CD3000

AKAI SERVICE MANUAL

CD-ROM SAMPLER PLAYER

MODEL CD3000

SPECIFICATIONS

Display	Backlit 320 characters / 240 x 640 graphic LCD
Disk drive	3.5" dual density drive (2HD, 2DD) and CD-ROM drive
Memory	2 M byte standard, expandable to 16 M byte
Data format	16 bit linear
Maximum number of samples	255
Maximum number of programs	254
Sampling rates	44.1 kHz (20 Hz - 20 kHz audio band width) 22.05 kHz (20 Hz - 10 kHz audio band width)
Sampling time (unexpanded memory)	22.28 seconds mono Fs=44.1 kHz 44.56 seconds mono Fs=22.05 kHz 11.14 seconds stereo Fs=44.1 kHz 22.28 seconds stereo Fs=22.05 kHz
Filter	Digital moving low pass filter (−12 dB/octave with resonant)
Envelope generators	2 x digital envelope generators (1 multi stage)
L.F.O	2 x low frequency oscillators
Polyphony	32 voices
Connectors	
Front panel	
HEAD PHONES	1/4 inch stereo phone x 1
FOOT SWITCH	1/4 inch phone x 1
Rear panel	
STEREO OUT	1/4 inch phone (unbalanced) x 2 (7.5 dBm, 600 ohms)
ASSIGNABLE OUTS	1/4 inch phone (unbalanced) x 8 (7.5 dBm, 600 ohms)
MIDI	DIN 5P (IN, OUT, THRU) x 3
SCSI interface	50P amphenol x 1
Power requirements	AC 100 V 50/60 Hz for Japan AC 120 V, 60 Hz for U.S.A and Canada AC 220 - 230 V, 50 Hz for Europe (excluding U.K.) AC 240 V, 50 Hz for U.K. and Australia
Power consumption	
Japan	28 W
Except Japan	32 W
Dimensions	483 (W) x 132.6 (H) x *410 (D) mm (EIA 3U size) (* : maximum 429 mm)
Weight	9.8 kg

Standard accessories

CD-ROM sound library disk	5
3-cored AC power cable	1
Operator's manual	1

Optional accessories

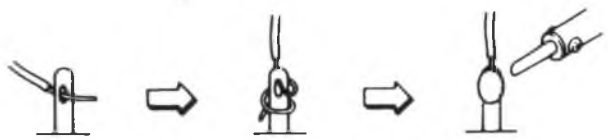
EXM3002	2 M byte memory expansion board
EXM3008	8 M byte memory expansion board
BL1000	3.5 inch blank diskettes (MF2HD)

* For improvement purposes, specifications and design are subject to change without notice.

★ SAFETY INSTRUCTIONS

PRECAUTIONS DURING SERVICING

1. Parts identified by the ⚠ (*) symbol are critical for safety. Replace them only with the parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation.
   These must also be replaced only with specified replacements.
   Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers (Insulating Barriers)
   4) Insulation sheets for transistors
   5) Plastic screws for fixing micro-switch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap the ends of the wires securely about the terminals before soldering.



6. Make sure that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Make sure that foreign objects (screws, solder, droplets, etc.) do not remain inside the set.

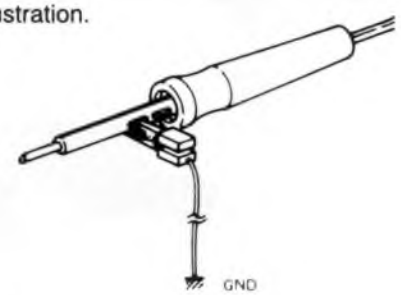
SAFETY CHECK AFTER SERVICING

After servicing, make measurements of leakage-current or resistance in order to determine that exposed parts are acceptably insulated from the supply circuit.
The Leakage-current measurement should be done between accessible metal parts (such as chassis, ground terminal, microphone jacks, signal-input/output connectors, etc.) and the earth ground through a resistor of 1500 ohms paralleled with a 0.15 µF capacitor, under the unit's normal working conditions. The leakage-current should be less than 0.5 mA rms AC.
The resistance measurement should be done between accessible exposed metal parts and power cord plug prongs with the power switch (if included) "ON". The resistance should be more than 2.2 M ohms.

PRECAUTIONS IN REPAIRING

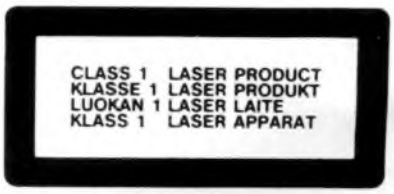
When repairing or adjusting the unit, please note the following points.

1. Do not put excessive pressure on the mechanical parts (operation parts), including the pick-up block, as extremely high mechanical precision is required in these parts.
2. When the base is removed for repair or adjustment, make sure that there are no metal obiects in the narrow gap between the P.C. board or the mecha parts and the base.
3. The Micro-Computer and the CD signal processing ICs can be damaged by static electricity or leakage from a soldering iron during repairing. While soldering, please take below precautions against leakage as shown in the illustration.

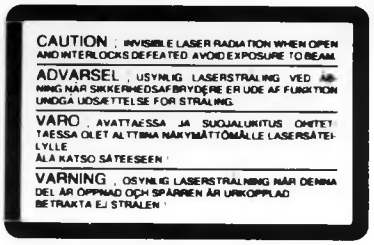


4. Do not loosen any screws in the pick-up block.
   When handling the pick-up block, please refer to the points to NOTE when replacing it.
5. To avoid hazardous invisible Laser Radiation, DO NOT look directly into the Laser Beam (Objective lens).
6. On models for some countries, laser warning labels are affixed on or inside the unit, as shown below.
   For your safety, read these labels carefully when repairing or adjusting the unit.

[EUROPE, SCANDINAVIA, UK and AUSTRALIA]



Label affixed on the rear panel of the unit



Label affixed on the CD drive, inside of the unit

[U.S.A]

CLASS 1 LASER PRODUCT

Silk printed on the rear panel of the unit

DANGER-INVISIBLE LASER RADIATION
WHEN OPEN AND INTERLOCK
FAILED OR DEFEATED.
AVOID DIRECT EXPOSURE TO BEAM.

Label affixed on the CD drive, inside of the unit

★ INFORMATION

PRIMARY DESTINATION INDICATION

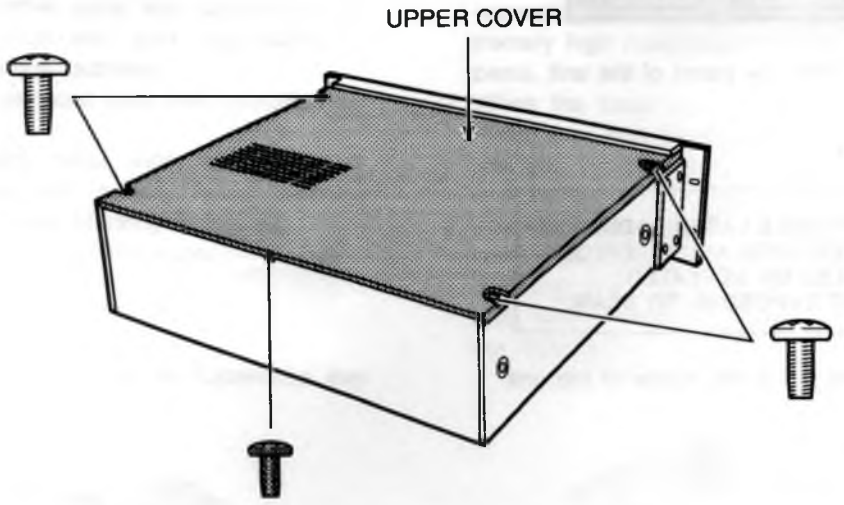
Primary destinations of units are indicated with the following letters.

Letter	Primary Destination
A	U.S.A
B	U.K.
C	Canada
E	Europe (except U.K)
J	Japan
S	Australia
V	Germany
U	Universal Area
Y*	Custom version

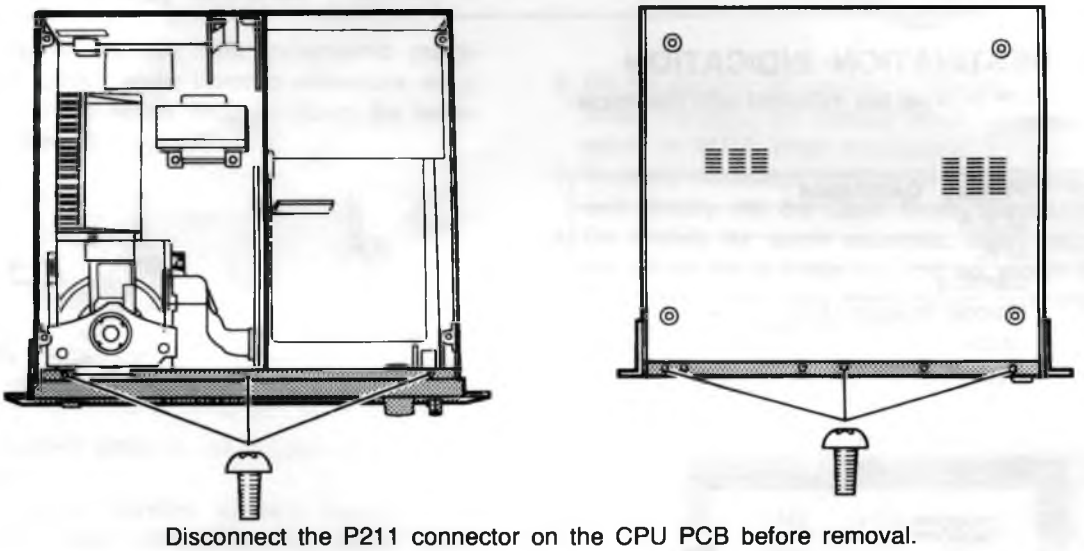
I. DISASSEMBLY

In case of trouble, etc., necessitating dismantling, please dismantle in the order shown in the illustrations. Reassemble in the reverse order.

1. Removal of the UPPER COVER

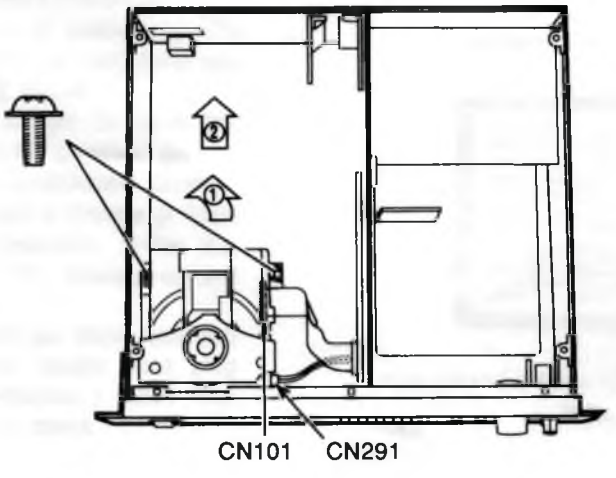


2. Removal of the FRONT PANEL BLK



Disconnect the P211 connector on the CPU PCB before removal.

3. Removal of the CD-DRIVE BLK



Disconnect the CN101 on BD PCB and CN291 on LOADING PCB of CD-DRIVE BLK before removal

II. PRINCIPAL PARTS LOCATION

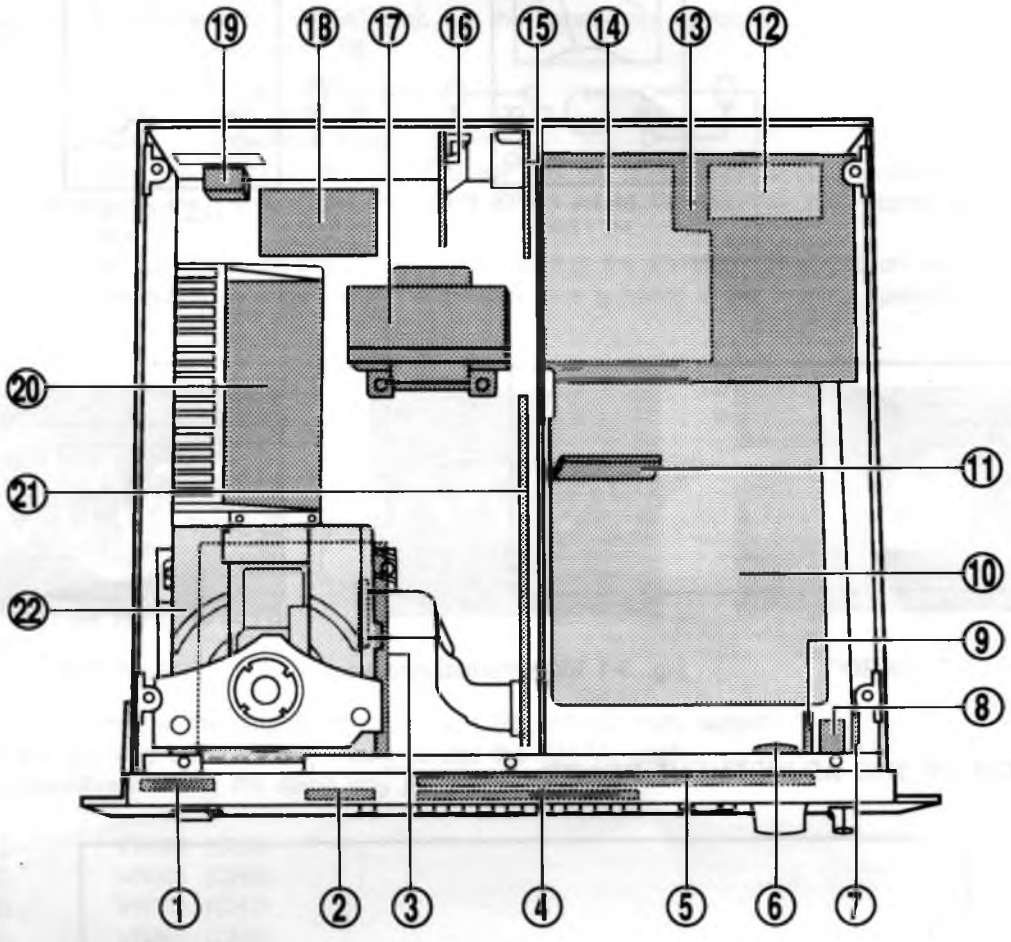


Fig. 2-1

1. POWER SW PCB
2. EJECT SW PCB
3. FDD BLK
4. LCD BLK
5. OPERATION PCB
6. ROTARY ENCODER (DATA)
7. PHONES PCB
8. CONTRAST VR PCB
9. MAIN VR PCB
10. CPU PCB
11. 2M-MEMORY PCB
12. FOOT SW PCB
13. OUTPUT PCB
14. LR OUT PCB
15. MIDI PCB
16. SCSI PCB
17. POWER TRANSFORMER
18. FUSE PCB
19. AC INLET
20. POWER PCB
21. CD PCB
22. CD DRIVE BLOCK

III. ELECTRICAL ADJUSTMENT

3-1. OUTPUT PCB

3-1-1. INSTRUMENT CONNECTION

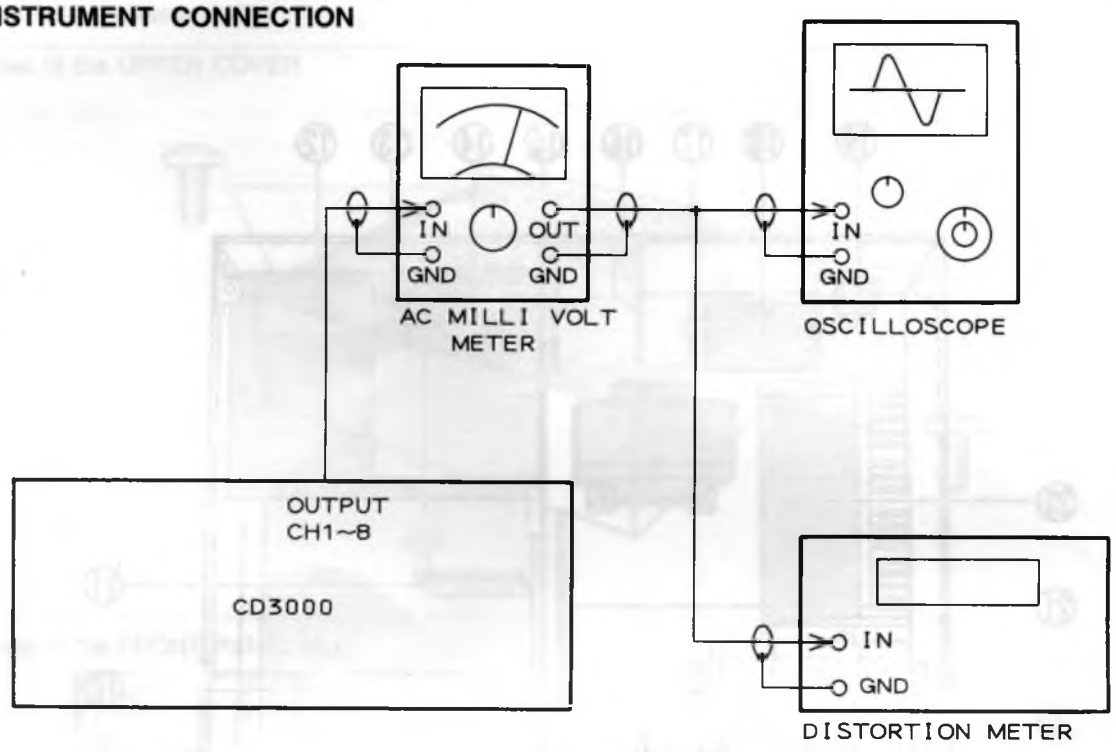


Fig. 3-1 Instrument connection

3-1-2. LOCATION OF THE ADJUSTMENT POINTS

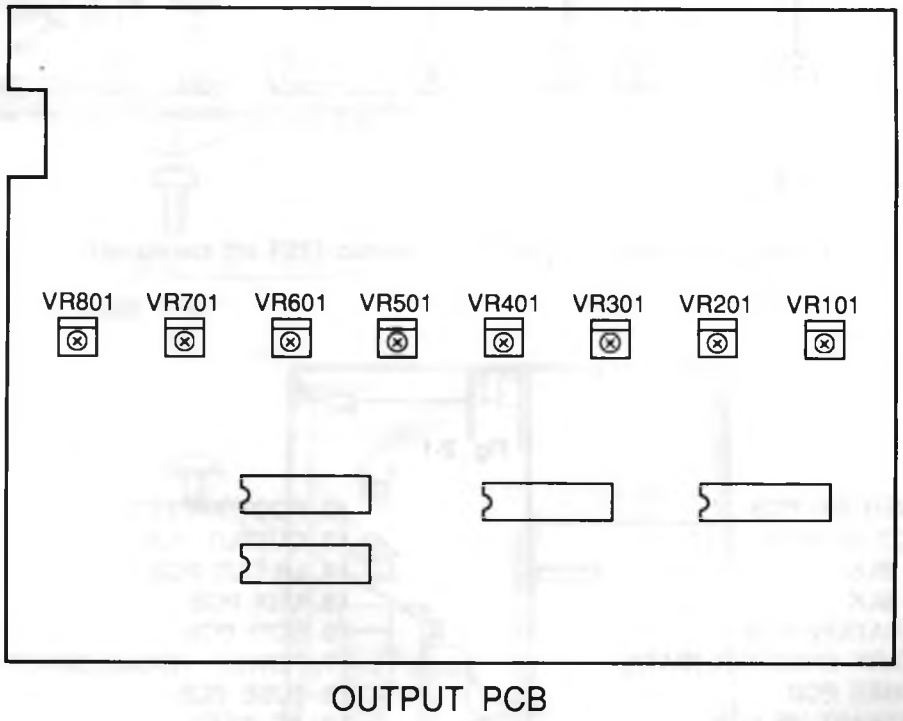


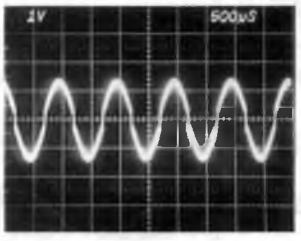
Fig. 3-2

3-1-3. MSB ADJUSTMENT

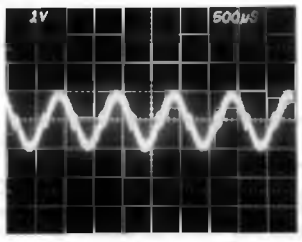
1) Conect an oscilloscope via an AC milli-volt meter (used as a high gain amplifier) to the ANALOG OUTPUT CH1 (and to the monitoring system).
2) After initialization and warm-up, press the "EDIT PROG/K" button then press the "F5/E" [OUT] to open the [OUTPUT LEVELS] page after the unit is turned on.
3) With the "CURSOR" buttons and the "DATA" knob, set the parameters as follows.

loudness : 80	>	loudness : 02
indiv output : OFF	>	indiv output : 1
indiv level : 50	>	indiv level : 99
velocity > loud : +20	>	velocity > loud : +00

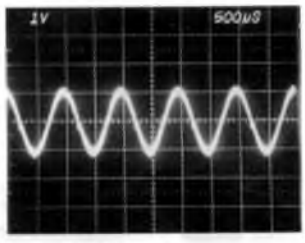
4) Press "ENT/PLAY" button and "HELP/P" button. This will play the [SINE] sample continuously at a very low level. Observe the waveform on the oscilloscope and listen to the sound. Press "HELP/P" button again to rerurn to the [OUTPUT LEVELS] page.
5) Adjust the semi-fixed VR101 (CH1) on the OUTPUT PCB so that the waveform displayed on the oscilloscope becomes a smooth continuous sinewave, as shown and the quietest tone is heard in the monitor speaker.



INCORRECT



INCORRECT



CORRECT

6) Connect the meter to one of the outputs from CH2 to CH8 and set "indiv output : " parameter accordingly with the "CURSOR" buttons and the "DATA" knob. Adjust the corresponding semi-fixed VRs in the same way as in step 5) above.

