

RDR-DC90/DC100/DC105/DC200/ DC205/DC305/DC500/DC505 RMT-D258P

SERVICE MANUAL



Ver. 1.1 2010.05



Photo: RDR-DC100

AEP Model
RDR-DC100/DC105/DC200/
DC205/DC500/DC505

UK Model
RDR-DC90/DC100/DC200/
DC205/DC305/DC505

SPECIFICATIONS

System

Laser:

Semiconductor laser

Transmission standards (Digital broadcasting):

DVB-T, DVB-C

Channel coverage (Digital broadcasting):

VHF/UHF

Channel coverage (Analogue broadcasting):

PAL (B/G, D/K, I)/SECAM (L)
VHF: E2 to E12, R1 to R12, F2 to F10, Italian A to H, Ireland A to J
UHF: E21 to E69, R21 to R69, B21 to B69, F21 to F69
CATV: S01 to S05, S1 to S20, France B to Q
HYPER: S21 to S41

The above channel coverage merely ensures the channel reception within these ranges. It does not guarantee the ability to receive signals in all circumstances. The channels that can be received differ depending on the country/region.

Video reception:

Frequency synthesizer system

Audio reception:

Split carrier system

Aerial out:

75-ohm asymmetrical aerial socket

Timer:

Clock: Quartz locked/Timer indication: 24-hour cycle (digital)

Video recording format:

MPEG-2, MPEG-1

Audio recording format/applicable bit rate:

DVB-T/C: DR (Direct Recording) (TS Rec Mode)
ATT: Dolby Digital 2ch
(HQ, SP, LP, EP (6 hours): 256 kbps, EP (8 hours): 128 kbps)

Inputs and outputs

LINE 2 OUT

(AUDIO):

Phono jack/2 Vrms/10 kilohms

(VIDEO):

Phono jack/1.0 Vp-p

LINE 2 IN

(AUDIO):

Phono jack/2 Vrms/more than 22 kilohms

(VIDEO):

Phono jack/1.0 Vp-p

(S VIDEO):

4-pin mini DIN/Y: 1.0 Vp-p, C: 0.3 Vp-p (PAL)

LINE 3 – TV:

21-pin
CVBS OUT
S-Video/RGB OUT (upstream)

LINE 1/DECODER:

21-pin
CVBS IN/OUT
S-Video/RGB IN
Decoder

DV IN:

4-pin/i.LINK S100

DIGITAL OUT (COAXIAL):

Phono jack/0.5 Vp-p/75 ohms

COMPONENT VIDEO OUT

(Y, Pb/Cb, Pr/Cr):

Phono jack/Y: 1.0 Vp-p, Pb/Cb: 0.7 Vp-p, Pr/Cr: 0.7 Vp-p

HDMI OUT:

HDMI™ Connector

USB:

USB jack (For connecting digital still camera, Memory card reader, USB memory, HDD camcorder and Hard disk drive)

Conditional access module:

CAM (Conditional Access Module) slot

General

Power requirements:

220-240V AC, 50/60Hz

Power consumption:

45 W

Dimensions (approx.):

430 × 71.5 × 258 mm (width/height/depth) incl. projecting parts AC, 50/60 Hz

Hard disk drive capacity:

RDR-DC105: 160 GB

RDR-DC205: 250 GB

RDR-DC505: 500 GB

Maximum recordable number of titles*:

999

Mass (approx.):

4.1 kg

Operating temperature:

5°C to 35°C

Operating humidity:

25% to 80%

* The maximum length for one title is 8 hours.

Supplied accessories

Mains lead (1)
Aerial cable (1)
Remote commander (remote) (1)
R6 (size AA) batteries (2)

Specifications and design are subject to change without notice.

DVD RECORDER

SONY®

WARNING!!!

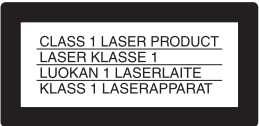
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION, BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 25 cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.

CAUTION:

The use of optical instrument with this product will increase eye hazard.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.



CAUTION

CLASS3B VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN.
AVOID DIRECT EXPOSURE TO THE BEAM.



SAFETY-RELATED COMPONET 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.

UNLEADED SOLDER

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.

(**Caution:** Some printed circuit boards may not come printed with the lead free mark due to their particular size)

LF : LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40 °C higher than ordinary solder.
Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
Soldering irons using a temperature regulator should be set to about 350 °C.
Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

Special Component Notice

The components identified by mark △ contain confidential information.
Strictly follow the instructions whenever the components are repaired and/or replaced.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer.

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are “pinched” or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, through functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.
6. Flexible Circuit Board Repairing
 - Keep the temperature of the soldering iron around 270 °C during repairing.
 - Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
 - Be careful not to apply force on the conductor when soldering or unsoldering.
7. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
8. Check the antenna terminals, metal trim, “metalized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA. Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

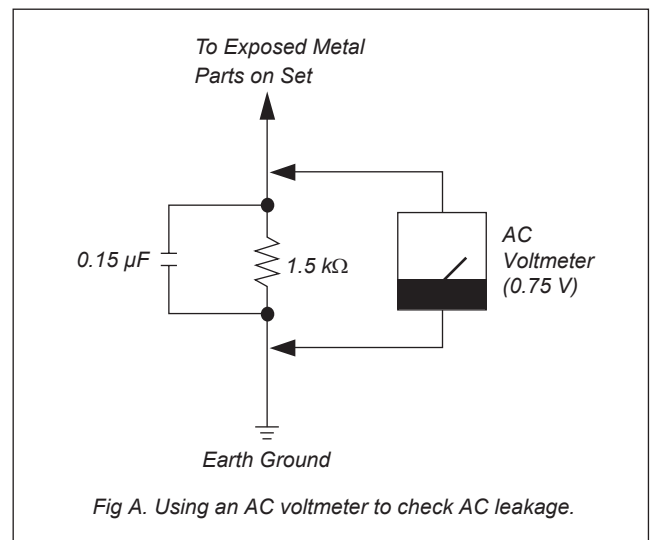


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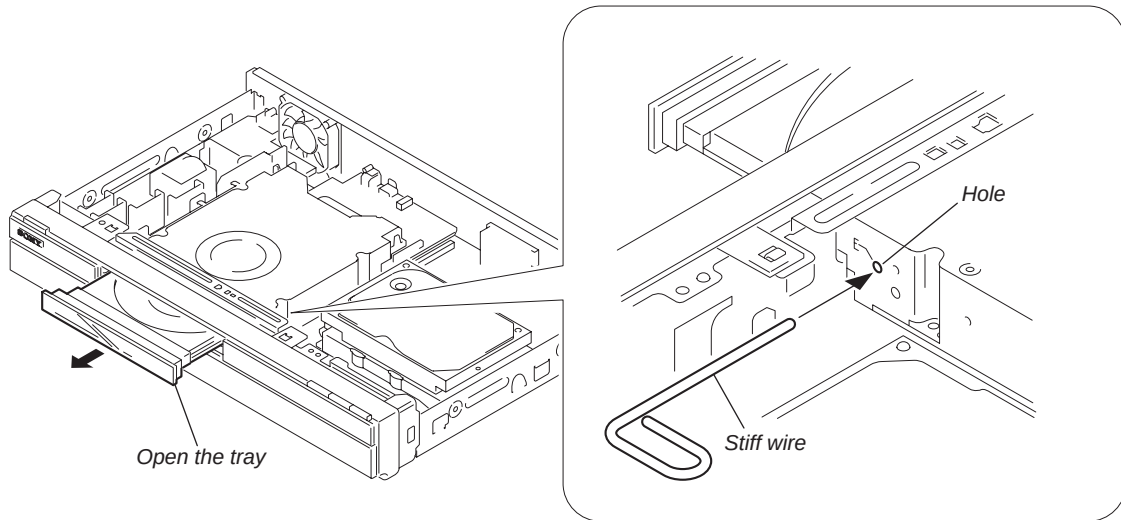
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SECTION 1

SERVICE NOTE

1. DISK REMOVAL PROCEDURE IF THE TRAY CANNOT BE EJECTED (FORCED EJECTION)

- (1) Remove the upper case.
- (2) Insert the stiff wire in the hole and eject the tray.



NOTES DURING THE FORCED EJECTION

1. If the forced ejection is executed while a blank disc media (DVD±RW, ±R) exists on the tray
 - Insert a DVD-ROM (DVD test disc, DVD software available on the market, or the like) in the tray and then close the tray.

Note1: If you close the tray while it is empty, ejection of the tray becomes impossible.

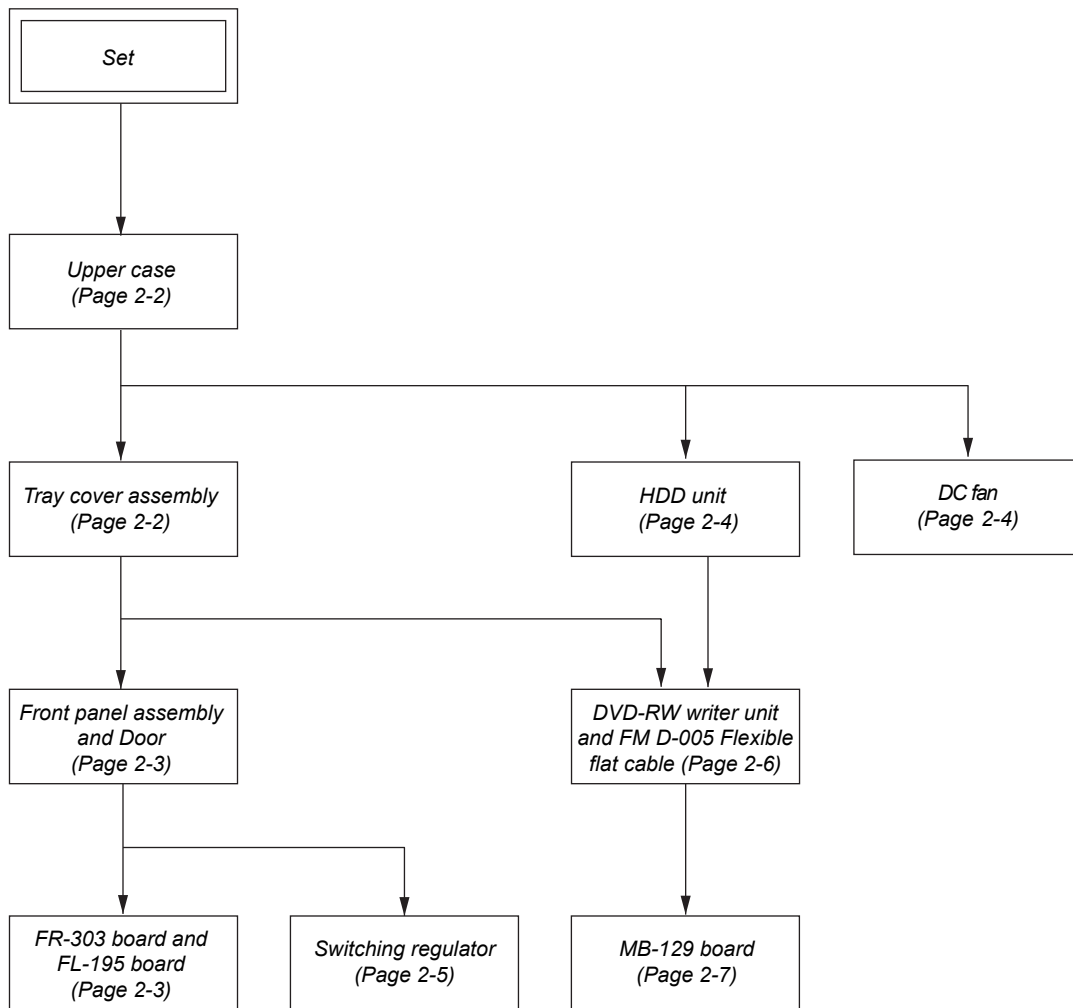
Note2: If you close the tray with a CD disc inserted in it, the CD can be ejected. However, if you close the tray while it is empty, there can be a case that ejection of the tray becomes impossible.

Note3: Even if you replace the DVD drive unit while the tray remains under the state as described above, the situation cannot be improved.
2. If the tray cannot be ejected while the disc is not inserted
 - Execute the forced ejection.
 - Insert a DVD-ROM (DVD test disc, DVD software available on the market, or the like) on the tray and try to close the tray. (There are cases that it recovers the trouble.)
3. Contents of forcibly ejected blank disc media (DVD±RW, ±R) can be damaged. (There can be a case that initialization is also impossible.)

SECTION 2 DISASSEMBLY

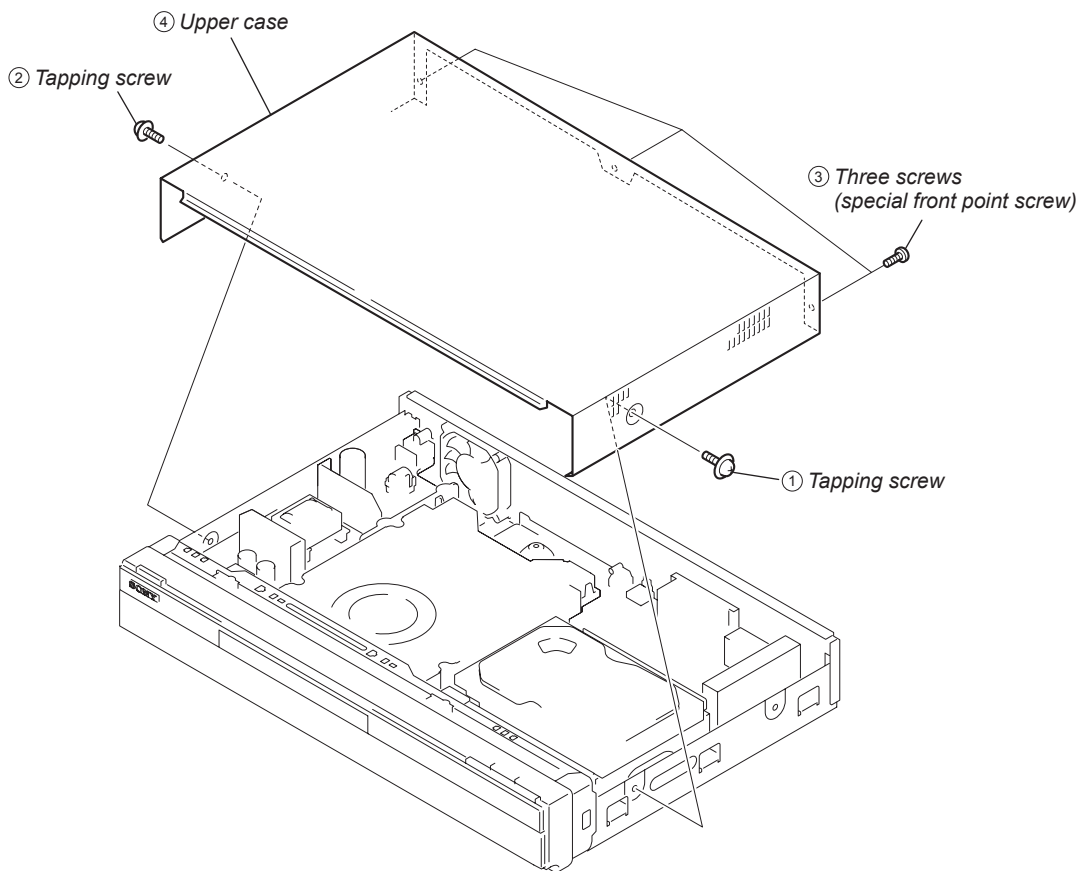
- This set can be disassembled in the order shown below.

2-1. DISASSEMBLY FLOW

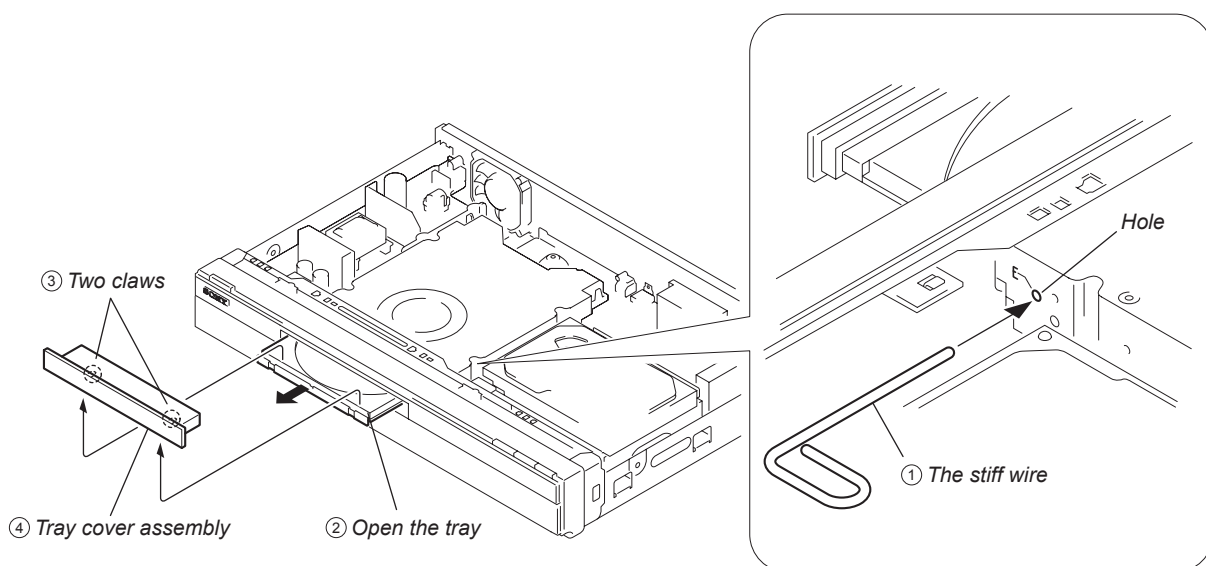


Note: Follow the disassembly procedure in the numerical order given.

