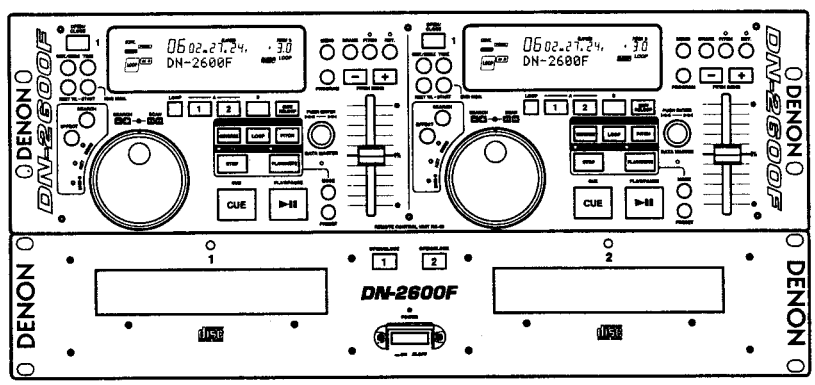
DENON

Hi-Fi Component

SERVICE MANUAL

MODEL DN-2600F

DOUBLE CD PLAYER



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

NIPPON COLUMBIA CO., LTD.

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)	
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) × 132 (H) × 40 (D) mm (without deet) 18-31/32″ (W) × 5-13/64″ (H) × 1-37/64″ (D)
Installation:	19-inch rack mountable	
	Player unit:	2U
	Remote control unit:	3U
	Player unit:	6 kg (13.23 ibs.)
	Remote control unit:	3 kg (6.614 lbs.)
Power Supply:	U.S.A. & Canada model:	120 V AC ±10 %, 60 Hz
	Europe & U.K. model:	230 V AC ±10 %, 50 Hz
Power Consumption:	26 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

Quantization:	16-bit linear per channel
Sampling Frequency:	44.1 kHz at normal pitch
Oversampling Rate:	8 times
Frequency response:	20 to 20,000 Hz
Analog output	
Output Level:	1.9 V
Digital Output:	
Signal Format:	SPDIF
Output Level:	0.5 Vp-p 75 Ω/ohms
Load impedone:	10 kΩ/kohms or more

FUNCTIONS

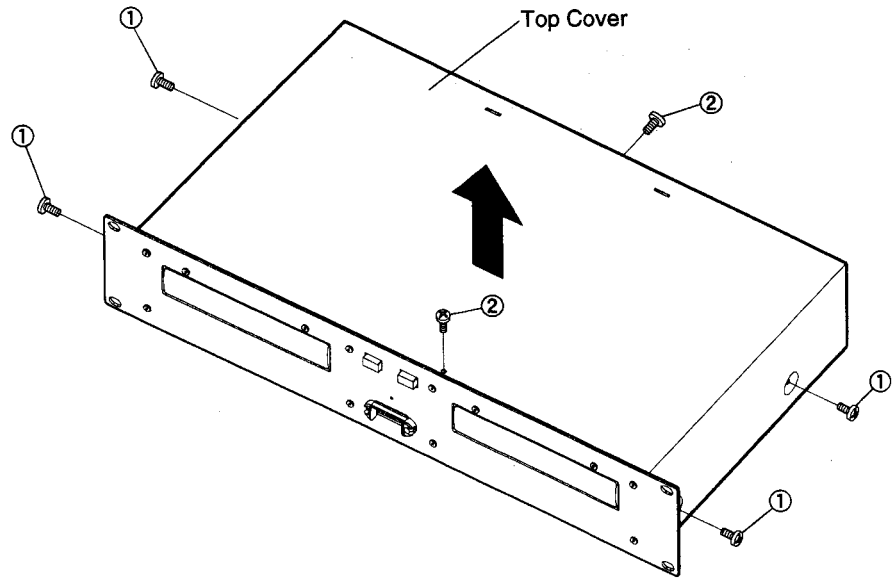
Instant Start:	Within 20 msec.	
Variable Pitch:	10 % range:	±10 % or more
	16 % range:	±16 % or more
Pitch Bend:	±32 % or more	
Sampling Length:	15 sec.	
Search Precision:	1/75 sec (1 subcode frame)	
Max. Scan Speed:	Over 20 times normal speed	
Max. Memory Steps:	300 steps	

DISASSEMBLY

(Follow the procedure below in reverse order when reassembling)

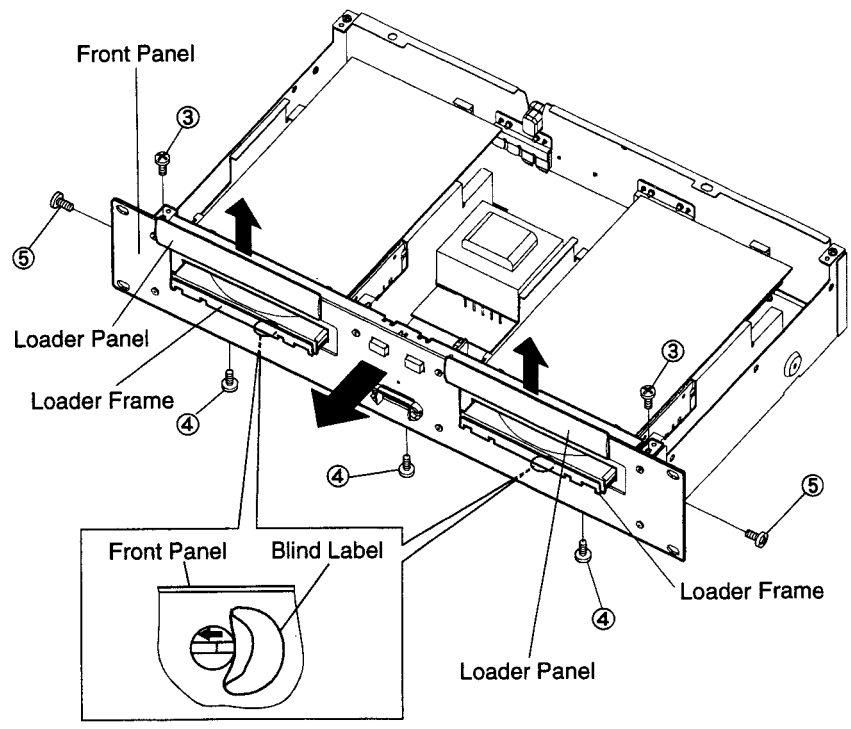
Top Cover

1. Remove 4 screws ① on both sides, and 2 screws ② .
2. Pull up Top Cover.



Front Panel

1. Detach 2 Blind Labels on the bottom chassis.
2. Move CD Mecha Rack in the arrow direction through the label detached chassis opening. Loader Frame comes out.
3. Pull up Loader Panel while pulling it towards front.
4. Remove 2 upper screws ③ and 3 lower screws ④ , and 2 screws ⑤ on both sides.
5. Detach Front Panel.

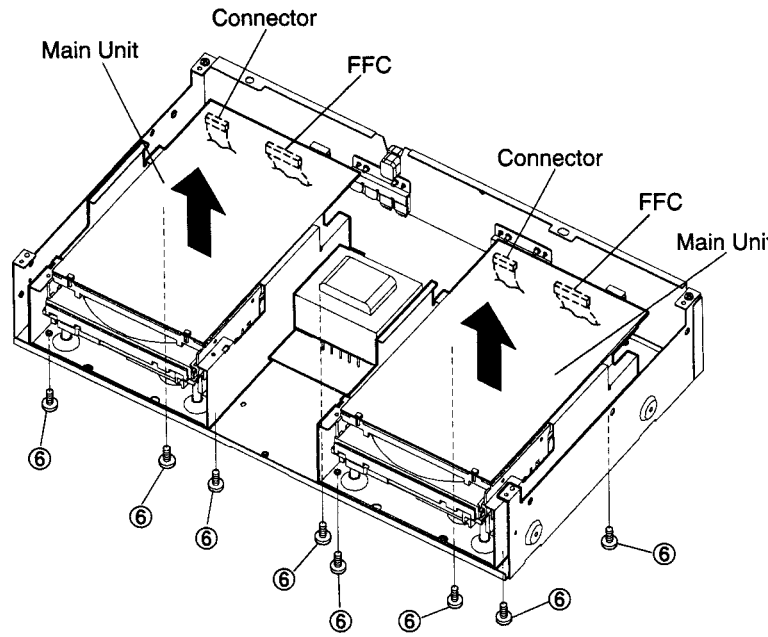


Mechanism Unit

1. Disconnect FFC cable and Connector.
2. Remove 8 screw ⑥ .

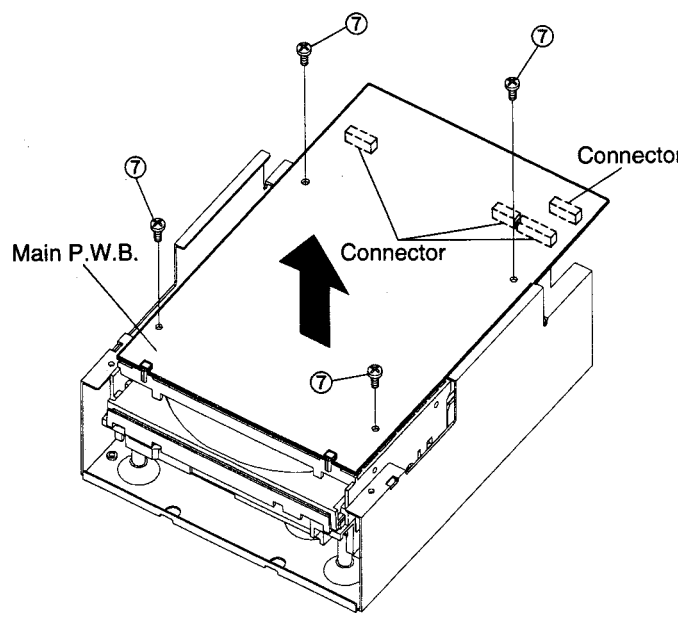
Notes: ● Do not pull out aslant to prevent the FFC cable from damage.

● Do not fail to pull out AC cord from wall outlet before disconnecting the FFC cable. If the AC cord is remained plugged into wall outlet, the power is kept supplied in the unit, which may cause danger.



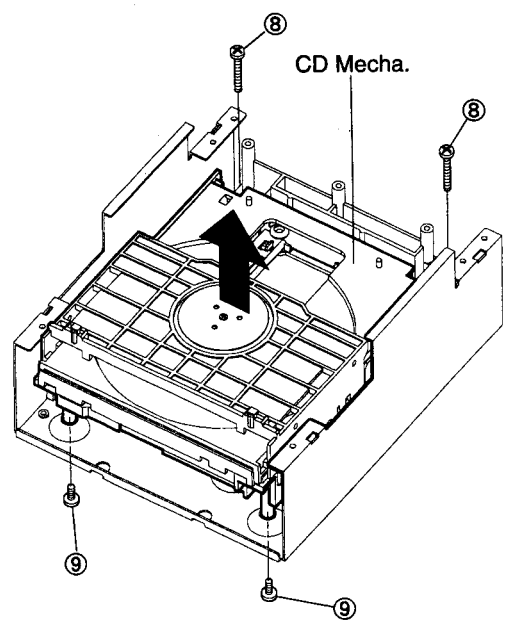
Main P.W.B.

1. Remove 4 screws ⑦ .
2. Disconnect Connector.
3. Detach Main P.W.B.



CD Mecha.

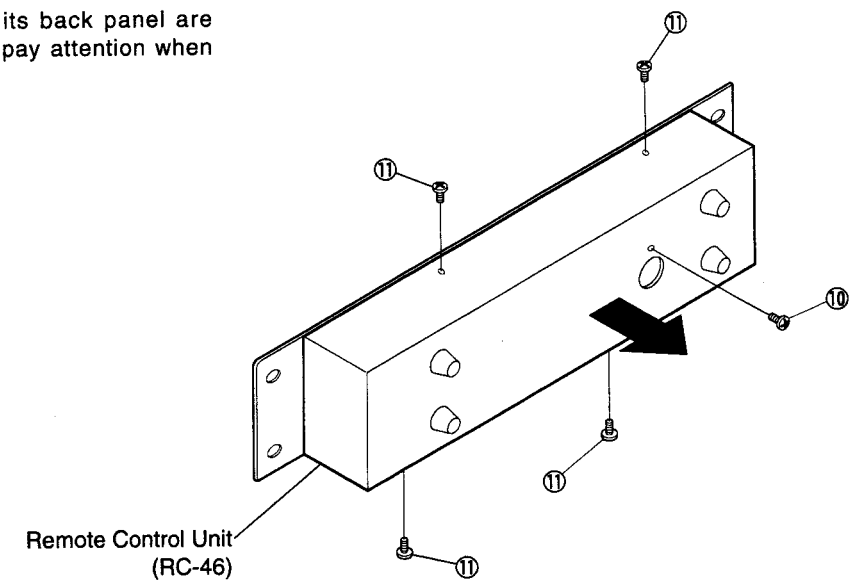
1. Remove 2 upper screws ⑧, and 2 lower screws ⑨.
2. Detach CD Mecha.



Cover (Remote Control Unit)

1. Remove 5 screws (1 × ⑩ and 4 × ⑪).

Note: Remote Control Unit and its back panel are connected with cables, so pay attention when removing the back panel.



CONFIRMING THE SERVO

CAUTION:
The Optical Pick-up used for CD player may invite defection by an external noise, such as electrostatic, etc., please pay the following attention.
1. Use a conductive mat on a working table to avoid electrostatic charge.
2. A working personnel should use a wrist strap to ground human body.
3. Tools, etc., specially for a soldering iron must use with its tip grounded to prevent leakage of electricity.
Utmost care must be taken to your clothes for electrostatic charging in a low humidity environment.

Required Measuring Implement

1. Dual trace oscilloscope
2. Reference disc (TCD784 or CO-74176)

1. What is Service Program

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

2. Actuating the Service Program and Servo Confirming Method

1. Turn the power switch off.
2. While pushing the CD1's PITCH BEND + button and CD2's OPEN/CLOSE button simultaneously, turn the power on.
3. "Servic Mode" is indicated on the display. µcom GEN No. appear as follows, RC µcom GEN No. → Min & Sec, Mecha. µcom GEN No. → Frm & Next TR.
4. Turn SELECT knob clockwise. The display shows " 0 1 " and "OPEN/CLOSE". At this mode, each pressing of the SELECT knob opens or closes the tray.
5. Set the reference disc (TCD784 or CO-74176) while the tray is open.
6. Turn SELECT knob clockwise again. The display shows " 0 2 " and "TR Signal".
At this mode, tracking error signal can be observed with connection below (Fig1).
To start measuring, press the SELECT knob.
7. Turn SELECT knob clockwise again. The display shows " 0 3 " and "HF Signal".
At this mode, HF signal can be observed with connection below (Fig2).
To start measuring, press the SELECT knob. ("HF Signal" is indicated when TR servo on)
8. Turn SELECT knob clockwise again. The display shows " 0 4 " and "Servo Data".
At this mode, servo automatic adjustment data can be called using JOG dial. (see Table below)
To start adjustment, press the SELECT knob.

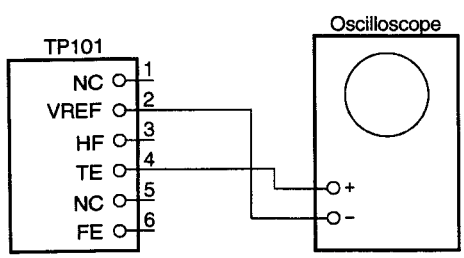


Fig1

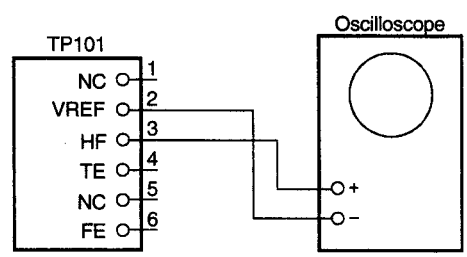


Fig2

	Adjustment Item	Adjustment Value indication at character portions.
1	Focus Gain	FOG 154 ~ 804
2	Focus Balance	FBAL −125 ~ 125
3	Focus Offset	FOFS −35 ~ 35
4	Tracking Gain	TrG 102 ~ 645
5	Tracking Balance	TBAL −110 ~ 86
6	Tracking Offset	TOFS −15 ~ 15

* When adjustment range exceeds, replace pick-up.

3. Contents of Service Program

Switch on the power while pushing the CD1's PITCH BEND + button and CD2's OPEN/CLOSE button at the same time. After actuating the servo program, select an aiming process number with the SELECT knob, FIL/REVERSE button, RVB/LOOP button, or FLG/PITCH 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	Contents
SELECT knob	01	OPEN/CLOSE	Performs open/close each time when the SELECT knob is pushed.
	02	Tracking Error	Check tracking error signal, then performs the Automatic Adjustment.
	03	HF Signal	Check HF signal.
	04	Automatic Adjustment call	Turn the JOG dial to display the Automatic Adjustment data.
	05	Cleaning of Pick-up Lens	Press SELECT knob. ("PU. Clean" is displayed.) Pick-up moves outward, and cleaning of the pick-up lens possible.
	06	Focus Gain Changing	Select Gain with JOG dial. Press SELECT knob, the display lights that will be newly memorized in EEPROM. Selectable level appears on the indicator SEC, while current Focus Gain level appears on the NEXT TR ("FO Gain" is displayed.). When select data becomes big or small, the Gain is up or down. In normal, do not change the data that is set by 4. The set No. stored in the EEPROM:
	07	Tracking Gain Changing	Select Gain with JOG dial. Press SELECT knob, the display lights that will be newly memorized in EEPROM. Selectable level appears on the indicator SEC, while current Tracking Gain level appears on the NEXT TR ("Tr Gain" is displayed.). When select data becomes big or small, the Gain is up or down. In normal, do not change the data that is set by 2. When sound out is occurred by oscillation, please raise the Gain. But there is sound out easily by defective disc. The set No. stored in the EEPROM:
	08	Error Code Check	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 (1) Error Code Table (Appears only at Heat Run and Chucking Test function) (2) E204 ····· Servo down during cue (3) E205 ····· Servo down during pause (4) E206 ····· Servo down during manual search and scan (5) E213 ····· Unable to read the subcode during cue (6) E214 ····· Unable to read the subcode during pause (7) E215 ····· Unable to read the subcode during the manual serach and scan Pressing SELECT knob enters to data erase mode. ("Error Clear?" is displayed.) If the SELECT knob is pushed again, the memorized error data are cleared.
	09	Total Running 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.

	Process No. (TRACK Indication)	Function	Contents
FIL/REVERCE button	H1	Heat Run	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).
RVB/LOOP, button	H2	Chucking Test	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).
FLG/PITCH button	H3	Playing Test	Selecting this mode and pushing the PLAY/PAUSE button starts 0.9 x speed playback, but with no sound. One more pushing of the PLAY/PAUSE button during playback changes it to be 1.8 × speed playback. Desired track can be selected with the SELECT knob during playback. The following are displayed on each indicators, ● TRACK: Track number ● FRAME: Playback speed 1 or 2 (1:0.9 2:1.8) ● CHARACTER: "Test Play 1" or "Test Play 2"

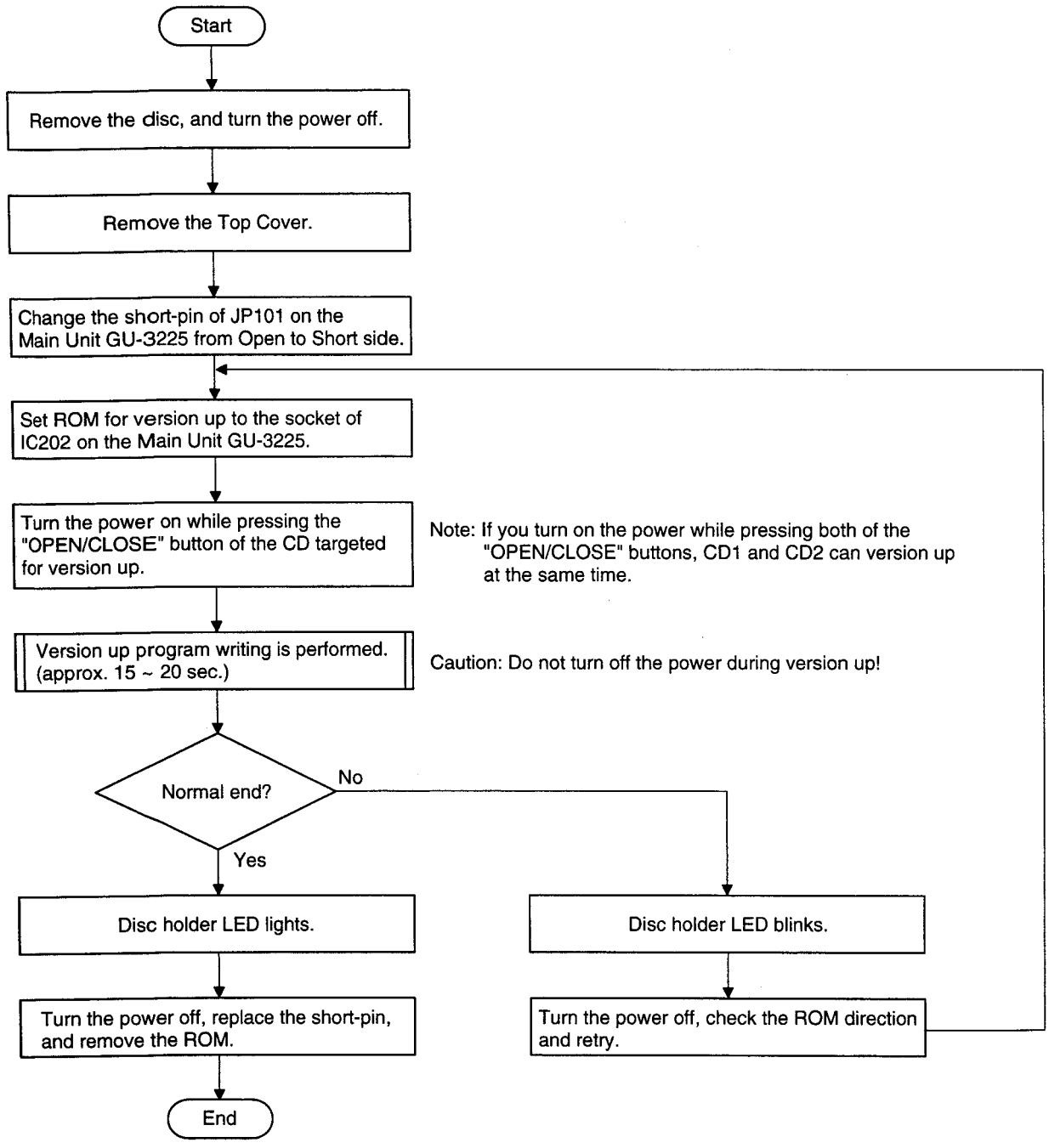
Error Code Table (Appears only at Heat Run and Chucking Test function)

Error Code	Contents
	Automatic Adjustment Error
E1 00	Unable to detect disc
E1 01	Unable to adjust tracking offset
E1 02	Unable to adjust focus 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 00	Servo down during playback
E2 01	Servo down during search
E2 02	Servo down during automatic adjustment
E2 03	Servo down during TOC read
E2 10	Unable to read the subcode between 500 msec. during the playback
E2 11	Unable to read the subcode between 1 sec. during the search
E2 12	Unable to read the subcode between 500 msec. during the TOC read
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
E5 01	Slide error during search
E8 00	Unable to store consecutive data due to track jump during data memorizing in the shock-proof memory.

