

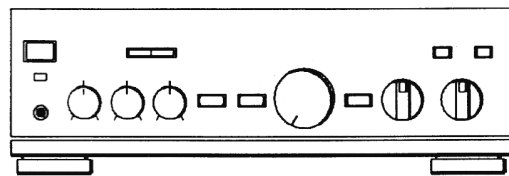
**AIWA®**

LS 222124

1 / SM-XA0-08 -

SERV-MANUAL XA-008  
9148 89 XA008**XA-008**

# SERVICE MANUAL



STEREO INTEGRATED AMPLIFIER

• TYPE. H,E,K,Z

## SPECIFICATIONS

### Common

#### Power requirements

XA-008H  
AC 120V/220V/240V  
switchable, 50/60Hz  
XA-008E, Z  
AC 220V, 50Hz  
XA-008K  
AC 240V, 50Hz

#### Power consumption

XA-008H 160W  
XA-008E, K, Z 450W

### Power amplifier

#### Effective output power

105W + 105W  
(4ohms, T.H.D. 0.9%, 1kHz)  
72W + 72W  
(8ohms, T.H.D. 0.9%, 1kHz)

#### Total harmonic distortion

0.006%  
(20Hz-20kHz, 50W, 8ohms)

#### Output bandwidth

6Hz-70kHz (less than 0.05%)  
[Both channels driven,  
8ohms]

#### Frequency response

5Hz-100kHz (+0.5/-3dB)

### Preamplifier

#### S/N ratio

IHF A curve short circuited  
PHONO:  
MM 94dB (5mV input)  
MC 75dB (0.5mV input)  
TUNER, CD, VCR/AUX,  
TAPE/DAT 108dB

#### Input jacks

#### (Sensitivity/input impedance)

PHONO:  
MM 2.5mV/47kohms  
MC 0.2mV/100ohms  
TUNER, CD, VCR/AUX,  
TAPE/DAT 150mV/47kohms

#### PHONO overload level

90mV (MM)  
[1kHz, T.H.D. 0.01%]

#### Output jacks

#### (Level/output impedance)

TAPE/DAT 150mV/47kohms  
Headphones 8-32ohms  
Speakers 4-16ohms  
(A+B: 8-16ohms)

#### RIAA deviation

±0.5dB (30Hz-15kHz)

#### SUBSONIC filter

16Hz 12dB/Oct

#### Maximum dimensions

(w/h/d) 430 × 128 × 332mm  
(17 × 5 1/8 × 13 1/8 inches)

#### Weight

8.3kg (18.26lbs)

• Design and specifications are subject to change  
without notice.

