

STR-DE515

SERVICE MANUAL

AEP Model
UK Model



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SPECIFICATIONS

Amplifier section		Outputs	TAPE/MD REC OUT : Voltage : 150mV, Impedance : 10 kilohms	Usable sensitivity	11.2 dBf, 1 μ V /75ohms (IHF)
Power output			VIDEO AUDIO OUT : Voltage : 150mV, Impedance : 10 kilohms	S/N	Mono : 76dB Stereo : 70dB
Stereo mode	(DIN 1kHz, 4ohms) 110W + 110W		WOOFER Voltage : 2V Impedance : 10 kilohms	Harmonic distortion at 1kHz	Mono : 0.3% Stereo : 0.5%
Surround mode	(DIN 1kHz, 4ohms) Front : 90W/ch Center : 90W Rear : (DIN 1kHz, 8ohms) 30Wch		PHONES : Accepts low and high impedance headphones	Separation	45dB at 1kHz
Frequency response	PHONO : RIAA equalization curve ± 0.5 dB TV/LD, CD, TAPE/MD, VIDEO, 5.1/DVD : 10Hz - 50kHz ± 1 dB	Muting	Full mute	Frequency response	30Hz - 15kHz $^{+0.5}_{-2}$ dB
Inputs		BASS BOOST	+ 10dB at 70Hz	Selectivity	60dB at 400kHz
	Sensitivity Impedance S/N (weighting network, input level)	TONE	± 8 dB at 100Hz and 10kHz	AM tuner section	
PHONO (MM)	2.5mV 50 74dB Kilohms 72dB*** (A, 2.5mV)	FM tuner section		Tuning range	522 - 1611 kHz
CD, 5.1/DVD	200mV	Tuning range	87.5 - 108.0MHz	Aerial	Loop aerial
TAPE/MD, TV/LD, VIDEO	150mV 50 82dB Kilohms 82dB*** (A, 150mV)	Aerial terminals	75ohms, unbalanced	Usable sensitivity	50dB/m (at 999kHz)
		Sensitivity	Mono : 18.3 dBf, 2.2 μ V /75ohms Stereo : 38.3 dBf, 22.5 μ V /75ohms	S/N	54dB (at 50mV/m)
				Harmonic distortion	0.5% (50mV/m, 400Hz)

***78 IHF

— Continued on next page —

FM STEREO/FM-AM RECEIVER



SONY®

TABLE OF CONTENTS

Selectivity	35dB
General System	Tuner section : PLL quartz-locked digital synthesizer system Preamplifier section : Low-noise NF type equalizer Power amplifier section : Pure-complimentary SEPP
Power requirements	230V AC, 50/60Hz
Power consumption	230W
AC outlets	Switched 100W
Dimensions	430 × 145 × 295mm
Mass (Approx.)	7.2kg
Supplied accessories	FM wire aerial (1) AM loop aerial (1) Remote controller (remote) (1) Size AA (R6) batteries (2) Scart adaptor (1)

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5. ELECTRICAL PARTS LIST

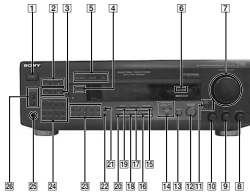
Design and specifications are subject to change without notice.

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.

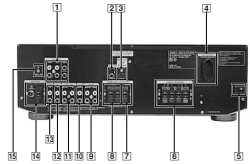
SECTION 1 GENERAL

LOCATION AND FUNCTION OF CONTROLS -FRONT-



- | | |
|--------------------------------|---|
| 1 POWER switch | 16 EFFECT/DELAY TIME, SET UP, 5.1/DVD INPUT buttons |
| 2 CENTER LEVEL +, - buttons | 17 TAPE/MD button |
| 3 REAR LEVEL +, - buttons | 18 PHONO button |
| 4 STANDBY indicator | 19 TV, LD button |
| 5 FUNCTION indicators | 20 TUNER button |
| 6 5.1 INPUT indicator | 21 VIDEO button |
| 7 MASTER VOLUME control | 22 CD button |
| 8 BALANCE control | 23 DIRECT button |
| 9 TREBLE control | 24 SHIFT button |
| 10 BASS control | 25 Numeric buttons |
| 11 BASS BOOST button/indicator | 26 Tuner control buttons |
| 12 SURROUND ON/OFF button | 27 PHONES jack |
| 13 MODE button | 28 SPEAKERS (A/B) buttons |

-REAR-



- | | |
|--|--------------------|
| 1 5.1 INPUT (FRONT/REAR/CENTER/WOOFER) | 6 VIDEO |
| 2 WOOFER | 7 TV, LD |
| 3 WIRELESS REAR SPEAKER | 8 TAPE/MD |
| 4 AC OUTLET | 9 CD |
| 5 AC power cord | 10 PHONO |
| 6 FRONT SPEAKERS (A/B) | 11 ANTENNA (FM/AM) |
| 7 SURROUND SPEAKERS (CENTER) | 12 SIGNAL GND |
| 8 SURROUND SPEAKERS (REAR) | |

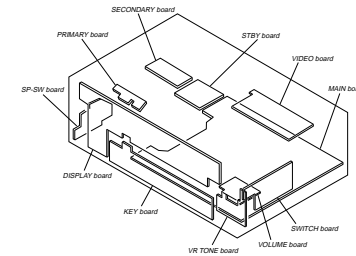
SECTION 2 EXPLANATION OF IC TERMINALS

IC201 : μ PD78044FGF-064-3BS

Pin No.	Pin Name	IO	Description
1	DM27	O	
2	DM28	O	
3	DM25	O	
4	DM24	O	Fluorescent indicator tube drive.
5	DM23	O	
6	DM22	O	
7	DM21	O	
8	AV	—	Power supply (+5V).
9	S-CLK	I	System clock.
10	S-DATA	I	System data.
11	PLL-DATA	I	PLL data input from TU001.
12	S-CLK(1/200)	O	Chip enable output.
13	S-CLK(1/700)	O	Chip enable output.
14	REARBY	I	Input for model select.
15	BRIDGE CABLE	O	Standby relay ON/OFF control.
16	PROTECT	I	Protector detect input.
17	RESET	I	System reset terminal.
18	AUTO STOP	I	Auto stop detect input.
19	STEREO IN	I	Stereo detect input.
20	AVC	—	Ground.
21	SR-RY	O	Speaker relay drive.
22	SR-RY	O	Surround Relay.
23	POWER-RY	O	Power relay drive.
24	NC	—	Not used.
25	SIGNAL	I	A/D signal input terminal.
26	A-D3	I	A/D3 key input terminal.
27	A-D2	I	A/D2 key input terminal.
28	A-D1	I	A/D1 key input terminal.
29	AVD2	—	Power supply (+5V).
30	AV-REF	—	Reference voltage (+5V).
31	GND	—	Ground.
32	NC	—	Not used (Open).
33	Vcc	—	Ground.
34	X1	I	System clock (4.19MHz).
35	X2	O	System clock (4.19MHz).
36	M-MUTE	O	Mute drive output for AP22381V (IC701).
37	PHOTO-LED	O	Photo-LED drive.
38	CSTUDIO	O	CINEMA STUDIO LED drive.
39	HALL	O	Hall LED drive.
40	T-MUTE	O	Tuner mute drive output.

