

Service Manual

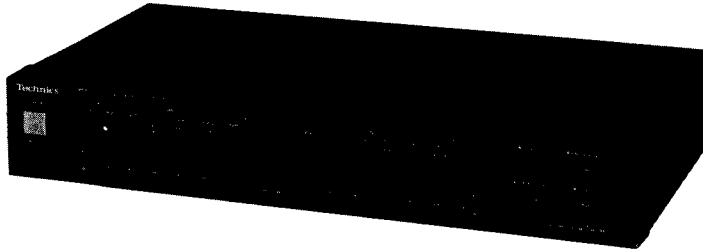
Equalizer

Stereo Graphic Equalizer

SH-8038

Color

(S) Silver Type
(K) Black Type



Area

Color	Area
(K)	(M).....U.S.A.
(K)	(MC).....Canada.
(S)(K)	(EX).....Continental Europe.
(S)(K)	(Ei).....Italy.
(S)(K)	(EG).....F.R.Germany.
(S)(K)	(EB).....Belgium.
(S)(K)	(EK).....United Kingdom.
(S)(K)	(EF).....France.
(S)(K)	(EH).....Holland.
(S)(K)	(XL).....Australia.
(S)(K)	(XA).....Asia, Latin America, Middle Near East, Africa and Oceania.
(S)(K)	(PA).....Far East PX.
(S)(K)	(PE).....European Military.
(S)(K)	(XB).....Saudi Arabia.

SPECIFICATIONS

Frequency response (center position)	5 Hz ~ 100 kHz, -3 dB
Maximum output voltage	7 V (1 kHz, THD 0.01%)
Rated output voltage	1 V
Rated total harmonic distortion	0.005% (20 Hz ~ 20 kHz) 0.003% (1 kHz)
Input sensitivity	1 V
Signal-to-noise ratio	110 dB (IHF'A) 100 dB (DIN)
Maximum input voltage	7 V (1 kHz)
Input impedance	33 kΩ
Gain	0±1 dB
Band level controls	+ 12 dB ~ -12dB (7 continuously variable elements per channel)
Center frequency	63 Hz, 160 Hz, 400 Hz, 1 kHz 2.5 kHz, 6.3 kHz, 16 kHz
Channel separation 1kHz	60 dB (DIN)

CONTENTS

	Page
SAFETY PRECAUTION.....	2
ACCESSORIES.....	2
LOCATION OF CONTROLS.....	3
CONNECTIONS.....	4
DISASSEMBLY INSTRUCTIONS.....	5
CIRCUIT BOARDS AND WIRING CONNECTION DIAGRAM.....	6,7

Channel balance
250Hz ~ 6300Hz ± 0.5dB (DIN)

GENERAL

Power supply
For U.S.A. and Canada AC 120 V, 60 Hz
For Continental Europe AC 220 V, 50 Hz/60 Hz
For United Kingdom and Australia AC 240 V, 50 Hz/60 Hz
For others AC 110 V ~ 127 V/220 V ~ 240 V,
50 Hz/60 Hz

Power consumption 7 W

Dimensions
(W X H X D) 430 X 75 X 192.5 mm
(16-15/16" X 2-31/32" X 7-19/32")
1.85 kg (4.1 lb.)

Weight

Specifications are subject to change without notice for further improvement. Weight and dimensions are approximate.

	Page
REPLACEMENT PARTS LIST (Electrical).....	8
TERMINAL GUIDE OF TRANSISTORS, DIODES AND IC'S.....	8
SCHEMATIC DIAGRAM.....	9 ~ 11
EXPLODED VIEW.....	12
REPLACEMENT PARTS LIST.....	13
RESISTORS AND CAPACITORS.....	14

Technics

Matsushita Services Company
50 Meadowland Parkway,
Secaucus, New Jersey 07094

Panasonic Sales Company,
Division of Matsushita Electric
of Puerto Rico, Inc.
Ave. 65 De Infanteria, Km. 9.7
Victoria Industrial Park
Carolina, Puerto Rico 00630

Panasonic Hawaii, Inc.
91-238, Kauhū St. Ewa Beach
P.O. Box 774
Honolulu, Hawaii 96808-0774

Matsushita Electric
of Canada Limited
5770 Ambler Drive, Mississauga,
Ontario, L4W 2T3

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

Panasonic Tokyo Office
Matsushita Electric Trading Co., Ltd.
6th Floor, World Trade Center Bldg.,
No. 4-1, Hamamatsu-cho 2-Chome,
Minato-ku, Tokyo 105, Japan

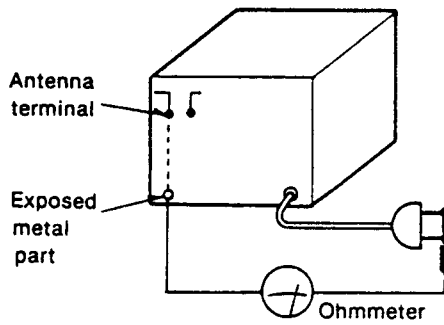
SAFETY PRECAUTION (This "safety precaution" is applied only in U.S.A.)

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacturer's recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

INSULATION RESISTANCE TEST

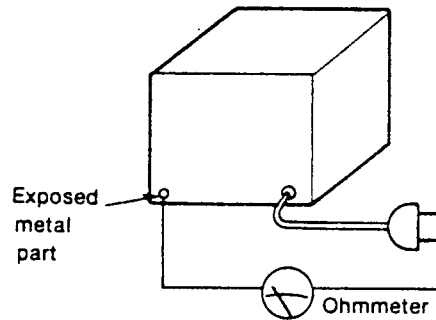
1. Unplug the power cord and short the two prongs of the plug with a jumper wire.
2. Turn on the power switch.
3. Measure the resistance value with ohmmeter between the jumpered AC plug and each exposed metal cabinet part, such as screwheads antenna, control shafts, handle brackets, etc. Equipment with antenna terminals should read between $3M\Omega$ and $5.2M\Omega$ to all exposed parts. (Fig. A) Equipment without antenna terminals should read approximately infinity to all exposed parts. (Fig. B)

Note: Some exposed parts may be isolated from the chassis by design. These will read infinity.



(Fig. A)

Resistance = $3M\Omega$ — $5.2M\Omega$



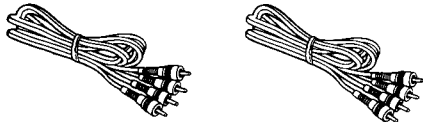
(Fig. B)

Resistance = Approx ∞

4. If the measurement is outside the specified limits, there is a possibility of a shock hazard. The equipment should be repaired and rechecked before it is returned to the customer.

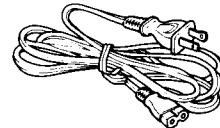
ACCESSORIES

- Stereo connections cables 2



(SJKP2202-1) all areas.

- AC power supply cord 1



- (SJA175-1T) (M) only.
- (SJA172) (MC) only.
- (SFDAC05E03) (EX), (EH), (EB), (EF), (Ei) and (EG) areas.
- (SFDAC05G02) (EK) only.
- (SJA168-1) (PA) and (PE) areas.
- (SJA173) (XL) only.
- (SJA183) (XB) only.
- (SJA185) (XA) only.