**AIWA Co., Ltd.****Tokyo Japan**

Printed in Japan

# ELECTRICAL MAIN PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
===IC===					
	87-001-171-010	IC, NJM2068D	J104	★87-009-392-010	JACK PIN 6P(PLAY 1)(PLAY 2) (REC OUT 1)
	87-027-787-010	IC, UPC1237H	L1	★87-005-158-010	COIL, 1UH
===TRANSISTOR===					
	89-110-155-010	TRANSISTOR, 2SA1015GR	L2	★87-005-158-010	COIL, 1UH
	89-111-453-010	TRANSISTOR, 2SA1145D	R97	★87-025-479-019	RES, NF 100-1/4WJ
	81-AA2-650-010	TRANSISTOR, 2SA1301 BND	R98	★87-025-479-019	RES, NF 100-1/4WJ
	89-113-583-410	TRANSISTOR, 2SA1358	R103	★87-025-333-010	RES, NF 56-1/4W
			R104	★87-025-333-010	RES, NF 56-1/4W
	89-109-705-010	TRANSISTOR, 2SA970GR	△R115	87-029-130-010	RES, FUSE 220-1W
	89-213-302-010	TRANSISTOR, 2SB1330	△R116	87-029-130-010	RES, FUSE 220-1W
	89-318-155-010	TRANSISTOR, 2SC1815GR	R117	★87-025-434-010	RES, CEMENT 0.22-5W
	89-322-405-010	TRANSISTOR, 2SC2240GR	R118	★87-025-434-010	RES, CEMENT 0.22-5W
	89-327-053-010	TRANSISTOR, 2SC2705(0)	R119	★87-025-434-010	RES, CEMENT 0.22-5W
	81-AA2-651-010	TRANSISTOR, 2SC3280 BND	R120	★87-025-434-010	RES, CEMENT 0.22-5W
	89-333-296-010	TRANSISTOR, 2SC3329BL	R123	★87-025-347-010	RES, M/O 10-2W F
	89-334-194-010	TRANSISTOR, 2SC3419Y	R124	★87-025-347-010	RES, M/O 10-2W F
	89-334-213-410	TRANSISTOR, 2SC3421	R125	★87-025-487-019	RES, M/F 10-1W
	89-420-062-380	TRANSISTOR, 2SD2006	R126	★87-025-487-019	RES, M/F 10-1W
	87-026-369-010	TRANSISTOR, RN1207	R201	★87-025-333-010	RES, NF 4.7-1/4WJ
			R202	★87-025-333-010	RES, NF 4.7-1/4WJ
===DIODE===					
	87-001-783-010	DIODE, 1N4002-T	R205	★87-025-479-019	RES, NF 680-1/4WJ
	87-020-110-010	DIODE, 1SS177	R206	★87-025-479-019	RES, NF 680-1/4WJ
	87-002-439-010	DIODE, D5SB20-4003	R207	★87-025-333-010	RES, NF 4.7-1/4WJ
	87-020-123-010	DIODE, DS46-AT	R208	★87-025-333-010	RES, NF 4.7-1/4WJ
	87-027-449-010	DIODE, ZENER HZ15-3L	R227	★87-025-479-019	RES, NF 100-1/4WJ
===MAIN CIRCUIT BOARD SECTION===					
C11	★87-018-121-010	CAP, CERA-SOL U 150P-50 B(Z)	RY1	87-045-316-010	RELAY, VB-245MBU-SP
C12	★87-018-121-010	CAP, CERA-SOL U 150P-50 B(Z)	S1	80-AA1-633-010	SW, ROTARY(FUNCTION)
C15	★87-018-121-010	CAP, CERA-SOL U 150P-50 B(Z)	S8	80-AA1-634-110	SW, PUSH(SPEAKER A)
C16	★87-018-121-010	CAP, CERA-SOL U 150P-50 B(Z)	S9	80-AA1-634-110	SW, PUSH(SPEAKER B)
C49	★87-010-263-010	CAP, ELECT 100-10	S16	80-AA1-633-010	SW, ROTARY(REC OUT)
C50	★87-010-263-010	CAP, ELECT 100-10	SFR1	★87-024-171-019	SFR 4.7K
C63	★87-010-405-010	CAP, ELECT 10-50 SME	SFR2	★87-024-171-019	SFR 4.7K
C64	★87-010-405-010	CAP, ELECT 10-50 SME	T101	★87-033-222-010	TERMINAL, SPEAKER 8P HOLE(SPEAKERS) (H, E, Z)
C65	★87-018-131-010	CAP, CERA-SOL U 1000P-50 B	T101	★87-033-210-010	TERMINAL, SPEAKER 8P(SPEAKERS)(K)
C66	★87-010-762-010	CAP, ELECT 220-10V BP	===SUB CIRCUIT BOARD SECTION===		
C68	★87-010-404-010	CAP, ELECT 4.7-50 SME	C1	★87-018-131-010	CAP, CERA-SOL U 1000P-50 B
C69	★87-010-260-010	CAP, ELECT 47-25 SME	C2	★87-018-131-010	CAP, CERA-SOL U 1000P-50 B
C70	★87-010-401-010	CAP, ELECT 1-50 SME	C3	★87-010-403-019	CAP, ELECT 3.3-50 SME
C73	★87-018-131-010	CAP, CERA-SOL U 1000P-50 B	C4	★87-010-403-019	CAP, ELECT 3.3-50 SME
C74	★87-018-131-010	CAP, CERA-SOL U 1000P-50 B	C19	★87-018-045-019	CAP, CERA-SOL S 2200P-25 X
C201	★87-010-945-010	CAP, ELECT 10000-56LQ	C20	★87-018-045-019	CAP, CERA-SOL S 2200P-25 X
C202	★87-010-945-010	CAP, ELECT 10000-56LQ	C21	★87-010-101-019	CAP, ELECT 220-16 SME
C203	★87-010-397-019	CAP, ELECT 1000-35 SME	C22	★87-010-101-019	CAP, ELECT 220-16 SME
C204	★87-010-397-019	CAP, ELECT 1000-35 SME	C23	★87-010-402-019	CAP, ELECT 2.2-50 SME
C205	★87-010-260-010	CAP, ELECT 47-25 SME	C24	★87-010-402-019	CAP, ELECT 2.2-50 SME
C206	★87-010-260-010	CAP, ELECT 47-25 SME	C31	★87-010-260-010	CAP, ELECT 47-25 SME
C207	★87-010-260-010	CAP, ELECT 47-25 SME	C32	★87-010-260-010	CAP, ELECT 47-25 SME
C208	★87-010-260-010	CAP, ELECT 47-25 SME	C37	★87-018-121-010	CAP, CERA-SOL U 150P-50 B
C209	★87-010-260-010	CAP, ELECT 47-25 SME	C38	★87-018-121-010	CAP, CERA-SOL U 150P-50 B
C210	★87-010-260-010	CAP, ELECT 47-25 SME	C39	★87-010-404-019	CAP, ELECT 4.7-50 SME
C235	★87-010-430-010	CAP, ELECT 100-63	C40	★87-010-404-019	CAP, ELECT 4.7-50 SME
C236	★87-010-430-010	CAP, ELECT 100-63	C41	★87-010-260-010	CAP, ELECT 47-25 SME
C241	★87-010-430-010	CAP, ELECT 100-63	C42	★87-010-260-010	CAP, ELECT 47-25 SME
C242	★87-010-430-010	CAP, ELECT 100-63	C43	★87-010-260-010	CAP, ELECT 47-25 SME
C301	★87-018-121-010	CAP, CERA-SOL U 150P-50 B(Z)	C44	★87-010-260-010	CAP, ELECT 47-25 SME
C302	★87-018-121-010	CAP, CERA-SOL U 150P-50 B(Z)	C71	★87-010-381-010	CAP, ELECT 330-16 SME
C305	★87-018-127-019	CAP, CERA-SOL U 470P-50 B(Z)	C72	★87-010-381-010	CAP, ELECT 330-16 SME
C306	★87-018-127-019	CAP, CERA-SOL U 470P-50 B(Z)	C92	★87-018-131-010	CAP, CERA-SOL U 1000P-50 B
C400	★87-018-119-010	CAP, CERA-SOL U 100P-50 B(Z)	C95	★87-018-123-019	CAP, CERA-SOL U 220P-50 B(Z)
J102	★87-009-395-010	JACK PIN 6P EARTH(TUNER)(CD) (VCR/AUX)	C221	★87-018-119-010	CAP, CERA-SOL U 100P-50 B(H, Z)
J103	★87-009-392-010	JACK PIN 6P(LINE IN)(LINE OUT) (REC OUT 2)	C221	★87-018-125-019	CAP, CERA-SOL U 330P-50 B(E, K)
			C222	★87-018-119-010	CAP, CERA-SOL U 100P-50 B(H)
			C222	★87-018-125-019	CAP, CERA-SOL U 330P-50 B(E, K, Z)

REF. NO.	PART NO.	DESCRIPTION
J101	★87-009-414-010	JACK PIN 2P(PHONO)
L3	★87-005-154-010	COIL, 220UH(Z)
L4	★87-005-154-010	COIL, 220UH(Z)
L5	★87-005-154-010	COIL, 220UH(Z)
L6	★87-005-154-010	COIL, 220UH(Z)
S14	81-AA2-630-010	PUSH SW(SUBSONIC)
S15	89-AA1-633-010	PUSH SW(MM/MC)

===FRONT CIRCUIT BOARD SECTION===

C151	★87-018-126-010	CAP, CERA-SOL U 390P-50 B
C152	★87-018-126-010	CAP, CERA-SOL U 390P-50 B
C155	★87-010-401-010	CAP, ELECT 1-50 SME
C156	★87-010-401-010	CAP, ELECT 1-50 SME
C157	★87-018-109-010	CAP, CERA-SOL U 22P-50 SL
C158	★87-018-109-010	CAP, CERA-SOL U 22P-50 SL
C159	★87-010-403-010	CAP, ELECT 3.3-50 SME
C160	★87-010-403-010	CAP, ELECT 3.3-50 SME
C167	★87-018-123-010	CAP, CERA-SOL U 220P-50 B
C168	★87-018-123-010	CAP, CERA-SOL U 220P-50 B
C171	★87-010-260-010	CAP, ELECT 47-25 SME
C172	★87-010-260-010	CAP, ELECT 47-25 SME
C173	★87-010-404-010	CAP, ELECT 4.7-50 SME
C174	★87-010-404-010	CAP, ELECT 4.7-50 SME
C175	★87-018-109-010	CAP, CERA-SOL U 22P-50 SL
C176	★87-018-109-010	CAP, CERA-SOL U 22P-50 SL
C177	★87-010-401-010	CAP, ELECT 1-50 SME
C178	★87-010-401-010	CAP, ELECT 1-50 SME
C179	★87-010-404-010	CAP, ELECT 4.7-50 SME
C180	★87-010-404-010	CAP, ELECT 4.7-50 SME
C181	★87-010-260-010	CAP, ELECT 47-25 SME
C182	★87-010-260-010	CAP, ELECT 47-25 SME
S10	80-AA1-635-110	SW, PUSH(LOUDNESS)
S11	80-AA1-635-110	SW, PUSH(DIRECT)
S12	80-AA1-635-110	SW, PUSH(MUTING)
VR1	★80-AA1-630-010	VOLUME, 100KB(VOLUME)
VR2	★80-AA1-631-010	VOLUME, 100K MN(BALANCE)
VR3	★80-AA1-632-010	VOLUME, 50K C(BASS)
VR4	★80-AA1-632-010	VOLUME, 50K C(TREBLE)

