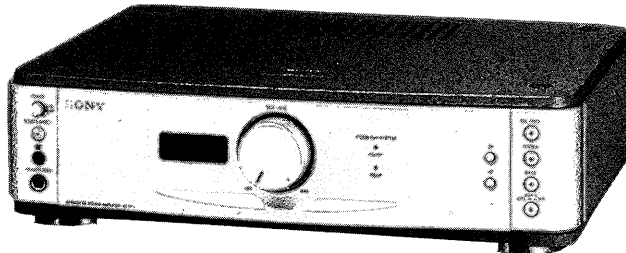


TA-VF1

SERVICE MANUAL

*AEP Model
E Model*

TA-VF1 (E Model) is Stereo
Amplifier in LBT-VF3.



SPECIFICATIONS

Continuous RMS power output 65 W + 65 W (6 ohms, at 1 kHz, 5%THD)
Peak music power output 500 W

INPUT	Jack type	Sensitivity	Impedance
PHONO	Phono	3.3 mV	47 kohms
DAT	Phono	245 mV	47 kohms
AUX	Phono	245 mV	47 kohms

OUTPUT	Jack type	Sensitivity	Impedance
DAT	Phono	200 mV	2 kohms
CORDLESS SYSTEM	Phone	2.00 V	4.7 kohms
SPEAKERS	Phono	Accepts speaker of 6 to 16 ohms	
HEADPHONES	Stereophone	Accepts headphones of 8 ohms or more	

Frequency response 10 Hz to 50 kHz ± 0.5 dB
Power requirements 220-230 V AC, 50/60 Hz (South-east
Asian, AEP, German model)
120 V AC, 50/60 Hz (Latin American
model)
Power consumption 110 W
AC outlet 1 unswitched, 100 W max.
Weight Approx. 5.9 kg
Dimensions Approx. 355 × 98.5 × 314 mm (w/h/d,
including projections)



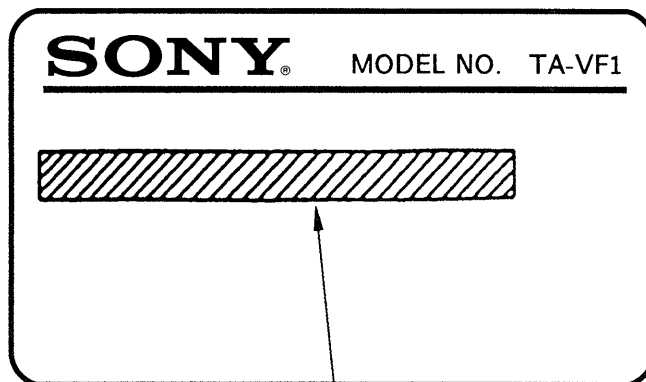
STEREO AMPLIFIER
SONY®

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
SECTION 1. GENERAL		3
SECTION 2. IC PIN FUNCTIONS		5
SECTION 3. DIAGRAMS		
3-1. BLOCK DIAGRAM		7
3-2. SCHEMATIC DIAGRAMS		11
3-3. PRINTED WIRING BOARDS		15
3-4. CIRCUIT BOARDS LOCATION		19
3-5. SEMICONDUCTOR LEAD LAYOUTS		20
3-6. IC BLOCK DIAGRAMS		21
SECTION 4. EXPLODED VIEWS		
4-1. CABINET SECTION		23
4-2. CHASSIS SECTION		24
SECTION 5. ELECTRICAL PARTS LIST		25

MODEL IDENTIFICATION

- Specification Label -



AEP Model : AC 220 - 230V ~ 50/60Hz

E(120V) Model : AC 120V ~ 110W 50/60Hz

E(220-230V) Model : AC 220 - 230V ~110W 50/60Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK Δ OR DOTTED LINE WITH MARK Δ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1
GENERAL

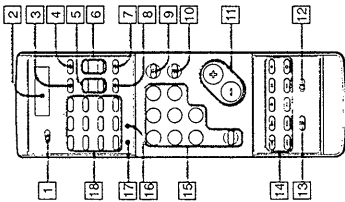
This section is extracted
from instruction manual.

Location of
Controls

Remote Commander
(RM-S1FE)

J

- 1 KEY MODE switch
- 2 Display
- 3 DISPLAY button (20) (56)
- 4 SHIFT/TV/VTR button (24)
- 5 CHANNEL + / - buttons (24, 26, 28, 30)
- 6 TV VOLUME + / - buttons (86, 88)
- 7 SLEEP button (69)
- 8 CORDLESS SYSTEM button (84)
- 9 SYSTEM POWER button (18, 62)
- 10 VIDEO POWER button (86, 88)
- 11 VOLUME + / - buttons (20)
- 12 FUNCTION CODE switch (10)
- 13 BASS SYNTHESIZER button (22)
- 14 Operation button for the CD player, cassette deck, etc.
- 15 FUNCTION buttons
- 16 RESET button (92)
- 17 MAKES button (62, 94)
- 18 Numeric and AMP/SURROUND CONTROL buttons



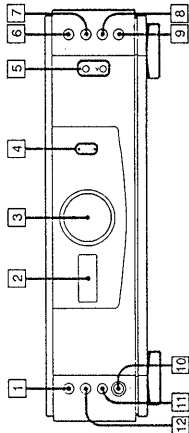
J

Location of
Controls

Amplifier (TA-VF1)

E

- 1 POWER button (18)
 - 2 Display
 - 3 VOLUME control (20)
 - 4 CORDLESS SYSTEM indicators (84)
 - 5 > and < buttons (20, 22, 40, 128)
 - 6 BALANCE button and indicator (20)
 - 7 TREBLE button and indicator (20)
 - 8 BASS button and indicator (20)
 - 9 BASS SYNTHESIZER button and indicator (22)
 - 10 HEADPHONES jack
 - 11 Remote sensor
 - 12 SOURCE DIRECT button
- When this button is pressed to ON, the source signal is directly output to the speakers without going through the tone control of the amplifier, the BASS SYNTHESIZER circuitry and the surround circuitry of the digital surround processor. Thus, you can enjoy more pure sound.
- In surround sound does not affect the rear sound.
 - The sound output from the front speakers is not surround sound. To reproduce the Dolby surround sound effectively, set this button to OFF.



E

Turning on the Power

Turn on the power after completing all connections.

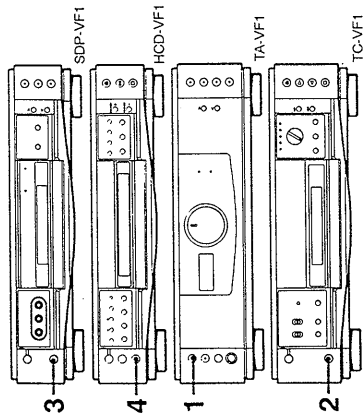
- 1 Turn on the amplifier, and always leave the POWER switch depressed.
- 2 Turn on the cassette deck, and always leave the POWER switch depressed.
- 3 Turn on the digital surround processor, and always leave the POWER switch depressed.
- 4 Turn on the system's main power.

Even when the SYSTEM POWER switch is turned off

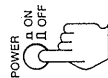
The clock in the tuner CD player continues to run.

Note

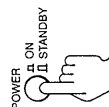
No sound is heard for about 5 seconds after turning on the power.



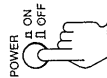
1



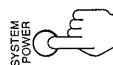
2



3



4



Basic Sound Adjustments

The following operations apply only to reproduced sound.

Adjusting the Volume

To increase the volume, turn the VOLUME control clockwise.

To decrease it, turn the VOLUME control counterclockwise.

Be sure to turn down the VOLUME control to MIN before switching on the system. This prevents damage to speakers.

Adjusting the Balance

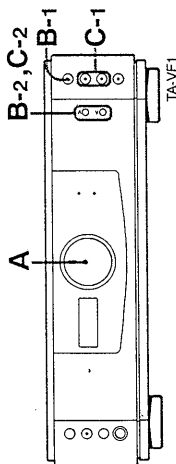
- 1 Press the BALANCE button so that the indicator is turned on. "BALANCE" is displayed for 1 second and the bar graph appears.

- 2 Press the > or < button to adjust the balance.
If you press the > and < buttons simultaneously, the balance is reset to the center position.

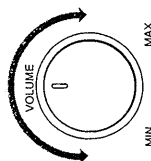
Adjusting the Tone Quality

- 1 Press the TREBLE button to adjust the treble or press the BASS button to adjust the bass so that the corresponding indicator is turned on. "TREBLE" or "BASS" is displayed for 1 second and the bar graph appears.

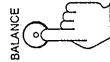
- 2 Press the > or < button to adjust the treble or bass.
If you press the > and < buttons simultaneously, the adjustment level is reset to the normal setting.