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)
				Indication state when error occurs
				"FOG ∗∗∗" (FG data)
				"FBAL ∗∗∗" (FBAL data)
				"FOFS ∗∗∗" (FOFS data)
				"TrG ∗∗∗" (TG data)
				"TBAL ∗∗∗" (TBAL data)
				"TOFS ∗∗∗" (TOFS data)

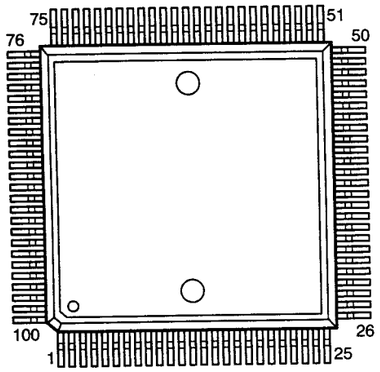
MECHA-μCOM VERSION UP



SEMICONDUCTORS

● IC's

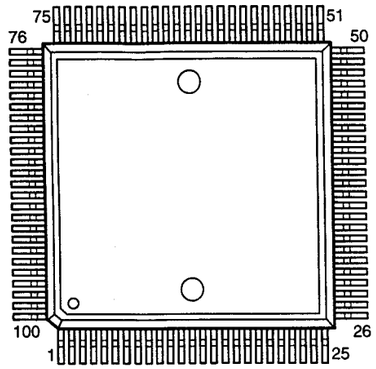
MN102LF61GAC (Main Unit: IC201)
MECHA μCOM



MN102LF61GAC Terminal Function

Pin No.	Pin Name	Symbol	I/O	DET	Ext	Ini	Res	Function
1	P60, WAIT	CDSEL	I	—	—	—	—	Mecha. No. select signal, L: Mecha.1, H: Mecha.2
2	RE_	RE_	O	—	—	—	—	ROM read enable output
3	WEL_	WEL_	O	—	—	—	—	Not used (open)
4	WEH_	WEH_	O	—	—	—	—	Not used (open)
5	CS0_	CS0_	O	—	—	—	—	ROM chip select
6	CS1_	CS1_	O	—	—	—	—	Not used (open)
7	CS2_	CS2_	O	—	—	—	—	Not used (open)
8	CS3_	CS3_	O	—	—	—	—	Not used (open)
9	P54	LDOUT_	I	—	Pu	—	H	Tray open complete signal
10	P55	LDIN_	I	—	Pu	—	H	Tray close complete signal
11	P56	DLOAD	I	—	Pd	—	L	ROM rewrite signal, H: Rewrite
12	WORD_	WORD	I	—	—	—	—	Fixed to 5V, H: 8-bit bus
13	A00	A00	O	—	—	—	—	Address bus 00, 1M-bit ROM connect
14	A01	A01	O	—	—	—	—	Address bus 01
15	A02	A02	O	—	—	—	—	Address bus 02
16	A03	A03	O	—	—	—	—	Address bus 03
17	VDD	VDD	—	—	—	—	—	Power (+5V)
18	SYSCLK	SYSCLK	O	—	—	—	—	System clock output (OSCI × 1/2), not used
19	Vss	Vss	—	—	—	—	—	GND (0V)
20	XI	XI	I	—	—	—	—	Fixed to GND
21	XO	XO	O	—	—	—	—	Not used (open)
22	VDD	VDD	—	—	—	—	—	Power (+5V)
23	OSCI	OSCI	I	—	—	—	—	X'tal input terminal, 20MHz
24	OSCO	OSCO	O	—	—	—	—	X'tal output terminal
25	MODE	MODE	I	—	—	—	—	Fixed to H, H: Single chip mode
26	A04	A04	O	—	—	—	—	Address bus 04
27	A05	A05	O	—	—	—	—	Address bus 05
28	A06	A06	O	—	—	—	—	Address bus 06
29	A07	A07	O	—	—	—	—	Address bus 07
30	A08	A08	O	—	—	—	—	Address bus 08
31	A09	A09	O	—	—	—	—	Address bus 09
32	A10	A10	O	—	—	—	—	Address bus 10
33	A11	A11	O	—	—	—	—	Address bus 11
34	VDD	VDD	—	—	—	—	—	Power (+5V)
35	A12	A12	O	—	—	—	—	Address bus 12
36	A13	A13	O	—	—	—	—	Address bus 13
37	A14	A14	O	—	—	—	—	Address bus 14
38	A15	A15	O	—	—	—	—	Address bus 15
39	A16	A16	O	—	—	—	—	Address bus 16
40	A17	A17	O	—	—	—	—	Address bus 17, not used
41	A18	A18	O	—	—	—	—	Address bus 18, not used
42	P43	SCL	O	—	Pu	—	—	X24C00 data clock
43	Vss	Vss	—	—	—	—	—	GND (0V)
44	P44	SDA	I/O	—	Pu	—	—	X24C00 data (normal input)
45	P45	CONT1	I	—	Pu	—	H	External control signal 1
46	P46	CONT2	I	—	Pu	—	H	External control signal 2
47	P47	DSPSCL	I/O	—	Pu	H	H	MN19413 clock signal
48	P80	DSPSDA	I/O	—	Pu	H	H	MN19413 data signal
49	P81	ADDR_	O	—	Pu	H	H	MN19413 command address signal, L: Same address
50	P82	SMRST_	O	—	Pd	L	L	SM5902AF/MN19413 reset signal
51	P83	YMLD_	O	—	Pu	H	H	SM5902AF data latch signal
52	P84	ZSENSE	I	—	—	—	—	SM5902AF status signal
53	P85	MCLK	O	—	—	H	—	MN662724, SM5902AF, BU2618 clock signal
54	VDD	VDD	—	—	—	—	—	Power (+5V)
55	P86	MDATA	O	—	—	H	—	MN662724, SM5902AF, BU2618 data signal
56	TM6IOB	ZLRCK	I	—	—	—	—	SM5902AF LRCK signal
57	P90	MLD_	O	—	Pu	H	H	MN662724 data latch signal
58	TM7IOA	SMPCLK	O	—	—	—	—	MN19413 sampler clock signal
59	P92	SENSE	I	—	—	—	—	MN662724 servo on status input signal
60	P93	FLOCK_	I	—	—	—	—	MN662724 focus servo on input signal
61	Vss	Vss	—	—	—	—	—	GND (0V)
62	P94	TLED	O	—	Pd	L	L	Tray LED, H: light
63	P95	TLOCK_	I	—	—	—	—	MN662724 tracking servo on input signal
64	P96	STAT	I	—	—	—	—	MN662724 servo status input signal (includes TLOCK)
65	P97	MNRST_	O	—	Pd	L	L	MN662724 reset signal
66	VDD (Vpp)	VDD	—	—	—	—	—	Power (+5V)
67	SBTO	SQCK	O	—	Pu	H	H	MN662724 sub-code read out clock signal
68	SBIO	SUBQ	I	—	Pu	—	H	MN662724 sub-code data input signal
69	P72	RESY	I	—	—	—	—	MN662724 frame sync re-sync signal, H: Sync
70	P73	EJECT_	I	—	Pu	—	—	Disc holder open/close SW input signal
71	SBI1	RXD	I	—	Pu	—	H	Data receive from RC
72	SBO1	TXD	O	—	Pu	H	H	Data send to RC
73	TEST1	TEST1	I	—	—	—	—	Fixed with 47k pull-up
74	TEST2	TEST2	I	—	—	—	—	Fixed with 47k pull-up
75	NMI_	NMI_	I	—	—	—	—	Fixed to 5V
76	PA0, IRQ0	BLKCK	I	Ed	—	—	—	MN662724 sub-code input (interrupt)
77	PA1, IRQ1_	STAT1	I	Ed	—	—	—	MN19413 status signal
78	PA2, IRQ2_	STAT2	I	Ed	—	—	—	MN19413 status signal
79	PA3, IRQ3_	INSW_	I	Lv	Pu	—	H	Slide inner circle SW input
80	PA4, IRQ4_	BSYIN_	I	Lv	Pu	—	H	RC serial TXD line in-use input signal, L: In-use
81	ADSEP_	ADSEP	I	—	—	—	—	Fixed to 5V, H: Address/data separate mode
82	RST_	RST_	I	—	—	—	—	CPU reset
83	VDD	VDD	—	—	—	—	—	Power (+5V)
84	P00	BSYOUT_	O	—	Pu	H	H	RC serial TXD line in-use output signal, L: In-use
85	P01	RESERVE	O	—	—	L	—	Not used (open)
86	P02	RESERVE	O	—	—	L	—	Not used (open)
87	P03	PLAY	O	—	—	L	—	In-trace signal, H: Trace
88	P04	AMUTE	O	—	Pu	H	H	Analog mute signal
89	P05	OPEN_	O	—	Pu	L	H	Tray open SW
90	P06	CLOSE_	O	—	Pu	L	H	Tray close SW
91	P07	MCE_	O	—	Pu	H	H	BU2618 (main clock) enable signal
92	Vss	Vss	—	—	—	—	—	GND (0V)
93	D08	D00	I/O	—	—	—	—	Data bus 0
94	D09	D01	I/O	—	—	—	—	Data bus 1
95	D10	D02	I/O	—	—	—	—	Data bus 2
96	D11	D03	I/O	—	—	—	—	Data bus 3
97	D12	D04	I/O	—	—	—	—	Data bus 4
98	D13	D05	I/O	—	—	—	—	Data bus 5
99	D14	D06	I/O	—	—	—	—	Data bus 6
100	D15	D07	I/O	—	—	—	—	Data bus 7

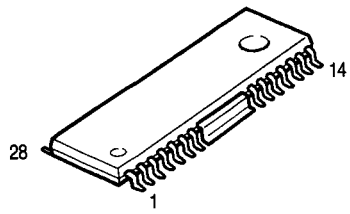
MN102L2503 (Display Unit: IC101)
µCOM

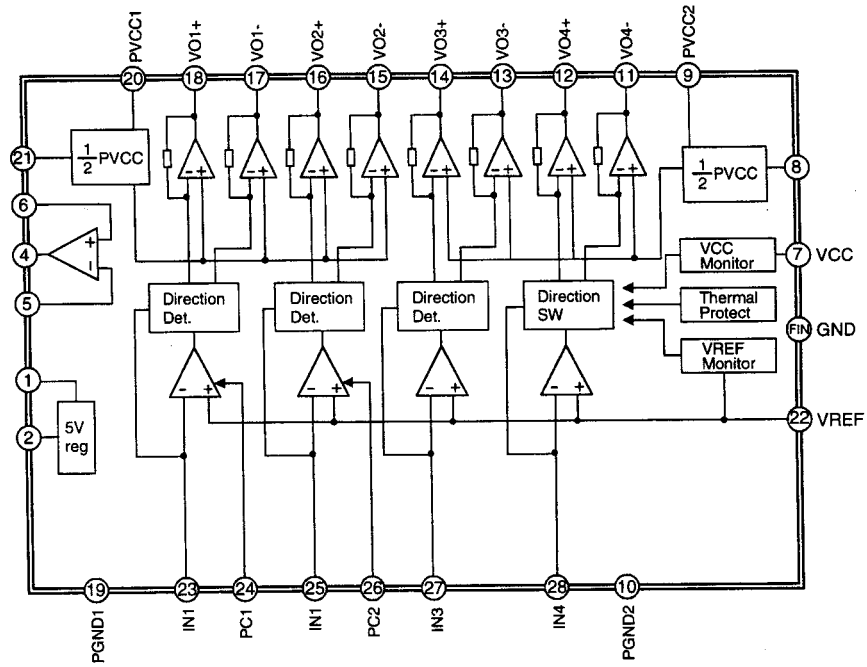


MN102L2503 Terminal Function

Pin No.	Pin Name	Symbol	I/O	DET	Ext	Ini	Res	Function
1	P60, WAIT	PUSH1_	I	—	Pu	—	H	CD1 track select encoder push input
2	RE_	RE_	O	—	—	—	—	ROM/EEPROM read enable output
3	WEL_	WEL_	O	—	—	—	—	Not used (open)
4	WEH_	WEH_	O	—	—	—	—	EEPROM write enable
5	CS0_	CS0_	O	—	—	—	—	ROM chip select
6	CS1_	CS1_	O	—	—	—	—	EEPROM chip select
7	CS2_	CS2_	O	—	—	—	—	Not used (open)
8	CS3_	CS3_	O	—	—	—	—	Not used (open)
9	P54, BREQ_	FLCS2_	O	—	Pu	H	H	CD2 M66004FSP latch signal
10	P55, BRACK_		O	—	—	L	—	Reserved
11	BSTRE_	BSTRE_	O	—	—	—	—	Not used (open)
12	WORD_	WORD	I	—	—	—	—	Fixed to 5V, H: 8-bit bus
13	A00	A00	O	—	—	—	—	Address bus 00, 256kbit ROM connect
14	A01	A01	O	—	—	—	—	Address bus 01
15	A02	A02	O	—	—	—	—	Address bus 02
16	A03	A03	O	—	—	—	—	Address bus 03
17	VDD	VDD	—	—	—	—	—	Power (+5V)
18	SYSCLK	SYSCLK	O	—	—	—	—	System clock output (OSCI x 1/2)
19	Vss	Vss	—	—	—	—	—	GND (0V)
20	XI	XI	I	—	—	—	—	Fixed to GND
21	XO	XO	O	—	—	—	—	Not used (open)
22	VDD	VDD	—	—	—	—	—	Power (+5V)
23	OSCI	OSCI	I	—	—	—	—	X'tal input terminal, 12.288MHz
24	OSCO	OSCO	O	—	—	—	—	X'tal output terminal
25	MODE	MODE	I	—	Pd	—	—	Fixed to L, L: Processor mode
26	A04	A04	O	—	—	—	—	Address bus 04
27	A05	A05	O	—	—	—	—	Address bus 05
28	A06	A06	O	—	—	—	—	Address bus 06
29	A07	A07	O	—	—	—	—	Address bus 07
30	A08	A08	O	—	—	—	—	Address bus 08
31	A09	A09	O	—	—	—	—	Address bus 09
32	A10	A10	O	—	—	—	—	Address bus 10
33	A11	A11	O	—	—	—	—	Address bus 11
34	VDD	VDD	—	—	—	—	—	Power (+5V)
35	A12	A12	O	—	—	—	—	Address bus 12
36	A13	A13	O	—	—	—	—	Address bus 13
37	A14	A14	O	—	—	—	—	Address bus 14
38	A15	A15	O	—	—	—	—	Address bus 15, not used
39	A16	A16	O	—	—	—	—	Address bus 16, not used
40	A17	A17	O	—	—	—	—	Address bus 17, not used
41	A18	A18	O	—	—	—	—	Address bus 18, not used
42	A19	A19	O	—	—	—	—	Address bus 19, not used
43	Vss	Vss	—	—	—	—	—	GND (0V)
44	A20	A20	O	—	—	—	—	Address bus 20, not used
45	A21	A21	O	—	—	—	—	Address bus 21, not used
46	A22, STOP, AN6, P46	TRS2B	I	—	Pu	—	H	CD2 track select encoder B input
47	A23, WDOUT, AN7, P47	PUSH2_	I	—	Pu	—	H	CD2 track select encoder push input
48	TM0IO, P80	KEYIN0_	I	—	Pu	—	H	CD1/2 key scan input 0
49	TM1IO, P81	KEYIN1_	I	—	Pu	—	H	CD1/2 key scan input 1
50	TM2IO, P82	KEYIN2_	I	—	Pu	—	H	CD1/2 key scan input 2
51	TM3IO, P83	KEYIN3_	I	—	Pu	—	H	CD1/2 key scan input 3
52	TM4IO, P84	RESERVE	O	—	Pd	L	L	Not used (TP change)
53	TM5IO, P85	KEY0	O	—	—	L	—	CD1/2 key scan output 0
54	VDD	VDD	—	—	—	—	—	Power (+5V)
55	TM6IOA, P86	KEY1	O	—	—	L	—	CD1/2 key scan output 1
56	TM6IOB, P87	KEY2	O	—	—	L	—	CD1/2 key scan output 2
57	TM610C, P90	KSEL2_	O	—	Pd	L	L	CD2 key scan select signal, H: Select
58	TM7IOA, P91	CUEL2	O	—	Pd	L	L	CD2 CUE LED, H: Light (TP change)
59	TM7IOB, P92	PLAYL2	O	—	Pd	L	L	CD2 PLAY LED, H: Light (TP change)
60	TM71C, P93	LCLK2	O	—	—	H	—	Clock signal for CD2 LED2 data output
61	Vss	Vss	—	—	—	—	—	GND (0V)
62	AN0, P94	PITC1	I	—	—	—	—	CD1 pitch VR center value signal
63	AN1, P95	PIT1	I	—	—	—	—	CD1 pitch VR signal
64	AN2, P96	PITC2	I	—	—	—	—	CD2 pitch VR center value signal
65	AN3, P97	PIT2	I	—	—	—	—	CD2 pitch VR signal
66	VDD (Vpp)	VDD	—	—	—	—	—	Power (+5V)
67	SBT0, P70	JOG2B	I	—	Pu	—	H	CD2 jog encoder B input
68	SBI0, P71	RC-RXD	I	—	Pu	—	H	Data receive from RC
69	SBO0, P72	RC-TXD	O	—	Pu	H	H	Data send to RC
70	SBT1, P73	JOG1B	I	—	Pu	—	H	CD1 jog encoder B input
71	SBI1, P74	RXD	I	—	Pu	—	H	Data receive from main unit
72	SBO1, P75	TXD	O	—	Pu	H	H	Data send to main unit
73	TEST1	TEST1	I	—	—	—	—	Fixed with 47k pull-up
74	TEST2	TEST2	I	—	—	—	—	Fixed with 47k pull-up
75	NMI_	NMI	I	—	—	—	—	Fixed to 5V
76	PA0, IRQ0_	TRS1A	I	Ed	Pu	—	H	CD1 track select encoder A interrupt input
77	PA1, IRQ1_	TRS2A	I	Ed	Pu	—	H	CD2 track select encoder A interrupt input
78	PA2, IRQ2_	JOG1A	I	Ed	Pu	—	H	CD1 jog encoder A interrupt input
79	PA3, IRQ3_	JOG2A	I	Ed	Pu	—	H	CD2 jog encoder A interrupt input
80	PA4, IRQ4_	TRS1B	I	—	Pu	—	H	CD1 track select encoder B input
81	ADSEP_	ADSEP	I	—	—	—	—	Fixed to 5V, H: Address/data separate mode
82	RST_	RST_	I	—	—	—	—	CPU reset
83	VDD	VDD	—	—	—	—	—	Power (+5V)
84	P00, D00	PRES_	O	—	Pd	L	L	CD1/2 M66004FSP reset signal
85	P01, D01	FLCLK	O	—	—	H	—	Clock signal for CD1/2 M66004FSP data output
86	P02, D02	DATA	O	—	—	—	—	CD1/2 M66004FSP LED data signal
87	P03, D03	FLCS1_	O	—	Pu	H	H	CD1 M66004FSP latch signal
88	P04, D04	CUEL1	O	—	Pd	L	L	CD1 CUE LED, H: Light (TP change)
89	P05, D05	PLAYL1	O	—	Pd	L	L	CD1 PLAY LED, H: Light (TP change)
90	P06, D06	LCLK1	O	—	—	H	—	Clock signal for CD1 LED1 data output
91	P07, D07	KSEL1_	O	—	Pd	L	L	CD1 key scan select signal, H: Select
92	Vss	Vss	—	—	—	—	—	GND (0V)
93	D08	D00	I/O	—	—	—	—	Data bus 0
94	D09	D01	I/O	—	—	—	—	Data bus 1
95	D10	D02	I/O	—	—	—	—	Data bus 2
96	D11	D03	I/O	—	—	—	—	Data bus 3
97	D12	D04	I/O	—	—	—	—	Data bus 4
98	D13	D05	I/O	—	—	—	—	Data bus 5
99	D14	D06	I/O	—	—	—	—	Data bus 6
100	D15	D07	I/O	—	—	—	—	Data bus 7

AN8816SB (Main unit: IC101)
PU DRIVER





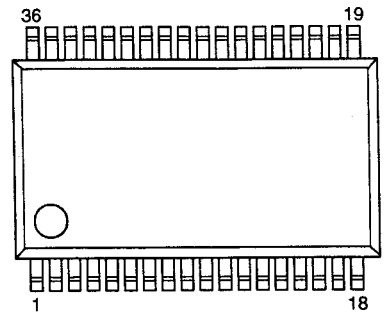
AN8816SB Terminal Function

Pin No.	Symbol	Function
1	IB	5Vreg external transistor base control terminal
2	VMON	5V regulator output monitor terminal
3	NC	No connection
4	OPO	OP-amp output terminal
5	IN–	OP-amp inverted input terminal
6	IN+	OP-amp non-inverted input terminal
7	Vcc	Power supply terminal
8	1/2PVCC2	1/2 PVCC output terminal 2
9	PVCC2	Power supply terminal 2 for driver
10	PGND2	Ground terminal 2 for driver
11	VO4–	Motor driver 4 inverted output terminal
12	VO4+	Motor driver 4 non-inverted output terminal
13	VO3–	Motor driver 3 inverted output terminal
14	VO3+	Motor driver 3 non-inverted output terminal

Pin no.	Symbol	Function
15	VO2–	Motor driver 2 inverted output terminal
16	VO2+	Motor driver 2 non-inverted output terminal
17	VO1–	Motor driver 1 inverted output terminal
18	VO1+	Motor driver 1 non-inverted output terminal
19	PGND1	Ground terminal 1 for driver
20	PVCC1	Power supply terminal 1 for driver
21	1/2PVCC1	1/2 PVCC output terminal 1
22	VREF	VREF input terminal
23	IN1	Motor driver 1 input terminal
24	PC1	PC (power cut) input terminal 1
25	IN2	Motor driver 2 input terminal
26	PC2	PC (power cut) input terminal 2
27	IN3	Motor driver 3 input terminal
28	IN4	Motor driver 4 input terminal

Note: FIN grounded

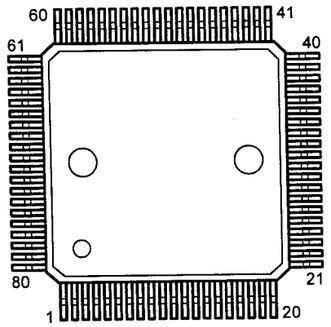
AN8807SB (Main unit: IC102)
RF AMP



AN8807 Terminal Function

Pin No	Symbol	I/O	Function
1	PD	I	PD signal input for output monitor of LD.
2	LD	O	Connect to external transistor's base for LD drive.
3	LDON	I	LD APC ON/OFF switching signal.
4	C.CRS	—	Capacitor connecting terminal for CROSS.
5	VCC	—	Power supply connecting terminal.
6	$\overline{RF}$	I	RF AMP reversal input terminal. Connect a resistor.
7	RFOUT	O	RF AMP output terminal (reversal AMP).
8	RFIN	I	Input terminal of RF AGC.
9	C. AGC	—	Capacitor connecting terminal for RF AGC loop filter.
10	ARF	O	RF output terminal of after AGC.
11	C. ENV	—	Capacitor connecting terminal for RF.
12	C. EA	—	Capacitor connecting terminal for AMP.
13	C. SBDO	—	Capacitor connecting terminal for low speed detection of dark level DO detection.
14	BDO	O	BDO detection output terminal. Positive logic.
15	C. SBRT	—	Capacitor connecting terminal for low speed detection of OFTR detection.
16	OFTR	O	Output terminal of OFF TRACK detection. Positive logic.
17	NRFDET	O	Output terminal of RF signal amplitude detection. Negative logic.
18	GND	—	GND
19	ENV	O	ENV output terminal.
20	VREF	O	VCC x 0.5(V) output terminal.
21	LD OFF	I	Input terminal of LD APC forcible stop.
22	VDET	O	Output terminal of vibration detection.
23	TEBPF	I	Input terminal of vibration detection.
24	CROSS	O	Output terminal of TE CROSS detection signal.
25	TEOUT	O	Output terminal of TEAMP.
26	$\overline{TE}$	I	TEAMP reversal input terminal. Connect a resistor.
27	FEOUT	O	Output terminal of FEAMP.
28	$\overline{FE}$	I	FEAMP reversal input terminal. Connect a resistor.
29	FBAL	I	Control signal input terminal of FO balance adjustment.
30	TBAL	I	Control signal input terminal of TE balance adjustment.
31	PDFR	—	Resistor connecting terminal for setting IV converting resistance value of PDE.
32	PDER	—	Resistor connecting terminal for setting IV converting resistance value of PDF.
33	PDE	I	Connect to PIN diode E.
34	PDF	I	Connect to PIN diode F.
35	PDBD	I	Connect to B, D of astigmatism 1/4 divided PD.
36	PDAC	I	Connect to A, C of astigmatism 1/4 divided PD.

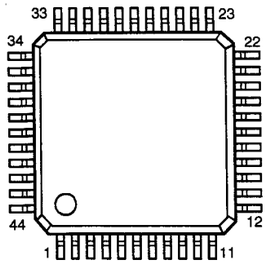
MN662724FRPE (Main unit: IC103)
CD SERVO PROCESSOR



MN662724FRPE Terminal Function

Pin No.	Symbol	I/O	Function
1	BCLK	O	Bit clock output for SRDATA.
2	LRCK	O	L,R discrimination signal output.
3	SRDATA	O	Serial data output.
4	DVDD1	—	Power supply for digital circuit.
5	DVSS1	—	GND for digital circuit.
6	TX	O	Digital audio interface output signal.
7	MCLK	I	Microcomputer command clock signal input (latches data at rising edge).
8	MDATA	I	Microcomputer command data input.
9	MLD	I	Microcomputer command load signal input. ("L": load)
10	SENSE	O	Sens signal output (OFT,, FESL,, NACEND,, NAJEND,, POSAD,, SFG).
11	$\overline{\text{FLOCK}}$	O	Focus servo draw in signal ("L": draw in state).
12	$\overline{\text{TLOCK}}$	O	Tracking servo draw in signal ("L": draw in state).
13	BLKCK	O	Subcode block clock signal (fGLKCK=75Hz).
14	SQCK	I	External clock input for subcode Q register.
15	SUBQ	O	Subcode Q code output.
16	DMUTE	I	Muting input ("H": mute).
17	STAT	O	Status signal (CRC,, CUE,, CLVS,, TTSTOP,, FCLV,, SQOK).
18	$\overline{\text{RST}}$	I	Reset input ("L": reset).
19	SMCK	O	8.4672MHz clock signal output at MSEL="H". 4.2336MHz clock signal output at MSEL="L".
20	PMCK	O	88.2kHz clock output.
21	TRV	O	Traverse forcible sending output.
22	TVD	O	Traverse drive output.
23	PC	O	Spindle motor ON signal ("L": ON).
24	ECM	O	Spindle motor drive signal (forcible mode output). 3-state.
25	ECS	O	Spindle motor drive signal (servo error signal output).
26	KICK	O	Kick pulse output.
27	TRD	O	Tracking drive output.
28	FOD	O	Focus drive output.
29	VREF	I	Reference voltage for DA output portion (TVD,BCS,TRD,FOD,FBAL,TBAL).
30	FBAL	O	Focus balance adjusting output.
31	TBAL	O	Tracking balance adjusting output.
32	FE	I	Focus error signal input (analog input).
33	TE	I	Tracking error signal input (analog input).
34	RFENV	I	RF envelope signal input (analog input).
35	VDET	I	Vibration detecting signal input ("H": detect).
36	OFT	I	Off track signal input ("H": off track).
37	TRCRS	I	Track cross signal input.
38	$\overline{\text{RFDET}}$	I	RF detecting signal input ("L": detect).
39	BDO	I	Drop out signal input ("H": drop out).
40	LDON	O	Laser ON signal output ("H": ON).
41	PLLF2	I/O	Loop filter terminal for PLL.
42	PLAY	O	Play signal output ("H": play).
43	WVEL	O	Double speed status signal output.
44	ARF	I	RF signal input.
45	IREF	I	Reference current input terminal.
46	DRF	I	Bias terminal for DSL.
47	DSLF	I/O	Loop filter terminal for DSL.
48	PLLF	I/O	Loop filter terminal for PLL.
49	VCOF	I/O	Loop filter terminal for VCO.
50	AVDD2	—	Power supply for analog circuit (for DSL,, PLL,, DA output sections).
51	AVSS2	—	GND for analog circuit (for DSL,, PLL,, DA output sections).
52	CK384	O	384 fs clock output.
53	PCK	O	PLL extract clock output (fPCK=4.321MHz).
54	TOFS	O	Tracking offset adjust signal output.
55	SUBC	O	Subcode serial output data output.
56	SBCK	I	Clock input for subcode serial output.
57	VSS	—	GND for osc. circuit.
58	X1	I	X'tal osc. circuit input terminal. f=16.9344MHz or 33.8688MHz.
59	X2	O	X'tal osc. circuit output terminal (use 33.8688MHz at double speed PB).
60	VDD	—	Power supply for osc. circuit.
61	BYTCK	O	Byte clock output.
62	$\overline{\text{CLDCK}}$	O	Subcode frame clock signal output (fCLDCK=7.35kHz).
63	FCLK	O	X'tal frame clock output (fFCLK=7.35kHz).
64	IPFLAG	O	Interpolation flag output ("H": interpolation).
65	FLAG	O	Flag output.
66	CLVS	O	Spindle servo phase sync state signal output ("H":CLV,, "L":rough servo).
67	CRC	O	Subcode CRC check result output ("H":OK,, "L":NG).
68	DEMPH	O	Deemphasis detecting signal output ("H":ON).
69	RESY	O	Flag 6 output at SSEL:"H"(RAM address reset generating signal by Jitter margin over of CLV servo. "L":address reset generates). RESY output at SSBL:"L"(Re-sync signal output of frame sync. "H": sync,, "L":out sync).
70	SDAT48	O	48 fs serial data output.
71	$\overline{\text{TEST}}$	I	Test terminal (normally "H").
72	AVDD1	—	Power supply for digital circuit.
73	LRCK48	O	48 fs L, R discrimination signal output.
74	AVSS1	—	GND for digital circuit.
75	BCLK48	O	48 fs bit clock output for SDAT48.
76	RSEL	I	RF signal polarity specify terminal (RSEL="H" at brightness level "H". RSEL="L" at brightness level "L").
77	CSEL	I	X'tal osc. frequency specify terminal,, X'tal osc. freq. 33.8688MHz:CSEL"H",, 16.9344MHz:CSEL"L".
78	PSEL	I	Test terminal (normally "L").
79	MSEL	I	SMCK terminal. Output frequency shifting terminal ("H":SMCK=8.4672MHz,"L":SMCK=4.2336MHz).
80	SSEL	I	Sub Q teminal. Output mode shifting terminal ("H":Q code buffer using mode).

