

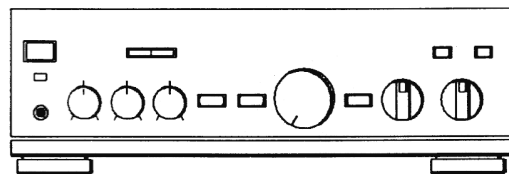
AIWA®

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 x 128 x 332mm
(17 x 5 1/8 x 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

===IC===

87-001-171-010 IC, NJM2068D
87-027-787-010 IC, UPC1237H

===TRANSISTOR===

89-110-155-010 TRANSISTOR, 2SA1015GR
89-111-453-010 TRANSISTOR, 2SA1145D
81-AA2-650-010 TRANSISTOR, 2SA1301 BND
89-113-583-410 TRANSISTOR, 2SA1358

89-109-705-010 TRANSISTOR, 2SA970GR
89-213-302-010 TRANSISTOR, 2SB1330
89-318-155-010 TRANSISTOR, 2SC1815GR
89-322-405-010 TRANSISTOR, 2SC2240GR

89-327-053-010 TRANSISTOR, 2SC2705(O)
81-AA2-651-010 TRANSISTOR, 2SC3280 BND
89-333-296-010 TRANSISTOR, 2SC3329BL
89-334-194-010 TRANSISTOR, 2SC3419Y

89-334-213-410 TRANSISTOR, 2SC3421
89-420-062-380 TRANSISTOR, 2SD2006
87-026-369-010 TRANSISTOR, RN1207

===DIODE===

87-001-783-010 DIODE, 1N4002-T
87-020-110-010 DIODE, 1SS177
87-002-439-010 DIODE, D5SB20-4003
87-020-123-010 DIODE, DS46-AT

87-027-449-010 DIODE, ZENER HZ15-3L

===MAIN CIRCUIT BOARD SECTION===

C11 ★87-018-121-010 CAP, CERA-SOL U 150P-50 B(Z)
C12 ★87-018-121-010 CAP, CERA-SOL U 150P-50 B(Z)
C15 ★87-018-121-010 CAP, CERA-SOL U 150P-50 B(Z)
C16 ★87-018-121-010 CAP, CERA-SOL U 150P-50 B(Z)

C49 ★87-010-263-010 CAP, ELECT 100-10
C50 ★87-010-263-010 CAP, ELECT 100-10
C63 ★87-010-405-010 CAP, ELECT 10-50 SME
C64 ★87-010-405-010 CAP, ELECT 10-50 SME

C65 ★87-018-131-010 CAP, CERA-SOL U 1000P-50 B
C66 ★87-010-762-010 CAP, ELECT 220-10V BP
C68 ★87-010-404-010 CAP, ELECT 4.7-50 SME
C69 ★87-010-260-010 CAP, ELECT 47-25 SME

C70 ★87-010-401-010 CAP, ELECT 1-50 SME
C73 ★87-018-131-010 CAP, CERA-SOL U 1000P-50 B
C74 ★87-018-131-010 CAP, CERA-SOL U 1000P-50 B
C201 ★87-010-945-010 CAP, ELECT 10000-56LQ

C202 ★87-010-945-010 CAP, ELECT 10000-56LQ
C203 ★87-010-397-019 CAP, ELECT 1000-35 SME
C204 ★87-010-397-019 CAP, ELECT 1000-35 SME
C205 ★87-010-260-010 CAP, ELECT 47-25 SME

C206 ★87-010-260-010 CAP, ELECT 47-25 SME
C207 ★87-010-260-010 CAP, ELECT 47-25 SME
C208 ★87-010-260-010 CAP, ELECT 47-25 SME
C209 ★87-010-260-010 CAP, ELECT 47-25 SME

C210 ★87-010-260-010 CAP, ELECT 47-25 SME
C235 ★87-010-430-010 CAP, ELECT 100-63
C236 ★87-010-430-010 CAP, ELECT 100-63
C241 ★87-010-430-010 CAP, ELECT 100-63

C242 ★87-010-430-010 CAP, ELECT 100-63
C301 ★87-018-121-010 CAP, CERA-SOL U 150P-50 B(Z)
C302 ★87-018-121-010 CAP, CERA-SOL U 150P-50 B(Z)
C305 ★87-018-127-019 CAP, CERA-SOL U 470P-50 B(Z)

C306 ★87-018-127-019 CAP, CERA-SOL U 470P-50 B(Z)
C400 ★87-018-119-010 CAP, CERA-SOL U 100P-50 B(Z)
J102 ★87-009-395-010 JACK PIN 6P EARTH(TUNER) (CD)
(VCR/AUX)

J103 ★87-009-392-010 JACK PIN 6P(LINE IN)(LINE OUT)
(REC OUT 2)

REF. NO. PART NO. DESCRIPTION

J104 ★87-009-392-010 JACK PIN 6P(PLAY 1)(PLAY 2)
(REC OUT 1)

L1 ★87-005-158-010 COIL, 1UH
L2 ★87-005-158-010 COIL, 1UH

R97 ★87-025-479-019 RES, NF 100-1/4WJ
R98 ★87-025-479-019 RES, NF 100-1/4WJ
R103 ★87-025-333-010 RES, NF 56-1/4W
R104 ★87-025-333-010 RES, NF 56-1/4W

△R115 87-029-130-010 RES, FUSE 220-1W
△R116 87-029-130-010 RES, FUSE 220-1W
R117 ★87-025-434-010 RES, CEMENT 0.22-5W
R118 ★87-025-434-010 RES, CEMENT 0.22-5W

R119 ★87-025-434-010 RES, CEMENT 0.22-5W
R120 ★87-025-434-010 RES, CEMENT 0.22-5W
R123 ★87-025-347-010 RES, M/O 10-2W F
R124 ★87-025-347-010 RES, M/O 10-2W F