A

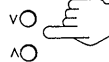


B

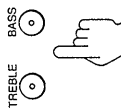


1

2

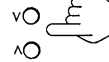


C



1

2



SECTION 2

IC PIN FUNCTIONS

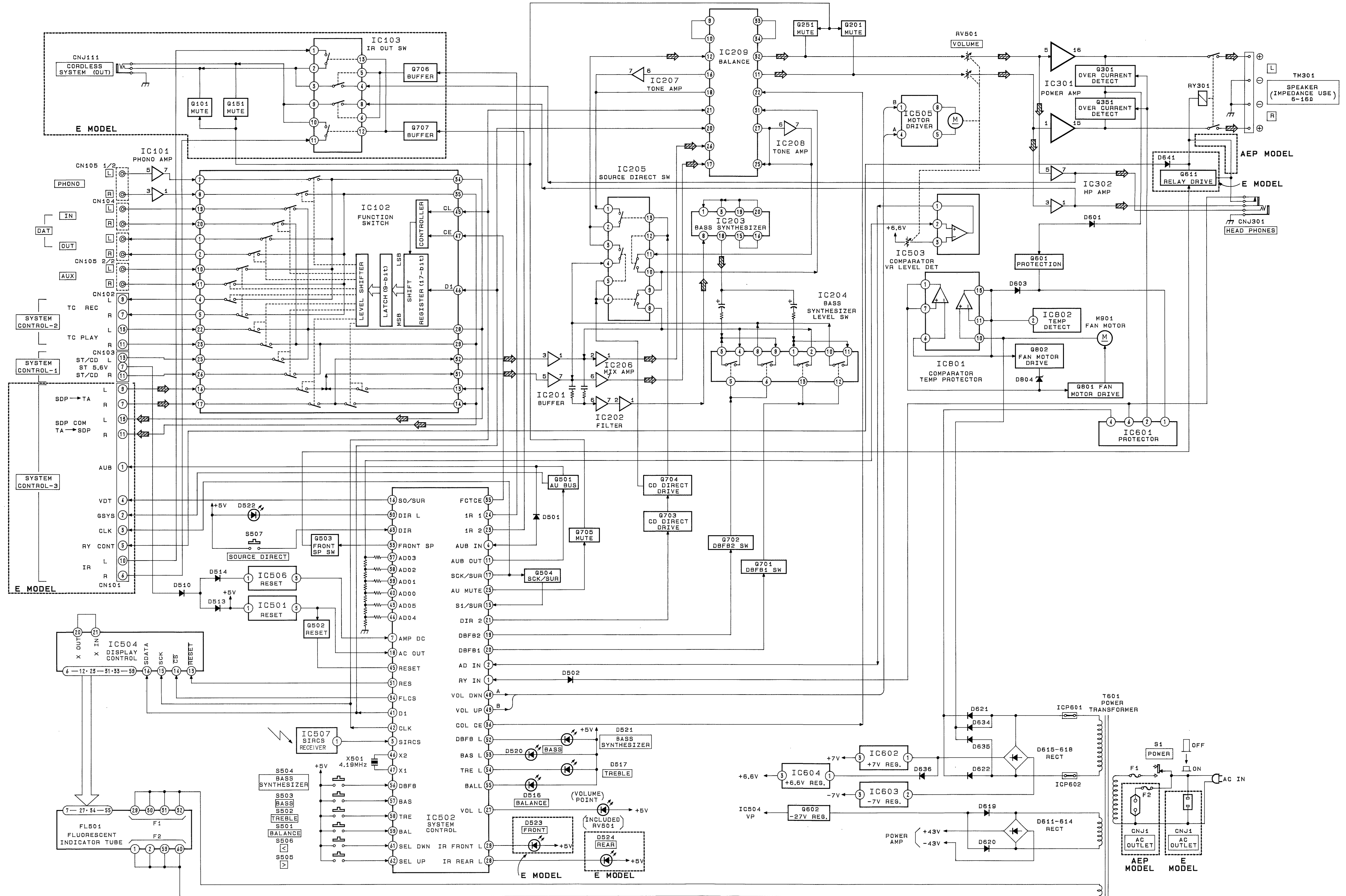
● IC502 μ PD75108CW-C81

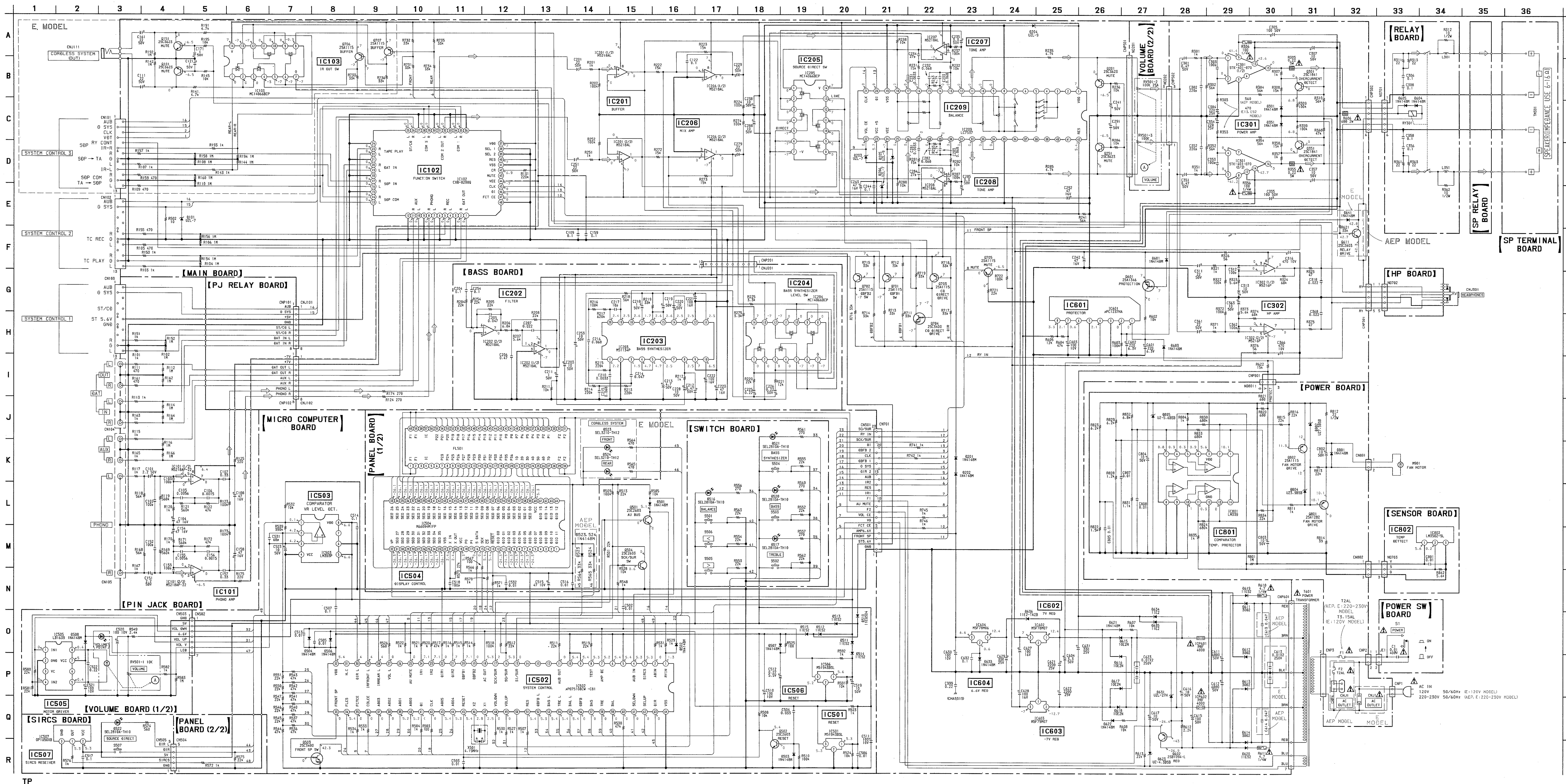
Pin No.	Pin Name	I / O	Description
1	RYIN	I	Relay control signal input. (Front speaker on/off).
2	ADIN	I	Volume control positioning detection software A/D input.
3	SIRCS	I	SIRCS code input.
4	AUBIN	I	Audio bus input.
5	—	I	Pull up to +5 volts.
6	—	I	Pull up to +5 volts.
7	AMPDC	I	Power ON/OFF detection for AMP.
8	TEST	I	Test mode input.
9	—	—	Open
10	—	—	Open
11	AUBOUT	O	Audio bus output.
12	—	O	Open
13	—	O	Open
14	—	O	Open
15	SI/SUR	I	Data receiving condition monitoring.
16	SO	I/O	Volume control positioning data output on sorround connection detector.
17	SCK/SUR	I	Serial clock input.
18	ACOUT	I	Power supply shut-off detection at edge of slope.
19	DBFB2	O	B-SYNTH control output.
20	DBFB1	O	B-SYNTH control output.
21	DIR2	O	DIRECT control output.
22	DIR1	O	DIRECT control output.
23	IR2	O	Cord less output select.
24	IR1	O	Cord less output select.
25	AUMUTE	O	Muting output.
26	—	O	Open
27	VOLL	O	LED output (VOL knob).
28	IRREARL	O	LED output (REAR indication of cord less).
29	IRFRNTL	O	LED output (FRONT indication of cord less).
30	DIRL	O	LED output (DIRECT).
31	NC	—	Not in use.
32	VDD	—	+Power supply terminal.
33	FRNTSP	O	FRONT speaker ON/OFF output.
34	FLCS	O	CHIP select output for IC504 (M66004MIFP).
35	FCTCE	O	CHIP ENABLE output for IC104 (CXD8200Q).
36	VOLCE	O	CHIP ENABLE output for IC209 (LC7537N).
37	AD03	O	Volume control detection software A/D output bit 3.
38	AD02	O	Volume control detection software A/D output bit 2.
39	AD01	O	Volume control detection software A/D output bit 1.
40	AD00	O	Volume control detection software A/D output bit 0.

Pin No.	Pin Name	I / O	Description
41	DI	O	Control data output for VOL, BAL, TREBLE, BASS, FUNCTION, INDICATOR tube.
42	CLK	O	CLOCK output.
43	AD05	O	Volume control detection software A/D output bit 5.
44	AD04	O	Volume control detection software A/D output bit 4.
45	RESET	I	Reset signal input at power ON.
46	X1	—	Xtal connection terminal.
47	X2	—	Xtal connection terminal.
48	VOLDN	O	VOL down.
49	VOLUP	O	VOL up.
50	—	—	Open
51	RES	O	RESET signal output.
52	DBFBL	O	LED output (DBFB)
53	BASL	O	LED output (BASS)
54	TREL	O	LED output (TREBLE)
55	BALL	O	LED output (BALANCE)
56	DBFB	I	KEY input (B-SYNTH)
57	BAS	I	KEY input (BASS)
58	TRE	I	KEY input (TREBLE)
59	BAL	I	KEY input (BALANCE)
60	—	—	GND
61	SELD	I	KEY input (<)
62	SELU	I	KEY input (>)
63	DIR	I	KEY input (DIRECT)
64	VSS	—	GND terminal.

SECTION 3 DIAGRAMS

3-1. BLOCK DIAGRAM





Note:

- All capacitors are in μF unless otherwise noted. $\text{pF} = \mu\text{F} \times 10^{-6}$.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- % : indicates tolerance.
- Δ : internal component.
- $\square$: nonflammable resistor.
- --- : fusible resistor.

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

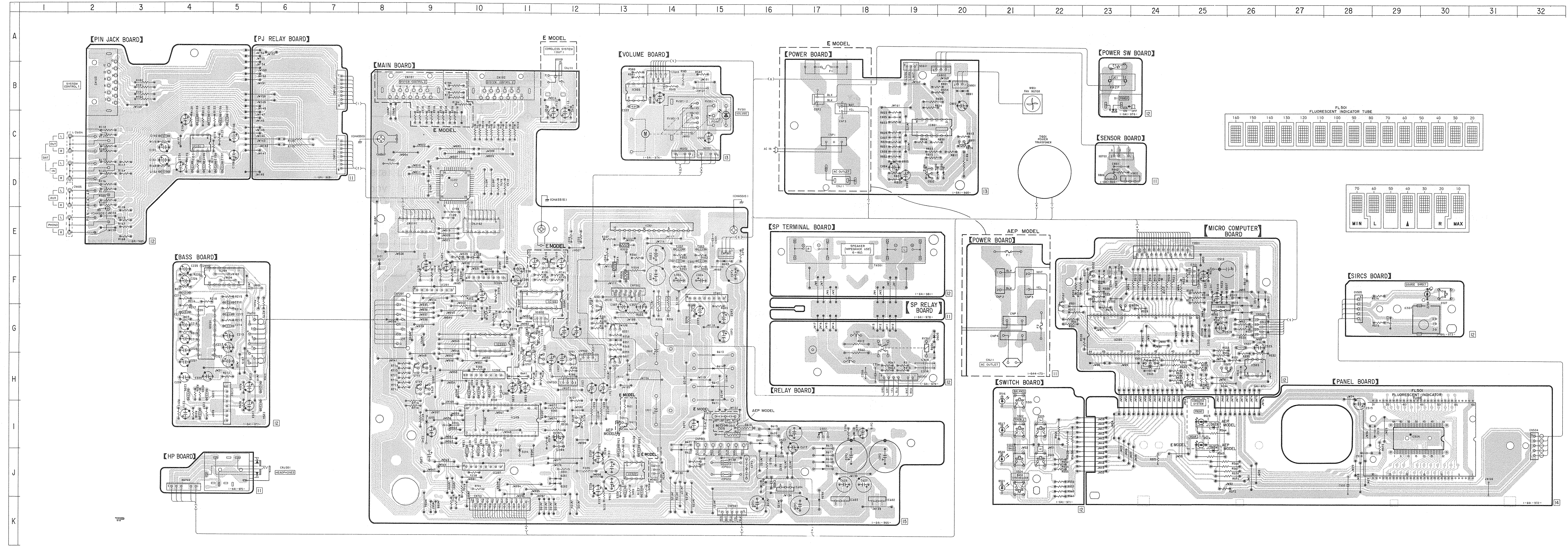
- : B+ Line
- : B- Line
- : Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- : Voltages are taken with a VOM (Input Impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.
- : Signal path.
- : PHONO

● Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	F-8	D804	D-20
D201	J-12	D805	C-19
D202	J-12		
D203	I-5	IC101	C-4
D204	J-11	IC102	D-10
D205	I-5	IC103	F-11
D206	I-12	IC201	F-9
D301	G-13	IC202	H-5
D351	G-13	IC203	G-4
D501	F-23	IC204	F-5
D502	F-23	IC205	G-10
D503	F-23	IC206	F-10
D504	F-23	IC207	J-10
D506	G-25	IC208	H-10
D507	F-26	IC209	I-11
D508	B-14	IC301	E-14
D510	F-26	IC302	J-13
D511	F-26	IC501	F-25
D512	F-26	IC502	G-24
D513	F-26	IC503	H-26
D514	G-26	IC504	I-30
D515	F-26	IC505	B-13
D516	H-21	IC506	G-25
D517	I-21	IC507	G-30
D520	J-21	IC601	F-15
D521	J-21	IC602	J-18
D522	F-30	IC603	J-18
D523	I-25	IC604	J-17
D524	I-25	IC801	C-19
D601	H-13	IC802	D-24
D603	F-15		
D604	G-20	Q101	E-12
D605	G-20	Q151	E-12
D611	H-15	Q201	H-12
D612	H-15	Q251	H-11
D613	G-15	Q301	G-13
D614	H-15	Q351	G-13
D615	I-17	Q501	F-22
D616	J-17	Q502	F-23
D617	J-17	Q503	H-26
D618	J-17	Q504	G-23
D619	I-16	Q601	H-13
D620	I-16	Q602	I-17
D621	I-14	Q611	I-13
D622	I-14	Q701	H-9
D623	I-16	Q702	H-9
D631	I-18	Q703	H-9
D633	J-16	Q704	H-9
D634	I-16	Q705	I-12
D635	J-16	Q706	G-11
D636	J-17	Q707	H-11
D641	H-11	Q801	C-20
D801	B-20	Q802	D-19
D802	D-20	Q804	D-23

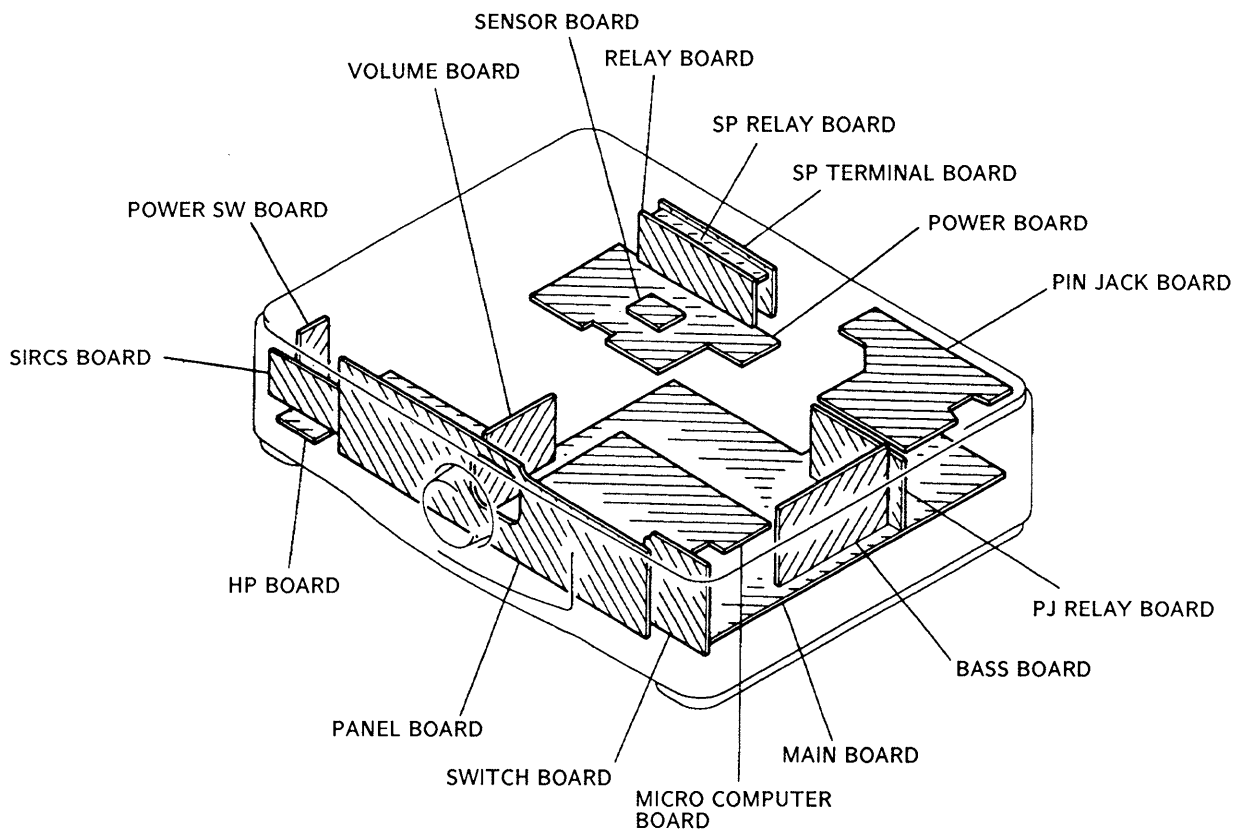
3-3. PRINTED WIRING BOARDS

• See page 19, 20 for Circuit Boards Location and Semiconductor Lead Layouts.