===HP CIRCUIT BOARD SECTION===

△	★87-033-213-010	CLAMP, FUSE
△C87	★87-019-112-010	CAP, SG 0.01 E
△F1	87-035-366-010	FUSE 2.5A 250V T E/K(E, K, Z)
J105	87-009-043-010	JACK 6.3 12.5-11.5(PHONES)
△S7	87-036-210-010	PUSH SW(POWER)

===LED CIRCUIT BOARD SECTION===

LED1	87-001-779-010	LED, SLH-56VC 70F165 (POWER INDICATOR)
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===POWER CIRCUIT BOARD SECTION===

△	★87-033-213-010	CLAMP, FUSE(H)
△F4	87-035-366-010	FUSE 2.5A 250V T E/K(H)
△F5	87-035-366-010	FUSE 2.5A 250V T E/K(H)
C211	87-014-210-010	CAP, MYLAR 0.047-250(Z)
C212	87-014-210-010	CAP, MYLAR 0.047-250(Z)
△PT1	81-AA2-608-018	POWER TRANSFORMER E(E, Z)
△PT1	81-AA2-606-010	POWER TRANSFORMER H(H)
△PT1	81-AA2-609-010	POWER TRANSFORMER K(K)


===AC VOLTAGE CIRCUIT BOARD SECTION===

△S17	87-036-067-019	SLIDE SW(AC VOLTAGE)(H)
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REF. NO. PART NO. DESCRIPTION

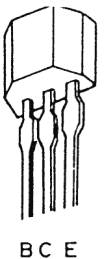
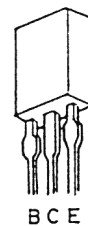
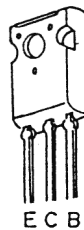
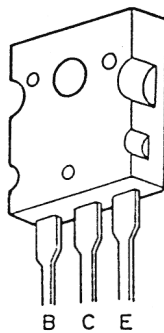
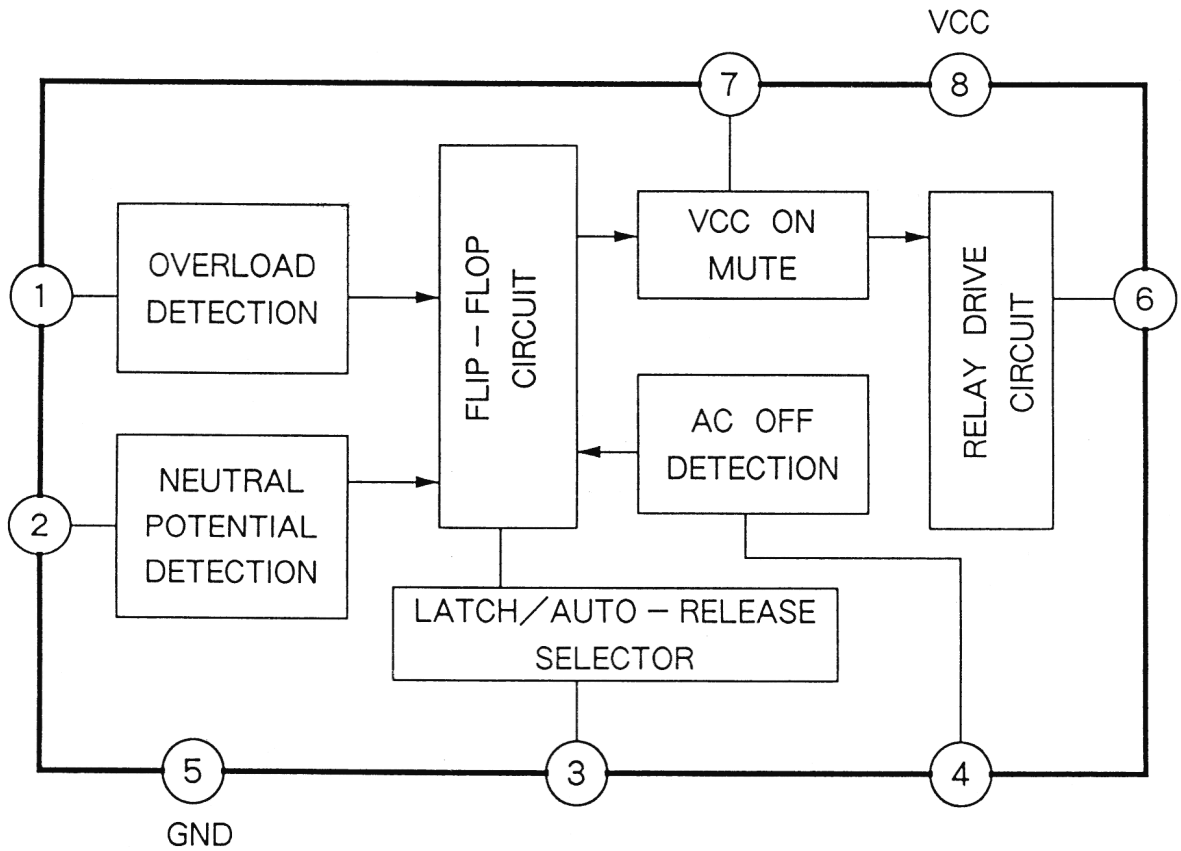
===MISCELLANEOUS===

△	★87-034-749-019	AC CORD H W/PLUG(H)
△	★82-187-797-019	AC CORD<E>(E, Z)
△	★87-034-781-018	AC CORD<E>(E, Z)
△	★87-187-796-019	AC CORD<K>(K)
△	★87-034-592-018	AC CORD<K>(K)
△	★87-085-184-010	BUSHING, AC CORD D(H)
△	★87-085-185-010	BUSHING, AC CORD E(E, K, Z)

※The  marked parts are compatible with each other.

