DENON

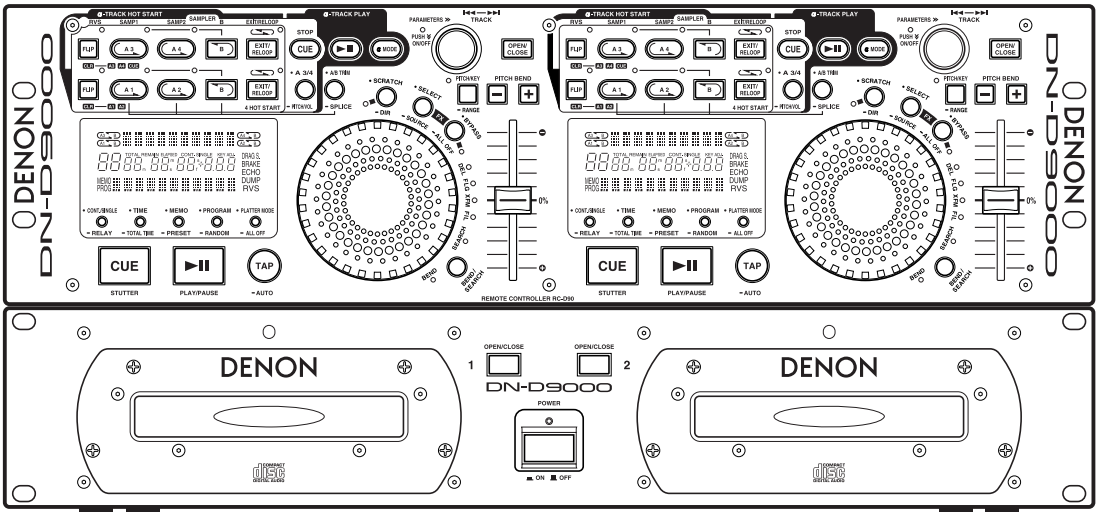
For U.S.A., Canada, Europe & Asia model

Hi-Fi Component

SERVICE MANUAL

MODEL DN-D9000

DOUBLE CD PLAYER



• Some illustrations using in this service manual are slightly different from the actual set.

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X0139 NC 0203

SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is defective.

SPECIFICATIONS

GENERAL

Type:	Twin mechanism compact disc player with wired remote control	
Disc Type:	Standard compact discs (12 cm and 8 cm discs) For CD-R and CD-RW discs, only finalized ones can be played back. However, some discs may not be playable depending on their recording conditions.	
Dimensions:	Player unit:	482 (W) × 88 (H) × 252 (D) mm (without feet) 18-31/32" (W) × 3-15/32" (H) × 9-59/64" (D)
	Remote control unit:	482 (W) × 62 (H) ×40 (D) mm (without feet) 18-31/32" (W) × 2-7/16" (H) × 1-37/64" (D)
Installation:	19-inch rack mountable	
	Player unit:	2U
	Remote control unit:	3U
	Player unit:	8 kg (17 lbs. 10.2oz)
	Remote control unit:	4 kg (8 lbs. 13.1oz)
Power Supply:	U.S.A. & Canada model:	120 V AC ±10 %, 60 Hz
	Europe & Asia model:	230 V AC ±10 %, 50 Hz
Power Consumption:	33 W	
Environmental Conditions:	Operational temperature:	5 to 35 °C (41 to 95 °F)
	Operational humidity:	25 to 85 % (no condensation)
	Storage temperature:	–20 to 60 °C (4 to 140 °F)

AUDIO SECTION

Main out/Monitor out	
Quantization:	24-bit linear per channel
Sampling Frequency:	44.1 kHz at normal pitch
Oversampling Rate:	8 times
Total Harmonic Distortion:	±0.01 % or less
S/N Ratio:	90 dB or more
Channel Separation:	85 dB or more
Frequency Response:	20 to 20,000 Hz
Analog output	
Main Out Level:	2.0 Vrms
Monitor Out Level:	2.0 Vrms
Digital Output:	
Signal Format:	SPDIF (–6 dB)
Output Level:	0.5 Vp-p 75 Ω/ohms
Load Impedance:	10 kΩ/kohms or more

FUNCTIONS

Instant Start:	Within 20 msec.	
Variable Pitch		
Main, α Track:	±4 % (0.05 % pitch), ±10 % (0.1 % pitch), ±16 % (0.1 % pitch), ±24 % (0.1 % pitch), ±100 % (1 % pitch)	
Pitch Bend:	Pitch range:	±4 %, ±10 % : ±12 %
	Pitch range:	±16 %, ±24 %: ±26 %
	Pitch range:	±100 % : ±99 %

SAMPLER

Sampling:	44.1 kHz
Length:	15 sec
Output Level:	2.0 Vrms (Variable/–14~+6 dB)
Variable Pitch:	±24 % (0.1 % pitch)
Search Precision:	1/75 sec (1 subcode frame)
Max. Scan Speed:	Over 20 times normal speed
Max. Memo Memory Steps:	5,000 steps

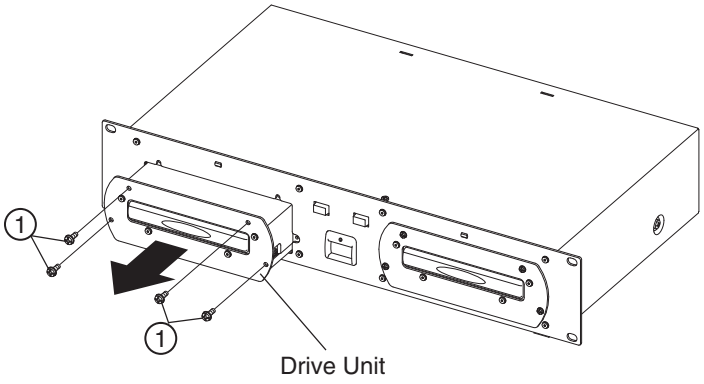
DISASSEMBLY

(Follow the procedure below in reverse order when reassembling)

Main Unit

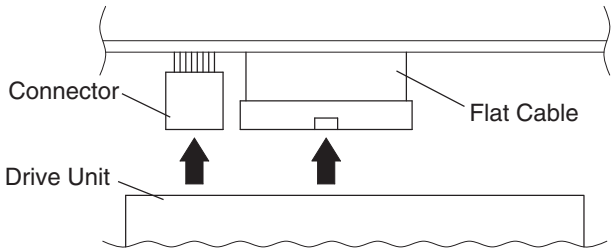
1. Drive Unit

1) Remove 4 screws ① and pull out Drive Unit.
2) Disconnect Flat cable and Connector.
3) Detach Drive Unit.



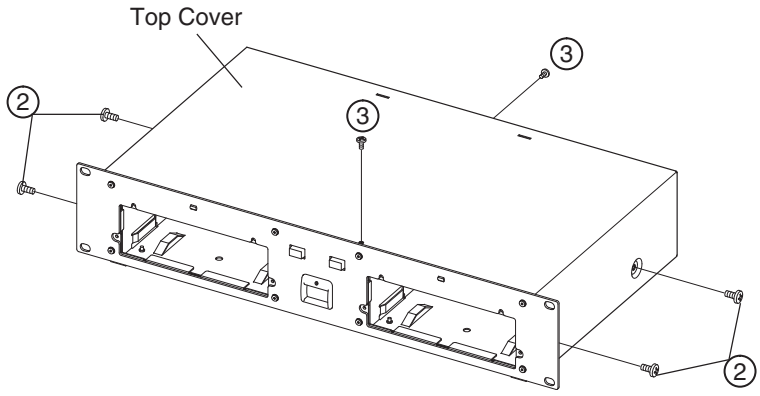
Note:

- Pull at a straight angle to avoid Flat Cable damage.
- Do not fail to pull AC cord from wall outlet before disconnect the Flat Cable and Connector. If AC cord is remained plugged into wall outlet, power is kept supplied in the unit, which may cause danger.



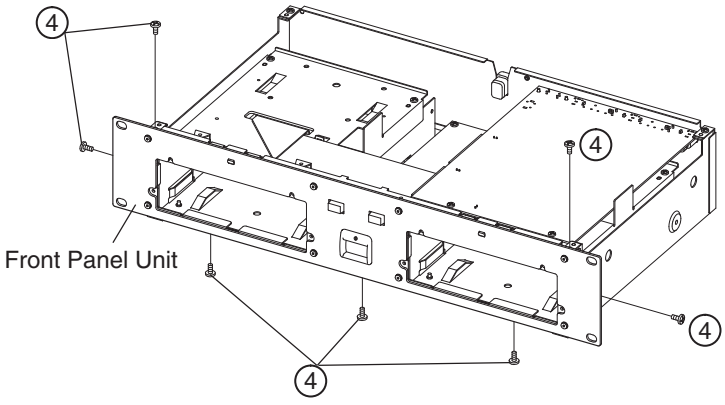
2. Top Cover

1) Remove 4 screws ② and 2 screws ③.
2) Detach Top Cover.



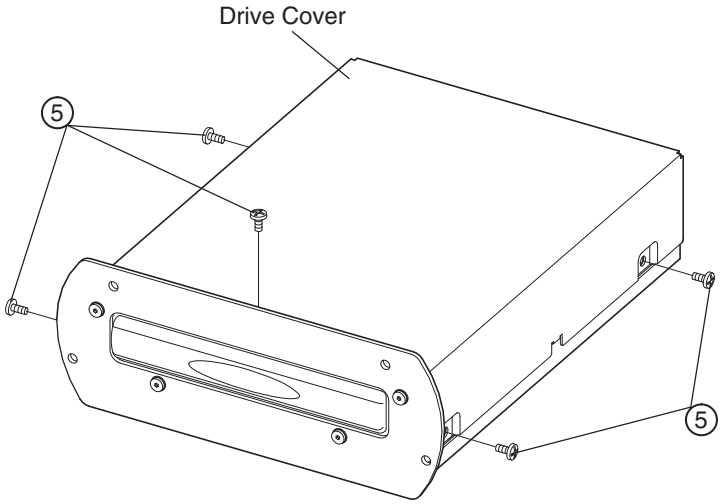
3. Front Panel Unit

1) Remove 7 screws ④ and pull out Front Panel Unit.



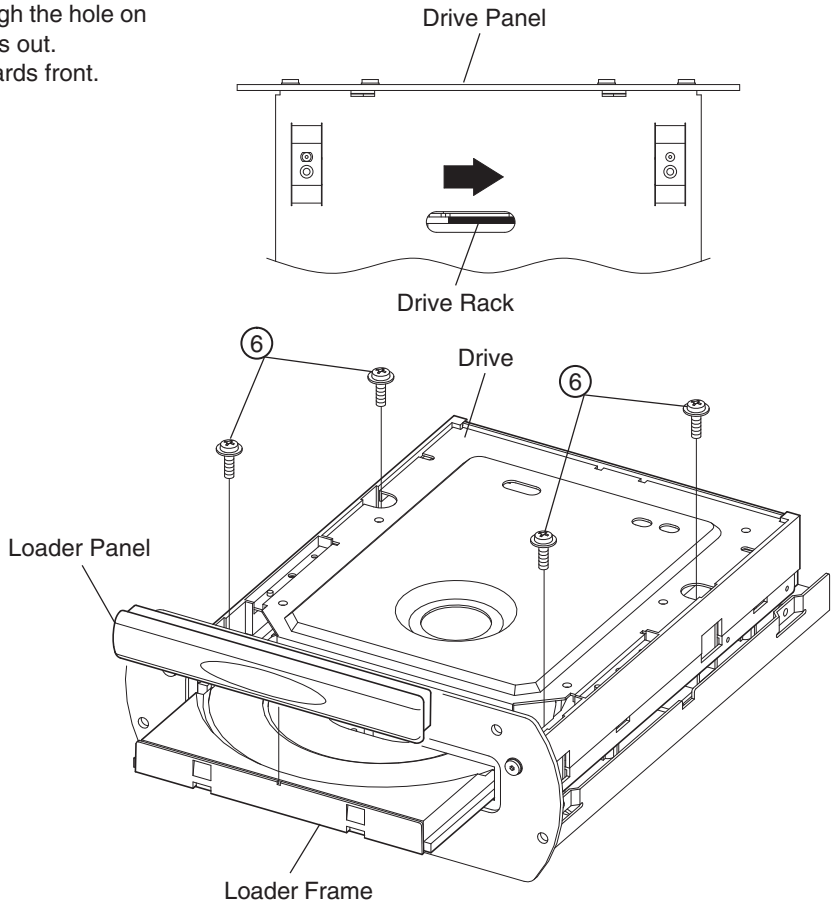
4. Drive Cover

1) Remove 5 screws ⑤ and pull out Drive Cover.



5. Drive

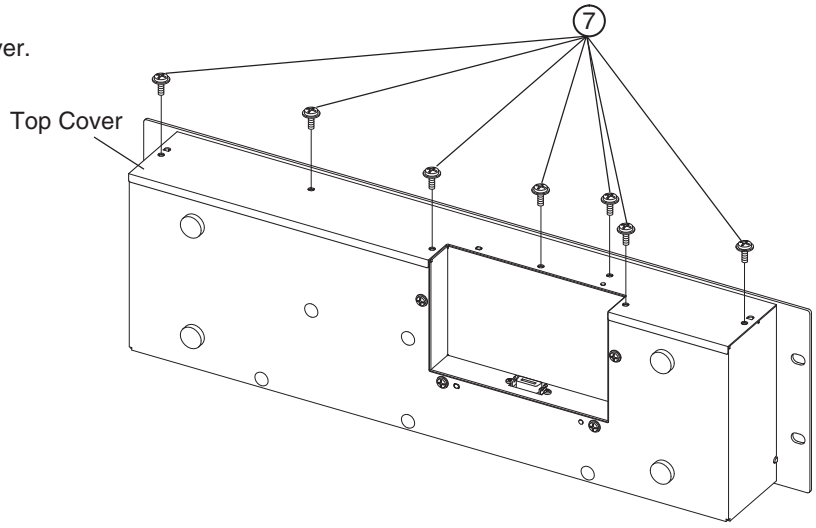
1) Move Drive Rack in arrow direction through the hole on the bottom chassis. Loader Frame comes out.
2) Pull up Loader Panel while pulling it towards front.
3) Remove 4 screws ⑥ and pull out Drive.



Remote Control Unit

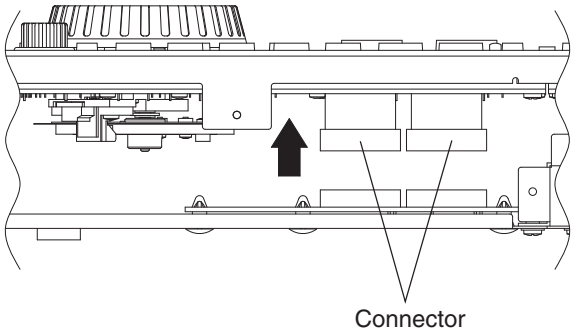
1. Top Cover

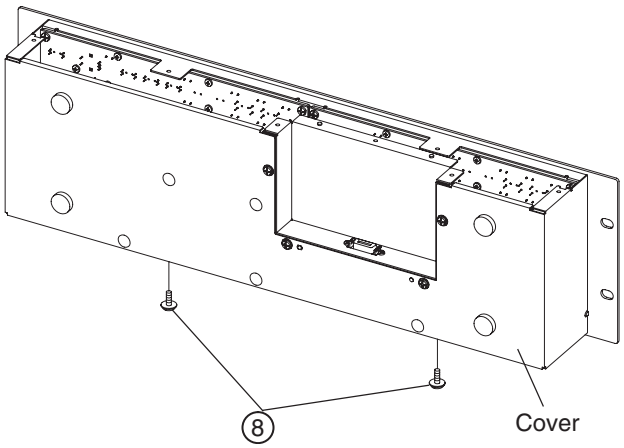
1) Remove 7 screws ⑦ and pull out Top Cover.



2. Cover

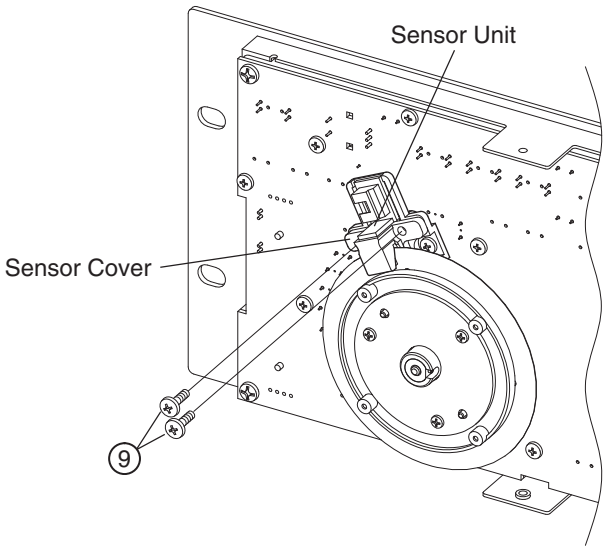
1) Disconnect Connector.
2) Remove 2 screws ⑧ and pull out Cover.





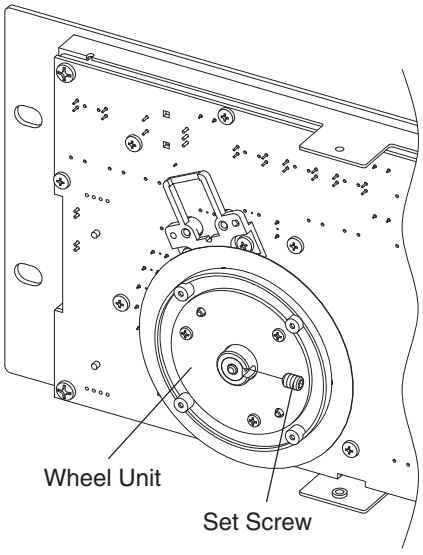
3. Sensor Unit

1) Remove 2 screws ⑨ and pull out Sensor Cover.
2) Detach Sensor Unit.



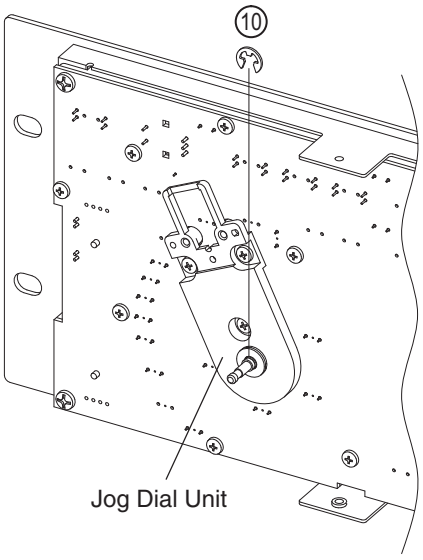
4. Wheel Unit

1) Remove Set Screw and pull out Wheel Unit.



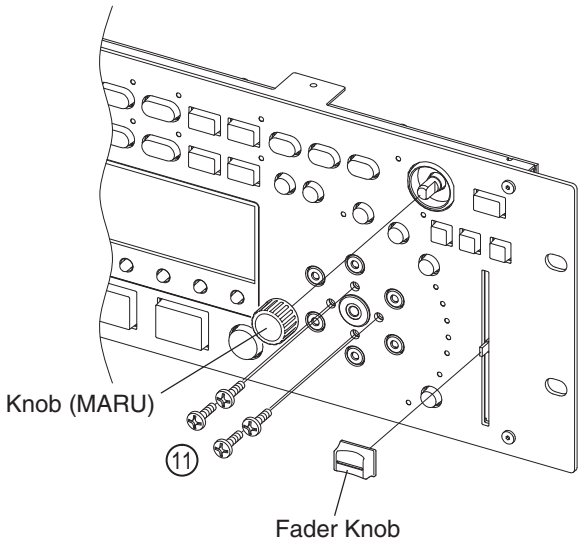
5. Jog Dial Unit

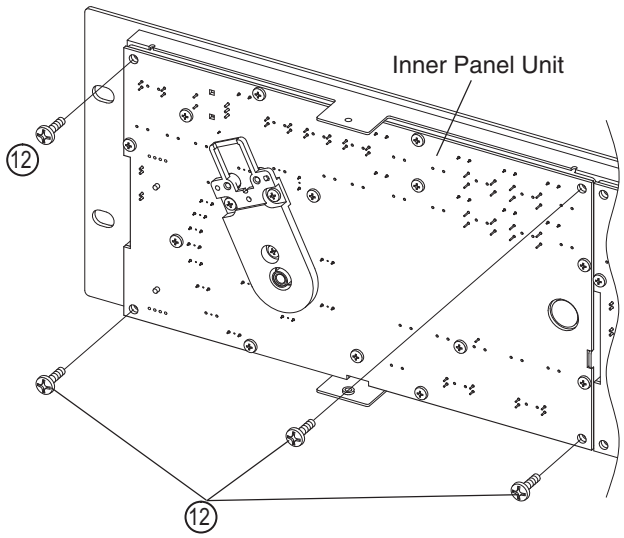
1) Remove a E ring ⑩ and pull out Jog Dial Unit.



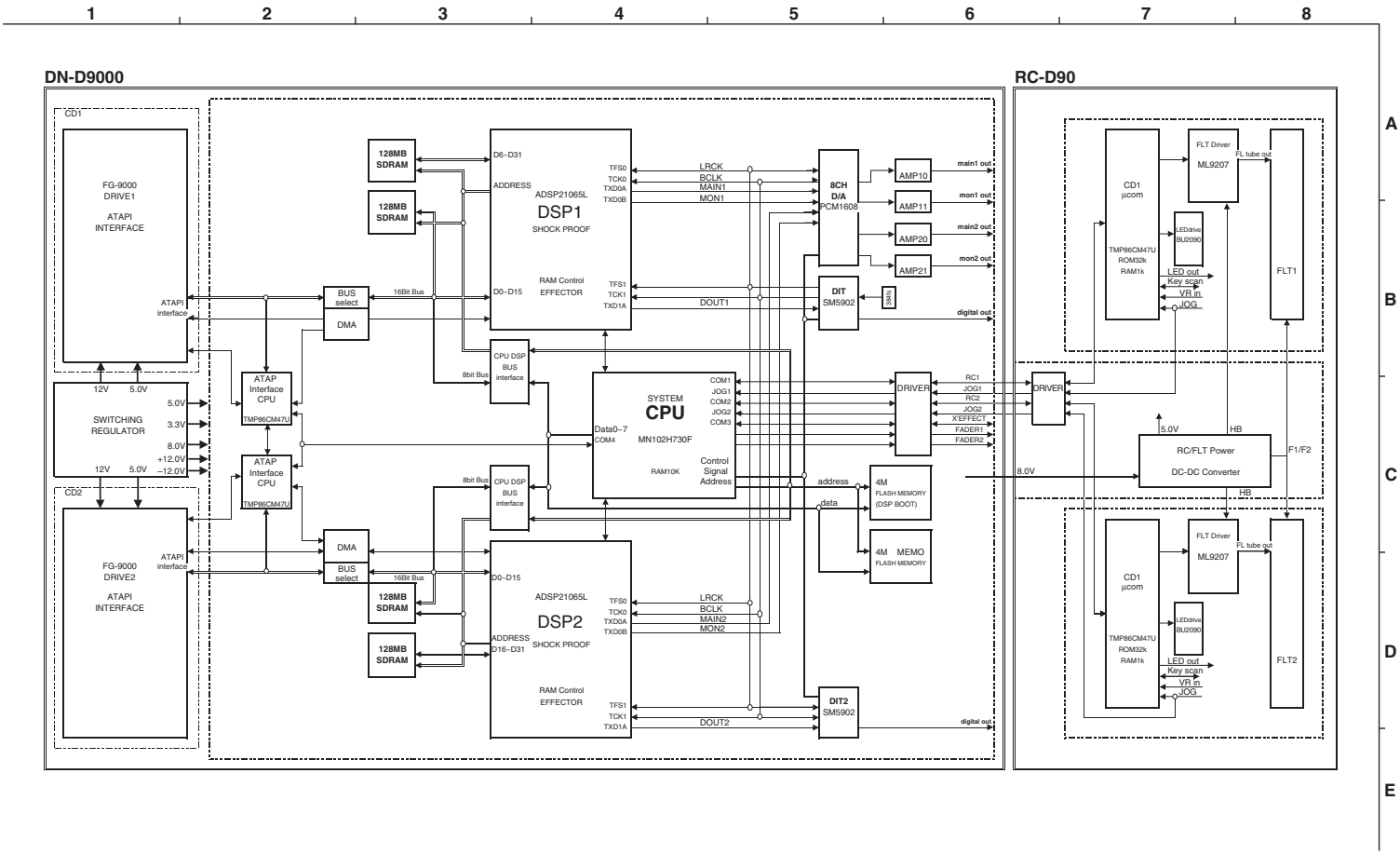
6. Inner Panel Unit

1) Remove 4 screws ⑪ and pull out Knob (MARU) and Fader Knob.
2) Remove 4 screws ⑫ and pull out Inner Panel Unit.





BLOCK DIAGRAM



CONFIRMING THE SERVO

Required Measuring Implement

1. Reference disc (TCD784 or CO-74176)

1. What is Service Program

Service program is a special program intended for confirming servo functions etc.

2. Contents of Service Program

Switch on the power while pushing the CD1's PITCH BEND + button and CD2's α CUE button at the same time. After actuating the servo program, select an aiming process number with the SELECT knob, A1 button, A2 button, or A3 button. Press the SELECT knob to execute the selected process, the process number is then displayed on the track indicator of the display. To exit from the service program, just switch off the power.

	Process No. (TRACK Indication)	Function (Character-display)	Contents
SELECT knob	01	μcom Version check (Version No.)	Check Version with JOG dial. 1. System μcom version No.: "Sys_XXXX" 2. DSP soft version No.: "Dsp_XXXX" 3. ATAPI μcom version No.: "Atapi_XXXX" 4. RC μcom version No.: "Rc_XXXX" 5. ROM drive mecha. μcom version No.: "Drive_XXXX"
	02	OPEN/CLOSE (Open Close)	Performs open/close each time when the SELECT knob is pushed.
	03	Drive Diagnostic (Drive_Diag)	ROM drive performs operation check when the SELECT knob is pushed, and indicates the operational result. If the disc holder open, it starts the operation check after closing. It indicates "Normal_End" if it ends normal. In case of error, ROM drive error code is displayed in the character's lower portion as "E****".
	04	Drive Data Read (Data Read)	Starts continuous playback at its maximum reading speed from the beginning of disc when the SELECT knob is pushed. It halts reading and stops if the knob is pushed again.
	05	Error Code Check (Error Data)	Turn the JOG dial to display the logging error codes in the occurred order. ("Error Data" is displayed.) 10 error logs are memorized at maximum. Kinds of Error Code, displayed Error Code Table (Appears only at Heat Run and Chucking Test function) Pressing SELECT knob enters to data erase mode. ("Err Clear?" is displayed.) If the SELECT knob is pushed again, the memorized error data are cleared.
	06	Total Running Time (Total_Time)	Total time span of servo function that counted by the hour is displayed. ("Total Time" is displayed.) The display time is less than 65535 hours. Note: No time is counted if powered down within 59 minutes. Pressing SELECT knob enters to data erase mode. ("Time Clear?" is displayed.) If the SELECT knob is pushed again, the memorized time data are cleared.
	07	Automatic Servo Adjustment call	Starts automatic servo adjustment when the SELECT knob is pushed, and after completing the adjustment, sort of the used disc is indicated. Data is selectable with the JOG dial. 1. Disc check, CD/CD-RW 2. Focus gain data 3. Focus balance data 4. Focus offset data 5. Tracking gain data 6. Tracking balance data 7. Tracking offset data 8. PreAMP Tracking Sensor Gain 9. DSP Tracking Sensor Gain 10. PI offset

	Adjustment Item	Adjustment Value indication at character portions.
1	**Focus Gain**	35 ~ 120
2	**Focus Balance**	–20 ~ +20
3	**Focus Offset**	–20 ~ +20
4	**Tracking Gain**	35 ~ 120
5	**Tracking Balance**	–20 ~ +20
6	**Tracking Offset**	–20 ~ +20

*** Reference data.**

3. TEST MODE

	Process No. (TRACK Indication)	Function (Character-display)	Contents
A1 button	–	Heat Run (H/R1_Normal)	Starting with the PLAY/PAUSE button, it repeats open/close of the tray and playback. All tracks are played back if the track count is less than 20. Only the first and last tracks are played back if the tracks are more than 21. When any errors, it stops and indicates error code (see Error Code Table).
A2 button	–	Chucking Test (H/R2_Tray)	Starting with the PLAY/PAUSE button, it repeats open/close of the tray, servo on, and TOC read. The display shows the number of the tray operation. When any errors, it stops and indicates error code (see Error Code Table).
A3 button	–	System check (Sys._Check)	It starts system check when the PLAY/PAUSE button is pushed, and indicates the status by performing plain operational check in the system . 1. Communication judge between the system μcom and DSP 2. DSP SDRAM write/read operation check 3. Communication judge between the system μcom and ATAPI μcom 4. Communication judge between the ATAPI μcom and ROM drive 5. ROM drive operation check 6. D/A register write/read operation check 7. DIT register write/read operation check After finishing the check, it indicates the result on the character display lower portion. When the 1. ~ 7. items are OK, their item numbers are indicated. But if there is a NG item, its item number is not indicated.

4. Error Code Table (Appears only at Heat Run and Chucking Test function)

Error Code	Contents
	Automatic Adjustment Error
E1 00	Unable to detect disc
E1 01	Unable to adjust tracking offset
E1 03	Unable to adjust focus fine gain
E1 04	Unable to actuate focus
E1 05	Unable to actuate tracking
E1 06	Unable to adjust tracking fine gain
E2 02	Servo down during automatic adjustment
E3 00	Unable to read TOC
E4 00	Unable to close the disc holder in the regular time
E4 01	Unable to open the disc holder in the regular time
E5 00	Slide error

Detailed error can be displayed by JOG dial when error occurs.

Error Indication				
TR	MIN	SEC	FRAM	CHARACTER
Displays the track No. in which error occurred.	Displays the time at which error occurred.			"H ∗∗∗∗ E ∗∗∗" (Operation count / Error code)

5. System µcom and DSP Version Upgrade

System µcom and DSP can be upgraded in the following manner.

Version Upgrade Method

1. Record the version upgrade software on a CD-R or CD-RW disc, only as one file with the format ISO9660 Mode-1. The file name of the supplied version upgrade software should be used as is and this disc needs to finalize.
2. After loading the disc made in above step 1 into CD1, turn off the power. Then, turn on the power while pressing the OPEN/CLOSE button of CD1. The version upgrade starts with reading data of the disc. No disc should be loaded into CD2.
3. TRAY LED of both CD1 and CD2 will turn on when the version upgrade starts, and they will turn off when the version upgrade ends.
   - TRAY LED of both CD1 and CD2 will blink if the version upgrade ends abnormally due to error etc.
   - In case of some error or the power is turned off during the version upgrade, it may be impossible to operate at all thereafter. Changing of IC502 on GU-3412 is necessary in this case, and software writing to IC502 should be done beforehand.
4. Turn off the power after finishing the version upgrade, and turn on again to take out the disc.
5. File name of the upgrade software indicates version numbers.

File name D9 ∗∗∗ ∗∗∗ . BIN
(∗∗∗: System µcom version; ∗∗∗: DSP version)

6. ROM Drive (FG-9000) µcom Version Upgrade

Drive (FG-9000) µcom can be upgraded in the following manner.

Version Upgrade Method

1. Record the version upgrade software on a CD-R or CD-RW disc, only as one file with the format ISO9660 Mode-1. The file name of the supplied version upgrade software should be used as is and this disc needs to finalize.
2. After turning on the power, load the disc made in above step 1 into the mecha. you want to upgrade the version.
3. "Drive" and "Version UP?" are indicated in the character display. Press the OPEN/CLOSE button and remove the disc when not upgrade the version.
4. Press the PLAY/PAUSE to start the version upgrade. "Now Loading" is indicated.
5. When the version upgrade is finished, "Complete" is indicated and the tray opens.
6. Turn off the power once and turn on again after take out the disc.

- The version upgrade ends in 20~30 seconds normally. If the power turned off underway or the version upgrade ends abnormally, the drive may become malfunction. In such a case, version upgrade with PC will be needed.

7. File name of the upgrade software indicates version number.

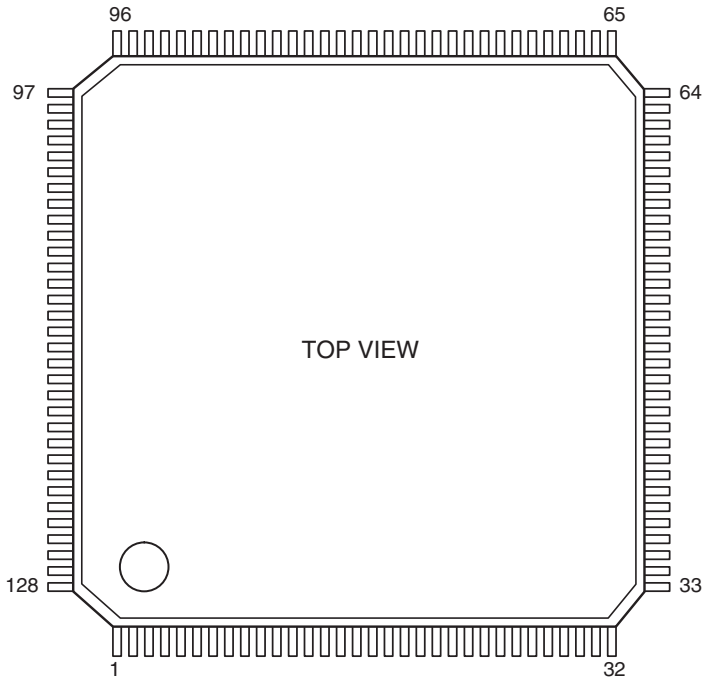
File name FG9K ∗∗∗∗ . BIN
(∗∗∗∗: Version number)

SEMICONDUCTORS

● IC's

Note: Indication before IC Numbers denotes P.W.B. name.
FG : CD-ROM P.W.B. Unit
DS : DSP P.W.B. Unit
PO : Power P.W.B. Unit
RC : Remote P.W.B. Unit

MN102H730F (DS: IC501)



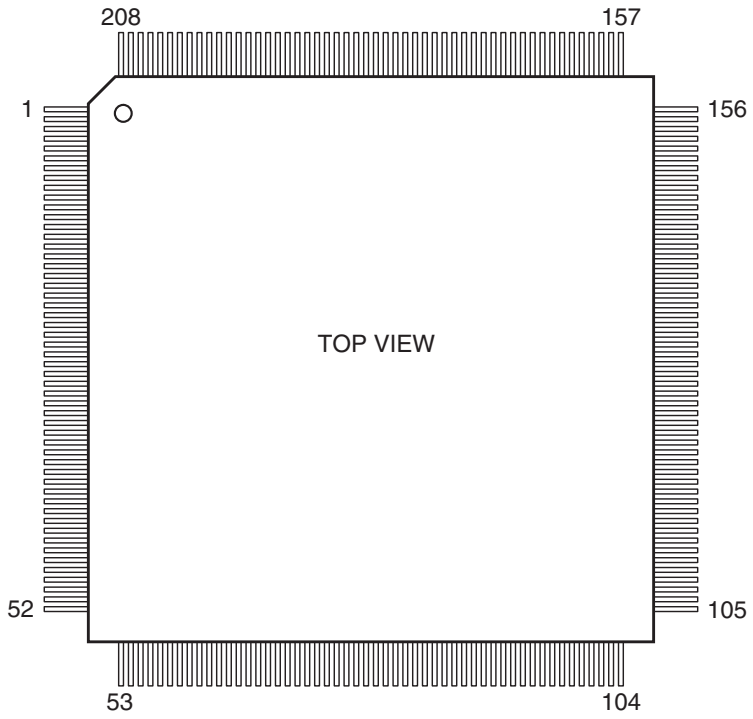
MN102H730F Terminal Function

Pin No.	Pin Name	Symbol	I/O	DET	Ext	Ini	Res	Function
1	CS0_	CS0_	O	—	Pu	—	—	Ext. memory chip select 0 (Flash ROM CS)
2	CS1_	CS1_	O	—	Pu	—	—	Ext. memory chip select 1 (Flash ROM for memo)
3	D00	DQ0	I/O	—	—	—	—	Ext. memory data in/output 0, DSP interface 0
4	D01	DQ1	I/O	—	—	—	—	Ext. memory data in/output 1, DSP interface 1
5	D02	DQ2	I/O	—	—	—	—	Ext. memory data in/output 2, DSP interface 2
6	D03	DQ3	I/O	—	—	—	—	Ext. memory data in/output 3, DSP interface 3
7	VDD	VDD	—	—	—	—	—	Power (+3.3V)
8	VSS	VSS	—	—	—	—	—	GND
9	D04	DQ4	I/O	—	—	—	—	Ext. memory data in/output 4, DSP interface 4
10	D05	DQ5	I/O	—	—	—	—	Ext. memory data in/output 5, DSP interface 5
11	D06	DQ6	I/O	—	—	—	—	Ext. memory data in/output 6, DSP interface 6
12	D07	DQ7	I/O	—	—	—	—	Ext. memory data in/output 7, DSP interface 7
13	D08,P10	KEYIN2	I	—	Pu	H	H	OPEN/CLOSE2 key input
14	D09,P11	KEYIN1	I	—	Pu	H	H	OPEN/CLOSE1 key input
15	D10,P12	FPLAY1	I	—	Pu	H	H	CD1 fader start PLAY input
16	PD0,DMAACK1_	FCUE1	I	—	Pu	H	H	CD1 fader start CUE input
17	PD1,DMAREQ1_	FPLAY2	I	—	Pu	H	H	CD2 fader start PLAY input
18	D11,P13	FCUE2	I	—	Pu	H	H	CD2 fader start CUE input
19	D12,P14	JOGA2	I	—	(Pu)	H	H	JOGA pulse input for CD2 scratch (Direction detect)
20	D13,P15	JOGB2	I	—	(Pu)	H	H	JOGB pulse input for CD2 scratch (Direction detect)
21	D14,P16	JOGA1	I	—	Pu	H	H	JOGA pulse input for CD1 scratch (Direction detect)
22	D15,P17	JOGB1	I	—	Pu	H	H	JOGB pulse input for CD1 scratch (Direction detect)
23	WORD	WORD	I	—		—		Data bus width select (H: 8bit), VDD fixed
24	VDD	VDD	—	—	—	—	—	Power (+3.3V)
25	MODE	MODE	I	—	—	L	L	Processor mode, GND fixed

Pin No.	Pin Name	Symbol	I/O	DET	Ext	Ini	Res	Function
26	PC3	MUTE	O	—	Pu	H	H	Mute signal (H: Mute)
27	XI	XI	I	—	—	—	—	Oscillation input
28	XO	XO	O	—	—	—	—	Oscillation output
29	VDD	VDD	—	—	—	—	—	Power (+3.3V)
30	OSCI	OSCI	I	—	—	—	—	Oscillation input, 32.0MHz
31	OSCO	OSCO	O	—	—	—	—	Oscillation output
32	VSS	VSS	—	—	—	—	—	GND
33	BOSC	32.0MHz	O	—	—	—	—	System clock output
34	PC5,NMI_	RESERVE	I	—	Pu	H	H	
35	RST_	RST_	I	—	—	—	—	µcom reset
36	PC0	LEDOUT1	O	—	Pu	H	H	TRAY1 LED
37	P76	LEDOUT2	O	—	Pu	H	H	TRAY2 LED
38	P60,IRQ0	JOGINT1	I	—	(Pu)	H	H	JOGA pulse input for CD1 scratch
39	P61,IRQ1	JOGINT2	I	—	(Pu)	H	H	JOGA pulse input for CD2 scratch
40	P62,IRQ2	DTIMA1	I	—	(Pu)	H	H	CD1 main playback clock input
41	P63,IRQ3	DTIMB1	I	—	Pu	H	H	CD1 monitor playback clock input
42	P64,IRQ4	ATANS_	I	—	Pu	—	H	ATAPI µcom serial interface
43	P65,IRQ5	DTIMA2	I	—	Pu	H	H	CD2 main playback clock input
44	P66,IRQ6	DTIMB2	I	—	Pu	H	H	CD2 monitor playback clock input
45	P67,IRQ7	RESERVE	O	—	—	H	—	
46	P70	YMCLK	O	—	—	H	—	Clock for SM5902(DOUT)/PCM1608(D/A) data
47	P71	YMDATA	O	—	—	H	—	SM5902(DOUT)/PCM1608(D/A) output data
48	PD2,DMAACK0_	NRES_	O	—	Pd	L	L	SM5902(DOUT)/PCM1608(D/A) reset signal
49	PD3,DMAREQ0_	ZSENCE1	I	—	—	—	—	SM5902 µcom interface status for CD1
50	VDD	VDD	—	—	—	—	—	Power (+3.3V)
51	P77	ZSENCE2	I	—	—	—	—	SM5902 µcom interface status for CD2
52	P72	MDO	I	—	Pd	—	L	PCM1608(D/A) input data
53	P73	YMLD1_	O	—	—	H	—	SM5902(DOUT) chip select for CD1
54	P74	YMLD2	O	—	—	H	—	SM5902(DOUT) chip select for CD2
55	P75	ML	O	—	—	H	—	PCM1608(D/A) chip select
56	PA0,SBI0	RXD1	I	—	(Pu)	—	H	Data receive from RC CD1
57	PA1,SBO0	TXD1	O	—	Pu	H	H	Data send to RC CD1 (PU µcom specify)
58	PA2,SBT0	MCMD_	O	—	Pu	H	H	ATAPI µcom serial interface (PU µcom specify)
59	PA3,SBI1	RXD2	I	—	(Pu)	—	H	Data receive from RC CD2
60	PA4,SBO1	TXD2	O	—	Pu	H	H	Data send to RC CD2
61	PA5	ATDIR	O	—	—	H	—	Not used
62	PB0,SBI2	X'RXD	I	—	(Pu)	—	H	Data receive from X'EFFECT
63	PB1,SBO2	X'TXD	O	—	Pu	H	H	Data send to X'EFFECT
64	PB2	APRES_	O	—	Pd	L	L	ATAPI µcom reset signal (CD1, CD2 common)
65	PB3,SBI3	ATDATA	I	—	Pu	—	H	ATAPI µcom serial receive signal
66	PB4,SBO3	MDATA	O	—	Pu	H	H	ATAPI µcom serial send signal
67	PB5,SBT3	MCLK	O	—	Pd	H	L	ATAPI µcom serial send/receive clock
68	VDD	VDD	—	—	—	—	—	Power (+3.3V)
69	VSS	VSS	—	—	—	—	—	GND
70	AVSS	AVSS	—	—	—	—	—	Analog ref. GND for A/D conversion, GND
71	Vref–	Vref–	—	—	—	—	—	Analog ref. V for A/D conversion, GND
72	P80	DFLG12	I/O	—	Pu	—	H	DSP1 general flag 2
73	P81	DFLG11	I/O	—	Pu	—	H	DSP1 general flag 1
74	P82	DR_/W1	O	—	—	H	—	DSP1 interface send/receive select signal
75	P83	DACK1_	I	—	Pu	H	H	DSP1 interface ACK
76	P84	DBSY1_	I	—	Pu	H	H	DSP1 interface busy signal
77	P85	DFLG10	I/O	—	Pu	—	H	DSP1 general flag 0
78	P86	DREQ1_	O	—	(Pu)	H	H	DSP1 interface request signal
79	P87	DR_/W2	O	—	—	H	—	DSP2 interface send/receive select signal
80	PD4	DACK2_	I	—	Pu	H	H	DSP2 interface ACK
81	PD5	DBSY2_	I	—	Pu	H	H	DSP2 interface busy signal
82	P90	DFLG20	I/O	—	Pu	—	H	DSP2 general flag 0
83	P91	DREQ2_	O	—	(Pu)	H	H	DSP2 interface request signal
84	P92	DFLG21	I/O	—	Pu	—	H	DSP2 general flag 1
85	P93	DFLG22	I/O	—	Pu	—	H	DSP2 general flag 2
86	Vref+	Vref+	—	—	—	—	—	Analog ref. V for A/D conversion, +3.3V
87	AVDD	AVDD	—	—	—	—	—	Power (+3.3V)

Pin No.	Pin Name	Symbol	I/O	DET	Ext	Ini	Res	Function
88	P94	RCRST_	O	—	Pd	L	L	RCD90 reset signal (L: Reset)
89	P95	APOWER	O	—	Pd	L	L	Analog output voltage ON/OFF (L: OFF)
90	P96	RESERVE	O	—	—	H	—	
91	P97	RESERVE	O	—	—	H	—	
92	BREQ_	BREQ_	I	—	Pu	H	H	Bus request signal
93	BRACK_	BRACK_	O	—	Pu	H	H	Bus request accept signal
94	WEL_	WE_	O	—	Pu	—	H	Ext. memory write enable (Lower 8bit)
95	P51	RESERVE	O	—	—	H	—	
96	RE_	RE_	O	—	Pu	—	H	Ext. memory read enable
97	CS2_	CS2_	O	—	Pu	—	H	Ext. memory chip select 2 (DSP1 interface)
98	VDD	VDD	—	—	—	—	—	Power (+3.3V)
99	VSS	VSS	—	—	—	—	—	GND
100	P54, BSTRE	SAMPC1	O	—	Pu	H	H	Not used
101	P55, WR_	SAMPC2	O	—	Pu	H	H	Not used
102	CS3_	CS3_	O	—	Pu	—	H	Ext. memory chip select 3 (DSP2 interface)
103	A00	A00	O	—	—	—	—	Ext. memory address bus 0
104	A01	A01	O	—	—	—	—	Ext. memory address bus 1
105	A02	A02	O	—	—	—	—	Ext. memory address bus 2
106	A03	A03	O	—	—	—	—	Ext. memory address bus 3
107	A04	A04	O	—	—	—	—	Ext. memory address bus 4
108	A05	A05	O	—	—	—	—	Ext. memory address bus 5
109	A06	A06	O	—	—	—	—	Ext. memory address bus 6
110	A07	A07	O	—	—	—	—	Ext. memory address bus 7
111	A08	A08	O	—	—	—	—	Ext. memory address bus 8
112	PD6	RESERVE	O	—	—	L	—	
113	PD7	RESERVE	O	—	—	L	—	
114	A09	A09	I	—	—	—	—	Ext. memory address bus 9
115	A10	A10	I	—	—	—	—	Ext. memory address bus 10
116	A11	A11	O	—	—	—	—	Ext. memory address bus 11
117	A12	A12	O	—	—	—	—	Ext. memory address bus 12
118	A13	A13	O	—	—	—	—	Ext. memory address bus 13
119	VDD	VDD	—	—	—	—	—	Power (+3.3V)
120	PC4	RESERVE	O	—	—	L	—	
121	A14	A14	O	—	—	—	—	Ext. memory address bus 14
122	A15	A15	O	—	—	—	—	Ext. memory address bus 15
123	A16	A16	O	—	—	—	—	Ext. memory address bus 16
124	A17	A17	O	—	Pu	—	—	Ext. memory address bus 17
125	A18	A18	O	—	Pu	—	—	Ext. memory address bus 18
126	A19	A19	O	—	Pu	—	—	Ext. memory address bus 19
127	A20	A20	O	—	Pu	—	—	Ext. memory address bus 20
128	A21	A21	O	—	Pu	—	—	Ext. memory address bus 21

ADSP-21065L (DS: IC301, 401)



ADSP-21065L Terminal Function

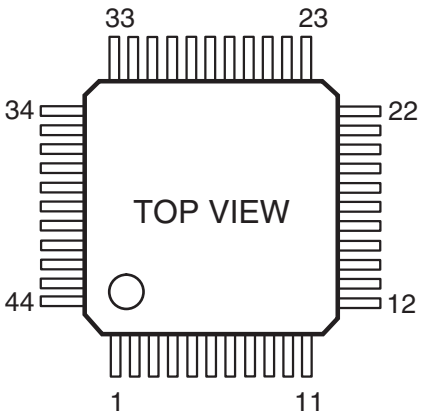
Pin No.	Port Name	Symbol (IC301)	Symbol (IC401)	I/O	DET	Ext	Ini	Res	Function
1	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
2	RFS0	YLRCK	YLRCK	I	—	IPu	—	H	Receive frame sync (LRCK) signal (Serial port IN 0)
3	GND	GND	GND	—	—	—	—	—	GND
4	RCLK0	YBCK	YBCK	I	—	—	—	—	Receive frame sync (BCK) signal (Serial port IN 0)
5	DR0A	ADDATA	ADDATA	I	—	IPu	—	H	Data receive A (serial port IN 0)
6	DR0B			I	—	IPu	—	H	Data receive B (serial port IN 0)
7	TFS0	YLRCK	YLRCK	I	—	IPu	—	H	Send frame sync (LRCK) signal (Serial port OUT 0)
8	TCLK0	YBCK	YBCK	I	—	—	—	—	Send frame sync (BCK) signal (Serial port OUT 0)
9	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
10	GND	GND	GND	—	—	—	—	—	GND
11	DT0A	MOUT1	MOUT2	O	—	IPu	—	H	Data send A (Serial port OUT 0)
12	DTOB	DOUT1	DOUT2	O	—	IPu	—	H	Data send B (Serial port OUT 0)
13	RFS1	LRCK1	LRCK2	I	—	IPu	—	H	Receive frame sync (LRCK) signal (Serial port IN 1)
14	GND	GND	GND	—	—	—	—	—	GND
15	RCLK1	BCK1	BCK2	I	—	—	L	—	Receive frame sync (BCK) signal (Serial port IN 1)
16	DR1A	SAMP2	SAMP1	I	—	IPu	—	H	Data receive A (serial port IN 1)
17	DR1B			I	—	IPu	—	H	Data receive B (serial port IN 1)
18	TFS1	LRCK2	LRCK1	I/O	—	IPu	—	H	Send frame sync (LRCK) signal (Serial port OUT 1)
19	TCLK1	BCK2	BCK1	I/O	—	—	—	—	Send frame sync (BCK) signal (Serial port OUT 1)
20	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
21	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
22	DT1A	SOUT1	SOUT2	O	—	IPu	—	H	Data send A (Serial port OUT 1)
23	DT1B	SAMP1	SAMP2	O	—	IPu	—	H	Data send B (Serial port OUT 1)
24	PWM_EVENT1			I/O	—	Pd	—	L	PWM1 output
25	GND	GND	GND	—	—	—	—	—	GND
26	PWM_EVENT0			I/O	—	Pd	—	L	PWM0 output
27	BR1_			I	—	Pu	—	H	Multi-processing bus request 1
28	BR2_			I	—	Pu	—	H	Multi-processing bus request 1
29	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
30	CLKIN			I	—	—	—	—	Clock input
31	XTAL_			O	—	—	—	—	X'tal oscillator pin
32	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)