SECTION 3 DIAGRAMS

3-1. CIRCUIT BOARDS LOCATION

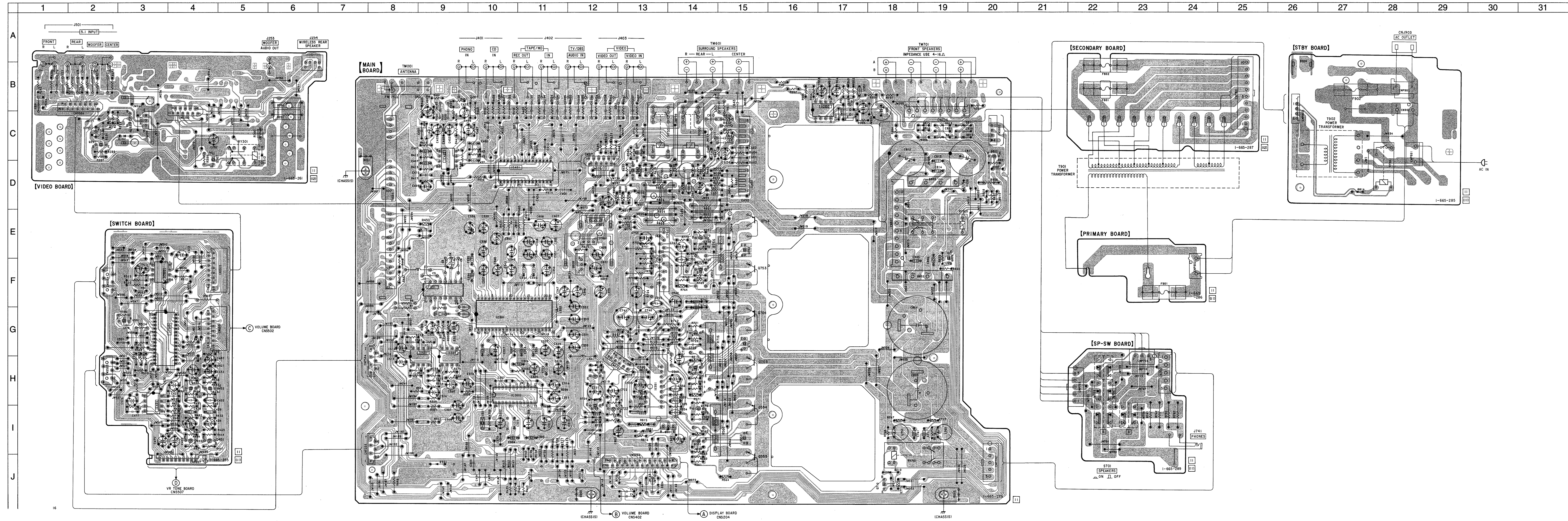


Pin No.	Pin Name	IO	Description
41	VOLUME UP	O	Volume up.
42	VOLUME DOWN	O	Volume down.
43	STANDBY	O	Standby LED drive.
44	SYN POWER	I	System power ON/OFF.
45	RDS-DATA_IN	I	RDS data input terminal.
46	RDS-CLK_IN	I	RDS clock input terminal.
47	STOP	I	Stop signal input from NMD103D (IC950).
48	Vcc	—	Ground.
49	SDRES	—	One signal input.
50	POWER SW	I	Power switch input terminal.
51	5.1ch LED	O	5.1ch input LED.
52	5V	—	Power supply (+5V).
53	BASS BOOST	O	Bass boost LED drive.
54	FUNC MUTE	O	Line mute drive.
55	SL MUTE	O	Surround Lch mute.
56	VERSION	I	Input for model select.
57	K14	I	Key in 4.
58	K13	I	Key in 3.
59	K12	I	Key in 2.
60	K11	I	Key in 1.
61	SR MUTE	O	Surround Rch mute.
62	S15	O	Key out 15.
63	S14	O	Key out 14.
64	S13	O	Key out 13.
65	S12	O	Key out 12.
66	S11	O	Key out 11. Fluorescent indicator tube drive.
67	S10	O	Key out 10.
68	S9	O	Key out 9.
69	S8	O	Key out 8.
70	S7	O	Key out 7.
71	VLOAD	—	Connect to -24V.
72	S6	O	Key out 6.
73	S5	O	Key out 5.
74	S4	O	Key out 4. Fluorescent indicator tube drive.
75	S3	O	Key out 3.
76	S2	O	Key out 2.
77	S1	O	Key out 1.
78	DM10	O	
79	DM9	O	Fluorescent indicator tube drive.
80	DM8	O	

3-2. PRINTED WIRING BOARDS (MAIN SECTION)

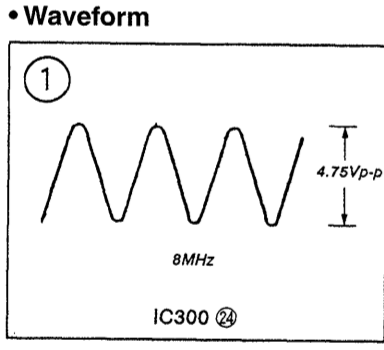
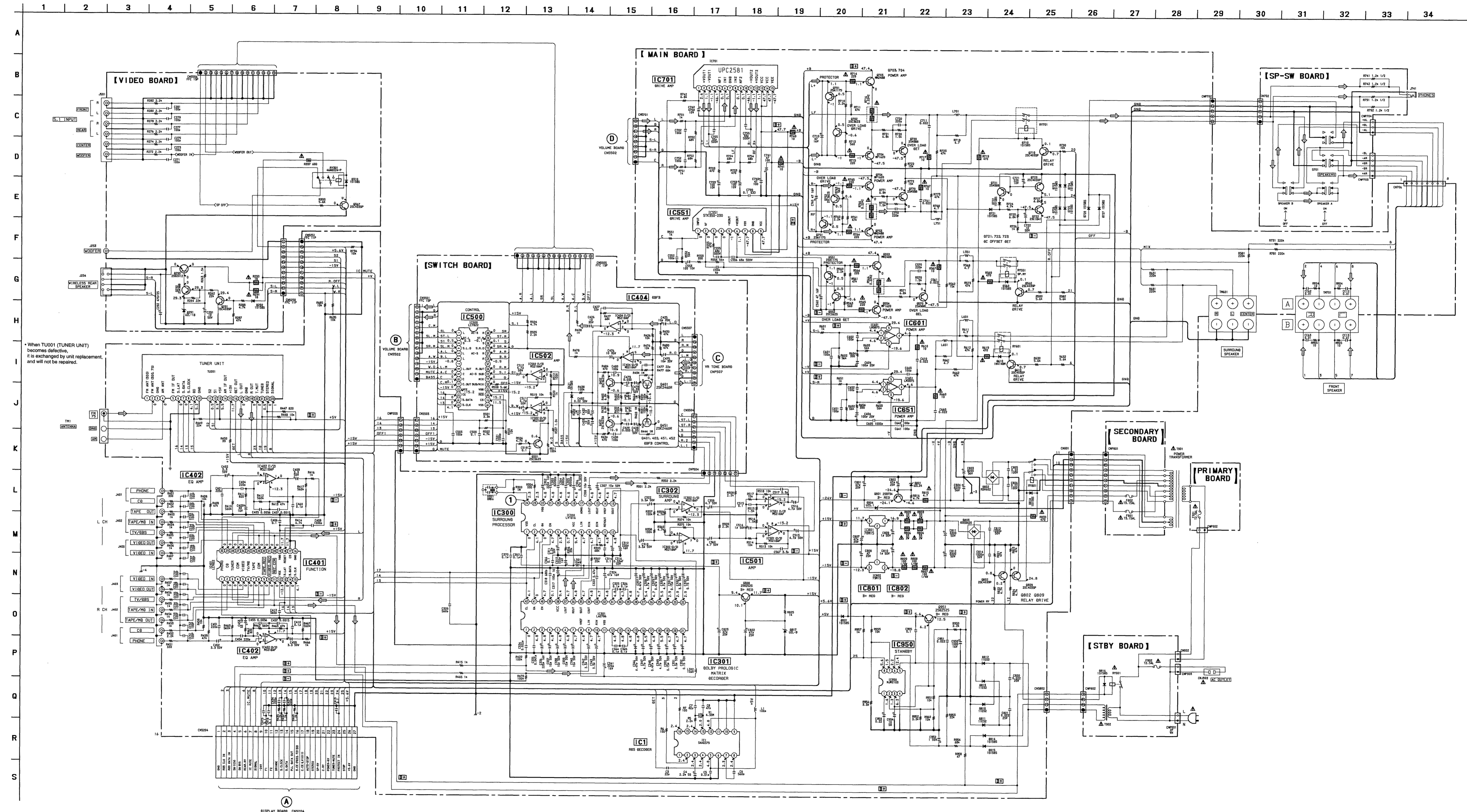
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D291	C-2	IC651	D-15
D292	C-3	IC701	E-13
D310	C-5	IC801	E-12
D421	H-4	IC802	E-12
D560	C-13	IC950	B-17
D610	D-13		
D710	J-18	Q291	C-2
D721	H-12	Q292	C-3
D722	H-12	Q293	C-3
D723	I-12	Q367	C-4
D724	I-12	Q401	I-4
D725	I-12	Q402	H-4
D726	I-12	Q451	I-4
D727	I-11	Q452	H-4
D728	I-11	Q501	G-3
D801	I-13	Q551	I-14
D802	F-19	Q552	I-15
D803	D-19	Q553	I-15
D804	J-13	Q554	H-15
D810	C-19	Q560	C-13
D811	C-19	Q570	H-14
D812	C-19	Q610	D-13
D813	C-19	Q701	H-14
D814	C-19	Q702	G-15
D815	C-19	Q703	H-15
D816	D-27	Q704	G-15
D817	F-12	Q710	J-18
D818	D-20	Q720	G-14
D901	J-9	Q721	H-12
		Q722	H-12
		Q723	H-12
IC1	F-9	Q751	E-14
IC300	H-10	Q752	E-15
IC301	G-10	Q753	F-15
IC302	G-9	Q754	E-15
IC401	D-11	Q770	E-14
IC402	H-13	Q801	I-13
IC404	H-3	Q802	C-20
IC500	G-4	Q808	F-12
IC502	F-3	Q809	E-19
IC551	H-13	Q951	B-17
IC601	C-15		



Note:
 • — : Parts extracted from the component side.
 • — : Pattern on the side which is seen.

3-3. SCHEMATIC DIAGRAM (MAIN SECTION) • Refer to page 17 for IC Block Diagrams.

