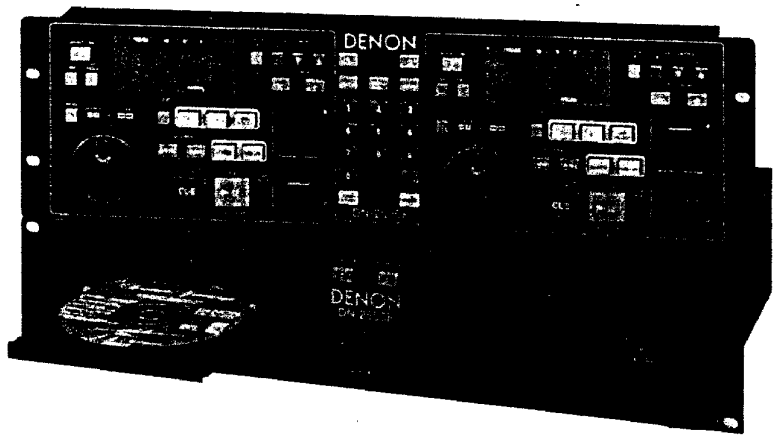
# DENON

Hi-Fi Component

# SERVICE MANUAL

# MODEL DN-2500F

## DOUBLE CD PLAYER

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NIPPON COLUMBIA CO., LTD.

## 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 CD player.
   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. DN-2500F Serial No. _____

**CAUTION**

**RISK OF ELECTRIC SHOCK DO NOT OPEN**

**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 uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user 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.

- **POUR LES MODELES AMERICAINS ET CANADIENS UNIQUEMENT**

**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

**NOTE:**

This CD player 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 DHHS RULES 21CFR SUBCHAPTER J APPLICABLE AT DATE OF MANUFACTURE

**CAUTION:**
**USE OF CONTROLS OR ADJUSTMENTS OR REFORMANCE 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.**

**NOTE:**
This unit may cause interference to radio and television reception if you do not operate it in strict accordance with this OPERATING INSTRUCTIONS.
This unit complies with Class B computing device rules in accordance with the specifications in Sub-part J or Part 15 of the FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. If the unit does cause interference to any radio or television reception, try to reduce it by one or more of the following means.

a) Turn the other unit to improve reception
b) Move this unit
c) Move this unit away from others
d) Plug this unit respectively into a different AC outlet

- **This is note in accordance with Section 15.838 of the FCC Rules.**

**CLASS 1 LASER PRODUCT**
**LUOKAN 1 LASERLAITE**
**KLASS 1 LASERAPPARAT**

"CLASS 1 LASER PRODUCT"

**ADVARSEL:** USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLING.

**VAROITUS!** LAITTEEN KÄYTTÄMINEN MUULLA KUIN TÄSSÄ KÄYTTÖOHJEESSA MAINITULLA TAVALLA SAATTAA ALTISTAA KÄYTTÄJÄN TURVALLISUUSLUOKAN 1 YLITTÄVÄLLE NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE.

**VARNING** OM APPARATEN ANVÄNDS PÅ ANNAT SÄTT ÄN I DENNA BRUKSANVISNING SPECIFICERATS, KAN ANVÄNDAREN UTSÄTTAS FÖR OSYNLIG LASERSTRÅLNING SOM ÖVERSKRIDER GRANSEN FÖR LASERKLASS 1.

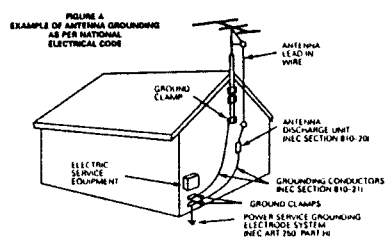


# SAFETY INSTRUCTIONS

1. Read Instructions – All the safety and operating instructions should be read before the appliance is operated.
2. Retain Instructions – The safety and operating instructions should be retained for future reference.
3. Heed Warnings – All warnings on the appliance and in the operating instructions should be adhered to.
4. Follow Instructions – All operating and use instructions should be followed.
5. Water and Moisture – The appliance should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.
6. Carts and Stands – The appliance should be used only with a cart or stand that is recommended by the manufacturer.

6A. 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.

7. Wall or Ceiling Mounting – The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. 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.
9. Heat – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
10. Power Sources – The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
11. Grounding or Polarization – Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.




12. Power-Cord Protection – Power-supply cords should be routed so that they are not likely to be walked on or pinched 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.
14. Cleaning – The appliance should be cleaned only as recommended by the manufacturer.
15. Power Lines – An outdoor antenna should be located away from power lines.
16. 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.
17. Nonuse Periods – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
18. Object and Liquid Entry – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
19. Damage Requiring Service – The appliance should be serviced by qualified service personnel when:
    A. The power-supply cord or the plug has been damaged; or
    B. Objects have fallen, or liquid has been spilled into the appliance; or
    C. The appliance has been exposed to rain; or
    D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
    E. The appliance has been dropped, or the enclosure damaged.
20. 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.

## RC-44

### CONTROL UNIT / STEUERUNGSTEIL / TELECOMMANDE / UNIDAD DE CONTROL / KONTROLLDEL / 控制機組

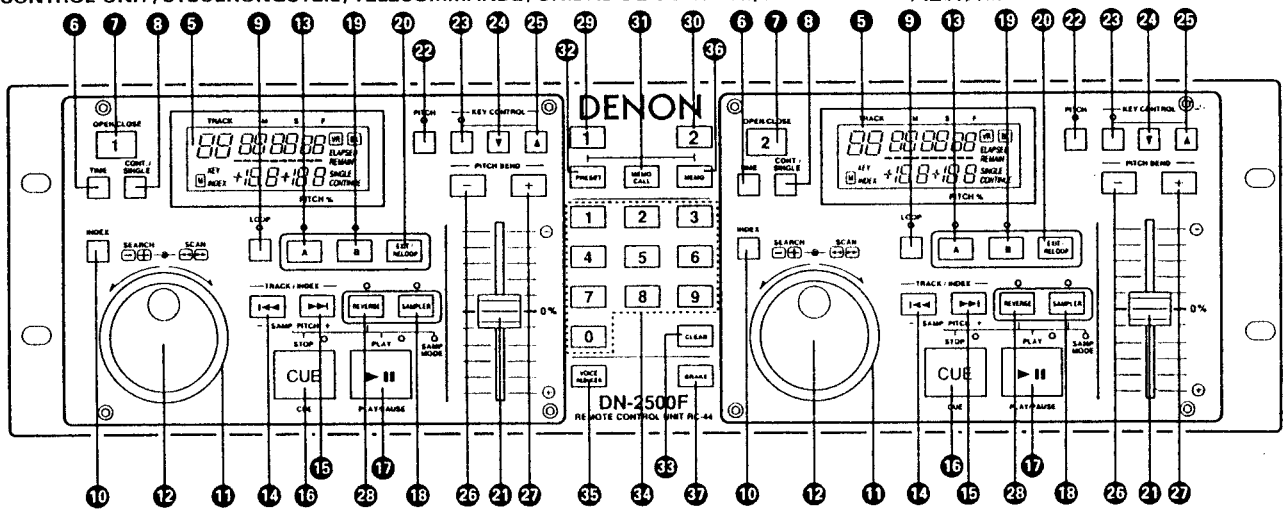



Figure 1 / Abbildung 1 / Figure 1 / Figura 1 / Figur 1 / 圖1

LCD

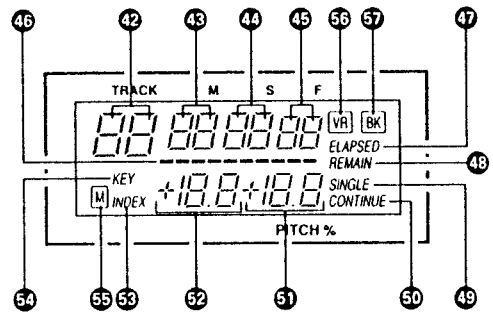
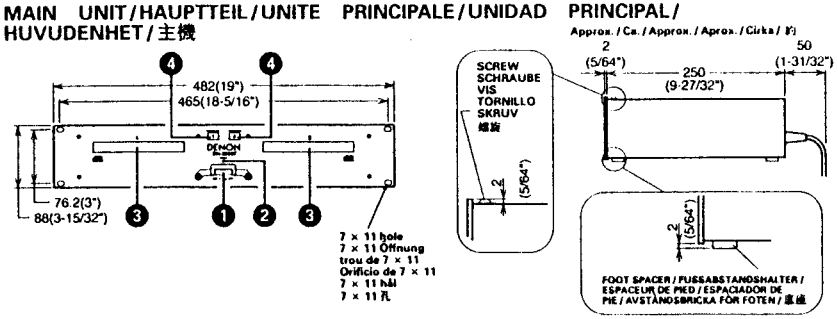



Figure 3 / Abbildung 3 / Figure 3 / Figura 3 / Figur 3 / 圖3

## DN-2500F

### MAIN UNIT / HAUPTTEIL / UNITE PRINCIPALE / UNIDAD PRINCIPAL / HUVUDENHET / 主機




REAR PANEL / RÜCKSEITE / PANNEAU ARRIERE / PANEL TRASERO / BAKPANEL / 背面

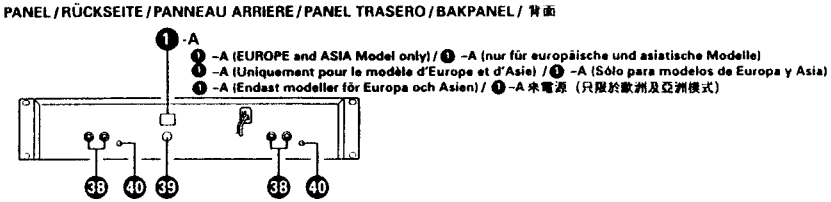
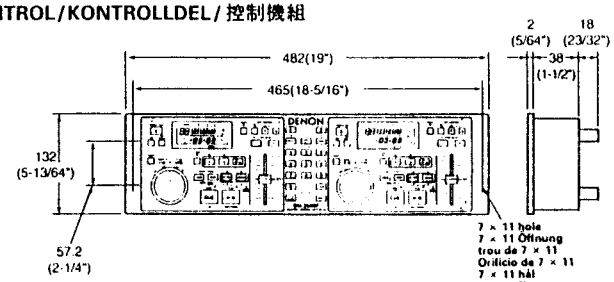



Figure 2 / Abbildung 2 / Figure 2 / Figura 2 / Figur 2 / 圖2

## RC-44

### CONTROL UNIT / STEUERUNGSTEIL / TELECOMMANDE / UNIDAD DE CONTROL / KONTROLLDEL / 控制機組




REAR PANEL / RÜCKSEITE / PANNEAU ARRIERE / PANEL TRASERO / BAKPANEL / 背面

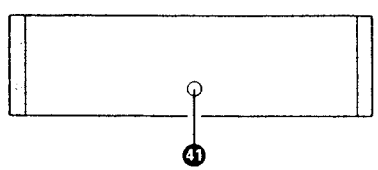
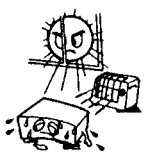


Figure 4 / Abbildung 4 / Figure 4 / Figura 4 / Figur 4 / 圖4

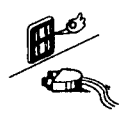
## NOTE ON USE / HINWEISE ZUM GEBRAUCH / OBSERVATIONS RELATIVES A L'UTILISATION NOTE SULL'USO / NOTAS SOBRE EL USO / ALVORENS TE GEBRUIKEN / OBSERVERA OBSERVAÇÕES QUANTO AO USO



- Avoid high temperatures.
  Allow for sufficient heat dispersion when installed on a rack.
- Vermeiden Sie hohe Temperaturen.
  Beachten Sie, daß eine ausreichend Luftzirkulation gewährleistet wird, wenn das Gerat auf ein Regal gestellt wird.
- Éviter des températures élevées.
  Tenir compte d'une dispersion de chaleur suffisante lors de l'installation sur une étagère.
- Evitate di esporre l'unità a temperature alte.
  Assicuratevi che ci sia un adeguata dispersione del calore quando installate l'unità in un mobile per componenti audio.
- Evite altas temperaturas.
  Permita la suficiente dispersión del calor cuando está instalado en la consola.
- Vermijd hoge temperaturen.
  Zorg voor een degelijk luchtcirculatie indien het apparaat op een rek wordt geplaatst.
- Undvik höga temperaturer.
  Se till att det finns möjlighet till god värmeavledning vid montering i ett rack.
- Evite temperaturas altas.
  Conceda suficiente dispersão de calor quando o equipamento for instalado numa prateleira.

- Handle the power cord carefully.
  Hold the plug when unplugging the cord.
- Gehen Sie vorsichtig mit dem Netzkabel um.
  Halten Sie das Kabel am Stecker, wenn Sie den Stecker herausziehen.
- Manipuler le cordon d'alimentation avec précaution.
  Tenir la prise lors du débranchement du cordon.
- Maneggiate il filo di alimentazione con cura.
  Agite per la spina quando scollegate il cavo dalla presa.
- Maneje el cordón de energía con cuidado.
  Sostenga el enchufe cuando desconecte el cordón de energía.
- Hanteer het netsnoer voorzichtig.
  Houd het snoer bij de stekker vast wanneer deze moet worden aan- of losgekoppeld.
- Hantera nätkabeln varsamt.
  Håll i kabeln när den kopplas från el-uttaget.
- Manusear com cuidado o fio condutor de energia.
  Segure a tomada ao desconectar o fio.

- Keep the set free from moisture, water, and dust.
- Halten Sie das Gerat von Feuchtigkeit, Wasser und Staub fern.
- Protéger l'appareil contre l'humidite, l'eau et la poussière.
- Tenete l'unità lontana dell'umidità, dall'acqua e dalla polvere.
- Mantenga el equipo libre de humedad, agua y polvo.
- Laat geen vochtigheid, water of stof in het apparaat binnendringen.
- Utsätt inte apparaten for fukt, vätten och damm.
- Mantenha o aparelho livre de qualquer umidade, água ou poeira.

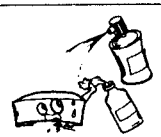


- Unplug the power cord when not using the set for long periods of time.
- Wenn das Gerat eine langere Zeit nicht verwendet werden soll, trennen Sie das Netzkabel vom Netzstecker.
- Débrancher le cordon d'alimentation lorsque l'appareil n'est pas utilisé pendant de longues périodes.
- Disinnestate il filo di alimentazione quando avete l'intenzione di non usare il filo di alimentazione per un lungo periodo di tempo.
- Desconecte el cordón de energía cuando no utilice el equipo por mucho tiempo.
- Neem altijd het netsnoer uit het stopkontakt wanneer het apparaat gedurende een lange periode niet wordt gebruikt.
- Koppla ur nätkabeln om apparaten inte kommer att användas i lång tid.
- Desligue o fio condutor de força quando o aparelho não tiver que ser usado por um longo período.

*(For sets with ventilation holes)

- Do not obstruct the ventilation holes.
- Die Belüftungsöffnungen dürfen nicht verdeckt werden.
- Ne pas obstruer les trous d'aération.
- Non coprite i fori di ventilazione.
- No obstruya los orificios de ventilación.
- De ventilatieopeningen mogen niet worden beblokkeerd.
- Täpp inte till ventilationsöppningarna.
- Não obstrua os orifícios de ventilação.

- Do not let foreign objects in the set.
- Keine fremden Gegenstände in das Gerat kommen lassen.
- Ne pas laisser des objets étrangers dans l'appareil.
- E' importante che nessun oggetto è inserito all'interno dell'unità.
- No deje objetos extraños dentro del equipo.
- Laat geen vreemde voorwerpen in dit apparaat vallen.
- Se till att främmande föremål inte tränger in i apparaten.
- Não deixe objetos estranhos no aparelho.



- Do not let insecticides, benzene, and thinner come in contact with the set.
- Lassen Sie das Gerat nicht mit Insektiziden, Benzin oder Verdünnungsmitteln in Berührung kommen.
- Ne pas mettre en contact des insecticides du benzène et un diluant avec l'appareil.
- Assicuratevvi che l'unità non venga in contatto con insetticidi, benzolo o solventi.
- No permita el contacto de insecticidas, gasolina y diluventes con el equipo.
- Laat geen insektenverdelgende middelen, benzine of verdunner met dit apparaat in kontakt komen.
- Se till att inte insektsmedel på spraybruk, bensen och thinner kommer i kontakt med apparatens hölje.
- Não permita que inseticidas, benzina e dissolventie entrem em contacto com o aparelho.

- Never disassemble or modify the set in any way.
- Versuchen Sie niemals das Gerät auseinander zu nehmen oder auf jegliche Art zu verandern.
- Ne jamais démonter ou modifier l'appareil d'une manière ou d'une autre.
- Non smontate mai, né modificate l'unità in nessun modo.
- Nunca desarme o modifique el equipo de ninguna manera.
- Nooit dit apparaat demonteren of op endere wijze modificeren.
- Ta inte isär apparaten och försök inte bygga om den.
- Nunca desmonte ou modifique o aparelho de alguma forma.



## MAIN FEATURES

**The DN-2500F is a double CD player which incorporates all of the popular functions from the DN-2000FMKII and adds additional features for more advanced DJ mixing and remixing.**

(1) The DN-2500F can be easily mounted on a standard 19-inch rack.
(2) The player unit and control unit are connected by a single cord, providing installation freedom.
(3) Playback begins immediately when the PLAY button is pressed. **(Instant Start)**
(4) Pitch is adjustable using a long-throw slider, providing an analog feel.
(5) The pitch can be changed temporarily based on the already adjusted pitch. **(Pitch Bend)**
(6) The point at which the sound actually starts is searched for automatically when a track is selected, eliminating troublesome searching operations. **(Cue to Music)**
(7) Searching is possible in units of single frames (1/75 of a second), the minimum time unit on CDs, for maximum precision.

In addition to the above functions (all provided on the DN-2000FMKII), the DN-2500F also includes the following functions.

(8) The range of the pitch control slider is selectable between ±4%, ±8% and ±16%.
(9) A Sampler function is included which provides over eight seconds of stereo sampling per side. Sample playback is triggered from the PLAY/PAUSE button while in sample mode. **(Sampler)**
(10) Familiar Jog/Shuttle dial controls allow fast and accurate searching of CD's. **(Jog Shuttle)**
(11) Key control function for adjusting the playback key. **(Key Control)**
(12) Voice Reducer function for reducing the sound of the vocals. **(Voice Reducer)**
(13) Brake function for gradually slowing the playback speed before stopping. **(Brake)**
(14) Memory function for recording and recalling disc identification data, cue point data, etc. **(Custom Setting Memory)**
(15) Direct Search function for directly accessing a specific point on a disc or a specific index number using the number buttons. **(Direct Search)**
(16) Preset function for setting functions according to the usage purpose.
(17) Fader input. **(Mini Jack)**
(18) Servo Auto Stop function for Spindle Motor.

**NOTE:**
This CD player 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).

### CAUTION: (U.S.A. and Canada model only)

Whenever the power switch is in the OFF state, the apparatus is still connected on AC line voltage.
Please be sure to unplug the cord when you leave home for, say, a vacation.
Be sure turn on POWER switch after a Remote cable of RC-44 is connected to the Player unit, otherwise, the apparatus may not work correctly.

### CAUTION: (Europe and Asia model only)

To use the player, turn on the main power switch on the rear panel.
Please be sure to turn off the main power switch when you leave home for, say, a vacation.

### DECLARATION OF CONFORMITY

We declare under our sole responsibility that this product, to which this declaration relates, is in conformity with the following standards.
EN60065, EN55013, EN55020, EN60555-2 and EN60555-3.
Following the provisions of 73/23/EEC, 89/336/EEC and 93/68/EEC Directive.

## CONTENTS





# [1] PREPARATIONS

### (1) Checking the Contents

Check that the carton contains the following items.

| | |
|---|---|
| ① DN-2500F (main unit) | 1 |
| ② RC-44 (control unit) | 1 |
| ③ Operating instructions (this booklet) | 1 |
| ④ Pair of RCA pin cords | 2 |
| ⑤ Control cord (3-meter, 9.8 feet) | 1 |

### (2) Installing the Units

Mount the units onto your console or rack with 19" EIA rack rails.

**CAUTION:**

- The DN-2500F will work normally when the main unit is mounted with the front panel within 20 degrees of the vertical plane. If the unit is tilted excessively, discs may not load or unload properly. (Figure 5)

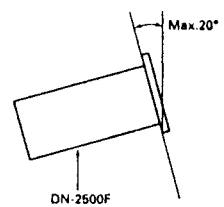



Figure 5

### (3) Connections

① Turn off the POWER switch.
② Connect the RCA pin cords to the inputs on your mixer.
③ Connect the control cord to the REMOTE connector on the RC-44.

**CAUTION:**

- Be sure to use the supplied control cord. Using another type of cable may result in damage.
- Be sure the power is off when connecting the control cord. Otherwise the units may not work properly.

## 2 NAMES AND FUNCTIONS

Below is a description of the functions of the controls listed on Pages 4 and 5.

### (1) DN-2500F (Main Unit) Front Panel

**❶❷ POWER (Power Switch and Indicator)**
When the POWER switch is pressed, the power turns on and the POWER indicator lights.

**❸ Disc Holders**
Place the discs in these holders. Press the OPEN/-CLOSE buttons to open and close the disc holders.

**❹ OPEN/CLOSE Buttons**
Press these to open and close the disc holders. The control unit also includes OPEN/CLOSE buttons. The disc holders cannot be opened during playback, so playback must be stopped before pressing these buttons.

### (2) RC-44 (Control Unit) Front Panel

**❺ LCD**
These liquid crystal displays (LCDs) indicate the current track numbers, minutes, seconds, frames and memory location numbers.

**❻ TIME Buttons**
These buttons switch the time display between elapsed time and remaining time. The selected mode is indicated by the ELAPSED and REMAIN indicators on the LCD.

**❼ OPEN/CLOSE Buttons**
Press these to open and close the disc holders. The main unit also includes OPEN/CLOSE buttons. The disc holders cannot be opened during playback, so playback must be stopped before pressing these buttons.

**❽ CONT./SINGLE Buttons**
Press these to switch between the single and continuous play modes. The selected mode is indicated by the SINGLE and CONTINUE indicators on the LCD.

**❾ LOOP Buttons**
Press these buttons to start loop mode. The LOOP LED is lit solid during loop playback.

**❿ INDEX Button**
Press this button to turn the index mode on and off. The "INDEX" indicator lights when the index mode is turned on.

**⓫ Shuttle Dials**
Use these dials to select the scanning direction and speed. The disc is scanned in the forward direction when the shuttle dial is turned clockwise from the neutral position, and in the reverse direction when the shuttle dial is turned counterclockwise. The scanning speed increases as the wheel is turned further.

**⓬ Jog Dials**
When these dials are turned during the search operation, the point at which the sound is being produced moves by a number of frames corresponding to the number of clicks.

**⓭ A Buttons**
Use these buttons to set the starting point for loop playback.

**⓮⓯ TRACK/INDEX SAMP. PITCH – I◀◀ and TRACK/INDEX SAMP. PITCH + ▶▶I Buttons**
Use these buttons to select the track, the index, to be played.
Also selects the sampler pitch during sample playback.

**⓰ CUE Buttons**
Press the CUE buttons during playback to return to the position at which playback started. The player is ready to play when the CUE LED stops flashing, remaining lit.

**⓱ PLAY/PAUSE ▶II Buttons**
Use these buttons to start playback. Press once to start playback, once again to set the pause mode, and once more to resume playback.

**⓲ SAMPLER Buttons**
Press these buttons to start recording the sample. Press the PLAY/PAUSE button after recording to set the sample play mode. These are also used to switch between the disc play and sample play mode.

**⓳ B Buttons**
Use these buttons to set the end point for loop playback.

**⓴ EXIT/RELOOP Button**
Press these buttons during loop playback to stop loop playback and continue normal playback past the B point (exit), or to return to loop playback for a loop which was previously exited (reloop).

**㉑ Pitch Sliders**
Use these sliders to adjust the BPM. Slide up to decrease the BPM, down to increase the BPM.

**㉒ PITCH Buttons**
Use these buttons to enable or disable pitch adjustment using the pitch sliders. Pitch adjustment with the pitch slider is enabled when the PITCH LED is lit.

**㉓ KEY CONTROL Buttons**
When these buttons are pressed, the key control mode is turned on and the key can be adjusted with the ▲ and ▼ buttons.
When pressed again, the key adjust mode is turned on and the key remains the same even if the pitch is changed. (KEY ADJUST)
Press the buttons again to return to the normal mode.

**㉔ ▼ Buttons**
When the key control mode is on, press these buttons to lower the key.

**㉕ ▲ Buttons**
When the key control mode is on, press these buttons to raise the key.

**㉖㉗ PITCH BEND – and PITCH BEND + Buttons**
The pitch changes temporarily while these buttons are pressed. Release the buttons to return to the original BPM.

**㉘ REVERSE Buttons**
Press these buttons to turn the sampler's reverse playback mode on and off.
After pressing the REVERSE button, the direction of playback does not change until the PLAY/PAUSE button is pressed.
The REVERSE LED lights when the reverse playback mode is on.

**㉙㉚ 1 and 2 Buttons**
Use these buttons to select which player the number buttons will function for.

**㉛ MEMO CALL Button**
When the CD "1" or "2" button is pressed while pressing this button, the data stored in the memory is called out and set.

**㉜ PRESET Button**
Press the CD "1" or "2" button while pressing this button to set CD 1 or 2 to the preset mode.
Press this button to set the preset data.
Press the button again while pressing the CD "1" or "2" button to turn the preset mode off.

**㉝ CLEAR Button**
Press this button to clear the data which was input using the number buttons.

**㉞ 0 –9 Buttons (Number Buttons)**
Use these buttons to input track numbers, times (minutes and seconds), and select the PRESET items.

**㉟ VOICE REDUCER Button**
When the CD "1" or "2" button is pressed while pressing this button, CD 1 or 2 is set to the voice reducer mode, and the level of the vocals in the music is reduced. (The "VR" indicator lights.)
Press the CD "1" or "2" button again while pressing the button to return to the normal playback mode. (The "VR" indicator turns off.)

**㊱ MEMO Button (Custom Setting Memory)**
Press the CD "1" or "2" button while pressing this button to store the CD 1 or 2 settings (disc data, cue point, loop start point, loop end point, pitch). (The "M" indicator lights.)

**㊲ BRAKE Button**
When the CD "1" or "2" button is pressed while pressing this button, CD 1 or 2 is set to the brake mode and brake playback is enabled. (The "BK" indicator lights.)
Press the CD "1" or "2" button again while pressing the button to return to the normal playback mode. (The "BK" indicator turns off.)

### (3) DN-2500F (Main Unit) Rear Panel

**㊳ LINE OUT 1 and 2**
The audio signals from each player are output from these jacks.

**㊴ REMOTE**
Connect this connector to the RC-44 control unit using the included control cord.

**㊵ FADER IN**
Use this when using the unit with a console fader. (Mini Jack)

**❶-A MAIN POWER (Europe and Asia Model only)**
Make sure to switch on.

### (4) RC-44 (Control Unit) Rear Panel

**㊶ Control Connector**
Connect this connector to the REMOTE connector on the DN-2500F (main unit) using the included control cord.

### (5) LCD

**㊷㊸㊹㊺ TRACK, MINUTE, SECOND and FRAME Displays**
These displays indicate information on the current position and time.

**㊻ BAR Indicator**
These ten indicators provide a visual display of the approximate position of the pickup within the current track.

**㊼ ELAPSED Indicators**
These indicate that the time shown on the display is the elapsed time.

**㊽ REMAIN Indicators**
These indicate that the time shown on the display is the remaining time.

**㊾ SINGLE Indicators**
When these indicators are lit, playback will stop at the end of the track.

**㊿ CONTINUE Indicators**
When these indicators are lit, playback will continue until the end of the disc.

**51** **Pitch Display**
This indicates the playback speed (pitch). (−16.0 to +16.0)

**52** **Key / Index Display**
This indicates the key when in the key control mode. (−16.0 to +16.0)
This also indicates the track's index number. (01 to 99)

**53** **Index Indicator (INDEX)**
This lights when the track's index number is displayed.

**54** **Key Indicator (KEY)**
This lights when the key is displayed.

**55** **Custom Setting Memory Indicator ( M )**
This lights when there is data stored in the memory.

**56** **Voice Reducer Indicator ( VR )**
This lights when the voice reducer mode is on.

**57** **Brake Indicator ( BK )**
This lights when brake playback is enabled.

## 3 BASIC OPERATIONS

### (1) Opening and Closing the Disc Holder and Loading Discs

**① Opening and closing the disc holder**

- This operation only works when the power is on.
- Press the OPEN/CLOSE button to open or close the disc holder. OPEN/CLOSE buttons are provided on both the main unit and control unit (RC-44).
- The disc holders cannot be opened during playback to prevent playback from being interrupted if the OPEN/CLOSE button is pressed accidentally. Stop playback, then press the OPEN/CLOSE button.

**② Loading discs**

- Hold the disc by the edges and place it in the disc tray. Do not touch the signal surface (the glossy side).
- When using 12cm discs, place the disc in the outer tray guides (Figure 6), and when using 8cm discs, place them securely in the inner guides (Figure 7).

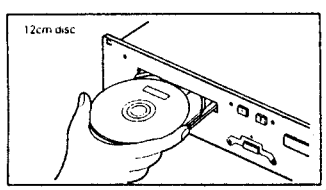



Figure 6

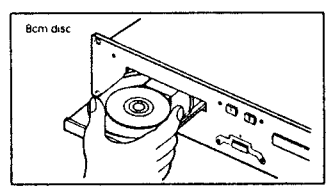



Figure 7

**CAUTION:**

- Do not place any foreign objects in the disc tray, and do not place more than one disc in the disc tray at a time. Doing so may result in malfunction.
- Do not push the disc tray in manually when the power is off, as this may result in malfunction and damage the player.

### (2) Selecting Tracks or INDEX

- Press the TRACK buttons once to move to the next or preceding track.
- Hold down the TRACK buttons to change tracks continuously at a higher speed.
- When a new track is selected during playback, playback begins as soon as the search operation is completed.
- Tracks can also be selected while the disc holder is open. The selected track is searched for when the disc holder is closed.
- If the TRACK ▶▶| button is pressed while on the last track, the first track is selected. Likewise, if the TRACK |◀◀ button is pressed while on the first track, the last track is selected.

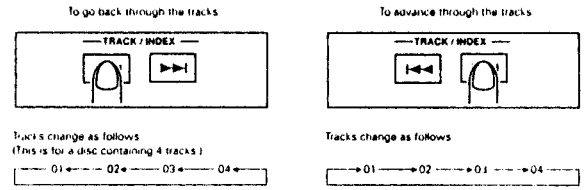



Figure 8

- When a track is selected, the DN-2500F automatically cues to the point at which the sound begins, skipping silent sections at the beginning of tracks. (Cue to Music) Level of cue point can be selected with preset item 4.
- When the INDEX button is pressed and the index search mode is set, use the INDEX ▶▶| and |◀◀ buttons for the index search operation.

