	3	
D202	MA1150	Zener, 15V	1	
D301	SVDS3VC10R	Rectifier	1	○
D302	SVDS3VC10	Rectifier	1	○
TRANSFORMER				
	SLT5P61	Power Transformer	1	○ SAFETY
RESISTORS				
R239,240,241,242	ERX2ANJR33	0.33Ω, 2W, ±5%, Metallic	4	
R231,232,237,238	ERD14FJ3R3	3.3Ω, 1/4W, ±5%, Carbon	4	SAFETY
R243,244	ERX1ANJ100	10Ω, 1W, ±5%, Metallic	2	
R248,306	ERD14FJ101	100Ω, 1/4W, ±5%, Carbon	2	SAFETY
R225,226	ERD18TJ101	100Ω, 1/8W, ±5%, Carbon	2	
R223,224	ERD18TJ151	150Ω, 1/8W, ±5%, Carbon	2	
R233,234,235,236	ERD14FJ151	150Ω, 1/4W, ±5%, Carbon	4	SAFETY
R229,230	ERD14FJ221	220Ω, 1/4W, ±5%, Carbon	2	SAFETY
R107,108	ERD18TJ221	220Ω, 1/8W, ±5%, Carbon	2	
R249,250	ERD18TJ331	330Ω, 1/8W, ±5%, Carbon	2	
R303	ERD14FJ331	330Ω, 1/4W, ±5%, Carbon	1	SAFETY
R245,246	ERG1ANJ331	330Ω, 1W, ±5%, Metallic	2	
R263,264	ERD18TJ561	560Ω, 1/8W, ±5%, Carbon	2	
R109,110	ERD18TJ821	820Ω, 1/8W, ±5%, Carbon	2	
R103,104,201,202,213,214,227,228	ERD18TJ102	1kΩ, 1/8W, ±5%, Carbon	8	
R301	ERG1ANJ102	1kΩ, 1W, ±5%, Metallic	1	
R255,256	ERD18TJ182	1.8kΩ, 1/8W, ±5%, Carbon	2	

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
R209,210,247,305	ERD18TJ222	2.2kΩ, 1/8W, ±5%, Carbon	4	
R217,218	ERD12TJ222	2.2kΩ, 1/2W, ±5%, Carbon	2	
R251,252	ERD12TJ272	2.7kΩ, 1/2W, ±5%, Carbon	2	
R221,222	ERD18TJ272	2.7kΩ, 1/8W, ±5%, Carbon	2	
R219,220	ERD12TJ332	3.3kΩ, 1/2W, ±5%, Carbon	2	
R155,156	ERD18TJ472	4.7kΩ, 1/8W, ±5%, Carbon	2	
R105,106	ERD18TJ682	6.8kΩ, 1/8W, ±5%, Carbon	6	
259~262				
R119,120	ERD18TJ562	5.6kΩ, 1/8W, ±5%, Carbon	2	
R151,152,257,258	ERD18TJ822	8.2kΩ, 1/8W, ±5%, Carbon	4	
R115,116,153,154,215,216	ERD18TJ123	12kΩ, 1/8W, ±5%, Carbon	6	
R207,208,211,212,253,254	ERD18TJ153	15kΩ, 1/8W, ±5%, Carbon	6	
R304	ERD18TJ473	47kΩ, 1/8W, ±5%, Carbon	1	
R205,206	ERD18TJ563	56kΩ, 1/8W, ±5%, Carbon	2	
R111,112	ERD18TJ683	68kΩ, 1/8W, ±5%, Carbon	2	
R3,4,121,122	ERD18TJ104	100kΩ, 1/8W, ±5%, Carbon	4	
R113,114	ERD18TJ124	120kΩ, 1/8W, ±5%, Carbon	2	
R101,102	ERD18TJ224	220kΩ, 1/8W, ±5%, Carbon	2	
R1,2	ERD18TJ394	390kΩ, 1/8W, ±5%, Carbon	2	
R203,204	ERD18TJ474	470kΩ, 1/8W, ±5%, Carbon	2	
R117,118	ERD14VSJ824	820kΩ, 1/4W, ±5%, Carbon	2	
VARIABLE RESISTORS				
VR1	EWFOA024BF5	250kΩ(B), Volume Control	1	○
VR2	EVE2DA067G25	200kΩ(G), Balance Control	1	○
VR3,4	EWV3NA029C15	100kΩ(C), Bass & Treble Control	2	○
CAPACITORS				
C209,210	ECCD1H150K	15pF, 50WV, ±10%, Ceramic	2	
C103,104	ECCD1H470K	47pF, 50WV, ±10%, Ceramic	2	
C213	ECCD1H101K	100pF, 50WV, ±10%, Ceramic	1	
C153,154	ECCD1H221K	220pF, 50WV, ±10%, Ceramic	2	
C105,106	ECKD1H681KB	680pF, 50WV, ±10%, Ceramic	2	
C205,206	ECKD1H821KB	820pF, 50WV, ±10%, Ceramic	2	
C231,232	ECKD1H102PF	0.001μF, 50WV, ±10%, Ceramic	2	
C227,228	ECQM05182KZ	0.0018μF, 50WV, ±10%, Polyester	2	
C111,112	ECQM05682KZ	0.0068μF, 50WV, ±10%, Polyester	2	
C223,224	ECQM05153KZ	0.015μF, 50WV, ±10%, Polyester	2	
C109,110	ECQM05223KZ	0.022μF, 50WV, ±10%, Polyester	2	
C229,230	ECQM05273KZ	0.027μF, 50WV, ±10%, Polyester	2	
C151,152	ECQM05333KZ	0.033μF, 50WV, ±10%, Polyester	2	
C215,216	ECQM05473KZ	0.047μF, 50WV, ±10%, Polyester	2	
C225,226	ECQM05154KZ	0.15μF, 50WV, ±10%, Polyester	2	
C1	ECEA6V33L	33μF, 6.3WV, Electrolytic	1	
C107,108,203,204	ECEA6V47L	47μF, 6.3WV, Electrolytic	4	
C219,220	ECEA6V220L	220μF, 6.3WV, Electrolytic	2	
C222	ECEA16V33L	33μF, 16WV, Electrolytic	1	
C101,102	ECEA25M3R3	3.3μF, 25WV, Electrolytic	2	
C207,208	ECEA25V47L	47μF, 25WV, Electrolytic	2	
C217,304	ECEA35V100L	100μF, 35WV, Electrolytic	2	

SU-7200 9

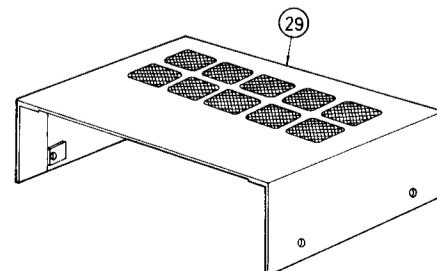
10 SU-7200

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
C221	ECEA35V220L	220μF, 35WV, Electrolytic	1	
C218,305	ECEA35V470L	470μF, 35WV, Electrolytic	2	
C211,212,303	ECEA35V1000	1000μF, 35WV, Electrolytic	3	
C301,302	ECET35R3300S	3300μF, 35WV, Electrolytic	2	
C113,114,201,202	ECEA50MR47	0.47μF, 50WV, Electrolytic	4	
COMPONENT COMBINATION				
M301	RXAF103P22HD	0.01μF(X2), Hum Cancel	1	
SWITCHES				
S1	SSR35	Selector Switch	1	○
S2,3,4	SSH315S	Push Switch, Tape, Mode, Loudness	1	○
S5	ESRC124F25A	Speakers Selector Switch	1	○
S6	ESB7047	Power Switch	1	○ SAFETY
S6 [XE]	ESB7017	Power Switch (for England [XE] Only)	1	○ SAFETY
S7	SSR53S	Voltage Selector Switch	1	○ SAFETY
FUSES				
F1	XBA2C16TRO	1.6A(T) Fuse, Power Source	1	SAFETY
F2,3	XBA2C31SSO	3.15A Fuse, Circuit Protection	2	SAFETY
F4	XBA2C08TRO	800mA(T) Fuse, Power Source	1	SAFETY
CABINET and CHASSIS PARTS				
1	SBN595	Knob, Volume Control, Speaker & Selector Switch	3	○
2	XNS9	Nut, Speaker Switch & Headphones	2	
3	XWV9	Washer, Speaker Switch	1	
4	XWS8AW	Washer, Bass & Balance Control	2	
5	XNS8	Nut, Bass, Treble, Balance & Volume Control	4	
6	SBN533	Knob, Bass, Treble & Balance Control	3	○
7	XWV8	Spring Washer, Volume Control	1	
8	XNS7	Nut, Selector Switch	1	
9	XWV7	Spring Washer, Selector Switch	1	
10	SGW6950	Front Panel Only	1	○
11	SGX6433	Sleeve, Push Switches Button	4	○
12 [XE]	QQC0689	Label, Made in Japan (Set for England [XE] Only)	1	○
13	SBC141	Button, Power Push Switch	1	
15	SJJA15	Jack, Headphones	1	
16	SBC139	Button, Push Switches	3	
17	XWC3B	Toothed Ring	2	
18	XTB3+8B	Screw, Front & Rear Panel M'tg.	4	
19	SNWA352	Nylon Washer	1	
20	SHR401-1	Lock Pin, P.C.B.	7	○
21	SJFA5101	Holder, Fuse (F4)	1	
22	SJFA108	Holder, Fuse (F1~F3)	6	
23	SHRA306	Clamp, Lead Wire	1	
24	RHR106	Bushing, AC Cord	1	
24 [XE]	SHR113	Bushing, AC Cord (for England [XE])	1	
25 [X,XG]	SJA95	AC Cord, (for [X] & Germany [XG])	1	○ SAFETY

