

JVC

SERVICE MANUAL

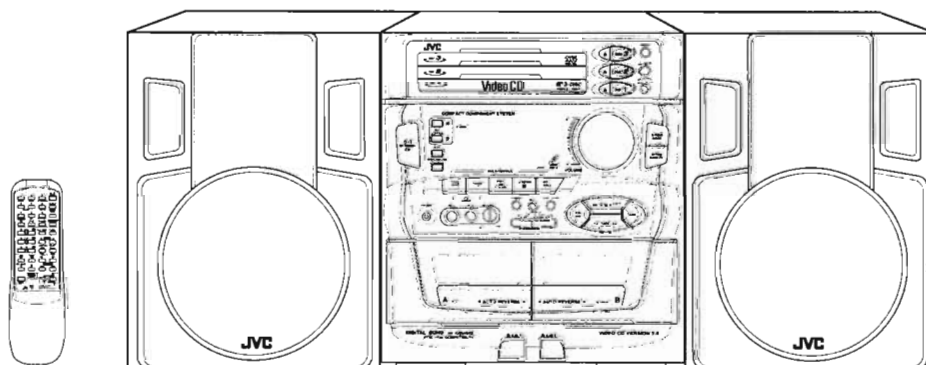
COMPACT COMPONENT SYSTEM

MX-V505T



COMPACT
disc
DIGITAL AUDIO
GRAPHICS

COMPACT
disc
DIGITAL AUDIO



Area Suffix

UB	Hong kong
UF	China
US	Singapore
UT	Formosa
U	Other Area

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Safety Precautions

1. This design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (\triangle) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage current check (Electrical shock hazard testing)
After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock. Do not use a line isolation transformer during this check.

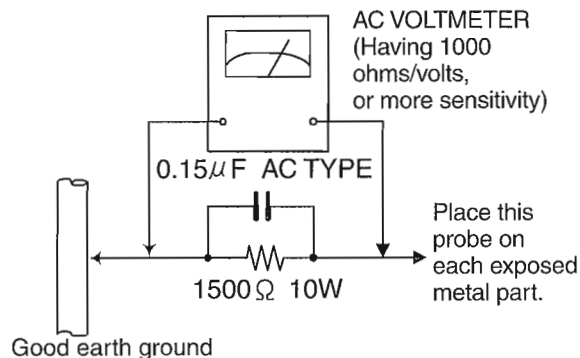
- Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.)

- Alternate check method

Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500 Ω 10W resistor paralleled by a 0.15 μ F AC-type capacitor between an exposed metal part and a known good earth ground.

Measure the AC voltage across the resistor with the AC voltmeter.

Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. voltage measured Any must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

CAUTION Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of performing repair of this system.

Important for Laser Products

1.CLASS 1 LASER PRODUCT

2.DANGER : Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.

3.CAUTION : There are no serviceable parts inside the Laser Unit. Do not disassemble the Laser Unit. Replace the complete Laser Unit if it malfunctions.

4.CAUTION : The compact disc player uses invisible laserradiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.

5.CAUTION : If safety switches malfunction, the laser is able to function.

6.CAUTION : Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

WARNING : Osynlig laserstrålning är denna del är öppnad och spårren är urkopplad. Betrakta ej strålen.
VARO : Avattaessa ja suojalukitus ohitettaessa olet alltiina näkymättömälle lasersäteilylle. Älä katso säteeseen.

ADVARSEL : Usynlig laserstråling ved åbning , når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

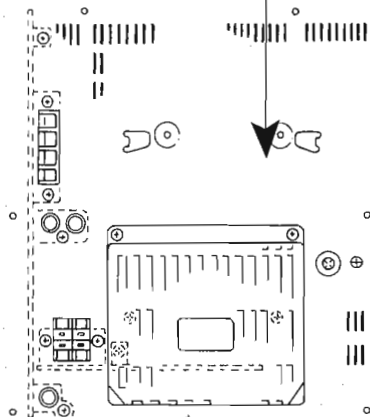
ADVARSEL : Usynlig laserstråling ved åpning,når sikkerhetsbryteren er avslott. unngå utsettelse for stråling.