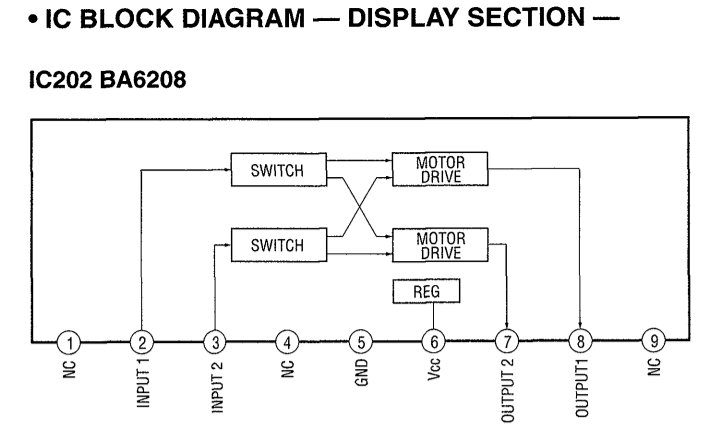
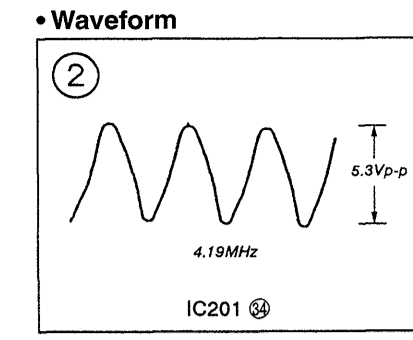
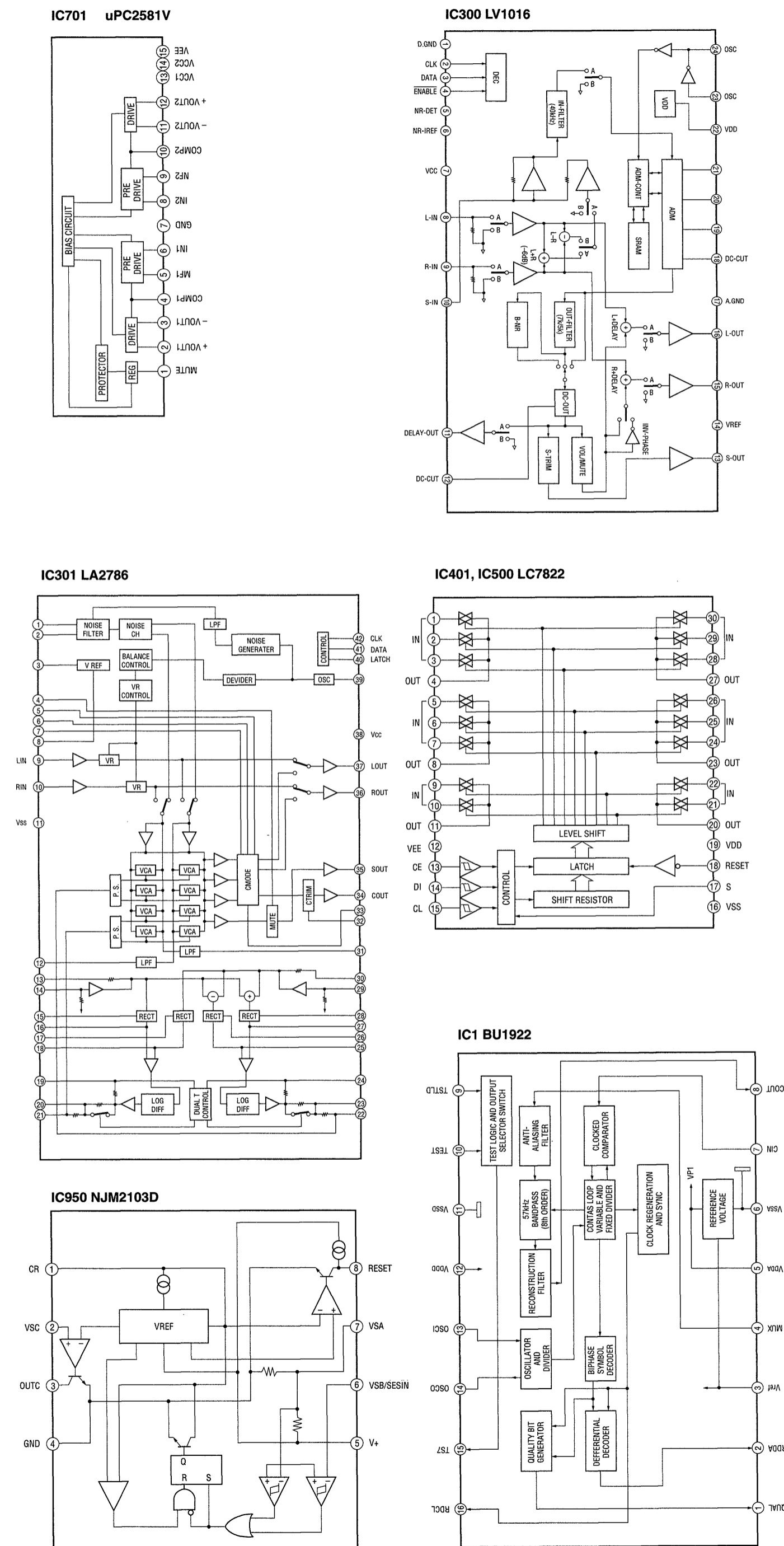


Note:

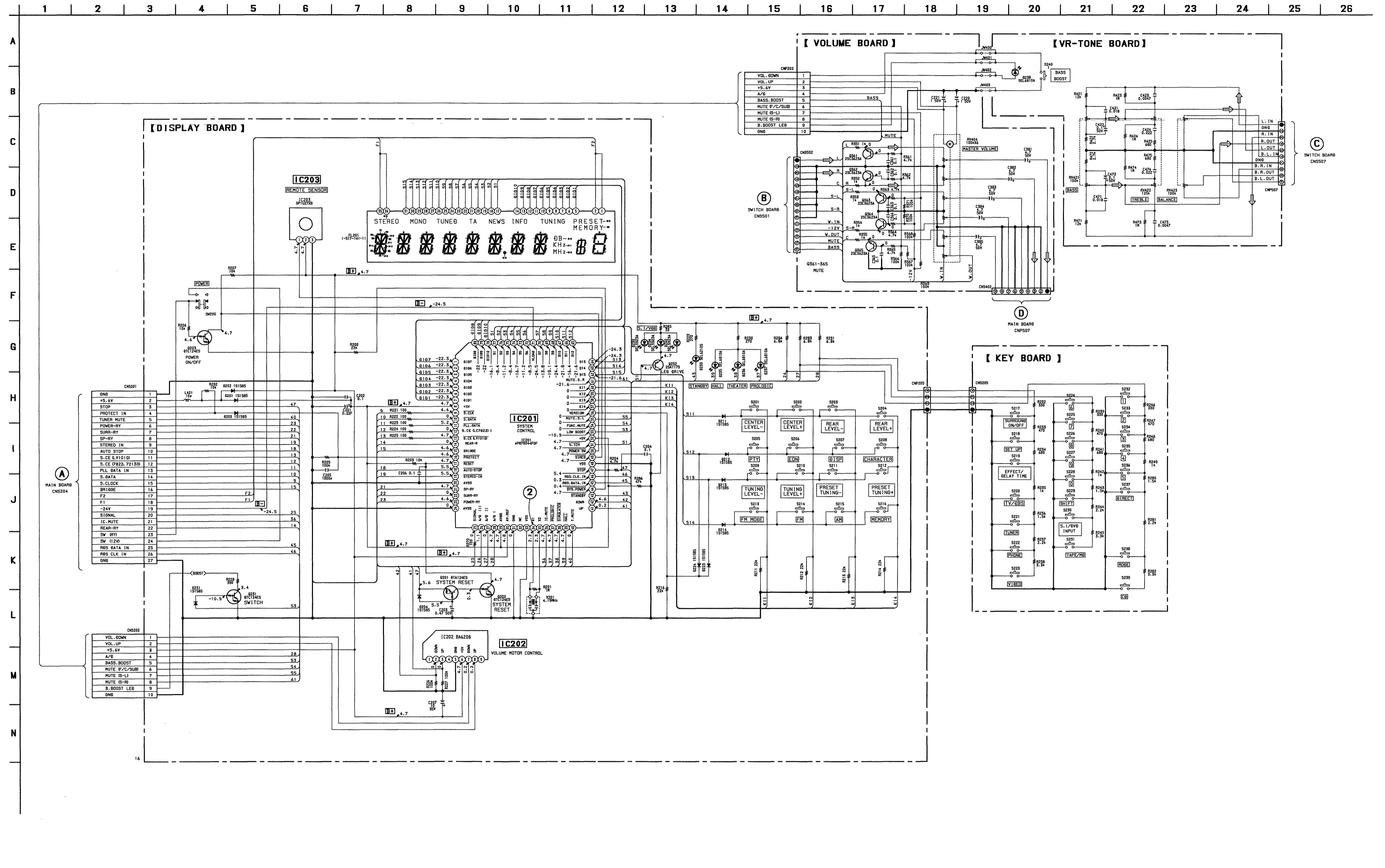
- All capacitors are in μF unless otherwise noted. pF: μF F 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- Δ : Internal component.
- \square : B+ Line.
- \square : B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- No mark: FM
- Voltages are taken with a VOM (Input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
- \rightarrow : FM

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

• IC BLOCK DIAGRAMS — MAIN SECTION —



3-4. SCHEMATIC DIAGRAM (DISPLAY SECTION)