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
25 [XGH]	SJA81	AC Cord (Set for Holland [XGH] Only)	1	SAFETY
25 [XE]	SJA73	AC Cord (Set for England [XE] Only)	1	SAFETY
26	XTV3+6C	Screw, P.C.B & Heat Sink M'tg.	4	
27	SUW865	Spring, Power Transistor	2	○
28	SKL149	Foot, Set (with Lock Pin)	4	○
29 [X]	SKA8250	Cabinet, Brown Wood (for [X] Only)	1	○
29 [XE]	SKA8470	Cabinet, Brown Wood (for England [XE] Only)	1	○
29 [XG,XGH]	SKA8251	Cabinet, Black Wood (for Germany [XG] & Holland [XGH] Only)	1	○
30 [X, XE]	SQXA4067	Caution Label, for Brown Cabinet Use	1	
30 [XG, XGH]	SQXA4112	Caution Label, for Black Cabinet Use	1	
31	XWG4FZ	Washer, Cabinet Screw	4	
32	XTB4+16FFZ	Screw, Cabinet M'tg.	4	○
33	RJS31-1	DIN Connector, Tape Deck	1	
34	SJF3007	Terminal, PHONO, TUNER etc.	1	○
35	SGP290A	Rear Panel	1	○
35 [XE]	SGP290-1A	Rear Panel (Set for England [XE] Only)	1	○
36	SJF4803	Terminal, Speakers	1	○
ACCESSORIES				
A1	XBA2C31SSO	3.15A Fuse, Circuit Protection	2	SAFETY
A2 [X]	RJP16AS	AC Plug (Set for [X] Only)	1	
PACKINGS				
P1	SPPA16-1	Soft Cover	1	
P2	SPP163	Polyethylene Bag	1	
P3	SPS325	Pad, Left & Right Side	2	○
P4 [X]	SPN5147	Carton Box, Inner (for [X] Only)	1	○
P5 [X]	SPG607	Carton Box, Outer (for [X] Only)	1	○
P5 [XG, XE]	SPG609	Carton Box (for Germany [XG] & England [XE])	1	○
P5 [XGH]	SPG611	Carton Box (for Holland [XGH] Only)	1	○
P6 [XGH]	SPS333	Pad, Under (for Holland [XGH] Only)	1	○
P7	SQF1171	Printed Matter	1	○
P7 [XE]	SQF1215	Printed Matter (for England [XE] Only)	1	○
P8	SPS481	Pad, Bottom Side	2	○

NOTE : Set for [X] are European, Asia, Latin America, Oceania, Middle East and Africa.

Cabinet for England [XE]



Service Manual

Stereo Integrated Amplifier

SU-7300

(XA), (XAL), (XG), (XGH),
(XGF), (XSD), (XSW), (XE)



The cabinet color shall be subject to change dependent on the destination.

The model SU-7300 [XA] is available in Asia, Latin America, Middle East and Africa.

The model SU-7300 [XAL] is available in Australia only.

The model SU-7300 [XG] is available in European only.

The model SU-7300 [XGH] is available Holland only.

The model SU-7300 [XSD] is available in Scandinavia only.

The model SU-7300 [XSW] is available in Switzerland only.

The model SU-7300 [XE] is available in England only.

The model SU-7300 [XGF] is available in France only.

TECHNICAL SPECIFICATIONS (IHF) Specifications are subject to change without notice for further improvement.

AMPLIFIER SECTION

1kHz continuous power:	both channels driven	55W + 55W (4Ω) 43W + 43W (8Ω)
20Hz ~ 20kHz continuous power:	both channels driven	48W + 48W (4Ω) 41W + 41W (8Ω)
Power bandwidth (both channels driven at 8Ω):	8Hz ~ 55kHz, -3dB	
Total harmonic distortion:	0.08% at rated power (20Hz ~ 20kHz) 0.04% at half power (20Hz ~ 20kHz) 0.02% at half power (1kHz)	
Intermodulation distortion:	0.08% (60Hz : 7 kHz = 4 : 1, SMPTE)	
Residual hum and noise:		0.6mV
Damping factor:		20 (4Ω), 40 (8Ω)
Input sensitivity and impedance:		
PHONO		2.5mV/47kΩ
TUNER		150mV/47kΩ
PLAYBACK (TAPE 1)		180mV/47kΩ
PLAYBACK (TAPE 2)		150mV/47kΩ
REC/PLAY (TAPE 1) input		180mV/47kΩ
PHONO maximum input voltage (1kHz, RMS):		150mV
Signal to noise ratio (IHF, A):	PHONO	78dB
	TUNER	97dB

Frequency response:	PHONO	RIAA standard curve ±0.3dB
	TUNER	7Hz ~ 80kHz, +0dB, -3dB 20Hz ~ 20kHz, ±0.5dB
Tone controls:	BASS	50Hz, +12dB ~ -12dB
	TREBLE	20kHz, +12dB ~ -12dB
High filter:		8kHz, -6dB/oct.
Loudness control (volume at -30dB):		100Hz, +8dB
Output voltage and impedance:		
	REC OUT (TAPE 1, 2)	150mV/1.2kΩ
	REC/PLAY (TAPE 1) output	30mV/82kΩ
Load impedance:	MAIN or REMOTE	4 ~ 16Ω

GENERAL

Power consumption:	400W
Power supply (50Hz/60Hz):	110V/120V/220V/240V 240V only (Set for Australia)
Dimensions (W x H x D):	410 x 139 x 334mm (16-5/32" x 5-15/32" x 13-5/32")
Weight:	8.9kg (19.6lb)

TECHNISCHE DATEN (DIN 45 500) Spezifikationen können infolge von Verbesserungen ohne Ankündigung geändert werden.

VERSTÄRKERTEIL

RMS-Dauerleistung bei 1kHz:		
beide Kanäle zusammen angesteuert	2 x 55W (4Ω) 2 x 43W (8Ω)	
RMS-Dauerleistung bei 20Hz ~ 20kHz:		
beide Kanäle zusammen angesteuert	2 x 48W (4Ω) 2 x 41W (8Ω)	
RMS-Dauerleistung bei 40Hz ~ 16kHz:		
beide Kanäle zusammen angesteuert	2 x 48W (4Ω) 2 x 41W (8Ω)	
Leistungsbandsbreite (beide Kanäle zusammen angesteuert bei 4Ω):	8Hz ~ 55kHz, -3dB	
Harmonische Verzerrungen:		
Nennausgangsleistung bei 1kHz, 4Ω	0,08%	
Nennausgangsleistung bei 40Hz ~ 16.000Hz, 4Ω	0,08%	
-26dB Nennausgangsleistung bei 1kHz, 4Ω	0,1%	
50mW Ausgangsleistung bei 1kHz, 4Ω	0,15%	
Intermodulationsverzerrung:		
Nennausgangsleistung bei 250Hz : 8,000Hz = 4 : 1, 4Ω	0,08%	
Hum & noise:	0,6mV	
Dämpfungsfaktor:	20 (4Ω), 40 (8Ω)	
Eingangsempfindlichkeit & Impedanz:		
PHONO	2,5mV/47kΩ	
TUNER	150mV/47kΩ	
PLAYBACK (TAPE 1)	180mV/47kΩ	
PLAYBACK (TAPE 2)	150mV/47kΩ	
REC/PLAY (TAPE 1) Eing.	180mV/47kΩ	
PHONO Maximale Eingangsspannungen (1kHz, RMS)	150mV	

Fremdspannungsabstand:		
Nennleistung	PHONO	63dB
	TUNER	83dB
-26dB Nennausgangsleistung	PHONO	55dB
	TUNER	58dB
50mW Ausgangsleistung	PHONO, TUNER	53dB
Frequenzgang:		7Hz ~ 80kHz, +0dB, -3dB 15Hz ~ 40kHz, +0dB, -1dB
Klangregler:	BÄSSE (BASS)	50Hz, +12dB bis -12dB
	HÖHEN (TREBLE)	20kHz, +12dB bis -12dB
Höhenfilter (HIGH):		8kHz, -6dB/oct.
Gehörliche Lautstärke (Lautstärke -30dB):		100Hz, +8dB
Ausgangsspannungen: REC OUT (TAPE 1, 2)		150mV/1.2kΩ
	REC/PLAY (TAPE 1) Aufnahme	30mV/82kΩ
Kopfhörerpegel & Ausgangsimpedanz:		350mV/330Ω
Ausgangsimpedanz: MAIN oder REMOTE		4 ~ 16Ω
Kanaltrennung:		±1,5dB
Kanalabweichung:		50dB

ALLGEMEINE DATEN

Leistungsaufnahme:	400W
Netzspannung (50Hz/60Hz):	110V/120V/220V/240V
Abmessungen (B x H x T):	410 x 139 x 334 mm
Gewicht:	8,9kg

CARACTERISTIQUES TECHNIQUES (IHF) Sujet à changement sans préavis.