■ LOCATION OF CONTROLS

● Power switch (power)

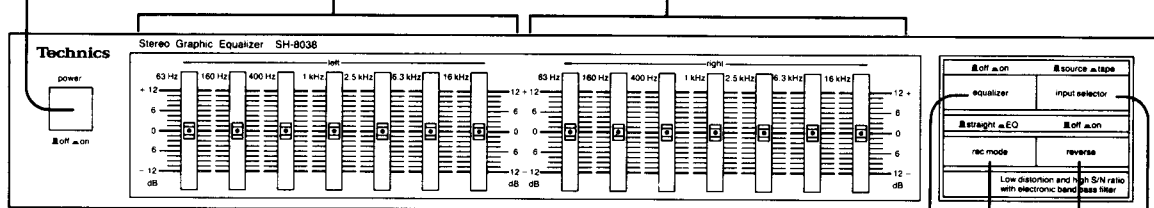
This switch turns on and off the secondary circuit power only. The unit is in the "standby" condition when this switch is set to the "off" (⏏) position. Regardless of the switch setting, the primary circuit is always "live" as long as the power cord is connected to an electrical outlet.

● Left channel Band-level controls (left)

These levers are used to adjust the 7 frequency levels. When these levers are moved in the "+ dB" direction, peak frequency characteristics are obtained. When they are moved in the "- dB" direction, dip frequency characteristics are obtained. These characteristics can be adjusted a maximum of ± 12 dB. When the power switch is set to the "on" position, the tip of these levers will illuminate.

● Right channel Band-level controls (right)

These levers function the same as the left channel band-level controls.



● Equalization switch (equalizer)

This switch is used to turn the equalization circuitry on and off.

on (⏏):

Set to this position for equalizer correction.

off (⏏):

Set to this position to turn off equalizer correction. By turning this switch on and off, the equalizer effect can also be checked. When this switch is in the "off" (⏏) position, signals will still pass through the unit and be emitted, regardless of whether the power switch is in the "on" or "off" position.

● Recording mode selector (rec mode)

straight (⏏):

Set to this position to record without equalizer correction.

EQ (⏏):

Set to this position to make a tape recording of a radio broadcast or a disc while controlling the frequency response.

Note:

The equalization switch must be set to the "on" (⏏) position and then the input selector must be set to the "source" (⏏) position, otherwise the frequency response cannot be controlled.

This only works for tape decks connected to this unit.

● Reverse mode selector (reverse)

off (⏏):

This is the normal position for use, when set to this position, the sound level of desired frequencies can be raised or lowered 12 dB by moving the lever in the (+dB) direction or (-dB) direction.

on (⏏):

When set to this position, characteristics are obtained which are completely inverted with respect to those obtained in the "off" position.

This is convenient for purposes such as reducing tape hiss, etc.

● Input selector (input selector)

source (⏏):

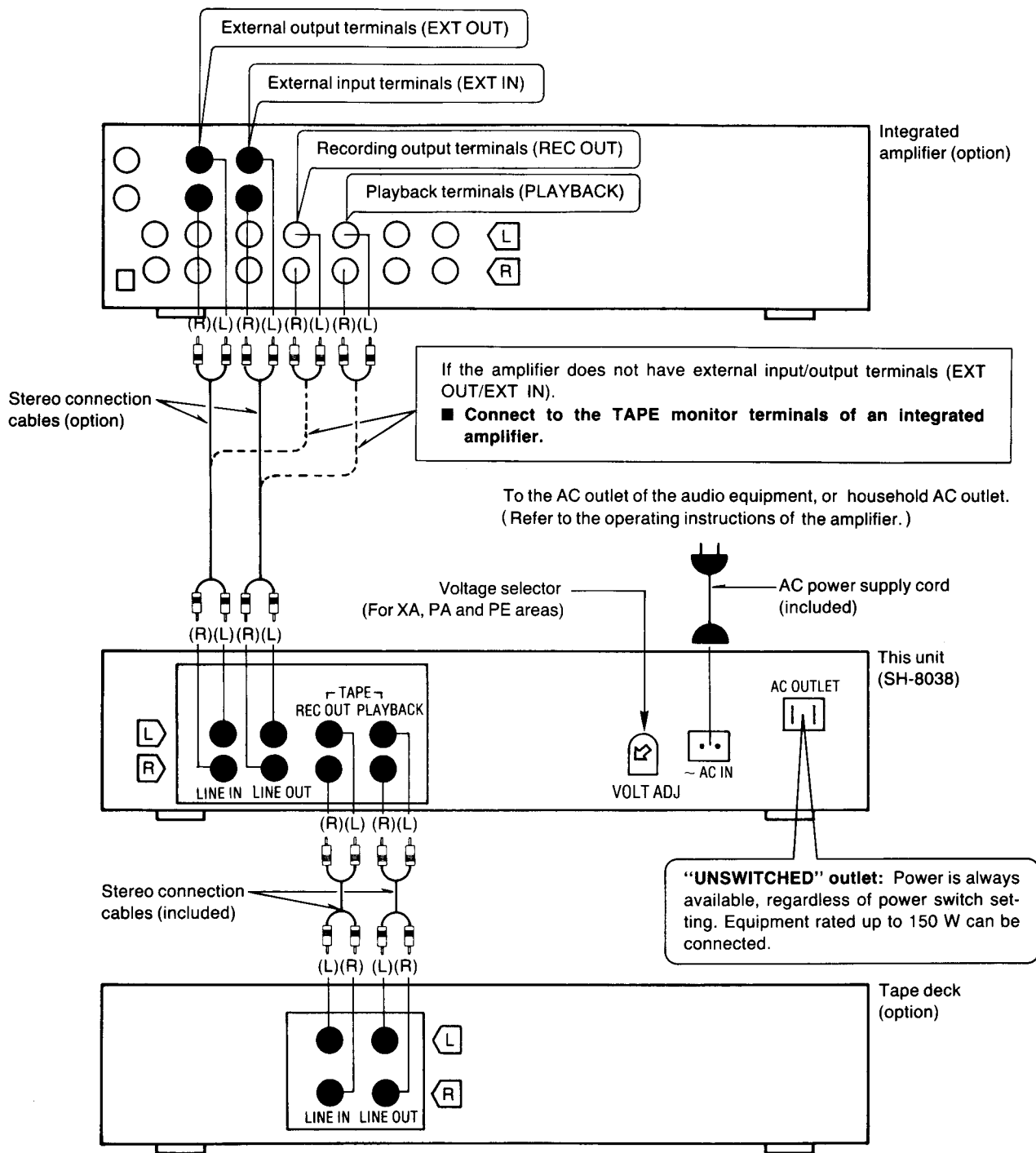
Set to this position to listen to the radio or a compact disc, etc.

tape (⏏):

Set to this position to listen to a tape deck connected to the back of this unit.

■ CONNECTIONS

- Connect to the input/output (EXT OUT/EXT IN) terminals of an integrated amplifier. Using the connection diagram below, corrected signals from any source can be heard or recorded onto the tape deck.



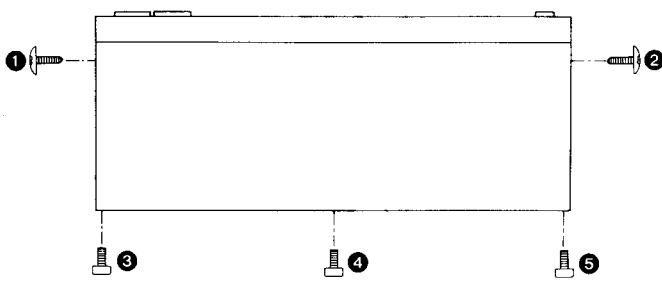
Note: A receiver or preamplifier can be connected in the same manner as described above. An integrated amplifier is used here for example.