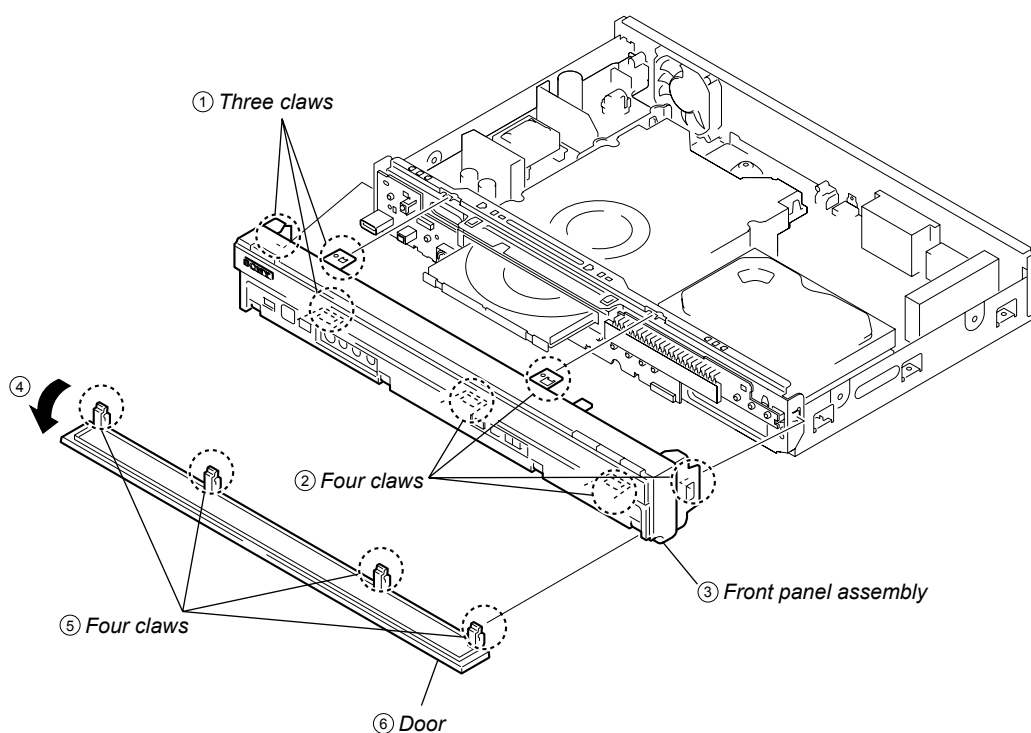
2-2. UPPER CASE



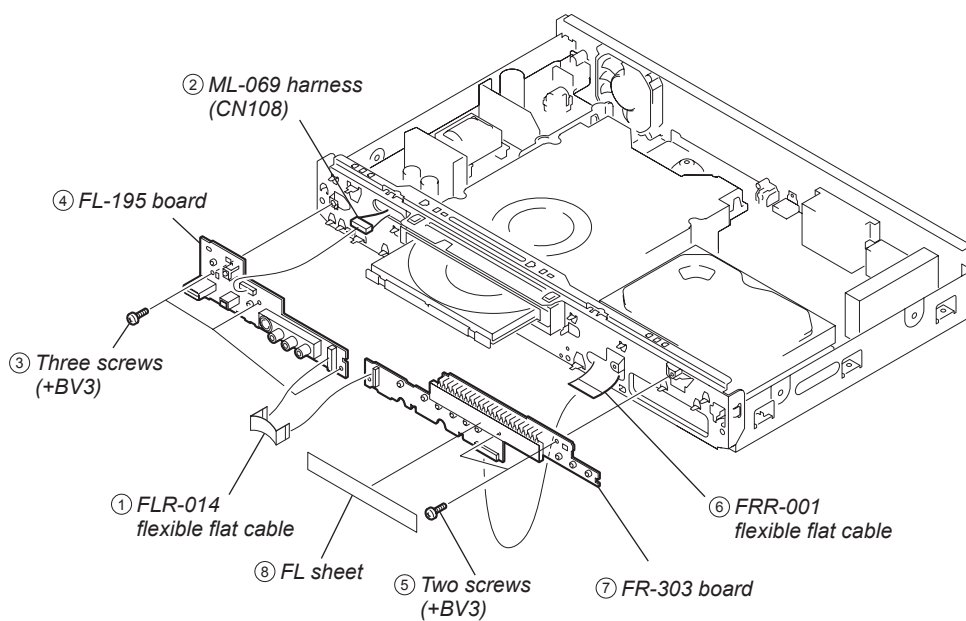
2-3. TRAY COVER ASSEMBLY



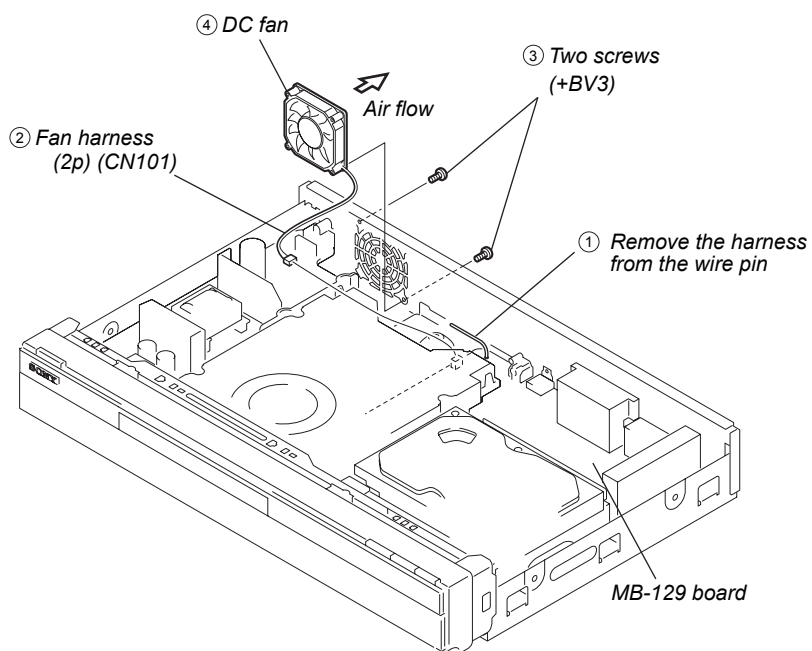
2-4. FRONT PANEL ASSEMBLY



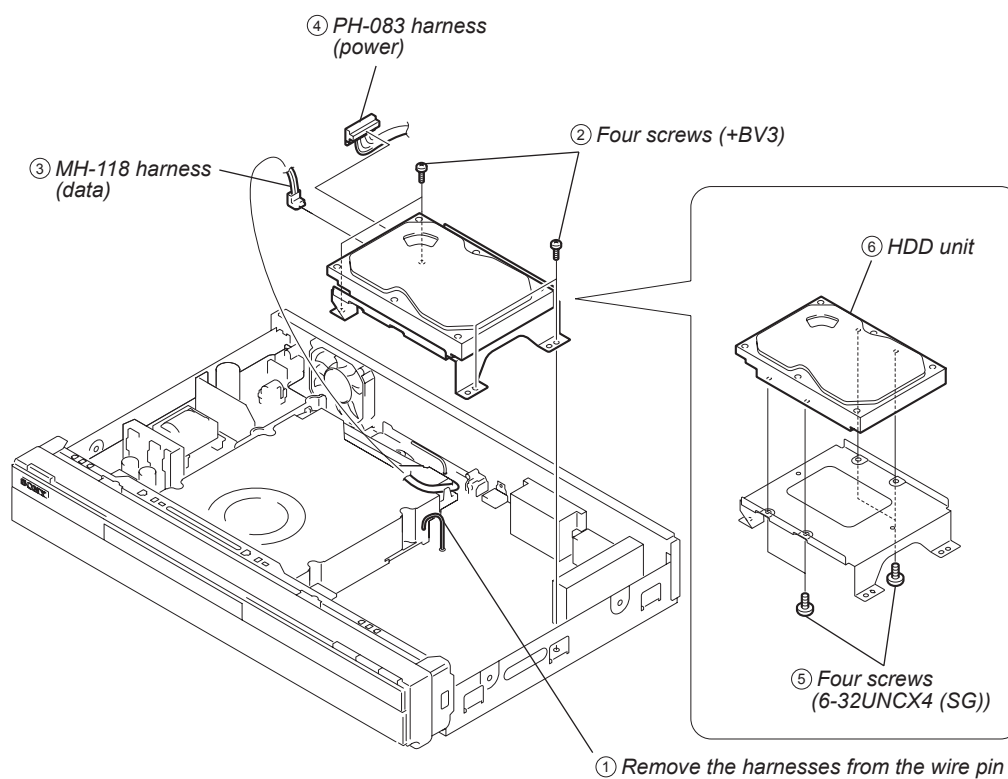
2-5. FR-303 BOARD AND FL-195 BOARD



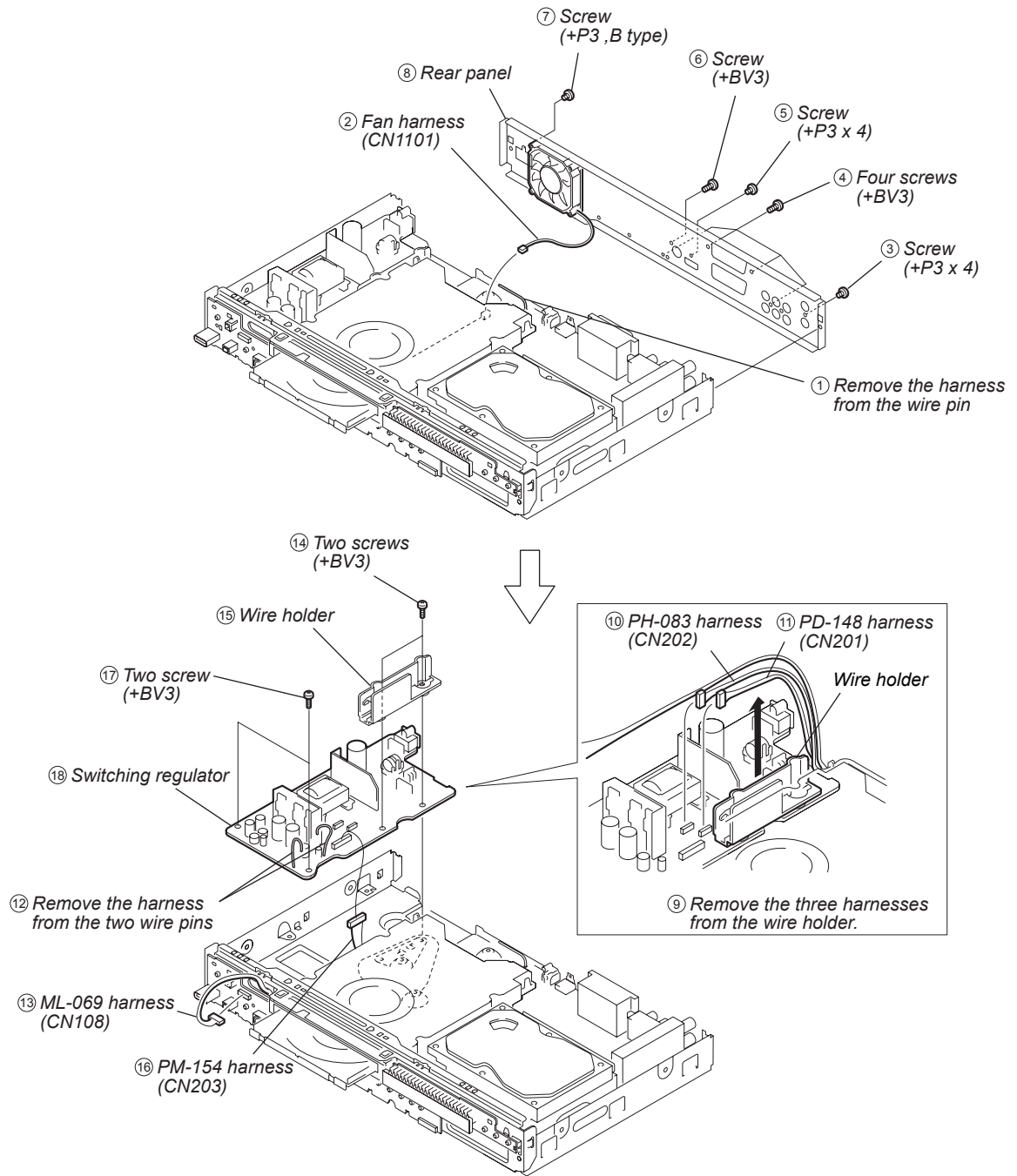
2-6. DC FAN



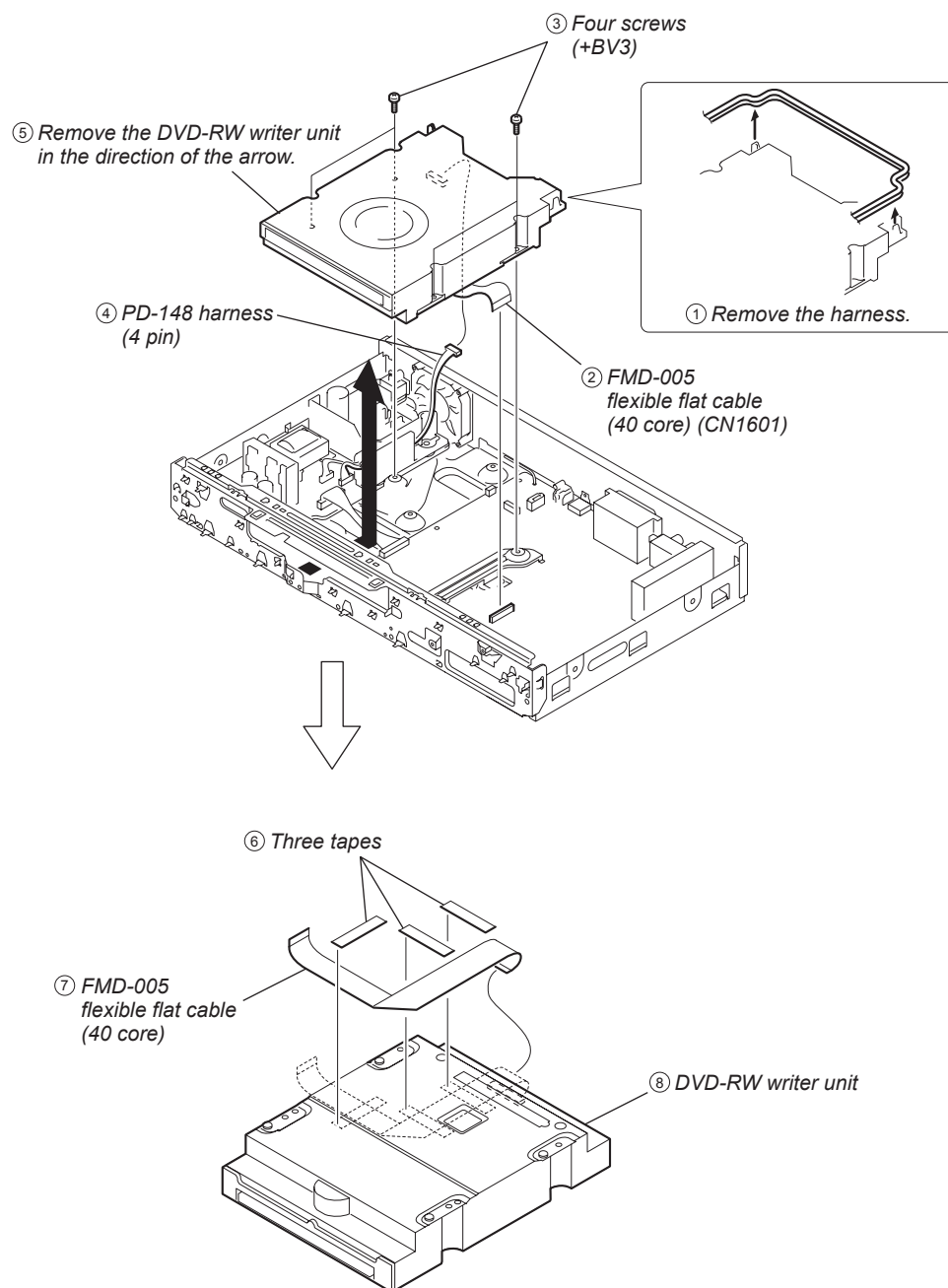
2-7. HDD UNIT



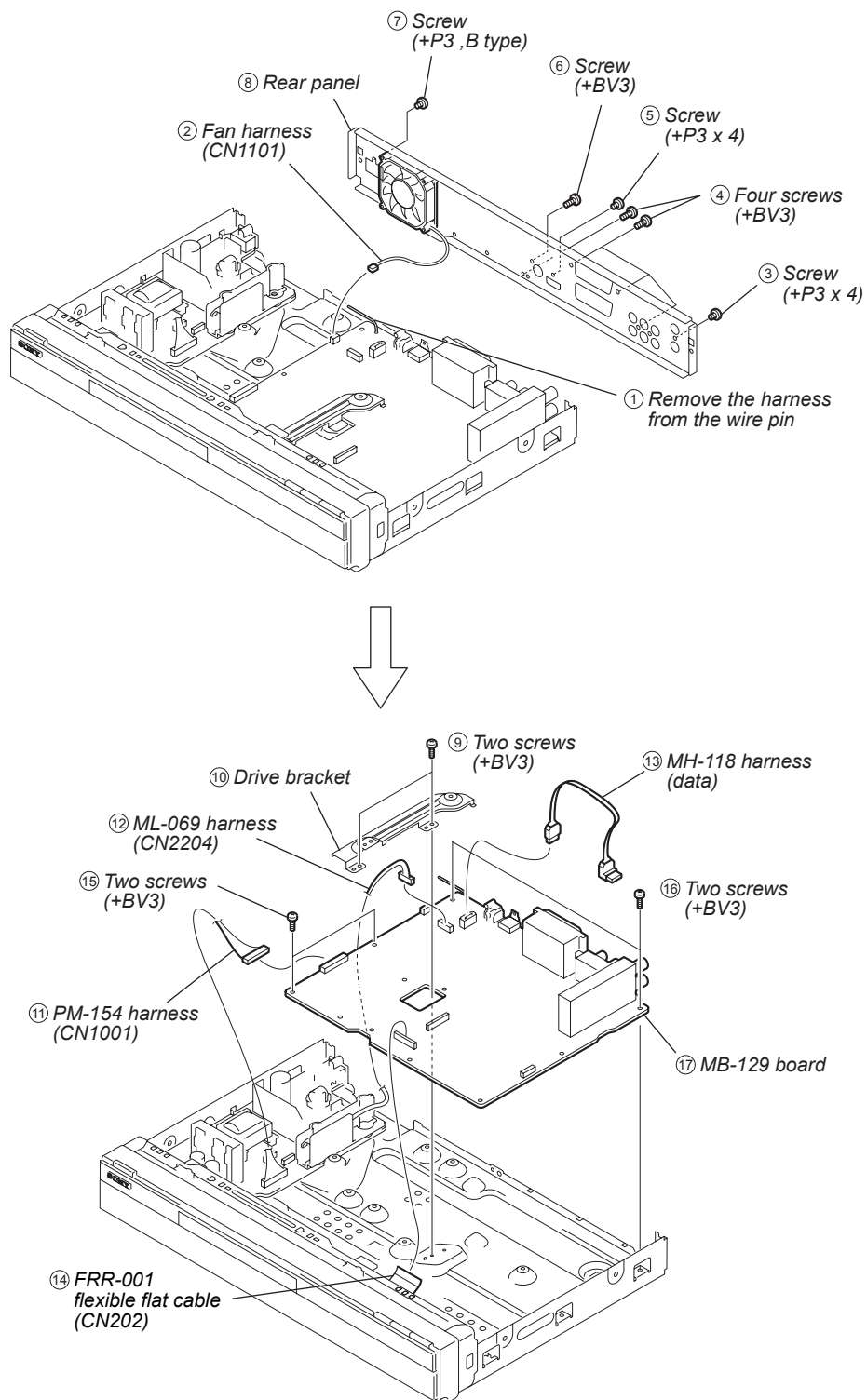
2-8. SWITCHING REGULATOR



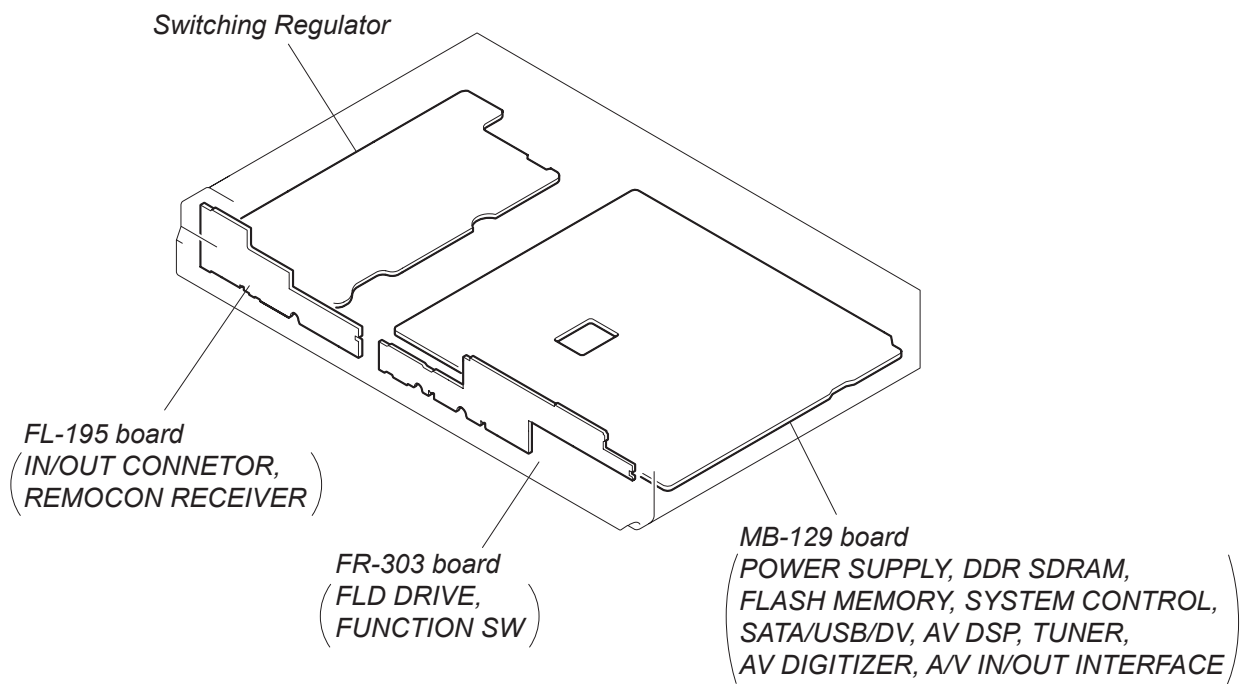
2-9. DVD-RW WRITER UNIT AND FMD-005 FLEXIBLE FLAT CABLE



2-10. MB-129 BOARD



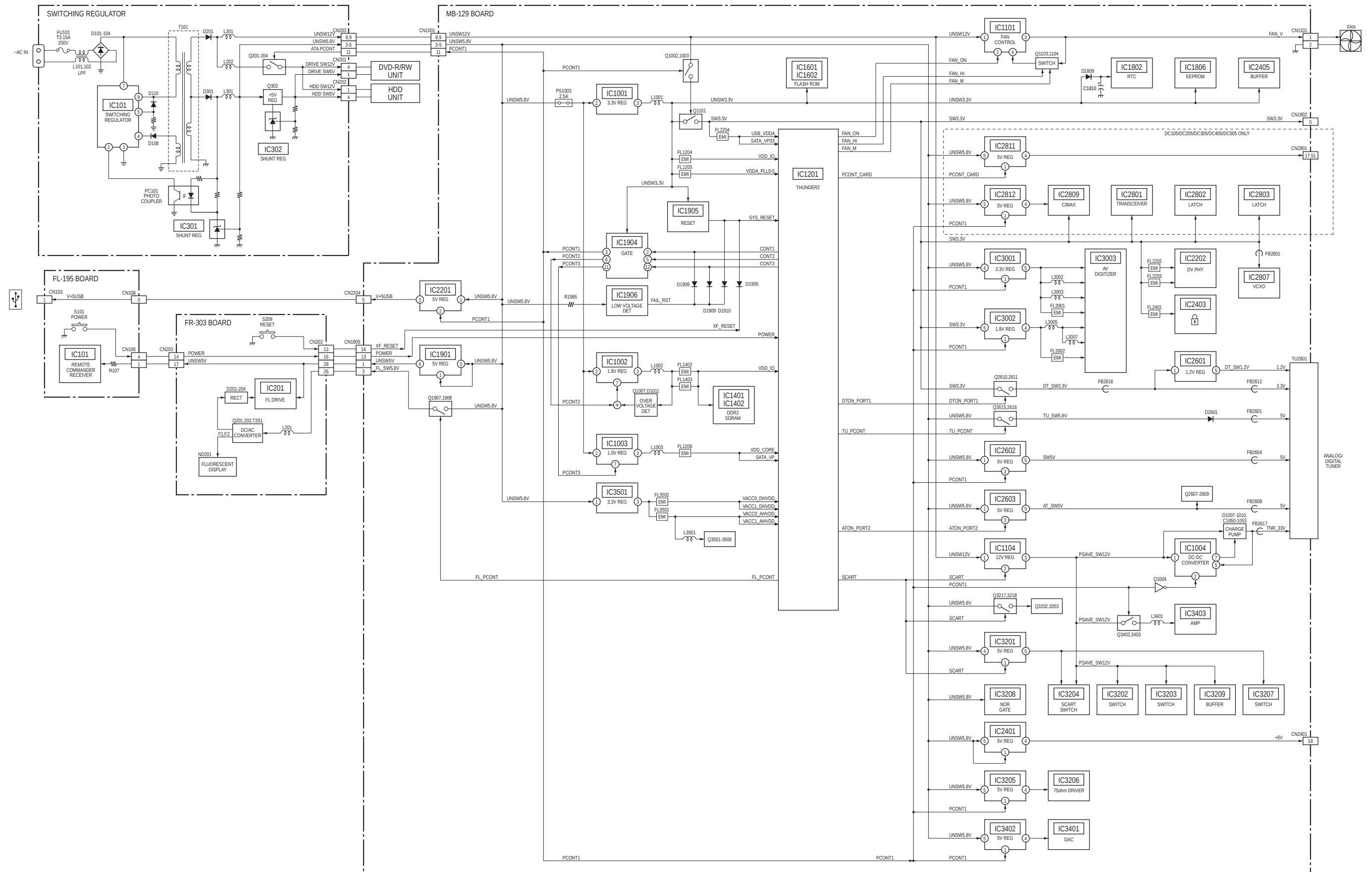
2-11. CHASSIS (REAR) ASSY



[illegible]

3-1

3-2. POWER BLOCK DIAGRAM



SECTION 4

SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

THIS NOTE IS COMMON FOR SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

(In addition to this, the necessary note is printed in each block)

(For printed wiring boards)

-  : Uses unleaded solder.
-  : Pattern from the side which enables seeing.
(The other layers' patterns are not indicated)
- There are a few cases that the part printed on diagram isn't mounted in this model.
-  : panel designation.

(For schematic diagrams)

- All capacitors are in μF unless otherwise noted.
 $\text{pF} : \mu\text{F}$. 50V or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4 \text{ W}$ (Chip resistors : $1/10 \text{ W}$) unless otherwise specified.
 $\text{k}\Omega=1000\Omega$, $\text{M}\Omega=1000\text{k}\Omega$
- Caution when replacing chip parts.
New parts must be attached after removal of chip.
Be careful not to heat the minus side of tantalum capacitor, because it is damaged by the heat.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
-  : nonflammable resistor.
-  : fusible resistor.
-  : panel designation.
-  : internal component.
-  : adjustment for repair.
-  : IN/OUT direction of (+/-) B line.
-  : B+ Line.
-  : B- Line.
- Voltages are dc between measurement point and ground.
- Readings are taken with a color-bar signals on DVD reference disc.
- Readings are taken with a digital multimeter (DC $10\text{M}\Omega$).
- Voltage variations may be noted due to normal production tolerances.

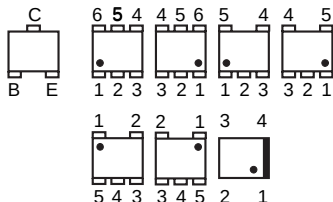
Note:

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

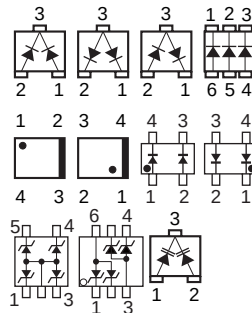
When indicating parts by reference number, please include the board name.

- Chip parts.

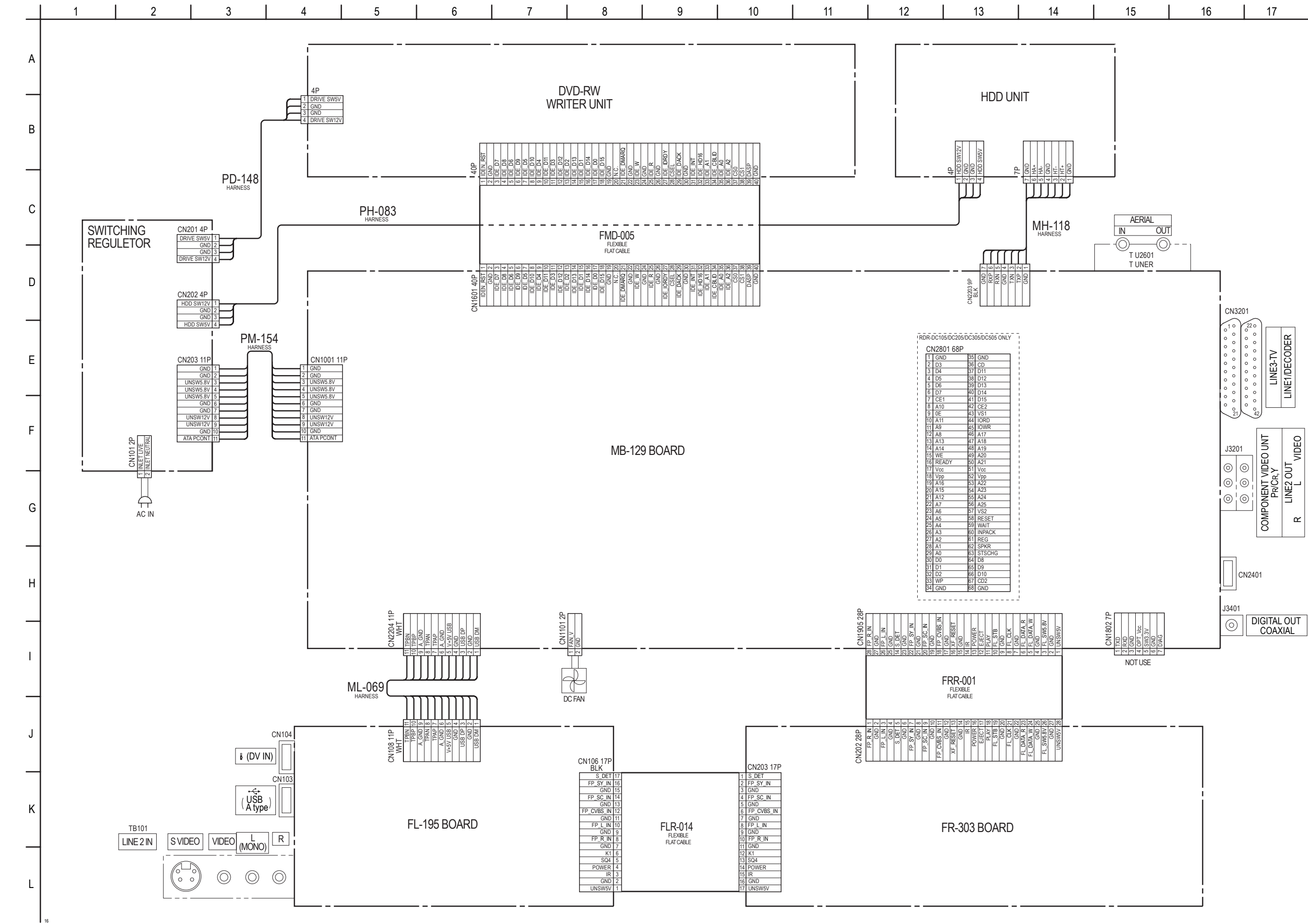
Transistor



Diode



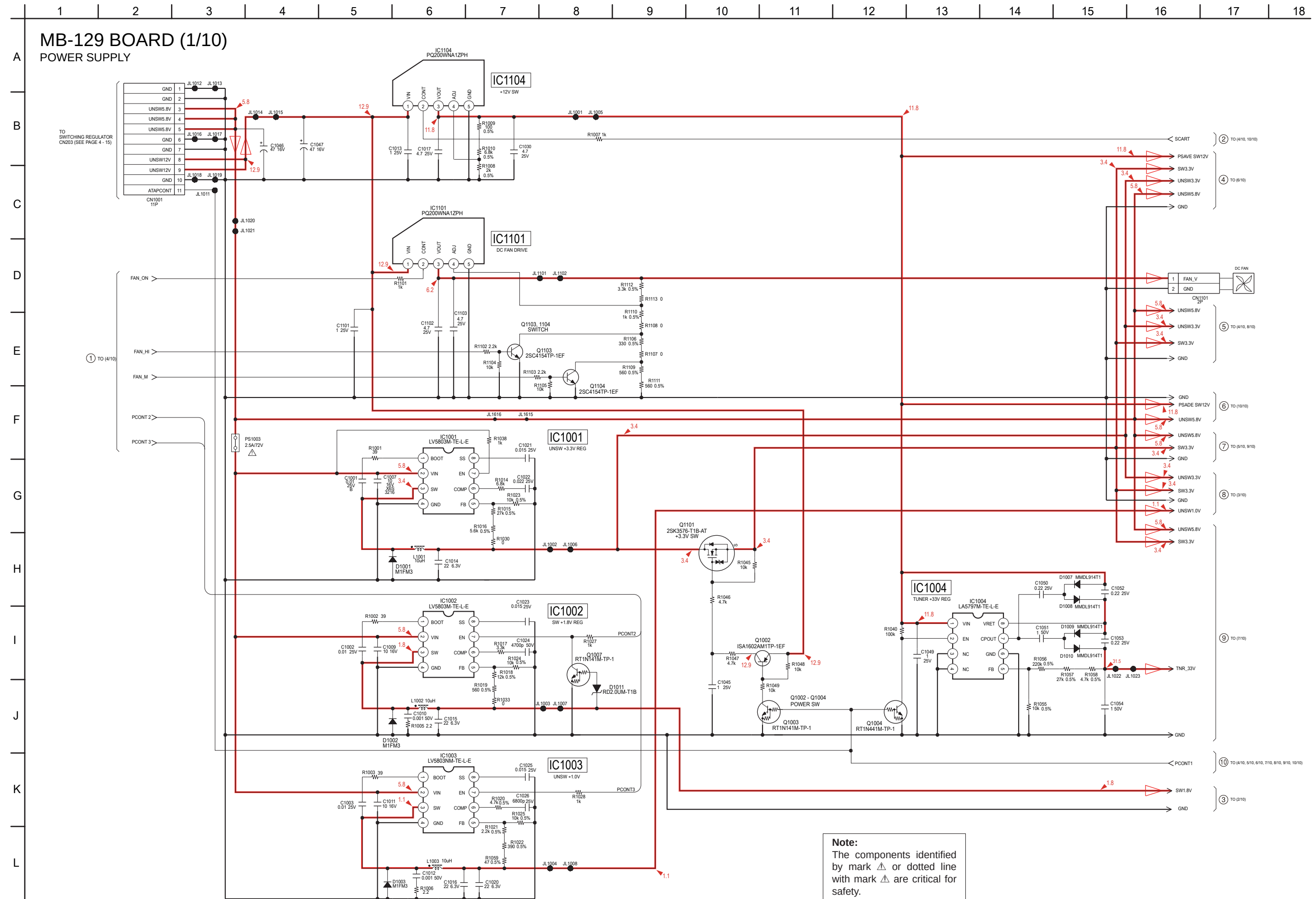
4-1. FRAME SCHEMATIC DIAGRAM

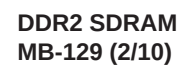


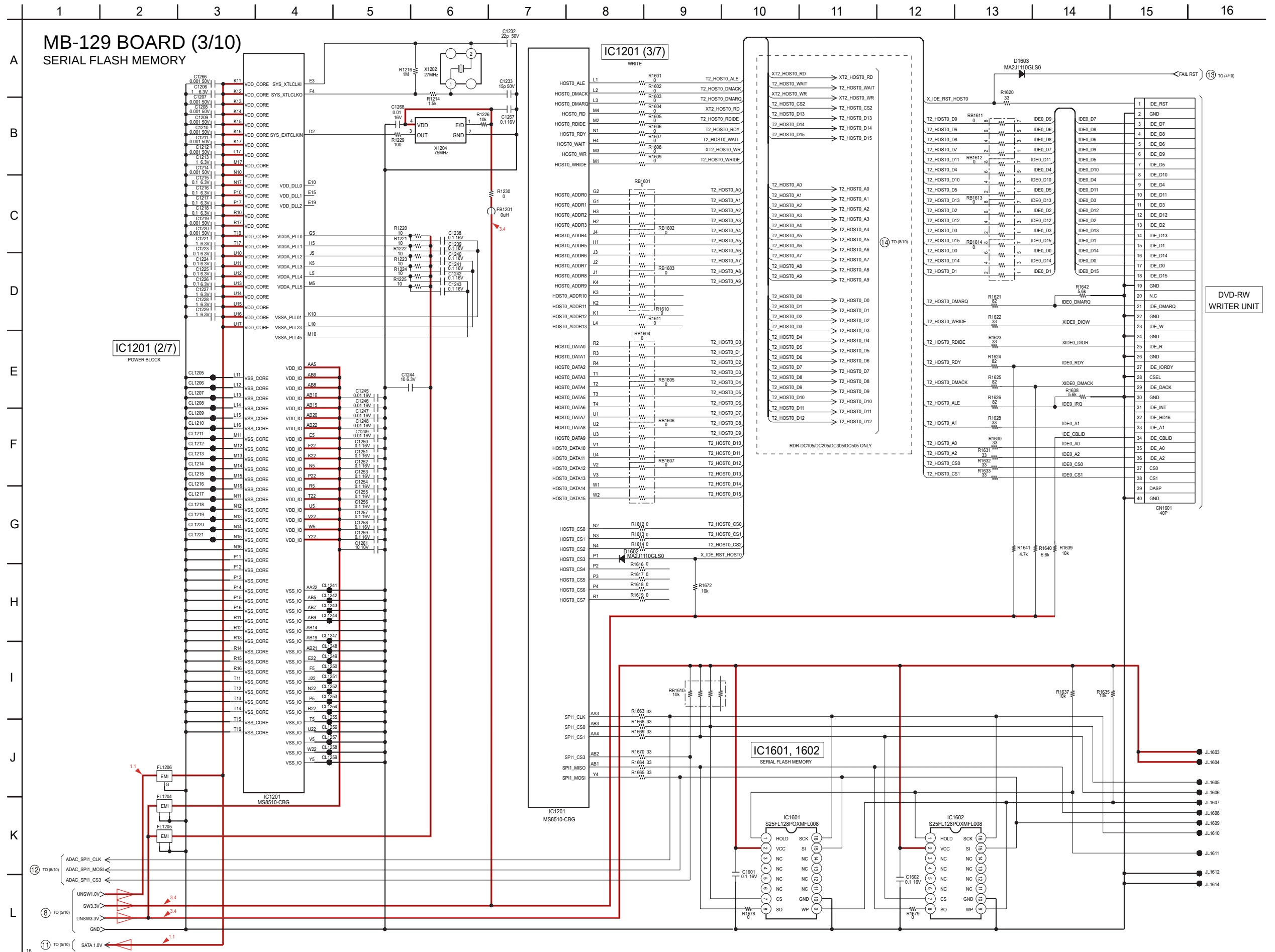
4-2. SCHEMATIC DIAGRAMS

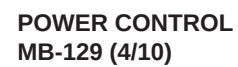
• MB-129 BOARD (POWER SUPPLY) SCHEMATIC DIAGRAM (1/10)

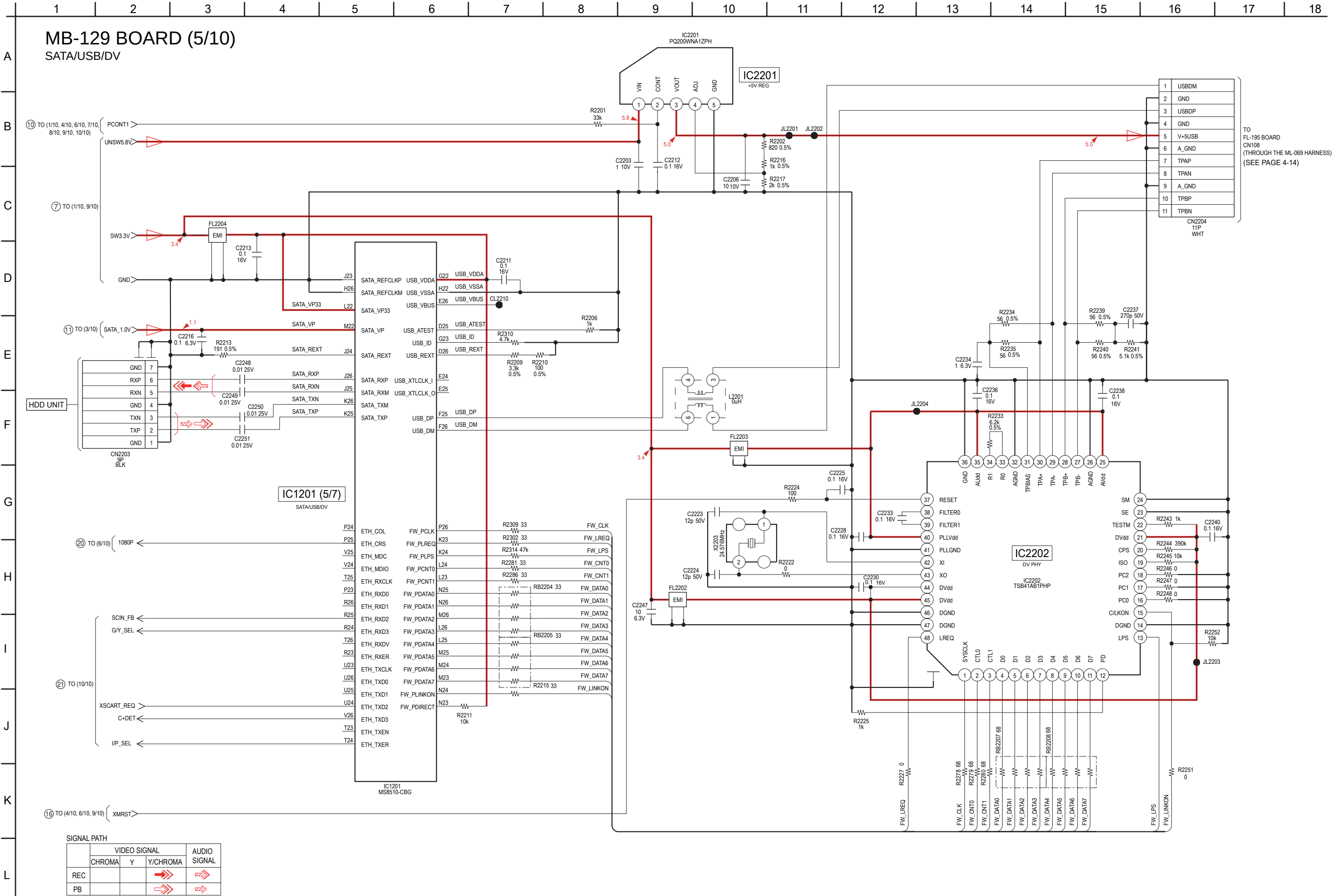
• See page 4-16 for printed wiring boards.