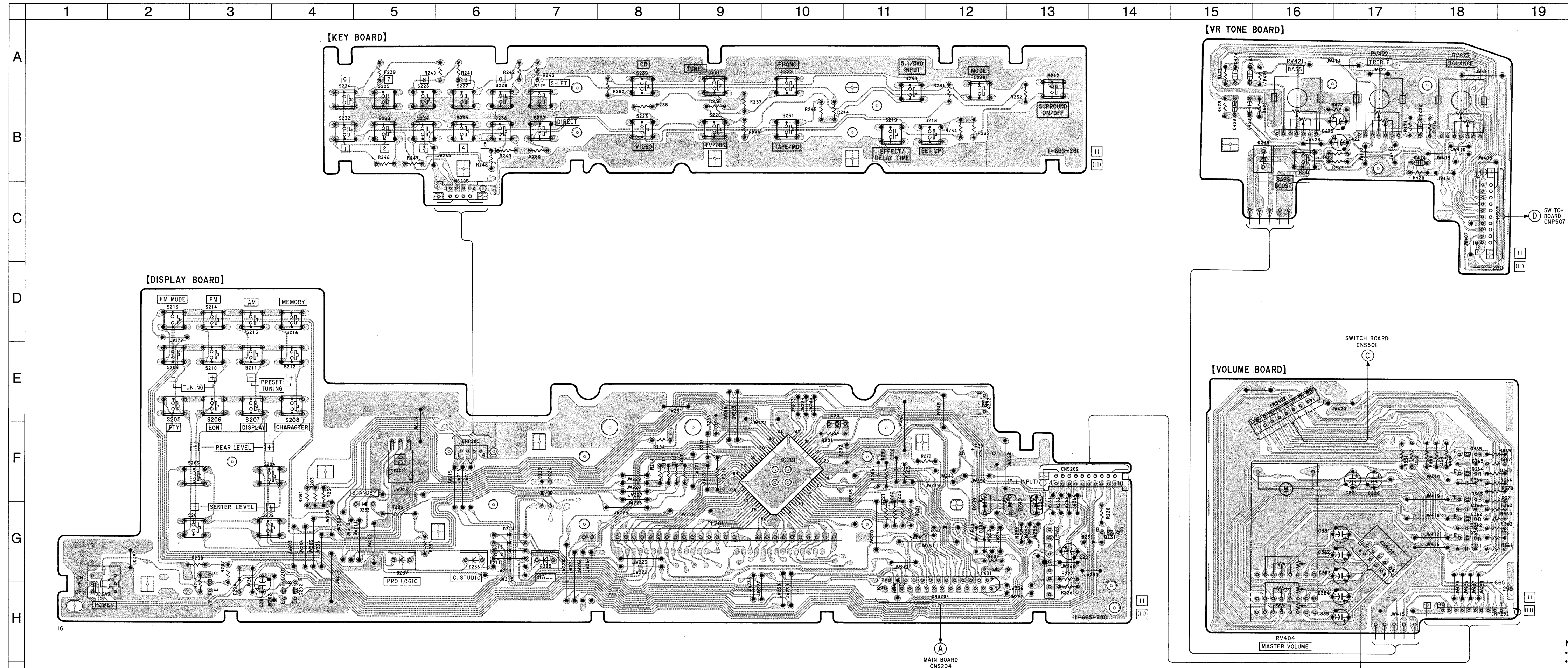


Note:

- 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 1/4W or less unless otherwise specified.
- Δ : Internal component.
- \square : B+ Line.
- \square : B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- No mark: FM

- Voltages are taken with a VOM (Input impedance 10M Ω).
- Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope.
- Voltage variations may be noted due to normal production tolerances.
- \square : B+ Line.
- \square : B- Line.
- Circled numbers refer to waveforms.
- Signal paths.
- \square : FM

3-5. PRINTED WIRING BOARDS (DISPLAY SECTION)



• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D201	G-12	D420	G-13
D202	G-12	IC201	F-10
D203	G-12	IC202	G-20
D204	H-3	IC203	F-5
D211	G-6		
D212	G-6		
D213	G-6	Q201	H-4
D214	G-6	Q202	H-4
D223	F-7	Q203	H-3
D221	G-14	Q231	G-14
D233	G-5	Q232	E-12
D234	G-13	Q361	G-18
D235	G-7	Q362	G-18
D236	G-6	Q363	G-18
D237	G-5	Q364	F-18
D238	B-16	Q365	F-18
D239	G-12		

Note:
 • : Parts extracted from the component side.
 • : Pattern on the side which is seen.

Ref. No.	Part No.	Description	Remarks			Ref. No.	Part No.	Description	Remarks		
C335	1-136-161-00	FILM	0.047uF	5%	50V	C567	1-162-193-31	CERAMIC	3.3PF	10%	50V
C336	1-126-934-11	ELECT	220uF	20%	16V	C570	1-162-286-21	CERAMIC	220PF	10%	50V
C337	1-126-964-11	ELECT	10uF	20%	50V	C601	1-162-282-31	CERAMIC	100PF	10%	50V
C338	1-126-964-11	ELECT	10uF	20%	50V	C602	1-162-282-31	CERAMIC	100PF	10%	50V
C339	1-126-964-11	ELECT	10uF	20%	50V	C604	1-104-665-11	ELECT	100uF	20%	25V
C340	1-126-964-11	ELECT	10uF	20%	50V	C605	1-162-294-31	CERAMIC	0.001uF	10%	50V
C341	1-126-934-11	ELECT	220uF	20%	16V	C610	1-137-372-11	FILM	0.022uF	5%	50V
C342	1-126-962-11	ELECT	3.3uF	20%	50V	C641	1-162-282-31	CERAMIC	100PF	10%	50V
C343	1-126-962-11	ELECT	3.3uF	20%	50V	C642	1-162-282-31	CERAMIC	100PF	10%	50V
C344	1-136-165-00	FILM	0.1uF	5%	50V	C643	1-162-282-31	CERAMIC	100PF	10%	50V
C345	1-136-165-00	FILM	0.1uF	5%	50V	C651	1-162-282-31	CERAMIC	100PF	10%	50V
C346	1-126-959-11	ELECT	0.47uF	20%	50V	C652	1-162-282-31	CERAMIC	100PF	10%	50V
C347	1-126-963-11	ELECT	4.7uF	20%	50V	C654	1-104-665-11	ELECT	100uF	20%	25V
C348	1-126-959-11	ELECT	0.47uF	20%	50V	C660	1-137-372-11	FILM	0.022uF	5%	50V
C349	1-126-963-11	ELECT	4.7uF	20%	50V	C702	1-162-282-31	CERAMIC	100PF	10%	50V
C350	1-124-250-11	ELECT	0.15uF	20%	50V	C703	1-126-933-11	ELECT	100uF	20%	10V
C351	1-126-962-11	ELECT	3.3uF	20%	50V	C705	1-102-233-00	CERAMIC	33PF	10%	500V
C352	1-124-250-11	ELECT	0.15uF	20%	50V	C710	1-126-967-11	ELECT	47uF	20%	16V
C357	1-164-159-21	CERAMIC	0.1uF		50V	C711	1-137-372-11	FILM	0.022uF	5%	50V
C359	1-126-963-11	ELECT	4.7uF	20%	50V	C720	1-162-286-21	CERAMIC	220PF	10%	50V
C360	1-126-963-11	ELECT	4.7uF	20%	50V	C721	1-126-923-11	ELECT	220uF	20%	10V
C365	1-126-966-11	ELECT	33uF	20%	16V	C722	1-126-964-11	ELECT	10uF	20%	50V
C366	1-164-159-21	CERAMIC	0.1uF		50V	C740	1-128-562-11	ELECT	47uF	20%	100V
C370	1-164-159-21	CERAMIC	0.1uF		50V	C741	1-128-562-11	ELECT	47uF	20%	100V
C401	1-162-286-21	CERAMIC	220PF	10%	50V	C742	1-126-925-11	ELECT	470uF	20%	10V
C402	1-126-962-11	ELECT	3.3uF	20%	50V	C752	1-162-282-31	CERAMIC	100PF	10%	50V
C403	1-126-966-11	ELECT	33uF	20%	16V	C753	1-126-933-11	ELECT	100uF	20%	10V
C404	1-162-286-21	CERAMIC	220PF	10%	50V	C755	1-102-233-00	CERAMIC	33PF	10%	500V
C405	1-137-459-11	FILM	0.0056uF	5%	100V	C760	1-126-967-11	ELECT	47uF	20%	16V
C406	1-164-159-21	CERAMIC	0.1uF		50V	C761	1-137-372-11	FILM	0.022uF	5%	50V
C407	1-137-365-11	FILM	0.0015uF	5%	50V	C770	1-162-286-21	CERAMIC	220PF	10%	50V
C408	1-162-294-31	CERAMIC	0.001uF	10%	50V	C799	1-164-159-21	CERAMIC	0.1uF		50V
C409	1-126-962-11	ELECT	3.3uF	20%	50V	C801	1-104-664-11	ELECT	47uF	20%	25V
C410	1-164-159-21	CERAMIC	0.1uF		50V	C802	1-104-664-11	ELECT	47uF	20%	25V
C412	1-162-291-31	CERAMIC	560PF	10%	50V	C803	1-125-556-11	ELECT(BLOCK)	8200uF	20%	56V
C413	1-164-159-21	CERAMIC	0.1uF		50V	C804	1-125-556-11	ELECT(BLOCK)	8200uF	20%	56V
C415	1-164-159-21	CERAMIC	0.1uF		50V	C805	1-130-781-00	FILM	0.22uF	10%	100V
C416	1-164-159-21	CERAMIC	0.1uF		50V	C806	1-130-781-00	FILM	0.22uF	10%	100V
C434	1-162-286-21	CERAMIC	220PF	10%	50V	C807	1-104-664-11	ELECT	47uF	20%	25V
C435	1-162-286-21	CERAMIC	220PF	10%	50V	C808	1-104-664-11	ELECT	47uF	20%	25V
C451	1-162-286-21	CERAMIC	220PF	10%	50V	C809	1-126-960-11	ELECT	1uF	20%	50V
C452	1-126-962-11	ELECT	3.3uF	20%	50V	C810	1-126-960-11	ELECT	1uF	20%	50V
C453	1-126-966-11	ELECT	33uF	20%	16V	C811	1-126-974-11	ELECT	3300uF	20%	50V
C454	1-162-286-21	CERAMIC	220PF	10%	50V	C812	1-126-974-11	ELECT	3300uF	20%	50V
C455	1-137-459-11	FILM	0.0056uF	5%	100V	C813	1-101-001-00	CERAMIC	0.001uF		50V
C457	1-137-365-11	FILM	0.0015uF	5%	50V	C814	1-101-001-00	CERAMIC	0.001uF		50V
C459	1-126-962-11	ELECT	3.3uF	20%	50V	C820	1-161-494-00	CERAMIC	0.022uF		25V
C460	1-164-159-21	CERAMIC	0.1uF		50V	C821	1-161-494-00	CERAMIC	0.022uF		25V
C513	1-126-963-11	ELECT	4.7uF	20%	50V	C822	1-104-664-11	ELECT	47uF	20%	25V
C514	1-126-960-11	ELECT	1uF	20%	50V	C823	1-104-664-11	ELECT	47uF	20%	25V
C515	1-164-159-21	CERAMIC	0.1uF		50V	C950	1-126-767-11	ELECT	1000uF	20%	16V
C516	1-126-963-11	ELECT	4.7uF	20%	50V	C951	1-164-097-11	CERAMIC	0.022uF		50V
C517	1-162-193-31	CERAMIC	3.3PF	10%	50V	C952	1-126-960-11	ELECT	1uF	20%	50V
C552	1-162-282-31	CERAMIC	100PF	10%	50V	C953	1-124-464-11	ELECT	0.22uF	20%	50V
C553	1-126-933-11	ELECT	100uF	20%	10V	C954	1-126-795-11	ELECT	10uF	20%	50V
C554	1-164-040-11	CERAMIC	4PF	0.25PF	50V	C955	1-164-159-21	CERAMIC	0.1uF		50V
C555	1-102-989-00	CERAMIC	68PF	5%	500V	CC01	1-162-282-31	CERAMIC	100PF	10%	50V
C556	1-102-989-00	CERAMIC	68PF	5%	500V	CC02	1-162-282-31	CERAMIC	100PF	10%	50V
C560	1-126-967-11	ELECT	47uF	20%	16V	CC03	1-162-282-31	CERAMIC	100PF	10%	50V
C561	1-137-372-11	FILM	0.022uF	5%	50V	CC04	1-162-282-31	CERAMIC	100PF	10%	50V

