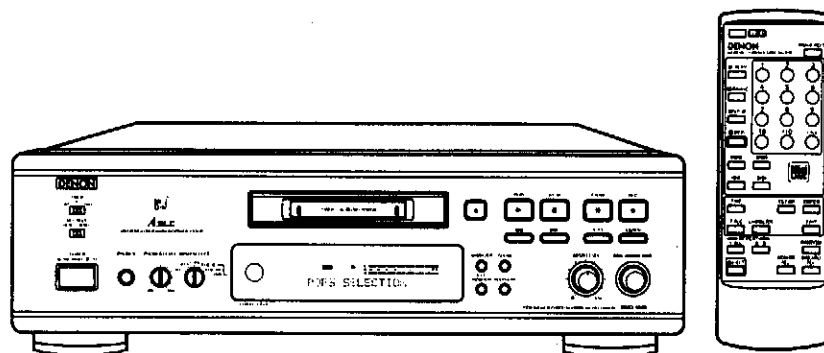


DENON

Hi-Fi Stereo Recorder

SERVICE MANUAL MODEL DMD-1000

STEREO MD RECORDER



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● In order to explain clearly, some illustrations using in this service manual may be slightly different from the actual set.

NIPPON COLUMBIA CO., LTD.

OPERATING INSTRUCTIONS

< Europe / U.K. & Asia Models >

NOTE ON USE / HINWEISE ZUM GEBRAUCH / OBSERVATIONS RELATIVES A L'UTILISATION
ALVORENS TE GEBRUIKEN

| | | |
|--|---|--|
|  <ul style="list-style-type: none"> • Avoid high temperatures. • Allow for sufficient heat dissipation when installed on a rack. • Vermeden Sie hohe Temperaturen. • Beschützen Sie das Gerät vor Feuchtigkeit, Wasser und Staub fern. • Protéger l'appareil contre l'humidité, l'eau et le poussières. • Laat geen vochtigheid, water of stof in het apparaat binnen dringen. |  <ul style="list-style-type: none"> • Keep the set free from moisture, water, and dust. • Halten Sie das Gerät von Feuchtigkeit, Wasser und Staub fern. • Protéger l'appareil contre l'humidité, l'eau et le poussières. • Laat geen vochtigheid, water of stof in het apparaat binnen dringen. |  <ul style="list-style-type: none"> • Do not let foreign objects in the set. • Keine fremden Gegenstände in das Gerät kommen lassen. • Ne pas laisser des objets étrangers dans l'appareil. • Laat geen vreemde voorwerpen in di apparaat vallen. |
| <ul style="list-style-type: none"> • Handle the power cord carefully. • Hold the plug when unplugging the cord. • Gehen Sie vorsichtig mit dem Netzstecker um. • Halten Sie das Kabel am Stecker, wenn Sie das Stecker aus der Steckdose ausziehen. • Manipuler le cordon d'alimentation avec précaution. • Tenez le cordon lors du débranchement du cordon. • Handleer het netstekker voorzichtig. • Houdt het snoer bij de stekker vast wanneer deze moet worden uit de stopcontact. |  <ul style="list-style-type: none"> • Unglug the power cord when not using the set for long periods of time. • Wenn das Gerät eine längere Zeit nicht verwendet werden soll, trennen Sie das Netzstecker vom Netzstecker. • Débrancher le cordon d'alimentation lorsque l'appareil n'est pas utilisé pendant de longues périodes. • Heem altijd het netstekker uit het stopcontact wanneer het apparaat gedurende een lange periode niet wordt gebruikt. |  <ul style="list-style-type: none"> • Do not let macadam, banana, and thinner come in contact with the set. • Lassen Sie das Gerät nicht mit Insekten, Benzin oder Verdünnungsmitteln in Berührung kommen. • Ne pas mettre en contact des macadam, du benzène et un diluant avec l'appareil. • Laat geen mesten/vergiftende middelen, benzine of verfverdunder met di apparaat in contact komen. |
|  <ul style="list-style-type: none"> • Handle the power cord carefully. • Hold the plug when unplugging the cord. • Gehen Sie vorsichtig mit dem Netzstecker um. • Halten Sie das Kabel am Stecker, wenn Sie das Stecker aus der Steckdose ausziehen. • Manipuler le cordon d'alimentation avec précaution. • Tenez le cordon lors du débranchement du cordon. • Handleer het netstekker voorzichtig. • Houdt het snoer bij de stekker vast wanneer deze moet worden uit de stopcontact. |  <ul style="list-style-type: none"> • Do not obstruct the ventilation holes. • Die Belüftungöffnungen dürfen nicht verdeckt werden. • Ne pas obstruer les trous d'aération. • De ventilatieopeningen mogen niet worden beblokeerd. |  <ul style="list-style-type: none"> • Never disassemble or modify the set in any way. • Versuchen Sie niemals das Gerät auseinander zu nehmen oder auf jegliche Art zu verändern. • Ne jamais démonter ou modifier l'appareil d'une manière ou d'une autre. • Nooit di apparaat demonteren of op andere wijze modificeren. |

DECLARATION OF CONFORMITY
We declare under our sole responsibility that the product, to which this declaration relates, is in conformity with the following standards: EN60068, EN60113, EN60220, EN60268-2 and EN60268-3. Following the provisions of the Directive 73/23/EEC, 89/336/EEC and 93/68/EEC Directive.

DEKLARATION ÜBER ÜBEREINSTIMMUNG
Wir erklären unter unserer Verantwortung, daß dieses Produkt, auf das sich diese Erklärung bezieht, den folgenden Standards entspricht: EN60068, EN60113, EN60220, EN60268-2 und EN60268-3. Entsprechend den Verordnungen der Richtlinie 73/23/EEC, 89/336/EEC und 93/68/EEC.

DECLARATION DE CONFORMITE
Nous déclarons sous notre seule responsabilité que l'appareil, auquel se réfère cette déclaration, est conforme aux standards suivants: EN60068, EN60113, EN60220, EN60268-2 et EN60268-3. D'après les dispositions de la Directive 73/23/EEC, 89/336/EEC et 93/68/EEC.

BEVOORWAARDINGSVERKLARING
Wij verklaren verantwoordelijk op onze verantwoordelijkheid dat dit product, waarop deze verklaring betrekking heeft, in overeenstemming is met de volgende normen: EN60068, EN60113, EN60220, EN60268-2 en EN60268-3. Volgens de bepalingen van de Richtlijnen 73/23/EEC, 89/336/EEC en 93/68/EEC.


CLASS 1 LASER PRODUCT
KLASSE 1 LASERPRODUKT
KLASSE 1 LASERAPPARAT

ADVARSEL: UTSKILT LASERSTRÅLING VED ÅBNING. NÅR BEGIVENHEDSAPPARATET ER I BRUG AF FUNKTION. UNDSK UDSTRÅLTET FOR STRÅLING.

VAROITUS: LÄTTÄN KÄYTTÖOHJEEN MUKALLA ESSEI TÄMÄ KÄYTTÖOHJEISSA MAHUSTALLA TAMMILLA SAATTAA ALTYTTÄÄ KÄYTTÖAJAN TUULIHAUHUVAUKSIKSI I VUOROKAUSI KÄYTTÖOHJEEN MUKALLA LASERSTRÅLLE.

VAROITUS: OM APPARAATTI AVAANEN PÄ AVAINT KÄYTTÖ AJAN OIRENNA SUUNNITTELUUNEN ENNENKOSKES, OIKO SUUNNITTELUUNEN LUUTÄTÄR FOR OIRENNA LASERSTRÅLINGEN SOM ÖVERSKEDER GRÄNSEN FÖR LASERKLASS 1.

CLASS 1 LASER PRODUCT



"SERIAL NO. _____"
PLEASE RECORD UNIT SERIAL NUMBER ATTACHED TO THE REAR OF THE CABINET FOR FUTURE REFERENCE"

< U.S.A. & Canada Models >

IMPORTANT TO SAFETY

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION:

- Handle the power supply cord carefully. Do not damage or deform the power supply cord. If it is damaged or deformed, it may cause electric shock or malfunction when used. When removing from wall outlet, be sure to remove by holding the plug attachment and not by pulling the cord.
- Do not open the top cover. In order to prevent electric shock, do not open the top cover. If problems occur, contact your DENON DEALER.
- Do not place anything inside. Do not place metal objects or liquid inside the MiniDisc recorder. Electric shock or malfunction may result.

Please record and retain the model name and serial number of your set shown on the rating label.
Model No. DMD-1000 Serial No. _____

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of unshielded "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 to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

FOR U.S.A. & CANADA MODEL ONLY

CAUTION
TO PREVENT ELECTRIC SHOCK DO NOT USE THIS POLARIZED PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

NOTE:
The MiniDisc recorder uses the semiconductor laser. To allow you to enjoy music at a stable operation, it is recommended to use this in a room of 5°C (41°F) - 35°C (95°F).

LABELS (for U.S.A. model only)

CERTIFICATION
THIS PRODUCT COMPLIES WITH DHSIS RULES 21 CFR SUBCHAPTER J APPLICABLE AT DATE OF MANUFACTURE.

CAUTION:
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

THE COMPACT DISC PLAYER SHOULD NOT BE ADJUSTED OR REPAIRED BY ANYONE EXCEPT PROPERLY QUALIFIED SERVICE PERSONNEL.

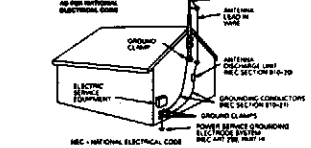
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

The Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.
Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

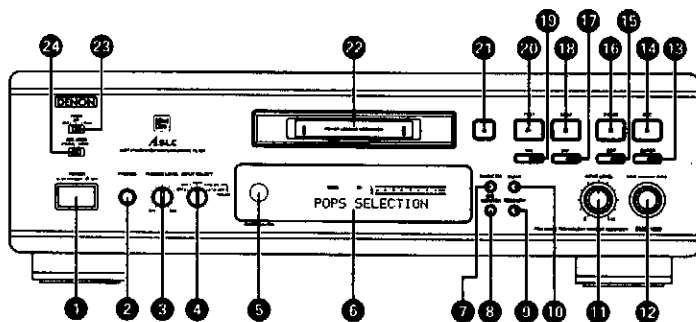
ATTENTION
POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

SAFETY INSTRUCTIONS

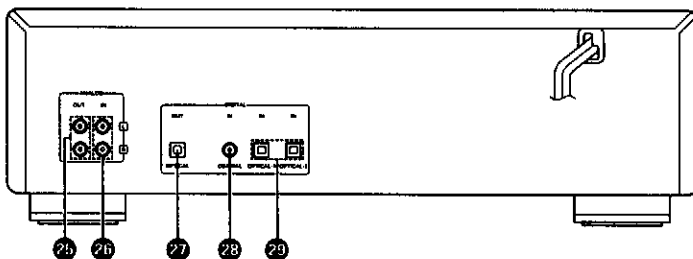
- Read Instructions - All the safety and operating instructions should be read before the appliance is operated.
- Razan Instructions - The safety and operating instructions should be retained for future reference.
- Head Warnings - All warnings on the appliance and in the operating instructions should be adhered to.
- Follow Instructions - All operating and use instructions should be followed.
- Water and Moisture - The appliance should not be used near water - for example, near a bath, washbasin, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.
- Carts and Stands - The appliance should be used only with a cart or stand that is recommended by the manufacturer.
- An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
- Wall or Ceiling Mounting - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
- Ventilation - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings, or placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
- Heat - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances including ampheaters that produce heat.
- Power Sources - The appliance should be connected to a power supply only in the way described in the operating instructions or as marked on the appliance.
- Grounding or Polarization - Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.
- Power-Cord Protection - Power-supply cords should be routed so that they are not likely to be walked on or crushed by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
- Cleaning - The appliance should be cleaned only as recommended by the manufacturer.
- Power Lines - An outdoor antenna should be located away from power lines.
- Outdoor Antenna Grounding - If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna-discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure A.
- Nonuse Periods - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
- Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
- Damage Requiring Service - The appliance should be serviced by qualified service personnel when:
 - The power-supply cord or the plug has been damaged or
 - Objects have fallen, or liquid has been spilled into the appliance, or
 - The appliance has been exposed to rain, or
 - The appliance does not appear to operate normally or exhibits a marked change in performance, or
 - The appliance has been dropped, or the enclosure damaged.
- Servicing - The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.



**FRONT PANEL
PANNEAU AVANT
TABLERO FRONTAL**



**REAR PANEL
PANNEAU ARRIERE
PANEL TRASERO**



3

IMPORTANT TO SAFETY

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE
THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION:

1. Handle the power supply cord carefully
Do not damage or deform the power supply cord. If it is damaged or deformed, it may cause electric shock or malfunction when used. When removing from wall outlet, be sure to remove by holding the plug attachment and not by pulling the cord.

2. Do not open the top cover
In order to prevent electric shock, do not open the top cover. If problems occur, contact your DENON DEALER.

3. Do not place anything inside
Do not place metal objects or spill liquid inside the MiniDisc recorder. Electric shock or malfunction may result.

Please, record and retain the Model name and serial number of your set shown on the rating label.

Model No. DMD-1000 Serial No. _____

NOTE:

This MiniDisc recorder uses the semiconductor laser. To allow you to enjoy music as a stable operation, it is recommended to use this in a room of 10°C (50°F) - 35°C (95°F).

Place of installation

To ensure sufficient ventilation, leave a space of at least 10 cm between the front, sides and back of the unit and walls or other objects which may obstruct ventilation.

CAUTION:

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

THE MINIDISC RECORDER SHOULD NOT BE ADJUSTED OR REPAIRED BY ANYONE EXCEPT PROPERLY QUALIFIED SERVICE PERSONNEL.

Thank you for purchasing this DENON MiniDisc recorder. Please read the operating instructions thoroughly in order to acquaint yourself with the MiniDisc recorder and achieve maximum satisfaction from it.

Please check to make sure the following items are included with the main unit in the cartons:

- (1) Operating Instructions 1
- (2) Connection Cord 2
- (3) Optical Fiber Cord 1
- (4) Remote Control Unit (RC-270) 1
- (5) RSP (AA) Dry Cell Battery 2
- (6) Service Station List 1

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1 FEATURES

The DMD-1000 is an audio device using the MiniDisc format. Recording is possible for up to 74 minutes at stereo recording. Operation is the same as with regular compact discs (CDs).

1. Clear sound quality

Digital recording provides clear playback sound. Also, a "JBL" (ADVANCED Super Linear Converter) is used for playback, increasing musical expression superbly when the volume is low.

2. Abundant playback functions

Programmed playback, random playback, all track repeat, single track repeat, A - B repeat etc.

3. Numerous editing functions

Editing functions for dividing, combining and moving tracks make it possible to freely manipulate recorded discs, and disc and track titles can be added. These functions make it easy to create original discs.

4. Sampling rate converter

Sources with different sampling frequencies, such as DATs and satellite broadcasts (32 kHz and 48 kHz), can be recorded digitally.

5. Timer recording and playback

A timer (not included) can be used for timer recording and playback.

2 CAUTIONS ON HANDLING

Installation
Do not place a TV set (even a small one) or other object on top of the DMD-1000.

When receiving FM, AM and TV broadcasts
If the DMD-1000's power is turned on while receiving FM, AM or TV broadcasts, there may be noise in the sound or stripes on the TV picture. Keep the DMD-1000's power turned off when not using it.

The DMD-1000 uses digital technology. If an FM tuner is placed nearby, it may cause adverse effects, such as noise in the tuner's antenna cable, etc.

Be sure to use coaxial cables to connect the antenna and the tuner's antenna terminal.

When not using the DMD-1000
Under normal circumstances:
• Always remove the disc and turn the power off.
• When leaving home for long periods of time such as for trips, be sure to unplug the power cord.

When moving the DMD-1000
• Do not subject the DMD-1000 to shocks.
• Always check that the disc has been removed and the connection cords disconnected before moving the DMD-1000.



3 ABOUT MINIDISCS

MiniDiscs allow a maximum of 74 minutes at stereo mode of recording and playback in a compact size.

There are two types of MiniDiscs: those for playback only, and those for recording and playback.

• Only MiniDiscs with the mark shown at the right can be played and recorded on the set.



Playback only MiniDiscs

• These discs are for playback only. Commercially available music MDs are of this type.
• These are laser discs, like regular compact discs.
• Tracks on such discs cannot be added.



Recordable MiniDiscs

• These are magneto-optical discs on which both recording and playback are possible. Recording is performed through magnetic modulation.
• Re-recording is also possible.



Accidental erasure prevention tabs

These tabs protect recordable MiniDiscs from accidental erasure.

To avoid accidentally erasing the recording, open the tab so that the hole is exposed. (See the diagram below.) When this is done, "Protected" is displayed if you attempt to record, erase or otherwise edit the disc, and the recording is protected. To record or erase the disc, set the tab back to its original position (with the hole covered).



Recording on discs

MiniDiscs include a section in which the audio signals are recorded and a section in which such data as track numbers and track titles are recorded.



The TOC

With MiniDiscs, after the audio signals are recorded, data used for checking the tracks (TOC - Table of Contents) is also recorded on the disc. This TOC data is used when playing the disc. In addition, editing is performed by rewriting the TOC data. The TOC is written on the disc when the select button is pressed to eject the disc and when the power button on the remote control unit is pressed to set the power to the standby mode. When TOC writing starts, the "TOC" indicator flashes. Do not shake the main unit, press the main unit's power button or unplug the power cord while the TOC is being written. If the data is not recorded properly, it will not be possible to play the disc.

Handling MiniDiscs

- MiniDiscs are housed in cartridges, so there is no need to worry about dirt and scratches. However, dirty or warped cartridges may cause malfunction. Be careful of the following to ensure long-lasting, high quality sound:
 - Do not touch the disc surface directly.
 - Do not open the shutter by hand.
 - Do not place MiniDisces directly on dirty or humid places.
 - Do not place MiniDiscs in places exposed to direct sunlight or high temperatures.
- When sticking labels on cartridges, be careful of the things described below. Applying labels incorrectly may cause the MiniDisc to get stuck inside the set.



- Apply the label properly within the specified area. (Do not apply labels outside the specified area.)
 - Do not stick one label on top of another.
 - If a label is peeling off or loose, replace it with a new label.
- Cleaning**
Use a dry cloth to gently wipe dirt or dust off the cartridge. Do not apply excessive force.

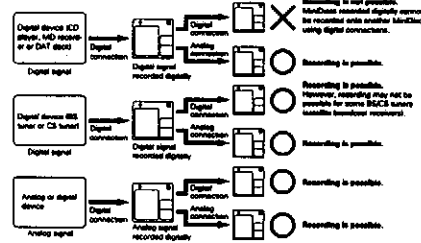
Track numbers

- Track numbers are assigned automatically when tracks or audio signals are recorded on MiniDiscs. When a new track or audio signal is added, it is assigned the next track number.
- When recording a CD or MiniDisc using the digital input, the same track numbers are automatically assigned at the same places as those on the CD or MiniDisc.

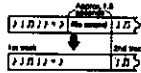


Digital Copies

MiniDiscs recorded from a CD, etc., using the digital input cannot be digitally recorded (copied) onto another MiniDisc or DAT. This is determined by SCMS (Serial Copy Management System) regulations.



- When recording from a CD onto a MiniDisc, the track numbers on the recorded MiniDisc may not match the track numbers on the CD.
- The function does not work with such digital equipment as BS/CS tuners or DAT decks, in which case the track numbers are assigned using the auto track increment function, in the same way as for recordings using the analog input.
- When recording from a BS/CS tuner or DAT deck using digital connectors:
 - Track numbers may not be recorded properly if there is much noise in the blank sections between tracks.
 - Track numbers may be recorded at points in the middle of a track where the signal level is extremely low. If this should happen, use the editing function after recording is completed.
- When recording a DAT or MiniDisc using the analog input, the input select switch (INPUT SELECT) is set to "ANALOG A.T.M. ON"; track numbers are automatically assigned when blank sections of over 1.5 seconds are detected. (Auto Track Increment function)

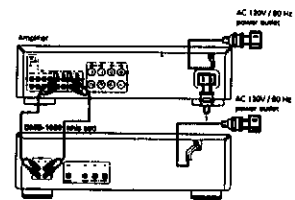


- Track numbers may not be assigned properly for some recordings, for example when there is noise in the signals.
- In some cases the auto track increment function will not be used and the entire recording will only have one track number. (See Page 13.)

4 CONNECTIONS

1. Connecting the analog input and output jacks (analog connections)

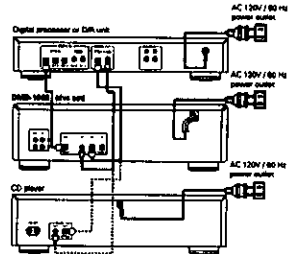
- Use the included connection cords (pin-plug cords) to connect the analog input and output jacks.
 - Connect the left (L) and right (R) analog output (ANALOG OUT) jacks on the DMD-1000 to the left (L) and right (R) tape input (tape playback) jacks on the amplifier.
 - Connect the left (L) and right (R) analog input (ANALOG IN) jacks on the DMD-1000 to the left (L) and right (R) tape output (tape recording) jacks on the amplifier.



2. Connecting the digital input and output jacks (digital connections)

Use the included optical fiber cord to connect the OPTICAL digital input and output jacks. Use separately sold RS 62/63 pins pin-plug cords to connect the COAXIAL digital input and output jacks.

- Connect the digital output (DIGITAL OPTICAL OUT) jack on the DMD-1000 to the digital optical input of a digital processor or D/A unit.
- Connect the digital input (DIGITAL OPTICAL IN or DIGITAL COAXIAL IN) jacks on the DMD-1000 to the digital output (DIGITAL OPTICAL OUT or DIGITAL COAXIAL OUT) jacks on a CD player, digital processor or D/A unit.



- This model comes with one optical fiber cable. Please contact your nearest Denon customer service center or office if you want to use a separately sold optical fiber cord.

- NOTES:**
- Do not plug in the power cord until all other connections have been made.
 - Check the channels and be sure to connect left to left (L—white), right to right (R—red).
 - Insert the plugs securely. Incomplete connections may result in noise.

- After unplugging the power cord, wait about 5 seconds before plugging it back in.
- Note that clamping the connection cords (pin-plug cords) together with the power cord may result in humming or noise.

5 PART NAMES AND FUNCTIONS

1 POWER button

- The power turns on when the button is switched from the off position (OFF) to the on position (ON).
- The power turns off when the button is switched from the on position (ON) to the off position (OFF).
- When the button is in the on position (ON), the power button on the remote control unit can be used to switch the power between the on and standby modes. "OFF" is displayed when the power is in the standby mode.
- If a disc is inserted while in the standby mode, the power turns on automatically and the disc is drawn in. If a disc is inserted, the power turns on automatically when the play or eject button is pressed, and that operation is performed.

NOTES:

- The model is equipped with a backup function for storing the recorded or edited TOC (Table of Contents) data even when the power button is set to the off position (OFF) or the power cord is unplugged.
- Before using the backup function, press the power button and leave the power on for about 15 minutes.
- The data is backed up for 2 or 3 days. Write the TOC data on the disc immediately after recording or editing.
- If the backup data is lost, the recorded or edited data is erased and cannot be retrieved. (See Page 5.)

2 Headphones jack (PHONES)

- Use the jack to listen with headphones. (Headphones are not included.)

3 Headphones volume control (PHONES LEVEL)

- Use this to adjust the output level (volume) of the headphones jack (PHONES).

4 Input select switch (INPUT SELECT)

- Use this to select the input source for recording.
- The input source cannot be switched during recording. To do so, first set the recording standby or stop mode.

5 REMOTE SENSOR

- Point the remote control unit (RC-270) towards the sensor when operating it.

6 Display

7 CHARACTER button

- Use this button when inputting tries to switch between capital letters, small letters and special letters.

8 External input monitor button (EXT. MONITOR)

- When this button is pressed, the input signal selected with the input select switch can be monitored on the set's output jacks.

9 RECOVERY button

- When recording or editing has been performed repeatedly, the recordable time may be shorter than the MiniDisc's maximum recording time. If this happens, press this button to reorganize the contents data (TOC) and increase the recordable time.
- The recordable time may not increase for some MiniDiscs.

10 CLEAR button

- Press this to clear programmed tracks or title characters.

11 Input level adjustment control (INPUT LEVEL)

- Use this to adjust the analog input signal recording level.
- This control does not affect digital recording.

12 Jog dial

- Use this dial to find the beginning of tracks and for editing.
- Use this dial to input letters when giving titles to tracks on the disc.

13 ENTER button

- Press this to enter the edited data.

14 Record button (REC)

- Press this button to record.
- The recording standby mode is set when the REC button is pressed alone.
- Press the play button (PLAY) while in the recording standby mode to start recording.
- To stop recording or to cancel the recording standby mode, press the stop button (STOP).

15 EDIT button

- This button is used when erasing disc and track titles and for such editing operations as erasing, dividing, combining and moving tracks. (See Page 18-24.)

16 Pause button (PAUSE)

- Press this button to stop playback or recording temporarily.
- Press the play button (PLAY) to cancel the pause mode.

17 Manual search forward button (FWD)

- Press this to search forward rapidly. (See Page 10.)

18 Stop button (STOP)

- Press this button to stop playback or recording.
- Press this button to clear the editing operation.

19 Manual search reverse button (REV)

- Press this to search backward rapidly. (See Page 10.)

20 Play button (PLAY)

- Press this button to start playback or recording.
- Press the button during recording to add a track number.

21 Eject button (EJECT)

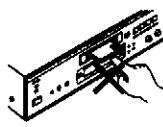
- Press this to eject the disc.

22 Disc insertion slot

- When a disc is inserted here, it is automatically drawn into the set.
- Be sure to insert the disc in the proper direction.

★ Note on ejecting discs

- After pressing the eject button do not push the disc back in while it is being ejected. To reinsert the disc, wait until it comes fully out and stops, then press it back in.



23 Timer select switch (TIMER)

- Use this for timer recording or playback when using the DMD-1000 with a separately sold audio timer.

24 Recording mode switch (REC MODE)

- Set the switch to "STEREO" to record in stereo, "MONO" to record in monaural.
- With monaural recording it is possible to record approximately twice as much as with stereo recording.
- The setting cannot be changed during recording. To change the setting, first switch to the pause or stop mode.

25 Analog output jacks (ANALOG OUT)

- Connect these to the amplifier's input jacks (TAPE-PR).

26 Analog input jacks (ANALOG IN)

- Connect these to the amplifier's output jacks (TAPE-REC).
- The audio signals from other components connected to the amplifier can be recorded on this set.
- To do so, set the input select switch (INPUT SELECT) to the "ANALOG" position.

27 Digital output jack (DIGITAL OPTICAL OUT)

- Digital data is output from this jack in the form of optical signals.
- When this jack is connected to the digital input (OPTICAL IN) jack on a digital processor or D/A unit, the sound from the DMD-1000 can be heard over the speakers.

28 Digital input jack (DIGITAL COAXIAL IN)

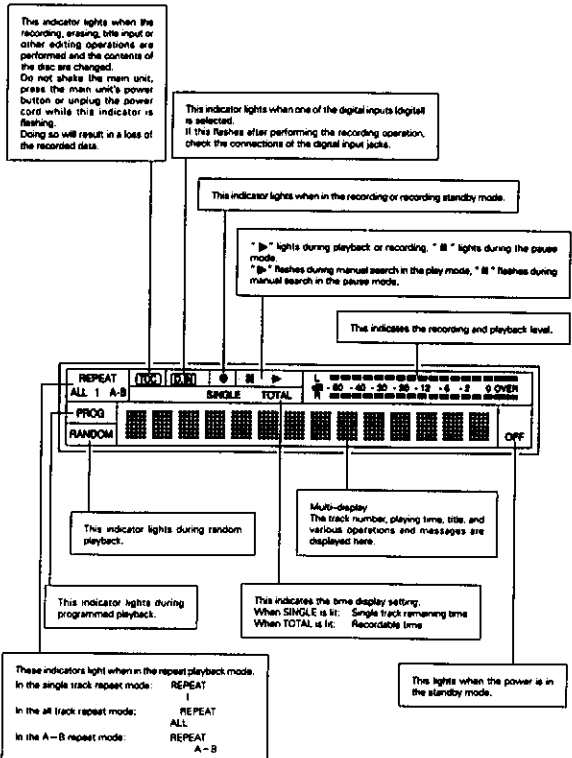
- Use this jack to input digital data.
- When connected to the digital optical output jack of a CD player, DAT deck, satellite broadcast tuner or another MD recorder, the sound from that unit can be recorded digitally on the DMD-1000. To do so, set the input select switch (INPUT SELECT) to the "COAX" position.

29 Digital input jack (DIGITAL OPTICAL IN 1, 2)

- Digital data is input from this jack in the form of optical signals.
- When connected to the digital optical output jack of a CD player, DAT deck, satellite broadcast tuner or another MD recorder, the sound from that unit can be recorded digitally on the DMD-1000. Two sets of digital inputs can be connected, so set the input select switch to "OPT-1" or "OPT-2".

* It is not possible to record the digital data of sources for which digital copying is prohibited. ("Copy Prohibit" is displayed.)

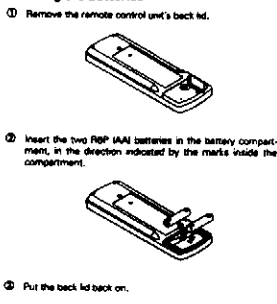
6 Display



8 REMOTE CONTROL UNIT

* The included remote control unit (RC-270) can be used to operate the DMD-1000 from a distance.

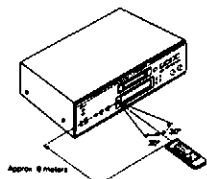
Inserting the batteries



Caution on batteries

- Use RPP (AA) batteries in the remote control unit.
- The batteries should be replaced with new ones after approximately one year, though this depends on the frequency with which the remote control unit is used.
- Even if the batteries are less than a year old, replace them with new ones if the remote control unit no longer operates even from a short distance from the main unit.
- When inserting new batteries, wait about two minutes after removing the old batteries before inserting the new ones.
- Be sure to set the batteries in the proper "+" and "-" directions, as indicated by the marks in the remote control unit's battery compartment.
- Remove the batteries when not using the remote control unit for long periods of time.
- To avoid explosions and fluid leakage:
 - Do not take one new battery with one old one.
 - Do not use two different types of batteries.
 - Do not short-circuit, disassemble, heat or dispose of batteries in flames.
- If the battery fluid should leak, wipe all the fluid off the battery compartment, then start new batteries.

Using the remote control unit



- When operating the remote control unit, point it at the main unit as shown in the diagram.
- The remote control unit can be operated from a direct distance of approximately 8 meters from the main unit. This distance will be shortened, however, if there are obstacles or when operated from an angle. (The remote control unit will operate from a horizontal angle of up to about 30°.)

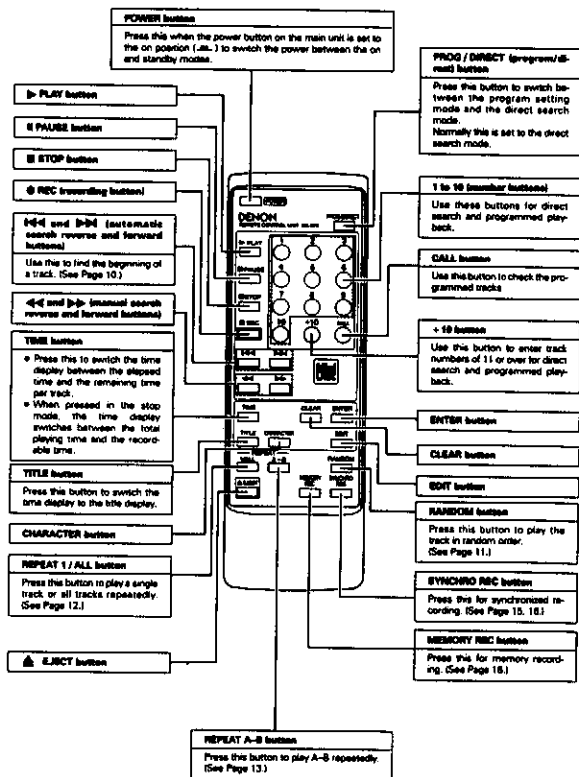
NOTE:

- The remote control unit may not operate if the remote sensor is exposed to direct sunlight or strong artificial light, or if there is an obstacle between it and the remote sensor.
- Do not press buttons on the main unit and on the remote control unit at the same time. Doing so will result in malfunction.