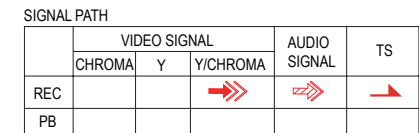




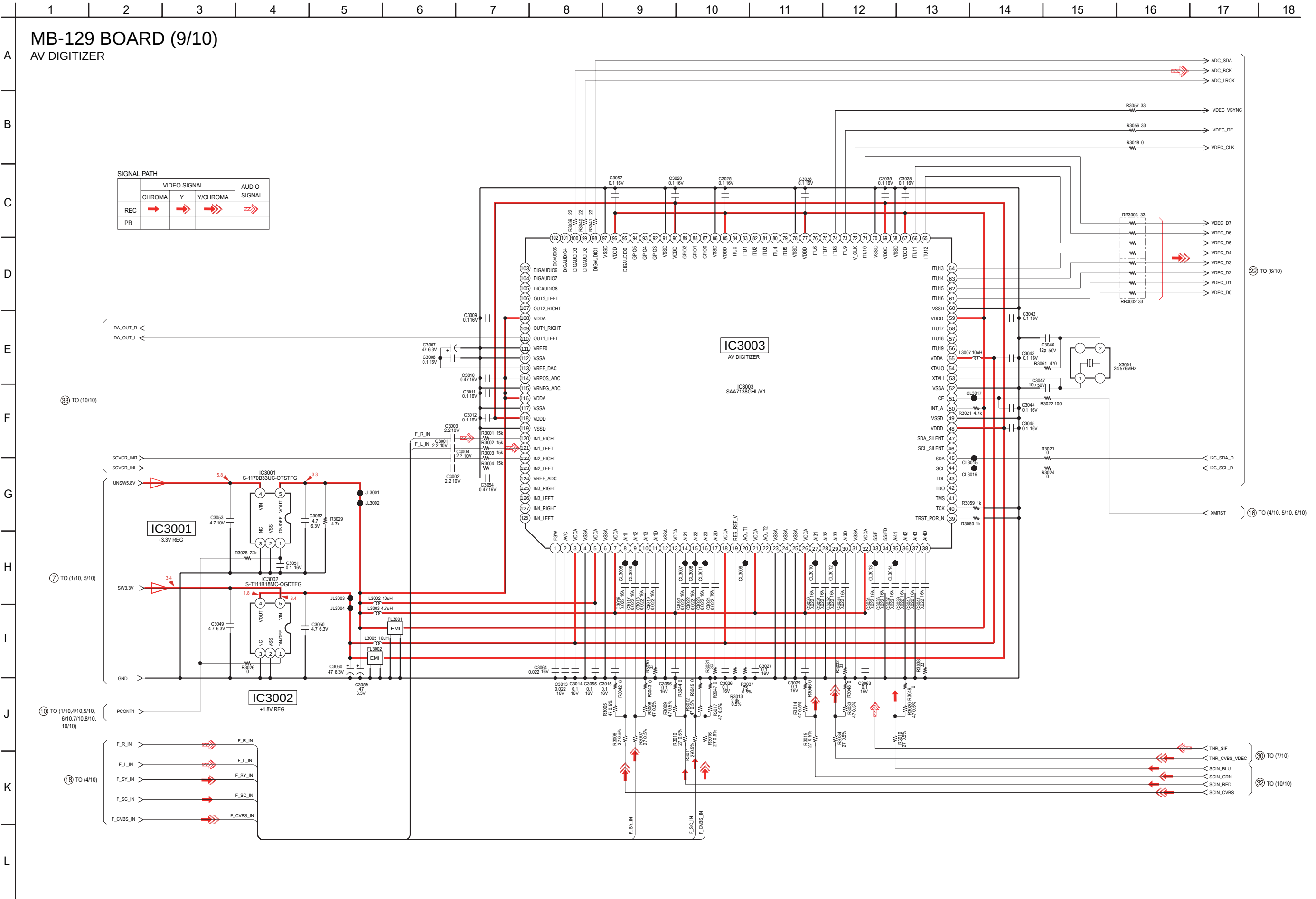


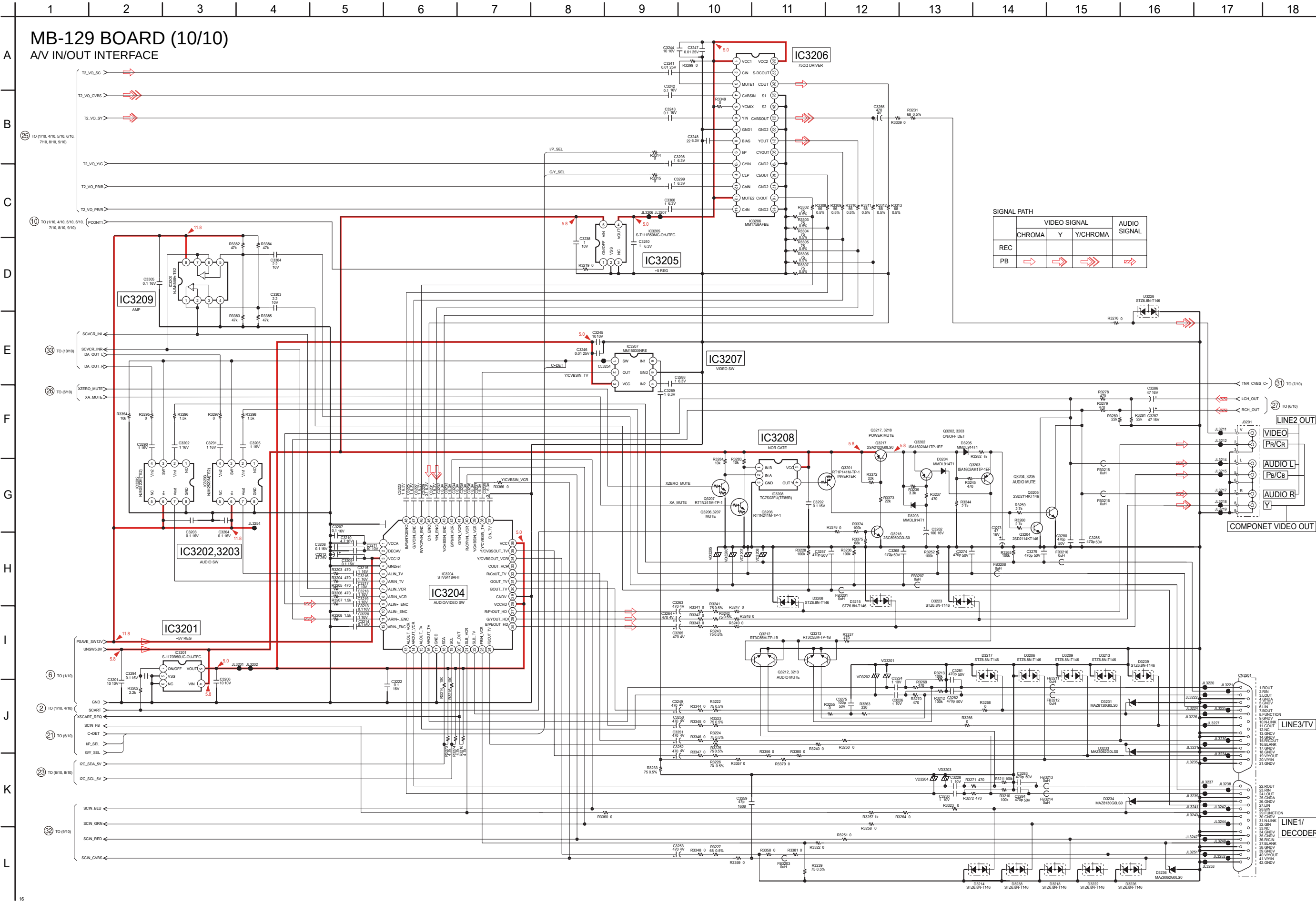


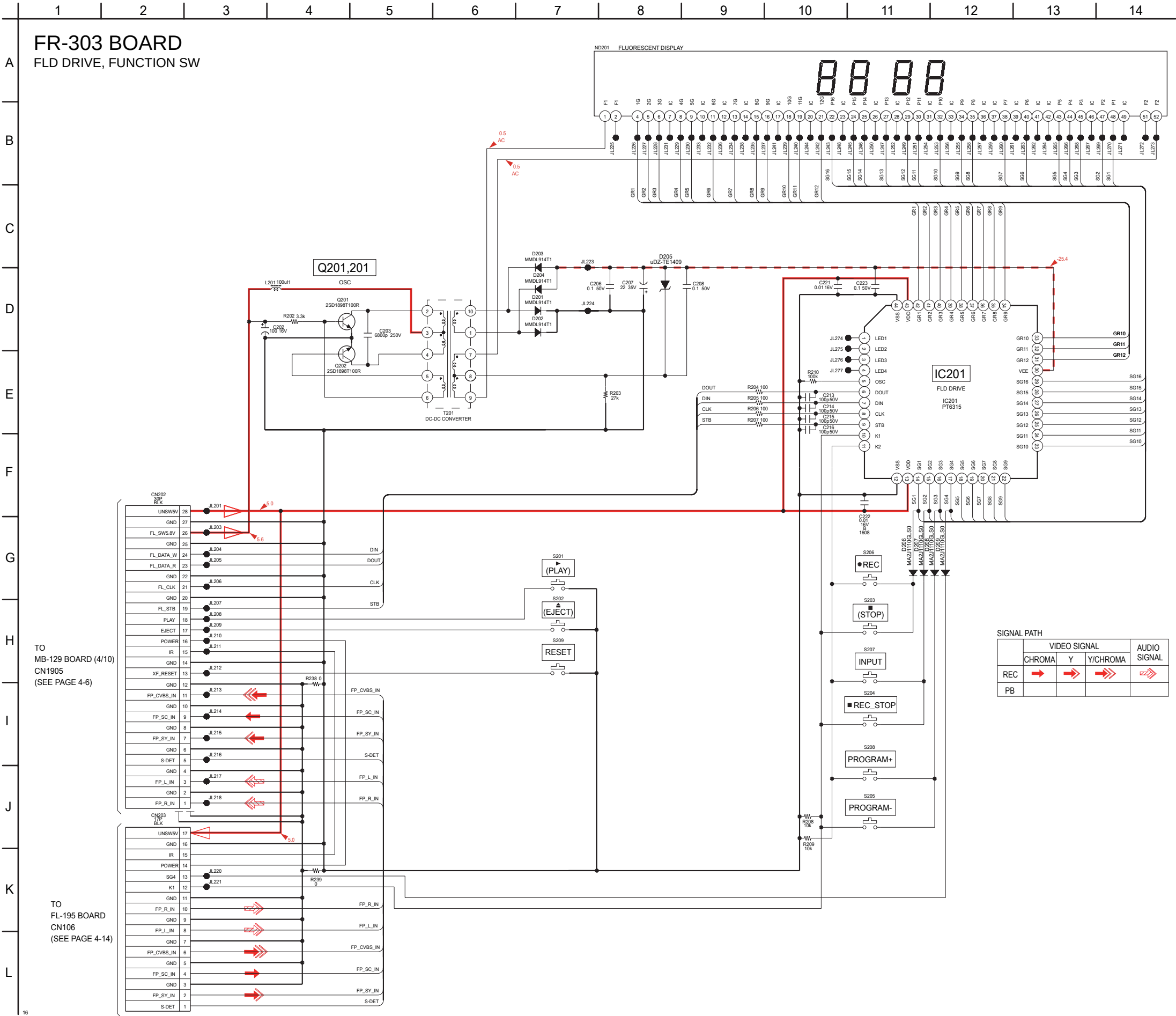


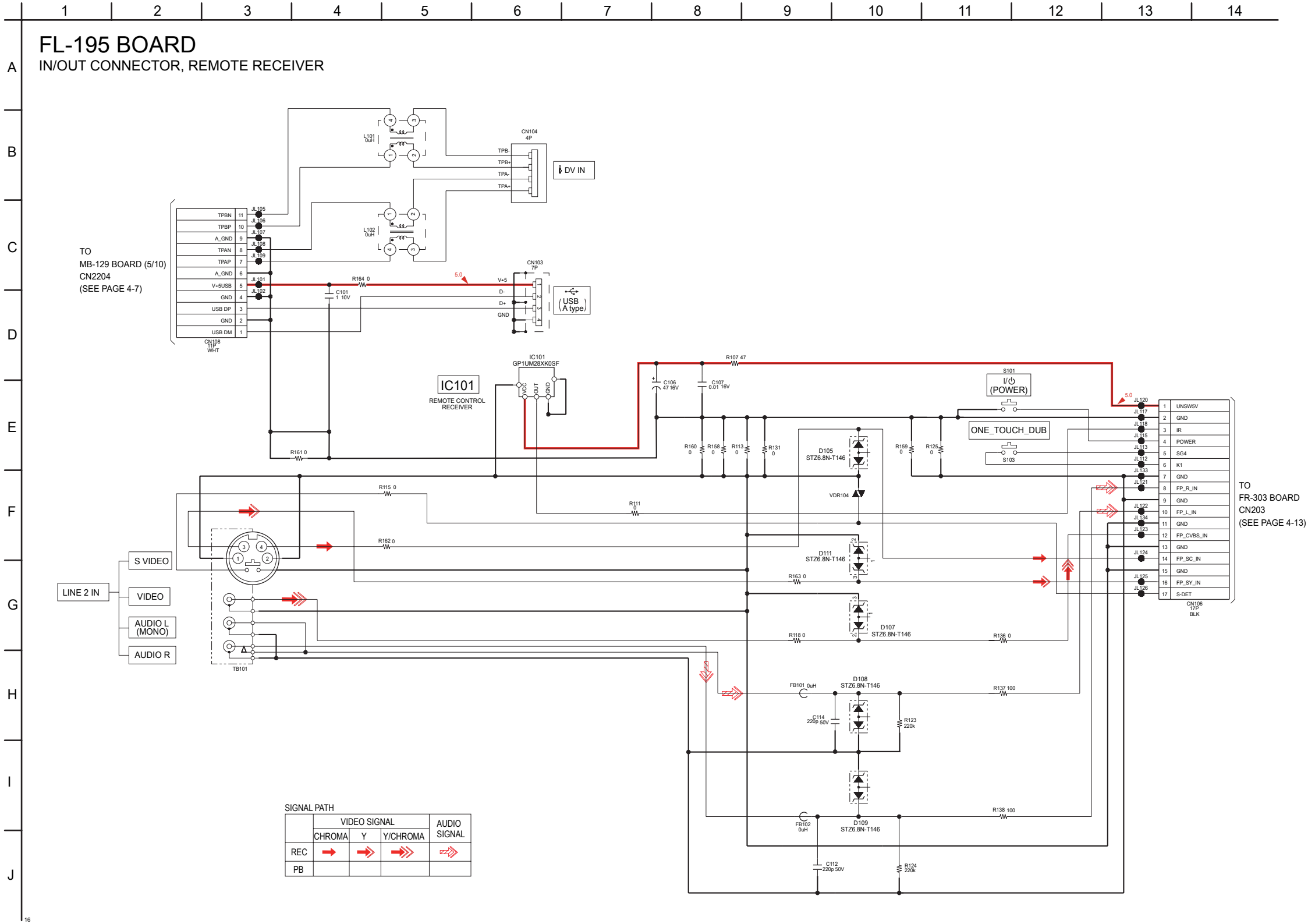




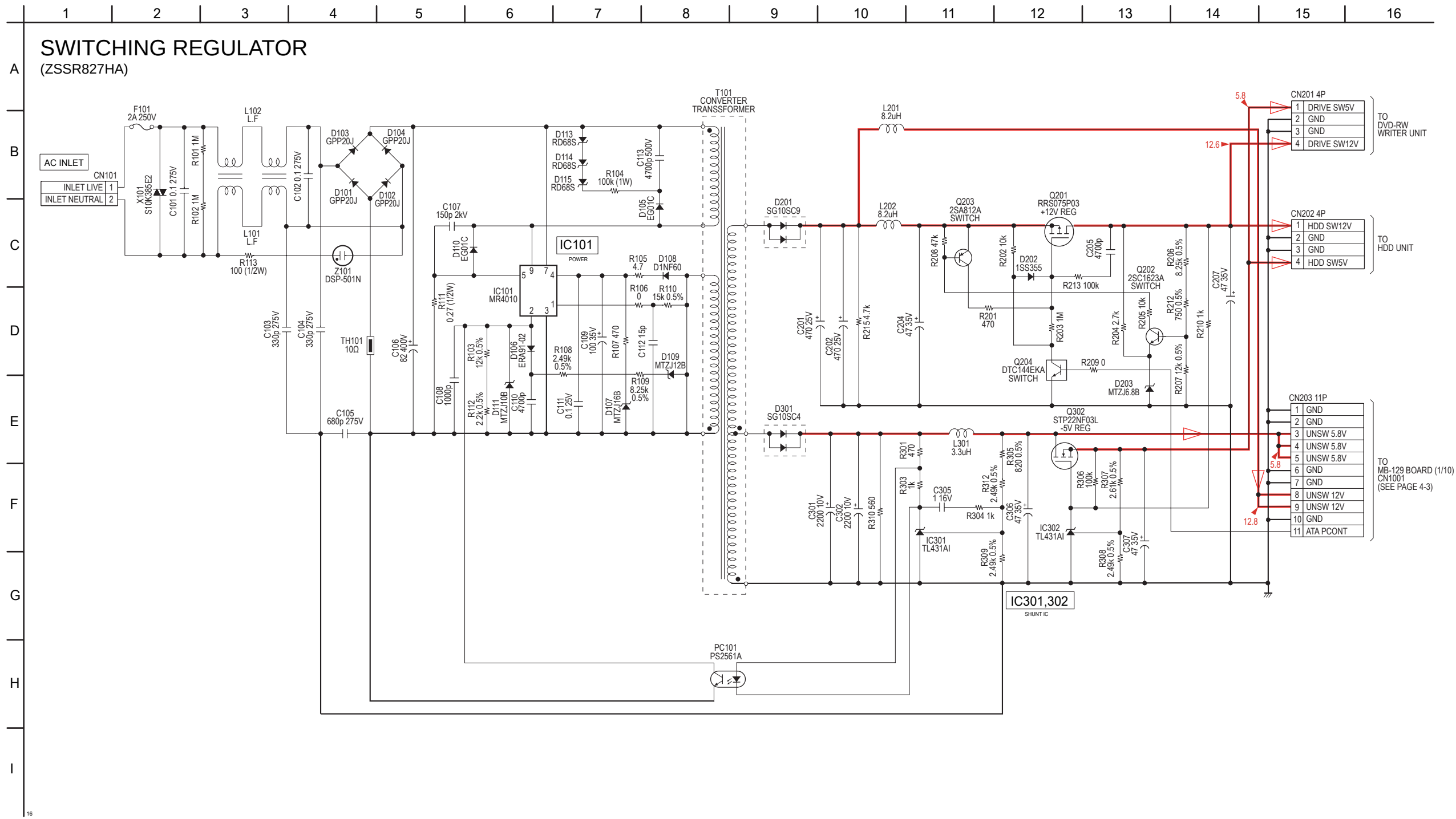








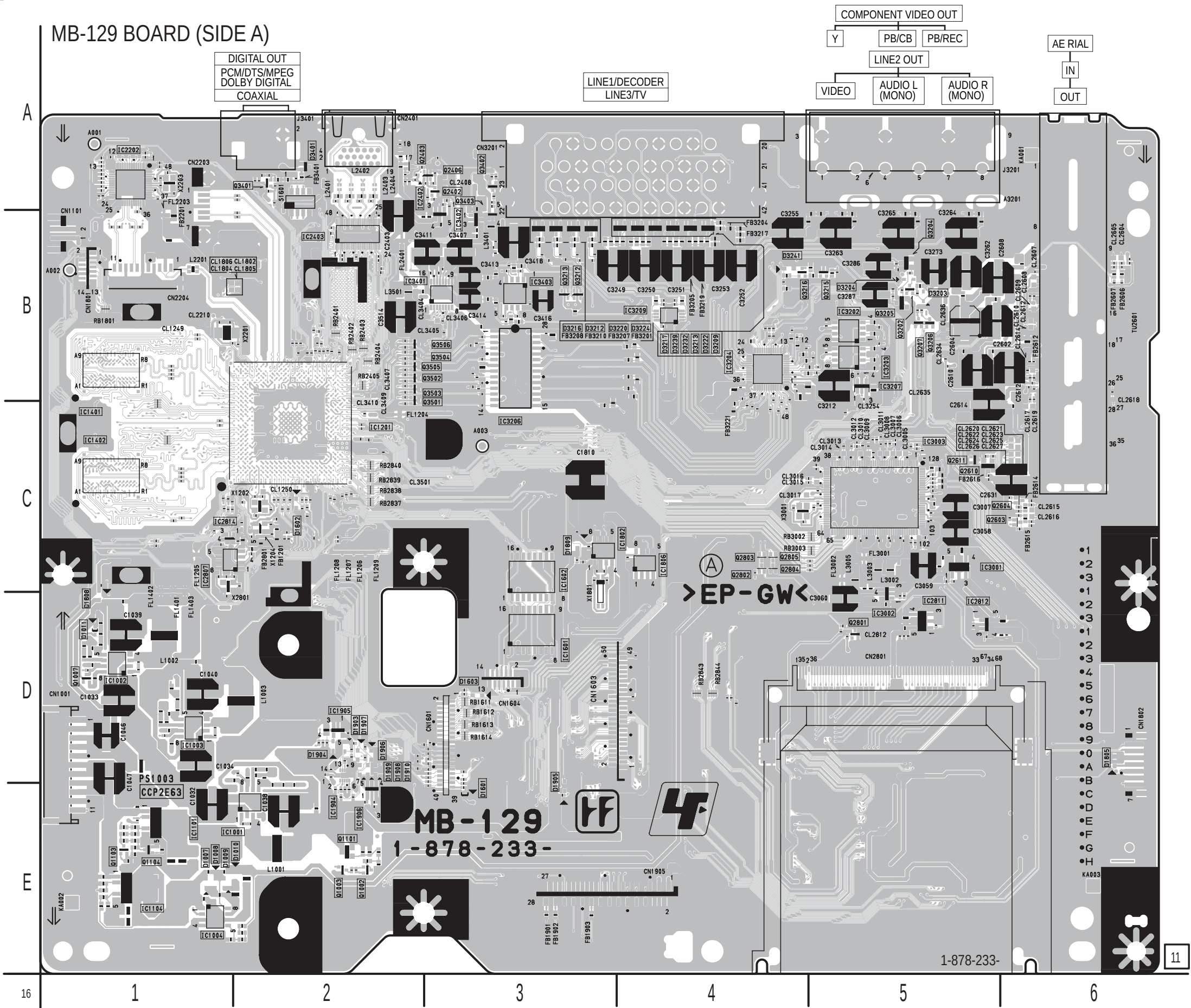
• SWITCHING REGULATOR (ZSSR827HA) SCHEMATIC DIAGRAM



4-3. PRINTED WIRING BOARDS

• MB-129 BOARD (SYSTEM CONTROL) PRINTED WIRING BOARD (SIDE A) • See page 2-8 for circuit boards location.

•  : Uses unleaded solder.



MB-129 BOARD (SIDE A)			
CN1001	D-1	PS1003	D-1
CN1101	B-1		
CN1601	D-3	Q1002	E-2
CN1802	D-6	Q1003	E-2
CN1905	E-4	Q1007	D-1
CN2203	A-1	Q1101	E-2
CN2204	B-1	Q1103	E-1
CN2401	A-2	Q1104	E-1
CN2801	D-5	Q2403	A-3
CN3201	A-3	Q2610	C-5
		Q2611	C-5
D1007	E-1	Q2801	D-5
D1008	E-1	Q2802	C-4
D1009	E-1	Q2803	C-4
D1010	E-1	Q2804	C-4
D1011	D-1	Q2805	C-4
D1602	C-2	Q3202	B-5
D1603	D-3	Q3204	B-5
D1809	C-3	Q3206	B-5
D1905	D-2	Q3207	B-5
D1908	D-2	Q3212	B-3
D1909	D-2	Q3213	B-3
D1910	D-2	Q3401	A-2
D3203	B-5	Q3402	A-3
D3204	B-5	Q3403	A-3
D3203	B-5	Q3501	B-2
D3204	B-5	Q3502	B-2
D3217	B-4	Q3503	B-2
D3222	B-4	Q3504	B-2
D3239	B-4	Q3505	B-2
		Q3506	B-2
IC1001	E-2		
IC1002	D-1	TU2601	B-6
IC1003	D-1		
IC1004	E-1	VD3205	B-3
IC1101	E-1	VD3206	B-3
IC1104	E-1	VD3207	B-3
IC1201	C-2	VD3208	B-3
IC1401	B-1		
IC1402	C-1		
IC1601	D-3		
IC1602	C-3		
IC1802	C-3		
IC1806	C-4		
IC1904	E-2		
IC1905	D-2		
IC1906	E-2		
IC2202	A-1		
IC2403	B-2		
IC2807	C-1		
IC2811	D-5		
IC2812	D-5		
IC3001	C-5		
IC3002	D-5		
IC3003	C-5		
IC3202	B-5		
IC3203	B-5		
IC3204	B-4		
IC3206	B-3		
IC3207	B-5		
IC3209	B-4		
IC3401	B-3		
IC3402	B-3		
IC3403	B-3		

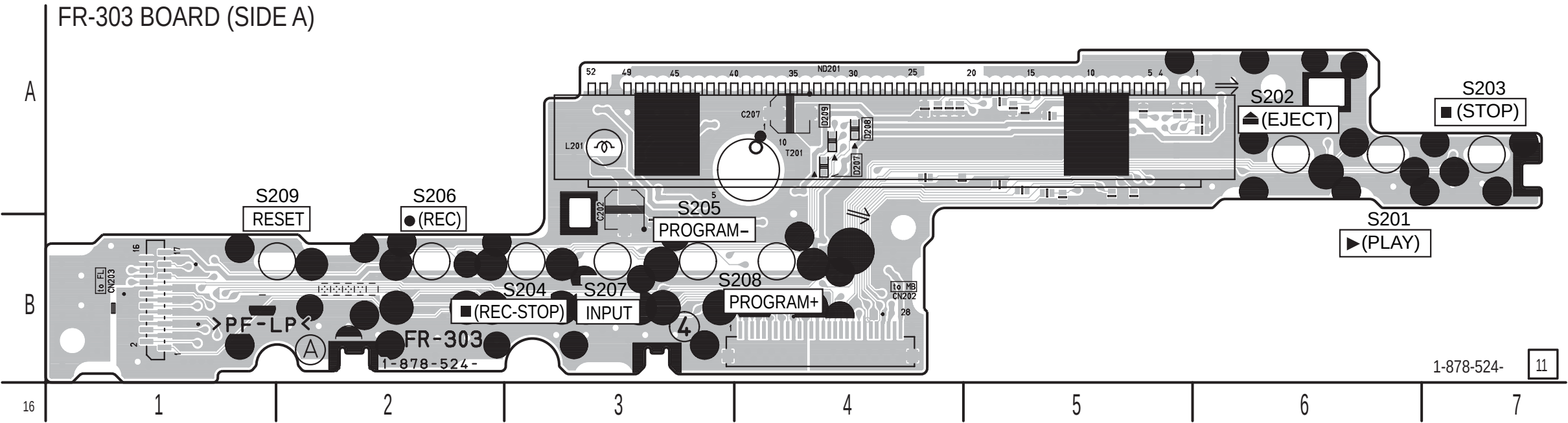
-  : Uses unleaded solder.



D1001	E-5
D1002	D-6
D1003	D-5
D2601	B-1
D3205	B-2
D3206	A-3
D3208	A-2
D3214	B-3
D3215	A-2
D3218	B-3
D3223	A-1
D3226	B-3
D3228	A-2
D3231	A-3
D3233	A-3
D3234	A-4
D3236	A-3
D3238	B-3
IC1901	E-3
IC2201	B-6
IC2401	B-4
IC2405	A-4
IC2601	B-1
IC2602	B-2
IC2603	B-2
IC2801	E-2
IC2802	E-2
IC2803	E-2
IC2809	E-2
IC3201	C-3
IC3205	B-4
IC3208	B-2
IC3501	B-5
Q1004	E-6
Q1903	E-4
Q1904	E-4
Q1905	E-4
Q1906	E-4
Q1907	E-3
Q1908	E-3
Q2401	B-4
Q2405	B-4
Q2605	B-1
Q2606	B-1
Q2607	B-2
Q2608	B-2
Q2609	B-2
Q2615	B-2
Q2616	B-2
Q2617	B-1
Q2618	B-1
Q3201	B-2
Q3203	B-2
Q3217	B-2
Q3218	B-2
VD3201	B-4
VD3202	B-3
VD3203	B-4
VD3204	B-4

• FR-303 BOARD (FLD DRIVE, FUNCTION SW) PRINTED WIRING BOARD • See page 2-8 for circuit boards location.

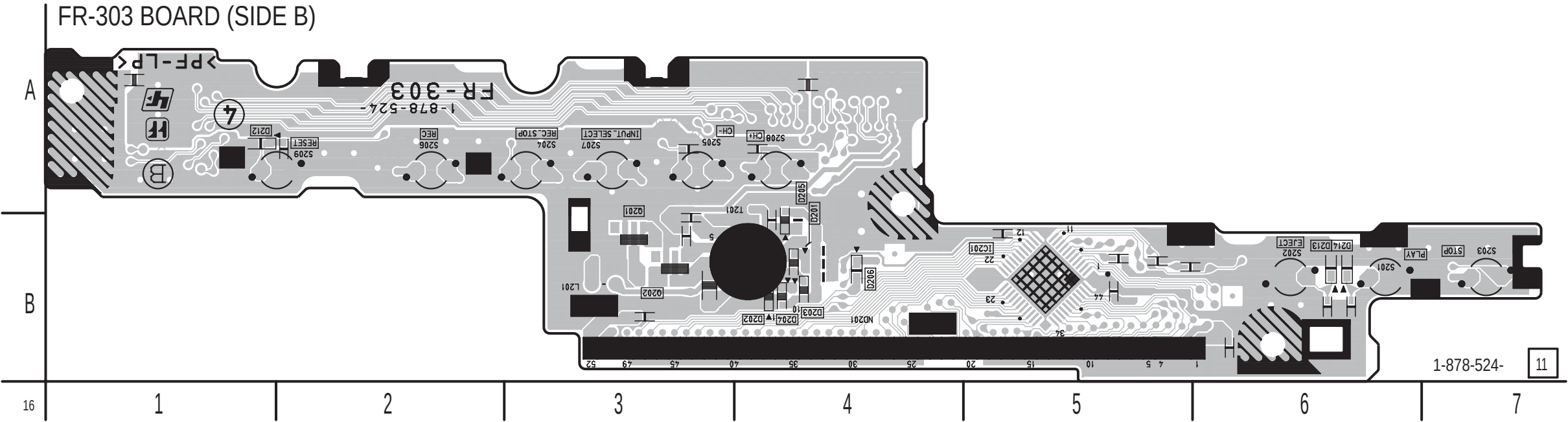
•  : Uses unleaded solder.



FR-303 BOARD (SIDE A)

CN202 B-1
CN203 B-4

D207 A-4
D208 A-4
D209 A-4



FR-303 BOARD (SIDE B)

D201 B-4
D202 B-4
D203 B-4
D204 B-4
D205 B-4
D206 B-4

IC201 B-5
Q201 B-3
Q202 B-3

SECTION 5

IC PIN FUNCTION DESCRIPTION

5-1. AV DIGITIZER (IC3003: SAA7138GHL/V1 (MB-129 BOARD))

Pin No.	Pin Name	I/O	Description
1	FSW	I	Fast switch SCART input (Not used)
2	AVC	I	Audio and video control SCART input (Not used)
3	VDDA(SADC)(1V8)	-	SADC analog supply voltage (1.8V)
4	VSSA(PLL)	-	PLL analog ground
5	VDDA(PLL)	-	PLL analog supply voltage (3.3V)
6	VSSA(AVI1)	-	Analog video input 1 analog ground
7	VDDA(AVI1)	-	Analog video input 1 Analog supply voltage (3.3V)
8	AI11	I	First analog video input of channel 1
9	AI12	I	Second analog video input of channel 1
10	AI13	I	Third analog video input of channel 1 (Not used)
11	AI1D	I	Differential reference connection of channel 1
12	VSSA(AVI2)	-	Analog video input 2 Analog ground
13	VDDA(AVI2)	-	Analog video input 2 Analog supply voltage (3.3V)
14	AI21	I	First analog video input of channel 2
15	AI22	I	Second analog video input of channel 2
16	AI23	I	Third analog video input of channel 2
17	AI2D	I	Differential reference connection of channel 2 (Fixed at “L”)
18	VDDA(1V8)	-	Analog supply voltage (1.8V)
19	RES_REF_V	-	Reference connection of analog video output buffers
20	AOUT1	O	Analog video output port 1 (75 ohm termination)
21	VDDA(AOUT)	-	Analog video output Analog supply voltage (3.3V)
22	AOUT2	O	Analog video output port 2 (Not used)
23	VSSA	-	Analog ground
24	VSSA(AOUT)	-	Analog video output Analog ground
25	VSSA(AVI3)	-	Analog video input 3 Analog ground
26	VDDA(AVI3)	-	Analog video input 3 Analog supply voltage (3.3V)
27	AI31	I	First analog video input of channel 3
28	AI32	I	Second analog video input of channel 3 (Not used)
29	AI33	I	Third analog video input of channel 3
30	AI3D	I	Differential reference connection of channel 3
31	VSSA(AVI4)	-	Analog video input 4 Analog ground
32	VDDA(AVI4)	-	Analog video input 4 Analog supply voltage (3.3V)
33	SSIF	I	Analog input for SSIF processing of channel 4
34	SSIFD	I	Differential reference connection for pin SSIF
35	AI41	I	First analog video input of channel 4
36	AI42	I	Second analog video input of channel 4 (Not used)
37	AI43	I	Third analog video input of channel 4 (Not used)
38	AI4D	I	Differential reference connection of channel 4
39	TRST_POR_N	I	Test reset input (active low) and test power-on reset (active low) (Fixed at “L”)
40	TCK	I	Test clock input (Fixed at “L”)
41	TMS	I	Test mode select (Not used)
42	TDO	O	Test serial data output (Not used)
43	TDI	I	Test serial data input (Not used)
44	SCL	I	I2C-bus clock input
45	SDA	I/O	I2C-bus data input and output
46	SCL_SILENT	O	I2C-bus silent clock output (Not used)
47	SDA_SILENT	I/O	I2C-bus silent data input and output (Not used)
48	VDDD(CORE)	-	Core digital supply voltage (1.8V)
49	VSSD(CORE)	-	Core digital ground
50	INT_A	O	Interrupt flag (active low) (Fixed at “H”)
51	CE	I	Chip enable
52	VSSA(OSC)	-	Oscillator analog ground
53	XTALI	I	Input for crystal (24.576MHz)
54	XTALO	O	Output for crystal (24.576MHz)
55	VDDA(OSC)	-	Oscillator analog supply voltage (1.8V)
56	ITU19	O	Programmable digital video output bit 19 (Not used)
57	ITU18	O	Programmable digital video output bit 18 (Not used)
58	ITU17	O	Programmable digital video output bit 17 (VDEC_D0)
59	VDDD(IO)	-	I/O digital supply voltage (3.3V)
60	VSSD(IO)	-	I/O digital ground

Pin No.	Pin Name	I/O	Description
61	ITU16	O	Programmable digital video output bit 16 (VDEC_D1)
62	ITU15	O	Programmable digital video output bit 15 (VDEC_D2)
63	ITU14	O	Programmable digital video output bit 14 (VDEC_D3)
64	ITU13	O	Programmable digital video output bit 13 (VDEC_D4)
65	ITU12	O	Programmable digital video output bit 12 (VDEC_D5)
66	ITU11	O	Programmable digital video output bit 11 (VDEC_D6)
67	VDDD(IO)	-	I/O digital supply voltage (3.3V)
68	VSSD(IO)	-	I/O digital ground
69	VDDD(CORE)	-	Core digital supply voltage (1.8V)
70	VSSD(CORE)	-	Core digital ground
71	ITU10	O	Programmable digital video output bit (VDEC_D7)
72	V_CLK	O	Clock output of upper and lower digital video output port
73	ITU9	O	Programmable digital video output bit 9 (VDEC_DE)
74	ITU8	O	Programmable digital video output bit 8 (VDEC_VSYNC)
75	ITU7	O	Programmable digital video output bit 7 (Not used)
76	ITU6	O	Programmable digital video output bit 6 (Not used)
77	VDDD(IO)	-	I/O digital supply voltage (3.3V)
78	VSD(IO)	-	I/O digital ground
79	ITU5	O	Programmable digital video output bit 5 (Not used)
80	ITU4	O	Programmable digital video output bit 4 (Not used)
81	ITU3	O	Programmable digital video output bit 3 (Not used)
82	ITU2	O	Programmable digital video output bit 2 (Not used)
83	ITU1	O	Programmable digital video output bit 1 (Not used)
84	ITU0	O	Programmable digital video output bit 0 (Not used)
85	VDDD(IO)	-	I/O digital supply voltage (3.3V)
86	VSSD(IO)	-	I/O digital ground
87	GPIO0	I/O	General purpose input and output 0 (Not used)
88	GPIO1	I/O	General purpose input and output 1 (Not used)
89	GPIO2	I/O	General purpose input and output 2 (Not used)
90	VDDD(CORE)	-	Core digital supply voltage (1.8V)
91	VSSD(CORE)	-	Core digital ground
92	GPIO3	I/O	General purpose input and output 3 (Not used)
93	GPIO4	I/O	General purpose input and output 4 (Not used)
94	GPIO5	I/O	General purpose input and output 5 (Not used)
95	DIGAUDIO0	I/O	Programmable digital audio (Not used)
96	VDDD(IO)	-	I/O digital supply voltage (3.3V)
97	VSSD(IO)	-	I/O digital ground
98	DIGAUDIO1	I/O	Programmable digital audio (ADC_SDA)
99	DIGAUDIO2	I/O	Programmable digital audio (ADC_LRCK)
100	DIGAUDIO3	I/O	Programmable digital audio (ADC_BCK)
101	DIGAUDIO4	I/O	Programmable digital audio (Not used)
102	DIGAUDIO5	I/O	Programmable digital audio (Not used)
103	DIGAUDIO6	I/O	Programmable digital audio (Not used)
104	DIGAUDIO7	I/O	Programmable digital audio (Not used)
105	DIGAUDIO8	I/O	Programmable digital audio (Not used)
106	OUT2_LEFT	O	Analog audio stereo left channel output 2 (Not used)
107	OUT2_RIGHT	O	Analog audio stereo right channel output 2 (Not used)
108	VDDA(DAC)	-	DAC analog supply voltage (3.3V)
109	OUT1_RIGHT	O	Analog audio stereo right channel output 1
110	OUT1_LEFT	O	Analog audio stereo left channel output 1
111	VREF0	-	Ground reference for base band audio processing
112	VSSA(DAC)	-	DAC analog ground
113	VREF_DAC	-	Voltage reference for base band audio DAC
114	VRPOS_ADC	-	Positive voltage reference for base band audio ADC (3.3V)
115	VRNEG_ADC	-	Negative voltage reference for base band audio ADC (Fixed at ground)
116	VDDA(SADC)(3V3)	-	SADC analog supply voltage (3.3V)
117	VSSA(SADC)	-	SADC analog ground
118	VDDD(CORE)	-	Core digital supply voltage (1.8V)
119	VSSD(CORE)	-	Core digital ground
120	IN1_RIGHT	I	Analog audio right channel input 1
121	IN1_LEFT	I	Analog audio left channel input 1

Pin No.	Pin Name	I/O	Description
122	IN2_RIGHT	I	Analog audio right channel input 2
123	IN2_LEFT	I	Analog audio left channel input 2
124	VREF_ADC	I	Voltage reference for base band audio ADC
125	IN3_RIGHT	I	Analog audio right channel input 3 (Not used)
126	IN3_LEFT	I	Analog audio left channel input 3 (Not used)
127	IN4_RIGHT	I	Analog audio right channel input 4 (Not used)
128	IN4_LEFT	I	Analog audio left channel input 4 (Not used)

5-2. THUNDER 2 (IC1201: MS8510-CBG (MB-129 BOARD))

Pin No.	Pin Name	I/O	Description
A1	SC1_DETECT	I	S video terminal detect (XS_DET)
A2	SC0_C8	O	Fan control (FAN_ON)
A3	SC0_IO	O	Fan control (FAN_HI)
A4	MEM_D31	I/O	Memory 32-bit data bus [31]
A5	MEM_D30	I/O	Memory 32-bit data bus [30]
A6	MEM_D26	I/O	Memory 32-bit data bus [26]
A7	MEM_D23	I/O	Memory 32-bit data bus [23]
A8	MEM_D20	I/O	Memory 32-bit data bus [20]
A9	MEM_D18	I/O	Memory 32-bit data bus [18]
A10	MEM_CKE	O	Memory clock enable
A11	MEM_A11	O	Memory address bus [11]
A12	MEM_A6	O	Memory address bus [6]
A13	MEM_CLKB	O	Memory clock output-Inverted
A14	MEM_CLK	O	Memory clock
A15	MEM_CAS#	O	Memory column address strobe
A16	MEM_RAS#	O	Memory row address strobe
A17	MEM_D15	I/O	Memory 32-bit data bus [15]
A18	MEM_D12	I/O	Memory 32-bit data bus [12]
A19	MEM_D10	I/O	Memory 32-bit data bus [10]
A20	MEM_DQM0	O	Memory 4-bit data mask [0]
A21	MEM_D4	I/O	Memory 32-bit data bus [4]
A22	MEM_D3	I/O	Memory 32-bit data bus [3]
A23	JTAG_TRST	-	Not used
A24	JTAG_TDO	-	Not used
A25	SD_BUSPWR	O	SD/MMC bus power control (Not used)
A26	SD_LED	O	SD/MMC LED output (Not used)
B1	SC1_VCCEN	I	PLAY switch input
B2	SC1_IO	I	POWER switch input
B3	SC0_C4	O	Fan control (FAN_M)
B4	SC0_RST	O	DV PHY, AV digitizer and DAC reset (XMRST)
B5	MEM_DQSB3	I/O	Memory 4-bit data strobe-Inverted [3]
B6	MEM_DQS3	I/O	Memory 4-bit data strobe [3]
B7	MEM_D24	I/O	Memory 32-bit data bus [24]
B8	MEM_D22	I/O	Memory 32-bit data bus [22]
B9	MEM_DQS2	I/O	Memory 4-bit data strobe [2]
B10	MEM_DQSB2	I/O	Memory 4-bit data strobe-Inverted [2]
B11	MEM_A8	O	Memory address bus [8]
B12	MEM_A4	O	Memory address bus [4]
B13	MEM_A0	O	Memory address bus [0]
B14	MEM_A2	O	Memory address bus [2]
B15	MEM_BS1	O	Memory 3-bit bank select [1]
B16	MEM_WE#	O	Memory write enable
B17	MEM_DQSB1	I/O	Memory 4-bit data strobe-Inverted [1]
B18	MEM_DQS1	I/O	Memory 4-bit data strobe [1]
B19	MEM_D9	I/O	Memory 32-bit data bus [9]
B20	MEM_DQSB0	I/O	Memory 4-bit data strobe-Inverted [0]
B21	MEM_DQS0	I/O	Memory 4-bit data strobe [0]
B22	MEM_D0	I/O	Memory 32-bit data bus [0]
B23	JTAG_TDI	I	JTAG test data input (Not used)
B24	SD_BUSVOLT0	O	SD/MMC bus voltage control [0] (Not used)
B25	SD_WP	I	SD/MMC write protect (Not used)
B26	SD_DATA0	I/O	SD/MMC 4-bit data [0] (Not used)
C1	SYS_CLK27	I	System 27MHz reference clock input
C2	SC1_C4	O	Fluorescent tube power control (FL-PCONT)
C3	SC1_CLK	-	Not used
C4	SC0_VCCEN	O	SCART power enable (SCART)
C5	SC0_DETECT	O	CIMAX reset output (CI_RST)
C6	MEM_D29	I/O	Memory 32-bit data bus [29]
C7	MEM_D27	I/O	Memory 32-bit data bus [27]
C8	MEM_DQM2	O	Memory 4-bit data mask [2]