Pin No.	Port Name	Symbol (IC301)	Symbol (IC401)	I/O	DET	Ext	Ini	Res	Function
33	GND	GND	GND	—	—	—	—	—	GND
34	SDCLK1			O	—	Pd	—	L	SDRAM clock enable 1
35	GND	GND	GND	—	—	—	—	—	GND
36	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
37	SDCLK0			I/O	—	—	—	—	SDRAM clock enable 0
38	DMAR1_			I	—	Pu	H	H	DMA request 1
39	DMAR2_			I	—	Pu	H	H	DMA request 2
40	HBR_			I	—	Pu	—	H	Host bus request (BOOT)
41	GND	GND	GND	—	—	—	—	—	GND
42	RAS_			I/O	—	Pu	H	H	SDRAM row access strobe
43	CAS_			I/O	—	Pu	H	H	SDRAM column access strobe
44	SDWE_			I/O	—	Pu	H	H	SDRAM write enable
45	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
46	DQM			O	—	—	—	—	SDRAM data mask
47	SDCKE			I/O	—	—	H	—	SDRAM clock enable
48	SDA10			O	—	Pd	L	L	SDRAM A10
49	GND	GND	GND	—	—	—	—	—	GND
50	DMAG1_			O	—	—	H	—	DMA ground 1
51	DMAG2_			O	—	—	H	—	DMA ground 2
52	HBG_			O	—	—	H	—	Host bus ground (BOOT)
53	BMSTR			O	—	—	H	—	Bus master output (H out)
54	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
55	CS_			I	—	—	L	L	Chip select (BOOT)
56	SBTS_			I	—	Pu	H	H	Extend bus three state
57	GND	GND	GND	—	—	—	—	—	GND
58	WR_			I/O	—	—	—	—	Memory write strobe
59	RD_			I/O	—	—	—	—	Memory read strobe
60	GND	GND	GND	—	—	—	—	—	GND
61	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
62	GND	GND	GND	—	—	—	—	—	GND
63	REDY			O	—	—	—	—	Host bus ACK
64	SW_			I/O	—	—	—	—	Sync type write select
65	CPA_			I/O	—	—	—	—	Core priority access
66	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
67	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
68	GND	GND	GND	—	—	—	—	—	GND
69	ACK			I/O	—	—	—	—	Memory ACK
70	MS0_			I/O	—	Pu	H	H	Memory select 0
71	MS1_			I/O	—	—	—	—	Memory select 1
72	GND	GND	GND	—	—	—	—	—	GND
73	GND	GND	GND	—	—	—	—	—	GND
74	MS2_			I/O	—	—	—	—	Memory select 2
75	MS3_			I/O	—	—	—	—	Memory select 3
76	FLAG11	DMABSY1	DMABSY2	O	—	Pu	—	H	General flag 11 (In DMA flag L: DMA)
77	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
78	FLAG10	SAMPCOP	SAMPCOPY	I/O	—	Pu	—	H	General flag 10 (In SAMPLER copy flag)
79	FLAG9	JOGB1	JOGB2	I	—	—	—	—	General flag 9 (JOG turning direction detect signal B)
80	FLAG8	JOGA1	JOGA2	I	—	—	—	—	General flag 8 (JOG turning direction detect signal A)
81	GND	GND	GND	—	—	—	—	—	GND
82	DATA0			I/O	—	—	—	—	Ext. bus data 0
83	DATA1			I/O	—	—	—	—	Ext. bus data 1
84	DATA2			I/O	—	—	—	—	Ext. bus data 2
85	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
86	DATA3			I/O	—	—	—	—	Ext. bus data 3
87	DATA4			I/O	—	—	—	—	Ext. bus data 4
88	DATA5			I/O	—	—	—	—	Ext. bus data 5
89	GND	GND	GND	—	—	—	—	—	GND
90	DATA6			I/O	—	—	—	—	Ext. bus data 6
91	DATA7			I/O	—	—	—	—	Ext. bus data 7
92	DATA8			I/O	—	—	—	—	Ext. bus data 8
93	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
94	GND	GND	GND	—	—	—	—	—	GND

Pin No.	Port Name	Symbol (IC301)	Symbol (IC401)	I/O	DET	Ext	Ini	Res	Function
95	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
96	DATA9			I/O	—	—	—	—	Ext. bus data 9
97	DATA10			I/O	—	—	—	—	Ext. bus data 10
98	DATA11			I/O	—	—	—	—	Ext. bus data 11
99	GND	GND	GND	—	—	—	—	—	GND
100	DATA12			I/O	—	—	—	—	Ext. bus data 12
101	DATA13			I/O	—	—	—	—	Ext. bus data 13
102	NC			—	—	—	—	—	NC
103	NC			—	—	—	—	—	NC
104	DATA14			I/O	—	—	—	—	Ext. bus data 14
105	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
106	GND	GND	GND	—	—	—	—	—	GND
107	DATA15			I/O	—	—	—	—	Ext. bus data 15
108	DATA16			I/O	—	—	—	—	Ext. bus data 16
109	DATA17			I/O	—	—	—	—	Ext. bus data 17
110	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
111	DATA18			I/O	—	—	—	—	Ext. bus data 18
112	DATA19			I/O	—	—	—	—	Ext. bus data 19
113	DATA20			I/O	—	—	—	—	Ext. bus data 20
114	GND	GND	GND	—	—	—	—	—	GND
115	NC			—	—	—	—	—	NC
116	DATA21			I/O	—	—	—	—	Ext. bus data 21
117	DATA22			I/O	—	—	—	—	Ext. bus data 22
118	DATA23			I/O	—	—	—	—	Ext. bus data 23
119	GND	GND	GND	—	—	—	—	—	GND
120	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
121	DATA24			I/O	—	—	—	—	Ext. bus data 24
122	DATA25			I/O	—	—	—	—	Ext. bus data 25
123	DATA26			I/O	—	—	—	—	Ext. bus data 26
124	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
125	GND	GND	GND	—	—	—	—	—	GND
126	DATA27			I/O	—	—	—	—	Ext. bus data 27
127	DATA28			I/O	—	—	—	—	Ext. bus data 28
128	DATA29			I/O	—	—	—	—	Ext. bus data 29
129	GND	GND	GND	—	—	—	—	—	GND
130	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
131	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
132	DATA30			I/O	—	—	—	—	Ext. bus data 30
133	DATA31			I/O	—	—	—	—	Ext. bus data 31
134	FLAG7	DFLG12	DFLG22	I/O	—	Pu	—	H	General flag 7 (RESERVE)
135	GND	GND	GND	—	—	—	—	—	GND
136	FLAG6	DFLG11	DFLG21	I/O	—	Pu	—	H	General flag 6 (RESERVE)
137	FLAG5	DTIMB1	DTIMB2	O	—	—	—	—	General flag 5 (Pulse output for generating monitor play time)
138	FLAG4	DTIMA1	DTIMA2	O	—	—	—	—	General flag 4 (Pulse output for generating main play time)
139	GND	GND	GND	—	—	—	—	—	GND
140	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
141	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
142	NC			—	—	—	—	—	NC
143	ID1			I	—	—	L	L	Multi-processing ID1 (Single processor: 0)
144	ID0			I	—	—	L	L	Multi-processing ID2 (Single processor: 0)
145	EMU_	EMU1_	EMU2_	O	—	—	—	—	Emulation status
146	TD0	TD01	TD02	O	—	—	—	—	Test data output (JTAG)
147	TRST_	TRST1_	TRST2_	I	—	IPu	—	H	Test reset (JTAG)
148	TDI	TDI1	TDI2	I	—	Pd	—	L	Test data input (JTAG)
149	TMS	TMS1	TMS2	I	—	IPu	—	H	Test mode select (JTAG)
150	GND	GND	GND	—	—	—	—	—	GND
151	TCK	TCK1	TCK2	I	—	Pu	—	H	Test clock (JTAG)
152	BSEL			I	—	—	H	H	EPROM boot select (Boot by EPROM: 1)
153	BMS_	BMS1_	BMS2_	I	—	—	H	H	Boot memory select (Host processor boot: 1)
154	GND	GND	GND	—	—	—	—	—	GND
155	GND	GND	GND	—	—	—	—	—	GND
156	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)

Pin No.	Port Name	Symbol (IC301)	Symbol (IC401)	I/O	DET	Ext	Ini	Res	Function
157	RESET_	DRES_	DRES_	I	—	—	H	L	DSP reset signal
158	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
159	GND	GND	GND	—	—	—	—	—	GND
160	ADDR23			I/O	—	—	—	—	Ext. bus address 23
161	ADDR22			I/O	—	—	—	—	Ext. bus address 22
162	ADDR21			I/O	—	—	—	—	Ext. bus address 21
163	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
164	ADDR20			I/O	—	—	—	—	Ext. bus address 20
165	ADDR19			I/O	—	—	—	—	Ext. bus address 19
166	ADDR18			I/O	—	—	—	—	Ext. bus address 18
167	GND	GND	GND	—	—	—	—	—	GND
168	GND	GND	GND	—	—	—	—	—	GND
169	ADDR17			I/O	—	—	—	—	Ext. bus address 17
170	ADDR16			I/O	—	—	—	—	Ext. bus address 16
171	ADDR15			I/O	—	—	—	—	Ext. bus address 15
172	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
173	ADDR14			I/O	—	—	—	—	Ext. bus address 14
174	ADDR13			I/O	—	—	—	—	Ext. bus address 13
175	ADDR12			I/O	—	—	—	—	Ext. bus address 12
176	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
177	GND	GND	GND	—	—	—	—	—	GND
178	ADDR11			I/O	—	—	—	—	Ext. bus address 11
179	ADDR10			I/O	—	—	—	—	Ext. bus address 10 (SDRAM: Connects SDA10)
180	ADDR9			I/O	—	—	—	—	Ext. bus address 9
181	GND	GND	GND	—	—	—	—	—	GND
182	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
183	ADDR8			I/O	—	—	—	—	Ext. bus address 8
184	ADDR7			I/O	—	—	—	—	Ext. bus address 7
185	ADDR6			I/O	—	—	—	—	Ext. bus address 6
186	GND	GND	GND	—	—	—	—	—	GND
187	GND	GND	GND	—	—	—	—	—	GND
188	ADDR5			I/O	—	—	—	—	Ext. bus address 5
189	ADDR4			I/O	—	—	—	—	Ext. bus address 4
190	ADDR3			I/O	—	—	—	—	Ext. bus address 3
191	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
192	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
193	ADDR2			I/O	—	—	—	—	Ext. bus address 2
194	ADDR1			I/O	—	—	—	—	Ext. bus address 1
195	ADDR0			I/O	—	—	—	—	Ext. bus address 0
196	GND	GND	GND	—	—	—	—	—	GND
197	FLAG0	DR_/W1	DR_/W2	I/O	—	—	—	—	General flag 0 (Command read write select)
198	FLAG1	DACK1_	DACK2_	I/O	—	—	—	—	General flag 1
199	FLAG2	DBSY1	DBSY2	I/O	—	—	—	—	General flag 2
200	VDD	VDD	VDD	—	—	—	—	—	Power (+3.3V)
201	FLAG3	DFLG10	DFLG20	I/O	—	Pu	—	H	General flag 3 (RESERVE)
202	NC			—	—	—	—	—	—
203	NC			—	—	—	—	—	—
204	GND	GND	GND	—	—	—	—	—	GND
205	IRQ0_	DREQ1	DREQ2	I	—	Pu	—	H	Interrupt request input 0 (SYS mcom interface)
206	IRQ1_	DREQ1_	DREQ2_	I	—	Pu	—	L	Interrupt request input 1 (SYS mcom interface)
207	IRQ2_	JOGINT1	JOGINT2	I	—	—	—	—	Interrupt request input 2 (JOG turning speed detect signal)
208	NC			—	—	—	—	—	NC

TMP86CM47U (DS: IC101, 151)

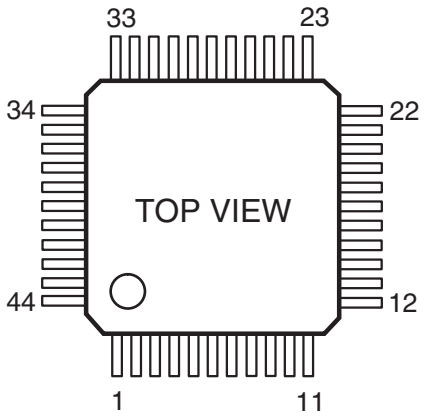


TMP86CM47U Terminal Function

Pin No.	Pin Name	Symbol	I/O	DET	Ext	Ini	Res	Function
1	VSS	VSS	—	—	—	—	—	GND (0V)
2	XIN	XIN	I	—	—	—	—	Oscillation input 8.0MHz
3	XOUT	XOUT	O	—	—	—	—	Oscillation output
4	TEST	TEST	I	—	—	—	—	Fixed to L
5	VDD	VDD	—	—	—	—	—	Power (+3.3V)
6	P21(LED)	DVSEL	O	—	Pu	L	H	Not used
7	P22	BREQ1_	O	—	Pu	H	H	System µcom bus request
8	RESET_	RST_	I	—	—	—	—	µcom reset
9	P20	DRLCH	O	—	Pu	H	H	ATAPI data register latch signal, H: Latch
10	P00(INT0)	MCMD_	I	—	—	—	—	System µcom serial interface
11	P01	DMA	O	—	Pu	L	H	ATAPI DMA mode select (H: DMA)
12	P02	DMABSY1	I	—	Pu	—	H	In DMA flag (L: DMA data transfer)
13	P03	ATANS	O	—	Pu	H	H	System µcom serial interface
14	P04(SO)	ATDATA	O	—	Pu	H	H	System µcom serial data receive signal
15	P05(SI)	MDATA	I	—	—	—	—	System µcom serial data send signal
16	P06(SCK_)	MCLK	I	—	—	—	—	System µcom serial send/receive clock
17	P07(INT4/LED)	BSYIN_	I	—	—	—	H	TXD BUSY input
18	P17	BSYOUT_	O	—	Pu	H	H	TXD BUSY output signal (L: BUSY)
19	P16	DRES_	O	—	Pd	L	L	DSP reset (L: Reset)
20	P15	DMAR_/W	I/O	—	Pu/Pd	H	L/H	ATAPI DMA direction select (L: Read) *
21	P14	RD_	O	—	—	H	—	ATAPI read strobe
22	P13	WR_	O	—	—	H	—	ATAPI write strobe
23	P12(INT2)	INTRQ	I	Lv	—	—	—	ATAPI interrupt request signal
24	P11(INT1)	DMARQ	I	Lv	Pd	—	—	ATAPI DMA request signal (Pd with 5.6kW)
25	P10	IORDY	I	—	Pu	—	H	ATAPI data transfer cycle extend request signal (Pu with 1.0kW)
26	P30	D0	I/O	—	Pd	L	L	ATAPI data bus 0 (APRES_ATAPI reset)
27	P31	D1	I/O	—	—	—	—	ATAPI data bus 1 (CS1 device register chip select 1)
28	P32	D2	I/O	—	—	—	—	ATAPI data bus 2 (CS0 device register chip select 0)
29	P33	D3	I/O	—	—	—	—	ATAPI data bus 3 (DA2 device register select 2)
30	P34	D4	I/O	—	—	—	—	ATAPI data bus 4 (DA1 device register select 1)
31	P35	D5	I/O	—	—	—	—	ATAPI data bus 5 (DA0 device register select 0)
32	P36	D6	I/O	—	—	—	—	ATAPI data bus 6
33	P37	D7	I/O	—	—	—	—	ATAPI data bus 7
34	VAREF	VAREF	I	—	—	—	—	GND (0V), Analog ref. V for A/D conversion, A/D not used
35	AVDD	AVDD	I	—	—	—	—	Power (+3.3V), Power for A/D conversion circuit only
36	AVSS	AVSS	I	—	—	—	—	GND (0V), Analog GND for A/D conversion
37	P40	D8	I/O	—	—	—	—	ATAPI data bus 8
38	P41	D9	I/O	—	—	—	—	ATAPI data bus 9
39	P42	D10	I/O	—	—	—	—	ATAPI data bus 10
40	P43	D11	I/O	—	—	—	—	ATAPI data bus 11
41	P44	D12	I/O	—	—	—	—	ATAPI data bus 12
42	P45	D13	I/O	—	—	—	—	ATAPI data bus 13
43	P46	D14	I/O	—	—	—	—	ATAPI data bus 14
44	P47	D15	I/O	—	—	—	—	ATAPI data bus 15

* Pd or Pu detected in input port when power on, Pd=CD1, Pu=CD2

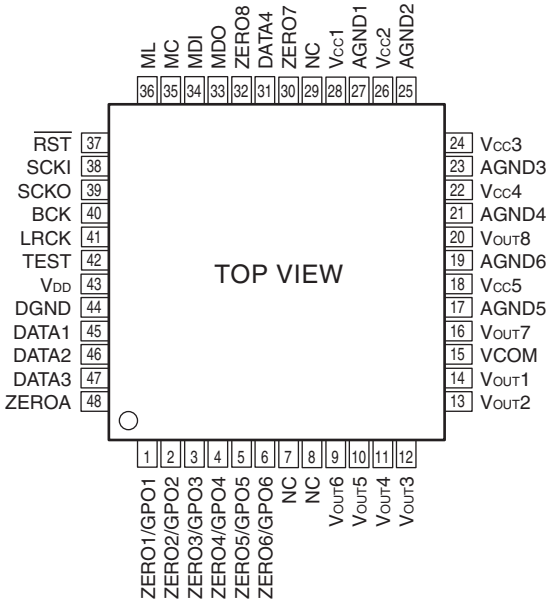
SM5902AF (DS: IC651, 652)

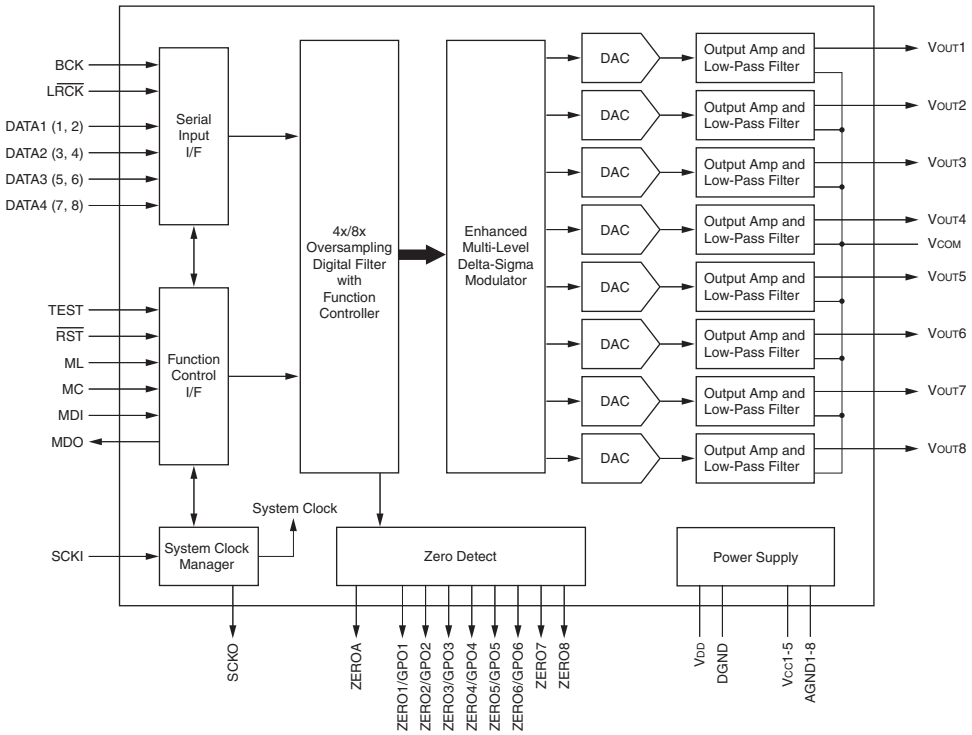


SM5902AF Terminal Function

Pin No.	Symbol	I/O	Function	Setting	
				H	L
1	VDD2	—	VDD power supply terminal.		
2	UC1	IP/O	Microcomputer interface extended I/O 1. Not Used (OPEN)		
3	UC2	IP/O	Microcomputer interface extended I/O 2. Not Used (OPEN)		
4	UC3	IP/O	Microcomputer interface extended I/O 3. Not Used (OPEN)		
5	UC4	IP/O	Microcomputer interface extended I/O 4. Not Used (OPEN)		
6	UC5	IP/O	Microcomputer interface extended I/O 5. Not Used (OPEN)		
7	DIT	O	Digital audio interface terminal.		
8	NTEST	IP	Test terminal.		Test
9	CLK	I	16.9344 MHz clock input.		
10	Vss	—	Ground terminal.		
11	YSRDATA	I	Audio serial input data.		
12	YLRCK	I	Audio serial input LR clock.	Lch	Rch
13	YSCK	I	Audio serial input bit clock.		
14	ZSCK	O	Audio serial output bit clock.		
15	ZLRCK	O	Audio serial output LR clock.	Lch	Rch
16	ZSRDATA	O	Audio serial output data.		
17	YFLAG	I	RAM overflow flag for signal processing IC.		Over
18	YFCLK	I	X'tal system frame clock.		
19	YBLKCK	I	Sub-code block clock signal.		
20	NRESET	I	System reset terminal.		Reset
21	ZSENSE	O	Microcomputer interface status output.		
22	VDD1	—	VDD power supply terminal.		
23	YDMUTE	I	Forcible mute terminal.	Mute	
24	YMLD	I	Microcomputer interface latch clock.		
25	YMDATA	I	Microcomputer interface serial data.		
26	YMCLK	I	Microcomputer interface shift clock.		
27	A10	O	DRAM address 10.		
28	NCAS	O	DRAM CAS control.		
29	D2	I/O	DRAM data input/output 2.		
30	D3	I/O	DRAM data input/output 3.		
31	D0	I/O	DRAM data input/output 0.		
32	D1	I/O	DRAM data input/output 1.		
33	NWE	O	DRAM WE control.		
34	NRAS	O	DRAM RAS control.		
35	A9	O	DRAM address 9.		
36	A8	O	DRAM address 8.		
37	A7	O	DRAM address 7.		
38	A6	O	DRAM address 6.		
39	A5	O	DRAM address 5.		
40	A4	O	DRAM address 4.		
41	A0	O	DRAM address 0.		
42	A1	O	DRAM address 1.		
43	A2	O	DRAM address 2.		
44	A3	O	DRAM address 3.		

PCM1608Y (DS: IC705)





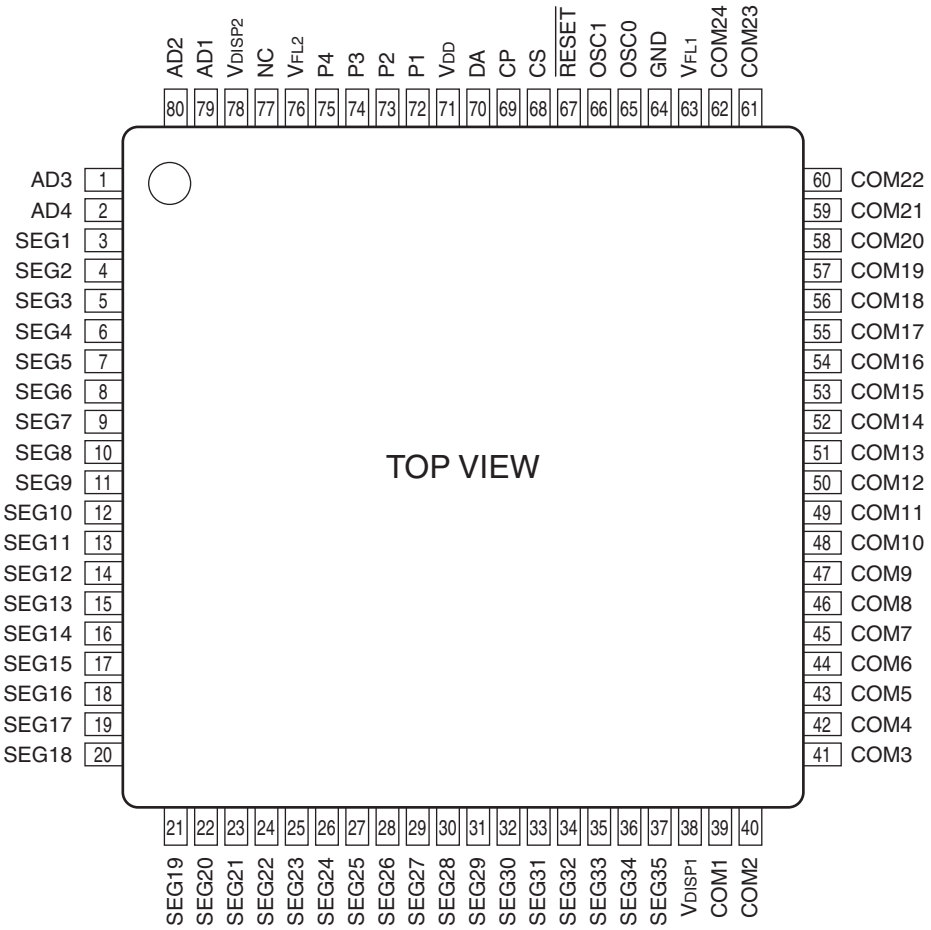
PCM1608Y Terminal Function

Pin No.	Pin Name	I/O	Function
1	ZERO1/GPO1	O	Zero Data Flag for VOUT1. Can also be used as GPO pin
2	ZERO2/GPO2	O	Zero Data Flag for VOUT2. Can also be used as GPO pin
3	ZERO3/GPO3	O	Zero Data Flag for VOUT3. Can also be used as GPO pin
4	ZERO4/GPO4	O	Zero Data Flag for VOUT4. Can also be used as GPO pin
5	ZERO5/GPO5	O	Zero Data Flag for VOUT5. Can also be used as GPO pin
6	ZERO6/GPO6	O	Zero Data Flag for VOUT6. Can also be used as GPO pin
7	NC	—	No Connection
8	NC	—	No Connection
9	VOUT6	O	Voltage Output of Audio Signal Corresponding to Rch on DATA3. Up to 96kHz
10	VOUT5	O	Voltage Output of Audio Signal Corresponding to Rch on DATA3. Up to 96kHz

Pin No.	Pin Name	I/O	Function
11	VOUT4	O	Voltage Output of Audio Signal Corresponding to Rch on DATA2. Up to 96kHz
12	VOUT3	O	Voltage Output of Audio Signal Corresponding to Rch on DATA2. Up to 96kHz
13	VOUT2	O	Voltage Output of Audio Signal Corresponding to Rch on DATA1. Up to 192kHz
14	VOUT1	O	Voltage Output of Audio Signal Corresponding to Rch on DATA1. Up to 192kHz
15	$\overline{\text{VCOM}}$	O	Common Voltage Output. This pin should be bypassed with a 10μF capacitor to AGND
16	VOUT7	O	Voltage Output for Audio Signal Corresponding to Rch on DATA4. Up to 192kHz
17	AGND5	—	Analog Ground
18	VCC5	—	Analog Power Supply, +5V
19	AGND6	—	Analog Ground
20	VOUT8	—	Voltage Output for Audio Signal Corresponding to Rch on DATA4. Up to 192kHz
21	AGND4	—	Analog Ground
22	VCC4	—	Analog Power Supply, +5V
23	AGND3	—	Analog Ground
24	VCC3	—	Analog Power Supply, +5V
25	AGND2	—	Analog Ground
26	VCC2	—	Analog Power Supply, +5V
27	AGND1	—	Analog Ground
28	VCC1	—	Analog Power Supply, +5V
29	NC	—	No Connection
30	ZERO7	—	Zero Data Flag for VOUT7
31	DATA4	—	Serial Audio Data Input VOUT7 and VOUT8 (2)
32	ZERO8	—	Zero Data Flag for VOUT7
33	MDO	O	Serial Audio Data Output for Serial Port (3)
34	MDI	I	Serial Audio Data Input for Serial Port (1)
35	MC	I	Shift Clock for Serial Control Port (1)
36	ML	I	Latch Enable for Serial Control Port (1)
37	RST	I	System Reset, Active LOW (1)
38	SCKI	I	System Clock Input frequency is 128,192,256,384,512,or 768fs. (2)
39	SCKO	O	Buffered Clock Output frequency is 128,192,256,384,512,or 768fs. (2)
40	BCK	I	Shift Clock Input for Serial Audio Data. Clock must be 32,48,or,64fs. (2)
41	LRCK	I	Left and Right Clock Input. This clock is equal to the sampling rate, fs. (2)
42	TEST	—	Test Pin. This pin should be connected to DGND. (1)
43	VDD	—	Digital Power Supply, +3.3V
44	DGND	—	Digital Ground
45	DATA1	I	Serial Audio Data Input VOUT1 and VOUT2 (2)
46	DATA2	I	Serial Audio Data Input VOUT3 and VOUT4 (2)
47	DATA3	I	Serial Audio Data Input VOUT5 and VOUT6 (2)
48	ZEROA	O	Zero Data Flag. Logical “AND” of ZERO1 through ZERO6

NOTE: (1) Schmitt-Trigger input with internal pull-down, 5V tolerant. (2) Schmitt-Trigger input, 5V tolerant. (3) Tri-state output.

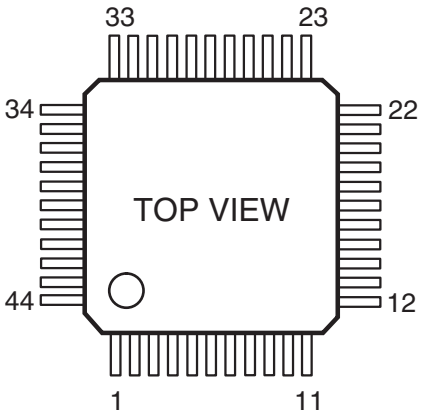
ML9207-01GP (RC: IC101, 201)



ML9207-01GP Terminal Function

Pin No.	Symbol	I/O	Function
3~37	SEG1~35	O	FL display anode electrode drive output pin
39~62	COM1~24	O	FL display grid electrode drive output pin
1, 2, 79, 80	AD1~4	O	FL display anode electrode drive output pin
72~75	P1~4	O	General port output pin
71	V_{DD}	—	V_{DD}-GND: Power for logic V_{DISP}-V_{FL}: Power for FL display drive Same power source should be used for V_{DD} and V_{DISP}
38, 78	$V_{DISP1\sim2}$		
64	GND		
63, 76	$V_{FL1\sim2}$		
70	DA	I	Serial data input pin (positive logic).
69	$\overline{CP}$	I	Shift clock input pin
68	$\overline{CS}$	I	Chip select input pin
67	$\overline{RESET}$	I	Reset input pin, L: All functions are initialized
65	OSCO	I	Pin for self-oscillation, target oscillation frequency 4.0MHz
66	OSC1	O	
77	NC	—	Not used

TMP86CM47U (RC: IC102, 202)

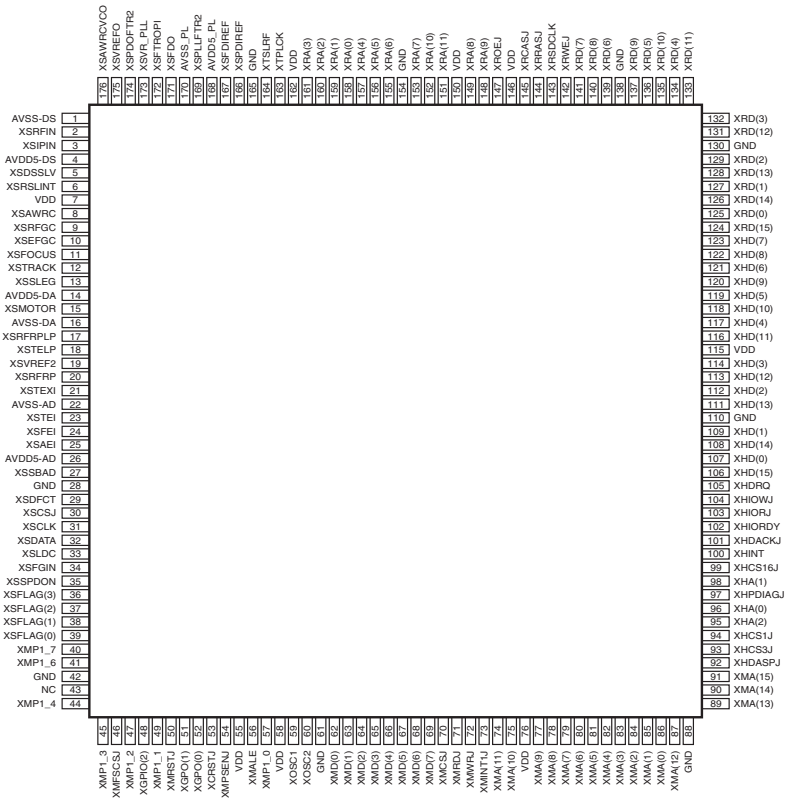


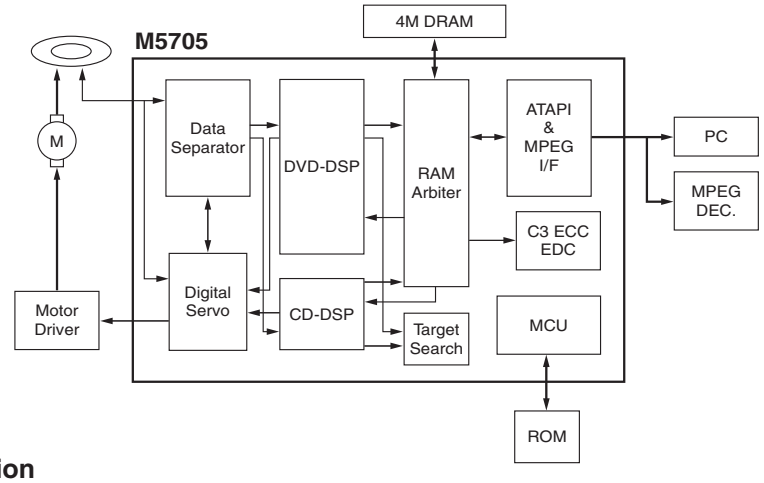
TMP86CM47U Terminal Function

Pin No.	Pin Name	Symbol	I/O	DET	Ext	Ini	Res	Function
1	VSS	VSS	—	—	—	—	—	GND(0V)
2	XIN	XIN	I	—	—	—	—	Oscillation input 16.0MHz
3	XOUT	XOUT	O	—	—	—	—	Oscillation output
4	TEST	TEST	I	—	—	—	—	Fixed to L
5	VDD	VDD	—	—	—	—	—	Power (+5.0V)
6	P21(LED)	LEDAT	O	—	Pu	L	H	BU2090 data
7	P22(LED)	LECLK	O	—	Pu	L	H	Clock signal for BU2090 data output
8	RESET_	RST_	I	—	—	—	—	µcom reset
9	P20(LED)	LED8	O	—	—	H	—	LED ON/OFF8 (L: ON)
10	P00(INT0)	TRSB	I	—	Pu	—	H	Track select encoder B input
11	P01	KIN7	I	—	Pu	—	H	Key scan input 7
12	P02(RXD)	RXD	I	—	Pu	—	H	Data receive from main unit
13	P03(TXD)	TXD	O	—	Pu	H	H	Data send to main unit
14	P04(SO)	FLDA	O	—	Pu	H	H	ML9207 data signal
15	P05	FLCS_	O	—	Pu	H	H	ML9207 latch signal
16	P06(SCK_)	FLCP_	O	—	Pu	H	H	Clock signal for ML9207 data output
17	P07	KIN6	I	—	Pu	—	H	Key scan input 6
18	P17	FLRES_	O	—	Pd	L	L	ML9207 reset signal
19	P16	KIN5	I	—	Pu	—	H	Key scan input 5
20	P15(INT3)	JOGD	I	Ed	Pu	—	H	JOG encoder D interrupt input
21	P14	KIN4	I	—	Pu	—	H	Key scan input 4
22	P13	KIN3	I	—	Pu	—	H	Key scan input 3
23	P12(INT2)	JOGC	I	Ed	Pu	—	H	JOG encoder C interrupt input
24	P11(INT1)	TRSA	I	Ed	Pu	—	H	Track select encoder A interrupt input
25	P10	KIN2	I	—	Pu	—	H	Key scan input 2
26	P30(AIN0)	PIT	I	—	—	—	—	Pitch VR signal
27	P31(AIN1)	PITC	I	—	—	—	—	Pitch VR center value signal
28	P32	KIN1	I	—	Pu	—	H	Key scan input 1
29	P33	KIN0	I	—	Pu	—	H	Key scan input 0
30	P34	KOUT0	O	—	Pu	H	H	Key scan output 0/LED line select 0 (L: Select)
31	P35	KOUT1	O	—	Pu	H	H	Key scan output 1/LED line select 1 (L: Select)
32	P36	KOUT2	I/O	—	Pu	H	H	Key scan output 2 (Other than scan, IN)
33	P37	KOUT3	I/O	—	Pu	H	H	Key scan output 3 (Other than scan, IN)
34	VAREF	VAREF	I	—	—	—	—	Power (+5.0V), Analog ref. V for A/D conversion
35	AVDD	AVDD	I	—	—	—	—	Power (+5.0V), For A/D conversion circuit only
36	AVSS	AVSS	I	—	—	—	—	GND(0V), Analog GND for A/D conversion
37	P40(LED)	LED0	O	—	—	H	—	LED ON/OFF0 (L: ON)
38	P41(LED)	LED1	O	—	—	H	—	LED ON/OFF1
39	P42(LED)	LED2	O	—	—	H	—	LED ON/OFF2
40	P43(LED)	LED3	O	—	—	H	—	LED ON/OFF3
41	P44(LED)	LED4	O	—	—	H	—	LED ON/OFF4
42	P45(LED)	LED5	O	—	—	H	—	LED ON/OFF5
43	P46(LED)	LED6	O	—	—	H	—	LED ON/OFF6
44	P47(LED)	LED7	O	—	—	H	—	LED ON/OFF7

* Pd or Pu detected in input port when power on, Pd=CD1, Pu=CD2

M5705 (FG: IC501)





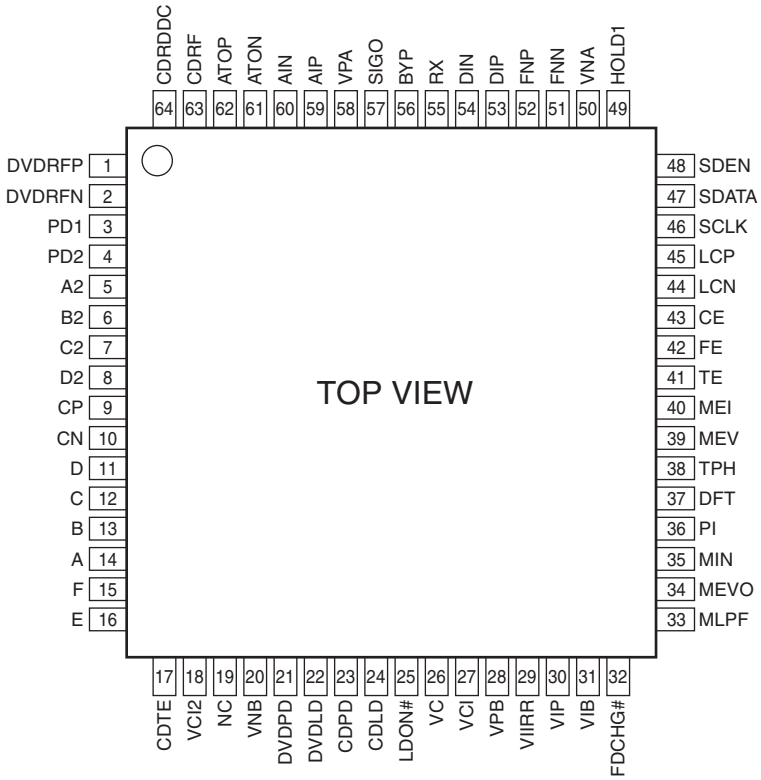
M5705 Terminal Function

Pin No.	Pin Name	Type	Description
2	XSRFIN	I/A	Analog RF signal input after passing through the equalizer
3	XSIPIN	I/A	Inverting input pin of data slicer
5	XSDSSLV	O/A	Slice level output pin
6	XSRSLINT	I/A	Reference current setting pin for analog data slicer
8	XSAWRC	O/A	Output for enlarge VCO range. Analog output from DAC buffer
9	XSRFGC	O/A	RF gain control output
10	XSEFGC	O/A	E,F gain control output
11	XSFOCUS	O/A	Output voltage level for focusing buffer IC
12	XSTRACK	O/A	Output voltage level for tracking buffer IC
13	XSSLEG	O/A	Output voltage level for sledge buffer IC
15	XSMOTOR	O/A	Output voltage level for spindle motor buffer IC
17	XSRFRPLP	I/A	High bandwidth low pass filter input for RFRP
18	XSTELP	I/A	High bandwidth low pass filter input for TE
19	XSVREF2	I/A	2.1V reference voltage input
20	XSRFRP	I/A	RF ripple/envelope signal input
21	XSTEXI	I/A	Tracking zero crossing input signal
23	XSTEI	I/A	Tracking error input signal
24	XSFEI	I/A	Focus error input signal
25	XSCEI	I/A	1. Center error input signal 2. Photo Interrupt input

Pin No.	Pin Name	Type	Description
27	XSSBAD	I/A	Sub-beam addition signal input
166	XSPDIREF	I/A	Phase detector reference current generator. Connect a resistor between this pin and ground to set reference current
167	XSFDIREF	I/A	Frequency detector reference current generator. Connect a resistor between this pin and ground to set reference current
169	XSPLLFTR2	I/A	Data PLL loop filter pin#2
171	XSFDO	O/A	Output node of frequency detector charge pump circuit
172	XSFTROPI	I/A	Input node of loop filter OP circuit
173	XSVR_PLL	I/A	PLL reference voltage input
174	XSPDOFTR2	I/A	Phase detector filter pin#1
175	XSVREFO	O/A	Reference voltage output
176	XSAWRCVCO	I/A	Auto Wide Range Control of VCO input pin. For enlarge VCO range in CAV mode
29	XSDFCT	I	Detect detection signal input
30	XSCSJ	O	Chip select signal for accessing control registers
31	XSCLK	O	Clock output for accessing control registers
32	XSDATA	I/O	Registers data input/output pin
33	XSLDC	O	Laser diode on/off control output for both CD/DVD
34	XSFGIN	I	Motor Hall sensor input
35	XSSPDON	O	Spindle motor on output
36, 37, 38, 39	XSFLAG[3:0]	O	These pins are used to monitor some status of servo control block
48, 51, 52	XGPIO[2:0]	I/O	1. These pins are used as general purpose I/O bus 2. When use internal microcontroller, XGPIO[2] can be used as programmable I/O port 3.6.
40	XMP1_7	I/O	Internal microcontroller programmable I/O port 1.7.
41	XMP1_6	I/O	Internal microcontroller programmable I/O port 1.6.
43	XMP1_5	I/O	This pin is now changed to be NC.
44	XMP1_4	I/O	Internal microcontroller programmable I/O port 1.4.
45	XMP1_3	I/O	Internal microcontroller programmable I/O port 1.3.
47	XMP1_2	I/O	Internal microcontroller programmable I/O port 1.2.
49	XMP1_1	I/O	Internal microcontroller programmable I/O port 1.1.
57	XMP1_0	I/O	Internal microcontroller programmable I/O port 1.0. This pin is default used as the A16 (microcontroller address line 16)
46	XMFSCSJ	I/O	Output chip select connected to external flash ROM chip enable pin
54	XMPSENJ	I/O	Output program store enable connected to external ROM PSENJ pin.
56	XMALE	I/O	This signal is used as address latch signal in address/data mux mode
70	XMCSJ	I/O	1. This signal must be asserted for all microcontroller accesses to the register of this chip 2. When use internal microcontroller, this signal can be used as programmable I/O port 3.1
71	XMRDJ	I/O	1. This signal is used as the Read Strobe signal 2. When use internal microcontroller, this signal can be used as programmable I/O port 3.0
72	XMWRJ	I/O	This signal is used as the Wire Strobe signal
73	XMINT1J	I/O	1. This signal is an interrupt line to the microcontroller 2. When use internal microcontroller, this signal can be used as programmable I/O port 3.7
74, 75, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 89, 90, 91	XMA[15:0]	I/O	These pins are used as address bus
62, 63, 64, 65, 66, 67, 68, 69	XMD[7:0]	I/O	These pins are used as data bus for the 16-bit processor mode, or the address/data mux bus for the 8-bit processor mode.
163	XTPLCK	I/O	PLCK test pin
164	XTSLRF	I/O	SLRF test pin
59	XOSC1	I	Crystal input/System clock. The input frequency from outside crystal or oscillator is 33.8688MHz
60	XOSC2	O	Crystal output
53	XCRSTJ	I	Chip Reset. As asserted low input generates a component reset that stops all operations within the chip and deasserts all output signals. All input/output signals are set to input.
94	XHCS1J	I	This pin is used to select the command block task file registers
93	XHCS3J	I	This pin is used to select the control block task file registers
103	XHIORJ	I	Asserted by the host during a host I/O read operation
104	XHIOWJ	I	Asserted by the host during a host I/O write operation
105	XHDRQ	O	1. DMA request. This pin is configured as the DMA request signal, and is used during DMA transfer between the host and the controller. This pin is tri-stated when DMA transfers are not enabled. 2. MPEG acknowledge. This pin is used as the ACKJ signal when MPEG interface mode is selected.
101	XHDACKJ	I	1. DMA acknowledge. This pin is configured as DACKJ, and is used as the DMA acknowledge signal during DMA data transfers. 2. MPEG request. This pin is used as the REQ signal when MPEG interface mode is selected
99	XHCS16J	O	1. 16-bit data select. This signal indicates that a 16-bit data transfer is active on the host data bus. This pin is open-drain tri-state output. 2. MPEG clock. This pin is used as the CLOCK signal when MPEG interface mode is selected.
50	XHRSTJ	I	Host Reset. The reset of ATA bus
100	XHINT	O	1. Host interface request. This tri-state pin is the host interrupt request, and is asserted to indicate to the host that the controller needs attention. 2. MPEG begin. This pin is used as the BEGIN signal when MPEG interface mode is selected

Pin No.	Pin Name	Type	Description
97	XHPDIAGJ	I/O	This pin is used as the Passed Diagnostics signal, and may be an input or an open-drain output
92	XHDASPJ	I/O	This pin is used as the Drive Active/Slave Present signal, and is an input or an open-drain output. This pin is used for Master/Slave drive communication and/or for driving an LED
102	XHIORDY	I/O	1. I/O channel ready. This signal is driven low to extend host transfer cycles when the controller is not ready to respond. This pin will be tri-stated when a read or write is not in progress. 2. MPEG error. This pin is used as the ERROR signal when MPEG interface mode is selected
95, 96, 98	XHA[2:0]	I	Host address lines. The host address lines A[2:0] are used to access the various host control, status, and data registers
106, 107, 108, 109, 111, 112, 113, 114, 116, 117, 118, 119, 120, 121, 122, 123	XHD[15.0]	I/O	1. Host data bus. This bus is used to transfer data and status between the host and the controller. 2. MPEG data bus 7-8. The HD[7:0] are used as the DATA [7:0] when MPEG interface mode is selected. 3. VCD I/F. Bit3-0 are used as VCD I/F signal when VCD function is enabled. The relationship of bit3-0 and VCD I/F is as follow HD0—CD-DATA HD1—CD-LRCK HD2—CD-BCK HD3—CD-C2PO
143	XRSDCLK	O	This signal is the clock output for SDRAM
147	XROEJ	O	This signal is used as the memory output enable for external DRAM buffers. After RSTJ is asserted, this signal will be low
142	XRWEJ	O	This signal is asserted low when a buffer memory write operation is active
144	XRRASJ	O	This signal is used as Row address output to external DRAM buffer. After RSTJ is asserted, this signal will be high
145	XRCASJ	O	This signal is used as column address output to external DRAM. After RSTJ is asserted, this signal will be high
148, 149, 151, 152, 153, 155, 156, 157, 158, 159, 160, 161	XRA[11:0]	O	1. RAM address lines. These are bits11-0 for addressing the buffer memory. 2. Hardware setting. The bits6-0 are used as hardware setting for some functions. RA[9] : FLASH size is 64K/128K 1: FLASH size is 64K 0: FLASH size is 128K RA[8] : External CPU is 8032/H8 1: 8032 0: H8 RA[7] : Microcontroller programmable I/O port 1 pin control 1: By internal microcontroller 0: By registers to decide input/output RA[6] : System test pin output 1: Normal operation 0: System test pin output RA[5] : For testing purpose, don't need to set RA[4] : IDE master/slave 1: Slave 0: Master RA[3] : For testing purpose, don't need to set RA[2] : For testing purpose, don't need to set RA[1-0] : MCU Mode selection 11: Normal Mode (internal uP, internal address latch) 10: Outside uP Mode (ICE Mode) 01: Test mode for internal uP testing 00: Internal uP mode with external address latch
124, 125, 126, 127, 128, 129, 131, 132, 134, 135, 136, 137, 138, 139, 140, 141	XRD[15:0]	I/O	These signals are the 8-bit parallel data lines to/from the buffer memory.
4	AVDD5_DS		Analog Power +5V for Data Slicer part
14	AVDD5_DA		Analog Power +5V for DAC part
26	AVDD5_AD		Analog Power +5V for ADC part
168	AVDD5_PL		Analog Power +5V for Data PLL part
7, 55, 58, 76, 115, 146, 150, 162	VDD		Power +3.3V for digital core logic and pad
1	AVSS_DS		Analog Ground for Data Slicer part
16	AVSS_DA		Analog Ground for DAC part
22	AVSS_AD		Analog Ground for ADC part
170	AVSS_PL		Analog Ground for Data PLL part
28, 42, 61, 88, 110, 130, 138, 154, 165	GND		Digital Ground core logic and pad.