MAIN

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
CC05	1-162-282-31	CERAMIC 100PF 10%	50V	IC402	8-759-636-74	IC M5218AP-22	
CC06	1-162-282-31	CERAMIC 100PF 10%	50V	IC551	8-749-011-16	IC STK350-230	
CC07	1-162-282-31	CERAMIC 100PF 10%	50V	IC601	8-759-085-89	IC LM3875-S	
CC51	1-162-282-31	CERAMIC 100PF 10%	50V	IC651	8-759-085-89	IC LM3875-S	
CC52	1-162-282-31	CERAMIC 100PF 10%	50V	IC701	8-759-326-52	IC uPC2581V	
CC53	1-162-282-31	CERAMIC 100PF 10%	50V	IC801	8-759-604-40	IC M5F78M15	
CC54	1-162-282-31	CERAMIC 100PF 10%	50V	IC802	8-759-604-46	IC M5F79M15	
CC55	1-162-282-31	CERAMIC 100PF 10%	50V	IC950	8-759-333-83	IC NJM2103D	
CC56	1-162-282-31	CERAMIC 100PF 10%	50V			< JACK >	
CC57	1-162-282-31	CERAMIC 100PF 10%	50V				
		< CONNECTOR >		J401	1-770-614-11	JACK, PIN 4P (PHONO/CD)	
CNP503	1-695-087-11	PIN, CONNECTOR (PC BOARD) 7P		J402	1-580-825-11	JACK, PIN 6P (TAPE/MD,TV/DBS AUDIO IN)	
CNP504	1-695-087-11	PIN, CONNECTOR (PC BOARD) 7P		J403	1-770-614-11	JACK, PIN 4P (VIDEO)	
CNP702	1-764-474-11	PIN, CONNECTOR (PC BOARD) 5P				< COIL >	
CNS204	1-569-327-11	SOCKET, CONNECTOR 27P		L1	1-410-521-11	INDUCTOR 100uH	
CNS251	1-569-060-11	SOCKET, CONNECTOR 11P		L301	1-410-509-11	INDUCTOR 10uH	
CNS701	1-568-442-11	SOCKET, CONNECTOR 9P		L302	1-410-509-11	INDUCTOR 10uH	
CNS802	1-770-480-11	SOCKET, CONNECTOR PIN 4P		L551	1-420-872-00	COIL, AIR-CORE	
		< DIODE >		L601	1-420-872-00	COIL, AIR-CORE	
D560	8-719-815-85	DIODE 1S1585		L651	1-420-872-00	COIL, AIR-CORE	
D610	8-719-815-85	DIODE 1S1585		L701	1-420-872-00	COIL, AIR-CORE	
D710	8-719-815-85	DIODE 1S1585		L751	1-420-872-00	COIL, AIR-CORE	
D721	8-719-815-85	DIODE 1S1585				< TRANSISTOR >	
D722	8-719-815-85	DIODE 1S1585		Q551	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D723	8-719-815-85	DIODE 1S1585		Q552	8-729-141-30	TRANSISTOR 2SC3623A-LK	
D724	8-719-815-85	DIODE 1S1585		Q553	8-749-010-25	IC MN2488-OPY-M	
D725	8-719-815-85	DIODE 1S1585		Q554	8-749-010-26	IC MP1620-OPY-M	
D726	8-719-815-85	DIODE 1S1585		Q560	8-729-119-78	TRANSISTOR 2SC403SP-51	
D727	8-719-815-85	DIODE 1S1585		Q570	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
D728	8-719-815-85	DIODE 1S1585		Q610	8-729-119-78	TRANSISTOR 2SC403SP-51	
D801	8-719-002-33	DIODE UZL-24L		Q701	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D802	8-719-302-38	DIODE RBV-602-01		Q702	8-729-141-30	TRANSISTOR 2SC3623A-LK	
D803	8-719-028-23	DIODE D3SBA20-4101		Q703	8-749-010-25	IC MN2488-OPY-M	
D804	8-719-010-38	DIODE UZ-5.1BSB		Q704	8-749-010-26	IC MP1620-OPY-M	
D810	8-719-200-82	DIODE 11ES2		Q710	8-729-119-78	TRANSISTOR 2SC403SP-51	
D811	8-719-200-82	DIODE 11ES2		Q720	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
D812	8-719-200-82	DIODE 11ES2		Q721	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
D813	8-719-200-82	DIODE 11ES2		Q722	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
D814	8-719-815-85	DIODE 1S1585		Q723	8-729-119-78	TRANSISTOR 2SC403SP-51	
D815	8-719-815-85	DIODE 1S1585		Q751	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D817	8-719-001-31	DIODE UZL-9H3-TA		Q752	8-729-141-30	TRANSISTOR 2SC3623A-LK	
D818	8-719-815-85	DIODE 1S1585		Q753	8-749-010-25	IC MN2488-OPY-M	
D901	8-719-815-85	DIODE 1S1585		Q754	8-749-010-26	IC MP1620-OPY-M	
		< TERMINAL >		Q770	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
* G200	1-537-738-21	TERMINAL, EARTH		Q801	8-729-140-97	TRANSISTOR 2SB734-34	
* G201	1-537-738-21	TERMINAL, EARTH		Q802	8-729-119-78	TRANSISTOR 2SC403SP-51	
* G202	1-537-738-21	TERMINAL, EARTH		Q808	8-729-030-18	TRANSISTOR 2SD2525	
		< IC >		Q809	8-729-119-78	TRANSISTOR 2SC403SP-51	
IC1	8-759-450-86	IC BU1922		Q951	8-729-030-18	TRANSISTOR 2SD2525	
IC300	8-759-442-97	IC LV1016				< RESISTOR >	
IC301	8-759-442-96	IC LA2786		R5	1-249-421-11	CARBON 2.2K 5% 1/4W F	
IC302	8-759-636-74	IC M5218AP-22		R6	1-247-807-31	CARBON 100 5% 1/4W	
IC401	8-759-805-14	IC LC7822		R7	1-247-807-31	CARBON 100 5% 1/4W	
				R298	1-249-381-11	CARBON 1 5% 1/4W F	
				R299	1-249-381-11	CARBON 1 5% 1/4W F	