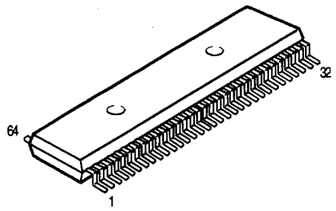
SM5902AF (Main unit: IC301))
SHOCK PROOF MEMORY CONTROLLER

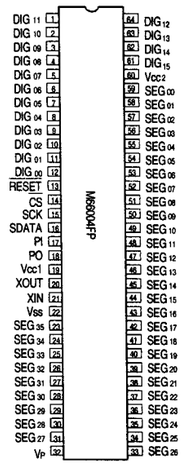


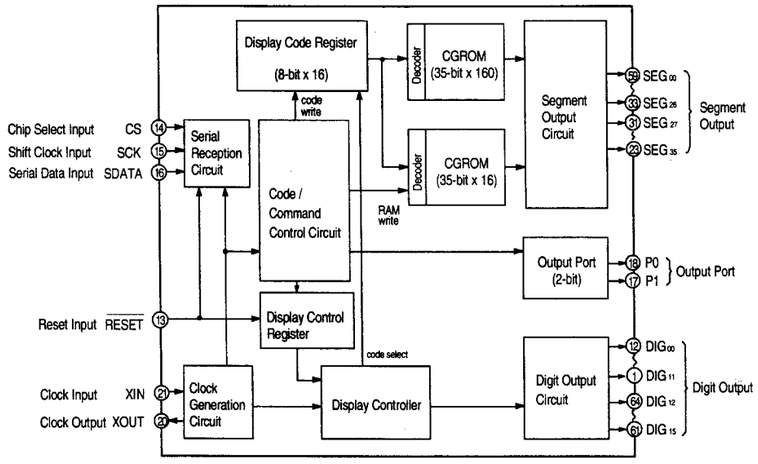
SM5902AF Terminal Function

Pin No.	Symbol	I/O	Function	Setting H	Setting 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.		

M66004FP (Display unit: IC201, 301))







M66004FP Terminal Function

Symbol	Name	Function
RESET	Reset Input	Initializes internal state of M66004.
CS	Chip Select Input	Able to communicate with MCU in "L" mode. Command from MCU will be disregareded in "H" mode.
SCK	Shift Clock Input	Shifts input data at rise from "L" to "H".
SDATA	Serial Data Input	Inputs character code or command data needed to display from MSB.
XIN XOUT	Clock Input Clock Output	Sets oscillation frequency by connecting external resistor and capacitor (maximum oscillation frequency fosc (max)=1MHz). Also feasible to apply external clock. In this case, inject external clock to Xin terminal and open Xout terminal.
DIG00 ~ DIG15	Digit Output	Connect to digit terminal of VFD. DIG00~DIG15 correspond to the 1st figure to 16th figure respectively.
SEG00 ~ SEG35	Segment Output	Connect to segment terminal of VFD. For corresponding SEG00~SEG35 to segment terminal of VFD, refer to the figure right.
P0, P1		Output port (static operation).
Vcc1		Positive power supply terminal for internal logic.
Vcc2		Positive power supply terminal for high tension output port.
Vss		GND terminal.
Vp		Negative power supply terminal for VFD drive.

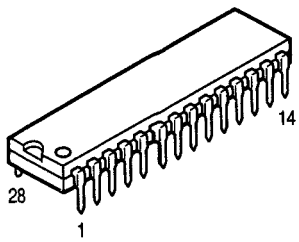
(Forwarding connection of segment output terminal.)

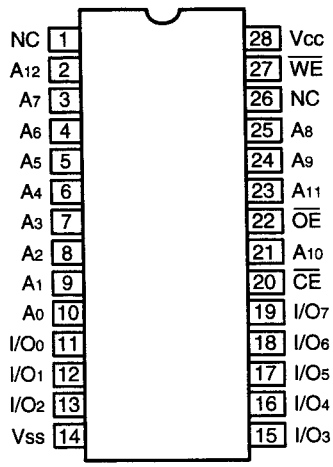
00	01	02	03	04
05	06	07	08	09
10	11	12	13	14
15	16	17	18	19
20	21	22	23	24
25	26	27	28	29
30	31	32	33	34

35

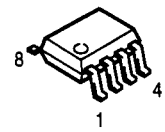
□ in the right figure indicates 1 dot of segment, the figure in □ shows the segment output terminal number (00 ~ 35) to be connected.

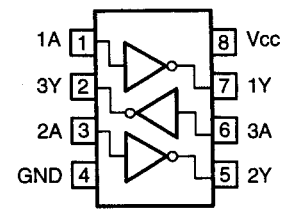
CAT28C64BP (Display unit: IC102)
8KB EEP ROM



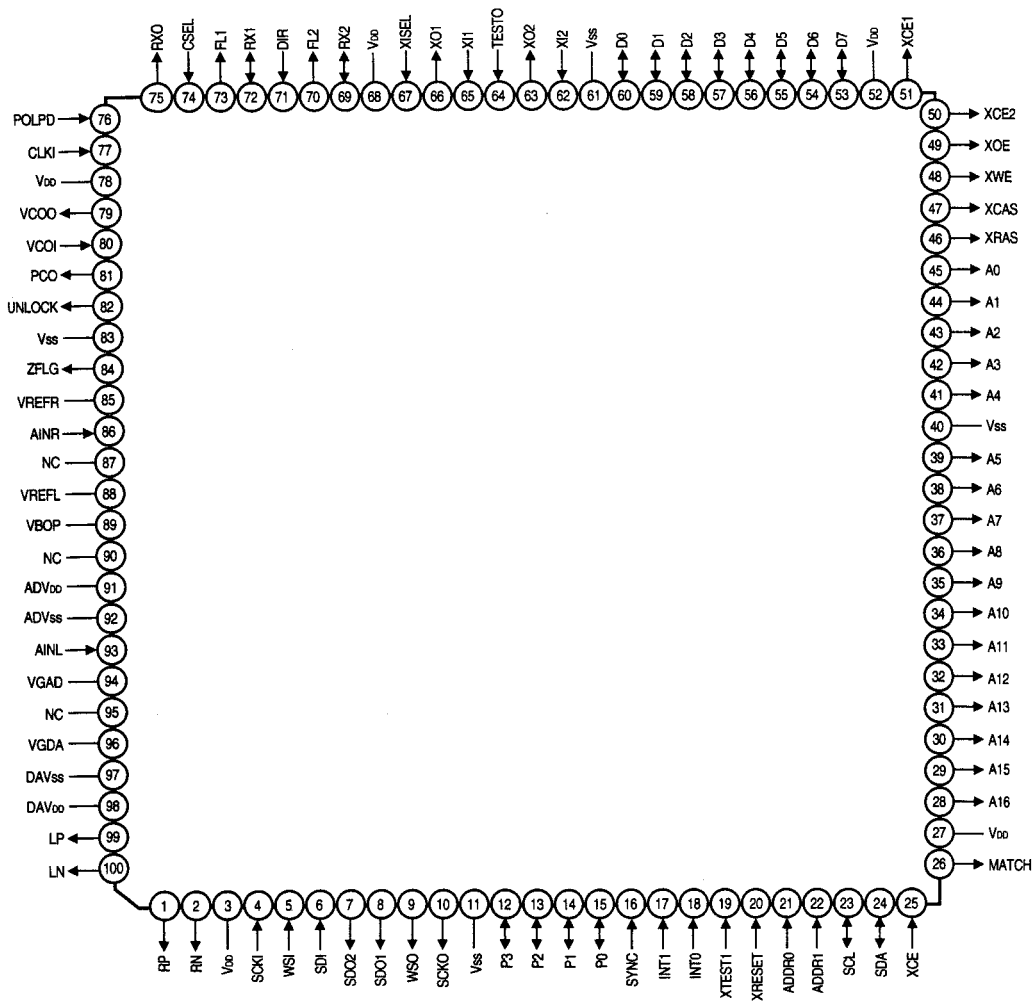


TC7WU04F (Power unit: IC701, 702)

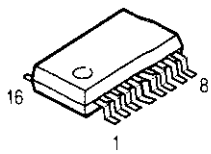


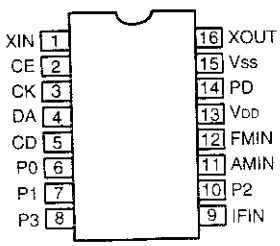


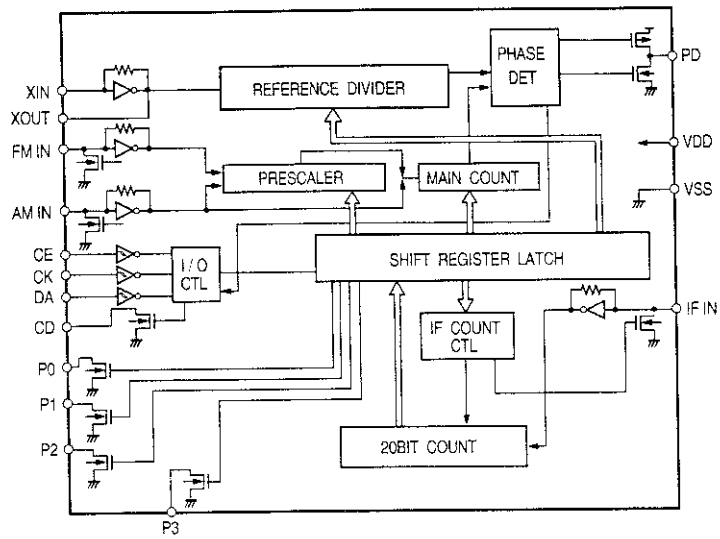
MN19413A (Main unit: IC401, 402)
AUDIO SIGNAL PROCESSOR



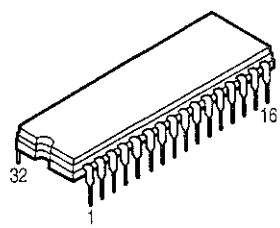
BU2618 (Main unit: IC303)

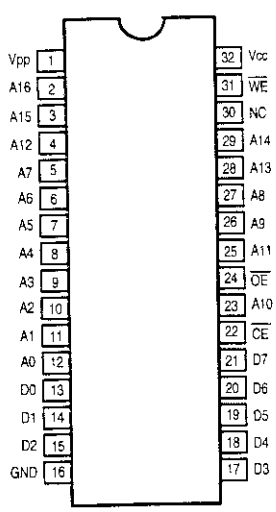




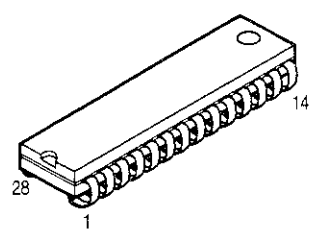


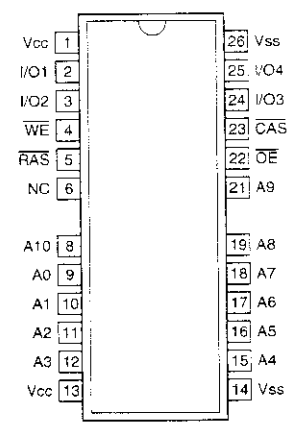
CAT28F010-09 (Display unit: IC103) FLASH MEMORY

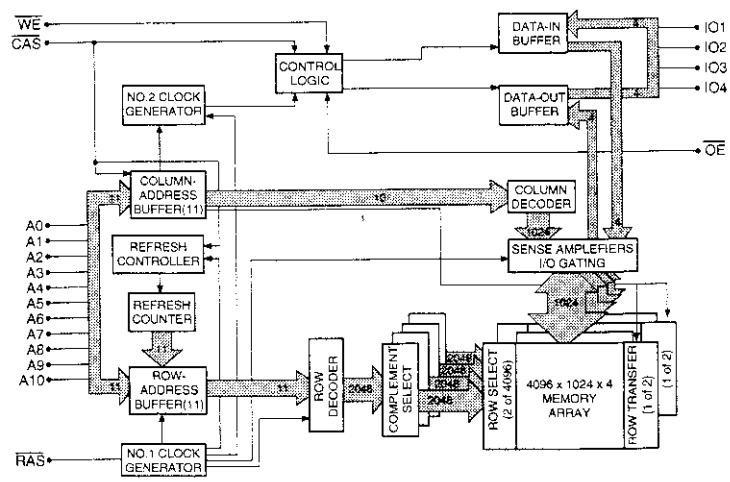




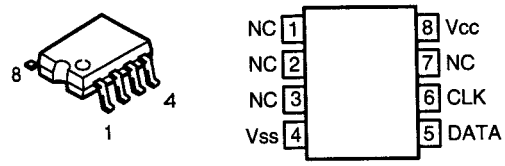
GM71C17400C or T2316400A (Main unit: IC302, 403 ~ 406) 16M DRAM



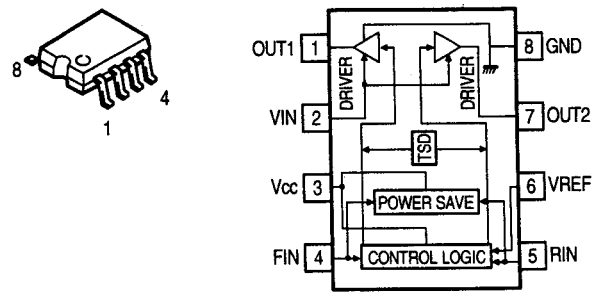




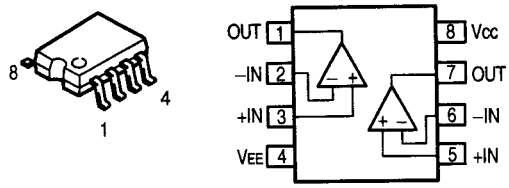
X24C00S (Power unit: IC602)
EEPROM



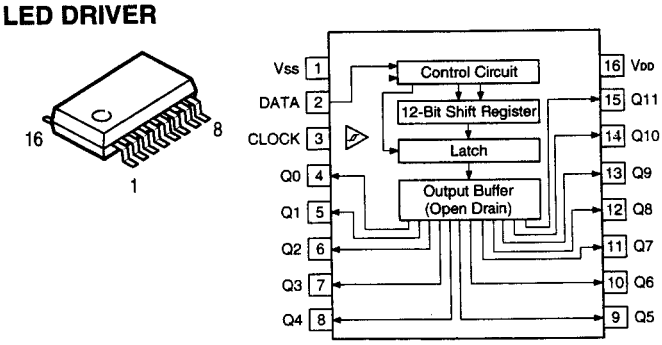
BA6287F (Main unit: IC104)
LOADING DRIVER



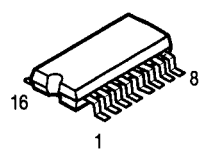
BA15218F (Main unit: IC409, 410, 501)



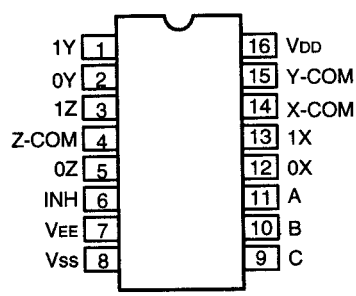
BU2090F (Display unit: IC203, 303)
LED DRIVER



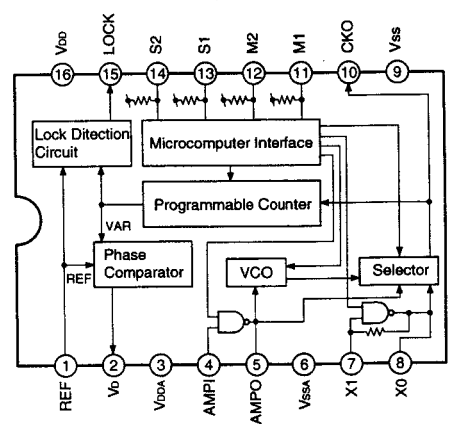
TC4053BF (Main unit: IC407, 408)
TC9246F (Main unit: IC305, 306)
TC74AC138F (Display unit: IC202, 302)
MAX202CSE (Display unit: IC105)
(Power unit: IC601)



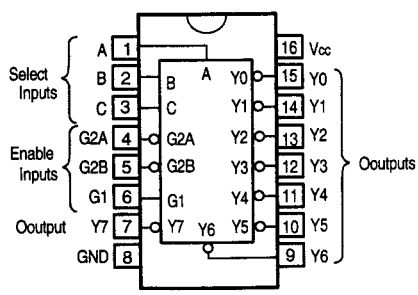
TC4053BF



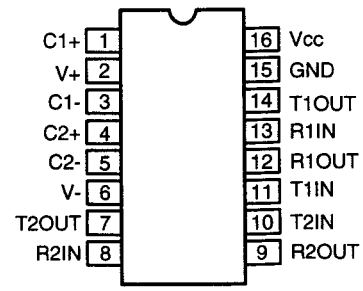
TC9246F



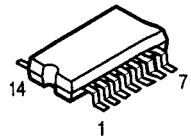
TC74AC138F



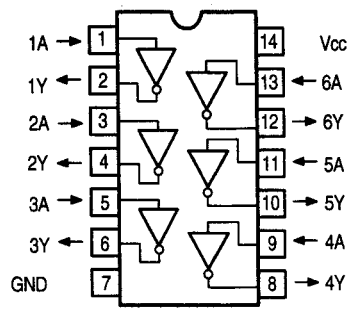
MAX202CSE



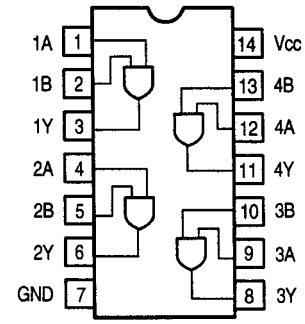
HD74AC04FP (Main unit: IC307)
TC74AC08AF (Power unit: IC603)



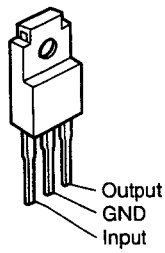
HD74AC04FP



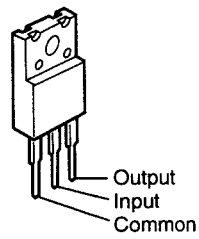
TC74AC08AF



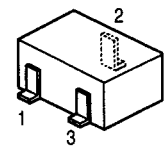
µPC2405AHF
(Display unit: IC601)
(Power unit: IC608, 609, 611 ~ 613)
µPC2406AHF
(Power unit: IC607, 610)



NJM7905FA
(Power unit: IC614)



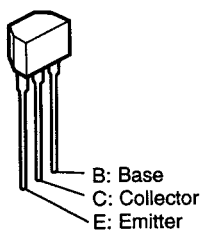
MN1382-R
(Display unit: IC104)
MN1382-S
(Power unit: IC604)



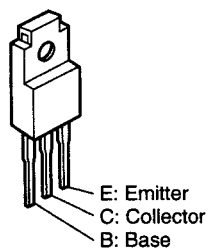
1: Out
2: VDD
3: Vss

● TRANSISTORS

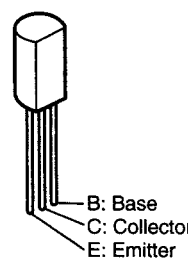
2SD2144S



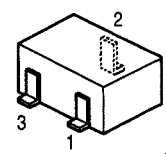
2SB1185 (E/F)



2SB562 (C)

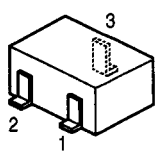


2SC2412K (S)



1: Emitter
2: Base
3: Collector

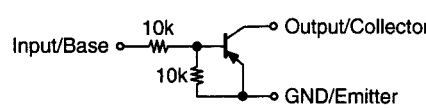
DTA114EK
DTC114EK
DTC143EK



1: GND/Emittor
2: Input/Base
3: Output/Collector

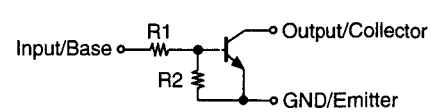
DTA114EK

(PNP Type)



DTC114EK
DTC143EK

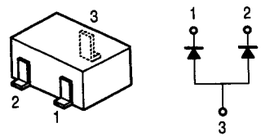
(NPN Type)



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

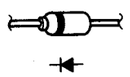
DIODES

DAP202K

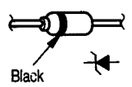


1: Cathode
2: Cathode
3: Anode

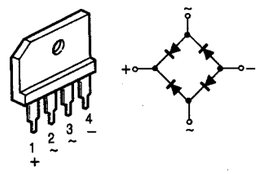
1SS270A



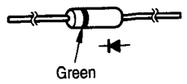
HZS2B-1
HZS6B-3
MTZJ4.3A
MTZJ39E



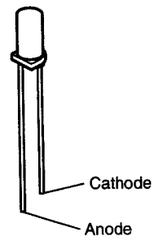
RBA-402



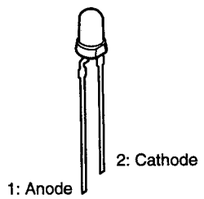
1SR139-200



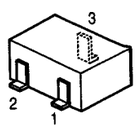
SLR-325DC (Orange)
SLR-325MC (Green)
SLR-325VC (Red)



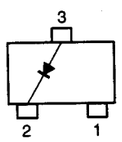
LNX901CFBDA (Blue)



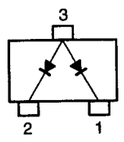
MA151A
MA151WA
MA151WK



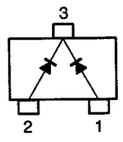
MA151A



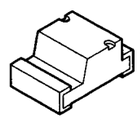
MA151WA



MA151WK

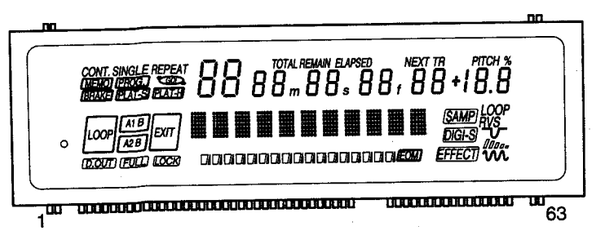


TLGU1002 (Green)
TLOU1002 (Orange)
TLRA1002 (Red)



1: Anode

◗ FL DISPLAY CM1941M (FL201, 301)



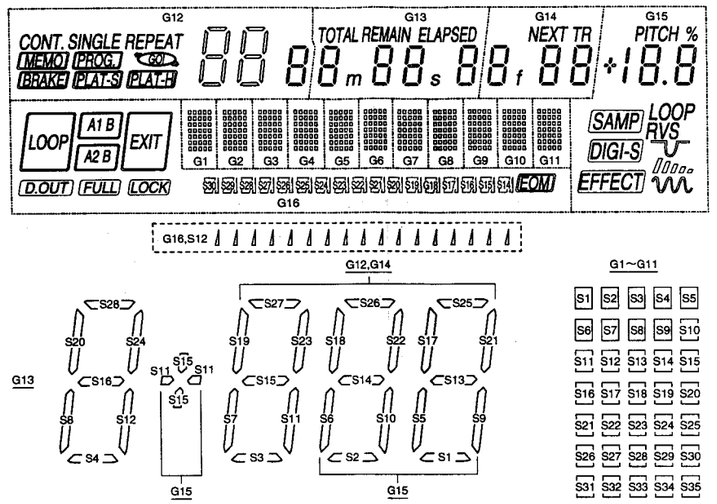
Pin Connection

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
Assignment	F1	F1	NP	NP	S35	S34	S33	S32	S31	S30	S29	S28	S27	S26	S25	S24	S23	S22	S21	S20	S19	S18	S17	S16	S15	S14	S13	S12	S11	S10	S9

Pin No.	32	33	34	35	36	37	38	39	40~43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
Assignment	S8	S7	S6	S5	S4	S3	S2	S1	NP	G7	G8	G9	G10	G11	G16	G1	G2	G3	G4	G5	G6	G15	G14	G13	G12	NP	NP	F2	F2

Note 1) F1,F2 : Filament 2) G1~G16 : Grid 3) S1~S35 : Anode 4) NP : No Pin

Anode & Grid Assignment



Anode & Grid Connection

	G1~G11	G12	G13	G14	G15	G16
S1	S1	S1	S1	S1	S1	A1
S2	S2	S2	S2	S2	S2	(A1) B
S3	S3	S3	S3	S3	○	A1 B
S4	S4	PLAT-H	S4			LOOP
S5	S5	S5	S5	S5	S5	A2
S6	S6	S6	S6	S6	S6	(A2) B
S7	S7	S7	S7	S7		A2 B
S8	S8	PLAT-S	S8		EFFECT	EXIT
S9	S9	S9	S9	S9	S9	D.OUT
S10	S10	S10	S10	S10	S10	FULL
S11	S11	S11	S11	S11	S11	LOCK
S12	S12	BRAKE	S12			S12
S13	S13	S13	S13	S13	S13	EOM
S14	S14	S14	S14	S14	S14	S14
S15	S15	S15	S15	S15	S15	S15
S16	S16	GO	S16			S16
S17	S17	S17	S17	S17	S17	S17
S18	S18	S18	S18	S18	S18	S18

