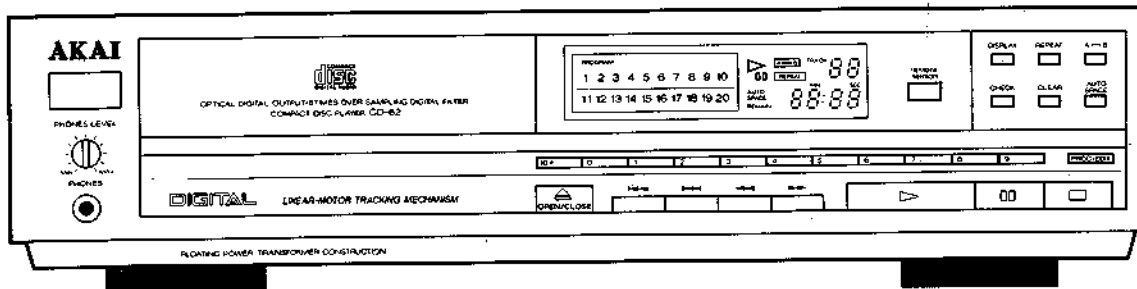


AKAI SERVICE MANUAL



COMPACT DISC PLAYER

MODEL CD-62

COMPACT
disc
DIGITAL AUDIO

SPECIFICATIONS

Pick-up	3 beam Laser pick up
Pick-up system	Linear tracking
Sampling frequency	44.1 kHz
Digital filter	18 bit, 8 times over sampling
D/A converter	18 bit linear
Error correction system	Cross Interleave Reed Solomon
Number of channels	2 channels stereo
Frequency response	4 Hz to 20 kHz ± 0.5 dB
Dynamic range	96 dB or more
S/N	104 dB or more
Total harmonic distortion	0.003% or less
Wow & flutter	Less than measurable limits
Output voltage/Impedance	
Analog	2V (0 dB)
Digital (Coaxial)	0.5 V _{p-p} /75 ohms
Digital (Optical)	-22 dBm, wave length 660 nm
Headphone output level/	
Impedance	28 mW/32 ohms
Power requirements	120 V, 60 Hz for USA & Canada 220 V, 50 Hz for Europe except UK 240 V, 50 Hz for UK & Australia
Dimensions	425(W) \times 110(H) \times 330(D) mm
Weight	5 kg (11 lbs)

Standard accessories

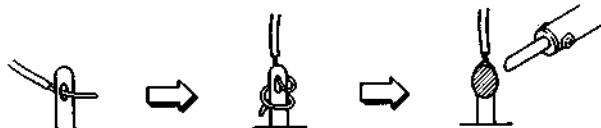
Connection cord	1
Remote control unit (RC-C62)	1
Batteries for remote control unit	2
Operator's manual	1

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

★ SAFETY INSTRUCTIONS

PRECAUTIONS DURING SERVICING

1. Parts identified by the \triangle (*) symbol are critical for safety. Replace only with 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 microswitch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



6. Observe 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. Use care 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 μ F 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 Mohms.

★ INFORMATION

SYMBOLS FOR PRIMARY DESTINATION

Alphabet indicates the destination of the units as listed below.

Symbols	Principal Destinations
A	USA
B	UK
C	Canada
E	Europe (except UK)
J	Japan
S	Australia
V	W. Germany only
U	Universal Area
Y*	Custom version

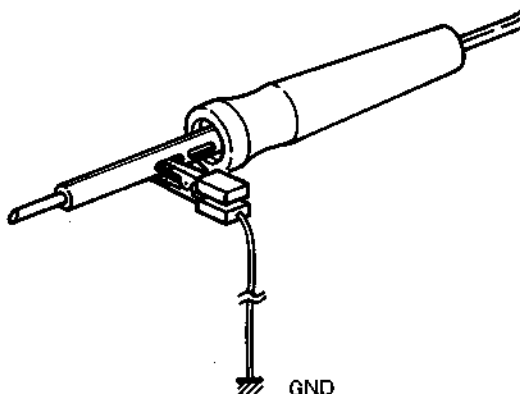
PRECAUTIONS IN REPAIRING

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

1. Do not put excessive pressure on the mechanical part (operation part), 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 objects 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.

When soldering, please take the precautions against leakage as in the illustration below.

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 the pick-up block.
5. Keep safety from hazardous invisible Laser Radiation. DO NOT watch the Laser Beam (Objective Lens) directly.
6. Models for the some countries. Leser Warning Lables are affixed on the unit and inside of the unit, as shown below. Read it carefully for your safety, when repairing or adjusting the unit.



BEFORE REPAIRING

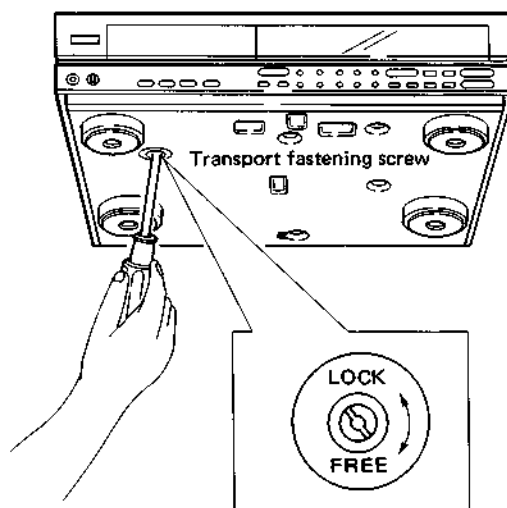
This unit uses high-precision componets and integrated circuits. To protect these delicate parts from vibration and shock during transport, a fastening screw secures the mechanism section. Before repairing the unuit, the screw must be released as described below.

1. Unpack the unit.
2. Turn the fastening screw clockwise with a flatblade screwdriver (approximately 1/4 turn). to set it to the FREE position.

For renewed transport

Remove the Compact Disc from the CD player and return the transport fastening screw to the LOCK position.

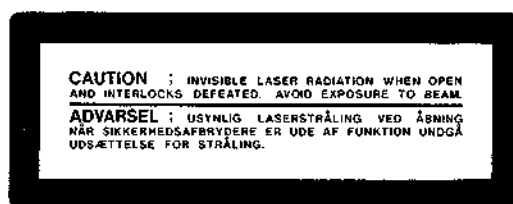
- NOTE :**
- Do not turn the unit upside down
 - Take care not to damage the fastening screw by overturning it.



EUROPE



A Label affixed on the Rear panel of the unit.

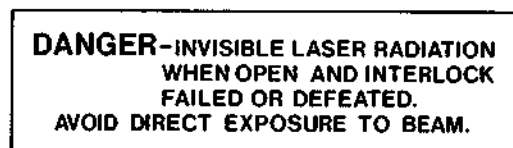


A Label affixed on the Disc clamber inside of the unit.

[U.S.A]



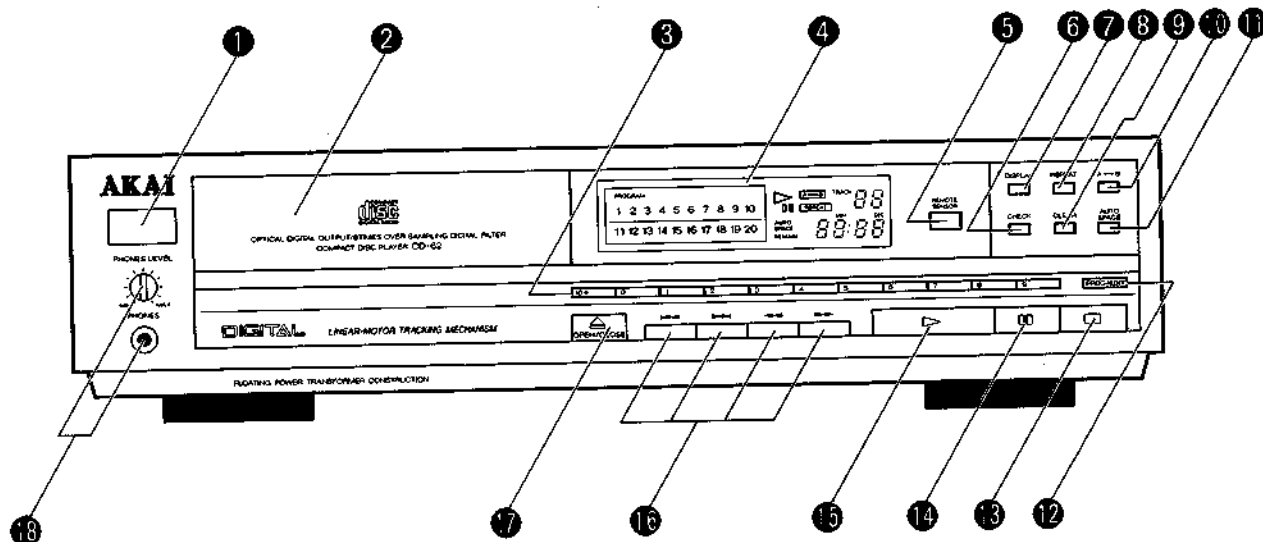
A Label printed on the Rear panel of the unit.



A Label affixed on the Disc clamber inside of the unit.

I. CONTROLS

1-1 FRONT PANEL



❶ **POWER Button**
To turn the power on and off.

❷ **Disc Drawer**
Load a compact disc here.

❸ **Numeric Buttons (10+ and 0 to 9)**
For direct search of the track you wish to playback and for programming for random program playback.

❹ **FL (Fluorescent) Display**
Tells you what the CD is doing.

❺ **REMOTE SENSOR Window**
For reception of the remote control signal.
Keep away from strong light and direct sunlight as this will interfere with the remote control function.

❻ **CHECK Button**
To confirm tracks programmed for random program playback.

❼ **DISPLAY Button**
To switch between the remaining playback time display and the elapsed playback time display.

❽ **REPEAT Button**
For repeat playback of all tracks or the random program.

❾ **CLEAR Button**
To cancel all programmed tracks of the random program or the automatically edited program.

❿ **A → B Button**
For repeat playback of a specific section of the CD.

⓫ **AUTO SPACE Button**
To set the blank intervals between tracks to a specific time (approximately 4 seconds) for uniformity during random program playback.

⓬ **PROG (Program)/EDIT Button**
For random program playback and automatic edit program playback.

⓭ **(Stop) Button**
To stop playback and to cancel all modes of the CD player.

⓮ **⏸ (Pause) Button**
To stop playback temporarily and to resume playback.

⓯ **▶ (Play) Button**
To start playback.

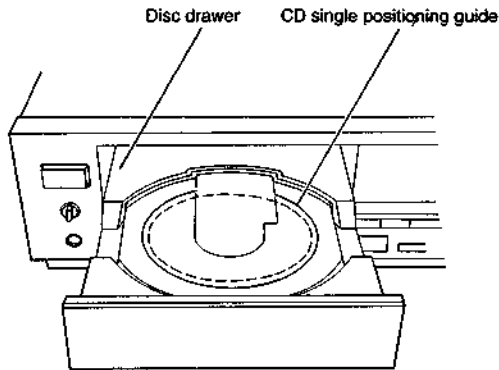
⓰ **⏮ / ⏭ and ⏪ / ⏩ Search Buttons**
⏪ / ⏩ Buttons
For manual search during playback.
⏮ / ⏭ Buttons
To skip tracks during playback.

⓱ **⏏ OPEN/CLOSE Button**
To open and close the disc drawer.

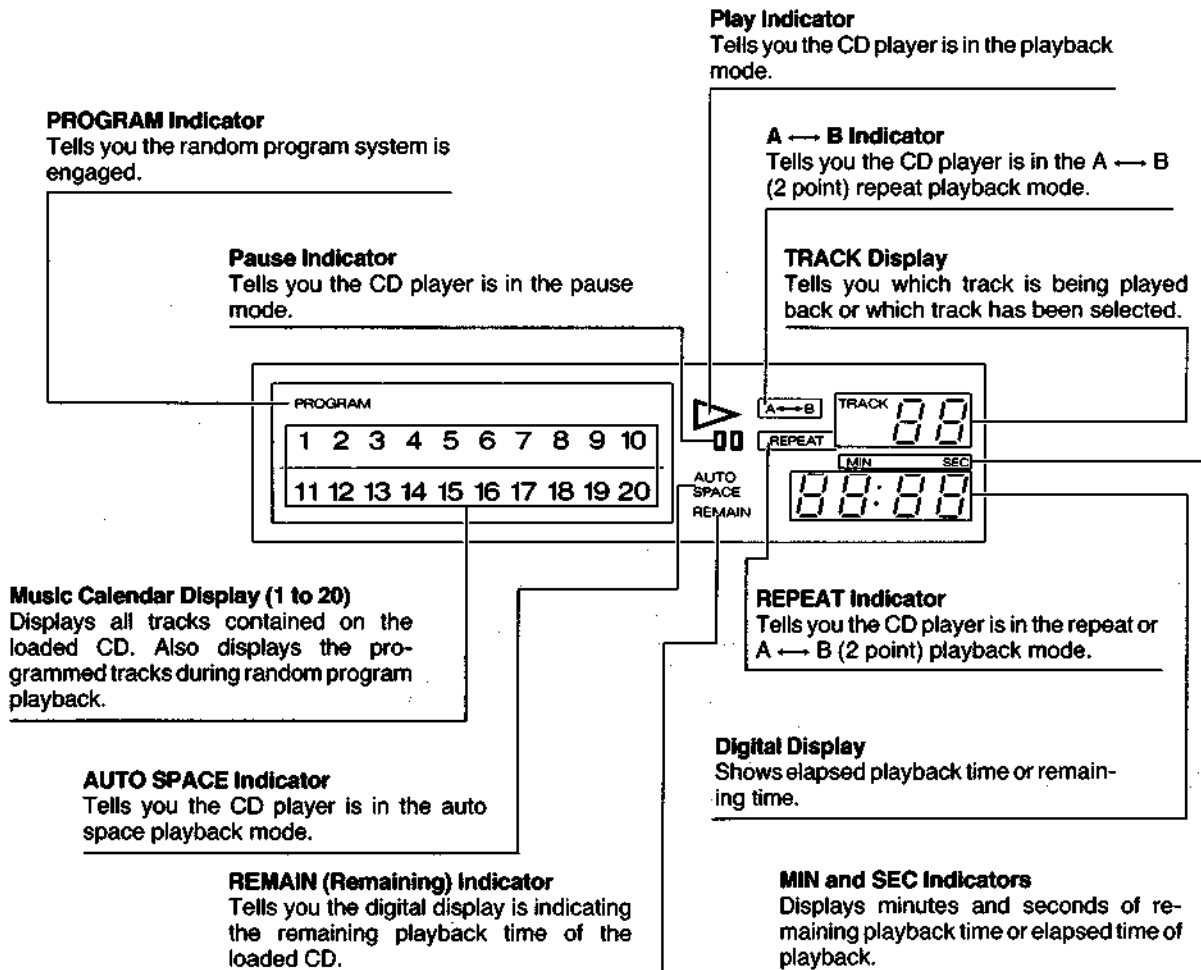
⓲ **PHONES Jack and LEVEL Control**
For headphone listening.

About the disc drawer

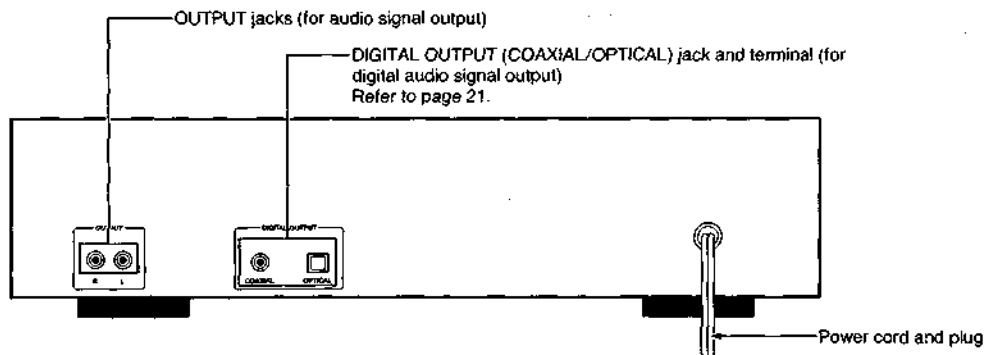
The disc drawer of this CD player is capable of holding a CD single (8cm diameter CD) for playback. Place the CD single on the center of the disc drawer as shown in the following illustration.



1-2 FL (Fluorescent) Display



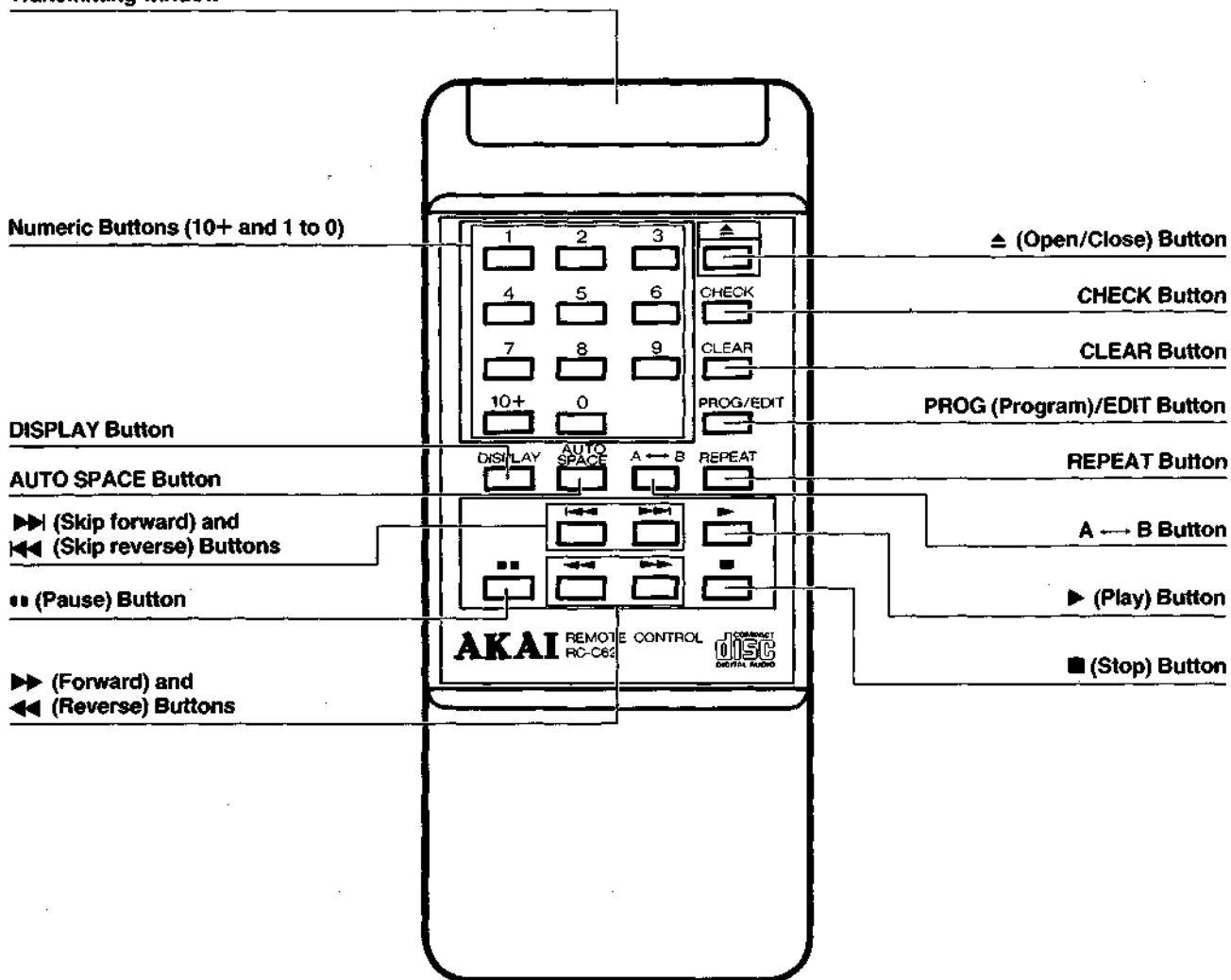
1-3 REAR PANEL



1-4 REMOTE CONTROL UNIT

The operation buttons on the remote control unit are the same as those on the CD player and can be used to conveniently control all the CD player's functions except turning on and off the power and controlling the headphone volume level.

