ORDER NO. SD8003-1712

Service Manual

Stereo Integrated DC Amplifier

SU-C03

[E], [EG], [XGF], [XGH], [EB], [XE], [XA], [XAL]

SU-C03(K)

[E], [EG]

05070202 91004988 46
SM-SUC03 1 ST
SERVICE MANUAL

*** The cabinet, front panel and knob are available in black color and silver types. The black type model is provided with (K) in the Service Manual.**

Areas

- * [E] and [EG] are available in Scandinavia and European.
- * [XGF] is available in France.
- * [XGH] is available in Holland.
- * [EB] is available in Belgium.
- * [XE] is available in United Kingdom.
- * [XA] is available in Asia, Latin America, Middle East and Africa.
- * [XAL] is available in Australia.

TECHNICAL SPECIFICATIONS (DIN 45 500)

Specifications are subject to change without notice for further improvement.

AMPLIFIER SECTION

20 Hz~20 kHz continuous power output	
both channels driven	2 × 45W (4Ω) 2 × 40W (8Ω)
40 Hz~16 kHz continuous power output	
both channels driven	2 × 45W (4Ω) 2 × 40W (8Ω)
1 kHz continuous power output	
both channels driven	2 × 55W (4Ω) 2 × 45W (8Ω)
Total harmonic distortion	
rated power at 20 Hz~20 kHz	0.05% (4Ω) 0.03% (8Ω)
rated power at 40 Hz~16 kHz	0.05% (4Ω) 0.03% (8Ω)
rated power at 1 kHz	0.05% (4Ω) 0.03% (8Ω)
half power at 20 Hz~20 kHz	0.02% (8Ω)
half power at 1 kHz	0.008% (8Ω)
−26 dB power at 1 kHz	0.1% (4Ω)
50 mW power at 1 kHz	0.2% (4Ω)
Intermodulation distortion	
rated power at 250 Hz: 8 kHz=4:1, 4Ω	0.05%
rated power at 60 Hz: 7 kHz=4:1, SMPTE, 8Ω	0.03%
Power bandwidth	
both channels driven, −3 dB	5 Hz~30 kHz (4Ω) 5 Hz~30 kHz (8Ω)
Residual hum and noise	0.65mV
Damping factor	25 (4Ω), 50 (8Ω)
Input sensitivity and impedance	
PHONO	2.5mV/47kΩ
TUNER, AUX	150mV/39kΩ
TAPE	150mV/39kΩ
PHONO maximum input voltage (1 kHz, RMS)	150mV
S/N	
rated power (4Ω)	
PHONO	71 dB (IHF, A: 84 dB)
TUNER, AUX, TAPE	90 dB (IHF, A: 97 dB)
−26 dB power (4Ω)	
PHONO	66 dB
TUNER, AUX, TAPE	67 dB
50 mW power (4Ω)	
PHONO	63 dB
TUNER, AUX, TAPE	64 dB
Frequency response	
PHONO	RIAA standard curve ±0.5 dB (30 Hz~15 kHz)
TUNER, AUX, TAPE	5 Hz~40 kHz (−1 dB) +0 dB, −0.3 dB (20 Hz~20 kHz)
Tone controls	
BASS	50 Hz, +10 dB~ −10 dB
TREBLE	20 kHz, +10 dB~ −10 dB
Subsonic filter	30 Hz, −6 dB/oct.
High-cut filter	7 kHz, −6 dB/oct.
Loudness control (volume at −30 dB)	50 Hz, +9 dB
Output voltage	
REC OUT	150mV
Channel balance, AUX 250 Hz~6,300 Hz	±1.5 dB
Channel separation, AUX 1 kHz	52 dB
Headphones output level and impedance	430mV/330Ω
Load impedance	
MAIN or REMOTE	4Ω~16Ω
MAIN and REMOTE	8Ω~16Ω

GENERAL

Power consumption	430W
Power supply	AC 50 Hz/60 Hz, 110V/120V/220V/240V
Dimensions (W×H×D)	297 × 98 × 270 mm (11-11/16" × 3-27/32" × 10-5/8")
Weight	5.9 kg (13.0 lb.)

Technics

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

SU-C03

TECHNISCHE DATEN (DIN 45 500)

Spezifikationen können infolge von verbesserungen ohne Ankündigung geändert werden.

VERSTÄRKERTEIL

Dauerton-Ausgangsleistung bei 20 Hz ~ 20 kHz	
beide Kanäle ausgesteuert	2 × 45W (4 Ω)
	2 × 40W (8 Ω)
Dauerton-Ausgangsleistung bei 40 Hz ~ 16 kHz	
beide Kanäle ausgesteuert	2 × 45W (4 Ω)
	2 × 40W (8 Ω)
Dauerton-Ausgangsleistung bei 1 kHz	
beide Kanäle ausgesteuert	2 × 55W (4 Ω)
	2 × 45W (8 Ω)
Gesamtklirrfaktor	
Nennleistung bei 20 Hz ~ 20 kHz	0,05% (4 Ω)
	0,03% (8 Ω)
Nennleistung bei 40 Hz ~ 16 kHz	0,05% (4 Ω)
	0,03% (8 Ω)
Nennleistung bei 1 kHz	0,05% (4 Ω)
	0,03% (8 Ω)
halbe Nennleistung bei 20 Hz ~ 20 kHz	0,02% (8 Ω)
halbe Nennleistung bei 1 kHz	0,008% (8 Ω)
−26 dB Leistung bei 1 kHz	0,1% (4 Ω)
50 mW Leistung bei 1 kHz	0,2% (4 Ω)
Intermodulationsfaktor	
Nennleistung bei 250 Hz: 8 kHz = 4:1, 4 Ω	0,05%
Nennleistung bei 60 Hz: 7 kHz = 4:1, nach SMPTE, 8 Ω	0,03%
Leistungsbandbreite	
beide Kanäle ausgesteuert bei −3 dB	
	5 Hz ~ 30 kHz (4 Ω)
	5 Hz ~ 30 kHz (8 Ω)
Restbrumm und Geräusch	0,65 mV
Dämpfungsfaktor	25 (4 Ω), 50 (8 Ω)
Eingangsempfindlichkeit und -impedanz	
Phono	2,5 mV/47 kΩ
Tuner, Aux	150 mV/39 kΩ
Tape	150 mV/39 kΩ
Maximale TA-Eingangsspannung (1 kHz, eff.)	150 mV
Geräuschabstand	
Nennleistung (4 Ω)	
Phono	71 dB (nach IHF, A: 84 dB)
Tuner, Aux, Tape	90 dB (nach IHF, A: 97 dB)
−26 dB Leistung (4 Ω)	
Phono	66 dB
Tuner, Aux, Tape	67 dB
50 mW Leistung (4 Ω)	
Phono	63 dB
Tuner, Aux, Tape	64 dB
Frequenzgang	
Phono	RIAA-Standardkurve
	±0,5 dB (30 Hz ~ 15 kHz)
Tuner Aux, Tape	5 Hz ~ 40 kHz(−1 dB)
	+0 dB, −0,3 dB (20 Hz~20 kHz)
Klangregler	
Baßregler (BASS)	50 Hz, +10 dB ~ −10 dB
Höhenregler (TREBLE)	20 kHz, +10 dB ~ −10 dB
Tiefenfilter	30 Hz, −6 dB/Okt.
Rauschfilter	7 kHz, −6 dB/Okt.
Gehörrichtige Lautstärkekorrektur (Loudness)	
(bei −30 dB Ausgangsleistung)	50 Hz, +9 dB
Ausgangsspannung	
Aufnahmeausgang (REC OUT)	150 mV
Kanalabweichung (Aux, 250 Hz ~ 6300 Hz)	±1,5 dB
Übersprechdämpfung (Aux, 1 kHz)	52 dB
Kopfhörerpegel und -impedanz	430 mV/330 Ω
Lautsprecherimpedanz	
MAIN oder REMOTE	4 Ω ~ 16 Ω
MAIN und REMOTE	8 Ω ~ 16 Ω

ALLGEMEINE DATEN

Leistungsaufnahme	430 W
Netzspannung	Wechselstrom 50 Hz/60 Hz, 110V/120V/220V/240V
Abmessungen (B×H×T)	297 × 98 × 270 mm
Gewicht	5,9 kg

DONNEES TECHNIQUES (DIN 45 500)

Sujet à changment sans préaris.