IC BLOCK DIAGRAM

IC,UPC1237H



2SA1015

2SA1145

2SA1301

2SA1358

2SB1330

RN1207

2SA970

2SC2705

2SC3280

2SC3419

2SD2006

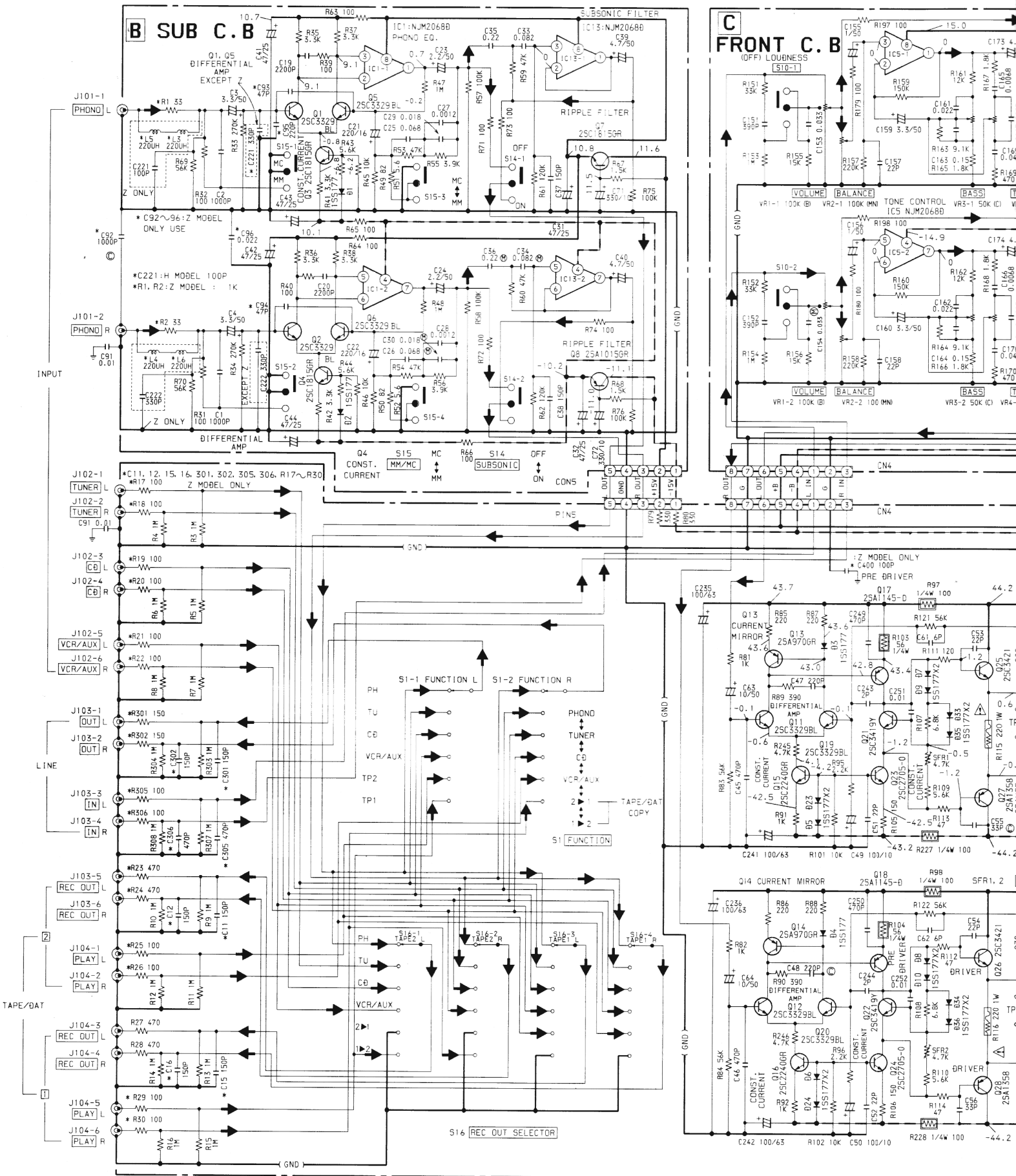
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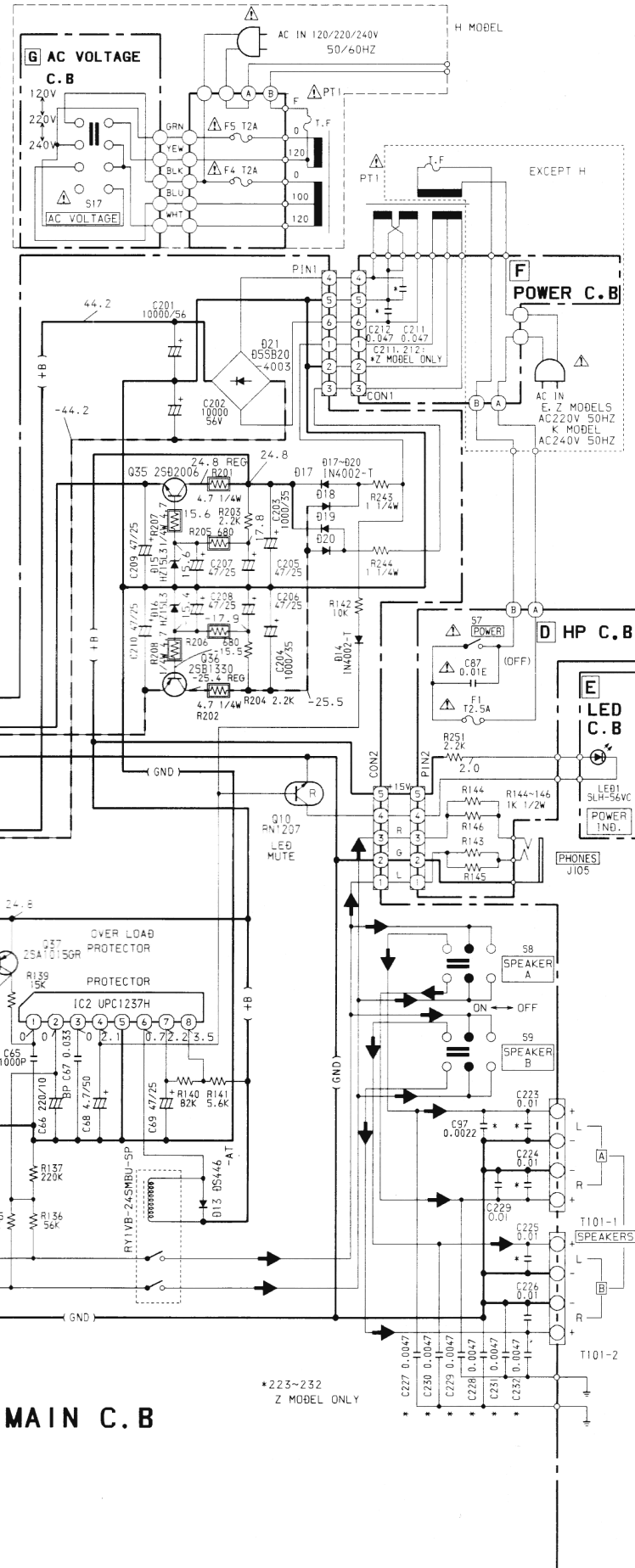
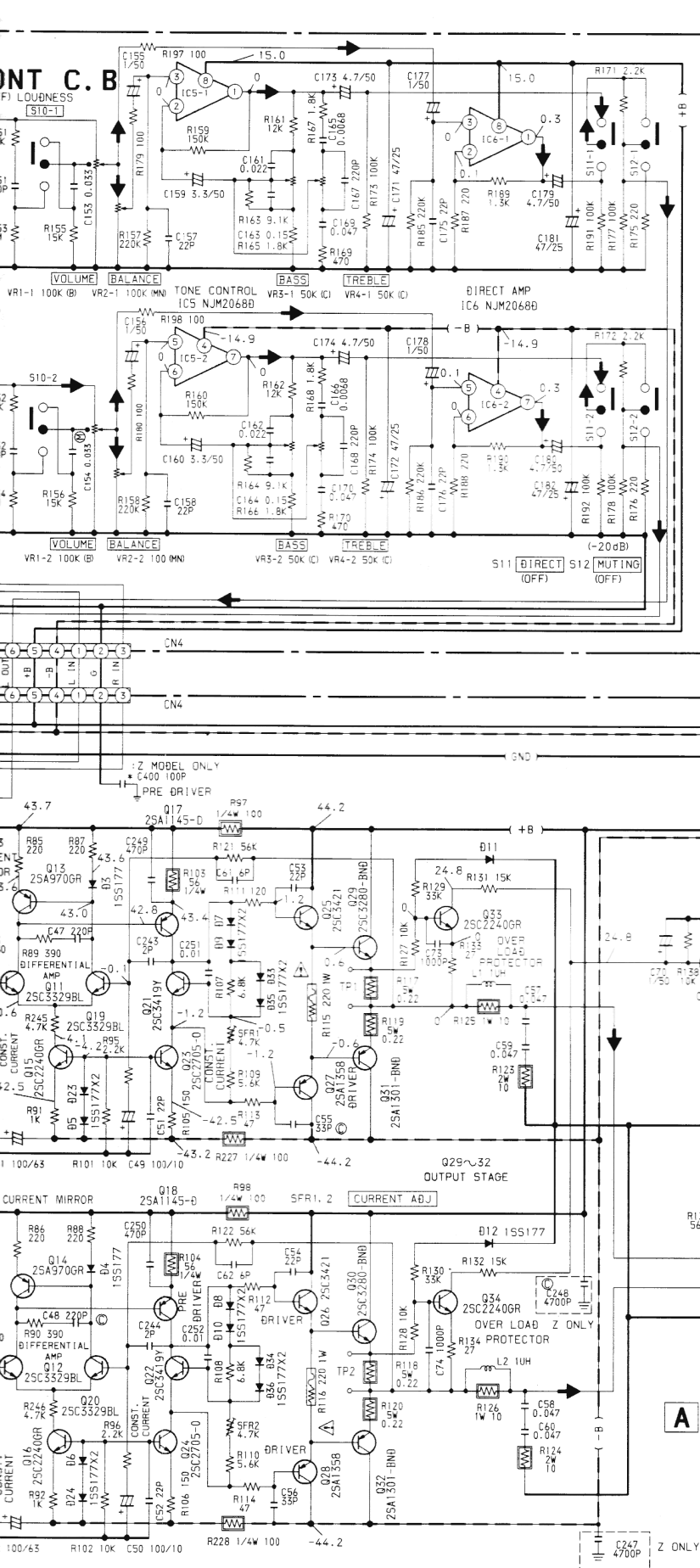
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2SC2240