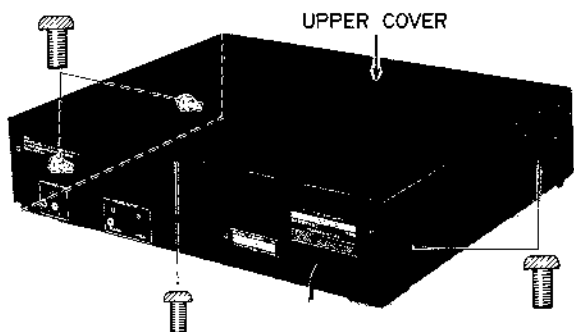
Transmitting window



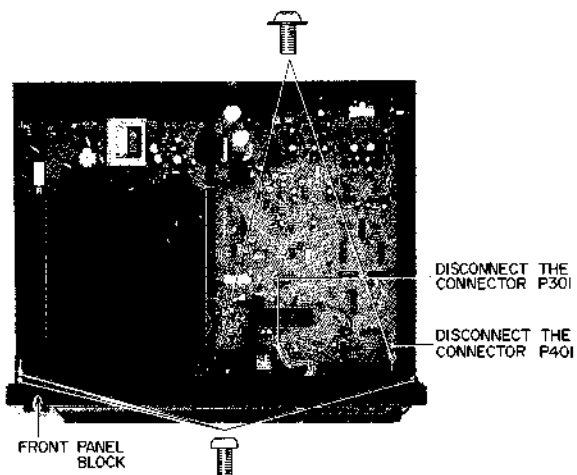
II. DISASSEMBLY

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

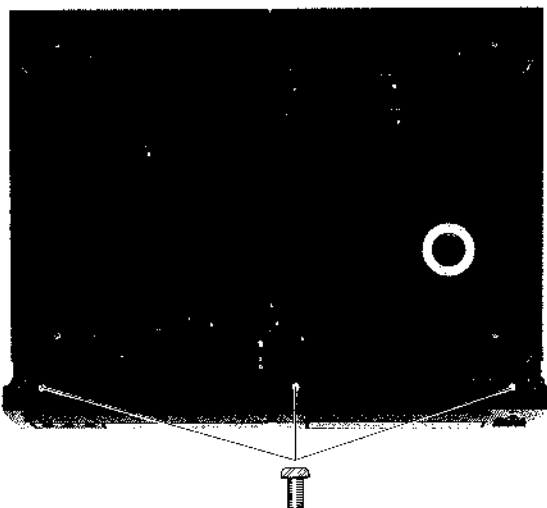
1. Removal of UPPER COVER



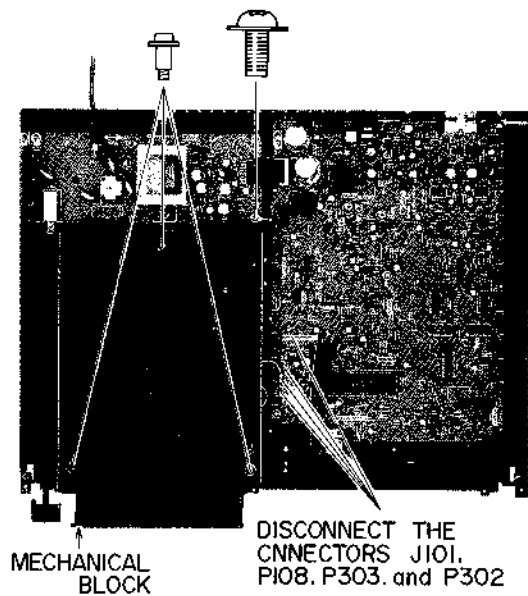
3.



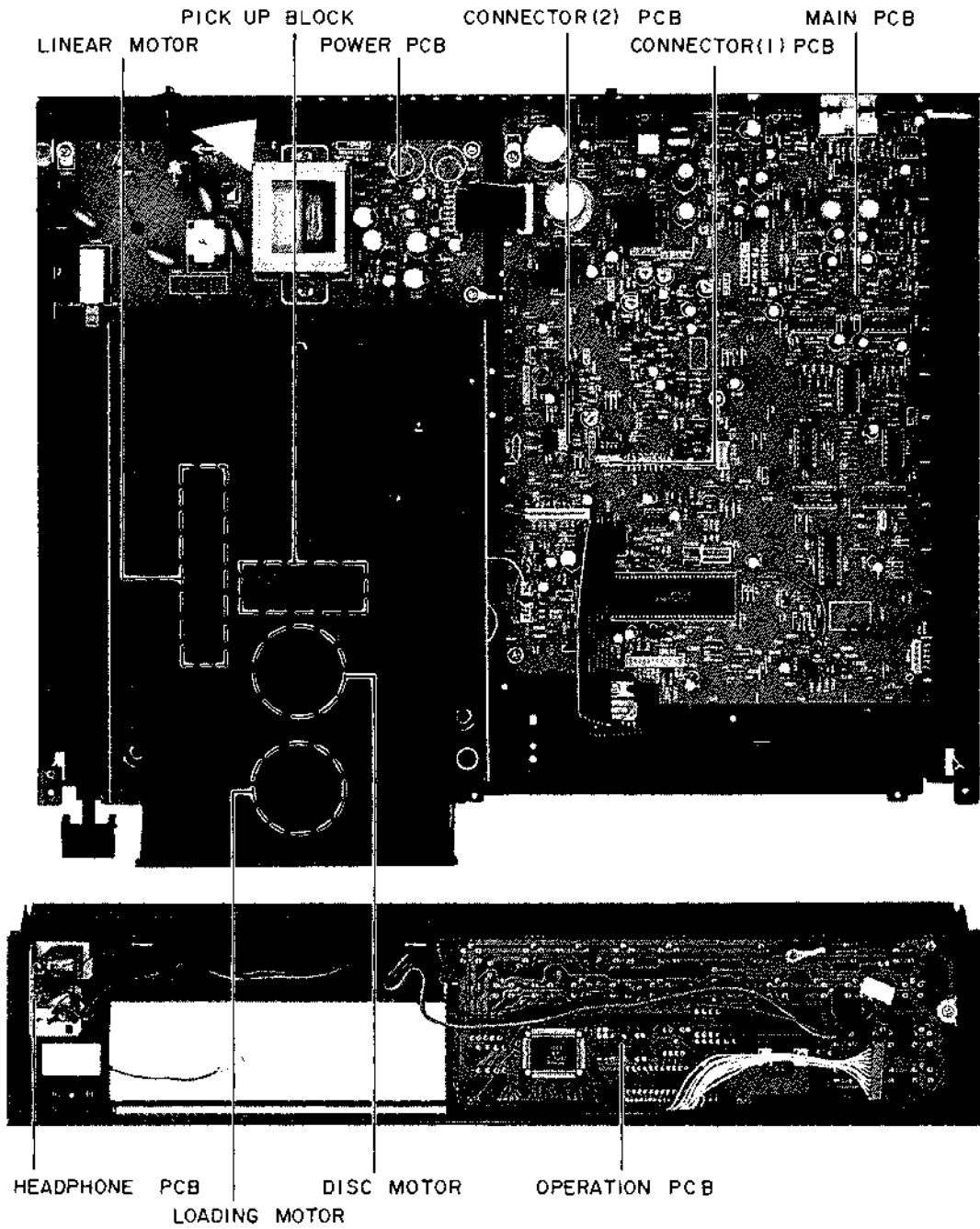
2. Removal of FRONT PANEL BLOCK



4. Removal of MECHANICAL BLOCK



III. PRINCIPAL PARTS LOCATION

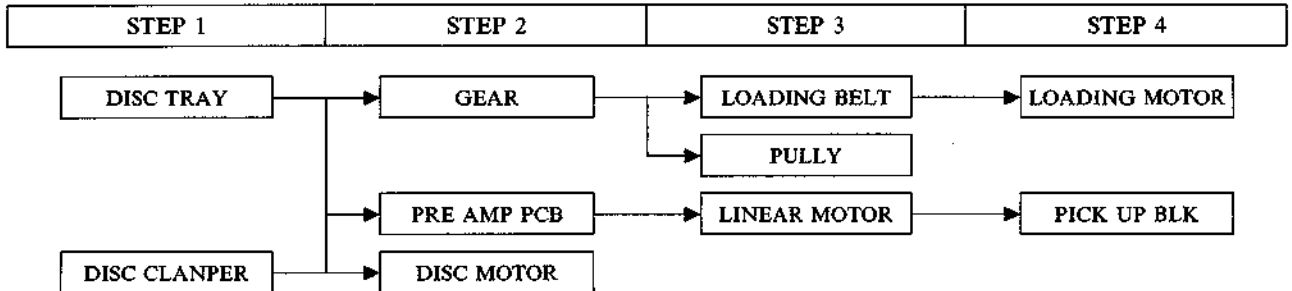


IV. REPLACEMENT OF MAIN COMPONENTS

※ Refer to II. DISASSEMBLY for dismantling the mechanical Block.

4-1 DISMANTLING PROCEDURE OF THE COMPONENTS

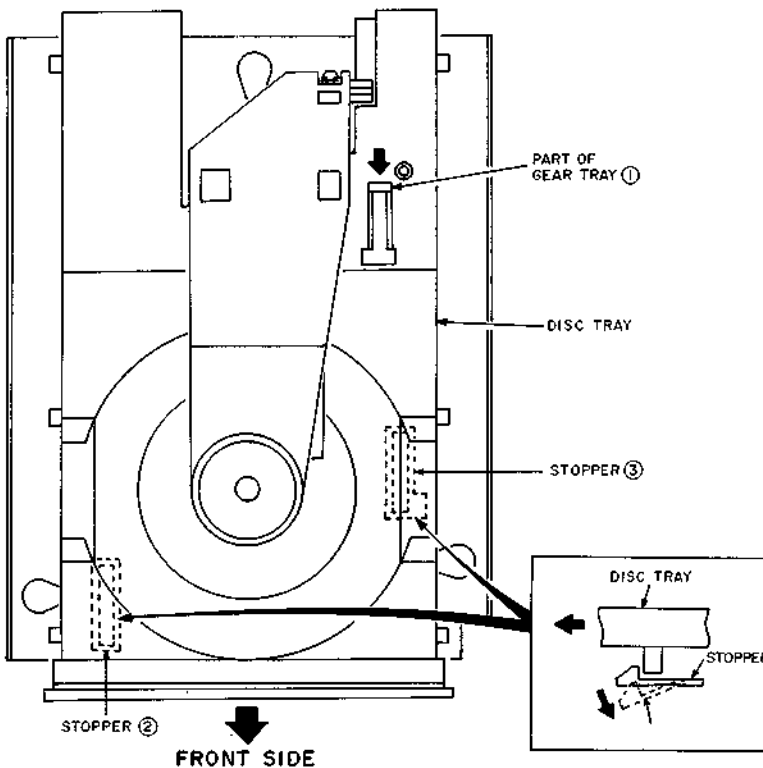
When replacement of mechanical part is necessary, replace the part as following procedure.



4-2 DISMANTLING METHOD OF EACH COMPONENT.

4-2-1 REMOVAL OF THE DISC TRAY

- 1) Push the part ① of the GEAR TRAY to front side direction, and set the DISC TRAY to open position.
- 2) Pull out the DISC TRAY. While releasing the STOPPERS ② and ③.



4-2-2 REMOVAL OF THE LOADING MOTOR

- 1) Remove the GEAR ④, LOADING BELT ⑤ and PULLY ⑥.
- 2) Push out the LOADING MOTOR ⑦ from the pulley side, while releasing the HOOKS ⑧.

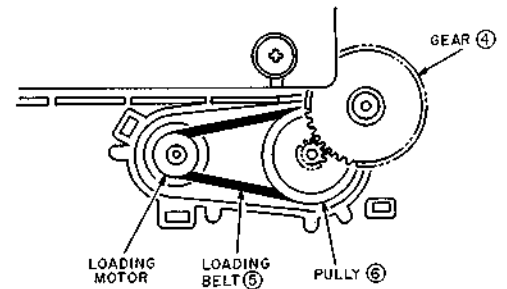


Fig. 4-2

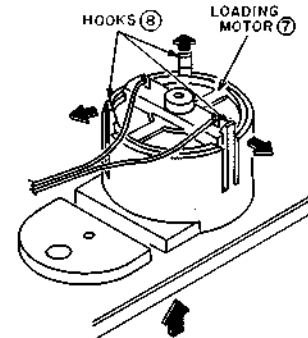


Fig. 4-3

Fig. 4-1

4-2-3 REMOVAL OF THE PICK UP BLOCK

- 1) Move the PICK UP BLOCK and coin side the FIXATION SCREWS (9) to the holes as shown Fig. 4-4. and remove the FIXATION SCREWS (9).
- 2) Disconnect the connector (10) and remove the GLUE (11) which fixing the wires.
- 3) Pull out the PRE AMP PCB (12) to (13) direction.
- 4) Remove two fixation screws (14) of LINEAR MOTOR (15) and remove the LINEAR MOTOR.
- 5) Remove two fixation screws (16) of the SLIDE SHAFTS (17), then pull out the SLIDE SHAFTS (17) direction and remove the PICK UP BLOCK (18).
- 6) Remove two fixation screws (19) and remove the PLATE (20).

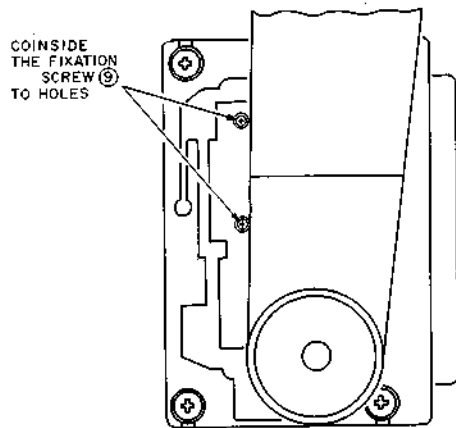


Fig. 4-4

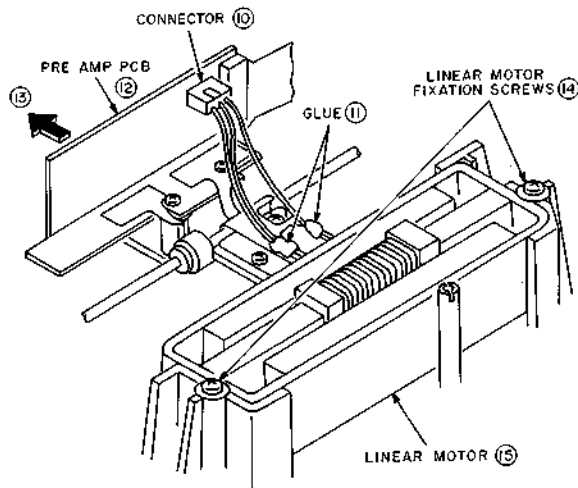


Fig. 4-5

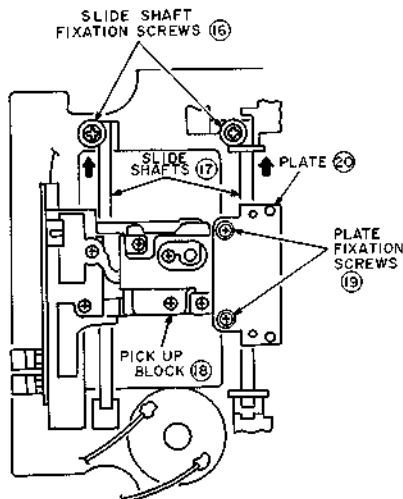


Fig. 4-6

4-2-4 REMOVAL OF THE DISC MOTOR

- 1) Remove SPRING CL (21) and remove the DISC CLAMPER (22) while releasing the HOOK (23).
- 2) Pull out the TURNTABLE (24), and remove two fixation screws of the DISC MOTOR then remove the DISC MOTOR (25).

NOTE: When Reassembling, adjust the TURNTABLE so that the height of TURNTABLE from chassis become 10.4 ± 0.1 mm.

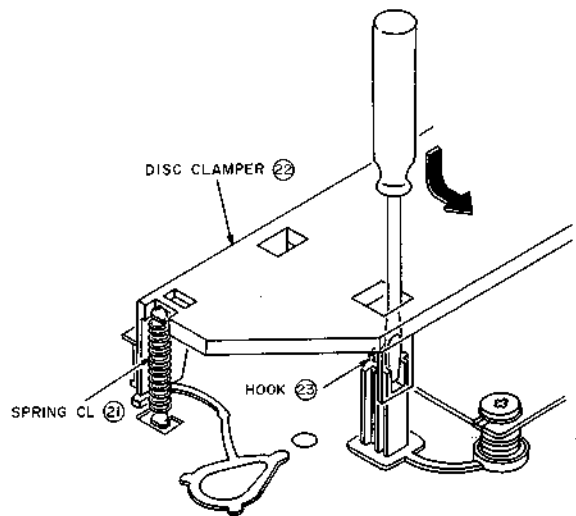


Fig. 4-7

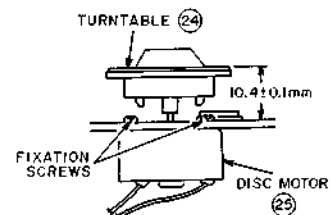


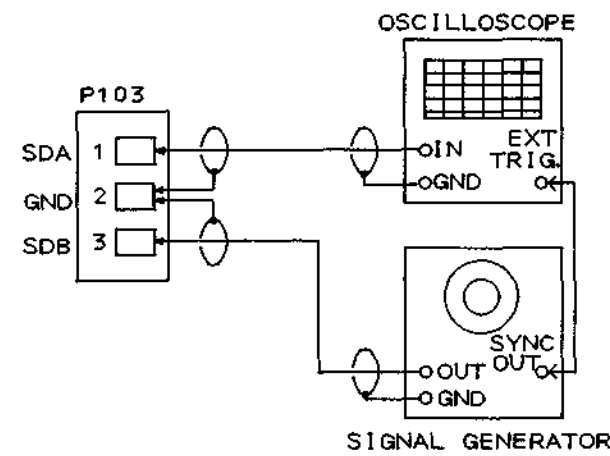
Fig. 4-8

V. ELECTRICAL ADJUSTMENT

About the TEST mode
 This TEST mode is used for adjustment or check.

