

# **AMC**

## **SERVICE MANUAL**

# **CDM7**

## **COMPACT DISC PLAYER**

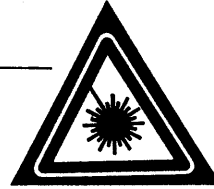
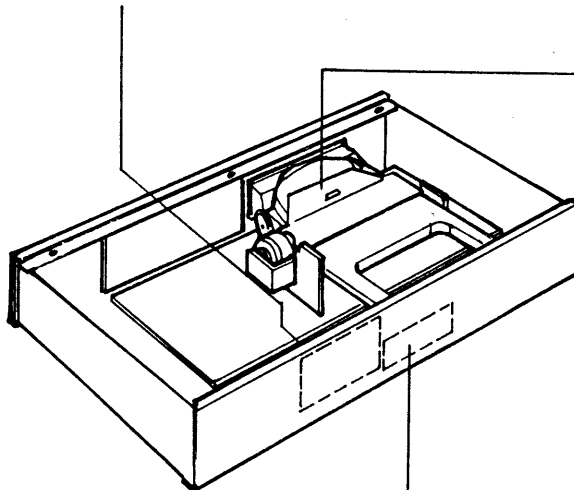
# SPECIFICATIONS

Disc capacity.....	One disc, 80mm or 120mm
Decoding.....	Bitstream converter
Laser pickup.....	Single beam
Mechanism.....	CDM4
Frequency Response.....	20Hz-20KHz -0.1/-0.5dB
THD (inc. noise).....	0.004% at 1KHz Max. Record Level
Linearity.....	+/-0.5dB; (0 to -90dB)
Signal/Noise Ratio.....	99dB A-weighted
Channel Separation.....	-90dB at 1KHz -88dB at 10KHz
Output Impedance.....	100 ohm
Output Level at 0dB.....	2.7 Vrms

# SAFETY INFORMATION

## CAUTION

CAUTION- INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.  
VORSICHT! UNSICHTBARE LASERSTRAHLUNG TRITT AUS. WENN DECKEL GEÖFFNET UND WENN SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT IST, NICHT DEM STRAHL AUSSETZEN!  
WARNING- OSYNLIG LASERSTRÅLNING NÅR DENNA DEL ÅR ÖPPNAD OCH SPÄRR ÅR URKOPPLAD. STRÅLEN ÅR FARLIG.  
ADVARSEL- USYNLIG LASERSTRÅLING VED ÅBNING. NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.  
ATTENTION- RAYONNEMENT LASER ET ELECTROMAGNETIQUE DANGEREUX SI OUVERT AVEC L' ENCLENCHEMENT DE SECURITE ANNULE.



CLASS 1 LASER PRODUCT



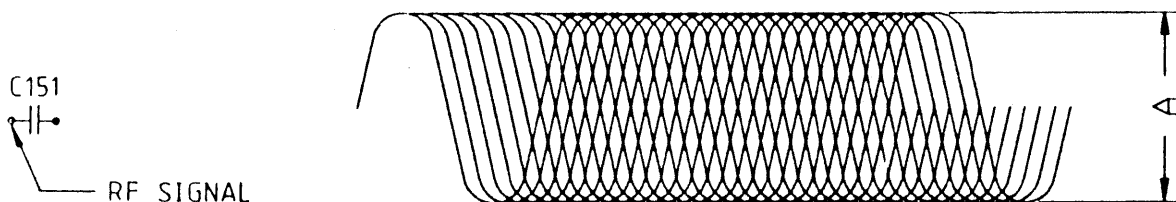
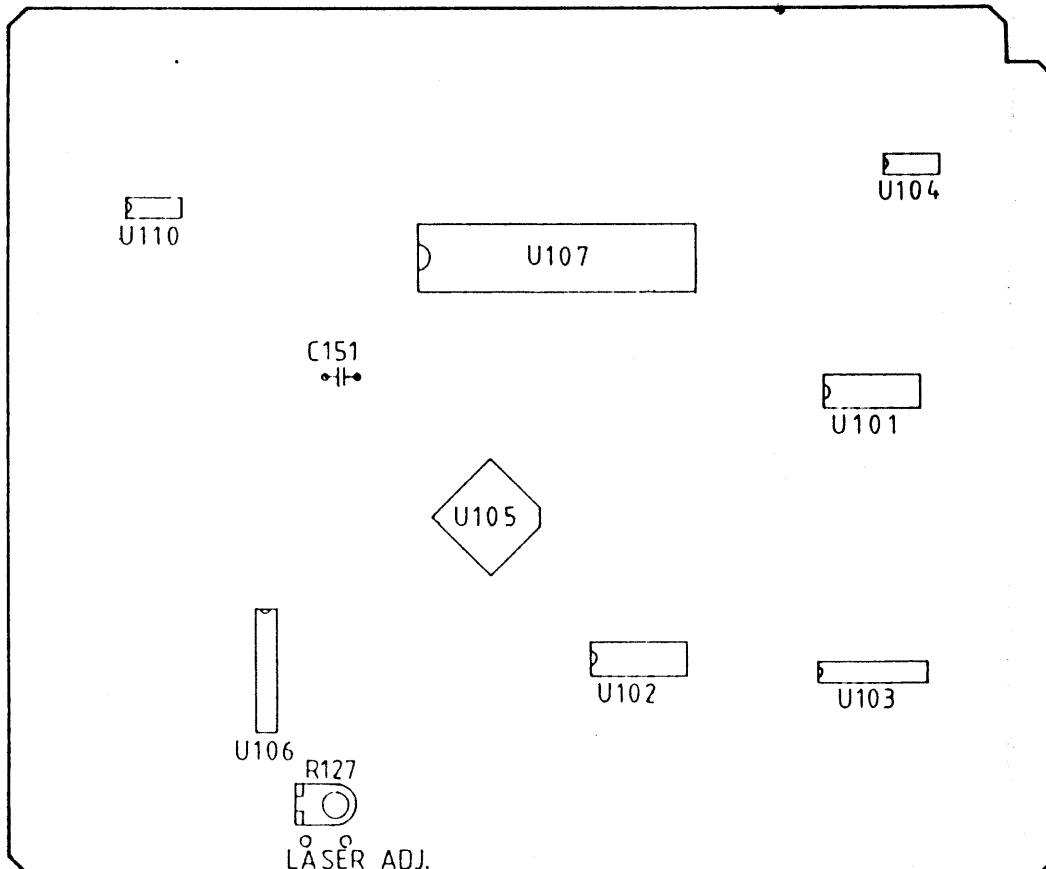
The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure; that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:  
(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND  
(2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE OPERATION.

