

Service Manual

Stereo DC Control Amplifier

SU-A6(K)

[E],[EG],[EK],
[EF],[EH],[XA],[XL]



* The black type model is provided with (K) in the Service Manual. **SU-A6 (K)**
* The colors of this model is black type only.

Areas

- * [E] and [EG] are available in Scandinavia and European except United Kingdom, France and Holland.
- * [EK] is available in United Kingdom.
- * [EF] is available in France.
- * [EH] is available in Holland.
- * [XA] is available in Asia, Latin America, Middle East and Africa.
- * [XL] is available in Australia.

English

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

(DIN 45 500)

■ AMPLIFIER SECTION

Total harmonic distortion (20 Hz~20 kHz)

PHONO MM (2.5 mV)	0.002%
	(3V output at vol. max.)
	(0.5V output at vol. -30dB: 0.002%)
PHONO MC (250 μ V)	0.003%
	(3V output at vol. max.)
	(0.5V output at vol. -30 dB: 0.006%)
TUNER, AUX, TAPE	0.002%
	(3V output at vol. max.)
	(0.5V output at vol. -30 dB: 0.002%)

Input sensitivity and impedance

PHONO MM	1.0 mV, 2.5mV/47k Ω
MC	100 μ V/100 Ω , 250 μ V/220 Ω
TUNER, AUX, TAPE	150 mV/47k Ω

PHONO maximum input voltage (1 kHz, RMS)

PHONO 1, 2 MM (2.5 mV)	160 mV
MC (250 μ V)	16 mV

S/N

rated output	
PHONO MM (2.5 mV)	79 dB (88 dB, IHF, '66)
MC (250 μ V)	71 dB (74 dB, IHF, '66)
TUNER, AUX, TAPE	100 dB (106 dB, IHF, '66)
-26 dB output	
PHONO MM (2.5 mV)	78 dB
MC (250 μ V)	70 dB
TUNER, AUX, TAPE	86 dB

Frequency response

PHONO 1, 2 MM	RIAA standard curve \pm 0.2 dB
MC	RIAA standard curve \pm 0.5 dB
TUNER, AUX, TAPE	DC~200 kHz (-3 dB)
	+0 dB, -0.1 dB (DC~20 kHz)

Maximum output voltage

PHONO MM	8V (20 Hz~20 kHz)
PHONO MC	8V (20 Hz~20 kHz)
TUNER, AUX, TAPE	8V (20 Hz~20 kHz)

Tone controls

BASS	50 Hz, +5 dB~ -5 dB
SUPER BASS	20 Hz, +10 dB~0 dB
TREBLE	20 kHz, +5 dB~ -5 dB
SUPER TREBLE	50 kHz, +10 dB~-10 dB

Turnover frequency

BASS	500 Hz
SUPER BASS	75 Hz, 150 Hz
TREBLE	2 kHz
SUPER TREBLE	8 kHz

Subsonic filter

20 Hz, -12 dB/oct.

High-filter

7 kHz, -6 dB/oct.

Loudness control (volume at -30 dB)

50 Hz, +7 dB

Muting

-20 dB

Output voltage and impedance

PRE OUT	rated 2V/2 Ω
REC OUT	150 mV/600 Ω

Channel balance, AUX 250 Hz~6,300 Hz

\pm 1 dB

Channel separation, AUX 1 kHz

56 dB

■ GENERAL

Power consumption

10W

Power supply

AC 50 Hz/60 Hz, 110V/120V/220V/240V

Dimensions (W·H·D)

430 × 97 × 360 mm
(16-15/16" × 3-13/16" × 14-3/16")

Weight

5.5 kg
(12 lb.)

Note:

Total harmonic distortion is measured by the digital spectrum analyzer (H.P. 3045 system).

Technics

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

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

■ VERSTÄRKERTEIL

Gesamtklirrfaktor (20 Hz ~ 20 kHz)	
Phono - magnetisch (PHONO MM) (2,5 mV)	0,002%
(3 V Ausgangsspannung bei Höchstleistung)	
(0,5 V Ausgangsspannung bei -30 dB Leistung: 0,002%)	
Phono - dynamisch (PHONO MC) (250 µV)	0,003%
(3 V Ausgangsspannung bei Höchstleistung)	
(0,5 V Ausgangsspannung bei -30 dB Leistung: 0,006%)	
Tuner, Aux, Tape	0,002%
(3 V Ausgangsspannung bei Höchstleistung)	
(0,5 V Ausgangsspannung bei -30 dB Leistung: 0,002%)	
Eingangsempfindlichkeit und -impedanz	
Phono - magnetisch (PHONO MM)	1,0 mV, 2,5 mV/47 kΩ
Phono - dynamisch (PHONO MC)	100 µV/100Ω, 250 µV/220 Ω
Tuner, Aux, Tape	150 mV/47 kΩ
Maximale TA-Eingangsspannung (1 kHz, eff.)	
magnetisch (MM) 1,2 (2,5 mV)	160 mV
dynamisch (MC) (250 µV)	16 mV
Geräuschabstand	
Nennausgang	
Phono - magnetisch (PHONO MM) (2,5 mV)	79 dB (88 dB nach IHF, '66)
Phono - dynamisch (PHONO MC) (250 µV)	71 dB (74 dB nach IHF, '66)
Tuner, Aux, Tape	100 dB (106 dB nach IHF, '66)
-26 dB Ausgang	
Phono - magnetisch (PHONO MM) (2,5 mV)	78 dB
Phono - dynamisch (PHONO MC) 250 µV	70 dB
Tuner, Aux, Tape	86 dB
Frequenzgang	
Phono 1, 2 MM	RIAA-Standardkurve ±0,2 dB
Phono MC	RIAA-Standardkurve ±0,5 dB
Tuner, Aux, Tape	DC ~ 200 kHz (-3 dB)
	+0 dB, -0,1 dB (DC ~ 20 kHz)
Maximale Ausgangsspannung	
Phono MM	8 V (20 Hz ~ 20 kHz)
Phono MC	8 V (20 Hz ~ 20 kHz)
Tuner Aux, Tape	8 V (20 Hz ~ 20 kHz)

Klangregler	
Baßregler (BASS)	50 Hz, +5 dB ~ -5 dB
Tiefbaßreglers (SUPER BASS)	20 Hz, +10 dB ~ 0 dB
Höhenregler (TREBLE)	20 kHz, +5 dB ~ -5 dB
Überhöhenregler (SUPER TREBLE)	50 kHz, +10 dB ~ -10 dB
Übergangsfrequenz	
Baßregler (BASS)	500 Hz
Tiefbaßreglers (SUPER BASS)	75 Hz, 150 Hz
Höhenregler (TREBLE)	2 kHz
Überhöhenregler (SUPER TREBLE)	8 kHz
Tiefenfilter	20 Hz, -12 dB/Okt.
Rauschfilter	7 kHz, -6 dB/Okt.
Gehörrichtige Lautstärkekorrektur (Loudness)	
(bei -30 dB Ausgangsleistung)	50 Hz, +7 dB
Tondämpfung	-20 dB
Ausgangsspannung und -impedanz	
Vorverstärker (PRE OUT)	Nennspg. 2 V/2 Ω
Aufnahmeausgang (REC OUT)	150 mV/600 Ω
Kanalabweichung (Aux, 250 Hz ~ 6300 Hz)	±1 dB
Übersprechdämpfung (Aux, 1 kHz)	56 dB

■ ALLGEMEINE DATEN

Leistungsaufnahme	10 W
Netzspannung	Wechselstrom 50 Hz/60 Hz, 110V/120V/220V/240V
Abmessungen (B×H×T)	430 × 97 × 360 mm
Gewicht	5,5 kg

Bemerkung:
Der Gesamtklirrfaktor wurde mit einem digitalen Rauschspektrometer (Anlage H.P. 3045) gemessen.

CARACTERISTIQUES (Sujet à changement sans préavis.) (DIN 45 500)

■ SECTION AMPLIFICATEUR

Distorsion harmonique totale (20 Hz~20 kHz)	
PHONO, AIMANT MOBILE (PHONO MM) (2,5 mV)	0,002%
(sortie de 3 V à vol. max.)	
(sortie de 0,5V à vol. -30 dB: 0,002%)	
PHONO, BOBINE MOBILE (PHONO MC) (250 µV)	0,003%
(sortie de 3 V à vol. max.)	
(sortie de 0,5V à vol. -30 dB: 0,006%)	
SYNTONISATEUR, AUX, BANDE (TUNER, AUX, TAPE)	0,002%
(sortie de 3 V à vol. max.)	
(sortie de 0,5V à vol. -30 dB: 0,002%)	
Sensibilité et impédance d'entrée	
PHONO, AIMANT MOBILE (PHONO MM)	1,0 mV, 2,5 mV/47kΩ
PHONO, BOBINE MOBILE (PHONO MC)	100 µV/100Ω, 250 µV/220Ω
SYNTONISATEUR, AUX, BANDE (TUNER, AUX, TAPE)	150 mV/47kΩ

PHONO (tension d'entrée maximum, 1 kHz RMS)	
AIMANT MOBILE (MM) 1, 2 (2,5 mV)	160 mV
BOBINE MOBILE (MC) (250 µV)	16 mV
Signal/Bruit	
sortie nominale	
PHONO, AIMANT MOBILE (PHONO MM) (2,5 mV)	79 dB (88 dB, IHF, '66)
PHONO, BOBINE MOBILE (PHONO MC) (250 µV)	71 dB (74 dB, IHF, '66)
SYNTONISATEUR, AUX, BANDE (TUNER, AUX, TAPE)	100 dB (106 dB, IHF, '66)
sortie de -26 dB	
PHONO, AIMANT MOBILE (PHONO MM) (2,5 mV)	78 dB
PHONO, BOBINE MOBILE (PHONO MC) (250 µV)	70 dB
SYNTONISATEUR, AUX, BANDE (TUNER, AUX, TAPE)	86 dB
Réponse de fréquence	
PHONO 1, 2 MM	Courbe nominale RIAA ±0,2 dB
PHONO MC	Courbe nominale RIAA ±0,5 dB
SYNTONISATEUR, AUX, BANDE (TUNER, AUX, TAPE)	CC~200 kHz (-3 dB)
	+0 dB, -0,1 dB (CC~20 kHz)

Tension de sortie maximum

PHONO MM	8V (20 Hz~20 kHz)
PHONO MC	8V (20 Hz~20 kHz)
TUNER, AUX, TAPE	8V (20 Hz~20 kHz)

Réglage de la tonalité

BASSES (BASS)	50 Hz, +5 dB~ -5 dB
ULTRA-BASSES (SUPER BASS)	20 Hz, +10 dB~0 dB
AIGUES (TREBLE)	20 kHz, +5 dB~ -5 dB
ULTRA-AIGUES (SUPER TREBLE)	50 kHz, +10 dB~ -10 dB

Fréquence charnière

BASSES (BASS)	500 Hz
ULTRA-BASSES (SUPER BASS)	75 Hz, 150 Hz
AIGUES (TREBLE)	2 kHz
ULTRA-AIGUES (SUPER TREBLE)	8 kHz

Filtre subsonique

20 Hz, -12 dB/oct.

Filtre coupe-hauts

7 kHz, -6 dB/oct.