R125 ★87-025-487-019 RES, M/F 10-1W
R126 ★87-025-487-019 RES, M/F 10-1W
R201 ★87-025-333-010 RES, NF 4.7-1/4WJ
R202 ★87-025-333-010 RES, NF 4.7-1/4WJ

R205 ★87-025-479-019 RES, NF 680-1/4WJ
R206 ★87-025-479-019 RES, NF 680-1/4WJ
R207 ★87-025-333-010 RES, NF 4.7-1/4WJ
R208 ★87-025-333-010 RES, NF 4.7-1/4WJ

R227 ★87-025-479-019 RES, NF 100-1/4WJ
R228 ★87-025-479-019 RES, NF 100-1/4WJ
R243 ★87-025-467-010 RES, NF 1-1/4WJ
R244 ★87-025-467-010 RES, NF 1-1/4WJ

RY1 87-045-316-010 RELAY, VB-245MBU-SP
S1 80-AA1-633-010 SW, ROTARY(FUNCTION)
S8 80-AA1-634-110 SW, PUSH(SPEAKER A)
S9 80-AA1-634-110 SW, PUSH(SPEAKER B)

S16 80-AA1-633-010 SW, ROTARY(REC OUT)
SFR1 ★87-024-171-019 SFR 4.7K
SFR2 ★87-024-171-019 SFR 4.7K
T101 ★87-033-222-010 TERMINAL, SPEAKER 8P HOLE(SPEAKERS)
(H, E, Z)

T101 ★87-033-210-010 TERMINAL, SPEAKER 8P(SPEAKERS) (K)

===SUB CIRCUIT BOARD SECTION===

C1 ★87-018-131-010 CAP, CERA-SOL U 1000P-50 B
C2 ★87-018-131-010 CAP, CERA-SOL U 1000P-50 B
C3 ★87-010-403-019 CAP, ELECT 3.3-50 SME
C4 ★87-010-403-019 CAP, ELECT 3.3-50 SME

C19 ★87-018-045-019 CAP, CERA-SOL S 2200P-25 X
C20 ★87-018-045-019 CAP, CERA-SOL S 2200P-25 X
C21 ★87-010-101-019 CAP, ELECT 220-16 SME
C22 ★87-010-101-019 CAP, ELECT 220-16 SME

C23 ★87-010-402-019 CAP, ELECT 2.2-50 SME
C24 ★87-010-402-019 CAP, ELECT 2.2-50 SME
C31 ★87-010-260-010 CAP, ELECT 47-25 SME
C32 ★87-010-260-010 CAP, ELECT 47-25 SME

C37 ★87-018-121-010 CAP, CERA-SOL U 150P-50 B
C38 ★87-018-121-010 CAP, CERA-SOL U 150P-50 B
C39 ★87-010-404-019 CAP, ELECT 4.7-50 SME
C40 ★87-010-404-019 CAP, ELECT 4.7-50 SME

C41 ★87-010-260-010 CAP, ELECT 47-25 SME
C42 ★87-010-260-010 CAP, ELECT 47-25 SME
C43 ★87-010-260-010 CAP, ELECT 47-25 SME
C44 ★87-010-260-010 CAP, ELECT 47-25 SME

C71 ★87-010-381-010 CAP, ELECT 330-16 SME
C72 ★87-010-381-010 CAP, ELECT 330-16 SME
C92 ★87-018-131-010 CAP, CERA-SOL U 1000P-50 B
C95 ★87-018-123-019 CAP, CERA-SOL U 220P-50 B(Z)

C221 ★87-018-119-010 CAP, CERA-SOL U 100P-50 B(H, Z)
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)

===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)