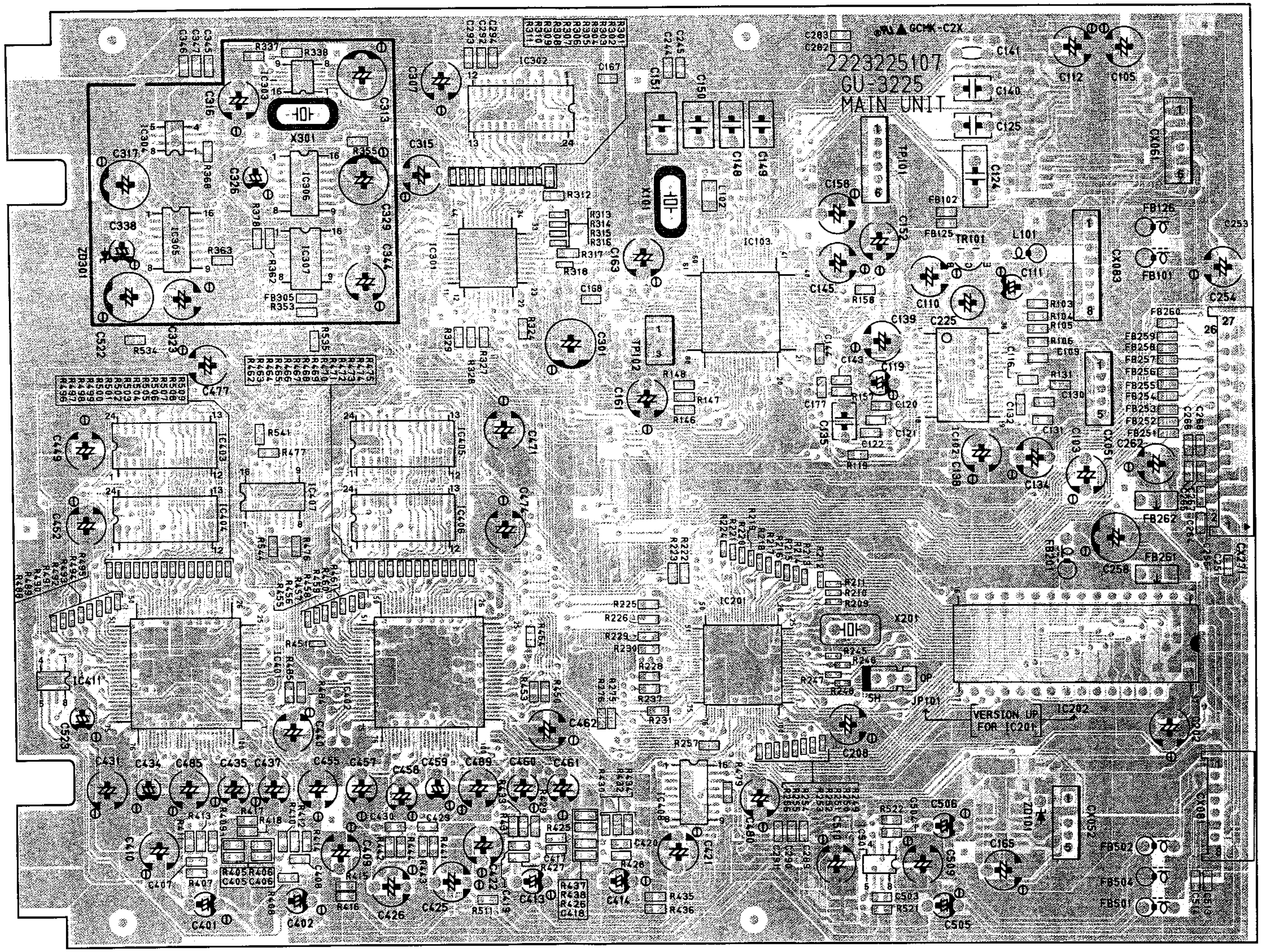
	G1~G11	G12	G13	G14	G15	G16
S19	S19	S19	S19	S19	/	S19
S20	S20	PROG.	S20			S20
S21	S21	S21	S21	S21	S21	S21
S22	S22	S22	S22	S22	S22	S22
S23	S23	S23	S23	S23		S23
S24	S24	MEMO	S24			S24
S25	S25	S25	S25	S25	S25	S25
S26	S26	S26	S26	S26	S26	S26
S27	S27	S27	S27	S27		S27
S28	S28	REPEAT	S28			S28
S29	S29	SIGNAL	ELAPSED	NEXT TR	PITCH %	S29
S30	S30	CONT.	REMAIN		SAMP	S30
S31	S31		TOTAL		LOOP	
S32	S32		m. s	f	RVS	
S33	S33				DIGI-S	
S34	S34					
S35	S35					

PRINTED WIRING BOARDS

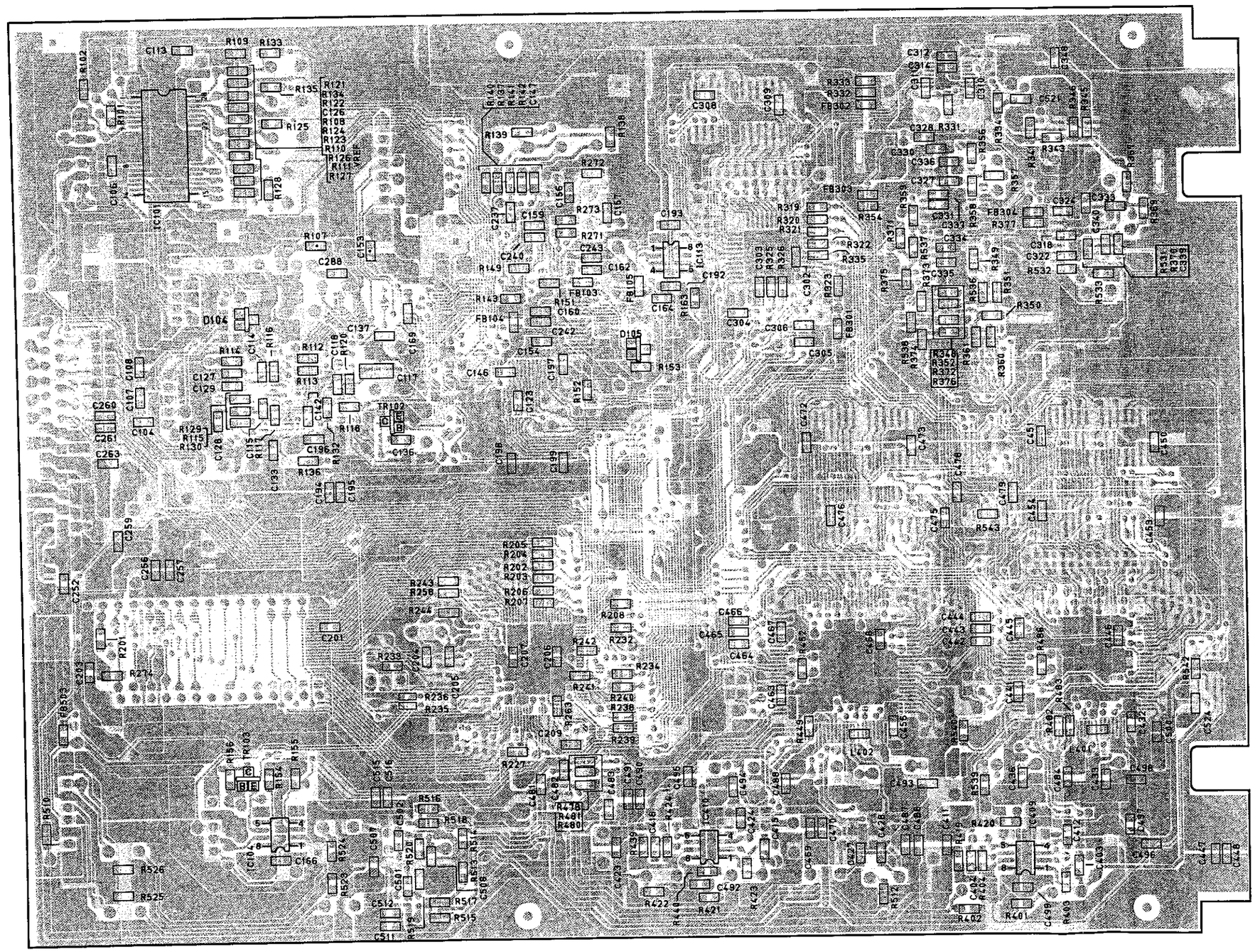
1 2 3 4 5 6 7 8

A B C D E

GU-3225 MAIN UNIT

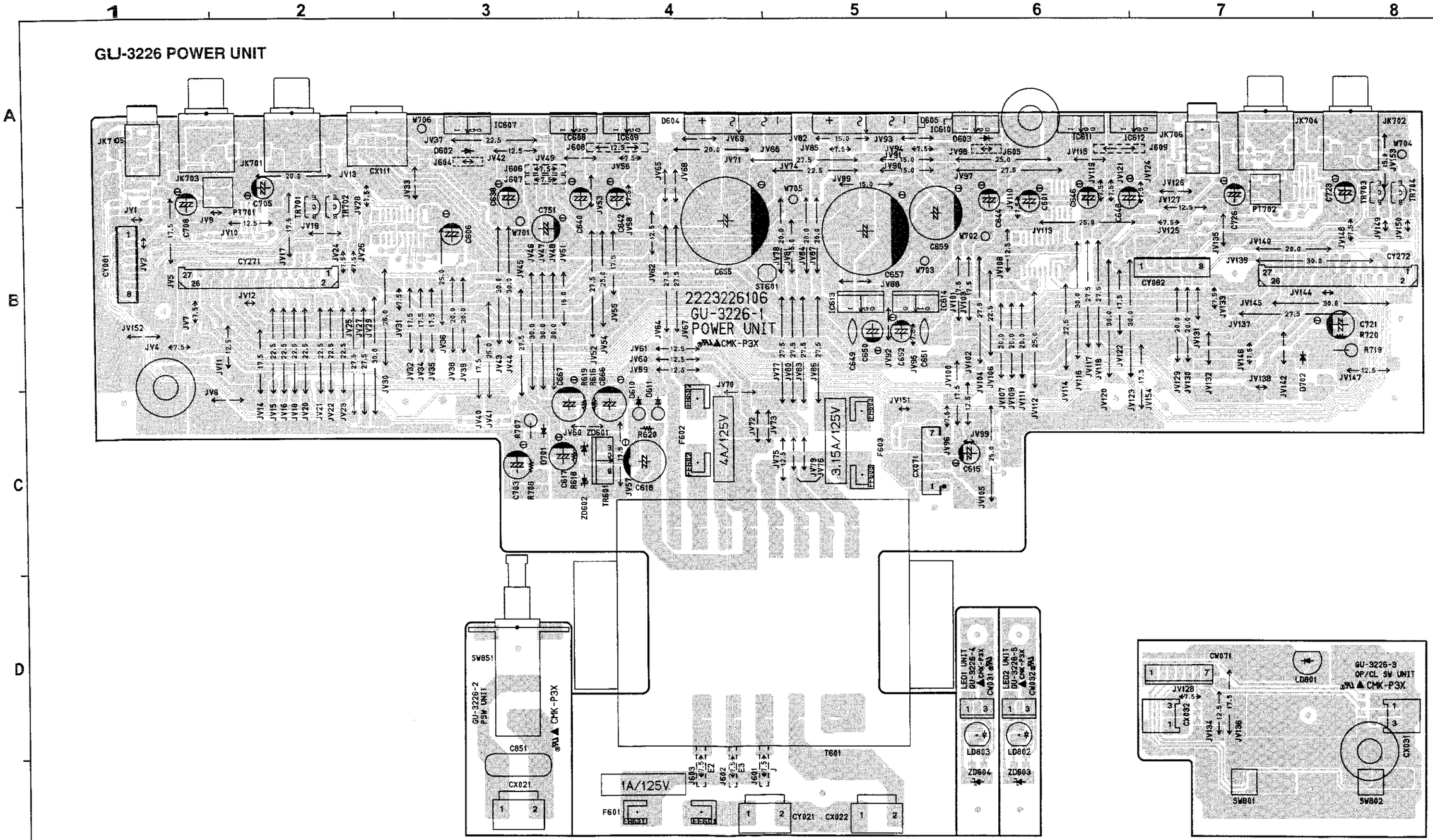


COMPONENT SIDE

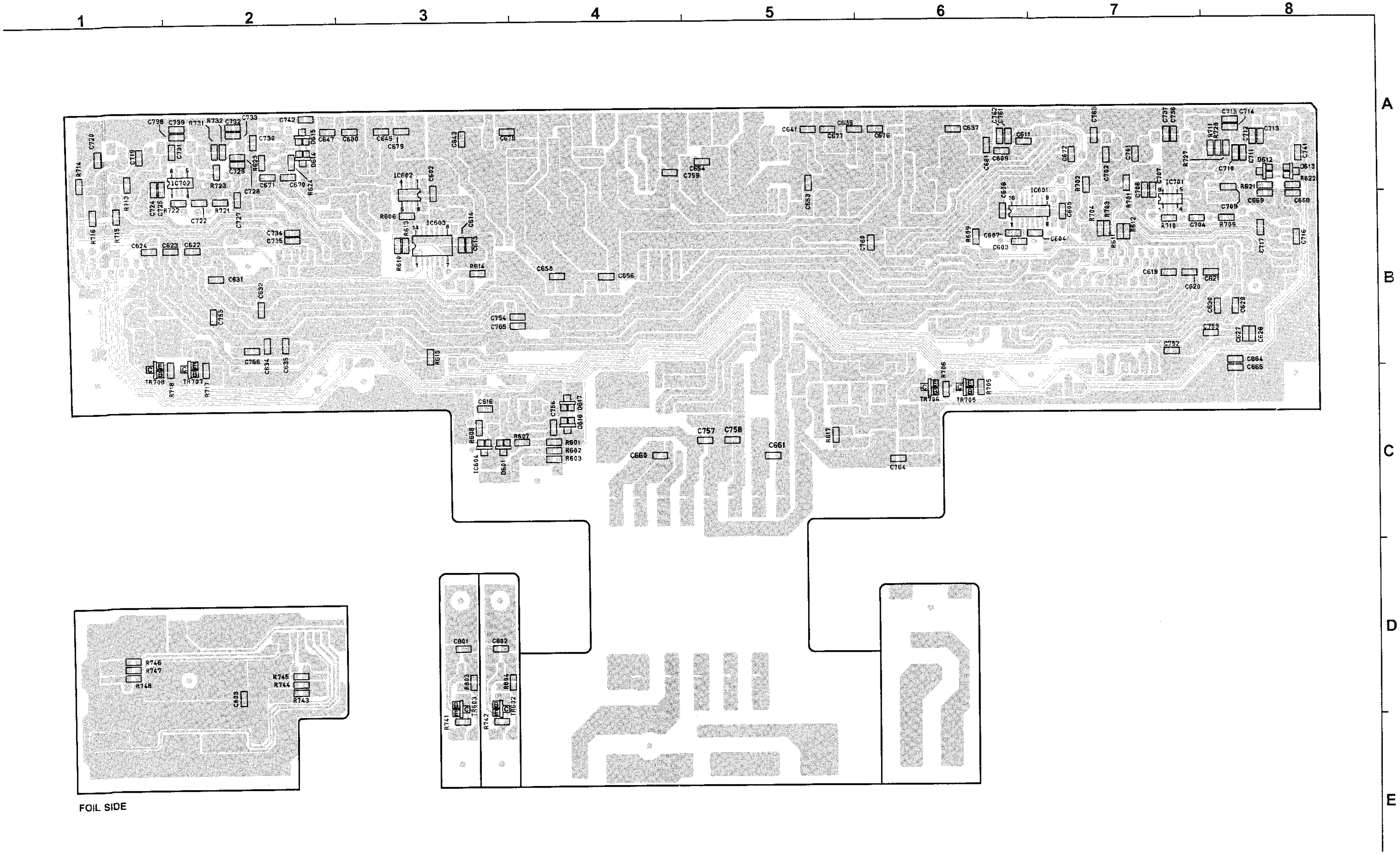


FOIL SIDE

GU-3226 POWER UNIT



COMPONENT SIDE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A
B
C
D
E
IC702
IC602
IC603
IC601
IC701
C739
C736
C742
C730
C647
C680
C645
C679
C643
C678
C641
C639
C677
C676
C637
C611
C609
C761
C762
C715
C714
C713
C741
R621
C669
C668
C624
C623
C622
C631
C632
C734
C735
C755
C756
C634
C635
R615
R614
C658
C656
C754
C765
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C619
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C629
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C627
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C664
C665
TR708
TR707
TR706
TR705
C616
R608
R601
R602
R603
C757
C758
C660
C661
C764
R617
C801
C802
R746
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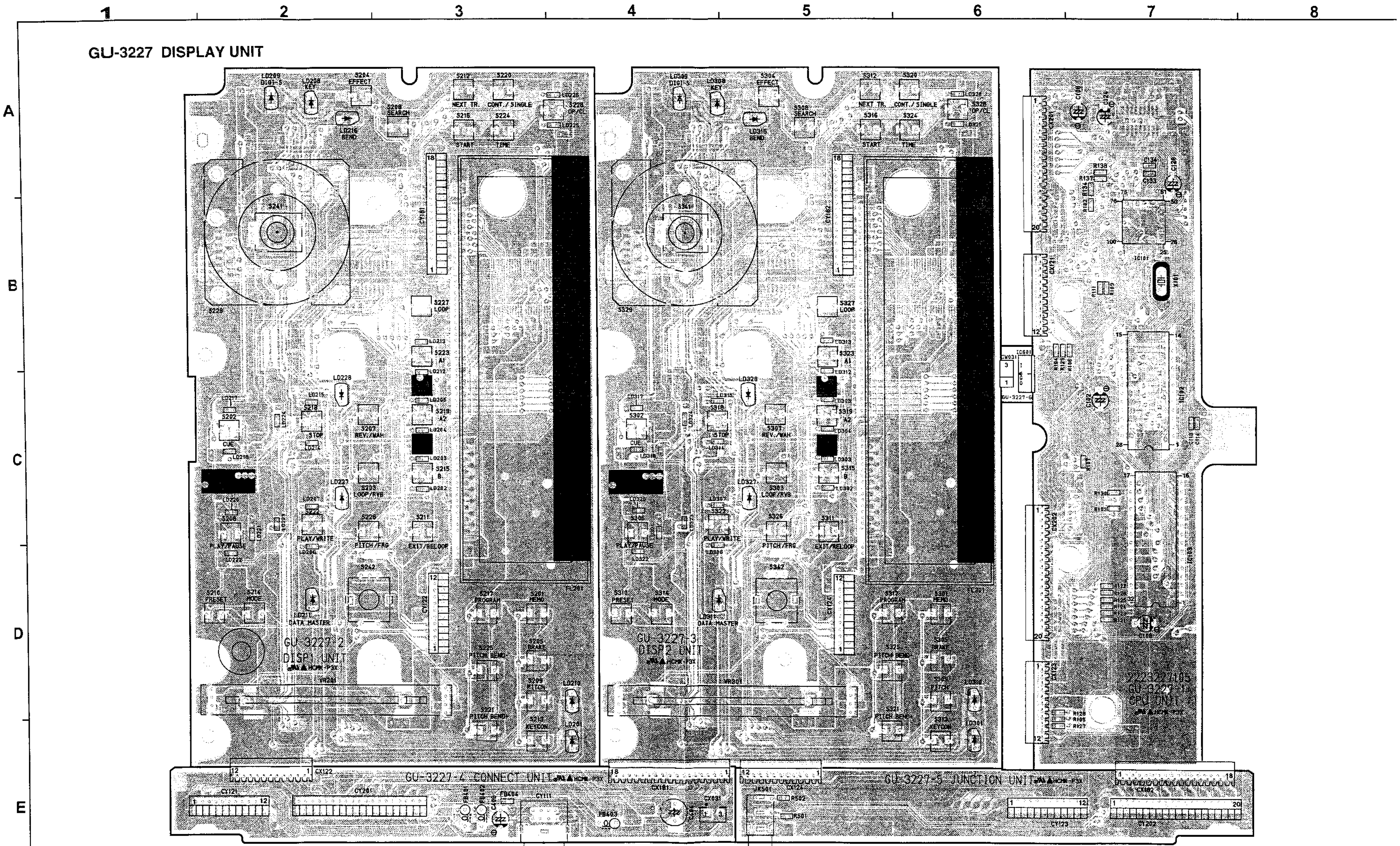
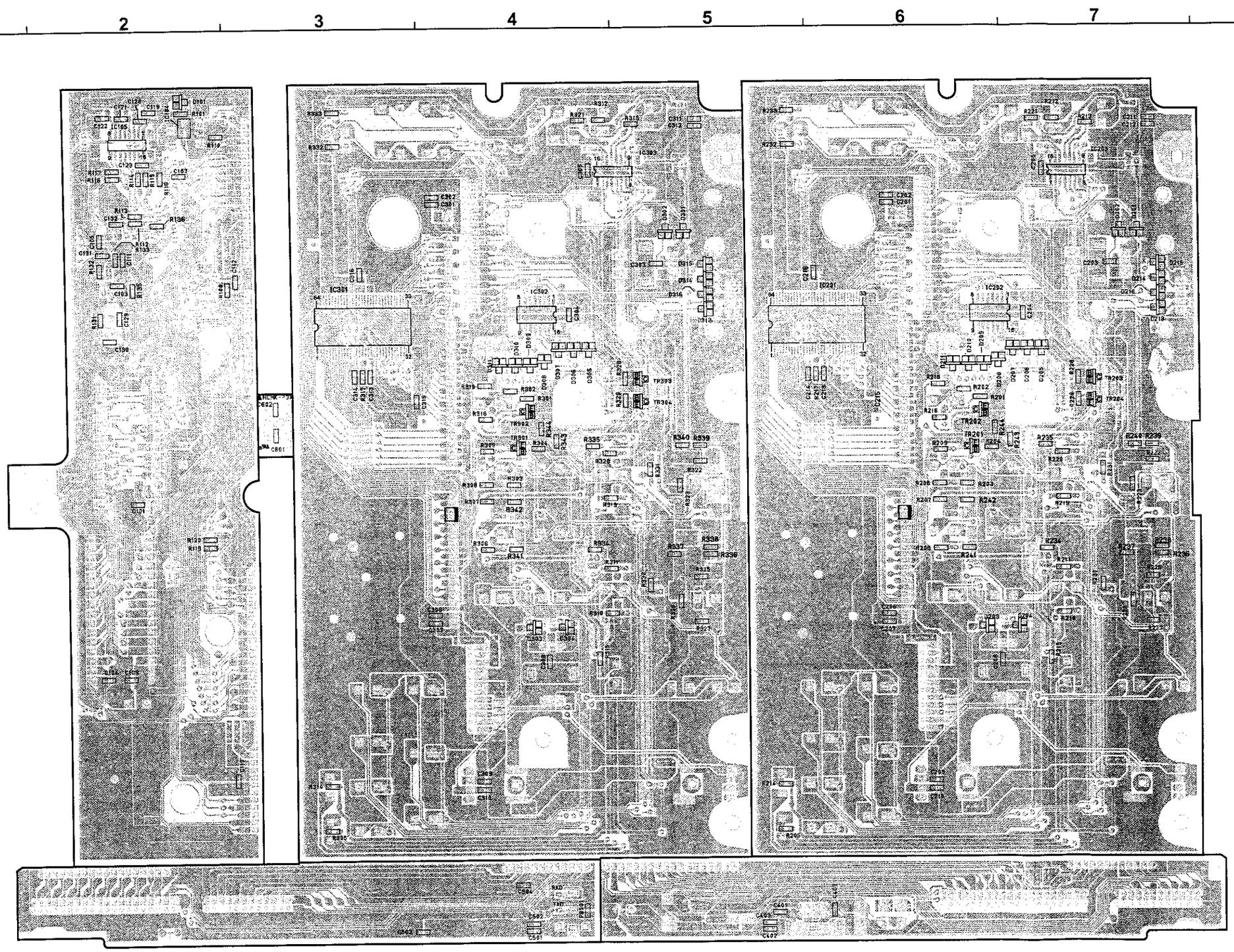
R748
R745
R744
R743
C803
R741
R742

FOIL SIDE

GU-3227 DISPLAY UNIT



COMPONENT SIDE



FOIL 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 "l" (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 14K 2E 182 G FR
Type / Shape and performance / Power / Resistance / Allowable error / Others

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

∗ Resistance

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

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

● Capacitors

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

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

∗ Capacity (electrolyte only)

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

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

∗ Capacity (except electrolyte)

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

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

GU-3225 MAIN P.W.B. UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC101	262 2461 902	IC AN8816SB-E1	
IC102	262 2462 901	IC AN8807SB-E1	
IC103	262 2368 005	IC MN662724RPE	
IC104	263 0994 908	IC BA6287F-E2	
IC201	262 2746 009	IC MN102LF61GAC	
IC301	262 2465 005	IC SM5902AF	
IC302	262 2701 905	IC 16M DRAM	
IC303	262 2651 903	IC BU2618FV (E2)	
IC305,306	262 1883 905	IC TC9246F	
IC307	262 2063 902	IC HD74AC04FP	
IC401,402	262 2290 018	IC MN19413A	
IC403~406	262 2701 905	IC 16M DRAM	
IC407,408	262 0707 901	IC TC4053BF	
IC409,410	263 0615 902	IC BA15218F	
IC501	263 0615 902	IC BA15218F	
TR101	272 0025 907	Transistor 2SB562 (C)	
TR102	269 0082 902	Transistor DTC114EK	
TR103	273 0384 900	Transistor 2SC2412K (S)	
D104,105	276 0559 909	Diode DAP202K	
ZD101	276 0462 928	Zener diode HZS6B-3	
ZD301	276 0450 901	Zener diode HZS2B-1	
RESISTORS GROUP			
R101~106	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R107	247 0002 966	Carbon chip 10ohm 1/10W	RM73B--100J
R108,109	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R111	247 0008 902	Carbon chip 1.8kohm 1/10W	RM73B--182J
R112	247 0013 968	Carbon chip 390kohm 1/10W	RM73B--394J
R113	247 0013 942	Carbon chip 330kohm 1/10W	RM73B--334J
R114,115	247 0008 960	Carbon chip 3.3kohm 1/10W	RM73B--332J
R116	247 0010 987	Carbon chip 27kohm 1/10W	RM73B--273J
R117	247 0011 902	Carbon chip 33kohm 1/10W	RM73B--333J
R118	247 0009 927	Carbon chip 5.6kohm 1/10W	RM73B--562J
R119	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R120	247 0009 927	Carbon chip 5.6kohm 1/10W	RM73B--562J
R121	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R122	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R123	247 0012 901	Carbon chip 82kohm 1/10W	RM73B--823J
R124	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R125	247 0011 986	Carbon chip 68kohm 1/10W	RM73B--683J
R126	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R127	247 0011 960	Carbon chip 56kohm 1/10W	RM73B--563J
R128	247 0008 944	Carbon chip 2.7kohm 1/10W	RM73B--272J
R130	247 0011 928	Carbon chip 39kohm 1/10W	RM73B--393J
R131	247 0013 900	Carbon chip 220kohm 1/10W	RM73B--224J
R132	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R133	247 0010 945	Carbon chip 18kohm 1/10W	RM73B--183J
R134	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R135	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R136	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R137	247 0011 986	Carbon chip 68kohm 1/10W	RM73B--683J
R138	247 0014 967	Carbon chip 1Mohm 1/10W	RM73B--105J
R139	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R141	247 0005 918	Carbon chip 110ohm 1/10W	RM73B--111J
R142	247 0007 903	Carbon chip 680ohm 1/10W	RM73B--681J
R143	247 0011 902	Carbon chip 33kohm 1/10W	RM73B--333J
R146~148	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R152	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R153~155	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R156	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R157	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R158	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R201	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R202~208	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R209~221	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R222,223	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R224	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R225	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R226	247 0004 922	Carbon chip 47ohm 1/10W	RM73B--470J
R227	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R228	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R229	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R230	247 0004 922	Carbon chip 47ohm 1/10W	RM73B--470J
R231	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R232	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R233	247 2009 983	Carbon chip 10kohm 1/16W	RM73B--103J
R234	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R235,236	247 2009 983	Carbon chip 10kohm 1/16W	RM73B--103J
R237	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R238,239	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R240~242	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R243	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R244	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R245~256	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R257	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R263	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R271	247 0014 967	Carbon chip 1Mohm 1/10W	RM73B--105J
R272,273	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R274,275	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R301	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R302~311	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R312	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J