### (3) Starting Playback

- Press the PLAY/PAUSE button during pause or cue mode to start playback.
- Playback begins immediately when the PLAY button is pressed. (Instant Start)
- The PLAY/PAUSE LED lights when playback starts.
- The point at which playback starts is automatically stored in the memory as the cue point. When the CUE button is pressed, the pickup then returns to the cue point (the point at which playback started). (Back Cue)

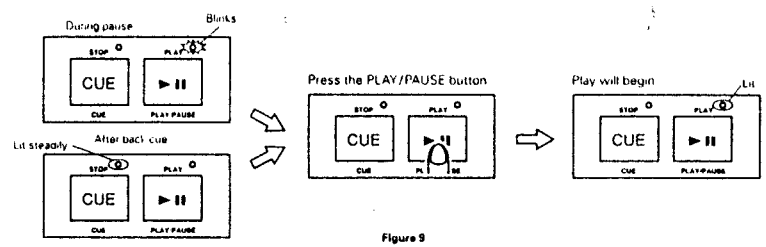



Figure 9

- The play mode can be selected by pressing the CONT./SINGLE button.
- When the SINGLE indicator is lit, playback stops automatically at the end of that track, and the disc is cued to the playback start position.
- When the CONTINUE indicator is lit, playback continues until the end of that disc. When playback is finished, the disc is cued to the playback start position.

### (4) Stopping Playback

- There are two ways to stop playback.
  ① Press the PLAY/PAUSE button during playback to pause at that point.
  ② Press the CUE button during playback to return to cue mode at the position at which playback started. (Back Cue)

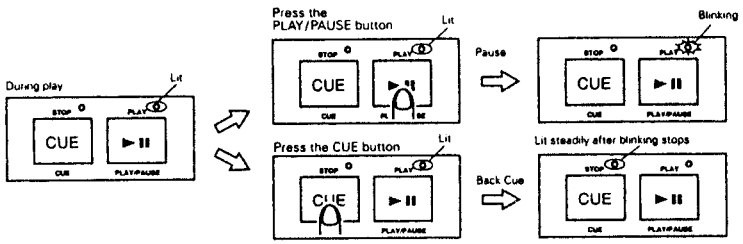
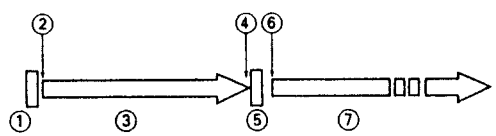



Figure 10

### (5) Pausing

- Press the PLAY/PAUSE button to switch between play and pause mode.
- The PLAY/PAUSE LED blinks when the pause mode is set.
- Figure 11 shows the relationship between the play and pause.




① The player has completed the cue or pause operation and is waiting for the play start command.
② When the PLAY/PAUSE button is pressed, playback starts and the cue point is stored in the memory.
③ Playing
④ The pause mode is set when the PLAY/PAUSE button is pressed again.
⑤ Pausing
⑥ Playback resumes when the PLAY/PAUSE button is pressed again.
⑦ Playing

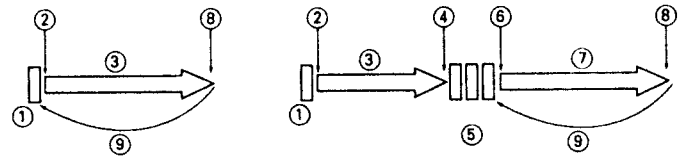
Figure 11





### (6) Cueing

- "Cueing" is the action of moving to a specified point (the cue point) and waiting for playback to begin (cue mode). When the PLAY/PAUSE button is pressed after cueing, playback starts immediately. (Instant Start)
- When the track search operation is completed after pressing the TRACK buttons, the player locates the position at which the sound starts and automatically cues there. (Cue to Music)
- If the CUE button is pressed during the search operation with the jog dial or the scanning operation with the shuttle dial, the point at which the button is pressed is set as the cue point and cueing starts.
- Figure 12 shows the relationship between the play and back cue operations.




(A) Play and cue (B) Play, pause and cue

① The player has completed the cue or pause operation and is waiting for the play start command
② When the PLAY/PAUSE button is pressed, playback starts and the cue point is stored in the memory.
③ Playing
④ The pause mode is set when the PLAY/PAUSE button is pressed again.
⑤ Pausing
⑥ When the PLAY/PAUSE button is pressed again, playback resumes and the new cue point is stored in the memory.
⑦ Playing
⑧ Press the CUE button.
⑨ The pickup returns to the cue point. (Back Cue)

Figure 12

### (7) Searching

- Searching is the function which allows you to continuously monitor a certain section of the disc and manually change the playback position in small increments. Searching is used to set playback start points and loop points with precision.
- Turn the jog dial while in the play, pause or cue mode to begin searching. The sound for one revolution of the disc is output repeatedly. The point at which the sound starts (the search point) is indicated on the LCD.
- When the jog dial is turned, the point from which the sound is output moves a number of frames corresponding to the number of clicks, and the time display on the LCD also changes.
- The search point moves in the forward direction when the jog dial is turned clockwise, in the reverse direction when the jog dial is turned counterclockwise.

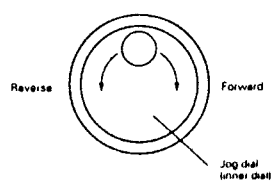



Figure 13

- The search point displayed on the LCD during the search operation is automatically stored in the memory as the cue point.
- If the jog dial is turned while in play mode, playback resumes automatically once the jog dial is released.

### (8) Scanning

- Scanning allows you to move quickly forward or backward through the CD while monitoring the sound, and is used, for example, to locate a specific section in a song.
- Turn the shuttle dial while the player is in the play, pause or cue modes to begin scanning. The disc moves rapidly forward or backward and the sound is output. The current point (scan point) is indicated on the LCD.
- The scanning speed depends on how far from the center point the shuttle dial is turned. The more it is turned, the faster the scanning speed.
- Turn the shuttle dial clockwise to scan in the forward direction, counterclockwise to scan in the reverse direction.

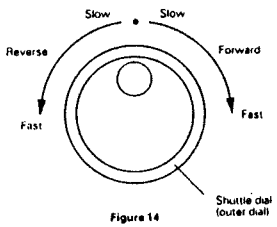


Figure 14

- The scanning point indicated on the LCD is automatically stored in the memory as the cue point.
- When the shuttle dial is released during scanning, it returns to the neutral position, scanning stops and the search mode is set. However, if scanning was started from play mode, playback resumes.
- When the dial is turned all the way to the end, the point of playback is skipped approximately one minute, played for about 3 seconds, then skipped again, etc.

## 4 MATCHING THE BEATS PER MINUTE (BPM)

- With the DN-2500F, there are two ways to adjust the playing speed and match the BPMs of the two CDs:
  - Use the pitch slider to adjust the BPM statically. One of three adjustments ranges can be selected by the Preset Mode.
  - Use the PITCH BEND buttons to change the BPM temporarily. Use this after adjusting the BPM with the pitch slider.

### (1) Pitch Slider

- To adjust the BPM by sliding the pitch slider up or down, first press the PITCH button to enable the pitch slider. The PITCH LED will turn on.
- With the pitch slider, the pitch can be adjusted within one of three ranges (±4%, ±8% or ±16%). (Can be selected with preset item 3.)
- The BPM decreases when the pitch slider is moved upwards, increases when the pitch slider is moved downwards.

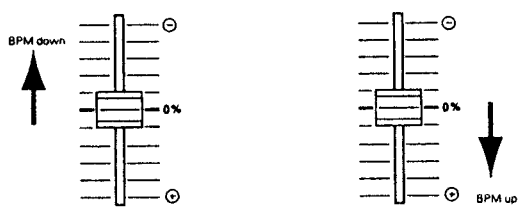


Figure 15



### (2) Pitch Bending

- The BPM increases or decreases temporarily while the PITCH BEND + or PITCH BEND – button is pressed.
- The extent to which the PITCH BEND button changes the BPM is proportionate to the amount of time the button is pressed. The longer the button is held down, the greater the percentage of change.
- The PITCH BEND button changes the BPM within a range of ±12% when the pitch adjustment range is ±4% or ±8%, and within a range of ±18% when the pitch adjustment range is ±16%.
- Figure 16 shows an example of how to use the pitch bend function. In this example, both players are playing and the BPM has already been matched with the pitch sliders.

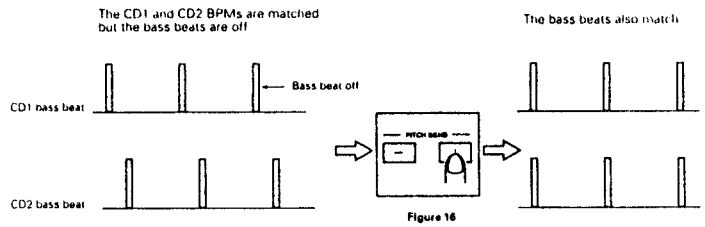
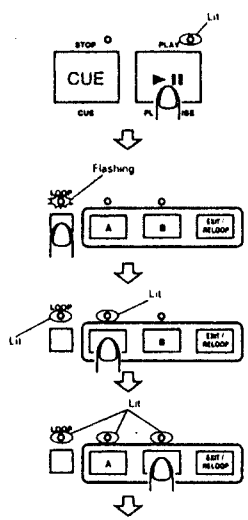


Figure 16

## 5 SEAMLESS LOOP

The DN-2500F is equipped with a seamless loop function.
**NOTE: The seamless loop mode cannot be used at the same time as the sampler mode.**

### (1) Starting seamless loop playback




- Press the PLAY/PAUSE button. (The PLAY/PAUSE button's LED lights.)
- Press the LOOP button to enter the seamless loop mode. (The LOOP button's LED flashes.)
- Press the A button to set the starting point (A). (The A button's LED lights.)
- Press the B button to set the ending point (B). (The B button's LED lights and the LOOP button's LED stops flashing, remaining lit.)

(continued on next page)

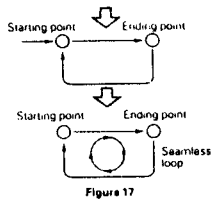


Figure 17

- When the ending point (B) is set, playback starts from the starting point (A) with no interruption in the sound.
- After this, the section between the starting point (A) and the ending point (B) is played repeatedly with no interruption in the sound.

**Alternative way to set the seamless loop starting point (A) and ending point (B)**

- While the disc is playing, press the LOOP and B buttons. The last cue point is set as point A, and seamless loop playback begins.
- After setting point A, set the cue mode, press button A, then use the scan or search function to fine-adjust point A. (The same can be done for point B.)

### (2) Leaving the seamless loop mode temporarily

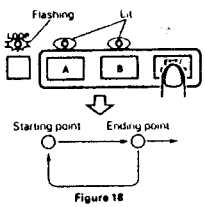


Figure 18

- Press the EXIT/RELOOP button while playing a seamless loop. (The LOOP button's LED starts flashing.)
- When the ending point (B) is reached, playback continues without returning to the starting point (A).

### (3) Replaying a seamless loop

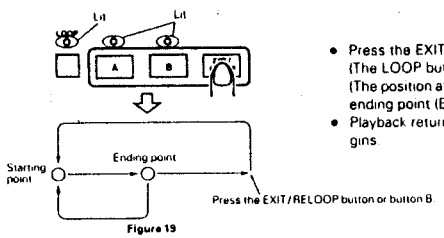


Figure 19

- Press the EXIT/RELOOP button or button B during normal playback. (The LOOP button's LED stops flashing, remaining lit.) (The position at which button B is pressed is set as the new loop playback ending point (B)).
- Playback returns to the starting point (A) and seamless loop playback begins.

### (4) Switching from seamless loop playback to normal disc playback

**(Setting the normal playback mode without canceling the starting and ending points)**

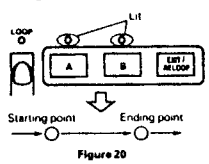


Figure 20

- Press the LOOP button within 1 second. (The LOOP button's LED turns off.) The normal playback mode is set. (Only the loop mode is canceled. Points A and B are not cleared.)

NOTE:

- **The starting point (A) and ending point (B) settings are canceled when the disc is removed from the player.**



### (5) Canceling the seamless loop settings

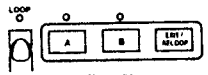


Figure 21

- Press the LOOP button for over 1 second. (The LOOP button's LED turns off.) When this is done, the starting point (A) and ending point (B) settings are automatically canceled. (The A and B buttons' LEDs turn off.)

NOTE:

- **After canceling the seamless loop during loop playback, it may take about 5 seconds before the seamless loop mode is set again.**

## 6 SAMPLER

The DN-2500F is equipped with a function for recording the sound of a disc for up to 8 seconds on both players. In addition, the recorded sound can be played normally, in the reverse mode (backwards) and in a loop. These sampler functions eliminate the need for a separate sampler.

NOTE: **The sampler mode cannot be used at the same time as the seamless loop mode.**

### (1) Recording samples

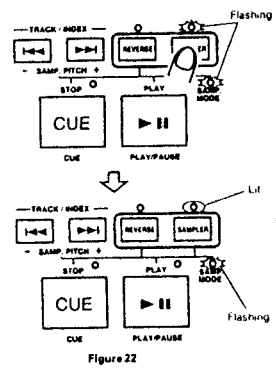


Figure 22

- Press the SAMPLER button. (The SAMPLER button's LED and the SAMP. MODE LED start flashing.) Recording starts.
- The sound is recorded for approximately 8 seconds. (The SAMPLER button's LED stops flashing, remaining lit.) Recording can also be stopped in less than 8 seconds by pressing the CUE button. (The SAMPLER button's LED stops flashing, remaining lit.)

NOTE:

- **When sample recording is set while the disc is playing, playback continues after recording stops. When sample recording is set during in the cue, pause or manual search mode, disc playback stops when recording stops.**

### (2) Playing the sample

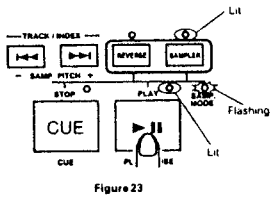



Figure 23

- Press the PLAY/PAUSE button.
  (The PLAY/PAUSE button's LED lights.)
  The sample is played.

### (3) Stopping the sample

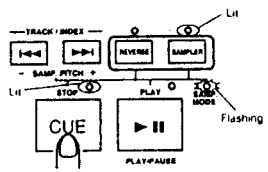



Figure 24

- Press the CUE button.
  (The CUE button's LED lights.)
  The sample is stopped

### (4) Changing the sample's pitch

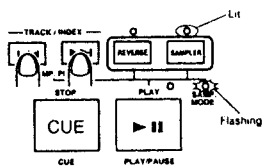



Figure 25

- Press the TRACK ▶▶| button to increase the sample's playing speed, the TRACK |◀◀ button to decrease it.
  The sample playing speed changes in steps of 0.5% and the speed flashes on the PITCH display section for approximately 3 seconds.
  (The sampler pitch range is ± 16%)

### (5) Setting the normal disc playback mode after recording a sample

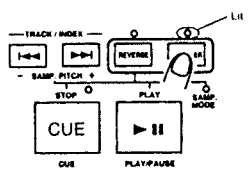



Figure 26

- After the sample has been recorded, press the SAMPLER button.
  (The SAMP. MODE LED turns off.)
  Normal disc playback is now possible.
  The sample can be played again by pressing the SAMPLER button again.
  (The SAMP. MODE LED flashes.)

**NOTE:**

- **When the SAMP. MODE LED is flashing, the following buttons function as sampler buttons, so they cannot be used for their normal operations:**
  **PLAY/PAUSE, CUE, TRACK ▶▶|, TRACK |◀◀ (However, the TRACK ▶▶| and |◀◀ buttons can be preset to be used as the normal track selection buttons. ITEM No. 2)**
- **The recorded sample is not cleared when the disc is removed from the player.**

### (6) Playing the sample in reverse

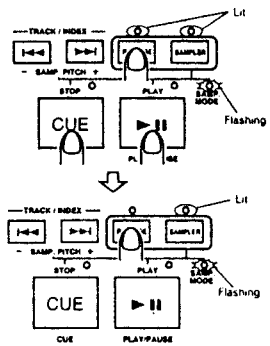



Figure 27

- Press the REVERSE button.
  (The REVERSE button's LED lights.)
  Reverse playback begins from the recording end position when the PLAY/PAUSE button is pressed after pressing the REVERSE button

- Press the REVERSE button again.
  (The REVERSE button's LED turns off.)
  The reverse sample play mode is canceled.
  Sampler normal playback begins when the PLAY/PAUSE button is pressed after pressing the REVERSE button

### (7) Playing the sample in a loop

This setting can be turned on and off with the presettings. (ITEM No. 1)

### (8) This clears the recorded sample

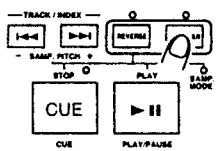
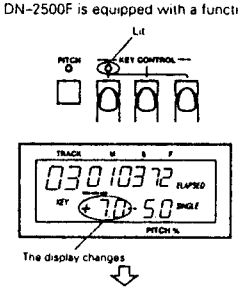



Figure 28

- Press the SAMPLER button for over 1 second.
  (The SAMPLER button's LED and the SAMP. MODE LED turn off.)
  This clears the recorded sample.

## 7 KEY CONTROL

The DN-2500F is equipped with a function for adjusting the key of the sound being played.




- Press the KEY CONTROL button.
  (The KEY CONTROL button's LED lit.)
  (The current setting appears in the key section of the display.)
  The key can be adjusted.
  Press the KEY ▲ button to raise the key.
  Press the KEY ▼ button to lower the key.

(continued on next page)

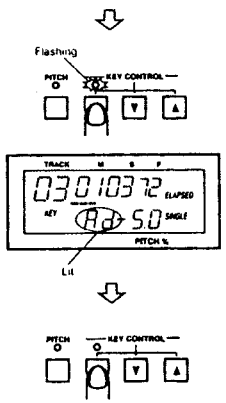



Figure 29

- Press the KEY CONTROL button again.
  (The KEY CONTROL button's LED starts flashing.)
  (" Ad " appears in the key section of the display.)
  The key can be adjusted to the normal key even when the pitch (speed) is changed.

**NOTE:**
**The key adjustment range is ± 16.0.**

- Press the KEY CONTROL button again.
  (The KEY CONTROL button's LED turns off.)
  The key control function is canceled.

## 8 VOICE REDUCER

The DN-2500F is equipped with a function to reduce the sound of the vocals in the music. This sound can be used as an effect sound for the sampler, etc.

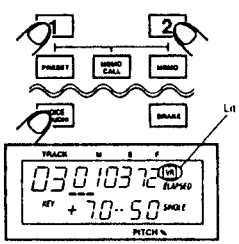



Figure 30

- Press the CD1 (or CD2) button while pressing the VOICE REDUCER button.
  ("VR" appears in the voice reducer section of the display.)
  The voice reducer function is set.

- Once again press the CD1 (or CD2) button while pressing the VOICE REDUCER button.
  ("VR" turns off from the voice reducer section of the display.)
  The voice reducer function is canceled.

NOTE: **Depending on the original recording, the vocals may not be completely eliminated.**
**This is even more effective when used with music in which the vocals are at the center.**





## 9 BRAKE

The DN-2500F is equipped with a function for gradually slowing the playback speed before stopping. This sound can be used as an effect sound. (Playback stops in about 0.5 seconds.)

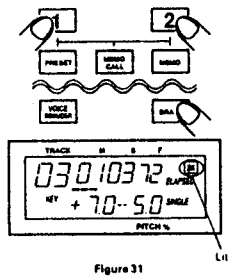



Figure 31

- Press the CD 1 (or CD 2) button while pressing the BRAKE button.
  ("BK" appears in the brake section of the display.)
  The brake function is set.
  Braking is performed when the PLAY/PAUSE button is pressed during playback while the brake mode is on.

- Once again press the CD 1 (or CD 2) button while pressing the BRAKE button.
  ("BK" turns off from the brake section of the display.)
  The brake function is canceled.

## 10 CUSTOM SETTING MEMORY

The DN-2500F is equipped with a function for storing and calling out disc identification data, cue points, pitches, and seamless loop starting points (A) and ending points (B).

### (1) Storing data in the memory

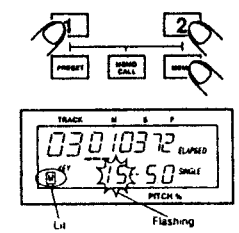



Figure 32

- Cue up the player.
  Press the CD 1 (or CD 2) button while pressing the MEMO button.
  ("M" appears in the memory section of the display, and the memory number (0 to 199) flashes for approximately 3 seconds in the key section of the display.)
  The above operation stores the following data in the memory:
  - Disc identification data
  - Cue point
  - Current playback pitch (0.0% if the pitch mode is off)
  - Seamless loop starting point (A) and ending point (B) (Only if set)

  In addition, if data is mistakenly registered, use the procedure in "(4) Clearing data" to clear the data.

**NOTE:**
**In the cases described below, there is no space left in the memory. If you attempt to store data in the memory, " FL " appears and the data is not stored.**
- **When there are already 200 sets of data stored in the memory**
  **(The maximum storage capacity is 200 discs and 200 sets of data.)**
- **When data for that track is already stored in the memory.**
  **(Only one set of data can be stored per track.)**

### (2) Overwriting previous data

**(This is only possible if 200 sets of data are already stored.)**

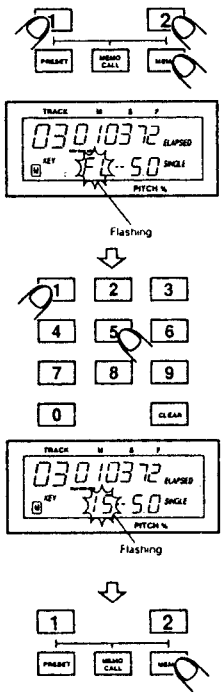



Figure 33

- Press the CD 1 (or CD 2) button while pressing the MEMO button.
  (" FL " flashes in the key section of the display.)
- Use the number buttons to input the number of the memory to be overwritten.
  (The memory number flashes in the key section of the display.)
- Press the MEMO button.
  ("M" appears in the memory section of the display.)
  The data is now overwritten.

### (3) Recalling data

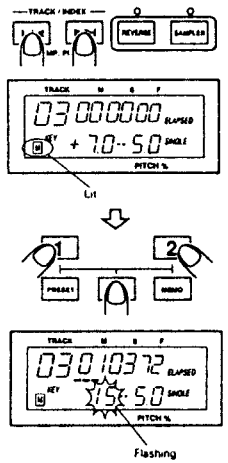
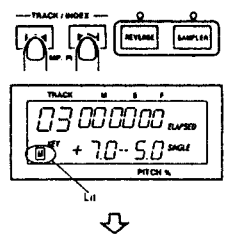



Figure 34

- When a custom setting memory disc is set in the player, the M indicator flashes, indicating that there is a memory.
- Use the TRACK ▶▶| and |◀◀ buttons to select the track whose data you want to recall.
  ("M" appears in the memory section of the display after the track is selected.)
- Press the CD 1 (or CD 2) button while pressing the MEMO CALL button.
  (The memory number (0 to 199) of the recalled data flashes for approximately 3 seconds in the key section of the display.)
  The data is recalled and the pickup moves to the cue point stored in the memory.
  (The CUE button's LED lights. If seamless loop data is stored, the LOOP, A and B button's LEDs also light.)
  In addition, the playback pitch is fixed to the registered playback pitch.
  (The pitch LED flashes.)

**NOTE: The track starting position changes through audio detection, so the time display of the called out cue point, A point and B point may be different from when the points were stored in the memory.**

### (4) Clearing data




- Use the TRACK ▶▶| and |◀◀ buttons to select the track whose data you want to clear.
  ("M" appears in the memory section of the display after the track is selected.)

(continued on next page)

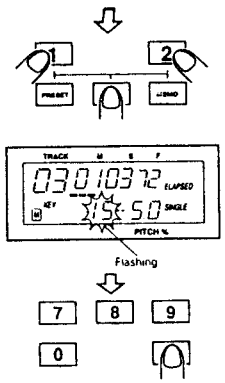



Figure 35

- Press the CD 1 (or CD 2) button while pressing the MEMO CALL button.

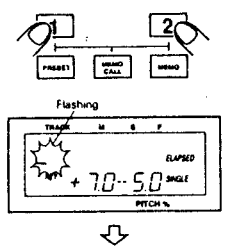
- Press the CLEAR button during the 3 seconds that the memory number (0 to 199) of the recalled data is flashing in the key section of the display. (The memory number and the "M" turn off from the key and memory sections of the display.)
  The data is now cleared.

**NOTE: Even when the data is cleared, the memory remains called out.**

## 11 DIRECT SEARCH

The DN-2500F is equipped with a function for directly accessing a specific position on the disc or a specific index number using the number buttons and the CUE and PLAY/PAUSE buttons.

### (1) Direct track and time search




- Press the CD 1 (or CD 2) button.
  ("– " flashes in the track section of the display and the time section turns off.)

(continued on next page)



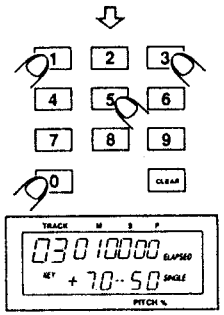



Figure 36

- Use the number buttons to input the track, minutes, seconds and frame. (If the input data does not exist on the disc, the input value flashes on the display and no other data can be input.)
  There is no need to input the minute, second and frame data.

- Press the PLAY/PAUSE button.
  Playback begins from the specified position.
  (If the CUE button is pressed, the pickup moves to the specified position.)
  The direct search mode is canceled when the CD 1 (or CD 2) button is pressed.

  When inputting direct search data (ELAPSED) is displayed.

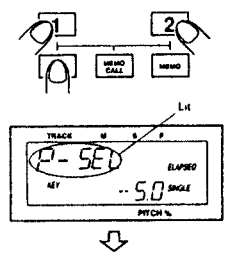
### (2) Direct index search

Set the index mode, then use the same procedure as for direct track and time search to directly access the specified index number.

## 12 PRESETTINGS

The DN-2500F is equipped with a function for storing various types of preset data. This data is not lost when the power is turned off. Use this function to store in the memory the desired settings for the items described on the table on Page 29. The presettings can be made independently for CD 1 and CD 2. Use this function to operate the players with the optimum settings.

### (1) Changing the preset data




- Press the CD 1 (or CD 2) button while pressing the PRESET button.
  ("P-SEL" appears in the track and time sections of the display, and the key section turns off.)

**NOTE: The preset item can also be changed during disc playback.**

(continued on next page)

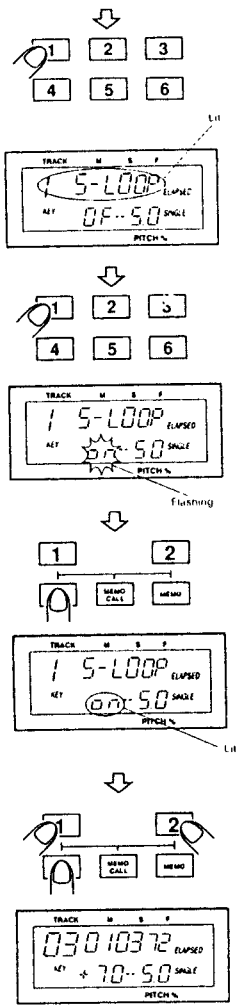



Figure 37

- Use the number buttons to input the number of the preset item. (The preset item number appears in the track and time sections of the display, and the preset data appears in the key section.)
- To select the preset data, press and hold in the number button corresponding to the preset item number. (The preset data in the key section of the display changes and flashes.)
- After selecting the preset data, press the PRESET button to set the new data. (The preset data in the key section of the display stops flashing, remaining lit.) Repeat the same procedure to change the data of other preset items.
- Press the CD 1 (or CD 2) button while pressing the PRESET button or the CD 1 (or CD 2) to exit the preset mode. (The track, time and key sections of the display switch to their normal displays.) The preset data is now changed. Preset data changing can also be exited by pressing the PLAY/PAUSE, CUE or OPEN/CLOSE button.

### (2) Table of Preset Functions

"*" indicates factory settings

| Item no. | Item | Display (" " indicates a space) Track / time | Key | Description |
|---|---|---|---|---|
| 1 | Sampler loop setting | 1 S-LOOP | on / OF | ON: Loop playback with sampler<br>OFF *: No loop playback with sampler |
| 2 | Pitch change setting during sample playback | 2S SPEED | on / OF | ON: * Pitch changed with sampler<br>OFF: No pitch change with sampler. When this is set, the track can be selected with the TRACK buttons |
| 3 | Pitch adjustment range setting | 3 PItch | 4.0 / 8.0 / 16.0 | 4%: Pitch can be increased or decreased within a range of ± 4% (0.1% step)<br>8%: * Pitch can be increased or decreased within a range of ± 8% (0.1% step)<br>16%: Pitch can be increased or decreased within a range of ± 16% (0.2% step) |
| 4 | Cue detection level setting | 4AUtoCUE | L / n / H / OF | – 72dB: Cueing is performed not at the actual starting point of the track but at the point where the sound starts. The level for detecting the first sound can be set to between – 36dB and – 72dB.<br>– 60dB*<br>– 36dB<br>OFF: Cue detection off |
| 5 | EOM time setting | 5 End | 0 / 10 / 15 / 20 / 30 / 60 / 90 | 0sec *: EOM OFF<br>10sec<br>15sec<br>20sec<br>30sec<br>60sec<br>90sec<br>When the end of the track approaches, the LCD display starts flashing, visually warning the operator that the track is about to end. The time at which the display starts flashing can be set to between 10 and 60 seconds from the end of the track.<br>**NOTE:** For some discs the EOM time may not be accurate. |
| 6 | Disc holder auto close setting | 6 CLOSE | on / OF | ON: The disc holder closes automatically after it is left open for approximately 1 minute.<br>OFF: * The disc holder does not close automatically |
| 7 | Setting of initial playback mode when power is turned on | 7S mCont | St / Co | Single *: Playback ends at the end of one track.<br>Continue: Playback continues through to the end of the disc. |
| 8 | Setting of initial time display mode when power is turned on | 8 ELA rE | EL / rE | Elapse *: The elapsed time is displayed when the power is turned on.<br>Remain: The remaining time is displayed when the power is turned on. |
| 9 | Servo auto stop setting | 9 SLEEP | on / OF | ON: The servo stops automatically.<br>OFF: * The servo does not stop automatically.<br>Servo auto stop: If no button is pressed for approximately 30 minutes in the pause or cue up modes, the servo stops and "SLEEP" is displayed.<br>• Press the CUE button to switch from the servo stop mode to the normal mode. |
| 0 | Custom Setting Memory all clear setting | 0 AllC L- | on / OF | ON: All the memory data is cleared.<br>OFF: * Not all the custom setting memory is cleared. The setting returns to OFF after all the data is cleared. |
| CLEAR | Reset to factory settings | PS-CL | on / OF | ON: Sets the preset data to the factory settings.<br>OFF *: Leaves the preset data unchanged. |

## 13 FADER INPUT

Fader playback is possible by connecting a console fader to the fader input plug.

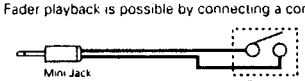


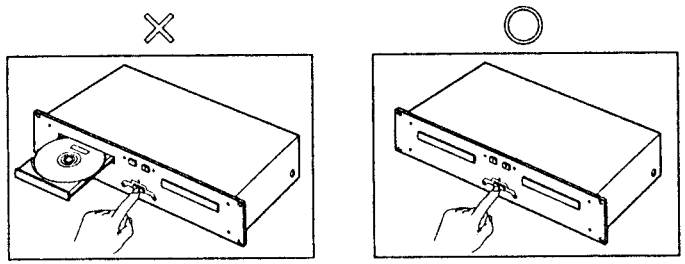

Figure 38

- Playback starts when the switch is turned on.
- The pause mode is set when the switch is turned off. (FADER INPUT LEVEL HCMOS (I_H = – 3mA))

## 14 BEFORE SWITCHING OFF THE POWER

When you have finished using the CD player, before switching off the power, be sure that the disc holder has been closed with the OPEN/CLOSE button.

