

C 521

**COMPACT
DISC PLAYER**

C 521

**COMPACT
DISC PLAYER**

SERVICE MANUAL

NAD

SAFETY INFORMATION

CAUTION

CAUTION - INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.

ADVARSEL - USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.

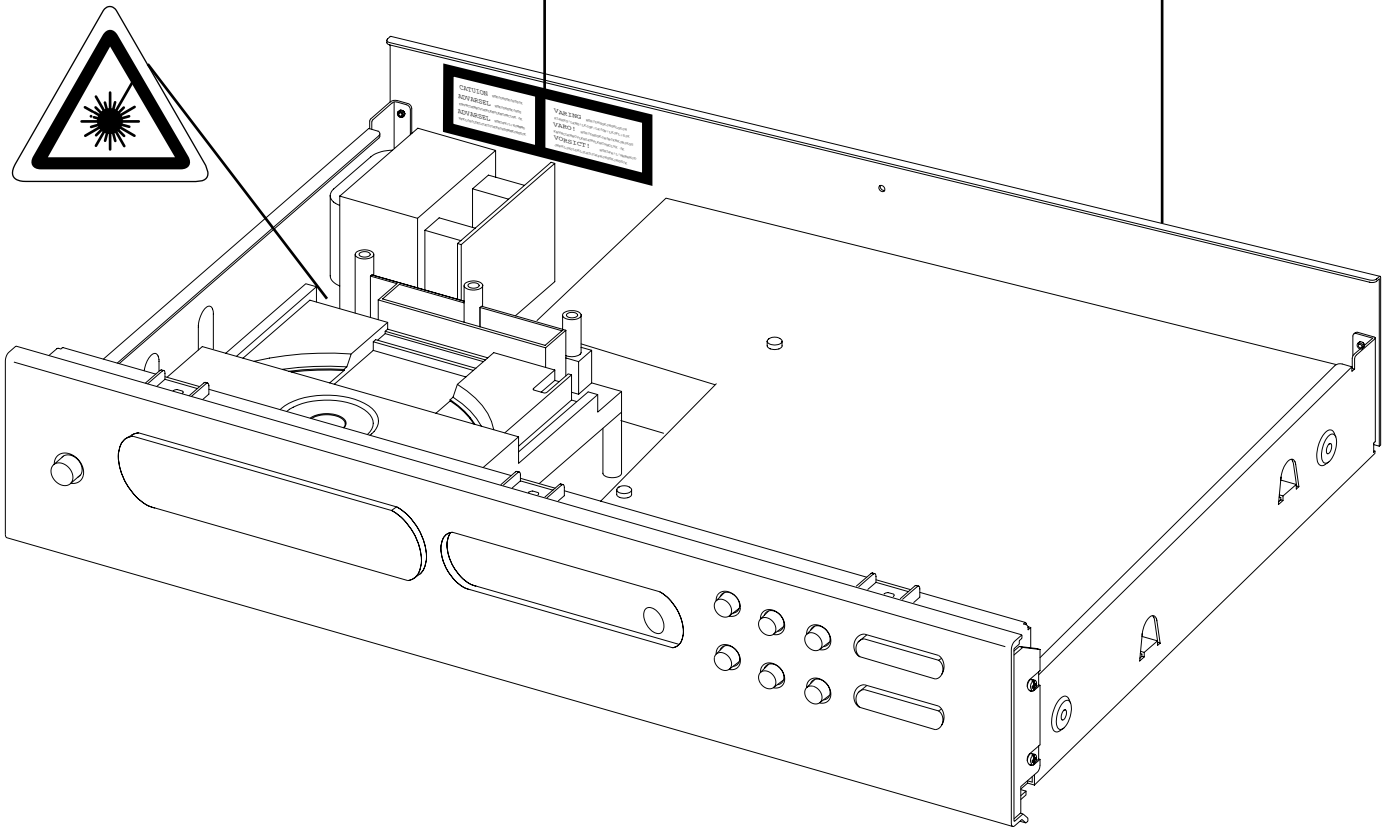
ADVARSEL - USYNLIG LASERSTRÅLING VED ÅBNING. NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.

VARNING - OSYNLIG LASERSTRÅLING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRRAR ÄR URKOPPLADE. STRÅLEN ÄR FARLIG.

VARO! - AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALITTIINA NÄKTMÄTÖNTÄ LASERSÄTEILYLLE. ÄLÄ KAISO SÄTEESEEN.

VORSICHT! - UNSICHTBARE LASERSTRAHLUNG TRITT AUS, WENN DECKEL GEÖFFNET UND WENN SICHERHEITVERRIEGELUNG ÜBERBRÜCKT IST. NICHT DEM STRAHL AUSSETZEN.

**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 UNDESIRE OPERATION.

SERVICE SAFETY PRECAUTIONS

1. Replacing the fuses

CAUTION: FOR CONTINUED PROTECTION AGAINST THE RISK OF FIRE REPLACE ONLY WITH SAME TYPE OF FUSE.

Reference No		Part Number	Description
M502-M504	*AH \triangle	5120-0020-0	FU T1A 250V UL/CSA 5X20MM
M502-M504	*C \triangle	5120-0018-0	FU T1A 250V SEMKO/UDE 5X20MM
M505	*AH \triangle	5120-0052-0	FUSE T1.6A 250V 5X20MM UL/CSA
M505	*C \triangle	5120-0050-0	FUSE T1.6A/250V 5X20MM SEMKO/VDE

NOTE:

- <*AH > : USA, CANADIAN MODEL ONLY.
- <*C > : EUROPEAN MODEL ONLY.

2. Safety check out

(Only U.S.A. model)

Before returning the product to the customer, make leakage current or resistance measurements to determine that exposed parts are acceptably insulated from the supply circuit.

Parts marked with the symbol \triangle are critical with regard to the risk of fire and electric shock. Replace only with parts recommended by the manufacturer.

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SPECIFICATIONS

Disc Capacity	One Disc, 120 or 80 mm
Decoding	BURR-BROWN Delta Sigma 20bit
Digital Filter	8 Times oversample
Analog Filter	4 pole active
Frequency Response	+/- 0.5 dB, 5Hz - 20kHz
De-Emphasis Error	+/- 0.3 dB
THD (at 0 dB, 1kHz)	0.007%
Intermodulation Distortion (19 + 20 kHz)	< - 100 dB
Dynamic Range	96 dB
Linearity	+/- 0.5 dB, 0 dB to -80 dB
Signal / Noise Ratio (A-Weight)	≥100 dB, De-Emphasis on ≥100 dB, De-Emphasis off
Channel Separation 1kHz	>90 dB
10 kHz	>80 dB
Wow and Flutter	Unmeasurable (Quartz Crystal Accuracy)
Output Impedance	200 Ω
Output Level at 0 dB	2.2 V rms
Digital Error Correction	IRC with double error correction in C1 and C2
Digital Code Output	Sony / Philips Serial data format

CONTROLS

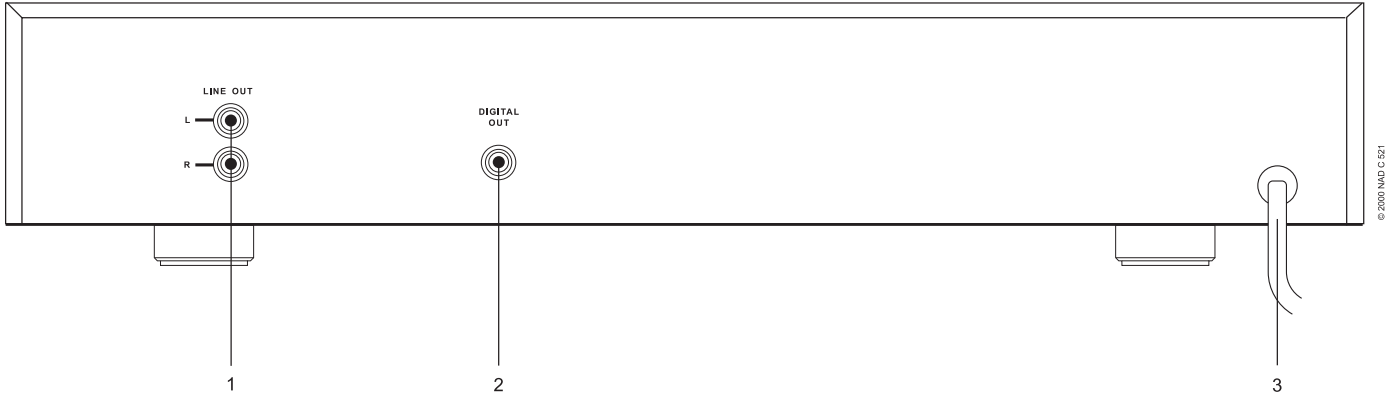
Play / Pause, Stop, Random, Skip (< >), Scan (< >), Open, Time, Repeat.

PHYSICAL SPECIFICATIONS

Dimensions (Width x Height x Depth)	435 x 80 x 285 mm
Net weight	4 kg (8.8 lbs)
Shipping weight	5.1 kg (11.22 lbs)

REAR PANEL / FRONT PANEL

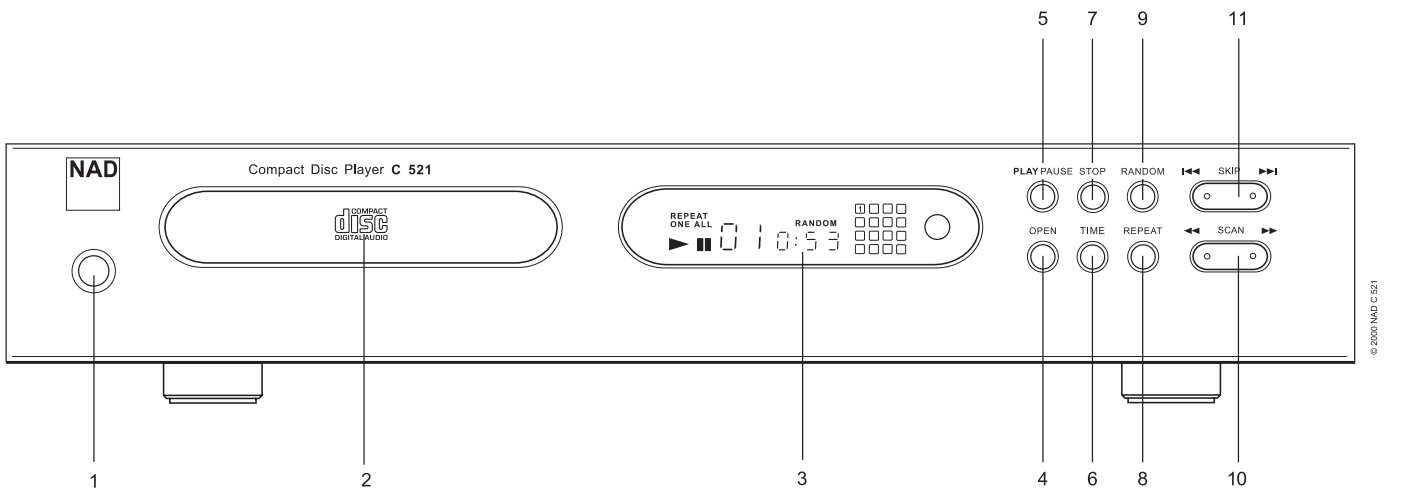
REAR PANEL



1. LINE OUT
2. DIGITAL OUT

3. AC LINE CORD

FRONT PANEL



1. POWER ON / OFF
2. DISC DRAWER
3. DISPLAY
4. OPEN
5. PLAY / PAUSE
6. TIME

7. STOP
8. REPEAT
9. RANDOM
10. SCAN Back (◀◀) / Forward (▶▶)
11. SKIP Back (◀◀◀) / Forward (▶▶▶)

DISASSEMBLY INSTRUCTIONS

1. Remove machine screws M 4.0 x 6.0 (① to ④) from the side panels.
Remove tapping screw 3.0 x 8.5 ⑤ from the back panel.
Refer to **Figure No.1**.

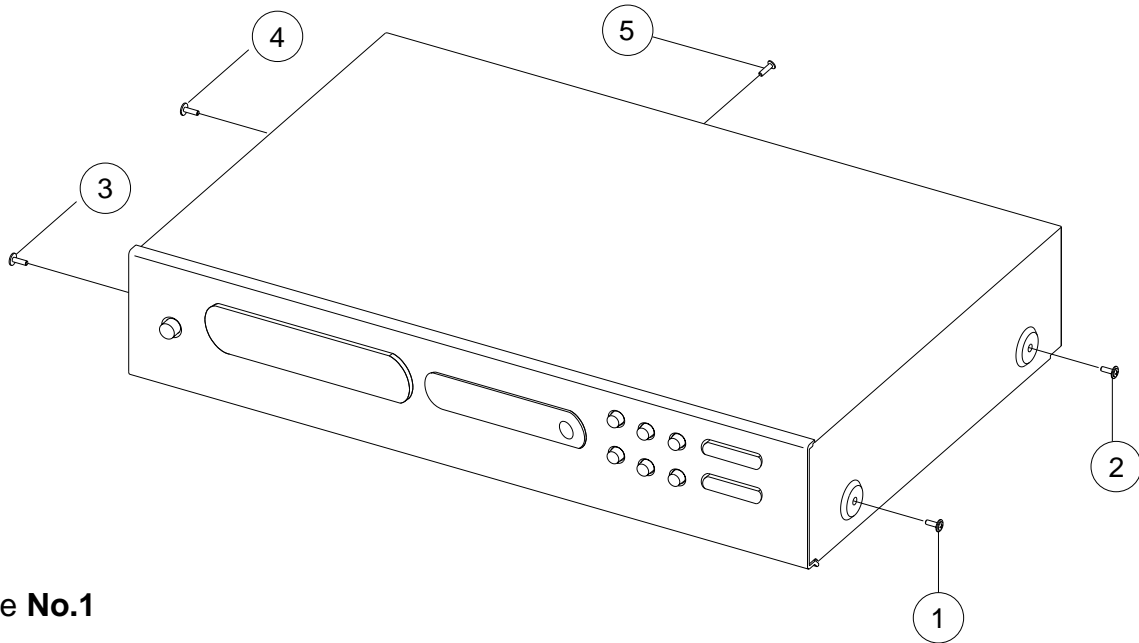


Figure No.1

2. Pull both sides of the TOP COVER slightly outwards ⑥ and tilt approx. 35° and then remove in the direction as indicated by the arrow ⑦ . Refer to **Figure No.2**.