Ref. No.	Part No.	Part Name	Remarks
R313~316	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R317	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R318	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R319~322	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R323	247 0003 978	Carbon chip 30ohm 1/10W	RM73B--300J
R324	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R325,326	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R327~330	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R331	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R332,333	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R334	247 0009 927	Carbon chip 5.6kohm 1/10W	RM73B--562J
R335	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R337,338	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R343	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R345,346	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R348	247 0007 987	Carbon chip 1.5kohm 1/10W	RM73B--152J
R349	247 0004 922	Carbon chip 47ohm 1/10W	RM73B--470J
R350	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R351	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R355	247 0004 922	Carbon chip 47ohm 1/10W	RM73B--470J
R356	247 0009 998	Carbon chip 11kohm 1/10W	RM73B--113J
R357	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R358	247 0013 939	Carbon chip 300kohm 1/10W	RM73B--304J
R359	247 0004 922	Carbon chip 47ohm 1/10W	RM73B--470J
R360,361	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R363	247 0004 922	Carbon chip 47ohm 1/10W	RM73B--470J
R367	247 0012 914	Carbon Chip 91kohm 1/10W	RM73B--913J
R369	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R370	247 0013 939	Carbon chip 300kohm 1/10W	RM73B--304J
R373	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R374	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R378	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R401,402	247 0010 990	Carbon chip 30kohm 1/10W	RM73B--303J
R403~406	247 0009 969	Carbon chip 8.2kohm 1/10W	RM73B--822J
R407~410	247 0008 902	Carbon chip 1.8kohm 1/10W	RM73B--182J
R411~414	247 0008 986	Carbon chip 3.9kohm 1/10W	RM73B--392J
R415~419	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R421,422	247 0010 990	Carbon chip 30kohm 1/10W	RM73B--303J
R423~426	247 0009 969	Carbon chip 8.2kohm 1/10W	RM73B--822J
R427~430	247 0008 902	Carbon chip 1.8kohm 1/10W	RM73B--182J
R431~434	247 0008 986	Carbon chip 3.9kohm 1/10W	RM73B--392J
R435~439	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R441,442	247 0005 947	Carbon chip 150ohm 1/10W	RM73B--151J
R443,444	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R450	247 0004 922	Carbon chip 47ohm 1/10W	RM73B--470J
R451	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R452	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R453	247 0004 922	Carbon chip 47ohm 1/10W	RM73B--470J
R454	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R455~475	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R476	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J

Ref. No.	Part No.	Part Name	Remarks
R484,485	247 0004 922	Carbon chip 47ohm 1/10W	RM73B--470J
R486	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R488~509	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R510	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R511,512	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R513,514	247 0009 914	Carbon chip 5.1kohm 1/10W	RM73B--512J
R515~518	247 0009 972	Carbon chip 9.1kohm 1/10W	RM73B--912J
R519,520	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R521,522	247 0010 974	Carbon chip 24kohm 1/10W	RM73B--243J
R523,524	247 0010 990	Carbon chip 30kohm 1/10W	RM73B--303J
R525,526	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R531	247 0012 985	Carbon chip 180kohm 1/10W	RM73B--184J
R532	247 0008 931	Carbon chip 2.4kohm 1/10W	RM73B--242J
R533	247 0009 914	Carbon chip 5.1kohm 1/10W	RM73B--512J
R534	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R536~538	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K

CAPACITORS GROUP

C103	254 4299 964	Electrolytic 47μF/16V	CE04W1C470M (SRE)
C104	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C105	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C106	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C109	257 3006 911	Metallized chip 0.1μF/16V	CF73=1C104J (ECHU)
C110	254 4299 964	Electrolytic 47μF/16V	CE04W1C470M (SRE)
C111	254 4305 968	Electrolytic 1μF/50V	CE04W1H010M (SRE)
C112	254 4299 964	Electrolytic 47μF/16V	CE04W1C470M (SRE)
C113	257 3006 924	Metallized chip 0.01μF/16V	CF73=1C103J (ECHU)
C114	257 3010 923	Metallized chip 150pF/50V	CF73=1H151J (ECHU)
C115	257 3010 952	Metallized chip 270pF/50V	CF73=1H271J (ECHU)
C116,117	257 3006 911	Metallized chip 0.1μF/16V	CF73=1C104J (ECHU)
C118	257 0001 948	Ceramic chip 2.0 pF/50V	CC73SL1H2R0C
C119	254 4305 968	Electrolytic 1μF/50V	CE04W1H010M (SRE)
C120	257 3010 907	Metallized chip 100pF/50V	CF73=1H101J (ECHU)
C121	257 3014 990	Metallized chip 0.027μF/16V	CF73=1C273J (ECHU)
C122	257 3011 948	Metallized chip 2200pF/50V	CF73=1H222J (ECHU)
C123	257 0002 921	Ceramic chip 10 pF/50V	CC73SL1H100D
C124	256 1059 912	Metallized 0.22μF/50V	CF93A1H224J (JL)
C125	255 1265 923	Mylar film 8200pF/50V	CQ93M1H822J (B)
C127	257 3006 924	Metallized chip 0.01μF/16V	CF73=1C103J (ECHU)
C128	257 3011 948	Metallized chip 2200pF/50V	CF73=1H222J (ECHU)
C130	257 3006 911	Metallized chip 0.1μF/16V	CF73=1C104J (ECHU)
C131	257 3015 928	Metallized chip 0.047μF/16V	CF73=1C473J (ECHU)
C132	257 3014 929	Metallized chip 4700pF/16V	CF73=1C472J (ECHU)
C133	257 3006 924	Metallized chip 0.01μF/16V	CF73=1C103J (ECHU)
C134	254 4213 940	Electrolytic 220μF/6.3V	CE04W0J221M (SRA)
C135	255 1264 982	Mylar film 4700pF/50V	CQ93M1H472J (B)
C136	257 3010 949	Metallized chip 220pF/50V	CF73=1H221J (ECHU)
C137	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C138,139	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C140	255 1264 924	Mylar film 1500pF/50V	CQ93M1H152J (B)
C141	253 9030 976	Ceramic 0.015μF/25V	CK45=1E153K

Ref. No.	Part No.	Part Name	Remarks
C142	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C143	257 3010 994	Metallized chip 560pF/50V	CF73=1H561J (ECHU)
C144	257 3006 924	Metallized chip 0.01μF/16V	CF73=1C103J (ECHU)
C145	254 4299 964	Electrolytic 47μF/16V	CE04W1C470M (SRE)
C146	257 3006 924	Metallized chip 0.01μF/16V	CF73=1C103J (ECHU)
C148,149	255 1265 978	Mylar film 0.022μF/50V	CQ93M1H223J (B)
C150	256 1058 971	Metallized 0.1μF/50V	CF93A1H104J (JL)
C151	256 1059 938	Metallized 0.33μF/50V	CF93A1H334J (JL)
C152	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C153,154	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C156,157	257 0001 977	Ceramic chip 5.0 pF/50V	CC73SL1H5R0C
C158	254 4299 964	Electrolytic 47μF/16V	CE04W1C470M (SRE)
C159	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C162	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C163	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C164	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C165	254 4299 964	Electrolytic 47μF/16V	CE04W1C470M (SRE)
C166	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C167	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C168	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C169	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C177	257 0002 947	Ceramic chip 12pF/50V	CC73SL1H120J
C192	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C193	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C194	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C195	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C196~198	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C199	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C201	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C202	254 4299 964	Electrolytic 47μF/16V	CE04W1C470M (SRE)
C203	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C204,205	257 0002 963	Ceramic chip 15pF/50V	CC73SL1H150J
C206	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C207	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C208	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C209	257 3006 924	Metallized chip 0.01μF/16V	CF73=1C103J (ECHU)
C225	254 3068 918	Electrolytic 2.2μF/50V	CE04D1H2R2MBP (SRA)
C237	257 3010 949	Metallized chip 220pF/50V	CF73=1H221J (ECHU)
C240	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C242,243	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C244	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C245	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C251~253	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C254	254 4299 964	Electrolytic 47μF/16V	CE04W1C470M (SRE)
C255,256	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C257	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C258	254 4533 950	Electrolytic 470μF/6.3V	CE04W0J471M
C259,260	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C261	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C262	254 4299 964	Electrolytic 47μF/16V	CE04W1C470M (SRE)
C263~266	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z

Ref. No.	Part No.	Part Name	Remarks
C267,268	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C282	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C283	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C289	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C290	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C291	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C292	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C293	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C294	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C301	254 4300 989	Electrolytic 330μF/6.3V	CE04W0J331M (SRE)
C302	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C303	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C304	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C307	254 4299 964	Electrolytic 47μF/16V	CE04W1C470M (SRE)
C308	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C309	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C310,311	257 0002 947	Ceramic chip 12pF/50V	CC73SL1H120J
C312	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C313	254 4300 989	Electrolytic 330μF/6.3V	CE04W0J331M (SRE)
C314	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C315	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C317	254 4300 989	Electrolytic 330μF/6.3V	CE04W0J331M (SRE)
C318	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C322	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C323	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C324	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C326	254 4305 955	Electrolytic 0.68μF/50V	CE04W1HR68M (SRE)
C328	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C329	254 4300 989	Electrolytic 330μF/6.3V	CE04W0J331M (SRE)
C330	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C331	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C333	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C334	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C335	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C336,337	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C338	254 4305 955	Electrolytic 0.68μF/50V	CE04W1HR68M (SRE)
C340	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C344	254 4299 964	Electrolytic 47μF/16V	CE04W1C470M (SRE)
C345	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C346	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C347	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C348	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C401,402	254 4299 906	Electrolytic 10μF/16V	CE04W1C100M (SRE)
C403~406	257 0005 944	Ceramic chip 220pF/50V	CC73SL1H221J
C407,408	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C409,410	254 4299 964	Electrolytic 47μF/16V	CE04W1C470M (SRE)
C411,412	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C413,414	254 4299 906	Electrolytic 10μF/16V	CE04W1C100M (SRE)
C415~418	257 0005 944	Ceramic chip 220pF/50V	CC73SL1H221J
C419,420	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J

Ref. No.	Part No.	Part Name	Remarks
C421,422	254 4299 964	Electrolytic 47μF/16V	CE04W1C470M (SRE)
C423,424	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C425,426	254 4299 964	Electrolytic 47μF/16V	CE04W1C470M (SRE)
C427,428	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C429,430	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C431	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C432,433	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C434	254 4305 968	Electrolytic 1μF/50V	CE04W1H010M (SRE)
C435	254 4299 919	Electrolytic 22μF/16V	CE04W1C220M (SRE)
C436	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C437	254 4299 919	Electrolytic 22μF/16V	CE04W1C220M (SRE)
C440	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C441	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C442	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C443,444	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C445,446	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C447	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C448	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C449	254 4299 964	Electrolytic 47μF/16V	CE04W1C470M (SRE)
C450	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C451	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C452	254 4299 964	Electrolytic 47μF/16V	CE04W1C470M (SRE)
C453	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C454	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C455	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C456	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C457,458	254 4299 919	Electrolytic 22μF/16V	CE04W1C220M (SRE)
C459	254 4305 968	Electrolytic 1μF/50V	CE04W1H010M (SRE)
C460,461	254 4299 919	Electrolytic 22μF/16V	CE04W1C220M (SRE)
C462	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C463	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C464	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C465,466	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C467,468	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C469	257 0007 900	Ceramic chip 1000pF/50V	CC73SL1H102J
C470	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C471	254 4299 964	Electrolytic 47μF/16V	CE04W1C470M (SRE)
C472	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C473	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C474	254 4299 964	Electrolytic 47μF/16V	CE04W1C470M (SRE)
C475	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C476	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C477	254 4299 964	Electrolytic 47μF/16V	CE04W1C470M (SRE)
C478	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C479	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C480	254 4299 964	Electrolytic 47μF/16V	CE04W1C470M (SRE)
C481	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C482	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C483,484	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C485	254 4299 964	Electrolytic 47μF/16V	CE04W1C470M (SRE)
C486	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C487,488	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z

Ref. No.	Part No.	Part Name	Remarks
C489	254 4299 964	Electrolytic 47μF/16V	CE04W1C470M (SRE)
C490	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C491,492	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C493~498	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C499,500	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C503,504	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C505,506	254 4299 906	Electrolytic 10μF/16V	CE04W1C100M (SRE)
C507,508	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C509,510	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C511	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C512,513	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C514,515	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C516	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C521	257 0006 901	Ceramic chip 390pF/50V	CC73SL1H391J
C522	254 4300 989	Electrolytic 330μF/6.3V	CE04W0J331M (SRE)

OTHER PARTS GROUP				Q'ty
AS201	205 0488 036	32P IC socket		1
CX051	205 0343 058	5P connector base(KR-PH)		1
CX052	205 0321 054	5P connector base (RED)		1
CX061	205 0321 067	6P connector base (RED)		1
CX081	205 0395 080	8P connector base (RED) L		1
CX083	205 0343 087	8P connector base (KR-PH)		1
CX271	205 1138 000	27P FFC connector base(SIDE)		1
FB101	235 0049 900	Beads inductor		1
FB102	235 0106 908	EMI filter (21A05)		1
FB104,105	235 0106 908	EMI filter (21A05)		2
FB125	235 0106 908	EMI filter (21A05)		1
FB126	235 0049 900	Beads inductor		1
FB201	235 0049 900	Beads inductor		1
FB251~260	235 0106 908	EMI filter (21A05)		10
FB261,262	235 0086 905	EMI filter (101)		2
FB301	235 0106 908	EMI filter (21A05)		1
FB303,304	235 0106 908	EMI filter (21A05)		2
FB501,502	235 0049 900	Beads inductor		2
FB503	235 0106 908	EMI filter (21A05)		1
JP101	205 0339 004	JM jumper connector		1
L101	235 0060 950	Inductor 10μH		1
L401,402	235 0107 949	LEM4532T101M		2
TP101	205 0343 061	6P connector base (KR-PH)		1
TP102	205 0343 032	3P connector base (KR-PH)		1
X101	399 0594 005	Crystal 30MHz		1
X201	399 0352 904	Ceramic resonator	CSA20.0MXZ040-TF01	1
X301	399 0595 004	Crystal 8.4672MHz		1
	205 0341 018	3P RE header	for JP101	1

GU-3226 POWER P.W.B. UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC601	262 2090 904	IC MAX202CSE	
IC602	262 1711 909	IC X24C00S	
IC603	262 1930 900	IC TC74AC08AF	
IC604	262 1647 905	IC MN1382-S(TX)	
IC607	263 1056 007	IC UPC2406AHF	
IC608,609	263 1043 007	IC UPC2405AHF	
IC610	263 1056 007	IC UPC2406AHF	
IC611~613	263 1043 007	IC UPC2405AHF	
IC614	263 0554 005	IC NJM7905FA	
IC701,702	262 1953 903	IC TC7WU04F	
TR601	272 0083 004	Transistor 2SB1185 (E/F)	
TR701~704	274 0160 907	Transistor 2SD2144STPU	
TR705	269 0083 901	Transistor DTA114EK	
TR706	269 0082 902	Transistor DTC114EK	
TR707	269 0083 901	Transistor DTA114EK	
TR708	269 0082 902	Transistor DTC114EK	
D601	276 0559 909	Diode DAP202K	
D602,603	276 0432 903	Diode 1SS270A	
D604,605	276 0623 000	Diode D3SBA20	
D610,611	276 0550 908	Diode 1SR139-200	
D612	276 0438 949	Diode MA151WK	
D613	276 0438 907	Diode MA151WA	
D614	276 0438 949	Diode MA151WK	
D615	276 0438 907	Diode MA151WA	
D616	276 0438 949	Diode MA151WK	
D617	276 0438 907	Diode MA151WA	
D701,702	276 0432 903	Diode 1SS270A	
ZD601	276 0643 967	Zener diode MTZJ4.3A	
ZD602	276 0646 906	Zener diode MTZJ39E	
LD801	393 9543 907	LED SLR-325VC	Red
LD802,803	393 9582 900	LED LNX901CFBDA	Blue
RESISTORS GROUP			
R601,602	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R603	247 0005 905	Carbon chip 100ohm 1/10W	RM73B--101J
R606	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R607	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R608	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R609~615	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R617	247 0008 944	Carbon chip 2.7kohm 1/10W	RM73B--272J
R621~624	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R701,702	247 0007 903	Carbon chip 680ohm 1/10W	RM73B--681J
R703,704	247 0008 944	Carbon chip 2.7kohm 1/10W	RM73B--272J

Ref. No.	Part No.	Part Name	Remarks
R705	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R706	247 0012 998	Carbon chip 200kohm 1/10W	RM73B--204J
R707	244 2051 974	Metal oxide 1kohm 1W	RS14B3A102JNBS (S)
R709	247 0007 987	Carbon chip 1.5kohm 1/10W	RM73B--152J
R710	247 0014 967	Carbon chip 1Mohm 1/10W	RM73B--105J
R711	247 0004 977	Carbon chip 75ohm 1/10W	RM73B--750J
R713,714	247 0007 903	Carbon chip 680ohm 1/10W	RM73B--681J
R715,716	247 0008 944	Carbon chip 2.7kohm 1/10W	RM73B--272J
R717	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R718	247 0012 998	Carbon chip 200kohm 1/10W	RM73B--204J
R719	244 2051 974	Metal oxide 1kohm 1W	RS14B3A102JNBS (S)
R721	247 0007 987	Carbon chip 1.5kohm 1/10W	RM73B--152J
R722	247 0014 967	Carbon chip 1Mohm 1/10W	RM73B--105J
R723	247 0004 977	Carbon chip 75ohm 1/10W	RM73B--750J
R727,728	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R731,732	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R741,742	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R744	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R747	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R803,804	247 0006 904	Carbon chip 270ohm 1/10W	RM73B--271J
CAPACITORS GROUP			
C601	254 4536 931	Electrolytic 220µF/10V	CE04W1A221M (SMG/RE3)
C602~605	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C606	254 4536 931	Electrolytic 220µF/10V	CE04W1A221M (SMG/RE3)
C607,608	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C611	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C613	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C614	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C615	254 4538 939	Electrolytic 47µF/16V	CE04W1C470M (SMG/RE3)
C616	257 3006 924	Metallized chip 0.01µF/16V	CF73=1C103J (ECHU)
C617	254 4535 929	Electrolytic 47µF/63V	CE04W1J470M (SMG/RE3)
C618	254 4540 707	Electrolytic 330µF/63V	CE04W1J331M (SMG/RE3)
C619~624	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C626	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C627	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C629~632	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C634	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C635	257 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
C637	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C638	254 4536 931	Electrolytic 220µF/10V	CE04W1A221M (SMG/RE3)
C639	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C640	254 4536 931	Electrolytic 220µF/10V	CE04W1A221M (SMG/RE3)
C641	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C642	254 4536 931	Electrolytic 220µF/10V	CE04W1A221M (SMG/RE3)
C643	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C644	254 4536 931	Electrolytic 220µF/10V	CE04W1A221M (SMG/RE3)
C645	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C646	254 4536 931	Electrolytic 220µF/10V	CE04W1A221M (SMG/RE3)
C647	257 0014 935	Ceramic chip 0.1µF/25V	CK73F1E104Z
C648	254 4536 931	Electrolytic 220µF/10V	CE04W1A221M (SMG/RE3)

Ref. No.	Part No.	Part Name	Remarks
C649	253 9039 906	Ceramic 0.1μF/25V	CK45=1E104Z
C650	254 4536 931	Electrolytic 220μF/10V	CE04W1A221M (SMG/RE3)
C651	253 9039 906	Ceramic 0.1μF/25V	CK45=1E104Z
C652	254 4536 931	Electrolytic 220μF/10V	CE04W1A221M (SMG/RE3)
C653,654	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C655	254 4565 708	Electrolytic 12000μF/16V	CE04W1C123M (SMG)
C656	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C657	254 4442 711	Electrolytic 10000μF/16V	CE04W1C103M (SMG)
C658	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C659	254 4539 718	Electrolytic 2200μF/16V	CE04W1C222M (SMG/RE3)
C664	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C665	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C668~671	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C676~681	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C701,702	257 3011 919	Metallized chip 1000pF/50V	CF73=1H102J (ECHU)
C703	254 4538 955	Electrolytic 220μF/16V	CE04W1C221M (SMG/RE3)
C704	257 3011 919	Metallized chip 1000pF/50V	CF73=1H102J (ECHU)
C705	254 4536 931	Electrolytic 220μF/10V	CE04W1A221M (SMG/RE3)
C706	257 0012 908	Ceramic chip 1000pF/50V	CK73F1H102Z
C707	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C708	254 4254 925	Electrolytic 33μF/16V	CE04W1C330M
C709	257 3006 924	Metallized chip 0.01μF/16V	CF73=1C103J (ECHU)
C710	257 0012 908	Ceramic chip 1000pF/50V	CK73F1H102Z
C711,712	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C713	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C715	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C716,717	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C719,720	257 3011 919	Metallized chip 1000pF/50V	CF73=1H102J (ECHU)
C721	254 4538 955	Electrolytic 220μF/16V	CE04W1C221M (SMG/RE3)
C722	257 3011 919	Metallized chip 1000pF/50V	CF73=1H102J (ECHU)
C723	254 4536 931	Electrolytic 220μF/10V	CE04W1A221M (SMG/RE3)
C724	257 0012 908	Ceramic chip 1000pF/50V	CK73F1H102Z
C725	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C726	254 4254 925	Electrolytic 33μF/16V	CE04W1C330M
C727	257 3006 924	Metallized chip 0.01μF/16V	CF73=1C103J (ECHU)
C728	257 0012 908	Ceramic chip 1000pF/50V	CK73F1H102Z
C729,730	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C731	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C733	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C734~736	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C737	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C738	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C739	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C741,742	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C751	254 4538 955	Electrolytic 220μF/16V	CE04W1C221M (SMG/RE3)
C752~756	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C759~761	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C762	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C763~766	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C801~803	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z

Ref. No.	Part No.	Part Name	Remarks
⚠ C851	253 8022 707	Ceramic 0.01 μF/250V (AC)	CK45F2EAC103M

OTHER PARTS GROUP			Q'ty
CW031,032	203 4379 022	3P KR-DS connector cord	2
CW071	204 2309 042	7P KR-DS connector cord	1
CX021,022	205 0581 001	2P VH connector base	2
CX031,032	205 0355 033	3P KR connector base (L)	2
CX071	205 0343 074	7P connector base (KR-PH)	1
CX111	205 1135 003	8P MD connector base (F-S)	1
CY021	205 0581 056	2P VH connector base	1
CY081,082	205 0321 083	8P connector base (RED)	2
CY271,272	205 0880 016	27P FFC connector base	2
FF601~603	202 0040 909	Fuse clip	3
FH601~603	202 0040 909	Fuse clip	3
JK701,702	204 8553 009	2P pin jack (FG-ANA)	2
JK703,704	204 8406 020	1P pin jack	2
JK705,706	204 8421 005	Mini jack	2
PT701,702	231 8063 009	Pulse trans.	2
SW801,802	212 5604 907	Tact switch	2
⚠ SW851	212 1176 015	Power switch (TV-5)	1

GU-3227 DISPLAY P.W.B. UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC101	262 2463 007	IC MN102L2503	
IC102	262 2103 008	IC CAT28C64BP-15	
IC103	GEN 4696	SYSTEM ROM SUB ASS'Y	CAT28 F010P 09 (P)
IC104	262 2452 908	IC MN1382-R (TX)	
IC105	262 2090 904	IC MAX202CSE	
IC201	262 1954 902	IC M66004FP	
IC202	262 2251 905	IC TC74AC138F (EL)	
IC203	262 2745 903	IC BU2090F (E2)	
IC301	262 1954 902	IC M66004FP	
IC302	262 2251 905	IC TC74AC138F (EL)	
IC303	262 2745 903	IC BU2090F (E2)	
IC601	263 1043 007	IC UPC2405AHF	
TR201~204	269 0048 904	Transistor DTC143EK	
TR301~304	269 0048 904	Transistor DTC143EK	
D101	276 0438 910	Diode MA151A	
D201~211	276 0438 910	Diode MA151A	
D213~216	276 0438 910	Diode MA151A	
D301~311	276 0438 910	Diode MA151A	
D313~316	276 0438 910	Diode MA151A	
FL201	393 8046 007	FLD (CM1941M)	
FL301	393 8046 007	FLD (CM1941M)	
LD201	393 9543 923	LED SLR-325DC	Orange
LD202,203	393 9571 911	LED TLOU1002	Orange
LD204,205	393 9571 908	LED TLGU1002	Green
LD208	393 9543 923	LED SLR-325DC	Orange
LD209	393 9543 907	LED SLR-325VC	Red
LD210	393 9543 910	LED SLR-325MC	Green
LD211	393 9543 923	LED SLR-325DC	Orange
LD212,213	393 9571 908	LED TLGU1002	Green
LD216	393 9543 910	LED SLR-325MC	Green
LD217,218	393 9570 909	LED TLRA1002	Red
LD220~222	393 9571 908	LED TLGU1002	Green
LD225,226	393 9571 908	LED TLGU1002	Green
LD227	393 9543 910	LED SLR-325MC	Green
LD228	393 9543 907	LED SLR-325VC	Red
LD301	393 9543 923	LED SLR-325DC	Orange
LD302,303	393 9571 911	LED TLOU1002	Orange
LD304,305	393 9571 908	LED TLGU1002	Green
LD308	393 9543 923	LED SLR-325DC	Orange