REPRODUCTION AND POSITION OF LABELS

WARNING LABEL

(four UB/UF/US version)

**CLASS 1
LASER PRODUCT**



VARO : Avattaessa ja suojalukitus ohitettaessa olet alltiina näkymättömälle lasersäteilylle. Älä katso säteeseen. (d)

ADVARSEL :Usynlig laserstrålning ved åbning , når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling. (f)

DANGER : Invisible laser radiation when open and interlock or defeated.
AVOID DIRECT EXPOSURE TO BEAM (e)

WARNING : Osynlig laserstrålning är denna del är öppnad och spårren är urkopplad. Betrakta ej strålen. (s)

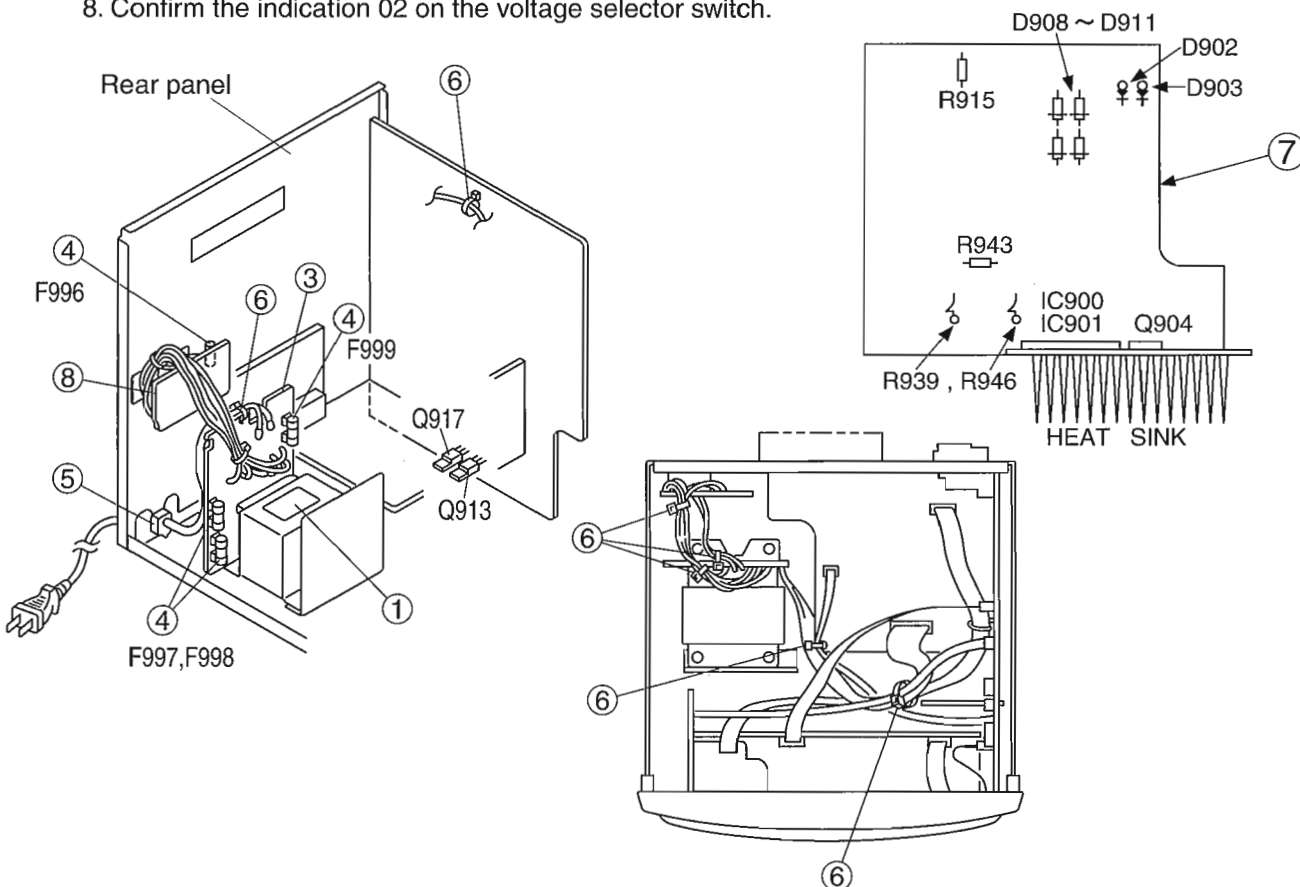
This label is attached Left side of
CD Traverse mechanism unit