# ADJUSTMENT POINTS DIAGRAM



$$A = 1.0 \begin{matrix} +0.2 \\ -0.1 \end{matrix} V_{P-P}$$

## LASER CURRENT ADJUSTMENT:

The Integrated circuitry used in the CD PCB eliminate the need for most adjustments by incorporating self adjusting circuitry, However, when parts in the servo circuitry or CD mechanism are replaced, a laser current adjustment should be performed, Follow steps below:

1. Insert the test disc (SONY Type 4, YEDS 18).
2. Make sure the power is off.
3. Connect a high impedance voltmeter across the testpoints LASER ADJ.
4. Turn the power on and press the Play button.
5. When track 1 starts playing, adjust R127 for 50mV +/-2mV.

# IMPORTANT NOTES

## INSTRUCTIONS FOR HANDLING OPTICAL SYSTEM BLOCK PICK-UP

Electrostatic breakdown of the laser diode in the optical system block may occur due to a potential difference caused by electrostatic charge accumulated on clothing, body, etc. A ground must be provided as follows to prevent any electrostatic discharge during unpacking or repair work.

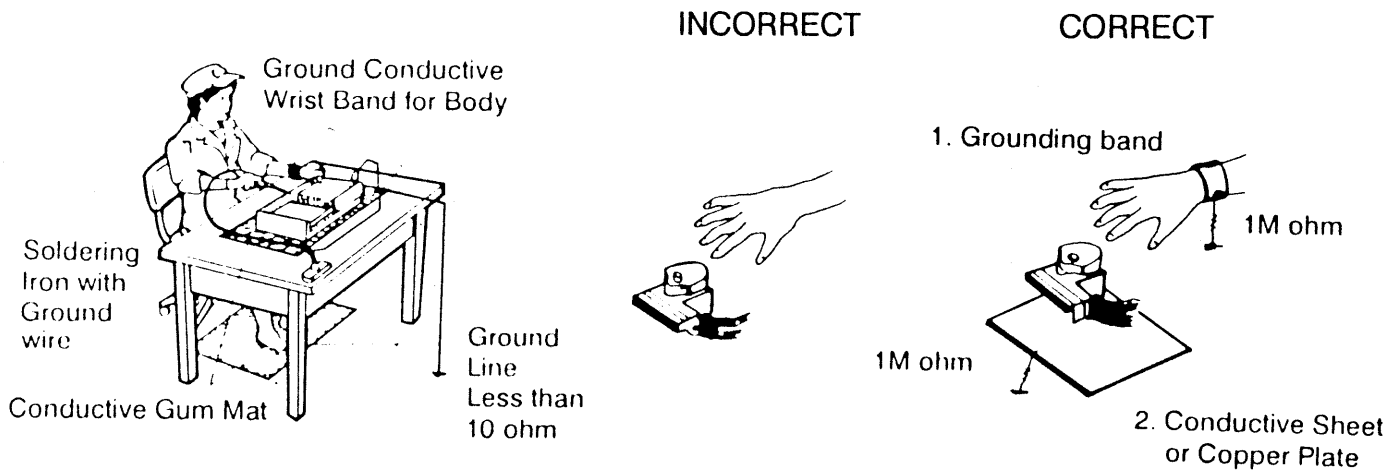
### 1. Body Ground.

Be sure to wear a grounding band (1M ohm) that is properly grounded to remove any static electricity from your clothing or body.

### 2. Ground for Work Bench

Be sure to place a conductive sheet (1M ohm) or copper plate with proper grounding on the work bench or other surface on which the pick-up is to be placed.

3. Because a static electricity charge on clothing does not discharge through the body grounding band, do not let clothing contact the pick-up unit.



**NOTE:** Laser diodes are so susceptible to damage from static electricity that even if a static discharge does not ruin the diode, it can shorten its life or cause it to work improperly.

## PRECAUTIONS FOR CHECKING BEAM EMISSION OF LASER DIODE

The laser beam of this unit is focused on the reflecting surface of the objective lens in the optical system block. Therefore, keep your eyes at least 12 inches (30 cm) away from the objective lens when the laser diode is ON.

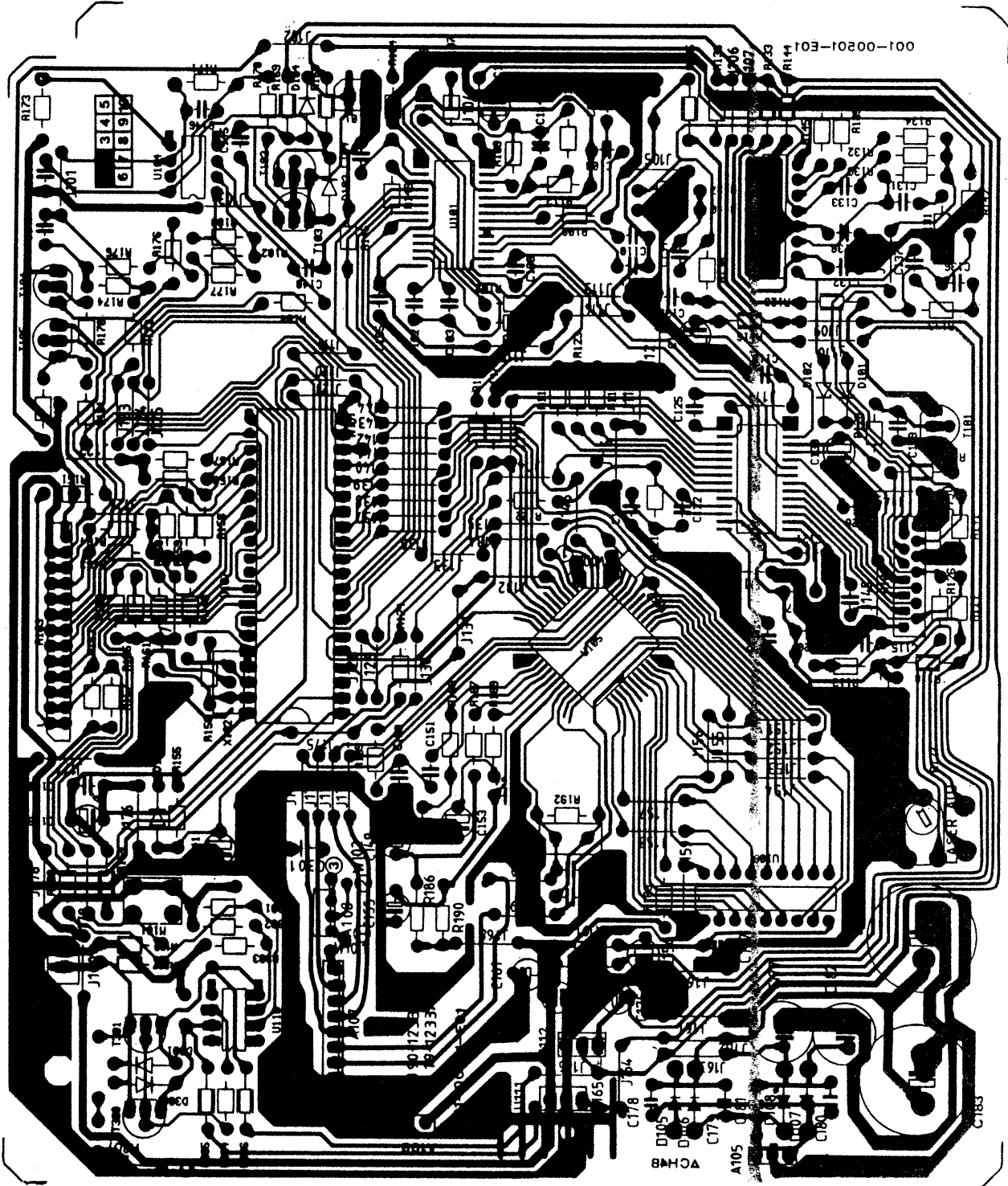
(Checking Method for Laser Diode and Focus Search Function.)