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
R300	1-247-903-00	CARBON	1M 5% 1/4W	R516	1-249-419-11	CARBON	1.5K 5% 1/4W F
R301	1-249-421-11	CARBON	2.2K 5% 1/4W F	R517	1-249-429-11	CARBON	10K 5% 1/4W
R302	1-249-421-11	CARBON	2.2K 5% 1/4W F	R518	1-249-429-11	CARBON	10K 5% 1/4W
R303	1-249-439-11	CARBON	68K 5% 1/4W	R551	1-249-417-11	CARBON	1K 5% 1/4W F
R306	1-249-436-11	CARBON	39K 5% 1/4W	R552	1-249-438-11	CARBON	56K 5% 1/4W
R307	1-247-862-11	CARBON	20K 5% 1/4W	R553	1-249-412-11	CARBON	390 5% 1/4W F
R308	1-249-421-11	CARBON	2.2K 5% 1/4W F	R554	1-249-438-11	CARBON	56K 5% 1/4W
R309	1-249-421-11	CARBON	2.2K 5% 1/4W F	R555	1-249-413-11	CARBON	470 5% 1/4W F
R357	1-249-441-11	CARBON	100K 5% 1/4W	R560	1-249-421-11	CARBON	2.2K 5% 1/4W F
R358	1-249-441-11	CARBON	100K 5% 1/4W	R561	1-249-437-11	CARBON	47K 5% 1/4W
R359	1-249-425-11	CARBON	4.7K 5% 1/4W F	R562	1-249-431-11	CARBON	15K 5% 1/4W
R360	1-249-425-11	CARBON	4.7K 5% 1/4W F	R563	1-249-414-11	CARBON	560 5% 1/4W F
R363	1-249-411-11	CARBON	330 5% 1/4W	△ R564	1-249-409-11	CARBON	220 5% 1/4W F
R374	1-249-429-11	CARBON	10K 5% 1/4W	△ R565	1-249-409-11	CARBON	220 5% 1/4W F
R375	1-249-429-11	CARBON	10K 5% 1/4W	△ R566	1-233-352-21	ENCAPSULATED COMPONENT	
R401	1-249-411-11	CARBON	330 5% 1/4W	△ R567	1-249-393-11	CARBON	10 5% 1/4W F
R402	1-249-421-11	CARBON	2.2K 5% 1/4W F	R568	1-249-389-11	CARBON	4.7 5% 1/4W F
R403	1-249-417-11	CARBON	1K 5% 1/4W F	△ R569	1-249-413-11	CARBON	470 5% 1/4W F
R404	1-249-417-11	CARBON	1K 5% 1/4W F	R570	1-249-419-11	CARBON	1.5K 5% 1/4W F
R405	1-249-417-11	CARBON	1K 5% 1/4W F	R571	1-249-427-11	CARBON	6.8K 5% 1/4W F
R406	1-249-417-11	CARBON	1K 5% 1/4W F	R573	1-249-437-11	CARBON	47K 5% 1/4W
R407	1-249-417-11	CARBON	1K 5% 1/4W F	R580	1-249-426-11	CARBON	5.6K 5% 1/4W
R408	1-249-429-11	CARBON	10K 5% 1/4W	R581	1-247-887-00	CARBON	220K 5% 1/4W
R409	1-249-437-11	CARBON	47K 5% 1/4W	R582	1-249-426-11	CARBON	5.6K 5% 1/4W
R410	1-247-897-11	CARBON	560K 5% 1/4W	R601	1-249-417-11	CARBON	1K 5% 1/4W F
R411	1-249-416-11	CARBON	820 5% 1/4W F	R602	1-249-438-11	CARBON	56K 5% 1/4W
R412	1-247-897-11	CARBON	560K 5% 1/4W	R603	1-249-438-11	CARBON	56K 5% 1/4W
R413	1-249-437-11	CARBON	47K 5% 1/4W	R604	1-249-412-11	CARBON	390 5% 1/4W F
R414	1-249-425-11	CARBON	4.7K 5% 1/4W F	△ R610	1-249-393-11	CARBON	10 5% 1/4W F
R415	1-249-417-11	CARBON	1K 5% 1/4W F	R611	1-249-389-11	CARBON	4.7 5% 1/4W F
R416	1-249-417-11	CARBON	1K 5% 1/4W F	R612	1-249-437-11	CARBON	47K 5% 1/4W
R417	1-247-897-11	CARBON	560K 5% 1/4W	△ R619	1-249-413-11	CARBON	470 5% 1/4W F
R420	1-249-441-11	CARBON	100K 5% 1/4W	R630	1-249-426-11	CARBON	5.6K 5% 1/4W
R435	1-249-418-11	CARBON	1.2K 5% 1/4W F	R631	1-247-887-00	CARBON	220K 5% 1/4W
R442	1-249-418-11	CARBON	1.2K 5% 1/4W F	R632	1-249-426-11	CARBON	5.6K 5% 1/4W
R443	1-249-418-11	CARBON	1.2K 5% 1/4W F	R635	1-249-429-11	CARBON	10K 5% 1/4W
R447	1-249-416-11	CARBON	820 5% 1/4W F	R651	1-249-417-11	CARBON	1K 5% 1/4W F
R448	1-249-429-11	CARBON	10K 5% 1/4W	R652	1-249-438-11	CARBON	56K 5% 1/4W
R449	1-247-863-91	CARBON	22K 5% 1/4W	R653	1-249-438-11	CARBON	56K 5% 1/4W
R450	1-249-400-11	CARBON	39 5% 1/4W F	R654	1-249-412-11	CARBON	390 5% 1/4W F
R451	1-249-411-11	CARBON	330 5% 1/4W	△ R660	1-249-393-11	CARBON	10 5% 1/4W F
R452	1-249-421-11	CARBON	2.2K 5% 1/4W F	R661	1-249-389-11	CARBON	4.7 5% 1/4W F
R453	1-249-417-11	CARBON	1K 5% 1/4W F	R662	1-249-437-11	CARBON	47K 5% 1/4W
R454	1-249-417-11	CARBON	1K 5% 1/4W F	R681	1-247-887-00	CARBON	220K 5% 1/4W
R455	1-249-417-11	CARBON	1K 5% 1/4W F	R685	1-249-429-11	CARBON	10K 5% 1/4W
R456	1-249-417-11	CARBON	1K 5% 1/4W F	R701	1-249-417-11	CARBON	1K 5% 1/4W F
R457	1-249-417-11	CARBON	1K 5% 1/4W F	R702	1-249-439-11	CARBON	68K 5% 1/4W
R458	1-249-429-11	CARBON	10K 5% 1/4W	R703	1-249-413-11	CARBON	470 5% 1/4W F
R459	1-249-437-11	CARBON	47K 5% 1/4W	R704	1-249-439-11	CARBON	68K 5% 1/4W
R460	1-247-897-11	CARBON	560K 5% 1/4W	R710	1-249-421-11	CARBON	2.2K 5% 1/4W F
R461	1-249-416-11	CARBON	820 5% 1/4W F	R711	1-249-437-11	CARBON	47K 5% 1/4W
R462	1-247-897-11	CARBON	560K 5% 1/4W	R713	1-249-414-11	CARBON	560 5% 1/4W F
R463	1-249-437-11	CARBON	47K 5% 1/4W	△ R714	1-249-409-11	CARBON	220 5% 1/4W F
R465	1-249-417-11	CARBON	1K 5% 1/4W F	△ R715	1-249-409-11	CARBON	220 5% 1/4W F
R466	1-249-417-11	CARBON	1K 5% 1/4W F	△ R716	1-233-352-21	ENCAPSULATED COMPONENT	
R467	1-247-897-11	CARBON	560K 5% 1/4W	△ R717	1-249-393-11	CARBON	10 5% 1/4W F
R470	1-249-441-11	CARBON	100K 5% 1/4W	R718	1-249-389-11	CARBON	4.7 5% 1/4W F
R513	1-249-429-11	CARBON	10K 5% 1/4W	△ R719	1-249-413-11	CARBON	470 5% 1/4W F
R514	1-249-429-11	CARBON	10K 5% 1/4W	R720	1-249-419-11	CARBON	1.5K 5% 1/4W F
R515	1-249-419-11	CARBON	1.5K 5% 1/4W F	R721	1-249-427-11	CARBON	6.8K 5% 1/4W F

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

MAIN	PRIMARY	SECONDARY	SP-SW
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Ref. No.	Part No.	Description			Remarks	Ref. No.	Part No.	Description			Remarks
R722	1-249-431-11	CARBON	15K	5%	1/4W	RR54	1-249-393-11	CARBON	10	5%	1/4W F
R723	1-249-437-11	CARBON	47K	5%	1/4W	RR55	1-249-393-11	CARBON	10	5%	1/4W F
R724	1-249-425-11	CARBON	4.7K	5%	1/4W F			< RELAY >			
R725	1-249-427-11	CARBON	6.8K	5%	1/4W F						
R726	1-249-417-11	CARBON	1K	5%	1/4W F						
R727	1-249-427-11	CARBON	6.8K	5%	1/4W F	RY551	1-515-920-11	RELAY (24V)			
R730	1-249-429-11	CARBON	10K	5%	1/4W	RY601	1-515-920-11	RELAY (24V)			
R731	1-247-887-00	CARBON	220K	5%	1/4W	RY701	1-515-920-11	RELAY (24V)			
R734	1-249-429-11	CARBON	10K	5%	1/4W	RY801	1-515-894-11	RELAY			
△ R740	1-249-393-11	CARBON	10	5%	1/4W F			< TERMINAL >			
△ R741	1-249-393-11	CARBON	10	5%	1/4W F	TM1	1-694-266-11	TERMINAL BOARD, ANT (ANTENNA)			
R742	1-249-427-11	CARBON	6.8K	5%	1/4W F	TM601	1-537-510-11	TERMINAL BOARD (SPEAKER) (6P)			
R751	1-249-417-11	CARBON	1K	5%	1/4W F			(SURROUND SPEAKERS)			
R752	1-249-439-11	CARBON	68K	5%	1/4W	TM701	1-537-376-11	TERMINAL BOARD (SPEAKER)			
R753	1-249-413-11	CARBON	470	5%	1/4W F			(FRONT SPEAKERS)			
R754	1-249-439-11	CARBON	68K	5%	1/4W			< TUNER >			
R760	1-249-421-11	CARBON	2.2K	5%	1/4W F						
R761	1-249-437-11	CARBON	47K	5%	1/4W	TU001	1-233-594-11	ENCAPSULATED COMPONENT			
R763	1-249-414-11	CARBON	560	5%	1/4W F			< VIBRATOR >			
△ R764	1-249-409-11	CARBON	220	5%	1/4W F						
△ R765	1-249-409-11	CARBON	220	5%	1/4W F	X1	1-579-900-21	VIBRATOR, CRYSTAL 4.33MHz			
△ R766	1-233-352-21	ENCAPSULATED COMPONENT				X301	1-579-952-21	VIBRATOR, CERAMIC 8MHz			
△ R767	1-249-393-11	CARBON	10	5%	1/4W F			*****			
R768	1-249-389-11	CARBON	4.7	5%	1/4W F						
R770	1-249-419-11	CARBON	1.5K	5%	1/4W F	*	1-665-286-11	PRIMARY BOARD			