SP3721A (FG: IC502)

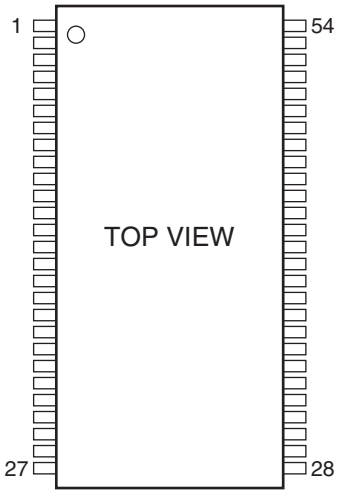


SP3721A Terminal Function

Pin No.	Pin Name	Type	Description
1, 2	DVDREP, DVDREN	I	RF Signal Inputs. Differential RF signal attenuator input pins
63	CDRF	I	RF Signal Inputs. Single-ended RF signal attenuator input pin
59, 60	AIP, AIN	I	AGC Amplifier Inputs. Differential AGC amplifier input pins
53, 54	DIP, DIN	I	Analog inputs for RF Single Buffer. Differential analog inputs to the RF single-ended output buffer and full wave rectifier
32	FDCHG#	I	Low Impedance Enable. A TTL compatible input pin that activates the FDCHG switches. A low level activates the switches and the falling edge of the internal FDCHG triggers the fast decay for the MIRR bottom hold circuit. (open high)
49	HOLD1	I	Hold Control. A TLL compatible control pin which, when pulled high, disables the RF AGC charge pump and holds the RF AGC amplifier gain at its present value. (open high)
11~14	D, C, B, A	I	Photo Detector Interface Inputs. Inputs from the main beam Photo detector matrix outputs
5~8	A2, B2, C2, D2	I	Photo Detector Interface Inputs. AC coupled inputs for the DPD from the main beam Photo detector matrix outputs
15~16	F, E	I	CD tracking Error Inputs. Inputs from the CD photo detector error outputs.
3~4	PD1, PD2	I	CD Photo detector Interface Inputs. Inputs from the CD photo detector error outputs
40	MEI	I	Mirror Envelope Inputs. The SIGO envelope input pin
35	MIN	I	RF signal Input for Mirror. AC coupled inputs for the mirror detection circuit from the pull-in signal output. (PI)
21	DVDPD	I	APC Input. DVD APC input pin from the monitor photo diode
23	CDPD	I	APC Input. CD APC input pin from the monitor photo diode
25	LDON#	I	APC Output On/Off. APC output control pin. A low level activates the LD output. (open high)
61, 62	ATON/ATOP	O	Differential Attenuator Output. Attenuator outputs
51, 52	FNN, FNP	O	Differential Normal Output. Filter normal outputs
57	SIGO	O	Single Ended Normal Output. Single-ended RF output
64	CDRFDC	O	CD RF Signal Output. Single ended CD RF summing output
42	FE	O	Focusing Error Signal Output. Focus error output reference to VCI
41	TE	O	Tracking Error Signal Output. Tracking error output reference to VCI

Pin No.	Pin Name	Type	Description
43	CE	O	Center Error Signal Output. Center error output reference to VCI
34	NEVO	O	SIGO Bottom Envelope Output. Bottom envelope for mirror detection
37	DFT	O	Defect Output. Pseudo CMOS output. When a defect is detected, the DFT output goes high. Also the servo AGC output can be monitored at this pin, when CAR bits 7-4 are '0011'
29	MIRR	O	Mirror Detect Output. Mirror Detect comparator output. Pseudo CMOS output
36	PI	O	Pull-in Signal Output. The summing signal output of A, B, C, D or PD1, PD2 for mirror detection. Reference to VCI
22	DVDLD	O	APC output. DVD APC output pin to control the laser power
24	CDLD	O	APC output. CD APC output pin to control the laser power
56	BYP	I/O	The RF AGC integration capacitor CBYP, is connected between BYP and VPA
9	CP	I/O	Differential Phase tracking LPF pin. An external capacitance is connected between this pin and the CN pin
10	CN	I/O	Differential Phase tracking LPF pin. An external capacitance is connected between this pin and the CP pin
45	LCP	—	Center Error LPF pin. An external capacitance is connected between this pin and the LCN pin
44	LCN	—	Center Error LPF pin. An external capacitance is connected between this pin and the LCP pin
30	MP	—	MIRR signal Peak hold pin. An external capacitance is connected to between this pin and VPB
31	MB	—	MIRR signal Bottom hold pin. An external capacitance is connected to between this pin and VPB
39	MEV	—	Sigo Bottom Envelope pin. An external capacitance is connected to between this pin and VPB
17	CDTE	—	CD Tracking. E-F Opamp output for feedback
38	TPH	—	PI Top Hold pin. An external capacitance is connected to between this pin and VPB
26	VC	—	Reference Voltage output. This pin provides the internal DC bias reference voltage (+2.5V lix). Output Impedance is less than 50ohms
27	VCI	—	Reference Voltage input. DC bias voltage input for the servo input reference
18	VCI2	—	Reference Voltage input. DC bias voltage input for the servo input reference
55	RX	—	Reference Resistor Input. An external 8.2kohm, 1% resistor is connected from this pin to ground to establish a precise PTAT (proportional to absolute temperature) reference current for the filter
33	MLPF	—	MIRR signal LPF pin. An external capacitance is connected between this pin and VPB
19	NC	—	No Connect
48	SDEN	I	Serial Data Enable. Serial Enable CMOS input. A high level input enable the serial port (Not to be left open)
47	SDATA	I/O	Serial Data. Serial data bi-directional CMOS pin. NRZ programming data for the internal registers is applied to this input (Not to be left open)
46	SCLK	I	Serial Clock. Serial Clock CMOS input. The clock applied to this pin is synchronized with the data applied to SDATA (Not to be left open)
58	VPA		Power. Power supply pin for the RF block and serial port
28	VPB		Power. Power supply pin for the servo block
50	VNA		Ground. Ground pin for the RF block and serial port
20	VNB		Ground. Ground pin for the servo bolck

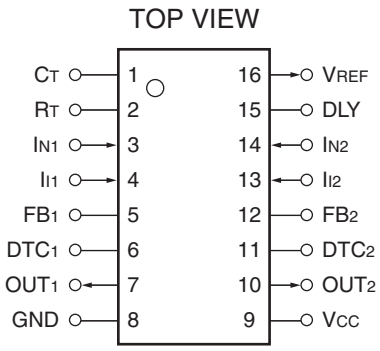
128M SDRAM
(DS: IC302, 303, 402, 403)

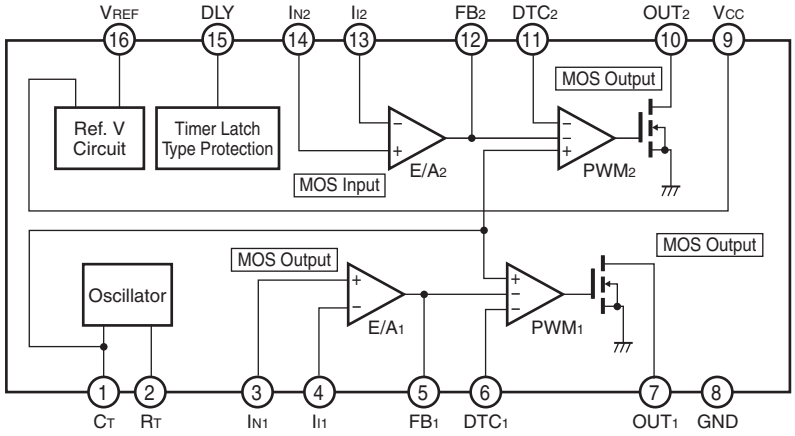


Pin Assignment

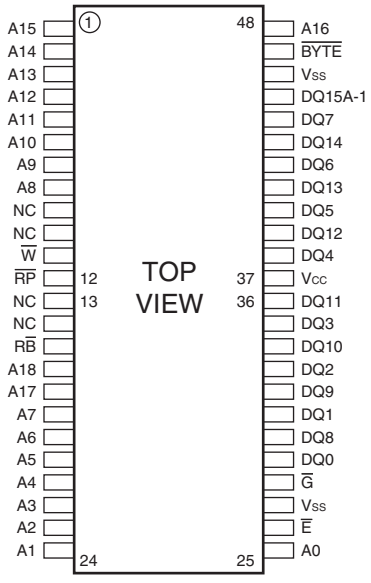
Pin No.	Pin Name	Function	Description
22, 23~26, 29~35	A0~A11	Address	Multiplexed pins for row and column address. Row address: A0~A11. Column address: A0~A8.
20, 21	BS0, BS1	Bank Select	Select bank to activate during row address latch time, or bank to read/write during address latch time.
2, 4, 5, 7, 8, 10,11, 13, 42, 44,45, 47, 48, 50, 51, 53	DQ0~ DQ15	Data Input/Output	Multiplexed pins for data output and input.
19	CS#	Chip Select	Disable or enable the command decoder. When command decoder is disabled, new command is ignored and previous operation continues.
18	RAS#	Row Address Strobe	Command input. When sampled at the rising edge of the clock, RAS#, CAS# and WE# define the operation to be executed.
17	CAS#	Column Address Strobe	Referred to RAS#
16	WE#	Write Enable	Referred to RAS#
15, 39	UDQM/ LDQM	input/output mask	The output buffer is placed at Hi-A (with latency of 2) when DQM is sampled high in read cycle. In write cycle, sampling DQM high will block the write operation with zero latency.
38	CLK	Clock Inputs	System clock used to sample inputs on the rising edge of clock.
37	CKE	Clock Enable	CKE controls the clock activation and deactivation. When CKE is low, Power Down mode, Suspend mode, or Self Refresh mode is entered.
1, 14, 27	Vcc	Power (+3.3V)	Power for input buffers and logic circuit inside DRAM.
28, 41, 54	Vss	Ground	Ground for input buffers and logic circuit inside DRAM.
3, 9, 43, 49	VccQ	Power (+3.3V) for I/O buffer	Separated power from Vcc, used for output buffers to improve noise.
6, 12, 46, 52	VssQ	Ground for I/O buffer	Separated ground from Vss, used for output buffers to improve noise.
36, 40	NC	No Connection	No Connection

uPC1934GR-1JG-E1 (RC: IC310)

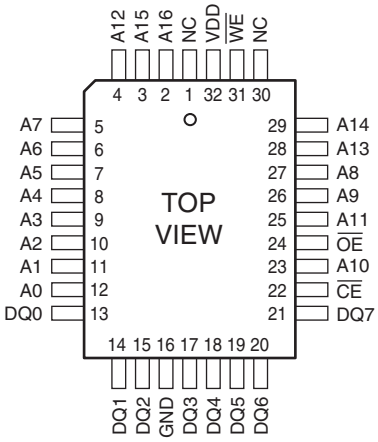


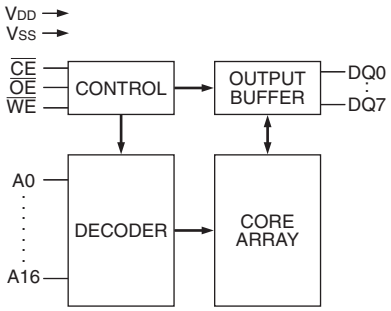


4M FLASH MEMORY (M29W800AB)
(DS: IC502, 509)



W29EE011P (FG: IC507)

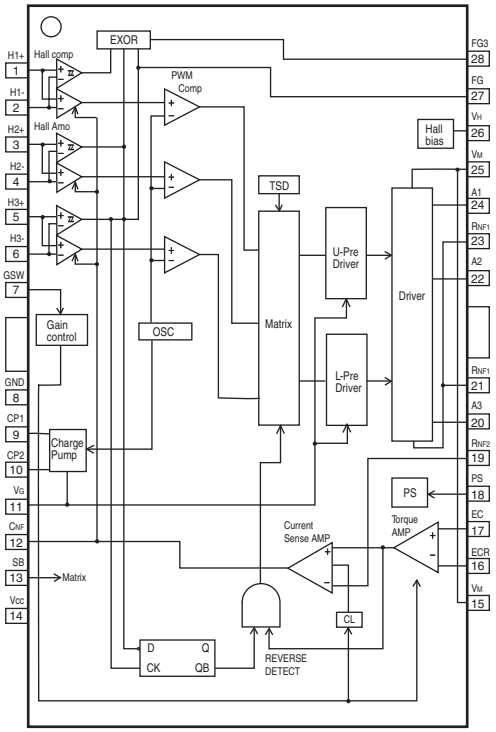




Terminal Function

Name	Function
A0 - A16	Address Inputs
DQ0 - DQ7	Data Inputs/Outputs
$\overline{CE}$	Chip Enable
$\overline{OE}$	Output Enable
$\overline{WE}$	Write Enable
VDD	Power Supply
GND	Ground
NC	No Connection

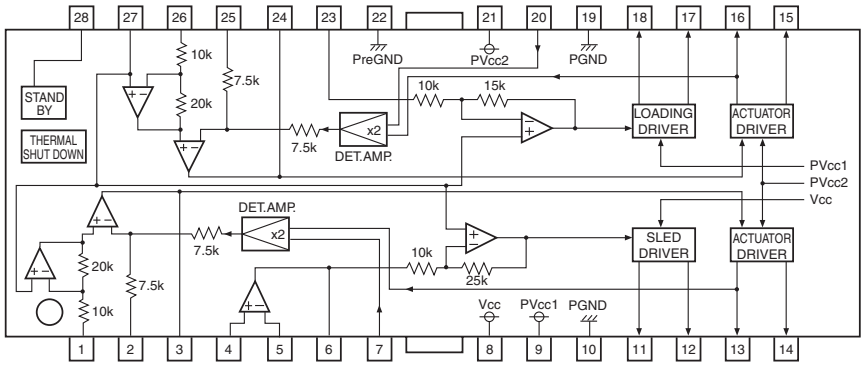
BD6670FM (FG: IC510)



BD6670FM Terminal Function

Pin No.	Pin Name	Function
1	H1+	Hall input Amp 1 positive input
2	H1-	Hall input Amp 1 negative input
3	H2+	Hall input Amp 2 positive input
4	H2-	Hall input Amp 2 negative input
5	H3+	Hall input Amp 3 positive input
6	H3-	Hall input Amp 3 negative input
7	GSW	Gain switch pin
8	GND	GND
9	CP1	Capacitor pin 1 for charge pump
10	CP2	Capacitor pin 2 for charge pump
11	VG	Capacitor connection pin for charge pump
12	CNF	Capacitor connection pin for phase compensation
13	SB	Short Brake Pin
14	VCC	Power supply for signal division
15	VM	Power supply for driver
16	ECR	Torque control standard voltage input terminal
17	EC	Torque control voltage input terminal
18	PS	Power Save in
19	RNF2	Resistor connection pin for current sense
20	A3	Output3 for motor
21	RNF1	Resistor connection pin for current sense
22	A2	Output2 for motor
23	RNF1	Resistor connection pin for current sense
24	A1	Output1 for motor
25	VM	Power supply for driver
26	VH	Hall bias pin
27	FG	FG output pin
28	FG3	FG3 output pin

BA5954FP (FG: IC509)

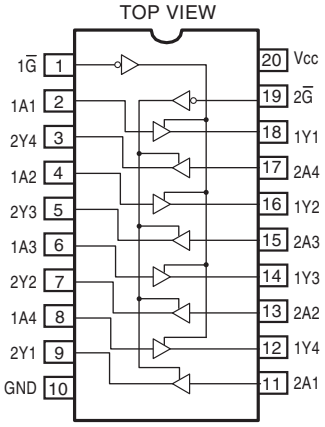


BA5954FP Terminal Function

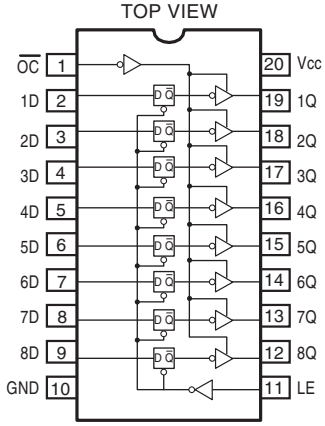
Pin No.	Pin Name	Function
1	VINFC	Focus driver input
2	CFCerr1	Cap. connection pin for error amp filter
3	CFCerr2	Cap. connection pin for error amp filter
4	VINSL+	Op. amp input (+) for sled driver
5	VINSL-	Op. amp input (-) for sled driver
6	VOSL	Op. amp output for sled driver
7	VNFFC	Focus driver feedback pin
8	Vcc	Pre Vcc, power Vcc for sled driver
9	PVcc1	Power Vcc for loading driver
10	PGND	Power GND
11	VOSL-	Output (-) of sled driver
12	VOSL+	Output (+) of sled driver
13	VOFC-	Output (-) of focus driver
14	VOFC+	Output (+) of focus driver

Pin No.	Pin Name	Function
15	VOTK+	Output (+) of tracking driver
16	VOTK-	Output (-) of tracking driver
17	VOLD+	Output (+) of loading driver
18	VOLD-	Output (-) of loading driver
19	PGND	Power GND
20	VNFTK	Tracking driver feedback pin
21	PVcc2	Power Vcc for actuator driver
22	PreGND	Pre GND
23	VINLD	Loading driver input
24	CTKerr2	Cap. connection pin for error amp filter
25	CTKerr1	Cap. connection pin for error amp filter
26	VINTK	Tracking driver input
27	BIAS	Bias input
28	STBY	Standby pin

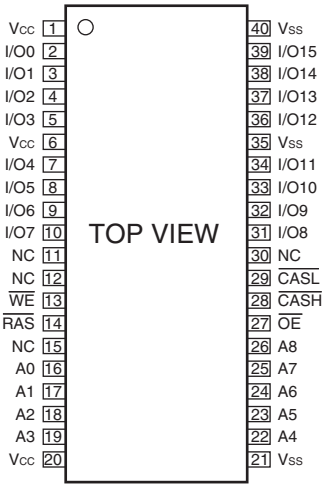
SN74LV244APW (DS: IC508)



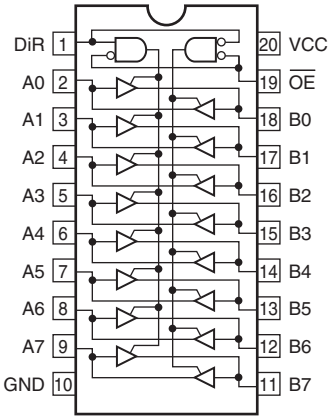
SN74LV573APW (DS: IC102, 152, 304, 305, 404, 405)



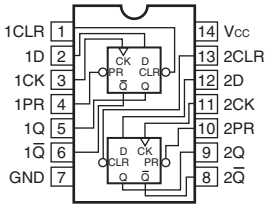
M11B416256A-35J
(FG: IC508)



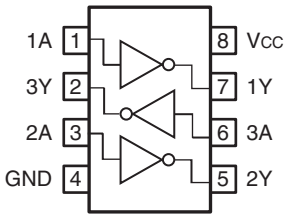
SN74AHC245APW (RC: IC301)
SN74LV245APW (DS: IC103, 104, 153, 154, 504-507, 601, 707)



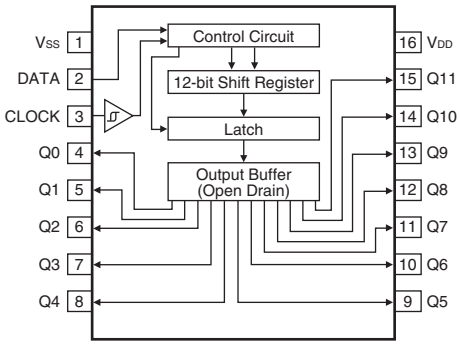
SN74LV74APW
(DS: IC111, 161)



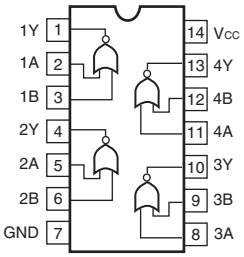
TC7WU04F
(DS: IC653, 654, 706)



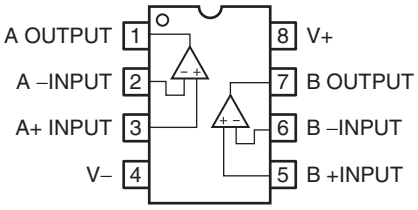
BU2090F (RC: IC103, 203)



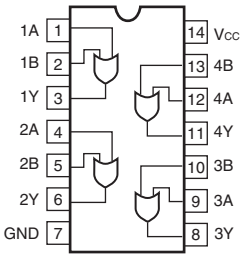
SN74LV02APW
(DS: IC306, 406)



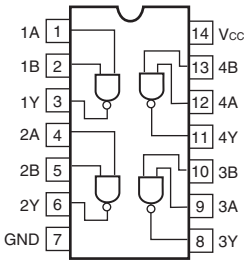
BA15218F (DS: IC701-704)
TL3472 (FG: IC505)



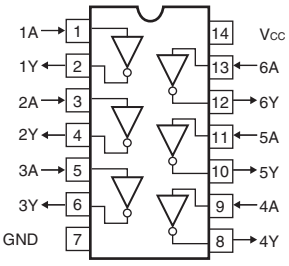
SN74LV32APW
(DS: IC106, 156, 307, 407)



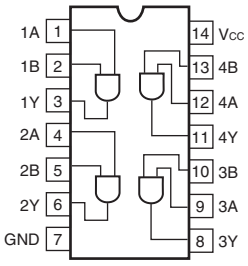
SN74LV00APW
(DS: IC107, 110, 160)



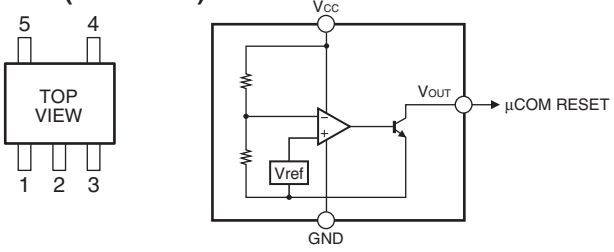
SN74ALVC04PW
(DS: IC604)



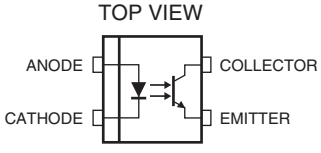
SN74AHCT08PW
(DS: IC105, 155, 602)
(RC: IC302)
SN74LV08APW
(DS: IC109, 308)



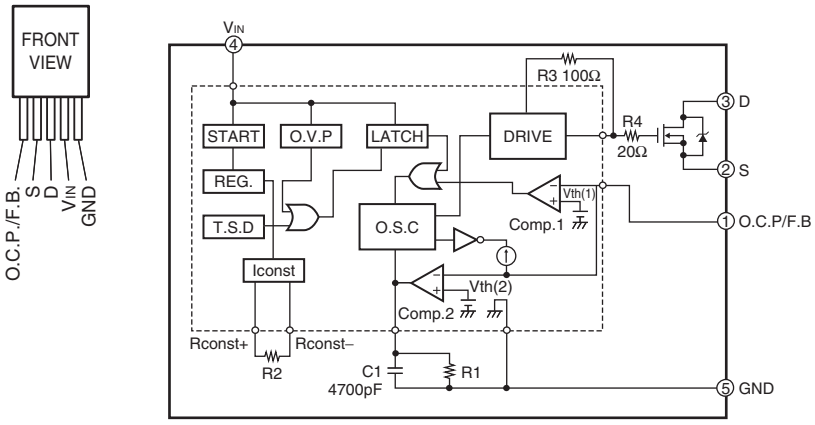
BD4743G (FG: IC109)



PC123 (PO: IC902)

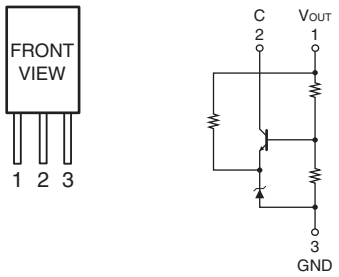


STR-F6676 (PO: IC901)

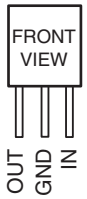


BA033T (PO: IC905)
NJM7805FA (DS: IC605) (RC: IC312)

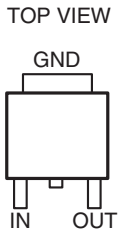
SE012N (PO: IC903)



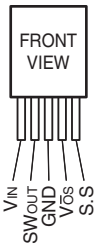
PST600H (DS: IC503)



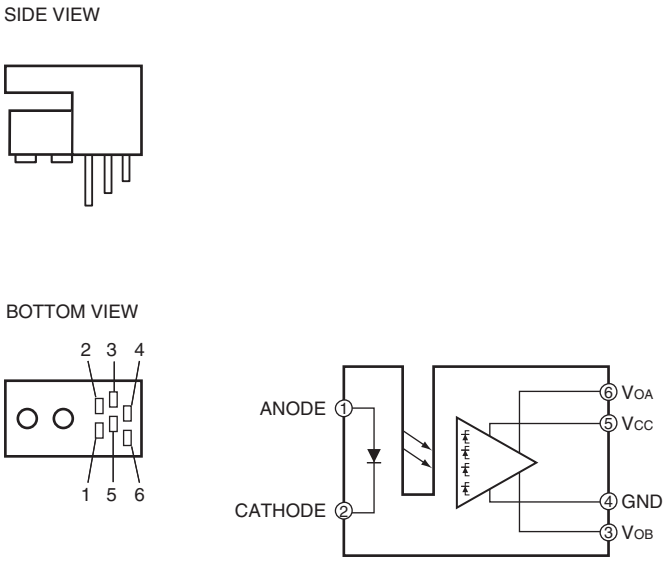
BA033FP (FG: IC113)



SI-8050S (PO: IC904)

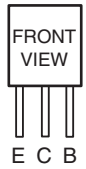


GP1A70R (RC: IC105, 205)



● TRANSISTORS

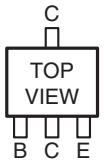
2SB1328 (P)
2SD2004 (P)



2SA1036K
2SC2411K
KTC2875B

2SK2414

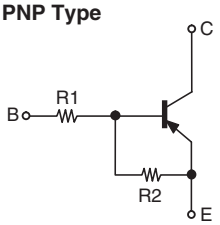
2SB766S
2SB1132



DTA114EK
DTC114EK
DTC143EK

DTA114EK

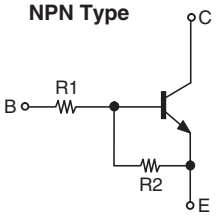
PNP Type



	R1	R2
DTA114EK	10kohm	10kohm

DTC114EK
DTC143EK

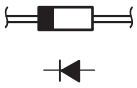
NPN Type



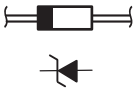
	R1	R2
DTC114EK	10kohm	10kohm
DTC143EK	4.7kohm	4.7kohm

● DIODES (included LED)

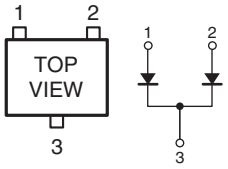
1SR35-400A
1SS133
1SS270A
AG01ZT (V1)
AL01ZT (V1)
SARS01T (V1)
RK14
RK44
RK46



MTZJ3.6A

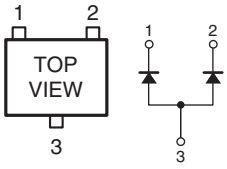


DAN202K



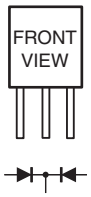
1: Anode
2: Anode
3: Cathode

DAP202K

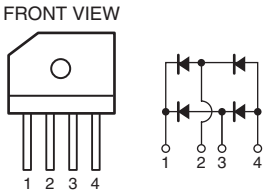


1: Cathode
2: Cathode
3: Anode

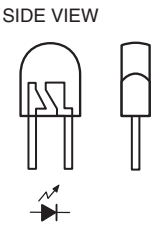
FMB-36



RBV-406

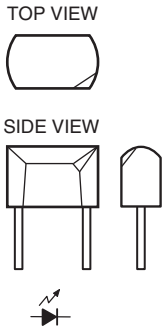


SEL6227S (Red)
SEL6427EP (Green)
SEL6927A (Orange)



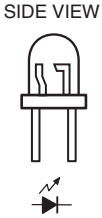
SEL2510C (Green)

SELU5E20C (Blue)

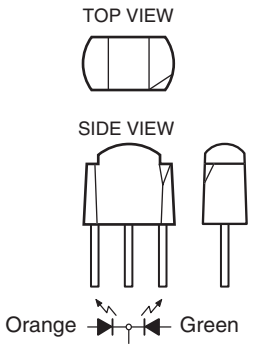


SLR-325VC (Red)

L-934MBCK (Blue)
SLR-342DC (Orange)
SLR-342MC (Green)
SLR-342VC (Red)
SLR-342YC (Yellow)

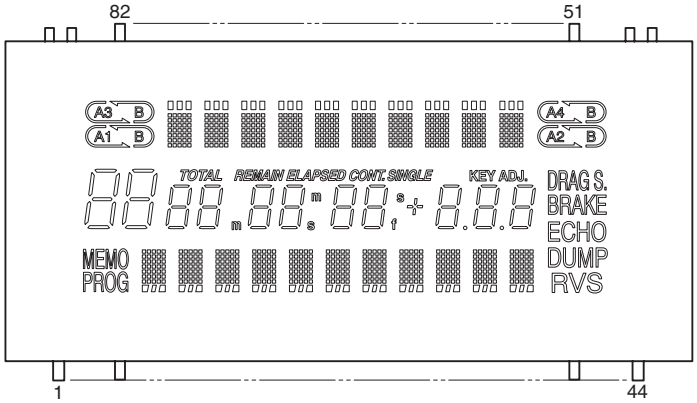


SML79423C



● FL DISPLAY

24-ST-09GN (RC: FL102, 202)



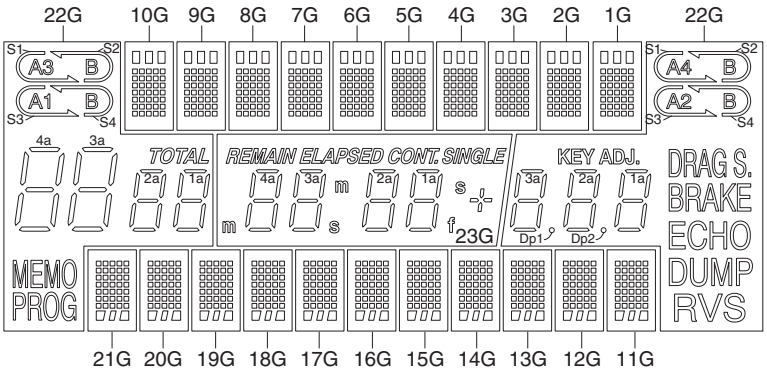
Pin Connection

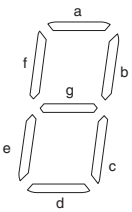
Pin No.	88	87	86	85	84	83	82	81	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45
Connection	NP	NP	NP	NP	NP	NP	P20	P19	P18	P17	P16	P15	P14	P13	P12	P11	P10	P9	P8	P7	P6	P5	P4	P3	P2	P1	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	23G	24G	NP	NP	NP	NP	NP	NP

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
Connection	F–	F–	F–	F–	NP	NP	IC	P21	P22	P23	P24	P25	P26	P27	P28	P29	P30	P31	P32	P33	P34	P35	P36	P37	P38	P39	22G	21G	20G	19G	18G	17G	16G	15G	14G	13G	12G	11G	NP	NP	F+	F+	F+	F+

NOTE: 1) F–, F+ ····· Filament 2) NP ····· No Pin 3) DL ····· Datum Line 4) 1G~24G ····· Grid
5) IC ····· Internal Connection 6) Visual Field ····· Upper 26°, lower 26°(min.)

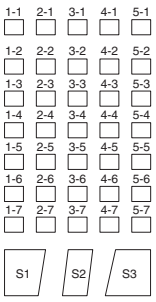
Grid Assignment



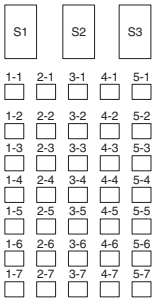


(22G~24G)

Segment Designation



(21G~11G)



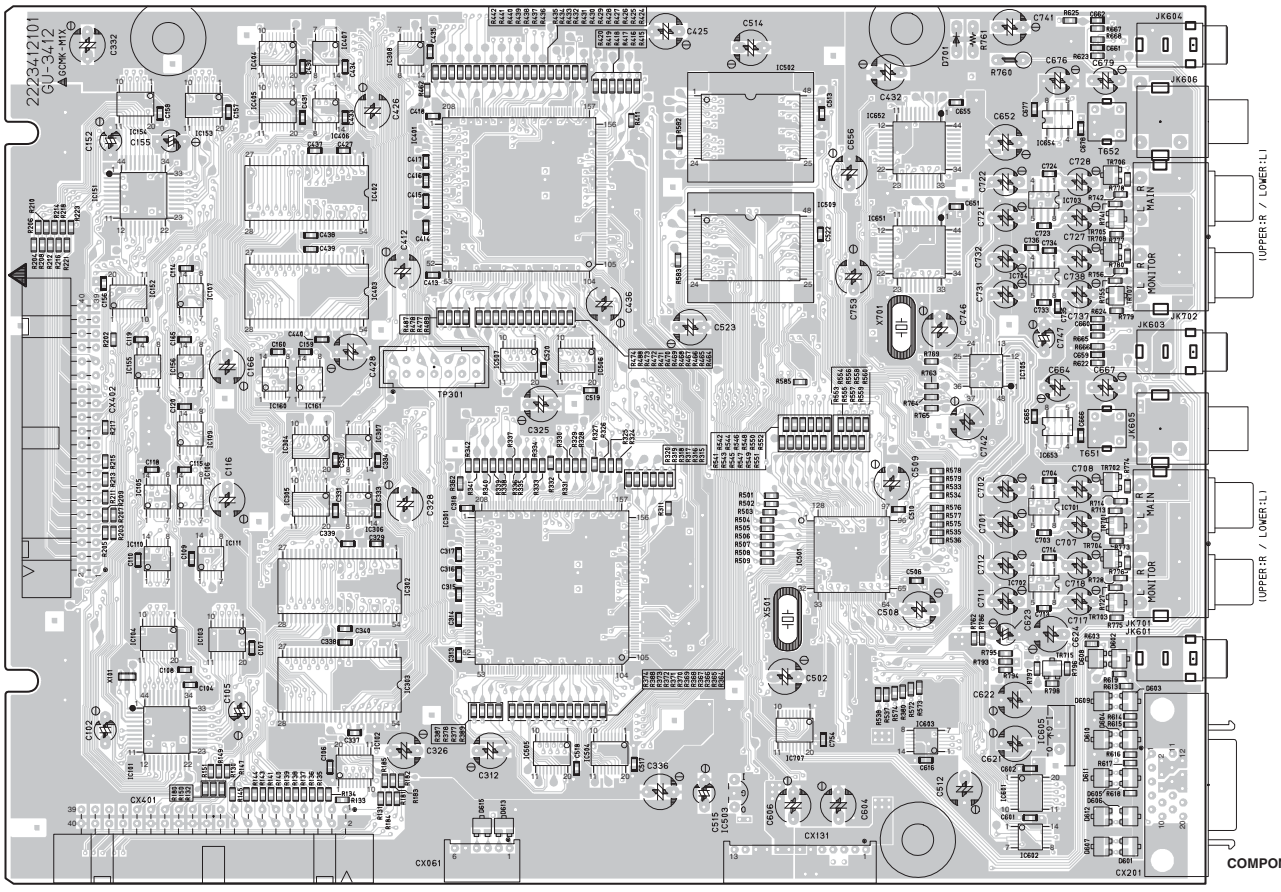
(10G~1G)

Anode Connection

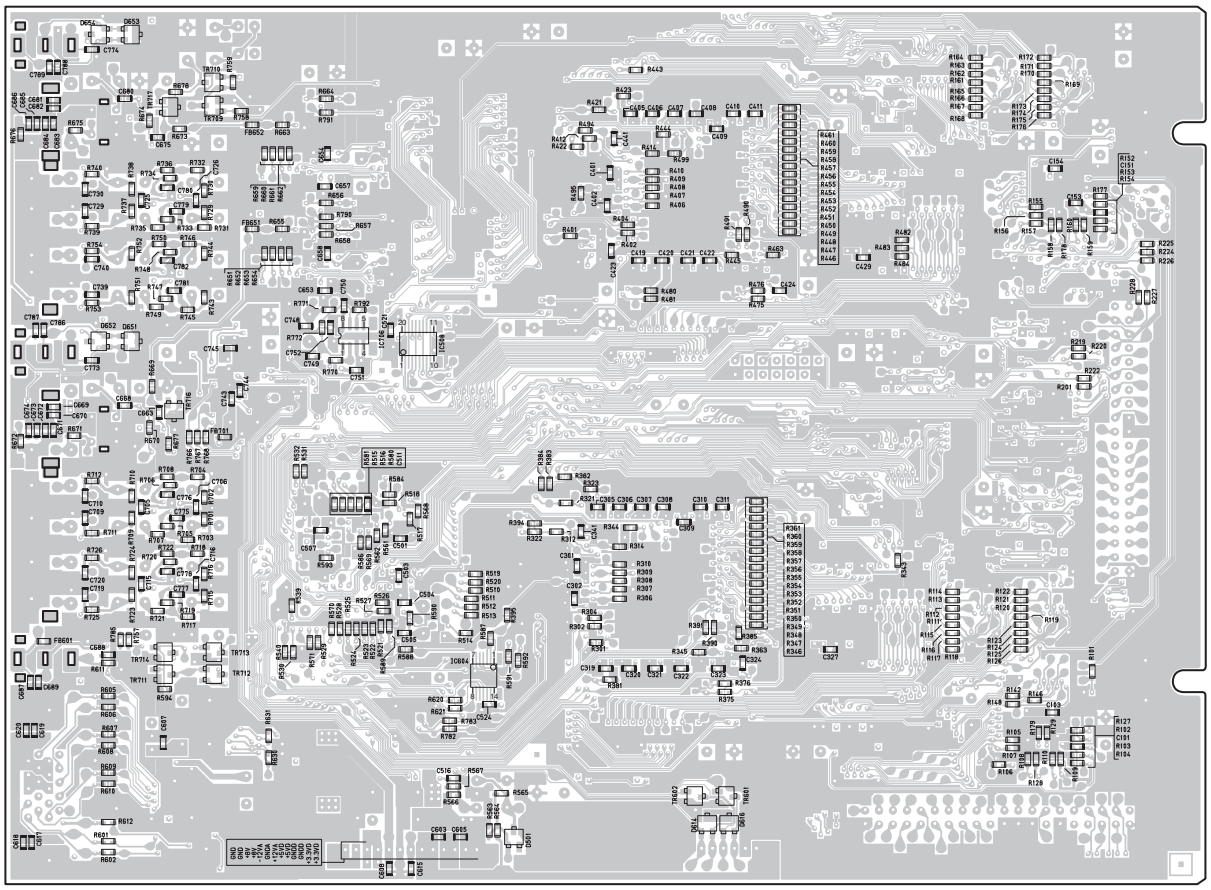
	24G	23G	22G	21G~1G		24G	23G	22G	21G~1G
P1	RVS	1d	1d	1-1	P21	Dp1	3b	3a	1-5
P2	DUMP	1e	1e	2-1	P22	2d	3a	TOTAL	2-5
P3	ECHO	1c	1c	3-1	P23	2e	4d	MEMO	3-5
P4	BRAKE	1g	1g	4-1	P24	2c	4e	PROG	4-5
P5	DRAG S.	1f	1f	5-1	P25	2g	4c	4d	5-5
P6		1b	1b	1-2	P26	2f	4g	4e	1-6
P7	A4	1a	1a	2-2	P27	2b	4f	4c	2-6
P8		2d	2d	2-2	P28	2a	4b	4g	2-6
P9	B	2e	2e	4-2	P29	Dp2	4a	4f	4-6
P10		2c	2c	5-2	P30	KEY ADJ.	m	4b	5-6
P11	A2	2g	2g	1-3	P31	3d	f	4a	1-7
P12		2f	2f	2-3	P32	3e	--	A1	2-7
P13	B	2b	2b	3-3	P33	3c	:		3-7
P14	1d	2a	2a	4-3	P34	3g	m	B	4-7
P15	1e	s	3d	5-3	P35	3f	s		5-7
P16	1c	3d	3e	1-4	P36	3b	REMAIN	A3	S-1
P17	1g	3e	3c	2-4	P37	3a	ELAPSED		S-2
P18	1f	3c	3g	3-4	P38	—	CONT.	B	S-3
P19	1b	3g	3f	4-4	P39	—	SINGLE		—
P20	1a	3f	3b	5-4					

PRINTED WIRING BOARDS

GU-3412 DSP P.W.B. UNIT Ass'y



GU-3412 DSP P.W.B. UNIT Ass'y

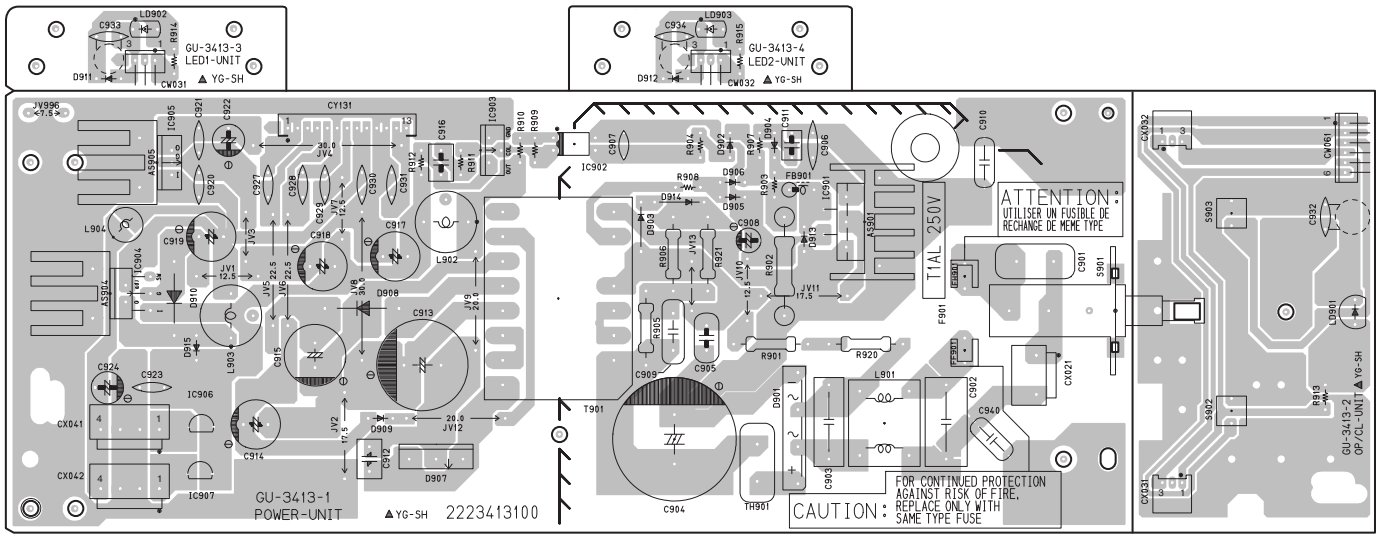


FOIL SIDE

1 2 3 4 5 6 7 8

A B C D E

GU-3413 POWER P.W.B. UNIT Ass'y

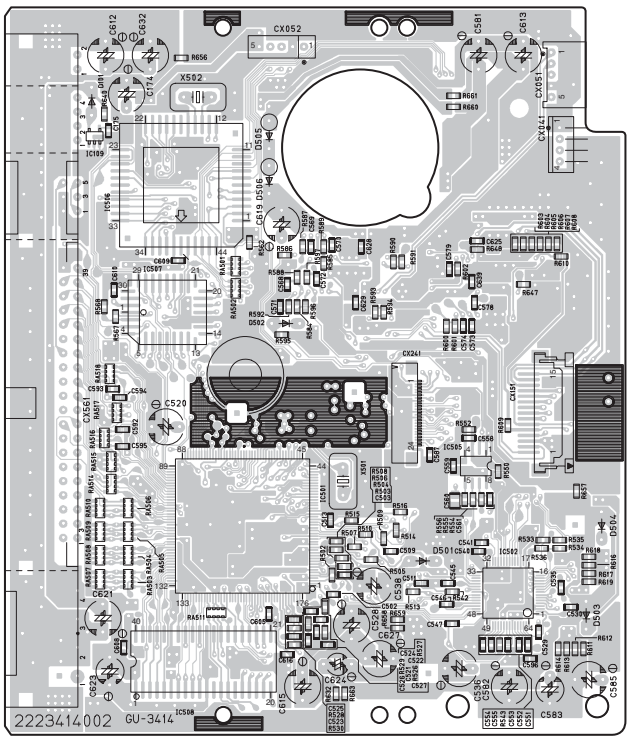


COMPONENT SIDE

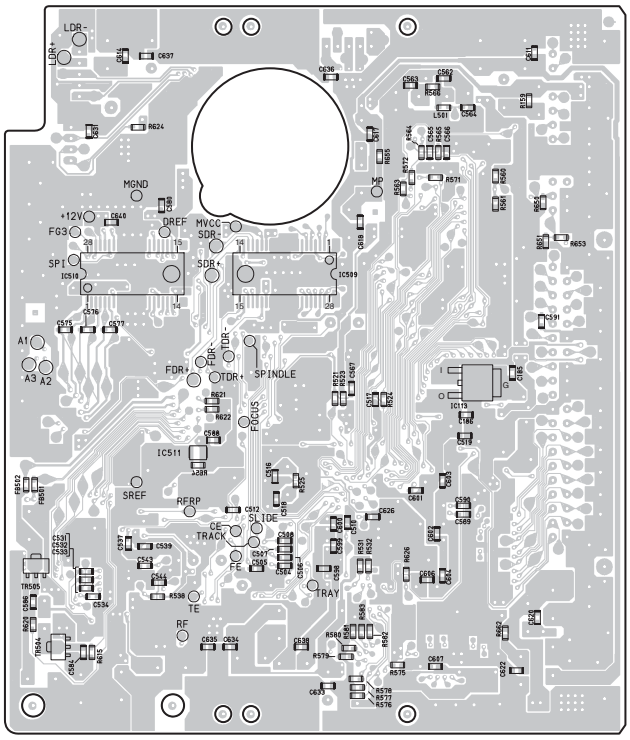
1 2 3 4 5 6 7 8

A B C D E

GU-3414 CD-ROM P.W.B. UNIT Ass'y

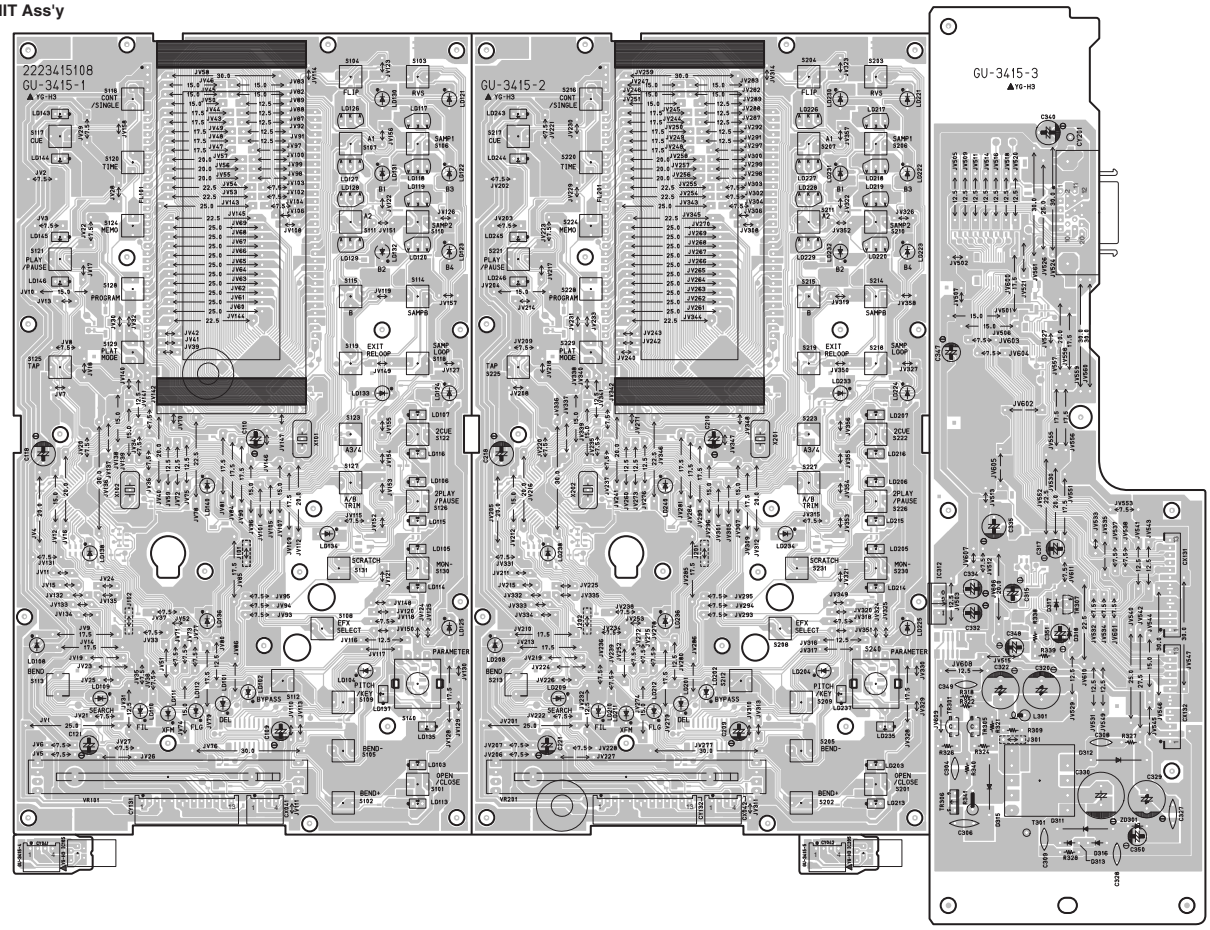


COMPONENT SIDE



FOIL SIDE

GU-3415 REMOTE P.W.B. UNIT Ass'y



COMPONENT SIDE

NOTE FOR PARTS LIST

- Part indicated with the mark "⊙" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "I" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including Carbon Film ±5%, 1/4W Type in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

WARNING:

Parts marked with this symbol ⚠ ▭ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

● Resistors

Ex.: RN (Type) 14K (Shape and performance) 2E (Power) 182 (Resistance) G (Allowable error) FR (Others)

RD : Carbon	2B : 1/8W	F : ±1%	P : Pulse-resistant type
RC : Composition	2E : 1/4W	G : ±2%	NL : Low noise type
RS : Metal oxide film	2H : 1/2W	J : ±5%	NB : Non-burning type
RW : Winding	3A : 1W	K : ±10%	FR : Fuse-resistor
RN : Metal film	3D : 2W	M : ±20%	F : Lead wire forming
RK : Metal mixture	3F : 3W		
	3H : 5W		

✻ **Resistance**

1 8 2 ⇒ 1800 ohm = 1.8 kohm
- 2: 2-digit effective number.
- 8: Indicates number of zeros after effective number.

