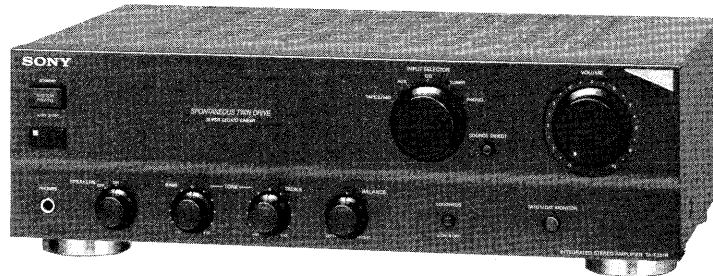


TA-F361R

SERVICE MANUAL

*AEP Model
E Model*



SPECIFICATIONS

Amplifier

Power output (both channels driven simultaneously)

DIN, 1 kHz	4 ohms	65 W + 65 W
	8 ohms	55 W + 55 W
20 Hz – 20 kHz	8 ohms	40 W + 40 W

Input

Input jack	Jack type	Sensitivity	Impedance
PHONO	Phono	2.5 mV	50 kilohms
TUNER, CD, AUX, TAPE 1/DAT, TAPE 2/MD	Phono	150 mV	20 kilohms

S/N

PHONO A, 5 mV	80 dB
TUNER, CD, AUX, TAPE 1/DAT, TAPE 2/MD	105 dB

Output

Output jack	Jack type	Voltage/impedance
REC OUT	Phono jack	Voltage 150 mV Impedance 1 kilohm
SPEAKERS	—	4 – 16 ohms SPEAKERS A+B: 8 – 16 ohms
PHONES	Stereo phone jack	10 mW (at 8 ohms) Accepts low and high impedance headphones

Tone controls

	Response	Turnover frequency
BASS	± 7 dB (100 Hz)	300 Hz
TREBLE	± 7 dB (10 kHz)	3 kHz

Harmonic distortion	Less than 0.025% at 10 W output
Intermodulation (IM) distortion (60 Hz:7 kHz = 4:1)	Less than 0.025% at 10 W output
Frequency response	PHONO: RIAA equalization curve ± 0.5 dB TUNER, CD, AUX, TAPE 1/DAT, TAPE 2/MD: 7 Hz – 100 kHz $\pm \frac{1}{3}$ dB
Residual noise	Less than 170 μ V (network A)
Damping factor	50 (8 ohms, 1 kHz)

— Continued on next page —

INTEGRATED STEREO AMPLIFIER
SONY®

General

System	Preamplifier: Low-noise, equalizer amplifier Power amplifier: Pure-complementary SEPP OCL power amplifier with all stages directly coupled
Power requirements	AEP, German model: 220 – 230 V AC, 50/60 Hz E model: 120 V, 220 V or 240 V AC adjustable, 50/60 Hz
Power consumption	160 W
Dimensions	Approx. 430 × 135 × 315 mm (w/h/d) (17 × 5 ³ / ₈ × 12 ¹ / ₂ inches)
Mass	Approx. 5.6 kg (12 lb 6 oz)
Supplied accessories	Remote commander RM-S311 (1) Sony SUM-3 (NS) batteries (2)

The above values are measured at 230 V AC.

Design and specifications are subject to change without notice.

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
	Specifications	1
1.	GENERAL	
	Location of Controls	3
2.	ELECTRICAL ADJUSTMENT	4
3.	DIAGRAMS	
3-1.	IC Pin Function Description	5
3-2.	Printed Wiring Boards – Panel Section –	6
3-3.	Printed Wiring Boards – Main Section –	9
3-4.	Schematic Diagram	13
4.	EXPLODED VIEWS	17
5.	ELECTRICAL PARTS LIST	19

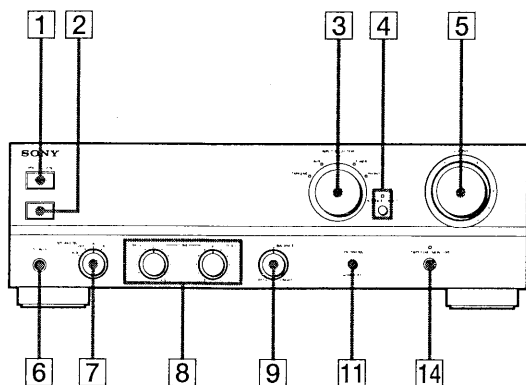
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  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.

This section is extracted from instruction manual.

SECTION 1 GENERAL

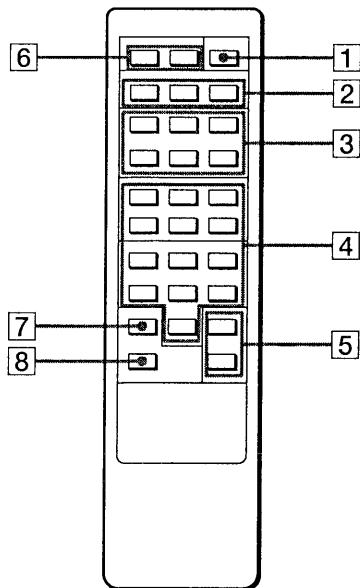
LOCATION OF CONTROLS



Front Panel

- 1 SYSTEM POWER switch and STANDBY indicator
Immediately after turning on the SYSTEM POWER switch, the STANDBY indicator flashes, then goes off. If the STANDBY indicator is lit, press the POWER switch on the remote.
- 2 Remote control sensor
- 3 INPUT SELECTOR and indicators
- 4 SOURCE DIRECT button and indicator
- 5 VOLUME control
- 6 PHONES jack
- 7 SPEAKERS selector
- 8 TONE (BASS/TREBLE) controls
- 9 BALANCE control
- 11 LOUDNESS button
- 14 TAPE 1/DAT MONITOR button and indicator

Remote Commander



- 1 POWER switch
If the STANDBY indicator on the TA-F361R is lit, press this switch.
- 2 TUNER operation buttons
TUNER: Select the TUNER mode.
PRESET +/- buttons: Select the preset station.
- 3 CD operation buttons
◀▶: Automatic music sensor.
D. (Disc) SKIP: Disc skip (for CD player equipped with a multi-disc changer)
▶: The amplifier enters the CD mode and the CD player starts playback automatically.
■: Stop.
||: Pause.
- 4 TAPE 2 DECK A/DECK B operation buttons
◀▶: Fast winding.
■: Stop.
◀: The amplifier enters the TAPE 2 mode and the tape deck starts reverse playback automatically.
▶: The amplifier enters the TAPE 2 mode and the tape deck starts forward playback automatically.
● + ▶: Start recording
● + ◀: Start recording in the reverse direction
||: Pause. (Only for DECK B)
- 5 VOL (Volume) +/- buttons
- 6 PHONO operation buttons
START: Pressing START automatically selects the PHONO mode on the amplifier and starts playback of the turntable system.
STOP: Stops playback of the turntable system.
- 7 DAT/TAPE 1 button
Selects the DAT or TAPE 1 mode.
- 8 AUX button
Selects the AUX mode.

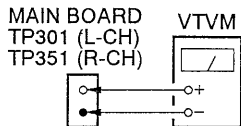
SECTION 2 ELECTRICAL ADJUSTMENT

Note:

1. DC BIAS adjustments should be made within 2 to 3 minutes after the POWER switch is turned on (POWER ON).
2. After replacing the power transistors, DC BIAS adjustments should be made.

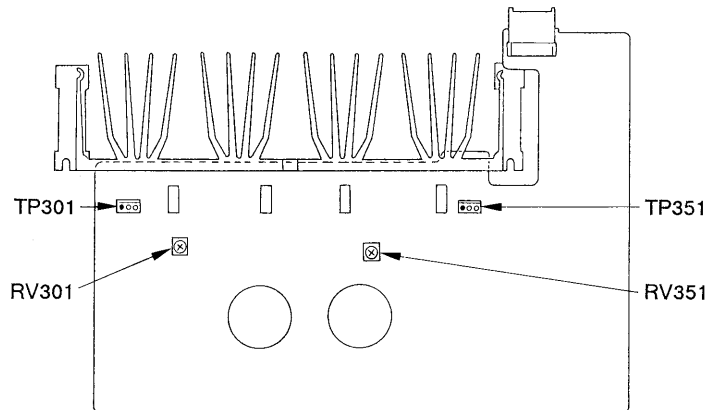
DC Bias Adjustment (with no signal input)

Procedure:



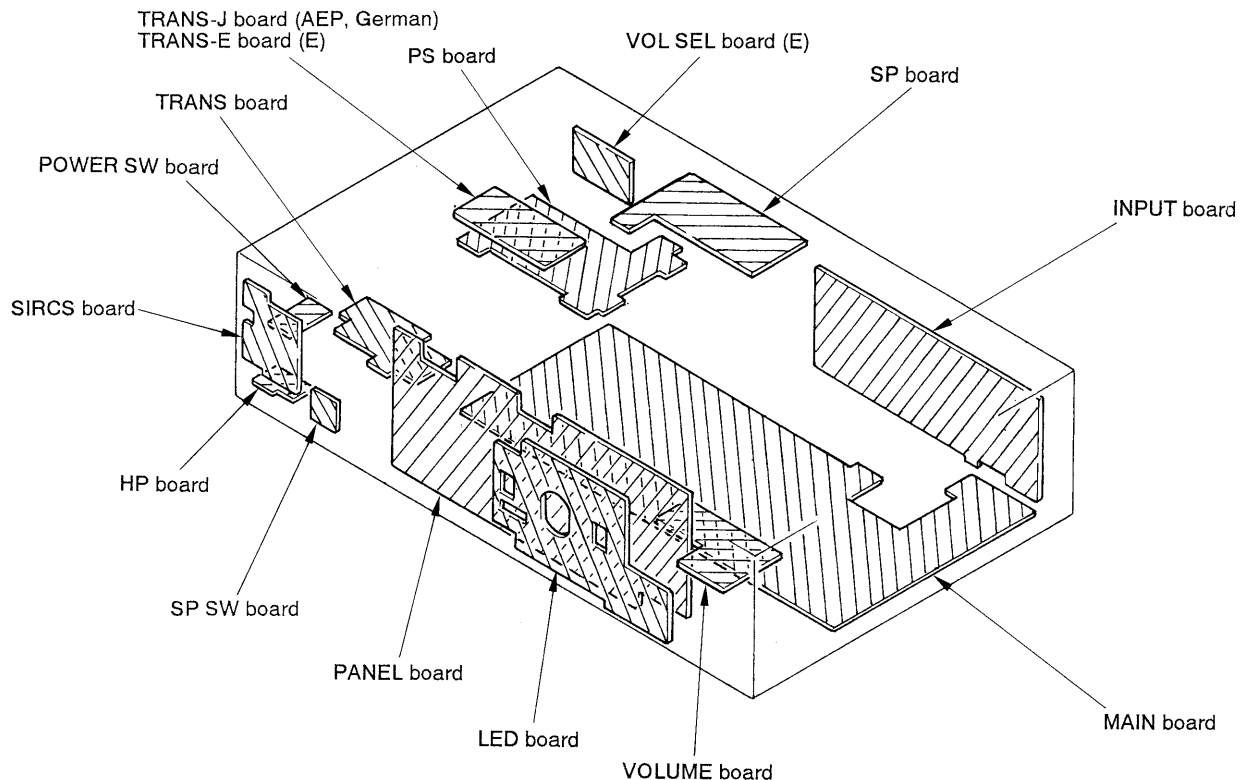
	Adjustment part	Reading on VTVM
L-CH	RV301	20 mV
R-CH	RV351	20 mV

[ADJUSTMENT LOCATIONS]



SECTION 3 DIAGRAMS

• **Circuit Boards Location**



3-1. IC PIN FUNCTION DESCRIPTION

PANEL BOARD IC701 TMP47C200BN

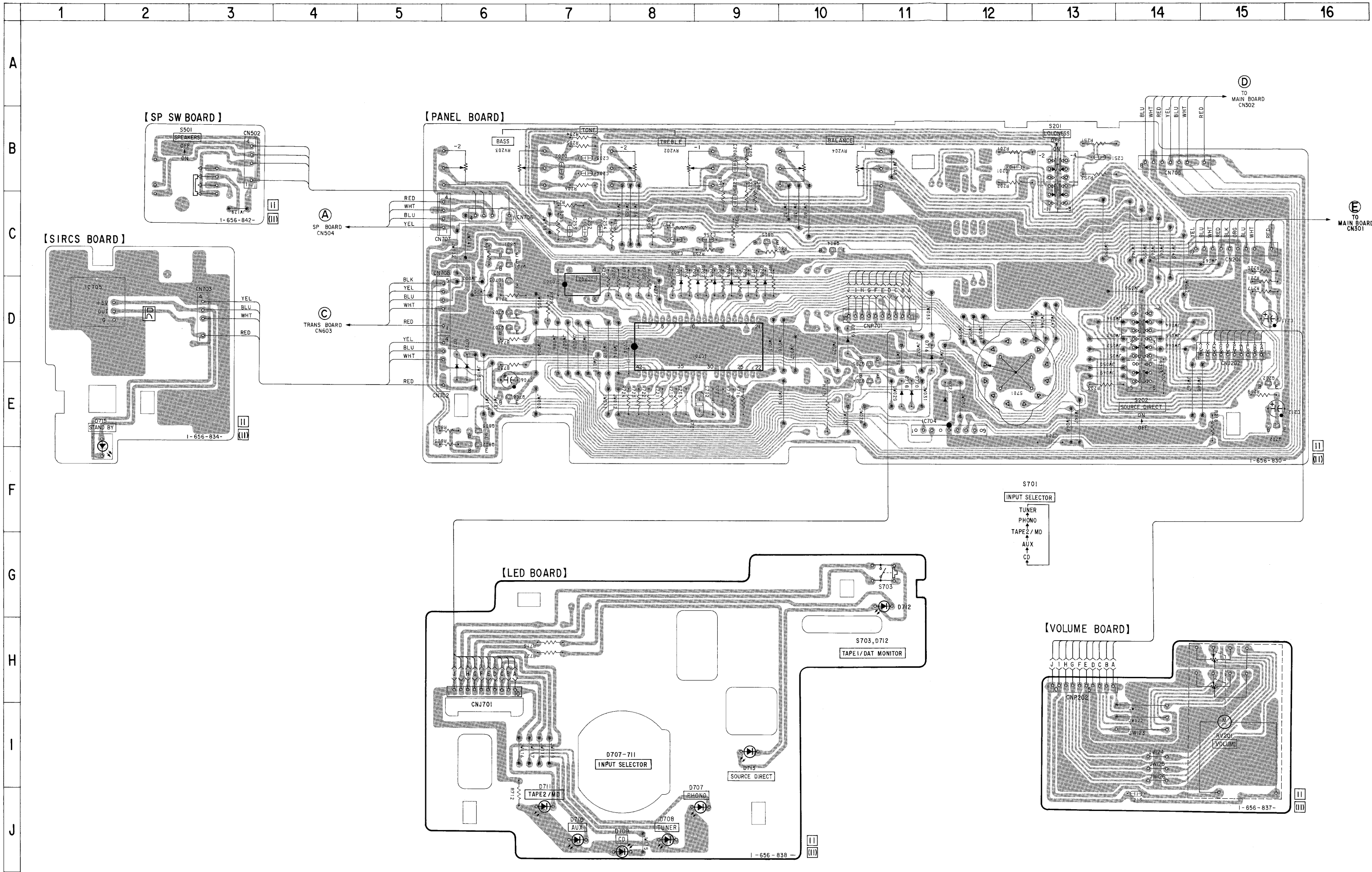
Pin No.	Pin Name	I/O	Function
1	RCL	O	Clock Data } Serial data of EEPROM. (X24C01)
2	RDT	I/O	
3	VUP	O	Up Down } VR motor control signal. (Active: H, Stop: L-L, Brake: H-H)
4	VDW	O	
5	PRY	O	Power relay ON/OFF control signal. (ON: L)
6	MUT	O	Mute Control signal output when switching. (Mute: H)
7	LED	O	LED display signal. (L: Function LED is turned on.)
8	94/95	I	Not used. (GND)
9	F3/F4	I	Model mode switch signal. (+5 V)
10	—	I	Not used. (GND)
11	SW0	I	Relativity position detection signal of rotary switch. (One of them terminal: L, the other terminal: H) Direction from SW5 to SW0, TUNER → CD → AUX → TAPE2 → PHONO → TUNER →
12	SW1	I	
13	SW2	I	
14	SW3	I	
15	SW4	I	
16	SW5	I	
17	PHONO	O	Function LED drive signal. (ON: L)
18	TUNER	O	
19	CD	O	
20	AUX	O	
21	GND	—	GND terminal.
22	TAPE2	O	Function LED drive signal. (ON: L)
23	TAPE1	O	
24	VOLLED	O	Not used. (Pull down to GND.)
25	STANBY	O	Standby LED drive signal. (ON: L)
26	PW KEY	I	Power ON/OFF signal. (SW ON: L)
27	T1 KEY	I	Not used. (Pull down to GND.)
28	—	I	Not used. (GND)
29	F3/F5	I	Model mode switch signal. (GND)
30	TEST		Test terminal. (Open)
31	XIN	—	Oscillation signal 8.19 MHz.
32	XOUT	—	
33	RESET	I	Reset signal. (Reset: L)
34	HOLD	I	Cancellation of hold mode signal. (Start: H)
35	PROTEC	I	Protector detection signal. (Active: H)
36	EON	I	Not used. (Pull up to +5 V.)
37	SIRCS	I	SIRCS signal. (Active: L)
38	T1	O	RELAY DRIVE
39	SCE	O	Chip Enable Data Clock } Serial control signal to IC101. (LC7821)
40	SDT	O	
41	SCK	O	
42	VDD	—	Power supply (+5 V) terminal.