8

Names and Functions of Remote Control Unit Buttons

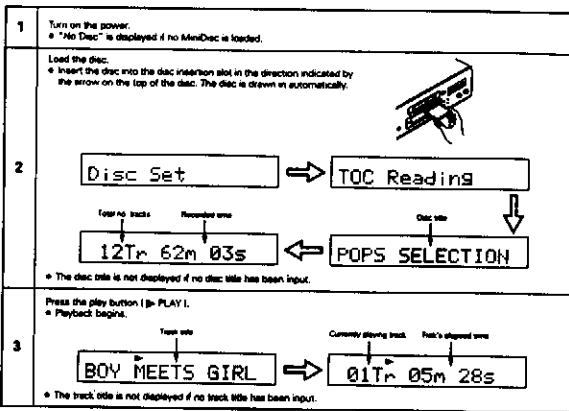
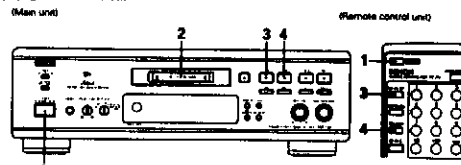
* Buttons not explained here function in the same way as the corresponding buttons on the main unit.



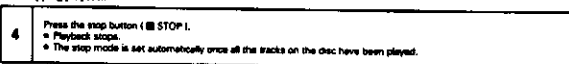
7 NORMAL PLAYBACK

1. Starting playback

First try playing the tracks in order.



2. Stopping playback

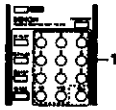


8 VARIOUS PLAYBACK FUNCTIONS

In addition to normal playback, the DMD-1000 also offers the playback functions described below.

1. Playing a certain track (remote control unit only) Direct Search

(Remote control unit)



- Use the number buttons (1) to (10) and the +10 button to input the number of the desired track.
 - For example: Press button (3) to listen to the 4th track, buttons (3) and (1) to listen to the 12th track, (3) and (10) and (1) to listen to the 30th track. Playback begins from that track.

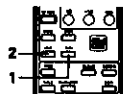
2. Finding the desired position while listening to the sound Manual Search

Use this function to skip rapidly through the disc while listening to the sound. This function comes in handy when you want to find a certain section within a long track.

(Main unit)



(Remote control unit)



(1) Searching forward

- During playback, press and hold in the manual search forward button (▶▶).
 - Normal playback resumes from the point at which the button is released.
 - Playback stops if the end of the last track on the disc is reached while pressing the manual search forward button (▶▶).
 - For high-speed forward search without hearing the sound, press the manual search forward button while in the pause mode.

(2) Searching backward

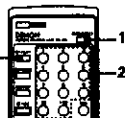
- During playback, press and hold in the manual search reverse button (◀◀).
 - Normal playback resumes from the point at which the button is released.
 - Manual search stops and playback starts if the beginning of the first track on the disc is reached while pressing the manual search reverse button (◀◀).
 - For high-speed backward search without hearing the sound, press the manual search reverse button while in the pause mode.

NOTE:
 • There may be a slight break in the sound when returning to normal playback from the manual search mode.

10

5. Playing tracks in a certain order Programmed Playback

(Remote control unit)



- Use this function to select certain tracks from the disc and program them to play in a certain order.
- Up to 25 tracks can be programmed.

- In the stop mode, press the PROG/DIRECT button.
 - The "PROG" indicator lights.
- Use the number buttons and the +10 button to select the tracks for programmed playback.
 - For example, to program the 3rd, 12th and 7th tracks, press PROG/DIRECT, (3), (12) and (7).
- Press the play button (▶ PLAY).
 - The tracks are played in the programmed order.

- To check the contents of the program, press the CALL button. The programmed tracks appear in the programmed order on the display each time the CALL button is pressed.
- To change the program, press the CLEAR button while in the stop mode, then program the desired track. The last programmed track is replaced with the newly input track.
- To clear the entire program, press the PROG/DIRECT or EJECT (▲) button while in the stop mode.

NOTES:
 • The single track repeat mode and A-B repeat mode cannot be set during random playback.
 • Programs with total playing times of over 256 minutes can be set, but the time will not be displayed properly.

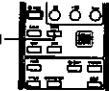
3. Finding the beginnings of tracks during playback Automatic Search

(1) Moving ahead to the beginning of the next track

(Main unit)



(Remote control unit)



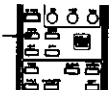
- Either turn the jog dial on the main unit clockwise (▶) or press the [▶▶] automatic search forward button on the remote control unit.
 - During the search operation, turn the jog dial on the main unit counterclockwise (◀) again or press the [▶▶] automatic search forward button on the remote control unit again to move further on to the beginning of the following track.

(2) Moving back to the beginning of the current track

(Main unit)



(Remote control unit)



- Either turn the jog dial on the main unit counterclockwise (◀) or press the [◀◀] automatic search reverse button on the remote control unit.
 - During the search operation, turn the jog dial on the main unit counterclockwise (◀) again or press the [◀◀] automatic search reverse button on the remote control unit again to move further back to the beginning of previous track.

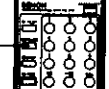
4. Stopping playback temporarily Pause

Use this function to stop playback temporarily then resume from the same point.

(Main unit)



(Remote control unit)

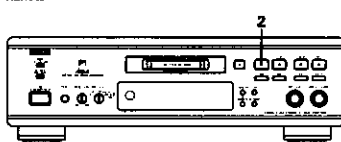


- During playback, press the pause button (⏸ PAUSE).
 - The pause mode is set.
 - Press the play button to resume playback from the point at which the pause mode was set.

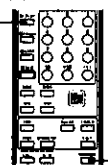
6. Playing in random order Random Playback

Use this function to play all the tracks on the disc once in random order.

(Main unit)



(Remote control unit)



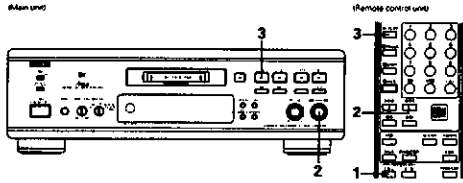
- In the stop mode, press the RANDOM button.
 - The "RANDOM" indicator lights.
- Press the play button (▶ PLAY).
 - During normal playback: Tracks are automatically played in random order.
 - During the all-track repeat mode: All the tracks are played once in random order, then repeated in another random order.
 - To cancel the random play mode, either set the stop mode or press the RANDOM button again.

NOTE:
 • The single track repeat mode and A-B repeat mode cannot be set during random playback.

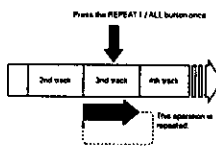
7. Playing repeatedly

Repeat Playback

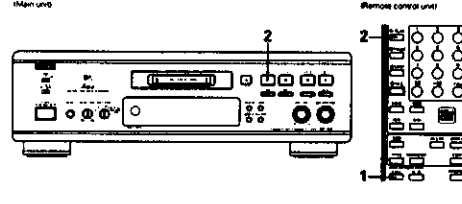
(1) Playing a single track repeatedly (Single Track Repeat)



| | |
|----------|--|
| 1 | <p>Press the REPEAT 1/ALL button once.</p> <ul style="list-style-type: none"> The "REPEAT" indicators light on the display and the single track repeat mode is set. |
| 2 | <p>Either turn the jog dial on the main unit or use the automatic search buttons (⏮ and ⏭) on the remote control unit to select the track to be played repeatedly.</p> |
| 3 | <p>Press the play button (▶ PLAY).</p> <ul style="list-style-type: none"> Playback starts. Once the selected track ends, it is played again from the beginning. The single track repeat mode can also be set by pressing the REPEAT 1/ALL button during playback. The current track is played repeatedly. To cancel the single track repeat mode, press the REPEAT 1/ALL button repeatedly until the "REPEAT" indicator turns off. |



(2) Playing all tracks repeatedly (All Track Repeat)



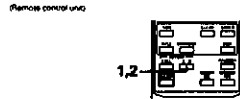
| | |
|----------|---|
| 1 | <p>Press the REPEAT 1/ALL button twice.</p> <ul style="list-style-type: none"> The "REPEAT ALL" indicators light on the display and the all track repeat mode is set. |
| 2 | <p>Press the play button (▶ PLAY).</p> <ul style="list-style-type: none"> The disc is played repeatedly. The all track repeat mode can also be set by pressing the REPEAT 1/ALL button during playback. If the REPEAT 1/ALL button is pressed during programmed playback, the tracks are played repeatedly in the programmed order. To cancel the all track repeat mode, press the REPEAT 1/ALL button repeatedly until the "REPEAT" indicator turns off. |

NOTE:

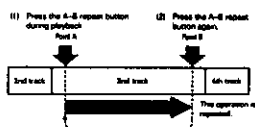
- The single track repeat mode and A-B repeat mode cannot be set during programmed playback or random playback.

(3) Playing a section between any two points repeatedly (A-B Repeat)

This function allows you to play a certain section within a track repeatedly.



| | |
|----------|---|
| 1 | <p>During playback, press the A-B repeat button at the position at which you want to start repeating (point A).</p> <ul style="list-style-type: none"> The "REPEAT A-B" indicator lights. |
| 2 | <p>Press the A-B repeat button again at the position at which you want to stop repeating (point B).</p> <ul style="list-style-type: none"> The "REPEAT A-B" indicator lights, the pickup returns to point A, and the section is played repeatedly. |



- To stop A-B repeat playback, press the REPEAT A-B button on the remote control unit until the "REPEAT" indicator turns off. The A-B repeat mode is cancelled and normal playback starts from the beginning of the current track.
- If the stop button (⏻ STOP) is pressed, the A-B repeat mode is cancelled and the stop mode is set.

NOTE:

- A-B repeat playback is not possible during programmed playback or random playback.
- The automatic and manual search functions cannot be used during A-B repeat playback or when setting point B.
- When A-B repeat playback is cancelled when point B is set on a different track from point A, playback resumes from the beginning of the track that is playing when the A-B repeat mode is cancelled.

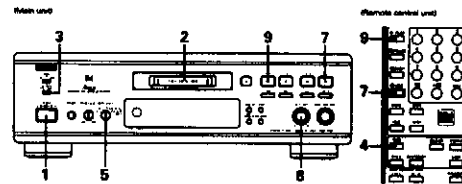
8 RECORDING

- When recording on an already recorded disc, recording automatically starts from the end of the section last recorded. When doing so, pay attention to the remaining time.
- To clear the entire content of the disc and record from the beginning, first erase the entire disc. (For instructions on erasing the entire disc, refer to "Editing — (1) Erasing all tracks" on Page 13.)
- To record on a disc, make sure the accidental erasure prevention tab is closed and the hole is covered.

1. Starting recording

- The recording pause mode is set automatically if a blank disc or no-track disc is loaded. (Auto Rec Pause function)

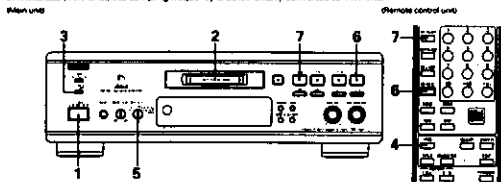
(1) Analog recording

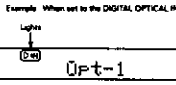


| | |
|-----------|--|
| 1 | Turn on the power. |
| 2 | Load the recordable MiniDisc on which you want to record. |
| 3 | Set the recording mode switch to the mode in which you want to record. |
| 4 | <p>When using an already recorded MiniDisc, press the TIME button to check the recordable time.</p> <ul style="list-style-type: none"> The time display switches between the total recorded time and the recordable time each time the TIME button is pressed. |
| 5 | <p>Set the input select switch (INPUT SELECT) to the "ANALOG" position.</p> <ul style="list-style-type: none"> "Analog ATM On" or "Analog ATM Off" appears on the multi-display. When the analog A.T.M. (Auto Track Marking) function is on (when "Analog ATM On" is displayed), track numbers are automatically added when soundless sections (about 1.5 sec) are detected in the recording input signal. When the analog A.T.M. function is off (when "Analog ATM Off" is displayed), track numbers are not automatically added. (For instructions on adding track numbers, refer to "Editing — (2) Dividing tracks" on Page 20.) |
| 6 | Start playing the selection you want to record on the CD player, cassette deck, etc. |
| 7 | <p>Press the record button (Ⓜ REC).</p> <ul style="list-style-type: none"> The recording standby mode is set. |
| 8 | <p>Use the INPUT LEVEL control to adjust the recording level.</p> <ul style="list-style-type: none"> Adjust the INPUT LEVEL control so that the "OVER" indicator does not light even when the volume is loudest. After adjusting, set the source to be recorded to the standby mode. |
| 9 | <p>Press the play button (▶ PLAY).</p> <ul style="list-style-type: none"> Recording starts. |
| 10 | Start playing the selection you want to record on the CD player, cassette deck, etc. |

2. Digital recording

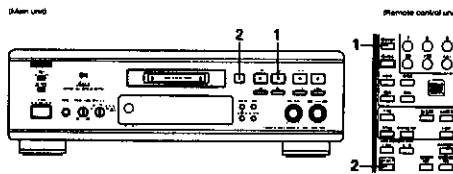
- The set includes a sampling converter.
- When recording DATs or satellite broadcasts (32 kHz or 48 kHz) whose digital input signal sampling frequency is different from that of MiniDiscs (44.1 kHz), the sampling frequency is automatically converted to 44.1 kHz.



| | |
|---|--|
| 1 | Turn on the power. |
| 2 | Load the recordable MiniDisc on which you want to record. |
| 3 | Set the recording mode switch to the mode in which you want to record. |
| 4 | When using an already recorded MiniDisc, press the TIME button to check the recordable time. • The time display switches between the total recorded time and the recordable time each time the TIME button is pressed. |
| 5 | Set the input select switch (INPUT SELECT) to the "COAX", "OPT-1" or "OPT-2" position. • "Coax", "Opt-1" or "Opt-2" appears on the multi-display. • If the "LOCK" indicator is flashing, check the connections to the digital input jacks. Example: When set to the DIGITAL OPTICAL IN 1 Lights  |
| 6 | Press the record button (RECL). • The recording standby mode is set. • If the input select switch is switched while in the recording pause mode, the digital input signal's sampling frequency is displayed for approximately 2 seconds. |
| 7 | Press the play button (PLAY). • Recording starts. |
| 8 | Play the selection to be recorded on the CD player, etc. |

NOTE:
 • If the recording mode switch is switched to "MONO" while stereo audio signals are being input, the level meter display and monitor signals do not switch to monoaural.

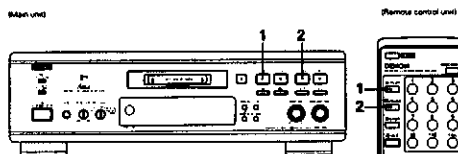
2. Stopping recording



| | |
|---|---|
| 1 | During recording, press the stop button (STOP). • The stop mode is set automatically once the end of the recordable time is reached. |
| 2 | Press the EJECT button (▲). • The TOC data is written and the disc is ejected. • When TOC writing starts, the "LOCK" indicator flashes. Do not shake the main unit, press the main unit's POWER button or unplug the power cord while the TOC is being written. If the data is not recorded properly, it will not be possible to play the disc. • The TOC data can also be written by setting the power to the standby mode by pressing the power button on the remote control unit. |

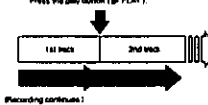
NOTES:
 • When performing digital recording, there is no need to adjust the recording level. The position of the INPUT LEVEL control does not affect the recording level.
 • When performing digital recording of CDs or MiniDiscs, the track numbers are recorded automatically. (Depending on the recorded content on the CD or MiniDisc and on the type of CD player, the track numbers may differ from those on the original CD or MiniDisc.) (See Page 6.)
 • When recording on CDs or MiniDiscs, track numbers may be incremented by 1. If this happens, erase the unnecessary track numbers. (See Page 18.)
 • When recording digital sources other than CDs or MiniDiscs, track numbers are automatically added when blank sections are detected. (See Page 6.)
 • During digital recording from CDs or MiniDiscs, the track number may not change if the same track is programmed twice in a row or if the single track repeat mode is set.
 • It is not possible to make digital recordings of MiniDiscs which have already been recorded digitally. The DMD-1000 includes a serial copy management system. This system limits reproduction of digital signals on digital audio devices to "one generation". Use analog recording to record MiniDiscs originally recorded digitally.
 • To eject the MiniDisc if the "Copy Prohibit" or "Digital Unlock" message is displayed during digital recording and the recording pause mode is set, first press the stop button, then press the eject button to eject the MiniDisc.

10 VARIOUS RECORDING FUNCTIONS



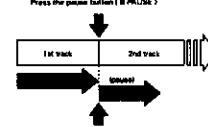
1. Adding track numbers during recording

- Track numbers can be added during recording regardless of the recording mode.

| | |
|---|--|
| 1 | During recording, press the play button (PLAY). • When the play button (PLAY) is pressed during recording, a track number is added at that point. • A new track number cannot be added for approximately 4 seconds after the last track number for stereo recordings, approximately 8 seconds after the last track number for monoaural recordings. Recording continues:  |
|---|--|

2. Stopping recording temporarily

- Recording can be stopped temporarily then resumed from the same point.

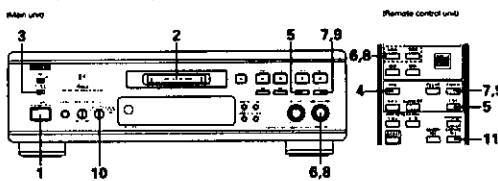
| | |
|---|---|
| 2 | During recording, press the pause button (PAUSE). • When the pause button (PAUSE) is pressed during recording, the pause mode is set at that point and the track number changes. • Press the play button (PLAY) to resume recording. Recording resumes:  |
|---|---|

NOTE:
 • The TOC is written on the disc when the eject button is pressed to eject the disc and when the power button on the remote control unit is pressed to set the power to the standby mode.
 • After recording, press the EJECT button (▲) to record the TOC data before performing other operations.
 • The "LOCK" indicator flashes while the TOC data is being recorded. Do not shake the main unit, press the main unit's POWER button or unplug the power cord while the TOC is being written. If the data is not recorded properly, it will not be possible to play the disc.

3. Recording simultaneously while playing on another component

Synchronized Recording

- With this function you can start recording automatically when playback starts on a component connected to the input jacks.



| | |
|----|--|
| 1 | Turn on the power. |
| 2 | Load the recordable MiniDisc on which you want to record. |
| 3 | Switch the recording mode switch to the mode in which you want to record. |
| 4 | When using an already recorded MiniDisc, press the TIME button to check the recordable time. • The time display switches between the total recorded time and the recordable time each time the TIME button is pressed. |
| 5 | In the stop mode, press the EDIT button. • "Edit Mode" is displayed. |
| 6 | Either turn the jog dial on the main unit or press one of the automatic search buttons (◀▶) and (▶▶) on the remote control unit. • Display "Sync Rec Lev.?" |
| 7 | Press the ENTER button. • "Sync Lev. -54 dB" is displayed. • The default value is -54 dB. • (A synchronized recording level of -54dB means that recording starts automatically on the MiniDisc when playback signals of -54 dB or greater are detected after a blank section of 4 seconds or more in the playback signals input from an external component.) |
| 8 | Turn the jog dial on the main unit or use the automatic search buttons (◀▶) and (▶▶) on the remote control unit to set the synchronized recording level. • The level can be adjusted in steps of 6 dB between -54 dB and -30 dB. • When the synchronized recording level is set to -30 dB, -36 dB, -42 dB or -48 dB, the signal level for the auto track increment function which automatically adds track numbers when blank sections are detected is set to the same level. When set to -54 dB, the signal level is set to approximately -50 dB. |
| 9 | Press the ENTER button. • "Complete" is displayed. • The synchronized recording level is set. |
| 10 | Set the input select switch (INPUT SELECT). |
| 11 | Press the SYNCHRO REC button. • Set the recording pause mode and "Synchro Rec" is displayed. |

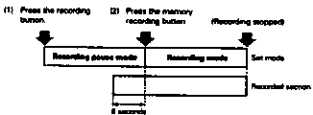
- 12 Play the track you want to record on the CD player, cassette deck, etc.
 • Recording starts automatically.
- When recording with the default synchronized recording level, skip steps 5 to 9.
 • To cancel the synchronized recording mode, press the STOP button.

NOTES:

- When recording an analog input, adjust the recording level before synchronized recording.
- When a blank section of 4 seconds or more is detected in the playback signal during synchronized recording, the track number increases by one and the recording pause mode is set automatically. When playback resumes recording also resumes.
- If a signal equal to or greater than the set recording level is being input when the synchronized recording button (SYNCHRO REC) is pressed, recording starts immediately.
- Synchronized recording may not work properly if there is noise in the blank sections between tracks. If this happens, change the synchronized recording level setting.
- During synchronized recording, the set operates as if the input select switch (INPUT SELECT) is set to ANALOG A.T.M. ON, even if it is set to ANALOG A.T.M. OFF.
- The track number increases if the sampling frequency switches when in the synchronized recording pause mode.
- The recording mode cannot be changed when in the synchronized recording pause mode.
- The synchronized recording level is reset to the default value when the power of the main unit is turned off (. . .).

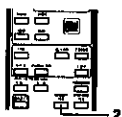
4. Recording from a point 6 seconds back **Memory Recording**

- With this function you can start recording from a point up to 6 seconds back in the sound that was being input to the set when the recording pause mode was set.



- Use this function to prevent missing the beginning of the satellite broadcast or other program you want to record using the "AIR CHECK" function.

(Remote control unit)

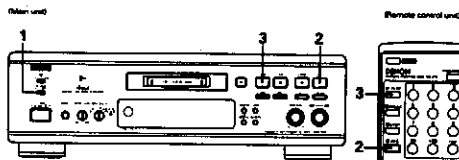


- 1 Perform the operations under "Starting to Record" on Pages 13 and 14.
 • To record an analog input, perform steps 1 to 8 under "Recording an Analog Input".
 • To record a digital input, perform steps 1 to 6 under "Recording a Digital Input".
- 2 Press the MEMORY REC button on the remote control unit.
 • Recording starts from a point up to 6 seconds before the button was pressed.
 • "Memory Rec" is displayed.
- To cancel the memory rec mode, press the STOP button.

- NOTE:**
- The set stores in the memory the sound which is being input at the point when the recording pause mode is set. Thus, the sound from 6 seconds ago cannot be recorded if recording is started more than 6 seconds after the recording pause mode is set. In addition, if the input is switched with the input select switch (INPUT SELECT) in the 6 seconds before memory recording is started, the sound recorded before the input was switched may be recorded.

5. Recording in monaural **Monaural Recording**

- With monaural recording it is possible to record approximately twice as much as with stereo recording.
- Use this function to record tracks originally recorded in monaural or programs consisting mostly of talk.



- 1 Set the recording mode switch to "MONO".
 • "Mono" is displayed.
- 2 Press the REC button.
 • The recording standby mode is set.
- 3 Press the PLAY button.
 • Recording starts.

NOTES:

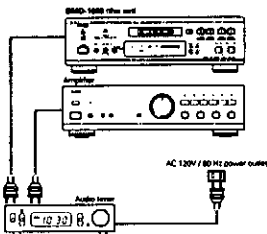
- The recording mode cannot be switched during recording.
- If the recording mode switch (REC MODE) is switched during the editing operation, the editing operation is cleared.
- The monitor signals and level meter display do not switch to monaural, even if the recording mode switch is switched to "MONO".

16

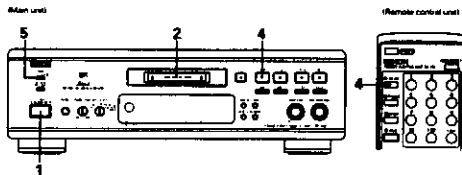
11 TIMER PLAYBACK AND RECORDING

- A separately sold auto timer can be used to start playback or recording at a specific time.
- Also refer to the operating instructions for the auto timer and amplifier.

1. Connections

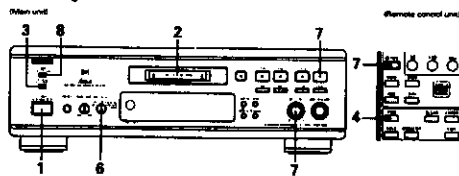


2. Timer playback



- 1 Turn on the power of the DMD-1000 and the connected components.
- 2 Load the MiniDisc for timer playback into the DMD-1000.
- 3 Set the amplifier's input selector to "MD".
- 4 Press the play button (▶ PLAY).
 • Play the disc to check the volume.
- 5 Set the DMD-1000's timer select switch (TIMER) to "PLAY".
- 6 Set the auto timer for the desired time.
- 7 Press the power button on the remote control unit to set the power to the standby mode.
 Turn the auto timer ON.
 • When the set time is reached, the power of the various components turns on automatically and playback begins from track one.

3. Timer recording



- 1 Turn on the power of the DMD-1000 and the connected components.
- 2 Load the recordable MiniDisc for timer recording into the DMD-1000.
- 3 Set the recording mode switch to the mode in which you want to record.
- 4 When using an already recorded MiniDisc, press the TIME button to check the recordable time.
- 5 Set the input selector button on the amplifier or receiver to the source to be recorded.
- 6 Set the input select switch (INPUT SELECT) on the DMD-1000 to the source to be input.
- 7 Press the record button and adjust the recording level. (For analog inputs only)
 • Adjust so that the level meter does not light up to "OVER".
- 8 Set the DMD-1000's timer select switch (TIMER) to "REC".
 • When the set time is reached, the power turns on and recording begins.
- 9 Set the auto timer for the desired time.
- 10 Press the power button on the remote control unit to set the power to the standby mode.
 Turn the auto timer ON.
 • When the set time is reached, the power of the various components turns on automatically and recording begins.

NOTES:

- Be sure to keep the main unit's power button in the on position when performing timer playback and recording. Timer playback and recording will not work if the power button is in the off position.
- The recording made using timer recording is stored on the disc the next time the power is turned on.
- During this, the [TDC] indicator flashes. Do not shake the main unit, press the main unit's power button or unplug the power cord while the "TDC" is flashing.
- To operate the DMD-1000 again after timer recording, first eject the disc, then reload it.
- The recording made using timer recording may be cleared if the DMD-1000's power is not turned on for 2 or 3 days. Be sure to turn on the DMD-1000 within 2 or 3 days.
- Be sure to set the DMD-1000's timer select switch (TIMER) to the "OFF" position when not using timer playback or recording.
- It takes several seconds from the time the timer recording start time is reached until the power is turned on and recording actually starts. Take this into consideration when setting the timer's start and stop times.
- The recordable area may be shortened by several seconds when using timer recording on discs on which editing (erasing tracks, etc.) has been performed repeatedly.
- The POWER button, TIME button and input level adjustment control (INPUT LEVEL) do not function during timer recording.
- To stop recording during timer recording, set the timer select switch (TIMER) to "OFF", then press the stop button (■ STOP).
- Timer recording is not possible when the disc's accidental erasure prevention tab is open or when the disc is already full ("Disc Full").





12 EDITING

The editing functions can be used to add track numbers, combine tracks, erase unwanted sections, etc. It is also possible to give titles to discs and tracks. Use the editing functions to get the best of the excellent portability that MiniDiscs offer.

1. Editing

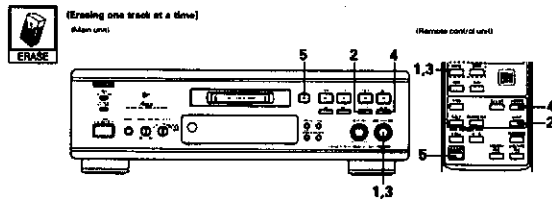
The DMD-1000 is equipped with the following four editing functions:

Editing functions

| | |
|---|---|
|  | <ul style="list-style-type: none"> • Erasing angle tracks (See Page 18) • Erasing all tracks (See Page 19) • Erasing A-B tracks (See Page 19) • Erasing disc titles (See Page 23) • Erasing track titles (See Page 23) • Erasing all titles (See Page 23) |
|  | • Combining tracks (See Page 20) |
|  | • Dividing tracks (See Page 20) |
|  | <ul style="list-style-type: none"> • Moving tracks (See Page 21) • Moving program tracks (See Page 21) |

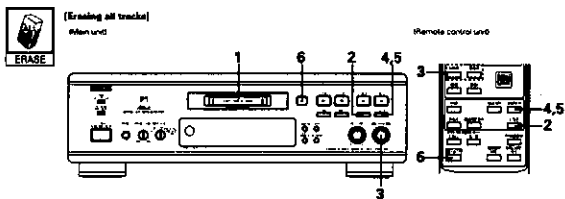
These four editing functions can be combined for a variety of editing possibilities. • When editing or adding titles, close the accidental erasure prevention tab to cover the hole.

(1) Erasing tracks



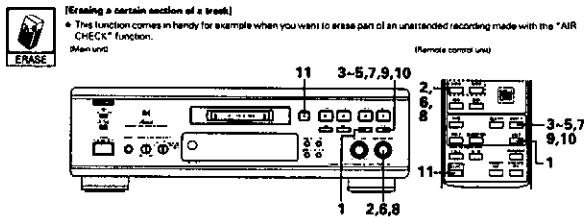
| | |
|---|--|
| 1 | In the stop mode, display the number of the track to be erased. • Either turn the jog dial on the main unit or use the automatic search buttons (◀◀ and ▶▶) on the remote control unit to display the number of the track to be erased. • This step is unnecessary when you want to erase the currently playing or paused track. |
| 2 | Press the EDIT button. • "Edit Mode" is displayed. |
| 3 | Either turn the jog dial on the main unit or press one of the automatic search buttons (◀◀ and ▶▶) on the remote control unit. • Display "Track Erase?". |
| 4 | Press the ENTER button to erase the track. • "Complete" is displayed. • The stop mode is set once the operation is completed. • During the pause mode, that track is erased. • When a track is erased during the pause mode, the stop mode is set after the track is erased. • When a track is erased, the numbers of the tracks following that track are all decreased by one. |
| 5 | Press the EJECT button (▲). • The TOC data is written and the disc is ejected. • When TOC writing starts, the [TDC] indicator flashes. Do not shake the main unit, press the main unit's POWER button or unplug the power cord while the TOC is being written. If the data is not recorded properly, it will not be possible to play the disc. • The TOC data can also be written by setting the power to the standby mode by pressing the power button on the remote control unit. |

• When erasing two or more tracks, start from the track with the largest number, since the numbers of the following tracks decrease when a track is erased.
• To cancel the erasing procedure, press the STOP or CLEAR button before step 4 above to display "Track Erase?".



| | |
|---|--|
| 1 | Load the disc you want to erase. |
| 2 | In the stop mode, press the EDIT button. • "Edit Mode" is displayed. |
| 3 | Either turn the jog dial on the main unit or press one of the automatic search buttons (◀◀ and ▶▶) on the remote control unit. • Display "ALL Erase?". |
| 4 | Press the ENTER button. • The "Erase OK?" message appears. |
| 5 | Press the ENTER button to erase the track. • "Complete" is displayed, then the "Blank Disc" message appears. |
| 6 | Press the EJECT button (▲). • The TOC data is written and the disc is ejected. • When TOC writing starts, the [TDC] indicator flashes. Do not shake the main unit, press the main unit's POWER button or unplug the power cord while the TOC is being written. If the data is not recorded properly, it will not be possible to play the disc. • The TOC data can also be written by setting the power to the standby mode by pressing the power button on the remote control unit. |

• When the all erase function is used, both the tracks and the disc title are erased.
• To cancel the erasing procedure, press the STOP or CLEAR button before step 5 above to display "ALL Erase?" or "Erase OK?".

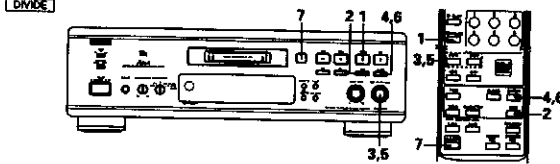


| | |
|----|--|
| 1 | In the play mode or pause mode, press the EDIT button. • "Edit Mode" is displayed. |
| 2 | Either turn the jog dial on the main unit or press one of the automatic search buttons (◀◀ and ▶▶) on the remote control unit. • Display "A-B Erase?". |
| 3 | Press the ENTER button. • "A Point In?" is displayed. |
| 4 | Press the ENTER button at the position where you want to start erasing (point A). • "B Point In?" is displayed. |
| 5 | Press the ENTER button again at the position where you want to stop erasing (point B). • The section which is to be erased is played and "Position OK?" is displayed. • The section at which the track is to be combined is played repeatedly for several seconds. |
| 6 | To fine-adjust point A, turn the jog dial on the main unit or use the automatic search buttons (◀◀ and ▶▶) on the remote control unit to move point A. • "A Point ± [point number]" is displayed. • Fine-adjustment is possible within the range of -178 to +178 points (1 point equals approximately 0.012 seconds). |
| 7 | Press the ENTER button to reset point A. • "B Point ± [point number]" is displayed. |
| 8 | To fine-adjust point B, turn the jog dial on the main unit or use the automatic search buttons (◀◀ and ▶▶) on the remote control unit to move point B. • "B Point ± [point number]" is displayed. • Fine-adjustment is possible within the range of -178 to +178 points (1 point equals approximately 0.012 seconds). |
| 9 | Press the ENTER button. • "Position OK?" is displayed. • The section at which the track is to be combined is played repeatedly for several seconds. |
| 10 | Press the ENTER button to erase the A-B section. • "Complete" is displayed. |
| 11 | Press the EJECT button (▲). • The TOC data is written and the disc is ejected. • When TOC writing starts, the [TDC] indicator flashes. Do not shake the main unit, press the main unit's POWER button or unplug the power cord while the TOC is being written. If the data is not recorded properly, it will not be possible to play the disc. • The TOC data can also be written by setting the power to the standby mode by pressing the power button on the remote control unit. |

• Press the CLEAR button to reset the settings to as they were one step before that point.
• To cancel the erasing procedure, press the STOP or CLEAR button before step 10 above.

