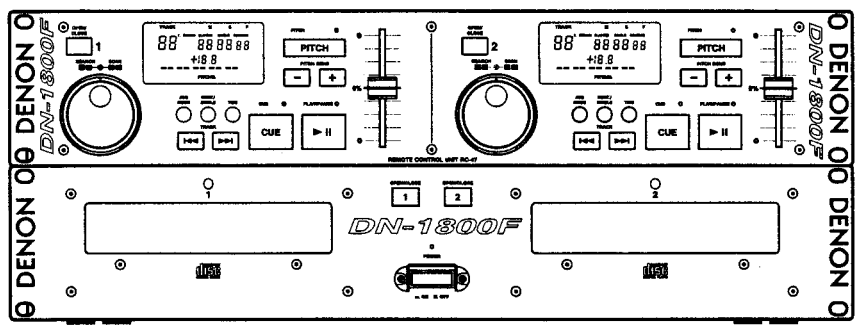
DENON

Hi-Fi Component

SERVICE MANUAL

MODEL DN-1800F

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)	
	Remote control unit:	482 (W) × 88 (H) × 62 (D) mm (without deet)	
Installation:	19-inch rack mountable		
	Player unit:	2U	
	Remote control unit:	2U	
	Player unit:	6 kg	
	Remote control unit:	1.5 kg	
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:	17 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

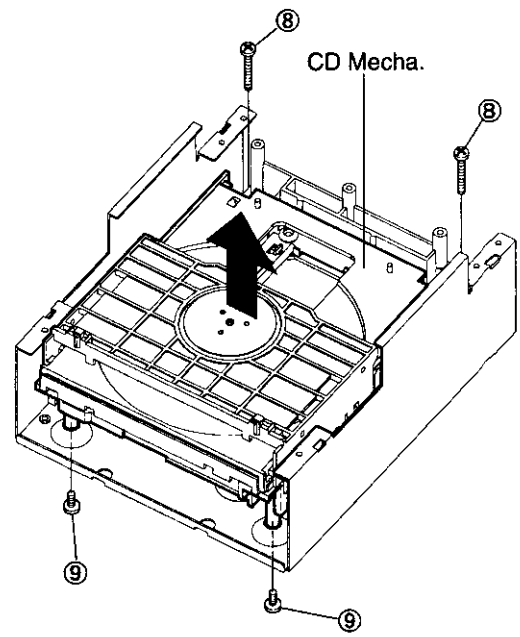
Quantization:	16-bit linear per channel
Sampling Frequency:	44.1 kHz at normal pitch
Oversampling Rate:	8 times
Frequency response:	20 to 20,000 Hz
Analog output	
Output Level:	20 V
Digital Output:	
Signal Format:	SPDIF
Output Level:	0.5 Vp-p 75 Ω/ohms
Load impedone:	10 kΩ/kohms or more

FUNCTIONS

Instant Start:	Within 30 msec.
Variable Pitch:	±10 % or more
Pitch Bend:	±32 % or more
Search Precision:	1/75 sec (1 subcode frame)
Max. Scan Speed:	Over 20 times normal speed

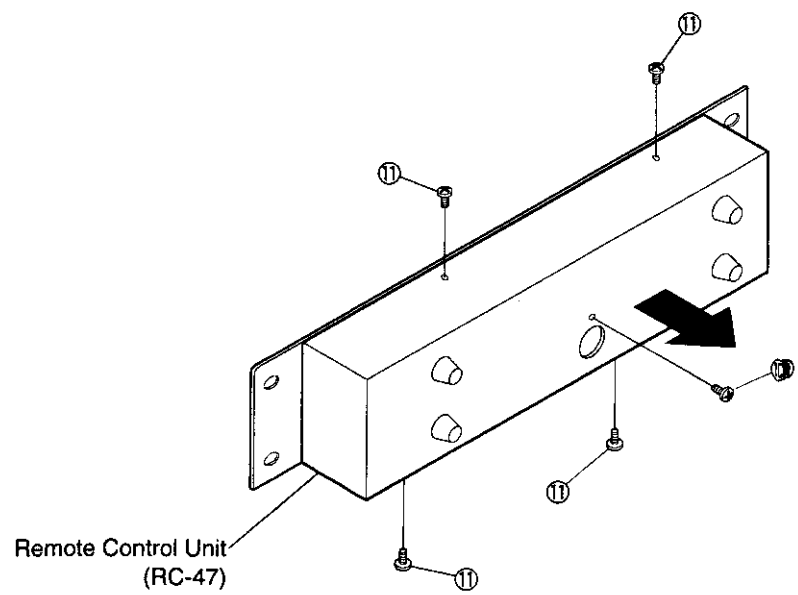
CD Mecha.

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).



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 and without 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. Actuating the Service Program and Servo Confirming Method

1. Turn the power switch off.
2. While simultaneously pushing the CD1's PITCH button and CD2's OPEN/CLOSE button, turn the power on.
3. Displayed indication is version number of microcomputer program.
   4 figures on the left are program version of remote control, and 4 figures on the right are program version of main body mechanism.
4. Press TRACK button. Display shows " 0 1 " and each pressing of PLAY/PAUSE button opens or closes the tray.
5. As the tray opens, set the adjustment disc (TCD784 or CO-74176)
6. Press TRACK button (" 0 2 " is displayed), also, press PLAY/PAUSE button.
   Tracking error signal can be observed with the connection below. (Fig1)
7. Press TRACK button (" 0 3 " is displayed), also, press PLAY/PAUSE button.
   HF signal can be observed with the connection below. (Fig2)
8. Press TRACK button (" 0 4 " is displayed), also, press PLAY/PAUSE button.
   By turning JOG DIAL servo automatic adjustment value can be called. (Ref. Table below)

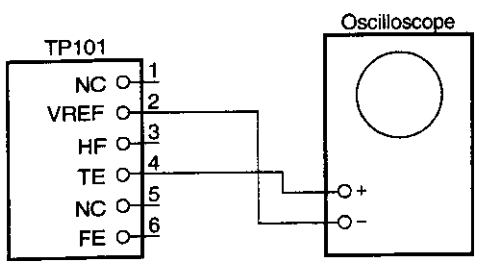


Fig1

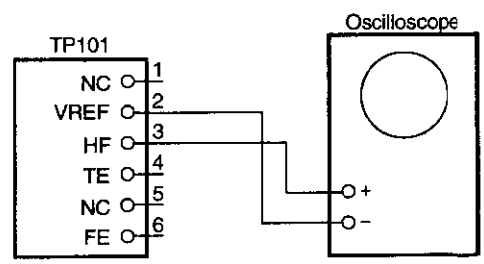


Fig2

TRACK Portion Indication	Adjustment Item	Adjustment Value indication at MIN and SEC portions.
1	Focus Gain (FG)	154 ~ 804
2	Focus Balance (FBAL)	–125 ~ 125
3	Focus Offset (FOFS)	–35 ~ 35
4	Tracking Gain (TG)	102 ~ 645
5	Tracking Balance (TBAL)	–110 ~ 86
6	Tracking Offset (TOFS)	–15 ~ 15

* When adjustment range exceeds, replace pick-up.

2. What is Service Program

Service program is a special program intended for confirming servo.

3. Contents of Service Program

While simultaneously pushing the CD1's PITCH and CD2's OPEN/CLOSE buttons, turn the power on.
After actuating the service program, select an aiming process number with the TRACK +/–, SINGLE/CONT. button, JOG MODE button, and TIME button, and push the PLAY/PAUSE button to execute processing. The process number is then displayed on the TRACK indication portion.

	Work No. (TRACK Indication)	Function	Contents
TRACK +/– button	01	OPEN/CLOSE	Performs OPEN/CLOSE each time when the PLAY/PAUSE button 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	Tray opens and pick-up moves out of mechanism, and clean the lens.
	06	Focus Gain Changing	Select Gain with JOG dial. Press PLAY/PAUSE button, the display lights that will be newly memorized in EEPROM. Selectable level appears on the indicator MIN, while current Focus Gain level appears on the SEC. When select data becomes big or small, the Gain is up or down. In normal, do not change the data that is set by 5. The set No. stored in the EEPROM:
	07	Tracking Gain Changing	Select Gain with JOG dial. Press PLAY/PAUSE button, the display lights that will be newly memorized in EEPROM. Selectable level appears on the indicator MIN, while current Tracking Gain level appears on the SEC. When select data becomes big or small, the Gain is up or down. In normal, do not change the data that is set by 3. 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. Three 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 The memorized error codes are erased when pushing the PLAY/PAUSE button while pressing the CUE button.
	09	Total Running Time	Total time span of servo function that counted by the hour is displayed. The display time is less than 65535 hours. Note: No time is counted if powered down within 59 minutes. The memorized error codes are erased when pusing the PLAY/PAUSE button while pressing the CUE button.

	Work No. (TRACK Indication)	Function	Contents
TIME button	H1	Heat Run	All tracks are played back if the track is less than 20, playbacks only the first and the last tracks on the disc when the track is more than 21.
JOG MODE button	H2	Chucking Test	Repeats OPEN/CLOSE of tray, servo ON, TOC read and displays the number of the tray OPEN/CLOSE times with the Time indicator. When an error occurs, displays error code and stops.
SINGLE/CONT. button	H3	Playing Test	Selecting this mode and pushing the PLAY/PAUSE button starts 0.7 × speed playback, but with no sound. One more pushing of the PLAY/PAUSE button during playback changes it to be 1.4 × speed playback. Desired track can be selected with the TRACK +/– button during playback. The following are displayed on each indicators, ● TRACK: Track number ● FRAME: Playback speed 1 or 2 (1=1, 2=1.4)

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

Error Code at TRACK portion	Contents No. at m portion	Contents
E1		Automatic Adjustment Error
	00	Unable to detect disc
	01	Unable to adjust tracking offset
	02	Unable to adjust focus offset
	03	Unable to adjust focus fine gain
	04	Unable to actuate focus
	05	Unable to actuate tracking
	06	Unable to adjust tracking fine gain
E2	00	Servo down during playback
	01	Servo down during search
	02	Servo down during automatic adjustment
	03	Servo down during TOC read
	10	Unable to read the subcode between 500 msec. during the playback
	11	Unable to read the subcode between 1 sec. during the search
	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
	01	Unable to open the disc holder in the regular time
E5	00	Slide error
	01	Slide error during search

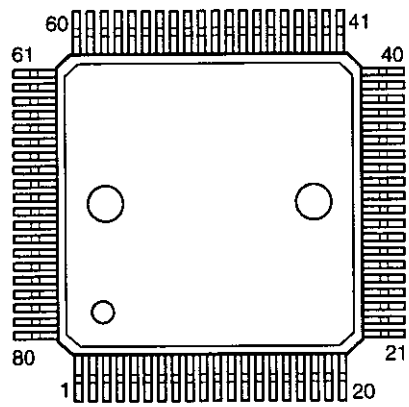
Detailed error can be displayed by select knob when error occurs.

Error indication			
TR	MIN	SEC	FRAM
Error Code	Contents No.	Accumulated number of open/close function of the tray prior to Error occures.	
Indication state when error occurs			
01	FG data		
02	FBAL data		
03	FOFS data		
04	TG data		
05	TBAL data		
06	TOFS data		

SEMICONDUCTORS

● IC's

MN662724RPE (Main unit: IC101)
CD SERVO PROCESSOR

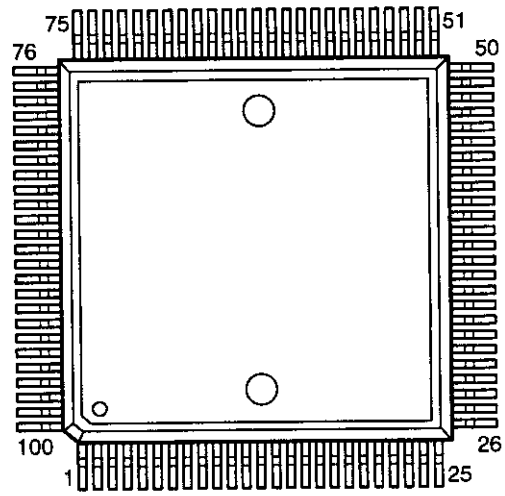


MN662724RPE Terminal Function

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.

Pin No.	Symbol	I/O	Function
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).

MN102L62GAA (Main unit: IC102)
SYSTEM μCOM

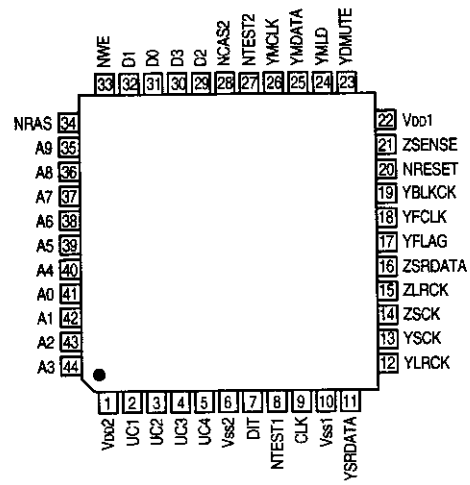


MN102L62GAA Terminal Function

Pin No.	Pin Name	Symbol	I/O	DET	Ext	Ini	Res	Function
1	P60	CDSEL	I	—	—	—	—	Mecha. No. select signal, L: Mecha.1, H: Mecha.2
2	P61	RESERVE	O	—	—	L	—	Not used, open
3	P62	TP	O	—	—	L	—	Test terminal for service mode
4	P63	RESERVE	O	—	—	L	—	Not used, open
5	P50	RESERVE	O	—	—	L	—	Not used, open
6	P51	RESERVE	O	—	—	L	—	Not used, open
7	P52	RESERVE	O	—	—	L	—	Not used, open
8	P53	RESERVE	O	—	—	L	—	Not used, open
9	P54	LDOUT_	I	—	Pu	—	H	Tray open end signal
10	P55	LDIN_	I	—	Pu	—	H	Tray close end signal
11	P56	RESERVE	O	—	—	L	—	Not used, open
12	P57	RESERVE	O	—	—	L	—	Not used, open
13	P20	RESERVE	O	—	—	L	—	Not used, open
14	P21	RESERVE	O	—	—	L	—	Not used, open
15	P22	RESERVE	O	—	—	L	—	Not used, open
16	P23	RESERVE	O	—	—	L	—	Not used, open
17	Vdd	Vdd	—	—	—	—	—	Power (+5.0V)
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 (+5.0V)
23	OSCI	OSCI	I	—	—	—	—	X'tal input terminal, 12.288MHz
24	OSCO	OSCO	O	—	—	—	—	X'tal output terminal
25	MODE	MODE	I	—	—	—	—	Fixed to H, H: Single chip mode
26	P24	RESERVE	O	—	—	L	—	Not used, open
27	P25	RESERVE	O	—	—	L	—	Not used, open
28	P26	RESERVE	O	—	—	L	—	Not used, open
29	P27	RESERVE	O	—	—	L	—	Not used, open
30	P30	RESERVE	O	—	—	L	—	Not used, open
31	P31	RESERVE	O	—	—	L	—	Not used, open
32	P32	RESERVE	O	—	—	L	—	Not used, open
33	P33	RESERVE	O	—	—	L	—	Not used, open
34	Vdd	Vdd	—	—	—	—	—	Power (+5.0V)
35	P34	RESERVE	O	—	—	L	—	Not used, open
36	P35	RESERVE	O	—	—	L	—	Not used, open
37	P36	RESERVE	O	—	—	L	—	Not used, open

Pin No.	Pin Name	Symbol	I/O	DET	Ext	Ini	Res	Function
38	P37	RESERVE	O	—	—	L	—	Not used, open
39	P40	RESERVE	O	—	—	L	—	Not used, open
40	P41	RESERVE	O	—	—	L	—	Not used, open
41	P42	RESERVE	O	—	—	L	—	Not used, open
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	MC_/RC	I	—	—	—	—	L: Mecha. mode, H: RC mode, fixed to L
48	P80	RESERVE	O	—	—	L	—	Not used, open
49	P81	YDMUTE	O	—	Pd	L	L	SM5905AF forcible mute, H: Mute
50	P82	SMRST_	O	—	Pd	L	L	SM5905AF reset signal
51	P83	YMLD_	O	—	Pu	H	H	SM5905AF data latch signal
52	P84	ZSENSE	I	—	—	—	—	SM5905AF status signal
53	P85	MCLK	O	—	—	H	—	MN662724, SM5905AF, BU2616 clock signal
54	Vdd	Vdd	—	—	—	—	—	Power (+5.0V)
55	P86	MDATA	O	—	—	H	—	MN662724, SM5905AF, BU2616 data signal
56	P87	RESERVE	O	—	—	L	—	Not used, open
57	P90	MLD_	O	—	Pu	H	H	MN662724 data latch signal
58	P91	RESERVE	O	—	—	L	—	Not used, open
59	P92	SENSE	I	—	—	—	—	MN662724 servo activate 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 (TLOCK included)
65	P97	MNRST_	O	—	Pd	L	L	MN662724 reset signal
66	Vdd (Vpp)	Vdd	—	—	—	—	—	Power (+5.0V)
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	RC data receive
72	SBO1	TXD	O	—	Pu	H	H	RC data send
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_	ENFA	O	—	Pu	—	H	SM5882
78	PA2, IRQ2_	RESERVE	O	—	—	L	—	Not used, open
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	—	—	—	—	µcom reset
83	Vdd	Vdd	—	—	—	—	—	Power (+5.0V)
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-tracing 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	—	Pd	L	L	BU2616 enable signal
92	Vss	Vss	—	—	—	—	—	GND (0V)
93	P10	RESERVE	O	—	—	L	—	Not used, open
94	P11	RESERVE	O	—	—	L	—	Not used, open
95	P12	RESERVE	O	—	—	L	—	Not used, open
96	P13	RESERVE	O	—	—	L	—	Not used, open
97	P14	RESERVE	O	—	—	L	—	Not used, open
98	P15	RESERVE	O	—	—	L	—	Not used, open
99	P16	RESERVE	O	—	—	L	—	Not used, open
100	P17	RESERVE	O	—	—	L	—	Not used, open

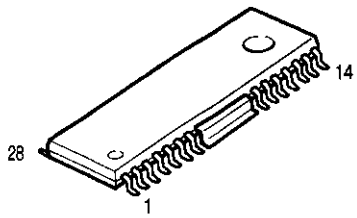
SM5905AF (Main unit)
(IC103)
Shock Proof Memory Controller