**CAUTION:**
Do not forcibly close the disc holder when the power is off.
It may damage the unit when it is transported.



Do not switch off the power when the disc holder is open.
POWER OFF

Switch off the power after the disc holder has been closed with the OPEN/CLOSE button.
POWER OFF

Figure 39

## 15 COMPACT DISCS

1. **Precautions on handling compact discs**
   - Do not allow fingerprints, oil or dust to get on the surface of the disc.
     If the disc is dirty, wipe it off with a soft dry cloth.
     We recommend using DENON's AMC-22 CD CLEANER.
   - Do not use benzene, thinner, water, record spray, electrostatic-proof chemicals, or silicone-treated cloths to clean discs.
   - Always handle discs carefully to prevent damaging the surface; in particular when removing a disc from its case or returning it.
   - Do not bend the disc.
   - Do not apply heat.
   - Do not enlarge the hole in the center of the disc.
   - Do not write on the label (printed side) with a hard-tipped implement such as a pencil or ball point pen.
   - Condensation will form if a disc is brought into a warm area from a colder one, such as outdoors in winter. Do not attempt to dry the disc with a hair dryer, etc.

2. **Precaution on storage**
   - After playing a disc, always unload it from the player.
   - Always store the disc in the jewel case to protect from dirt or damage.
   - Do not place discs in the following areas:
     1) Areas exposed to direct sunlight for a considerable time.
     2) Areas subject to accumulation of dust or high humidity.
     3) Areas affected by heat from indoor heaters, etc.



## 16 SPECIFICATIONS

### GENERAL

| | | | |
|---|---|---|---|
| **Type:** | Twin mechanism compact disc player with wired controller | | |
| **Disc type:** | Standard compact discs (12 cm and 8 cm discs) | | |
| **Dimensions:** | Player unit: | 482 (W) × 88(H) × 252 (D) mm (without feet) | |
| | | 19" (W) × 3-15/32 (H) × 9-59/64 (D) | |
| | Control unit: | 482 (W) × 132(H) × 40 (D) mm (without feet) | |
| | | 19" (W) × 5-13/64 (H) × 1-37/64 (D) | |
| **Installation:** | 19-inch rack mountable | | |
| | Player unit: | 2U | |
| | Control unit: | 3U | |
| **Weight:** | Player unit: | 6 kg (13.23 lbs.) | |
| | Control unit: | 3 kg (6.614 lbs.) | |
| **Power supply:** | U.S. and Canadian models: | 120 V AC | ± 10%, 60 Hz |
| | European models: | 230 V AC | ± 10%, 50 Hz |
| **Power consumption:** | 27 W | | |
| **Environmental conditions:** | Operational temperature: | 5 to 35°C | (41 to 95°F) |
| | Operational humidity: | 25 to 85% | (no condensation) |
| | Storage temperature: | – 20 to 60°C | (4 to 140°F) |
| **Accessories:** | Connecting cord (2 pairs for left and right channels) | | |
| | Control cord (5m, 15 feet) | | |

### AUDIO SECTION

| | |
|---|---|
| **Quantization:** | 18-bit linear per channel |
| **Sampling frequency:** | 44.1 kHz at normal pitch |
| **Oversampling rate:** | 8 times |
| **Frequency response:** | 20 to 20,000 Hz |
| **Total harmonic distortion:** | 0.006% |
| **Signal to noise ratio:** | 98 dB |
| **Dynamic range:** | 98 dB |
| **Channel separation:** | 96 dB |
| **Output level:** | 2.0 V |
| **Load impedance:** | 10 kΩ/kohms or more |

### FUNCTIONS

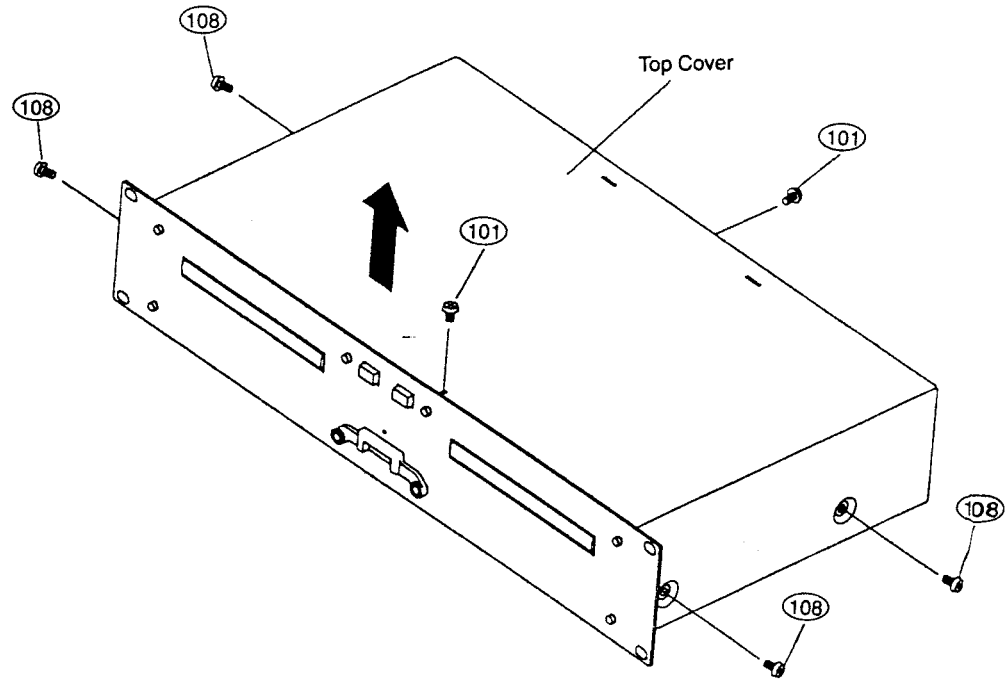
| | | |
|---|---|---|
| **Instant start:** | Within 10 msec | |
| **Variable pitch:** | 4% range: | ± 4% or more |
| | 8% range: | ± 8% or more |
| | 16% range: | ± 16% or more |
| **Pitch bend:** | 4% and 8% ranges: | ± 12% or more |
| | 16% range: | ± 18% or more |
| **Sampling length:** | 8.19 sec. | |
| **Max. scan speed:** | Over 20 times normal speed | |
| **Max. memory steps:** | 200 steps | |

* Specifications and design are subject to change without notice for purpose of improvement.

# DISASSEMBLY

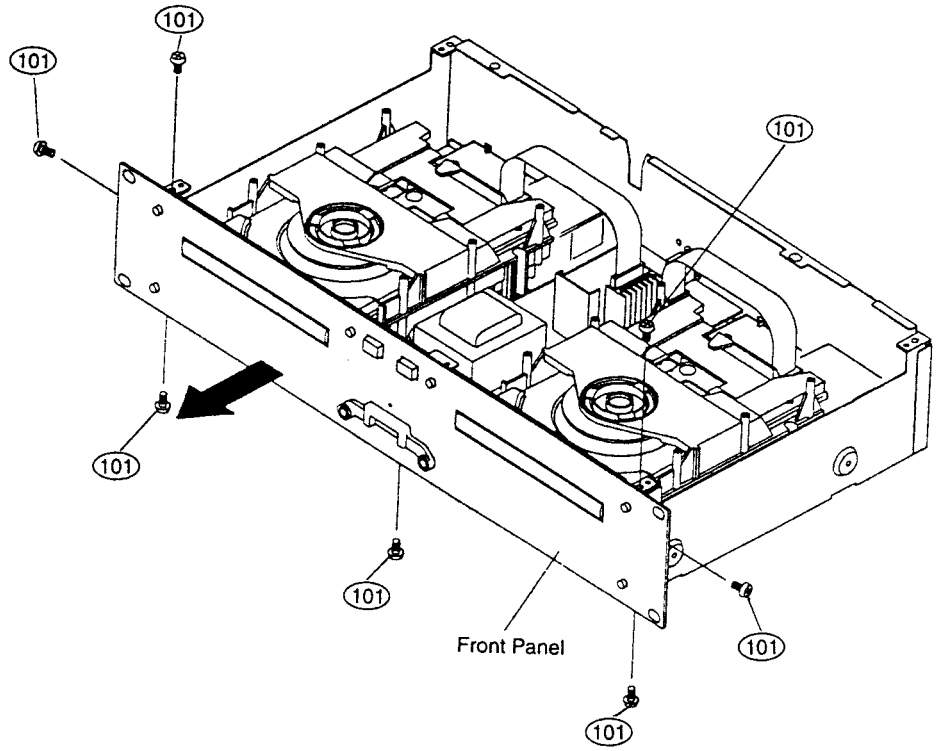
## ● TOP COVER

1. Remove 4 screws (108) on both sides, and 2 screws (101) .
2. Pull up Top Cover.




## ● Front Panel

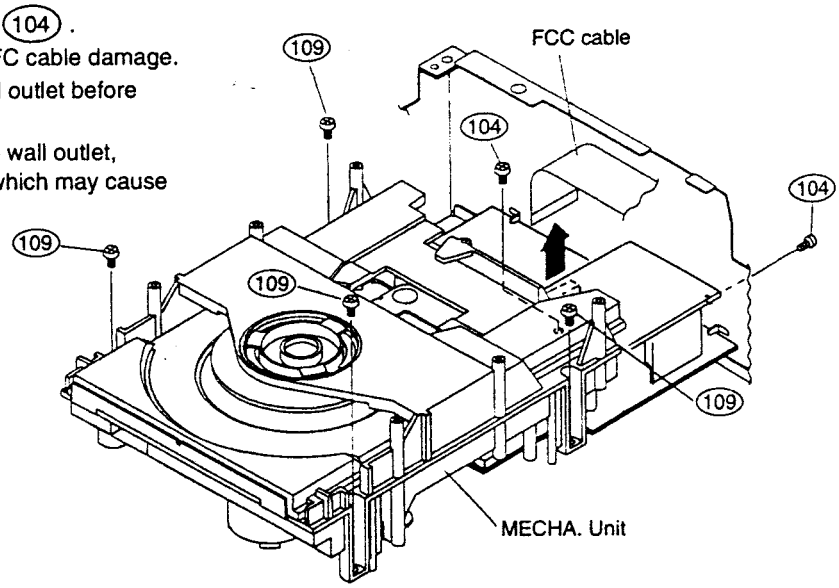
1. Remove 2 upper screws (101) and 3 lower screws (101) , and 2 screws (101) on both sides.
2. Detach Front Panel.



## ● MECHANISM UNIT

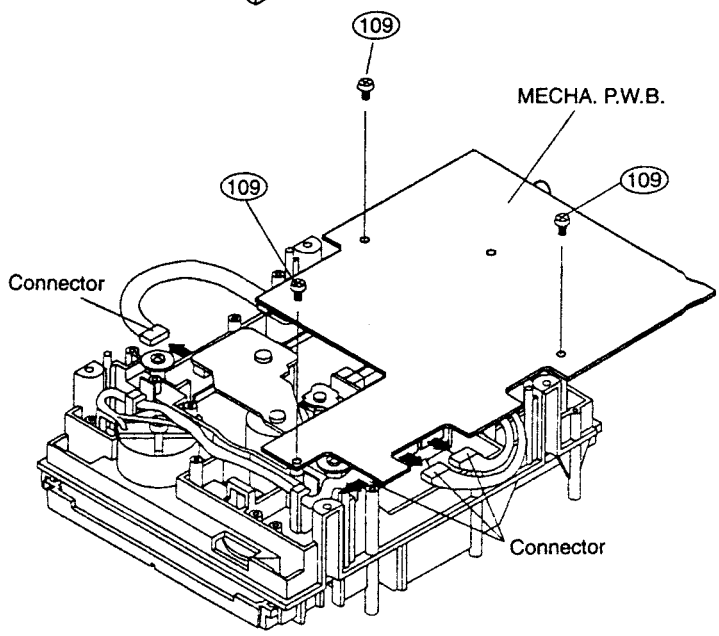
1. Disconnect FFC cable.
2. Remove 4 screws (109) and 2 screws (104).

Note : ● Do not pull out aslant to prevent FFC cable damage.
● Do not fail to pull AC cord from wall outlet before disconnect the FFC cable .
If AC cord is remained plugged into wall outlet, power is kept supplied in the unit, which may cause danger.



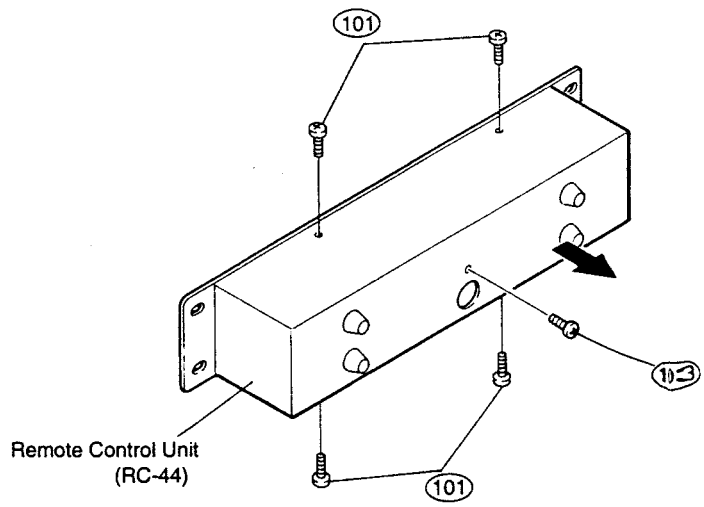

## ● MECHA. PWB

1. Remove 3 screws (109).
2. Disconnect Connector.
3. Detach MECHA. PWB.




## ● COVER (REMOTE CONTROL UNIT)

1. Remove 5 screws (1 (103) and 4 (101)).



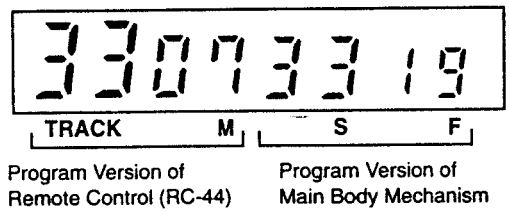
# CONFIRMING THE SERVO

## Required Measuring Implement

1. Dual trace oscilloscope
2. Reference disc (CA1094)

## 1. Actuating the Service Program and Servo Confirming Method

1. Turn the power switch off.
2. While simultaneously pushing the center blue buttons (1,2) of remote control (RC-44), turn the power on.
3. Displayed indication on the remote control (RC-44) is version number of microcomputer program.
   4 figures on the left are program version of remote control, and 4 figures on the right are program version of main body mechanism.




4. Press TRACK button [⏭] once. Display shows "01" and each pressing of PLAY button opens or closes the tray.
5. As the tray opens, set the adjustment disc (CA-1094).
6. Press TRACK button [⏭] ("02" is displayed), also, press PLAY button.
   Tracking error signal can be observed with the connection below. (Fig1)
7. Press TRACK button [⏭] ("03" is displayed), also, press PLAY button.
   HF signal can be observed with the connection below. (Fig2)
8. Press TRACK button [⏭] ("04" is displayed), also, press PLAY button.
   By pressing SEARCH button [⏩] servo automatic adjustment value can be called. (Ref. Table below)

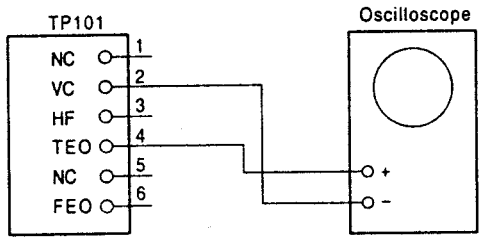



Fig1

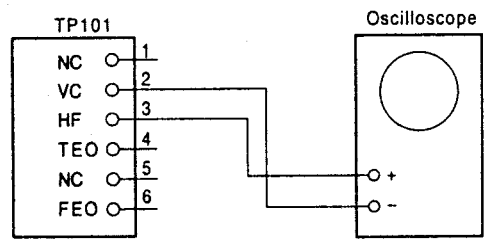



Fig2

| TRACK Portion Indication | Adjustment Item | Adjustment Value indication at M and S portions. | Adjustment Item No. indication at F portion. |
|---|---|---|---|
| 04 | Error Code | — | 00 |
| | Focus Gain (FG) | 73 ~ 382 | 01 |
| | Focus Balance (FBAL) | −100 ~ 100 | 02 |
| | Focus Offset (FOFS) | −35 ~ 35 | 03 |
| | Tracking Gain (TG) | 53 ~ 336 | 04 |
| | Tracking Balance (TBAL) | −110 ~ 86 | 05 |
| | Tracking Offset (TOFS) | −15 ~ 15 | 06 |

* When adjustment range exceeds, replace pick-up.

## 2. What is Service Program

Service program is a special program intended for confirming servo.

## 3. Contents of Service Program.

After actuating the service program, select an aiming process number with the TRACK ( ⏮ ⏭ ) buttons, TIME button, and PITCH button, and push the PLAY button to execute processing, The process number is then displayed on the TRACK indication portion.

| TRACK BUTTONS | Work No. (TRACK Indication) | Function | Contents |
|---|---|---|---|
| ⏮ ⏭ | 01 | OPEN/CLOSE | Performs OPEN/CLOSE each time the PLAY button is pushed. |
| | 02 | Tracking Error | Checks tracking error signal. |
| | 03 | HF Signal | Checks HF signal. |
| | 04 | Automatic Adjustment call | Push tray to open automatically, press SEARCH button to call servo adjustment value. |
| | 05 | Cleaning of Pick-up Lens | Tray open and pick-up, moves out of mechanism and cleaning the lens. |
| | 06 | Focus Gain Changing | Select Gain with SEARCH ( ◀◀ ▶▶ ) button. When operating SEARCH ( ◀◀ ▶▶ ) button, minute and second indicator are blinked. Press PLAY or CUE button, the display lights that will be newly memory in EEPROM. When select data becomes big or small, the Gain is up or down. In normally, do not change the data that is setted by 750.0. |
| | 07 | Tracking Gain Changing | Select Gain with SEARCH ( ◀◀ ▶▶ ) button. When operating SEARCH ( ◀◀ ▶▶ ) button, minute and second indicator are blinked. Press PLAY or CUE button, the display lights that will be newly memory in EEPROM. When select data becomes big or small, the Gain is up or down. In normally, do not change the data that is setted by 1000.0. When sound out is occured by oscillation, please raise gain. But there is sound out easily by defective disc. |
| TIME | 0A | CHUCKING Test | Repeats OPEN/CLOSE of tray, servo ON, and TOC read. |
| PITCH | 0B | Heat Run (No Skip Check) | Repeats OPEN/CLOSE of tray, repeats playing the first and the last programs of music on the disc. When an error occurs, displays error code and stops. |

**Error Code Table (Appears only at Heat Run functon)**

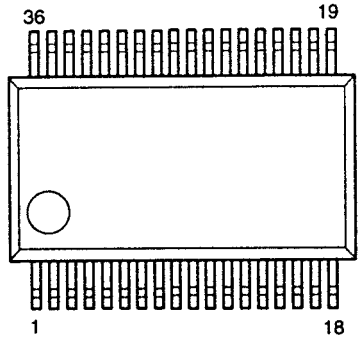
| Error Code at TRACK portion | Contents No. at M portion | Contents |
|---|---|---|
| E1 | | Automatic Adjustment Error |
| | 00 | Unable to detect disc |
| | 01 | Unable to adjust tracking offset |
| | 02 | Unable to adjust focus offset |
| | 03 | Unable to adjust focus fine gain |
| | 04 | Unable to actuate focus |
| | 05 | Unable to actuate tracking |
| | 06 | Unable to adjust tracking fine gain |
| | 07 | Unable to adjust EF balance |
| | 08 | Unable to adjust focus balance |
| E2 | 00 | Servo down during playback |
| | 01 | Not read subcode |
| E3 | | Unable to read TOC |
| E4 | | Loader error |
| E5 | | Slide error |

Detailed error can be displayed by pushing TRACK button ⏮ ⏭ when error occurs.

| LCD Error indication | | | |
|---|---|---|---|
| TR | MIN | SEC | FRAM |
| Error Code | Contents No. | Accumulated number of open/close function of the tray prior to Error occures. | |
| Indication state when error occurs | | | |
| 01 | FG data | | 01 |
| 02 | FBAL data | | 02 |
| 03 | FOFS data | | 03 |
| 04 | TG data | | 04 |
| 05 | TBAL data | | 05 |
| 06 | TOFS data | | 06 |

# IC TERMINAL FUNCTION LIST

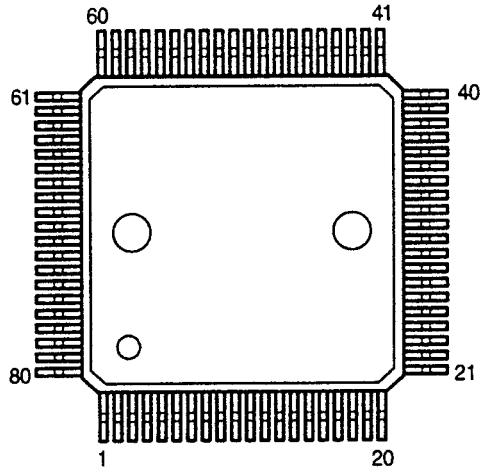
## AN8805S (IC102) (Mecha unit)




## AN8805S Terminal Function

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 1 | PD | I | Inputs PD signal for output monitor of LD. |
| 2 | LD | O | Connet to external transistor's base for LD drive. |
| 3 | LDON | I | Shifts LD APC ON/OFF. |
| 4 | C.CRS | — | Capacitor connecting terminal for CROSS. |
| 5 | VCC | — | Power supply connecting terminal. |
| 6 | RF- | I | RF AMP reversal input terminal. Connect a resistor. |
| 7 | RFOUT | O | RF AMP output terminal (reversal AMP). |
| 8 | RFIN | I | Input terminal of RF AGC. |
| 9 | C. AGC | — | Capacitor connecting terminal for RF AGC loop filter. |
| 10 | ARF | O | RF output terminal of after AGC. |
| 11 | C. ENV | — | Capacitor connecting terminal for RF. |
| 12 | C. EA | — | Capacitor connecting terminal for AMP. |
| 13 | C. SBDO | — | Capacitor connecting terminal for low speed detection of dark level DO detection. |
| 14 | BDO | O | BDO detection output terminal. Positive logic. |
| 15 | C. SBRT | — | Capacitor connecting terminal for low speed detection of OFTR detection. |
| 16 | OFTR | O | Output terminal of OFF TRACK detection. Positive logic. |
| 17 | NRFDET | O | Output terminal of RF signal amplitude detection. Negative logic. |
| 18 | GND | — | GND. |
| 19 | ENV | O | ENV output terminal. |
| 20 | VREF | O | VCC x 0.5(V) output terminal. |
| 21 | LD OFF | I | Input terminal of LD APC forcible stop. |
| 22 | VDET | O | Output terminal of vibration detection. |
| 23 | TEBPF | I | Input terminal of vibration detection. |
| 24 | CROSS | O | Output terminal of TE CROSS detection signal. |
| 25 | TEOUT | O | Output terminal of TEAMP. |
| 26 | TE- | I | TEAMP reversal input terminal. Connect a resistor. |
| 27 | FEOUT | O | Output terminal of FEAMP. |
| 28 | FE- | I | FEAMP reversal input terminal. Connect a resistor. |
| 29 | FBAL | I | Control signal input terminal of FO balance adjustment. |
| 30 | TBAL | I | Control signal input terminal of TE balance adjustment. |
| 31 | PDFR | — | Resistor connecting terminal for setting IV converting resistance value of PDE. |
| 32 | PDER | — | Resistor connecting terminal for setting IV converting resistance value of PDF. |
| 33 | PDE | I | Connect to PIN diode E. |
| 34 | PDF | I | Connect to PIN diode F. |
| 35 | PDBD | I | Connect to B,D of astigmatism 1/4 divided PD. |
| 36 | PDAC | I | Connect to A,C of astigmatism 1/4 divided PD. |

## MN662720 (Mecha unit)
## (IC101)

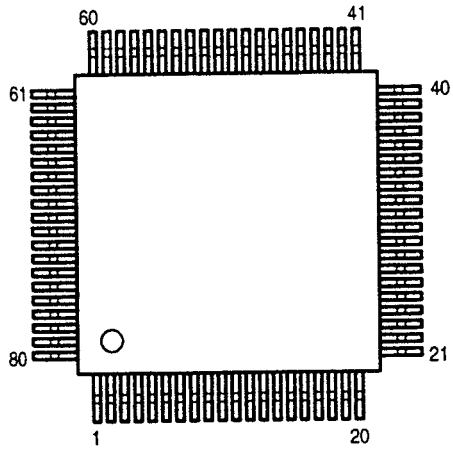



### MN662720 Terminal Function

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 1 | BCLK | O | Bit clock output for SRDATA. |
| 2 | LRCK | O | L,R discrimination signal output. |
| 3 | SRDATA | O | Serial data output. |
| 4 | DVDD1 | I | Power supply for digital circuit. |
| 5 | DVSS1 | I | GND for digital circuit. |
| 6 | TX | O | Digital audio interface output signal. |
| 7 | MCLK | I | Microcomputer command clock signal input (latches data at rising edge). |
| 8 | MDATA | I | Microcomputer command data input. |
| 9 | MLD | I | Microcomputer command load signal input. ("L": load) |
| 10 | SENSE | O | Sens signal output (OFT, FESL, NACEND, NAJEND, POSAD, SFG). |
| 11 | $\overline{\text{FLOCK}}$ | O | Focus servo draw in signal ("L": draw in state). |
| 12 | $\overline{\text{TLOCK}}$ | O | Tracking servo draw in signal ("L": draw in state). |
| 13 | BLKCK | O | Subcode block clock signal (fGLKCK=75Hz). |
| 14 | SQCK | I | External clock input for subcode Q register. |
| 15 | SUBQ | O | Subcode Q code output. |
| 16 | DMUTE | I | Muting input ("H": mute). |
| 17 | STAT | O | Status signal (CRC, CUE, CLVS, TTSTOP, FCLV, SQOK). |
| 18 | $\overline{\text{RST}}$ | I | Reset input ("L": reset). |
| 19 | SMCK | O | 8.4672MHz clock signal output at MSEL="H". 4.2336MHz clock signal output at MSEL="L". |
| 20 | PMCK | O | 88.2kHz clock output. |
| 21 | TRV | O | Traverse forcible sending output. |
| 22 | TVD | O | Traverse drive output. |
| 23 | PC | O | Spindle motor ON signal ("L": ON). |
| 24 | ECM | O | Spindle motor drive signal (forcible mode output). 3-state. |
| 25 | ECS | O | Spindle motor drive signal (servo error signal output). |
| 26 | KICK | O | Kick pulse output. |
| 27 | TRD | O | Tracking drive output. |
| 28 | FOD | O | Focus drive output. |
| 29 | VREF | I | Reference voltage for DA output portion (TVD,BCS,TRD,FOD,FBAL,TBAL). |
| 30 | FBAL | O | Focus balance adjusting output. |

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 31 | TBAL | O | Tracking balance adjusting output. |
| 32 | FE | I | Focus error signal input (analog input). |
| 33 | TE | I | Tracking error signal input (analog input). |
| 34 | RFENV | I | RF envelope signal input (analog input). |
| 35 | VDET | I | Vibration detecting signal input ("H": detect). |
| 36 | OFT | I | Off track signal input ("H": off track). |
| 37 | TRCRS | I | Track cross signal input. |
| 38 | $\overline{\text{RFDET}}$ | I | RF detecting signal input ("L": detect). |
| 39 | BDO | I | Drop out signal input ("H": drop out). |
| 40 | LDON | O | Laser ON signal output ("H": ON). |
| 41 | TES | O | Tracking error shunt signal output ("H": shunt). |
| 42 | PLAY | O | Play signal output ("H": play). |
| 43 | WVEL | O | Double speed status signal output. |
| 44 | ARF | I | RF signal input. |
| 45 | IREF | I | Reference current input terminal. |
| 46 | DRF | I | Bias terminal for DSL. |
| 47 | DSLF | I/O | Loop filter terminal for DSL. |
| 48 | PLLF | I/O | Loop filter sterminal for PLL. |
| 49 | VCOF | I/O | Loop filter terminal for VCO. |
| 50 | AVDD2 | I | Power supply for analog circuit (for DSL, PLL, DA output sections). |
| 51 | AVSS2 | I | GND for analog circuit (for DSL, PLL, DA output sections). |
| 52 | EFM | O | EFM signal output. |
| 53 | PCK | O | PLL extract clock output (fPCK=4.321MHz). |
| 54 | PDO | O | Phase comparing signal output of EFM signal and PCK signal. |
| 55 | SUBC | O | Subcode serial output data output. |
| 56 | SBCK | I | Clock input for subcode serial output. |
| 57 | VSS | I | GND for osc. circuit. |
| 58 | X1 | I | X'tal osc. circuit input terminal. f=16.9344MHz or 33.8688MHz. |
| 59 | X2 | O | X'tal osc. circuit output terminal (use 33.8688MHz at double speed PB). |
| 60 | VDD | I | Power supply for osc. circuit. |
| 61 | BYTCK | O | Byte clock output. |
| 62 | $\overline{\text{CLDCK}}$ | O | Subcode frame clock signal output (fCLDCK=7.35kHz). |
| 63 | FCLK | O | X'tal frame clock output (fFCLK=7.35kHz). |
| 64 | IPFLAG | O | Interpolation flag output ("H": interpolation). |
| 65 | FLAG | O | Flag output. |
| 66 | CLVS | O | Spindle servo phase sync state signal output ("H":CLV, "L":rough servo). |
| 67 | CRC | O | Subcode CRC check result output ("H":OK, "L":NG). |
| 68 | DEMPH | O | Deemphasis detecting signal output ("H":ON). |
| 69 | RESY | O | Flag 6 output at SSEL:"H"(RAM address reset generating signal by Jitter margin over of CLV servo. "L":address reset generates).<br>RESY output at SSBL:"L"(Re-sync signal output of frame sync. "H": sync, "L":out sync). |
| 70 | NC1 | NC | Non connection terminal (not connected internally). |
| 71 | $\overline{\text{TEST}}$ | I | Test terminal (normally "H"). |
| 72 | AVDD1 | I | Power supply for digital circuit. |
| 73 | NC2 | NC | Non connection terminal(not connected internally). |
| 74 | AVSS1 | I | GND for digital circuit. |
| 75 | NC3 | NC | Non connection terminal (not connected internally). |
| 76 | RSEL | I | RF signal polarity specify terminal (RSEL="H" at brightness level "H". RSEL="L" at brightness level "L"). |
| 77 | CSEL | I | X'tal osc. frequency specify terminal, X'tal osc. freq. 33.8688MHz:CSEL"H", 16.9344MHz:CSEL"L". |
| 78 | PSEL | I | Test terminal (normally "L"). |
| 79 | MSEL | I | SMCK terminal. Output frequency shifting terminal ("H":SMCK=8.4672MHz, "L":SMCK=4.2336MHz). |
| 80 | SSEL | I | Sub Q teminal. Output mode shifting terminal ("H":Q code buffer using mode). |