SECTION AMPLIFICATEUR

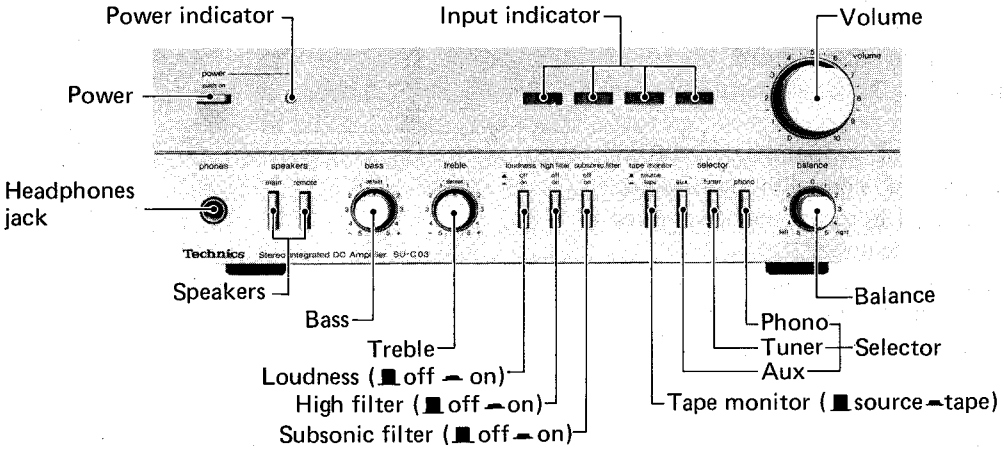
Puissance de sortie continue de 20 Hz~20 kHz,	
les deux canaux en circuit	2 × 45W (4Ω)
	2 × 40W (8Ω)
Puissance de sortie continue de 40 Hz~16 kHz,	
les deux canaux en circuit	2 × 45W (4Ω)
	2 × 40W (8Ω)
Puissance de sortie continue à 1 kHz	
les deux canaux en circuit	2 × 55W (4Ω)
	2 × 45W (8Ω)
Distorsion harmonique totale	
à puissance nominale (20 Hz~20 kHz)	0,05% (4Ω)
	0,03% (8Ω)
à puissance nominale (40 Hz~16 kHz)	0,05% (4Ω)
	0,03% (8Ω)
à puissance nominale (1 kHz)	0,05% (4Ω)
	0,03% (8Ω)
à demi-puissance (20 Hz~20 kHz)	0,02% (8Ω)
à demi-puissance (1 kHz)	0,008% (8Ω)
puissance de −26 dB à 1 kHz	0,1% (4Ω)
puissance de 50 mW à 1 kHz	0,2% (4Ω)
Distorsion d'intermodulation	
à puissance nominale à 250 Hz: 8 kHz=4:1, 4Ω	0,05%
à puissance nominale à 60 Hz: 7 kHz=4:1, SMPTE, 8Ω	0,03%
Réponse de fréquences	
les deux canaux en circuit, −3 dB	5 Hz~30 kHz (4Ω)
	5 Hz~30 kHz (8Ω)
Bruit et ronflement résiduels	0,65 mV
Coefficient d'amortissement	25 (4Ω), 50 (8Ω)
Sensibilité et impédance d'entrée	
PHONO	2,5 mV/47kΩ
SYNTONISATEUR, AUX (TUNER, AUX)	150 mV/39kΩ
BANDE (TAPE)	150 mV/39kΩ
PHONO (tension d'entrée maximum, 1 kHz RMS)	150 mV
Signal/Bruit	
à puissance nominale (4Ω)	
PHONO	71 dB (IHF, A: 84 dB)
SYNTONISATEUR, AUX, BANDE (TUNER, AUX, TAPE)	90 dB (IHF, A: 97 dB)
puissance de −26 dB (4Ω)	
PHONO	66 dB
SYNTONISATEUR, AUX, BANDE (TUNER, AUX, TAPE)	67 dB
puissance de 50 mW (4Ω)	
PHONO	63 dB
SYNTONISATEUR, AUX, BANDE (TUNER, AUX, TAPE)	64 dB
Réponse de fréquence	
PHONO	Courbe nominale RIAA
	±0,5 dB (30 Hz~15 kHz)
SYNTONISATEUR, AUX, BANDE (TUNER, AUX, TAPE)	5 Hz~40 kHz (−1 dB)
	+0 dB, −0,3 dB (20 Hz~20 kHz)
Réglage de la tonalité	
BASSES (BASS)	50 Hz, +10 dB~ −10 dB
AIGUS (TREBLE)	20 kHz, +10 dB~ −10 dB
Filtre subsonique	30 Hz, −6 dB/oct.
Filtre coupe-hauts	7 kHz, −6 dB/oct.
Compensateur physiologique (volume à −30 dB)	50 Hz, +9 dB
Tension de sortie	
SORTIE ENREGISTREMENT (REC OUT)	150mV
Equilibrage des canaux, AUX 250 Hz~6 300 Hz	±1,5 dB
Séparation des canaux, AUX 1 kHz	52 dB
Niveau de sortie des casques et impédance	430 mV/330Ω
Impédance de charge	
PRINCIPALE ou AUXILIAIRE (MAIN or REMOTE)	4Ω~16Ω
PRINCIPALE et AUXILIAIRE (MAIN and REMOTE)	8Ω~16Ω

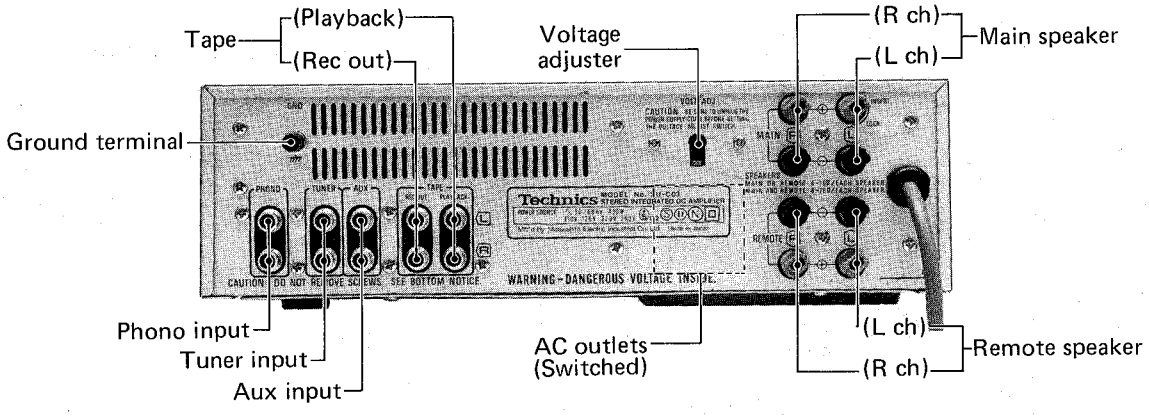
DIVERS

Consommation	430W
Alimentation	CA 50 Hz/60 Hz, 110V/120V/220V/240V
Dimensions (L×H×Pr)	297 × 98 × 270 mm
Poids	5,9 kg

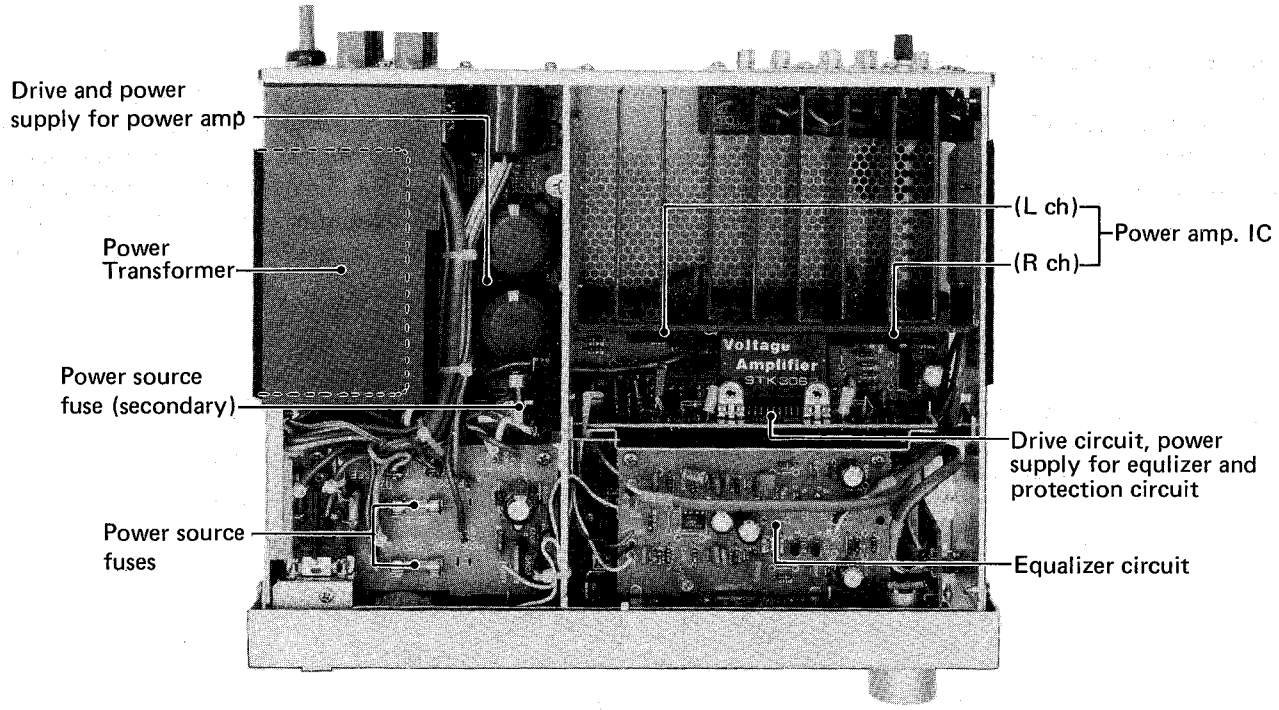
■ CONTENTS

■ LOCATION OF CONTROLS





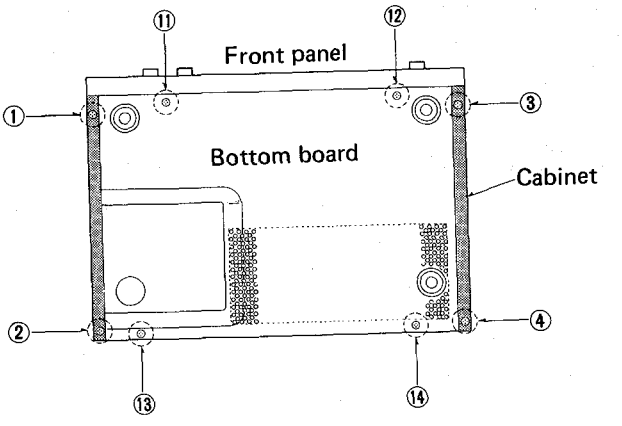
• The products for destination [XA] is equipped with AC outlet.