REF. NO. PART NO. DESCRIPTION

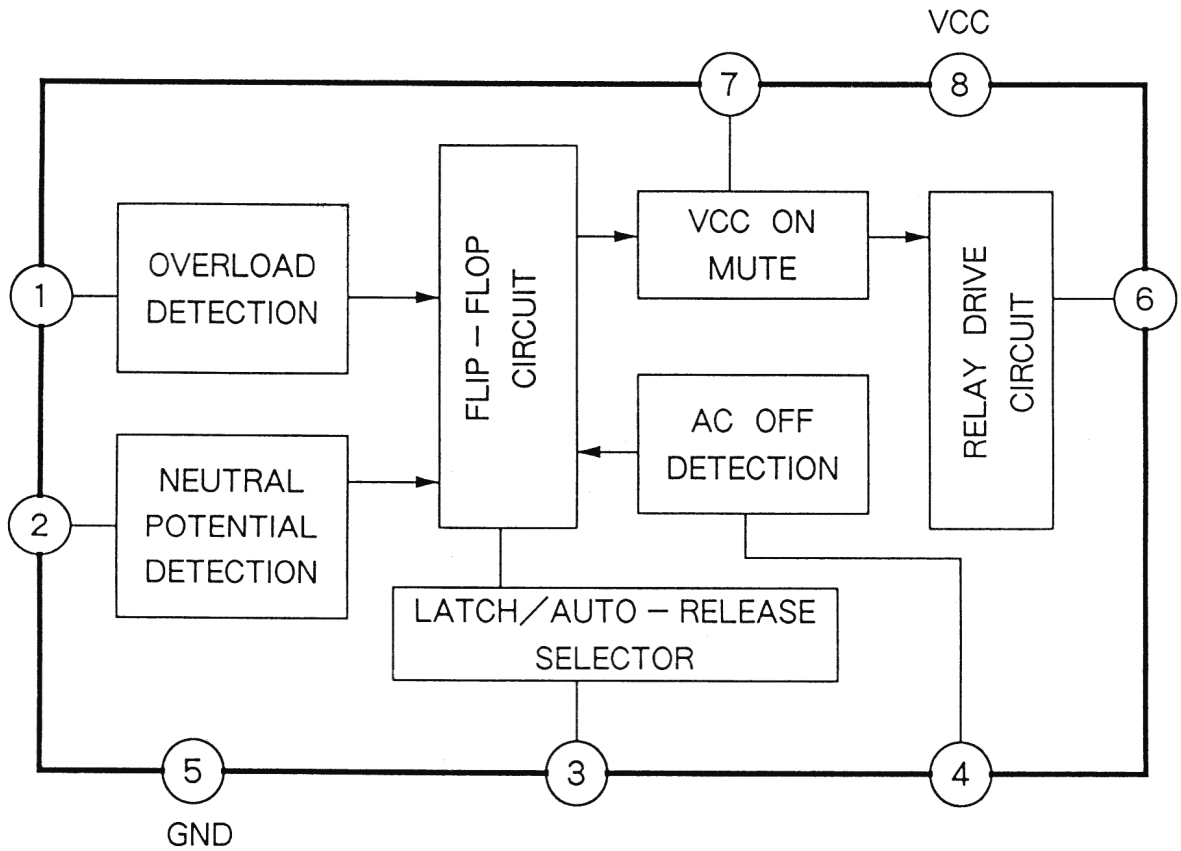
===MISCELLANEOUS===

△ ★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

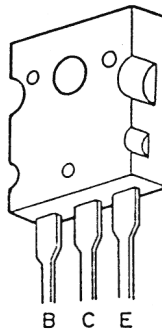
IC,UPC1237H



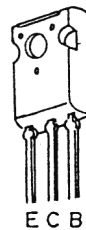
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2SA970