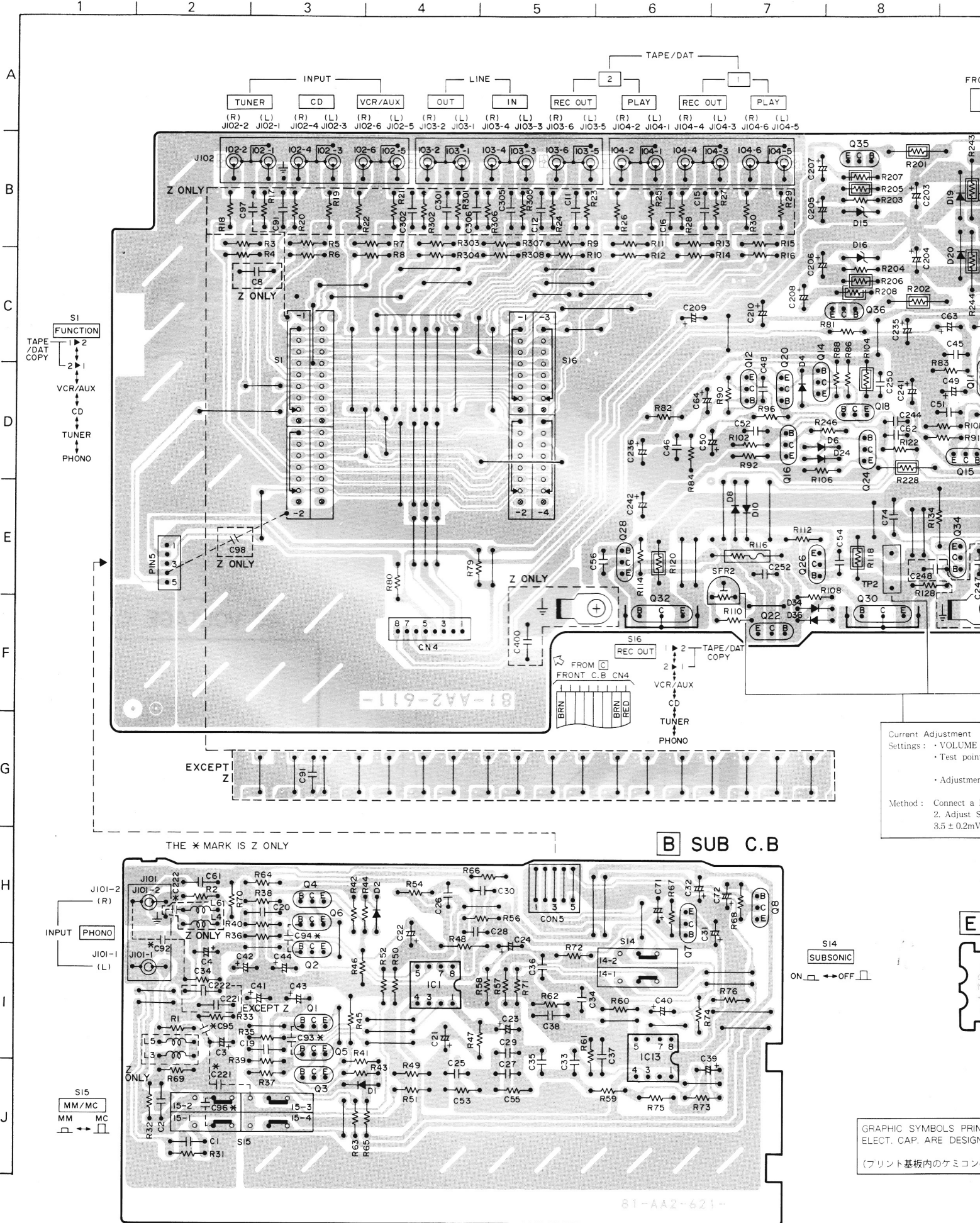
2SC3329

# SCHEMATIC DIAGRAM





# WIRING - 1



Current Adjustment  
 Settings : · VOLUME :  
 · Test point :  
 · Adjustment :  
 Method : Connect a DMM to  
 2. Adjust SP  
 3.5 ± 0.2mV.