VR101 (CH1)	VR501 (CH5)
VR201 (CH2)	VR601 (CH6)
VR301 (CH3)	VR701 (CH7)
VR401 (CH4)	VR801 (CH8)

3-2. CD DRIVE BLOCK

To confirm the function of the Laser Diode and Focus Search operation, turn the unit on without inserting the disc. The objective lens will move up and down 3 times and the dispersed red light of laser beam can be seen. Keep your eyes at least 30cm away from the objective lens to prevent damage to your eyes.

Note : The 3 semi-fixed VRs located on the optical pick-up block should never be moved as they are factory set with precision jigs. The optical pick-up block should be replaced as a whole block when faulty.

* The following TEST CD disc should be used for the adjustment.
  TEST CD disc : TEST DISC TCD-725 TF-806AB (AT-751382)

3-2-1. INSTRUMENT CONNECTION

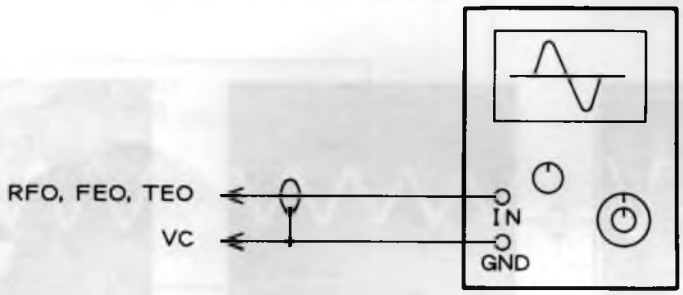


Fig 3-3

3-2-2. LOCATION OF ADJUSTMENT POINTS

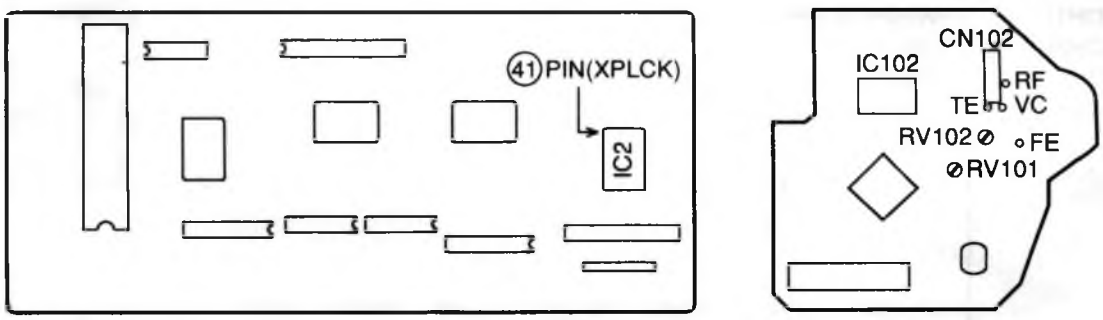


Fig 3-4

3-2-3. RF LEVEL CONFIRMATION

1) Connect the probe of the oscilloscope to the TP RF (Optical Out) and the ground wire to TP VC.

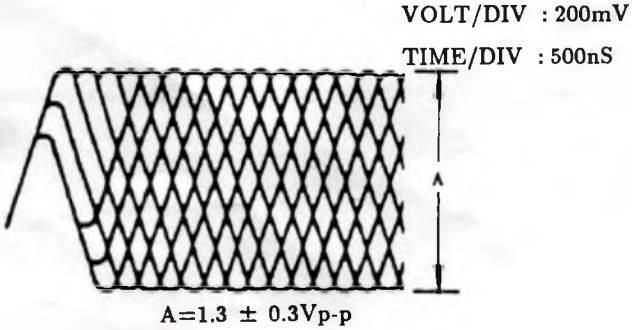
Note : The TP VC is about 2.5 Volt DC high. If more than 2 probes are connected, remove the ground wire of the other probes from the chassis, otherwise the VC terminal is shorted to the GND.

2) Turn the unit on and insert the Test CD disc.

Note : An ordinary good quality disc can be substituted.

3) Press "EDIT SAMPLE/J" then "F3/C [REC2]" button.
4) Press "F3/C [PLAY]" to start playing the disc.

5) Observe the waveform and confirm the level and clarity of the "Eye-pattern" as illustrated.



A=1.3 ± 0.3Vp-p

3-2-4. PLL FREE RUN FREQUENCY CONFIRMATION

1) Connect the frequency counter to the Pin 41(XPLCK) of IC 2 (CXD2500) and GND on the CD PCB.
2) Play the disc and confirm that the frequency reading is 4.3218 MHz.

3-2-5. FOCUS GAIN/TRACKING GAIN ADJUSTMENTS

Accurate adjustments require precision jigs. However, the drive has a fairly broad margin in adjustment, it performs quite satisfactory even if it is not set at it's optimum position, thus it is not suggested to readjust it during normal maintenance. The Focus/Tracking adjustments determine the response characteristic of the optical pick-up block against a mechanical noise and shock in a 2-axis device function, however, these adjustments counteract each other. They have already been adjusted to a point where both function satisfactory.
The higher the gain, the louder the mechanical noise. The lower the gain, the more sensitive to mechanical noise and shock, causing it to skip during playback.

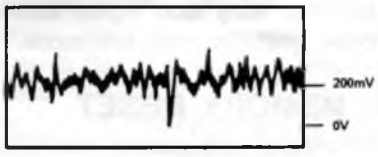
Symptoms	Gain	
	Focus	Tracking
Long delay from Stop to Playback or after search (typically 2-3 sec.)	Low	Low or High
Disc rotates without Playback from Stop to Play or after search, Sound skips/jumps or Time Counter stops incrementing during playback	—	Low
Loud mechanical noise during 2-axis operation	High	High

The following is a simplified adjustment without the use of precision jigs. Since it is not an accurate adjustment, mark the position of the VRs before starting. If the end result is close to their previously marked position, leave them in their original position. Do not push up the BD PCB while adjusting the VRs as it interferes with the operation of the disc rotation.

1) Place the CD-Drive mechanism horizontally. If not placed horizontally, gravity affects the performance of the 2-axis device and it cannot be adjusted properly.
2) Connect the oscilloscope to the TP FEO (Focus Error Out) and TP VC on the BD PCB and play the TEST CD Disc.
3) Adjust the RV102 (Focus Gain) so that the waveform observed is as shown.

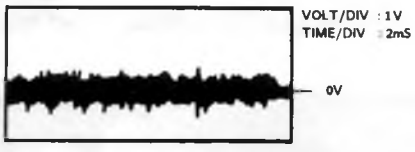
CORRECT

FOCUS GAIN is too high

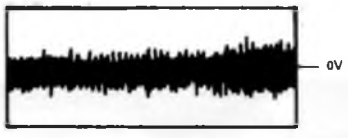


FOCUS GAIN is too low

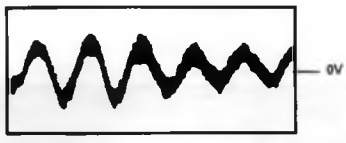
4) Connect the oscilloscope to the TP TEO (Tracking Error Out) and TR VC on the BD PCB. Adjust the RV101 (Tracking Gain) so that the waveform observed is as shown.



CORRECT



TRACKING GAIN is too high



TRACKING GAIN is too low

IV. SUPPLEMENTARY INFORMATION

4-1. MEMORY TEST

* This test mode is used to check the internal waveform RAMs.
  To test the unit, proceed as follows.

1) Press the "MARK/ #" and "NAME" buttons simultaneously while the unit is turned on. All the mode select buttons ("SELECT PROG/I" to "HELP/P") will light.
2) Press the "+ / ◁ " button. The following messages will be displayed on the LCD BLK and the last value of the slot 2 line will start to increase.

```
Testing  MEMORY...
slot 1 ..
slot 2 .. testing  1M  DRAM...
slot 3 ..
slot 4 ..
```

Fig. 4-1

3) In a few minutes, the test result will appear with the message "okay", "FAILED" or "no board present" as illustrated. As slots 1 and 3 are not available for memory expansion, the message "no board present" will always be displayed on the first and third lines.

```
Testing  MEMORY...
slot 1 .. no board Present
slot 2 .. testing  1M  DRAM...10  okay
slot 3 .. no board Present
slot 4 .. no board Present
    Press F8 to continue
```

Fig. 4-2

4) Press the "F8/H" button or turn off the unit to terminate the test.
   Note that fairly loud digital noise will appear momentarily when the "F8/H" button is pressed if the "FX" was in use before going into the test mode.

4-2. MEMORY RESET

To initialize all the internal memories and circuits without turning off the unit, press the "MARK/#" and "NAME" buttons simultaneously then press the "–/ ▷ " button.

4-3. SCSI SETTING

The SCSI ID number of the CD3000 itself is set as ID=6, the same as the other S3000 series models, and it can be changed in the "HARD DISK CONTROL" page. The SCSI ID number for the internal CD-ROM drive unit, however, is fixed as ID=4 and it cannot be changed. The SCSI terminators are located (soldered) on the CD PCB.

V. PARTS LIST

ATTENTION

1. **When placing an order for parts, be sure to list the Part No., Model No. and the description of each part. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.**
2. **Please make sure that Part No. is correct when ordering. If not, a part different from the one you ordered may be delivered.**
3. **Since the parts shown in Parts List of Preliminary Service Manual may have been the subject of changes, please use this Parts List for all future reference.**

HOW TO USE THIS PARTS LIST

1. This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
2. The Recommended Spare Parts List shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.
4. How to read the Parts List.

a) Mechanism Block

2. HEAD BASE BLOCK

Ref. No.	Part No.	Description
1	BH-T2023A320A	HEAD BASE BLOCK
2	HP-H2206A010A	HEAD R/P PR4-8FU C
3	ZS-477876	PAN20×03STL CMT
4	ZS-536488	BID20×08STL CMT
5	ZG-402895	SP CS ANGLE ADJUST

SP (Service Parts) Classification

This number corresponds with the individual parts index number in that figure.

b) PC Board

6. MAIN PC BOARD

Ref. No.	Part No.	Description
IC1	EI-324536	IC HD14049BP
IC2	EI-336801	IC MB8841-564M
C1A	EC-338399	C MMY V 223M 250AC [U,E,B,S]
C1B	EC-350949	C MMY V 223M 250DC [J]
C1C	EC-338397	C MMY V 223M 125AC [C,A]
X1	EI-318384	OSC X'TAL NC-18C

Symbols for primary destination

[A] :AAL (U.S.A) [S] :SAA (Australia)
[B] :BEAB (England) [U] :U/T (Universal Area)
[C] :CSA (Canada)
[E] :CEE (Europe) [V] :VDE (Germany)
[J] :JPN (Japan) [Y] :Custom Version

SP (Service Parts) Classification

These reference symbols correspond with component symbols in the Schematic Diagrams.

The available PC Board Blocks are listed separately.

5. When Part No. is known, Parts Index at end of Parts List can be used to locate where that part is shown in Parts List by its Reference No.listed at right of Part No.

WARNING

⚠ (*) INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS.

AVERTISSEMENT

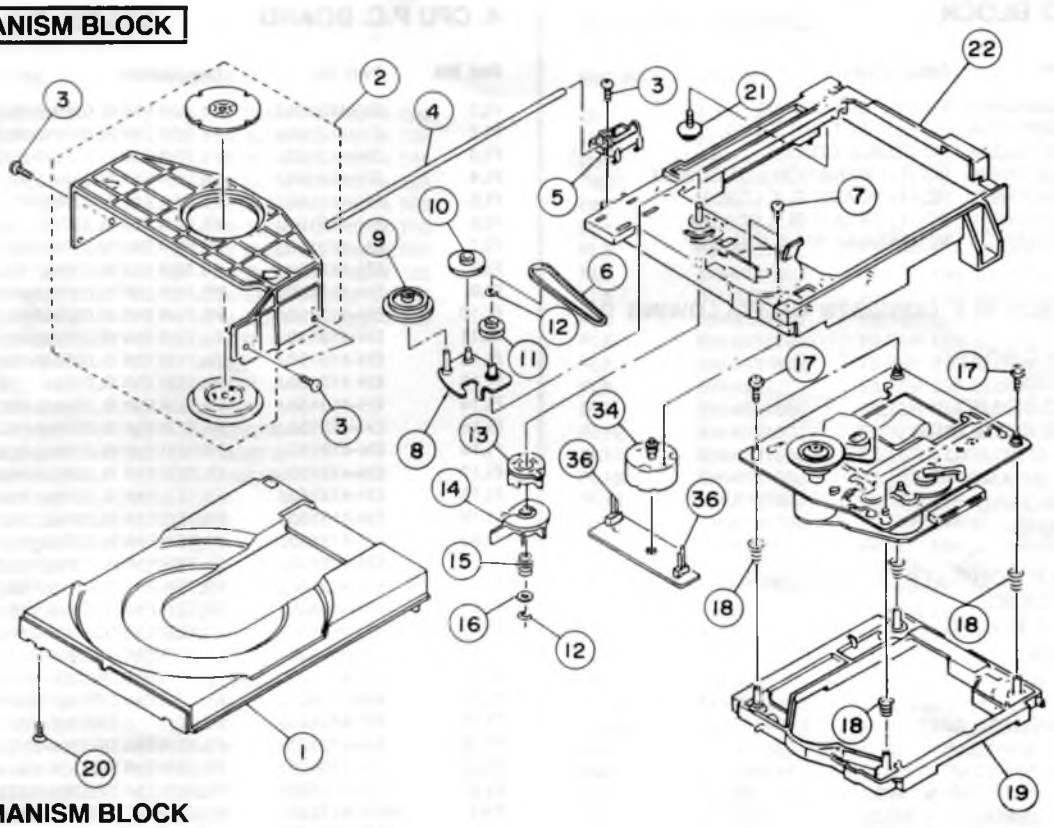
⚠ (*) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉDE L'APPAREIL, NE REMPLACER QUE DES PIÉCES RECOMMANDEES PAR LÉ FABRICANT.

1. RECOMMENDED SPARE PARTS

We suggest you to stock the following Recommended Spare Part items listed below since they can cover most of the routine service.

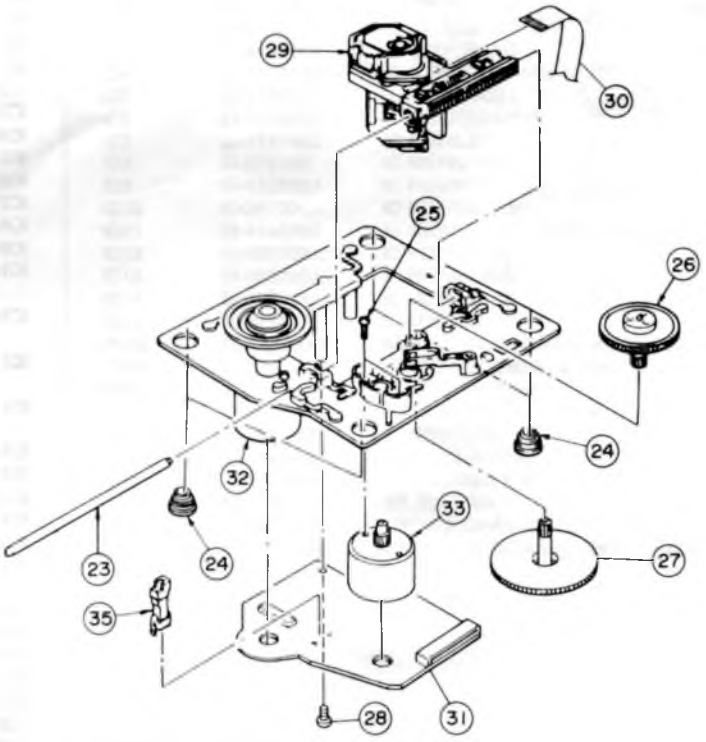
Ref. No.	Part No.	Description
1	BB-413117J	FLOPPY DISK FD-235HF-3448
2	BB-412436J	MECHA CD CDM01358K
3	BM-733502J	MOTOR LOADING ASSY [M103]
4	BM-733501J	MOTOR SLED ASSY [M102]
5	BM-733500J	MOTOR SPINDLE WITH BASE ASSY [M101]
6	BO-733497J	PICK-UP KSS-240A
7	*BT-378272	TRANS POW L4003 C,A [C,A]
8	*BT-378273	TRANS POW L4003 E,V,B,S [E,V,B,S]
9	*BT-378271	TRANS POW L4003 J [J]
10	*ED-365819	D SILICON CTU-12R 200/ 6.0A [D902]
11	*ED-365818	D SILICON CTU-12S 200/ 6.0A [D901]
12	*ED-330319	D SILICON DBA10B 100/1.0A
13	ED-389834J	D SILICON DS135E-FB2 F12 100/1
14	ED-344280	D SILICON H GMA-01-FY2 F05
15	ED-412105J	D ZENER H HZS5B1 T26
16	ED-378219	DETECTOR PC6N137
17	*EF-359086	FUSE BET T 250V 4.00A [B]
18	*EF-355374	FUSE BET T 250V 500MA [B]
19	*EF-358974	FUSE BET T 250V 630MA [B]
20	*EF-373142	FUSE ICP-N25 50V 1.0A
21	*EF-690996	FUSE SEMKO T 250V 4.00A [E,V,S]
22	*EF-593706	FUSE SEMKO T 250V 500MA [E,V,S]
23	*EF-601942	FUSE SEMKO T 250V 630MA [E,V,S]
24	*EF-309387	FUSE TSC A 250V 1.00A [J]
25	*EF-306952	FUSE TSC A 250V 4.00A [J]
26	*EF-306124	FUSE TSC A 250V 630MA [J]
27	*EF-310229	FUSE TSC 125V 1.00A [C,A]
28	*EF-306957	FUSE TSC 125V 4.00A [C,A]
29	*EF-305703	FUSE TSC 125V 630MA [C,A]
30	EI-410421J	IC AM27C010-200D [BLANK ROM]
31	EI-418466J	IC AM27C010-200D CD3000V1.00-L [PROGRAM ROM]
32	EI-418468J	IC AM27C010-200D CD3000V1.00-M [PROGRAM ROM]
33	EI-733507J	IC CXA1372Q [IC102]
34	EI-414746J	IC CXD1185AQ
35	EI-414745J	IC CXD1186BQ
36	EI-410565J	IC CXD2500BQ
37	EI-412434J	IC CXP80116-766Q L6027
38	EI-386287J	IC HD74AC00P
39	EI-389061J	IC HD74AC04P
40	EI-389050J	IC HD74AC32P
41	EI-386300J	IC HD74AC86P
42	EI-386289J	IC HD74HC138P
43	EI-393701J	IC HD74HC139P
44	EI-388712J	IC HD74HC245P
45	EI-397090J	IC HD74HC273P
46	EI-388709J	IC HD74HC32P
47	EI-393698J	IC HD74HC365P
48	EI-393702J	IC HD74HC595P
49	EI-414748J	IC HD74LS132
50	EI-416497J	IC HM658512LP-85
51	EI-733508J	IC LA6532M [Q101]
52	EI-416488J	IC LC3517BSL-15
53	EI-416890J	IC LC3664ASLL-10
54	EI-378276	IC LC7981
55	EI-413120J	IC L7A1045 L6028 DSP-A
56	EI-412247J	IC MB814400-80L PSZ-G
57	EI-379657J	IC MB89255A-P-G
58	EI-388602J	IC MB89352A-P-G
59	EI-375185	IC M51953BL
60	EI-360043	IC M5220P
61	*EI-348123	IC M5230L
62	EI-377057	IC M54641L
63	EI-377191	IC NJM5532D-D
64	EI-400856J	IC NJM78M05FA
65	EI-400855J	IC NJM79M05FA
66	EI-386311J	IC PCM61P
67	EI-412279J1	IC PCM69AP-4
68	EI-410389J	IC PQ30RV1
69	EI-413131J	IC SM5840EP
70	*EI-365820	IC STR9005 [IC901]
71	EI-377101	IC UPC7805HF
72	EI-413119J	IC UPD70236GD-16
73	EI-413121J	IC UPD72069GF-3BA
74	EI-413126J	IC 18CV8PC-15 L6028A
75	EI-413127J	IC 18CV8PC-15 L6028B
76	EI-413141J	IC 18CV8PC-15 L6028C
77	EI-414698J	IC 18CV8PC-15 L6029A
78	EI-368473	OSC CE CSA8.00MTZ
79	EI-381139N	OSC X'TAL HC-49/U 16934.400KHZ
80	EI-396541J	OSC X'TAL HC-49/U 32.000000MHZ
81	EI-384779J	OSC X'TAL TD308C 33.8688MHZ
82	EL-728382J	EL BACK LIGHT
83	EM-382317J	IND LCD EDM-MPJ2COW
84	EQ-348929	RELAY SIG G5A-237P 2TR 12V
85	*ER-200972	R FUSE H S10 ERD2FC 1/4W 33R0G
86	*ER-412299J	R FUSE H S12 ERQ12AJ 1/2W 3R3J
87	ES-733503J	SW LEAF [S101]
88	ES-733504J	SW LEAF (LOAD) [S291][S292]
89	ES-414627J	SW ROTARY EC24B50D0 [CONTROL VR]
90	*ES-413128J	SW SEESAW EST15962V [POWER SW]
91	*ES-306430	SW SLIDE J-S4013—01 01-2 [E,V,B,S]
92	ES-349474	SW TACT SKHHAM004A
93	ES-412382J	SW TACT SKHJGG
94	ET-732638J	TR CHIP DTC144EK [IC101]
95	ET-405321J	TR 2SA1524
96	ET-365748	TR 2SB1223
97	*ET-356817	TR 2SB891 Q,R [TR901]
98	ET-349592	TR 2SC3400 F05
99	*ET-354083	TR 2SD1189 Q,R [TR902]
100	EV-413118J	VR ROTARY RK16312A A103X2
101	EV-414633J	VR SPL RK0971112 SW B502

CD MECHANISM BLOCK



2. CD MECHANISM BLOCK

Ref. No.	Part No.	Description
1	SC-733476J	DISC TABLE
2	BZ-733477J	HOLDER (MG) ASSY
3	ZS-463353	T2BR30X08STL BNI
4	MS-733478J	SHAFT TABLE GUIDE
5	MS-733479J	GUIDE (T)
6	MB-733480J	BELT LM
7	ZS-370834	BID26X05STL BZN
8	ML-733481J	ARM SWING ASSY
9	MZ-733482J	GEAR (P)
10	MZ-733483J	GEAR (C)
11	MR-733484J	PULLY (B)
12	ZW-357164	RING E 230SUP CMT
13	MZ-733485J	CAM (A)
14	MZ-733486J	CAM (B)
15	ZG-733487J	SP CAM
16	ZW-733488J	WASHER LIMITTER
17	ZS-733489J	T2PAN26X06STL CMT CO85
18	ZG-733490J	SP (B)
19	MA-733491J	HOLDER (BU)
20	ZS-356467	T2CTS26X06STL BNI
21	ZS-346048	T2BR30X08STL BNI C080
22	MA-733492J	CHASSY (MD) ASSY
23	MS-733493J	SHAFT SLED
24	SA-733494J	INSULATOR (A)
25	ZS-477876	PAN20X03STL CMT
26	MZ-733495J	GEAR (M)
27	MZ-733496J	GEAR (P)
28	ZS-383887J	BT BID26X08STL BNI
29	BO-733497J	PICK-UP KSS-240A
30	EW-733498J	FLEXIBLE PRINTED BOARD 12P
31	BA-733499J	PC BD MOUNT
32	BM-733500J	MOTOR SPINDLE WITH BASE ASSY [M101]
33	BM-733501J	MOTOR SLED ASSY [M102]
34	BM-733502J	MOTOR LOADING ASSY [M103]
35	ES-733503J	SW LEAF [S101]
36	ES-733504J	SW LEAF (LOAD) [S291][S292]
37X	EV-733505J	VR FIX 10K [RV101]
38X	EV-733506J	VR FIX 10K [RV102]



Ref. No.	Part No.	Description
39X	ET-732638J	TR CHIP DTC144EK [IC101]
40X	EI-733507J	IC CXA1372Q [IC102]
41X	EI-733508J	IC LA6532M [Q101]

NOTE:
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

3. P.C. BOARD BLOCK

Ref. No.	Part No.	Description
1	BA-L6028A030D	PC CPU BLK CD3000
2	BA-L6028A070A	PC OUT PUT BLK S3000
3	BA-L6027A020A	PC CD BLK CD3000
4	BA-L6027A040A	PC (#) OPERATION BLK CD3000
5	BA-L4003C090D	PC (#) POWER BLK CD3000
6	BA-L6027A030A	PC (#) LR OUT BLK CD3000
7	BA-L6028A050A	PC 2M-MEMORY BLK S3000

PC (#) OPERATION BLK CONSISTS OF FOLLOWING P.C BOARDS.