• Units: ohm

1 R 2 ⇒ 1.2 ohm
- 2: 1-digit effective number.
- R: 2-digit effective number, decimal point indicated by R.

• Units: ohm

● Capacitors

Ex.: CE (Type) 04W (Shape and performance) 1H (Dielectric strength) 2R2 (Capacity) M (Allowable error) BP (Others)

CE : Aluminum foil electrolytic	0J : 6.3V	F : ±1%	HS : High stability type
CA : Aluminum solid electrolytic	1A : 10V	G : ±2%	BP : Non-polar type
CS : Tantalum electrolytic	1C : 16V	J : ±5%	HR : Ripple-resistant type
CQ : Film	1E : 25V	K : ±10%	DL : For change and discharge
CK : Ceramic	1V : 35V	M : ±20%	HF : For assuring high requency
CC : Ceramic	1H : 50V	Z : +80% –20%	U : UL part
CP : Oil	2A : 100V	P : +100% –0%	C : CSA part
CM : Mica	2B : 125V	C : ±0.25pF	W : UL-CSA type
CF : Metallized	2C : 160V	D : ±0.5pF	F : Lead wire forming
CH : Metallized	2D : 200V	= : Others	
	2E : 250V		
	2H : 500V		
	2J : 630V		

✻ **Capacity (electrolyte only)**

2 2 2 ⇒ 2200μF
- 2: 2-digit effective number.
- 2: Indicates number of zeros after effective number.

• Units: μF.

2 R 2 ⇒ 2.2μF
- 2: 1-digit effective number.
- R: 2-digit effective number, decimal point indicated by R.

• Units: μF.

✻ **Capacity (except electrolyte)**

2 2 2 ⇒ 2200pF=0.0022μF
- 22: 2-digit effective number.
- 2 (More than 2): Indicates number of zeros after effective number.

• Units: pF.

2 2 1 ⇒ 220pF
- 22: 2-digit effective number.
- 1 (0 or 1): Indicates number of zeros after effective number.

• Units: pF.

• When the dielectric strength is indicated in AC, "AC" is included after the dieelectric strength value.

PARTS LIST OF P.W.B. UNIT ASS'Y

GU-3412 DSP P.W.B. UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC102	262 2642 909	IC SN74LV573APW-EL2	
IC103,104	262 2640 901	IC SN74LV245APW-EL2	
IC105	262 2813 903	IC SN74AHCT08PW-EL2	
IC106	262 2516 909	IC SN74LV32APW-EL2	
IC107	262 2519 906	IC SN74LV00APW-EL2	
IC109	262 2517 908	IC SN74LV08APW-EL2	
IC110	262 2519 906	IC SN74LV00APW-EL2	
IC111	262 2518 907	IC SN74LV74APW-EL2	
IC152	262 2642 909	IC SN74LV573APW-EL2	
IC153,154	262 2640 901	IC SN74LV245APW-EL2	
IC155	262 2813 903	IC SN74AHCT08PW-EL2	
IC156	262 2516 909	IC SN74LV32APW-EL2	
IC160	262 2519 906	IC SN74LV00APW-EL2	
IC161	262 2518 907	IC SN74LV74APW-EL2	
IC301	262 3115 008	IC ADSP-21065L(MP3)	
IC302,303	262 3042 003	IC 128M SDRAM(TSOP)	
IC304,305	262 2642 909	IC SN74LV573APW-EL2	
IC306	262 2729 903	IC SN74LV02APW-EL2	
IC307	262 2516 909	IC SN74LV32APW-EL2	
IC308	262 2517 908	IC SN74LV08APW-EL2	
IC401	262 3115 008	IC ADSP-21065L(MP3)	
IC402,403	262 3042 003	IC 128M SDRAM(TSOP)	
IC404,405	262 2642 909	IC SN74LV573APW-EL2	
IC406	262 2729 903	IC SN74LV02APW-EL2	
IC407	262 2516 909	IC SN74LV32APW-EL2	
IC501	262 3044 001	IC MN102H730F	
IC502	262 3043 002	IC 4M FLASH MEMORY(70N)	
IC503	263 0913 905	IC PST600C TP	
IC504-507	262 2640 901	IC SN74LV245APW-EL2	
IC508	262 2959 906	IC SN74LV244APW	
IC509	262 3043 002	IC 4M FLASH MEMORY(70N)	
IC601	262 2640 901	IC SN74LV245APW-EL2	
IC602	262 2813 903	IC SN74AHCT08PW-EL2	
IC604	262 3117 909	IC SN74ALVC04PW	
IC605	263 0809 006	IC NJM7805FA(S)	
IC651,652	262 2465 005	IC SM5902AF	
IC653,654	262 1953 903	IC TC7WU04F	
IC701-704	263 0615 902	IC BA15218F-DXE2	
IC705	262 3045 000	IC PCM1608Y	
IC706	262 1953 903	IC TC7WU04F	
IC707	262 2640 901	IC SN74LV245APW-EL2	
TR601,602	269 0082 902	Transistor DTC114EKT96	
TR701-708	273 0460 905	Transistor KTC2875B-RTK	
TR709	269 0083 901	Transistor DTA114EKT96	
TR710,711	269 0082 902	Transistor DTC114EKT96	
TR712	269 0083 901	Transistor DTA114EKT96	
TR713	273 0437 909	Transistor 2SC2411K-T146	
TR714	269 0082 902	Transistor DTC114EKT96	
TR715	271 0260 905	Transistor 2SA1036KT146(S/R)	
TR716,717	273 0460 905	Transistor KTC2875B-RTK	
D501	276 0559 909	Diode DAP202KT146	
D601-606	276 0560 901	Diode DAN202KT146	
D607-612	276 0559 909	Diode DAP202KT146	
D651	276 0559 909	Diode DAP202KT146	
D652	276 0560 901	Diode DAN202KT146	
D653	276 0559 909	Diode DAP202KT146	
D654	276 0560 901	Diode DAN202KT146	
D701	276 0432 903	Diode 1SS270A TE (TAPE)	
RESISTORS GROUP			
R101	247 2003 947	Carbon chip 22 ohm 1/16W	RM73B--220JT
R102-105	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R106	247 2007 943	Carbon chip 1 kohm 1/16W	RM73B--102JT
R107	247 2009 925	Carbon chip 5.6 kohm 1/16W	RM73B--562JT
R108-110	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R111-126	247 2003 947	Carbon chip 22 ohm 1/16W	RM73B--220JT
R127-129	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R130-151	247 2003 989	Carbon chip 22 ohm 1/16W	RM73B--330JT
R152-155	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R156	247 2007 943	Carbon chip 1 kohm 1/16W	RM73B--102JT
R157	247 2009 925	Carbon chip 5.6 kohm 1/16W	RM73B--562JT
R158-160	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R161-176	247 2003 947	Carbon chip 22 ohm 1/16W	RM73B--220JT
R177-179	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R180-185	247 2003 989	Carbon chip 22 ohm 1/16W	RM73B--330JT
R201-228	247 2003 989	Carbon chip 22 ohm 1/16W	RM73B--330JT
R301,302	247 2005 903	Carbon chip 100 ohm 1/16W	RM73B--101JT
R304	247 2005 903	Carbon chip 100 ohm 1/16W	RM73B--101JT
R306-310	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R311,312	247 2005 903	Carbon chip 100 ohm 1/16W	RM73B--101JT
R314	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R315-321	247 2005 903	Carbon chip 100 ohm 1/16W	RM73B--101JT
R322,323	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R324-342	247 2005 903	Carbon chip 100 ohm 1/16W	RM73B--101JT
R343,344	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R345-362	247 2005 903	Carbon chip 100 ohm 1/16W	RM73B--101JT
R363	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R364-378	247 2005 903	Carbon chip 100 ohm 1/16W	RM73B--101JT
R380-384	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R385	247 2008 913	Carbon chip 2 kohm 1/16W	RM73B--202JT
R387-389	247 2005 903	Carbon chip 100 ohm 1/16W	RM73B--101JT

Ref. No.	Part No.	Part Name	Remarks
R390,391	247 2003 947	Carbon chip 22 ohm 1/16W	RM73B--220JT
R394	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R395	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT
R401,402	247 2005 903	Carbon chip 100 ohm 1/16W	RM73B--101JT
R404	247 2005 903	Carbon chip 100 ohm 1/16W	RM73B--101JT
R406-410	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R411,412	247 2005 903	Carbon chip 100 ohm 1/16W	RM73B--101JT
R414	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R415-421	247 2005 903	Carbon chip 100 ohm 1/16W	RM73B--101JT
R422,423	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R424-442	247 2005 903	Carbon chip 100 ohm 1/16W	RM73B--101JT
R443,444	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R445-462	247 2005 903	Carbon chip 100 ohm 1/16W	RM73B--101JT
R463	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R464-478	247 2005 903	Carbon chip 100 ohm 1/16W	RM73B--101JT
R480-484	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R487-489	247 2005 903	Carbon chip 100 ohm 1/16W	RM73B--101JT
R490,491	247 2003 947	Carbon chip 22 ohm 1/16W	RM73B--220JT
R494	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R495	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT
R499	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R501-509	247 2003 947	Carbon chip 22 ohm 1/16W	RM73B--220JT
R510-513	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R514	247 2010 956	Carbon chip 20 kohm 1/16W	RM73B--203JT
R515-530	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R531,532	247 2003 947	Carbon chip 22 ohm 1/16W	RM73B--220JT
R533-540	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R541-560	247 2003 947	Carbon chip 22 ohm 1/16W	RM73B--220JT
R561,562	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R564	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT
R565	247 2006 915	Carbon chip 470 ohm 1/16W	RM73B--271JT
R566	247 2007 943	Carbon chip 1 kohm 1/16W	RM73B--102JT
R567	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT
R568-581	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R582,583	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT
R584	247 2003 947	Carbon chip 22 ohm 1/16W	RM73B--220JT
R586	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R587,588	247 2003 989	Carbon chip 22 ohm 1/16W	RM73B--330JT
R589	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R590	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT
R591	247 2003 989	Carbon chip 22 ohm 1/16W	RM73B--330JT
R592	247 2003 947	Carbon chip 22 ohm 1/16W	RM73B--220JT
R593,594	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R601,602	247 2003 947	Carbon chip 22 ohm 1/16W	RM73B--220JT
R603	247 2005 903	Carbon chip 100 ohm 1/16W	RM73B--101JT
R605-610	247 2003 947	Carbon chip 22 ohm 1/16W	RM73B--220JT
R611	247 2008 913	Carbon chip 2 kohm 1/16W	RM73B--202JT
R612	247 2003 947	Carbon chip 22 ohm 1/16W	RM73B--220JT
R613-619	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT

Ref. No.	Part No.	Part Name	Remarks
R620,621	247 2005 903	Carbon chip 100 ohm 1/16W	RM73B--101JT
R622-625	247 2011 942	Carbon chip 47 kohm 1/16W	RM73B--473JT
R630,631	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT
R651-654	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R655	247 2005 987	Carbon chip 100 ohm 1/16W	RM73B--221JT
R656-658	247 2003 947	Carbon chip 22 ohm 1/16W	RM73B--220JT
R659-662	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R663	247 2005 987	Carbon chip 100 ohm 1/16W	RM73B--221JT
R664	247 2003 947	Carbon chip 22 ohm 1/16W	RM73B--220JT
R665-668	247 2007 943	Carbon chip 1 kohm 1/16W	RM73B--102JT
R669	247 2006 960	Carbon chip 470 ohm 1/16W	RM73B--471JT
R670	247 2014 965	Carbon chip 1 Mohm 1/16W	RM73B--105JT
R671	247 2004 975	Carbon chip 75 ohm 1/16W	RM73B--750JT
R672	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT
R673	247 2006 960	Carbon chip 470 ohm 1/16W	RM73B--471JT
R674	247 2014 965	Carbon chip 1 Mohm 1/16W	RM73B--105JT
R675	247 2004 975	Carbon chip 75 ohm 1/16W	RM73B--750JT
R676	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT
R677,678	247 2008 942	Carbon chip 2.7 kohm 1/16W	RM73B--272JT
R701,702	247 2010 998	Carbon chip 30 kohm 1/16W	RM73B--303JT
R703,704	247 2009 970	Carbon chip 9.1 kohm 1/16W	RM73B--912JT
R705,706	247 2009 938	Carbon chip 6.2 kohm 1/16W	RM73B--622JT
R707,708	247 2011 913	Carbon chip 36 kohm 1/16W	RM73B--363JT
R709,710	247 2010 998	Carbon chip 30 kohm 1/16W	RM73B--303JT
R711,712	247 2007 901	Carbon chip 680 ohm 1/16W	RM73B--681JT
R713,714	247 2008 942	Carbon chip 2.7 kohm 1/16W	RM73B--272JT
R715,716	247 2010 998	Carbon chip 30 kohm 1/16W	RM73B--303JT
R717,718	247 2009 970	Carbon chip 9.1 kohm 1/16W	RM73B--912JT
R719,720	247 2009 938	Carbon chip 6.2 kohm 1/16W	RM73B--622JT
R721,722	247 2011 913	Carbon chip 36 kohm 1/16W	RM73B--363JT
R723,724	247 2010 998	Carbon chip 30 kohm 1/16W	RM73B--303JT
R725,726	247 2007 901	Carbon chip 680 ohm 1/16W	RM73B--681JT
R727,728	247 2008 942	Carbon chip 2.7 kohm 1/16W	RM73B--272JT
R729,730	247 2010 998	Carbon chip 30 kohm 1/16W	RM73B--303JT
R731,732	247 2009 970	Carbon chip 9.1 kohm 1/16W	RM73B--912JT
R733,734	247 2009 938	Carbon chip 6.2 kohm 1/16W	RM73B--622JT
R735,736	247 2011 913	Carbon chip 36 kohm 1/16W	RM73B--363JT
R737,738	247 2010 998	Carbon chip 30 kohm 1/16W	RM73B--303JT
R739,740	247 2007 901	Carbon chip 680 ohm 1/16W	RM73B--681JT
R741,742	247 2008 942	Carbon chip 2.7 kohm 1/16W	RM73B--272JT
R743,744	247 2010 998	Carbon chip 30 kohm 1/16W	RM73B--303JT
R745,746	247 2009 970	Carbon chip 9.1 kohm 1/16W	RM73B--912JT
R747,748	247 2009 938	Carbon chip 6.2 kohm 1/16W	RM73B--622JT
R749,750	247 2011 913	Carbon chip 36 kohm 1/16W	RM73B--363JT
R751,752	247 2010 998	Carbon chip 30 kohm 1/16W	RM73B--303JT
R753,754	247 2007 901	Carbon chip 680 ohm 1/16W	RM73B--681JT
R755,756	247 2008 942	Carbon chip 2.7 kohm 1/16W	RM73B--272JT
R757	247 2006 960	Carbon chip 470 ohm 1/16W	RM73B--471JT
R758	247 2010 956	Carbon chip 20 kohm 1/16W	RM73B--203JT
R759	247 2012 996	Carbon chip 200 kohm 1/16W	RM73B--204JT
R760	244 2051 974	Metal oxide 1 kohm 1W(NB)	RS14B3A102JNBST(S)

Ref. No.	Part No.	Part Name	Remarks
R762	247 2006 960	Carbon chip 470 ohm 1/16W	RM73B--471JT
R763-770	247 2003 947	Carbon chip 22 ohm 1/16W	RM73B--220JT
R771	247 2006 986	Carbon chip 470 ohm 1/16W	RM73B--561JT
R772	247 2014 965	Carbon chip 1 Mohm 1/16W	RM73B--105JT
R773-780	247 2005 987	Carbon chip 100 ohm 1/16W	RM73B--221JT
R782,783	247 2003 947	Carbon chip 22 ohm 1/16W	RM73B--220JT
R785,786	247 2006 960	Carbon chip 470 ohm 1/16W	RM73B--471JT
R790,791	247 2003 947	Carbon chip 22 ohm 1/16W	RM73B--220JT
R792	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT
R794	247 2007 943	Carbon chip 1 kohm 1/16W	RM73B--102JT
R797	247 2007 943	Carbon chip 1 kohm 1/16W	RM73B--102JT
R798	247 2012 925	Carbon chip 100 kohm 1/16W	RM73B--104JT
CAPACITORS GROUP			
C101	257 0506 951	Ceramic chip 100pF/50V	CC73CH1H101JT
C102	254 4299 906	Electrolytic 10µF/16V	CE04W1C100MT(SRE)
C103,104	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C105	254 4299 906	Electrolytic 10µF/16V	CE04W1C100MT(SRE)
C106-110	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C114,115	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C116	254 4302 958	Electrolytic 47µF/10V	CE04W1A470MT(SRE)
C118-120	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C151	257 0506 951	Ceramic chip 100pF/50V	CC73CH1H101JT
C152	254 4299 906	Electrolytic 10µF/16V	CE04W1C100MT(SRE)
C153,154	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C155	254 4299 906	Electrolytic 10µF/16V	CE04W1C100MT(SRE)
C156-160	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C165	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C166	254 4302 958	Electrolytic 47µF/10V	CE04W1A470MT(SRE)
C301,302	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C305-311	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C312	254 4302 958	Electrolytic 47µF/10V	CE04W1A470MT(SRE)
C313-323	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C324	257 0506 951	Ceramic chip 100pF/50V	CC73CH1H101JT
C325,326	254 4302 958	Electrolytic 47µF/10V	CE04W1A470MT(SRE)
C327	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C328	254 4302 958	Electrolytic 47µF/10V	CE04W1A470MT(SRE)
C329-331	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C332	254 4302 958	Electrolytic 47µF/10V	CE04W1A470MT(SRE)
C333,334	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C336	254 4302 958	Electrolytic 47µF/10V	CE04W1A470MT(SRE)
C337-341	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C401,402	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C405-411	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C412	254 4302 958	Electrolytic 47µF/10V	CE04W1A470MT(SRE)
C413-423	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C424	257 0506 951	Ceramic chip 100pF/50V	CC73CH1H101JT
C425,426	254 4302 958	Electrolytic 47µF/10V	CE04W1A470MT(SRE)
C427	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C428	254 4302 958	Electrolytic 47µF/10V	CE04W1A470MT(SRE)

Ref. No.	Part No.	Part Name	Remarks
C429-431	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C432	254 4302 958	Electrolytic 47µF/10V	CE04W1A470MT(SRE)
C433-435	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C436	254 4302 958	Electrolytic 47µF/10V	CE04W1A470MT(SRE)
C437-441	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C501	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C502	254 4302 958	Electrolytic 47µF/10V	CE04W1A470MT(SRE)
C503	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C504,505	257 0503 941	Ceramic chip 12pF/50V	CC73CH1H120JT
C506	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C507	257 0506 951	Ceramic chip 100pF/50V	CC73CH1H101JT
C508,509	254 4302 958	Electrolytic 47µF/10V	CE04W1A470MT(SRE)
C510,511	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C512	254 4302 958	Electrolytic 47µF/10V	CE04W1A470MT(SRE)
C513	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C514	254 4302 958	Electrolytic 47µF/10V	CE04W1A470MT(SRE)
C515	254 4299 906	Electrolytic 10µF/16V	CE04W1C100MT(SRE)
C516	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102KT
C517-522	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C523	254 4302 958	Electrolytic 47µF/10V	CE04W1A470MT(SRE)
C524	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C601-603	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C604	254 4299 964	Electrolytic 47µF/16V	CE04W1C470MT(SRE)
C605	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C606	254 4302 974	Electrolytic 100µF/10V	CE04W1A101MT(SRE)
C607,608	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C615	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C617	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102KT
C618	257 0501 901	Ceramic chip 0.01µF/50V	CK73B1H103KT (1608)
C619	257 0511 904	Ceramic chip 0.01µF/50V	CK73F1H103ZT
C620	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102KT
C621	254 4536 957	Electrolytic 470µF/10V	CE04W1A471MT SMG/RE3
C622	254 4299 964	Electrolytic 47µF/16V	CE04W1C470MT(SRE)
C623	254 4538 955	Electrolytic 220µF/16V	CE04W1C221MT SMG/RE3
C624	254 4305 968	Electrolytic 1µF/50V	CE04W1H010MT(SRE)
C651	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C652	254 4302 974	Electrolytic 100µF/10V	CE04W1A101MT(SRE)
C653	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C654	257 0506 951	Ceramic chip 100pF/50V	CC73CH1H101JT
C655	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C656	254 4302 974	Electrolytic 100µF/10V	CE04W1A101MT(SRE)
C657	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C658	257 0506 951	Ceramic chip 100pF/50V	CC73CH1H101JT
C659-662	257 0508 917	Ceramic chip 470pF/50V	CC73CH1H471JT
C663	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102KT
C664	254 4536 928	Electrolytic 100µF/10V	CE04W1A101MT SMG/RE3
C665	257 0501 901	Ceramic chip 0.01µF/50V	CK73B1H103KT (1608)
C666	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C667	254 4254 925	Electrolytic 33µF/16V	CE04W1C330MT (SME)
C668	257 0501 901	Ceramic chip 0.01µF/50V	CK73B1H103KT (1608)

Ref. No.	Part No.	Part Name	Remarks
C669	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102KT
C670,671	257 0501 901	Ceramic chip 0.01µF/50V	CK73B1H103KT (1608)
C672	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C674	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C675	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102KT
C676	254 4536 928	Electrolytic 100µF/10V	CE04W1A101MT SMG/RE3
C677	257 0501 901	Ceramic chip 0.01µF/50V	CK73B1H103KT (1608)
C678	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C679	254 4254 925	Electrolytic 33µF/16V	CE04W1C330MT (SME)
C680	257 0501 901	Ceramic chip 0.01µF/50V	CK73B1H103KT (1608)
C681	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102KT
C682,683	257 0501 901	Ceramic chip 0.01µF/50V	CK73B1H103KT (1608)
C684	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C686	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C687-689	257 0508 917	Ceramic chip 470pF/50V	CC73CH1H471JT
C701,702	254 4538 900	Electrolytic 10µF/16V	CE04W1C100MT SMG/RE3
C703,704	257 0506 951	Ceramic chip 100pF/50V	CC73CH1H101JT
C705,706	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C707,708	254 4541 900	Electrolytic 10µF/25V	CE04W1E100MT SMG/RE3
C709,710	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102KT
C711,712	254 4538 900	Electrolytic 10µF/16V	CE04W1C100MT SMG/RE3
C713,714	257 0506 951	Ceramic chip 100pF/50V	CC73CH1H101JT
C715,716	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C717,718	254 4541 900	Electrolytic 10µF/25V	CE04W1E100MT SMG/RE3
C719,720	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102KT
C721,722	254 4538 900	Electrolytic 10µF/16V	CE04W1C100MT SMG/RE3
C723,724	257 0506 951	Ceramic chip 100pF/50V	CC73CH1H101JT
C725,726	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C727,728	254 4541 900	Electrolytic 10µF/25V	CE04W1E100MT SMG/RE3
C729,730	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102KT
C731,732	254 4538 900	Electrolytic 10µF/16V	CE04W1C100MT SMG/RE3
C733,734	257 0506 951	Ceramic chip 100pF/50V	CC73CH1H101JT
C735,736	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C737,738	254 4541 900	Electrolytic 10µF/25V	CE04W1E100MT SMG/RE3
C739,740	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102KT
C741	254 4538 955	Electrolytic 220µF/16V	CE04W1C221MT SMG/RE3
C742	254 4302 974	Electrolytic 100µF/10V	CE04W1A101MT(SRE)
C743	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C744	257 0506 951	Ceramic chip 100pF/50V	CC73CH1H101JT
C745	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C746	254 4302 958	Electrolytic 47µF/10V	CE04W1A470MT(SRE)
C747	254 4299 906	Electrolytic 10µF/16V	CE04W1C100MT(SRE)
C748,749	257 0503 967	Ceramic chip 15pF/50V	CC73CH1H150JT
C750	257 0511 904	Ceramic chip 0.01µF/50V	CK73F1H103ZT
C751	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C752	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102KT
C753	254 4302 958	Electrolytic 47µF/10V	CE04W1A470MT(SRE)
C754	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C773,774	257 0508 917	Ceramic chip 470pF/50V	CC73CH1H471JT
C775-782	257 0509 961	Ceramic chip 1500pF/50V	CK73B1H152KT
C786-789	257 0508 917	Ceramic chip 470pF/50V	CC73CH1H471JT

Ref. No.	Part No.	Part Name	Remarks	Q'ty
OTHER PARTS GROUP				
CX061	205 0355 062	6P KR connector base (L)		1
CX131	205 0480 034	13P KR connector base (L)		1
CX201	204 6716 000	20P D connector (MSY-20S)		1
CX401,402	205 0429 024	40P pin header		2
FB601	235 0130 903	Chip emifil (11A121)		1
FB651,652	235 0130 903	Chip emifil (11A121)		2
FB701	235 0130 903	Chip emifil (11A121)		1
JK601	204 8421 005	Mini jack		1
JK603,604	204 8421 005	Mini jack		2
JK605,606	204 8375 009	1P pin jack		2
JK701,702	204 8507 026	4P pin jack (Shied)		2
T651,652	231 8063 009	Pulse trans.		2
X101	399 0801 905	Ceramic 8 MHz	CSTCE8M00G52-RO	1
X501	399 0794 009	Crystal 32.00 MHz		1
X701	399 0165 007	Crystal 16.9344 MHz		1

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Note : The symbols in the column "Remarks" indicate the following destinations.
E3 : U.S.A. & Canada model
E2 : Europe model

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC901	265 0115 000	IC STR-F6676	
IC902	262 3047 008	IC PC123 Y-22	
IC903	263 1168 005	IC SE012N	
IC904	263 1169 004	IC SI-8050S	
IC905	263 1048 002	IC BA033T	
D901	276 0767 005	Diode RBV-406	
D902	276 0730 906	Diode AG01ZT (V1)	
D903	276 0724 909	Diode SARS01T (V1)	
D904-906	276 0730 906	Diode AG01ZT (V1)	
D907	276 0768 004	Diode FMB-36	
D908	276 0769 003	Diode RK-44	
D909	276 0730 906	Diode AG01ZT (V1)	
D910	276 0770 005	Diode RK-46	
D913	276 0730 906	Diode AG01ZT (V1)	
D914	276 0724 909	Diode SARS01T (V1)	
D915	276 0730 906	Diode AG01ZT (V1)	
LD901	393 9543 907	LED SLR-325VC (RED) TAPE	Red
LD902,903	393 9612 906	LED SELU5E20C(TP15)	Blue
TH901	279 0044 002	Thermistor NTH11D8R0LA	
RESISTORS GROUP			
R901	244 2675 716	Metal oxide 68 kohm 2W(NB)	RS14B3D683JNBF(ERG), for E3
R901	244 2675 732	Metal oxide 100 kohm 2W(NB)	RS14B3D104JNBF(ERG), for E2
R902	244 2677 002	Metal oxide 0.22 ohm 3W(NB)	RS14B3FR22JNBF(ERG)
R905	244 2675 732	Metal oxide 100 kohm 2W(NB)	RS14B3D104JNBF(ERG)
R906	244 2675 745	Metal oxide 100 ohm 2W(NB)	RS14B3D101JNBF(ERG)
R920	244 2675 732	Metal oxide 100 kohm 2W(NB)	RS14B3D104JNBF(ERG), for E2
R921	244 2675 745	Metal oxide 100 ohm 2W(NB)	RS14B3D101JNBF(ERG)
CAPACITORS GROUP			
⚠ C901	253 8022 707	Ceramic 0.01μF/250V(AC)	CK45F2EAC103MC
⚠ C902	256 8038 017	Metalized 0.22μF/250V	CF99--2EAC224M
⚠ C903	256 8038 004	Metalized 0.1μF/250V	CF99--2EAC104M
C904	254 4616 709	Electrolytic 220μF/400V	CE04W2G221MC25E(KMH)
C905	253 4546 711	Ceramic 220pF/2000V	CC45SL3D221JC
C906	253 4452 902	Ceramic 470pF/50V	CC45SL1H471JT
C907	253 9030 963	Ceramic 0.01μF/25V	CK45=1E103KT
C908	254 4423 905	Electrolytic 47μF/35V	CE04W1V470MT(KMG)
C909	253 8028 701	Ceramic 2200pF/1000V	CK45R3A222KC
⚠ C910	253 8029 700	Ceramic 2200pF/250V(AC)	CK45F2EAC222MC (KX)
C911	255 4201 984	Mylar film 560pF/50V	CQ93P1H561JT
C912	253 4548 706	Ceramic 1000pF/1000V	CC45R3A102KC
C913	254 4592 755	Electrolytic 6800μF/16V	CE04W1C682MCM35(LXV)
C914	254 4617 902	Electrolytic 220μF/16V	CE04W1C221MT(KMF)
C915	254 4592 742	Electrolytic 2200μF/16V	CE04W1C222MCK30(LXV)
C916	256 1058 971	Metalized 0.1μF/50V	CF93A1H104JT (JL)
C917	254 4592 726	Electrolytic 470μF/16V	CE04W1C471MCH20(LXV)
C918,919	254 4592 739	Electrolytic 1200μF/16V	CE04W1C122MCJ30(LXV)
C920,921	253 9039 906	Ceramic 0.1μF/25V	CK45=1E104ZT(DD-3)
C922	254 4533 950	Electrolytic 470μF/6.3V	CE04W0J471MT SMG/RE3
C923	253 9039 906	Ceramic 0.1μF/25V	CK45=1E104ZT(DD-3)
C924	254 4539 705	Electrolytic 1000μF/16V	CE04W1C102MC SMG/RE3
C927-934	253 9039 906	Ceramic 0.1μF/25V	CK45=1E104ZT(DD-3)
⚠ C940	253 8029 700	Ceramic 2200pF/250V(AC)	CK45F2EAC222MC (KX)

Ref. No.	Part No.	Part Name	Remarks	Q'ty
OTHER PARTS GROUP				
CX021	205 0581 001	2P VH connector base		1
CX031,032	205 0355 033	3P KR connector base (L)		2
CX041,042	205 0653 049	4P VH connector base		2
CY131	205 0375 039	13P connector base (KR-PH)		1
⚠ F901	206 1087 015	Fuse ET1A	for E3	1
⚠ F901	206 1087 028	Fuse ET2A	for E2	1
FB901	235 0049 900	Beads inductor		1
FF901	202 0040 909	Fuse clip		1
FH901	202 0040 909	Fuse clip		1
⚠ L901	235 0141 002	Line filter (PLA10A)		1
L902	235 0154 002	Coil (4.7μH)		1
L903	235 0155 001	Coil (56μH)		1
L904	235 0156 903	Coil (22μH)		1
⚠ S901	212 1176 015	Power switch (TV-5)		1
S902,903	212 5604 907	Tact switch		2
⚠ T901	233 6416 007	Switching trans.		1
	417 0476 023	Radiator		2
	417 0610 009	Heat sink		1
	471 3304 015	Screw 3x8 CBS-Z		2
	471 3305 027	Screw 3x10 CBS-B		1

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Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC109	262 3082 908	IC BD4743G	
IC113	263 1079 903	IC BA033FP	
IC501	262 3083 004	IC M5705	
IC502	262 3084 003	IC SP-3721A	
IC505	262 3085 905	IC TL3472	
IC507	262 3086 001	IC W29EE011P-90	
IC508	262 3087 903	IC M11B416256A-35J	
IC509	262 3088 902	IC BA5954FP	
IC510	262 3089 901	IC BD6670FM	
TR504,505	272 0160 901	Transistor 2SB1132T100Q	
D101	276 0401 905	Diode 1SS133T77 (TAPE)	
D502-504	276 0401 905	Diode 1SS133T77 (TAPE)	
RESISTORS GROUP			
R159	247 2005 987	Carbon chip 220 ohm 1/16W	RM73B--221JT 1608
R502	247 2010 956	Carbon chip 20 kohm 1/16W	RM73B--203JT 1608
R503	247 2011 955	Carbon chip 51 kohm 1/16W	RM73B--513JT 1608
R505-507	247 2008 968	Carbon chip 3.3 kohm 1/16W	RM73B--332JT 1608
R508	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT 1608
R509	247 2011 942	Carbon chip 47 kohm 1/16W	RM73B--473JT 1608
R510	247 2003 989	Carbon chip 33 ohm 1/16W	RM73B--330JT 1608
R513	247 2007 998	Carbon chip 1.6 kohm 1/16W	RM73B--162JT 1608
R514	247 2009 909	Carbon chip 4.7 kohm 1/16W	RM73B--472JT 1608
R515	247 2009 912	Carbon chip 5.1 kohm 1/16W	RM73B--512JT 1608
R516	247 2009 909	Carbon chip 4.7 kohm 1/16W	RM73B--472JT 1608
R521	247 2002 964	Carbon chip 10 ohm 1/16W	RM73B--100JT 1608
R523	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT 1608
R524	247 2002 964	Carbon chip 10 ohm 1/16W	RM73B--100JT 1608
R525	247 2014 965	Carbon chip 1 Mohm 1/16W	RM73B--105JT 1608
R527	247 2009 909	Carbon chip 4.7 kohm 1/16W	RM73B--472JT 1608
R528	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT 1608
R529	247 2009 912	Carbon chip 5.1 kohm 1/16W	RM73B--512JT 1608
R530	247 2007 969	Carbon chip 1.2 kohm 1/16W	RM73B--122JT 1608
R531	247 2012 925	Carbon chip 100 kohm 1/16W	RM73B--104JT 1608
R532	247 2011 968	Carbon chip 56 kohm 1/16W	RM73B--563JT 1608
R533	247 2009 996	Carbon chip 11 kohm 1/16W	RM73B--113JT 1608
R534,535	247 2007 969	Carbon chip 1.2 kohm 1/16W	RM73B--122JT 1608
R536	247 2009 996	Carbon chip 11 kohm 1/16W	RM73B--113JT 1608
R538	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT 1608
R542	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT 1608
R543	247 2019 931	Carbon chip 8.2 kohm 1/16W	RM73B--822FT 1608
R550	247 2007 985	Carbon chip 1.5 kohm 1/16W	RM73B--152JT 1608
R552	247 2019 931	Carbon chip 8.2 kohm 1/16W	RM73B--822FT 1608
R554	247 2011 968	Carbon chip 56 kohm 1/16W	RM73B--563JT 1608
R555	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT 1608
R556	247 2013 982	Carbon chip 470 kohm 1/16W	RM73B--474JT 1608

Ref. No.	Part No.	Part Name	Remarks
R562	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT 1608
R567	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT 1608
R584	247 2003 989	Carbon chip 33 ohm 1/16W	RM73B--330JT 1608
R585	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT 1608
R586	247 2011 900	Carbon chip 33 kohm 1/16W	RM73B--333JT 1608
R587	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT 1608
R588	247 2010 901	Carbon chip 12 kohm 1/16W	RM73B--123JT 1608
R589	247 2008 968	Carbon chip 3.3 kohm 1/16W	RM73B--332JT 1608
R590,591	247 2018 916	Carbon chip 1 ohm 1/16W	RM73B--010KT 1608
R592	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT 1608
R593,594	247 2018 916	Carbon chip 1 ohm 1/16W	RM73B--010KT 1608
R595	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT 1608
R596	247 2011 900	Carbon chip 33 kohm 1/16W	RM73B--333JT 1608
R597	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT 1608
R601	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT 1608
R602	247 2003 989	Carbon chip 33 ohm 1/16W	RM73B--330JT 1608
R603-606	247 2018 987	Carbon chip 2 ohm 1/16W	RM73B--2R0KT 1608
R609,610	247 2005 929	Carbon chip 120 ohm 1/16W	RM73B--121JT 1608
R611-614	247 2004 904	Carbon chip 39 ohm 1/16W	RM73B--390JT 1608
R615	247 2009 912	Carbon chip 5.1 kohm 1/16W	RM73B--512JT 1608
R616-619	247 2004 904	Carbon chip 39 ohm 1/16W	RM73B--390JT 1608
R620	247 2007 943	Carbon chip 1 kohm 1/16W	RM73B--102JT 1608
R621	247 2007 969	Carbon chip 1.2 kohm 1/16W	RM73B--122JT 1608
R622	247 2006 960	Carbon chip 470 ohm 1/16W	RM73B--471JT 1608
R626	247 2008 926	Carbon chip 2.2 kohm 1/16W	RM73B--222JT 1608
R632	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT 1608
R640	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT 1608
R647	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT 1608
R648	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT 1608
R650,651	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT 1608
R653	247 2008 968	Carbon chip 3.3 kohm 1/16W	RM73B--332JT 1608
R654,655	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT 1608
R660-663	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT 1608
RA501,502	247 9002 909	Chip network 33 ohm 1/16W	MNR14=330JE0AB
RA503-506	247 9007 904	Chip network 100 ohm 1/16W	MNR14=101JE0
RA507-510	247 9007 917	Chip network 10 kohm 1/16W	MNR14=103JE0
RA511	247 9002 909	Chip network 33 ohm 1/16W	MNR14=330JE0AB
RA514	247 9002 909	Chip network 33 ohm 1/16W	MNR14=330JE0AB
RA515	247 9007 917	Chip network 10 kohm 1/16W	MNR14=103JE0
RA516	247 9002 909	Chip network 33 ohm 1/16W	MNR14=330JE0AB
RA517	247 9007 917	Chip network 10 kohm 1/16W	MNR14=103JE0
RA518	247 9002 909	Chip network 33 ohm 1/16W	MNR14=330JE0AB
CAPACITORS GROUP			
C174	254 4299 964	Electrolytic 47μF/16V	CE04W1C470MT (SRE)
C185,186	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104ZT 1608
C502	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102KT 1608
C503	257 0510 950	Ceramic chip 6800pF/50V	CK73B1H682KT 1608
C505,506	257 0508 917	Ceramic chip 470pF/50V	CC73CH1H471JT 1608

Ref. No.	Part No.	Part Name	Remarks
C507,508	257 0516 941	Ceramic chip 0.047µF/25V	CK73B1E473KT 1608
C509,510	257 0516 954	Ceramic chip 0.1µF/25V	CK73B1E104KT 1608
C511,512	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102KT 1608
C513	257 0516 954	Ceramic chip 0.1µF/25V	CK73B1E104KT 1608
C516	257 0504 908	Ceramic chip 22pF/50V	CC73CH1H220JT 1608
C517	257 0504 982	Ceramic chip 47pF/50V	CC73CH1H470JT 1608
C518	257 0504 908	Ceramic chip 22pF/50V	CC73CH1H220JT 1608
C519	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT 1608
C520	254 4300 963	Electrolytic 100µF/6.3V	CE04W0J101MT (SRE)
C521-523	257 0516 954	Ceramic chip 0.1µF/25V	CK73B1E104KT 1608
C524	257 0504 982	Ceramic chip 47pF/50V	CC73CH1H470JT 1608
C525	257 0508 933	Ceramic chip 560pF/50V	CC73CH1H561JT 1608
C526	257 0516 941	Ceramic chip 0.047µF/25V	CK73B1E473KT 1608
C527	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT 1608
C528	254 4300 963	Electrolytic 100µF/6.3V	CE04W0J101MT (SRE)
C529	257 0508 959	Ceramic chip 680pF/50V	CC73CH1E681JT 1608
C530	257 0516 954	Ceramic chip 0.1µF/25V	CK73B1E104KT 1608
C531-534	257 0508 959	Ceramic chip 680pF/50V	CC73CH1E681JT 1608
C535	257 0506 951	Ceramic chip 100pF/50V	CC73CH1H101JT 1608
C536	254 4306 963	Electrolytic 100µF/6.3V	CE04W0J101MT (SRE)
C537	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT 1608
C538	254 4533 921	Electrolytic 100µF/6.3V	CE04W0J101MT SMG/RE3
C539	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT 1608
C540	257 0510 934	Ceramic chip 4700pF/50V	CK73B1H472KT 1608
C541	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102KT 1608
C543	257 0507 918	Ceramic chip 180pF/50V	CC73CH1H181JT 1608
C544	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102KT 1608
C545	257 0516 954	Ceramic chip 0.1µF/25V	CK73B1E104KT 1608
C546	257 0516 941	Ceramic chip 0.047µF/25V	CK73B1E473KT 1608
C547	257 0508 959	Ceramic chip 680pF/50V	CC73CH1E681JT 1608
C551-555	257 0516 954	Ceramic chip 0.1µF/25V	CK73B1E104KT 1608
C558	257 0516 954	Ceramic chip 0.1µF/25V	CK73B1E104KT 1608
C559	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT 1608
C560	257 0033 903	Ceramic chip 0.47µF/25V	CK73B1E474KT 2125
C561	257 0504 940	Ceramic chip 33pF/50V	CC73CH1H330JT 1608
C568	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT 1608
C569	257 0506 951	Ceramic chip 100pF/50V	CC73CH1H101JT 1608
C570	257 0510 934	Ceramic chip 4700pF/50V	CK73B1H472KT 1608
C571,572	257 0506 951	Ceramic chip 100pF/50V	CC73CH1H101JT 1608
C573,574	257 0516 954	Ceramic chip 0.1µF/25V	CK73B1E104KT 1608
C575-577	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102KT 1608
C578	257 0516 954	Ceramic chip 0.1µF/25V	CK73B1E104KT 1608
C579,580	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT 1608
C581	254 4193 947	Electrolytic 100µF/16V	CE04W1C101MT (SRA)
C582	254 4300 963	Electrolytic 100µF/6.3V	CE04W0J101MT (SRE)
C583	254 4299 919	Electrolytic 22µF/16V	CE04W1C220MT(SRE)
C584	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102KT 1608
C585	254 4300 963	Electrolytic 100µF/6.3V	CE04W0J101MT (SRE)
C586	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102KT 1608
C587,588	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT 1608
C589,590	257 0503 925	Ceramic chip 10pF/50V	CC73CH1H100DT 1608
C592-595	257 0503 925	Ceramic chip 10pF/50V	CC73CH1H100DT 1608

Ref. No.	Part No.	Part Name	Remarks
C596	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT 1608
C598-608	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT 1608
C610,611	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT 1608
C612	254 4193 947	Electrolytic 100µF/16V	CE04W1C101MT (SRA)
C613	254 4300 963	Electrolytic 100µF/6.3V	CE04W0J101MT (SRE)
C614	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT 1608
C615	254 4300 963	Electrolytic 100µF/6.3V	CE04W0J101MT (SRE)
C616	257 0508 917	Ceramic chip 470pF/50V	CC73CH1H471JT 1608
C617,618	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT 1608
C619	254 4538 942	Electrolytic 100µF/16V	CE04W1C101MT SMG/RE3
C620	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT 1608
C621	254 4300 963	Electrolytic 100µF/6.3V	CE04W0J101MT (SRE)
C622	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT 1608
C623	254 4300 963	Electrolytic 100µF/6.3V	CE04W0J101MT (SRE)
C624	254 4300 963	Electrolytic 100µF/6.3V	CE04W0J101MT (SRE)
C625	257 0501 901	Ceramic chip 0.01µF/50V	CK73B1H103KT 1608
C626	257 0510 934	Ceramic chip 4700pF/50V	CK73B1H472KT 1608
C627	254 4300 963	Electrolytic 100µF/6.3V	CE04W0J101MT (SRE)
C628,629	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT 1608
C632	254 4193 947	Electrolytic 100µF/16V	CE04W1C101MT (SRA)
C633-640	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT 1608

OTHER PARTS GROUP				Q'ty
CX051	205 0355 059	5P KR connector base (L)		1
CX151	205 1224 901	15P FFC base (P=1)		1
CX241	205 1225 900	24P FFC base (P=1)		1
CX561	205 1231 004	IDE connector (56P)		1
FB501,502	235 0130 903	Chip emifil (11A121)		2
X501	399 0790 906	Ceramic 33 MHz	CSALS33M8X51-A0	1

GU-3415 REMOTE P.W.B. UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC101	262 3048 007	IC ML9207-01GP	
IC103	262 2745 903	IC BU2090F(E2)	
IC105	269 0203 008	Photo interrupter GP1A70R	
IC201	262 3048 007	IC ML9207-01GP	
IC203	262 2745 903	IC BU2090F(E2)	
IC205	269 0203 008	Photo interrupter GP1A70R	
IC301	262 3116 900	IC SN74AHC245APW	
IC302	262 2813 903	IC SN74AHCT08PW-EL2	
IC310	262 3130 902	IC UPC1934GR-1JG-E1	
IC312	263 0809 006	IC NJM7805FA(S)	
TR101,102	272 0081 909	Transistor 2SB766S(TAPE)	
TR103-105	269 0048 904	Transistor DTC143EK-T96	
TR201,202	272 0081 909	Transistor 2SB766S(TAPE)	
TR203-205	269 0048 904	Transistor DTC143EK-T96	
TR301	273 0465 900	Transistor 2SC2002-T	
TR305	271 0307 907	Transistor 2SA953-T	
TR306	275 0108 001	FET 2SK2414	
TR307	269 0093 904	Transistor DTA144ES (47K-47K) T	
D101-104	276 0559 909	Diode DAP202KT146	
D201-204	276 0559 909	Diode DAP202KT146	
D301-304	276 0560 901	Diode DAN202KT146	
D305-309	276 0559 909	Diode DAP202KT146	
D310	276 0560 901	Diode DAN202KT146	
D312	276 0766 705	Diode RK14 LF-C4	
D313	276 0727 906	Diode AL01ZT (V1)	
D315	276 0766 705	Diode RK14 LF-C4	
D317,318	276 0432 903	Diode 1SS270A TE (TAPE)	
ZD301	276 0643 941	Zener diode MTZJ3.6A T77	
LD101	393 9610 908	LED SLR342YC(TB7)	Yellow
LD102	393 9609 906	LED SLR342DC(TB7)	Orange
LD103	393 9605 900	LED SEL6427EP(TP5)	Green
LD104	393 9608 907	LED SLR342MC(TB7)	Green
LD105	393 9606 909	LED SEL6927A(TP5)	Orange
LD106	393 9605 900	LED SEL6427EP(TP5)	Green
LD107	393 9604 901	LED SEL6227S(TP5)	Red
LD108	393 9608 907	LED SLR342MC(TB7)	Green
LD109	393 9609 906	LED SLR342DC(TB7)	Orange
LD110-112	393 9610 908	LED SLR342YC(TB7)	Yellow
LD113	393 9605 900	LED SEL6427EP(TP5)	Green
LD114	393 9606 909	LED SEL6927A(TP5)	Orange
LD115	393 9605 900	LED SEL6427EP(TP5)	Green

Ref. No.	Part No.	Part Name	Remarks
LD116	393 9604 901	LED SEL6227S(TP5)	Red
LD117-120	393 9602 903	LED SML79423C(TP15)	Orange/Green
LD121	393 9608 907	LED SLR342MC(TB7)	Green
LD122,123	393 9607 908	LED SLR342VC(TB7)	Red
LD124	393 9608 907	LED SLR342MC(TB7)	Green
LD125	393 9609 906	LED SLR342DC(TB7)	Orange
LD126-129	393 9602 903	LED SML79423C(TP15)	Orange/Green
LD130	393 9608 907	LED SLR342MC(TB7)	Green
LD131,132	393 9607 908	LED SLR342VC(TB7)	Red
LD133	393 9608 907	LED SLR342MC(TB7)	Green
LD134	393 9603 902	LED SEL2510C(TP6)	Green
LD136	393 9611 907	LED L-934MBCK(BLUE)	Blue
LD138	393 9611 907	LED L-934MBCK(BLUE)	Blue
LD140	393 9611 907	LED L-934MBCK(BLUE)	Blue
LD143,144	393 9604 901	LED SEL6227S(TP5)	Red
LD145,146	393 9605 900	LED SEL6427EP(TP5)	Green
LD201	393 9610 908	LED SLR342YC(TB7)	Yellow
LD202	393 9609 906	LED SLR342DC(TB7)	Orange
LD203	393 9605 900	LED SEL6427EP(TP5)	Green
LD204	393 9608 907	LED SLR342MC(TB7)	Green
LD205	393 9606 909	LED SEL6927A(TP5)	Orange
LD206	393 9605 900	LED SEL6427EP(TP5)	Green
LD207	393 9604 901	LED SEL6227S(TP5)	Red
LD208	393 9608 907	LED SLR342MC(TB7)	Green
LD209	393 9609 906	LED SLR342DC(TB7)	Orange
LD210-212	393 9610 908	LED SLR342YC(TB7)	Yellow
LD213	393 9605 900	LED SEL6427EP(TP5)	Green
LD214	393 9606 909	LED SEL6927A(TP5)	Orange
LD215	393 9605 900	LED SEL6427EP(TP5)	Green
LD216	393 9604 901	LED SEL6227S(TP5)	Red
LD217-220	393 9602 903	LED SML79423C(TP15)	Orange/Green
LD221	393 9608 907	LED SLR342MC(TB7)	Green
LD222,223	393 9607 908	LED SLR342VC(TB7)	Red
LD224	393 9608 907	LED SLR342MC(TB7)	Green
LD225	393 9609 906	LED SLR342DC(TB7)	Orange
LD226-229	393 9602 903	LED SML79423C(TP15)	Orange/Green
LD230	393 9608 907	LED SLR342MC(TB7)	Green
LD231,232	393 9607 908	LED SLR342VC(TB7)	Red
LD233	393 9608 907	LED SLR342MC(TB7)	Green
LD234	393 9603 902	LED SEL2510C(TP6)	Green
LD236	393 9611 907	LED L-934MBCK(BLUE)	Blue
LD238	393 9611 907	LED L-934MBCK(BLUE)	Blue
LD240	393 9611 907	LED L-934MBCK(BLUE)	Blue
LD243,244	393 9604 901	LED SEL6227S(TP5)	Red
LD245,246	393 9605 900	LED SEL6427EP(TP5)	Green
RESISTORS GROUP			
R101,102	247 2007 901	Carbon chip 680 ohm 1/16W	RM73B--681JT
R103	247 2007 927	Carbon chip 820 ohm 1/16W	RM73B--821JT
R104	247 2007 901	Carbon chip 680 ohm 1/16W	RM73B--681JT
R105	247 2006 931	Carbon chip 360 ohm 1/16W	RM73B--361JT