CAUTION:
 TO PREVENT ELECTRIC SHOCK MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

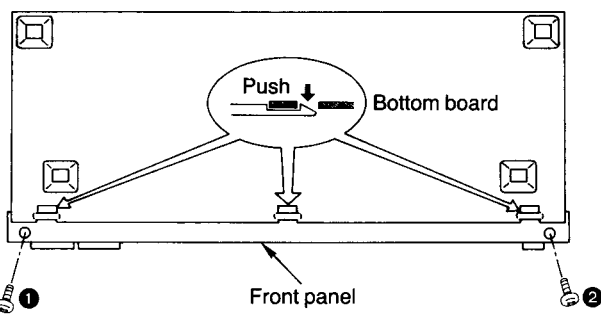
Note that the way the input and output cords are routed (for example, if they are tangled with the power cord) could cause a hum to be emitted.

DISASSEMBLY INSTRUCTIONS

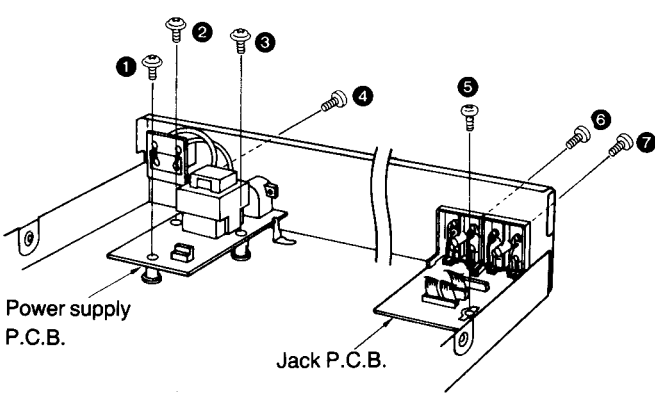
Ref. No. 1	How to remove the cabinet
Procedure 1	<ul style="list-style-type: none"> Remove the 5 screws (①~⑤).



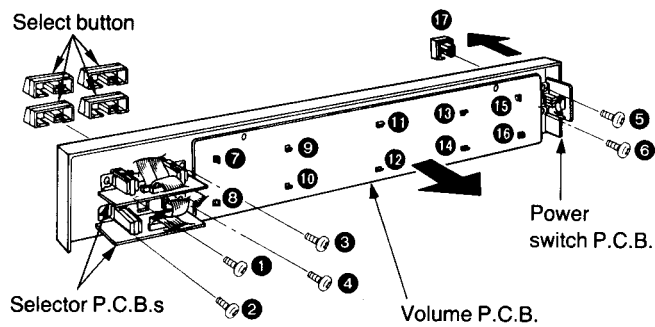
Ref. No. 2	How to remove the front panel
Procedure 1→2	<ul style="list-style-type: none"> Remove the 2 screws (①, ②) Push the 3 tabs projected from the bottom board in the direction of the arrow.



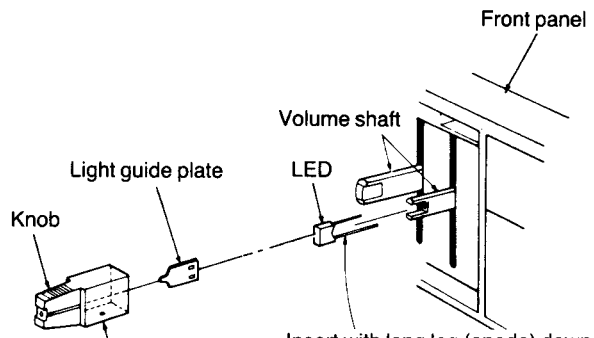
Ref. No. 3	How to remove the power supply P.C.B. and Jack P.C.B.
Procedure 1→3	<ul style="list-style-type: none"> Remove the 4 screws (①~④) of power supply P.C.B. Remove the 3 screws (⑤~⑦) of Jack P.C.B.



Ref. No. 4	How to remove the power switch P.C.B., volume P.C.B., and selector P.C.B.
Procedure 1→2→4	<ul style="list-style-type: none"> Remove the 4 screws. (①~④) Remove the 2 screws. (⑤, ⑥) Push the 10 tabs aside. (⑦~⑯) Remove the 4 select buttons. Remove the power switch button (⑰) in the direction of the arrow.



How to fit the volume rod



Knob

Light guide plate

LED

Volume shaft

Front panel

Insert with long leg (anode) down

Fit the knob with gate hole side down.

CIRCUIT BOARDS AND WIRING CONNECTION DIAGRAM

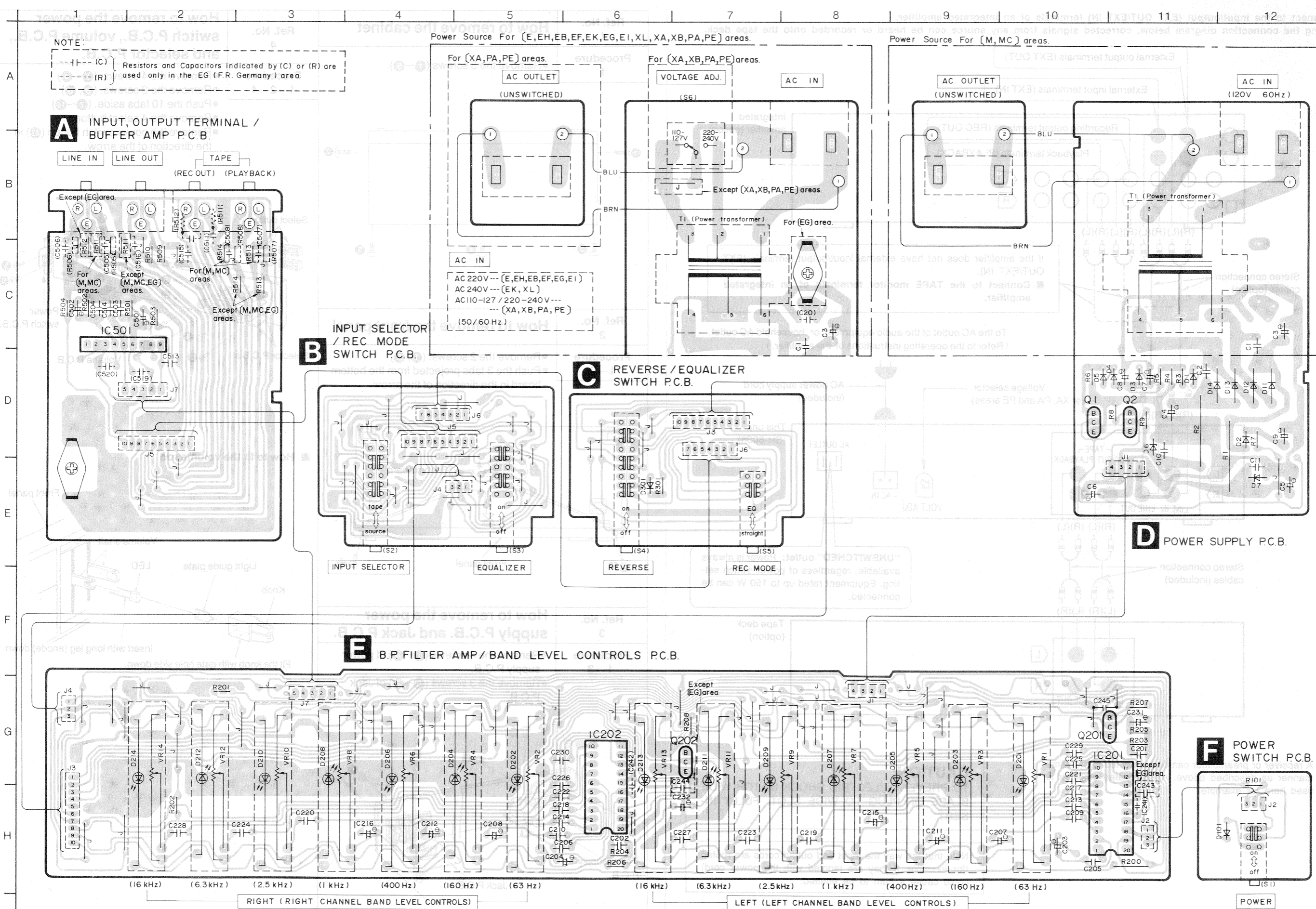
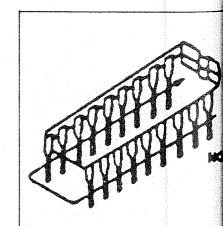
REPLACEMENT PARTS LIST

Notes: * Important s... Component... manufactur... * Bracketed i... Parts witho...