3-2. PRINTED WIRING BOARDS - PANEL SECTION -

● Semiconductor Location

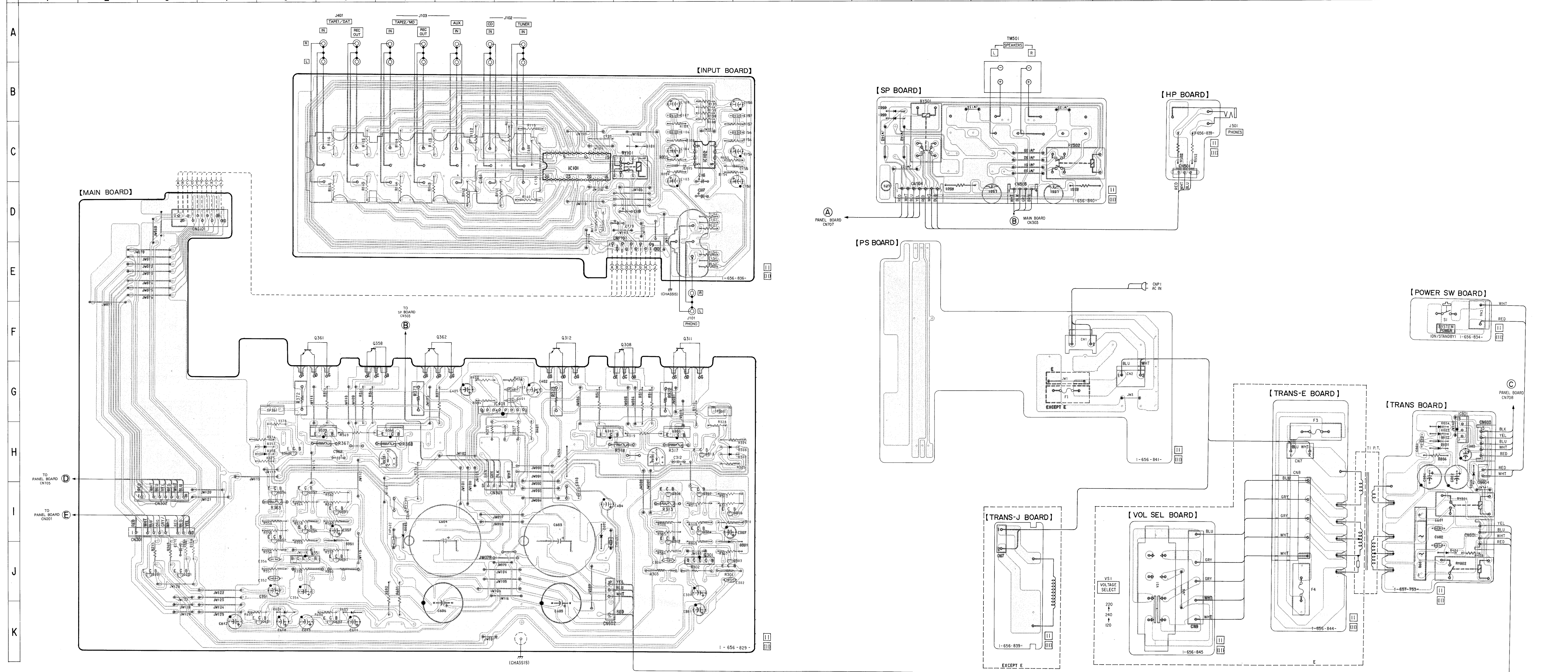
Ref. No.	Location
D701	D-8
D702	D-9
D703	D-9
D704	D-9
D705	D-9
D706	D-9
D707	J-9
D708	J-8
D709	J-8
D710	J-7
D711	J-7
D712	G-11
D713	I-9
D715	E-2
D716	D-11
D717	D-6
D718	E-11
D719	D-10
D720	E-11
D721	D-6
D723	E-12
IC701	D-8
IC702	D-7
IC703	D-6
IC704	E-11
IC705	D-1
Q202	E-15
Q701	C-6
Q702	E-15
Q703	D-6
Q704	E-11
Q705	D-11
Q707	D-6
Q708	E-6
Q801	C-6
Q802	E-6
Q803	E-6
Q804	C-10
Q805	C-9

Note:
● ○ : parts extracted from the component side.



3-3. PRINTED WIRING BOARDS – MAIN SECTION –

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
--	---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----



- **Semiconductor Location**

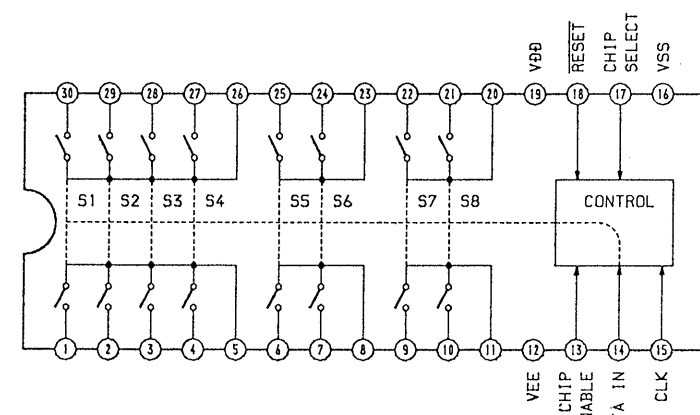
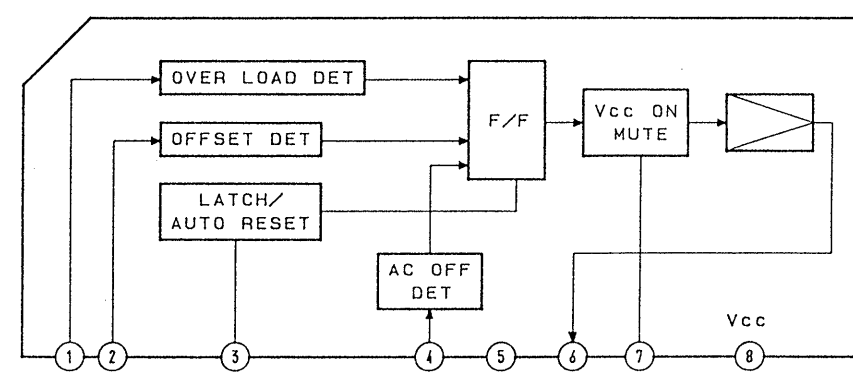
Ref. No.	Location
D101	C-11
D107	J-12
D137	H-12
D308	H-12
D351	J-6
D357	H-5
D358	H-5
D359	J-25
D501	8-15
D502	8-15
D601	J-24
D602	I-11
D603	I-7
D604	K-5
D605	K-6
D801	H-24
D802	H-24
D803	H-24
D804	H-24
D805	H-25
IC101	C-10
IC102	C-12
IC101	6-9
IC801	H-25
Q201	J-3
Q202	J-3
Q251	J-12
Q252	J-12
Q303	J-12
Q304	I-12
Q305	I-12
Q306	I-11
Q307	H-12
Q308	F-11
Q310	H-11
Q311	F-12
Q312	F-12
Q313	H-12
Q351	J-5
Q352	J-5
Q353	J-6
Q354	I-5
Q355	I-6
Q356	I-5
Q357	I-5
Q358	F-6
Q359	H-6
Q360	H-7
Q361	F-5
Q362	F-7
Q363	H-5
Q601	K-5
Q602	K-6

Note:

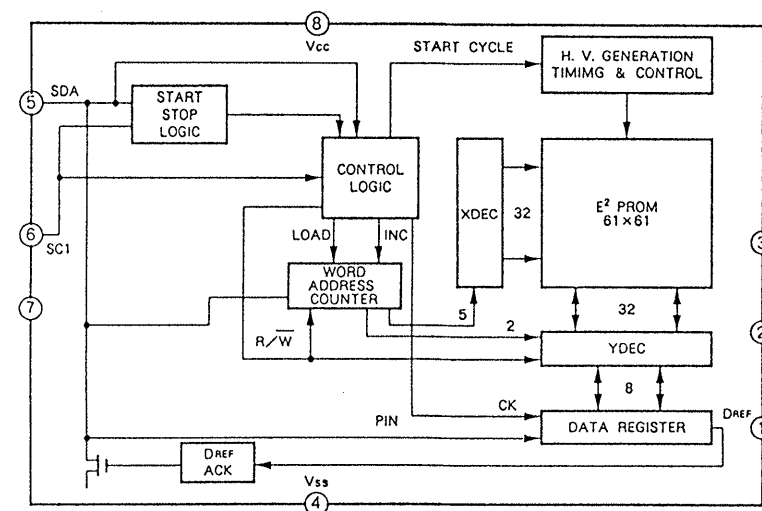
- ○ — : parts extracted from the component side.