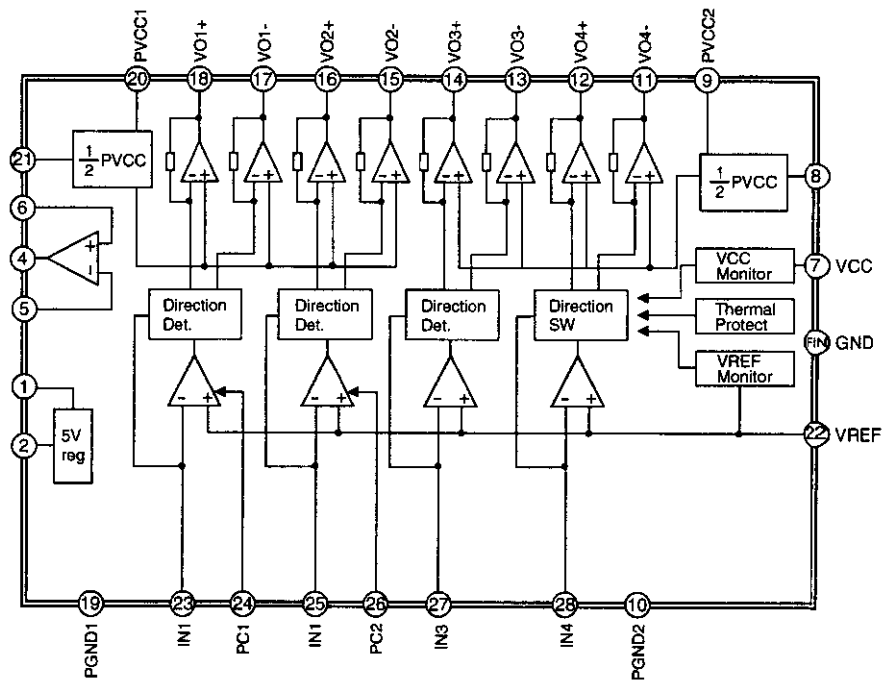


SM5905AF Terminal Function

Pin No.	Pin Name	I/O	Function
1	VDD2	—	VDD power terminal
2	UC1	IP/O	µcom interface expansion I/O 1
3	UC2	IP/O	µcom interface expansion I/O 2
4	UC3	IP/O	µcom interface expansion I/O 3
5	UC4	IP/O	µcom interface expansion I/O 4
6	Vss2	—	GND
7	DIT	O	Digital audio interface terminal
8	NTEST1	IP	Test terminal
9	CLK	I	16.9344MHz clock input
10	Vss1	—	GND
11	YSRDATA	I	Audio serial input data
12	YLRCK	I	Audio serial input LR clock, H: Lch
13	YSCK	I	Audio serial input bit clock
14	ZSCK	O	Audio serial output bit clock
15	ZLRCK	O	Audio serial output LR clock, H: Lch
16	ZSRDATA	O	Audio serial output data
17	YFLAG	I	RAM over-flow flag for signal processing, L: Over
18	YFCLK	I	X'tal system frame clock
19	YBLKCK	I	Sub-code block clock signal
20	NRESET	I	System reset terminal, L: Reset
21	ZSENSE	O	µcom interface status output
22	VDD1	—	VDD power terminal
23	YDMUTE	I	Forcible mute terminal, H: Mute
24	YMLD	I	µcom interface latch clock
25	YMDATA	I	µcom interface serial data
26	YMCLK	I	µcom interface shift clock
27	NTEST2	IP	Test terminal
28	NCAS2	O	DRAM2/CAS control (for external DRAM)
29	D2	IP/O	DRAM data input/output 2
30	D3	IP/O	DRAM data input/output 3
31	D0	IP/O	DRAM data input/output 0
32	D1	IP/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

AN8816SB (Main unit: IC104)
PU DRIVER





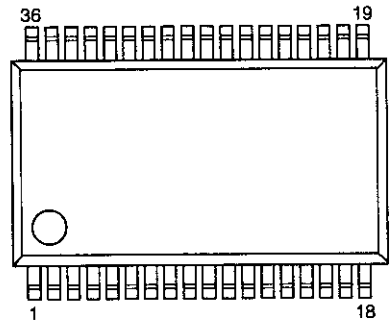
AN8816SB Terminal Function

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

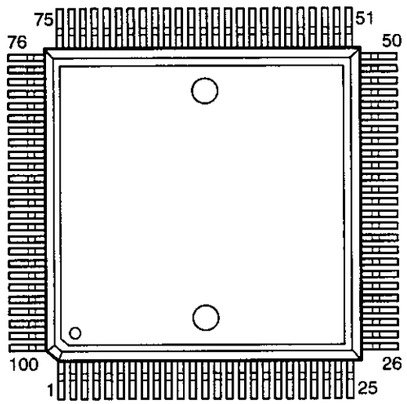
AN8807SB (Main unit: IC105)
RF AMP



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.

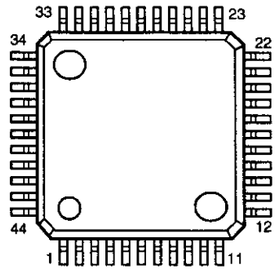
MN102L62GAA (Remote unit: IC101)
µCOM



MN102L62GAA Terminal Function

Pin No.	Pin Name	Symbol	I/O	DET	Ext	Ini	Res	Function
1	P60	P60	O	—	—	L	—	Not used, open
2	P61	RESERVE	O	—	—	L	—	Not used, open
3	P62	RESERVE	O	—	—	L	—	Not used, open
4	P63	RESERVE	O	—	—	L	—	Not used, open
5	P50	RESERVE	O	—	—	L	—	Not used, open
6	P51	RESERVE	O	—	—	L	—	Not used, open
7	P52	RESERVE	O	—	—	L	—	Not used, open
8	P53	RESERVE	O	—	—	L	—	Not used, open
9	P54	P54	O	—	—	L	—	Not used, open
10	P55	P55	O	—	—	L	—	Not used, open
11	P56	RESERVE	O	—	—	L	—	Not used, open
12	P57	RESERVE	O	—	—	L	—	Not used, open
13	P20	RESERVE	O	—	—	L	—	Not used, open
14	P21	RESERVE	O	—	—	L	—	Not used, open
15	P22	RESERVE	O	—	—	L	—	Not used, open
16	P23	RESERVE	O	—	—	L	—	Not used, open
17	VDD	VDD	—	—	—	—	—	Power (+5.0V)
18	SYSCLK	SYSCLK	O	—	—	—	—	System clock output (OSCI×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 (+5.0V)
23	OSCI	OSCI	I	—	—	—	—	X'tal input terminal, 12.288MHz
24	OSCO	OSCO	O	—	—	—	—	X'tal output terminal
25	MODE	MODE	I	—	—	—	—	Fixed to 5V, single chip mode
26	F24	RESERVE	O	—	—	L	—	Not used, open
27	P25	RESERVE	O	—	—	L	—	Not used, open
28	P26	RESERVE	O	—	—	L	—	Not used, open
29	P27	RESERVE	O	—	—	L	—	Not used, open
30	P30	RESERVE	O	—	—	L	—	Not used, open
31	P31	RESERVE	O	—	—	L	—	Not used, open
32	P32	RESERVE	O	—	—	L	—	Not used, open
33	P33	RESERVE	O	—	—	L	—	Not used, open
34	VDD	VDD	—	—	—	—	—	Power (+5.0V)
35	P34	RESERVE	O	—	—	L	—	Not used, open
36	P35	RESERVE	O	—	—	L	—	Not used, open
37	P36	RESERVE	O	—	—	L	—	Not used, open
38	P37	RESERVE	O	—	—	L	—	Not used, open
39	P40	RESERVE	O	—	—	L	—	Not used, open
40	P41	RESERVE	O	—	—	L	—	Not used, open
41	P42	RESERVE	O	—	—	L	—	Not used, open
42	P43	RESERVE	O	—	—	L	—	Not used, open
43	Vss	Vss	—	—	—	—	—	GND (0V)
44	AN4, P44	RESERVE	O	—	—	L	—	Not used, open
45	AN5, P45	RESERVE	O	—	—	L	—	Not used, open
46	STOP, AN6, P46	RESERVE	O	—	—	L	—	Not used, open
47	P47	MC_/RC	I	—	—	—	—	L: Mecha. mode, H: RC mode, fixed to H
48	TM0IO, P80	SHTL23	I	—	Pu	—	H	CD2 shuttle input 3
49	TM1IO P81	SHTL22	I	—	Pu	—	H	CD2 shuttle input 2
50	TM2IO, P82	SHTL21	I	—	Pu	—	H	CD2 shuttle input 1
51	TM3IO, P83	SHTL20	I	—	Pu	—	H	CD2 shuttle input 0
52	TM4IO, P84	RESERVE	O	—	—	L	—	Not used, open
53	TM5IO, P85	RESERVE	O	—	—	L	—	Not used, open
54	VDD	VDD	—	—	—	—	—	Power (+5.0V)
55	TM6IOA, P86	RESERVE	O	—	—	L	—	Not used, open
56	TM6IOB, P87	RESERVE	O	—	—	L	—	Not used, open
57	TM6IOC, P90	RESERVE	O	—	—	H	—	Not used, open
58	TM7IOA, P91	RESERVE	O	—	—	H	—	Not used, open
59	TM7IOB, P92	FLNCS1	O	—	Pu	H	H	CD1 MN12510F latch signal
60	TM71C, P93	FLNCS2	O	—	Pu	H	H	CD2 MN12510F latch signal
61	Vss	Vss	—	—	—	—	—	GND (0V)
62	AN0, P94	PIT1	I	—	—	—	—	CD1 pitch VR signal
63	AN1, P95	PITC1	I	—	—	—	—	CD1 pitch VR center value signal
64	AN2, P96	PIT2	I	—	—	—	—	CD2 pitch VR signal
65	AN3, P97	PITC2	I	—	—	—	—	CD2 pitch VR center value signal
66	VDD (Vpp)	VDD	—	—	—	—	—	Power (+5.0V)
67	SBTO, P70	FLCLK	O	—	Pu	H	H	MN12510F data clock signal
68	SBIO, P71	FLSDO	I	—	—	—	—	MN12510F data input signal
69	SBO0, P72	FLSDI	O	—	—	H	—	MN12510F data output signal
70	SBT1, P73	P73	O	—	—	L	—	Not used, open
71	SBI1, P74	RC-RXD	I	—	Pu	—	H	Data receive from main unit
72	SBO1, P75	RC-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_	JOG21	I	Ed	Pu	—	H	CD2 jog input 1, iPu: Internal Pu
77	PA1, IRQ1_	JOG20	I	Ed	Pu	—	H	CD2 jog input 0
78	PA2, IRQ2_	JOG11	I	Ed	Pu	—	H	CD1 jog input 1
79	PA3, IRQ3_	JOG10	I	Ed	Pu	—	H	CD1 jog input 0
80	PA4, IRQ4_	PA4	O	—	—	L	—	Not used, open
81	ADSEP_	ADSEP	I	—	—	—	—	Fixed to 5V, H: Address/data separate mode
82	RST_	RST_	I	—	—	—	—	µcom reset
83	VDD	VDD	—	—	—	—	—	Power (+5.0V)
84	P00	SHTL13	I	—	Pu	—	H	CD1 shuttle input 3
85	P01	SHTL12	I	—	Pu	—	H	CD1 shuttle input 2
86	P02	SHTL11	I	—	Pu	—	H	CD1 shuttle input 1
87	P03	SHTL10	I	—	Pu	—	H	CD1 shuttle input 0
88	P04	P04	I	—	—	—	L	Not used, fixed to 0V
89	P05	P05	I	—	—	—	L	Not used, fixed to 0V
90	P06	P06	I	—	—	—	L	Not used, fixed to 0V
91	P07	P07	I	—	—	—	L	Not used, fixed to 0V
92	Vss	Vss	—	—	—	—	—	GND (0V)
93	P10	RESERVE	O	—	—	L	—	Not used, open
94	P11	RESERVE	O	—	—	L	—	Not used, open
95	P12	RESERVE	O	—	—	L	—	Not used, open
96	P13	RESERVE	O	—	—	L	—	Not used, open
97	P14	RESERVE	O	—	—	L	—	Not used, open
98	P15	RESERVE	O	—	—	L	—	Not used, open
99	P16	RESERVE	O	—	—	L	—	Not used, open
100	P17	RESERVE	O	—	—	L	—	Not used, open

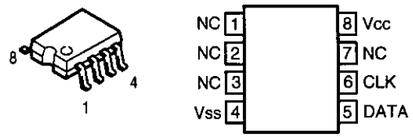
MN12510F (Remote unit: IC201, 301)
FL DRIVER



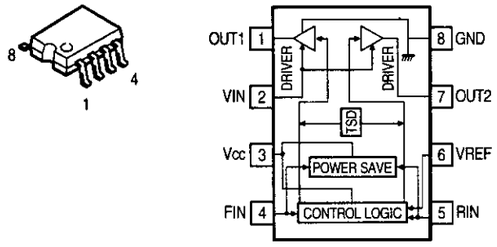
MN12510F Terminal Function

Pin No.	Symbol	I/O	Function
1	P21	O	Segment output15 (hi-voltage proof output).
2	P20	O	LED drive output (hi-voltage proof output).
3	P03	O	No connection.
4	P02	O	No connection.
5	P01	O	Digit output10 (hi-voltage proof output).
6	P00	O	Digit output9 (hi-voltage proof output).
7	DGT7	O	Digit output8 (hi-voltage proof output).
8	DGT6	O	Digit output7 (hi-voltage proof output).
9	DGT5	O	Digit output6 (hi-voltage proof output).
10	DGT4	O	Digit output5 (hi-voltage proof output).
11	NC	—	No connection.
12	DGT3	O	Digit output4 (hi-voltage proof output).
13	DGT2	O	Digit output3 (hi-voltage proof output).
14	DGT1	O	Digit output2 (hi-voltage proof output).
15	DGT0	O	Digit output1 (hi-voltage proof output).
16	Vpp	I	ELP driver power supply, VPP: VDD -35V.
17	NC	—	No connection.
18	VDD	I	Power supply terminal, VDD: +5V ±0.5V.
19	OSC1	I	Clock oscillation input terminal.
20	OSC2	O	Clock oscillation output terminal.
21	Vss	I	Power supply terminal, Vss: 0V.
22	NCS	I	Chip select input, "L": Serial input enable, "H": Disable.
23	SCK	I	Clock input for serial transference.
24	SDI	O	Serial data input terminal.
25	SDO	O	Serial data output terminal.
26	P30	I	Key scan input terminal.
27	P31	I	Key scan input terminal.
28	P32	I	Key scan input terminal.
29	P33	O	LED drive output terminal.
30	P34	O	LED drive output terminal.
31	SEG0	O	Segment output1 (hi-voltage proof output).
32	SEG1	O	Segment output2 (hi-voltage proof output).
33	SEG2	O	Segment output3 (hi-voltage proof output).
34	SEG3	O	Segment output4 (hi-voltage proof output).
35	SEG4	O	Segment output5 (hi-voltage proof output).
36	SEG5	O	Segment output6 (hi-voltage proof output).
37	SEG6	O	Segment output7 (hi-voltage proof output).
38	SEG7	O	Segment output8 (hi-voltage proof output).
39	P10	O	Segment output9 (hi-voltage proof output).
40	P11	O	Segment output10 (hi-voltage proof output).
41	P12	O	Segment output11 (hi-voltage proof output).
42	P13	O	Segment output12 (hi-voltage proof output).
43	P23	O	Segment output13 (hi-voltage proof output).
44	P22	O	Segment output14 (hi-voltage proof output).

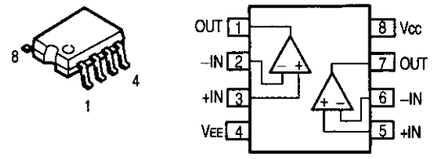
X24C00S (Power unit: IC602)
EEPROM



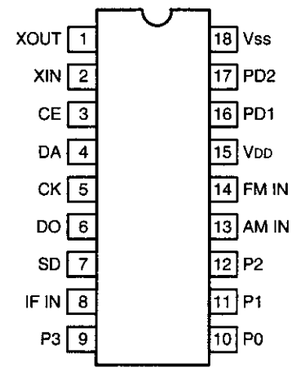
BA6287F (Main unit: IC106)
LOADING DRIVER

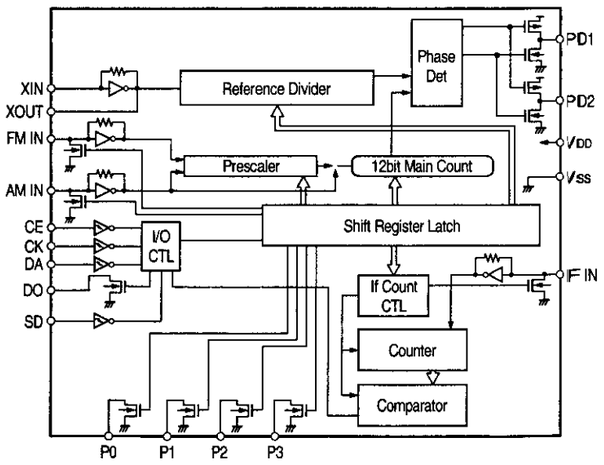


BA15218F (Main unit: IC111)

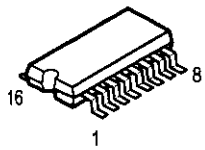


BU2616F (Main unit: IC107)

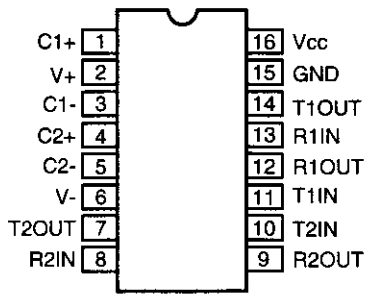




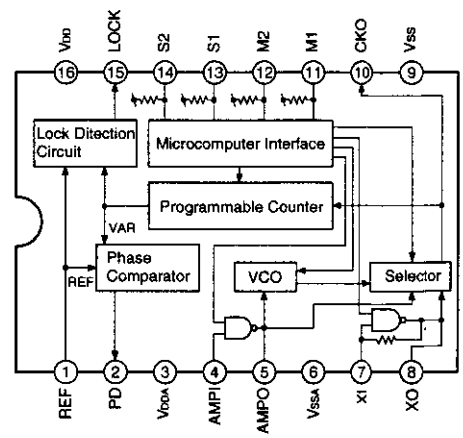
TC9246F (Main unit: IC108)
MAX202CSE (Remote unit: IC103)
(Power unit: IC601)



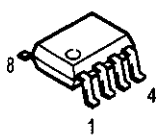
MAX202CSE

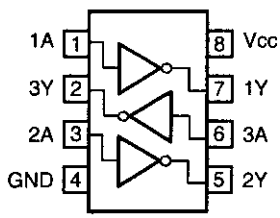


TC9246F

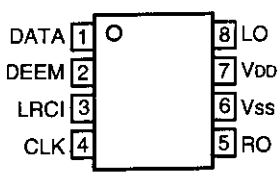


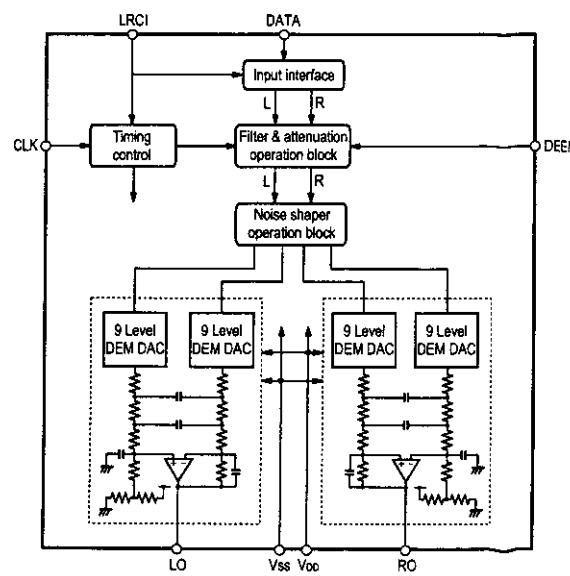
TC7WU04F (Power unit: IC701, 702)