[How to set the TEST mode]
 • Turn the power is ON, while pressing the 0 button on the FRONT PANEL.
 • When change the TEST mode number, press the **PLAY** button on the FRONT PANEL.
 • When return to the TEST mode number 0, press **STOP** button on the FRONT PANEL.
 • When release from the TEST mode, turn the power is OFF.

OPERATION	DISPLAY	FUNCTION
PRESS STOP	TRACK 0	• LASER OFF • ALL SERVO OFF
PRESS PLAY	7E57	
PRESS PLAY	TRACK 1	• LASER ON
PRESS PLAY	7E57	
PRESS PLAY	TRACK 2	• FOCUS SERVO ON
PRESS PLAY	7E57	
PRESS PLAY	TRACK 3	• ROUGH SERVO ON
PRESS PLAY	7E57	



NOTE: When output from the signal generator is not obtained, connect the buffer circuit between P103 Pin ③ and signal generator.

Fig5-1 Instrument Connecn

Step No.	Adjust Number	Adjustment Part
1. Test Disc		Adjustment Part Test Point
2. Mode		
3. • Test Point & Instrument		
4. • Result		
	• Remarks	

4 FOCUS SERVO GAIN

- TEST DISC SONY TYPE III (AT-711881)
- PLAY mode
- VR105
- Connect an oscilloscope between W105 ③ (FB) and GND.
 Adjust VR105 so that the waveform on the oscilloscope is 0.8 ~ 1.2 Vp-p

1 SLIDE SERVO BALANCE

- TEST mode 0
- VR103
- Remove CONNECTOR (2) PCB from P103 and connect the Instruments as shown Fig 5-1.
- Input 15 Hz, 1 Vp-p square wave signal generator.
 Adjust VR103 so that the VE is 260~410 mV and adjust VR104 so that the center of VE is on the DC 0v.

NOTE:
 1. When adjusting the VR103, make sure that the waveform is not inverted wave form.

3 FOCUS SERVO OFF-SET

- STOP mode
- VR106
- Connect a digital DC voltmeter between P104 Pin ③ (FE) and GND.
 Adjust VR106 so that the reading on the digital DC voltmeter is DC 0 ± 5 mV.

2 TRACKING SERVO OFF-SET

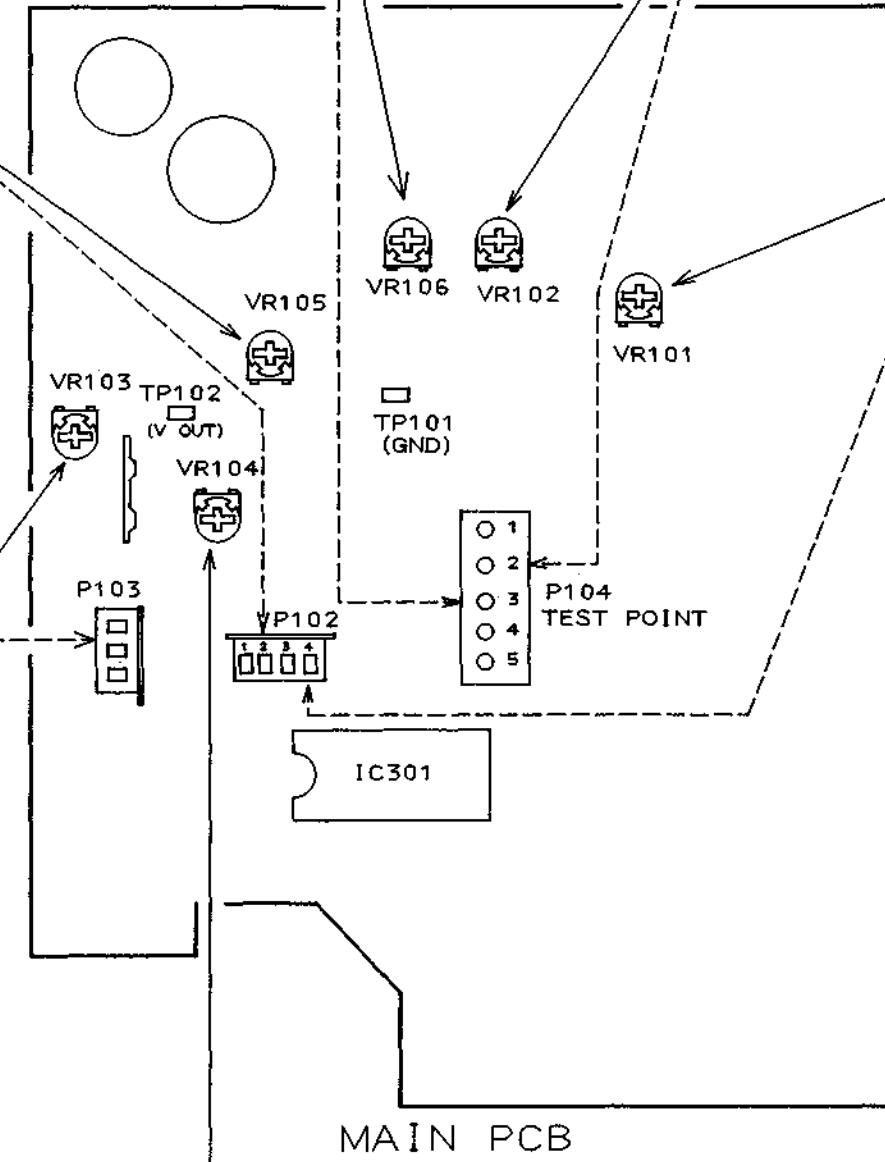
- TEST mode 0
- VR102
- Connect a digital DC voltmeter between P104 Pin ② (TE) and GND.
 Adjust VR102 so that the reading on the digital DC voltmeter is DC -20 ± 5 mV.

5 TRACKING SERVO GAIN

- TEST DISC SONY TYPE III (AT-711881)
- PLAY
- VR101
- Connect an oscilloscope between W105 ② (TB) and GND.
 Adjust VR101 so that the waveform on the oscilloscope is 4.0 ~ 4.2 Vp-p

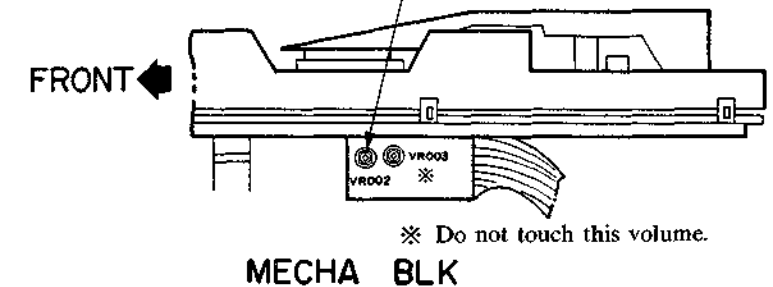
7 E-F BALANCE

- TEST DISC SONY TYPE III (AT-711881)
- TEST mode 3
- VR002
- Connect an oscilloscope through the CR probe as shown below.
 Adjust VR002 so that the waveform on the oscilloscope is DC 0 ± 20 mV.



6 SLIDE SERVO OFF-SET

- TEST DISC SONY TYPE III (AT-711881)
- TEST mode 2.
- VR104
- Remove CONNECTOR (2) PCB from P103 and connect a digital DC voltmeter between connector P103 pin ① (SDA) and pin ② (GND).
 Adjust VR104 so that the reading on the digital DC voltmeter is DC 0 ± 100mV.



VI. PARTS LIST

ATTENTION

1. When placing an order for parts, be sure to list 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

- 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.
- The Recommended Spare Parts List shows those parts in the Parts List which are considered particularly important for service.
- Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.
- How to read the Parts List.
 - Mechanism Block
 - PC Board

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	PAN20x035TL CMT
4	ZS-536488	BID20x08STL CMT
5	ZG-402895	SP CS ANGLE ADJUST

SP (Service Parts) Classification
 This number corresponds with the individual parts index number in that figure.

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 XTAL NC-18C

Symbols for primary destination
 [A] : AAL (U.S.A) [S] : SAA (Australia)
 [B] : BEAB (England) [U] : U/T (Universa Area)
 [C] : CSA (Canada) Area
 [E] : CEE (Europe) [V] : VDE (W. 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.

- 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 MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT

IL INDIQUE LES COMPOSANTS CRITIQUES DE SECURITE POUR MAINTENIR LE NIVEAU DE SECURITE DE L'APPAREIL. NE REMPLACER QUE DES PIECES RECOMMANDEES PAR LE 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.

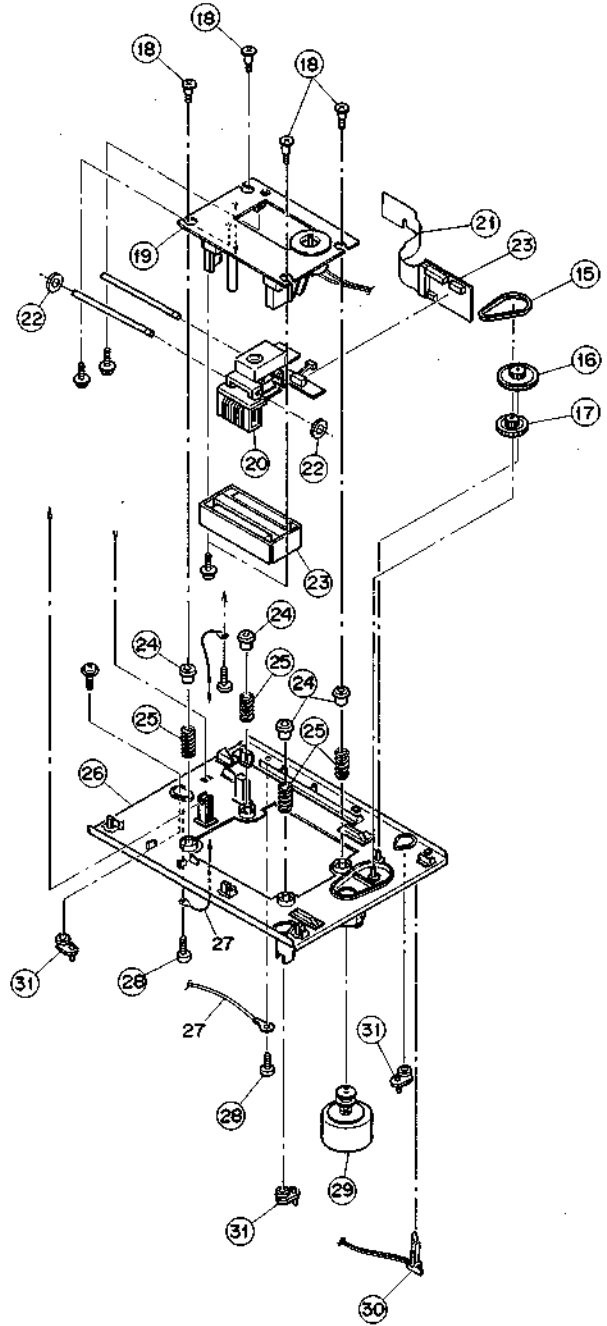
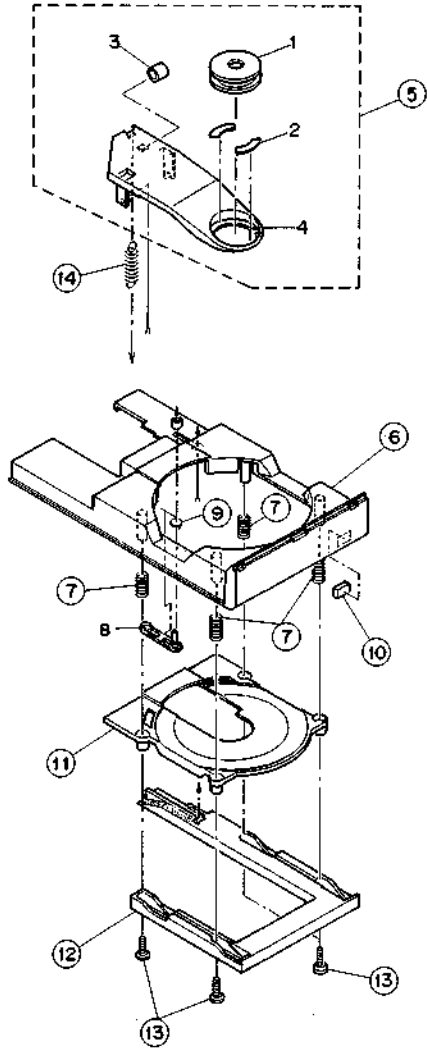
Ref. No.	Part No.	Description
1	BM-P2041A340A	LOADING MOTOR BLK CD-62
2	BO-382258J	PICK UP MLP-10E2
3	*BT-383557J	TRANS POW P2041(A) [C,A]
4	*BT-383559J	TRANS POW P2041(B) [B,S]
5	*BT-383558J	TRANS POW P2041(E) [E,V]
6	BT-368261	TRANS PULSE TC-1027-04
7	ED-383034J	D LED SLR-54PC3F L,M GREEN
8	ED-383587J	D SILICON DSF10T 100/1.0A
9	ED-624903	D SILICON H 1S2473
10	ED-348612	D ZENER H HZ11 C1
11	ED-324013	D ZENER H HZ20 2
12	ED-338333	D ZENER H HZ5 B2
13	ED-309959	D ZENER H HZ5 C3
14	ED-346531	D ZENER H HZ7A2L
15	*EF-368699	FUSE BET T 250V 80MA [B,S]
16	*EF-339902	FUSE SEMKO T 250V 100MA [E,V]
17	EH-387939J	FILTER EMI FBR07HA121NB-00
18	*EI-378893J	IC AN79M05F
19	EI-367572	IC BA15218
20	EI-383595J	IC CXP5014-306Q
21	EI-387934J	IC HD74HC04P
22	EI-387935J	IC HD74HC174P
23	EI-387936J	IC HD74HC175P
24	EI-387937J	IC HD74HC74P
25	EI-383594J	IC MN1281-Q
26	EI-371544	IC M5M4416P-15
27	EI-383592J	IC M50423FP
28	EI-383593J	IC M50747-143SP T2041
29	EI-371079	IC M51564P
30	EI-377057	IC M54641L
31	EI-371556	IC NJM4556S
32	EI-360225	IC NJM5532D
33	EI-368612	IC PCM56P
34	EI-382964J	IC SBX1483-12
35	EI-371554	IC STA341M
36	EI-383591J	IC S2FR03
37	*EI-377885	IC UPC78M05HF
38	EI-386485J	IC YM3414
39	EI-381139J	OSC XTAL HC-49/U 16934.400KHZ
40	EM-381030J	IND FL 6-BT-111GAK CHARACTER
41	*EO-383586J	COIL LF UF1922C-102Y1R0-1
42	ES-368603	SW LEAF MSW-1585
43	*ES-371104	SW PUSH SDDL1082A 01-1 [POWER SW]
44	ES-387940J	SW TACT SKHHPK [CALL]
45	ET-371075	TR DTA124XS
46	ET-373392	TR DTC124XS
47	ET-371688	TR FET 2SK381 D F05
48	ET-308472	TR 2SA1115 E,F,G F05
49	*ET-348829	TR 2SA1209 S,T
50	*ET-372199	TR 2SA1515 R
51	ET-366365	TR 2SB1185 E,F
52	ET-372112	TR 2SC2080 R F05
53	ET-308141	TR 2SC2603 G F05
54	*ET-348831	TR 2SC2911 S,T
55	*ET-372197	TR 2SC3377 R
56	ET-349081	TR 2SC3383 S,T
57	EV-383599J	VR ROTARY RK0971220 A203X2 [HEADPHONE LEVEL CONTROL]
58	MB-383409J	BELT LOADING
59	MZ-383395J	GEAR TRAY

2. MECHA BLOCK

Ref. No.	Part No.	Description
5	BZ-P2041A330A	CLAMPER BLK CD-62 [INCL. 1 TO 4]
6	SC-383394J	DISK TRAY
7	ZG-383412J	SP PUSH DH
9	ZG-383410J	SP TORSION STOPPER
11	SZ-383397J	DISK HOLDER
12	MZ-383395J	GEAR TRAY
13	ZS-609208	T2PAN30X08STL BNI
14	ZG-383415J	SP PULL CL
15	MB-383409J	BELT LOADING
16	MZ-383401J	GEAR
17	MR-383399J	PULLEY
18	ZS-383416J	SCREW GRADUATED M3
19	BB-P2041A360A	TRAVERSE MECHA BLK CD-62
20	BO-382258J	PICK UP MLP-10E2
21	EZ-727442J	PC FLEXIBLE
22	SZ-727443J	STOPPER
23	BA-727444J	PC PRE AMP BLK CD-62
24	MB-383406J	CUSHION RUBBER
25	ZG-383413J	SP PUSH T1
26	BZ-383392J	CHASSIS MECHA OUTSERT PART
28	ZS-385374	ST BR30X05STL N13
29	BM-P2041A340A	LOADING MOTOR BLK CD-62
30	ES-368603	SW LEAF MSW-1585
31	SZ-383405J	CUSHION BASE
32	BB-P2041A300A	MECHA BLK CD-62 [INCL. 1 TO 31]

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.

