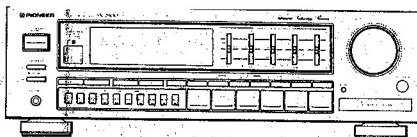


Service Manual

PIONEER
The Art of Entertainment



STEREO RECEIVER

SX-2900

SX-2800

SX-1900

SX-240

MODELS SX-2900, SX-2800, SX-1900 AND SX-240 HAVE FOLLOWING VERSIONS :

Type	Applicable model				Power requirement	Export destination
	SX-2900	SX-2800	SX-1900	SX-240		
KUC	○	○	○	○	AC120V only	U.S.A. and Canada.
SD	○	—	○	—	AC110V, 120-127V, 220V, 240V (switchable)	Kingdom of Saudi Arabia and General market.
KUCXJ	—	—	○	—	AC120V only	U.S.A. and Canada.

- This manual is applicable to the SX-2900/KUC, SD, SX-2800/KUC, SX-1900/KUC, SD and SX-240/KUC types.
- As to the SX-2900/SD, SX-2800/KUC, SX-1900/KUC, SD and SX-240/KUC types, refer to pages 31-34.
- As to the SX-1900/KUCXJ type, refer to applicable service manual.
- Ce manuel pour le service comprend les explications de réglage en français.
- Este manual de servicio trata del método ajuste escrito en español.

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This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.

Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5).

When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

1. SAFETY INFORMATION

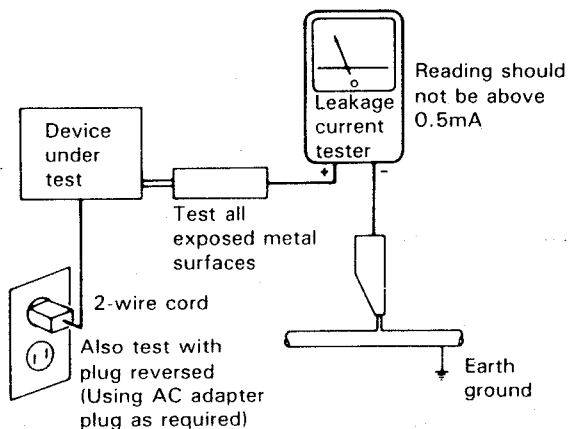
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a Δ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

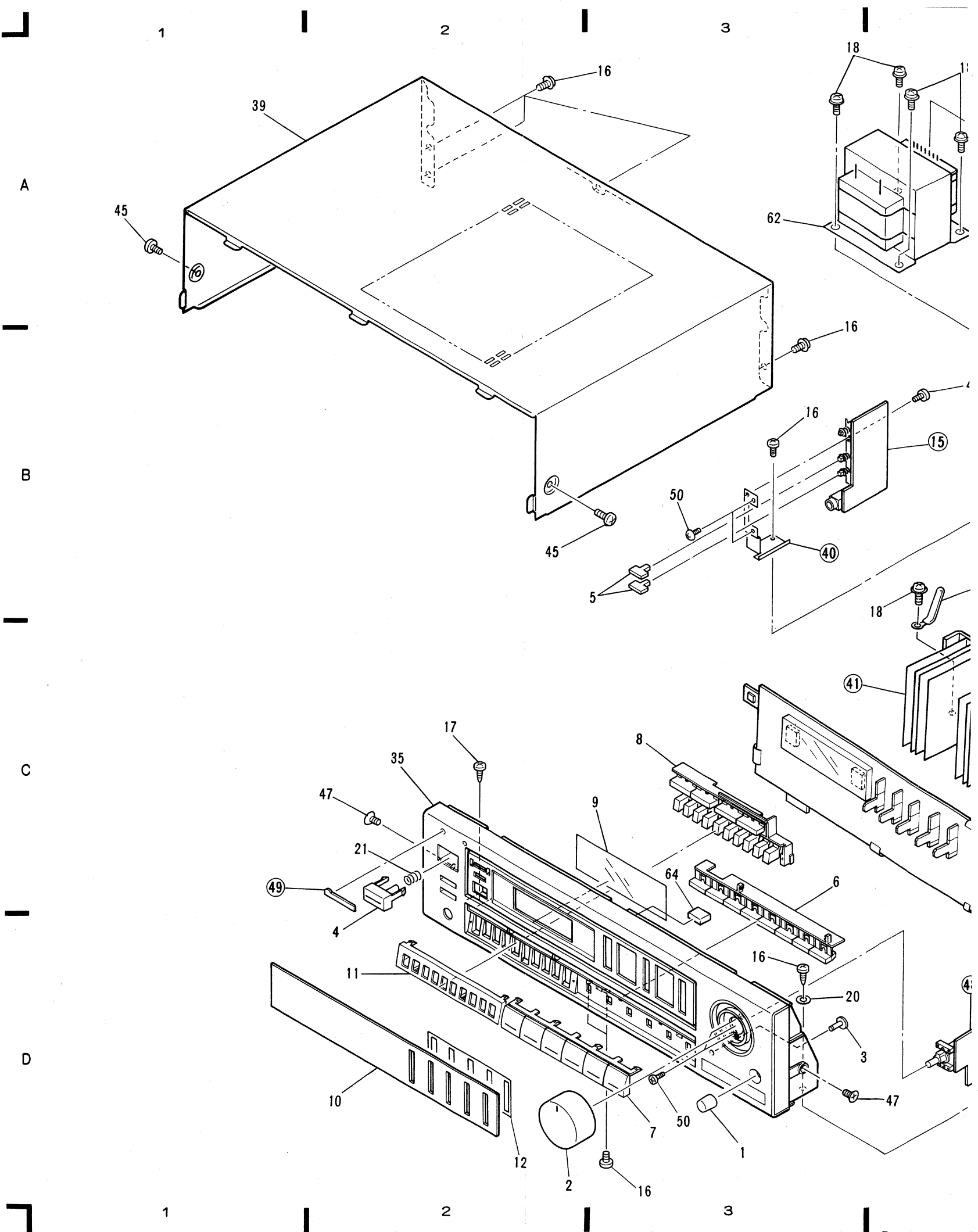
2. EXPLODED VIEWS, PACKING AND PARTS LIST

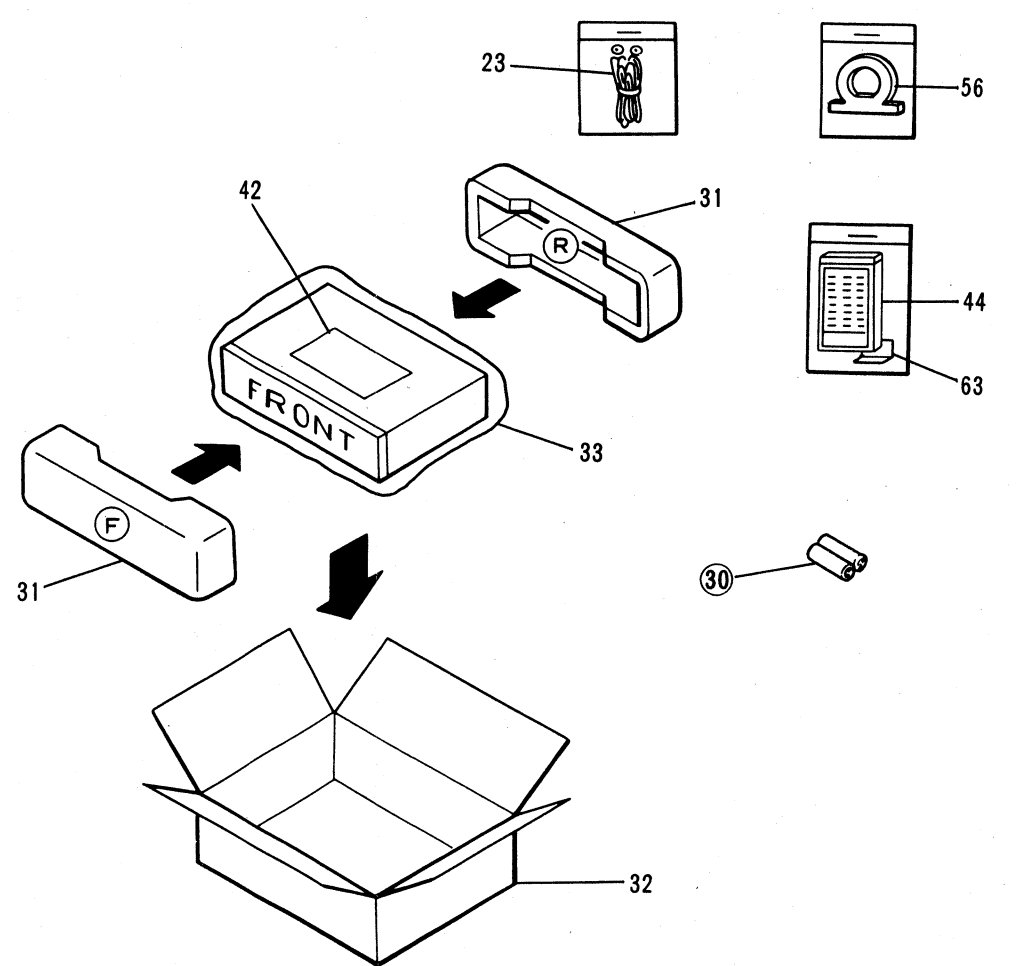
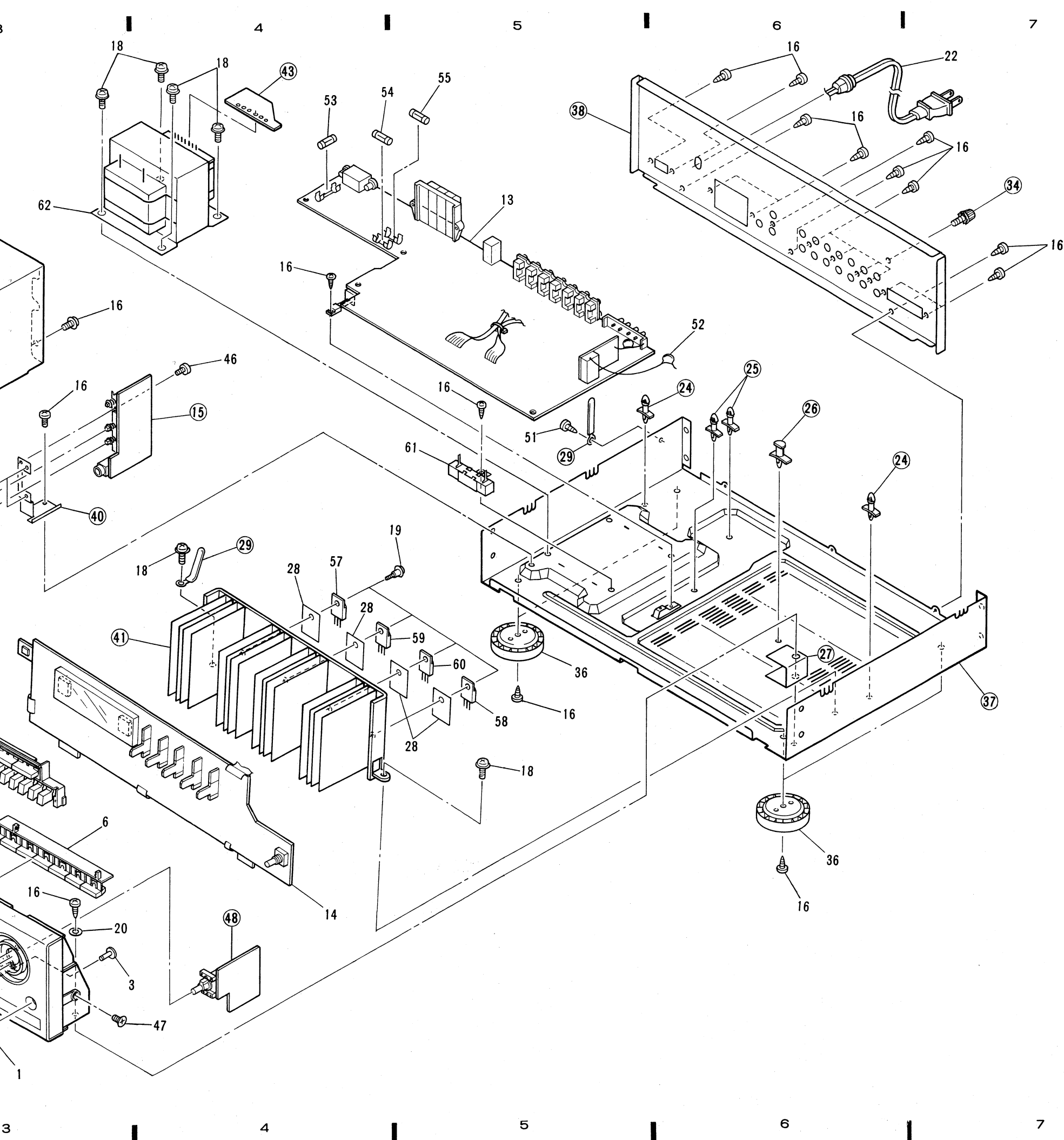
NOTES:

- Parts without part number cannot be supplied.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by “●” are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

