

TA-VE110

SERVICE MANUAL

AEP Model
UK Model



SPECIFICATIONS

Amplifier section

Power output
Surround mode (DIN 1 kHz)
Front:
25 W+25 W/8 ohms
Center:
25 W/8 ohms
(only in the PRO LOGIC
and C, STUDIO modes)
Rear:
10 W+10 W/8 ohms

Frequency response VIDEO 1+2, TV, AUX:
20 Hz-20 kHz \pm 2 dB

Audio section

Inputs

	Sensitivity	Impedance
VIDEO1, VIDEO2, TV, AUX	150mV	50kilohms

Outputs

VIDEO 1 REC:
Voltage: 150 mV,
Impedance: 470 ohms
REAR, MIX:
Voltage: 1 V
Impedance: 1 kilohms

BASS BOOST

+7 dB at 60 Hz

General

Power requirements 220-230 V AC, 50/60 Hz

Power consumption 110 W

Dimensions 430 \times 95 \times 280 mm
(17 \times 3 3/4 \times 11 1/8 inches)

Mass (Approx.) 4.6 kg
(10 lb 2 oz)

Supplied accessories

Remote controller (remote) (1)
Size AA (R6) batteries (2)
Scart adaptor (1)

Design and specifications are subject to change without notice.

STEREO AV AMPLIFIER

SONY®



TABLE OF CONTENTS

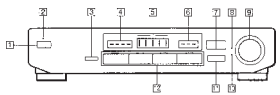
1. GENERAL	3
2. IC PIN FUNCTION	5
3. DIAGRAMS	8
3-1. CIRCUIT BOARDS LOCATION	8
3-2. PRINTED WIRING BOARD	9
3-3. SCHEMATIC DIAGRAM	13
3-4. IC BLOCK DIAGRAMS	18
4. EXPLODED VIEWS	21
4-1. FRONT PANEL SECTION	21
4-2. CHASSIS SECTION	22
5. ELECTRICAL PARTS LIST	23

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK \triangle OR DOTTED LINE WITH MARK \triangle 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.

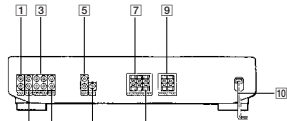
**SECTION 1
GENERAL**

Front panel



- 1 POWER switch
- 2 STANDBY indicator
- 3 CENTER MODE button
- 4 LEVEL indicator
- 5 SURROUND indicator
- 6 SURROUND ON/OFF button
- 7 EFFECT +, - button
- 8 BASS BOOST indicator
- 9 MASTER VOLUME control
- 10 MUTING indicator
- 11 SURROUND MODE button
- 12 Function button

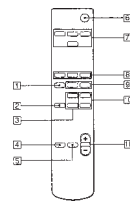
Rear panel



- 1 AUX IN
- 2 VIDEO 2 IN
- 3 VIDEO 1 (Audio in/out)
- 4 TV (Audio in)
- 5 SURROUND REAR out
- 6 SURROUND MIX out
- 7 REAR SPEAKERS
- 8 CENTER SPEAKERS
- 9 FRONT SPEAKERS
- 10 Mains lead

**SECTION 2
IC PIN FUNCTION**

Remote commander (RM-UE110)



- 1 SURROUND ON/OFF button
- 2 TEST TONE button
- 3 REAR LEVEL buttons
- 4 BASS BOOST button
- 5 MUTING button
- 6 POWER OFF button
- 7 FUNCTION buttons
- 8 SURROUND MODE buttons
- 9 EFFECT +, - buttons
- 10 CENTER LEVEL +, - buttons
- 11 MASTER VOL +, - buttons

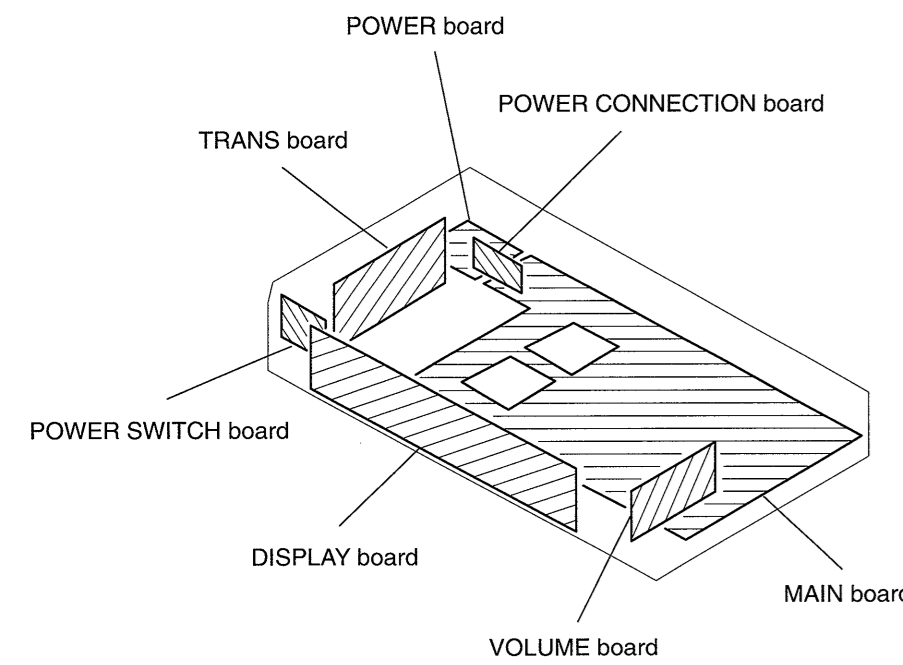
IC501 u PD78001BGC-627-AB8

Pin No.	Pin Name	IO	Pin Description
1	POWERV	O	Power relay ON/OFF control pin.
2	SPRV	O	Speaker relay ON/OFF control pin.
3	SURRV	O	Surround speaker relay ON/OFF control pin.
4	VOLUP	O	Volume up signal output.
5	VOLDWN	O	Volume down signal output.
6	MUTE	O	Mute ON/OFF control pin.
7	TV SCART	O	TV ON signal output.
8	NC	---	Not used.
9	VSS	---	Power supply GND pin. (Ground)
10	NC	---	Not used.
11	DBFB	O	DBFB ON/OFF control pin.
12	MUTE	O	Mute LED ON/OFF control pin.
13	LEV1	O	
14	LEV2	O	
15	LEV3	O	Level LED ON/OFF control pin.
16	LEV4	O	
17	LEV5	O	
18	SURLEATED	O	
19	THEATR	O	Surround LED ON/OFF control pin.
20	PROLOGRC	O	
21	VIDEO1	O	Video 1 LED ON/OFF control pin.
22	TV	O	TV LED ON/OFF control pin.
23	VIDEO2	O	Video 2 LED ON/OFF control pin.
24	VSS	---	Ground
25	AUXLINE	O	AUX LINE LED ON/OFF control pin.
26	STANDBY	O	Power LED ON/OFF control pin.
27	PHANTOM	O	
28	SCHLOGRC	O	
29	NORMAL	O	CENTER MODE LED ON/OFF control pin.
30	WDR	O	
31	INH1	O	Video 1 picture output loop-cut control pin.
32	V1	O	Video 1 image output loop-cut control pin.
33	V2	O	Video 2 image output loop-cut control pin.
34	INH2	O	Video 2 picture output loop-cut control pin.
35	RESET	I	Reset pin. Reset at L.
36	STOP	I	Power failure detection pin.
37	PROTECT	I	Speaker output protector detection input pin.
38	SIRCS IN	I	Remote control signal input pin.
39	VIDEO SCART	O	Video input detect
40	VDD	---	Power supply pin. (+5 V)

Pin No.	Pin Name	IO	Pin Description
41	X1	---	
42	X2	---	System clock pin. (10 MHz)
43	IC0	---	Not used. (Ground)
44	X12	---	Not used. (Open)
45	GND	---	Ground
46	RT1	---	Not used. (Ground)
47	K01	O	
48	K02	O	
49	K03	O	Key matrix output pin.
50	KH1	I	
51	KH2	I	
52	KH3	I	Key matrix input pin.
53	KH4	I	
54	S0455034	I	Model identification pin.
55	IC2	---	VDD connection. (+5 V)
56	IC3	---	Not used. (Ground)
57	P20	I	Not used.
58	PC1	I	Not used.
59	7825_C0	O	Serial data output to audio function switch.
60	DATA	O	Serial data output to surround processor.
61	CLK	O	Serial clock output.
62	2785_C0	O	Data latch output to surround processor.
63	P26	---	Not used.
64	PSW	I	Power switch ON/OFF detection pin.