PARTIE AMPLIFICATEUR

1kHz, puissance continue: total 2 canaux 55W + 55W (4Ω)
43W + 43W (8Ω)

20Hz ~ 20kHz, puissance continue: total 2 canaux 48W + 48W (4Ω)
41W + 41W (8Ω)

Largeur de bande de puissance: total 2 canaux 8Ω
8Hz ~ 55 kHz, -3dB

Distorsion harmonique totale:
à la puissance nominale (20Hz ~ 20kHz) 0.08%
à demi-puissance (20Hz ~ 20kHz) 0.04%
à demi-puissance (1kHz) 0.02%

Distorsion par intermodulation:
0.08% (60Hz : 7 kHz = 4 : 1, SMPTE)

Tension résiduelle de bruit: 0.6mV

Facteur d'amortissement: 20 (4Ω), 40 (8Ω)

Sensibilité et impédance d'entrée:

PHONO 2.5mV/47kΩ

TUNER 150mV/47kΩ

Magnétophone 1. LECTURE 180mV/47kΩ

Magnétophone 2. LECTURE 150mV/47kΩ

Magnétophone 1. REC/PLAY 180mV/47kΩ

Tension max. d'entrée PHONO (1kHz, eff.): 150mV

Rapport S/B (IHF, A): PHONO 78dB

TUNER 97dB

Courbe de réponse: PHONO norme RIAA ±0.3dB

TUNER 7Hz ~ 80kHz +0dB, -3dB

20Hz ~ 20kHz, ±0.5dB

Commandes de tonalité: Grave (BASS) 50Hz, +12dB à -12dB

Aigu (TREBLE) 20kHz, +12dB à -12dB

Filtre Aigu (HIGH): 8kHz, -6dB/oct.

Correction physiologique (Volume à -30dB) 100Hz, +8dB

Tension de sortie: Magnétophone 1, 2, Enregistrement 150mV/1.2kΩ

Magnétophone 1, REC/PLAY 30mV/82kΩ

Impédance de charge: PRINCIPAL ou ELOIGNE 4 à 16Ω

GENERALITES

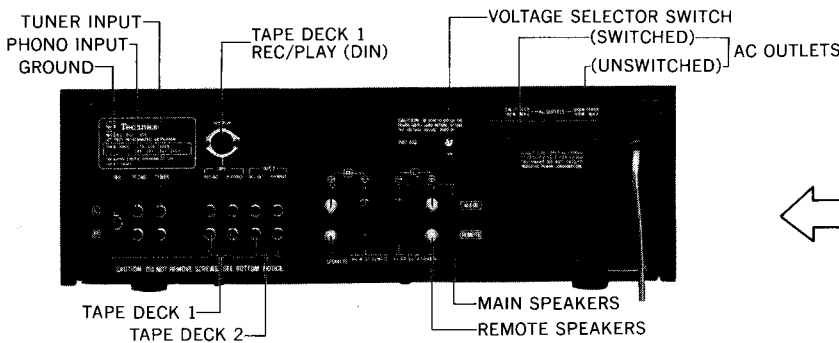
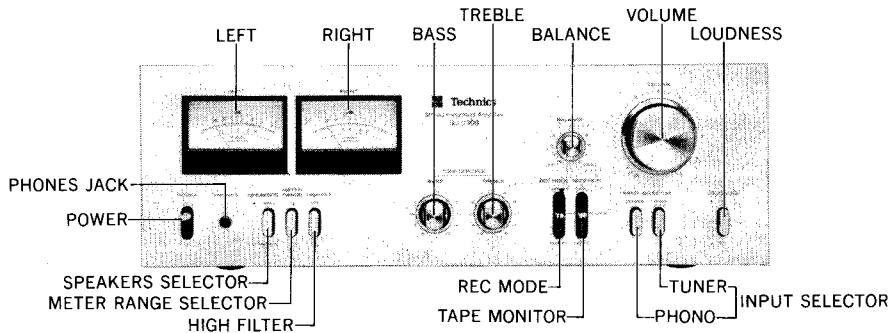
Consommation: 400W

Alimentation (50Hz/60Hz): 110V/120V/220V/240V

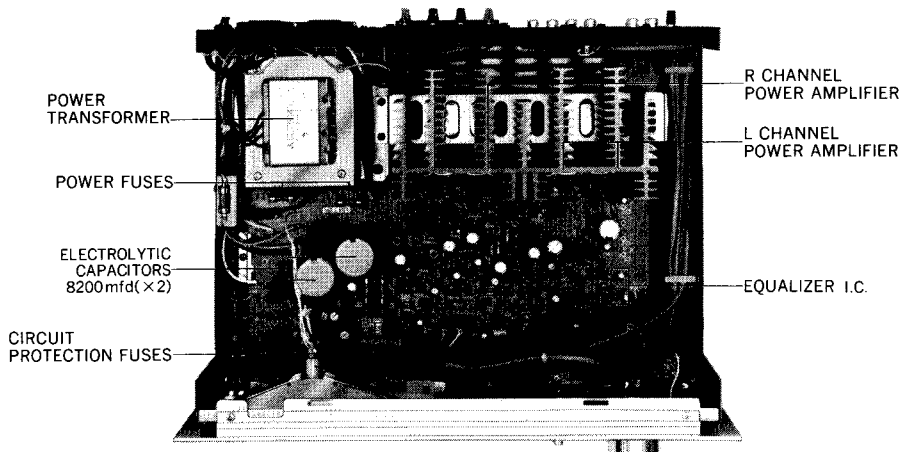
Dimensions (L x H x P): 410 x 139 x 334mm

Poids: 8.9kg

LOCATION OF CONTROLS



- This photo shows only the products for [XA].
- The products for other destinations except [XA] are equipped with AC outlets.
- For further remark, the products for [XAL] are not provided with voltage selector and AC outlets.



■ TO REMOVE CABINET

1. Remove four (4) cabinet-mounting screws, nos. ①~④ as shown in Fig. 1.
2. Remove cabinet from chassis in arrow direction 1 to 2, as shown in Fig. 1:
3. To reassemble, reverse above procedure.

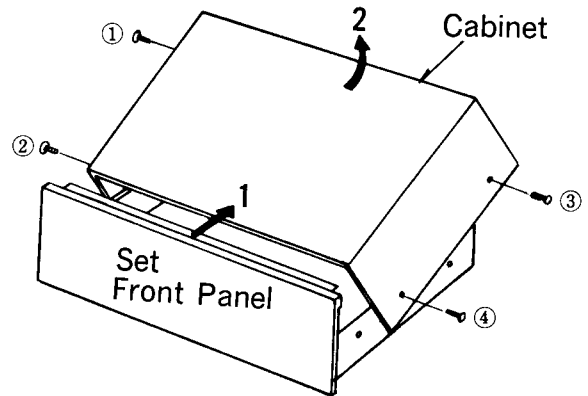


Fig. 1

■ TO REMOVE CHASSIS

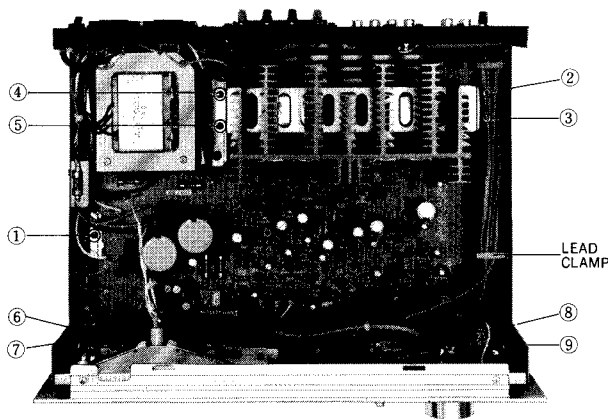


Fig. 2

1. Remove cabinet from chassis. (Refer to "To remove cabinet").
2. Remove lead wires from lead clamp. (Refer to Fig. 2).
3. Remove a screw and printed circuit board metal clamp. (Refer to Fig. 2: ①).