Pin No.	Pin Name	I/O	Description
C9	MEM_D16	I/O	Memory 32-bit data bus [16]
C10	MEM_D17	I/O	Memory 32-bit data bus [17]
C11	MEM_A12	O	Memory address bus [12]
C12	MEM_A7	O	Memory address bus [7]
C13	MEM_A3	O	Memory address bus [3]
C14	MEM_A1	O	Memory address bus [1]
C15	MEM_BS0	O	Memory 3-bit bank select [0]
C16	MEM_ODT	-	Memory on die termination
C17	MEM_D13	I/O	Memory 32-bit data bus [13]
C18	MEM_D11	I/O	Memory 32-bit data bus [11]
C19	MEM_D7	I/O	Memory 32-bit data bus [7]
C20	MEM_D6	I/O	Memory 32-bit data bus [6]
C21	MEM_D1	I/O	Memory 32-bit data bus [1]
C22	JTAG_TMS	O	JTAG test mode select (Not used)
C23	SD_BUSVOLT1	O	SD/MMC bus voltage control [1] (Not used)
C24	SD_CD	I	SD/MMC card detect (Not used)
C25	SD_CLK	O	SD/MMC clock output (Not used)
C26	SD_DATA3	I/O	SD/MMC 4-bit data [3] (Not used)
D1	IR_IN	I	IR input
D2	SYS_EXTCLK	I	System external clock input
D3	SC1_C8	I	EJECT switch input
D4	SC1_RST	I	CA card detect input (CARD_DETECT)
D5	SC0_CLK	-	Not used
D6	MEM_DQM3	O	Memory 4-bit data mask [3]
D7	MEM_D28	I/O	Memory 32-bit data bus [28]
D8	MEM_D25	I/O	Memory 32-bit data bus [25]
D9	MEM_D21	I/O	Memory 32-bit data bus [21]
D10	MEM_D19	I/O	Memory 32-bit data bus [19]
D11	MEM_VREF	-	Memory SSTL-2 VREF
D12	MEM_A9	O	Memory address bus [9]
D13	MEM_A5	O	Memory address bus [5]
D14	MEM_A10	O	Memory address bus [10]
D15	MEM_BS2	O	Memory 3-bit bank select [2]
D16	MEM_DQM1	O	Memory 4-bit data mask [1]
D17	MEM_D14	I/O	Memory 32-bit data bus [14]
D18	MEM_D8	I/O	Memory 32-bit data bus [8]
D19	MEM_D5	I/O	Memory 32-bit data bus [5]
D20	MEM_D2	I/O	Memory 32-bit data bus [2]
D21	JTAG_TCK	I	JTAG test clock (Not used)
D22	SD_BUSVOLT2	O	SD/MMC bus voltage control [2] (Not used)
D23	SD_CMD	I	SD/MMC command (Not used)
D24	SD_DATA1	I	CIMAX interrupt input (CI_INT)
D25	USB_ATEST	O	USB analog test output (Fixed at “L”)
D26	USB_REXT	-	USB external resistor reference
E1	I2CDBG_SCL	I/O	I2C DBG serial clock (Not used)
E2	SYS_TEST	I	System test mode (Pull down)
E3	SYS_XTALI	I	System crystal input (27MHz)
E4	SYS_RESET#	I	System reset input
E5	VDD_IO	-	IO digital power (3.3V)
E6	VDD_MEM	-	MEM digital power (1.8V)
E7	VSS_MEM	-	MEM digital ground
E8	VDD_MEM	-	MEM digital power (1.8V)
E9	VSS_MEM	-	MEM digital ground
E10	NC	-	Not used
E11	VDD_MEM	-	MEM digital power (1.8V)
E12	MEM_DLLDTO1	O	Memory 2-bit DLL digital test output (Not used)
E13	MEM_DLLATO	O	Memory DLL analog test output (Not used)
E14	VSS_MEM	-	MEM digital ground
E15	NC	-	Not used
E16	MEM_DLLDTO0	O	Memory 2-bit DLL digital test output (Not used)
E17	VDD_MEM	-	MEM digital power (1.8V)

Pin No.	Pin Name	I/O	Description
E18	VSS_MEM	-	MEM digital ground
E19	NC	-	Not used
E20	VDD_MEM	-	MEM digital power (1.8V)
E21	VSS_MEM	-	MEM digital ground
E22	VSS_IO	-	IO digital ground
E23	SD_DATA2	I/O	SD/MMC 4-bit data [2] (Not used)
E24	USB_XI	I	USB crystal or clock input (Not used)
E25	USB_XO	O	USB crystal output (Not used)
E26	USB_VBUS	I/O	USB mini receptacle VBUS (Not used)
F1	IR_OUT		IR output (Not used)
F2	I2C0_SDA	I/O	I2C 0 serial data
F3	PWM_OUT	O	PWM output
F4	SYS_XTALO	O	System crystal output (27MHz)
F5	VSS_IO	-	IO digital ground
F22	VDD_IO	-	IO digital power (3.3V)
F23	SYS_GPIO5	-	Not used
F24	SYS_GPIO7	-	Not used
F25	USB_DP	I/O	USB data plus
F26	USB_DM	I/O	USB data minus
G1	HOST0_ADDR1	O	Host interface 14-bit address bus [1]
G2	HOST0_ADDR0	O	Host interface 14-bit address bus [0]
G3	I2C0_SCL	I/O	I2C 0 serial clock
G4	I2CDBG_SDA	I/O	I2C DBG serial data (Not used)
G5	PLL_VDDA0	-	PLL analog power [0] (3.3V)
G22	USB_VDDA	-	USB analog power
G23	USB_ID	I	USB identify input (Fixed at “L”)
G24	SYS_GPIO6	-	Not used
G25	SYS_GPIO3	-	Not used
G26	SYS_GPIO2	-	Fixed at “L”
H1	HOST0_ADDR5	O	Host interface 14-bit address bus [5]
H2	HOST0_ADDR3	O	Host interface 14-bit address bus [3]
H3	HOST0_ADDR2	O	Host interface 14-bit address bus [2]
H4	HOST0_WAIT	I	Host interface wait
H5	PLL_VDDA1	-	PLL analog power [1] (3.3V)
H22	USB_VSSA	-	USB analog ground
H23	SYS_GPIO4	I	Ethernet carrier sense (Not used)
H24	SYS_GPIO1	I	Ethernet receive error (Not used)
H25	SYS_GPIO0	-	Fixed at “L”
H26	SATA_REFCLKM	I	SATA reference clock input minus (Not used)
J1	HOST0_ADDR8	O	Host interface 14-bit address bus [8]
J2	HOST0_ADDR7	O	Host interface 14-bit address bus [7]
J3	HOST0_ADDR6	O	Host interface 14-bit address bus [6]
J4	HOST0_ADDR4	O	Host interface 14-bit address bus [4]
J5	PLL_VDDA2	-	PLL analog power [2] (3.3V)
J22	VSS_IO	-	IO digital ground
J23	SATA_REFCLKP	I	SATA reference clock input plus (Not used)
J24	SATA_REXT	-	SATA external reference resistor
J25	SATA_RXM	I	SATA receive minus
J26	SATA_RXP	I	SATA receive plus
K1	HOST0_ADDR12	O	Host interface 14-bit address bus [12] (Not used)
K2	HOST0_ADDR11	O	Host interface 14-bit address bus [11] (Not used)
K3	HOST0_ADDR10	O	Host interface 14-bit address bus [10] (Not used)
K4	HOST0_ADDR9	O	Host interface 14-bit address bus [9]
K5	PLL_VDDA3	-	PLL analog power [3] (3.3V)
K10	PLL_VSSA01	-	Fixed at “H”
K11	VDD_CORE	-	Core digital power (1.0V)
K12	VDD_CORE	-	Core digital power (1.0V)
K13	VDD_CORE	-	Core digital power (1.0V)
K14	VDD_CORE	-	Core digital power (1.0V)
K15	VDD_CORE	-	Core digital power (1.0V)
K16	VDD_CORE	-	Core digital power (1.0V)

Pin No.	Pin Name	I/O	Description
K17	VDD_CORE	-	Core digital power (1.0V)
K22	VDD_IO	-	IO digital power (3.3V)
K23	FW_PLREQ	O	AV link output link request
K24	FW_PLPS	O	AV link power status
K25	SATA_TXP	O	SATA transmit plus
K26	SATA_TXM	O	SATA transmit minus
L1	HOST0_ALE	O	Host interface address latch enable
L2	HOST0_DMACK	O	Host interface 0 DMA acknowledge
L3	HOST0_DMARQ	I	Host interface 0 DMA request
L4	HOST0_ADDR13	O	Host interface 14-bit address bus [13] (Not used)
L5	PLL_VDDA4	-	PLL analog power [4] (3.3V)
L10	PLL_VSSA23	-	Fixed at “H”
L11	VSS_CORE	-	Core digital ground
L12	VSS_CORE	-	Core digital ground
L13	VSS_CORE	-	Core digital ground
L14	VSS_CORE	-	Core digital ground
L15	VSS_CORE	-	Core digital ground
L16	VSS_CORE	-	Core digital ground
L17	VDD_CORE	-	Core digital power (1.0V)
L22	SATA_VP33	-	SATA 3.3V analog IO power
L23	FW_PCNT1	I/O	AV link 2-bit control interface [1]
L24	FW_PCNT0	I/O	AV link 2-bit control interface [0]
L25	FW_PDATA4	I/O	AV link 8-bit data bus [4]
L26	FW_PDATA3	I/O	AV link 8-bit data bus [3]
M1	HOST0_WRIDE	O	Host interface 0 write IDE
M2	HOST0_RDIDE	O	Host interface 0 read IDE
M3	HOST0_WR	O	Host interface 0 write
M4	HOST0_RD	O	Host interface 0 read
M5	PLL_VDDA5	-	PLL analog power [5] (3.3V)
M10	PLL_VSSA45	-	Fixed at “H”
M11	VSS_CORE	-	Core digital ground
M12	VSS_CORE	-	Core digital ground
M13	VSS_CORE	-	Core digital ground
M14	VSS_CORE	-	Core digital ground
M15	VSS_CORE	-	Core digital ground
M16	VSS_CORE	-	Core digital ground
M17	VDD_CORE	-	Core digital power (1.0V)
M22	SATA_VP	-	SATA 1.0V core power
M23	FW_PDATA7	I/O	AV link 8-bit data bus [7]
M24	FW_PDATA6	I/O	AV link 8-bit data bus [6]
M25	FW_PDATA5	I/O	AV link 8-bit data bus [5]
M26	FW_PDATA2	I/O	AV link 8-bit data bus [2]
N1	HOST0_RDY	I	Host interface ready
N2	HOST0_CS0	O	Host 0 8-wire chip select [0]
N3	HOST0_CS1	O	Host 0 8-wire chip select [1]
N4	HOST0_CS2	O	Host 0 8-wire chip select [2]
N5	VDD_IO	-	IO digital power (3.3V)
N10	VDD_CORE	-	Core digital power (1.0V)
N11	VSS_CORE	-	Core digital ground
N12	VSS_CORE	-	Core digital ground
N13	VSS_CORE	-	Core digital ground
N14	VSS_CORE	-	Core digital ground
N15	VSS_CORE	-	Core digital ground
N16	VSS_CORE	-	Core digital ground
N17	VDD_CORE	-	Core digital power (1.0V)
N22	VSS_IO	-	IO digital ground
N23	FW_PDIRECT	I	AV link general purpose IO
N24	FW_PLINKON	I	AV link power status
N25	FW_PDATA0	I/O	AV link 8-bit data bus [0]
N26	FW_PDATA1	I/O	AV link 8-bit data bus [1]
P1	HOST0_CS3	O	Host 0 8-wire chip select [3]

Pin No.	Pin Name	I/O	Description
P2	HOST0_CS4	O	Host 0 8-wire chip select [4] (Not used)
P3	HOST0_CS5	O	Host 0 8-wire chip select [5] (Not used)
P4	HOST0_CS6	O	Host 0 8-wire chip select [6] (Not used)
P5	VSS_IO	-	IO digital ground
P10	VDD_CORE	-	Core digital power (1.0V)
P11	VSS_CORE	-	Core digital ground
P12	VSS_CORE	-	Core digital ground
P13	VSS_CORE	-	Core digital ground
P14	VSS_CORE	-	Core digital ground
P15	VSS_CORE	-	Core digital ground
P16	VSS_CORE	-	Core digital ground
P17	VDD_CORE	-	Core digital power (1.0V)
P22	VDD_IO	-	IO digital power (3.3V)
P23	ETH_RXD0	I	Ethernet receive data (MII/RMII) (Not used)
P24	ETH_COL	I	Ethernet collision detect (Not used)
P25	ETH_CRS	O	HDMI 1080P select (1080P)
P26	FW_PCLK	I	AV link input clock
R1	HOST0_CS7	O	Host 0 8-wire chip select [7] (Not used)
R2	HOST0_DATA0	I/O	Host interface 16-bit data bus [0]
R3	HOST0_DATA1	I/O	Host interface 16-bit data bus [1]
R4	HOST0_DATA2	I/O	Host interface 16-bit data bus [2]
R5	VDD_IO	-	IO digital power (3.3V)
R10	VDD_CORE	-	Core digital power (1.0V)
R11	VSS_CORE	-	Core digital ground
R12	VSS_CORE	-	Core digital ground
R13	VSS_CORE	-	Core digital ground
R14	VSS_CORE	-	Core digital ground
R15	VSS_CORE	-	Core digital ground
R16	VSS_CORE	-	Core digital ground
R17	VDD_CORE	-	Core digital power (1.0V)
R22	VSS_IO	-	IO digital ground
R23	ETH_RXER	I	Ethernet receive error (Not used)
R24	ETH_RXD3	O	RGB/component select (G/Y_SEL)
R25	ETH_RXD2	O	RGB/component select (SC IN_FB)
R26	ETH_RXD1	I	Ethernet receive data (MII/RMII) (Not used)
T1	HOST0_DATA3	I/O	Host interface 16-bit data bus [3]
T2	HOST0_DATA4	I/O	Host interface 16-bit data bus [4]
T3	HOST0_DATA5	I/O	Host interface 16-bit data bus [5]
T4	HOST0_DATA6	I/O	Host interface 16-bit data bus [6]
T5	VSS_IO	-	IO digital ground
T10	VDD_CORE	-	Core digital power (1.0V)
T11	VSS_CORE	-	Core digital ground
T12	VSS_CORE	-	Core digital ground
T13	VSS_CORE	-	Core digital ground
T14	VSS_CORE	-	Core digital ground
T15	VSS_CORE	-	Core digital ground
T16	VSS_CORE	-	Core digital ground
T17	VDD_CORE	-	Core digital power (1.0V)
T22	VDD_IO	-	IO digital power (3.3V)
T23	ETH_TXEN	O	Ethernet transmit enable (Not used)
T24	ETH_TXER	O	Interlace/Progressive select (I/P_SEL)
T25	ETH_RXCLK	I	Ethernet receive clock (Not used)
T26	ETH_RXDV	I	Ethernet receive data valid (Not used)
U1	HOST0_DATA7	I/O	Host interface 16-bit data bus [7]
U2	HOST0_DATA8	I/O	Host interface 16-bit data bus [8]
U3	HOST0_DATA9	I/O	Host interface 16-bit data bus [9]
U4	HOST0_DATA11	I/O	Host interface 16-bit data bus [11]
U5	VDD_IO	-	IO digital power (3.3V)
U10	VDD_CORE	-	Core digital power (1.0V)
U11	VDD_CORE	-	Core digital power (1.0V)
U12	VDD_CORE	-	Core digital power (1.0V)

Pin No.	Pin Name	I/O	Description
U13	VDD_CORE	-	Core digital power (1.0V)
U14	VDD_CORE	-	Core digital power (1.0V)
U15	VDD_CORE	-	Core digital power (1.0V)
U16	VDD_CORE	-	Core digital power (1.0V)
U17	VDD_CORE	-	Core digital power (1.0V)
U22	VSS_IO	-	IO digital ground
U23	ETH_TXCLK	I	Ethernet transmit clock (Not used)
U24	ETH_TXD2	I	SCART interrupt request
U25	ETH_TXD1	O	Ethernet transmit data [1] (MII/RMII) (Not used)
U26	ETH_TXD0	O	Ethernet transmit data [0] (MII/RMII) (Not used)
V1	HOST0_DATA10	I/O	Host interface 16-bit data bus [10]
V2	HOST0_DATA12	I/O	Host interface 16-bit data bus [12]
V3	HOST0_DATA13	I/O	Host interface 16-bit data bus [13]
V4	UART1_TXD	O	Power control 1 (CONT1)
V5	VSS_IO	-	IO digital ground
V22	VDD_IO	-	IO digital power (3.3V)
V23	AOUT_SPDIF	O	Audio output SPDIF
V24	ETH_MDIO	I/O	Management data I/O line (Not used)
V25	ETH_MDC	I/O	Management data clock line (Not used)
V26	ETH_TXD3	O	(C+DET)
W1	HOST0_DATA14	I/O	Host interface 16-bit data bus [14]
W2	HOST0_DATA15	I/O	Host interface 16-bit data bus [15]
W3	UART0_TXD	O	UART0 transmit data
W4	SPI0_CLK	O	SPI0 clock
W5	VDD_IO	-	IO digital power (3.3V)
W22	VSS_IO	-	IO digital ground
W23	AIN1_BCK	I	Audio input 1 bit clock (Not used)
W24	AIN1_DATA	I	Audio input 1 data (Not used)
W25	AIN0_BCK	I	Audio input 0 bit clock
W26	AIN0_LR	I	Audio input 0 left/right clock
Y1	UART1_RXD	O	Power control 2 (CONT2)
Y2	UART0_RXD	I	UART0 receive data
Y3	SPI0_MOSI	O	SPI0 master out serial in
Y4	SPI1_MOSI	O	SPI1 master out serial in
Y5	VSS_IO	-	IO digital ground
Y22	VDD_IO	-	IO digital power (3.3V)
Y23	AIN1_LR	I	Audio input 1 left/right clock
Y24	AOUT_DATA2	O	Audio output 4-bit data bus [2]
Y25	AOUT_LR	O	Audio output left/right clock
Y26	AIN0_DATA	I	Audio input 0 data
AA1	SPI0_MISO	I	SPI0 master in serial out
AA2	SPI0_RDY	I	SPI0 ready/chip select
AA3	SPI1_CLK	O	SPI1 clock
AA4	SPI1_CS1	O	SPI1 chip select
AA5	VDD_IO	-	IO digital power (3.3V)
AA22	VSS_IO	-	IO digital ground
AA23	Not open to public	O	DDC serial clock
AA24	AOUT_DATA1	O	Audio output 4-bit data bus [1]
AA25	AOUT_BCK	O	Audio output bit clock
AA26	AOUT_DATA3	O	Audio output 4-bit data bus [3]
AB1	SPI1_MISO	I	SPI1 master in serial out
AB2	SPI1_CS3	O	SPI1 chip select
AB3	SPI1_CS0	O	SPI1 chip select
AB4	TSIN0_VALID	I	Transport stream input 0 valid (RDR-DC90/DC100/DC200/DC500 only)
AB5	VSS_IO	-	IO digital ground
AB6	VDD_IO	-	IO digital power (3.3V)
AB7	VSS_IO	-	IO digital ground
AB8	VDD_IO	-	IO digital power (3.3V)
AB9	VSS_IO	-	IO digital ground
AB10	VDD_IO	-	IO digital power (3.3V)
AB11	VDAC0_DHVDD	-	Video DAC 0 digital power

Pin No.	Pin Name	I/O	Description
AB12	VDAC0_AHVDD	-	Video DAC 0 analog supply
AB13	VDAC0_AHVSS	-	Video DAC 0 analog ground
AB14	VSS_IO	-	IO digital ground
AB15	VDD_IO	-	IO digital power (3.3V)
AB16	VDAC1_DHVDD	-	Video DAC 1 digital power
AB17	VDAC1_AHVDD	-	Video DAC 1 analog supply
AB18	VDAC1_AHVSS	-	Video DAC 1 analog ground
AB19	VSS_IO	-	IO digital ground
AB20	VDD_IO	-	IO digital power (3.3V)
AB21	VSS_IO	-	IO digital ground
AB22	VDD_IO	-	IO digital power (3.3V)
AB23	VOUT_DATA18	-	Not used
AB24	Not open to public	I/O	DDC serial data
AB25	AOUT_XCLK	I/O	Audio output external clock
AB26	AOUT_DATA0	O	Audio output 4-bit data bus [0]
AC1	SPI1_CS2	O	Power control 3 (CONT3)
AC2	TSIN0_CLK	I	Transport stream input 0 clock (RDR-DC90/DC100/DC200/DC500 only)
AC3	TSIN0_ERR	I	Transport stream input 0 error (Not used)
AC4	TSIN0_DATA5	I	Transport stream input 0 8-bit data bus [5] (RDR-DC90/DC100/DC200/DC500 only)
AC5	TSIN1_SYNC	I	Transport stream input 1 sync (RDR-DC105/DC205/DC305/DC505 only)
AC6	TSIN1_DATA1	I	Transport stream input 1 8-bit data bus [1] (RDR-DC105/DC205/DC305/DC505 only)
AC7	TSIN1_DATA6	I	Transport stream input 1 8-bit data bus [6] (RDR-DC105/DC205/DC305/DC505 only)
AC8	TSIN2_VALID	O	Analog tuner power control (ATON_PORT2)
AC9	TSOUT0_VALID	-	Not used
AC10	TSOUT1_VALID	-	Not used
AC11	VIN_CLK0	I	Video input clock input [0]
AC12	VIN_DATA14	I	Video input 8-bit data bus [14]
AC13	VIN_DATA12	I	Video input 8-bit data bus [12]
AC14	VIN_DATA10	I	Video input 8-bit data bus [10]
AC15	VIN_DATA8	I	Video input 8-bit data bus [8]
AC16	VDAC0_VREFIN	I	Video DAC 0 reference voltage input
AC17	VDAC1_VREFOUT	O	Video DAC 1 reference voltage output (Fixed at “L”)
AC18	VDAC1_IOR	O	Video DAC 1 component-Pr/Cr or RGB-R output
AC19	VOUT_DATA15	O	PHY reset output (RST_PHY#)
AC20	VOUT_DATA17	I/O	Serial data (SDA_PHY)
AC21	VOUT_DATA19	-	Not used
AC22	Not open to public	I/O	Hot plug detect
AC23	Not open to public	O	Power down
AC24	Not open to public	I/O	Receiver sense
AC25	Not open to public	I/O	CEC
AC26	OTP_VPP	-	OTP power supply
AD1	TSIN0_SYNC	I	Transport stream input 0 sync (RDR-DC90/DC100/DC200/DC500 only)
AD2	TSIN0_DATA0	I	Transport stream input 0 8-bit data bus [0] (RDR-DC90/DC100/DC200/DC500 only)
AD3	TSIN0_DATA4	I	Transport stream input 0 8-bit data bus [4] (RDR-DC90/DC100/DC200/DC500 only)
AD4	TSIN1_CLK	I	Transport stream input 1 clock (RDR-DC105/DC205/DC305/DC505 only)
AD5	TSIN1_DATA0	I	Transport stream input 1 8-bit data bus [0] (RDR-DC105/DC205/DC305/DC505 only)
AD6	TSIN1_DATA4	I	Transport stream input 1 8-bit data bus [4] (RDR-DC105/DC205/DC305/DC505 only)
AD7	TSIN2_CLK	-	Not used
AD8	TSOUT0_CLK	-	Not used
AD9	TSOUT0_DATA	-	Not used
AD10	TSOUT1_ERR	-	Not used
AD11	VIN_DE0	I	Video input data enable [0]
AD12	VIN_DATA15	I	Video input 8-bit data bus [15]
AD13	VIN_DATA13	I	Video input 8-bit data bus [13]
AD14	VIN_DATA11	I	Video input 8-bit data bus [11]
AD15	VIN_DATA9	I	Video input 8-bit data bus [9]
AD16	VDAC0_RSET	-	Video DAC 0 external resistor reference
AD17	VDAC0_I0G	O	Video DAC 0 S-Y output
AD18	VDAC1_VREFIN	I	Video DAC 1 reference voltage input
AD19	VOUT_DATA20	-	Not used
AD20	VOUT_DATA16	O	Serial clock (SCL_PHY)

Pin No.	Pin Name	I/O	Description
AD21	Not open to public	O	Control [3]
AD22	Not open to public	O	Data enable
AD23	Not open to public	O	12-bit data bus [2]
AD24	Not open to public	O	12-bit data bus [5]
AD25	Not open to public	O	12-bit data bus [9]
AD26	Not open to public	O	Control [2]
AE1	TSIN0_DATA1	I	Transport stream input 0 8-bit data bus [1] (RDR-DC90/DC100/DC200/DC500 only)
AE2	TSIN0_DATA3	I	Transport stream input 0 8-bit data bus [3] (RDR-DC90/DC100/DC200/DC500 only)
AE3	TSIN0_DATA7	I	Transport stream input 0 8-bit data bus [7] (RDR-DC90/DC100/DC200/DC500 only)
AE4	TSIN1_ERR	I	Transport stream input 1 error (Not used)
AE5	TSIN1_DATA3	I	Transport stream input 1 8-bit data bus [3] (RDR-DC105/DC205/DC305/DC505 only)
AE6	TSIN1_DATA7	I	Transport stream input 1 8-bit data bus [7] (RDR-DC105/DC205/DC305/DC505 only)
AE7	TSIN2_ERR	O	Digital tuner power control (DTON_PORT1)
AE8	TSOUT0_SYNC	-	Not used
AE9	TSOUT1_CLK	-	Not used
AE10	TSOUT1_DATA	-	Not used
AE11	VIN_DATA1	I	Video input 8-bit data bus [1]
AE12	VIN_DATA2	I	Video input 8-bit data bus [2]
AE13	VIN_DE1	I	Video input data enable [1] (Fixed at “L”)
AE14	VIN_DATA5	I	Video input 8-bit data bus [5]
AE15	VIN_DATA6	I	Video input 8-bit data bus [6]
AE16	VDAC0_VREFOUT	O	Video DAC 0 reference voltage output
AE17	VDAC0_IOR	O	Video DAC 0 composite video output
AE18	VDAC1_RSET	-	Video DAC 1 external resistor reference
AE19	VDAC1_IJOG	O	Video DAC 1 component-Y or RGB-G output
AE20	VOUT_DATA21	-	Not used
AE21	Not open to public	O	Vertical sync
AE22	Not open to public	O	12-bit data bus [0]
AE23	Not open to public	O	12-bit data bus [2]
AE24	Not open to public	O	12-bit data bus [6]
AE25	Not open to public	O	12-bit data bus [8]
AE26	Not open to public	O	12-bit data bus [11]
AF1	TSIN0_DATA2	I	Transport stream input 0 8-bit data bus [2] (RDR-DC90/DC100/DC200/DC500 only)
AF2	TSIN0_DATA6	I	Transport stream input 0 8-bit data bus [6] (RDR-DC90/DC100/DC200/DC500 only)
AF3	TSIN1_VALID	I	Transport stream input 1 valid (RDR-DC105/DC205/DC305/DC505 only)
AF4	TSIN1_DATA2	I	Transport stream input 1 8-bit data bus [2] (RDR-DC105/DC205/DC305/DC505 only)
AF5	TSIN1_DATA5	I	Transport stream input 1 8-bit data bus [5] (RDR-DC105/DC205/DC305/DC505 only)
AF6	TSIN2_SYNC	O	CA card power control (PCONT_CARD) (RDR-DC105/DC205/DC305/D 505)
AF7	TSIN2_DATA	O	Tuner power control (TU_PCONT)
AF8	TSOUT0_ERR	-	Not used
AF9	TSOUT1_SYNC	-	Not used
AF10	VIN_VSYNC0	I	Video input vertical sync [0]
AF11	VIN_DATA0	I	Video input 8-bit data bus [0]
AF12	VIN_DATA3	I	Video input 8-bit data bus [3]
AF13	VIN_CLK1	I	Video input clock input [1] (Fixed at “L”)
AF14	VIN_DATA4	I	Video input 8-bit data bus [4]
AF15	VIN_DATA7	I	Video input 8-bit data bus [7]
AF16	VIN_VSYNC1	I	Video input vertical sync [1] (Fixed at “L”)
AF17	VDAC0_COMP	-	Video DAC 0 compensation
AF18	VDAC0_IJOG	O	Video DAC 0 S-C output
AF19	VDAC1_COMP	-	Video DAC 1 compensation
AF20	VDAC1_IJOG	O	Video DAC 1 component-Pb/Cb or RGB-B output
AF21	Not open to public	O	Horizontal sync
AF22	Not open to public	O	12-bit data bus [1]
AF23	Not open to public	O	12-bit data bus [4]
AF24	Not open to public	O	Pixel clock
AF25	Not open to public	O	12-bit data bus [7]
AF26	Not open to public	O	12-bit data bus [10]

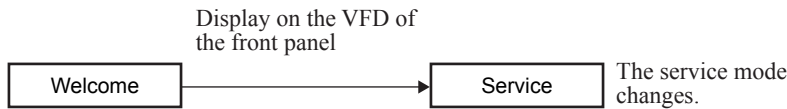
SECTION 6

SERVICE MODE

[Changing to the service mode]

Operation: Turn on AC_IN while pressing [▲] and [▶] keys simultaneously.

(The front panel display shows “Welcome”, and then “SERVICE” appears immediately.)



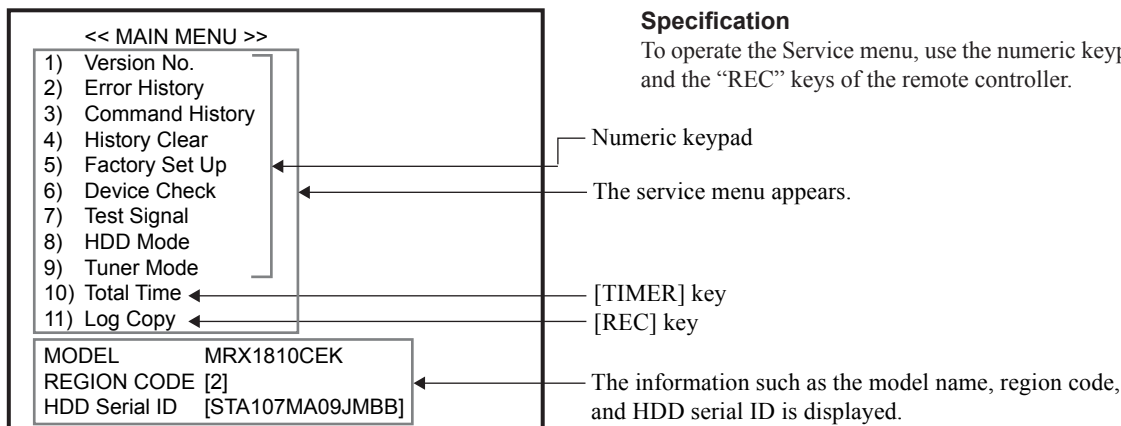
[Storing the service information]

The service information other than the one for the HDD is stored in the flash memory.

[Exiting the service mode]

Press the [I/⏻] button, and disconnect the AC plug from the outlet.

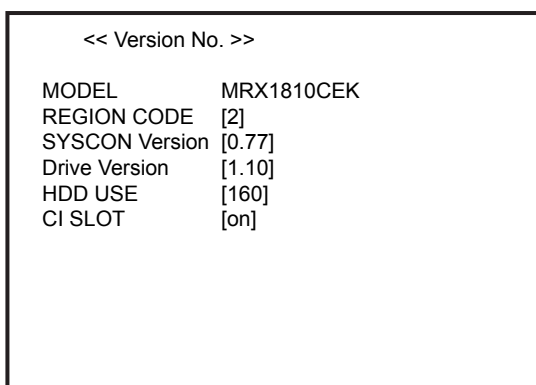
When the service mode starts, the following display appears on the connected monitor.
The service mode menu and the setting status are displayed.



*The operation can be performed only with mode 3 (initial value) of the remote controller.

6-1. VERSION NO.

This menu allows you to check the product information of the unit.



Specification

MODEL: Displays the model name of the unit.
REGION CODE: Displays the region code of the unit.
SYSCON Version: Displays the software version of the unit.
Drive Version: Displays the software version of the DVD drive mounted on the unit.
HDD USE: Sets the storage capacity of the HDD.
CI SLOT: Turns on or off the CI slot.

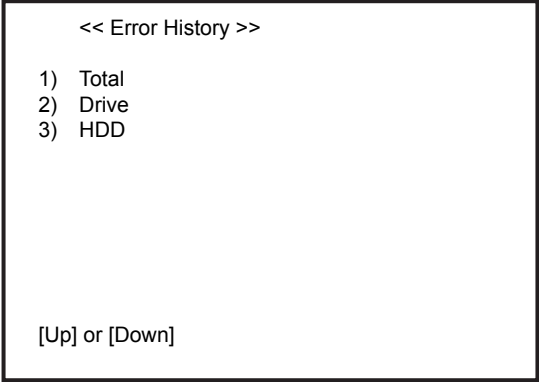
Compatible model list

Name	Prototype name
RDR-DC90	MRX-1800CEK
RDR-DC100	MRX-1810CEK
	MRX-1810EC1
RDR-DC105	MRX-1810EC2
	MRX-1810EC3
RDR-DC200	MRX-1820CEK
	MRX-1820EC1

Name	Prototype name
RDR-DC205	MRX-1825CEK
	MRX-1825EC2
	MRX-1825EC3
RDR-DC305	MRX-1835CEK
RDR-DC500	MRX-1850EC1
RDR-DC505	MRX-1855CEK
	MRX-1855EC2
	MRX-1855EC3

6-2. ERROR HISTORY

This menu displays the information of the errors that have occurred in the unit.