When the POWER switch is turned ON after the chucking arm is removed, observe the objective lens and confirm that the following operations are performed properly.

(The optical system block should be at the lead-in area position before chucking arm is removed)

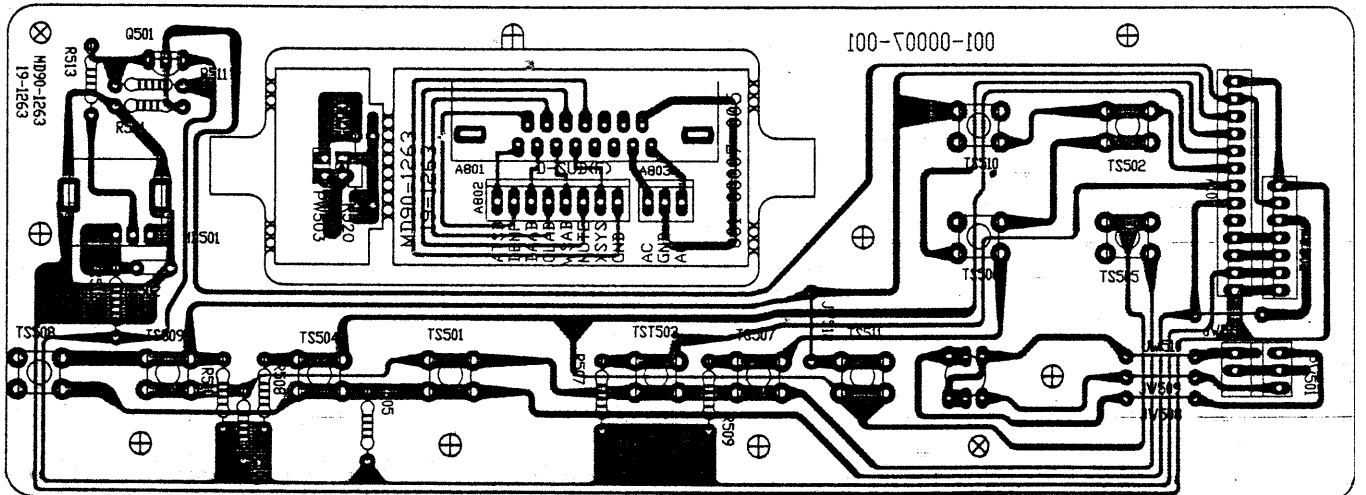
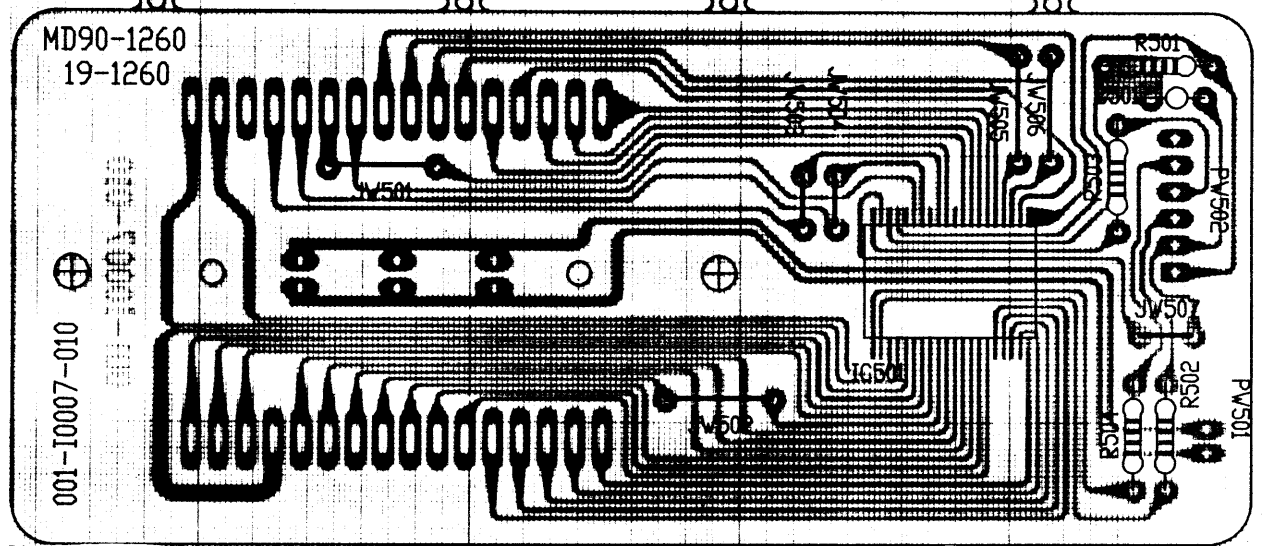
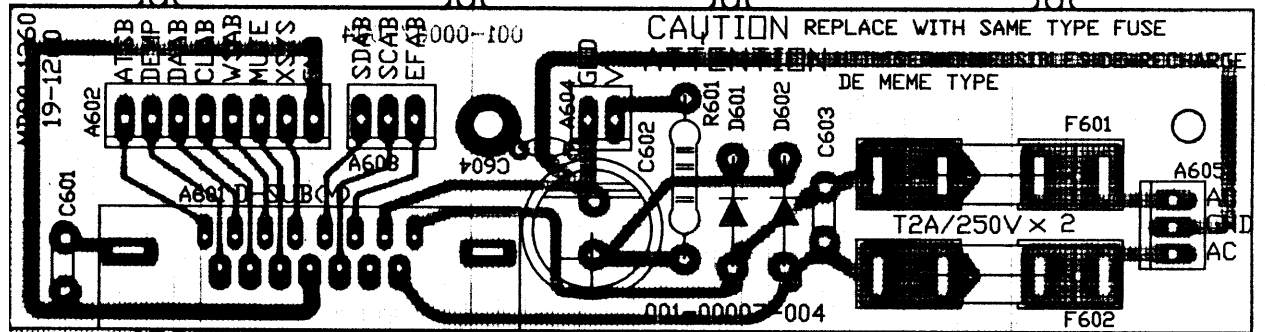
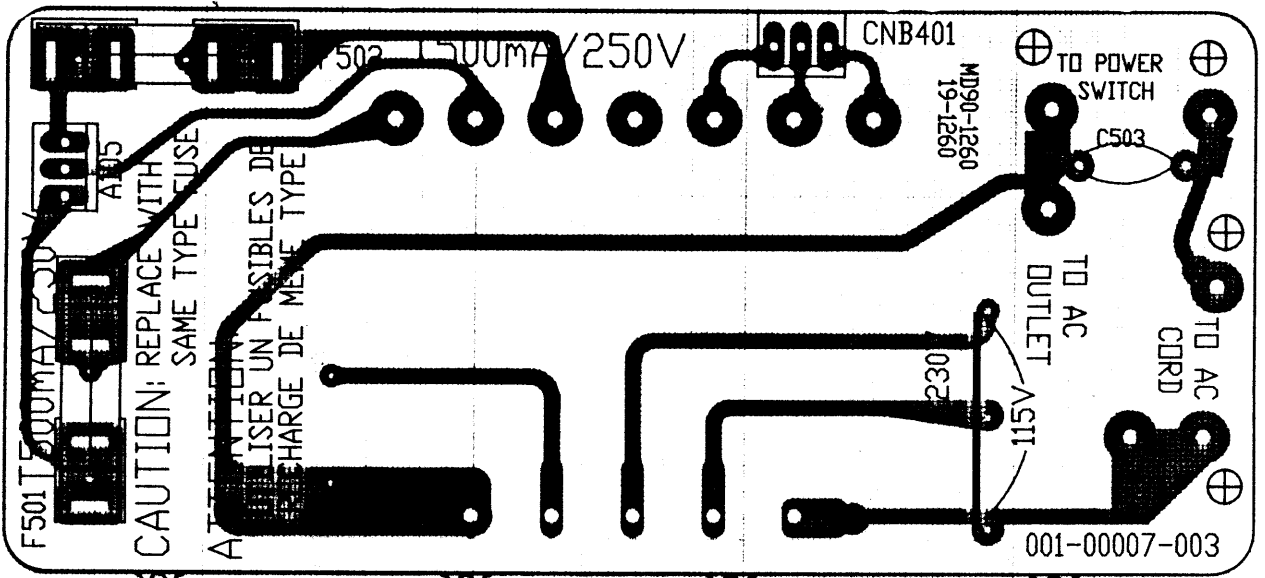
- (1) The laser should be at the innermost position after the chucking arm is removed.
- (2) The diffused light of the laser beam should be seen when the POWER switch is turned ON.
- (3) Vertical (up and down) movement of the objective lens (several times) will take place.