ELECTRICAL CONNECTIONS

Table with columns: Ref. No., Part, INTEGRATED CIRCUITS, TRANSISTORS, DIODES. Lists components like IC201, IC202, IC501, Q1, Q2, Q201, Q202, D1, D2, D3, D4, D5, D6, D7, D11, D12, D13, D14, D101, D201, D202, D203, D204, D205, D206, D207, D208, D209, D210, D211, D212, D213.

TERMINAL CONNECTIONS



NOTE: (C) Resistors and Capacitors indicated by (C) or (R) are used only in the EG (F.R. Germany) area.

B INPUT SELECTOR / REC MODE SWITCH P.C.B.

C REVERSE / EQUALIZER SWITCH P.C.B.

D POWER SUPPLY P.C.B.

E B.P. FILTER AMP / BAND LEVEL CONTROLS P.C.B.

F POWER SWITCH P.C.B.

REPLACEMENT PARTS LIST

Notes : * 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.

* Bracketed indications in Ref. No. columns specify the area. (Refer to the first page for area.)
Parts without these indications can be used for all areas.

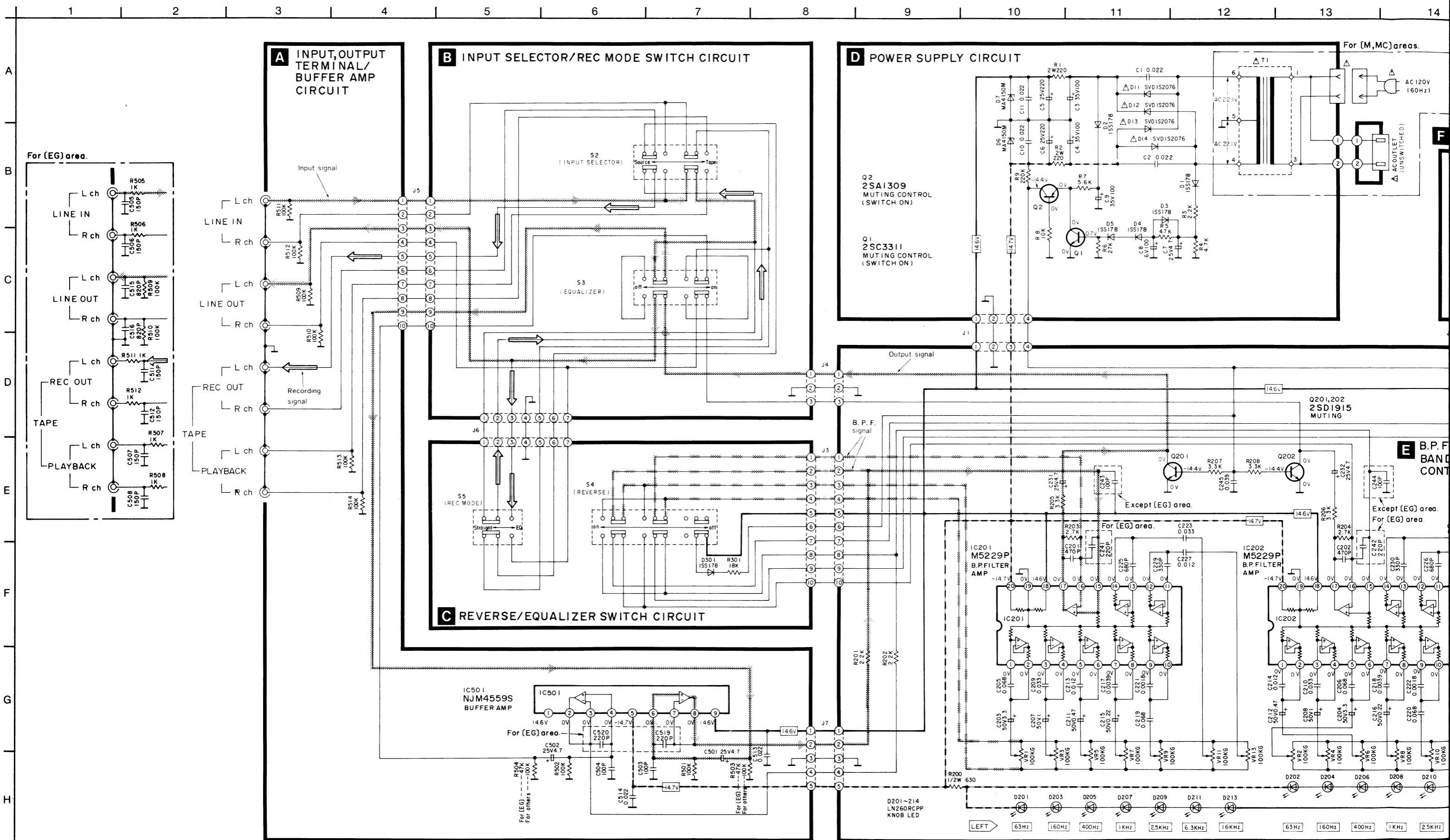
ELECTRICAL PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
INTEGRATED CIRCUITS			D214	LN260RCP	DIODE ASS'Y
IC201	M5229	I.C. B.P.FILTER	D301	1SS178	DIODE
IC202	M5229	I.C. B.P.FILTER	VARIABLE RESISTORS		
IC501	NJM4559S	I.C. BUFFER AMP	VR1	EWANW1J15G15	VARIABLE RESISTOR
TRANSISTORS			VR2	EWANW1J15G15	VARIABLE RESISTOR
Q1	2SC3311A-Q	TRANSISTOR	VR3	EWANW1J15G15	VARIABLE RESISTOR
Q2	2SA1309QRS	TRANSISTOR	VR4	EWANW1J15G15	VARIABLE RESISTOR
Q201	2SD1915S	TRANSISTOR	VR5	EWANW1J15G15	VARIABLE RESISTOR
Q202	2SD1915S	TRANSISTOR	VR6	EWANW1J15G15	VARIABLE RESISTOR
DIODES			VR7	EWANW1J15G15	VARIABLE RESISTOR
D1	1SS178	DIODE	VR8	EWANW1J15G15	VARIABLE RESISTOR
D2	1SS178	DIODE	VR9	EWANW1J15G15	VARIABLE RESISTOR
D3	1SS178	DIODE	VR10	EWANW1J15G15	VARIABLE RESISTOR
D4	1SS178	DIODE	VR11	EWANW1J15G15	VARIABLE RESISTOR
D5	1SS178	DIODE	VR12	EWANW1J15G15	VARIABLE RESISTOR
D6	MA4150M	DIODE	VR13	EWANW1J15G15	VARIABLE RESISTOR
D7	MA4150M	DIODE	VR14	EWANW1J15G15	VARIABLE RESISTOR
D11	SVD1S2076AT	DIODE SI	COILS AND TRANSFORMERS		
D12	SVD1S2076AT	DIODE SI	PT1 Δ	SLTK511-M	POWER TRANSFORMER
D13	SVD1S2076AT	DIODE SI	(M, MC)		
D14	SVD1S2076AT	DIODE SI	PT1 Δ	SLTK512-W	POWER TRANSFORMER
D101	1SS178	DIODE	(EX, EH, EB)		
D201	LN260RCP	DIODE ASS'Y	(EG, XL)		
D202	LN260RCP	DIODE ASS'Y	PT1 Δ	SLTK513-W	POWER TRANSFORMER
D203	LN260RCP	DIODE ASS'Y	(XB, XA, PA)		
D204	LN260RCP	DIODE ASS'Y	(PE)		
D205	LN260RCP	DIODE ASS'Y	SWITCHES		
D206	LN260RCP	DIODE ASS'Y	S1 Δ	SSH1194	SW. POWER
D207	LN260RCP	DIODE ASS'Y	S2	SSHK82	SW. INPUT SEL.
D208	LN260RCP	DIODE ASS'Y	S3	SSHK82	SW. EQ.
D209	LN260RCP	DIODE ASS'Y	S4	SSHK83	SW. REVERSE
D210	LN260RCP	DIODE ASS'Y	S5	SSHK83	SW. REC. MODE
D211	LN260RCP	DIODE ASS'Y	S6 Δ	SSRK19	SW. . V. SELECTOR
D212	LN260RCP	DIODE ASS'Y	(XB, XA, PA)		
D213	LN260RCP	DIODE ASS'Y	(PE)		