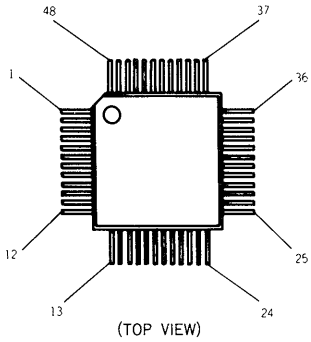
Note:
● : parts extracted from the component side.
● : Pattern on the side which is seen.

3-4. CIRCUIT BOARDS LOCATION

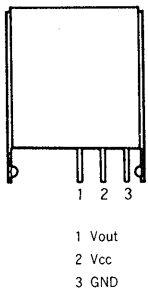


3-5. SEMICONDUCTOR LEAD LAYOUTS

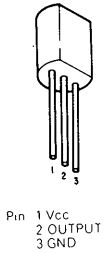
CXD8200Q



GP1U50XB



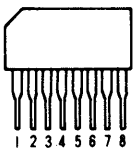
LM35DZ-SL



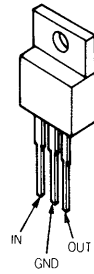
M51943BSL



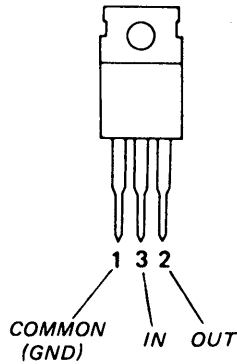
**M5218AL
μPC1237HA**



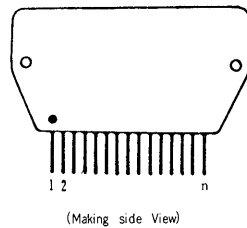
**M5F78M06
M5F78M07**



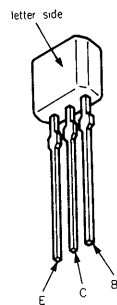
M5F79M07



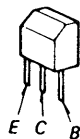
STK401-070



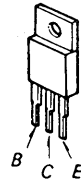
**2SA1175-HFE
2SC3623A-LK**



2SB733-5



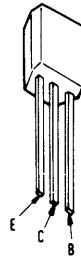
2SB1094-LK



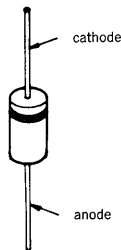
**2SC1815-Y
2SC1841-PAFAEA**



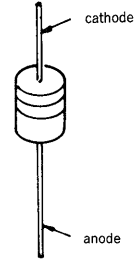
**2SC2603-EF
DTA124ES
DTC124ES**



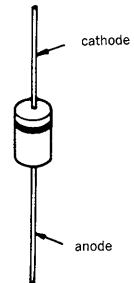
**1N4148M
10E2
10E2N**



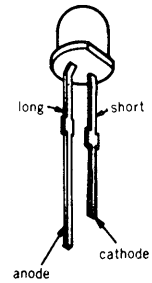
**11EQS04
11ES2
HZS7A1L
HZS9A2L
UZ-3.9BSB
UZ-4.3BSB
UZ-5.6BSB
UZ-7.5BSB
UZL-7L1
UZL-27H**



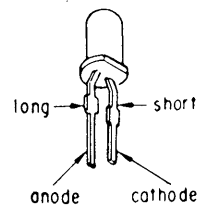
30DF2



SEL2810A

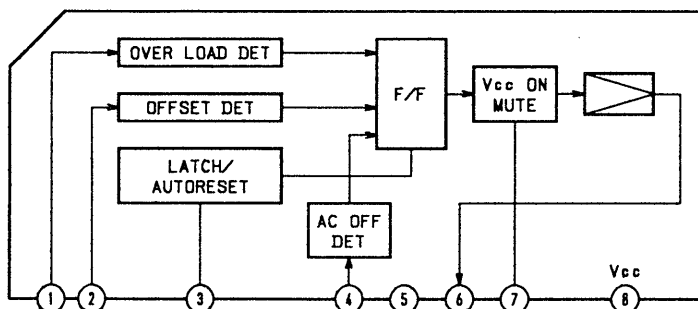


SEL3210S-CD

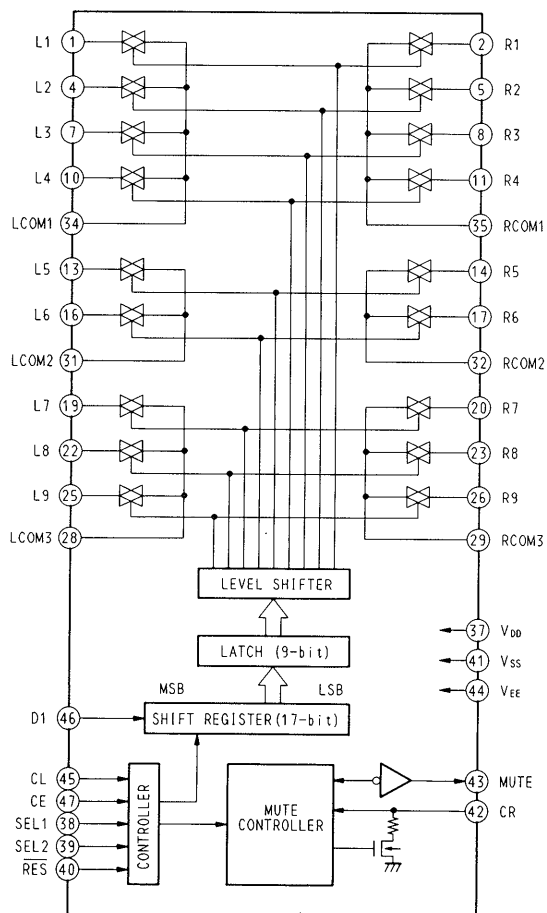


3-6. IC BLOCK DIAGRAMS

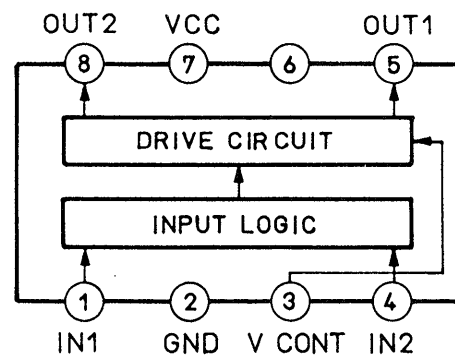
IC601 μ PC1237HA



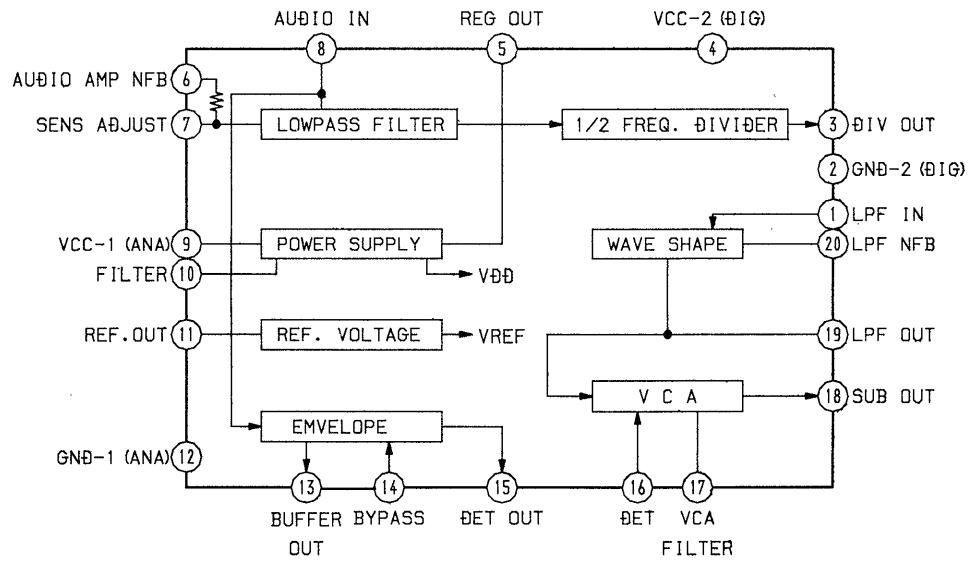
IC102 CXD-8200Q



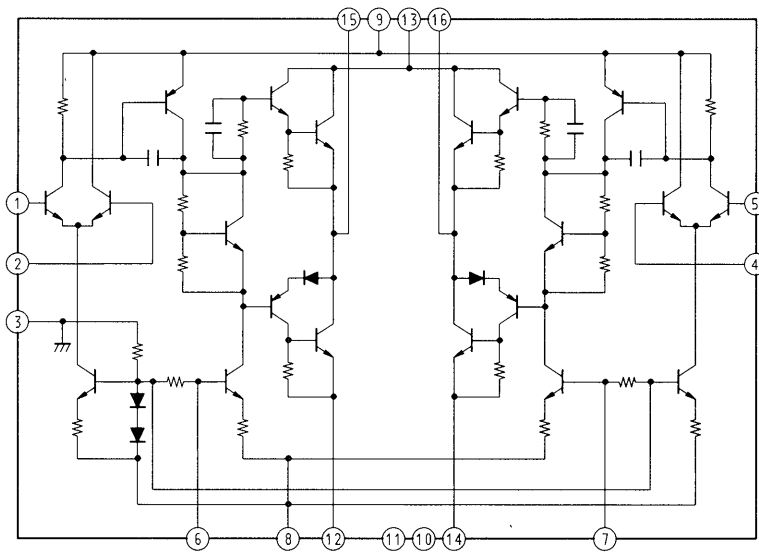
IC505 LB1639



IC203 M51134P



IC301 STK401-070



SECTION 4 EXPLODED VIEWS

NOTE:

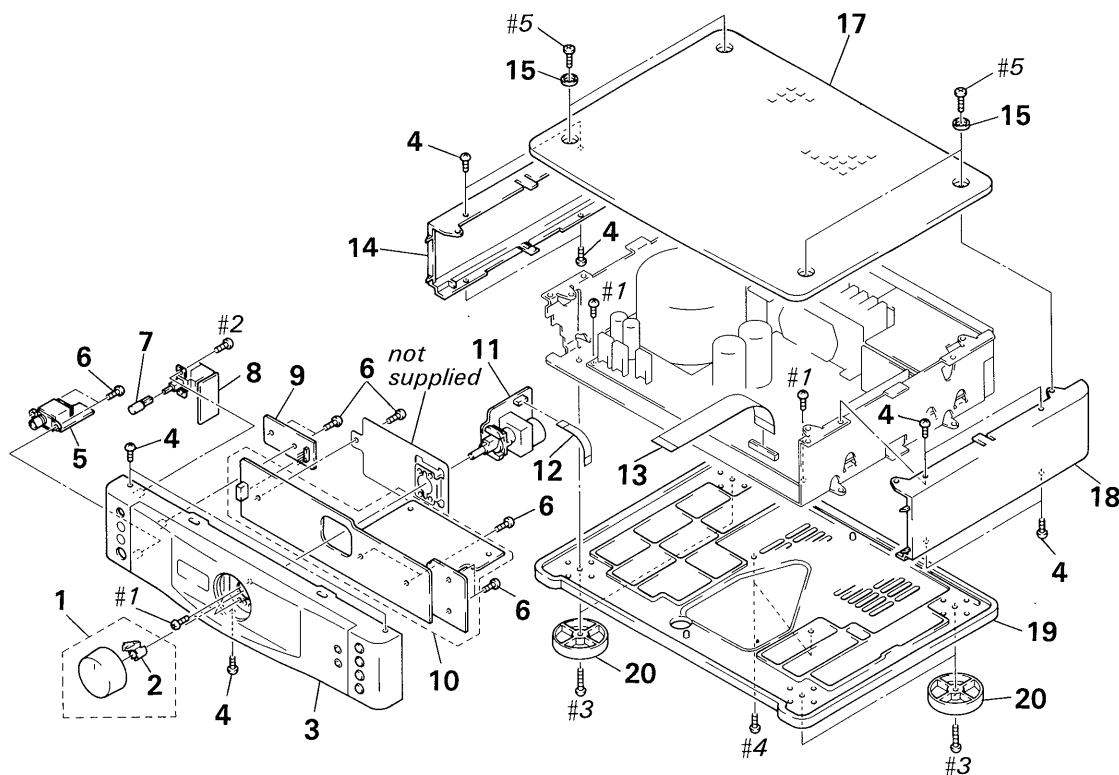
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
Example:
KNOB, BALANCE(WHITE)...(RED)
↑ ↑
Parts color Cabinet's color

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- hardware (#mark) list is given in the last of this parts list.