2SC1815
2SC2240
2SC3329



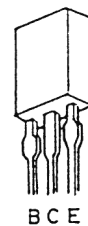
2SA1145
2SC2705



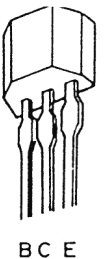
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2SC3280



2SA1358
2SC3419
2SC3421

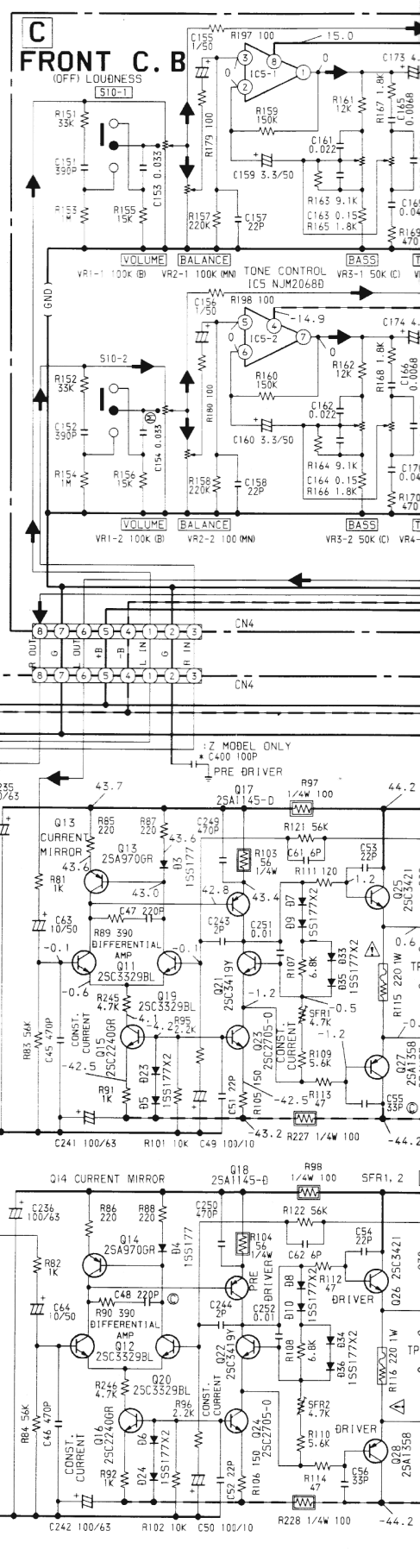
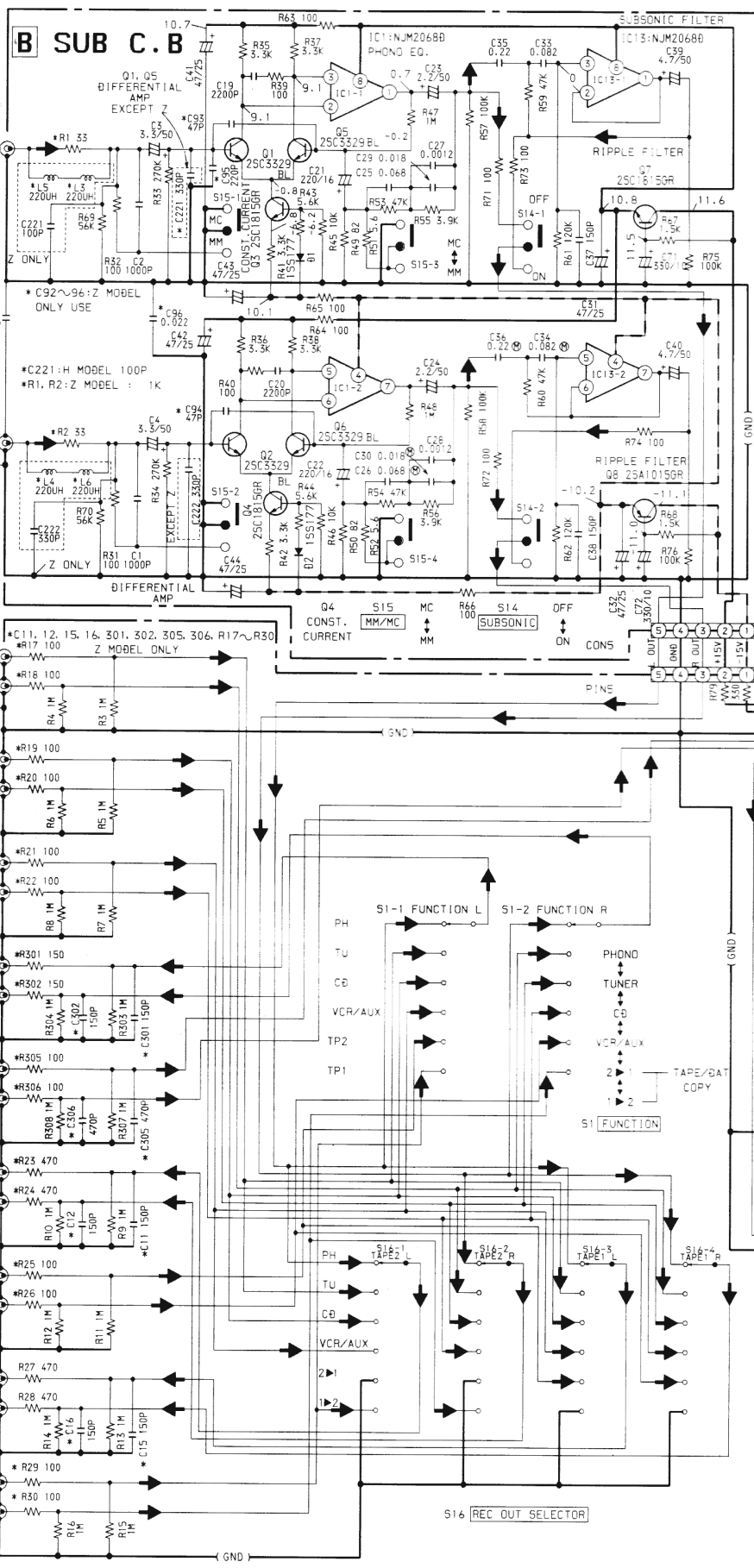