Ref. No.	Part No.	Part Name	Remarks
LD309	393 9543 907	LED SLR-325VC	Red
LD310	393 9543 910	LED SLR-325MC	Green
LD311	393 9543 923	LED SLR-325DC	Orange
LD312,313	393 9571 908	LED TLGU1002	Green
LD316	393 9543 910	LED SLR-325MC	Green
LD317,318	393 9570 909	LED TLRA1002	Red
LD320~322	393 9571 908	LED TLGU1002	Green
LD325,326	393 9571 908	LED TLGU1002	Green
LD327	393 9543 910	LED SLR-325MC	Green
LD328	393 9543 907	LED SLR-325VC	Red
RESISTORS GROUP			
R101	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R102~111	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R112,113	247 0011 944	Carbon chip 47kohm 1/10W	RM73B--473J
R114~130	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R131	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R132~134	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R135~138	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R201~204	247 0007 929	Carbon chip 820ohm 1/10W	RM73B--821J
R205	247 0005 976	Carbon chip 200ohm 1/10W	RM73B--201J
R206,207	247 0005 950	Carbon chip 160ohm 1/10W	RM73B--161J
R208,209	247 0006 917	Carbon chip 300ohm 1/10W	RM73B--301J
R212	247 0005 976	Carbon chip 200ohm 1/10W	RM73B--201J
R213	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R214,215	247 0005 976	Carbon chip 200ohm 1/10W	RM73B--201J
R216	247 0006 917	Carbon chip 300ohm 1/10W	RM73B--301J
R217	247 0010 987	Carbon chip 27kohm 1/10W	RM73B--273J
R218	247 0006 917	Carbon chip 300ohm 1/10W	RM73B--301J
R221	247 0005 976	Carbon chip 200ohm 1/10W	RM73B--201J
R222,223	247 0006 917	Carbon chip 300ohm 1/10W	RM73B--301J
R225~227	247 0005 976	Carbon chip 200ohm 1/10W	RM73B--201J
R232,233	247 0007 932	Carbon chip 910ohm 1/10W	RM73B--911J
R234	247 0005 976	Carbon chip 200ohm 1/10W	RM73B--201J
R235	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R241,242	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R243,244	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R301~304	247 0007 929	Carbon chip 820ohm 1/10W	RM73B--821J
R305	247 0005 976	Carbon chip 200ohm 1/10W	RM73B--201J
R306,307	247 0005 950	Carbon chip 160ohm 1/10W	RM73B--161J
R308,309	247 0006 917	Carbon chip 300ohm 1/10W	RM73B--301J
R312	247 0005 976	Carbon chip 200ohm 1/10W	RM73B--201J
R313	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R314,315	247 0005 976	Carbon chip 200ohm 1/10W	RM73B--201J
R316	247 0006 917	Carbon chip 300ohm 1/10W	RM73B--301J
R317	247 0010 987	Carbon chip 27kohm 1/10W	RM73B--273J
R318	247 0006 917	Carbon chip 300ohm 1/10W	RM73B--301J
R321	247 0005 976	Carbon chip 200ohm 1/10W	RM73B--201J
R322,323	247 0006 917	Carbon chip 300ohm 1/10W	RM73B--301J
R325~327	247 0005 976	Carbon chip 200ohm 1/10W	RM73B--201J

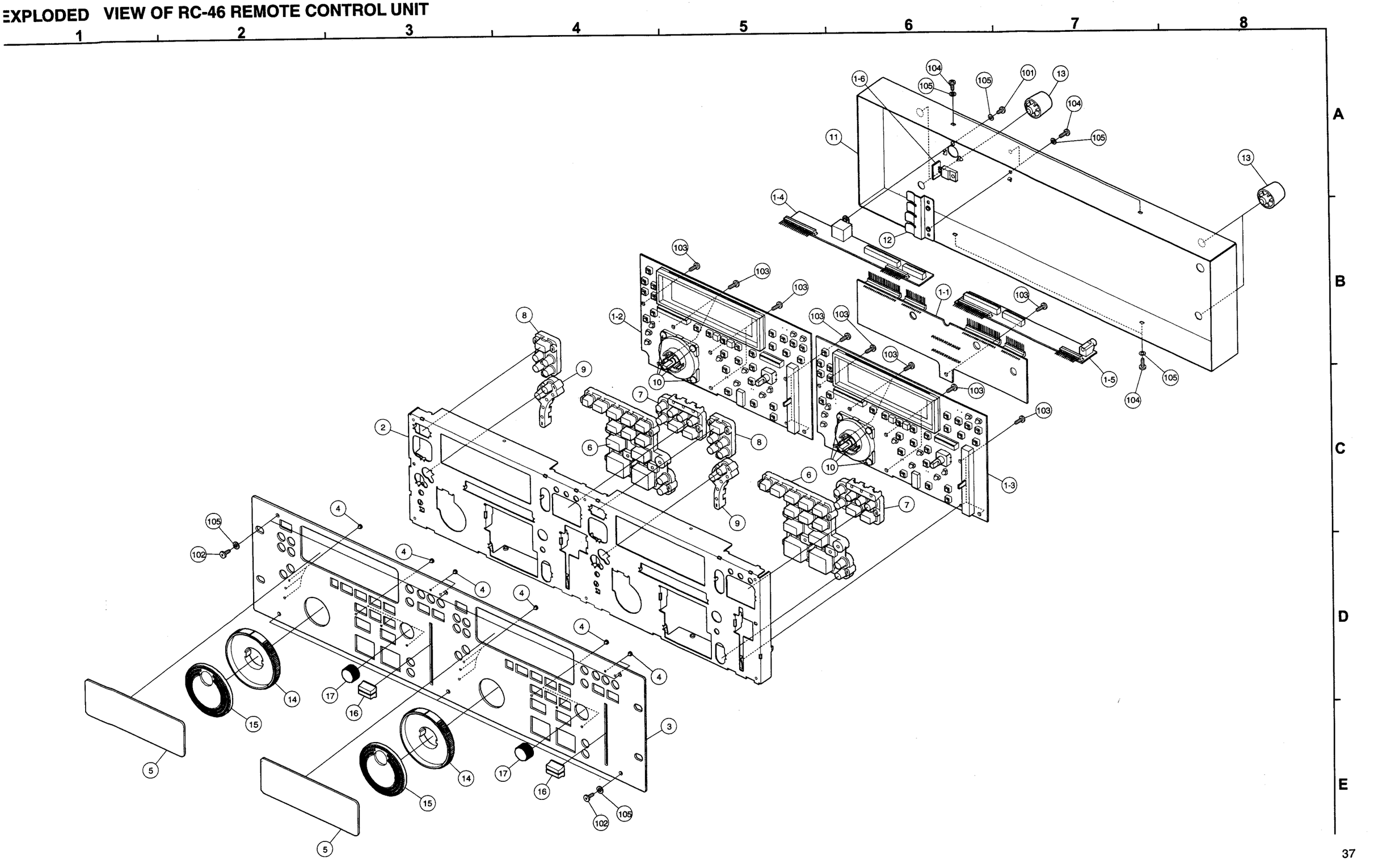
Ref. No.	Part No.	Part Name	Remarks
R332,333	247 0007 932	Carbon chip 910ohm 1/10W	RM73B--911J
R334	247 0005 976	Carbon chip 200ohm 1/10W	RM73B--201J
R335	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R341,342	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R343,344	247 0007 945	Carbon chip 1kohm 1/10W	RM73B--102J
R501,502	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
VR201	211 0849 007	Slide volume (C)	
VR301	211 0849 007	Slide volume (C)	
CAPACITORS GROUP			
C101	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C102	254 4538 939	Electrolytic 47μF/16V	CE04W1C470M (SMG/RE3)
C103,104	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C105	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C106	254 4538 939	Electrolytic 47μF/16V	CE04W1C470M (SMG/RE3)
C107	257 3006 924	Metallized chip 0.01μF/16V	CF73=1C103J (ECHU)
C108	254 4538 939	Electrolytic 47μF/16V	CE04W1C470M (SMG/RE3)
C109	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C110~113	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C114	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C119~123	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C124	254 4538 939	Electrolytic 47μF/16V	CE04W1C470M (SMG/RE3)
C128	254 4538 942	Electrolytic 100μF/16V	CE04W1C101M (SMG/RE3)
C129,130	257 0002 921	Ceramic chip 10 pF/50V	CC73SL1H100D
C131~134	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C201,202	257 0013 907	Ceramic chip 0.047μF/50V	CK73F1H473Z
C203~205	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C206,207	257 0013 907	Ceramic chip 0.047μF/50V	CK73F1H473Z
C208~211	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C212	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C213	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C214	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C215	257 0013 907	Ceramic chip 0.047μF/50V	CK73F1H473Z
C216	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C301,302	257 0013 907	Ceramic chip 0.047μF/50V	CK73F1H473Z
C303~305	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C306,307	257 0013 907	Ceramic chip 0.047μF/50V	CK73F1H473Z
C308~311	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C312	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C313	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C314	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C315	257 0013 907	Ceramic chip 0.047μF/50V	CK73F1H473Z
C316	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C402	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C403	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C404	254 3056 962	Electrolytic 22μF/50V	CE04D1H220MBP
C406	254 4538 942	Electrolytic 100μF/16V	CE04W1C101M (SMG/RE3)
C407	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C601,602	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z

Ref. No.	Part No.	Part Name	Remarks	Q'ty
OTHER PARTS GROUP				
AS103	205 0488 036	32P IC socket		1
CW031	203 5012 061	3P SAN-PH connector cord		1
CX031	205 0343 032	3P connector base(KR-PH)		1
CX121~124	205 0850 059	12P connector base (BTMK-P)		4
CX181,182	205 0850 033	18P connector base (BTMK-P)		2
CX201,202	205 0850 046	20P connector base (BTMK-P)		2
CY111	205 1135 003	8P MD connector base (F-S)		1
CY121~124	205 0849 057	12P connector base (BTMK-S)		4
CY181,182	205 0849 031	18P connector base (BTMK-S)		2
CY201,202	205 0849 044	20P connector base (BTMK-S)		2
FB401~403	235 0049 900	Beads inductor		3
FB501	235 0106 908	EMI filter (21A05)		1
JK501	204 8421 005	Mini jack		1
S201~228	212 5604 907	Tact switch		28
S229	212 0427 008	Shuttle		1
S241	212 0433 005	Rotary encorder		1
S242	212 0410 002	Rotary encorder-JOG		1
S301~328	212 5604 907	Tact switch		28
S329	212 0427 008	Shuttle		1
S341	212 0433 005	Rotary encorder		1
S342	212 0410 002	Rotary encorder-JOG		1
X101	399 0219 021	Crystal 12.288MHz		1
	479 0010 005	Push rivet		4
	513 8013 003	P-ROM seal		1
	461 0984 046	FL spacer		2

PARTS LIST OF RC-46 REMOTE CONTROL UNIT

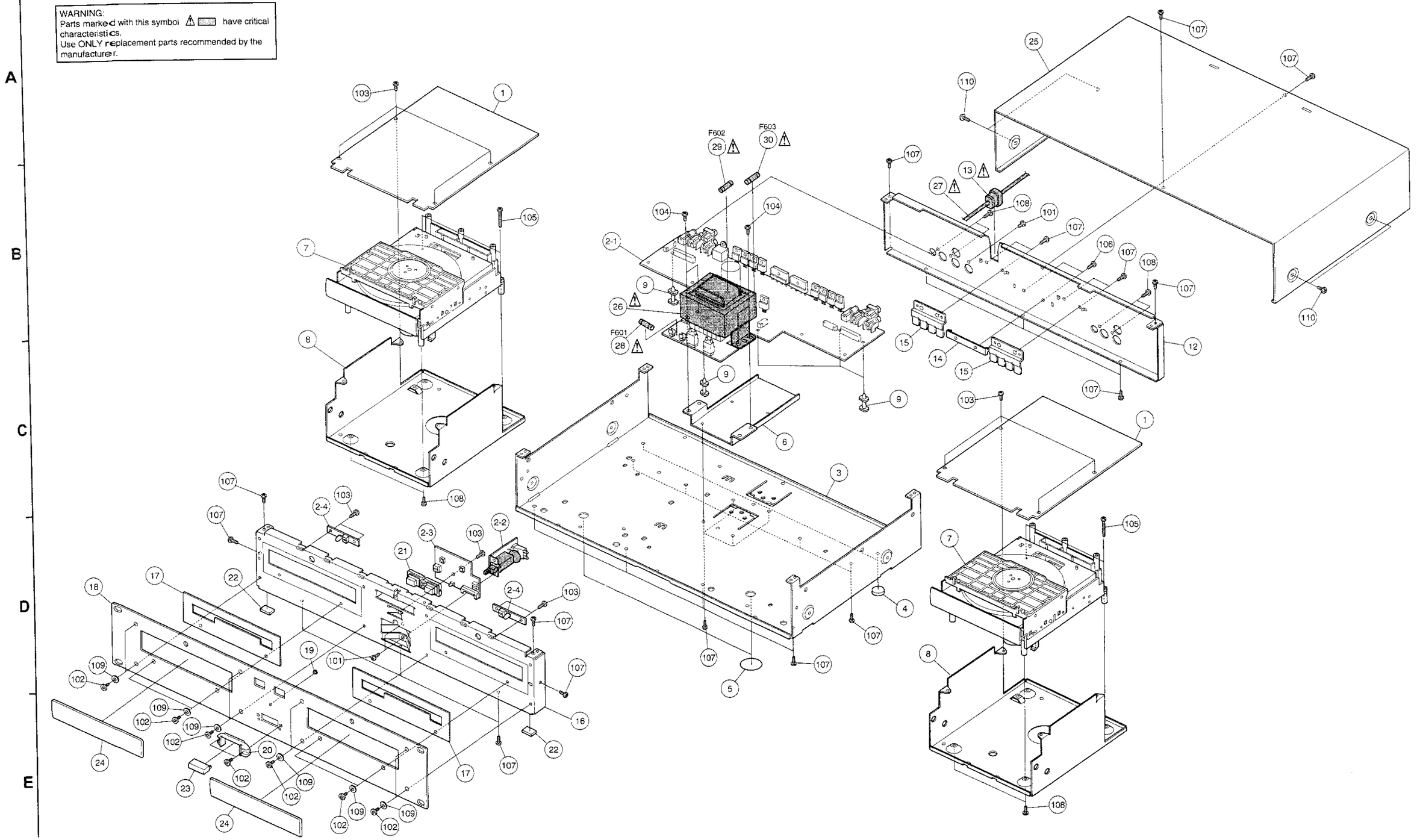
Ref. No.	Part No.	Part Name	Remarks	Q'ty
1	GU-3227	Display P.W.B. unit Ass'y		1
1-1		CPU unit		
1-2		Display1 unit		
1-3		Display2 unit		
1-4		Connect unit		
1-5		Junction unit		
1-6		Regurator unit		
2	441 1920 005	RC front sub panel		1
3	144 2684 106	RC front panel		1
4	143 1072 004	Lens		16
5	146 2144 008	Window		2
6	119 0101 106	Rubber key (PLAY/PAUSE)		2
7	119 0102 008	Rubber key (PITCH BEND)		2
8	119 0103 007	Rubber key (OPEN/CLOSE)		2
9	119 0104 006	Rubber key (JOG MODE)		2
10	479 0010 005	Push rivet		8
11	105 1325 102	Cover		1
12	412 9371 001	Spring plate		1
13	104 0270 006	Foot		4
14	112 0843 007	Shuttle ring		2
15	112 0852 001	Jog dial Ass'y		2
16	113 1840 109	Slide knob		2
17	112 0820 017	Knob (Maru)		2
★ 19	513 3349 002	Caution label		1
SCREWS & NUTS				
101	471 3303 029	Screw 3×6 CBS-B		1
102	471 9050 020	Screw 3×6 FHHS MFZNII-B		6
103	473 7002 005	Screw 3×6 CBTS (S)-Z		17
104	473 7002 021	Screw 3×8 CBTS (S)-B		6
105	475 1178 009	Washer 3W-B		13

EXPLODED VIEW OF RC-46 REMOTE CONTROL UNIT



EXPLODED VIEW OF CHASSIS AND CABINET

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



PARTS LIST OF EXPLODED VIEW

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

Ref. No.	Part No.	Part Name	Remarks	Q'ty
1	GU-3225	Main P.W.B. unit Ass'y		2
2	GU-3226	Power P.W.B. unit Ass'y		1
2-1		Power unit		
2-2		P. SW. unit		
2-3		OP/CL SW. unit		
2-4		LED unit		
3	411 1923 001	Chassis		1
4	461 0706 127	Foot sheet		2
5	513 3175 001	Blind label		2
6	412 4343 102	Trans. bracket		1
7	337 0059 102	CD mecha. unit (CD93F8)		2
8	412 4560 008	Mecha. bracket		2
9	412 2814 086	Card spacer (L=14.8)		5
12	105 1324 200	Back panel		1
⚠ 13	445 0084 009	Cord bush	for E3	1
⚠ 13	445 0056 008	Cord bush	for E2/EK	1
14	412 4580 004	Diode bracket		1
15	412 9371 001	Spring plate		2
16	441 1919 003	Front sub panel		1
17	415 0831 002	Blind sheet		2
18	144 2683 000	Front panel		1
19	143 1072 004	Lens		1
20	146 1661 016	Power SW. protector		1
21	119 0069 125	Rubber key (B)		1
22	461 0740 002	Sheet		2
23	113 1357 207	P. SW. knob		1
24	146 2067 101	Loader panel		2
25	102 0425 253	Top cover		1
⚠ 26	233 6311 005	Power trans		1
⚠ 27	206 2155 001	AC cord with connector E3	for E3	1
⚠ 27	206 2089 106	AC cord with connector E2	for E2	1
⚠ 27	206 2128 009	AC cord with connector EK	for EK	1
⚠ 28	206 1039 034	Fuse 1A	F601, for E3	1
⚠ 28	206 1036 006	Fuse 630mA	F601, for E2/EK	1
⚠ 29	206 1039 092	Fuse 4.0AT	F602, for E3	1
⚠ 29	206 1015 087	Fuse 4.0A	F602, for E2/EK	1
⚠ 30	206 1039 089	Fuse 3.15A	F603, for E3	1
⚠ 30	206 1015 074	Fuse 3.15A	F603, for E2/EK	1
★ 31	445 8028 009	Cord holder		1
★ 32	445 0033 005	Wire clamp band		2
★ 33	203 8440 025	5P PH-PH connector cord	CX051 to Mecha.	2
★ 34	204 2469 050	8P PH-PH connector cord	CX083 to Mecha.	2
★ 35	204 0479 042	6P connector cord (Red)	CX061 to Mecha.	2
★ 36	203 8440 038	5P PH-PH connector cord (Red)	CX052 to Mecha.	2
★ 37	009 0133 042	27P FFC	CX271 to CY271	2
★ 38	204 2661 049	8P PH-PH connector cord	CX081 to CY081	2
★ 39	203 5132 080	3P VH connector cord	CX021 to CY021	1
★ 40	513 2065 002	E2 laser caution	for E2	2
★ 41	513 3402 004	Fuse label	for F601, for E2/EK	1
★ 42	513 3402 017	Fuse label	for F602, for E2/EK	1
★ 43	513 3402 020	Fuse label	for F603, for E2/EK	1
★ 44	513 3335 003	Fuse caution label	for E3	1
★ 45	513 3161 073	Rating sheet	for E3	1
★ 45	513 3161 060	Rating sheet	for E2/EK	1
★ 46	513 2303 007	Version label		1
★ 47	513 2728 006	Caution sheet (PU)		1
★ 48	513 1519 009	Manufacture date label	for E3	1
★ 49	513 2521 009	CE label	for E2/EK	1
★ 50	513 3160 100	E3 label	for E3	1
★ 51	513 0985 003	Inst. label	for E2/EK	1
★ 52	513 3384 009	C-UL mark US (813)	for E3	
★ 53	513 3253 004	C-TICK label	for E2/EK	1
★ 54	513 3159 001	FCC/class B caution	for E3	1

SCREWS & NUTS

Ref. No.	Part No.	Part Name	Remarks	Q'ty
101	471 3303 029	Screw 3×6 CBS-B		3
102	471 9050 020	Screw 3×6 FHHS MFZNII-B		14
103	473 7002 005	Screw 3×6 CBTS (S)-Z		13
104	473 7004 003	Screw 4×8 CBTS (S)-Z		4
105	473 7005 057	Screw 3×25 CBTS (S)-Z		4
106	473 7006 027	Screw 3×10 CBTS (S)-B		2
107	473 7015 018	Screw 3×8 CBTS (S)-B		30
108	473 7508 017	Screw 3×10 CBTS (P)-B		8
109	475 1178 009	Washer 3W-B		12
110	477 0263 005	3P. swelling screw		4

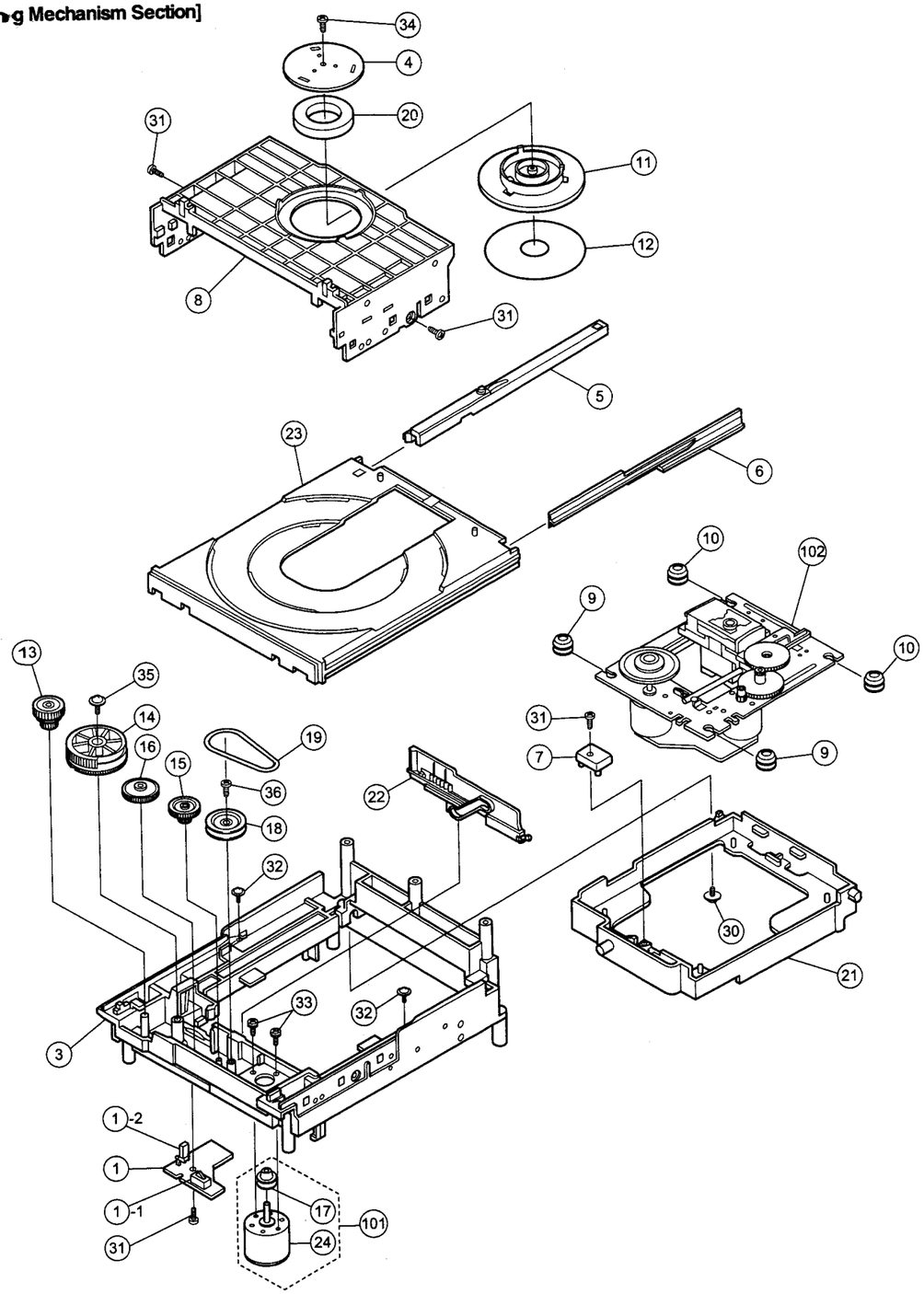
PARTS LIST OF MECHANISM UNIT (CD93F8)

Ref. No.	Part No.	Part Name	Remarks	Q'ty
Loading Mechanism Section				
┌1	964 0001 004	PCB switch Ass'y		1
├1-1	964 0003 507	Push switch	SW01	1
└1-2	964 0003 400	Leaf switch	SW02	1
3	964 0001 101	Frame chassis		1
4	964 0001 208	Magnet plate		1
5	964 0001 305	Rail left Ass'y		1
6	964 0001 402	Rail right		1
7	964 0001 509	Chassis stopper		1
8	964 0001 606	Magnet support		1
9	964 0001 703	Rubber cushion (Blue)		2
10	964 0001 800	Rubber cushion (Purple)		2
11	964 0001 907	Magnet holder		1
12	964 0002 003	Sheet		1
13	964 0002 100	Loading gear		1
14	964 0002 207	Lifter gear		1
15	964 0002 304	Idler gear A		1
16	964 0002 401	Idler gear B		1
17	964 0002 508	Pulley motor		1
18	964 0002 605	Pulley gear		1
19	964 0002 702	Square belt		1
20	964 0002 809	Disk clamp magnet		1
21	964 0002 906	Lifter mecha		1
22	964 0003 002	Slide lifter		1
23	964 0003 109	Table loading		1
24	964 0003 206	Motor, 3.0V, 0.3W		1
101	964 0003 303	Loading moter Ass'y		1
102	964 0005 013	Traverse unit		1
30	944 0025 219	Screw 3 x 8		1
31	944 0056 013	Screw 2.6 x 8		4
32	944 0048 384	Screw 2 x 6		2
33	964 0004 001	Screw 1.7 x 3.5		2
34	964 0004 108	Special screw		1
35	964 0004 205	Screw 3 x 8		1
36	964 0004 302	Screw 2.6 x 8		1
Traverse Section				
1	964 0005 107	Laser pickup		1
2	–	Chassis Ass'y		1
3	–	Turntable Ass'y		1
4	964 0005 204	Guide bar		1
5	964 0005 301	Middle gear		1
6	964 0005 408	Motor gear		1
7	964 0005 505	Power gear		1
8	964 0005 602	Rack plate		1
9	964 0005 709	PCB morter		1
10	–	Motor, 2.0V,0.2W (Spindle Motor)		1
11	–	Motor, 3.0V,0.3W (Sled Moter)		1
12	964 0005 806	Leaf switch		1
13	964 0005 903	Pickup shaft		1

