DENON

Hi-Fi Component

SERVICE MANUAL

MODEL DN-2000F

V05545

DOUBLE CD PLAYER

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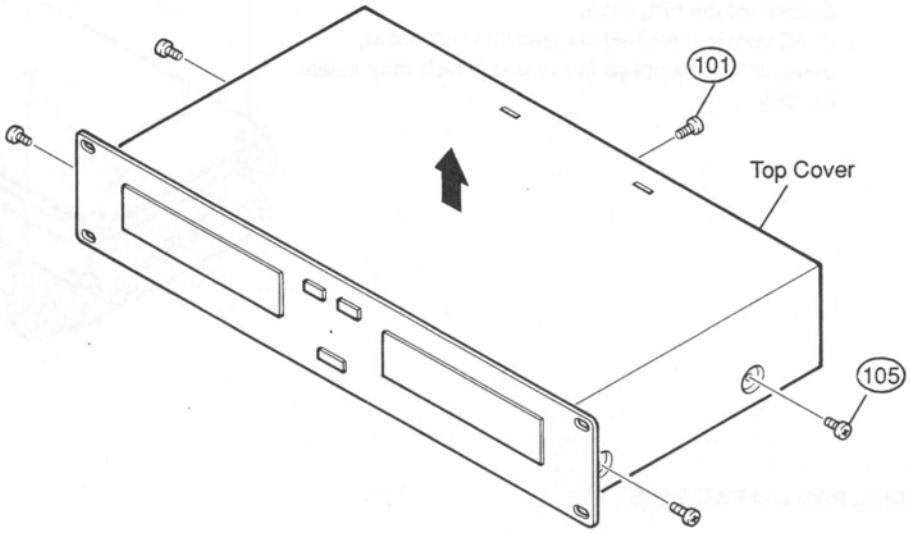
NIPPON COLUMBIA CO., LTD.

DISASSEMBLY

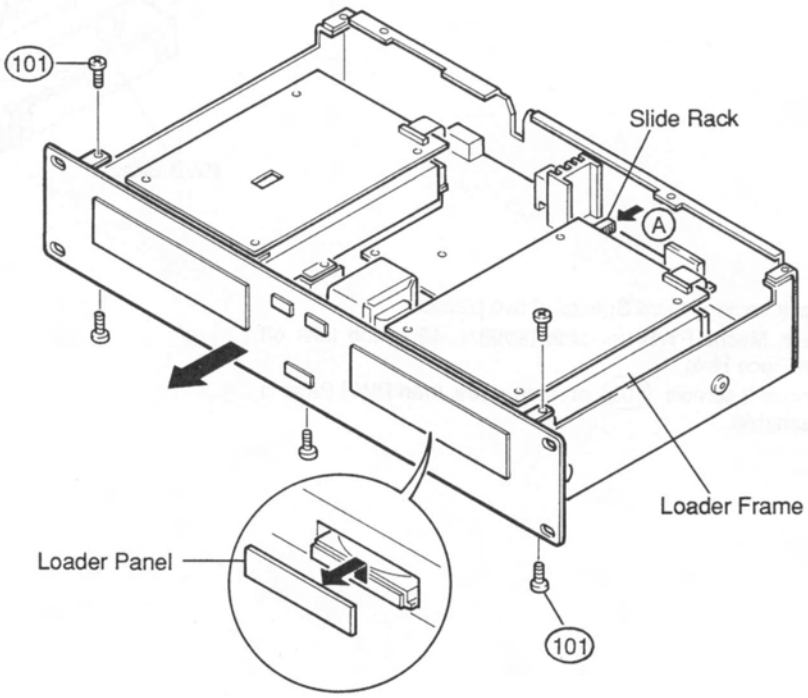
● **TOP COVER**

1. Remove 4 screws (105) on both sides, and 1 screw (101) on rear side.
2. Pull up TOP COVER.



● **FRONT PANEL**

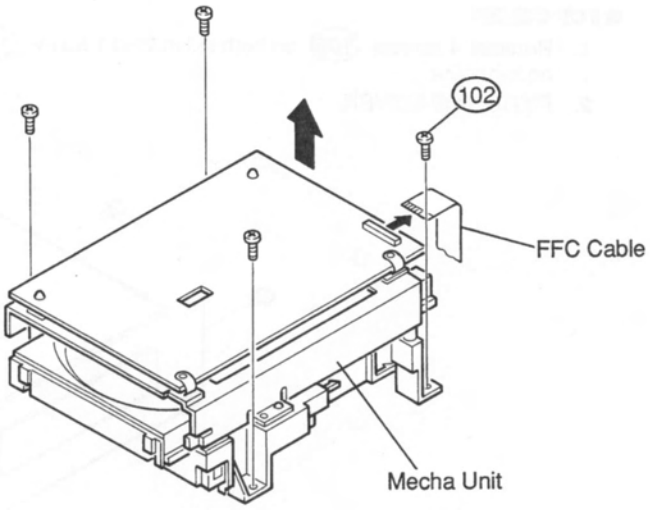
1. LOADER FRAME comes out when SLIDE RACK (A) of mechanism unit is pushed.
2. Pull up LOADER PANEL while pulling it towards front.
3. Remove 2 upper screws (101) and 3 lower screws (101)
4. Detach FRONT PANEL.



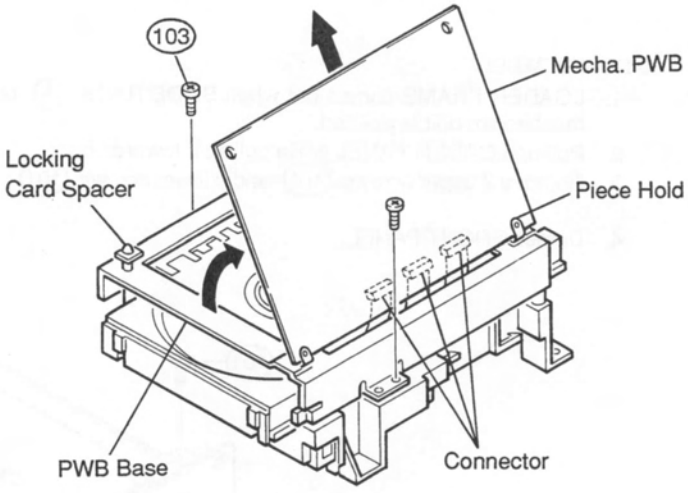
● **MECHANISM UNIT**

1. Disconnect FFC cable.
2. Remove 4 screws (102) .

Note : ● Do not pull out aslant to prevent FFC cable damage.
● Do not fail to pull AC cord from wall outlet before disconnect the FFC cable .
IF AC cord is remained plugged into wall outlet, power is kept supplied in the unit, which may cause danger.



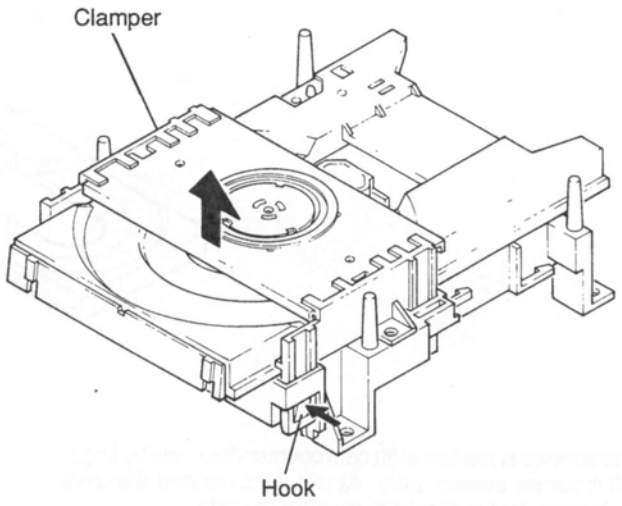
● **MECHA. PWB and PWB BASE**



1. Unlock Locking Card Spacer at two places.
2. Rotate Mecha.PWB upwards (approx. 45°), and take off from Piece Hold.
3. Remove 2 screws (103) on both sides, then PWB Base is detachable.

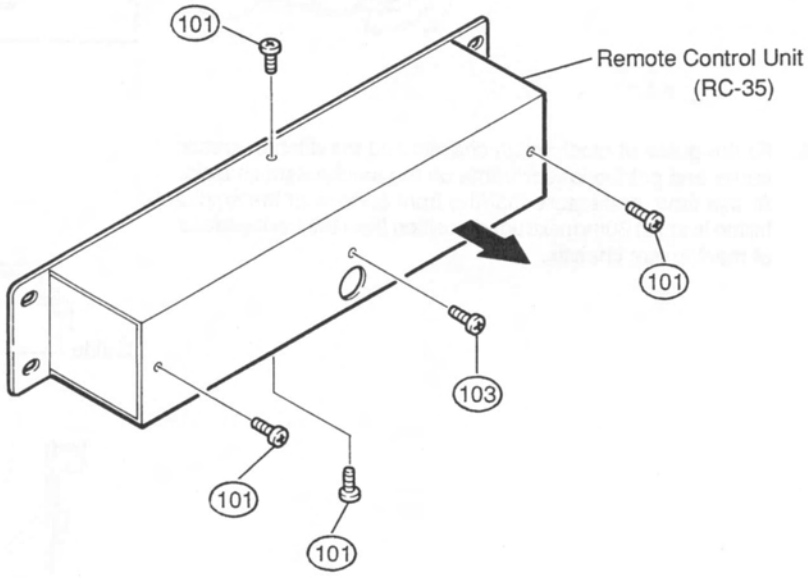
● **CLAMPER**

Pull clamper and undo 4 hooks.



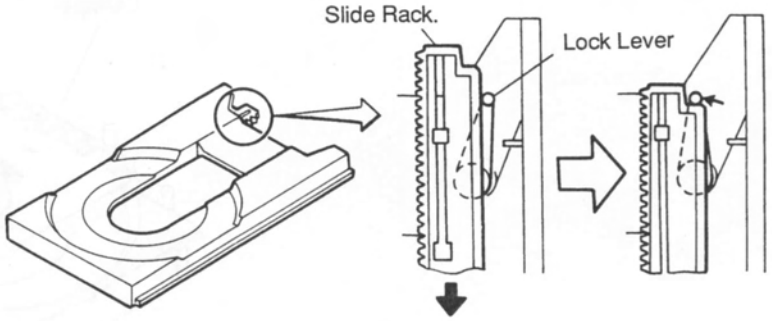
● **COVER (REMOTE CONTROL UNIT)**

1. Remove 5 screws (1 (103) and 4 (101)).

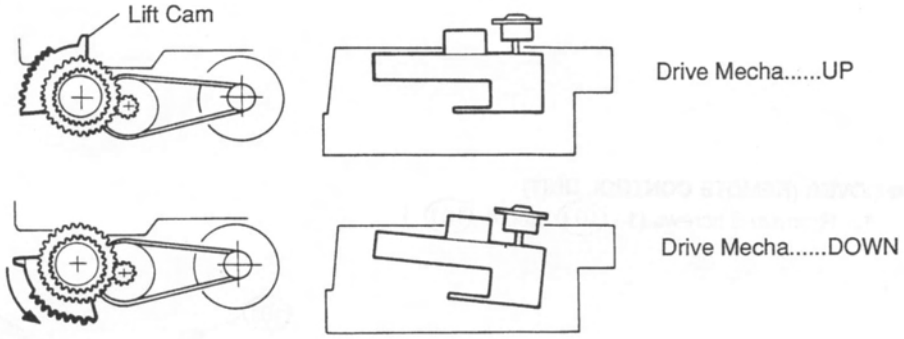


LOADER FRAME ASSEMBLING

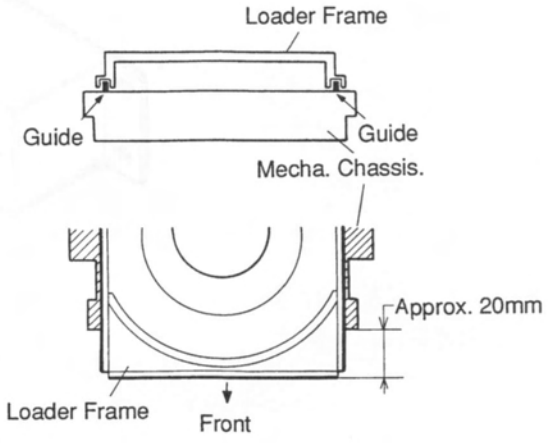
1. Slide the slide rack located inner side of the loader frame, and set the lock lever as shown in the below figure.



2. Rotate the gear portion of lift cam counterclockwise by finger until it comes stopper part. At this time, confirm the drive mechanism that is placed in lowered position.

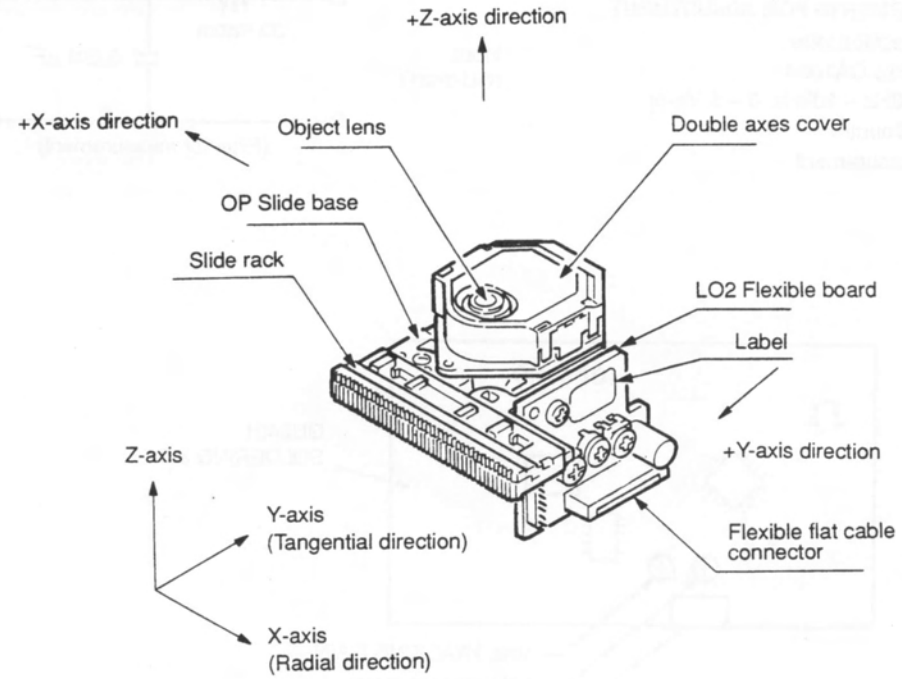


3. Fit the guide of mechanism chassis and the ditch of loader frame and put the loader frame on the mechanism chassis. At this time, make sure that the front surface of the loader frame is set at 20mm extruded position from the front surface of mechanism chassis.

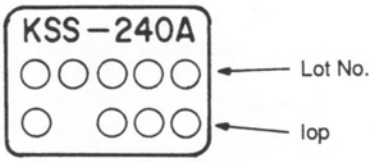


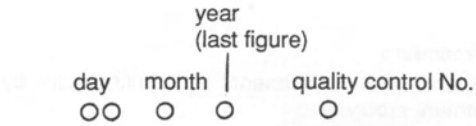
4. Insert the clamper frame to the mechanism chassis until it locks.

NOTE FOR HANDLING OF LASER PICK-UP
DESCRIPTION OF THE COMPONENTS

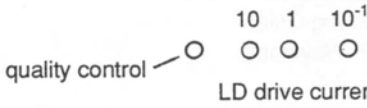


Label



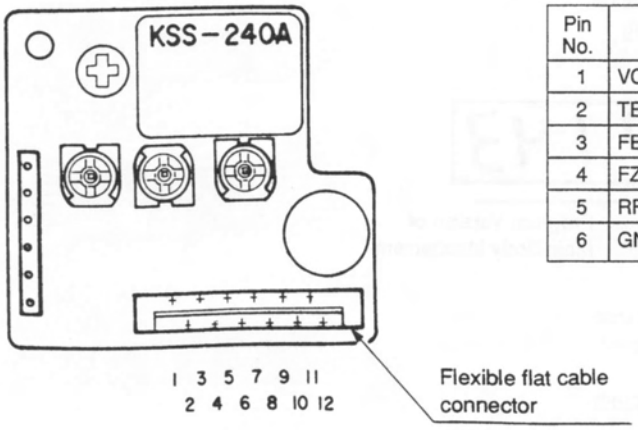


but Oct. Nov. and Dec. are expressed by alphabetical letters of X, Y and Z.



The expressed unit is by mA, with omission of the decimal point as for example, 56.5mA will be expressed as 565, but the head of English letter means the control in the manufacturing plant.

PIN CONNECTOR

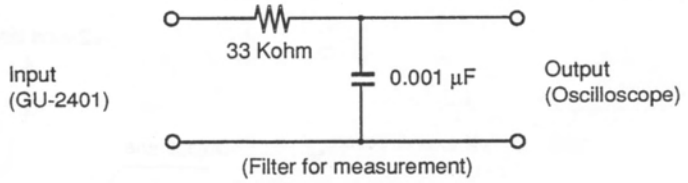


Pin No.	Description	Input/ Output	Pin. No.	Description	Input/ Output
1	VC (+2.5v)	OUT	7	Vcc (+5V)	IN
2	TE (TRK ER signal)	OUT	8	LDC (LD Control)	IN
3	FE (FCS ER signal)	OUT	9	FCS + (Double axes)	IN
4	FZC (FZC signal)	OUT	10	TRK + (Double axes)	IN
5	RF (RF signal)	OUT	11	TRK – (Double axes)	IN
6	GND	IN	12	FCS – (Double axes)	IN

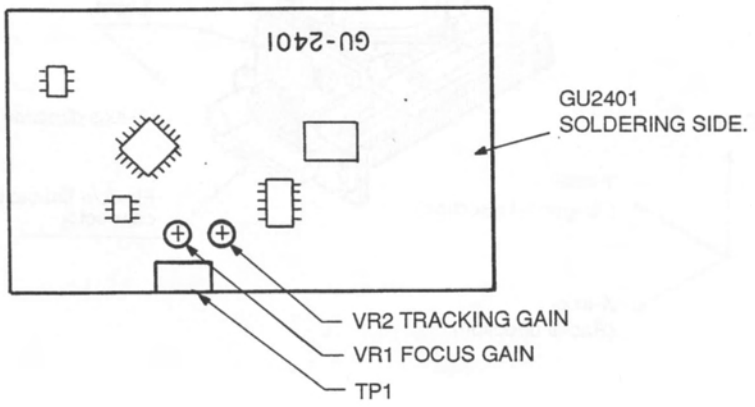
SERVO ADJUSTMENT

NECESSARY EQUIPMENTS FOR ADJUSTMENT

1. Dual trace oscilloscope
2. Reference disc CA1094
3. Oscillator (10Hz ~ 10kHz, 0 ~ 3 Vp-p)
4. Frequency Counter
5. Filter for measurement



LOCATION



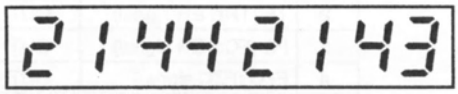
Adjustment Procedure

Be sure to perform servo adjustments and confirmations by this order of adjustment procedure.

1 Actuating the Service Program.
2 Confiirmation of Tracking Offset.
3 Adjustment of Focus Gain.
4 Adjustment of Tracking Gain.
5 Confirmation of HF Waveform.

1. Actuating the Servo Program

① Turn the power off.
② While simultaneously pushing the center blue buttons (1,2) of remote control (RC-35), turn the power on.
③ As the tray opens, set the adjustment disc (CA-1094).
④ Displayed indication on the remote control (RC-35) 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.

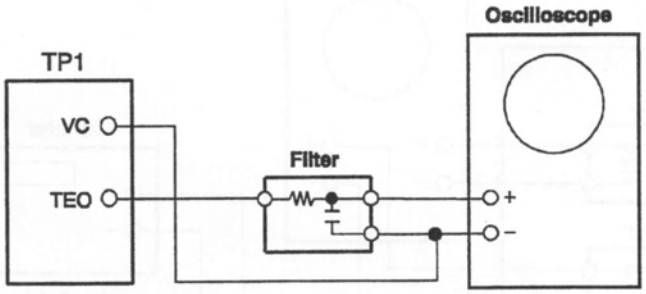


Program Version of Remote Control (RC-35)
Program Version of Main Body Mechanism

⑤ Push the TRACK [▶▶] button of the mechanism intended to adjust for one time. After confirm that 01 is displayed, push the PLAY button. Then, the Tray will close.
⑥ Push the TRACK [▶▶] button (02 is indicated), then push the PLAY button.

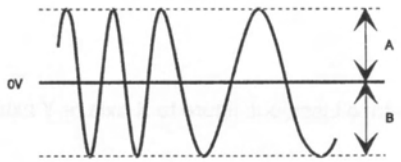
2. Confirmation of Tracking Offset

① Connections



② Push the TRACK ▶▶ button (03 is indicated), then push the PLAY button.

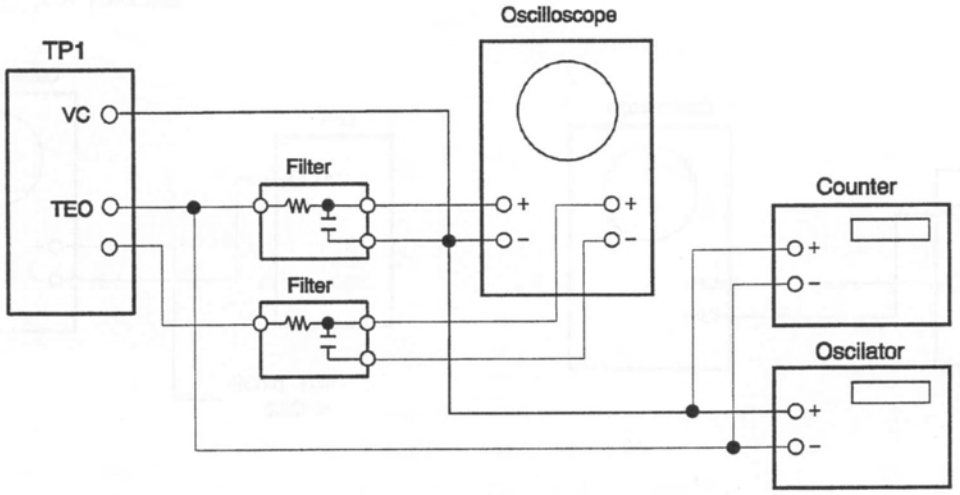
③ Observe TEO on the scope.



Measure the voltage of A,B and in case $\frac{|A-B|}{A+B}$ exceeds 15%, please replace pick-up as it is defected.

3. Adjusment of Focus Gain

① Connections



② Push the TRACK ▶▶ Button (04 is indicated), then push the PLAY button.

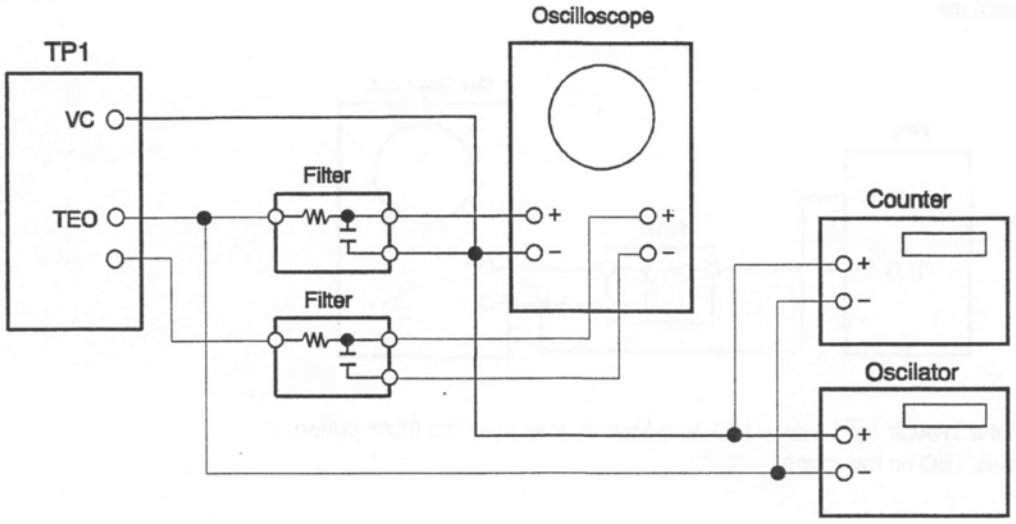
③ Set the oscillator 1.1kHz, 0.6 Vp-p mode.

④ Make the oscilloscope in X-Y mode.

