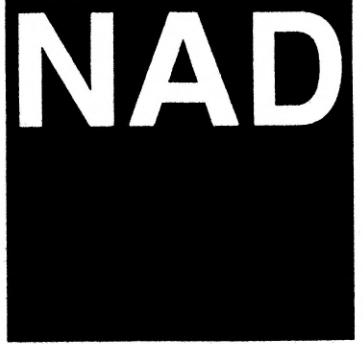


SERVICE MANUAL



SERVICE SAFETY PRECAUTIONS (UL)

1. Use exact replacement parts for critical locations marked "⚠"
2. Return lead dress to original position and re-install protective covers.
3. Before returning to customer, test for shock hazard; use either method A or B:

A. Leakage test "cold":

1. Unplug the AC cord; turn power switch ON.
2. Connect one lead of High Voltage Insulation Tester to both prongs of the AC plug.
3. Touch other lead to all exposed metal parts.
4. Impedance measurement must be 0.3-5.0 Megohms.

B. Leakage test, "live" :

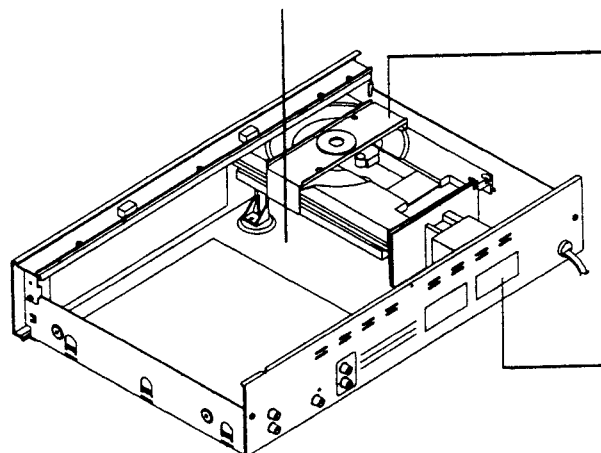
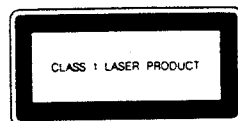
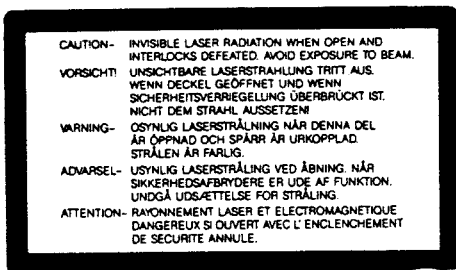
1. Plug unit directly into the AC outlet: do not use isolation transformer.
2. Connect one lead of the Leakage Current Tester to earth ground.
3. Touch other lead to all exposed metal parts.
4. Leakage measurement must be less than 0.5 milliamps.

514
COMPACT
DISC
PLAYER

514
COMPACT
DISC
PLAYER

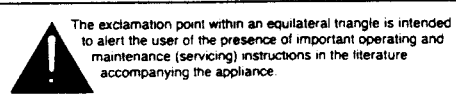
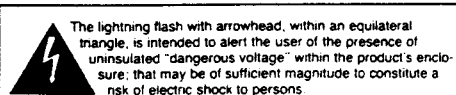
SAFETY INFORMATION

CAUTION



CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE OF T630mA/250V FUSES.

ATTENTION: POUR MAINTENIR PROTECTION CONTRE RISQUE D'INCENDIE, UTILISER LES FUSIBLES DE RECHANGE DE MEME TYPE DE T630mA/250V.



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.

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SPECIFICATIONS

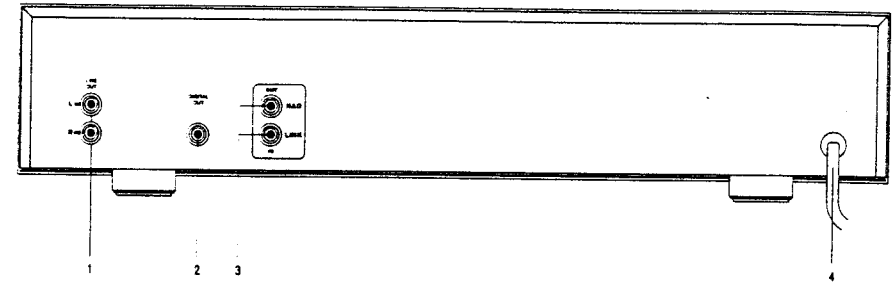
Disc capacity.....	Single disc 120 or 80mm
Programming capacity.....	20 Tracks
Digital-to Analogue conversion.....	MASH, 18-bit resolution, 4 x oversampled, linear phase with 18-bit coefficients
Analogue filter.....	5 Pole active
Frequency response 5Hz-20kHz.....	+/-0.2dB
De-emphasis error.....	<0.2dB
THD (at 0dB, 1kHz).....	0.002%
Dynamic range.....	98dB
Linearity.....	+0.5dB; 0 to -90dB
Signal/Noise Ratio.....	>100dB
(A-weighted, measured with all zeroes test disc)	
Channel Separation 1kHz.....	>100dB
Wow and Flutter.....	Unmeasurable (Quartz accuracy)
Output Impedance.....	120 ohm
Output Level at 0dB.....	2.0 V rms
Digital error correction.....	CIRC with double error correction in C1 and C2
Digital code input.....	Sony/Philips serial data format
Remote control.....	Yes

PHYSICAL SPECIFICATION

Dimensions(WxHxD).....	435 x 93 x 290mm
Net weight.....	4.6 Kg/ 10.14 lbs
Shipping weight.....	5.5 Kg/ 12.13 lbs

REAR PANEL/FRONT PANEL VIEW

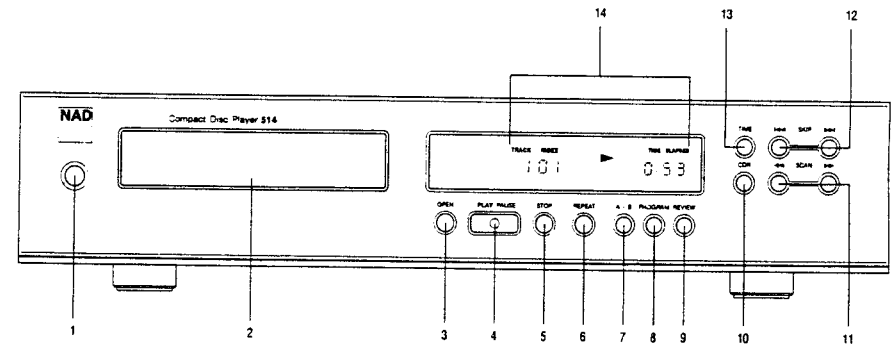
REAR PANEL



1. LINE OUTPUT JACKS
2. DIGITAL OUTPUT

3. NAD LINK IN/OUT
4. AC LINE CORD

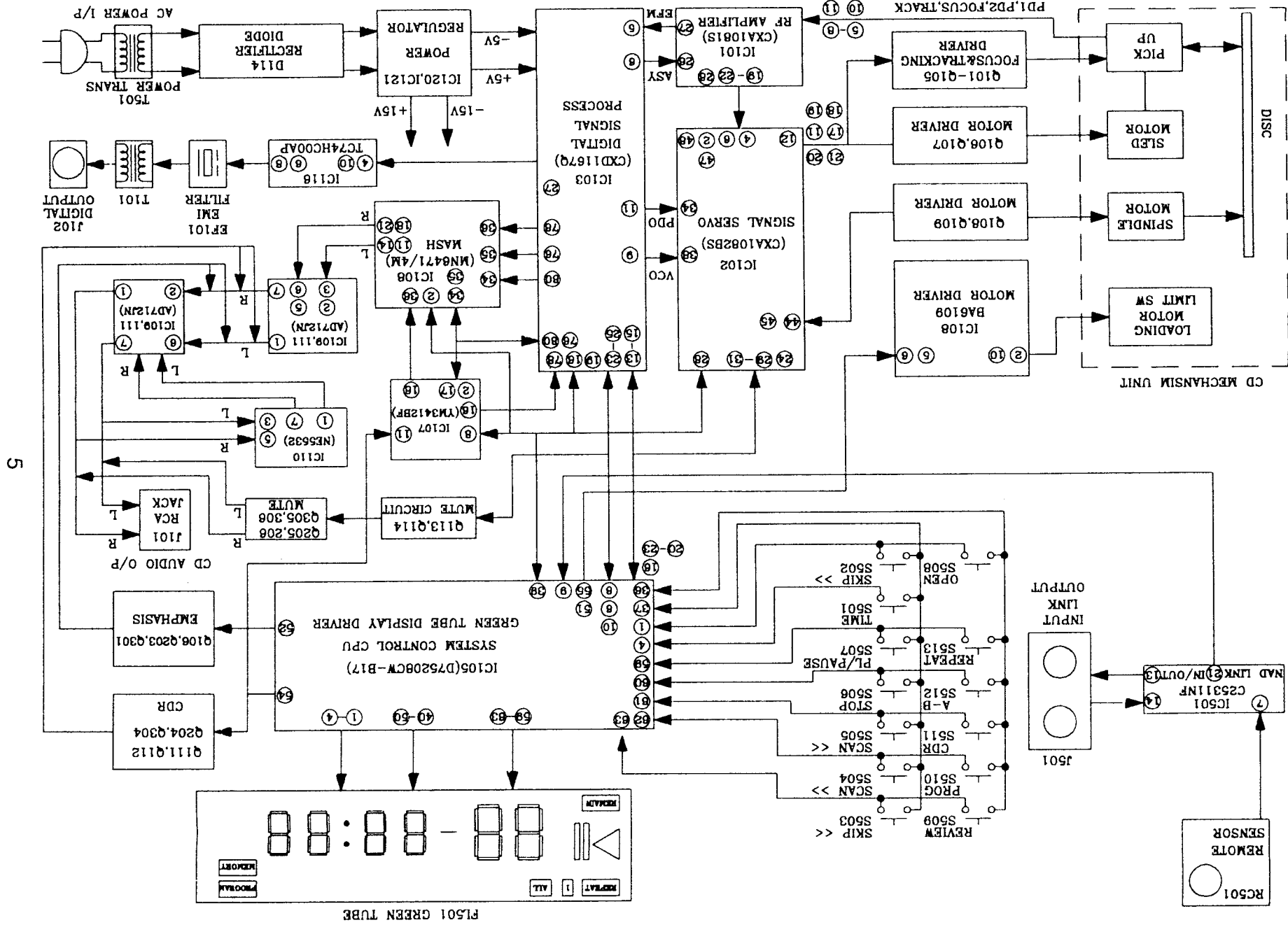
FRONT PANEL



1. POWER
2. DISC DRAWER
3. OPEN
4. PLAY/PAUSE
5. STOP
6. REPEAT
7. A-B REPEAT

8. PROGRAM(ENTER MEMORY)
9. REVIEW
10. CDR
11. SCAN Forward/Back
12. SKIP Forward and Back
13. TIME DISPLAY SELECTOR
14. DISPLAY

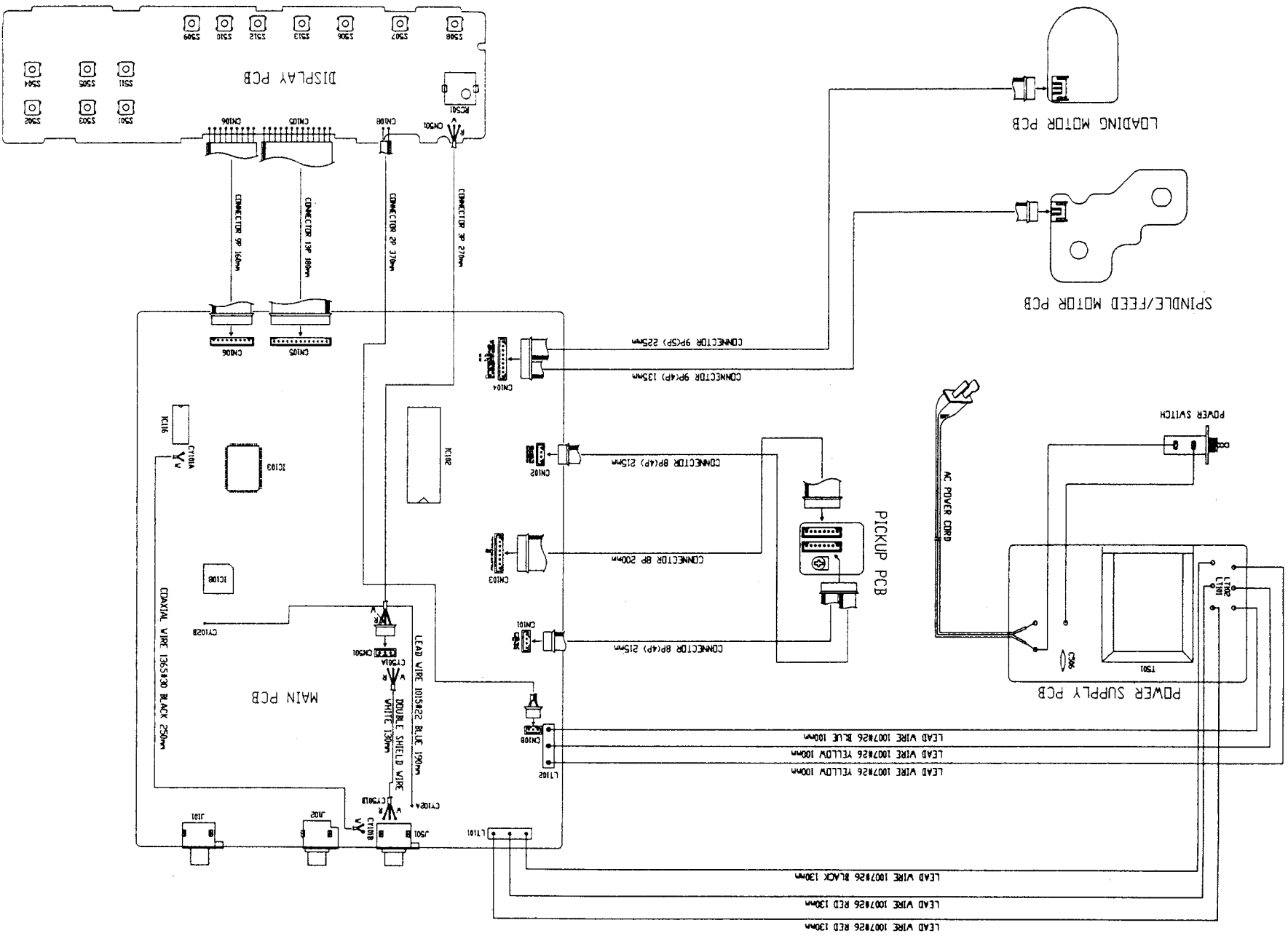
BLOCK DIAGRAM



5

P1501 GREEN TUBE

WIRING DIAGRAM



DISASSEMBLY INSTRUCTIONS

TOP COVER REMOVAL

1. Remove parts in order of disassembly as numbered.

- a. ①-④ Machine screw M4.0X6.0(See Fig. 1.)
- b. ⑤ Tapping screw M3.0X8.0(See Fig. 1.)