- OPERATION P.C BOARD
- MIDI P.C BOARD
- EJECT SW P.C BOARD
- MAIN VOLUME P.C BOARD
- CONTRAST P.C BOARD
- FOOT SW P.C BOARD
- PHONES P.C BOARD
- FUSE P.C BOARD

PC (#) LR OUT BLK CONSISTS OF FOLLOWING P.C BOARDS.

- LR OUT P.C BOARD
- POWER SW P.C BOARD
- SCSI P.C BOARD

4. CPU P.C. BOARD

Ref. No.	Part No.	Description
FL1	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL2	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL3	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL4	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL5	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL6	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL7	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL8	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL9	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL10	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL11	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL12	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL13	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL14	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL15	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL16	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL17	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL18	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL19	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL20	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL21	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL22	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL23	EH-410420J	FILTER EMI DSS306-93B101M T05
FL24	EH-412152J	FILTER EMI DSS306-93B221M T05
FL25	EH-410420J	FILTER EMI DSS306-93B101M T05
FL26	EH-410420J	FILTER EMI DSS306-93B101M T05
FL27	EH-410420J	FILTER EMI DSS306-93B101M T05
FL28	EH-410420J	FILTER EMI DSS306-93B101M T05
FL29	EH-410420J	FILTER EMI DSS306-93B101M T05
FL30	EH-410420J	FILTER EMI DSS306-93B101M T05
FL31	EH-410420J	FILTER EMI DSS306-93B101M T05
FR1	*ER-412299J	R FUSE H S12 ERQ12AJ 1/2W 3R3J
FR2	*ER-200972	R FUSE H S10 ERD2FC 1/4W 33R0G
IB1	EH-359185	COMP R RKC1/8B8 103J
IB2	EH-349374	COMP R RKC1/8B8 472J
IC1	EI-413119J	IC UPD70236GD-16
IC2	EI-413120J	IC L7A1045 L6028 DSP-A
IC3	EI-413121J	IC UPD72069GF-3BA
IC4	EI-378276	IC LC7981
IC5	EI-379657J	IC MB89255A-P-G
IC6	EI-416488J	IC LC3517BSL-15
IC7	EI-375185	IC M51953BL
IC8	EI-416497J	IC HM658512LP-85
IC9	EI-416497J	IC HM658512LP-85
IC10-A	EI-418466J	IC AM27C010-200D CD3000V1.00-L [PROGRAM ROM]
IC10-B	EI-410421J	IC AM27C010-200D [BLANK ROM]
IC11-A	EI-418468J	IC AM27C010-200D CD3000V1.00-M [PROGRAM ROM]
IC11-B	EI-410421J	IC AM27C010-200D [BLANK ROM]
IC12	EI-388712J	IC HD74HC245P
IC13	EI-386289J	IC HD74HC138P
IC14	EI-393698J	IC HD74HC365P
IC15	EI-393701J	IC HD74HC139P
IC16	EI-388712J	IC HD74HC245P
IC17	EI-397090J	IC HD74HC273P
IC21	EI-386287J	IC HD74AC00P
IC22	EI-389050J	IC HD74AC32P
IC23	EI-388709J	IC HD74HC32P
IC24	EI-386287J	IC HD74AC00P
IC25	EI-386300J	IC HD74AC86P
IC27	EI-413126J	IC 18CV8PC-15 L6028A
IC28	EI-413127J	IC 18CV8PC-15 L6028B
J103	EJ-413156J	SOCKET FCN-234J068-G/0 68P
J105	EJ-413156J	SOCKET FCN-234J068-G/0 68P
L1	EO-394178J	COIL FIX 2 SBT-0240 400N
L2	EO-345894	COIL FIX 1 LAL03KH R22M
P110	EJ-386356J	PLUG RA-H341TD-1190 34P
P113	EJ-413147J	PLUG 128D-064P2A-L14A 64P
T1	BT-390145J	TRANS PULSE NI05-05-5
W112	EW-412284J	WIRE ASSY L6027 W112 34P
X1	EI-396541J	OSC X'TAL HC-49/U 32.000000MHZ
X2	EI-384779J	OSC X'TAL TD308C 33.8688MHZ

5. OUTPUT P.C. BOARD

Ref. No.	Part No.	Description
FL1	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL2	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL3	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL4	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL5	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL6	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL7	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL8	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL9	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL10	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
IC1	EI-413131J	IC SM5840EP
IC2	EI-413131J	IC SM5840EP
IC3	EI-413131J	IC SM5840EP
IC4	EI-413131J	IC SM5840EP
IC7	EI-400856J	IC NJM78M05FA
IC8	EI-400856J	IC NJM78M05FA
IC9	EI-400855J	IC NJM79M05FA
IC10	EI-360043	IC M5220P
IC11	EI-360043	IC M5220P
IC12	EI-360043	IC M5220P
IC13	EI-360043	IC M5220P
IC14	EI-360043	IC M5220P
IC15	EI-360043	IC M5220P
IC16	EI-360043	IC M5220P
IC17	EI-360043	IC M5220P
IC18	EI-400855J	IC NJM79M05FA
IC101	EI-386311J	IC PCM61P
IC201	EI-386311J	IC PCM61P
IC301	EI-386311J	IC PCM61P
IC401	EI-386311J	IC PCM61P
IC501	EI-386311J	IC PCM61P
IC601	EI-386311J	IC PCM61P
IC701	EI-386311J	IC PCM61P
IC801	EI-386311J	IC PCM61P
J601	EJ-354105	PHONE J 2P HLJ0520-110 6.3
J602	EJ-354105	PHONE J 2P HLJ0520-110 6.3
J603	EJ-354105	PHONE J 2P HLJ0520-110 6.3
J604	EJ-354105	PHONE J 2P HLJ0520-110 6.3
J605	EJ-354105	PHONE J 2P HLJ0520-110 6.3
J606	EJ-354105	PHONE J 2P HLJ0520-110 6.3
J607	EJ-354105	PHONE J 2P HLJ0520-110 6.3
J608	EJ-354105	PHONE J 2P HLJ0520-110 6.3
P601	EJ-378282	PLUG RF-H202TD-1190 20P
VR101	EV-410614J	R S-FIX H PK50HO 0.50W 104
VR201	EV-410614J	R S-FIX H PK50HO 0.50W 104
VR301	EV-410614J	R S-FIX H PK50HO 0.50W 104
VR401	EV-410614J	R S-FIX H PK50HO 0.50W 104
VR501	EV-410614J	R S-FIX H PK50HO 0.50W 104
VR601	EV-410614J	R S-FIX H PK50HO 0.50W 104
VR701	EV-410614J	R S-FIX H PK50HO 0.50W 104
VR801	EV-410614J	R S-FIX H PK50HO 0.50W 104

6. CD P.C. BOARD

Ref. No.	Part No.	Description
D1	ED-344280	D SILICON H GMA-01-FY2 F05
D2	ED-344280	D SILICON H GMA-01-FY2 F05
D3	ED-344280	D SILICON H GMA-01-FY2 F05
D4	ED-389834J	D SILICON DS135E-FB2 F12 100/1
D5	ED-412105J	D ZENER H HZS5B1 T26
FL1	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL2	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL3	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL4	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL5	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL6	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL7	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL8	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL9	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL10	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL11	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL12	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL13	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL14	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL15	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL16	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL17	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL18	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL19	EO-394178J	COIL FIX 2 SBT-0240 400N
FL20	EO-394178J	COIL FIX 2 SBT-0240 400N
FL21	EO-394178J	COIL FIX 2 SBT-0240 400N
FL22	EO-394178J	COIL FIX 2 SBT-0240 400N
FL25	EH-403921J	FILTER EMI DSS310H55B 222M CUT
IB1	EH-359185	COMP R RKC1/8B8 103J
IB2	EH-359185	COMP R RKC1/8B8 103J
IB3	EH-408860J	COMP R RKC1/8B9 111J
IB4	EH-408860J	COMP R RKC1/8B9 111J
IC1	EI-414745J	IC CXD1186BQ
IC2	EI-410565J	IC CXD2500BQ
IC3	EI-414746J	IC CXD1185AQ
IC4	EI-412434J	IC CXP80116-766Q L6027
IC5	EI-416890J	IC LC3664ASLL-10
IC6	EI-388602J	IC MB89352A-P-G
IC7	EI-414748J	IC HD74LS132
IC8	EI-375185	IC M51953BL
IC9	EI-410389J	IC PQ30RV1
IC10	EI-397090J	IC HD74HC273P
IC11	EI-414698J	IC 18CV8PC-15 L6029A
IC12	EI-393702J	IC HD74HC595P
IC13	EI-393702J	IC HD74HC595P
IC14	EI-389061J	IC HD74AC04P
IC15	EI-377057	IC M54641L
P112	EJ-412433J	SOCKET 128D-064S2A-S14A 64P
P502	EJ-414749J	SOCKET SLEM22S-2 22P
P801	EJ-397342J	PLUG PS-50PE-D4LT1-B1
SF1	*EF-373142	FUSE ICP-N25 50V 1.0A
TR1	ET-365748	TR 2SB1223
TR2	ET-349592	TR 2SC3400 F05
TR3	ET-349592	TR 2SC3400 F05
TR4	ET-405321J	TR 2SA1524
X1	EI-368473	OSC CE CSA8.00MTZ
X2	EI-381139N	OSC X'TAL HC-49/U 16934.400KHZ

7. OPERATION P.C. BOARD

Ref. No.	Part No.	Description
IB1	EH-355321	COMP R RKC1/8B13 103J
IB2	EH-413158J	COMP R RKC1/8B8 471J
SW1	ES-349474	SW TACT SKHHAM004A
SW2	ES-349474	SW TACT SKHHAM004A
SW3	ES-349474	SW TACT SKHHAM004A
SW4	ES-349474	SW TACT SKHHAM004A
SW5	ES-349474	SW TACT SKHHAM004A
SW6	ES-349474	SW TACT SKHHAM004A
SW7	ES-349474	SW TACT SKHHAM004A
SW8	ES-349474	SW TACT SKHHAM004A
SW9	ES-413140J	SW TACT SKHJGS
SW10	ES-413140J	SW TACT SKHJGS
SW11	ES-413140J	SW TACT SKHJGS
SW12	ES-413140J	SW TACT SKHJGS
SW13	ES-413140J	SW TACT SKHJGS
SW14	ES-413140J	SW TACT SKHJGS
SW15	ES-413140J	SW TACT SKHJGS
SW16	ES-413140J	SW TACT SKHJGS
SW17	ES-349474	SW TACT SKHHAM004A
SW18	ES-349474	SW TACT SKHHAM004A
SW19	ES-349474	SW TACT SKHHAM004A
SW20	ES-349474	SW TACT SKHHAM004A
SW21	ES-349474	SW TACT SKHHAM004A
SW22	ES-349474	SW TACT SKHHAM004A
SW23	ES-349474	SW TACT SKHHAM004A
SW24	ES-349474	SW TACT SKHHAM004A
SW25	ES-349474	SW TACT SKHHAM004A
SW26	ES-349474	SW TACT SKHHAM004A
SW27	ES-349474	SW TACT SKHHAM004A
SW28	ES-349474	SW TACT SKHHAM004A
SW29	ES-349474	SW TACT SKHHAM004A
SW30	ES-349474	SW TACT SKHHAM004A
SW31	ES-349474	SW TACT SKHHAM004A
SW32	ES-349474	SW TACT SKHHAM004A
SW33	ES-349474	SW TACT SKHHAM004A
SW34	ES-349474	SW TACT SKHHAM004A
SW35	ES-349474	SW TACT SKHHAM004A
SW36	ES-349474	SW TACT SKHHAM004A

8. MIDI P.C. BOARD

Ref. No.	Part No.	Description
D1	ED-344280	D SILICON H GMA-01-FY2 F05
FL1	EH-404248J	FILTER EMI DSS310-54B 101M CUT
FL2	EH-404248J	FILTER EMI DSS310-54B 101M CUT
FL3	EH-404248J	FILTER EMI DSS310-54B 101M CUT
FL4	EH-404248J	FILTER EMI DSS310-54B 101M CUT
FL5	EH-404248J	FILTER EMI DSS310-54B 101M CUT
FL6	EH-404248J	FILTER EMI DSS310-54B 101M CUT
FL7	EH-404248J	FILTER EMI DSS310-54B 101M CUT
IC1	EI-388709J	IC HD74HC32P
J1	EJ-403478J	DIN J YKF51-5040 5P
PH1	ED-378219	DETECTOR PC6N137

9. EJECT SW P.C. BOARD

Ref. No.	Part No.	Description
SW37	ES-412382J	SW TACT SKHJGG

10. MAIN VOLUME P.C. BOARD

Ref. No.	Part No.	Description
VR1	EV-413118J	VR ROTARY RK16312A A103X2

11. CONTRAST VR P.C. BOARD

Ref. No.	Part No.	Description
VR2	EV-414633J	VR SPL RK0971112 SW B502

12. FOOT SW P.C. BOARD

Ref. No.	Part No.	Description
FL8	EH-405610J	FILTER EMI DSS310H54B 222M 250
FL9	EH-405610J	FILTER EMI DSS310H54B 222M 250
J2	EJ-379523	PHONE J 3P HLJ4305-3080 S.NUT

13. PHONES P.C. BOARD

Ref. No.	Part No.	Description
J3	EJ-353031	PHONE J 3P HLJ0520-010
R8	*ER-321619	R OMF H S15 FS 1W 101J
R9	*ER-321619	R OMF H S15 FS 1W 101J

14. FUSE P.C. BOARD

Ref. No.	Part No.	Description
C1	*EC-396545J	C MMY V XE-Z 683M 250AC
C2	*EC-410346J	C CE V DE1110E102M 400AC
C3	*EC-410346J	C CE V DE1110E102M 400AC
C4	*EC-410346J	C CE V DE1110E102M 400AC
L1	*EO-389172J	COIL LF LF-4N 502
F1-A	*EF-309387	FUSE TSC A 250V 1.00A [J]
F1-B	*EF-310229	FUSE TSC 125V 1.00A [C,A]
F1-C	*EF-593706	FUSE SEMKO T 250V 500MA [E,V,S]
F1-D	*EF-355374	FUSE BET T 250V 500MA [B]

15. POWER P.C. BOARD

Ref. No.	Part No.	Description
C1	*EC-379611	C EC V S10 SME 123M 10.0DC
C4	EC-365619	C EC V CUT AS1 102M 25.0DC
C5	EC-365619	C EC V CUT AS1 102M 25.0DC
D1	*ED-389834J	D SILICON DS135E-FB2 F12 100/1
D2	*ED-330319	D SILICON DBA10B 100/1.0A
IC1	*EI-348123	IC M5230L
R1	*ER-324185	R CB H S10 FS RDS 1/4W 221J
R2	*ER-324185	R CB H S10 FS RDS 1/4W 221J
F2-A	*EF-306952	FUSE TSC A 250V 4.00A [J]
F2-B	*EF-306957	FUSE TSC 125V 4.00A [C,A]
F2-C	*EF-690996	FUSE SEMKO T 250V 4.00A [E,V,S]
F2-D	*EF-359086	FUSE BET T 250V 4.00A [B]
F3-A	*EF-306124	FUSE TSC A 250V 630MA [J]
F3-B	*EF-305703	FUSE TSC 125V 630MA [C,A]
F3-C	*EF-601942	FUSE SEMKO T 250V 630MA [E,V,S]
F3-D	*EF-358974	FUSE BET T 250V 630MA [B]
F4-A	*EF-306124	FUSE TSC A 250V 630MA [J]
F4-B	*EF-305703	FUSE TSC 125V 630MA [C,A]
F4-C	*EF-601942	FUSE SEMKO T 250V 630MA [E,V,S]
F4-D	*EF-358974	FUSE BET T 250V 630MA [B]
1	EZ-362348	SHEET HEATSINK
2	ZW-632226	WASHER INSULATOR (BUSH M)
3	*ED-365818	D SILICON CTU-12S 200/ 6.0A [D901]
4	*ED-365819	D SILICON CTU-12R 200/ 6.0A [D902]
5	*EI-365820	IC STR9005 [IC901]
6	*ET-356817	TR 2SB891 Q,R [TR901]
7	*ET-354083	TR 2SD1189 Q,R [TR902]

16. LR OUT P.C. BOARD

Ref. No.	Part No.	Description
D1	ED-389834J	D SILICON DS135E-FB2 F12 100/1
FL1	EH-412220J	FILTER EMI BL03RN2-R66
FL2	EH-397281J	FILTER EMI DSS306-54B 101M CUT
FL3	EH-397281J	FILTER EMI DSS306-54B 101M CUT
FL4	EH-397281J	FILTER EMI DSS306-54B 101M CUT
FL5	EH-397281J	FILTER EMI DSS306-54B 101M CUT
FL6	EO-394178J	COIL FIX 2 SBT-0240 400N
FL7	EO-394178J	COIL FIX 2 SBT-0240 400N
FL8	EH-381117J	FILTER EMI DSS306-54FZ103N CUT
IC1	EI-413131J	IC SM5840EP
IC2	EI-412279J1	IC PCM69AP-4
IC3	EI-377191	IC NJM5532D-D
IC4	EI-377191	IC NJM5532D-D
IC5	EI-360043	IC M5220P
IC6	EI-360043	IC M5220P
IC7	EI-360043	IC M5220P
IC8	EI-377101	IC UPC7805HF
J1	EJ-354105	PHONE J 2P HLJ0520-110 6.3
J2	EJ-354105	PHONE J 2P HLJ0520-110 6.3
P112	EJ-386356J	PLUG RA-H341TD-1190 34P
RL1	EQ-348929	RELAY SIG G5A-237P 2TR 12V
TR1	ET-349592	TR 2SC3400 F05
W601	EW-414736J	WIRE ASSY L6027 W601 20P