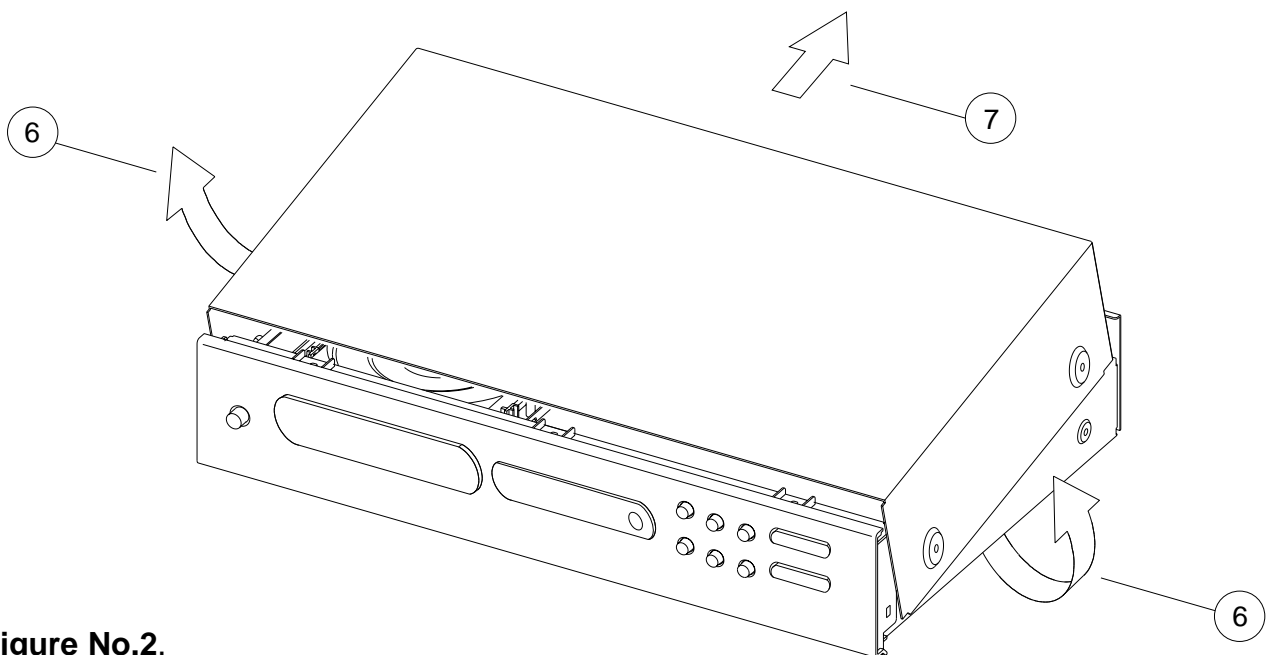
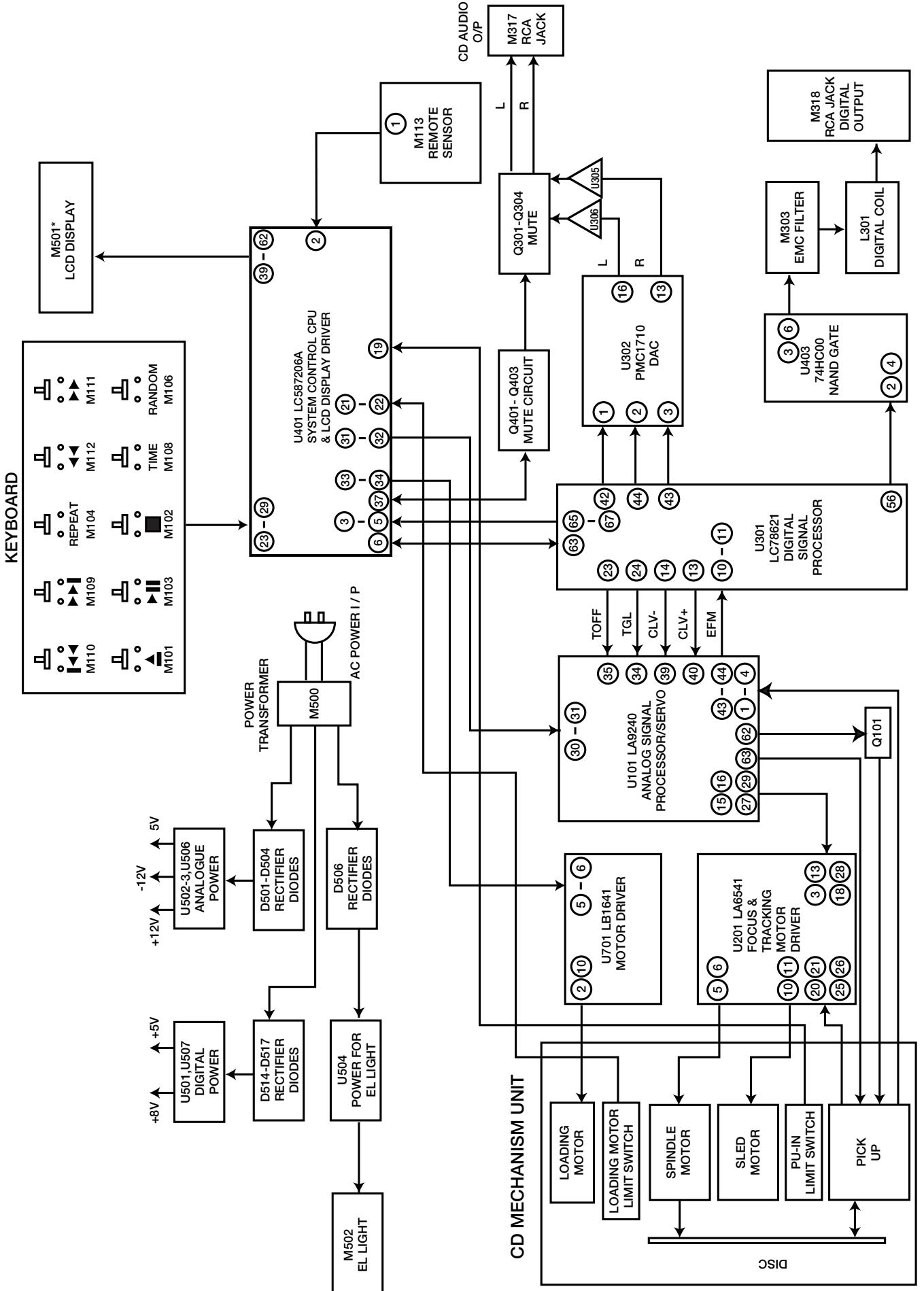
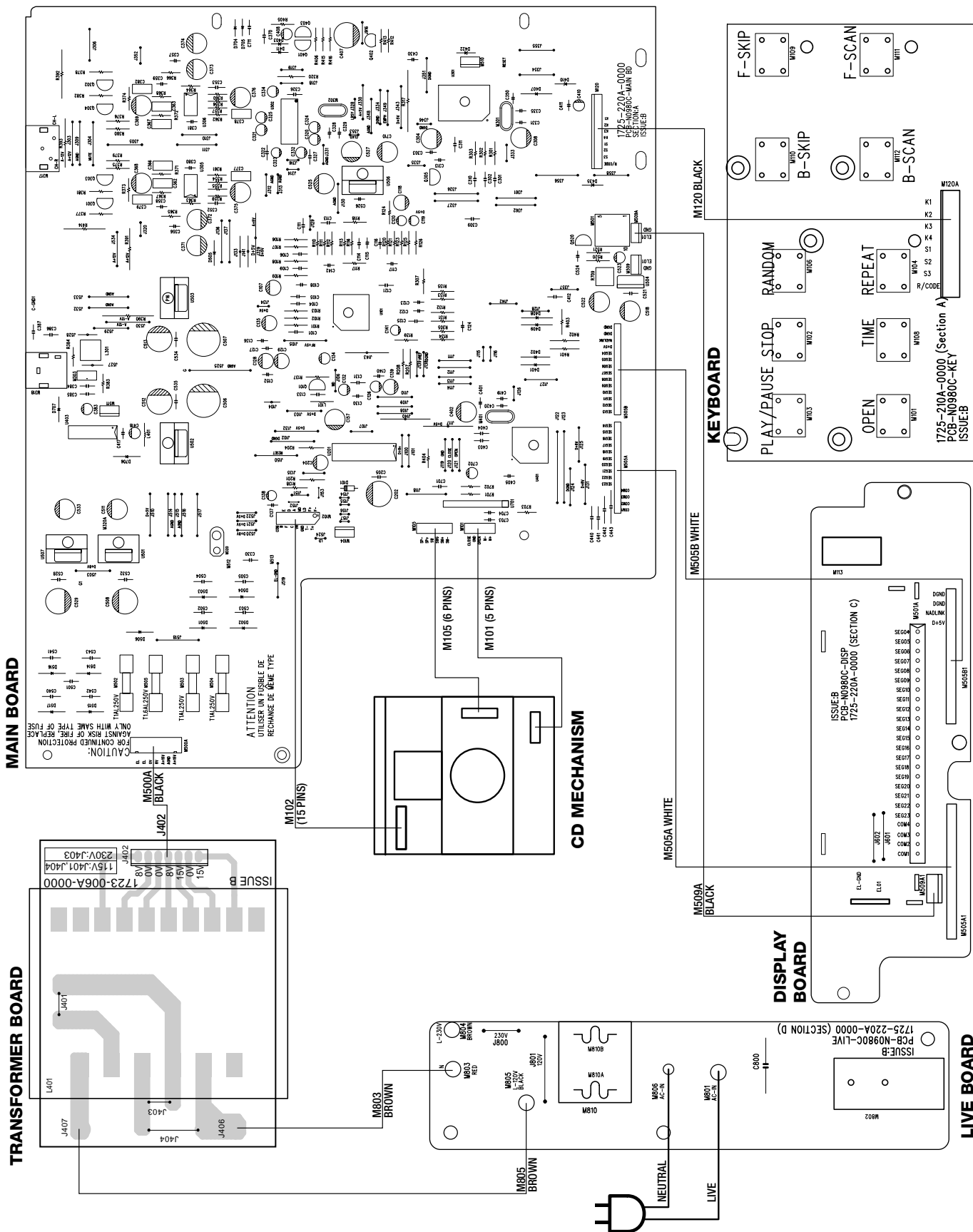


Figure No.2.

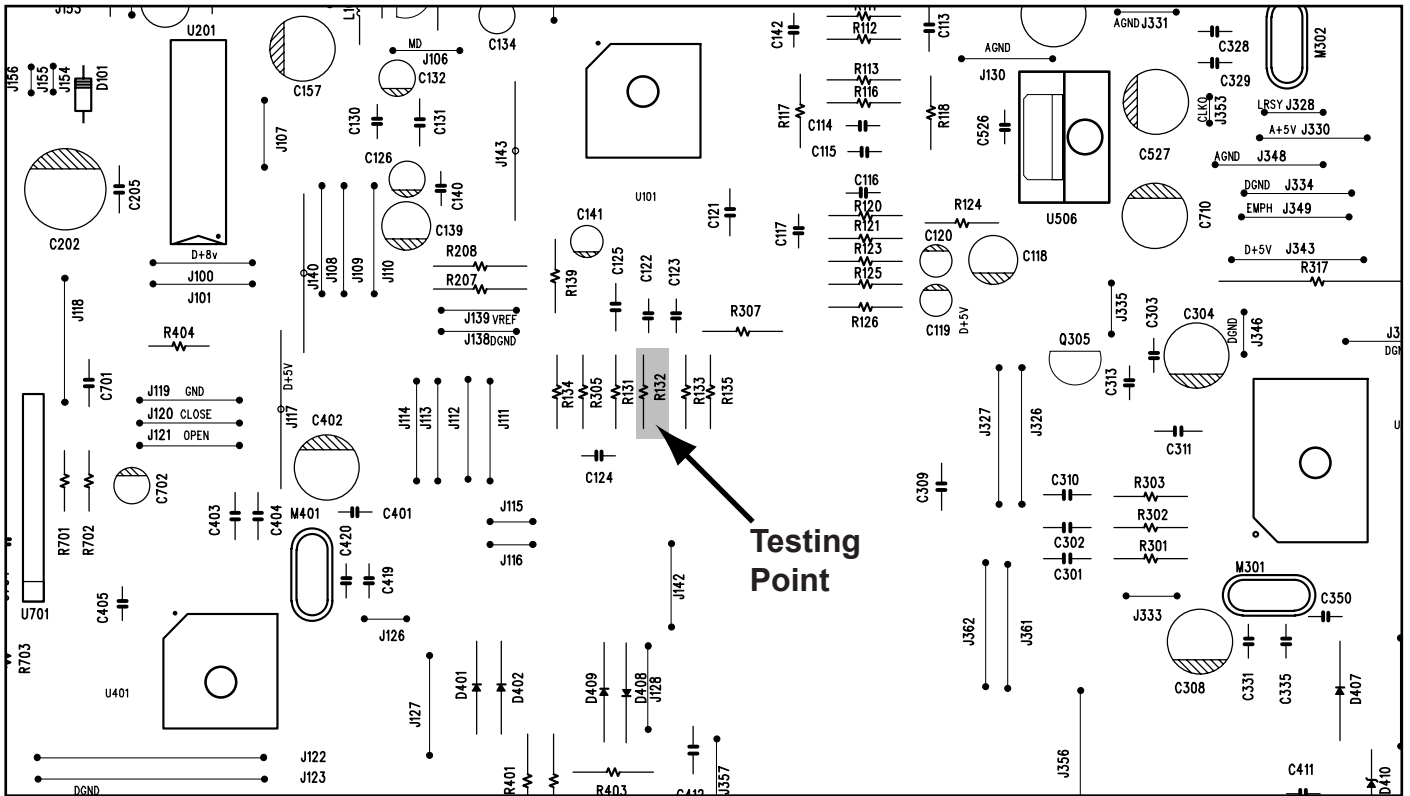
BLOCK DIAGRAM



WIRING DIAGRAM



RF PATTERN TESTING



NAD - C 521 PCB TESTING POINTS DIAGRAM

TESTING PROCEDURE

- (1) Load the test disc (Sony Test CD YEDS-7) and set the unit into PLAY mode.
- (2) Connect the scope to R132 (Pin 41 of U101) and DGND (J334).
 Scope setting: Coupling : AC.
 Vertical sensitivity : 0.2 V/ div.
 Horizontal time base : 0.5 μ S/div.
- (3) Observe the waveform is 2.0V p-p +/-5% and the eye pattern is at its best shape (see **FIG. 1**).