THE \* MARK IS Z ONLY

**B SUB C.B**

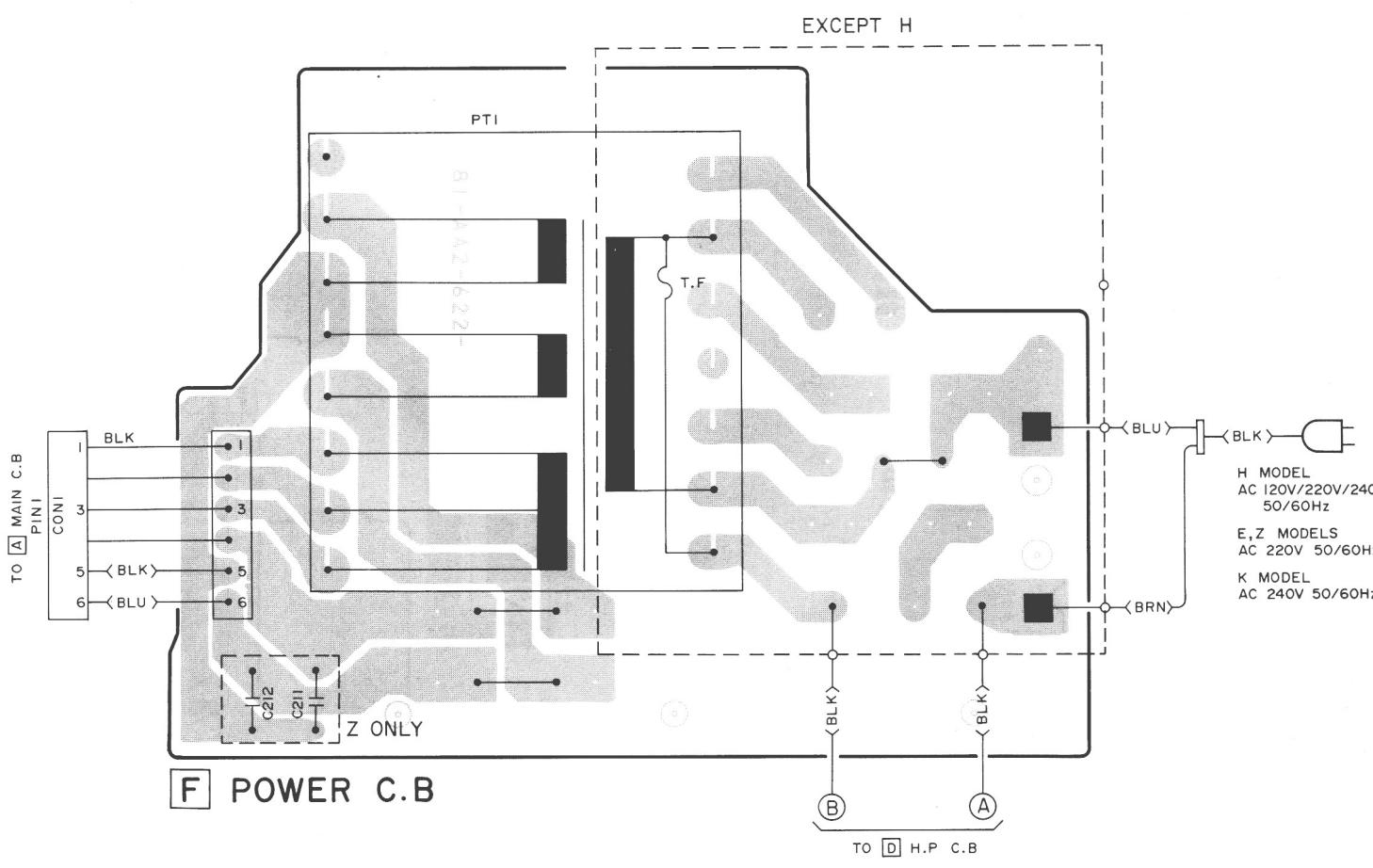
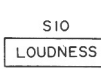
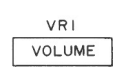
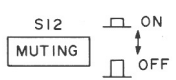
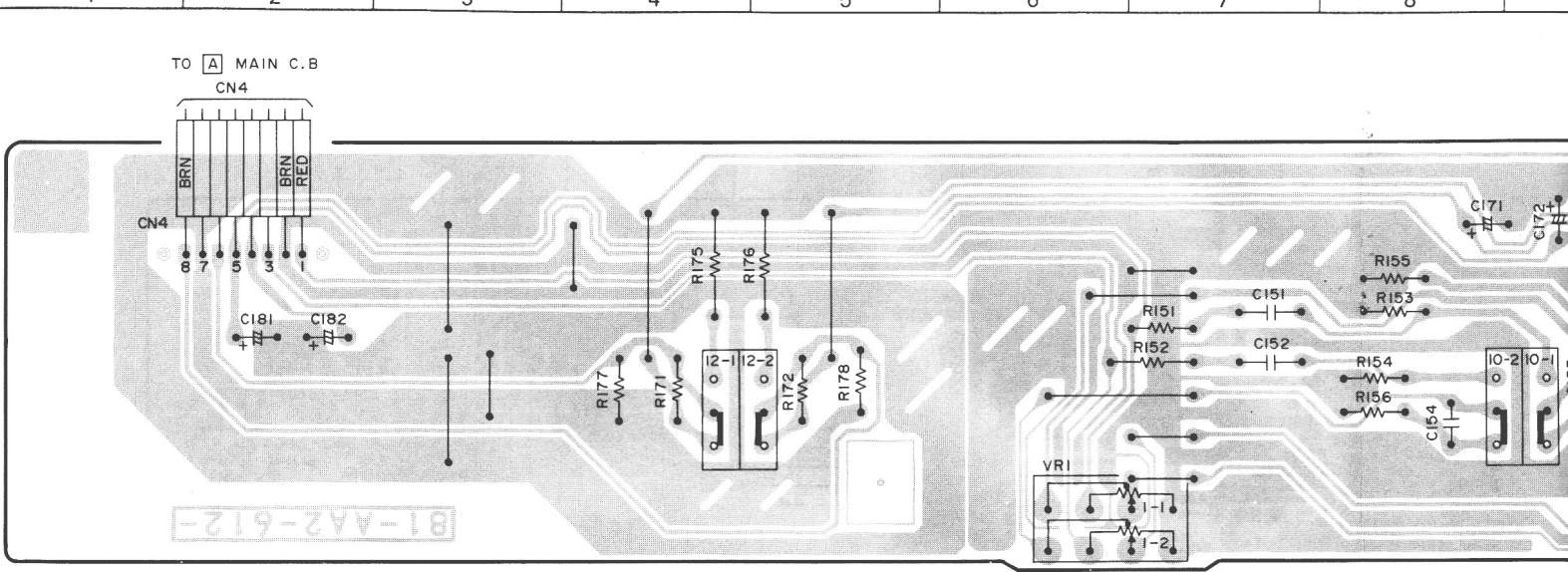
S14  
**SUBSONIC**  
 ON  OFF