17. POWER SW P.C. BOARD

Ref. No.	Part No.	Description
C1	*EC-361942	C CE V DNS103ZV V 103Z 400AC

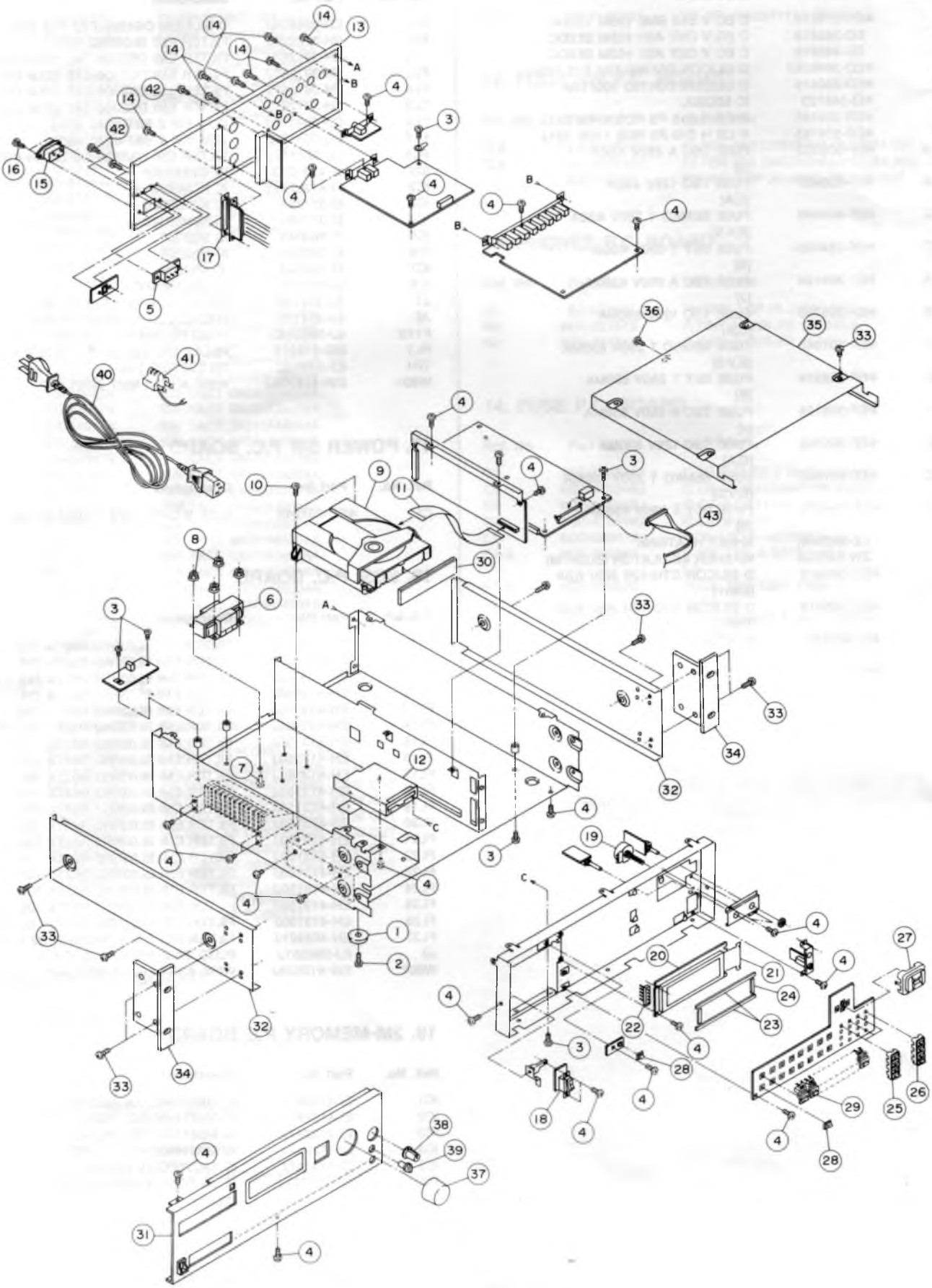
18. SCSI P.C. BOARD

Ref. No.	Part No.	Description
FL9	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL10	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL11	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL12	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL13	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL14	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL15	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL16	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL17	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL18	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL19	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL20	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL21	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL22	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL23	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL24	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL25	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL26	EH-413150J	FILTER EMI BL03RN2-R62T4 T05
FL27	EH-403921J	FILTER EMI DSS310H55B 222M CUT
J3	EJ-386351J	PLUG 57LE-40500-7700 (D29)
W801	EW-412528J	WIRE ASSY L6027 W801 50P

19. 2M-MEMORY P.C BOARD

Ref. No.	Part No.	Description
IC1	EI-412247J	IC MB814400-80L PSZ-G
IC2	EI-412247J	IC MB814400-80L PSZ-G
IC3	EI-412247J	IC MB814400-80L PSZ-G
IC4	EI-412247J	IC MB814400-80L PSZ-G
IC5	EI-413141J	IC 18CV8PC-15 L6028C
P301	EJ-413161J	PLUG FCN-235P68-G/0 68P

FINAL ASSEMBLY BLOCK



20. FINAL ASSEMBLY BLOCK

Ref. No.	Part No.	Description
1	SA-349332	FOOT
2	ZS-344754	ST PAN30X06STL CMT C080
3	ZS-379405	BID30X06STL CMT
4	ZS-320906	ST BR30X06STL CMT
5	*ES-306430	SW SLIDE J-S4013—01 01-2 [E,V,B,S]
6-A	*BT-378271	TRANS POW L4003 J [J]
6-B	*BT-378272	TRANS POW L4003 C,A [C,A]
6-C	*BT-378273	TRANS POW L4003 E,V,B,S [E,V,B,S]
7	ZS-321298	BID30X08STL CMT
8	ZW-609434	N FRANGE 30STL CMT
9	BB-412436J	MECHA CD CDM01358K
10	ZS-351186	ST BR30X08STL CMT C080
11	EW-414744J	CORD L6027 W502 22P
12	BB-413117J	FLOPPY DISK FD-235HF-3448
13	SP-414166J	PANEL REAR CD3000
14	ZS-345272	ST BR30X06STL BNI
15	*EJ-358632J1	SOCKET INLET SOT-16 3P
16	ZS-336612	ST CTS30X08STL BNI
17	SC-385427J	COVER CONNECTOR (B) [SCSI COVER]
18	*ES-413128J	SW SEESAW EST15962V [POWER SW]
19	ES-414627J	SW ROTARY EC24B50D0 [CONTROL VR]
20	EM-382317J	IND LCD EDM-MPJ2COW
21	EL-728382J	EL BACK LIGHT
22	EJ-352054	PLUG B10P-SHF-1AA-K 10P
23	SZ-401475J1	SEAL DUST A
24	SZ-401476J1	SEAL DUST B
25	SB-413597J	BUTTON TENKEY (A)
26	SB-413598J	BUTTON TENKEY (B)
27	SB-413601J1	BUTTON CURSOR
28	SB-413599J	BUTTON PUSH (A)
29	SB-413336J	BUTTON PUSH (4)-A
30	SP-414167J	PANEL CD-ROM
31	BD-414168J	PANEL FRONT CD3000 PART
32	SP-413448J	COVER SIDE
33	ZS-322570	ST BID40X08STL NI3
34	GH-413441J	HANDLE RACK
35	SP-417333J	COVER TOP
36	ZS-378722J	ST BR30X06STL BNI EARTH LOCK
37	SK-411156J	KNOB CONTROL
38	SK-411144J	KNOB VOL PART (1)
39	SK-413636J	KNOB VOL GR
40-A	*EW-380905J	AC CORD 250S KP300 KS16 B J [J]
40-B	*EW-368420	AC CORD200SKP30KS16 B AC [C,A]
40-C	*EW-403993J	AC CORD200SKP4819DKS31A B E [E,V]
40-D	*EW-368422	AC CORD200 KS-31AAGTBS [B]
40-E	*EW-368418J1	AC CORD200SKP551KS31 B S [S]
41	*EJ-405424J	PLUG ADAPTOR KPR-25
42	ZS-350934	PT BR30X08STL BNI
43	EW-414724J	WIRE ASSY L6027 W110 34P

NOTE:
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

21. EXM3008 (OPTIONAL P.C. BOARD)

Ref. No.	Part No.	Description
IC1	EI-414848J	IC MB8116400-70PZ-G
IC2	EI-414848J	IC MB8116400-70PZ-G
IC3	EI-414848J	IC MB8116400-70PZ-G
IC4	EI-414848J	IC MB8116400-70PZ-G
IC5	EI-414512J	IC 18CV8PC-15 L5110A
P101	EJ-413161J	PLUG FCN-235P68-G/0 68P

INDEX

Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.
EM382317J	20-20	EV410614J	5-VR401	ZS463353	2-3		
EO345894	4-L2	EV410614J	5-VR501	ZS477876	2-25		
EO389172J	14-L1	EV410614J	5-VR601	ZS733489J	2-17		
EO394178J	4-L1	EV410614J	5-VR701	ZW357164	2-12		
EO394178J	6-FL19	EV410614J	5-VR801	ZW609434	20-8		
EO394178J	6-FL20	EV413118J	10-VR1	ZW632226	15-2		
EO394178J	6-FL21	EV414633J	11-VR2	ZW733488J	2-16		
EO394178J	6-FL22	EV733505J	2-37X				
EO394178J	16-FL6	EV733506J	2-38X				
EO394178J	16-FL7	EW368418J1	20-40-E				
EQ348929	16-RL1	EW368420	20-40-B				
ER200972	4-FR2	EW368422	20-40-D				
ER321619	13-R8	EW380905J	20-40-A				
ER321619	13-R9	EW403993J	20-40-C				
ER324185	15-R1	EW412284J	4-W112				
ER324185	15-R2	EW412528J	18-W801				
ER412299J	4-FR1	EW414724J	20-43				
ES306430	20-5	EW414736J	16-W601				
ES349474	7-SW1	EW414744J	20-11				
ES349474	7-SW2	EW733498J	2-30				
ES349474	7-SW3	EZ362348	15-1				
ES349474	7-SW4	GH413441J	20-34				
ES349474	7-SW5	MA733491J	2-19				
ES349474	7-SW6	MA733492J	2-22				
ES349474	7-SW7	MB733480J	2-6				
ES349474	7-SW8	ML733481J	2-8				
ES349474	7-SW17	MR733484J	2-11				
ES349474	7-SW18	MS733478J	2-4				
ES349474	7-SW19	MS733479J	2-5				
ES349474	7-SW20	MS733493J	2-23				
ES349474	7-SW21	MZ733482J	2-9				
ES349474	7-SW22	MZ733483J	2-10				
ES349474	7-SW23	MZ733485J	2-13				
ES349474	7-SW24	MZ733486J	2-14				
ES349474	7-SW25	MZ733495J	2-26				
ES349474	7-SW26	MZ733496J	2-27				
ES349474	7-SW27	SA349332	20-1				
ES349474	7-SW28	SA733494J	2-24				
ES349474	7-SW29	SB413336J	20-29				
ES349474	7-SW30	SB413597J	20-25				
ES349474	7-SW31	SB413598J	20-26				
ES349474	7-SW32	SB413599J	20-28				
ES349474	7-SW33	SB413601J1	20-27				
ES349474	7-SW34	SC385427J	20-17				
ES349474	7-SW35	SC733476J	2-1				
ES349474	7-SW36	SK411144J	20-38				
ES412382J	9-SW37	SK411156J	20-37				
ES413128J	20-18	SK413636J	20-39				
ES413140J	7-SW9	SP413448J	20-32				
ES413140J	7-SW10	SP414166J	20-13				
ES413140J	7-SW11	SP414167J	20-30				
ES413140J	7-SW12	SP417333J	20-35				
ES413140J	7-SW13	SZ401475J1	20-23				
ES413140J	7-SW14	SZ401476J1	20-24				
ES413140J	7-SW15	ZG733487J	2-15				
ES413140J	7-SW16	ZG733490J	2-18				
ES414627J	20-19	ZS320906	20-4				
ES733503J	2-35	ZS321298	20-7				
ES733504J	2-36	ZS322570	20-33				
ET349592	6-TR2	ZS336612	20-16				
ET349592	6-TR3	ZS344754	20-2				
ET349592	16-TR1	ZS345272	20-14				
ET354083	15-7	ZS346048	2-21				
ET356817	15-6	ZS350934	20-42				
ET365748	6-TR1	ZS351186	20-10				
ET405321J	6-TR4	ZS356467	2-20				
ET732638J	2-39X	ZS370834	2-7				
EV410614J	5-VR101	ZS378722J	20-36				
EV410614J	5-VR201	ZS379405	20-3				
EV410614J	5-VR301	ZS383887J	2-28				

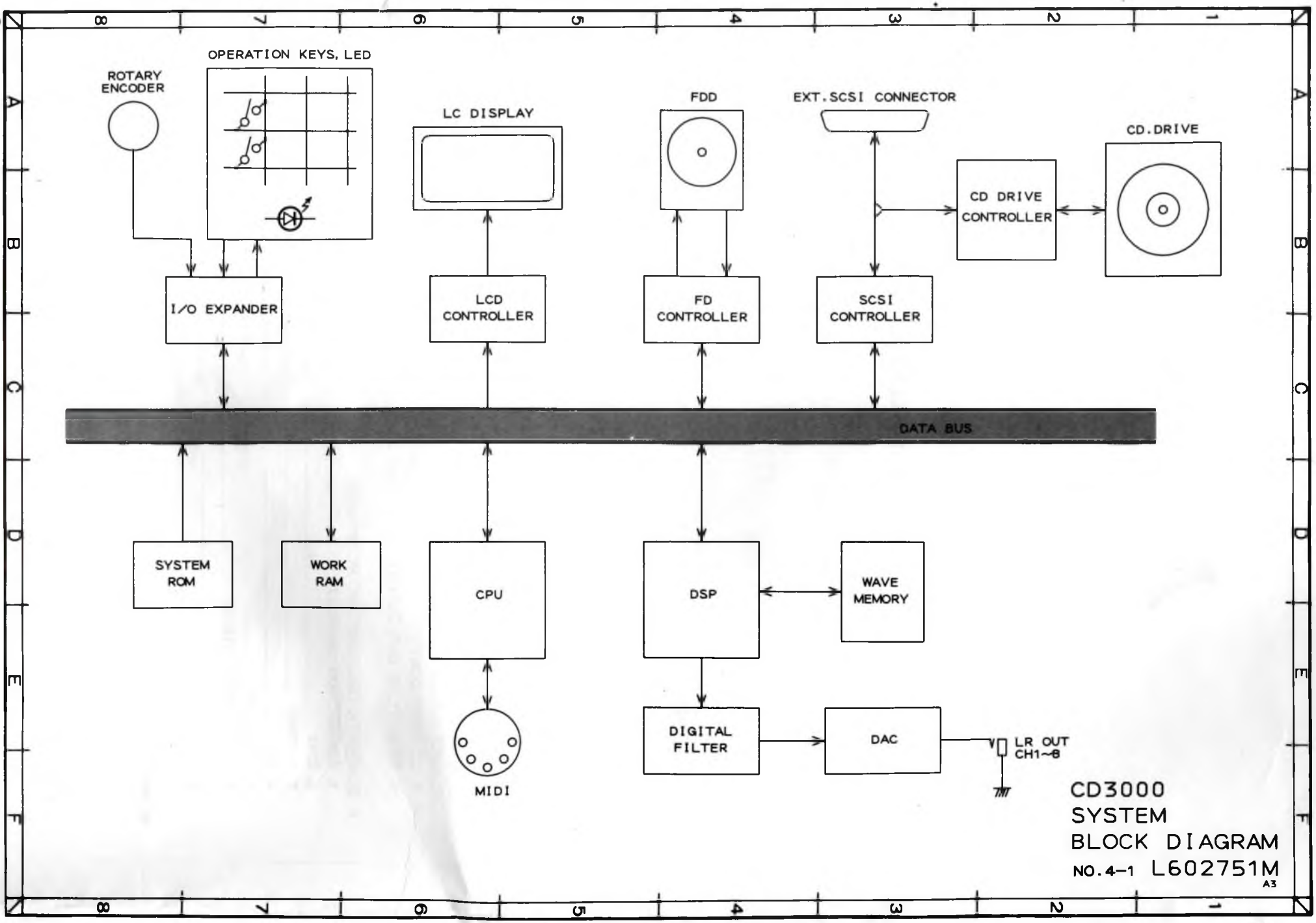
AKAI

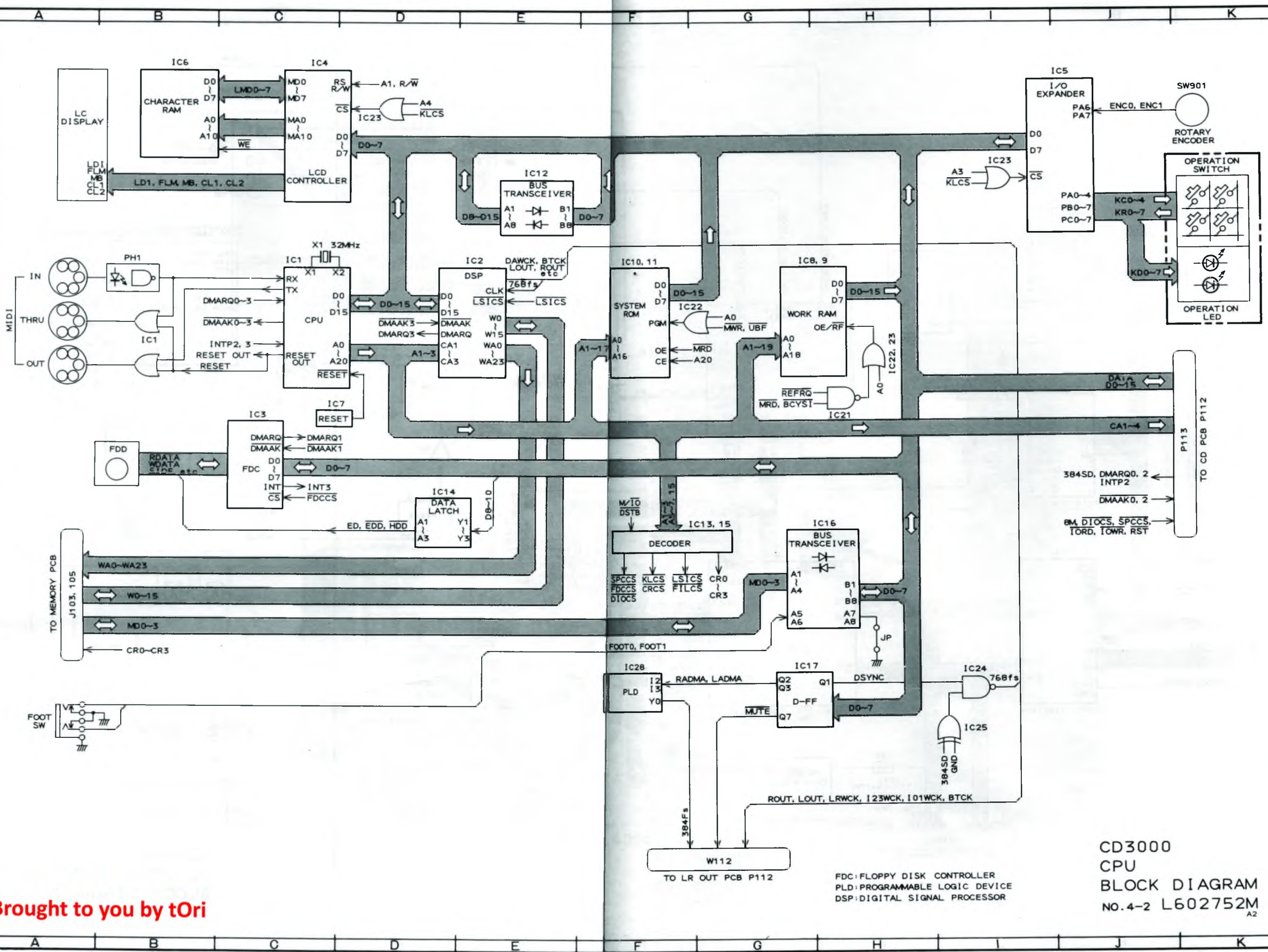
MODEL CD3000

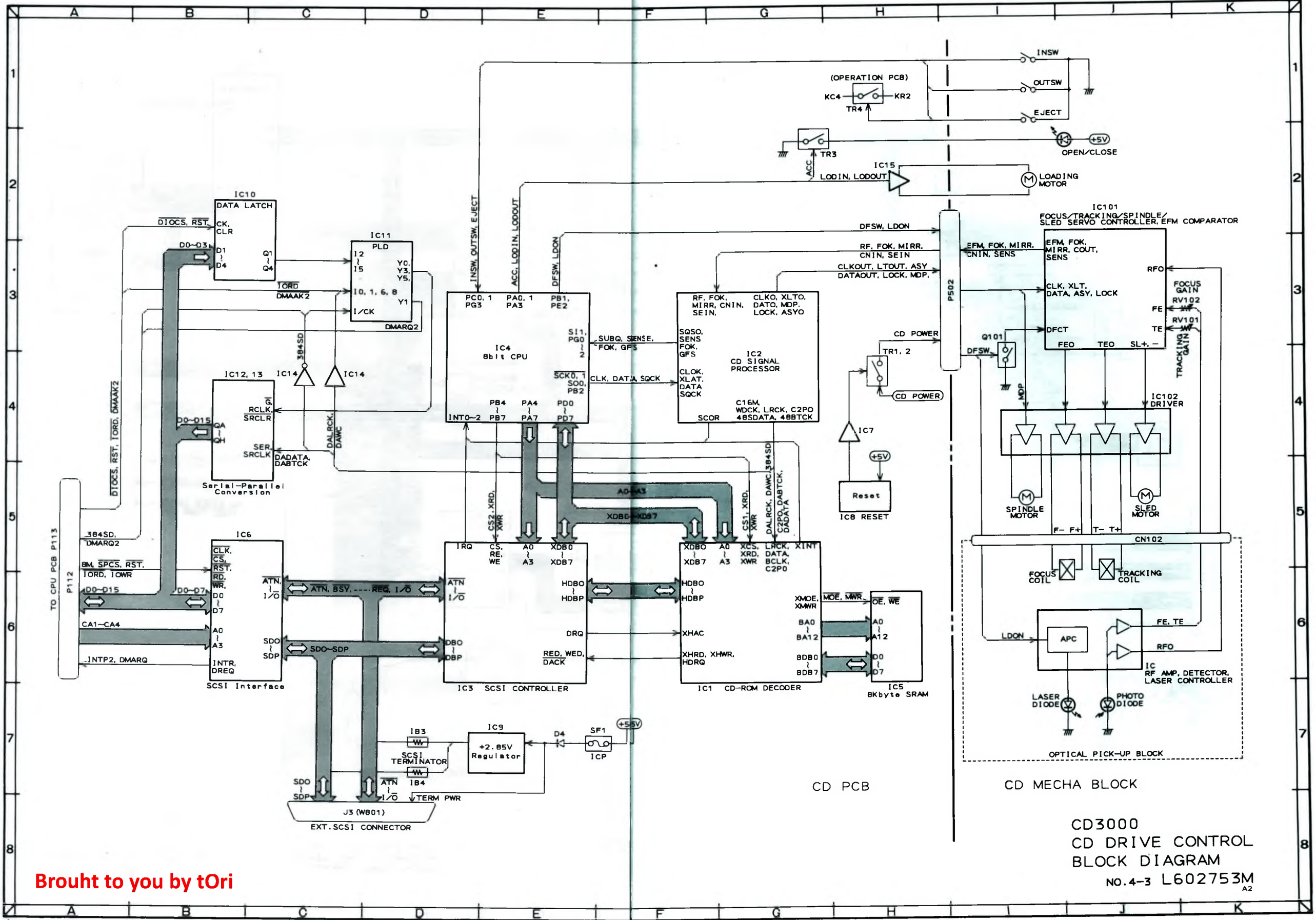
SCHEMATIC DIAGRAMS AND PC BOARDS

TABLE OF CONTENTS

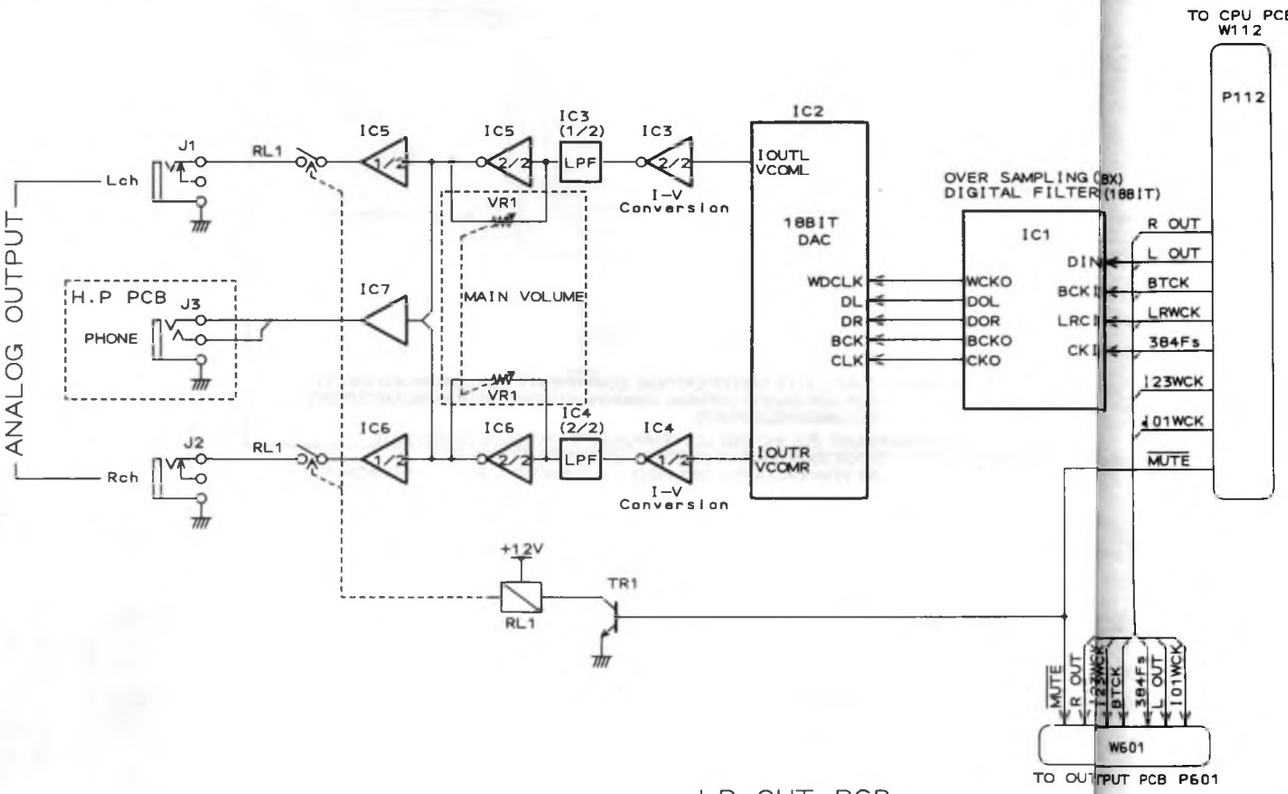
Use these schematic diagrams and PC boards together with the provided service manual.