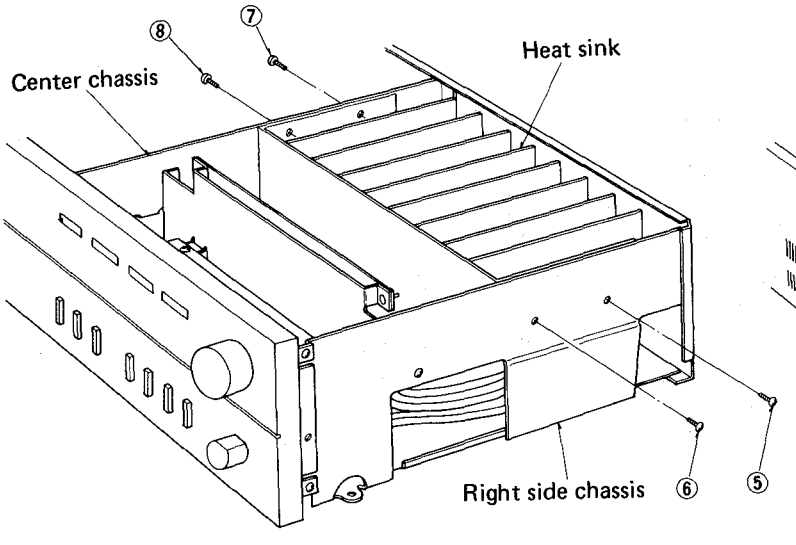
■ DISASSEMBLY INSTRUCTIONS

• How to remove the power IC

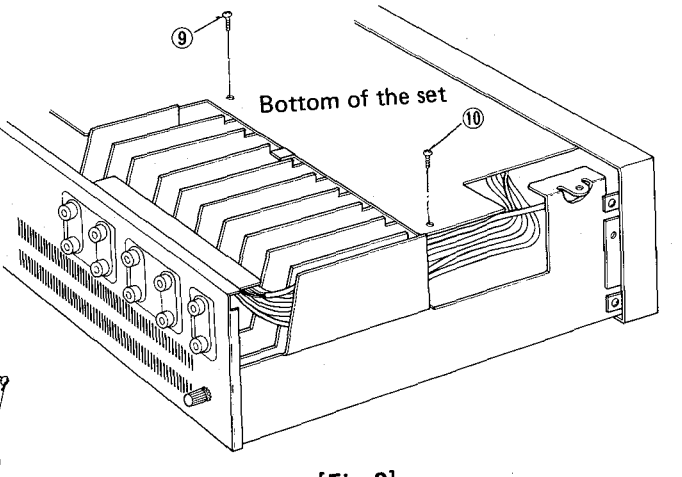
1. Remove the 4 setscrews (Fig. 1 :①~④) on the bottom of the cabinet.
2. Remove the 4 setscrews (Fig. 2 : ⑤ ~ ⑧) on the right side chassis and center chassis.
3. Remove the drive circuit P.C.B. (Refer to the section "How to remove the drive circuit P.C.B.")
4. To remove the bottom board, remove the 4 setscrews (Fig. 1 : ⑪ ~ ⑭) holding the bottom board.
5. Remove the 2 setscrews (Fig. 3 :⑨, ⑩) at the bottom of the heat sink.
6. Remove the solder of power IC for both L ch and R ch. and then remove the heat sink along with the power IC.
7. Remove the 2 setscrews used to secure the power IC on the heat sink, and then pull the power IC.
8. When mounting the power IC, apply silicone compound (or equivalent heat diffuser) to the back of power IC, and then follow the steps 1 ~ 7 reversely.



[Fig. 1]



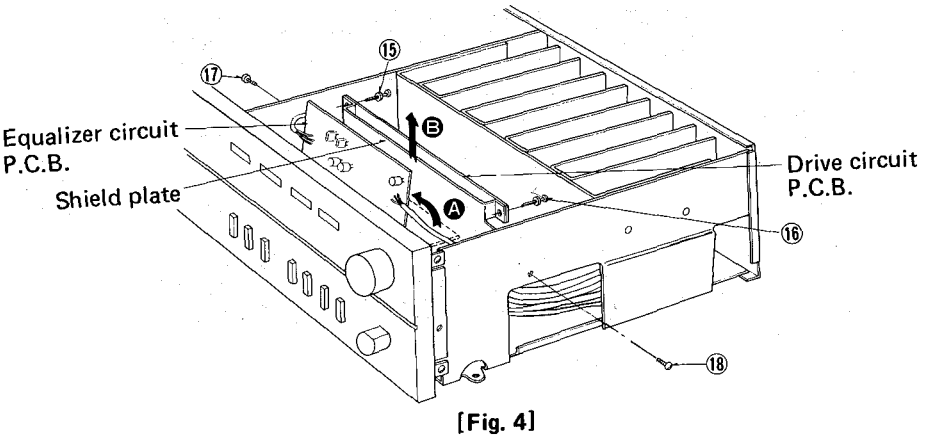
[Fig. 2]



[Fig. 3]

• How to remove the drive circuit P.C.B.

1. Remove the cabinet.
2. Remove the 2 lock pins (Fig. 4 : ⑮, ⑯) which fastens the drive circuit P.C.B.
3. Remove the drive circuit printed board from the socket by pulling it up.
4. When checking the drive circuit board for voltage, etc., loosen the 2 setscrews of the equalizer circuit printed board and raise the board in the direction of the arrow Ⓐ (Fig. 4). Next, remove the 2 setscrews (Fig. 4 : ⑰, ⑱) to detach the shielding plate in the direction of the arrow Ⓑ (Fig. 4), then check the printed circuit board.



[Fig. 4]

■ ADJUSTING INSTRUCTIONS

ENGLISH)

Adjustment of unbalanced DC voltage

Notes:

1. Speakers switch. . . . . .main
2. Sound volume. . . . . .0 (minimum)
3. DC voltmeter
4. 8-ohm load resistor

Adjustments	DC voltmeter connections	Adjusting portions	Adjusting procedure
Unbalanced DC voltage	Connect the meter to the speaker terminals for L and R channels in parallel with the resistor.	VR301 (L. ch.) VR302 (R. ch.)	Set the meter to "0" with measuring range as small as possible.

DEUTSCH). . . . . EINSTELLUNGSANWEISUNGEN

Abgleichen der unausgeglichenen Gleichspannung

Stellungszustand und verwendete Geräte

1. Lautsprecherschalter . . . . . .main
2. Lautstärke . . . . . .0 (Min.)
3. Gleichstrom-Voltmesser
4. 8 Ohm Belastungswiderstand (nur für Abgleichen der unausgeglichenen Gleichspannung verwendet.)

Abgleich	Anschluß des Gleich-strom-Voltmessers	Abgleichs-punkte	Abgleichsverfahren
Unausgeglichene Gleichspannung	An die Lautsprecherklemmen für L-und R-Kanal parallel mit Widerstand den Messer anschließen.	VR301 (L) VR302 (R)	Mit möglichst kleinem Meßbereich den Messer auf 0 abgleichen.

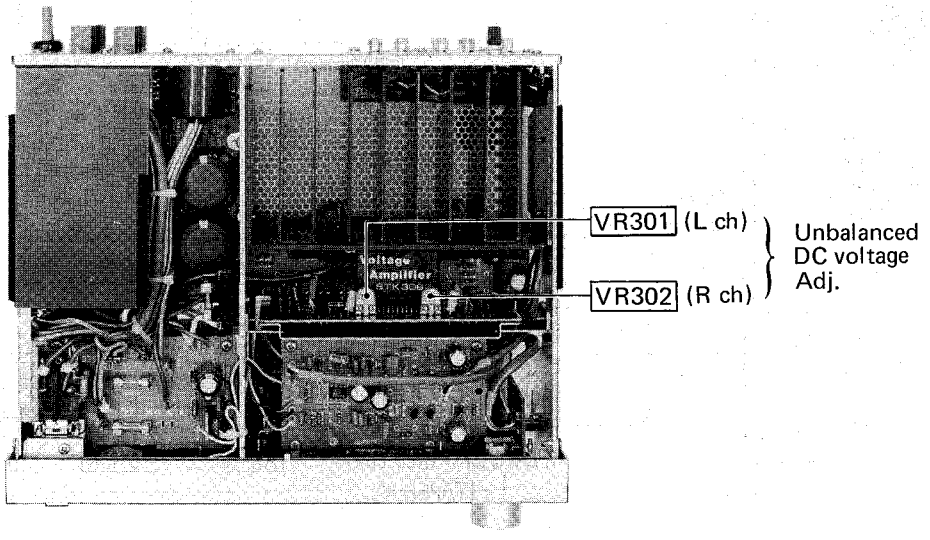
FRANÇAIS). . . . . INSTRUCTIONS DE REGLAGE

Réglage de la tension CC déséquilibrée

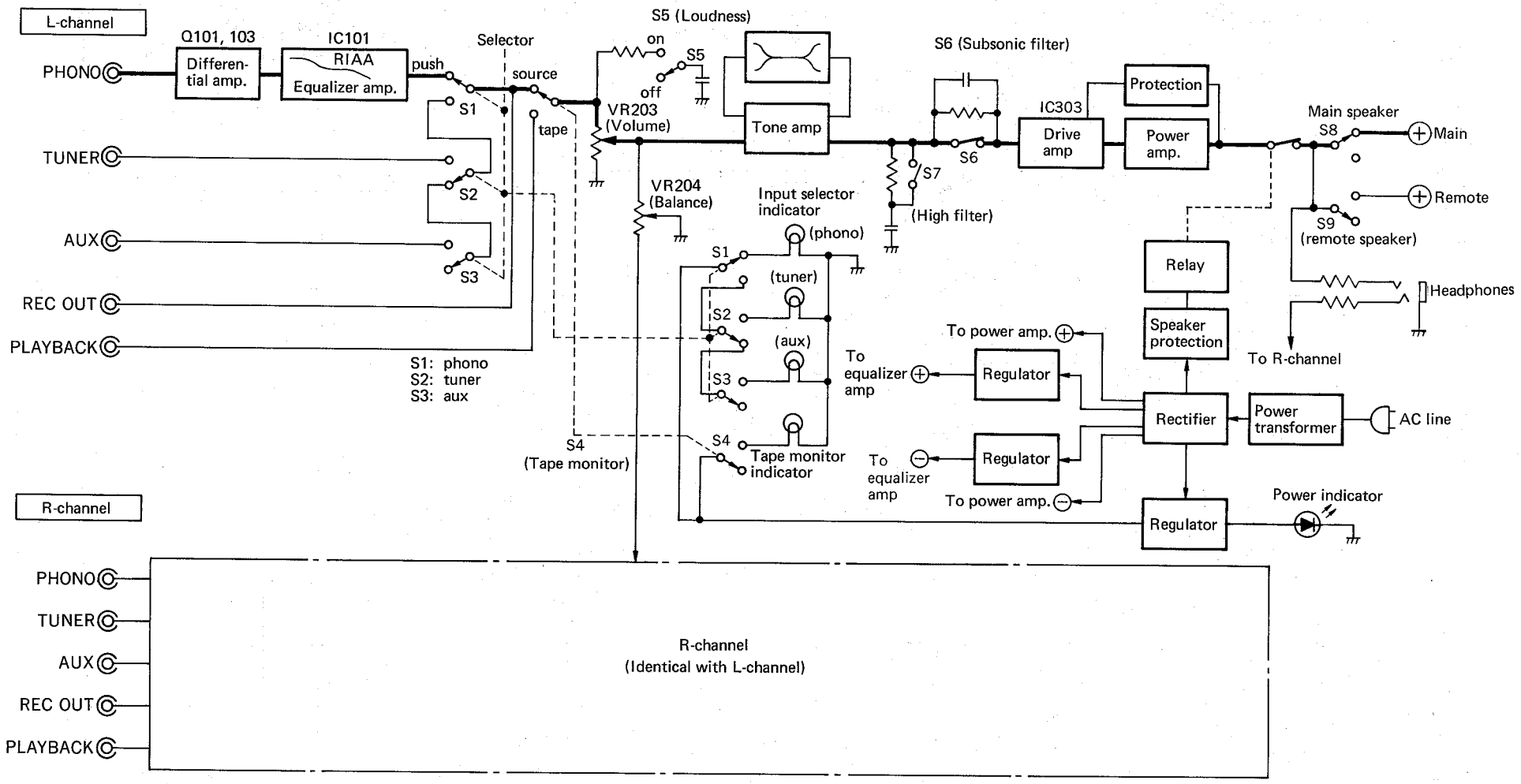
Conditions de l'appareil et équipement utilisé