(1) Dividing tracks

- A recorded track can be divided, adding a new track number to the second part.
- Use the function to add a track number at the desired position to make it easy to search for that position.

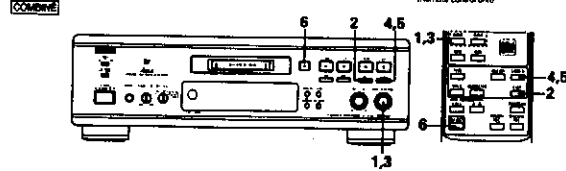


| | |
|---|--|
| 1 | Press the PAUSE button at the position at which you want to divide the track. |
| 2 | Press the EDIT button. • "Edit Mode" is displayed. |
| 3 | Either turn the jog dial on the main unit or press one of the automatic search buttons ([◀] and [▶]) on the remote control unit. • Display "Divide?". |
| 4 | Press the ENTER button. • The position at which the track is to be divided is played and "Position OK?" is displayed. • The section at which the tracks have been combined is played repeatedly for several seconds. |
| 5 | To fine-adjust the divide position, turn the jog dial on the main unit or use the automatic search buttons ([◀] and [▶]) on the remote control unit to move the position. • "Position a [point number]" is displayed. • Fine-adjustment is possible within the range of -255 to +255 points. (1 point equals approximately 0.012 seconds.) |
| 6 | Press the ENTER button to divide the track. • "Complete" is displayed. |
| 7 | Press the EJECT button ([EJECT]). • The TOC data is written and the disc is ejected. • When TOC writing starts, the " [TOC] " indicator flashes. Do not shake the main unit, press the main unit's POWER button or unplug the power cord while the TOC is being written. If the data is not recorded properly, it will not be possible to play the disc. • The TOC data can also be written by setting the power to the standby mode by pressing the power button on the remote control unit. |

• If a titled track is divided, both parts will have the same title.
• To put a divided track back together, see "(2) Combining tracks" on Page 20.
• To cancel the dividing procedure, press the STOP or CLEAR button before step 6 above.

(2) Combining tracks

- Combining two adjacent tracks
- Use the function to combine two adjacent tracks.



| | |
|---|--|
| 1 | In the stop mode, display the number of the second of the adjacent tracks. • Either turn the jog dial on the main unit or use the automatic search buttons ([◀] and [▶]) on the remote control unit to display the number of the second track. |
| 2 | Press the EDIT button. • "Edit Mode" is displayed. |
| 3 | Either turn the jog dial on the main unit or press one of the automatic search buttons ([◀] and [▶]) on the remote control unit. • Display "Combine?". |
| 4 | Press the ENTER button. • The tracks to be combined are played and "Combine OK?" is displayed. • The section at which the tracks have been combined is played repeatedly for several seconds. |
| 5 | Press the ENTER button to combine the tracks. • "Complete" is displayed. |
| 6 | Press the EJECT button ([EJECT]). • The TOC data is written and the disc is ejected. • When TOC writing starts, the " [TOC] " indicator flashes. Do not shake the main unit, press the main unit's POWER button or unplug the power cord while the TOC is being written. If the data is not recorded properly, it will not be possible to play the disc. • The TOC data can also be written by setting the power to the standby mode by pressing the power button on the remote control unit. |

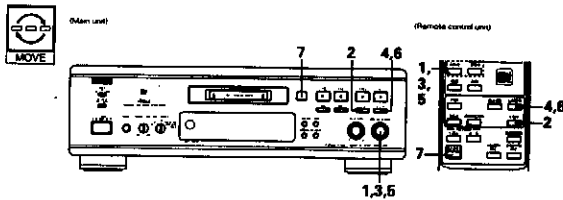
• To divide tracks that have been combined, see "(1) Dividing tracks" on Page 20.
• Tracks can also be combined in the same way during the play or pause modes by pressing the EDIT button. In the case, the track at which the pause mode is set is combined with the track before it.
• The title of the combined track is the title of the first of the two tracks. If the first track has no title, the title of the second track is used.
• To cancel the combining procedure, press the STOP or CLEAR button before step 6 above.

NOTES:

- Tracks recorded from CDs or MiniDiscs using the digital inputs cannot be combined with tracks recorded using the analog inputs.
- It is not possible to combine a track recorded in stereo with a track recorded in monoaural.
- It may not be possible to combine short tracks less than 15 seconds long.

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(4) Moving tracks

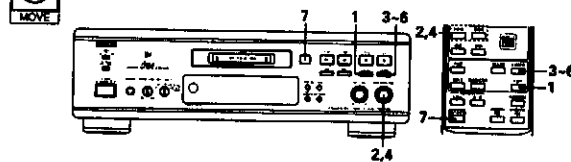


| | |
|---|--|
| 1 | In the stop mode, display the number of the track to be moved. • Either turn the jog dial on the main unit or use the automatic search buttons ([◀] and [▶]) on the remote control unit to display the number of the track to be moved. |
| 2 | Press the EDIT button. • "Edit Mode" is displayed. |
| 3 | Either turn the jog dial on the main unit or press one of the automatic search buttons ([◀] and [▶]) on the remote control unit. • Display "Move?". |
| 4 | Press the ENTER button. • Display "OO? Move OOR?". |
| 5 | Either turn the jog dial on the main unit or use the automatic search buttons ([◀] and [▶]) on the remote control unit to specify the number to which the track is to be moved. |
| 6 | Press the ENTER button to move the track. • "Complete" is displayed. |
| 7 | Press the EJECT button ([EJECT]). • The TOC data is written and the disc is ejected. • When TOC writing starts, the " [TOC] " indicator flashes. Do not shake the main unit, press the main unit's POWER button or unplug the power cord while the TOC is being written. If the data is not recorded properly, it will not be possible to play the disc. • The TOC data can also be written by setting the power to the standby mode by pressing the power button on the remote control unit. |

• To cancel the moving procedure, press the STOP or CLEAR button before step 6 above.

(5) Rearranging the tracks in programmed order

- This function comes in handy when you want to rearrange the order of the tracks recorded on the MiniDisc.



| | |
|---|---|
| 1 | In the stop mode, press the EDIT button. • "Edit Mode" is displayed. |
| 2 | Either turn the jog dial on the main unit or press one of the automatic search buttons ([◀] and [▶]) on the remote control unit. • Display "Program Move?". |
| 3 | Press the ENTER button. • "New OTr<->Tr" is displayed, and the mode for programming a new track as the first track is set. |
| 4 | Turn the jog dial on the main unit or use the automatic search buttons ([◀] and [▶]) or the number buttons on the remote control unit then press the ENTER button to program the track to be moved. • For example, to make the track which is currently track the first track, specify "3". "New OTr<->Tr" is displayed. When the ENTER button is pressed, the mode for setting the next track is set and "New OTr<->Tr" is displayed. • To continue programming more tracks, repeat steps 3 and 4. |
| 5 | Press the ENTER button. • To enter the settings programmed in steps 3 and 4, press the ENTER button while "New OTr<->Tr" is displayed. |
| 6 | Press the ENTER button while "Prog. Move OK?" is displayed to enter the new program. • "Complete" is displayed. |
| 7 | Press the EJECT button ([EJECT]). • The TOC data is written and the disc is ejected. • When TOC writing starts, the " [TOC] " indicator flashes. Do not shake the main unit, press the main unit's POWER button or unplug the power cord while the TOC is being written. If the data is not recorded properly, it will not be possible to play the disc. • The TOC data can also be written by setting the power to the standby mode by pressing the power button on the remote control unit. |

• Up to 25 tracks can be specified.
• Press the CLEAR button at step 5 to clear the track number which was last programmed.
• Press the CALL button at step 6 to check the contents of the program.
• To cancel the moving procedure, press the STOP or CLEAR button before step 6 above.

NOTES:

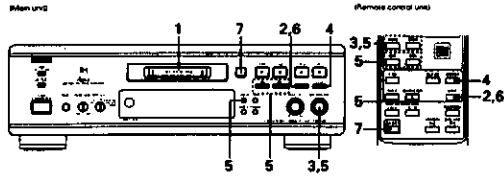
- Tracks which have not been programmed are placed after the programmed tracks.
- It is not possible to program the same track twice.

21

2. Adding titles

* Up to 100 characters can be input for the track and disc titles

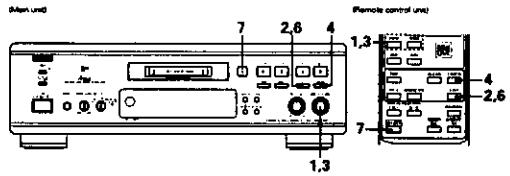
(1) Adding disc titles



| | |
|---|---|
| 1 | Load the disc to which you want to give a title. |
| 2 | In the stop mode, press the EDIT button. * "Edit Mode" is displayed. |
| 3 | Either turn the jog dial on the main unit or use the automatic search buttons (◀◀ and ▶▶) on the remote control unit to display "Disc Name In?". |
| 4 | Press the ENTER button. * The cursor flashes, indicating the title input standby mode. |
| 5 | Input the title. * Either turn the jog dial on the main unit or use the automatic search buttons (◀◀ and ▶▶) on the remote control unit to select the desired character. * Some characters that can be input on the DMD-1000 cannot be displayed on other models. * The shape of the cursor changes each time the CHARACTER button is pressed. [Explanation of cursor] <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;"> </div> <div style="border: 1px solid black; padding: 2px;"> </div> </div> Capital letter / number input mode ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789 Small letter / number input mode: abcdefghijklmnopqrstuvwxyz0123456789 Special character input mode: Space * % & * () ^ _ / : ; < > ? @ [\] - * When the manual search forward button (▶▶) or the ENTER button is pressed, the selected character is set, and the unit is set to the input standby mode for the next character. * The cursor can be moved back by pressing the manual search reverse button (◀◀). Use this to correct input characters. |
| 6 | Press the EDIT button to enter the input title. * The set disc title scrolls on the display. |

| | |
|---|---|
| 7 | Press the EJECT button (▲). * The TOC data is written and the disc is ejected. * When TOC writing starts, the " [TOC] " indicator flashes. Do not shake the main unit, press the main unit's POWER button or unplug the power cord while the TOC is being written. If the data is not recorded properly, it will not be possible to play the disc. * The TOC data can also be written by setting the power to the standby mode by pressing the power button on the remote control unit. * To erase a character, move the cursor to that character then press the CLEAR button. * To correct a character, first erase it, then input the correct character. |
|---|---|

(2) Adding track titles



| | |
|---|--|
| 1 | In the stop mode, either turn the jog dial on the main unit or use the automatic search buttons (◀◀ and ▶▶) on the remote control unit to display the track number. |
| 2 | Press the EDIT button. * "Edit Mode" is displayed. * In the play, pause or recording modes, press the EDIT button to give a title to the current track. |
| 3 | Either turn the jog dial on the main unit or use the automatic search buttons (◀◀ and ▶▶) on the remote control unit to display "Track Name In?". |
| 4 | Press the ENTER button. * The cursor flashes, indicating the title input standby mode. |
| 5 | Input the title. * For instructions on entering titles, see step 5 under "Adding disc titles" on Page 22. |
| 6 | Press the EDIT button to enter the input track title. |
| 7 | Press the EJECT button (▲). * The TOC data is written and the disc is ejected. * When TOC writing starts, the " [TOC] " indicator flashes. Do not shake the main unit, press the main unit's POWER button or unplug the power cord while the TOC is being written. If the data is not recorded properly, it will not be possible to play the disc. * The TOC data can also be written by setting the power to the standby mode by pressing the power button on the remote control unit. * In the play or recording mode, finish adding the title before the track ends. If the track changes, the characters that have been input up to that point are no longer valid. * Characters input in the recording pause mode are cleared when the STOP button is pressed. |

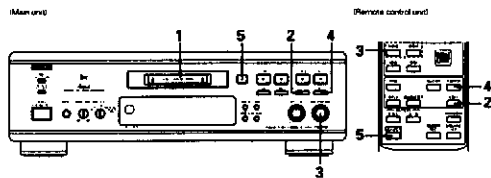
NOTE:
 * Up to 100 characters can be input for the track and disc titles. "Name Full" is displayed if you attempt to input a 101st character.
 * If the title operation is performed with a disc containing titles with over 100 characters input on another MiniDisc recorded, the characters over the 100th character are erased.
 * A total of approximately 1700 characters can be input for all disc and track titles. "Name Full" is displayed if you attempt to input more characters.

22

3. Erasing titles

* Use this function to change or erase track and disc titles

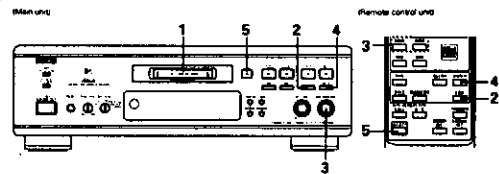
(1) Erasing disc titles



| | |
|---|--|
| 1 | Insert the MiniDisc whose title you want to erase into the disc insertion slot. |
| 2 | Press the EDIT button in the stop mode while the total number of tracks is displayed. * "Edit Mode" is displayed. |
| 3 | Either turn the jog dial on the main unit or press one of the automatic search buttons (◀◀ and ▶▶) on the remote control unit. * Display "D. Name Erase?". |
| 4 | Press the ENTER button to erase the disc name. * "Complete" is displayed. |
| 5 | Press the EJECT button (▲). * The TOC data is written and the disc is ejected. * When TOC writing starts, the " [TOC] " indicator flashes. Do not shake the main unit, press the main unit's POWER button or unplug the power cord while the TOC is being written. If the data is not recorded properly, it will not be possible to play the disc. * The TOC data can also be written by setting the power to the standby mode by pressing the power button on the remote control unit. |

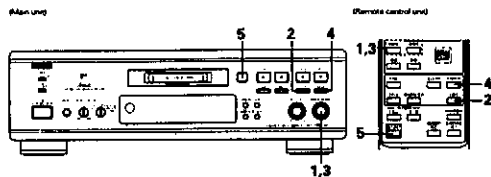
| | |
|---|--|
| 4 | Press the ENTER button to erase the track name. * "Complete" is displayed. |
| 5 | Press the EJECT button (▲). * The TOC data is written and the disc is ejected. * When TOC writing starts, the " [TOC] " indicator flashes. Do not shake the main unit, press the main unit's POWER button or unplug the power cord while the TOC is being written. If the data is not recorded properly, it will not be possible to play the disc. * The TOC data can also be written by setting the power to the standby mode by pressing the power button on the remote control unit. |

(2) Erasing all the track titles and the disc title



| | |
|---|--|
| 1 | Insert the MiniDisc whose disc and track titles you want to erase into the disc insertion slot. |
| 2 | Press the EDIT button in the stop mode while the total number of tracks is displayed. * "Edit Mode" is displayed. |
| 3 | Either turn the jog dial on the main unit or press one of the automatic search buttons (◀◀ and ▶▶) on the remote control unit. * Display "A. Name Erase?". |
| 4 | Press the ENTER button to erase all the track titles and the disc title. * "Complete" is displayed. |
| 5 | Press the EJECT button (▲). * The TOC data is written and the disc is ejected. * When TOC writing starts, the " [TOC] " indicator flashes. Do not shake the main unit, press the main unit's POWER button or unplug the power cord while the TOC is being written. If the data is not recorded properly, it will not be possible to play the disc. * The TOC data can also be written by setting the power to the standby mode by pressing the power button on the remote control unit. |

(2) Erasing track titles

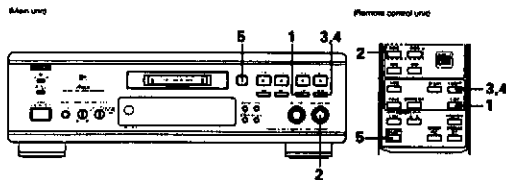


| | |
|---|---|
| 1 | Turn the jog dial on the main unit or use the automatic search buttons (◀◀ and ▶▶) on the remote control unit to display the number of the track whose title you want to erase. |
| 2 | Press the EDIT button in the stop mode while the number of the track whose title you want to erase is displayed. * "Edit Mode" is displayed. |
| 3 | Either turn the jog dial on the main unit or press one of the automatic search buttons (◀◀ and ▶▶) on the remote control unit. * Display "T. Name Erase?". |

4. Undoing the last editing operation

Undo Function

* With this function you can undo the editing operation last performed and reset the settings to as they were one step before that point. This comes in handy if you make a mistake when editing.



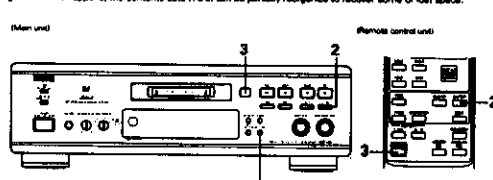
| | |
|---|---|
| 1 | In the stop mode, press the EDIT button. • "Edit Mode" is displayed. |
| 2 | Either turn the jog dial on the main unit or press one of the automatic search buttons (◀◀ and ▶▶) on the remote control unit. • Display "Undo?" • "Undo?" is not displayed if no editing operation has been performed or if the undo operation is not possible. • The undo function cannot be used in the following cases: • Once the TOC data has been rewritten • Once you have recorded or edited something new • After a power failure • After the undo operation has been used once • When a title has been input in a mode other than the stop mode • When the disc recovery function has been used |
| 3 | Press the ENTER button. • One of the following messages appears, depending on the type of editing operation last performed: • When a track or disc title has been input or changed → "Name Undo?" • When a track title, disc title, a single track, all tracks or part of a track has been erased → "Erase Undo?" • When a track has been divided → "Divide Undo?" • When tracks have been combined → "Combine Undo?" • When the move or program move function has been used → "Move Undo?" |
| 4 | Press the ENTER button to clear the editing. • "Complete" is displayed. |
| 5 | Press the EJECT button (⏏). • The TOC data is written and the disc is ejected. • When TOC writing starts, the "TOC" indicator flashes. Do not shake the main unit, press the main unit's POWER button or unplug the power cord while the TOC is being written. If the data is not recorded properly, it will not be possible to play the disc. • The TOC data can also be written by setting the power to the standby mode by pressing the power button on the remote control unit. |

• To set back to the previous setting, press the CLEAR button.
• To cancel the undo operation, press the stop (■ STOP) or CLEAR button before step 4.

5. Reorganizing the MiniDisc's TOC data

Disc Recovery Function

* When recording or editing has been performed repeatedly, the recordable time may be shorter than the MiniDisc's maximum recording time. If this happens, the contents data (TOC) can be partially reorganized to recover some of lost space.



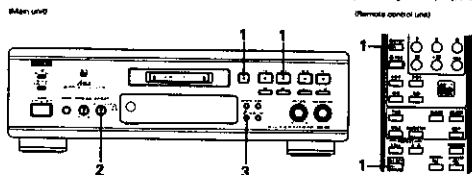
| | |
|---|--|
| 1 | In the stop mode, press the RECOVERY button. • "D. Recovery OK" is displayed. |
| 2 | Press the ENTER button. • "Complete" is displayed. |
| 3 | Press the EJECT button (⏏). • The TOC data is written and the disc is ejected. • When TOC writing starts, the "TOC" indicator flashes. Do not shake the main unit, press the main unit's POWER button or unplug the power cord while the TOC is being written. If the data is not recorded properly, it will not be possible to play the disc. • The TOC data can also be written by setting the power to the standby mode by pressing the power button on the remote control unit. |

• The disc recovery function is activated automatically when the single track erase or A-B erase editing operation is performed.

NOTE:
• Due to MiniDisc limitations, the recordable time may not increase with some MiniDiscs.
• This function reorganizes the contents data (TOC). It does not rewrite the audio data.

13 USING THE EXTERNAL INPUT MONITOR

* This function lets you monitor the external input data being input to the different input jacks using the output jacks



| | |
|---|--|
| 1 | Press the EJECT button to eject the MiniDisc or press the STOP button to stop playback. |
| 2 | Select the input signal to be monitored using the input select switch. |
| 3 | Press the EXT. MONITOR button. • "Ext. Monitor" is displayed and the selected input signal is output to the output jacks. • "Ext. OOKHz" is displayed when a digital input signal is selected, and "Ext. Analog" is displayed when an analog input signal is selected ("OOKHz" indicates the sampling frequency of the digital input signal). • If a digital input signal is selected, "Ext. Monitor" is displayed and the "LOCK" indicator is flashing, the digital input signal is not locked. In this case, check the connections, referring to "Connections" on Page 6. |

• To stop the external input monitor, press the external input monitor (EXT. MONITOR) again. The external input monitor is also stopped when playback is started or another operation is performed.

14 MESSAGES

Messages may appear on the display while using the DMD-1000. The meanings of these messages are explained below.

| Message | Meaning |
|----------------|---|
| TOC Reading | TOC is being read. |
| Blank Disc | Nothing is recorded on the loaded disc. |
| Complete | Editing is completed. |
| Copy Prohibit | The SCMS (Serial Copy Management System) prohibits digital copying of that source. |
| Digital Unlock | During digital recording, this indicates that signals are not being input properly due to incomplete connections of the digital input jacks, etc. |
| Disc Err # | Disc is scratched. No TOC is written on the MiniDisc or the data is defective. |
| Disc Full | There is no remaining time on the disc. There are already 255 tracks on the disc. |
| Impossible | This indicates that the editing operation is not possible. |
| No Name | This means that no title has been input. |
| No Track | The disc has a title but no tracks on it. |
| Playback Only | This appears when you try to record or edit on a disc for playback only. |
| Protected | The disc is protected against accidental erasure. |
| Name Full | 100 characters have already been input for the disc or track title. Approx. 1700 characters have already been input for the disc and track titles. |
| TrackProtected | This track cannot be edited. |
| Disc ? | Data is defective. MiniDisc does not conform to standards. |
| TOC Err # | Disc is scratched. TOC data cannot be read. MiniDisc does not conform to standards. |
| Can't REC | Proper recording was not possible due to shocks or scratched disc. |
| Temp Over | Temperature is too high. |
| Defect | Recording is interrupted due to scratched disc. |
| Mech Err # | MiniDisc is not functioning properly. |
| Not Audio | Non-audio data is recorded on the disc. |
| UTOC W Err | Proper TOC data could not be created due to scratched disc. |
| UTOC Err # | TOC data recorded on the disc is not to MiniDisc standards or cannot be read. |
| Focus Err | Disc is scratched. Player is being used in a shaky, unstable place. |

(** indicates a letter or character)

16 SYSTEM LIMITATIONS

The recording method used on MiniDisc (MD) systems is different from conventional recording methods. Because of this, there are several system limitations.
Note that the following are not malfunctions.

1. Track number limitations

- Up to 255 tracks can be recorded on blank discs or discs with no tracks on them when the tracks are recorded in order starting from track 1. If a disc has been edited repeatedly, however, it may not be possible to record 255 tracks on the disc.
- If there is an eraseless data or other signals between tracks during digital recording, this will be treated as a break within the track (the track number will not change), and recording may not be possible, regardless of the recording time or number of tracks.

2. Recording limitations

- If 255 tracks are already recorded on the disc, no further recording is possible, even if the recorded time is less than the maximum recordable time.
- Recording is performed in units of about 2 seconds. About 2 seconds of disc space is used even if the section is less than 2 seconds long. Thus, the actual recordable time becomes shorter.
- If there are scratches on the disc, recording is not possible in the scratched sections, and the recordable time decreases accordingly. ("Defect" is displayed during recording and the number of tracks on the MiniDisc is automatically increased.)
- When digitally recording CDs, depending on the recording on the CD blank sections of several seconds may be created and the number of tracks may differ from the number on the original CD.
- When the analog A.T.M. function is on and track numbers are added automatically, the track numbers may not be added properly, depending on the original recording.
- In some cases, the remaining time may not decrease when short tracks are erased. This is because sections of 12 seconds and less are ignored when displaying the remaining time on the MD.

3. Editing limitations

- In some cases it is not possible to combine short tracks created through editing.
- There may be breaks in the sound during manual search on MiniDiscs which have been recorded or edited repeatedly.

16 TROUBLESHOOTING

Check the following before assuming there is a problem with the unit.

- Are connections proper?
- Are you operating as described in these operating instructions?
- Be sure to check that the main power switch on the rear panel is turned on.

If the unit does not seem to be operating properly, check the items listed on the table below. If the cause of the problem cannot be found, this unit may be malfunctioning. Immediately turn off the power and unplug the power cord, then contact your store of purchase or your nearest Denon dealer.

| Problem | Cause | Measure | Page |
|----------------------------|--|---|---|
| Set does not operate. | <ul style="list-style-type: none"> The disc is loaded. Disc is damaged or dirty. | <ul style="list-style-type: none"> Load a disc. Replace with another disc. | 5 |
| Disc does not play. | <ul style="list-style-type: none"> Connections are wrong. Nothing is recorded on the disc ("Blank Disc" or "No Track" is displayed). | <ul style="list-style-type: none"> Check the connections. Replace with a recorded disc. | 6 25 |
| Recording is not possible. | <ul style="list-style-type: none"> Disc is protected ("Protected" is displayed). There is no remaining time on the disc ("Disc Full" is displayed). 255 tracks are already recorded on the disc ("Disc Full" is displayed). You are attempting to digitally record a digitally recorded source (See the description of the SCMS system) ("Copy Prohibit" is displayed). The input selector (INPUT SELECT) is not set properly. The INPUT LEVEL control is turned down. | <ul style="list-style-type: none"> Move the disc's accidental erasure protection tab to open the hole. Replace the disc. If there are any sections you do not need, erase them to increase the recording time. Replace the disc. If there are any tracks you do not need, erase them to increase the recording time. Use Inhibit recording. Check the recording input mode. Adjust the INPUT LEVEL control for analog recording only. | 5, 25 26 26 13, 26 13 13 |

17 MAIN SPECIFICATIONS

| | |
|------------------------------|---|
| Type: | MiniDisc digital audio system |
| Wow & flutter: | Below measurable limits (± 0.001% W, peak or less) |
| Sampling frequency: | 44.1 kHz |
| Recording method: | Magnetic modulation overwriting |
| Light source: | Semiconductor |
| Signal-to-noise Ratio: | 105 dB |
| Dynamic Range: | 98 dB |
| Power supply: | AC 120 V, 60Hz (U.S.A. & Canada models) AC 230 V, 50Hz (Europe / U.K. & Asia models) |
| Power consumption: | 20 W |
| Maximum external dimensions: | 434 (width) x 134 (height) x 340 (depth) mm (including feet, controls and terminals) |
| Weight: | 6.4 kg |
| Remote control unit: | RC-270 |
| Remote control method: | Infrared pulse |
| No. batteries: | 3x |
| Power supply: | DC 3V using two R6P (AA) batteries |
| Maximum external dimensions: | 80 (width) x 177 (height) x 18 (depth) mm (including batteries) |
| Weight: | 100 g |

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

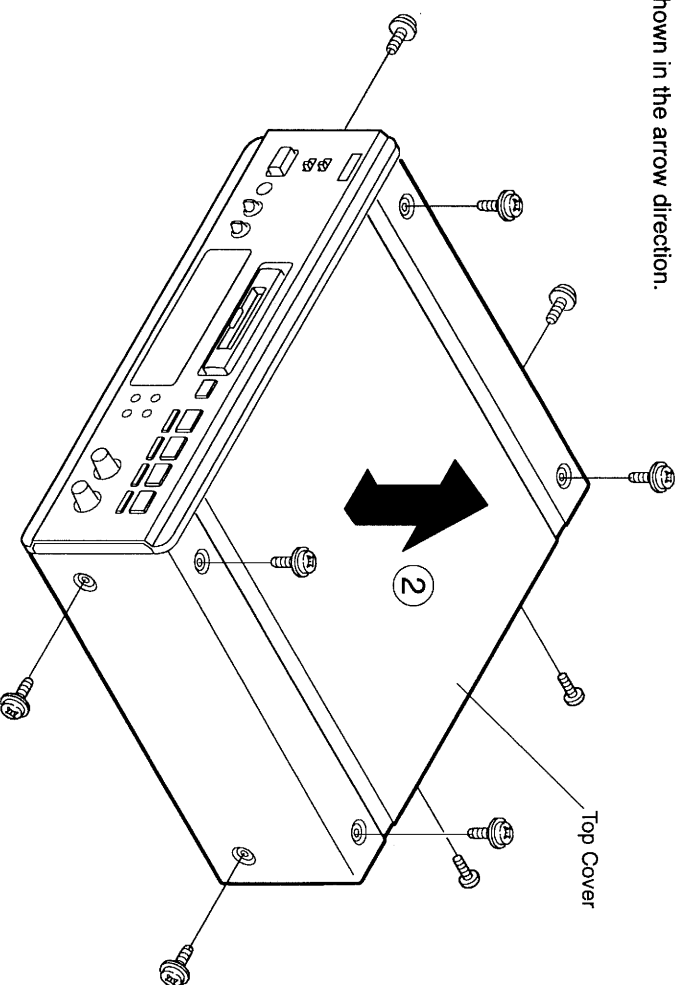
"US and foreign patents licensed from Dolby Laboratories Licensing Corporation"

DISASSEMBLY

(Follow the procedure below reverse order when reassembling)

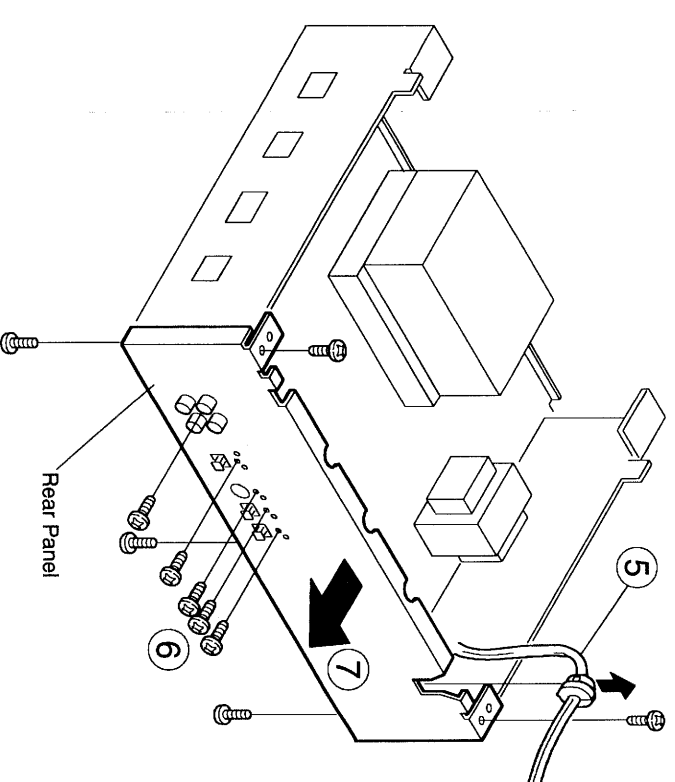
Top Cover

1. Remove 2 screws on the rear, 4 screws on both sides and 4 screws on the top.
2. Detach the Top Cover as shown in the arrow direction.



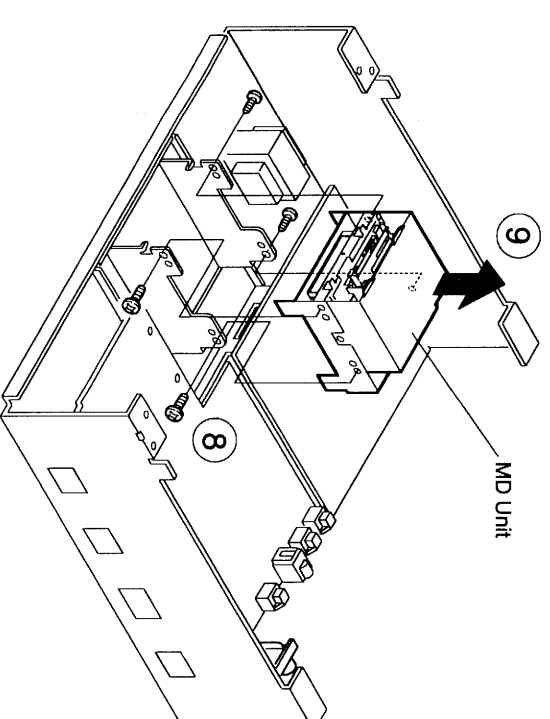
Rear Panel

5. Remove the cord bush from the Rear Panel.
6. Remove 10 screws fixing the Rear Panel.
7. Detach the Rear Panel in the arrow direction.