■ Important administration points regarding safety

1. Power transformer making number FMTP66U8-65A (UB/UF/US/UT/U version)
The torque of the screw driver for the power transformer must be controlled.
2. The tab for winding the power cord must be twisted and soldered to prevent disconnection.
The lead of the power cord must be wound around the tab and soldered the spatial distance must be 4.0 mm or more.
3. Concerning the primary terminal and the adjacent secondary terminal on the printed circuit board to provide proper creeping and spatial distance, solder must not protrude from soldering round.
4. Before installation confirm the fuse capacity indication, s or marks on the fuse cap, when installing, confirm if the fuse is held tightly with the fuse holder.

Ref. No.	Capacity and mark	Indication on printed circuit board	Area Suffix
F996	T800mA L250V	T800mA	
F997	T1.25A L250V	T1.25A	
F998	T1.25A L250V	T1.25A	
F999	T1.6A L250V	T1.6A	

5. Confirm the cord stopper NIFCO 2271.
6. Wire must be clamped or secured at the location shown in the figure so that the wire do not touch to live parts , moving parts, hot parts or shap edges.
7. Following parts are controlled as the heated parts, confirm that the flammable parts are lifted up , the parts in () must be controlled.
IC: IC900, IC901, Resistor: R915, R939, R943, R946, Transistor : Q904, Q913, Q917
Diode : D902, D903, (D908, D909, D910, D911), Heat sink
8. Confirm the indication 02 on the voltage selector switch.



Instructions

English
English

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Thank you for purchasing the JVC Compact Component System. We hope it will be a valued addition to your home, giving you years of enjoyment. Be sure to read this instruction manual carefully before operating your new stereo system. Here you will find all the information you need to set up and use the system. For questions that are not be answered in the manual, please contact your dealer.

Features

- Here are some of the things that make your System powerful and easy to use.
 - Types of CDs you can play.
 - Many types of compact discs are sold for a variety of uses. The Video CD Player can play the following compact discs:
 - **Video CD:** for audio and video (moving picture) reproduction, including multiplex sound.
 - **Video CD with Playback Control function:** featuring menu-type operation and super-fine still pictures for audio and video (moving picture) reproduction, including multiplex sound.
 - **CD Graphics (CD-G):** for audio and video (still picture) reproduction, including multiplex sound.
 - **Digital Audio CD, including single discs:** for audio reproduction.
 - CDs you can't play back
 - Do not play back CD-ROMs on this equipment. Doing so may generate a noise which can damage your speakers.
 - The controls and operations have been designed to make them very easy to use, so you can spend your time listening to music:
 - With the One Touch Operation feature of JVC's **COMPU PLAY** you can turn on the System and start the radio, the Cassette Deck, or the CD Player with a single touch.
 - To get such great sound from such a compact package the System has:
 - Programmed sound mode includes live surround effects **D**, **CLUB**, **HALL**, and **STADIUM**. It also includes **S.E.A** (Sound Effect Amplifier) effects **ROCK**, **CLASSIC**, and **POP**.
 - CD change function can operate 3 discs.
 - Continuous, random or program play of 3 discs.
 - Includes a timer for recording broadcasts while you are out, and an easy-to-use Sleep timer.
 - You can use conventional tapes and CDs for **Karaoke** with the voice masking system. With an optional microphone, you can replace the lead singer's voice on your favourite songs with your own.
 - **Digital Echo** applied to your voice through the microphone gives you a professional sound.