Compensateur physiologique (volume à -30 dB)

50 Hz, +7 dB

Réglage silencieux

-20 dB

Tension de sortie et impédance

PREAMPLI (PRE OUT) nominale 2V/2Ω

SORTIE ENREGISTREMENT (REC OUT) 150 mV/600Ω

Equilibrage des canaux, AUX 250 Hz~6 300 Hz ±1 dB

Séparation des canaux, AUX 1 kHz 56 dB

■ DIVERS

Consommation

10W

Alimentation

CA 50 Hz/60 Hz, 110V/120V/220V/240V

Dimensions (L×H×Pr)

430 × 97 × 360 mm

Poids

5.5 kg

Remarque:

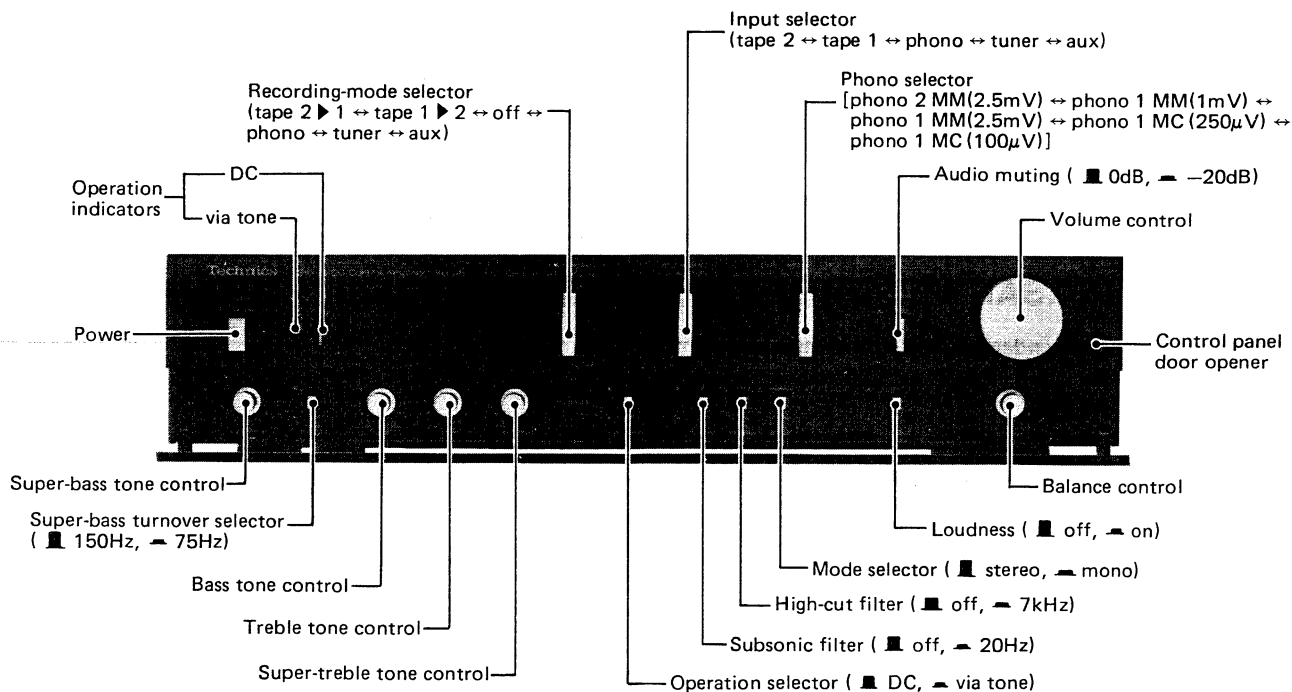
On mesure la distorsion harmonique totale au moyen d'un analyseur de spectre digital (Système HP. 3045).

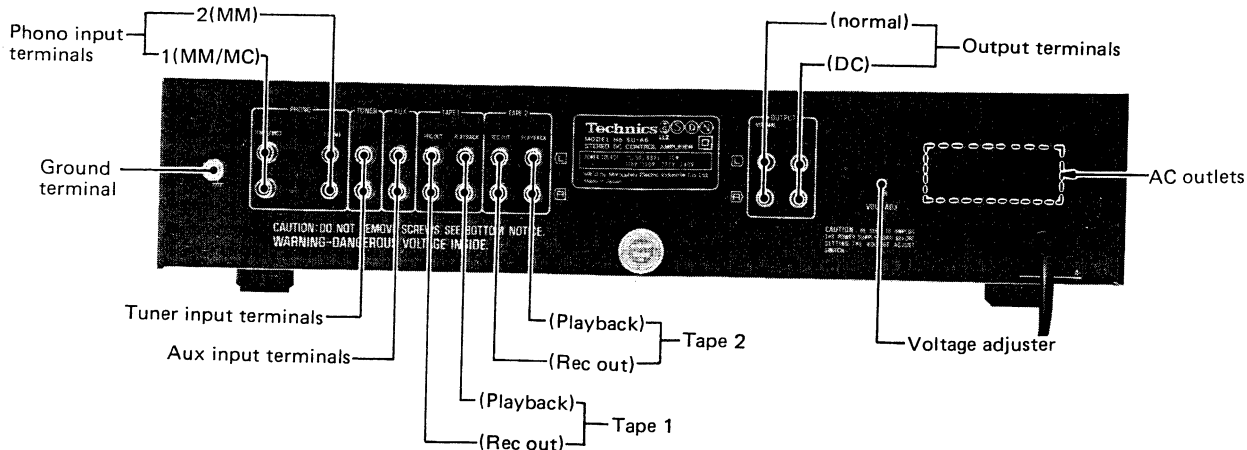
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■ LOCATION OF CONTROLS





- The products for destination [XA] is equipped with AC outlets.

MEASUREMENTS AND ADJUSTMENTS ENGLISH

Setting of controls and instruments to be used.

1. Operation switch DC
2. Input selector switch tuner
3. DC voltmeter (able to measure 1mV)

No.	Adjustments	DC voltmeter connections	Adjusting points	Adjustment procedure
1	Voltage regulator	Between TP701 and ground	VR701	<ul style="list-style-type: none"> • Turn voltage regulator semi-fixed resistor VR701 to minimum. (counter-clockwise direction) • Adjust VR701 to 17V.
2	Buffer amplifier DC balance adj.	(L channel) Between DC output terminal (Lch) and ground (R channel) Between DC output terminal (Rch) and ground	VR601 (L channel) VR602 (R channel)	<ul style="list-style-type: none"> • Turn volume control to minimum. • Adjust VR601 (Lch) and VR602 (Rch) to obtain a minimum reading, using the 300mV range on the DC voltmeter.
3	Flat amplifier DC balance adj.	(L channel) Between DC output terminal (Lch) and ground (R channel) Between DC output terminal (Rch) and ground	VR501 (L channel) VR502 (R channel)	<ul style="list-style-type: none"> • Turn volume control to maximum. • Adjust VR501 (Lch) and VR502 (Rch) to obtain a minimum reading, using the 300mV range on the DC voltmeter.

EINSTELLUNGSANWEISUNGEN DEUTSCH

Einstellung der zu verwendenden Regler und Instrumente

1. Funktionsschalter "DC"
2. Eingangswahlschalter tuner
3. Gleichstromvoltmeter 1mV Meßbereich erforderlich

Nr.	Einstellungen	Gleichstromvoltmeter-verbindungen	Einstellungspunkte	Einstellungsvorgang
1	Spannungsregler	Zwischen TP701 und Masse.	VR701	<ul style="list-style-type: none"> • Die spannungsregler halbfeingestellten Widerstände VR701 auf Minimalstellung drehen. (Entgegen dem Uhrzeigersinn) • VR701 auf 17V abstimmen.
2	Gleichstrom balance	L-Kanal Zwischen DC ausgangsbuchsen (L-Kanal) und Erdungsanschluß R-Kanal Zwischen DC ausgangsbuchsen (R-Kanal) und Erdungsanschluß	VR601 (L-Kanal) VR602 (R-Kanal)	<ul style="list-style-type: none"> • Lautstärkeregler ganz heruntêrdrehen. • Durch Benutzung des 300mV-Bereiches des Gleichstromvoltmeters, den regelbaren Widerstand VR601 (L-Kanal) und VR602 (R-Kanal) auf minimalen Wert einstellen.
3		L-Kanal Zwischen DC ausgangsbuchsen (L-Kanal) und Erdungsanschluß R-Kanal Zwischen DC ausgangsbuchsen (R-Kanal) und Erdungsanschluß	VR501 (L-Kanal) VR502 (R-Kanal)	<ul style="list-style-type: none"> • Lautstärkeregler ganz aufdrehen. • Durch Benutzung des 3mV-Bereiches des Gleichstromvoltmeters, dem regelbaren Widerstand VR501 (L-Kanal) und VR502 (R-Kanal) auf minimalen Wert einstellen.