MECHA BLOCK



3. PRE-AMP P.C BOARD

Ref. No.	Part No.	Description
IC001	EI-727445J	IC M51599FP
VR002	EV-727446J	R S-FIX H 0.05W 223
VR003	EV-727447J	R S-FIX H 0.05W 473

4. P.C BOARD BLOCK

Ref. No.	Part No.	Description
1A	BA-P2041E020B	PC(#)MAIN BLK CD-62 (C) [C,A]
1B	BA-P2041E020C	PC(#)MAIN BLK CD-62 (E) [E,V]
1C	BA-P2041E020D	PC(#)MAIN BLK CD-62 (B) [B,S]
2	BA-P2041E030A	PC# OPERATION (1) BLK CD-62

PC (#) MAIN BLK CONSISTS OF FOLLOWING P.C BOARD.
* MAIN P.C BOARD
* IC P.C BOARD

PC (#) OPERATION BLK CONSISTS OF FOLLOWING P.C BOARD.
* OPERATION P.C BOARD
* HEADPHONE P.C BOARD

5. MAIN P.C BOARD

Ref. No.	Part No.	Description
C401	EC-347205	C MC V F05 FM 220J 500DC
C402	EC-347205	C MC V F05 FM 220J 500DC
C409	EC-365413	C PP V F05 CSF3 222J 125DC
C410	EC-365413	C PP V F05 CSF3 222J 125DC
C413	EC-378331	C PP V F05 CSF3 561J 125DC
C414	EC-378331	C PP V F05 CSF3 561J 125DC
C415	EC-377960	C PP V F05 CSF3 101J 125DC
C416	EC-377960	C PP V F05 CSF3 101J 125DC
C419	EC-347263	C MC V F05 FM 221J 500DC
C420	EC-347263	C MC V F05 FM 221J 500DC
C438	EC-347408	C MC V F05 FE92 101J 500DC
C439	EC-347408	C MC V F05 FE92 101J 500DC
C501	EC-365620	C EC V CUT AS1 472M 25.0DC
C502	EC-365620	C EC V CUT AS1 472M 25.0DC
D101	ED-624903	D SILICON H 1S2473
D103	ED-309959	D ZENER H HZ5 C3
D104	ED-309959	D ZENER H HZ5 C3
D105	ED-383587J	D SILICON DSF10T 100/1.0A
D106	ED-383587J	D SILICON DSF10T 100/1.0A
D201	ED-624903	D SILICON H 1S2473
D204	ED-624903	D SILICON H 1S2473
D301	ED-346531	D ZENER H HZ7A2L
D401	ED-624903	D SILICON H 1S2473
D402	ED-338333	D ZENER H HZ5 B2
D403	ED-624903	D SILICON H 1S2473
D501	ED-383034J	D LED SLR-54PC3F L.M GREEN
D502	ED-383034J	D LED SLR-54PC3F L.M GREEN
D503	ED-346531	D ZENER H HZ7A2L
D504	ED-346531	D ZENER H HZ7A2L
IC101	EI-371079	IC M51564P
IC102	EI-383591J	IC S2FR03
IC103	EI-367572	IC BA15218
IC201	EI-383592J	IC M50423FP
IC202	EI-371544	IC M5M4416P-15
IC203	EI-387934J	IC HD74HC04P
IC204	EI-386485J	IC YM3414
IC301	EI-383593J	IC M50747-143SP T2041
IC302	EI-377057	IC M54641L

Ref. No.	Part No.	Description
IC303	EI-383594J	IC MN1281-Q
IC401	EI-368612	IC PCM56P
IC402	EI-368612	IC PCM56P
IC403	EI-367936J	IC HD74HC174P
IC404	EI-367936J	IC HD74HC175P
IC405	EI-360225	IC NJM5532D
IC406	EI-360225	IC NJM5532D
IC407	EI-367572	IC BA15218
IC408	EI-367937J	IC HD74HC74P
IC902	*EI-377865	IC UPC78M05HF
IC903	*EI-378893J	IC AN79M05F
J101	EV-383545J	SOCKET 5597-19CPB 19P
J201	EJ-376482	PIN J YKB11-0422 1P
J202	EJ-383549J	SOCKET OPTICAL TOTX174 [OPTICAL OUT]
J401	EJ-376961J	PIN J YKC21-0315 2P [OUTPUT]
L201	EO-345931	COIL FIX 1 LAL03KH 221K
L202	EH-387939J	FILTER EMI FBR07HA121NB-00
L203	EH-387939J	FILTER EMI FBR07HA121NB-00
L301	EO-345931	COIL FIX 1 LAL03KH 221K
L302	EO-345931	COIL FIX 1 LAL03KH 221K
L403	EO-345898	COIL FIX 1 LAL03KH R47M
TR101	ET-372112	TR 2SC2060 R F05
TR102	ET-366365	TR 2SB1185 E,F
TR103	ET-371075	TR DTA124XS
TR104	ET-308141	TR 2SC2603 G F05
TR105	ET-373392	TR DTC124XS
TR201	ET-373392	TR DTC124XS
TR301	ET-308141	TR 2SC2603 G F05
TR302	ET-308141	TR 2SC2603 G F05
TR401	ET-371688	TR FET 2SK381 D F05
TR402	ET-371688	TR FET 2SK381 D F05
TR403	ET-349081	TR 2SC3383 S,T
TR404	ET-349081	TR 2SC3383 S,T
TR405	ET-308472	TR 2SA1115 E,F,G F05
TR406	ET-308141	TR 2SC2603 G F05
TR407	ET-308472	TR 2SA1115 E,F,G F05
TR501	ET-308472	TR 2SA1115 E,F,G F05
TR502	ET-308141	TR 2SC2603 G F05
TR503	*ET-348831	TR 2SC2911 S,T
TR504	*ET-348829	TR 2SA1209 S,T
T201	BT-368261	TRANS PULSE TC-1027-04
VR101	EV-368024	R S-FIX H V6EK-PV3(1S)0.1W 103
VR102	EV-368024	R S-FIX H V6EK-PV3(1S)0.1W 103
VR103	EV-371276	R S-FIX H VM6CKPVB 0.30W 201
VR104	EV-368024	R S-FIX H V6EK-PV3(1S)0.1W 103
VR105	EV-368024	R S-FIX H V6EK-PV3(1S)0.1W 103
VR106	EV-368024	R S-FIX H V6EK-PV3(1S)0.1W 103
X201	EI-381139J	OSC X'TAL HC-49/U 18934.400KHZ

6. IC P.C BOARD

Ref. No.	Part No.	Description
IC801	EI-371554	IC STA341M

7. OPERATION P.C BOARD

Ref. No.	Part No.	Description
D701	ED-624903	D SILICON H 1S2473
D702	ED-624903	D SILICON H 1S2473
D703	ED-624903	D SILICON H 1S2473
D704	ED-624903	D SILICON H 1S2473
D705	ED-624903	D SILICON H 1S2473
D706	ED-624903	D SILICON H 1S2473
IC701	EI-383595J	IC CXP5014-306Q
IN701	EM-381030J	IND FL 6-BT-111GAK CHARACTER
L701	EO-345931	COIL FIX 1 LAL03KH 221K
RS701	EI-382964J	IC SBX1483-12
SW701	ES-387940J	SW TACT SKHHPK [CALL]
SW702	ES-387940J	SW TACT SKHHPK [A-B]
SW703	ES-387940J	SW TACT SKHHPK [REPEAT]
SW704	ES-387940J	SW TACT SKHHPK [CLEAR]
SW705	ES-387940J	SW TACT SKHHPK [DISPLAY]
SW706	ES-387940J	SW TACT SKHHPK [8]
SW707	ES-387940J	SW TACT SKHHPK [AUTO SPACE]
SW708	ES-387940J	SW TACT SKHHPK [6]
SW709	ES-387940J	SW TACT SKHHPK [9]
SW710	ES-387940J	SW TACT SKHHPK [7]
SW711	ES-387940J	SW TACT SKHHPK [PAUSE]
SW712	ES-387940J	SW TACT SKHHPK [STOP]
SW713	ES-387940J	SW TACT SKHHPK [4]
SW714	ES-387940J	SW TACT SKHHPK [PROG/EDIT]
SW715	ES-387940J	SW TACT SKHHPK [5]
SW716	ES-387940J	SW TACT SKHHPK [FR]
SW717	ES-387940J	SW TACT SKHHPK [FF]
SW718	ES-387940J	SW TACT SKHHPK [2]
SW719	ES-387940J	SW TACT SKHHPK [PLAY]
SW720	ES-387940J	SW TACT SKHHPK [3]
SW721	ES-387940J	SW TACT SKHHPK [OPEN/CLOSE]
SW722	ES-387940J	SW TACT SKHHPK [RS]
SW723	ES-387940J	SW TACT SKHHPK [0]
SW724	ES-387940J	SW TACT SKHHPK [FS]
SW725	ES-387940J	SW TACT SKHHPK [1]
SW726	ES-387940J	SW TACT SKHHPK [+10]

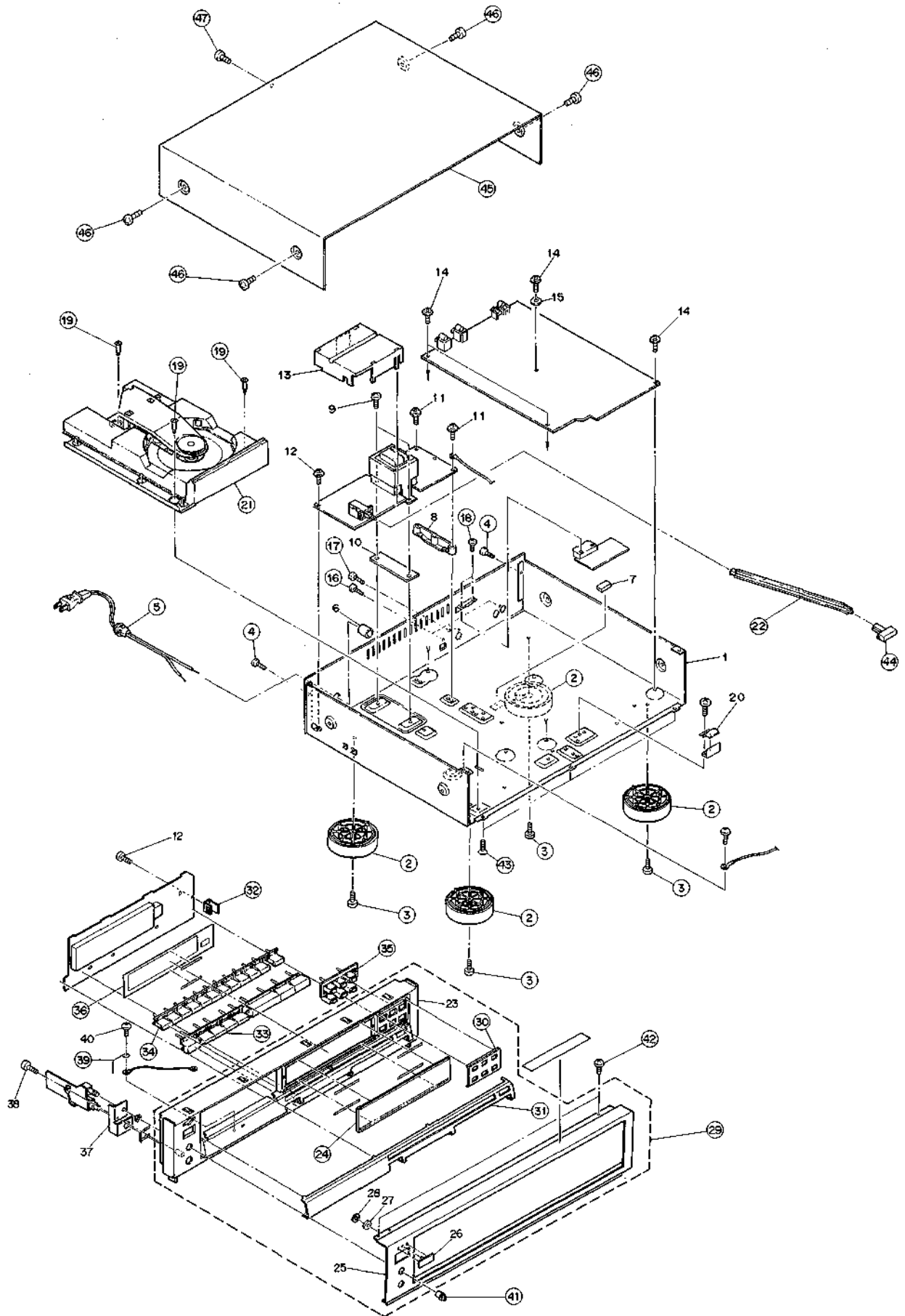
8. HEADPHONE P.C BOARD

Ref. No.	Part No.	Description
IC801	EI-371558	IC NJM4556S
J801	EJ-383536J	PHONE J 3P HLJ1540-01-410 6.3 [HEADPHONE JACK]
VR801	EV-383599J	VR ROTARY RK0971220 A203X2 [HEADPHONE LEVEL CONTROL]

9. POWER SUPPLY P.C BOARD

Ref. No.	Part No.	Description
C601	*EC-364049	C CE V DNS472MEE E 472M 400AC
C602	*EC-364049	C CE V DNS472MEE E 472M 400AC
C608	*EC-364049	C CE V DNS472MEE E 472M 400AC
D601	*ED-383587J	D SILICON DSF10T 100/1.0A
D602	*ED-383587J	D SILICON DSF10T 100/1.0A
D603	*ED-383587J	D SILICON DSF10T 100/1.0A
D604	*ED-383587J	D SILICON DSF10T 100/1.0A
D605	*ED-383587J	D SILICON DSF10T 100/1.0A
D606	*ED-383587J	D SILICON DSF10T 100/1.0A
D607	ED-346612	D ZENER H HZ11 C1
D608	ED-346612	D ZENER H HZ11 C1
D609	*ED-383587J	D SILICON DSF10T 100/1.0A
D610	*ED-383587J	D SILICON DSF10T 100/1.0A
D611	ED-324013	D ZENER H HZ20 2
D612	ED-338333	D ZENER H HZ5 B2
R603	ER-376789	R CB H S12 FS RDS 1/2W 681J
SW601	*ES-371104	SW PUSH SDDL1082A 01-1 [POWER SW]
TR601	*ET-372197	TR 2SC3377 R
TR602	*ET-372199	TR 2SA1515 R
T601	*EO-383586J	COIL LF UF1922C-102Y1R0-1
T602A	*BT-383557J	TRANS POW P2041(A) [C,A]
T602B	*BT-383558J	TRANS POW P2041(E) [E,V]
T602C	*BT-383559J	TRANS POW P2041(B) [B,S]
F601A	*EF-339902	FUSE SEMKO T 250V 100MA [E,V]
F601B	*EF-368699	FUSE BET T 250V 80MA [B,S]

FINAL ASSEMBLY BLOCK



PARTS LIST

10. FINAL ASSEMBLY BLOCK

Ref. No.	Part No.	Description
2	SA-384105J	FOOT ROUND SHAPED(N)
3	ZS-378447	ST BID40X10STL BNI
4	ZS-305827	ST BID30X06STL BNI
5A	*EW-363647	AC CORD 200 238APSPT2 B070 A U [C,A]
5B	*EW-363672	AC CORD 200 0364 LCFL B070 A EV [E,V]
5C	*EW-363684	AC CORD 200 LCFL B070 A B [B]
5D	*EW-363698	AC CORD 200 0436 LCFL B070 A S [S]
16	ZS-366385	T2BR30X08STL BNI PROJECTION
17	ZS-332468	T2BR30X20STL NI3 GUIDE
18	ZS-383887J	BT BID26X08STL BNI
19	ZS-382445J	SCREW GRADUATED
21	SP-383890J	PANEL TRAY(EX) B
22	MZ-383419J	JOINT KNOB
24	SE-383432J	WINDOW FL
29	BD-387035J	PANEL FRONT CD-62 PART [INCL. 23 TO 28]
30	SP-383435J	PANEL SUB 1 B
31	SP-383436J	PANEL SUB 2 B
32	MZ-383418J	HOLDER PANEL SUB
33	SK-383431J	KNOB RE B
34	SK-383430J	KNOB 10KEY B
35	SK-383429J	KNOB ESCUTCHEON B
36	SE-383433J	FILTER
41	SK-383428J	KNOB VOL B
42	ZS-381032J	ST BID30X08STL NI3 EARTH LOCK
43	ZS-387983J	ST BID30X08STL BNI EARTH LOCK
44	SK-373236B	KNOB POWER-B
45	SP-378157	COVER UPPER B
46	ZS-378749J	ST BID40X06STL BNI EARTH LOCK
47	ZS-376523	ST BID30X06STL BNI EARTH LOCK
48	ZZ-383897J	LABEL TRANSPORT EX
49	SZ-725384J	CAP OPTICAL PROTECTOR

11. REMOTE CONTROL UNIT RC-C62

Ref. No.	Part No.	Description
1	SC-724340J	COVER BATTERY

12. ACCESSORY

Ref. No.	Part No.	Description
1	AX-383907J	REMOCON RC-C62
2	AV-315170	CORD RR-165 PIN-PIN/2P