How This Manual Is Organized

- In this manual, we have incorporated some special features:
- Basic information that is the same for many different functions is grouped in one place, and not repeated in each procedure. For instance, in the section on playing a CD, we do not repeat the information about setting the volume and the sound conditions, which are discussed in the Common Operations section.
 - Name of buttons and controls are written in all capital letters like this: **SOUND MODE**.
 - When we are talking about the Function, rather than the **BUTTON** or **DISPLAY**, only the first letter is capitalized.

The manual has a table of contents to help you quickly look up what you want to know. We've enjoyed making this manual for you, and hope you will use it to enjoy the sound and many features built into your System.

IMPORTANT CAUTIONS

- 1. Installation of the Unit**
 - Select a place which is level, dry and neither too hot nor too cold. (Between 5°C and 35°C or 41°F and 95°F)
 - Leave sufficient distance between the Unit and a TV.
 - Do not use the Unit in a place subject to vibrations.
- 2. Power cord**
 - Do not handle the power cord with wet hands!
 - Some power (12 watts) is always consumed as long as the power cord is connected to the wall outlet.
 - When unplugging the Unit from the wall outlet, always pull the plug, not the power cord.
- 3. Malfunctions, etc.**
 - There are no user serviceable parts inside. If anything goes wrong, unplug the power cord and consult your dealer.
 - Do not insert any metallic object into the Unit.



Easy operation



Great sound

Triple Tray

Singing Along

Getting Started

Accessories

Check that you have all of the following items, which are supplied with the System.

- AM Loop Antenna (1)
- Remote Control (1)
- Batteries (2)
- FM Wire Antenna (1)
- AC Plug Adaptor (except for Hong Kong) (1)
- Video Cord (1)

If any of these items is missing, contact your dealer immediately.

Set the VOLTAGE SELECTOR Switch

To avoid damaging the System, set the voltage before plugging in the Unit.

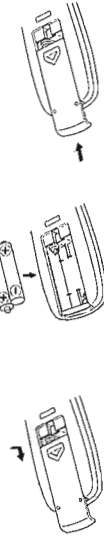
- Set the correct voltage for your area with the **VOLTAGE SELECTOR** switch on the back panel of the System. Use a screwdriver to rotate the selector so the number the arrow is pointed at is the same as the voltage.



How To Put Batteries In the Remote Control

Match the polarity (+ and -) on the batteries with the + and - markings in the battery compartment.

R6P (SUM-3)/AA (15F)

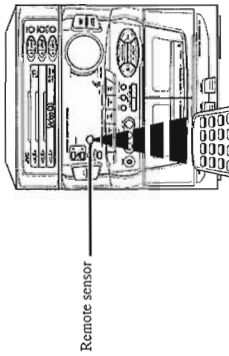


CAUTION: Handle batteries properly.

- To avoid battery leakage or explosion:
- Remove batteries when the Remote Control will not be used for a long time.
- When you need to replace the batteries, replace both batteries at the same time with new ones.
- Don't use an old battery with a new one.
- Don't use different types of batteries together.

Using the Remote Control

The Remote Control makes it easy to use many of the functions of the System from a distance of up to 7m (23 feet) away. You need to point the Remote Control at the remote sensor on the System's front panel.

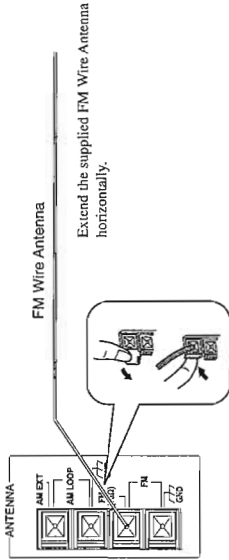


3

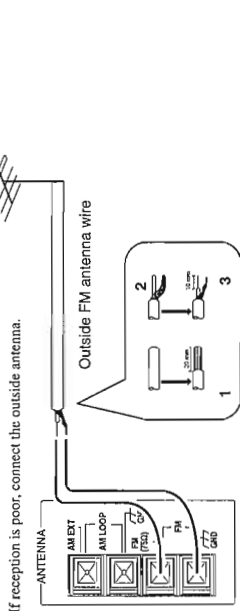
CAUTION: Make all connections before plugging the Unit into an AC power outlet.