TERMINAL GUIDE OF TRANSISTORS, DIODES AND IC'S

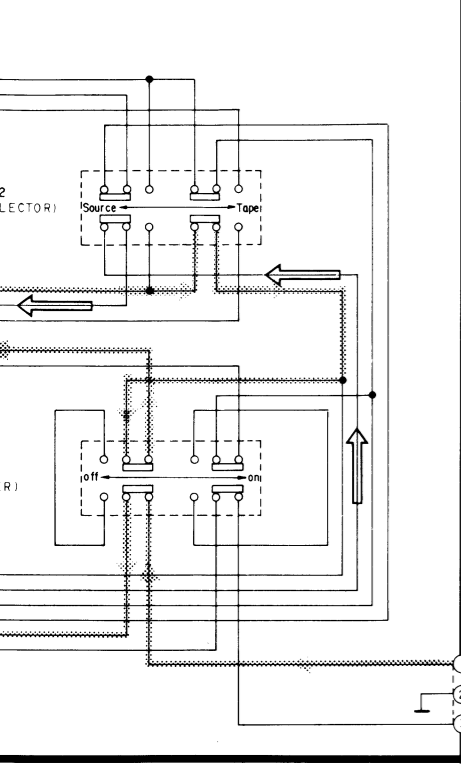
	<p>NJM4559S</p>	<p>2SC3311A-Q 2SA1309QRS 2SD1915S</p>	<p>1SS178TPA7 MA4150M</p>	<p>LN260RCP</p>
--	-----------------	---	-------------------------------	-----------------

SCHEMATIC DIAGRAM

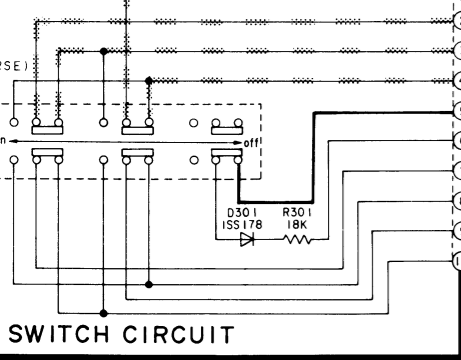


6 7 8 9 10 11 12 13 14 15 16 17 18 19

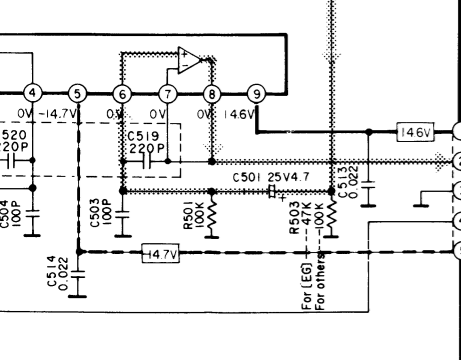
C MODE SWITCH CIRCUIT



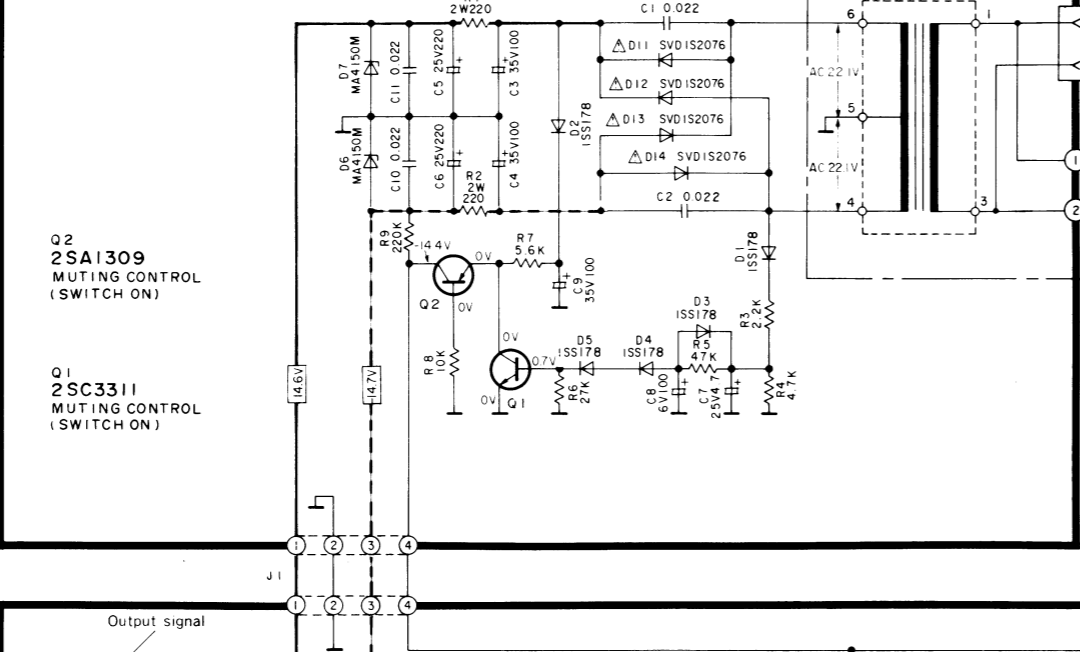
SWITCH CIRCUIT



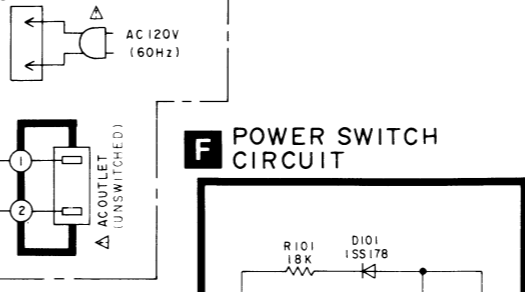
For (EG) area. For other areas.