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2SD2006

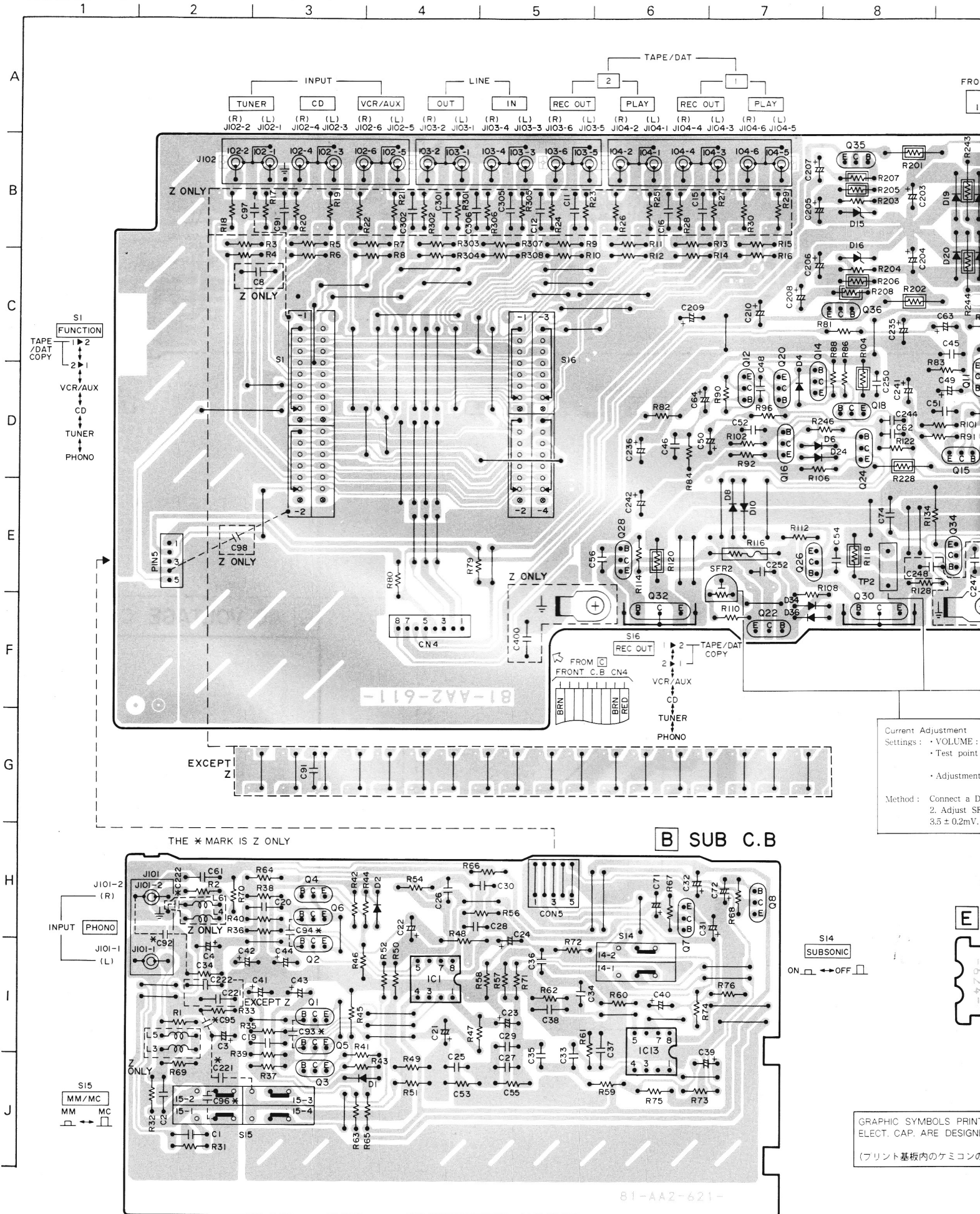


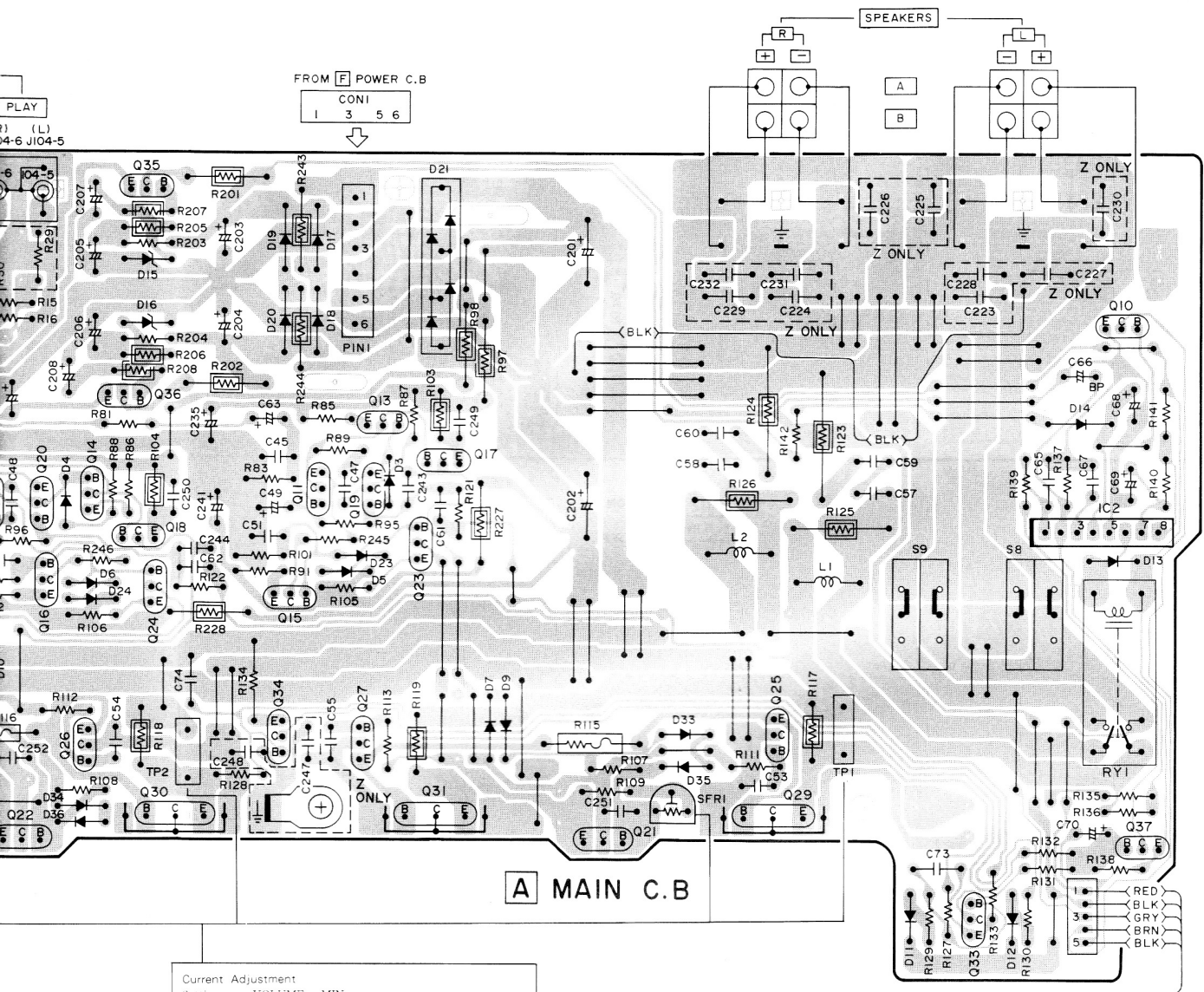
RN1207

SCHEMATIC DIAGRAM



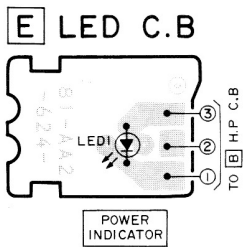
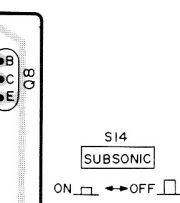
WIRING - 1