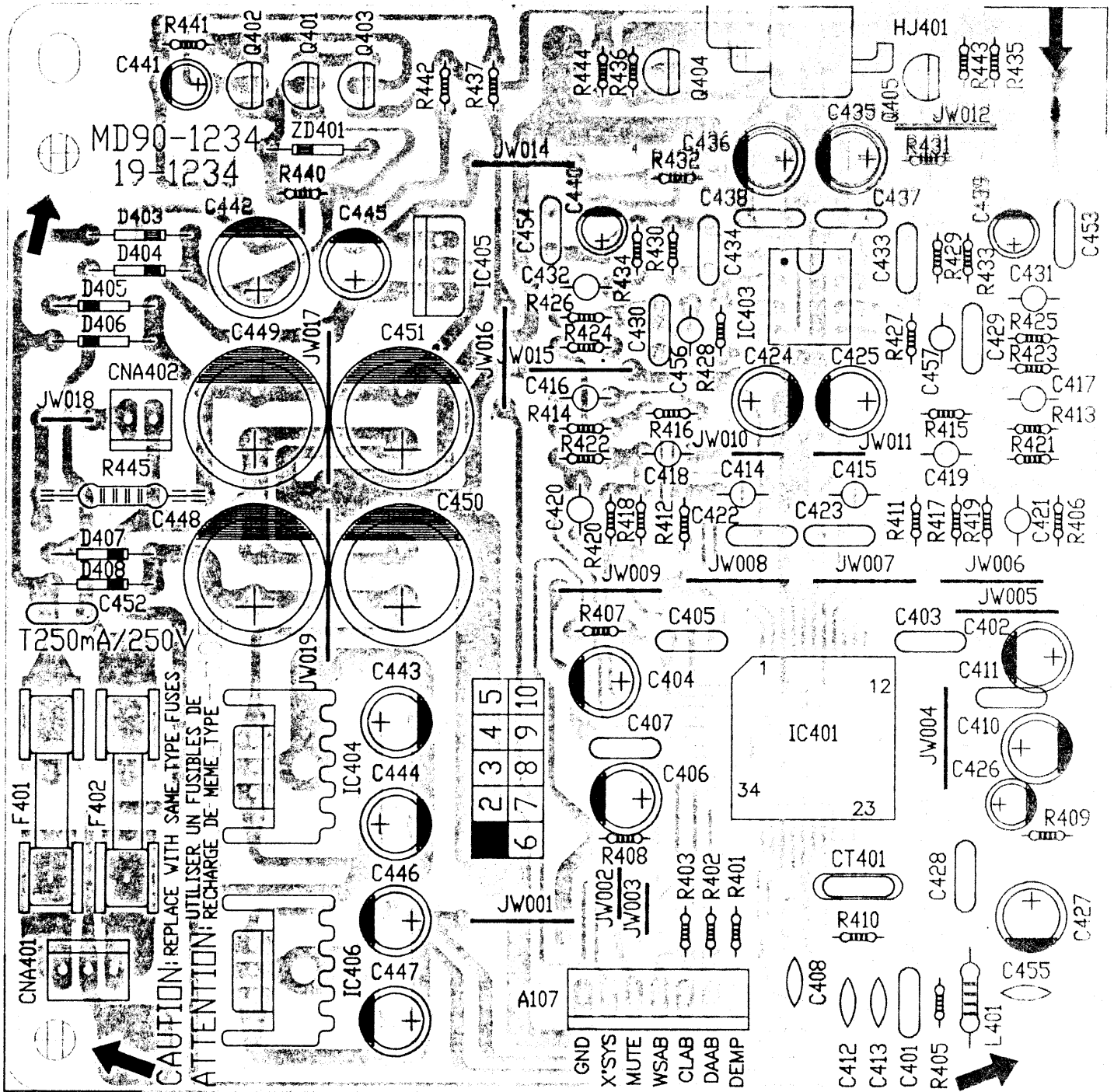
001-00201-E01

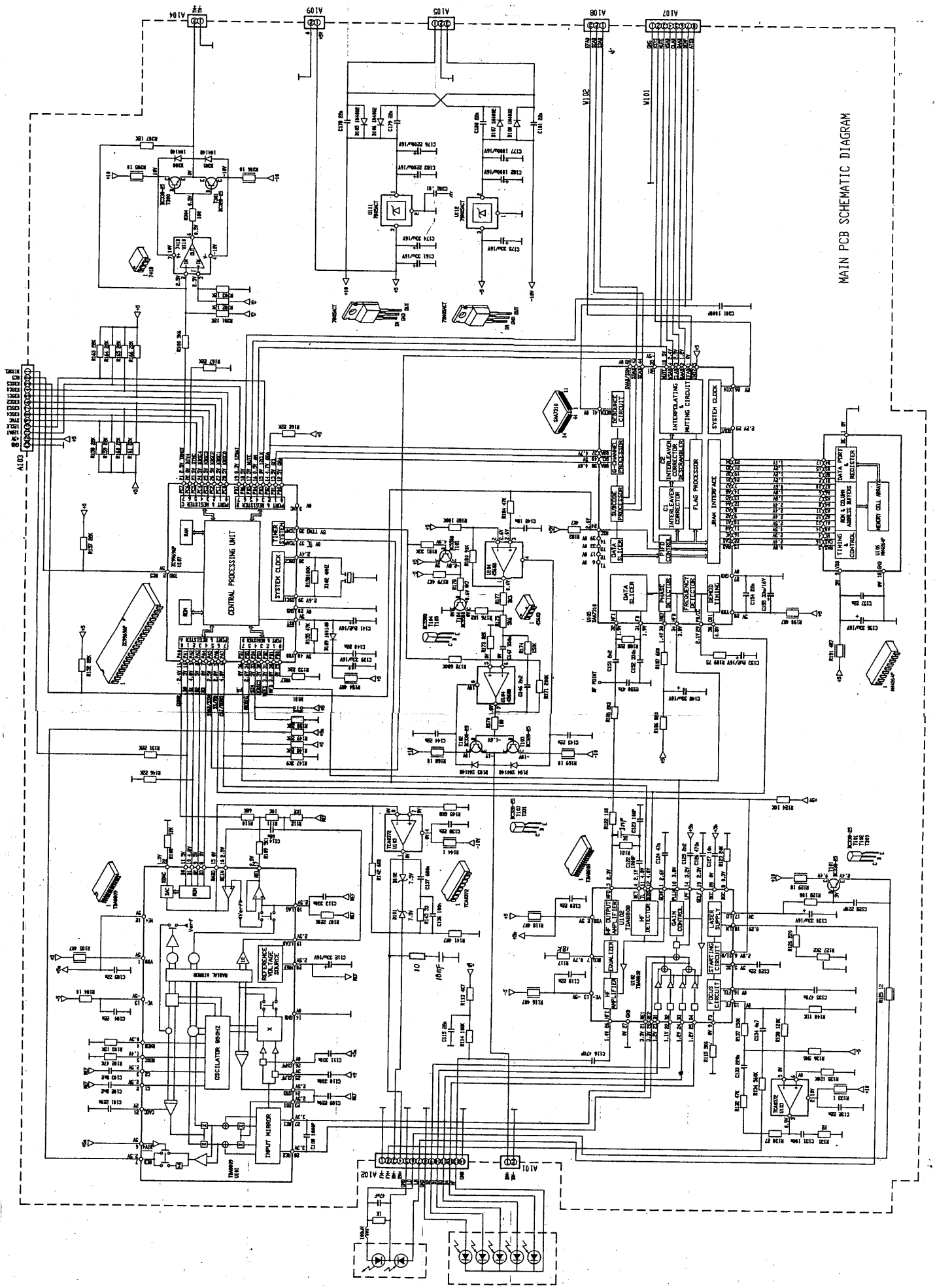
A105  
D105  
D106  
C17  
C183