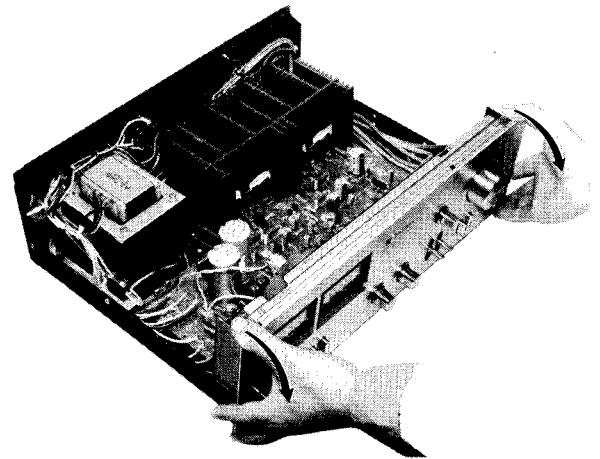


Fig. 3

4. Remove four (4) heat sink-mounting screws. (Refer to Fig. 2: ②~⑤).
5. Remove four (4) panel-mounting screws from chassis. (Refer to Fig. 2: ⑥~⑨, left and right side).
6. As photo in Fig. 3, hold the panel at its side ends and push it downward tilting slightly its top part to the forward direction.
7. Remove the front panel from the chassis. (Fig. 4 to Fig. 5).
8. Set the printed circuit board on the chassis as indicated in Fig. 6.
9. The front panel can be reset in the reverse sequence.
10. Mount the lever switch bracket inside the chassis prior to resetting the front panel. (Fig. 6).

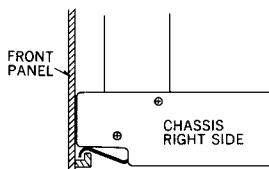


Fig. 4

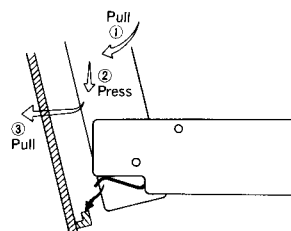


Fig. 5

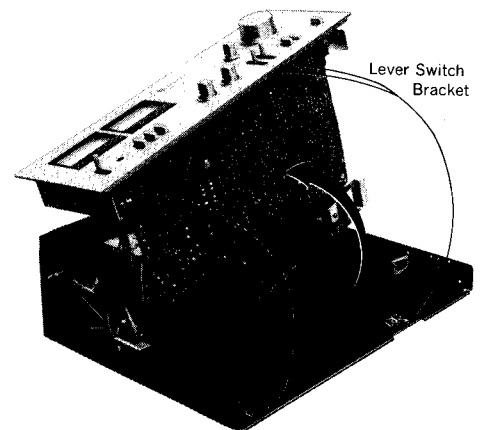


Fig. 6

■ NOTE

The unit is provided with the speaker circuit protection fuses at the right and left channels respectively. The fuse is to prevent the power transistor from destruction, should the speaker terminals be short-circuited. Accordingly, if the unit fails to function upon completion of the speaker connections, check the speaker protection fuses first of all for possible blowing.

■ ALIGNMENT INSTRUCTIONS

- When the power transistor is replaced, be sure to apply silicone compound (or equivalent thermal diffusion agent) onto the mica plate, and at the same time confirm the idling current of the power transistor. (measure voltage across the emitter resistance)

Ⓐ For adjustment with DC voltmeter

- Turn the speaker switch "OFF".
- Connect the DC voltmeter as in Fig. 7 of the adjusting spot diagram.
- If the reading is under 25mV approximately several minutes after turning ON the power supply, the circuit is "OK". On the other hand, if the reading is over 25mV, cut off the lead wire for **L** in the case of left channel (The lead wire for **R** in the case of right channel).
- Should the reading not fall under 25mV even when the lead wire has been cut off, there is something wrong with the circuit, and therefore, check the power source circuit or main amplifier circuit.

NOTE: When cutting off the lead wire, cut off the same at the root.

Ⓑ Current should be checked only when adjustment is made with a tester. (measuring instrument incapable of measuring voltage in mV unit).

- Turn OFF the power supply for the set.
- Connect the ammeter as shown in Fig. 9.
- After ensuring that the ammeter will not come off, turn ON the power supply.
- If the reading is under 75mA after several minutes (But, when nothing resistance of internal resistor by ammeter) the circuit is "OK". If over 75mA, cut off the lead wire for **L** in the case of left channel (The lead wire for **R** in the case of right channel).
- If the reading does not fall under 75mA, there is something wrong with the circuit.

NOTE: The adjustment may be made either by Ⓐ or by Ⓑ method. (We recommend the method Ⓐ where possible). Figs. 8 and 9 are related to the case of left channel.

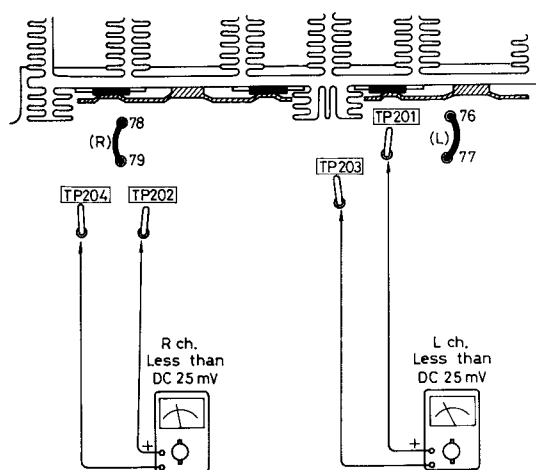
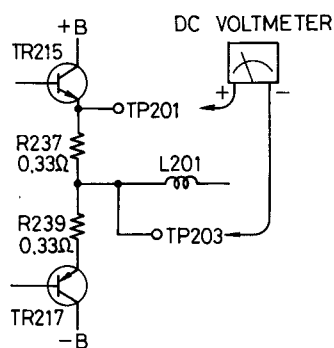
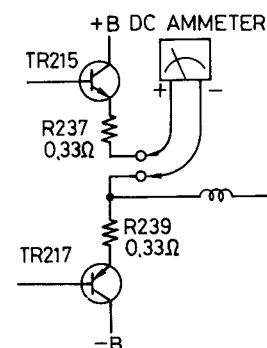


Fig. 7 (Abb. 7)



Voltage check method
(Stromspannung-prüfmethode)
Méthode de vérification
de tension

Fig. 8 (Abb. 8)



Current check method
(Stromstärke-Prüfmethode)
Méthode de vérification
de courant

Fig. 9 (Abb. 9)

■ ABGLEICHANWEISUNGEN

- Wenn der Netztransistor ersetzt wird, ist zu beachten, daß eine Siliziumverbindung (oder ähnliches Thermodiffusionsmittel) auf die Glimmerplatte gegeben wird, und zur gleichen Zeit der Blindstrom des Netztransistors festgestellt wird. (Die Spannung über den Emitterwiderstand messen.)

- Ⓐ Zum Justieren mit dem Gleichstrom-Voltmeter
1. Drehen Sie den Lautsprecherschalter auf "OFF".
 2. Schließen Sie den Gleichstrom-Voltmeter an, wie in Abb. 7 des Justierpunkte-Diagramms gezeigt.
 3. Falls die Anzeige weniger als ca. 25 mV beträgt, so ist die Schaltung in Ordnung. Falls aber die Anzeige mehr als 25 mV beträgt, schneiden Sie den Leitungsdraht für **L** im Falle des linken Kanals weg (oder den Leitungsdraht für **R** im Falle des rechten Kanals).
 4. Falls die Anzeige auch nach Unterbrechen des Leitungsdrahtes nicht unter 25 mV fällt, so ist die Schaltung nicht in Ordnung, und die Stromquellenschaltung und die Hauptverstärkerschaltung müssen überprüft werden.

ANMERKUNG: Falls das Wegschneiden des Leitungsdrahtes nötig ist, schneiden Sie diesen nahe am Anschlußpunkt weg.

- Ⓑ Die Stromstärke sollte nur geprüft werden, wenn die Justierung mit einem Prüfgerät vorgenommen wird. (Mit dem Meßinstrument kann die Spannung nicht in mV gemessen werden.)
1. Schalten Sie die Stromzufuhr zum Gerät aus.
 2. Schließen Sie das Ammeter an, wie in Abb. 9 gezeigt.
 3. Nachdem Sie sich vergewissert haben, daß das Ammeter solide befestigt ist, schalten Sie die Stromzufuhr ein.
 4. Falls die Anzeige einige Minuten nach dem Einschalten weniger als 75 mA beträgt, so ist die Schaltung in Ordnung. Liegt die Anzeige über 75 mA, schneiden Sie den Leitungsdraht für **L** im Falle des linken Kanals weg. (oder den Leitungsdraht für **R** im Falle des rechten Kanals).
 5. Falls die Anzeige auch dann nicht unter 75 mA fällt, so ist die Schaltung defekt.