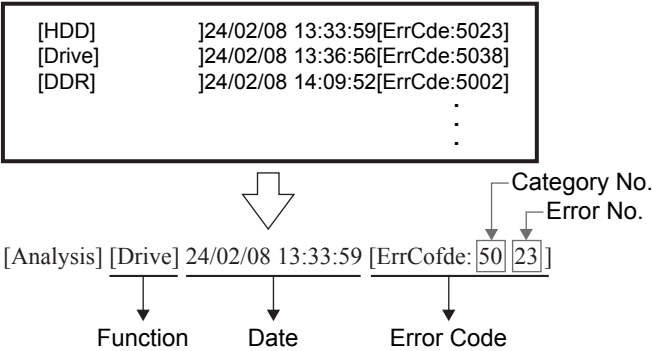


Specification
The history of errors that have occurred is displayed by the error code.
*Up to the latest 50 errors can be registered in the history.

*Operate this menu with the numeric keypad of the remote controller.

6-2-1. TOTAL

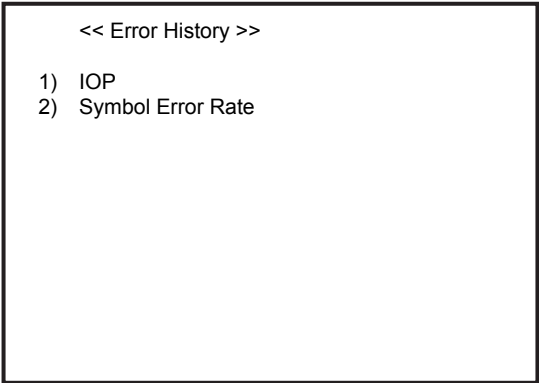
This menu allows you to check the part where an error occurred, and its date and time with error codes.
The error code consists of “Category No.” and “Error No.”.
For details, refer to “6-2-4. ERROR HISTORY CONTENTS”.



Note
1) Error No. is not correctly displayed.
Please check the “Category No.”.
2) The displayed codes are not all NG.

6-2-2. DRIVE

Displays the information of the drive mounted on the unit.

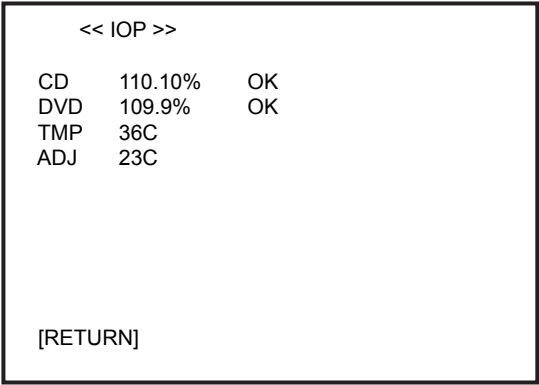


Specification
IOP: Displays the loader information.
Symbol Error Rate: Displays the error rate of the disc.

*Operate this menu with the numeric keypad of the remote controller.

1) IOP

Displays the IOP information of the drive and the temperature information of the laser pickup.



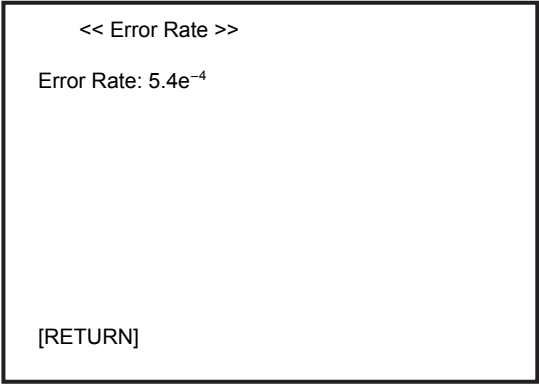
Pressing **RETURN** returns to the previous menu.

Specification

- CD: Displays the IOP value of the CD, and whether it is OK or NG.
- DVD: Displays the IOP value of the DVD, and whether it is OK or NG.
- TMP: Displays the temperature of when measuring the laser pickup.
- ADJ: Displays the initial (standard) temperature of the laser pickup.

2) Symbol Error Rate

This menu displays the error rate of the drive.



Pressing **RETURN** returns to the previous menu.

Threshold when determining OK or Error.

Disc type	Recording mode	Finalize	Reference value
DVD-Video	—	—	8.0×10.0^{-4}
DVD-R	Video mode	Finalized	1.0×10.0^{-3}
		Not finalized	1.0×10.0^{-3}
DVD-RW	Video mode	Finalized	1.0×10.0^{-3}
		Not finalized	1.0×10.0^{-3}

6-2-3. HDD

Displays the error information of the HDD.
For details, refer to Category “HDD” in “6-2-4. ERROR HISTORY CONTENTS”.

6-2-4. ERROR HISTORY CONTENTS

Category	Category No	Error No	Error Description
CPU & HW	01	01	RISC0 initialized fail
		02	RISC1 initialized fail
		03	High speed SPI bus initialize fail
		04	SPI Flash full
		05	Host bus1 busy
		06	Host bus2 busy
		07	I/O error
		08	No such device or address
		09	AV Switch no answer
		0A	SAA7138 no answer
		0B	SAA7138 no answer
		0C	Stv6418 no answer
		0D	1394 Port fail
RTOS	02	01	Task create fail
		02	Task delete fail
		03	OS_TaskResume: task is invalid
		04	OS_TaskResume: task is not in unconditionally suspended state
		05	OS_TaskResume: unknown error
		06	OS_TaskResume: task pointer is invalid
		07	Kernel installed fail
		08	Arg list too long
		09	Device or resource busy
		0A	No such device
		0B	Invalid argument
Memory	03	01	DDR initialized and self check fail
		02	Memory malloc fail
		03	Memory free fail
		04	Out of memory
		05	memory not enough
		06	Bad address
		07	sram pool init failed
		08	MemoryInit - parament error
		09	MemoryInit - system creates semaphore failed
		0A	MemoryWrite - parameter error
		0B	MemoryWrite - not init
		0C	MemoryWrite - no such block no
		0D	MemoryRead - parameter error
		0E	MemoryRead - not init
		0F	MemoryRead - no such block no
HDD	04	01	HDD format fail
		02	SATA: sata_write_sectors on unconnected drive
		03	SATA: write address is bigger than 48-bit max
		04	SATA: cannot allocate temp write buffer
		05	SATA: WRITE_DMA failed
		06	SATA: sata_read_verify sectors on unconnected drive
		07	SATA: read verify count bigger than 48-bit max
		08	SATA: READ VERIFY SECTOR(S) failed
		09	SATA: ATAPI device not supported
		0A	SATA: diagnostics failed
		0B	SATA: SMART READ DATA failed
		0C	temperature too high
		0D	HDD communication fail
		0E	HDD full
		0F	Exec format error

 : This error is not supported. This does not function at present.

Category	Category No	Error No	Error Description
ATAPI	05	01	ATAPI_ERROR_INVALID_DRIVE
		02	ATAPI_ERROR_TIMEOUT
		03	ATAPI_ERROR_INSUFFICIENT_BUF_SIZE
		04	ATAPI_ERROR_SIZE_MISMATCH
		05	ATAPI_ERROR_CHECK_SENSE
		06	ATAPI_ERROR_ABORTED
		07	ATAPI_ERROR_RESETED
		08	ATAPI_ERROR_FAILED
		09	ATAPI_WARNING_REASON_MISMATCH
Tuner	06	01	afc tuning could not locked to carrier
		02	iic communication error
		03	Not able to read back the frequency & offset
		04	invalid video carrier frequency
SPI Flash	07	01	FLASH_ERR_BAD_PARAMETER
		02	FLASH_ERR_NOT_SUPPORTED
		03	FLASH_ERR_NULL_POINTER
		04	FLASH_ERR_TIMEOUT
USB	08	01	Unknown USB device
		02	Communication error
		03	USB_PVR_UNMOUNTED
		04	USB_DEVICE_DISCONNECT
DVD	09	01	Unformatted disc
		02	Bad disc
		03	unknowable disc
		04	Load disc fail
		05	Exec format error
		06	Error in opening tray
		07	Error in closing tray
		08	tray initialize failed
HDMI	0A	01	HDMI initialize failed
		02	HDMI_TASK_UNINITIALIZED (Before task init)
			HDMI_TASK_DISCONNECTED (Task init finished, cable not connected)
		03	HDMI_TASK_EDID_NOT_FINISHED (Cable connected, EDID read is under way)
		04	HDMI_TASK_AUTH_NOT_FINISHED HDCP (authentication is under way)
		05	HDMI_AUDIO_NOT_SUPPORTED
		06	HDMI_AUDIO_SUPPORT_UNKNOWN

: This error is not supported. This does not function at present.

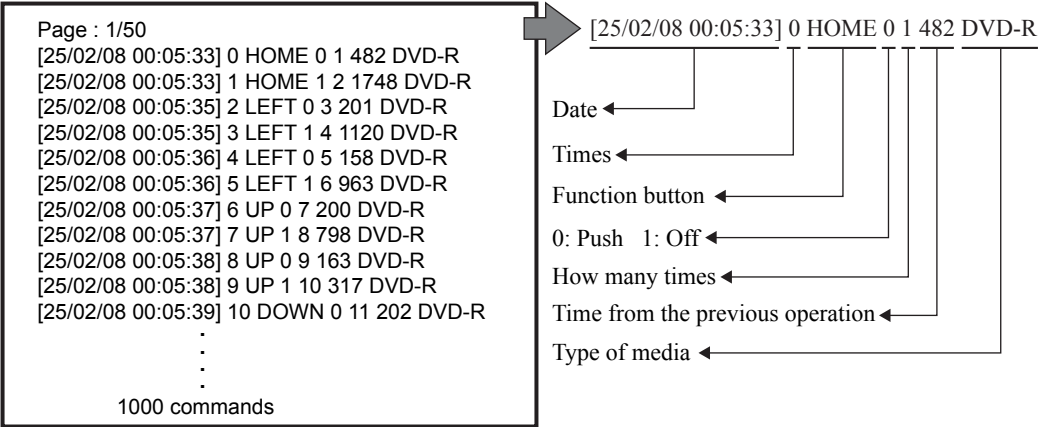
Category	Category No	Error No	Error Description
Encoder	0B	01	mpeg_encoder_init Failed
		02	MPEGENCODER_ERROR_CREATE_CONTEXT_FAIL
		03	MPEGENCODER_ERROR_CREATE_CMD_Q_FAIL
		04	MPEGENCODER_ERROR_CREATE_THREAD_FAIL
		05	MPEGENCODER_ERROR_CMD_QUEUE
		06	MPEGENCODER_ERROR_CMD_FAIL
		07	MPEGENCODER_ERROR_WRONG_CMD
		08	MPEGENCODER_ERROR_PARAMETER_ERR
		09	MPEGENCODER_ERROR_STREAMING_RUNNING
		0A	MPEGENCODER_ERROR_TIMEOUT
		0B	MPEGENCODER_ERROR_INVALID_STATE
		0C	MPEGENCODER_ERROR_SWITCH_TO_DV
		0D	MPEGENCODER_ERROR_START_RECORD
		0E	MPEGENCODER_ERROR_TIMEOUT_STOP
		0F	MPEGENCODER_ERROR_ENCODE_IFRAME
		10	MPEGENCODER_ERROR_TIMESOUT_START_RECORD
		11	MPEGENCODER_ERROR_TIMESOUT_WATING_DMA
File System	0C	01	Bad drive number.
		02	Invalid parameter given
		03	The disk is not opened yet.
		04	Disk is removed.
		05	Error in the cluster chain
		06	The Disk has invalid cluster size.
		07	Fat cache table too small.
		08	Defective cluster detected.
		09	Bad Disk
		0A	No partition in disk.
		0B	Cannot format or delete the drive, files are still opened
		0C	No FAT type in this partition. Can't Format
		0D	Too many clusters for this partition. Can't Format
		0E	File allocation table too small. Can't Format
		0F	Numroot must be an even multiple of 16
		10	Not formatted this disk.
		11	Path or filename too long
		12	Path or filename is invalid.
		13	There has been a problem when reading the content of a directory
		14	invalid file descriptor
		15	Attempt to open a read only file or a special (directory).
		16	Write filed. Presumably because of no space.
		17	File not found or path to file not found.
		18	Exclusive access requested but file already exists.
		19	Seek to negative file pointer attempted.
		1A	Directory is not empty.
		1B	Invalid parameter is specified.
		1C	Invalid parameter combination is specified.
		1D	The file we wanted to open is a directory
		1E	Can't allocate internal buffer.
		1F	Driver IO function routine returned error
		20	Nucleus FILE internal error
		21	Not enough data provided for some functions
		22	Indicate the last entry in a directory
		23	write file error
		24	write to maximum file size

Category	Category No	Error No	Error Description
Recorder	0D	01	RECORDLAYER_ERROR_NONSPECIFIC
		02	RECORDLAYER_ERROR_SYSTEM_BUSY
		03	RECORDLAYER_ERROR_DISC_WRITE
		04	RECORDLAYER_ERROR_INVALID_PARAMETER
		05	RECORDLAYER_ERROR_CODEC_FAILURE
		06	RECORDLAYER_ERROR_MUX_FAILURE
		07	RECORDLAYER_ERROR_TITLE_DEPLETED
		08	RECORDLAYER_ERROR_LBA_DEPLETED
		09	RECORDLAYER_ERROR_GOP_DEPLETED
		0A	RECORDLAYER_ERROR_CHAPTER_DEPLETED
		0B	RECORDLAYER_ERROR_CELL_DEPLETED
		0C	RECORDLAYER_ERROR_NONCIRRUS_DISC
		0D	RECORDLAYER_ERROR_DUPLICATE_CHAPTER
		0E	RECORDLAYER_ERROR_DELETE_1ST_CHAPTER
		0F	RECORDLAYER_ERROR_WRITE_PROTECT
		10	RECORDLAYER_ERROR_STANDARD_MISMATCH
		11	RECORDLAYER_ERROR_NONRECORDABLE_DISC
		12	RECORDLAYER_ERROR_DISC_WRITE_CRITICAL
		13	RECORDLAYER_ERROR_NO_RECORDABLE_DATA
		14	RECORDLAYER_ERROR_DISC_SYNTAX
		15	RECORDLAYER_ERROR_DISC_FULL
		16	RECORDLAYER_ERROR_DISC_WRITE_RECSTOP
		17	RECORDLAYER_ERROR_DRIVE_CANCEL
		18	RECORDLAYER_ERROR_OUT_OF_MEMORY
		19	RECORDLAYER_ERROR_NO_DISC
		1A	RECORDLAYER_ERROR_TITLE_LBA_DEPLETED
		1B	RECORDLAYER_ERROR_FILE_SYSTEM_SUCCESS_RECSTOP
		1C	RECORDLAYER_ERROR_DAMAGED_DISC
		1D	RECORDLAYER_ERROR_DISC_WRITEABORTED
divx	0E	01	getting registration code error
		02	Un-supported audio type
		03	Invalid subpicture
		04	Menu play failed
navigator	0F	01	Open AUDIO_TS.IFO Failed
		02	Open AUDIO_TS.BUP Failed
		03	Open AUDIO_TS.VOB Failed
		04	context buffer too small
		05	invalid context version
		06	invalid media type
		07	mismatch context size
		08	context size too big
		09	null context
Others	10	01	Password wrong
		02	In valid key
		03	Operation not permitted
		04	No child processes
		05	Permission denied
		06	send I2C data failed
		07	get I2C data failed
		08	Temperature anomaly (Over Heat) *The set shuts down after recording Log when the set temperature has exceeded the operation security temperature.

: This error is not supported. This does not function at present.

6-3. COMMAND HISTORY

This menu displays the history of commands that the user used.



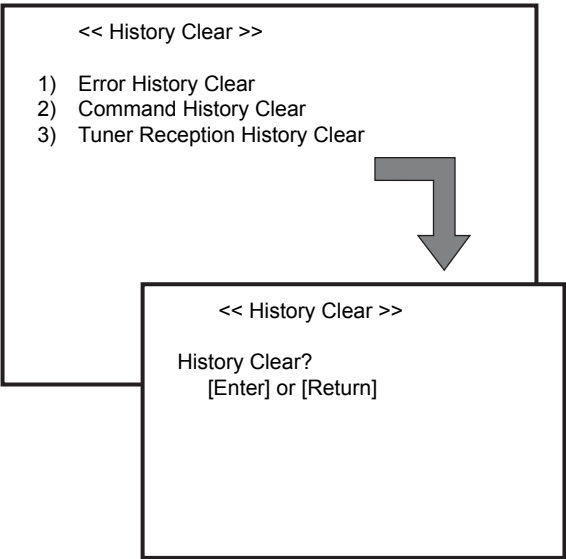
Pressing the **↑** **↓** keys moves pages.
Pressing **RETURN** returns to the main menu.

Explanation of the display

- Date: Operation date and time
- Times: Operation order (0 is the oldest)
- Function button: Name of buttons that are performed on the front panel or remote control.
- 0: Push 1: Off: "Push" - Indicates that the button is pressed.
"Off" - Indicates that the button is released after pressing.
- How many times: Total number of times the button is pressed after the power is turned on.
- Time from the previous operation: Elapsed time since the previous key operation until the latest key operation. (Unit: ms)
- Type of media: Type of the media that was selected or used.
(DVD-ROM, DVD-R, DVD-RW_VR, DVD-RW_VIDDVD+R, DVD+RW, CD-ROM, CD-R, NONE or UNKNOWN)

6-4. HISTORY CLEAR

This menu deletes all the history information.



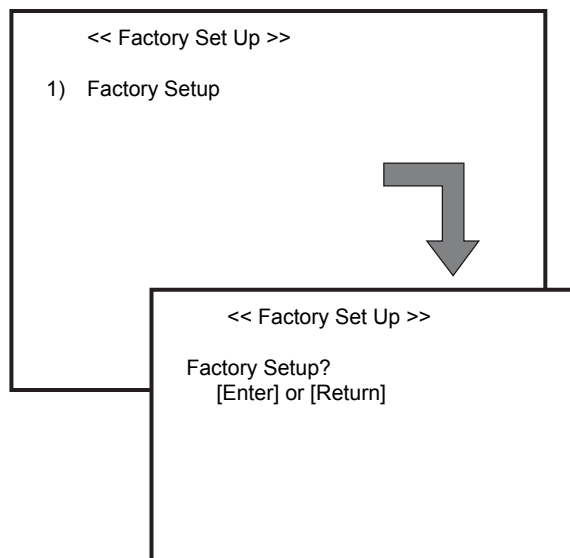
Specification
Clears all error histories, command histories, or tuner reception histories ((1.) to (4.) of Tuner mode).

Pressing **RETURN** returns to the main menu.

*Operate this menu with the **ENTER** key or the **RETURN** key of the remote controller.

6-5. FACTORY SET UP

This menu returns the settings to the factory default state.



*Operate this menu with the **ENTER** key or the **RETURN** key of the remote controller.

Specification

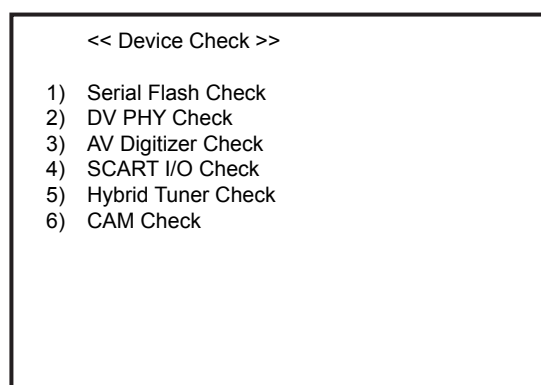
Initialize Setting

*Model names and the key information (CPRM, HDCP, NUID) are not cleared.

Pressing **RETURN** returns to the main menu.

6-6. DEVICE CHECK

This menu allows you to check the operation of each device.



*Operate this menu with the numeric keypad of the remote controller.

Specification

1) Device Check -- Serial Flash

SERIAL FLASH (1)
READING DATA: 0xAA
RESULT: OK

SERIAL FLASH (2)
READING DATA: 0x55
RESULT: OK

2) Device Check -- DV PHY

DV_PHY
RESULT: OK

3) Device Check -- AV Digitizer

READING DATA (L): 0x71
READING DATA (U): 0x38
RESULT: OK

READING VOLTAGE: 0xF
RESULT: OK

4) Device Check -- Scart

READING DATA: 0x0085
RESULT: OK

5) Device Check -- Hybrid Tuner

READING DATA: 0xBC
RESULT: OK

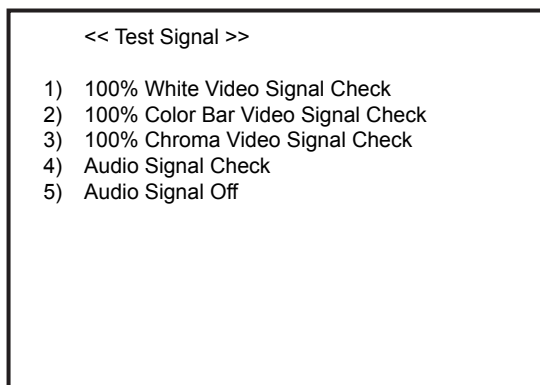
6) Device Check -- CAM

CI on model
RESULT: OK
CI off model
RESULT: NG

Each menu returns to the previous menu by pressing **RETURN**.

6-7. TEST SIGNAL

This menu allows you to check the video signal and the audio signal.



Specification

Test Signal

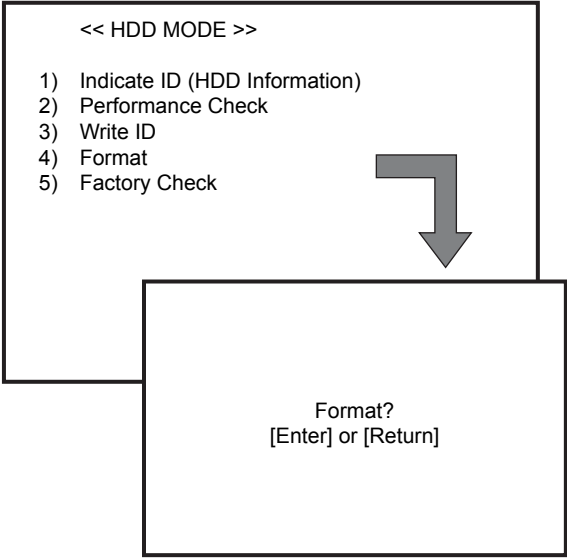
- 1) The screen is all-white.
- 2) The screen displays color bars.
- 3) The screen is pink or magenta.
- 4) The screen is <<Test Signal -- Audio On>>.
- 5) The screen is <<Test Signal -- Audio Off>>.

Pressing RETURN returns to the previous page.

*Operate this menu with the numeric keypad of the remote controller.

6-8. HDD MODE

This menu allows you to perform HDD-related operations such as HDD information display and initialization.



*Operate this menu with the **[ENTER]** key or the **[RETURN]** key of the remote controller.

Specification

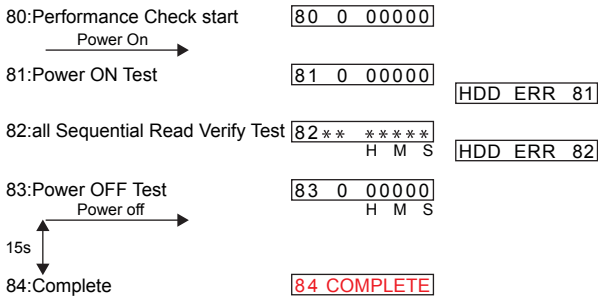
1) HDD Information

MODEL: [Hitachi HDT721016SLA380]
FIRMWARE: [ST10A38C]
SERIAL: [STA107MA09JMBB]

2) Monitor Display “HDD performance check is going on ...”

HDD performance Check

○Normal display ○Error display



When the **[I/⏻]** button is pressed, the unit starts in the normal mode.
To return to the service mode, disconnect the AC plug and enter the service mode again.

3) HDD Write ID

HDD ID OK
HDD ID Check: [STA107MA09JMBB]

4) Display at the center of the screen

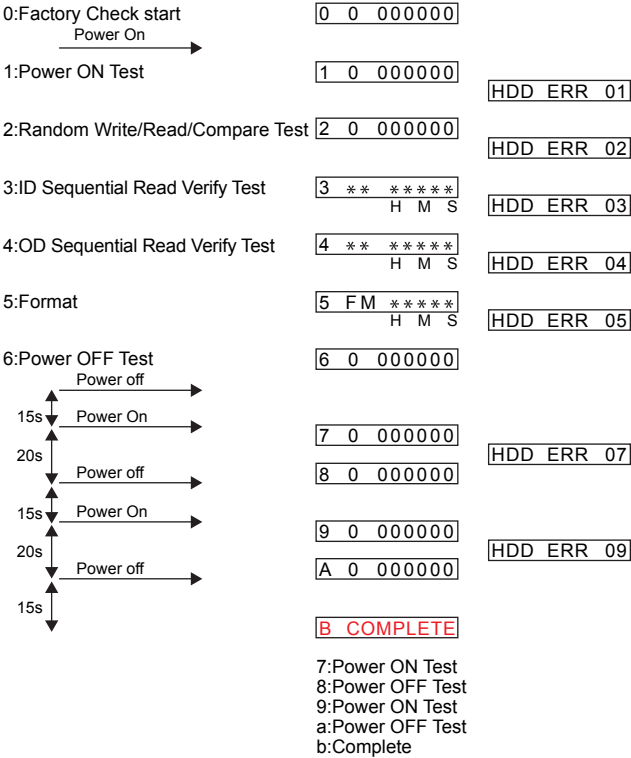
Format?
[Enter] or [Return]

1), 3), and 4) return to the previous menu by pressing [Return].

5) Monitor Display “HDD factory check is going on ...”

FL display specification
HDD factory Check

○Normal display ○Error display



When the **[I/⏻]** button is pressed, the unit starts in the normal mode.
To return to the service mode, disconnect the AC plug and enter the service mode again.

6-9. HOW TO REPLACE THE HDD

Case of MB-Board Defect

- 1) MB-Board change to new board.
- 2) Select to 8) HDD mode of Service mode.
- 3) Select to 3) Write ID
- 4) Select to 1) Indicate ID & Check HDD Model Name
- 5) Select to 1) Factory Setup of TOP menu 5) Factory Setup

Case of HDD Defect

- 1) HDD change to new HDD.
- 2) Select to 8) HDD mode of Service mode.
- 3) Select to 3) Write ID
- 4) Select to 5) Factory Check
- 5) Select to 1) Indicate ID & Check HDD Model Name

6-10. TUNER MODE

*The following menu is displayed after entering “Tuner Mode”

1. DVB-T Tuner DB
2. DVB-C Tuner DB
3. ATT Channel list

*Operate this menu with the numeric keypad of the remote controller.

6-10-1. DVB-T TUNER DB

This menu allows you to refer to the DVB-T reception history.

< DVB-T Tuner DB >
1. [25/02/08 00:05:33]
2. [15/01/08 00:13:35]
3. [18/11/07 00:08:35]
.
20 History (For example)

1. [25/02/08 00:05:33]
No. ←
Date ←

*Operation: Enter a history No.

Return Value	Example.	Explanation
LCN: ****	LCN: 0001	Channel No. (0001, 0002, ...)
S_TYPE: 0x****	S_TYPE: 0x0001	ServiceType (0x0001 = TV)
NAME: *****	NAME: BBC ONE	Service name
TSID: 0x****	TSID: 0x1003	MUX_ID (MUX A_BBC ONE = 0x1003)
ONID: 0x****	ONID: 0x233a	Country_ID (UK = 0x233a)
NID: 0x****	NID: 0x3005	Network_ID = Transmitter_ID (0x3005 = Region - London)
FREQ: ****Hz	FREQ: 578MHz	Frequency (578MHz = 578000)
BW: *MHz	BW: 6MHz	Band Wide (6MHz, 7MHz, 8MHz)
MOD: *****	MOD: 16QAM	modulation (QPSK, 16QAM, 64QAM)
HIERARCHY: ***	HIERARCHY: ON	Hierarchical modulation (ON, OFF)
HP: */*	HP: 1/2	HP Cord Rate (1/2, 2/3, 3/4, 5/6, 7/8)
LP: */*	LP: 7/8	LP Cord Rate (1/2, 2/3, 3/4, 5/6, 7/8)
G_INT: */**	G_INT: 1/16	Guard Interval (1/32, 1/16, 1/8, 1/4)
T_MODE: *K	T_MODE: 2K	Carrier (2K, 8K)
BER: *.*e-4	BER: 2.00e-4	Bit Error Rate

Pressing  moves to the next program, and pressing  moves to the previous program.

6-10-2. DVB-C TUNER DB

Return Value	Example.	Explanation
LCN: ****	LCN: 0001	Channel No. (0001, 0002, ...)
S_TYPE: 0x****	S_TYPE: 0x0001	ServiceType (0x0001 = TV)
NAME: *****	NAME: BBC ONE	Service name
TSID: 0x****	TSID: 0x1003	MUX_ID (MUX A_BBC ONE = 0x1003)
ONID: 0x****	ONID: 0x233a	Country_ID (UK = 0x233a)
NID: 0x****	NID: 0x3005	Network_ID = Transmitter_ID (0x3005 = Region - London)
FREQ: *****Hz	FREQ: 578MHz	Frequency (578MHz = 578000)
MOD: *****	MOD: 16QAM	modulation (16QAM, 32QAM, 64QAM, 128QAM, 256QAM)
SYR: *.*Msps	SYR: 6.90Msps	Symbol Rate
BER: *.*e-4	BER: 2.00e-4	Bit Error Rate

Pressing  moves to the next program, and pressing  moves to the previous program.

6-10-3. ATT CHANNEL LIST

This menu allows you to refer to the ATT reception history.

< ATT Channel list >
1. [25/02/08 00:05:33]
2. [15/01/08 00:13:35]
3. [18/11/07 00:08:35]
.
20 History (For example)

1. [25/02/08 00:05:33]

No. ←

Date ←

*Operation: Enter a history No.

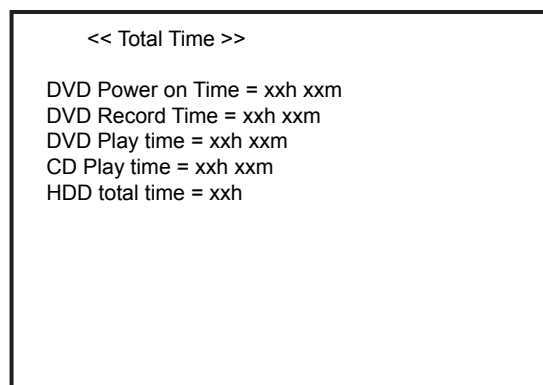
↓

< ATT Channel list > 3.
Ch System Freq
4 B/G 62
12 B/G 224
21 B/G 471
.
.

History No. ←

6-11. TOTAL TIME

This menu allows you to know the total elapsed time.



Specification

Reading of DVD Drive using time

- Total Time of Power on
- Total Time of DVD Reading
- Total Time of DVD Recording
- Total Time of CD Reading

Reading of HDD using time

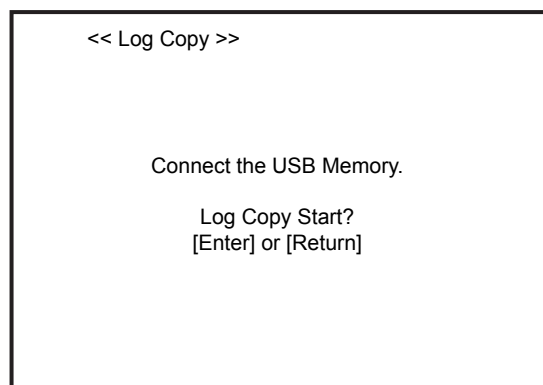
- Power on Time of HDD

*Display Format: ○○○○h△△m

*Operate this menu with the numeric keypad of the remote controller.

6-12. LOG COPY

This menu allows you to copy the log to the connected USB memory.



Specification

The log of the following items can be copied to the connected USB memory.

The following items are the main menu of the Service menu.

- 1) Version No.
- 2) Error History
- 3) Command History
- 9) Tuner Mode
- 10) Total Time

*Operate this menu with the **ENTER** key or the **RETURN** key of the remote controller.

SECTION 7 ADJUSTMENT

7-1. VIDEO SYSTEM ADJUSTMENT

Preparing for Adjustment

1. Equipments

- Oscilloscope
- Reference Disc
 - HLX-507 (PAL single layer disc) J-6090-077-A
 - HLX-506 (PAL dual layer disc) J-6090-078-A

1. Video Output Level Check

<Purpose>

This check is made to satisfy the PAL signal standard, if it is adjusted incorrectly, brightness will be too bright or too dark.

Mode	Play
Signal	100% Color bars
Test point	Output (VIDEO) connector (terminated in 75 Ω)
Instrument	Oscilloscope
Specification	1.0 V ± 0.07 Vp-p

Check method:

- (1) Insert the PAL reference disc and play back the 100% color bars.
- (2) Confirm that the video level is 1.0 V ± 0.07 Vp-p.

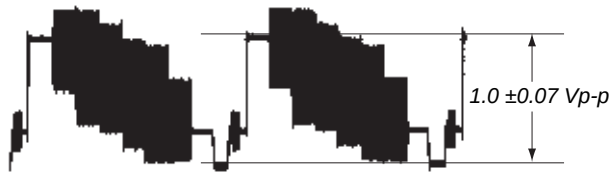


Fig. 7-1

2. Component Video Output Y Check

<Purpose>

This check confirms that the component Y signal output has the rated amplitude. If this signal level is not correct, brightness of the video signal will not be too dark or too thin when the COMPONENT connector output signal is connected to a projector having COMPONENT input.

Mode	Play
Signal	100% Color bars
Test point	COMPONENT VIDEO OUT (Y) connector (terminated in 75 Ω)
Instrument	Oscilloscope
Specification	1.0 V ± 0.07 Vp-p

Check method:

Note 1: Do not set RGB OUT to ON.

Note 2: Do not connect the HDMI OUT.

- (1) Insert the PAL reference disc and play back the 100% color bars.
- (2) Confirm that the Y signal level is 1.0 V ± 0.07 Vp-p.



Fig. 7-2

3. Component Video Output B-Y (Pb) Check

<Purpose>

This check confirms that the B-Y signal of the component video conforms to the PAL standard. If this signal level is not correct, color of the video signal will have different color when the COMPONENT connector output signal is connected to a projector having COMPONENT input.

Mode	Play
Signal	100% Color bars
Test point	COMPONENT VIDEO OUT (Pb) connector (terminated in 75 Ω)
Instrument	Oscilloscope
Specification	700 mV ± 50 mVp-p

Check method:

Note 1: Do not set RGB OUT to ON.

Note 2: Do not connect the HDMI OUT.

- (1) Insert the PAL reference disc and play back the 100% color bars.
- (2) Confirm that the burst signal level is 700 mV ± 50 mVp-p.

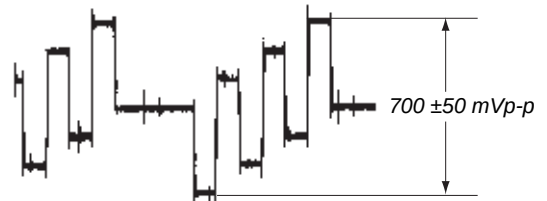


Fig. 7-3

4. Component Video Output R-Y (Pr) Check

<Purpose>

This check confirms that the R-Y signal of the component video conforms to the PAL standard. If this signal level is not correct, color of the video signal will have different color when the COMPONENT connector output signal is connected to a projector having COMPONENT input.