## µPD784021GC-3B9 (Mecha Unit)
## (IC201)

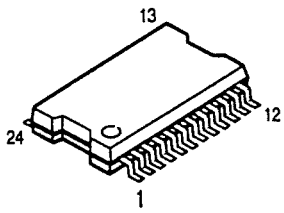


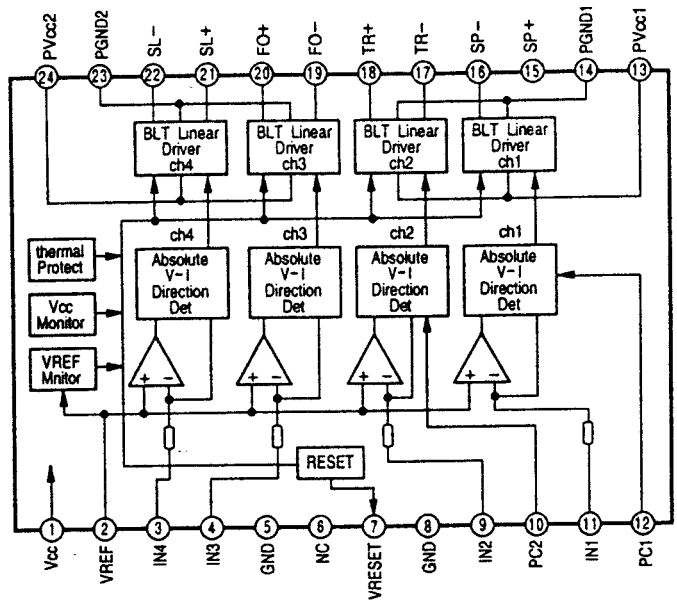

### µPD784021GC-3B9 Terminal Function

| Pin No. | Terminal Name | Symbol | I/O | Reset | Initial | Active | Function |
|---|---|---|---|---|---|---|---|
| 1 | P32/$\overline{SCK}$ | SCL | O | Z | H | — | Serial communication data output to MN19412A, MN19413. |
| 2 | P33/S00/SBO | SDA | O | Z | H | — | Serial communication clock output to MN19412A, MN19413. |
| 3 | P34/TO0 | VCOCK | O | Z | H | — | 44.1 kHz clock output to MN19413. |
| 4 | P35/TO1 | $\overline{MLE}$ | O | Z | H | — | SM5841BS command latch. |
| 5 | P36/TO2 | CLK | O | Z | H | — | Clock for MN662720, SM5841BS command output. |
| 6 | P37/TO3 | MDATA | O | Z | H | — | MN662720, SM5841BS command data. |
| 7 | $\overline{RESET}$ | $\overline{RESET}$ | I | L | — | L | Reset signal input (reset at "L"). |
| 8 | $V_{DD}$ | $V_{DD}$ | — | | | | Microcomputer power supply (+5V). |
| 9 | X2 | X2 | — | | | | Open. |
| 10 | X1 | X1 | I | | | | System clock input (24.57 MHz). |
| 11 | Vss | Vss | — | | | | Microcomputer GND. |
| 12 | PO0 | DMUTE | O | Z | L | H | MN662720 digital mute. |
| 13 | PO1 | MLD | O | Z | H | L | MN662720 command latch. |
| 14 | PO2 | SENSE | I | Z | — | — | MN662720 servo state input signal. |
| 15 | PO3 | $\overline{FLOCK}$ | I | Z | — | L | MN662720 focus servo Lead-in signal. |
| 16 | PO4 | $\overline{TLOCK}$ | I | Z | — | L | MN662720 tracking servo Lead-in signal. |
| 17 | PO5 | SQCK | O | Z | H | — | MN662720 subcode Q register reading clock. |
| 18 | PO6 | SUBQ | I | Z | — | — | MN662720 subcode Q input. |
| 19 | PO7 | STAT | I | Z | — | — | MN662720 status signal. |
| 20 | P67/$\overline{REFRQ}$/HLDAK | $\overline{RST}$ | O | L | L | L | MN662720, AN8805 reset signal. |
| 21 | P66/$\overline{WAIT}$/HLDRQ | RST-D | O | Z | L | L | SM5841BS, MN19413, MN19412A reset signal. |
| 22 | P65/$\overline{WR}$ | — | O | Z | — | — | Not used (open). |
| 23 | P64/$\overline{RD}$ | — | O | Z | — | — | Not used (open). |
| 24 | P63/A19 | — | O | Z | L | — | Not used (open). |
| 25 | P62/A18 | — | O | Z | L | — | Not used (open). |
| 26 | P61/A17 | — | O | Z | L | — | Not used (open), |
| 27 | P60/A16 | — | O | Z | L | — | Not used (open). |
| 28 | P57/A15 | A15 | | | | | Address bus. |
| 29 | P56/A14 | A14 | | | | | Address bus. |

| Pin No. | Terminal Name | Symbol | I/O | Reset | Initial | Active | Function |
|---|---|---|---|---|---|---|---|
| 30 | P55/A13 | A13 | | | | | Address bus. |
| 31 | P54/A12 | A12 | | | | | Address bus. |
| 32 | P53/A11 | A11 | | | | | Address bus. |
| 33 | P52/A10 | A10 | | | | | Address bus. |
| 34 | P51/A9 | A9 | | | | | Address bus. |
| 35 | P50/A8 | A8 | | | | | Address bus. |
| 36 | P47/AD7 | AD7 | | | | | Address/data bus. |
| 37 | P46/AD6 | AD6 | | | | | Address/data bus. |
| 38 | P45/AD5 | AD5 | | | | | Address/data bus. |
| 39 | P44/AD4 | AD4 | | | | | Address/data bus. |
| 40 | P43/AD3 | AD3 | | | | | Address/data bus. |
| 41 | P42/AD2 | AD2 | | | | | Address/data bus. |
| 42 | P41/AD1 | AD1 | | | | | Address/data bus. |
| 43 | P40/AD0 | AD0 | | | | | Address/data bus. |
| 44 | ASTB/CLKOUT | ASTB | | | | | Address strobe terminal (address bus effective at "L"). |
| 45 | Vss | Vss | | | | | GND. |
| 46 | TEST | — | | | | | Connect to 0V. |
| 47 | P10/PWM0 | PO0 | I | Z | — | — | Status data input 0 of MN19413. |
| 48 | P11/PWM1 | PO1 | I | Z | — | — | Status data input 1 of MN19413. |
| 49 | P12/ASCK2/$\overline{SCK2}$ | PO3 | O | Z | L | H | MN19412 port command output permitting signal. |
| 50 | P13/RxD2/SI2 | — | — | Z | — | — | Not used (open). |
| 51 | P14/TxD2/SO2 | — | — | Z | — | — | Not used (open). |
| 52 | P15 | TXDEN | O | Z | H | L | IC enable signal for M5M3045 serial communication. |
| 53 | P16 | P10 | I | Z | — | — | Status data input 0 of MN19412A. |
| 54 | P17 | P11 | I | Z | — | — | Status data input 1 of MN19412A. |
| 55 | $V_{DD}$ | $V_{DD}$ | — | | | | Microcomputer power supply (+5V). |
| 56 | P70/ANI0 | ADDRO | O | Z | L | — | Address designated signal for MN19412A command output. |
| 57 | P71/ANI1 | $\overline{OPEN}$ | O | L | L | — | Tray OPEN switch ON. |
| 58 | P72/ANI2 | $\overline{CLOSE}$ | O | L | L | — | Tray CLOSE switch ON. |
| 59 | P73/ANI3 | LDOUT | I | Z | — | L | Tray OPEN detection switch input. |
| 60 | P74/ANI4 | LDIN | I | Z | — | L | Tray CLOSE detection switch input. |
| 61 | P75/ANI5 | AMUTE | O | L | L | L | Analog mute. |
| 62 | P76/ANI6 | STIN1 | I | Z | — | L | RC44 communication status input. |
| 63 | P77/ANI7 | CDSEL | I | Z | — | — | Microcomputer ID (0: CD1, 1: CD2). |
| 64 | $AV_{DD}$ | $AV_{DD}$ | | | | | A/D converter power supply (+5V). |
| 65 | AVref1 | AVref1 | | | | | A/D converter reference voltage (+5V). |
| 66 | AVss | AVss | — | | | | GND for A/D converter (0V). |
| 67 | ANO0 | STOUT | O | OV | H | — | RC44 communication status output. |
| 68 | ANO1 | — | O | OV | H | — | Not used (open). |
| 69 | AVref2 | AVref2 | | | | | Connect to 5V. |
| 70 | AVref3 | AVref3 | | | | | A/D converter reference voltage input (+side) (+5V). |
| 71 | P20/NMI | — | I | Z | — | — | A/D converter reference voltage input (-side) (0V). |
| 72 | P21/INTP0 | EJSW | I | Z | — | L | Eject switch input. |
| 73 | P22/INTP1 | INSW | I | Z | — | L | Slide inner switch input. |
| 74 | P23/INTP2/CI | BLKCK | I | Z | — | L | Subcode block clock input. |
| 75 | P24/INTP3 | FCLK | I | Z | — | L | Frame count clock input. |
| 76 | P25/INTP4/ASCK/$\overline{SCK1}$ | FADE | I | Z | — | — | Fader input. ↓ Starts playback, ↑ Pause. |
| 77 | P26/INTP5 | — | I | Z | — | — | Not used (connect to 0V). |
| 78 | P27/SI0 | — | I | Z | — | — | Not used (connect to 0V). |
| 79 | P30/RxD/SI1 | RXD | I | Z | — | — | Serial communication data input from remote control. |
| 80 | P31/TxD/SO1 | TXD | O | Z | — | — | Serial communication data output to remote control. |

## AN8389 (IC103) (Mecha unit)

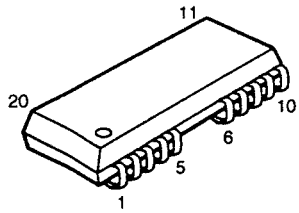


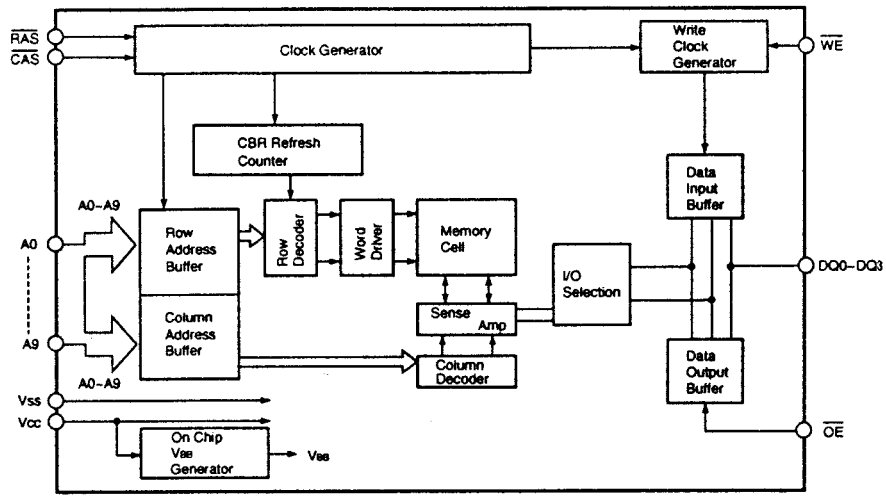




## AN8389 Terminal Function

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 1 | ACC | — | Power supply. |
| 2 | VREF | I | VREF input terminal. |
| 3 | IN4 | I | Motor driver 4 input terminal. |
| 4 | IN3 | I | Motor driver 3 input terminal. |
| 5 | GND | — | GND. |
| 6 | NC | — | |
| 7 | NRESET | O | Reset output terminal. |
| 8 | GND | — | GND. |
| 9 | IN2 | I | Motor driver 2 input terminal. |
| 10 | PC2 | I | PC2 (power cut) input terminal. |
| 11 | IN1 | I | Motor driver 1 input terminal. |
| 12 | PC1 | I | PC1 (power cut) input terminal. |
| 13 | PVCC1 | — | Power supply terminal1 for driver. |
| 14 | PGND1 | — | GND terminal1 for driver. |
| 15 | SP+ | O | Motor driver 1 reversal output terminal, spindle motor drive. |
| 16 | SP− | O | Motor driver 1 obverse output terminal, spindle motor drive. |
| 17 | TR− | O | Motor driver 2 reversal output terminal. |
| 18 | TR+ | O | Motor driver 2 obverse output terminal. |
| 19 | FO− | O | Motor driver 3 reversal output terminal. |
| 20 | FO+ | O | Motor driver 3 obverse output terminal. |
| 21 | SL+ | O | Motor driver 4 reversal output terminal, slide motor drive. |
| 22 | SL− | O | Motor driver 4 obverse output terminal, slide motor drive. |
| 23 | PGND2 | — | GND terminal 2 for driver. |
| 24 | PVCC2 | — | Power supply terminal2 for driver. |

## MN41440CSJ-07 (Mecha unit)
## (IC304,305)

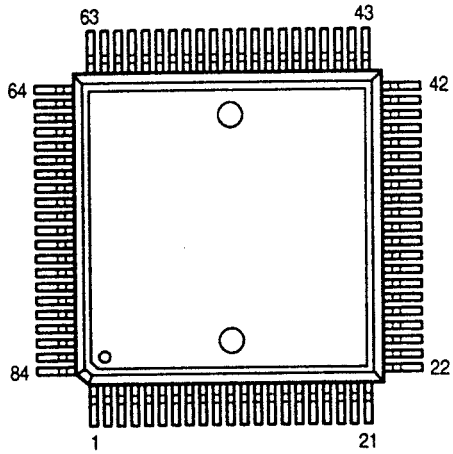



## MN41440CSJ-07 Terminal Function

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 1 | DQ0 | I/O | Data input/output. |
| 2 | DQ1 | I/O | Data input/output. |
| 3 | $\overline{WE}$ | I | Write enable input. |
| 4 | $\overline{RAS}$ | I | Row address strobe. |
| 5 | A9 | I | Address input. |
| 6 | A0 | I | Address input. |
| 7 | A1 | I | Address input. |
| 8 | A2 | I | Address input. |
| 9 | A3 | I | Address input. |
| 10 | Vcc | — | Power supply (+5V). |
| 11 | A4 | I | Address input. |
| 12 | A5 | I | Address input. |
| 13 | A6 | I | Address input. |
| 14 | A7 | I | Address input. |
| 15 | A8 | I | Address input. |
| 16 | $\overline{OE}$ | I | Output enable input. |
| 17 | $\overline{CAS}$ | I | Column address strobe. |
| 18 | DQ2 | I/O | Data input/output. |
| 19 | DQ3 | I/O | Data input/output. |
| 20 | Vss | — | Power supply (0V). |

## MN19412A (Mecha Unit)
## (IC301)

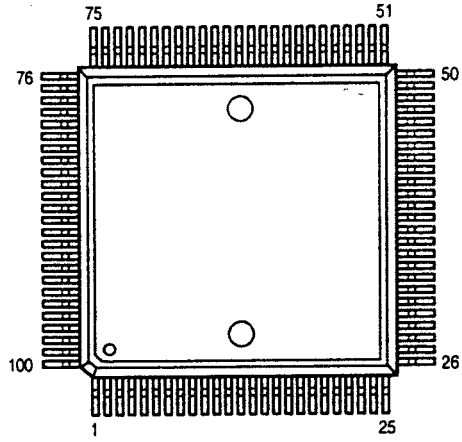



### MN19412A Terminal Function

| Pin No. | Symbol | I/O/T | Function |
|---|---|---|---|
| 1 | N.C. | — | Non connection. |
| 2 | SOEN2 | I | Output enable for serial output 2. |
| 3 | SCKO2 | I | Serial clock for serial output 2. |
| 4 | SDO3 | O/T | Data for serial output 3. |
| 5 | WSO3 | I | Word select for serial output 3. |
| 6 | SCKO3 | I | Serial clock for serial output 3. |
| 7 | SOEN3 | I | Output enable for serial output 3. |
| 8 | Vss | — | GND terminal (0V). |
| 9 | Vss | — | GND terminal (0V). |
| 10 | XCAS | O | Column address strobe for external DRAM. Open when not used. |
| 11 | XOE | O | Output enable for external RAM. |
| 12 | A14 | O | Address 14 for external RAM. |
| 13 | A13 | O | Address 13 for external RAM. |
| 14 | A12 | O | Address 12 for external RAM. |
| 15 | A11 | O | Address 11 for external RAM. |
| 16 | A10 | O | Address 10 for external RAM. |
| 17 | A9 | O | Address 9 for external RAM. |
| 18 | A8 | O | Address 8 for external RAM. |
| 19 | A7 | O | Address 7 for external RAM. |
| 20 | A6 | O | Address 6 for external RAM. |
| 21 | N.C. | — | Non connection. |
| 22 | A5 | O | Address 5 for external RAM. |
| 23 | A4 | O | Address 4 for external RAM. |
| 24 | A3 | O | Address 3 for external RAM. |
| 25 | A2 | O | Address 2 for external RAM. |
| 26 | A1 | O | Address 1 for external RAM. |
| 27 | A0 | O | Address 0 for external RAM. |
| 28 | XCE2 | O | Chip enable 2 for external SRAM. |
| 29 | XCE1 | O | Chip enable 1 for external SRAM. |
| 30 | XRAS | O | Row address strobe for external DRAM. Open when not used. |

| Pin No. | Symbol | I/O/T | Function |
|---|---|---|---|
| 31 | XWE | O | Write enable for external RAM. |
| 32 | VSS | — | GND terminal (0V). |
| 33 | VSS | — | GND terminal (0V). |
| 34 | D7 | I/O | Data 7 for external RAM (Connect to D4~7 when one DRAM is used). |
| 35 | D6 | I/O | Data 6 for external RAM. |
| 36 | D5 | I/O | Data 5 for external RAM. |
| 37 | D4 | I/O | Data 4 for external RAM. |
| 38 | D3 | I/O | Data 3 for external RAM. |
| 39 | D2 | I/O | Data 2 for external RAM. |
| 40 | D1 | I/O | Data 1 for external RAM. |
| 41 | D0 | I/O | Data 0 for external RAM. |
| 42 | P7 | I/O/T | General purpose port 7. |
| 43 | P6 | I/O/T | General purpose port 6. |
| 44 | P5 | I/O/T | General purpose port 5. |
| 45 | P4 | I/O/T | General purpose port 4. |
| 46 | P3 | I/O/T | General purpose port 3. |
| 47 | P2 | I/O/T | General purpose port 2. |
| 48 | P1/PT1 | I/O/T | General purpose port 1/Flag 1 for condition dividing. |
| 49 | P0/PT0 | I/O/T | General purpose port 0/Flag 0 for condition dividing. |
| 50 | N.C. | — | Non connection. |
| 51 | SYNC | I | Input for program sync (condition input). |
| 52 | VDD | — | Power supply terminal. |
| 53 | INT0 | I | Interrupt input 0. |
| 54 | INT1 | I | Interrupt input 1. |
| 55 | XRESET | I | System reset input. |
| 56 | Vss | — | GND terminal (0V). |
| 57 | CLKI | I | System clock input. |
| 58 | CLKO | O | System clock output. |
| 59 | VDD | — | Power supply terminal. |
| 60 | VDD | — | Power supply terminal. |
| 61 | ADDR0 | I | Address select 0 for IIC bus. |
| 62 | ADDR1 | I | Address select 1 for IIC bus. |
| 63 | XCE | I | Chip enable for IIC bus. |
| 64 | IICSEL | I | IIC/IC switching for IIC bus. |
| 65 | XTRANS | I | Data transfer control for IIC bus. |
| 66 | SDA | I/O | Serial data for IIC bus. |
| 67 | SCL | I/O | Serial clock for IIC bus. |
| 68 | MATCH | O | Address match at coefficient input for IIC bus. |
| 69 | SDI1 | I | Data for serial input 1. |
| 70 | WSI1 | I | Word select for serial input 1. |
| 71 | N.C. | — | Non connection. |
| 72 | SCKI1 | I | Serial clock for serial input 1. |
| 73 | SDI2 | I | Data for serial input 2. |
| 74 | WSI2 | I | Word select for serial input 2. |
| 75 | SCKI2 | I | Serial clock for serial input 2. |
| 76 | VDD | — | Power supply terminal. |
| 77 | VDD | — | Power supply terminal. |
| 78 | SDO1 | O/T | Data for serial output 1. |
| 79 | WSO1 | I | Word select for serial output 1. |
| 80 | N.C. | — | Non connection. |
| 81 | SCKO1 | I | Serial clock for serial output 1. |
| 82 | SOEN1 | I | Output enable for serial output 1. |
| 83 | SDO2 | O/T | Data for serial output 2. |
| 84 | WSO2 | I | Word select for serial output 2. |

## MN19413 (Mecha Unit)
## (IC303)

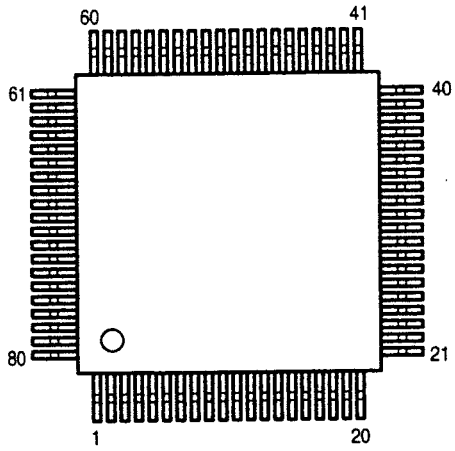



## MN19413 Terminal Function

| Pin No. | Symbol | I/O/T | Function |
|---|---|---|---|
| 1 | RP | O | D/A Rch analog output (positive). |
| 2 | RN | O | D/A Rch analog output (negative). |
| 3 | VDD | — | Digital system power supply (5V). |
| 4 | SCKI | I | Serial clock for serial input. |
| 5 | WSI | I | Word select for serial input. |
| 6 | SDI | I | Data for serial input. |
| 7 | SDO2 | O | Data for serial output 2. |
| 8 | SDO1 | O | Data for serial output 1. |
| 9 | WSO | O | Word select for serial output. |
| 10 | SCKO | O | Serial clock for serial output. |
| 11 | Vss | — | Digital system GND terminal (0V). |
| 12 | P3 | I/O/T | General purpose port 3. |
| 13 | P2 | I/O/T | General purpose port 2. |
| 14 | P1/PT1 | I/O/T | General purpose port 1/Flag 1 for condition dividing. |
| 15 | P0/PT0 | I/O/T | General purpose port 0/Flag 0 for condition dividing. |
| 16 | SYNC | I | Input for program sync (condition input). |
| 17 | INT1 | I | Interrupt input 1. |
| 18 | INT0 | I | Interrupt input 0. |
| 19 | XTEST1 | I | Test input (normally 5V). |
| 20 | XRESET | I | System reset input. |
| 21 | ADDR0 | I | Address select 0 for IIC bus. |
| 22 | ADDR1 | I | Address select 1 for IIC bus. |
| 23 | SCL | I/O | Serial clock for IIC bus. |
| 24 | SDA | I/O | Serial data for IIC bus. |
| 25 | XCE | I | Chip enable for IIC bus. |
| 26 | MATCH | O | Address match at coefficcient input for IIC bus. |
| 27 | VDD | — | Digital system power supply (5V). |
| 28 | A16 | O | Address 16 for external RAM (open when address is not used). |
| 29 | A15 | O | Address 15 for external RAM. |
| 30 | A14 | O | Address 14 for external RAM. |
| 31 | A13 | O | Address 13 for external RAM. |
| 32 | A12 | O | Address 12 for external RAM. |
| 33 | A11 | O | Address 11 for external RAM. |
| 34 | A10 | O | Address 10 for external RAM. |
| 35 | A9 | O | Address 9 for external RAM. |
| 36 | A8 | O | Address 8 for external RAM. |
| 37 | A7 | O | Address 7 for external RAM. |
| 38 | A6 | O | Address 6 for external RAM. |
| 39 | A5 | O | Address 5 for external RAM. |
| 40 | Vss | — | Digital system GND terminal (0V). |

| Pin No. | Symbol | I/O/T | Function |
|---|---|---|---|
| 41 | A4 | O | Address 4 for external RAM. |
| 42 | A3 | O | Address 3 for external RAM. |
| 43 | A2 | O | Address 2 for external RAM. |
| 44 | A1 | O | Address 1 for external RAM. |
| 45 | A0 | O | Address 0 for external RAM. |
| 46 | XRAS | O | Row address strobe for external DRAM (open when not used). |
| 47 | XCAS | O | Column address strobe for external DRAM (open when not used). |
| 48 | XWE | O | Write enable for external RAM. |
| 49 | XOE | O | Output enable for external RAM. |
| 50 | XCE2 | O | Chip enable 2 for external SRAM. |
| 51 | XCE1 | O | Chip enable 1 for external SRAM. |
| 52 | VDD | — | Digital system power supply (5V). |
| 53 | D7 | I/O | Data 7 for external RAM (connect to D4~7 when one DRAM is used). |
| 54 | D6 | I/O | Data 6 for external RAM. |
| 55 | D5 | I/O | Data 5 for external RAM. |
| 56 | D4 | I/O | Data 4 for external RAM. |
| 57 | D3 | I/O | Data 3 for external RAM. |
| 58 | D2 | I/O | Data 2 for external RAM. |
| 59 | D1 | I/O | Data 1 for external RAM. |
| 60 | D0 | I/O | Data 0 for external RAM. |
| 61 | Vss | — | Digital system GND terminal (0V). |
| 62 | XI2 | I | System clock 2 input. |
| 63 | XO2 | O | System clock 2 output. |
| 64 | TEST0 | I | Test input (normally 0V). |
| 65 | XI1 | I | System clock 1 input. |
| 66 | XO1 | O | System clock 1 output. |
| 67 | XISEL | I | System clock selection. (O: XI2, I: XI1). |
| 68 | VDD | — | Digital system power supply (5V). |
| 69 | RX2 | I/O | Digital audio signal input. |
| 70 | FL2 | O | RX2 feedback signal output. |
| 71 | DIR | I | DIR selection (1: use internal DIR). |
| 72 | RX1 | I/O | Digital audio signal input 1. |
| 73 | FL1 | O | RX1 feedback signal output. |
| 74 | CSEL | I | A/D, D/A master clock selection (0: 256fs, 1: 384fs). |
| 75 | RXO | O | Digital audio signal output. |
| 76 | POLPD | I | PCO output polarity selection. |
| 77 | CLKI | I | VCO clock input (connect VCO output [VCOO]). |
| 78 | VDD | — | Digital system power supply (5V). |
| 79 | VCOO | O | Built-in VCO output. |
| 80 | VCOI | I | Built-in VCO input. |
| 81 | PCO | O | PLL phase compare output. |
| 82 | UNLOCK | O | PLL unlock flag output. |
| 83 | Vss | — | Digital system GND terminal (0V). |
| 84 | ZFLG | O | D/A ∞0 input detection output. |
| 85 | VREFR | — | A/D Rch reference voltage terminal (1.0V). |
| 86 | AINR | I | A/D Rch analog input terminal. |
| 87 | N.C. | — | Non connection. |
| 88 | VREFL | — | A/D Lch reference voltage terminal (1.0V). |
| 89 | VBOP | — | Built-in operation Amp. bias voltage terminal (2.5V). |
| 90 | N.C. | — | Non connection. |
| 91 | ADVDD | — | A/D analog system power supply terminal (5V). |
| 92 | ADVss | — | A/D analog system GND terminal (0V). |
| 93 | AINL | I | A/D Lch analog input terminal. |
| 94 | VGAD | — | A/D analog GND (2.5V). |
| 95 | N.C. | — | No connection. |
| 96 | VGDA | — | A/D analog GND (1.5V). |
| 97 | DAVss | — | D/A analog system GND terminal (0V). |
| 98 | DAVDD | — | D/A analog system power supply terminal (5V). |
| 99 | LP | O | D/A Lch analog output (positive). |
| 100 | LN | O | D/A Lch analog output (negative). |

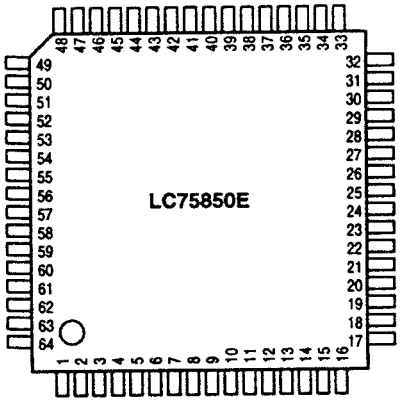
## μPD784021GC-3B9 (Remote control Unit)
## (IC301)

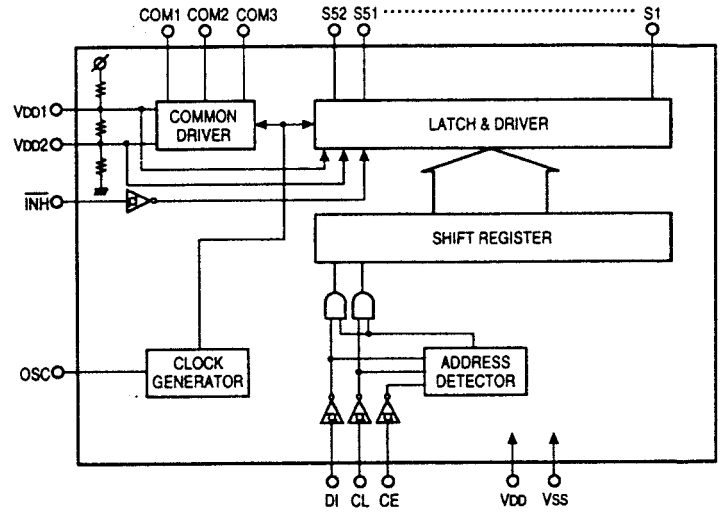



### μPD784021GC-3B9 Terminal Function

| Pin No. | Terminal Name | Symbol | I/O | Reset | Initial | Active | Function |
|---|---|---|---|---|---|---|---|
| 1 | P32/$\overline{SCK}$ | — | O | Z | H | — | Open. |
| 2 | P33/S00/SBO | — | O | Z | H | — | Open. |
| 3 | P34/TO0 | INH1 | O | L | L | L | Output to INH of LCD driver 1. |
| 4 | P35/TO1 | LDAT1 | O | Z | H | — | Output to LDAT1 of LCD driver 1. |
| 5 | P36/TO2 | LCLK1 | O | Z | H | — | Output to LCLK1 of LCD driver 1. |
| 6 | P37/TO3 | LCE1 | O | Z | H | — | Output to LCE1 of LCD driver 1. |
| 7 | $\overline{RESET}$ | RESET | I | L | — | — | Reset input. |
| 8 | VDD | VDD | — | | | | Positive power supply (+5V). |
| 9 | X2 | X2 | — | | | | Connect to system clock oscillation X' tal (open). |
| 10 | X1 | X1 | I | | | | Connect to system clock oscillation X' tal (24.57 MHz). |
| 11 | Vss | Vss | — | | | | GND (0V). |
| 12 | PO0 | KO0 | O | Z | H | L | Key scan output 0. |
| 13 | PO1 | KO1 | O | Z | H | L | Key scan output 1. LED dynamic lighting line selection output 0. |
| 14 | PO2 | KO2 | O | Z | H | L | Key scan output 2. |
| 15 | PO3 | KO3 | O | Z | H | L | Key scan output 3. LED dynamic lighting line selection output 1. |
| 16 | PO4 | KO4 | O | Z | H | L | Key scan output 4. |
| 17 | PO5 | KO5 | O | Z | H | L | Key scan output 5. |
| 18 | PO6 | KO6 | O | Z | H | L | Key scan output 6. |
| 19 | PO7 | KO7 | O | Z | H | L | Key scan output 7. LED dynamic lighting line selection output 2. |
| 20 | P67/$\overline{REFRQ}$/HLDAK | KO8 | O | Z | H | L | Key scan output 8. LED dynamic lighting line selection output 3. |
| 21 | P66/$\overline{WAIT}$/HLDRQ | KO9 | O | Z | H | L | Key scan output 9. |
| 22 | P65/$\overline{WR}$ | — | O | | | | Connect to write enable (WE) of EEPROM. |
| 23 | P64/$\overline{RD}$ | — | O | | | | Connect to output enable (OE) of EEPROM. |
| 24 | P63/A19 | — | O | Z | L | — | Open. |
| 25 | P62/A18 | — | O | Z | L | — | Open. |
| 26 | P61/A17 | — | O | Z | L | — | Open. |
| 27 | P60/A16 | — | O | Z | L | — | Open. |
| 28 | P57/A15 | A15 | | | | | Address bus. |
| 29 | P56/A14 | A14 | | | | | Address bus. |