ANMERKUNG: Die Justierung kann entweder nach Methode Ⓐ oder Ⓑ vorgenommen werden. (Wo möglich, empfehlen wir Methode Ⓐ). Die Abbildungen 8 und 9 beziehen sich auf den linken Kanal.

■ INSTRUCTIONS D'ALIGNEMENT

- Lorsque le transistor de puissance est remplacé, s'assurer d'appliquer le composé de silicone (ou un agent de diffusion thermique équivalent) sur la plaque de mica et confirmer en même temps le courant déwatté du transistor de puissance. (Mesurer la tension à travers la résistance de l'émetteur.)

- Ⓐ Pour la mise au point avec un voltmètre C.C.
1. Tourner le commutateur de haut-parleur sur "OFF".
 2. Connecter le voltmètre C.C. comme dans la Fig. 7 du schéma des endroits de vérification.
 3. Si la lecture est approximativement inférieure à 25 mV plusieurs minutes après la mise en marche de l'alimentation, le circuit fonctionne correctement. Par contre, si la lecture est au-delà de 25 mV, couper le fil de jonction pour **L** dans le cas du canal Gauche [L], (le fil de jonction pour **R**, dans le cas du canal Droite [R]).
 4. Si la lecture ne descend pas au-dessous de 25 mV même lorsque le fil de jonction a été coupé, cela signifie qu'il y a quelque chose d'incorrect dans le circuit et par conséquent, il sera nécessaire de vérifier le circuit d'alimentation ou le circuit d'amplification principal.

REMARQUE: Lorsqu'on coupe le fil de jonction, le couper à l'extrémité de sa racine.

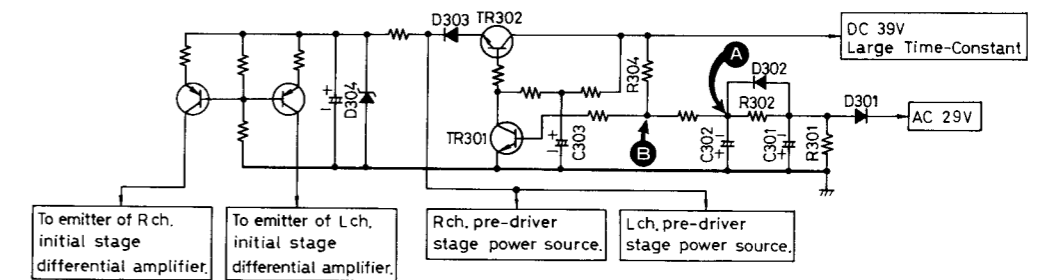
- Ⓑ Le courant ne devra être vérifié seulement que lorsque la mise au point est faite avec un appareil contrôleur. (Appareil de mesure incapable d'une tension de mesure dans un appareillage de mV).
1. Couper l'alimentation de l'appareillage.
 2. Brancher l'ampèremètre, comme il est montré à la Fig. 9.
 3. Après s'être assuré que l'ampèremètre n'est pas débranché, mettre en marche l'alimentation.
 4. Si la lecture est inférieure à 75 mA après plusieurs minutes, le circuit fonctionne correctement. Si par contre la lecture va au-delà de 75 mA, couper le fil de jonction pour **L** dans le cas du canal Gauche [L], (le fil de jonction pour **R**, dans le cas du canal Droite [R]).
 5. Si la lecture ne descend pas au-dessous de 75 mA, cela signifie qu'il y a quelque chose de défectueux dans le circuit.

REMARQUE: La mise au point doit être faite soit avec la méthode Ⓐ, soit avec la méthode Ⓑ. (Si c'est possible, nous recommandons la méthode Ⓐ). Les Figures 8 et 9 se rapportent au cas du canal Gauche [L].

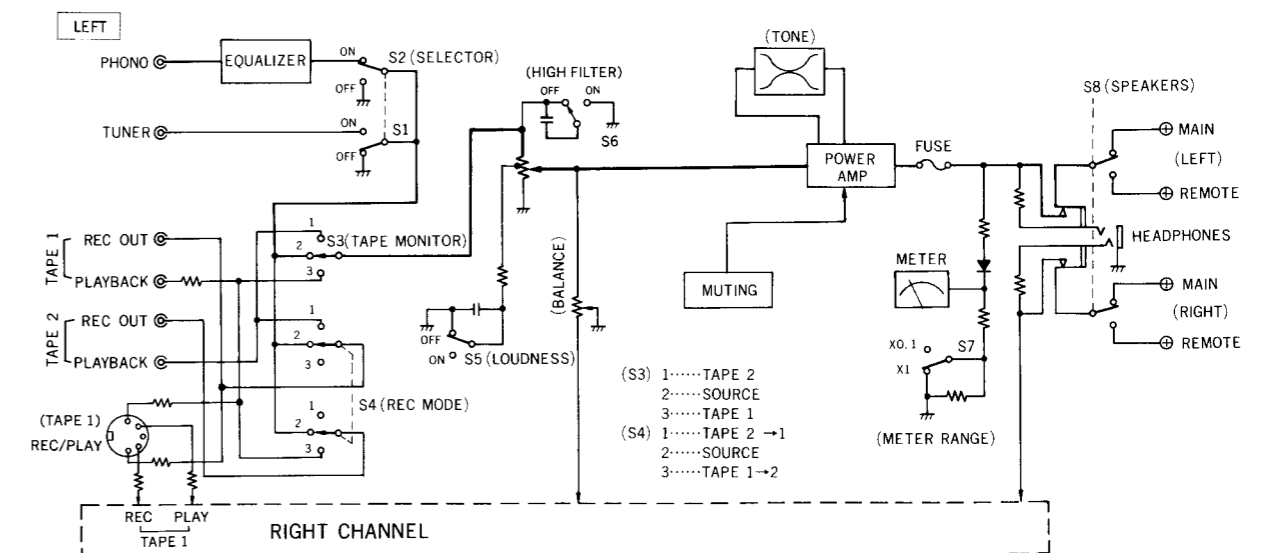
■ SERVICE AID

Shock noise prevention circuit during ON-OFF of power supply

In the voltage at the point Ⓐ, at the moment when the power supply is turned ON, C302 is charged by the current rectified to negative through D301. Therefore, gradual change to minus takes place from 0V. During this time, positive voltage is applied to the base of TR301 which is thus rendered conductive. Consequently, the base of TR302 connected to TR301 is of ground potential, with TR302 not being functioning. In other words, no current is flowing through the preamplifier in this state. After the power supply is turned ON, the potential at the point Ⓑ gradually decreases as the point Ⓐ is saturated to negative through time constant of R302 and C302, and when TR301 reaches cut-off state, positive voltage goes on charging C303. Upon rising of the base potential of TR302 close to 0.7V, TR302 is turned ON, thus causing current to flow through the preamplifier. Time required from turning ON of the power supply to functioning of the preamplifier is set to be approximately 6 to 7 seconds. When the power supply is turned OFF, D302 is biased in the forward direction, and if $R301 \ll R302$, the charges in C301 and C302 are discharged through R301 in a short period of time. However, large positive voltage of specific constant does not fall immediately, with voltage at the point Ⓑ rising up to TR301 operating voltage for causing TR301 to function. Accordingly, the charge in C303 is discharged, and TR302 rapidly reaches cut-off state, with current being prevented from flowing through the preamplifier, so that the shock noises from the preamplifier section during turning OFF of the power supply can be eliminated.