1. Commutateur du haut-parleur . . . . . Principal
2. Volume du son . . . . . 0 (minimum)
3. Voltmètre CC
4. Résistance de 8 ohms de charge (utilisée seulement pour le réglage de la tension CC déséquilibrée)

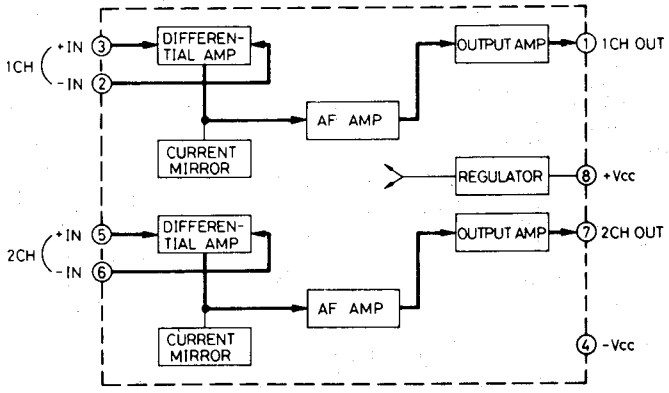
Réglages	Branchements du voltmètre CC	Sections à régler	Procédé de réglage
Tension CC déséquilibrée	Brancher le compteur aux bornes des canaux D et G du haut-parleur en parallèle avec la résistance.	VR301 (Canal G) VR302 (Canal D)	Régler le compteur sur "0" avec une gamme de mesure aussi petite que possible.



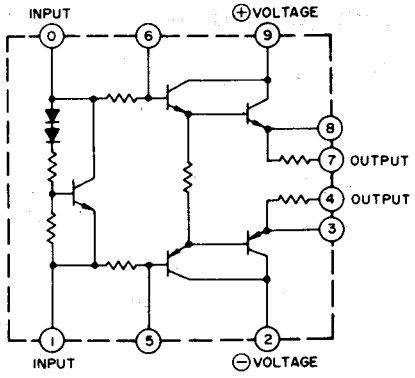
■ BLOCK DIAGRAM



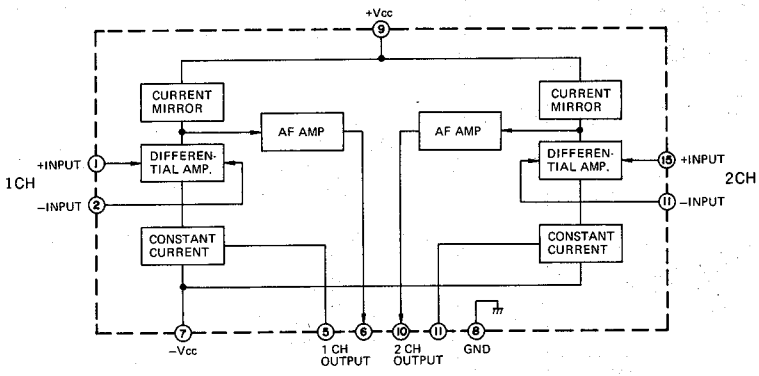
■ BLOCK DIAGRAM OF IC'S



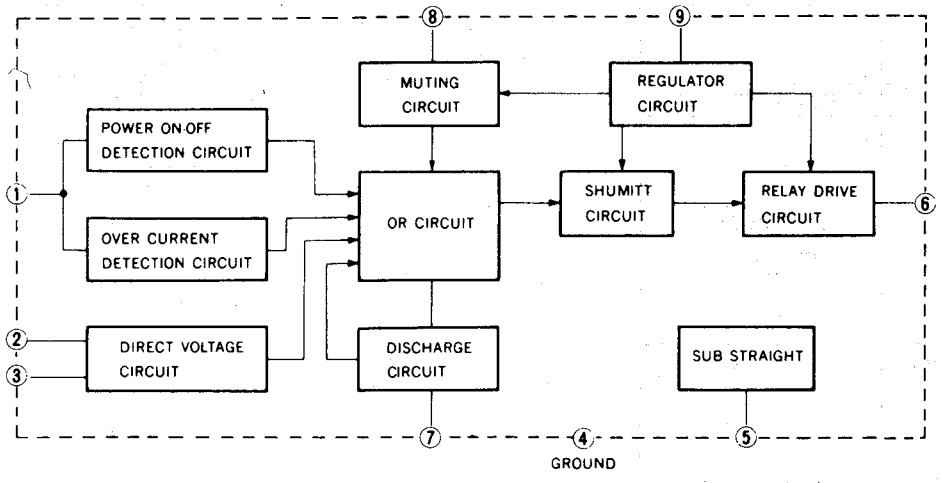
IC101, 201 (SVINJM4559DS)
Equalizer and Tone Amplifier



IC301, 302 (SVISTK1050K)
Power Amplifier



IC303 (SVISTK3062)
Voltage Amplifier



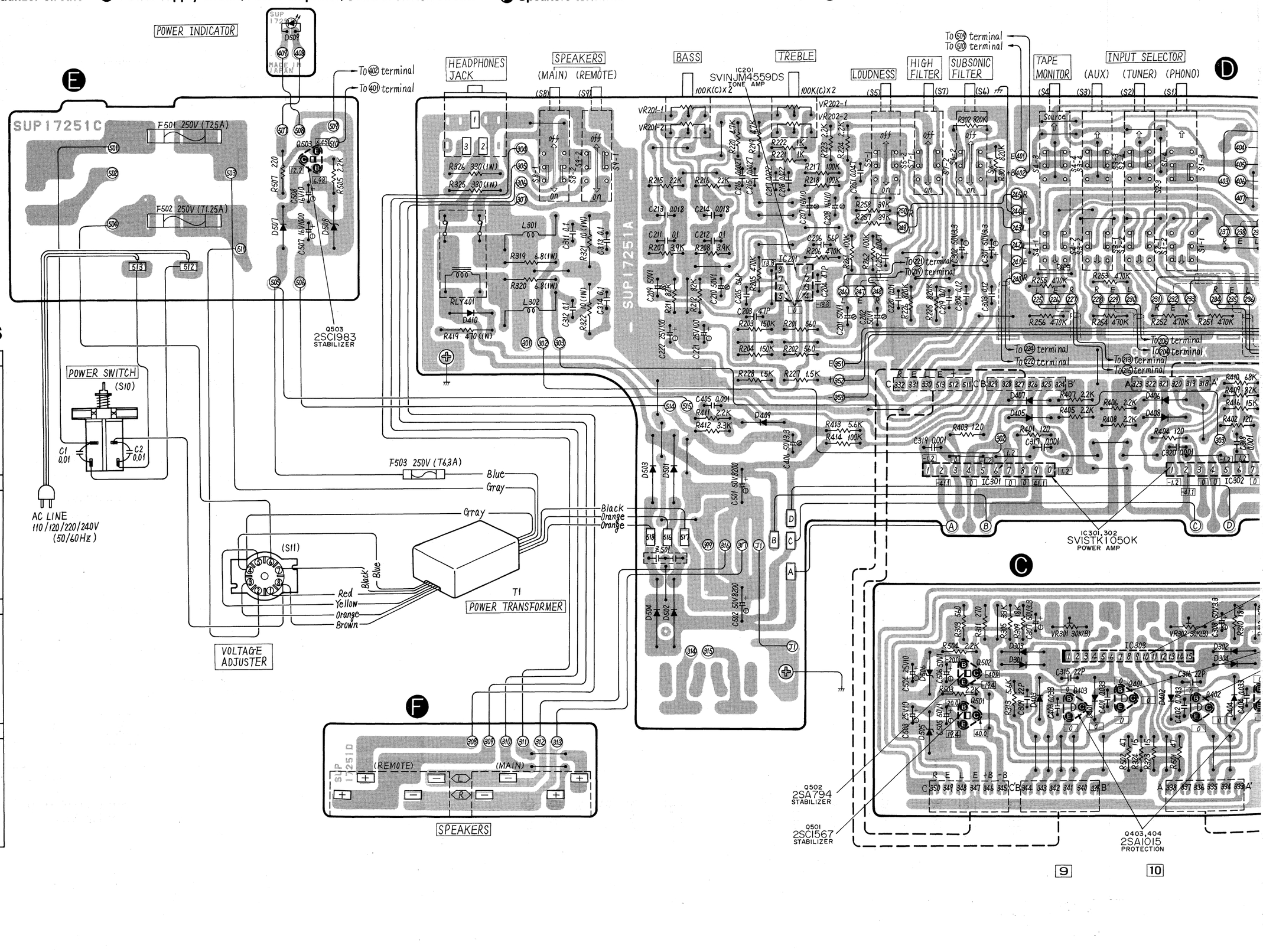
IC401 (SVITA7317P)
Relay Drive

SU-C03 SU-C03

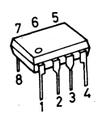
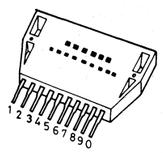
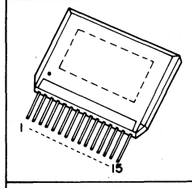
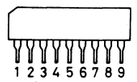
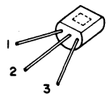
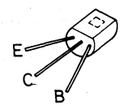
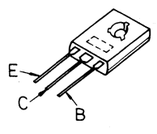
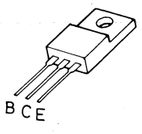
■ PRINTED CIRCUIT BOARD WIRING VIEW

Ⓐ Input terminal
Ⓑ Equalizer circuit
Ⓒ Drive circuit/Protection circuit/Power supply for equalizer
Ⓓ Power supply circuit/Power amplifier/Control switch circuit
Ⓔ Power switch/Power supply for power indicator
Ⓕ Speakers terminal
Ⓖ Input indicator
Ⓗ Volume control and balance control