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

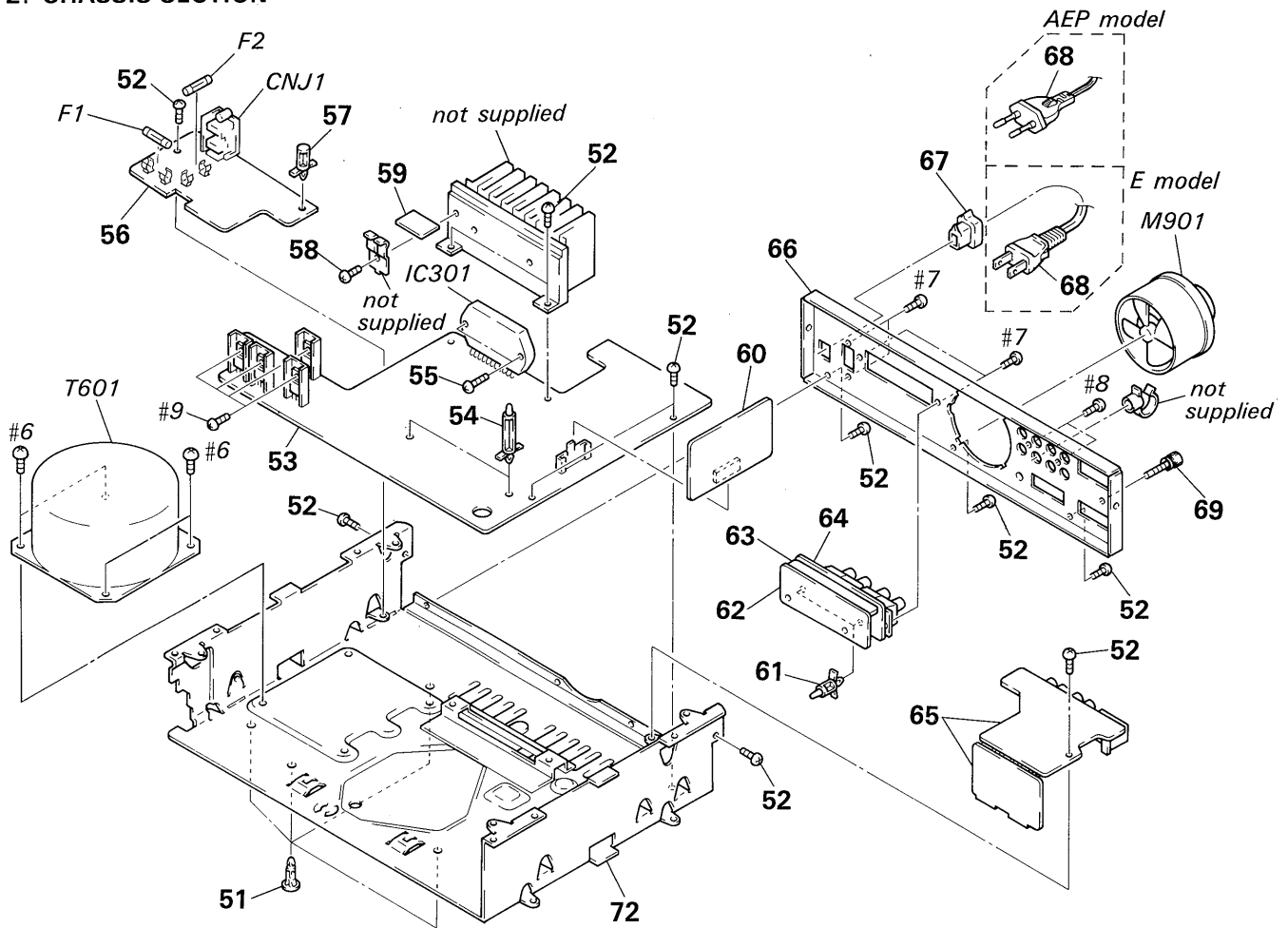
4-1. CABINET SECTION



Ref. No.	Part No.	Description	Remark
1	X-4942-019-1	KNOB ASSY, VOL	
2	4-948-030-01	PLATE, LIGHT GUIDE	
3	X-4941-993-1	PANEL ASSY, FRONT (E)	
3	X-4942-726-1	PANEL ASSY, FRONT (AEP)	
4	3-375-580-11	SCREW (NATEC BVTT) (M3X8)	
* 5	1-641-975-11	HP BOARD	
6	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
7	4-948-024-01	BUTTON (POWER)	
* 8	1-641-976-11	SW BOARD	
* 9	1-641-973-11	SIRCS BOARD	

Ref. No.	Part No.	Description	Remark
* 10	A-4345-843-A	PANEL BOARD, COMPLETE (E)	
* 10	A-4347-912-A	PANEL BOARD, COMPLETE (AEP)	
* 11	1-641-974-11	VOLUME BOARD	
12	1-590-238-31	WIRE, FLAT TYPE (7 CORE)	
13	1-575-664-31	WIRE, FLAT TYPE (23 CORE)	
14	4-948-019-01	PLATE (A) (L), SIDE	
15	4-928-025-51	ESCUTCHEON (TOP)	
* 17	4-948-022-01	COVER (UPPER)	
18	4-948-020-01	PLATE (A) (R), SIDE	
19	4-948-021-01	COVER (LOWER) (TA)	
20	4-948-027-01	FOOT (DIA. 50)	

4-2. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
* 51	3-704-198-21	SUPPORT, PC	
52	3-375-580-11	SCREW (NATEC BVTT) (M3X8)	
* 53	A-4347-902-A	MAIN BOARD, COMPLETE (E)	
* 53	A-4347-907-A	MAIN BOARD, COMPLETE (AEP)	
* 54	4-924-098-81	HOLDER, PC BOARD	
55	4-928-635-11	SCREW, +BV (2.6X16) TAPPING	
* 56	A-4347-904-A	POWER BOARD, COMPLETE (E)	
* 56	A-4347-908-A	POWER BOARD, COMPLETE (AEP)	
* 57	4-944-316-21	HOLDER, PC BOARD	
58	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
* 59	1-641-969-11	SENSOR BOARD	
* 60	A-4347-915-A	BASS BOARD, COMPLETE	
* 61	4-943-687-01	HOLDER, PC BOARD	
* 62	1-641-979-11	RELAY BOARD	
* 63	1-641-978-11	SP RELAY BOARD	
* 64	1-641-981-11	SP TERMINAL BOARD	
* 65	A-4345-841-A	PIN JACK BOARD, COMPLETE	

Ref. No.	Part No.	Description	Remark
* 66	4-947-626-21	PANEL, BACK (AEP)	
* 66	4-947-626-51	PANEL, BACK (E:120V)	
* 66	4-947-626-61	PANEL, BACK (E:220-230V)	
67	3-703-244-11	BUSHING (2104), CORD (AEP)	
67	3-703-571-00	BUSHING (S) (4516), CORD (E)	
△68	1-575-651-71	CORD, POWER (AEP)	
△68	1-575-656-21	CORD, POWER (E)	
69	4-947-010-01	SCREW, FEEDER FIXED	
72	X-4942-761-1	CHASSIS ASSY	
△CNJ1	1-526-794-11	OUTLET, AC (AEP)	
△CNJ1	1-540-038-11	OUTLET, AC (NONPOLAR) (1P) (E)	
△F1	1-532-203-00	FUSE (2A/250V) (AEP, E:220-230V)	
△F1	1-532-237-00	FUSE, TIME LAG (3.15A/250V) (E:120V)	
△F2	1-532-203-00	FUSE (2A/250V) (AEP)	
M901	X-4942-029-1	CASE ASSY, FAN	
△T601	1-450-944-11	TRANSFORMER, POWER (AEP, E:220-230V)	
△T601	1-450-946-11	TRANSFORMER, POWER (E:120V)	

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

MAIN

Ref. No.	Part No.	Description	Remark		
< CAPACITOR >					
C109	1-164-159-11	CERAMIC	0. 1uF		50V
C111	1-126-233-11	ELECT	22uF	20%	50V (E)
C121	1-126-301-11	ELECT	1uF	20%	50V (E)
C122	1-164-159-11	CERAMIC	0. 1uF		50V
C159	1-164-159-11	CERAMIC	0. 1uF		50V
C161	1-126-233-11	ELECT	22uF	20%	50V (E)
C171	1-126-301-11	ELECT	1uF	20%	50V (E)
C201	1-126-233-11	ELECT	22uF	20%	50V
C229	1-126-233-11	ELECT	22uF	20%	50V
C231	1-130-477-00	MYLAR	0. 0033uF	5%	50V
C232	1-136-163-00	FILM	0. 068uF	5%	50V
C233	1-136-163-00	FILM	0. 068uF	5%	50V
C234	1-164-056-11	CERAMIC	27PF	5%	50V
C235	1-126-162-11	ELECT	3. 3uF	20%	50V
C238	1-126-059-11	ELECT	10uF	20%	50V
C241	1-126-301-11	ELECT	1uF	20%	50V
C242	1-126-022-11	ELECT	47uF	20%	16V
C243	1-126-022-11	ELECT	47uF	20%	16V
C244	1-164-159-11	CERAMIC	0. 1uF		50V
C251	1-126-233-11	ELECT	22uF	20%	50V
C279	1-126-233-11	ELECT	22uF	20%	50V
C281	1-130-477-00	MYLAR	0. 0033uF	5%	50V
C282	1-136-163-00	FILM	0. 068uF	5%	50V
C283	1-136-163-00	FILM	0. 068uF	5%	50V
C284	1-164-056-11	CERAMIC	27PF	5%	50V
C285	1-126-162-11	ELECT	3. 3uF	20%	50V
C288	1-126-059-11	ELECT	10uF	20%	50V
C291	1-126-301-11	ELECT	1uF	20%	50V
C292	1-126-022-11	ELECT	47uF	20%	16V
C301	1-126-300-11	ELECT	0. 47uF	20%	50V
C302	1-110-339-11	MYLAR	220PF	5%	50V
C303	1-110-335-11	MYLAR	100PF	5%	50V
C304	1-124-120-11	ELECT	220uF	20%	25V
C305	1-124-122-11	ELECT	100uF	20%	50V
C307	1-126-059-11	ELECT	10uF	20%	50V
C311	1-126-233-11	ELECT	22uF	20%	50V
C312	1-110-335-11	MYLAR	100PF	5%	50V
C313	1-126-059-11	ELECT	10uF	20%	50V
C316	1-124-997-11	ELECT	470uF	20%	10V
C318	1-136-157-00	FILM	0. 022uF	5%	50V
C351	1-126-300-11	ELECT	0. 47uF	20%	50V
C352	1-110-339-11	MYLAR	220PF	5%	50V
C353	1-110-335-11	MYLAR	100PF	5%	50V
C354	1-124-120-11	ELECT	220uF	20%	25V
C355	1-124-122-11	ELECT	100uF	20%	50V
C357	1-126-059-11	ELECT	10uF	20%	50V

Ref. No.	Part No.	Description	Remark		
C361	1-126-233-11	ELECT	22uF	20%	50V
C362	1-110-335-11	MYLAR	100PF	5%	50V
C363	1-126-059-11	ELECT	10uF	20%	50V
C366	1-124-997-11	ELECT	470uF	20%	10V
C368	1-136-157-00	FILM	0. 022uF	5%	50V
C601	1-124-587-11	ELECT	220uF	20%	6. 3V
C602	1-124-587-11	ELECT	220uF	20%	6. 3V
C603	1-124-994-11	ELECT	100uF	20%	10V
C604	1-126-162-11	ELECT	3. 3uF	20%	50V
C611	1-128-543-11	CAP, ELECT			
C612	1-128-543-11	CAP, ELECT			
C613	1-102-394-11	CERAMIC	0. 01uF		250V(E)
C613	1-136-161-00	FILM	0. 047uF	5%	50V(AEP)
C614	1-136-161-00	FILM	0. 047uF	5%	50V(AEP)
C615	1-124-122-11	ELECT	100uF	20%	50V
C616	1-126-059-11	ELECT	10uF	20%	50V
C617	1-126-059-11	ELECT	10uF	20%	50V
C621	1-124-962-11	ELECT	2200uF	20%	25V
C622	1-124-962-11	ELECT	2200uF	20%	25V
C623	1-102-394-11	CERAMIC	0. 01uF		250V
C627	1-124-122-11	ELECT	100uF	20%	50V
C628	1-124-122-11	ELECT	100uF	20%	50V
C629	1-126-025-11	ELECT	330uF	20%	25V
C630	1-124-994-11	ELECT	100uF	20%	10V
C631	1-126-025-11	ELECT	330uF	20%	25V
C632	1-164-159-11	CERAMIC	0. 1uF		50V
C999	1-136-169-00	FILM	0. 22uF	5%	50V
< CONNECTOR >					
* CN101	1-691-004-31	PLUG, CONNECTOR (PC BOARD) 13P (SYSTEM CONTROL 3) (E)			
* CN102	1-691-004-21	PLUG, CONNECTOR (PC BOARD) 13P (SYSTEM CONTROL 2)			
* CN701	1-568-839-11	SOCKET, CONNECTOR 23P			
< JACK >					
* CNJ101	1-565-347-11	SOCKET, CONNECTOR (PC BOARD) 8P			
* CNJ102	1-565-347-11	SOCKET, CONNECTOR (PC BOARD) 8P			
CNJ111	1-507-967-11	JACK (CORDLESS SYSTEM OUT) (E)			
< CONNECTOR >					
* CNP101	1-565-344-11	PIN, CONNECTOR (PC BOARD) 8P			
* CNP102	1-565-344-11	PIN, CONNECTOR (PC BOARD) 8P			
CNP201	1-573-296-11	CONNECTOR, BOARD TO BOARD 10P			
* CNP301	1-564-508-11	PLUG, CONNECTOR 5P			
* CNP302	1-564-509-11	PLUG, CONNECTOR 6P			