• IC Block Diagrams

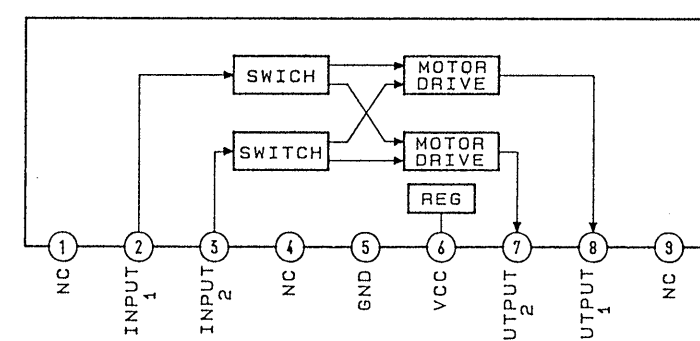
IC101 LC7821

IC401 μ PC1237HA

IC702 X24C01P-S



IC704 BA6208



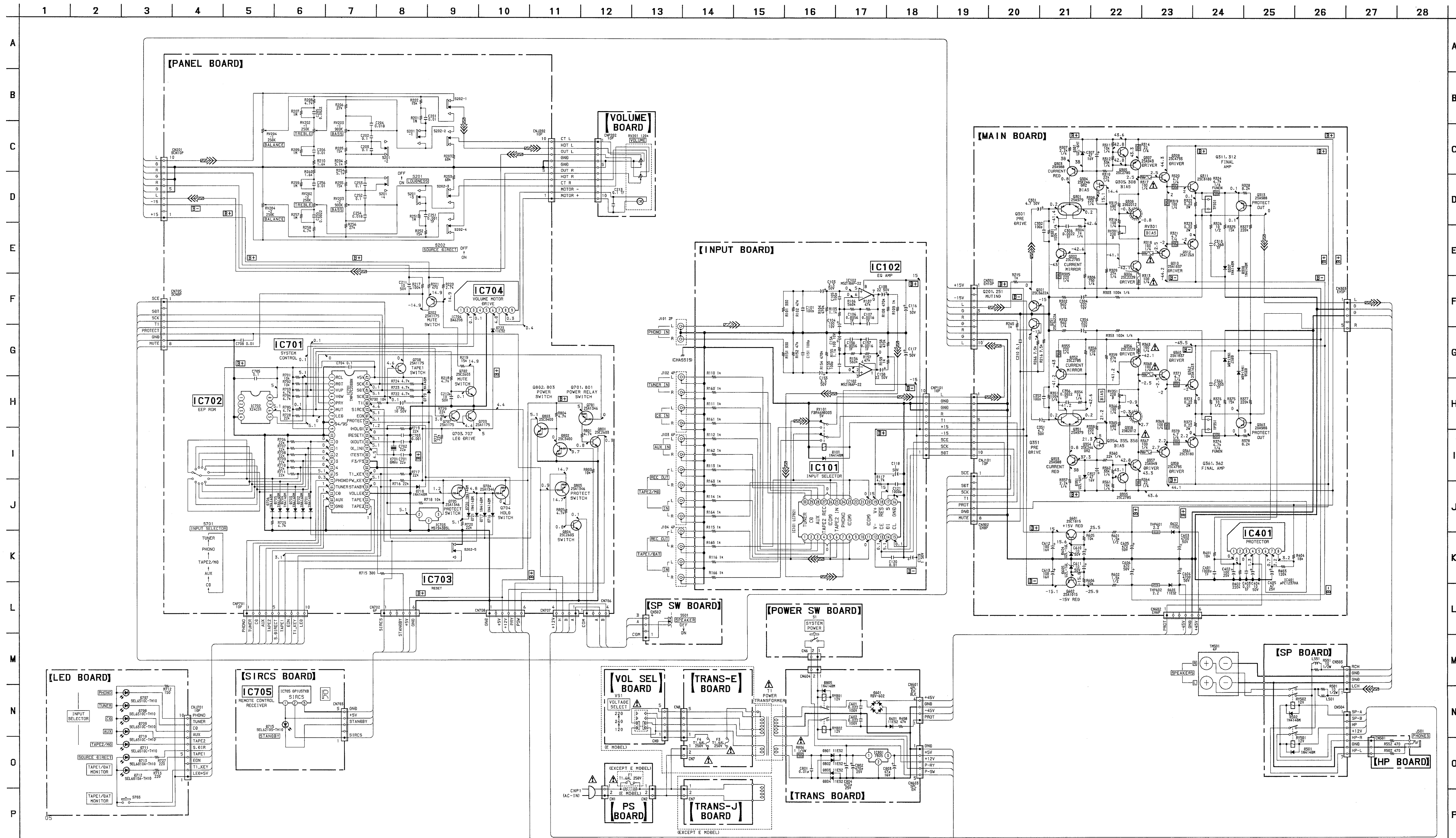
Note:

- All capacitors are in μ F unless otherwise noted. pF: μ F
- 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}$ W or less unless otherwise specified.
- $\square$: nonflammable resistor.
- $\square$: 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.

- $\square$: B + Line.
- $\square$: B - Line.
- $\square$: panel designation.
- $\square$: adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : PHONO
- Voltages are taken with a VOM (10 M Ω /V).
- Voltage variations may be noted due to normal production tolerances.
- Signal path.
- $\Rightarrow$: PHONO

3-4. SCHEMATIC DIAGRAM



SECTION 4

EXPLODED VIEWS

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.

- Color Indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE) ... (RED)