Earth (Ground) lines



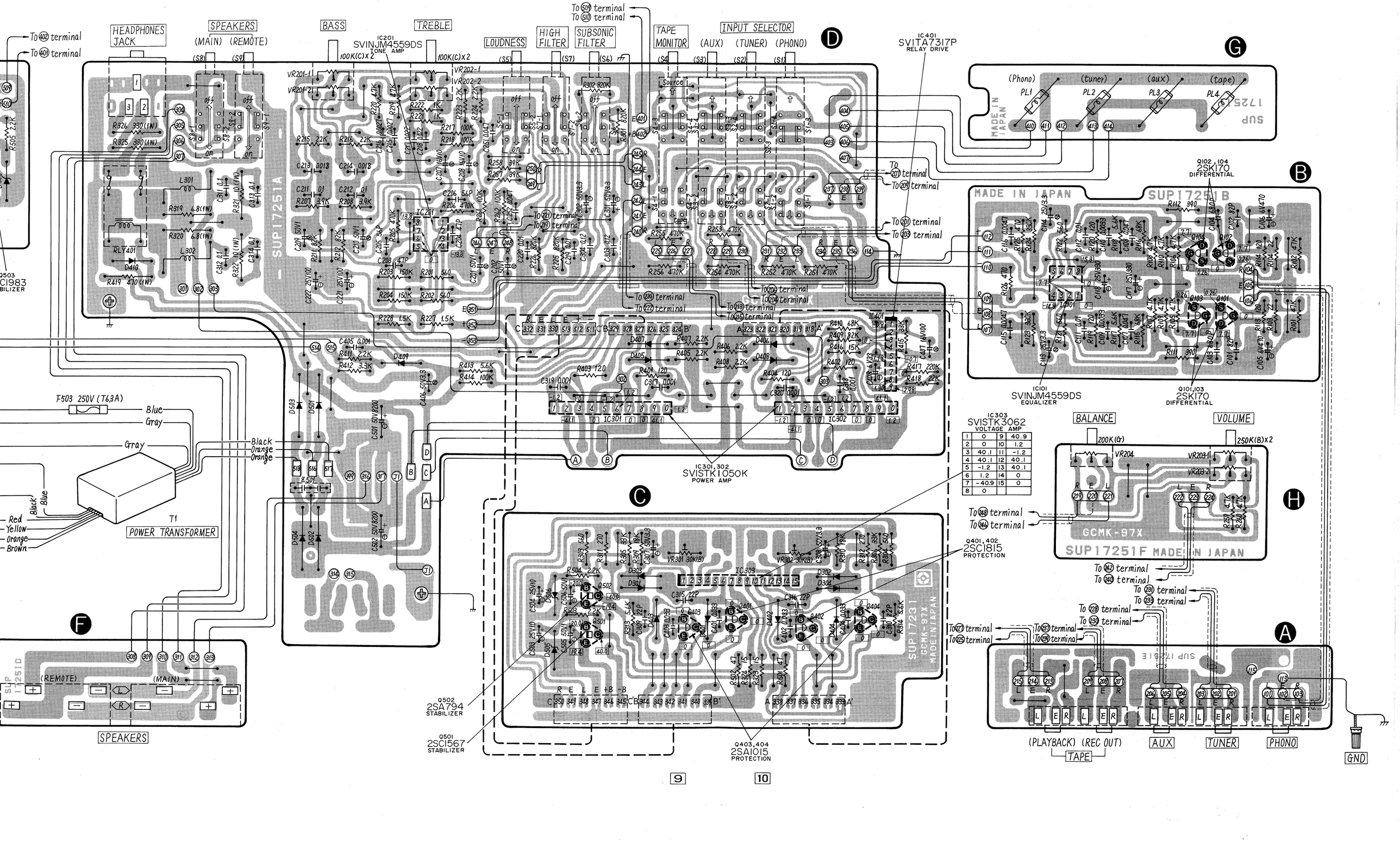
■ TERMINAL GUIDE OF TRANSISTOR AND IC'S

SVINJM4559DS	SVISTK1050K
	
SVISTK3062	SVITA7317P
	
2SK170	2SC1815 , 2SA1015
 1. Drain 2. Gate 3. Source	
2SA794 , 2SC1567	2SC1983
	

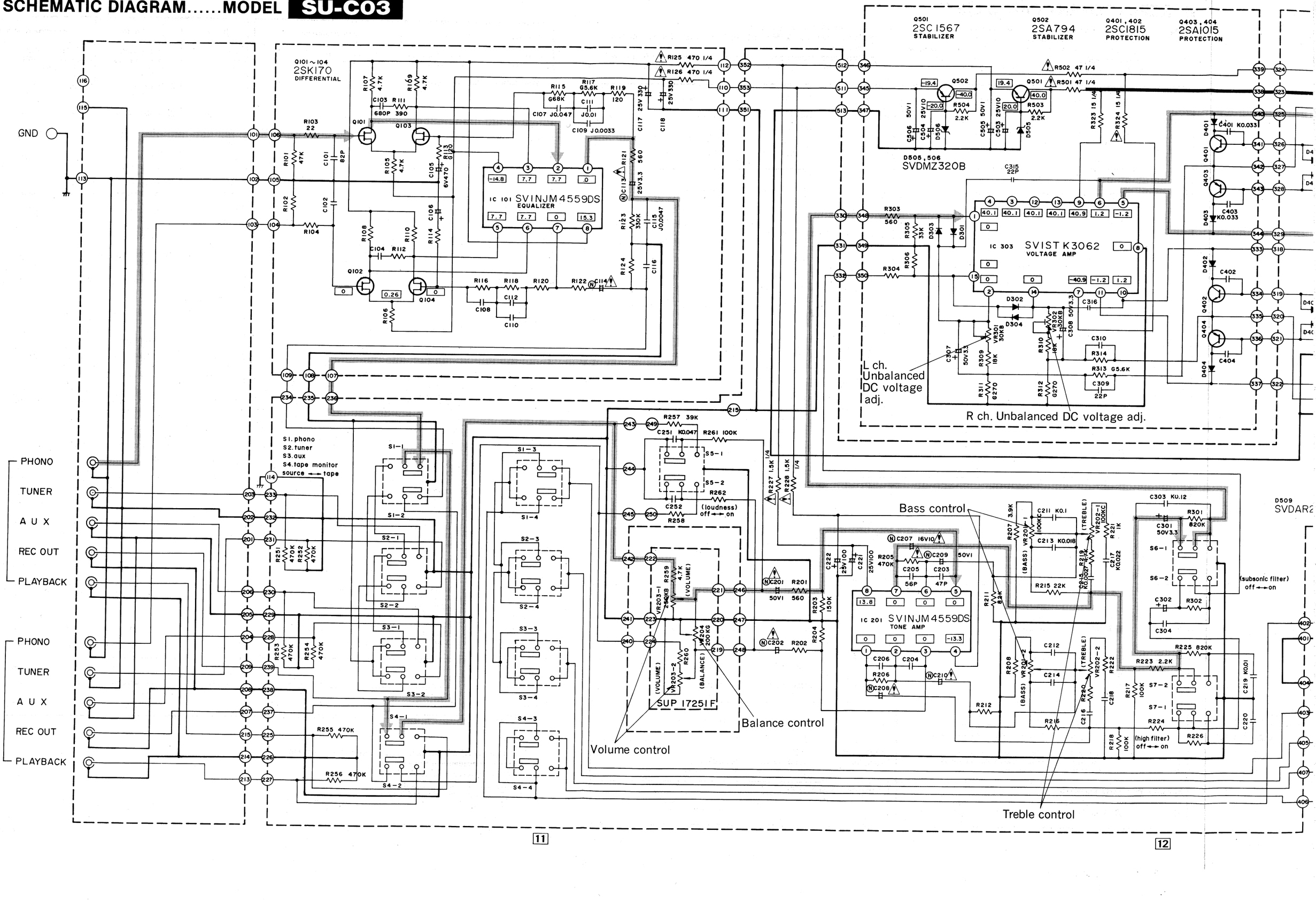
wer supply for equalizer
ier/Control switch circuit

E Power switch/Power supply for power indicator
F Speakers terminal

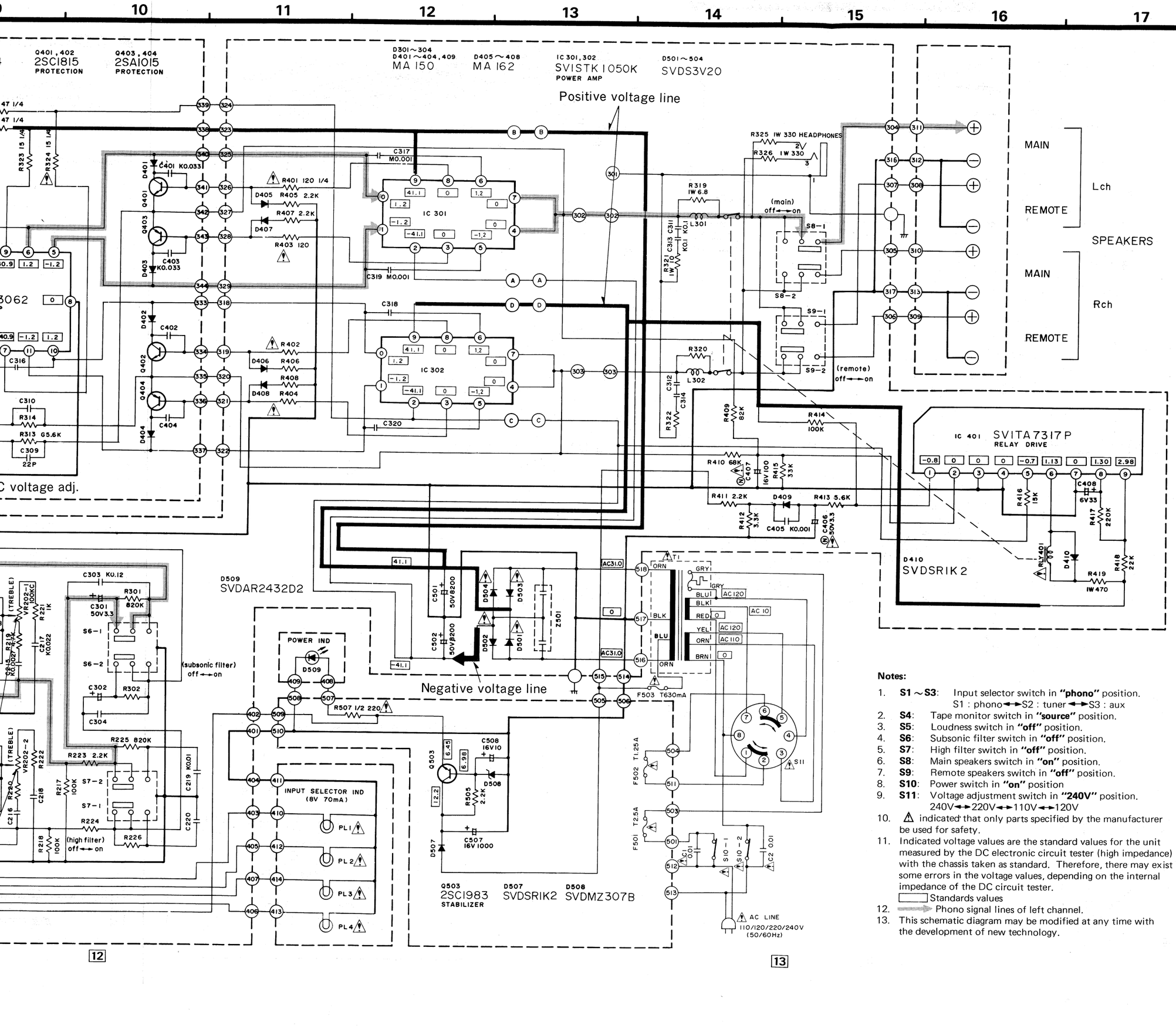
G Input indicator
H Volume control and balance control