MAIN

Ref.No.	Part No.	Description	Remark
* CNP501	1-564-506-11	PLUG, CONNECTOR 3P	
* CNP502	1-564-506-11	PLUG, CONNECTOR 3P	
* CNP601	1-564-915-11	PIN, CONNECTOR 7P	
* CNP801	1-564-337-00	PIN, CONNECTOR 3P	

< DIODE >

D101	8-719-000-75	DIODE	UZL-7L1
D201	8-719-987-63	DIODE	1N4148M
D202	8-719-987-63	DIODE	1N4148M
D203	8-719-000-78	DIODE	UZL-7L
D204	8-719-933-54	DIODE	HZS9A2L
D205	8-719-933-54	DIODE	HZS9A2L
D206	8-719-000-78	DIODE	UZL-7L
D301	8-719-987-63	DIODE	1N4148M
D351	8-719-987-63	DIODE	1N4148M
D601	8-719-987-63	DIODE	1N4148M
D603	8-719-987-63	DIODE	1N4148M
D611	8-719-230-02	DIODE	30DF2
D612	8-719-230-02	DIODE	30DF2
D613	8-719-230-02	DIODE	30DF2
D614	8-719-230-02	DIODE	30DF2
D615	8-719-200-77	DIODE	10E2N
D616	8-719-200-77	DIODE	10E2N
D617	8-719-200-77	DIODE	10E2N
D618	8-719-200-77	DIODE	10E2N
D619	8-719-200-82	DIODE	11ES2
D620	8-719-200-82	DIODE	11ES2
D621	8-719-987-63	DIODE	1N4148M
D622	8-719-987-63	DIODE	1N4148M
D623	8-719-010-29	DIODE	UZ-4.3BSB
D631	8-719-002-48	DIODE	UZL-27H
D633	8-719-987-63	DIODE	1N4148M
D634	8-719-200-02	DIODE	10E2
D635	8-719-200-02	DIODE	10E2
D636	8-719-200-02	DIODE	10E2
D641	8-719-987-63	DIODE	1N4148M (E)

< IC >

IC102	8-759-047-14	IC	CXD8200Q
IC103	8-759-000-49	IC	MC14066BCP (E)
IC201	8-759-634-50	IC	M5218AL
IC205	8-759-000-49	IC	MC14066BCP
IC206	8-759-634-50	IC	M5218AL
IC207	8-759-634-50	IC	M5218AL
IC208	8-759-634-50	IC	M5218AL
IC209	8-759-802-31	IC	LC7537
IC301	8-749-922-93	IC	STK401-070
IC302	8-759-603-37	IC	M5216P

Ref.No.	Part No.	Description	Remark
IC601	8-759-111-68	IC	uPC1237HA
IC602	8-759-605-00	IC	M5F78M07L
IC603	8-759-604-95	IC	M5F79M07L
IC604	8-759-604-99	IC	M5F78M06L

< IC LINK >

△ICP601	1-532-845-21	LI	NK, IC
△ICP602	1-532-845-21	LI	NK, IC

< TRANSISTOR >

Q101	8-729-141-30	TRANSISTOR	2SC3623A-LK (E)
Q151	8-729-141-30	TRANSISTOR	2SC3623A-LK (E)
Q201	8-729-141-30	TRANSISTOR	2SC3623A-LK
Q251	8-729-141-30	TRANSISTOR	2SC3623A-LK
Q301	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA
Q351	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA
Q601	8-729-900-63	TRANSISTOR	DTA124ES
Q602	8-729-141-83	TRANSISTOR	2SB1094-LK
Q611	8-729-620-05	TRANSISTOR	2SC2603-EF (E)
Q701	8-729-119-76	TRANSISTOR	2SA1175-HFE
Q702	8-729-119-76	TRANSISTOR	2SA1175-HFE
Q703	8-729-119-76	TRANSISTOR	2SA1175-HFE
Q704	8-729-900-36	TRANSISTOR	DTC124ES
Q705	8-729-119-76	TRANSISTOR	2SA1175-HFE
Q706	8-729-119-76	TRANSISTOR	2SA1175-HFE (E)
Q707	8-729-119-76	TRANSISTOR	2SA1175-HFE (E)

< RESISTOR >

R103	1-249-417-11	CARBON	1K	5%	1/4W
R104	1-247-903-00	CARBON	1M	5%	1/4W
R105	1-249-413-11	CARBON	470	5%	1/4W
R106	1-247-903-00	CARBON	1M	5%	1/4W
R107	1-249-417-11	CARBON	1K	5%	1/4W (E)
R108	1-247-903-00	CARBON	1M	5%	1/4W (E)
R109	1-249-413-11	CARBON	470	5%	1/4W (E)
R110	1-247-903-00	CARBON	1M	5%	1/4W (E)
R124	1-249-410-11	CARBON	270	5%	1/4W
R131	1-247-887-00	CARBON	220K	5%	1/4W
R141	1-249-425-11	CARBON	4.7K	5%	1/4W (E)
R142	1-247-903-00	CARBON	1M	5%	1/4W (E)
R143	1-249-417-11	CARBON	1K	5%	1/4W (E)
R144	1-247-903-00	CARBON	1M	5%	1/4W (E)
R145	1-249-429-11	CARBON	10K	5%	1/4W (E)
R153	1-249-417-11	CARBON	1K	5%	1/4W
R154	1-247-903-00	CARBON	1M	5%	1/4W
R155	1-249-413-11	CARBON	470	5%	1/4W
R156	1-247-903-00	CARBON	1M	5%	1/4W
R157	1-249-417-11	CARBON	1K	5%	1/4W (E)

The components identified by mark △ or dotted line with mark. △ are critical for safety. Replace only with part number specified.

MAIN

Ref. No.	Part No.	Description	Remark		
R158	1-247-903-00	CARBON	1M	5%	1/4W (E)
R159	1-249-413-11	CARBON	470	5%	1/4W (E)
R160	1-247-903-00	CARBON	1M	5%	1/4W (E)
R174	1-249-410-11	CARBON	270	5%	1/4W
R191	1-249-425-11	CARBON	4.7K	5%	1/4W (E)
R192	1-247-903-00	CARBON	1M	5%	1/4W (E)
R193	1-249-417-11	CARBON	1K	5%	1/4W (E)
R194	1-247-903-00	CARBON	1M	5%	1/4W (E)
R195	1-249-429-11	CARBON	10K	5%	1/4W (E)
R201	1-249-417-11	CARBON	1K	5%	1/4W
R202	1-249-441-11	CARBON	100K	5%	1/4W
R222	1-249-431-11	CARBON	15K	5%	1/4W
R223	1-249-431-11	CARBON	15K	5%	1/4W
R224	1-249-441-11	CARBON	100K	5%	1/4W
R231	1-249-431-11	CARBON	15K	5%	1/4W
R232	1-249-429-11	CARBON	10K	5%	1/4W
R235	1-249-425-11	CARBON	4.7K	5%	1/4W
R236	1-249-429-11	CARBON	10K	5%	1/4W
R237	1-249-441-11	CARBON	100K	5%	1/4W
R238	1-249-429-11	CARBON	10K	5%	1/4W
R241	1-249-438-11	CARBON	56K	5%	1/4W
R243	1-249-425-11	CARBON	4.7K	5%	1/4W
R251	1-249-417-11	CARBON	1K	5%	1/4W
R252	1-249-441-11	CARBON	100K	5%	1/4W
R272	1-249-431-11	CARBON	15K	5%	1/4W
R273	1-249-431-11	CARBON	15K	5%	1/4W
R274	1-249-441-11	CARBON	100K	5%	1/4W
R281	1-249-431-11	CARBON	15K	5%	1/4W
R282	1-249-429-11	CARBON	10K	5%	1/4W
R285	1-249-425-11	CARBON	4.7K	5%	1/4W
R286	1-249-429-11	CARBON	10K	5%	1/4W
R287	1-249-441-11	CARBON	100K	5%	1/4W
R288	1-249-429-11	CARBON	10K	5%	1/4W
R293	1-249-425-11	CARBON	4.7K	5%	1/4W
R301	1-249-417-11	CARBON	1K	5%	1/4W
R302	1-249-438-11	CARBON	56K	5%	1/4W
R303	1-249-413-11	CARBON	470	5%	1/4W (E)
R303	1-249-414-11	CARBON	560	5%	1/4W (AEP)
R304	1-249-438-11	CARBON	56K	5%	1/4W
R305	1-217-156-00	RES, METAL PLATE			0.22
△R306	1-212-881-11	FUSIBLE	100	5%	1/4W F
R307	1-249-417-11	CARBON	1K	5%	1/4W
R308	1-249-431-11	CARBON	15K	5%	1/4W
R309	1-249-441-11	CARBON	100K	5%	1/4W
R310	1-249-438-11	CARBON	56K	5%	1/4W
R321	1-249-417-11	CARBON	1K	5%	1/4W
R322	1-249-441-11	CARBON	100K	5%	1/4W
R323	1-249-426-11	CARBON	5.6K	5%	1/4W

Ref. No.	Part No.	Description	Remark		
R324	1-249-439-11	CARBON	68K	5%	1/4W
R325	1-249-401-11	CARBON	47	5%	1/4W
R326	1-249-402-11	CARBON	56	5%	1/4W
R351	1-249-417-11	CARBON	1K	5%	1/4W
R352	1-249-438-11	CARBON	56K	5%	1/4W
R353	1-249-413-11	CARBON	470	5%	1/4W (E)
R353	1-249-414-11	CARBON	560	5%	1/4W (AEP)
R354	1-249-438-11	CARBON	56K	5%	1/4W
R355	1-217-156-00	RES, METAL PLATE			0.22
△R356	1-212-881-11	FUSIBLE	100	5%	1/4W F
R357	1-249-417-11	CARBON	1K	5%	1/4W
R358	1-249-431-11	CARBON	15K	5%	1/4W
R359	1-249-441-11	CARBON	100K	5%	1/4W
R360	1-249-437-11	CARBON	47K	5%	1/4W
R371	1-249-417-11	CARBON	1K	5%	1/4W
R372	1-249-441-11	CARBON	100K	5%	1/4W
R373	1-249-426-11	CARBON	5.6K	5%	1/4W
R374	1-249-439-11	CARBON	68K	5%	1/4W
R375	1-249-401-11	CARBON	47	5%	1/4W
R376	1-249-402-11	CARBON	56	5%	1/4W
R502	1-249-393-11	CARBON	10	5%	1/4W
R602	1-249-429-11	CARBON	10K	5%	1/4W
R603	1-249-441-11	CARBON	100K	5%	1/4W
R604	1-249-437-11	CARBON	47K	5%	1/4W
R605	1-249-430-11	CARBON	12K	5%	1/4W
△R606	1-215-891-11	METAL OXIDE	680	5%	2W F
R607	1-249-429-11	CARBON	10K	5%	1/4W
R608	1-249-429-11	CARBON	10K	5%	1/4W
△R610	1-212-849-00	FUSIBLE	4.7	5%	1/4W F
△R611	1-212-849-00	FUSIBLE	4.7	5%	1/4W F
R612	1-249-421-11	CARBON	2.2K	5%	1/4W
R613	1-249-433-11	CARBON	22K	5%	1/4W
R621	1-249-435-11	CARBON	33K	5%	1/4W (E)
R622	1-249-431-11	CARBON	15K	5%	1/4W
R711	1-249-435-11	CARBON	33K	5%	1/4W
R712	1-249-435-11	CARBON	33K	5%	1/4W
R713	1-249-435-11	CARBON	33K	5%	1/4W
R714	1-249-435-11	CARBON	33K	5%	1/4W
R715	1-249-435-11	CARBON	33K	5%	1/4W
R716	1-249-435-11	CARBON	33K	5%	1/4W
R717	1-249-435-11	CARBON	33K	5%	1/4W
R718	1-249-435-11	CARBON	33K	5%	1/4W
R719	1-249-435-11	CARBON	33K	5%	1/4W
R721	1-249-433-11	CARBON	22K	5%	1/4W
R722	1-249-441-11	CARBON	100K	5%	1/4W
R731	1-249-435-11	CARBON	33K	5%	1/4W
R732	1-249-435-11	CARBON	33K	5%	1/4W

The components identified by mark △ or dotted line with mark. △ are critical for safety. Replace only with part number specified.