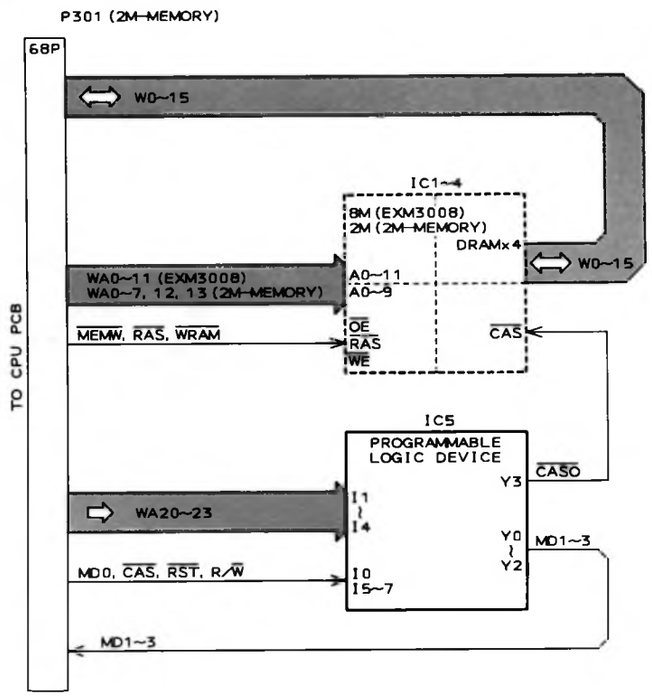




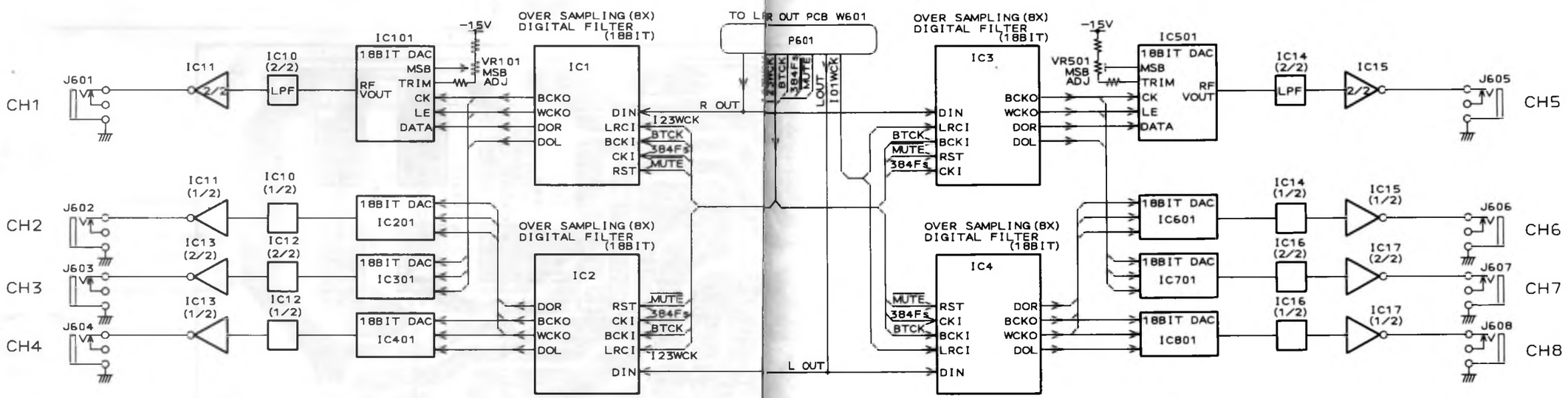


CD3000
CD DRIVE CONTROL
BLOCK DIAGRAM
NO.4-3 L602753M
A2

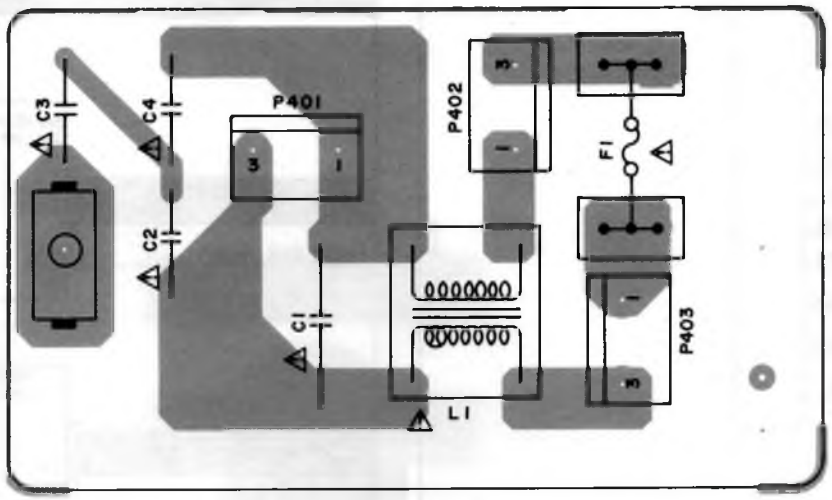




MEMORY BOARD



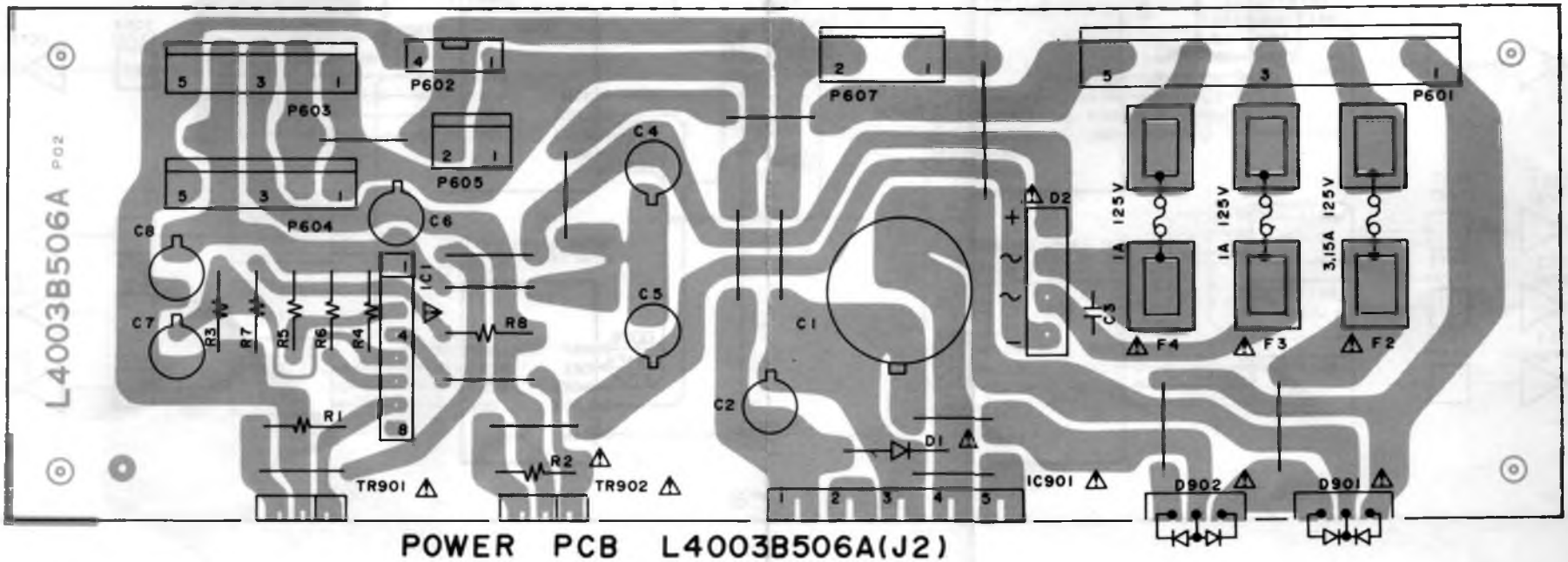
CD3000
MEMORY, LR OUT, OUTPUT
BLOCK DIAGRAM
NO.4-4 L602754M
A2



FUSE PCB L6027A503H

WANING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVRTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT



POWER PCB L4003B506A(J2)

POWER PCB L4003506A

OPERATION PCB
L6027A503A

LCD BLOCK
EDM-MPJ2COW

BACK LIGHT

MIDI PCB L6027A503B

CD MECHANISM BLOCK
CDM0135BK

CD PCB
L6027A5010

SCSI PCB L6027B502C

F.D.D. BLOCK
FD-235HF-3448

2M-MEMORY PCB
L6028850

CPU PCB L6028A5010

POWER SW PCB
L6027B502B

FUSE PCB L6027A503H

POWER PCB

MAIN VR PCB
L6027A503D

LR OUT PCB
L6027B502A

OUTPUT PCB
L6028850

CONTRAST VR PCB
L6027A503E

FOOT SW PCB
L6027A503F

PHONES PCB
L6027A503G

EJECT SW PCB
L6027A503C

ROTARY SW
EC24B50D

DATA

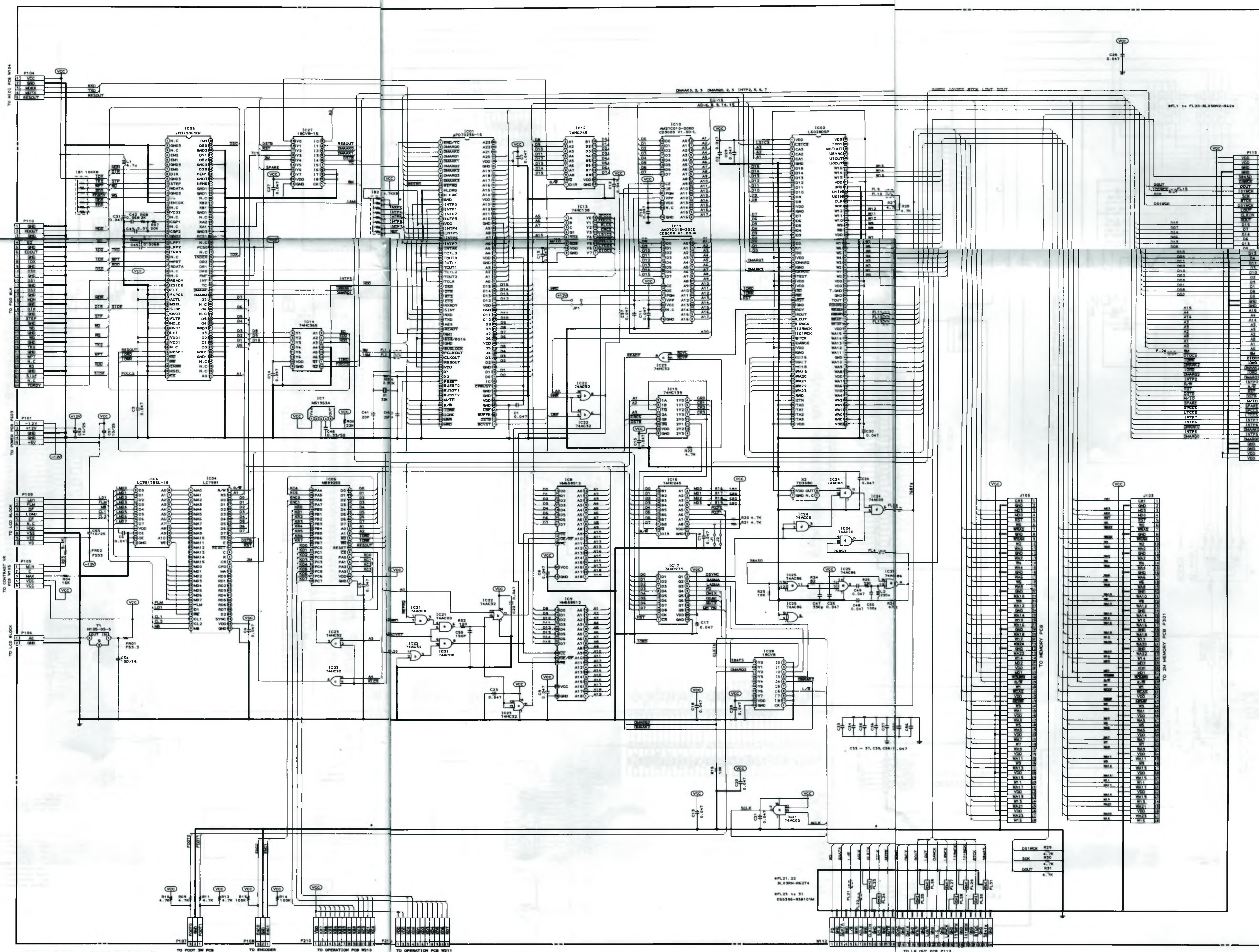
AC INLET
SOT-16

CHASSIS
GND

NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN μF/WV

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS
AVERTISSEMENT: ⚠ IL INDIQUÉ LES COMPOSANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

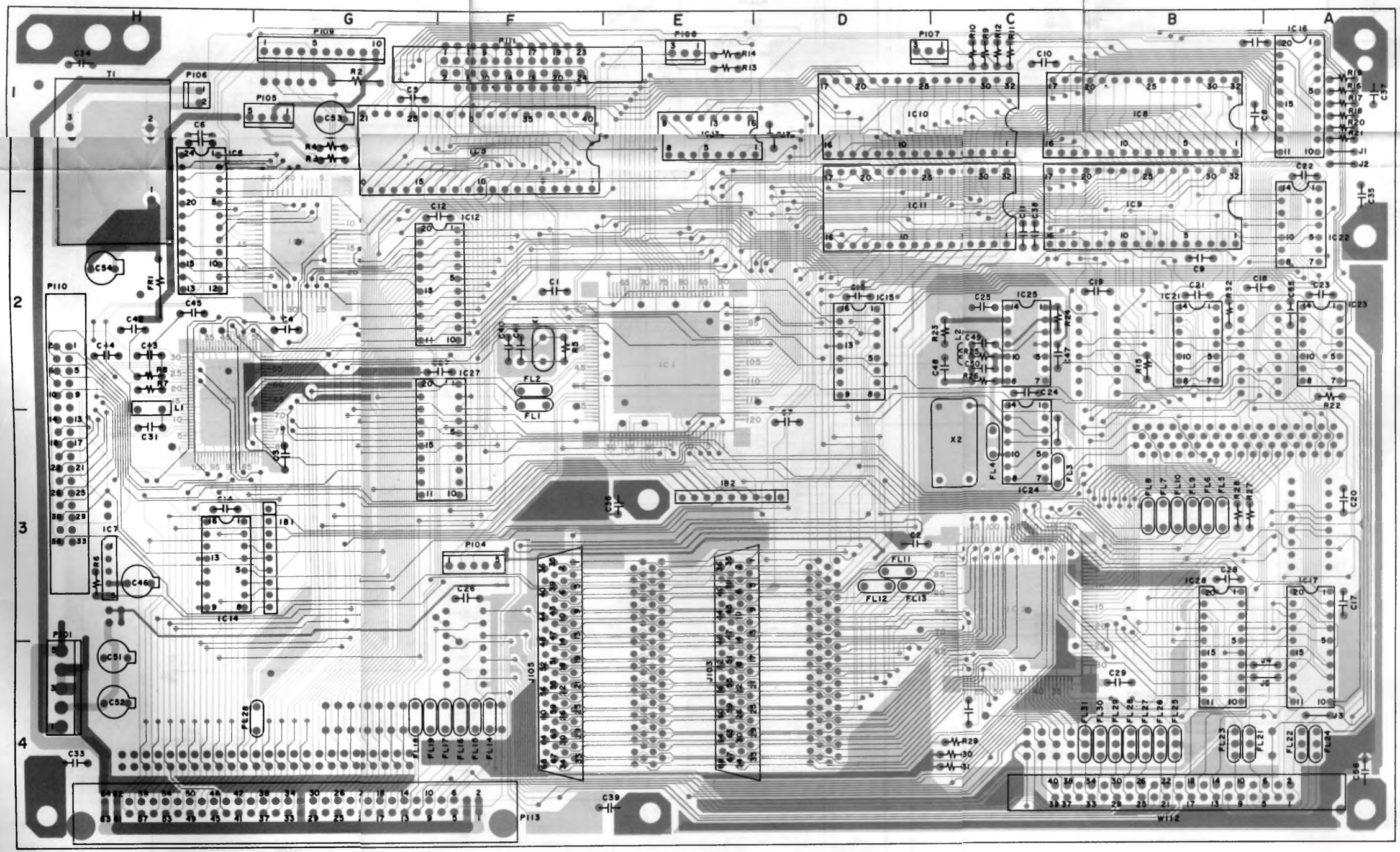
CD3000
CONNECTION DIAGRAM
NO.8-1 L602701M
A1