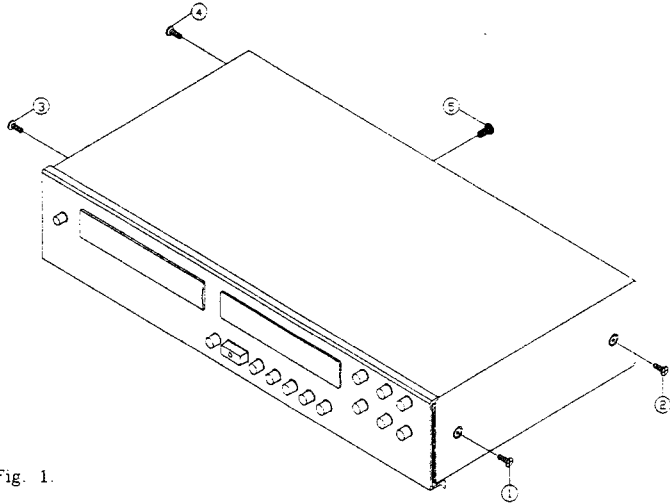


Fig. 1.

2. pull both sides of TOP COVER outward and turning about 35° (shown as arrow ⑥) then remove as arrow ⑦ show. (See Fig. 2.)

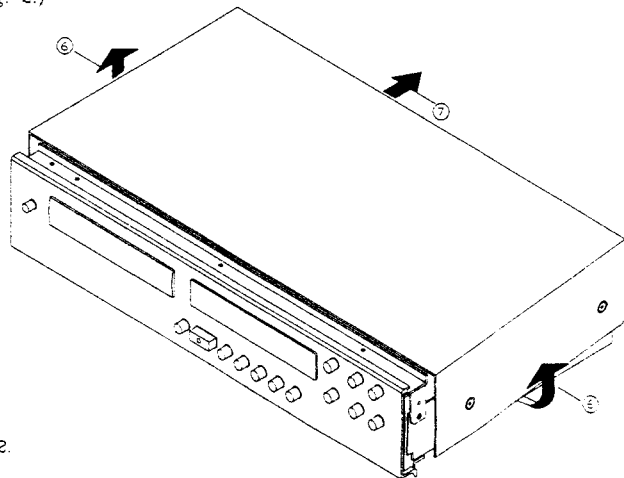


Fig. 2.

ALIGNMENT PROCEDURE

Measuring instruments

- Oscilloscope (Which has a bandwidth of 50 MHz or greater)
- Audio frequency oscillator (AF - OSC)
- Frequency counter (Counter)
- Test disc : SONY YEDS - 7
- Special circuit

TEST MODE Setting Procedure and Key Operation on TEST MODE Procedure :

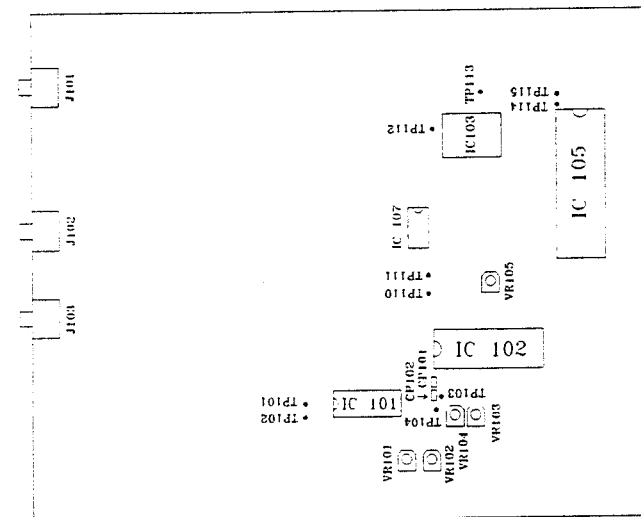
- A) Make sure the power is turned off.
- B) Short TP115 (TMD) and TP114 (GND) together.
- C) Turn the power switch on and the unit will now be in test mode.

Key Operation on TEST MODE

Key No.

- | | |
|---------------|---|
| 1 " OPEN " | : Open and close the tray. |
| 2 " STOP " | : Reset and initialize. |
| 3 " CDR " | : Set the pick-up to the home position. |
| 4 " REPEAT " | : Emit the power and start focus searching. |
| 5 " A - B " | : Start the disc motor. |
| 6 " TIME " | : Switch the tracking servo on / off. |
| 7 " REVIEW " | : Switch the sled servo on / off. |
| 8 " PROGRAM " | : Move the sled motor forward. |
| 9 " SCAN " | : 10 - Track jump forward. |
| 10 " SCAN " | : 10 - Track jump backward. |
| 11 " SKIP " | : 100 - Track jump forward. |
| 12 " SKIP " | : 100 - Track jump backward. |

Main PCB Test Points



Special Circuit

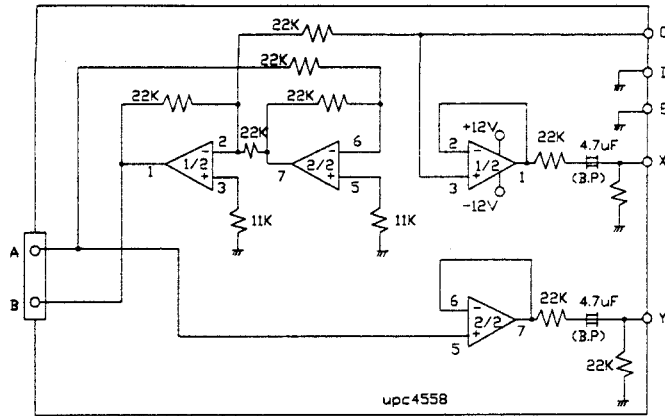


Fig. 3

Focus and Tracking Gain Setting

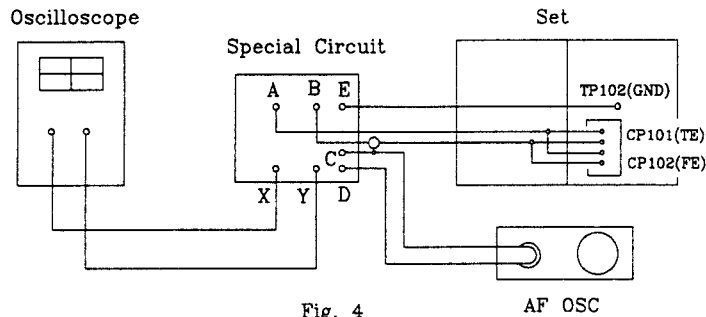


Fig. 4

Adjustment of Focus Offset

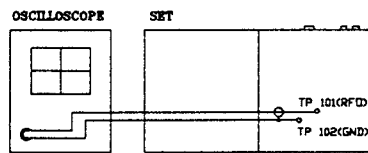


Fig. 5

Adjustment of E-F Balance

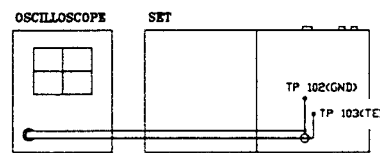


Fig. 6

Adjustment of PLL

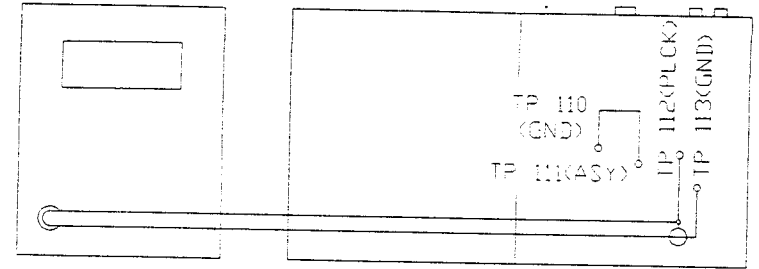
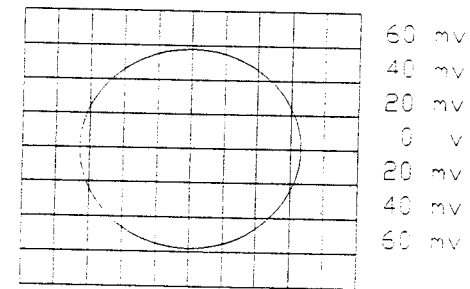


Fig. 7

Adjustment of Focus Servo

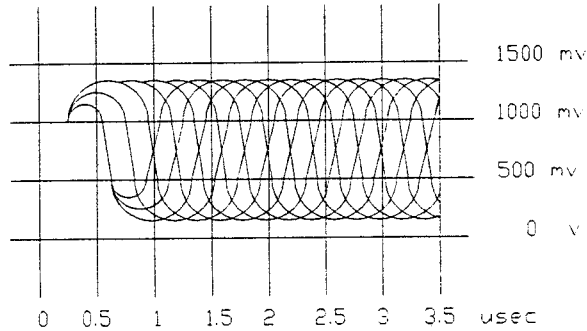
Focus Gain Setting

1. Remove the short ring from CP102 of the set.
2. Connect oscilloscope, special circuit (Fig. 3 Page 9), AF - OSC and the set as shown Fig. 4 Page 9.
3. Make the set to TEST MODE and load the test disc (SONY YEDS - 7 which has no damage) on the tray.
4. Press Key from No. 1 to No. 7 in order of Key No. on TEST MODE (Ref. TEST MODE setting procedure and Key operation on TEST MODE).
5. Apply the sine wave signal of 1.3 kHz, about 100 mVrms from the AF - OSC.
6. Adjust VR103 to make the lissajous's waveform circularly.



Adjustment of Focus Offset

1. Join CP102 of the set with the shorting.
2. Connect oscilloscope to the set as shown Fig. 5 Page 9.
3. Make the set to TEST MODE and load the test disc (SONY YEDS - 7 which has no damage) on the tray.
4. Press Key from No. 1 to No. 7 in order of Key No. on TEST MODE.
5. Adjust VR102 to make the eye patterns which has the maximum amplitude and the biggest diamond windows.

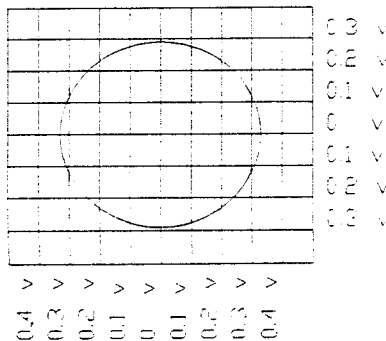


The above is an example of good eye pattern.
The diamond windows in the center portion are large and clear.

Adjustment of Tracking Servo

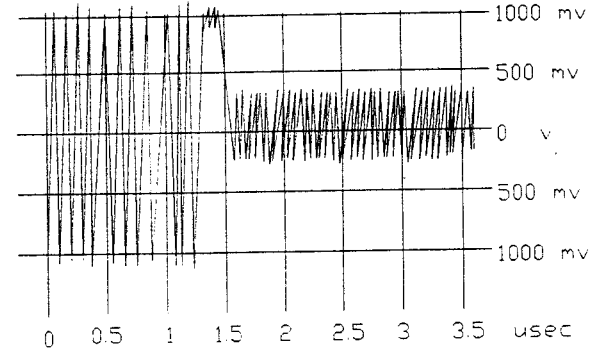
Tracking Gain Setting

1. Remove the shorting from CP101 of the set.
2. Connect oscilloscope , special circuit (Fig. 3 Page 9) , AF - OSC and the set as shown Fig. 4 Page 9.
3. Make the set to TEST MODE and load the disc (SONY YEDS - 7 which has no damage) on the tray.
4. Press Key from No. 1 to No. 7 in order of Key No. on TEST MODE.
5. Apply the sine wave signal of 1.15 kHz , about 400 mVrms from the AF - OSC.
6. Adjust VR104 to make the lissajous's waveform is circular.



Adjustment of E - F Balance

1. Join the shorting to CP101 of the set.
2. Connect oscilloscope to the set as shown Fig. 6 Page 9.
3. Make the set to TEST MODE and load the test disc (SONY YEDS 7 which has no damage) on the tray.
4. Press Key from No. 1 to No. 6 in order of Key No. on TEST MODE and Tracking servo off.
5. Adjust VR101 to make the waveform symmetrically on the oscilloscope screen.



Adjustment of PLL (Phase Lock Loop)

1. Short TP110 (GND) and TP111 (ASY) of the set and connect frequency counter to the set as shown on Fig. 7 Page 10.
2. Make the set to TEST MODE and load the test disc (SONY YEDS -7 which has no damage) on the tray.
3. Press Key from No. 1 to No. 3 in order of Key No. on TEST MODE.
4. Adjust VR105 to show the counter reading is about 4.32MHz.
5. Open TP110 and TP111 of the set and press Key from No. 4 to No. 7 in order of Key No. on TEST MODE.
6. Reconfirm the counter reading is within $4.3218 \text{ MHz} \pm 0.0025 \text{ MHz}$.