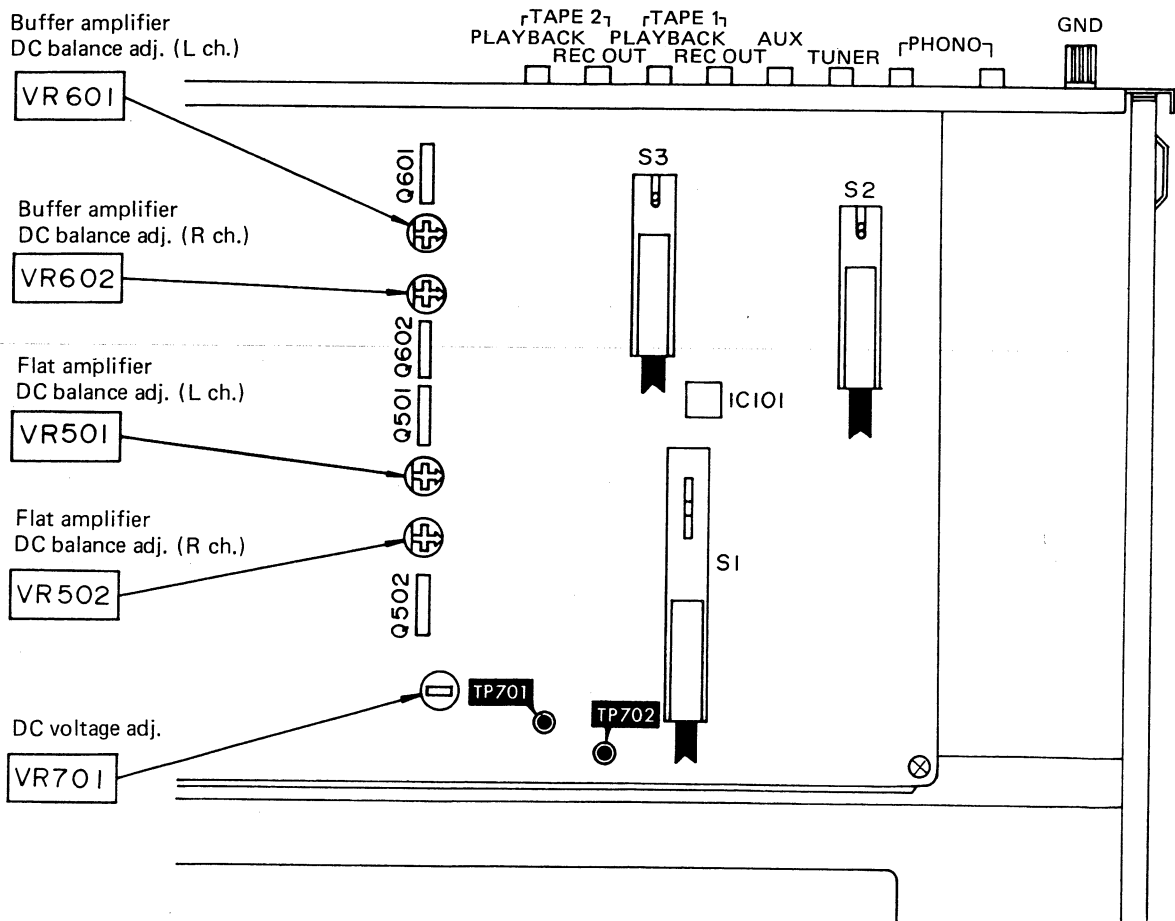
INSTRUCTIONS DE REGLAGE FRANÇAIS

● Réglage des commandes et des appareils à utiliser

1. Sélecteur de fonctionnement . . . "DC"
2. Sélecteur d'entrée tuner
3. Voltmètre CC (pouvant mesurer 1mV)

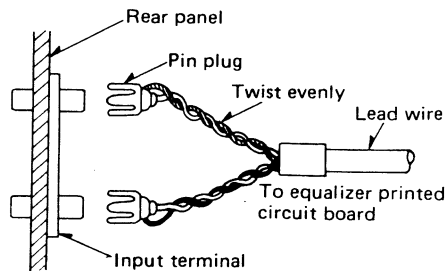
No.	Réglages	Connexions du voltmètre CC	Point de réglage	Procédé de réglage
1	Régulateur de potentiel	Entre TP701 et la masse	VR701	<ul style="list-style-type: none"> ● Tourner les résistances VR701 semifixes regulateur de potentiel sur le minimum. (à gauche) ● Régler les VR701 sur 17V.
2	Equilibre CC	(Canal de gauche) Entre la borne de sortie C.C. (canal de gauche) et la masse. (Canal de droite)	VR601 (Canal gauche)	<ul style="list-style-type: none"> ● Tourner la commande de volume au minimum. ● Régler VR601 (Canal gauche) et VR602 (Canal droit) pour obtenir une lecture minimale, à l'aide de la gamme de 300mV sur le voltmètre CC.
		Entre la borne de sortie C.C. (canal de droite) et la masse.	VR602 (Canal droit)	
3	Equilibre CC	(Canal de gauche) Entre la borne de sortie C.C. (canal de gauche) et la masse. (Canal de droite)	VR501 (Canal gauche)	<ul style="list-style-type: none"> ● Tourner la commande de volume au maximum. ● Régler VR501 (Canal gauche) et VR502 (Canal droit) pour obtenir une lecture minimale, à l'aide de la gamme de 3mV sur le voltmètre CC.
		Entre la borne de sortie C.C. (canal de droite) et la masse.	VR502 (Canal droit)	

● Adjustment points



PRECAUTIONS FOR REPAIR

The S/N ratio of the equalizer circuit may be influenced depending on the way of lead wire arrangement. So after repair of this circuit, twist the leads of phono 1 and 2 evenly 5 or 6 times before connecting them to the terminals. Such may decrease the hum level. (See Fig. 1)



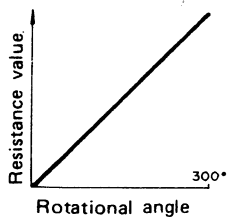
[Fig. 1]

VARIABLE RESISTORS

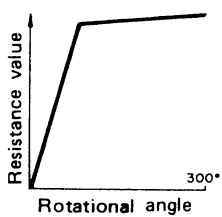
● Alteration of resistance values according to the rotational angles of variable resistors

Alteration characteristics as shown below are often used for sets. All are intended to keep the frequency response of the set at optimum levels, and are used according to the types of circuits. For example, characteristic (B) is used for sound volume adjustment; (A) and (C) are for bass and treble sound quality adjustment; (G) is for medium sound quality adjustment; and (BH) is for the adjustment of sound balance between the right and left.

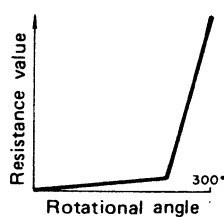
In the case of this unit, variable resistor with characteristic (C) which is short-circuited between its ends at rotational angle of 150° (center) is used for bass adjustment. Also, variable resistor with characteristic (C) whose resistance is zero at rotational angle of 150° (center) is used for treble adjustment. And characteristic (BH) in which two variable resistors are interlocked with characteristics (C) and (A) combined is used for the adjustment of sound level balance.



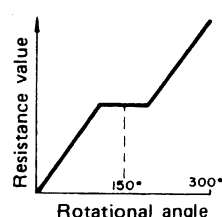
Characteristic (B)



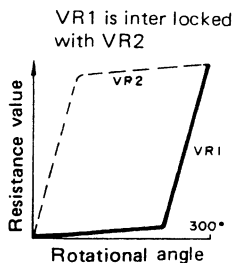
Characteristic (C)



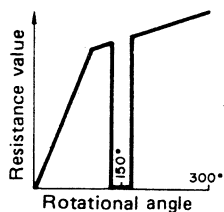
Characteristic (A)



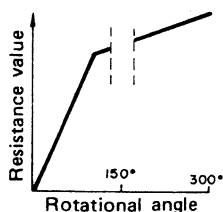
Characteristic (G)



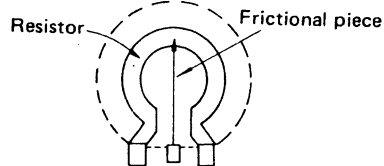
Characteristic (BH)