Parts list of Exterior and packing

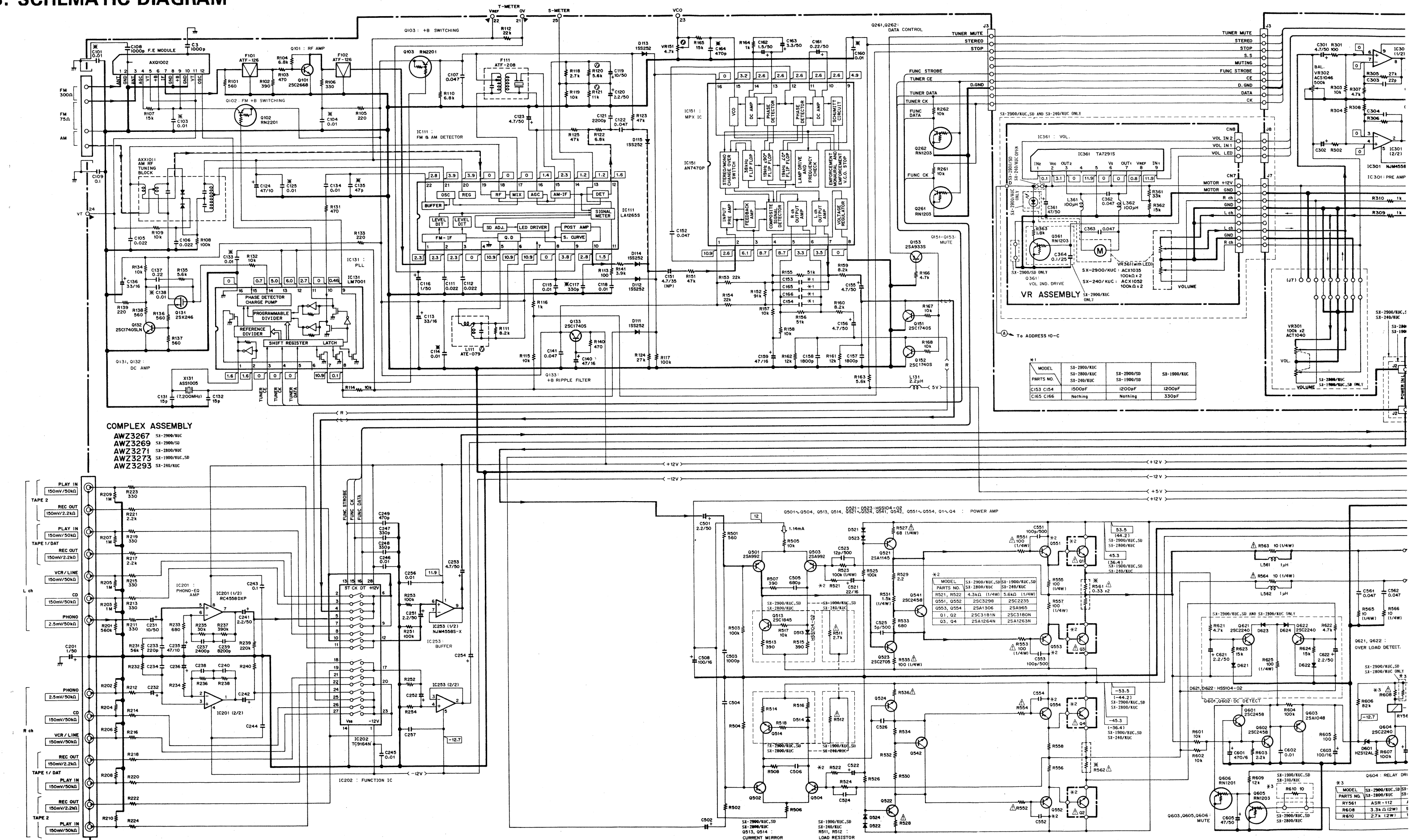
Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
	1	ROTARY KNOB (BALANCE)	AAB1133		41	HEAT SINK	
	2	MASTER VOL ASSY (VOLUME)	AAB1207		42	OPERATING INSTRUCTIONS (English)	ARB1286
	3	TACT KNOB (RETURN)	AAD1398		43	TRANS ASSEMBLY	
	4	KNOB (POWER)	AAD1661		44	REMOTE CONTROL UNIT (CU-SX021)	AXD1186
	5	SPEAKER KNOB (SPEAKERS)	AAD1662		45	SCREW	BBT30P060FZK
	6	TUNER FUNCTION KNOB	AAD1663		46	SCREW	BPZ26P080FMC
	7	FUNCTION KNOB	AAD1664		47	SCREW	CBZ30P060FZK
	8	STATION KNOB	AAD1924		48	VR ASSEMBLY	
	9	PLATE	AAK1833		49	NAME PLATE	
	10	ACRYLIC PANEL	AAK2092		50	SCREW	PMZ30P060FCU
●	11	STATION SASH	AAP1111		51	SCREW	VCZ30P060FCU
●	12	EQUALIZER SASH	AAP1112	⚠	52	CERAMIC CAPACITOR (C3)	CKDYF102Z50
	13	COMPLEX ASSEMBLY	AWZ3267	⚠	53	FUSE (4A/125V, FU1)	AEK-100
	14	CONTROL ASSEMBLY	AWZ3268	⚠	54	FUSE (1.25A/125V, FU3)	AEK-120
	15	SP SWITCH ASSEMBLY		⚠	55	FUSE (1.25A/125V, FU4)	AEK-120
	16	SCREW	ABA-298	⚠	56	LOOP ANTENNA	ATB1005
	17	SCREW (STEEL)	ABA1009	⚠	57	TRANSISTOR (Q1)	2SC3181N
	18	SCREW	ABA1054	⚠	58	TRANSISTOR (Q2)	2SC3181N
	19	SCREW	ABA1082	⚠	59	TRANSISTOR (Q3)	2SA1264N
	20	WASHER	ABF1017	⚠	60	TRANSISTOR (Q4)	2SA1264N
⚠	21	COIL SPRING	ABH1064		61	RESISTOR (750Ω/10W, R1)	ACN1083
	22	AC POWER CORD	ADG1057	⚠	62	POWER TRANSFORMER (T1)	ATS1248
	23	FM ANTENNA	ADH1004		63	BATTERY COVER	PZN1001
	24	PCB SUPPORT			64	PVC SHEET	AED1117
	25	PCB SUPPORT					
	26	PCB SUPPORT					
	27	PVC PLATE					
	28	SHEET	AEE1014				
	29	CLAMPER					
	30	“AAA” DRY SELL					
	31	STYROL PROTECTOR	AHA1015				
	32	PACKING CASE	AHD1985				
	33	PACKING SHEET	AHG1016				
	34	TERMINAL SCREW					
	35	FRONT PANEL	AMB1753				
	36	INSULATOR ASSY	AMR2140				
	37	CHASSIS					
	38	REAR PANEL					
	39	BONNET CASE	ANE1215				
	40	PCB INDICATOR HOLDER					

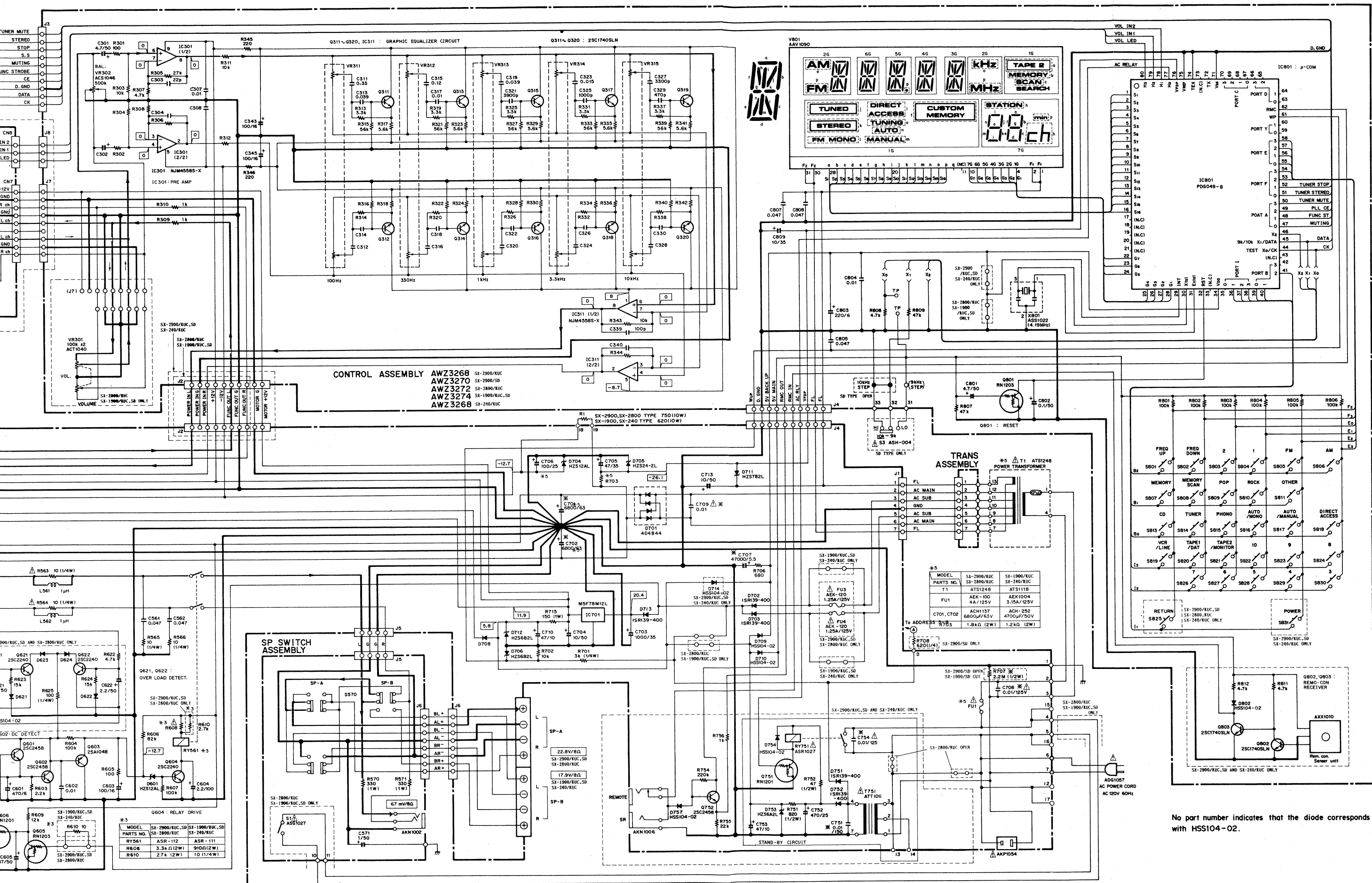


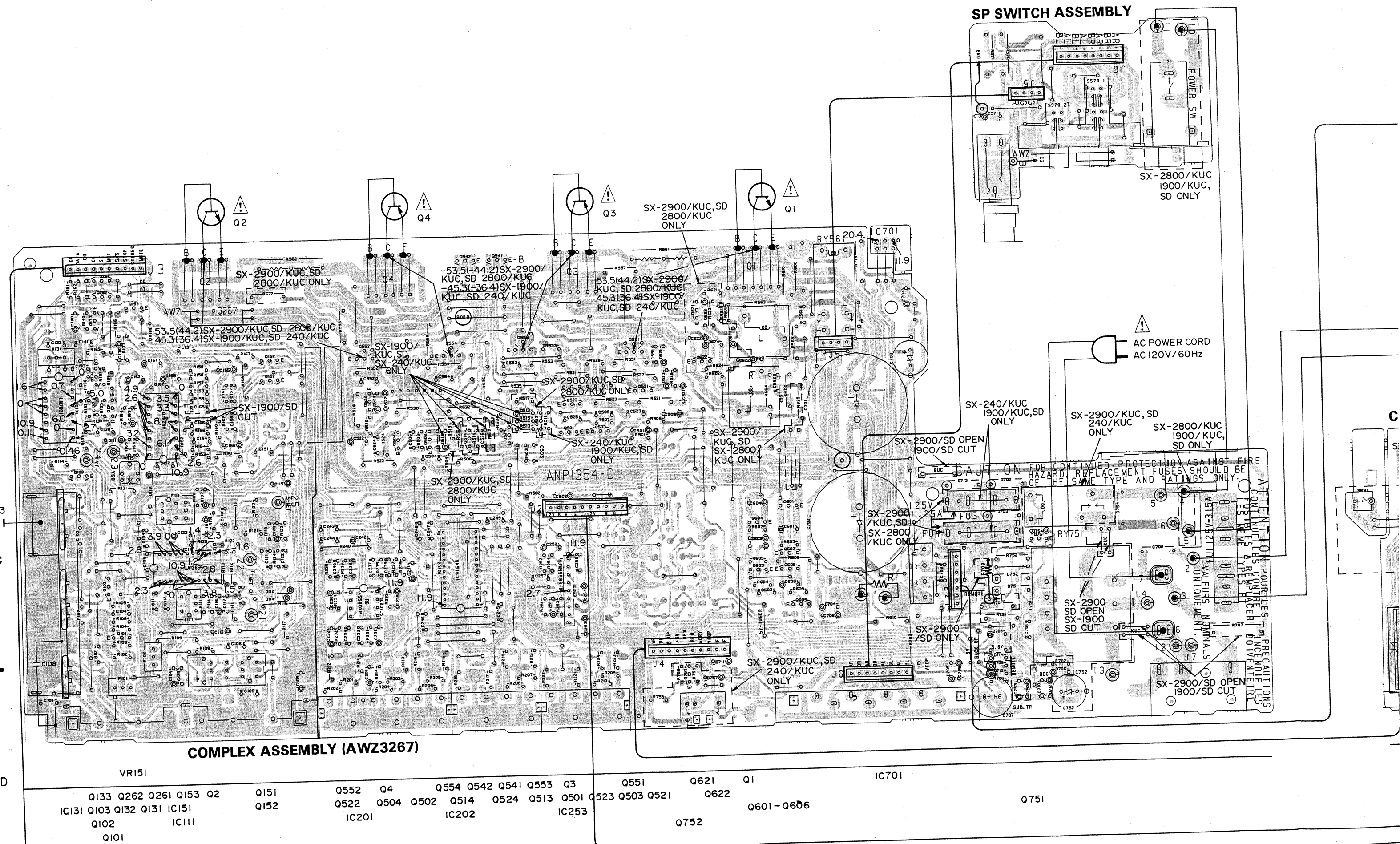


A
B
C
D

B. SCHEMATIC DIAGRAM





[illegible]

1. RESISTORS

Indicated in Ω , 1/4W, 1/8W, $\pm 5\%$, tolerance unless otherwise noted k: k Ω , M: M Ω , (F): $\pm 1\%$, (G): $\pm 2\%$, (K): $\pm 10\%$, (M): $\pm 20\%$ tolerance.

2. CAPACITORS

Indicated in capacity (μ F)/voltage (V) unless otherwise noted P: PF.

Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE CURRENT

$\square$ V : Signal voltage at (65W+65W 8 Ω) output (1kHz).

$\square$: DC voltage (V) at no input signal.

Value in () is DC voltage at rated power.

$\leftarrow$ mA : DC current at no input signal.

4. OTHERS

$\Rightarrow$: Signal route

$\odot$: Adjusting point

The Δ mark found on some components parts indicates the importance of the safety factor of the parts.

Therefore, when replacing, be sure to use parts of identical designation.