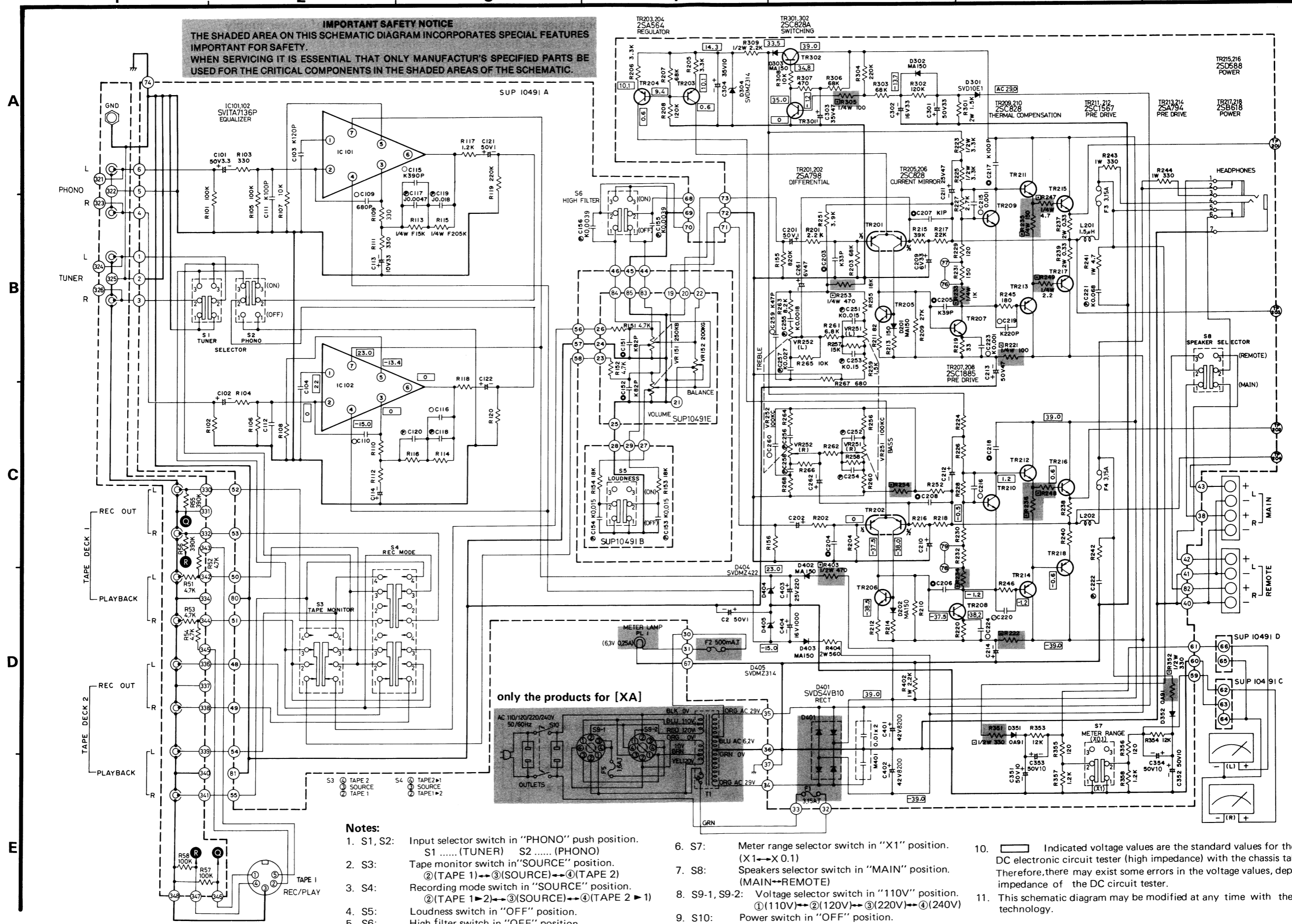


■ BLOCK DIAGRAM



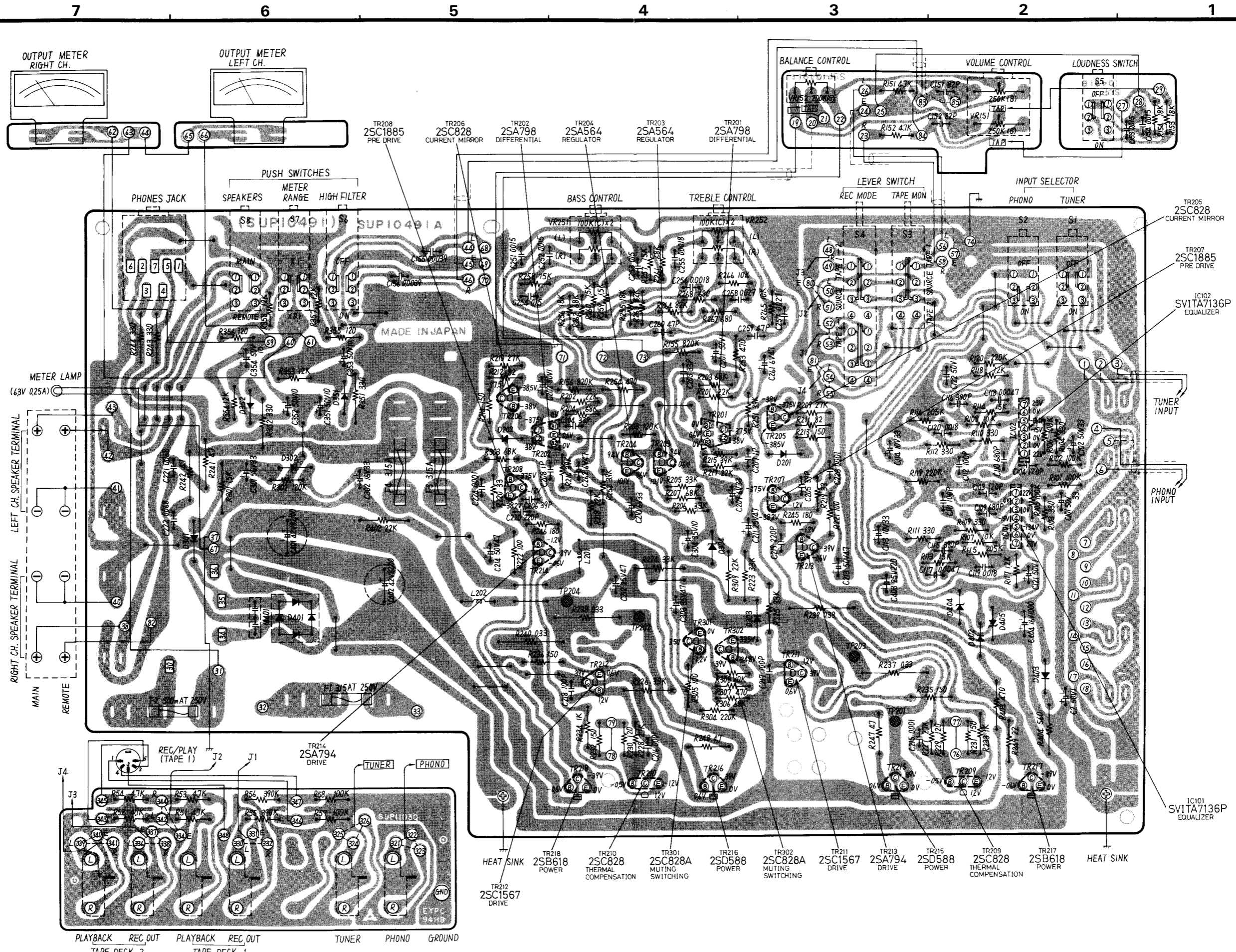
Schematic Diagram Model SU-7300

IMPORTANT SAFETY NOTICE
 THE SHADED AREA ON THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR SAFETY.
 WHEN SERVICING IT IS ESSENTIAL THAT ONLY MANUFACTURER'S SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE SHADED AREAS OF THE SCHEMATIC.



- Notes:**
- 1. S1, S2: Input selector switch in "PHONO" push position.
 S1 (TUNER) S2 (PHONO)
 - 2. S3: Tape monitor switch in "SOURCE" position.
 ② (TAPE 1) → ③ (SOURCE) → ④ (TAPE 2)
 - 3. S4: Recording mode switch in "SOURCE" position.
 ② (TAPE 1 → 2) → ③ (SOURCE) → ④ (TAPE 2 → 1)
 - 4. S5: Loudness switch in "OFF" position.
 - 5. S6: High filter switch in "OFF" position.
 - 6. S7: Meter range selector switch in "X1" position.
 (X1 → X 0.1)
 - 7. S8: Speakers selector switch in "MAIN" position.
 (MAIN → REMOTE)
 - 8. S9-1, S9-2: Voltage selector switch in "110V" position.
 ① (110V) → ② (120V) → ③ (220V) → ④ (240V)
 - 9. S10: Power switch in "OFF" position.
 - 10. Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
 - 11. This schematic diagram may be modified at any time with the development of new technology.