Mode	Play
Signal	100% Color bars
Test point	COMPONENT VIDEO OUT (Pr) connector (terminated in 75 Ω)
Instrument	Oscilloscope
Specification	700 mV ± 50 mVp-p

Check method:

Note 1: Do not set RGB OUT to ON.

Note 2: Do not connect the HDMI OUT.

- (1) Insert the PAL reference disc and play back the 100% color bars.
- (2) Confirm that the burst signal level is 700 mV ± 50 mVp-p.

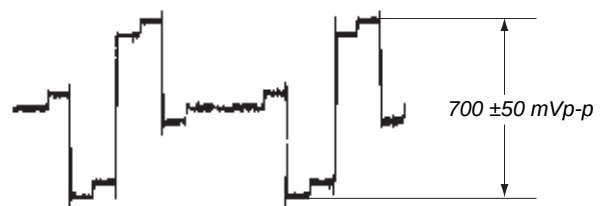


Fig. 7-4

5. Scart Video Output Level Check

<Purpose>

This check is made to satisfy the PAL signal standard, if it is adjusted incorrectly, brightness will be too bright or too dark.

Mode	Play
Signal	100% Color bars
Test point	Scart Video output connector pin-⑲ (terminated in 75 Ω)
Instrument	Oscilloscope
Specification	1.0 V $\pm$ 0.07 Vp-p

Check method:

Note: SCART OUT should be set to “Video”.

- (1) Insert the PAL reference disc and play back the 100% color bars.
- (2) Confirm that the video level is 1.0 V $\pm$ 0.07 Vp-p.



Fig. 7-5

6. Scart Video Output S-Y Check

<Purpose>

This check confirms that the Scart Y-signal output has the rated amplitude. If it adjusted incorrectly, the playback video signal will not be displayed corrected even when the Scart cable is connected.

Mode	Play
Signal	100% Color bars
Test point	Scart Video output connector pin-⑲ (terminated in 75 Ω)
Instrument	Oscilloscope
Specification	1.0 V $\pm$ 0.07 Vp-p

Check method:

Note: SCART OUT should be set to “S-Video”.

- (1) Insert the PAL reference disc and play back the 100% color bars.
- (2) Confirm that the video level is 1.0 V $\pm$ 0.07 Vp-p.

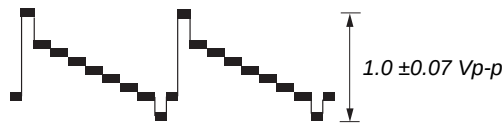


Fig. 7-6

7. Scart Video Output S-C Check

<Purpose>

This check confirms that the Scart output S-C conforms to the PAL standard. If it adjusted incorrectly, the playback color will not be too dark or too thin.

Mode	Play
Signal	100% Color bars
Test point	Scart Video output connector pin-⑲ (terminated in 75 Ω)
Instrument	Oscilloscope
Specification	300 mV $\pm$ 30 mVp-p

Check method:

Note: SCART OUT should be set to “S-Video”.

- (1) Insert the PAL reference disc and play back the 100% color bars.
- (2) Confirm that the burst signal level is 300 mV $\pm$ 30 mVp-p.

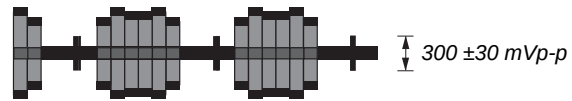


Fig. 7-7

8. Scart Video RGB Output R Check

<Purpose>

This check confirms that the RGB R signal output has the rated amplitude. If this signal level is not correct, brightness of the video signal will not be too dark or too thin when the Scart connector output signal is connected to a projector having Scart input.

Mode	Play
Signal	100% Color bars
Test point	Scart Video output R connector pin-⑲ (terminated in 75 Ω)
Instrument	Oscilloscope
Specification	700 mV $\pm$ 50 mVp-p

Check method:

Note 1: RGB OUT should be set to ON.

Note 2: Do not connect the HDMI OUT.

- (1) Insert the PAL reference disc and play back the 100% color bars.
- (2) Confirm that the R signal level is 700 mV $\pm$ 50 mVp-p.



Fig. 7-8

9. Scart Video RGB Output R Check

<Purpose>

This check confirms that G signal of the RGB video conforms to the PAL standard. If this signal level is not correct, color of the video signal will have different color when the Scart connector output signal is connected to a projector having Scart input.

Mode	Play
Signal	100% Color bars
Test point	Scart Video output G connector pin-⑪ (terminated in 75 Ω)
Instrument	Oscilloscope
Specification	700 mV $\pm$ 50 mVp-p

Check method:

Note 1: RGB OUT should be set to ON.

Note 2: Do not connect the HDMI OUT.

- (1) Insert the PAL reference disc and play back the 100% color bars.
- (2) Confirm that the G signal level is 700 mV $\pm$ 50 mVp-p.

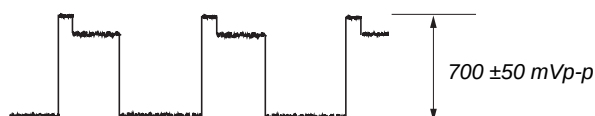


Fig. 7-9

10. Scart Video RGB Output B Check

<Purpose>

This check confirms that B signal of the RGB video conforms to the PAL standard. If this signal level is not correct, color of the video signal will have different color when the Scart connector output signal is connected to a projector having Scart input.

Mode	Play
Signal	100% Color bars
Test point	Scart Video output B connector pin-⑦ (terminated in 75 Ω)
Instrument	Oscilloscope
Specification	700 mV $\pm$ 50 mVp-p

Check method:

Note 1: RGB OUT should be set to ON.

Note 2: Do not connect the HDMI OUT.

- (1) Insert the PAL reference disc and play back the 100% color bars.
- (2) Confirm that the B signal level is 700 mV $\pm$ 50 mVp-p.

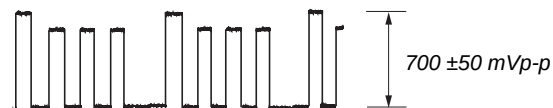


Fig. 7-10

SECTION 8

REPAIR PARTS LIST

8-1. EXPLODED VIEWS

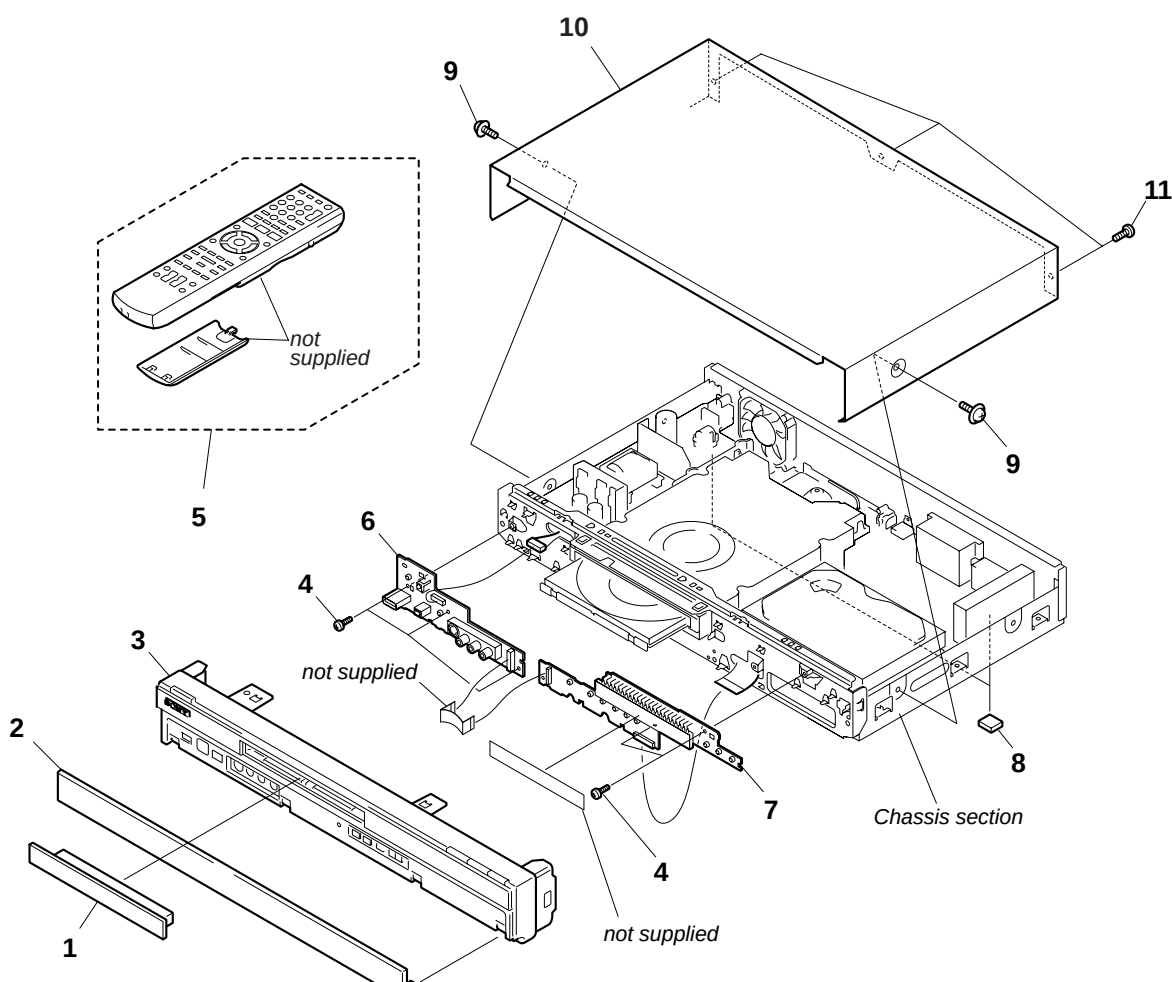
Note:

- -XX and -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.
- The mechanical parts with no reference number in the exploded views are not supplied.

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

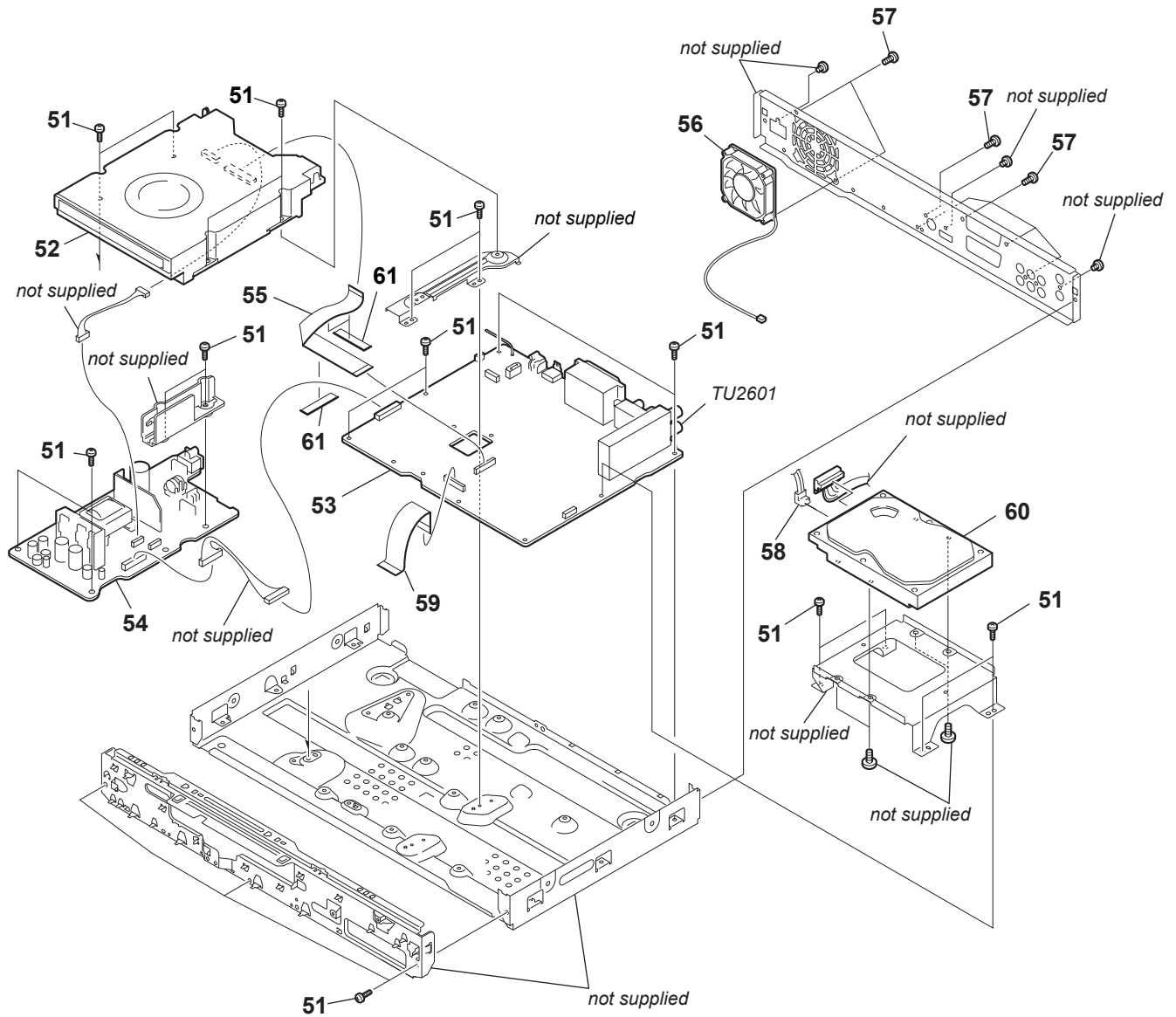
The components identified by mark $\square$ contain confidential information. Strictly follow the instructions whenever the components are repaired and/or replaced.

8-1-1. OVERALL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-2345-916-1	COVER ASSY, TRAY		3	X-2345-917-1	PANEL ASSY, FRONT (RDR-DC105/DC205/DC305/DC505)	
2	4-137-009-01	DOOR (RDR-DC90)		3	X-2349-627-1	PANEL ASSY, FRONT (RDR-DC90/DC100/DC200/DC500)	
2	4-137-009-11	DOOR (RDR-DC100)		4	3-077-331-01	+BV3 (3-CR)	
2	4-137-009-61	DOOR (RDR-DC105: AEP3)		5	1-487-288-11	REMOTE COMMANDER (RMT-D258P)	
2	4-137-009-31	DOOR (RDR-DC200)		6	A-1733-521-A	FL-195 (AG) COMPL	
2	4-137-009-41	DOOR (RDR-DC205: UK, AEP3)		7	A-1733-523-A	FR-303 (AG) COMPL	
2	4-137-009-51	DOOR (RDR-DC305)		* 8	3-087-319-01	CUSHION, FOOT	
2	4-137-009-21	DOOR (RDR-DC500)		9	3-710-901-71	SCREW, TAPPING	
2	4-137-009-71	DOOR (RDR-DC505: UK, AEP3)		10	4-134-094-01	CASE, UPPER	
2	4-139-306-01	DOOR (RDR-DC105: AEP2)		11	3-076-563-11	SCREW, SPECIAL FRONT POINT	
2	4-139-306-11	DOOR (RDR-DC205: AEP2)					
2	4-139-306-21	DOOR (RDR-DC505: AEP2)					

8-1-2. MAIN SECTION



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

The components identified by mark Δ contain confidential information. Strictly follow the instructions whenever the components are repaired and/or replaced.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	3-077-331-01	+BV3 (3-CR)		Δ 54	1-474-176-11	REGULATOR, SWITCHING (ZSSR827H)	
Δ 52	1-487-421-11	WRITER UNIT, DVD-RW (DVR-L14SO)		55	1-836-879-11	CABLE, FLEXIBLE FLAT (FMD-005)	
53	A-1774-739-A	MB-129 DC90-UK		Δ 56	1-787-625-51	FAN, D.C.	
53	A-1744-740-A	MB-129 DC100-AEP		57	3-077-331-31	+BV3 (3-CR)	
53	A-1744-741-A	MB-129 DC100-UK		58	1-966-484-11	HARNESS (MH-118)	
53	A-1744-742-A	MB-129 DC105-AEP		59	1-836-881-11	CABLE, FLEXIBLE FLAT (FRR-001)	
53	A-1744-743-A	MB-129 DC105-FR		Δ 60	1-840-224-11	HDD/SG-GARBO-S(160GB) (RDR-DC90/DC100)/DC105)	
53	A-1744-744-A	MB-129 DC200-AEP		Δ 60	1-797-993-11	HDD/SG-SUPERHAWK-S(250GB) (RDR-DC200/DC205)	
53	A-1744-749-A	MB-129 DC200-UK		Δ 60	1-840-198-11	HDD/SG-GARBO-S(320GB) (RDR-DC305)	
53	A-1744-745-A	MB-129 DC205-UK		Δ 60	1-840-263-11	HDD/HG-GEMINI-C-S(500GB) (RDR-DC500/DC505)	
53	A-1744-746-A	MB-129 DC205-AEP		61	3-087-220-01	TAPE, NON-HALOGENE	
53	A-1744-747-A	MB-129 DC205-FR		Δ TU2601	8-597-703-00	TUNER UNIT, DIGITAL LTD-HF415	
53	A-1744-748-A	MB-129 DC305-UK					
53	A-1744-750-A	MB-129 DC500-AEP					
53	A-1744-751-A	MB-129 DC505-UK					
53	A-1744-752-A	MB-129 DC505-AEP					
53	A-1744-753-A	MB-129 DC505-FR					

8-2. ELECTRICAL PARTS LIST

Note:

- 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 and -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
- COILS
uH: μ H
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable

- SEMICONDUCTORS
In each case, u: μ , for example:
uA. . . : μ A. . . , uPA. . . , μ PA. . . ,
uPB. . . : μ PB. . . , uPC. . . , μ PC. . . ,
uPD. . . : μ PD. . .

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

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

Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description	Remark			
	A-1733-521-A	FL-195 (AG) COMPLETE ***** < CAPACITOR >					R161	1-216-295-91	SHORT CHIP	0			
							R162	1-216-864-11	SHORT CHIP	0			
							R163	1-216-864-11	SHORT CHIP	0			
							R164	1-216-864-11	SHORT CHIP	0			
C101	1-115-156-11	CAP, CERAMIC	1uF	10V			< SWITCH >						
C106	1-137-765-21	ELECT CHIP	47uF	20%	16V								
C107	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V		S101	1-786-726-11	SWITCH, TACTILE (POWER)				
C112	1-164-230-11	CERAMIC CHIP	220PF	5%	50V		S103	1-786-726-11	SWITCH, TACTILE (ONE-TOUCH-DUB)				
C114	1-164-230-11	CERAMIC CHIP	220PF	5%	50V		< VARISTOR >						
		< CONNECTOR >					VDR104	1-804-499-21	VARISTOR, CHIP (1608)				
CN103	1-819-866-11	USB CONNECTOR (A)				*****							
CN106	1-820-116-41	CONNECTOR, FFC/FPC 17P											
CN106	1-820-116-51	CONNECTOR, FFC/FPC 17P											
* CN108	1-819-444-11	HEADER ASSEMBLY FOR PWB 11P				A-1733-523-A FR-303 (AG) BOARD, COMPLETE *****							
		< DIODE >					*	4-129-980-01	SPACER, FL				
D105	8-719-067-40	DIODE	STZ6.8N-T146			< CAPACITOR >							
D107	8-719-067-40	DIODE	STZ6.8N-T146										
D108	8-719-067-40	DIODE	STZ6.8N-T146			C202	1-117-681-11	ELECT CHIP	100uF	20%	16V		
D109	8-719-067-40	DIODE	STZ6.8N-T146			C206	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V		
D111	8-719-067-40	DIODE	STZ6.8N-T146			C207	1-126-400-11	ELECT CHIP	22uF	20%	35V		
		< IC >					C208	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	
IC101	6-600-500-01	IC	GP1UM28XK0SF			C213	1-162-927-11	CERAMIC CHIP	100PF	5%	50V		
		< COIL >					C214	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	
L101	1-456-390-21	COMMOM MODE CHOKE COIL				C215	1-162-927-11	CERAMIC CHIP	100PF	5%	50V		
L102	1-456-390-21	COMMOM MODE CHOKE COIL				C216	1-162-927-11	CERAMIC CHIP	100PF	5%	50V		
		< RESISTOR >					C221	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V	
R107	1-216-805-11	METAL CHIP	47	5%	1/10W	C222	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V		
R111	1-216-864-11	SHORT CHIP	0			C223	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V		
R113	1-216-295-91	SHORT CHIP	0			< CONNECTOR >							
R115	1-216-864-11	SHORT CHIP	0			CN203	1-820-116-41	CONNECTOR, FFC/FPC 17P					
R118	1-216-864-11	SHORT CHIP	0			CN203	1-820-116-51	CONNECTOR, FFC/FPC 17P					
							< DIODE >						
R123	1-216-849-11	METAL CHIP	220K	5%	1/10W	D201	8-719-081-97	DIODE	MMDL914T1				
R124	1-216-849-11	METAL CHIP	220K	5%	1/10W	D202	8-719-081-97	DIODE	MMDL914T1				
R125	1-216-295-91	SHORT CHIP	0			D203	8-719-081-97	DIODE	MMDL914T1				
R131	1-216-295-91	SHORT CHIP	0			D204	8-719-081-97	DIODE	MMDL914T1				
R136	1-216-864-11	SHORT CHIP	0			D205	8-719-056-82	DIODE	UDZ-TE-17-6.2B				
R137	1-216-809-11	METAL CHIP	100	5%	1/10W	D206	6-501-817-01	DIODE	MA2J1110GLS0				
R138	1-216-809-11	METAL CHIP	100	5%	1/10W	D207	6-501-817-01	DIODE	MA2J1110GLS0				
R158	1-216-295-91	SHORT CHIP	0			D208	6-501-817-01	DIODE	MA2J1110GLS0				
R159	1-216-295-91	SHORT CHIP	0			D209	6-501-817-01	DIODE	MA2J1110GLS0				
R160	1-216-295-91	SHORT CHIP	0										

Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description	Remark				
IC201	6-701-729-01	< IC >					C1016	1-100-159-91	CERAMIC CHIP	22uF	10%	6.3V		
		IC PT6315	C1017	1-100-911-11	CERAMIC CHIP	4.7uF	10%	25V						
			C1020	1-100-159-91	CERAMIC CHIP	22uF	10%	6.3V						
			C1021	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V						
L201	1-411-919-11	< COIL >					C1022	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V		
		INDUCTOR 100uH	C1023	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V						
			C1024	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V						
			< FLUORESCENT INDICATOR TUBE >	C1025	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V					
ND201	1-483-098-11	INDICATOR TUBE, FLUORESCENT					C1026	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V		
		< TRANSISTOR >					C1030	1-100-911-11	CERAMIC CHIP	4.7uF	10%	25V		
		Q201	8-729-052-91	TRANSISTOR 2SD1898T100R					C1045	1-114-246-11	CERAMIC CHIP	1uF	20%	25V
				Q202	8-729-052-91	TRANSISTOR 2SD1898T100R					C1046	1-137-765-21	ELECT CHIP	47uF
R202	1-216-827-11	< RESISTOR >					C1047	1-128-992-21	ELECT CHIP	47uF	20%	25V		
		METAL CHIP 3.3K 5% 1/10W	C1049	1-114-246-11	CERAMIC CHIP	1uF	20%	25V						
			C1050	1-114-326-11	CERAMIC CHIP	0.22uF	10%	25V						
			C1051	1-114-507-11	CERAMIC CHIP	1uF	10%	50V						
R203	1-216-838-11	METAL CHIP 27K 5% 1/10W					C1052	1-114-326-11	CERAMIC CHIP	0.22uF	10%	25V		
R204	1-216-809-11	METAL CHIP 100 5% 1/10W					C1053	1-114-326-11	CERAMIC CHIP	0.22uF	10%	25V		
R205	1-216-809-11	METAL CHIP 100 5% 1/10W					C1054	1-114-507-11	CERAMIC CHIP	1uF	10%	50V		
R206	1-216-809-11	METAL CHIP 100 5% 1/10W					C1101	1-114-246-11	CERAMIC CHIP	1uF	20%	25V		
R207	1-216-809-11	METAL CHIP 100 5% 1/10W	C1102	1-100-911-11	CERAMIC CHIP	4.7uF	10%	25V						
			C1103	1-100-911-11	CERAMIC CHIP	4.7uF	10%	25V						
			C1206	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V						
			C1207	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V						
R208	1-216-833-11	METAL CHIP 10K 5% 1/10W					C1208	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V		
R209	1-216-833-11	METAL CHIP 10K 5% 1/10W					C1209	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V		
R210	1-216-845-11	METAL CHIP 100K 5% 1/10W						C1210	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V	
R238	1-216-295-91	SHORT CHIP 0						C1211	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V	
R239	1-216-295-91	SHORT CHIP 0						C1212	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V	
		< SWITCH >					C1213	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V		
		S201	1-786-726-11	SWITCH, TACTILE (PLAY)					C1214	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V
		S202	1-786-726-11	SWITCH, TACTILE (EJECT)					C1215	1-114-367-11	CERAMIC CHIP	0.1uF	20%	6.3V
S203	1-786-726-11	SWITCH, TACTILE (STOP)					C1216	1-114-367-11	CERAMIC CHIP	0.1uF	20%	6.3V		
S204	1-786-726-11	SWITCH, TACTILE (REC STOP)					C1217	1-114-367-11	CERAMIC CHIP	0.1uF	20%	6.3V		
S205	1-786-726-11	SWITCH, TACTILE (PROGRAM -)					C1218	1-114-367-11	CERAMIC CHIP	0.1uF	20%	6.3V		
S206	1-786-726-11	SWITCH, TACTILE (REC)					C1219	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V		
		S207	1-786-726-11	SWITCH, TACTILE (INPUT)					C1220	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V
		S208	1-786-726-11	SWITCH, TACTILE (PROGRAM +)					C1221	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
		S209	1-786-726-11	SWITCH, TACTILE (RESET)					C1223	1-114-367-11	CERAMIC CHIP	0.1uF	20%	6.3V
* T201	1-445-728-11	< TRANSFORMER >					C1224	1-114-367-11	CERAMIC CHIP	0.1uF	20%	6.3V		
		*****					C1225	1-114-367-11	CERAMIC CHIP	0.1uF	20%	6.3V		
		MB-129 BOARD					C1226	1-114-367-11	CERAMIC CHIP	0.1uF	20%	6.3V		
		*****					C1227	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V		
C1001	1-100-567-81	< CAPACITOR >					C1228	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V		
		CERAMIC CHIP 0.01uF 10% 25V	C1229	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V						
			C1232	1-164-858-11	CERAMIC CHIP	22PF	5%	50V						
			C1233	1-164-854-11	CERAMIC CHIP	15PF	5%	50V						
C1002	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V					C1238	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V		
C1003	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V					C1239	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V		
C1007	1-114-553-11	CERAMIC CHIP 10uF 10% 16V					C1240	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V		
C1009	1-114-553-11	CERAMIC CHIP 10uF 10% 16V					C1241	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V		
C1010	1-100-905-11	CERAMIC CHIP 0.001uF 10% 50V					C1242	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V		
C1011	1-114-553-11	CERAMIC CHIP 10uF 10% 16V					C1243	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V		
C1012	1-100-905-11	CERAMIC CHIP 0.001uF 10% 50V					C1244	1-100-909-11	CERAMIC CHIP	10uF	10%	6.3V		
C1013	1-114-246-11	CERAMIC CHIP 1uF 20% 25V					C1245	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V		
C1014	1-100-159-91	CERAMIC CHIP 22uF 10% 6.3V					C1246	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V		
C1015	1-100-159-91	CERAMIC CHIP 22uF 10% 6.3V	C1247	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V						
			C1248	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V						
			C1249	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V						
			C1250	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V						

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C1251	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	C1448	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V
C1252	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	C1449	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
C1253	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	C1450	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V
C1254	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	C1451	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
C1255	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	C1452	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
C1256	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	C1453	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
C1257	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	C1454	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
C1258	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	C1455	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
C1259	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	C1456	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V
C1261	1-100-966-91	CERAMIC CHIP	10uF	20%	10V	C1601	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C1266	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V	C1602	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C1267	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	C1809	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C1268	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V	C1810	1-128-392-11	ELECT CHIP	470uF	20%	6.3V
C1401	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C1811	1-164-845-11	CERAMIC CHIP	5PF	0.25PF	50V
C1402	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C1812	1-164-845-11	CERAMIC CHIP	5PF	0.25PF	50V
C1403	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V	C1816	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C1404	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V	C1901	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C1405	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V	C1904	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C1406	1-114-367-11	CERAMIC CHIP	0.1uF	20%	6.3V	C1908	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C1407	1-114-367-11	CERAMIC CHIP	0.1uF	20%	6.3V	C1910	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C1408	1-114-367-11	CERAMIC CHIP	0.1uF	20%	6.3V	C1911	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
C1409	1-114-367-11	CERAMIC CHIP	0.1uF	20%	6.3V	C1912	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C1410	1-114-367-11	CERAMIC CHIP	0.1uF	20%	6.3V	C1913	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
C1411	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	C1915	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C1412	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C1917	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C1413	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V	C2203	1-112-781-11	CERAMIC CHIP	1uF	10%	10V
C1414	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V	C2206	1-100-966-91	CERAMIC CHIP	10uF	20%	10V
C1415	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C2207	1-164-850-11	CERAMIC CHIP	10PF	0.5PF	50V
C1416	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V	C2208	1-164-850-11	CERAMIC CHIP	10PF	0.5PF	50V
C1417	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V	C2211	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C1418	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C2212	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C1419	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C2213	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C1420	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V	C2216	1-114-367-11	CERAMIC CHIP	0.1uF	20%	6.3V
C1421	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C2223	1-164-852-11	CERAMIC CHIP	12PF	5%	50V
C1422	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V	C2224	1-164-852-11	CERAMIC CHIP	12PF	5%	50V
C1423	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C2225	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C1424	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C2228	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C1425	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V	C2230	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C1426	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C2233	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C1427	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C2234	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
C1428	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V	C2236	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C1429	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C2237	1-100-574-81	CERAMIC CHIP	270PF	10%	50V
C1430	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C2238	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C1431	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V	C2240	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C1432	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C2247	1-100-909-11	CERAMIC CHIP	10uF	10%	6.3V
C1433	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V	C2248	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V
C1434	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V	C2249	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V
C1435	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V	C2250	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V
C1436	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C2251	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V
C1437	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C2401	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C1438	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C2403	1-126-210-21	ELECT CHIP	220uF	20%	4V
C1439	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C2404	1-112-781-11	CERAMIC CHIP	1uF	10%	10V
C1440	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C2406	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
C1441	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C2407	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V
C1442	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V	C2408	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
C1443	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V	C2409	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V
C1444	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C2410	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
C1445	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C2411	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V
C1446	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V	C2412	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
C1447	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C2413	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V

Ref. No.	Part No.	Description	Remark		
C2414	1-112-717-91	CERAMIC CHIP 1uF	10%	6.3V	
C2415	1-112-717-91	CERAMIC CHIP 1uF	10%	6.3V	
C2416	1-100-566-91	CERAMIC CHIP 0.1uF	10%	25V	
C2417	1-100-566-91	CERAMIC CHIP 0.1uF	10%	25V	
C2418	1-100-566-91	CERAMIC CHIP 0.1uF	10%	25V	
C2419	1-100-566-91	CERAMIC CHIP 0.1uF	10%	25V	
C2420	1-164-943-81	CERAMIC CHIP 0.01uF	10%	16V	
C2425	1-112-717-91	CERAMIC CHIP 1uF	10%	6.3V	
C2601	1-162-966-11	CERAMIC CHIP 0.0022uF	10%	50V	
C2603	1-162-966-11	CERAMIC CHIP 0.0022uF	10%	50V	
C2607	1-162-966-11	CERAMIC CHIP 0.0022uF	10%	50V	
C2608	1-100-767-21	ELECT CHIP 220uF	20%	16V	
C2609	1-164-939-11	CERAMIC CHIP 0.0022uF	10%	50V	
C2611	1-100-966-91	CERAMIC CHIP 10uF	20%	10V	
C2613	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C2617	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C2620	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C2621	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C2622	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C2623	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C2624	1-112-717-91	CERAMIC CHIP 1uF	10%	6.3V	
C2625	1-112-717-91	CERAMIC CHIP 1uF	10%	6.3V	
C2626	1-127-573-11	CERAMIC CHIP 1uF	10%	16V	
C2627	1-127-573-11	CERAMIC CHIP 1uF	10%	16V	
C2628	1-127-573-11	CERAMIC CHIP 1uF	10%	16V	
C2629	1-127-573-11	CERAMIC CHIP 1uF	10%	16V	
C2630	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C2631	1-135-366-11	ELECT CHIP 100uF	20%	16V	
C2644	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C2645	1-100-966-91	CERAMIC CHIP 10uF	20%	10V	
C2646	1-100-966-91	CERAMIC CHIP 10uF	20%	10V	
C2647	1-164-315-11	CERAMIC CHIP 470PF	5%	50V	
C2648	1-162-966-11	CERAMIC CHIP 0.0022uF	10%	50V	
C2649	1-164-315-11	CERAMIC CHIP 470PF	5%	50V	
C2650	1-164-315-11	CERAMIC CHIP 470PF	5%	50V	
C2651	1-164-315-11	CERAMIC CHIP 470PF	5%	50V	
C2652	1-164-315-11	CERAMIC CHIP 470PF	5%	50V	
C2801	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
		(RDR-DC105/DC205/DC305/DC505)			
C2802	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
		(RDR-DC105/DC205/DC305/DC505)			
C2803	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
		(RDR-DC105/DC205/DC305/DC505)			
C2804	1-164-943-81	CERAMIC CHIP 0.01uF	10%	16V	
C2806	1-164-842-11	CERAMIC CHIP 2PF	0.25PF	50V	
C2807	1-164-842-11	CERAMIC CHIP 2PF	0.25PF	50V	
C2808	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
		(RDR-DC105/DC205/DC305/DC505)			
C2809	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
		(RDR-DC105/DC205/DC305/DC505)			
C2810	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
		(RDR-DC105/DC205/DC305/DC505)			
C2811	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
		(RDR-DC105/DC205/DC305/DC505)			
C2812	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
		(RDR-DC105/DC205/DC305/DC505)			
C2813	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
		(RDR-DC105/DC205/DC305/DC505)			
C2816	1-112-780-11	CERAMIC CHIP 0.47uF	10%	16V	
		(RDR-DC105/DC205/DC305/DC505)			
C2818	1-114-331-11	CERAMIC CHIP 4.7uF	10%	10V	
		(RDR-DC105/DC205/DC305/DC505)			