FIG. 1 (a)

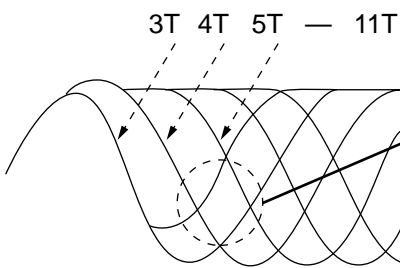


FIG. 1 (b) Poor eye pattern

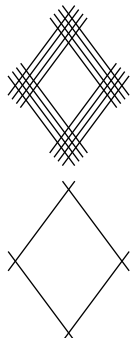


FIG. 1 (c) Good eye pattern

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 ground band (1M ohm) that is properly to remove any static electricity that may be charged on the body.

2. Ground for Work Bench

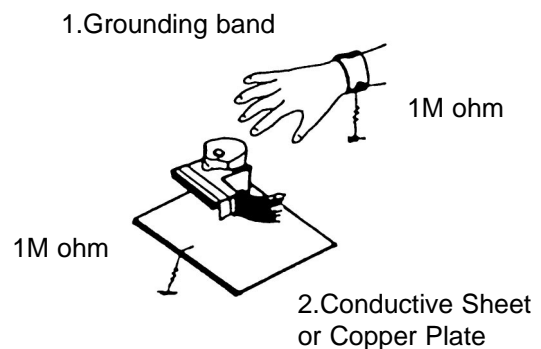
Be sure to place a conductive sheet (1M ohm) or copper plate with proper grounding on the work bench or other surface on which the pick-up is to be placed.

3. Because the static electricity charge on the clothing does not discharge through the body grounding band, do not let clothing get in contact with 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

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 plate is removed, observe the objective lens and confirm that the following operations are performed properly.

(The optical system 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 plate is removed.

(2) The diffused light of the laser beam can be seen when the **POWER** switch is turned **ON**.

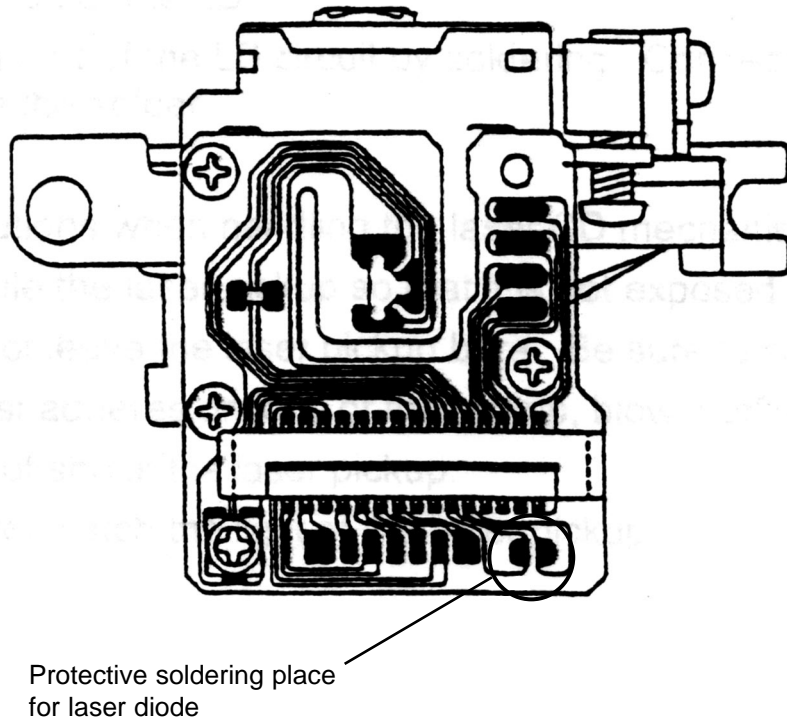
(3) Vertical (up and down) movement of the objective lens (2 or 3 times) will take place.

PRECAUTIONS WHEN CHANGING LASER PICK-UP

When removing the pick-up assembly, short circuit the PCB tracks on the optical block as show in the drawing in order to protect the pick-up before removal.

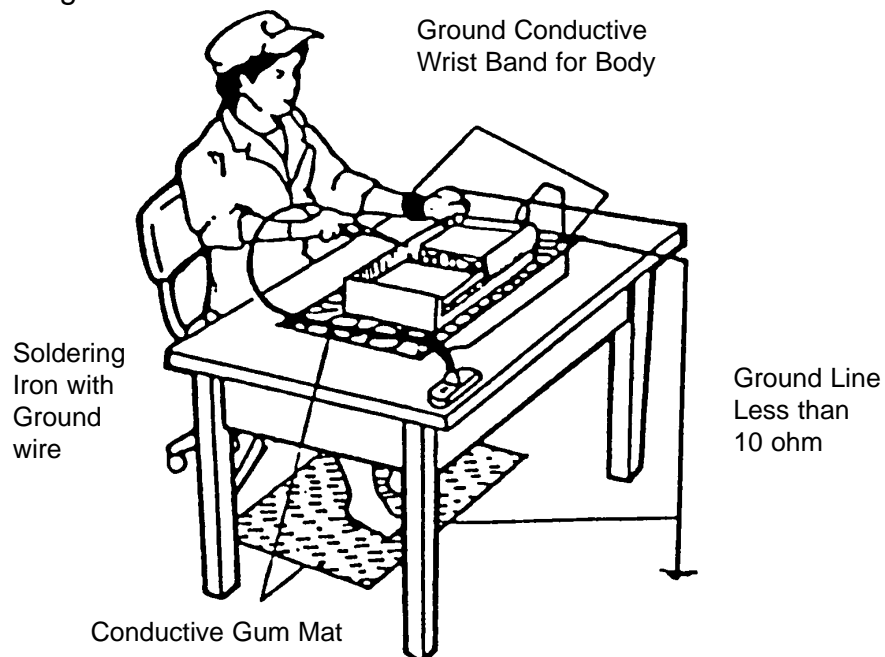
NOTE: Replacement pick-up assemblies are supplied with the PCB pattern already protected.

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



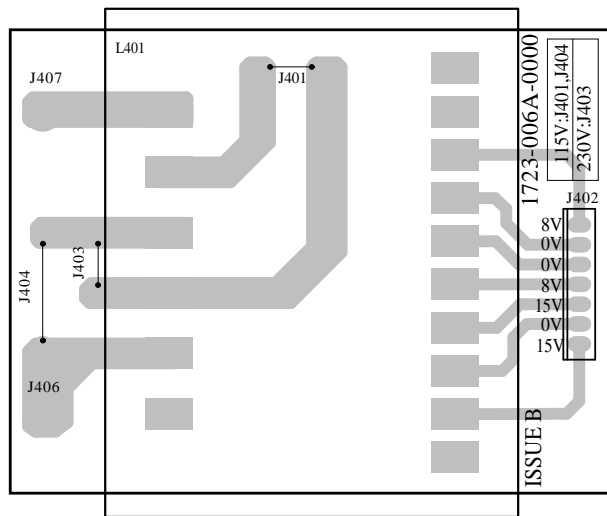
Caution:

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.