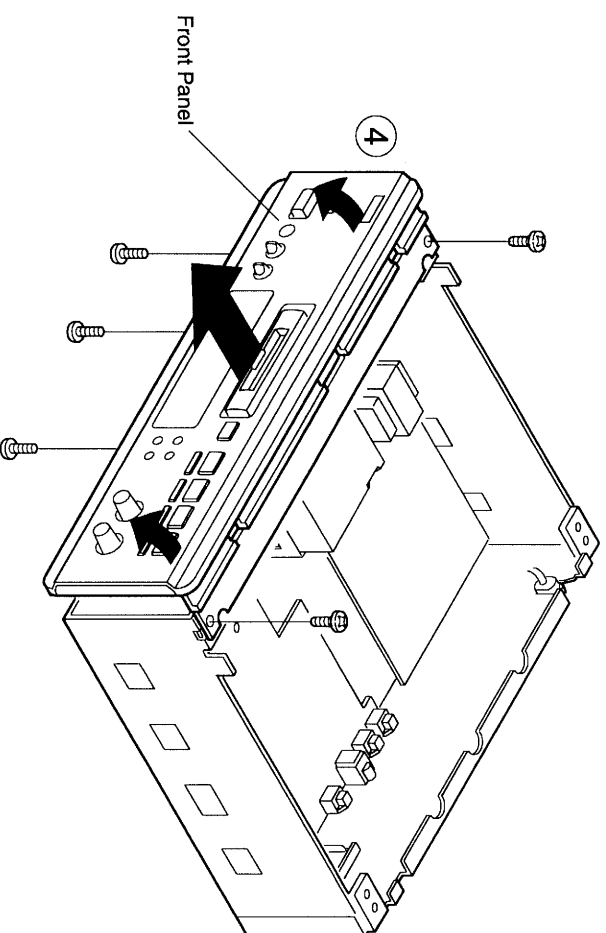
MD Unit

8. Remove 4 screws fixing the MD Unit.
9. Detach the MD Unit in the arrow direction.



Front Panel

3. Remove 2 upper screws and 3 lower screws.
4. Detach the Front Panel in the arrow direction.



ADJUSTMENT

● PREPARATION

Required Test Disc

| | Type | Test Disc |
|---|----------------------|-------------------------------------|
| 1 | High reflection disc | TGYSI (SONY) for playback |
| 2 | Low reflection disc | Mini disc for recording |
| 3 | — | Transparent disc for head alignment |

● TEST MODE

Setting the Test Mode

Load the disc 1 (high reflection disc) for playback or the disc 2 (low reflection disc). Short-circuit between J209 and J210 on the main P.W.B. in the OFF state of the power supply, then turn the power supply switch ON to indicate that the set is in the test mode as the following. Release J209 and J210 from the short-circuit after getting in the test mode.

Microcomputer version display tsm@@*# (all MD microcomputer version)

@@ : model code.
 *# : microcomputer ROM version (from 01).
 !! : EEPROM protect data version (from 01).

↓
 "LOADING"

↓
 "AUT YOBI"

Cancelling the Test Mode

Press the power supply button to OFF or pull out the AC cord from the wall socket to set in the no power, connect a resistor which is less than 10 ohm at the both ends of C146 for 15~20 sec. When the voltage at the both ends of C146 is less than 2V, turn the power supply ON again to cancel the test mode.

Note: Before turning the power supply ON again, be sure to remove the resistor.

Setting after changing the Pick-up or P.W.B. in the MD Unit

- 1) Short-circuit between the pin 8 (Protect) and 2 (Vcc) of IC1402 (EEPROM) on the P.W.B. in MD Unit.
- 2) Enter into the test mode according to the steps described in "Setting the Test Mode".
- 3) Carry out "AUTO PREPARATION MODE" and "AUTO MODE" in the test mode.
- 4) Press the CHARACTER button.
- 5) If "W. Complete" is displayed, cancel the test mode according to the steps described in "Cancelling the Test Mode". Be sure to undo the short-circuited Pin 8 and 2 of IC1402.

Outline of the Test Mode

| | |
|--------------------|--|
| 1. AUTOYOBI MODE | <ul style="list-style-type: none"> •Carries out automatic pre-adjustment. (After the adjustment, grating adjustment mode) |
| 2. AUTO MODE | <ul style="list-style-type: none"> • Carries out automatic adjustment. • Carries out continuous playback. (Error rate, measurement) |
| 3. RST YOBI MODE | <ul style="list-style-type: none"> •Displays the values of measuring, setting and calculation. •Changes setting value manually. (At the servo OFF) |
| 4. RESULT MODE | <ul style="list-style-type: none"> •Displays setting value after calculation. •Changes setting value manually. (At the servo OFF) |
| 5. MNU YOBI MODE | <ul style="list-style-type: none"> •Carries out RF manual adjustment. •Carries out ATT manual adjustment of focus and tracking signals. •Carries out off-set measurement of focus and tracking signals. |
| 6. MANUAL MODE | <ul style="list-style-type: none"> •Carries out ATT manual adjustment of focus and tracking signals. |
| 7. EEPROM_SET MODE | <ul style="list-style-type: none"> •Changes various coefficients of digital servo manually. •Sets each servo to ON respectively. •Measures temperature detecting pin voltage, and sets reference value. |

Contents of the Test Mode

1. AUTOYOBI MODE

| Operation Procedure | Display |
|---|------------|
| 1. Press the PLAY button from the STOP state of service mode to display as the light-mentioned. | _AUT YOBI_ |
| 2. Press the ENTER button to start the AUTO adjustment. | * * * : _ |
| 3. When the adjustment is NG, display as the right-mentioned. | Can't_ADJ |
| 4. When the adjustment is OK, displays as the right-mentioned. | _COMPLETE_ |
| 5. Press the STOP button to become the AUT YOBI menu state (return to item 1 state). | _AUT YOBI_ |

*** : adjustment name

2. AUTO MODE

| Operation Procedure | Display |
|--|------------|
| 1. Press the PLAY button from the STOP state of service mode to display as the light-mentioned. | _AUTO_ |
| 2. Press the ENTER button to start the AUTO adjustment. | * * * : _ |
| 3. When the adjustment is NG, display as the right-mentioned. | Can't_ADJ. |
| 4. When the adjustment is OK, displays as the right-mentioned. | _COMPLETE_ |
| 5. Press the ENTER button to become the continuative playback state when the adjustment is OK. | s□□□□c---- |
| 5(a). Continuative playback (pit portion, high reflection disc). | a□□□□c---- |
| 5(b). Continuative playback (groove portion, low reflection disc). | |
| 6. Press the EJECT button to display as item 7. | |
| 7. Continuative playback (low reflection disc only, no display changes when hi reflection disc). | a□□□□a---- |
| 8. Press the STOP button to become the AUTO menu state (return to item 1 state). | _AUTO_ |

*** : adjustment name, □□□□ : address name, ---- : C1 error

3. RST YOBI MODE

| Operation Procedure | Display |
|---|--------------|
| 1. Press the PLAY button from the STOP state of service mode to display as the right-mentioned. | _RST_YOBI_ |
| 2. Press the ENTER button to display RFG measured value. | RFG: __00__X |
| 3. Press the PLAY button to display RCG measured value. | RCG: __00__X |
| 4. Press the PLAY button to display PTG set value. | PTG: ___X |
| 5. Press the PLAY button to display GTG set value. | GTG: ___X |
| 6. Press the PLAY button to display PCH set value. | PCH: __XX |
| 7. Press the PLAY button to display GCH set value. | GCH: __XX |
| 8. Press the PLAY button to display SAG set value. | SAG: __XXX |
| 9. Press the PLAY button to display SBG set value. | SBG: __XXX |
| 10. Press the PLAY button to display SEG set value. | SEG: __XXX |
| 11. Press the PLAY button to display SFG set value. | SFG: __XXX |
| 12. Press the PLAY button to display HA0 set value. | HA0:000__ |
| 13. Press the PLAY button to display HB0 set value. | HB0:000__ |
| 14. Press the PLAY button to display HE0 set value. | HE0:000__ |
| 15. Press the PLAY button to display HF0 set value. | HF0:000__ |
| 16. Press the PLAY button to display LA0 set value. | LA0:000__ |
| 17. Press the PLAY button to display LB0 set value. | LB0:000__ |
| 18. Press the PLAY button to display LE0 set value. | LE0:000__ |
| 19. Press the PLAY button to display LF0 set value. | LF0:000__ |
| 20. Press the PLAY button to display TC0 set value. | TC0:000__ |
| 21. Press the PLAY button to display YOB (sequence No. of adjust error display). | YOB: \$\$__ |
| 22. Press the PLAY button to display DIF (adjusting state display). | DIF: \$\$__ |
| 23. Press the PLAY button to display ADJ (pre-adjust unfinish/00 or finish/4B). | ADJ: \$\$__ |
| 24. Press the STOP button to become the RST YOBI menu state (return to item 1 state). | _RST_YOBI_ |

0 : measured value, X : set value, \$: various data

Change the set value with the Automatic Search key while the set value displayed.

4. RESULT MODE

| Operation Procedure | Display |
|---|------------|
| 1. Press the PLAY button from the STOP state of service mode to display as the right-mentioned. | __RESULT__ |
| 2. Press the ENTER button to display HAG measured value. | HAG: __XXX |
| 3. Press the PLAY button to display HBG measured value. | HBG: __XXX |
| 4. Press the PLAY button to display LAG set value. | LAG: __XXX |
| 5. Press the PLAY button to display LBG set value. | LBG: __XXX |
| 6. Press the PLAY button to display PEG set value. | PEG: __XXX |
| 7. Press the PLAY button to display PFG set value. | PFG: __XXX |
| 8. Press the PLAY button to display GEG set value. | GEG: __XXX |
| 9. Press the PLAY button to display GFG set value. | GFG: __XXX |
| 10. Press the PLAY button to display GCG set value. | GCG: __XXX |
| 11. Press the STOP button to become the RESULT menu state (return to item 1 state). | __RESULT__ |

X : set value

Change the set value with the Automatic Search key while the set value displayed.

5. MNU YOBI MODE

| Operation Procedure | Display |
|--|---------------|
| 1. Press the PLAY button from the STOP state of service mode to indicate as the right-mentioned. | _MNU_YOBI_ |
| 2. Press the ENTER button to display TEMP measured value. | TEMP: 00__ |
| 3. Press the PLAY button to display HA0 temporarily measured value (A signal off-set). | HA0: 000__ |
| 4. Press the PLAY button to display HB0 temporarily measured value (B signal off-set). | HB0: 000__ |
| 5. Press the PLAY button to display HE0 temporarily measured value (E signal off-set). | HE0: 000__ |
| 6. Press the PLAY button to display HF0 temporarily measured value (F signal off-set). | HF0: 000__ |
| 7. Press the PLAY button to turn on Laser and to indicate the right-mentioned. | LON: _____ |
| 8. Press the PLAY button to set RFg coarsely (RF side FG). | RFg:000__X |
| 9. Press the PLAY button to set SAg coarsely (Focus ATT/A signal). | SAg:000\$\$\$ |
| 10. Press the PLAY button to set SBg coarsely (Focus ATT/B signal). | SBg:000\$\$\$ |
| 11. Press the PLAY button to adjust PTG (RF side pit portion TG). | PTG:000__X |
| 12. Press the PLAY button to set PCH (pit portion COUT level). | PCH:000__\$ |
| 13. Press the PLAY button to adjust GTG (RF side groove portion TG). | GTG:000__X |
| 14. Press the PLAY button to set GCH (groove portion COUT level). | GCH:000__\$ |
| 15. Press the PLAY button to adjust RCG (RF side TCRS). | RCG:000__X |
| 16. Press the PLAY button to set SEG (Tracking ATT/A signal). | SEG:000\$\$\$ |
| 17. Press the PLAY button to set SFG (Tracking ATT/B signal). | SFG:000\$\$\$ |
| 18. Press the PLAY button to display gMI measured value (Tracking EFMIO). | Gml:000__ |
| 19. Press the PLAY button to adjust RFG (RF side pit portion FG). | RFG:000__X |
| 20. Press the PLAY button to set SAG (Focus ATT/A signal). | SAG:000\$\$\$ |
| 21. Press the PLAY button to set SBG (Focus ATT/B signal). | SBG:000\$\$\$ |
| 22. Press the PLAY button to display HA0 measured value (A signal off-set). | HA0:000__ |
| 23. Press the PLAY button to display HB0 measured value (B signal off-set). | HB0:000__ |
| 24. Press the PLAY button to display HE0 measured value (E signal off-set). | HE0:000__ |
| 25. Press the PLAY button to display HF0 measured value (F signal off-set). | HF0:000__ |
| 26. Press the PLAY button to display TC0 measured value (TRCS signal off-set). | TC0:000__ |
| 27. Press the PLAY button to display LA0 measured value (A signal off-set). | LA0:000__ |
| 28. Press the PLAY button to display LB0 measured value (B signal off-set). | LB0:000__ |
| 29. Press the PLAY button to display LE0 measured value (E signal off-set). | LE0:000__ |
| 30. Press the PLAY button to display LF0 measured value (F signal off-set). | LF0:000__ |
| 31. Press the STOP button to become MNU YOBI menu state (return to item 1 state). | _MNU_YOBI_ |

0 : measured value, X : set value, \$: calculated value

Change the set value with the Automatic Search key while the set value displayed.

※ When ☆ mark appeared after the set value (8th character), it indicates that the adjusted value comes within an allowable range.

6. MANUAL MODE

6-1. Low reflection disc

| Operation Procedure | Display |
|--|---------------|
| 1. Press the PLAY button from the STOP state of service mode to indicate as the right-mentioned. | _MNU_AJST_ |
| 2. Press the ENTER button to display TEMP measured value. | TMP:_00__ |
| 3. Press the PLAY button to light laser and display as the right-mentioned. | LON:_____ |
| 4. Press the PLAY button to set PEG (Tracking ATT/E signal). | PEG:000__ |
| 5. Press the PLAY button to set PFG (Tracking ATT/F signal). | PFG:000__ |
| 6. Press the PLAY button to display PMI measured value (Tracking EFMIO). | PMI:000__ |
| 7. Press the PLAY button to set LAg (Focus ATT/A signal). | LAg:000__ |
| 8. Press the PLAY button to set LBg (Focus ATT/B signal). | LBg:_____ |
| 9. Press the PLAY button to set GCG (Track cross). | GCG:000_X |
| 10. Press the PLAY button to set GEG (Tracking ATT/E signal). | GEG:000\$\$\$ |
| 11. Press the PLAY button to set GFG (Tracking ATT/F signal). | GFG:000\$\$\$ |
| 12. Press the PLAY button to display GMI measured value (Tracking EFMIO). | GMI:000_\$\$ |
| 13. Press the PLAY button to set LAG (Focus ATT/A signal). | LAG:000_\$\$ |
| 14. Press the PLAY button to set LBG (Focus ATT/B signal). | LBG:000_X |
| 15. Press the STOP button to become the MNU AJST menu state (return to item 1 state). | _MNU_AJST_ |

0 : measured value, X : set value, \$: calculated value

Change the set value with the Automatic Search key while the set value displayed.

6-2. Low reflection disc

| Operation Procedure | Display |
|--|------------|
| 1. Press the PLAY button from the STOP state of service mode to indicate as the right-mentioned. | _MNU_AJST_ |
| 2. Press the ENTER button to display TEMP measured value. | TMP:_00__ |
| 3. Press the PLAY button to light laser and display as the right-mentioned. | LON:_____ |
| 4. Press the PLAY button to set PEG (Tracking ATT/E signal). | PEG:000XXX |
| 5. Press the PLAY button to set PFG (Tracking ATT/F signal). | PFG:000XXX |
| 6. Press the PLAY button to display PMI measured value (Tracking EFMIO). | PMI:000__ |
| 7. Press the PLAY button to set HAG (Focus ATT/A signal). | HAG:000XXX |
| 8. Press the PLAY button to set HBG (Focus ATT/B signal). | HBG:000XXX |
| 9. Press the STOP button to become the MNU AJST menu state (return to item 1 state). | _MNU_AJST_ |

0 : measured value, X : set value, \$: calculated value

Change the set value with the Automatic Search key while the set value displayed.

7. EEPROM_SET MODE

(a) Setting the Focus

| Operation Procedure | Display |
|---|-------------|
| 1. Press the PLAY button from the STOP state of service mode to display as the right-mentioned. | EEPROM_SET |
| 2. Press the ENTER button to become the focus setting menu state. | __Focus__ |
| 3. Press the ENTER button to become the FG setting state. | FG__\$ |
| 4. Press the PLAY button to become the FF1 setting state. | FF1__\$ |
| 5. Press the PLAY button to become the FF2 setting state. | FF2__\$ |
| 6. Press the PLAY button to become the FZHLEV setting state. | FZHLEV__\$ |
| 7. Press the PLAY button to become the FOKLEVn setting state. | FOKLEVn__\$ |
| 8. Press the PLAY button to become the FOKLEVf setting state. | FOKLEVf__\$ |
| 9. Press the PLAY button to become the FOKLPFn setting state. | FOKLPFn__\$ |
| 10. Press the PLAY button to become the FOKLPFf setting state. | FOKLPFf__\$ |
| 11. Press the PLAY button to become the WAITf setting state. | WAITf__\$ |
| 12. Press the STOP button to become the FOCUS setting menu state (return to item 2 state). | __Focus__ |

0 : measured value, X : set value, \$: calculated value

Change the set value with the Automatic Search key while the set value displayed.

(b) Setting the Spindle

| Operation Procedure | Display |
|---|-------------|
| 1. Press the PLAY button from the STOP state of service mode to display as the right-mentioned. | EEPROM_SET |
| 2. Press the ENTER button to become the focus setting menu state. | __Focus__ |
| 3. Press the PLAY button to display as the right-mentioned. | __spindle__ |
| 4. Press the ENTER button to become the SPG setting state. | SPG__\$ |
| 5. Press the PLAY button to become the SPG in setting state. | SPG_in__\$ |
| 6. Press the PLAY button to become the SPG mid setting state. | SPG_mid__\$ |
| 7. Press the PLAY button to become the SPG out setting state. | SPG_out__\$ |
| 8. Press the PLAT button to become the SP1 setting state. | SP1__\$ |
| 9. Press the PLAT button to become the SP2 setting state. | SP2__\$ |
| 10. Press the PLAY button to become the SP3 setting state. | SP3__\$ |
| 11. Press the PLAY button to become the SP4 setting state. | SP4__\$ |
| 12. Press the PLAY button to become the SP5 setting state. | SP5__\$ |
| 13. Press the STOP button to become the spindle setting menu state (return to item 3 state). | __spindle__ |

Change the set value with the Automatic Search key while the set value displayed.

(c) Setting the Tracking

| Operation Procedure | Display |
|---|--------------|
| 1. Press the PLAY button from the STOP state of service mode to display as the right-mentioned. | EEPROM_SET |
| 2. Press the ENTER button to become the focus setting menu state. | __Focus__ |
| 3. Press the PLAY button to display as the right-mentioned. | __Tracking__ |
| 4. Press the ENTER button to become the TG setting state. | TG__\$ |
| 5. Press the PLAY button to become the TF1 setting state. | TF1__\$ |
| 6. Press the PLAY button to become the TF2 setting state. | TF2__\$ |
| 7. Press the PLAY button to become the TRBLVo setting state. | TRBLVo__\$ |
| 8. Press the PLAY button to become the TRBLVt setting state. | TRBLVt__\$ |
| 9. Press the PLAY button to become the TRKLVo setting state. | TRKLVo__\$ |
| 10. Press the PLAY button to become the TRKLVt setting state. | TRKLVt__\$ |
| 11. Press the PLAY button to become the TDPWo setting state. | TDPWo__\$ |
| 12. Press the PLAY button to become the TDPWt setting state. | TDPWt__\$ |
| 13. Press the PLAY button to become the SLCTo setting state. | SLCTo__\$ |
| 14. Press the PLAY button to become the SLCTt setting state. | SLCTt__\$ |
| 15. Press the PLAY button to become the SLCTm setting state. | SLCTm__\$ |
| 16. Press the PLAY button to become the SVCNT4 setting state. | SVCNT4__\$ |
| 17. Press the PLAY button to become the TCRSC1P setting state. | TCRSC1P__\$ |
| 18. Press the PLAY button to become the COTLVp setting state. | COTLVp__\$ |
| 19. Press the PLAY button to become the COTLVr setting state. | COTLVr__\$ |
| 20. Press the STOP button to become the Tracking setting menu state (return to item 3 state). | __Tracking__ |

\$:set value

Change the set value with the Automatic Search key while the set value displayed.

(d) Setting the Slide

| Operation Procedure | Display |
|---|------------|
| 1. Press the PLAY button from the STOP state of service mode to display as the right-mentioned. | EEPROM_SET |
| 2. Press the ENTER button to become the focus setting menu state. | __Focus__ |
| 3. Press the PLAY button to display as the right-mentioned. | __Sled__ |
| 4. Press the ENTER button to become the SLG setting state. | SLG__\$ |
| 5. Press the PLAY button to become the SL2 setting state. | SL2__\$ |
| 6. Press the PLAY button to become the SLDLIM setting state. | SLDLIM__\$ |
| 7. Press the PLAY button to become the SLKLEV setting state. | SLKLEV__\$ |
| 8. Press the PLAY button to become the SLKLVk setting state. | SLKLVk__\$ |
| 9. Press the PLAY button to become the SLKLVt setting state. | SLKLVt__\$ |
| 10. Press the PLAY button to become the SLKLVm setting state. | SLKLVm__\$ |
| 11. Press the PLAY button to become the Slide setting menu state (return to item 3 stste). | __Sled__ |

\$:set value

Change the set value with the Automatic Search key while the set value displayed.

(e) Setting the TEMP

| Operation Procedure | Display |
|---|--------------|
| 1. Press the PLAY button from the STOP state of service mode to display as the right-mentioned. | EEPROM_SET |
| 2. Press the ENTER button to become the focus setting menu state. | __Focus__ |
| 3. Press the PLAY button to display as the right-mentioned. | __Temp__ |
| 4. Press the ENTER button to become the TEMP setting state. | TEMP_00_\$\$ |
| 5. Press the STOP button to become the TEMP setting menu state (return to item 3 state). | __Temp__ |

0:measured value, \$:set value

Change the set value with the Automatic Search key while the set value displayed.

(f) Setting the Control

| Operation Procedure | Display |
|---|-------------|
| 1. Press the PLAY button from the STOP state of service mode to display as the right-mentioned. | EEPROM_SET |
| 2. Press the ENTER button to become the focus setting menu state. | __Focus__ |
| 3. Press the PLAY button to display as the right-mentioned. | __Control__ |
| 4. Press the ENTER button to become the CONTROL1 setting state. | CONTROL1_XX |
| 5. Press the PLAY button to become the CONTROL2 setting state. | CONTROL2_XX |
| 6. Press the PLAY button to become the SPKLEVm setting state. | SPKLEVm_XX |
| 7. Press the PLAY button to become the ADJTTM setting state. | ADJTTM_XX |
| 8. Press the PLAY button to become the HDEQAD setting state. | HDEQAD_XX |
| 9. Press the PLAY button to become the LDEQAD setting state. | LDEQAD_XX |
| 10. Press the PLAY button to become the GDEQAD setting state. | GDEQAD_XX |
| 11. Press the PLAY button to become the HDEQBC setting state. | HDEQBC_XX |
| 12. Press the PLAY button to become the LDEQBC setting state. | LDEQBC_XX |
| 13. Press the PLAY button to become the GDEQBC setting state. | GDEQBC_XX |
| 14. Press the PLAY button to become the HALSG setting state. | HALSG_XX |
| 15. Press the PLAY button to become the LALSG setting state. | LALSG_XX |
| 16. Press the PLAY button to become the GALSG setting state. | GALSG_XX |
| 17. Press the PLAY button to become the HALSOFS setting state. | HALSOFS_XX |
| 18. Press the PLAY button to become the LALSOFS setting state. | LALSOFS_XX |
| 19. Press the PLAY button to become the GALSOFS setting state. | GALSOFS_XX |
| 20. Press the STOP button to become the CONTROL setting menu state (return to item 3 state). | __CONTROL__ |

X:set value

Change the set value with the Automatic Search key while the set value displayed.

(g) Setting the ADJSET

| Operation Procedure | Display |
|---|------------|
| 1. Press the PLAY button from the STOP state of service mode to display as the right-mentioned. | EEPROM_SET |
| 2. Press the ENTER button to become the focus setting menu state. | __Focus__ |
| 3. Press the PLAY button to become the ADJSET setting menu state. | __ADJSET__ |
| 4. Press the ENTER button to become the COK setting state. | COK_XX |
| 5. Press the PLAY button to become the FAT setting state. | FAT_XX |
| 6. Press the PLAY button to become the TAT setting state. | TAT_XX |
| 7. Press the PLAY button to become the CAT setting state. | CAT_XX |
| 8. Press the PLAY button to become the FAB setting state. | FAB_XX |
| 9. Press the PLAY button to become the STR setting state. | STR_XX |
| 10. Press the PLAY button to become the SFS setting state. | SFS_XX |
| 11. Press the PLAY button to become the STC setting state. | STC_XX |
| 12. Press the STOP button to become the ADJSET setting menu state (return to item 3 state). | __ADJSET__ |

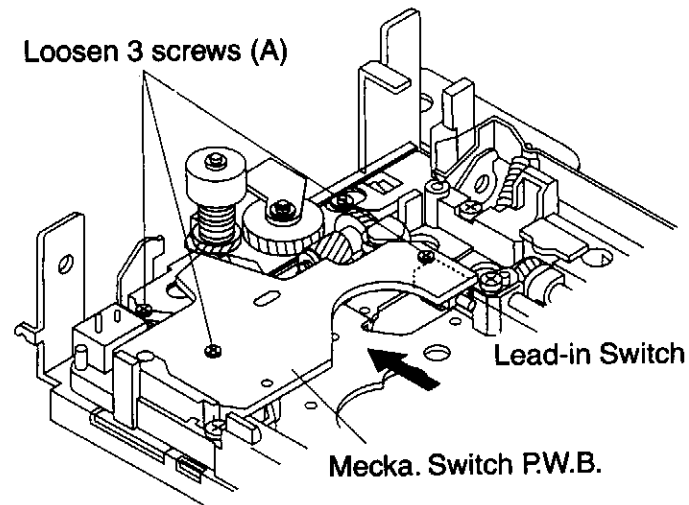
X:set value

Change the set value with the Automatic Search key while the set value displayed.

LEAD-IN SWITCH POSITION MEASUREMENT MODE (with Test Disc1)

Measuring with the high reflection disc (Make sure when changing the Mecha. Switch P.W.B.)

| Step No. | Setting | Remarks | Display | Display |
|----------|------------------------|--|------------------------------------|--------------|
| Step 1 | Start test mode | Servo OFF (Power ON) | AUTO | AUTO |
| Step 2 | Push PAUSE button once | | No operation with recording discs. | INNER |
| Step 3 | Push PLAY button once | Displays sub-code cluster value of the Lead-in Switch. | | 『s□□□□c△△△△』 |



NOTE: Adjust the Lead-in Switch position to SUBQ FF85~FFD2.

1. Loosen 3 screws (A) fixing the Mecha. Switch P.W.B.

2. After tightening the screws with pushing the Mecha. Switch P.W.B. in the arrow direction, measure the Lead-in Switch position again. Fix by the 3 screws (A) after the position adjustment. (See Fig below)

Measuring with the high reflection disc(Make sure when changing the Mecha. Switch P.W.B)

● MAGNETIC HEAD MOUNTING POSITION

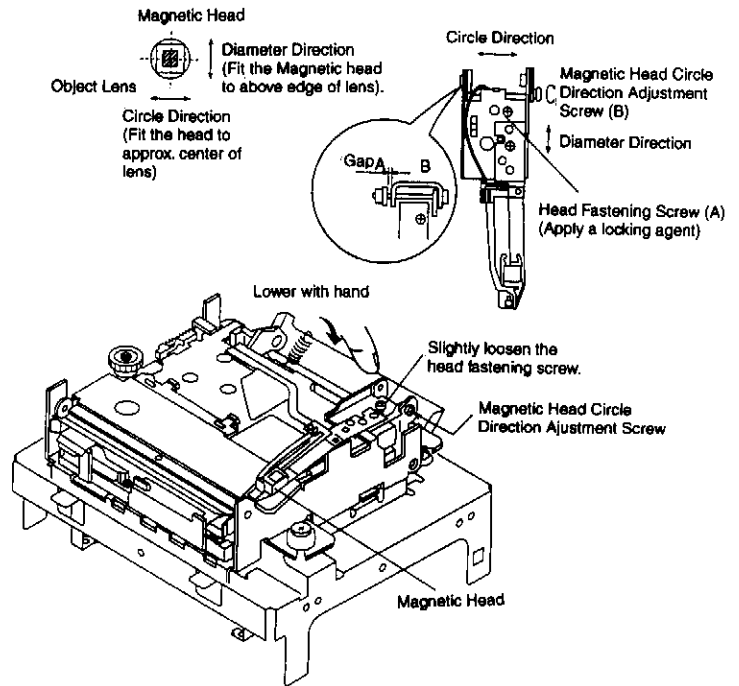
- * Be sure to adjust the mounting position whenever the magnetic head or optical pick-up is replaced.
- * In order easier to perform the mounting position adjustment, place the optical pick-up in the center position.

1. Set the transparent disc (Test disc 3).
2. Lower the magnetic head up-shift arm manually to lift the magnetic head.
3. View the unit from the above to confirm that the object lens of pick-up coincides with the magnetic head.

Diameter direction: Slightly loosen the head fastening screw (A) and slide the head fixture to diameter direction so as the head coincides within the object lens of pick-up.

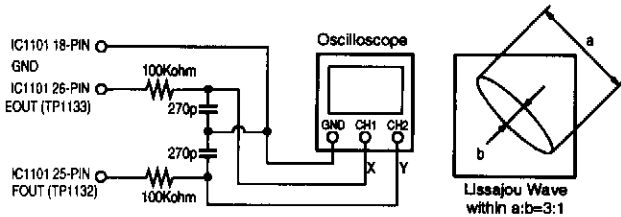
Circle direction: Adjust the head circle direction adjustment screw (B) to fit the head within the object lens.

4. Confirm a gap as in figure and ascertain the head that is moving smoothly.
5. After complete adjustment, apply a screw locking agent on head fastening screw (A) and adjusted head circle direction screw (B).



● MECHANISM ADJUSTMENT

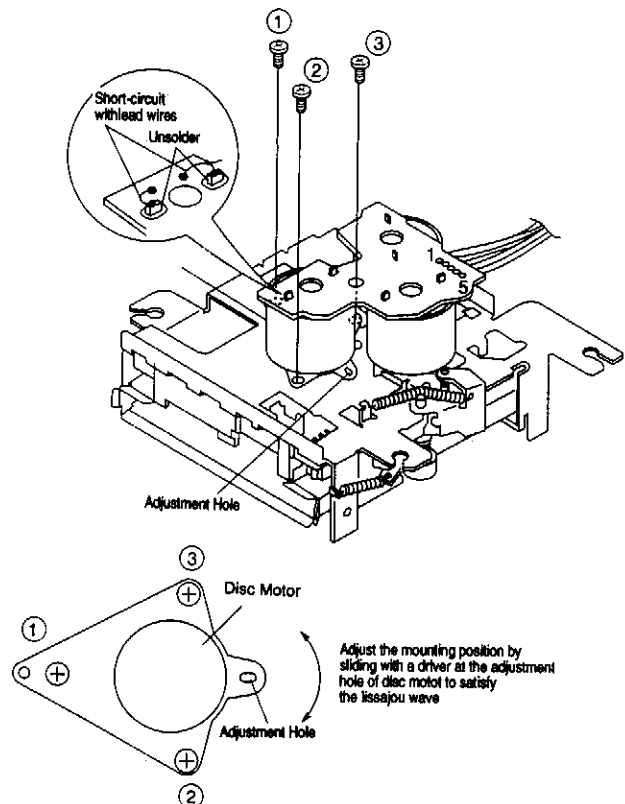
Checking the Optical Pick-up Grating

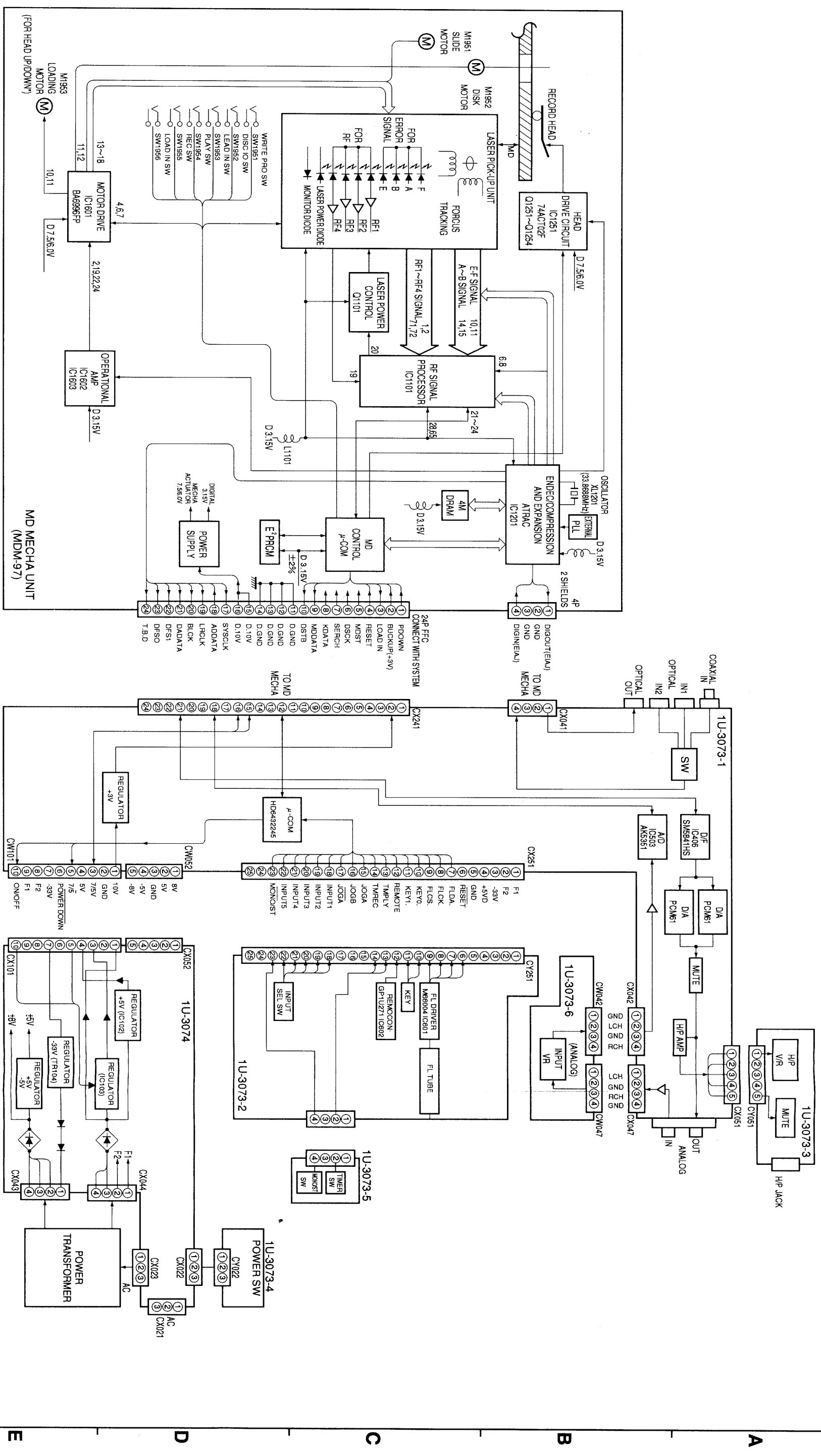


Measuring method of the optical pick-up grating slippage

Adjust the Lissajou wave (X-Y) of EOUT against to FOUT after executing AUTO adjustment in the AUTO mode of test mode with the high reflection disc (displays COMPLETE).