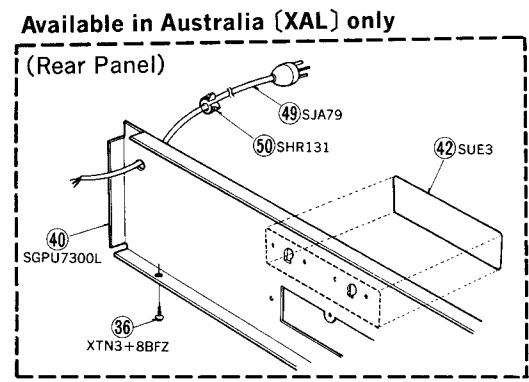
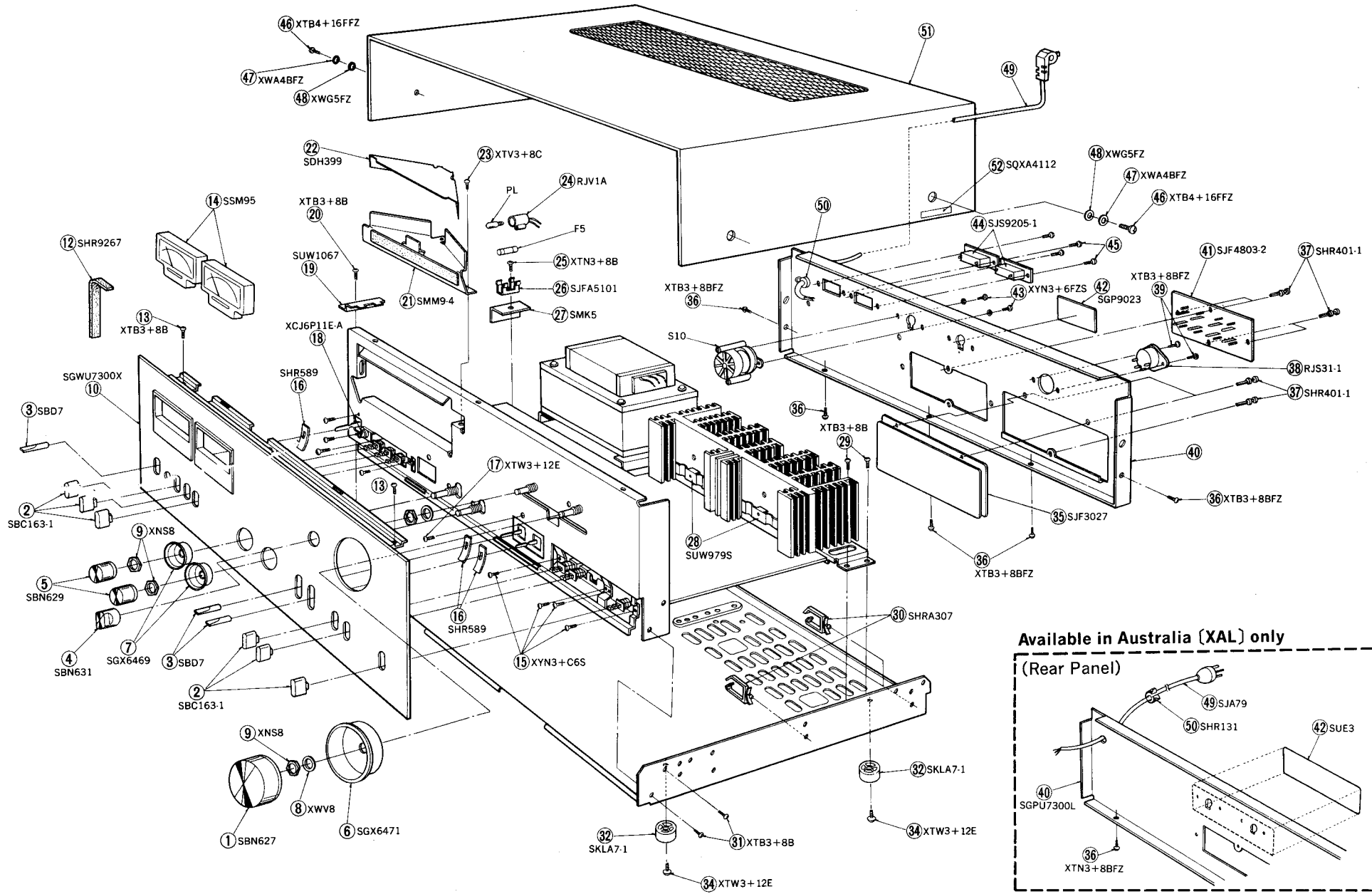
Printed Circuit Board Model SU-7300



Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
VR251, 252	EWKGYA033C15	Bass & Treble Control, 100k Ω (C)	2	
CAPACITORS				
C2	ECEA50V1	Electrolytic, 1 μ F, 50V	1	
C101	ECEA50M3R3R	Electrolytic, 3.3 μ F, 50V	1	
C102	ECEA50M3R3R	Electrolytic, 3.3 μ F, 50V	1	
C103	ECCD2H121KB	Ceramic, 120pF, 500V, \pm 10%	1	
C104	ECCD2H121KB	Ceramic, 120pF, 500V, \pm 10%	1	
C109	ECKD2H681KB	Ceramic, 680pF, 500V, \pm 10%	1	
C110	ECKD2H681KB	Ceramic, 680pF, 500V, \pm 10%	1	
C111	ECCD1H101K	Ceramic, 100pF, 50V, \pm 10%	1	
C112	ECCD1H101K	Ceramic, 100pF, 50V, \pm 10%	1	
C113	ECEA10V33	Electrolytic, 33 μ F, 10V	1	
C114	ECEA10V33	Electrolytic, 33 μ F, 10V	1	
C115	ECKD2H391KB	Ceramic, 390pF, 500V, \pm 10%	1	
C116	ECKD2H391KB	Ceramic, 390pF, 500V, \pm 10%	1	
C117	ECQM1H472JZ	Polyester, 0.0047 μ F, 50V, \pm 5%	1	
C118	ECQM1H472JZ	Polyester, 0.0047 μ F, 50V, \pm 5%	1	
C119	ECQM1H183JZ	Polyester, 0.018 μ F, 50V, \pm 5%	1	
C120	ECQM1H183JZ	Polyester, 0.018 μ F, 50V, \pm 5%	1	
C121	ECEA50M1R	Electrolytic, 1 μ F, 50V	1	
C122	ECEA50M1R	Electrolytic, 1 μ F, 50V	1	
C123	FCCD1H820K	Ceramic, 82pF, 50V, \pm 10%	1	
C152	ECCD1H820K	Ceramic, 82pF, 50V, \pm 10%	1	
C153	ECQM1H153KZ	Polyester, 0.015 μ F, 50V, \pm 10%	1	
C154	ECQM1H153KZ	Polyester, 0.015 μ F, 50V, \pm 10%	1	
C155	ECQM1H392KZ	Polyester, 0.0039 μ F, 50V, \pm 10%	1	
C156	ECQM1H392KZ	Polyester, 0.0039 μ F, 50V, \pm 10%	1	
C201	ECEA50M1R	Electrolytic, 1 μ F, 50V	1	
C202	ECEA50M1R	Electrolytic, 1 μ F, 50V	1	
C203	ECCD1H330K	Ceramic, 33pF, 50V, \pm 10%	1	
C204	ECCD1H330K	Ceramic, 33pF, 50V, \pm 10%	1	
C205	ECCD1H390K	Ceramic, 39pF, 50V, \pm 10%	1	
C206	ECCD1H390K	Ceramic, 39pF, 50V, \pm 10%	1	
C207	ECCD1H010C	Ceramic, 1pF, 50V, \pm 0.25pF	1	
C208	ECCD1H010C	Ceramic, 1pF, 50V, \pm 0.25pF	1	
C209	ECEA6V33	Electrolytic, 33 μ F, 6.3V	1	
C210	ECEA6V33	Electrolytic, 33 μ F, 6.3V	1	
C211	ECEA35V47V	Electrolytic, 47 μ F, 35V	1	
C212	ECEA35V47V	Electrolytic, 47 μ F, 35V	1	
C213	ECEA50V47V	Electrolytic, 47 μ F, 50V	1	
C214	ECEA50V47V	Electrolytic, 47 μ F, 50V	1	
C215	ECKD1H102PE	Ceramic, 0.001 μ F, 50V, \pm 100%	1	
C216	ECKD1H102PE	Ceramic, 0.001 μ F, 50V, \pm 100%	1	
C217	ECCD1H101K	Ceramic, 100pF, 50V, \pm 10%	1	
C218	ECCD1H101K	Ceramic, 100pF, 50V, \pm 10%	1	
C219	ECKD2H221KB	Ceramic, 220pF, 500V, \pm 10%	1	
C220	ECKD2H221KB	Ceramic, 220pF, 500V, \pm 10%	1	
C221	ECQM1H683KZ	Polyester, 0.068 μ F, 50V, \pm 10%	1	
C222	ECQM1H683KZ	Polyester, 0.068 μ F, 50V, \pm 10%	1	
C223	ECKD1H102PE	Ceramic, 0.001 μ F, 50V, \pm 100%	1	
C224	ECKD1H102PE	Ceramic, 0.001 μ F, 50V, \pm 100%	1	
C251	ECQM1H153KZ	Polyester, 0.015 μ F, 50V, \pm 10%	1	
C252	ECQM1H153KZ	Polyester, 0.015 μ F, 50V, \pm 10%	1	