## LC75850E (Remote control unit)
## (IC101,201)




### LC75850E Terminal Function

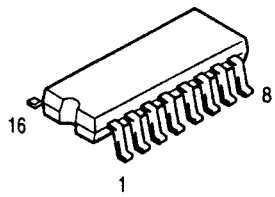
| Pin No. | Port Name | I/O | Active | Function | Remark |
|---|---|---|---|---|---|
| 1 ∫ 52 | S1~S52 | O | — | Segment output for indication data transferred from serial data. | Open when not used. |
| 53 | COM1 | O | — | Common driver output.<br>Frame frequency : fo = (fosc/384)Hz | Open when not used. |
| 54 | COM2 | | | | |
| 55 | COM3 | | | | |
| 56 | $V_{DD}$ | | | Power supply (+5V) | |
| 57 | $\overline{INH}$ | I | L | Irrespective of internal data to fail indication forcibly.<br>Serial data is feasible to input regardless to "H" or "L". | When not used, connect to GND. |
| 58 | $V_{DD1}$ | I | — | For applying external LCD drive bias 2/3 voltage.<br>Connect to VDD2 at 1/2 bias. | Open when not used. |
| 59 | $V_{DD2}$ | I | — | For applying external LCD drive bias 1/3 voltage.<br>Connect to VDD1 at 1/2 bias. | Open when not used. |
| 60 | Vss | | | GND | |
| 61 | OSC | I | — | Oscillation terminal | When not used, connect to GND. |
| 62 | CE | I | H | Transfer terminal for serial data, connect to microcomputer. (CE: Chip enable, CL: Sync clock, DI: Transfer data) | When not used, connect to GND. |
| 63 | CL | I | L→H | | |
| 64 | DI | I | — | | |

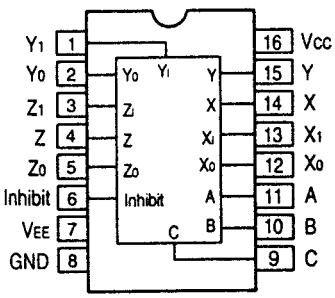
| Pin No. | Terminal Name | Symbol | I/O | Reset | Initial | Active | Function |
|---|---|---|---|---|---|---|---|
| 30 | P55/A13 | A13 | | | | | Address bus. |
| 31 | P54/A12 | A12 | | | | | Address bus. |
| 32 | P53/A11 | A11 | | | | | Address bus. |
| 33 | P52/A10 | A10 | | | | | Address bus. |
| 34 | P51/A9 | A9 | | | | | Address bus. |
| 35 | P50/A8 | A8 | | | | | Address bus. |
| 36 | P47/AD7 | AD7 | | | | | Address/data bus. |
| 37 | P46/AD6 | AD6 | | | | | Address/data bus. |
| 38 | P45/AD5 | AD5 | | | | | Address/data bus. |
| 39 | P44/AD4 | AD4 | | | | | Address/data bus. |
| 40 | P43/AD3 | AD3 | | | | | Address/data bus. |
| 41 | P42/AD2 | AD2 | | | | | Address/data bus. |
| 42 | P41/AD1 | AD1 | | | | | Address/data bus. |
| 43 | P40/AD0 | AD0 | | | | | Address/data bus. |
| 44 | ASTB/CLKOUT | ASTB | | | | | Latch timing output. |
| 45 | Vss | Vss | | | | | GND (0V). |
| 46 | TEST | TEST | | | | | Terminal for IC test (connect to Vss). |
| 47 | P10/PWM0 | LED0 | O | Z | H | L | LED dynamic lighting control 0. |
| 48 | P11/PWM1 | LED1 | O | Z | H | L | LED dynamic lighting control 1. |
| 49 | P12/ASCK2/$\overline{SCK2}$ | LED2 | O | Z | H | L | LED dynamic lighting control 2. |
| 50 | P13/RxD2/SI2 | — | O | Z | H | — | Open. |
| 51 | P14/TxD2/SO2 | — | O | Z | H | — | Open. |
| 52 | P15 | LED3 | O | Z | H | L | LED dynamic lighting control 3. |
| 53 | P16 | LED4 | O | Z | H | L | LED dynamic lighting control 4. |
| 54 | P17 | — | O | Z | H | — | Open. |
| 55 | $V_{DD}$ | $V_{DD}$ | | | | | Positive power supply (+5V). |
| 56 | P70/ANI0 | VR10 | I | — | — | — | Slide volume 1 reference voltage input. |
| 57 | P71/ANI1 | VR11 | I | — | — | — | Slide volume 1 input. |
| 58 | P72/ANI2 | VR20 | I | — | — | — | Slide volume 2 reference voltage input. |
| 59 | P73/ANI3 | VR21 | I | — | — | — | Slide volume 2 input. |
| 60 | P74/ANI4 | INH2 | O | L | L | L | Output to INH of LCD driver 2. |
| 61 | P75/ANI5 | LDAT2 | O | Z | H | — | Output to LDAT 2 of LCD driver 2. |
| 62 | P76/ANI6 | LCLK2 | O | Z | H | — | Output to LCLK 2 of LCD driver 2. |
| 63 | P77/ANI7 | LCE2 | O | Z | H | — | Output to LCE 2 of LCD driver 2. |
| 64 | $AV_{DD}$ | $AV_{DD}$ | | | | | Positive power supply for A/D converter (+5V). |
| 65 | AVRref | AVREF1 | | | | | A/D converter reference voltage (+5V). |
| 66 | AVss | AVss | | | | | GND for A/D converter (0V). |
| 67 | ANO0 | ANO0 | O | 0V | L | — | Open. |
| 68 | ANO1 | ANO1 | O | 0V | L | — | Open. |
| 69 | AVref2 | AVREF2 | | | | | A/D converter reference voltage input (+side) (+5V). |
| 70 | AVref3 | AVREF3 | | | | | A/D converter reference voltage input (–side) (0V). |
| 71 | P20/NMI | KI0 | I | H | — | L | Key scan input 0. |
| 72 | P21/INTP0 | KI1 | I | H | — | L | Key scan input 1. |
| 73 | P22/INTP1 | KI2 | I | H | — | L | Key scan input 2. |
| 74 | P23/INTP2/CI | KI3 | I | H | — | L | Key scan input 3. |
| 75 | P24/INTP3 | KI4 | I | H | — | L | Key scan input 4. |
| 76 | P25/INTP4/ASCK/$\overline{SCK1}$ | KI5 | I | H | — | L | Key scan input 5. |
| 77 | P26/INTP5 | KI6 | I | H | — | L | Key scan input 6. |
| 78 | P27/SI0 | KI7 | I | H | — | L | Key scan input 7. |
| 79 | P30/RxD/SI1 | RXD | I | Z | — | — | Status input from drive microcomputer. |
| 80 | P31/TxD/SO1 | TXD | O | Z | — | — | Command output to drive microcomputer. |

# SEMICONDUCTORS

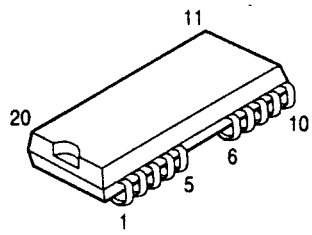
## ● IC's

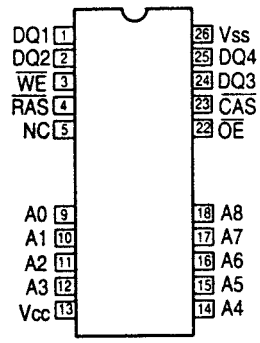
### HD74HC4053FP(IC205) (Mecha unit)



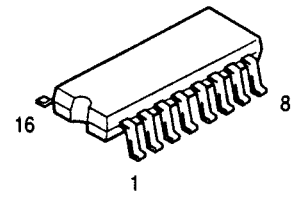



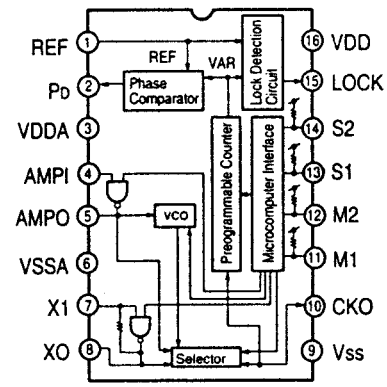

### MSM514256(IC302, 307) (Mecha unit)



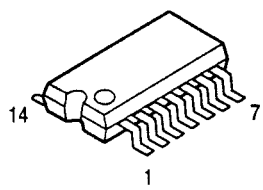



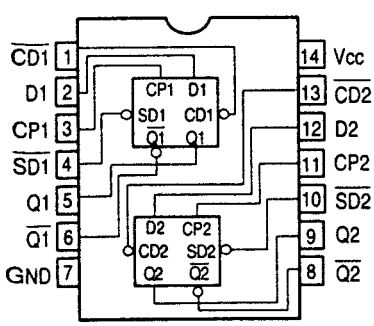

### TC9246F(IC204, 404) (Mecha unit)



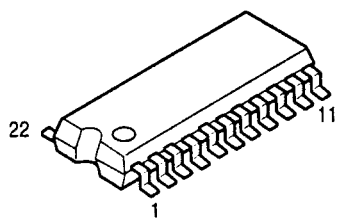



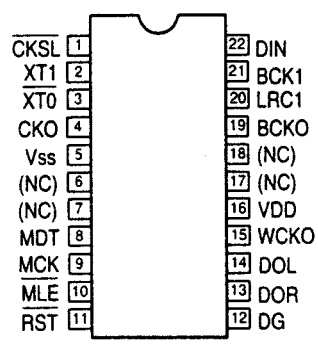

### MC74F74ML1(IC306) (Mecha unit)



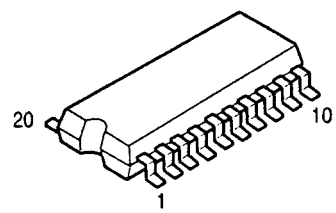



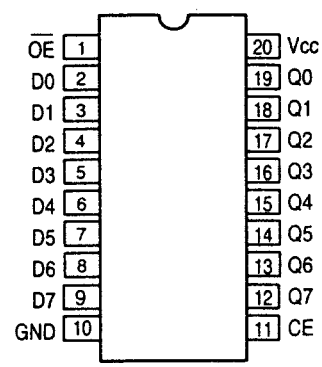

### SM5841BS(IC401) (Mecha unit)



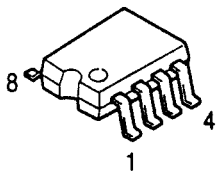




### TC74HC573AF (IC202) (Mecha unit) (IC303) (Remote control unit)

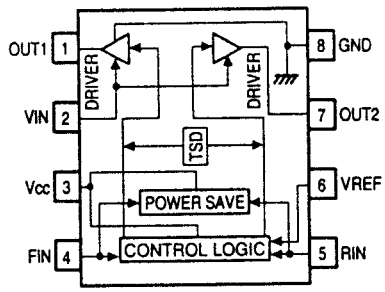


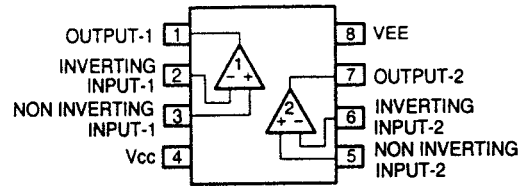
**BA6287F(IC104) (Mecha unit)**
**BA15218F(IC403, 405, 501) (Mecha unit)**



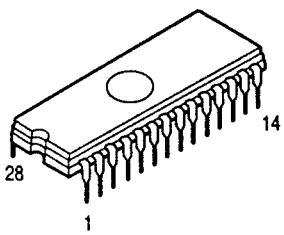

**BA6287F**

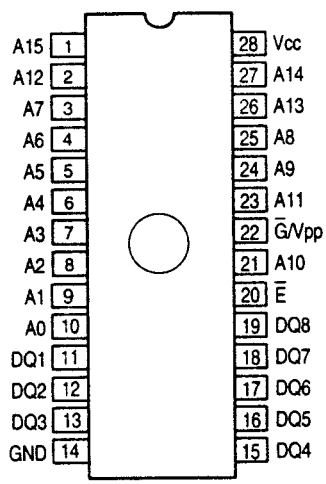



**BA15218F**

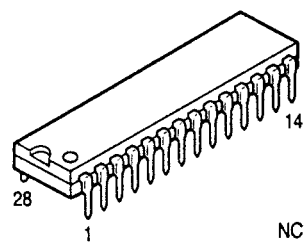


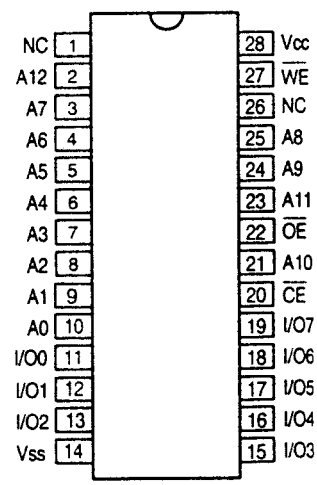

**TMS27C512G**
**(IC203) (Mecha unit)**
**(IC302) (Remote control unit)**



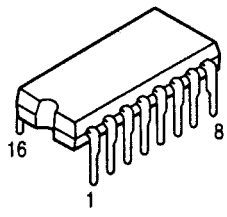




**CAT28C64BP-15(IC304)**
**(Remote control unit)**

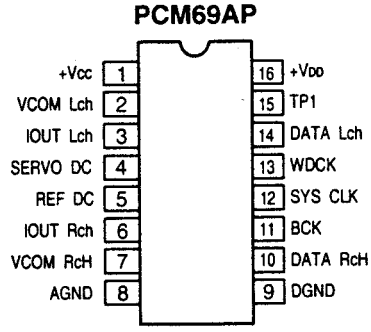


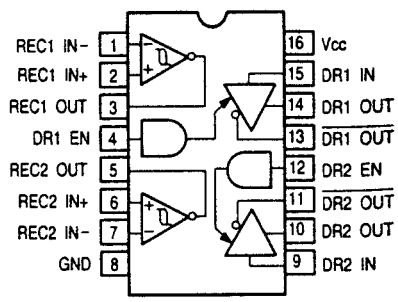

**PCM69AP(IC402) (Mecha unit)**
**MC34051P (IC706) (Main unit)**



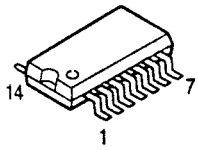

**PCM69AP**

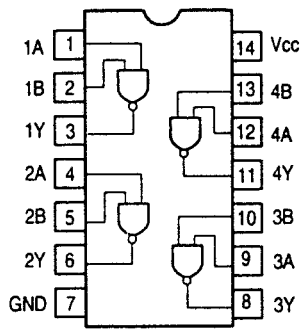



**MC34051P**

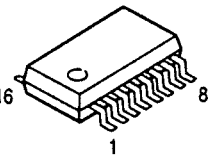


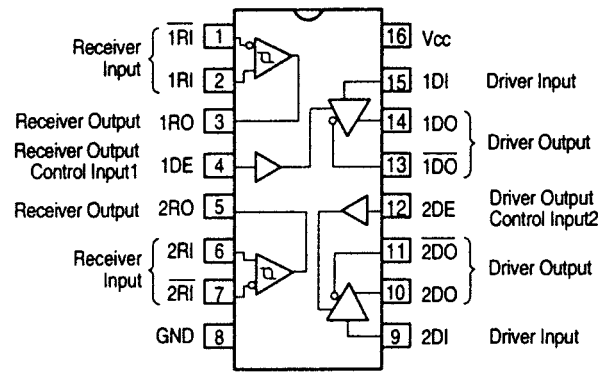
**TC74HC00AF**
**(IC306)**
**(Remote control unit)**



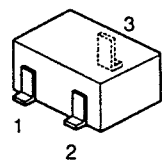




**M5M34051FP**
**(IC401)**
**(Remote control unit)**



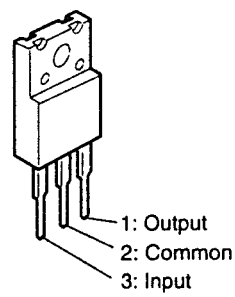




**MN1382-S**
**(IC305)**
**(Remote control unit)**

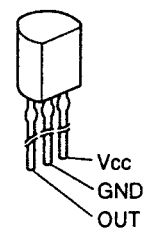



1: GND
2: VDD
3: OUT

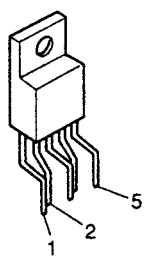
**NJM78M05FA**
**(IC701)**
**(Main unit)**




**PST529C**
**(IC703)**
**(Main unit)**

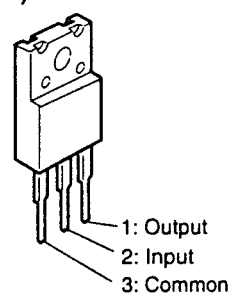



**SI-3050C**
**(IC702, 707)**
**(Main unit)**



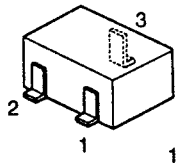

1. Vin
2. NC
3. GND
4. STB
5. Vout

**NJM79M05FA**
**(IC704)**
**(Main unit)**



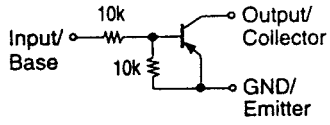
## ● TRANSISTORS

**DTA114EK(TR251)**
**DTC114EK(TR252, 301~305)**

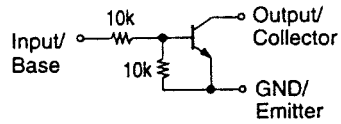



1: GND/Emitter
2: Input/Base
3: Output/Collector

**DTA114EK**

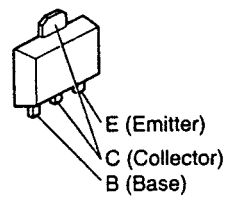



**DTC114EK**



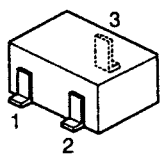

**2SA933(TR102)**
**2SD2144(TR403,404)**


**2SB766S (TR101, 102, 201, 202)**

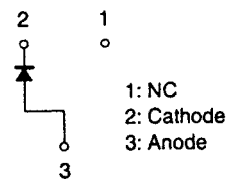



## ● DIODES

**MA151A(D101~108, 201~208, 301~304)**
**MA151WA(D402, 404)**
**MA151WK(D401, 403)**

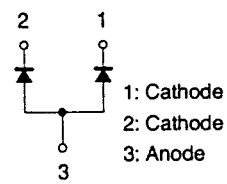



**MA151A**



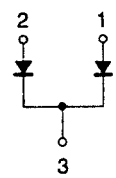

1: NC
2: Cathode
3: Anode

**MA151WA**



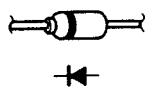

1: Cathode
2: Cathode
3: Anode

**MA151WK**

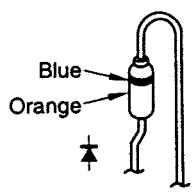



1: Anode
2: Anode
3: Cathode

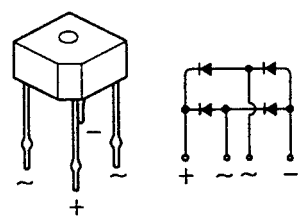
**1SS270A**
**(D201, 708~716)**



**1SR35-200A**
**(D702~705)**



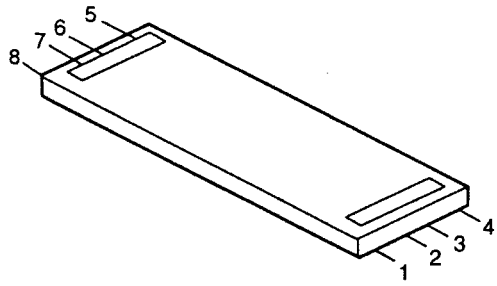

**S4VB20 (D701, 717)**



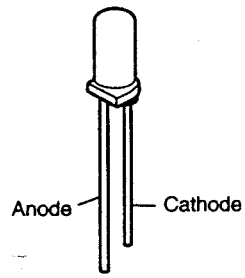
## ● LED

**BACK LIGHT (LB101, 102)**

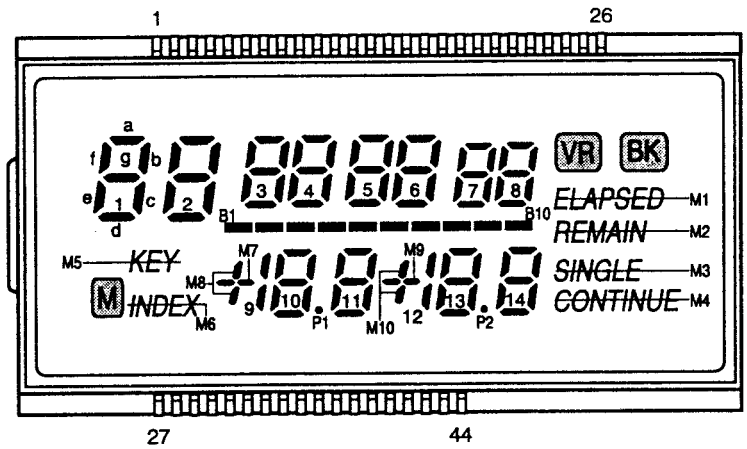
**SLR-325VC (Red) (LE103, 107, 203, 207, 801)**
**SLR-325MC (Green) (LE101, 105, 106, 108, 201, 205, 206, 208)**
**SLR-325DC (Orange) (LE102, 104, 109, 110, 202, 204, 209, 210)**




1, 3, 5, 7: Anode
2, 4, 6, 8: Cathode




**LCD (LC101)**




**Terminal Connection**

| Pin No. | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1d | | | 2d | | | 3d | | B1 | 4d | B2 | B3 | 5d | B4 | B5 | 6d | B6 | B7 | 7d | B8 | B9 | 8d | B10 | M1 | N2 |
| | 1e | 1g | 1c | 2e | 2g | 2c | 3e | 3g | 3c | 4e | 4g | 4c | 5e | 5g | 5c | 6e | 6g | 6c | 7e | 7g | 7c | 8e | 8g | 8c | BK | N3 |
| | 1f | 1a | 1b | 2f | 2a | 2b | 3f | 3a | 3b | 4f | 4a | 4b | 5f | 5a | 5b | 6f | 6a | 6b | 7f | 7a | 7b | 8f | 8a | 8b | VR | N4 |

| Pin No. | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M6 | M8 | 9bc | 10d | | P1 | 11d | | M10 | 12bc | 13d | | P2 | 14d | | COM0 | | |
| | M | M7 | 10e | 10g | 10c | 11e | 11g | 11c | M9 | 13e | 13g | 13c | 14e | 14g | 14c | | COM1 | |
| | M5 | | 10f | 10a | 10b | 11f | 11a | 11b | | 13f | 13a | 13b | 14f | 14a | 14b | | | COM2 |

# 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 "l" (i) 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 ⚠ ■■■ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

## ● Resistors

Ex.: RN (Type) 14K (Shape and performance) 2E (Power) 182 (Resistance) G (Allowable error) FR (Others)

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

**• Resistance**

1 8 2 ⇒ 1800 ohm = 1.8 kohm
- 2-digit effective number.
- Indicates number of zeros after effective number.

• Units: ohm

1 R 2 ⇒ 1.2 ohm
- 1-digit effective number.
- 2-digit effective number, decimal point indicated by R.

• Units: ohm

## ● Capacitors

Ex.: CE (Type) 04W (Shape and performance) 1H (Dielectric strength) 2R2 (Capacity) M (Allowable error) BP (Others)

| | | | |
|---|---|---|---|
| CE : Aluminum foil electrolytic<br>CA : Aluminum solid electrolytic<br>CS : Tantalum electrolytic<br>CQ : Film<br>CK : Ceramic<br>CC : Ceramic<br>CP : Oil<br>CM : Mica<br>CF : Metallized<br>CH : Metallized | 0J : 6.3V<br>1A : 10V<br>1C : 16V<br>1E : 25V<br>1V : 35V<br>1H : 50V<br>2A : 100V<br>2B : 125V<br>2C : 160V<br>2D : 200V<br>2E : 250V<br>2H : 500V<br>2J : 630V | F : ±1%<br>G : ±2%<br>J : ±5%<br>K : ±10%<br>M : ±20%<br>Z : +80%<br>−20%<br>P : +100%<br>−0%<br>C : ±0.25pF<br>D : ±0.5pF<br>= : Others | HS : High stability type<br>BP : Non-polar type<br>HR : Ripple-resistant type<br>DL : For charge and discharge<br>HF : For assuring high frequency<br>U : UL part<br>C : CSA part<br>W : UL-CSA type<br>F : Lead wire forming |

**• Capacity (electrolyte only)**

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

• Units: μF.

2 R 2 ⇒ 2.2μF
- 1-digit effective number.
- 2-digit effective number, decimal point indicated by R.

• Units: μF.

**• Capacity (except electrolyte)**

2 2 2 ⇒ 2200pF = 0.0022μF
- (More than 2) Indicates number of zeros after effective number.
- 2-digit effective number.

• Units: μF.

2 2 1 ⇒ 220pF
- (0 or 1) 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.

# PRINTED WIRING BOARD PARTS LIST

## GU-2932 MECHA P.W.B. UNIT

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| **SEMICONDUCTORS GROUP** | | | |
| IC101 | 262 2141 002 | IC MN662720 | |
| IC102 | 262 2142 904 | IC AN8805S | |
| IC103 | 262 2143 903 | IC AN8389 | |
| IC104 | 263 0994 908 | IC BA6287F | |
| IC201 | 262 2288 004 | IC µPD784021 | |
| IC202 | 262 1721 902 | IC TC74HC573AF | |
| IC203 | GEN 3607 | DN25 ROM sub Ass'y | |
| IC204 | 262 1883 905 | IC TC9246F | |
| IC205 | 262 2058 904 | IC HD74HC4053FP | |
| IC301 | 262 2289 003 | IC MN19412A | |
| IC302 | 262 2173 902 | IC MSM514256(B-70,A-80) | |
| IC303 | 262 2290 005 | IC MN19413 | |
| IC304,305 | 262 2305 903 | IC MN414400CSJ-07 | |
| IC306 | 262 1962 907 | IC MC74F74ML1 | |
| IC307 | 262 2173 902 | IC MSM514256(B-70,A-80) | |
| IC401 | 262 1765 900 | IC SM5841BS | |
| IC402 | 262 2145 008 | IC PCM69AP | |
| IC403 | 263 0674 901 | IC µPC4570G2-E2 | |
| IC404 | 262 1883 905 | IC TC9246F | |
| IC405 | 263 0615 902 | IC BA15218F | |
| IC501 | 263 0615 902 | IC BA15218F | |
| TR102 | 271 0183 927 | Transistor 2SA933 (R/S) | |
| TR103 | 273 0384 900 | Transistor 2SC2412K | |
| TR251 | 269 0083 901 | Transistor DTA114EK | |
| TR252,253 | 269 0082 902 | Transistor DTC114EK | |
| TR403,404 | 274 0160 907 | Transistor 2SD2144STPU | |
| D201 | 276 0432 903 | Diode 1SS270A | |
| D202 | 276 0529 900 | Doide MA157A | |
| D203 | 276 0432 903 | Diode 1SS270A | |
| ZD101 | 276 0465 909 | Zener Diode HZS7B-1 | |
| **RESISTORS GROUP(not included carbon film ±5% 1/4W type)** | | | |
| R101 | 247 0007 903 | Chip 680ohm 1/10W | RM73B--681J |
| R102 | 247 0006 988 | Chip 560ohm 1/10W | RM73B--561J |
| R103 | 247 0012 927 | Chip 100kohm 1/10W | RM73B--104J |
| R104 | 247 0014 967 | Chip 1Mohm 1/10W | RM73B--105J |
| R105 | 247 0012 927 | Chip 100kohm 1/10W | RM73B--104J |
| R106 | 247 0012 943 | Chip 120kohm 1/10W | RM73B--124J |
| R107 | 247 0008 986 | Chip 3.9kohm 1/10W | RM73B--392J |

| Ref No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| R110 | 247 0013 900 | Chip 220kohm 1/10W | RM73B--224J |
| R111 | 247 0011 928 | Chip 39kohm 1/10W | RM73B--393J |
| R112 | 247 0010 987 | Chip 27kohm 1/10W | RM73B--273J |
| R113 | 247 0011 986 | Chip 68kohm 1/10W | RM73B--683J |
| R114,115 | 247 0013 942 | Chip 330kohm 1/10W | RM73B--334J |
| R116 | 247 0012 901 | Chip 82kohm 1/10W | RM73B--823J |
| R117 | 247 0010 945 | Chip 18kohm 1/10W | RM73B--183J |
| R118 | 247 0011 960 | Chip 56kohm 1/10W | RM73B--563J |
| R119 | 247 0008 944 | Chip 2.7kohm 1/10W | RM73B--272J |
| R120 | 247 0012 998 | Chip 200kohm 1/10W | RM73B--204J |
| R121 | 247 0009 901 | Chip 4.7kohm 1/10W | RM73B--472J |
| R122 | 247 0008 944 | Chip 2.7kohm 1/10W | RM73B--272J |
| R123 | 247 0009 901 | Chip 4.7kohm 1/10W | RM73B--472J |
| R124 | 247 0009 985 | Chip 10kohm 1/10W | RM73B--103J |
| R125 | 247 0010 945 | Chip 18kohm 1/10W | RM73B--183J |
| R126 | 247 0009 985 | Chip 10kohm 1/10W | RM73B--103J |
| R127,128 | 247 0005 905 | Chip 100ohm 1/10W | RM73B--101J |
| R131 | 247 0009 985 | Chip 10kohm 1/10W | RM73B--103J |
| R132 | 247 0008 960 | Chip 3.3kohm 1/10W | RM73B--332J |
| R133~137 | 247 0018 905 | Chip 0ohm 1/10W | RM73B--0R0K |
| R138 | 247 0009 985 | Chip 10kohm 1/10W | RM73B--103J |
| R139 | 247 0005 905 | Chip 100ohm 1/10W | RM73B--101J |
| R142 | 247 0008 986 | Chip 3.9kohm 1/10W | RM73B--392J |
| R143 | 247 0008 957 | Chip 3kohm 1/10W | RM73B--302J |
| R146,147 | 247 0009 985 | Chip 10kohm 1/10W | RM73B--103J |
| R148 | 247 0007 945 | Chip 1kohm 1/10W | RM73B--102J |
| R158 | 244 2050 904 | Metallic 22ohm 1W | RS14B3A220JNBS(S) |
| R181 | 247 0013 939 | Chip 300kohm 1/10W | RM73B--304J |
| R201 | 247 0018 905 | Chip 0ohm 1/10W | RM73B--0R0K |
| R210 | 244 2051 974 | Metallic 1kohm 1W | RS14B3A102JNBS(S) |
| R211 | 247 0004 993 | Chip 91ohm 1/10W | RM73B--910J |
| R253 | 247 0012 998 | Chip 200kohm 1/10W | RM73B--204J |
| R254 | 247 0005 905 | Chip 100ohm 1/10W | RM73B--101J |
| R255 | 247 0013 939 | Chip 300kohm 1/10W | RM73B--304J |
| R256 | 247 0005 989 | Chip 220ohm 1/10W | RM73B--221J |
| R257 | 247 0007 945 | Chip 1kohm 1/10W | RM73B--102J |
| R258 | 247 0008 915 | Chip 2kohm 1/10W | RM73B--202J |
| R260 | 247 0012 927 | Chip 100kohm 1/10W | RM73B--104J |
| R261 | 247 0007 945 | Chip 1kohm 1/10W | RM73B--102J |
| R270,271 | 247 0009 985 | Chip 10kohm 1/10W | RM73B--103J |
| R302 | 247 0018 905 | Chip 0ohm 1/10W | RM73B--0R0K |
| R303~306 | 247 0007 945 | Chip 1kohm 1/10W | RM73B--102J |
| R310~312 | 247 0018 905 | Chip 0ohm 1/10W | RM73B--0R0K |
| R313 | 247 0006 904 | Chip 270ohm 1/10W | RM73B--271J |
| R315 | 247 0005 905 | Chip 100ohm 1/10W | RM73B--101J |
| R401~408 | 247 0007 945 | Chip 1kohm 1/10W | RM73B--102J |
| R409 | 247 0006 920 | Chip 330ohm 1/10W | RM73B--331J |