**SECTION 3
DIAGRAMS**

3-1. CIRCUIT BOARDS LOCATION

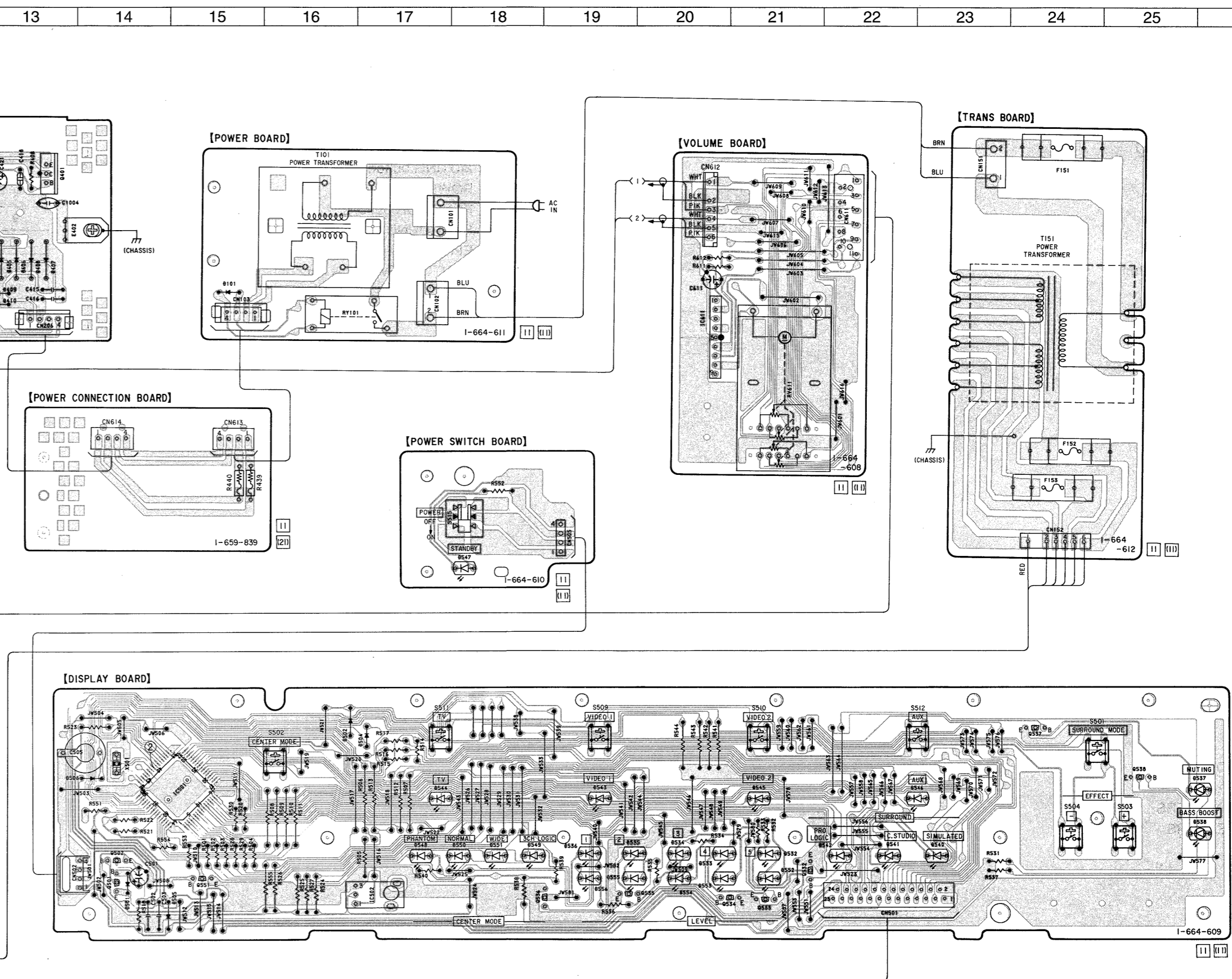
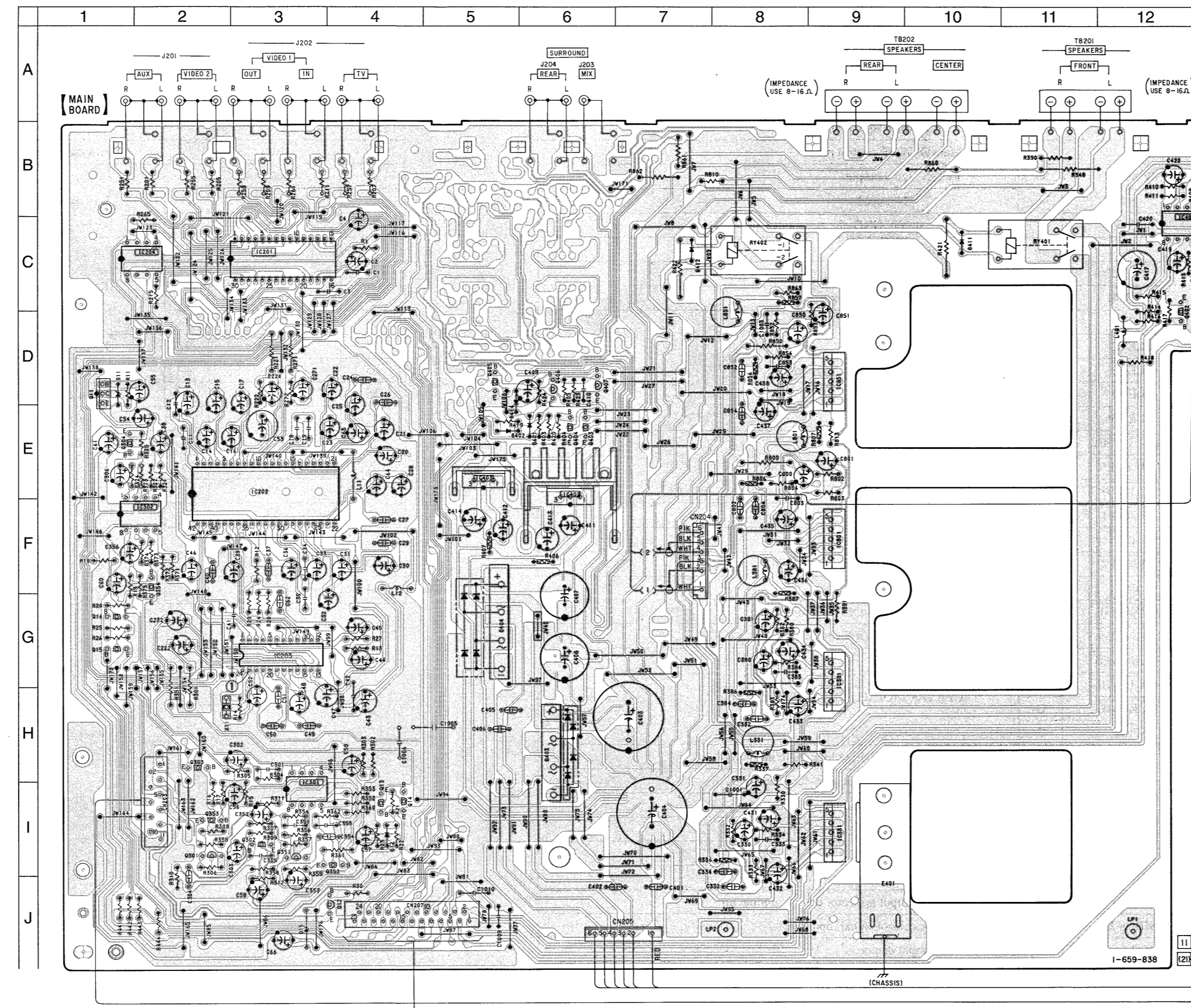


• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D11	D-1	IC202	E-3
D12	I-4	IC203	G-3
D15	J-3	IC204	C-2
D101	C-15	IC301	I-3
D401	E-6	IC302	F-2
D402	F-5	IC331	I-9
D403	H-6	IC381	G-9
D404	G-5	IC402	E-6
D405	C-13	IC403	E-5
D406	C-13	IC404	C-12
D407	C-13	IC501	I-15
D408	C-13	IC502	J-17
D409	C-13	IC611	D-20
D410	D-13	IC801	F-9
D411	C-10	IC851	D-9
D412	C-7		
D414	E-5	Q11	D-1
D501	J-4	Q12	J-4
D502	H-16	Q13	I-4
D504	H-17	Q14	I-4
D505	J-15	Q15	G-1
D506	I-14	Q16	G-1
D532	J-21	Q301	I-2
D533	J-20	Q302	I-3
D534	I-20	Q303	H-2
D535	I-19	Q304	E-1
D536	I-19	Q351	I-3
D537	I-26	Q352	I-4
D538	I-26	Q353	I-2
D540	I-23	Q354	F-2
D541	I-22	Q401	B-13
D542	I-22	Q402	D-12
D543	I-19	Q403	E-6
D544	I-17	Q404	E-6
D545	I-21	Q405	D-5
D546	I-23	Q406	D-6
D547	F-18	Q407	D-6
D548	I-17	Q501	J-14
D549	I-18	Q502	J-14
D550	I-18	Q532	J-21
D551	I-18	Q533	J-21
D552	J-21	Q534	J-21
D553	J-20	Q535	J-20
D554	J-20	Q536	J-18
D555	J-19	Q537	H-24
D556	J-19	Q538	I-25
		Q551	J-15
IC201	C-3		

Note :
 ○ : Parts extracted from the component side.
 ● : Pattern on the side witch is seen.

3-2. PRINTED WIRING BOARDS



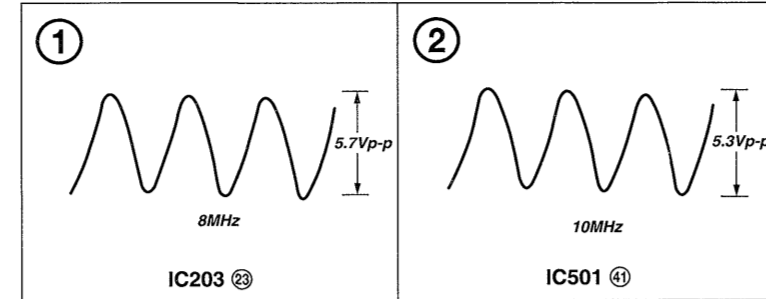
Note :

- All capacitors are in μF unless otherwise noted, pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{ W}$ or less unless otherwise specified.
- Δ : internal component.
- RES : nonflammable resistor.

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

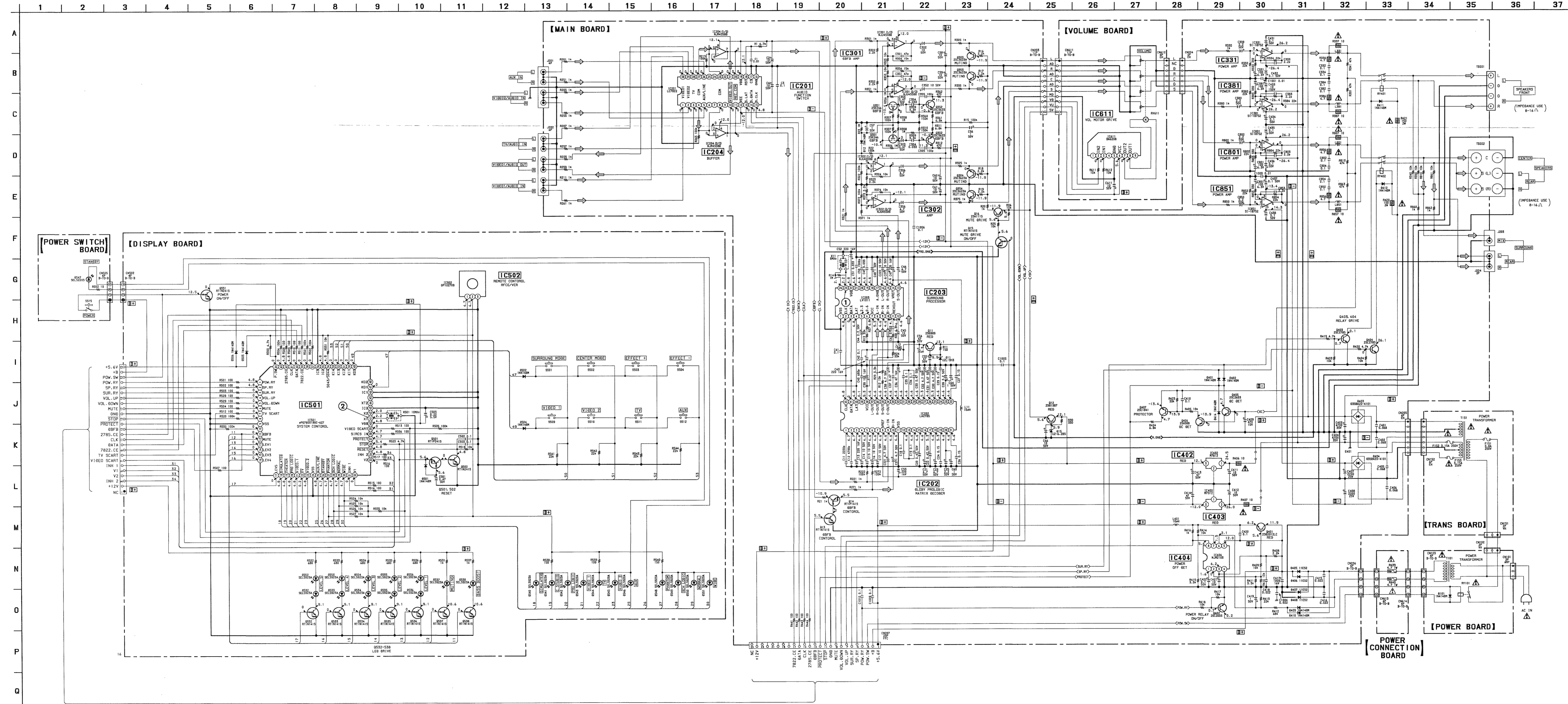
- $\text{B}+$: B-Line.
- $\text{B}-$: B-Line.
- B : adjustment for repair.
- Voltage is dc with respect to ground under no-signal conditions.
- Voltage are taken with a VOM (input Impedance $10\text{M}\Omega$).
- Waveforms are measured by an oscilloscope.
- Waveform variation may be noted due to normal production tolerance.
- Numbers in round mark (O) are the reference number with waveform diagram.
- Signal path.

• WAVEFORM DIAGRAMS



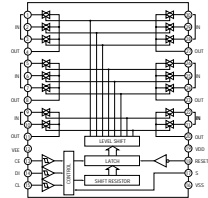
3-3. SCHEMATIC DIAGRAM

• See page 18 for IC BLOCK DIAGRAMS.