Connecting the FM Antenna

Using the Supplied Wire Antenna



Using an FM 75-Ohm Antenna Wire (Not Supplied)

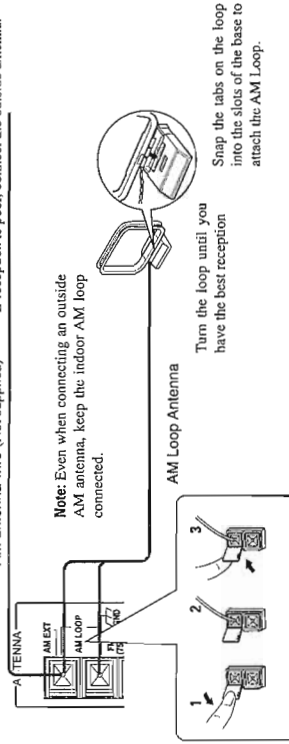


If reception is poor, connect the outside antenna. Before attaching a 75 ohm coaxial lead (the kind with a round wire going to an outside antenna), disconnect the supplied FM Wire Antenna.

CAUTION: To avoid noise, keep antennas away from metallic parts of the System, connecting cord and the AC power cord.

Connecting the AM Antenna

AM antenna wire (Not supplied) If reception is poor, connect the outside antenna.



Note: Even when connecting an outside AM antenna, keep the indoor AM loop connected.

Turn the loop until you have the best reception

Snap the tabs on the loop into the slots of the base to attach the AM Loop.

4

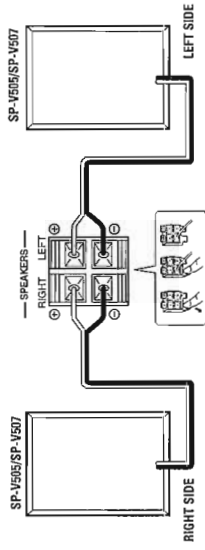
English
English

CAUTION: Make all connections before plugging the Unit into an AC power outlet.

Connecting the Speakers

■ Please refer to instructions for speakers as well when you connect speakers.

For each speaker, connect one end of the speaker wire to the speaker terminals on the back of the System. Open each of the terminals and insert the speaker wires firmly, then close the terminals.
 Note: Connect the red (+) and black (-) wires of the right side speaker to the red (+) and black (-) terminals marked **RIGHT** on the System.
 Connect the red (+) and black (-) wires of the left side speaker to the red (+) and black (-) terminals marked **LEFT** on the System.



IMPORTANT: Use speakers with the correct impedance only. The correct impedance is indicated on the back panel.
CAUTION: If a TV is installed near speakers, the TV may display irregular colours. In this case, set the speakers away from the TV.

Video Out Select

Set the **NTSC / PAL / PAL AUTO** button on the front panel to **NTSC**, **PAL** or **PAL AUTO** mode according to your television system.

NTSC for NTSC exclusive TV.

PAL for PAL exclusive TV.

PAL AUTO for Multisystem TV.

PAL AUTO detects the formula of the disc (**NTSC/PAL**) automatically and plays the image on the screen correctly.

Notes

- When you play an **NTSC** disc in **PAL AUTO** mode on a **PAL** exclusive TV, the image may be distorted. If this happens, change the mode to "**PAL**".
- Select the mode before you play the disc. If you change the mode during play, images may get distorted. In this situation stop the player and reset the mode.
- When you play an **NTSC** disc in **PAL AUTO** mode on a Multisystem TV, the image may blink for a moment. This symptom is caused by the Player detecting the formula of the disc, not by a malfunction of the Player.