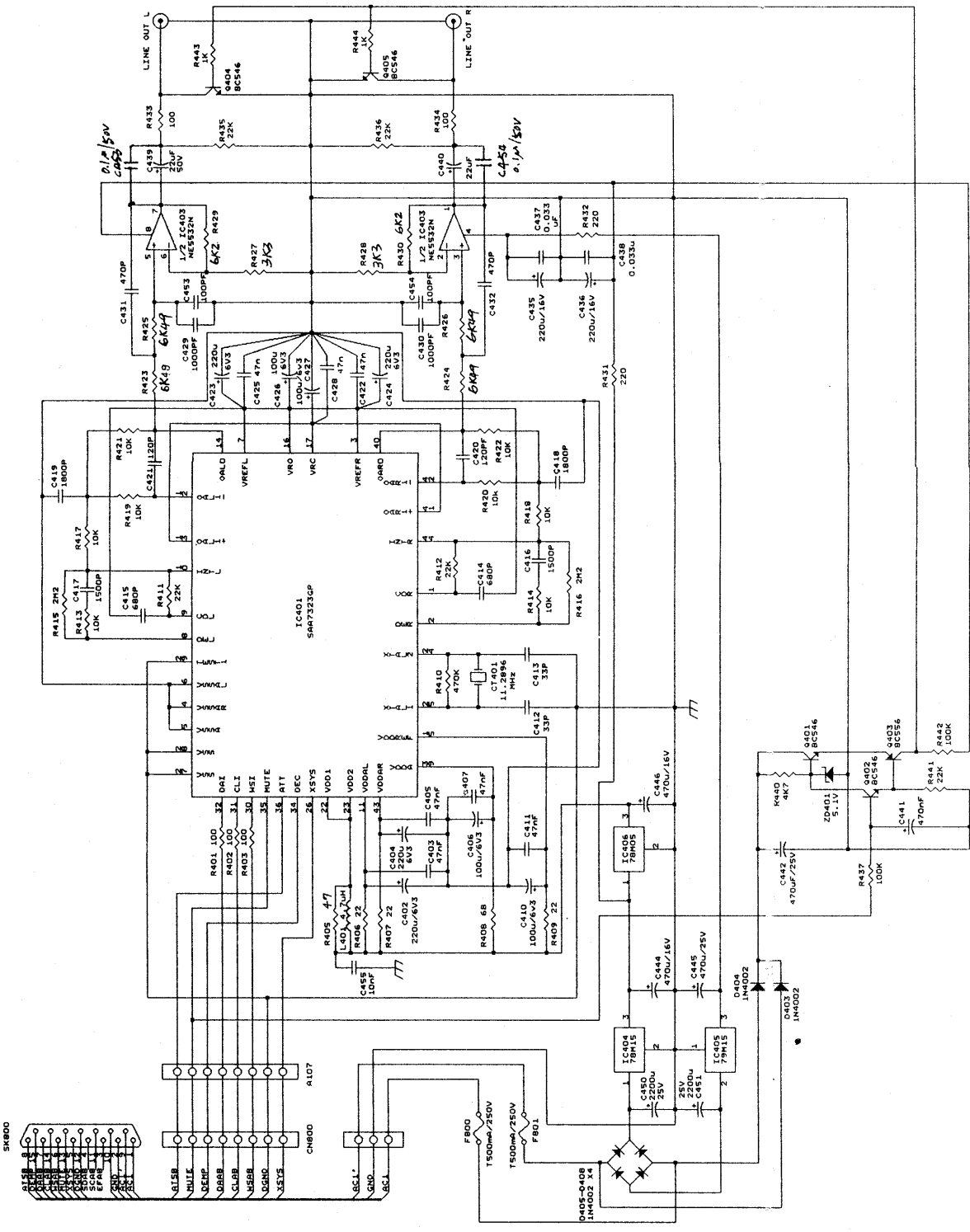


# PCB LAYOUT (DAC PCB)



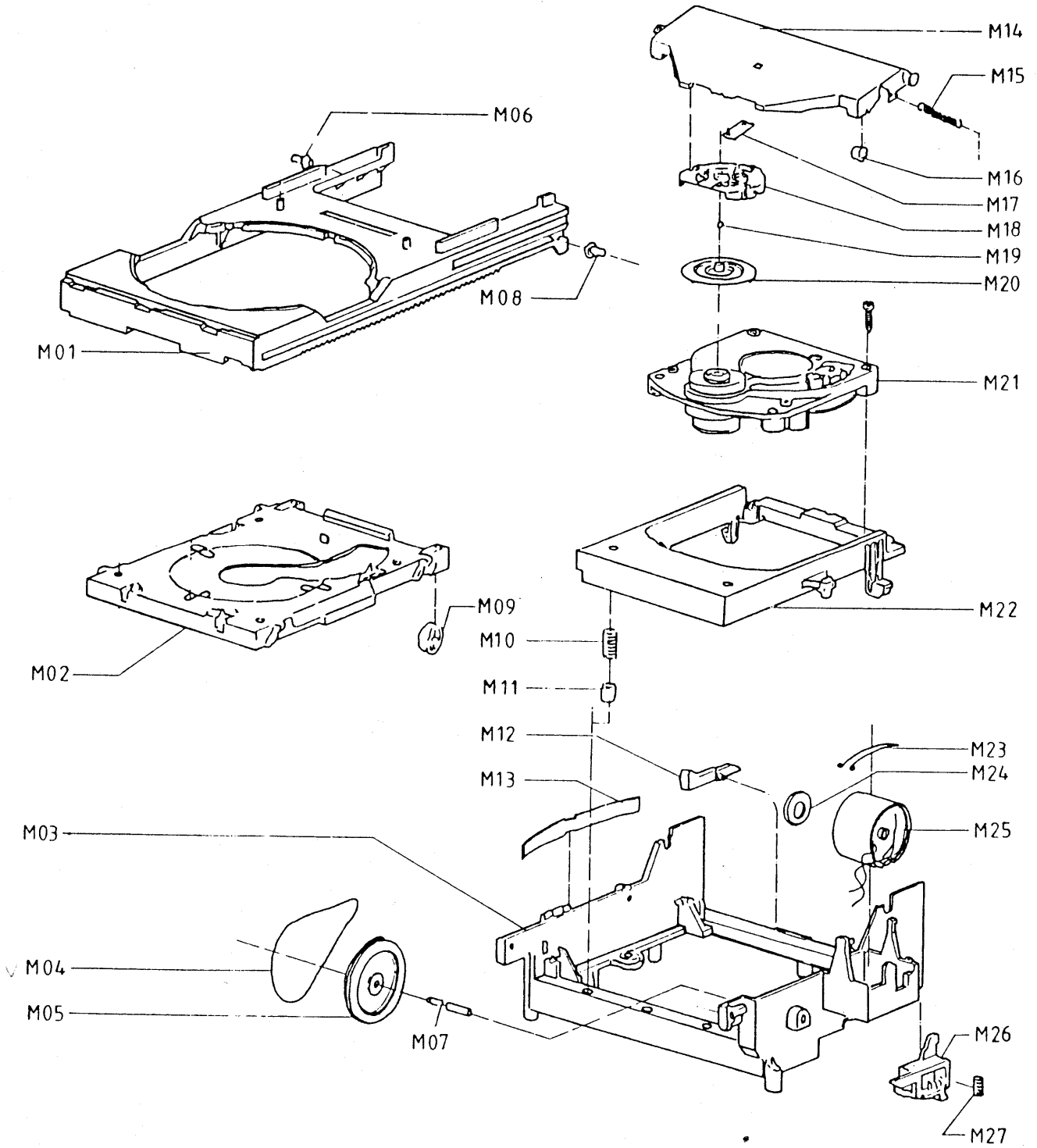


MAIN PCB SCHEMATIC DIAGRAM



Company	ARCCL INTERNATIONAL CORP.
Title	005401 DAC PCB.
Size	Document Number: 40294131.L
Sheet	B of 8
Date	Nov 11, 1994