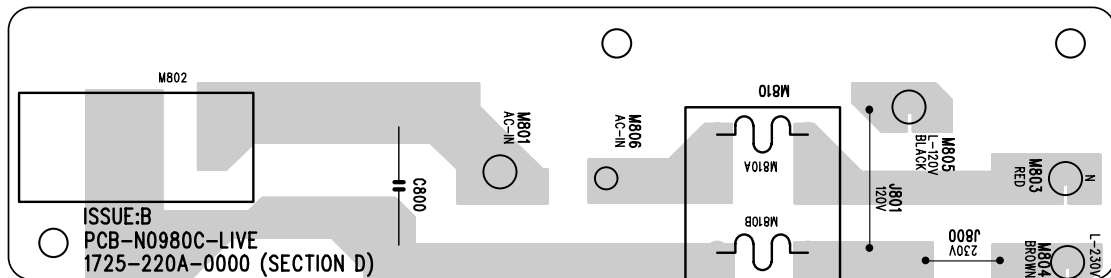


PCB LAYOUT

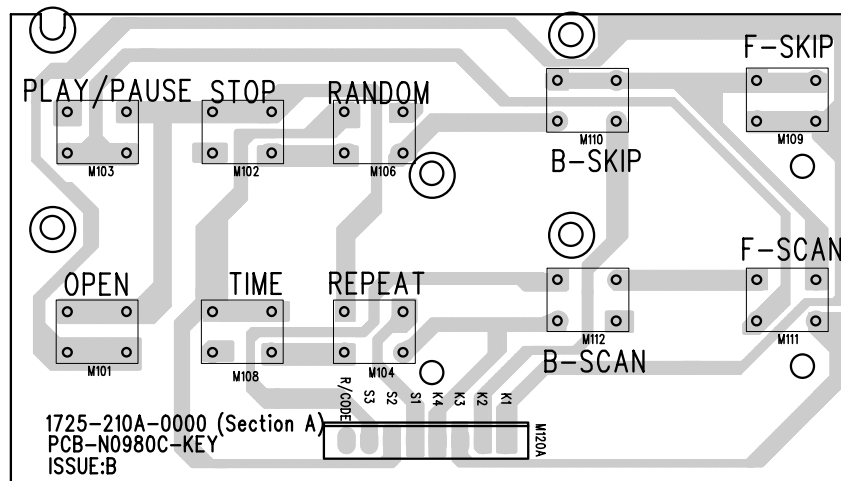
TRANSFORMER BOARD



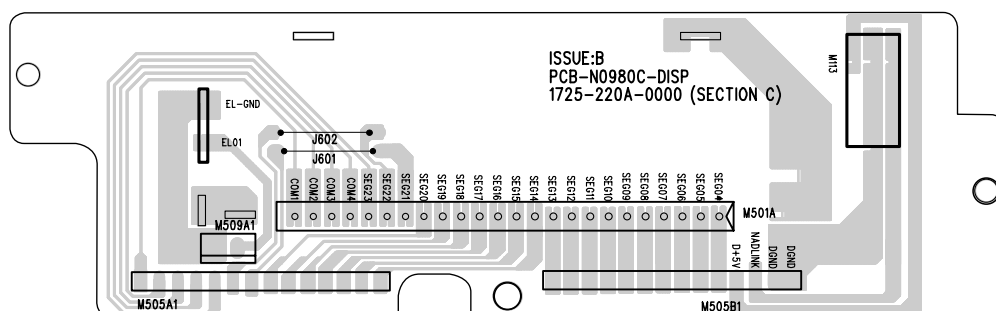
LIVE BOARD



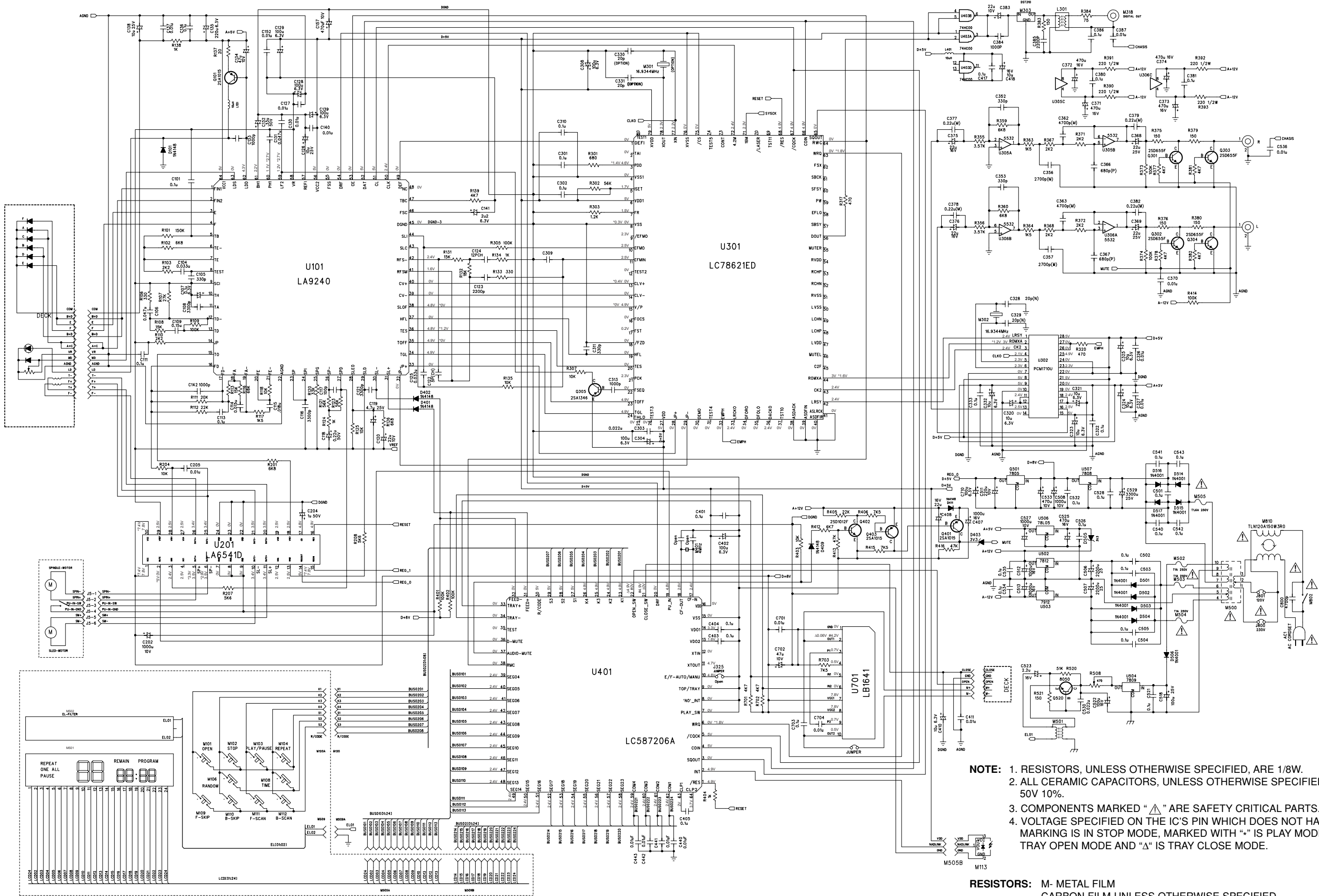
KEY BOARD



DISPLAY BOARD



SCHEMATIC DIAGRAM



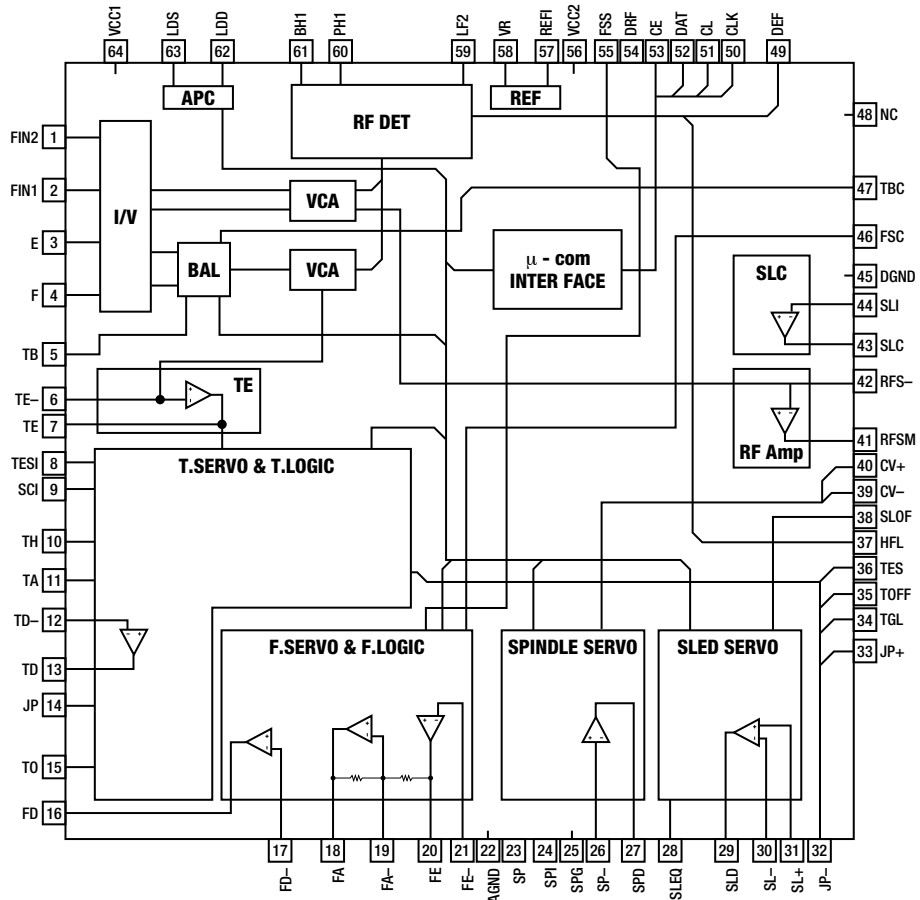
NOTE:

1. RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/8W.
2. ALL CERAMIC CAPACITORS, UNLESS OTHERWISE SPECIFIED, ARE 50V 10%.
3. COMPONENTS MARKED "▲" ARE SAFETY CRITICAL PARTS.
4. VOLTAGE SPECIFIED ON THE IC'S PIN WHICH DOES NOT HAS MARKING IS IN STOP MODE, MARKED WITH "*" IS PLAY MODE, "#" IS TRAY OPEN MODE AND "▲" IS TRAY CLOSE MODE.

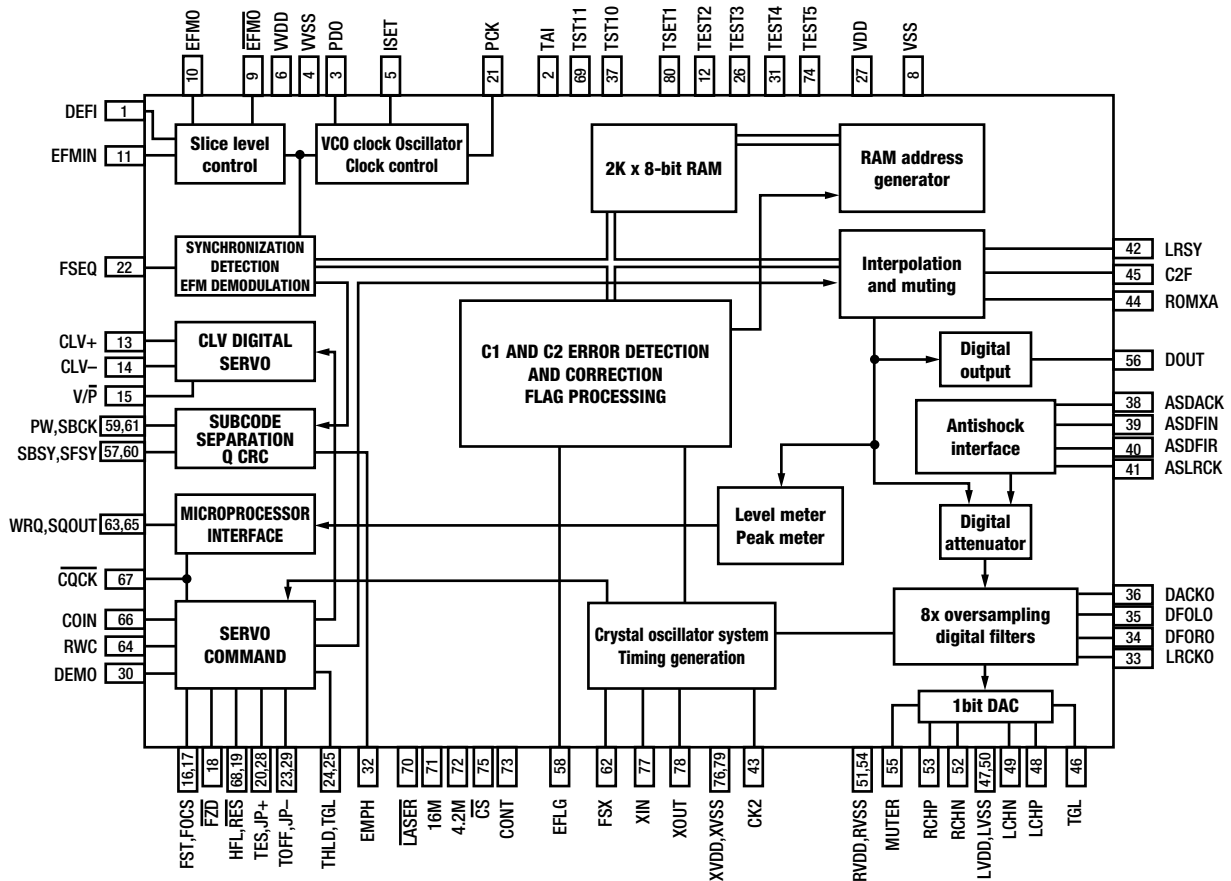
RESISTORS: M- METAL FILM
CARBON FILM UNLESS OTHERWISE SPECIFIED.