IMPORTANT NOTES

INSTRUCTION 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, human body, etc. A ground must be provided as follows to prevent any electrostatic charge during unpacking or repair work.

1. Ground for Human Body

Be sure to wear a grounding band (1M ohm) that is properly grounded to remove any static electricity that may be charged on the body.

2. Ground for Work Bench

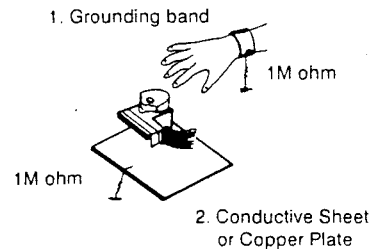
Be sure to place a conductive sheet (1M ohm) or copper plate with proper grounding on the work bench or other surface on which the pick-up is to be placed.

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

INCORRECT



CORRECT



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.

(Operation Check 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 when it is checked at this time.)

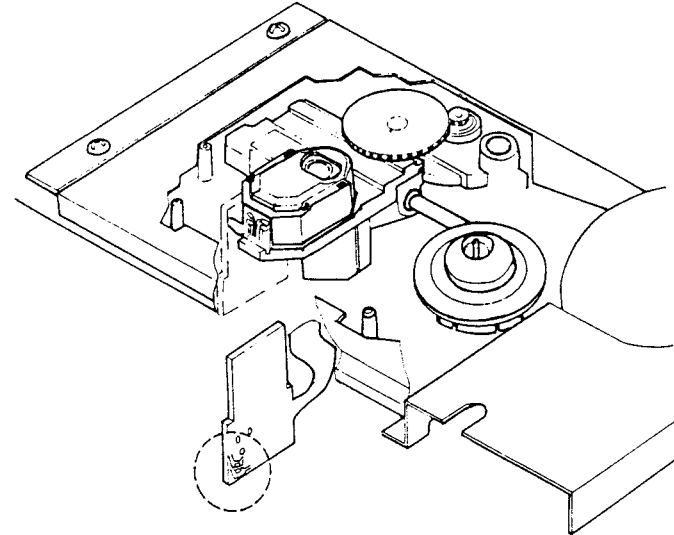
- (1) The laser should be at the innermost position after the chucking arm is removed.
- (2) The diffused light of the laser beam can be seen when the POWER switch is turned ON.
- (3) Vertical (up and down) movement of the objective lens (2 or 3 times) will take place.

PRECAUTIONS WHEN CHANGING LASER PICK-UP

When removing pick-up assembly, short circuit the PCB pattern as shown in the drawing in order to protect the pick up before removal.

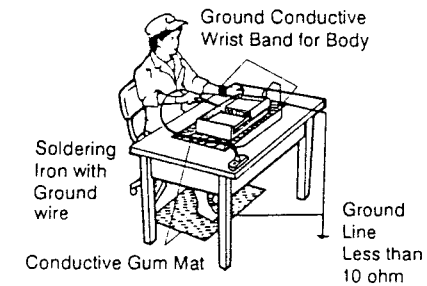
NOTE: Replacement pickup assemblies are supplied with the PCB pattern already protected.

DO NOT REMOVE THE SHORT CIRCUITS UNTIL YOU HAVE FINISHED FITTING THE PICK-UP.

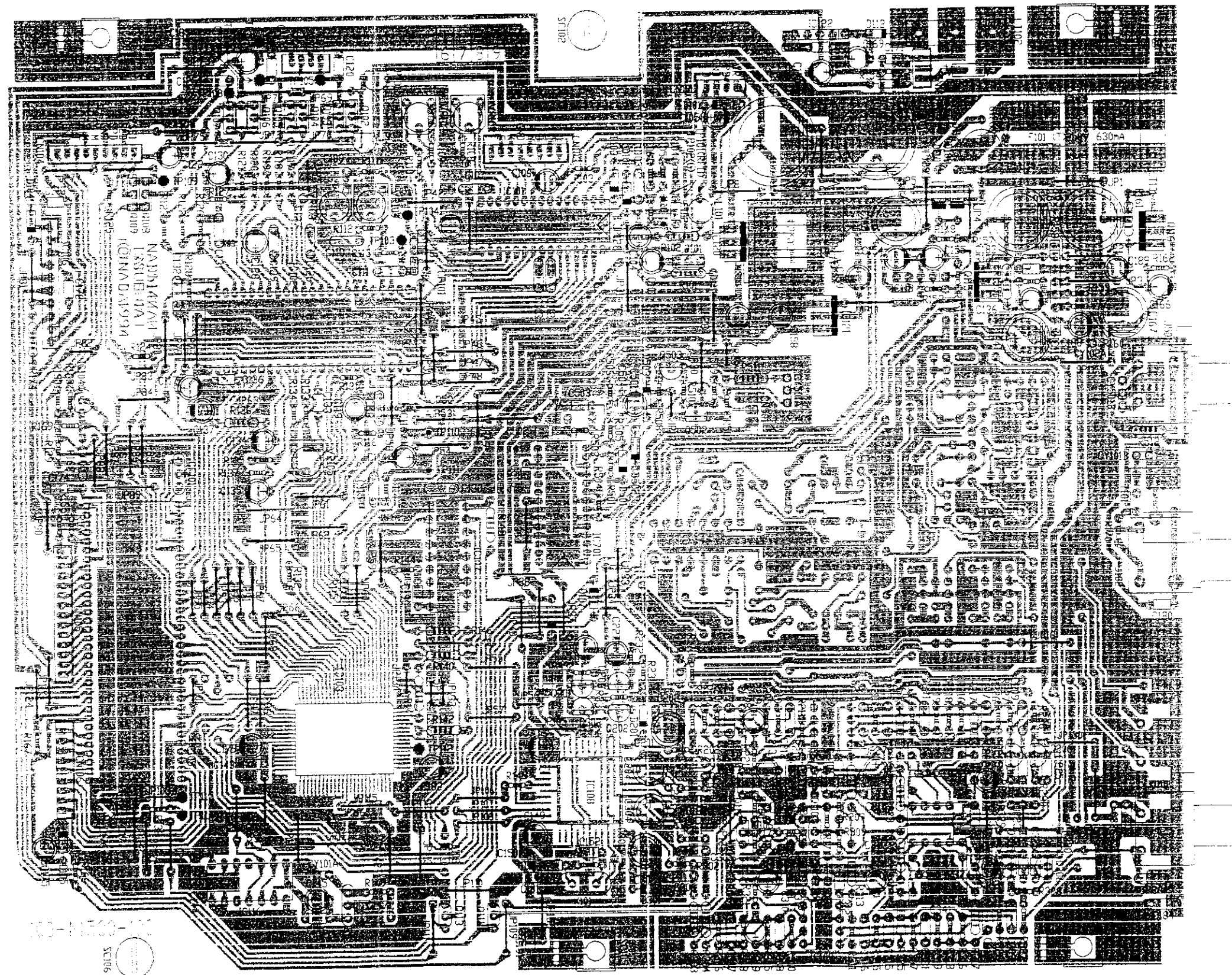


Caution:

Laser diodes are extremely susceptible to damage from static electricity. Even if a static discharge does not ruin the diode, it can shorten its life or cause it to work improperly. When replacing the pick-up, use a conductive mat, a grounded soldering iron, and so on, to protect the laser diode from static damage.

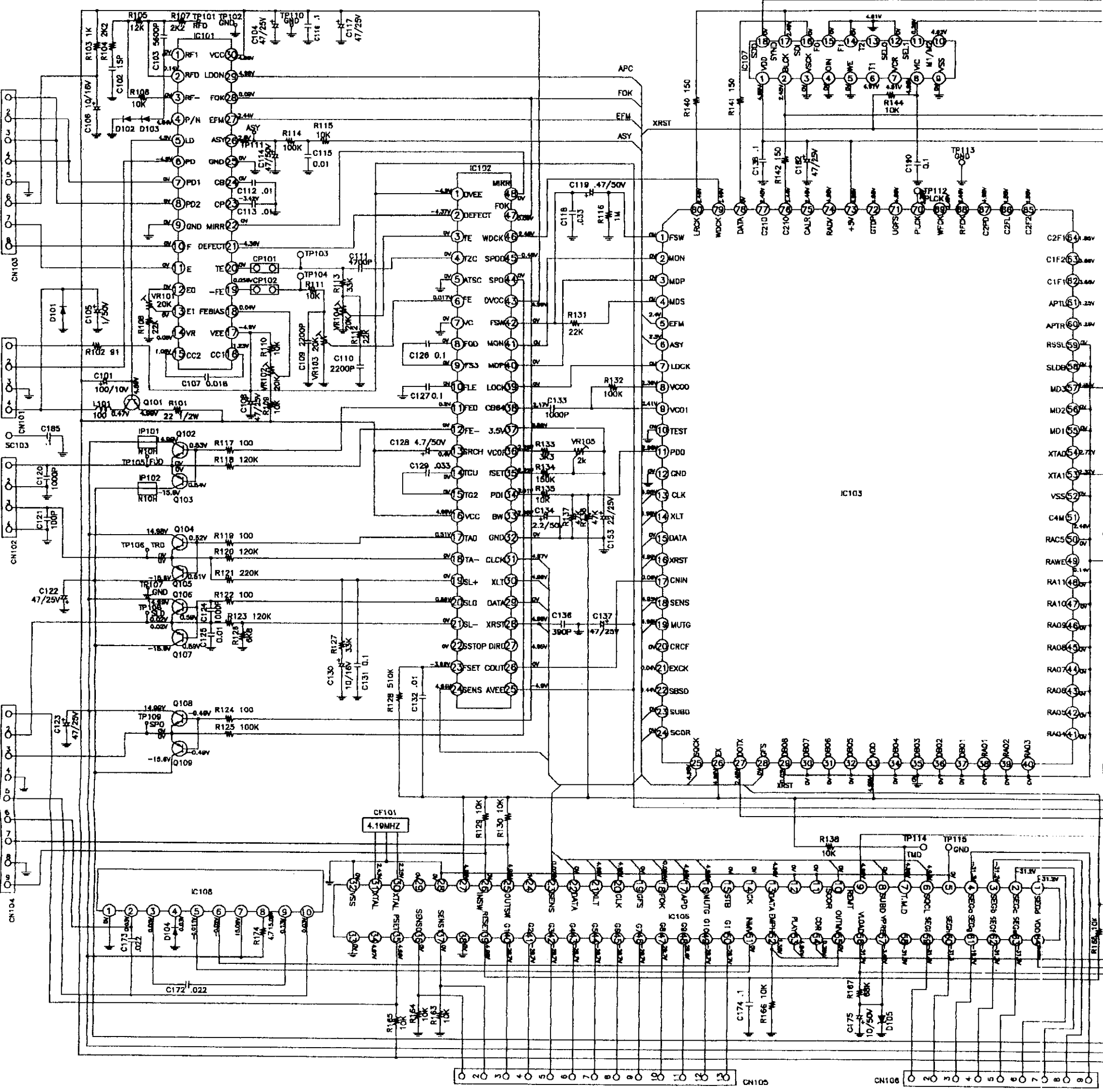


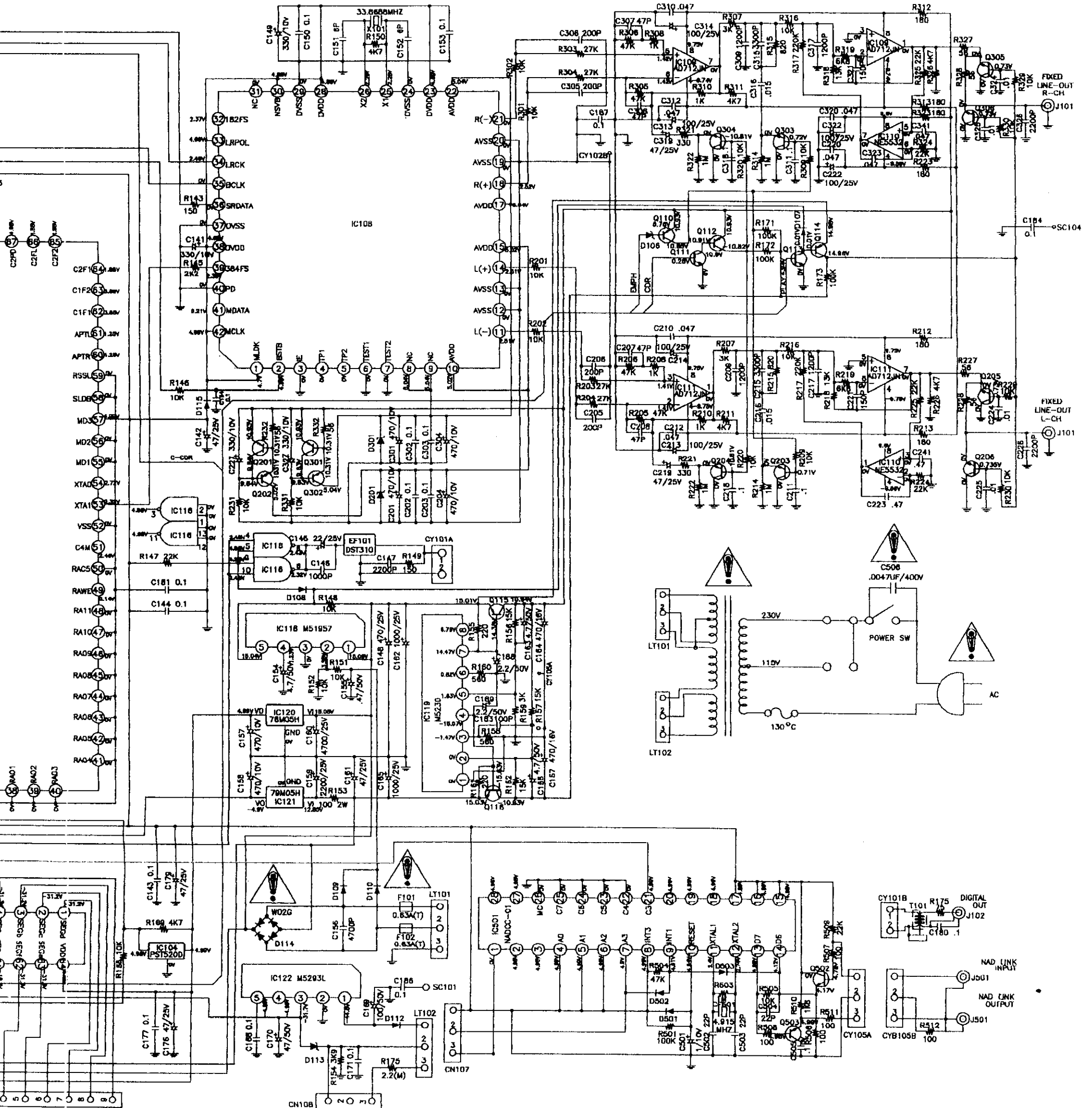
MAIN PCB LAYOUT (PARTS SIDE)