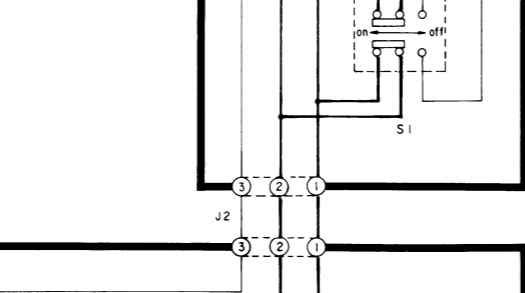
D POWER SUPPLY CIRCUIT



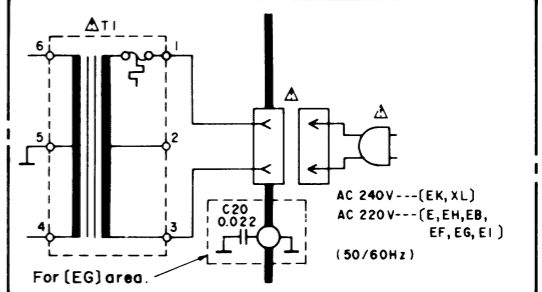
For (M,MC) areas.



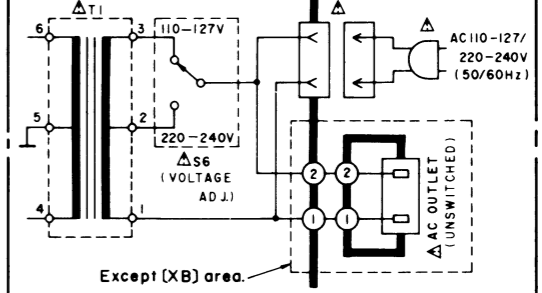
F POWER SWITCH CIRCUIT



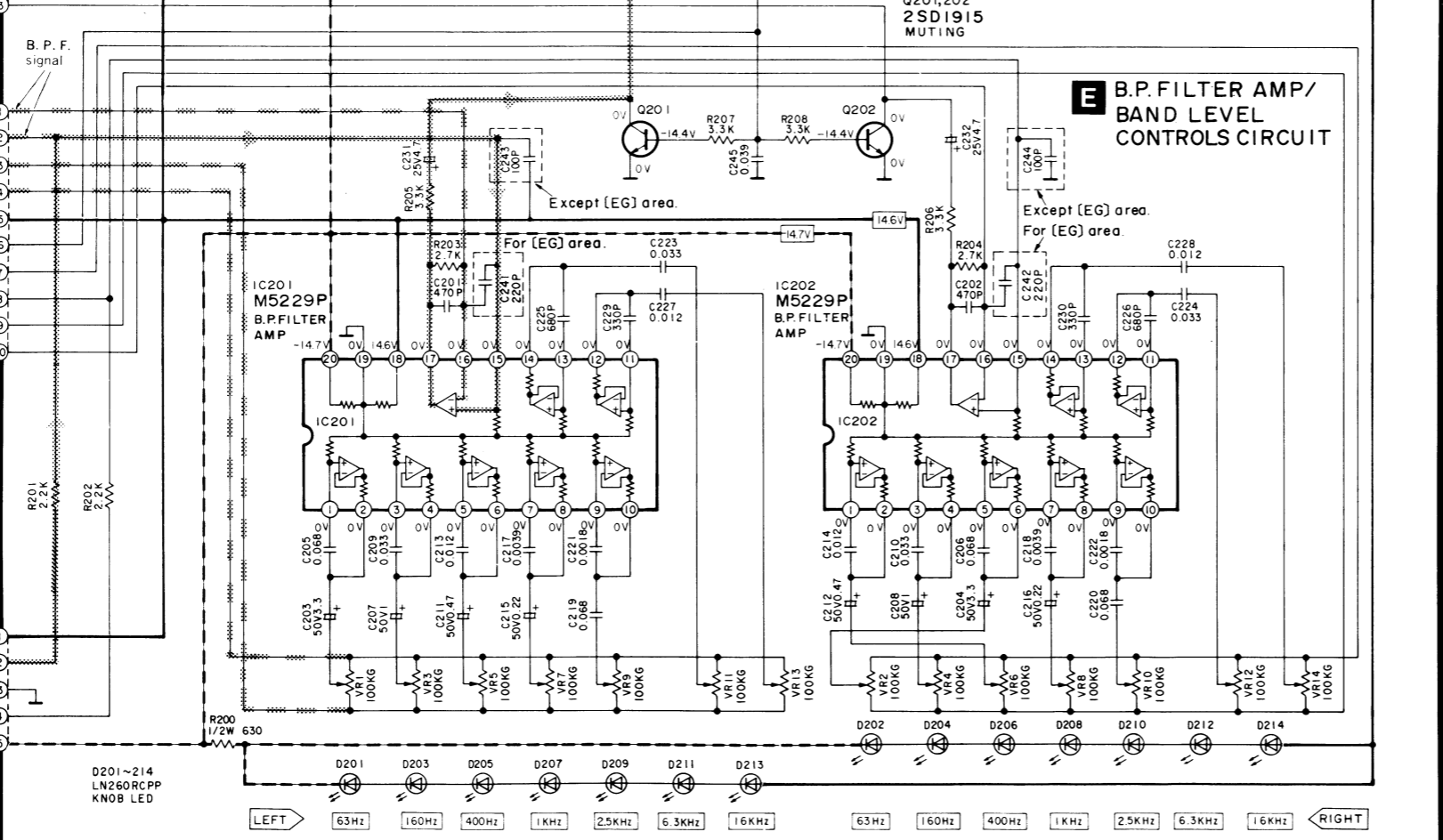
Power Source For (E, EH, EB, EF, EK, EG, EI, XL) areas.



Power Source For (XA, XB, PA, PE) area.