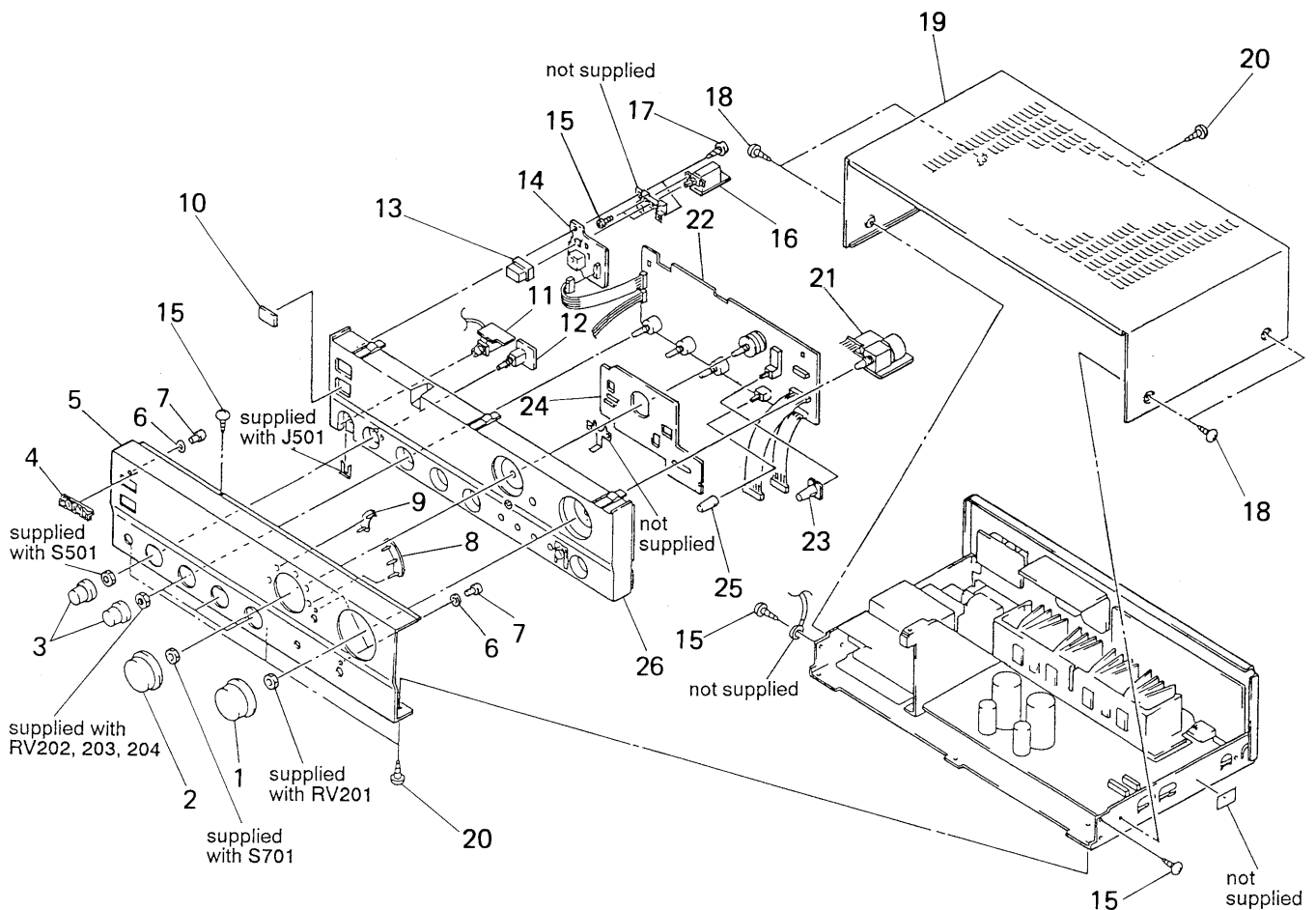
↑ ↑
Parts Color Cabinet's Color

- 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.
- Accessories and packing materials are given in the last of the electrical parts list.

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

- Abbreviation
G: German

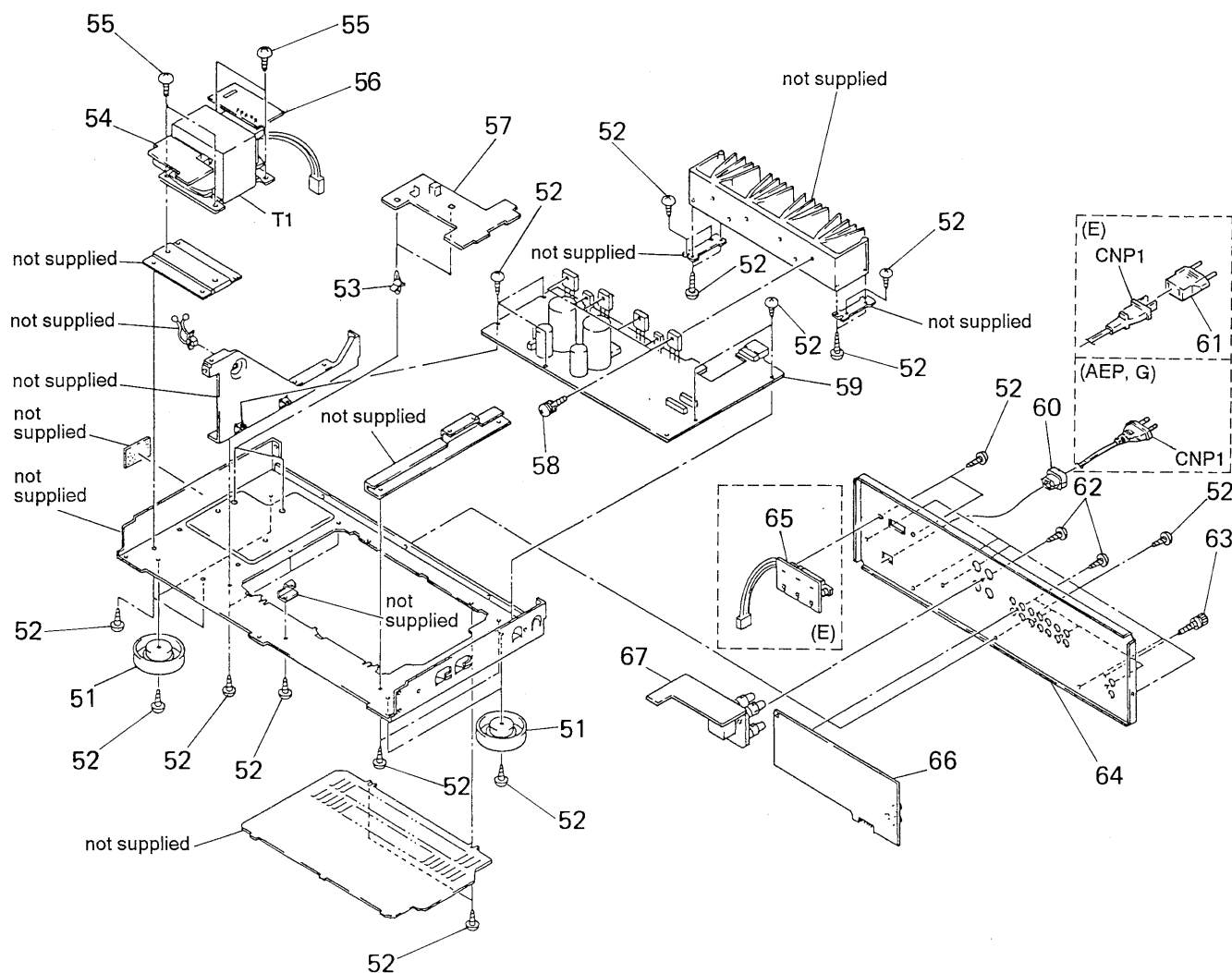
(1) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
1	X-4944-844-1	KNOB (VOL) ASSY	
2	4-966-003-01	KNOB (SEL)	
3	4-965-996-01	KNOB (TONE)	
4	4-942-568-01	EMBLEM (NO. 5), SONY	
5	4-965-991-51	PANEL, FRONT	
* 6	4-927-881-01	SHEET, ADHESIVE	
7	4-938-518-01	INDICATOR (C)	
8	4-965-999-01	INDICATOR (3)	
9	4-965-999-11	INDUCATOR	
10	4-931-911-01	FILTER	
* 11	1-656-839-11	HP BOARD	
* 12	1-656-842-11	SP SW BOARD	
13	4-917-460-81	KNOB, POWER	

Ref. No.	Part No.	Description	Remark
* 14	1-656-831-11	SIRCS BOARD	
15	4-967-961-01	SCREW (3X8) (SPECIAL)	
* 16	1-656-834-11	POWER SW BOARD	
17	4-969-221-01	SCREW (3X12)	
18	3-704-366-01	SCREW (CASE) (M3X8)	
19	4-976-672-11	CASE	
20	7-682-548-09	SCREW +BVTT 3X8 (S)	
* 21	1-656-837-11	VOLUME BOARD	
* 22	A-4378-189-A	PANEL BOARD, COMPLETE	
23	4-966-000-01	BUTTON (L)	
* 24	1-656-838-11	LED BOARD	
25	4-965-997-01	BUTTON (S)	
26	4-974-890-01	BASE, PANEL	

(2) CHASSIS SECTION



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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	4-956-885-11	FOOT (F58175S2W)		Δ 61	1-569-007-11	ADAPTER, CONVERSION 2P (E)	
52	4-967-961-01	SCREW (3X8) (SPECIAL)		62	3-704-515-41	SCREW (BV/RING)	
* 53	3-346-265-11	HOLDER, PC BOARD		63	4-947-010-01	SCREW, FEEDER FIXED	
* 54	1-657-753-11	TRANS BOARD		* 64	4-966-005-51	PANEL, BACK (AEP, G)	
55	4-967-960-01	SCREW (4X8)		* 64	4-966-005-61	PANEL, BACK (E)	
* 56	1-656-844-11	TRANS-E BOARD (E)		* 65	1-656-845-11	VOL SEL BOARD (E)	
* 56	1-656-835-11	TRANS-J BOARD (AEP, G)		* 66	A-4378-192-A	INPUT BOARD, COMPLETE	
* 57	1-656-841-11	PS BOARD		* 67	1-656-840-11	SP BOARD	
58	3-905-609-11	SCREW (TRANSISTOR)		Δ CNP1	1-558-943-41	CORD, POWER (E)	
* 59	A-4378-188-A	MAIN BOARD, COMPLETE		Δ CNP1	1-575-651-21	CORD, POWER (AEP, G)	
* 60	3-703-244-00	BUSHING (2104), CORD (AEP, G)		Δ T1	1-429-080-11	TRANSFORMER, POWER (AEP, G)	
* 60	3-703-571-11	BUSHING (S) (4516), CORD (E)		Δ T1	1-429-081-11	TRANSFORMER, POWER (E)	

HP	INPUT
----	-------

When indicating parts by reference number, please include the board.