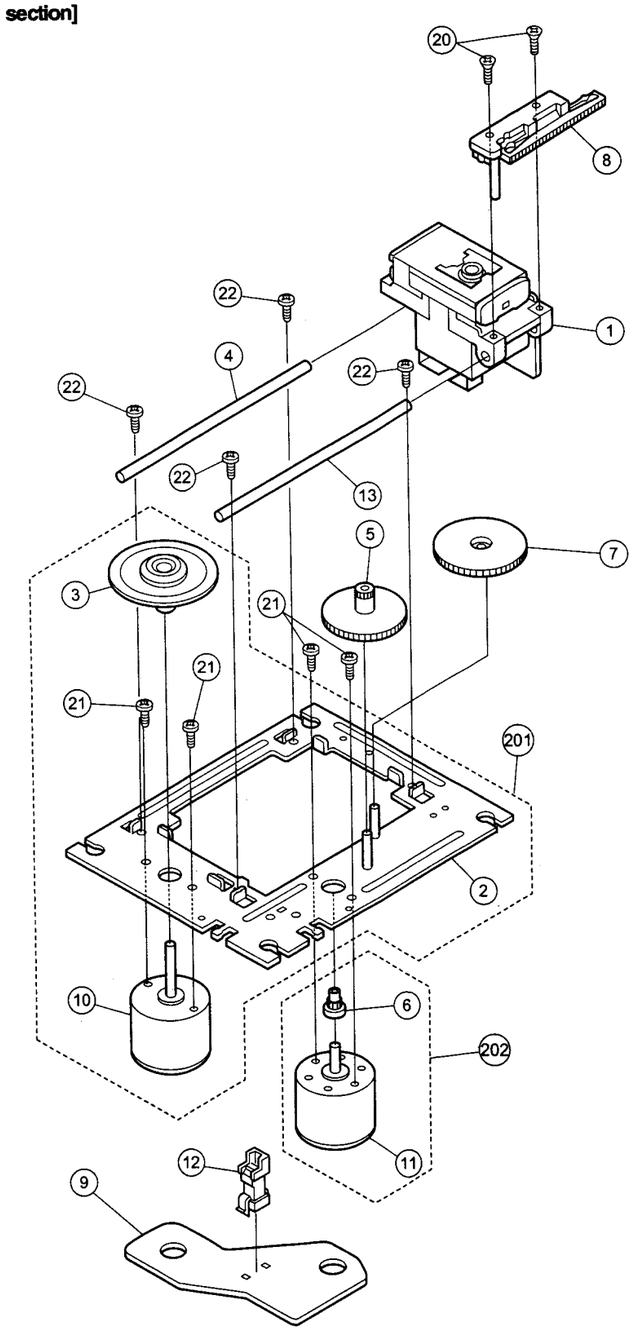
Ref. No.	Part No.	Part Name	Remarks	Q'ty
201	964 0007 011	Motor chassis Ass'y		1
202	964 0007 105	Motor Ass'y		1
20	964 0006 009	Screw 2 x 5		2
21	964 0006 106	Screw 1.7 x 2.5		4
22	964 0006 203	Special screw		4

EXPLODED VIEW OF CD MECHANISM UNIT

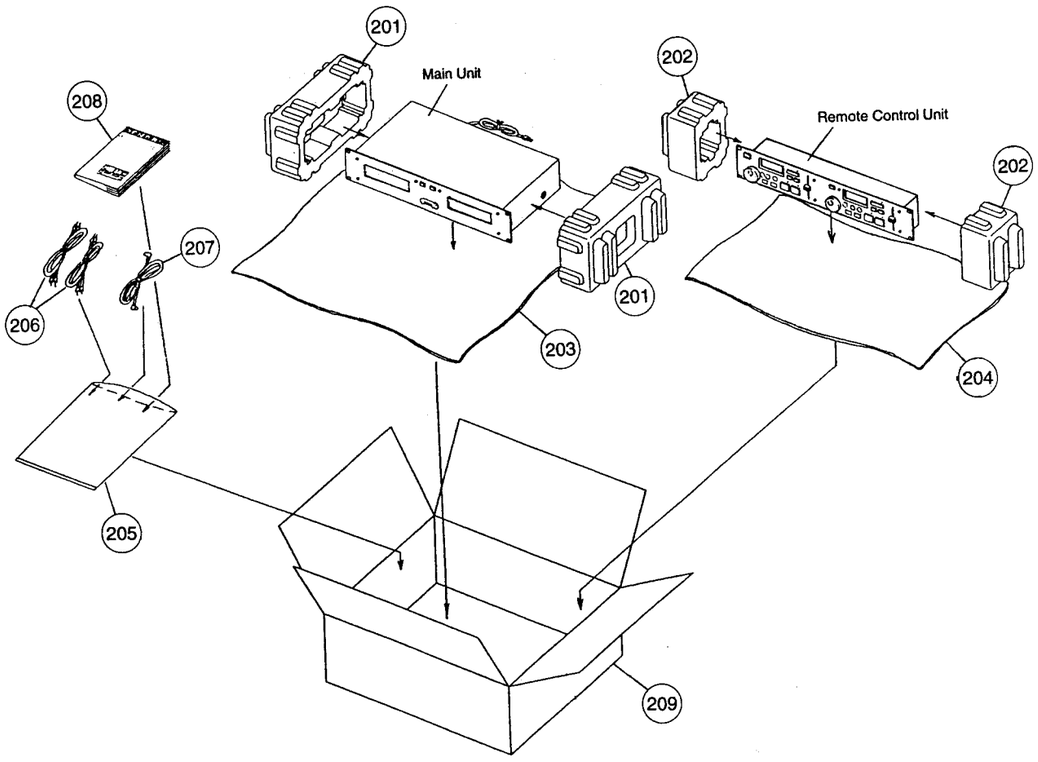
[Loading Mechanism Section]



[Traverse section]



PACKING & ACCESSORIES



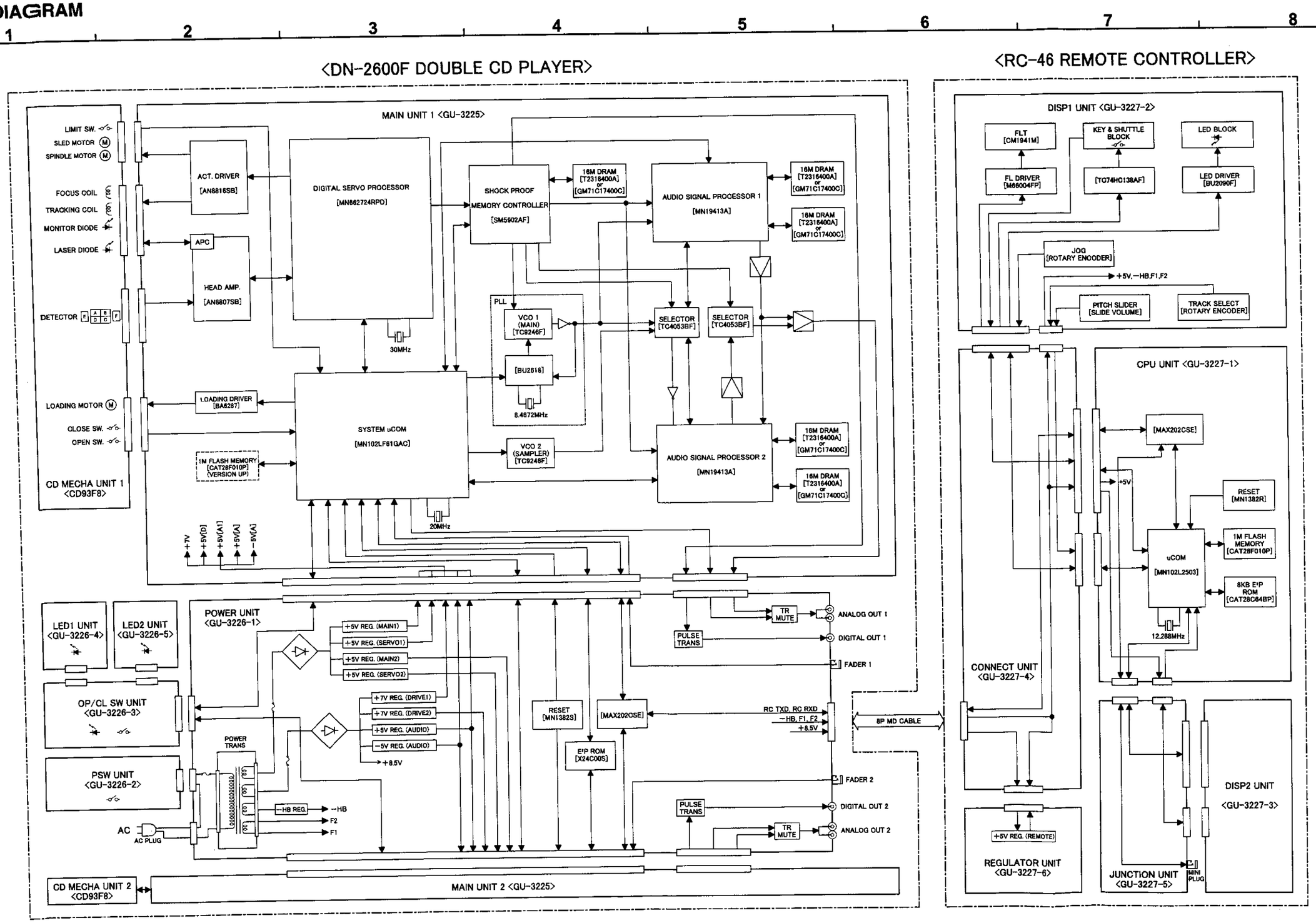
PARTS LIST OF PACKING & ACCESSORIES

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

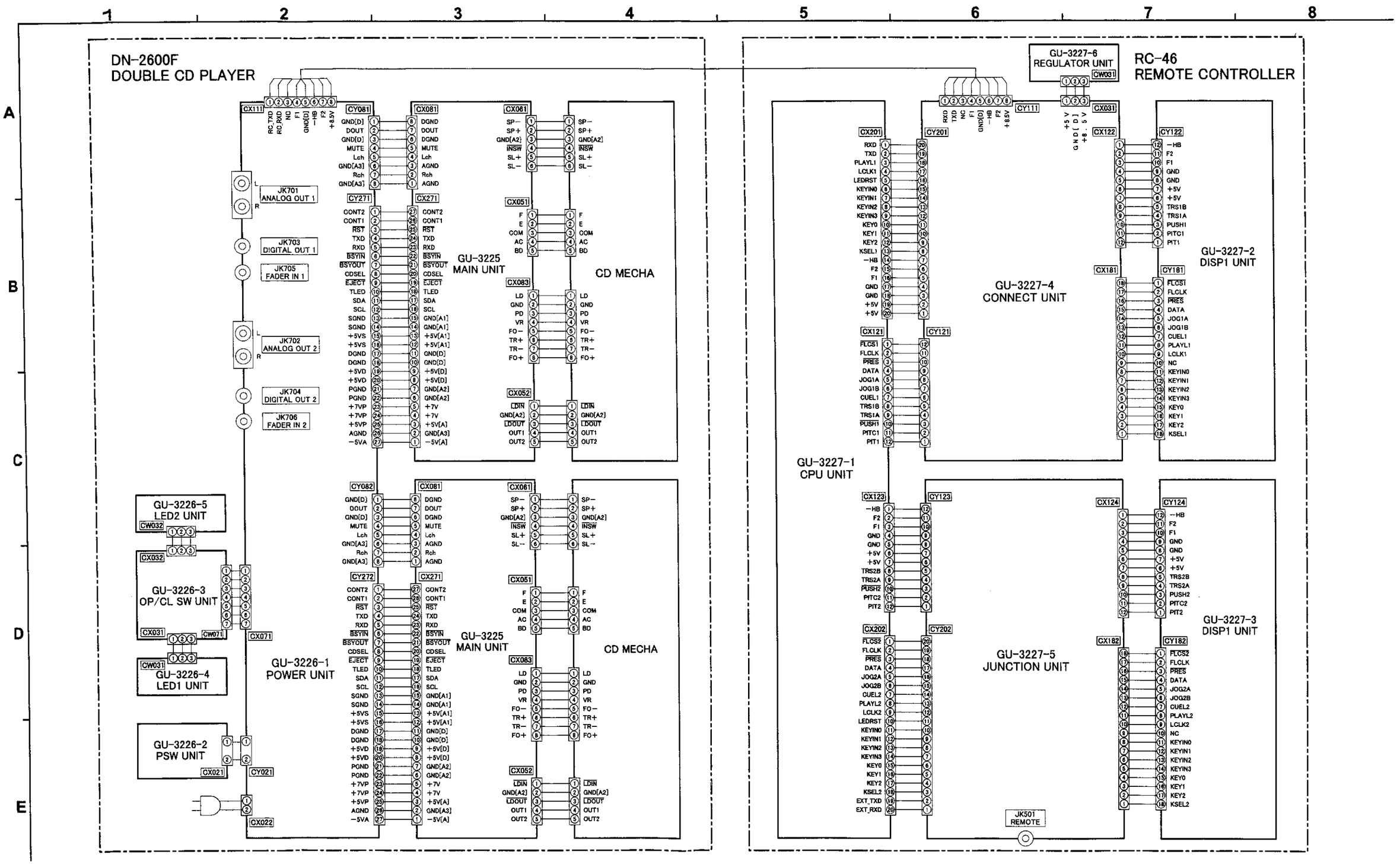
Ref. No.	Part No.	Part Name	Remarks	Q'ty
201	503 1001 400	Cushion	for main unit	2
202	503 1110 100	Cushion (RC)	for remote control unit	2
203	505 0102 092	Stylen paper	for main unit	1
204	505 0102 021	Stylen paper	for remote control unit	1
205	505 0038 030	Poly. cover		1
206	203 2360 004	2P Pin cord		2

Ref. No.	Part No.	Part Name	Remarks	Q'ty
207	204 2750 002	8P MD connector cord (L)		1
208	511 3534 002	Instruction manual		1
209	501 1982 086	Carton case		1
★ 210	513 3348 003	Caution label (Cord)		1
★ 211	513 2303 007	Version label		2
★ 212	515 0692 101	DEL warranty com.	for E3	1

BLOCK DIAGRAM

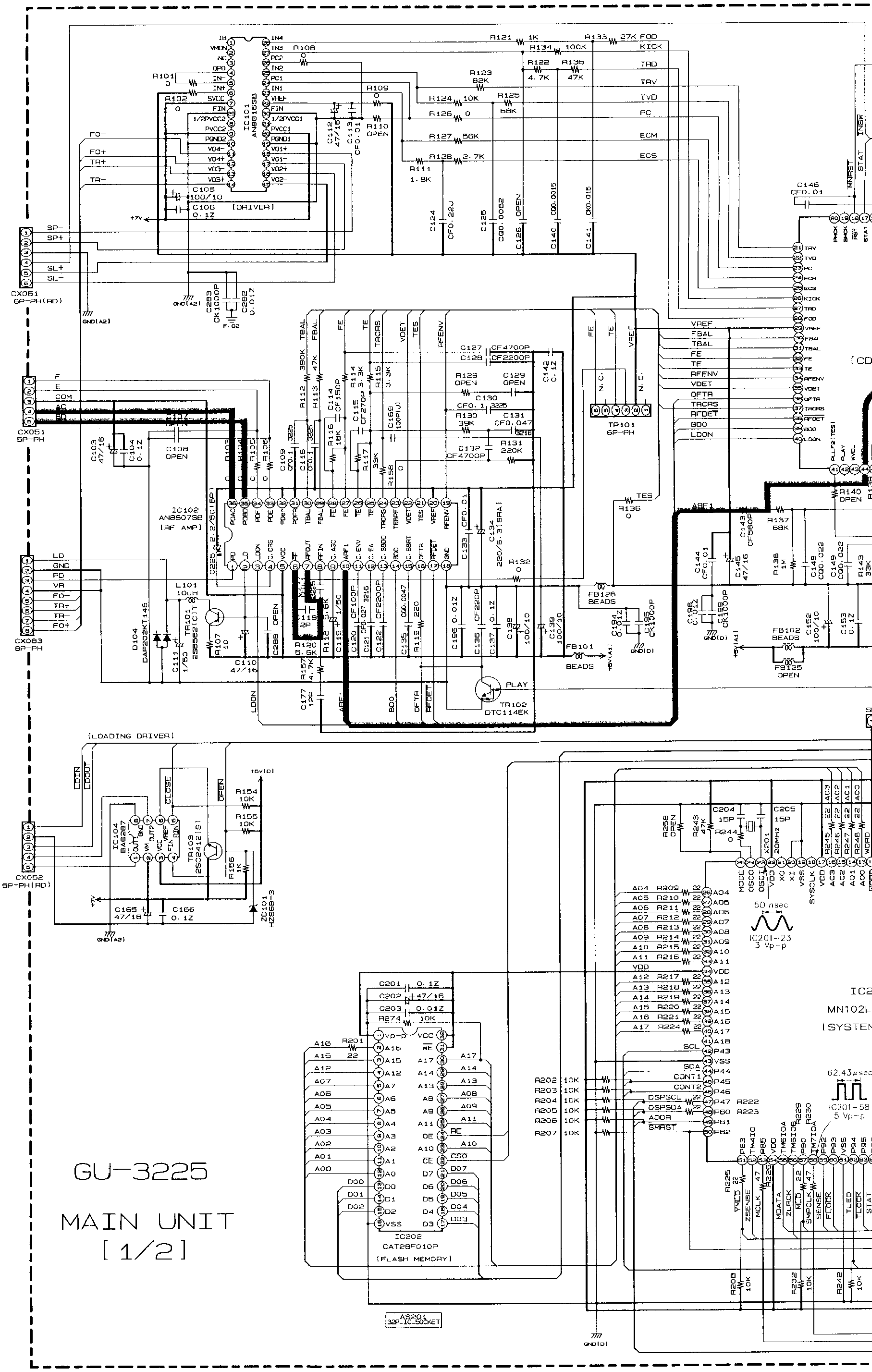


WIRING DIAGRAM



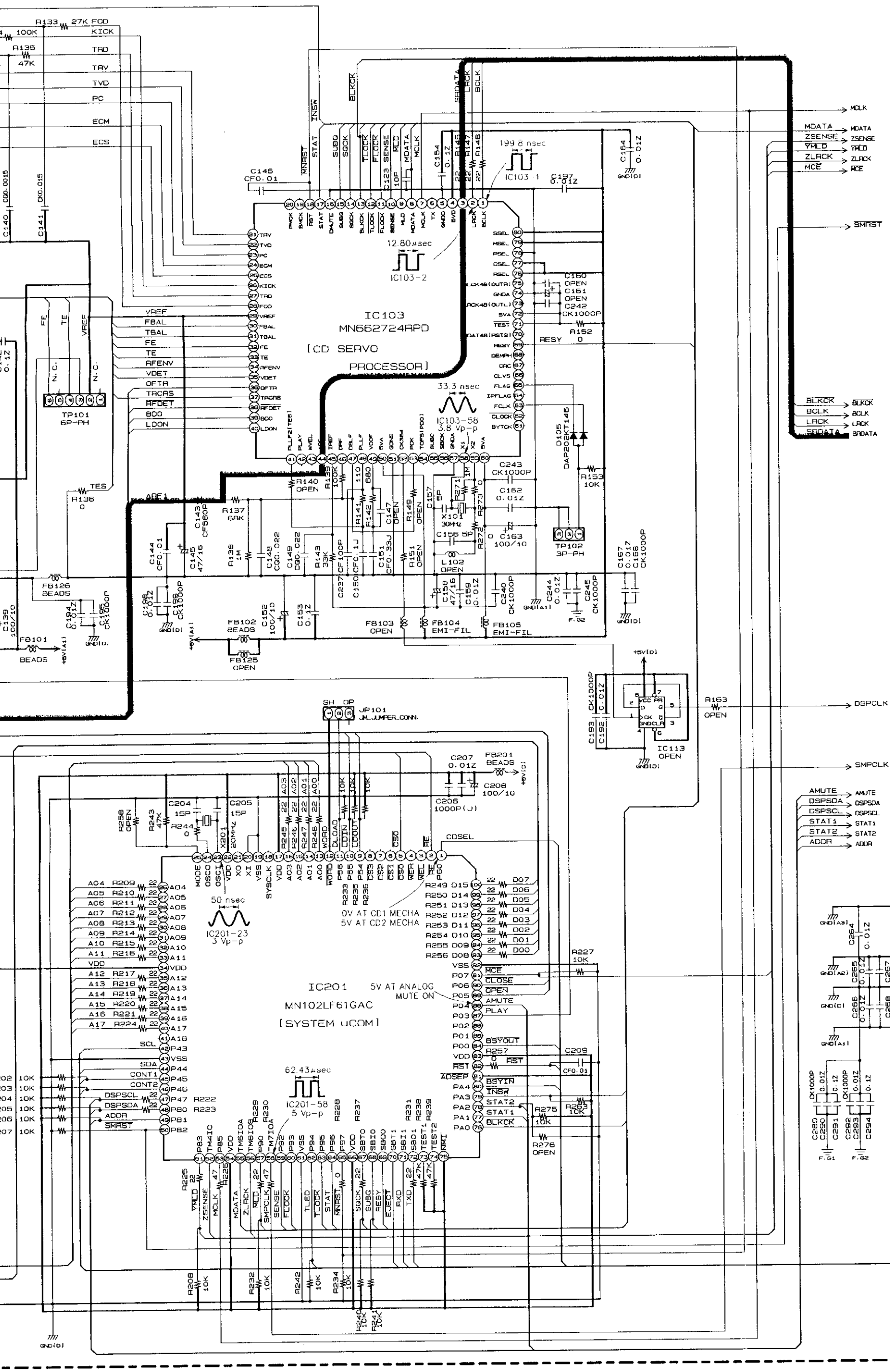
SCHEMATIC DIAGRAMS (1/4)

1 2 3 4 5



GU-3225

MAIN UNIT
[1/2]



NOTICE

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

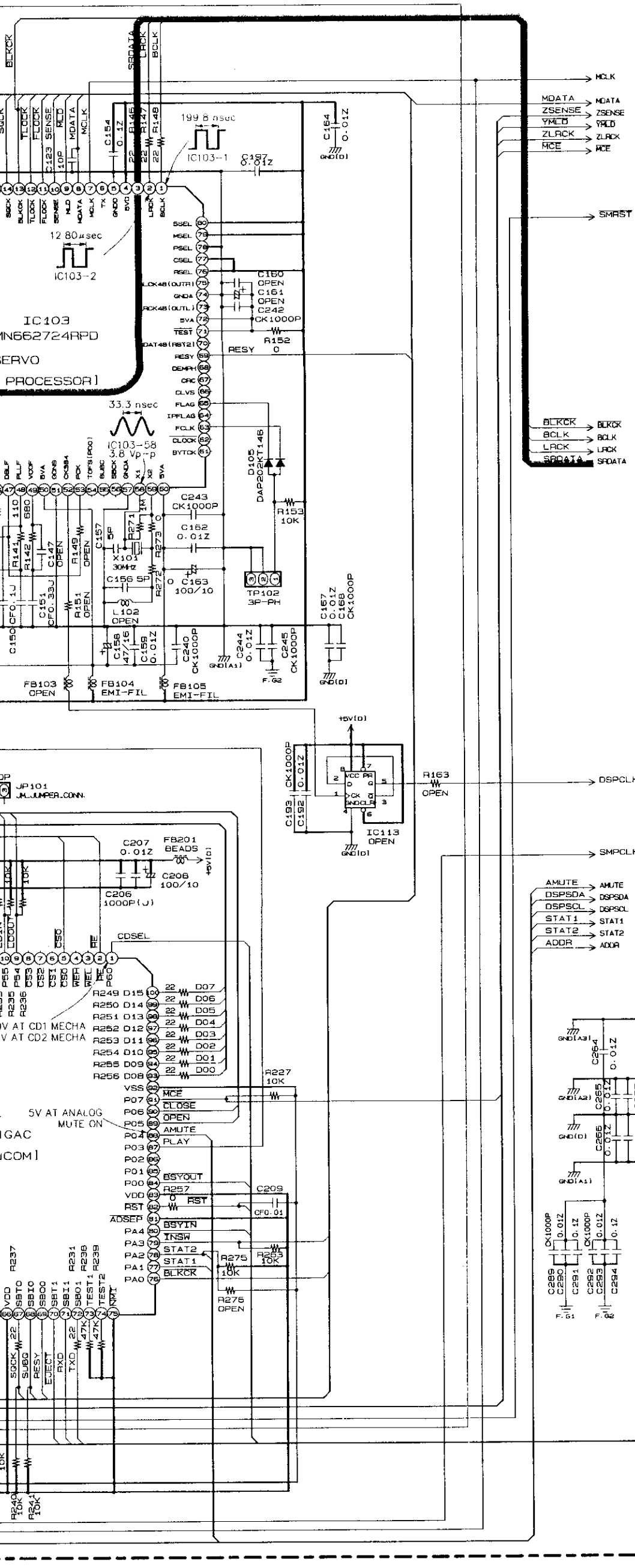
WARNING:
Parts marked with this symbol ⚠ ▨
Use ONLY replacement parts recomm

CAUTION:
Before returning the unit to the cus
leakage current check or (2) a line
current exceeds 0.5 milliamps, or if
of the power cord is less than 460

WARNING:
DO NOT return the unit to the cust
corrected.

7 8 9 10 11

A B C D E F G H



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 MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:

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

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 cord is less than 460 kohms, the unit is detective.