SM5882AS (Main unit: IC109)

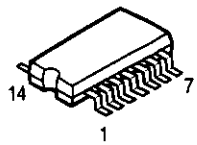




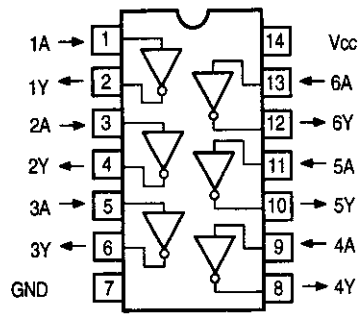
Terminal Function

Pin No.	Pin Name	I/O	Function
1	DATA	I	Serial data input terminal
2	DEEM	I	De-emphasis switching terminal (44.1kHz, H: ON)
3	LRCI	I	Sample rate clock (fs) input terminal (H: Lch, L: Rch)
4	CLK	I	External clock input terminal
5	RO	O	Rch analog output terminal
6	Vss	—	Vss terminal
7	VDD	—	VDD terminal
8	LO	O	Lch analog terminal

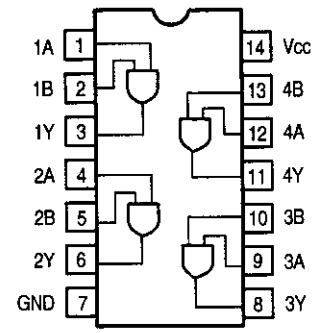
HD74AC04FP (Main unit: IC110)
TC74HC08AF (Power unit: IC603)



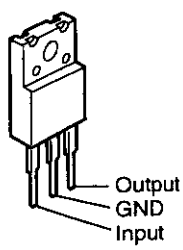
HD74AC04FP



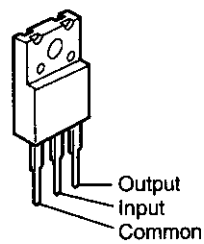
TC74HC08AF



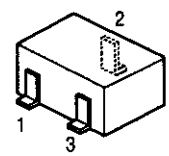
NJM7805FA (S)
(Power unit: IC608, 611, 613)
NJM7806FA (S)
(Power unit: IC610)



NJM7905FA
(Power unit: IC614)



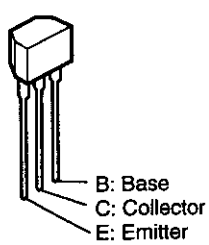
MN1382-R
(Remote unit: IC104)
MN1382-S
(Power unit: IC604)



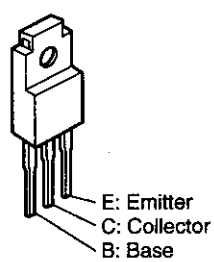
1: Output
2: V_{DD}
3: Vss

● TRANSISTORS

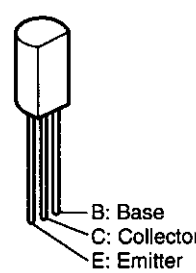
2SD2144S



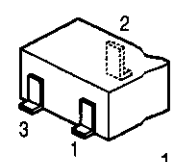
2SB1185 (E/F)



2SB562 (C)

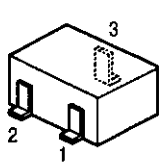


2SC2412K (S)



1: Emitter
2: Base
3: Collector

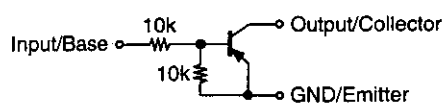
DTA114EK
DTC114EK



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

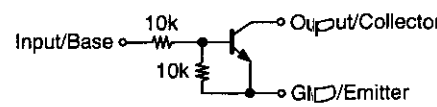
DTA114EK

(PNP Type)



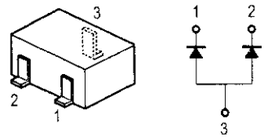
DTC114EK

(NPN Type)



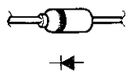
● DIODES(Including LED)

DAP202K

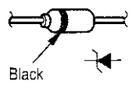


1: Cathode
2: Cathode
3: Anode

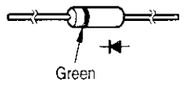
1SS270A



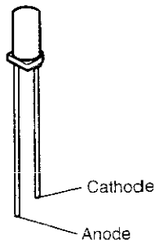
HZS2B-1
HZS6B-3
MTZJ4.3A
MTZJ27A



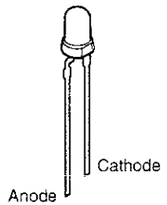
1SR139-200



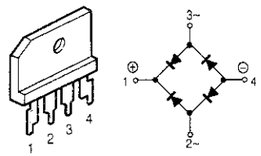
SLR-325MC (Green)
SLR-325VC (Red)



SEL1810A(Orange)

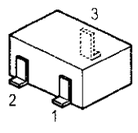


D3SBA20

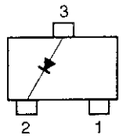


MA151A
MA151WA
MA151WK

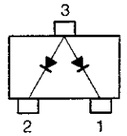
MA151A



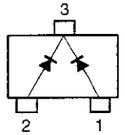
MA151A



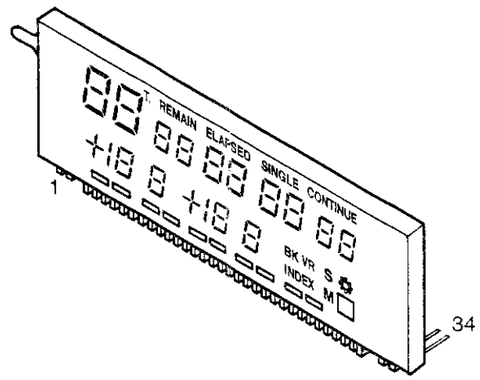
MA151WA



MA151WK



● FL TUBE 10-MT-109GK (FL201, 301)

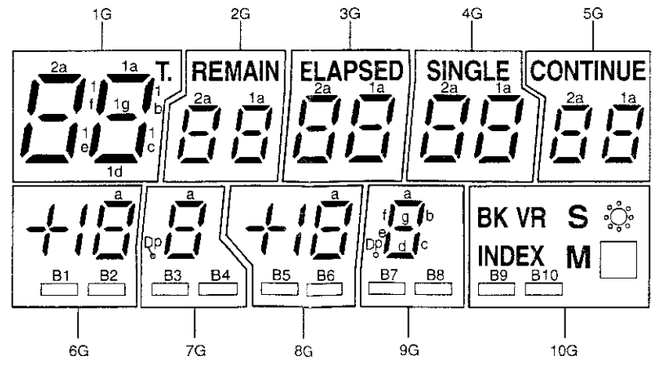


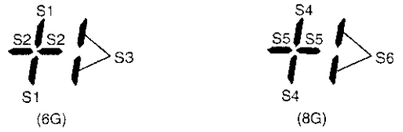
Pin Connection

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	32	33 34
Connection	F1	F1	NP	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	NC	NC	NC	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	NP	F2 F2

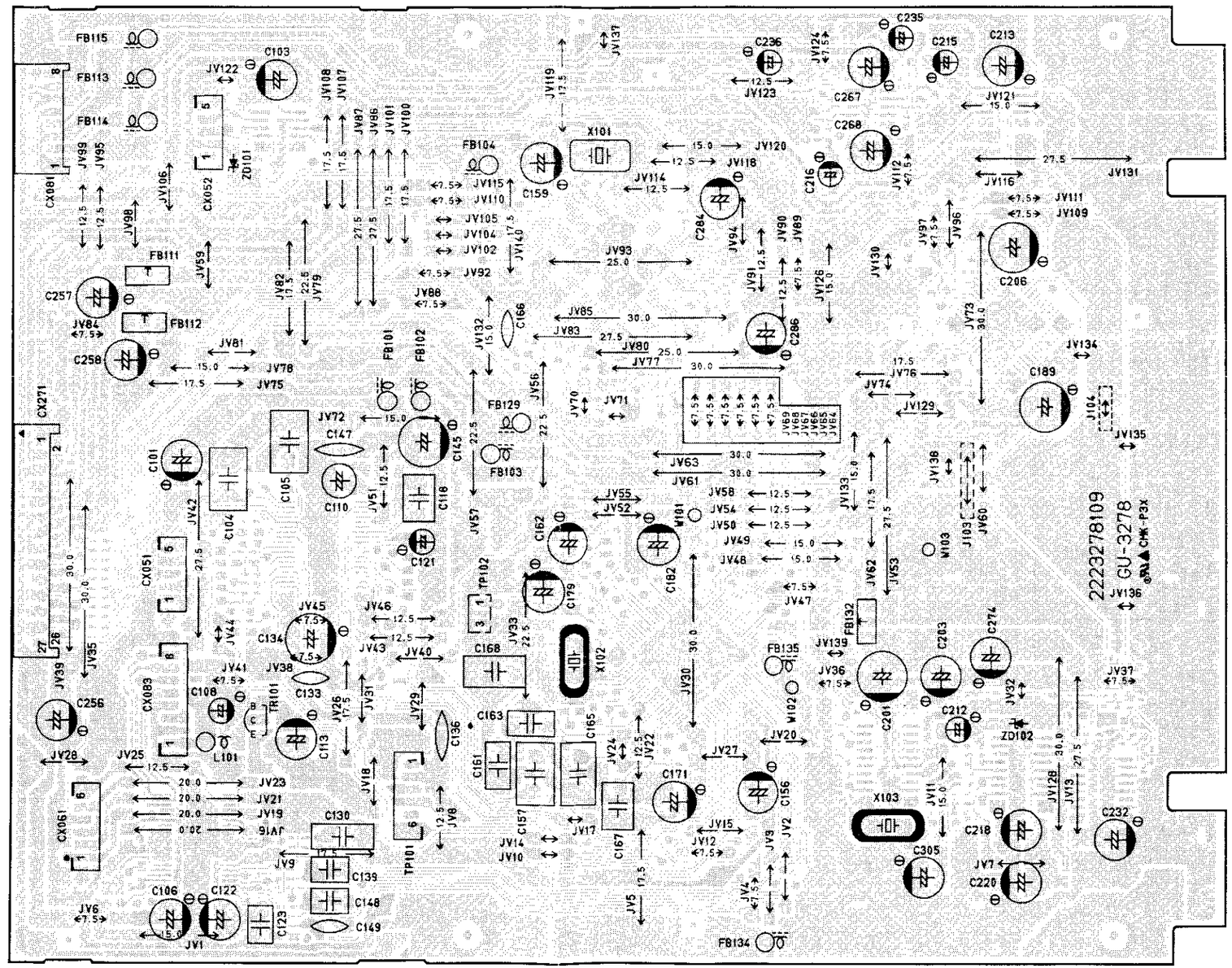
NOTE 1) F1, F2 ..... Filament
2) NP ..... No Pin
3) NC ..... No Connection
4) P1~P15 ..... Datum Line
5) 1G~10G ..... Grid