GRAPHIC SYMBOLS PRINTED  
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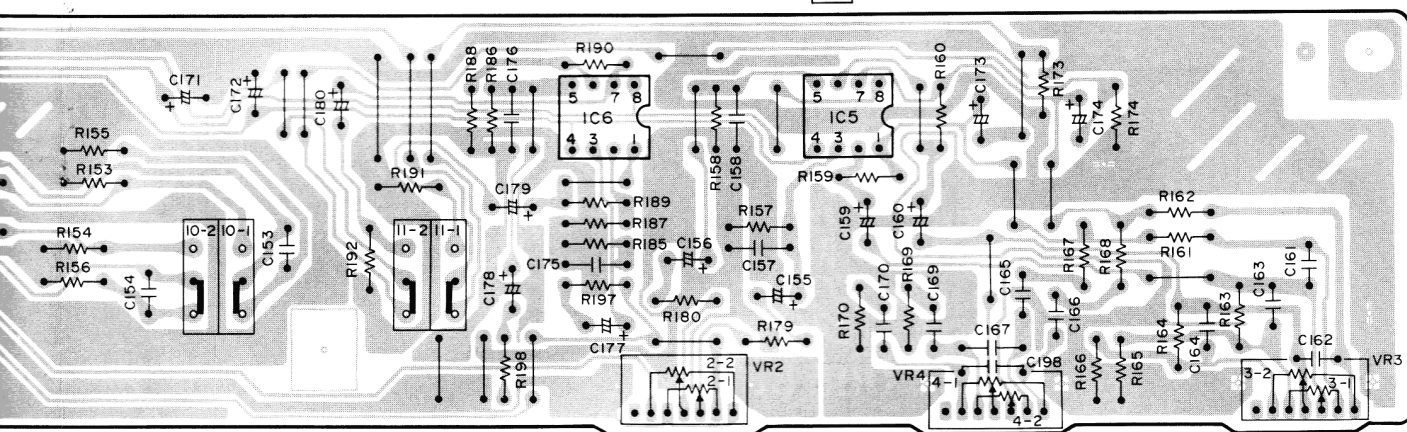




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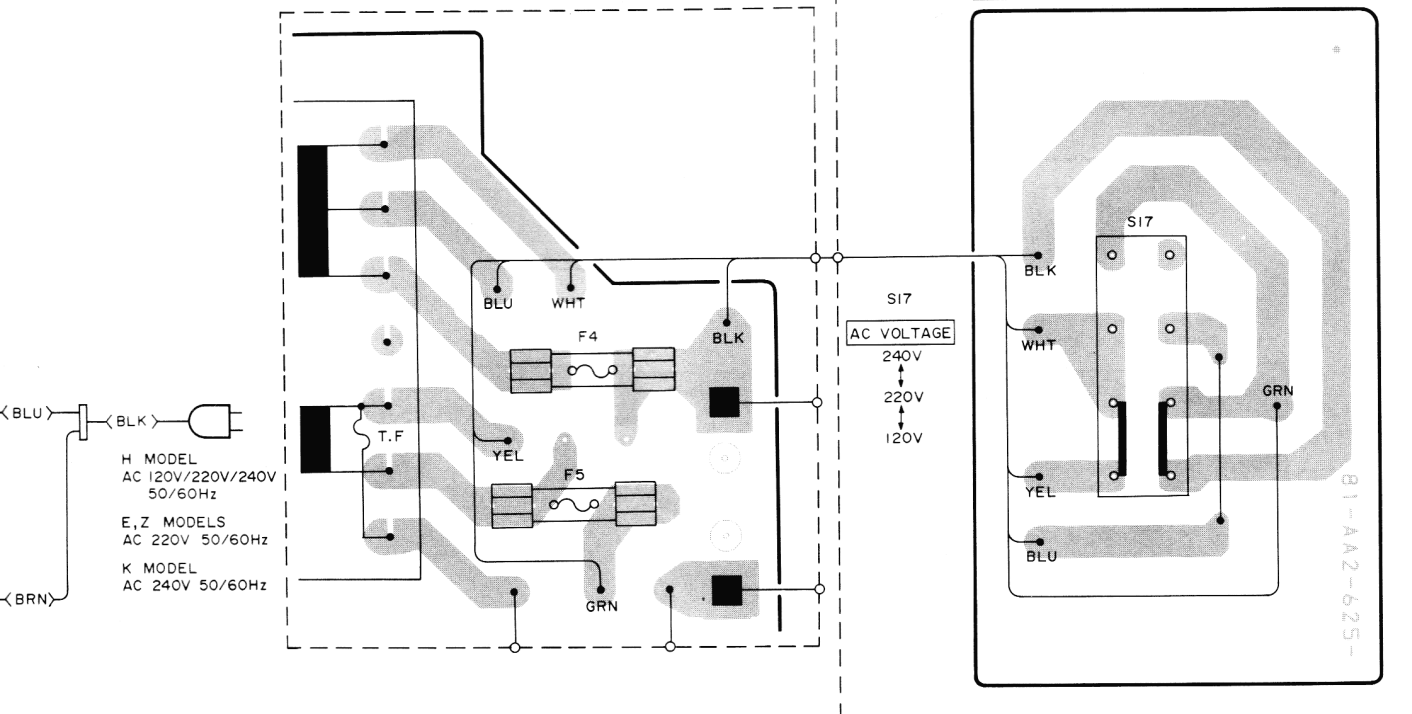
C FRONT C.B