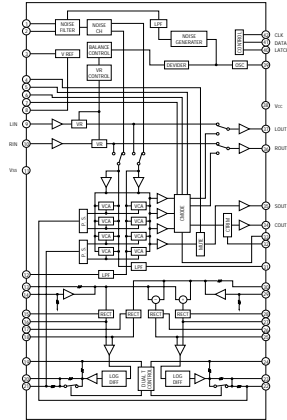


3-4. IC BLOCK DIAGRAMS

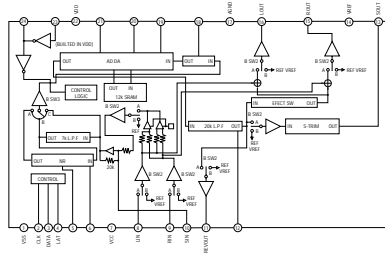
IC201 LC7822



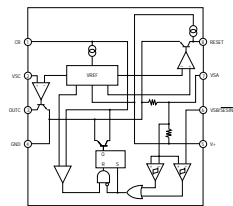
IC202 LA2785



IC203 LV1011



IC404 NJM2103D



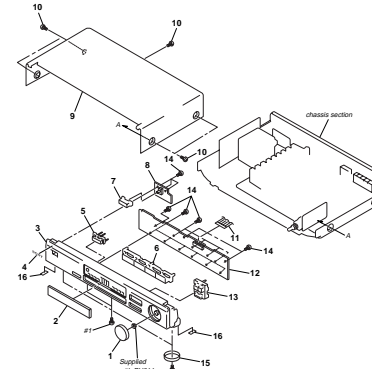
SECTION 4
EXPLODED VIEWS

NOTE:

- "XX, X" means standardized parts, so they may have some differences from the original one.
- Items marked "V" 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 as the exploded views are not supplied.
- Abbreviation: G: German model; EE: East European model.

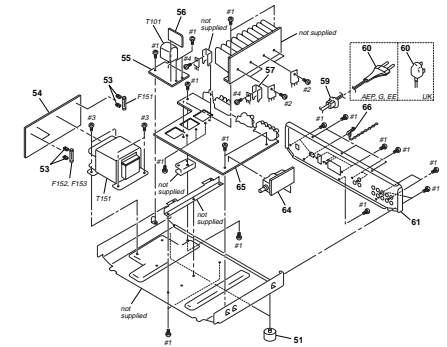
The components identified by mark Δ, or dotted line with mark Δ, are critical for safety. Replace only with part number specified.

4-1. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
1	4-980-041-01	KNOB (VOL)		9	4-980-192-21	CASE (V80220)	
2	4-980-055-11	WINDOW		10	3-705-566-01	SCREW (CASE) (M3X3)	
3	X-4948-003-1	PANEL ASSY. FRONT		11	1-775-215-11	WIRE (FLAT TYPE) (25 CORE)	
4	4-980-404-21	SHIELDING (S.A.) SHOWN		12	4-620-561-A	ROCKWELL BRAND, COMPLETE	
5	4-980-039-01	BUTTON (LFEV)		13	4-980-038-01	BUTTON (SURROUND)	
6	4-980-040-01	BUTTON (FUNCTION)		14	4-951-620-01	SCREW (2.6X6) -BVTP	
7	3-921-420-01	BUTTON (POWER)		15	4-971-010-11	WIRE (S.A.) (SIL. ORNAMENTAL)	
8	1-664-610-11	POWER SWITCH BOARD		16	4-977-358-11	CLUSHION (BX12.5)	

4-2. CHASSIS SECTION



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
51	X-3371-405-1	FOOT (SMALL) ASSY		61	4-988-714-11	PANEL, BACK (L&K)	
53	1-532-210-11	FUSE HOLDER		64	1-664-405-11	VOLUME BOARD	
54	1-664-612-11	TUNER BOARD		65	A-4392-568-A	MAIN BOARD, COMPLETE	
55	1-664-611-11	POWER BOARD		66	4-956-370-02	BAND, PLUG (FIXED) (L&K)	
56	1-689-630-11	POWER CONNECTION BOARD		J.F151	1-532-201-51	FUSE (T800X250V)	
57	3-306-144-21	HEAT SINK		J.F152	1-532-465-51	FUSE (T800 X250V)	
59	3-703-244-01	BUSHING (21/4) (CORD)		J.F153	1-532-465-51	FUSE (T800 X250V)	
J.60	1-696-671-11	CORD, POWER (S&K)		J.T101	1-421-161-11	TRANSFORMER, POWER	
J.60	1-777-071-11	CORD, POWER (AFP, G, EE)		J.T151	1-431-146-11	TRANSFORMER, POWER	
61	4-988-714-01	PANEL, BACK (JEP, G, EE)					

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

SECTION 5 ELECTRICAL PARTS LIST

DISPLAY

NOTE:

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

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

- Abbreviation
 - G: German model
 - EE: East European model

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
uF: μ F

- RESISTORS
All resistors are in ohms.
METAL: metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable
- COILS
uH: μ H
- SEMICONDUCTORS
In each case, u, μ , for example:
uA...: μ A... , uPA... , μ PA... ,
uPB... , μ PB... , uPC... , μ PC... ,
uPD... , μ PD...

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
*	A-4392-561-A	DISPLAY BOARD, COMPLETE *****				< IC >	
		< CAPACITOR >		IC501	8-759-429-36	IC uPD78001BGC-627-AB8	
C501	1-124-465-00	ELECT	0.47uF 20% 50V	IC502	8-759-332-18	IC GP1U27XB	
C502	1-164-159-11	CERAMIC	0.1uF 50V			< TRANSISTOR >	
C503	1-164-159-11	CERAMIC	0.1uF 50V	Q501	8-729-900-63	TRANSISTOR DTA124ES	
C505	1-125-486-11	DOUBLE LAYERS	0.22F 5.5V	Q502	8-729-661-95	TRANSISTOR RT1N241SK-TP	
		< CONNECTOR >		Q532	8-729-661-94	TRANSISTOR RT1N141SK-TP	
CN501	1-569-310-11	SOCKET, CONNECTOR (L TYRE) 25P		Q533	8-729-661-94	TRANSISTOR RT1N141SK-TP	
CN502	1-562-087-00	SOCKET, CONNECTOR 4P		Q534	8-729-661-94	TRANSISTOR RT1N141SK-TP	
		< DIODE >		Q535	8-729-661-94	TRANSISTOR RT1N141SK-TP	
D501	8-719-987-63	DIODE 1N4148M		Q536	8-729-661-94	TRANSISTOR RT1N141SK-TP	
D502	8-719-987-63	DIODE 1N4148M		Q537	8-729-661-94	TRANSISTOR RT1N141SK-TP	
D504	8-719-987-63	DIODE 1N4148M		Q538	8-729-661-94	TRANSISTOR RT1N141SK-TP	
D505	8-719-987-63	DIODE 1N4148M		Q551	8-729-661-95	TRANSISTOR RT1N241SK-TP	
D506	8-719-987-63	DIODE 1N4148M				< RESISTOR >	
D532	8-719-057-97	LED SEL5923A-TP15 (LEVEL 5)		R501	1-247-807-31	CARBON 100 5% 1/4W	
D533	8-719-057-97	LED SEL5923A-TP15 (LEVEL 4)		R502	1-247-807-31	CARBON 100 5% 1/4W	
D534	8-719-057-97	LED SEL5923A-TP15 (LEVEL 3)		R503	1-247-807-31	CARBON 100 5% 1/4W	
D535	8-719-057-97	LED SEL5923A-TP15 (LEVEL 2)		R504	1-247-807-31	CARBON 100 5% 1/4W	
D536	8-719-057-97	LED SEL5923A-TP15 (LEVEL 1)		R505	1-249-441-11	CARBON 100K 5% 1/4W	
D537	8-719-057-97	LED SEL5923A-TP15 (MUTING)		R506	1-247-807-31	CARBON 100 5% 1/4W	
D538	8-719-057-97	LED SEL5923A-TP15 (BASS BOOST)		R507	1-247-807-31	CARBON 100 5% 1/4W	
D540	8-719-057-97	LED SEL5923A-TP15 (SIMULATED)		R508	1-247-807-31	CARBON 100 5% 1/4W	
D541	8-719-057-97	LED SEL5923A-TP15 (C STUDIO)		R509	1-247-807-31	CARBON 100 5% 1/4W	
D542	8-719-057-97	LED SEL5923A-TP15 (PRO LOGIC)		R510	1-247-807-31	CARBON 100 5% 1/4W	
D543	8-719-033-06	LED SEL5920A (VIDEO 1)		R511	1-247-807-31	CARBON 100 5% 1/4W	
D544	8-719-033-06	LED SEL5920A (TV)		R512	1-247-807-31	CARBON 100 5% 1/4W	
D545	8-719-033-06	LED SEL5920A (VIDEO 2)		R513	1-247-807-31	CARBON 100 5% 1/4W	
D546	8-719-033-06	LED SEL5920A (AUX)		R514	1-247-807-31	CARBON 100 5% 1/4W	
D548	8-719-057-97	LED SEL5923A-TP15 (PHANTOM)		R515	1-247-807-31	CARBON 100 5% 1/4W	
D549	8-719-057-97	LED SEL5923A-TP15 (3CH LOGIC)		R516	1-247-807-31	CARBON 100 5% 1/4W	
D550	8-719-057-97	LED SEL5923A-TP15 (NORMAL)		R517	1-247-807-31	CARBON 100 5% 1/4W	
D551	8-719-057-97	LED SEL5923A-TP15 (WIDE)		R518	1-249-429-11	CARBON 10K 5% 1/4W	
D552	8-719-057-97	LED SEL5923A-TP15 (LEVEL 5)		R520	1-249-441-11	CARBON 100K 5% 1/4W	
D553	8-719-057-97	LED SEL5923A-TP15 (LEVEL 4)		R521	1-249-441-11	CARBON 100K 5% 1/4W	
D554	8-719-057-97	LED SEL5923A-TP15 (LEVEL 3)		R522	1-249-441-11	CARBON 100K 5% 1/4W	
D555	8-719-057-97	LED SEL5923A-TP15 (LEVEL 2)		R523	1-249-425-11	CARBON 4.7K 5% 1/4W F	
D556	8-719-057-97	LED SEL5923A-TP15 (LEVEL 1)		R524	1-249-429-11	CARBON 10K 5% 1/4W	
				R525	1-249-429-11	CARBON 10K 5% 1/4W	
				R526	1-249-429-11	CARBON 10K 5% 1/4W	