⑤ Adjust the VR1 (FOCUS) so as to symmetrize Lissajous figure to X axis or Y axis.

4. Adjustment of Tracking Gain

① Connections

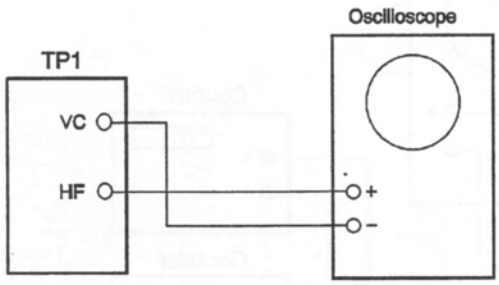


② Confirm that 04 is indicated.
③ Set the osillator 1.9kHz, 0.6Vp-p mode.
④ Make the oscilloscope in X-Y mode.
⑤ Adjust the VR2 (TRACK) so as to symmetrize Lissajous figure to X axis or Y axis.

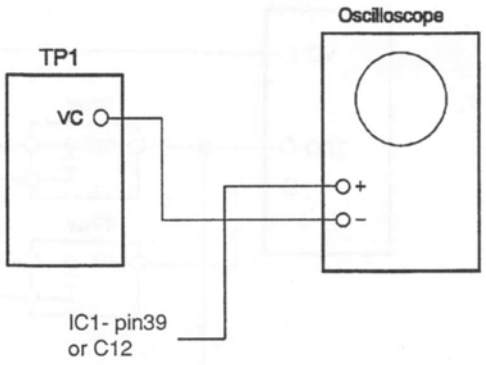
5. Confirmation of HF Waveform

① Connections

For PWB Item No. 222 2401 207



For PWB Item Nos. 222 2401 003
222 2401 100



② Observe HF waveform on the scope.
③ The standard amplitude of HF waveform is 1.1V. If it is less than 0.8V, please replace pick-up as it is defected.

6. Adjustment of Super Linear Converter

Adjustment of Super Linear Converter is only performed at a time the DA Converter is replaced.

Adjustment Procedure

① Connections
Connect the LINE OUT to a distortion meter through the low-pass filter.
② Playback a disc obtains 1kHz, 0dB sine wave tone.
③ Adjust the VR300, VR301 and obtain minimum THD.

VR300 . . . . . .R-channel
VR301 . . . . . .L-channel

THD standard is less than 0.006%

About the Service Program

The service program is a program specially for servo adjustments and for confirmations.

Actuating the Service Program.

① Turn the power off.
② While simultaneously pushing the center blue buttons (1,2) of remote control (RC-35), turn the power on.
③ Program version of microcomputer indicated on the remote control signifies start actuating of service program.

Contents of Service Program

After actuating the service program, select an aiming process number with the TRACK (|◀◀| |▶▶|) buttons, TIME button, PITCH BEND button, and PITCH button, and push the PLAY button to execute processing, The process number is then displayed on the TRACK indication portion.

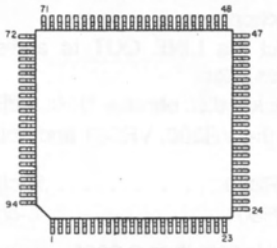
	Process No. (TRACK Indication)	Function	Contents Explanation
TRACK BUTTONS	01	OPEN/CLOSE	Performs OPEN/CLOSE each time the PLAY button is pushed.
	02	Slide	Moves pick-up to the center of disc.
	03	FOCUS SERVO ON	Turns the FOCUS Servo ON.
	04	Confirmation of TRACKING OFFSET	Rotates the disc. Checks divergence of Tracking Offset.
	05	Adjustment of Gain	Adjusts FOCUS, TRACKING Gains. Normally the same as PLAY MODE.
	06	Cleaning of Pick-up Lens	Pick-up. moves when SEARCH (|◀◀| |▶▶|)button is pressed. Move the pick-up under the hole of mechanism PWB, and clean the lens.
TIME	0A	CHUCKING Test	Repeats OPEN/CLOSE of tray, servo ON, and TOC read.
PITCH BEND [+]	0B	Heat Run (No Skip Check)	Repeats OPEN/CLOSE of tray, repeats playing the first and the last programs of music on the disc. When an error occurs, displays error code and stops.
PITCH BEND [−]	0C	Heat Run (With Skip Check)	Repeats OPEN/CLOSE of tray, repeats playing the first and the last program of music on the disc. Stops when skip (track jump) occurs.

IC TERMINAL FUNCTION LIST

TABLE OF MICROCOMPUTER (IC800) TERMINALS

IC800 is utilizing an external ROM in its initial lot until using the mask item. As the contents of same terminals differ according to the lot for this reason, please be reminded at a time performing service. External ROM utilizing models are up to these serial numbers listed below.

Model	Serial No.	Model	Serial No.
EUROPE	~ 881, 886 ~ 950	CANADA	~ 130
U.K.	~ 300	Multi-Voltage	~ 100
U.S.A.	~ 620		



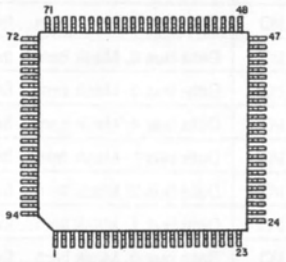
Terminal No.	Symbol Name	I/O	Terminal Function
1	CUEL2	O	CUE LED ON/OFF signal of CD-2. ON at "H".
2	PLYL2	O	PLAY LED ON/OFF signal of CD-2. ON at "H".
3	PITL2	O	PITCH LED ON/OFF signal of CD-2. ON at "H".
4	PITL1	O	PITCH LED ON/OFF signal of CD-1. ON at "H".
5	PLYL1	O	PLAY LED ON/OFF signal of CD-1. ON at "H".
6	CUEL1	O	CUE LED ON/OFF signal of CD-1. ON at "H".
7	RST–	I	Hard reset input. Reset at "L".
8	V_{DD}	—	+5V power supply.
9	X2	I	Clock oscilation circuit input 2.
10	X1	I	Clock oscilation circuit input 1.
11	V_{SS}	—	0V power supply.
12	V_{SS}	—	0V power supply.
13	—	—	Not connected.
14	LCE2	O	Chip enable signal of CD-2's LCD driver.
15	LCLK2	O	Command transmitting clock for CD-2's LCD driver.
16	LDAT2	O	Command data for CD-2's LCD driver.
17	LCE1	O	Chip enable signal of CD-1's LCD driver.
18	LCLK1	O	Command transmitting clock for CD-1's LCD driver.
19	LDAT1	O	Command data for CD-1's LCD driver.
20	—	O	Not used. Fixed to "L".
21	—	—	Not Connected.
22	—	O	Not used. Fixed to "L".
23	—	O	Not used. Fixed to "L".
24	—	O	Not used. Fixed to "L".
25	WR–	O	Not used. Mask item... fixed to "L", external ROM... fixed to "H".
26	OE–	O	Enable signal output for external ROM. Mask item... fixed to "L", external ROM... pulse output fot reading.
27	KOUT3	O	Key matrix scan signal 3.
28	KOUT2	O	Key matrix scan signal 2.
29	KOUT1	O	Key matrix scan signal 1.
30	KOUT0	O	Key matrix scan signal 0.
31	—	—	Not connected.
32	A15	O	Memory address 15. Not used. Mask item... fixed to "L".
33	A14	O	Memory address 14. Mask item... fixed to "L".
34	A13	O	Memory address 13. Mask item... fixed to "L".
35	—	—	Not connected.
36	A12	O	Memory address 12. Mask item... fixed to "L".
37	A11	O	Memory address 11. Mask item... fixed to "L".
38	A10	O	Memory address 10. Mask item... fixed to "L".
39	A9	O	Memory address 9. Mask item... fixed to "L".
40	A8	O	Memory address 8. Mask item... fixed to "L".
41	—	—	Not connected.

Terminal No.	Symbol Name	I/O	Terminal Function
42	AD7	I/O	Data bus 7. Mask item... fixed to "L".
43	AD6	I/O	Data bus 6. Mask item... fixed to "L".
44	AD5	I/O	Data bus 5. Mask item... fixed to "L".
45	AD4	I/O	Data bus 4. Mask item... fixed to "L".
46	AD3	I/O	Data bus 3. Mask item... fixed to "L".
47	AD2	I/O	Data bus 2. Mask item... fixed to "L".
48	AD1	I/O	Data bus 1. Mask item... fixed to "L".
49	AD0	I/O	Data bus 0. Mask item... fixed to "L".
50	ASTB	O	Pulse for address latch. Mask item... fixed to "L".
51	V_{SS}	—	0V power supply.
52	V_{SS}	—	0V power supply.
53	—	—	Not connected.
54	MODE	I	Memory mode selection terminal. Use external ROM at "H", use mask ROM at "L". Mask item... "L", external ROM "H".
55	—	—	Not connected.
56	—	I	Not used.
57	—	I	Not used.
58	—	I	Not used.
59	—	I	Not used.
60	—	—	Not connected.
61	—	I	Not used.
62	—	I	Not used.
63	—	I	Not used.
64	—	I	Not used.
65	V_{DD}	—	+5v power supply.
66	V_{DD}	—	+5v power supply.
67	PIT1	I	CD-1 pitch volume input.
68	PIT2	I	CD-2 pitch volume input.
69	—	I	Not used. Fixed to "L".
70	—	—	Not connected.
71	—	I	Not used. Fixed to "L".
72	—	I	Not used. Fixed to "L".
73	—	I	Not used. Fixed to "L".
74	—	I	Not used. Fixed to "L".
75	—	I	Not used. Fixed to "L".
76	AV_{DD}	—	+5v power supply for A/D converter.-
77	AVREF1	—	+5V. A/D converter reference voltage.
78	—	—	Not connected.
79	AV_{SS}	—	0V power supply for A/D converter.
80	—	O	Not used.
81	—	O	Not used.
82	AVREF2	—	+5V. D/A converter reference voltage.
83	AVREF3	—	0V. D/A converter reference voltage.
84	—	—	Not connected.
85	KIN10	I	CD-1 key data 0.
86	KIN11	I	CD-1 key data 1.
87	KIN12	I	CD-1 key data 2.
88	KIN13	I	CD-1 key data 3.
89	KIN20	I	CD-2 key data 0.
90	KIN21	I	CD-2 key data 1.
91	KIN22	I	CD-2 key data 2.
92	KIN23	I	CD-2 key data 3.
93	RXD–	I	Serial interface reception data.
94	TXD–	O	Serial interface transmission data.

TABLE OF MICROCOMPUTER μPD78233GJ-5BG(IC200) TERMINALS

IC200 is utilizing an external ROM in its initial lot until using the mask item. As the contents of some terminals differ according to the lot for this reason, please be reminded at a time performing service. External ROM utilizing models are up to these serial numbers listed below.

Model	Serial No.	Model	Serial No.
EUROPE	~ 881, 886 ~ 950	CANADA	~ 130
U.K.	~ 300	Multi-Voltage	~ 100
U.S.A.	~ 620		



Terminal No.	Symbol Name	I/O	Terminal Function
1	—		
2	RST2	O	Reset signal of IC201(μPD6381GF).
3	BRRQ	O	Break request signal of IC201(μPD6381GF). Not used. Fixed to "H".
4	BRAK	I	Break acknowledge signal of IC201(μPD6381GF). Not used. Fixed to "H".
5	GF	I	?
6	SO	I	IC201 serial data input.
7	RST–	I	Hard reset input. Reset at "L".
8	V_{DD}	—	+5V power supply.
9	X2	I	Clock oscillation circuit input 2.
10	X1	I	Clock oscillation circuit input 1.
11	V_{SS}	—	0V power supply.
12	V_{SS}	—	0V power supply.
13	—	—	Not connected.
14	CLOK	O	Clock for servo command, level command. Connected to IC1, IC300.
15	DATA	O	Data for servo command, level command. Connected to IC1, IC300.
16	XLAT	O	Latch pulse of servo command. Latched at falling edge.
17	—	O	Not used. Fixed to "L".
18	LDON	O	Laser ON/OFF signal of optical pickup. Laser emits light at "H".
19	—	O	Not used. Fixed to "L".
20	—	O	Not used. Fixed to "L".
21	—	—	Not connected.
22	—	O	Not used. Fixed to "L".
23	DRNO–	I	Mechanism number input. Mechanism 1 at "L", mechanism 2 at "H".
24	TXDEN	O	Demand signal of serial interface using. Used at "H".
25	—	O	Not used. Mask item — fixed to "L", external ROM — fixed to "H".
26	OE–	O	Output enable signal for external ROM. Mask item — fixed to "L", external ROM — pulse output for reading.
27	CS–	O	Chip select signal of IC201. Normally "H". "L" at select only.
28	C–/D	O	Command/data designate signal of IC201. Command at "L", indicates data transmitting mode at "H".
29	SCK–	O	Clock for command transmission to IC201.
30	SI	O	Command data to IC201.
31	—	—	Not connected.
32	A15	O	Memory address 15. Not used. Mask item — fixed to "L".
33	A14	O	Memory address 14. Mask item — fixed to "L".
34	A13	O	Memory address 13. Mask item — fixed to "L".
35	—	—	Not connected.
36	A12	O	Memory address 12. Mask item — fixed to "L".
37	A11	O	Memory address 11. Mask item — fixed to "L".
38	A10	O	Memory address 10. Mask item — fixed to "L".
39	A9	O	Memory address 9. Mask item — fixed to "L".
40	A8	O	Memory address 8. Mask item — fixed to "L".
41	—	—	Not connected.
42	AD7	I/O	Data bus 7. Mask item — fixed to "L".
43	AD6	I/O	Data bus 6. Mask item — fixed to "L".

Terminal No.	Symbol Name	I/O	Terminal Function
44	AD5	I/O	Data bus 5. Mask item — fixed to "L".
45	AD4	I/O	Data bus 4. Mask item — fixed to "L".
46	AD3	I/O	Data bus 3. Mask item — fixed to "L".
47	AD2	I/O	Data bus 2. Mask item — fixed to "L".
48	AD1	I/O	Data bus 1. Mask item — fixed to "L".
49	AD0	I/O	Data bus 0. Mask item — fixed to "L".
50	ASTB	O	Pulse for address latch. Mask item — fixed to "L".
51	V_{SS}	—	0V power supply.
52	V_{SS}	—	0V power supply.
53	—	—	Not connected.
54	MODE	I	Memory read select terminal. External ROM use at "H", mask ROM use at "L". Mask item — "L", external ROM — "H".
55	—	—	Not connected.
56	AMUTE	O	Audio output mute signal. Mute at "H".
57	SQCK	O	Clock for sub—code reading.
58	SENS	I	Indication signal of servo actuating condition. Emits from IC2.
59	CLOSE–	I	Tray CLOSE switch. CLOSE state at "L".
60	—	—	Not connected.
61	OPEN–	I	Tray OPEN switch. OPEN state at "L".
62	SQSO	I	Sub—code data input. Emits from IC2.
63	DFLAT	O	Command latch pulse for digital filter. Output to IC300.
64	—	O	Not used. Fixed to "H".
65	V_{DD}	—	+5v power supply.
66	V_{DD}	—	+5v power supply.
67	LDIN	I	Analog input for tray drive servo.
68	STIN	I	Input for between microcomputers communication. Connected to STOUT of the other mechanism microcomuter. To communicate with 3 kinds of voltages, i.e. 0V, 2.5V, 5V.
69	—	I	Not used. Fixed to "L".
70	—	—	Not connected.
71	—	I	Not used. Fixed to "L".
72	—	I	Not used. Fixed to "L".
73	—	I	Not used. Fixed to "L".
74	—	I	Not used. Fixed to "L".
75	—	I	Not used. Fixed to "L".
76	AV_{DD}	—	+5V power supply for A/D converter.
77	AVREF1	—	+5V. A/D converter reference voltage.
78	—	—	Not connected.
79	AV_{SS}	—	0V power supply for A/D converter.
80	LOADER	O	Tray drive signal. Stops at 2.5V, CLOSE action at 3V, OPEN action at 2V.
81	STOUT	O	Output for microcomputer communication. Connects to STIN of the other microcomputer. Communicates with 3 kinds of voltages, i.e. OV, 2.5V, 5V.
82	AVREF2	—	+5V. D/A converter reference voltage.
83	AVREF3	—	0V. D/A converter reference voltage.
84	—	—	Not connected.
85	—	I	Not used. Fixed to OV.
86	EJSW–	I	EJECT/OPEN switch input. Connected to the switch of front panel. Shifts to "L" when the switch is pressed.
87	RST	I	Input for +5V voltage observation. Shifts to "H" when POWER switch is turned off.
88	WFCK	I	Connected to WFCK output of IC2. 7.35kHz clock.
89	SCOR	I	Sub-code sink input. Connect to IC2. Input 75 pulses per 1 second.
90	DRDY	I	Data receiving READY signal of IC201. Fixed to "H".
91	—	I	Not used. Fixed to "L".
92	OVF–	I	Over flag of IC201. Normally "H".
93	RXD–	I	Serial interface reception data.
94	TXD–	O	Serial interface transmission data.

TABLE OF DIGITAL SIGNAL PROCESSOR μPD6381GF (IC201) TERMINALS

Terminal No.	Symbol Name	I/O	Terminal Function
1	DRDY	O	Command reception READY signal from microcomputer. Normally "H".
2	FSMASK	I	LRCK mask signal. Fixed to "L".
3	SEL	I	Clock input select. Fixed to "H".
4	—	I	Not used.
5	XO	O	X'tal oscillation output.
6	XI	I	X'tal oscillation input.
7	GND	—	0V power supply.
8	XFSO	O	Clock Output. Not used.
9	—	—	Not connected.
10	LRCKO	O	LR clock output. 44.1kHz.
11	WCLKO	O	Word clock output. 88.2kHz. Not used.
12	BCLKO	O	Bit clock output. 2.1MHz.
13	BRAK–	O	Break acknowledge output. Fixed to "H".
14	GND	—	OV power supply.
15	BRRQ–	I	Break request input. Fixed to "H".
16	FSRST–	I	Program counter reset input. Fixed to "H".
17	RST2–	I	Soft reset input. Normally "H".
18	RST–	I	Hard reset input. Normally "H".
19	A0	O	External RAM address 0.
20	A1	O	External RAM address 1.
21	A2	O	External RAM address 2.
22	A3	O	External RAM address 3.
23	A4	O	External RAM address 4.
24	A5	O	External RAM address 5.
25	A6	O	External RAM address 6.
26	A7	O	External RAM address 7.
27	A8	O	External RAM address 8.
28	A9	O	External RAM address 9. Not used.
29	A10	O	External RAM address 10. Not used.
30	A11	O	External RAM address 11. Not used.
31	A12	O	External RAM address 12. Not used.
32	A13	O	External RAM address 13. Not used.
33	V_{DD}	—	+5V power supply.
34	A14	O	External RAM address 14. Not used.
35	A15	O	External RAM address 15. Not used.
36	A16	O	External RAM address 16. Not used.
37	RAS–	O	External RAM low address strobe signal.
38	CAS–	O	External RAM column address strobe signal.
39	WE–	O	External RAM write enable signal.
40	I01	I/O	External RAM data 1.
41	I02	I/O	External RAM data 2.
42	I03	I/O	External RAM data 3.
43	I04	I/O	External RAM data 4.
44	I05	I/O	External RAM data 5. Not used.
45	I06	I/O	External RAM data 6. Not used.
46	I07	I/O	External RAM data 7. Not used.
47	I08	I/O	External RAM data 8. Not used.
48	I09	I/O	External RAM data 9. Not used.
49	I010	I/O	External RAM data 10. Not used.
50	I011	I/O	External RAM data 11. Not used.
51	I012	I/O	External RAM data 12. Not used.

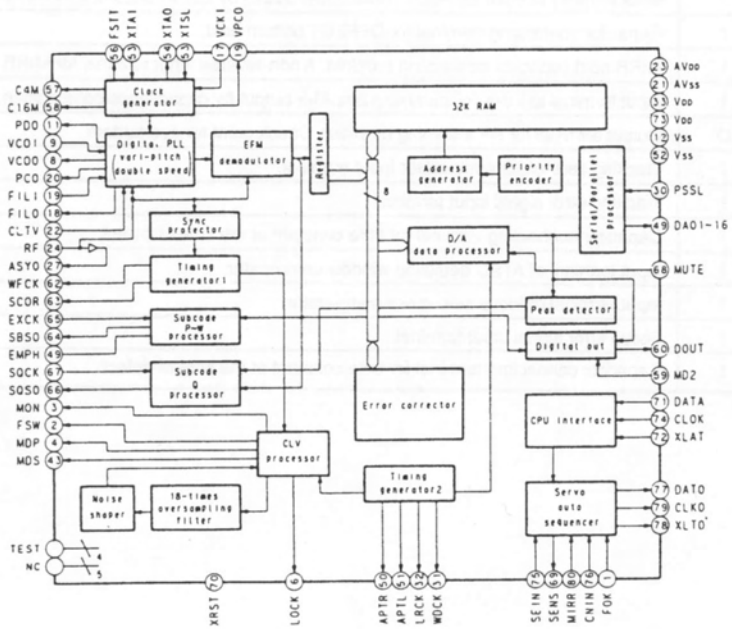
Terminal No.	Symbol Name	I/O	Terminal Function
52	I013	I/O	External RAM data 13. Not used.
53	I014	I/O	External RAM data 14. Not used.
54	I015	I/O	External RAM data 15. Not used.
55	I016	I/O	External RAM data 16. Not used.
56	GND	—	0V power supply.
57	MD0	I	Mode select 0. Fixed to "L".
58	MD1	I	Mode select 1. Fixed to "H".
59	MD2	I	Mode select 2. Fixed to "L".
60	BCLK1	I	Bit clock input. 2.18MHz.
61	LRCK1	I	LR clock input. 44.1kHz.
62	BCLK2	I	Fixed to "L". Not used.
63	LRCK2	I	Fixed to "L". NOt used.
64	DI1	I	Data input.
65	DO1	O	Data output.
66	DI2	I	Fixed to "L". Not used.
67	DO2	O	Not used.
68	DO3	O	Not used.
69	DORQ–	I	Not used. Fixed to "H".
70	GF–	O	G flag output. Normally "H".
71	OVF–	O	Over flag output. Normally "H".
72	V_{DD}	—	+5V power supply.
73	TEST0	I	Fixed to "H".
74	TEST1	I	Fixed to "H".
75	SETRDY	O	Not used.
76	SO	O	Serial data output.
77	SCK–	I	Serial data input/output clock.
78	SI	I	Serial data input.
79	C–/D	I	Command /data designation signal. "L" - command, "H" - data.
80	CS–	I	Chip select input.

CXD2500AQ Terminal Function

Terminal No.	Symbol	I/O		Terminal Function
1	FOK	I		Input terminal for OK focussing. Use for Servo-autosequencer.
2	FSW	O	Z,0	Output to shift time constant of output filter for spindle motor.
3	MON	O	1,0	ON/OFF control output for spindle motor.
4	MDP	O	1,Z,0	Servo control for spindle motor.
5	MDS	O	1,Z,0	Servo control for spindle motor.
6	LOCK	O	1,0	Sampling GFS by 460 Hz and if it is "H", delivers "H" ; if it is continuously "L" 8 times, delivers "L".
7	NC	—		
8	VCOO	O	1,0	Oscillation current output for analog EFM PLL.
9	VCOI	I		Oscillation current output for analog EFM PLL. f LOCK=8.6436MHz.
10	TEST	I		TEST output. Normally GND.
11	PDO	O	1,Z,0	Charge pump output for analog EFM PLL.
12	Vss			GND.
13	NC	—		
14	NC	—		
15	NC	—		
16	VPCO	O	1,Z,0	Charge pump output for variable pitch PLL.
17	VCKI	O		Clock input from external VCO for variable pitch. fc center=16.9344MHz.
18	FILO	O	Analog	Filter output for master PLL. (slave=digital PLL)
19	FILI	I		Filter input for master PLL.
20	PCO	O	1,Z,0	Charge pump output for master PLL.
21	AVss			Analog GND.
22	CLTV	I		Control voltage input for master VCO.
23	AVDD			Analog power supply (+5V).
24	RF	I		EFM signal input.
25	BIAS	I		Constant-current input for Asymmetry circuit.
26	ASYI	I		Comparate voltage input for Asymmetry.
27	ASYO	O	1,0	Full swing output for EFM. (L=Vss, H=VDD).
28	ASYE	I		L: Asymmetry circuit → OFF. H: Asymmetry cirquit → ON.
29	NC	—		
30	PSSL	I		Input to shift output mode of audio data. Serial output at L; parallel output at H.
31	WDCK	O	1,0	D/A Interface for 48 bit slot. Word-clock f=2 Fs.
32	LRCK	O	1,0	D/A Interface for 48 bit slot. LR-clock f= Fs.
33	VDD			Power supply (+5V).
34	DA16	O	1,0	At PSSL=1 for DA16 (MBS) output; PSSL=0 for serial data of 48 bit slot. (2s'COMP, MSB first).
35	DA15	O	1,0	At PSSL=1 for DA15 output; PSSL=0 for bit clock of 48 bit slot.
36	DA14	O	1,0	At PSSL=1 for DA14 output; PSSL=0 for serial data of 64 bit slot. (2s'COMP, LSB first).
37	DA13	O	1,0	At PSSL=1 for DA13 output; PSSL=0 for bit clock of 64 bit slot.
38	DA12	O	1,0	At PSSL=1 for DA12 output; PSSL=0 for LR clock of 64 bit slot.
39	DA11	O	1,0	At PSSL=1 for DA11 output; PSSL=0 for GTOP output.
40	DA10	O	1,0	At PSSL=1 for DA10 output; PSSL=0 for XUGF output.
41	DA09	O	1,0	At PSSL=1 for DA09 output; PSSL=0 for XPLCK output.
42	DA08	O	1,0	At PSSL=1 for DA08 output; PSSL=0 for GFS output.
43	DA07	O	1,0	At PSSL=1 for DA07 output; PSSL=0 for RFCK output.
44	DA06	O	1,0	At PSSL=1 for DA06 output; PSSL=0 for C2PO output.
45	DA05	O	1,0	At PSSL=1 for DA05 output; PSSL=0 for XRAOF output.
46	DA04	O	1,0	At PSSL=1 for DA04 output; PSSL=0 for MNT3 output.
47	DA03	O	1,0	At PSSL=1 for DA03 output; PSSL=0 for MNT2 output.
48	DA02	O	1,0	At PSSL=1 for DA02 output; PSSL=0 for MNT1 output.
49	DA01	O	1,0	At PSSL=1 for DA01 output; PSSL=0 for MNT0 output.
50	APTR	O	1,0	Control output for aperture compensation. In H for R-ch.
51	APTL	O	1,0	Control output for aperture compensation. In H for L-ch.