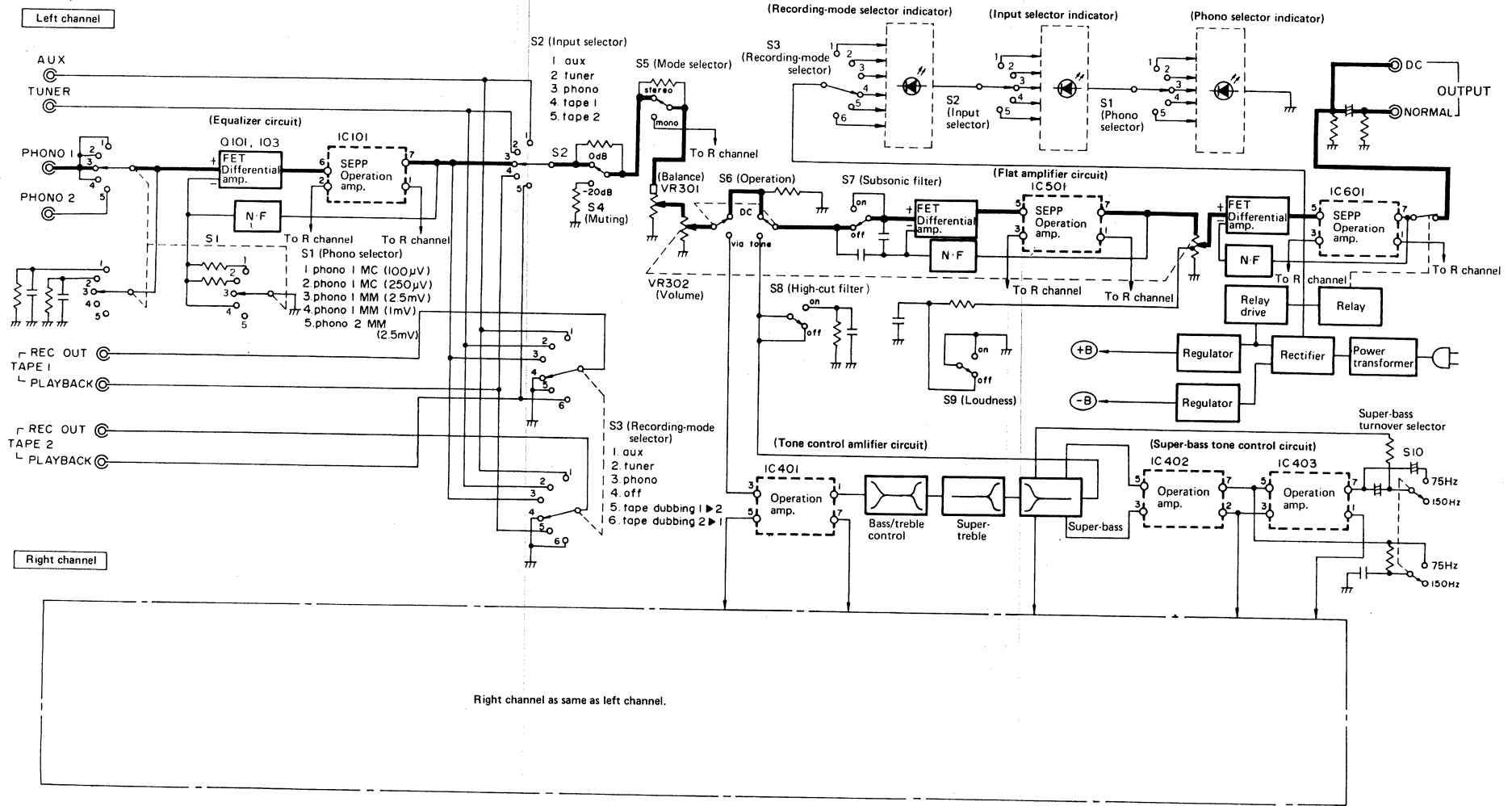


Characteristic (C): short-circuited at center

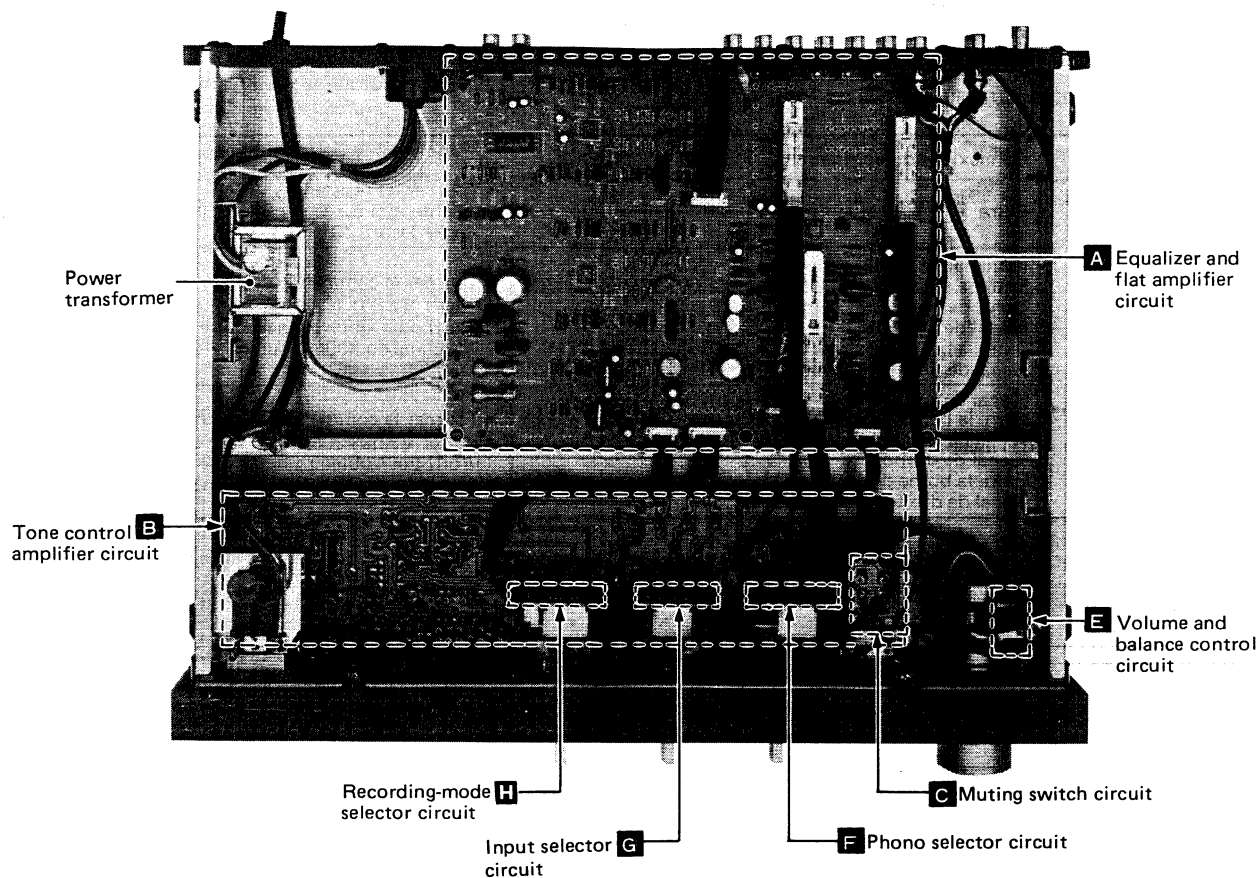


Characteristic (C): opened at center





PRINTED CIRCUIT BOARDS LOCATION



REPLACEMENT PARTS LIST Electrical Parts

- Notes:** 1. Parts numbers are indicated on most mechanical parts. Please use this part number for parts orders.
 2. Important safety notice:
 Components identified by Δ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

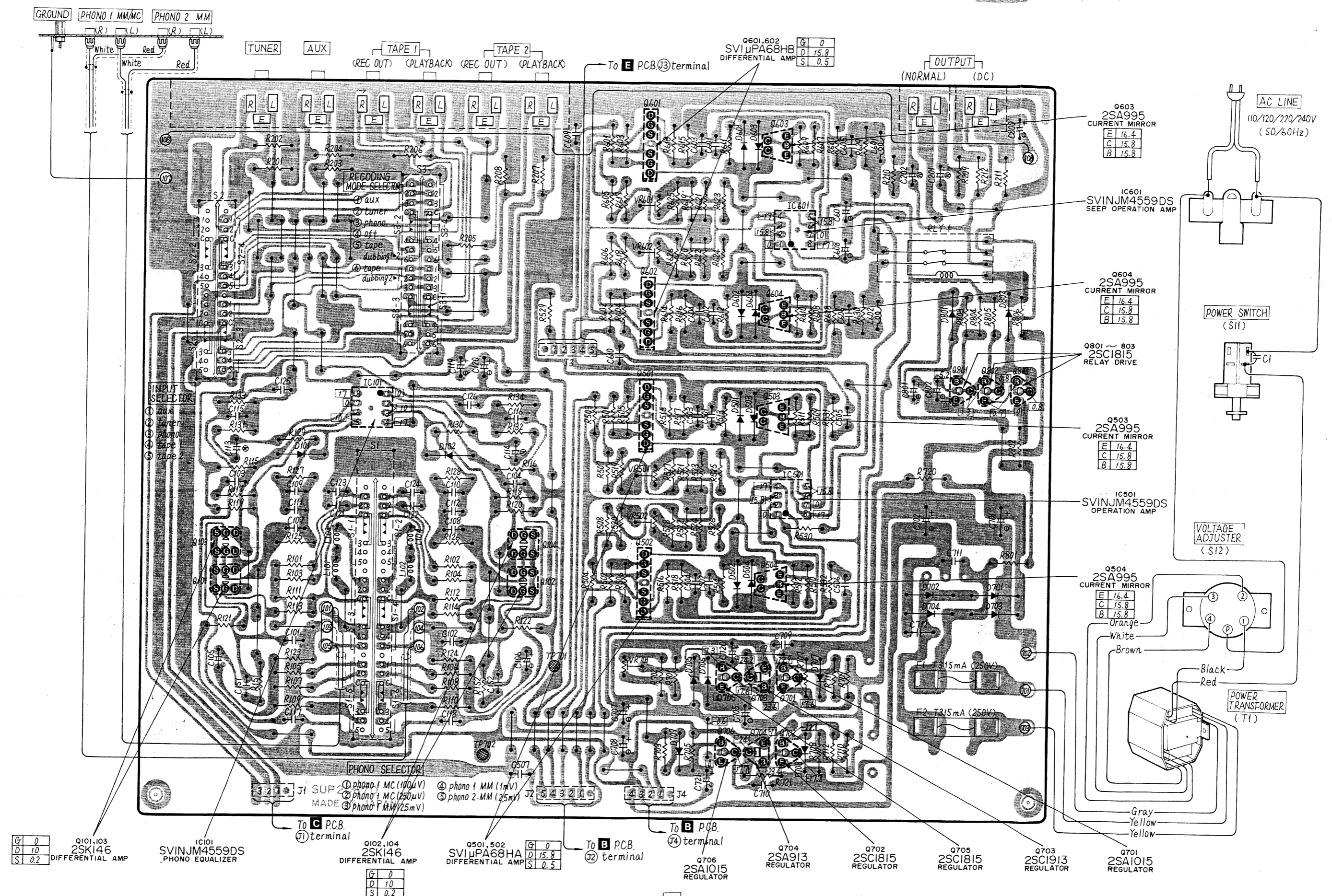
Ref. No.	Part No.	Part Name & Description
INTEGRATED CIRCUITS		
IC101, 401, 501, 601	SVINJM4559DS	IC, Phono Equalizer and Operation Amplifier
IC402, 403	AN6552F	IC, Operation Amplifier
TRANSISTORS		
Q101~104	2SK146-BL	Transistor, Equalizer Differential Amplifier
Q501, 502	SVIUPA68H-KL	Transistor, Differential Amplifier
Q503, 504, 603, 604	2SA995N-G	Transistor, Current Mirror (Use in ranks F or G)
Q601, 602	SVIUPA68H-KL	Transistor, Differential Amplifier
Q701, 706	2SA1015-Y	Transistor, Regulator (Use in ranks Y or O)
Q702, 705	2SC1815-Y	Transistor, Regulator and Relay Drive
801~803		
Q703	2SC1913-R	Transistor, Regulator (Use in ranks Q or R)
Q704	2SA913-R	Transistor, Regulator (Use in ranks Q or R)
DIODES		
D101, 102, 501~504, 601~604, 706, 801, 802	MA162A	Diode, Bias
D701~704	Δ SVDSR1K2	Diode, Rectifier
D705	SVDMZ307A	Diode, 7V Zener
D707, 708, 709	MA27A2	Diode, Bias
D901	RVDRD12FB	Diode, 12V Zener
D902	SVDGL-9PR9	Diode, Operation Indicator (DC)
D903	SVDGL-9HY9	Diode, Operation Indicator (via tone)
D904~919	LN233RP	Diode, Input Selector Indicator
COILS		
L101~104	ELQ5A77	Coil, Choke
L601, 602	RLQX1013-D	Coil, Choke