DISPLAY

MAIN

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
R527	1-249-429-11	CARBON	10K 5% 1/4W	C17	1-126-964-11	ELECT	10uF 20% 50V
R528	1-247-807-31	CARBON	100 5% 1/4W	C18	1-164-159-11	CERAMIC	0.1uF 50V
R529	1-247-807-31	CARBON	100 5% 1/4W	C19	1-164-159-11	CERAMIC	0.1uF 50V
R530	1-249-441-11	CARBON	100K 5% 1/4W	C20	1-126-959-11	ELECT	0.47uF 20% 50V
R531	1-249-417-11	CARBON	1K 5% 1/4W F	C21	1-126-963-11	ELECT	4.7uF 20% 50V
R532	1-249-415-11	CARBON	680 5% 1/4W F	C22	1-126-959-11	ELECT	0.47uF 20% 50V
R533	1-249-415-11	CARBON	680 5% 1/4W F	C23	1-126-963-11	ELECT	4.7uF 20% 50V
R534	1-249-415-11	CARBON	680 5% 1/4W F	C24	1-136-167-00	FILM	0.15uF 5% 50V
R535	1-249-415-11	CARBON	680 5% 1/4W F	C25	1-126-961-11	ELECT	2.2uF 20% 50V
R536	1-249-415-11	CARBON	680 5% 1/4W F	C26	1-136-167-00	FILM	0.15uF 5% 50V
R537	1-249-417-11	CARBON	1K 5% 1/4W F	C27	1-136-167-00	FILM	0.15uF 5% 50V
R538	1-249-407-11	CARBON	150 5% 1/4W F	C28	1-126-961-11	ELECT	2.2uF 20% 50V
R539	1-247-807-31	CARBON	100 5% 1/4W	C29	1-136-167-00	FILM	0.15uF 5% 50V
R540	1-249-407-11	CARBON	150 5% 1/4W F	C30	1-126-963-11	ELECT	4.7uF 20% 50V
R541	1-249-433-11	CARBON	22K 5% 1/4W	C31	1-126-959-11	ELECT	0.47uF 20% 50V
R542	1-249-433-11	CARBON	22K 5% 1/4W	C32	1-126-963-11	ELECT	4.7uF 20% 50V
R543	1-249-433-11	CARBON	22K 5% 1/4W	C33	1-126-959-11	ELECT	0.47uF 20% 50V
R544	1-249-433-11	CARBON	22K 5% 1/4W	C34	1-164-159-11	CERAMIC	0.1uF 50V
R551	1-249-429-11	CARBON	10K 5% 1/4W	C35	1-164-159-11	CERAMIC	0.1uF 50V
R553	1-249-425-11	CARBON	4.7K 5% 1/4W F	C36	1-126-967-11	ELECT	47uF 20% 16V
R554	1-249-441-11	CARBON	100K 5% 1/4W	C37	1-136-173-00	FILM	0.47uF 5% 50V
R555	1-249-429-11	CARBON	10K 5% 1/4W	C38	1-126-963-11	ELECT	4.7uF 20% 50V
< SWITCH >				C39	1-126-933-11	ELECT	100uF 20% 16V
S501	1-554-303-21	SWITCH, TACTILE (SURROUND MODE)		C40	1-137-363-91	FILM	680PF 5% 50V
S502	1-554-303-21	SWITCH, TACTILE (CENTER MODE)		C41	1-164-159-11	CERAMIC	0.1uF 50V
S503	1-554-303-21	SWITCH, TACTILE (EFFECT +)		C42	1-164-159-11	CERAMIC	0.1uF 50V
S504	1-554-303-21	SWITCH, TACTILE (EFFECT -)		C43	1-126-934-11	ELECT	220uF 20% 16V
S509	1-554-303-21	SWITCH, TACTILE (VIDEO 1)		C44	1-126-961-11	ELECT	2.2uF 20% 50V
S510	1-554-303-21	SWITCH, TACTILE (VIDEO 2)		C45	1-126-964-11	ELECT	10uF 20% 50V
S511	1-554-303-21	SWITCH, TACTILE (TV)		C46	1-126-963-11	ELECT	4.7uF 20% 50V
S512	1-554-303-21	SWITCH, TACTILE (AUX)		C47	1-126-934-11	ELECT	220uF 20% 16V
< VIBRATOR >				C48	1-126-960-11	ELECT	1uF 20% 50V
X501	1-579-175-11	VIBRATOR, CERAMIC 10MHz		C49	1-136-159-00	FILM	0.033uF 5% 50V
*****				C50	1-130-473-00	MYLAR	0.0015uF 5% 50V
*****				C51	1-136-159-00	FILM	0.033uF 5% 50V
*	A-4392-566-A	MAIN BOARD, COMPLETE	*****	C52	1-126-934-11	ELECT	220uF 20% 16V
*****				C53	1-126-934-11	ELECT	220uF 20% 16V
*	3-309-144-21	HEAT SINK		C54	1-126-967-11	ELECT	47uF 20% 50V
7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3			C55	1-126-967-11	ELECT	47uF 20% 50V
7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3			C56	1-126-960-11	ELECT	1uF 20% 50V
7-685-872-09	SCREW +BVTT 3X8 (S)			C57	1-126-960-11	ELECT	1uF 20% 50V
< CAPACITOR >				C58	1-126-964-11	ELECT	10uF 20% 50V
C1	1-162-306-11	CERAMIC	0.01uF 20% 16V	C59	1-126-964-11	ELECT	10uF 20% 50V
C2	1-126-964-11	ELECT	10uF 20% 50V	C60	1-126-964-11	ELECT	10uF 20% 50V
C3	1-164-159-11	CERAMIC	0.1uF 50V	C61	1-126-964-11	ELECT	10uF 20% 50V
C4	1-126-964-11	ELECT	10uF 20% 50V	C62	1-136-159-00	FILM	0.033uF 5% 50V
C11	1-162-302-11	CERAMIC	0.0022uF 30% 16V	C63	1-126-960-11	ELECT	1uF 20% 50V
C12	1-162-600-11	CERAMIC	0.0047uF 30% 16V	C64	1-126-960-11	ELECT	1uF 20% 50V
C13	1-126-934-11	ELECT	220uF 20% 16V	C66	1-126-964-11	ELECT	10uF 20% 50V
C14	1-126-964-11	ELECT	10uF 20% 50V	C221	1-126-963-11	ELECT	4.7uF 20% 50V
C15	1-126-964-11	ELECT	10uF 20% 50V	C222	1-126-964-11	ELECT	10uF 20% 50V
C16	1-126-964-11	ELECT	10uF 20% 50V	C271	1-126-963-11	ELECT	4.7uF 20% 50V
				C272	1-126-964-11	ELECT	10uF 20% 50V
				C301	1-162-215-31	CERAMIC	47PF 5% 50V
				C302	1-126-964-11	ELECT	10uF 20% 50V