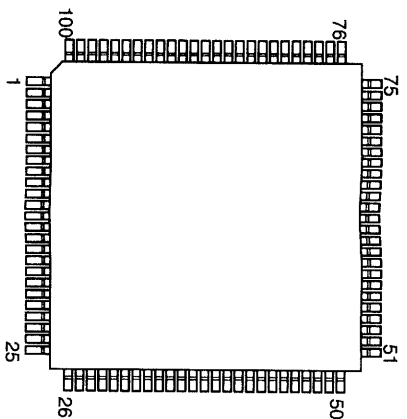
1. Unsolder 2 positions on the disc motor P.W.B., short-circuit with lead wire as shown in the figure between the motor terminal and P.W.B., loosen 3 screws slightly and adjust while observing the Lissajou wave.
2. When completed, tighten these screws in the order of number 1, 2, 3.





SEMICONDUCTORS

● IC's
HD6432245F10 (IC201)



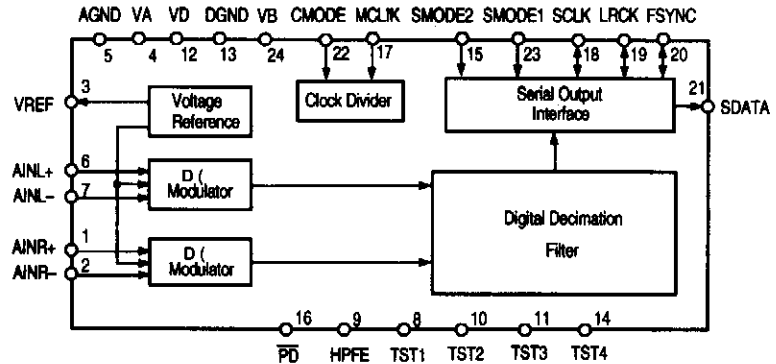
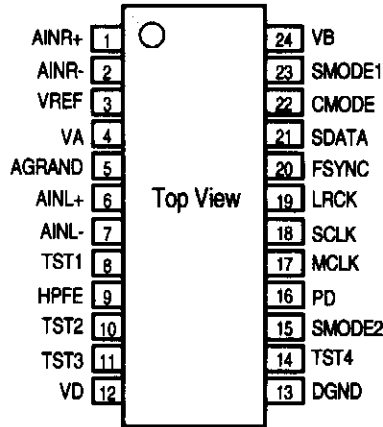
HD6432245F10 Terminal Function

| Pin No. | Name | Symbol | I/O | Typ | Rst | Ini | Act | Ext | Function |
|---------|-------------------|-----------|-----|-----|-----|-----|-----|-------|---|
| 1 | P127/TIOCC0/TCLKA | MONO/ST | I | B | HZ | — | — | P. UP | Recording monaural / stereo switching input pin. |
| 2 | P137/TIOCD0/TCLKB | INPUT 1 | I | B | HZ | — | — | P. UP | Input signal switching input pin. |
| 3 | P147/TIOCA1 | INPUT 2 | I | B | HZ | — | — | P. UP | Input signal switching input pin. |
| 4 | P157/TIOCB1/TCLKC | INPUT 3 | I | B | HZ | — | — | P. UP | Input signal switching input pin. |
| 5 | P167/TIOCA2 | INPUT 4 | I | B | HZ | — | — | P. UP | Input signal switching input pin. |
| 6 | P177/TIOCB2/TCLKD | INPUT 5 | I | B | HZ | — | — | P. UP | Input signal switching input pin. |
| 7 | Vss | Vss | — | — | — | — | — | — | GND connection (GND for system). |
| 8 | P30/TXD0 | KDATA | O | B | HZ | L | — | P. UP | Serial communication data output pin (communication with drive μ-com). |
| 9 | P31/TXD1 | DA | I/O | B | HZ | H | — | P. UP | Data In/out pin for signal processing LSI. |
| 10 | P32/RXD0 | MDDATA | I | B | HZ | L | — | P. UP | Serial communication data input pin (communication with drive μ-com). |
| 11 | P33/RXD1 | LD | I | B | HZ | H | — | P. UP | Latch enable output pin for signal processing LSI. |
| 12 | P34/CSK0/IRQ4 | DSCK | O | B | HZ | L | — | P. UP | Serial communication clock signal output pin (communication with drive μ-com). |
| 13 | P34/CSK1/IRQ5 | CL | O | B | HZ | H | — | P. UP | Clock output pin for signal processing LSI. |
| 14 | PE0 | DSTB | I | B | HZ | L | — | P. UP | Serial communication request signal input pin (communication with drive μ-com). |
| 15 | PE1 | DFSO | I | B | HZ | L | — | P. UP | Emphasis input pin. |
| 16 | PE2 | DFSI | I | B | HZ | L | — | P. UP | Emphasis input pin. |
| 17 | PE3 | MD RESET | O | B | HZ | H | L | P. UP | Reset signal output pin for MD Mecha. |
| 18 | Vss | Vss | — | — | — | — | — | — | GND connection. (GND for system) |
| 19 | PE4 | MD ON | O | B | HZ | L | — | P. UP | Power ON/OFF switching signal output pin for MD Mecha. |
| 20 | PE5 | LOAD IN | I | B | HZ | L | H | P. UP | Disc loading state signal input. (Disc loaded : H) |
| 21 | PE6 | P. DOWN | O | B | HZ | H | L | P. UP | Back-up process direct pin. |
| 22 | PE7 | O/C OUT | O | B | HZ | L | — | P. UP | Optical/Coaxial input switching output pin. (OPT-1: L, COAX: H) |
| 23 | PD0 | OPT 1/2 | O | B | HZ | L | — | P. UP | Optical input 1/2 switching output pin. (OPT-1: H, OPT-2: L) |
| 24 | PD1 | D. OUT | O | B | HZ | H | — | P. UP | D. OUT MUTE signal output pin. (H : ON) |
| 25 | PD2 | B.S.S | O | B | HZ | L | — | P. UP | Back-up volt detect ON/OFF signal output pin. (H : +3V, L : None) |
| 26 | PD3 | 3V ON/OFF | O | B | HZ | L | H | P. UP | 3V ON/OFF switching signal output pin. (H : +3V, L : None) |
| 27 | PD4 | TV/5V OUT | O | B | HZ | L | — | — | MD Mecha power voltage switching output pin. |
| 28 | PD5 | NC | O | B | HZ | L | — | — | OPEN Not used. |
| 29 | PD6 | NC | O | B | HZ | L | — | — | OPEN Not used. |
| 30 | PD7 | NC | O | B | HZ | L | — | — | OPEN Not used. |
| 31 | Vss | Vss | — | — | — | — | — | — | GND connection. (GND for system) |
| 32 | PC0 | LOCK | I | B | HZ | L | H | P. UP | Digital clock state detect signal input pin. |
| 33 | PC1 | MU | I | B | HZ | L | H | P. UP | Mute signal input pin. |
| 34 | PC2 | CTG1 | O | B | HZ | — | — | P. UP | Data output pin for digital signal encode. |
| 35 | PC3 | CTG2 | O | B | HZ | L | H | P. UP | Clock output pin for digital signal encode. |
| 36 | PC4 | CTG3 | O | B | HZ | L | H | P. UP | Latch enable output pin for digital signal encode. |
| 37 | PC5 | LBIT | O | B | HZ | L | H | P. UP | Copyright data output pin. |
| 38 | PC6 | MLEN | O | B | HZ | — | — | P. UP | Latch enable output pin for SM5845 mode switching. |
| 39 | PC7 | MCLK | O | B | HZ | — | — | P. UP | Clock output pin for SM5845 mode switching. |
| 40 | Vcc | Vcc | — | — | — | — | — | — | +5V connection. (Power for system) |
| 41 | PB0 | MDATA | O | B | HZ | — | — | P. UP | Data output pin for SM5845 mode switching. |

| Pin No. | Name | Symbol | I/O | Typ | Rst | Ini | Act | Ext | Function |
|---------|----------------|-----------|-----|-----|-----|-----|-----|-------|---|
| 42 | PB1 | EMPHA OUT | O | B | HZ | L | H | P. UP | Emphasis switching signal output pin. |
| 43 | PB2 | ADRST | O | B | HZ | L | H | P. UP | Reset signal output pin for A/D · D/F. |
| 44 | PB3 | AMUTE | O | B | HZ | L | H | P. UP | Mute signal output pin. |
| 45 | PB4 | NC | O | B | HZ | L | — | — | OPEN Not used. |
| 46 | PB5 | NC | O | B | HZ | L | — | — | OPEN Not used. |
| 47 | PB6 | NC | O | B | HZ | L | — | — | OPEN Not used. |
| 48 | PB7 | NC | O | B | HZ | L | — | — | OPEN Not used. |
| 49 | Vss | Vss | — | — | — | — | — | — | GND connection. (GND for system) |
| 50 | PA0 | OP1 | I | B | HZ | — | — | — | Character switching input pin. |
| 51 | PA1 | OP2 | I | B | HZ | — | — | — | Model switching input pin. |
| 52 | PA1 | SERVICE | I | B | HZ | — | — | — | Service mode setting pin. (L : Service mode) |
| 53 | PA3 | NC | O | B | HZ | L | — | — | Not used. |
| 54 | P50/TXD2 | FLDA | O | B | HZ | H | — | P. UP | Data output pin for controlling FL display. |
| 55 | P51/RXD2 | FLCS | O | B | HZ | H | L | P. UP | Chip select output pin for controlling FL display. |
| 56 | P52/SCK2 | FLOK | O | B | HZ | H | — | P. UP | Clock output pin for controlling FL display. |
| 57 | MDO | MDO | I | A | HZ | L | H | P. UP | +5V connection. |
| 58 | MD1 | MD1 | I | A | HZ | L | H | P. UP | +5V connection. |
| 59 | P53 | NC | O | B | HZ | L | — | — | OPEN Not used. |
| 60 | WDTOVF | WDTOVF | O | B | HZ | H | L | — | OPEN Not used. |
| 61 | MD2 | MD2 | I | A | HZ | L | H | P. UP | +5V connection. |
| 62 | RES | RESET | I | A | HZ | H | L | — | Reset signal input pin. |
| 63 | NMI | NMI | I | A | HZ | — | — | P. UP | +5V connection. |
| 64 | STBY | STBY | I | A | HZ | — | — | P. UP | +5V connection. |
| 65 | Vcc | Vcc | — | — | — | — | — | — | +5V connection. (Power for system) |
| 66 | XTAL | OSC1 | I | A | — | — | — | — | Ceramic oscillator pin. |
| 67 | EXTAL | OSC2 | I | A | — | — | — | — | Ceramic oscillator pin. |
| 68 | Vss | Vss | — | — | — | — | — | — | GND connection. (GND for system) |
| 69 | PF7/φ | NC | O | B | HZ | L | — | — | OPEN Not used. |
| 70 | PF6 | NC | O | B | HZ | L | — | — | OPEN Not used. |
| 71 | PF5 | NC | O | B | HZ | L | — | — | OPEN Not used. |
| 72 | PF4 | JOGB | I | B | HZ | — | — | P. UP | Jog B terminal pulse input pin. |
| 73 | PF3/IRQ3 | JOGA | I | A | HZ | — | — | P. UP | Jog A terminal pulse input pin. |
| 74 | PF2/IRQ2 | P. IN | I | A | HZ | — | ↑ | P. UP | Power watch signal input pin. (H : P.ON, L : P.OFF) |
| 75 | PF1/IRQ1 | REMOTE | I | A | HZ | — | ↑ | P. UP | Remote control signal input pin. |
| 76 | PF0/IRQ0 | NC | O | B | — | — | — | — | OPEN Not used. |
| 77 | AVcc | AVcc | — | — | — | — | — | — | +5V connection. (Power for system) |
| 78 | Vref | VREF | — | — | — | — | — | — | +5V connection. (Power for system) |
| 79 | P40/ANO | KEY0 | I | B | HZ | — | — | P. UP | Key input signal pin. |
| 80 | P41/AN1 | KEY1 | I | B | HZ | — | — | P. UP | Key input signal pin. |
| 81 | P42/AN2 | ATT LEVEL | I | B | HZ | — | — | P. UP | Input pin for digital ATT control. |
| 82 | P43/AN3 | P. LEVEL | I | B | HZ | — | — | P. UP | +3V signal input pin. |
| 83 | AVss | AVss | — | — | — | — | — | — | GND connection. (GND for system) |
| 84 | Vss | Vss | — | — | — | — | — | — | GND connection. (GND for system) |
| 85 | P20 | NC | O | B | HZ | L | — | — | OPEN Not used. |
| 86 | P21 | NC | O | B | HZ | L | — | — | OPEN Not used. |
| 87 | P22/TMR10 | NC | O | B | HZ | L | — | — | OPEN Not used. |
| 88 | P23/TMC10 | NC | O | B | HZ | L | — | — | OPEN Not used. |
| 89 | P24/TMR11 | NC | O | B | HZ | L | — | — | OPEN Not used. |
| 90 | P25/TMC11 | NC | O | B | HZ | L | — | — | OPEN Not used. |
| 91 | P26/TMO0 | NC | O | B | HZ | L | — | — | OPEN Not used. |
| 92 | P27/TMO1 | NC | O | B | HZ | L | — | — | OPEN Not used. |
| 93 | PG0/ADTRG/IRQ6 | JOGA | I | A | HZ | — | — | P. UP | Jog A terminal pulse inversion input pin. |
| 94 | PG1/IRQ7 | NC | O | B | HZ | L | — | — | OPEN Not used. |
| 95 | PG2 | NC | O | B | HZ | L | — | — | OPEN Not used. |
| 96 | PG3 | NC | O | B | HZ | L | — | — | OPEN Not used. |
| 97 | PG4 | NC | O | B | HZ | L | — | — | OPEN Not used. |
| 98 | Vcc | Vcc | — | — | — | — | — | — | +5V connection. (Power for system) |
| 99 | P10/TIOCA0 | TMREC | I | B | HZ | — | — | P. UP | Timer REC input pin. |
| 100 | P11/TIOCOB0 | TMPLY | I | B | HZ | — | — | P. UP | Timer PLAY input pin. |

TYPE A: Standard Input Port
B: Standard Output Port

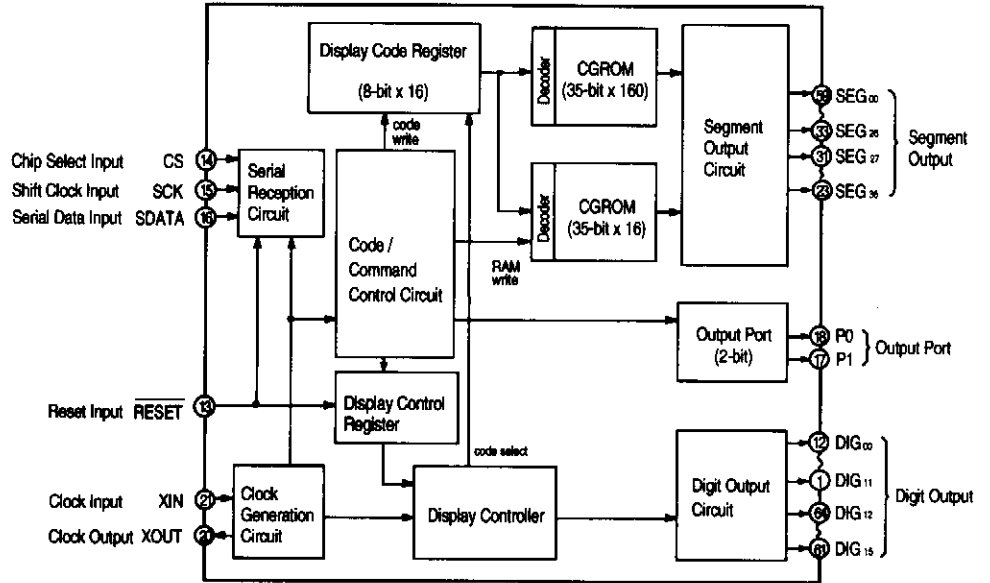
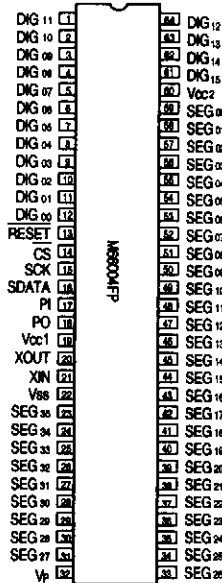
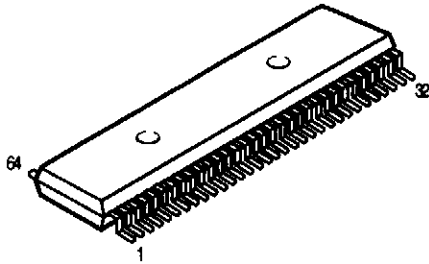
AK5351 (IC503)



AK5351 Terminal Function

| Pin No. | Name | I/O | Function |
|---------|--------|-----|--|
| 1 | AINR+ | I | Rch analog non-inverted input pin. |
| 2 | AINR- | I | Rch analog inverted input pin. |
| 3 | VREF | O | Ref. voltage output pin (VA=2.6V) Normally 0.1μF ceramic capacitor in parallel with 10μF electrolytic capacitor connected to VA. |
| 4 | VA | — | Analog part power pin (+5V). |
| 5 | AGND | — | Analog part ground pin. |
| 6 | AINL+ | I | Lch analog non-inverted input pin. |
| 7 | AINL- | I | Lch analog inverted input pin. |
| 8 | TST1 | | Test pin, leave it open. |
| 9 | HPFE | I | Hi-pass filter enable pin. "H" : HI-pass filter ON, "L" : OFF). |
| 10 | TST2 | | Test pin, leave it open. |
| 11 | TST3 | | Test pin, leave it open. |
| 12 | VD | — | Digital part power pin (+5V). |
| 13 | DGND | — | Digital part ground pin. |
| 14 | TST4 | | Test pin, leave it open. |
| 15 | SMODE2 | I | Interface clock select pin. |
| 16 | PD | I | Power down pin, "L" : Power down mode. Set to "L" once when power ON. |
| 17 | MCLK | I | Master clock input pin CMODE="H":384fs, "L":256fs |
| 18 | SCLK | I/O | Serial data clock pin. |
| 19 | LRCK | I/O | Input channel select pin. |
| 20 | FSYNC | I/O | Frame synchro clock pin. |
| 21 | SDATA | O | Serial data output pin. |
| 22 | CMODE | I | Master clock select pin "L":MCLK=256fs, "H":MCLK=384fs |
| 23 | SMODE1 | I | Interface clock select pin. |
| 24 | VB | — | Bulk Power pin (+5V). |

M66004FP (IC601)



M66004FP Terminal Function

| Symbol | Name | Function |
|----------------|-------------------|--|
| RESET | Reset Input | Initializes internal state of M66004. |
| CS | Chip Select Input | Able to communicate with MCU in "L" mode. Command from MCU will be disregarded in "H" mode. |
| SCK | Shift Clock Input | Shifts input data at rise from "L" to "H". |
| SDATA | Serial Data Input | Inputs character code or command data needed to display from MSB. |
| XIN | Clock Input | Sets oscillation frequency by connecting external resistor and capacitor (maximum oscillation frequency fosc (max)=1MHz). Also feasible to apply external clock. In this case, inject external clock to Xin terminal and open Xout terminal. |
| XOUT | Clock Output | |
| DIG 00 ~ DIG15 | Digit Output | Connect to digit terminal of VFD. DIG00~DIG15 correspond to the 1st figure to 16th figure respectively. |
| DIG 00 ~ DIG35 | Segment Output | Connect to segment terminal of VFD. For corresponding SEG00~SEG35 to segment terminal of VFD, refer to the figure right. |
| P0, P1 | | Output port (static operation). |
| Vcc1 | | Positive power supply terminal for internal logic. |
| Vcc2 | | Positive power supply terminal for high tension output port. |
| Vss | | GND terminal. |
| Vp | | Negative power supply terminal for VFD drive. |

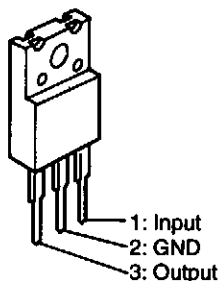
| | | | | |
|----|----|----|----|----|
| 00 | 01 | 02 | 03 | 04 |
| 05 | 06 | 07 | 08 | 09 |
| 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 |
| 30 | 31 | 32 | 33 | 34 |

35

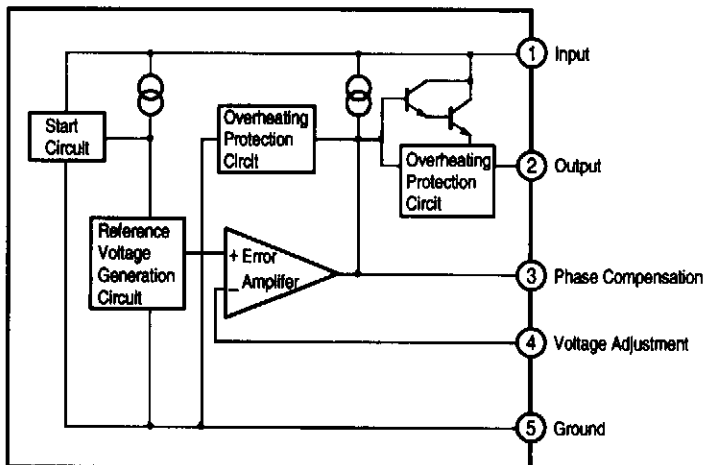
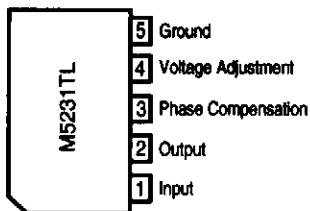
(Forwarding connection of segment output terminal.)

□ in the right figure indicates 1 dot of segment, the figure in □ shows the segment output terminal number (00 ~ 35) to be connected.

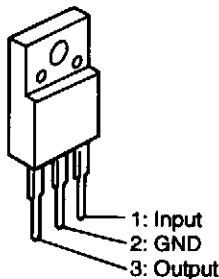
BA17809T (IC104)
BA17805T (IC102)
NJM7805FA (IC105)



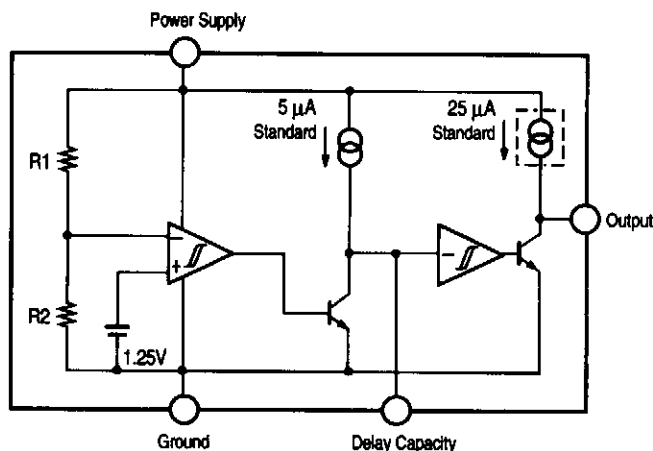
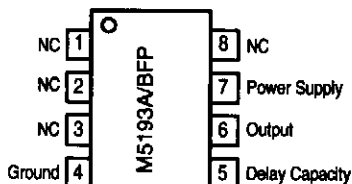
M5231TL
(IC103, 104)



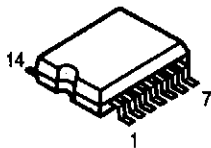
NJM7905FA
(IC106)



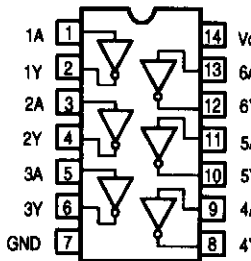
M5193A
(IC202)



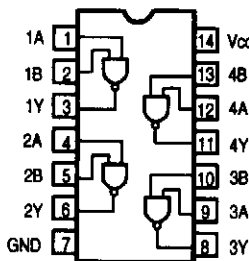
TC74HCT04AF (IC203)
TC74HCU04AF
(IC105, 107, 301, 403, 404)
TC74HC05AF (IC204)
TC74HC00AF (IC302, 303)



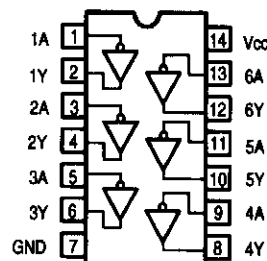
TC74HCT04AF
TC74HCU04AF



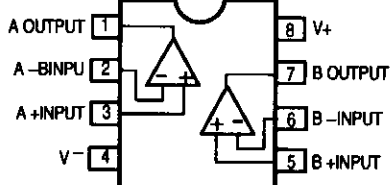
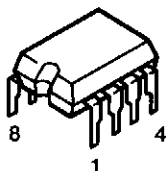
TC74HC00AF



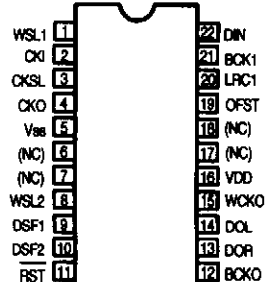
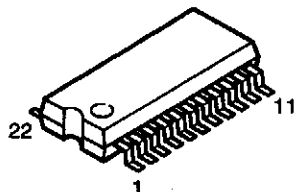
TC74HCU05AF



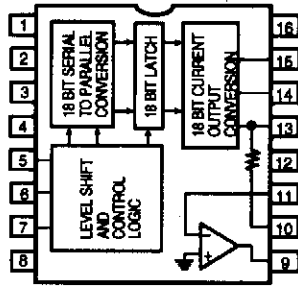
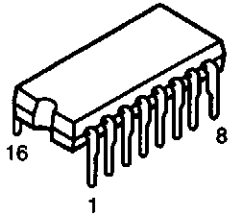
BA15218 (IC411, 504)



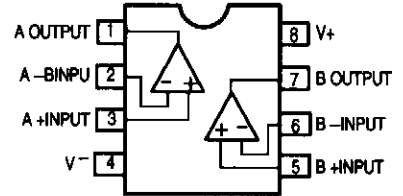
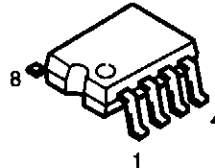
SM5841HS (IC406)



PCM61P-L (IC407, 408)

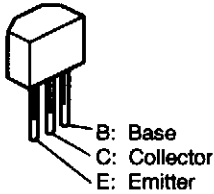


BA4510F (IC501, 502)
BA15218 (IC504)

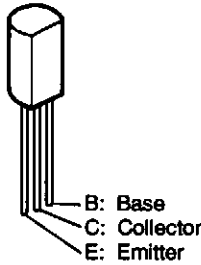


● TRANSISTOR

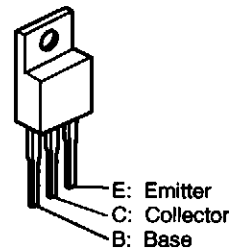
2SC1740S
2SD2144STPU



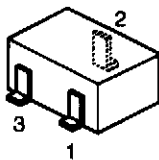
2SB562 (C)
2SD468 (C)



2SB1185 (E/F)
2SD1762 (E/F)

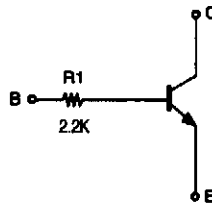


DTA124XKA
DTC114EK
DTC124EK
DTC323TK

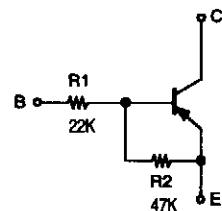


1: Emitter
2: Collector
3: Base

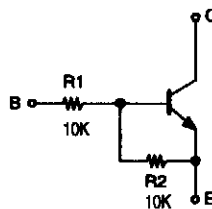
DTC323TK



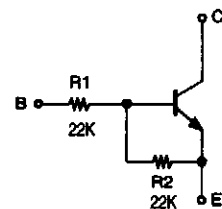
DTA124XKA



DTC114EK

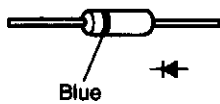


DTC124EK

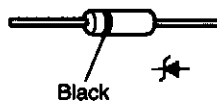


● DIODES

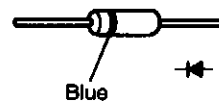
1SR35-200A



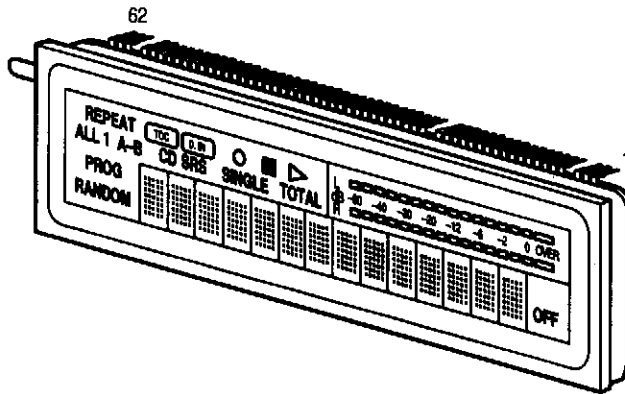
MTZJ6.2A
MTZJ8.2A
MTZJ39A



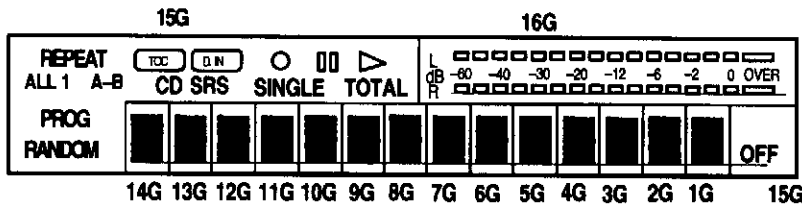
1SS270A



● FL DISPLAY (FL601)
(Part No. 393 4157 000)