Ref. No.	Part No.	Part Name & Description
TRANSFORMER		
T1	Δ SLT5J137-W	Transformer, Power Source
VARIABLE RESISTORS		
VR301	EWGHPA065252	Balance Control, 200k Ω (BH)
VR302	EWI6PA0491C3	Volume Control, 200k Ω (C)
VR401	EWGGPY067530	Bass Control, 100k Ω (C)
VR402, 403	EWGGP0067C15	Treble & Super Treble Control, 100k Ω (C)
VR404	EWKMA065B15	Super Bass Control, 100k Ω (B)
VR501, 502	EVMH1GA00B53	DC Balance Adjustment, 5k Ω (B)
601, 602		
VR701	EVTR4SA00B53	Voltage Control Adjustment, 5k Ω (B)
FUSES		
F1, 2	Δ XBA2C03TRO	Fuse, T315mA(250V) P.T. Secondary
SWITCHES		
S1-1~1-6	ESA26523	Switch, Phono Selector
S2-1~2-4, 3-1~3-4	ESA2682	Switch, Input Selector and Record Selector
S4	SSH177	Switch, Muting
S5, 7, 8	SSH395	Switch, Mode and High filter and Subsonic
S6	SSH163	Switch, Operation
S9	SSH165	Switch, Loudness
S10	SSH159	Switch, Turnover
S11	Δ SSH119	Switch, Power
S11 [XA] only	Δ ESB9997S	Switch, Power
S12	Δ ESE372	Switch, Voltage Adjuster
RELAY		
RLY1	Δ SSY9	Relay, Speaker Protection

CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM

A Equalizer & flat amplifier circuit

Ground (Earth) lines



G	0
D	10
S	0.2

Q101,103
2SK146
DIFFERENTIAL AMP

IC101
SVINJM4559DS
PHONO EQUALIZER

To C PCB
① terminal

G	0
D	10
S	0.2

Q102,104
2SK146
DIFFERENTIAL AMP

Q501,502
SV1μPA68HA
DIFFERENTIAL AMP

To B PCB
② terminal

To B PCB
④ terminal

Q704
2SA913
REGULATOR

Q702
2SC1815
REGULATOR

Q705
2SC1815
REGULATOR

Q703
2SC1913
REGULATOR

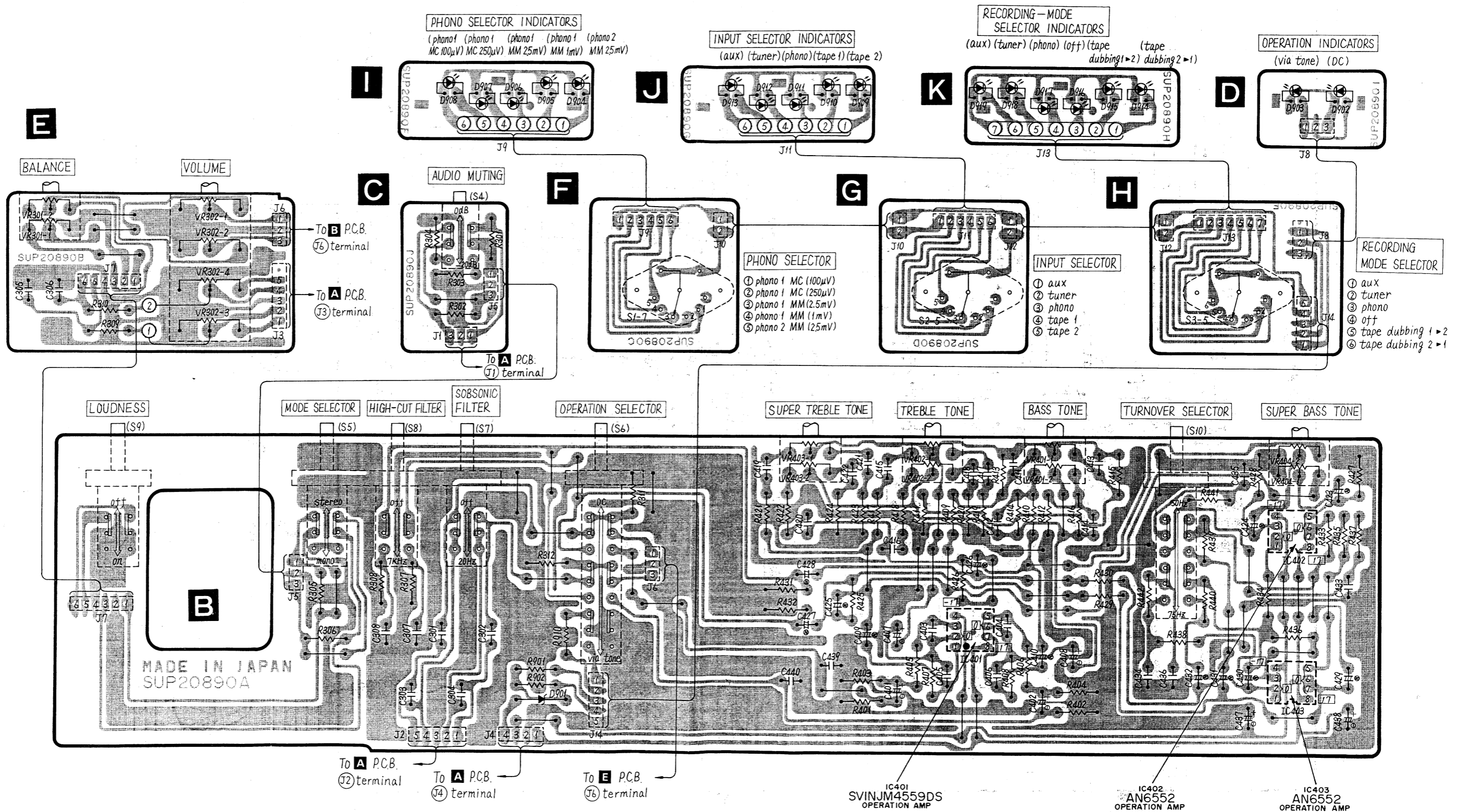
Q701
2SA1015
REGULATOR

SU-A6 SU-A6

B Tone control amplifier circuit **C** Muting switch circuit **D** Operation indicators **E** Volume and balance control circuit

F ~ **K** Selector switch/indicator circuit

Ground (Earth) lines



SCHEMATIC DIAGRAM MODEL **SU-A6**

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

Notes:

1. **S1-1 ~ 1-7:** Phono selector switch in "phono 1 MM (2.5mV)" position.
 - ① phono 1 MC (100 μ V) \leftrightarrow ② phono 1 MC (250 μ V) \leftrightarrow
 - ③ phono 1 MM (2.5mV) \leftrightarrow ④ phono 1 MM (1mV) \leftrightarrow
 - ⑤ phono 2 MM (2.5mV)
2. **S2-1 ~ 2-5:** Input selector switch in "phono" position.
 - ① aux \leftrightarrow ② tuner \leftrightarrow ③ phono \leftrightarrow ④ tape 1 \leftrightarrow ⑤ tape 2
3. **S3-1 ~ 3-5:** Recording-mode selector switch in "off" position.
 - ① aux \leftrightarrow ② tuner \leftrightarrow ③ phono \leftrightarrow ④ off \leftrightarrow
 - ⑤ tape dubbing 1 \rightarrow 2 \leftrightarrow ⑥ tape dubbing 2 \rightarrow 1
4. **S4:** Audio muting switch in "0dB" position.

0dB \leftrightarrow -20dB
5. **S5:** Mode selector switch in "stereo" position.

stereo \leftrightarrow mono
6. **S6:** Operation selector switch in "DC" position.

DC \leftrightarrow via tone
7. **S7:** Subsonic filter switch in "off" position.

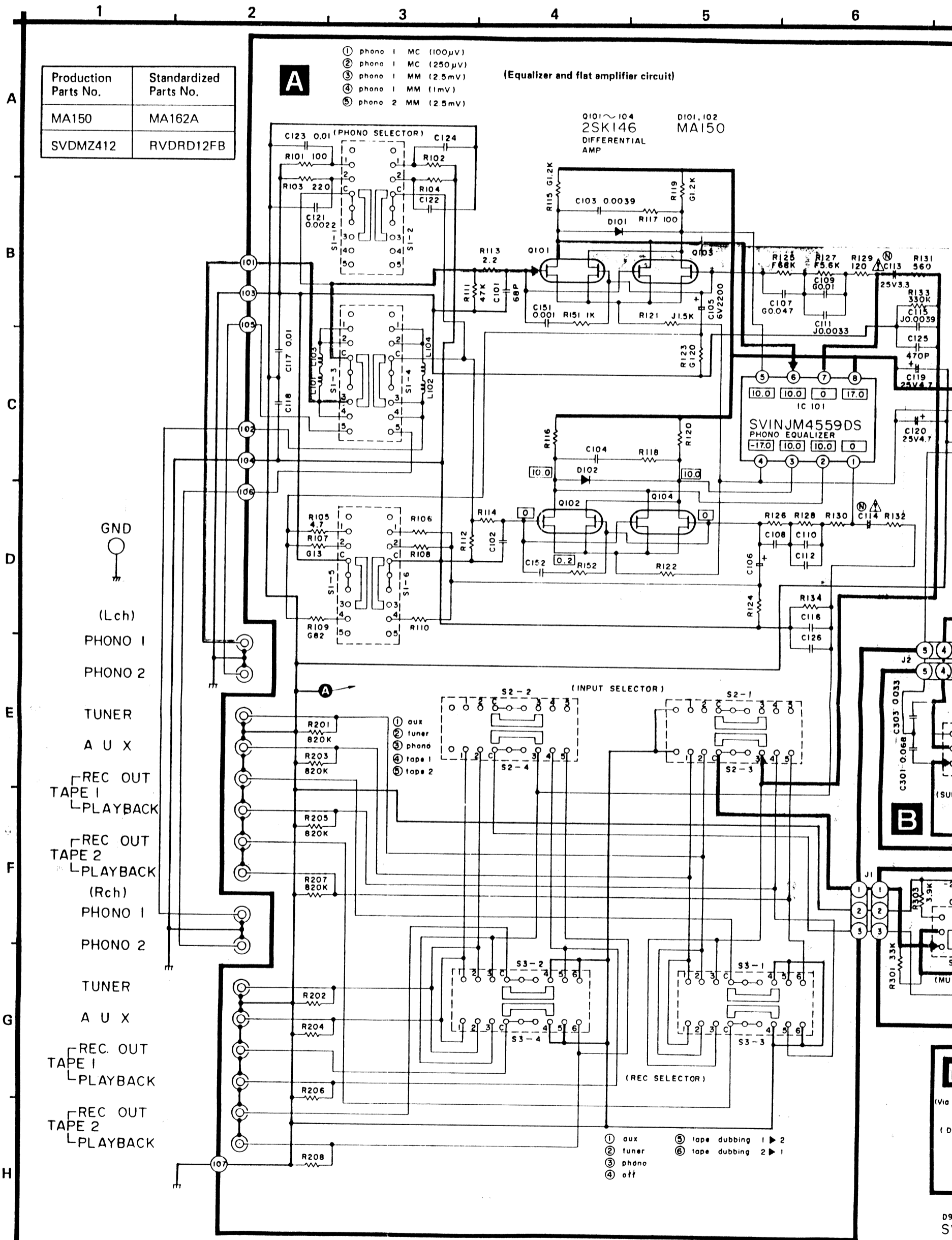
off \leftrightarrow 20 Hz
8. **S8:** High-cut filter switch in "off" position.