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| R410 | 247 0007 929 | Chip 820ohm 1/10W | RM73B--821J |
| R411 | 247 0007 945 | Chip 1kohm 1/10W | RM73B--102J |
| R412 | 247 0006 920 | Chip 330ohm 1/10W | RM73B--331J |
| R413 | 247 0007 929 | Chip 820ohm 1/10W | RM73B--821J |
| R414 | 247 0007 958 | Chip 1.1kohm 1/10W | RM73B--112J |
| R431 | 247 0010 990 | Chip 30kohm 1/10W | RM73B--303J |
| R432 | 247 0007 903 | Chip 680ohm 1/10W | RM73B--681J |
| R433 | 247 0008 944 | Chip 2.7kohm 1/10W | RM73B--272J |
| R434 | 247 0010 990 | Chip 30kohm 1/10W | RM73B--303J |
| R435 | 247 0007 903 | Chip 680ohm 1/10W | RM73B--681J |
| R436 | 247 0008 944 | Chip 2.7kohm 1/10W | RM73B--272J |
| R451 | 247 0007 945 | Chip 1kohm 1/10W | RM73B--102J |
| R452 | 247 0008 915 | Chip 2kohm 1/10W | RM73B--202J |
| R453 | 247 0005 905 | Chip 100ohm 1/10W | RM73B--101J |
| R454 | 247 0013 939 | Chip 300kohm 1/10W | RM73B--304J |
| R455 | 244 2043 924 | Metallic 68ohm 1W | RS14B3A680JNBS(S) |
| R460 | 247 0018 905 | Chip 0ohm 1/10W | RM73B--0R0K |
| R461 | 247 0009 972 | Chip 9.1kohm 1/10W | RM73B--912J |
| R462 | 247 0009 985 | Chip 10kohm 1/10W | RM73B--103J |
| R463 | 247 0010 961 | Chip 22kohm 1/10W | RM73B--223J |
| R464 | 247 0009 985 | Chip 10kohm 1/10W | RM73B--103J |
| R465 | 247 0009 972 | Chip 9.1kohm 1/10W | RM73B--912J |
| R466 | 247 0009 985 | Chip 10kohm 1/10W | RM73B--103J |
| R467 | 247 0010 961 | Chip 22kohm 1/10W | RM73B--223J |
| R468 | 247 0009 985 | Chip 10kohm 1/10W | RM73B--103J |
| R469,470 | 247 0010 990 | Chip 30kohm 1/10W | RM73B--303J |
| R471 | 247 0007 958 | Chip 1.1kohm 1/10W | RM73B--112J |
| R472 | 247 0007 945 | Chip 1kohm 1/10W | RM73B--102J |
| R481 | 247 0007 945 | Chip 1kohm 1/10W | RM73B--102J |
| R487,488 | 247 0005 989 | Chip 220ohm 1/10W | RM73B--221K |
| R489,490 | 247 0009 912 | Chip 5.1Kohm 1/10W | RM73B--512J |
| R501 | 247 0008 986 | Chip 3.9kohm 1/10W | RM73B--392J |
| R502 | 247 0008 902 | Chip 1.8kohm 1/10W | RM73B--182J |
| R503 | 247 0008 986 | Chip 3.9kohm 1/10W | RM73B--392J |
| R504 | 247 0008 902 | Chip 1.8kohm 1/10W | RM73B--182J |
| R505,506 | 247 0009 969 | Chip 8.2kohm 1/10W | RM73B--822J |
| R507 | 247 0010 990 | Chip 30kohm 1/10W | RM73B--303J |
| R508 | 247 0008 986 | Chip 3.9kohm 1/10W | RM73B--392J |
| R509 | 247 0008 902 | Chip 1.8kohm 1/10W | RM73B--182J |
| R510 | 247 0008 986 | Chip 3.9kohm 1/10W | RM73B--392J |
| R511 | 247 0008 902 | Chip 1.8kohm 1/10W | RM73B--182J |
| R512,513 | 247 0009 969 | Chip 8.2kohm 1/10W | RM73B--822J |
| R514 | 247 0010 990 | Chip 30kohm 1/10W | RM73B--303J |
| R516-518 | 247 0018 905 | Chip 0ohm 1/10W | RM73B--0R0K |
| R519 | 247 0005 947 | Chip 150ohm 1/10W | RM73B--151J |
| R520,521 | 247 0009 985 | Chip 10kohm 1/10W | RM73B--103J |
| R522 | 247 0005 947 | Chip 150ohm 1/10W | RM73B--151J |
| R526 | 247 0018 905 | Chip 0ohm 1/10W | RM73B--0R0K |

| Ref No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| R528 | 247 0018 905 | Chip 0ohm 1/10W | RM73B--0R0K |
| R529-531 | 247 0003 949 | Chip 22ohm 1/10W | RM73B--220J |
| R532,533 | 247 0009 985 | Chip 10kohm 1/10W | RM73B--103J |
| R535 | 247 0018 905 | Chip 0ohm 1/10W | RM73B--0R0K |
| L310 | 247 0006 920 | Chip 330ohm 1/10W | RM73B--331J |
| **CAPACITORS GROUP** | | | |
| C101 | 254 4250 932 | Electrolytic 220 µF/6.3V | CE04W0J221M(SME) |
| C102 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C103,104 | 257 0001 977 | Chip(Ceramic) 5pF/50V | CC73SL1H5R0C |
| C105 | 256 1035 936 | Metalizde 0.33 µF/50V | CF93A1H334J |
| C107 | 256 1034 979 | Metalizde 0.1 µF/50V | CF93A1H104J |
| C109,110 | 257 0011 941 | Chip(Ceramic) 0.022 µF/25V | CK73B1E223K |
| C111 | 257 0007 900 | Chip(Ceramic) 1000pF/50V | CC73SL1H102J |
| C112 | 254 4250 932 | Electrolytic 220 µF/6.3V | CE04W0J221M(SME) |
| C113 | 254 4305 968 | Electrolytic 1 µF/50V | CE04W1H010M(SRE) |
| C114 | 257 0004 961 | Chip(Ceramic) 100pF/50V | CC73SL1H101J |
| C115 | 257 0011 954 | Chip(Ceramic) 0.027 µF/25V | CK73B1E273K |
| C116 | 257 0009 924 | Chip(Ceramic) 2200pF/50V | CK73B1H222K |
| C117 | 257 0009 966 | Chip(Ceramic) 4700pF/50V | CK73B1H472K |
| C118 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C119 | 254 4302 974 | Electrolytic 100 µF/10V | CE04W1A101M(SRE) |
| C120 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C121 | 257 0001 977 | Chip(Ceramic) 5pF/50V | CC73SL1H5R0C |
| C124 | 257 0011 983 | Chip(Ceramic) 0.047 µF/25V | CK73B1E473K |
| C125 | 257 0009 966 | Chip(Ceramic) 4700pF/50V | CK73B1H472K |
| C126,127 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C128,129 | 257 0005 986 | Chip(Ceramic) 330pF/50V | CC73SL1H331J |
| C130 | 257 0011 996 | Chip(Ceramic) 0.1 µF/25V | CK73B1E104K |
| C132 | 254 4299 964 | Electrolytic 47 µF/16V | CE04W1C470M(SRE) |
| C133 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C134 | 254 4299 964 | Electrolytic 47 µF/16V | CE04W1C470M(SRE) |
| C135,136 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C137 | 254 4302 974 | Electrolytic 100 µF/10V | CE04W1A101M(SRE) |
| C139 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C140 | 257 0009 908 | Chip(Ceramic) 1500pF/50V | CK73B1H152K |
| C141 | 257 0009 995 | Chip(Ceramic) 8200pF/50V | CK73B1H822K |
| C142,143 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C145 | 257 0009 924 | Chip(Ceramic) 2200pF/50V | CK73B1H222K |
| C146 | 257 0004 903 | Chip(Ceramic) 56pF/50V | CC73SL1H560J |
| C147 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C148 | 254 4299 964 | Electrolytic 47 µF/16V | CE04W1C470M(SRE) |
| C149 | 254 4305 984 | Electrolytic 2.2 µF/50V | CE04W1H2R2M(SRE) |
| C150,151 | 257 0005 944 | Chip(Ceramic) 220pF/50V | CC73SL1H221J |
| C154 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C155,156 | 254 3061 902 | Electrolytic 1 µF/50V(Bipolar) | CE04D1H010MBP(SRE) |
| C160 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C161 | 254 3061 902 | Electrolytic 1 µF/50V(Bipolar) | CE04D1H010MBP(SRE) |
| C162,163 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C165-169 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| C181 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C182 | 254 4302 974 | Electrolytic 100 µF/10V | CE04W1A101M(SRE) |
| C201 | 254 4302 974 | Electrolytic 100 µF/10V | CE04W1A101M(SRE) |
| C202 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C203,204 | 257 0002 921 | Chip(Ceramic) 10pF/50V | CC73SL1H100D |
| C205 | 254 4254 954 | Electrolytic 220 µF/16V | CE04W1C221M (SME) |
| C206 | 254 4302 974 | Electrolytic 100 µF/10V | CE04W1A101M (SRE) |
| C207 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C251 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C252 | 257 0004 961 | Chip(Ceramic) 100pF/50V | CC73SL1H101J |
| C254 | 254 4305 955 | Electrolytic 0.68 µF/50V | CE04W1HR68M(SRE) |
| C260 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C301,302 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C303,304 | 254 4302 974 | Electrolytic 100 µF/10V | CE04W1A101M(SRE) |
| C305-307 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C308 | 254 4302 974 | Electrolytic 100 µF/10V | CE04W1A101M(SRE) |
| C309 | 257 0012 966 | Chip(Ceramic) 0.01 µF/50V | CK73F1H103Z |
| C311 | 257 0012 966 | Chip(Ceramic) 0.01 µF/50V | CK73F1H103Z |
| C312 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C313 | 257 0012 966 | Chip(Ceramic) 0.01 µF/50V | CK73F1H103Z |
| C314 | 254 4302 974 | Electrolytic 100 µF/10V | CE04W1A101M(SRE) |
| C315 | 257 0012 966 | Chip(Ceramic) 0.01 µF/50V | CK73F1H103Z |
| C317 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C318.319 | 257 0007 900 | Chip(Ceramic) 1000pF/25V | CC73SL1H102J |
| C320 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C321 | 257 1147 906 | Ceramic 0.015µF/50V | CK45F1H153Z |
| C401 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C402 | 254 4299 906 | Electrolytic 10 µF/16V | CE04W1C100M(SRE) |
| C403 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C404-407 | 254 4299 906 | Electrolytic 10 µF/16V | CE04W1C100M(SRE) |
| C408 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C409 | 254 4299 906 | Electrolytic 10 µF/16V | CE04W1C100M(SRE) |
| C410-413 | 254 4302 974 | Electrolytic 100 µF/10V | CE04W1A101M(SRE) |
| C414 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C418,419 | 254 4299 906 | Electrolytic 10 µF/16V | CE04W1C100M(SRE) |
| C420,421 | 257 0007 900 | Chip(Ceramic) 1000pF/50V | CC73SL1H102J |
| C423 | 254 4305 955 | Electrolytic 0.68 µF/50V | CE04W1HR68M(SRE) |
| C424 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C425 | 254 4302 974 | Electrolytic 100 µF/10V | CE04W1A101M(SRE) |
| C430 | 254 4302 974 | Electrolytic 100 µF/10V | CE04W1A101M(SRE) |
| C431 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C433 | 257 0003 946 | Chip(Ceramic) 33pF/50V | CC73SL1H330J |
| C434 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C440 | 257 0007 900 | Chip(Ceramic) 1000pF/50V | CC73SL1H102J |
| C462 | 257 0004 961 | Chip(Ceramic) 100pF/50V | CC73SL1H101J |
| C464 | 257 0004 961 | Chip(Ceramic) 100pF/50V | CC73SL1H101J |
| C465,466 | 254 4299 906 | Electrolytic 10 µF/16V | CE04W1C100M(SRE) |

| Ref No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| C471,472 | 257 0007 900 | Chip(Ceramic) 1000pF/50V | CC73SL1H102J |
| C473 | 257 0006 927 | Chip(Ceramic) 470pF/50V | CC73SL1H471J |
| C475,476 | 257 0002 921 | Chip(Ceramic) 10pF/50V | CC73SL1H100D |
| C501 | 257 0004 961 | Chip(Ceramic) 100pF/50V | CC73SL1H101J |
| C502,503 | 257 0005 944 | Chip(Ceramic) 220pF/50V | CC73SL1H221J |
| C504 | 254 4299 906 | Electrolytic 10 µF/16V | CE04W1C100M(SRE) |
| C505 | 257 0004 961 | Chip(Ceramic) 100pF/50V | CC73SL1H101J |
| C506,507 | 257 0005 944 | Chip(Ceramic) 220pF/50V | CC73SL1H221J |
| C508 | 254 4299 906 | Electrolytic 10 µF/16V | CE04W1C100M(SRE) |
| C511 | 254 4299 964 | Electrolytic 47 µF/16V | CE04W1C470M(SRE) |
| C512 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C513 | 254 4299 964 | Electrolytic 47 µF/16V | CE04W1C470M(SRE) |
| C514 | 257 0004 961 | Chip(Ceramic) 100pF/50V | CC73SL1H101J |
| C515 | 257 0007 900 | Chip(Ceramic) 1000pF/50V | CC73SL1H102J |
| C516 | 254 4299 964 | Electrolytic 47 µF/16V | CE04W1C470M(SRE) |
| C517 | 257 0004 961 | Chip(Ceramic) 100pF/50V | CC73SL1H101J |
| C518 | 257 0007 900 | Chip(Ceramic) 1000pF/50V | CC73SL1H102J |
| C519,520 | 254 4299 919 | Electrolytic 22 µF/16V | CE04W1C220M(SRE) |
| C521 | 254 4305 968 | Electrolytic 1 µF/50V | CE04W1H010M(SRE) |
| C522,523 | 254 4299 919 | Electrolytic 22 µF/16V | CE04W1C220M(SRE) |
| C524 | 254 4299 964 | Electrolytic 47 µF/16V | CE04W1C470M(SRE) |
| C525,526 | 257 0014 935 | Chip(Ceramic) 0.1 µF/25V | CK73F1E104Z |
| C527 | 257 0005 944 | Chip(Ceramic) 220pF/50V | CC73SL1H221J |

**OTHERS PARTS GROUP**

| | | | |
|---|---|---|---|
| X101 | 399 0036 013 | Crystal | 16.9344MHz |
| X201 | 399 0141 908 | Crystal | 24.57MHz |
| X310 | 399 0331 909 | Crystal | 39.45MHz |
| L101,201 | 235 0106 908 | CHiP EMIFIL (21A05) | |
| L301 | 235 0106 908 | CHIP EMIFIL (21A05) | |
| L303-306 | 235 0106 908 | CHIP EMIFIL (21A05) | |
| L400-402 | 235 0106 908 | CHIP EMIFIL (21A05) | |
| L501 | 235 0107 949 | LEM4532T101 | |
| CB201 | 205 0736 047 | 17P FFC connector base | |
| CB101 | 205 0355 062 | 6P KR connector base(L) | |
| CB102 | 205 0685 062 | 6P KR connector base(BLK)L | |
| CB103 | 205 0395 064 | 6P connector base(RED)L | |
| CB104 | 205 0939 006 | 5P connector base | |
| CB401 | 205 0823 031 | 11P connector plug | |
| CB401 | 205 0824 030 | 11P connector base | |
| CB402 | 205 0823 015 | 9P connector plug | |
| CB402 | 205 0824 014 | 9P connector base | |
| JA301 | 204 8511 009 | 2P pin jack | |
| JA302 | 204 8421 005 | Mini jack | |
| IC203 | 205 0488 010 | 28P IC socket | |
| W701 | 203 0301 078 | 1P contact Ass'y | |

# GU-2935 MAIN P.W.B. UNIT

| Ref No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| **SEMICONDUCTORS GROUP** | | | |
| IC701 | 263 0800 005 | IC NJM78M05FA(S) | |
| IC702 | 263 0935 006 | IC SI-3050C | |
| IC703 | 263 0652 907 | IC PST529C | |
| IC704 | 263 0501 003 | IC NJM79M05FA | |
| IC706 | 263 1002 006 | IC MC34051P | |
| IC707 | 263 0935 006 | IC SI-3050C | |
| D701 | 276 0338 007 | Diode S4VB20F | |
| D702-705 | 276 0553 905 | Diode 1SR35-200A | |
| D708-716 | 276 0432 903 | Diode 1SS270A | |
| D717 | 276 0338 007 | Diode S4VB20F | |
| LE801 | 393 9543 907 | LED SLR-325VC(RED) | |
| **RESISTORS GROUP(not included carbon film ±5% 1/4W type)** | | | |
| R708-710 | 244 0068 024 | Metallic 3.3ohm 2W | RS14B3D3R3JNBF |
| **CAPACITORS GROUP** | | | |
| C199 | 253 9039 906 | Ceramic 0.1 µF/25V | CK45=1E104Z |
| C701 | 254 4416 705 | Electrolytic 10000 µF/25V | CE04W1E103MC(SME) |
| C702,703 | 254 4254 792 | Electrolytic 2200 µF/16V | CE04W1C222MC(SME) |
| ⚠ C704 | 253 9014 702 | Ceramic 0.01 µF/250VAC | CK45F2GAC103MC<br>Europe and U.K models |
| C706 | 254 4254 941 | Electrolytic 100 µF/16V | CE04W1C101M(SME) |
| C708 | 253 9039 906 | Ceramic 0.1 µF/25V | CK45=1E104Z |
| C709 | 254 4254 954 | Electrolytic 220 µF/16V | CE04W1C221M(SME) |
| C751 | 253 9039 906 | Ceramic 0.1 µF/25V | CK45=1E104Z |
| C752 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M(SME) |
| C753 | 253 9039 906 | Ceramic 0.1 µF/25V | CK45=1E104Z |
| C754 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M(SME) |
| C755 | 253 9039 906 | Ceramic 0.1 µF/25V | CK45=1E104Z |
| C756 | 254 4254 941 | Electrolytic 100 µF/16V | CE04W1C101M(SME) |
| C757,758 | 253 9039 906 | Ceramic 0.1 µF/25V | CK45=1E104Z |
| C759 | 254 4254 941 | Electrolytic 100 µF/16V | CE04W1C101M(SME) |
| C760 | 253 9039 906 | Ceramic 0.1 µF/25V | CK45=1E104Z |
| C761,762 | 254 4254 938 | Electrolytic 47 µF/16V | CE04W1C470M(SME) |
| C763,764 | 253 1146 907 | Ceramic 0.01 µF/50V | CK45F1H103Z |
| C766,767 | 253 1147 906 | Ceramic 0.015 µF/50V | CK45F1H153Z |

| Ref No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| **OTHERS PARTS GROUP** | | | |
| ⚠ SW704 | 212 1031 008 | Power switch(TV-5) | Europe and U.K models |
| SW801,802 | 212 4775 905 | Tact switch | Long st |
| SW803 | 212 1039 000 | 1P push switchi | |
| F101 | 202 0040 909 | Fuse clip | |
| ⚠ F101 | 206 1039 016 | Fuse (UBA) | U.S.A and Canada models |
| ⚠ F101 | 206 1031 032 | Fuse (3.6A) | Europe and U.K models |
| | 513 2014 008 | Fuse label | Europe and U.K. models |
| CB701 | 205 0343 058 | 5P connector base KR-PH | |
| ⚠ CB702 | 205 0581 001 | 2P VH connector base | |
| CB703,704 | 205 0668 076 | 17P FFC connector base | |
| CB705 | 205 0877 003 | 8P MD connector base (F-S) | |
| ⚠ CB706,707 | 205 0581 001 | 2P VH connector base | Europe and U.K models |
| | 203 0466 007 | 1P conntact ass'y | |
| CC101 | 204 0489 003 | 6P connector cord(M-P) | |
| CC102 | 204 0490 005 | 6P shield wire | |
| CC103 | 204 0479 000 | 6P connector cord | |
| CC705 | 204 2750 002 | 8P MD connector cord(L) | |
| CC801 | 203 8169 047 | 5P KR-DS connector cord | |
| CC802 | 203 4853 001 | 3P DS-DS connector cord | |
| | 203 5132 019 | 3P VH connector cord | Europe and U.K. models |
| | 417 0307 011 | Heat sink | |

## GU-2943 REMOTE P.W.B. UNIT

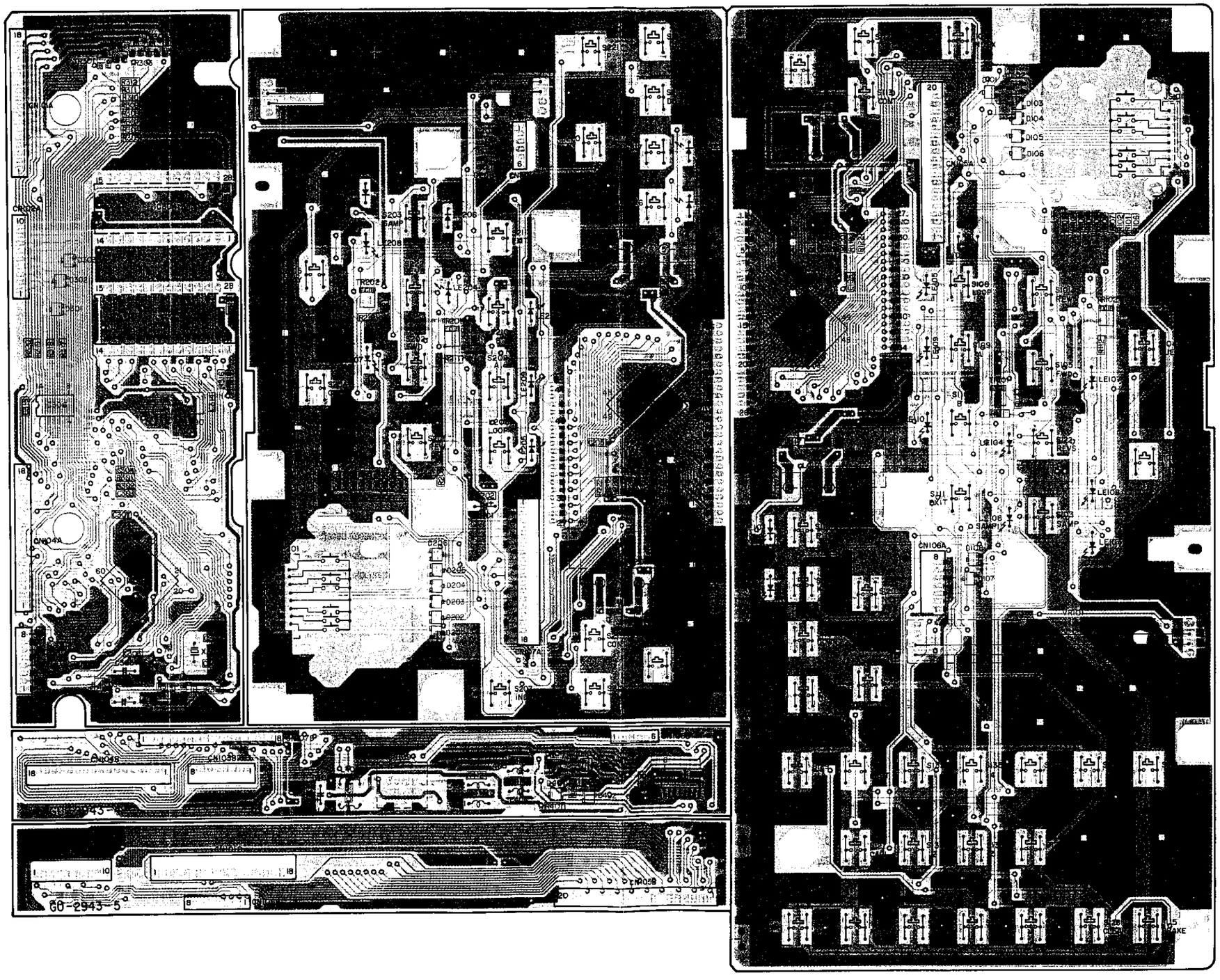
| Ref No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| **SEMICONDUCTORS GROUP** | | | |
| IC101 | 262 2291 004 | IC LC75850E | |
| IC201 | 262 2291 004 | IC LC75850E | |
| IC301 | 262 2288 004 | IC μPD784021 | |
| IC302 | GEN 3608 | RC44 ROM sub Ass'y | |
| IC303 | 262 1721 902 | IC TC74HC573AF | |
| IC304 | 262 2103 008 | IC CAT28C64BP-15 | |
| IC305 | 262 1647 905 | IC MN1382-S | |
| IC306 | 262 1718 902 | IC TC74HC00AF | |
| IC401 | 262 1597 903 | IC M5M34051FP | |
| TR101,102 | 272 0081 909 | Transistor 2SB766S | |
| TR201,202 | 272 0081 909 | Transistor 2SB766S | |
| TR301-305 | 269 0082 902 | Transistor DTC114EK | |
| D101-108 | 276 0438 910 | Diode MA151A | |
| D201-208 | 276 0438 910 | Diode MA151A | |
| D301-304 | 276 0438 910 | Diode MA151A | |
| D401 | 276 0438 949 | Diode MA151WK | |
| D402 | 276 0438 907 | Diode MA151WA | |
| D403 | 276 0438 949 | Diode MA151WK | |
| D404 | 276 0438 907 | Diode MA151WA | |
| LE101 | 393 9543 910 | LED SLR-325MC (GRN) | |
| LE102 | 393 9543 923 | LED SLR-325DC (ORG) | |
| LE103 | 393 9543 907 | LED SLR-325VC (RED) | |
| LE104 | 393 9543 923 | LED SLR-325DC (ORG) | |
| LE105,106 | 393 9543 910 | LED SLR-325MC (GRN) | |
| LE107 | 393 9543 907 | LED SLR-325VC (RED) | |
| LE108 | 393 9543 910 | LED SLR-325MC (GRN) | |
| LE109,110 | 393 9543 923 | LED SLR-325DC (ORG) | |
| LE201 | 393 9543 910 | LED SLR-325MC (GRN) | |
| LE202 | 393 9543 923 | LED SLR-325DC (ORG) | |
| LE203 | 393 9543 907 | LED SLR-325VC (RED) | |
| LE204 | 393 9543 923 | LED SLR-325DC (ORG) | |
| LE205,206 | 393 9543 910 | LED SLR-325MC (GRN) | |
| LE207 | 393 9543 907 | LED SLR-325VC (RED) | |
| LE208 | 393 9543 910 | LED SLR-325MC (GRN) | |
| LE209,210 | 393 9543 923 | LED SLR-325DC (ORG) | |
| LB101 | 393 6009 114 | L.C.D back light | |

| Ref No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| LB201 | 393 6009 114 | L.C.D back light | |
| **RESISTORS GROUP (not included carbon film ±5% 1/4W type)** | | | |
| R101-110 | 247 0005 989 | Chip 220ohm 1/10W | RM73B--221J |
| R111,112 | 247 0006 920 | Chip 330ohm 1/10W | RM73B--331J |
| R113,114 | 247 0009 985 | Chip 10kohm 1/10W | RM73B--103J |
| R115-118 | 247 0004 906 | Chip 39ohm 1/10W | RM73B--390J |
| R122 | 247 0013 942 | Chip 330kohm 1/10W | RM73B--334J |
| R123 | 247 0011 957 | Chip 51kohm 1/10W | RM73B--513J |
| R201-210 | 247 0005 989 | Chip 220ohm 1/10W | RM73B--221J |
| R211,212 | 247 0006 920 | Chip 330ohm 1/10W | RM73B--331J |
| R213,214 | 247 0009 985 | Chip 10kohm 1/10W | RM73B--103J |
| R215-218 | 247 0004 906 | Chip 39ohm 1/10W | RM73B--390J |
| R222 | 247 0013 942 | Chip 330kohm 1/10W | RM73B--334J |
| R223 | 247 0011 957 | Chip 51kohm 1/10W | RM73B--513J |
| R301-312 | 247 0009 985 | Chip 10kohm 1/10W | RM73B--103J |
| R313 | 247 0009 901 | Chip 4.7kohm 1/10W | RM73B--472J |
| R314 | 247 0011 944 | Chip 47kohm 1/10W | RM73B--473J |
| R316-320 | 247 0018 905 | Chip 0ohm 1/10W | RM73B--0R0K |
| R401,402 | 247 0007 945 | Chip 1kohm 1/10W | RM73B--102J |
| R403 | 247 0005 905 | Chip 100ohm 1/10W | RM73B--101J |
| VR101 | 211 0849 007 | Slide volume (C) | |
| VR201 | 211 0849 007 | Slide volume (C) | |
| **CAPACITORS GROUP** | | | |
| C101 | 254 4252 927 | Electrolytic 47 μF/10V | CE04W1A470M (SME) |
| C102 | 257 0014 935 | Chip(Ceramic) 0.1 μF/25V | CK73F1E104Z |
| C105 | 257 0014 935 | Chip(Ceramic) 0.1 μF/25V | CK73F1E104Z |
| C106 | 257 0006 969 | Chip(Ceramic) 680pF/50V | CC73SL1H681J |
| C201 | 254 4252 927 | Electrolytic 47 μF/10V | CE04W1A470M (SME) |
| C202 | 257 0014 935 | Chip(Ceramic) 0.1 μF/25V | CK73F1E104Z |
| C205 | 257 0014 935 | Chip(Ceramic) 0.1 μF/25V | CK73F1E104Z |
| C206 | 257 0006 969 | Chip(Ceramic) 680pF/50V | CC73SL1H681J |
| C301-304 | 257 0014 935 | Chip(Ceramic) 0.1 μF/25V | CK73F1E104Z |
| C305 | 254 4302 958 | Electrolytic 47 μF/10V | CE04W1A470M(SRE) |
| C306,307 | 257 0014 935 | Chip(Ceramic) 0.1 μF/25V | CK73F1E104Z |
| C308,309 | 257 0003 904 | Chip(Ceramic) 22pF/50V | CC73SL1H220J |
| C310 | 257 0014 935 | Chip(Ceramic) 0.1 μF/25V | CK73F1E104Z |
| C311 | 254 4302 916 | Electrolytic 10 μF/10V | CE04W1A100M(SRE) |
| C312-315 | 257 0014 935 | Chip(Ceramic) 0.1 μF/25V | CK73F1E104Z |
| C401 | 254 4302 958 | Electrolytic 47 μF/10V | CE04W1A470M(SRE) |