Grid Partition



| | | | | |
|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 |

Pin Connection

| | | | | | | | | | | | | | | | | | | | | | |
|-----------|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Pin No. | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Electrode | 16G | 15G | 14G | 13G | 12G | 11G | 10G | 9G | 8G | 7G | 6G | 5G | 4G | 3G | 2G | 1G | NC | NP | NP | F1 | F1 |

| | | | | | | | | | | | | | | | | | | | | | |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|
| Pin No. | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 |
| Electrode | P20 | P19 | P18 | P17 | P16 | P15 | P14 | P13 | P12 | P11 | P10 | P9 | P8 | P7 | P6 | P5 | P4 | P3 | P2 | P1 | NC |

| | | | | | | | | | | | | | | | | | | | | |
|-----------|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pin No. | 62 | 61 | 60 | 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | 48 | 47 | 46 | 45 | 44 | 43 |
| Electrode | F2 | F2 | NP | NP | NC | P35 | P34 | P33 | P32 | P31 | P30 | P29 | P28 | P27 | P26 | P25 | P24 | P23 | P22 | P21 |

- Note
- 1) F1, F2 ----- Filament
 - 2) NP ----- No pin
 - 3) NC ----- No connection
 - 4) P1~P35 ----- Anode
 - 5) 1G~16G ----- Grid

Internal Connection

| | 1~14G | 15G | 18G |
|-----|-------|--------|-----|
| P1 | 1 | TOTAL | 1 |
| P2 | 2 | ⊙ | 2 |
| P3 | 3 | SINGLE | 3 |
| P4 | 4 | ⏏ | 4 |
| P5 | 5 | ○ | 5 |
| P6 | 6 | CD SRS | 6 |
| P7 | 7 | D.N | 7 |
| P8 | 8 | TOC | 8 |
| P9 | 9 | B | 9 |
| P10 | 10 | A- | 10 |
| P11 | 11 | 1 | 11 |
| P12 | 12 | REPEAT | 12 |

| | 1~14G | 15G | 18G |
|-----|-------|--------|-----|
| P13 | 13 | ALL | 13 |
| P14 | 14 | RANDOM | 14 |
| P15 | 15 | | 15 |
| P16 | 16 | | 16 |
| P17 | | | |
| P18 | 18 | | 18 |
| P19 | 19 | | 19 |
| P20 | 20 | | 20 |
| P21 | 21 | | 21 |
| P22 | 22 | | 22 |
| P23 | 23 | | 23 |
| P24 | 24 | | 24 |

| | 1~14G | 15G | 18G |
|-----|-------|--------|-----|
| P25 | 25 | ALL | 25 |
| P26 | 26 | RANDOM | 26 |
| P27 | 27 | | 27 |
| P28 | 28 | | 28 |
| P29 | 29 | | 29 |
| P30 | 30 | | 30 |
| P31 | 31 | | 31 |
| P32 | 32 | | 32 |
| P33 | 33 | | 33 |
| P34 | 34 | | 34 |
| P35 | 35 | OFF | |

PRINTED WIRING BOARD PATTERNS

1

2

3

4

1U-3074 POWER UNIT ASS'Y

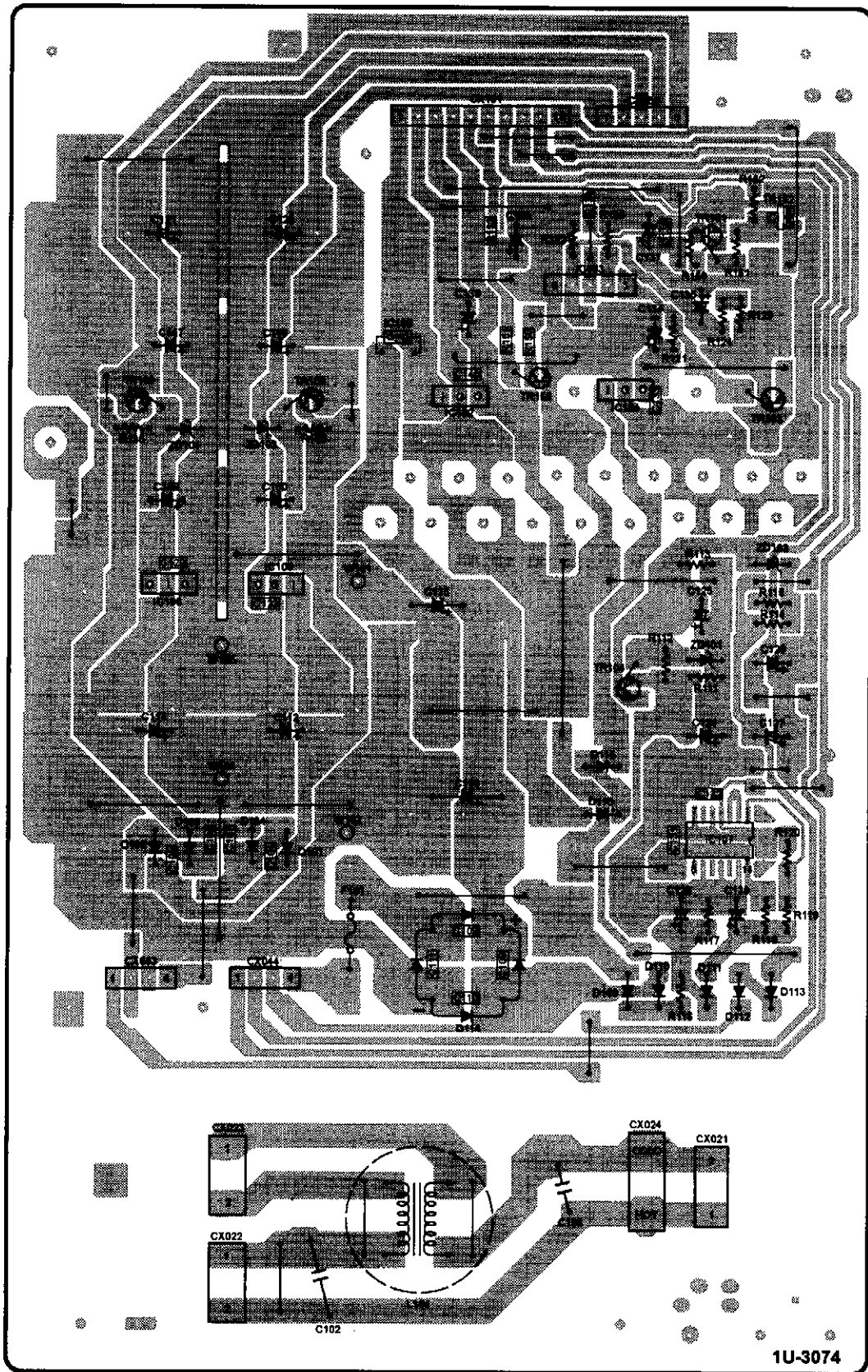
A

B

C

D

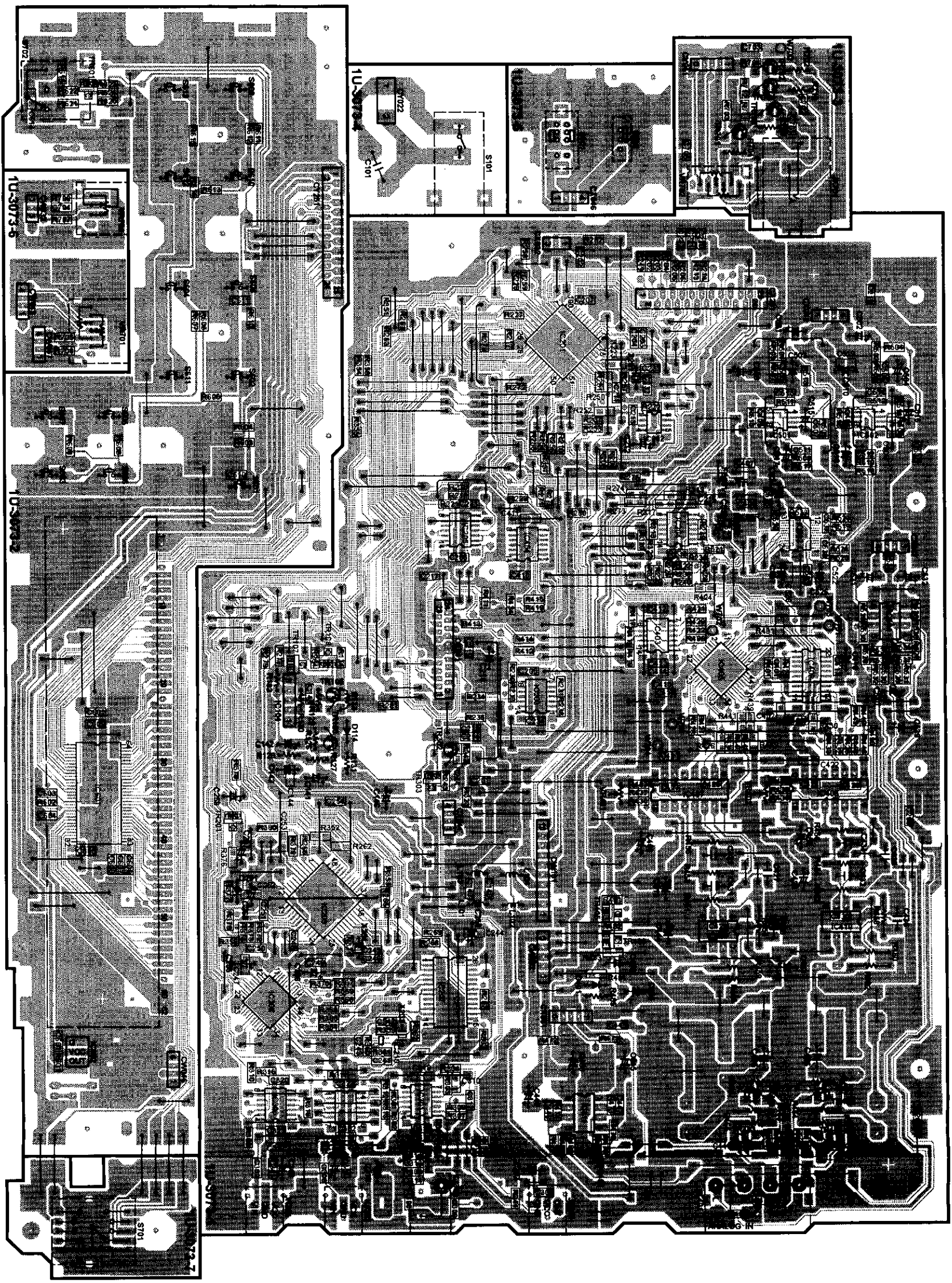
E



1U-3074

1U-3073 MAIN UNIT ASS'y

1 2 3 4 5 6 7 8



A B C D E

NOTE FOR PARTS LIST

- Part indicated with the mark "⊙" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "1" (1) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including Carbon Film ±5%, 1/4W Type in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

WARNING:

Parts marked with this symbol **Δ** have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

Resistors

Ex.: **RN** 14K 2E 1B2 1H 2B2 M BP
Type Shape Power Resist- Allowable Others
and per- ance error Others
formance

| | | | |
|-------------------------|-----------|----------|--------------------------|
| RD : Carbon composition | 2B : 1/8W | F : ±1% | P : Pulse-resistant type |
| RC : Metaloxide film | 2E : 1/4W | G : ±2% | NL : Low noise type |
| RW : Winding | 2H : 1/2W | J : ±5% | NB : Non-burning type |
| RN : Metal film | 3A : 1W | K : ±10% | FR : Fuse-resistor |
| RK : Metal mixture | 3D : 2W | L : ±20% | F : Lead wire forming |
| | 3F : 3W | M : ±20% | |
| | 3H : 5W | | |

Capacity (electrolyte only)

1 1 B 2 2 ⇒ 1800 ohm = 1.8 kohm
Indicates number of zeros after effective number.
2-digit effective number, decimal point indicated by R.
Units: ohm

Capacity (except electrolyte)

2 2 2 2 ⇒ 2200pF = 0.0022μF
Indicates number of zeros after effective number.
2-digit effective number, decimal point indicated by R.
Units: μF

Capacitors

Ex.: **CE** 04W 1H 2B2 M BP
Type Shape Dielectric Capacity Allowable Others
and per- strength error Others
formance

| | | | |
|----------------------------------|-----------|-------------|---|
| CE : Aluminum electrolytic | DJ : 6.3V | F : ±1% | HS : High stability type |
| CA : Aluminum solid electrolytic | 1A : 10V | G : ±2% | Bp : Non-polar type |
| CS : Tantalum electrolytic | 1C : 16V | J : ±5% | HR : Ripple-resistant type |
| CG : Film | 1E : 25V | K : ±10% | DL : For change and discharge frequency |
| CK : Ceramic | 1V : 35V | L : ±20% | HF : For assuring high frequency |
| CC : Ceramic | 1H : 50V | Z : ±80% | U : UL part |
| CP : Or | 2A : 100V | P : ±100% | C : CSA part |
| CM : Mica | 2B : 125V | W : ±100% | W : UL-CSA type |
| CF : Metallized | 2C : 160V | C : ±0.25pF | F : Lead wire forming |
| CH : Metallized | 2D : 200V | D : ±0.5pF | |
| | 2E : 250V | = : Others | |
| | 2H : 500V | | |
| | 2J : 630V | | |

Capacity (electrolyte only)

2 2 2 2 ⇒ 2200μF
Indicates number of zeros after effective number.
2-digit effective number.
Units: μF

Capacity (except electrolyte)

2 2 2 2 ⇒ 2.2μF
Indicates number of zeros after effective number.
2-digit effective number, decimal point indicated by R.
Units: μF

Capacity (except electrolyte)

2 2 2 2 ⇒ 2200pF = 0.0022μF
Indicates number of zeros after effective number.
2-digit effective number, decimal point indicated by R.
Units: pF

Capacity (except electrolyte)

2 2 2 2 (0 or 1) ⇒ 220pF
Indicates number of zeros after effective number.
2-digit effective number.
Units: pF

When the dielectric strength is indicated in AC, "AC" is included after the dielectric strength value.

PARTS LIST OF P.W.B. UNIT ASSY 1U-3073 MAIN UNIT ASSY

| Ref. No. | Part No. | Part Name | Remarks |
|-----------------------------|--------------|---------------------------|-------------------|
| SEMICONDUCTORS GROUP | | | |
| IC104 | 263 1041 009 | IC M5231TL | |
| IC201 | 262 2430 001 | IC HD6432245F10 | |
| IC202 | 263 0530 906 | IC M51953A | |
| IC203 | 262 1421 901 | IC TC74HC04AF | |
| IC205 | 262 1205 907 | IC TC74HC04AF | |
| IC301 | 262 1205 907 | IC TC74HC04AF | |
| IC302,303 | 262 1719 902 | IC TC74HC00AF | |
| IC403,404 | 262 1205 907 | IC TC74HC04AF | |
| IC406 | 262 2210 904 | IC SM5841HS | |
| IC407,408 | 262 1409 004 | IC PCM61-L | |
| IC411 | 263 0565 007 | IC BA15218 | |
| IC501,502 | 263 0934 900 | IC BA4510F | |
| IC503 | 262 2426 905 | IC AK5351-VF | |
| IC504 | 263 0565 007 | IC BA15218 | |
| IC601 | 262 1954 902 | IC M66004FP | |
| IC602 | 499 0290 007 | IC GP1U271X | |
| TR105 | 272 0025 907 | Transistor 2SB562(C) | |
| TR106 | 273 0303 910 | Transistor 2SC1740S(S) | |
| TR107 | 269 0082 902 | Transistor DTC114EK | |
| TR108 | 269 0054 901 | Transistor DTC144EK | |
| TR301 | 269 0066 902 | Transistor DTC323TK | |
| TR302 | 272 0025 907 | Transistor 2SB562(C) | |
| TR303 | 269 0082 902 | Transistor DTC114EK | |
| TR401-404 | 274 0160 907 | Transistor 2SD2144STPU | |
| TR405 | 269 0156 906 | Transistor DTA124XKA | |
| TR406 | 269 0082 902 | Transistor DTC114EK | |
| TR601 | 269 0102 905 | Transistor DTC124EK | |
| TR701,702 | 274 0160 907 | Transistor 2SD2144STPU | |
| D114 | 276 0432 903 | Diode 1SS270A | |
| D301,302 | 276 0432 903 | Diode 1SS270A | |
| D401 | 276 0432 903 | Diode 1SS270A | |
| FL601 | 393 4157 000 | FLD BJ588GK | |
| RESISTORS GROUP | | | |
| R131 | 244 2050 904 | Metal oxide 22ohm 1W | RS1483A220JNBS(S) |
| R134 | 247 0009 985 | Carbon chip 10kohm 1/10W | RM73B--103J |
| R202-206 | 247 0011 944 | Carbon chip 47kohm 1/10W | RM73B--473J |
| R207 | 247 0009 985 | Carbon chip 10kohm 1/10W | RM73B--103J |
| R213,214 | 247 0011 944 | Carbon chip 47kohm 1/10W | RM73B--473J |
| R222 | 247 0007 945 | Carbon chip 1kohm 1/10W | RM73B--102J |
| R223 | 247 0005 976 | Carbon chip 200ohm 1/10W | RM73B--201J |
| R227 | 247 0012 927 | Carbon chip 100kohm 1/10W | RM73B--104J |
| R230,231 | 247 0018 905 | Carbon chip 0ohm 1/10W | RM73B--0R0K |
| R234,235 | 247 0018 905 | Carbon chip 0ohm 1/10W | RM73B--0R0K |
| R238,239 | 247 0018 905 | Carbon chip 0ohm 1/10W | RM73B--0R0K |
| R240,241 | 247 0018 905 | Carbon chip 0ohm 1/10W | RM73B--0R0K |
| R242 | 247 0012 927 | Carbon chip 100kohm 1/10W | RM73B--104J |
| R243 | 247 0008 915 | Carbon chip 2kohm 1/10W | RM73B--202J |
| R244 | 247 0007 945 | Carbon chip 1kohm 1/10W | RM73B--102J |
| R249 | 247 0011 944 | Carbon chip 47kohm 1/10W | RM73B--473J |
| R250-253 | 247 0009 985 | Carbon chip 10kohm 1/10W | RM73B--103J |
| R258 | 247 0012 927 | Carbon chip 100kohm 1/10W | RM73B--104J |
| R261 | 247 0012 927 | Carbon chip 100kohm 1/10W | RM73B--104J |
| R263,264 | 247 0012 927 | Carbon chip 100kohm 1/10W | RM73B--104J |
| R266 | 247 0011 944 | Carbon chip 47kohm 1/10W | RM73B--473J |
| R275 | 247 0012 927 | Carbon chip 100kohm 1/10W | RM73B--104J |
| R276 | 247 0011 944 | Carbon chip 47kohm 1/10W | RM73B--473J |
| R277 | 247 0012 927 | Carbon chip 100kohm 1/10W | RM73B--104J |
| R279 | 247 0009 985 | Carbon chip 10kohm 1/10W | RM73B--103J |
| R280,281 | 247 0012 927 | Carbon chip 100kohm 1/10W | RM73B--104J |
| R301-303 | 247 0011 944 | Carbon chip 47kohm 1/10W | RM73B--473J |
| R304 | 247 0005 905 | Carbon chip 100ohm 1/10W | RM73B--101J |
| R305 | 247 0018 905 | Carbon chip 0ohm 1/10W | RM73B--0R0K |
| R306 | 247 0004 977 | Carbon chip 75ohm 1/10W | RM73B--750J |
| R307 | 247 0011 944 | Carbon chip 47kohm 1/10W | RM73B--473J |
| R308 | 247 0013 942 | Carbon chip 330kohm 1/10W | RM73B--334J |
| R310 | 247 0005 905 | Carbon chip 100ohm 1/10W | RM73B--101J |
| R312,313 | 247 0018 905 | Carbon chip 0ohm 1/10W | RM73B--0R0K |
| R314 | 247 0008 915 | Carbon chip 2kohm 1/10W | RM73B--202J |
| R315,316 | 247 0018 905 | Carbon chip 0ohm 1/10W | RM73B--0R0K |
| R323 | 247 0018 905 | Carbon chip 0ohm 1/10W | RM73B--0R0K |
| R357,358 | 247 0011 944 | Carbon chip 47kohm 1/10W | RM73B--473J |
| R401 | 247 0018 905 | Carbon chip 0ohm 1/10W | RM73B--0R0K |
| R411 | 257 0011 909 | Ceramic chip 0.01μF25V | CK73B1E103K |
| R412 | 247 0018 905 | Carbon chip 0ohm 1/10W | RM73B--0R0K |
| R413 | 257 0011 909 | Ceramic chip 0.01μF25V | CK73B1E103K |
| R414 | 247 0018 905 | Carbon chip 0ohm 1/10W | RM73B--0R0K |
| R415 | 247 0011 944 | Carbon chip 47kohm 1/10W | RM73B--473J |
| R417 | 247 0011 944 | Carbon chip 47kohm 1/10W | RM73B--473J |
| R419 | 247 0018 905 | Carbon chip 0ohm 1/10W | RM73B--0R0K |
| R420-424 | 247 0007 945 | Carbon chip 1kohm 1/10W | RM73B--102J |
| R429 | 247 0018 905 | Carbon chip 0ohm 1/10W | RM73B--0R0K |

| Ref. No. | Part No. | Part Name | Remarks |
|----------|--------------|---------------------------|-------------------|
| R430-433 | 247 0006 920 | Carbon chip 330ohm 1/10W | RM73B--331J |
| R434 | 247 0013 942 | Carbon chip 330kohm 1/10W | RM73B--334J |
| R435,436 | 247 0013 984 | Carbon chip 470kohm 1/10W | RM73B--474J |
| R437,438 | 247 0014 967 | Carbon chip 1Mohm 1/10W | RM73B--105J |
| R467-470 | 247 0008 944 | Carbon chip 2.7kohm 1/10W | RM73B--272J |
| R471,472 | 247 0018 905 | Carbon chip 0ohm 1/10W | RM73B--0R0K |
| R473,474 | 247 0011 957 | Carbon chip 51kohm 1/10W | RM73B--513J |
| R475,476 | 247 0008 986 | Carbon chip 3.9kohm 1/10W | RM73B--392J |
| R477,478 | 247 0008 999 | Carbon chip 4.3kohm 1/10W | RM73B--432J |
| R479,480 | 247 0010 990 | Carbon chip 30kohm 1/10W | RM73B--303J |
| R481 | 247 0018 905 | Carbon chip 0ohm 1/10W | RM73B--0R0K |
| R482 | 247 0012 998 | Carbon chip 200kohm 1/10W | RM73B--204J |
| R483 | 247 0018 905 | Carbon chip 0ohm 1/10W | RM73B--0R0K |
| R484 | 247 0004 922 | Carbon chip 47ohm 1/10W | RM73B--470J |
| R485 | 244 2051 974 | Metal oxide 1kohm 1W | RS14B3A102JNBS(S) |
| R487,488 | 247 0012 998 | Carbon chip 200kohm 1/10W | RM73B--204J |
| R491 | 247 0018 905 | Carbon chip 0ohm 1/10W | RM73B--0R0K |
| R503,504 | 247 0009 985 | Carbon chip 10kohm 1/10W | RM73B--103J |
| R505,506 | 247 0011 915 | Carbon chip 36kohm 1/10W | RM73B--363J |
| R507-510 | 247 0009 901 | Carbon chip 4.7kohm 1/10W | RM73B--472J |
| R511,512 | 247 0010 958 | Carbon chip 20kohm 1/10W | RM73B--203J |
| R515,516 | 247 0010 958 | Carbon chip 20kohm 1/10W | RM73B--203J |
| R519,520 | 247 0006 920 | Carbon chip 330ohm 1/10W | RM73B--331J |
| R521 | 247 0006 962 | Carbon chip 470ohm 1/10W | RM73B--471J |
| R523,524 | 247 0006 920 | Carbon chip 330ohm 1/10W | RM73B--331J |
| R525,526 | 247 0018 905 | Carbon chip 0ohm 1/10W | RM73B--0R0K |
| R527,528 | 247 0010 945 | Carbon chip 18kohm 1/10W | RM73B--183J |
| R531,532 | 247 0006 962 | Carbon chip 470ohm 1/10W | RM73B--471J |
| R537,538 | 247 0011 944 | Carbon chip 47kohm 1/10W | RM73B--473J |
| R539 | 247 0018 905 | Carbon chip 0ohm 1/10W | RM73B--0R0K |
| R601 | 247 0009 985 | Carbon chip 10kohm 1/10W | RM73B--103J |
| R602 | 247 0010 987 | Carbon chip 27kohm 1/10W | RM73B--273J |
| R603 | 247 0007 945 | Carbon chip 1kohm 1/10W | RM73B--102J |
| R604 | 247 0005 947 | Carbon chip 150ohm 1/10W | RM73B--151J |
| R605 | 247 0005 963 | Carbon chip 180ohm 1/10W | RM73B--181J |
| R606 | 247 0006 904 | Carbon chip 270ohm 1/10W | RM73B--271J |
| R607 | 247 0006 946 | Carbon chip 390ohm 1/10W | RM73B--391J |
| R608 | 247 0006 975 | Carbon chip 510ohm 1/10W | RM73B--511J |
| R609 | 247 0007 932 | Carbon chip 910ohm 1/10W | RM73B--911J |
| R610 | 247 0007 945 | Carbon chip 1kohm 1/10W | RM73B--102J |
| R611 | 247 0005 947 | Carbon chip 150ohm 1/10W | RM73B--151J |
| R612 | 247 0005 963 | Carbon chip 180ohm 1/10W | RM73B--181J |
| R613 | 247 0006 904 | Carbon chip 270ohm 1/10W | RM73B--271J |
| R614 | 247 0006 946 | Carbon chip 390ohm 1/10W | RM73B--391J |
| R615 | 247 0006 975 | Carbon chip 510ohm 1/10W | RM73B--511J |
| R621,622 | 247 0005 905 | Carbon chip 100ohm 1/10W | RM73B--101J |
| R623-625 | 247 0009 985 | Carbon chip 10kohm 1/10W | RM73B--103J |
| R701,702 | 244 2055 970 | Metal oxide 56ohm 1W | RS14B3A560JNBS(S) |
| R703,704 | 247 0008 944 | Carbon chip 2.7kohm 1/10W | RM73B--272J |

| Ref. No. | Part No. | Part Name | Remarks |
|------------------|--------------|-----------------------------|-------------------|
| R705,706 | 247 0018 905 | Carbon chip 0ohm 1/10W | RM73B--0R0K |
| VR401,402 | 211 6093 970 | Semi fixed resistor 100kohm | V06PB104T |
| VR701 | 211 0876 009 | Variable resistor 50kohm | V1420V16FA503 |
| VR702 | 211 0903 008 | Variable resistor 2kohm | V1420Q15FC202 |
| CAPACITORS GROUP | | | |
| C101 | 253 8014 702 | Ceramic 0.01μF/400V(AC) | CK45F2GAC103MC |
| C141,142 | 254 4260 948 | Electrolytic 1μF/50V | CE04W1H010M |
| C143 | 254 4254 909 | Electrolytic 10μF/16V | CE04W1C100M |
| C144 | 257 0010 900 | Ceramic chip 0.01μF/50V | CK73B1H103K |
| C146 | 259 0009 001 | Back up cap. 1F/6.3V | GOLD CAP=105= |
| C201 | 257 0012 966 | Ceramic chip 0.01μF/50V | CK73F1H103Z |
| C202 | 257 0010 900 | Ceramic chip 0.01μF/50V | CK73B1H103K |
| C205,206 | 257 0012 966 | Ceramic chip 0.01μF/50V | CK73F1H103Z |
| C207 | 257 0010 900 | Ceramic chip 0.01μF/50V | CK73B1H103K |
| C211 | 257 0010 900 | Ceramic chip 0.01μF/50V | CK73B1H103K |
| C212 | 254 4260 948 | Electrolytic 1μF/50V | CE04W1H010M |
| C213 | 257 0010 900 | Ceramic chip 0.01μF/50V | CK73B1H103K |
| C214-217 | 257 0012 966 | Ceramic chip 0.01μF/50V | CK73F1H103Z |
| C220-222 | 257 0012 966 | Ceramic chip 0.01μF/50V | CK73F1H103Z |
| C233,234 | 257 0012 966 | Ceramic chip 0.01 F/50V | CK73F1H103Z |
| C301,302 | 257 0010 900 | Ceramic chip 0.01μF/50V | CK73B1H103K |
| C303 | 254 4254 941 | Electrolytic 100μF/16V | CE04W1C101M |
| C304 | 257 0010 900 | Ceramic chip 0.01μF/50V | CK73B1H103K |
| C305 | 254 4254 941 | Electrolytic 100μF/16V | CE04W1C101M |
| C306 | 257 0010 900 | Ceramic chip 0.01μF/50V | CK73B1H103K |
| C307 | 254 4254 941 | Electrolytic 100μF/16V | CE04W1C101M |
| C308 | 257 0010 900 | Ceramic chip 0.01μF/50V | CK73B1H103K |
| C310 | 257 0010 900 | Ceramic chip 0.01μF/50V | CK73B1H103K |
| C311,312 | 257 0014 935 | Ceramic chip 0.1μF/25V | CK73F1E104Z |
| C313 | 257 0012 966 | Ceramic chip 0.01μF/50V | CK73F1H103Z |
| C314 | 257 0003 988 | Ceramic chip 47pF/50V | CC73SL1H470J |
| C315 | 257 0010 900 | Ceramic chip 0.01μF/50V | CK73B1H103K |
| C316 | 254 4260 948 | Electrolytic 1μF/50V | CE04W1H010M |
| C317 | 257 0005 902 | Ceramic chip 150pF/50V | CC73SL1H151J |
| C318-320 | 257 0012 966 | Ceramic chip 0.01μF/50V | CK73F1H103Z |
| C322,323 | 257 0012 966 | Ceramic chip 0.01μF/50V | CK73F1H103Z |
| C405,406 | 257 0002 921 | Ceramic chip 10 pF/50V | CC73SL1H100D |
| C409 | 257 0012 966 | Ceramic chip 0.01μF/50V | CK73F1H103Z |
| C410-413 | 257 0010 900 | Ceramic chip 0.01μF/50V | CK73B1H103K |
| C417 | 257 0014 935 | Ceramic chip 0.1μF/25V | CK73F1E104Z |
| C418 | 254 4254 941 | Electrolytic 100μF/16V | CE04W1C101M |
| C419 | 254 4356 713 | Electrolytic 100μF/50V | CE04W1H010MC(ARS) |
| C421,422 | 257 0014 935 | Ceramic chip 0.1μF/25V | CK73F1E104Z |
| C425,426 | 257 0014 935 | Ceramic chip 0.1μF/25V | CK73F1E104Z |

| Ref. No. | Part No. | Part Name | Remarks | Ref. No. | Part No. | Part Name | Remarks | Q'ty | |
|----------|--------------|--------------------------------|-------------------|--------------------------|-------------------------|--------------------------------|---------|--------------|--|
| C427,428 | 255 4235 992 | Polypropylene film 680pF/100V | CQ93P2A681J(NH) | OTHER PARTS GROUP | | | | | |
| C433,434 | 255 4235 963 | Polypropylene film 5600pF/100V | CQ93P2A562J(NH) | CW042 | 203 6499 007 | 4P PH-SAN connector cord | | 1 | |
| C445,446 | 254 4368 934 | Electrolytic 100μF/25V | CE04W1E101M(ASF) | CW046 | 203 6236 040 | 4P KR-DA connector cord | | 1 | |
| C447,448 | 257 0004 903 | Ceramic chip 56pF/50V | CC73SL1H560J | CW047 | 203 6499 049 | 4P PH-SAN connector cord | | 1 | |
| C449 | 257 0004 961 | Ceramic chip 100pF/50V | CC73SL1H101J | CW052 | 203 8414 019 | 5P EH-SCN connector cord | | 1 | |
| C450,451 | 254 4368 934 | Electrolytic 100μF/25V | CE04W1E101M(ASF) | CW101 | 204 6608 008 | 10P EH-SCN connector cord | | 1 | |
| C452 | 254 4256 952 | Electrolytic 220μF/25V | CE04W1E221M | CX041 | 205 0343 045 | 4P connector base(KR-PH) | | 1 | |
| C453 | 254 3056 917 | Electrolytic 1μF/50V | CE04D1H010MBP | CX042 | 205 0321 041 | 4P connector base (RED) | | 1 | |
| C456 | 254 4356 713 | Electrolytic 100μF/50V | CE04W1H101MC(ARS) | CX046 | 205 0279 041 | 4P PH.SID connector base | | 1 | |
| C465,466 | 254 4356 713 | Electrolytic 100μF/50V | CE04W1H101MC(ARS) | CX047 | 205 0321 041 | 4P connector base (RED) | | 1 | |
| C469,470 | 257 0012 966 | Ceramic chip 0.01μF/50V | CK73F1H103Z | CX051 | 205 0343 058 | 5P connector base(KR-PH) | | 1 | |
| C501,502 | 254 4313 921 | Electrolytic 22μF/50V | CE04W1H220M(ASF) | CX241 | 205 0892 046 | 24P FFC base (P=1) | | 1 | |
| C503,504 | 254 4382 910 | Electrolytic 220μF/16V | CE04W1C221M(ASF) | CX251 | 205 0736 089 | 25P FFC connector base | | 1 | |
| C505,506 | 257 0014 935 | Ceramic chip 0.1μF/25V | CK73F1E104Z | CY022 | 205 0581 085 | 2P VH connector base | | 1 | |
| C507,508 | 257 0002 921 | Ceramic chip 10 pF/50V | CC73SL1H100D | CY051 | 205 0343 058 | 5P connector base(KR-PH) | | 1 | |
| C513,514 | 257 0014 935 | Ceramic chip 0.1μF/25V | CK73F1E104Z | CY251 | 205 0736 089 | 25P FFC connector base | | 1 | |
| C515-518 | 254 4313 918 | Electrolytic 10μF/50V | CE04W1H100M(ASF) | FB501,502 | 235 0049 900 | Beads inductor | | 2 | |
| C519 | 257 0012 966 | Ceramic chip 0.01μF/50V | CK73F1H103Z | J501,503 | 235 0049 900 | Beads inductor | | 2 | |
| C520 | 257 0011 996 | Ceramic chip 0.1μF/25V | CK73B1E104K | JK301,302 | 269 0172 003 | GP1F37R | | 2 | |
| C521 | 257 0009 966 | Ceramic chip 4700pF/50V | CK73B1H472K | JK303 | 269 0098 006 | GP1F32T (OPT. OUT) | | 1 | |
| C522,523 | 257 0011 909 | Ceramic chip 0.01μF/25V | CK73B1E103K | JK304 | 204 8178 028 | 1P pin jack | | 1 | |
| C524 | 254 4313 918 | Electrolytic 10μF/50V | CE04W1H100M(ASF) | JK401 | 204 8540 012 | 4P pin jack | | 1 | |
| C525 | 257 0011 909 | Ceramic chip 0.01μF/25V | CK73B1E103K | JK701 | 204 8322 007 | Headphone jack | | 1 | |
| C526,527 | 254 4356 797 | Electrolytic 10μF/50V | CE04W1H100MC(ARS) | AS101 | 212 1101 006 | Power switch (TV-5) | | 1 | |
| C528 | 257 0011 909 | Ceramic chip 0.01μF/25V | CK73B1E103K | S601-613 | 212 5604 910 | Tact switch | | 13 | |
| C531,532 | 254 4313 921 | Electrolytic 22μF/50V | CE04W1H220M(ASF) | S701 | 212 0388 008 | Rotary switch (1-5) | | 1 | |
| C535 | 254 4382 910 | Electrolytic 220μF/16V | CE04W1C221M(ASF) | S702 | 212 0382 004 | Rotary encoder | | 1 | |
| C537,538 | 257 0009 908 | Ceramic chip 1500pF/50V | CK73B1H152K | S801 | 212 1046 006 | Slide switch (2-3) | | 1 | |
| C539,540 | 254 4368 934 | Electrolytic 100μF/25V | CE04W1E101M(ASF) | S802 | 212 1048 004 | Slide switch (1-2) | | 1 | |
| C601 | 257 0010 900 | Ceramic chip 0.01μF/50V | CK73B1H103K | W300 | 4123100003 | PWB Earth | | 1 | |
| C602,603 | 257 0012 966 | Ceramic chip 0.01μF/50V | CK73F1H103Z | X201 | 3990160905 | Crystal 8.00MHz | | 1 | |
| C604 | 257 0004 961 | Ceramic chip 100pF/50V | CC73SL1H101J | | 4610862016 | FL spacer | | 2 | |
| C605 | 257 0012 966 | Ceramic chip 0.01μF/50V | CK73F1H103Z | | 2050452017 | Style pin | | 2 | |
| C606-608 | 257 0005 931 | Ceramic chip 200pF/50V | CC73SL1H201J | | | | | | |
| C609 | 257 0012 966 | Ceramic chip 0.01μF/50V | CK73F1H103Z | | | | | | |
| C610,611 | 257 0007 900 | Ceramic chip 1000pF/50V | CC73SL1H102J | | | | | | |
| C614,615 | 257 0010 900 | Ceramic chip 0.01μF/50V | CK73B1H103K | | | | | | |
| C701,702 | 257 0012 966 | Ceramic chip 0.01μF/50V | CK73F1H103Z | | | | | | |
| C705 | 257 0012 966 | Ceramic chip 0.01μF/50V | CK73F1H103Z | | | | | | |