IC BLOCK DIAGRAM

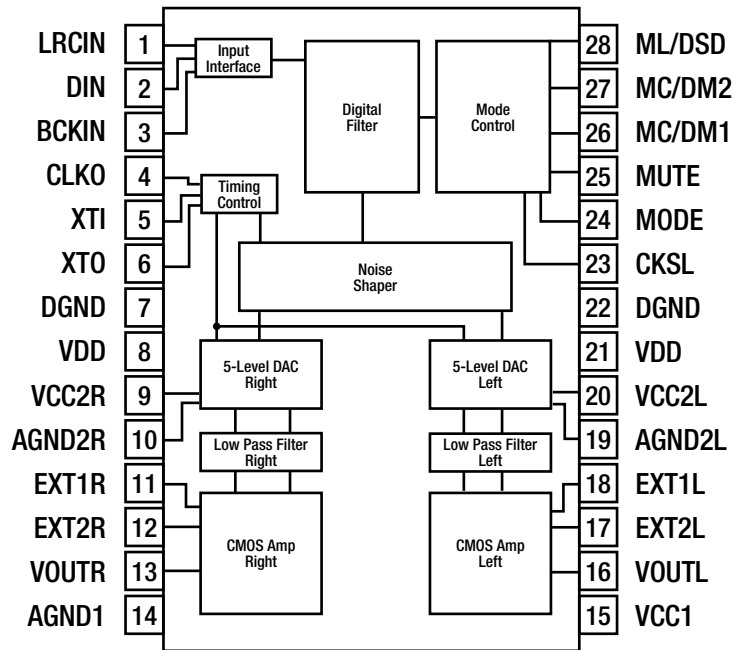
U101: LA9240



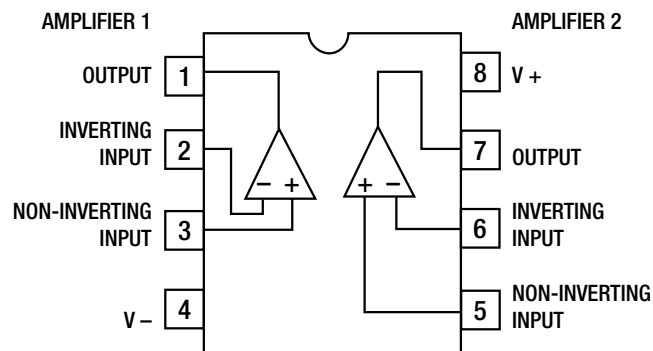
U301: LC78621ED



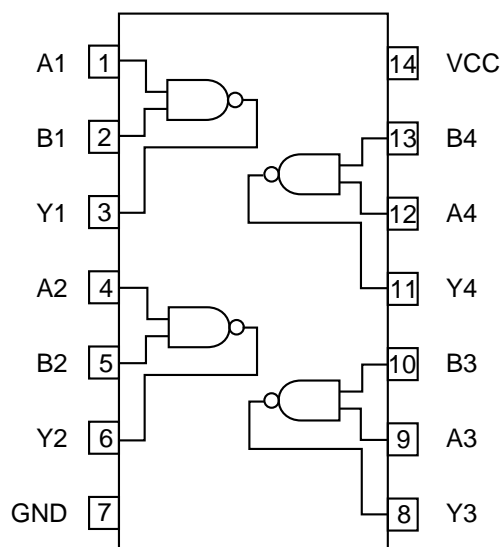
U302: PCM1710U



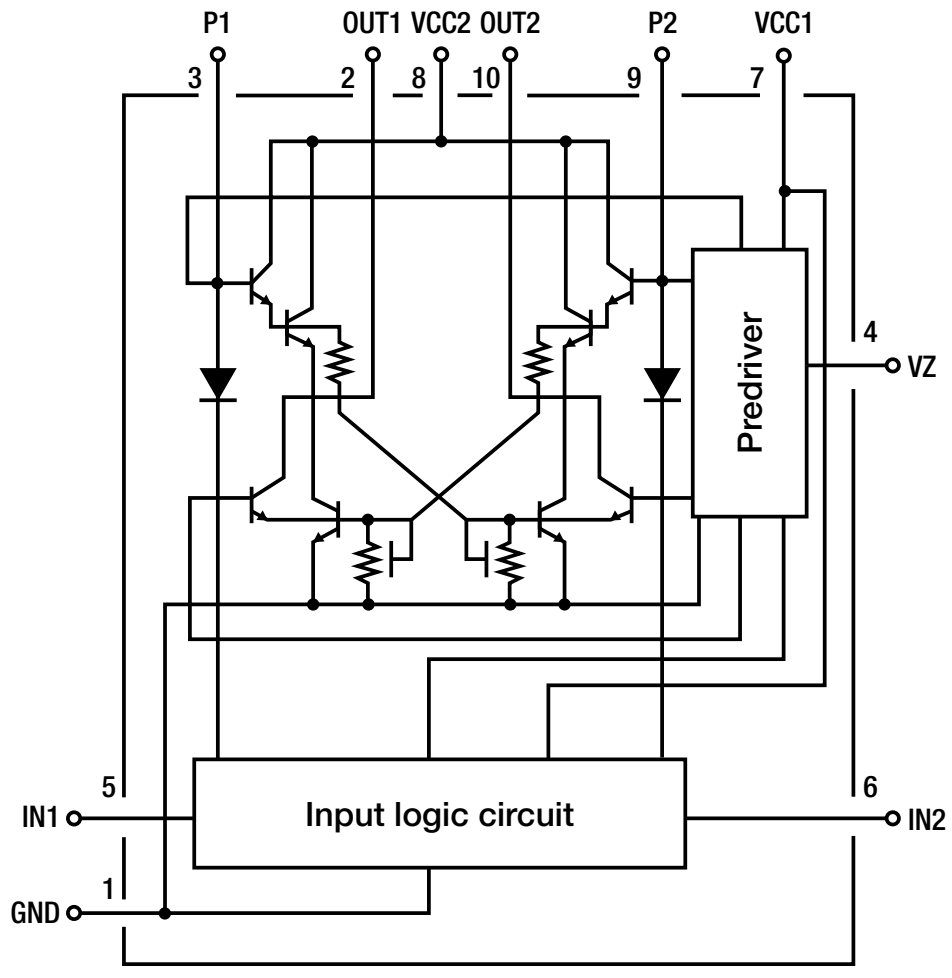
U305-U306: NE5532



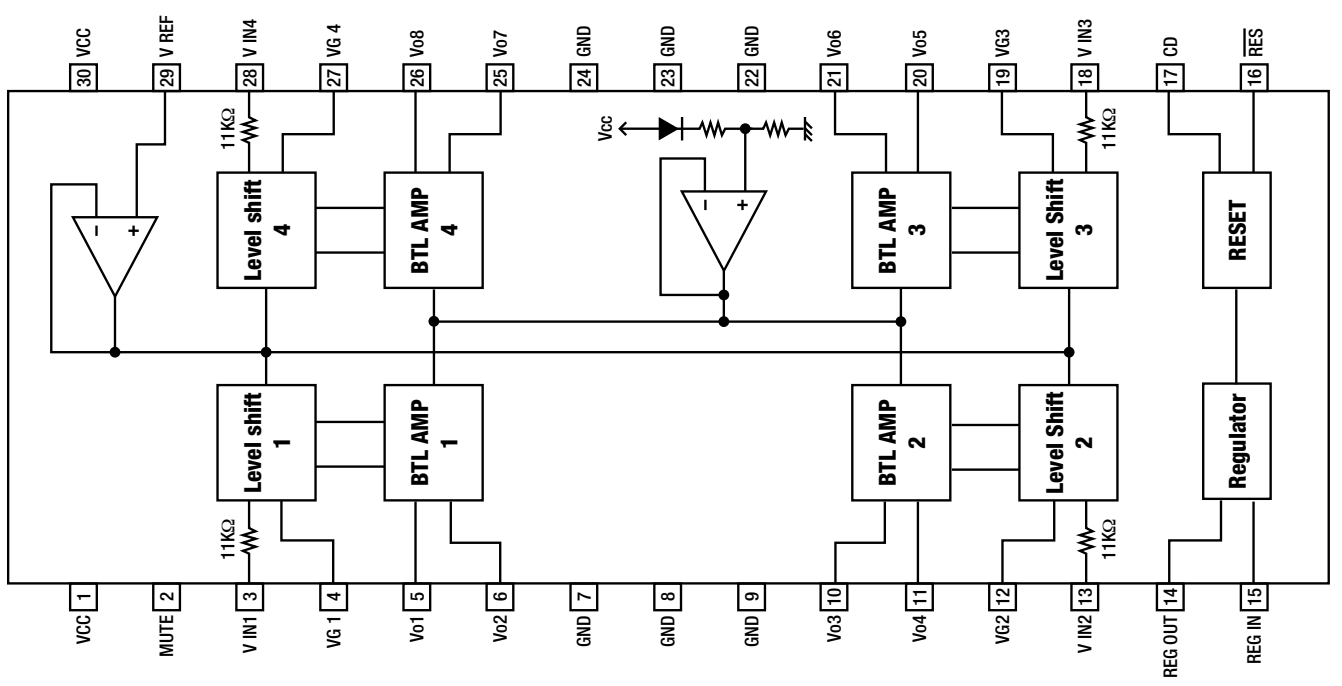
U403: TC74HC00



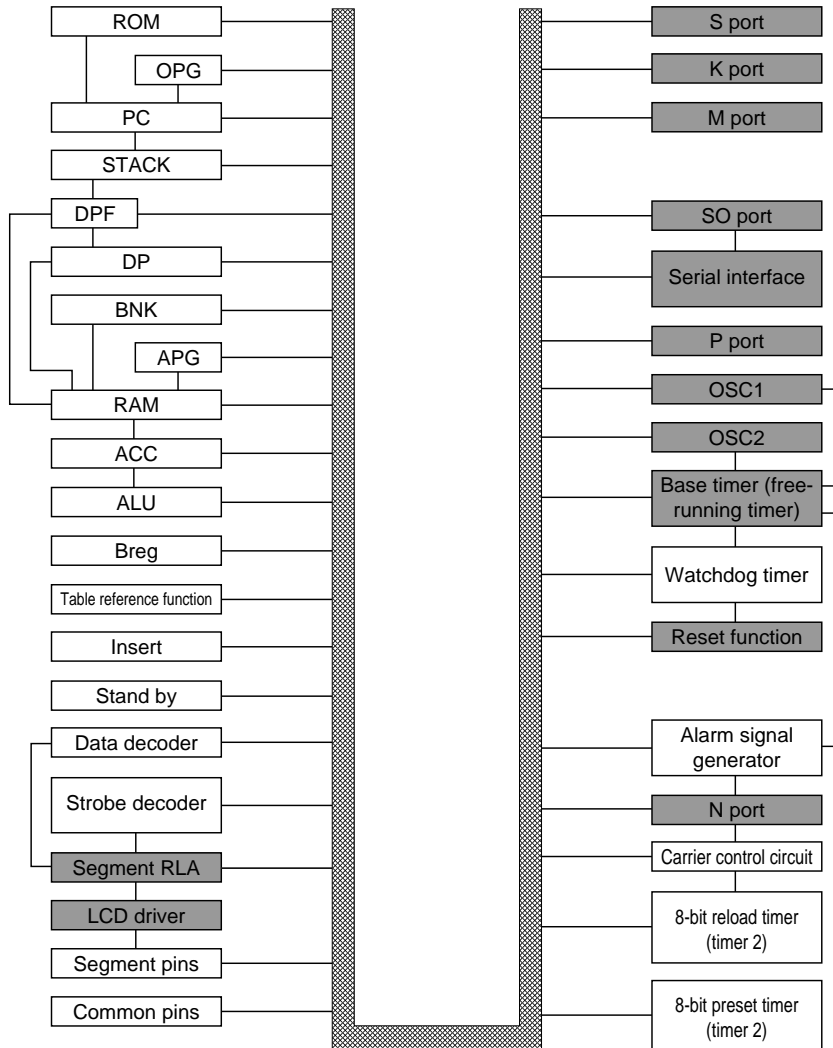
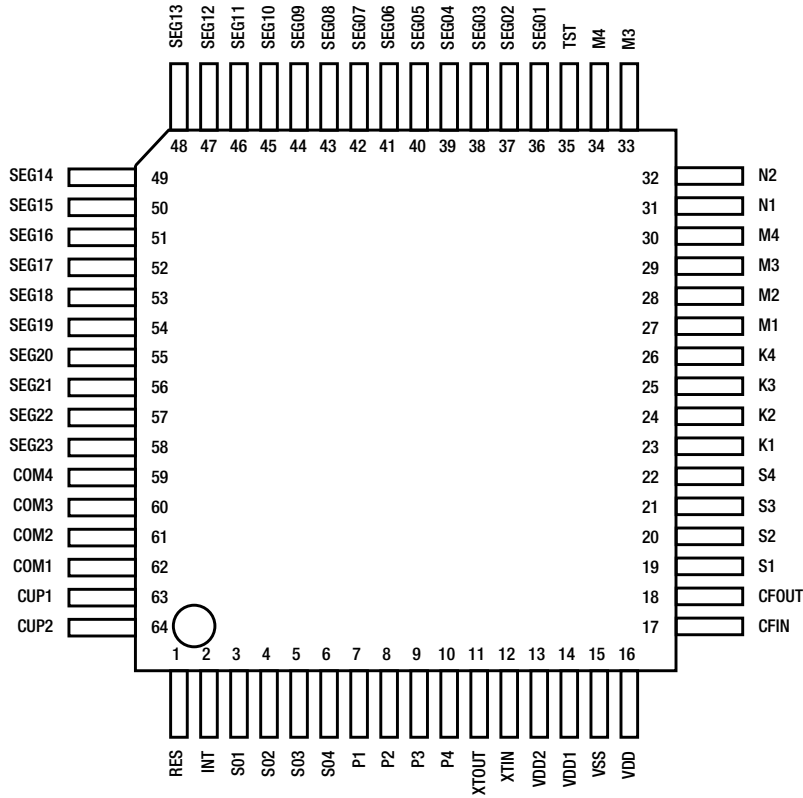
U701: LB1641



U201: LA6541D

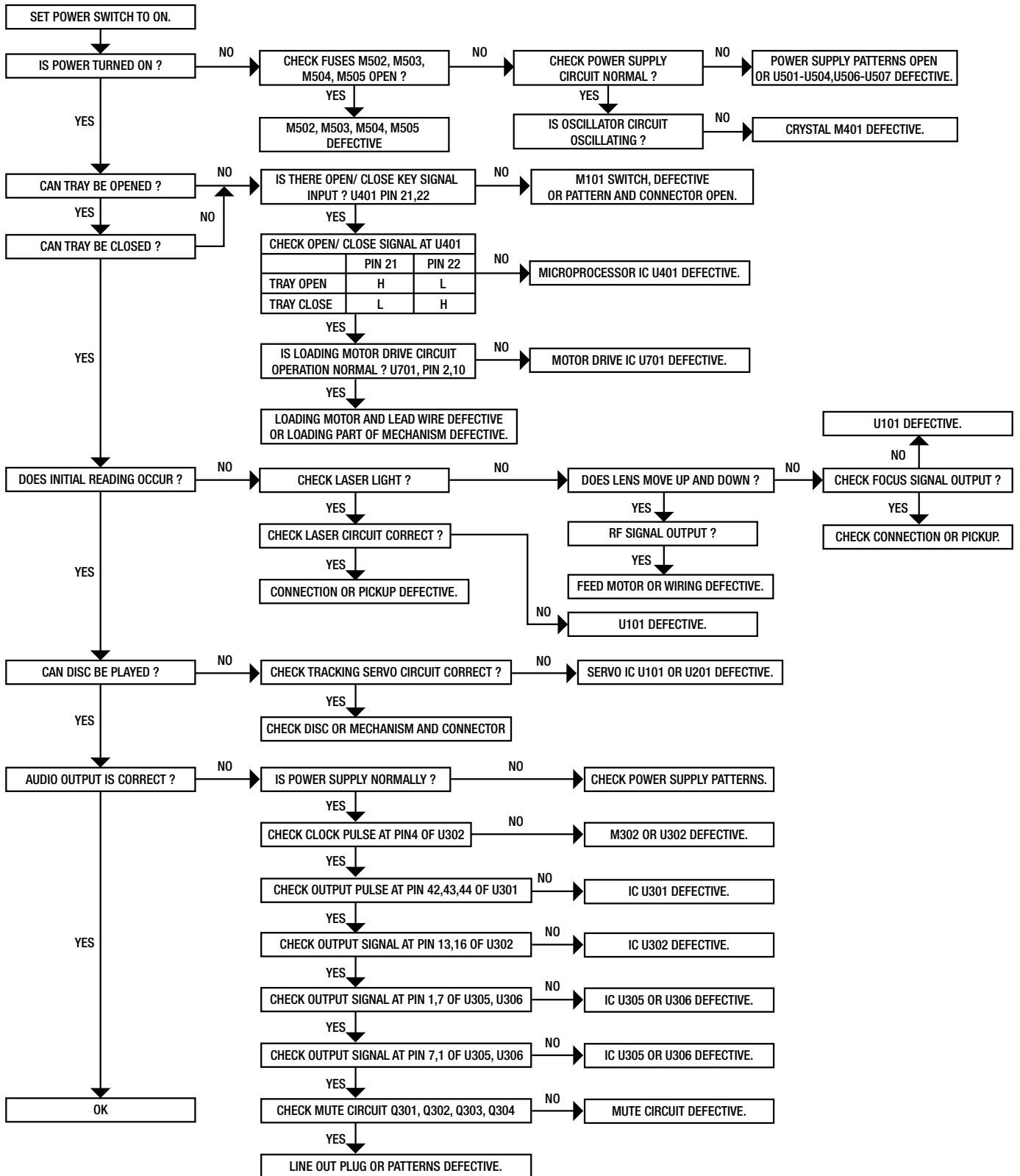


U401: LC587206A



Note: Shaded blocks can be selected by the user as mask options.