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| C402-404 | 257 0014 935 | Chip(Ceramic) 0.1 μF/25V | CK73F1E104Z |
| **OTHERS PARTS GROUP** | | | |
| X301 | 399 0141 908 | Crystal | 24.57MHz |
| S101-138 | 212 5604 907 | Tact switch | |
| S201-213 | 212 5604 907 | Tact switch | |
| S216-222 | 212 5604 907 | Tact switch | |
| LC101 | 393 6019 007 | L.C.D | |
| LC201 | 393 6019 007 | L.C.D | |
| | 415 0731 102 | Sheet | |
| JS101 | 212 0352 018 | Jog-Shuttle | |
| JS201 | 212 0352 018 | Jog-Shuttle | |
| L401-406 | 235 0049 900 | Beads inductor | |
| IC302 | 205 0488 010 | 28P IC socket | |
| | 205 0849 002 | 6P connector base(BTMK-S) | |
| | 205 0850 004 | 6P connector base(BTMK-P) | |
| | 205 0849 015 | 8P connector base(BTMK-S) | |
| | 205 0850 017 | 8P connector base(BTMK-P) | |
| | 205 0849 028 | 10P connector base(BTMK-S) | |
| | 205 0850 020 | 10P connector base(BTMK-P) | |
| | 205 0849 031 | 18P connector base(BTMK-S) | |
| | 205 0850 033 | 18P connector base(BTMK-P) | |
| | 205 0849 044 | 20P connector base(BTMK-S) | |
| | 205 0850 046 | 20P connector base(BTMK-P) | |
| | 205 0877 003 | 8P MD connector base (F-S) | |

## PRINTED WIRING BOARD PATTERNS

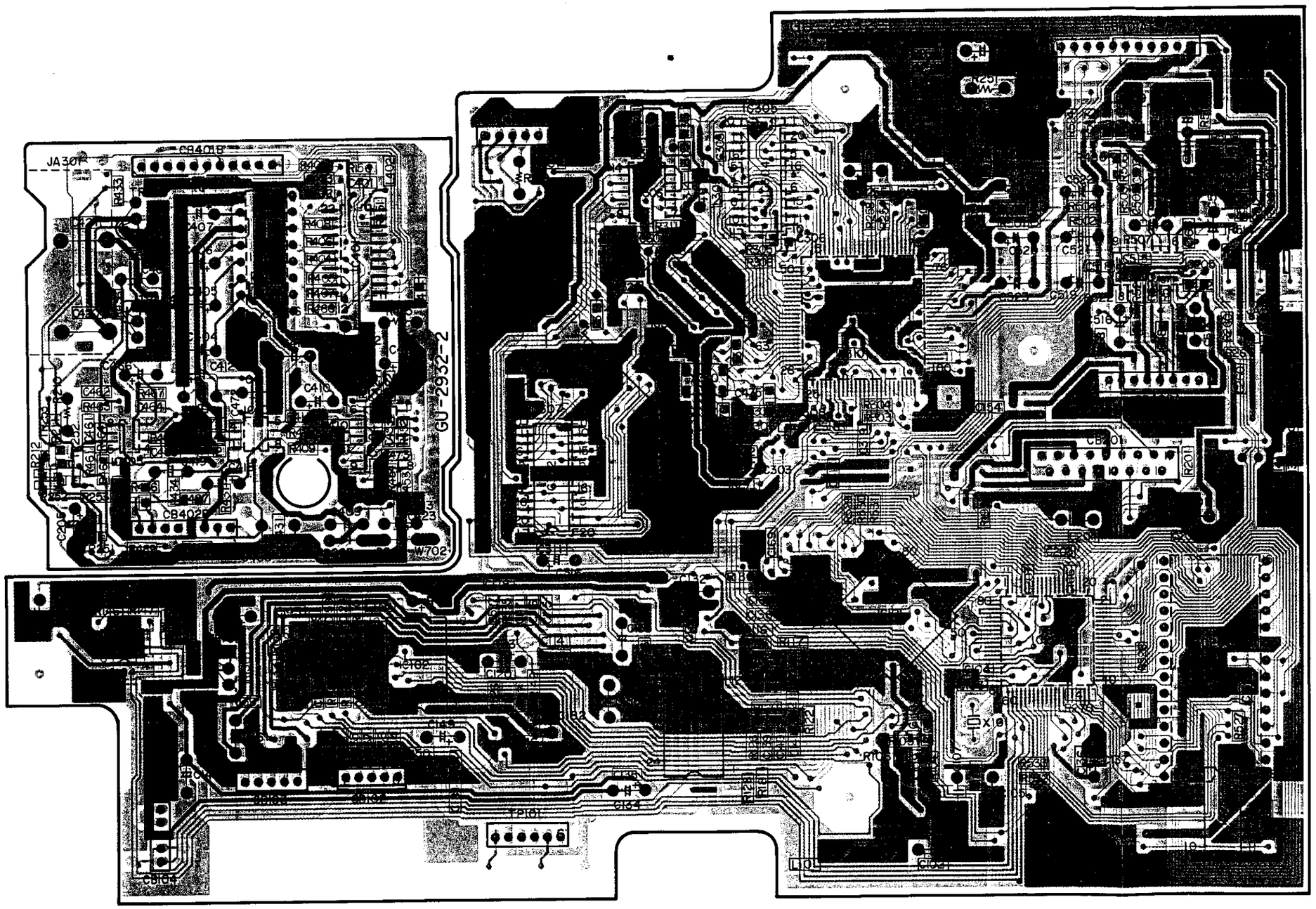
### GU-2943 REMOTE CONTROL P.W.B. UNIT ASS'Y



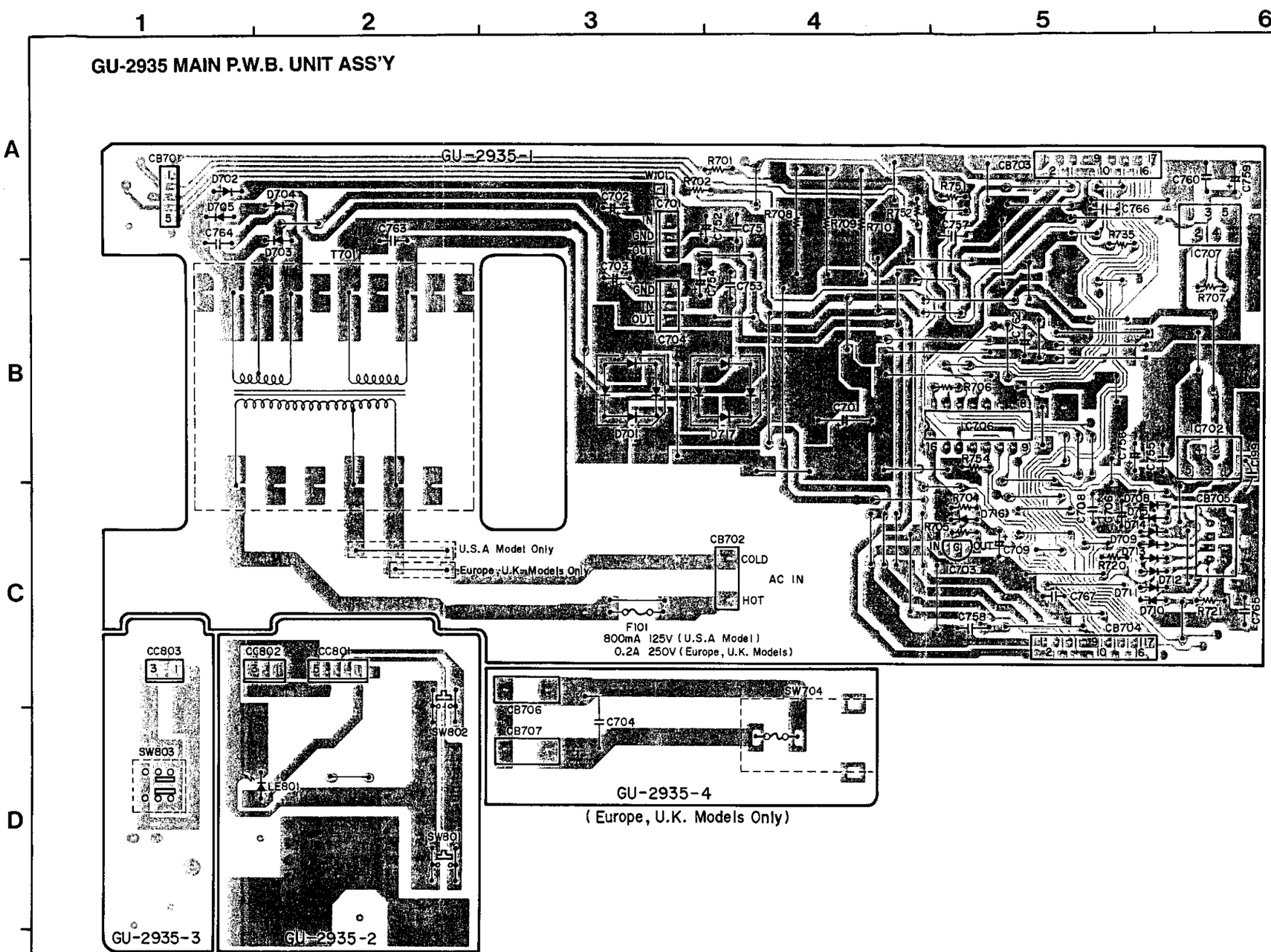
1 2 3 4 5 6 7 8

A B C D E

**GU-2932 MECHA. P.W.B. UNIT ASS'Y**



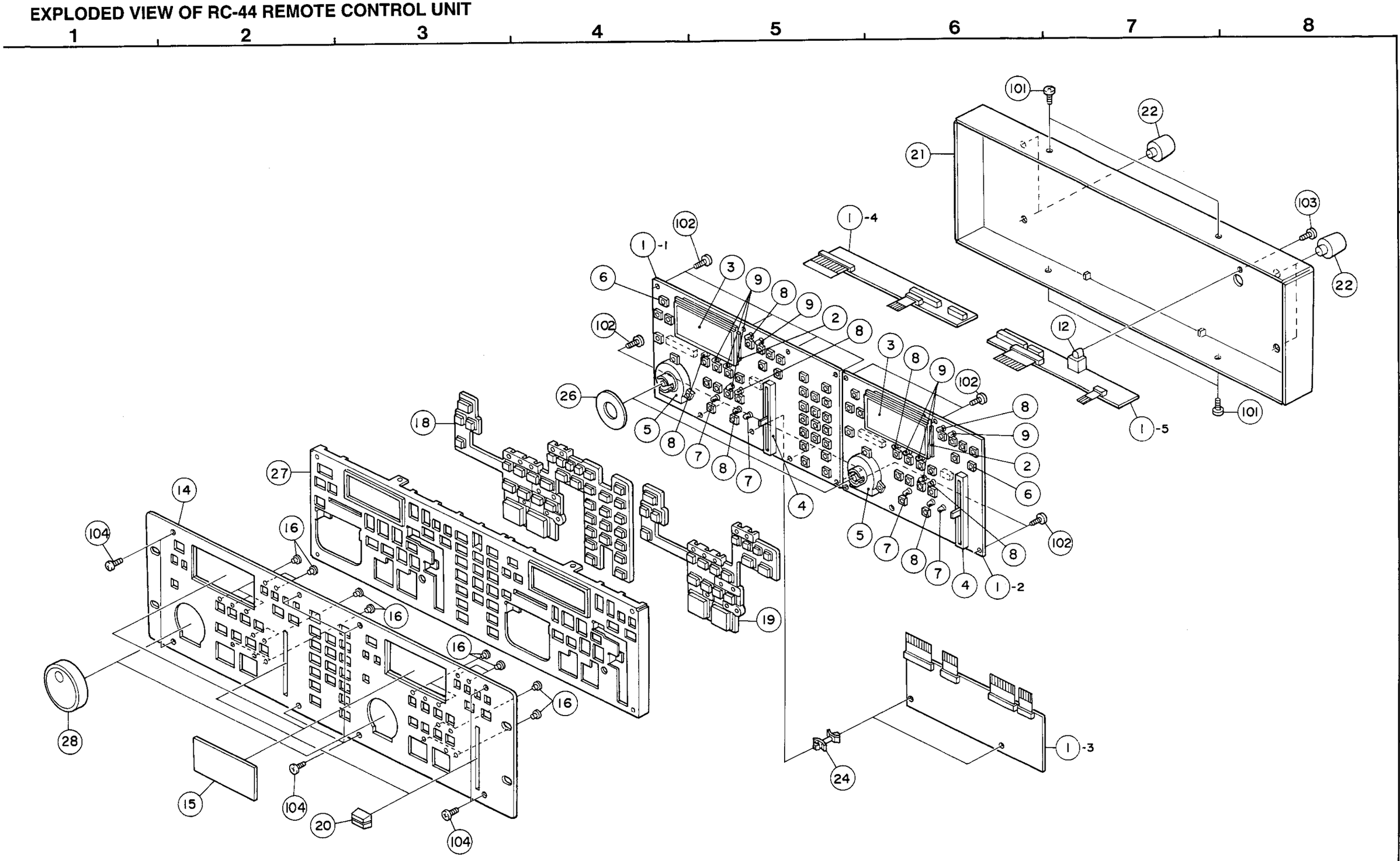
## GU-2935 MAIN P.W.B. UNIT ASS'Y



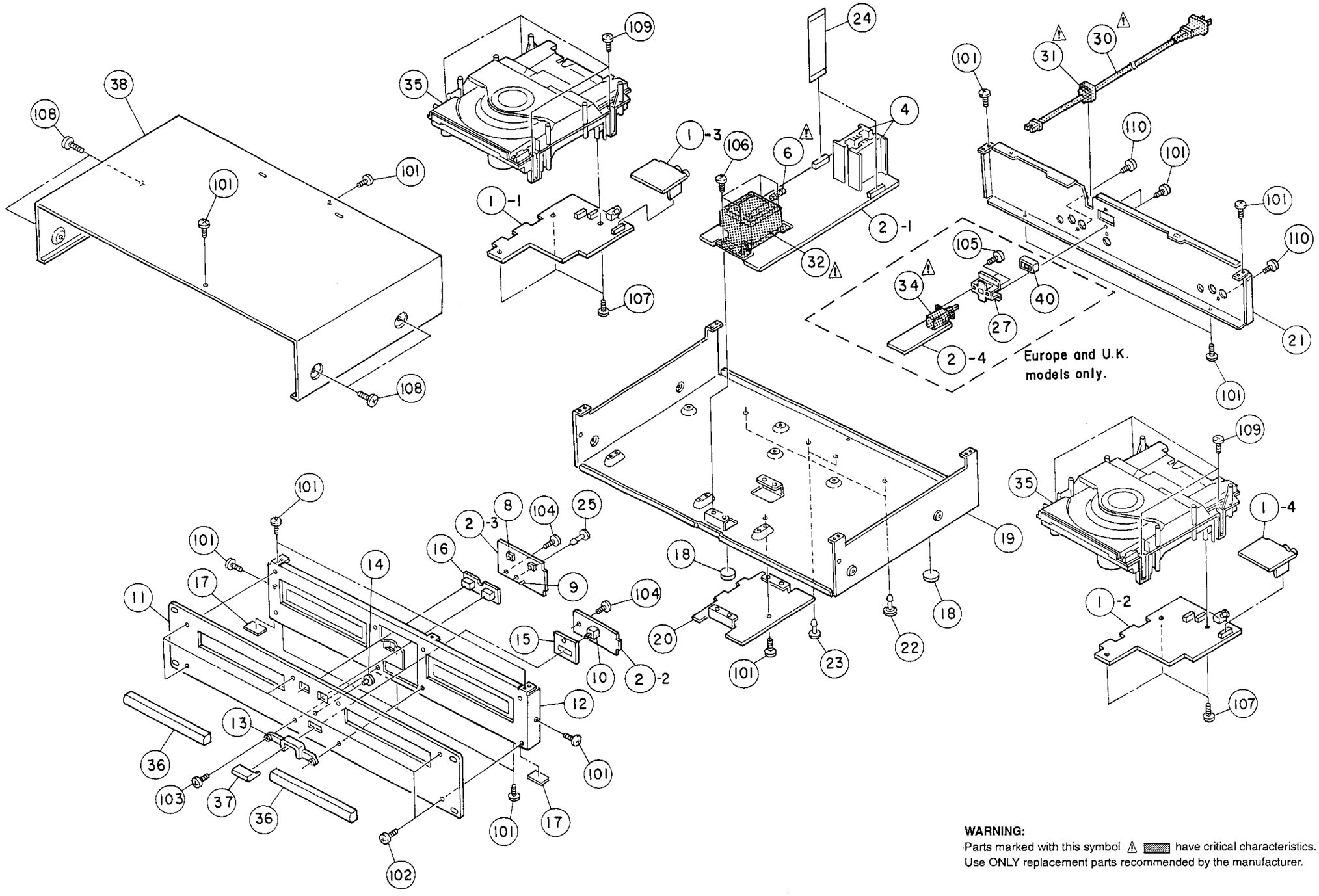

## PARTS LIST OF RC-44 REMOTE CONTROL UNIT

| Ref. No. | Part No. | Part Name | Remarks | Q'ty |
|---|---|---|---|---|
| ◉ 1 | GU- 2943 | Remote P.W.B. unit Ass'y | | 1 |
| 1-1 | GU- 2943 -1 | Left P.W.B. unit | | |
| 1-2 | GU- 2943 -2 | Right P.W.B. unit | | |
| 1-3 | GU- 2943 -3 | CPU P.W.B. unit | | |
| 1-4 | GU- 2943 -4 | Connect P.W.B. unit | | |
| 1-5 | GU- 2943 -5 | Junction P.W.B. unit | | |
| 2 | 393 6009 114 | L.C.D back light | | 2 |
| 3 | 393 6019 007 | L.C.D | | 2 |
| 4 | 211 0849 007 | Slide volume | | 2 |
| 5 | 212 0352 018 | Jog shuttle | | 2 |
| 6 | 212 5604 907 | Tact switch | | 58 |
| 7 | 393 9543 907 | LED SLR-325VC (RED) | | 4 |
| 8 | 393 9543 910 | LED SLR-325MC (GRN) | | 8 |
| 9 | 393 9543 923 | LED SLR-325DC (ORG) | | 8 |
| 12 | 205 0877 003 | 8P MD connector base (F-S) | | 1 |
| ◉ 14 | 144 2508 004 | Operation panel | | 1 |
| ◉ 15 | 146 1636 009 | LCD window | | 2 |
| ◉ 16 | 146 1371 005 | LED window | | 20 |
| 18 | 119 0086 001 | Rubber button (1) | | 1 |
| 19 | 119 0087 000 | Rubber button (2) | | 1 |
| 20 | 113 1523 002 | Slide knob | | 2 |
| ◉ 21 | 105 1204 003 | Cover | | 1 |
| ◉ 22 | 104 0270 006 | Foot | | 4 |
| 24 | 449 0133 004 | PWB holder | | 2 |
| ◉ 26 | 461 0840 009 | Rubber pad | | 2 |
| ◉ 27 | 441 1783 103 | Operation sub panel | | 1 |
| 28 | 113 1642 006 | Jog dial | | 2 |
| **SCREWS** | | | | |
| 101 | 473 7002 005 | 3X6 CBTS(S)-Z | | 16 |
| 102 | 473 7002 021 | 3X8 CBTS (S)-B | | 4 |
| 103 | 471 3303 029 | 3X6 CBS-B | | 1 |
| 104 | 475 5120 024 | 3X5 HSHB MFZNB | | 8 |
| 105 | 475 1178 009 | 3W-B | | 18 |

## EXPLODED VIEW OF RC-44 REMOTE CONTROL UNIT



## EXPLODED VIEW OF CHASSIS AND CABINET

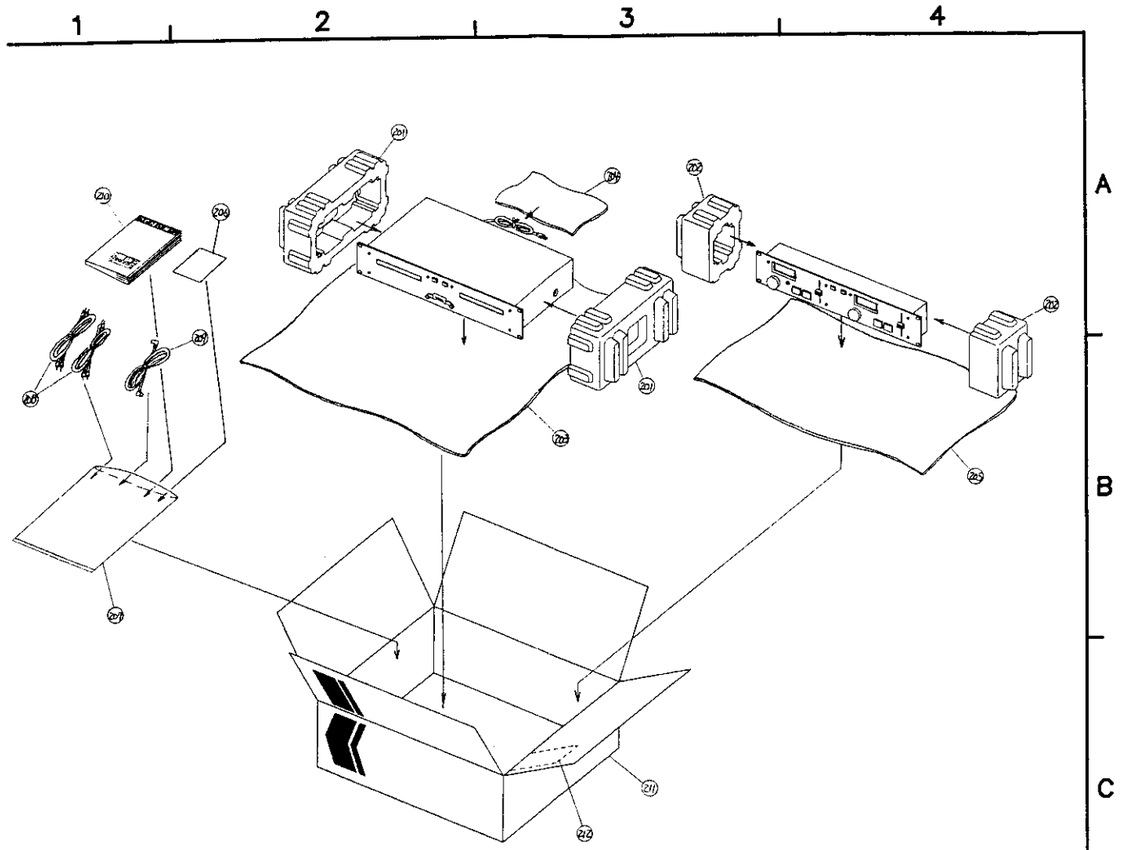



**WARNING:**
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

## PARTS LIST OF EXPLODED VIEW

| Ref. No. | Part No. | Part Name | Remarks | Q'ty |
|---|---|---|---|---|
| ◉ 1 | GU- 2932 | Mecha P.W.B. unit Ass'y | | 1 |
| 1-1 | GU- 2932 -1 | Drive P.W.B. unit | | |
| 1-2 | GU- 2932 -1 | Drive P.W.B. unit | | |
| 1-3 | GU- 2932 -2 | Audio P.W.B. unit | | |
| 1-4 | GU- 2932 -2 | Audio P.W.B. unit | | |
| ◉ 2 | GU- 2935 | Main P.W.B. unit Ass'y | | 1 |
| 2-1 | GU- 2935 -1 | Main P.W.B. unit | | |
| 2-2 | GU- 2935 -2 | SW. P. P.W.B. unit | | |
| 2-3 | GU- 2935 -3 | SW. P.W.B. unit | | |
| 2-4 | GU- 2935 -4 | AC switch P.W.B. unit | Europe and U.K. models | |
| 4 | 417 0307 011 | Heat sink | | 2 |
| ⚠ 5 | 206 1039 016 | Fuse (0.8A) | U.S.A. and Canada models | 1 |
| ⚠ 6 | 206 1031 032 | Fuse (1.6A) | Europe and U.K. models | 1 |
| 7 | 205 0877 003 | 8P MD connector base (F-S) | | 1 |
| 8 | 212 4775 905 | Tact switch | Long st | 2 |
| 9 | 393 9543 907 | LED SLR-325VC(RED) | | 1 |
| 10 | 212 1039 000 | 1P push switch | | 1 |
| ◉ 11 | 144 2446 111 | Front panel | | 1 |
| ◉ 12 | 441 1715 003 | Front sub panel | | 1 |
| 13 | 146 1579 001 | P. bottun protector | | 1 |
| 14 | 146 1371 005 | LED window | | 1 |
| 15 | 441 1714 004 | P. button guide | | 1 |
| 16 | 119 0069 109 | Rubber button (B) | | 1 |
| ◉ 17 | 461 0740 002 | Sheet | | 2 |
| 18 | 461 0706 127 | Foot sheet | | 2 |
| ◉ 19 | 411 1327 102 | Chassis | | 1 |
| ◉ 20 | 441 1713 005 | Bottom plate | | 1 |
| ◉ 21 | 105 1206 108 | Back panel | U.S.A. and Canada models | 1 |
| ◉ 21 | 105 1206 111 | Back panel | Europe model | 1 |
| ◉ 21 | 105 1206 124 | Back panel | U.K. model | 1 |
| ◉ 22 | 449 0077 021 | Card spacer | | 2 |
| ◉ 23 | 449 0077 034 | Card spacer | | 2 |
| 24 | 009 0096 008 | 17P FFC cable | | 2 |
| ◉ 25 | 449 0077 047 | Card spacer | | 1 |
| ◉ 26 | 412 2814 015 | Card spacer | L=14 | 1 |
| 27 | 412 4143 001 | AC SW bracket | Europe and U.K. models | 1 |
| ⚠ 30 | 206 2110 004 | AC cord with connector | U.S.A. and Canada models | 1 |
| ⚠ 30 | 206 2069 106 | AC cord with connector(E2) | Europe model | 1 |
| ⚠ 30 | 206 2128 009 | AC cord with connector(EK) | U.K. model | 1 |
| ⚠ 31 | 445 0058 009 | Cord bush | | 1 |
| ⚠ 32 | 233 6163 004 | Power trans | U.S.A. and Canada models | 1 |
| ⚠ 32 | 233 6167 000 | Power trans(E2) | Europe and U.K. models | 1 |
| 35 | 337 0043 008 | CD mecha unit | FG-110 | 2 |
| 36 | 146 1571 106 | Loader panel | | 2 |
| 37 | 113 1357 207 | Power switch button | | 1 |
| ◉ 38 | 102 0425 253 | Top cover | | 1 |
| | 342 0020 007 | Ferrite core | | 1 |
| ⚠ 39 | 212 1031 008 | Power switch (TV-5) | Europe and U.K. models | 1 |
| ◉ | 461 0804 016 | Himeron sheet | | 2 |
| 40 | 113 1689 001 | Power switch knob | Europe and U.K. models | 1 |
| | 204 0489 003 | 6P connector cord (M-P) | CC101 | 2 |
| | 204 0490 005 | 6P shield wire | CC102 | 2 |
| | 204 0479 000 | 6P connector cord | CC103 | 2 |
| | 513 1581 011 | Serial no. sheet | | 1 |
| | LL- 64426 | CSA label DCI SHIRA | U.S.A. and Canada models | 1 |
| | 513 1519 009 | Manufac. date label | U.S.A. and Canada models | 1 |
| | 513 2065 002 | E2 laser caution | Europe model | 2 |
| | 513 1144 005 | Masking sheet | Europe model | 1 |
| | 513 2014 008 | Fuse label | Europe and U.K. models | 1 |
| **SCREWS** | | | | |
| 101 | 473 7002 021 | Screw 3X8 CBTS (S)-B | U.S.A. and Canada models | 15 |
| 101 | 473 7002 021 | Screw 3X8 CBTS (S)-B | Europe and U.K. models | 17 |
| 102 | 475 5120 024 | Screw 3X5 HSHB MFZNB | | 6 |
| 103 | 475 5120 011 | Screw 3X8 HSHB MFZNB | | 2 |
| 104 | 473 7002 005 | Screw 3X6 CBTS(S)-Z | | 4 |
| 105 | 471 3303 029 | Screw 3X6 CBS-B | U.S.A. and Canada models | 1 |
| 105 | 471 3303 029 | Screw 3X6 CBS-B | Europe and U.K. models | 3 |
| 106 | 473 7004 003 | Screw 4X8 CBTS (S)-Z | | 4 |
| 107 | 473 7519 006 | Screw 2.6X8 CBTS(P)-B | | 6 |
| 108 | 473 7007 000 | Screw 4X8 CBTS (S)-B | | 4 |
| 109 | 473 7005 002 | Screw 3X10 CBTS (S)-Z | | 8 |
| 110 | 473 7508 017 | Screw 3X10 CBTS (P)-B | | 2 |
| 111 | 475 1178 009 | 3W-B | | 6 |