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
C253	ECQM1H154KZ	Polyester, 0.15 μ F, 50V, \pm 10%	1	
C254	ECQM1H154KZ	Polyester, 0.15 μ F, 50V, \pm 10%	1	
C255	ECQM1H182KZ	Polyester, 0.0018 μ F, 50V, \pm 10%	1	
C256	ECQM1H182KZ	Polyester, 0.0018 μ F, 50V, \pm 10%	1	
C257	ECQM1H273KZ	Polyester, 0.027 μ F, 50V, \pm 10%	1	
C258	ECQM1H273KZ	Polyester, 0.027 μ F, 50V, \pm 10%	1	
C259	ECCD1H470K	Ceramic, 47pF, 50V, \pm 10%	1	
C260	ECCD1H470K	Ceramic, 47pF, 50V, \pm 10%	1	
C261	ECEA6V47	Electrolytic, 47 μ F, 6.3V	1	
C262	ECEA6V47	Electrolytic, 47 μ F, 6.3V	1	
C301	ECEA63V33V	Electrolytic, 33 μ F, 63V	1	
C302	ECEA25V33V	Electrolytic, 33 μ F, 25V	1	
C303	ECEA35V47V	Electrolytic, 47 μ F, 35V	1	
C304	ECEA35V10	Electrolytic, 10 μ F, 35V	1	
C351	ECEA50V10V	Electrolytic, 10 μ F, 50V	1	
C352	ECEA50V10V	Electrolytic, 10 μ F, 50V	1	
C353	ECEA50V10V	Electrolytic, 10 μ F, 50V	1	
C354	ECEA50V10V	Electrolytic, 10 μ F, 50V	1	
C401	ECET42R822S	Electrolytic, 8200 μ F, 42V	1	○
C402	ECET42R822S	Electrolytic, 8200 μ F, 42V	1	○
C403	ECEA25V220V	Electrolytic, 220 μ F, 25V	1	
C404	ECEA16V1000A	Electrolytic, 1000 μ F, 16V	1	
FUSES				
F1	XBA2C31TR0	Fuse, 3.15AT, Power Source (Except set for [XAL])	1	
F1 [XAL] only	XBA2C18TR0	Fuse, 1.6AT, Power Source (only set for [XAL])	1	
F2	XBA2C06TR0	Fuse, 500mAAT, Power Source	1	
F3, 4	XBA2C31SS0	Fuse, 3.15A, Circuit Protection	2	
F5	XBA2C18TR0	Fuse, 1.6AT, Power Source (Except set for [XAL])	1	
COMPONENT COMBINATION				
M401	RXAF103P22HD	Component Combination, 0.01 μ F (X2)	1	
PILOT LAMP				
PL1	XAMR53K	Meter Lamp (6.3V 0.25A)	1	
SWITCHES				
S1, 2	SSH235S	Switch, Input Selector	1	
S3, 4	SSL23	Switch, Recording Mode & Tape Monitor	1	
S5	SSH67S	Switch, Loudness	1	
S6, 7, 8	SSH329S	Switch, Filter, Meter & Speaker	1	
S10	SSL37S	Switch, Power	1	○
S9	SSR53S	Switch, Voltage Selector (Except set for [XAL])	1	
CABINET and CHASSIS PARTS				
1	SBN627	Knob, Volume Control	1	
2	SBC163-1	Button, Push Switches	6	○
3	SBD7	Knob, Lever Switches	3	
4	SBN631	Knob, Balance Control	1	
5	SBN629	Knob, Bass & Treble	2	
6	SGX6471	Ornament, Volume Knob	1	
7	SGX6469	Ornament, Bass & Treble Knobs	2	

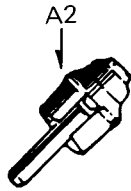
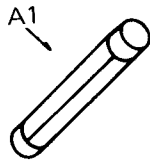
EXPLODED VIEWS



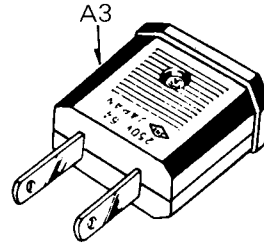
Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
8	XWV8	Washer (Spring), Balance & Volume	2	
9	XNS8	Nut, Bass, Treble, Balance & Volume	4	
10	SGWU7300X	Panel, Front Ass'y	1	○
12	SHR9267	Shading Cloth	1	
13	XTB3+8B	Screw, Front Panel M'tg	2	
14	SSM95	Meter, Output Level	2	
15	XYN3+C6S	Screw, Push Switches & Power Switch M'tg	8	
16	SHR589	Bracket, Power, Tape & Rec Mode Switch	3	○
17	XTW3+12E	Screw, Tape & Rec Mode Switch M'tg	1	
18	XCJ6P11E-A	Jack, Headphones	1	
19	SUW1067	Bracket, Printed Circuit Board	1	*○
20	XTB3+8B	Screw, Printed Circuit Board M'tg	1	
21	SMM9-4	Bracket, Meter	1	*
22	SDH399	Reflector Plate	1	*○
23	XTV3+8C	Screw, Meter Bracket M'tg	1	
24	RJV1A	Holder, Meter Lamp	1	
25	XTN3+8B	Screw, Fuse Holder M'tg (Except set for [XA])	1	
26	SJFA5101	Holder, Fuse (Except set for [XAL])	1	
27	SMK5	Bracket, Fuse Holder (Except set for [XAL])	1	*
28	SUW979S	Bracket, Power Transistor	2	*
29	XTB3+8B	Screw, Printed Circuit Board M'tg	2	
30	SHRA307	Lead Clamp	2	
31	XTB3+8B	Screw, Chassis M'tg (Left & Right Side)	4	
32	SKL7.7-1	Foot, Set Bottom Board	4	
34	XTW3+12E	Screw, Foot M'tg	4	
35	SJF3027	Terminal, Input	1	○
36	XTB3+8BFZ	Screw, Rear Panel M'tg	5	
37	SHR401-1	Latch, Input & Speaker Terminal M'tg	7	
38	RJS31-1	Socket, Tape Deck Connection (DIN)	1	
39	XTB3+8BFZ	Screw, DIN Socket M'tg	2	
40 [XG, XGH, XGF]	SGP670A	Rear Panel	1	○
40 [XA]	SGP670-1A	Rear Panel	1	○
40 [XE]	SGP670-2A	Rear Panel	1	○
40 [XSD, XSW]	SGPU7300D	Rear Panel, SGP670A with Name Plate (SGT13651)	1	○
40 [XAL]	SGPU7300L	Rear Panel, SGP670-2A with Name Plate (SGT13650)	1	○
41	SJF4803-2	Terminal, Speakers	1	○
42 [XAL] only	SUE3	Cover Plate, Rear Panel Hole	1	
42	SGP9023	Cover Plate, Rear Panel Hole (Except set for [XAL])	1	
43	XYN3+6FZS	Screw, Voltage Selector Switch M'tg (Except set for [XAL])	2	
44 [XA] only	SJS9205-1	Socket, AC Power (only set for [XA])	2	
45 [XA] only	XTN3+8BFZ	Screw, AC Outlet M'tg (only set for [XA])	4	
46	XTB4+16FFZ	Screw, Cabinet M'tg	4	
47	XWA4BFZ	Washer (Spring), Cabinet	4	
48	XWG5FZ	Washer, Cabinet	4	
49 [XA, XG, XGF]	SJA97	AC Cord, with Plug	1	
49 [XAL]	SJA79	AC Cord, with Plug	1	
49 [XE]	SJA73	AC Cord	1	
49 [XSD, XGH]	SJA81	AC Cord, with Plug	1	
49 [XSW]	SJA68	AC Cord, with Plug	1	
50	SHR127	Bushing, AC Cord (Except set for [XAL] & [XE])	1	
50 [XAL, XE]	SHR131	Bushing, AC Cord	1	

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
51	SKA8253W	Cabinet (Except set for [XE]), Black	1	○
51 [XE] only	SKA8254W	Cabinet, Brown Wooden	1	○
52	SQXA4112	Caution Label, Cabinet Screw (Except set for [XAL])	1	
ACCESSORIES				
A1	XBA2C31SS0	Fuse, 3.15A (250V) Circuit Protection	2	
A2	RJP5	Pin Plug	4	
A3 [XA] only	SJP5213	Plug Adapter, Power	1	
A4 [XA] only	SJP5215	Plug Adapter, Power	1	
PACKING PARTS				
P1	SPP495	Polyethylene Bag	1	○
P2	SPS971	Pad, Right Upper Side	1	○
P3	SPS969	Pad, Right Lower Side	1	○
P4	SPS967	Pad, Left Upper Side	1	○
P5	SPS965	Pad, Left Lower Side	1	○
P6	SPG987	Carton Box	1	○
P6 [XE] only	SPG989	Carton Box	1	○
P6 [XGF] only	SGP1061	Carton Box	1	○
P7	SQF1511	Printed Matter, Instructions Book (Except Ser for [XA] [XE] & [XAL])	1	○
P7 [XA][XE] only	SQF1507	Printed Matter, (Instructions Book)	1	○
P7 [XAL]	SQF1509	Printed Matter, (Instructions Book)	1	○
<p>The model [XA] is available in Asia, Latin America, Middle East and Africa. The model [XAL] is available in Australia only. The model [XG] is available in European only. The model [XGH] is available in Holland only. The model [XSD] is available in Scandinavia only. The model [XSW] is available in Switzerland only. The model [XE] is available in England only. The model [XGF] is available in France only.</p>				

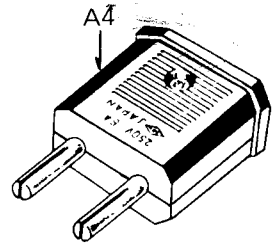
■ ACCESSORIES



(only set for [XA])



(only set for [XA])



■ PACKINGS