Terminal No.	Symbol	I/O		Terminal Function
52	Vss			GND.
53	XTAI	I		X'tal oscillation circuit input. By selecting of mode, f=16.9344MHz or 33.8688MHz.
54	XTAO	O	1,0	X'tal oscillation circuit input. f=16.9344MHz.
55	XTSL	I		Selection input terminal of X'tal. "L" for X'tal 16.9344MHz; H for 33.8688MHz.
56	FSTT	O	1,0	2/3 Dividing output of 53 and 54 terminal. No change by variable pitch.
57	C4M	O	1,0	4.2336MHz output. When variable pitched, simultaneously changes.
58	C16M	O	1,0	16.9344MHz output. When variable pitched, simultaneously changes.
59	MD2	I		Digital-out ON/OFF control. ON at H; OFF at L.
60	DOUT	O	1,0	Digital-out output terminal.
61	EMPH	O	1,0	When playback disc emphasized, outputs H; otherwise outputs L.
62	WFCK	O	1,0	WFCK (Write Flame Clock) output.
63	SCOR	O	1,0	Output of subcode sync. S0+S1. H output when either one detected.
64	SBSO	O	1,0	Serial output of Sub P~W.
65	EXCK	I		Clock iutput for SBSO read-out.
66	SQSO	O	1,0	Output for Sub Q 80 bits and PCM peak level 16 bits.
67	SQCK	I		Clock input for SQSO read-out.
68	MUTE	I		Mute at H; remove mute at L.
69	SENS	—	1,Z,0	SENS output. Outputs to CPU.
70	XRST	I		System reset input. Resets at "L".
71	DATA	I		Input of serial data from CPU.
72	XLAT	I		Input for latch from CPU. Latches serial data at release.
73	VDD			Power supply (+5V).
74	CLOK	I		Serial data transfer clock input from CPU.
75	SEIN	I		SENS input from SSP.
76	CNIN	I		Input of tracking pulse.
77	DATO	O	1,0	Serial data output to SSP.
78	XLTO	O	1,0	Serial data latch output to SSP.
79	CLKO	O	1,0	Serial data transfer clock output to SSP.
80	MIRR	I		Mirror signal input. Use for track jump for over 128 tracks, using autosequencer.

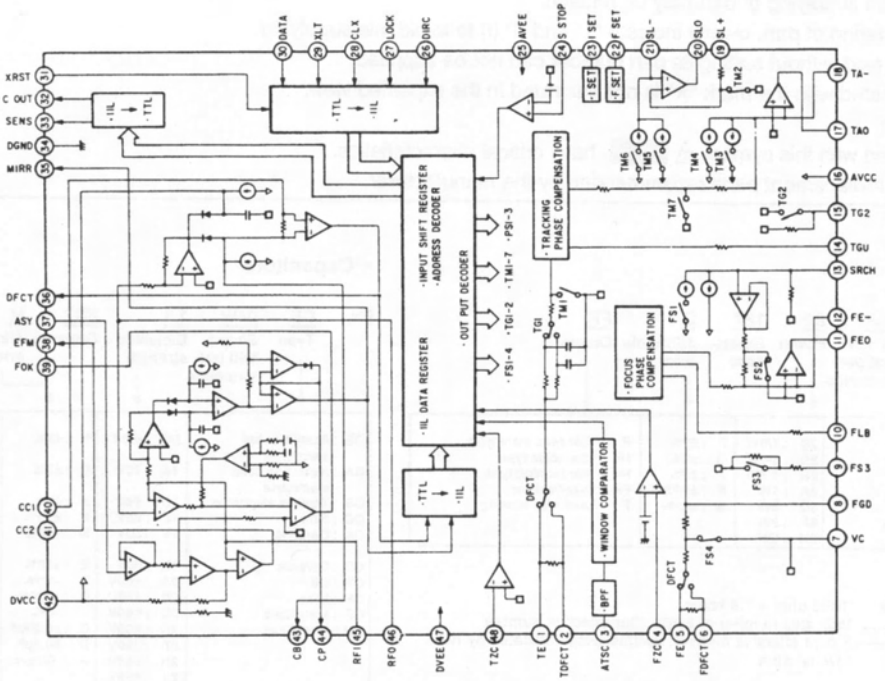
CXD2500AQ



CXA1372Q Terminal Function

Terminal No.	Symbol	I/O	Terminal Function
1	Vc	I	Mid-point voltage input terminal.
2	FGD	I	In case of reducing higher range gain of focus servo, connect a capacitor between this terminal and terminal number (9).
3	FS3	I	Shifts higher range gain of focus servo by FS3 ON/OFF.
4	FLB	I	Terminal for external time constant to increase lower range of focus servo.
5	FEO	O	Focus drive output.
6	FE–	I	Reverse input terminal for focus amplifier.
7	SRCH	I	Terminal for external time constant to make focus search waveform.
8	TGU	I	Terminal for external time constant to shift higher range gain of tracking.
9	TG2	I	Terminal for external time constant to shift higher range gain of tracking.
10	TAO	O	Tracking drive output.
11	TA–	I	Reverse input terminal for tracking amplifier.
12	SL+	I	Non-reverse input terminal for sled amplifier.
13	SLO	O	Sled drive output.
14	SL–	I	Reverse input terminal for sled amplifier.
15	FSET	I	Terminal to compensate peak in focus/tracking phase.
17	ISET	I	Delivers a current to set the height of focus search, track jump, and sled kick.
18	SSTOP	I	Terminal for limit switch ON/OFF to detect disc innermost circle.
19	DIRC	I	Terminal is used at the time of 1 track jump. A 47 kohm pull up resistor is included.
20	LOCK	I	Reckless drive protection circuit of sled; activates at "L". A 47k ohm pull up resistor is included.
21	CLK	I	Serial data transfer clock input from CPU.
22	XLT	I	Latch input from CPU.
23	DATA	I	Serial data input from CPU.
24	XRST	I	Reset input terminal. Resets at "L".
26	C.OUT	O	Terminal to output signal for track number count.
27	SENS	O	Terminal to output FZC, AS, TZC, SSTOP by command from CPU.
29	MIRR	O	Output terminal for MIRR comparator.
30	DFCT	O	Output terminal for DEFECT comparator.
31	ASY	I	Input terminal for auto-symmetric control.
32	EFM	O	Output terminal for EFM comparator.
33	FOK	O	Output terminal for focus OK (FOK) comparator.
34	CC1	O	DEFECT bottom hold output terminal.
35	CC2	I	Input terminal to input DEFECT bottom hold output by capacitance combination.
37	CB	I	Capacitor connecting terminal for DEFECT bottom hold.
38	CP	I	MIRR hold capacitor connecting terminal. A non-reverse input terminal for MIRR comparator.
39	RFI	I	Input terminal to input RF summing amplifier output by capacitance combination.
40	RFO	O	Output terminal for RF summing amplifier. Check point for eye pattern.
42	TZC	I	Tracking zero-cross comparator input terminal.
43	TE	I	Tracking error signal input terminal.
44	TDFCT	I	Capacitor connecting terminal for time constant at the time of defect.
45	ATSC	I	Input terminal of ATSC detecting window comparator.
46	FZC	I	Input terminal of focus zero-cross comparator.
47	FE	I	Focus error signal input terminal.
48	FDFCT	I	Capacitor connecting terminal for time constant at the time of defect.

CXA1372Q


DATA
XLT
CLK
LOCK
DIRC
AVEE
S STOP
I SET
F SET
SL-
SLO
SL+
XRST
C OUT
SENS
DGND
MIRR
DFCT
ASY
EFM
FOK
CC1
CC2
DVCC
TA-
TAO
AVCC
TG2
TGU
SRCH
FE-
FEO
FLB
FS3
FGD
VC
CB
CP
RFI
RFO
DVEE
T2C
TE
TDFCT
ATSC
F2C
FE
FDFCT
INPUT SHIFT REGISTER
ADDRESS DECODER
OUT PUT DECODER
IIL DATA REGISTER
TRACKING PHASE COMPENSATION
FOCUS PHASE COMPENSATION
WINDOW COMPARATOR
BPF
TTL → IIL
IIL → TTL

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.

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

Resistance

1 8 2 ⇒ 1800 ohm = 1.8 kohm
- 2: Indicates number of zeros after effective number
- 18: 2-digit effective numver, decimal point indicated by R.
- Units: ohm

• Capasitors

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

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

Capasity

2 R 2 ⇒ 2.2μF
- 2: 1-digit effective number, decimal point indicated by R.
- 2R2: 2-digit effective numver, decimal point indicated by R.

- Units: μF, (for P, pF (μμF))
- When the dielectric strength is indicated in AC, "AC" is included after

GU-2402 MAIN PWB UNIT

Ref No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC700	263 0800 005	IC NJM78M05FA(S)	
IC701	263 0501 003	IC NJM79M05FA	
IC702	263 0695 003	IC L780S05	
IC703	262 1479 005	IC M5M34051P	
IC710	268 0076 902	PROTECTOR ICP-N38	
IC711,712	268 0075 903	PROTECTOR ICP-N25	
IC713~715	268 0078 900	PROTECTOR ICP-N75	Multi- Voltage Model
TR710,711	274 0160 907	Transistor 2SD2144STPU	
TR720,721	274 0160 907	Transistor 2SD2144STPU	
D700	276 0603 004	Diode MA750	
D702,703	276 0603 004	Diode MA750	
D704~707	276 0553 905	Diode 1SR35-200A	
D708~715	276 0432 903	Diode 1SS270A	
LE700	393 9462 017	LED SLR-40VC3F (RED)	
RESISTOR (Not included Carbon Film ±5% 1/4w)			
CAPACITORS GROUP			
C701	254 4255 720	Electrolytic 6800µF/16V	CE04W1C682MC(SME)
C702,703	254 4255 717	Electrolytic 4700µF/16V	CE04W1C472MC(SME)
C706	254 4254 941	Electrolytic 100µF/16V	CE04W1C101MT(SME)
C708	253 9036 909	Ceramic 0.1µF/25V	CK45=1E104Z
C710,711	253 4538 949	Ceramic 100pF/50V	CC45SL1H101J
C712	253 9036 909	Ceramic 0.1µF/25V	CK45=1E104Z
C720,721	253 4538 949	Ceramic 100pF/50V	CC45SL1H101J
C722	253 9036 909	Ceramic 0.1µF/25V	CK45=1E104Z
OTHERS PARTS GROUP			
L701~706	235 0049 900	BEADS INDUCTOR	
SW700,701	212 4763 904	TACT SWITCH(LONG ST)	
SW702	212 1039 000	1P PUSH SWITCH	
⚠F700	206 1039 018	FUSE 0.8A	U.S.A., Canada Model
⚠F700	206 1031 032	FUSE 0.16A	Europe, U.K. Model
⚠F700	206 1015 003	FUSE 0.5A	Multi- Voltage Model
⚠	202 0040 909	FUSE CLIP	
CB700	205 0321 054	5P CONN.BASE(RED)	
⚠CB701,702	205 0581 001	2P VH CONN.BASE	
CB704	205 0190 052	5P NH CONN.BASE	
CB705	205 0717 008	8P MINI DIN CONN.BASE	
CB710	205 0668 047	21P FFC CONN.BASE	
CB711	204 8373 001	2P PIN JACK	
CB720	205 0668 047	21P FFC CONN.BASE	
CB721	204 8373 001	2P PIN JACK	
CC700	203 8196 034	5P KR-DS CONN.CORD	
CC706	203 4853 001	3P DS-DS CONN.CORD	
⚠	206 2086 002	AC CORD W/CONN.	U.S.A., Canada Model
⚠	206 2089 009	AC CORD W/CONN.	Europe, U.K. Model
⚠	206 2090 001	AC CORD W/CONN.	U.K. Model
⚠	206 2088 000	AC CORD W/CONN.	Multi- Voltage Model
⚠	233 5953 008	POWER TRANS	U.S.A., Canada Model
⚠	233 5955 006	POWER TRANS	Europe Model
⚠	233 5961 003	POWER TRANS	U.K. Model
⚠	233 5954 007	POWER TRANS	Multi- Voltage Model
⚠	212 4698 008	VOLTAGE SELECTOR	Multi- Voltage Model

PRINTED WIRING BOARD PARTS LIST
GU-2403 CONTROL PWB UNIT

Ref No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC800	262 1473 001	IC μPD78233GJ-5BG	U.S.A. Model Serial No.~620 Europe Model Serial No.~881 No.886~950 U.K. Model Serial No.~300 Canada Model Serial No.~130 Multi-Voltage Model Serial No.~100
IC800	262 1691 003	IC μPD 78234GJ-516-5BG	U.S.A. Model Serial No.621~ Europe Model Serial No.882~885 No.951~ U.K. Model Serial No.301~ Canada Model Serial No.131~ Multi-Voltage Model Serial No.101~
IC801	262 1597 903	IC M5M34051FP	
IC802,803	263 0533 000	IC LC7582	
IC804	262 0943 901	IC HD74HC373FP-TL	U.S.A. Model Serial No.~620 Europe Model Serial No.~811 No.886~950 U.K. Model Serial No.~300 Canada Model Serial No.~l30 Multi-Voltage Model Serial No.~l00
IC805	205 0488 010 GEN 2144	IC 28P IC SOCKET CONTROL ROM SUB Ass'Y	U.S.A. Model Serial No.~620 Europe Model Serial No.~881 No.886~950 U.K. Model Serial No.~300 Canada Model Serial No.~130 Multi-Voltage Model Serial No.~100
IC806	262 1647 905	IC MN1382-S(TX)	
TR800~805	269 0082 902	Transistor DTC114EK	
D800,801	276 0438 949	Diode MA151WK	
D802,803	276 0438 907	Diode MA151WA	
D804~815	276 0438 910	Diode MA151A	
LE810	393 9511 104	LED BACK LIGHT	(CD-1)
LE811	393 9462 017	LED SLR-40VC3F(RED)	CUE Monitor(CD-1)
LE812,813	393 9512 006	LED SLR-40MC3F (GRN)	PLAY/PAUSE,PITCH Monitor (CD-1)
LE830	393 9511 104	LED BACK LIGHT	(CD-2)
LE831	393 9462 017	LED SLR-40VC3F(RED)	CUE Monitor(CD-2)
LE832,833	393 9512 006	LED SLR-40MC(GRN)	PLAY/PAUSE,PITCH Monitor (CD-2)
LC810	393 4139 002	LCD	
LC830	393 4139 002	LCD	

Ref No.	Part No.	Part Name	Remarks
RESISTORS GROUP (Not included Carbon Film ±5% 1/4W)			
R801	247 0005 905	Chip 100ohm 1/4W	RM73B--101J
R802	247 0008 902	Chip 18Kohm 1/10W	RM73B--182J
R804	247 0011 944	Chip 47Kohm 1/10W	RM73B--473J
R805	247 0011 944	Chip 47Kohm 1/10W	RM73B--473J U.S.A. Model Serial No.~620 Europe Model Serial No.~881 No.886~950 U.K. Model Serial No.~300 Canada Model Serial No.~130 Multi-Voltage Model No.~100
R806,807	247 0007 945	Chip 1Kohm 1/10W	RM73B--102J
R810~813	247 0011 944	Chip 47Kohm 1/10W	RM73B--473J
R814	247 0011 957	Chip 51Kohm 1/10W	RM73B--513J
R815	247 0013 942	Chip 330Kohm 1/10W	RM73B--334J
R816	247 0006 962	Chip 470ohm 1/10W	RM73B--471J
R817,818	247 0005 989	Chip 220ohm 1/10W	RM73B--221J
R819,820	247 0003 965	Chip 27ohm 1/10W	RM73B--270J
R823,824	247 0003 965	Chip 27ohm 1/10W	RM73B--270J
R830~833	247 0011 944	Chip 47Kohm 1/10W	RM73B--473J
R834	247 0011 957	Chip 51Kohm 1/10W	RM73B--513J
R835	247 0013 942	Chip 330Kohm 1/10W	RM73B--334J
R836	247 0006 962	Chip 470ohm 1/10W	RM73B--471J
R837,838	247 0005 989	Chip 220ohm 1/10W	RM73B--221J
R839,840	247 0003 965	Chip 27ohm 1/10W	RM73B--270J
VR810	211 0763 015	Slide Volume	
VR830	211 0763 015	Slide Volume	
CAPACITORS GROUP			
C800	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104Z
C801	254 4260 980	Electrolytic 10μF/50V	CE04W1H100M(SME)
C810,811	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104Z
C812	257 0006 969	Ceramic-chip 680pF/50V	CC73SL1H681J
C830,831	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104Z
C832	257 0006 969	Ceramic-chip 680pF/50V	CC73SL1H681J
C842,843	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104Z
C861~865	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104Z
OTHERS PARTS GROUP			
X800	399 0038 008	Ceramic Vibrator	CST12.0M
SW811~822	212 4763 904	TACT SWITCH (LONG ST)	
SW830~841	212 4763 904	TACT SWITCH (LONG ST)	
L801~806	235 0049 900	BEADS INDUCTOR	
CB800,801	205 0708 020	18P CONN.SOCKET	
CB802	205 0717 008	8P MINI DIN CONN.BASE	
CB810	205 0707 021	18P CONN.BASE	
CB830	205 0707 021	18P CONN.BASE	

GU-2401 MECHA PWB UNIT

Ref No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC001	262 1342 006	IC CXA1372Q(48PQFP)	
IC002	262 1514 009	IC CXD2500AQ	
IC003	262 1344 907	IC SN74LS624NSR	
IC004,005	263 0615 902	IC BA15218F	
IC006	263 0805 903	IC BA6296FP	
IC008	262 1205 907	IC TC74HCU04AF	
IC200	262 1473 001	IC UPD78233GJ-5BG	U.S.A. Mode Serial No.~620 Europe Model Selial No.~881 No.886~950 U.K. Model Serial No.~300 Canada Model Serial No.~I30 Multi-Voltage Model Serial No.~I00
IC200	262 1690 004	IC μPD78234GJ-515 -5BG	U.S.A. Model Serial No.621~ Europe Model Serial No.882~885 No.951~ U.K. Model Serial No.301~ Canada Model Serial No.131~ Multi-Voltage Model Serial No.101~
IC201	262 1474 000	IC UPD6381GF	
IC203	262 1615 908	IC V53C104BK	
IC204	262 0943 901	IC HD74HC373FP-TL	U.S.A. Model Serial No.~620 Europe Model Serial No.~881 No.886~950 U.K. Model Serial No.~300 Canada Model Serial No.~I30 Multi-Voltage Model Serial No.~I00
IC205	205 0488 010 GEN 2172	IC 28P IC SOCKET MECHA ROM SUB Ass'y	U.S.A. Model Serial No.~620 Europe Model Serial No.~881 No.886~950 U.K. Model Serial No.~300 Canada Model Serial No.~I30 Multi-Voltage Model Seriai No.~I00
IC300	262 1664 904	IC CXD2554M	
IC301,302	262 1409 004	IC PCM61P-L	
IC303,304	263 0615 902	IC BA15218F	
IC500	262 1647 905	IC MN1382-S(TX)	
TR070	274 0036 905	Transistor 2SD468(C)TF	
TR071	272 0025 907	Transistor 2SB562(C)TF	
TR300	269 0083 901	Transistor DTA114EK	
TR301	269 0082 902	Transistor DTC114EK	
D400	276 0533 909	Diode MA3047-TX	
RESISTORS GROUP (Not included Carbon Film ±5% 1/4W)			
R020	247 0010 987	Chip 27Kohm 1/10W	RM73B--273J
R021	247 0012 927	Chip 100Kohm 1/10W	RM73B--104J
R022	247 0009 985	Chip 10Kohm 1/10W	RM73B--103J
R023	247 0012 930	Chip 110Kohm 1/10W	RM73B--114J
R024,025	247 0009 985	Chip 10Kohm 1/10W	RM73B--103J
R026	247 0011 960	Chip 56Kchm 1/10W	RM73B--563J
R027	247 0011 928	Chip 39Kohm 1/10W	RM73B--393J
R028	247 0009 956	Chip 7.5Kohm 1/10W	RM73B--752J
R030	247 0012 927	Chip 100Kohm 1/10W	RM73B--104J
R031	247 0009 985	Chip 10Kohm 1/10W	RM73B--103J
R034	247 0012 943	Chip 120Kohm 1/10W	RM73B--124J
R038	247 0012 927	Chip 100Kohm 1/10W	RM73B--104J
R039	247 0012 914	Chip 91Kohm 1/10W	RM73B--913J
R040	247 0011 944	Chip 47Kohm 1/10W	RM73B--473J
R043	247 0011 986	Chip 68Kohm 1/10W	RM73B--683J
R044	247 0009 969	Chip 8.2Kohm 1/10W	RM73B--822J
R045	247 0014 925	Chip 680Kohm 1/10W	RM73B--684J
R046	247 0009 985	Chip 10Kohm 1/10W	RM73B--103J
R047	247 0012 943	Chip 120Kohm 1/10W	RM73B--124J
R050,051	247 0009 985	Chip 10Kohm 1/10W	RM73B--103J
R052	247 0011 944	Chip 47Kohm 1/10W	RM73B--473J
R053	247 0009 956	Chip 7.5Kohm 1/10W	RM73B--752J
R054	247 0008 931	Chip 2.4Kohm 1/10W	RM73B--242J
R055	247 0011 944	Chip 47Kohm 1/10W	RM73B--473J
R056	247 0011 944	Chip 47Kohm 1/10W	RM73B--473J
R057	247 0012 914	Chip 91Kohm 1/10W	RM73B--913J
R059	247 0005 989	Chip 220ohm 1/10W	RM73B--221J
R060	247 0009 901	Chip 4.7Kohm 1/10W	RM73B--472J
R061	247 0006 962	Chip 470ohm 1/10W	RM73B--471J
R062	247 0011 902	Chip 33Kohm 1/10W	RM73B--333J
R063	247 0009 985	Chip 10Kohm 1/10W	RM73B--103J
R064	247 0008 960	Chip 3.3Kohm 1/10W	RM73B--332J
R065	247 0009 943	Chip 6.8Kohm 1/10W	RM73B--682J
R066	247 0009 985	Chip 10Kohm 1/10W	RM73B--103J
R067	247 0009 985	Chip 10Kohm 1/10W	RM73B--103J
R068	247 0010 929	Chip 15Kohm 1/10W	RM73B--153J
R069	247 0010 916	Chip 13Kohm 1/10W	RM73B--133J
R079	244 2051 945	Metallic 1ohm 1W	RS14B3A010JNB ST(S)
R080~083	247 0009 985	Chip 10Kohm 1/10W	RM73B--103J
R084	247 0009 985	Chip 10Kohm 1/10W	U.S.A. Model Serial No.~620 Europe Model Serial No.~881 No.886~950 U.K. Model Serial No.~300 Canada Model Serial No.~I30 Multi-Voltage Model Serial No.~I00
R200	247 0009 985	Chip 10Kohm 1/10W	RM73B--103J
R202	247 0009 985	Chip 10Kohm 1/10W	RM73B--103J
R203	247 0009 985	Chip 10Kohm 1/10W	RM73B--103J
R205	247 0009 985	Chip 10Kohm 1/10W	RM73B--103J
R250	247 0008 902	Chip 1.8Kohm 1/10W	RM73B--182J
R303	247 0018 905	Chip 0ohm Jumper	RM73B--0R0K
R304	247 0007 945	Chip 1Kohm 1/10W	RM73B--102J
R305,306	247 0007 945	Chip 1Kohm 1/10W	RM73B--102J
R310	247 0011 944	Chip 47Kohm 1/10W	RM73B--473J
R311	247 0014 967	Chip 1Mohm 1/10W	RM73B--105J
R312	247 0013 984	Chip 470Kohm 1/10W	RM73B--474J
R313	247 0012 998	Chip 200Kohm 1/10W	RM73B--204J
R314	247 0009 998	Chip 11Kohm 1/10W	RM73B--113J