Ref. No.	Part No.	Part Name	Remarks
R106	247 2005 990	Carbon chip 240 ohm 1/16W	RM73B--241JT
R107	247 2006 944	Carbon chip 390 ohm 1/16W	RM73B--391JT
R108,109	247 2007 901	Carbon chip 680 ohm 1/16W	RM73B--681JT
R110-112	247 2006 999	Carbon chip 620 ohm 1/16W	RM73B--621JT
R113-120	247 2005 945	Carbon chip 150 ohm 1/16W	RM73B--151JT
R121-125	247 2006 960	Carbon chip 470 ohm 1/16W	RM73B--471JT
R126-133	247 2005 945	Carbon chip 150 ohm 1/16W	RM73B--151JT
R134-137	247 2006 960	Carbon chip 470 ohm 1/16W	RM73B--471JT
R138	247 2005 974	Carbon chip 200 ohm 1/16W	RM73B--201JT
R139-145	247 2007 943	Carbon chip 1 kohm 1/16W	RM73B--102JT
R146-148	247 2005 987	Carbon chip 220 ohm 1/16W	RM73B--221JT
R149	247 2007 901	Carbon chip 680 ohm 1/16W	RM73B--681JT
R150	247 2005 990	Carbon chip 240 ohm 1/16W	RM73B--241JT
R151	247 2005 958	Carbon chip 160 ohm 1/16W	RM73B--161JT
R152-155	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R156,157	247 2003 947	Carbon chip 22 ohm 1/16W	RM73B--220JT
R158	247 2011 942	Carbon chip 47 kohm 1/16W	RM73B--473JT
R159-163	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R164	247 2011 942	Carbon chip 47 kohm 1/16W	RM73B--473JT
R165	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R166-168	247 2011 942	Carbon chip 47 kohm 1/16W	RM73B--473JT
R169-172	247 2003 947	Carbon chip 22 ohm 1/16W	RM73B--220JT
R173-176	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R177-179	247 2011 942	Carbon chip 47 kohm 1/16W	RM73B--473JT
R180	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R181,182	247 2012 925	Carbon chip 100 kohm 1/16W	RM73B--104JT
R184,185	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT
R188	247 2005 974	Carbon chip 200 ohm 1/16W	RM73B--201JT
R189	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT
R199	247 2007 985	Carbon chip 1.5 kohm 1/16W	RM73B--152JT
R201,202	247 2007 901	Carbon chip 680 ohm 1/16W	RM73B--681JT
R203	247 2007 927	Carbon chip 820 ohm 1/16W	RM73B--821JT
R204	247 2007 901	Carbon chip 680 ohm 1/16W	RM73B--681JT
R205,206	247 2005 990	Carbon chip 240 ohm 1/16W	RM73B--241JT
R207	247 2006 944	Carbon chip 390 ohm 1/16W	RM73B--391JT
R208,209	247 2007 901	Carbon chip 680 ohm 1/16W	RM73B--681JT
R210-212	247 2006 999	Carbon chip 620 ohm 1/16W	RM73B--621JT
R213-220	247 2005 945	Carbon chip 150 ohm 1/16W	RM73B--151JT
R221-225	247 2006 960	Carbon chip 470 ohm 1/16W	RM73B--471JT
R226-233	247 2005 945	Carbon chip 150 ohm 1/16W	RM73B--151JT
R234-237	247 2006 960	Carbon chip 470 ohm 1/16W	RM73B--471JT
R238	247 2005 974	Carbon chip 200 ohm 1/16W	RM73B--201JT
R239-245	247 2007 943	Carbon chip 1 kohm 1/16W	RM73B--102JT
R246-248	247 2005 987	Carbon chip 220 ohm 1/16W	RM73B--221JT
R249	247 2007 901	Carbon chip 680 ohm 1/16W	RM73B--681JT
R250	247 2005 990	Carbon chip 240 ohm 1/16W	RM73B--241JT
R251	247 2005 958	Carbon chip 160 ohm 1/16W	RM73B--161JT
R252-255	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R256,257	247 2003 947	Carbon chip 22 ohm 1/16W	RM73B--220JT
R258	247 2011 942	Carbon chip 47 kohm 1/16W	RM73B--473JT
R259-263	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT

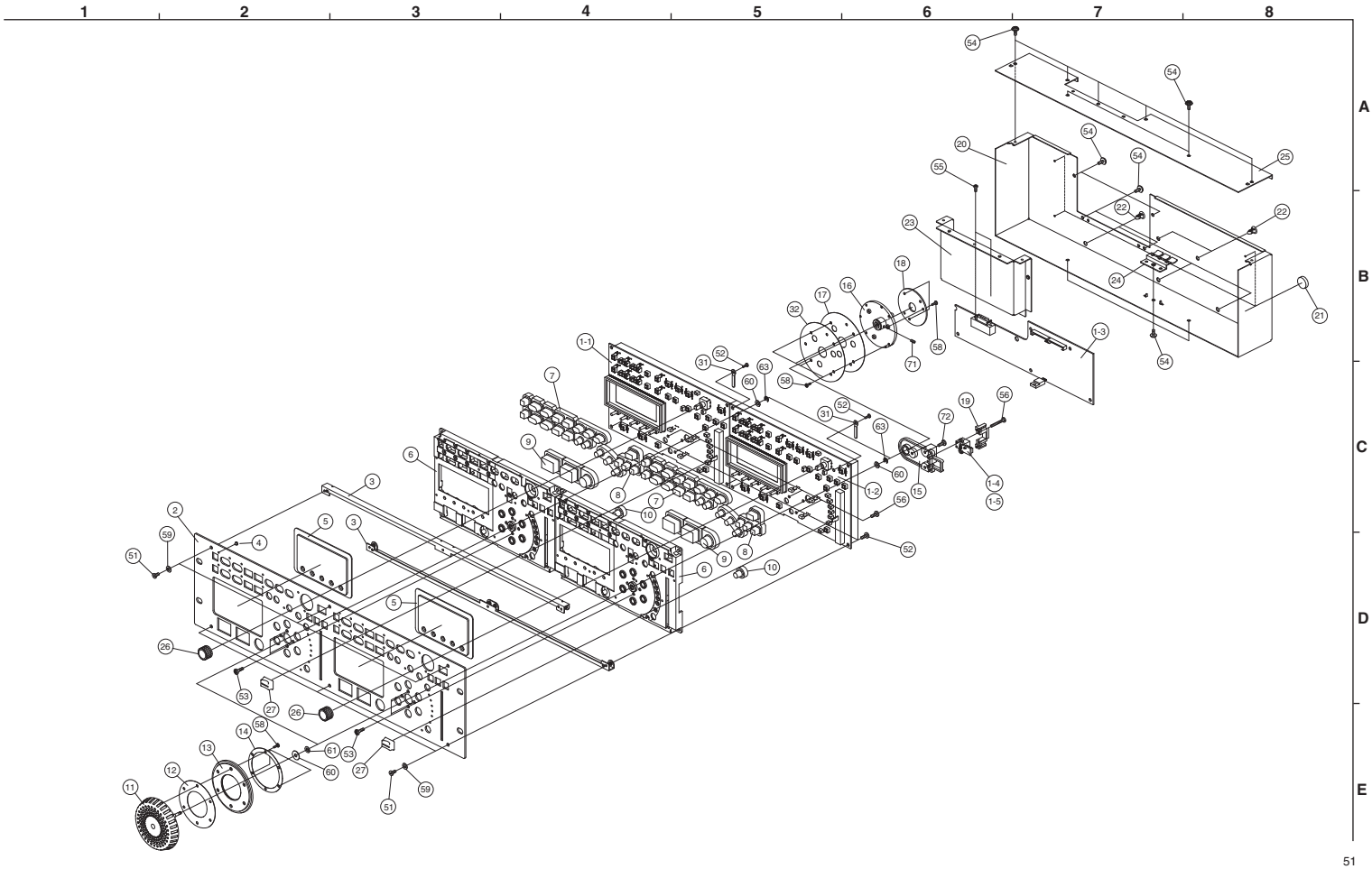
Ref. No.	Part No.	Part Name	Remarks
R264	247 2011 942	Carbon chip 47 kohm 1/16W	RM73B--473JT
R265	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R266-268	247 2011 942	Carbon chip 47 kohm 1/16W	RM73B--473JT
R269-272	247 2003 947	Carbon chip 22 ohm 1/16W	RM73B--220JT
R273-276	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R277-279	247 2011 942	Carbon chip 47 kohm 1/16W	RM73B--473JT
R280	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R281,282	247 2012 925	Carbon chip 100 kohm 1/16W	RM73B--104JT
R284,285	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT
R288	247 2005 974	Carbon chip 200 ohm 1/16W	RM73B--201JT
R289	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT
R299	247 2007 985	Carbon chip 1.5 kohm 1/16W	RM73B--152JT
R301-307	247 2003 947	Carbon chip 22 ohm 1/16W	RM73B--220JT
R311	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT
R312	247 2012 925	Carbon chip 100 kohm 1/16W	RM73B--104JT
R313,314	247 2005 903	Carbon chip 100 ohm 1/16W	RM73B--101JT
R315,316	247 2003 947	Carbon chip 22 ohm 1/16W	RM73B--220JT
R320	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT
R325	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R331	247 2010 943	Carbon chip 18 kohm 1/16W	RM73B--183JT
R332	247 2009 983	Carbon chip 10 kohm 1/16W	RM73B--103JT
R333	247 2008 913	Carbon chip 2 kohm 1/16W	RM73B--202JT
R334	247 2010 901	Carbon chip 12 kohm 1/16W	RM73B--123JT
R335	247 2008 913	Carbon chip 2 kohm 1/16W	RM73B--202JT
R336	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT
R337	247 2010 901	Carbon chip 12 kohm 1/16W	RM73B--123JT
R341	244 2051 987	Metal oxide 4.7 ohm 1W(NB)	RS14B3A4R7JNBST(S)
R401-417	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT
R451-467	247 2018 903	Carbon chip 0 ohm 1/16W	RM73B--0R0KT
VR101	211 0908 003	Slide volume	Pitch control
VR201	211 0908 003	Slide volume	Pitch control
CAPACITORS GROUP			
C101,102	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102KT
C103	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104ZT
C104	254 4302 945	Electrolytic 33μF/10V	CE04W1A330MT(SRE)
C105	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104ZT
C108	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104ZT
C109	254 4302 974	Electrolytic 100μF/10V	CE04W1A101MT(SRE)
C110	254 4302 958	Electrolytic 47μF/10V	CE04W1A470MT(SRE)
C111	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104ZT
C112	257 0506 951	Ceramic chip 100pF/50V	CC73CH1H101JT
C113	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104ZT
C114	257 0506 951	Ceramic chip 100pF/50V	CC73CH1H101JT
C115-117	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104ZT
C118	254 4302 958	Electrolytic 47μF/10V	CE04W1A470MT(SRE)
C119	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104ZT
C121	254 4302 958	Electrolytic 47μF/10V	CE04W1A470MT(SRE)
C122	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104ZT

Ref. No.	Part No.	Part Name	Remarks
C123-126	257 0511 920	Ceramic chip 0.047µF/50V	CK73F1H473ZT
C127	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C128	257 0501 901	Ceramic chip 0.01µF/50V	CK73B1H103KT (1608)
C129	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C130	257 0501 901	Ceramic chip 0.01µF/50V	CK73B1H103KT (1608)
C131	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C132	257 0501 901	Ceramic chip 0.01µF/50V	CK73B1H103KT (1608)
C133	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C134	257 0501 901	Ceramic chip 0.01µF/50V	CK73B1H103KT (1608)
C135-137	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C201,202	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102KT
C203	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C204	254 4302 945	Electrolytic 33µF/10V	CE04W1A330MT(SRE)
C205	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C208	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C209	254 4302 974	Electrolytic 100µF/10V	CE04W1A101MT(SRE)
C210	254 4302 958	Electrolytic 47µF/10V	CE04W1A470MT(SRE)
C211	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C212	257 0506 951	Ceramic chip 100pF/50V	CC73CH1H101JT
C213	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C214	257 0506 951	Ceramic chip 100pF/50V	CC73CH1H101JT
C215-217	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C218	254 4302 958	Electrolytic 47µF/10V	CE04W1A470MT(SRE)
C219	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C221	254 4302 958	Electrolytic 47µF/10V	CE04W1A470MT(SRE)
C222	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C223-226	257 0511 920	Ceramic chip 0.047µF/50V	CK73F1H473ZT
C227	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C228	257 0501 901	Ceramic chip 0.01µF/50V	CK73B1H103KT (1608)
C229	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C230	257 0501 901	Ceramic chip 0.01µF/50V	CK73B1H103KT (1608)
C231	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C232	257 0501 901	Ceramic chip 0.01µF/50V	CK73B1H103KT (1608)
C233	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C234	257 0501 901	Ceramic chip 0.01µF/50V	CK73B1H103KT (1608)
C235-237	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C301-303	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C304	253 1179 903	Ceramic 100pF/50V	CK45B1H101KT(DD-3)
C305	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C306	253 9039 906	Ceramic 0.1µF/25V	CK45=1E104ZT(DD-3)
C310	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C312	257 0507 976	Ceramic chip 330pF/50V	CC73CH1H331JT
C314	257 0507 976	Ceramic chip 330pF/50V	CC73CH1H331JT
C315	254 4524 972	Electrolytic 4.7µF/50V	CE04W1H4R7MT SMG/RE3
C316	257 0516 954	Ceramic chip 0.1µF/25V	CK73B1E104KT
C317	254 4538 942	Electrolytic 100µF/16V	CE04W1C101MT SMG/RE3
C318,319	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C320	254 4592 739	Electrolytic 1200µF/16V	CE04W1C122MCJ30(LXV)
C321	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C322	254 4592 739	Electrolytic 1200µF/16V	CE04W1C122MCJ30(LXV)

Ref. No.	Part No.	Part Name	Remarks
C327	253 9039 906	Ceramic 0.1µF/25V	CK45=1E104ZT(DD-3)
C328	253 9037 908	Ceramic 0.1µF/50V	CK45=1H104ZT(BC)
C329	254 4592 904	Electrolytic 120µF/16V	CE04W1C121MTF11(LXV)
C330	254 4592 768	Electrolytic 56µF/50V	CE04W1H560MCF15(LXV)
C331	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C332	254 4538 942	Electrolytic 100µF/16V	CE04W1C101MT SMG/RE3
C333	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C334	254 4538 942	Electrolytic 100µF/16V	CE04W1C101MT SMG/RE3
C337	257 0501 901	Ceramic chip 0.01µF/50V	CK73B1H103KT (1608)
C338	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102KT
C339	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C340	254 4299 964	Electrolytic 47µF/16V	CE04W1C470MT(SRE)
C341	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102KT
C342	257 0511 904	Ceramic chip 0.01µF/50V	CK73F1H103ZT
C343-346	257 0512 903	Ceramic chip 0.1µF/25V	CK73F1E104ZT
C347	254 4538 939	Electrolytic 47µF/16V	CE04W1C470MT SMG/RE3
C349	253 1180 934	Ceramic 1200pF/50V	CK45B1H122KT(DD-3)
C350	254 4538 939	Electrolytic 47µF/16V	CE04W1C470MT SMG/RE3
C351	254 4524 972	Electrolytic 4.7µF/50V	CE04W1H4R7MT SMG/RE3

OTHER PARTS GROUP				Q'ty
CX041,042	205 0355 046	4P KR connector base (L)		2
CX131	205 0375 039	13P connector base (KR-PH)		1
CX132	205 1236 009	13P connector base (RD)		1
CY041,042	205 0355 046	4P KR connector base (L)		2
CY131,132	205 0480 034	13P KR connector base (L)		2
CY201	204 6716 000	20P D connector (MSY-20S)		1
FL101	393 8063 006	FLT (24-ST-09GN)		1
FL201	393 8063 006	FLT (24-ST-09GN)		1
S101-131	212 5604 907	Tact switch		31
S140	212 0410 002	Rotary encoder-jog		1
S201-231	212 5604 907	Tact switch		31
S240	212 0410 002	Rotary encoder-jog		1
⚠T301	233 6413 000	DC-DC converter trans.		1
X101	399 0661 909	Ceramic 4.00 MHz	CSTS4.00MG06	1
X102	399 0805 901	Ceramic 16.0 MHz	CSTLS16M0X53-A0	1
X201	399 0661 909	Ceramic 4.00 MHz	CSTS4.00MG06	1
X202	399 0805 901	Ceramic 16.0 MHz	CSTLS16M0X53-A0	1

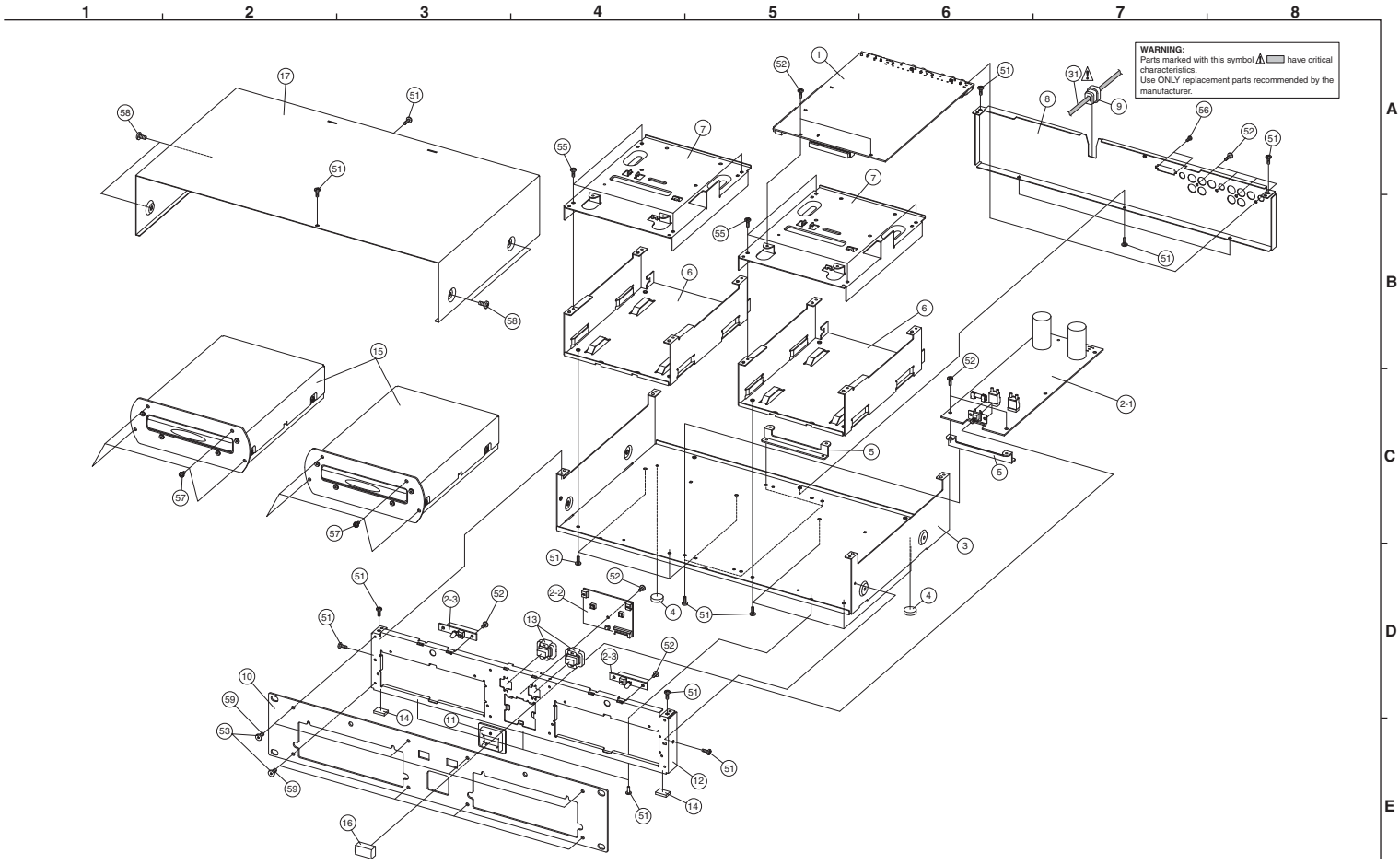
EXPLODED VIEW OF REMOTE CONTROL UNIT (RC-D90)



PARTS LIST OF REMOTE CONTROL UNIT (RC-D90)

Ref. No.	Part No.	Part Name	Remarks	Q'ty
1	GU-3415	Remote P.W.B. unit Ass'y		1
1-1	–	Panel P.W.B. unit		
1-2	–	Panel P.W.B. unit		
1-3	–	Connect P.W.B. unit		
1-6	–	Sensor P.W.B. unit		
1-7	–	Sensor P.W.B. unit		
2	144 2800 100	RC front panel		1
3	412 4925 009	RC front bracket		2
4	143 1072 004	Lens		36
5	146 2278 107	Window		2
6	146 2279 203	Inner panel Ass'y		2
7	119 0114 009	Rubber key (Function)		2
8	119 0115 008	Rubber key (Pitch bend)		2
9	119 0116 007	Rubber key (Play/Pause)		2
10	119 0117 006	Rubber key (Mode)		2
11	112 0890 102	Jog dial Ass'y		2
12	441 1960 007	Reflect plate		2
13	143 1144 000	Jog ring		2
14	441 1961 006	Reflect ring		2
15	443 1572 006	S. holder (GP1A70R)		2
16	421 0796 100	Wheel Ass'y		2
17	421 0797 002	Scale disk		2
18	441 1962 005	Wheel plate		2
19	443 1573 005	S. cover (GP1A70R)		2
20	105 1399 002	Cover		1
21	461 0706 127	Foot sheet		4
22	449 0070 002	Locking card spacer		5
23	105 1400 001	Connect cover		1
24	412 4812 015	Spring plate		1
25	102 0658 004	Top cover		1
26	112 0891 004	Knob (MARU)		2
27	113 1925 008	Fader knob		2
31	445 8028 009	Cord holder		2
32	441 1970 000	Disk fix plate		2
59	475 1178 009	3 washer-B		6
60	475 1185 005	Washer 10/4.5		4
61	475 1177 000	Washer		2
63	476 1003 009	3 E ring		2
SCREWS				
51	471 9050 020	Screw 3X6 FHHS-B		6
52	473 7002 021	Screw 3X8 CBTS(S)-B		8
53	473 7508 017	Screw 3X10 CBTS(P)-B		8
54	473 8007 083	Cup screw 3x8		14
55	471 1204 036	Screw 2.6X8 CPS-NiB		2
56	473 7505 007	Screw 2.6X8 CBTS(P)-Z		30
58	473 7506 022	Screw 2X6 CBTS(P)-B		20
71	471 3103 012	Screw 2.6X6 CBS		2
72	473 7505 052	Screw 2.6X10 CBTS(P)-B		6

EXPLODED VIEW OF MAIN UNIT



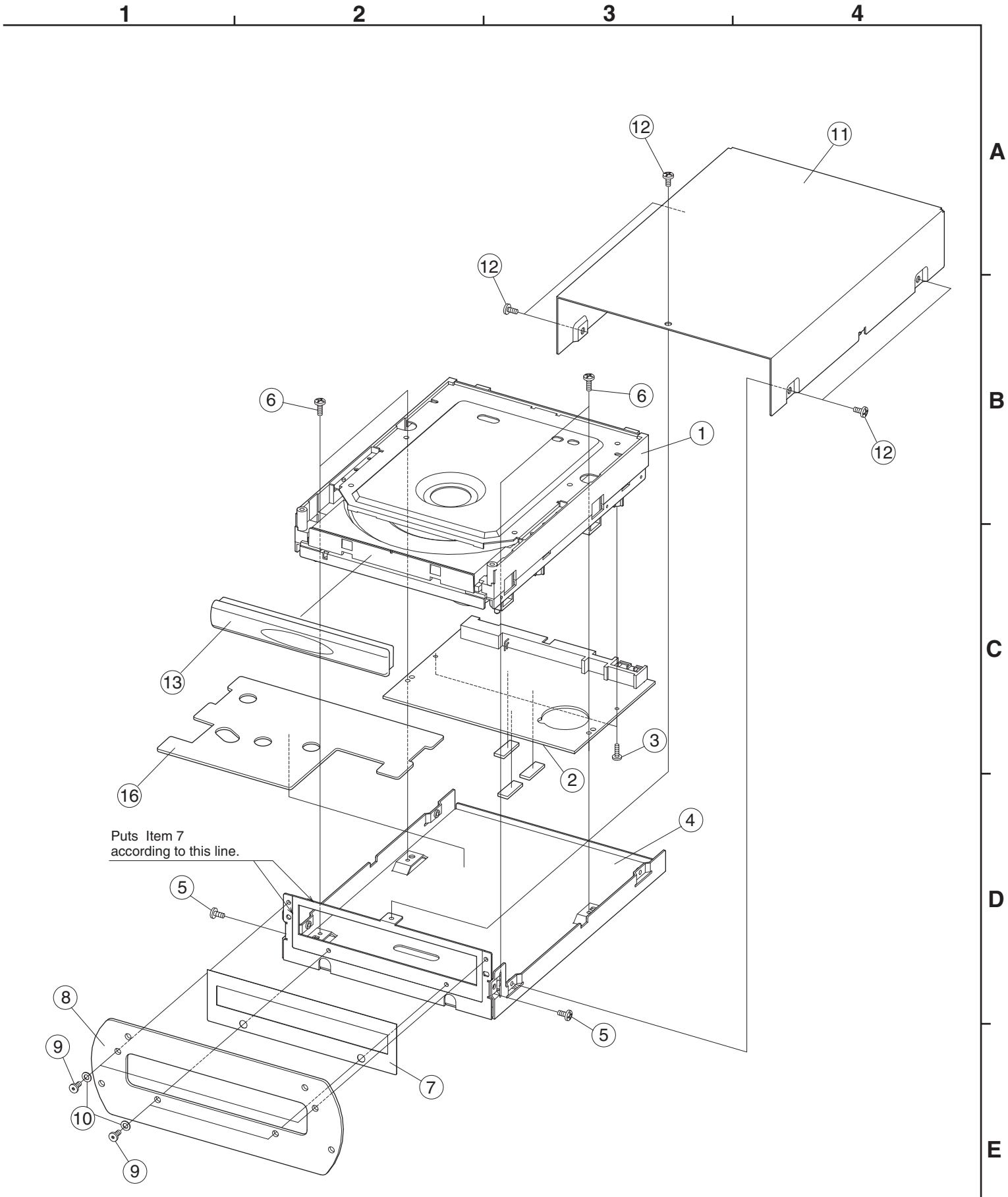
PARTS LIST OF MAIN UNIT

Note : The symbols in the column "Remarks" indicate the following destinations.
E3: U.S.A. & Canada model
E2: Europe model

Ref. No.	Part No.	Part Name	Remarks	Q'ty
1	GU-3412	DSP P.W.B. unit Ass'y		1
2	GU-3413	Power P.W.B. unit Ass'y		1
2-1	–	Power P.W.B. unit		
2-2	–	OP/CL switch P.W.B. unit		
2-3	–	LED P.W.B. unit		
3	411 2005 009	Chassis		1
4	461 0706 127	Foot sheet		2
5	412 4921 003	PWB bracket		2
6	412 4922 002	Mecha. bracket		2
7	412 4923 001	Mecha. cover		2
8	105 1398 003	Back panel		1
9	445 0084 009	Cord bush	for E3	1
9	445 0056 008	Cord bush	for E2	1
10	144 2798 005	Front panel		1
11	146 2275 003	P. switch knob guide Ass'y		1
12	441 1959 005	Front sub panel		1
13	119 0096 004	Rubber key (C)		2
14	461 0740 002	Sheet		2
15	FG- 9000	Drive unit		2
16	113 1689 001	P. switch knob		1
17	102 0425 253	Top cover		1
★ 21	415 0335 032	PWB support		1
★ 22	445 0033 005	Wire clamp band		5
★ 23	445 0123 009	Clamp band (PLT2I)		2
★ 24	445 0122 000	Clamp plate (FCPI2)		4
⚠ 31	206 2155 001	AC cord with connector	for E3	1
⚠ 31	206 2089 106	AC cord with connector	for E2	1
★ 32	203 6577 000	4P LC-VH connector cord		1
★ 33	203 6577 013	4P LC-VH connector cord		1
★ 34	204 6719 007	40P flat cable		1
★ 35	204 6719 010	40P flat cable		1
★ 41	513 3796 008	Fuse label	for E2	1
★ 42	513 3744 018	Rating sheet	for E3	1
★ 42	513 3744 005	Rating sheet	for E2	1
★ 43	513 2303 007	Version label		1
★ 44	513 1519 009	Manufac. date label	for E3	1
★ 45	513 0985 003	Inst. label	for E2	1
★ 46	513 3776 002	E3 label	for E3	1
★ 47	513 2521 009	CE label	for E2	1
★ 48	513 3384 009	C-UL mark US (813)	for E3	1
★ 49	513 3253 004	C-tick label	for E2	1
★ 50	513 3159 001	FCC/class B caution	for E3	1
59	475 1178 009	3 washer-B		8

Ref. No.	Part No.	Part Name	Remarks	Q'ty
SCREWS				
51	473 7015 005	Screw 3X6 CBTS (S)-B		26
52	473 7002 005	Screw 3X6 CBTS(S)-Z		11
53	471 9050 020	Screw 3X6 FHHS-B		8
54	473 7508 017	Screw 3X10 CBTS(P)-B		4
55	471 3301 021	Screw 3X4 CBS-B		8
56	471 1204 036	Screw 2.6X8 CPS-NiB		2
57	471 1832 013	Screw 3X8 SEMS		8
58	477 0263 005	3P. swelling screw		4

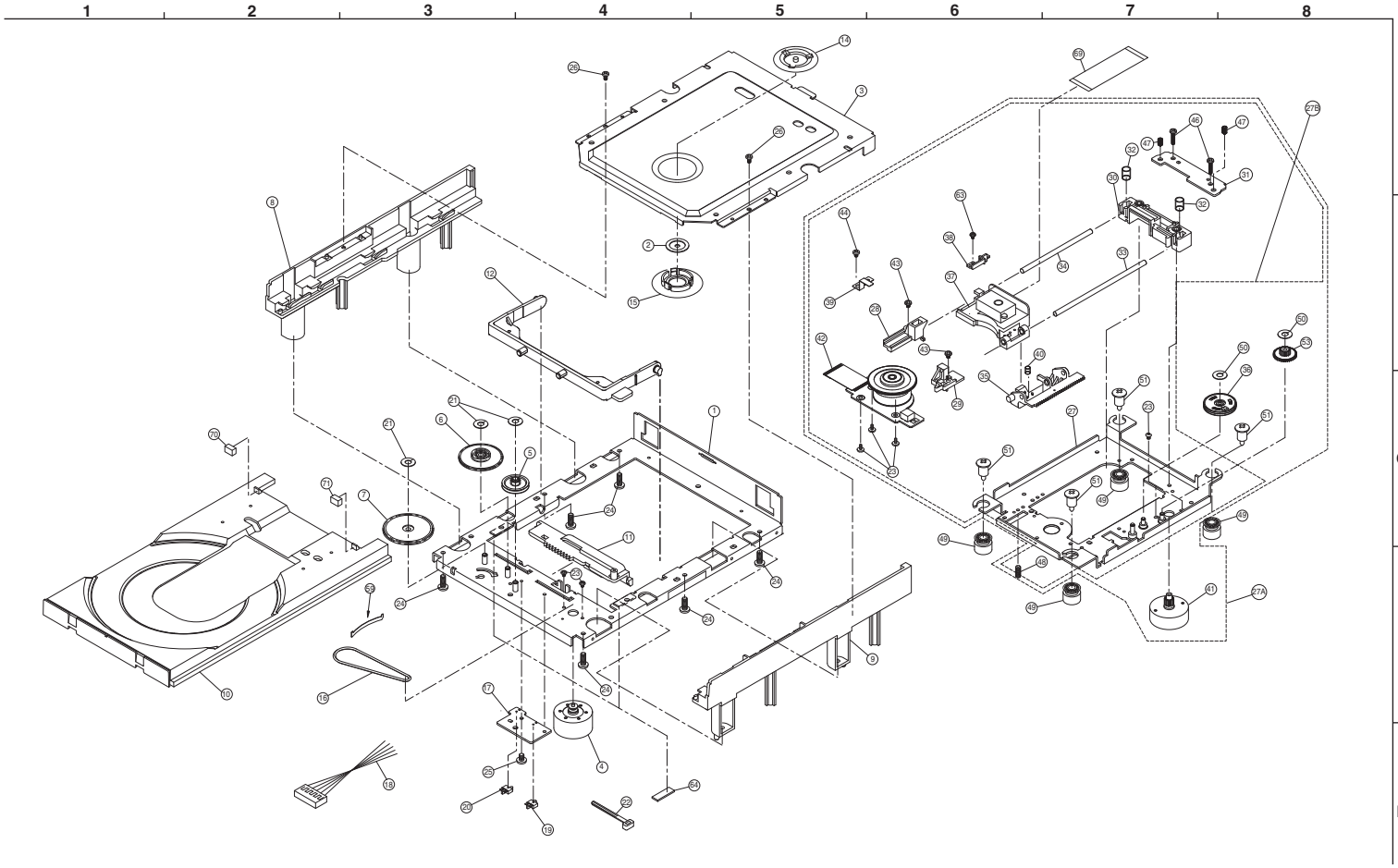
EXPLODED VIEW OF CD DRIVE UNIT (FG-9000)



PARTS LIST OF CD DRIVE UNIT

Ref. No.	Part No.	Part Name	Remarks	Q'ty
1	9KC 2A06 5A	CD mecha. Unit TD-5HP-D2		1
2	GU-3414	CD-ROM P.W.B. unit Ass'y		1
4	412 4924 000	Drive bracket		1
7	415 0876 009	Blind sheet		1
8	144 2799 004	Drive panel		1
10	475 1178 009	3 washer-B		4
11	102 0657 005	Drive cover		1
13	146 2277 001	Loader panel		1
16	417 0630 005	Heat sink		1
★ 21	513 2065 002	E2 laser caution		1
★ 22	513 3797 007	Connect label		1
SCREWS				
3	473 7506 019	Screw 2X6 CBTS(P)-Z		2
5	473 7001 035	Screw 2.6X6 CBTS(S)-Z		2
6	473 7400 005	Cup screw 2.6X8(S)-Z		4
9	471 9050 020	Screw 3X6 FHHS-B		4
12	473 7002 005	Screw 3X6 CBTS(S)-Z		5

EXPLODED VIEW OF CD MECHANISM

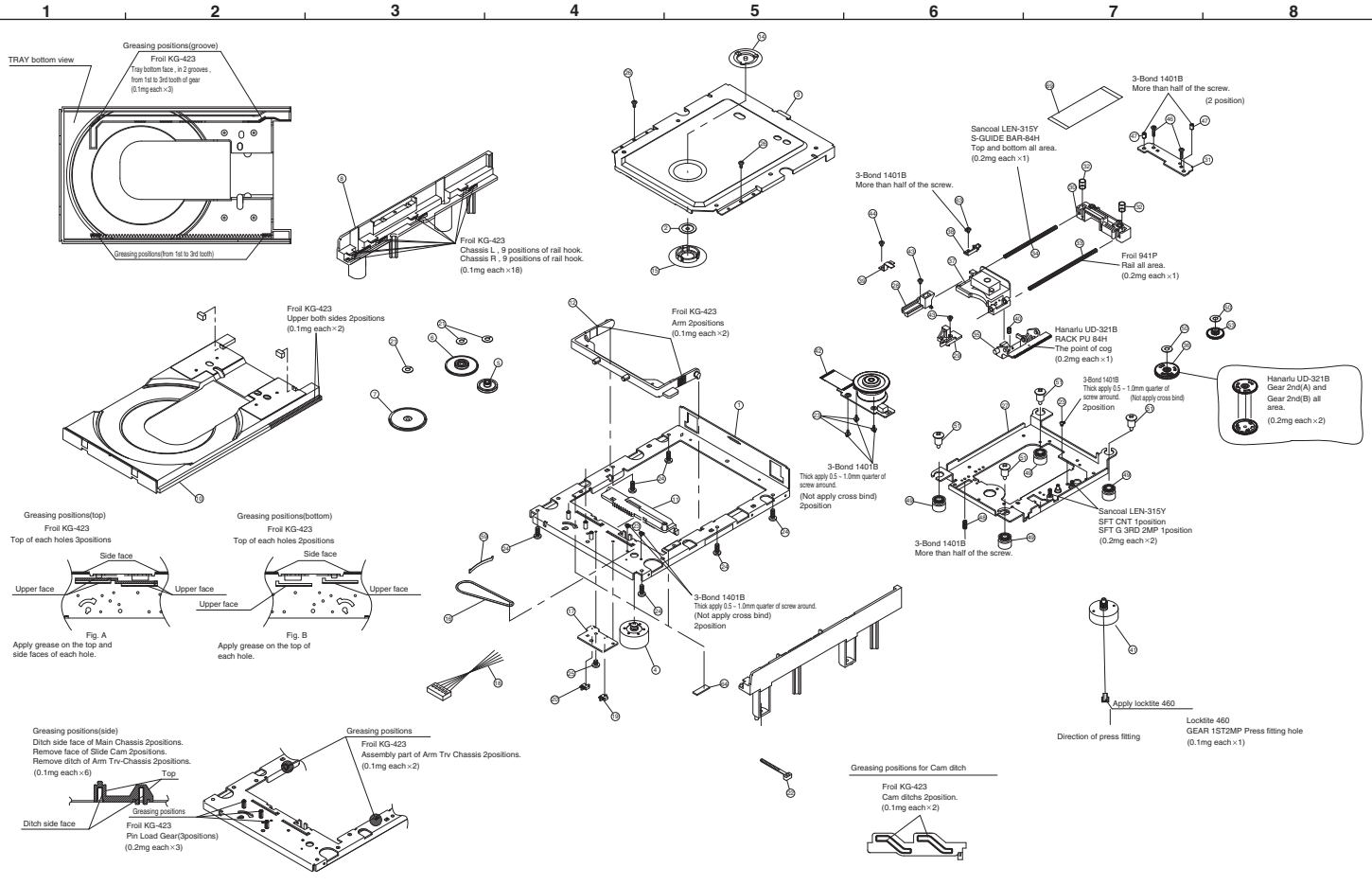


PARTS LIST OF CD MECHANISM UNIT

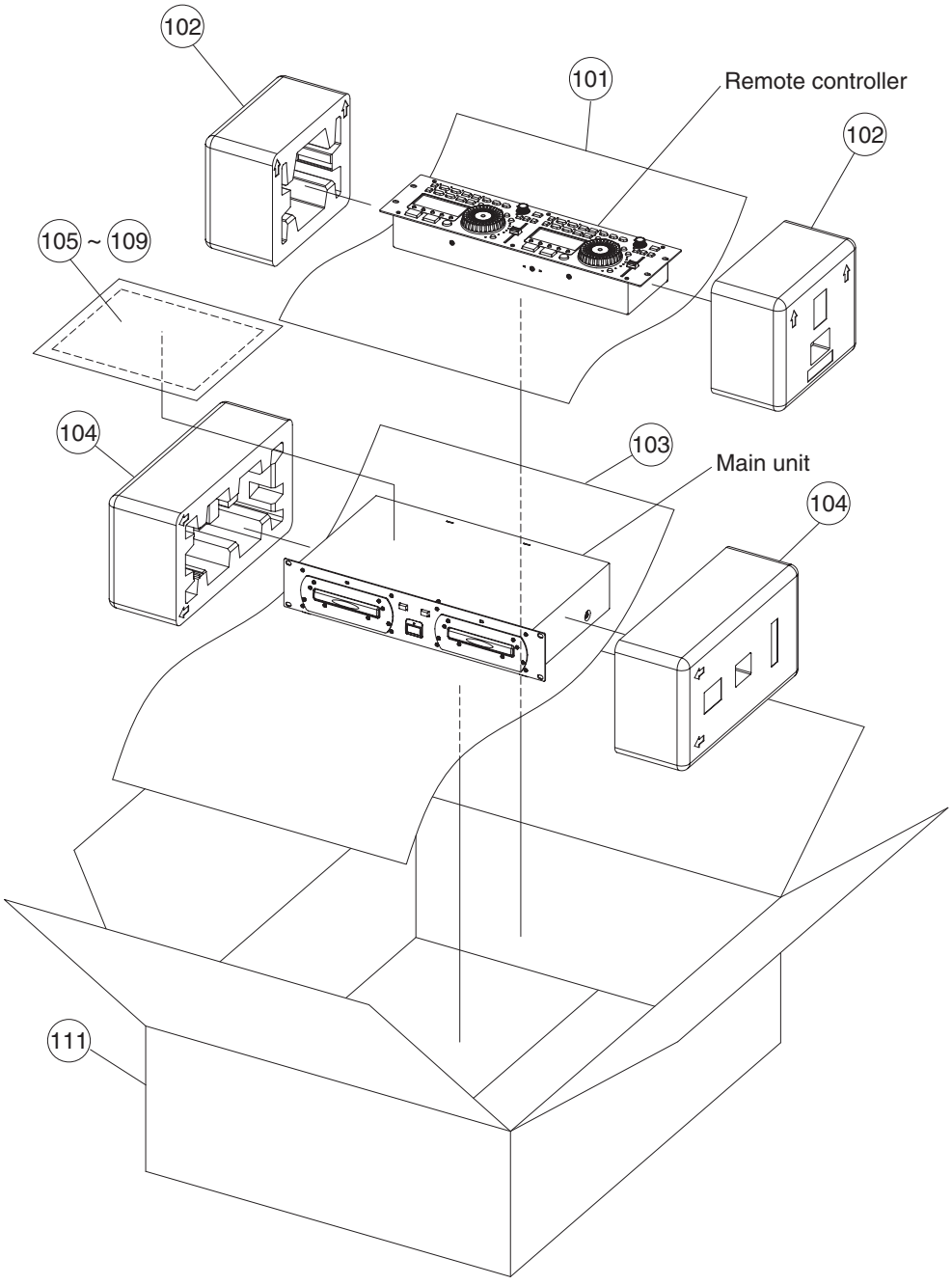
Ref. No.	Part No.	Part Name	Remarks	Q'ty
1A	9KC 2A06 5A	CD Mecha. unit TD-5HP-D2		
1	9KC 1A01 7	Main chassis Ass'y		1
2	9KA 7P08 5	Clamper bracket		1
3	9KC 4P00 7	Guide clamp bracket		1
4	9KC 2A00 3	Loading motor Ass'y		1
5	9KC 2G02 9	Loading gear		1
6	9KB 9G03 0	Loading gear 2nd		1
7	9KB 9G03 1	Loading gear 3rd		1
8	9KB 9G02 5	Sub chassis-L		1
9	9KC 1G00 2	Sub chassis-R		1
10	9KA 2G39 9	Tray		1
11	9KC 1G00 3	Slide-cam		1
12	9KC 1G00 4	Traverse arm		1
14	9KA 7G20 2	Clamper H		1
15	9KA 7G20 3	Clamper L		1
16	9KB 9G01 5	Loading belt		1
17	9KC 1P01 4	Switch P.W.B.		1
18	9KC 2G04 3	5P PH wire		1
19	9KS 01W2 04	Switch ESE22MH1	or 9KS 01W1 97	1
20	9KS 01W2 05	Switch ESE22MH3	or 9KS 01W1 98	1
21	9KP 26C6 25	Poly.slit washer 2.6X6X0.25C		3
22	445 8004 007	Wire clamper		1
23	9KS 17N0 22	Precision screw 1.7X2.2 type3		2
24	9KB 26BK 06	Screw 2.6X6 CBTS(B)-Z		6
26	473 7506 019	Screw 2X6 CBTS(P)-Z		2
27A	9KC 2A06 3A	Traverse mecha (feed) Ass'y	Assembled part	1
27B	9KC 2A06 4A	Traverse mecha Ass'y	Assembled part	1
23	9KS 17N0 22	Precision screw 1.7X2.2 type3	For spindle motor	
27	9KC 2A00 7	PU chassis Ass'y		
28	9KC 2G00 8	Shaft holder L		
29	9KC 2G00 7	Shaft holder R		
30	9KC 2G01 0	Shaft tilt base		
31	9KC 2P00 5	Shaft tilt plate		
32	9KB 7S00 3	Tilt spring		
33	9KC 2H00 1	Main shaft		
34	9KC 2H00 2	Sub shaft		
35	9KC 2G00 9	PU rack gear		
37	9KC 2G10 4A	Pick up HOP-1200		
38	9KC 2G01 5	PU spring		
39	9KC 2P01 6	Shaft spring		
40	9KC 2S00 5	Rack gear spring		
42	9KC 2A04 0	T/T motor Ass'y		
43	9KB 26TK 06	Screw 2.6X6 CBTS(S)-Z		
44	9KB 26TK 04	Screw 2.6X4 CBTS(S)-Z		
46	9KH 26TK 15	Screw 2.6X15 CFTS(S)-Z		
47	9KB 7H00 8	Screw 3X4 BSS		
63	9KS 17N3 05	Precision screw 1.7X5 type3		
23	9KS 17N0 22	Precision screw 1.7X2.2 type3		
25	9KS 20TK 33	Precision screw 2X3(S) type3		
36	9KB 8A00 5	Feed gear 2nd Ass'y		
41	9KC 2A02 3	Feed motor Ass'y		
50	9KP 21C4 25	Poly.slit washer 2.1X4X0.25C		
53	9KC 4G00 5	Feed gear 3rd		
48	474 4302 002	Screw 3X8 BSS (A)		1

Ref. No.	Part No.	Part Name	Remarks	Q'ty
49	9KC 1G04 3	Damper		4
51	9KC 1H01 1A	Special screw		4
59	9KB 7P02 4	Tray-spring-VXF		1
63	9KS 17N0 35	Precision screw 1.7X3.5 type3		1
64	9KC 1G04 2	Rubber cushion		2
69	9KC 2G09 7	FFC (PU L52)		1
70	9KC 2G08 5	Cushion (L)		1
71	9KC 2G08 4	Cushion (R)		1

POINTS OF GREASING



PACKING VIEW



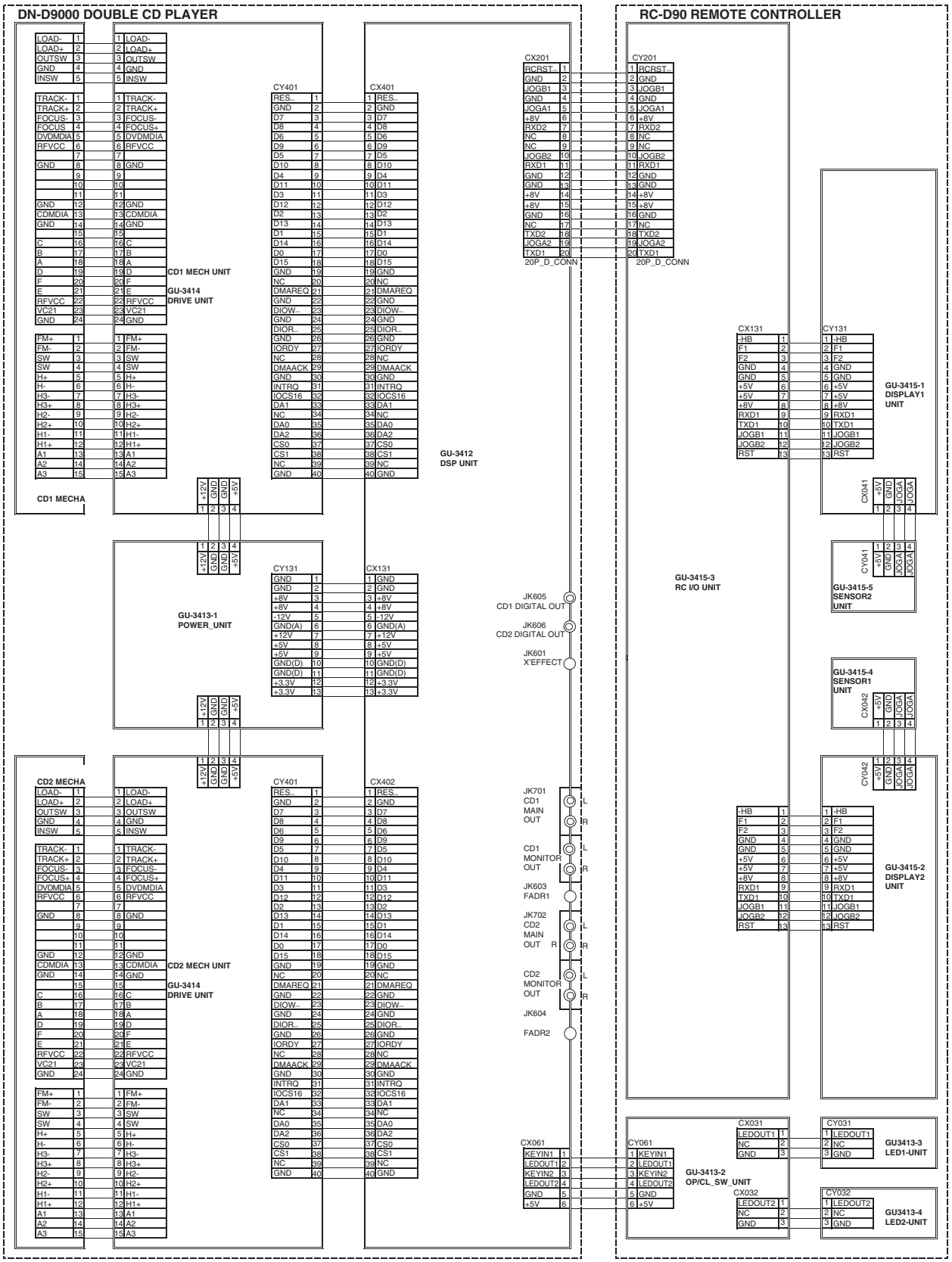
PARTS LIST OF PACKING & ACCESSORIES

Note : The symbols in the column "Remarks" indicate the following destinations.
E3 : U.S.A. & Canada model
E2 : Europe model