Ref. No.	Part No.	Description	Remark		
C2821	1-112-780-11	CERAMIC CHIP 0.47uF	10%	16V	
		(RDR-DC105/DC205/DC305/DC505)			
C2823	1-114-331-11	CERAMIC CHIP 4.7uF	10%	10V	
		(RDR-DC105/DC205/DC305/DC505)			
C2829	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
		(RDR-DC105/DC205/DC305/DC505)			
C2835	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C2836	1-112-780-11	CERAMIC CHIP 0.47uF	10%	16V	
C2837	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
		(RDR-DC105/DC205/DC305/DC505)			
C3001	1-100-742-91	CERAMIC CHIP 2.2uF	20%	10V	
C3002	1-100-742-91	CERAMIC CHIP 2.2uF	20%	10V	
C3003	1-100-742-91	CERAMIC CHIP 2.2uF	20%	10V	
C3004	1-100-742-91	CERAMIC CHIP 2.2uF	20%	10V	
C3007	1-126-205-11	ELECT CHIP 47uF	20%	6.3V	
C3008	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C3009	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C3010	1-112-780-11	CERAMIC CHIP 0.47uF	10%	16V	
C3011	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C3012	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C3013	1-107-819-11	CERAMIC CHIP 0.022uF	10%	16V	
C3014	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C3015	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C3016	1-107-819-11	CERAMIC CHIP 0.022uF	10%	16V	
C3017	1-107-819-11	CERAMIC CHIP 0.022uF	10%	16V	
C3018	1-107-819-11	CERAMIC CHIP 0.022uF	10%	16V	
C3019	1-107-819-11	CERAMIC CHIP 0.022uF	10%	16V	
C3020	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C3021	1-107-819-11	CERAMIC CHIP 0.022uF	10%	16V	
C3022	1-107-819-11	CERAMIC CHIP 0.022uF	10%	16V	
C3023	1-107-819-11	CERAMIC CHIP 0.022uF	10%	16V	
C3024	1-107-819-11	CERAMIC CHIP 0.022uF	10%	16V	
C3025	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C3026	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C3027	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C3028	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C3029	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C3030	1-107-819-11	CERAMIC CHIP 0.022uF	10%	16V	
C3031	1-107-819-11	CERAMIC CHIP 0.022uF	10%	16V	
C3032	1-107-819-11	CERAMIC CHIP 0.022uF	10%	16V	
C3033	1-107-819-11	CERAMIC CHIP 0.022uF	10%	16V	
C3034	1-107-819-11	CERAMIC CHIP 0.022uF	10%	16V	
C3035	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C3036	1-107-819-11	CERAMIC CHIP 0.022uF	10%	16V	
C3037	1-107-819-11	CERAMIC CHIP 0.022uF	10%	16V	
C3038	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C3039	1-107-819-11	CERAMIC CHIP 0.022uF	10%	16V	
C3040	1-107-819-11	CERAMIC CHIP 0.022uF	10%	16V	
C3041	1-107-819-11	CERAMIC CHIP 0.022uF	10%	16V	
C3042	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C3043	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C3044	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C3045	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C3046	1-164-852-11	CERAMIC CHIP 12PF	5%	50V	
C3047	1-164-850-11	CERAMIC CHIP 10PF	0.5PF	50V	
C3049	1-112-746-11	CERAMIC CHIP 4.7uF	10%	6.3V	
C3050	1-112-746-11	CERAMIC CHIP 4.7uF	10%	6.3V	
C3051	1-100-916-11	CERAMIC CHIP 0.1uF	10%	16V	
C3052	1-112-746-11	CERAMIC CHIP 4.7uF	10%	6.3V	
C3053	1-114-331-11	CERAMIC CHIP 4.7uF	10%	10V	
C3054	1-112-780-11	CERAMIC CHIP 0.47uF	10%	16V	

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C3055	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	C3257	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C3056	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	C3259	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C3057	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	C3262	1-117-681-11	ELECT CHIP	100uF	20%	16V
C3059	1-126-205-11	ELECT CHIP	47uF	20%	6.3V	C3263	1-100-582-21	ELECT CHIP	470uF	20%	4V
C3060	1-126-205-11	ELECT CHIP	47uF	20%	6.3V	C3264	1-100-582-21	ELECT CHIP	470uF	20%	4V
C3063	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	C3265	1-100-582-21	ELECT CHIP	470uF	20%	4V
C3064	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V	C3268	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C3201	1-100-966-91	CERAMIC CHIP	10uF	20%	10V	C3273	1-137-765-21	ELECT CHIP	47uF	20%	16V
C3202	1-100-352-91	CERAMIC CHIP	1uF	20%	16V	C3274	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C3203	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	C3275	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C3204	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	C3279	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C3205	1-100-352-91	CERAMIC CHIP	1uF	20%	16V	C3280	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C3206	1-100-966-91	CERAMIC CHIP	10uF	20%	10V	C3281	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C3207	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	C3282	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C3208	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	C3283	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C3209	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	C3284	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C3210	1-100-670-11	CERAMIC CHIP	4.7uF	20%	16V	C3285	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C3211	1-100-966-91	CERAMIC CHIP	10uF	20%	10V	C3286	1-137-765-21	ELECT CHIP	47uF	20%	16V
C3212	1-128-992-21	ELECT CHIP	47uF	20%	25V	C3287	1-137-765-21	ELECT CHIP	47uF	20%	16V
C3213	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3288	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
C3214	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C3289	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
C3215	1-100-352-91	CERAMIC CHIP	1uF	20%	16V	C3290	1-100-352-91	CERAMIC CHIP	1uF	20%	16V
C3216	1-100-352-91	CERAMIC CHIP	1uF	20%	16V	C3291	1-100-352-91	CERAMIC CHIP	1uF	20%	16V
C3217	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	C3292	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C3218	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	C3294	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C3219	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	C3298	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
C3220	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	C3299	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
C3222	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	C3300	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
C3223	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C3303	1-100-742-91	CERAMIC CHIP	2.2uF	20%	10V
C3224	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	C3304	1-100-742-91	CERAMIC CHIP	2.2uF	20%	10V
C3225	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C3305	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C3226	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	C3401	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C3227	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C3403	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C3228	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	C3404	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V
C3229	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	C3405	1-100-905-11	CERAMIC CHIP	0.001uF	10%	50V
C3230	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	C3406	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C3231	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C3407	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C3232	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C3408	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C3233	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C3409	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C3234	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C3410	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C3235	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C3411	1-165-492-21	ELECT CHIP	100uF	20%	10V
C3236	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C3413	1-137-764-21	ELECT CHIP	22uF	20%	16V
C3237	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C3414	1-137-764-21	ELECT CHIP	22uF	20%	16V
C3238	1-165-908-11	CERAMIC CHIP	1uF	10%	10V	C3415	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C3239	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	C3416	1-124-779-00	ELECT CHIP	10uF	20%	16V
C3240	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C3417	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C3241	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V	C3418	1-117-681-11	ELECT CHIP	100uF	20%	16V
C3242	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	C3419	1-164-872-11	CERAMIC CHIP	82PF	5%	50V
C3243	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V	* C3420	1-100-741-81	CERAMIC CHIP	560PF	5%	50V
C3244	1-100-966-91	CERAMIC CHIP	10uF	20%	10V	* C3421	1-100-741-81	CERAMIC CHIP	560PF	5%	50V
C3245	1-100-966-91	CERAMIC CHIP	10uF	20%	10V	C3422	1-164-872-11	CERAMIC CHIP	82PF	5%	50V
C3246	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V	C3423	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C3247	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V	C3501	1-112-781-11	CERAMIC CHIP	1uF	10%	10V
C3248	1-114-332-11	CERAMIC CHIP	22uF	10%	6.3V	C3502	1-100-916-11	CERAMIC CHIP	0.1uF	10%	16V
C3249	1-100-582-21	ELECT CHIP	470uF	20%	4V	C3503	1-100-909-11	CERAMIC CHIP	10uF	10%	6.3V
C3250	1-100-582-21	ELECT CHIP	470uF	20%	4V	C3504	1-100-909-11	CERAMIC CHIP	10uF	10%	6.3V
C3251	1-100-582-21	ELECT CHIP	470uF	20%	4V	C3505	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C3252	1-100-582-21	ELECT CHIP	470uF	20%	4V	C3506	1-100-909-11	CERAMIC CHIP	10uF	10%	6.3V
C3253	1-100-582-21	ELECT CHIP	470uF	20%	4V	C3507	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C3255	1-100-582-21	ELECT CHIP	470uF	20%	4V	C3508	1-100-909-11	CERAMIC CHIP	10uF	10%	6.3V

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C3510	1-100-916-11	CERAMIC CHIP 0.1uF 10%	16V	FB2604	1-500-283-11	INDUCTOR, FERRITE BEAD	
C3511	1-100-916-11	CERAMIC CHIP 0.1uF 10%	16V	FB2606	1-414-760-21	INDUCTOR, FERRITE BEAD	
C3512	1-100-916-11	CERAMIC CHIP 0.1uF 10%	16V	FB2607	1-414-760-21	INDUCTOR, FERRITE BEAD	
C3513	1-100-916-11	CERAMIC CHIP 0.1uF 10%	16V	FB2608	1-500-283-11	INDUCTOR, FERRITE BEAD	
C3514	1-117-681-11	ELECT CHIP 100uF 20%	16V	FB2612	1-469-080-11	INDUCTOR, FERRITE BEAD (1005)	
C3515	1-100-916-11	CERAMIC CHIP 0.1uF 10%	16V	FB2614	1-543-949-22	BEAD, FERRITE (CHIP) (1608)	
C3516	1-164-943-81	CERAMIC CHIP 0.01uF 10%	16V	FB2615	1-543-949-22	BEAD, FERRITE (CHIP) (1608)	
< CONNECTOR >				FB2616	1-469-080-11	INDUCTOR, FERRITE BEAD (1005)	
CN1001	1-821-589-21	PIN, CONNECTOR (PC BOARD) 11P		FB2617	1-414-760-21	INDUCTOR, FERRITE BEAD	
CN1101	1-770-469-21	PIN, CONNECTOR (PC BOARD) 2P		FB2801	1-543-949-22	BEAD, FERRITE (CHIP) (1608)	
CN1601	1-818-857-51	CONNECTOR, FFC/FPC 40P		FB3201	1-414-228-11	INDUCTOR, FERRITE BEAD	
CN1802	1-764-177-11	PIN, CONNECTOR (SMD) (1.5MM) 7P		FB3203	1-414-594-11	INDUCTOR, FERRITE BEAD	
CN2203	1-819-876-21	CONNECTOR, SATA SMT (7P)		FB3207	1-414-228-11	INDUCTOR, FERRITE BEAD	
CN2203	1-819-876-21	SATA CONNECTOR SMT (7P)		FB3208	1-414-228-11	INDUCTOR, FERRITE BEAD	
* CN2204	1-819-444-11	HEADER ASSEMBLY FOR PWB 11P		FB3210	1-414-228-11	INDUCTOR, FERRITE BEAD	
CN2401	1-822-657-11	CONNECTOR, HDMI		FB3211	1-414-228-11	INDUCTOR, FERRITE BEAD	
< DIODE >				FB3212	1-414-228-11	INDUCTOR, FERRITE BEAD	
D1001	8-719-081-67	DIODE M1FM3		FB3213	1-414-228-11	INDUCTOR, FERRITE BEAD	
D1002	8-719-081-67	DIODE M1FM3		FB3214	1-414-228-11	INDUCTOR, FERRITE BEAD	
D1003	8-719-081-67	DIODE M1FM3		FB3215	1-414-228-11	INDUCTOR, FERRITE BEAD	
D1007	8-719-081-97	DIODE MMDL914T1		FB3216	1-414-228-11	INDUCTOR, FERRITE BEAD	
D1008	8-719-081-97	DIODE MMDL914T1		FB3401	1-216-864-11	SHORT CHIP 0	
< DIODE >				< FLUORESCENT INDICATOR TUBE >			
D1009	8-719-081-97	DIODE MMDL914T1		FL1204	1-234-939-21	FILTER, EMI REMOVAL (SMD)	
D1010	8-719-081-97	DIODE MMDL914T1		FL1205	1-234-939-21	FILTER, EMI REMOVAL (SMD)	
D1011	8-719-057-01	DIODE RD2.0UM-T1B		FL1402	1-234-939-21	FILTER, EMI REMOVAL (SMD)	
D1602	6-501-817-01	DIODE MA2J1110GLSO		FL1403	1-234-939-21	FILTER, EMI REMOVAL (SMD)	
D1603	6-501-817-01	DIODE MA2J1110GLSO		FL2202	1-234-939-21	FILTER, EMI REMOVAL (SMD)	
D1809	6-501-817-01	DIODE MA2J1110GLSO		FL2203	1-234-939-21	FILTER, EMI REMOVAL (SMD)	
D1905	6-501-817-01	DIODE MA2J1110GLSO		FL2204	1-234-939-21	FILTER, EMI REMOVAL (SMD)	
D1908	6-501-817-01	DIODE MA2J1110GLSO		FL2401	1-234-939-21	FILTER, EMI REMOVAL (SMD)	
D1909	6-501-817-01	DIODE MA2J1110GLSO		FL3001	1-234-939-21	FILTER, EMI REMOVAL (SMD)	
D1910	6-501-817-01	DIODE MA2J1110GLSO		FL3002	1-234-939-21	FILTER, EMI REMOVAL (SMD)	
D2601	6-501-817-01	DIODE MA2J1110GLSO		FL3501	1-234-939-21	FILTER, EMI REMOVAL (SMD)	
D3203	8-719-081-97	DIODE MMDL914T1		FL3502	1-234-939-21	FILTER, EMI REMOVAL (SMD)	
D3204	8-719-081-97	DIODE MMDL914T1		< IC >			
D3205	8-719-081-97	DIODE MMDL914T1		IC1003	6-714-307-01	IC LV5803NM-TE-L-E	
D3206	8-719-067-40	DIODE STZ6.8N-T146		IC1101	6-708-762-01	IC PQ200WNA1ZPH	
D3208	8-719-067-40	DIODE STZ6.8N-T146		IC1104	6-708-762-01	IC PQ200WNA1ZPH	
D3209	8-719-067-40	DIODE STZ6.8N-T146		IC1401	6-713-205-11	IC EDE5116AJBG-8E-E-TR	
D3213	8-719-067-40	DIODE STZ6.8N-T146		IC1402	6-713-205-11	IC EDE5116AJBG-8E-E-TR	
D3214	8-719-067-40	DIODE STZ6.8N-T146		IC1802	6-709-517-01	IC S-35390A-J8T1G	
D3215	8-719-067-40	DIODE STZ6.8N-T146		IC1806	6-714-151-01	IC R1EX24032ASAS0A	
D3217	8-719-067-40	DIODE STZ6.8N-T146		IC1901	6-705-313-01	IC S-T111B50MC-OHJTFG	
D3218	8-719-067-40	DIODE STZ6.8N-T146		IC1905	6-713-849-01	IC S80128CNMC-JKNT2G	
D3222	8-719-067-40	DIODE STZ6.8N-T146		IC1906	6-706-673-01	IC S-80852CNMC-B9DT2G	
D3223	8-719-067-40	DIODE STZ6.8N-T146		IC2201	6-708-762-01	IC PQ200WNA1ZPH	
D3226	8-719-067-40	DIODE STZ6.8N-T146		IC2401	6-711-116-01	IC NJM2878F3-05 (TE2)	
D3228	8-719-067-40	DIODE STZ6.8N-T146		IC2405	6-706-487-01	IC TC7SH08FU (T5RSOYJF)	
D3231	6-501-770-01	DIODE MAZ8130G0LSO		IC2601	6-709-932-01	IC MM3141CNRE	
D3233	6-501-736-01	DIODE MAZ8062G0LSO		IC2602	6-711-135-01	IC MM3295ANRE	
D3234	6-501-770-01	DIODE MAZ8130G0LSO		IC2603	6-711-135-01	IC MM3295ANRE	
D3236	6-501-736-01	DIODE MAZ8062G0LSO		IC2801	6-711-471-01	IC TC74LCX245FK (EL, K)	
D3238	8-719-067-40	DIODE STZ6.8N-T146		(RDR-DC105/DC205/DC305/DC505)			
D3239	8-719-067-40	DIODE STZ6.8N-T146		* IC2802	6-711-290-01	IC TC74LCX373FK (EL, K)	
< FERRITE BEAD >				(RDR-DC105/DC205/DC305/DC505)			
FB1201	1-500-283-11	INDUCTOR, FERRITE BEAD		* IC2803	6-711-290-01	IC TC74LCX373FK (EL, K)	
FB2601	1-500-283-11	INDUCTOR, FERRITE BEAD		(RDR-DC105/DC205/DC305/DC505)			
				IC2807	6-704-486-01	IC MK3721DLFTR	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* IC2809	6-711-207-01	IC CIMAX-SP2L (RDR-DC105/DC205/DC305/DC505)		Q2608	8-729-620-13	TRANSISTOR 2SC4154TP-1EF	
IC2811	6-711-050-01	IC S-1170B50UC-OUJTFG (RDR-DC105/DC205/DC305/DC505)		Q2609	8-729-620-13	TRANSISTOR 2SC4154TP-1EF	
IC2812	6-705-313-01	IC S-T111B50MC-OHJTFG (RDR-DC105/DC205/DC305/DC505)		Q2610	6-551-456-01	TRANSISTOR RTR020P02TL	
IC3001	6-711-049-01	IC S-1170B33UC-OTSTFG		Q2611	8-729-028-96	TRANSISTOR DTC114EUA-T106	
IC3002	6-705-311-01	IC S-T111B18MC-OGDTFG		Q2615	6-551-699-01	TRANSISTOR ISA1602AM1TP-1EF	
IC3201	6-711-050-01	IC S-1170B50UC-OUJTFG		Q2616	8-729-028-96	TRANSISTOR DTC114EUA-T106	
IC3202	8-759-685-70	IC NJM2520M (TE2)		Q2617	8-729-044-37	TRANSISTOR LSK3019FP8TL	
IC3203	8-759-685-70	IC NJM2520M (TE2)		Q2618	8-729-044-37	TRANSISTOR LSK3019FP8TL	
IC3205	6-705-313-01	IC S-T111B50MC-OHJTFG		Q2801	8-729-029-06	TRANSISTOR DTC124EUA-T106 (RDR-DC105/DC205/DC305/DC505)	
IC3206	6-710-470-01	IC MM1758AFBE		Q2802	8-729-044-37	TRANSISTOR LSK3019FP8TL (RDR-DC105/DC205/DC305/DC505)	
IC3207	6-703-623-01	IC MM1503XNRE		Q2803	8-729-044-37	TRANSISTOR LSK3019FP8TL (RDR-DC105/DC205/DC305/DC505)	
IC3208	8-759-058-56	IC TC7S02FU (TE85R)		Q2804	8-729-044-37	TRANSISTOR LSK3019FP8TL (RDR-DC105/DC205/DC305/DC505)	
IC3209	8-759-278-58	IC NJM4558V-TE2		Q2805	8-729-044-37	TRANSISTOR LSK3019FP8TL (RDR-DC105/DC205/DC305/DC505)	
IC3402	6-705-313-01	IC S-T111B50MC-OHJTFG		Q3201	6-551-812-01	TR UNR51A1G0LS0	
IC3403	8-759-710-97	IC NJM4565M-D		Q3202	6-551-699-01	TRANSISTOR ISA1602AM1TP-1EF	
IC3501	6-708-762-01	IC PQ200WNA1ZPH		Q3203	6-551-699-01	TRANSISTOR ISA1602AM1TP-1EF	
		< JACK >		Q3204	8-729-023-22	TRANSISTOR 2SD2114K	
J3401	1-784-431-11	JACK, PIN 1P (DIGITAL OUT)		Q3205	8-729-023-22	TRANSISTOR 2SD2114K	
		< COIL >		Q3206	8-729-029-06	TRANSISTOR DTC124EUA-T106	
L1001	1-457-455-11	INDUCTOR 10uH		Q3207	8-729-029-06	TRANSISTOR DTC124EUA-T106	
L1002	1-457-455-11	INDUCTOR 10uH		Q3212	6-551-484-01	TRANSISTOR RT3C55M-TP-1B	
L1003	1-457-455-11	INDUCTOR 10uH		Q3213	6-551-484-01	TRANSISTOR RT3C55M-TP-1B	
* L2401	1-813-880-11	COMMON MODE CHOKE COIL		Q3217	6-551-699-01	TRANSISTOR ISA1602AM1TP-1EF	
* L2402	1-813-880-11	COMMON MODE CHOKE COIL		Q3218	8-729-620-13	TRANSISTOR 2SC4154TP-1EF	
* L2403	1-813-880-11	COMMON MODE CHOKE COIL		Q3401	8-729-620-13	TRANSISTOR 2SC4154TP-1EF	
* L2404	1-813-880-11	COMMON MODE CHOKE COIL		Q3402	8-729-028-96	TRANSISTOR DTC114EUA-T106	
L3002	1-469-555-21	INDUCTOR 10uH		Q3403	6-551-699-01	TRANSISTOR ISA1602AM1TP-1EF	
L3003	1-469-553-21	INDUCTOR 4.7uH		Q3501	6-551-699-01	TRANSISTOR ISA1602AM1TP-1EF	
L3005	1-469-555-21	INDUCTOR 10uH		Q3502	6-551-699-01	TRANSISTOR ISA1602AM1TP-1EF	
L3007	1-469-555-21	INDUCTOR 10uH		Q3503	6-551-699-01	TRANSISTOR ISA1602AM1TP-1EF	
L3401	1-469-555-21	INDUCTOR 10uH		Q3504	6-551-699-01	TRANSISTOR ISA1602AM1TP-1EF	
L3501	1-469-555-21	INDUCTOR 10uH		Q3505	6-551-699-01	TRANSISTOR ISA1602AM1TP-1EF	
		< IC LINK >		Q3506	6-551-699-01	TRANSISTOR ISA1602AM1TP-1EF	
△ PS1003	1-576-398-21	IC LINK 2.5A 72V				< RESISTOR >	
		< TRANSISTOR >		R1001	1-218-936-11	METAL CHIP 39 5% 1/16W	
Q1002	6-551-699-01	TRANSISTOR ISA1602AM1TP-1EF		R1002	1-218-936-11	METAL CHIP 39 5% 1/16W	
Q1003	8-729-028-96	TRANSISTOR DTC114EUA-T106		R1003	1-218-936-11	METAL CHIP 39 5% 1/16W	
Q1004	8-729-029-14	TRANSISTOR DTC144EUA-T106		R1005	1-244-161-81	METAL CHIP 2.2 5% 1/16W	
Q1007	8-729-028-96	TRANSISTOR DTC114EUA-T106		R1006	1-244-161-81	METAL CHIP 2.2 5% 1/16W	
Q1103	8-729-620-13	TRANSISTOR 2SC4154TP-1EF		R1007	1-216-821-11	METAL CHIP 1K 5% 1/10W	
Q1104	8-729-620-13	TRANSISTOR 2SC4154TP-1EF		R1008	1-218-854-11	METAL CHIP 2K 0.5% 1/10W	
Q1903	8-729-044-37	TRANSISTOR LSK3019FP8TL		R1009	1-218-823-11	METAL CHIP 100 0.5% 1/10W	
Q1904	8-729-044-37	TRANSISTOR LSK3019FP8TL		R1010	1-218-867-11	METAL CHIP 6.8K 0.5% 1/10W	
Q1905	8-729-044-37	TRANSISTOR LSK3019FP8TL		R1014	1-218-867-11	METAL CHIP 6.8K 0.5% 1/10W	
Q1906	8-729-044-37	TRANSISTOR LSK3019FP8TL		R1015	1-218-881-11	METAL CHIP 27K 0.5% 1/10W	
Q1907	6-552-221-01	TR 2SA2188-T112-1F		R1016	1-218-865-11	METAL CHIP 5.6K 0.5% 1/10W	
Q1908	8-729-038-28	TRANSISTOR RT1N441C-TP-1		R1017	1-216-827-11	METAL CHIP 3.3K 5% 1/10W	
Q2401	8-729-038-32	TRANSISTOR RT1P241M-TP-1		R1018	1-218-873-11	METAL CHIP 12K 0.5% 1/10W	
Q2403	8-729-044-37	TRANSISTOR LSK3019FP8TL		R1019	1-218-841-11	METAL CHIP 560 0.5% 1/10W	
Q2405	8-729-029-06	TRANSISTOR DTC124EUA-T106		R1020	1-218-863-11	METAL CHIP 4.7K 0.5% 1/10W	
Q2605	8-729-044-37	TRANSISTOR LSK3019FP8TL		R1021	1-218-855-11	METAL CHIP 2.2K 0.5% 1/10W	
Q2606	8-729-044-37	TRANSISTOR LSK3019FP8TL		R1022	1-218-837-11	METAL CHIP 390 0.5% 1/10W	
Q2607	8-729-620-13	TRANSISTOR 2SC4154TP-1EF		R1023	1-218-871-11	METAL CHIP 10K 0.5% 1/10W	
				R1024	1-218-871-11	METAL CHIP 10K 0.5% 1/10W	
				R1025	1-218-871-11	METAL CHIP 10K 0.5% 1/10W	

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

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R1027	1-218-953-11	METAL CHIP	1K	5%	1/16W	R1426	1-218-945-11	METAL CHIP	220	5%	1/16W
R1028	1-218-953-11	METAL CHIP	1K	5%	1/16W	R1427	1-218-953-11	METAL CHIP	1K	5%	1/16W
R1030	1-216-864-11	SHORT CHIP	0			R1428	1-208-683-11	METAL CHIP	1K	0.5%	1/16W
R1033	1-216-864-11	SHORT CHIP	0			R1429	1-208-683-11	METAL CHIP	1K	0.5%	1/16W
R1038	1-218-953-11	METAL CHIP	1K	5%	1/16W	R1601	1-218-990-81	SHORT CHIP	0		
R1040	1-218-977-11	METAL CHIP	100K	5%	1/16W	R1602	1-218-990-81	SHORT CHIP	0		
R1045	1-216-833-11	METAL CHIP	10K	5%	1/10W	R1603	1-218-990-81	SHORT CHIP	0		
R1046	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R1604	1-218-990-81	SHORT CHIP	0		
R1047	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R1605	1-218-990-81	SHORT CHIP	0		
R1048	1-218-965-11	METAL CHIP	10K	5%	1/16W	R1606	1-218-990-81	SHORT CHIP	0		
R1049	1-218-965-11	METAL CHIP	10K	5%	1/16W	R1607	1-218-990-81	SHORT CHIP	0		
R1055	1-218-871-11	METAL CHIP	10K	0.5%	1/10W	R1608	1-218-990-81	SHORT CHIP	0		
R1056	1-218-903-11	METAL CHIP	220K	0.5%	1/10W	R1609	1-218-990-81	SHORT CHIP	0		
R1057	1-218-881-11	METAL CHIP	27K	0.5%	1/10W	R1610	1-218-990-81	SHORT CHIP	0		
R1058	1-218-863-11	METAL CHIP	4.7K	0.5%	1/10W	R1611	1-218-990-81	SHORT CHIP	0		
R1059	1-211-985-11	METAL CHIP	47	0.5%	1/10W	R1612	1-218-990-81	SHORT CHIP	0		
R1101	1-218-953-11	METAL CHIP	1K	5%	1/16W	R1613	1-218-990-81	SHORT CHIP	0		
R1102	1-218-957-11	METAL CHIP	2.2K	5%	1/16W	R1614	1-218-990-81	SHORT CHIP	0		
R1103	1-218-957-11	METAL CHIP	2.2K	5%	1/16W	R1616	1-218-990-81	SHORT CHIP	0		
R1104	1-216-833-11	METAL CHIP	10K	5%	1/10W	R1617	1-218-990-81	SHORT CHIP	0		
R1105	1-216-833-11	METAL CHIP	10K	5%	1/10W	R1618	1-218-990-81	SHORT CHIP	0		
R1106	1-218-835-11	METAL CHIP	330	0.5%	1/10W	R1619	1-218-990-81	SHORT CHIP	0		
R1107	1-216-864-11	SHORT CHIP	0			R1620	1-218-935-11	METAL CHIP	33	5%	1/16W
R1108	1-216-864-11	SHORT CHIP	0			R1621	1-218-940-11	METAL CHIP	82	5%	1/16W
R1109	1-218-841-11	METAL CHIP	560	0.5%	1/10W	R1622	1-218-935-11	METAL CHIP	33	5%	1/16W
R1110	1-218-847-11	METAL CHIP	1K	0.5%	1/10W	R1623	1-218-935-11	METAL CHIP	33	5%	1/16W
R1111	1-218-841-11	METAL CHIP	560	0.5%	1/10W	R1624	1-218-940-11	METAL CHIP	82	5%	1/16W
R1112	1-218-859-11	METAL CHIP	3.3K	0.5%	1/10W	R1625	1-218-940-11	METAL CHIP	82	5%	1/16W
R1113	1-216-864-11	SHORT CHIP	0			R1626	1-218-940-11	METAL CHIP	82	5%	1/16W
R1214	1-218-955-11	METAL CHIP	1.5K	5%	1/16W	R1628	1-218-935-11	METAL CHIP	33	5%	1/16W
R1216	1-218-989-11	METAL CHIP	1M	5%	1/16W	R1630	1-218-935-11	METAL CHIP	33	5%	1/16W
R1220	1-218-929-11	METAL CHIP	10	5%	1/16W	R1631	1-218-935-11	METAL CHIP	33	5%	1/16W
R1221	1-218-929-11	METAL CHIP	10	5%	1/16W	R1632	1-218-935-11	METAL CHIP	33	5%	1/16W
R1222	1-218-929-11	METAL CHIP	10	5%	1/16W	R1633	1-218-935-11	METAL CHIP	33	5%	1/16W
R1223	1-218-929-11	METAL CHIP	10	5%	1/16W	R1635	1-218-965-11	METAL CHIP	10K	5%	1/16W
R1224	1-218-929-11	METAL CHIP	10	5%	1/16W	R1637	1-218-965-11	METAL CHIP	10K	5%	1/16W
R1225	1-218-929-11	METAL CHIP	10	5%	1/16W	R1638	1-218-962-11	METAL CHIP	5.6K	5%	1/16W
R1226	1-218-965-11	METAL CHIP	10K	5%	1/16W	R1639	1-218-965-11	METAL CHIP	10K	5%	1/16W
R1229	1-218-941-11	METAL CHIP	100	5%	1/16W	R1640	1-218-962-11	METAL CHIP	5.6K	5%	1/16W
R1230	1-216-864-11	SHORT CHIP	0			R1641	1-218-961-11	METAL CHIP	4.7K	5%	1/16W
R1401	1-208-683-11	METAL CHIP	1K	0.5%	1/16W	R1642	1-218-962-11	METAL CHIP	5.6K	5%	1/16W
R1402	1-208-683-11	METAL CHIP	1K	0.5%	1/16W	R1643	1-218-965-11	METAL CHIP	10K	5%	1/16W
R1404	1-218-933-11	METAL CHIP	22	5%	1/16W	R1644	1-218-965-11	METAL CHIP	10K	5%	1/16W
R1405	1-218-933-11	METAL CHIP	22	5%	1/16W	R1646	1-218-965-11	METAL CHIP	10K	5%	1/16W
R1406	1-218-933-11	METAL CHIP	22	5%	1/16W	R1647	1-218-965-11	METAL CHIP	10K	5%	1/16W
R1407	1-218-933-11	METAL CHIP	22	5%	1/16W	R1651	1-218-957-11	METAL CHIP	2.2K	5%	1/16W
R1408	1-218-933-11	METAL CHIP	22	5%	1/16W	R1654	1-218-965-11	METAL CHIP	10K	5%	1/16W
R1409	1-218-933-11	METAL CHIP	22	5%	1/16W	R1663	1-218-935-11	METAL CHIP	33	5%	1/16W
R1410	1-218-933-11	METAL CHIP	22	5%	1/16W	R1664	1-218-935-11	METAL CHIP	33	5%	1/16W
R1411	1-218-933-11	METAL CHIP	22	5%	1/16W	R1665	1-218-935-11	METAL CHIP	33	5%	1/16W
R1412	1-218-933-11	METAL CHIP	22	5%	1/16W	R1668	1-218-935-11	METAL CHIP	33	5%	1/16W
R1413	1-218-933-11	METAL CHIP	22	5%	1/16W	R1669	1-218-935-11	METAL CHIP	33	5%	1/16W
R1414	1-218-933-11	METAL CHIP	22	5%	1/16W	R1670	1-218-935-11	METAL CHIP	33	5%	1/16W
R1415	1-218-933-11	METAL CHIP	22	5%	1/16W	R1672	1-218-965-11	METAL CHIP	10K	5%	1/16W
R1416	1-218-933-11	METAL CHIP	22	5%	1/16W	R1675	1-218-990-81	SHORT CHIP	0		
R1417	1-218-933-11	METAL CHIP	22	5%	1/16W	R1678	1-218-990-81	SHORT CHIP	0		
R1422	1-218-945-11	METAL CHIP	220	5%	1/16W	R1679	1-218-990-81	SHORT CHIP	0		
R1423	1-218-953-11	METAL CHIP	1K	5%	1/16W	R1805	1-218-941-81	METAL CHIP	100	5%	1/16W
R1424	1-208-683-11	METAL CHIP	1K	0.5%	1/16W	R1811	1-218-941-81	METAL CHIP	100	5%	1/16W
R1425	1-208-683-11	METAL CHIP	1K	0.5%	1/16W	R1821	1-218-965-11	METAL CHIP	10K	5%	1/16W