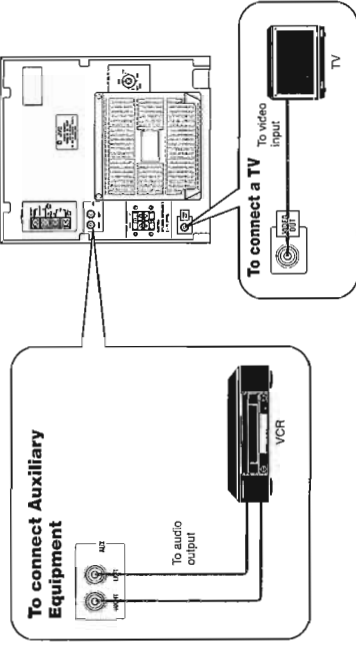
Connecting Auxiliary Equipment

You can connect the following equipment to this System.

- TV with a video input jack : used as a monitor of video CD playback.
- Audio/video equipment : used only as a playback device.

CAUTION:

DO NOT connect other equipment while power is on.
DO NOT plug in the AC power cord until all connections are complete.



Connect the video input jack on the TV and the **VIDEO OUT** jack, using the supplied video cord.

Now you can plug the AC power cord into the wall outlet, and your System is at your command!

COMPU PLAY

COMPU PLAY is JVC's feature that lets you control the most frequently used functions of the System with a single touch.

One Touch Operation starts playing a CD, turns on the radio, plays a tape, etc. with a single press of the play button for that function. What One Touch Operation does for you is to turn the power on, then start the function you have specified. If the Unit is not ready, such as no CD or tape in place, the Unit still powers on so you can insert a CD or tape.

How One Touch Operation works in each case is explained in the section dealing with that function.

The **COMPU PLAY** buttons are:

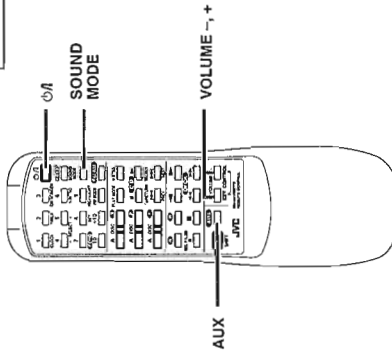
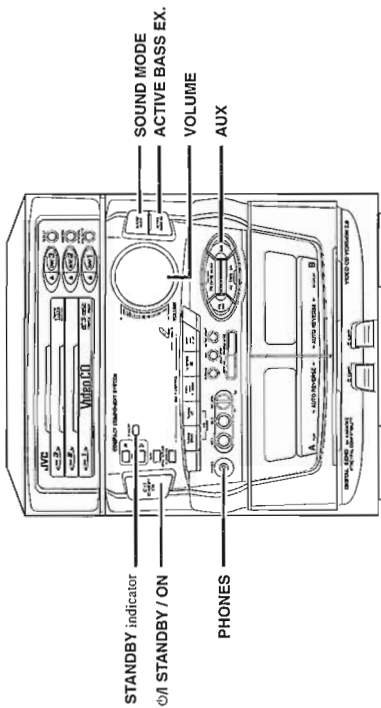
On the Unit

- CD > II SELECT button
- FM/AM button
- CD Player DISC 1 to DISC 3 buttons
- CD Player Open/Close (A) buttons
- FM/AM button
- TAPE > button
- AUX button

On the Remote Control

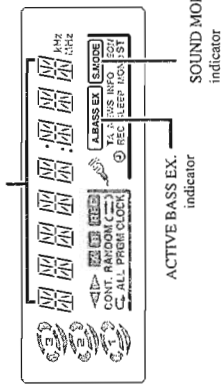
- FM/AM button
- AUX button
- CD control > SELECT
- CD control DISC 1 to DISC 3 buttons
- CD control Open/Close (A) buttons
- Deck control <-> buttons

Common Operations



Display

Source, Sound Mode Volume Level etc.



When the System is being used, the display shows other items as well. However, we have only shown the items described in this section.

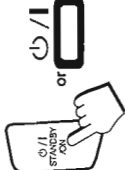
Turning the Power On and Off

Turning the System On
Press the / STANDBY / ON button.