* marked capacitors and resistors have parts numbers.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

5. SWITCHES

S2 VOLTAGE SELECTOR

110/120-127/220/240V

(SX-2900/SD, SX-1900/SD ONLY)

S3 SLIDE SW 10k/9k

(SX-2900/SD, SX-1900/SD ONLY)

S4 VOLTAGE SELECTOR

220-240V/110/127V

(SX-2900/SD ONLY)

SP SWITCH assembly

S570 SPEAKER (SP-A/SP-B)

S1 POWER

(SX-2800/KUC, SX-1900/KUC, SD ONLY)

CONTROL assembly

S801 FREQ UP

S802 FREQ DOWN

S803 2

S804 1

S805 FM

S806 AM

S807 MEMORY

S808 MEMORY SCAN

S809 POP

S810 ROCK

S811 OTHER

S813 CD

S814 TUNER

S815 PHONO

S816 AUTO/MONO

S817 AUTO/MANUAL

S818 DIRECT ACCESS

S819 VCR/LINE

S820 TAPE1/DAT

S821 TAPE2/MONITOR

S822 10

S823 9

S824 8

S825 RETURN (SX-2900/KUC, SD,

SX-2800/KUC,

SX-240/KUC ONLY)

S826 7

S827 6

S828 5

S829 4

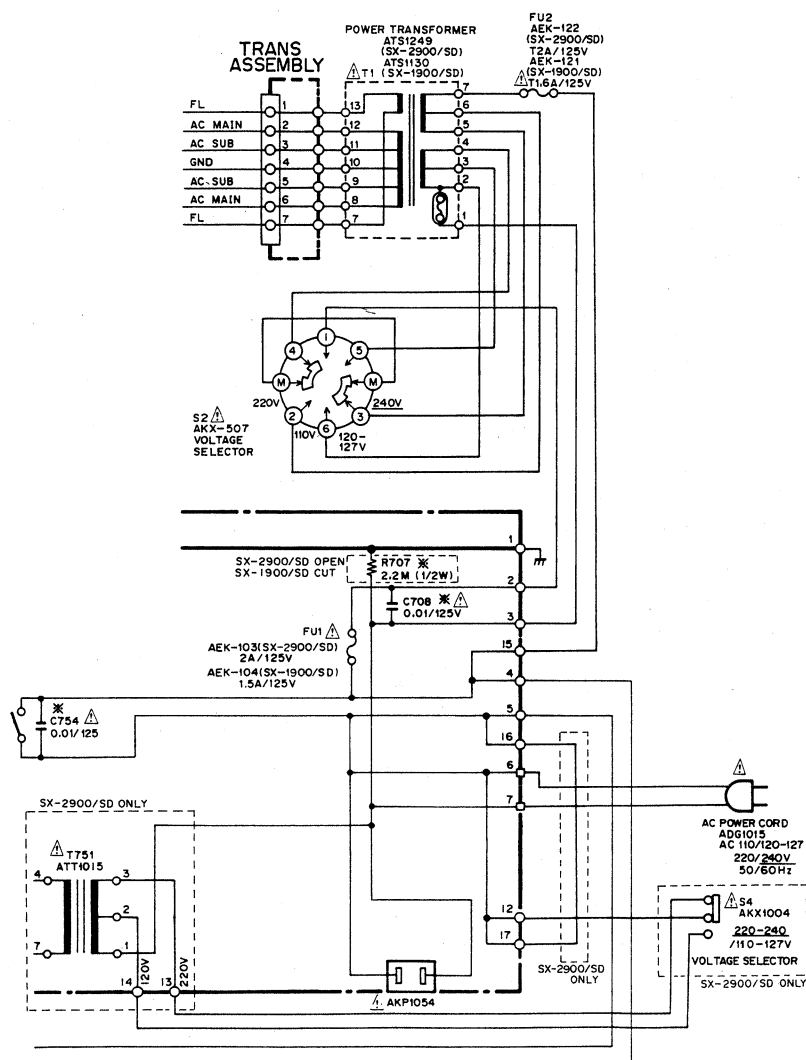
S830 3

S831 POWER (SX-2900/KUC, SD,

SX-240/KUC ONLY)

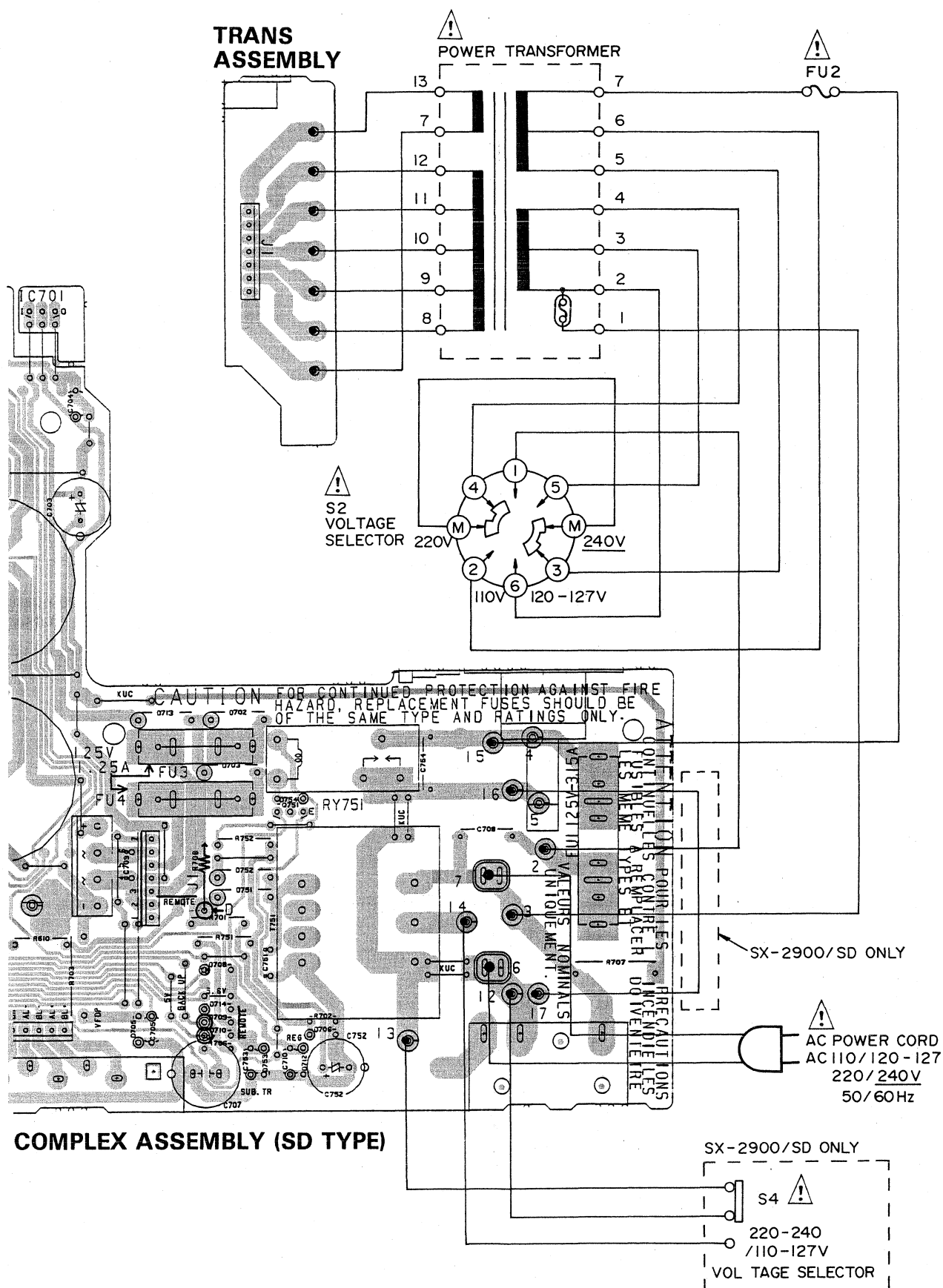
SCHEMATIC DIAGRAM

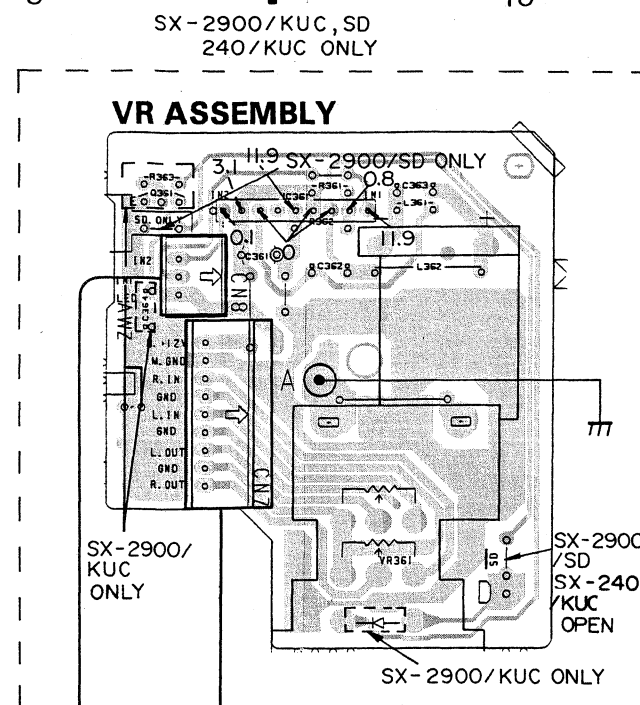
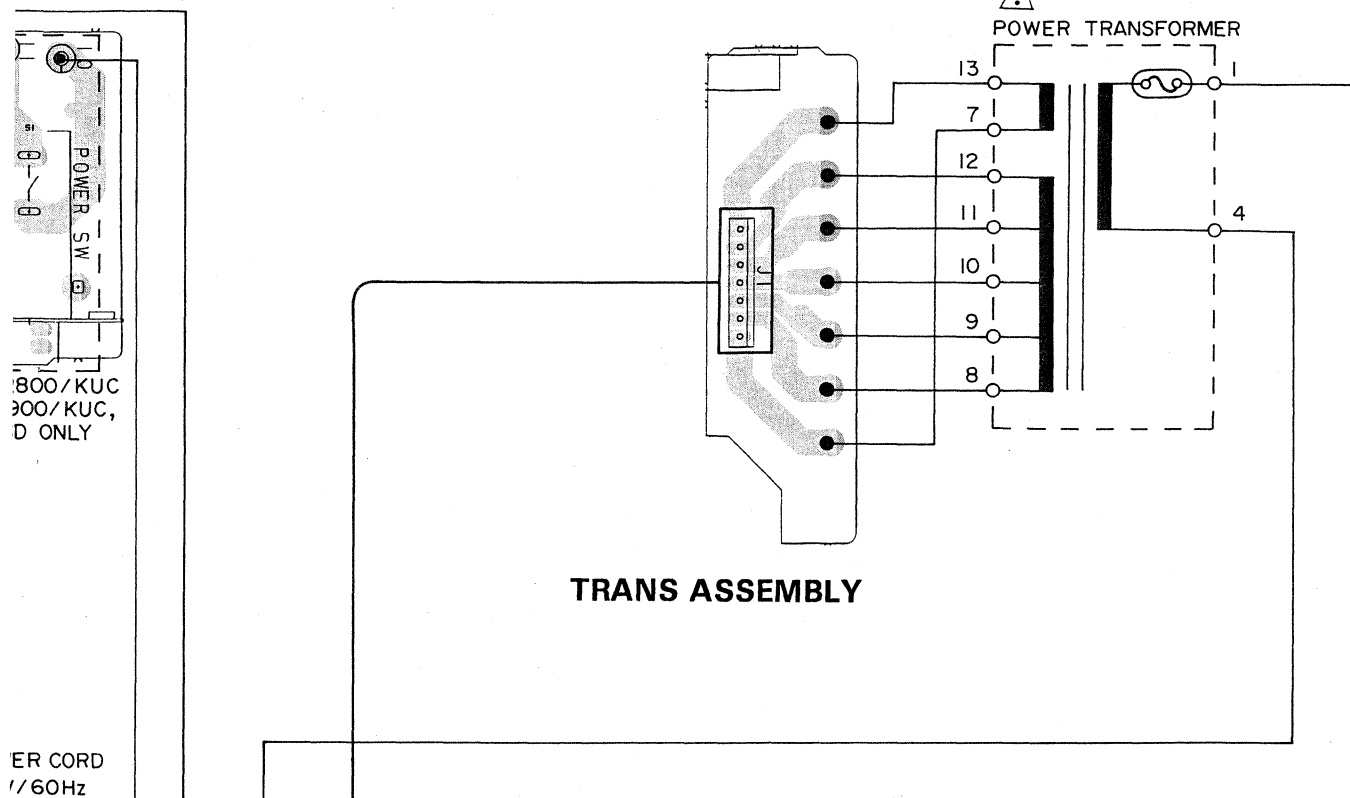
(For SX-2900/SD and SX-1900/SD types)



The underline indicates the switch position.

4. P.C.BOARDS CONNECTION DIAGRAM





NOTE

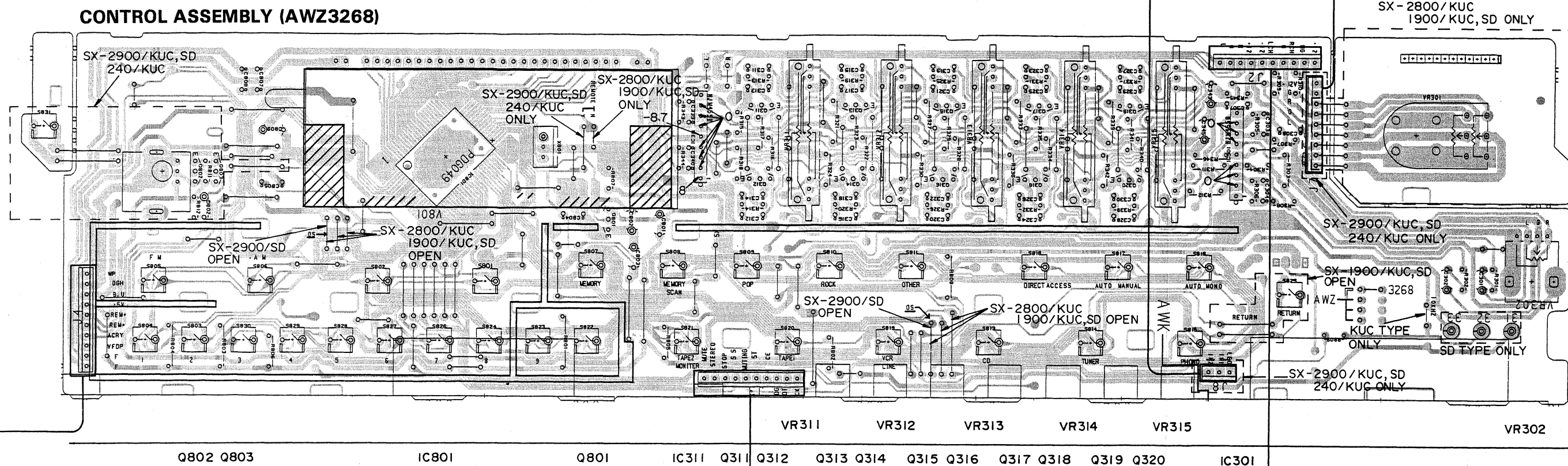
1. This P.C.B. connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
EO 0504		Transistor
Q215		Radiator type transistor
D203		Diode
R237		Resistor
C513		Capacitor (Polarity)
C518		Capacitor (Non-polarity)

Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capacitor terminal marked with @ (double circles) shows negative terminal.
4. The diode terminal marked with @ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.



This P.C.B. connection diagram is viewed from the foil side.