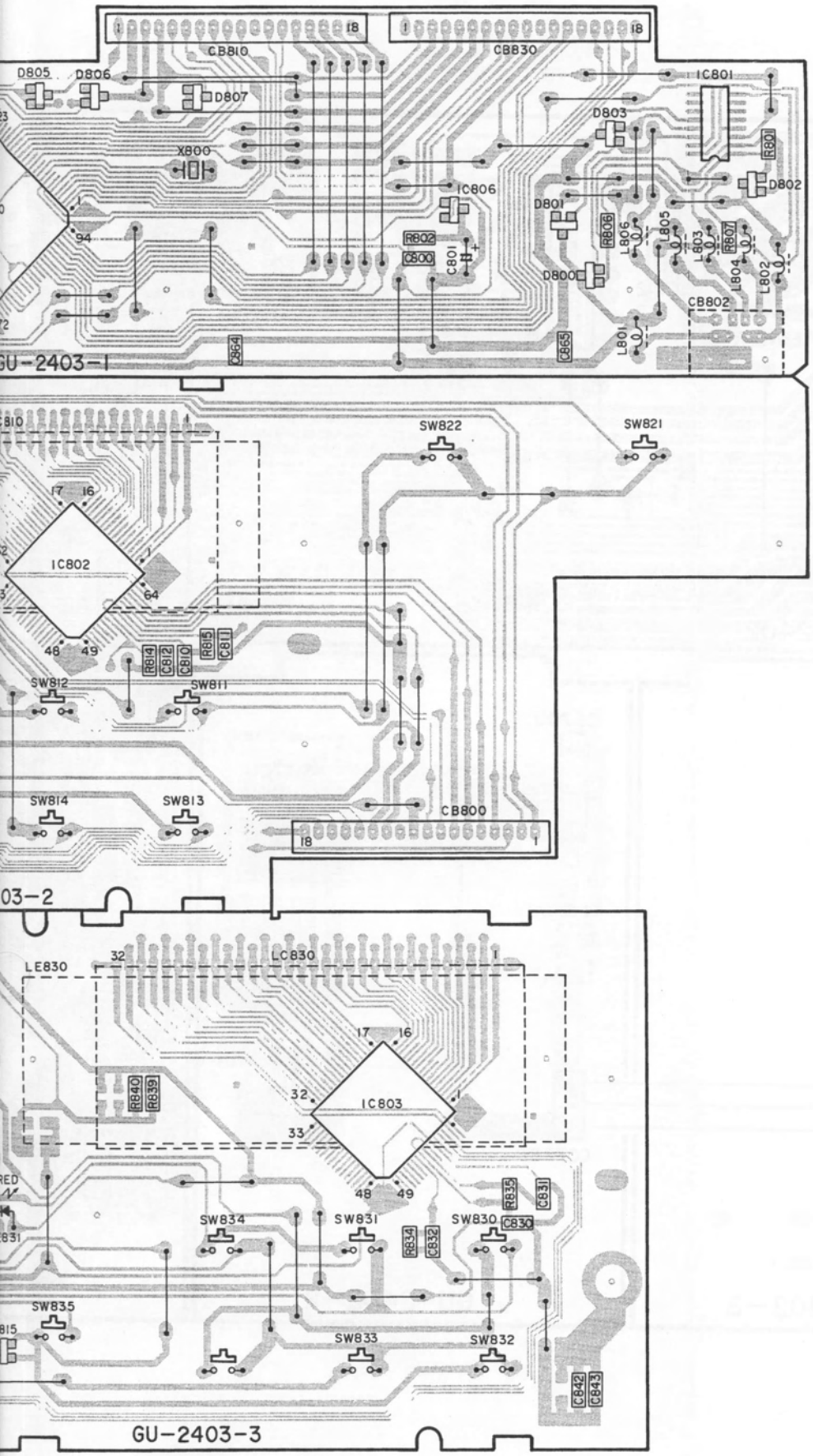
Ref No.	Part No.	Part Name	Remarks
R315	247 0009 927	Chip 5.6Kohm 1/10W	RM73B--562J
R316	247 0009 998	Chip 11Kohm 1/10W	RM73B--113J
R317	247 0010 945	Chip 18Kohm 1/10W	RM73B--183J
R318	247 0010 958	Chip 20Kohm 1/10W	RM73B--203J
R319	247 0010 990	Chip 30Kohm 1/10W	RM73B--303J
R330	247 0011 944	Chip 47Kohm 1/10W	RM73B--473J
R331	247 0014 967	Chip 1Mohm 1/10W	RM73B--105J
R332	247 0013 984	Chip 470Kohm 1/10W	RM73B--474J
R333	247 0012 998	Chip 200Kohm 1/10W	RM73B--204J
R334	247 0009 998	Chip 11Kohm 1/10W	RM73B--113J
R335	247 0009 927	Chip 5.6Kohm 1/10W	RM73B--562J
R336	247 0009 998	Chip 11Kohm 1/10W	RM73B--113J
R337	247 0010 945	Chip 18Kohm 1/10W	RM73B--183J
R338	247 0010 958	Chip 20Kohm 1/10W	RM73B--203J
R339	247 0010 990	Chip 30Kohm 1/10W	RM73B--303J
R350	247 0007 945	Chip 1Kohm 1/10W	RM73B--102J
R351	247 0008 960	Chip 3.3Kohm 1/10W	RM73B--332J
R402	247 0012 969	Chip 150Kohm 1/10W	RM73B--154J
R500,501	247 0011 902	Chip 33Kohm 1/10W	RM73B--333J
R502,503	247 0009 985	Chip 10Kohm 1/10W	RM73B--103J
R600	247 0012 927	Chip 100Kohm 1/10W	RM73B--104J
R601,602	247 0012 927	Chip 100Kohm 1/10W	RM73B--104J
R603	247 0009 985	Chip 10Kohm 1/10W	RM73B--103J
R607	247 0012 927	Chip 100Kohm 1/10W	RM73B--104J
R608	247 0009 901	Chip 4.7Kohm 1/10W	RM73B--472J
R609	247 0012 927	Chip 100Kohm 1/10W	RM73B--104J
R700	247 0009 998	Chip 11Kohm 1/10W	RM73B--113J
R701	247 0008 915	Chip 2Kohm 1/10W	RM73B--202J
R702	247 0006 917	Chip 300ohm 1/10W	RM73B--301J
R703	247 0007 945	Chip 1Kohm 1/10W	RM73B--102J
R704	247 0012 927	Chip 100Kohm 1/10W	RM73B--104J
VR001,002	211 6086 903	Semi Fixed Resistor 22Kohm	V04PB203M(RVG4M)
VR300,301	211 6077 938	Semi Fixed Resistor 100Kohm	V06PB104

CAPACITORS GROUP

C001	254 4430 008	Electrolytic 1000μF/6.3V	CE04W0J102M(KMG)
C002	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104Z
C010	257 0010 900	Ceramic-chip 0.01μF/50V	CK73B1H103K
C011	257 0009 937	Ceramic-chip 2700pF/50V	CK73B1H272K
C012	257 0010 900	Ceramic-chip 0.01μF/50V	CK73B1H103K
C013	257 1010 941	Ceramic-chip 3300pF/50V	CK73B1H332K
C014	257 0006 943	Ceramic-chip 560pF/50V	CC73SL1H561J
C015	257 1013 951	Ceramic-chip 0.047μF/25V	CK73B1E473K
C016	257 1013 993	Ceramic-chip 0.1μF/25V	CK73B1E104K
C017	257 1013 951	Ceramic-chip 0.047μF/25V	CK73B1E473K
C018	257 0009 924	Ceramic-chip 2200pF/50V	CK73B1H222K
C019	257 1013 993	Ceramic-chip 0.1μF/25V	CK73B1E104K
C020	257 1013 980	Ceramic-chip 0.082μF/25V	CK73B1E823K
C021	257 1011 966	Ceramic-chip 0.033μF/50V	CK73B1H333K
C022	257 0004 961	Ceramic-chip 100pF/50V	CC73SL1H101J
C024	254 4304 930	Electrolytic 6.8μF/35V	CE04W1V6R8M(SRE)
C025	256 1035 910	Metallize 0.22μF/50V	CF93A1H224J
C026	257 0003 991	Ceramic-chip 51pF/50V	CC73SL1H510J
C027	257 1013 993	Ceramic-chip 0.1μF/25V	CK73B1E104K
C028	254 4304 927	Electrolytic 4.7μF/35V	CE04W1V4R7M(SRE)
C029	257 0004 961	Ceramic-chip 100pF/50V	CC73SL1H101J
C030,031	257 0012 966	Ceramic-chip 0.01μF/50V	CK73F1H103Z
C032	254 4305 926	Electrolytic 0.22μF/50V	CE04W1HR22M(SRE)
C033	257 1011 966	Ceramic-chip 0.033μF/50V	CK73B1H333K
C040,041	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104Z
C044	257 0010 900	Ceramic-chip 0.01μF/50V	CK73B1H103K
C045	254 4299 964	Electrolycic 47μF/16V	CE04W1C470M(SRE)
C046	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104Z
C051	257 0004 961	Ceramic-chip 100μF/50V	CC73SL1H101J
C060	254 4305 926	Electrolytic 0.22μF/50V	CE04W1HR22M(SRE)
C061	257 0002 989	Ceramic-chip 18pF/50V	CC73SL1H180J
C062	257 1013 951	Ceramic-chip 0.047μF/25V	CK73B1E473K
C063	257 0007 942	Ceramic-chip 1500pF/50V	CC73SL1H152J
C064	257 0001 951	Ceramic-chip 3pF/50V	CC73SL1H3R0C
C065	257 0001 977	Ceramic-chip 5pF/50V	CC73SL1H5R0C
C066	254 4300 963	Electrolycic 100μF/6.3V	CE04W0J101M(SRE)
C067~069	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104Z
C104	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104Z
C200,201	257 0003 904	Ceramic-chip 22pF/50V	CC73SL1H220J
C202,203	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104Z
C205	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104Z
C206,207	254 4300 963	Electrolytic 100μF/6.3V	CE04W0J101M(SRE)
C253	254 4300 934	Electrolytic 22μF/6.3V	CE04W0J220M(SRE)
C300	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104Z
C301	254 4300 963	Electrolytic 100μF/6.3V	CE04W0J101M(SRE)
C302	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104Z
C303	254 4300 963	Electrolytic 100μF/6.3V	CE04W0J101M(SRE)
C304	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104Z
C305,306	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104Z
C307	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104Z
C308,309	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104Z
C310,311	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104Z
C312	257 0007 926	Ceramic-chip 1200pF/50V	CC73SL1H122J
C313	257 0005 931	Ceramic-chip 200pF/50V	CC73SL1H201J
C314	257 0002 992	Ceramic-chip 20pF/50V	CC73SL1H200J
C315	254 4306 925	Electrolytic 10μF/50V	CE04W1H100M(SRE)
C330,331	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104Z
C332	257 0007 926	Ceramic-chip 1200pF/50V	CC73SL1H122J
C333	257 0005 931	Ceramic-chip 200pF/50V	CC73SL1H201J
C334	257 0002 992	Ceramic-chip 20pF/50V	CC73SL1H200J
C335	254 4306 925	Electrolytic 10μF/50V	CE04W1H100M(SRE)
C401	257 0004 961	Ceramic-chip 100pF/50V	CC73SL1H101J
C500~505	257 0014 935	Ceramic-chip 0.1μF/25V	CK73F1E104Z
C700	257 0013 907	Ceramic-chip 0.047μF/50V	CK73F1H473Z

OTHERS PARTS GROUP

X001	399 0036 013	CRYSTAL	16.9344MHz
X200	399 0038 008	CERAMIC VIBRATOR	CST12.0M
X201	399 0174 001	CRYSTAL	24.576MHz
CB001	205 0681 008	12P FFC SIDE BASE	
CB002	205 0395 051	5P CONN.BASE (RED) L	
CB003	205 0355 059	5P KR CONN.BASE(L)	
CB004	205 0702 039	21P FFC CONN.BASE(L)	
TP001	205 0355 062	6P KR CONN. BASE(L)	
	009 0079 009	21P FFC	


CB810
CB830
D805
D806
D807
X800
IC801
D803
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D802
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L806
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L803
R807
L804
L802
R802
C800
C801
D800
CB802
L801
C865
C864
GU-2403-1
SW822
SW821
IC802
R815
C811
R814
C812
C810
SW812
SW811
SW814
SW813
CB800
GU-2403-2
LE830
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R840
R839
R835
C831
SW834
SW831
SW830
R834
C832
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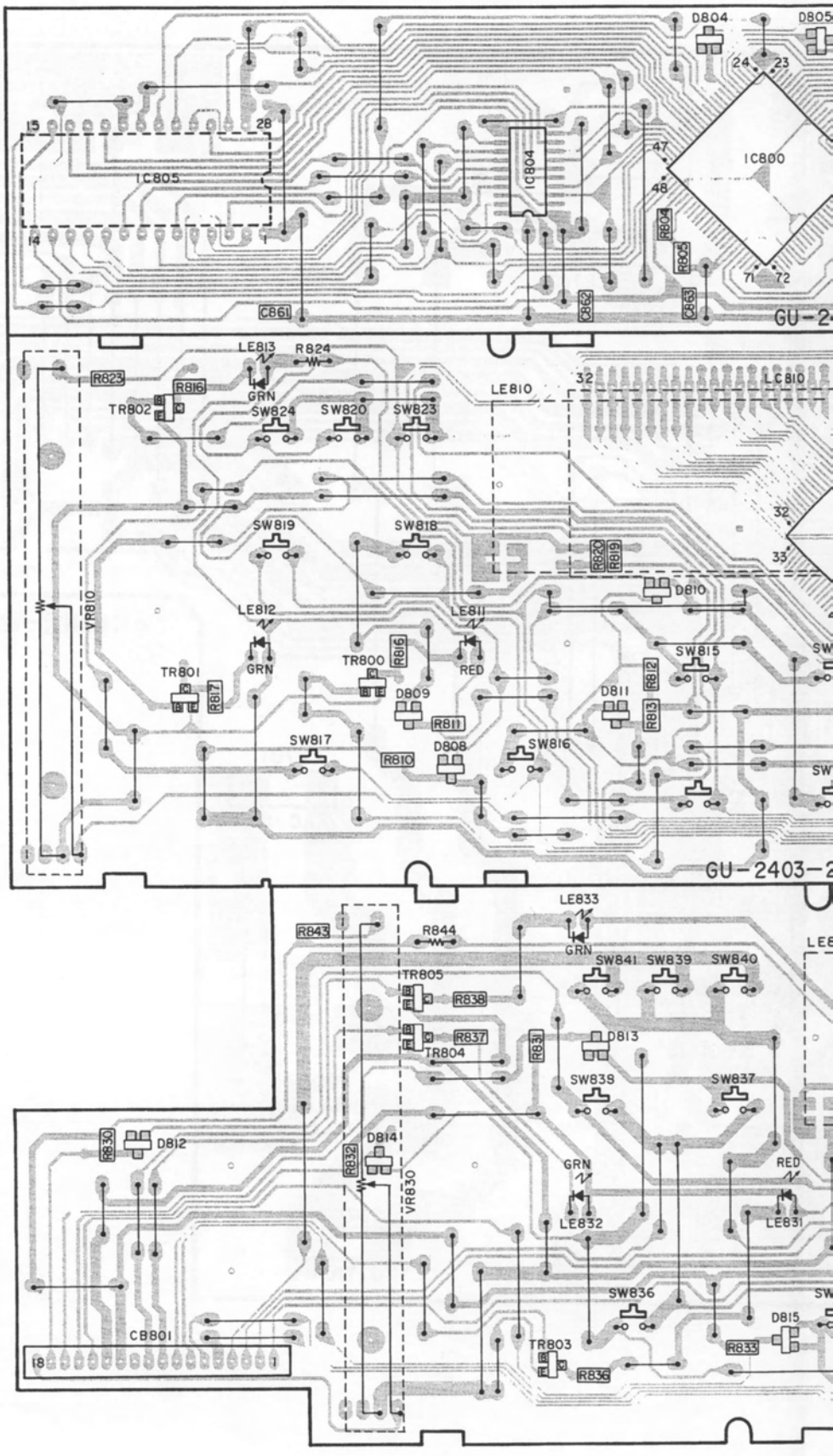
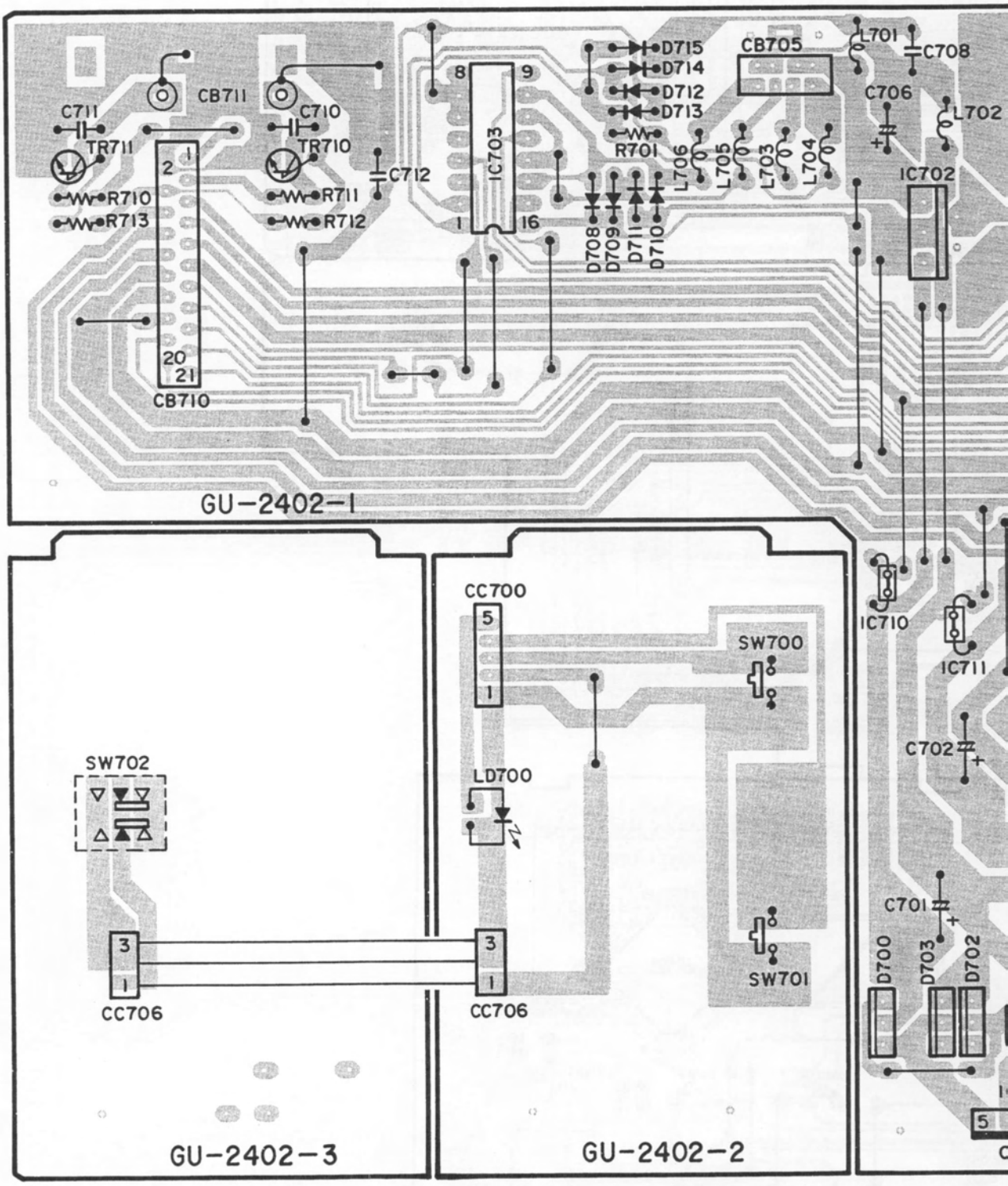
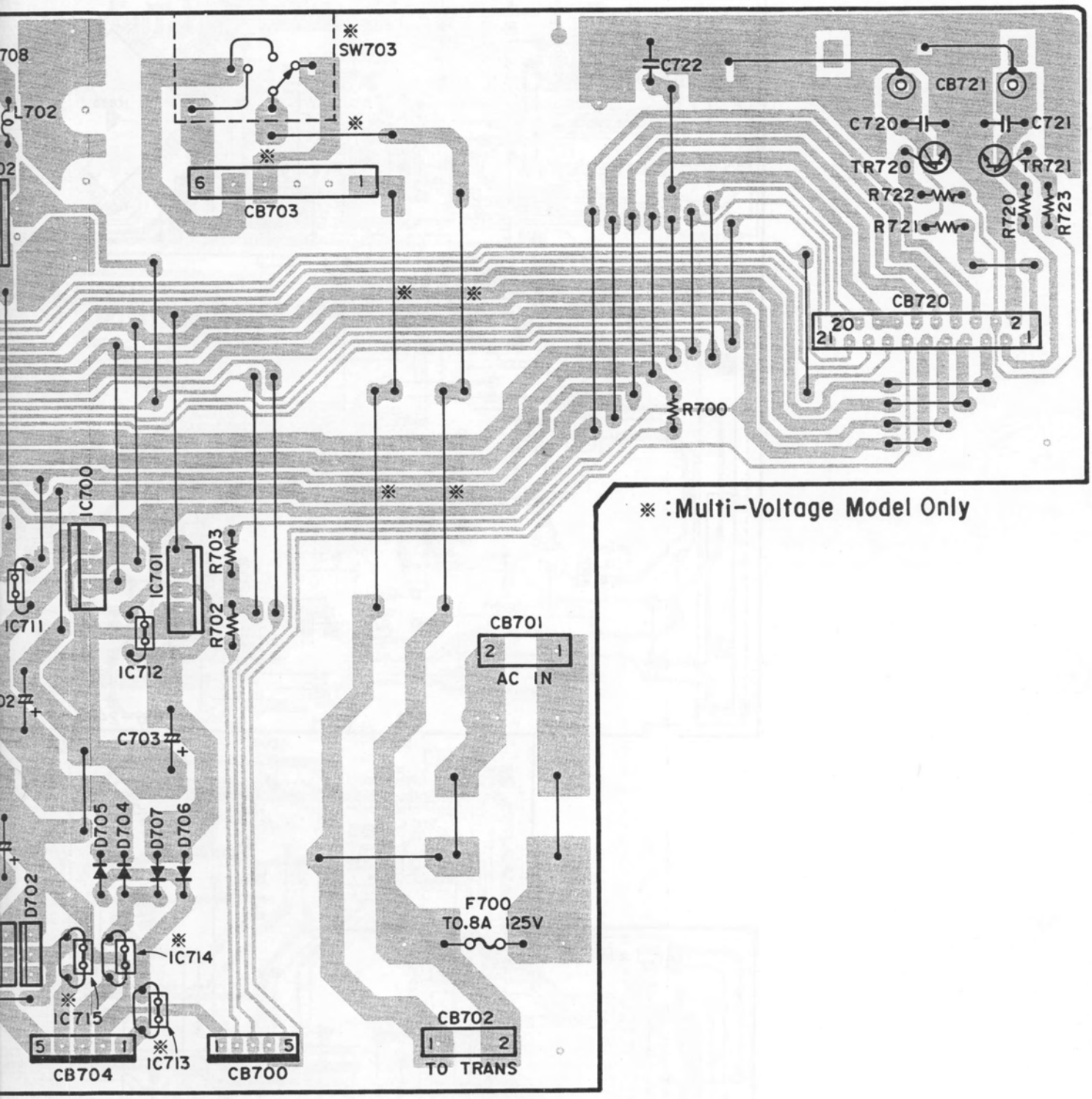
C842
C843
GU-2403-3