- 19 -

INPUT

LED

MAIN

Ref. No.	Part No.	Description	Remark		
R156	1-247-897-11	CARBON	560K	5%	1/4W
R157	1-249-437-11	CARBON	47K	5%	1/4W
R158	1-247-895-00	CARBON	470K	5%	1/4W
R159	1-249-417-11	CARBON	1K	5%	1/4W
R160	1-249-417-11	CARBON	1K	5%	1/4W
R161	1-249-417-11	CARBON	1K	5%	1/4W
R162	1-249-417-11	CARBON	1K	5%	1/4W
R163	1-249-417-11	CARBON	1K	5%	1/4W
R164	1-249-417-11	CARBON	1K	5%	1/4W
R165	1-249-417-11	CARBON	1K	5%	1/4W
R166	1-249-417-11	CARBON	1K	5%	1/4W
< RELAY >					
RY101	1-515-622-11	RELAY			

*	1-656-838-11	LED BOARD			

< CONNECTOR >					
* CNJ701	1-691-244-11	SOCKET, CONNECTOR 10P			
< DIODE >					
D707	8-719-303-02	LED SEL6510C-TH10 (PHONO)			
D708	8-719-303-02	LED SEL6510C-TH10 (TUNER)			
D709	8-719-303-02	LED SEL6510C-TH10 (CD)			
D710	8-719-303-02	LED SEL6510C-TH10 (AUX)			
D711	8-719-303-02	LED SEL6510C-TH10 (TAPE2/MD)			
D712	8-719-301-49	LED SEL6810A-TH10 (TAPE1/DAT MONITOR)			
D713	8-719-301-49	LED SEL6810A-TH10 (SOURCE DIRECT)			
< RESISTOR >					
R712	1-249-407-11	CARBON	150	5%	1/4W
R713	1-249-409-11	CARBON	220	5%	1/4W
R727	1-249-409-11	CARBON	220	5%	1/4W
< SWITCH >					
S703	1-554-303-21	SWITCH, TACTILE (TAPE1/DAT MONITOR)			

*	A-4378-188-A	MAIN BOARD, COMPLETE			

< CAPACITOR >					
C210	1-136-165-00	FILM	0.1uF	5%	50V
C301	1-126-963-11	ELECT	4.7uF	20%	50V
C302	1-110-335-11	MYLAR	100PF	5%	50V
C304	1-104-666-11	ELECT	220uF	20%	10V
C306	1-130-475-00	MYLAR	0.0022uF	5%	50V

Ref. No.	Part No.	Description	Remark		
C307	1-104-664-11	ELECT	47uF	20%	16V
C310	1-136-159-00	FILM	0.033uF	5%	50V
C351	1-126-963-11	ELECT	4.7uF	20%	50V
C352	1-110-335-11	MYLAR	100PF	5%	50V
C354	1-104-666-11	ELECT	220uF	20%	10V
C356	1-130-475-00	MYLAR	0.0022uF	5%	50V
C357	1-104-664-11	ELECT	47uF	20%	16V
C360	1-136-159-00	FILM	0.033uF	5%	50V
C401	1-130-471-00	MYLAR	0.001uF	5%	50V
C402	1-124-478-11	ELECT	100uF	20%	25V
C403	1-136-153-00	FILM	0.01uF	5%	50V
C404	1-124-907-11	ELECT	10uF	20%	50V
C405	1-124-477-11	ELECT	47uF	20%	25V
C603	1-126-138-11	ELECT	4700uF	20%	50V
C604	1-126-138-11	ELECT	4700uF	20%	50V
C605	1-124-913-11	ELECT	470uF	20%	50V
C606	1-124-913-11	ELECT	470uF	20%	50V
C610	1-124-907-11	ELECT	10uF	20%	50V
C611	1-124-907-11	ELECT	10uF	20%	50V
C612	1-104-665-11	ELECT	100uF	20%	16V
C613	1-104-665-11	ELECT	100uF	20%	16V
< CONNECTOR >					
CN301	1-691-771-11	PLUG (MICRO CONNECTOR)	9P		
CN302	1-691-769-11	PLUG (MICRO CONNECTOR)	7P		
CN303	1-691-766-21	PLUG (MICRO CONNECTOR)	4P		
CN602	1-691-767-11	PLUG (MICRO CONNECTOR)	5P		
CNJ101	1-568-321-11	SOCKET, CONNECTOR	10P		
< DIODE >					
D301	8-719-933-39	DIODE	HZS6C1L		
D307	8-719-987-63	DIODE	1N4148M		
D308	8-719-987-63	DIODE	1N4148M		
D351	8-719-933-39	DIODE	HZS6C1L		
D357	8-719-987-63	DIODE	1N4148M		
D358	8-719-987-63	DIODE	1N4148M		
D602	8-719-024-99	DIODE	11ES2-NTA2B		
D603	8-719-024-99	DIODE	11ES2-NTA2B		
D604	8-719-933-88	DIODE	HZS16-2L		
D605	8-719-933-88	DIODE	HZS16-2L		
< IC >					
IC401	8-759-111-68	IC	uPC1237HA		
< TRANSISTOR >					
Q201	8-729-141-26	TRANSISTOR	2SC3622A-LK		
Q251	8-729-141-26	TRANSISTOR	2SC3622A-LK		
Q301	8-729-620-18	TRANSISTOR	2SA979-FG		
Q302	8-729-620-05	TRANSISTOR	2SC2603-EF		

Ref. No.	Part No.	Description	Remark
Q303	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q304	8-729-201-56	TRANSISTOR 2SK246-GR2	
Q305	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q306	8-729-021-73	TRANSISTOR 2SC2229-OY-TPE6	
Q307	8-729-021-74	TRANSISTOR 2SA949-OY-TPE6	
Q308	8-729-209-15	TRANSISTOR 2SD2012	
Q309	8-729-017-06	TRANSISTOR 2SC4793	
Q310	8-729-017-05	TRANSISTOR 2SA1837	
Q311	8-729-020-84	TRANSISTOR 2SC3180N-RO	
Q312	8-729-020-85	TRANSISTOR 2SA1263N-RO	
Q313	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q351	8-729-620-18	TRANSISTOR 2SA979-FG	
Q352	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q353	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q354	8-729-201-56	TRANSISTOR 2SK246-GR2	
Q355	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q356	8-729-021-73	TRANSISTOR 2SC2229-OY-TPE6	
Q357	8-729-021-74	TRANSISTOR 2SA949-OY-TPE6	
Q358	8-729-209-15	TRANSISTOR 2SD2012	
Q359	8-729-017-06	TRANSISTOR 2SC4793	
Q360	8-729-017-05	TRANSISTOR 2SA1837	
Q361	8-729-020-84	TRANSISTOR 2SC3180N-RO	
Q362	8-729-020-85	TRANSISTOR 2SA1263N-RO	
Q363	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q601	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q602	8-729-201-53	TRANSISTOR 2SA1015-GR	
< RESISTOR >			
R215	1-249-417-11	CARBON 1K 5% 1/4W	
R216	1-247-852-11	CARBON 7.5K 5% 1/4W	
R219	1-249-431-11	CARBON 15K 5% 1/4W	
R265	1-249-417-11	CARBON 1K 5% 1/4W	
R266	1-247-852-11	CARBON 7.5K 5% 1/4W	
R301	1-249-441-11	CARBON 100K 5% 1/4W	
R302	1-249-414-11	CARBON 560 5% 1/4W	
R303	1-249-441-11	CARBON 100K 5% 1/4W	
R304	1-249-417-11	CARBON 1K 5% 1/4W	
R305	1-249-409-11	CARBON 220 5% 1/4W F	
R306	1-247-828-11	CARBON 750 5% 1/4W	
R307	1-249-421-11	CARBON 2.2K 5% 1/4W	
R308	1-249-409-11	CARBON 220 5% 1/4W	
R309	1-249-434-11	CARBON 27K 5% 1/4W	
R310	1-249-433-11	CARBON 22K 5% 1/4W	
R311	1-249-429-11	CARBON 10K 5% 1/4W	
R312	1-249-435-11	CARBON 33K 5% 1/4W	
△R313	1-212-881-11	FUSIBLE 100 5% 1/4W F	
R314	1-249-397-11	CARBON 22 5% 1/4W F	
R315	1-249-415-11	CARBON 680 5% 1/4W	