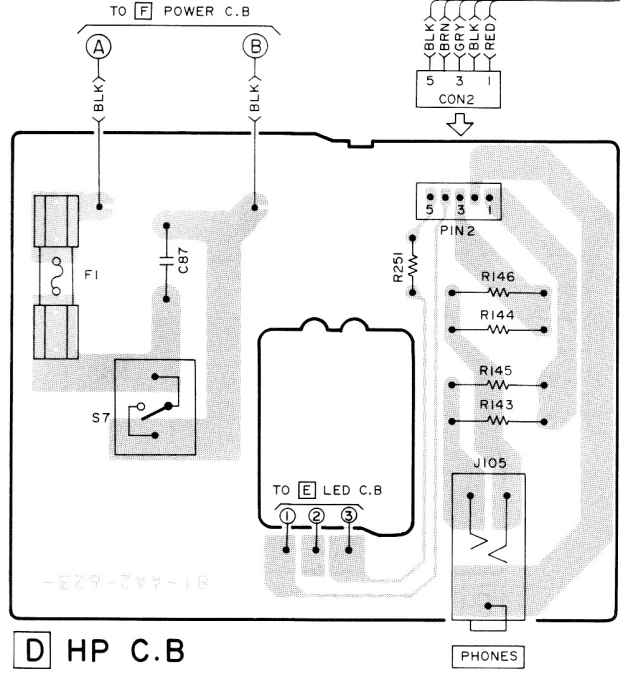


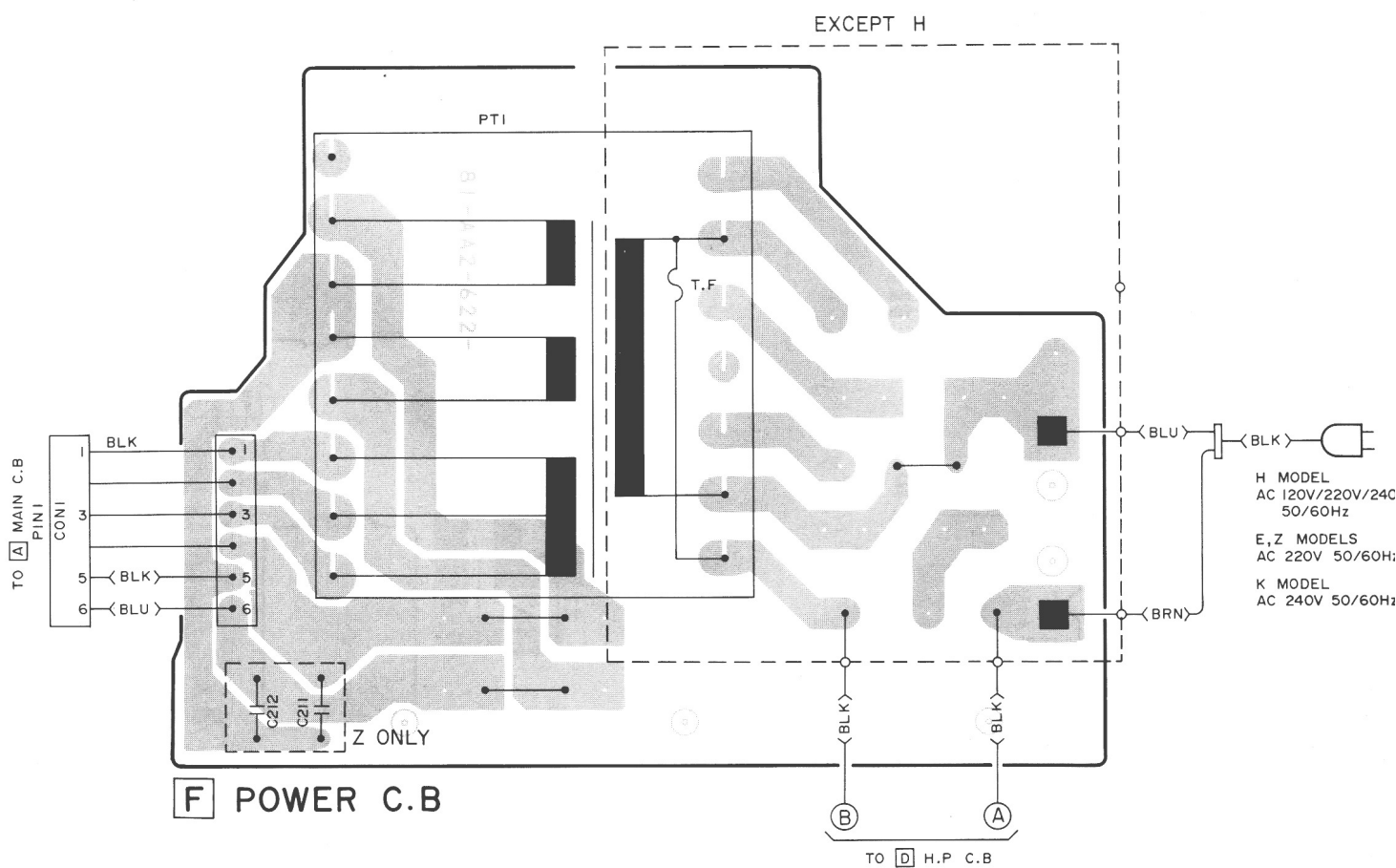
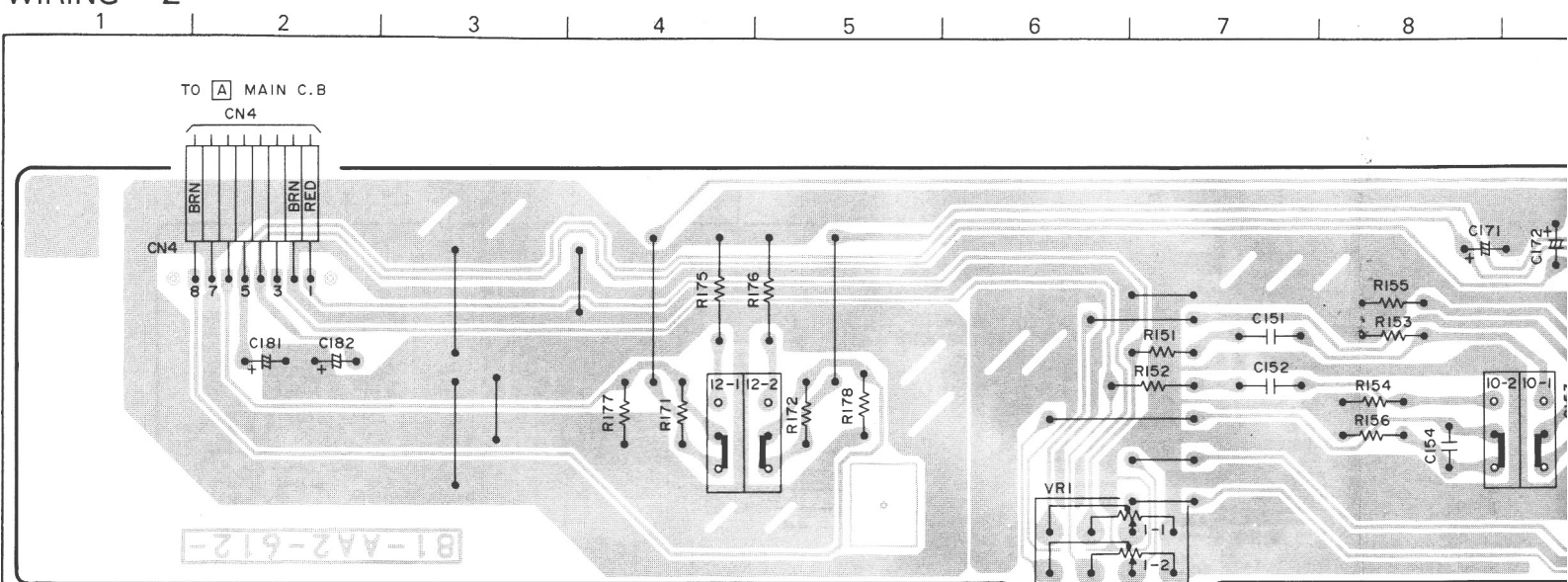
Current Adjustment
Settings : • VOLUME : MIN
• Test point : TP1 (Lch)
TP2 (Rch)
• Adjustment location : SFR1 (Lch)
SFR2 (Rch)
Method : Connect a DC voltmeter across test points TP1.
2. Adjust SFR1, 2 so that the voltage becomes
 $3.5 \pm 0.2\text{mV}$.