PRINTED WIRING BOARD PATTERNS
GU-2403 CONTROL UNIT



GU-2402 MAIN UNIT

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C722
CB721
C720
C721
TR720
TR721
R722
R721
R720
R723
CB703
6
1
CB720
21
20
2
1
R700
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※ :Multi-Voltage Model Only
L702
IC700
IC701
R703
R702
IC711
IC712
CB701
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AC IN
C703
D705
D704
D707
D706
D702
F700
T0.8A 125V
※ IC714
※ IC715
※ IC713
CB704
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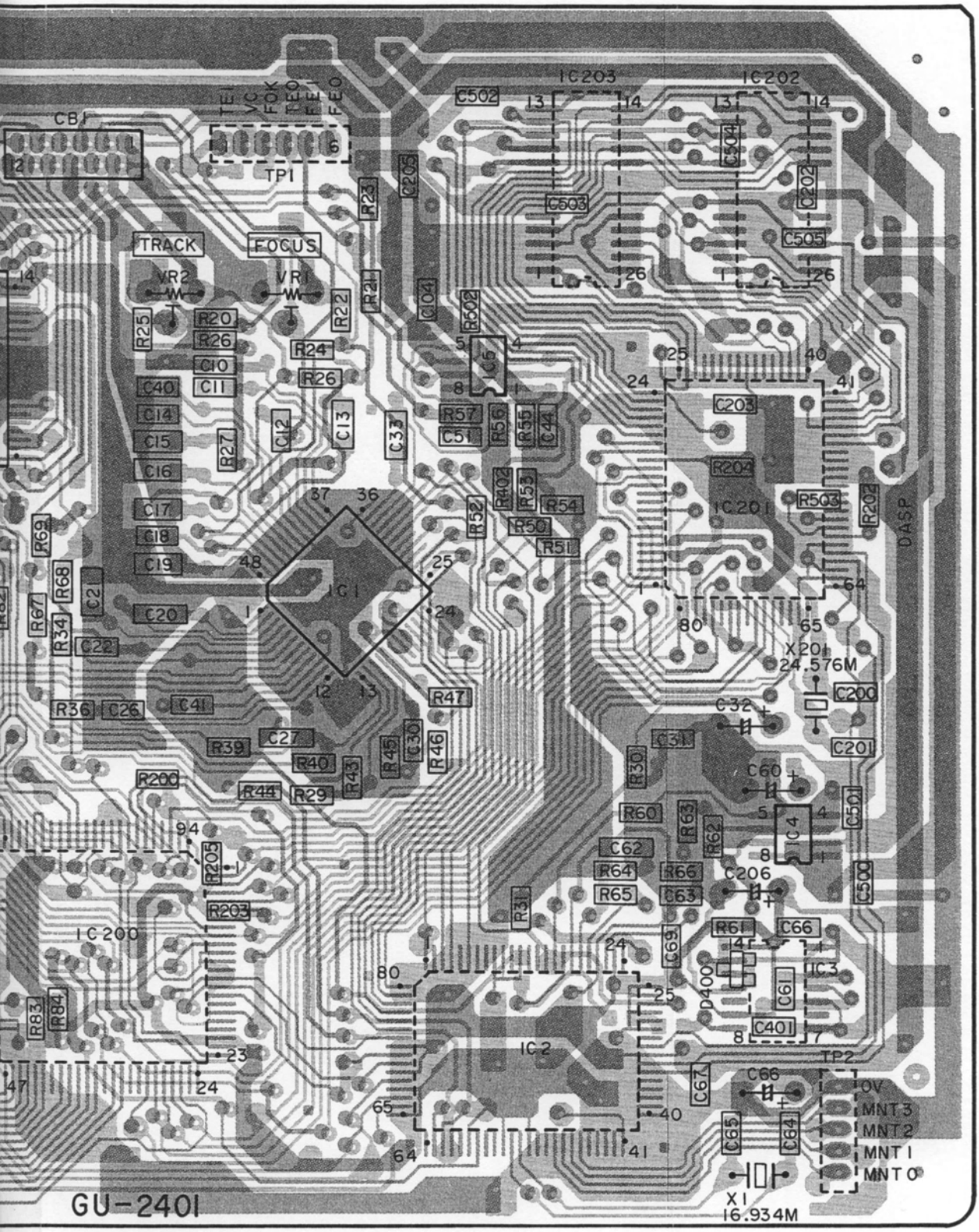
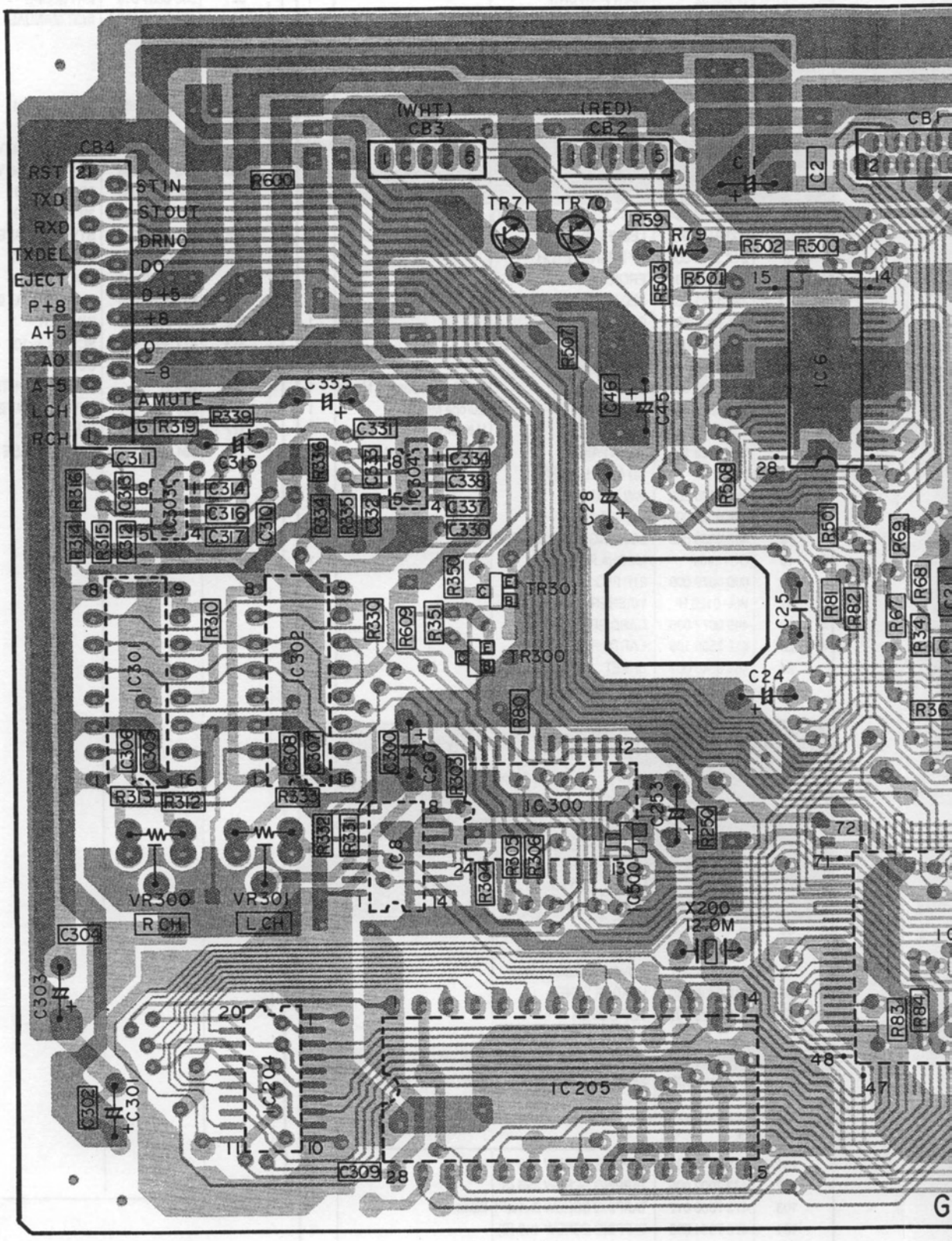
CB700
1
5
CB702
1
2
TO TRANS


GU-2401
CB1
TPI
TE
VC
FOK
FEO
FEI
FEO
TRACK
FOCUS
VR2
VR1
IC1
IC200
IC2
IC201
IC202
IC203
IC3
IC4
IC5
DASP
X201
24.576M
X1
16.934M
TP2
0V
MNT3
MNT2
MNT1
MNT0

GU-2401 MECHA UNIT



PARTS LIST OF EXPLODED VIEW

Ref. No.	Part No.	Part Name	Remarks	Q'ty
◉ 1	GU-2402	MAIN PWB UNIT		1
1-1	GU-2402-1	MAIN PWB UNIT		1
1-2	GU-2402-2	PANEL PWB UNIT		1
1-3	GU-2402-3	PANEL PWB UNIT		2
2	205 0717 008	8P MINI DIN CON. BASE		1
3	204 8373 001	2P PIN JACK		2
◉ 4	417 0462 105	HEAT SINK		1
⚠ 5	206 1039 018	FUSE 0.8A	U.S.A. And Canada Model	1
⚠	206 1031 032	FUSE 0.16A	Europe And U.K.Model	1
⚠	206 1015 003	FUSE 0.5A	Multi-Voltage Model	1
6	212 4763 904	TACT SWITCH (LONG ST)		2
7	393 9462 017	LED (RED)	SLR-40VC3F	1
8	212 1039 000	1P PUSH SWITCH		1
◉ 9	144 2189 106	FRONT PANEL Ass'y		1
◉ 10	146 1371 005	LED WINDOW		1
◉ 11	411 1422 201	CHASSIS		1
◉ 12	499 0074 008	LOCKING CARD SPACER		2
13	461 0706 101	FOOT SHEET		2
◉ 14	105 1029 000	BACK PANEL	U.S.A. And Canada Model	1
◉	105 1029 123	BACK PANEL	Europe Model	1
◉	105 1029 123	BACK PANEL	U.K. Model	1
◉	105 1029 110	BACK PANEL	Multi-Voltage Model	1
◉ 15	FG- 50	CD MECHA.UNIT		2
◉ 16	412 3495 200	P.W.B. BASE		2
◉ 17	499 0063 006	PIERCE HOLD		4
◉ 18	449 0033 049	LOCKING CARD SPACER		4
◉ 19	GU- 2401	MECHA PWB UNIT		1
20	009 0079 009	21P FFC		2
21	WA- 0120 H	WASHER		2
◉ 22	449 0077 005	CARD SPACER		2
◉ 23	412 3555 108	EARTH PLATE		1
24	461 0740 002	SHEET		2
25	—			
⚠ 30	206 2086 002	AC CORD W/CON.	U.S.A. And Canada Model	1
⚠	206 2089 009	AC CORD W/CON.	Europe Model	1
⚠	206 2090 001	AC CORD W/CON.	U.K. Model	1
⚠	206 2088 000	AC CORD W/CON.	Multi-Voltage Model	1
⚠ 31	445 0056 008	CORD BUSH		1
⚠ 32	233 5953 008	POWER TRANS	U.S.A. And Canada Model	1
⚠	233 5955 006	POWER TRANS	Europe Model	1
⚠	233 5961 003	POWER TRANS	U.K. Model	1
⚠	233 5954 007	POWER TRANS	Multi-Voltage Model	1
33	--			
34	119 0069 109	RUBBER BUTTON (B)		1
35	113 1357 207	POWER SW.BUTTON		1
◉ 36	146 9238 140	LOADER PANEL		2
◉ 37	102 0425 101	TOP COVER		1
⚠ 40	212 4698 008	VOLTAGE SELECTOR	Multi-Voltage Model	1
◉ 41	411 1143 001	SELECTOR BRACKET	Multi-Voltage Model	1
SCREWS				
101	473 7015 005	TAPPING SCREW 3×6 (S)	Black	11
102	473 7002 005	TAPPING SCREW 3×6 (S)		10
103	473 7508 017	TAPPING SCREW 3×10(P)	Black	7
104	473 7004 003	TAPPING SCREW 4×8 (S)		2
105	477 0263 005	3P SWELLING SCREW	Black	4

PACKING AND ACCESSORIES (not included EXPLODED VIEW)

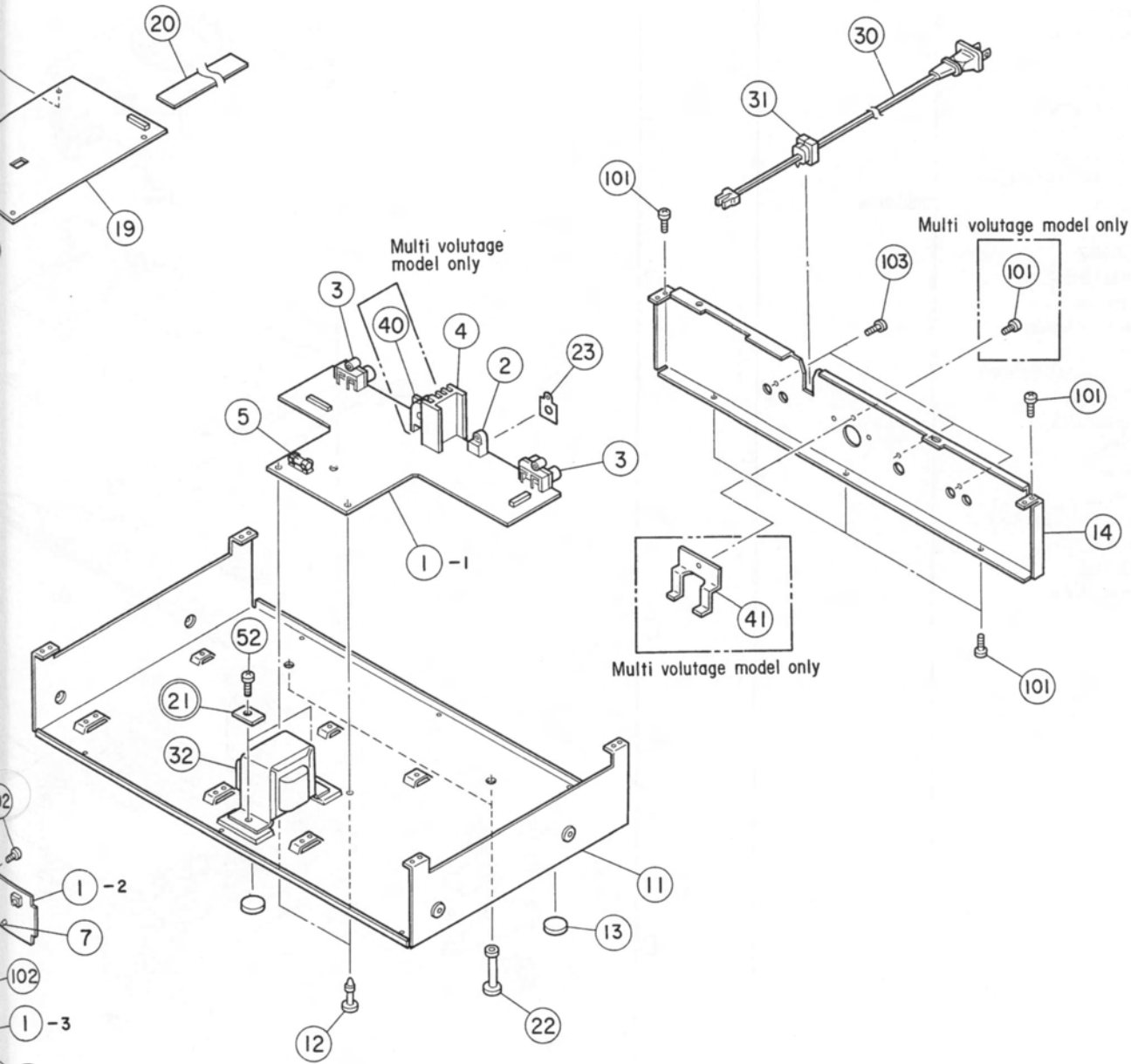
Ref. No.	Part No.	Part Name	Remarks	Q'ty
301	505 0061 010	ENVELOPE		1
302	511 2322 105	INST.MANUAL	U.S.A. Model U.K. Model Multi-Voltage Model	1
303	511 2347 106	INST.MANUAL	Canada And Europe Model	1
304	515 0474 002	DAI WARRANTY ROM	U.S.A. Model	1
305	515 0436 008	DCI WARRANTY	Canada Model	1
306	204 2518 008	8P MD.CORD		1
307	203 6305 007	2P PIN CORD		2
308	505 0102 092	STYRENE PAPER		1
309	505 0099 008	POLY COVER		1
310	505 0099 082	POLY COVER		1
311	412 3556 000	CONNECTING BRACKET		2
312	477 0053 040	WASHER		8
313	471 3505 021	SCREW 5×10		8
314	503 1001 206	CUSHION		2
315	RC-35	REMOTE CONTROL UNIT		1
316	505 1012 021	STYRENE PAPER		1
317	503 1010 103	CUSHION(RC)	Remote Control Unit	2
318	501 1527 137	CARTON CASE		1

● 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.