R771	1-249-427-11	CARBON	6.8K	5%	1/4W F						
R772	1-249-431-11	CARBON	15K	5%	1/4W		1-533-233-21	HOLDER, FUSE			
R773	1-249-437-11	CARBON	47K	5%	1/4W			< FUSE >			
R781	1-247-887-00	CARBON	220K	5%	1/4W	△ F901	1-532-464-51	FUSE TIME LAG 2.5A 250V			
△ R801	1-215-883-11	METAL OXIDE	33	5%	2W F			*****			
△ R802	1-215-883-11	METAL OXIDE	33	5%	2W F						
△ R803	1-215-883-11	METAL OXIDE	33	5%	2W F	*	1-665-287-11	SECONDARY BOARD			
△ R804	1-215-883-11	METAL OXIDE	33	5%	2W F			*****			
△ R805	1-215-883-11	METAL OXIDE	33	5%	2W F						
△ R806	1-215-883-11	METAL OXIDE	33	5%	2W F		1-533-233-21	HOLDER, FUSE			
△ R807	1-249-405-11	CARBON	100	5%	1/4W F			< CONNECTOR >			
△ R808	1-249-405-11	CARBON	100	5%	1/4W F						
△ R809	1-249-405-11	CARBON	100	5%	1/4W F	CNP801	1-764-479-11	PIN, CONNECTOR (PC BOARD) 10P			
△ R815	1-249-389-11	CARBON	4.7	5%	1/4W F			< FUSE >			
R816	1-249-425-11	CARBON	4.7K	5%	1/4W F	△ F801	1-532-465-51	FUSE TIME LAG 3.15A 250V			
R821	1-249-437-11	CARBON	47K	5%	1/4W	△ F802	1-532-465-51	FUSE TIME LAG 3.15A 250V			
R822	1-249-425-11	CARBON	4.7K	5%	1/4W F			*****			
R823	1-249-437-11	CARBON	47K	5%	1/4W						
R824	1-249-425-11	CARBON	4.7K	5%	1/4W F	*	1-665-289-11	SP-SW BOARD			
R825	1-249-417-11	CARBON	1K	5%	1/4W F			*****			
△ R830	1-249-413-11	CARBON	470	5%	1/4W F			< CONNECTOR >			
R950	1-249-421-11	CARBON	2.2K	5%	1/4W F						
R951	1-249-429-11	CARBON	10K	5%	1/4W	CNP703	1-764-474-11	PIN, CONNECTOR (PC BOARD) 5P			
R952	1-247-843-11	CARBON	3.3K	5%	1/4W	CNP704	1-764-473-11	PIN, CONNECTOR (PC BOARD) 3P			
R953	1-247-863-91	CARBON	22K	5%	1/4W			< JACK >			
R954	1-249-439-11	CARBON	68K	5%	1/4W						
R955	1-249-429-11	CARBON	10K	5%	1/4W	J741	1-750-733-11	JACK (LARGE TYPE) (PHONES)			
R956	1-247-843-11	CARBON	3.3K	5%	1/4W			< RESISTOR >			
R957	1-249-417-11	CARBON	1K	5%	1/4W F						
R958	1-249-401-11	CARBON	47	5%	1/4W F						
R960	1-249-429-11	CARBON	10K	5%	1/4W						
RR01	1-249-418-11	CARBON	1.2K	5%	1/4W F	R741	1-260-100-11	CARBON	1.2K	5%	1/2W
RR04	1-249-393-11	CARBON	10	5%	1/4W F	R742	1-260-100-11	CARBON	1.2K	5%	1/2W
RR05	1-249-393-11	CARBON	10	5%	1/4W F	R791	1-260-100-11	CARBON	1.2K	5%	1/2W
RR51	1-249-418-11	CARBON	1.2K	5%	1/4W F	R792	1-260-100-11	CARBON	1.2K	5%	1/2W

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Ref. No.	Part No.	Description	Remarks
		< SWITCH >	
S701	1-762-319-11	SWITCH, PUSH (2 KEY) (SPEAKERS)	

*	1-665-285-11	STBY BOARD	

	1-533-233-21	HOLDER, FUSE	
		< CONNECTOR >	
CNP802	1-779-495-11	PLUG, CONNECTOR PIN 4P	
CNP901	1-564-321-00	PIN, CONNECTOR 2P	
CNP903	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P	
		< DIODE >	
D816	8-719-815-85	DIODE 1S1585	
		< FUSE >	
△F902	1-532-464-51	FUSE TIME LAG 2.5A 250V	
		< RELAY >	
△RY901	1-515-720-11	RELAY	
		< TRANSFORMER >	
△T902	1-450-358-11	TRANSFORMER, POWER	

*	A-4392-956-A	SWITCH BOARD, COMPLETE	

		< CAPACITOR >	
C425	1-126-096-11	ELECT 10uF 20% 35V	
C426	1-126-096-11	ELECT 10uF 20% 35V	
C427	1-162-207-31	CERAMIC 22PF 5% 50V	
C428	1-124-252-00	ELECT 0.33uF 20% 50V	
C429	1-130-489-00	MYLAR 0.033uF 5% 50V	
C430	1-102-973-00	CERAMIC 100PF 5% 50V	
C432	1-126-096-11	ELECT 10uF 20% 35V	
C433	1-126-096-11	ELECT 10uF 20% 35V	
C475	1-126-096-11	ELECT 10uF 20% 35V	
C476	1-126-096-11	ELECT 10uF 20% 35V	
C477	1-162-207-31	CERAMIC 22PF 5% 50V	
C478	1-124-252-00	ELECT 0.33uF 20% 50V	
C479	1-130-489-00	MYLAR 0.033uF 5% 50V	
C480	1-102-973-00	CERAMIC 100PF 5% 50V	
C492	1-124-464-11	ELECT 0.22uF 20% 50V	
C500	1-164-159-21	CERAMIC 0.1uF 50V	
C501	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C503	1-162-282-31	CERAMIC 100PF 10% 50V	
C511	1-126-163-11	ELECT 4.7uF 20% 50V	
C512	1-126-163-11	ELECT 4.7uF 20% 50V	
C518	1-164-159-21	CERAMIC 0.1uF 50V	
		< CONNECTOR >	
* CNS501	1-569-306-11	SOCKET, CONNECTOR (L TYRE) 15P	
CNS503	1-695-092-11	SOCKET, CONNECTOR 7P	
CNS504	1-695-092-11	SOCKET, CONNECTOR 7P	
* CNS505	1-569-306-11	SOCKET, CONNECTOR (L TYRE) 15P	
CNS507	1-770-403-11	HOUSING,CONNECTOR (PC BOARD) 10P	

Ref. No.	Part No.	Description	Remarks
		< DIODE >	
D421	8-719-815-85	DIODE 1S1585	
		< IC >	
IC404	8-759-636-74	IC M5218AP-22	
IC500	8-759-805-14	IC LC7822	
IC502	8-759-636-74	IC M5218AP-22	
		< TRANSISTOR >	
Q401	8-729-202-67	TRANSISTOR 2SK246-GR3	
Q402	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q451	8-729-202-67	TRANSISTOR 2SK246-GR3	
Q452	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q501	8-729-141-30	TRANSISTOR 2SC3623A-LK	
		< RESISTOR >	
R426	1-249-429-11	CARBON 10K 5% 1/4W	
R427	1-249-439-11	CARBON 68K 5% 1/4W	
R428	1-249-417-11	CARBON 1K 5% 1/4W	F
R430	1-249-437-11	CARBON 47K 5% 1/4W	
R431	1-247-843-11	CARBON 3.3K 5% 1/4W	
R432	1-247-883-00	CARBON 150K 5% 1/4W	
R433	1-249-427-11	CARBON 6.8K 5% 1/4W	F
R434	1-249-413-11	CARBON 470 5% 1/4W	F
R438	1-249-441-11	CARBON 100K 5% 1/4W	
R441	1-249-441-11	CARBON 100K 5% 1/4W	
R444	1-247-903-00	CARBON 1M 5% 1/4W	
R464	1-247-903-00	CARBON 1M 5% 1/4W	
R469	1-247-903-00	CARBON 1M 5% 1/4W	
R476	1-249-429-11	CARBON 10K 5% 1/4W	
R477	1-249-439-11	CARBON 68K 5% 1/4W	
R478	1-249-417-11	CARBON 1K 5% 1/4W	F
R480	1-249-437-11	CARBON 47K 5% 1/4W	
R481	1-247-843-11	CARBON 3.3K 5% 1/4W	
R482	1-247-883-00	CARBON 150K 5% 1/4W	
R483	1-249-427-11	CARBON 6.8K 5% 1/4W	F
R484	1-249-413-11	CARBON 470 5% 1/4W	F
R491	1-249-441-11	CARBON 100K 5% 1/4W	
R492	1-247-903-00	CARBON 1M 5% 1/4W	
R494	1-247-903-00	CARBON 1M 5% 1/4W	
R501	1-247-843-11	CARBON 3.3K 5% 1/4W	
R502	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R503	1-249-429-11	CARBON 10K 5% 1/4W	
R504	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R505	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R506	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R507	1-249-417-11	CARBON 1K 5% 1/4W	F
R508	1-249-426-11	CARBON 5.6K 5% 1/4W	
R511	1-249-441-11	CARBON 100K 5% 1/4W	
R512	1-249-441-11	CARBON 100K 5% 1/4W	
R519	1-249-429-11	CARBON 10K 5% 1/4W	
R520	1-249-417-11	CARBON 1K 5% 1/4W	F