Ref. No.	Part No.	Description	Remark
R316	1-247-807-31	CARBON 100 5% 1/4W	
△R317	1-212-881-11	FUSIBLE 100 5% 1/4W F	
△R318	1-212-881-11	FUSIBLE 100 5% 1/4W F	
R319	1-249-405-11	CARBON 100 5% 1/4W F	
R320	1-249-389-11	CARBON 4.7 5% 1/4W F	
R321	1-249-389-11	CARBON 4.7 5% 1/4W F	
R322	1-217-151-00	METAL PLATE 0.22 2W	
R323	1-217-151-00	METAL PLATE 0.22 2W	
R324	1-249-425-81	CARBON 4.7K 5% 1/4W F	
R325	1-249-431-11	CARBON 15K 5% 1/4W	
R326	1-247-727-11	CARBON 10 5% 1/2W	
R327	1-247-887-00	CARBON 220K 5% 1/4W	
R328	1-249-428-11	CARBON 8.2K 5% 1/4W	
R351	1-249-441-11	CARBON 100K 5% 1/4W	
R352	1-249-414-11	CARBON 560 5% 1/4W	
R353	1-249-441-11	CARBON 100K 5% 1/4W	
R354	1-249-417-11	CARBON 1K 5% 1/4W	
R355	1-249-409-11	CARBON 220 5% 1/4W F	
R356	1-247-828-11	CARBON 750 5% 1/4W	
R357	1-249-421-11	CARBON 2.2K 5% 1/4W	
R358	1-249-409-11	CARBON 220 5% 1/4W	
R359	1-249-434-11	CARBON 27K 5% 1/4W	
R360	1-249-433-11	CARBON 22K 5% 1/4W	
R361	1-249-429-11	CARBON 10K 5% 1/4W	
R362	1-249-435-11	CARBON 33K 5% 1/4W	
△R363	1-212-881-11	FUSIBLE 100 5% 1/4W F	
R364	1-249-397-11	CARBON 22 5% 1/4W F	
R365	1-249-415-11	CARBON 680 5% 1/4W	
R366	1-247-807-31	CARBON 100 5% 1/4W	
△R367	1-212-881-11	FUSIBLE 100 5% 1/4W F	
△R368	1-212-881-11	FUSIBLE 100 5% 1/4W F	
R369	1-249-405-11	CARBON 100 5% 1/4W F	
R370	1-249-389-11	CARBON 4.7 5% 1/4W F	
R371	1-249-389-11	CARBON 4.7 5% 1/4W F	
R372	1-217-151-00	METAL PLATE 0.22 2W	
R373	1-217-151-00	METAL PLATE 0.22 2W	
R374	1-249-425-81	CARBON 4.7K 5% 1/4W F	
R375	1-249-431-11	CARBON 15K 5% 1/4W	
R376	1-247-727-11	CARBON 10 5% 1/2W	
R377	1-247-887-00	CARBON 220K 5% 1/4W	
R378	1-249-428-11	CARBON 8.2K 5% 1/4W	
R401	1-249-429-11	CARBON 10K 5% 1/4W	
R402	1-247-887-00	CARBON 220K 5% 1/4W	
R403	1-247-881-00	CARBON 120K 5% 1/4W	
R404	1-249-432-11	CARBON 18K 5% 1/4W	
R601	1-247-754-11	CARBON 1.5K 5% 1/2W	
R602	1-247-754-11	CARBON 1.5K 5% 1/2W	
R605	1-249-429-11	CARBON 10K 5% 1/4W	
R606	1-249-429-11	CARBON 10K 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

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

RV301	1-241-759-21	RES, ADJ, CARBON 220	
RV351	1-241-759-21	RES, ADJ, CARBON 220	

< THERMISTOR(POSITIVE) >

THP601	1-806-882-11	THERMISTOR, POSITIVE 2.2	
THP602	1-806-882-11	THERMISTOR, POSITIVE 2.2	

< TEST PIN >

* TP301	1-564-506-11	PLUG, CONNECTOR 3P	
* TP351	1-564-506-11	PLUG, CONNECTOR 3P	

*	A-4378-189-A	PANEL BOARD, COMPLETE	
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< CAPACITOR >

C201	1-130-471-00	MYLAR	0.001uF	5%	50V
C202	1-136-165-00	FILM	0.1uF	5%	50V
C203	1-136-165-00	FILM	0.1uF	5%	50V
C204	1-136-156-00	FILM	0.018uF	5%	50V
C205	1-130-475-00	MYLAR	0.0022uF	5%	50V
C206	1-136-153-00	FILM	0.01uF	5%	50V
C211	1-124-907-11	ELECT	10uF	20%	50V
C212	1-124-907-11	ELECT	10uF	20%	50V
C251	1-130-471-00	MYLAR	0.001uF	5%	50V
C252	1-136-165-00	FILM	0.1uF	5%	50V
C253	1-136-165-00	FILM	0.1uF	5%	50V
C254	1-136-156-00	FILM	0.018uF	5%	50V
C255	1-130-475-00	MYLAR	0.0022uF	5%	50V
C256	1-136-153-00	FILM	0.01uF	5%	50V
C701	1-162-207-31	CERAMIC	22PF	5%	50V
C702	1-162-207-31	CERAMIC	22PF	5%	50V
C703	1-162-294-31	CERAMIC	0.001uF	10%	50V
C704	1-164-159-11	CERAMIC	0.1uF		50V
C705	1-164-159-11	CERAMIC	0.1uF		50V
C706	1-124-907-11	ELECT	10uF	20%	50V
C708	1-162-306-11	CERAMIC	0.01uF	30%	16V

< CONNECTOR >

* CN707	1-564-507-11	PLUG, CONNECTOR 4P	
* CNJ202	1-568-451-11	HOUSING, CONNECTOR(PC BOARD)10P	
CNP701	1-766-257-11	PIN, CONNECTOR (PC BOARD) 10P	

< DIODE >

D701	8-719-987-63	DIODE	1N4148M
D702	8-719-987-63	DIODE	1N4148M
D703	8-719-987-63	DIODE	1N4148M

Ref. No.	Part No.	Description	Remark
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D704	8-719-987-63	DIODE	1N4148M
D705	8-719-987-63	DIODE	1N4148M

D706	8-719-987-63	DIODE	1N4148M
D716	8-719-987-63	DIODE	1N4148M
D717	8-719-987-63	DIODE	1N4148M
D718	8-719-987-63	DIODE	1N4148M
D719	8-719-987-63	DIODE	1N4148M

D720	8-719-987-63	DIODE	1N4148M
D721	8-719-987-63	DIODE	1N4148M
D723	8-719-024-99	DIODE	11ES2-NTA2B

< IC >

IC701	8-759-343-64	IC	TMP47C200BN
IC702	8-759-188-67	IC	X24C01P-S
IC703	8-759-635-63	IC	M51943BSL
IC704	8-759-962-08	IC	BA6208

< TRANSISTOR >

Q202	8-729-119-76	TRANSISTOR	2SA1175-HFE
Q701	8-729-900-63	TRANSISTOR	DTA124ES
Q702	8-729-620-05	TRANSISTOR	2SC2603-EF
Q703	8-729-119-76	TRANSISTOR	2SA1175-HFE
Q704	8-729-900-63	TRANSISTOR	DTA124ES
Q705	8-729-900-63	TRANSISTOR	DTA124ES
Q707	8-729-119-76	TRANSISTOR	2SA1175-HFE
Q708	8-729-119-76	TRANSISTOR	2SA1175-HFE
Q801	8-729-620-05	TRANSISTOR	2SC2603-EF
Q802	8-729-900-36	TRANSISTOR	DTC124ES
Q803	8-729-900-36	TRANSISTOR	DTC124ES
Q804	8-729-620-05	TRANSISTOR	2SC2603-EF
Q805	8-729-900-63	TRANSISTOR	DTA124ES

< RESISTOR >

R201	1-247-903-00	CARBON	1M	5%	1/4W
R202	1-249-431-11	CARBON	15K	5%	1/4W
R203	1-249-439-11	CARBON	68K	5%	1/4W
R204	1-247-848-11	CARBON	5.1K	5%	1/4W
R205	1-249-431-11	CARBON	15K	5%	1/4W
R206	1-249-434-11	CARBON	27K	5%	1/4W
R207	1-247-903-00	CARBON	1M	5%	1/4W
R208	1-249-425-11	CARBON	4.7K	5%	1/4W
R209	1-247-903-00	CARBON	1M	5%	1/4W
R210	1-247-836-11	CARBON	1.6K	5%	1/4W
R217	1-249-441-11	CARBON	100K	5%	1/4W
R218	1-249-425-11	CARBON	4.7K	5%	1/4W
R220	1-249-422-11	CARBON	2.7K	5%	1/4W
R221	1-249-413-11	CARBON	470	5%	1/4W
R251	1-247-903-00	CARBON	1M	5%	1/4W