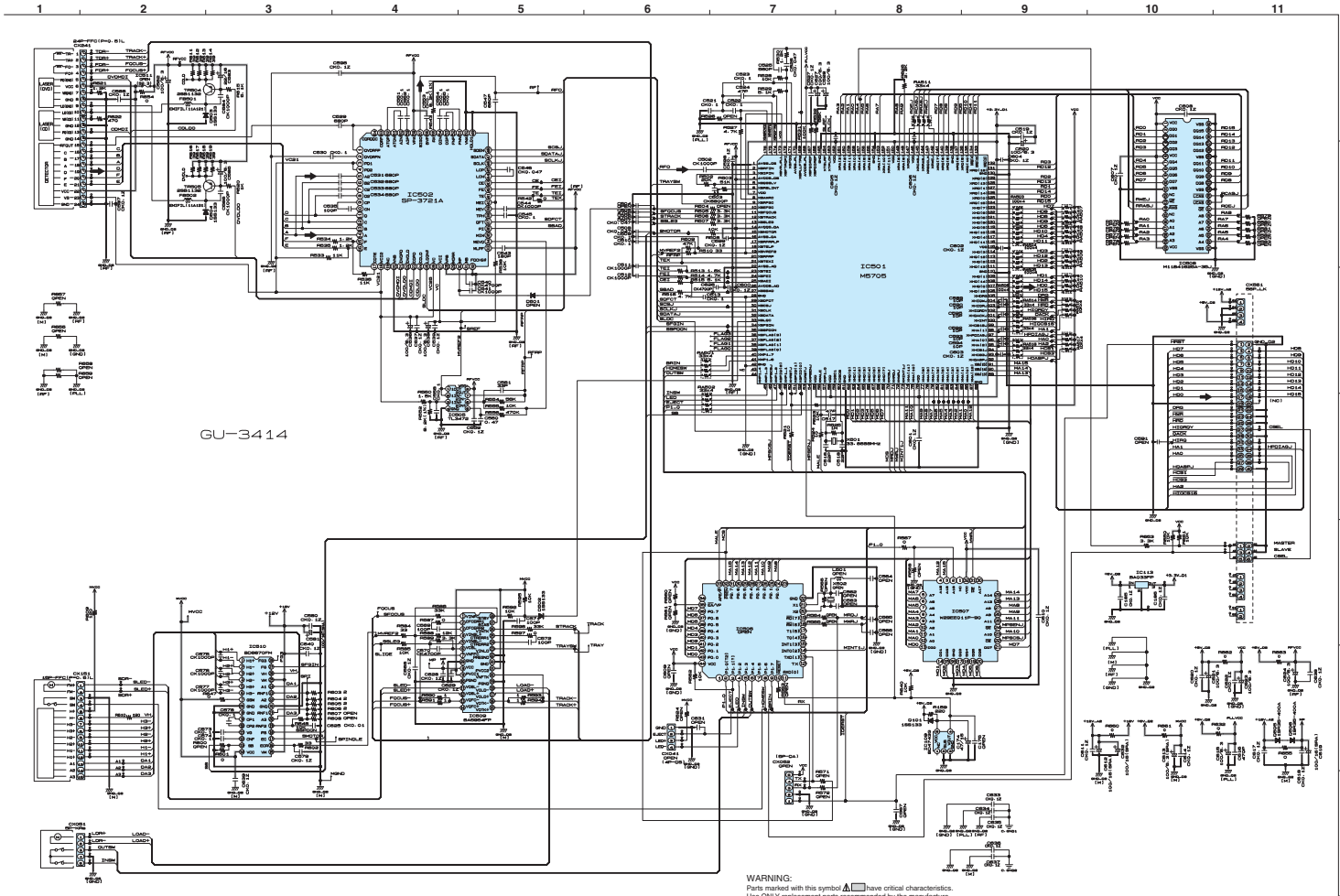
Ref. No.	Part No.	Part Name	Remarks	Q'ty
101	505 0350 006	Stylen paper		1
102	503 1431 009	Cushion (RC)		2
103	505 0102 092	Stylen paper		1
104	503 1430 000	Cushion		2
105	505 0038 030	Poly. cover		1
106	511 3876 003	Instruction manual		1
107	515 0886 108	Service station list com. (EX)		1

Ref. No.	Part No.	Part Name	Remarks	Q'ty
108	203 2360 004	2P pin cord		4
109	204 6704 009	20P D-sub cable		1
110	RC- D90	Remote controller		1
111	501 2179 005	Carton case		1
★ 112	–	Control card		
★ 113	–	Bar code label		
★ 114	515 0692 101	DEL warranty com.	for E3	1

WIRING DIAGRAM



SCHEMATIC DIAGRAMS (1/6)



NOTICE
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:
Parts marked with this symbol ⚠ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

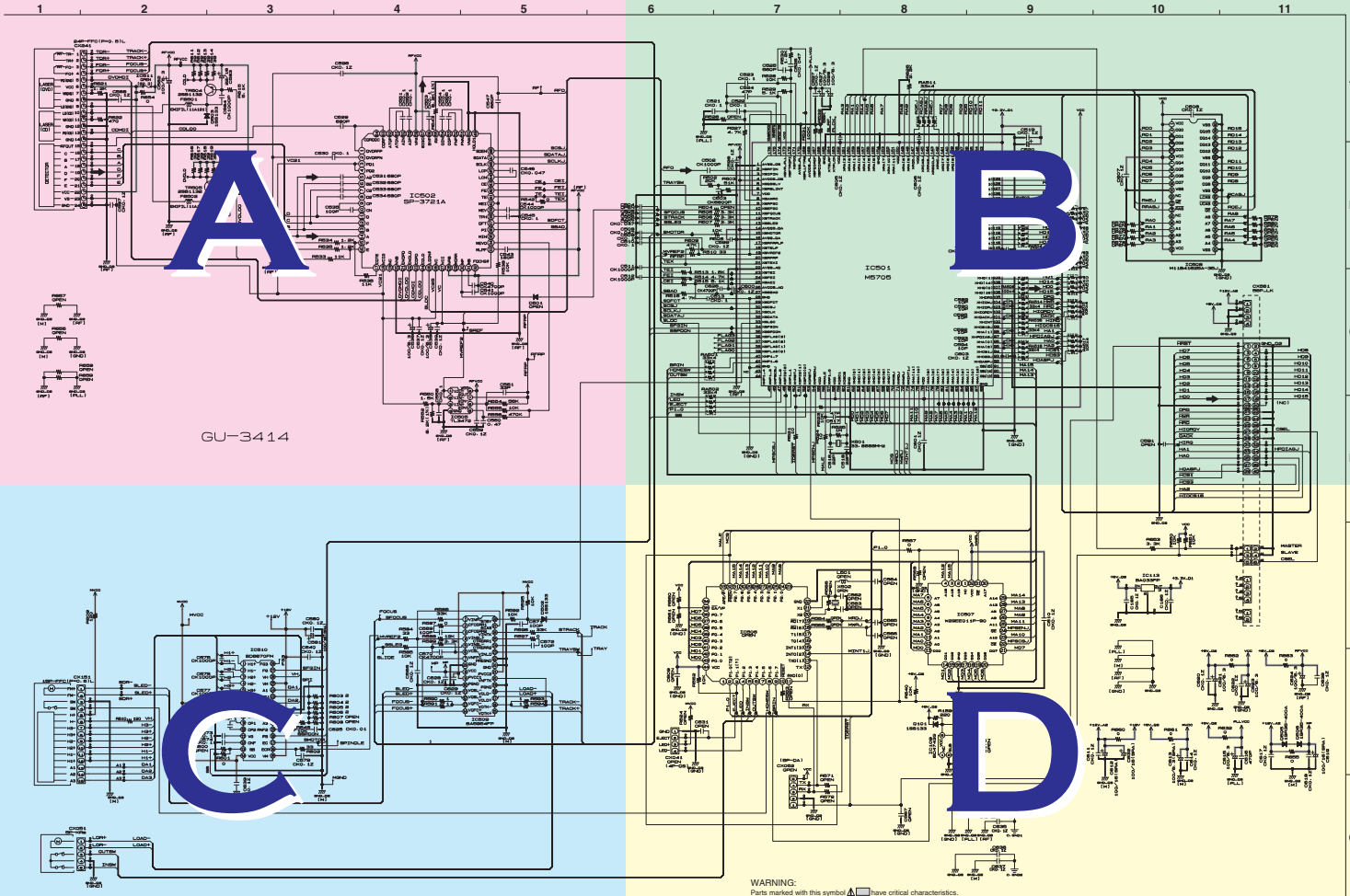
CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

+B LINE
SIGNAL LINE

SCHEMATIC DIAGRAMS (1/6)
1U-3414 CD-ROM UNIT

SCHEMATIC DIAGRAMS (1/6)



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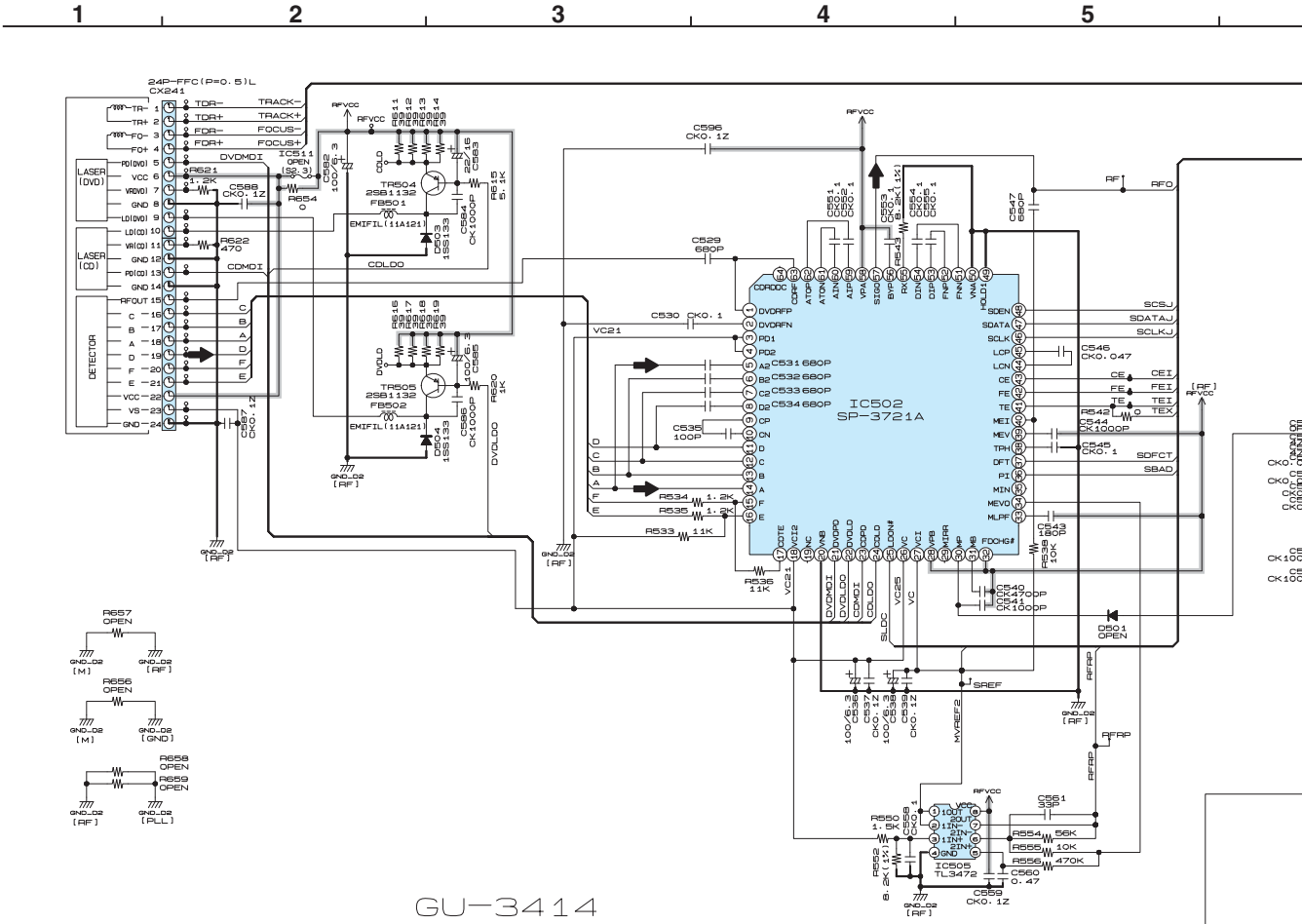
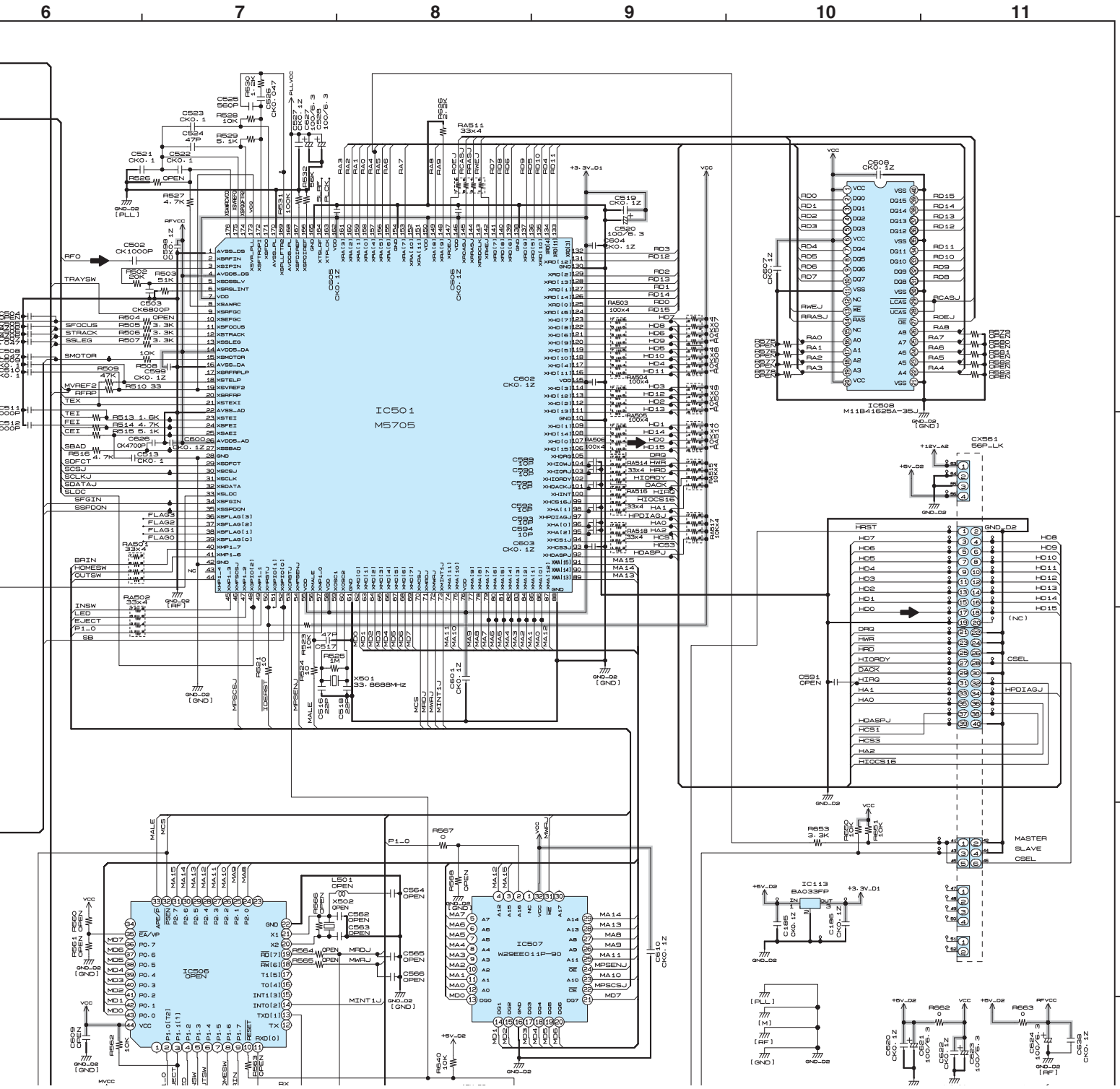
SCHEMATIC DIAGRAMS (1/6)
1U-3414 CD-ROM UNIT

SCHEMATIC DIAGRAMS (1/6)



GU-3414


6
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A
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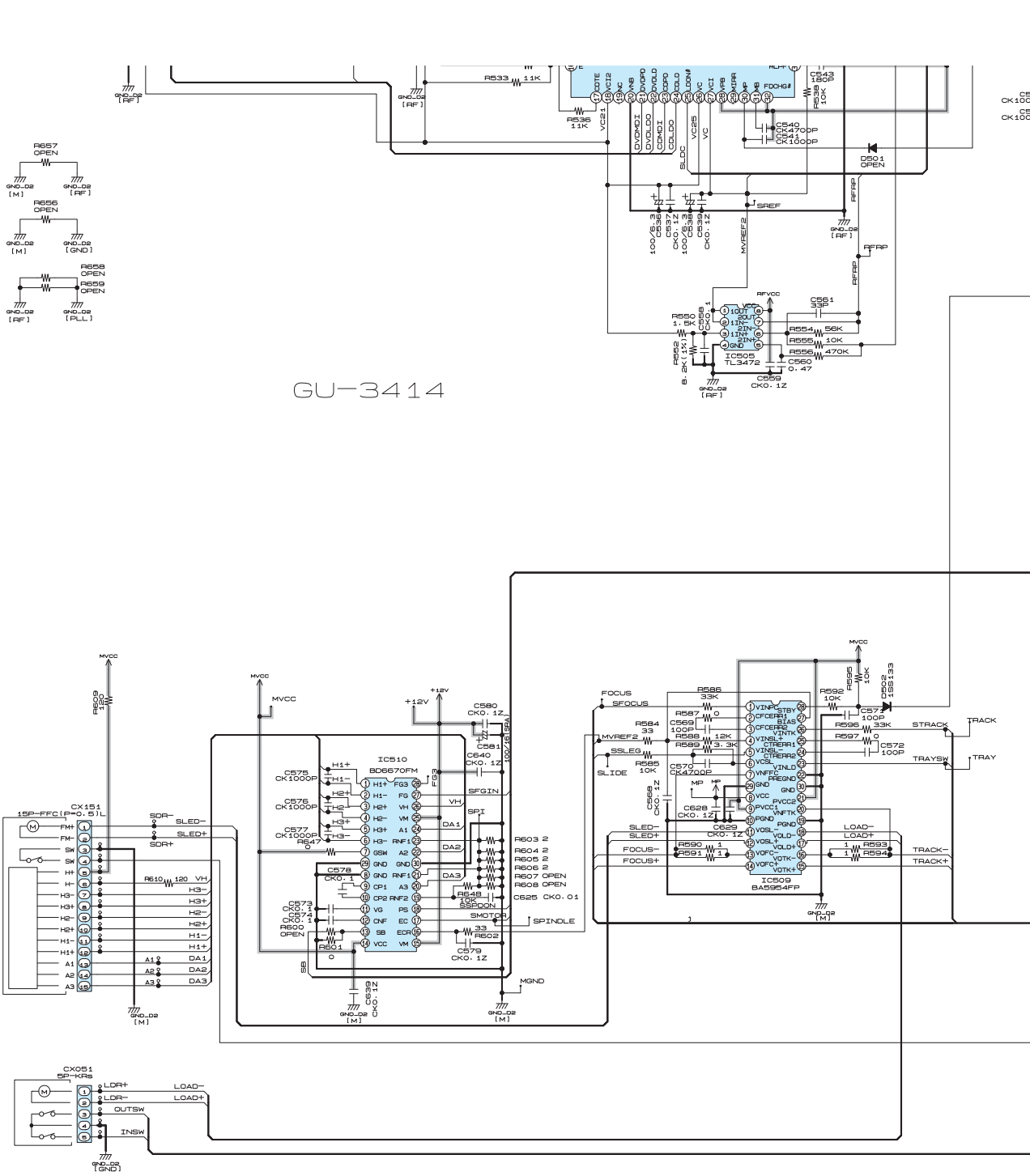
C
D
E
IC501
M5705
IC506
OPEN
IC507
W29EE011P-90
IC508
M11B416256A-35J
IC113
BA033FP
X501
33.8688MHz
X502
OPEN
CX561
56P_LK
MASTER
SLAVE
CSEL
HPDIAGJ
HDASPJ
HCS1
HCS3
HA2
HIOCS16
HIRQ
HDACK
HIORDY
HWR
HRD
HRST
MINT1J
MPSENJ
MPSCSJ
MWRJ
MRDJ
IOERST
TRAYSW
SFOCUS
STRACK
SSLEG
SMOTOR
MVREF2
RFRP
TEX
TEI
FEI
CEI
SBAD
SDFCT
SCSJ
SCLKJ
SDATAJ
SLOC
SFGIN
SSPDON
FLAG3
FLAG2
FLAG1
FLAG0
BRIN
HOMESW
OUTSW
INSW
LED
EJECT
P1_0
SB
RFO
RFVCC
MVCC
GND_D2
[PLL]
[GND]
[RF]
[M]



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ALL CAPACITANCE VALUES IN MICRO
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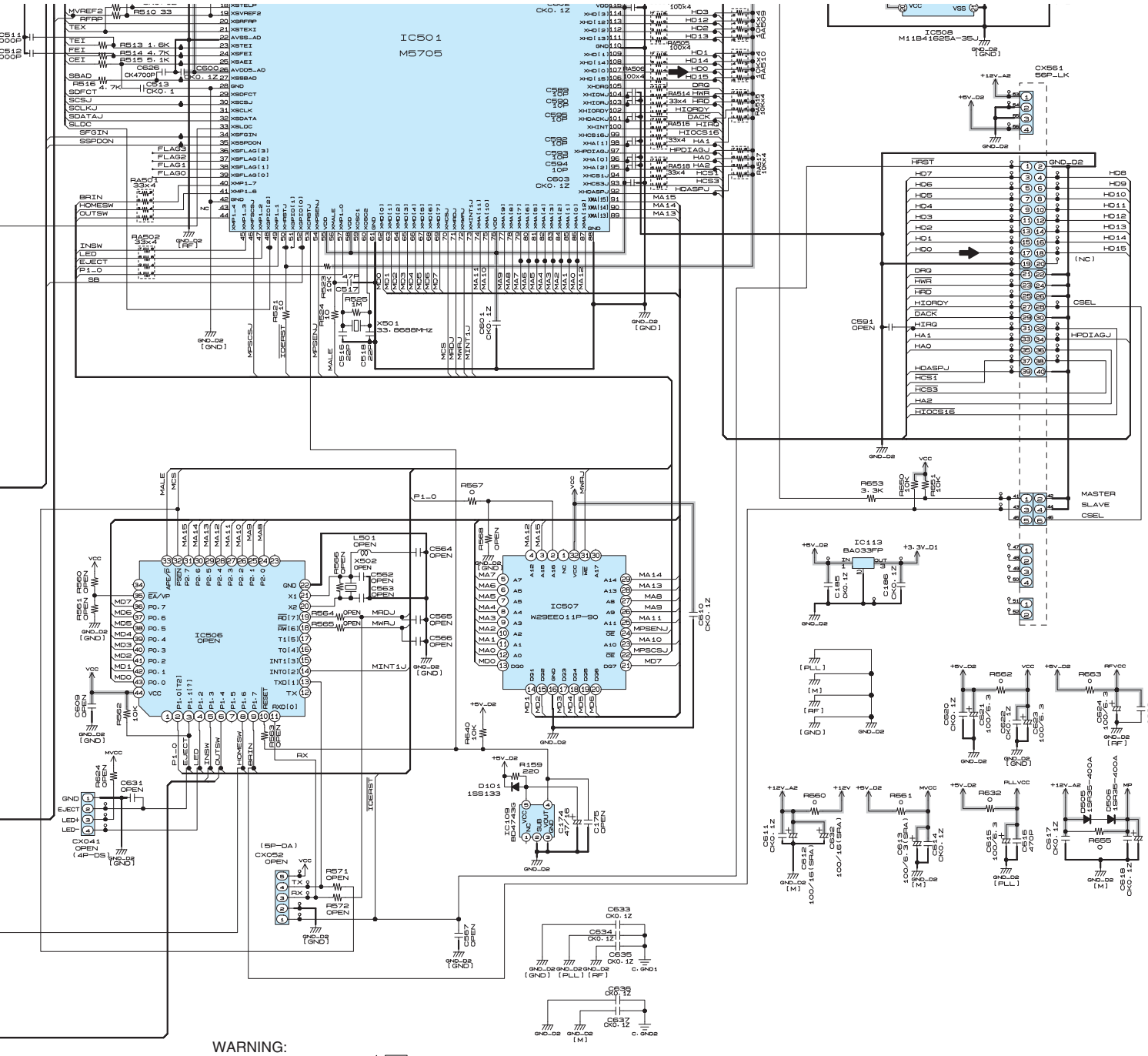
CONDITION.
CIRCUIT AND PARTS ARE SUBJECT T
NOTICE.



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RO FARAD. P=MICRO-MICRO FARAD
E MEASUERD AT MO SIGNAL INPUT

T TO CHANGE WITHOUT PRIOR

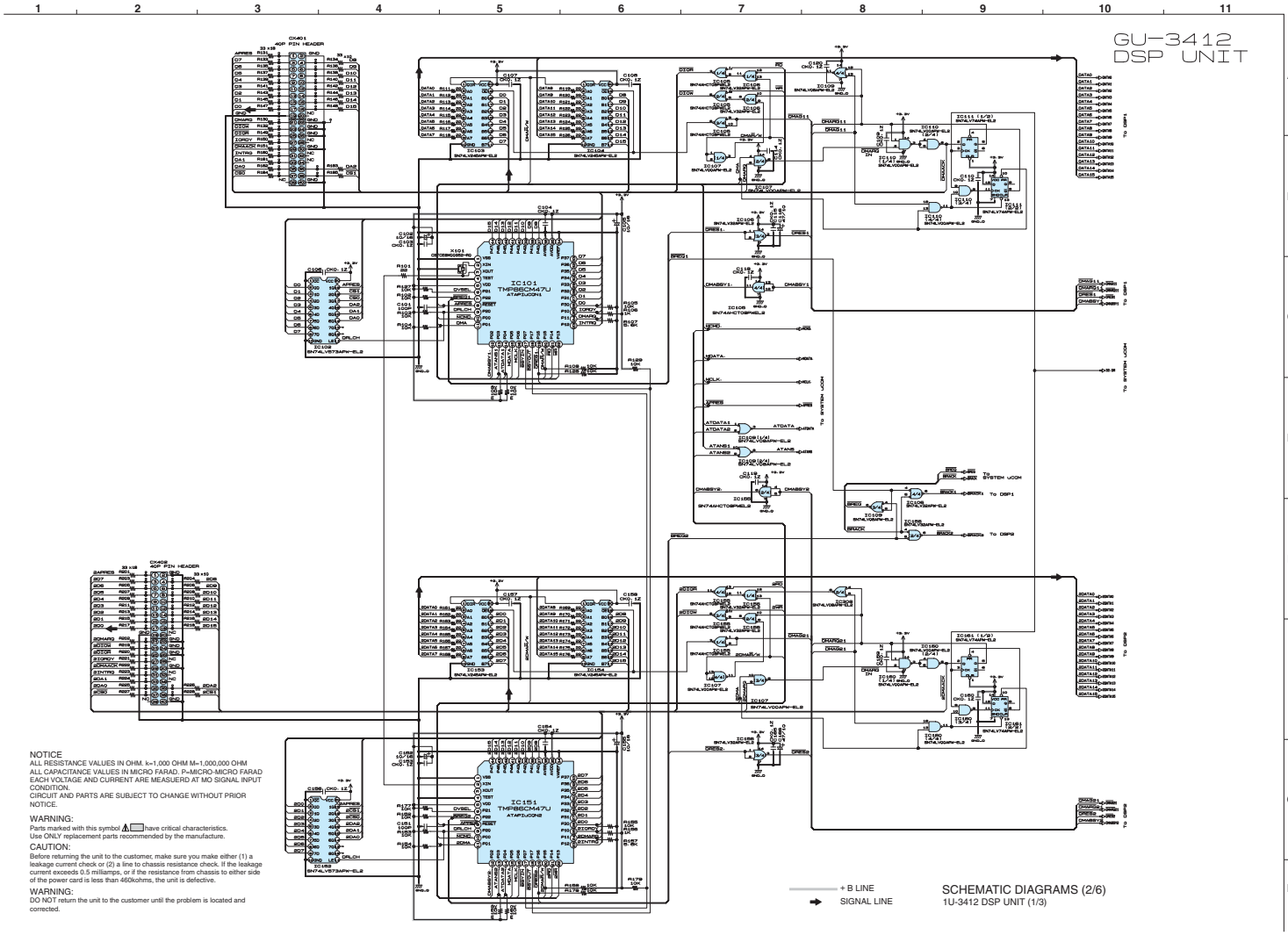
+B LINE

SIGNAL LINE

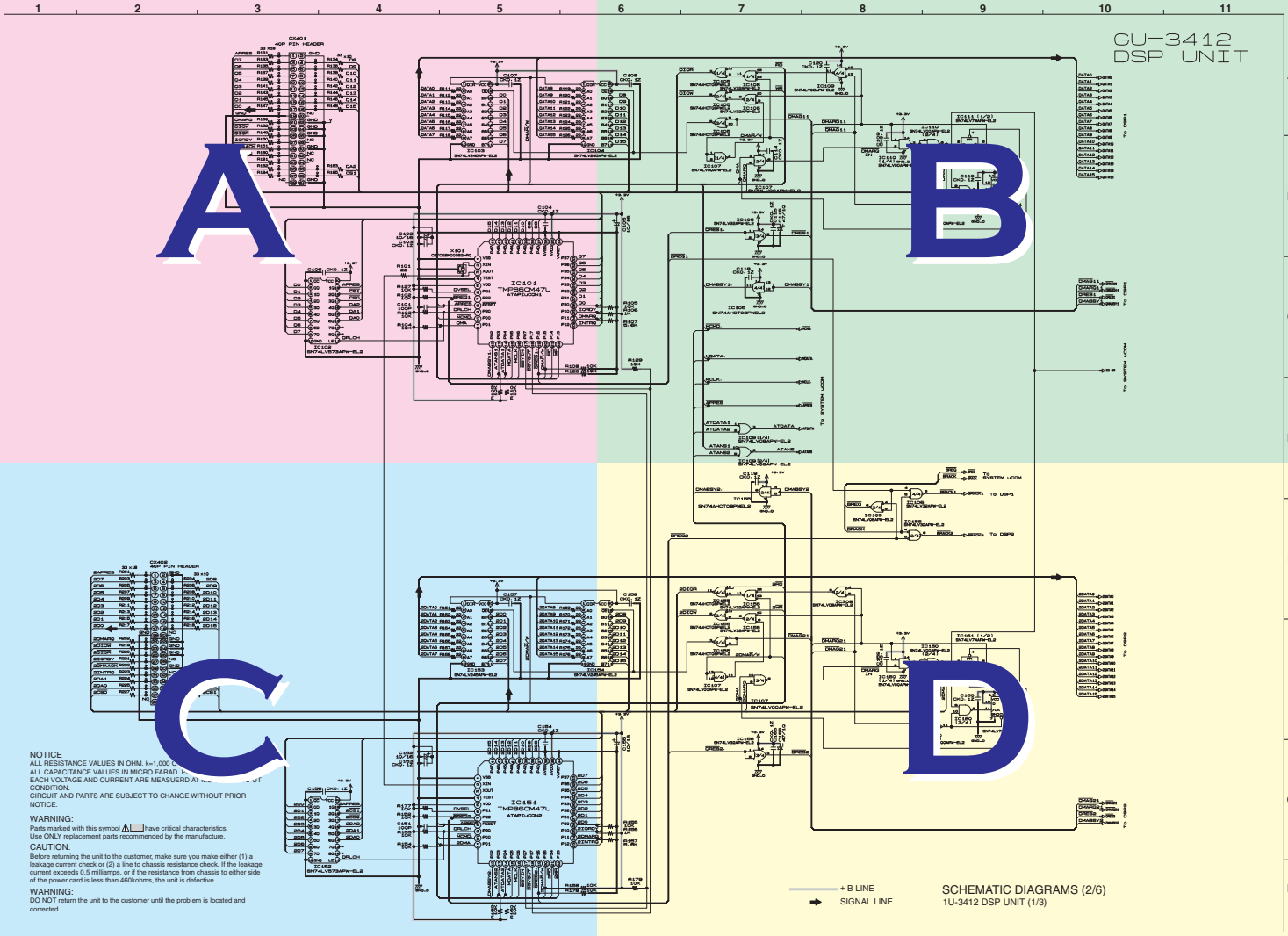
SCHEMATIC DIAGRAMS (1/6)

1U-3414 CD-ROM UNIT

SCHEMATIC DIAGRAMS (2/6)

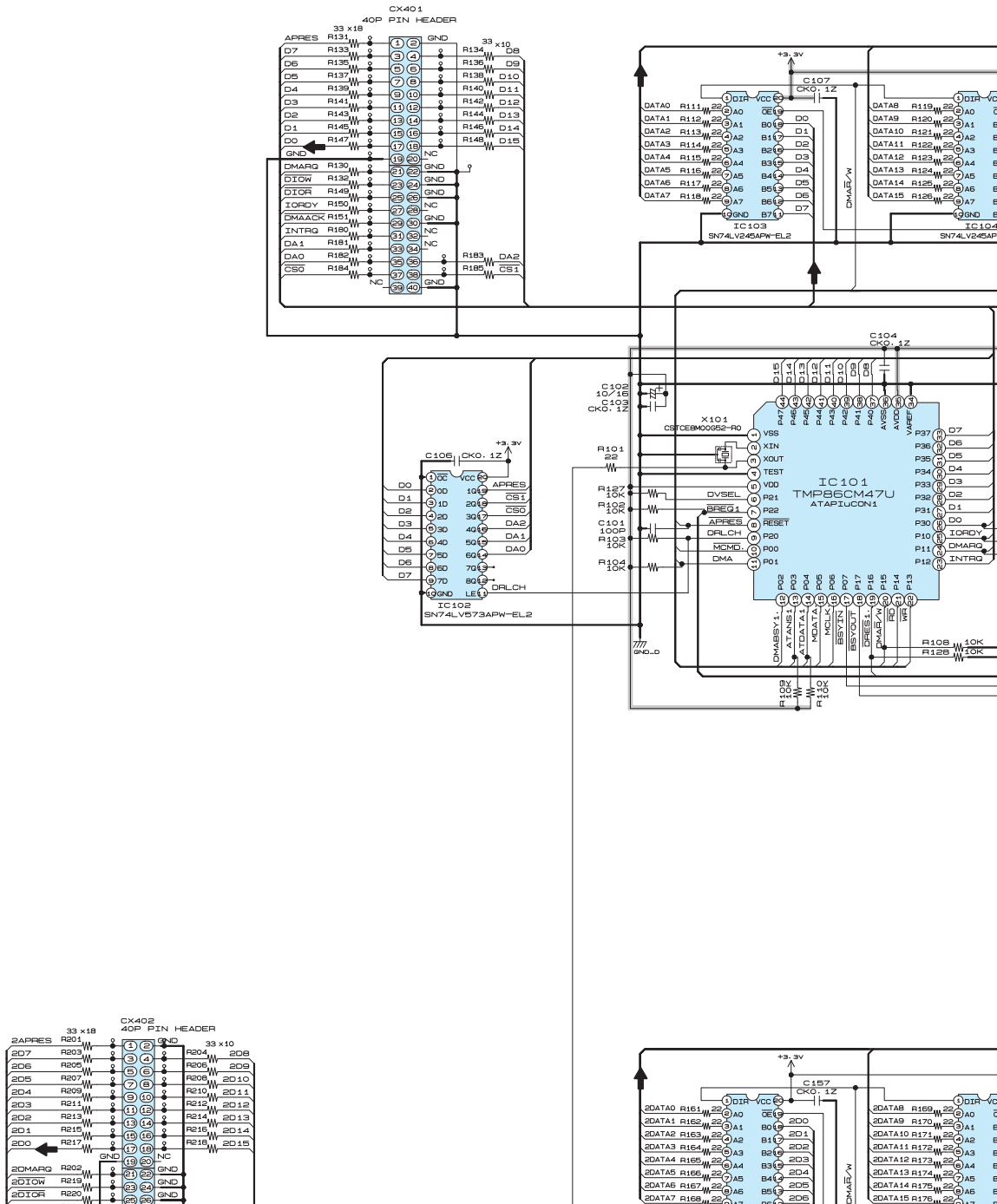


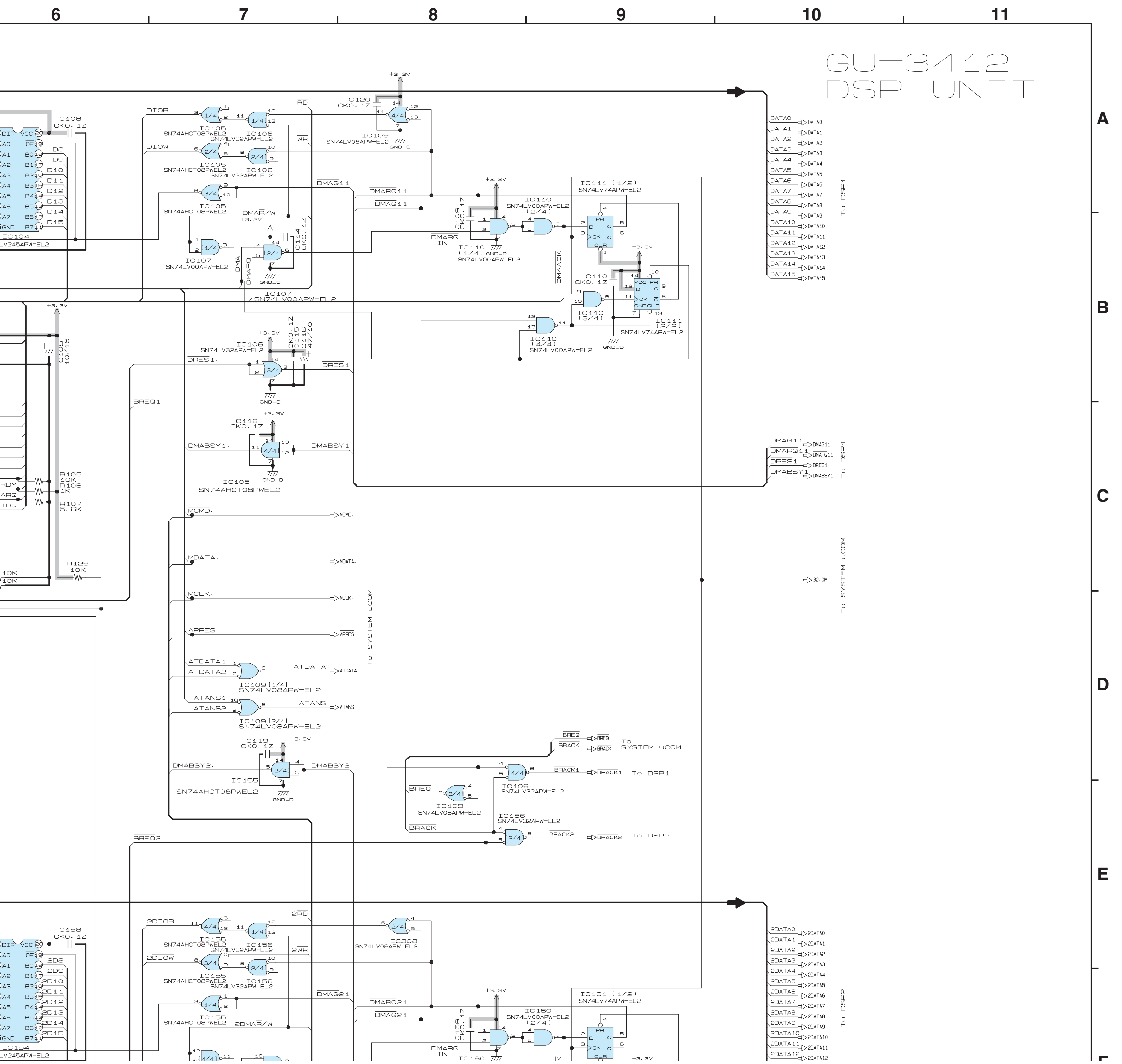
SCHEMATIC DIAGRAMS (2/6)



SCHEMATIC DIAGRAMS (2/6)

1 2 3 4 5




6
7
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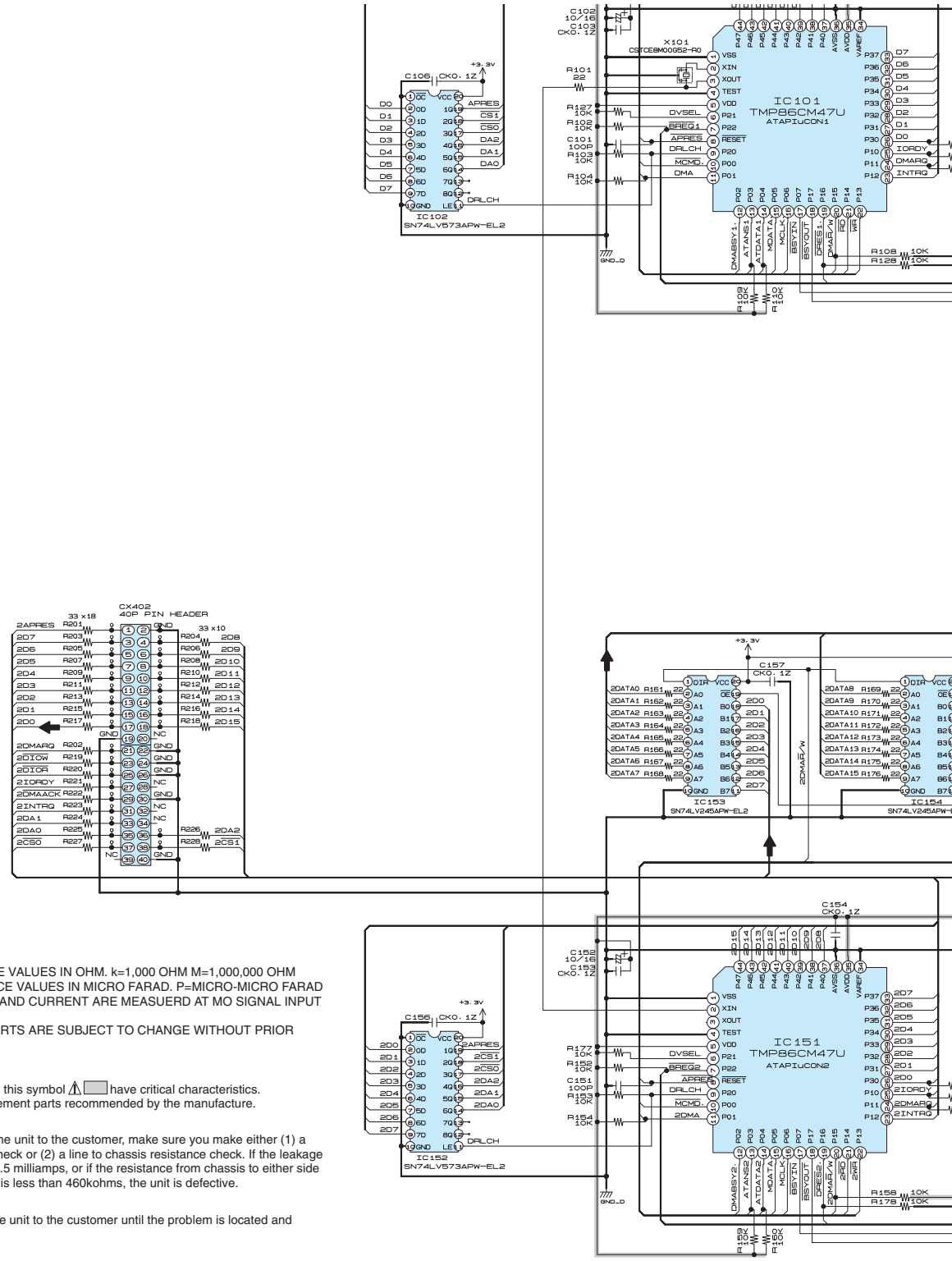
9
10
11
A
B
C
D
E
GU-3412
DSP UNIT
IC104
C108 CK0.1Z
IC105 SN74AHCT08PWEL2
IC106 SN74LV32APW-EL2
IC107 SN74LV00APW-EL2
IC109 SN74LV08APW-EL2
C120 CK0.1Z
IC110 SN74LV00APW-EL2
IC111 (1/2) SN74LV74APW-EL2
IC111 (2/2) SN74LV74APW-EL2
C109 CK0.1Z
C110 CK0.1Z
C114 CK0.1Z
C105 10/16
C115 CK0.1Z
C116 47/10
C118 CK0.1Z
C119 CK0.1Z
R105 10K
R106 1K
R107 5.6K
R129 10K
DMARQ IN
DATA0
DATA1
DATA2
DATA3
DATA4
DATA5
DATA6
DATA7
DATA8
DATA9
DATA10
DATA11
DATA12
DATA13
DATA14
DATA15
To DSP1
DMAG11
DMARQ11
DRES1
DMABSY1
To DSP1
32.0M
To SYSTEM uCOM
MCMD
MDATA
MCLK
APRES
ATDATA1
ATDATA2
ATDATA
ATANS1
ATANS2
ATANS
To SYSTEM uCOM
DMABSY2
IC155 SN74AHCT08PWEL2
BREQ
BRACK
To SYSTEM uCOM
BRACK1 To DSP1
BRACK2 To DSP2
IC156 SN74LV32APW-EL2
BREQ1
BREQ2
C158 CK0.1Z
IC154
IC308 SN74LV08APW-EL2
IC160 SN74LV00APW-EL2
IC161 (1/2) SN74LV74APW-EL2
C159 CK0.1Z
2DATA0
2DATA1
2DATA2
2DATA3
2DATA4
2DATA5
2DATA6
2DATA7
2DATA8
2DATA9
2DATA10
2DATA11
2DATA12
To DSP2
GND_D
+3.3V



NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:

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CAUTION:

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WARNING:

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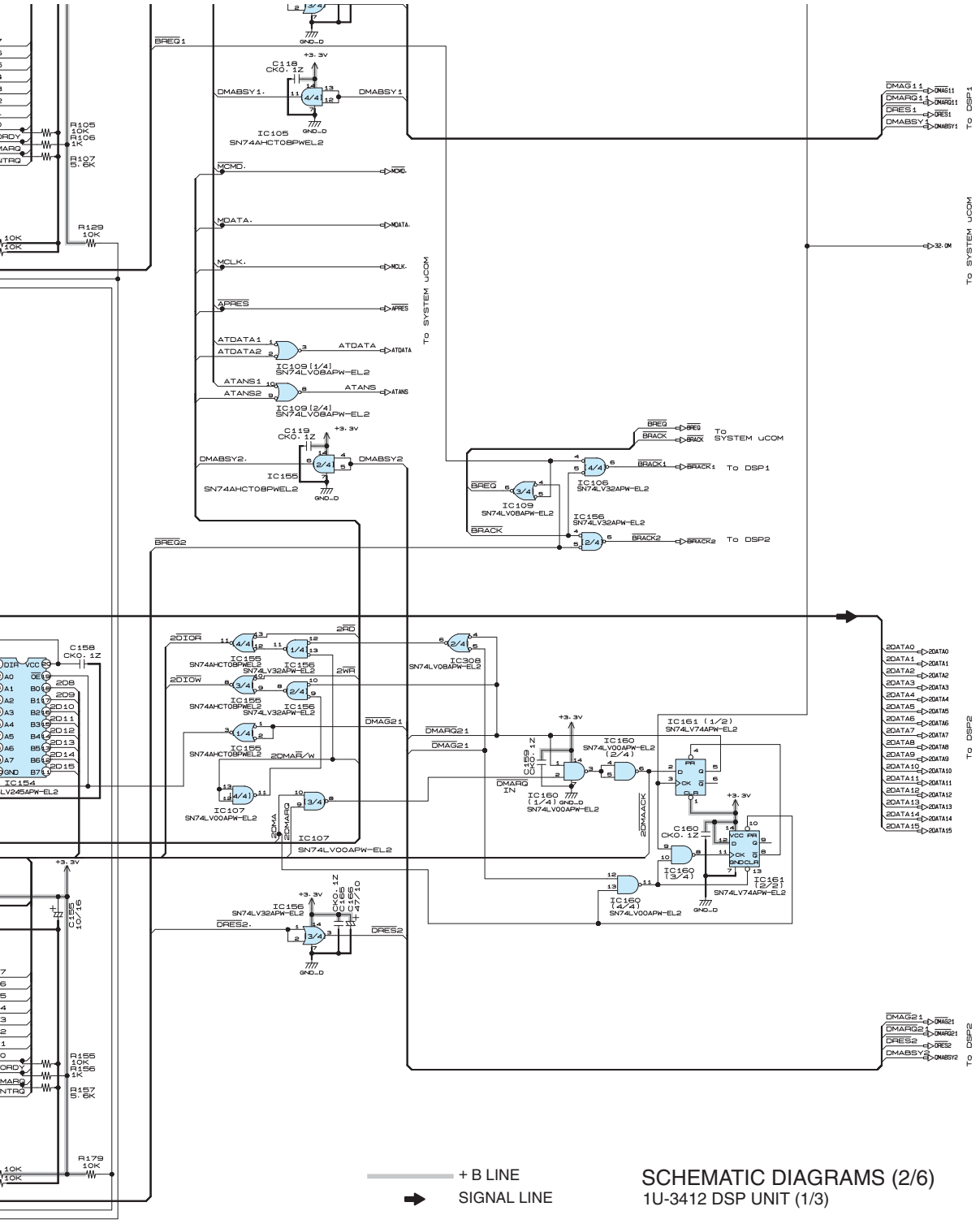