Grid Assignment

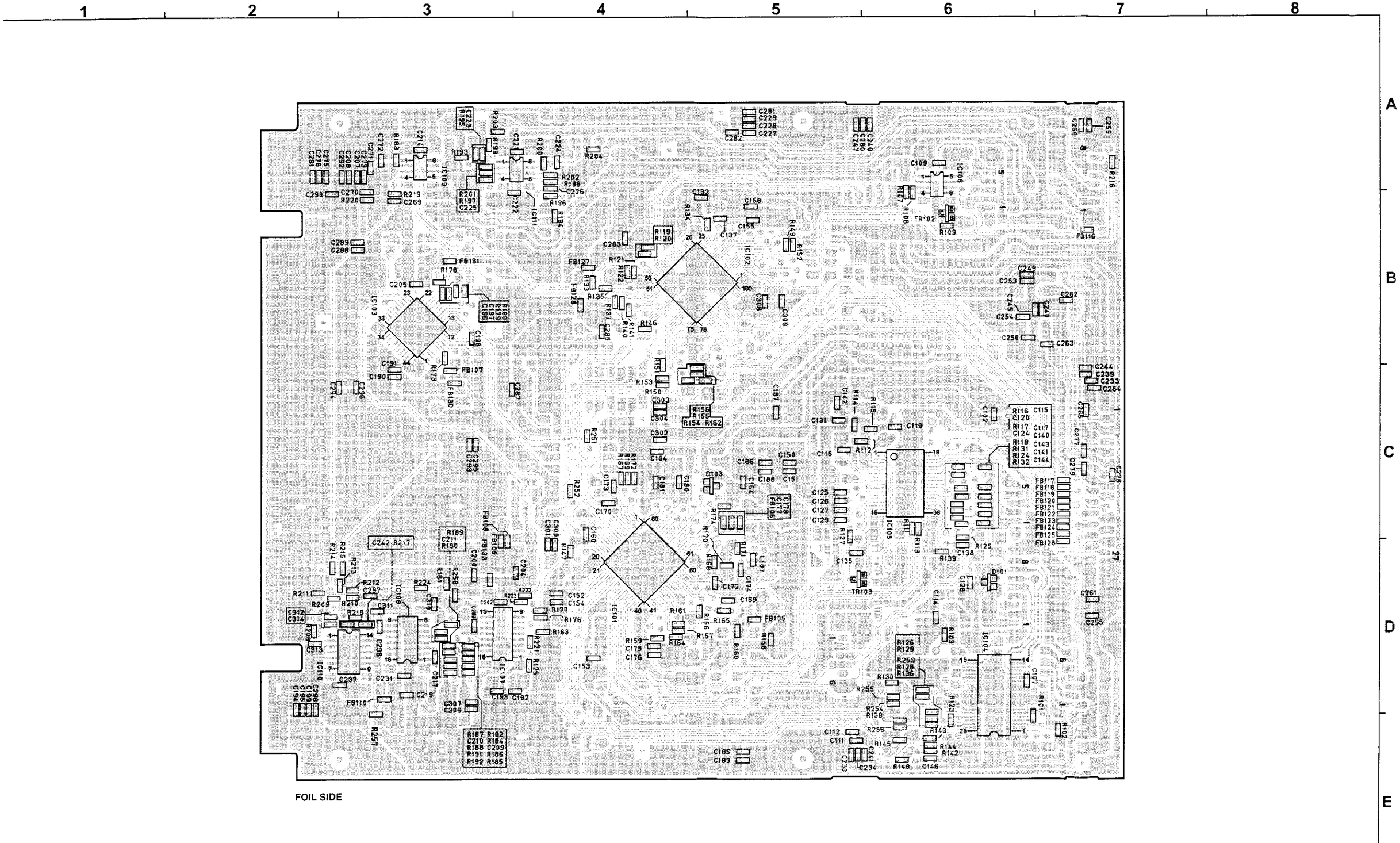




GU-3278 MAIN UNIT

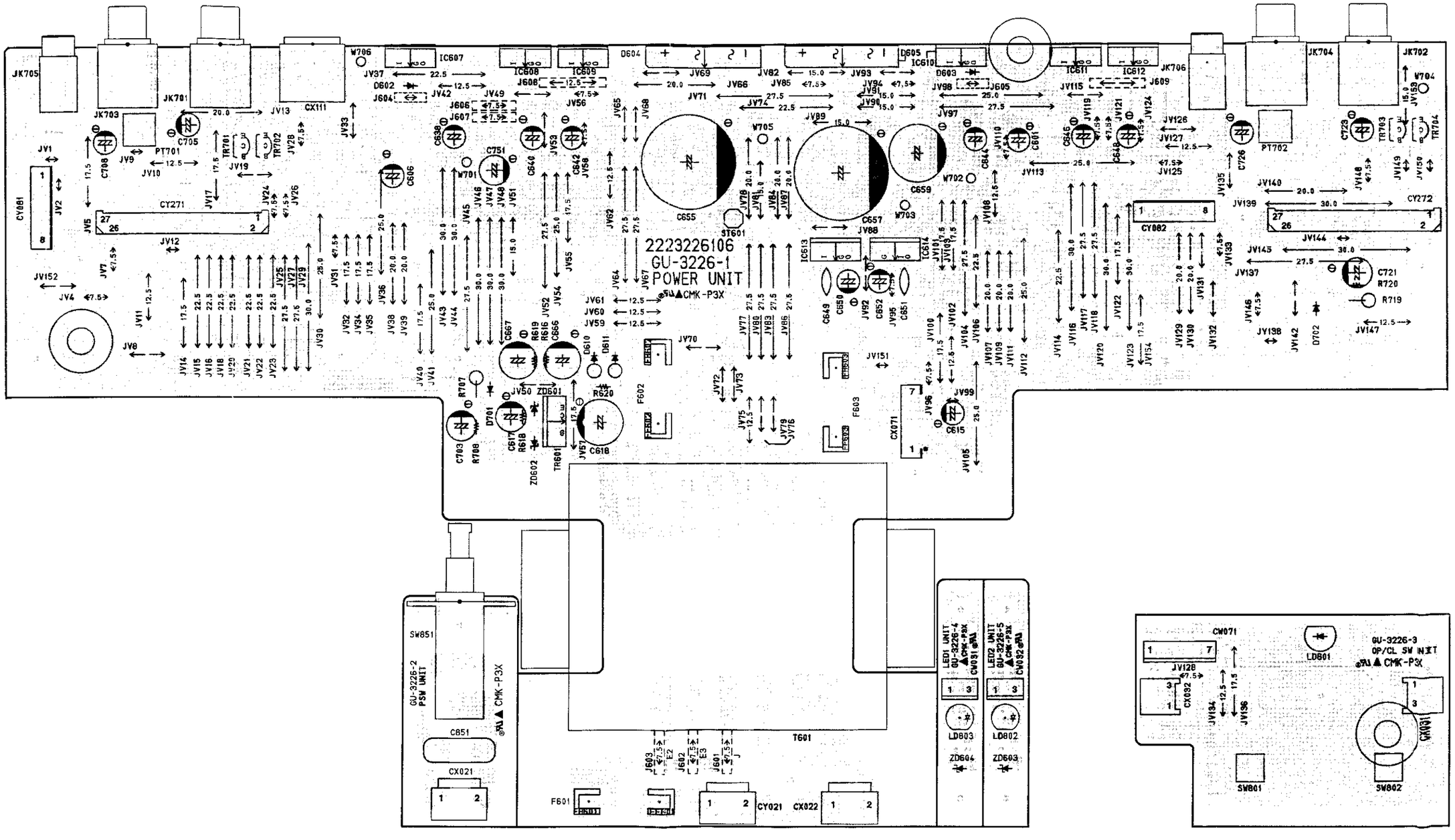


COMPONENT SIDE

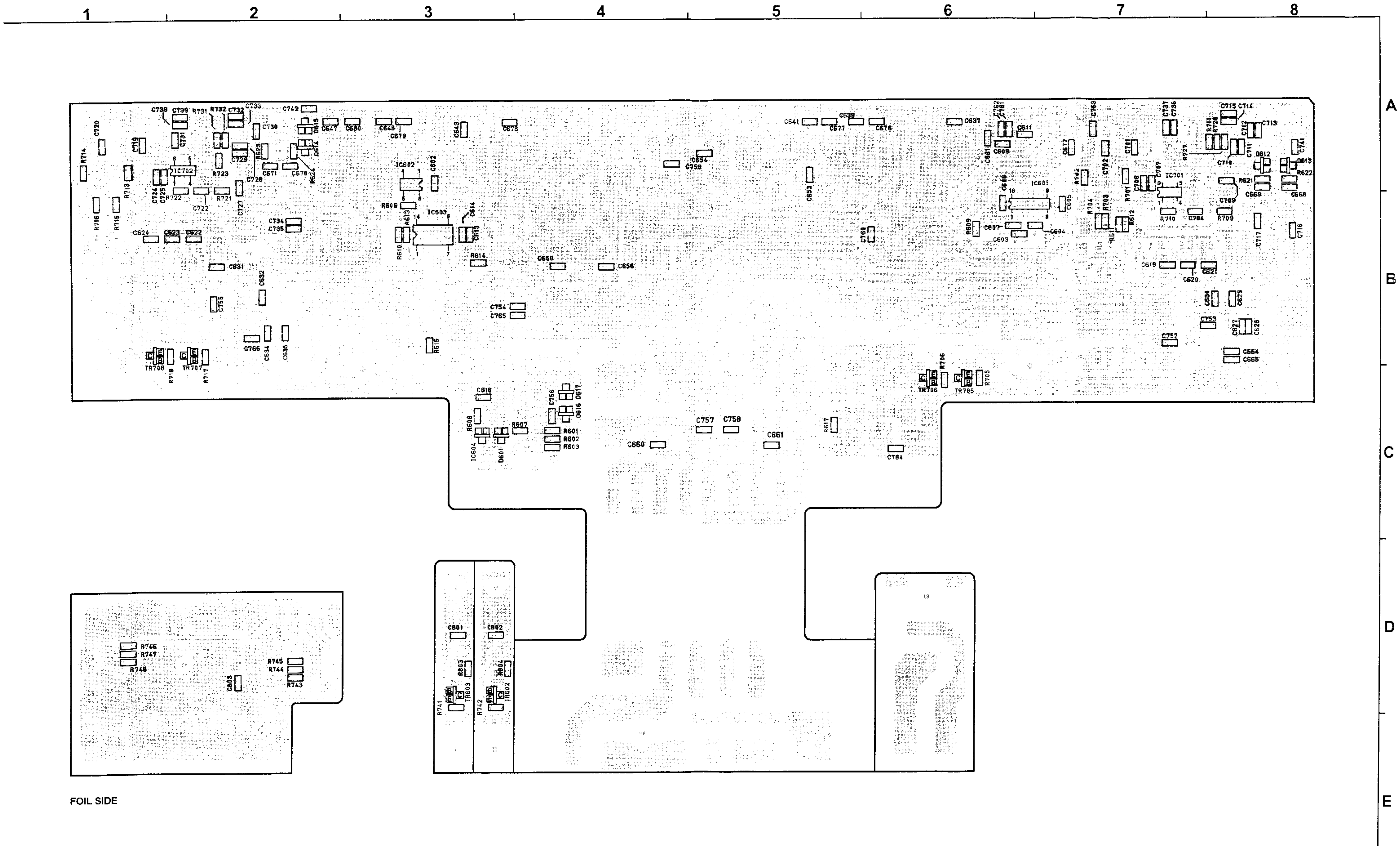


FOIL SIDE

GU-3226A POWER UNIT

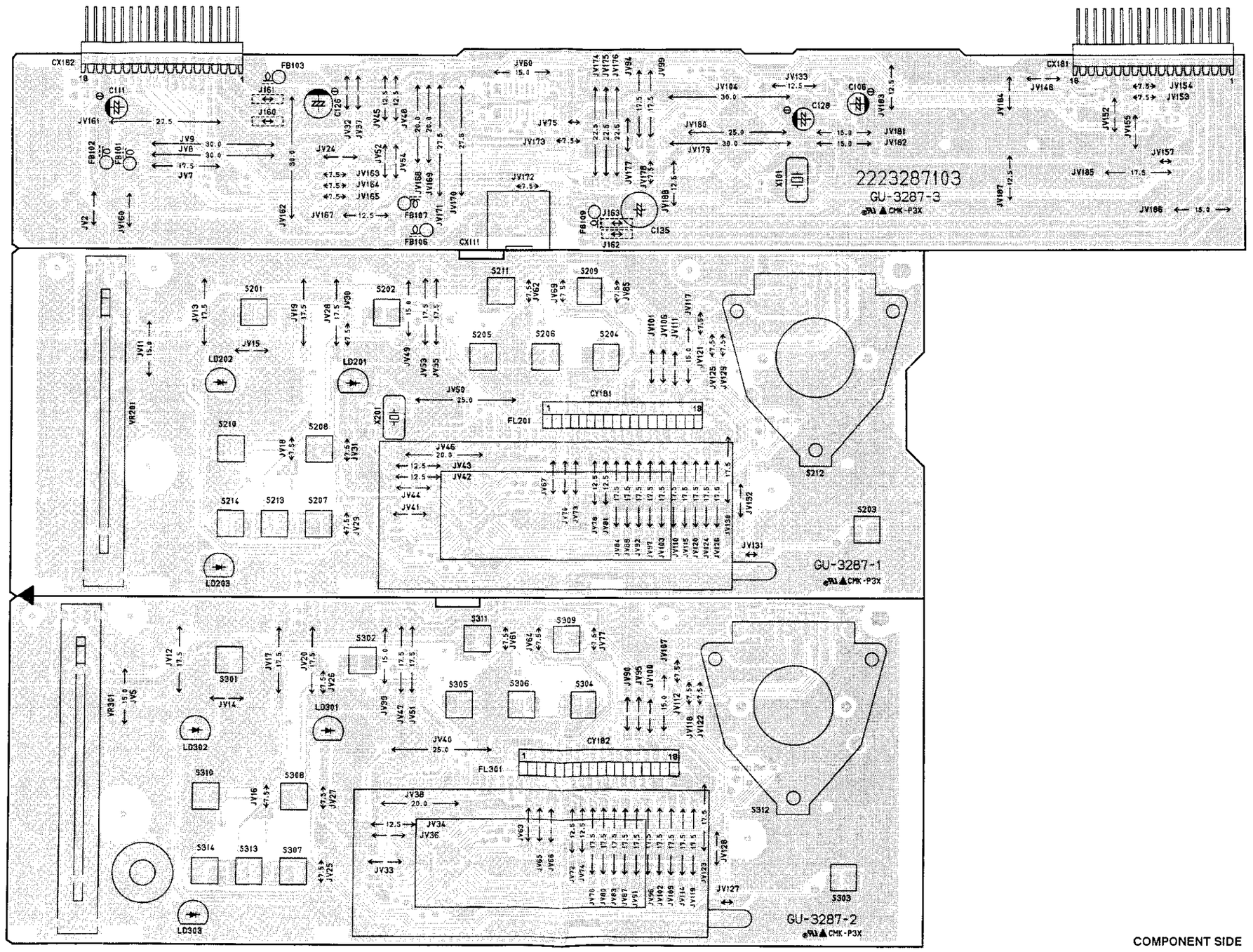


COMPONENT SIDE

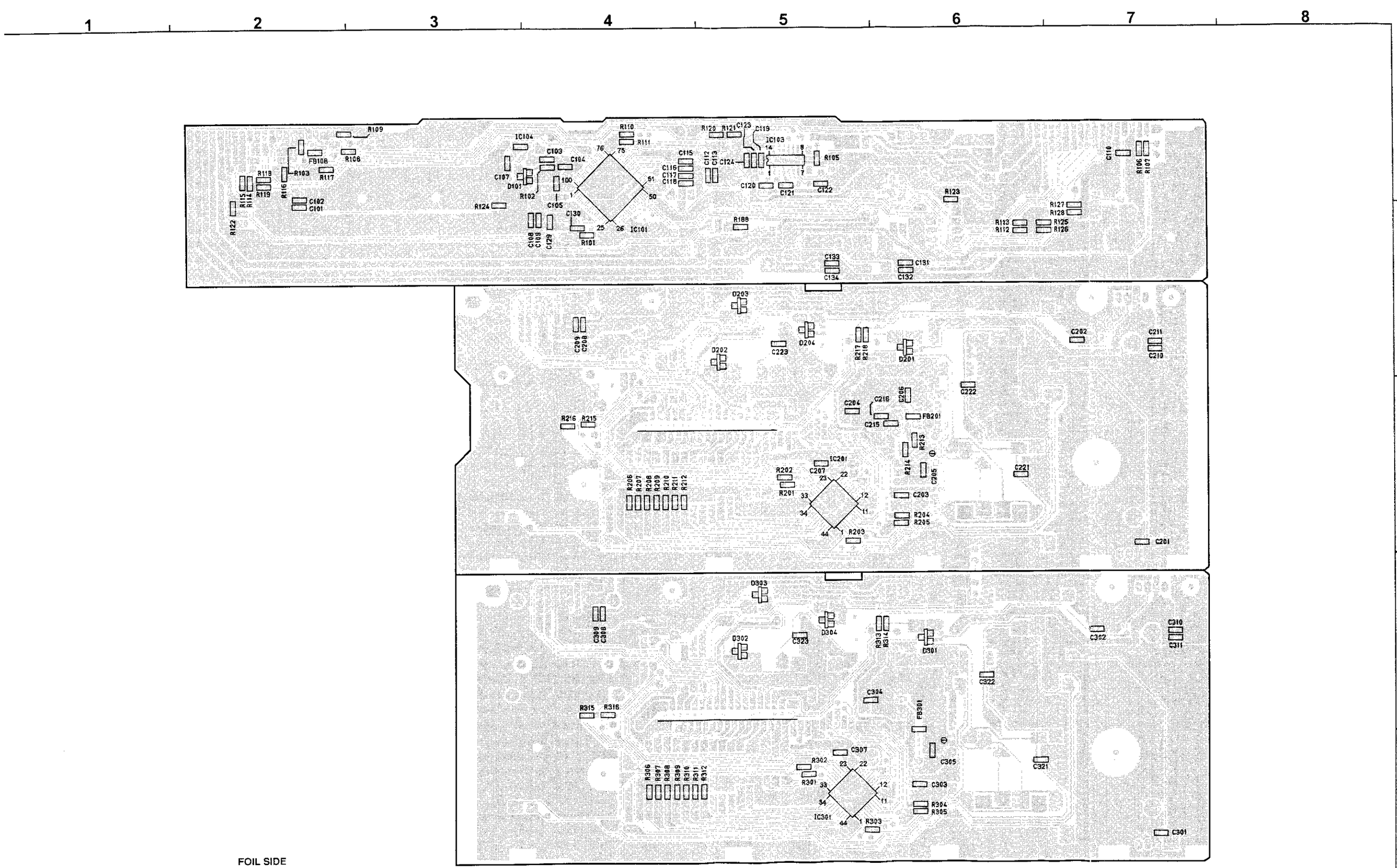


FOIL SIDE

GU-3287 REMOTE UNIT



COMPONENT SIDE


1
2
3
4
5
6
7
8
A
B
C
D
E
R109
FB108
R108
R103
R117
R118
R119
R116
R115
R114
R122
C102
C101
IC104
C103
C104
C107
D101
R102
C105
R124
C108
C109
C129
C130
R101
R110
R111
76
75
51
50
100
1
25
26
IC101
C115
C116
C117
C118
C112
C113
R120
R121
C123
C119
IC103
14
8
1
7
C124
R105
C120
C121
C122
R123
R188
C116
R106
R107
R127
R128
R113
R112
R125
R126
C133
C134
C131
C132
D203
C209
C208
D202
C223
D204
R217
R218
D201
C202
C211
C210
C222
C204
C216
C206
C215
FB201
R216
R215
R214
R213
C205
C221
IC201
C207
R202
R201
22
23
33
12
34
11
44
1
R203
C203
R204
R205
C201
R206
R207
R208
R209
R210
R211
R212
D303
C309
C308
D304
C323
D302
R310
R311
D301
C302
C310
C311
C322
C304
R315
R316
FB301
C307
C305
C321
R302
R301
C303
R304
R305
IC301
R303
C301
R306
R307
R308
R309
R310
R311
R312

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 "I" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including Carbon Film ±5%, 1/4W Type in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

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

● Resistors

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

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

✱ Resistance

1 8 2 ⇒ 1800 ohm = 1.8 kohm
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 (Type) 04W (Shape and performance) 1H (Dielectric strength) 2R2 (Capacity) M (Allowable error) BP (Others)

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

✱ Capacity (electrolyte only)

2 2 2 ⇒ 2200μF
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-3278 MAIN P.W.B. UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC101	262 2368 005	IC MN662724RPE	
IC102	262 2790 000	IC MN102L62GAA	
IC103	262 2788 009	IC SM5905AF	
IC104	262 2461 902	IC AN8816SB	
IC105	262 2462 901	IC AN8807SB	
IC106	263 0994 908	IC BA6287F	
IC107	262 2789 901	IC BU2616F	
IC108	262 1883 905	IC TC9246F	
IC109	262 2787 903	IC SM5882AS	
IC111	263 0615 902	IC BA15218F	
TR101	272 0025 907	Transistor 2SB562 (C)	
TR102	273 0384 900	Transistor 2SC2412K (S)	
TR103	269 0082 902	Transistor DTC114EK	
D101	276 0559 909	Diode DAP202K	
D103	276 0559 909	Diode DAP202K	
ZD101	276 0462 928	Zener diode HZS6B-3	
ZD102	276 0450 901	Zener diode HZS2B-1	
RESISTORS GROUP			
R101,102	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R103	247 0002 966	Carbon chip 10ohm 1/10W	RM73B--100J
R107,108	247 2009 983	Carbon chip 10kohm 1/16W	RM73B--103J
R109	247 2007 943	Carbon chip 1kohm 1/16W	RM73B--102J
R111	247 2013 966	Carbon chip 390kohm 1/16W	RM73B--394J
R112	247 0009 927	Carbon chip 5.6kohm 1/10W	RM73B--562J
R113	247 2013 940	Carbon chip 330kohm 1/16W	RM73B--334J
R114	247 0009 927	Carbon chip 5.6kohm 1/10W	RM73B--562J
R115	247 0009 901	Carbon chip 4.7kohm 1/10W	RM73B--472J
R116	247 2010 985	Carbon chip 27kohm 1/16W	RM73B--273J
R117	247 2008 968	Carbon chip 3.3kohm 1/16W	RM73B--332J
R118	247 2011 900	Carbon chip 33kohm 1/16W	RM73B--333J
R119,120	247 2009 983	Carbon chip 10kohm 1/16W	RM73B--103J
R121,122	247 2009 983	Carbon chip 10kohm 1/16W	RM73B--103J
R124	247 2008 968	Carbon chip 3.3kohm 1/16W	RM73B--332J
R125	247 2018 903	Carbon chip 0ohm 1/16W	RM73B--0R0K
R126	247 2008 971	Carbon chip 3.6kohm 1/16W	RM73B--362J
R127	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R128	247 2009 983	Carbon chip 10kohm 1/16W	RM73B--103J
R129	247 2011 968	Carbon chip 56kohm 1/16W	RM73B--563J
R130	247 2008 942	Carbon chip 2.7kohm 1/16W	RM73B--272J
R132	247 2011 926	Carbon chip 39kohm 1/16W	RM73B--393J
R133	247 2009 983	Carbon chip 10kohm 1/16W	RM73B--103J
R134	247 2018 903	Carbon chip 0ohm 1/16W	RM73B--0R0K
R135	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R136	247 2012 909	Carbon chip 82kohm 1/16W	RM73B--823J
R137	247 2004 920	Carbon chip 47ohm 1/16W	RM73B--470J
R138	247 2011 984	Carbon chip 68kohm 1/16W	RM73B--683J
R139	247 2013 908	Carbon chip 220kohm 1/16W	RM73B--224J
R140	247 2009 983	Carbon chip 10kohm 1/16W	RM73B--103J
R141	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R142	247 2007 943	Carbon chip 1kohm 1/16W	RM73B--102J
R143	247 2009 909	Carbon chip 4.7kohm 1/16W	RM73B--472J
R144	247 2012 925	Carbon chip 100kohm 1/16W	RM73B--104J
R145	247 2011 942	Carbon chip 47kohm 1/16W	RM73B--473J
R146,147	247 2009 983	Carbon chip 10kohm 1/16W	RM73B--103J
R148	247 2010 985	Carbon chip 27kohm 1/16W	RM73B--273J
R149,150	247 2009 983	Carbon chip 10kohm 1/16W	RM73B--103J
R151	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R152,153	247 2009 983	Carbon chip 10kohm 1/16W	RM73B--103J
R154	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R155,156	247 2011 942	Carbon chip 47kohm 1/16W	RM73B--473J
R157	247 2011 984	Carbon chip 68kohm 1/16W	RM73B--683J
R158	247 0014 967	Carbon chip 1Mohm 1/10W	RM73B--105J
R160	247 0011 902	Carbon chip 33kohm 1/10W	RM73B--333J
R161	247 2012 925	Carbon chip 100kohm 1/16W	RM73B--104J
R162,163	247 2009 983	Carbon chip 10kohm 1/16W	RM73B--103J
R164	247 2005 916	Carbon chip 110ohm 1/16W	RM73B--111J
R165	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R167	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R168	247 2014 965	Carbon chip 1Mohm 1/16W	RM73B--105J
R169	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R170	247 2005 929	Carbon chip 120ohm 1/16W	RM73B--121J
R171	247 2018 903	Carbon chip 0ohm 1/16W	RM73B--0R0K
R172	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R173	247 2003 976	Carbon chip 30ohm 1/16W	RM73B--300J
R174	247 2009 983	Carbon chip 10kohm 1/16W	RM73B--103J
R175	247 2018 903	Carbon chip 0ohm 1/16W	RM73B--0R0K
R176,177	247 2009 983	Carbon chip 10kohm 1/16W	RM73B--103J
R178~180	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R181	247 2009 983	Carbon chip 10kohm 1/16W	RM73B--103J
R182	247 2009 925	Carbon chip 5.6kohm 1/16W	RM73B--562J
R183	247 2009 983	Carbon chip 10kohm 1/16W	RM73B--103J
R184	247 2018 903	Carbon chip 0ohm 1/16W	RM73B--0R0K
R185,186	247 2009 983	Carbon chip 10kohm 1/16W	RM73B--103J
R187	247 2012 912	Carbon chip 91kohm 1/16W	RM73B--913J
R188	247 2012 983	Carbon chip 180kohm 1/16W	RM73B--184J
R189	247 2005 903	Carbon chip 100ohm 1/16W	RM73B--101J
R190	247 2013 937	Carbon chip 300kohm 1/16W	RM73B--304J
R191	247 2008 939	Carbon chip 2.4kohm 1/16W	RM73B--242J
R192	247 2009 912	Carbon chip 5.1kohm 1/16W	RM73B--512J
R193,194	247 2011 942	Carbon chip 47kohm 1/16W	RM73B--473J
R195~202	247 2009 983	Carbon chip 10kohm 1/16W	RM73B--103J
R203,204	247 2010 998	Carbon chip 30kohm 1/16W	RM73B--303J
R208,209	247 2018 903	Carbon chip 0ohm 1/16W	RM73B--0R0K
R210	247 2007 943	Carbon chip 1kohm 1/16W	RM73B--102J
R212	247 2018 903	Carbon chip 0ohm 1/16W	RM73B--0R0K
R213	247 2018 903	Carbon chip 0ohm 1/16W	RM73B--0R0K
R214,215	247 2003 947	Carbon chip 22ohm 1/16W	RM73B--220J
R216	247 2018 903	Carbon chip 0ohm 1/16W	RM73B--0R0K