# MECHANISM EXPLODED VIEW



## MECHANISM EXPLODED VIEW PARTS LIST

### 1. MD90-1229-1

ITEM	PART NO.	DESCRIPTION	Q'TY
A	MD90-1229	CD MECHANISM COMPLETE UNIT FOR CD6	1
B	117-00501-001	SHIELDED PLATE	1

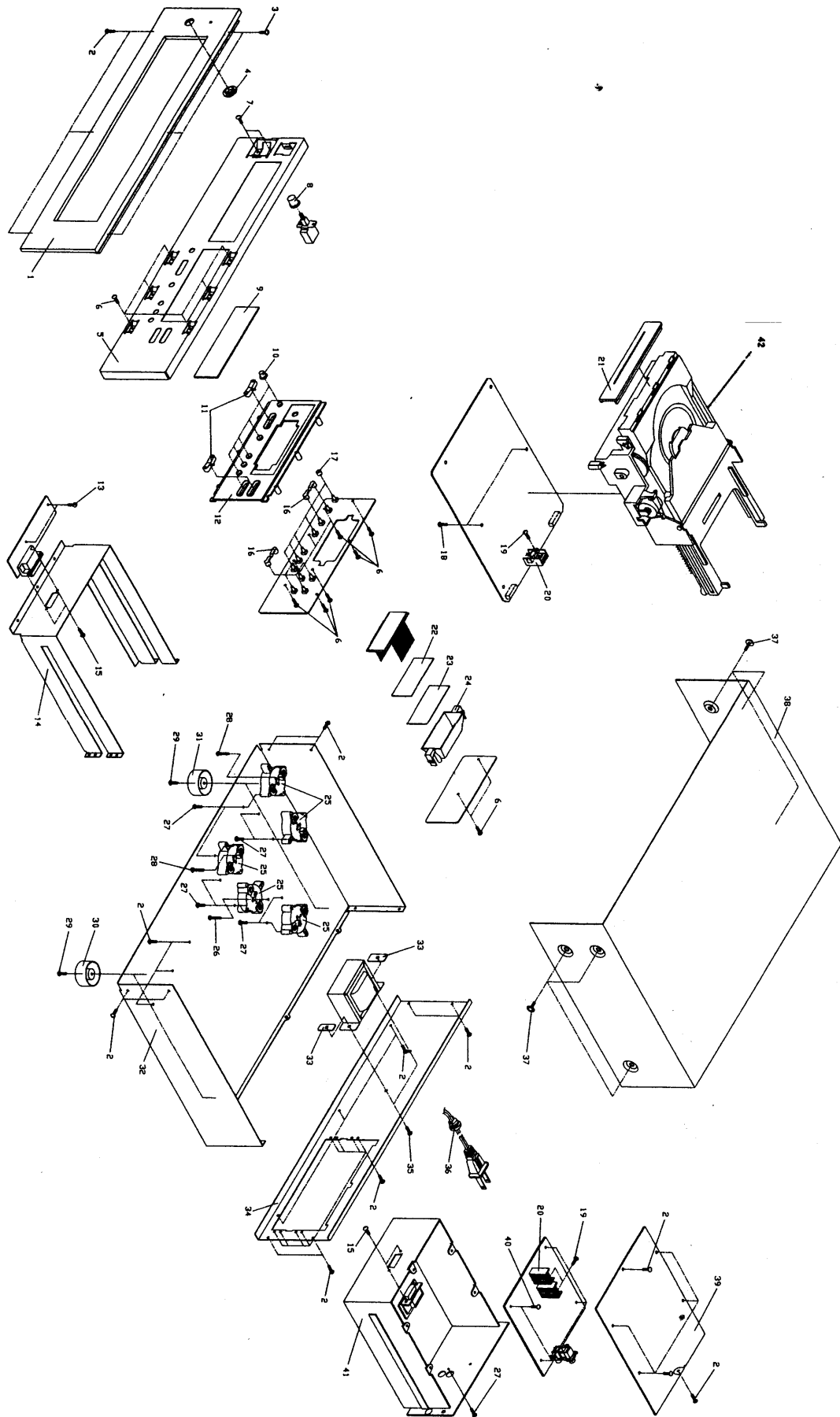
### 2. MD90-1229

ITEM	PART NO.	DESCRIPTION	Q'TY
M01	317 10005A	TRAY	1
M02	317 10003B	LIFT PLATE	1
M03	259 10002C	CHASSIS	1
M04	017 40002	BELT	1
M05	077 30005	GEAR WHEEL	1
M06	271 30004	GUIDE	2
M07	316 40005	SHAFT	1
M08	271 30003	GUIDE	2
M09	151 40001	ROLLER LIP	2
M10	172 40016	COMPRESSION SPRING	4
M11	078 40002	SUSPENSION GROMMET	4
M12	209 40001A	TUMBLER	1
M13	172 30015	FLAT SPRING	1
M14	300 10004C	LID	1
M15	172 40017	TENSION SPRING	2
M16	151 40002	ROLLER LID	2
M17	300 40005	PIVOT PLATE	1
M18	258 20004A	CENTRING RING	1
M19	013 40001	BALL	1
M20	258 30003	PRESSURE RING (CARRIER RING)	1
M21	480 32403	CDM4 MINI	1
M22	259 10003C	SUPPORT PIECE	1
M23	172 40014	SPRING	1
M24	139 40003A	PULLEY	1
M25	118 40001	LOADER MOTOR	1
M26	255 30003C	SWITCH BRACKET	1
M27	172 40013	COMPRESSION SPRING	1