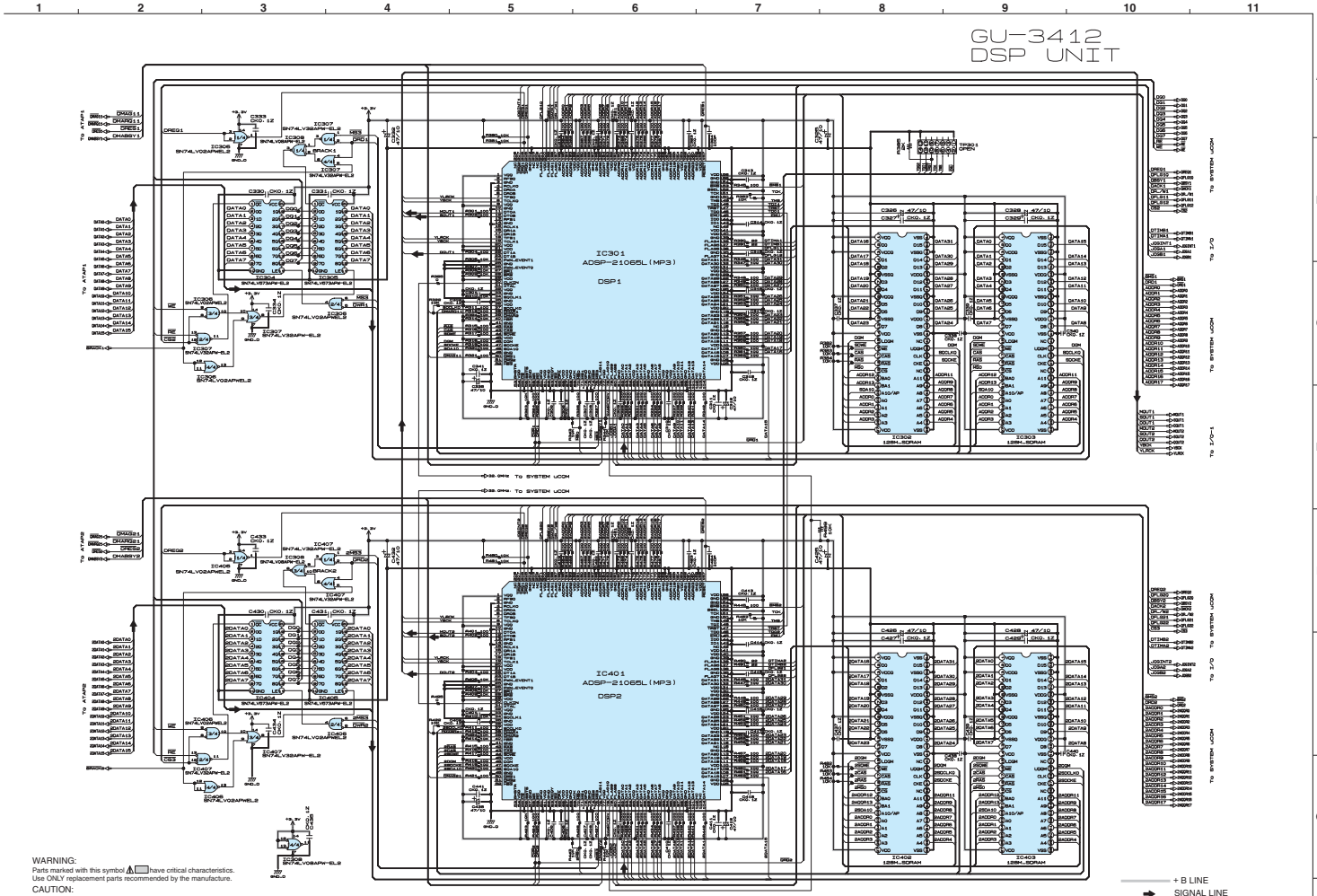
+ B LINE

SIGNAL LINE

SCHEMATIC DIAGRAMS (2/6)

1U-3412 DSP UNIT (1/3)

SCHEMATIC DIAGRAMS (3/6)



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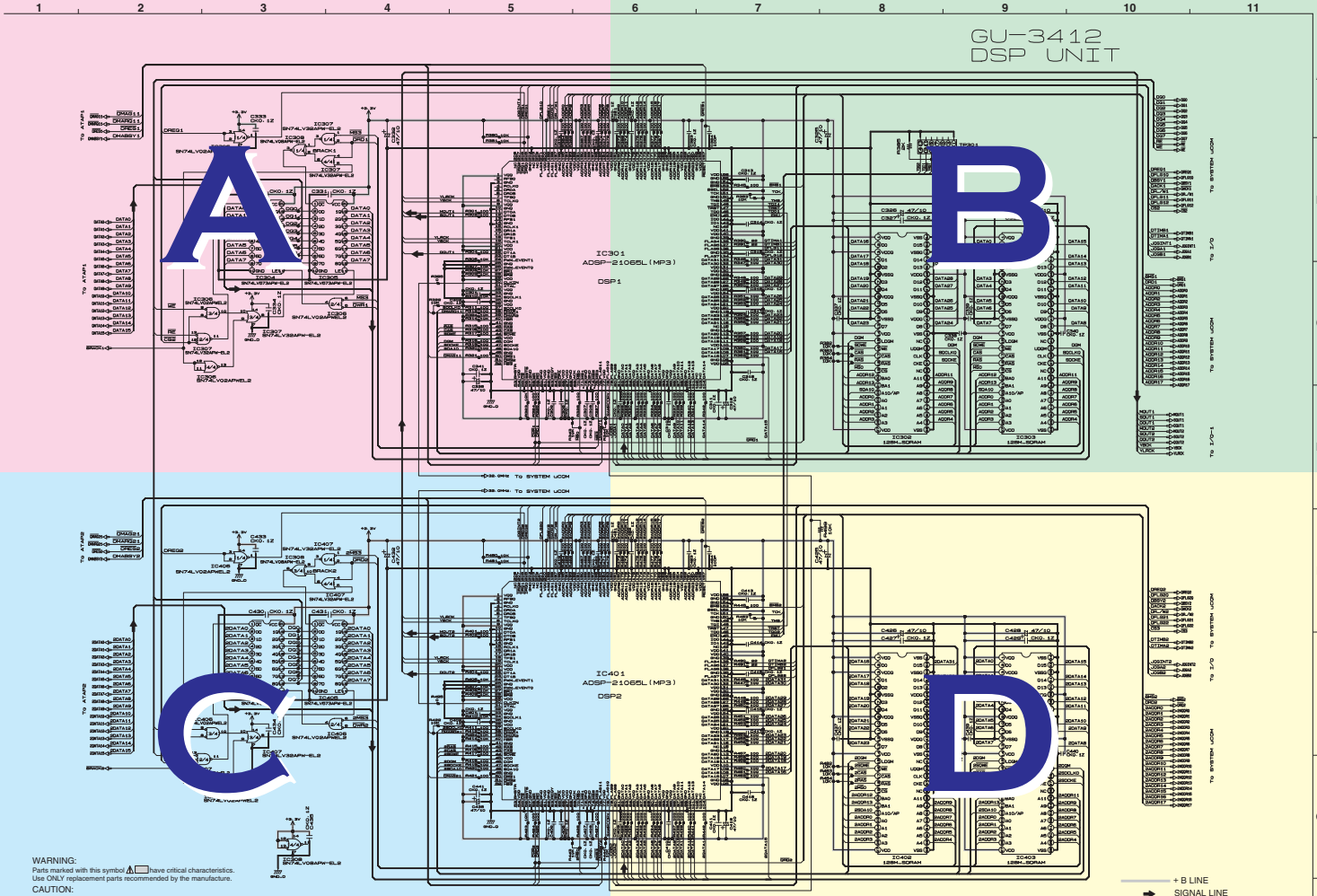
SCHEMATIC DIAGRAMS (3/6)
1U-3412 DSP UNIT (2/3)

SCHEMATIC DIAGRAMS (3/6)



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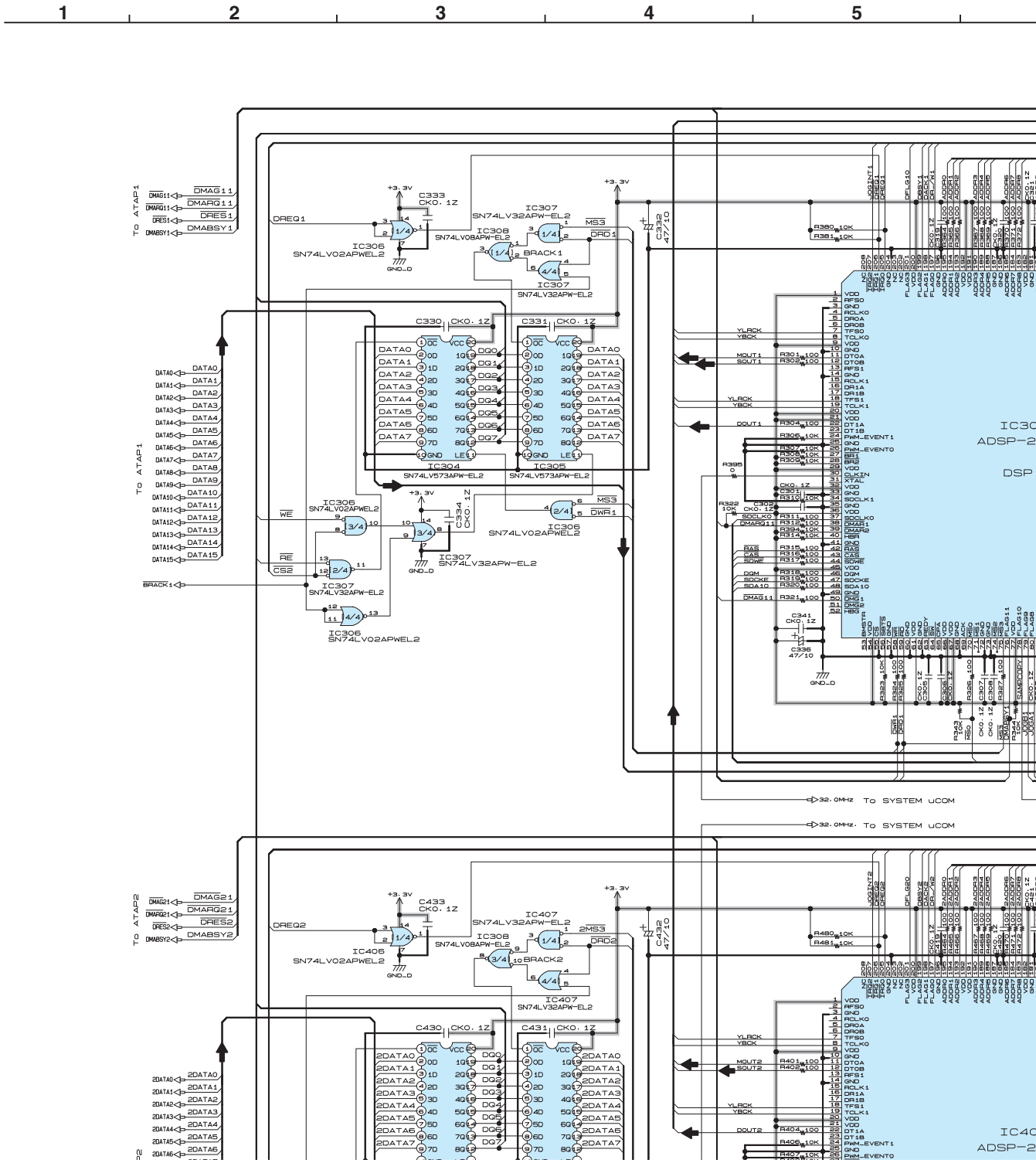
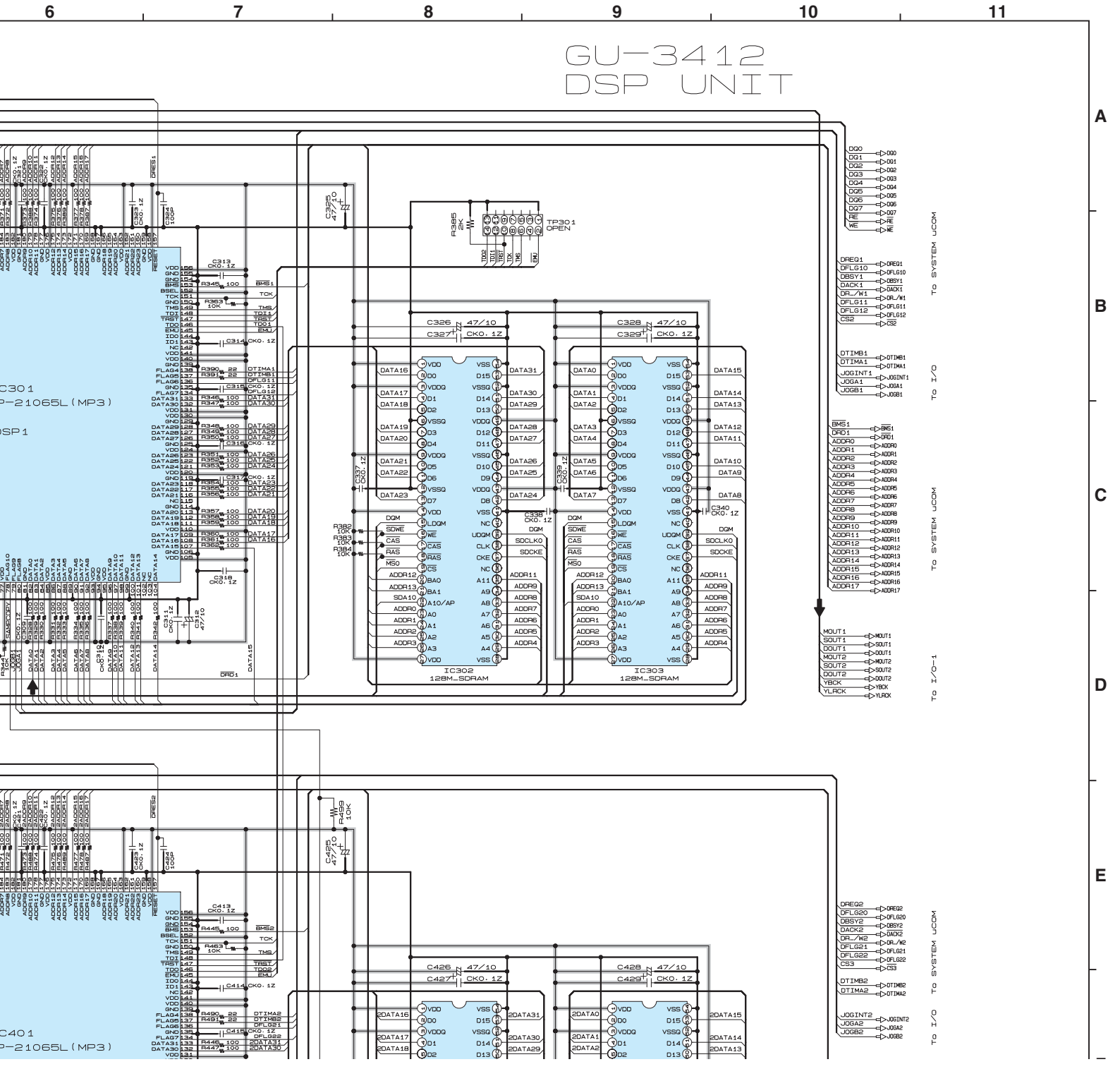
SCHEMATIC DIAGRAMS (3/6)
1U-3412 DSP UNIT (2/3)

SCHEMATIC DIAGRAMS (3/6)

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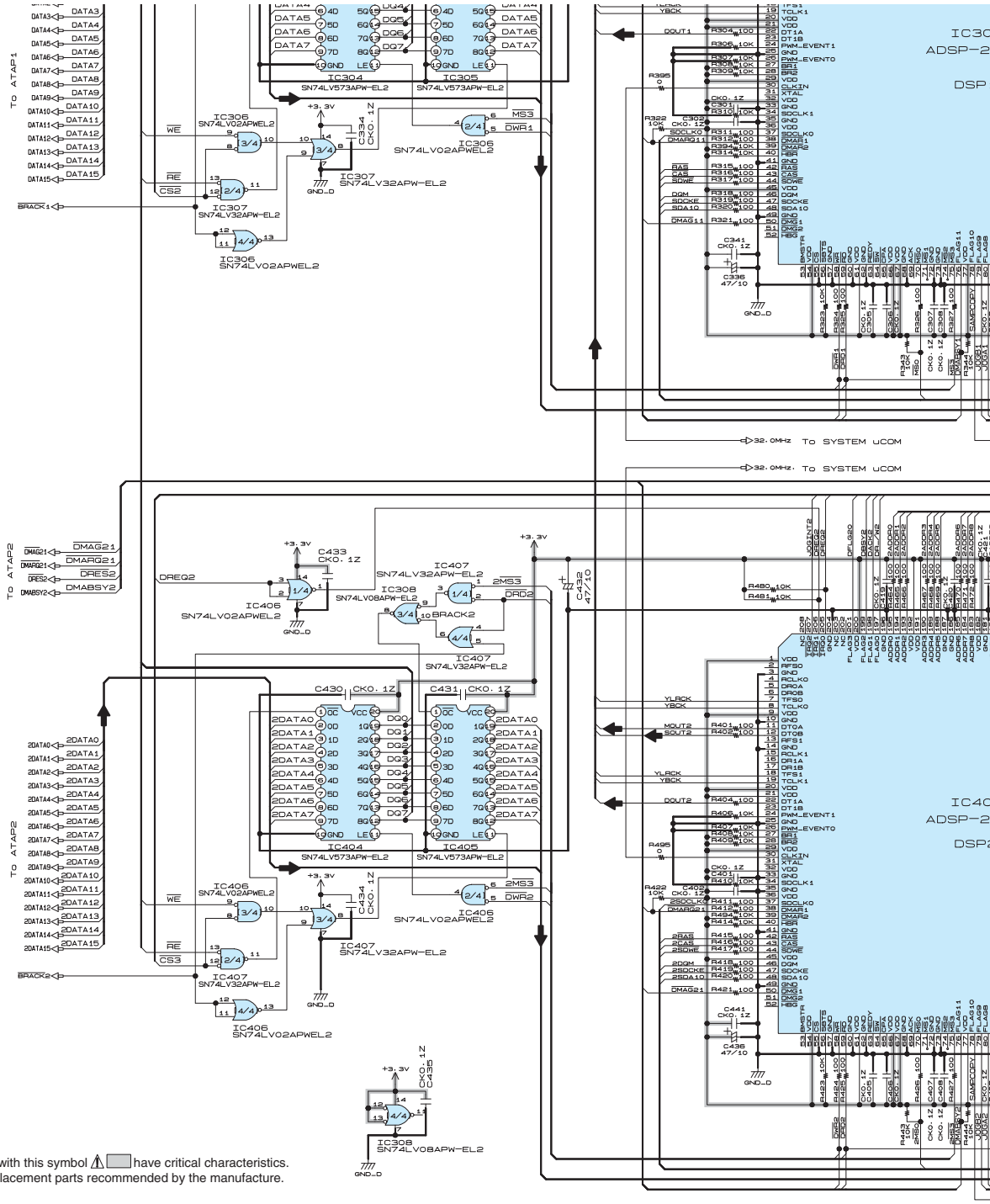
D
E
GU-3412
DSP UNIT
IC302
128M_SDRAM
IC303
128M_SDRAM
TP301
OPEN
To SYSTEM uCOM
To I/O
To I/O-1



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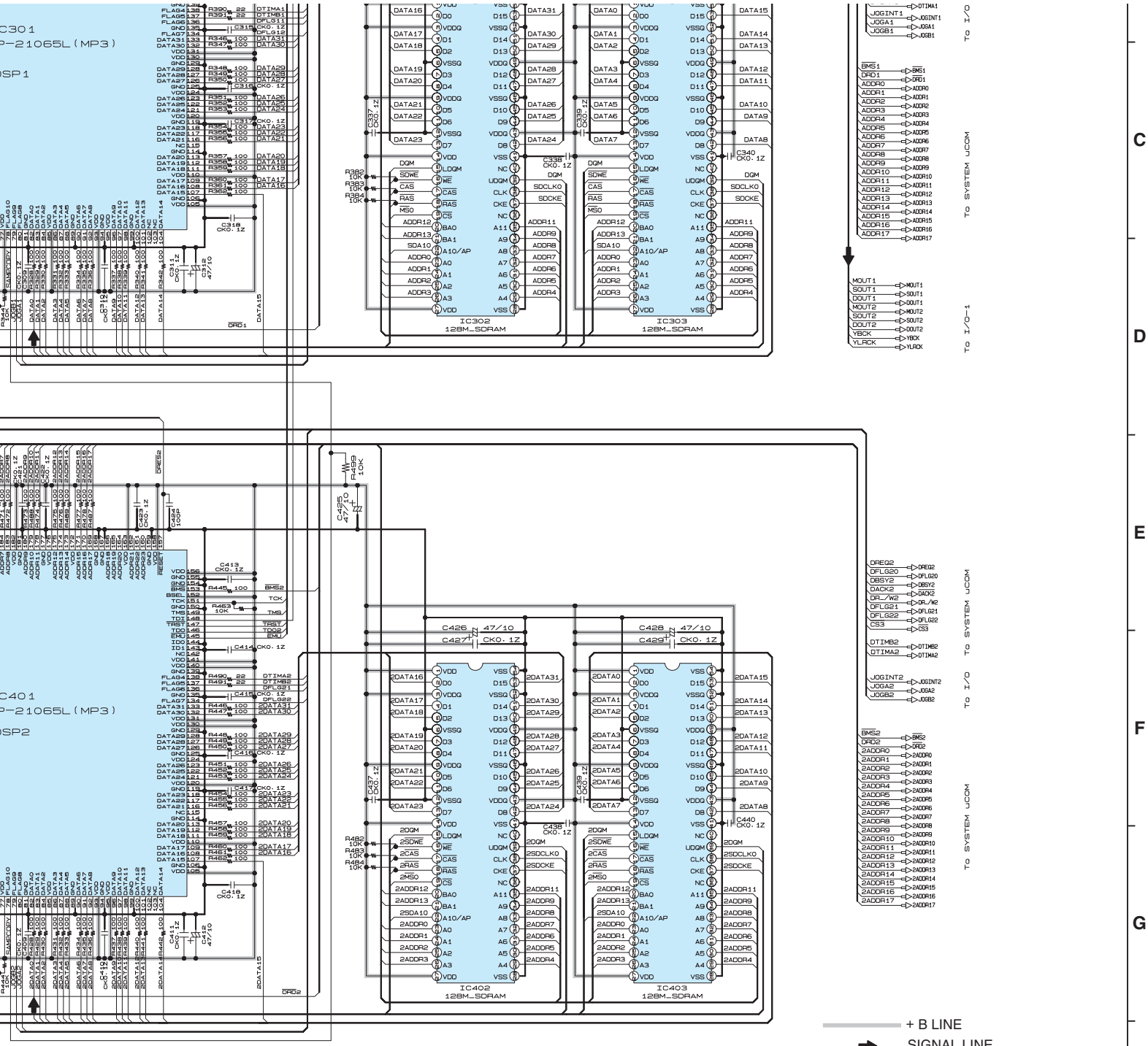
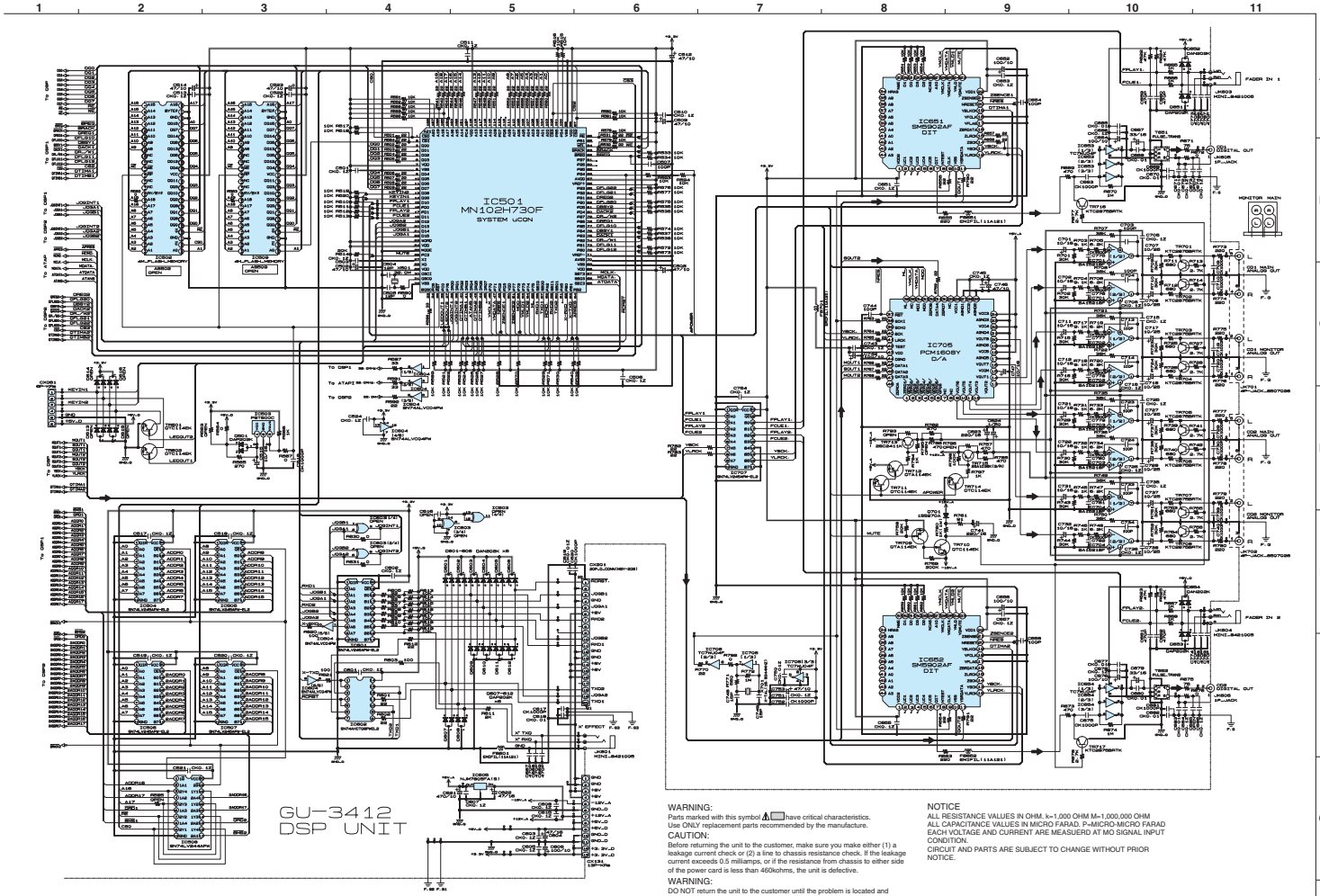


SCHEMATIC DIAGRAMS (3/6)

1U-3412 DSP UNIT (2/3)

SCHEMATIC DIAGRAMS (4/6)



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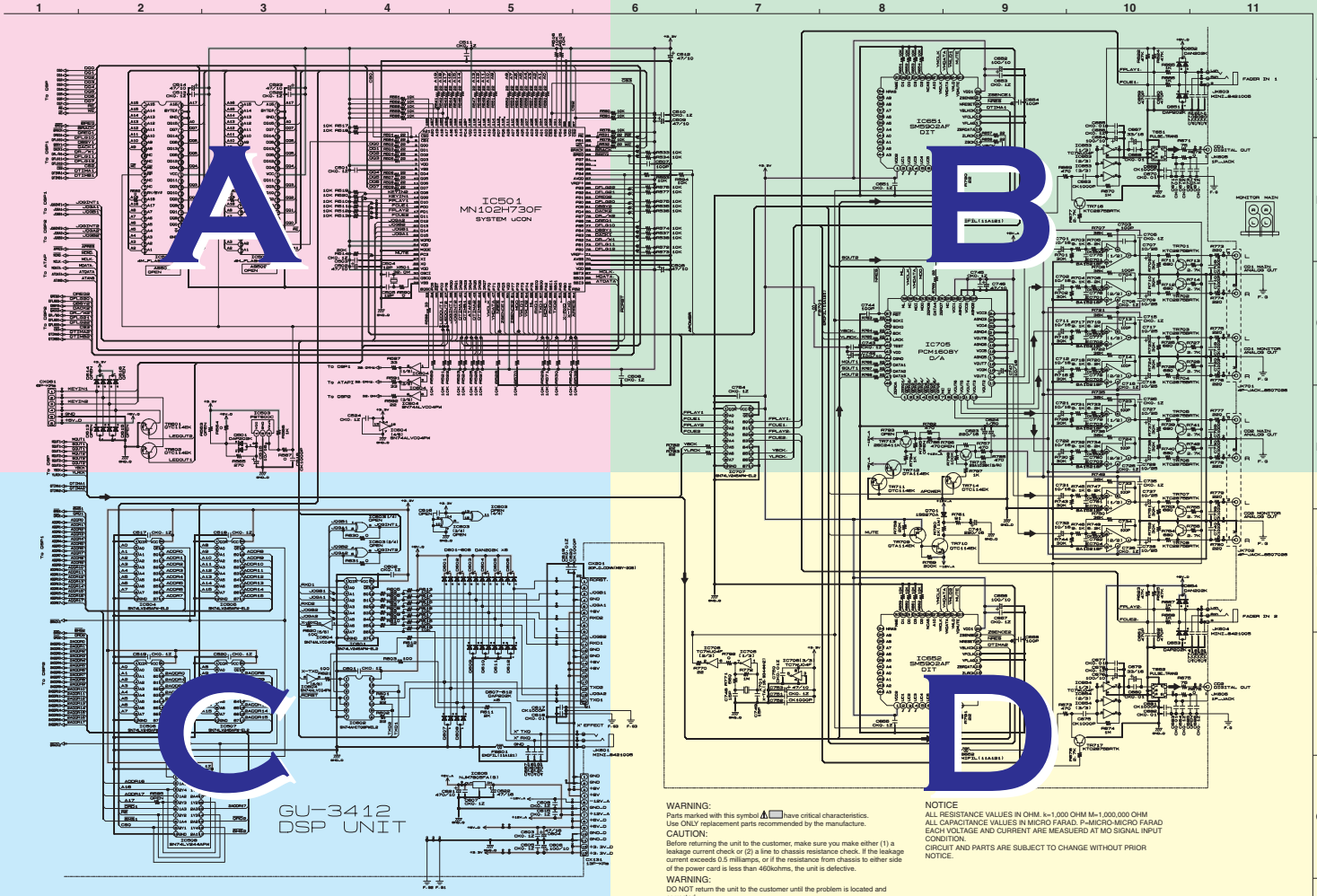
± B LINE
SIGNAL LINE

SCHEMATIC DIAGRAMS (4/6)
1U-3412 DSP UNIT (3/3)

SCHEMATIC DIAGRAMS (4/6)



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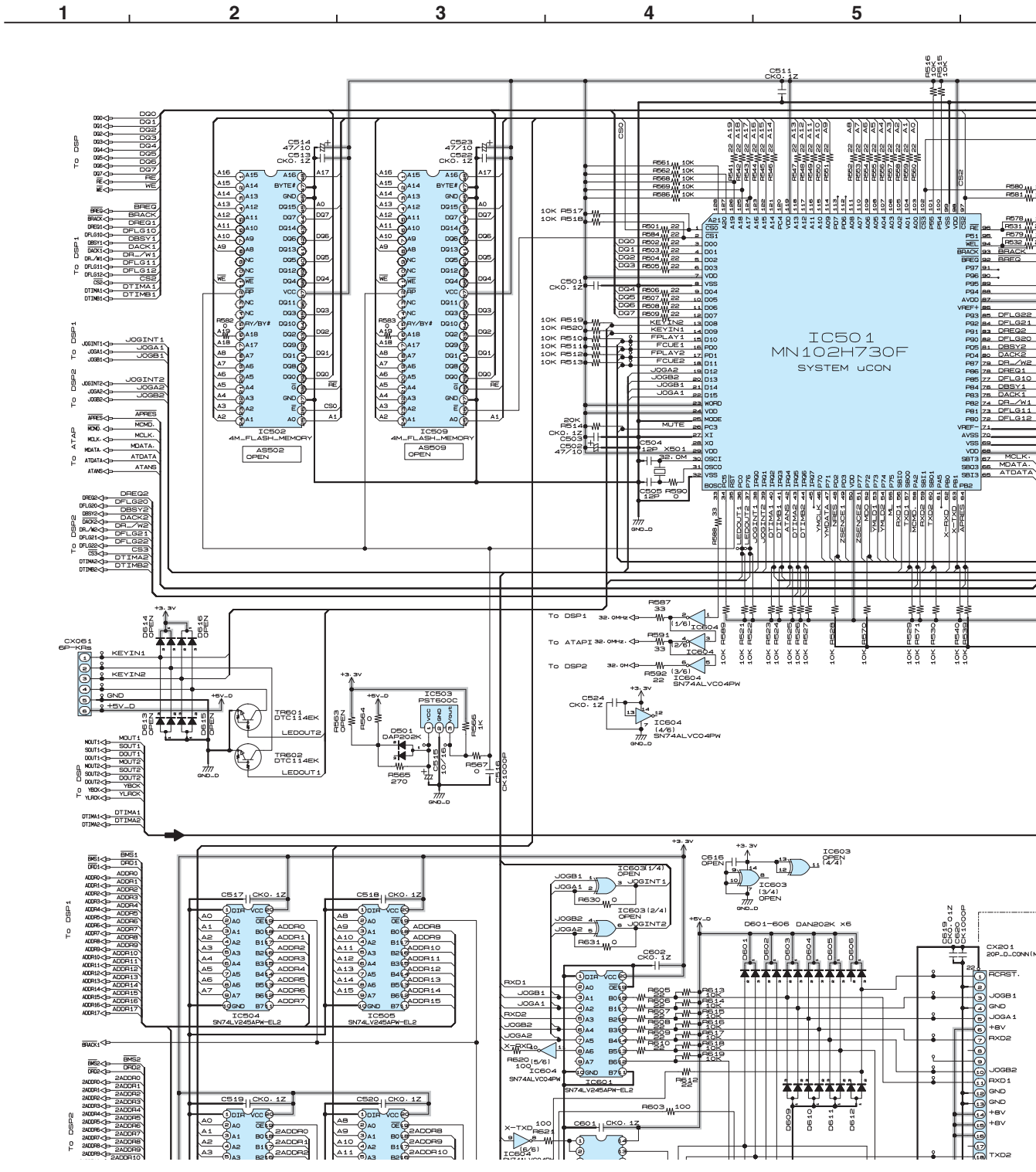
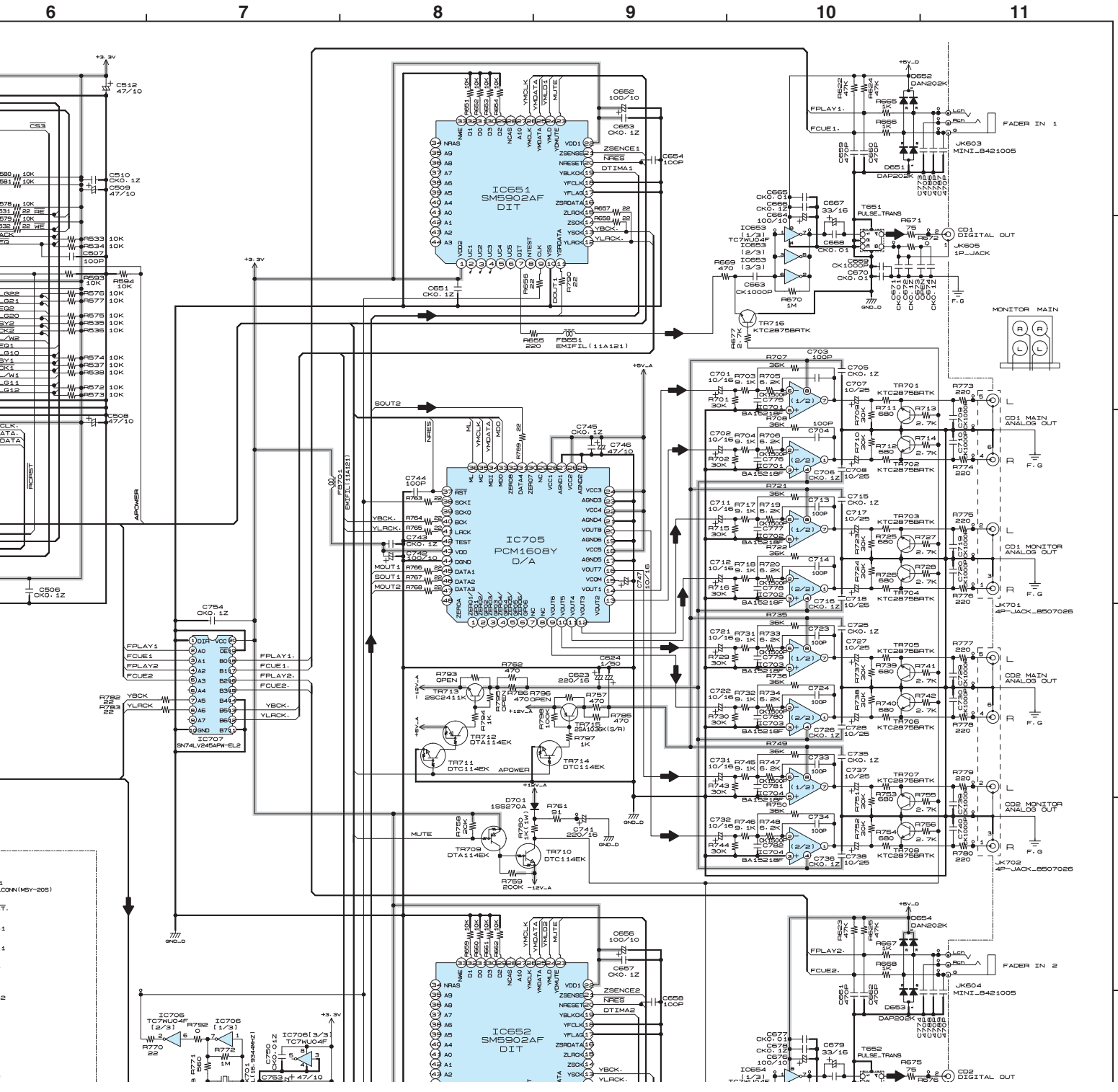
± B LINE
SIGNAL LINE

SCHEMATIC DIAGRAMS (4/6)
1U-3412 DSP UNIT (3/3)

SCHEMATIC DIAGRAMS (4/6)

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D
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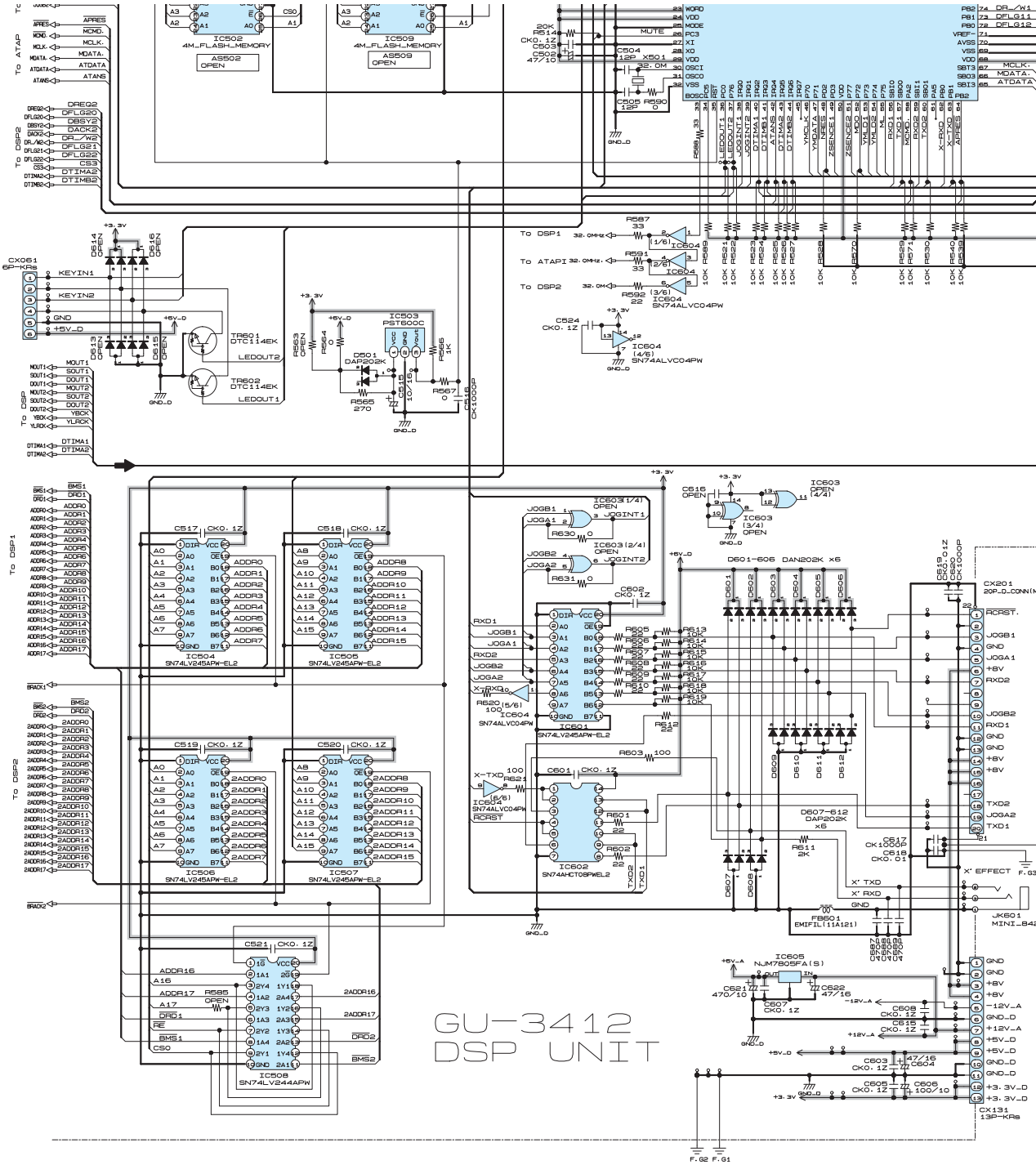
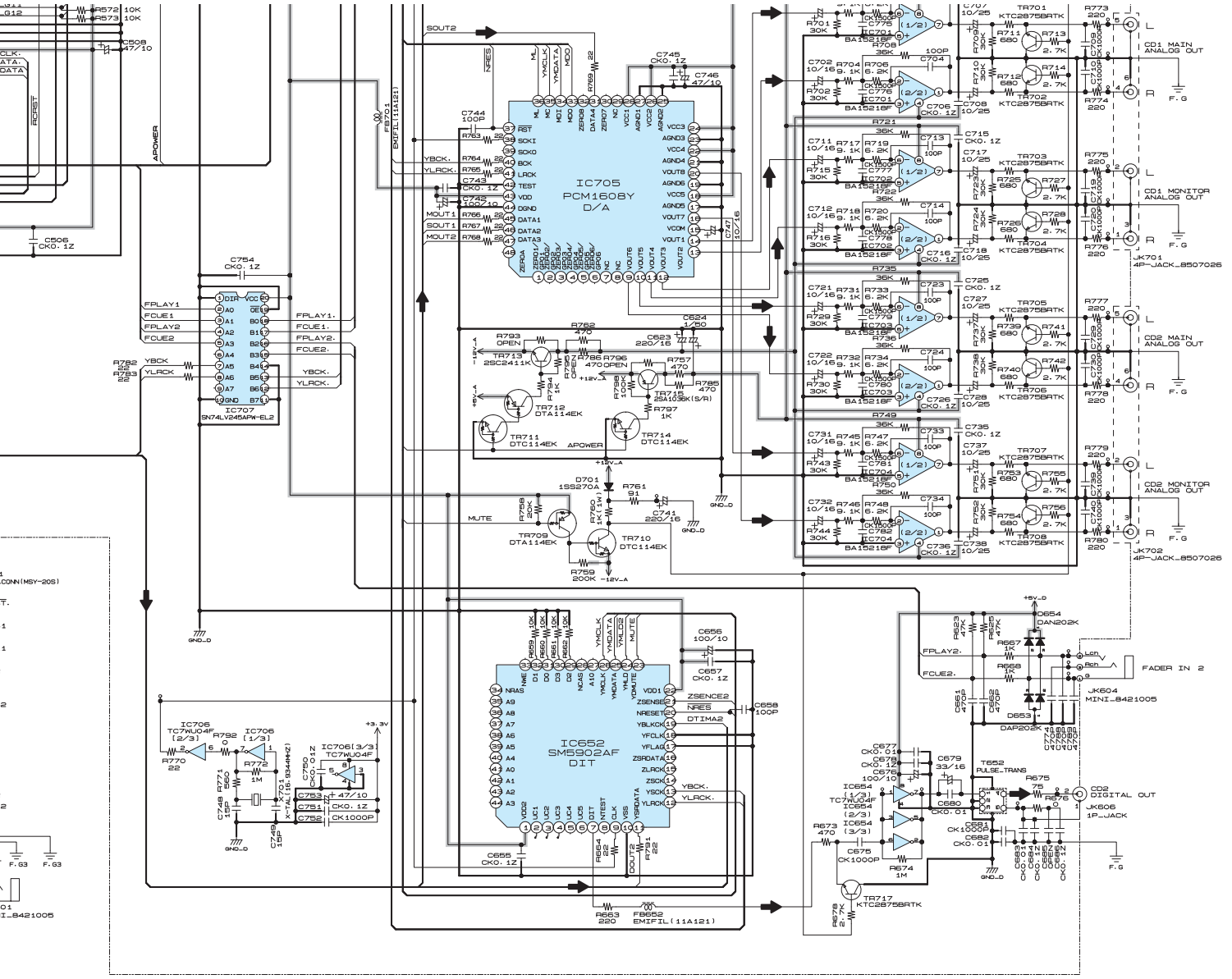
IC651
SM5902AF
DIT
IC652
SM5902AF
DIT
IC705
PCM1608Y
D/A
IC707
SN74LV245APW-EL2
IC706
TC7WU04F
IC653
TC7WU04F
IC654
TC7WU04F
TR701
KTC2875BRTK
TR702
KTC2875BRTK
TR703
KTC2875BRTK
TR704
KTC2875BRTK
TR705
KTC2875BRTK
TR706
KTC2875BRTK
TR707
KTC2875BRTK
TR708
KTC2875BRTK
TR709
DTA114EK
TR710
DTC114EK
TR711
DTC114EK
TR712
DTA114EK
TR713
2SC2411K
TR714
DTC114EK
TR715
2SA1036K(S/R)
TR716
KTC2875BRTK
D651
DAP202K
D652
DAN202K
D653
DAP202K
D654
DAN202K
D701
1SS270A
JK603
MINI_8421005
JK604
MINI_8421005
JK605
1P_JACK
JK701
4P_JACK_8507026
JK702
4P_JACK_8507026
T651
PULSE_TRANS
T652
PULSE_TRANS
FADER IN 1
FADER IN 2
CD1 DIGITAL OUT
CD2 DIGITAL OUT
CD1 MAIN ANALOG OUT
CD1 MONITOR ANALOG OUT
CD2 MAIN ANALOG OUT
CD2 MONITOR ANALOG OUT
MONITOR MAIN
FB651
EMIFIL(11A121)
FB701
EMIFIL(11A121)
APOWER
MUTE
RESET
SOUT2
FPLAY1.
FCUE1.
FPLAY2.
FCUE2.
YBCK.
YLRCK.
GND_D
F.G