off \leftrightarrow 7kHz
9. **S9:** Loudness switch in "off" position.

off \leftrightarrow on
10. **S10:** Super-bass turnover selector switch in "150Hz" position.

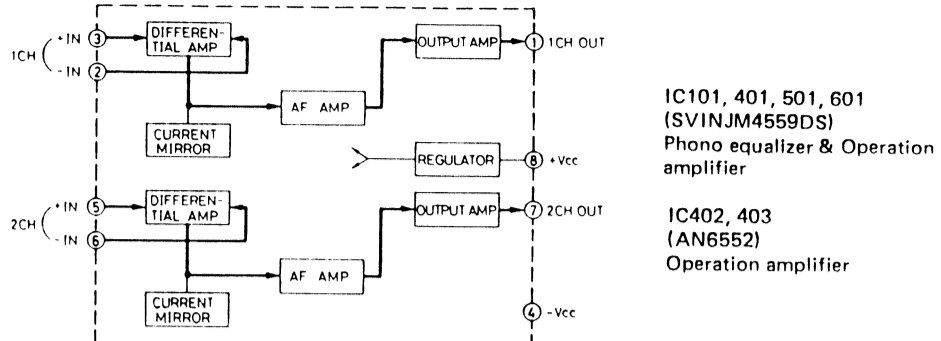
150Hz \leftrightarrow 75Hz
11. **S11:** Power switch in "on" position.
12. **S12:** Voltage adjuster switch in "240V" position.
 - ① 110V \leftrightarrow ② 120V \leftrightarrow ③ 220V \leftrightarrow ④ 240V

13. Indicated voltage values with the impedance) with the voltage values, depending on the position of the switch.
14. Phono signal
15. Positive (+B)
- Negative (-)
16. Important safety note: Components identified with this symbol. When replacing any component, be sure to use the correct type and value.



■ BLOCK DIAGRAM OF IC'S

This is the basic block diagram of the inside circuit of IC. In an actual circuit, there may be sometimes idle terminals or some different functions other than the basic circuit.

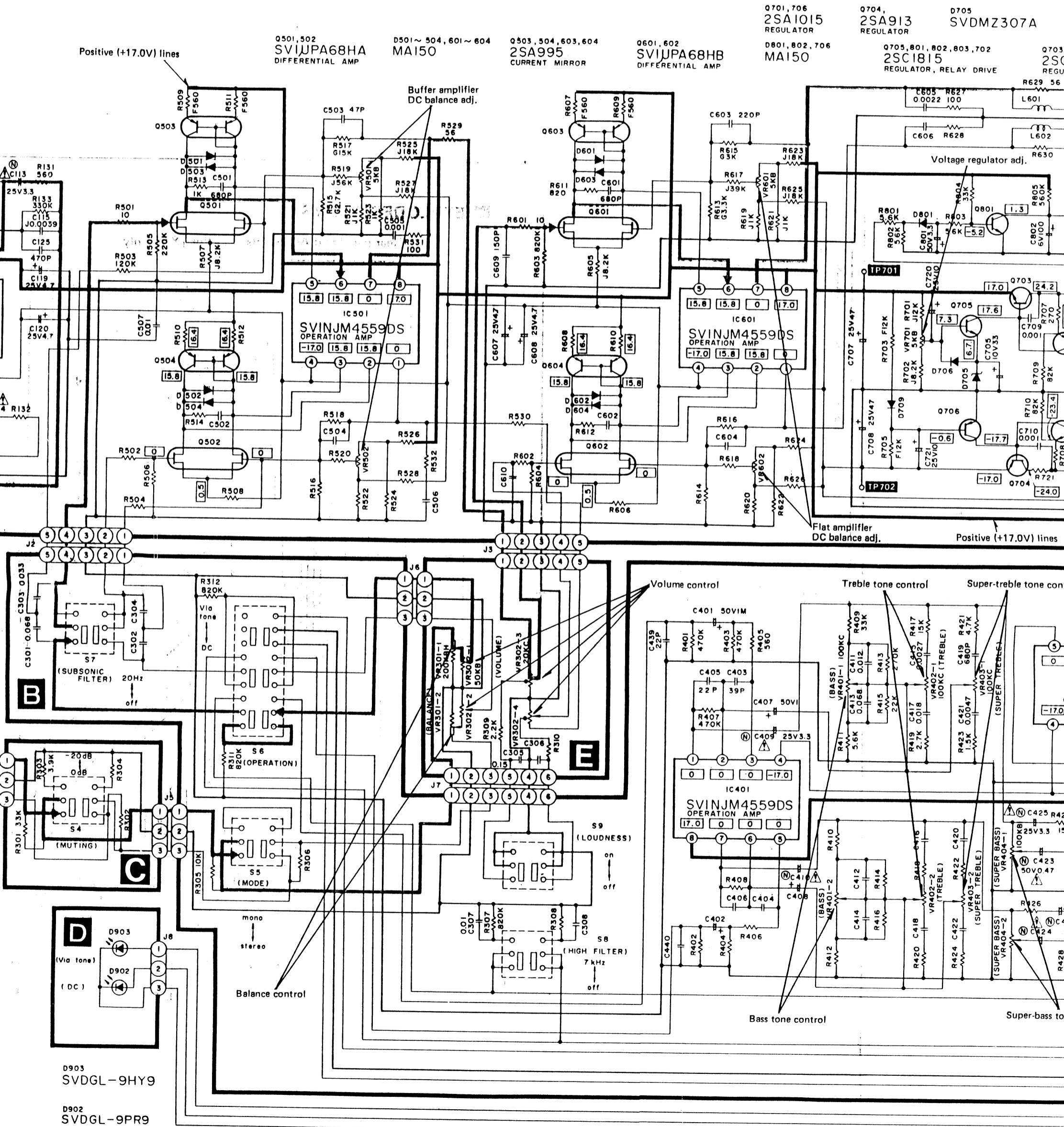


Indicated voltage values are the standard values for the DC electronic circuit tester (high impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

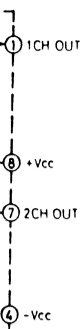
Phono signal lines of left channel
 Positive (+B) voltage lines.
 Negative (-B) voltage.

Important safety notice:
 Components identified by Δ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