Part Name	P.C.B. pattern diagram indication
IC	IC
Switch	S
Relay	RY
Coil	L
Filter	F
Variable resistor or 2-watt fixed resistor	VR

Part Name	Corresponding part symbol	P.C.B. pattern diagram indication
Transistor		
Resistor type		
Diode		
Resistor		
Capacitor (Polarized)		
Capacitor (Non-polarized)		

3. The capacitor terminal marked with ⊙ (double circles) shows negative.

4. The diode terminal marked with ⊙ (double circles) shows cathode.

5. The transistor terminal with E is fitted shows the emitter.

3. The capacitor terminal marked with © (double circles) shows negative
4. The diode terminal marked with © (double circles) shows cathode
5. The transistor terminal to which E is affixed shows the emitter

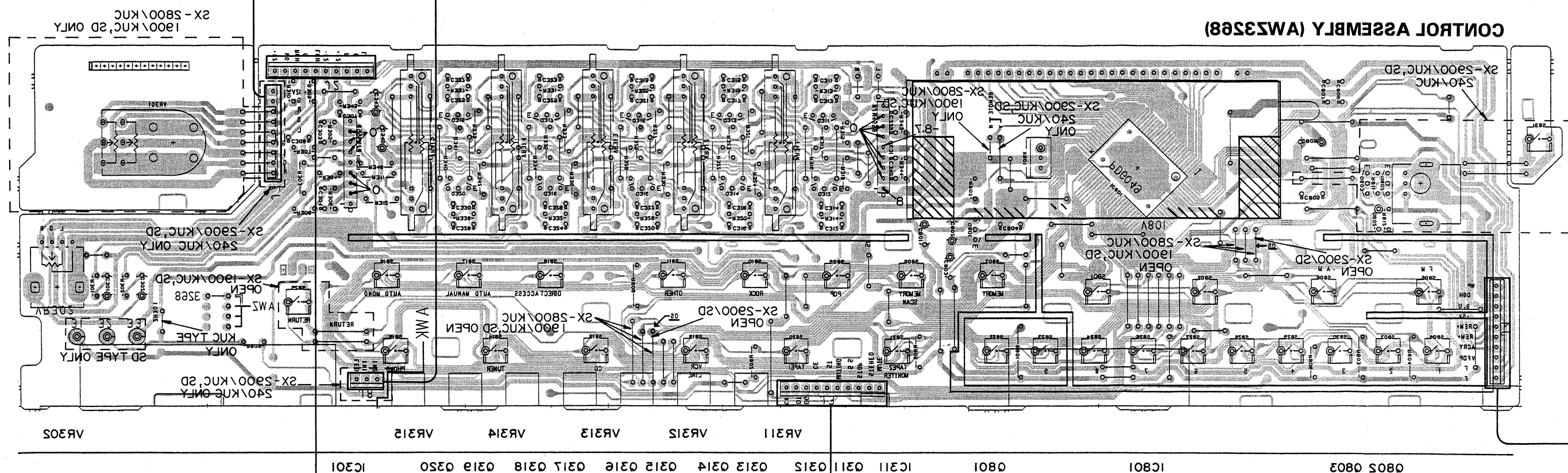
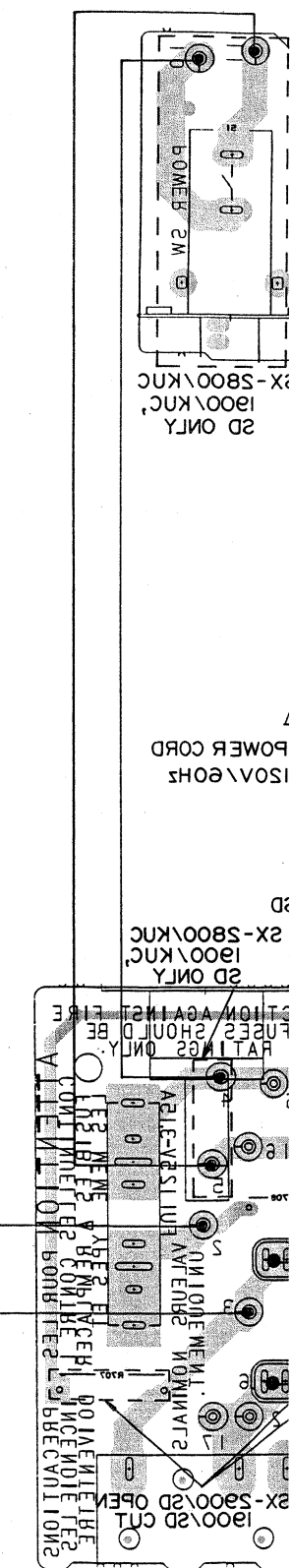
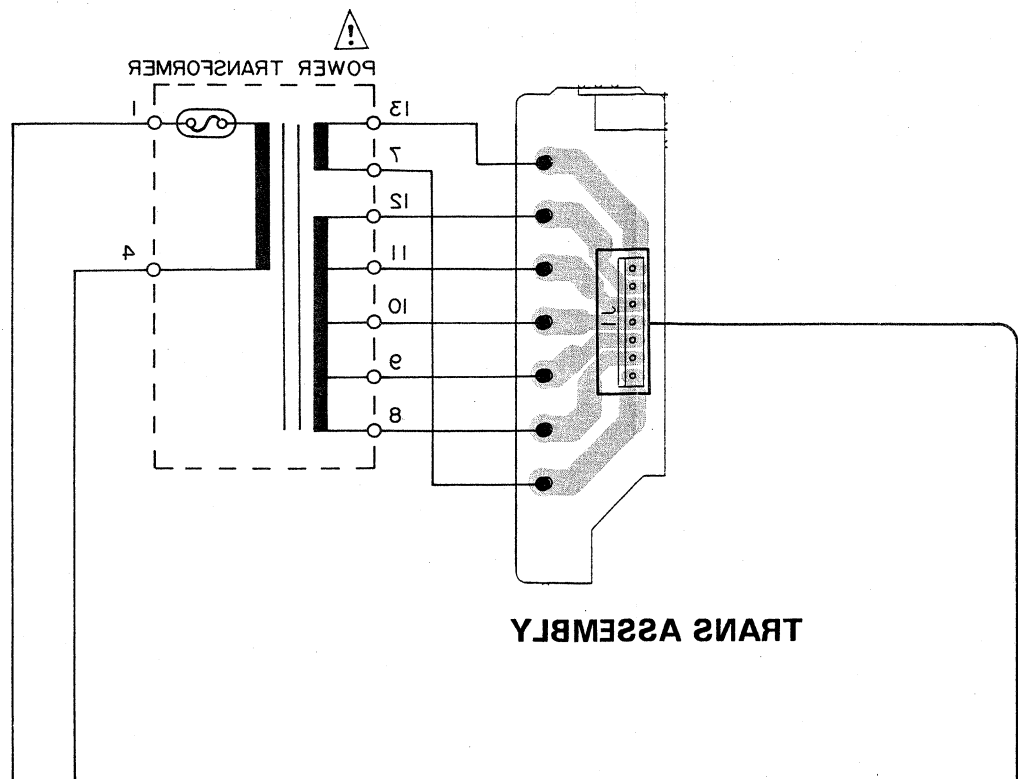
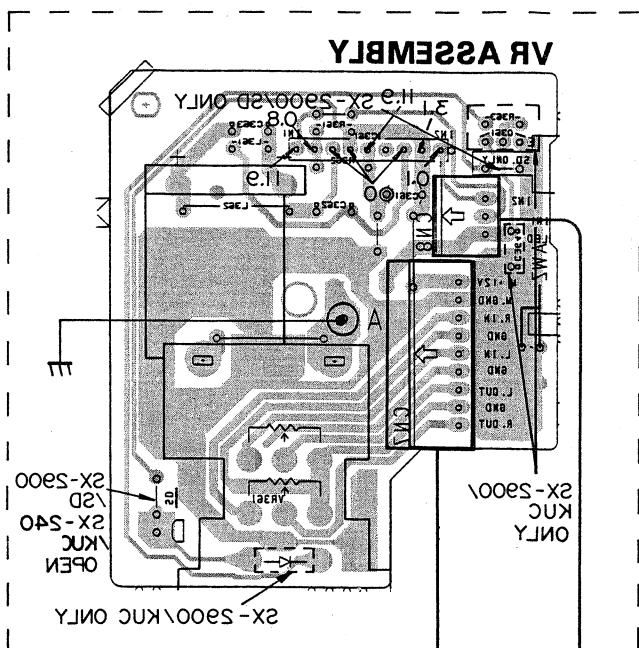
Others

NOTE

1. This P.C.B. connection diagram is viewed from the parts mounted side.

2. The parts which have been mounted on the board can be replaced with those shown.

3. The tail of the potentiometer is connected to ground.



5. P.C.B 's PARTS LIST

NOTES:

- Parts without part number cannot be supplied.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560 Ω	56×10^1	561.....	RD1/4PS $\square$ $\square$ $\square$ J
47k Ω	47×10^3	473.....	RD1/4PS $\square$ $\square$ $\square$ J
0.5 Ω	0R5.....		RN2H $\square$ $\square$ $\square$ K
1 Ω	010.....		RS1P $\square$ $\square$ $\square$ K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω	562×10^1	5621.....	RN1/4SR $\square$ $\square$ $\square$ $\square$ F
----------------	-------------------	-----------	---

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
SP SWITCH ASSEMBLY				OTHERS			
SWITCH				CN7	CONNECTOR(9P)	KPC9	
S570	PUSH SWITCH	SUJ5LXYS		CN8	JUMPER CONNECTOR 3-P	KPC3	
CAPACITOR				◎ COMPLEX ASSEMBLY (AWZ3267)			
C571	ELECTR.CAPACITOR	CEAS010M50		SEMICONDUCTORS			
RESISTORS				IC111	AM/FM IC	LA1265S	
R570, 571	METAL OXIDE RESISTOR	RS1PMF331J		IC131	PLL IC	LM7001	
OTHERS				IC151	MPX IC	AN7470P	
	JACK (HEAD PHONE)	AKN1002		IC201	OP-AMP IC	RC4558DXP	
VR ASSEMBLY				IC202	E-SW IC	TC9164N	
SEMICONDUCTORS				IC253	OP-AMP IC	NJM4558S-X	
IC361	MECHANISM DRIVER IC	TA7291S		IC701	REGULATOR IC	M5F78M12L	
Q361	TRANSISTOR	RN1203		Q101	TRANSISTOR	2SC2668	
COILS				Q102, 103	TRANSISTOR	RN2201	
L361, 362	AXIAL INDUCTOR	LAU101K		Q131	N-FET	2SK246	
CAPACITORS				Q132	TRANSISTOR	2SC1740SLN	
C361	ELECTR.CAPACITOR	CEAS470M50		Q133	TRANSISTOR	2SC1740S	
C362, 363	CERAMIC CAPACITOR	CKDYF473Z50		Q151, 152	TRANSISTOR	2SC1740S	
C364	CERAMIC CAPACITOR	CKDYX104M25		Q153	TRANSISTOR	2SA933S	
RESISTORS				Q261, 262	TRANSISTOR	RN1203	
VR361	VARIABLE RESISTOR	ACX1035		Q501-504	TRANSISTOR	2SA992	
	Other resistors	RD1/8PM $\square$ $\square$ $\square$ $\square$ J		Q513, 514	TRANSISTOR	2SC1845	
				Q521, 522	TRANSISTOR	2SA1145	
				Q523, 524	TRANSISTOR	2SC2705	
				Q541, 542	TRANSISTOR	2SC2458	
				Q551, 552	TRANSISTOR	2SC3298	
				Q553, 554	TRANSISTOR	2SA1306	
				Q601, 602	TRANSISTOR	2SC2458	
				Q603	TRANSISTOR	2SA1048	
				Q604	TRANSISTOR	2SC2240	

Mark No.	Description	Parts No.
Q605	TRANSISTOR	RN1203
Q606	TRANSISTOR	RN1201
Q621, 622	TRANSISTOR	2SC2240
Q751	TRANSISTOR	RN1201
Q752	TRANSISTOR	2SC2458
D111-115	DIODE	1SS252
D513, 514	DIODE	HSS104-02
D521-524	DIODE	HSS104-02
D601	ZENER DIODE	HZS12AL
D621-624	DIODE	HSS104-02
D701	DIODE	4D4B44
D702, 703	DIODE	1SR139-400
D704	ZENER DIODE	HZS12AL
D705	ZENER DIODE	HZS24-2L
D706	ZENER DIODE	HZS6B2L
D708-710	DIODE	HSS104-02
D711	ZENER DIODE	HZS7B2L
D712	ZENER DIODE	HZS6B2L
D713	DIODE	1SR139-400
D714	DIODE	HSS104-02
D751, 752	DIODE	1SR139-400
D753	ZENER DIODE	HZS6A2L
D754, 757	DIODE	HSS104-02

RELAYS

RY561	RELAY	ASR-112
RY751	RELAY	ASR1027

COILS & TRANSFORMER

F101, 102	CERAMIC FILTER	ATF-126
F111	CERAMIC FILTER	ATF-208
L111	COIL	ATE-079
L131	AXIAL INDUCTOR	LAU2R2M
L561, 562	COIL	ATH1004
T751	POWER TRANSFORMER	ATT1011

CAPACITORS

C101	CERAMIC CAPACITOR	ACG1021
C103, 104	CERAMIC CAPACITOR	ACG1021
C105, 106	CERAMIC CAPACITOR	CKDYF223Z50
C107	CERAMIC CAPACITOR	CKDYF473Z50
C108	CERAMIC CAPACITOR	CKDYF102Z50
C109	CERAMIC CAPACITOR	CKDYX104M25
C111, 112	CERAMIC CAPACITOR	CKDYF223Z50
C113	ELECTR.CAPACITOR	CEAS330M16
C114	CERAMIC CAPACITOR	ACG1021
C115	CERAMIC CAPACITOR	CKDYF103Z50
C116	ELECTR.CAPACITOR	CEAS010M50
C117	CERAMIC CAPACITOR	ACG1018
C118	CERAMIC CAPACITOR	CKDYF103Z50
C119	ELECTR.CAPACITOR	CEAS100M50
C120	ELECTR.CAPACITOR	CEAS2R2M50

Mark No.	Description	Parts No.
C121	CERAMIC CAPACITOR	CKDYF222Z50
C122	CERAMIC CAPACITOR	CKDYF473Z50
C123	ELECTR.CAPACITOR	CEAS4R7M50
C124	ELECTR.CAPACITOR	CEAS470M10
C125	CERAMIC CAPACITOR	ACG1021
C131, 132	CERAMIC CAPACITOR	CCDCH150J50
C133	CERAMIC CAPACITOR	ACG1021
C134	CERAMIC CAPACITOR	CKDYF103Z50
C135	CERAMIC CAPACITOR	ACG1016
C136	ELECTR.CAPACITOR	CEAS330M16
C137	AUDIO FILM CAPACITOR	CFTXA224J50
C138	CERAMIC CAPACITOR	ACG1021
C140	ELECTR.CAPACITOR	CEAS470M16
C141	CERAMIC CAPACITOR	CKDYF473Z50
C151	ELECTR.CAPACITOR	CEANP4R7M35
C152	CERAMIC CAPACITOR	CKDYF473Z50
C153, 154	MYLOR FILM CAPACITOR	CQMA152J50
C155, 156	ELECTR.CAPACITOR	CEAS4R7M50
C157, 158	CERAMIC CAPACITOR	CKDYB182K50
C159	ELECTR.CAPACITOR	CEAS470M16
C160	CERAMIC CAPACITOR	ACG1021
C161	ELECTR.CAPACITOR	CEASR22M50
C162	ELECTROLYTIC CAPACIT	CEAS1R5M50
C163	ELECTR.CAPACITOR	CEAS3R3M50
C164	CAPACITOR	ACE1039
C201	ELECTR.CAPACITOR	CEAS010M50
C231, 232	ELECTR.CAPACITOR	CEAS100M50
C233, 234	CERAMIC CAPACITOR	CCCSL221J50
C235, 236	ELECTR.CAPACITOR	CEAS470M10
C237, 238	MYLOR FILM CAPACITOR	CQMA242J50
C239, 240	MYLOR FILM CAPACITOR	CQMA822K50
C241, 242	ELECTR.CAPACITOR	CEAS2R2M50
C243-246	CERAMIC CAPACITOR	CKDYF103Z50
C247, 248	CERAMIC CAPACITOR	CKCYB331K50
C249	CERAMIC CAPACITOR	CKCYB471K50
C251, 252	ELECTR.CAPACITOR	CEAS2R2M50
C253, 254	ELECTR.CAPACITOR	CEAS4R7M50
C256, 257	CERAMIC CAPACITOR	CKDYF103Z50
C501, 502	ELECTR.CAPACITOR	CEAS2R2M50
C503, 504	CERAMIC CAPACITOR	CKDYB102K50
C505, 506	CERAMIC CAPACITOR	CKDYB681K50
C508	ELECTR.CAPACITOR	CEAS101M16
C521, 522	ELECTR.CAPACITOR	CEAS220M16
C523, 524	CERAMIC CAPACITOR	CCCSL120K500
C525, 526	CERAMIC CAPACITOR	CCCSL050C500