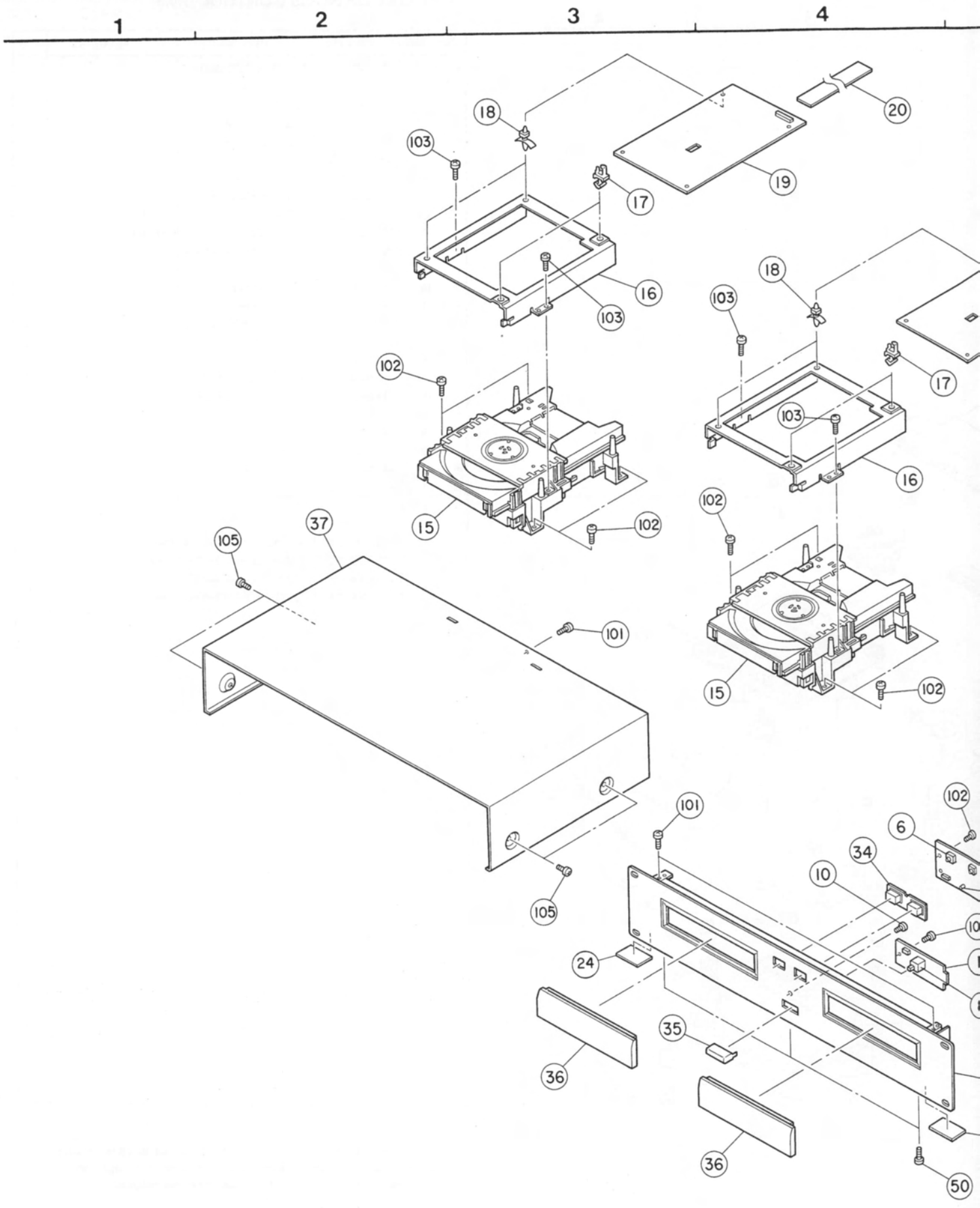
5 6 7 8

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

A B C D E



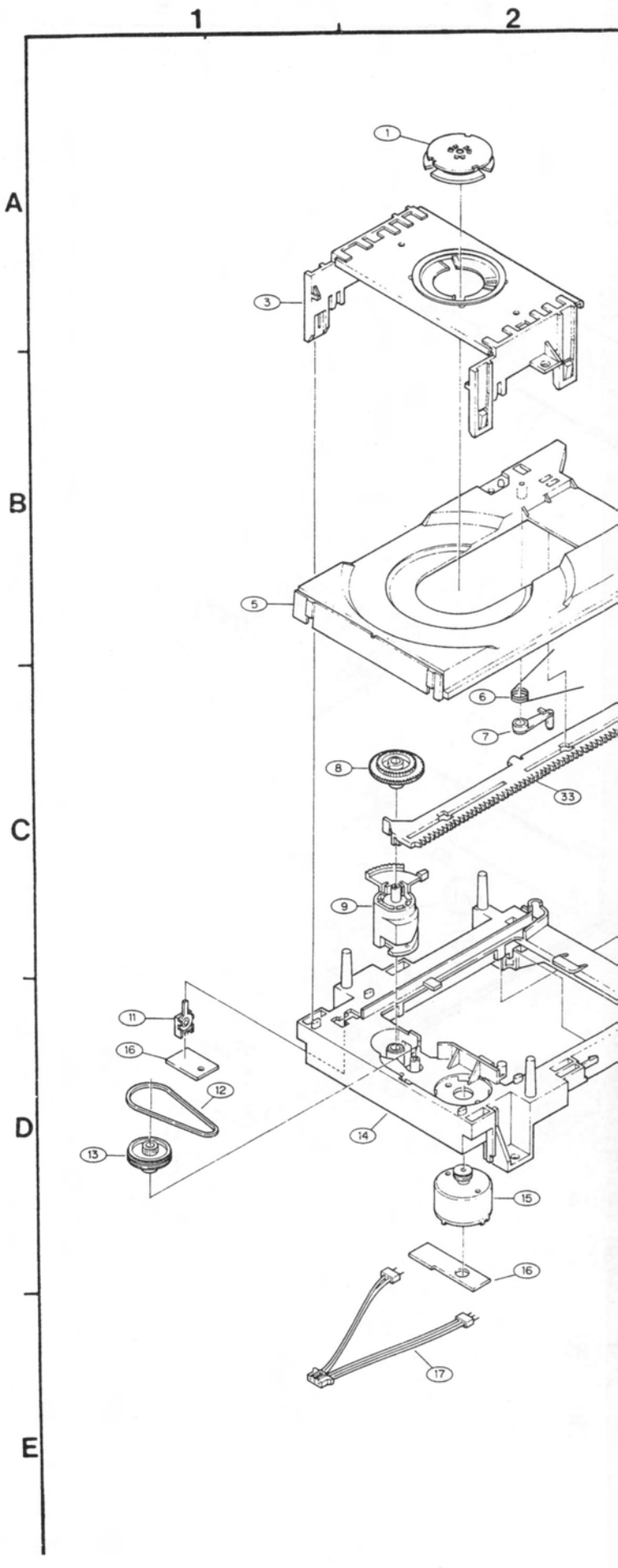
EXPLODED VIEW OF CHASSIS AND CABINET

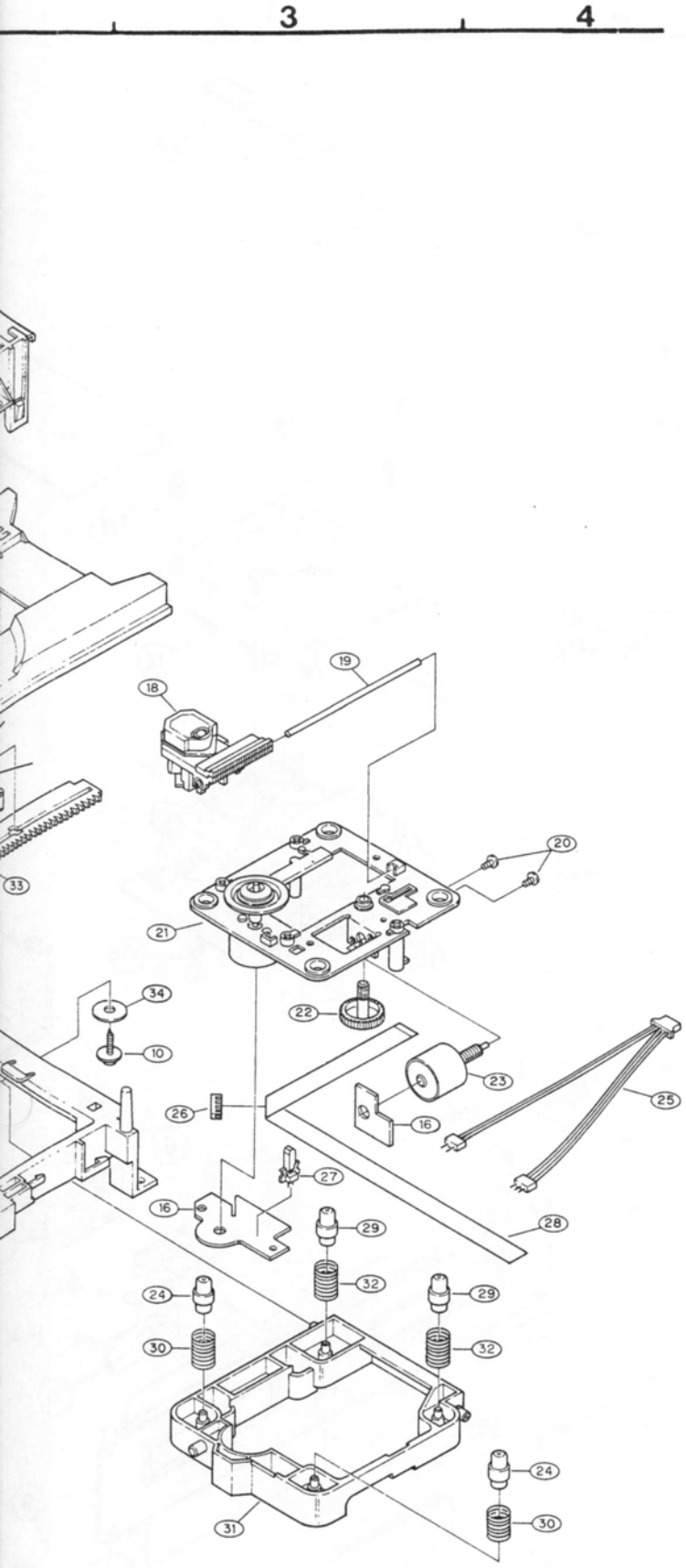


PARTS LIST OF FG-50 MECHANISM UNIT

Ref. No.	Partr No.	Part Name	Remarks
1	GEN 1396	Clamper Press Sub Ass'y	
◉ 3	412 3133 006	Clamper Frame	
5	431 0300 302	Loader Frame	
6	463 0669 008	Lock Lever Spring	
7	412 3215 202	Lock Lever	
8	424 0162 005	Gear	
9	424 0160 104	Lift Cam	
10	477 0262 006	Special Screw	
11	212 1059 006	Open/Close SW.	
12	423 0056 011	Belt	
13	424 0161 103	Pulley Gear	
◉ 14	411 1019 300	Mecha. Chassis	
15	GEN 1492	L. Motor Sub Ass'y	
16	222 2275 006	Motor SW. P.W.B.	
17	203 8302 008	5-3, 2P PH-SAN CORD-R	
18	499 0191 009	Laser P.U	KSS-240A
19	443 1094 005	P.U. Shaft	
20	471 3801 039	2×3 CBS-Z	
21	GEN 1636	Spindle Motor Ass'y	
22	424 0164 003	Helical Gear	
23	GEN 1397	Slide Motor Sub Ass'y	
24	462 0078 104	Damper	
25	203 8301 009	5-3, 2P PH-SAN CORD-W	
26	443 1093 006	FFC Clamper	
27	212 6013 005	Inner SW. (PU)	
28	009 0051 001	12P FFC	
29	462 0078 117	Damper	
30	463 0583 100	Spring (F)	
◉ 31	GEN 1408	Mecha. Frame Sub Ass'y	
32	461 0661 000	Spring F. (R)	
33	435 0117 403	Slide Rack	
◉ 34	462 0113 014	Rubber Washer	

PARTS LIST OF FG-50 MECHA UNIT

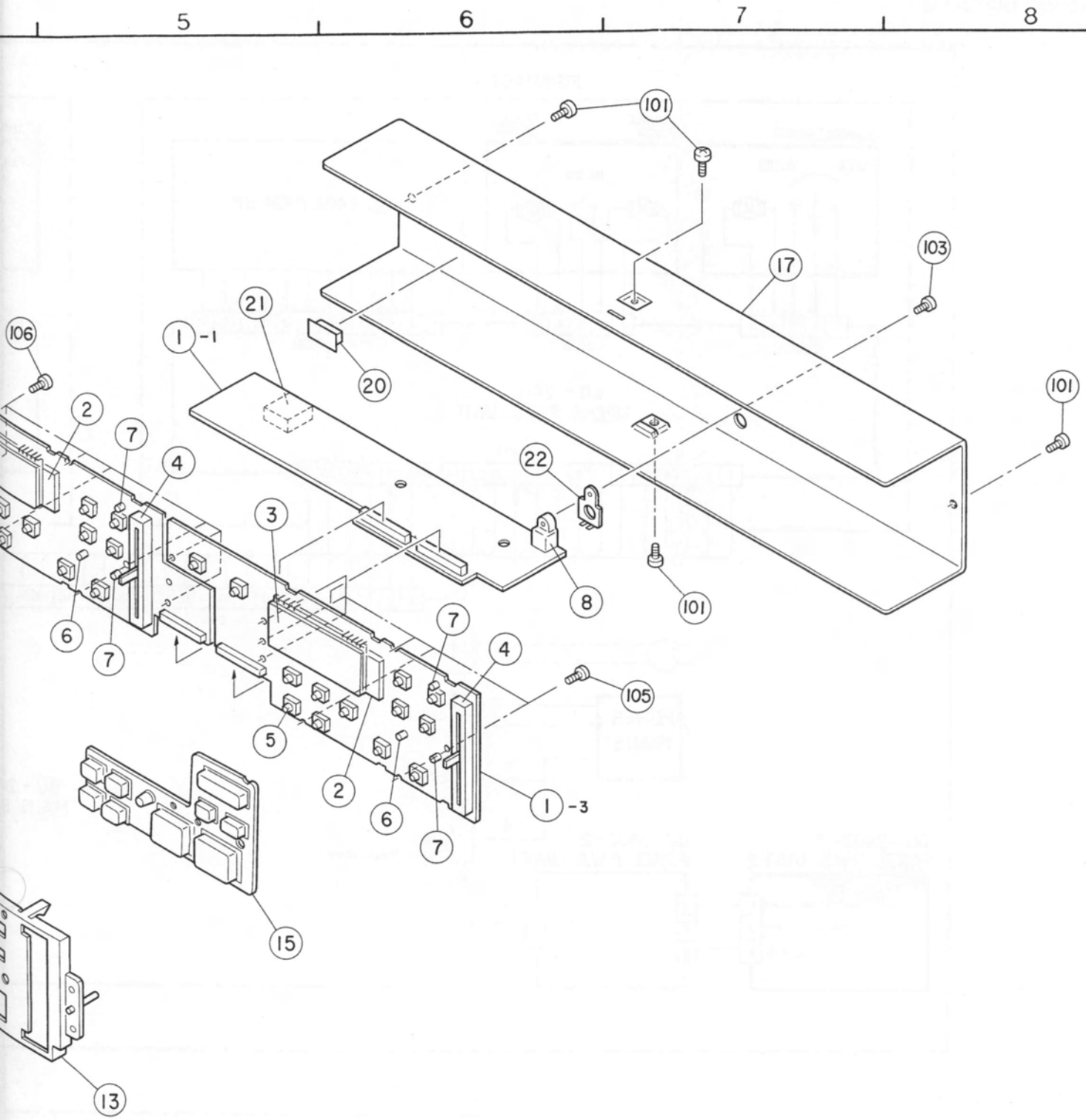




PART LIST OF RC-35 CONTROL UNIT

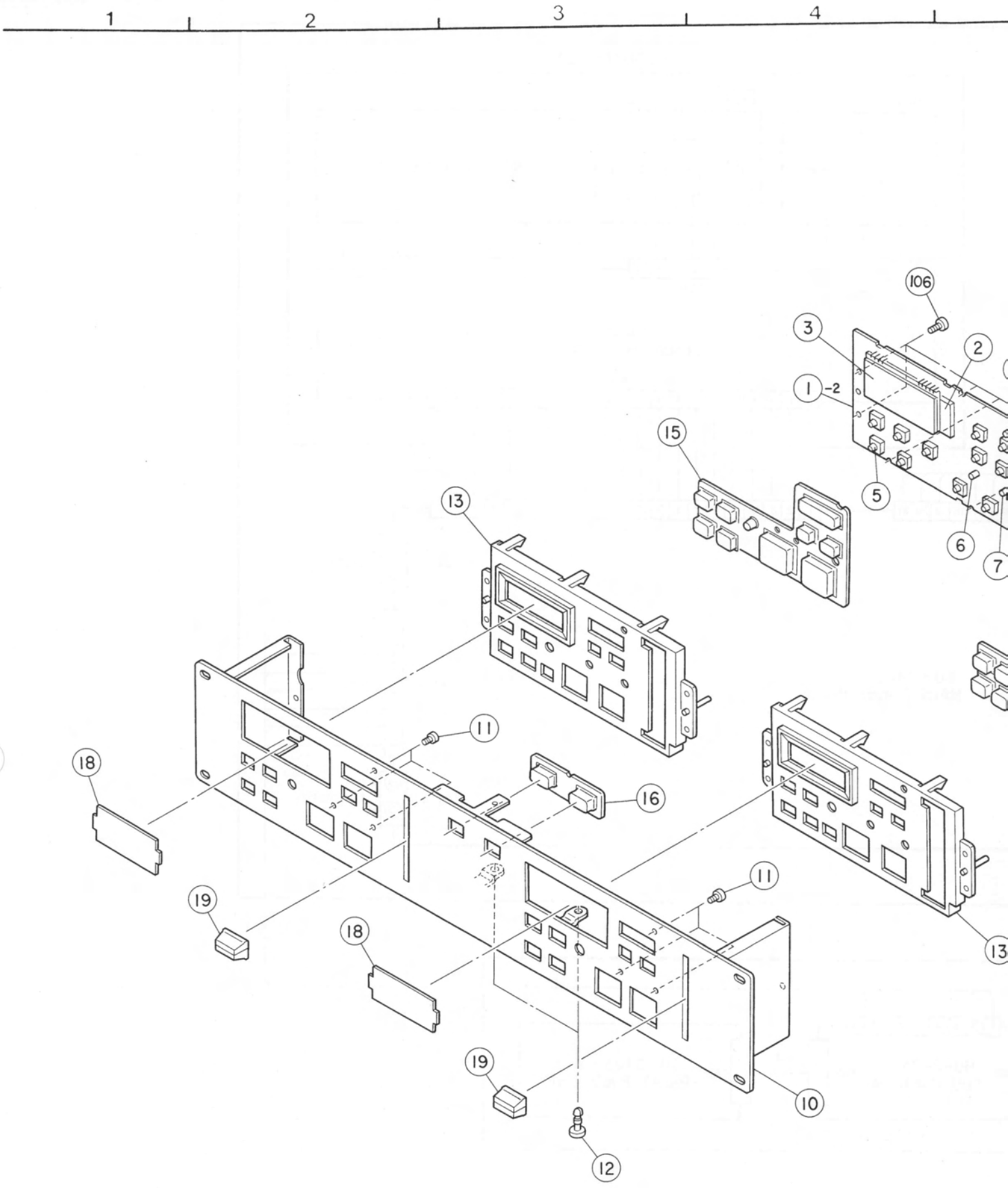
Ref. No.	Part No.	Part Name	Remarks	Q'ty
◉ 1	GU- 2403	CONTROL PWB UNIT		1
1-1	GU- 2403 -1	CPU PWB UNIT		
1-2	GU- 2403 -2	LEFT PWB UNIT		
1-3	GU- 2403 -3	RIGHT PWB UNIT		
2	393 9511 104	LED BACK LIGHT		1
3	393 4139 002	LCD		2
4	211 0763 015	SLIDE VOLUME		2
5	212 4763 904	TACT SWITCH(LONG ST)		24
6	393 9462 017	LED (RED)	SLR-40VC3F	2
7	393 9512 006	LED (GRN)	SLR-40MC	4
8	205 0717 008	8P MINI DIN CONN.BASE		1
9	—			
◉ 10	144 2191 107	RC FRONT PANEL ASS'Y		1
◉ 11	146 1371 005	LED WINDOW		6
◉ 12	449 0074 011	LOCKING CARD SPACER		2
◉ 13	146 1369 101	INNER PANEL		2
14	—			
15	119 0068 100	RUBBER BUTTON (A)		2
16	119 0069 109	RUBBER BUTTON (B)		1
◉ 17	105 1030 109	COVER		1
◉ 18	146 1370 200	WINDOW		2
19	113 1523 002	SLIDE KNOB		2
◉ 20	461 0653 005	CUSHION (M)		1
◉ 21	461 0504 002	PAD		1
◉ 22	412 3555 108	EARTH PLATE		1
101	473 7015 005	TAPPING SCREW 3×6 (S)	Black	4
103	473 7508 017	TAPPING SCREW 3×10(P)	Black	1
105	473 7500 015	TAPPING SCREW 3×8 (P)		8
106	473 7002 021	TAPPING SCREW 3×8 (S)	Black	8

● 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.

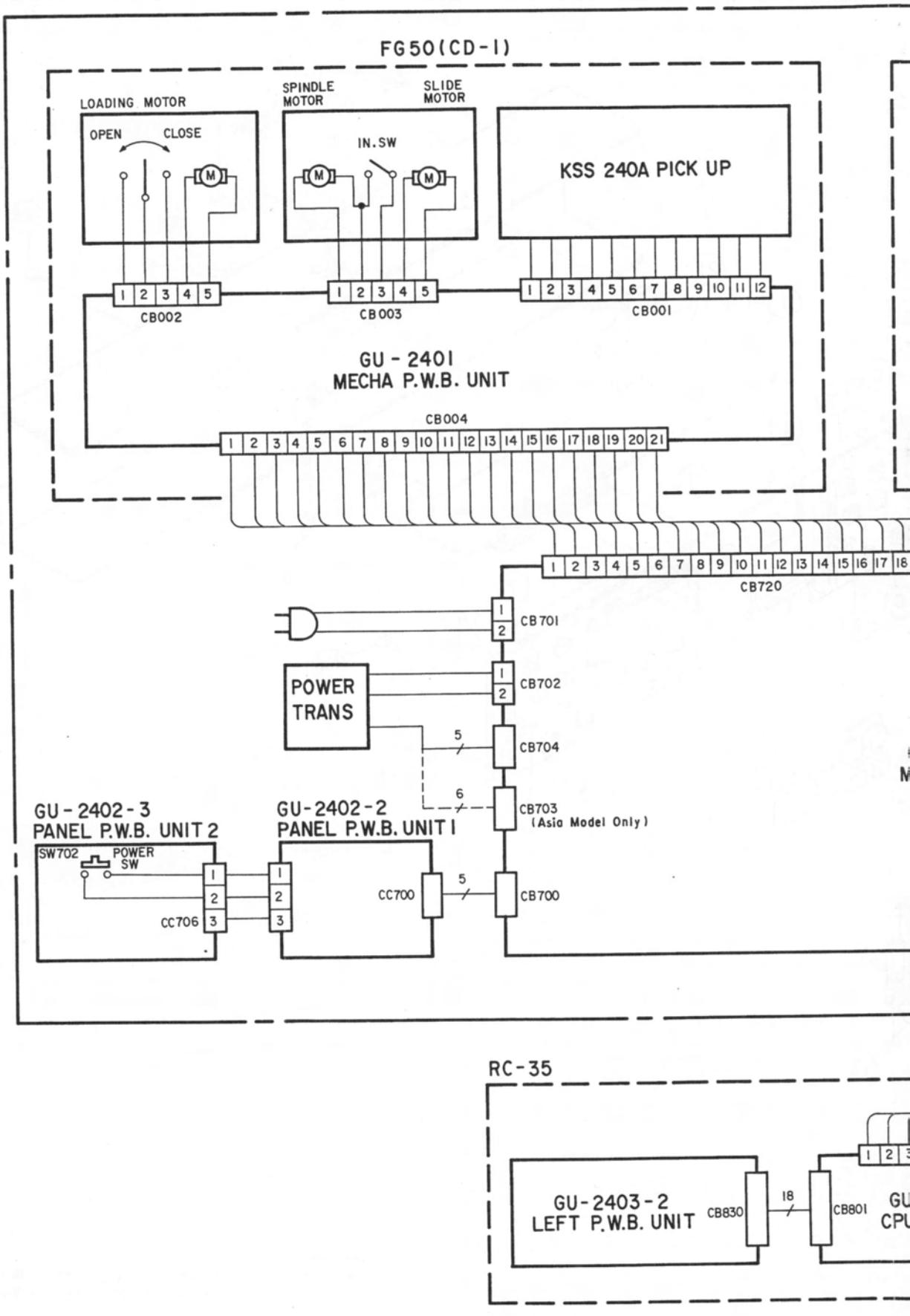


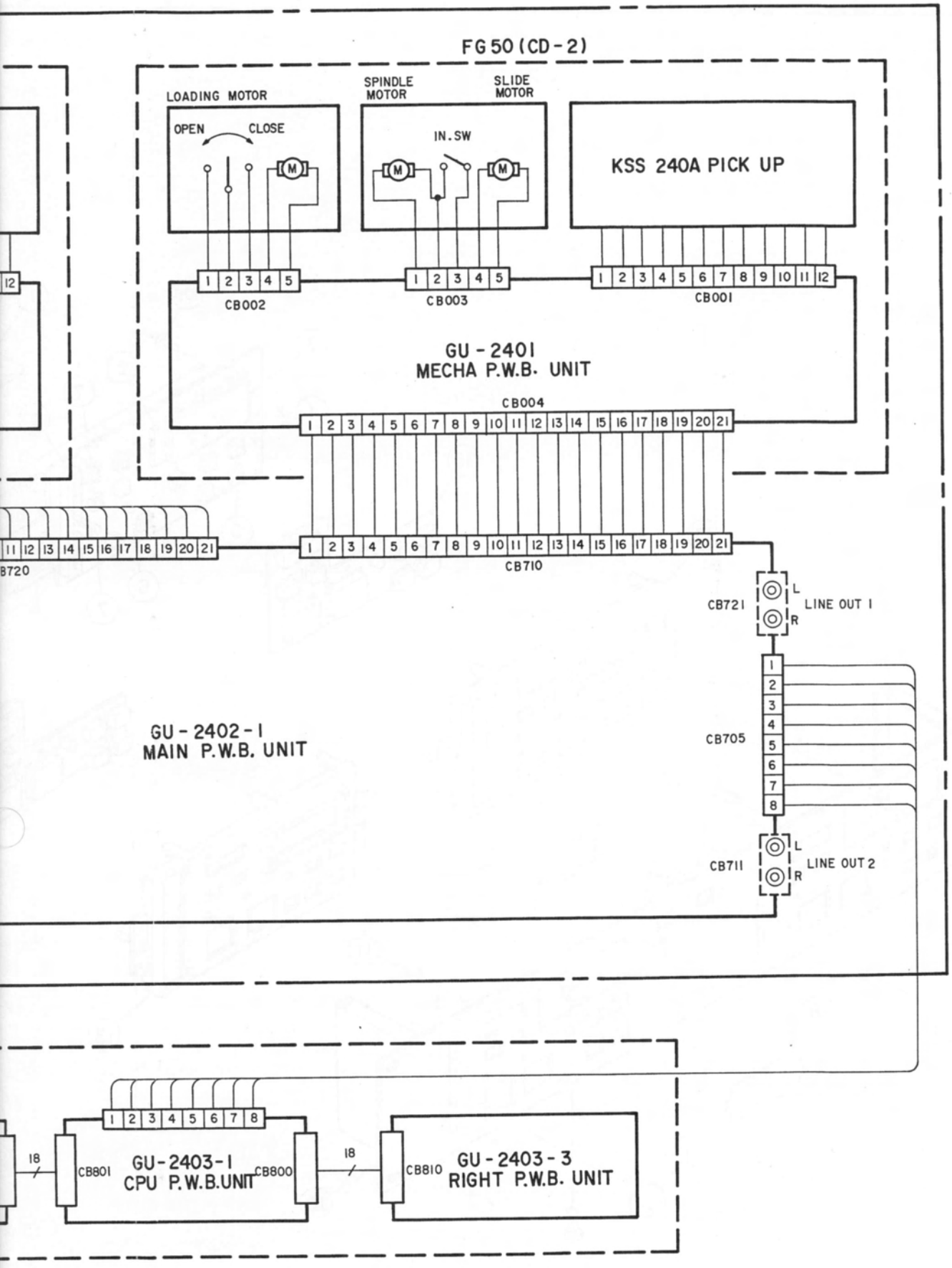
WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