7 8 9 10 11 12 13



of IC. In an actual circuit, present functions other than



IC101, 401, 501, 601 (SVINJM4559DS)
Phono equalizer & Operation amplifier

IC402, 403 (AN6552)
Operation amplifier

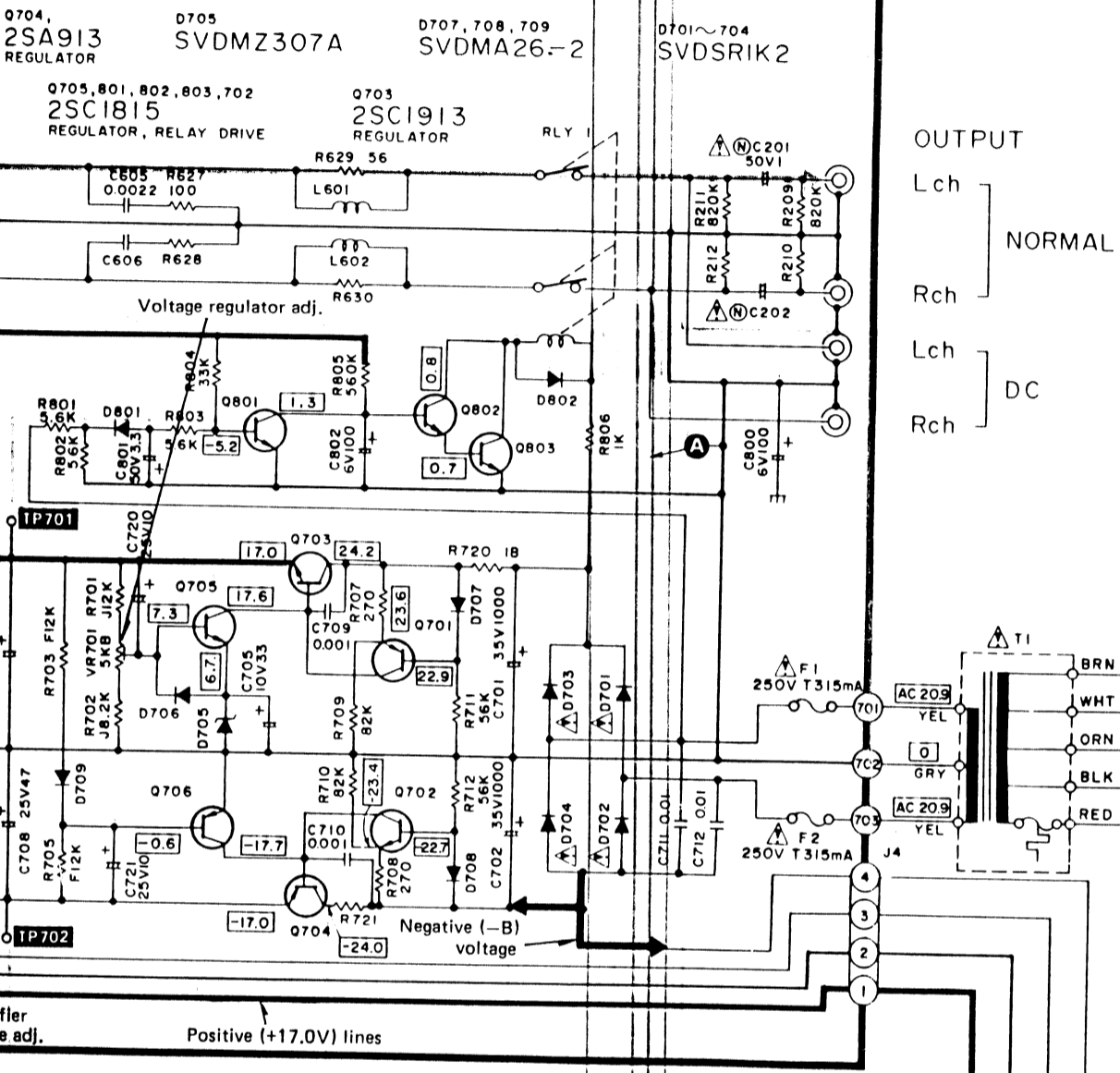
Terminal guide of transistors and IC's

SVINJM4559DS 	AN6552 	2SK146 	1. Drain 1 2. Gate 1 3. Source 1 4. Drain 2 5. Gate 2 6. Source 2
SVIµ PA68H 	2SA995 	2SA1015, 2SC1815 	2SC1913, 2SA913

13

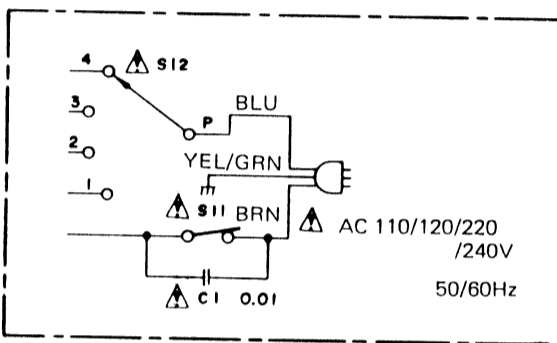
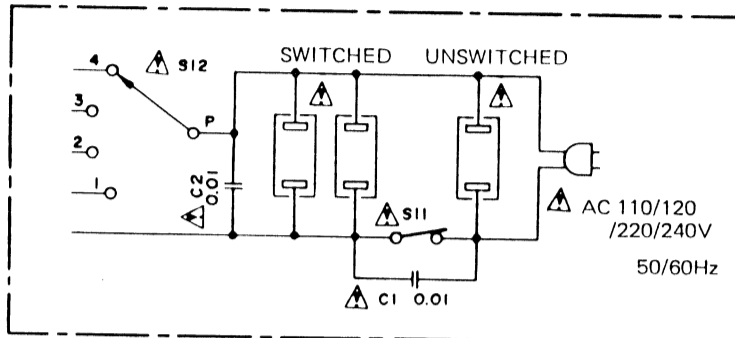
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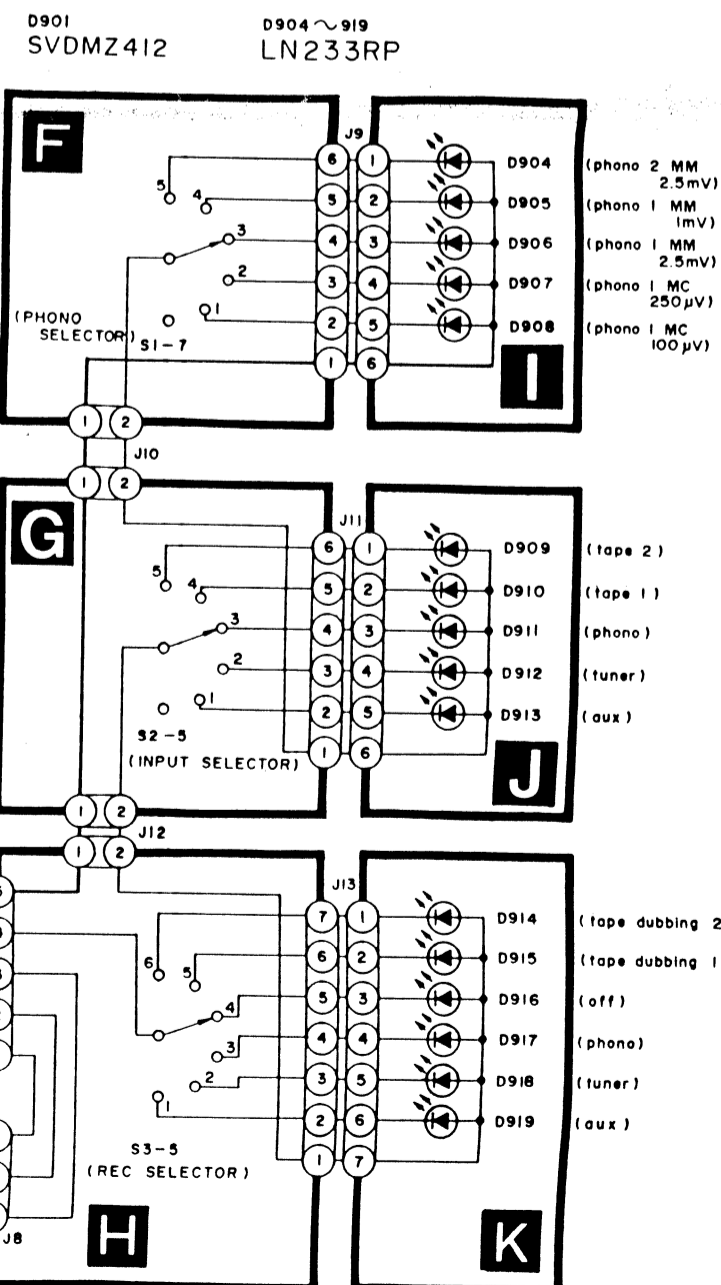
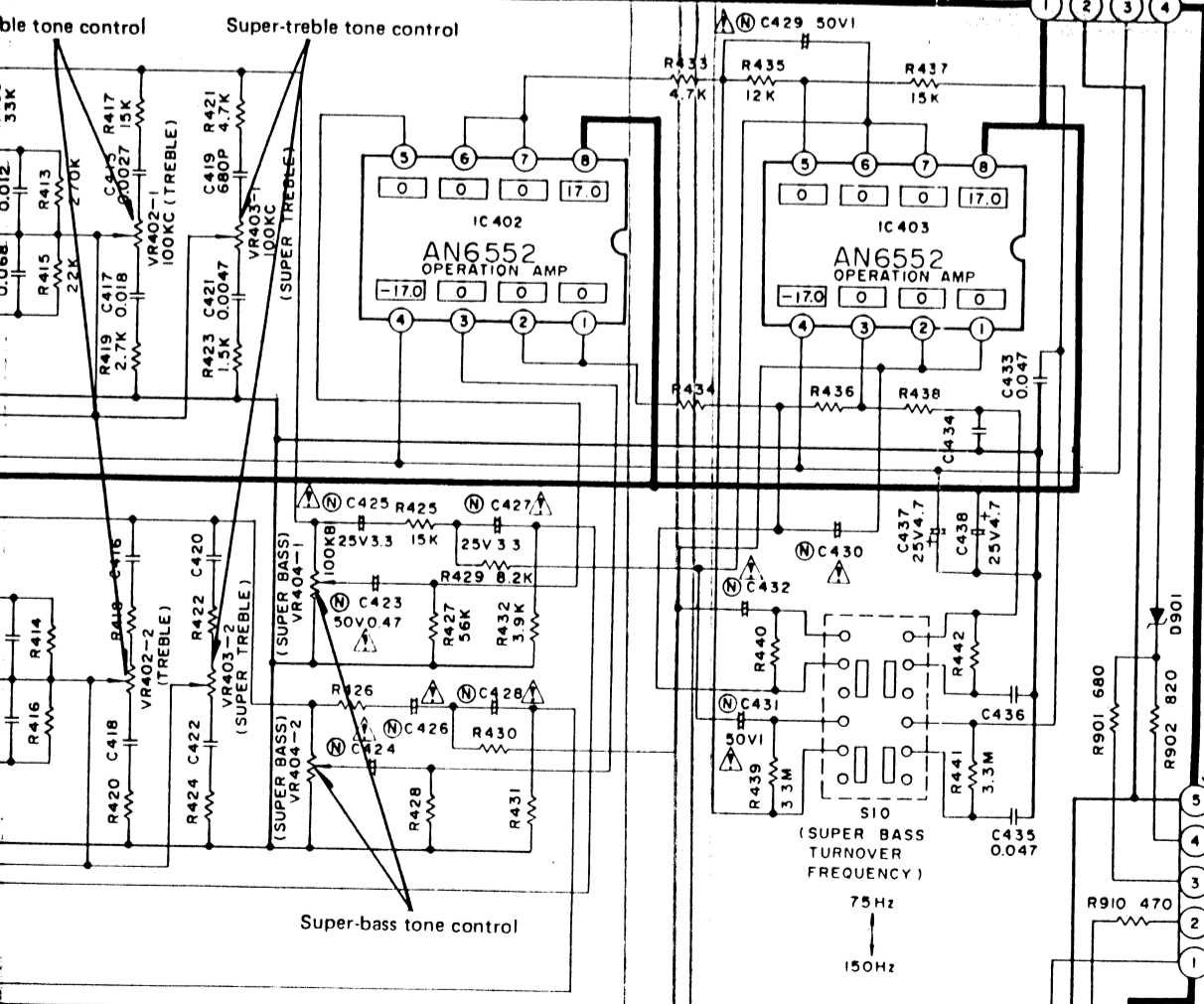


Power source circuits for [XL] and [XA]

[XA] ... Available in Asia, Latin America, Middle East and Africa.



[XL] ... Available in Australia.



15

16

Continued from page 8.

Table with 3 columns: Ref. No., Part No., Part Name & Description. Section: RESISTORS. Lists various resistor parts with their specifications.