Mark	No.	Description	Parts No.
	C551-554	CERAMIC CAPACITOR	CCCSL101K500
	C561, 562	MYLOR FILM CAPACITOR	CQMA473K50
	C601	ELECTROLYTIC CAPACIT	CEAS471M6
	C602	CERAMIC CAPACITOR	CKDYF103Z50
	C603	ELECTR.CAPACITOR	CEAS101M16
	C604	ELECTROLYTIC CAPACIT	CEAS2R2M100
	C605	ELECTR.CAPACITOR	CEAS4R7M50
	C621, 622	ELECTR.CAPACITOR	CEAS2R2M50
	C701, 702	ELECTROLYTIC CAPACIT	ACH1137
	C703	ELECTROLYTIC CAPACIT	CEAS102M35
	C704	ELECTR.CAPACITOR	CEAS100M50
	C705	ELECTROLYTIC CAPACIT	CEAS470M35
	C706	ELECTR.CAPACITOR	CEAS101M25
	C707	CEA (47000/5.5V)	ACH1037
△	C708	CKA (0.01/AC400V)	ACG1002
	C709	CKA (0.01/AC250V)	ACG1005
	C710	ELECTR.CAPACITOR	CEAS470M10
	C751	CKA (0.01/AC250V)	ACG1005
	C752	ELECTROLYTIC CAPACIT	CEAS471M25
	C753	ELECTR.CAPACITOR	CEAS470M10
△	C754	CKA (0.01/AC400V)	ACG1002
RESISTORS			
	VR151	VR (4.7K)	ACP1024
	R521, 522	CARBON FILM RESISTOR	RD1/4PM432J
	R523	CARBON FILM RESISTOR	RD1/4PM104J
△	R527, 528	CARBON FILM RESISTOR	RD1/4PMF680J
	R531, 532	CARBON FILM RESISTER	RD1/4PM152J
△	R535, 536	FUSIBLE RESISTOR	RFA1/4PS101J
△	R551-554	FUSIBLE RESISTOR	RFA1/4PS101J
	R555-558	CARBON FILM RESISTOR	RD1/4PMF101J
△	R561, 562	RESISTOR (0.33, 5W)	ACN-139
△	R563, 564	CARBON FILM RESISTOR	RD1/4PMF100J
	R565, 566	CARBON FILM RESISTOR	RD1/4PMF100J
△	R608	METAL OXIDE RESISTOR	RS2LMF332J
△	R610	METAL OXIDE RESISTOR	RS2LMF272J
	R625	CARBON FILM RESISTOR	RD1/4PMF101J

Mark	No.	Description	Parts No.
	R701	CARBON FILM RESISTOR	RD1/4PM302J
△	R703	METAL OXIDE RESISTOR	RS2LMF182J
	R707	RESISTOR (2.2M, 1/2W)	ACN-209
△	R715	METAL OXIDE RESISTOR	RS1LMF151J
	R751	CARBON FILM RESISTOR	RD1/2PM821J
	R752	CARBON FILM RESISTOR	RD1/2PM470J
		Other resistors	RD1/8PM□□□J
OTHERS			
		ANTENNA TERMINAL 4-P	AKA1009
		PIN JACK (4P)	AKB1101
		PIN JACK (6P)	AKB1121
		SPEAKER TERMINAL 8-P	AKE-111
		JACK (2P)	AKN1006
△		AC OUTLET (1P)	AKP1054
		2 SERIAL F.E. MODULE ASSY	AXQ1002
		AM RF TUNING BLOCK	AXX1011
X131		CRYSTAL RESONATOR	ASS1005

◎ CONTROL ASSEMBLY (AWZ3268)
SEMICONDUCTORS

IC301, 311	OP-AMP IC	NJM4558S-X
IC801	RECEIVER CONTROL	PDG049-B
Q311-320	TRANSISTOR	2SC1740SLN
Q801	TRANSISTOR	RN1203
Q802, 803	TRANSISTOR	2SC1740SLN
D802	DIODE	HSS104-02

SWITCHES

S801-811	SWITCH	ASG1034
S813-831	SWITCH	ASG1034

CAPACITORS

C301, 302	ELECTR.CAPACITOR	CEAS470M50
C303, 304	CERAMIC CAPACITOR	CCCSL220J50
C307, 308	CERAMIC CAPACITOR	CKDYF103Z50
C311, 312	AUDIO FILM CAPADITOR	CFTXA334J50
C313, 314	MYLOR FILM CAPACITOR	CQMA393K50

Mark	No.	Description	Parts No.
	C315, 316	AUDIO FILM CAPACITOR	CFTXA124J50
	C317, 318	MYLOR FILM CAPACITOR	CQMA103K50
	C319, 320	MYLOR FILM CAPACITOR	CQMA393K50
	C321, 322	MYLOR FILM CAPACITOR	CQMA392K50
	C323, 324	MYLOR FILM CAPACITOR	CQMA153J50
	C325, 326	CERAMIC CAPACITOR	CKDYB102K50
	C327, 328	MYLOR FILM CAPACITOR	CQMA332K50
	C329, 330	CERAMIC CAPACITOR	CKDYB471K50
	C339, 340	CERAMIC CAPACITOR	CCCSL101J50
	C343, 345	ELECTR. CAPACITOR	CEAS101M16
	C801	ELECTROLYTIC CAPACIT	CEJA4R7M50
	C802	ELECTROLYTIC CAPACIT	CEJA0R1M50
	C803	ELECTR. CAPACITOR	CEJA221M6
	C804	CERAMIC CAPACITOR	CKDYF103Z50
	C805	CERAMIC CAPACITOR	CKDYF473Z50
	C807, 808	CERAMIC CAPACITOR	CKDYF473Z50
	C809	ELECTROLYTIC CAPACIT	CEJA100M35

RESISTORS

VR302	VARIABLE (500k-X1)	ACS1046
VR311-315	VR	ACU1020
	Other resistors	RD1/8PM□□□J

OTHERS

	FL SPACER	AEB1120
	REMOTE RECEIVER UNIT	AXX1010
V801	FL TUBE	AAV1090
X801	CERAMIC OSCILLATOR	ASS1022

TRANS ASSEMBLY

No parts are supplied with the TRANS ASSEMBLY.

6. ADJUSTMENTS

TUNER SECTION

- Set the volume to "MIN".
- Set the FUNCTION to "TUNER".

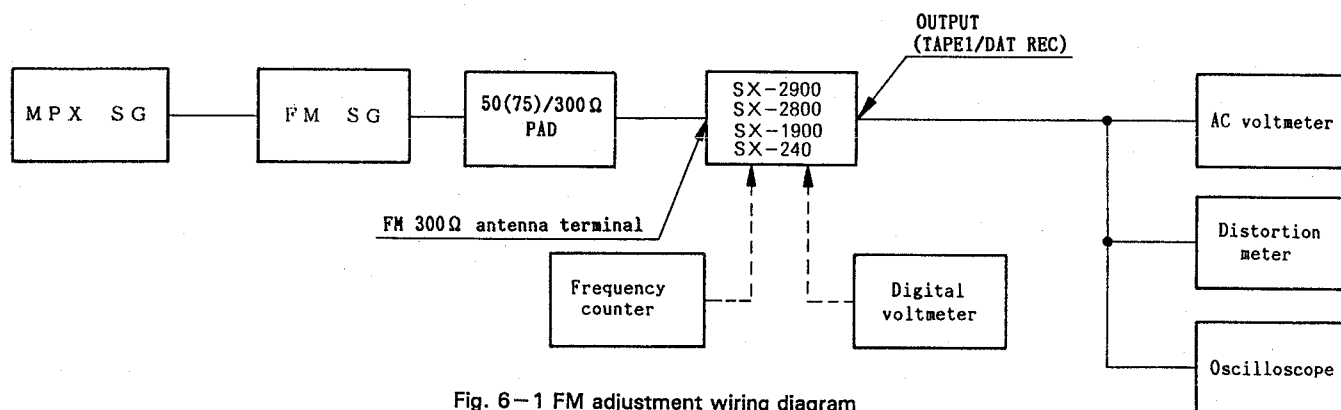


Fig. 6-1 FM adjustment wiring diagram

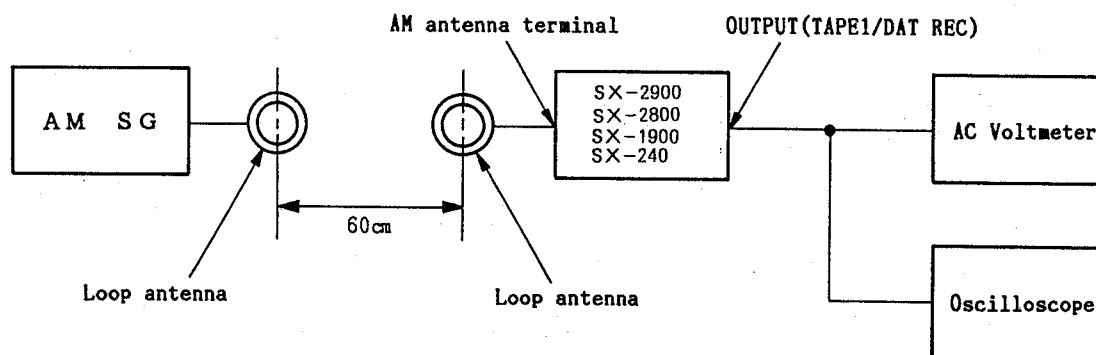


Fig. 6-2 AM adjustment wiring diagram

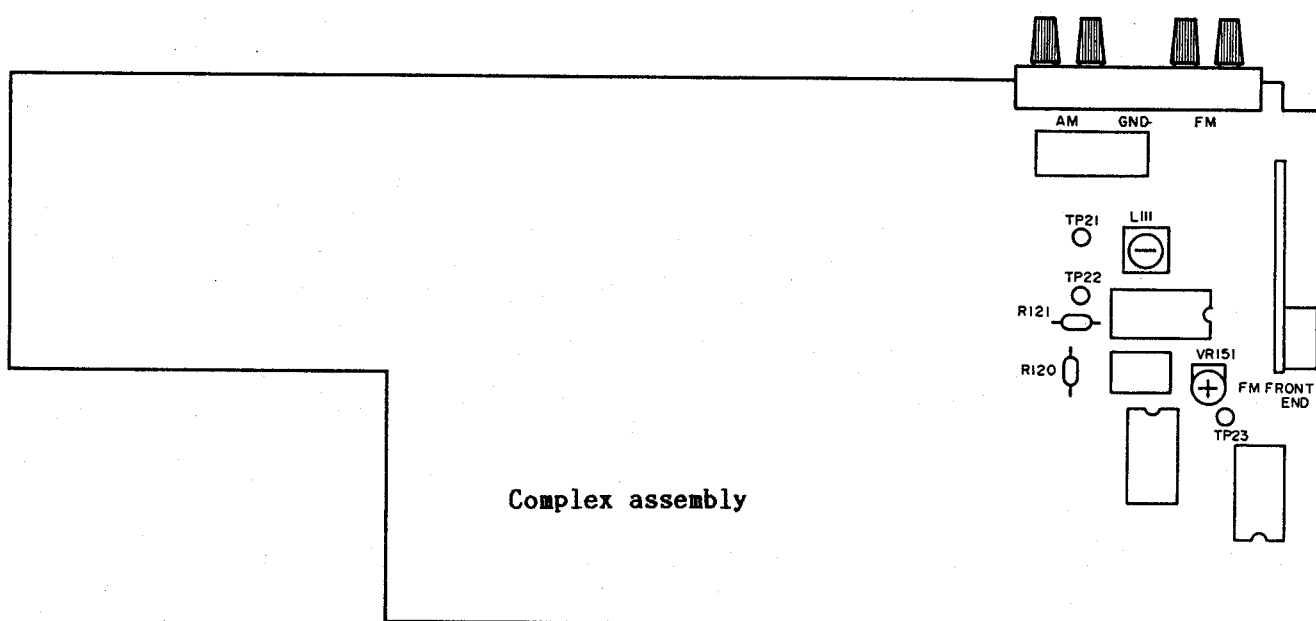


Fig. 6-3 Adjustment locations

FM TUNER SECTION ADJUSTMENT

- For connections and points to be adjusted, refer to Fig. 6-1 and 6-3.
- Set the BAND selector to "FM".
- Perform VCO adjustment after turning the power ON, two minutes or more.

*Note: Stereo modulation: Main 1kHz L+R ± 68.25 Hz dev.
Pilot 19kHz ± 6.75 kHz dev.*

Step No.	Adjustment Title	FM SG (1kHz ± 75 kHz dev.)		SX – 2900,2800 1900,240 Reception Fre- quency Display	Adjustment	
		Frequency (MHz)	Level (dB μ V)		Adjustment Location	Specifications
1	Detector coil T-meter adjustment (MONO)	98.0	60	98.0MHz	L111	Adjust so that the DC voltage between TP21 and TP22 is 0 ± 50 mv.
2	Checking front end sensitivity (MONO)	98.0	—	98.0MHz	—	Check that the practical sensitivity is 10 dB μ V or less.
3	VCO adjustment (MONO)	98.0 (No modulation)	60	98.0MHz	VR151	Adjust so that the frequency between TP23 and GND is 76 ± 0.5 kHz.
4	Checking stereo distortion (STEREO)	98.0	60	98.0MHz	—	Check that the stereo distortion is 1.5% or less.
		Stereo modulation (Note)				
5	Checking separation (STEREO)	98.0	60	98.0MHz	—	Check that the separation is 25 dB or more (at 1kHz).
6	Check lighting level of TUNED and STEREO IND. (STEREO)	98.0	—	98.0MHz	R121 * 1	FOR TUNED IND. 24 dB μ V ± 15 dB. FOR STEREO IND. ± 3 dB of TUNED IND. lighting level.

*1. Remove the R121 (11k Ω) from the complex assembly if the Tuning indicator fails of light up.

AM TUNER SECTION ADJUSTMENT

- For connections and points to be adjusted, refer to Fig. 6-2 and 6-3.
- Set the BAND selector to "AM"

Step No.	Adjustment Title	AM SG		SX-2900,2800, 1900,240 Reception Fre- quency Display	Adjustment	
		Frequency	Level		Adjustment Location	Specifications
1	Checking front end sensitivity	1000kHz (Modulation ON)	—	1000kHz	—	Check that the practical sensitivity is 75 dB μ V/m or less.
2	Check lighting level of TUNED IND.	1000kHz	—	1000kHz	R120 * 2	65dB μ V/m or less

*2. Remove the R120 (5.6k Ω) from the complex assembly if the Tuning indicator fails of light up.