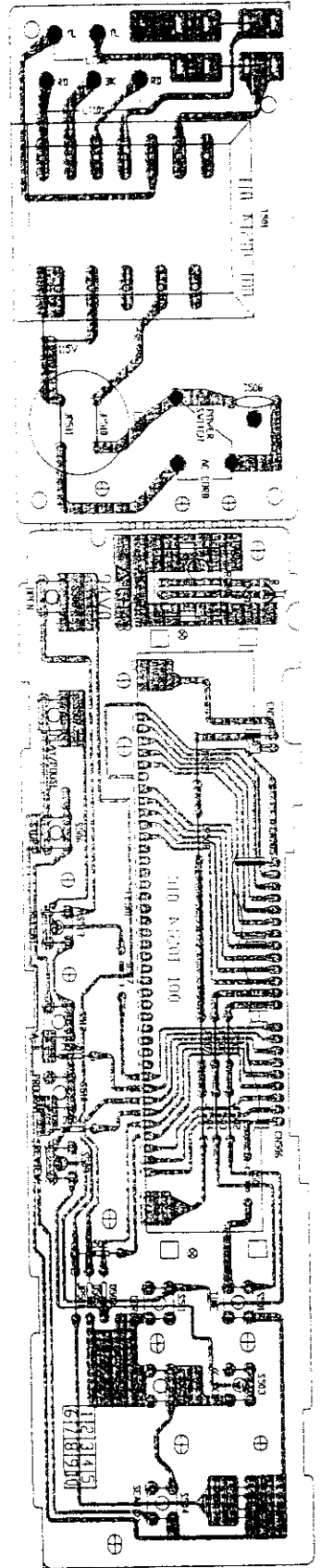
MAIN SCHEMATIC DIAGRAM

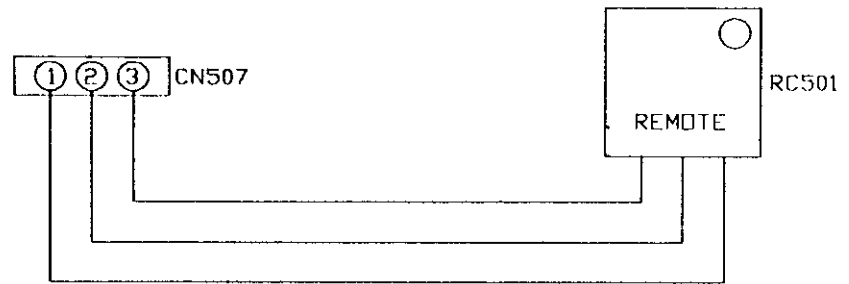
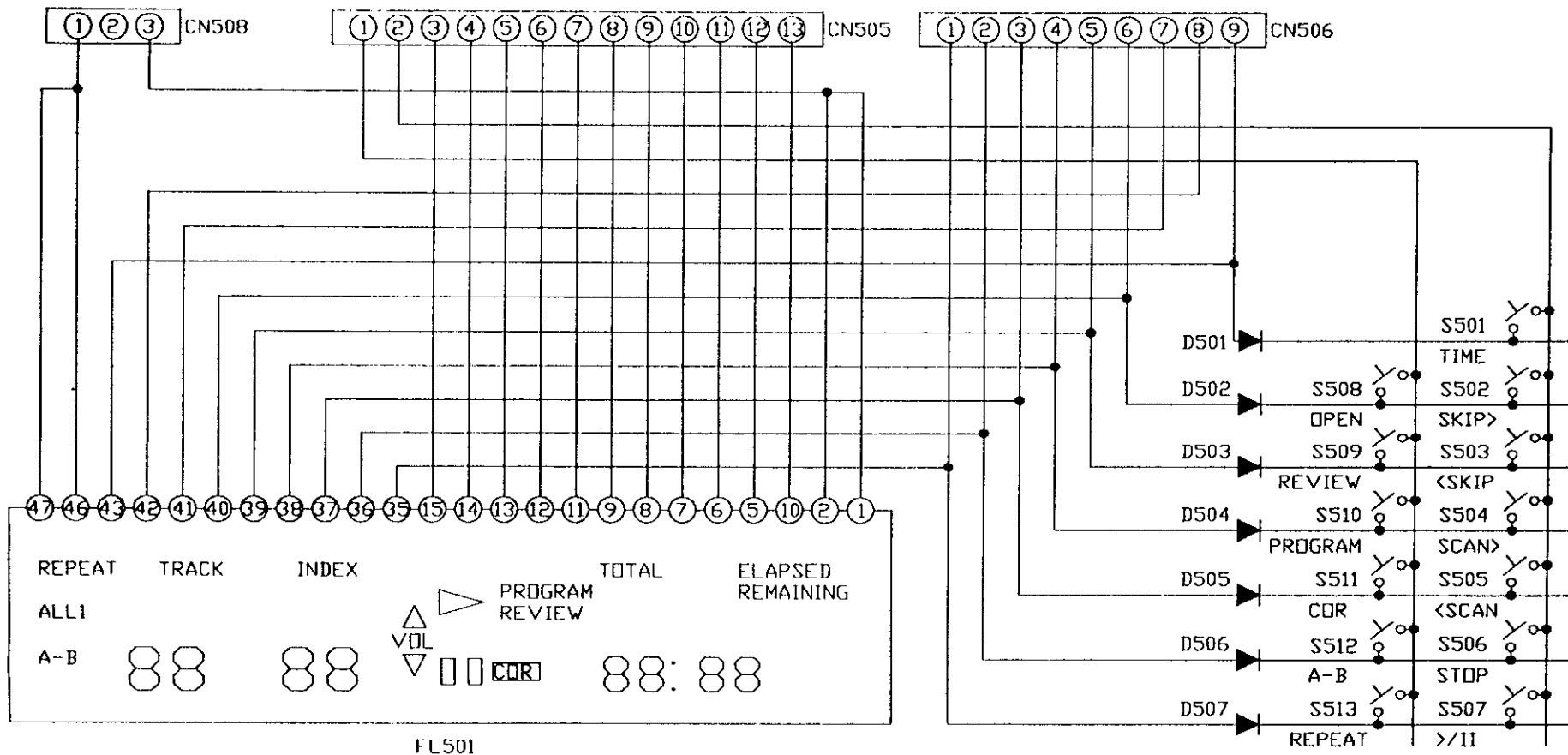
- NOTE: 1. ALL RESISTANCES VALUES ARE IN Ω . ($K\Omega=1000\Omega$, $M\Omega=1000K\Omega$.)
 2. THE WATTAGE OF RESISTORS IS 1/6W UNLESS OTHERWISE NOTED.
 3. ALL CAPACITANCES VALUES ARE IN μF UNLESS OTHERWISE NOTED. ($P=\mu\mu F$).
 4. SAFETY REQUIREMENTS COMPONENTS IN ACCORDANCE WITH PRESENT SAFETY REGULATIONS THESE COMPONENTS MUST ONLY BE REPLACED BY ORIGINAL PARTS.