Table with 3 columns: Ref. No., Part No., Part Name & Description. Section: CAPACITORS. Lists various capacitor parts with their specifications.

Table with 3 columns: Ref. No., Part No., Part Name & Description. Section: CABINET and CHASSIS PARTS. Lists various cabinet and chassis components.

Table with 3 columns: Ref. No., Part No., Part Name & Description. Section: SCREWS WASHER and NUTS, ACCESSORIES, PACKING PARTS. Lists hardware and accessory parts.

Areas
* [E] and [EG] are available in Scandinavia and European except United Kingdom, France and Holland.
* [EK] is available in United Kingdom.
* [EF] is available in France.
* [EH] is available in Holland.
* [XA] is available in Asia, Latin America, Middle East and Africa.
* [XL] is available in Australia.

Part Name & Description

Panel Door Ass'y
Balance, Super Treble, Treble, Bass
Super Bass
Volume Control
Phono Selector, Input Selector and
Selector
Front Ass'y
Speaker, (Left)

Control Panel Door Opener
Audio Muting Switch
Audio Muting
Push Switch
Loudness, Mode, High cut Filter,
C Filter, Operation and Super Bass
Power Switch
Power Switch

Speaker, (Right)

Volume and Balance Control
Super Treble, Treble, Bass, Super

LED Indicator Rubber
LED Indicator Rubber
Cushion LED Indicator
Cushion LED Indicator

Control, Phono Selector
Control, Input Selector
Control, Rec. Selector
Power Transformer M'fg
Phono Input Connection
Phono 1 Input
Input, Rec. Out and Playback
Output
Lug
Earth Terminal

Earth (Ground)
Earth (Ground)

Panel
Panel, (SGP2370-2A with Name
Plate SGT23530)
Panel
Panel, (SGP2370-4A with Name
Plate SGT23670)
Rear Panel
AC Outlet

AC Cord
AC Cord

Power Source
Power Source
Power Source
Power Source

Board
Resistor
Resistor
Resistor, Lead Wire, 3 Pin
Resistor, Lead Wire, 4 Pin
Resistor, Lead Wire, 5 Pin

Pin
Pin

Printed Circuit Board
Outlet Protection
Cushion, Control Panel Door Opener

Voltage Adjuster
Strip, 2P (Except Product
for [XA])
Voltage Adjuster

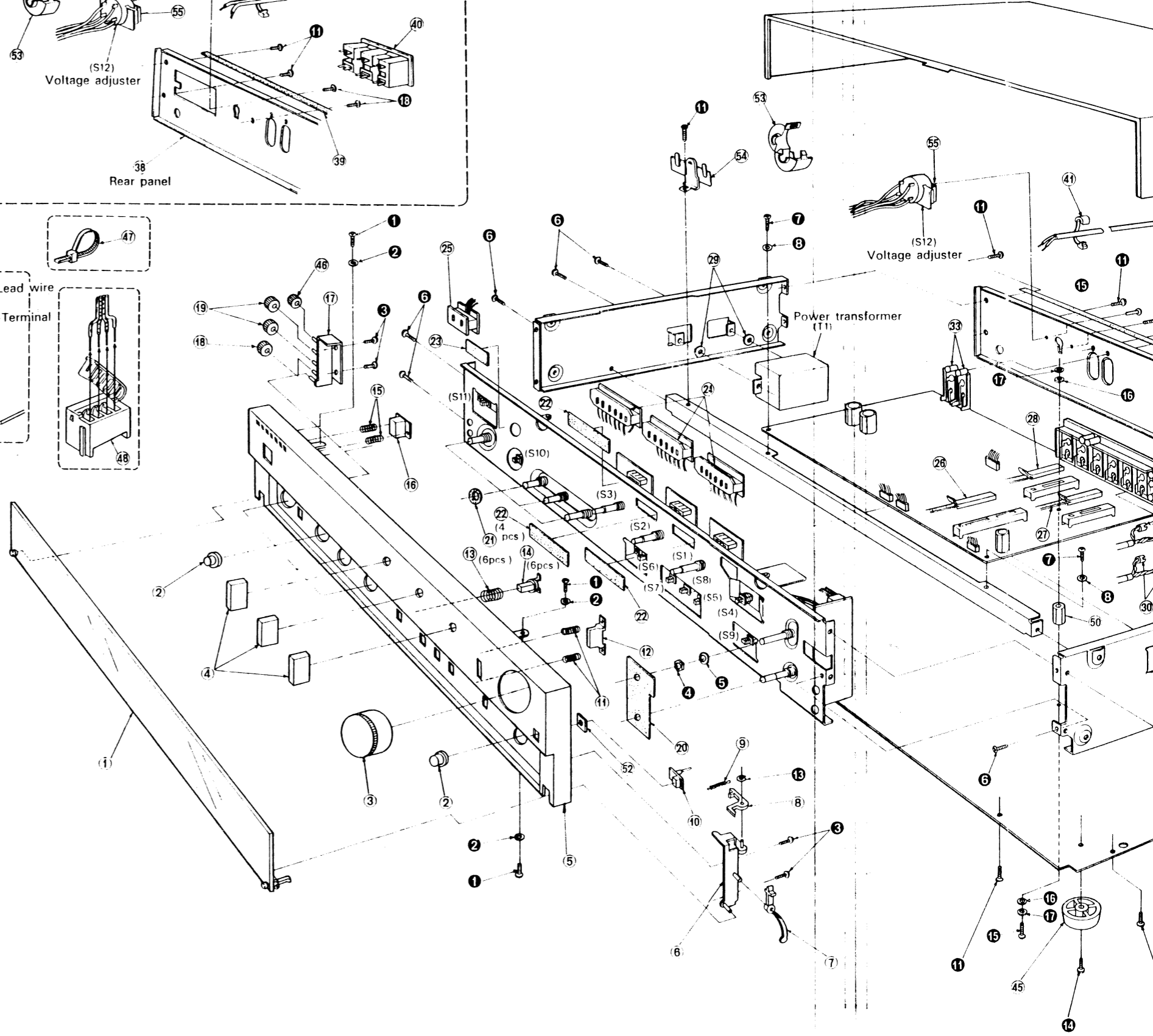
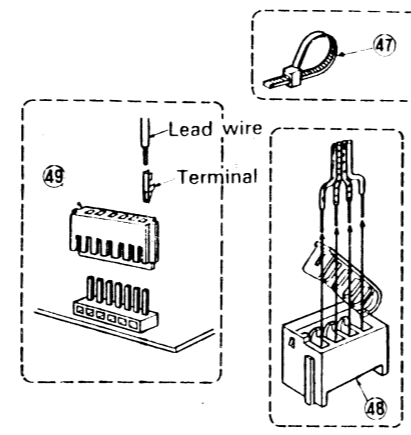
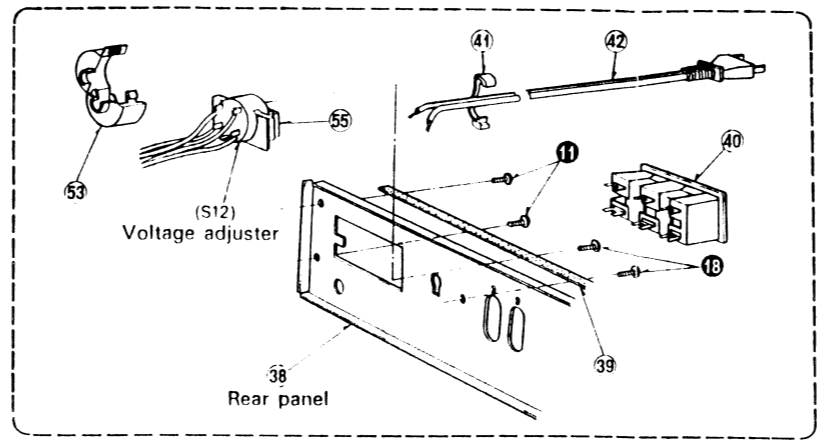
Ref. No.	Part No.	Part Name & Description
SCREWS WASHER and NUTS		
1	XTB3+8BFZ	Screw, Tapping, \oplus 3x8
2	XWC3BFZ	Washer, Toothed, ϕ 3
3	XSN3+8S	Screw, \oplus 3x6
4	XNS8	Nut, M8
5	XW7/8	Washer, Spring, ϕ 8
6	XTB3+8BFN	Screw, Tapping, \oplus 3x8
7	XTV3+8BFN	Screw, Tapping, \oplus 3x8
8	XWC3B	Washer, Toothed, ϕ 3
9	XNG4ES	Nut, M4 (Ground Terminal)
10	XWC4B	Washer, Toothed, ϕ 4
11	XTE3+8BFZ	Screw, Tapping, \oplus 3x8
12	XSS35+12F1S	Screw, \oplus 5x12
13	XUC3FT	Circlip
14	XTB3+12BFZ	Screw, Tapping, \oplus 3x12
15	XSN3+8BNS	Screw, \oplus 3x8
16	XWG3FN	Washer, Plain, ϕ 3
17	XWA3BFN	Washer, Spring, ϕ 3
18	XTE3+16BFZ	Screw, Tapping, \oplus 3 x 16
ACCESSORIES		
A1	SJP2239	Cord, Stereo Pin-Type Connection
A2 [XA] only	RJP74-1	Plug Adapter, AC Power
A3 [XA] only	RJP75	Plug Adapter, AC Power
A4	SJP2239	Cord, Stereo Pin-Type Connection
PACKING PARTS		
P1	SPP389	Polyethylene Bag
P2	SPS2955	Pad, Left Side
P2 [XL] only	SPS2955-1	Pad, Left Side
P3	SPS2957	Pad, Right Side
P3 [XL] only	SPS2957-1	Pad, Right Side
P4 [E,EG,EK, EH,XA,EB]	SPG2987	Carton Box
P4 [XL]	SPG2889	Carton Box
P4 [EF]	SPG2871	Carton Box
P5	SQF10701	Instructions Book, Printed Matter
P5 [XA] only	SQF10703	Instructions Book, Printed Matter

Areas

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- [EK] is available in United Kingdom.
- [EF] is available in France.
- [EH] is available in Holland.
- [XA] is available in Asia, Latin America, Middle East and Africa.
- [XL] is available in Australia.

EXPLODED VIEWS

Rear panel and AC outlets . . . for [XA] only



EXPLODED VIEWS

Rear panel and AC outlets . . . for [XA] only