1. CDM7'S mechanism MD90-1229-1, is composed of MD90-1229 and a shielding plate for anti-interference.

2. MD90-1229 is mechanism unit of CD6.

REV. B  
Nov.29, 1995



## MECHANICAL PARTS LIST

REF.NO.	PART NO.	DESCRIPTION	Q'TY
1	103-00007-001	FRONT PANEL A	1
2	128-03006-014	TAPPING SCREW PS #3x6R	31
3	128-03006-024	TAPPING SCREW PS #3x6R	3
4	106-00006-007	KNOB GUIDE	1
5	103-00006-002	FRONT PANEL B	1
6	130-03008-014	TAPPING SCREW PS #3x8R	16
7	131-03006-014	MACHINE SCREW PM #3x6Rx0.5	2
8	102-00006-001	POWER KNOB	1
9	101-00007-001	DISPLAY WINDOW	1
10	102-00006-002	PUSH KONB A	5
11	102-00006-003	PUSH KONB B	3
12	106-00007-002	PCB HOLDER	1
13	131-03008-013	MACHINE SCREW PM #3x8Rx0.5	2
14	105-00007-001	MODULE HOLDER	1
15	131-02608-014	MACHINE SCREW PM #2.6x8R	4
16	106-00006-006	DOUBLE BUSH	3
17	106-00006-005	SINGLE BUSH	5
18	130-03008-013	TAPPING SCREW PS #3x8R	2
19	129-03006-013	TAPPING SCREW PM #3x6R TYPE 3	3
20	111-00610-001	HEAT SINK	3
21	118-00007-001	CD DOOR	1
22	101-00007-003	FILTER PLATE (BLUE)	1
23	101-00007-002	FILTER PLATE (WHITE)	1
24	106-00007-001	DISPLAY HOLDER	1
25	106-00006-003	CD HOLDER	5
26	130-03022-014	TAPPING SCREW PS #3x22R	1
27	130-03010-W14	TAPPING SCREW PS #3x10R	9
28	130-03016-033	TAPPING SCREW PS #3x16R	2
29	128-03010-W14	TAPPING SCREW #3x10R	4
30	113-00006-001	FOOT	2
31	113-00006-002	FOOT	2
32	122-00007-005	BOTTOM CASE	1
33	105-00405-008	TRANSFORMER BRACKET	2
34	122-00007-003	BACK BOARD	1
35	149-00006-001	SCREW M4x10R BLK	2
36	055-07150-001	POWER CORD STOPPER SR-4N-4	1
37	149-00501-001	SPECIAL SCREW M4x6 BLK	6
38	122-00006-004	TOP COVER	1
39	122-00007-001	MODULE TOP COVER (CD-7)	1
40	131-03006-013	MACHINE SCREW PM #3x6	4
41	122-00007-002	MODULE BOTTOM CASE (CD-7)	1
42	MD90-1229-1	CD MECHANISM COMPLETE UNIT FOR CD7	1

REV. B  
Nov. 29, 1995

CDM7 SERVICE PARTS LIST

PART NO.	DESCRIPTION	SPECIFICATION
016-00004-TDK	CERAMIC FILTER	TDK4* OMC3
020-00372-TCA	I.C.	TCA0372/DP2 16P
020-00741-NJM	I.C.	NJM741D 8P
020-02111-PCF	I.C.	PCF2111T 40P
020-04264-OMN	I.C.	MN4264P-15 18P
020-04560-OBA	I.C.	BA4560 8P
020-07310-SAA	I.C.	SAA7310GP
020-07850-UPC	VOLTAGE REG IC.	UPC7805H 5V/1A
020-08808-TDA	I.C.	TDA8808T
020-08809-TDA	I.C.	TDA8809T
020-79M05-NJM	I.C.	NJM79M05
020-99696-OZC	I.C.	ZC99696P
025-00006-001	INFRARED RECEIVER	
025-00006-002	LED	GREEN LTL-231
025-00007-001	LCD	UTN-H078ENV
025-00007-002	LAMP	4.75# 18V 65mA
025-00006-004	FUSE	250V/0.5A
025-00007-003	FUSE	250V/2A SEMKO
027-00007-001	SOCKET A	DA-15SLURL2
045-00501-001	MOTOR	RF-510T-12620 DC4.6V
048-00007-001	TRANSFORMER	EI-57
049-00501-001	CD PICKUP	CDM-4
055-00501-002	GUIDE	271-30003 WHT.
055-00501-003	GUIDE	271-30004 BLK.
101-00007-001	DISPLAY WINDOW	
102-00006-001	POWER KNOB	4S0006M12
102-00006-002	PUSH KNOB A	4S00006M
102-00006-003	PUSH KNOB B	24 x 11.5
103-00006-002	FRONT PANEL B	
103-00007-001	FRONT PANEL A	
105-00007-001	MODULE HOLDEER	
106-00200-001	FUSE HOLDER	
106-00501-002	TUMBLER SW.	209-40001A 4S501M24
106-00501-003	SW. BRACKET	255-30003C 3S501M25
106-00501-004	CENTRING RING	258-20004A 2S501M26
106-00501-005	CARRIER	258-30003B 3S501M27
106-00501-006	LIFT PLATE	317-10003B 1S501M34
106-00501-007	PIVOT PLATE	300-40005 4S501M33
106-00501-008	TRANSPORT	321-30002 3S501M44
107-00501-001	MOTOR PULLEY	139-40003A 4S501M21
108-00501-001	GEAR WHEEL	077-30005 3S501M20
108-00501-002	ROLLER L/P	151-40001 4S501M22 WHT. L88
108-00501-003	ROLLER LID	151-40002 4S501M23 BLK. L88
109-00501-001	SHAFT	316-40005 4S501M43
113-00006-001	FOOT	
113-00501-002	SUSPENSION GROMMET	078-40002 4S501M35
113-00501-003	BELT	017-40002
115-00501-001	FLAT SPRING	172-30015
118-00501-003	LID	300-10004C
121-00501-001	CHASSIS	259-10002C
121-00501-002	SUPPORT PIECE	259-10003B
121-00501-003	TRAY	317-10005A
122-00006-004	TOP COVER	1S0006M10
142-00501-001	BALL	013-40001 3mm
147-00501-001	COMPRESSION SPRING	172-40016
147-00501-002	COMPRESSION SPRING	172-40013
147-00501-003	SPRING	172-40014 #26 7/0.16 BLK
147-00501-004	TENSION SPRING	172-400017
200-00007-001	R/C HAND SET	
020-05532-ONE	IC.	NE5532N
020-07323-SAA	IC.	SAA7323GP
020-07805-UPC	VOLTAGE REG IC.	UPC7805H 5V/1A
020-78M15-UPC	IC.	UPC78M15 350mA
020-79M15-NJM	IC.	NJM79M15
035-82896-011	CRYSTAL	11.2896MHZ
122-00007-001	MODULE TOP COVER	CDM7
122-00007-002	MODULE BOTTOM CASE	CDM7



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