Ref. No.	Part No.	Part Name	Remarks
R217	247 2004 920	Carbon chip 47ohm 1/16W	RM73B--470J
R218	247 2018 903	Carbon chip 0ohm 1/16W	RM73B--0R0K
R221~224	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R251~256	247 2018 903	Carbon chip 0ohm 1/16W	RM73B--0R0K
R258	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
CAPACITORS GROUP			
C101	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C102	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C103	254 4538 942	Electrolytic 100μF/16V	CE04W1C101M (SMG/RE3)
C106	254 4538 942	Electrolytic 100μF/16V	CE04W1C101M (SMG/RE3)
C107	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C108	254 4305 968	Electrolytic 1μF/50V	CE04W1H010M (SRE)
C109	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C110	254 3068 918	Electrolytic 2.2μF/50V	CE04D1H2R2MBP (SRA)
C111	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C112	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C113	254 4299 964	Electrolytic 47μF/16V	CE04W1C470M (SRE)
C115	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C116	257 0001 948	Ceramic chip 2.0 pF/50V	CC73SL1H2R0C
C117	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C118	256 1058 971	Metallized 0.1μF/50V	CF93A1H104J (JL)
C119	257 0002 976	Ceramic chip 16pF/50V	CC73SL1H160J
C120	257 0005 902	Ceramic chip 150pF/50V	CC73SL1H151J
C121	254 4305 968	Electrolytic 1μF/50V	CE04W1H010M (SRE)
C122	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C123	255 1265 936	Mylar film 0.01μF/50V	CQ93M1H103J (B)
C124	257 0005 960	Ceramic chip 270pF/50V	CC73SL1H271J
C125	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C126	257 0010 955	Ceramic chip 0.027μF/25V	CK73B1E273K
C127	257 0009 924	Ceramic chip 2200pF/50V	CK73B1H222K
C128	257 0004 961	Ceramic chip 100pF/50V	CC73SL1H101J
C129	257 0009 966	Ceramic chip 4700pF/50V	CK73B1H472K
C130	256 1059 912	Metallized 0.22μF/50V	CF93A1H224J (JL)
C131	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C133	253 9030 963	Ceramic 0.01μF/25V	CK45=1E103K
C134	254 4213 940	Electrolytic 220μF/6.3V	CE04W0J221M (SRA)
C135	257 0005 944	Ceramic chip 220pF/50V	CC73SL1H221J
C136	253 9039 906	Ceramic 0.1μF/25V	CK45=1E104Z
C138	257 0009 966	Ceramic chip 4700pF/50V	CK73B1H472K
C139	255 1265 923	Mylar film 8200pF/50V	CQ93M1H822J (B)
C140	257 0010 900	Ceramic chip 0.01μF/50V	CK73B1H103K
C141	257 0009 924	Ceramic chip 2200pF/50V	CK73B1H222K
C142	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C144	257 0011 983	Ceramic chip 0.047μF/25V	CK73B1E473K
C145	254 4213 940	Electrolytic 220μF/6.3V	CE04W0J221M (SRA)
C147	253 9039 906	Ceramic 0.1μF/25V	CK45=1E104Z
C148	255 1264 924	Mylar film 1500pF/50V	CQ93M1H152J (B)
C149	253 9030 976	Ceramic 0.015μF/25V	CK45=1E153K
C150	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C151	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C152,153	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z

Ref. No.	Part No.	Part Name	Remarks
C154	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C155	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102K
C156	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C157	255 4201 984	Polypropylene film 560pF/50V	CQ93P1H561J
C158	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C159	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C160	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C161	255 1265 978	Mylar film 0.022μF/50V	CQ93M1H223J (B)
C162	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C163	255 1265 978	Mylar film 0.022μF/50V	CQ93M1H223J (B)
C164	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C165	255 4202 909	Polypropylene film 680pF/50V	CQ93P1H681J
C166	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
C167	256 1058 971	Metallized 0.1μF/50V	CF93A1H104J (JL)
C170	257 0002 921	Ceramic chip 10 pF/50V	CC73SL1H100D
C171	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C172	257 0001 993	Ceramic chip 7.0 pF/50V	CC73SL1H7R0C
C173	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C174	257 0001 993	Ceramic chip 7.0 pF/50V	CC73SL1H7R0C
C175	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C176,177	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C178	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C179	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C180	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C181	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C182	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C183,184	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C185	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C186	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C188	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C189	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C190	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C191	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102K
C192,193	257 0503 967	Ceramic chip 15pF/50V	CC73CH1H150J
C194	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102K
C195	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C196	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102K
C199,200	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104Z
C201	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C202	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C203	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C204,205	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C206	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C207	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C208	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102K
C209	257 0507 992	Ceramic chip 390pF/50V	CC73CH1H391J
C210	257 0506 951	Ceramic chip 100pF/50V	CC73CH1H101J
C212	254 4305 955	Electrolytic 0.68μF/50V	CE04W1HR68M (SRE)
C213	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C214	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C215,216	254 4299 906	Electrolytic 10μF/16V	CE04W1C100M (SRE)

Ref. No.	Part No.	Part Name	Remarks
C217	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C218	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C219	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104Z
C220	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C221,222	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104Z
C223~226	257 0507 976	Ceramic chip 330pF/50V	CC73CH1H331J
C227	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102K
C228	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C229	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104Z
C230	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102K
C231	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C232	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C233,234	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C235,236	254 4299 906	Electrolytic 10μF/16V	CE04W1C100M (SRE)
C237	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C238	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C239,240	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C241	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104Z
C242	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102K
C244,245	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102K
C247	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C248	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104Z
C249,250	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C253~255	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104Z
C256	254 4538 942	Electrolytic 100μF/16V	CE04W1C101M (SMG/RE3)
C257~258	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C259	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104Z
C260~263	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C264,265	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104Z
C267,268	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C269,270	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C271	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104Z
C272	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C273	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104Z
C274	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C275	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102K
C276~279	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C280	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102K
C281,282	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C283	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104Z
C284	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C285	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104Z
C286	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C287	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104Z
C288	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102K
C289,290	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C291	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104Z
C292~294	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C295,296	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102K
C297,298	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C299	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104Z

Ref. No.	Part No.	Part Name	Remarks
C300	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C301	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102K
C302	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104Z
C303	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102K
C304	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C305	254 4302 974	Electrolytic 100μF/10V	CE04W1A101M (SRE)
C306	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C307	257 0512 903	Ceramic chip 0.1μF/25V	CK73F1E104Z
C308	257 0511 904	Ceramic chip 0.01μF/50V	CK73F1H103Z
C309	257 0509 929	Ceramic chip 1000pF/50V	CK73B1H102K
C314	247 2018 903	Carbon chip 0ohm 1/16W	RM73B--0R0K

OTHER PARTS GROUP				Q'ty
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 1050 036	27P FFC connector base (9603F)		1
FB101~104	235 0049 900	Beads inductor		4
FB105~107	235 0130 903	EMI filter (11A121)		3
FB110	235 0130 903	EMI filter (11A121)		1
FB111,112	235 0048 901	EMI filter (103)		2
FB114,115	235 0049 900	Beads inductor		2
FB116~128	235 0130 903	EMI filter (11A121)		11
FB129	235 0049 900	Beads inductor		1
FB130,131	235 0130 903	EMI filter (11A121)		2
FB132	235 0086 905	EMI filter (101)		1
FB133	235 0137 906	Chip EMIFIL (HF50ACC)		1
L101	235 0060 950	Inductor 10μH		1
TP101	205 0343 061	6P connector base (KR-PH)		1
X101	399 0262 900	Ceramic resonator	CST12.288MTW	1
X102	399 0618 004	Crystal 24.57MHz		1
X103	399 0595 004	Crystal 8.4672MHz		1

GU-3226A 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 1346 905	IC TC74HC08AF	
IC604	262 1647 905	IC MN1382-S	
IC608,609	263 0809 006	IC NJM7805FA (S)	
IC611~613	263 0809 006	IC NJM7805FA (S)	
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	
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 0645 949	Zener diode MTZJ27A	
LD801	393 9543 907	LED SLR-325VC	Red
LD802,803	393 9453 932	LED SEL1810A	Orange
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
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 0004 977	Carbon chip 75ohm 1/10W	RM73B--750J
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 0004 977	Carbon chip 75ohm 1/10W	RM73B--750J
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 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
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 0012 966	Ceramic chip 0.01µF/50V	CK73F1H103Z
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 4538 955	Electrolytic 220µF/16V	CE04W1C221M(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 4538 955	Electrolytic 220µF/16V	CE04W1C221M(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)
C649	253 9039 906	Ceramic 0.1µF/25V	CK45B1E104Z
C650	254 4536 931	Electrolytic 220µF/10V	CE04W1A221M(SMG/RE3)
C651	253 9039 906	Ceramic 0.1µF/25V	CK45B1E104Z

Ref. No.	Part No.	Part Name	Remarks
C652	254 4536 931	Electrolytic 220μF/10V	CE04W1A221M(SMG/RE3)
C653,654	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C655	254 4442 708	Electrolytic 6800μF/16V	CE04W1C682M (SMG)
C656	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C657	254 4442 708	Electrolytic 6800μF/16V	CE04W1C682M (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 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C703	254 4538 955	Electrolytic 220μF/16V	CE04W1C221M(SMG/RE3)
C704	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
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 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
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 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C721	254 4538 955	Electrolytic 220μF/16V	CE04W1C221M(SMG/RE3)
C722	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
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 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
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
⚠C851	253 6022 707	Ceramic 0.01 μF/250V (AC)	CK45F2EAC103M

Ref. No.	Part No.	Part Name	Remarks	Q'ty
OTHER PARTS GROUP				
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
W703	203 0541 003	1P SIN cord Ass'y		1

GU-3287 REMOTE P.W.B. UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC101	262 2790 000	IC MN102L62GAA	
IC103	262 2090 904	IC MAX202CSE	
IC104	262 2452 908	IC MN1382-R	
IC201	262 2459 008	IC MN12510F	
IC301	262 2459 008	IC MN12510F	
D101	276 0438 910	Diode MA151A	
D201~204	276 0438 910	Diode MA151A	
D301~304	276 0438 910	Diode MA151A	
LD201	393 9543 907	LED SLR-325VC	Red
LD202,203	393 9543 910	LED SLR-325MC	Green
LD301	393 9543 907	LED SLR-325VC	Red
LD302,303	393 9543 910	LED SLR-325MC	Green
FL201	393 8032 008	FLT (10-MT-109GK)	
FL301	393 8032 008	FLT (10-MT-109GK)	
RESISTORS GROUP			
R101	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R102	247 0005 989	Carbon chip 220ohm 1/10W	RM73B--221J
R103	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R105~128	247 0009 985	Carbon chip 10kohm 1/10W	RM73B--103J
R188	247 0007 958	Carbon chip 1.1kohm 1/10W	RM73B--112J
R201~203	247 0006 946	Carbon chip 390ohm 1/10W	RM73B--391J
R204~212	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R213	247 0003 949	Carbon chip 22ohm 1/10W	RM73B--220J
R214~218	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
R301~303	247 0006 946	Carbon chip 390ohm 1/10W	RM73B--391J
R304~312	247 0012 927	Carbon chip 100kohm 1/10W	RM73B--104J
R313~316	247 0018 905	Carbon chip 0ohm 1/10W	RM73B--0R0K
VR201	211 0908 003	Slide volume	
VR301	211 0908 003	Slide volume	
CAPACITORS GROUP			
C103	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C104	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C105	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C106	254 4538 939	Electrolytic 47μF/16V	CE04W1C470M (SMG)
C107,108	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z

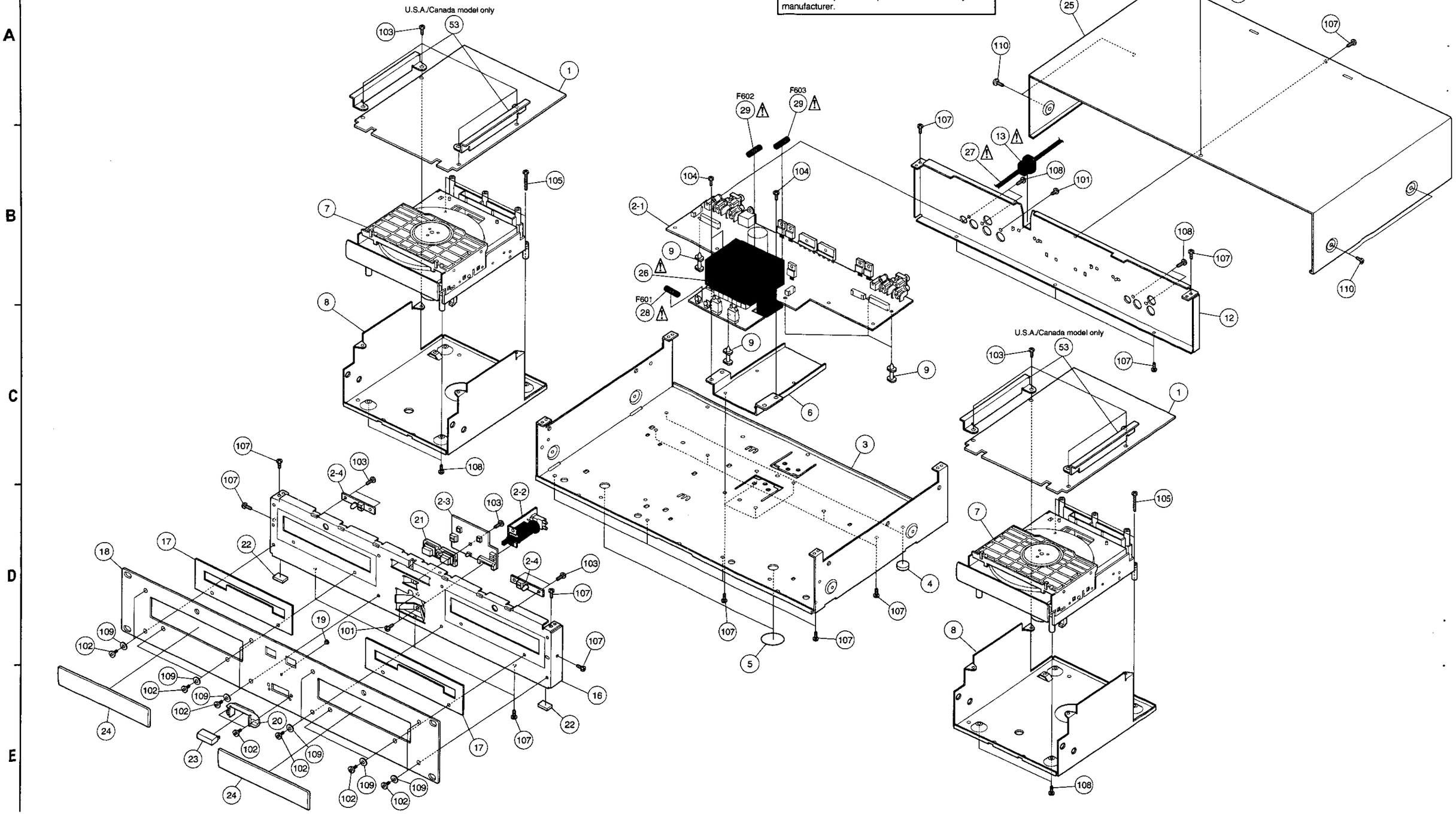
Ref. No.	Part No.	Part Name	Remarks
C109	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C110	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C111	254 4533 918	Electrolytic 47μF/6.3V	CE04W0J470M (SMG)
C112	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C113	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C115~118	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C119~123	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C124	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C126	254 4522 954	Electrolytic 47μF/35V	CE04W1V470M (SMG)
C128	254 4538 939	Electrolytic 47μF/16V	CE04W1C470M (SMG)
C133	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C134	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C201,202	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C203	257 1015 920	Ceramic chip 0.1μF/50V	CK73F1H104Z
C204	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C205	257 2002 961	Tantalum E. 47pF/7V	CS77B--470M
C206	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C207	257 0002 921	Ceramic chip 10 pF/50V	CC73SL1H100D
C208	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C209	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C215,216	257 0003 933	Ceramic chip 30pF/50V	CC73SL1H300J
C221~223	257 0003 988	Ceramic chip 47pF/50V	CC73SL1H470J
C301,302	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C303	257 1015 920	Ceramic chip 0.1μF/50V	CK73F1H104Z
C304	257 0014 935	Ceramic chip 0.1μF/25V	CK73F1E104Z
C305	257 2002 961	Tantalum E. 47pF/7V	CS77B--470M
C307	257 0002 921	Ceramic chip 10 pF/50V	CC73SL1H100D
C308	257 0012 966	Ceramic chip 0.01μF/50V	CK73F1H103Z
C309	257 0008 983	Ceramic chip 1000pF/50V	CK73B1H102K
C321~323	257 0003 988	Ceramic chip 47pF/50V	CC73SL1H470J

OTHER PARTS GROUP				Q'ty
CX111	205 0877 003	8P MD base (F-S)		1
CX181,182	205 0850 033	18P connector base (BTMK-P)		2
CY181,182	205 0849 031	18P connector base (BTMK-S)		2
FB101~103	235 0049 900	Beads inductor		3
FB106,107	235 0049 900	Beads inductor		2
FB108	235 0130 903	EMI filter (11A121)		1
FB109	235 0049 900	Beads inductor		1
FB201	235 0130 903	EMI filter (11A121)		1
FB301	235 0130 903	EMI filter (11A121)		1
S201~211	212 5604 907	Tact switch		11
S212	212 0402 104	Jog-shuttle		1
S213,214	212 5604 907	Tact switch		2
S301~311	212 5604 907	Tact switch		11
S312	212 0402 104	Jog-shuttle		1
S313,314	212 5604 907	Tact switch		2

Ref. No.	Part No.	Part Name	Remarks	Q'ty
X101	399 0262 900	Ceramic resonator	CST12.288MTW	1
X201	399 0041 901	Ceramic resonator	CSA4.00MG	1
	461 0984 017	FL spacer		2