■ SCHEMATIC DIAGRAM.....MODEL SU-C03

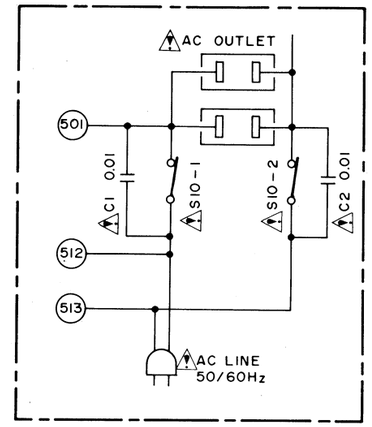


11 12

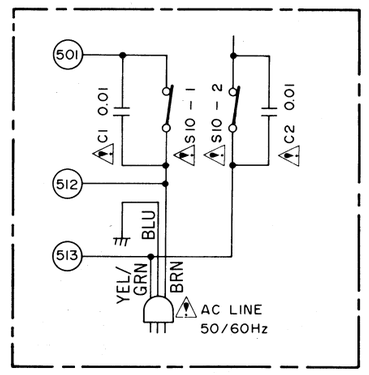


■ POWER SOURCE CIRCUIT OF OTHER PRODUCTS

- **Product for Asia, Latin America, Middle East and Africa [XA]**

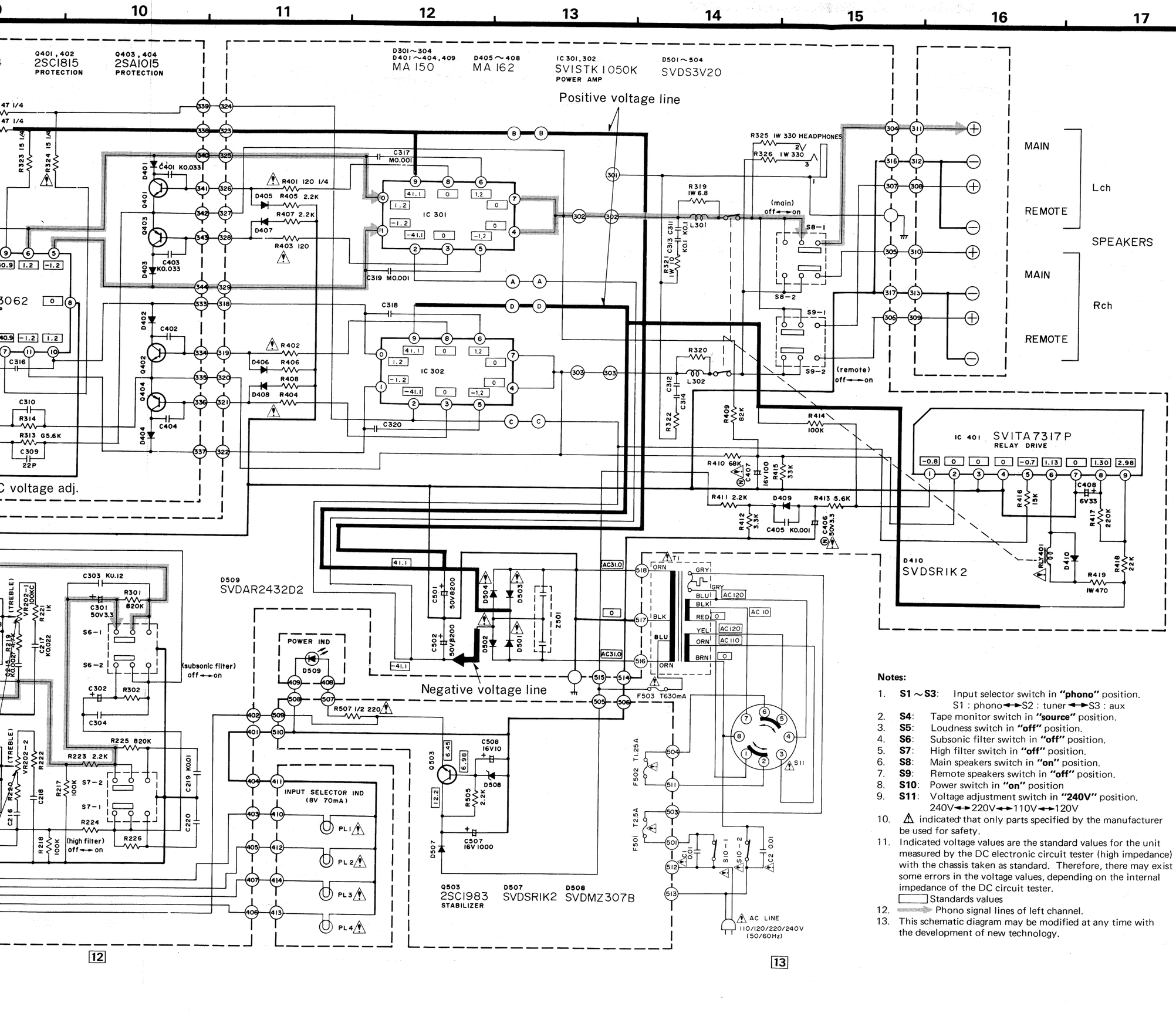


- **Product for Australia [XAL] only**



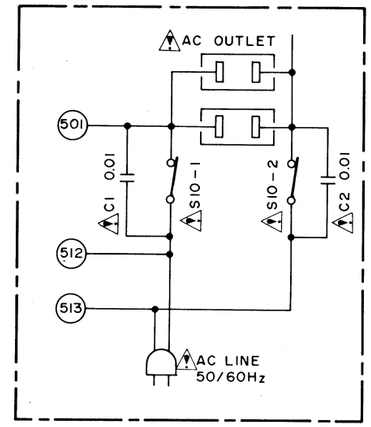
Notes:

1. **S1~S3**: Input selector switch in **"phono"** position.
   S1 : phono⟷S2 : tuner⟷S3 : aux
2. **S4**: Tape monitor switch in **"source"** position.
3. **S5**: Loudness switch in **"off"** position.
4. **S6**: Subsonic filter switch in **"off"** position.
5. **S7**: High filter switch in **"off"** position.
6. **S8**: Main speakers switch in **"on"** position.
7. **S9**: Remote speakers switch in **"off"** position.
8. **S10**: Power switch in **"on"** position
9. **S11**: Voltage adjustment switch in **"240V"** position.
   240V⟷220V⟷110V⟷120V
10. ⚠ indicated that only parts specified by the manufacturer be used for safety.
11. 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.
    ▭ Standards values
12. ⟹ Phono signal lines of left channel.
13. This schematic diagram may be modified at any time with the development of new technology.

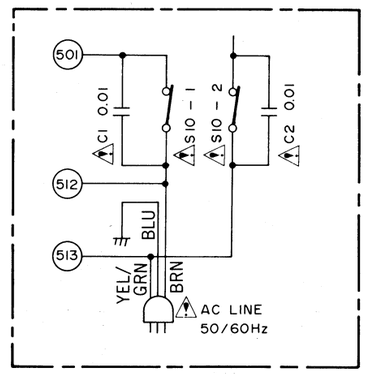


■ POWER SOURCE CIRCUIT OF OTHER PRODUCTS

- **Product for Asia, Latin America, Middle East and Africa [XA]**



- **Product for Australia [XAL] only**



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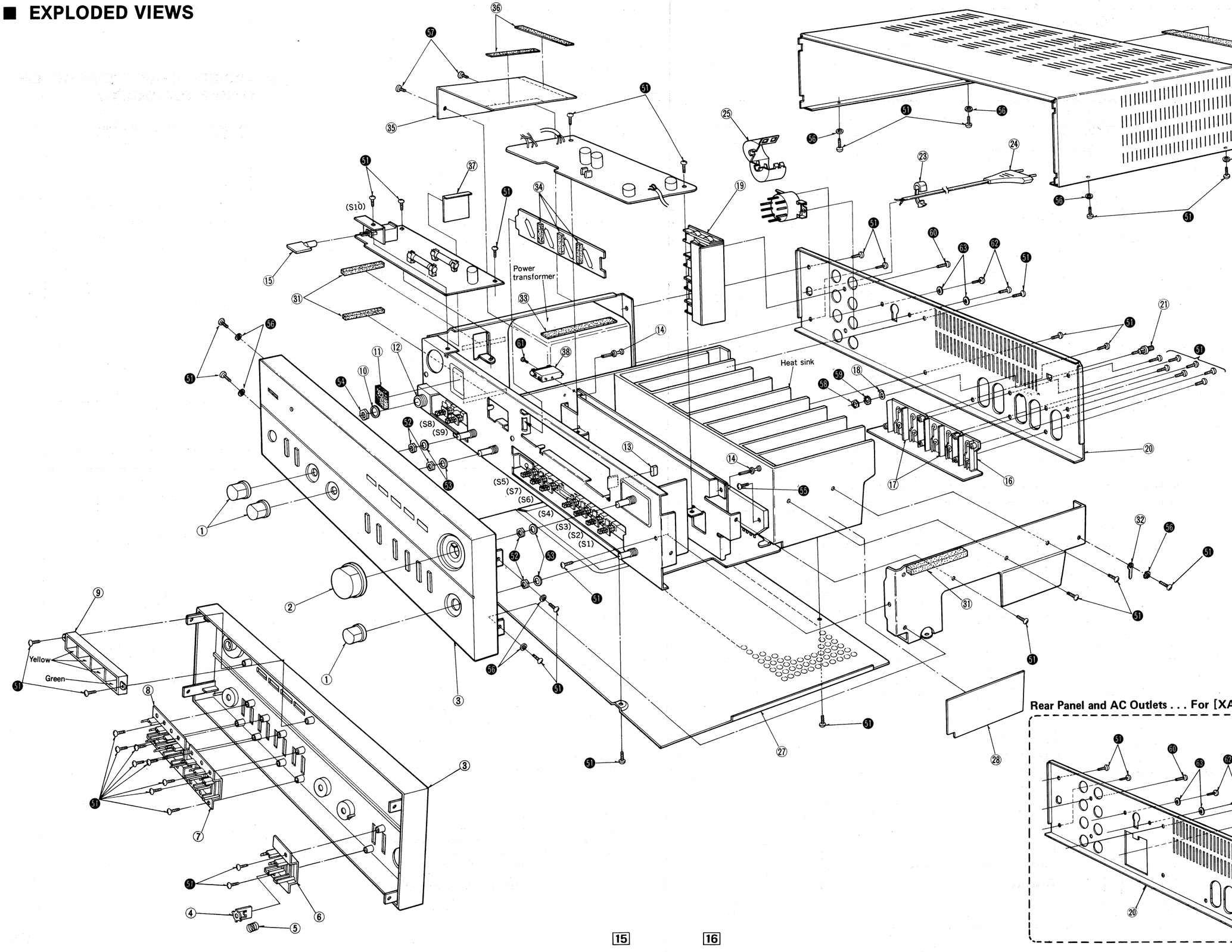
■ EXPLODED VIEWS