1U-3074 POWER UNIT ASS'Y

| Ref. No. | Part No. | Part Name | Remarks |
|-----------------------------|--------------|--------------------------------|-------------------|
| SEMICONDUCTORS GROUP | | | |
| IC102 | 263 1055 008 | IC BA17805T | |
| IC103 | 263 1041 009 | IC M5231TL | |
| IC104 | 263 1054 009 | IC BA17809T | |
| IC105 | 263 0809 006 | IC NJM7805FA(S) | |
| IC106 | 263 0554 005 | IC NJM7905FA | |
| IC107 | 262 1205 907 | IC TC74HCU04AF | |
| IC108 | 268 0073 905 | IC ICP-N15 | IC protector |
| TR103,104 | 272 0083 004 | Transistor 2SB1185(E/F) | |
| TR108 | 272 0025 907 | Transistor 2SB562(C) | |
| TR109 | 274 0036 905 | Transistor 2SD468(D) | |
| TR150 | 273 0303 910 | Transistor 2SC1740S(S) | |
| D101-104 | 276 0553 905 | Diode 1SR35-200A | |
| D109-113 | 276 0553 905 | Diode 1SR35-200A | |
| D114 | 276 0305 001 | Diode S4VB20 | |
| ZD101 | 276 0645 981 | Zener diode MTZJ39A | 39V |
| ZD102 | 276 0637 902 | Zener diode MTZJ6.2A | 6.2V |
| ZD103,104 | 276 0644 924 | Zener diode MTZJ8.2A | 8.2V |
| RESISTORS GROUP | | | |
| R117 | 244 2052 973 | Metal oxide 560ohm 1W | RS14B3A561JNBS(S) |
| R122 | 245 2368 903 | Metal film 3.3kohm 1/4W | RN14K2E332F(5) |
| R123 | 245 2368 961 | Metal film 5.6kohm 1/4W | RN14K2E562F(5) |
| R150 | 247 0009 956 | Carbon chip 7.5kohm 1/10W | RM73B--752J |
| R151 | 247 0007 945 | Carbon chip 1kohm 1/10W | RM73B--102J |
| R152 | 247 0013 900 | Carbon chip 220kohm 1/10W | RM73B--224J |
| CAPACITORS GROUP | | | |
| C104-111 | 257 0010 900 | Ceramic chip 0.01μF/50V | CK73B1H103K |
| C112,113 | 254 4313 727 | Electrolytic 2200μF/50V | CE04W1H222M(ASF) |
| C114 | 254 4403 747 | Electrolytic 10000μF/25V | CE04W1E103M(SMG) |
| C115 | 254 4403 705 | Electrolytic 6800μF/25V | CE04W1E682M(SMG) |
| C120,121 | 254 4356 713 | Electrolytic 100μF/50V | CE04W1H101MC(ARS) |
| C122,123 | 255 4235 934 | Polypropylene film 0.01μF/100V | CQ93P2A103J(NH) |
| C124 | 254 4262 946 | Electrolytic 47μF/63V | CE04W1J470M |
| C125 | 254 4260 980 | Electrolytic 10μF/50V | CE04W1H100M |
| C126 | 254 4299 906 | Electrolytic 10μF/16V | CE04W1C100M(SRE) |
| C127,128 | 254 4261 905 | Electrolytic 33μF/50V | CE04W1H330M |
| C130 | 254 4300 905 | Electrolytic 33μF/6.3V | CE04W0J330M(SRE) |
| C131 | 257 0010 900 | Ceramic chip 0.01μF/50V | CK73B1H103K |
| C132 | 257 0010 942 | Ceramic chip 0.022μF/50V | CK73B1H223K |
| C133 | 257 0010 900 | Ceramic chip 0.01μF/50V | CK73B1H103K |
| C134,135 | 254 4260 948 | Electrolytic 1μF/50V | CE04W1H010M |
| C137 | 254 4254 954 | Electrolytic 220μF/16V | CE04W1C221M |
| C138 | 257 0010 900 | Ceramic chip 0.01μF/50V | CK73B1H103K |
| C139 | 254 4260 980 | Electrolytic 10μF/50V | CE04W1H100M |

| Ref. No. | Part No. | Part Name | Remarks | Q'ty |
|--------------------------|--------------|---------------------------|---------------------------------|------|
| C147,148 | 254 4382 910 | Electrolytic 220μF/16V | CE04W1C221M(ASF) | |
| C149,150 | 254 4368 934 | Electrolytic 100μF/25V | CE04W1E101M(ASF) | |
| C160 | 254 4260 948 | Electrolytic 1μF/50V | CE04W1H010M | |
| OTHER PARTS GROUP | | | | |
| CX021 | 205 0581 001 | 2P VH connector base | | 1 |
| CX022 | 205 0581 085 | 2P VH connector base | | 1 |
| CX023 | 205 0581 056 | 2P VH connector base | | 1 |
| CX043 | 205 0277 043 | 4P EH connector base (RD) | | 1 |
| CX044 | 205 0233 045 | 4P EH connector base | | 1 |
| CX052 | 205 0233 058 | 5P EH connector base | | 1 |
| CX101 | 205 0275 003 | 10P EH connector base | | 1 |
| A F101 | 205 4313 001 | Fuse 2A | Except U.S.A./ Canada models | |
| A F102 | 205 4313 002 | Fuse 2.5A | U.S.A./ Canada models | |
| | 202 0040 909 | Fuse clip | | 2 |
| | 417 0476 049 | Radiator | | 1 |
| | 417 0560 010 | Heat sink(SE553) | | 1 |
| | 471 3304 015 | Screw 3X8 CBS-Z | | 3 |
| | 205 0452 017 | Style pin | | 3 |
| | 513 2585 032 | Fuse label | Except U.S.A./ Canada model | 1 |
| | 513 2492 057 | Fuse label | U.S.A./ Canada models | 1 |

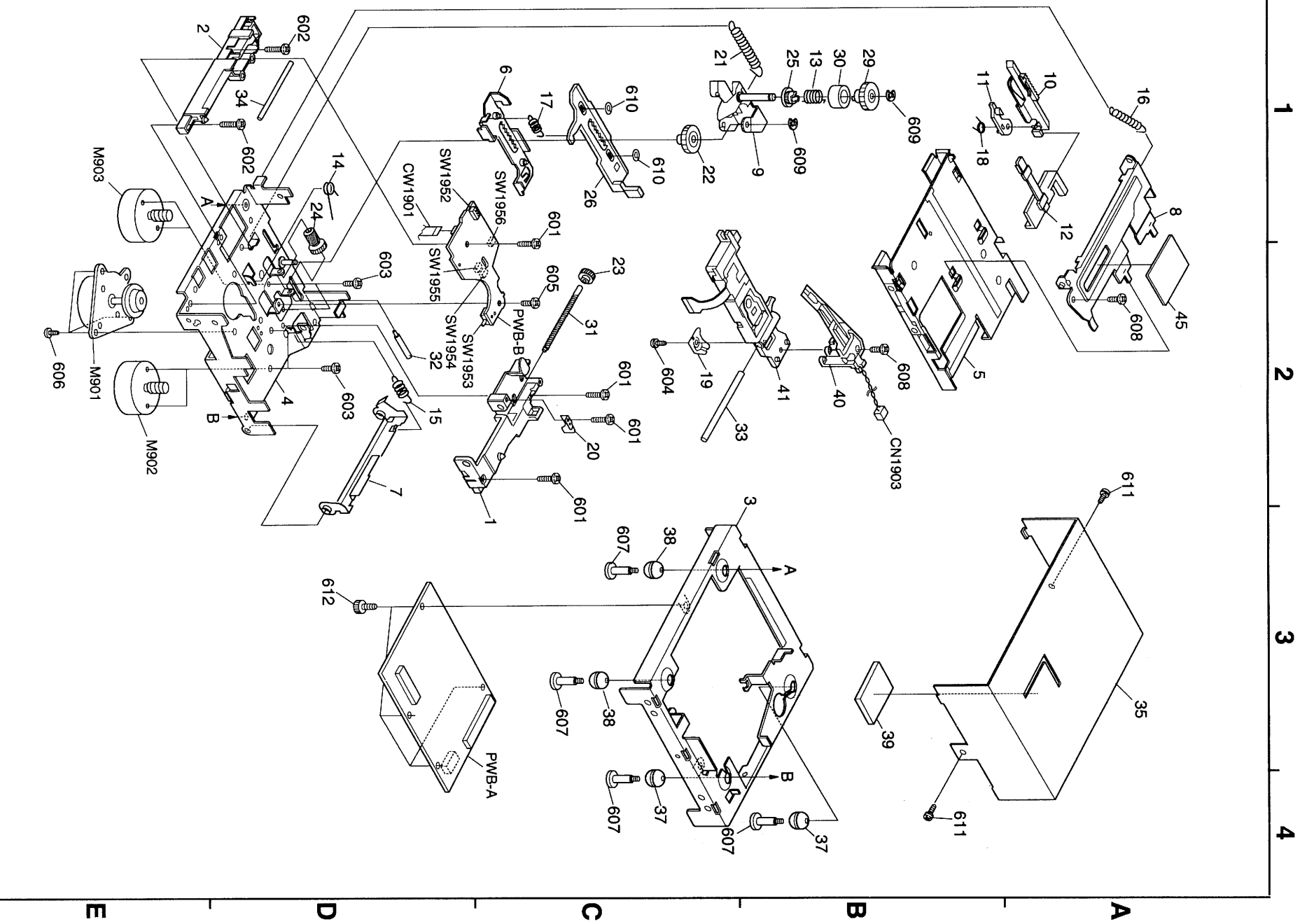
MDM97 MD MECHANISM P.W.B. UNIT ASS'Y

| Ref. No. | Part No. | Part Name | Remarks | Ref. No. | Part No. | Part Name | Remarks |
|-----------------------------|--------------|-----------------------------|---------------|------------|--------------|-----------------------------|---------------|
| SEMICONDUCTORS GROUP | | | | | | | |
| IC1101 | 937 0213 308 | IC IR3R55 | | R1201 | | Carbom (Chip) 150ohm 1/16W | VRS-CY1JB151J |
| IC1201 | 937 0213 405 | IC LR37648A | | R1202 | | Carbom (Chip) 1Mohm 1/16W | VRS-CY1JB105J |
| IC1202 | 937 0177 800 | IC IX2474AF | | R1210 | | Carbom (Chip) 100ohm 1/16W | VRS-CY1JB101J |
| IC1251 | 937 0104 080 | IC 74ACT02F | | R1211 | | Carbom (Chip) 220ohm 1/16W | VRS-CY1JB221J |
| IC1401 | 937 0213 502 | IC IX0197 | | R1221 | | Carbom (Chip) 220ohm 1/16W | VRS-CY1JB221J |
| IC1402 | 937 0206 205 | IC S29294A | | R1221 | | Carbom (Chip) 220ohm 1/16W | VRS-CY1JB221J |
| IC1601 | 937 0213 609 | IC M56758FP | | R1223 | | Carbom (Chip) 680ohm 1/10W | VRS-TY2AB681J |
| IC1801 | 937 0214 705 | IC XC62EP32 | | R1251 | | Carbom (Chip) 10ohm 1/16W | VRS-CY1JB100J |
| IC1906 | 937 0142 903 | IC TC7ST08F | | R1252,1253 | 937 9955 201 | Carbom (Chip) 0ohm | VRS-TV2AB000J |
| IC1907 | 937 0213 706 | IC TC9246F | | R1254 | 937 9956 103 | Carbom (Chip) 220ohm 1/16W | VRS-TV2AB221J |
| IC1916 | 937 0213 803 | IC 74VHC08FS | | R1255 | | Carbom (Chip) 0ohm | VRS-TV2AB000J |
| IC1990 | 937 0104 064 | IC 74C04FS | | R1261-1263 | 937 9958 664 | Carbom (Chip) 10kohm 1/16W | VRS-CY1JB100J |
| Q1251,1252 | 937 0104 200 | Transistor 2SK2909 | | R1266 | 937 9958 664 | Carbom (Chip) 10kohm 1/16W | VRS-CY1JB100J |
| Q1253,1254 | 937 0104 103 | Transistor 2SK1473 | | R1269 | | Carbom (Chip) 0ohm | VRS-CY1JB000J |
| Q1401 | 937 0205 206 | Transistor RN2402 | | R1281 | | Carbom (Chip) 47ohm 1/16W | VRS-CY1JB470J |
| Q1402 | 937 0205 303 | Transistor RNC1404 | | R1401 | | Carbom (Chip) 1kohm 1/16W | VRS-CY1JB102J |
| Q1403 | 937 0205 206 | Transistor RN2404 | | R1404 | | Carbom (Chip) 1kohm 1/16W | VRS-CY1JB102J |
| Q1404 | 937 0205 303 | Transistor PNC1404 | | R1406,1407 | | Carbom (Chip) 3.3kohm 1/16W | VRS-CY1JB332J |
| Q1451 | 937 0205 400 | Transistor RNC1407 | | R1408 | | Carbom (Chip) 100kohm 1/16W | VRS-CY1JB104J |
| Q1601 | 937 0104 307 | Transistor 2SA1314C | | R1409 | | Carbom (Chip) 1kohm 1/16W | VRS-CY1JB102J |
| Q1801 | 937 0104 307 | Transistor 2SA1314C | | R1412 | | Carbom (Chip) 100kohm 1/16W | VRS-CY1JB104J |
| Q1802,1803 | 937 0213 900 | Transistor RN1406 | | R1413 | | Carbom (Chip) 3.3kohm 1/16W | VRS-CY1JB332J |
| Q1807 | 937 0104 307 | Transistor 2SA1314C | | R1414 | 937 9958 664 | Carbom (Chip) 10kohm 1/16W | VRS-CY1JB103J |
| Q1820 | 937 0214 006 | Transistor 2SA1162C | | R1415 | | Carbom (Chip) 1kohm 1/16W | VRS-CY1JB102J |
| Q1821,1822 | 937 0205 400 | Transistor RNC1407 | | R1416 | 937 9958 664 | Carbom (Chip) 10kohm 1/16W | VRS-CY1JB103J |
| D1251,1252 | 937 0104 530 | Diode SB0209CP-1 | | R1418 | | Carbom (Chip) 47ohm 1/16W | VRS-CY1JB470J |
| D1990 | 937 0104 514 | Diode 1SS372 | | R1420 | | Carbom (Chip) 1kohm 1/16W | VRS-CY1JB102J |
| RESISTORS GROUP | | | | | | | |
| R1100 | | Carbom (Chip) 27ohm 1/8W | VRS-TQ2BB270J | R1422-1424 | | Carbom (Chip) 10kohm 1/16W | VRS-CY1JB103J |
| R1102 | | Carbom (Chip) 560ohm 1/16W | VRS-CY1JB561J | R1425 | | Carbom (Chip) 2.7kohm 1/16W | VRS-CY1JB272J |
| R1105 | | Carbom (Chip) 390kohm 1/16W | VRS-CY1JB394J | R1426 | | Carbom (Chip) 1kohm 1/16W | VRS-CY1JB102J |
| R1106 | 937 9958 664 | Carbom (Chip) 10kohm 1/16W | VRS-CY1JB103J | R1427 | | Carbom (Chip) 4.7kohm 1/16W | VRS-CY1JB472J |
| R1107 | | Carbom (Chip) 1ohm 1/16W | VRS-CY1JB1R0J | R1428 | | Carbom (Chip) 1kohm 1/16W | VRS-CY1JB102J |
| R1150-1154 | 937 9958 729 | Carbom (Chip) 22kohm 1/16W | VRS-CY1JB223J | R1429,1430 | | Carbom (Chip) 10kohm 1/16W | VRS-CY1JB103J |
| R1155 | | Carbom (Chip) 56kohm 1/16W | VRS-CY1JB563J | R1431 | | Carbom (Chip) 0ohm | VRS-CY1JB000J |
| R1166 | | Carbom (Chip) 1.2kohm 1/16W | VRS-CY1JB122J | R1452 | | Carbom (Chip) 3.3kohm 1/16W | VRS-CY1JB332J |
| | | | | R1454 | | Carbom (Chip) 1kohm 1/16W | VRS-CY1JB102J |
| | | | | R1456 | | Carbom (Chip) 1kohm 1/16W | VRS-CY1JB102J |
| | | | | R1458 | | Carbom (Chip) 6.8kohm 1/16W | VRS-CY1JB682J |
| | | | | R1459 | 937 9958 664 | Carbom (Chip) 10kohm 1/16W | VRS-CY1JB103J |
| | | | | R1460 | | Carbom (Chip) 6.8kohm 1/16W | VRS-CY1JB682J |
| | | | | R1461 | 937 9958 664 | Carbom (Chip) 10kohm 1/16W | VRS-CY1JB103J |
| | | | | R1462 | | Carbom (Chip) 6.8kohm 1/16W | VRS-CY1JB682J |
| | | | | R1463 | 937 9958 664 | Carbom (Chip) 10kohm 1/16W | VRS-CY1JB103J |
| | | | | R1464 | | Carbom (Chip) 220ohm 1/16W | VRS-CY1JB221J |
| | | | | R1466 | | Carbom (Chip) 220ohm 1/16W | VRS-CY1JB221J |
| | | | | R1471 | 937 9958 664 | Carbom (Chip) 10kohm 1/16W | VRS-CY1JB103J |
| | | | | R1472 | | Carbom (Chip) 47kohm 1/16W | VRS-CY1JB473J |
| | | | | R1473 | | Carbom (Chip) 100kohm 1/16W | VRS-CY1JB104J |
| | | | | R1474-1476 | | Carbom (Chip) 1kohm 1/16W | VRS-CY1JB102J |
| | | | | R1477 | 937 9958 664 | Carbom (Chip) 10kohm 1/16W | VRS-CY1JB103J |
| | | | | R1609 | | Carbom (Chip) 1.5kohm 1/16W | VRS-CY1JB152J |

| Ref. No. | Part No. | Part Name | Remarks | Ref. No. | Part No. | Part Name | Remarks |
|------------|--------------|-----------------------------|---------------|-------------------------|--------------|-----------------------------|---------------|
| R1610 | | Carbom (Chip) 30kohm 1/16W | VRS-CY1JB303D | R1965 | 937 9958 664 | Carbom (Chip) 10kohm 1/16W | VRS-CY1JB103J |
| R1611 | | Carbom (Chip) 12kohm 1/16W | VRS-CY1JB123D | R1967 | | Carbom (Chip) 47ohm 1/16W | VRS-CY1JB470J |
| R1612 | | Carbom (Chip) 56kohm 1/16W | VRS-CY1JB563J | R1968 | | Carbom (Chip) 220ohm 1/16W | VRS-CY1JB221J |
| R1613 | | Carbom (Chip) 27kohm 1/16W | VRS-CY1JB273J | R1969 | | Carbom (Chip) 56ohm 1/8W | VRS-TQ2BB560J |
| R1614 | | Carbom (Chip) 18kohm 1/16W | VRS-CY1JB183D | R1973 | | Carbom (Chip) 6.8kohm 1/16W | VRS-CY1JB682J |
| R1617 | | Carbom (Chip) 47kohm 1/16W | VRS-CY1JB473J | R1974 | | Carbom (Chip) 220ohm 1/16W | VRS-CY1JB221J |
| R1620 | | Carbom (Chip) 0ohm | VRS-CY1JB000J | R1994 | | Carbom (Chip) 47ohm 1/16W | VRS-CY1JB470J |
| R1650 | 937 9958 664 | Carbom (Chip) 10kohm 1/16W | VRS-CY1JB103J | R1995 | | Carbom (Chip) 0ohm | VRS-CY1JB000J |
| R1651 | | Carbom (Chip) 100kohm 1/16W | VRS-CY1JB104J | RC120 | | Carbom (Chip) 0ohm | VRS-CY1JB000J |
| R1652 | | Carbom (Chip) 10kohm 1/16W | VRS-CY1JB103J | LR190 | | Carbom (Chip) 22ohm 1/10W | VRS-TV2AB220J |
| R1653 | | Carbom (Chip) 100kohm 1/16W | VRS-CY1JB104J | J1405 | 937 9958 664 | Carbom (Chip) 10kohm 1/16W | VRS-CY1JB103J |
| R1654 | | Carbom (Chip) 6.8kohm 1/16W | VRS-CY1JB682J | J1720 | 937 9955 201 | Carbom (Chip) 0ohm | VRS-TV2AB000J |
| R1655 | 937 9958 732 | Carbom (Chip) 120kohm 1/16W | VRS-CY1JB124J | J1730 | | Carbom (Chip) 0ohm | VRS-CY1JB000J |
| R1656 | | Carbom (Chip) 6.8kohm 1/16W | VRS-CY1JB682J | J1920 | | Carbom (Chip) 0ohm | VRS-CY1JB000J |
| R1657 | 937 9958 732 | Carbom (Chip) 120kohm 1/16W | VRS-CY1JB124J | J1922 | | Carbom (Chip) 0ohm | VRS-CY1JB000J |
| R1658 | | Carbom (Chip) 15kohm 1/16W | VRS-CY1JB153J | J1950 | | Carbom (Chip) 0ohm | VRS-CY1JB000J |
| R1659 | | Carbom (Chip) 82kohm 1/16W | VRS-CY1JB823J | J1963 | | Carbom (Chip) 0ohm | VRS-CY1JB000J |
| R1660 | | Carbom (Chip) 15kohm 1/16W | VRS-CY1JB153J | | | | |
| R1661 | | Carbom (Chip) 82kohm 1/16W | VRS-CY1JB823J | CAPACITORS GROUP | | | |
| R1662 | 937 9958 664 | Carbom (Chip) 10kohm 1/16W | VRS-CY1JB103J | C1101 | | Ceramic (Chip) 1μF/6.3V | VCKYTV0JB105K |
| R1663 | | Carbom (Chip) 62kohm 1/16W | VRS-CY1JB623J | C1102 | | Ceramic (Chip) 1μF/6.3V | VCKYTV0JB105K |
| R1664 | 937 9958 664 | Carbom (Chip) 10kohm 1/16W | VRS-CY1JB103J | C1103 | 937 9958 004 | Ceramic (Chip) 1μF/16V | VCKYTV1CF105Z |
| R1665 | | Carbom (Chip) 62kohm 1/16W | VRS-CY1JB623J | C1104 | | Ceramic (Chip) 0.027μF/50V | VCKYTV1HB273K |
| R1666,1667 | 937 9958 729 | Carbom (Chip) 22kohm 1/16W | VRS-CY1JB223J | C1105 | | Ceramic (Chip) 1μF/6.3V | VCKYTV0JB105K |
| R1668,1669 | | Carbom (Chip) 6.8kohm 1/16W | VRS-CY1JB682J | C1106 | 937 9955 845 | Ceramic (Chip) 0.47μF/16V | VCKYTV1CB474K |
| R1708 | | Carbom (Chip) 6.8kohm 1/16W | VRS-CY1JB682J | C1107 | 937 9955 887 | Ceramic (Chip) 0.0047μF/50V | VCKYTV1HB472K |
| R1733 | | Carbom (Chip) 1kohm 1/16W | VRS-CY1JB102J | C1109 | | Ceramic (Chip) 1μF/6.3V | VCKYTV0JB105K |
| R1758,1759 | | Carbom (Chip) 1kohm 1/16W | VRS-CY1JB102J | C1110 | | Ceramic (Chip) 0.47μF/16V | VCKYTV1CB474K |
| R1801 | | Carbom (Chip) 1.8kohm 1/16W | VRS-CY1JB182J | C1111 | | Ceramic (Chip) 0.015μF/50V | VCKYTV1HB153K |
| R1802 | | Carbom (Chip) 270ohm 1/16W | VRS-CY1JB271J | C1112-1116 | | Ceramic (Chip) 270pF/50V | VCCCCY1HH271J |
| R1804 | | Carbom (Chip) 220kohm 1/16W | VRS-CY1JB224J | C1121 | 937 9958 004 | Ceramic (Chip) 1μF/16V | VCKYTV1CF105Z |
| R1805 | | Carbom (Chip) 100kohm 1/16W | VRS-CY1JB104J | C1145 | 937 9958 211 | Ceramic (Chip) 0.033μF/16V | VCKYCY1CB333K |
| R1808 | | Carbom (Chip) 27kohm 1/16W | VRS-CY1JB273J | C1202,1203 | 937 9958 004 | Ceramic (Chip) 1μF/16V | VCKYTV1CF105Z |
| R1809 | | Carbom (Chip) 390ohm 1/16W | VRS-CY1JB391J | C1204,1205 | 937 9958 114 | Ceramic (Chip) 12pF/50V | VCCCCY1HH120J |
| R1820,1821 | | Carbom (Chip) 1ohm 1/10W | VRS-TY2AB1R0J | C1206,1207 | | Ceramic (Chip) 1μF/16V | VCKYTV1CF105Z |
| R1827 | | Carbom (Chip) 270ohm 1/16W | VRS-CY1JB271J | C1208 | 937 9958 224 | Ceramic (Chip) 0.047μF/16V | VCKYCY1CB473K |
| R1901 | 937 9955 421 | Carbom (Chip) 470ohm 1/10W | VRS-TY2AB471J | C1209-1211 | | Ceramic (Chip) 1μF/16V | VCKYTV1CF105Z |
| R1902 | | Carbom (Chip) 1.8kohm 1/10W | VRS-TY2AB182J | C1251 | | Ceramic (Chip) 0.027μF/16V | VCKYCY1CB273K |
| R1903,1904 | | Carbom (Chip) 820ohm 1/10W | VRS-TY2AB821J | C1252 | | Ceramic (Chip) 120pF/50V | VCCCCY1HH121J |
| R1927 | | Carbom (Chip) 22ohm 1/10W | VRS-TY2AB220J | C1254 | | Ceramic (Chip) 10μF/10V | RC-KZ0002AWZZ |
| R1939 | | Carbom (Chip) 1kohm 1/16W | VRS-CY1JB102J | C1255 | | Ceramic (Chip) 4.7μF/10V | RC-KZ0003AWZZ |
| R1940 | | Carbom (Chip) 220ohm 1/16W | VRS-CY1JB221J | C1401,1402 | | Ceramic (Chip) 0.047μF/16V | VCKYCY1CB473K |
| R1947 | | Carbom (Chip) 47ohm 1/10W | VRS-TY2AB470J | C1403 | | Ceramic (Chip) 680pF/50V | VCKYCY1HB681K |
| R1951 | | Carbom (Chip) 0ohm | VRS-CY1JB000J | C1405 | 937 9958 266 | Ceramic (Chip) 0.1μF/25V | VCKYCY1EF104Z |
| R1952,1953 | | Carbom (Chip) 47ohm 1/16W | VRS-CY1JB470J | | | | |
| R1961 | | Carbom (Chip) 100ohm 1/16W | VRS-CY1JB101J | | | | |
| R1962 | | Carbom (Chip) 220kohm 1/16W | VRS-CY1JB224J | | | | |
| R1963 | | Carbom (Chip) 1.5kohm 1/16W | VRS-CY1JB152J | | | | |
| R1964 | | Carbom (Chip) 6.8kohm 1/16W | VRS-CY1JB682J | | | | |

| Ref. No. | Part No. | Part Name | Remarks | Ref. No. | Part No. | Part Name | Remarks | Q'ty |
|------------|--------------|-----------------------------|---------------|--------------------------|--------------|---------------------|---------|------|
| C1406 | | Ceramic (Chip) 1μF/16V | VCKYTV1CF105Z | OTHER PARTS GROUP | | | | |
| C1407 | 937 9958 127 | Ceramic (Chip) 0.022μF/ 50V | VCKYCY1CB223K | L1101 | 937 0214 103 | Coil 10μH | | 1 |
| C1412 | | Ceramic (Chip) 680pF/50V | VCKYCY1HB681K | L1102 | 937 0214 200 | Coil 0.47μH | | 1 |
| C1421-1424 | 937 9958 127 | Ceramic (Chip) 0.022μF/16V | VCKYCY1CB223K | L1201 | 937 0214 200 | Coil 0.47μH | | 1 |
| C1425 | 937 9958 224 | Ceramic (Chip) 0.047μF/16V | VCKYCY1CB473K | L1203 | 937 0214 307 | Coil 4.7μH | | 1 |
| C1601,0602 | 937 9958 004 | Ceramic (Chip) 1μF/16V | VCKYTV1CF105Z | L1251 | 937 0214 404 | Coil 47μH | | 1 |
| C1604 | | Ceramic (Chip) 56pF/50V | VCCCCY1HH560J | L1601 | 937 0214 501 | Coil 1μH | | 1 |
| C1605 | 937 9958 295 | Electrolytic 100μF/10V | VCEAPS107AF1A | L1950 | 937 0214 501 | Coil 1μH | | 1 |
| C1609 | 937 9955 120 | Ceramic (Chip) 1μF/16V | VCKYTV1CF105Z | XL1201 | 937 0214 608 | Crystal 33.8688MHz | | 1 |
| C1610 | | Ceramic (Chip) 10μF/10V | RC-KZ0002AWZZ | CN1101 | 937 0214 802 | 23P plug | | 1 |
| C1631 | 937 9958 004 | Ceramic (Chip) 1μF/16V | VCKYTV1CF105Z | CN1252 | 937 0148 318 | 2P plug | | 1 |
| C1650-1653 | 937 9958 350 | Ceramic (Chip) 820pF/50V | VCCSCY1HL821J | CN1601 | 937 0214 815 | 5P plug | | 1 |
| C1654,1655 | | Ceramic (Chip) 0.015μF/25V | VCKYCY1EB153K | CN1602 | 937 0214 828 | 2P plug | | 1 |
| C1656,1657 | | Ceramic (Chip) 0.0056μF/50V | VCKYCY1HB562K | CN1603 | 937 0214 831 | 2P plug | | 1 |
| C1661 | 937 9958 295 | Electrolytic 100μF/10V | VCEAPS107AF1A | CN1604 | 937 0214 844 | 2P plug | | 1 |
| C1724 | 937 9958 486 | Ceramic (Chip) 22pF/50V | VCCCCY1HH220J | CN1901 | 937 0214 857 | 5P socket | | 1 |
| C1801 | 937 9958 088 | Ceramic (Chip) 2.2μF/16V | VCKYTQ1CF225Z | CN1902 | 937 0214 860 | 24P socket | | 1 |
| C1802 | 937 9958 295 | Electrolytic 100μF/10V | VCEAPS107AF1A | CN1904 | 937 0203 509 | 4P plug | | 1 |
| C1803 | 937 9958 088 | Ceramic (Chip) 2.2μF/16V | VCKYTQ1CF225Z | CW1901 | 937 0214 909 | 5P connector Ass'y | | 1 |
| C1805 | 937 9958 004 | Ceramic (Chip) 1μF/16V | VCKYTV1CF105Z | CW1903 | 937 0215 005 | 2P connector Ass'y | | 1 |
| C1806 | | Ceramic (Chip) 10μF/10V | RC-KZ0002AWZZ | M901 | 937 0215 102 | Spindle motor Ass'y | | 1 |
| C1807 | | Electrolytic 220μF/4V | VCEAPS227AF0G | M902 | 937 0215 209 | Feed motor Ass'y | | 1 |
| C1913 | 937 9958 486 | Ceramic (Chip) 22pF/50V | VCCCCY1HH220J | M903 | 937 0215 306 | Loading motor Ass'y | | 1 |
| C1927 | 937 9958 224 | Ceramic (Chip) 0.047μF/16V | VCKYCY1CB473K | SW1952 | 937 0215 403 | Push switch | | 1 |
| C1951 | 937 9958 224 | Ceramic (Chip) 0.047μF/16V | VCKYCY1CB473K | SW1953 | 937 0152 207 | Push switch | | 1 |
| C1952 | 937 9958 499 | Ceramic (Chip) 0.01μF/16V | VCKYCY1CB103K | SW1954,1955 | 937 0215 500 | Push switch | | 2 |
| C1953 | 937 9958 253 | Ceramic (Chip) 0.47μF/16V | VCKYCY1CB472K | SW1956 | 937 0215 607 | Push switch | | 1 |
| C1954 | 937 9958 509 | Ceramic (Chip) 15pF/50V | VCCCCY1HH150J | | | | | |
| C1955 | 937 9958 224 | Ceramic (Chip) 0.047μF/16V | VCKYCY1CB473K | | | | | |
| C1956 | 937 9958 512 | Electrolytic 47μF/6.3V | VCEAPS476AF0J | | | | | |
| C1957 | 937 9958 525 | Electrolytic 100μF/6.3V | VCEAPS107AF0J | | | | | |
| C1958 | 937 9958 224 | Ceramic (Chip) 0.047μF/16V | VCKYCY1CB473K | | | | | |
| C1964 | 937 9958 376 | Ceramic (Chip) 1000pF/16V | VCKYCY1HB102K | | | | | |
| C1990 | | Ceramic (Chip) 1μF/6.3V | VCKYTV0JB105K | | | | | |
| C1991 | | Ceramic (Chip) 10μF/10V | RC-KZ0002AWZZ | | | | | |
| C1992 | 937 9958 266 | Ceramic (Chip) 0.1μF/25V | VCKYCY1EF104Z | | | | | |
| JC171 | 937 9955 874 | Ceramic (Chip) 22pF/50V | VCCCTV1HH220J | | | | | |
| JC196 | 937 9955 874 | Ceramic (Chip) 22pF/50V | VCCCTV1HH220J | | | | | |