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

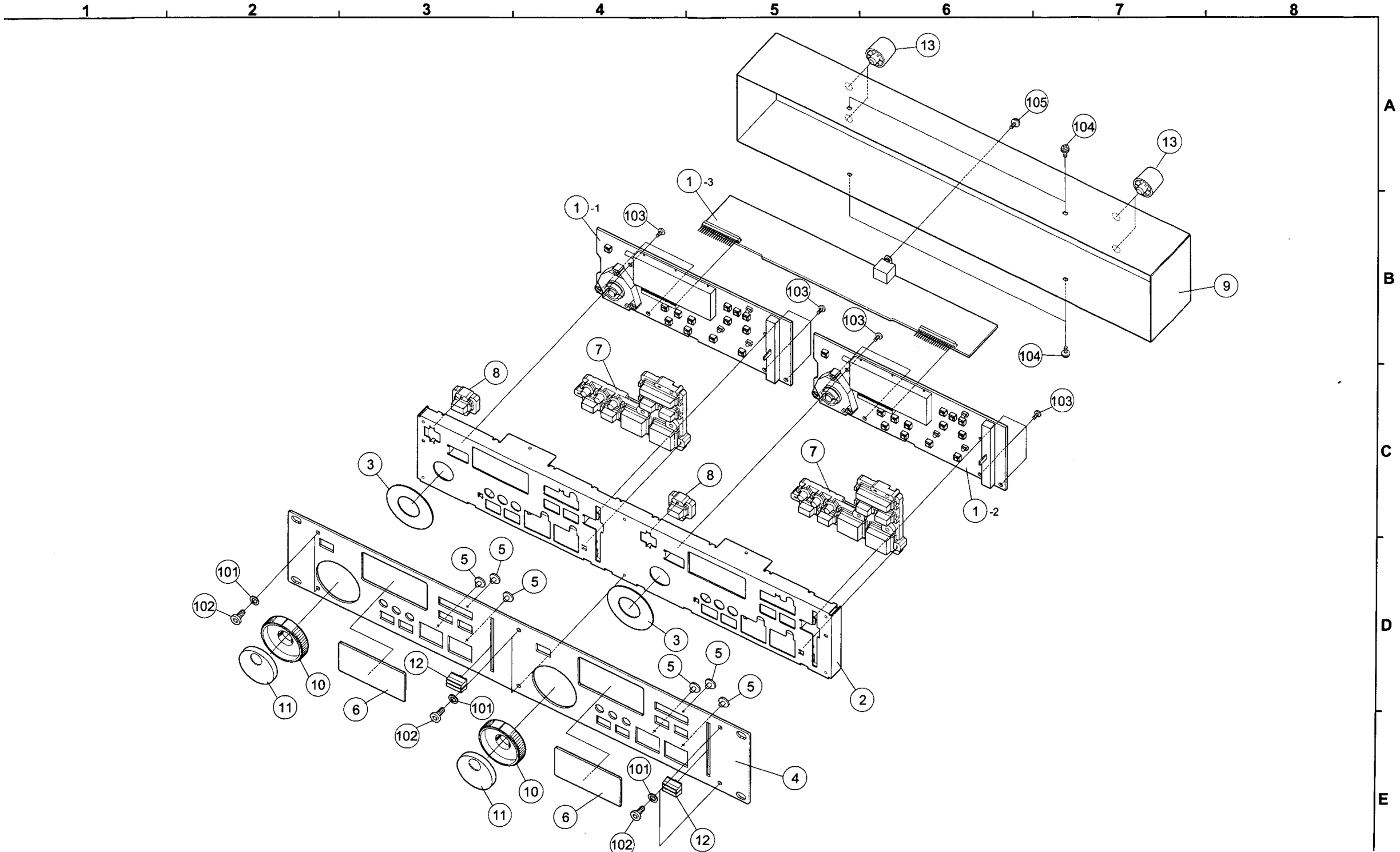
Note: The symbols in the column "Remarks" indicate the following destinations.
E3: U.S.A./Canada model EK: U.K. model
E2: Europe model

Ref. No.	Part No.	Part Name	Remarks	Q'ty
1	GU-3278	Main P.W.B. unit Ass'y		2
2	GU-3226A	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 226	Back panel		1
⚠ 13	445 0084 009	Cord bush	for E3	1
⚠ 13	445 0056 008	Cord bush	for E2/EK	1
16	441 1919 003	Front sub panel		1
17	415 0831 109	Blind sheet		2
18	144 2683 013	Front panel		1
19	146 1371 005	LED window		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 114	Loader panel		2
25	102 0425 253	Top cover		1
⚠ 26	233 5323 006	Power trans.		1
⚠ 27	206 2155 001	AC cord with connector E3	for E3	1
⚠ 27	206 2099 106	AC cord with connector E2	for E2	1
⚠ 27	206 2128 009	AC cord with connector EK	for EK	1
⚠ 28	206 1039 005	Fuse 630mA	F601, for E3	1
⚠ 28	206 1015 045	Fuse 315mA	F601, for E2/EK	1
⚠ 29	206 1039 076	Fuse 2.5A	F602/603, for E3	2
⚠ 29	206 1015 032	Fuse 2.5A	F602/603, for E2/EK	2
★ 30	445 8028 009	Cord holder		1
★ 31	445 0033 005	Wire clamp band		2
★ 32	203 8440 025	5P PH-PH connector cord	CX051 to Mecha.	2
★ 33	204 2469 050	8P PH-PH connector cord	CX083 to Mecha.	2
★ 34	204 0479 042	6P connector cord (Red)	CX061 to Mecha.	2
★ 35	203 8440 038	5P PH-PH connector cord (Red)	CX052 to Mecha.	2
★ 36	009 0133 042	27P FFC	CX271 to CY271	2
★ 37	204 2661 049	8P PH-PH connector cord	CX081 to CY081	2
★ 38	203 5132 080	3P VH connector cord	CX021 to CY021	1
★ 39	513 2065 002	E2 laser caution	for E2	2
★ 40	513 3465 009	Fuse label (E3)	for F601, for E3	1
★ 40	513 3402 033	Fuse label	for F601, for E2/EK	1
★ 41	513 3465 012	Fuse label (E3)	for F602/603, for E3	2
★ 41	513 3402 046	Fuse label	for F602/603, for E2/EK	2
★ 42	513 3335 016	Fuse caution label	for E3	1
★ 43	513 3161 099	Rating sheet	for E3	1
★ 43	513 3161 086	Rating sheet	for E2/EK	1
★ 44	513 2303 007	Version label		1
★ 45	513 2728 006	Caution sheet (PU)		1
★ 46	513 1519 009	Manufacture date label	for E3	1
★ 47	513 2521 009	CE label	for E2/EK	1
★ 48	513 3160 100	E3 label	for E3	1
★ 49	513 0985 003	Inst. label	for E2/EK	1
★ 50	513 3384 009	C-UL mark US (813)	for E3	1
★ 51	513 3253 004	C-TICK label	for E2/EK	1
★ 52	513 3159 001	FCC/class B caution	for E3	1
53	412 4619 001	Earth bracket	for E3	4
SCREWS & NUTS				
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
107	473 7015 018	Screw 3×8 CBTS (S)-B		26
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 RC-47 REMOTE CONTROL UNIT

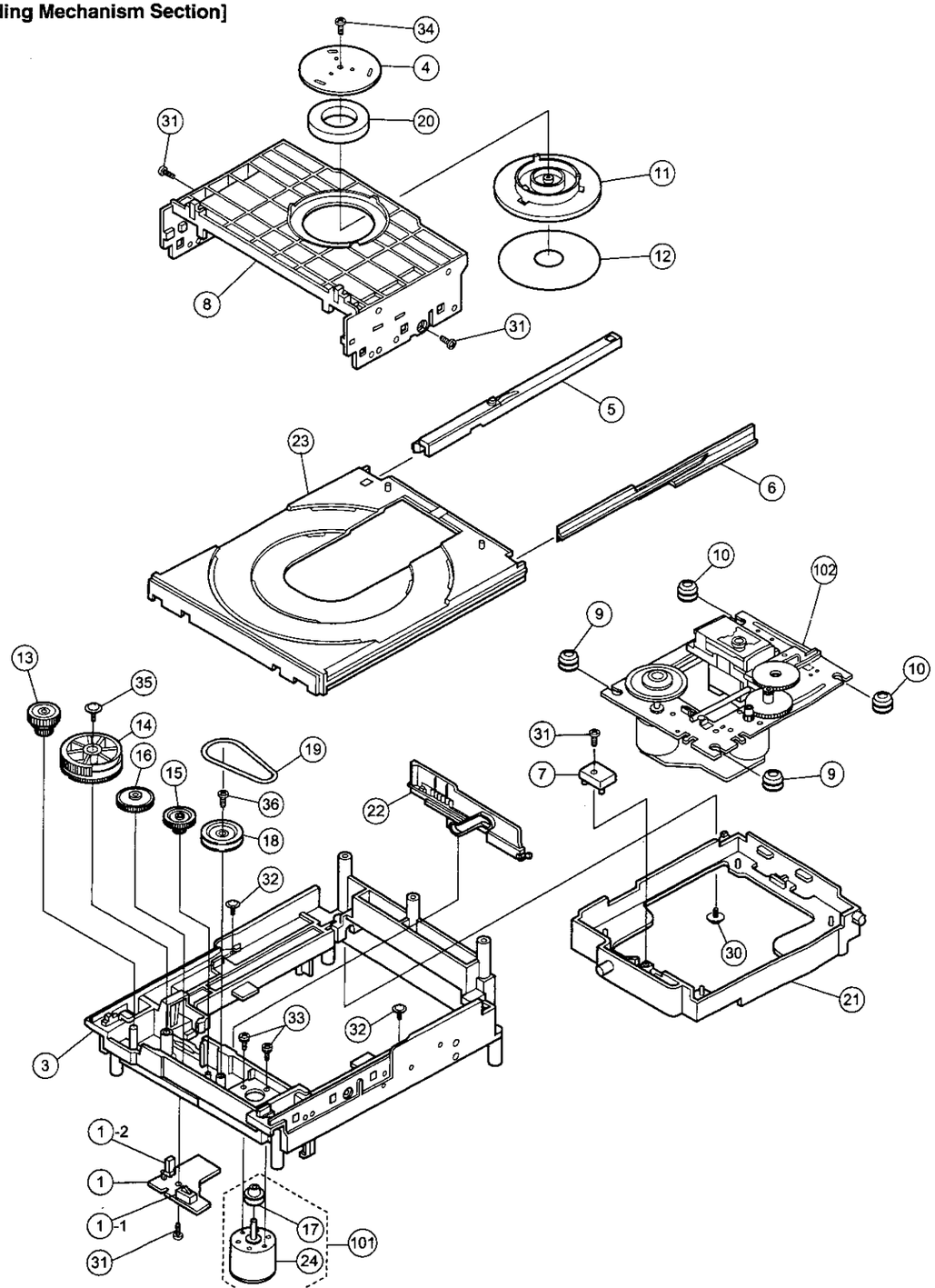
Ref. No.	Part No.	Part Name	Remarks	Q'ty
1	GU-3287	Remote P.W.B. unit Ass'y		1
1-1		Display1 unit		
1-2		Display2 unit		
1-3		CPU unit		
2	441 1859 105	RC front sub panel		1
3	122 0229 107	Blind sheet		2
4	144 2597 015	RC front panel		1
5	146 1371 005	LED Window		6
6	146 2068 100	Window		2
7	119 0095 005	Rubber key (A)		2
8	119 0096 004	Rubber key (C)		2
9	105 1276 002	Cover		1
10	112 0815 006	Shuttle ring		2
11	112 0816 018	Jog dial		2
12	113 1840 109	Slide knob		2
13	104 0270 006	Foot		4
★ 14	513 3349 112	Caution label		1
SCREWS & NUTS				
101	475 1178 009	Washer 3W-B		6
102	471 9050 020	Screw 3×6 FHHS MFZNII-B		6
103	473 7002 005	Screw 3×6 CBTS (S)-Z		12
104	471 8010 113	Special screw		4
105	471 1832 000	Screw M3 SEMS		1

EXPLODED VIEW OF REMOTE CONTROL UNIT

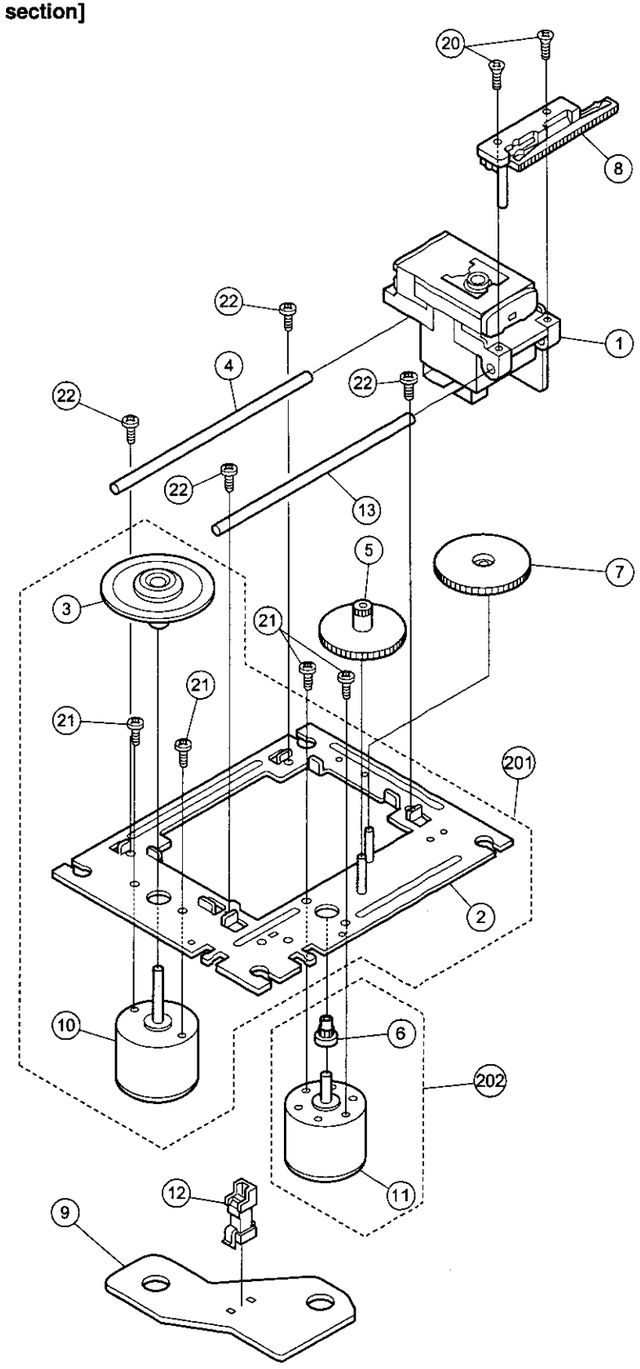


EXPLODED VIEW OF CD MECHANISM UNIT

[Loading Mechanism Section]



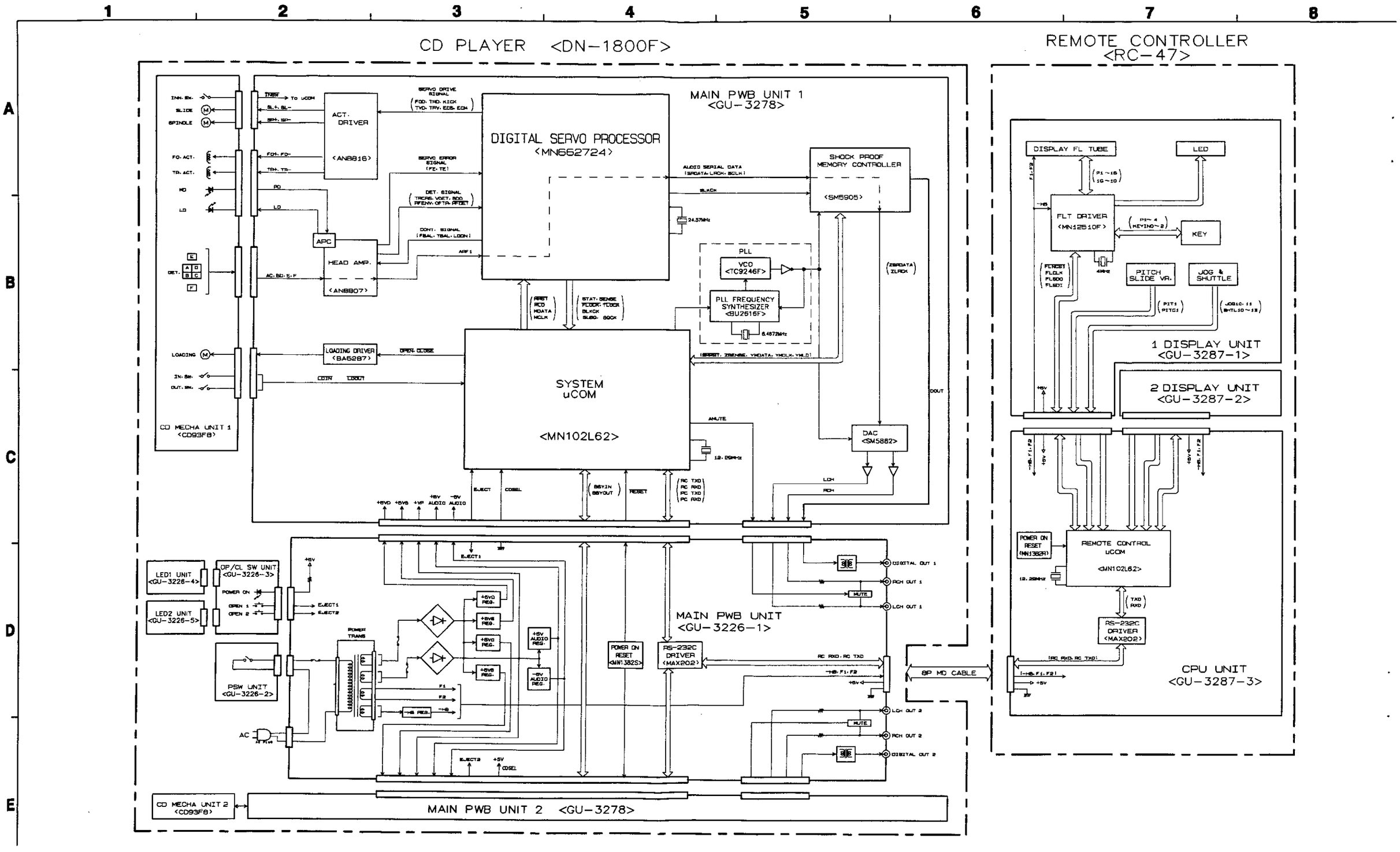
[Traverse section]