CPU PCB L6028A5010

NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN μF/WV

CD3000
CPU
SCHEMATIC DIAGRAM
NO.8-2 L602705M
A0



CPU PCB L6028A5010

PRINCIPAL PARTS LOCATION

ICs

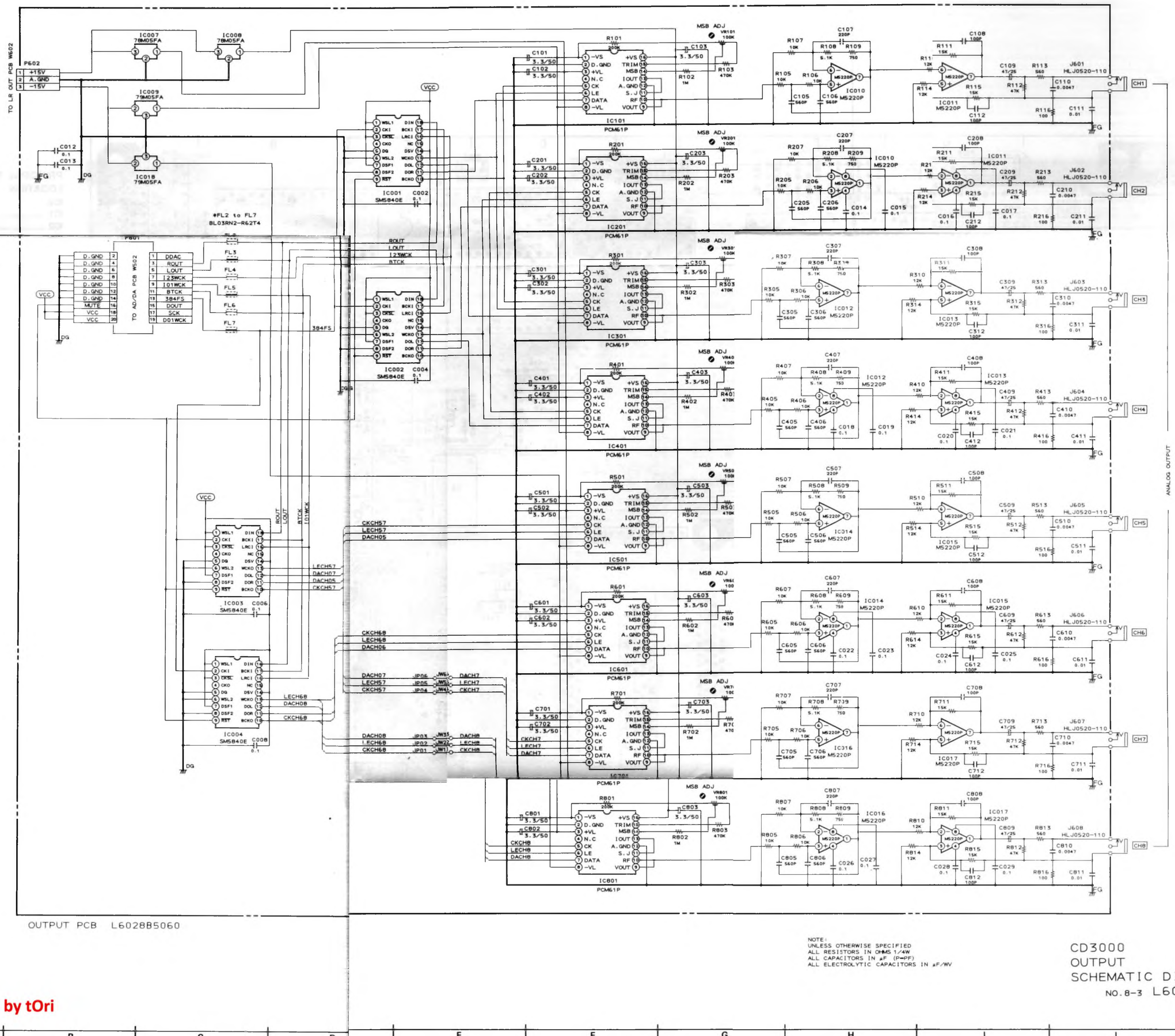
IC1	E2
IC2	C3,4
IC3	G,H2
IC4	G2
IC5	F,G1
IC6	H1,2
IC7	H3
IC8	B1
IC9	B1,2
IC10	C,D1
IC11	C,D2
IC12	F,G2
IC13	E1
IC14	H3
IC15	D2
IC16	A1
IC17	A3,4
IC21	B2
IC22	A2
IC23	A2
IC24	C3
IC25	C2
IC27	F,G3
IC28	B3,4

CONNECTORs

J103	E3,4
J105	F3,4
P101	H3,4
P104	F3
P105	G1
P106	H1
P107	C,D1
P108	E1
P109	G1
P110	H2,3
P111	F1
P113	G4

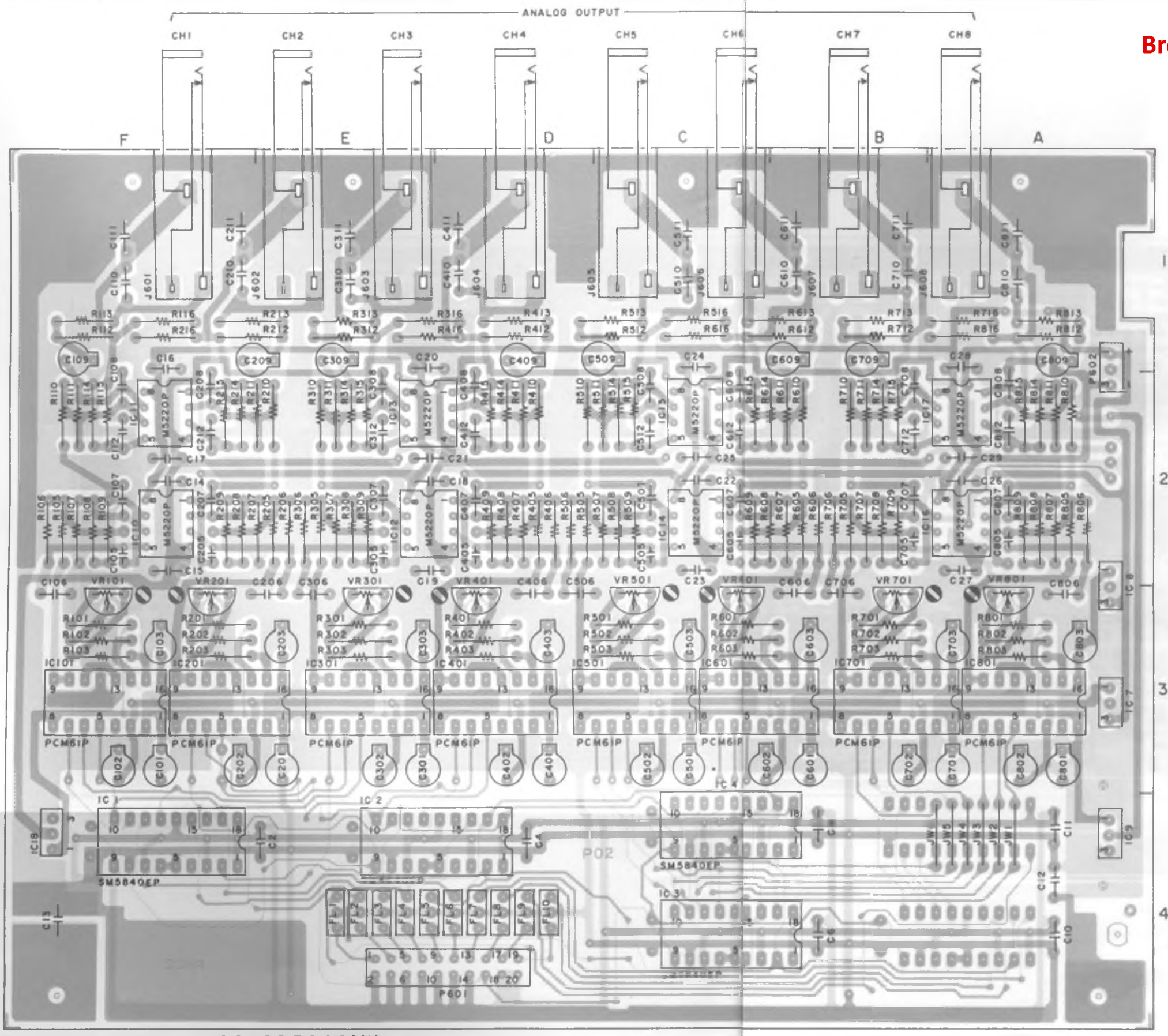
WIRE

W112	B4



NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W
ALL CAPACITORS IN μF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN μF/WV

CD3000
OUTPUT
SCHEMATIC DIAGRAM
NO.8-3 L602706M
A1



OUTPUT PCB L6028B5060(J1)

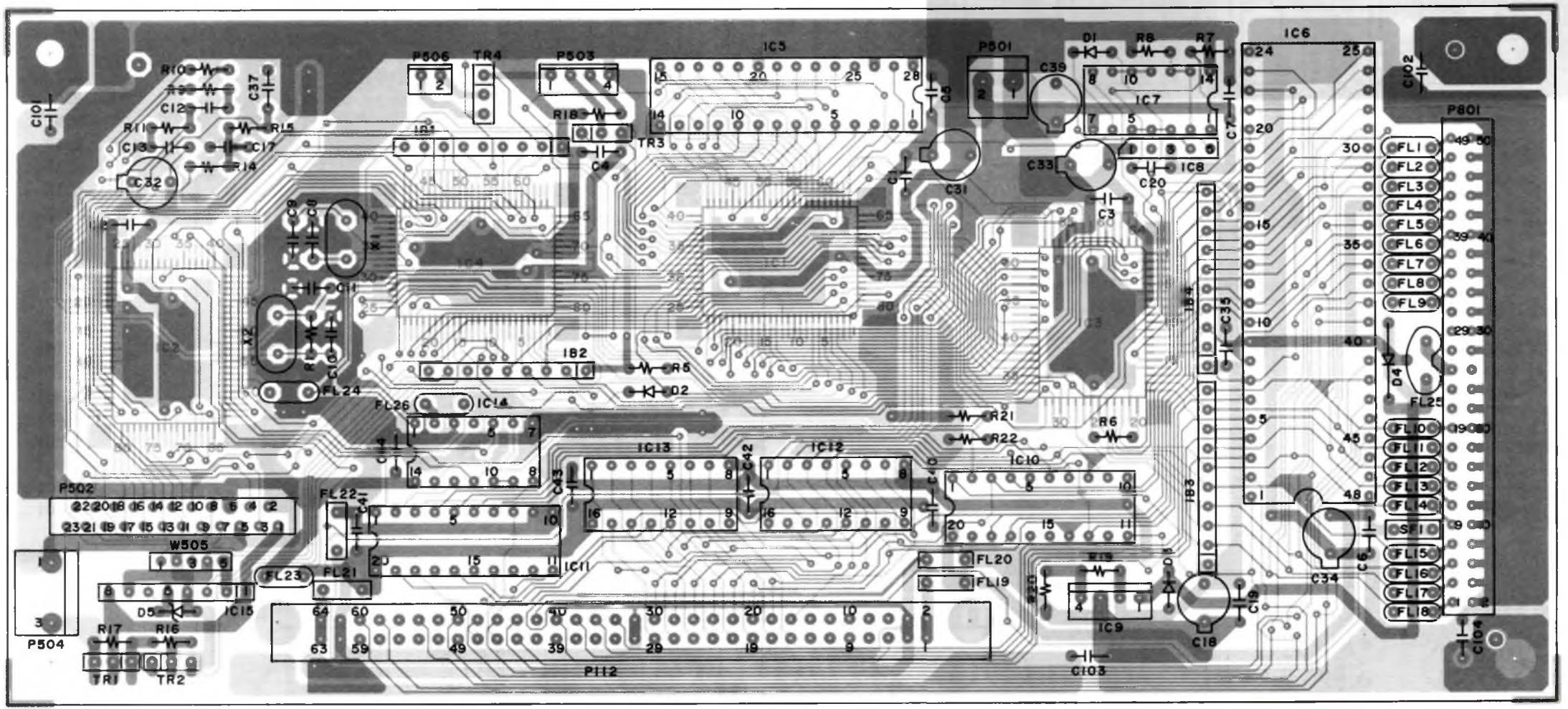
PRINCIPAL PARTS LOCATION

ICs

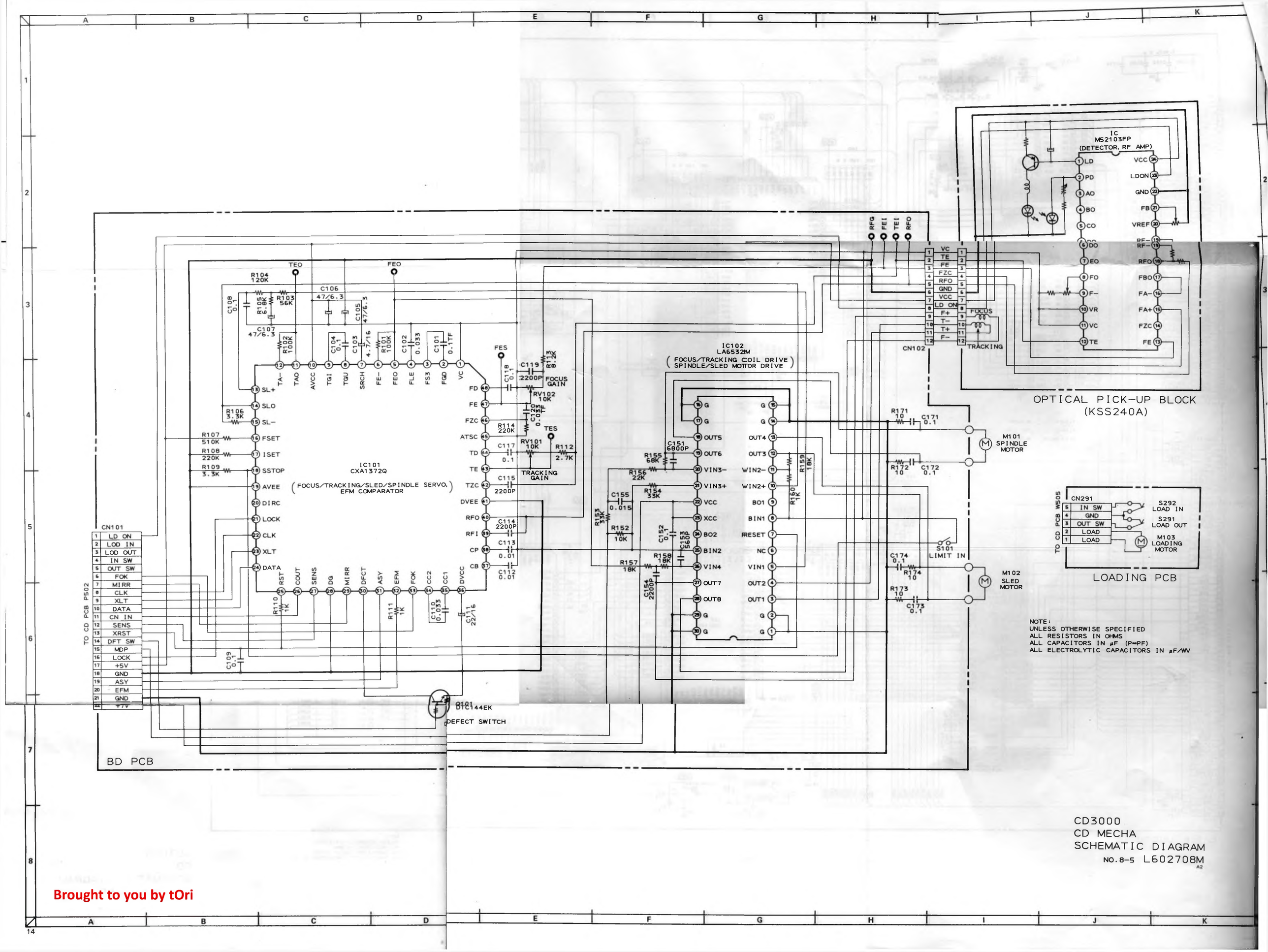
IC1	F4
IC2	D,E4
IC3	C4
IC4	C4
IC7	A3
IC8	A2,3
IC9	A4
IC10	F2
IC11	F2
IC12	D,E2
IC13	D,E2
IC14	C2
IC15	C2
IC16	A2
IC17	A2
IC18	F4
IC101	F3
IC201	F3
IC301	E3
IC401	D3
IC501	C3
IC601	B,C3
IC701	B3
IC801	A3