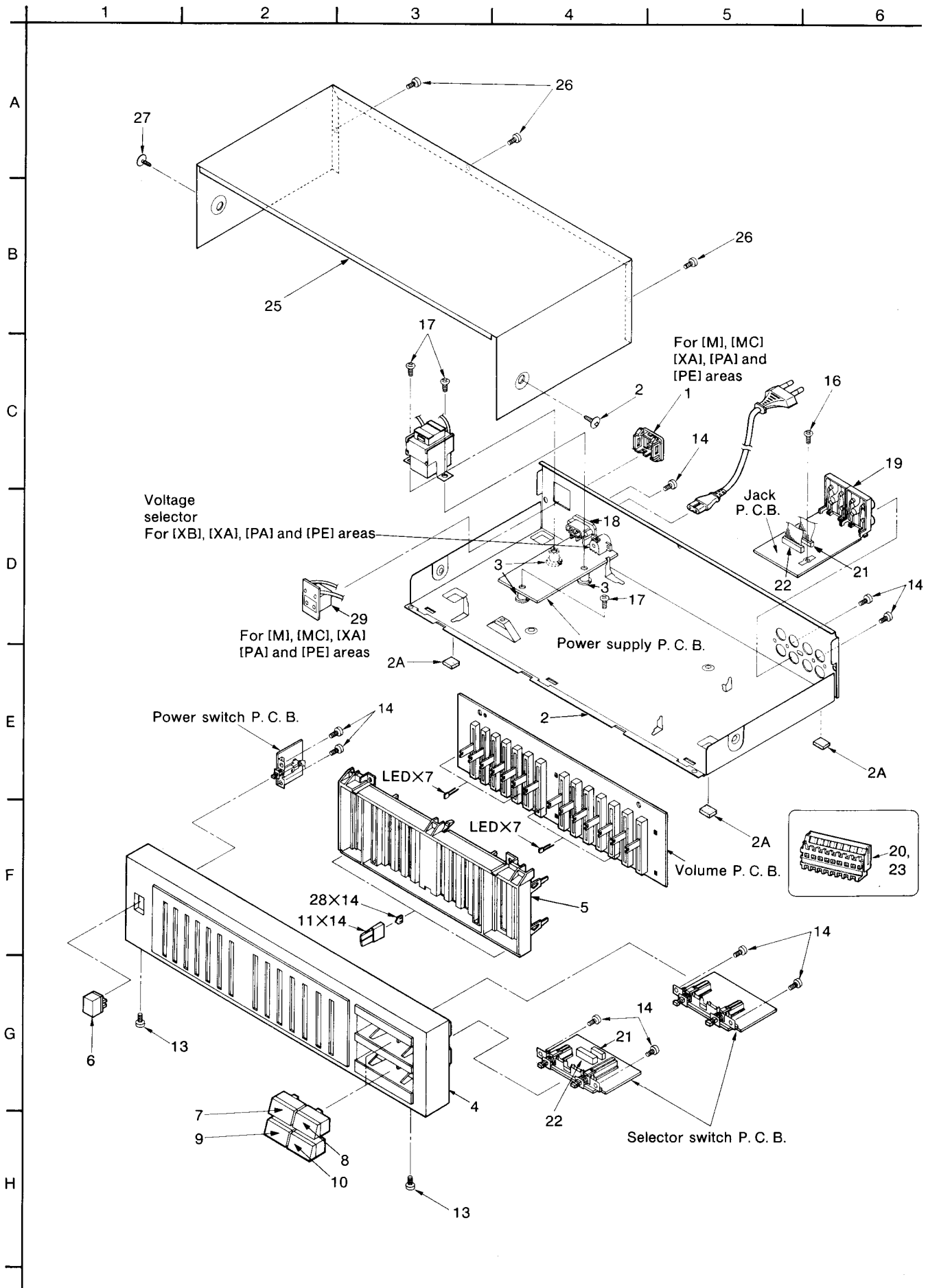
E B.P. FILTER AMP/ BAND LEVEL CONTROLS CIRCUIT



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

- Notes:**
- S1: Power switch in "on" position.
 - S2: Input selector switch in "source" position.
 - S3: Reverse mode selector in "on" position.
 - S4: Equalization switch in "off" position.
 - S5: Recording mode selector in "straight" position.
 - S6: Voltage selector switch in "110-127 V" position.
(110 V ↔ 127 V ↔ 220 V ↔ 240 V)
(For [XA], [XB], [PA] and [PE] areas.)
- 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.
- Line in signal
 - B.P.F signal
 - Recording signal
 - Positive voltage line
 - Negative voltage line
- 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.

EXPLODED VIEW



REPLACEMENT PARTS LIST

● CABINET PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description	
CABINET AND CHASSIS						
1	SJS9233A	AC OUTLET COVER	6	⊙	SBC666	BUTTON, POWER
(M, MC)			7	⊗	SBCK83A	BUTTON
1	SJS9330A	AC OUTLET COVER	7	⊙	SBCK83-1A	BUTTON
{XA, PA, PE}			8	⊗	SBCK83B	BUTTON
2	SGPKH8038-KE	PANEL	8	⊙	SBCK83-1B	BUTTON
{EX}			9	⊗	SBCK83C	BUTTON
2	SGPKH8038-KG	PANEL	9	⊙	SBCK83-1C	BUTTON
{EH, EB, EF}			10	⊗	SBCK83D	BUTTON
{E1, EG}			10	⊙	SBCK83-1D	BUTTON
2	SGPKH8038-KK	PANEL	11	⊗	SBWK27	BUTTON
{EK}			11	⊙	SBWK28	KNOB
2	SGPKH8038-KL	PANEL	13		XTB3+8JFZ	SCREW
{XL}			14		XTB3+8GFZ	SCREW
2	SGPKH8038-KM	PANEL	16		XTB3+8CFYR1	TAPPING SCREW
{M, MC}			17		XTW3+20T	SCREW
2	SGPKH8038-KX	PANEL	18	△	SJSD16	AC INLET
{XA, PA, PE}			(XL, M, MC)			
2	SGPKH8038KXB	PANEL	18	△	SJS9236	AC INLET
{XB}			{EX, EH, EB}			
2A	SKL293	FOOT	{EF, E1, EK}			
3	SHE187-K	SPACER	{EG, XB, XA}			
4	⊗		{PA, PE}			
{EX, EH, EB}			19		SJF3057NA	TERMINAL
{EF, E1, EK}			20		SJT30440LX-V	CONNECTOR(4P)
{EG, XL, XB}			21		SJSK90303DS	CONNECTOR(3P)
{XA, PA, PE}			21		SJSK90703DS	CONNECTOR(7P)
4	⊗		21		SJSK91003DS	CONNECTOR(10P)
{M, MC}			22		SJSD1005	CONNECTOR
4	⊙		23		SJT30543-V	CONNECTOR(5P)
{EX, EH, EB}			25	⊗	SKCK200K99	CABINET BODY
{EF, E1, EK}			25	⊙	SKCK200S98	CABINET BODY
{EG, XL, XB}			26		XTB3+8JFZ	SCREW
{XA, PA, PE}			27	⊗	SNE2095-5	SCREW
5	SGXK122	ORNAMENT	27	⊙	SNE2095-4	SCREW
6	⊗		28		SBZK33	GUIDE, LIGHT
	SBC666-5	BUTTON, POWER	29	△	SJS9232B	AC OUTLET
			{XA, PA, PE}			
			29	△	SJS9233B	AC OUTLET
			{M, MC}			

● PACKING PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description	
PACKING MATERIAL						
P1	SPGK358	PACKING CASE	{PE}			
{M}			A3	△	SFDAC05E03	POWER CORD
P1	SPGK359	PACKING CASE	{EX, EH, EB}			
{MC}			{EF, E1, EG}			
P1	⊗		A3	△	SFDAC05G02	POWER CORD
{EX, EH, EB}			{EK}			
{E1, EG, XL}			A3	△	SJA168	POWER CORD
{XB, XA, PA}			{PA, PE}			
{PE}			A3	△	SJA172	POWER CORD
P1	⊗		{MC}			
{EF}			A3	△	SJA173	POWER CORD
P1	⊗		{XL}			
{EK}			A3	△	SJA175-1T	POWER CORD
P1	⊙		{M}			
{EX, EH, EB}			A3	△	SJA183	POWER CORD
{E1, EG, XL}			{XB}			
{XB, XA, PA}			A3	△	SJA185	POWER CORD
{PE}			{XA}			
P1	⊙		A4		SQFK10196	INSTRUCTION BOOK
{EK}			{M}			
P1	⊙		A4		SQFK10197	INSTRUCTION BOOK
{EF}			{MC}			
P2	SPSK121	PAD	A4		SQFK10198	INSTRUCTION BOOK
P3	SPSK122-1	PAD	{EX, EH, EB}			
P4	SPPK51	PROTECTION COVER	{EF, E1}			
ACCESSORIES			A4		SQFK10199	INSTRUCTION BOOK
A1	SJPK2202-1	CORD	{EG}			
A2	△		A4		SQFK10200	INSTRUCTION BOOK
{XB, XA, PA}			{EK, XL, XB}			
	RJP120ZBS-H	AC PLUG ADAPTOR	{XA}			
			A4		SQFK10201	INSTRUCTION BOOK
			{PA, PE}			

RESISTORS AND CAPACITORS

Notes : * 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.