Rear Panel and AC Outlets . . . For [XA] only

■ REPLACEMENT PARTS LIST

Notes: 1. Part numbers are indicated on most mechanical parts. Please use this part number of parts orders.
2. ⚠ indicates that only parts specified by the manufacturer be used for safety.
3. [K] marked parts are used for black type only, while O-marked parts are for silver type only.
4. Parts other than [K]-and O-marked are used for both black and silver types.
5. Bracketed indications in Ref. No. columns specify the area. Parts without these indications can be used for all areas.

Ref. No.		Part No.	Part Name & Description
CABINET and CHASSIS PARTS			
1	O	QYT0518S	Knob, Balance, Treble and Bass (Silver)
1	K	QYT0518K	Knob, Balance, Treble and Bass (Black)
2	O	SBN849	Knob, Volume (Silver)
2	K	SBN849–1	Knob, Volume (Black)
3	O	SGWUC03M	Panel, Front Ass'y (Silver)
3	K	SGWUC03KD	Panel, Front Ass'y (Black)
4	O	SBC225	Button, Push Switch (Silver)
4	K	SBC225–1	Button, Push Switch (Black)
5		SUS163	Spring, Push Switch Button
6		SGX6711	Escutcheon, Push Switch Button
7		SGX6713	Escutcheon, Push Switch Button
8		SGX6715	Escutcheon, Push Switch Button
9		SYE683	Escutcheon, Selector Indicator
10		SNE59–1	Washer, Headphones Jack
11		SHR9493	Cushion, Power Indicator
12		XCJ6P21B–A	Jack, Headphones
13		SHG1445	Rubber, Lamp P.C.B. M'tg
14		SHR401–1	Latch, Drive Amp. P.C.B. M'tg
15	O	SBC207–1	Button, Power Switch (Silver)
15	K	SBC207–2	Button, Power Switch (Black)
16		SJF3225A	Terminal, Phono
17		SJF3431A	Terminal, Tuner, Aux and Tape
18		SJT215	Terminal, Ground
19		SJF5809	Terminal, Speakers
20 [E]	O	SGP1870–1A	Rear Panel
20 [XE, EG, EB, XGH, XGF]	O	SGPUC03E	Rear Panel, SGP1870–1A with Name Plate (SGT21750)
20 [XA]	O	SGP1870–3A	Rear Panel
20 [XAL]	O	SGPUC03L	Rear Panel, SGP1870–2A with Name Plate (SGT21730)
20 [E]	K	SGPUC03KD	Rear Panel, SGP1870–1B with Name Plate (SGT21711)
20 [EG]	K	SGPUC03KEG	Rear Panel, SGP1870–1B with Name Plate (SGT21751)
21		SJF4101–1	Terminal, Ground
22 [XA] only	⚠	SJS9401	Socket, AC Outlet
23 [E, EG, EB, XGH,XGF,XA]		SFSR4N4	Bushing, AC Cord (Product Part No. SHR127)
23 [XE]		SFSR5N4	Bushing, AC Cord (Product Part No. SHR129)
23 [XAL]		SHR131	Bushing, AC Cord
24 [E, EG, EB, XGH,XGF,XA]	⚠	RJA23ZC	AC Cord, Power Source
24 [XE]	⚠	RJA45ZC	AC Cord, Power Source
24 [XAL]	⚠	QFC1207M	AC Cord, Power Source
25		SUV453	Cover, Voltage Adjuster
26	O	SKCUC03D	Cabinet (Silver)
26	K	SKCUC03KD	Cabinet (Black)
27	O	SYU207–3	Bottom Board
27 [XA] only	O	SYUUC03P	Bottom Board, SYU207–3 with Name Plate (SGT21770)
27	K	SYU207–4	Bottom Board
28		SMX343	Plate, Lead Wire Protection
29		SHS6101	Fiber, Cabinet
31		SHS2423	Fiber, Left and Right Side
32		RJT202B	Lug, Earth (Ground)
33		SHS6113	Fiber, Power Transformer
34		SHG1537	Cushion, Selector Indicator Lamp
35		SMC737	Cover, Power Transformer
36		SHS3229	Fiber, Power Transformer Cover
37		SMX319–1	Fiber, Power Switch Insulation
38		SJFA5101	Holder, Fuse
SCREWS, WASHERS and NUTS			
㊾		**XTB3+8BFN**	Screw, Tapping, ⊕3 x 8
㊾	K	**XTB3+8BFZ**	Screw, Tapping, ⊕3 x 8 (Rear Panel Input Terminal, Bottom Board, Cabinet)
㊿		**XNS8**	Nut, M8 (Volume, Balance, Treble and Bass)
(51)		**XWV8**	Washer, Spring, φ8 (Volume, Balance, Treble and Bass)
(52)		**XNS12**	Nut, M12 (Headphones Jack)
(53)		**XTB3+16BFZ**	Screw, Tapping, ⊕3 x 16 (Power IC)
(54)		**XWC3B**	Washer, Toothed Lock, φ3
(57)		**XTB4+8BFN**	Screw, Tapping, ⊕4 x 8 (Power Transformer)
(58)		**XNG6E**	Nut, M6 (Ground Terminal)
(59)		**XWC6B**	Washer, Toothed Lock, φ6 (Ground Terminal)
(60)		**XTB3+12BFN**	Screw, Tapping, ⊕3 x 12 (Speakers Terminal)
(60)	K	**XTB3+12BFZ**	Screw, Tapping, ⊕3 x 12 (Speakers Terminal)
(61)		**XTN3+8B**	Screw, Tapping, ⊕3 x 8 (Fuse Holder)
(62)		**XSN3+6BNS**	Screw, ⊕3 x 6 (Voltage Adjuster)
(62)	K	**XSN3+6BVS**	Screw, ⊕3 x 6 (Voltage Adjuster)
(63)		**XWA3BFN**	Washer, Spring, φ3 (Voltage Adjuster)
(63)	K	**XWA3BFZ**	Washer, Spring, φ3 (Voltage Adjuster)
ACCESSORIES			
A1 [XA] only	⚠	SJP5213–1	Plug Adapter, AC Power
A2 [XA] only	⚠	SJP5215	Plug Adapter, AC Power
PACKING PARTS			
P1		SPP639	Polythylene Bag
P2		SPS2281	Pad, Left Side
P2 [XAL] only		SPS2281–1	Pad, Left Side
P3		SPS2283	Pad, Right Side
P3 [XAL] only		SPS2283–1	Pad, Right Side
P4		SPS2315	Pad, Front Side
P5		SPS2693	Pad, Rear Side (Except Product for [XAL])
P6 [E, XE, XA, EG, EB, XGH]	O	SPG2479	Carton Box
P6 [XAL]	O	SPG2481	Carton Box
P6 [XGF]	O	SPG2483	Carton Box
P6 [E, EG]	K	SPG2485	Carton Box
P7		SQF10381	Instructions Book, Printed Matter
INTEGRATED CIRCUITS			
IC101, 201		SVINJM4559DS	IC, Equalizer and Tone Amplifier
IC301, 302		SVISTK1050K	IC, Power Amplifier
IC303		SVISTK3062	IC, Voltage Amplifier
IC401		SVITA7317P	IC, Relay Drive
TRANSISTORS			
Q101～104		2SK170–GR	Transistor, Differential
Q401, 402		2SC1815–O	Transistor, Protection (Use in ranks Y or O)
Q403, 404		2SA1015–O	Transistor, Protection (Use in ranks Y or O)
Q501		2SC1567–Q	Transistor, Stabilizer (Use in ranks Q or R)
Q502		2SA794–Q	Transistor, Stabilizer (Use in ranks Q or R)
Q503		2SC1983	Transistor, Stabilizer
DIODES			
D301～304, 401～404, 409		**MA162A**	Diode, Bias
D405～408		**MA162LF**	Diode, Bias
D410, 507		**SVDSR1K2**	Diode, Relay Protection and Bias
D501～504	⚠	**SVDS3V40**	Rectifier
D505, 506		SVDMZ320B	Diode, 20V Zener
D508		SVDMZ307B	Diode, 7V Zener
D509		SVDGD4203SRD	Diode, Power Indicator
COILS and TRANSFORMER			
L301, 302		SLQY15G-3P	Coil, Choke
P.T.	⚠	SLT7C005–W	Transformer, Power Source
VARIABLE RESISTORS			
VR201		EWJFCY090530	Bass Control, 100kΩ (C)
VR202		EWJFC0090C15	Treble Control, 100kΩ (C)
VR203		EWJEKA094BF5	Volume Control, 250kΩ (B)
VR204		EVHFKA524G25	Balance Control, 200kΩ (G)
VR301, 302		**EVTS0AA00B34**	Voltage Adjustment, 30kΩ (B)
COMPONENT COMBINATION			
Z501		EXRFS203ZS	Component Combination, 0.01μF x 2
FUSES			
F501	⚠	XBA2C25TR0	Fuse, T2.5A (250V) Power Transformer Primary
F502	⚠	XBA2C12TR0	Fuse, T1.2A (250V) Power Transformer Primary
F503	⚠	XBA2C06TR0	Fuse, T0.6A (250V) Power Transformer Secondary
SWITCHES			
S1～7		SSH705	Switch, Input Selector, Tape Monitor, Subsonic filter, High filter and Loudness
S8, 9		SSH269	Switch, Speakers Selector
S10	⚠	SSH145–1	Switch, Power
S11	⚠	ESE37200	Switch, Voltage Adjuster
RELAY			
RLY401	⚠	SSY69	Relay, Speaker Protection
LAMPS			
PL1～4	⚠	XAMR68S8	Lamp, Input Selector Indicator