H ONLY

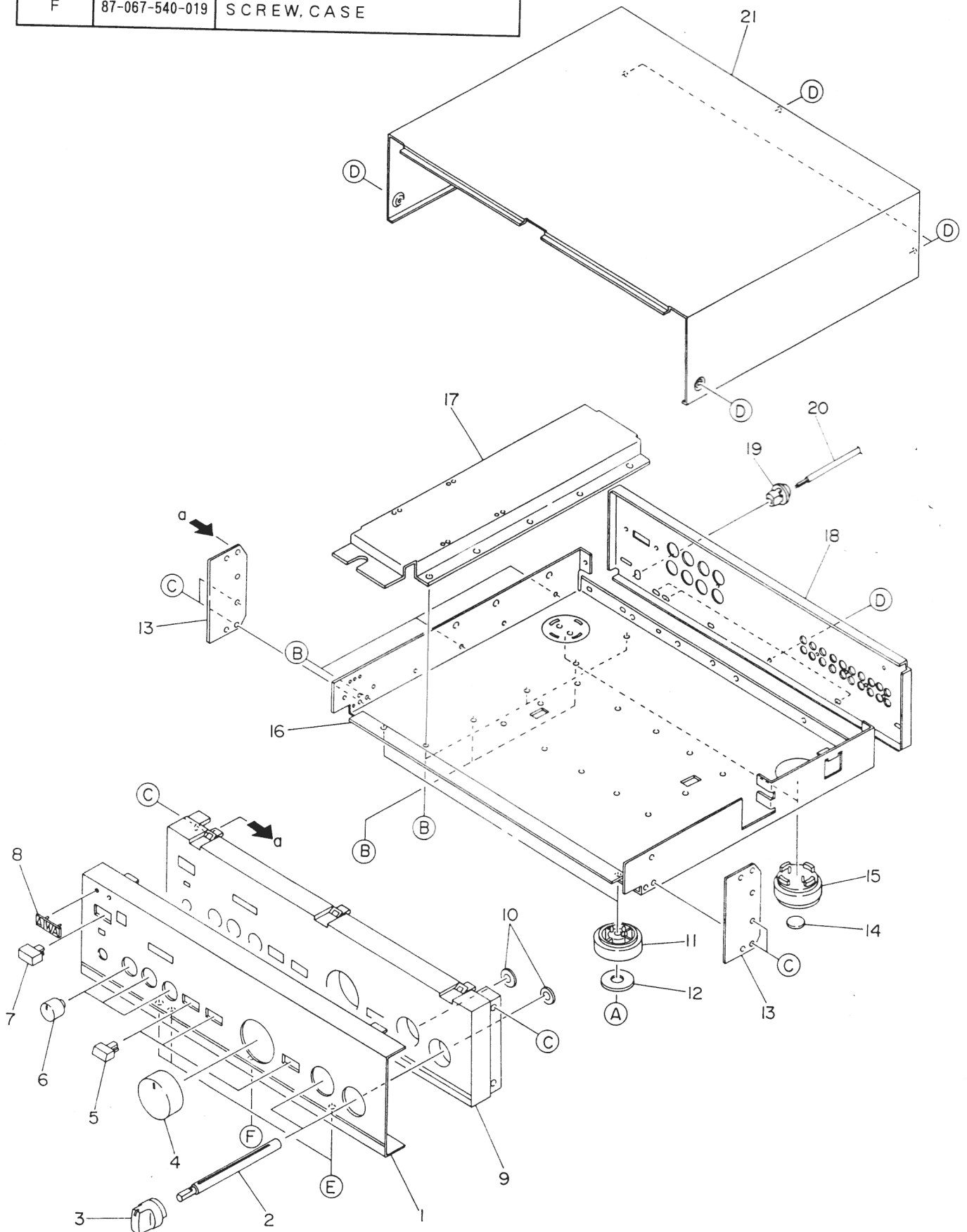
H ONLY

G AC VOLTAGE C.B




# EXPLODED VIEW - 1

REF. NO.	PART NO.	DESCRIPTION
A	87-067-579-010	BVT2+3-8 W/O SLOT
B	87-067-689-010	BVTT+3-8
C	87-591-094-410	QIT+3-6
D	87-067-660-010	BVT2+3-8 W/O SLOT (B)
E	87-743-096-410	UT2+3 -10 (B)
F	87-067-540-019	SCREW, CASE



# MECHANICAL PARTS LIST

PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	1-1	★81-AA2-001-010	PANEL, FRONT	※	1
	1-2	★80-AA1-205-010	ROD, SELECT		2
	1-3	★80-AA1-007-019	KNOB, SELECT		2
	1-4	★80-AA1-005-010	KNOB, VOLUME		1
	1-5	★80-AA1-008-019	BUTTON, MUTE		3
	1-6	★80-AA1-006-019	KNOB, BALANCE		3
	1-7	★81-DS1-008-010	BUTTON, POWER		1
	1-8	★84-764-009-119	BADGE, AIWA		1
	1-9	★80-AA1-001-110	CABINET, FRONT		1
	1-10	★81-663-213-019	CLOTH, DIA 18-8.7		2
	1-11	★84-738-022-010	FOOT		2
	1-12	★84-731-027-010	FELT, FOOT		2
	1-13	---	HOLDER, SIDE		2
	1-14	★80-DS3-206-019	CUSHION, G DIA 15-1		2
	1-15	★80-DS3-014-119	FOOT, REAR ST		2
	1-16	---	CHASSIS, MAIN		1
	1-17	---	HOLDER, PT		1
	1-18	★81-AA2-006-019	PANEL, REAR (H)	※	1
	1-18	★81-AA2-003-019	PANEL, REAR (E)	※	1
	1-18	★81-AA2-008-019	PANEL, REAR (EE)	※	1
	1-18	★81-AA2-010-019	PANEL, REAR (EN)	※	1
	1-18	★81-AA2-004-019	PANEL, REAR (K)	※	1
	1-18	★81-AA2-011-019	PANEL, REAR (KN)	※	1
	1-18	★81-AA2-005-019	PANEL, REAR (Z)	※	1
	1-18	★81-AA2-012-019	PANEL, REAR (ZN)	※	1
	1-19	★87-085-185-010	BUSHING, AC CORD (EXCEPT H)		1
	1-19	★87-085-184-010	BUSHING, AC CORD (H)		1
	1-20	★87-034-749-019	CORD, AC (H)		1
↳	1-20	★87-034-781-018	CORD, AC (E, Z)		1
↳	1-20	★82-187-797-019	CORD, AC (E, Z)		1
↳	1-20	★87-034-592-018	CORD, AC (K)		1
↳	1-20	★82-187-796-019	CORD, AC (K)		1
	1-21	★80-AA1-003-019	CABINET, STEEL		1

※The  marked parts are compatible with each other.

# EXPLODED VIEW - 2

REF. NO.	PART NO.	DESCRIPTION
A	87-067-660-010	BVT2+3-8 W/O SLOT (B)
B	87-561-096-210	VFT1+3-10 DIA 10
C	87-067-579-010	BVT2+3-8 W/O SLOT
D	87-067-703-010	BVT2+3-10 W/O SLOT
E	87-067-689-010	BVTT+3-8
F	87-751-096-410	VT2+3-10
G	87-067-585-010	BVTT+4-6