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Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.
AV-315170	12-2	ED-624903	7-D705	ES-387940J	7-SW705	SA-384105J	10-2
AX-383907J	12-1	ED-624903	7-D706	ES-387940J	7-SW706	SC-383394J	2-6
BA-727444J	2-23	EF-339902	1-16	ES-387940J	7-SW707	SC-724340J	11-1
BA-P2041E020B	4-1A	EF-339902	9-F601A	ES-387940J	7-SW708	SE-383432J	10-24
BA-P2041E020C	4-1B	EF-368699	1-15	ES-387940J	7-SW709	SE-383433J	10-36
BA-P2041E020D	4-1C	EF-368699	9-F601B	ES-387940J	7-SW710	SK-373236B	10-44
BA-P2041E030A	4-2	EH-387939J	1-17	ES-387940J	7-SW711	SK-383428J	10-41
BB-P2041A300A	2-32	EH-387939J	5-L202	ES-387940J	7-SW712	SK-383429J	10-35
BB-P2041A360A	2-19	EH-387939J	5-L203	ES-387940J	7-SW713	SK-383430J	10-34
BD-387035J	10-29	EI-360225	1-32	ES-387940J	7-SW714	SK-383431J	10-33
BM-P2041A340A	1-1	EI-360225	5-IC405	ES-387940J	7-SW715	SP-378157	10-45
BM-P2041A340A	2-29	EI-360225	5-IC406	ES-387940J	7-SW716	SP-383435J	10-30
BO-382258J	1-2	EI-367572	1-19	ES-387940J	7-SW717	SP-383436J	10-31
BO-382258J	2-20	EI-367572	5-IC103	ES-387940J	7-SW718	SP-383890J	10-21
BT-368261	1-6	EI-367572	5-IC407	ES-387940J	7-SW719	SZ-383397J	2-11
BT-368261	5-T201	EI-368612	1-33	ES-387940J	7-SW720	SZ-383405J	2-31
BT-383557J	1-3	EI-368612	5-IC401	ES-387940J	7-SW721	SZ-725384J	10-49
BT-383557J	9-T602A	EI-368612	5-IC402	ES-387940J	7-SW722	SZ-727443J	2-22
BT-383558J	1-5	EI-371079	1-29	ES-387940J	7-SW723	ZG-383410J	2-9
BT-383558J	9-T602B	EI-371079	5-IC101	ES-387940J	7-SW724	ZG-383412J	2-7
BT-383559J	1-4	EI-371544	1-26	ES-387940J	7-SW725	ZG-383413J	2-25
BT-383559J	9-T602C	EI-371544	5-IC202	ES-387940J	7-SW726	ZG-383415J	2-14
BZ-383392J	2-26	EI-371554	1-35	ET-308141	1-53	ZS-305827	10-4
BZ-P2041A330A	2-5	EI-371554	6-IC901	ET-308141	5-TR104	ZS-332468	10-17
EC-347205	5-C401	EI-371556	1-31	ET-308141	5-TR301	ZS-365374	2-28
EC-347205	5-C402	EI-371556	8-IC801	ET-308141	5-TR302	ZS-366385	10-16
EC-347263	5-C419	EI-377057	1-30	ET-308141	5-TR406	ZS-378523	10-47
EC-347263	5-C420	EI-377057	5-IC302	ET-308141	5-TR502	ZS-378447	10-3
EC-347408	5-C438	EI-377865	1-37	ET-308472	1-48	ZS-378749J	10-46
EC-347408	5-C439	EI-377865	5-IC902	ET-308472	5-TR405	ZS-381032J	10-42
EC-364049	9-C601	EI-378893J	1-18	ET-308472	5-TR407	ZS-382445J	10-19
EC-364049	9-C602	EI-378893J	5-IC903	ET-308472	5-TR501	ZS-383416J	2-18
EC-364049	9-C608	EI-381139J	1-39	ET-348829	1-49	ZS-383887J	10-18
EC-365413	5-C409	EI-381139J	5-X201	ET-348829	5-TR504	ZS-387983J	10-43
EC-365413	5-C410	EI-382964J	1-34	ET-348831	1-54	ZS-609208	2-13
EC-365620	5-C501	EI-382964J	7-RS701	ET-348831	5-TR503	ZZ-383897J	10-48
EC-365620	5-C502	EI-383591J	1-36	ET-349081	1-56		
EC-377960	5-C415	EI-383591J	5-IC102	ET-349081	5-TR403		
EC-377960	5-C416	EI-383592J	1-27	ET-349081	5-TR404		
EC-378331	5-C413	EI-383592J	5-IC201	ET-366365	1-51		
EC-378331	5-C414	EI-383593J	1-28	ET-366365	5-TR102		
ED-309959	1-13	EI-383593J	5-IC301	ET-371075	1-45		
ED-309959	5-D103	EI-383594J	1-25	ET-371075	5-TR103		
ED-309959	5-D104	EI-383594J	5-IC303	ET-371688	1-47		
ED-324013	1-11	EI-383595J	1-20	ET-371688	5-TR401		
ED-324013	9-D611	EI-383595J	7-IC701	ET-371688	5-TR402		
ED-388333	1-12	EI-386485J	1-38	ET-372112	1-52		
ED-388333	5-D402	EI-386485J	5-IC204	ET-372112	5-TR101		
ED-388333	9-D612	EI-387934J	1-21	ET-372197	1-55		
ED-346531	1-14	EI-387934J	5-IC203	ET-372197	9-TR601		
ED-346531	5-D301	EI-387935J	1-22	ET-372199	1-50		
ED-346531	5-D503	EI-387935J	5-IC403	ET-372199	9-TR602		
ED-346531	5-D504	EI-387936J	1-23	ET-373392	1-46		
ED-346612	1-10	EI-387936J	5-IC404	ET-373392	5-TR105		
ED-346612	9-D607	EI-387937J	1-24	ET-373392	5-TR201		
ED-346612	9-D608	EI-387937J	5-IC408	EV-368024	5-VR101		
ED-383034J	1-7	EI-727445J	3-IC001	EV-368024	5-VR102		
ED-383034J	5-D501	EJ-376482	5-J201	EV-368024	5-VR104		
ED-383034J	5-D502	EJ-376961J	5-J401	EV-368024	5-VR105		
ED-383587J	1-8	EJ-383536J	8-J801	EV-368024	5-VR106		
ED-383587J	5-D105	EJ-383549J	5-J202	EV-371276	5-VR103		
ED-383587J	5-D106	EM-381030J	1-40	EV-383545J	5-J101		
ED-383587J	9-D601	EM-381030J	7-IN701	EV-383599J	1-57		
ED-383587J	9-D602	EO-345898	5-L403	EV-383599J	8-VR601		
ED-383587J	9-D603	EO-345931	5-L201	EV-727446J	3-VR002		
ED-383587J	9-D604	EO-345931	5-L301	EV-727447J	3-VR003		
ED-383587J	9-D605	EO-345931	5-L302	EW-363647	10-5A		
ED-383587J	9-D606	EO-345931	7-L701	EW-363672	10-5B		
ED-383587J	9-D609	EO-383586J	1-41	EW-363684	10-5C		
ED-383587J	9-D610	EO-383586J	9-T601	EW-363698	10-5D		
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ED-624903	5-D201	ES-368603	2-30	MB-383409J	1-58		
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ED-624903	7-D701	ES-387940J	7-SW701	MZ-383395J	2-12		
ED-624903	7-D702	ES-387940J	7-SW702	MZ-383401J	2-16		
ED-624903	7-D703	ES-387940J	7-SW703	MZ-383418J	10-32		
ED-624903	7-D704	ES-387940J	7-SW704	MZ-383419J	10-22		

ABBREVIATIONS (COMPACT DISC)

ABBREVIATION	EXPLANATION	ABBREVIATION	EXPLANATION
A-D	Analog to Digital (Convertor)	LSB	Least Significant Bit
ADC	Analog to Digital (Convertor)	Mb	Mega Bits
BCD	Binary Code Decimal	MDA	Motor Drive Amplifier
BPI	Bits per Inch	MFM	Modified Frequency Modulation
CD	Compact Disc	MM	Mono-stable Multivibrator
CIRC	Cross Interleaving & Reed Solomon Coding	M'FM	Modified Modified Frequency Modulation
CLV	Constant Linear Velocity	MOD2	Modulo 2 (Addition)
CP	Clock Pulses	MP	Microprocessor
CRCC	Cyclic Redundancy Check Codes	MSB	Most Significant Bit
D Level	Decision Level	NA	Numerical Aperture
D-A	Digital to Analog (Convertor)	NRZ	Non Return to Zero
DAC	Digital to Analog (Convertor)	NRZ-1	Non Return to Zero Inverted
DAD	Digital Audio Disc	P	Parity Data
DEM	Dynamic Element Matching	PAM	Pulse Amplitude Modulation
DPD	Differential Phase Detection	PCM	Pulse Code Modulation
DSV	Digital Sum Value	PD	Phase Detector
EFM	Eight to fourteen Modulation	PE	Phase Encode
EX-OR	EXclusive OR	PLL	Phase Locked Loop
FCI	Flux Changes per Inch	PNM	Pulse Number Modulation
FIR	Finite Impulse Response	PPM	Pulse Phase Modulation
FP	Front Pulse	PWM	Pulse Width Modulation
FPG	Front Pulse Gate	Q	Parity Data
f	Frequency of Sampling	R, R ₁ , R ₂ , etc.	Data for Right Channel
GF	Galois Field	RAM	Random Access Memory
H&V (Parity)	Horizontal & Vertical	RPG	Rear Pulse Gate
IIR	Infinite Impulse Response	SCOOP	Self Coupled Optical Pick-up
kb	Kilo Bits	S&H	Sample & Hold
L, L ₁ , L ₂ , etc.	Data for Left Channel	S/N	Signal to Noise Ratio
LPF	Low Pass Filter	SSG	Standard Signal Generator
		SYS CON	SYStem CONTROL

AKAI

MODEL **CD-62**

SCHEMATIC DIAGRAM AND PC BOARDS

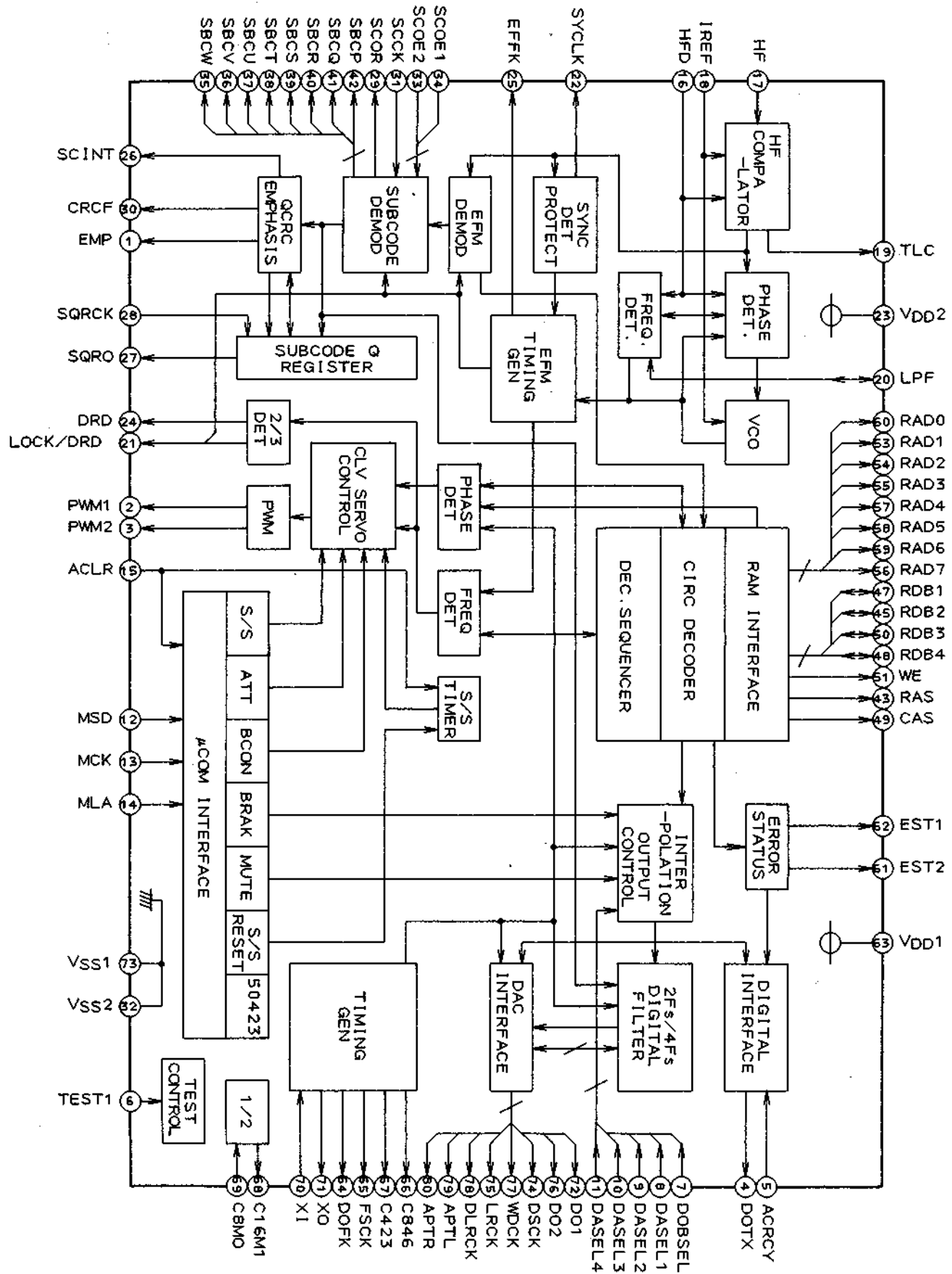
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CXP5014-306Q (Display & Operation MI-COM)

PIN NO.	SYMBOL	I/O	FUNCTION
1	PX3 (SDATA)	O	Serial data output port for key code & remote control code serial data.
2	PD0 (KI0)	I	Input port for key return from key matrix.
3	PD1 (KI1)		
4	PD2 (KI2)		
5	PD3 (KI3)		
6	PC0 (KI4)		
7	PC1 (KI5)		
8	PC2 (KI6)		
9	PC3 (SHIFT)	I	Input port for key code conversion of key matrix line PC2.
10	PF0 (KO0)	O	Output port for key scan signal of key matrix.
11	PF1 (KO1)		
12	PF2 (KO2)		
13	PF3 (KO3)		
14	PE0 (KO4)		
15	PE1 (KO5)		
16	PE2 (KO6)		
17	PE3 (KO7)		
18	PB0 (DSPON)	I	Display ON/OFF switching input. ON with "L". Normally monitoring.
19	PB1 (DUTY)	I	Light ON duty switching input for display. Normally monitoring.
20	PB2 (DSET0)	I	Switch input for display digit & display data input number. Check during power ON reset only reset.
21	PB3 (DSET1)		
22	PA0 (M-2)	I	Receive permit switching input for each remote control format. Effective with "L". Check during power ON reset only.
23	PA1 (M-1)		
24	PA2 (A-2)		
25	PA3 (A-1)		
26	V _{DD}		+5V
27	V _{SS}		GND
28 to 43	S0 to S15	O	Segment data output for display.
44 to 51	T7 to T0	O	Digit data output for display.
52	VFDP		Power supply for FL display. (-20V)
53	INT1 (ACK)	I	Input port for serial data send/receive interrupts.
54	XTAL		Not in use.
55	EXTAL (C423)	I	External clock input. 4.2336MHz
56	RST (ACLR)	I	Power ON reset input port.
57	PY0 (RMIND)		Not in use.
58	V _{DD}		+5V
59	PY1 (STB)	O	Output port for serial data send/receive interrupt.
60	PY2 (ACK)	I	Input port for serial data send/receive interrupts.
61	RMC (RMS)	I	Remote control receive data input port.
62	PX0 (SC)	I/O	I/O port for serial data send/receive shift clock.
63	PX1 (SI)	I	Display serial data input port.
64	PX2		Not in use.

M50423FP (Signal Processor)



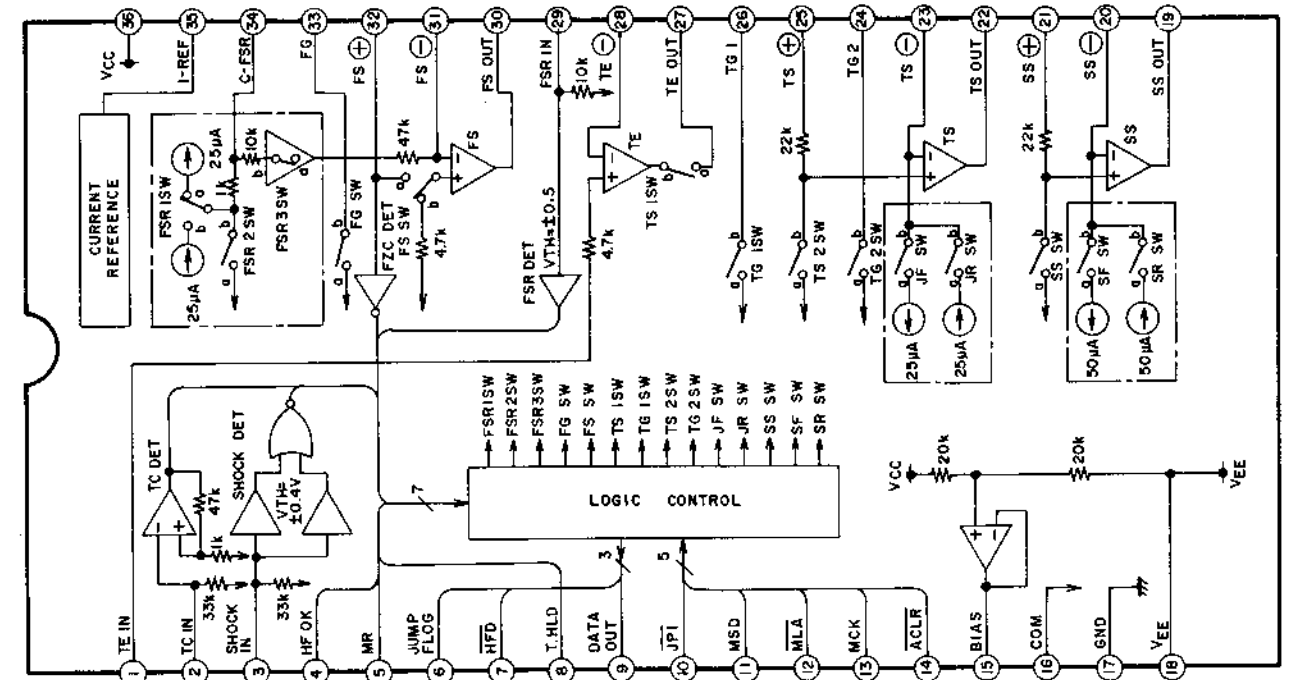
PIN NO.	SYMBOL	I/O	FUNCTION	PIN NO.	SYMBOL	I/O	FUNCTION
1	EMP	O	Emphasis code output. Emphasis: "H"	34	SCOE1	I	SBC T ~ SBC output enable input.
2	PWM1	O	PWM output 1 for disc motor drive. ⊖	35	SBCW	O	Sub code Vch. output.
3	PWM2	O	PWM output 2 for disc motor drive. ⊕	36	SBCV	O	Sub code Uch. output.
4	DOTX	O	Digital output.	37	SBCU	O	Sub code Tch. output.
5	ACRCY	I	Clock accuracy input for digital output channel status.	38	SBCT	O	Sub code Sch. output.
6	TEST1	I	Test mode select input. Normal play: "L"	39	SBCS	O	Sub code Rch. output.
7	DOBSSEL	I	Output data bit number select. 18 bit: "H"	40	SBCR	O	Sub code Qch. output.
8	DASEL1	I	DAC Interface Select input 1.	41	SBCQ	O	Sub code Pch. output.
9	DASEL2	I	DAC Interface Select input 2.	42	SBCP	O	Row address strobe signal output.
10	DASEL3	I	DAC Interface Select input 3.	43	RAS	O	External memory data I/O 2.
11	DASEL4	I	DAC Interface Select input 4.	44	NC	—	External memory data I/O 1.
12	MSD	I	Serial data input from Mi-com interface.	45	RDB2	I/O	External memory data I/O 4.
13	MCK	I	Shift clock input from Mi-com interface.	46	NC	—	External memory data output 3.
14	MLA	I	Data latch clock from Mi-com interface.	47	RDB1	I/O	Write enable signal output.
15	ACLR	I	Register clear input from Mi-com interface.	48	RDB4	I/O	External memory address 1.
16	HFD	I	Dropout signal input.	49	CAS	O	External memory address 2.
17	HF	I	Playback signal input.	50	RDB3	I/O	External memory address 3.
18	IREF	I	Detector / PLL circuit reference current input.	51	WE	O	External memory address 4.
19	TLC	O	Slice level control output.	52	NC	—	External memory address 5.
20	LPF	I/O	PLL loop filter connection terminal.	53	RAD1	O	External memory address 6.
21	LOCK / DRD	O	Synchronize / disc motor low speed status output.	54	RAD2	O	External memory address 7.
22	SYCLK	O	Fram Synchronize condition output. Synchronized: "H"	55	RAD3	O	External memory address 0.
23	VDD2	I	Analogue section power supply (+5V) for Detector / PLL circuit	56	RAD7	O	Error condition output 2.
24	DRD	O	Disc motor low speed status output.	57	RAD4	O	Error condition output 1. C1 decoder error detect: "H"
25	EFFK	O	EFM Fram clock output. duty=50%	58	RAD5	O	Power supply. +5V
26	SCINT	O	Interrupt signal of the sub code Q output.	59	RAD6	O	OSC Fram clock output. 7.35kHz duty=50%
27	SQRO	O	Sub code Q register output.	60	RAD0	O	Clock output. 44.1kHz
28	SQRCK	I	Sub code Q register data shift clock input.	61	EST2	O	Clock output. 8.4672MHz
29	SCOR	O	Sub code Q sync. signal output. S0 + S1	62	EST1	O	Clock output. 4.2336MHz
30	CRCF	O	Sub code Q CRC check result output. CRC OK: "H"	63	VDD1	I	1/2 divider input.
31	SCCK	I	Shift clock input for sub code serial output.	64	DOFK	O	1/2 divider output.
32	VSS2	I	GND 0V	65	FSCK	O	X'tal OSC input.
33	SCOE2	I	SBCP ~ SBCB output enable input.	66	C846	O	X'tal OSC input.
				67	C423	O	DAC Serial data output.
				68	C16M1	I	DAC data shift clock output.
				69	C8M0	O	DAC L/R clock output.
				70	XI	I	Dual DAC Serial data output. Rch
				71	XO	O	DAC word clock.
				72	DO1	O	DAC L/R clock output 2.
				73	VSS1	I	DAC deglitch clock (L).
				74	DSCK	O	DAC deglitch clock (R).
				75	LRCK	O	
				76	DO2	O	
				77	WDCK	O	
				78	DLRCK	O	
				79	APTL	O	
				80	APTR	O	