RESISTORS

R101, 102		**ERD25TJ473**	Carbon,	47kΩ,	1/4W, ± 5%
R103, 104		**ERD25FJ220**	Carbon,	22Ω,	1/4W, ± 5%
R105, 106		**ERO25CKF4701**	Metal Film,	4.7kΩ,	1/4W, ± 1%
R107, 108		**ERO25CKF4701**	Metal Film,	4.7kΩ,	1/4W, ± 1%
R109, 110		**ERO25CKF4701**	Metal Film,	4.7kΩ,	1/4W, ± 1%
R111, 112		**ERD25FJ391**	Carbon,	390Ω,	1/4W, ± 5%
R113, 114		**ERO25CKF1200**	Metal Film,	120Ω,	1/4W, ± 1%
R115, 116		**ERO25CKF6802**	Metal Film,	68kΩ,	1/4W, ± 1%
R117, 118		**ERO25CKF5601**	Metal Film,	5.6kΩ,	1/4W, ± 1%
R119, 120		**ERD25FJ121**	Carbon,	120Ω,	1/4W, ± 5%
R121, 122		**ERD25FJ561**	Carbon,	560Ω,	1/4W, ± 5%
R123, 124		**ERD25TJ334**	Carbon,	330kΩ,	1/4W, ± 5%
R125, 126	⚠	**ERD25FJ471**	Carbon,	470Ω,	1/4W, ± 5%
R201, 202		**ERD25FJ561**	Carbon,	560Ω,	1/4W, ± 5%
R203, 204		**ERD25TJ154**	Carbon,	150kΩ,	1/4W, ± 5%
R205, 206		**ERD25TJ474**	Carbon,	470kΩ,	1/4W, ± 5%
R207, 208		**ERD25FJ392**	Carbon,	3.9kΩ,	1/4W, ± 5%
R211, 212		**ERD25TJ823**	Carbon,	82kΩ,	1/4W, ± 5%
R215, 216		**ERD25TJ223**	Carbon,	22kΩ,	1/4W, ± 5%
R217, 218		**ERD25TJ104**	Carbon,	100kΩ,	1/4W, ± 5%
R219, 220		**ERD25FJ472**	Carbon,	4.7kΩ,	1/4W, ± 5%
R221, 222		**ERD25FJ102**	Carbon,	1kΩ,	1/4W, ± 5%
R223, 224		**ERD25FJ222**	Carbon,	2.2kΩ,	1/4W, ± 5%
R225, 226		**ERD25TJ824**	Carbon,	820kΩ,	1/4W, ± 5%
R227, 228	⚠	**ERD25FJ152**	Carbon,	1.5kΩ,	1/4W, ± 5%
R251, 252		**ERD25TJ474**	Carbon,	470kΩ,	1/4W, ± 5%
R253, 254		**ERD25TJ474**	Carbon,	470kΩ,	1/4W, ± 5%
R255, 256		**ERD25TJ474**	Carbon,	470kΩ,	1/4W, ± 5%
R257, 258		**ERD25TJ393**	Carbon,	39kΩ,	1/4W, ± 5%
R259, 260		**ERD25FJ472**	Carbon,	4.7kΩ,	1/4W, ± 5%
R261, 262		**ERD25TJ104**	Carbon,	100kΩ,	1/4W, ± 5%
R301, 302		**ERD25TJ824**	Carbon,	820kΩ,	1/4W, ± 5%
R303, 304		**ERD25FJ561**	Carbon,	560Ω,	1/4W, ± 5%
R305, 306		**ERD25TJ333**	Carbon,	33kΩ,	1/4W, ± 5%
R309, 310		**ERD25TJ183**	Carbon,	18kΩ,	1/4W, ± 5%
R311, 312		**ERO25CKF2700**	Metal Film,	270Ω,	1/4W, ± 1%
R313, 314		**ERO25CKF5601**	Metal Film,	5.6kΩ,	1/4W, ± 1%
R319, 320		**ERX1ANJ6R8**	Metal Film,	6.8Ω,	1W, ± 5%
R321, 322		**ERG1ANJ100**	Metal Oxide,	10Ω,	1W, ± 5%
R323		**ERD2FCG150**	Fuse type Carbon,	15Ω,	1/4W, ± 2%
R324	⚠	**ERD25FJ150**	Carbon,	15Ω,	1/4W, ± 5%
R325, 326		**ERG1ANJ331**	Metal Oxide,	330Ω,	1W, ± 5%
R401, 402	⚠	**ERD25FJ121**	Carbon,	120Ω,	1/4W, ± 5%
R403, 404	⚠	**ERD25FJ121**	Carbon,	120Ω,	1/4W, ± 5%
R405, 406		**ERD25FJ222**	Carbon,	2.2kΩ,	1/4W, ± 5%
R407, 408		**ERD25FJ222**	Carbon,	2.2kΩ,	1/4W, ± 5%
R409		**ERD25TJ823**	Carbon,	82kΩ,	1/4W, ± 5%
R410		**ERD25TJ683**	Carbon,	68kΩ,	1/4W, ± 5%
R411		**ERD25FJ222**	Carbon,	2.2kΩ,	1/4W, ± 5%
R412		**ERD25FJ332**	Carbon,	3.3kΩ,	1/4W, ± 5%
R413		**ERD25FJ562**	Carbon,	5.6kΩ,	1/4W, ± 5%
R414		**ERD25TJ104**	Carbon,	100kΩ,	1/4W, ± 5%
R415		**ERD25TJ333**	Carbon,	33kΩ,	1/4W, ± 5%
R416		**ERD25TJ153**	Carbon,	15kΩ,	1/4W, ± 5%
R417		**ERD25TJ224**	Carbon,	220kΩ,	1/4W, ± 5%
R418		**ERD25TJ223**	Carbon,	22kΩ,	1/4W, ± 5%
R419		**ERG1ANJ471**	Metal Oxide,	470Ω,	1W, ± 5%
R501, 502	⚠	**ERD25FJ470**	Carbon,	47Ω,	1/4W, ± 5%
R503, 504		**ERD25FJ222**	Carbon,	2.2kΩ,	1/4W, ± 5%
R505		**ERD25FJ222**	Carbon,	2.2kΩ,	1/4W, ± 5%
R507	⚠	**ERD50FJ221**	Carbon,	220Ω,	1/2W, ± 5%

CAPACITORS

C1, 2	⚠	ECKDKC103PF	Ceramic,	0.01μF,	400VAC, +100 0%
C101, 102		ECCD1H820K	Ceramic,	82pF,	50V, ±10%
C103, 104		ECKD1H681KB	Ceramic,	680pF,	50V, ±10%
C105, 106		**ECEA0JS471**	Electrolytic,	470μF,	6.3V
C107, 108		ECQM1H473JZ	Polyester,	0.047μF,	50V, ± 5%
C109, 110		ECQM1H332JZ	Polyester,	0.0033μF,	50V, ± 5%
C111, 112		ECQM1H103JZ	Polyester,	0.01μF,	50V, ± 5%
C113, 114	⚠	**ECEA25N3R3**	Non-Polar Electrolytic,	3.3μF,	25V
C115, 116		ECQM1H472JZ	Polyester,	0.0047μF,	50V, ± 5%
C117, 118		**ECEA1ES331**	Electrolytic,	330μF,	25V
C201, 202	⚠	**ECEA50N1**	Non-Polar Electrolytic,	1μF,	50V
C203, 204		ECCD1H470K	Ceramic,	47pF,	50V, ±10%
C205, 206		ECCD1H560K	Ceramic,	56pF,	50V, ±10%
C207, 208	⚠	**ECEA16N10**	Non-Polar Electrolytic,	10μF,	16V
C209, 210	⚠	**ECEA50N1**	Non-Polar Electrolytic	1μF,	50V
C211, 212		ECQM1H104KZ	Polyester,	0.1μF,	50V, ±10%
C213, 214		ECQM1H183KZ	Polyester,	0.018μF,	50V, ±10%
C215, 216		ECQM1H272KZ	Polyester,	0.0027μF,	50V, ±10%
C217, 218		ECQM1H223KZ	Polyester,	0.022μF,	50V ±10%
C219, 220		ECQM1H103KZ	Polyester,	0.01μF,	50V, ±10%
C221, 222		**ECEA1ES101**	Electrolytic,	100μF,	25V
C251, 252		ECQM1H473KZ	Polyester,	0.047μF,	50V, ±10%
C301, 302		**ECEA50Z3R3**	Electrolytic,	3.3μF,	50V
C303, 304		ECQM1H124KZ	Polyester,	0.12μF,	50V, ±10%
C307, 308		**ECEA50Z3R3**	Electrolytic,	3.3μF,	50V
C309, 310		ECCD1H220K	Ceramic,	22pF,	50V, ±10%
C311, 312		ECQM1H104KZ	Polyester,	0.1μF,	50V, ±10%
C313, 314		ECQM1H104KZ	Polyester,	0.1μF,	50V, ±10%
C315, 316		ECCD2H220K	Ceramic,	22pF,	500V, ±10%
C317, 318		ECKD1H102MD	Ceramic,	0.001μF,	50V, ±20%
C319, 320		ECKD1H102MD	Ceramic,	0.001μF,	50V, ±20%
C401, 402		ECQM1H333KZ	Polyester,	0.033μF,	50V, ±10%
C403, 404		ECQM1H333KZ	Polyester,	0.033μF,	50V, ±10%
C405		ECQM1H102KZ	Polyester,	0.001μF,	50V, ±10%
C406	⚠	**ECEA50N3R3**	Non-Polar Electrolytic,	3.3μF,	50V
C407	⚠	**ECEA16N100**	Non-Polar Electrolytic,	10μF,	16V
C408		**ECEA1CS330**	Electrolytic,	33μF,	16V
C501, 502		ECETS1HV822U	Electrolytic,	8200μF,	50V
C503, 504		**ECEA1HS100**	Electrolytic,	10μF,	50V
C505, 506		**ECEA50Z1**	Electrolytic,	1μF,	50V
C507		**ECEA1CS102**	Electrolytic,	1000μF,	16V
C508		**ECEA1HS100**	Electrolytic,	10μF,	50V

Notes

* [E] and [EG] are available in Scandinavia and European.
* [XGF] is available in France.
* [XGH] is available in Holland.
* [EB] is available in Belgium.
* [XE] is available in United Kingdom.
* [XA] is available in Asia, Latin America, Middle East and Africa.
* [XAL] is available in Australia.

Printed in Japan
80034350 A Y.K.