EXPLODED VIEW OF RC-35 CONTROL UNIT

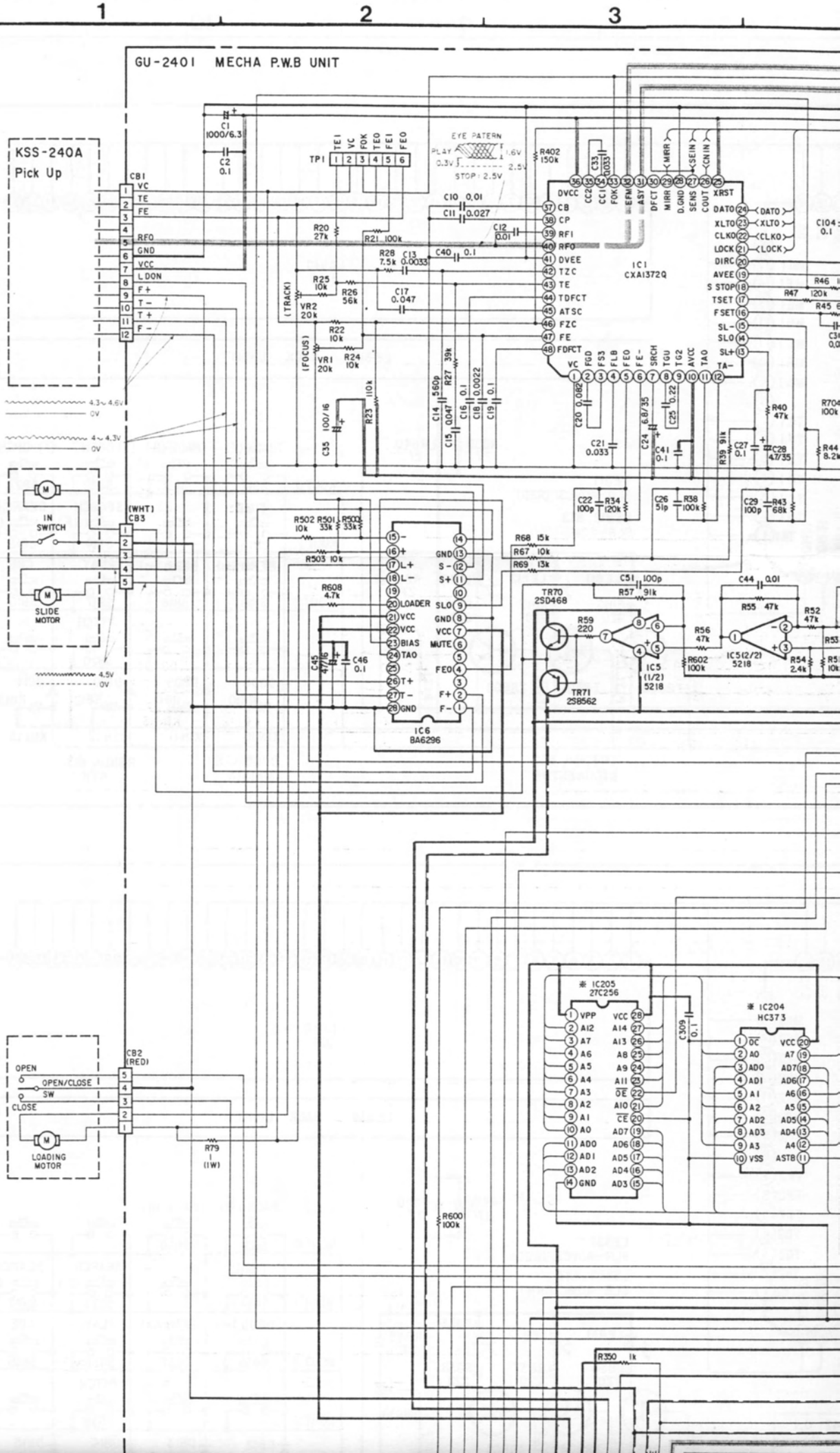


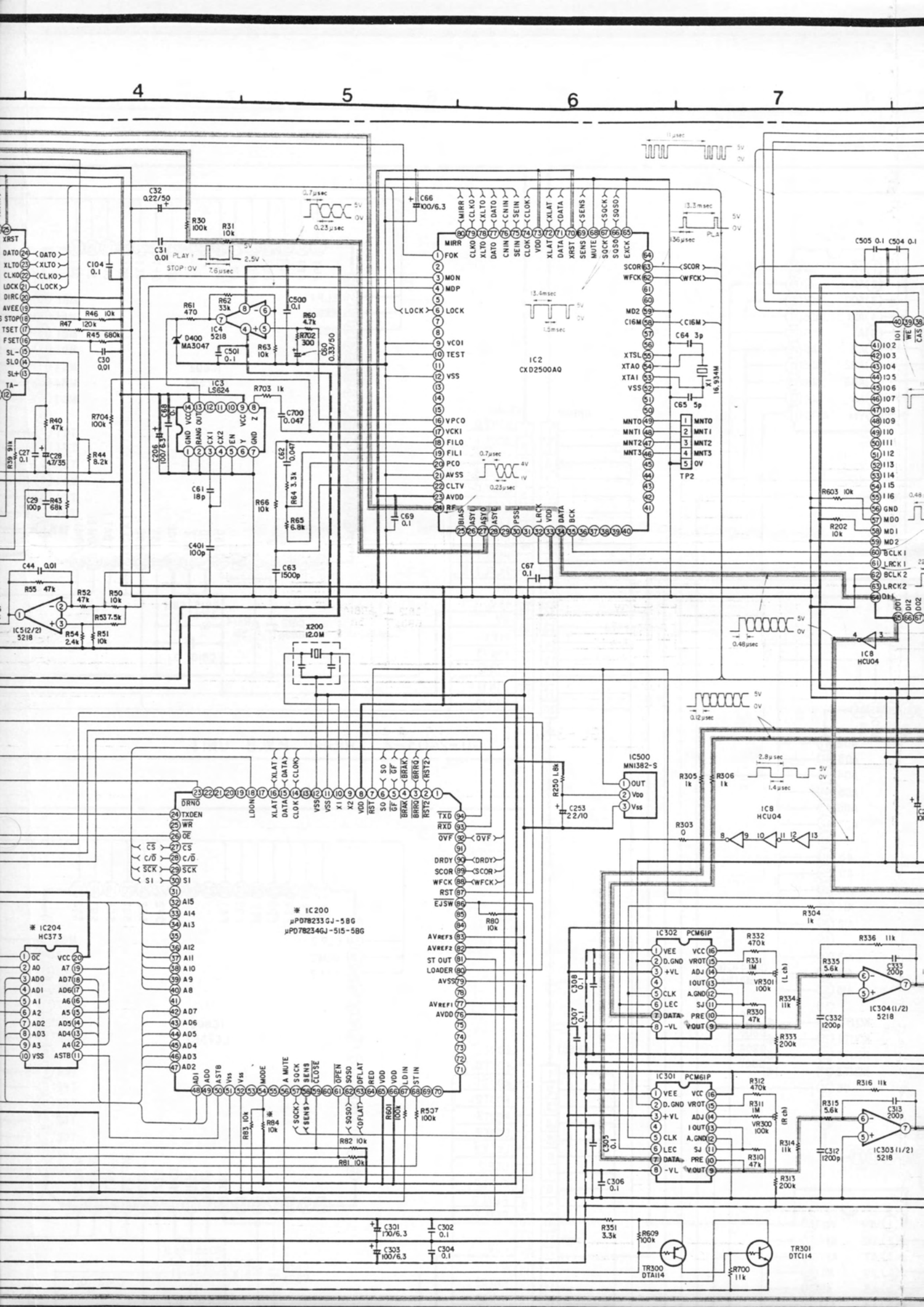
WIRING DIAGRAM

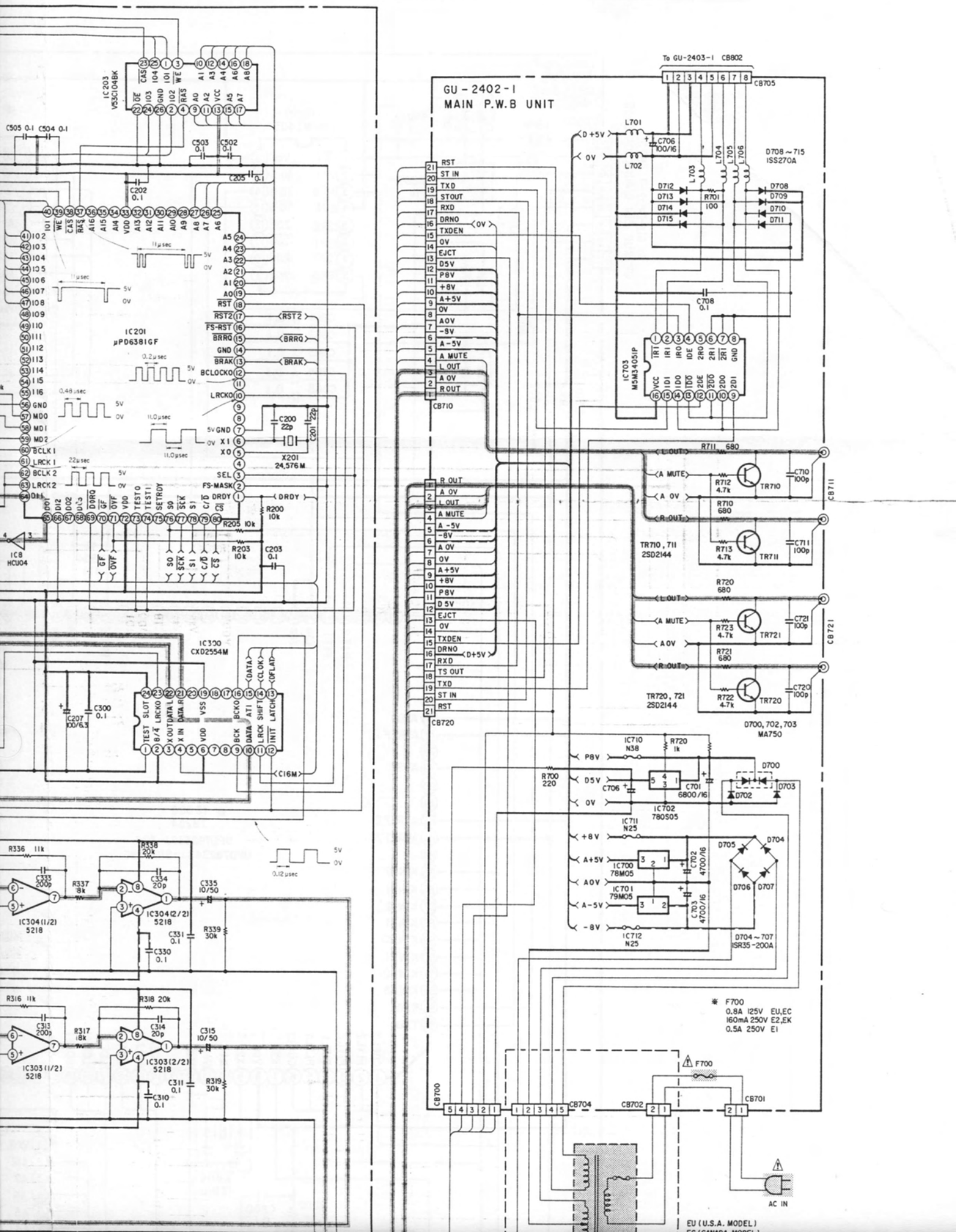


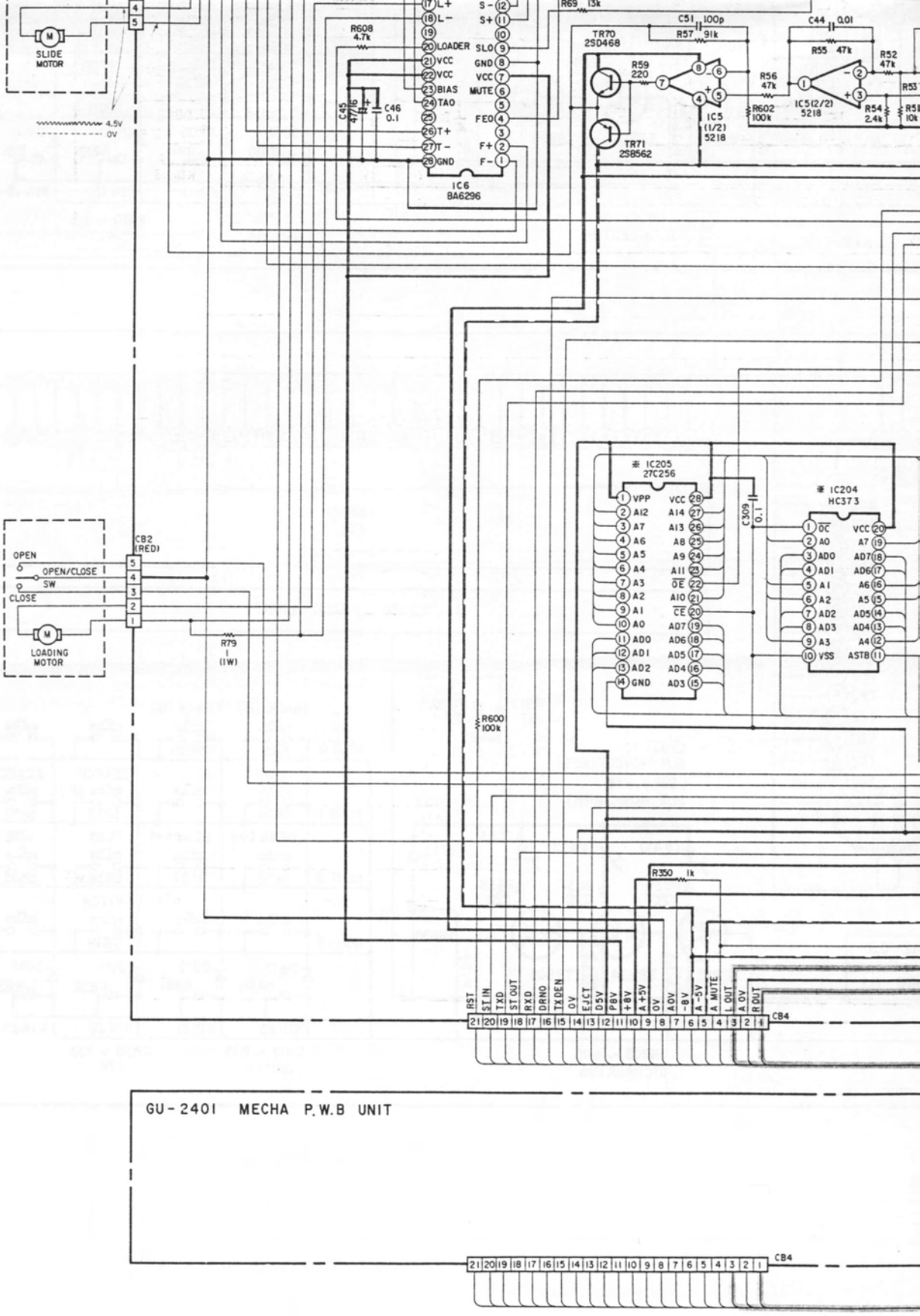

FG 50 (CD-2)
LOADING MOTOR
OPEN
CLOSE
SPINDLE MOTOR
SLIDE MOTOR
IN. SW
KSS 240A PICK UP
CB002
CB003
CB001
GU-2401
MECHA P.W.B. UNIT
CB004
CB710
CB720
CB721
LINE OUT 1
CB705
CB711
LINE OUT 2
GU-2402-1
MAIN P.W.B. UNIT
GU-2403-1
CPU P.W.B.UNIT
CB801
CB800
CB810
GU-2403-3
RIGHT P.W.B. UNIT

SCHEMATIC DIAGRAM GU-2401 MECHA P.W.B. UNIT/GU-2402 MAIN P.W.B. UNIT




4
5
6
7
IC2
CXD2500AQ
IC3
LS624
IC4
5218
IC5(2/2)
5218
IC8
HCU04
IC500
MN1382-S
IC302 PCM61P
IC301 PCM61P
IC304(1/2)
5218
IC303(1/2)
5218
TP2
X200
12.0M
X1
16.934M
* IC200
μPD78233GJ-58G
μPD78234GJ-515-58G
* IC204
HC373
TR300
DTA114
TR301
DTC114
D400
MA3047


GU-2402-I
MAIN P.W.B UNIT
To GU-2403-I CB802
CB705
IC203 V53C104BK
IC201 μPD6381GF
X201 24.576M
IC300 CXD2554M
IC8 HCU04
IC303(1/2) 5218
IC303(2/2) 5218
IC304(1/2) 5218
IC304(2/2) 5218
IC703 M5M34051P
IC710 N38
IC711 N25
IC712 N25
IC700 78M05
IC701 79M05
IC702 78S05
TR710, 711 2SD2144
TR720, 721 2SD2144
D700, 702, 703 MA750
D704 ~ 707 ISR35-200A
D708 ~ 715 1SS270A
F700 0.8A 125V EU,EC 160mA 250V E2,EK 0.5A 250V EI
CB700
CB704
CB702
CB701
AC IN
EU (U.S.A. MODEL)



NOTES

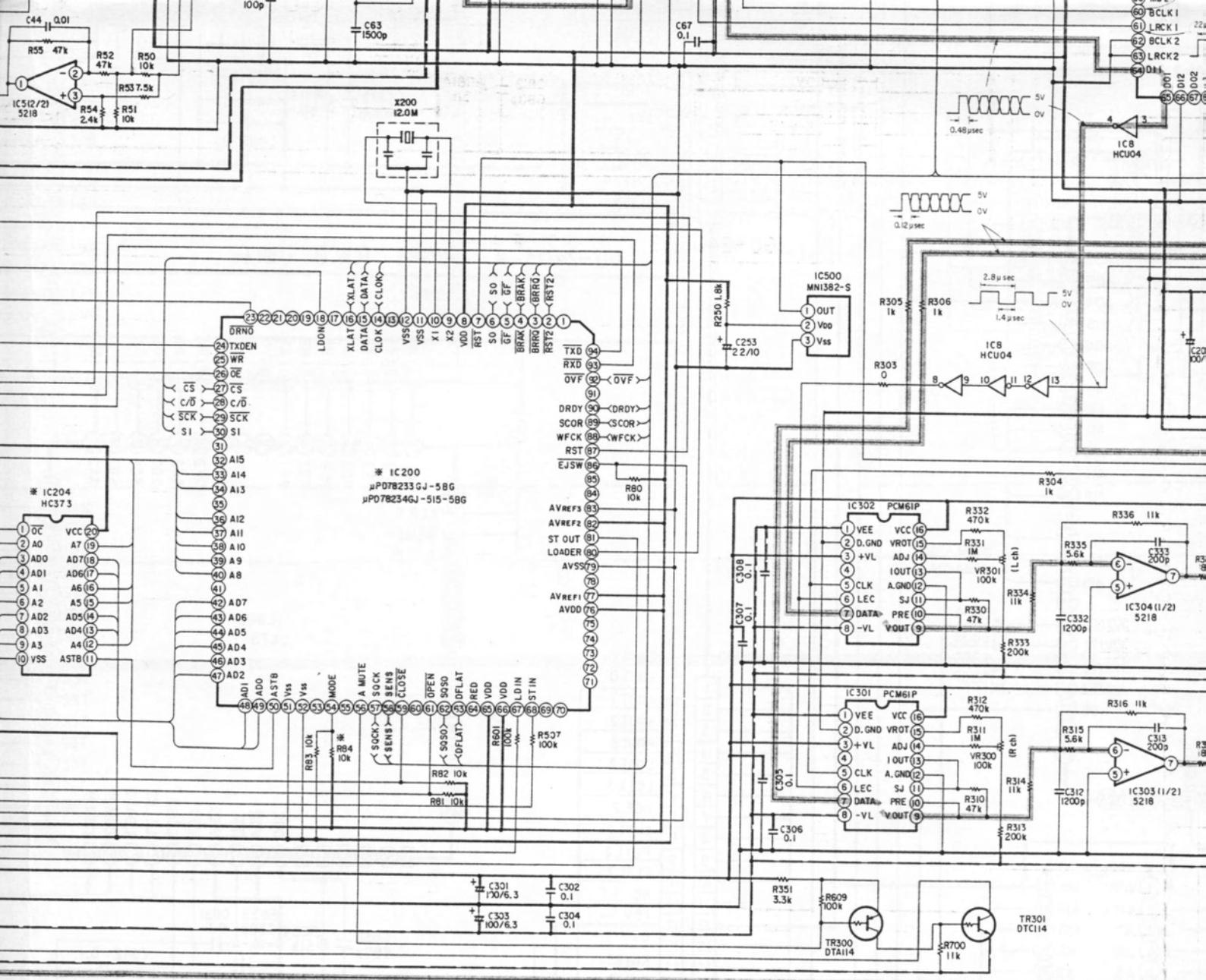
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM, M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:
Parts marked with
Use ONLY replac

CAUTION:
Before returning t
the leakage curre
defective.

WARNING:
DO NOT return th

NOTES:
Circuit and parts a



〔 SAME AS ABOVE 〕

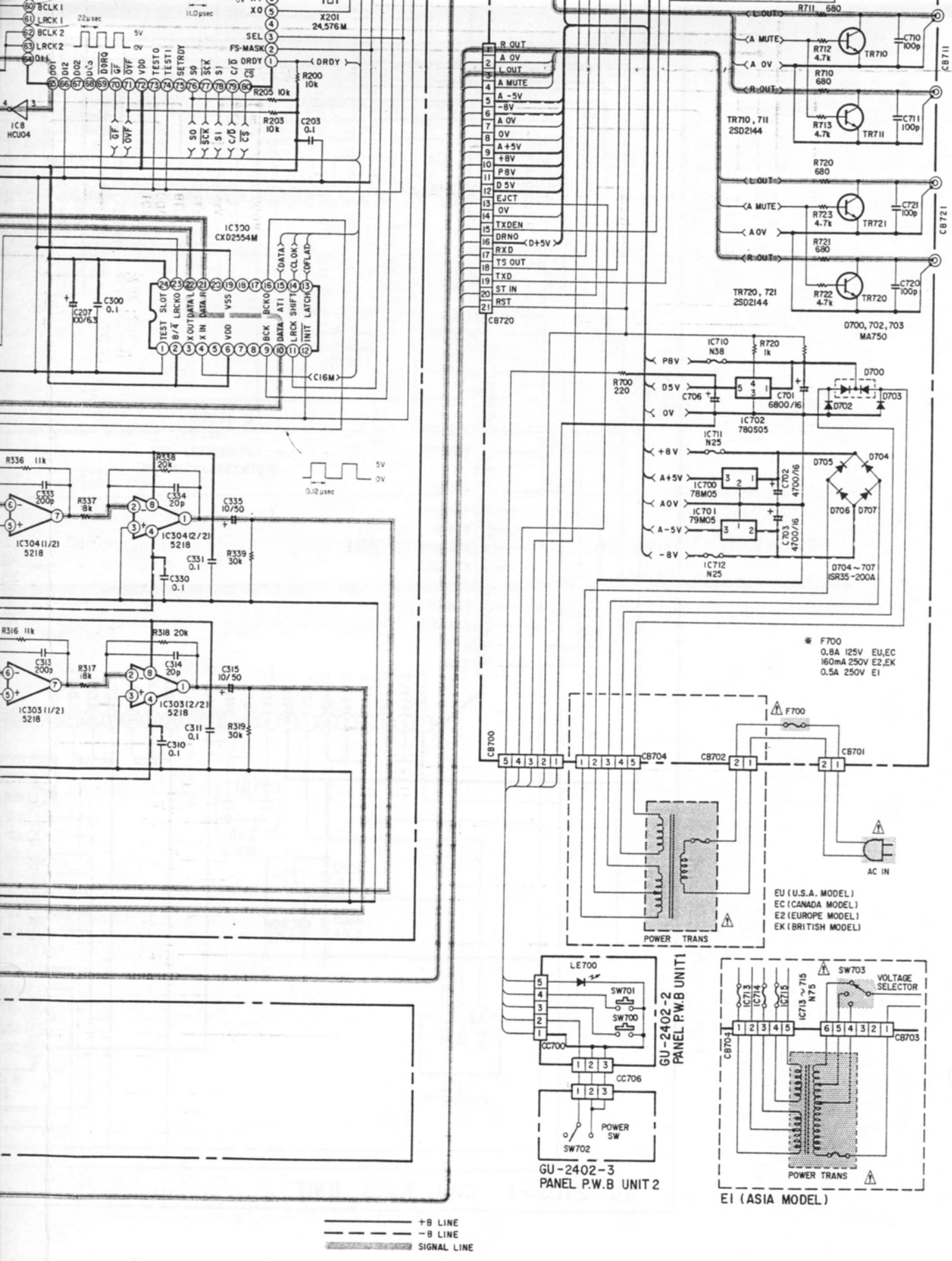
WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

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 240 kohms, the unit is defective.

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

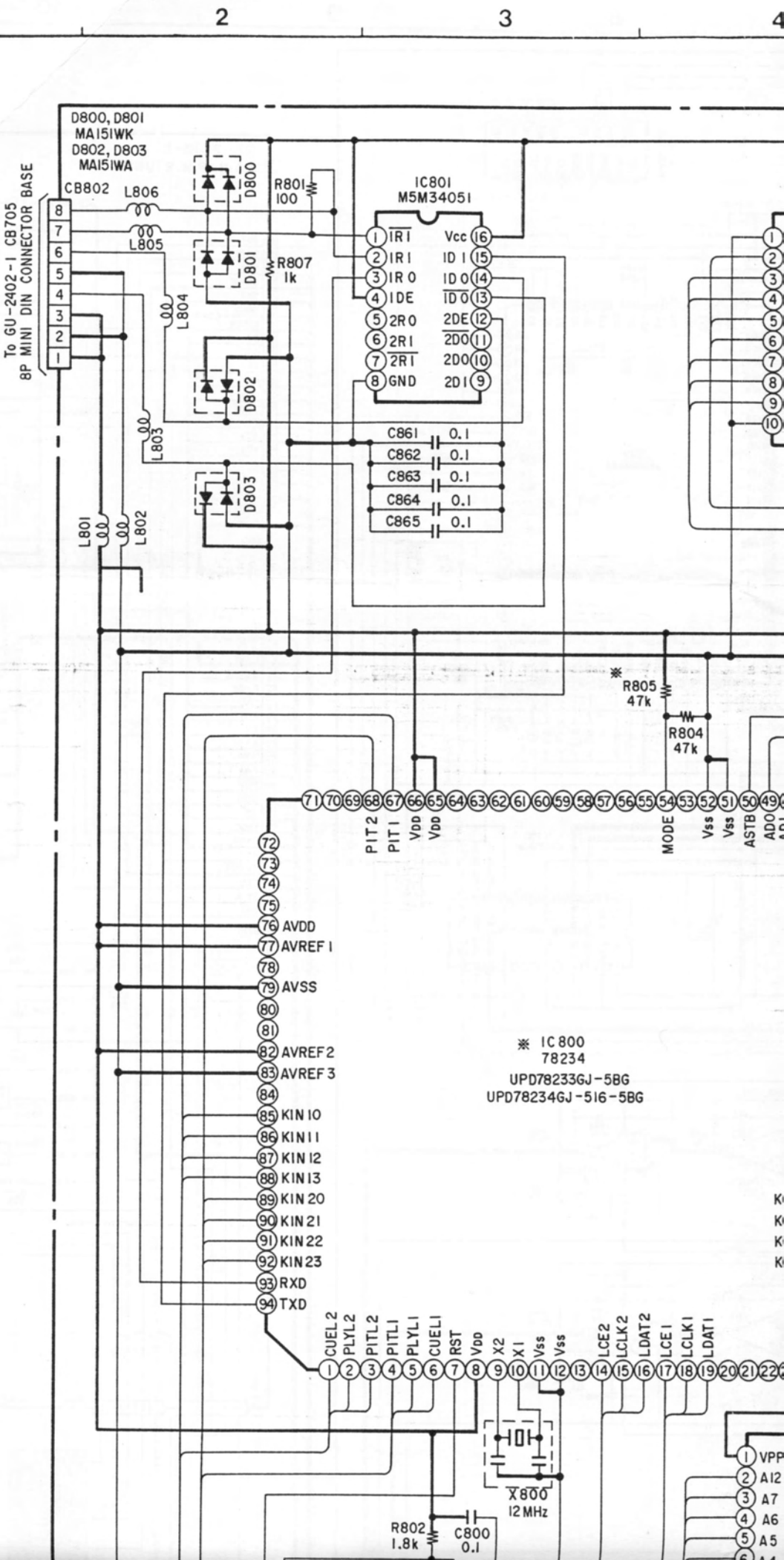
NOTES:
Circuit and parts are subject to change without prior notice.