* Bracketed indications in Ref. No. columns specify the area. (Refer to the first page for area.)
Parts without these indications can be used for all areas.

Numbering System of Resistor

Example:

ERD	25	F	J	102
Type	Wattage (1/4W)	Shape	Tolerance	Value (1K Ω)
ERX	2	AN	J	471
Type	Wattage (2W)	Shape	Tolerance	Value (470 Ω)

Numbering System of Capacitor

Example:

ECKD	1H	102	Z	F
Type	Voltage (50V)	Value (0.001 μ F)	Tolerance	Peculiarity
ECEA	50	M	330	
Type	Voltage (50V)	Peculiarity	Value (33 μ F)	

● Capacity are in microfarads (μ F) unless specified otherwise, P= Pico-farads (pF) F= Farads (F).

● Resistance are in ohms (Ω), unless specified otherwise, 1K = 1,000 Ω , 1M = 1,000k Ω

Resistor Type	Wattage		Tolerance
ERD : Carbon	10 : 1/8W	12 : 1/2W	J : \pm 5%
ERG : Metal Oxide	14 : 1/4W	25 : 1/4W	F : \pm 1%
ERQ : Fuse Type Metal	1A : 1W	18 : 1/8W	G : \pm 2%
ERX : Metal Film	S2 : 1/4W	S1 : 1/2W	J : \pm 5%
ERD L : Carbon (chip)	2F : 1/4W	50 : 1/2W	K : \pm 10%
ERO K : Metal Film (chip)	2A : 2W	3A : 3W	M : \pm 20%
ERC : Solid	6G : 1/10W	8G : 1/8W	
ERF : Incombustible Box-Shaped			
ERM : Wire-Wound			
RRJ : Chip Resistor			
ERJ : Chip Resistor			

Capacitor Type	Voltage		Tolerance
ECE : Electrolytic	0J : 6.3V	1A : 10V	K : \pm 10%
ECCD : Ceramic	1C : 16V	1E : 25V	M : \pm 20%
ECKD : Ceramic Capacitor	1H : 50V	1V : 35V	Z : +80 % -20
EQCM : Polyester	50 : 50V	05 : 50V	J : \pm 5%
EQCP : Polypropylene	2H : 500V	2A : 100V	G : \pm 2%
ECG : Ceramic	1 : 100V	1J : 63V	F : \pm 1%
ECEA N : Non Polar Electrolytic	KC : 400V AC		C : \pm 0.25pF
OCU : Ceramic (Chip Type)	KC : 125V AC		D : \pm 0.5pF
ECUX : Ceramic (Chip Type)	(UL)		
ECF : Semiconductor			
EECW : Liquid electrolyte double layer capacitor			

Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.
RESISTORS(VALUE,WATTAGE)			R511	ERDS2TJ104	100K 1/4	C218	ECKD1H392KB	0.0039 50
R1	ERG2ANJ221	220 2	R512	ERDS2TJ102	1K 1/4	C219	ECFTD683KXL	0.068 25
R2	ERG2ANJ221	220 2	R512	ERDS2TJ104	100K 1/4	C220	ECFTD683KXL	0.068 25
R3	ERDS2TJ222	2.2K 1/4	R513	ERDS2TJ104	100K 1/4	C221	ECKD1H182KB	0.0018 50
R4	ERDS2TJ472	4.7K 1/4	R514	ERDS2TJ104	100K 1/4	C222	ECKD1H182KB	0.0018 50
R5	ERDS2TJ473	47K 1/4	CAPACITORS(VALUE,VOLTAGE)			C223	ECFTD333KXL	0.033 25
R6	ERDS2TJ273	27K 1/4	C1	ECKD1H223PF	0.022 50	C224	ECFTD333KXL	0.033 25
R7	ERDS2TJ562	5.6K 1/4	C2	ECKD1H223PF	0.022 50	C225	ECKD1H681KB	680P 50
R8	ERDS2TJ103	10K 1/4	C3	ECEA1VU101	100 35	C226	ECKD1H681KB	680P 50
R9	ERDS2TJ224	220K 1/4	C4	ECEA1VU101	100 35	C227	ECFTD123KXL	0.012 25
R101	ERDS2TJ183	18K 1/4	C5	ECEA1EU221	220 25	C228	ECFTD123KXL	0.012 25
R200	ERDS1FJ681	680 1/2	C6	ECEA1EU221	220 25	C229	ECKD1H331KB	330P 50
R201	ERDS2TJ222	2.2K 1/4	C7	ECEA1EK4R7	4.7 25	C230	ECKD1H331KB	330P 50
R202	ERDS2TJ222	2.2K 1/4	C8	ECEA0JU101	100 6.3	C231	ECEA1EK4R7	4.7 25
R203	ERDS2TJ272	2.7K 1/4	C9	ECEA1VU101	100 35	C232	ECEA1EK4R7	4.7 25
R204	ERDS2TJ272	2.7K 1/4	C10	ECKD1H223PF	0.022 50	C241	ECKD1H221KB	220P 50
R205	ERDS2TJ332	3.3K 1/4	C11	ECKD1H223PF	0.022 50	C242	ECKD1H221KB	220P 50
R206	ERDS2TJ332	3.3K 1/4	C201	ECKD1H471KB	470P 50	C243	ECKD1H101KB	100P 50
R207	ERDS2TJ332	3.3K 1/4	C202	ECKD1H471KB	470P 50	C244	ECKD1H101KB	100P 50
R208	ERDS2TJ332	3.3K 1/4	C203	ECEA1HK3R3	3.3 50	C245	ECQV1H393JZW	0.039 50
R301	ERDS2TJ183	18K 1/4	C204	ECEA1HK3R3	3.3 50	C501	ECEA1EK4R7	4.7 25
R501	ERDS2TJ104	100K 1/4	C205	ECFTD683KXL	0.068 25	C502	ECEA1EK4R7	4.7 25
R502	ERDS2TJ104	100K 1/4	C206	ECFTD683KXL	0.068 25	C503	ECKD1H101KB	100P 50
R503	ERDS2TJ104	100K 1/4	C207	ECEA1HK010	1 50	C504	ECKD1H101KB	100P 50
R503	ERDS2TJ473	47K 1/4	C208	ECEA1HK010	1 50	C505	ECKD1H151KB	150P 50
R504	ERDS2TJ104	100K 1/4	C209	ECFTD333KXL	0.033 25	C506	ECKD1H151KB	150P 50
R504	ERDS2TJ473	47K 1/4	C210	ECFTD333KXL	0.033 25	C507	ECKD1H151KB	150P 50
R505	ERDS2TJ102	1K 1/4	C211	ECEA1HKR47	0.47 50	C508	ECKD1H151KB	150P 50
R506	ERDS2TJ102	1K 1/4	C212	ECEA1HKR47	0.47 50	C511	ECKD1H151KB	150P 50
R507	ERDS2TJ102	1K 1/4	C213	ECFTD123KXL	0.012 25	C512	ECKD1H151KB	150P 50
R508	ERDS2TJ102	1K 1/4	C214	ECFTD123KXL	0.012 25	C513	ECKD1H223PF	0.022 50
R509	ERDS2TJ104	100K 1/4	C215	ECEA1HKR22	0.22 50	C514	ECKD1H223PF	0.022 50
R510	ERDS2TJ104	100K 1/4	C216	ECEA1HKR22	0.22 50	C515	ECKD1H821KB	820P 50
R511	ERDS2TJ102	1K 1/4	C217	ECKD1H392KB	0.0039 50	C516	ECKD1H821KB	820P 50
						C519	ECKD1H221KB	220P 50
						C520	ECKD1H221KB	220P 50