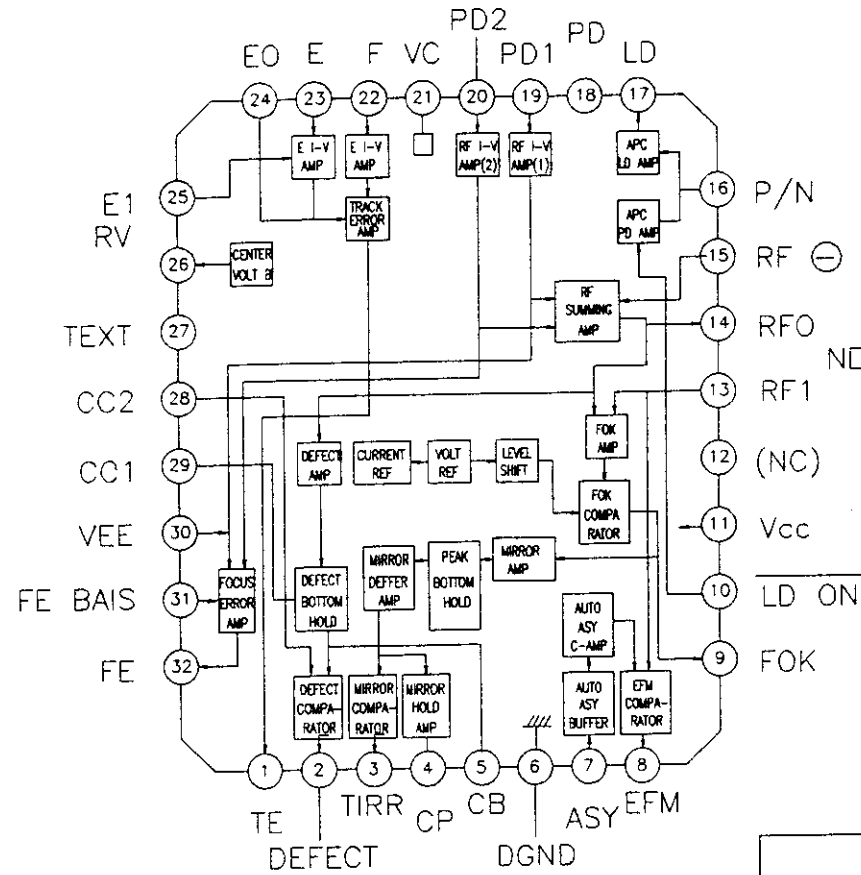
DISPLAY PCB LAYOUT (PARTS SIDE) AND SCHEMATIC DIAGRAM



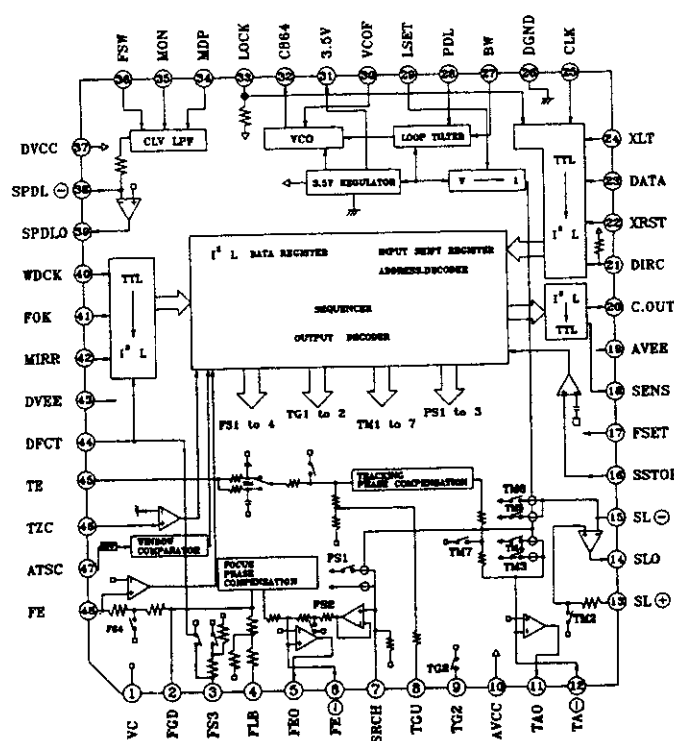


IC BLOCK DIAGRAM

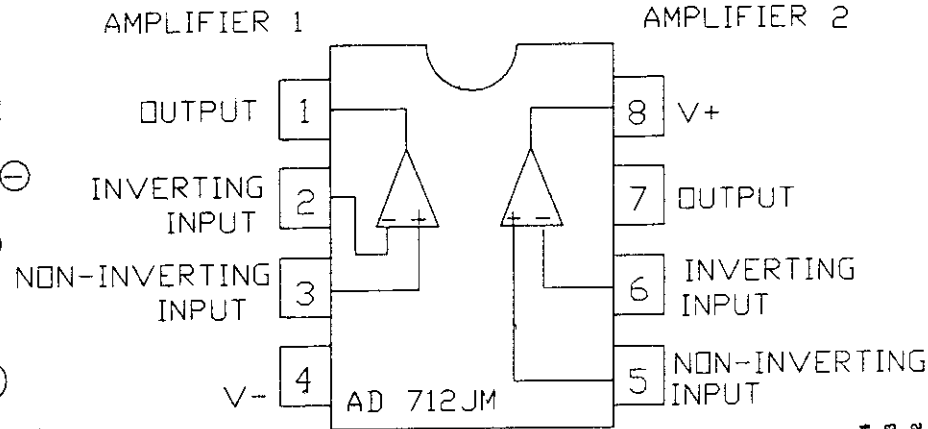
IC101 CXA1081S



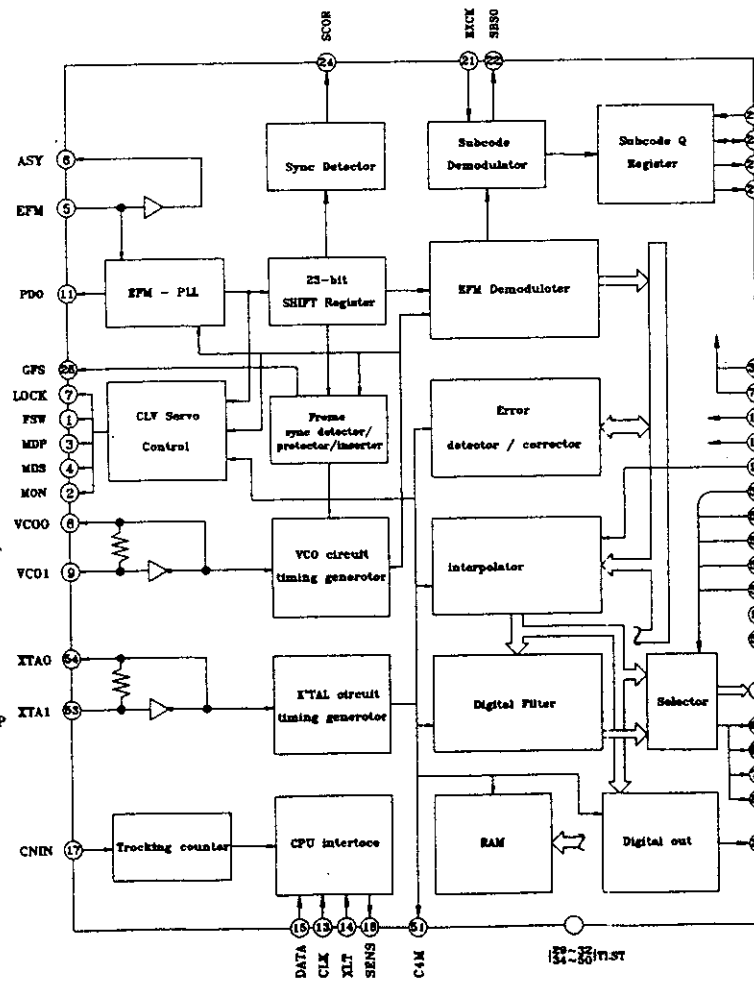
IC102 CXA1082BS



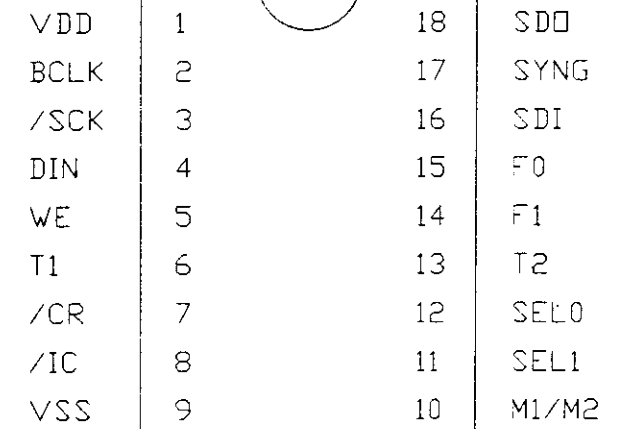
IC109/111 AD712JMB



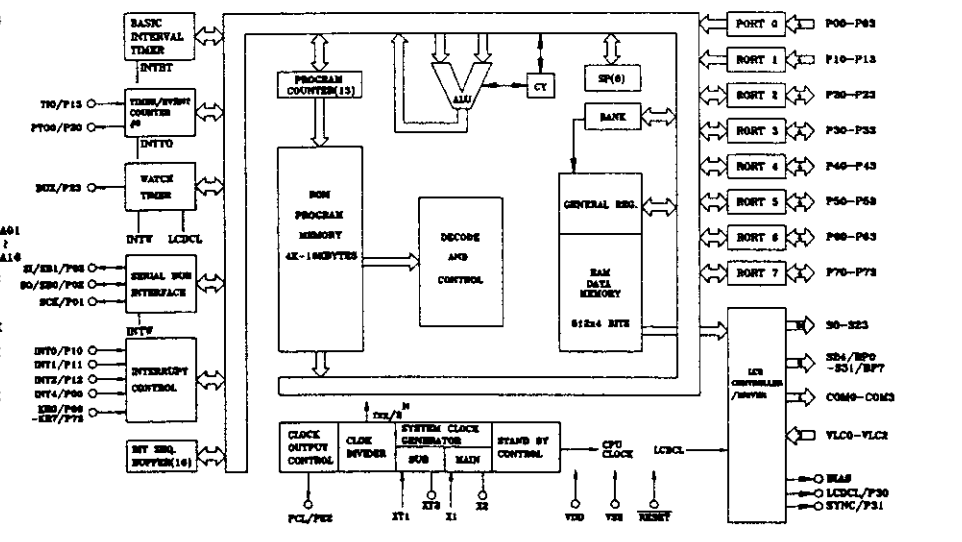
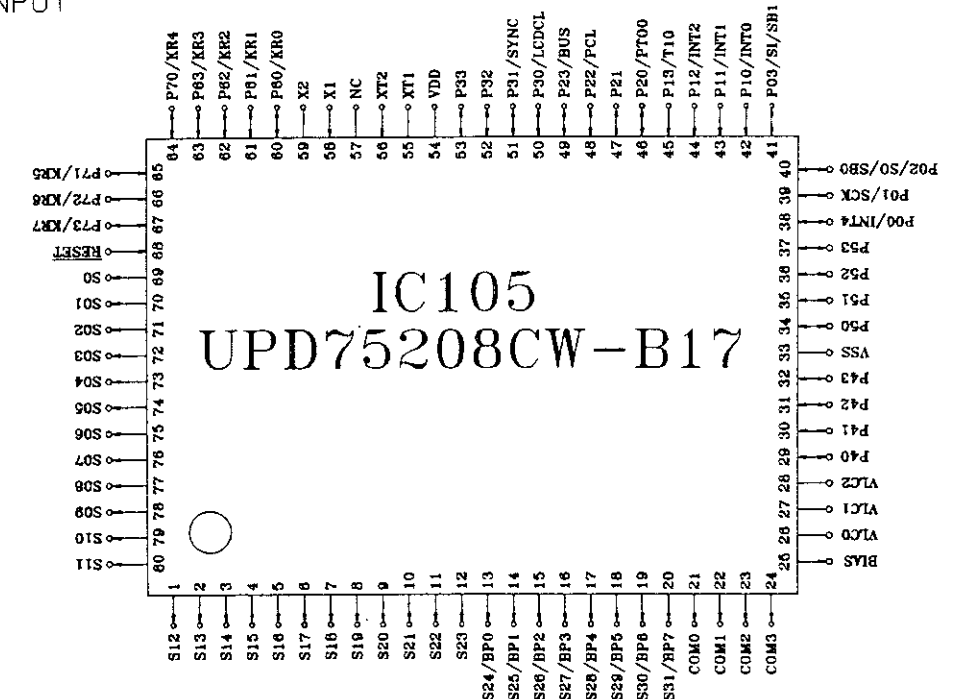
IC103 CXD1167Q

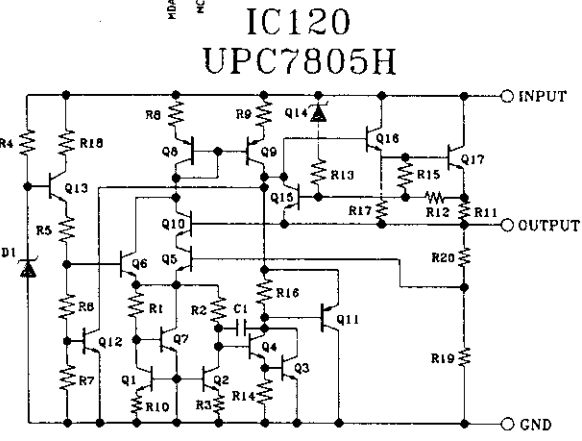
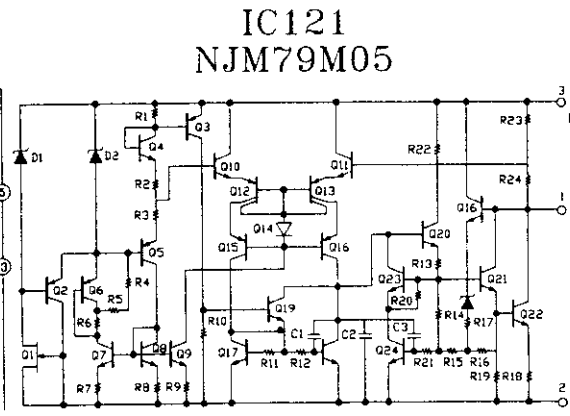
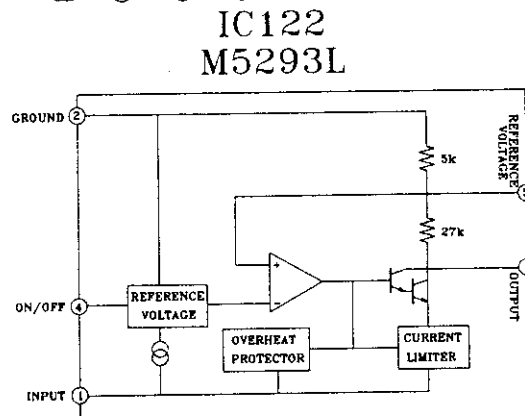
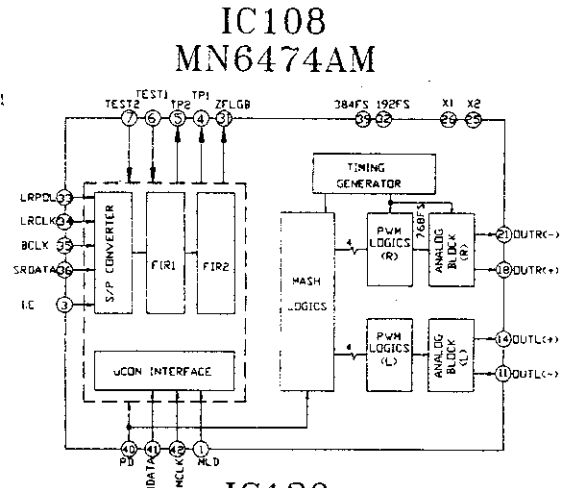
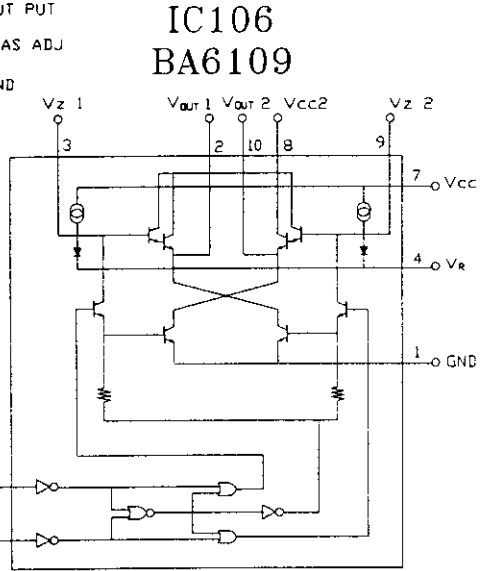
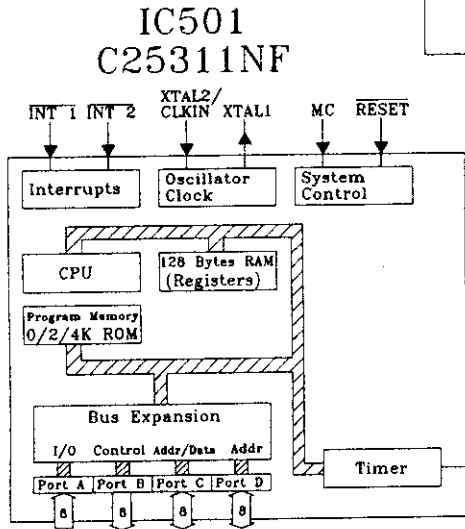
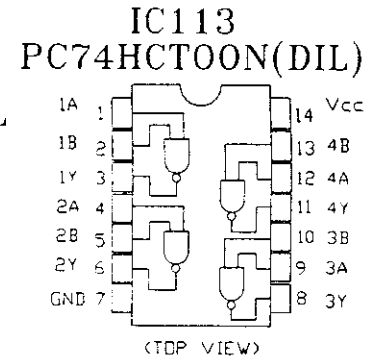
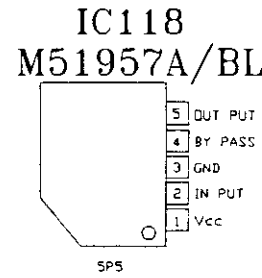
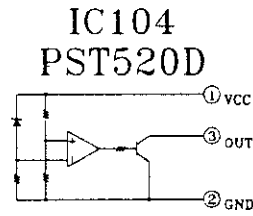
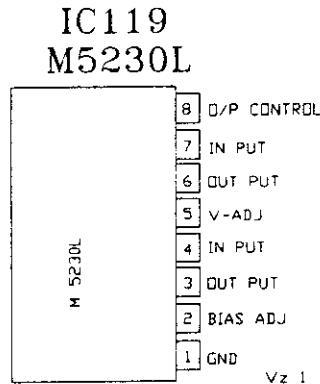
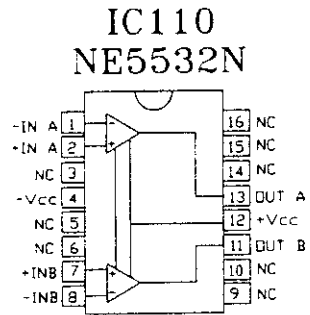