MAIN

PANEL

MICRO COMPUTER

SWITCH

Ref. No.	Part No.	Description	Remark		
R733	1-249-435-11	CARBON	33K	5%	1/4W (E)
R734	1-249-435-11	CARBON	33K	5%	1/4W
R735	1-249-435-11	CARBON	33K	5%	1/4W
R736	1-249-435-11	CARBON	33K	5%	1/4W (E)
R741	1-249-417-11	CARBON	1K	5%	1/4W
R742	1-249-417-11	CARBON	1K	5%	1/4W
R745	1-249-417-11	CARBON	1K	5%	1/4W
R746	1-249-417-11	CARBON	1K	5%	1/4W

* A-4345-843-A PANEL BOARD, COMPLETE (E)
 * A-4347-912-A PANEL BOARD, COMPLETE (AEP)
 MICRO COMPUTER BOARD
 SWITCH BOARD

* 4-948-458-01 HOLDER (TA), FL

< CAPACITOR >

C502	1-161-379-00	CERAMIC	0.01uF	20%	25V
C503	1-161-379-00	CERAMIC	0.01uF	20%	25V
C504	1-130-489-00	MYLAR	0.033uF	5%	50V
C505	1-161-379-00	CERAMIC	0.01uF	20%	25V
C506	1-161-379-00	CERAMIC	0.01uF	20%	25V
C507	1-164-159-11	CERAMIC	0.1uF		50V
C510	1-124-994-11	ELECT	100uF	20%	10V
C511	1-124-994-11	ELECT	100uF	20%	10V
C512	1-125-486-11	DOUBLE LAYERS	0.22F		5. 5V
C513	1-161-379-00	CERAMIC	0.01uF	20%	25V
C514	1-164-159-11	CERAMIC	0.1uF		50V
C515	1-124-589-11	ELECT	47uF	20%	16V
C516	1-161-379-00	CERAMIC	0.01uF	20%	25V
C518	1-162-282-31	CERAMIC	100PF	10%	50V
C519	1-126-059-11	ELECT	10uF	20%	50V
C523	1-126-059-11	ELECT	10uF	20%	50V
C531	1-164-066-11	CERAMIC	68PF	5%	50V
C532	1-161-379-00	CERAMIC	0.01uF	20%	25V

< CONNECTOR >

* CN501 1-568-839-11 SOCKET, CONNECTOR 23P

< DIODE >

D501	8-719-987-63	DIODE	1N4148M		
D502	8-719-987-63	DIODE	1N4148M		
D503	8-719-987-63	DIODE	1N4148M		
D504	8-719-987-63	DIODE	1N4148M		
D506	8-719-987-63	DIODE	1N4148M		
D507	8-719-987-63	DIODE	1N4148M		
D510	8-719-210-21	DIODE	11EQS04		

Ref. No.	Part No.	Description	Remark		
D511	8-719-200-82	DIODE	11ES2		
D512	8-719-200-82	DIODE	11ES2		
D513	8-719-200-82	DIODE	11ES2		
D514	8-719-200-82	DIODE	11ES2		
D515	8-719-200-82	DIODE	11ES2		
D516	8-719-301-49	LED	SEL2810A		
D517	8-719-301-49	LED	SEL2810A		
D520	8-719-301-49	LED	SEL2810A		
D521	8-719-301-49	LED	SEL2810A		

D523 8-719-313-69 DIODE SEL3210S-CD (E)
 D523 8-719-987-63 DIODE 1N4148M (AEP)

D524 8-719-313-69 DIODE SEL3210S-CD (E)
 D524 8-719-987-63 DIODE 1N4148M (AEP)

< INDICATOR TUBE >

FL501 1-519-701-11 INDICATOR TUBE, FLUORESCENT

< IC >

IC501	8-759-635-63	IC	M51943BSL		
IC502	8-759-047-13	IC	uPD75108CW-C81		
IC503	8-759-987-16	IC	LM393P		
IC504	8-759-045-48	IC	M66004MIFP		
IC506	8-759-635-63	IC	M51943BSL		

< TRANSISTOR >

Q501	8-729-620-05	TRANSISTOR	2SC2603-EF		
Q502	8-729-620-05	TRANSISTOR	2SC2603-EF		
Q503	8-729-900-36	TRANSISTOR	DTC124ES		
Q504	8-729-620-05	TRANSISTOR	2SC2603-EF		

< RESISTOR >

R501	1-249-433-11	CARBON	22K	5%	1/4W
R503	1-249-405-11	CARBON	100	5%	1/4W
R504	1-249-417-11	CARBON	1K	5%	1/4W
R505	1-249-429-11	CARBON	10K	5%	1/4W
R507	1-249-417-11	CARBON	1K	5%	1/4W
R508	1-249-429-11	CARBON	10K	5%	1/4W
R509	1-249-441-11	CARBON	100K	5%	1/4W
R510	1-249-441-11	CARBON	100K	5%	1/4W
R511	1-249-433-11	CARBON	22K	5%	1/4W
R512	1-249-433-11	CARBON	22K	5%	1/4W
R513	1-249-433-11	CARBON	22K	5%	1/4W
R514	1-249-417-11	CARBON	1K	5%	1/4W
R515	1-249-417-11	CARBON	1K	5%	1/4W
R516	1-249-417-11	CARBON	1K	5%	1/4W
R517	1-249-437-11	CARBON	47K	5%	1/4W
R518	1-249-433-11	CARBON	22K	5%	1/4W

PANEL

MICRO COMPUTER

SWITCH

PIN JACK

Ref. No.	Part No.	Description	Remark
R519	1-249-433-11	CARBON	22K 5% 1/4W
R520	1-249-417-11	CARBON	1K 5% 1/4W
R521	1-249-417-11	CARBON	1K 5% 1/4W
R522	1-249-417-11	CARBON	1K 5% 1/4W
R523	1-249-417-11	CARBON	1K 5% 1/4W
R524	1-249-429-11	CARBON	10K 5% 1/4W
R525	1-249-405-11	CARBON	100 5% 1/4W
R526	1-249-414-11	CARBON	560 5% 1/4W
R527	1-249-417-11	CARBON	1K 5% 1/4W
R528	1-249-429-11	CARBON	10K 5% 1/4W
R529	1-249-417-11	CARBON	1K 5% 1/4W
R530	1-249-417-11	CARBON	1K 5% 1/4W
R531	1-249-417-11	CARBON	1K 5% 1/4W
R532	1-249-429-11	CARBON	10K 5% 1/4W
R533	1-249-417-11	CARBON	1K 5% 1/4W
R534	1-249-417-11	CARBON	1K 5% 1/4W
R536	1-249-437-11	CARBON	47K 5% 1/4W
R537	1-249-437-11	CARBON	47K 5% 1/4W
R538	1-249-437-11	CARBON	47K 5% 1/4W
R539	1-247-893-11	CARBON	390K 5% 1/4W
R540	1-249-437-11	CARBON	47K 5% 1/4W
R541	1-249-437-11	CARBON	47K 5% 1/4W
R542	1-249-437-11	CARBON	47K 5% 1/4W
R543	1-249-437-11	CARBON	47K 5% 1/4W
R544	1-249-437-11	CARBON	47K 5% 1/4W
R545	1-249-433-11	CARBON	22K 5% 1/4W
R546	1-249-433-11	CARBON	22K 5% 1/4W
R547	1-249-433-11	CARBON	22K 5% 1/4W
R548	1-249-417-11	CARBON	1K 5% 1/4W
R550	1-249-433-11	CARBON	22K 5% 1/4W
R551	1-249-433-11	CARBON	22K 5% 1/4W
R552	1-249-433-11	CARBON	22K 5% 1/4W
R553	1-249-433-11	CARBON	22K 5% 1/4W
R554	1-249-433-11	CARBON	22K 5% 1/4W
R555	1-249-433-11	CARBON	22K 5% 1/4W
R556	1-249-410-11	CARBON	270 5% 1/4W
R557	1-249-410-11	CARBON	270 5% 1/4W
R560	1-249-410-11	CARBON	270 5% 1/4W
R561	1-249-410-11	CARBON	270 5% 1/4W
R562	1-249-433-11	CARBON	22K 5% 1/4W
R563	1-249-433-11	CARBON	22K 5% 1/4W
R564	1-249-413-11	CARBON	470 5% 1/4W (E)
R564	1-249-435-11	CARBON	33K 5% 1/4W (AEP)
R565	1-249-413-11	CARBON	470 5% 1/4W (E)
R565	1-249-435-11	CARBON	33K 5% 1/4W (AEP)
R566	1-249-417-11	CARBON	1K 5% 1/4W
R567	1-249-405-11	CARBON	100 5% 1/4W
R570	1-249-417-11	CARBON	1K 5% 1/4W

Ref. No.	Part No.	Description	Remark
R571	1-249-417-11	CARBON	1K 5% 1/4W
R572	1-249-417-11	CARBON	1K 5% 1/4W
R573	1-249-434-11	CARBON	27K 5% 1/4W
R575	1-249-433-11	CARBON	22K 5% 1/4W
R591	1-249-429-11	CARBON	10K 5% 1/4W
R592	1-249-417-11	CARBON	1K 5% 1/4W

< SWITCH >

S501	1-554-303-21	SWITCH, TACTILE (BALANCE)
S502	1-554-303-21	SWITCH, TACTILE (TREBLE)
S503	1-554-303-21	SWITCH, TACTILE (BASS)
S504	1-554-303-21	SWITCH, TACTILE (BASS SYNTHESIZER)
S505	1-554-303-21	SWITCH, TACTILE (▶)
S506	1-554-303-21	SWITCH, TACTILE (◀)

< VIBRATOR >

X501	1-577-101-11	VIBRATOR, CERAMIC (4.19MHz)
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* A-4345-841-A PIN JACK BOARD, COMPLETE

< CAPACITOR >

C101	1-126-161-11	ELECT	2.2uF	20%	50V
C102	1-110-335-11	MYLAR	100PF	5%	50V
C103	1-110-335-11	MYLAR	100PF	5%	50V
C104	1-126-022-11	ELECT	47uF	20%	16V
C105	1-130-480-00	MYLAR	0.0056uF	5%	50V
C106	1-106-347-00	MYLAR	1500PF	5%	200V
C107	1-136-171-00	FILM	0.33uF	5%	50V
C108	1-126-022-11	ELECT	47uF	20%	16V
C151	1-126-161-11	ELECT	2.2uF	20%	50V
C152	1-110-335-11	MYLAR	100PF	5%	50V
C153	1-110-335-11	MYLAR	100PF	5%	50V
C154	1-126-022-11	ELECT	47uF	20%	16V
C155	1-130-480-00	MYLAR	0.0056uF	5%	50V
C156	1-106-347-00	MYLAR	1500PF	5%	200V
C157	1-136-171-00	FILM	0.33uF	5%	50V
C158	1-126-022-11	ELECT	47uF	20%	16V

< CONNECTOR >

* CN103	1-691-004-11	PLUG, CONNECTOR (PC BOARD) 13P (SYSTEM CONTROL 1)
CN104	1-565-259-11	JACK, PIN 4P (DAT)
CN105	1-565-259-11	JACK, PIN 4P (AUX/PHONO)

< IC >

IC101	8-759-636-74	IC M5218AP-22
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PIN JACK

POWER

Ref. No.	Part No.	Description	Remark
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< RESISTOR >

R101	1-249-417-11	CARBON	1K 5% 1/4W
R102	1-247-903-00	CARBON	1M 5% 1/4W
R111	1-249-413-11	CARBON	470 5% 1/4W
R112	1-247-903-00	CARBON	1M 5% 1/4W
R113	1-249-417-11	CARBON	1K 5% 1/4W

R114	1-247-903-00	CARBON	1M 5% 1/4W
R115	1-249-417-11	CARBON	1K 5% 1/4W
R116	1-247-903-00	CARBON	1M 5% 1/4W
R117	1-249-417-11	CARBON	1K 5% 1/4W
R118	1-249-438-11	CARBON	56K 5% 1/4W

R119	1-247-897-11	CARBON	560K 5% 1/4W
R120	1-249-417-11	CARBON	1K 5% 1/4W
R121	1-247-897-11	CARBON	560K 5% 1/4W
R122	1-249-437-11	CARBON	47K 5% 1/4W
R123	1-249-441-11	CARBON	100K 5% 1/4W

R125	1-249-409-11	CARBON	220 5% 1/4W
R151	1-249-417-11	CARBON	1K 5% 1/4W
R152	1-247-903-00	CARBON	1M 5% 1/4W
R161	1-249-413-11	CARBON	470 5% 1/4W
R162	1-247-903-00	CARBON	1M 5% 1/4W

R163	1-249-417-11	CARBON	1K 5% 1/4W
R164	1-247-903-00	CARBON	1M 5% 1/4W
R165	1-249-417-11	CARBON	1K 5% 1/4W
R166	1-247-903-00	CARBON	1M 5% 1/4W
R167	1-249-417-11	CARBON	1K 5% 1/4W