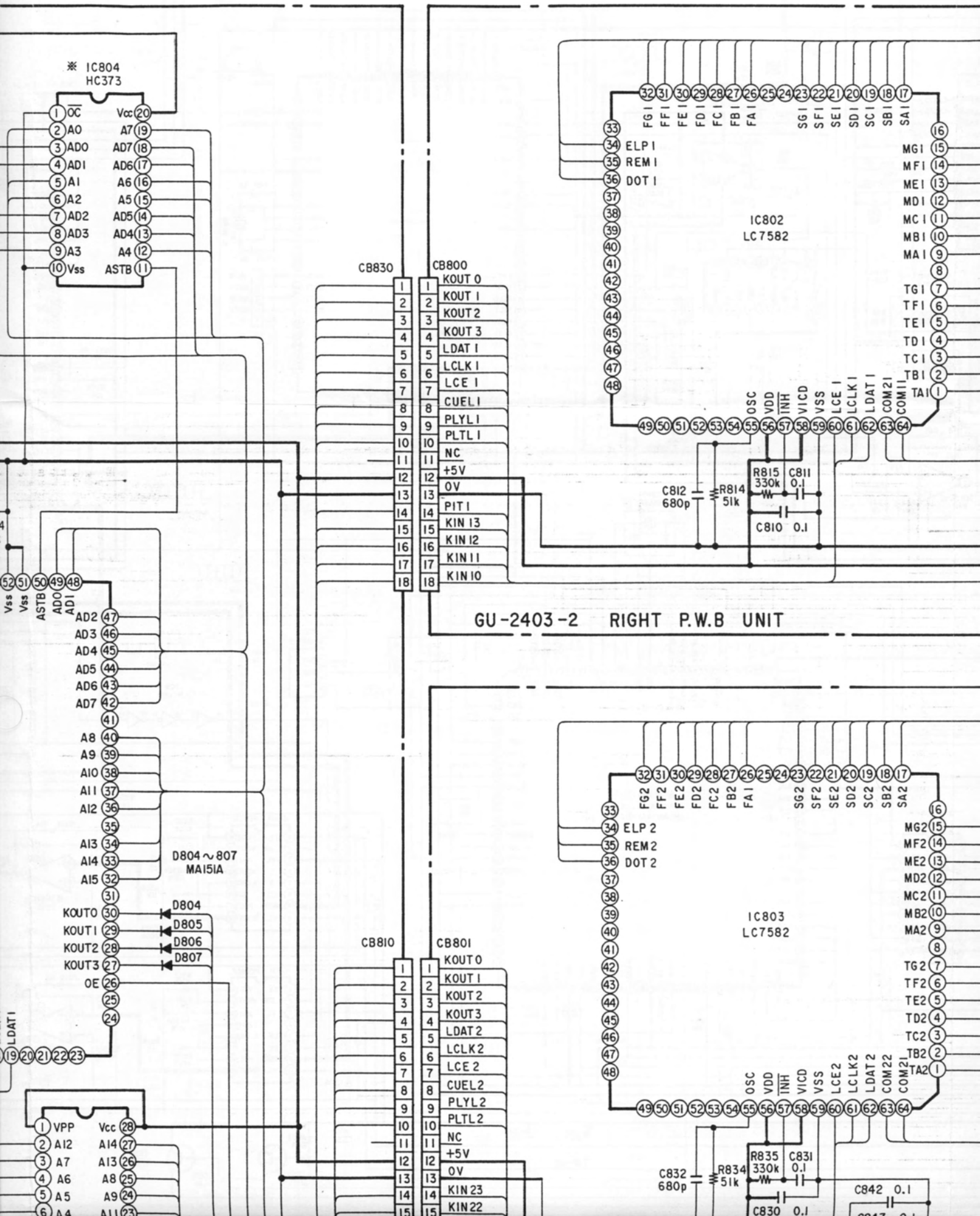
* For serial numbers o
No. 301, of Canada M
CPU masking and ma

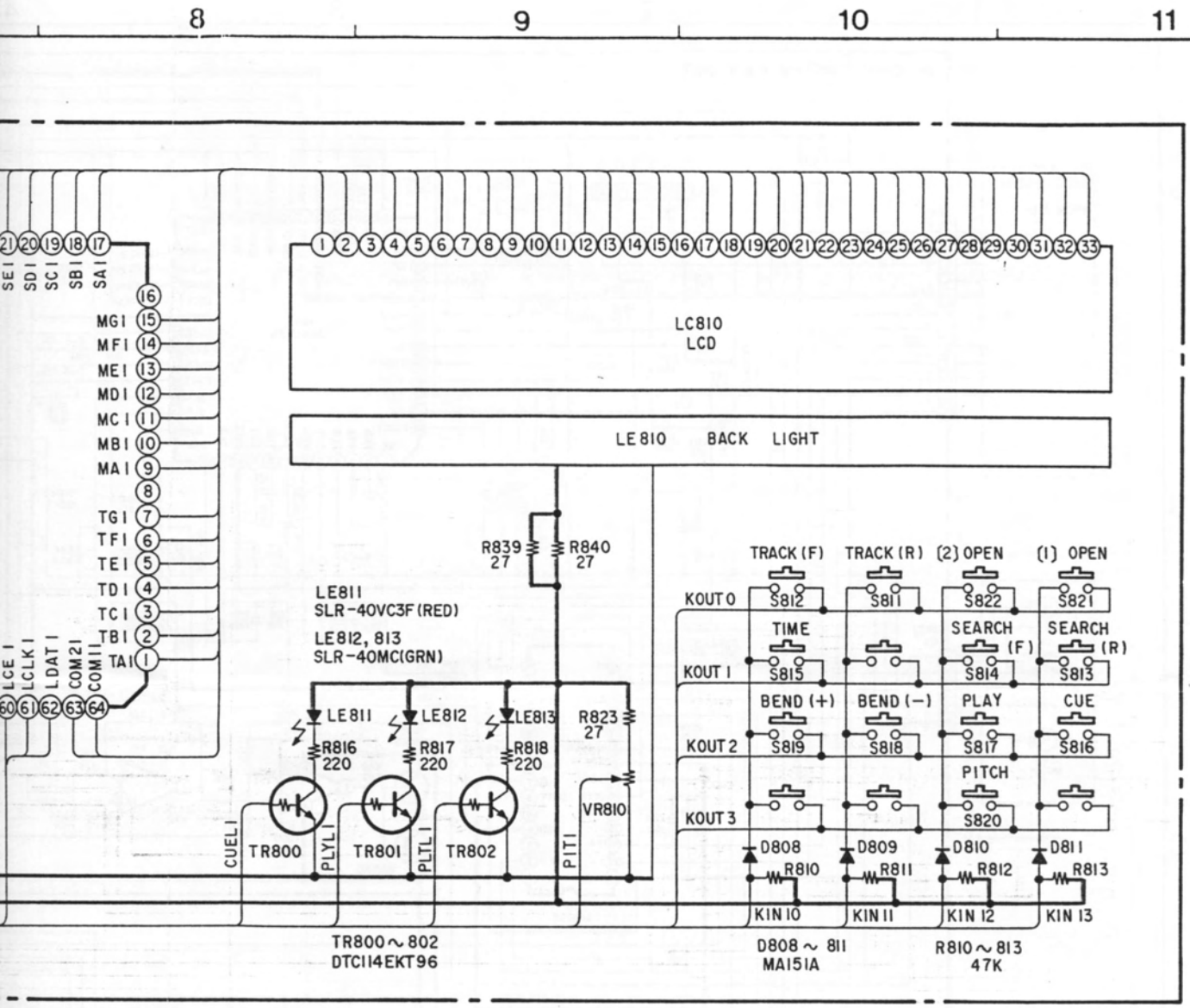


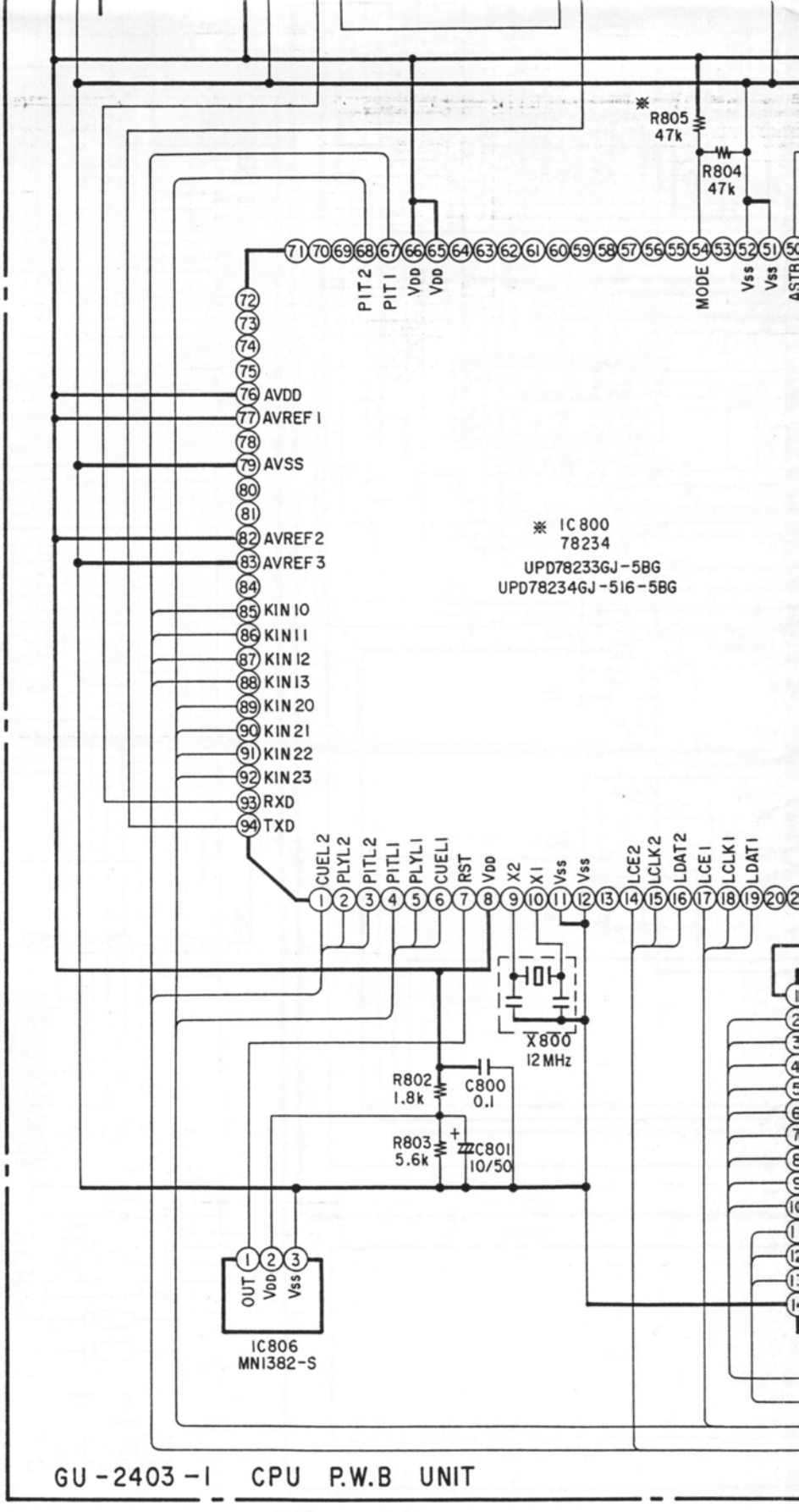
rial numbers of U.S.A. Model after No. 621, of Europe Model up to No.882~885 and after No.951, of U.K. Model after
1, of Canada Model after No. 131, and of Multi-Voltage Model after No. 101, IC200 becomes UPD78234 GJ-515-5BG by
asking and makes IC204, IC205, R84 unnecessary.

SCHEMATIC DIAGRAM GU-2403 CONTROL P.W.B. UNIT

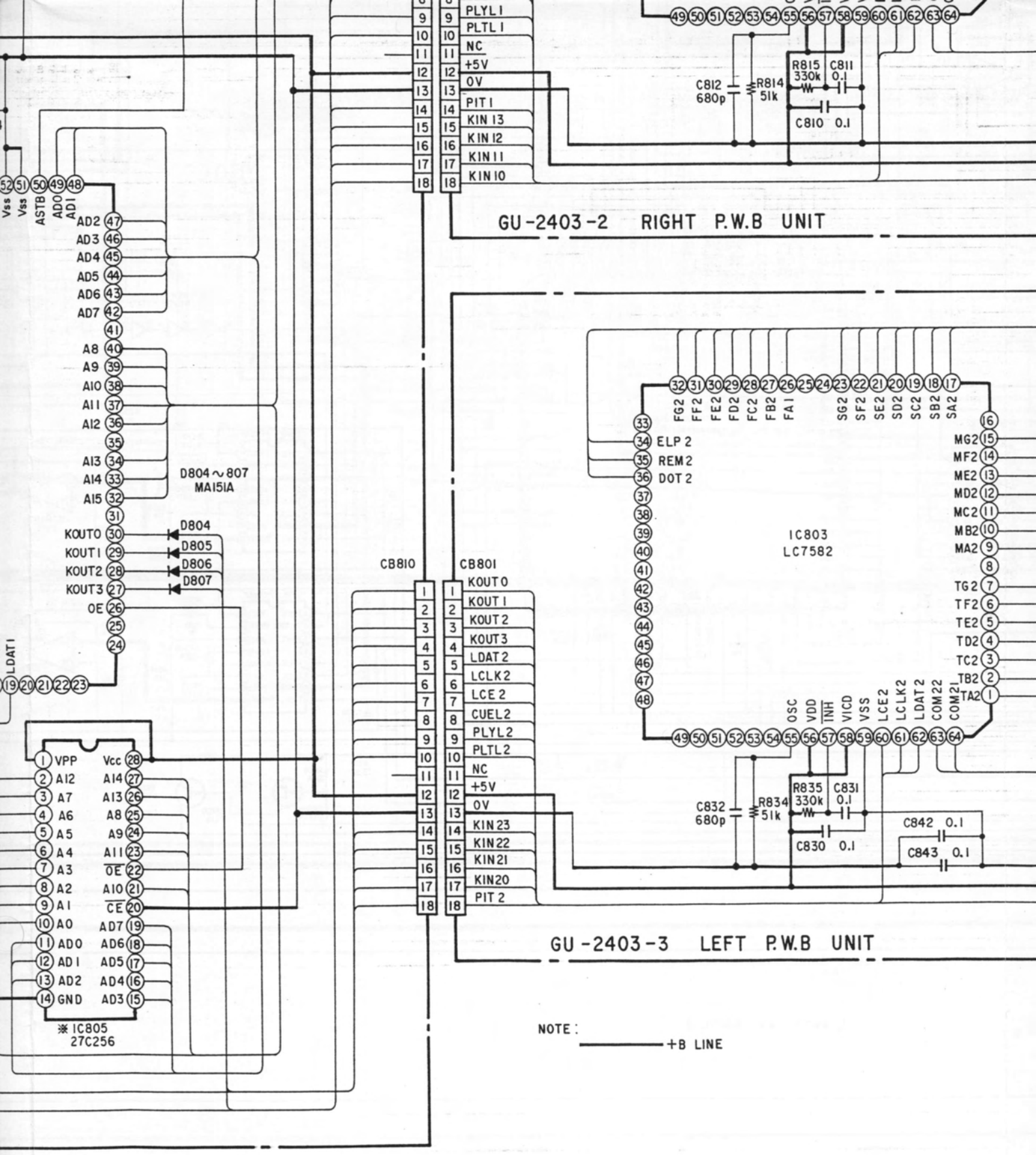



※ IC804
HC373
IC802
LC7582
IC803
LC7582
CB830
CB800
CB810
CB801
D804 ~ 807
MA151A
D804
D805
D806
D807
C812 680p
R814 51k
R815 330k
C811 0.1
C810 0.1
C832 680p
R834 51k
R835 330k
C831 0.1
C842 0.1
C830 0.1
GU-2403-2 RIGHT P.W.B UNIT


8
9
10
11
A
B
C
D
E
LC810
LCD
LE810 BACK LIGHT
LE811
SLR-40VC3F(RED)
LE812, 813
SLR-40MC(GRN)
R839 27
R840 27
R816 220
R817 220
R818 220
R823 27
VR810
TR800
TR801
TR802
CUEL1
PLYL1
PLTL1
PIT1
TRACK (F)
TRACK (R)
(2) OPEN
(1) OPEN
KOUT 0
KOUT 1
KOUT 2
KOUT 3
S812
S811
S822
S821
TIME
SEARCH (F)
SEARCH (R)
S815
S814
S813
BEND (+)
BEND (-)
PLAY
CUE
S819
S818
S817
S816
PITCH
S820
D808
D809
D810
D811
R810
R811
R812
R813
KIN 10
KIN 11
KIN 12
KIN 13
TR800~802
DTC114EKT96
D808~811
MA151A
R810~813
47K
LC830
LCD
LE830 BACK LIGHT
LE831
SLR-40VC3F(RED)
LE832, 833
SLR-40MC(GRN)
R819 27
R820 27
R836 220
R837 220
R838 220
R843 27
VR830
TR803
TR804
TR805
CUEL2
PLYL2
PLTL2
PIT2
C842 0.1
C843 0.1
S831
S830
S834
S833
S832
S838
S837
S836
S835
S839
D812
D813
D814
D815



* For serial numbers of U.S.A. Model after No.621, of Europe Model up to No.882~88
No. 301, of Canada Model after No.131, and of Multi-Voltage Model after No.101, IC
CPU masking and makes IC804, IC805, R805 unnecessary.



.882-885 and after No.951, of U.K. Model after
o.101, IC800 becomes UPD78234 GJ-516-5BG by

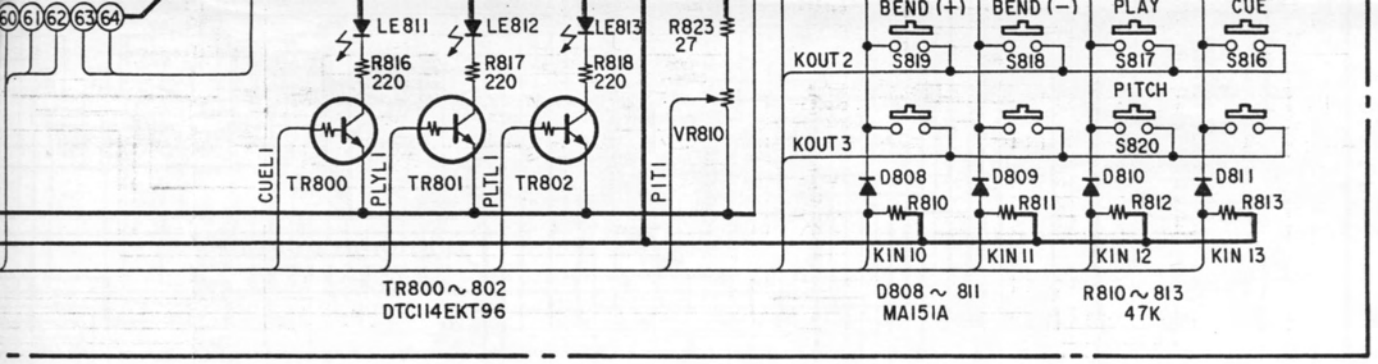
NOTES
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM, M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

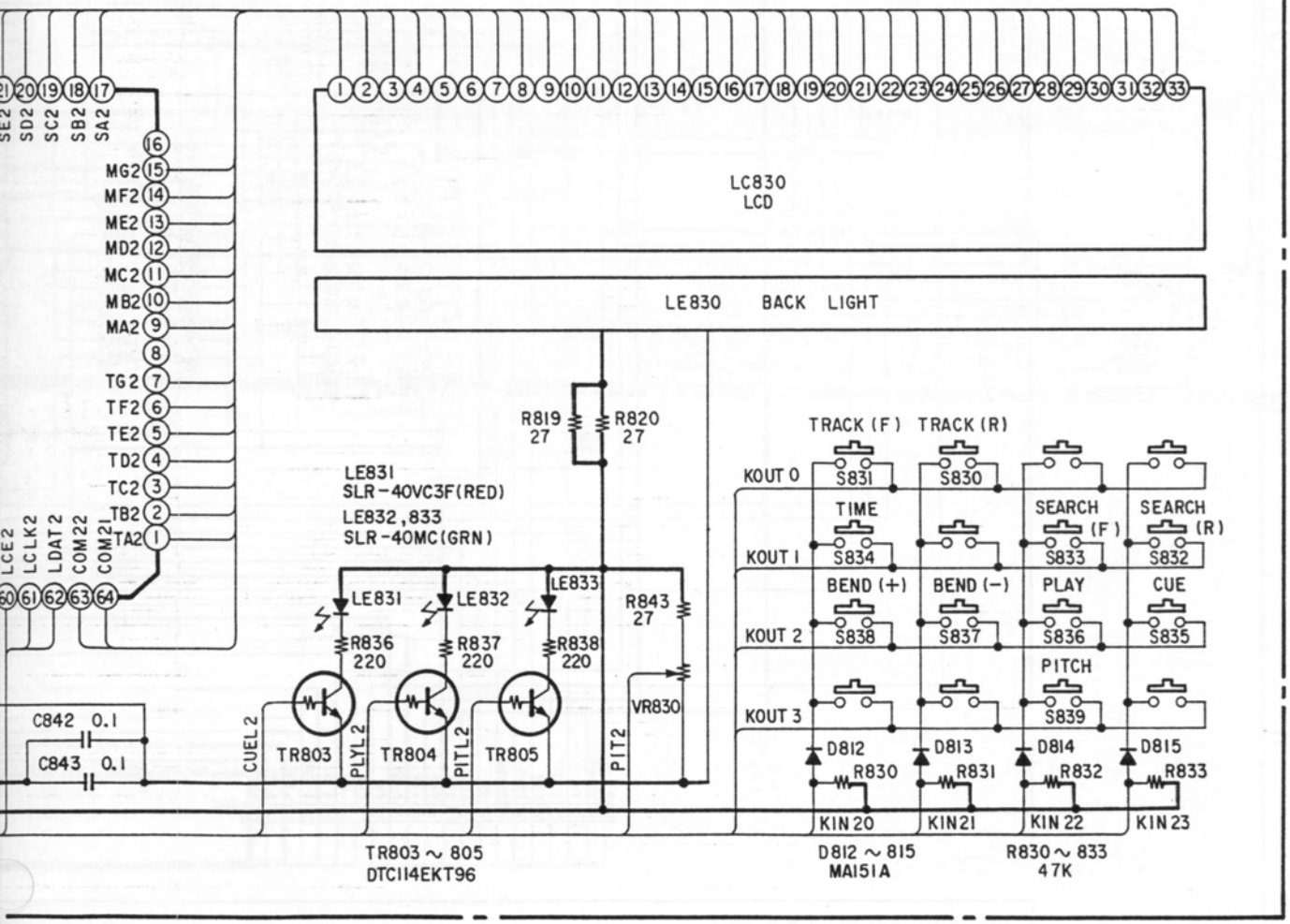
WARNING:
Parts marked
Use ONLY re

CAUTION:
Before return
the leakage c
defective.

WARNING:
DO NOT retu

NOTES:
Circuit and p





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 240 kohms, the unit is defective.

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

NOTES:
Circuit and parts are subject to change without prior notice.