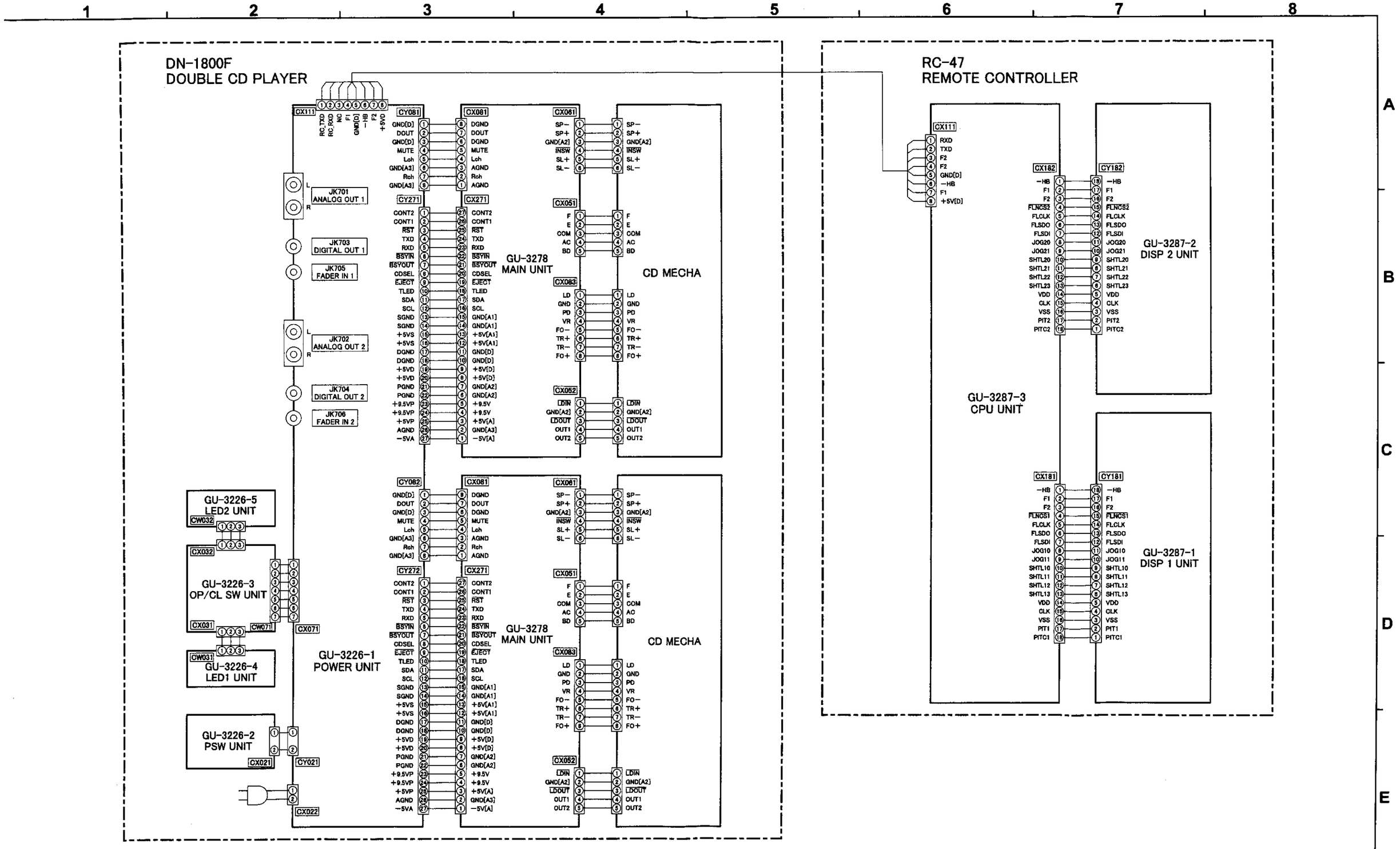
PARTS LIST OF MECHANISM UNIT (CD93F8)

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
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

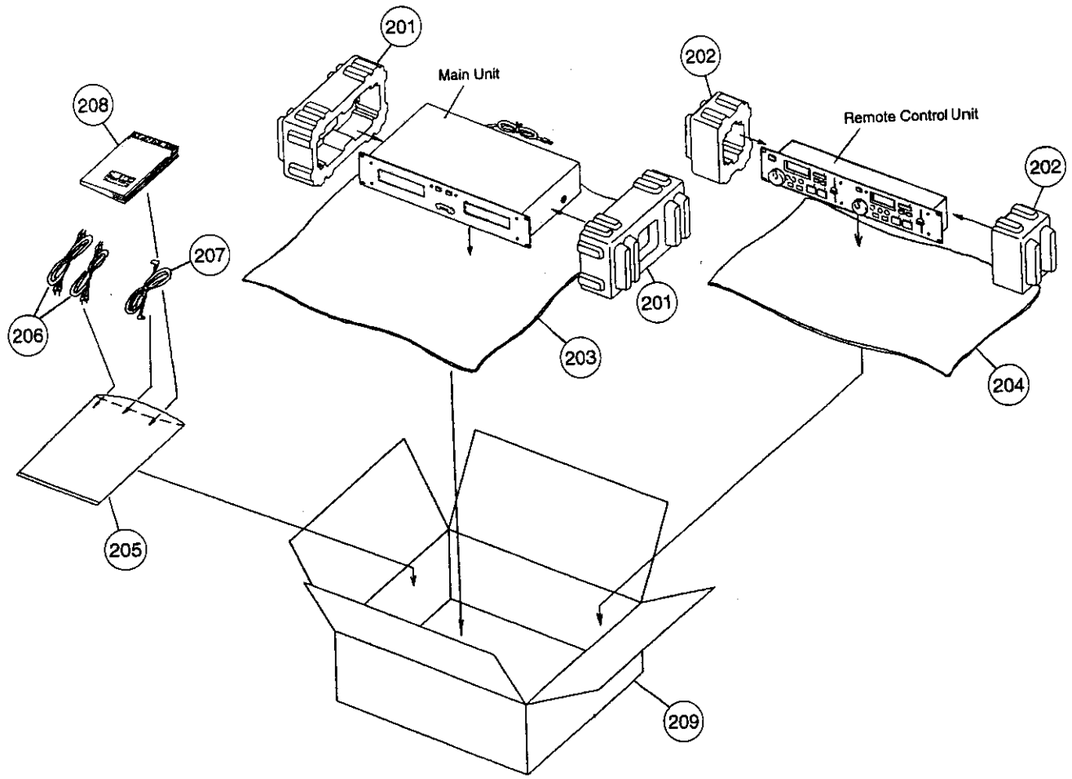
BLOCK DIAGRAM



WIRING DIAGRAM



PACKING & ACCESSORIES



PARTS LIST OF PACKING & ACCESSORIES

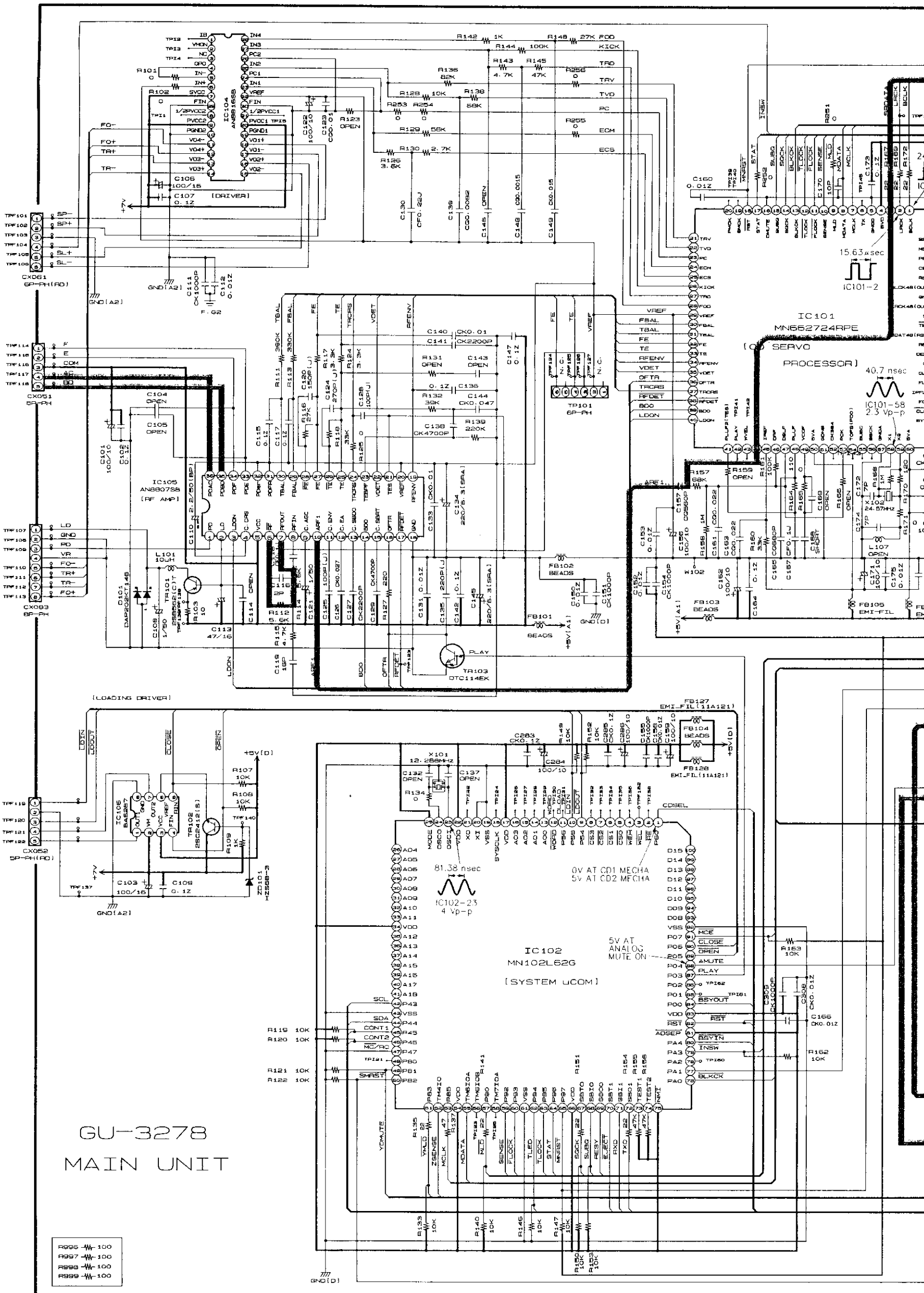
Note: The symbols in the column "Remarks" indicate the following destinations.
E3: U.S.A./Canada model E1: U.K. model
E2: Europe model

Ref. No.	Part No.	Part Name	Remarks	Q'ty
201	503 1001 400	Cushion	for main unit	2
202	503 1010 307	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 3584 007	Instruction manual		1
209	501 1982 099	Carton case		1
★ 210	513 3348 113	Caution label (Cord)		1
★ 211	513 2303 007	Version label		2
★ 212	515 0692 101	DEL warranty com.	for E3	1

SCHEMATIC DIAGRAMS (1/3)

1 2 3 4 5 6



IC101
MN6627248PE
[CD SERVO PROCESSOR]

IC102
MN102L62G
[SYSTEM uCOM]

IC103
SM5905AF
SHOCK PROOF MEMORY CONTROLLER

IC107
BU2616F

IC109
SM5882AS

TR103
DTC114EK

X101
12.288MHz

X102
24.576MHz

X103
8.4672MHz

TP101
6P-PH

81.38 nsec
IC102-23
4 Vp-p

0V AT CD1 MECHA
5V AT CD2 MECHA

5V A1
ANALOG
MUTE ON

PITCH OFF
IC103-15

22.68 μsec
IC103-55
2.3 Vp-p

40.7 nsec
IC101-58
2.3 Vp-p

15.63 μsec
IC101-2

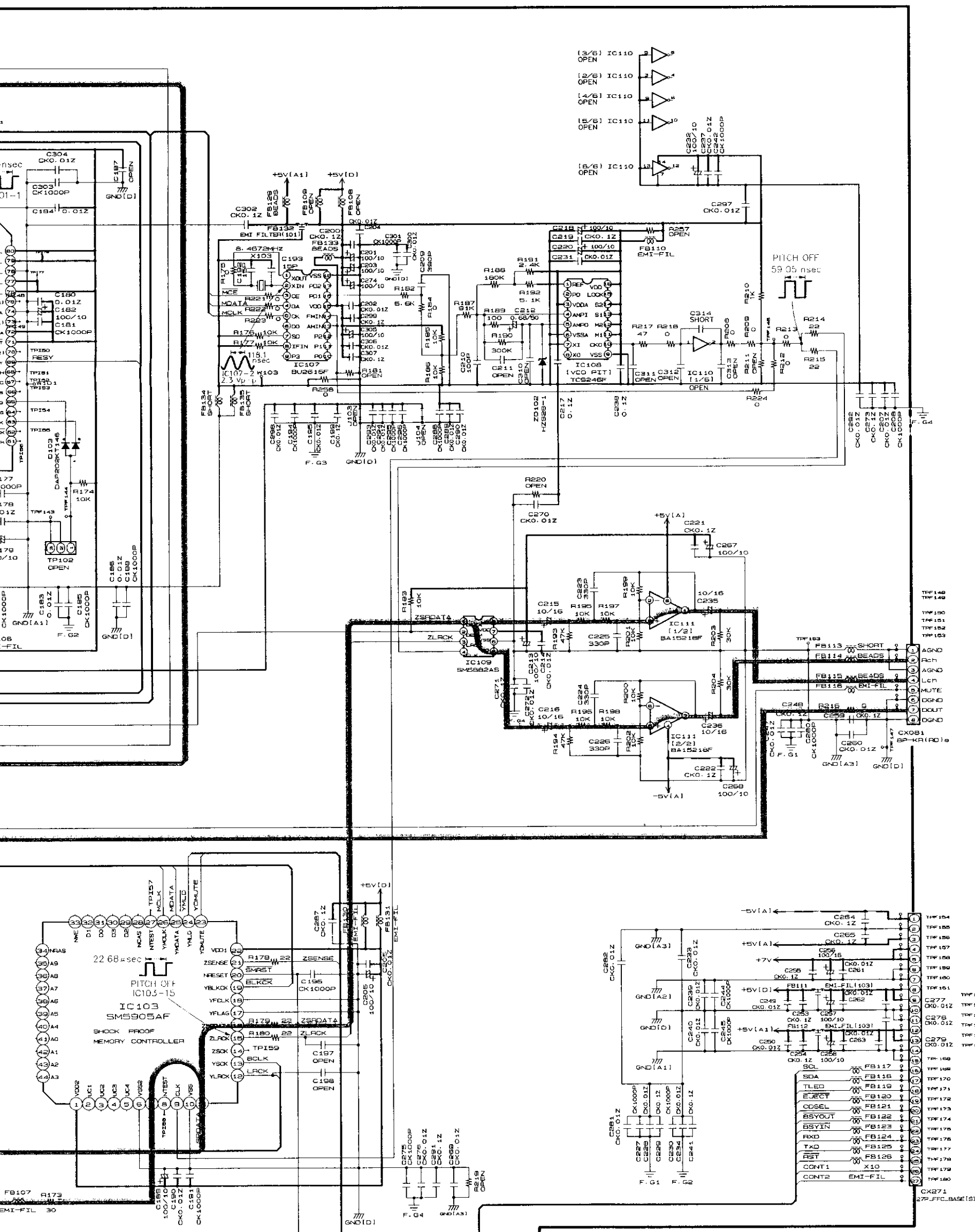
244nsec
IC101-1

118.1 nsec
IC107-2 W103
2.3 Vp-p

+B LINE
-B LINE
SIGNAL LINE

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

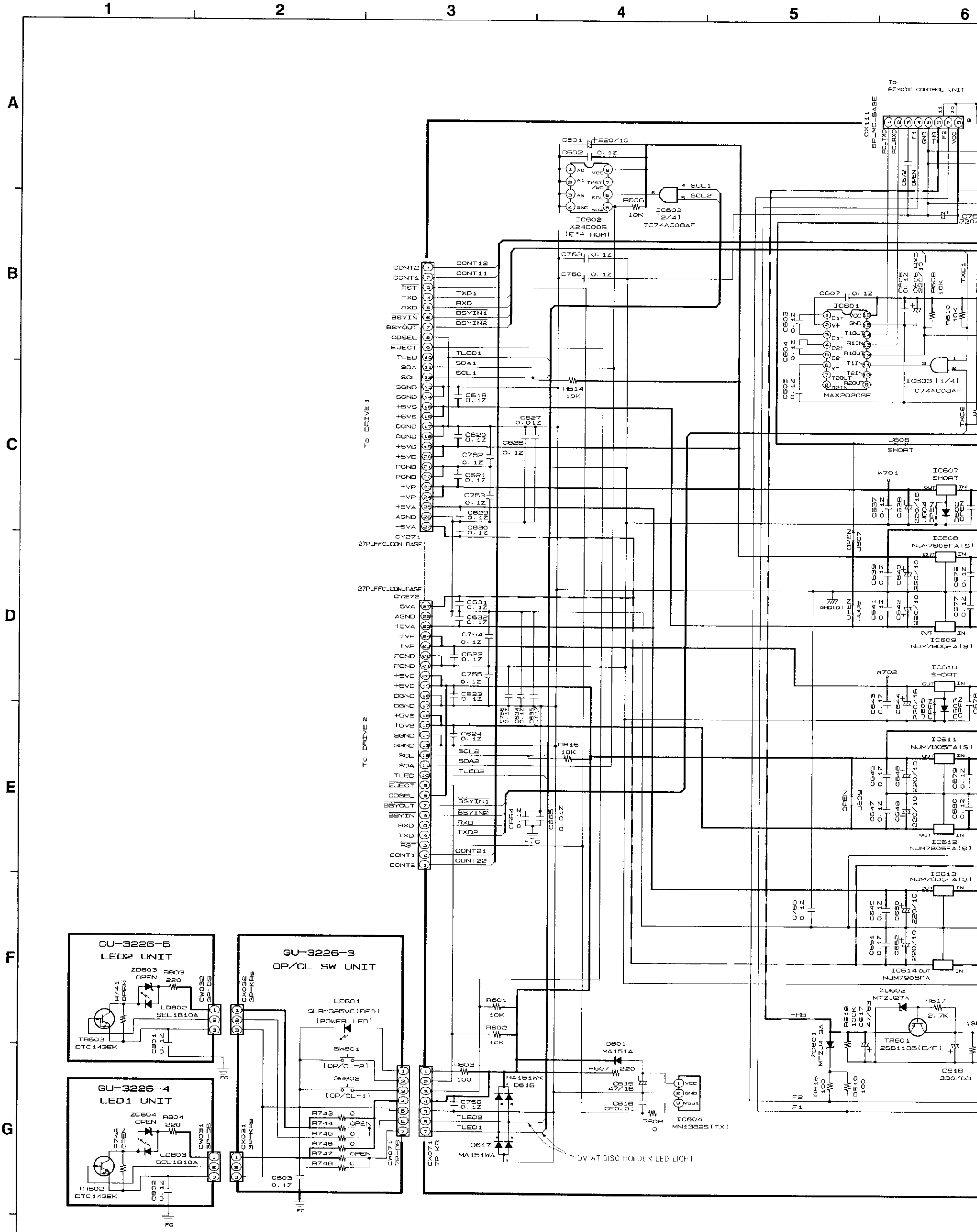
CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is detective.

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

SCHEMATIC DIAGRAMS (1/3)

GU-3278 MAIN UNIT

SCHEMATIC DIAGRAMS (2/3)



5 6 7 8 9

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 SHORT

IC608 NJM7805FA(S)

IC609 NJM7805FA(S)

IC610 SHORT

IC611 NJM7805FA(S)

IC612 NJM7805FA(S)

IC613 NJM7805FA(S)

IC614 NJM7905FA

IC604 MN1382S(TX)

To DRIVE2

To DRIVE1

5V AT ANALOG MUTE ON

CY082 8P-PH(RD)

CY081 8P-PH(RD)

TR701 2SD2144

TR702 2SD2144

TR703 2SD2144

TR704 2SD2144

TR705 DTA114EK

TR706 DTC114EK

TR707 DTA114EK

TR708 DTC114EK

TR601 2SB1185(E/F)

D701 1SS270A

D702 1SS270A

D604 D3SBA20

D605 D3SBA20

D610 1SR139-200T62

D611 1SR139-200T62

D612 MA151WK

D614 MA151WK

ZD601 MTZJ4.3A

ZD602 MTZJ27A

IC701 (1/3) TC7WU04F

IC701 (2/3)

IC701 (3/3)

IC702 (1/3) TC7WU04F

IC702 (2/3)

IC702 (3/3)

PT701 PULSE_TRANS

PT702 PULSE_TRANS

T601 POWER-TRANS

CONT11

CONT12

CONT21

CONT22

	DN1800F	
	E3	E2, EK
⚠ F601	630mA/ 125V	315mA/ 250V
⚠ F602	2.5A/ 125V	2.5A/ 250V
⚠ F603	2.5A/ 125V	2.5A/ 250V

	E3	E2, EK
⚠ J601	OPEN	OPEN
⚠ J602	SHORT	OPEN
⚠ J603	OPEN	SHORT

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

+B LINE

-B LINE

SIGNAL LINE

NOTICE

ALL RESISTANCE VALUES IN OHM. k=

ALL CAPACITANCE VALUES IN MICRO

EACH VOLTAGE AND CURRENT ARE M CONDITION.