TROUBLESHOOTING GUIDE



ELECTRICAL PARTS LIST

<u>Reference No.</u>	<u>Part No.</u>	<u>Description</u>
<u>DISPLAY ASSEMBLY</u> <u>PCB BOARD</u> 1000	PCB-N0980C-DISP	DISPLAY ASSEMBLY
<u>LCD</u> M501	2460-1340-1	LCD DISPLAY
<u>BACKLIGHT</u> M502	2450-1146-0	EL BACKLIGHT
<u>IR SENSOR</u> M113	4816-043T-3	IR SENSOR PIC-26043TM2 KODENSHI
<u>KEYBOARD ASSEMBLY</u> <u>PC BOARD</u> 2000	PCB-N0980C-KEY	KEYBOARD ASSEMBLY
<u>SWITCHES</u> M101-M104, M106 M108-M112	5200-3538-0 5200-3538-0	SWITCH, TACT SKHHBY 7MM HIGH SWITCH, TACT SKHHBY 7MM HIGH
<u>LIVE ASSEMBLY</u> <u>PC BOARD</u> 3000 *AH 3000 *C	PCB-N0980C-LIVE PCB-N0981C-LIVE	LIVE ASSEMBLY LIVE ASSEMBLY
<u>CAPACITOR</u> C800 △	8910-0049-0	CAP400V 4700P DE7150F472MVA1KC
<u>POWER SWITCH</u> M802 △	5200-3151-0-01	POWER SWITCH
<u>TRANSFORMER</u> M810 *C	1806-2170-0	EMI FILTER TLN12UA 150W3R0
<u>TRANSFORMER ASSEMBLY</u> 4000 *AH 4000 *C	PCB-N0980C-PWR PCB-N0981C-PWR	TRANSFORMER ASSEMBLY TRANSFORMER ASSEMBLY
<u>TRANSFORMER</u> M500 △	1806-2194-0	EI-57 TRANSFORMER 740 AC3
<u>FUSE ASSEMBLY</u>		
<u>FUSES</u> M502-M504 △ *AH M502-M504 △ *C M505 △ *AH M505 △ *C	5120-0020-0 5120-0018-0 5120-0052-0 5120-0050-0	FU T1A 250V UL/CSA 5X20MM FU T1A 250V SEMKO/UDE 5X20MM FUSE T1.6A 250V 5X20MM UL/CSA FUSE T1.6A/250V 5X20MM SEMKO/VDE
<u>MAIN ASSEMBLY</u> <u>PC BOARD</u> 5000	PCB-N0980C-MAIN	MAIN ASSEMBLY

<u>Reference No.</u>	<u>Part No.</u>	<u>Description</u>
CAPACITORS		
C101	150F-104K-5-II	CC 50V 0.1μF 10% RL 5X5
C104	153F-333J-5-MS	CM 50V 0.033μF 5% RL 7X10
C105	150F-331K-5-GE	CC 50V 330pF 10% RL 4X3
C106	153F-473J-5-NR	CM 50V 0.047μF 5% RL 7.5x9.5
C107	157F-104M-5-IU	CE 50V 0.1μF 20% RL 5x11
C108	150F-332K-5-OF	CC 50V 3300pF 10% RL 8X3
C109	153F-154J-5-NLM	CM 50V 0.15μF 5% RL 7.3X6.5
C111, C113	150F-104K-5-II	CC 50V 0.1μF 10% RL 5X5
C114	153F-153K-5-KP	CM 50V 0.015μF 10% RL 6x8.5
C115	153F-183J-5-KJ	CM 50V 0.018μF 5% RL 6X5.5
C116	150F-332K-5-OF	CC 50V 3300pF 10% RL 8X3
C117	150F-101K-2-FC	CC 50V 100pF 10% AT 3.5
C118	157F-224M-5-IU	CE 50V 0.22μF 20% RL 5X11
C119	157E-475M-5-IU	CE 25V 4.7μF 20% RL 5x11
C120	157E-226K-5-IU	CE 25V 22μF 10% RL 5x11
C121	150F-332K-5-OF	CC 50V 3300pF 10% RL 8X3
C122	15CH-050D-5-GG	CTC 0/60 5pF 0.5pF RL 4X4
C123	153F-222J-5-IM	CM 50V 2200pF 5% RL 5X7
C124	15CH-120J-5-GG	CTC 0/60 12pF 5% RL 4x4
C125	153F-333J-5-MS	CM 50V 0.033μF 5% RL 7X10
C126	157F-106M-5-IU	CE 50V 10μF 20% RL 5x11
C127	153F-103J-5-IM	CM 50V 0.01μF 5% RL 5X7
C128, C129	157B-107M-5-KM	CE 6.3V 100μF 20% RL 6x7
C130	153F-103J-5-IM	CM 50V 0.01μF 5% RL 5X7
C131	153F-473J-5-NR	CM 50V 0.047μF 5% RL 7.5X9.5
C132	157F-334K-5-IU	CE 50V 0.33μF 10% RL 5X11
C133	150F-102K-5-IF	CC 50V 1000pF 10% RL 5X3
C134	157C-476M-5-IU	CE 10V 47μF 20% RL 5x11
C135	157B-227M-5-KW	CE 6.3V 220μF 20% RL 6X12
C136	150F-104K-5-II	CC 50V 0.1μF 10% RL 5X5
C137	153F-103J-5-IM	CM 50V 0.01μF 5% RL 5X7
C138	157E-106M-5-IU	CE 25V 10μF 20% RL 5x11
C139	157B-107M-5-KM	CE 6.3V 100μF 20% RL 6x7
C140	150F-104K-5-II	CC 50V 0.1μF 10% RL 5X5
C141	157F-225M-5-IU	CE 50V 2.2μF 20% RL 5x11
C142	150F-102K-5-IF	CC 50V 1000μF 10% RL 5X3
C152	153F-103J-5-IM	CM 50V 0.01μF 5% RL 5X7
C157	157C-477M-5-OW	CE 10V 470μF 20% RL 8x12
C202	157C-108M-5-S5	CE 10V 1000μF 20% RL 10X16
C204	157F-105M-5-IU	CE 50V 1μF 20% RL 5x11
C205	153F-103J-5-IM	CM 50V 0.01μF 5% RL 5X7
C301, C302	150F-104K-5-II	CC 50V 0.1μF 10% RL 5X5
C303	150D-223M-5-MG	CC 16V 0.022μF 20% RL
C304, C308	157B-107M-5-KM	CE 6.3V 100μF 20% RL 6x7
C310	150F-104K-5-II	CC 50V 0.1μF 10% RL 5X5
C311	150F-331K-5-GE	CC 50V 330pF 10% RL 4X3
C313	150F-102K-5-IF	CC 50V 1000pF 10% RL 5X3
C322	150F-104K-5-II	CC 50V 0.1μF 10% RL 5X5
C320-C321, C323-C325	157B-106M-5-EI	CE 6.3V 10μF 20% RL 3x5
C326, C327	153F-103J-5-IM	CM 50V 0.01μF 5% RL 5X7
C328, C329	15CH-200J-5-GG	CTC 0/60 20pF 5% RL 4x4
C330	153F-103J-5-IM	CM 50V 0.01μF 5% RL 5X7
C332, C334	157B-106M-5-EI	CE 6.3V 10μF 20% RL 3x5
C350	150F-104K-5-II	CC 50V 0.1μF 10% RL 5X5
C352, C353	150F-331K-5-GE	CC 50V 330pF 10% RL 4X3
C356, C357	153F-272J-5-JM	CM 50V 2700pF 5% RL 5.5X7
C362, C363	153F-472J-5-KM	CM 50V 4700pF 5% RL 6x7
C366, C367	158F-681J-5-KW	CP 50V 680pF 5% RL 6x12
C368, C369	157E-226K-5-IU	CE 25V 22μF 10% RL 5x11

Reference No.	Part No.	Description
C370	153F-103J-5-IM	CM 50V 0.01μF 5% RL 5X7
C371-C374	157D-477M-5-OY	CE 470μF +-20% RL 8X13
C375,C376	157E-226M-5-IU	CE 25V 22μF 20% RL 5x11
C377-C379, C382	153F-224J-5-MIB	CM 50V 0.22μF 5% RL 7x5
C380, C381	150F-104K-5-II	CC 50V 0.1μF 10% RL 5X5
C383	157C-226M-5-IU	CE 10V 22μF 20% RL 5x11
C384	150F-102K-5-IF	CC 50V 1000pF 10% RL 5X3
C385	150F-222K-5-LF	CC 50V 2200pF 10% RL
C386, C401	150F-104K-5-II	CC 50V 0.1μF 10% RL 5X5
C402	157B-107M-5-KM	CE 6.3V 100μF 20% RL 6x7
C403, C405	150F-104K-5-II	CC 50V 0.1μF 10% RL 5X5
C407	157D-108M-5-S9	CE 16V 1000μF 20% RL 10X20
C408	157E-226M-5-IU	CE 25V 22μF 20% RL 5x11
C410	157B-106M-5-EI	CE 6.3V 10μF 20% RL 3x5
C411	153F-103J-5-IM	CM 50V 0.01μF 5% RL 5X7
C412-C417	150F-104K-5-II	CC 50V 0.1μF 10% RL 5X5
C418	157E-106M-5-IU	CE 25V 10μF 20% RL 5x11
C440-C443	150F-103K-2-FC	CC 50V 0.01μF 10% AT
C501-C505	150F-104K-5-II	CC 50V 0.1μF 10% RL 5X5
C506, C507	157E-228M-5-X9	CE 25V 2200μF 20% RL 12.5X20
C508	157C-108M-5-S5	CE 10V 1000μF 20% RL 10X16
C511	157C-227M-5-KW	CE 10V 220μF 20% RL 6x12
C512, C513	157D-108M-5-S9	CE 16V 1000μF 20% RL 10X20
C518	157E-107M-5-KW	CE 25V 100μF 20% RL 6x12
C521	150F-104K-5-II	CC 50V 0.1μF 10% RL 5X5
C522	157D-107M-5-IU	CE 16V 100μF 20% RL 5x11
C523	157F-225M-5-IU	CE 50V 2.2μF 20% RL 5x11
C524	153F-223J-5-LQ	CM 50V 0.022μF 5% RL 6.5X9
C525	157D-477M-5-OY	CE 470μF +-20% RL 8X13
C526	150F-104K-5-II	CC 50V 0.1μF 10% RL 5X5
C527	157C-108M-5-S5	CE 10V 1000μF 20% RL 10X16
C528	150F-104K-5-II	CC 50V 0.1μF 10% RL 5X5
C529	157D-338M-5-W@	CE 16V 3300μF 20% RL 12X26
C532	150F-104K-5-II	CC 50V 0.1μF 10% RL 5X5
C533	157C-477M-5-OW	CE 10V 470μF 20% RL 8x12
C534, C535	150F-104K-5-II	CC 50V 0.1μF 10% RL 5X5
C540-C543	150F-104K-5-II	CC 50V 0.1μF 10% RL 5X5
C701	153F-103J-5-IM	CM 50V 0.01μ 5% RL 5X7
C702	157C-476M-5-IU	CE 10V 47μF 20% RL 5x11
C703	150F-104K-5-II	CC 50V 0.1μF 10% RL 5X5
C704	153F-103J-5-IM	CM 50V 0.01μ 5% RL 5X7
C710	157B-107M-5-KM	CE 6.3V 100μF 20% RL 6x7
DIODES		
D101, D401-D402	4804-1480-2	DIODE 1N4148 AT
D403	4837-3V31-2	DZ 1/2W 3.1-3.5V ROHM AT
D409, D411	4804-1480-2	DIODE 1N4148 AT
D501-D504	4804-0010-2	DIODE 1N4001 AT
D505	4840-1140-0	ZD 1.3W 3.3V 5% AT
D506,D514-D517	4804-0010-2	DIODE 1N4001 AT
D707	4804-1480-2	DIODE 1N4148 AT
COILS		
J510, L101	1801-100K-M	COIL 10μH 10% BL7.0
L301	1802-0450-0	DIGITAL COIL 015-910-27BB
CRYSTAL		
M301, M302	2300-0110-0	CRYSTAL 16.9344 MHZ