WARNING:

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

SCHEMATIC DIAGRAMS (1/4)

GU-3225 MAIN UNIT (1/2)

SCHEMATIC DIAGRAMS (2/4)

GU-3225

MAIN UNIT [2/2]

4 5 6 7 8 9

IC401
MN19413A
[AUDIO SIGNAL PROCESSOR-1]

IC402
MN19413A
[AUDIO SIGNAL PROCESSOR-2]

IC403
T2316400A
(16M DRAM)

IC405
T2316400A
(16M DRAM)

IC407
TC4053BF

IC406
TC4053BF

IC411
SM5862AS

IC409 [2/2] BA15218F

IC409 [1/2] BA15218F

IC410 [2/2] BA15218F

IC410 [1/2] BA15218F

IC501 [1/2] BA15218F

IC501 [2/2] BA15218F

[3/6] IC307 HD74AC04FP

PITCH OFF
(20 nsec/div)

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,
ALL CAPACITANCE VALUES IN MICRO F
EACH VOLTAGE AND CURRENT ARE ME
CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO
NOTICE.

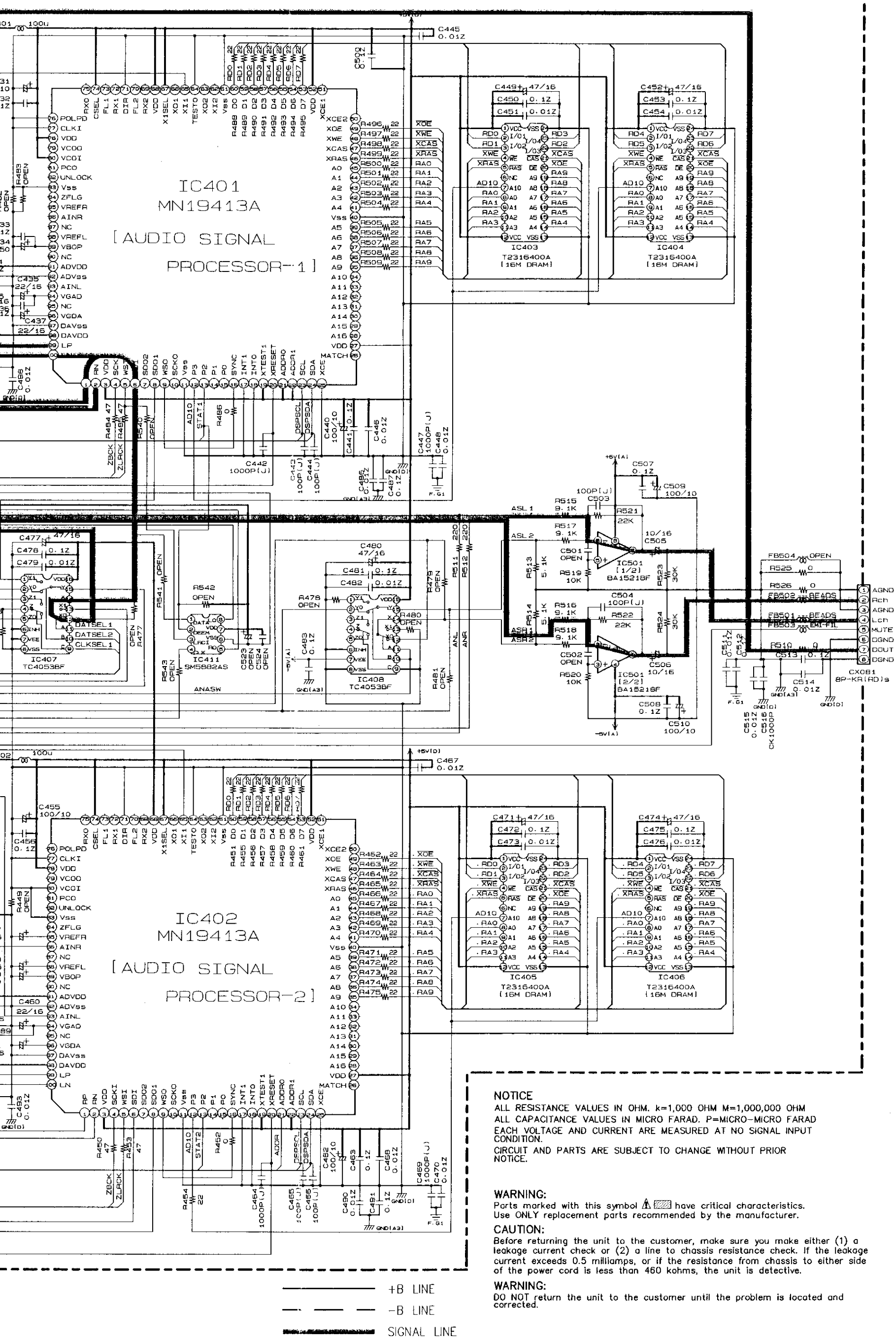
WARNING:
Parts marked with this symbol ⚠ ▨
Use ONLY replacement parts recomme

CAUTION:
Before returning the unit to the custo
leakage current check or (2) a line to
current exceeds 0.5 milliamps, or if th
of the power cord is less than 460 k

WARNING:
DO NOT return the unit to the custom
corrected.

+B LINE
−B LINE
SIGNAL LINE

SCHEMATIC DIAGRAMS (2/4)
GU-3225 MAIN UNIT (2/2)



7 8 9 10 11

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 MEASURED AT NO 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 manufacturer.

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 cord is less than 460 kohms, the unit is detective.

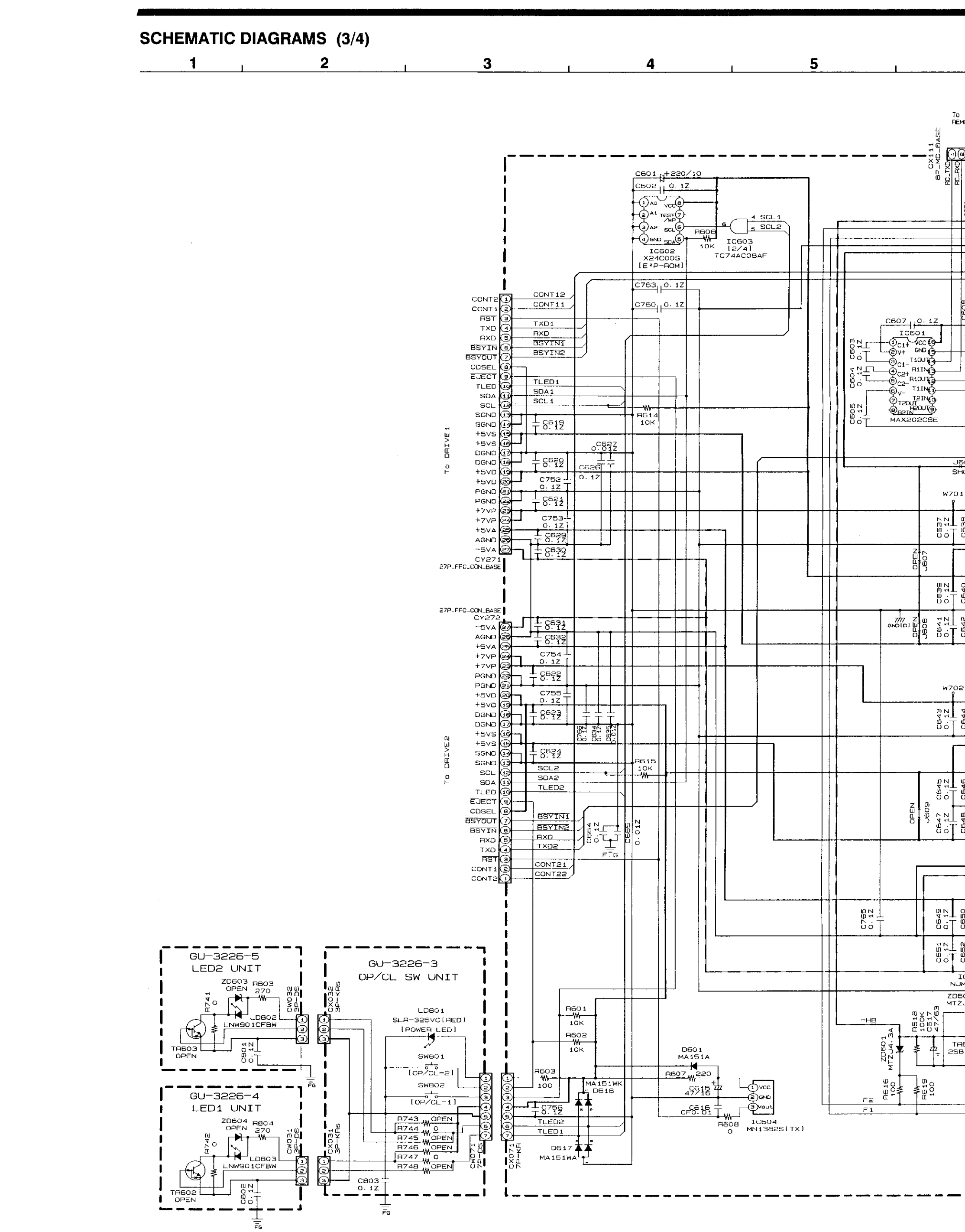
WARNING:

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

SCHEMATIC DIAGRAMS (2/4)

GU-3225 MAIN UNIT (2/2)

SCHEMATIC DIAGRAMS (3/4)



5 6 7 8 9 10

To REMOTE CONTROL UNIT

CX111 8P_MD_BASE

IC603 [2/4] TC74AC08AF

IC601 MAX202CSE

IC603 [1/4] TC74AC08AF

IC603 [4/4] TC74AC08AF

IC603 [3/4] TC74AC08AF

J606 SHORT

IC607 UPC2406AHF

IC608 UPC2405AHF

IC609 UPC2405AHF

IC610 UPC2406AHF

IC611 UPC2405AHF

IC612 UPC2405AHF

IC613 UPC2405AHF

IC614 NJM7905FA

D604 D3SBA20

D605 D3SBA20

ZD602 MTZJ39E

TR601 2SB1185(E/F)

D610 1SR139-200T62

D611 1SR139-200T62

ZD601 MTZJ4.3A

D601 MA151A

IC604 MN1382S(TX)

To DRIVE2

To DRIVE1

CY082 8P-PH(RD)

CY081 8P-PH(RD)

5V AT ANALOG MUTE ON

TR701 2SD2144

TR702 2SD2144

TR703 2SD2144

TR704 2SD2144

TR705 DTA114EK

TR706 DTC114EK

TR707 DTA114EK

TR708 DTC114EK

D701 1SS270A

D702 1SS270A

IC701 TC7WU04F

IC702 TC7WU04F

PT701 PULSE_TRANS

PT702 PULSE_TRANS

T601 POWER_TRANS

CONT11

CONT12

CONT21

CONT22

	※1 F601	※2 F602	※3 F603
E3	1A/125V	4A/125V	3.15A/125V
E2,EK	630mA/250V	4A/250V	3.15A/250V

CY021 2P-VH(BK)

CX021 2P-VH

CX022 2P-VH

To AC

SW851 POWER_SW

GU-3226-2 PSW UNIT

GU-3226-1 POWER UNIT

NOTICE

ALL RESISTANCE VALUES

ALL CAPACITANCE VALUE

EACH VOLTAGE AND CUR CONDITION.

CIRCUIT AND PARTS ARE NOTICE.

WARNING:

Parts marked with this s Use ONLY replacement p

CAUTION:

Before returning the unit leckage current check or current exceeds 0.5 milli of the power cord is les

WARNING:

DO NOT return the unit corrected.

+B LINE

-B LINE

SIGNAL LINE

SCH

GU-32

5 6 7 8 9 10

To REMOTE CONTROL UNIT

CX111 8P_MC_BASE

To DRIVE2

To DRIVE1

CY082 6P-PH(RD)

CY081 6P-PH(RD)

5V AT ANALOG MUTE ON

IC603 [2/4] TC74AC08AF

IC601 MAX202CSE

IC603[1/4] TC74AC08AF

IC603[4/4] TC74AC08AF

IC603[3/4] TC74AC08AF

J606 SHORT

IC607 UPC2406AHF

IC608 UPC2405AHF

IC609 UPC2405AHF

IC610 UPC2406AHF

IC611 UPC2405AHF

IC612 UPC2405AHF

IC613 UPC2405AHF

IC614 NJM7905FA

TC7WU04F IC701 (1/3) (2/3) (3/3)

TC7WU04F IC702 (1/3) (2/3) (3/3)

TR701 2SD2144

TR702 2SD2144

TR703 2SD2144

TR704 2SD2144

TR705 DTA114EK

TR706 DTC114EK

TR707 DTA114EK

TR708 DTC114EK

TR601 2SB1185(E/F)

D701 1SS270A

D702 1SS270A

D602 1SS270A

D603 1SS270A

D604 D3SBA20

D605 D3SBA20

D610 1SR139-200T62

D611 1SR139-200T62

ZD602 MTZJ39E

PT701 PULSE_TRANS

PT702 PULSE_TRANS

T601 POWER_TRANS

F601 ※1

F602 ※2

F603 ※3

	※1 F601	※2 F602	※3 F603
E3	1A/125V	4A/125V	3.15A/125V
E2,EK	630mA/250V	4A/250V	3.15A/250V

CY021 2P-VH(BK)

CX021 2P-VH

CX022 2P-VH

SW851 POWER_SW

C851 0.01/400

GU-3226-2 PSW UNIT

GU-3226-1 POWER UNIT

NOTICE

ALL RESISTANCE VALUES IN

ALL CAPACITANCE VALUES

EACH VOLTAGE AND CURRE CONDITION.

CIRCUIT AND PARTS ARE S NOTICE.

WARNING:

Parts marked with this sy Use ONLY replacement par

CAUTION:

Before returning the unit t leakage current check or (current exceeds 0.5 millian of the power cord is less

WARNING:

DO NOT return the unit to corrected.

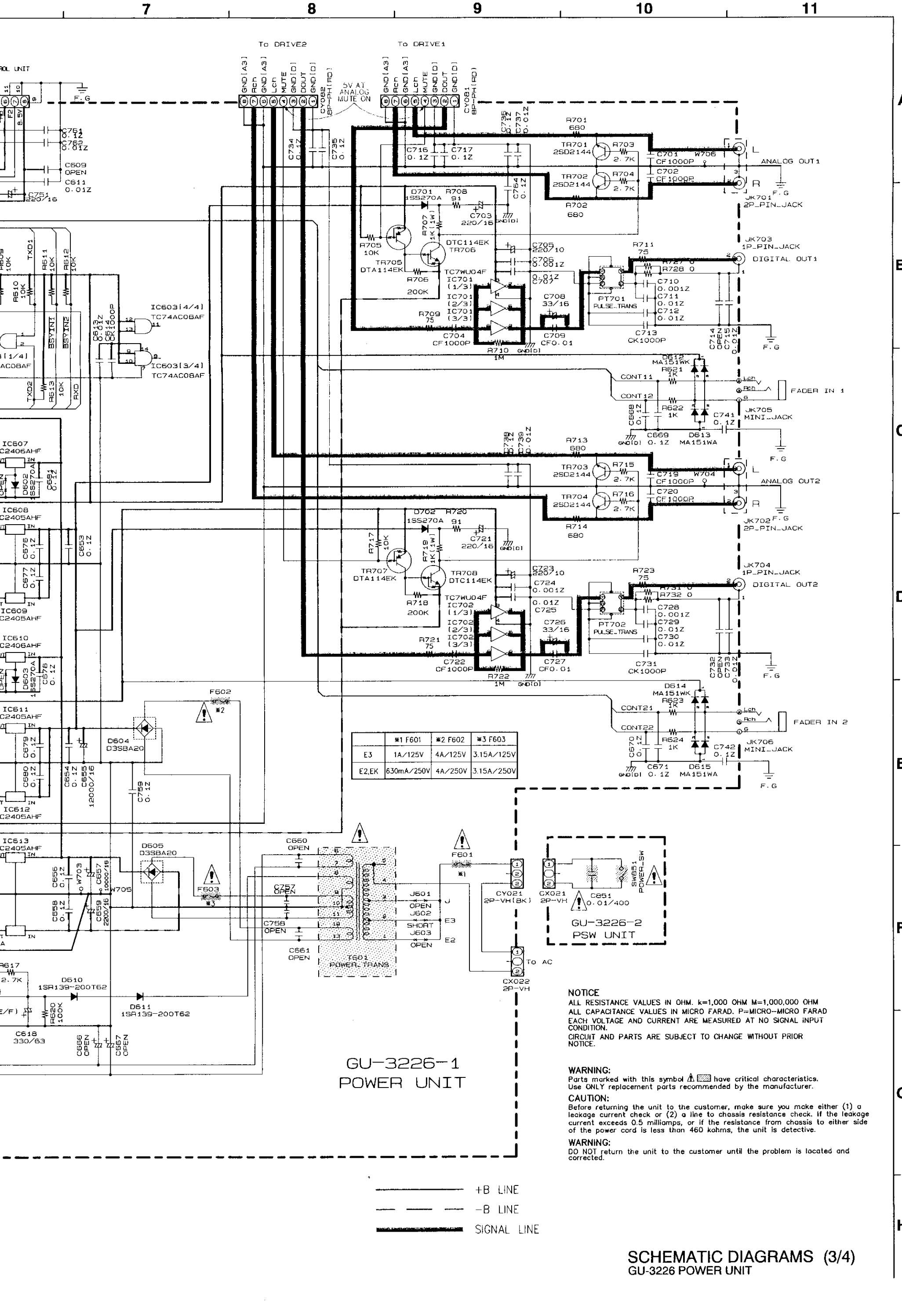
+B LINE

-B LINE

SIGNAL LINE

SCHE

GU-322



	*1 F601	*2 F602	*3 F603
E3	1A/125V	4A/125V	3.15A/125V
E2,EK	630mA/250V	4A/250V	3.15A/250V

+B LINE

−B LINE

SIGNAL LINE

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 MEASURED AT NO 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 manufacturer.

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 cord is less than 460 kohms, the unit is detective.

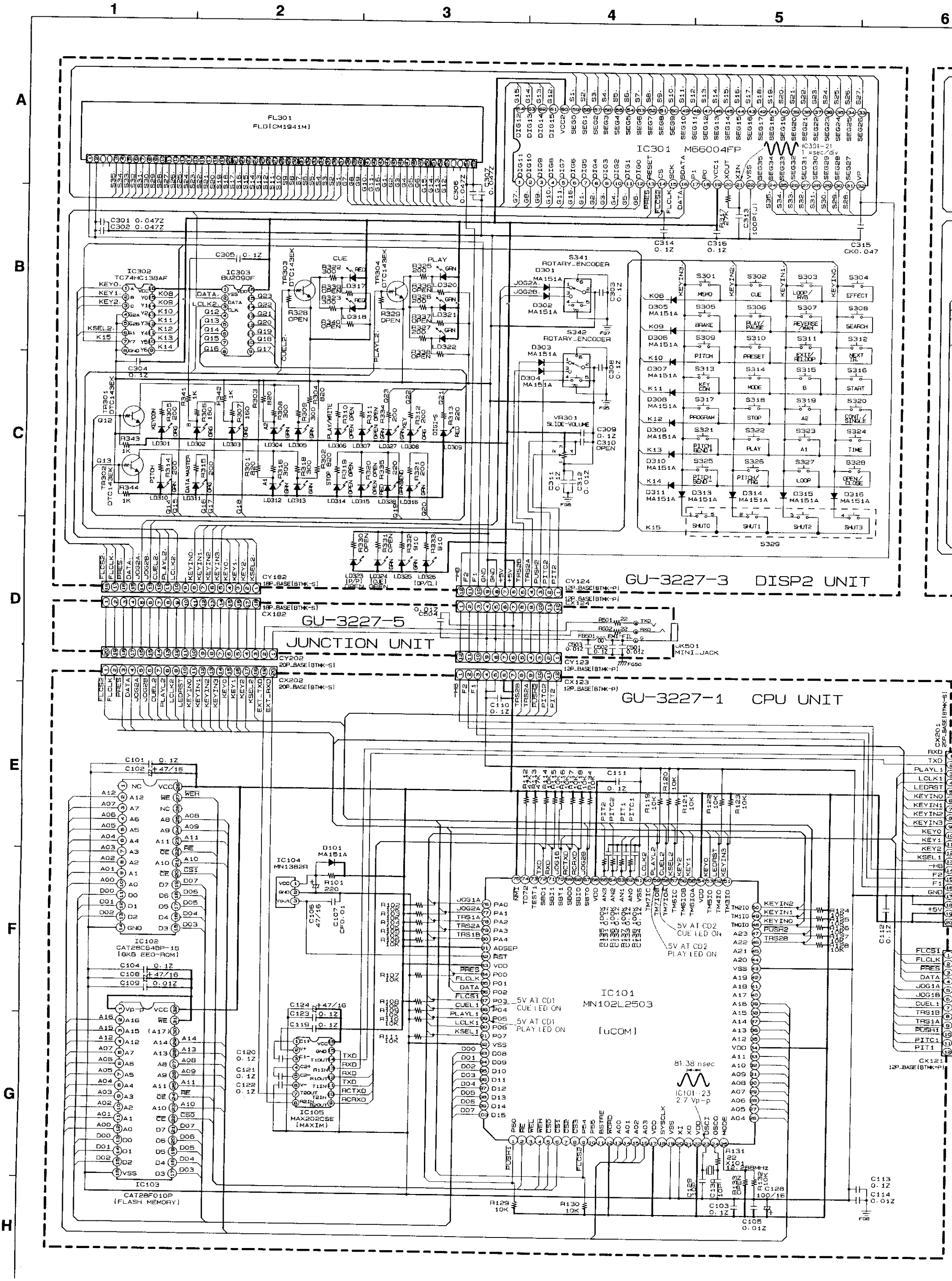
WARNING:

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

SCHEMATIC DIAGRAMS (3/4)

GU-3226 POWER UNIT

SCHEMATIC DIAGRAMS (4/4)



4 5 6 7 8 9

GU-3227-3 DISP2 UNIT

GU-3227-2

GU-3227-1 CPU UNIT

GU-3227-4 CONNECT UNIT

NOTICE

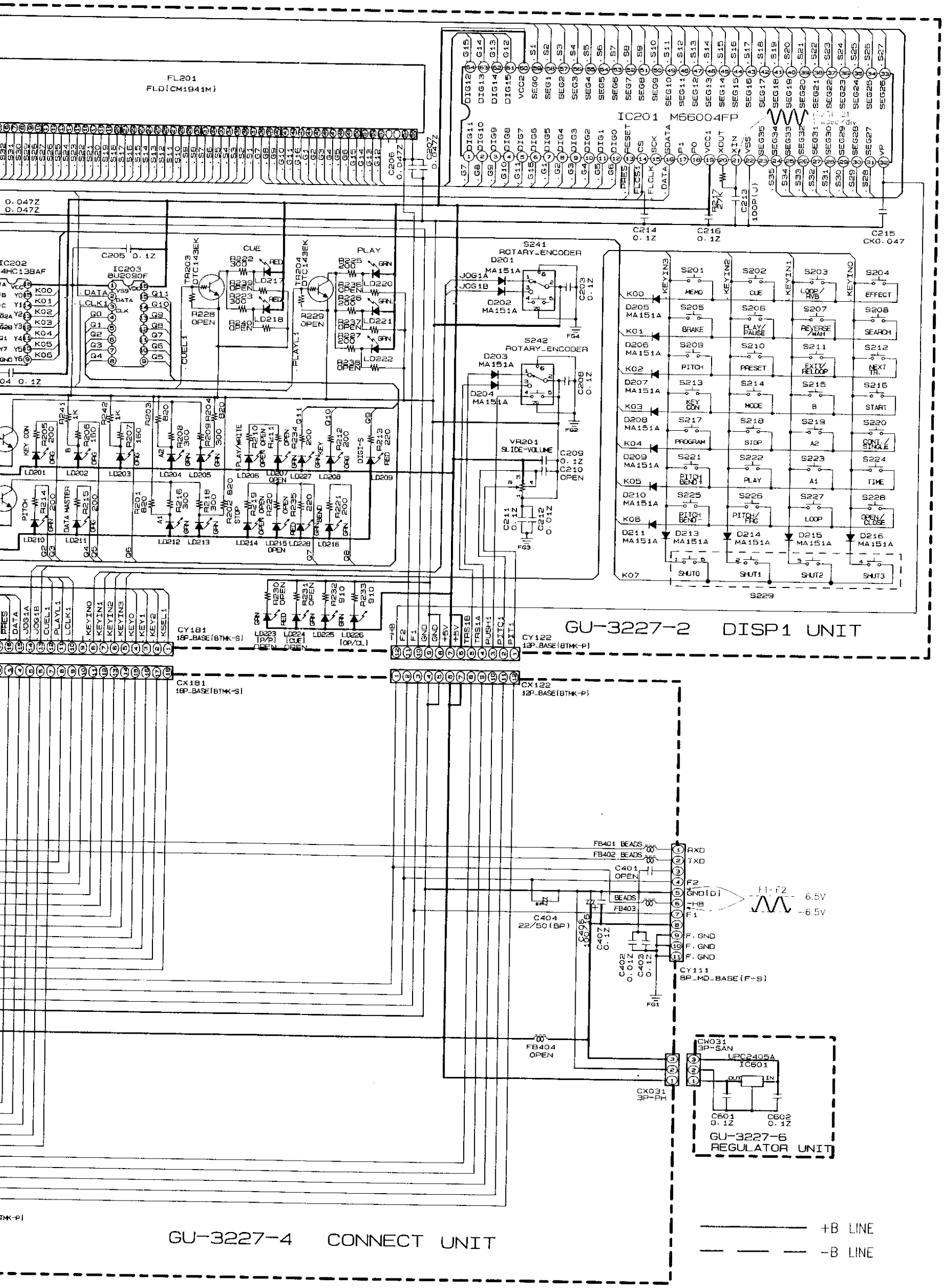
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:
Parts marked with this symbol ⚠ have critical characteris
Use ONLY replacement parts recommended by the manufactu

CAUTION:
Before returning the unit to the customer, make sure you ma
leakage current check or (2) a line to chassis resistance che
current exceeds 0.5 milliamps, or if the resistance from chas
of the power cord is less than 460 kohms, the unit is detect

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

SCHEMATIC DIAGRAMS (4/4)
GU-3227 DISPLAY UNIT



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 MEASURED AT NO 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 manufacturer.

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 cord is less than 460 kohms, the unit is detective.

WARNING:

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

SCHEMATIC DIAGRAMS (4/4)

GU-3227 DISPLAY UNIT