GU-3412
DSP UNIT



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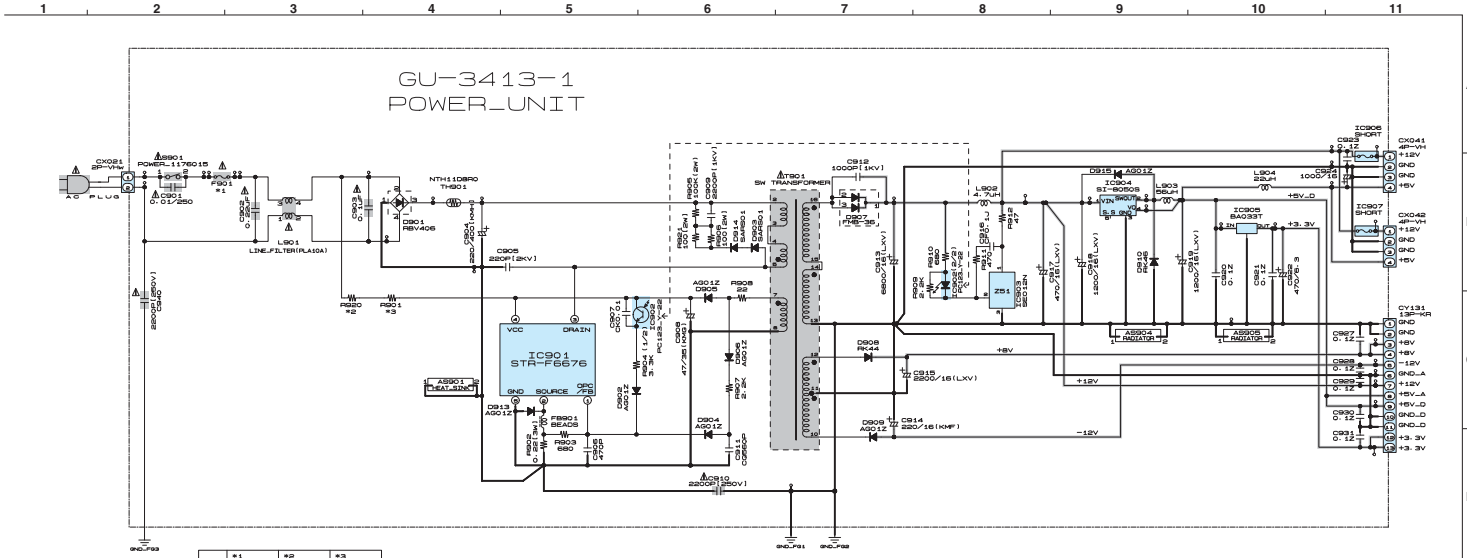
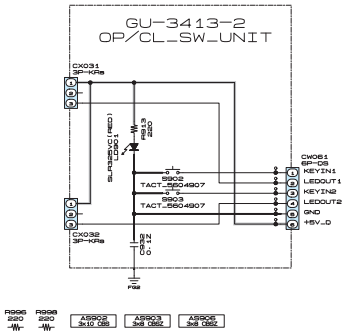
± B LINE
SIGNAL LINE

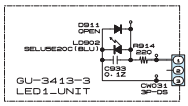
SCHEMATIC DIAGRAMS (4/6)
1U-3412 DSP UNIT (3/3)

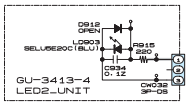
SCHEMATIC DIAGRAMS (5/6)



	*1 F901	*2 R920	*3 R901
E2	T2AL250V	100K(2W)	100K(2W)
E3	T1AL250V	SHORT	68K(2W)







NOTICE
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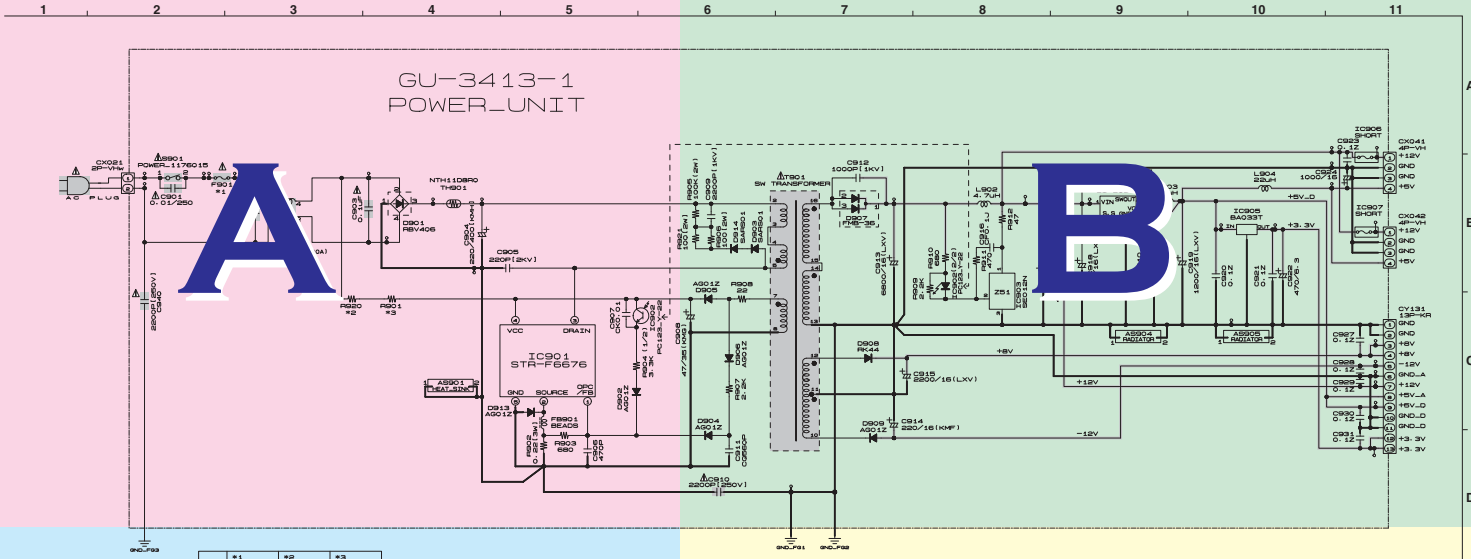
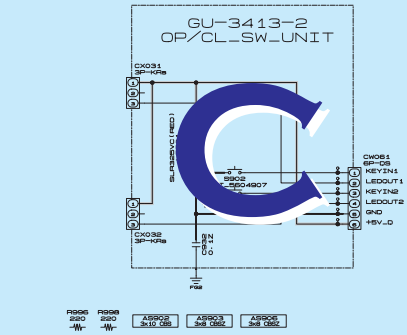
± B LINE

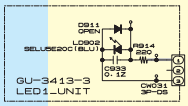
SCHEMATIC DIAGRAMS (5/6)
GU-3413-1 POWER UNIT
GU-3413-2 OP/CL SW UNIT
GU-3413-3 LED1 UNIT
GU-3413-4 LED2 UINT

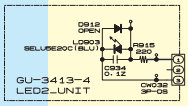
SCHEMATIC DIAGRAMS (5/6)



	*1 F901	*2 R920	*3 R901
E2	T2AL250V	100K(2W)	100K(2W)
E3	T1AL250V	SHORT	68K(2W)







D

NOTICE
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
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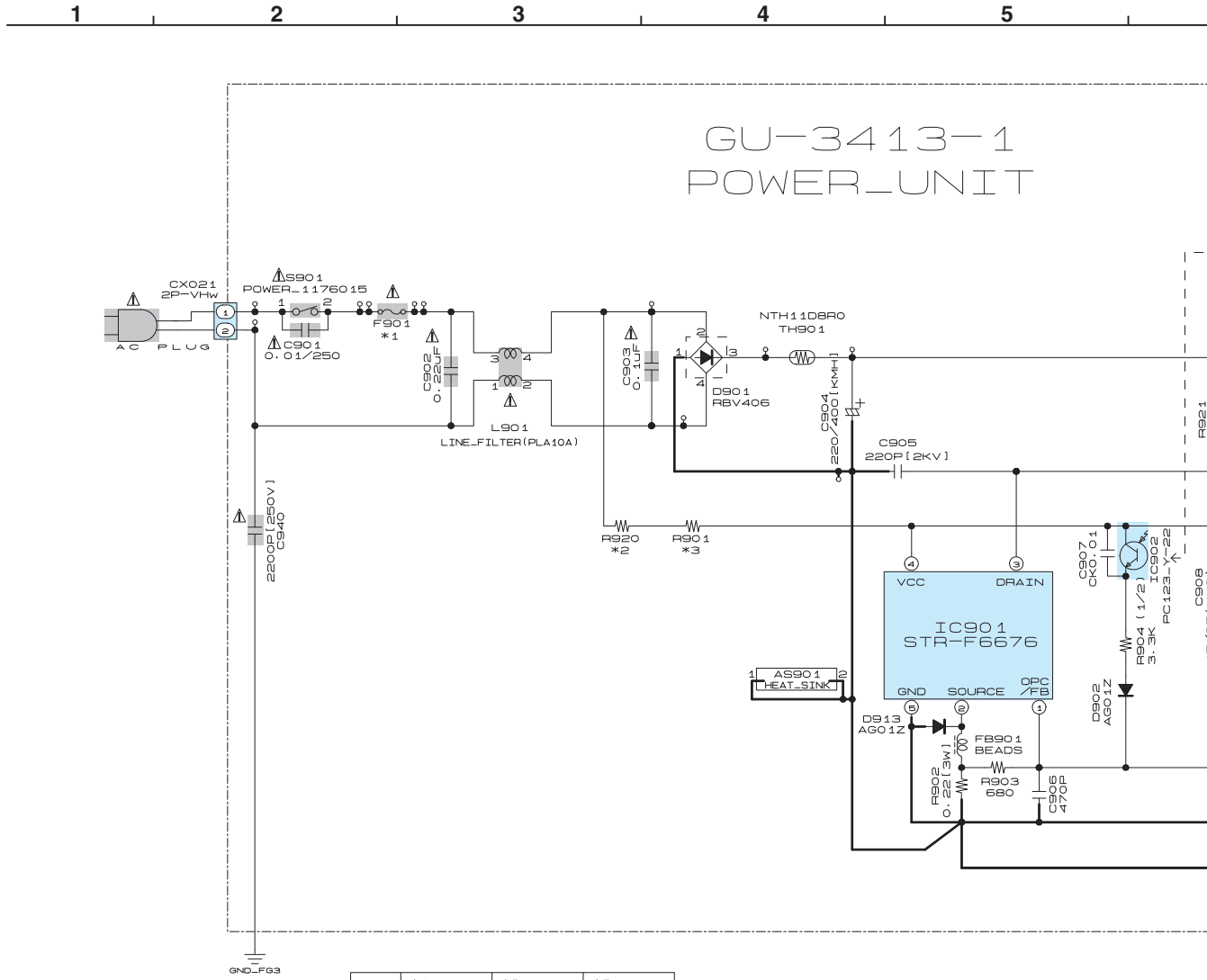
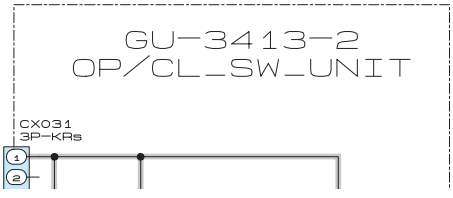
± B LINE

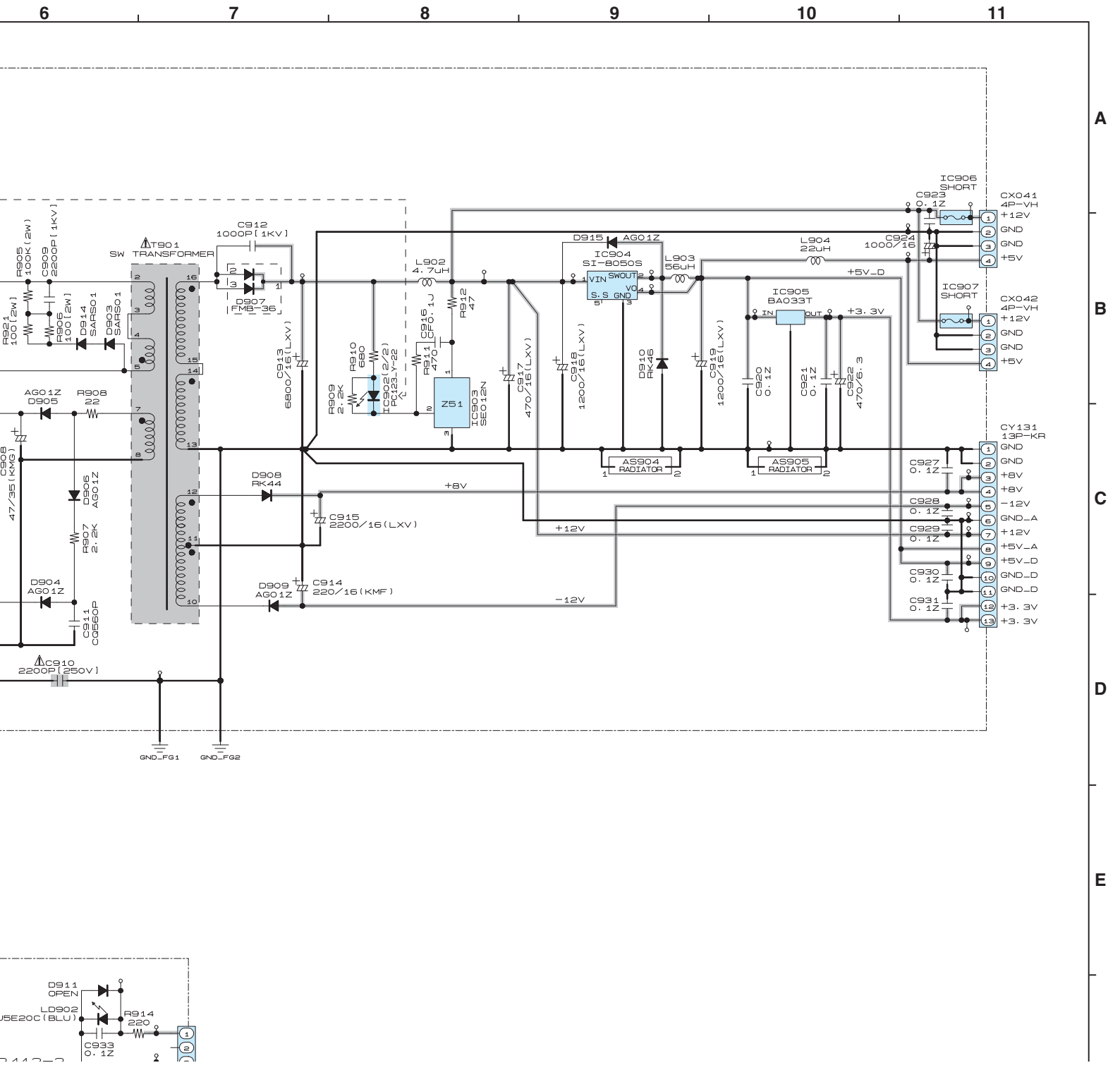
SCHEMATIC DIAGRAMS (5/6)
GU-3413-1 POWER UNIT
GU-3413-2 OP/CL SW UNIT
GU-3413-3 LED1 UNIT
GU-3413-4 LED2 UINT

SCHEMATIC DIAGRAMS (5/6)



	*1 F901	*2 R920	*3 R901
E2	T2AL250V	100K(2W)	100K(2W)
E3	T1AL250V	SHORT	68K(2W)

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D
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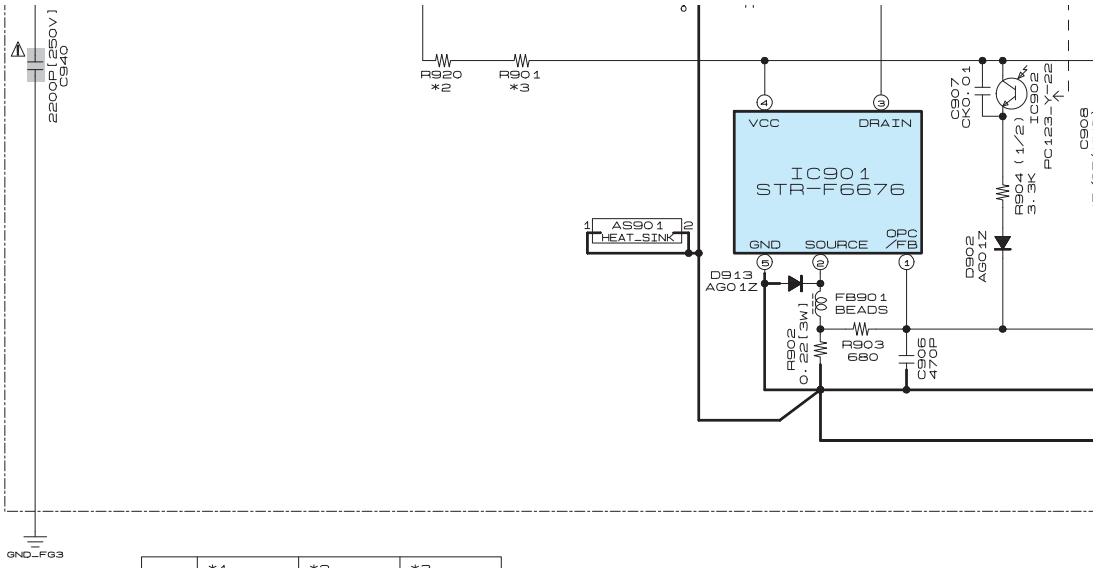
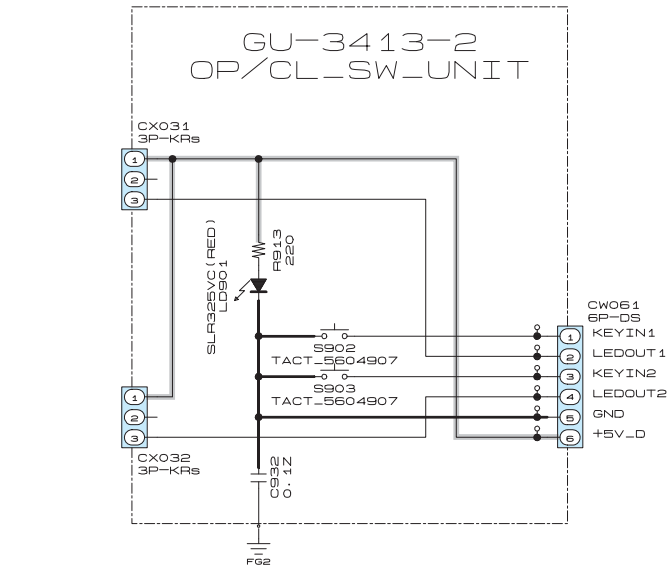
T901
SW TRANSFORMER
C912 1000P[1KV]
D907 FMB-36
L902 4.7uH
D915 AG01Z
IC904 SI-8050S
VIN
SWOUT
VO
S.S
GND
L903 56uH
L904 22uH
+5V_D
IC905 BA033T
IN
OUT
+3.3V
IC906 SHORT
IC907 SHORT
C923 0.1Z
C924 1000/16
CX041 4P-VH
CX042 4P-VH
+12V
GND
GND
+5V
R905 100K(2W)
C909 2200P[1KV]
R921 100[2W]
R906 100[2W]
D914 SARS01
D903 SARS01
AG01Z D905
R908 22
C908 47/35(KMG)
D906 AG01Z
R907 2.2K
D904 AG01Z
C911 CQ560P
C910 2200P[250V]
C913 6800/16(LXV)
R910 680
R909 2.2K
R911 470
C916 CF0.1J
R912 47
Z51
IC903 SE012N
C917 470/16(LXV)
C918 1200/16(LXV)
D910 RK46
C919 1200/16(LXV)
C920 0.1Z
C921 0.1Z
C922 470/6.3
D908 RK44
C915 2200/16(LXV)
+8V
+12V
D909 AG01Z
C914 220/16(KMF)
−12V
AS904 RADIATOR
AS905 RADIATOR
CY131 13P-KR
C927 0.1Z
C928 0.1Z
C929 0.1Z
C930 0.1Z
C931 0.1Z
GND
+8V
−12V
GND_A
+12V
+5V_A
+5V_D
GND_D
+3.3V
GND_FG1
GND_FG2
D911 OPEN
LD902
R914 220
C933 0.1Z



	*1 F901	*2 R920	*3 R901
E2	T2AL250V	100K(2W)	100K(2W)
E3	T1AL250V	SHORT	68K(2W)

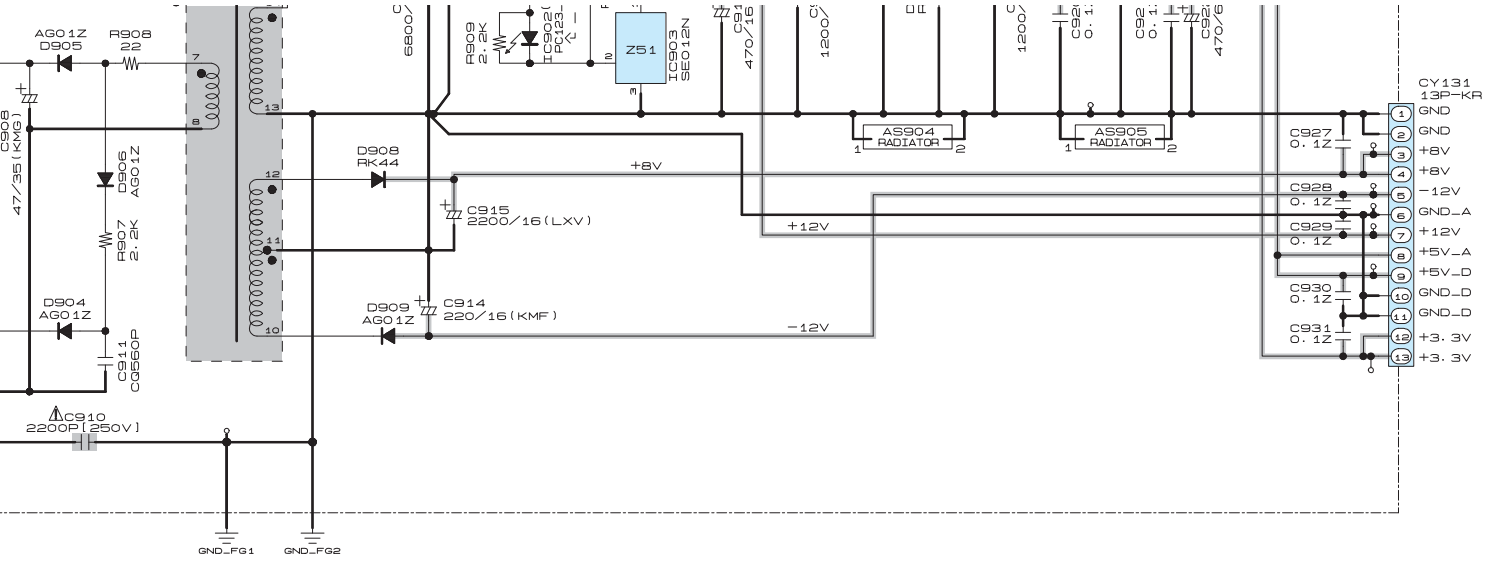


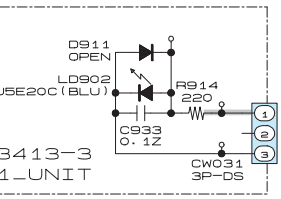
R996 220 R998 220

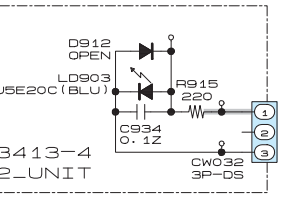
AS902	AS903	AS906
3x10 CBS	3x8 CBSZ	3x8 CBSZ

NOTICE

ALL RESISTANCE VALUES IN OHM. k=
ALL CAPACITANCE VALUES IN MICRO
EACH VOLTAGE AND CURRENT ARE
CONDITION.
CIRCUIT AND PARTS ARE SUBJECT T
NOTICE.







k=1,000 OHM M=1,000,000 OHM
RO FARAD. P=MICRO-MICRO FARAD
E MEASUERD AT MO SIGNAL INPUT

T TO CHANGE WITHOUT PRIOR

WARNING:
Parts marked with this symbol ⚠ ▭ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

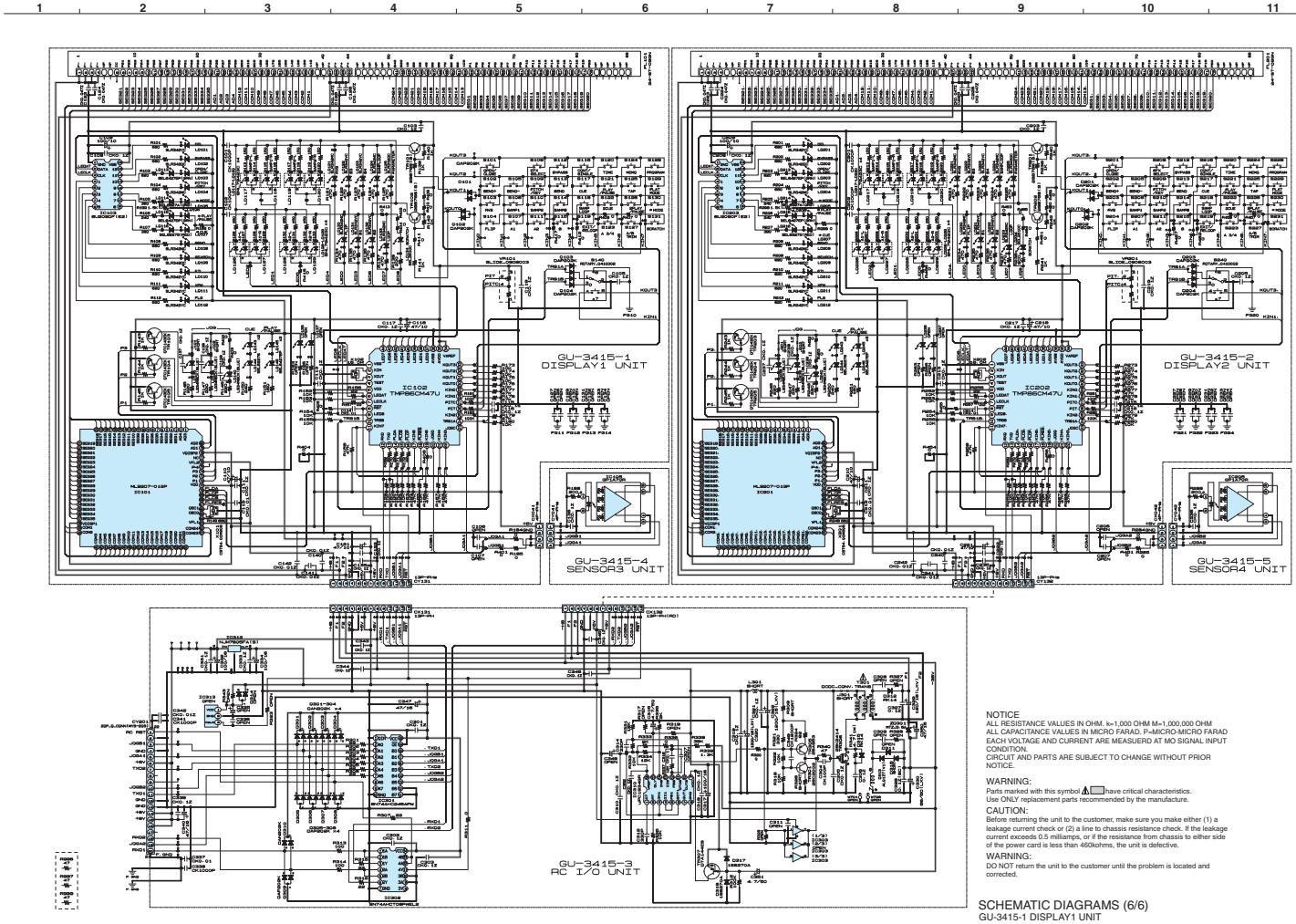
WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

± B LINE

SCHEMATIC DIAGRAMS (5/6)

GU-3413-1 POWER UNIT
GU-3413-2 OP/CL SW UNIT
GU-3413-3 LED1 UNIT
GU-3413-4 LED2 UINT

SCHEMATIC DIAGRAMS (6/6)



NOTICE
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:
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CAUTION:
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WARNING:
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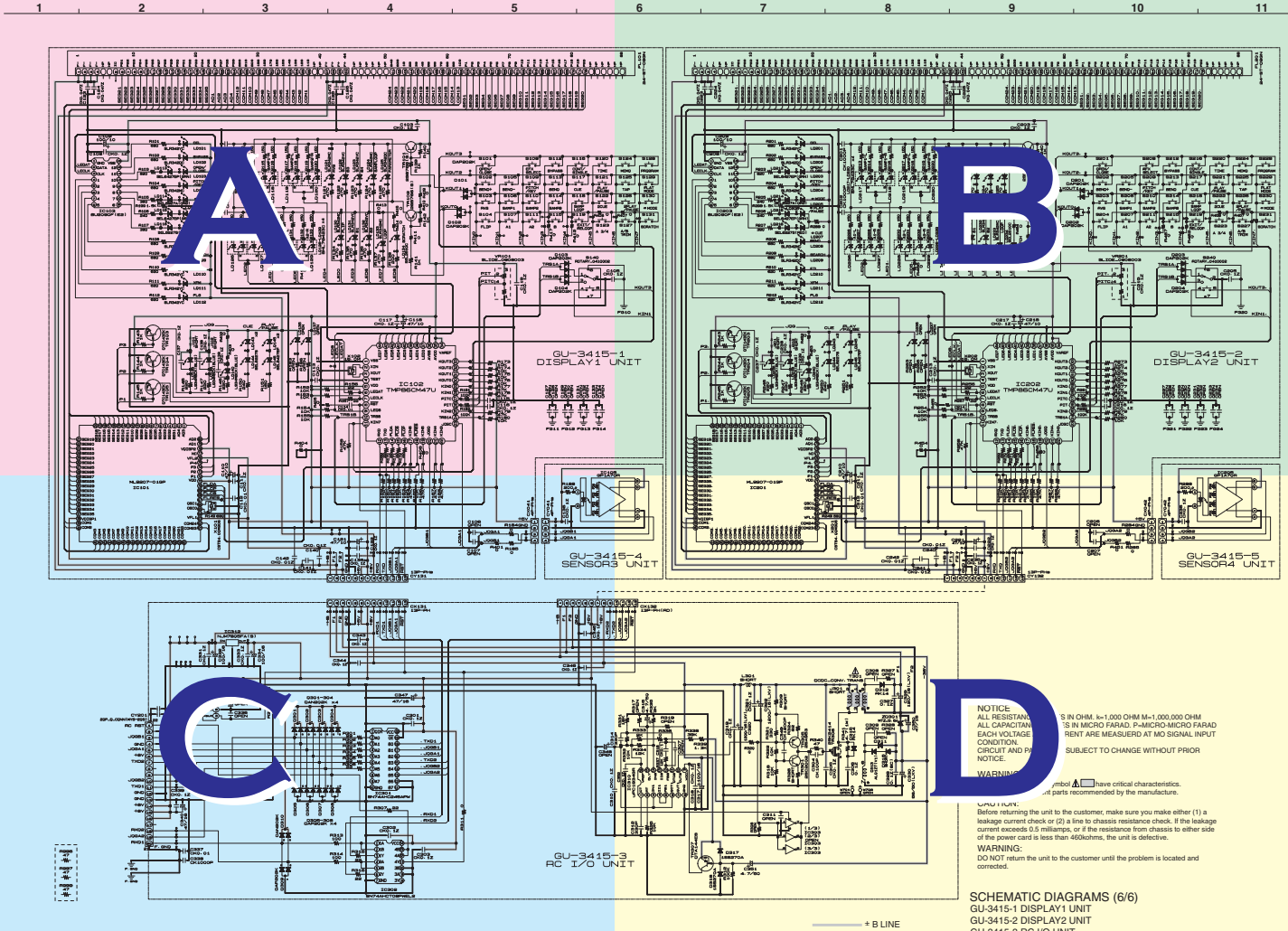
SCHEMATIC DIAGRAMS (6/6)
GU-3415-1 DISPLAY1 UNIT
GU-3415-2 DISPLAY2 UNIT
GU-3415-3 RC I/O UNIT
GU-3415-4 SENSOR3 UNIT
GU-3415-5 SENSOR4 UNIT

SCHEMATIC DIAGRAMS (6/6)



NOTICE:
ALL RESISTANCES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:
Components identified by symbol ⚠ have critical characteristics. Use only replacement parts recommended by the manufacture.

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SCHEMATIC DIAGRAMS (6/6)
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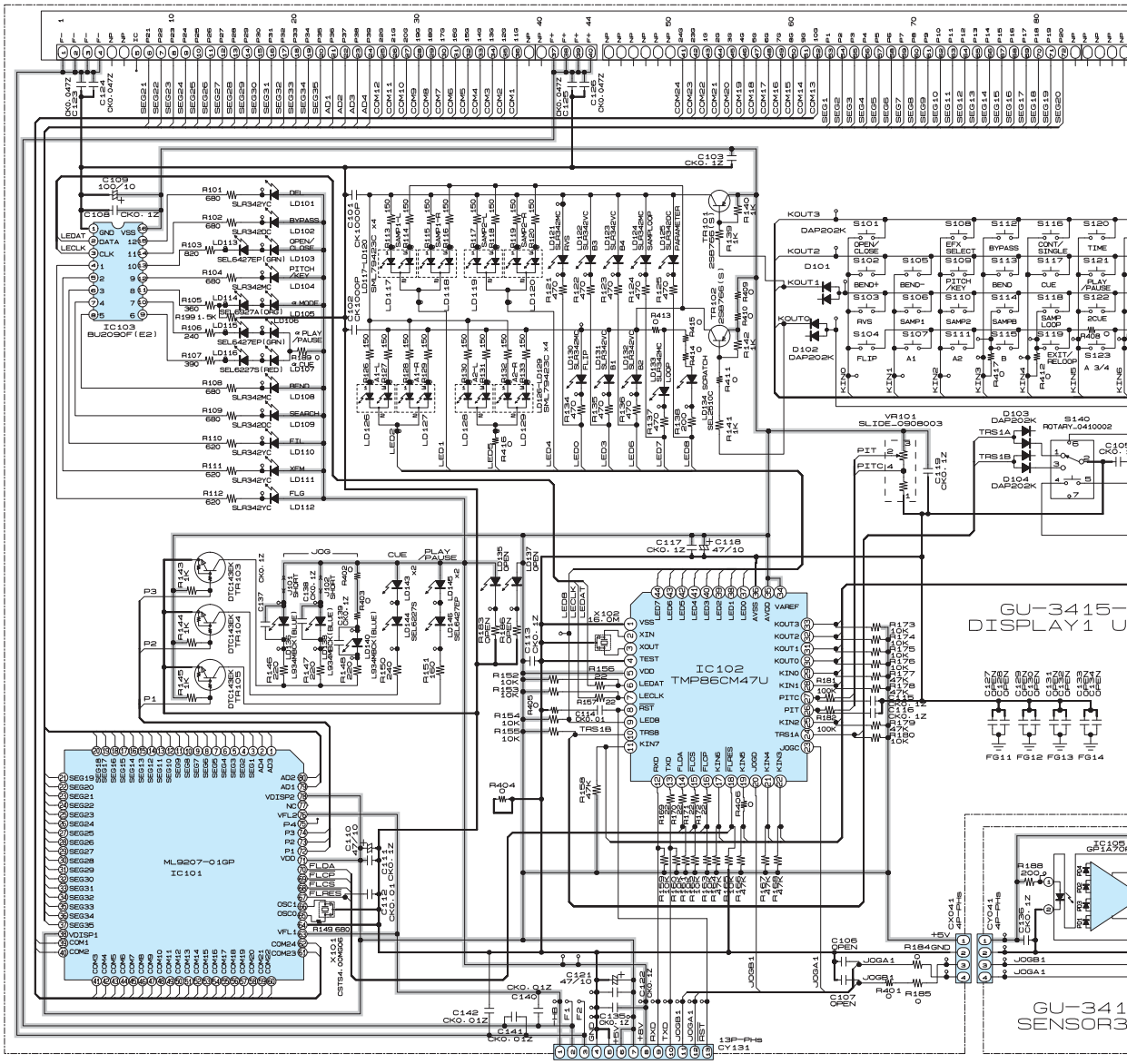
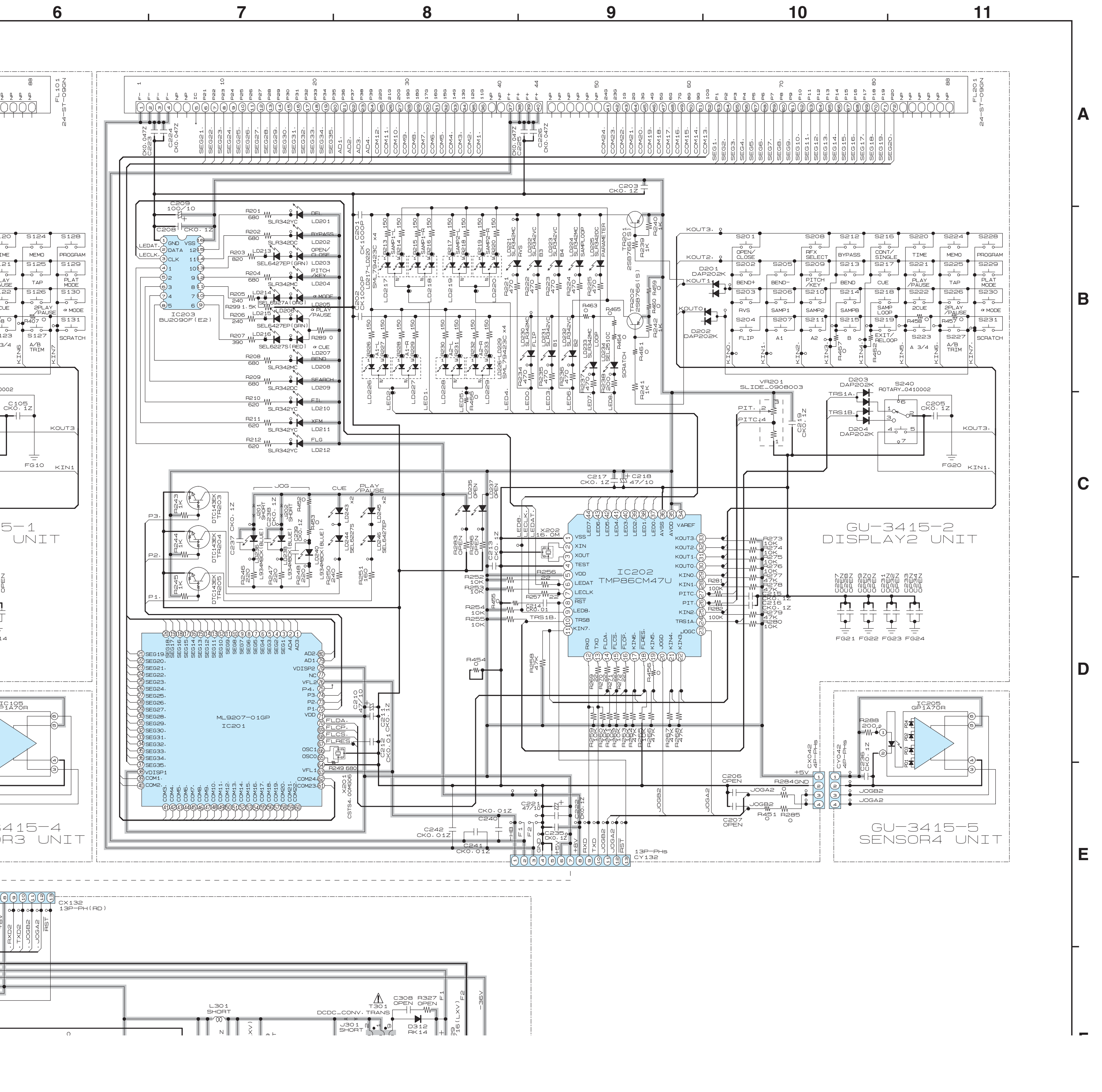
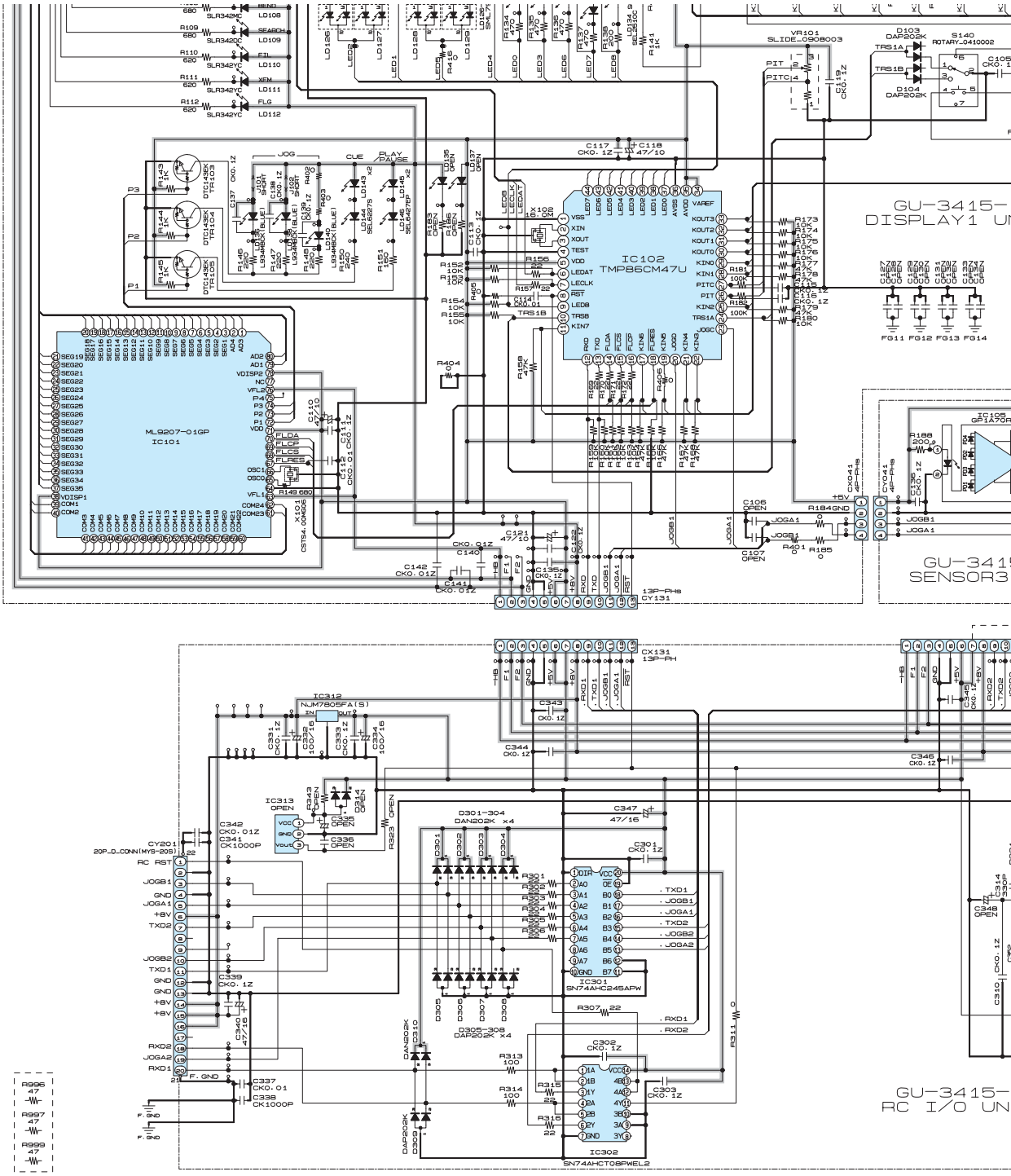
GU-3415-3 RC I/O UNIT
GU-3415-4 SENSOR3 UNIT
GU-3415-5 SENSOR4 UNIT

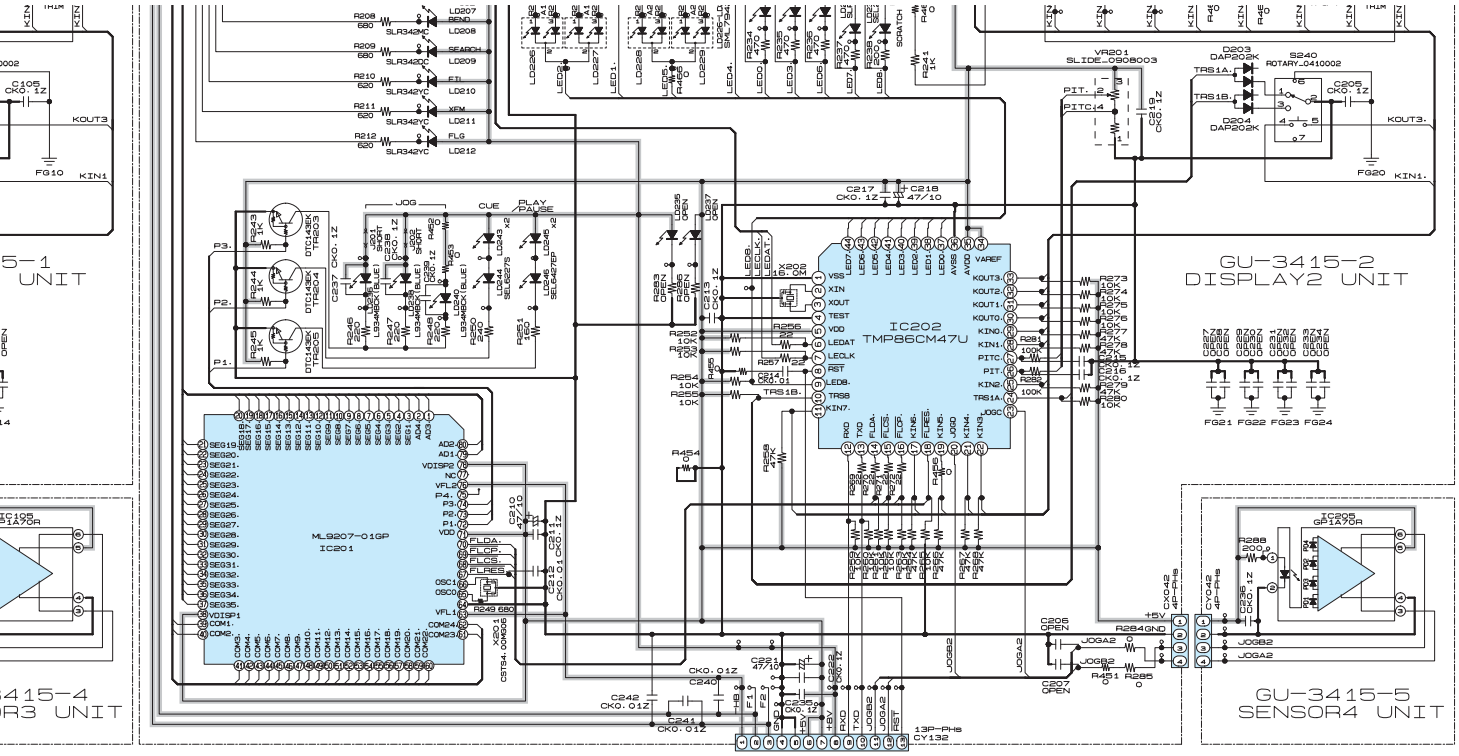
SCHEMATIC DIAGRAMS (6/6)

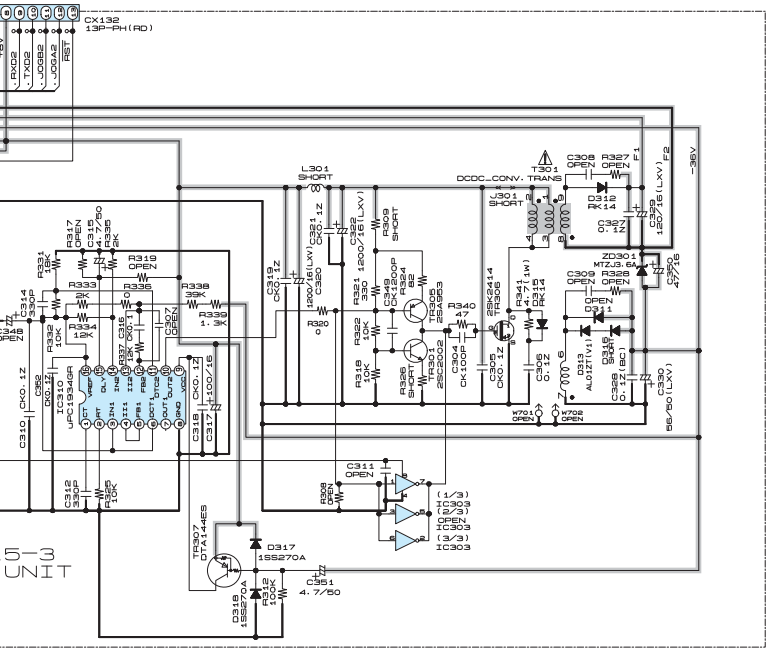
1 2 3 4 5




6
7
8
9
10
11
A
B
C
D
E
FL201
24-ST-09GN
IC203
BU2090F(E2)
IC202
TMP86CM47U
ML9207-01GP
IC201
VR201
SLIDE_0908003
S240
ROTARY_0410002
GU-3415-2
DISPLAY2 UNIT
GU-3415-5
SENSOR4 UNIT
IC205
GP1A70R
13P-PHs
CY132
CX132
13P-PH(RD)
DCDC_CONV. TRANS
OPEN/CLOSE
BEND+
RVS
FLIP
SAMP1
A1
SAMP2
A2
BYPASS
SAMPB
B
CONT/SINGLE
CUE
PLAY/PAUSE
TIME
MEMO
TAP
PROGRAM
PLAT MODE
SCRATCH
A/B TRIM


IC102
TMP86CM47U
IC101
ML9207-01GP
GU-3415-
DISPLAY1 UN
GU-3415-
SENSOR3
GU-3415-
RC I/O UN





± B LINE

NOTICE

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SCHEMATIC DIAGRAMS (6/6)

GU-3415-1 DISPLAY1 UNIT
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GU-3415-3 RC I/O UNIT
GU-3415-4 SENSOR3 UNIT
GU-3415-5 SENSOR4 UNIT