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VIDEO

VOLUME

VR-TONE

Ref. No.	Part No.	Description	Remarks
*	1-665-261-11	VIDEO BOARD *****	
	7-685-872-09	SCREW +BVTT 3X8 (S)	
		< CAPACITOR >	
C271	1-162-282-31	CERAMIC 100PF 10% 50V	
C273	1-162-282-31	CERAMIC 100PF 10% 50V	
C275	1-162-282-31	CERAMIC 100PF 10% 50V	
C277	1-162-282-31	CERAMIC 100PF 10% 50V	
C279	1-162-282-31	CERAMIC 100PF 10% 50V	
C281	1-162-282-31	CERAMIC 100PF 10% 50V	
C291	1-126-795-11	ELECT 10uF 20% 50V	
C292	1-124-480-11	ELECT 470uF 20% 25V	
C293	1-126-795-11	ELECT 10uF 20% 50V	
		< CONNECTOR >	
CNS250	1-569-060-11	SOCKET, CONNECTOR 11P	
CNS506	1-569-321-11	SOCKET, CONNECTOR 15P	
		< DIODE >	
D291	8-719-002-12	DIODE UZL-18H	
D292	8-719-815-85	DIODE 1S1585	
D310	8-719-815-85	DIODE 1S1585	
		< JACK >	
J253	1-774-843-11	JACK, PIN 1P (WOOFER)	
J254	1-774-136-11	CONNECTOR, ROUND TYPE 6P (REAR SPEAKER)	
J501	1-779-380-11	JACK, PIN 6P (FRONT/REAR/WOOFER/CENTER)	
		< TRANSISTOR >	
Q291	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q292	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q293	8-729-209-15	TRANSISTOR 2SD2012	
Q367	8-729-119-78	TRANSISTOR 2SC403SP-51	
		< RESISTOR >	
R262	1-247-863-91	CARBON 22K 5% 1/4W	
R263	1-249-419-11	CARBON 1.5K 5% 1/4W F	
R264	1-247-863-91	CARBON 22K 5% 1/4W	
R272	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R274	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R275	1-249-429-11	CARBON 10K 5% 1/4W	
R276	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R277	1-249-429-11	CARBON 10K 5% 1/4W	
R278	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R280	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R282	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R287	1-249-437-11	CARBON 47K 5% 1/4W	
R288	1-249-425-11	CARBON 4.7K 5% 1/4W F	
△R290	1-216-446-00	METAL OXIDE 18 5% 2W F	
△R291	1-216-446-00	METAL OXIDE 18 5% 2W F	
R397	1-249-415-11	CARBON 680 5% 1/4W F	
R399	1-249-426-11	CARBON 5.6K 5% 1/4W	
		< RELAY >	
RY301	1-515-793-11	RELAY	

Ref. No.	Part No.	Description	Remarks
*	A-4392-954-A	VR-TONE BOARD, COMPLETE *****	
		VOLUME *****	
		< CAPACITOR >	
C220	1-126-301-11	ELECT 1uF 20% 50V	
C221	1-126-301-11	ELECT 1uF 20% 50V	
C361	1-164-159-21	CERAMIC 0.1uF 50V	
C362	1-164-159-21	CERAMIC 0.1uF 50V	
C363	1-164-159-21	CERAMIC 0.1uF 50V	
C364	1-164-159-21	CERAMIC 0.1uF 50V	
C365	1-164-159-21	CERAMIC 0.1uF 50V	
C381	1-126-963-11	ELECT 4.7uF 20% 50V	
C382	1-126-963-11	ELECT 4.7uF 20% 50V	
C383	1-126-963-11	ELECT 4.7uF 20% 50V	
C384	1-126-963-11	ELECT 4.7uF 20% 50V	
C385	1-126-963-11	ELECT 4.7uF 20% 50V	
C421	1-137-440-11	FILM 0.018uF 5% 50V	
C422	1-124-463-00	ELECT 0.1uF 20% 50V	
C423	1-137-368-11	FILM 0.0047uF 5% 50V	
C424	1-137-372-11	FILM 0.022uF 5% 50V	
C471	1-137-440-11	FILM 0.018uF 5% 50V	
C472	1-124-463-00	ELECT 0.1uF 20% 50V	
C473	1-137-368-11	FILM 0.0047uF 5% 50V	
C474	1-137-372-11	FILM 0.022uF 5% 50V	
		< CONNECTOR >	
* CNP202	1-770-394-11	PIN, CONNECTOR (PC BOARD) 10P	
* CNP507	1-770-394-11	PIN, CONNECTOR (PC BOARD) 10P	
CNS402	1-568-442-11	SOCKET, CONNECTOR 9P	
CNS502	1-569-321-11	SOCKET, CONNECTOR 15P	
		< DIODE >	
D238	8-719-313-50	DIODE SEL6810A-TH12 (BASS BOOST)	
		< TRANSISTOR >	
Q361	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q362	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q363	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q364	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q365	8-729-141-30	TRANSISTOR 2SC3623A-LK	
		< RESISTOR >	
R351	1-249-417-11	CARBON 1K 5% 1/4W F	
R352	1-249-417-11	CARBON 1K 5% 1/4W F	
R353	1-249-417-11	CARBON 1K 5% 1/4W F	
R354	1-249-417-11	CARBON 1K 5% 1/4W F	
R355	1-249-417-11	CARBON 1K 5% 1/4W F	
R361	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R362	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R363	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R364	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R365	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R366	1-249-441-11	CARBON 100K 5% 1/4W	
R367	1-249-441-11	CARBON 100K 5% 1/4W	
R368	1-249-441-11	CARBON 100K 5% 1/4W	
R369	1-249-441-11	CARBON 100K 5% 1/4W	
R370	1-249-441-11	CARBON 100K 5% 1/4W	

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Ref. No.	Part No.	Description	Remarks
R371	1-249-441-11	CARBON 100K 5%	1/4W
R421	1-249-430-11	CARBON 12K 5%	1/4W
R422	1-249-422-11	CARBON 2.7K 5%	1/4W F
R423	1-247-903-00	CARBON 1M 5%	1/4W
R424	1-247-903-00	CARBON 1M 5%	1/4W
R425	1-249-415-11	CARBON 680 5%	1/4W F
R471	1-249-430-11	CARBON 12K 5%	1/4W
R472	1-249-422-11	CARBON 2.7K 5%	1/4W F
R473	1-247-903-00	CARBON 1M 5%	1/4W
R474	1-247-903-00	CARBON 1M 5%	1/4W
R475	1-249-415-11	CARBON 680 5%	1/4W F
< VARIABLE RESISTOR >			
RV404	1-225-446-11	RES, VAR, CARBON 100KX6 (MASTER VOLUME)	
RV421	1-223-362-11	RES, VAR, CARBON 100K/100K (BASS)	
RV422	1-223-363-11	RES, VAR, CARBON 125K/125K (TREBLE)	
RV423	1-225-447-11	RES, VAR, CARBON 100K/100K (BALANCE)	
< SWITCH >			
S240	1-554-937-11	SWITCH, KEY BOARD (BASS BOOST)	

MISCELLANEOUS *****			
10	1-773-252-11	WIRE (FLAT TYPE) (27 CORE)	
11	1-769-912-11	WIRE (FLAT TYPE) (9 CORE)	
12	1-773-001-11	WIRE (FLAT TYPE) (15 CORE)(9cm)	
61	1-769-942-11	WIRE (FLAT TYPE) (11 CORE)	
69	1-773-011-11	WIRE (FLAT TYPE) (15 CORE)(24cm)	
△71	1-769-744-11	CORD, POWER	
△CNJ903	1-526-794-11	OUTLET, AC	
△T901	1-431-269-11	TRANSFORMER, POWER	

Ref. No.	Part No.	Description	Remarks
ACCESSORIES & PACKING MATERIALS *****			
	1-475-042-11	ADAPTOR (21PIN D. SUB)	
	1-475-137-11	REMOTE COMMANDER (RM-P301)	
	1-501-374-11	ANTENNA, LOOP	
	1-501-594-11	ANTENNA (FM)	
	3-859-657-11	MANUAL, INSTRUCTION (ENGLISH/FRENCH/GERMAN/DUTCH/ITALIAN)	
	3-859-657-41	MANUAL, INSTRUCTION (SPANISH/SWEDISH/FINNISH/DANISH/PORTUGUESE)(AEP)	
	3-861-064-21	INSTRUCTION	
	4-981-643-01	COVER, BATTERY (for RM-P301)	

***** HARDWARE LIST *****			
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#2	7-685-881-09	SCREW +BVTT 4X8 (S)	
#3	7-685-872-09	SCREW +BVTT 3X8 (S)	
#4	7-685-646-71	SCREW +BTP 3X8	

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