6. RÉGLAGE

SECTION TUNER

- Régler le volume sur "MIN".
- Régler le sélecteur de fonction sur "TUNER".

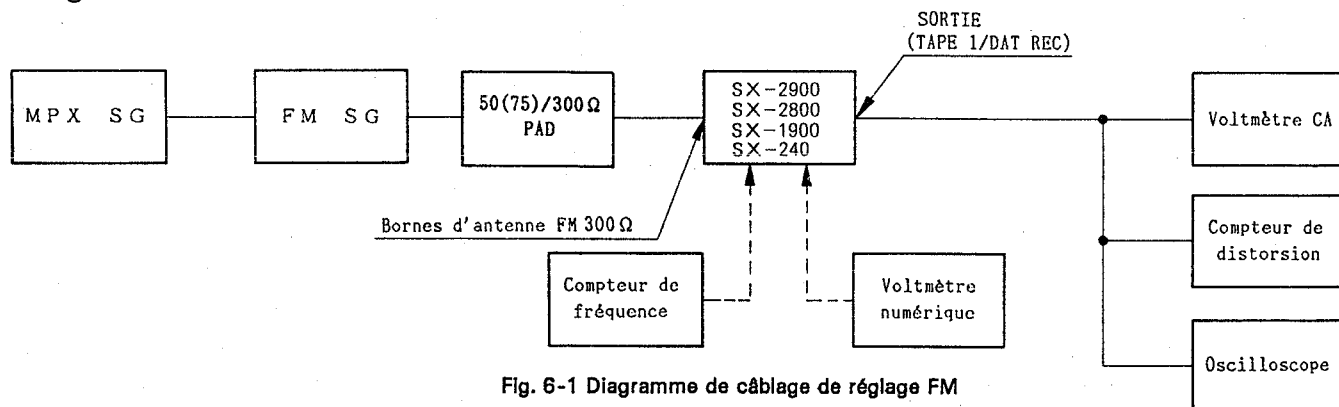


Fig. 6-1 Diagramme de câblage de réglage FM

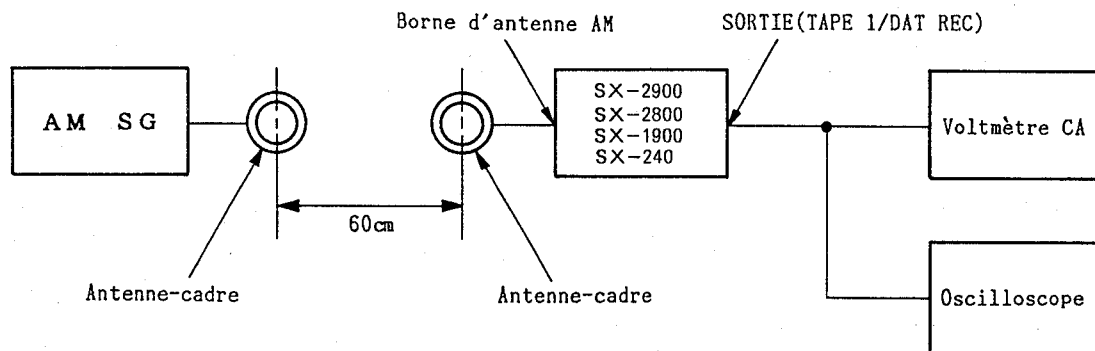


Fig. 6-2 Diagramme de câblage de réglage AM

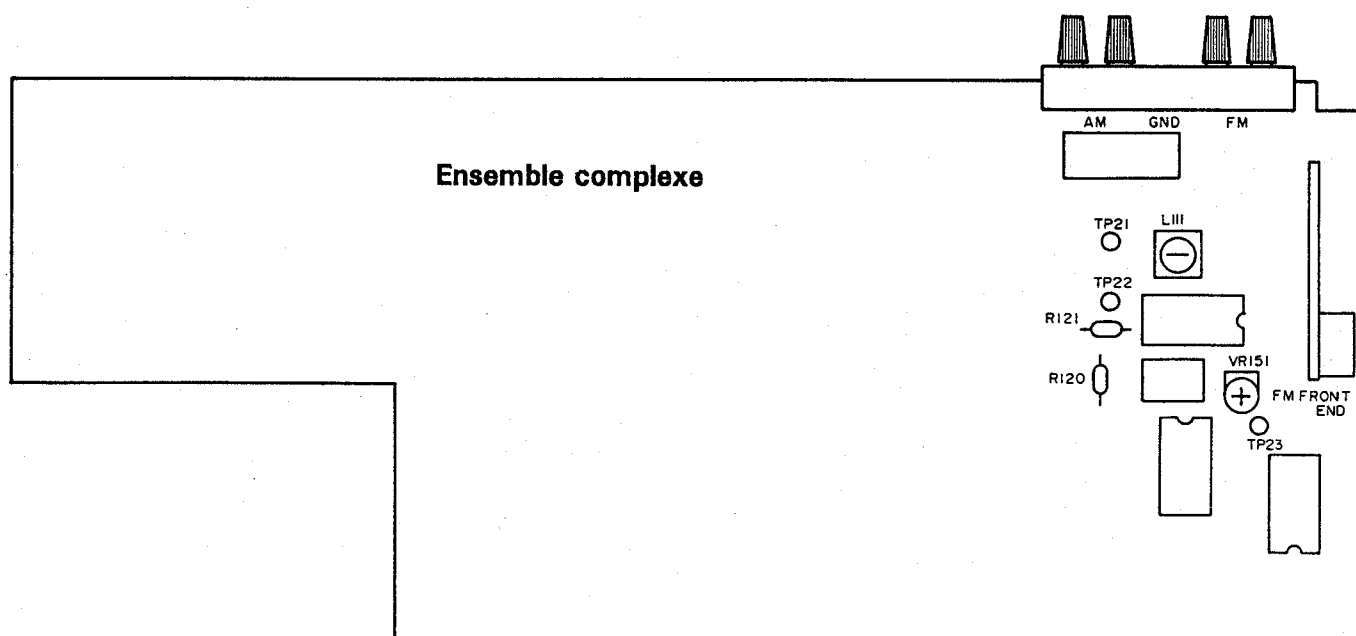


Fig. 6-3 Emplacements de réglage

RÉGLAGE DE SECTION TUNER FM

- Se reporter aux figures 6-1 et 6-3 pour les connexions et points à régler.
- Placer le sélecteur de BANDE sur "FM".
- Effectuer le réglage d'oscillateur commandé par variation de tension (VCO) deux minutes ou plus après la mise sous tension (ON).

*Note: Modulation stéréo: Principal 1 kHz G+D $\pm 68,25$ Hz d'écart
Pilote 19 kHz $\pm 6,75$ kHz d'écart*

Etape N°	Désignation de réglage	FM SG (1 kHz $\pm$ 75 kHz d'écart)		SX-2900, 2800 1900, 240 Affichage de fréquence de réception	Réglage	
		Fréquence (MHz)	Niveau (dB μ)		Emplacement de réglage	Spécifications
1	Réglage de compteur T de bobine de détecteur (MONO)	98,0	60	98,0 MHz	L111	Régler pour que la tension CC entre TP21 et TP22 soit de 0 $\pm$ 50 mV.
2	Contrôle de sensibilité d'extrémité avant (MONO)	98,0	—	98,0 MHz	—	Vérifier que la sensibilité pratique est de 10 dB μ V ou moins.
3	Réglage VCO (MONO)	98,0 (Sans modulation)	60	98,0 MHz	VR151	Régler pour que la fréquence entre TP23 et la terre soit de 76 $\pm$ 0,5 kHz.
4	Contrôle de distorsion stéréo (STEREO)	98,0	60	98,0 MHz	—	Vérifier que la distorsion stéréo est 1,5 % ou moins.
		Modulation stéréo (Note)				
5	Contrôle de séparation (STEREO)	98,0	60	98,0 MHz	—	Vérifier que la séparation est 25 dB ou plus (à 1 kHz).
6	Contrôler l'intensité d'éclairage du témoin d'ACCORD et de STEREO (STEREO)	98,0	—	98,0 MHz	R121 *1	Pour témoin d'ACCORD 24 dBV $\pm$ 15 dB Pour témoin STEREO $\pm$ 3 dB de l'intensité d'éclairage du témoin d'ACCORD.

* 1. Déposer le R121 (11 k Ω) de l'ensemble complexe si le témoin d'accord manque de s'allumer.

REGLAGE DE SECTION TUNER AM

- Se reporter aux figures 6-2 et 6-3 pour les connexions et points à régler.
- Placer le sélecteur de BANDE sur "AM"

Etape N°	Désignation de réglage	AM SG		SX-2900, 2800, 1900, 240 Affichage de fréquence de réception	Réglage	
		Fréquence	Niveau		Emplacement de réglage	Spécifications
1	Contrôle de sensibilité d'extrémité avant	1000 kHz (Modulation activée)	—	1000 kHz	—	Vérifier que la sensibilité pratique est 75 dB ou moins.
2	Contrôler l'intensité d'éclairage du témoin d'ACCORD	1000 kHz	—	1000 kHz	R120 *2	65 dB μ V/m ou moins

* 2. Déposer le R120 (5,6 k Ω) de l'ensemble complexe si le témoin d'accord manque de s'allumer

6. AJUSTE

SECCIÓN DEL SINTONIZADOR

- Ajuste el volumen a la posición "MIN".
- Ajuste la función (FUNCTION) a la posición "TUNER".

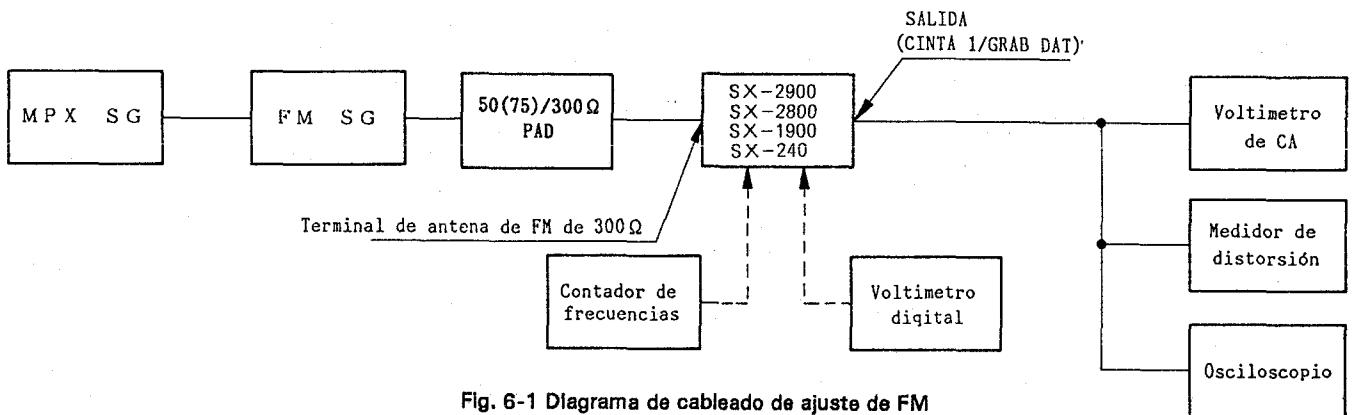


Fig. 6-1 Diagrama de cableado de ajuste de FM

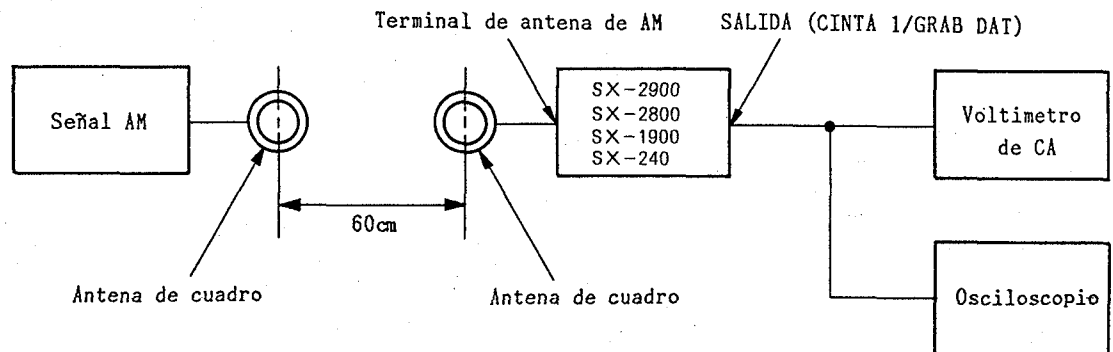


Fig. 6-2 Diagrama de cableado de ajuste de AM

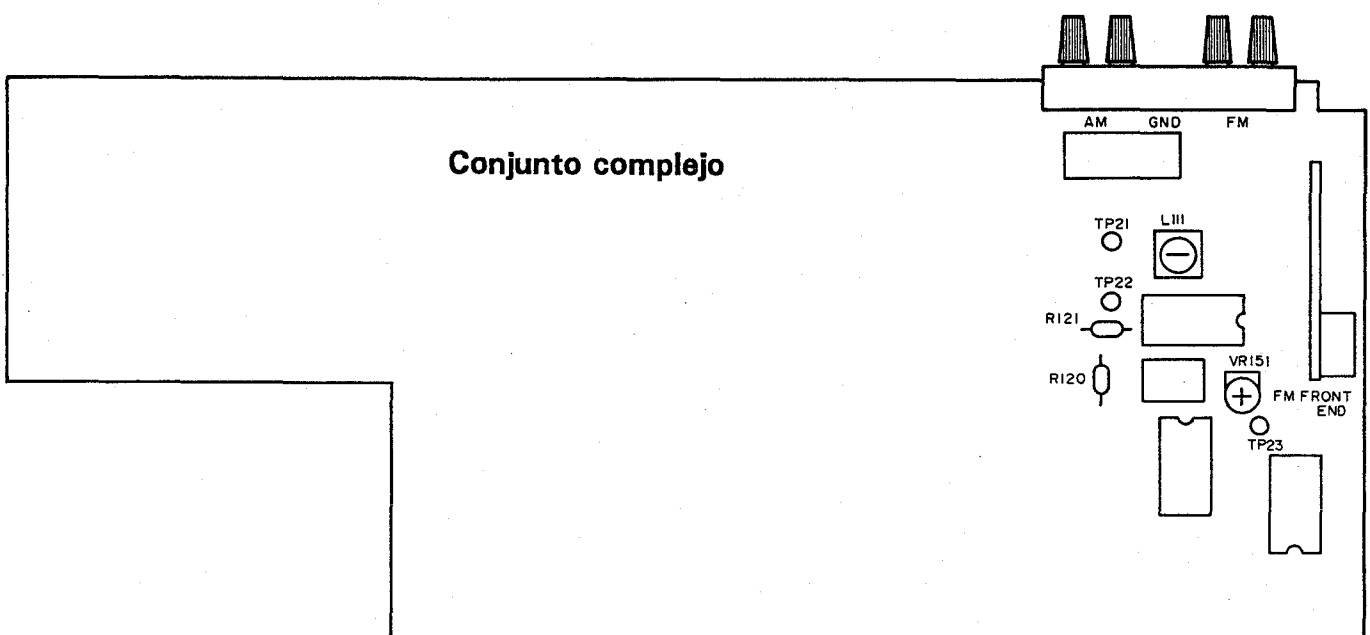


Fig. 6-3 Puntos de ajustes

AJUSTE DE LA SECCIÓN DEL SINTONIZADOR DE FM

- Para las conexiones y puntos a ser ajustados, refiérase a las figuras 6-1 y 6-3.
- Ajuste el selector BAND a "FM".
- Realice el ajuste VCO luego de los dos minutos o más de haber encendido la unidad.