Ref. No.	Part No.	Description			Remarks	Ref. No.	Part No.	Description			Remarks
C303	1-126-959-11	ELECT	0.47uF	20%	50V	C850	1-126-961-11	ELECT	2.2uF	20%	50V
C304	1-136-159-00	FILM	0.033uF	5%	50V	C851	1-126-933-11	ELECT	100uF	20%	10V
C305	1-162-282-31	CERAMIC	100PF	10%	50V	C852	1-136-165-00	FILM	0.1uF	5%	50V
C306	1-126-963-11	ELECT	4.7uF	20%	50V	C853	1-162-191-31	CERAMIC	2.2PF	10%	50V
C330	1-126-961-11	ELECT	2.2uF	20%	50V	C854	1-136-165-00	FILM	0.1uF	5%	50V
C331	1-126-933-11	ELECT	100uF	20%	10V	C1001	1-162-306-11	CERAMIC	0.01uF	20%	16V
C332	1-136-165-00	FILM	0.1uF	5%	50V	C1003	1-162-306-11	CERAMIC	0.01uF	20%	16V
C333	1-162-191-31	CERAMIC	2.2PF	10%	50V	C1004	1-101-005-00	CERAMIC	22000PF		50V
C334	1-136-165-00	FILM	0.1uF	5%	50V	C1005	1-164-159-11	CERAMIC	0.1uF		50V
C351	1-162-215-31	CERAMIC	47PF	5%	50V	C1006	1-164-159-11	CERAMIC	0.1uF		50V
C352	1-126-964-11	ELECT	10uF	20%	50V	C1009	1-164-159-11	CERAMIC	0.1uF		50V
C353	1-126-959-11	ELECT	0.47uF	20%	50V	C1010	1-164-159-11	CERAMIC	0.1uF		50V
C354	1-136-159-00	FILM	0.033uF	5%	50V			< CONNECTOR >			
C355	1-162-282-31	CERAMIC	100PF	10%	50V	CN203	1-695-089-11	PIN, CONNECTOR (PC BOARD) 11P			
C356	1-126-963-11	ELECT	4.7uF	20%	50V	* CN206	1-565-495-11	CONNECTOR, BOARD TO BOARD 4P			
C380	1-126-961-11	ELECT	2.2uF	20%	50V			< DIODE >			
C381	1-126-933-11	ELECT	100uF	20%	10V	D11	8-719-001-30	DIODE UZL-9H3			
C382	1-136-165-00	FILM	0.1uF	5%	50V	D12	8-719-987-63	DIODE 1N4148M			
C383	1-162-191-31	CERAMIC	2.2PF	10%	50V	D15	8-719-109-93	DIODE RD6.2ESB2			
C384	1-136-165-00	FILM	0.1uF	5%	50V	D401	8-719-987-63	DIODE 1N4148M			
C401	1-137-375-11	FILM	0.068uF	5%	50V	D402	8-719-987-63	DIODE 1N4148M			
C402	1-137-375-11	FILM	0.068uF	5%	50V	D403	8-719-028-23	DIODE D3SBA20-4101			
C403	1-126-955-11	ELECT	4700uF	20%	35V	D404	8-719-028-23	DIODE D3SBA20-4101			
C404	1-126-955-11	ELECT	4700uF	20%	35V	D405	8-719-024-99	DIODE 11ES2-NTA2B			
C405	1-137-375-11	FILM	0.068uF	5%	50V	D406	8-719-024-99	DIODE 11ES2-NTA2B			
C406	1-137-375-11	FILM	0.068uF	5%	50V	D407	8-719-024-99	DIODE 11ES2-NTA2B			
C407	1-126-943-11	ELECT	2200uF	20%	25V	D408	8-719-024-99	DIODE 11ES2-NTA2B			
C408	1-126-943-11	ELECT	2200uF	20%	25V	D409	8-719-987-63	DIODE 1N4148M			
C409	1-126-925-11	ELECT	470uF	20%	10V	D410	8-719-987-63	DIODE 1N4148M			
C410	1-164-159-11	CERAMIC	0.1uF		50V	D411	8-719-987-63	DIODE 1N4148M			
C411	1-126-964-11	ELECT	10uF	20%	50V	D412	8-719-987-63	DIODE 1N4148M			
C412	1-126-964-11	ELECT	10uF	20%	50V	D414	8-719-987-63	DIODE 1N4148M			
C413	1-126-967-11	ELECT	47uF	20%	50V			< TERMINAL >			
C414	1-126-967-11	ELECT	47uF	20%	50V	* E401	4-962-200-01	PLATE (TR), GROUND			
C415	1-161-494-00	CERAMIC	0.022uF		25V	E402	1-537-770-21	TERMINAL BOARD, GROUND			
C416	1-161-494-00	CERAMIC	0.022uF		25V			< IC >			
C417	1-126-952-11	ELECT	1000uF	20%	16V	IC201	8-759-805-14	IC LC7822			
C418	1-164-097-11	CERAMIC	0.022uF		50V	IC202	8-759-248-74	IC LA2785			
C419	1-126-960-11	ELECT	1uF	20%	50V	IC203	8-759-341-23	IC LV1011			
C420	1-164-159-11	CERAMIC	0.1uF		50V	IC204	8-759-634-51	IC M5218AP			
C421	1-126-964-11	ELECT	10uF	20%	50V	IC301	8-759-634-51	IC M5218AP			
C422	1-126-956-91	ELECT	0.1uF	20%	50V	IC302	8-759-634-51	IC M5218AP			
C431	1-126-964-11	ELECT	10uF	20%	50V	IC331	8-759-502-33	IC SI18752			
C432	1-126-964-11	ELECT	10uF	20%	50V	IC381	8-759-502-33	IC SI18752			
C433	1-126-964-11	ELECT	10uF	20%	50V	IC402	8-759-231-58	IC TA7812S			
C434	1-126-964-11	ELECT	10uF	20%	50V	IC403	8-759-245-86	IC TA79012S			
C435	1-126-964-11	ELECT	10uF	20%	50V	IC404	8-759-333-83	IC NJM2103D			
C436	1-126-964-11	ELECT	10uF	20%	50V	IC801	8-759-502-33	IC SI18752			
C437	1-126-964-11	ELECT	10uF	20%	50V	IC851	8-759-502-33	IC SI18752			
C438	1-126-964-11	ELECT	10uF	20%	50V						
C800	1-126-961-11	ELECT	2.2uF	20%	50V						
C801	1-126-933-11	ELECT	100uF	20%	10V						
C802	1-136-165-00	FILM	0.1uF	5%	50V						
C803	1-162-191-31	CERAMIC	2.2PF	10%	50V						
C804	1-136-165-00	FILM	0.1uF	5%	50V						