IC107 YM3412B

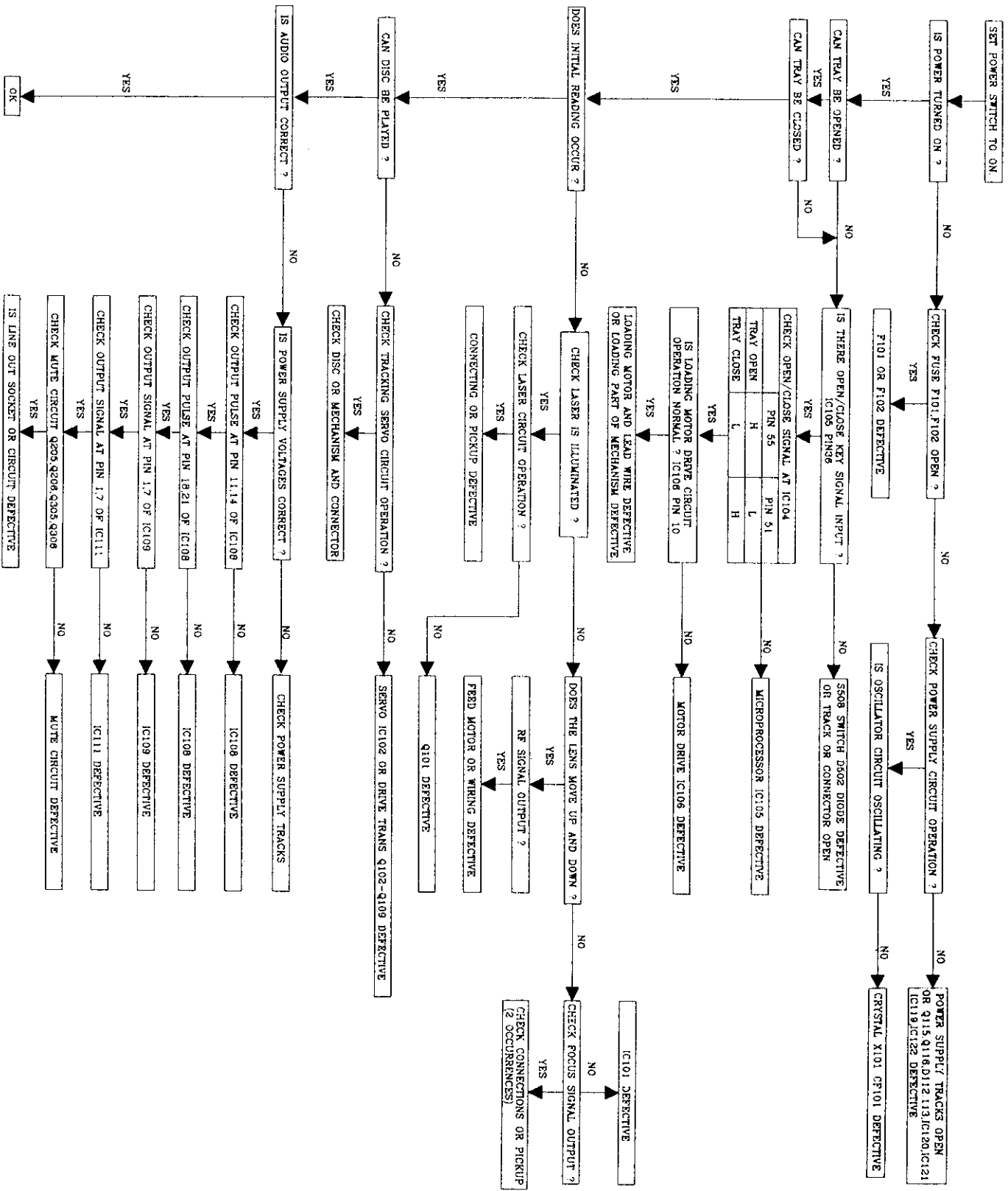


IC105 UPD75208CW-B17



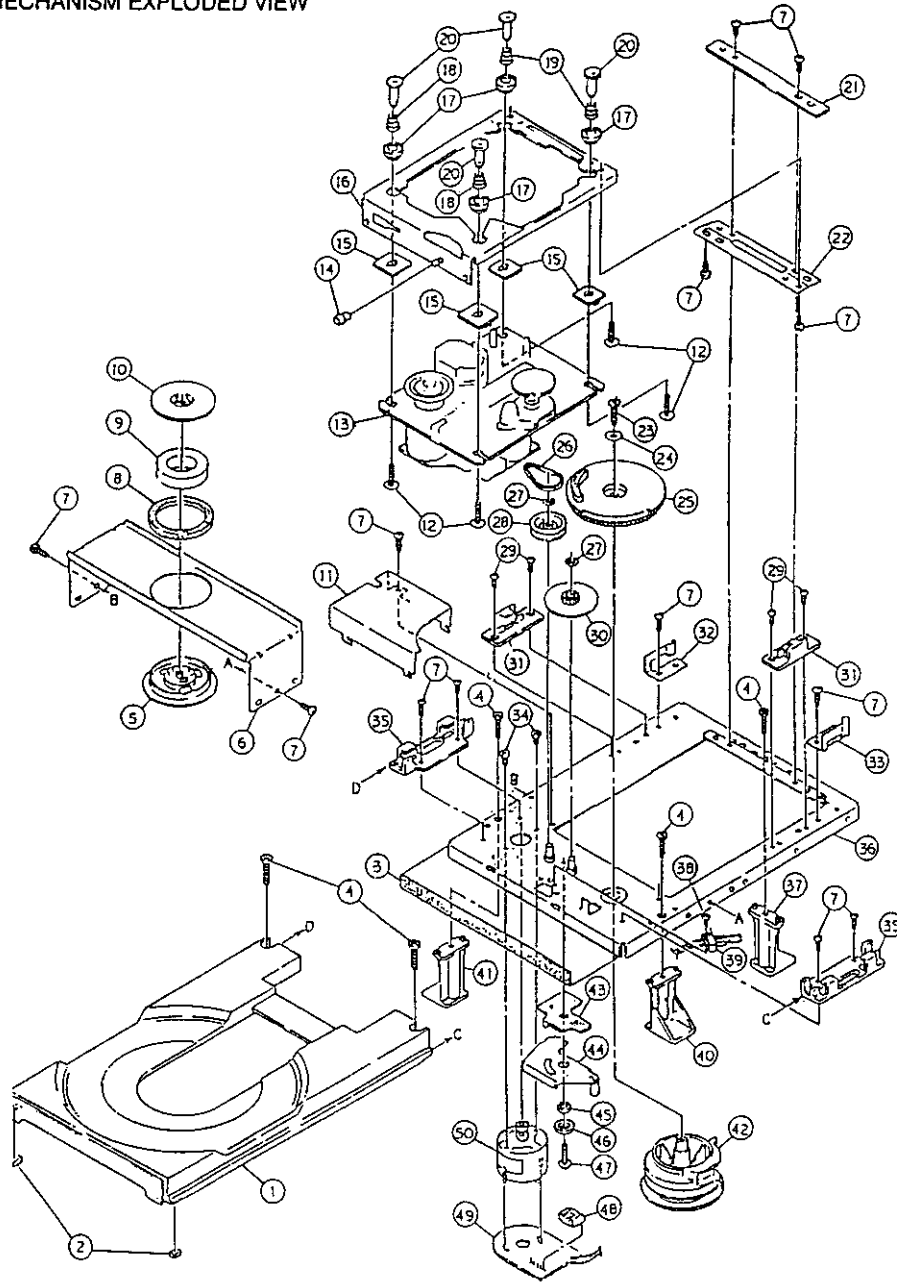


TROUBLE SHOOTING GUIDE



MECHANISM EXPLODED VIEW AND PARTS LIST

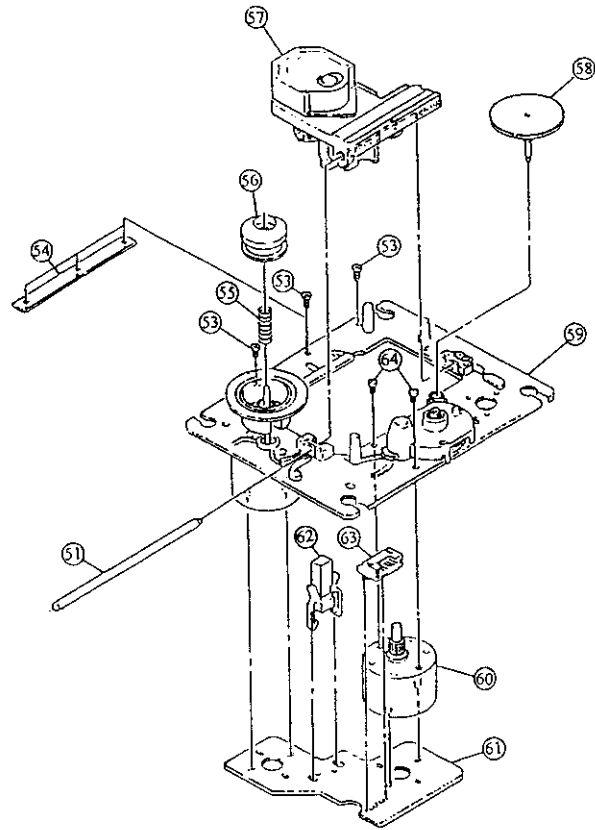
MECHANISM EXPLODED VIEW



MECHANISM EXPLODED VIEW PARTS LIST

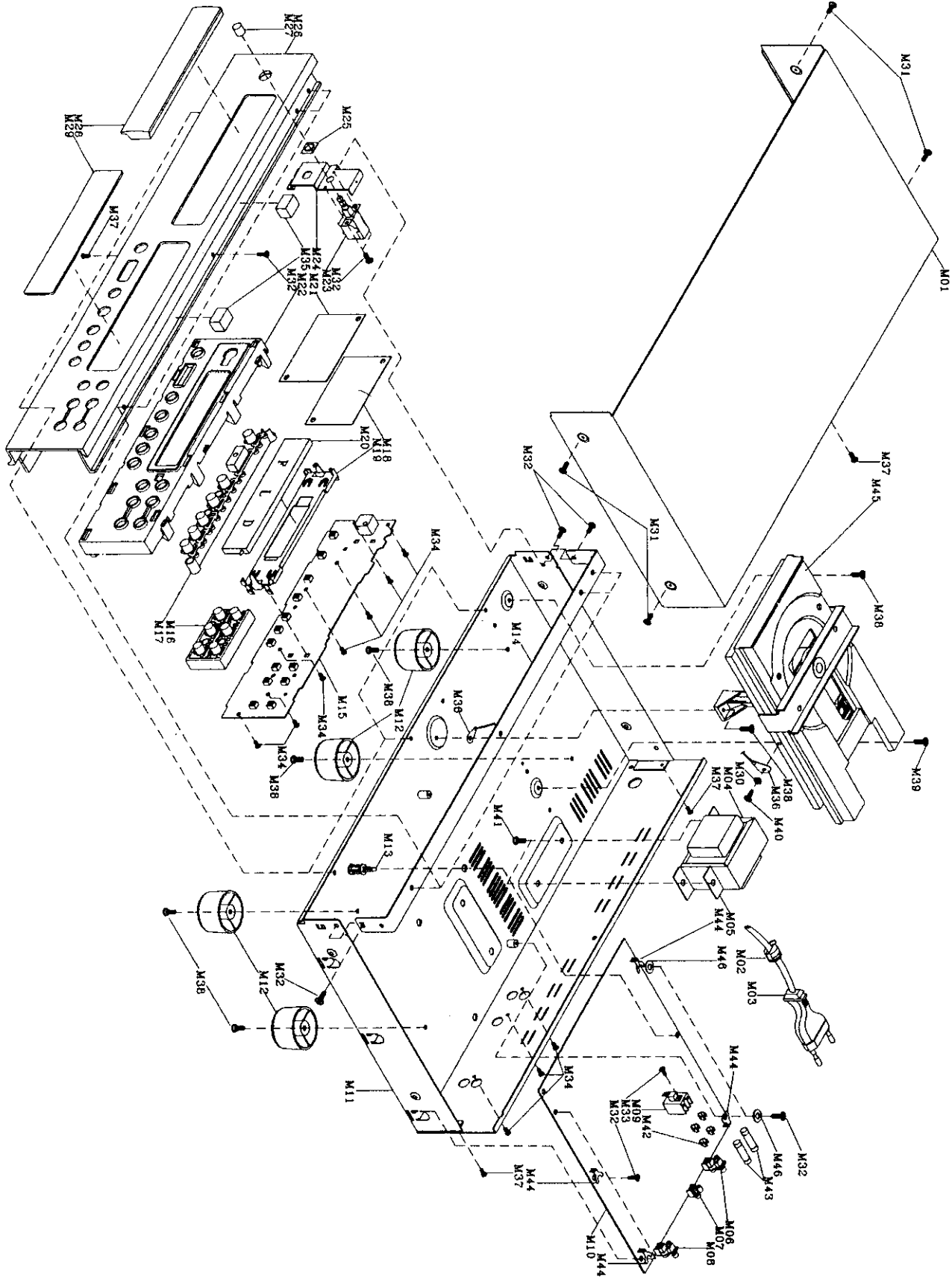
NO.	PARTS NO.	DESCRIPTION	Q'TY
1	2-642-156-02	TRAY (SP)	1
2	2-642-125-01	DAMPER	2
3	2-642-157-03	TAPE, FRONT	1
4	7-685-547-19	SCREW + BTP3 x 10	5
5	2-642-181-02	PULLEY(AU), CHUCKING	1
6	2-642-165-01	CHASSIS(S), CHUCK	1
7	7-685-862-01	SCREW + BVTT 2.6 x 6	13
8	2-642-439-01	DAMPER, YOKE	1
9	1-452-493-21	MAGNET	1
10	2-642-175-01	YOKE (SP), CHUCKING	1
11	2-642-149-02	COVER(SP), GEAR	1
12	2-642-142-01	SCREW, WASHER	4
13	---	DRIVE UNIT	1
14	2-642-169-02	ROLLER (SP)	1
15	2-642-159-01	PLATE (T) (SP)	4
16	X-2642-105-02	CHASSIS ASSY (SP), SUB	1
17	2-642-158-01	INSULATOR (C)	4
18	2-642-139-02	SPRING (A)	2
19	2-642-137-02	SPRING (B)	2
20	2-642-160-02	SHAFT (T) (SP)	4
21	2-642-170-01	RETAINER (SP), HINGE	1
22	2-642-164-01	HINGE (SP)	1
23	7-685-535-19	SCREW + BTP2.6 x 10	1
24	4-812-554-01	WASHER	1
25	2-642-154-03	GEAR (SP), DRIVE	1
26	3-653-387-01	BELT, LM	1
27	3-558-708-21	WASHER, STOPPER	2
28	4-913-731-01	PULLEY, LOADING	1
29	7-685-781-01	SCREW + PIT 2 x 4	4
30	2-642-148-01	GEAR (SP), MIDWAY	1
31	2-642-162-03	HOLDER(REAR) (SP), TRAY	2
32	2-642-147-02	GUIDE(LEFT) (SP), TRAY	1
33	2-642-146-02	GUIDE (RIGHT) (SP), TRAY	1
34	7-621-775-00	SCREW + B2.6 x 3	2
35	2-642-161-01	HOLDER (FRONT) (SP), TRAY	2
36	X-2642-106-2	CAHSSIS ASSY (SP), MAIN	1
37	2-642-512-01	BOSS (REAR)	1
38	7-685-851-01	SCREW + BVTT 2 x 4	1
39	1-572-052-11	SWITCH, LEAF	1
40	2-642-510-01	BOSS (RIGHT)	1
41	2-642-511-01	BOSS (LEFT)	1
42	2-642-153-01	CAM (SP), CONTROL	1
43	2-642-173-01	PLATE (SP), LINK	1
44	X-2642-109-1	LNK ASSY(AU), STOPPER	1
45	2-642-133-02	BOSS	1
46	2-642-172-01	SPACER (SP)	1
47	7-682-902-31	SCREW 2.6 x 8 STPWH	1
48	1-564-721-11	PIN, CONNECTOR 5P	1
49	1-624-793-21	PC BOARD, MOTOR	1
50	X-2641-336-1	MOTOR ASSY (RP)	1