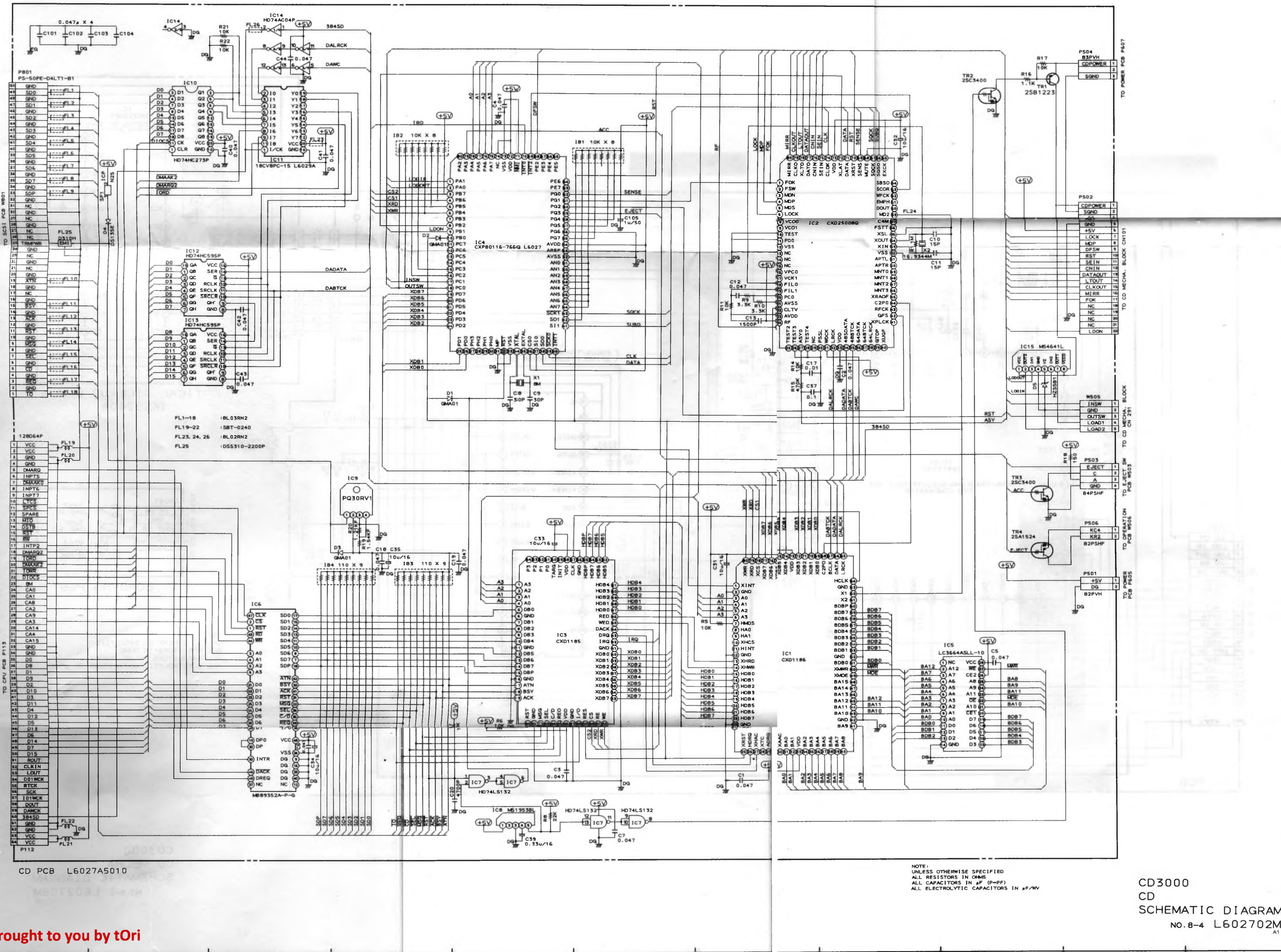
CONNECTORs

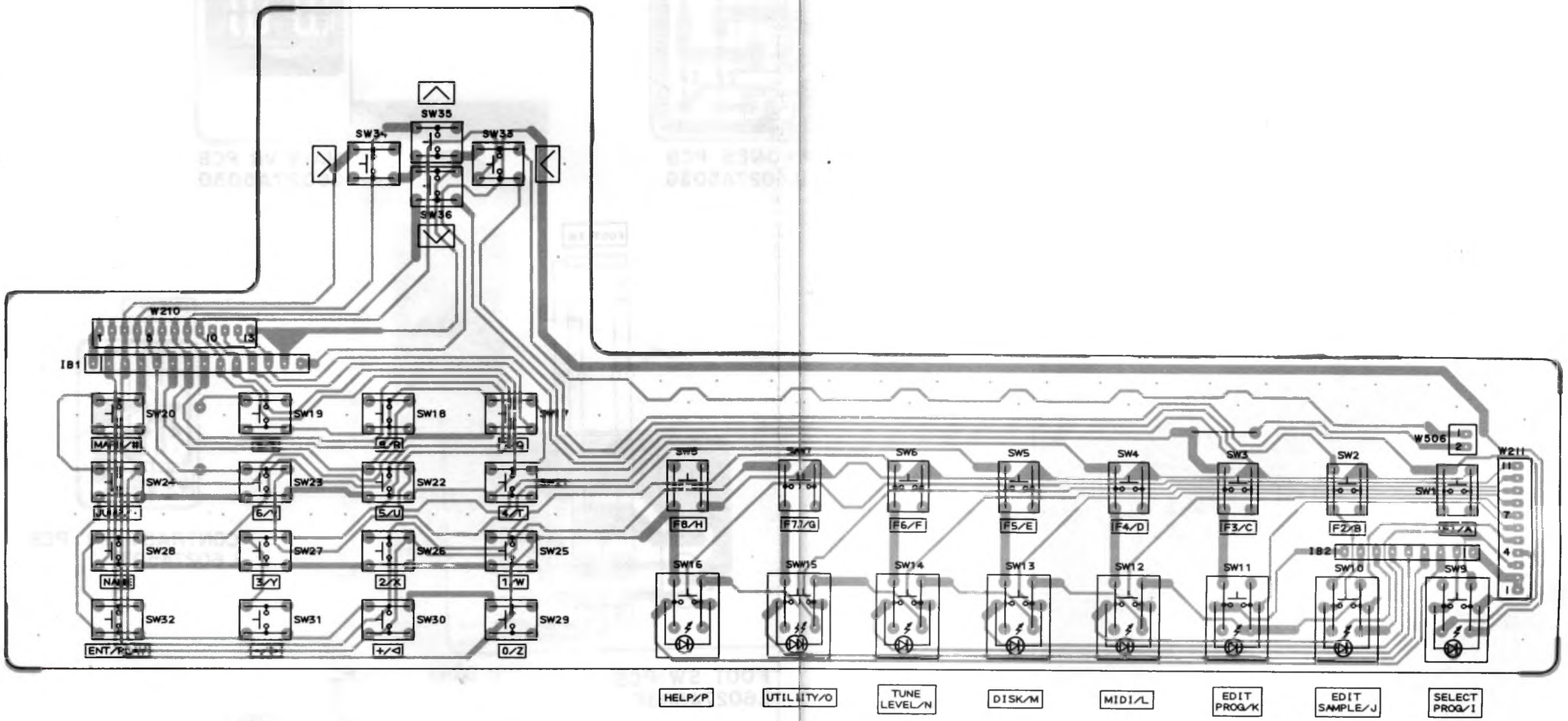
P601	D,E4
P602	A1,2



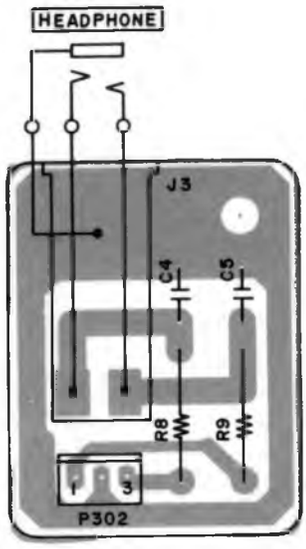
CD PCB L6027A5010



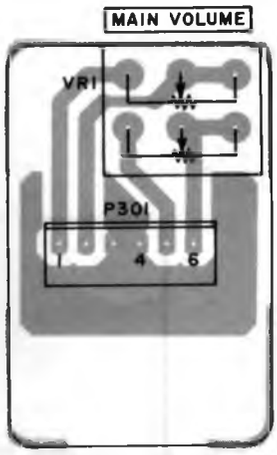




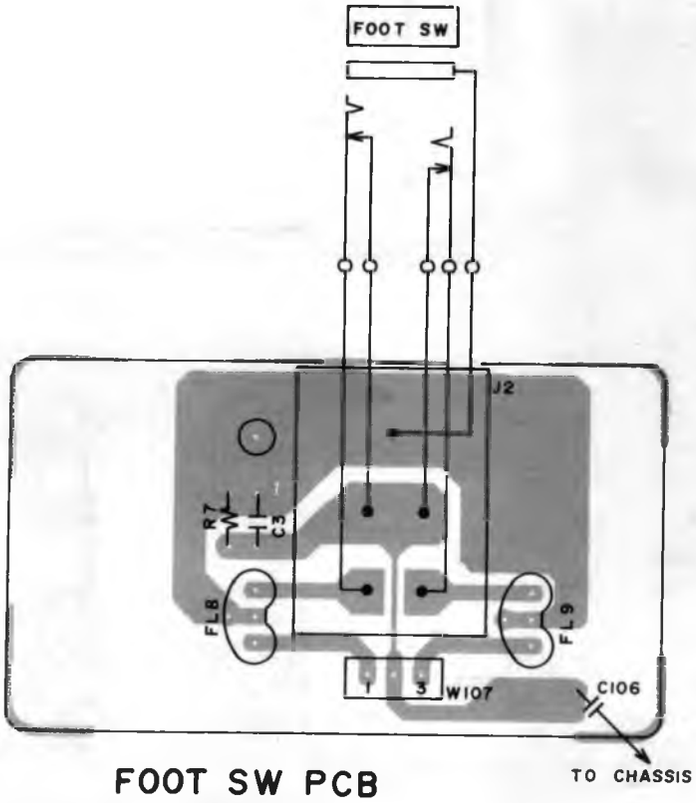
OPERATION PCB L6027A503A



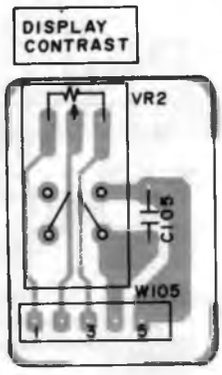
PHONES PCB
L6027A503G



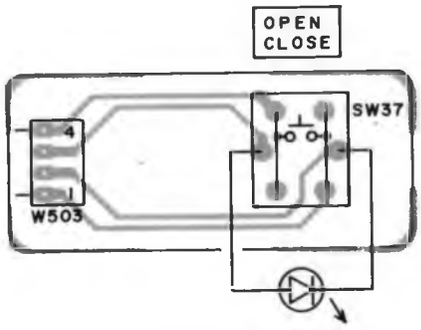
MAIN VR PCB
L6027A503D



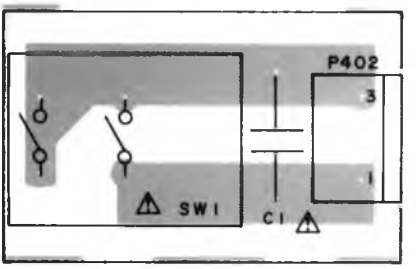
FOOT SW PCB
L6027A503F



CONTRAST VR PCB
L6027A503E



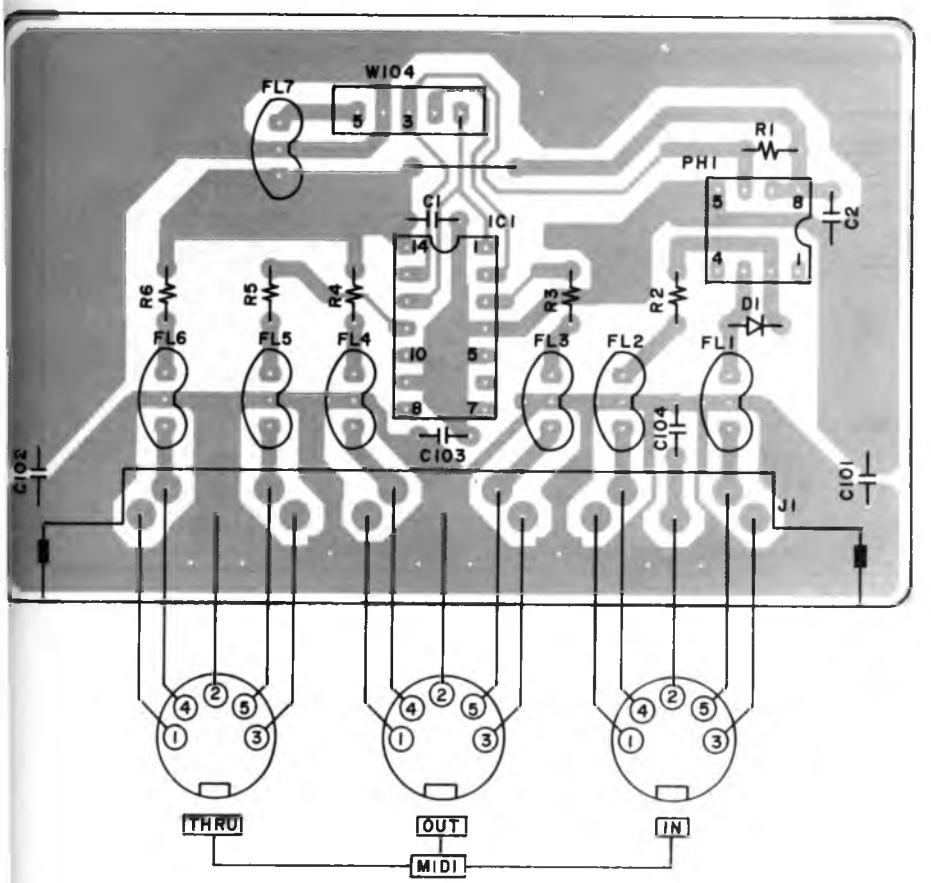
EJECT SW PCB
L6027A503C



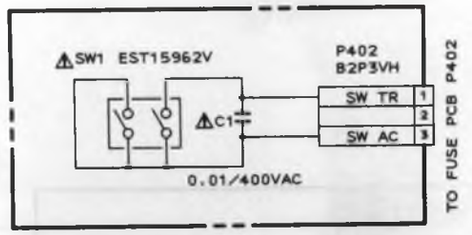
POWER SW PCB
L6027B502B

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

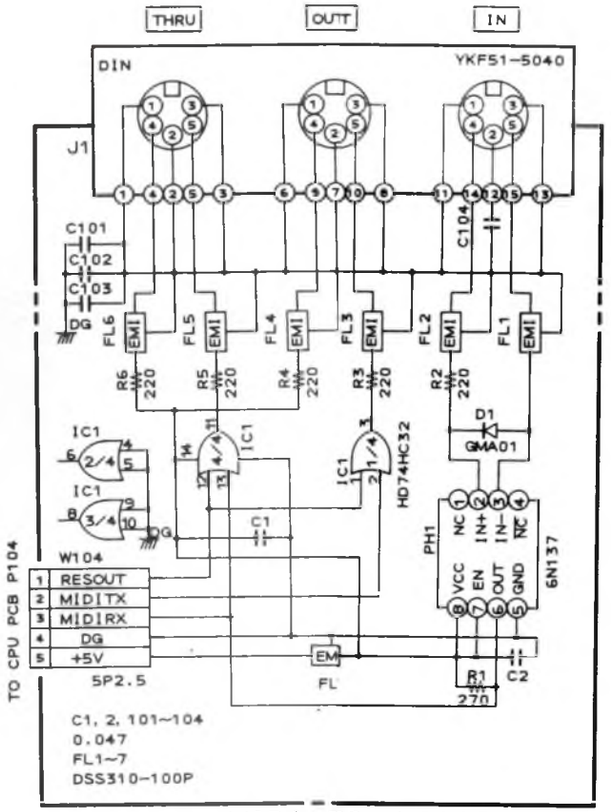
AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT



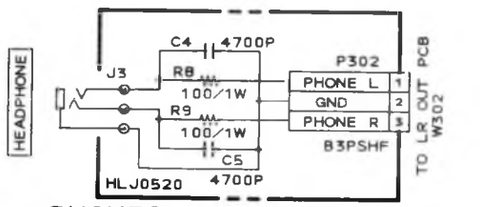
MIDI PCB L6027A503B



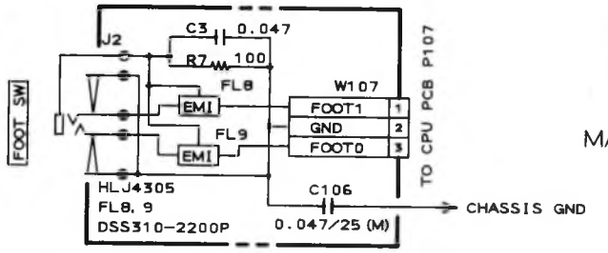
POWER SW PCB L6027B502B



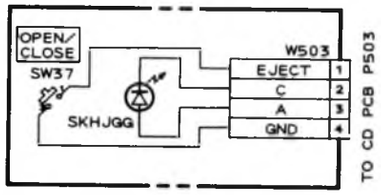
MIDI PCB L6027A503B



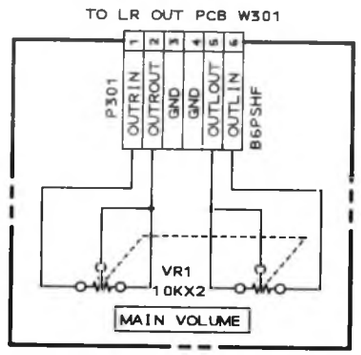
PHONES PCB L6027A503G



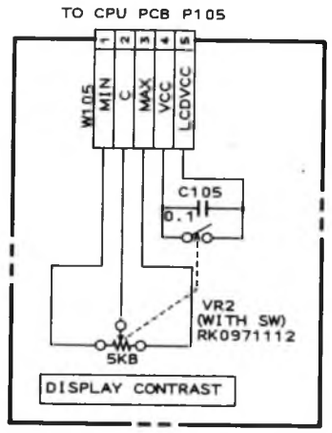
FOOT SW PCB L6027A503F



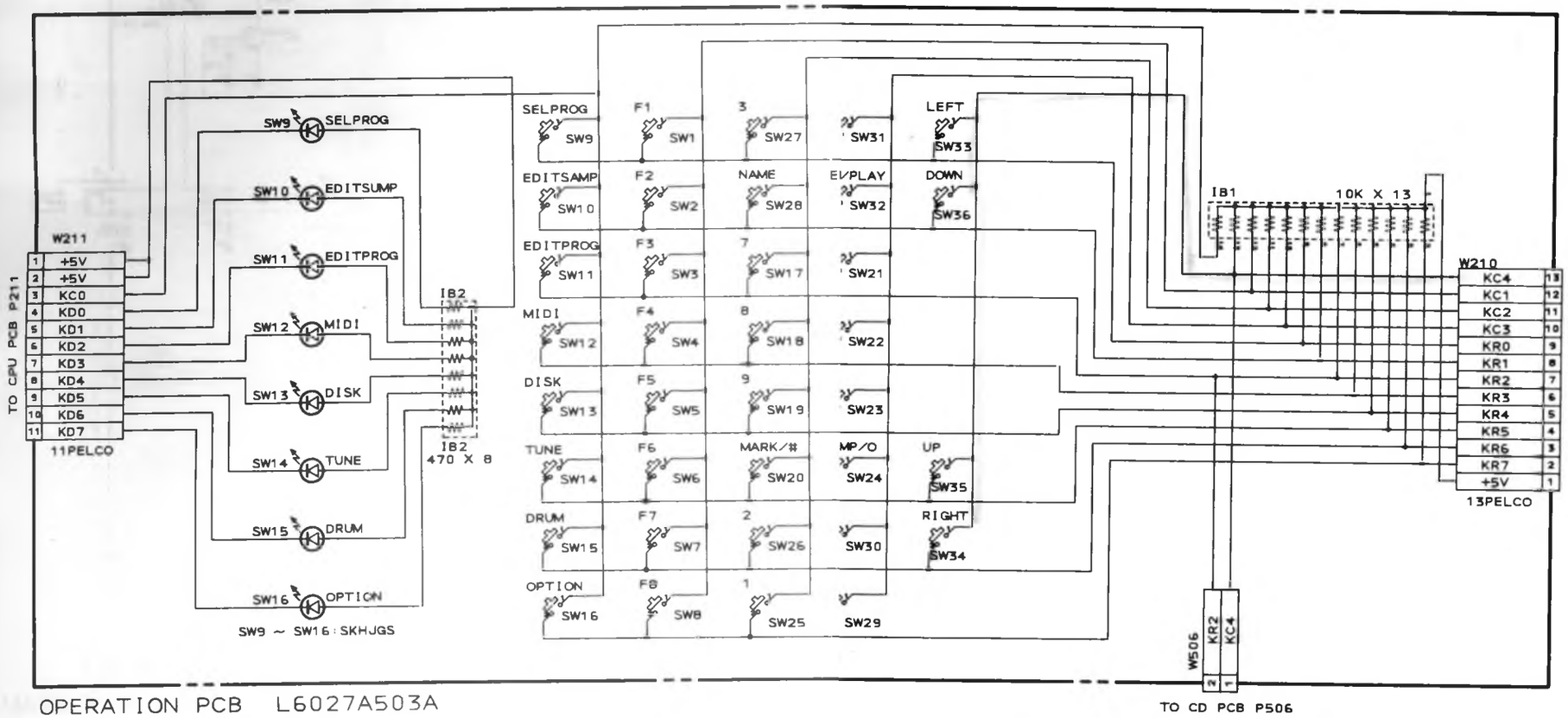
EJECT SW PCB L6027A503C



MAIN VR PCB L6027A503D



CONTRAST VR PCB
L6027A503E



OPERATION PCB L6027A503A

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER' S RECOMMENDED PARTS

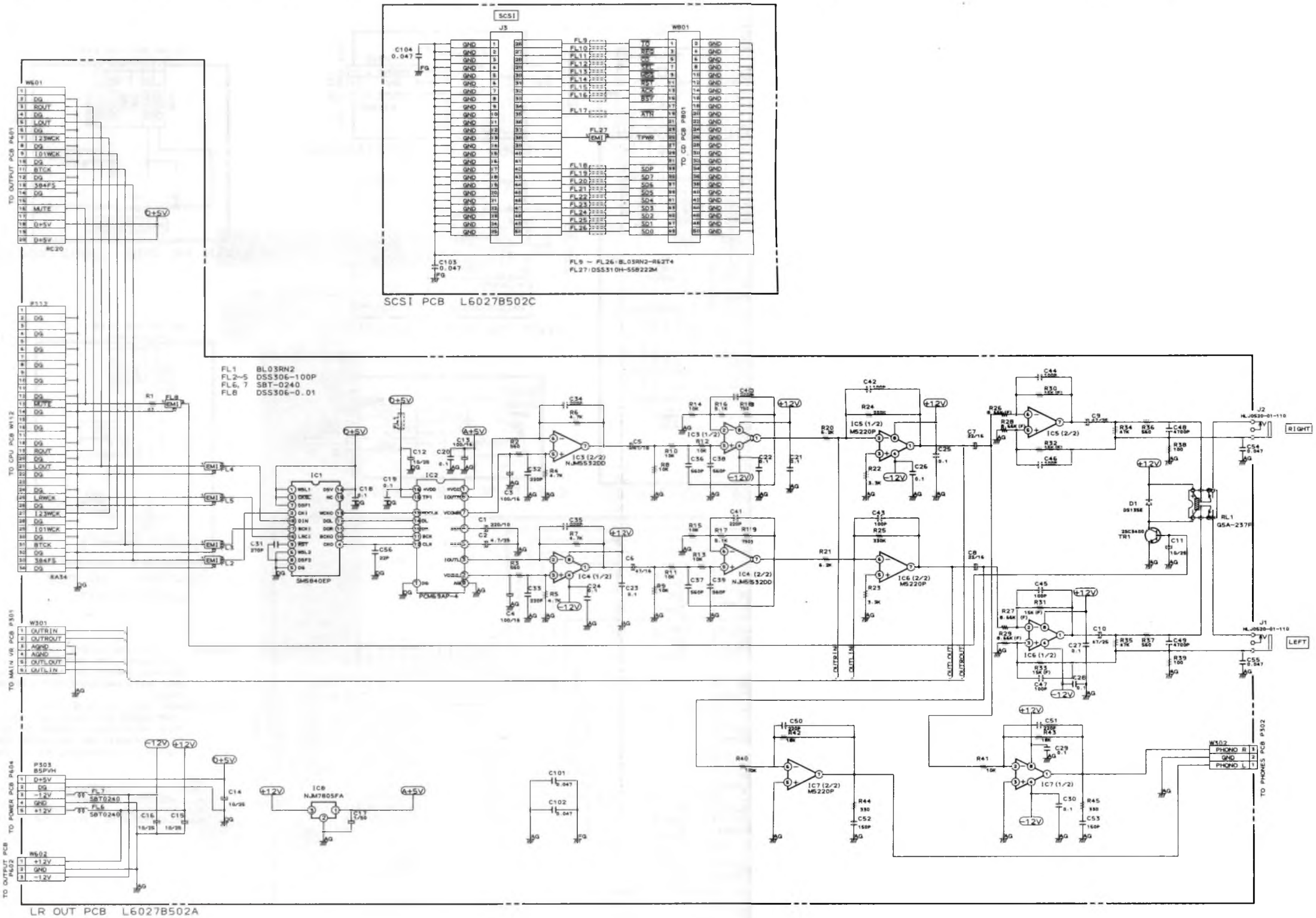
AVERTISSMENT: ⚠ IL INDIQUÉ LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L' APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

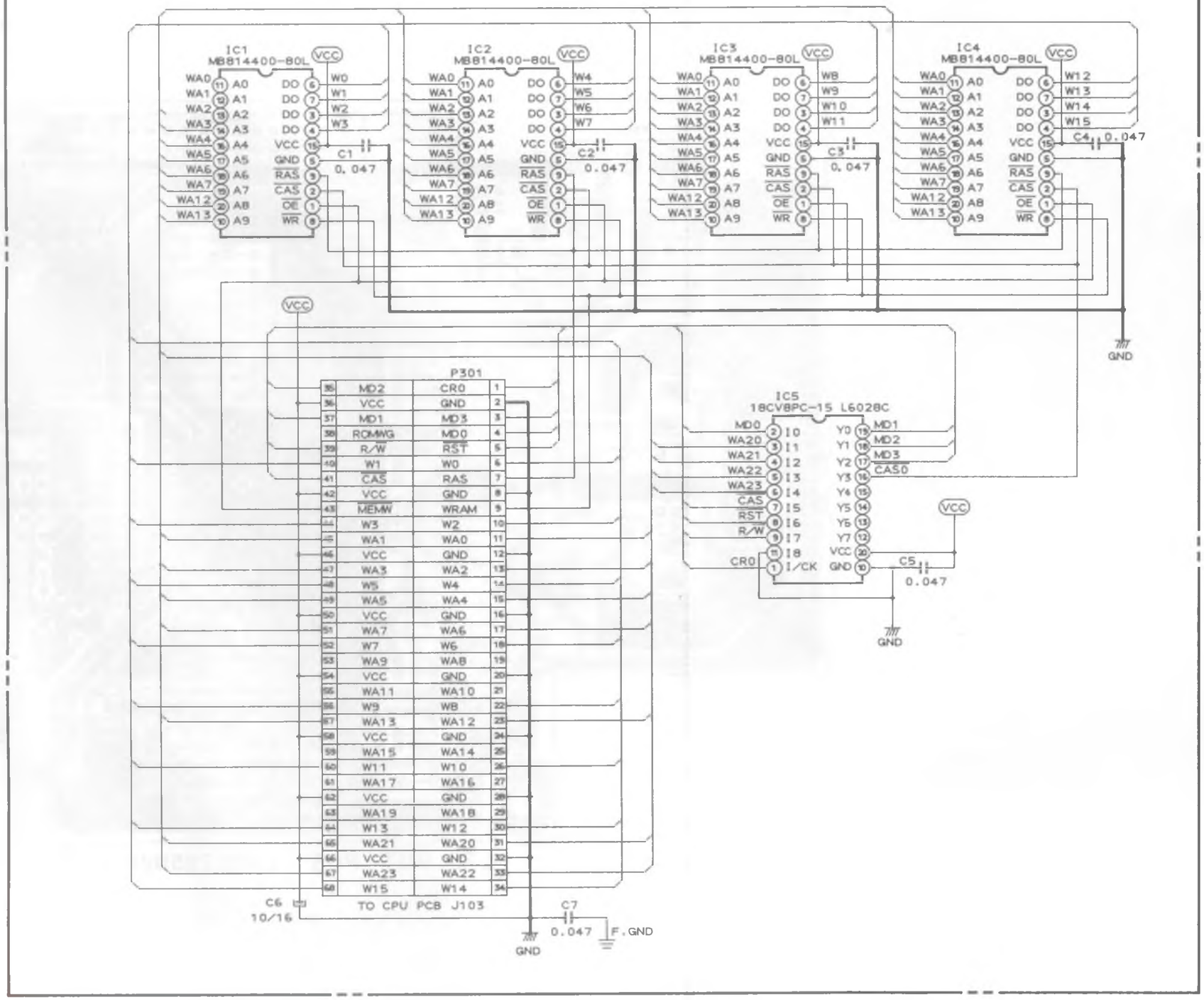
NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN μF/WV