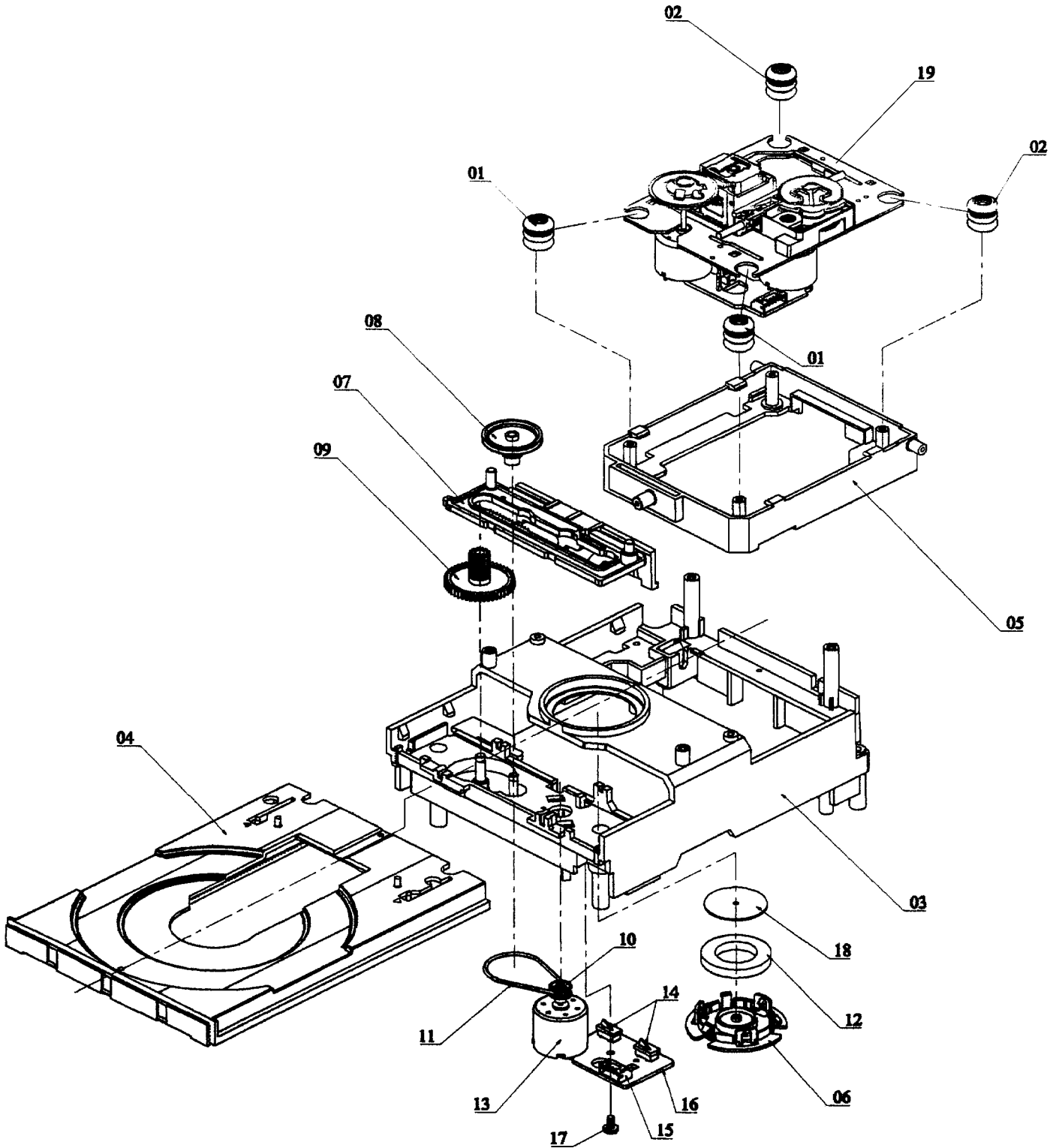
<u>Reference No.</u>	<u>Part No.</u>	<u>Description</u>
TRANSFORMER M501	1806-2320-0	TRANSFORMER STEP-UP 5V TO 83.5V
TRANSISTORS Q101	4851-015Y-5	TR 2SA1015-Y HFE120-240
Q301-Q304	4860-1780-5	TR 2SD655F HFE:600-1200
Q305	485A-1346-5	TR 2SA1346 HFE 50-100
Q401	4860-0660-5	TR 2SA1015 (G.R.) RL
Q402	4851-012F-5	TR 2SD1012F/G HFE 160~560
Q403	4860-0660-5	TR 2SA1015 (G.R.) RL
Q520	4860-0050-5	TR SS8050 C/D SAMSUNG RL
RESISTORS R101	4701-154J-C	RCF 1/8W 150K 5% ATS
R102	4701-682J-C	RCF 1/8W 6.8K 5% ATS
R103	4701-222J-C	RCF 1/8W 2.2K 5% ATS
R106	4701-331J-C	RCF 1/8W 330R 5% ATS
R107	4701-273J-C	RCF 1/8W 27K 5% ATS
R108	4701-153J-C	RCF 1/8W 15K 5% ATS
R109	4701-104J-C	RCF 1/8W 100K 5% ATS
R110	4701-222J-C	RCF 1/8W 2.2K 5% ATS
R111	4701-203J-C	RCF 1/8W 20K 5% ATS
R112	4701-223J-C	RCF 1/8W 22K 5% ATS
R113	4701-153J-C	RCF 1/8W 15K 5% ATS
R116	4701-393J-C	RCF 1/8W 39K 5% ATS
R117	4701-152J-C	RCF 1/8W 1.5K 5% ATS
R118	4701-103J-C	RCF 1/8W 10K 5% ATS
R120	4701-333J-C	RCF 1/8W 33K 5% ATS
R121, R123	4701-563J-C	RCF 1/8W 56K 5% ATS
R124	4701-102J-C	RCF 1/8W 1K 5% ATS
R125	4701-103J-C	RCF 1/8W 10K 5% ATS
R126	4701-682J-C	RCF 1/8W 6.8K 5% ATS
R131	4701-153J-C	RCF 1/8W 15K 5% ATS
R132	4701-183J-C	RCF 1/8W 18K 5% ATS
R133	4701-331J-C	RCF 1/8W 330R 5% ATS
R134	4701-102J-C	RCF 1/8W 1K 5% ATS
R135	4701-103J-C	RCF 1/8W 10K 5% ATS
R137	4701-200J-C	RCF 1/8W 20R 5% ATS
R138	4701-102J-C	RCF 1/8W 1K 5% ATS
R139	4701-472J-C	RCF 1/8W 4.7K 5% ATS
R201	4701-682J-C	RCF 1/8W 6.8K 5% ATS
R204	4701-103J-C	RCF 1/8W 10K 5% ATS
R207, R208	4701-562J-C	RCF 1/8W 5.6K 5% ATS
R301	4701-681J-C	RCF 1/8W 680R 5% ATS
R302	4701-563J-C	RCF 1/8W 56K 5% ATS
R303	4701-122J-C	RCF 1/8W 1.2K 5% ATS
R305	4701-104J-C	RCF 1/8W 100K 5% ATS
R307	4701-103J-C	RCF 1/8W 10K 5% ATS
R317	4701-102J-C	RCF 1/8W 1K 5% ATS
R320	4701-471J-C	RCF 1/8W 470R 5% ATS
R354	4701-271J-C	RCF 1/8W 270R 5% ATS
R355, R356	4701-332J-C	RCF 1/8W 3.3K 5% ATS
R357	4701-271J-C	RCF 1/8W 270R 5% ATS
R359, R360	4701-682J-C	RCF 1/8W 6.8K 5% ATS
R363, R364	4701-152J-C	RCF 1/8W 1.5K 5% ATS
R367, R368	4701-222J-C	RCF 1/8W 2.2K 5% ATS
R371, R372	4701-222J-C	RCF 1/8W 2.2K 5% ATS
R373, R374	4701-104J-C	RCF 1/8W 100K 5% ATS
R375, R376	4701-151J-C	RCF 1/8W 150R 5% ATS
R377, R378	4701-472J-C	RCF 1/8W 4.7K 5% ATS

Reference No.	Part No.	Description
R379, R380	4701-151J-C	RCF 1/8W 150R 5% ATS
R381, R382	4701-472J-C	RCF 1/8W 4.7K 5% ATS
R383	4701-151J-C	RCF 1/8W 150R 5% ATS
R384	4701-750J-C	RCF 1/8W 75R 5% ATS
R390-R393	4717-221J-C	RMF 1/2W 220R 5% ATS
R401, R402	4701-104J-C	RCF 1/8W 100K 5% ATS
R403	4701-103J-C	RCF 1/8W 10K 5% ATS
R404	4701-102J-C	RCF 1/8W 1K 5% ATS
R405	4701-223J-C	RCF 1/8W 22K 5% ATS
R406	4701-752J-C	RCF 1/8W 7.5K 5% ATS
R412	4701-472J-C	RCF 1/8W 4.7K 5% ATS
R413	4701-473J-C	RCF 1/8W 47K 5% ATS
R414	4701-104J-C	RCF 1/8W 100K 5% ATS
R415	4701-752J-C	RCF 1/8W 7.5K 5% ATS
R416	4701-473J-C	RCF 1/8W 47K 5% ATS
R520	4701-513J-C	RCF 1/8W 51K 5% ATS
R521	4701-151J-C	RCF 1/8W 150R 5% ATS
R701, R702	4701-472J-C	RCF 1/8W 4.7K 5% ATS
R703	4701-752J-C	RCF 1/8W 7.5K 5% ATS
ICS		
U101	3130-6710-0	IC LA9240 ASP FOR CD QIP64E
U201	3130-6720-0	IC LA6541D 4-CHANNEL BTL DRIVER DIP30SLF
U301	3130-6700-0	IC LC78621ED DSP FOR CD QIP80E
U302	3130-5660-0	IC PCM1710U D/A CONVERTER
U305-U306	3130-2430-0	IC-NE5532 OP AMP
U401	3130-6750-0	IC LC587206A MICRO-CONTROLLER FOR CD
U403	3130-4160-0	IC TC74HC00AP NAND GATE
U501, M506	3130-2020-3	IC 7805 REG 5V 1.5A
U502	3130-2520-3	IC 7812 12V REGULATOR (SGS)
U503	3130-3800-0	IC UPC79M12HF REGULATOR
U504	3130-9030-0	IC NJM78L09A 9V 0.1A REGULATOR TO-92
U507	3130-2790-1	IC NJM7808FA +8V REG TO-220F
U701	3130-6560-0	IC LB1641 MOTOR DRIVER

- NOTE:**
- The components identified by \triangle mark are critical for risk of fire and electrical shock. Replace only with part number specified.
 - <*AH > : USA, Canadian model only.
 - <*C > : European model only.
 - Capacitors : CP-Polystyrene, CM-Mylar, CE-Electrolytic, CC-Ceramic, CTC-NPO.
 - Resistors : RMF-Metal Film, RCF-Carbon Film.

MECHANISM EXPLODED VIEW

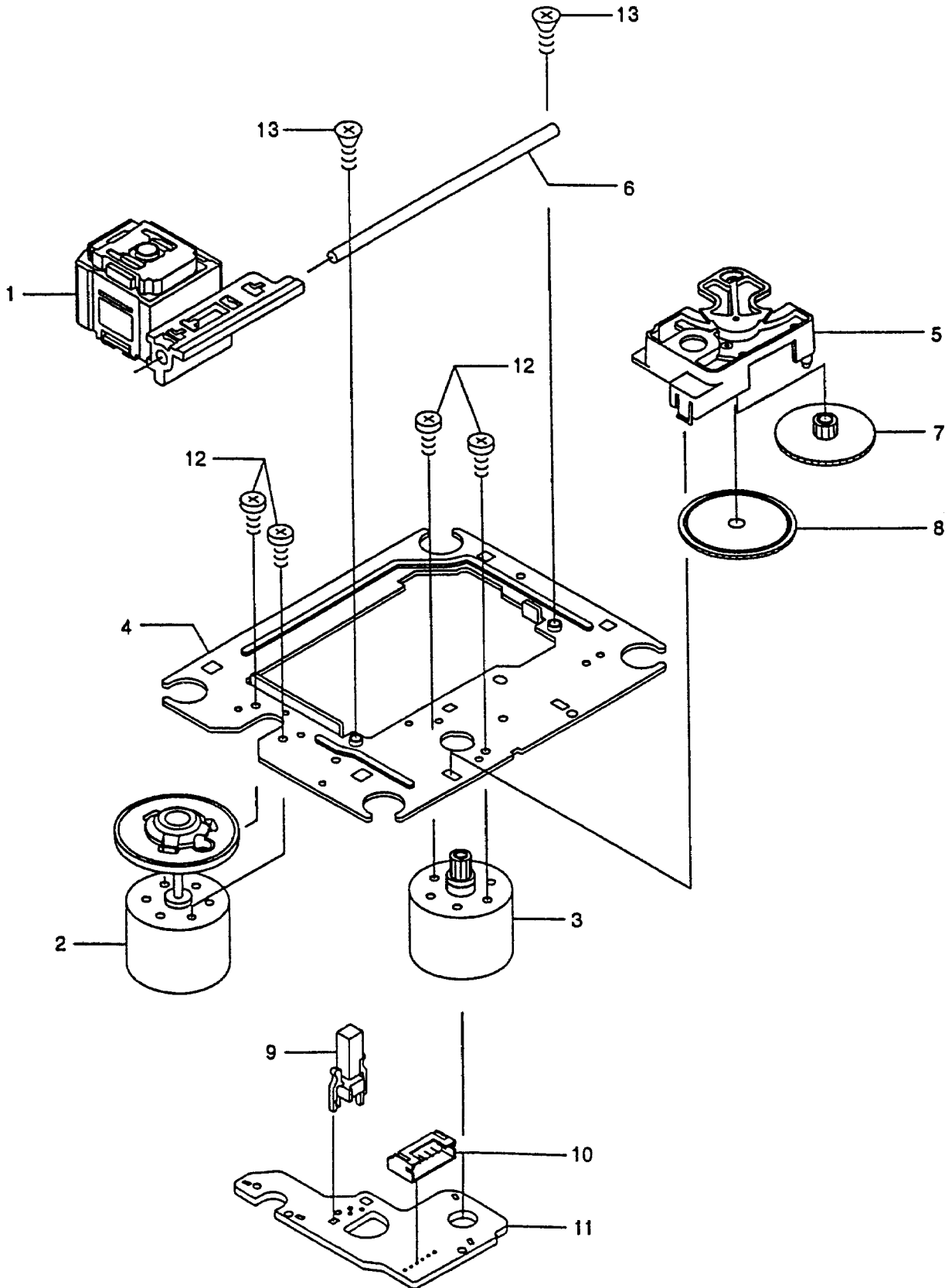
CD11CA



MECHANISM EXPLODED VIEW PARTS LIST

<u>ITEM</u>	<u>Part No.</u>	<u>Description</u>	<u>Qty</u>
1	4102-6101-0	RUBBER CUSHION (HARD)	2
2	4102-6102-0	RUBBER CUSHION (SOFT)	2
3	4102-6103-0	BASE	1
4	4102-6104-0	TRAY	1
5	4102-6105-0	CDM MOUNTING BASE	1
6	4102-6106-0	MAGNET HOLDER	1
7	4102-6107-0	SLIDE GEAR	1
8	4102-6108-0	PULLEY GEAR	1
9	4102-6109-0	DRIVE GEAR	1
10	4102-6110-0	PULLEY MOTOR	1
11	4102-6111-0	SQUARE BELT	1
12	4102-6112-0	MAGNET	1
13	4102-6113-0	LOADING MOTOR	1
14	4102-6114-0	SWITCH PUSH 2-1	2
15	4102-6115-0	CON JST 5P RT	1
16	4102-6116-0	MOTOR/SW.PCB	1
17	4102-6117-0	SCREW M3.0X8.0	1
18	4102-6118-0	PLATE MAGNET	1
19	4102-6213-0	LASER CD11CA-G	1