.B

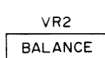
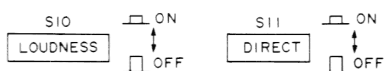
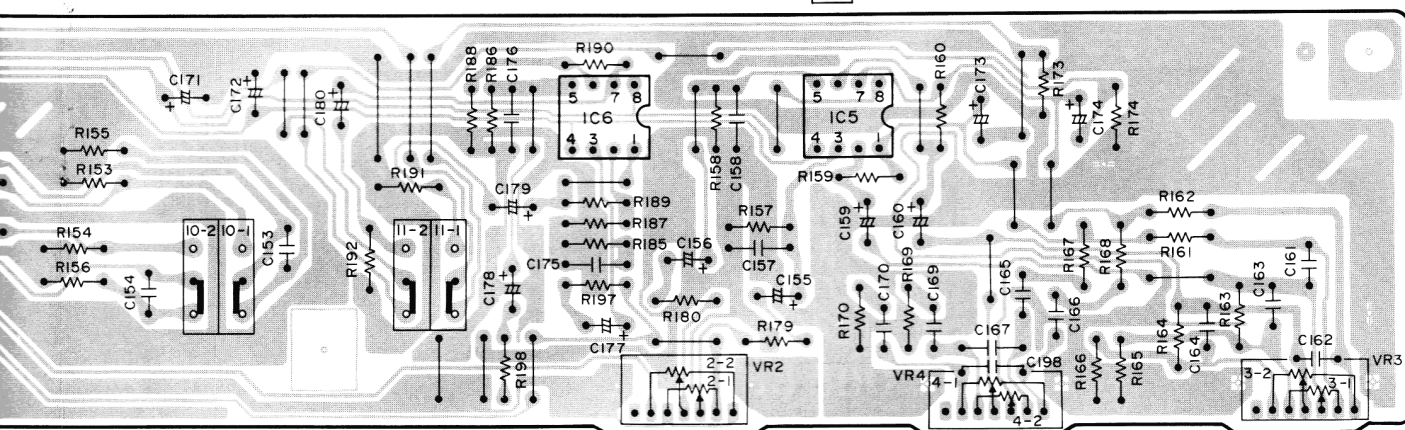


GRAPHIC SYMBOLS PRINTED CIRCUIT BOARD OF
ELECT. CAP. ARE DESIGNED AS NEGATIVE POLE.
(プリント基板内のケミコンの極性表示は⊖表示です。)