M50747-143SP (System control MI-COM)

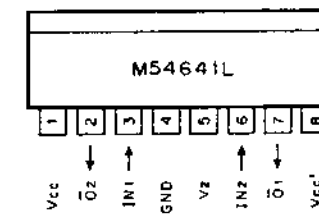
PIN NO.	SYMBOL	I/O	FUNCTION																				
1	Vcc		+5V																				
2 to 9	(P67) ~ (P60)	O	Not in use.																				
10 to 17	(P47) ~ (P40)	I	Not in use.																				
18	SRDY		Not in use.																				
19	SCLK	I/O	Clock for serial data communications with slave MI-COM (CXP5014).																				
20	TXD	O	Display data serial output to slave MI-COM (CXP5014) (Input port during reception).																				
21	RXD	I	Serial input of control data from slave MI-COM (CXP5014).																				
22	DATA/MR	I	Data input from pick up servo. Focus OK signal (Focus ON by "H" → "L") during focussing. TC (Track Cross) signal during 100 track/10 track/1 track Jump. MR (Mirror) signal during SEEK JUMP.																				
23	STB	I	Receive request and transfer permit signals to slave MI-COM (CXP5014).																				
24	ACK	O	Transfer request and receive permit signals to slave MI-COM (CXP5014).																				
25	SCINT	I	Read permit signal for sub code Q data from signal processing IC (M50423).																				
26			Input at time of CRC check OK after 1 block read-in of sub code.																				
27	CNVss		GND																				
28	RESET	I	Reset signal. Input of "L" level at time of POWER ON.																				
29	C846	I	External clock input. 8.46 MHz clock input from signal processing IC (M50423).																				
30			Not in use.																				
31			Not in use.																				
32	Vss		GND																				
33	TIMER PLAY	I	Timer PLAY select. PLAY on with "L". Fixed to "L".																				
34	SEEK SW	I	SEEK JUMP select. SEEK JUMP permit with "L". Fixed to "L".																				
35	SEEK TIME	I	Protector timer select during SEEK JUMP. Fixed to "L".																				
36	MECHA	I	MECHANISM Select. Linear motor mechanism with "L". Gear feed mechanism with inner SW with "H". Fixed to "L".																				
37	CD	I	CD select signal of audio control pulse. CD control mode with "H".																				
38	CBD2	I	Control code signal of audio control pulse. CD (Pin 37) effective only with "H".																				
39	CBD1																						
40	CBD0																						
			<table border="1"> <thead> <tr> <th>CBD2</th> <th>CBD1</th> <th>CBD0</th> <th>CONTROL</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>1</td> <td>0</td> <td>RS</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> <td>FS</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> <td>STOP</td> </tr> <tr> <td>1</td> <td>0</td> <td>1</td> <td>PLAY</td> </tr> </tbody> </table>	CBD2	CBD1	CBD0	CONTROL	0	1	0	RS	0	1	1	FS	1	0	0	STOP	1	0	1	PLAY
CBD2	CBD1	CBD0	CONTROL																				
0	1	0	RS																				
0	1	1	FS																				
1	0	0	STOP																				
1	0	1	PLAY																				
41	MR ON	O	Input switching of DATA/MR signal. "L" and switch to MIRROR signal only during SEEK JUMP.																				
42	DATA ON	O	Input switching of DATA/MR signal. "L" and switch to DATA signal at times other than SEEK JUMP.																				
43	SQR CK	O	Clock for readout of sub code Q. Data set by falling edge of pulse to the signal processing IC M50423 is read by the rising edge.																				
44	SQRD	I	Sub code Q data. Input synchronized with SQRCK signal from signal processing IC M50423.																				
45	LOCK	I	PLL lock status. "H" input from signal processing IC M50423 during PLL lock. ERROR STOP during "L" on startup and 5 sec duration on playback.																				
46	JPI	O	Jump brake signal during 100 track/10 track/1 track Jump. Output to Pick up servo IC M51564.																				
47	MSD	O	Servo control serial data output. Transfer of each type of control data (8 bit) to pick up servo IC M51564 and signal processing IC M50423.																				
48	MLA	O	Latch signal for MSD signal (above), "L" pulse output after 8 bit MSD transfer.																				
49	MCK	O	MSD transfer clock. MSD data set with falling edge.																				
50	STP BRAKE	O	Disc motor brake control signal. "L" during braking only.																				
51	DRD	I	Disc motor low speed status. "L" → "H" at time of 1/3 drop in rpm from normal speed during disc motor braking.																				
52	MUTE	O	Audio mute signal. "L" during PLAY only. (Not in use)																				
53	OPEN	O	"L" during disc tray OPEN operation only.																				
54	CLOSE	O	"L" during disc tray CLOSE operation only.																				
55	OPEN SW	I	Mechanism switch. "L" during disc tray open.																				

PIN NO.	SYMBOL	I/O	FUNCTION
56	CLOSE SW	I	Mechanism switch. "L" during disc tray close.
57	LD ON	O	Pick up laser diode ON/OFF control. ON with "L".
58	SGU	O	Slide servo gain up control signal. Gain up with "L". "L" at times other than 100 track/10 track JUMP.
59	BRAKE	O	Disc motor deceleration control signal. "H" during SEEK JUMP towards disc circumference. (Not in use.)
60	KICK	O	Disc motor acceleration control signal. "H" during SEEK JUMP towards center of disc. (Not in use.)
61	INNER SW	I	Mechanism switch. Detector switch for innermost pick up slide position. "L" at innermost position (use only during Pin 36 MECHA is selected "H" (gear feed mechanism)). (Not in use.)
62	PU MOVE	O	Signal during Pick up start position shift. "H" during Pick up start position shift (0.4 sec) at time of POWER ON and STOP.
63			Not in use.
64			Not in use.

M51564P (Pick-up servo)

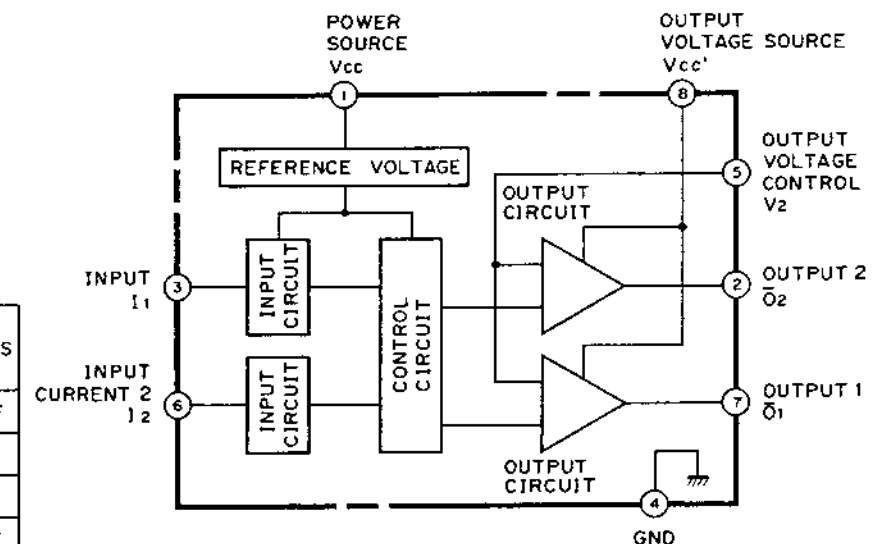


M54641L (Reversible motor control & Drive)

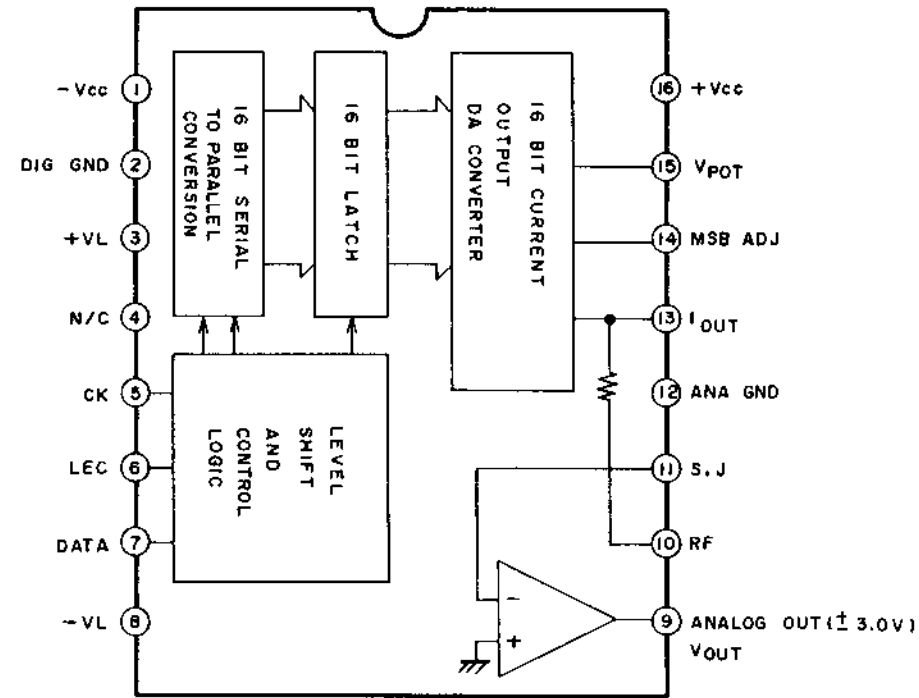


TRUTH TABLE

INPUT		OUTPUT		REMARKS
IN1	IN2	O1	O2	
L	L	"OFF" start	"OFF" start	IC OFF
H	L	H	L	⤴
L	H	L	H	⤵
H	H	L	L	BRAKE



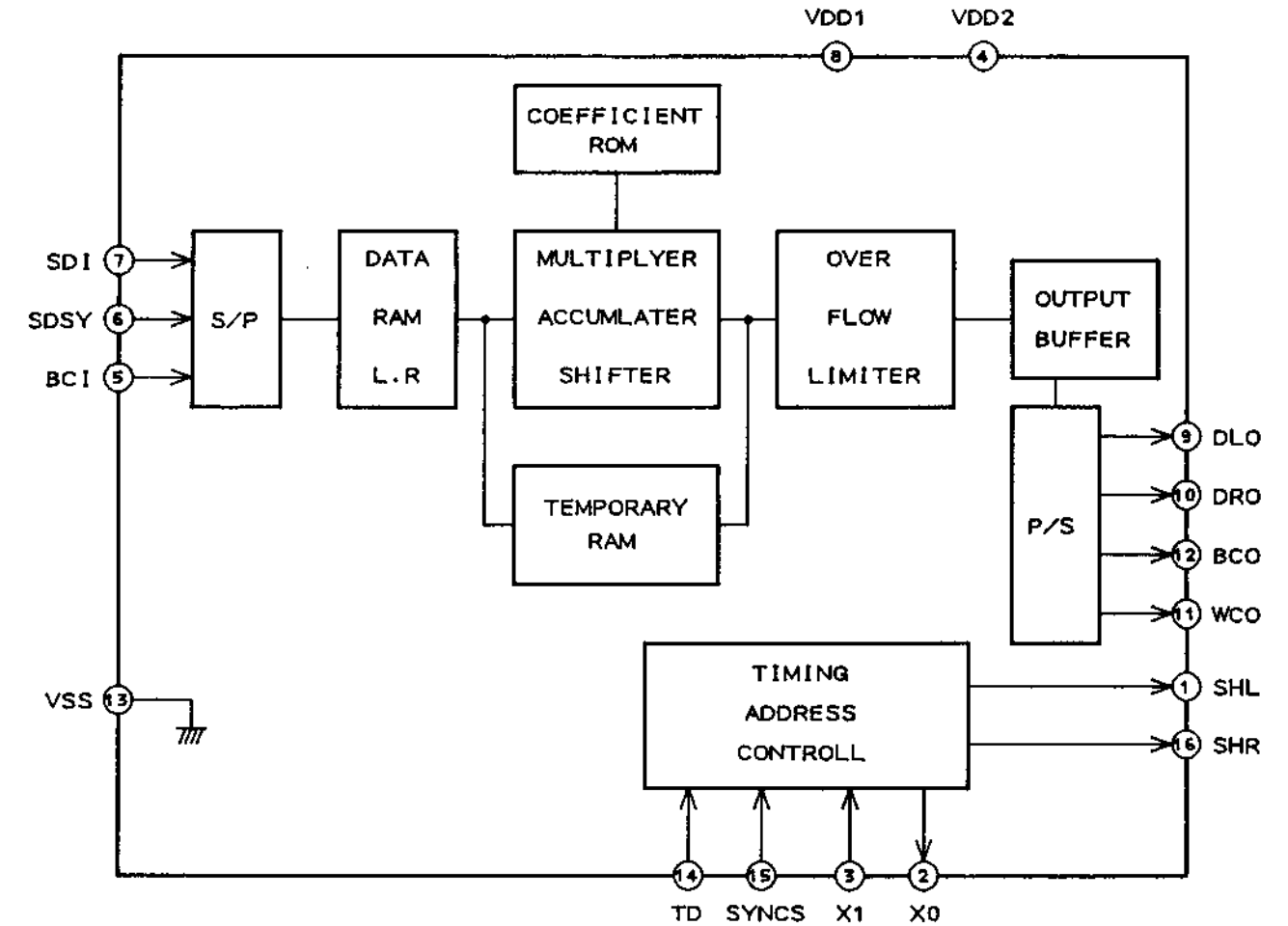
PCM56P (16Bit D/A converter)



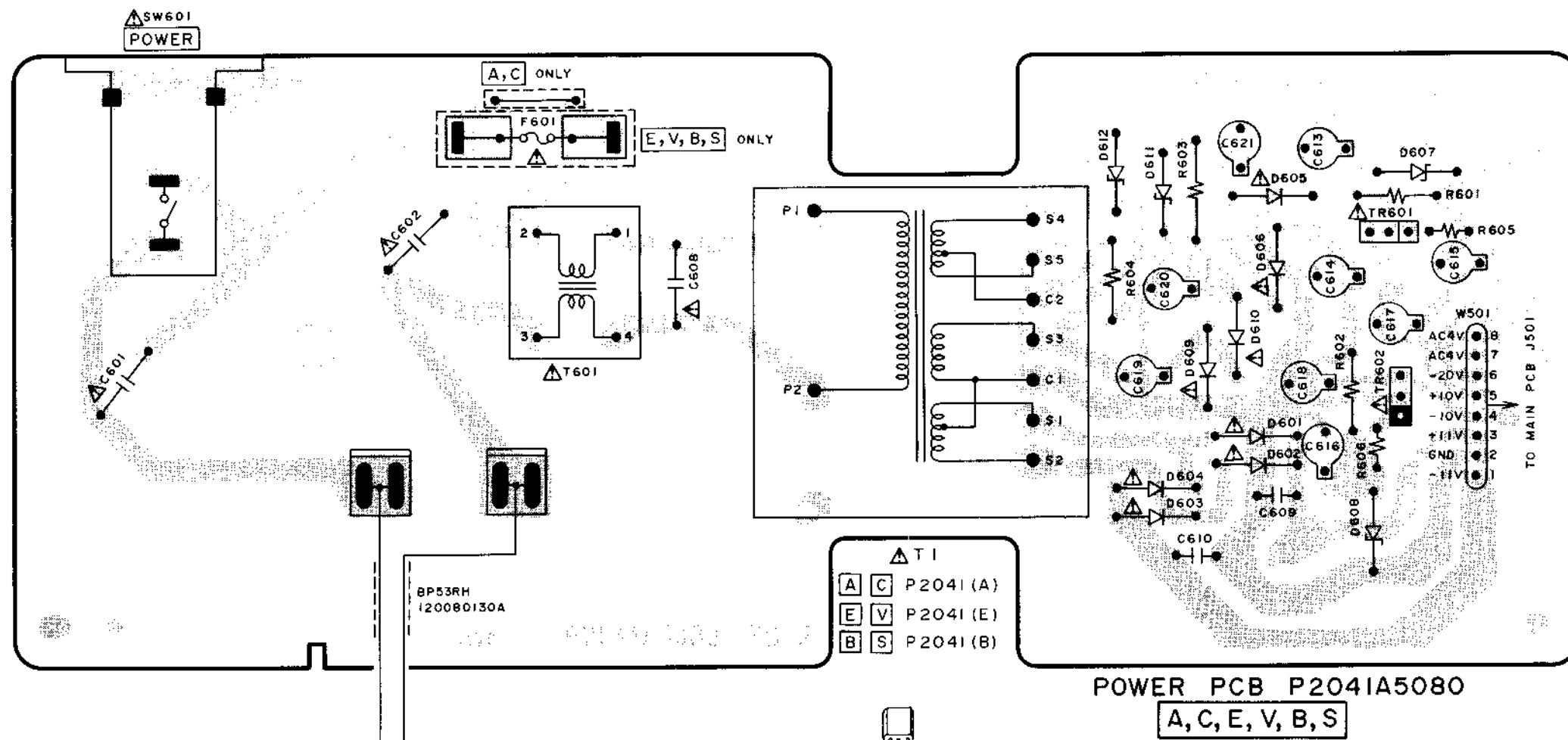
PIN NO.	SYMBOL	DESCRIPTION
1	-Vcc	Analog + power supply
2	DIG GND	Digital ground
3	+VL	Logic + power supply
4	N.C	
5	CK	Clock input
6	LEC	Latch enable control
7	DATA	Data input
8	-VL	Logic - power supply
9	Vout	Voltage output
10	RF	Terminal for feedback resistor
11	SJ	Summing junction (OP Amp input)
12	ANA GND	Analog ground
13	Iout	Current output
14	MSB ADJ	Terminal for MSB adjustment
15	Vpot	Terminal for potentiometer
16	+Vcc	Analog + power supply