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R1822	1-218-990-81	SHORT CHIP	0			R2215	1-218-935-11	METAL CHIP	33	5%	1/16W
R1825	1-218-953-11	METAL CHIP	1K	5%	1/16W	R2216	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R1837	1-218-965-11	METAL CHIP	10K	5%	1/16W	R2217	1-218-854-11	METAL CHIP	2K	0.5%	1/10W
R1838	1-218-965-11	METAL CHIP	10K	5%	1/16W	R2222	1-218-990-81	SHORT CHIP	0		
R1843	1-218-941-81	METAL CHIP	100	5%	1/16W	R2224	1-218-941-81	METAL CHIP	100	5%	1/16W
R1844	1-218-953-11	METAL CHIP	1K	5%	1/16W	R2225	1-218-953-11	METAL CHIP	1K	5%	1/16W
R1845	1-218-950-11	METAL CHIP	560	5%	1/16W	R2227	1-218-990-81	SHORT CHIP	0		
R1846	1-218-961-11	METAL CHIP	4.7K	5%	1/16W	R2233	1-208-906-81	METAL CHIP	6.2K	0.5%	1/16W
R1847	1-218-961-11	METAL CHIP	4.7K	5%	1/16W	R2234	1-218-938-11	METAL CHIP	56	5%	1/16W
R1849	1-218-941-81	METAL CHIP	100	5%	1/16W	R2235	1-218-938-11	METAL CHIP	56	5%	1/16W
R1900	1-218-965-11	METAL CHIP	10K	5%	1/16W	R2239	1-218-938-11	METAL CHIP	56	5%	1/16W
R1902	1-218-965-11	METAL CHIP	10K	5%	1/16W	R2240	1-218-938-11	METAL CHIP	56	5%	1/16W
R1903	1-218-965-11	METAL CHIP	10K	5%	1/16W	R2241	1-218-864-11	METAL CHIP	5.1K	0.5%	1/10W
R1910	1-218-953-11	METAL CHIP	1K	5%	1/16W	R2243	1-218-953-11	METAL CHIP	1K	5%	1/16W
R1911	1-218-953-11	METAL CHIP	1K	5%	1/16W	R2244	1-218-984-11	METAL CHIP	390K	5%	1/16W
R1913	1-218-953-11	METAL CHIP	1K	5%	1/16W	R2245	1-218-965-11	METAL CHIP	10K	5%	1/16W
R1919	1-218-953-11	METAL CHIP	1K	5%	1/16W	R2246	1-218-990-81	SHORT CHIP	0		
R1924	1-218-953-11	METAL CHIP	1K	5%	1/16W	R2247	1-218-990-81	SHORT CHIP	0		
R1926	1-218-965-11	METAL CHIP	10K	5%	1/16W	R2248	1-218-990-81	SHORT CHIP	0		
R1927	1-218-965-11	METAL CHIP	10K	5%	1/16W	R2251	1-218-990-81	SHORT CHIP	0		
R1934	1-218-953-11	METAL CHIP	1K	5%	1/16W	R2252	1-218-965-11	METAL CHIP	10K	5%	1/16W
R1935	1-218-953-11	METAL CHIP	1K	5%	1/16W	R2278	1-218-939-11	METAL CHIP	68	5%	1/16W
R1937	1-218-953-11	METAL CHIP	1K	5%	1/16W	R2279	1-218-939-11	METAL CHIP	68	5%	1/16W
R1938	1-216-864-11	SHORT CHIP	0			R2280	1-218-939-11	METAL CHIP	68	5%	1/16W
R1940	1-216-833-11	METAL CHIP	10K	5%	1/10W	R2281	1-218-935-11	METAL CHIP	33	5%	1/16W
R1941	1-216-827-11	METAL CHIP	3.3K	5%	1/10W	R2286	1-218-935-11	METAL CHIP	33	5%	1/16W
R1943	1-218-990-81	SHORT CHIP	0			R2302	1-218-935-11	METAL CHIP	33	5%	1/16W
R1944	1-218-990-81	SHORT CHIP	0			R2309	1-218-935-11	METAL CHIP	33	5%	1/16W
R1945	1-218-990-81	SHORT CHIP	0			R2310	1-218-961-11	METAL CHIP	4.7K	5%	1/16W
R1946	1-216-296-11	SHORT CHIP	0			R2314	1-218-973-11	METAL CHIP	47K	5%	1/16W
R1947	1-218-965-11	METAL CHIP	10K	5%	1/16W	R2405	1-218-990-81	SHORT CHIP	0		
R1948	1-218-965-11	METAL CHIP	10K	5%	1/16W	R2407	1-218-941-81	METAL CHIP	100	5%	1/16W
R1949	1-218-965-11	METAL CHIP	10K	5%	1/16W	R2408	1-218-941-81	METAL CHIP	100	5%	1/16W
R1950	1-218-965-11	METAL CHIP	10K	5%	1/16W	R2411	1-218-938-11	METAL CHIP	56	5%	1/16W
R1951	1-218-967-11	METAL CHIP	15K	5%	1/16W	R2415	1-218-990-81	SHORT CHIP	0		
R1952	1-218-965-11	METAL CHIP	10K	5%	1/16W	R2416	1-218-965-11	METAL CHIP	10K	5%	1/16W
R1953	1-218-965-11	METAL CHIP	10K	5%	1/16W	R2417	1-218-933-11	METAL CHIP	22	5%	1/16W
R1956	1-218-965-11	METAL CHIP	10K	5%	1/16W	R2418	1-218-961-11	METAL CHIP	4.7K	5%	1/16W
R1957	1-218-965-11	METAL CHIP	10K	5%	1/16W	R2419	1-218-961-11	METAL CHIP	4.7K	5%	1/16W
R1959	1-216-864-11	SHORT CHIP	0			R2423	1-218-965-11	METAL CHIP	10K	5%	1/16W
R1960	1-216-864-11	SHORT CHIP	0			R2425	1-218-961-11	METAL CHIP	4.7K	5%	1/16W
R1961	1-216-864-11	SHORT CHIP	0			R2427	1-218-950-11	METAL CHIP	560	5%	1/16W
R1962	1-218-941-81	METAL CHIP	100	5%	1/16W	R2428	1-218-957-11	METAL CHIP	2.2K	5%	1/16W
R1963	1-218-965-11	METAL CHIP	10K	5%	1/16W	R2429	1-218-961-11	METAL CHIP	4.7K	5%	1/16W
R1964	1-218-965-11	METAL CHIP	10K	5%	1/16W	R2433	1-218-970-11	METAL CHIP	27K	5%	1/16W
R1965	1-218-953-11	METAL CHIP	1K	5%	1/16W	R2434	1-218-990-81	SHORT CHIP	0		
R1966	1-218-965-11	METAL CHIP	10K	5%	1/16W	R2435	1-218-935-11	METAL CHIP	33	5%	1/16W
R1969	1-218-990-81	SHORT CHIP	0			R2436	1-218-949-11	METAL CHIP	470	5%	1/16W
R1970	1-218-990-81	SHORT CHIP	0			R2437	1-218-965-11	METAL CHIP	10K	5%	1/16W
R1971	1-218-990-81	SHORT CHIP	0			R2439	1-218-990-81	SHORT CHIP	0		
R1972	1-218-990-81	SHORT CHIP	0			R2440	1-218-947-11	METAL CHIP	330	5%	1/16W
R1997	1-218-961-11	METAL CHIP	4.7K	5%	1/16W	R2441	1-218-947-11	METAL CHIP	330	5%	1/16W
R1998	1-218-965-11	METAL CHIP	10K	5%	1/16W	R2442	1-218-947-11	METAL CHIP	330	5%	1/16W
R2201	1-218-971-11	METAL CHIP	33K	5%	1/16W	R2443	1-218-947-11	METAL CHIP	330	5%	1/16W
R2202	1-218-845-11	METAL CHIP	820	0.5%	1/10W	R2445	1-218-951-11	METAL CHIP	680	5%	1/16W
R2206	1-218-953-11	METAL CHIP	1K	5%	1/16W	R2446	1-218-961-11	METAL CHIP	4.7K	5%	1/16W
R2207	1-218-953-11	METAL CHIP	1K	5%	1/16W	R2447	1-216-864-11	SHORT CHIP	0		
R2209	1-208-695-11	METAL CHIP	3.3K	0.5%	1/16W	R2453	1-218-961-11	METAL CHIP	4.7K	5%	1/16W
R2210	1-218-941-11	METAL CHIP	100	5%	1/16W	R2454	1-218-973-11	METAL CHIP	47K	5%	1/16W
R2211	1-218-965-11	METAL CHIP	10K	5%	1/16W	R2455	1-218-990-81	SHORT CHIP	0		

Ref. No.	Part No.	Description			Remark
R2456	1-218-990-81	SHORT CHIP	0		
R2458	1-218-959-11	METAL CHIP	3.3K	5%	1/16W
R2459	1-218-990-81	SHORT CHIP	0		
R2460	1-218-990-81	SHORT CHIP	0		
R2461	1-218-990-81	SHORT CHIP	0		
R2467	1-218-956-11	METAL CHIP	1.8K	5%	1/16W
R2468	1-218-956-11	METAL CHIP	1.8K	5%	1/16W
R2469	1-216-864-11	SHORT CHIP	0		
R2601	1-218-990-81	SHORT CHIP	0		
R2604	1-218-990-81	SHORT CHIP	0		
R2606	1-218-941-81	METAL CHIP	100	5%	1/16W
R2607	1-218-990-81	SHORT CHIP	0		
R2608	1-218-965-11	METAL CHIP	10K	5%	1/16W
R2609	1-218-965-11	METAL CHIP	10K	5%	1/16W
R2610	1-218-957-11	METAL CHIP	2.2K	5%	1/16W
R2611	1-218-957-11	METAL CHIP	2.2K	5%	1/16W
R2612	1-218-935-11	METAL CHIP	33	5%	1/16W
R2613	1-218-935-11	METAL CHIP	33	5%	1/16W
R2614	1-218-935-11	METAL CHIP	33	5%	1/16W
R2629	1-218-953-11	METAL CHIP	1K	5%	1/16W
R2630	1-218-953-11	METAL CHIP	1K	5%	1/16W
R2633	1-218-953-11	METAL CHIP	1K	5%	1/16W
R2634	1-218-990-81	SHORT CHIP	0		
R2637	1-218-953-11	METAL CHIP	1K	5%	1/16W
R2638	1-218-943-11	METAL CHIP	150	5%	1/16W
R2639	1-218-965-11	METAL CHIP	10K	5%	1/16W
R2640	1-218-969-11	METAL CHIP	22K	5%	1/16W
R2641	1-218-953-11	METAL CHIP	1K	5%	1/16W
R2643	1-216-864-11	SHORT CHIP	0		
R2645	1-218-953-11	METAL CHIP	1K	5%	1/16W
R2647	1-218-953-11	METAL CHIP	1K	5%	1/16W
R2648	1-218-973-11	METAL CHIP	47K	5%	1/16W
R2649	1-218-949-11	METAL CHIP	470	5%	1/16W
R2652	1-218-965-11	METAL CHIP	10K	5%	1/16W
R2663	1-216-864-11	SHORT CHIP	0		
R2664	1-216-864-11	SHORT CHIP	0		
R2665	1-216-864-11	SHORT CHIP	0		
R2666	1-216-864-11	SHORT CHIP	0		
R2667	1-216-864-11	SHORT CHIP	0		
R2677	1-218-953-11	METAL CHIP	1K	5%	1/16W
R2678	1-218-953-11	METAL CHIP	1K	5%	1/16W
R2679	1-218-990-81	SHORT CHIP	0		
R2680	1-218-990-81	SHORT CHIP	0		
R2681	1-218-990-81	SHORT CHIP	0		
R2682	1-218-990-81	SHORT CHIP	0		
R2683	1-218-973-11	METAL CHIP	47K	5%	1/16W
R2684	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2685	1-216-296-11	SHORT CHIP	0		
R2686	1-218-990-81	SHORT CHIP	0		
R2687	1-218-990-81	SHORT CHIP	0		
R2688	1-216-864-11	SHORT CHIP	0		
R2690	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2691	1-218-961-11	METAL CHIP	4.7K	5%	1/16W
R2692	1-218-961-11	METAL CHIP	4.7K	5%	1/16W
R2693	1-218-990-81	SHORT CHIP	0		
R2694	1-218-990-81	SHORT CHIP	0		
R2697	1-218-990-81	SHORT CHIP	0		
R2698	1-218-990-81	SHORT CHIP	0		
R2699	1-216-864-11	SHORT CHIP	0		
R2801	1-218-935-11	METAL CHIP	33	5%	1/16W

Ref. No.	Part No.	Description			Remark
R2803	1-218-990-81	SHORT CHIP	0		(RDR-DC105/DC205/DC305/DC505)
R2804	1-218-965-11	METAL CHIP	10K	5%	1/16W
R2805	1-218-937-11	METAL CHIP	47	5%	1/16W
R2806	1-218-965-11	METAL CHIP	10K	5%	1/16W
R2807	1-218-965-11	METAL CHIP	10K	5%	1/16W
R2808	1-218-937-11	METAL CHIP	47	5%	1/16W
R2809	1-218-965-11	METAL CHIP	10K	5%	1/16W
R2811	1-218-970-11	METAL CHIP	27K	5%	1/16W
R2816	1-218-937-11	METAL CHIP	47	5%	1/16W
R2817	1-218-937-11	METAL CHIP	47	5%	1/16W
R2818	1-218-937-11	METAL CHIP	47	5%	1/16W
R2819	1-218-990-81	SHORT CHIP	0		(RDR-DC105/DC205/DC305/DC505)
R2820	1-218-990-81	SHORT CHIP	0		(RDR-DC105/DC205/DC305/DC505)
R2821	1-218-990-81	SHORT CHIP	0		(RDR-DC105/DC205/DC305/DC505)
R2827	1-218-941-81	METAL CHIP	100	5%	1/16W
R2837	1-218-965-11	METAL CHIP	10K	5%	1/16W
R2838	1-218-965-11	METAL CHIP	10K	5%	1/16W
R2850	1-218-935-11	METAL CHIP	33	5%	1/16W
R2851	1-218-990-81	SHORT CHIP	0		(RDR-DC105/DC205/DC305/DC505)
R2852	1-218-965-11	METAL CHIP	10K	5%	1/16W
R2859	1-218-990-81	SHORT CHIP	0		
R2861	1-218-990-81	SHORT CHIP	0		
R2870	1-218-961-11	METAL CHIP	4.7K	5%	1/16W
R2871	1-218-965-11	METAL CHIP	10K	5%	1/16W
R2872	1-218-965-11	METAL CHIP	10K	5%	1/16W
R2874	1-218-953-11	METAL CHIP	1K	5%	1/16W
R2875	1-218-961-11	METAL CHIP	4.7K	5%	1/16W
R2876	1-218-961-11	METAL CHIP	4.7K	5%	1/16W
R2877	1-218-965-11	METAL CHIP	10K	5%	1/16W
R2878	1-218-977-11	METAL CHIP	100K	5%	1/16W
R2879	1-218-990-81	SHORT CHIP	0		(RDR-DC90/DC100/DC200/DC500)
R2880	1-218-990-81	SHORT CHIP	0		(RDR-DC90/DC100/DC200/DC500)
R2881	1-218-990-81	SHORT CHIP	0		(RDR-DC90/DC100/DC200/DC500)
R2882	1-218-990-81	SHORT CHIP	0		(RDR-DC105/DC205/DC305/DC505)
R2883	1-218-990-81	SHORT CHIP	0		(RDR-DC105/DC205/DC305/DC505)

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R2884	1-218-990-81	SHORT CHIP	0			R3212	1-218-977-11	METAL CHIP	100K	5%	1/16W
			(RDR-DC105/DC205/DC305/DC505)			R3213	1-218-977-11	METAL CHIP	100K	5%	1/16W
R3001	1-218-967-11	METAL CHIP	15K	5%	1/16W	R3214	1-218-941-81	METAL CHIP	100	5%	1/16W
R3002	1-218-967-11	METAL CHIP	15K	5%	1/16W	R3216	1-218-941-81	METAL CHIP	100	5%	1/16W
R3003	1-218-967-11	METAL CHIP	15K	5%	1/16W	R3218	1-218-961-11	METAL CHIP	4.7K	5%	1/16W
R3004	1-218-967-11	METAL CHIP	15K	5%	1/16W						
						R3219	1-218-990-81	SHORT CHIP	0		
R3005	1-208-855-81	METAL CHIP	47	0.5%	1/16W	R3222	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R3006	1-220-880-81	METAL CHIP	27	0.5%	1/16W	R3223	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R3007	1-220-880-81	METAL CHIP	27	0.5%	1/16W	R3224	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R3008	1-208-855-81	METAL CHIP	47	0.5%	1/16W	R3225	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R3009	1-208-855-81	METAL CHIP	47	0.5%	1/16W						
						R3226	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R3010	1-220-880-81	METAL CHIP	27	0.5%	1/16W	R3227	1-211-989-11	METAL CHIP	68	0.5%	1/10W
R3011	1-220-880-81	METAL CHIP	27	0.5%	1/16W	R3228	1-218-977-11	METAL CHIP	100K	5%	1/16W
R3012	1-208-855-81	METAL CHIP	47	0.5%	1/16W	R3231	1-211-989-11	METAL CHIP	68	0.5%	1/10W
R3013	1-208-692-11	METAL CHIP	2.4K	0.5%	1/16W	R3233	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R3014	1-208-855-81	METAL CHIP	47	0.5%	1/16W						
						R3235	1-218-959-11	METAL CHIP	3.3K	5%	1/16W
R3015	1-220-880-81	METAL CHIP	27	0.5%	1/16W	R3236	1-218-977-11	METAL CHIP	100K	5%	1/16W
R3016	1-220-880-81	METAL CHIP	27	0.5%	1/16W	R3237	1-216-817-11	METAL CHIP	470	5%	1/10W
R3017	1-208-855-81	METAL CHIP	47	0.5%	1/16W	R3239	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R3018	1-218-990-81	SHORT CHIP	0			R3240	1-216-864-11	SHORT CHIP	0		
R3019	1-220-880-81	METAL CHIP	27	0.5%	1/16W						
						R3241	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R3020	1-208-855-81	METAL CHIP	47	0.5%	1/16W	R3242	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R3021	1-218-961-11	METAL CHIP	4.7K	5%	1/16W	R3243	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R3022	1-218-941-81	METAL CHIP	100	5%	1/16W	R3244	1-218-958-11	METAL CHIP	2.7K	5%	1/16W
R3023	1-218-990-81	SHORT CHIP	0			R3245	1-218-949-11	METAL CHIP	470	5%	1/16W
R3024	1-218-990-81	SHORT CHIP	0								
						R3247	1-216-864-11	SHORT CHIP	0		
R3026	1-218-990-81	SHORT CHIP	0			R3248	1-216-864-11	SHORT CHIP	0		
R3028	1-218-969-11	METAL CHIP	22K	5%	1/16W	R3249	1-216-864-11	SHORT CHIP	0		
R3029	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R3250	1-216-864-11	SHORT CHIP	0		
R3030	1-218-935-11	METAL CHIP	33	5%	1/16W	R3251	1-216-864-11	SHORT CHIP	0		
R3031	1-218-935-11	METAL CHIP	33	5%	1/16W						
						R3252	1-218-977-11	METAL CHIP	100K	5%	1/16W
R3032	1-218-935-11	METAL CHIP	33	5%	1/16W	R3255	1-216-864-11	SHORT CHIP	0		
R3033	1-208-855-81	METAL CHIP	47	0.5%	1/16W	R3256	1-216-864-11	SHORT CHIP	0		
R3034	1-220-880-81	METAL CHIP	27	0.5%	1/16W	R3257	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3037	1-208-860-81	METAL CHIP	75	0.5%	1/16W	R3258	1-216-864-11	SHORT CHIP	0		
R3038	1-218-935-11	METAL CHIP	33	5%	1/16W						
						R3259	1-218-958-11	METAL CHIP	2.7K	5%	1/16W
R3039	1-218-933-11	METAL CHIP	22	5%	1/16W	R3260	1-218-958-11	METAL CHIP	2.7K	5%	1/16W
R3040	1-218-933-11	METAL CHIP	22	5%	1/16W	R3263	1-218-835-11	METAL CHIP	330	0.5%	1/10W
R3041	1-218-933-11	METAL CHIP	22	5%	1/16W	R3264	1-216-864-11	SHORT CHIP	0		
R3042	1-218-990-81	SHORT CHIP	0			R3265	1-218-977-11	METAL CHIP	100K	5%	1/16W
R3043	1-218-990-81	SHORT CHIP	0								
						R3268	1-216-864-11	SHORT CHIP	0		
R3044	1-218-990-81	SHORT CHIP	0			R3269	1-216-817-11	METAL CHIP	470	5%	1/10W
R3045	1-218-990-81	SHORT CHIP	0			R3270	1-216-817-11	METAL CHIP	470	5%	1/10W
R3046	1-218-990-81	SHORT CHIP	0			R3271	1-216-817-11	METAL CHIP	470	5%	1/10W
R3047	1-218-990-81	SHORT CHIP	0			R3272	1-216-817-11	METAL CHIP	470	5%	1/10W
R3048	1-218-990-81	SHORT CHIP	0								
						R3273	1-218-961-11	METAL CHIP	4.7K	5%	1/16W
R3049	1-218-990-81	SHORT CHIP	0			R3274	1-218-961-11	METAL CHIP	4.7K	5%	1/16W
R3056	1-218-935-11	METAL CHIP	33	5%	1/16W	R3276	1-216-864-11	SHORT CHIP	0		
R3057	1-218-935-11	METAL CHIP	33	5%	1/16W	R3278	1-218-949-11	METAL CHIP	470	5%	1/16W
R3059	1-218-953-11	METAL CHIP	1K	5%	1/16W	R3279	1-218-949-11	METAL CHIP	470	5%	1/16W
R3060	1-218-953-11	METAL CHIP	1K	5%	1/16W						
						R3280	1-218-969-11	METAL CHIP	22K	5%	1/16W
R3061	1-218-949-11	METAL CHIP	470	5%	1/16W	R3281	1-218-969-11	METAL CHIP	22K	5%	1/16W
R3202	1-218-957-11	METAL CHIP	2.2K	5%	1/16W	R3282	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3203	1-218-949-11	METAL CHIP	470	5%	1/16W	R3283	1-218-965-11	METAL CHIP	10K	5%	1/16W
R3204	1-218-949-11	METAL CHIP	470	5%	1/16W	R3284	1-218-965-11	METAL CHIP	10K	5%	1/16W
R3205	1-218-949-11	METAL CHIP	470	5%	1/16W						
						R3293	1-218-965-11	METAL CHIP	10K	5%	1/16W
R3206	1-218-949-11	METAL CHIP	470	5%	1/16W	R3294	1-218-965-11	METAL CHIP	10K	5%	1/16W
R3207	1-218-955-11	METAL CHIP	1.5K	5%	1/16W	R3295	1-218-990-81	SHORT CHIP	0		
R3208	1-218-955-11	METAL CHIP	1.5K	5%	1/16W	R3296	1-218-955-11	METAL CHIP	1.5K	5%	1/16W
R3210	1-218-977-11	METAL CHIP	100K	5%	1/16W	R3297	1-218-990-81	SHORT CHIP	0		
R3211	1-218-977-11	METAL CHIP	100K	5%	1/16W						

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R3298	1-218-955-11	METAL CHIP	1.5K	5%	1/16W	R3416	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R3299	1-216-864-11	SHORT CHIP	0			R3417	1-218-970-11	METAL CHIP	27K	5%	1/16W
R3302	1-211-990-11	METAL CHIP	75	0.5%	1/10W	R3418	1-218-688-11	METAL CHIP	680	0.5%	1/10W
R3303	1-211-990-11	METAL CHIP	75	0.5%	1/10W	R3419	1-218-688-11	METAL CHIP	680	0.5%	1/10W
R3304	1-211-990-11	METAL CHIP	75	0.5%	1/10W	R3420	1-218-716-11	METAL CHIP	10K	0.5%	1/10W
R3305	1-211-990-11	METAL CHIP	75	0.5%	1/10W	R3421	1-218-716-11	METAL CHIP	10K	0.5%	1/10W
R3306	1-211-990-11	METAL CHIP	75	0.5%	1/10W	R3422	1-218-975-11	METAL CHIP	68K	5%	1/16W
R3307	1-211-990-11	METAL CHIP	75	0.5%	1/10W	R3423	1-218-977-11	METAL CHIP	100K	5%	1/16W
R3308	1-211-987-11	METAL CHIP	56	0.5%	1/10W	R3424	1-218-965-11	METAL CHIP	10K	5%	1/16W
R3309	1-211-987-11	METAL CHIP	56	0.5%	1/10W	R3425	1-218-965-11	METAL CHIP	10K	5%	1/16W
R3310	1-211-987-11	METAL CHIP	56	0.5%	1/10W	R3426	1-218-941-81	METAL CHIP	100	5%	1/16W
R3311	1-211-989-11	METAL CHIP	68	0.5%	1/10W	R3427	1-218-941-81	METAL CHIP	100	5%	1/16W
R3312	1-211-989-11	METAL CHIP	68	0.5%	1/10W	R3428	1-218-712-11	METAL CHIP	6.8K	0.5%	1/10W
R3313	1-211-989-11	METAL CHIP	68	0.5%	1/10W	R3429	1-218-724-11	METAL CHIP	22K	0.5%	1/10W
R3314	1-218-990-81	SHORT CHIP	0			R3430	1-218-724-11	METAL CHIP	22K	0.5%	1/10W
R3315	1-218-990-81	SHORT CHIP	0			R3431	1-218-712-11	METAL CHIP	6.8K	0.5%	1/10W
R3322	1-216-864-11	SHORT CHIP	0			R3434	1-220-169-11	METAL CHIP	75	5%	1/16W
R3323	1-216-864-11	SHORT CHIP	0			R3435	1-218-941-81	METAL CHIP	100	5%	1/16W
R3337	1-216-817-11	METAL CHIP	470	5%	1/10W	R3436	1-218-941-81	METAL CHIP	100	5%	1/16W
R3339	1-216-864-11	SHORT CHIP	0			R3437	1-218-941-81	METAL CHIP	100	5%	1/16W
R3341	1-216-864-11	SHORT CHIP	0			R3438	1-218-941-81	METAL CHIP	100	5%	1/16W
R3342	1-216-864-11	SHORT CHIP	0			R3439	1-218-941-81	METAL CHIP	100	5%	1/16W
R3343	1-216-864-11	SHORT CHIP	0			R3440	1-218-941-81	METAL CHIP	100	5%	1/16W
R3344	1-216-864-11	SHORT CHIP	0			R3446	1-218-965-11	METAL CHIP	10K	5%	1/16W
R3345	1-216-864-11	SHORT CHIP	0			R3501	1-218-969-11	METAL CHIP	22K	5%	1/16W
R3346	1-216-864-11	SHORT CHIP	0			R3503	1-218-965-11	METAL CHIP	10K	5%	1/16W
R3347	1-216-864-11	SHORT CHIP	0			R3504	1-218-965-11	METAL CHIP	10K	5%	1/16W
R3348	1-216-864-11	SHORT CHIP	0			R3505	1-218-965-11	METAL CHIP	10K	5%	1/16W
R3349	1-216-864-11	SHORT CHIP	0			R3506	1-218-965-11	METAL CHIP	10K	5%	1/16W
R3354	1-218-965-11	METAL CHIP	10K	5%	1/16W	R3507	1-218-965-11	METAL CHIP	10K	5%	1/16W
R3356	1-216-864-11	SHORT CHIP	0			R3516	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R3357	1-216-864-11	SHORT CHIP	0			R3517	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R3358	1-216-864-11	SHORT CHIP	0			R3518	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R3359	1-216-864-11	SHORT CHIP	0			R3519	1-218-990-81	SHORT CHIP	0		
R3360	1-218-990-81	SHORT CHIP	0			R3520	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R3366	1-216-864-11	SHORT CHIP	0			R3521	1-218-947-11	METAL CHIP	330	5%	1/16W
R3372	1-218-969-11	METAL CHIP	22K	5%	1/16W	R3522	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R3373	1-218-969-11	METAL CHIP	22K	5%	1/16W	R3523	1-218-990-81	SHORT CHIP	0		
R3374	1-218-977-11	METAL CHIP	100K	5%	1/16W	R3524	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R3375	1-218-975-11	METAL CHIP	68K	5%	1/16W	R3525	1-218-947-11	METAL CHIP	330	5%	1/16W
R3378	1-218-990-81	SHORT CHIP	0			R3526	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R3379	1-216-864-11	SHORT CHIP	0			R3527	1-218-990-81	SHORT CHIP	0		
R3380	1-216-864-11	SHORT CHIP	0			R3528	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R3381	1-216-864-11	SHORT CHIP	0			R3529	1-218-947-11	METAL CHIP	330	5%	1/16W
R3382	1-218-973-11	METAL CHIP	47K	5%	1/16W	R3530	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R3383	1-218-973-11	METAL CHIP	47K	5%	1/16W	R3531	1-218-990-81	SHORT CHIP	0		
R3384	1-218-973-11	METAL CHIP	47K	5%	1/16W	R3532	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R3385	1-218-973-11	METAL CHIP	47K	5%	1/16W	R3533	1-218-947-11	METAL CHIP	330	5%	1/16W
R3401	1-218-933-11	METAL CHIP	22	5%	1/16W	R3534	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R3402	1-218-933-11	METAL CHIP	22	5%	1/16W	R3535	1-218-990-81	SHORT CHIP	0		
R3403	1-218-933-11	METAL CHIP	22	5%	1/16W	R3536	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R3404	1-218-933-11	METAL CHIP	22	5%	1/16W	R3537	1-218-947-11	METAL CHIP	330	5%	1/16W
R3405	1-218-933-11	METAL CHIP	22	5%	1/16W	R3538	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R3406	1-218-990-81	SHORT CHIP	0			R3539	1-218-990-81	SHORT CHIP	0		
R3407	1-218-965-11	METAL CHIP	10K	5%	1/16W	R3540	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R3409	1-218-950-11	METAL CHIP	560	5%	1/16W	R3541	1-218-947-11	METAL CHIP	330	5%	1/16W
R3411	1-216-833-11	METAL CHIP	10K	5%	1/10W	R3542	1-218-835-11	METAL CHIP	330	0.5%	1/10W
R3412	1-218-949-11	METAL CHIP	470	5%	1/16W	R3543	1-218-835-11	METAL CHIP	330	0.5%	1/10W
R3413	1-218-951-11	METAL CHIP	680	5%	1/16W	R3544	1-218-831-11	METAL CHIP	220	0.5%	1/10W
R3415	1-220-169-11	METAL CHIP	75	5%	1/16W	R3545	1-218-835-11	METAL CHIP	330	0.5%	1/10W

Ref. No.	Part No.	Description	Remark
R3546	1-218-854-11	METAL CHIP 2K 0.5%	1/10W
R3547	1-218-957-11	METAL CHIP 2.2K 5%	1/16W
R3548	1-218-957-11	METAL CHIP 2.2K 5%	1/16W
R3549	1-218-957-11	METAL CHIP 2.2K 5%	1/16W
R3550	1-218-957-11	METAL CHIP 2.2K 5%	1/16W
< COMPOSITION CIRCUIT BLOCK >			
RB1401	1-234-370-21	RES, NETWORK 22 (1005X4)	
RB1402	1-234-370-21	RES, NETWORK 22 (1005X4)	
RB1403	1-234-370-21	RES, NETWORK 22 (1005X4)	
RB1404	1-234-370-21	RES, NETWORK 22 (1005X4)	
RB1405	1-234-370-21	RES, NETWORK 22 (1005X4)	
RB1406	1-234-370-21	RES, NETWORK 22 (1005X4)	
RB1407	1-234-370-21	RES, NETWORK 22 (1005X4)	
RB1408	1-234-370-21	RES, NETWORK 22 (1005X4)	
RB1409	1-234-370-21	RES, NETWORK 22 (1005X4)	
RB1410	1-234-370-21	RES, NETWORK 22 (1005X4)	
RB1411	1-234-370-21	RES, NETWORK 22 (1005X4)	
RB1412	1-234-370-21	RES, NETWORK 22 (1005X4)	
RB1413	1-234-370-21	RES, NETWORK 22 (1005X4)	
RB1601	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	
RB1602	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	
RB1603	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	
RB1604	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	
RB1605	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	
RB1606	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	
RB1607	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	
RB1610	1-234-378-21	RES, NETWORK 10K (1005X4)	
RB1611	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	
RB1612	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	
RB1613	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	
RB1614	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	
RB2204	1-242-963-21	RES, NETWORK 33 (1005X4)	
RB2205	1-242-963-21	RES, NETWORK 33 (1005X4)	
RB2207	1-234-702-11	RES, NETWORK 68 (1005X4)	
RB2208	1-234-702-11	RES, NETWORK 68 (1005X4)	
RB2401	1-234-370-21	RES, NETWORK 22 (1005X4)	
* RB2402	1-234-714-11	RES, NETWORK 56 (1005X4)	
* RB2403	1-234-714-11	RES, NETWORK 56 (1005X4)	
* RB2404	1-234-714-11	RES, NETWORK 56 (1005X4)	
* RB2405	1-234-714-11	RES, NETWORK 56 (1005X4)	
RB2601	1-242-963-21	RES, NETWORK 33 (1005X4)	
RB2602	1-242-963-21	RES, NETWORK 33 (1005X4)	
RB2801	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2802	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2803	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2804	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2805	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2806	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2807	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2808	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2809	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)

Ref. No.	Part No.	Description	Remark
RB2810	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2815	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2816	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2817	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2818	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2820	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2823	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2824	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2825	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2826	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2827	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2828	1-234-372-11	RES, NETWORK 100 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2829	1-234-372-11	RES, NETWORK 100 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2830	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2831	1-234-372-11	RES, NETWORK 100 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2832	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2833	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2834	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2835	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2836	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2837	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC90/DC100/DC200/DC500)
RB2838	1-234-371-21	RES, NETWORK 47 (1005X4)	(RDR-DC90/DC100/DC200/DC500)
RB2839	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2840	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2841	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	(RDR-DC90/DC100/DC200/DC500)
RB2842	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	(RDR-DC90/DC100/DC200/DC500)
RB2843	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB2844	1-234-400-21	CONDUCTOR, NETWORK (1005X4)	(RDR-DC105/DC205/DC305/DC505)
RB3002	1-242-963-21	RES, NETWORK 33 (1005X4)	
RB3003	1-242-963-21	RES, NETWORK 33 (1005X4)	
< TUNER UNIT >			
△ TU2601	8-597-703-00	TUNER UNIT, DIGITAL LTD-HF415	
< VARISTOR >			
VD3201	1-805-774-21	VARISTOR, CHIP	
VD3202	1-805-774-21	VARISTOR, CHIP	

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

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<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
VD3203	1-805-774-21	VARISTOR, CHIP	
VD3204	1-805-774-21	VARISTOR, CHIP	
VD3205	1-805-774-21	VARISTOR, CHIP	
VD3206	1-805-774-21	VARISTOR, CHIP	
VD3207	1-805-774-21	VARISTOR, CHIP	
VD3208	1-805-774-21	VARISTOR, CHIP	
		< VIBRATOR >	
X1202	1-814-068-11	VIBRATOR, CRYSTAL (27MHz)	
* X1204	1-814-226-11	OSCILLATOR, CRYSTAL (75MHz)	
* X1801	1-814-303-11	VIBRATOR, CRYSTAL 32.768kHz)	
X2203	1-814-267-11	QUARTZ CRYSTAL UNIT (24.576MHz)	
X2801	1-814-068-11	VIBRATOR, CRYSTAL (27MHz)	
X3001	1-814-267-11	QUARTZ CRYSTAL UNIT (24.576MHz)	

		ACCESSORIES	

△	1-487-288-11	REMOTE COMMANDER (RMT-D258P)	
	1-575-131-82	CORD, POWER (AEP)	
	1-696-593-11	CORD, CONNECTION (PAL)	
△	1-827-269-12	CORD, POWER (UK)	
	1-769-451-21	CORD, CONNECTION	
*	4-131-978-11	MANUAL, INSTRUCTION (UK)	
*	4-131-978-21	MANUAL, INSTRUCTION (AEP1)	
*	4-131-978-31	MANUAL, INSTRUCTION (AEP1)	
*	4-131-978-41	MANUAL, INSTRUCTION (AEP1)	
*	4-131-978-51	MANUAL, INSTRUCTION (AEP3)	
*	4-139-800-11	MANUAL, INSTRUCTION (AEP2)	
*	4-139-800-21	MANUAL, INSTRUCTION (AEP2)	
*	4-139-800-31	MANUAL, INSTRUCTION (AEP2)	
*	4-139-800-41	MANUAL, INSTRUCTION (AEP2)	
*	4-139-800-51	MANUAL, INSTRUCTION (AEP2)	

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

REVISION HISTORY

[illegible]