CIRCUIT AND PARTS ARE SUBJECT TO NOTICE.

WARNING:

Parts marked with this symbol ⚠ Use ONLY replacement parts recomm

CAUTION:

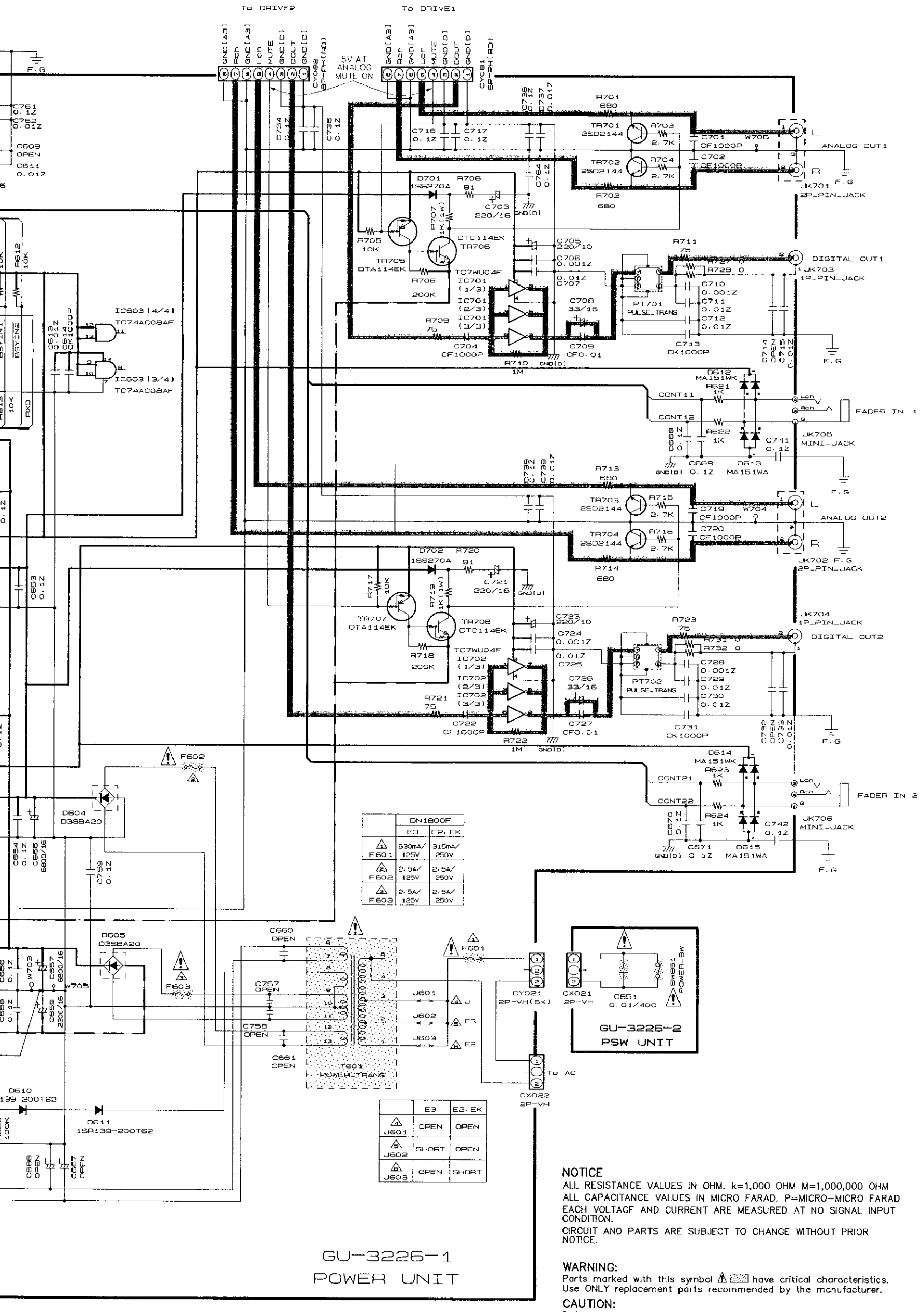
Before returning the unit to the cust leakage current check or (2) a line t current exceeds 0.5 milliamps, or if of the power cord is less than 460 k

WARNING:

DO NOT return the unit to the custo corrected.

HOLDER LED LIGHT

SCHEMATIC DIAGRAMS (2/3)



	DN1800F	
	E3	E2. EK
⚠1 F601	630mA/ 125V	315mA/ 250V
⚠2 F602	2.5A/ 125V	2.5A/ 250V
⚠3 F603	2.5A/ 125V	2.5A/ 250V

	E3	E2. EK
⚠4 J601	OPEN	OPEN
⚠5 J602	SHORT	OPEN
⚠6 J603	OPEN	SHORT

+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.

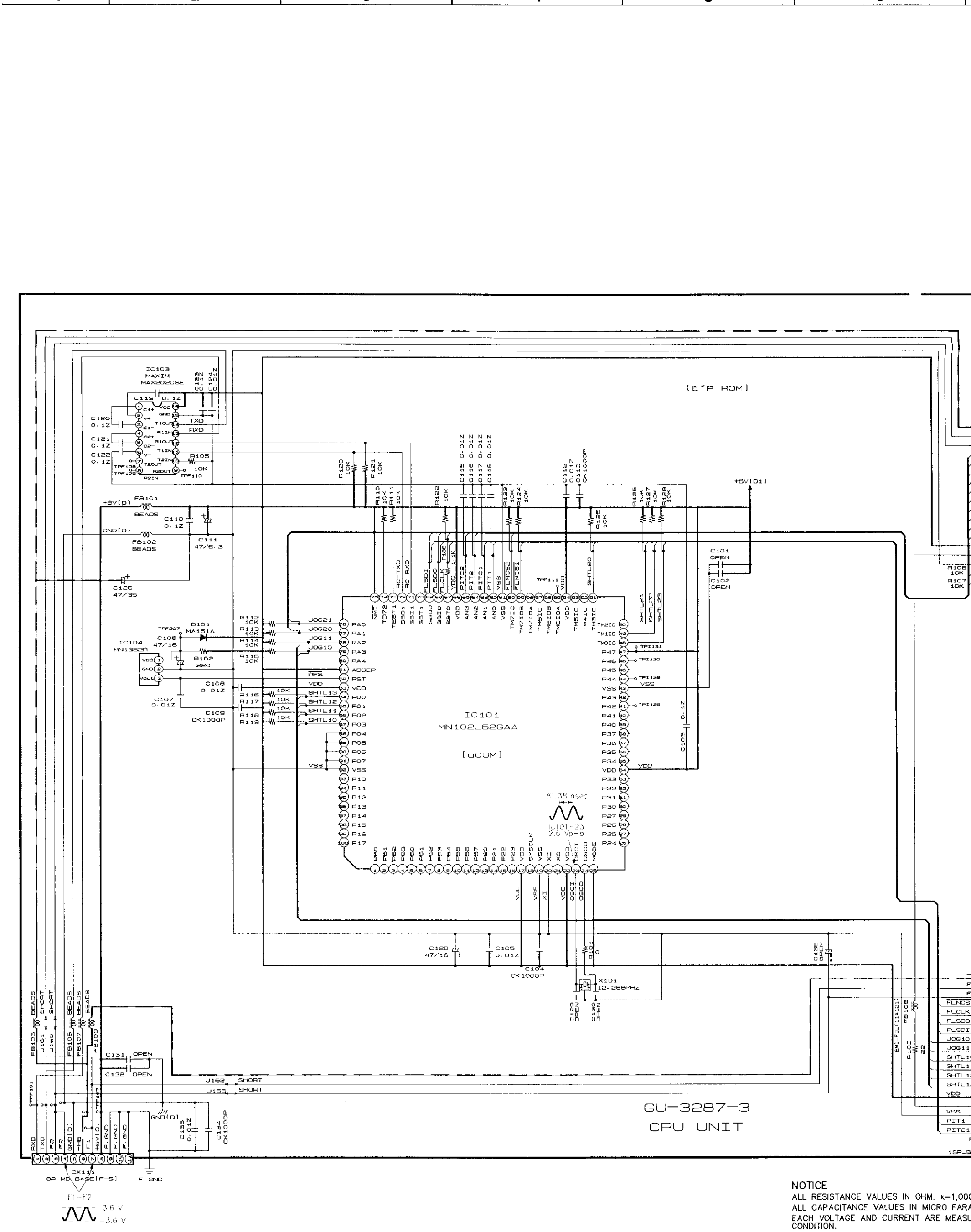
CAUTION:

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 (2/3)



NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000

ALL CAPACITANCE VALUES IN MICRO FARA

EACH VOLTAGE AND CURRENT ARE MEASU CONDITION.

CIRCUIT AND PARTS ARE SUBJECT TO CHA NOTICE.

3 4 5 6 7 8

[E²P ROM]

IC101
MN102L62GAA
[uCOM]

81.38 nsec
IC101-23
2.6 Vp-p

GU-3287-3
CPU 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.

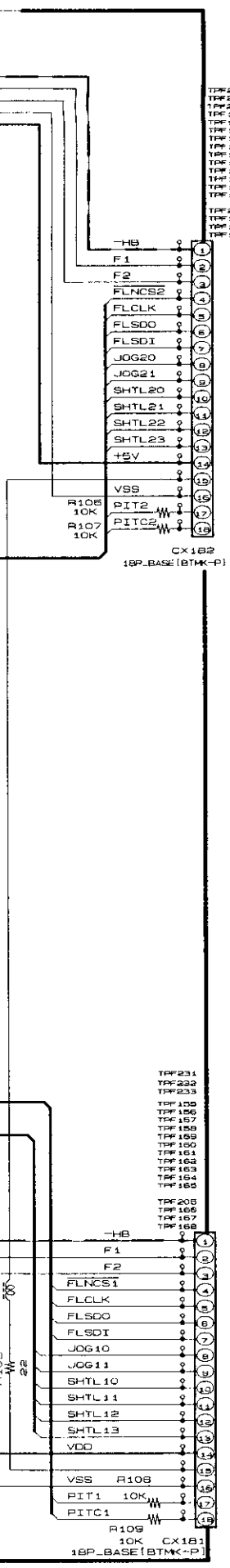
WARNING:
Parts marked with this symbol ⚠ Use ONLY replacement parts recom

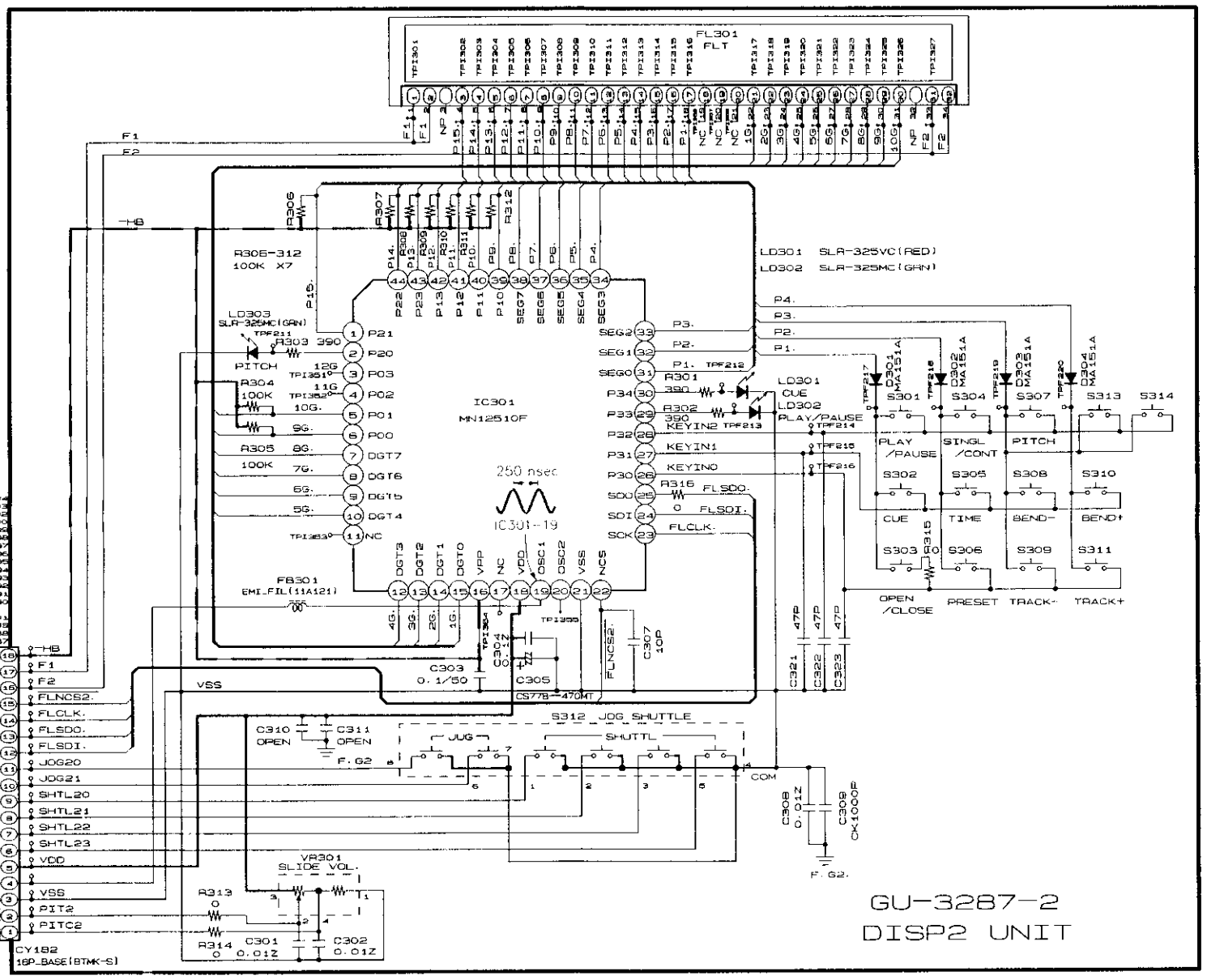
CAUTION:
Before returning the unit to the c leakage current check or (2) a lin current exceeds 0.5 milliamps, or of the power cord is less than 46

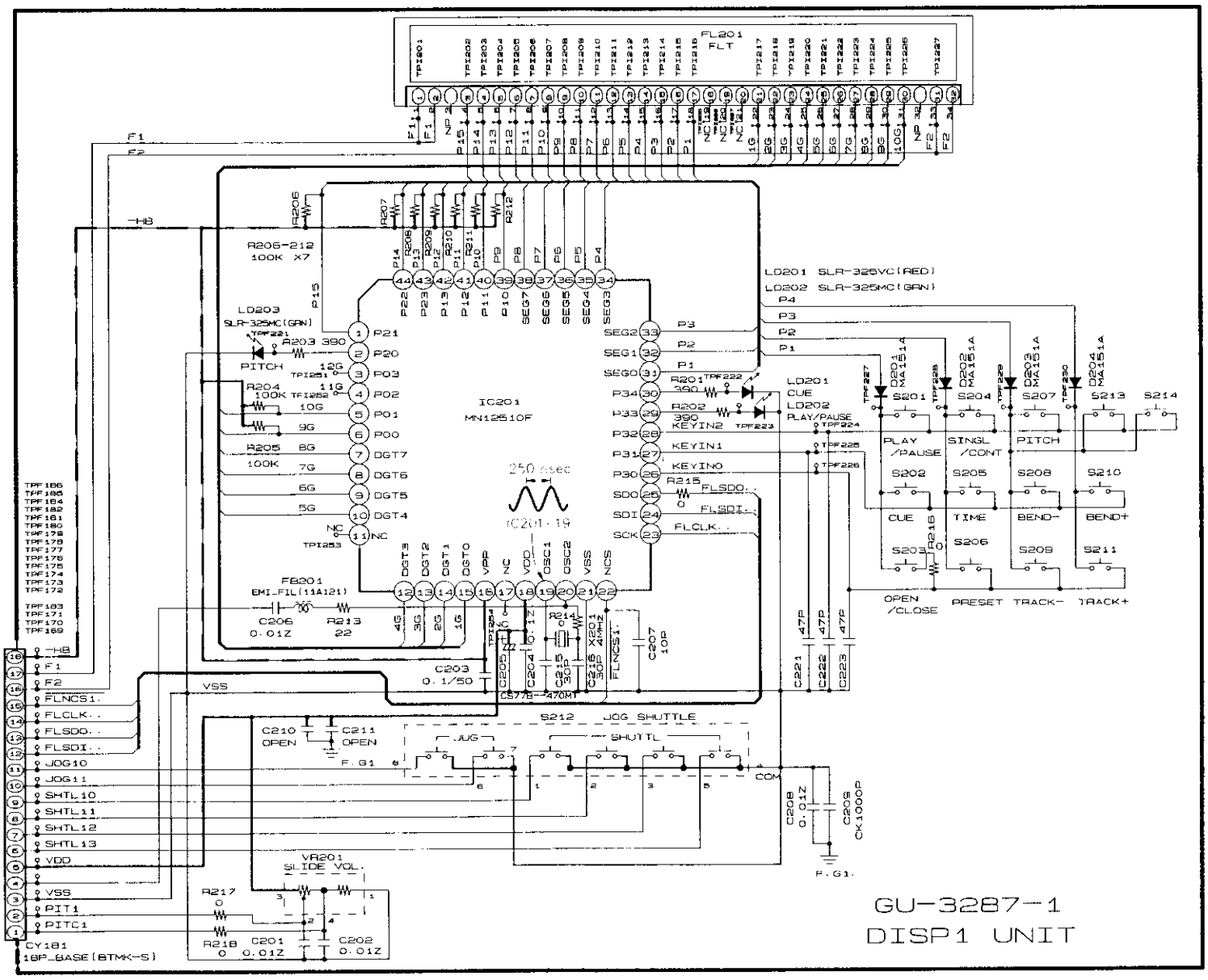
WARNING:
DO NOT return the unit to the cus corrected.

7 8 9 10 11

A B C D E F G H







GU-3287-2
DISP2 UNIT

GU-3287-1
DISP1 UNIT

: OHM. k=1,000 OHM M=1,000,000 OHM
IN MICRO FARAD. P=MICRO-MICRO FARAD
NT ARE MEASURED AT NO SIGNAL INPUT

UBJECT TO CHANGE WITHOUT PRIOR

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.

+B LINE

-B LINE

SCHEMATIC DIAGRAMS (3/3)
GU-3287 REMOTE UNIT