*Nota: Modulación estereofónica: Principal 1 kHz I+D $\pm$ 68,25 Hz de desviación.
Señal piloto 19 kHz $\pm$ 6,75 kHz de desviación.*

Paso	Título de ajuste	Señal de FM (1 kHz $\pm$ 76 kHz de desviación)		Presentación de frecuencia de recepción del SX-2900, 2800, 1900, 240	Ajuste	
		Frecuencia (MHz)	Nivel (dB μ)		Punto de ajuste	Especificaciones
1	Ajuste del medidor T de la bobina de detección (MONOFÓNICO)	98,0	60	98,0 MHz	L111	Ajuste de modo que el voltaje de CC entre los terminales TP21 y TP22 sea 0 $\pm$ 50 mV.
2	Comprobación de sensibilidad de sección de sintonía (MONOFÓNICO)	98,0	—	98,0 MHz	—	Compruebe que la sensibilidad real sea de 10 dB μ V o menos.
3	Ajuste de VCO (MONOFÓNICO)	98,0 (Sin modulación)	60	98,0 MHz	VR151	Ajuste de modo que la frecuencia entre el terminal TP23 y masa (GND) sea 76 $\pm$ 0,5 kHz.
4	Comprobación de distorsión estereofónica (ESTÉREO)	98,0	60	98,0 MHz	—	Compruebe que la distorsión estereofónica sea de 1,5 % o menos.
		Modulación estereofónica (Nota)				
5	Comprobación de separación (ESTÉREO)	98,0	60	98,0 MHz	—	Compruebe que la separación sea de 25 dB o más (en 1 kHz).
6	Compruebe el nivel de iluminación de TUNED y STEREO IND. (ESTÉREO)	98,0	—	98,0 MHz	R121 *1	Para TUNED IND. 24 dB μ V $\pm$ 15 dB Para STEREO IND. $\pm$ 3 dB del nivel de iluminación de TUNED IND.

* 1. Si el indicador de sintonía no se enciende desconecte la resistencia R121 (11 k Ω) del conjunto complejo.

AJUSTE DE LA SECCIÓN DEL SINTONIZADOR DE AM

- Para las conexiones y puntos a ser ajustados, refiérase a las figuras 6-2 y 6-3.
- Ajuste el selector BAND a la posición "AM"

Paso	Título de ajuste	Señal de AM		Presentación de frecuencia de recepción del SX-2900, 2800, 1900, 240	Ajuste	
		Frecuencia	Modulación		Punto de ajuste	Especificaciones
1	Comprobación de sensibilidad de sección de sintonía	1000 kHz (Modulación ON)	—	1000 kHz	—	Compruebe que la sensibilidad real sea de 75 dB μ B/m o menos.
2	Compruebe el nivel de iluminación de TUNED IND.	1000 kHz		1000 kHz	R120 *2	65 dB μ V/m o menos.

* 2. Si el indicador de sintonía no se enciende desconecte la resistencia R120 (5,6 k Ω) del conjunto complejo.

7. FOR SX-2900/SD, SX-2800/KUC, SX-1900/KUC, SD AND SX-240/KUC TYPES

CONTRAST OF MISCELLANEOUS PARTS

NOTES:

- Parts without part number cannot be supplied.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

The SX-2900/SD, SX-2800/KUC, SX-1900/KUC, SD and SX-240/KUC types are the same as the SX-2900/KUC type with the exception of the following sections.

Mark	Symbol & Description	Part No.						Remarks
		SX-2900/ KUC type	SX-2900/ SD type	SX-2800/ KUC type	SX-1900/ KUC type	SX-1900/ SD type	SX-240/ KUC type	
	SP SWITCH Assembly	Non supply	Non supply	Non supply	Non supply	Non supply	Non supply	*1
	VR Assembly	Non supply	Non supply	.....	.....	.....	Non supply	
⊙	COMPLEX Assembly	AWZ3267	AWZ3269	AWZ3271	AWZ3273	AWZ3273	AWZ3293	
⊙	CONTROL Assembly	AWZ3268	AWZ3270	AWZ3272	AWZ3274	AWZ3274	AWZ3268	
Δ	Q1, Q2 Transistor	2SC3181N	2SC3181N	2SC3181N	2SC3180N	2SC3180N	2SC3180N	
Δ	Q3, Q4 Transistor	2SA1264N	2SA1264N	2SA1264N	2SA1263N	2SA1263N	2SA1263N	
Δ	S2 Line voltage selector switch (AC110V, 120-127V, 220V, 240V)	.....	AKX-507	.....	.....	AKX-507	.....	
Δ	S4 Line voltage selector switch (AC110-127V/220V-240V)	.....	AKX1004	.....	.....	.....	.....	
Δ	S3 Slide switch (9k/10k)	.....	ASH-004	.....	.....	ASH-004	.....	
Δ	T1 Power transformer	ATS1248	ATS1249	ATS1248	ATS1118	ATS1130	ATS1118	
Δ	AC Power cord	ADG1057	ADG1015	ADG1057	ADG1057	ADG1015	ADG1057	
	R1 Resistor (750 Ω /10W, R1)	ACN1083	ACN1083	ACN1083	.....	.....	.....	
	R1 Resistor (620 Ω /10W, R1)	.....	.....	.....	ACN1082	ACN1082	ACN1082	
Δ	FU1 Fuse (4A/125V)	AEK-100	.....	AEK-100	.....	.....	.....	
Δ	FU1 Fuse (3.15A/125V)	.....	.....	.....	AEK1004	.....	AEK1004	
Δ	FU1 Fuse (2A/125V)	.....	AEK-103	.....	.....	.....	.....	
Δ	FU1 Fuse (1.5A/125V)	.....	.....	.....	.....	AEK-104	.....	
Δ	FU2 Fuse (1.6A/125V)	.....	.....	.....	.....	AEK-121	.....	
Δ	FU2 Fuse (2A/125V)	.....	AEK-122	.....	.....	.....	.....	
Δ	FU3, FU4 Fuse (1.25A/125V)	AEK-120	AEK-120	AEK-120	.....	.....	.....	
	Master VOL assembly	AAB1207	AAB1207	.....	.....	.....	AAB1207	
	Master VOL knob	.....	.....	AAB1134	AAB1134	AAB1134	.....	
	Tact knob	AAD1398	AAD1398	AAD1398	.....	.....	AAD1398	
	Insulator assembly	AMR2140	AMR2140	.....	.....	.....	.....	
	Leg assembly	.....	.....	AEC1323	AEC1323	AEC-784	AEC1323	

Mark	Symbol & Description	Part No.						Remarks
		SX-2900/ KUC type	SX-2900/ SD type	SX-2800/ KUC type	SX-1900/ KUC type	SX-1900/ SD type	SX-240/ KUC type	
⚠	Screw	ABA1009	ABA1009					
	Washer	ABF1017	ABF1017	.....	.....	.....	.....	
	Coil spring	ABH1064	ABH1064	.....	.....	.....	ABH1064	
	Front panel	AMB1753	AMB1753	AMB1752	AMB1751	AMB1751	AMB1754	
	Acrylic panel	AAK2092	AAK2092	AAK2091	AAK2091	AAK2091	AAK2092	
	Fuse holder	.....	AKR-038	.....	.....	AKR-038	.....	
	Screw (For S3, Slide switch)	.....	BMZ26P040FCU	.....	.....	BMZ26P040FCU	.....	
	Nut (For VR301)	.....	.....	NK70FUC	NK70FUC	NK70FUC	.....	
	Packing case	AHD1985	AHD1985	AHD1984	AHD1983	AHD1983	AHD1986	
	Remote control unit (CU-SX021)	AXD1186	AXD1186	.....	.....	.....	AXD1186	
	Operating instructions (English)	ARB1286	ARB1286	ARB1285	ARB1285	ARB1285	ARB1298	
	Operating instructions	.....	ARC1240	.....	.....	ARC1240	.....	

*1: The SP SWITCH assembly of SX-2900/KUC, SD and SX-240/KUC types are identical assemblies.
The SP SWITCH assembly of SX-1900/KUC and SX-1900/SD types are also identical assemblies.

SP SWITCH Assembly (SX-2800/KUC, SX-1900/KUC and SD types)

The SP SWITCH Assembly (SX-2800/KUC, SX-1900/KUC and SD types) is the same as the SP SWITCH Assembly (SX-2900/KUC type) with the exception of the following sections.

Mark	Symbol & Description	Part No.				Remarks
		SX-2900/ KUC type	SX-2800/ KUC type	SX-1900/ KUC type	SX-1900/ SD type	
⚠	S1 Power switch	.....	ASG1027	ASG1027	ASG1027	

VR Assembly (SX-2900/SD and SX-240/KUC types)

The VR Assembly (SX-2900/SD and SX-240/KUC types) is the same as the VR Assembly (SX-2900/KUC type) with the exception of the following sections.

Mark	Symbol & Description	Part No.			Remarks
		SX-2900/KUC type	SX-2900/SD type	SX-240/KUC type	
	Q361	RN1203			
	C364	CKDYX104M25	.....	.....	
	R363	RD1/8PM182J	.....	.....	
	VR361	ACX1035	ACX1035	ACX1052	

COMPLEX Assembly (AWZ3269, AWZ3271, AWZ3273 and AWZ3293)

The COMPLEX Assembly (AWZ3269, AWZ3271, AWZ3273 and AWZ3293) is the same as the COMPLEX Assembly (AWZ3267) with the exception of the following sections.

Mark	Symbol & Description	Part No.					Remarks
		AWZ3267	AWZ3269	AWZ3271	AWZ3273	AWZ3293	
	Q513, Q514	2SC1845	2SC1845	2SC1845	.....	.....	
	Q551, Q552	2SC3298	2SC3298	2SC3298	2SC2235	2SC2235	
	Q553, Q554	2SA1306	2SA1306	2SA1306	2SA965	2SA965	
	Q621, Q622	2SC2240	2SC2240	2SC2240	.....	.....	
	Q751	RN1201	RN1201	.....	.....	RN1201	
	Q752	2SC2458	2SC2458	.....	.....	2SC2458	
	D513, D514, D621 - D624,	HSS104-02	HSS104-02	HSS104-02	.....	.....	
	D714, D754, D757	HSS104-02	HSS104-02	.....	.....	HSS104-02	
	D751, D752	1SR139-400	1SR139-400	.....	.....	1SR139-400	
	D753	HZS6A2L	HZS6A2L	.....	.....	HZS6A2L	
	RY751	ASR1027	ASR1027	.....	.....	ASR1027	
	RY561	ASR-112	ASR-112	ASR-112	ASR-111	ASR-111	
	T751 Power transformer	ATT1011	ATT1015	.....	.....	ATT1011	
	C153, C154	CQMA152J50	CQMA122J50	CQMA152J50	CQMA122J50	CQMA152J50	
	C165, C166	.....	.....	.....	*1 CKCYB331K50	.....	
	C621, C622	CEAS2R2M50	CEAS2R2M50	CEAS2R2M50	.....	.....	
	C701, C702 (6800 μ F/DC83V)	ACH1137	ACH1137	ACH1137	.....	.....	
	C701, C702 (4700 μ F/DC50V)	.....	.....	.....	ACH-252	ACH-252	
	C751 (0.01 μ F/150V)	ACG1005	ACG1005	.....	.....	ACG1005	
	C752	CEAS471M25	CEAS471M25	.....	.....	CEAS471M25	
	C753	CEAS470M10	CEAS470M10	.....	.....	CEAS470M10	
	R511, R512	.....	.....	.....	RD1/8PM272J	RD1/8PM272J	
	R513 - R516	RD1/8PM391J	RD1/8PM391J	RD1/8PM391J	.....	.....	
	R517, R518	RD1/8PM103J	RD1/8PM103J	RD1/8PM103J	.....	.....	
	R521, R522	RD1/4PM432J	RD1/4PM432J	RD1/4PM432J	RD1/4PM562J	RD1/4PM562J	
⚠	R608	RS2LMF332J	RS2LMF332J	RS2LMF332J	RS2LMF911J	RS2LMF911J	
⚠	R610	RS2LMF272J	RS2LMF272J	RS2LMF272J	RD1/4PMF100J	RD1/4PMF100J	
	R621, R622	RD1/8PM472J	RD1/8PM472J	RD1/8PM472J	.....	.....	
	R623, R624	RD1/8PM153J	RD1/8PM153J	RD1/8PM153J	.....	.....	
	R625	RD1/4PMF101J	RD1/4PMF101J	RD1/4PMF101J	.....	.....	
⚠	R703	RS2LMF182J	RS2LMF182J	RS2LMF182J	RS2LMF122J	RS2LMF122J	
	R707	ACN-209	.....	ACN-209	*2 ACN-209	ACN-209	
	R708	.....	RD1/4PM621J	.....	.....	.....	
	R751	RD1/2PM821J	RD1/2PM821J	.....	.....	RD1/2PM821J	
	R752	RD1/2PM470J	RD1/2PM470J	.....	.....	RD1/2PM470J	
	R754	RD1/8PM224J	RD1/8PM224J	.....	.....	RD1/8PM224J	
	R755	RD1/8PM223J	RD1/8PM223J	.....	.....	RD1/8PM223J	
	R756	RD1/8PM102J	RD1/8PM102J	.....	.....	RD1/8PM102J	
	Jack (2P)	AKN1006	AKN1006	AKN1006	.....	AKN1006	

*1, *2 : Cut the parts *1 and *2 when the specification of the SX-1900/SD applies.

**SX-2900/SD, -2800/KUC,
-1900/KUC, SD, -240/KUC**

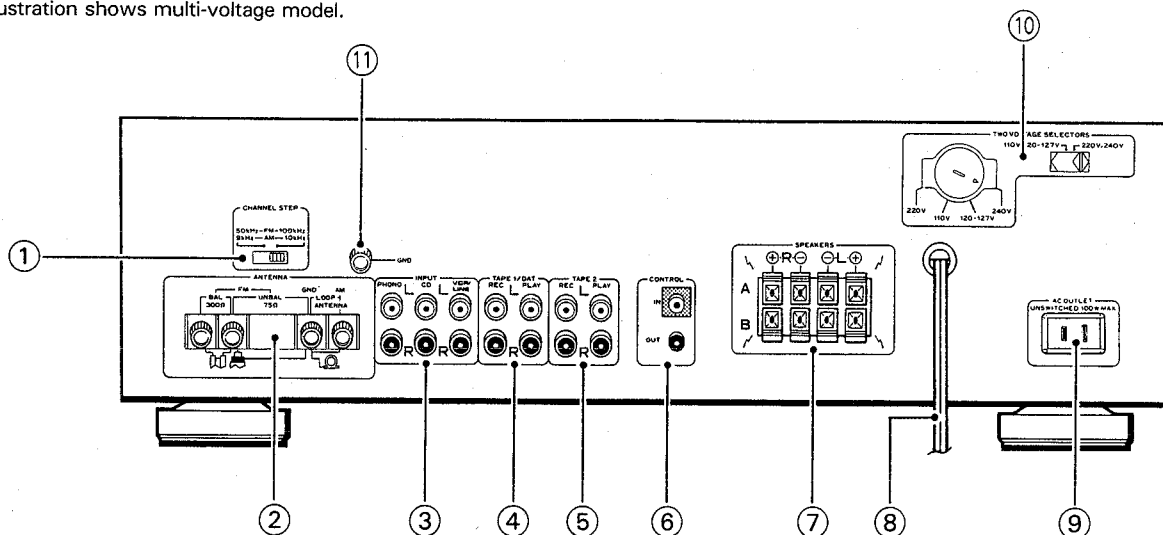
CONTROL Assembly (AWZ3270, AWZ3272 and AWZ3274)

The CONTROL Assembly (AWZ3270, AWZ3272 and AWZ3274) is the same as the CONTROL Assembly (AWZ3268) with the exception of the following sections.