MAIN

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
< JACK >				R25	1-249-429-11	CARBON	10K 5% 1/4W
J201	1-770-614-11	JACK, PIN 4P (AUX/VIDEO 2)		R26	1-249-429-11	CARBON	10K 5% 1/4W
J202	1-580-825-11	JACK, PIN 6P (VIDEO 1/TV)		R27	1-249-427-11	CARBON	6.8K 5% 1/4W F
J203	1-774-843-11	JACK, PIN 1P (SURROUND MIX)		R28	1-249-427-11	CARBON	6.8K 5% 1/4W F
J204	1-774-822-11	JACK, PIN 2P (SURROUND REAR)		R29	1-247-843-11	CARBON	3.3K 5% 1/4W
< COIL >				R30	1-249-411-11	CARBON	330 5% 1/4W
L11	1-410-509-11	INDUCTOR 10uH		R201	1-249-417-11	CARBON	1K 5% 1/4W F
L12	1-410-509-11	INDUCTOR 10uH		R205	1-249-417-11	CARBON	1K 5% 1/4W F
L331	1-420-872-00	COIL, AIR-CORE		R207	1-249-417-11	CARBON	1K 5% 1/4W F
L381	1-420-872-00	COIL, AIR-CORE		R209	1-249-417-11	CARBON	1K 5% 1/4W F
L401	1-410-509-11	INDUCTOR 10uH		R211	1-249-417-11	CARBON	1K 5% 1/4W F
L801	1-420-872-00	COIL, AIR-CORE		R215	1-249-441-11	CARBON	100K 5% 1/4W
L851	1-420-872-00	COIL, AIR-CORE		R221	1-249-417-11	CARBON	1K 5% 1/4W F
< TRANSISTOR >				R222	1-249-441-11	CARBON	100K 5% 1/4W
Q11	8-729-180-92	TRANSISTOR 2SD809-K		R251	1-249-417-11	CARBON	1K 5% 1/4W F
Q12	8-729-801-93	TRANSISTOR 2SD1387		R255	1-249-417-11	CARBON	1K 5% 1/4W F
Q13	8-729-661-94	TRANSISTOR RT1N141SK-TP		R257	1-249-417-11	CARBON	1K 5% 1/4W F
Q14	8-729-661-98	TRANSISTOR RT1P141SK-TP		R259	1-249-417-11	CARBON	1K 5% 1/4W F
Q15	8-729-661-94	TRANSISTOR RT1N141SK-TP		R261	1-249-417-11	CARBON	1K 5% 1/4W F
Q16	8-729-119-76	TRANSISTOR 2SA1175-HFE		R265	1-249-441-11	CARBON	100K 5% 1/4W
Q301	8-729-202-67	TRANSISTOR 2SK246-GR3		R271	1-249-417-11	CARBON	1K 5% 1/4W F
Q302	8-729-141-30	TRANSISTOR 2SC3623A-LK		R272	1-249-441-11	CARBON	100K 5% 1/4W
Q303	8-729-141-30	TRANSISTOR 2SC3623A-LK		R301	1-249-417-11	CARBON	1K 5% 1/4W F
Q304	8-729-141-30	TRANSISTOR 2SC3623A-LK		R302	1-249-421-11	CARBON	2.2K 5% 1/4W F
Q351	8-729-202-67	TRANSISTOR 2SK246-GR3		R303	1-249-429-11	CARBON	10K 5% 1/4W
Q352	8-729-141-30	TRANSISTOR 2SC3623A-LK		R304	1-249-431-11	CARBON	15K 5% 1/4W
Q353	8-729-141-30	TRANSISTOR 2SC3623A-LK		R305	1-249-417-11	CARBON	1K 5% 1/4W F
Q354	8-729-141-30	TRANSISTOR 2SC3623A-LK		R306	1-247-903-00	CARBON	1M 5% 1/4W
Q401	8-729-018-60	TRANSISTOR 2SD2012-LC		R307	1-249-441-11	CARBON	100K 5% 1/4W
Q402	8-729-620-05	TRANSISTOR 2SC2603-EF		R308	1-247-903-00	CARBON	1M 5% 1/4W
Q403	8-729-119-78	TRANSISTOR 2SC2785-HFE		R309	1-247-843-11	CARBON	3.3K 5% 1/4W
Q404	8-729-119-78	TRANSISTOR 2SC2785-HFE		R310	1-247-883-00	CARBON	150K 5% 1/4W
Q405	8-729-620-05	TRANSISTOR 2SC2603-EF		R311	1-249-427-11	CARBON	6.8K 5% 1/4W F
Q406	8-729-140-82	TRANSISTOR 2SA988-PAFAEA		R312	1-249-413-11	CARBON	470 5% 1/4W F
Q407	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA		R321	1-249-417-11	CARBON	1K 5% 1/4W F
< RESISTOR >				R322	1-249-441-11	CARBON	100K 5% 1/4W
R1	1-249-425-11	CARBON	4.7K 5% 1/4W F	R323	1-249-421-11	CARBON	2.2K 5% 1/4W F
R11	1-249-407-11	CARBON	150 5% 1/4W F	R324	1-249-429-11	CARBON	10K 5% 1/4W
R12	1-249-431-11	CARBON	15K 5% 1/4W	R325	1-249-417-11	CARBON	1K 5% 1/4W F
R13	1-249-435-11	CARBON	33K 5% 1/4W	R330	1-249-417-11	CARBON	1K 5% 1/4W F
R14	1-247-903-00	CARBON	1M 5% 1/4W	R332	1-249-433-11	CARBON	22K 5% 1/4W
R15	1-249-441-11	CARBON	100K 5% 1/4W	R333	1-249-411-11	CARBON	330 5% 1/4W
R16	1-249-421-11	CARBON	2.2K 5% 1/4W F	R334	1-249-433-11	CARBON	22K 5% 1/4W
R17	1-249-421-11	CARBON	2.2K 5% 1/4W F	△ R336	1-249-389-11	CARBON	4.7 5% 1/4W F
R18	1-249-421-11	CARBON	2.2K 5% 1/4W F	△ R337	1-249-393-11	CARBON	10 5% 1/4W F
R19	1-249-421-11	CARBON	2.2K 5% 1/4W F	R340	1-249-429-11	CARBON	10K 5% 1/4W
R20	1-249-417-11	CARBON	1K 5% 1/4W F	R341	1-249-437-11	CARBON	47K 5% 1/4W
R21	1-249-417-11	CARBON	1K 5% 1/4W F	R351	1-249-417-11	CARBON	1K 5% 1/4W F
R22	1-249-441-11	CARBON	100K 5% 1/4W	R352	1-249-421-11	CARBON	2.2K 5% 1/4W F
R23	1-247-903-00	CARBON	1M 5% 1/4W	R353	1-249-429-11	CARBON	10K 5% 1/4W
R24	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 POWER POWER CONNECTION