(PU): Terminal pull upped inside of IC

YM3414 (8ft digital filter)



Pin No.	Name	I/O	Contents
1	SHL	O	1 DAC (TD = "L"): Lch Deglitcher signal (at 4 times over sampling) 2 DAC (TD = "H"): L/Rch Deglitcher signal (at 8 times over sampling)
2	XO	O	Connect X'tal element between XI and XO
3	XI	I	XI clock = 384xfS (connection of EXT clock to XI clock is possible)
4	VDD2	—	+B (+5V) for X'tal OSC and Deglitcher signal circuit
5	BCI	I	Bit clock input for input data
6	SDSY	I	L/Rch division and input timing clock for input data
7	SDI	I	16 bit Serial Data input
8	VDD1	—	+B (+5V) for Digital signal circuit
9	DLO	O	1 DAC (TD = "L"): L.Rch Data output (at 4 times over sampling) 2 DAC (TD = "H"): Lch Data output (at 8 times over sampling)
10	DRO	O	Rch Data output
11	WCO	O	Word clock for DLO and RLO
12	BCO	O	Bit clock output for DLO and RLO
13	VSS	—	GND
14	TD	I	1 DAC/2 DAC Select input: 1 DAC (4 times over sampling) = "L" : 2 DAC (8 times over sampling) = "H"
15	SyncS	I	Sync signal for absorbing Jitter from asynchronous data (SyncS = "H": at synchronous data input to SDI) (SyncS = "L": at asynchronous data input to SDI)
16	SHR	O	Rch Deglitcher signal at 1 DAC



POWER PCB P2041A5080
A, C, E, V, B, S

- A, C AC 120V/60Hz
- E, V AC 220V/50Hz
- S AC 240V/50Hz
- B AC 240V/50Hz

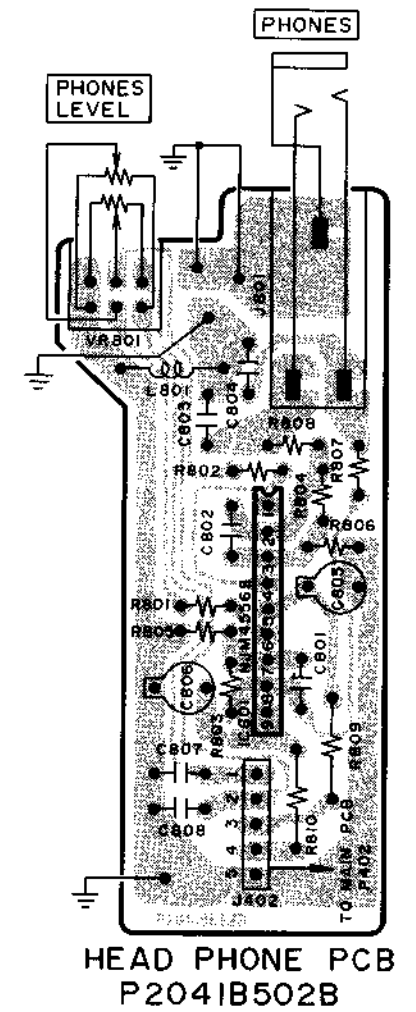
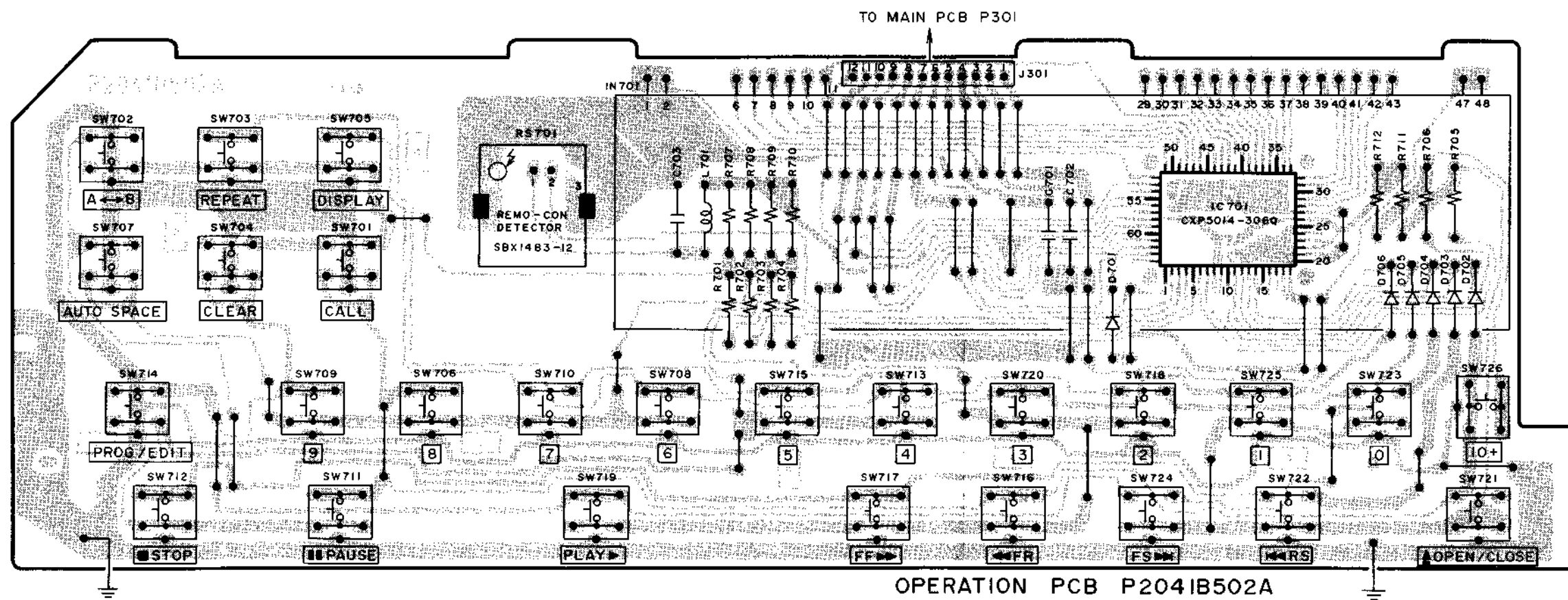
- △ TI
- A C P2041 (A)
 - E V P2041 (E)
 - B S P2041 (B)

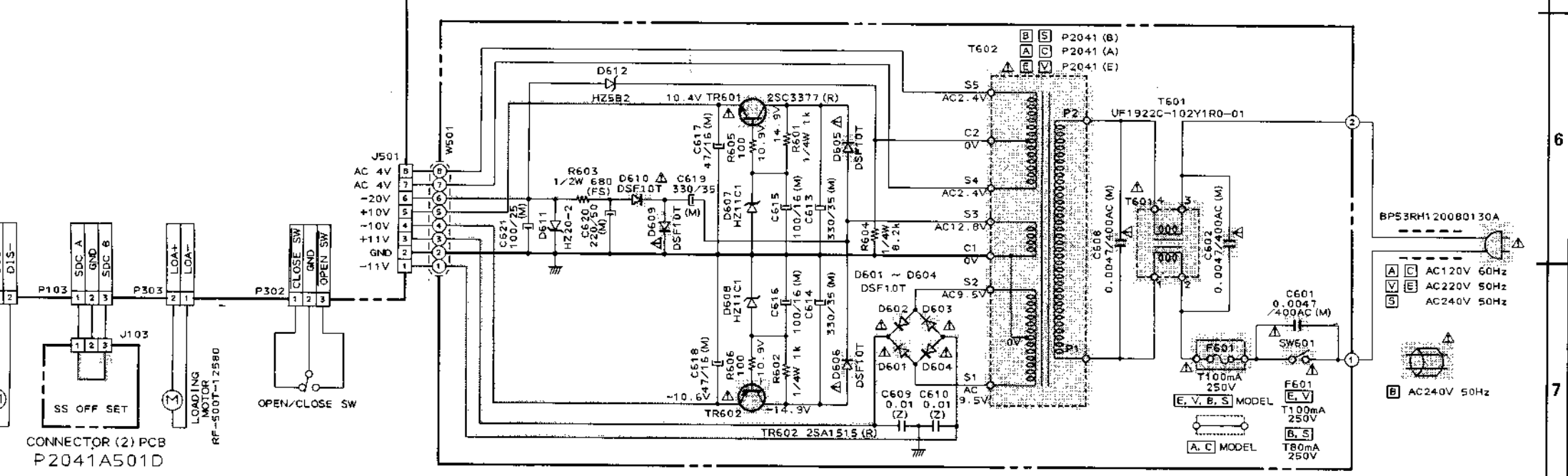
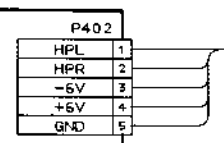
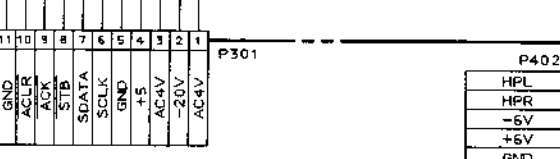
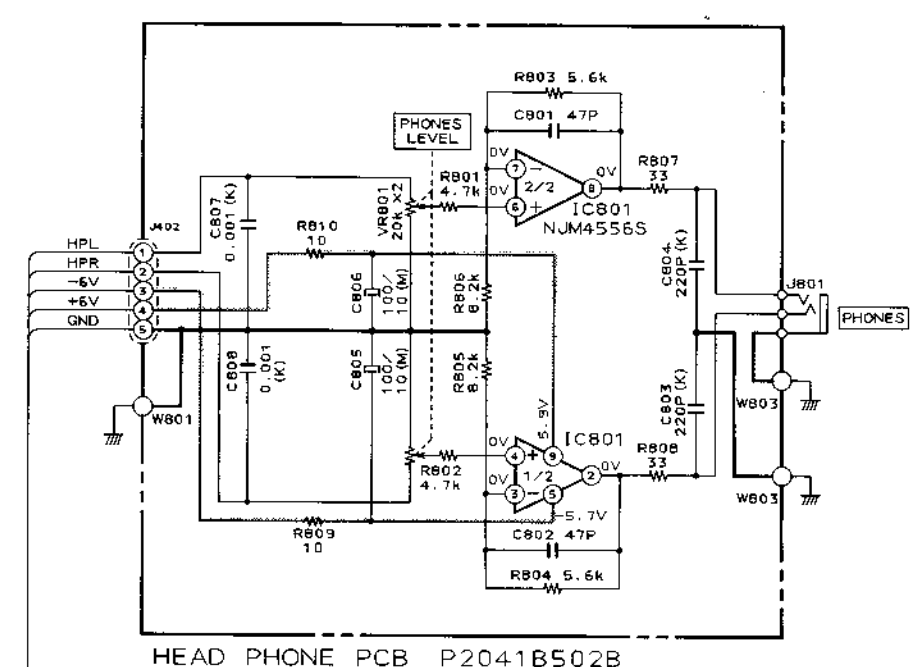
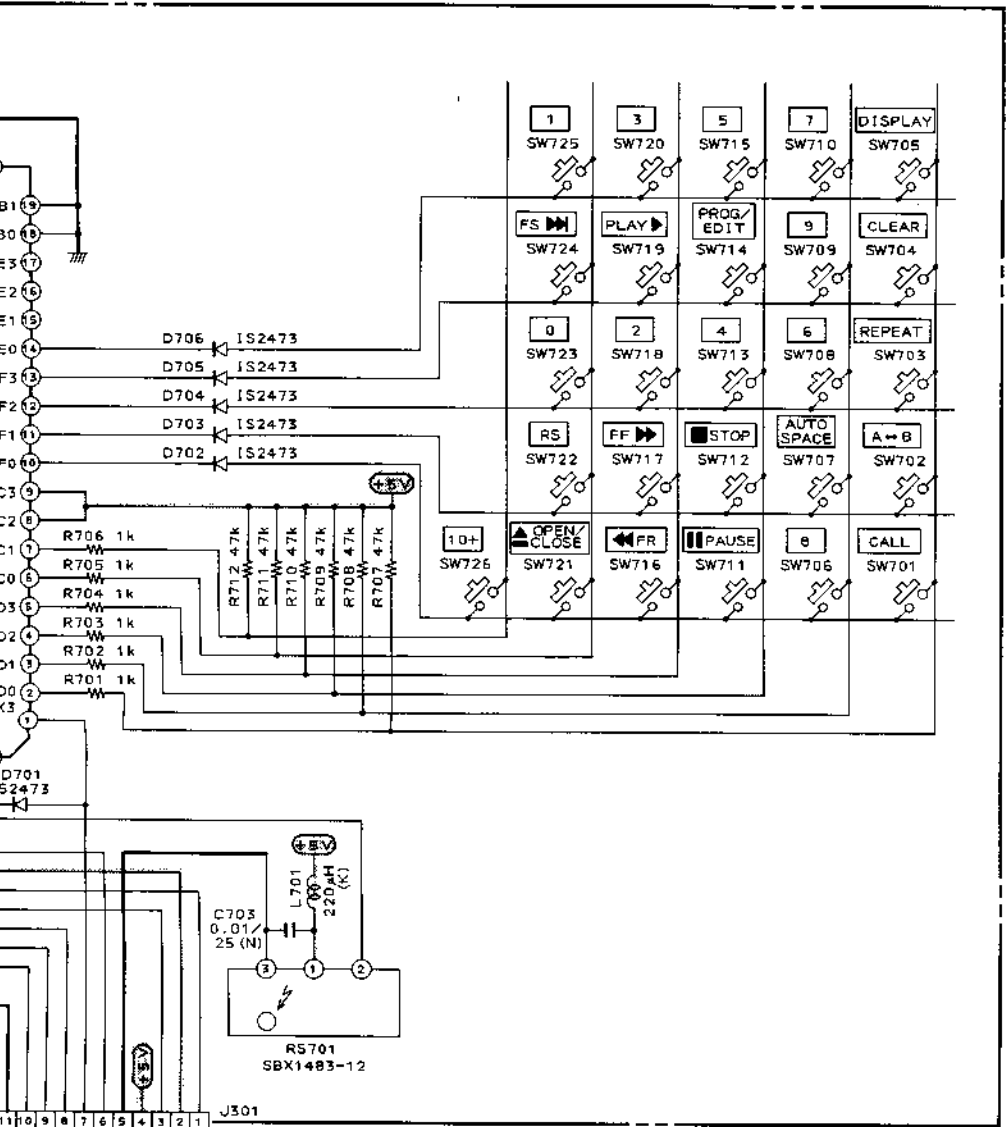
ECB
2SC3377
2SA1515

- B ••• = NPN TRANSISTOR
- B ••• = PNP TRANSISTOR

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 RECOMMANDÉES PAR LE FABRICANT.





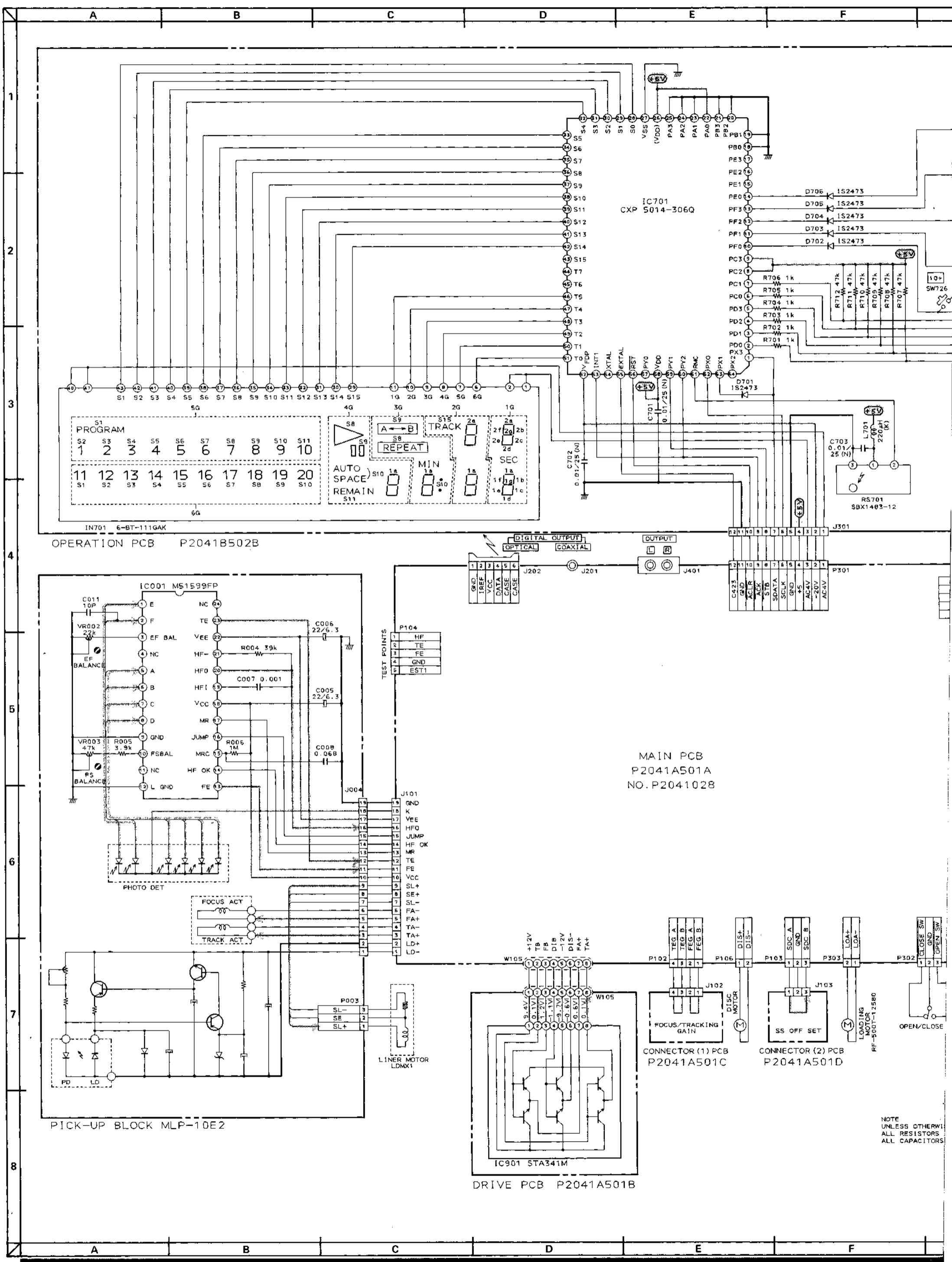
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μ F 50WV(J)