PANEL
POWER SW
PS
SIRCS
SP

Ref.No.	Part No.	Description	Remark
R252	1-249-431-11	CARBON	15K 5% 1/4W
R253	1-249-439-11	CARBON	68K 5% 1/4W
R254	1-247-848-11	CARBON	5.1K 5% 1/4W
R255	1-249-431-11	CARBON	15K 5% 1/4W
R256	1-249-434-11	CARBON	27K 5% 1/4W
R257	1-247-903-00	CARBON	1M 5% 1/4W
R258	1-249-425-11	CARBON	4.7K 5% 1/4W
R259	1-247-903-00	CARBON	1M 5% 1/4W
R260	1-247-836-11	CARBON	1.6K 5% 1/4W
R701	1-249-429-11	CARBON	10K 5% 1/4W
R702	1-249-429-11	CARBON	10K 5% 1/4W
R703	1-249-425-11	CARBON	4.7K 5% 1/4W
R704	1-249-425-11	CARBON	4.7K 5% 1/4W
R705	1-249-425-11	CARBON	4.7K 5% 1/4W
R706	1-249-433-11	CARBON	22K 5% 1/4W
R707	1-249-433-11	CARBON	22K 5% 1/4W
R708	1-249-433-11	CARBON	22K 5% 1/4W
R709	1-249-433-11	CARBON	22K 5% 1/4W
R710	1-249-433-11	CARBON	22K 5% 1/4W
R711	1-249-433-11	CARBON	22K 5% 1/4W
R715	1-247-818-11	CARBON	300 5% 1/4W
R716	1-249-433-11	CARBON	22K 5% 1/4W
R717	1-249-433-11	CARBON	22K 5% 1/4W
R718	1-249-429-11	CARBON	10K 5% 1/4W
R719	1-249-433-11	CARBON	22K 5% 1/4W
R720	1-249-433-11	CARBON	22K 5% 1/4W
R721	1-249-433-11	CARBON	22K 5% 1/4W
R722	1-249-425-11	CARBON	4.7K 5% 1/4W
R723	1-249-425-11	CARBON	4.7K 5% 1/4W
R724	1-249-425-11	CARBON	4.7K 5% 1/4W
R725	1-249-425-11	CARBON	4.7K 5% 1/4W
R728	1-249-433-11	CARBON	22K 5% 1/4W
R729	1-249-433-11	CARBON	22K 5% 1/4W
R730	1-249-429-11	CARBON	10K 5% 1/4W
R801	1-249-425-11	CARBON	4.7K 5% 1/4W
R803	1-249-429-11	CARBON	10K 5% 1/4W
R804	1-249-425-11	CARBON	4.7K 5% 1/4W
R805	1-249-425-11	CARBON	4.7K 5% 1/4W
< VARIABLE RESISTOR >			
RV202	1-223-934-11	RES, VAR, CARBON 250K/250K (TREBLE)	
RV203	1-223-935-11	RES, VAR, CARBON 900K/900K (BASS)	
RV204	1-223-933-11	RES, VAR, CARBON 250K/250K (BALANCE)	
< SWITCH >			
S201	1-762-387-11	SWITCH, PUSH (LOUDNESS)	
S202	1-572-642-11	SWITCH, PUSH (1 KEY) (SOURCE DIRECT)	
S701	1-692-967-11	SWITCH, ROTARY (INPUT SELECTOR)	

Ref.No.	Part No.	Description	Remark
< VIBRATOR >			
X701	1-579-223-11	OSCILLATOR, CERAMIC (8MHz)	

*	1-656-834-11	POWER SW BOARD	*****
< CONNECTOR >			
CN6	1-564-321-00	PIN, CONNECTOR 2P	
< SWITCH >			
S1	1-554-920-11	SWITCH, PUSH (1 KEY) (SYSTEM POWER)	

*	1-656-841-11	PS BOARD	*****
< CONNECTOR >			
CN1	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P	
* CN2	1-564-321-21	PIN, CONNECTOR 2P	
△F1	1-532-259-00	FUSE T1.6A/250V (AEP, G)	
△F3	1-532-259-00	FUSE T1.6A/250V (E)	
△F4	1-532-259-00	FUSE T1.6A/250V (E)	

*	1-656-831-11	SIRCS BOARD	*****
< CONNECTOR >			
CN703	1-691-766-11	PLUG (MICRO CONNECTOR) 4P	
< DIODE >			
D715	8-719-313-43	LED SEL6210S-TH10 (STANDBY)	
< IC >			
IC705	8-749-923-43	IC GP1U57XB	

*	1-656-840-11	SP BOARD	*****
< CONNECTOR >			
* CN503	1-564-519-11	PLUG, CONNECTOR 4P	
* CN504	1-564-522-11	PLUG, CONNECTOR 7P	
< COIL >			
* L501	1-420-872-00	COIL, AIR-CORE	
* L551	1-420-872-00	COIL, AIR-CORE	

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

SP

SP SW

TRANS

TRANS-E

TRANS-J

VOLUME

Ref. No.	Part No.	Description	Remark		
< DIODE >					
D501	8-719-987-63	DIODE	1N4148M		
D502	8-719-987-63	DIODE	1N4148M		
< RESISTOR >					
R501	1-247-727-11	CARBON	10	5%	1/2W
R551	1-247-727-11	CARBON	10	5%	1/2W
< RELAY >					
RY501	1-515-921-11	RELAY (12V)			
RY502	1-515-921-11	RELAY (12V)			
< TERMINAL >					
TM501	1-537-921-11	TERMINAL BOARD (SPEAKERS)			

*	1-656-842-11	SP SW BOARD			

< CONNECTOR >					
CN502	1-691-766-11	PLUG (MICRO CONNECTOR) 4P			
< SWITCH >					
S501	1-762-389-11	SWITCH, ROTARY (SPEAKERS)			

*	1-657-753-11	TRANS BOARD			

	1-533-233-11	HOLDER, FUSE (AEP, G)			
< CAPACITOR >					
C601	1-106-375-12	MYLAR	0.022uF	5%	200V
C602	1-106-375-12	MYLAR	0.022uF	5%	200V
C801	1-136-153-00	FILM	0.01uF	5%	50V
C802	1-126-941-11	ELECT	470uF	20%	25V
C803	1-104-664-11	ELECT	47uF	20%	16V
C804	1-126-941-11	ELECT	470uF	20%	25V
< CONNECTOR >					
* CN601	1-564-519-11	PLUG, CONNECTOR 4P			
* CN603	1-564-520-11	PLUG, CONNECTOR 5P			
< DIODE >					
D401	8-719-024-99	DIODE	11ES2-NTA2B		
D601	8-719-302-38	DIODE	RBV-602-01		
D801	8-719-024-99	DIODE	11ES2-NTA2B		
D802	8-719-024-99	DIODE	11ES2-NTA2B		

Ref. No.	Part No.	Description	Remark		
D803	8-719-024-99	DIODE 11ES2-NTA2B			
D804	8-719-024-99	DIODE 11ES2-NTA2B			
D805	8-719-987-63	DIODE 1N4148M			
< IC >					
IC801	8-759-231-53	IC TA7805S			
< RESISTOR >					
R408	1-249-437-11	CARBON	47K	5%	1/4W
<u>A</u> R806	1-249-447-11	CARBON	1	5%	1/4W F
< RELAY >					
RY801	1-755-018-11	RELAY			
RY802	1-755-018-11	RELAY			

*	1-656-844-11	TRANS-E BOARD (E)			

	1-533-233-11	HOLDER, FUSE (E)			
< CONNECTOR >					
* CN8	1-580-618-11	PIN, CONNECTOR 5P (E)			

*	1-656-835-11	TRANS-J BOARD (AEP, G)			

*	1-656-837-11	VOLUME BOARD			

< CAPACITOR >					
C213	1-136-165-00	FILM	0.1uF	5%	50V
< CONNECTOR >					
* CNP202	1-568-455-11	PIN, CONNECTOR (PC BOARD) 10P			
< VARIABLE RESISTOR >					
RV201	1-223-932-11	RES, VAR, CARBON 120K/120K (VOLUME)			

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

VOL SEL

Ref. No.	Part No.	Description	Remark
*	1-656-845-11	VOL SEL BOARD (E) *****	
		< VOLTAGE SELECTOR >	
△VS1	1-692-155-11	SELECTOR, POWER VOLTAGE (VOLTAGE SELECT) (E) *****	
		MISCELLANEOUS *****	
△G1	1-569-007-11	ADAPTER, CONVERSION 2P (E)	
△CNP1	1-558-943-41	CORD, POWER (E)	
△CNP1	1-575-651-21	CORD, POWER (AEP, G)	
△T1	1-429-080-11	TRANSFORMER, POWER (AEP, G)	
△T1	1-429-081-11	TRANSFORMER, POWER (E) *****	
		ACCESSORIES & PACKING MATERIALS *****	
		1-693-131-11 REMOTE COMMANDER (RM-S311)	
		2-181-754-01 COVER, BATTERY (FOR RM-S311)	
		3-798-913-11 MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (AEP, E)	
		3-798-913-21 MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) (AEP)	
		3-798-913-31 MANUAL, INSTRUCTION (GERMAN) (German)	
*	4-967-239-01	CUSHION	
*	4-977-071-01	INDIVIDUAL, CARTON	

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