R168	1-249-438-11	CARBON	56K 5% 1/4W
R169	1-247-897-11	CARBON	560K 5% 1/4W
R170	1-249-417-11	CARBON	1K 5% 1/4W
R171	1-247-897-11	CARBON	560K 5% 1/4W
R172	1-249-437-11	CARBON	47K 5% 1/4W

R173	1-249-441-11	CARBON	100K 5% 1/4W
R175	1-249-409-11	CARBON	220 5% 1/4W

* A-4347-904-A POWER BOARD, COMPLETE (E)
 * A-4347-908-A POWER BOARD, COMPLETE (AEP)

* 1-533-213-31 HOLDER, FUSE

< CAPACITOR >

C802	1-126-059-11	ELECT	10uF 20% 50V
C803	1-126-059-11	ELECT	10uF 20% 50V
C804	1-126-059-11	ELECT	10uF 20% 50V
C805	1-161-379-00	CERAMIC	0.01uF 20% 25V
C807	1-161-379-00	CERAMIC	0.01uF 20% 25V
C808	1-161-379-00	CERAMIC	0.01uF 20% 25V

Ref. No.	Part No.	Description	Remark
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< CONNECTOR >

* CN801	1-564-505-11	PLUG, CONNECTOR 2P	
* CN802	1-564-506-11	PLUG, CONNECTOR 3P	

< JACK >

△CNJ1	1-526-794-11	OUTLET, AC (AEP)	
△CNJ1	1-540-038-11	OUTLET, AC (NONPOLAR) (1P) (E)	

< CONNECTOR >

* CNP1	1-580-230-11	PIN, CONNECTOR (PC BOARD) 3P	
* CNP2	1-564-321-21	PIN, CONNECTOR 2P	
* CNP3	1-564-321-00	PIN, CONNECTOR 2P	
CNP4	1-535-139-00	BASE POST 22MM (10MM PITCH) 2P (AEP)	

< DIODE >

D801	8-719-987-63	DIODE	1N4148M
D802	8-719-010-54	DIODE	UZ-7.5BSB
D804	8-719-010-26	DIODE	UZ-3.9BSB
D805	8-719-010-42	DIODE	UZ-5.6BSB

< IC >

IC801	8-759-984-03	IC	LM339N
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< TRANSISTOR >

Q801	8-729-140-93	TRANSISTOR	2SB733-34
Q802	8-729-119-76	TRANSISTOR	2SA1175-HFE

< RESISTOR >

R801	1-247-903-00	CARBON	1M 5% 1/4W
R804	1-249-417-11	CARBON	1K 5% 1/4W
R811	1-249-417-11	CARBON	1K 5% 1/4W
R812	1-247-731-11	CARBON	22 5% 1/2W
R813	1-249-433-11	CARBON	22K 5% 1/4W

R814	1-249-400-11	CARBON	39 5% 1/4W
R815	1-249-433-11	CARBON	22K 5% 1/4W
R816	1-249-433-11	CARBON	22K 5% 1/4W
R820	1-249-415-11	CARBON	680 5% 1/4W
R821	1-249-415-11	CARBON	680 5% 1/4W

R822	1-249-419-11	CARBON	1.5K 5% 1/4W
R823	1-247-850-11	CARBON	6.2K 5% 1/4W
R824	1-247-899-11	CARBON	680K 5% 1/4W
R828	1-249-418-11	CARBON	1.2K 5% 1/4W
R829	1-247-850-11	CARBON	6.2K 5% 1/4W

R830	1-247-899-11	CARBON	680K 5% 1/4W
R831	1-247-832-11	CARBON	1.1K 5% 1/4W
R832	1-249-427-11	CARBON	6.8K 5% 1/4W
R833	1-247-899-11	CARBON	680K 5% 1/4W

The components identified by
 mark △ or dotted line with mark.
 △ are critical for safety.
 Replace only with part number
 specified.

POWER

POWER SW

RELAY

SENSOR

SIRCS

SP RELAY

Ref.No.	Part No.	Description	Remark
R834	1-249-433-11	CARBON	22K 5% 1/4W
R835	1-249-417-11	CARBON	1K 5% 1/4W

* 1-641-976-11 POWER SW BOARD

< CAPACITOR >

△C1 1-161-744-00 CERAMIC 0.01uF 400V

< SWITCH >

△S1 1-554-920-61 SWITCH, PUSH (AC POWER) (1 KEY)

* 1-641-979-11 RELAY BOARD

< CAPACITOR >

C306 1-164-159-11 CERAMIC 0.1uF 50V
C308 1-164-159-11 CERAMIC 0.1uF 50V
C356 1-164-159-11 CERAMIC 0.1uF 50V
C358 1-164-159-11 CERAMIC 0.1uF 50V

< DIODE >

D604 8-719-987-63 DIODE 1N4148M
D605 8-719-987-63 DIODE 1N4148M

< COIL >

L301 1-420-872-00 COIL, AIR CORE
L351 1-420-872-00 COIL, AIR CORE

< RESISTOR >

R311 1-249-397-11 CARBON 22 5% 1/4W
R312 1-247-727-11 CARBON 10 5% 1/2W
R313 1-249-397-11 CARBON 22 5% 1/4W
R361 1-249-397-11 CARBON 22 5% 1/4W
R362 1-247-727-11 CARBON 10 5% 1/2W
R363 1-249-397-11 CARBON 22 5% 1/4W

< RELAY >

RY301 1-515-765-11 RELAY

Ref.No.	Part No.	Description	Remark
*	1-641-969-11	SENSOR BOARD	*****

< CAPACITOR >

C801 1-161-379-00 CERAMIC 0.01uF 20% 25V

< IC >

IC802 8-759-512-73 IC LM35DZ-SL

< TRANSISTOR >

Q804 8-729-281-52 TRANSISTOR 2SC1815-Y

< RESISTOR >

R842 1-249-426-11 CARBON 5.6K 5% 1/4W

* 1-641-973-11 SIRCS BOARD

< CAPACITOR >

C517 1-164-159-11 CERAMIC 0.1uF 50V

< CONNECTOR >

* CN505 1-560-531-00 PIN, CONNECTOR 5P

< DIODE >

D522 8-719-301-49 LED SEL2810A

< IC >

IC507 8-749-922-36 IC GP1U50XB

< RESISTOR >

R574 1-249-414-11 CARBON 560 5% 1/4W
R576 1-249-417-11 CARBON 1K 5% 1/4W

< SWITCH >

S507 1-554-303-21 SWITCH, TACTILE (SOURCE DIRECT)

* 1-641-978-11 SP RELAY BOARD

The components identified by
mark △ or dotted line with mark.
△ are critical for safety.
Replace only with part number
specified.

SP TERMINAL

VOLUME

Ref. No.	Part No.	Description	Remark
*	1-641-981-11	SP TERMINAL BOARD *****	
		< TERMINAL >	
TM301	1-536-571-31	TERMINAL BOARD (4P) (SPEAKER) (E)	
TM301	1-536-571-41	TERMINAL BOARD (4P) (SPEAKER) (AEP)	

*	1-641-974-11	VOLUME BOARD *****	
		< CAPACITOR >	
C520	1-124-994-11	ELECT 100uF 20% 10V	
C521	1-124-994-11	ELECT 100uF 20% 10V	
C522	1-136-169-00	FILM 0.22uF 5% 50V	
		< CONNECTOR >	
* CN503	1-568-826-11	SOCKET, CONNECTOR 7P	
		< DIODE >	
D508	8-719-987-63	DIODE 1N4148M	
		< IC >	
IC505	8-759-820-62	IC LB1639	
		< RESISTOR >	
R549	1-247-840-00	CARBON 2.4K 5% 1/4W	
R580	1-249-433-11	CARBON 22K 5% 1/4W	
R581	1-249-433-11	CARBON 22K 5% 1/4W	
R582	1-249-417-11	CARBON 1K 5% 1/4W	
R583	1-247-903-00	CARBON 1M 5% 1/4W	
		< VARIABLE RESISTOR >	
RV501	1-241-922-11	RES. VAR. CARBON 10K/100K/100K (VOLUME)	

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS *****	
12	1-590-238-31	WIRE, FLAT TYPE (7 CORE)	
13	1-575-664-31	WIRE, FLAT TYPE (23 CORE)	
△68	1-575-651-71	CORD, POWER (AEP)	
△68	1-575-656-21	CORD, POWER (E)	
△F1	1-532-203-00	FUSE (2A/250V) (AEP, E:220-230V)	
△F1	1-532-237-00	FUSE, TIME LAG (3.15A/250V) (E:120V)	
△F2	1-532-203-00	FUSE (2A/250V) (AEP)	
M901	X-4942-029-1	CASE ASSY, FAN	
△T601	1-450-944-11	TRANSFORMER, POWER (AEP, E:220-230V)	
△T601	1-450-946-11	TRANSFORMER, POWER (E:120V)	

		ACCESSORIES & PACKING MATERIALS *****	
	1-690-353-11	CORD (WITH CONNECTOR) 13P (AEP)	
	2-352-555-01	CUSHION (AEP)	
	3-754-418-11	MANUAL, INSTRUCTION (AEP) (ENGLISH/FRENCH/SPANISH/PORTUGUESE)	
	3-754-418-41	MANUAL, INSTRUCTION (AEP) (GERMAN/DUTCH/SWEDISH/ITALIAN)	
*	4-948-201-01	CUSHION	
*	4-952-537-01	INDIVIDUAL CARTON (AEP)	

		***** HARDWARE LIST *****	
#1	7-685-646-01	SCREW +BVTP 3X8 TYPE1	
#2	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
#3	7-682-551-09	SCREW +BVTT 3X14 (S)	
#4	7-682-549-09	SCREW +BVTT 3X10 (S)	
#5	7-682-549-04	SCREW (M3X10), S TITE. + BTT	
#6	7-682-560-04	SCREW +BVTT 4X6 (S)	
#7	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#8	7-621-849-00	SCREW (BV/RING)	
#9	7-682-547-04	SCREW +BVTT 3X6 (S)	

The components identified by
mark △ or dotted line with mark.
△ are critical for safety.
Replace only with part number
specified.

SONY SERVICE MANUAL

AEP Model
E Model

SUPPLEMENT-1

File this supplement with the service manual.

Subject : Addition to Germany model

The model for Germany have been added to TA-VF1.
Germany model is almost same as the AEP model and only the difference from AEP model is described this manual.
Refer to the TA-VF1 (AEP model) SERVICE MANUAL for the other information.

EXPLODED VIEWS

(page 23)

<u>No.</u>		<u>Part No.</u>	<u>Description</u>
17	*	4-953-955-01	COVER (UPPER) (Germany)

(page 24)

<u>No.</u>		<u>Part No.</u>	<u>Description</u>
53	*	A-4347-905-A	MAIN BOARD, COMPLETE (Germany)
65	*	A-4347-906-A	PIN JACK BOARD, COMPLETE (Germany)
66	*	4-947-626-31	PANEL, BACK (Germany)
F2	△	1-532-203-00	FUSE (2A/250V) (Germany)

NOTE :

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

ELECTRICAL PARTS LIST

NOTE :

● RESISTORS

All resistors are in ohms

● CAPACITORS

uF : μ F

● Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

MAIN BOARD (page 25,26)

<u>No.</u>	<u>Part No.</u>	<u>Description</u>
	* A-4347-905-A	MAIN BOARD, COMPLETE (Germany)
C319	1-162-294-31	CERAMIC 0.001uF 10% 50V (Germany)

PIN JACK BOARD (page 30,31)

<u>No.</u>	<u>Part No.</u>	<u>Description</u>
	* A-4347-906-A	PIN JACK BOARD, COMPLETE (Germany)
C103	1-164-075-11	CERAMIC 150pF 10% 50V (Germany)
C153	1-164-075-11	CERAMIC 150pF 10% 50V (Germany)
C110	1-164-077-11	CERAMIC 220pF 10% 50V (Germany)
C131	1-162-286-31	CERAMIC 220pF 10% 50V (Germany)
C132	1-162-286-31	CERAMIC 220pF 10% 50V (Germany)
C133	1-162-286-31	CERAMIC 220pF 10% 50V (Germany)
C134	1-162-286-31	CERAMIC 220pF 10% 50V (Germany)
C160	1-164-077-11	CERAMIC 220pF 10% 50V (Germany)
C181	1-162-286-31	CERAMIC 220pF 10% 50V (Germany)
C182	1-162-286-31	CERAMIC 220pF 10% 50V (Germany)
C183	1-162-286-31	CERAMIC 220pF 10% 50V (Germany)
C184	1-162-286-31	CERAMIC 220pF 10% 50V (Germany)
R126	1-249-417-11	CARBON 1K 5% 1/4W (Germany)
R176	1-249-417-11	CARBON 1K 5% 1/4W (Germany)

SP TERMINAL BOARD (page 33)

<u>No.</u>	<u>Part No.</u>	<u>Description</u>
C309	1-164-159-11	CERAMIC 0.1uF 50V (Germany)
C310	1-164-159-11	CERAMIC 0.1uF 50V (Germany)
C320	1-161-377-11	CERAMIC 0.0047uF 20% 50V (Germany)
C359	1-164-159-11	CERAMIC 0.1uF 50V (Germany)
C360	1-164-159-11	CERAMIC 0.1uF 50V (Germany)
L302	1-420-872-00	COIL, AIR CORE (Germany)
L352	1-420-872-00	COIL, AIR CORE (Germany)
R314	1-247-727-11	CARBON 10 5% 1/2W (Germany)
R364	1-247-727-11	CARBON 10 5% 1/2W (Germany)