WARNING: Δ AND \square INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: Δ ET \square ILS INDIQUENT LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

--- (B) (POWER SUPPLY) LINE
- - - - - TRACKING SERVO SIGNAL LINE
- - - - - FOCUS SERVO SIGNAL LINE
- - - - - AUDIO SIGNAL LINE

CD-62
CONNECTION DIAGRAM
NO. 2-1 P204101M



OPERATION PCB P2041B502B

MAIN PCB
P2041A501A
NO. P2041028

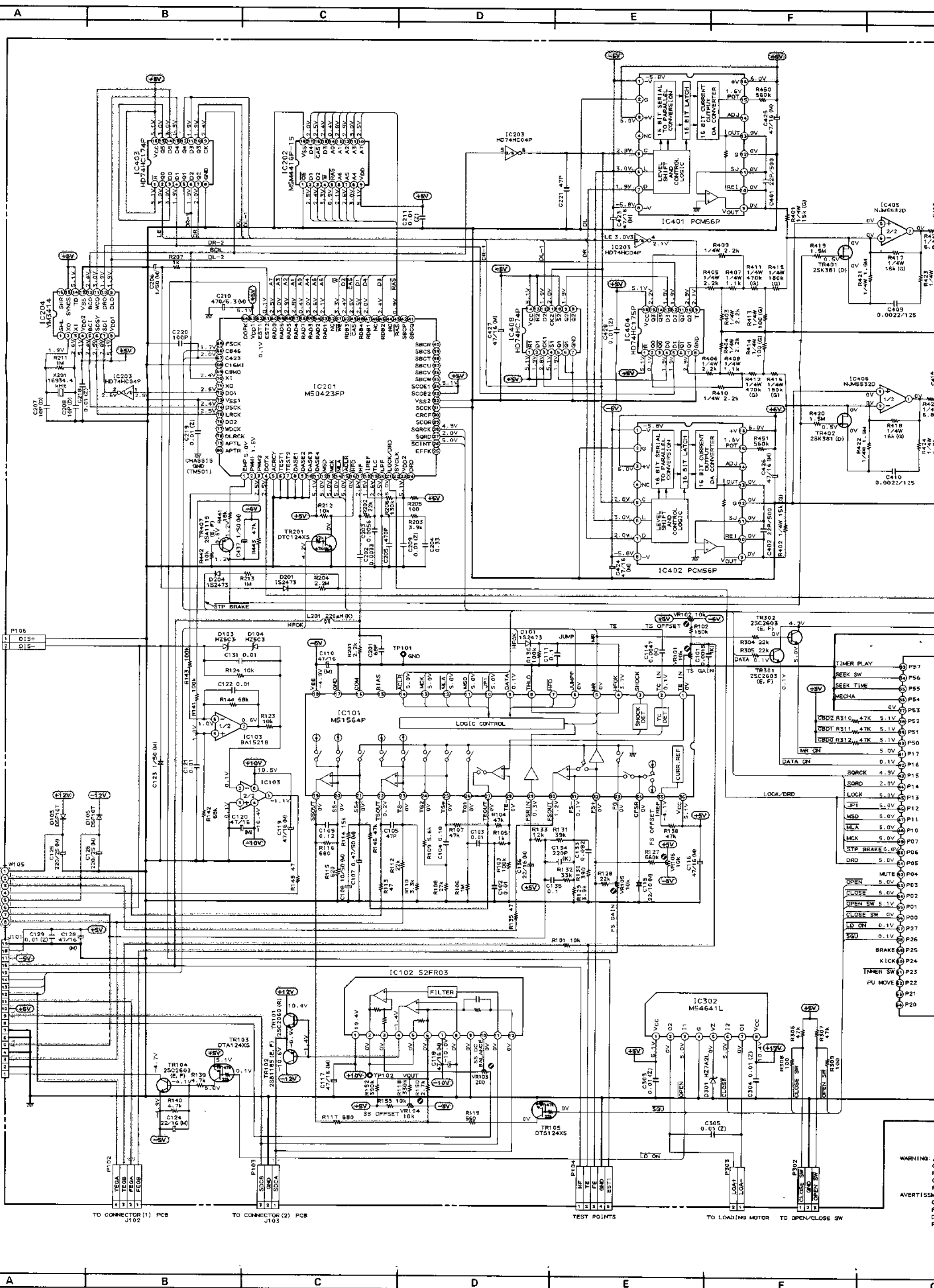
PICK-UP BLOCK MLP-10E2

DRIVE PCB P2041A501B

CONNECTOR (1) PCB
P2041A501C

CONNECTOR (2) PCB
P2041A501D

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS
ALL CAPACITORS



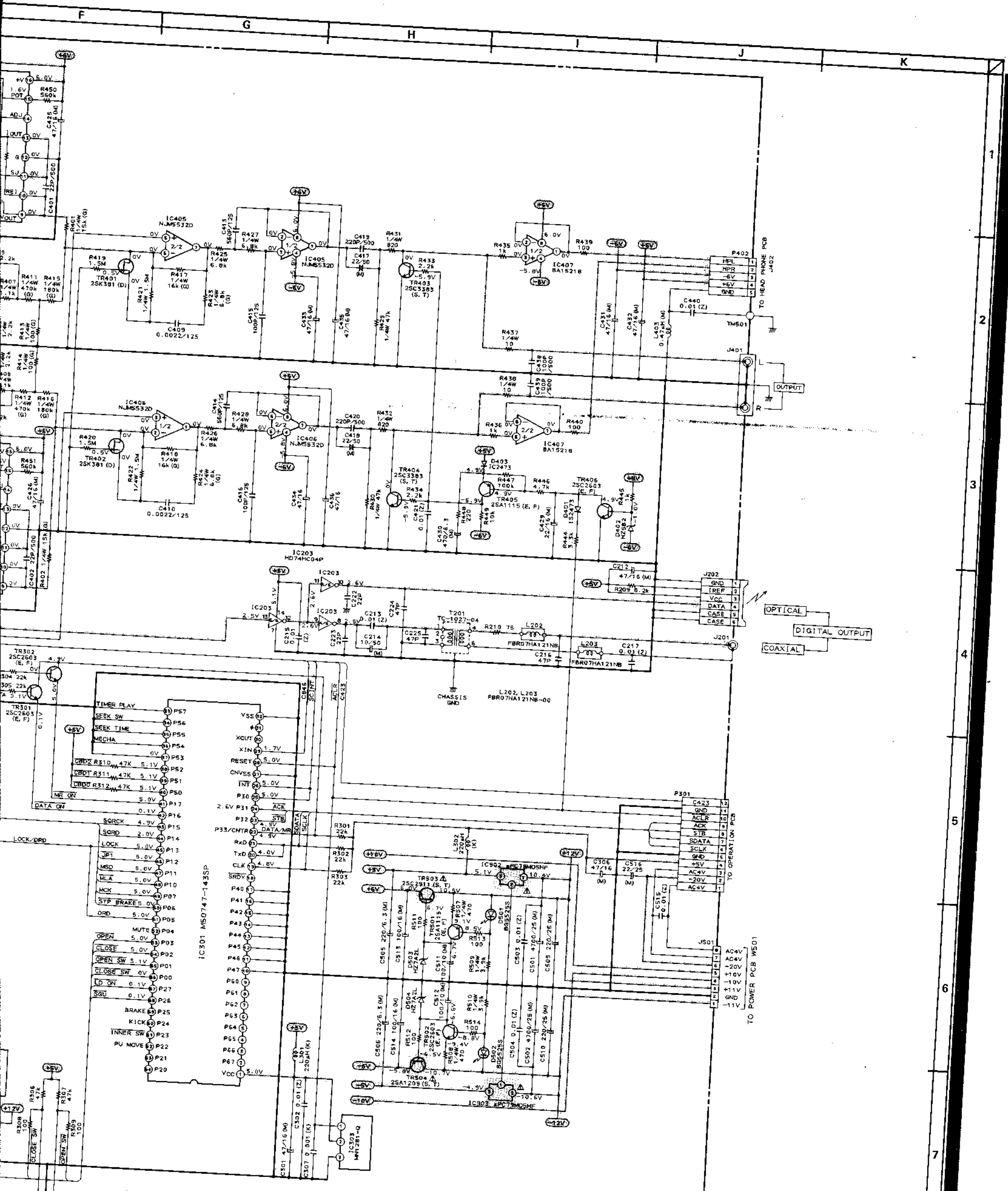
TO CONNECTOR (1) PCB
J102

TO CONNECTOR (2) PCB
J103

TEST POINTS

TO LOADING MOTOR
TO OPEN/CLOSE SW

WARNING: ⚠
RE
ON
PA
FA
CO
PI



MAIN PCB P2041A501A

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

AVERTISSEMENT: ⚠ ET ⚡ ILS INDICENT LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.

NOTE: UNLESS OTHERWISE SPECIFIED, ALL RESISTORS IN OHMS 1/6W (J) ALL CAPACITORS IN µF 50V (J)

① (POWER SUPPLY) LINE
 Ⓜ TRACKING SERVO SIGNAL LINE
 Ⓜ AUDIO SIGNAL LINE
 Ⓜ FOCUS SERVO SIGNAL LINE

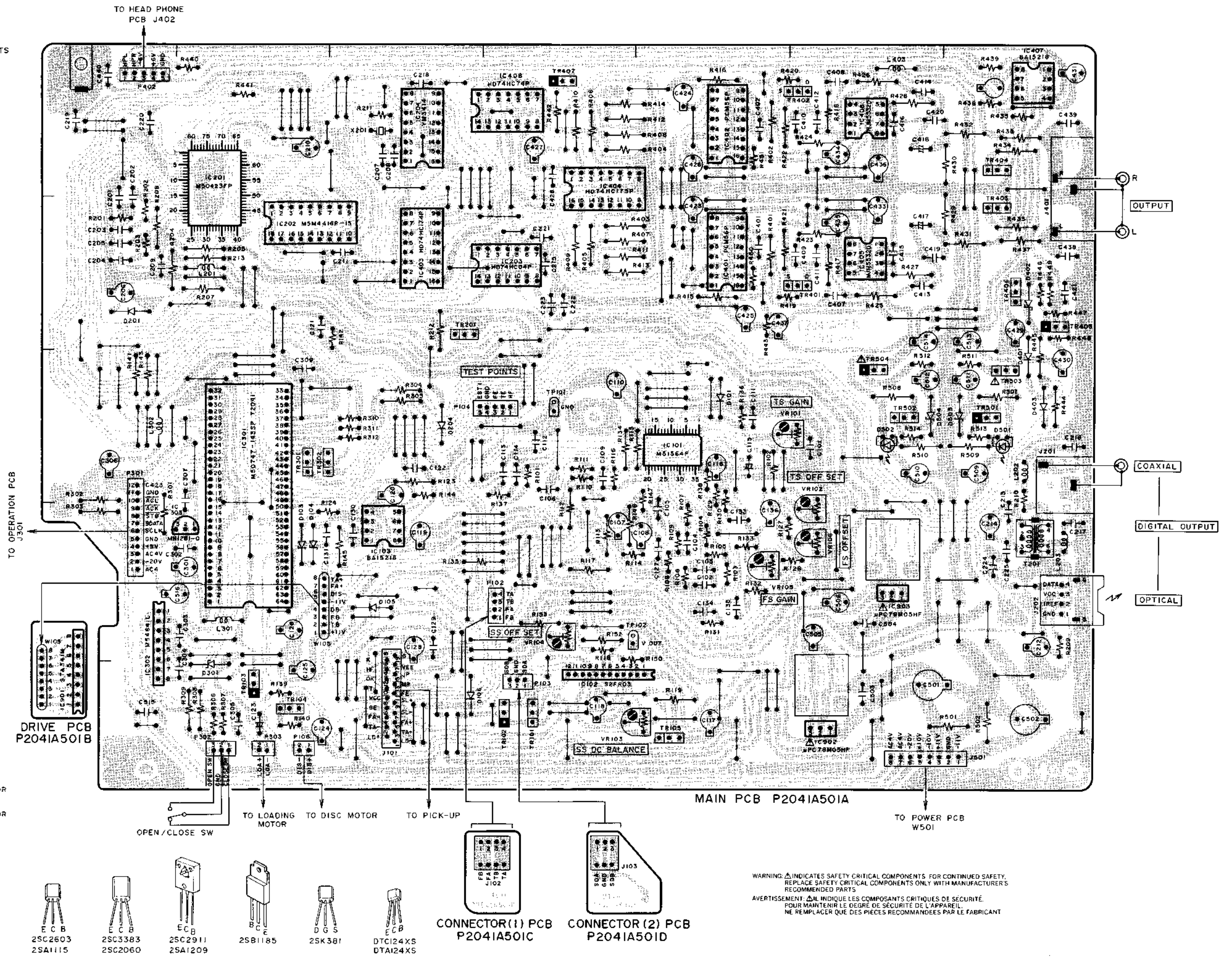
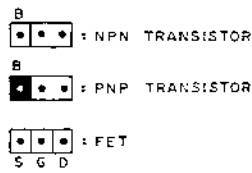
CD-62
 MAIN
 SCHEMATIC DIAGRAM
 NO.2-2 P204102M

LOCATION OF COMPONENTS

- IC'S
 IC101 C3
 IC102 D5
 IC103 E4
 IC201 F1
 IC202 F2
 IC203 D2
 IC204 E1
 IC301 F3
 IC302 G4
 IC303 G4
 IC401 C2
 IC402 C1
 IC403 E2
 IC404 D1
 IC405 B2
 IC406 B1
 IC407 A1
 IC408 D1
 IC902 B5
 IC903 B4

- TRANSISTORS
 TR101 D5
 TR102 D5
 TR103 F5
 TR104 F5
 TR105 C5
 TR201 E2
 TR301 F3
 TR302 F3
 TR401 B2
 TR402 B1
 TR403 A2
 TR404 A1
 TR405 A2
 TR406 A2
 TR407 D1
 TR501 A3
 TR502 B3
 TR503 A3
 TR504 B3

- CONNECTORS
 P102 04
 P103 D5
 P104 D3
 P106 F5
 P301 G4
 P302 F5
 P303 F5
 P402 G1
 J101 E5
 J201 A3
 J202 A4
 J304 F3
 J401 A1
 J501 A5
 W105 F4

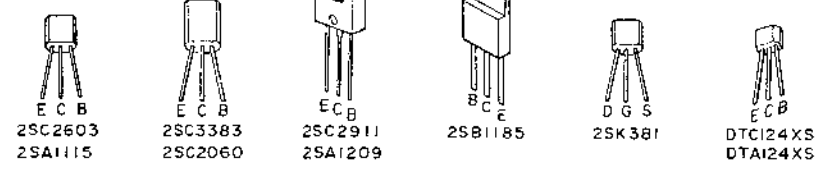


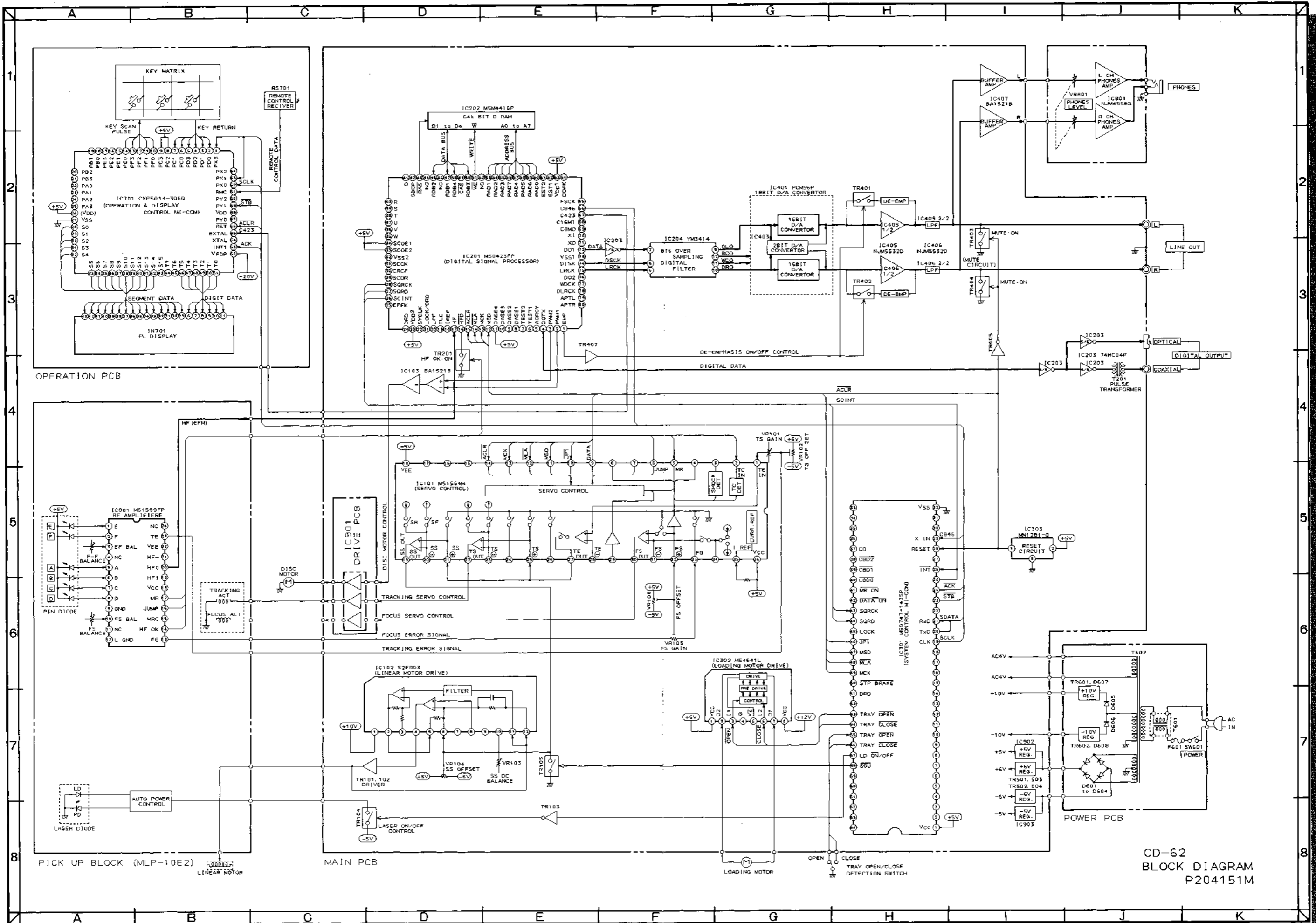
DRIVE PCB P204IA501B

MAIN PCB P204IA501A

CONNECTOR (1) PCB P204IA501C

CONNECTOR (2) PCB P204IA501D





CD-62
BLOCK DIAGRAM
P204151M