MDM97 MD MECHANISM EXPLODED VIEW



MDM97 MD MECHANISM PARTS LIST OF EXPLODED VIEW

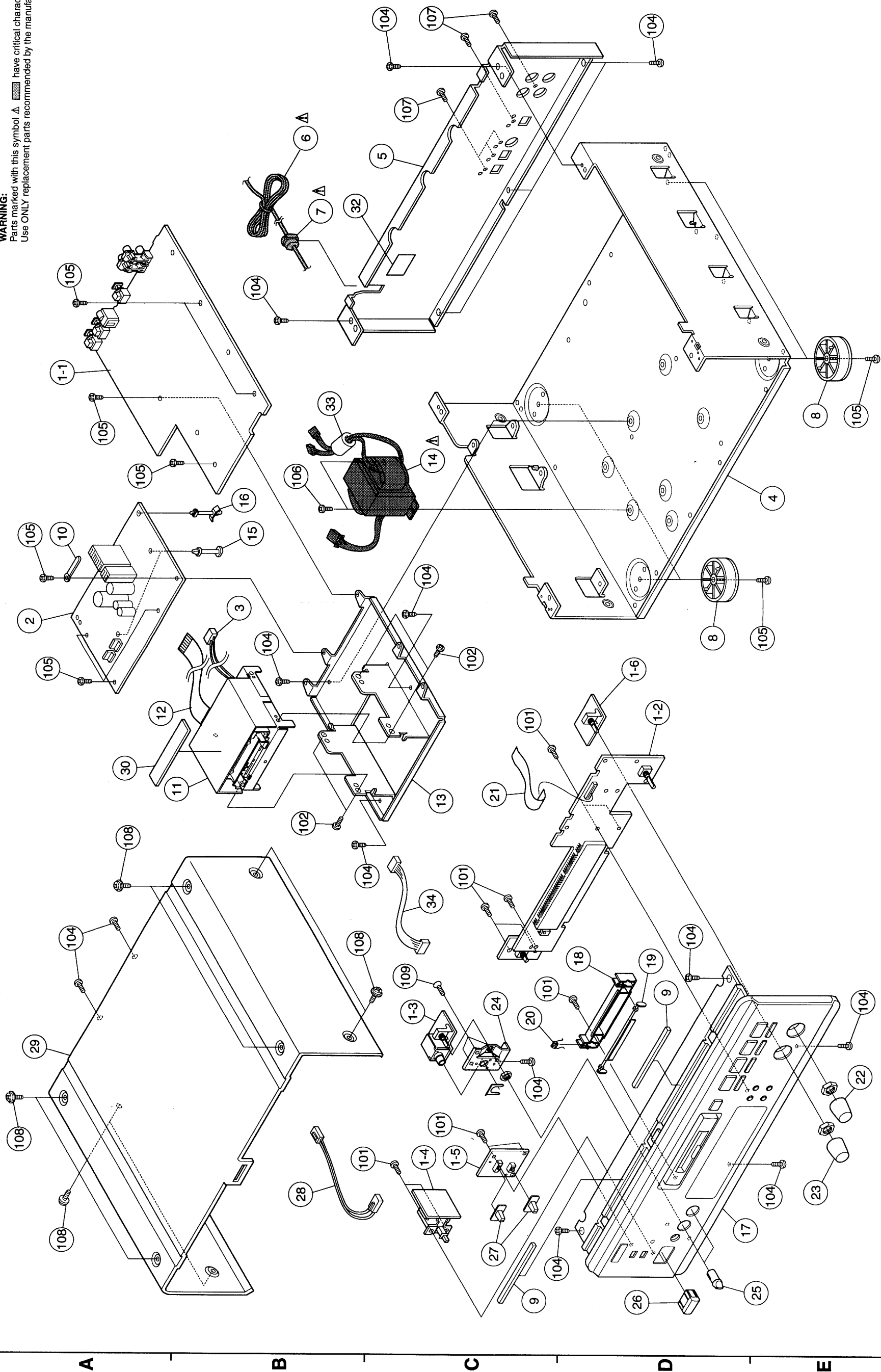
| Ref. No. | Part No. | Part Name | Remarks | Qty |
|----------|--------------|-----------------------|---------|-----|
| 1 | 937 0215 704 | MD guide bracket (A) | | 1 |
| 2 | 937 0215 801 | MD guide bracket (A) | | 1 |
| 3 | 937 0215 908 | Base frame | | 1 |
| 4 | 937 0216 004 | Drive chassis | | 1 |
| 5 | 937 0216 101 | Cartridge holder | | 1 |
| 6 | 937 0216 208 | Cam plate lever | | 1 |
| 7 | 937 0216 305 | Head arm up lever | | 1 |
| 8 | 937 0216 402 | Holder arm | | 1 |
| 9 | 937 0216 509 | Roller arm lever | | 1 |
| 10 | 937 0216 606 | Guide lever | | 1 |
| 11 | 937 0216 703 | Catch lever | | 1 |
| 12 | 937 0216 800 | Slider lever | | 1 |
| 13 | 937 0216 907 | Roller holder spring | | 1 |
| 14 | 937 0216 910 | Spring | | 1 |
| 15 | 937 0160 202 | Shaft arm spring | | 1 |
| 16 | 937 0162 006 | Holder arm spring | | 1 |
| 17 | 937 0159 705 | Lack spring | | 1 |
| 18 | 379 0180 509 | Catch spring | | 1 |
| 19 | 937 0217 003 | Drive grip spring (A) | | 1 |
| 20 | 937 0216 923 | Drive shaft spring | | 1 |
| 21 | 937 0161 502 | Roller arm spring | | 1 |
| 22 | 937 0217 100 | Loading gear (B) | | 1 |
| 23 | 937 0217 207 | Drive gear | | 1 |
| 24 | 937 0217 304 | Loading gear (A) | | 1 |
| 25 | 937 0217 401 | Roller gear | | 1 |
| 26 | 937 0217 508 | Lack gear | | 1 |
| 29 | 937 0217 605 | Roller holder | | 1 |
| 30 | 937 0217 702 | Roller | | 1 |
| 31 | 937 0217 809 | Drive shaft | | 1 |
| 32 | 937 0217 906 | Loading gear shaft | | 1 |
| 33 | 937 0159 501 | Pickup slide shaft | | 1 |
| 34 | 937 0160 406 | Pickup guide shaft | | 1 |
| 35 | 937 0218 002 | Cover | | 1 |
| 37 | 937 0163 005 | Cushion (A) | | 2 |
| 38 | 937 0163 102 | Cushion (B) | | 2 |
| 39 | 937 0218 109 | Head cushion | | 1 |
| 40 | 937 0218 206 | Magnetic head | | 1 |
| 41 | 937 0218 303 | Optical pickup unit | | 1 |
| M901 | 937 0215 102 | MD Spindle motor Assy | | 1 |
| M902 | 937 0215 209 | MD Feed motor Assy | | 1 |
| M903 | 937 0215 306 | MD Loading motor Assy | | 1 |
| SW1952 | 937 0215 403 | Push switch | | 1 |
| SW1953 | 937 0152 207 | Push switch | | 1 |
| SW1954 | 937 0215 500 | Push switch | | 1 |
| SW1955 | 937 0215 500 | Push switch | | 1 |
| SW1956 | 937 0215 607 | Push switch | | 1 |
| CW1901 | 937 0214 909 | SP connector Assy | | 1 |

| Ref. No. | Part No. | Part Name | Remarks | Qty |
|--------------------------|--------------|--------------------------------------|---------|-----|
| SCREWS & NUTS | | | | |
| 601 | 937 0218 400 | Screw Φ 1.7x9.5 mm | | 4 |
| 602 | 937 0218 413 | Screw Φ 1.7x7.5 mm | | 2 |
| 603 | 937 0218 426 | Screw Φ 1.7x2 mm | | 4 |
| 604 | 937 0105 924 | Screw Φ 1.4x2.2 mm | | 2 |
| 605 | 937 0161 609 | Screw Φ 1.7x3 mm | | 1 |
| 606 | 937 0161 007 | Screw Φ 1.7x2.5 mm | | 3 |
| 607 | 937 0163 607 | Screw Φ 1.7x8.9 mm | | 4 |
| 608 | 937 0161 900 | Screw Φ 1.7x5 mm | | 2 |
| 609 | 937 0161 405 | Washer Φ 1.5x Φ 3.2x0.5 mm | | 2 |
| 610 | 937 0159 909 | Washer Φ 1.2x Φ 3x0.25 mm | | 2 |
| 611 | 937 0163 403 | Screw Φ 2x4 mm | | 2 |
| 612 | 937 0163 500 | Screw Φ 1.7x3 mm | | 4 |

EXPLODED VIEW

1 2 3 4 5 6 7 8

WARNING:
Parts marked with this symbol Δ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.



PARTS LIST OF EXPLODED VIEW

| Ref. No. | Part No. | Part Name | Remarks | Qty |
|----------|--------------|--------------------------|-----------------------------|-----|
| 1 | 1U-3073A | Main P.W.B. Unit Assy | | 1 |
| 1-1 | 1U-3073-1 | Main unit | | (1) |
| 1-2 | 1U-3073-2 | Display unit | | (1) |
| 1-3 | 1U-3073-3 | Head phone unit | | (1) |
| 1-4 | 1U-3073-4 | Power switch unit | | (1) |
| 1-5 | 1U-3073-5 | Timer unit | | (1) |
| 1-6 | 1U-3073-6 | REC VR unit | | (1) |
| 2 | 1U-3074A | Power P.W.B. Unit Assy | Except U.S.A./Canada models | 1 |
| 2-1 | 1U-3074-1 | Power unit | Canada models | (1) |
| 3 | 203 6504 002 | 4P shield connector cord | | 1 |
| 4 | 411 1371 200 | Chassis | | 1 |
| 5 | Note | Rear panel | | 1 |
| 6 | Note | AC cord with connector | | 1 |
| 7 | 445 0056 008 | Card bush | | 1 |
| 8 | 104 0194 205 | Foot ass'y | | 4 |
| 9 | 461 0501 005 | Rubber sheet | | 2 |
| 10 | 445 0048 016 | Cord holder | L=50 | 1 |
| 11 | 337 0053 001 | MD mecha unit (MDM-97) | | 1 |
| 12 | 009 0146 013 | 24P FFC cable shield | | 1 |
| 13 | 412 4285 105 | Mecha chassis | | 1 |
| 14 | Note | Power trans. | | 1 |
| 15 | 412 2814 073 | Card spacer | L=18 | 2 |
| 16 | 409 0052 006 | Holder (A) | | 1 |
| 17 | 144 2572 409 | Front panel ass'y | Gold model | 1 |
| 17 | Note | Front panel ass'y | Black model | 1 |
| 18 | 441 1815 107 | Door holder | | 1 |
| 19 | 146 1653 008 | Door | Gold model | 1 |
| 19 | 146 1653 040 | Door | Black model | 1 |
| 20 | 463 0841 004 | Door spring | | 1 |
| 21 | 009 0105 009 | 25P FFC cable | | 1 |
| 22 | 112 0779 003 | Knob (maru) | Gold model | 1 |
| 22 | 112 0779 045 | Knob (maru) | Black model | 1 |
| 23 | 112 0779 016 | Knob (maru) | Gold model | 1 |
| 23 | 112 0812 009 | Knob (maru) | Black model | 1 |
| 24 | 412 4286 104 | Head phone bracket | | 1 |
| 25 | 112 0811 000 | Knob (Fuji) | Gold model | 2 |
| 25 | 112 0811 013 | Knob (Fuji) | Black model | 2 |
| 26 | 113 9213 084 | Power knob (P) ass'y | Gold model | 1 |
| 26 | 113 9213 000 | Power knob (P) ass'y | Black model | 1 |
| 27 | 113 1797 003 | Slide knob | Gold model | 2 |
| 27 | 113 1797 016 | Slide knob | Black model | 2 |
| 28 | 203 5132 051 | 3P VH-VH connector cord | | 1 |
| 29 | 102 9048 275 | Top cover | Gold model | 1 |
| 29 | 102 9048 262 | Top cover | Black model | 1 |
| 30 | 513 2065 002 | E2 laser caution | Europe/U.K. Asia models | 1 |
| 32 | 513 2404 058 | Fuse caution label | U.S.A./Canada models | 1 |
| 33 | 342 0020 007 | Ferrite core | | 1 |
| 34 | 203 8488 003 | SF PH-PH connector cord | | 1 |

| Ref. No. | Part No. | Part Name | Remarks | Qty |
|--------------------------|--------------|----------------------|-------------|-----|
| SCREWS & NUTS | | | | |
| 101 | 473 7508 017 | Screw 3X10 CBTS(P)-B | | 11 |
| 102 | 471 3303 016 | Screw 3X6 CBS-Z | | 4 |
| 103 | 471 3304 015 | Screw 3X8 CBS-Z | | 3 |
| 104 | 473 7015 018 | Screw 3X8 CBTS(S)-B | | 15 |
| 105 | 473 7002 018 | Screw 3X8 CBTS(S)-Z | | 12 |
| 106 | 473 7004 016 | Screw 4X6 CBTS(S)-Z | | 2 |
| 107 | 477 0064 107 | Fixing screw | | 5 |
| 108 | 477 0263 018 | 3P swelling screw | Gold model | 8 |
| 108 | 477 0263 005 | 3P swelling screw | Black model | 8 |
| 109 | 473 7511 004 | Screw 3X10 CBTS(P)-B | | 3 |

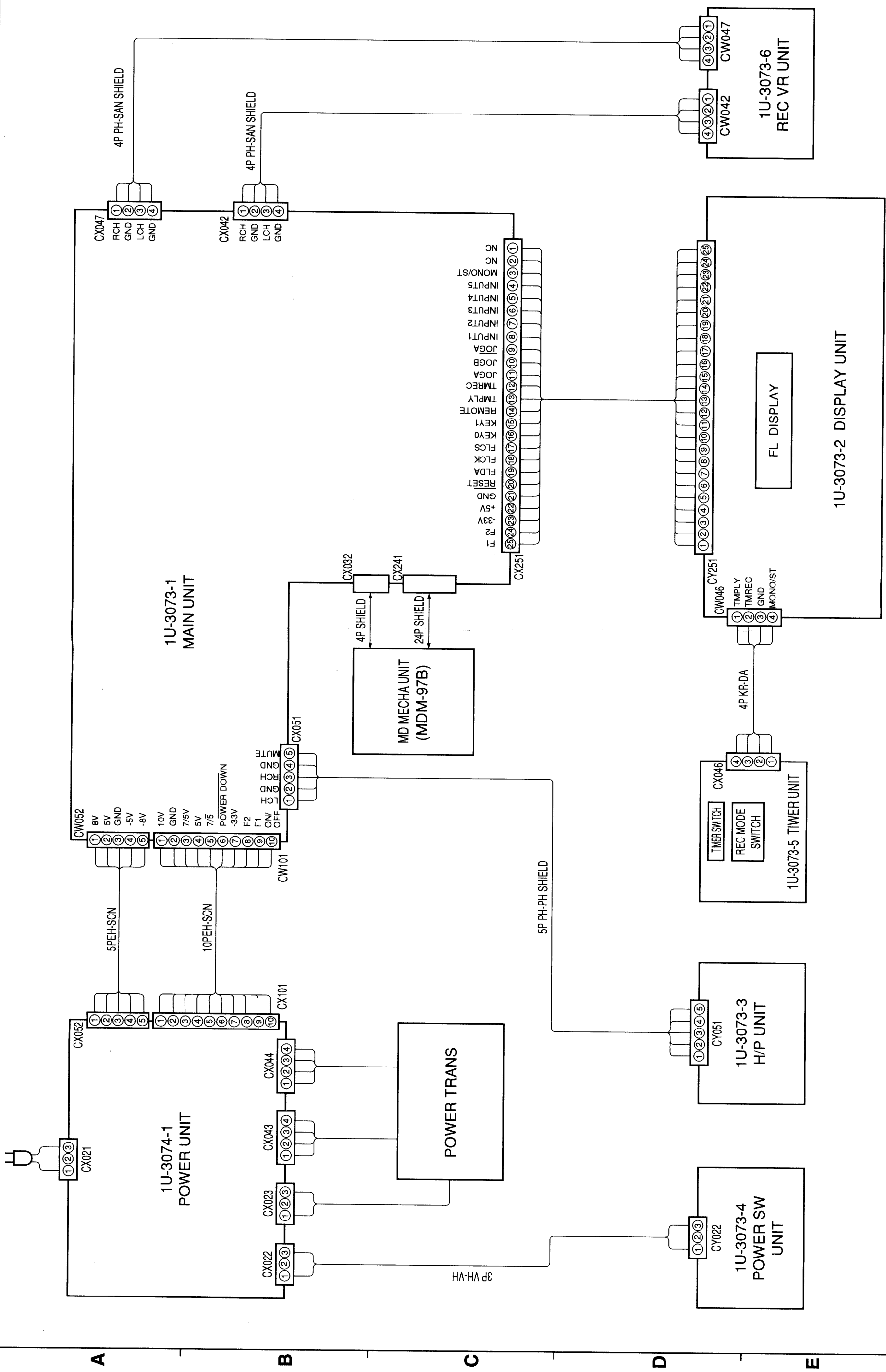
| PACKING & ACCESSORIES (Not included EXPLODED VIEW) | | | | |
|---|--------------|------------------------|-------------------------|-----|
| Ref. No. | Part No. | Part Name | Remarks | Qty |
| 201 | Note | Rating sheet | | 1 |
| 202 | 504 0168 004 | AC protect sheet | U.K. model only | 1 |
| 203 | 513 1381 004 | Manufacture date label | U.S.A./Canada models | 1 |
| 204 | 504 0092 060 | Stylen paper | | 1 |
| 205 | 505 0131 076 | Cabinet cover | | 1 |
| 206 | 503 1269 103 | Cushion | | 2 |
| 208 | 501 1977 075 | Carton case | | 1 |
| 209 | 513 9111 001 | Color label (gold) | Europe/Asia | 2 |
| 210 | 517 1340 005 | E2 POS label | Gold models | 1 |
| 210 | 517 1340 018 | E2 POS label | Europe gold model only | 1 |
| 210 | 517 1316 013 | UPC label | Europe black model only | 1 |
| 210 | 517 1342 061 | EK POS label | U.K. model only | 1 |
| 211 | 513 1389 006 | Control card | U.S.A./Canada models | 1 |
| 212 | 505 0038 030 | Poly. cover | | 1 |
| 213 | Note | Inst. manual | | 1 |
| 214 | 515 0671 601 | S.S. list (EX) | | 1 |
| 215 | 515 0690 307 | DEL warranty home | U.S.A./Canada models | 1 |
| 216 | 203 2360 004 | 2P pin cord | | 2 |
| 217 | 351 0001 017 | Optical cable | | 1 |
| 218 | 399 0473 003 | Remicon | FC-270 | 1 |

ADDEMDUM PARTS LIST
PARTS LIST OF EXPLODED VIEW

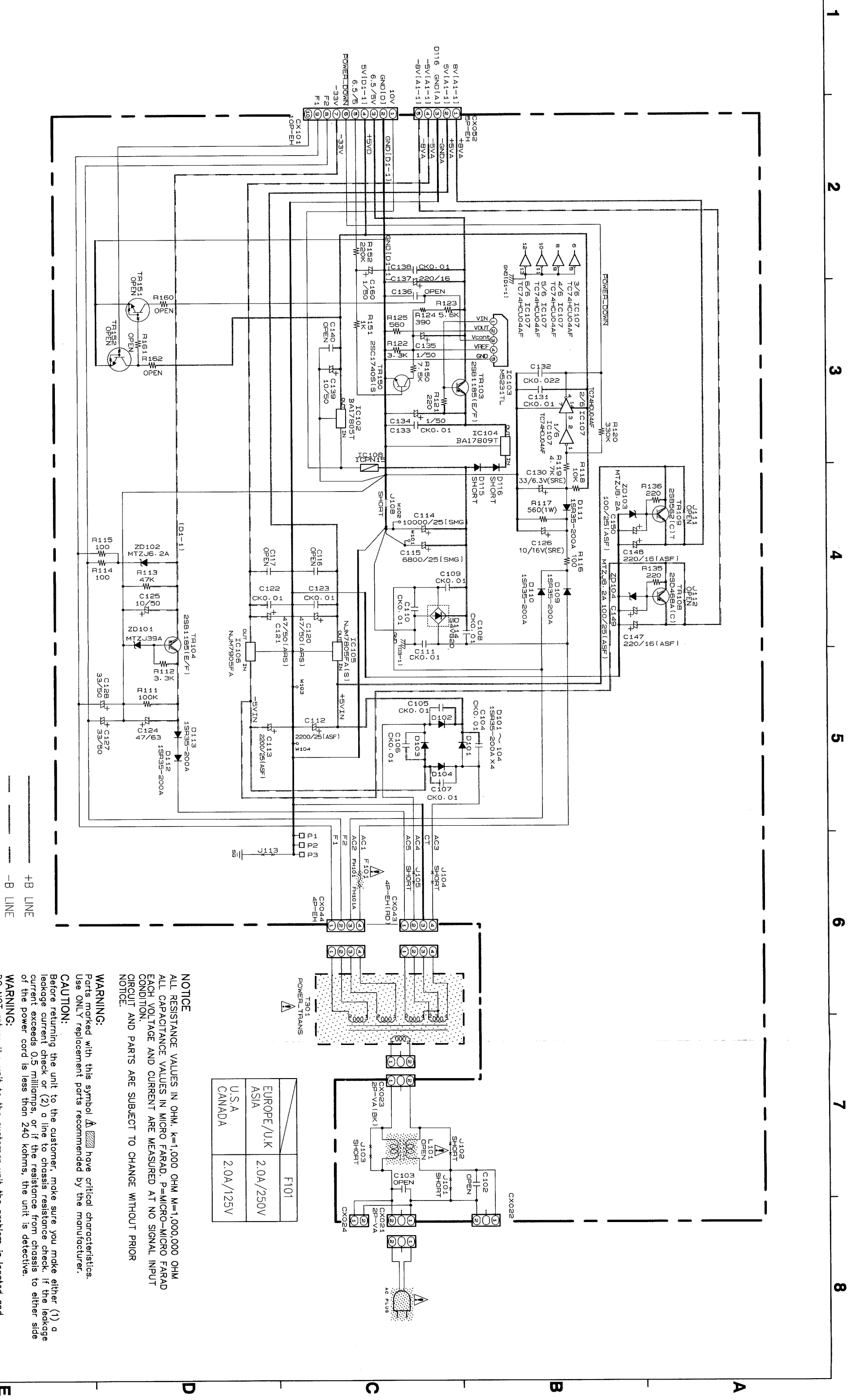
| Ref. No. | Part Name | Part No. | | | |
|----------|------------------------|---------------|--------------|--------------|--------------|
| | | U.S.A./Canada | Europe | U.K. | Asia |
| 5 | Rear panel | 105 1231 047 | 105 1231 034 | 105 1231 050 | 105 1231 034 |
| 6 | AC card with connector | 208 2110 004 | 206 2889 106 | 208 2128 009 | 206 2889 106 |
| 14 | Power trans. | 233 6241 007 | 233 6242 006 | 233 6242 006 | 233 6242 006 |
| 17 | Front panel ass'y | 144 2572 441 | 144 2572 412 | 144 2572 412 | — |
| 201 | Rating sheet | 513 1581 011 | 513 2689 022 | 513 2689 022 | 513 2689 035 |
| 213 | Inst. manual | 511 3213 006 | 511 3214 005 | 511 3214 005 | 511 3216 003 |

WIRING DIAGRAM


1 2 3 4 5 6 7 8



SCHEMATIC DIAGRAM (1/4)



NOTICE
 ALL RESISTANCE VALUES IN OHM. K=1,000 OHM M=1,000,000 OHM
 ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
 EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT
 CONDITION.
 CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR
 NOTICE.

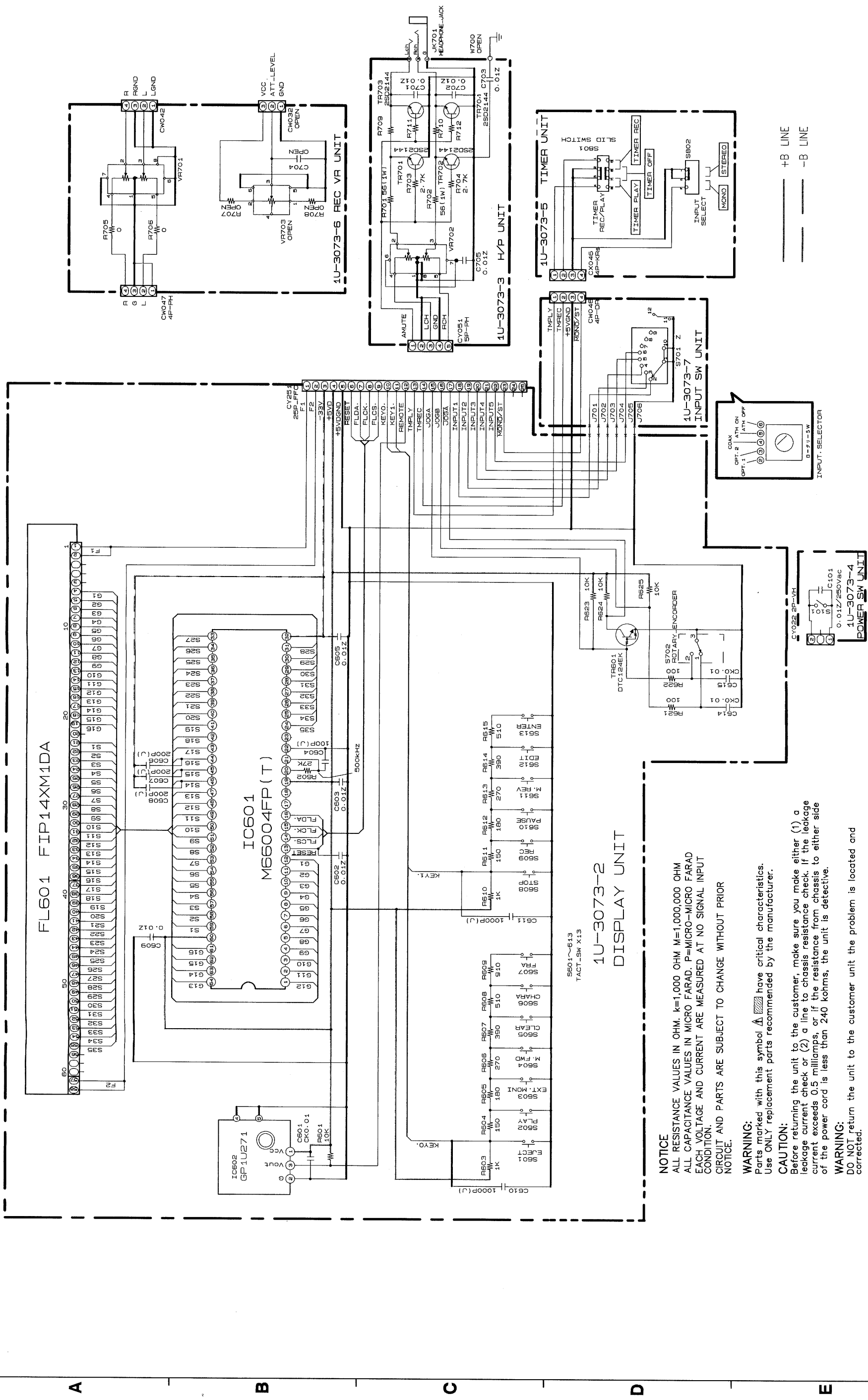
WARNING:
 Parts marked with this symbol  have critical characteristics.
 Use ONLY replacement parts recommended by the manufacturer.

CAUTION:
 Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamperes, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is defective.


WARNING:
 DO NOT return the unit to the customer until the problem is located and corrected.

SCHEMATIC DIAGRAM (2/4)

1 2 3 4 5 6 7 8



NOTICE
 ALL RESISTANCE VALUES IN OHM, K=1,000 OHM M=1,000,000 OHM
 ALL CAPACITANCE VALUES IN MICRO FARAD, P=MICRO-MICRO FARAD
 EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT
 CONDITION.
 CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR
 NOTICE.

WARNING:
 Parts marked with this symbol  have critical characteristics.
 Use ONLY replacement parts recommended by the manufacturer.

CAUTION:
 Before returning the unit to the customer, make sure you make either (1) a
 leakage current check or (2) a line to chassis resistance check. If the leakage
 current exceeds 0.5 milliamperes, or if the resistance from chassis to either side
 of the power cord is less than 240 kohms, the unit is defective.

WARNING:
 DO NOT return the unit to the customer until the problem is located and
 corrected.