Mark	Symbol & Description	Part No.				Remarks
		AWZ3268	AWZ3270	AWZ3272	AWZ3274	
	Q802, Q803	2SC1740SLN	2SC1740SLN	.....	.....	
	D802	HSS104-02	HSS104-02	.....	.....	
	S825	ASG1034	ASG1034	ASG1034	.....	
	S831	ASG1034	ASG1034	.....	.....	
	VR301 (100k×2)	.....	.....	ACT1040	ACT1040	
	R811, R812	RD1/8PM472J	RD1/8PM472J	.....	.....	
	Remote receiver unit	AXX1010	AXX1010	.....	.....	

8. PANEL FACILITIES

• Illustration shows multi-voltage model.



① CHANNEL STEP switch

② FM/AM ANTENNA terminals

Use these antenna terminals for receiving FM and AM broadcasts.

③ INPUT jacks

PHONO Connect to the output cables from a turntable.

CD Connect to the output jacks of a compact disc player.

VCR/LINE ..Connect to the output jacks of a video cassette recorder, etc.

④ TAPE 1/DAT jacks

Connect these jacks to the cassette deck or digital audio tape deck.

⑤ TAPE2 jacks

Connect these jacks to the cassette deck.

⑥ CONTROL IN/OUT jacks

IN: Connect this jack to other Pioneer components when using those components to control this unit.

OUT: Connect this jack to other Pioneer components when using the remote control of this unit to control the other components.

NOTE:

The receiver's remote sensor does not function when a plug is inserted in the IN jack. To operate, point the remote control unit at the remote sensor on the component to which the receiver's IN jack is connected.

⑦ SPEAKERS terminals

A: Connect to a first set of speakers.

B: Connect to a second set of speakers.

NOTE:

No sound will be heard through the speakers when both A and B switches are depressed if only one set of speakers has been connected to either A or B SPEAKERS terminals.

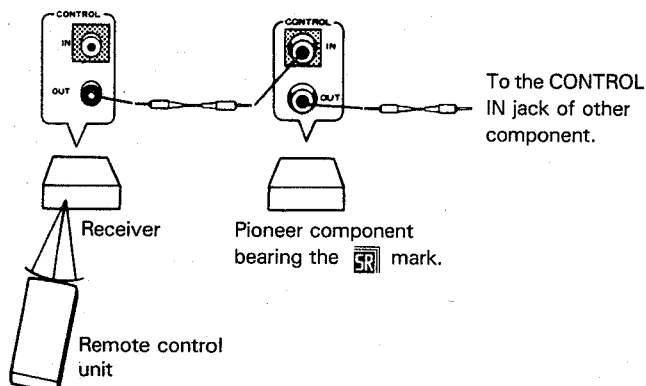
⑧ Power cord

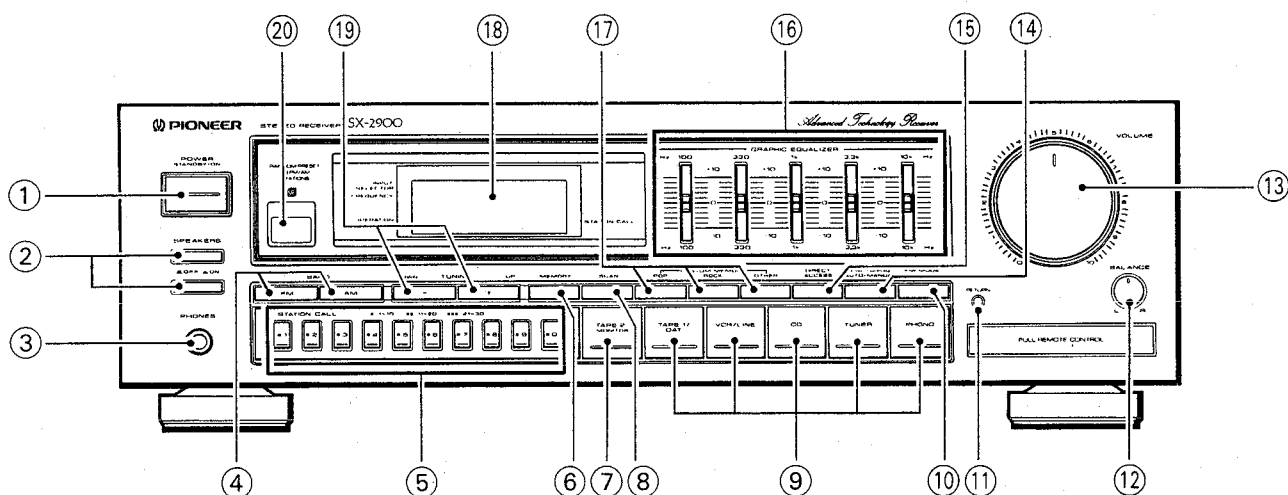
⑨ AC OUTLETS

⑩ VOLTAGE SELECTORS

⑪ GND terminal

Connect to the ground lead of a turntable.





① POWER (STANDBY/ON) switch

- The accessory remote control unit can also be used to operate STANDBY/ON and SLEEP function of this switch.
- The POWER switch selects the transformer secondary even in STANDBY position. The unit circuitry will work as long as the power cord is connected to a wall socket.
- When not using the unit for a long period, disconnected the power cord.

[FOR MULTI-VOLTAGE MODEL]

Even when the power is in STANDBY, the VOLUME control knob indicator remains lit.

NOTE:

When the power is initially turned ON, muting will be applied to prevent sound from being output for about 5 seconds.

② SPEAKERS switches (OFF, ON)

These are used to select the speaker through which you wish to listen.

A: When the speakers connected to A terminals are in use.

B: When the speakers connected to B terminals are in use.

- Turn both A and B speakers to OFF position when only the HEADPHONES are in use.

NOTE:

No sound will be heard through the speakers when both A and B switches are depressed if only one set of speakers has been connected to either A or B SPEAKERS terminals.

③ PHONES jack

Connect the plug on your headphones to this jack. To listen to a program through the headphones, set both SPEAKERS A and B switches to the OFF position.

④ BAND Selector buttons

These buttons are used to select either AM or FM reception.

AM: Push this button for AM reception.

FM: Push this button for FM reception.

⑤ STATION CALL buttons

These buttons are used to preset and recall desired broadcasting stations.

⑥ MEMORY button

When the unit is in the frequency display mode, pressing this button will result in the memorization of the current broadcast band, reception frequency, and FM AUTO/MONO mode.

This button is also used to input custom memory names.

⑦ TAPE 2 MONITOR button

Press when listening to tape playback with the cassette deck 2.

⑧ SCAN button

This button is used for both station memory scan and custom memory scan.

⑨ Function buttons

Use to select playback source.

[TAPE 1 /DAT] — Press when listening to tape playback with the cassette deck 1 or digital audio tape deck.

[VCR/LINE] — Press when listening to programs from a component connected to the VCR/LINE terminals.

[CD] — Press when listening to compact disc playback with a CD player.

[TUNER] — Press when listening to AM or FM broadcasts with a tuner.

[PHONO] — Press when listening to record playback on a turntable.

⑩ FM MODE AUTO/MONO selector button

Use to select the auto stereo mode or monaural mode when listening to FM broadcasts. The monaural mode has been selected when the FM MONO indicator is lighted.

Auto stereo mode:

Normally leave in this mode for reception. When a stereo FM broadcast is received, it will be automatically reproduced in stereo sound.

Monaural mode:

When receiving distant stations or stations with weak broadcast signals, the input signal may be weak, thus resulting in increased noise during FM stereo broadcasts. In this event, setting the receiver to the monaural mode will reduce the noise. In this case, however, FM stereo broadcasts will be reproduced in monaural sound.

NOTE:

This button has no effect on reception of AM broadcasts.

⑪ RETURN button

This is helpful during troubleshooting or when no sound is output.

Pressing this button returns the receiver to the following settings, the sound level being controlled by VOLUME control.

- TAPE 2 MONITOR OFF
- FUNCTION TUNER
- BAND FM*

* The last FM broadcast you were listening to will be received. When reception is not possible, search begins for frequency that can be received.

NOTE:

If no sound is output after the RETURN button is pressed, make sure that SPEAKERS switches are turned on.

⑫ BALANCE control

Should normally be left in the center position. Adjust balance if the sound is louder from one of the speakers. If the right side is louder, turn toward the L position and if the left side is louder, turn toward the R position.

⑬ VOLUME control

Use to adjust volume level.

⑭ FM TUNING AUTO/MANUAL button

Works during FM reception.

Use this button to select either the AUTO mode or the MANUAL mode. When the "AUTO" indicator is lit, the receiver is in the AUTO mode.

⑮ DIRECT ACCESS tuning button

When this button is pressed, the STATION CALL buttons function as ten-key number buttons for direct input of the desired reception frequency. Press again to cancel this mode.

If the input station falls outside of the receiver's tuning range, the display section will display a message: "UPPER" if the frequency is too high and "LOWER" if it is too low.

⑯ GRAPHIC EQUALIZER controls

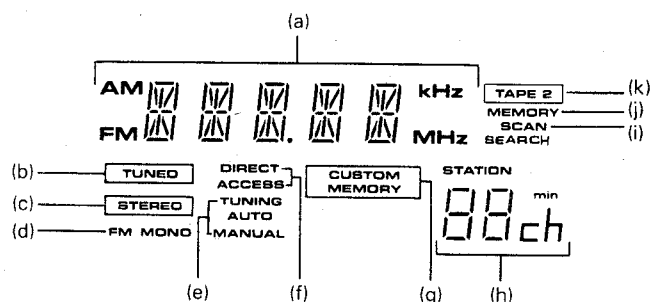
The equalizer is divided into five frequency ranges (100 Hz, 330 Hz, 1 kHz, 3.3 kHz, 10 kHz) to tailor music to the individual taste of the listener.

⑰ CUSTOM MEMORY buttons

Stations can be assigned to STATION CALL buttons according to the genre of material broadcast (POP, ROCK, OTHER). You can recall a particular genre, and scan all the stations of that genre with Memory Scan until you reach the desired one.

⑱ OPERATION DISPLAY panel

- (a) Indicates the function or frequency by the function switches.
- (b) TUNED indicator
- (c) FM STEREO indicator
- (d) FM MONO indicator
- (e) TUNING AUTO/MANUAL indicator
- (f) DIRECT ACCESS tuning indicator
- (g) CUSTOM MEMORY indicator
- (h) Indicates channel, STATION CALL number or sleep time.
- (i) SCAN indicator
- (j) MEMORY indicator
- (k) TAPE 2 monitor indicator.



⑲ TUNING buttons (DOWN, UP)

UP: The FM or AM band is scanned in the direction of increasing frequency.

DOWN: The opposite operation to that of the UP button takes place.

⑳ Remote sensor window

9. SPECIFICATIONS

Amplifier Section

Continuous Average Power Output is 65 watts* per channel, min., at 8 ohms from 20 Hertz to 20,000 Hertz with no more than 0.07 % total harmonic distortion.**

Continuous Power Output (both channel driven)**

20 Hz — 20 kHz, T.H.D. 0.07 %, 8 Ω 65 W + 65 W

Dynamic power output (with EIA test signal)

2/4/8 Ω 145 W/130 W/90 W

Total Harmonic Distortion**

1 kHz, 65 W, 8 Ω 0.01 %

Input (Sensitivity/ Impedance)

PHONO 2.5 mV/47 k Ω

CD, VCR/LINE, TAPE 1/DAT, TAPE 2 150 mV/22 k Ω

Phono Overload Level (T.H.D. 0.01 %, 1,000 Hz)

PHONO 130 mV

Output Level

TAPE REC 150 mV/2.2 k Ω

Frequency Response

PHONO (RIAA Equalization) 20 Hz to 20,000 Hz $\pm$ 0.5 dB

CD, VCR/LINE, TAPE 1/DAT, TAPE 2 10 Hz to 70,000 Hz $\pm$ 0.5 dB

Signal-to-Noise Ratio (IHF, short circuited, A network)

PHONO 72 dB

CD, VCR/LINE, TAPE 1/DAT, TAPE 2 96 dB

Graphic Equalizer frequency band 100 Hz, 330 Hz, 1 kHz,

3.3 kHz, 10 kHz, $\pm$ 8 dB

FM Tuner Section

Frequency range 87.5 MHz to 108 MHz

Usable Sensitivity 10.8 dBf, IHF (0.95 μ V/75 Ω)

50 dB Quieting Sensitivity

MONO 15.3 dBf (1.6 μ V/75 Ω)

STEREO 37.1 dBf (19.5 μ V/75 Ω)

Signal-to-Noise Ratio

MONO 78 dB (at 85 dBf)

STEREO 75 dB (at 85 dBf)

Distortion

STEREO 0.3 % (1 kHz)

Alternate Channel Selectivity 55 dB (400 kHz)

Stereo Separation 35 dB (1 kHz)

Frequency Response 30 Hz to 15 kHz ($\pm$ 1 dB)

Antenna Input 300 Ω balanced, 75 Ω unbalanced

AM Tuner Section

Frequency range, when 10 kHz step 530 kHz to 1,700 kHz

When 9 kHz step 531 kHz to 1,602 kHz

Sensitivity

IHF, Loop antenna 300 μ V/m

Selectivity 20 dB

Signal-to-Noise Ratio 50 dB

Antenna AM Loop Antenna

Miscellaneous

Power Requirements

U.S., Canadian model AC 120 Volts, 60 Hz

Other destination models ~ AC 110 V/ 120 V—127 V/
220 V/ 240 V (switchable), 50/60 Hz

Power Consumption

U.S., Canadian models 250 W (UL), 335 VA (CSA)

Other destination models 395 W

AC Outlet UNSWITCHED x 1 : 100W MAX

Dimensions 420 (W) X 120 (H) X 336 (D) mm

16-9/16(W) X 4-3/4 (H) X 13-1/4 (D) in

Weight (without package) 7.1 kg (15 lb 10 oz)

Furnished Parts

FM T-type Antenna 1

AM Loop Antenna 1

Remote control unit 1

Dry cell battery (size "AAA" (R03/UM-4)) 2

Operating Instructions 1

** Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier.*

*** Measured By Audio Spectrum Analyzer.*

NOTE:

Specifications and design subject to possible modification without notice due to improvements.