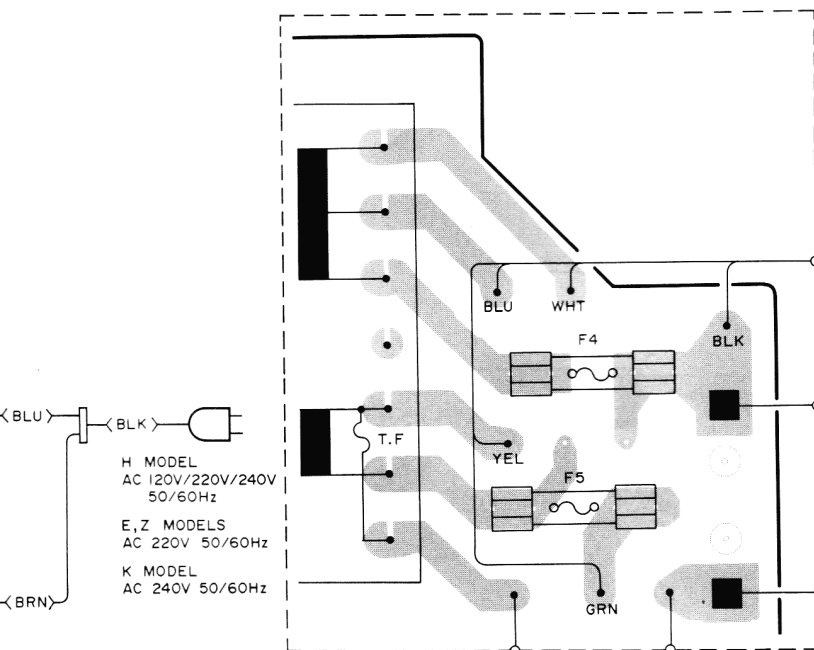




C FRONT C.B

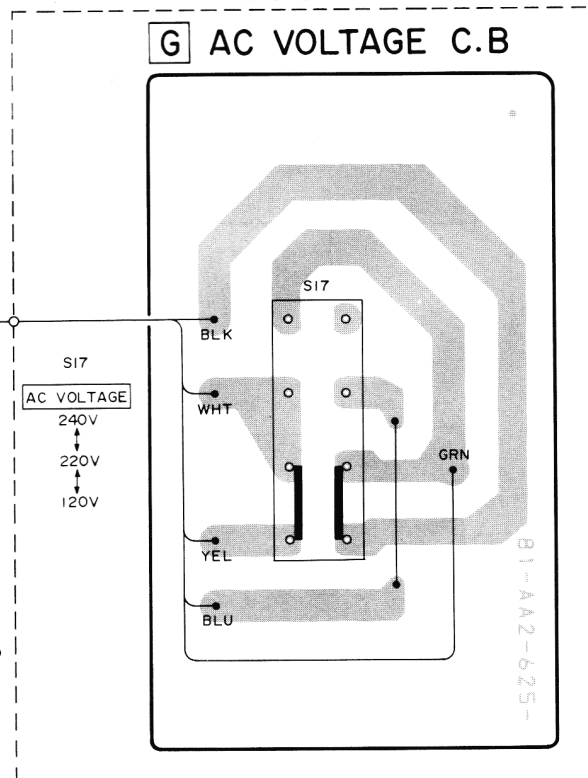


H ONLY



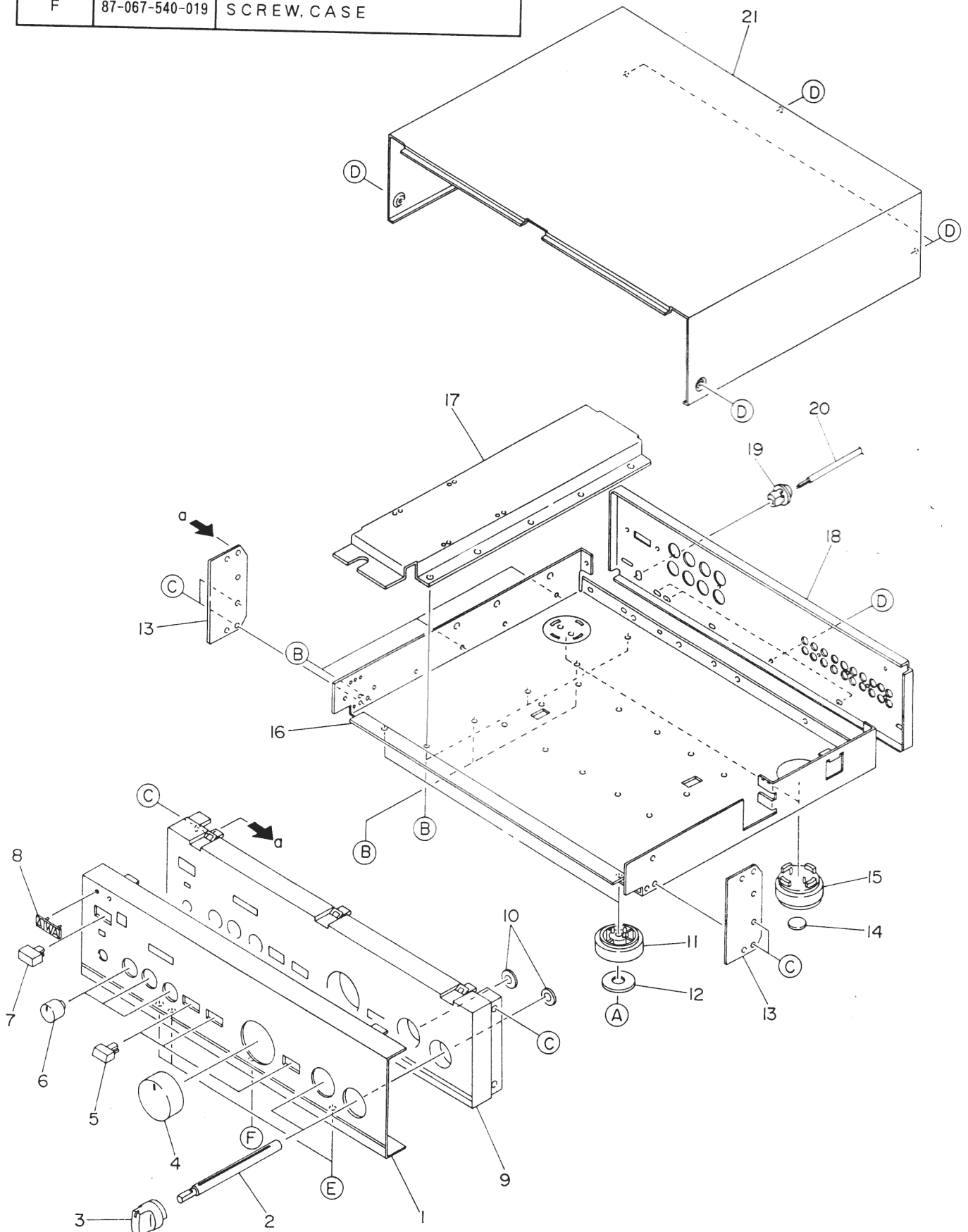
H ONLY

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.

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	BVT T+3-8
F	87-751-096-410	VT2+3-10
G	87-067-585-010	BVT T+4-6