EXPLODED VIEW AND PARTS LIST OF DRIVE UNIT



NO.	PARTS NO.	DESCRIPTION	QTY
51	4-917-565-01	SHAFT (S), SLED	1
52		Missing number	-
53	2-641-386-01	SCREW (2x5), TAPPING (S)	3
54	2-625-625-01	REINFORCEMENT (S)	1
55	2-625-191-01	SPRING (S), COMPRESSION	1
56	2-625-187-01	RING (LO) (S), CENTER	1
57	8-848-127-31	PICK UP KSS-210A (S) (RP)	1
58	2-625-188-02	GEAR (A) (S)	1
59	X-2625-317-1	CHASSIS ASSY (MT) N, TT	1
60	X-2625-365-1	GEAR ASSY (MT), MOTOR	1
61	1-636-788-13	PC BOARD, MOTOR (4P) (S)	1
62	1-572-085-12	SWITCH, LEAF	1
63	1-564-720-11	PIN, CONNECTOR 4P	1
64	7-621-255-15	SCREW + P2 x 3	1

EXPLODED VIEW



EXPLODED VIEW PARTS LIST

ITEM	PART NO.	DESCRIPTION	Q'TY
M01	122-00514-002	TOP COVER	1
M02	055-07150-001	POWER CORD STOPPER SR-4N-4	1
M03*AH	043-00100-001	AC POWER CORD (UL TYPE)	1
M03*B	043-01250-001	AC POWER CORD (UK TYPE)	1
M03*B1	043-05602-001	AC POWER CORD (SAA TYPE)	1
M03*C	043-04602-001	AC POWER CORD (EU TYPE)	1
M04	048-00514-001	TRANSFORMER (115/230V 60/50HZ)	1
M05	105-00405-008	TRANSFORMER BRACKET	2
M09	111-00514-001	HEAT SINK	1
M11*AH	122-00514-003	BOTTOM CHASSIS (120V)	1
M11*B/B1/C	122-00514-001	BOTTOM CHASSIS (220-240V)	1
M12	113-00501-001	FOOT	4
M13	055-00301-001	PCB SPACER (SCB-8)	1
M14	105-00514-001	FIX BRACKET	1
M16	102-00514-001	CONTROL BUTTON A	1
M17	102-00514-002	CONTROL BUTTON B	1
M19	106-00514-001	FLD HOLDER	1
M21	114-00514-001	INSULATION PLATE (111x64x1T 94V-0)	1
M22	121-00514-001	SUB CHASSIS	1
M23	023-07150-004	POWER SWITCH	1
M24	105-00514-002	POWER SW BRACKET	1
M25	106-00514-002	BEZEL	1
M26	103-00514-001	FRONT PANEL	1
M27	102-00501-001	POWER BUTTON	1
M28	118-00514-001	CD DOOR	1
M29	101-00514-001	DISPLAY WINDOW	1
M30	125-26050-001	OUTGEAR WASHER ϕ 2.6	1
M31	149-00501-001	SCREW (BID M4x6 W/WASHER)	4
M32	129-03006-013	TAPPING SCREW (PS ϕ 3x6R)	14
M33	128-03008-013	TAPPING SCREW (PS ϕ 3x8R)	1
M34	130-03010-013	TAPPING SCREW (PS ϕ 3x10R)	10
M35	112-00514-001	SPONGE (15x10x5T)	2
M36	125-00030-001	LUG 3 ϕ	2
M37	129-03006-014	TAPPING SCREW (PS ϕ 3x6R)	6
M38	129-03006-W13	TAPPING SCREW (PS ϕ 3x6R W/ ϕ 8 WASHER)	6
M39	129-04006-W13	TAPPING SCREW (PS ϕ 4x6R W/ ϕ 8 WASHER)	1
M40	129-02606-013	TAPPING SCREW (PS ϕ 2.6x6R)	1
M41	131-04010-W13	MACHINE SCREW (PM ϕ 4x10R W/ ϕ 10 WASHER)	2
M42	106-00301-001	FUSE HOLDER (WL210A)	4
M44	115-00117-001	EARTH PLATE	4
M45	049-00514-001	CD MECHANISM (KSL-2102AAM)	1
M46	125-32140-001	WASHER (ϕ 14x ϕ 3.2x0.8t Ni)	2

PARTS LIST

MAD-514 PARTS LIST					
SYMBOL NO.	REF. NO.	PART NO.	DESCRIPTION	Q'TY	
MAIN PCB ASS'Y		(610-00514-001)	MAD-514		1
PC BOARD PCB 1	001-00514-A01	001-00514-A01	MAIN PCB (245x195x1.6T)		1
CAPACITORS					
C101	089-10702-010	089-10702-010	CAP. EL.	100uFKBT +/-10%	10V 1
C102	087-15001-000	087-15001-000	CAP. CER.	15PFJYT NPO +/-5%	50V 1
C103	088-56201-050	088-56201-050	CAP. MYLAR	0.0056uFJYT +/-5%	50V 1
C104	089-47602-025	089-47602-025	CAP. EL.	47uFKBT +/-10%	25V 1
C105	089-10502-050	089-10502-050	CAP. EL.	1uFKBT +/-10%	50V 1
C106	089-10602-025	089-10602-025	CAP. EL.	10uFKBT +/-10%	25V 1
C107	088-18301-050	088-18301-050	CAP. MYLAR	0.018uFJT +/-5%	50V 1
C108	089-47602-025	089-47602-025	CAP. EL.	47uFKBT +/-10%	25V 1
C109, C110	097-22201-063	097-22201-063	CAP. M.P.E.	0.0022uFJYS +/-5%	63V 2
C111	097-47201-063	097-47201-063	CAP. M.P.E.	0.0047uFJYS +/-5%	63V 1
C112, C113	097-10301-063	097-10301-063	CAP. M.P.E.	0.01uFJYS +/-5%	63V 1
C114	089-47402-050	089-47402-050	CAP. EL.	0.47uFKBT +/-10%	50V 1
C115	097-10301-063	097-10301-063	CAP. M.P.E.	0.01uFJYS +/-5%	63V 1
C116	061-10403-050	061-10403-050	CAP. M.C.	0.1uFZYT +/-80%	50V 1
C117	089-47602-025	089-47602-025	CAP. EL.	47uFKBT +/-10%	25V 1
C118	097-33301-063	097-33301-063	CAP. M.P.E.	0.033uFJYS +/-5%	63V 1
C119	089-47402-050	089-47402-050	CAP. EL.	0.47uFKBT +/-10%	50V 1
C120	097-10201-063	097-10201-063	CAP. M.P.E.	0.001uFJYS +/-5%	63V 1
C121	087-10101-050	087-10101-050	CAP. CER.	100PFJYT +/-5%	50V 1
C122, C123	089-47602-025	089-47602-025	CAP. EL.	47uFKBT +/-10%	25V 2
C124	097-10201-063	097-10201-063	CAP. M.P.E.	0.001uFJYS +/-5%	63V 1
C125	097-10401-063	097-10401-063	CAP. M.P.E.	0.01uFJYS +/-5%	63V 1
C126, C127	097-10401-063	097-10401-063	CAP. M.P.E.	0.1uFJYS +/-5%	63V 2
C128	089-47502-050	089-47502-050	CAP. EL.	4.7uFKBT +/-10%	50V 1
C129	097-33301-063	097-33301-063	CAP. M.P.E.	0.033uFJYS +/-5%	63V 1
C130	089-10602-025	089-10602-025	CAP. EL.	10uFKBT +/-10%	25V 1
C131	097-10401-063	097-10401-063	CAP. M.P.E.	0.1uFJYS +/-5%	63V 1
C132	097-10301-063	097-10301-063	CAP. M.P.E.	0.01uFJYS +/-5%	63V 1
C133	097-10201-063	097-10201-063	CAP. M.P.E.	0.001uFJYS +/-5%	63V 1
C134	089-22502-050	089-22502-050	CAP. EL.	2.2uFKBT +/-10%	50V 1
C135	089-22602-025	089-22602-025	CAP. EL.	22uFKBT +/-10%	25V 1
C136	087-39101-050	087-39101-050	CAP. CER.	390PFJYT +/-5%	50V 1
C137	089-47602-025	089-47602-025	CAP. EL.	47uFKBT +/-10%	25V 1
C138	097-10401-063	097-10401-063	CAP. M.P.E.	0.1uFJYS +/-5%	63V 1
C141	089-33702-010	089-33702-010	CAP. EL.	330uFKBT +/-10%	10V 1
C142	089-47602-025	089-47602-025	CAP. EL.	47uFKBT +/-10%	25V 1
C143	061-10403-050	061-10403-050	CAP. M.C.	0.1uFZYT +/-80%	50V 1
C144	097-10401-063	097-10401-063	CAP. M.P.E.	0.1uFJYS +/-5%	63V 1
C145	089-22602-025	089-22602-025	CAP. EL.	22uFKBT +/-10%	25V 1
C146	097-10201-063	097-10201-063	CAP. M.P.E.	0.001uFJYS +/-5%	63V 1
C147	097-22201-063	097-22201-063	CAP. M.P.E.	0.0022uFJYS +/-5%	63V 1
C148	010-47702-025	010-47702-025	CAP. EL.	470uFKBT +/-10%	25V 1
C149	089-33702-010	089-33702-010	CAP. EL.	330uFKBT +/-10%	10V 1
C150	061-10403-050	061-10403-050	CAP. M.C.	0.1uFZYT +/-80%	50V 1
C151, C152	087-06001-000	087-06001-000	CAP. CER.	6PFJYT NPO +/-5%	50V 2
C153	061-10403-050	061-10403-050	CAP. M.C.	0.1uFZYT +/-80%	50V 1
C154	089-47502-050	089-47502-050	CAP. EL.	4.7uFKBT +/-10%	50V 1
C155	089-47402-050	089-47402-050	CAP. EL.	0.47uFKBT +/-10%	50V 1
C156	087-47203-500	087-47203-500	CAP. CER.	0.0047uFZYT +/-80%	50V 1
C157, C158	089-47702-010	089-47702-010	CAP. EL.	470uFKBT +/-10%	10V 2
C159	089-47602-025	089-47602-025	CAP. EL.	47uFKBT +/-10%	25V 1
C160	010-47802-025	010-47802-025	CAP. EL.	4700uFKB +/-10%	25V 1
C161	010-22802-025	010-22802-025	CAP. EL.	2200uFKB +/-10%	25V 1
C162	010-10802-025	010-10802-025	CAP. EL.	1000uFKB +/-10%	25V 1
C163	089-47502-050	089-47502-050	CAP. EL.	4.7uFKBT +/-10%	50V 1
C164	089-47702-016	089-47702-016	CAP. EL.	470uFKBT +/-10%	16V 1
C165	010-10802-025	010-10802-025	CAP. EL.	1000uFKB +/-10%	25V 1
C166	089-10502-050	089-10502-050	CAP. EL.	1uFKBT +/-10%	50V 1
C167	089-47702-016	089-47702-016	CAP. EL.	470uFKBT +/-10%	16V 1
C168	061-10403-050	061-10403-050	CAP. M.C.	0.1uFZYT +/-80%	50V 1
C169	089-10702-050	089-10702-050	CAP. EL.	100uFKBT +/-10%	50V 1
C170	089-47602-025	089-47602-025	CAP. EL.	47uFKBT +/-10%	50V 1
C171-C173	061-22303-050	061-22303-050	CAP. M.C.	0.022uFJT +/-5%	50V 3
C174	061-10403-050	061-10403-050	CAP. M.C.	0.1uFZYT +/-80%	50V 1
C175	089-10602-050	089-10602-050	CAP. EL.	10uFKBT +/-10%	50V 1
C176	089-47602-025	089-47602-025	CAP. EL.	47uFKBT +/-10%	25V 1
C177, C178	061-10403-050	061-10403-050	CAP. M.C.	0.1uFZYT +/-80%	50V 2
C179	089-47602-025	089-47602-025	CAP. EL.	47uFKBT +/-10%	25V 1
C180, C181	061-10403-050	061-10403-050	CAP. M.C.	0.1uFZYT +/-80%	50V 2
C182	089-47602-025	089-47602-025	CAP. EL.	47uFKBT +/-10%	25V 1