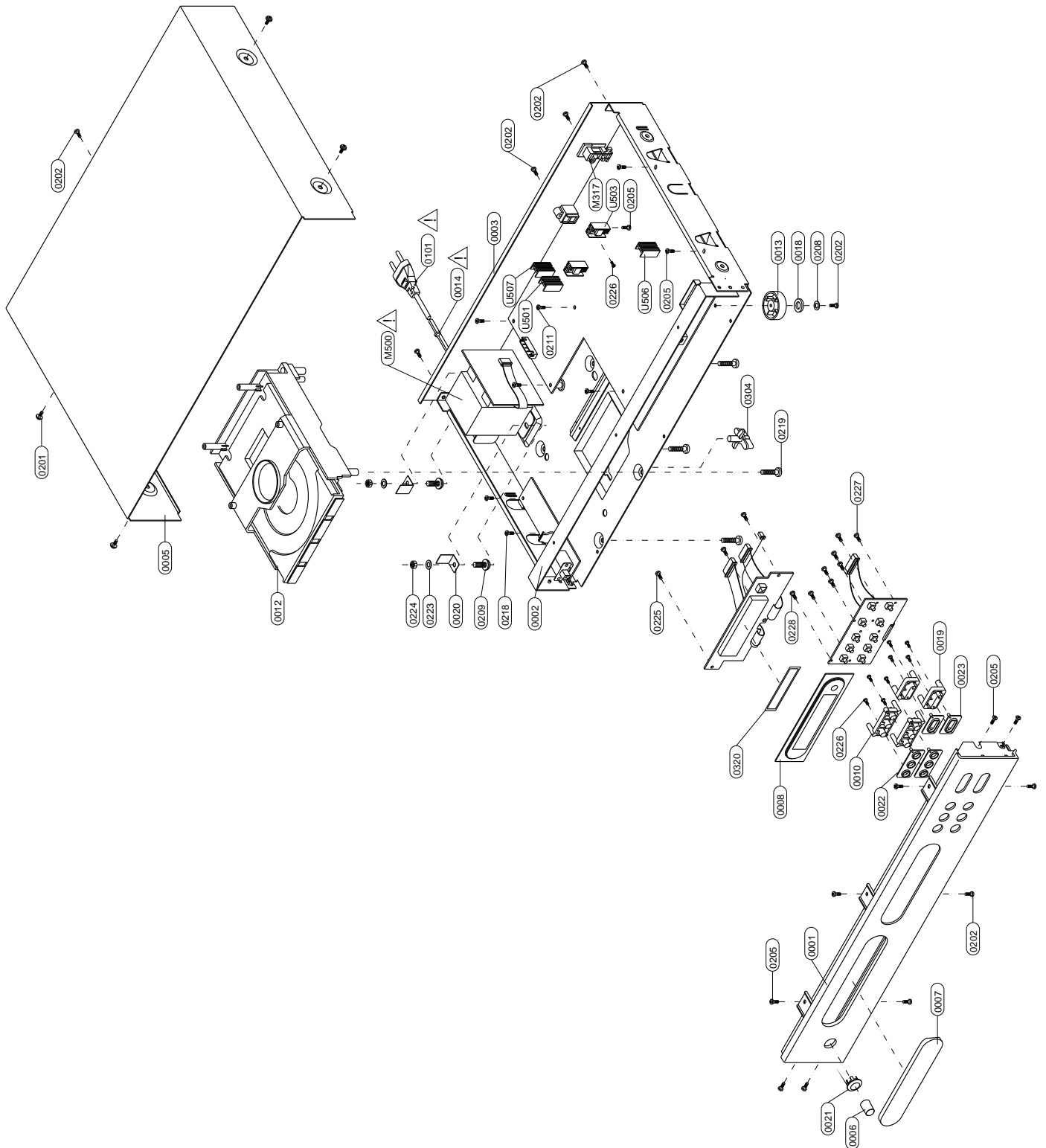
EXPLODED VIEW OF LASER CD11CA-G



EXPLODED VIEW PARTS LIST OF LASER CD11CA-G

<u>ITEM</u>	<u>Part No.</u>	<u>Description</u>	<u>Qty</u>
1	4102-6214-0	ASSY PICKUP LASER P101N	1
2	4102-6215-0	ASSY MOTOR 6.0V SPINDLE	1
3	4102-6216-0	ASSY MOTOR SLED 6.0V	1
4	4102-6217-0	CHASSIS	1
5	4102-6218-0	COVER GEAR	1
6	4102-6219-0	SHAFT SLIDE	1
7	4102-6220-0	GEAR MIDDLE	1
8	4102-6221-0	GEAR DRIVE	1
9	4102-6222-0	SWITCH LEAF(PWB MOTOR)	1
10	4102-6223-0	PLUG 6P	1
11	4102-6224-0	PWB MOTOR	1
12	4102-6225-0	SCREW PAN PCS 2x3	4
13	4102-6226-0	SCREW SELF-TAPING FLT 2.6x6	2

EXPLODED VIEW

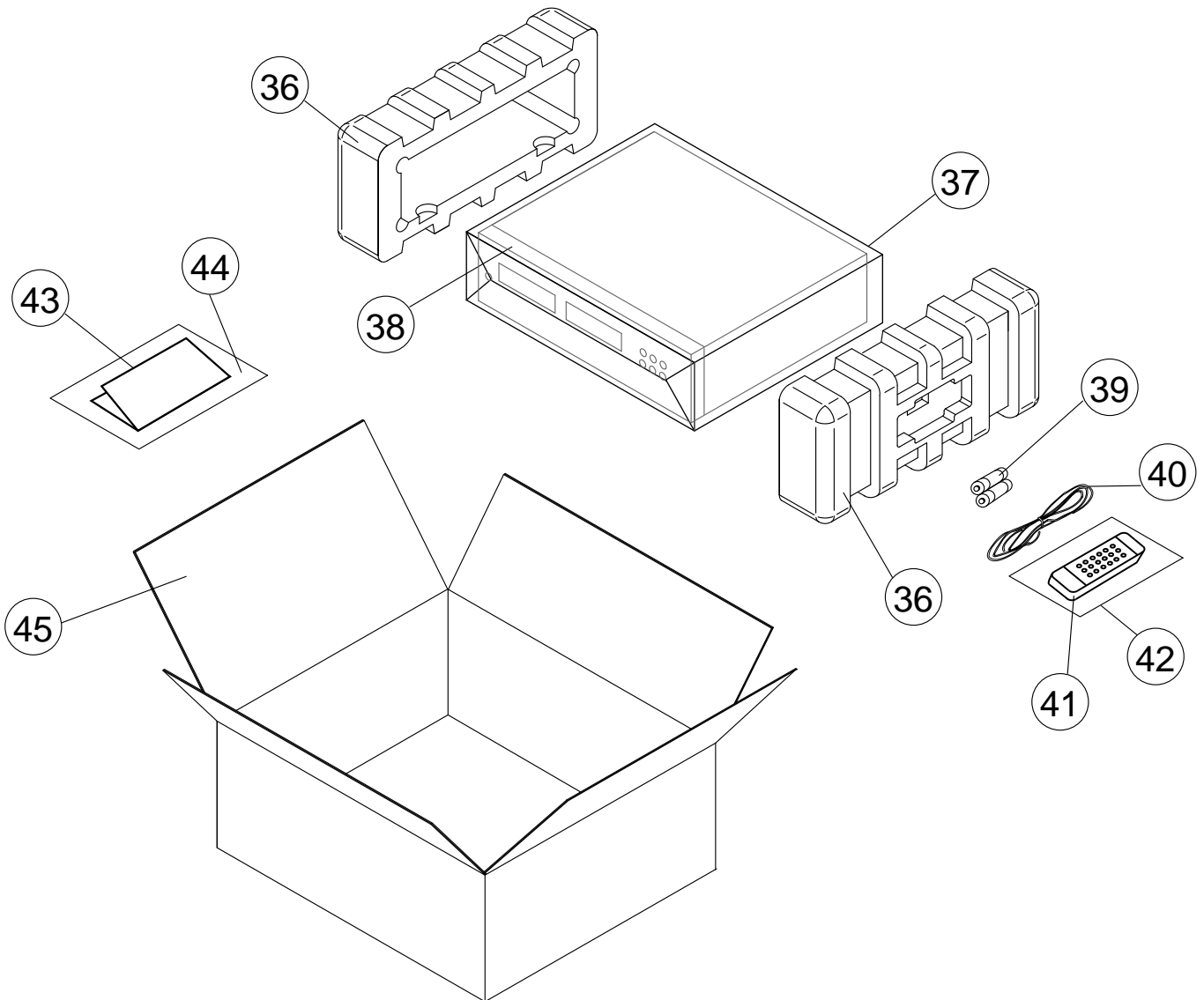


EXPLODED VIEW PARTS LIST

ITEM	Part No.	Description	Qty
0001	1465-5703-2	FASCIA W/SS PAINT	1
0002	1402-3781-2	STRAP	1
0003*AH	1402-3516-0	CHASSIS W/SS PAINT	1
0003*C	1402-3517-0	CHASSIS W/SS PAINT	1
0005	1402-3530-0	COVER	1
0006	2442-1000-0	POWER BUTTON	1
0007	1464-6011-3	CD DOOR W/SS PAINT	1
0008	3716-4313-0	WINDOW LENS W/SS	1
0010	2444-1201-0	BUTTON TRIO	2
0012	4111-1131-0	CD DECK	1
0013	4152-4631-0	RUBBER FOOT 14MM HIGH	4
0014 \triangle	4151-9461-0	STRAIN RELIEF BUSHING 4N-4	1
0018	4152-4641-0	CUSHION FOOT	4
0019	2444-1301-1	BUTTON RACKER	2
0020	4132-6191-0	BRACKET,MTG,X'FORMER	2
0021	4152-4331-0	POWER BUTTON BEZEL	1
0022	4154-0031-0	BEZEL TRIO	2
0023	4154-0091-0	BEZEL RACKER	2
0101*AH \triangle	7009-3100-2	AC CORD 18AWGX2 SPT-2 D.INSULATED UL/CSA	1
0101*C \triangle	7009-3110-0	AC CORD SEMKO	1
0201	2900-4006-3010	M4X0.5PX6MM W/FLAT WASHER	4
0202	2954-3008-3000	T3X8MM SELF TAPPING	12
0205	2954-3008-0000	TAPPING 3X8MM B-TITE(YEL.ZN)	17
0208	2842-3367-0	METAL WASHER ID=3.3 OD=6.7	4
0209	2900-4010-3030	PH W/WASHER M4X10 BL ZN	2
0211	2904-3006-0000	SCREW M3X6	4
0218	2954-3006-0000	3X6MM B-TITE (YEL.ZN)	2
0219	2954-4010-3000	SCREW TAP-C2 BH M4X10MM BZ CROSS	4
0223	2600-4008-0973	FLAT WASHER M4X0.8X9.7 BZ	2
0224	2640-4030-0703	M4 NUT (BLK)	2
0226	2954-2006-0000	TAPPING SCREW 2X6	13
0227	2954-2608-0000	SCREW BT 2.6X8	7
0228	2950-2608-3000	SCREW PAN HEAD,B-TITE 2.6X8 BLACK	1
0304	1463-160B-0	CD TRANSIT LOCK (RED)	1
0320	4154-1931-0	DUST PROOF CUSHION	1
M500 \triangle	1806-2194-0	EI-57 TRANSFORMER 740 AC3	1
U501-U503	5400-9130-0	HEAT SINK FOR 7805 2438-17	3
U506-U507	5400-9130-0	HEAT SINK FOR 7805 2438-17	2

- NOTE:**
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 - <*AH > : USA, Canadian model only.
 - <*C > : European model only.

PACKING DIAGRAM



ITEM	PART NO.	DESCRIPTION	Q'TY
36	1490-3783-0	POLYFOAM ENDCAP	2
37	1497-1332-1	UNIT POLYBAG	1
38	1497-1432-0	FASCIA COVER	1
39	4060-0530-0	BATTERIES	2
40	2103-7302-1	RCA CABLE	1
41	8900-2166-0	REMOTE CONTROL HANDSET	1
42	1497-1302-1	REMOTE CONTROL POLYBAG	1
43	4301-4104-1	INSTRUCTION MANUAL	1
44	1497-1062-0	MANUAL POLYBAG	1
45	1435-4300-1-2	CARTON BOX	1

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SERVICE MANUAL

C 521

COMPACT
DISC PLAYER

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