CD3000
OPERATION & OTHER SCHEMATIC DIAGRAMS

NO. 8-6 L602704M

A2

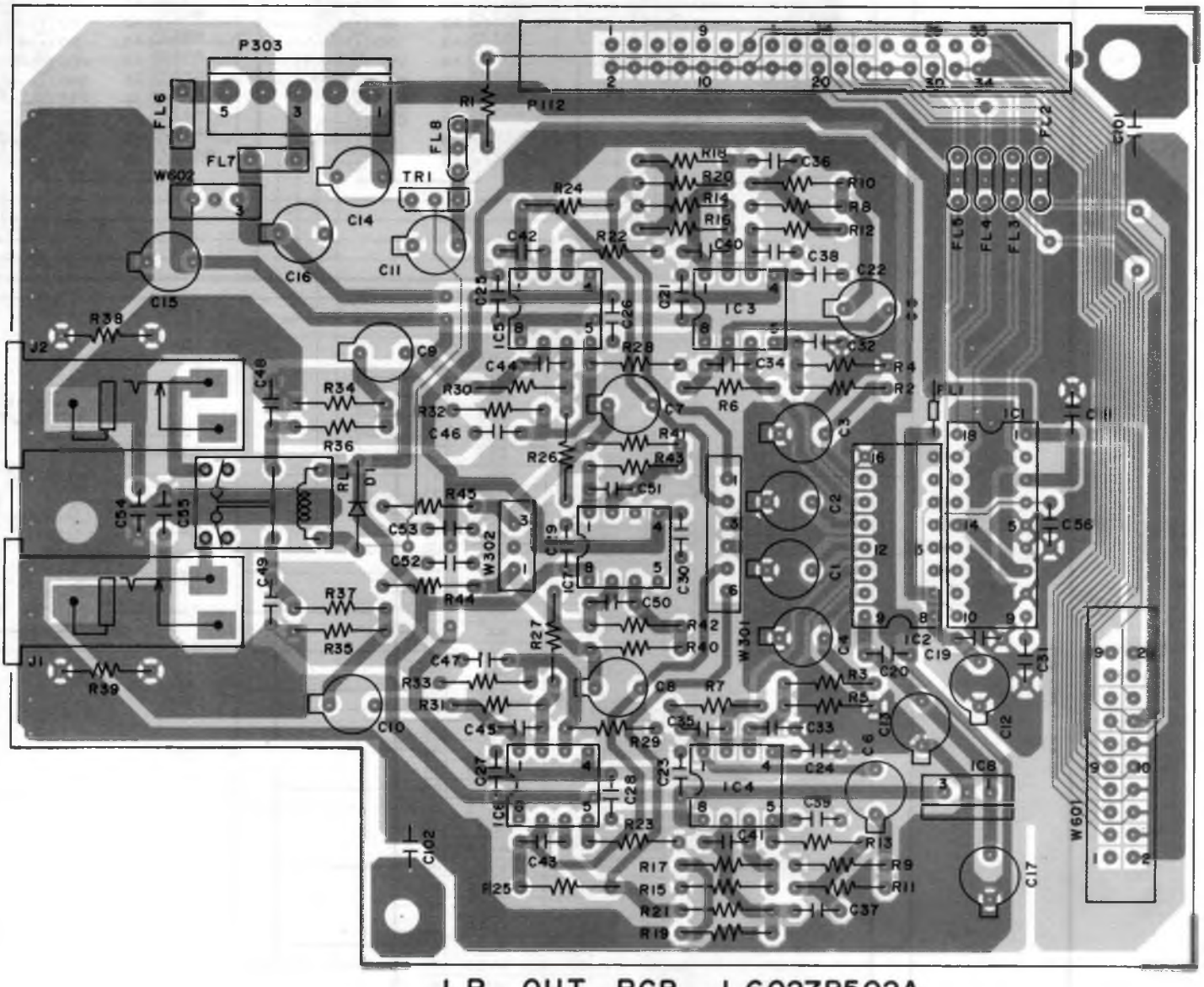


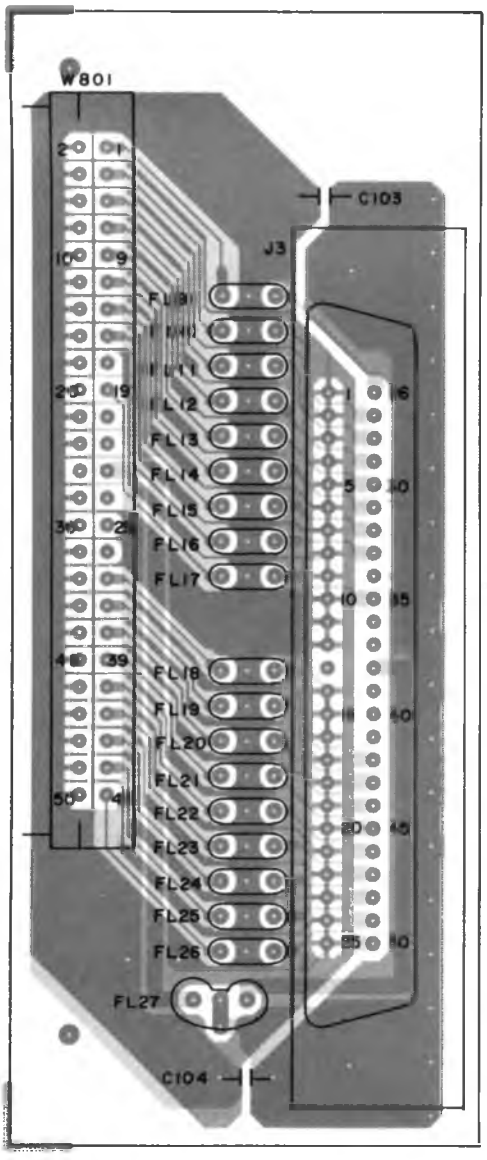


2M-MEMORY PCB L6028B5030

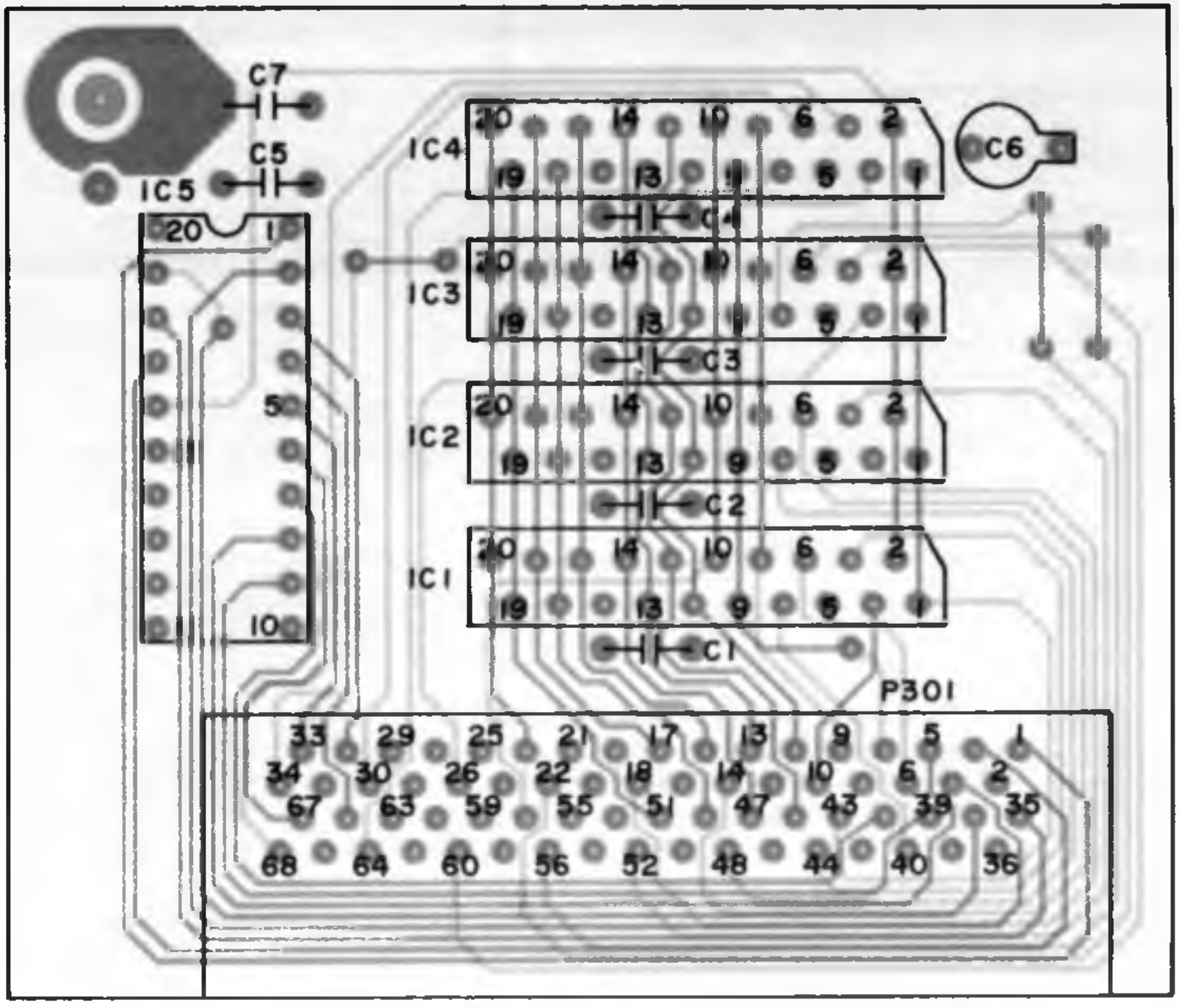
NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN μF/WV

CD3000
2M-MEMORY
SCHEMATIC DIAGRAM
NO.8-8 L602707M
A3





SCSI PCB L6027B502C



2M-MEMORY PCB L6028B5030

IC LIST

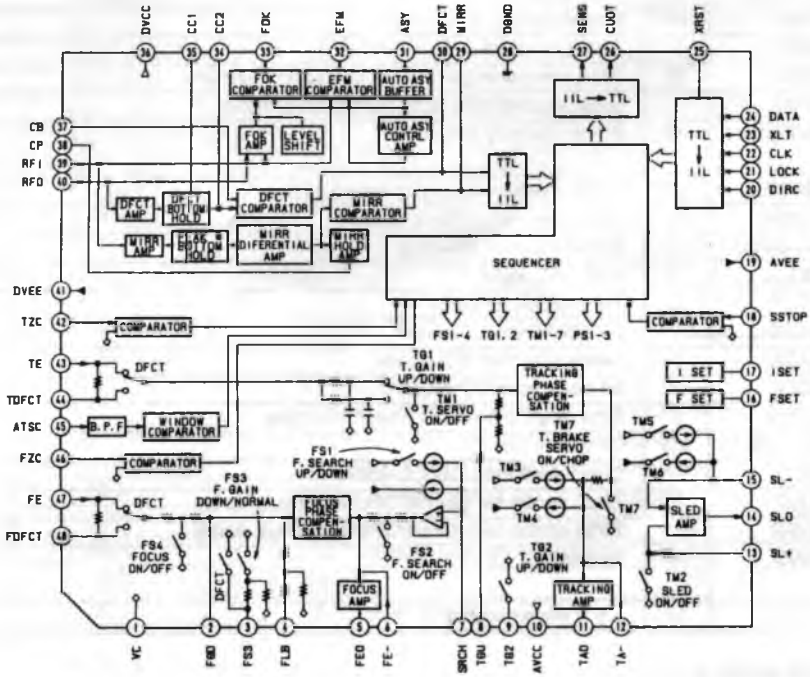
NAME OF IC	FUNCTION
18CV8PC-15	Programmable logic device
AM27C010-200D	1 M byte EPROM
CXA1372AQ	CD RF-signal processor / servo controller
CXD1185AQ	SCSI controller
CXD1186BQ	CD-ROM decoder
CXD2500BQ	CD signal processor
CXP80116-776Q	8 bit CPU
HD74AC00P	Quad 2 input NAND gate
HD74AC04P	Hex inverters
HD74AC32P	Quad 2 input OR gate
HD74AC86P	Quad Exclusive-OR gate
HD74HC04P	Hex inverters
HD74HC32P	Quad 2 input OR gate
HD74HC138P	3 to 8 demultiplexer
•HD74HC139P	Dual 2 to 4 line decoder
HD74HC245P	Octal 3 state transceiver
HD74HC273P	Octal D-FFs with CLR
HD74HC365P	Hex 3 state buffer
HD74HC590P	8 bit binay counter
HD74HC595P	8 bit shift registor with output latch
HD74LS132	Quad 2 input NAND gate
HM658512LP-85	512 k byte SRAM
L7A1045 L6028	Digital signal processor
LA6532M	Drive amplifier
LC3517BSL-15	2 k byte SRAM
LC3664ASLL-10	8 k byte SRAM
LC7981	LCD dot matrix graphic generator
M51953BL	Reset generator
M5220P	Dual low noise voltage amplifier
M5230L	Dual voltage regulator
M54641L	Dual linear amp
MB814400-80L	4 M bit DRAM
MB89255A-P-G	Programmable peripheral interface
MB89352A-P-G	SCSI protocal controller
NJM5532D-D	Low noise OP amplifier
NJM7805FA	+ 5 V regulator
NJM78M05FA	+ 5 V regulator
NJM79M05FA	– 5 V regulator
PCM61P	18 bit DA converter
PCM69AP	18 bit DA converter
PQ30RV1	Power regulator
SM5840EP	8 times over sampling digital filter
STR9005	Power regulator
UPD70236GD-16	16 bit CPU
UPD72069GF-3BA	FDD controller

CXA1372AQ (CD RF-SIGNAL PROCESSOR AND SERVO AMPLIFIER)

PIN No.	SYMBOL	I/O	FUNCTION
2, 3	FGD, FS3	I	Focus high frequency gain reduction
4	FLB	I	Focus low frequency gain boost
5, 6	FEO, FE-	O/I	Focus drive amp
7	SRCH	I	Focus search time constant
8, 9	TGU, TG2	I	Tracking high frequency gain control
11, 12	TAO, TA-	O/I	Tracking drive amp
13, 14, 15	SL+, SLO, SL-	I/O	Sled drive amp
16	FSET	I	Focus, tracking phase compensation
17	ISET	I	Focus search, track jump, sled kick current
18	SSTOP	I	Disc location (inner most) detect
21	LOCK	I	Sled over-run protection = L
22, 23, 24	CLK, XLT, DATA	I	Data, data latch, clock from CD signal processor
25	RST	I	XRST : Reset = L
26	COUT	O	CNIN : Track count signal
27	SENS	O	Servo control status
29	MIRR	O	MIRR out
30	DFCT	O	DFT SW : Defect out
31	ASY	I	Assynmetry control input
32	EFM	O	EFM RF out
33	FOK	O	Focus status
34, 35, 37	CC2, CC1, CB	I/O	Defect bottom hold
38	CP	I	MIRR hold
39, 40	RFO, RFI	I/O	RF amp
42, 46	TZC, FZC	I	Tracking, Focus zero cross detect
43, 44	TE, TD	I	Tracking error
47, 48	FE, FD	I	Focus error
1	VC	—	Center voltage
19, 28, 41	AVEE, DG, DVEE	—	Ground
10, 36	AVCC, DVCC	—	+ 5 V power supply

Other pins not listed above are not used.

CXA1372AQ (CD RF-SIGNAL PROCESSOR AND SERVO AMPLIFIER)



CXD1185AQ (SCSI CONTROLLER)

PIN No.	SYMBOL	I/O	FUNCTION
1 to 4	A3 - A0	I	Registor selecter, 0 to 3 bit
5, 7 to 10, 12 to 14	DB0 - DB7	I/O	Data bus on SCSI bus
15	DBP	I/O	Data bus on SCSI bus, Odd parity
17	ATN	I/O	ATN signal on SCSI bus
18	BSY	I/O	BSY signal on SCSI bus
19	ACK	I/O	ACK signal on SCSI bus
20	RST	I/O	RST signal on SCSI bus
22	MSG	I/O	MSG signal on SCSI bus
23	SEL	I/O	SEL signal on SCSI bus
24	C/D	I/O	C/D signal on SCSI bus
25	REQ	I/O	REQ signal on SCSI bus
28	I/O	I/O	I/O signal on SCSI bus
29	RES	I	Reset all registors, L-active
30	CS	I	Chip select, L-active
31	RE	I	Read internal registor, L-active
32	WE	I	Write internal registor, L-active
33 to 40	XDB7 -XDB0	I/O	CPU bus data
42	IRQ	O	Interrupt request
43	DRQ	O	DMA request
44	DACK	I	DMA acknowledge, L-active
45	WED	I	Write strobe for data bus, L-active
46	RED	I	Read strobe for data bus, L-active
47 to 54	HDB0 - HDB7	I/O	Data bus
55	HDBP	I/O	Data bus, parity
57	CLK	I	Clock input
6, 11, 16, 21, 27, 41, 56	GND	—	Ground
26, 58	VDD	—	+ 5 V power supply

Other pins not listed above are not used.

CXD1186BQ (CD-ROM DECODER)

PIN No.	SYMBOL	I/O	FUNCTION
1	XINT	O	Interrupt request to CPU
3 to 6	A0 - A3	I	CPU registor address
7	HMDS	I	Host mode select, H for SCSI controller
13	XHRD	O	Data read strobe to SCSI controller
14	XHWR	O	Data write strobe to SCSI controller
15 to 22	HDB0 - HDB7	I/O	Host data bus
24	HDBP	I/O	Host data bus, Error flag
25	XRST	I	Reset, L-active
26	HDRQ	O	DMA acknowledge to SCSI controller, L-active
27	XHAC	I	Data request from SCSI controller, H-active
31, 32, 34 to 41, 43 to 48	BA0 -BA15	O	Buffer memory address
49	XMOE	O	Buffer memory output enable, L-active
50	XMWR	O	Buffer memory write, L-active
51, 53 to 59	BDB0 - BDB7	I/O	Buffer memory data bus
62	X1	I	X'tal OSC input
64	HCLK	O	1/2 devided X1 clock
65	LRCK	I	LR clock from CD player
66	DATA	I	Serial data from CD player
67	BCLK	I	Bit clock from CD player
68	C2PO	I	Error flag C2 from CD player, H-active
69 to 72,74 to 77	XDB0 - XDB7	I/O	CPU data bus
78	XCS	I	Chip select from CPU, L-active
79	XRD	I	Read strobe for internal CPU registor, L-active
80	XWR	I	Write strobe for internal CPU registor, L-active
2, 12, 23, 42, 52, 63,	GND	—	Ground
33, 73	VDD	—	+ 5 V power supply

Other pins not listed above are not used.

CXD2500BQ (CD SIGNAL PROCESSOR)

PIN No.	SYMBOL	I/O	FUNCTION
1	FOK	I	Focus OK
4	MDP	O	Spindle motor control
6	LOCK	O	Digital PLL lock
17	VCK1	I	Clock for vari-pitch oeration
18	FIL0	O	Master PLL filter
19	FIL1	I	
20	PC0	O	
22	CLTV	I	Master VCO control voltage
24	RF	I	EFM CD signal input
27	ASY0	O	ASY : EFM full swing (L : Vss, H : Vdd)
31	WDCK	O	DAWC : Word clock for DADATA = 2Fs
32	LRCK	O	DALRCK : L / R clock for DADATA = Fs
34	48SDATA	O	DADATA : CD signal data (2's Comp., MSB first)
35	48BTCK	O	DABTCK : Bit clock for DADATA
42	GFS	O	Frame sync monitor : H = locked
44	C2PO	O	C2 error flag out
53, 54	XIN, XOUT	I/O	X'tal OSC
58	C16M	O	16 MHz clock out
63	SCOR	O	Interrupt to CPU when subcode is detected
66	SQSO	O	SUBQ : Subcode data
67	SQCK	O	Serial clock for SUBQ
69	SENSE	O	Servo control status
70	XRST	I	RST : Reset
71	DATA	I	CPU data
72	XLAT	I	Latch for CPU data
74	CLOK	I	CLK : Clock for CPU data
75	SEIN	I	Sense signal from CD mechanism
76	CNIN	I	Count signal of track jump
77	DATO	O	DATAOUT : Control data to CD mechanism
78	XLTO	O	LTOUT : Latch for DATAOUT
79	CLKO	O	CLKOUT : Clock for DATAOUT
80	MIRR	I	Mirror signal from CD mechanism used in track jump
12, 21, 52	VSS, AVSS	—	Ground
23, 33, 73	AVDD, VDD	—	+ 5 V power supply

Other pins not listed above are not used.

CXP80116 (8 BIT CPU)

PIN No.	SYMBOL	I/O	FUNCTION
1, 2	PA0, PA1	O	LODOUT, LODIN : tray control,
75 to 79	PA7 - PA3	O	ACC : CD access, A0 - A3 : CPU address
8 to 10	PB2 - PB0	O	RST, LDON : Laser active, XLAT : Latch signal
3 to 6	PB7 - PB4	O	XWR, XRD, CS1, CS2 : Peripheral IC control
17, 18	PC1, PC0	I	OUTSW, INSW : tray position sense
19 to 26	PD7 - PD0	I/O	XDB0 - XDB7 : CPU bus data
32	RST	I/O	Reset, L-active
34, 35	XTAL, EXTAL	O, I	OSC X'tal connection
38	SO0	O	DATA : Serial data to CD signal processor
39	SCK0	O	CLK : Serial clock output
40	INT1	I	Interrupt from CD-ROM decoder, H-active
41	SI1	I	SUBQ : Serial subcode data
43	SCK1	I	SQCK : Serial clock
59 to 62	PG3 - PG0	I	SENSE : Servo status, FOK : Focus OK, GFS : Frame sync lock signals from CD signal processor, EJECT : Door open / close switch
68	PE2	O	DFSW : Defeat switch to CD mechanism
69	INT2	I	Interrupt from CD signal processor, L-active
70	INT0	I	IRQ : Interrupt from SCSI controller, L-active
33, 73	VSS	—	Ground
72	VDD	—	+ 5 V Power supply

Other pins not listed above are not used.

AKAI ELECTRIC CO., LTD.

ELECTRONIC MUSICAL INSTRUMENT DIV.
335 Kariyado, Nakahara-ku, Kawasaki-shi, Kanagawa, Japan
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