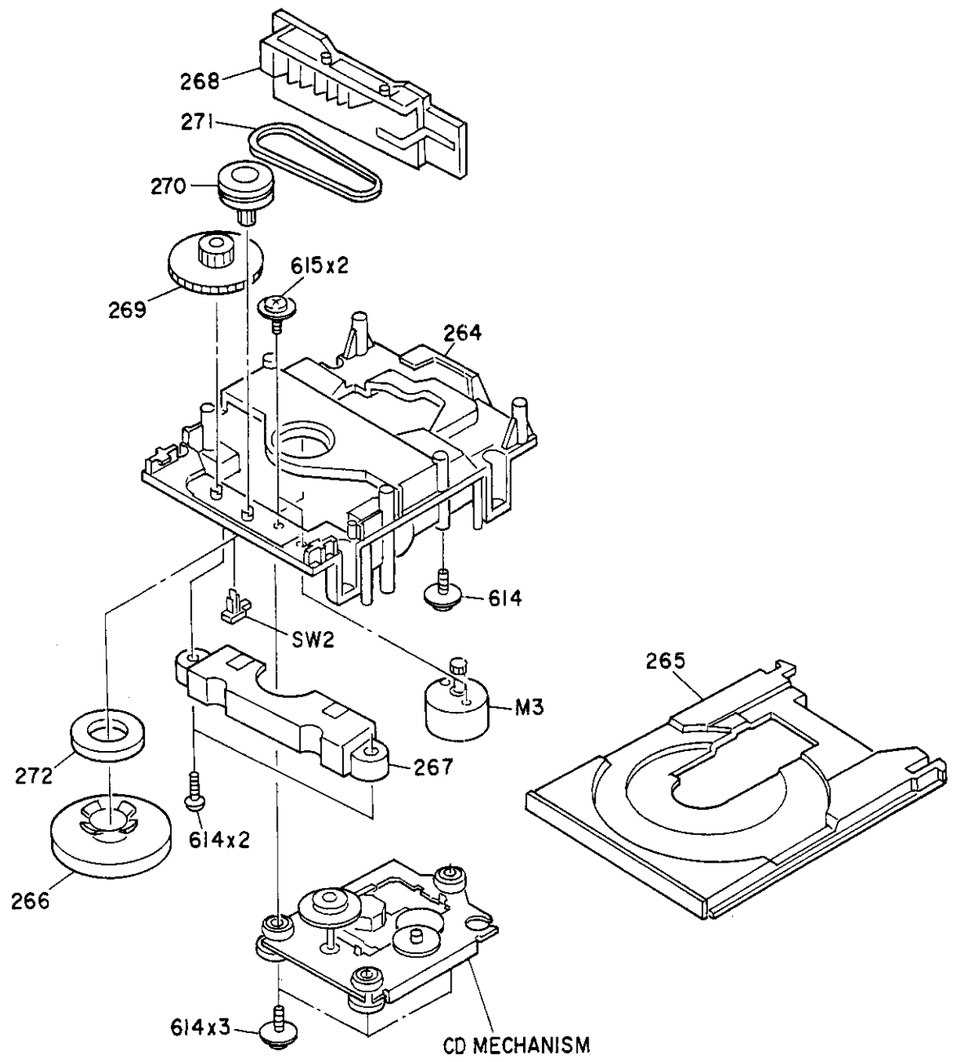
## PACKING & ACCESSORIES

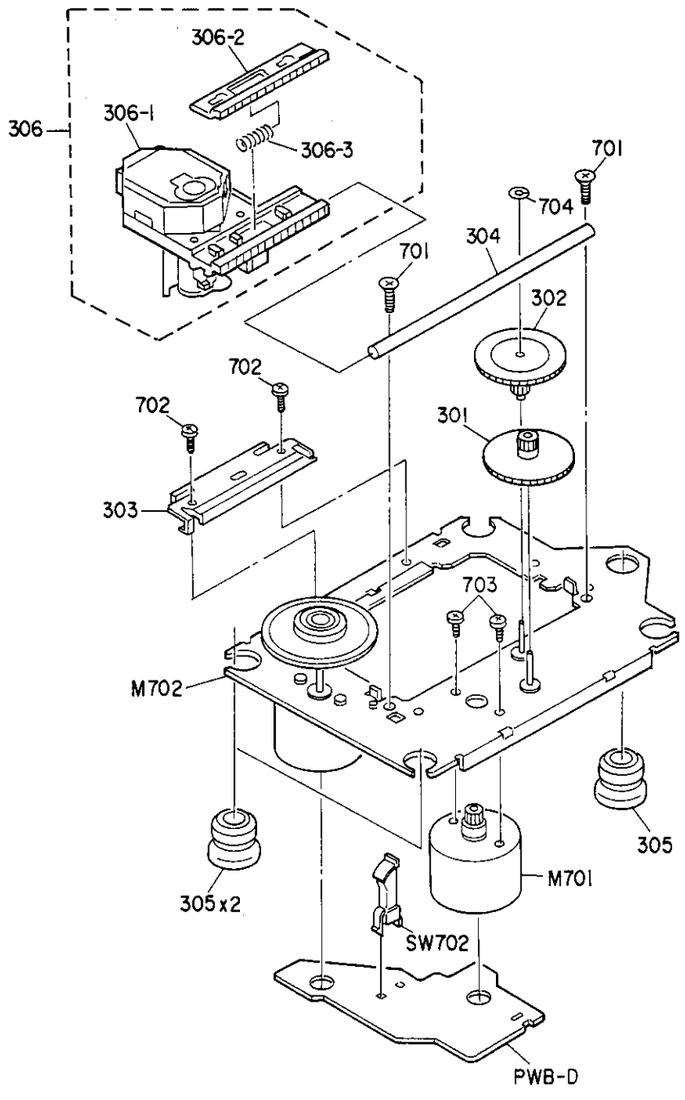



## PARTS LIST OF PACKING & ACCESSORIES

| Ref. No. | Part No. | Part Name | Remarks | Q'ty |
|---|---|---|---|---|
| 201 | 503 1001 303 | Cushion | For main unit | 2 |
| 202 | 503 1110 003 | Cushion | For remote control unit | 2 |
| 203 | 505 0102 092 | Stylen paper | For main unit | 1 |
| 204 | 504 0092 060 | Stylen paper | For AC cord Except to U.K. model | 1 |
| 204 | 504 0170 005 | Protector sheet | For AC cord U.K. model only | 1 |
| 205 | 505 0102 021 | Stylen paper | For remote control unit | 1 |
| 206 | 515 0754 007 | Preset sheet | | 1 |
| 207 | 505 0038 030 | Poly cover | For accessories | 1 |
| 208 | 203 2360 004 | 2P pin cord | | 2 |
| 209 | 204 2750 002 | 8P MD connector cord(L) | | 1 |
| 210 | 511 2906 000 | Operating instructions | | 1 |
| 211 | 501 1924 002 | Carton case | | 1 |
| 212 | 515 0692 004 | DEL warranty com. | U.S.A. model only | 1 |
| 213 | 517 0114 038 | UPC label | U.S.A. and Canada models | 1 |
| | 513 1389 006 | Control card base | | 1 |

# PARTS LIST OF CD MECHANISM UNIT (FG-110)




## PARTS LIST OF MECHANISM UNIT (TRAY)

| Ref.No. | Part No. | Part Name | Remarks | Q'ty |
|---|---|---|---|---|
| 264 | 937 0122 402 | Body chassis | | 1 |
| 265 | 937 0122 509 | Disc holder | | 1 |
| 266 | 937 0122 606 | Stabilizer | | 1 |
| 267 | 937 0122 703 | Mecha. holder | | 1 |
| 268 | 937 0122 800 | Gear rack | | 1 |
| 269 | 937 0122 907 | Gear tray | | 1 |
| 270 | 937 0123 003 | Pully drive | | 1 |

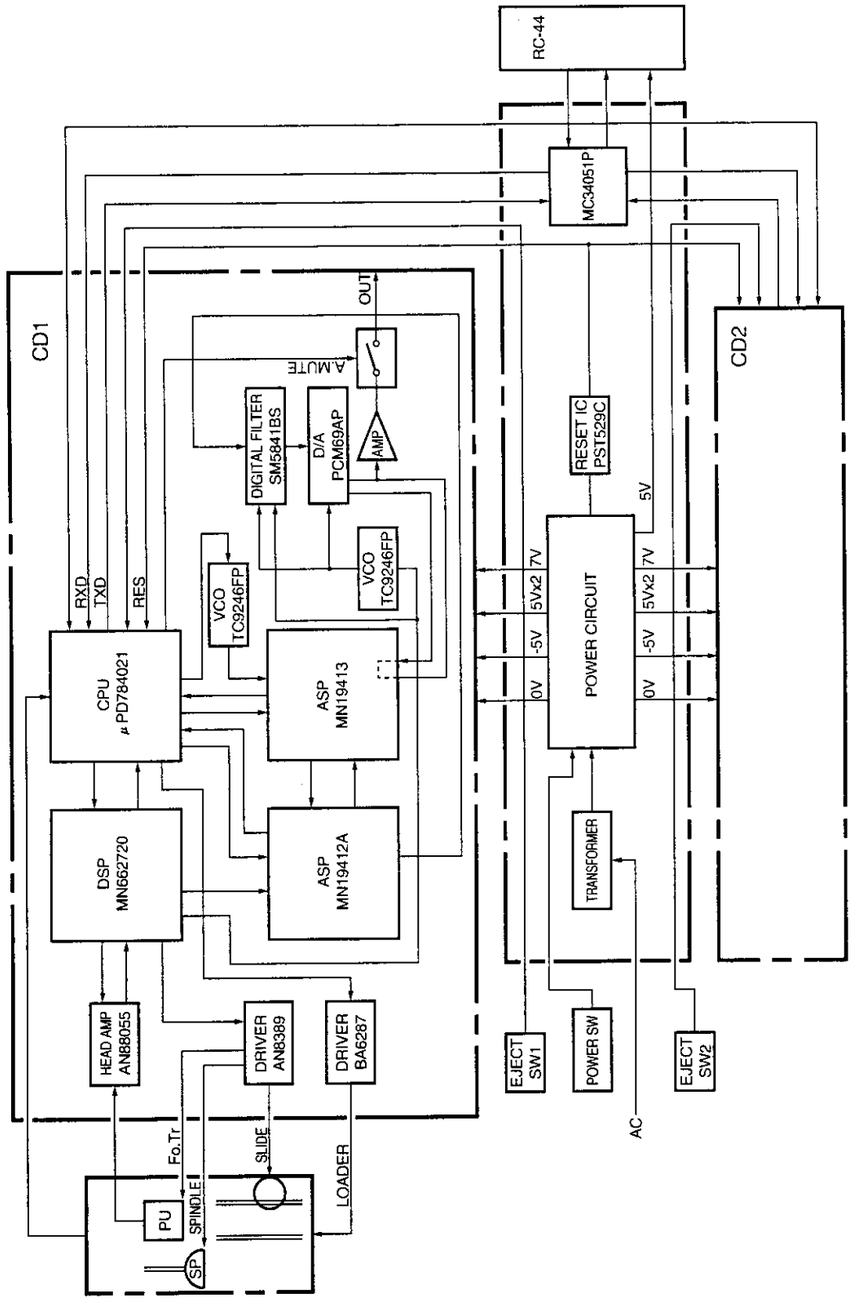
| Ref.No. | Part No. | Part Name | Remarks | Q'ty |
|---|---|---|---|---|
| 271 | 937 0123 100 | Belt drive | | 1 |
| 272 | 937 0123 207 | Magnet | | 1 |
| M3 | 937 0123 304 | Loading motor | | 1 |
| SW2 | 937 0123 401 | Switch | | 1 |
| 614 | 937 0121 830 | Screw 2.6×10 | | 6 |
| 615 | 937 0121 843 | Screw 2.6×5 | | 2 |

## PARTS LIST OF MECHANISM UNIT (CD MECHA.)

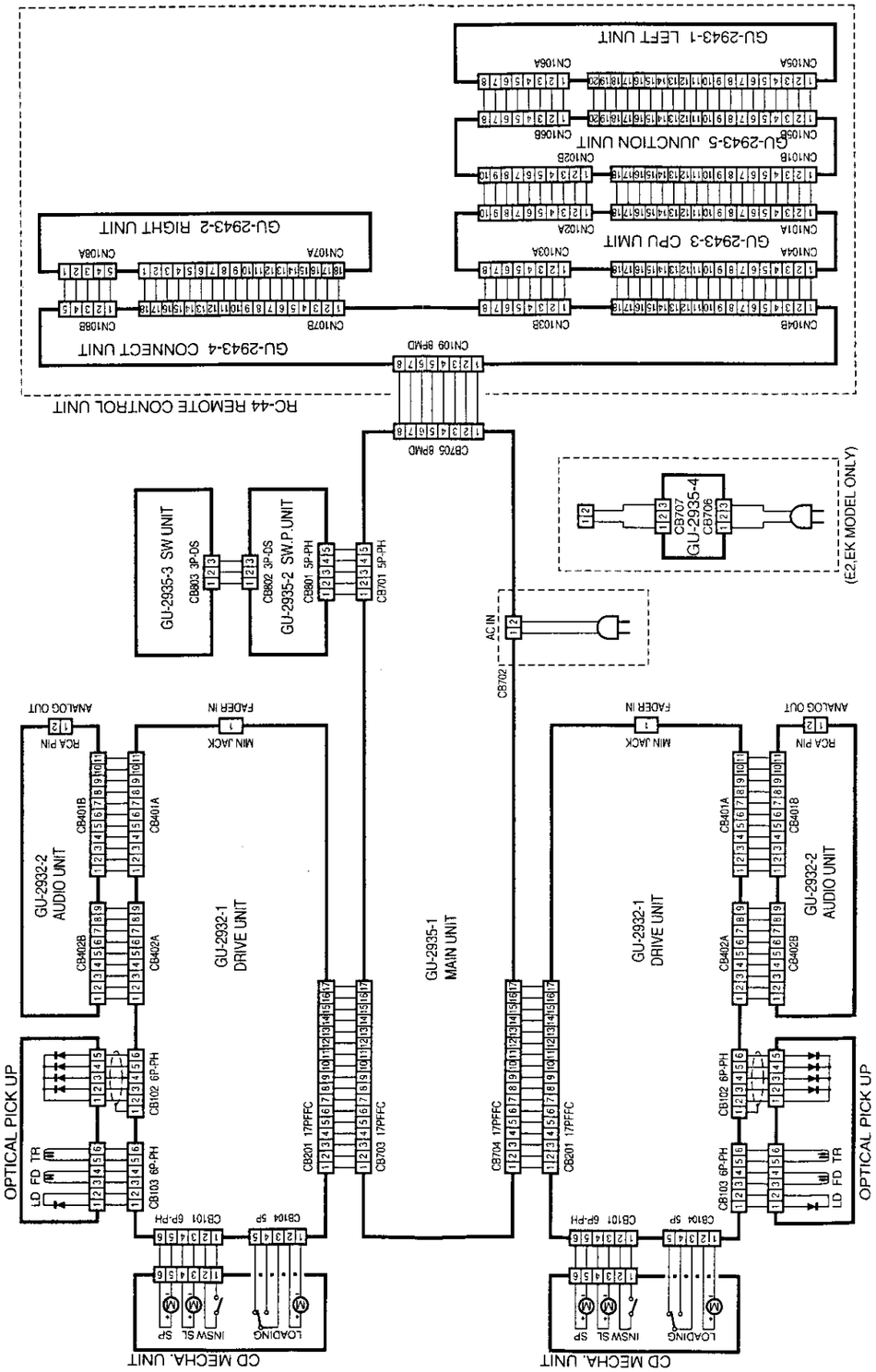
| Ref.No. | Part No. | Part Name | Remarks | Q'ty |
|---|---|---|---|---|
| 301 | 937 0121 005 | Gear middle | | 1 |
| 302 | 937 0121 102 | Gear drive | | 1 |
| 303 | 937 0121 209 | Rail guide | | 1 |
| 304 | 937 0121 306 | Shaft guide | | 1 |
| 305 | 937 0121 403 | Cushion | | 3 |
| 306 | 937 0121 500 | Pickup Ass'y | | 1 |
| 306-2 | 937 0121 607 | Gear rack | | 1 |
| 306-3 | 937 0121 704 | Spring rack | | 1 |

| Ref.No. | Part No. | Part Name | Remarks | Q'ty |
|---|---|---|---|---|
| 701 | 937 0121 801 | Screw 2.6×6 | | 2 |
| 702 | 937 0121 814 | Screw 2.0×5 | | 2 |
| 703 | 937 0121 827 | Screw 2.0×3 | | 2 |
| 704 | 937 0121 908 | Washer | | 1 |
| M701 | 937 0122 004 | Motor+Gear | | 1 |
| M702 | 937 0122 101 | Motor+Chassis | | 1 |
| SW702 | 937 0122 208 | Switch | | 1 |
| PWB-D | 937 0122 305 | Board only | | 1 |

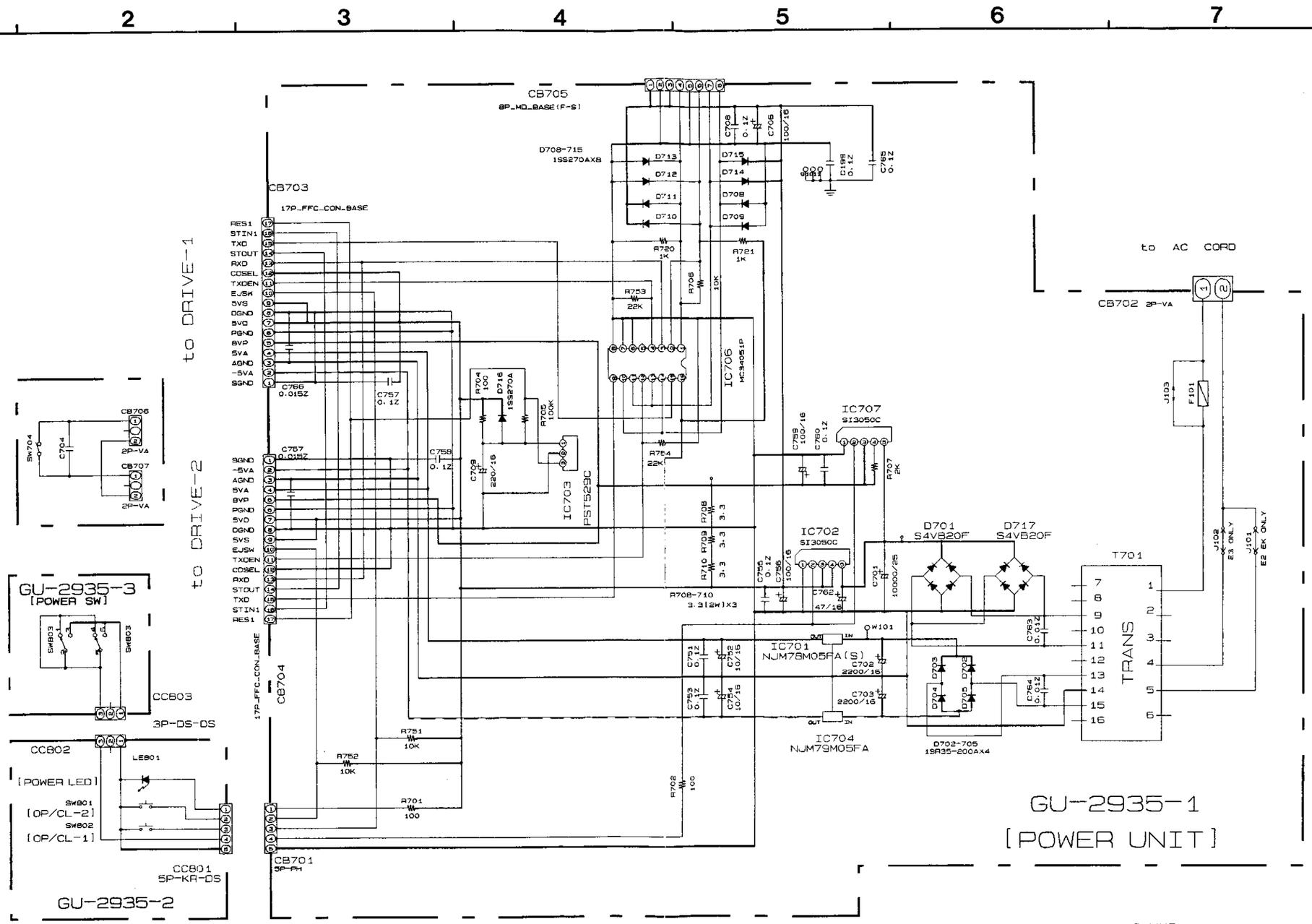
## BLOCK DIAGRAM




## WIRING DIAGRAM



# SCHEMATIC DIAGRAM OF GU-2935 MAIN. P.W.B. UNIT




**NOTES**

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM, M=1,000,000 OHM

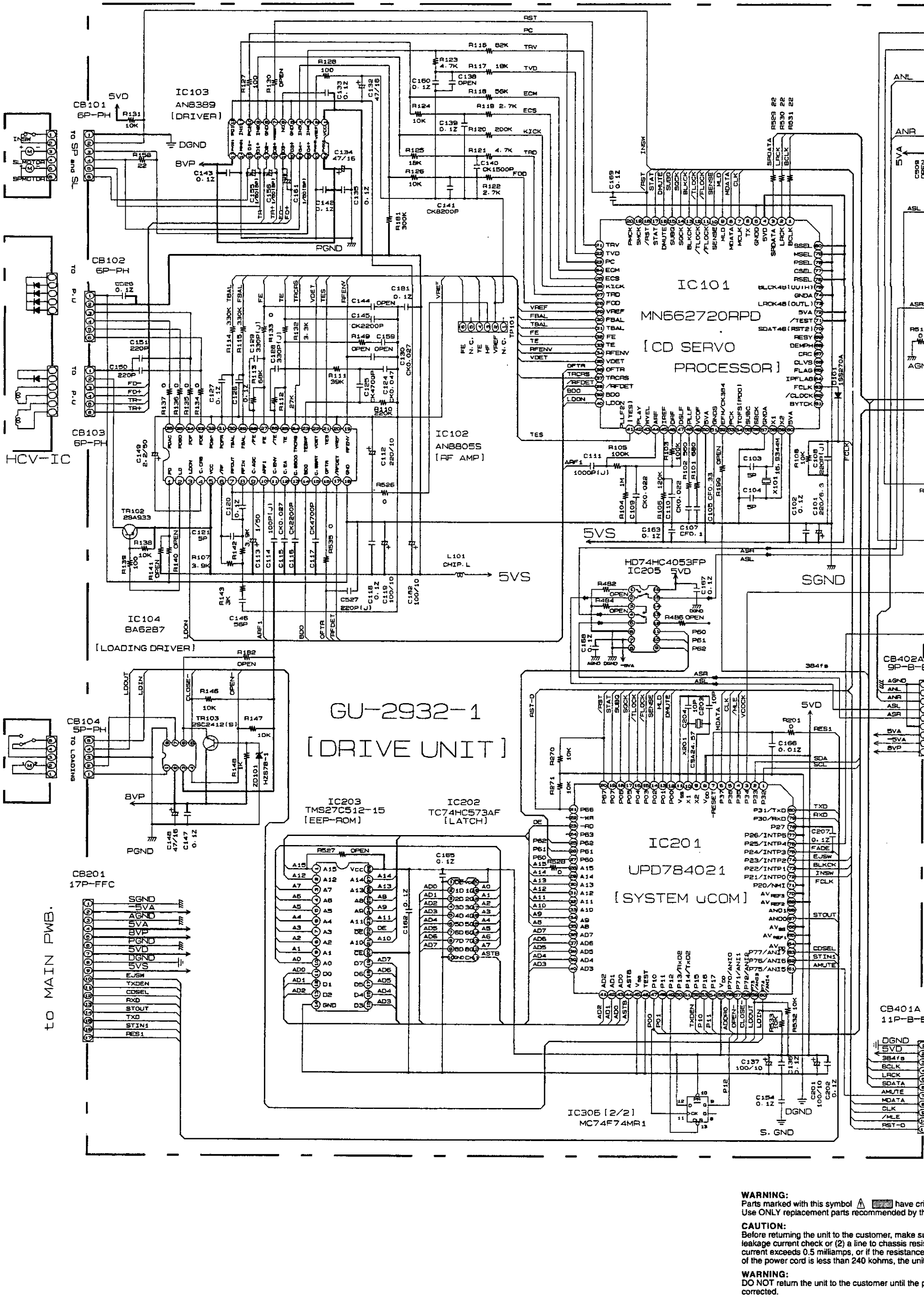
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD

EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.

CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

# SCHEMATIC DIAGRAM OF GU-2932 MECH. P.W.B. UNIT

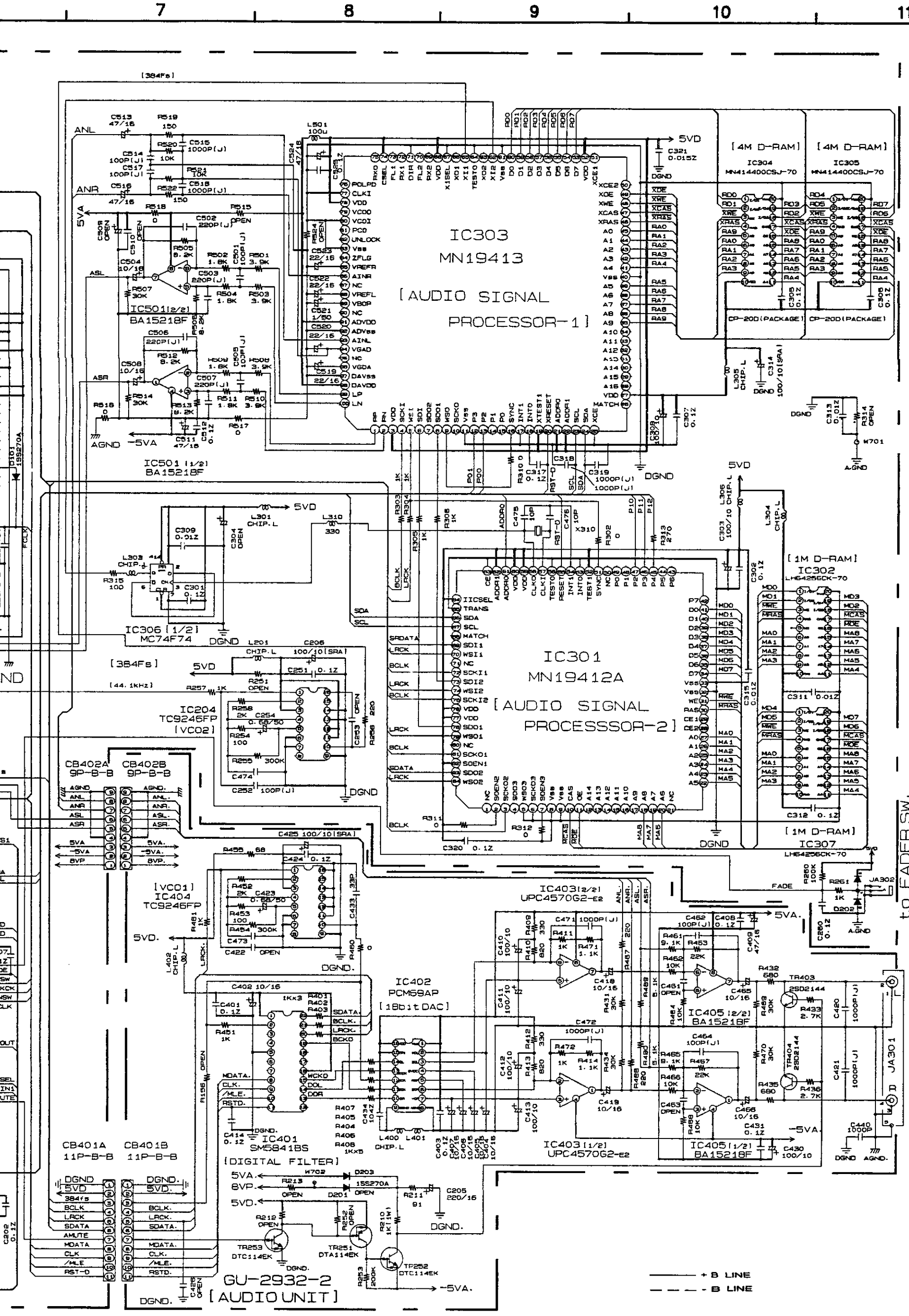
1 2 3 4 5 6




**WARNING:**
Parts marked with this symbol ⚠ ▒▒ have cri
Use ONLY replacement parts recommended by th

**CAUTION:**
Before returning the unit to the customer, make su
leakage current check or (2) a line to chassis resis
current exceeds 0.5 milliamps, or if the resistance
of the power cord is less than 240 kohms, the unit

**WARNING:**
DO NOT return the unit to the customer until the p
corrected.




s symbol ⚠ ▒▒ have critical characteristics.
nt parts recommended by the manufacturer.

nit to the customer, make sure you make either (1) a
or (2) a line to chassis resistance check. If the leakage
illiamps, or if the resistance from chassis to either side
ss than 240 kohms, the unit is defective.

it to the customer until the problem is located and

**NOTES**

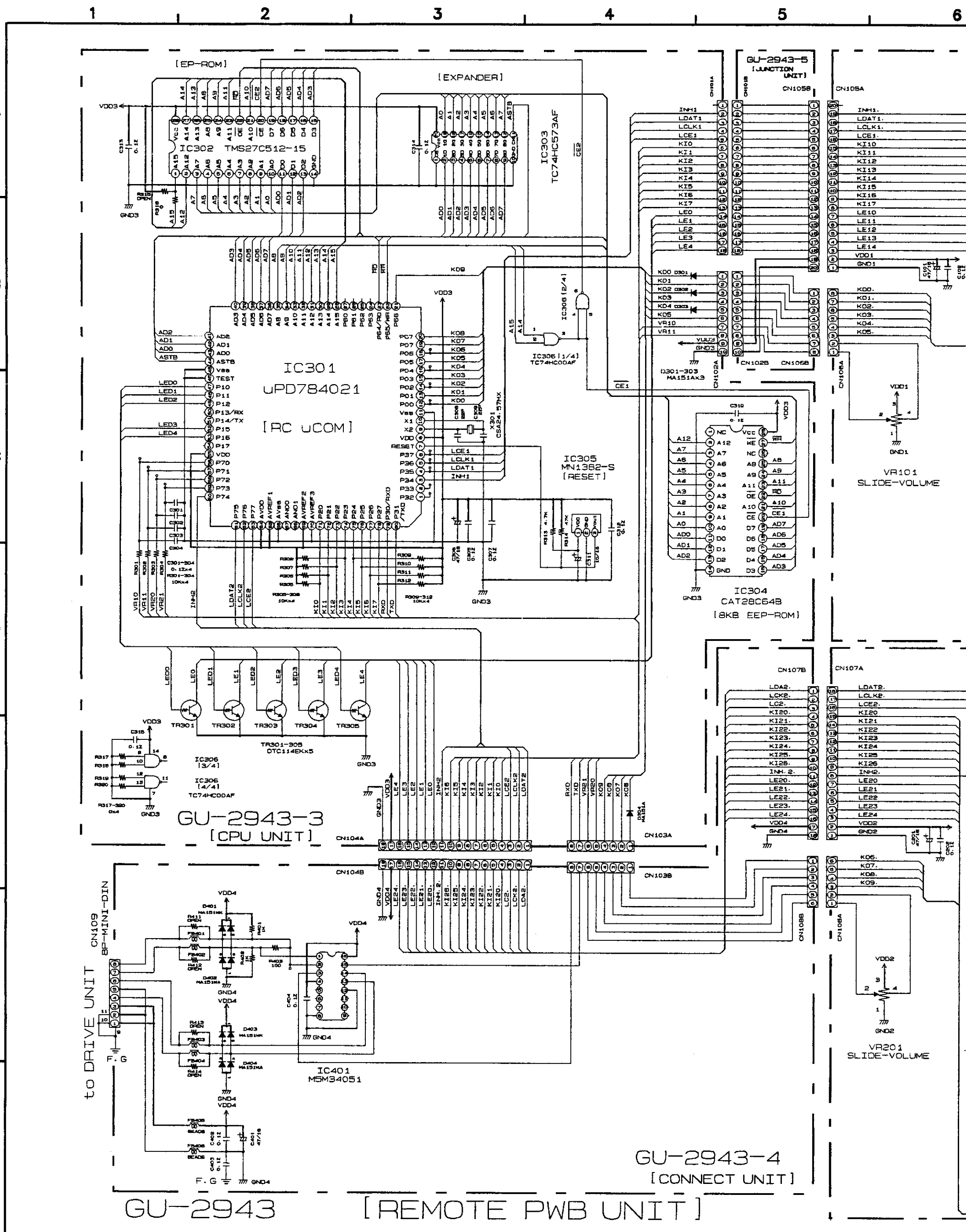
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM, M=1,000,000 OHM

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.

# SCHEMATIC DIAGRAM OF GU-2943 REMOTE CONTROL P.W.B. UNIT




**NOTES**

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 milliamps, 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.

6 7 8 9 10 11

# GU-2943-1 [LEFT UNIT]

| Ref. No. | Part Name |
|---|---|
| LE103. 107 | SLR-325VC(RED) |
| LE101. 105. 106. 108 | SLR-325MC(GRN) |
| LE102. 104. 109. 110 | SLR-325DC(ORG) |

R101-110 220x10

LB101 [LCD BACK-LIGHT]

LC101 [LCD-1]

IC101 LC75850E [LCD DRIVER]

VR101 SLIDE-VOLUME

TR101 2SB766

TR102 2SB766

D101-108 MA151AX8

# GU-2943-2 [RIGHT UNIT]

| Ref. No. | Part Name |
|---|---|
| LE203. 207 | SLR-325VC(RED) |
| LE201. 205. 206. 208 | SLR-325MC(GRN) |
| LE202. 204. 209. 210 | SLR-325DC(ORG) |

R201-210 220x10

LB201 [LCD BACK-LIGHT]

LC201 [LCD-2]

IC201 LC75850E [LCD DRIVER]

VR201 SLIDE-VOLUME

TR201 2SB766

TR202 2SB766

D201-208 MA151AX8

RC37X. 001

+B LINE

DENON

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