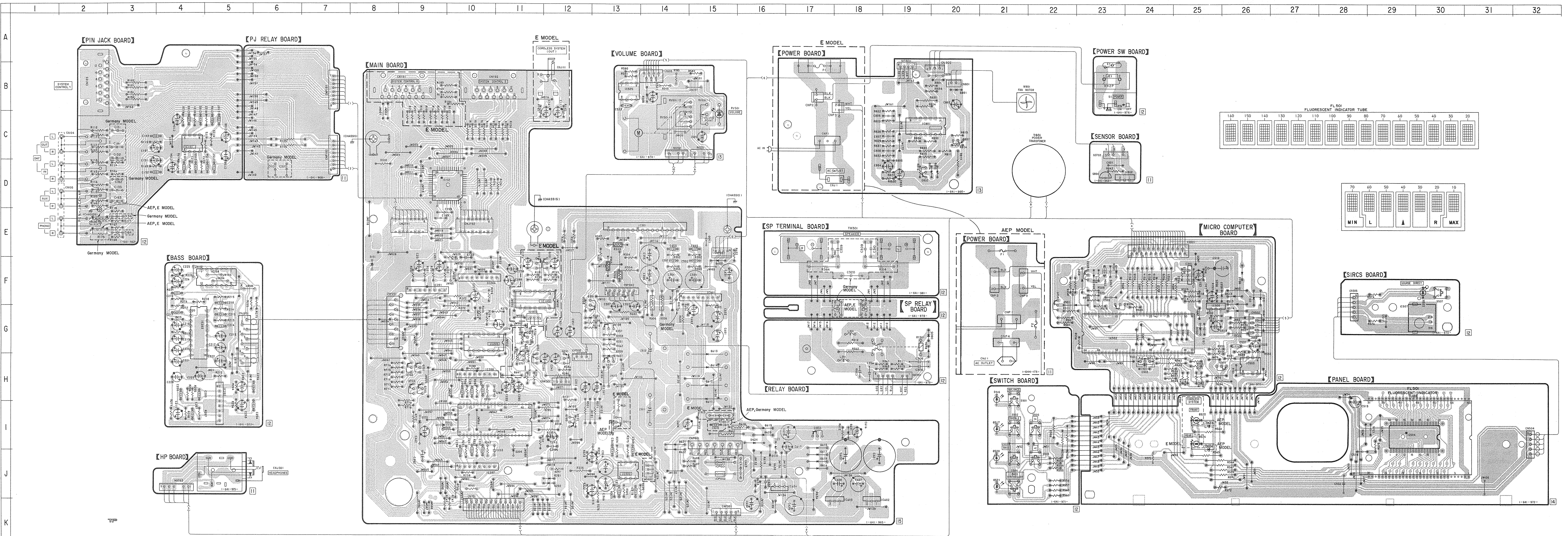
PRINTED WIRING BOARDS

Semiconductor Location

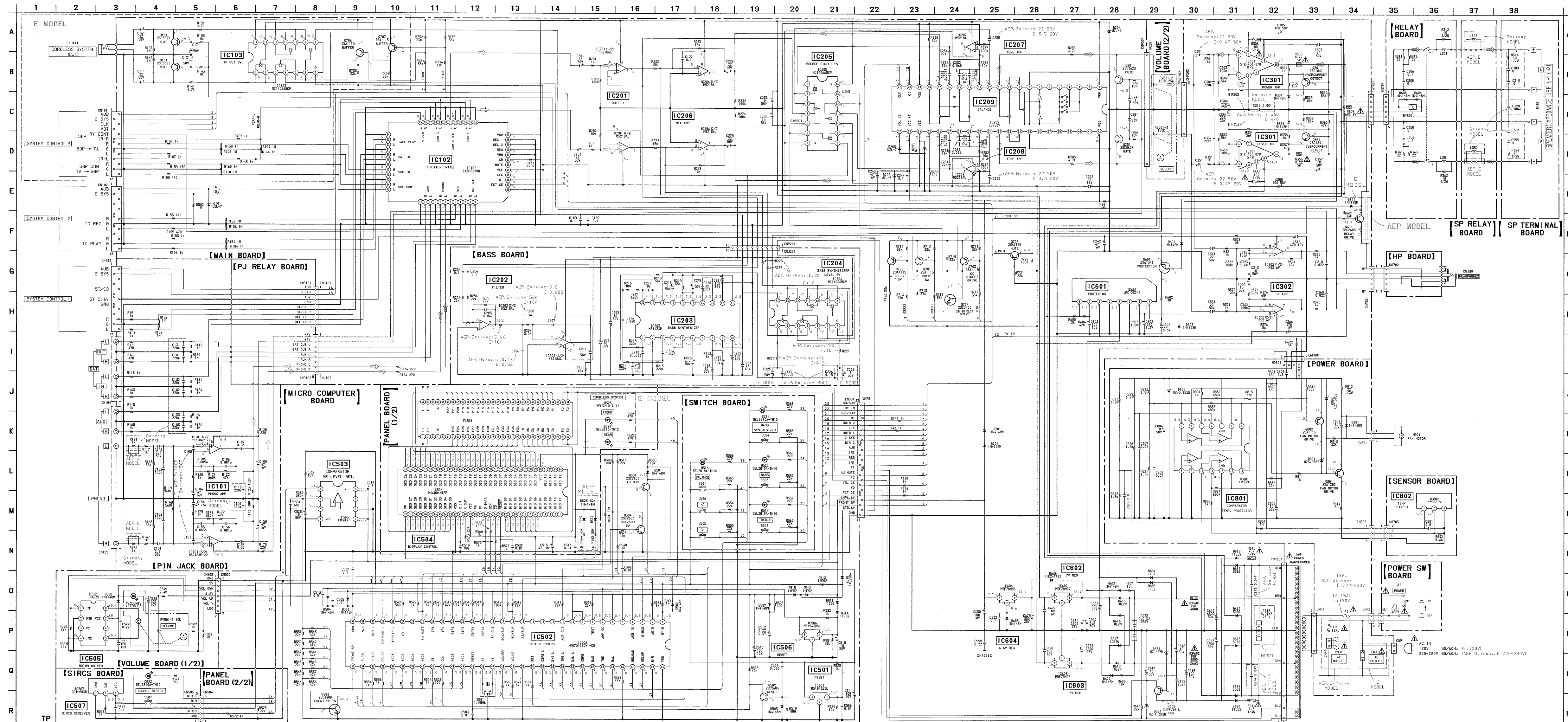
Ref. No.	Location	Ref. No.	Location
D101	F-8	D804	D-20
D201	J-12	D805	C-19
D202	J-12		
D203	I-5	IC101	C-4
D204	J-11	IC102	D-10
D205	I-5	IC103	F-11
D206	I-12	IC201	F-9
D301	G-13	IC202	H-5
D351	G-13	IC203	G-4
D501	F-23	IC204	F-5
D502	F-23	IC205	G-10
D503	F-23	IC206	F-10
D504	F-23	IC207	J-10
D506	G-25	IC208	H-10
D507	F-26	IC209	I-11
D508	B-14	IC301	E-14
D510	F-26	IC302	J-13
D511	F-26	IC501	F-25
D512	F-26	IC502	G-24
D513	F-26	IC503	H-26
D514	G-26	IC504	I-30
D515	F-26	IC505	B-13
D516	H-21	IC506	G-25
D517	I-21	IC507	G-30
D520	J-21	IC601	F-15
D521	J-21	IC602	J-18
D522	F-30	IC603	J-18
D523	I-25	IC604	J-17
D524	I-25	IC801	C-19
D601	H-13	IC802	D-24
D603	F-15		
D604	G-20	Q101	E-12
D605	G-20	Q151	E-12
D611	H-15	Q201	H-12
D612	H-15	Q251	H-11
D613	G-15	Q301	G-13
D614	H-15	Q351	G-13
D615	I-17	Q501	F-22
D616	J-17	Q502	F-23
D617	J-17	Q503	H-26
D618	J-17	Q504	G-23
D619	I-16	Q601	H-13
D620	I-16	Q602	I-17
D621	I-14	Q611	I-13
D622	I-14	Q701	H-9
D623	I-16	Q702	H-9
D631	I-18	Q703	H-9
D633	J-16	Q704	H-9
D634	I-16	Q705	I-12
D635	J-16	Q706	G-11
D636	J-17	Q707	H-11
D641	H-11	Q801	C-20
D801	B-20	Q802	D-19
D802	D-20	Q804	D-23

Note:

- : parts extracted from the component side.
- ⊗ : Pattern on the side which is seen.



SCHEMATIC DIAGRAMS



SONY SERVICE MANUAL

AEP Model
E Model

CORRECTION-1

Correct your service manual as shown below.

 : indicates corrected portion.

Page	INCORRECT					CORRECT					
23	<u>No.</u>	<u>Part No.</u>	<u>Description</u>			<u>Part No.</u>	<u>Description</u>				
	8	*1-641-976-11	SW BOARD			*1-641-976-11	<u>POWER SW BOARD</u>				
	17	*4-948-022-01	COVER (UPPER)			*4-948-022-01	COVER (UPPER) (E)				
	17	_____				*4-953-955-01	COVER (UPPER) (AEP)				
24	F2	<u>Δ</u> 1-532-203-00 FUSE (2A/250V) (AEP)					<u>Δ</u> 1-576-228-31 FUSE (H.B.C), 2A/250V (AEP)				
25	(BASS BOARD)					*A-4347-915-A BASS BOARD, COMPLETE (AEP)					
	*A-4347-915-A BASS BOARD, COMPLETE					*A-4345-958-A BASS BOARD, COMPLETE (E)					
	C206	1-136-173-00	FILM	0.47μF	5% 50V	1-136-173-00	FILM	0.47μF	5% 50V	(AE)	
	C206	_____				1-136-174-00	FILM	0.56μF	5% 50V	(E)	
	C207	1-136-157-00	FILM	0.022μF	5% 50V	1-136- <u>153</u> -00	FILM	<u>0.01</u> μF	5% 50V	(AE)	
	C207	_____				1-136-164-00	FILM	0.082μF	5% 50V	(E)	
	C225	1-136-169-00	FILM	0.22μF	5% 50V	1-136- <u>164</u> -00	FILM	<u>0.082</u> μF	5% 50V	(AE)	
	C225	_____				1-126-301-11	ELECT	1μF	20% 50V	(E)	
	C226	1-136-169-00	FILM	0.22μF	5% 50V	1-136- <u>167</u> -00	FILM	<u>0.15</u> μF	5% 50V	(AE)	
						1-126-301-11	ELECT	1μF	20% 50V	(E)	

Page	INCORRECT						CORRECT					
	<u>No.</u>	<u>Part No.</u>	<u>Description</u>				<u>Part No.</u>	<u>Description</u>				
	R206	1-249-427-11	CARBON	6.8K	5%	1/4W	1-249-426-11	CARBON	5.6K	5%	1/4W (AE)	
	R206	—————					1-249-429-11	CARBON	10K	5%	1/4W (E)	
	R207	1-249-426-11	CARBON	5.6K	5%	1/4W	1-247-848-11	CARBON	5.1K	5%	1/4W	
	R208	1-249-433-11	CARBON	22K	5%	1/4W	1-249-438-11	CARBON	56K	5%	1/4W (AE)	
	R208	—————					1-249-429-11	CARBON	10K	5%	1/4W (E)	
	R220	1-249-433-11	CARBON	22K	5%	1/4W	1-249-437-11	CARBON	47K	5%	1/4W (AE)	
25	R220	—————					1-249-428-11	CARBON	8.2K	5%	1/4W (E)	
	R221	1-249-430-11	CARBON	12K	5%	1/4W	1-249-433-11	CARBON	22K	5%	1/4W (AE)	
	R221	—————					1-249-424-11	CARBON	3.9K	5%	1/4W (E)	
	R225	1-249-423-11	CARBON	3.3K	5%	1/4W	1-249-428-11	CARBON	8.2K	5%	1/4W (AE)	
	R225	—————					1-249-417-11	CARBON	1K	5%	1/4W (E)	
	R275	1-249-423-11	CARBON	3.3K	5%	1/4W	1-249-428-11	CARBON	8.2K	5%	1/4W (AE)	
	R275	—————					1-249-417-11	CARBON	1K	5%	1/4W (E)	
	(MAIN BOARD)											
	C235	1-126-162-11	ELECT	3.3 μ F	20%	50V	1-126-162-11	ELECT	3.3 μ F	20%	50V (E)	
	C235	—————					1-126-233-11	ELECT	22 μ F	20%	50V (AEP)	
	C285	1-126-162-11	ELECT	3.3 μ F	20%	50V	1-126-162-11	ELECT	3.3 μ F	20%	50V (E)	
26	C285	—————					1-126-233-11	ELECT	22 μ F	20%	50V (AEP)	
	C301	1-126-300-11	ELECT	0.47 μ F	20%	50V	1-126-300-11	ELECT	0.47 μ F	20%	50V (E)	
	C301	—————					1-126-233-11	ELECT	22 μ F	20%	50V (AEP)	
	C351	1-126-300-11	ELECT	0.47 μ F	20%	50V	1-126-300-11	ELECT	0.47 μ F	20%	50V (E)	
	C351	—————					1-126-233-11	ELECT	22 μ F	20%	50V (AEP)	