Ref. No.	Part No.	Description			Remarks
R354	1-249-431-11	CARBON	15K	5%	1/4W
R355	1-249-417-11	CARBON	1K	5%	1/4W F
R356	1-247-903-00	CARBON	1M	5%	1/4W
R357	1-249-441-11	CARBON	100K	5%	1/4W
R358	1-247-903-00	CARBON	1M	5%	1/4W
R359	1-247-843-11	CARBON	3.3K	5%	1/4W
R360	1-247-883-00	CARBON	150K	5%	1/4W
R361	1-249-427-11	CARBON	6.8K	5%	1/4W F
R362	1-249-413-11	CARBON	470	5%	1/4W F
R371	1-249-417-11	CARBON	1K	5%	1/4W F
R372	1-249-441-11	CARBON	100K	5%	1/4W
R373	1-249-421-11	CARBON	2.2K	5%	1/4W F
R374	1-249-429-11	CARBON	10K	5%	1/4W
R375	1-249-417-11	CARBON	1K	5%	1/4W F
R380	1-249-417-11	CARBON	1K	5%	1/4W F
R382	1-249-433-11	CARBON	22K	5%	1/4W
R383	1-249-411-11	CARBON	330	5%	1/4W
R384	1-249-433-11	CARBON	22K	5%	1/4W
△R386	1-249-389-11	CARBON	4.7	5%	1/4W F
△R387	1-249-393-11	CARBON	10	5%	1/4W F
R390	1-249-429-11	CARBON	10K	5%	1/4W
R391	1-249-437-11	CARBON	47K	5%	1/4W
R403	1-249-429-11	CARBON	10K	5%	1/4W
R404	1-249-429-11	CARBON	10K	5%	1/4W
R405	1-249-429-11	CARBON	10K	5%	1/4W
△R406	1-249-393-11	CARBON	10	5%	1/4W F
△R407	1-249-393-11	CARBON	10	5%	1/4W F
R408	1-249-421-11	CARBON	2.2K	5%	1/4W F
R409	1-249-429-11	CARBON	10K	5%	1/4W
R410	1-249-429-11	CARBON	10K	5%	1/4W
R411	1-247-843-11	CARBON	3.3K	5%	1/4W
R412	1-249-439-11	CARBON	68K	5%	1/4W
R413	1-249-433-11	CARBON	22K	5%	1/4W
R414	1-249-429-11	CARBON	10K	5%	1/4W
R415	1-247-843-11	CARBON	3.3K	5%	1/4W
R416	1-249-417-11	CARBON	1K	5%	1/4W F
R417	1-249-429-11	CARBON	10K	5%	1/4W
R418	1-249-429-11	CARBON	10K	5%	1/4W
R419	1-249-425-11	CARBON	4.7K	5%	1/4W F
R420	1-249-425-11	CARBON	4.7K	5%	1/4W F
△R421	1-215-887-00	METAL OXIDE	150	5%	2W F
△R422	1-215-887-00	METAL OXIDE	150	5%	2W F
R423	1-249-435-11	CARBON	33K	5%	1/4W
R424	1-249-427-11	CARBON	6.8K	5%	1/4W F
R441	1-247-807-31	CARBON	100	5%	1/4W
R442	1-247-807-31	CARBON	100	5%	1/4W
R443	1-247-807-31	CARBON	100	5%	1/4W
R444	1-247-807-31	CARBON	100	5%	1/4W
R800	1-249-417-11	CARBON	1K	5%	1/4W F
R802	1-249-433-11	CARBON	22K	5%	1/4W
R803	1-249-411-11	CARBON	330	5%	1/4W
R804	1-249-433-11	CARBON	22K	5%	1/4W
△R806	1-249-389-11	CARBON	4.7	5%	1/4W F
△R807	1-249-393-11	CARBON	10	5%	1/4W F
R810	1-249-429-11	CARBON	10K	5%	1/4W

Ref. No.	Part No.	Description			Remarks
R813	1-249-437-11	CARBON	47K	5%	1/4W
R850	1-249-417-11	CARBON	1K	5%	1/4W F
R852	1-249-433-11	CARBON	22K	5%	1/4W
R853	1-249-411-11	CARBON	330	5%	1/4W
R854	1-249-433-11	CARBON	22K	5%	1/4W
△R856	1-249-389-11	CARBON	4.7	5%	1/4W F
△R857	1-249-393-11	CARBON	10	5%	1/4W F
R860	1-249-417-11	CARBON	1K	5%	1/4W F
R861	1-249-429-11	CARBON	10K	5%	1/4W
R862	1-249-417-11	CARBON	1K	5%	1/4W F
R863	1-249-437-11	CARBON	47K	5%	1/4W
		< RELAY >			
RY401	1-515-920-11	RELAY (24V)			
RY402	1-515-920-11	RELAY (24V)			
		< TERMINAL >			
TB201	1-537-925-31	TERMINAL BOARD(FRONT SPEAKERS)			
TB202	1-537-923-11	TERMINAL BOARD(6P) (REAR/CENTER SPEAKERS)			
		< VIBRATOR >			
X11	1-579-952-21	VIBRATOR, CERAMIC (8MHz)			

*	1-664-611-11	POWER BOARD			

		< CONNECTOR >			
CN101	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P			
CN102	1-564-321-00	PIN, CONNECTOR 2P			
* CN103	1-565-495-11	CONNECTOR, BOARD TO BOARD 4P			
		< DIODE >			
D101	8-719-987-63	DIODE 1N4148M			
		< RELAY >			
△RY101	1-755-018-11	RELAY			
		< TRANSFORMER >			
△T101	1-431-145-11	TRANSFORMER, POWER			

*	1-659-839-11	POWER CONNECTION BOARD			

		< CONNECTOR >			
* CN613	1-565-480-11	CONNECTOR, BOARD TO BOARD 4P			
* CN614	1-565-480-11	CONNECTOR, BOARD TO BOARD 4P			

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

POWER CONNECTION

POWER SWITCH

TRANS

VOLUME

Ref. No.	Part No.	Description	Remarks
		< RESISTOR >	
△R439	1-217-477-00	FUSIBLE 4.7 5% 1W F	
△R440	1-217-477-00	FUSIBLE 4.7 5% 1W F	

*	1-664-610-11	POWER SWITCH BOARD *****	
		< CONNECTOR >	
* CN505	1-506-509-11	PIN, CONNECTOR 4P	
		< DIODE >	
D547	8-719-812-44	LED TLO124 (STANDBY)	
		< RESISTOR >	
R552	1-249-393-11	CARBON 10 5% 1/4W F	
		< SWITCH >	
S515	1-554-118-00	SWITCH, PUSH (1 KEY) (POWER)	

*	1-664-612-11	TRANS BOARD *****	
	1-533-293-11	FUSE HOLDER	
		< CONNECTOR >	
CN152	1-691-768-11	PLUG (MICRO CONNECTOR) 6P	
		< FUSE >	
△F151	1-532-501-51	FUSE (T800mA/250V)	
△F152	1-532-465-51	FUSE, TIME LAG (T3.15A/250V)	
△F153	1-532-465-51	FUSE, TIME LAG (T3.15A/250V)	
		< TRANSFORMER >	
△T151	1-431-146-11	TRANSFORMER, POWER	

Ref. No.	Part No.	Description	Remarks
*	1-664-608-11	VOLUME BOARD *****	
		< CAPACITOR >	
C611	1-126-964-11	ELECT 10uF 20% 50V	
		< CONNECTOR >	
CN611	1-695-094-11	SOCKET, CONNECTOR 11P	
CN612	1-691-768-11	PLUG (MICRO CONNECTOR) 6P	
		< IC >	
IC611	8-759-962-08	IC BA6208	
		< RESISTOR >	
R611	1-249-429-11	CARBON 10K 5% 1/4W	
R612	1-249-429-11	CARBON 10K 5% 1/4W	
		< VARIABLE RESISTOR >	
RV611	1-225-183-11	RES, VAR, CARBON 100KX4 (MASTER VOLUME)	

		MISCELLANEOUS *****	
11	1-773-215-11	WIRE (FLAT TYPE) (25 CORE)	
53	1-533-293-11	FUSE HOLDER	
△60	1-696-571-11	CORD, POWER (UK)	
△60	1-777-071-11	CORD, POWER (AEP, G, EE)	
△F151	1-532-501-51	FUSE (T800mA/250V)	
△F152	1-532-465-51	FUSE, TIME LAG (T3.15A/250V)	
△F153	1-532-465-51	FUSE, TIME LAG (T3.15A/250V)	
△T101	1-431-145-11	TRANSFORMER, POWER	
△T151	1-431-146-11	TRANSFORMER, POWER	

		ACCESSORIES & PACKING MATERIALS *****	
	1-475-042-11	ADAPTOR	
	1-475-155-11	REMOTE COMMANDER (RM-UE110)	
	3-858-974-11	MANUAL, INSTRUCTION (ENGLISH/FRENCH/SPANISH/PORTUGUESE/DANISH/FINNISH)	
	3-858-974-21	MANUAL, INSTRUCTION (GERMAN/DUTCH/SWEDISH/ITALIAN)(AEP, G)	
	4-981-643-01	COVER, BATTERY (RM-UE110)	

		***** HARDWARE LIST *****	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 TT(B)	
#2	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT,	
#3	7-685-880-09	SCREW +BVTT 4X6 (S)	
#4	7-685-872-09	SCREW +BVTT 3X8 (S)	

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