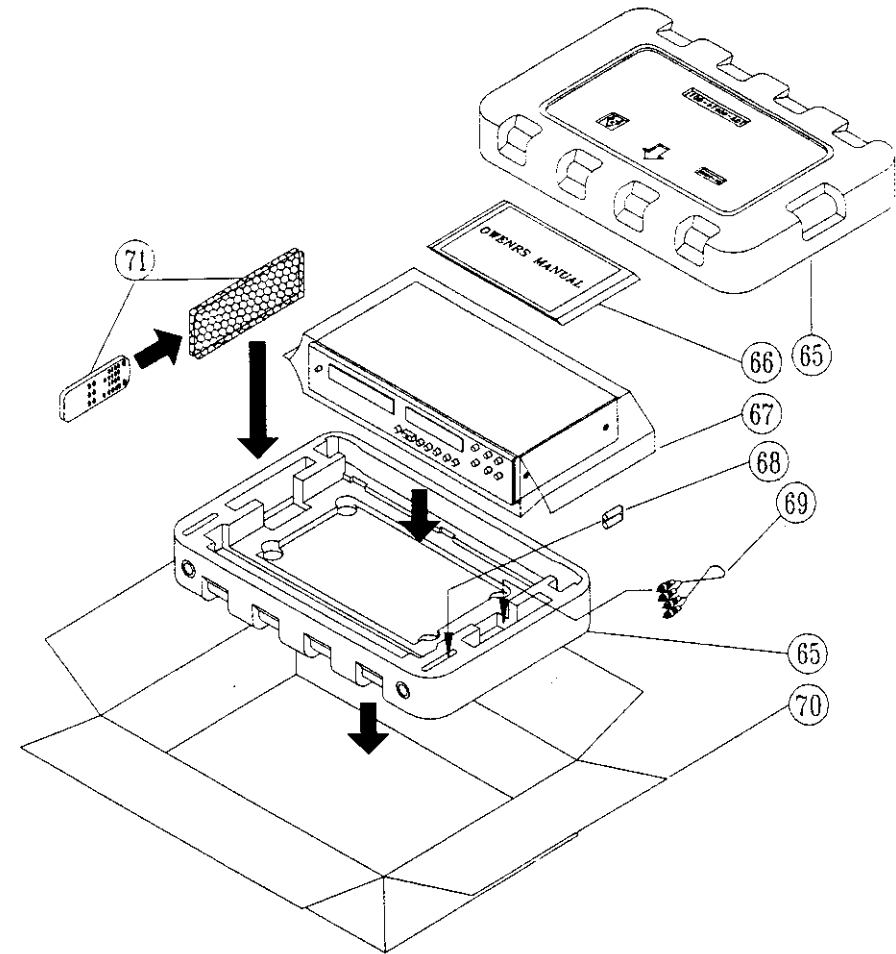
NAD-514 PARTS LIST

SYMBOL NO.	REF. NO.	PART NO.	DESCRIPTION	Q'TY
C183	087-10101-050	087-10101-050	CAP. CER.	1
C184	097-10301-063	097-10301-063	CAP. M.P.E.	1
C185, C186	061-10403-050	061-10403-050	CAP. M.C.	2
C187	097-10401-063	097-10401-063	CAP. M.P.E.	1
C188, C189	089-22502-050	089-22502-050	CAP. EL.	2
C190, C191	061-10403-050	061-10403-050	CAP. M.C.	2
C201	089-47702-010	089-47702-010	CAP. EL.	1
C202, C203	061-10403-050	061-10403-050	CAP. M.C.	2
C204	089-47702-010	089-47702-010	CAP. EL.	1
C205, C206	079-20101-100	079-20101-100	CAP. PP	2
C207, C208	087-47001-000	087-47001-000	CAP. CER.	2
C209	079-12201-A50	079-12201-A50	CAP. PP	1
C210	061-47303-050	061-47303-050	CAP. M.C.	1
C211	061-10403-050	061-10403-050	CAP. M.C.	1
C212	061-47303-050	061-47303-050	CAP. M.C.	1
C213, C214	089-10702-025	089-10702-025	CAP. EL.	2
C215	088-33201-050	088-33201-050	CAP. MYLAR	1
C216	079-15301-A50	079-15301-A50	CAP. PP	1
C217	079-12201-A50	079-12201-A50	CAP. PP	1
C218	061-10403-050	061-10403-050	CAP. M.C.	1
C219	089-47602-025	089-47602-025	CAP. EL.	1
C220	061-47303-050	061-47303-050	CAP. M.C.	1
C221	079-15101-050	079-15101-050	CAP. PP	1
C222	089-10702-025	089-10702-025	CAP. EL.	1
C223	014-47401-A50	014-47401-A50	CAP. M.P.F.	1
C224, C225	087-10323-050	087-10323-050	CAP. CER.	2
C226	097-22201-063	097-22201-063	CAP. M.P.E.	1
C227	089-33702-010	089-33702-010	CAP. EL.	1
C241	014-47401-A50	014-47401-A50	CAP. M.P.F.	1
C301	089-47702-010	089-47702-010	CAP. EL.	1
C302, C303	061-10403-050	061-10403-050	CAP. M.C.	2
C304	089-47702-010	089-47702-010	CAP. EL.	1
C305, C306	079-20101-100	079-20101-100	CAP. PP	2
C307, C308	087-47001-000	087-47001-000	CAP. CER.	2
C309	079-12201-A50	079-12201-A50	CAP. PP	1
C310	061-47303-050	061-47303-050	CAP. M.C.	1
C311	061-10403-050	061-10403-050	CAP. M.C.	1
C312	061-47303-050	061-47303-050	CAP. M.C.	1
C313, C314	089-10702-025	089-10702-025	CAP. EL.	2
C315	088-33201-050	088-33201-050	CAP. MYLAR	1
C316	079-15301-A50	079-15301-A50	CAP. PP	1
C317	079-12201-A50	079-12201-A50	CAP. PP	1
C318	061-10403-050	061-10403-050	CAP. M.C.	1
C319	089-47602-025	089-47602-025	CAP. EL.	1
C320	061-47303-050	061-47303-050	CAP. M.C.	1
C321	079-15101-050	079-15101-050	CAP. PP	1
C322	089-10702-025	089-10702-025	CAP. EL.	1
C323	014-47401-A50	014-47401-A50	CAP. M.P.F.	1
C324, C325	087-10323-050	087-10323-050	CAP. CER.	2
C326	097-22201-063	097-22201-063	CAP. M.P.E.	1
C327	089-33702-010	089-33702-010	CAP. EL.	1
C341	014-47401-A50	014-47401-A50	CAP. M.P.F.	1
C501	089-10502-050	089-10502-050	CAP. EL.	1
C502-C504	087-22001-000	087-22001-000	CAP. CER.	3
C505	061-10403-050	061-10403-050	CAP. M.C.	1
CERAMIC RESONATOR				
CF101	FCR4.19MC	016-00419-MC5	CERAMIC RESONATOR	1
CRYSTAL				
CF501	016-00004-915	016-00004-915	CRYSTAL UNIT	1
DIODES				
D101-D103	091-00176-1S5	091-00176-1S5	DIODE	3
D104	091-00068-005	091-00068-005	ZENER DIODE	1
D105	091-00047-005	091-00047-005	ZENER DIODE	1
D106	091-00075-005	091-00075-005	ZENER DIODE	1
D107, D108	091-00176-1S5	091-00176-1S5	DIODE	2
D109, D110	091-04002-01W	091-04002-01W	DIODE, RETIFIER	2
D112	091-00176-1S5	091-00176-1S5	DIODE	1
D113	091-06075-005	091-06075-005	ZENER DIODE	1
D114	022-00002-00W	022-00002-00W	DIODE	1
D115	091-00100-0R8	091-00100-0R8	DIODE	1
D201, D301	091-00051-005	091-00051-005	ZENER DIODE	2
D501-D503	091-04148-01N	091-04148-01N	DIODE	3

NAD-514 PARTS LIST

SYMBOL NO.	REF. NO.	PART NO.	DESCRIPTION	Q'TY
CERAMIC FILTER				
EF101	DSS310-558271M	016-55271-100	CERAMIC FILTER	1
FUSES				
F101, F102*AH	025-00501-007	025-00501-007	FUSE 5.2x20 T-LAG	1
F101, F102*B/81/C	025-01600-009	025-01600-009	FUSE 5.2x20 T-LAG	1
ICs				
IC101	CXA1081S	020-01081-CXA	IC, SERVO PROCESS	1
IC102	CXA1082BS	020-01082-CXA	IC, LST OC DSP	1
IC103	CXD11670	020-M1167-CXD	IC, LST OC DSP	1
IC104	PST5200	020-00520-PST	IC	1
IC105	UPD75208CW-B17	020-75208-UPD	IC, U-COM	1
IC106	BA6109	020-06109-08A	IC	1
IC107	YM3412BF	020-M3412-0YM	IC	1
IC108	MN6474M	020-06474-0MN	IC, D/A CPNVERTER	1
IC109	AD712JN	020-00712-0AD	IC, OPAMP	1
IC110	NE5532N	020-05532-0NE	IC, OPAMP	1
IC111	AD712JN	020-00712-0AD	IC, OPAMP	1
IC116	PC74HCT00M	020-07400-HCT	IC	1
IC118	M51957BL	020-51957-00M	IC	1
IC119	M5230L	020-05230-00M	IC	1
IC120	UPC7805H	020-07805-UPC	IC, VOLTAGE REG.	1
IC121	NJM79M05	020-79M05-NJM	IC, VOLTAGE REG.	1
IC122	M5293	020-05293-00M	IC	1
IC501	C25311NF	020-25311-00C	IC, NAD LINK	1
FUSE				
IP101, IP102	ICP-N10	090-001CP-N10	FUSE, (TR. TYPE)	1
RCA JACKS				
J101	HSP-242V2-02G	027-00514-001	RCA JACK, 2P(GOLD, W/SHILED)	1
J102	HSP-241V18	027-00514-002	RCA JACK, 1P(W/SHILED)	1
J501	HSP-242V-09	027-00514-003	RCA JACK, 2P	1
JUMPERS(RES. TYPE)				
JP..	085-52000-804	085-52000-804	RES., CARBON FILM	103
COILS				
L101	019-00514-002	019-00514-002	CHOCK COIL	1
TRANSISTORS				
Q101	2S81237R-TV6	090-01237-TV6	TR., PNP	1
Q102	2SD1858R-TV6	090-01858-TV6	TR., NPN	1
Q103	2S81237R-TV6	090-01237-TV6	TR., PNP	1
Q104	2SD1858R-TV6	090-01858-TV6	TR., NPN	1
Q105	2S81237R-TV6	090-01237-TV6	TR., PNP	1
Q106	2SD1858R-TV6	090-01858-TV6	TR., NPN	1
Q107	2S81237R-TV6	090-01237-TV6	TR., PNP	1
Q108	2SD1858R-TV6	090-01858-TV6	TR., NPN	1
Q109	2S81237R-TV6	090-01237-TV6	TR., PNP	1
Q110	DTA114-ES	090-00114-00A	TR., PNP	1
Q111	DTC114-ES	090-00114-005	TR., NPN	1
Q112	DTA114-ES	090-00114-00A	TR., PNP	1
Q113	DTC114-ES	090-00114-005	TR., NPN	1
Q114	DTA114-ES	090-00114-00A	TR., PNP	1
Q115	2SB1185-F	021-01185-006	TR., PNP	1
Q116	2SD1762-F	021-01762-006	TR., NPN	1
Q201, Q202	2SA1015-Y	090-A1015-025	TR., PNP HF	2
Q203-Q206	2SC2878-A	090-02878-001	TR., NPN HF	4
Q301, Q302	2SA1015-Y	090-A1015-025	TR., PNP HF	2
Q303-Q306	2SC2878-A	090-02878-001	TR., NPN HF	4
Q502	2SC1815-Y	090-01815-025	TR., NPN HF	1
Q503	2SA1015-Y	090-A1015-025	TR., PNP HF	1
RESISTORS				
R101	075-52221-F02	075-52221-F02	RES., METAL FILM	1
R102	075-52911-F04	075-52911-F04	RES., METAL FILM	1
R103	075-52103-F08	075-52103-F08	RES., METAL FILM	1
R104	075-52223-F08	075-52223-F08	RES., METAL FILM	1
R105	075-52124-F08	075-52124-F08	RES., METAL FILM	1
R106	075-52104-F08	075-52104-F08	RES., METAL FILM	1
R107	075-52223-F08	075-52223-F08	RES., METAL FILM	1
R108	075-52224-F08	075-52224-F08	RES., METAL FILM	1
R109-R111	075-52104-F08	075-52104-F08	RES., METAL FILM	3
R112	075-52224-F08	075-52224-F08	RES., METAL FILM	1

PACKING DIAGRAM



ITEM	PARTS NO.	DESCRIPTION	Q'TY
65	137-00514-001	POLYFOAM	2
66	134-00514-001	INSTRUCTION BOOK	1
67	138-00501-001	PE BAG	1
68	050-00015-002	BATTERY UM-4 1.5V	2
69	056-01600-001	RCA PLUG GRY L=450MM	1
70	141-00514-001	CARTON	1
71	200-00514-001	REMOTE HANDSET	1