- The display comes on and the STANDBY indicator goes out.
- The System comes on ready to continue in the mode it was in when the power was last turned off.
- If the last thing you were doing was listening to a tape in Deck B, you are now ready to listen to a tape again in Deck B, or you can change to another source.
- If you were listening to the Tuner last, the Tuner comes on playing the station it was last set to.

Turning the System Off
Press the / STANDBY / ON button again.

- The STANDBY indicator lights up and the display is blank, except for the clock display.
- Some power (12 watts) is always consumed even though power is turned off (called Standby Mode).
- To switch off the Unit completely, unplug the AC power cord from the AC outlet. When you unplug the AC power cord, the clock will be reset to 0:00 immediately, and preset Tuner stations will be erased after a few days.

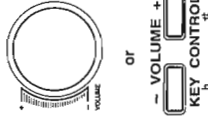


English

English

Adjusting the Volume

Turn the VOLUME control clockwise to increase the volume or anticlockwise to decrease it. Turning the VOLUME control quickly also adjusts the volume level quickly. When using the Remote Control, press the VOLUME + button to increase the volume or press the VOLUME - button to decrease it. You can adjust the volume level between 0 and 50.



VOLUME 0

CAUTION: The Volume cannot be adjusted while the Unit is in STANDBY mode. DO NOT turn on the Unit and/or start playing any source without setting the VOLUME control to 0; otherwise, the sudden blast of sound can damage your hearing, speakers and/or headphones.

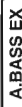
For private listening

Connect a pair of headphones to the PHONES jack. No sound comes out of the speakers. Be sure to turn down the volume before connecting or putting on headphones.

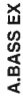
Reinforcing the Bass Sound

The richness and fullness of the bass sound is maintained regardless of how low you set the volume. You can use this effect only for playback.

To get the effect, press the ACTIVE BASS EX (Active Bass Extension) button. The frame around the A. BASS EX indicator lights up.



To cancel the effect, press the button again. The frame around the A. BASS EX indicator goes out.



Sound Modes

The System has some preset sound effects that give you control of the way your music sounds, so you can tailor it for your room and for the quality of the source. We can give you some idea of how each one affects the music, but the only way to really tell is to try them yourself.

- The preset sound modes include modes using surround effects and modes using S.E.A. effects.
- Sound Mode effects cannot be recorded.

Surround effect modes

- D. CLUB (Dance Club) Increases resonance and bass.
- HALL Adds depth and brilliance to the sound, like in a concert hall.
- STADIUM Adds clarity and spreads the sound, like in an outdoor stadium.

S.E.A. effect modes

- ROCK Boosts low and high frequencies.
- CLASSIC Set for wide and dynamic sound stereo systems.
- POP Good for vocal music.

To get an effect, press the SOUND MODE button repeatedly until the Sound Mode you want appears in the display. The frame around the S.MODE indicator lights up. Each time you press the SOUND MODE button, the display changes as shown below:

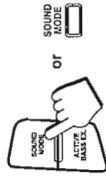


→ D. CLUB → HALL → STADIUM → ROCK → CLASSIC → POP → FLAT → (back to the beginning)

To cancel an effect, press the SOUND MODE button until FLAT appears on the display. The frame around the S.MODE indicator goes out.

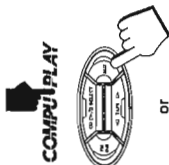


To show the current Sound Mode on the display, press the SOUND MODE button again.



Listening to Auxiliary Equipment

By playing the sound from auxiliary equipment through the System, you can gain control over how the music or program sounds. Once the connected equipment is playing through the System, you can apply the sound effects.

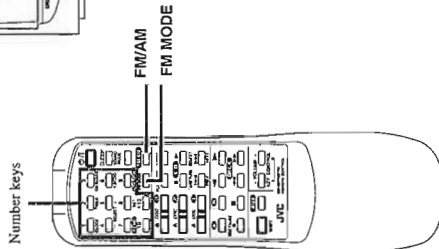
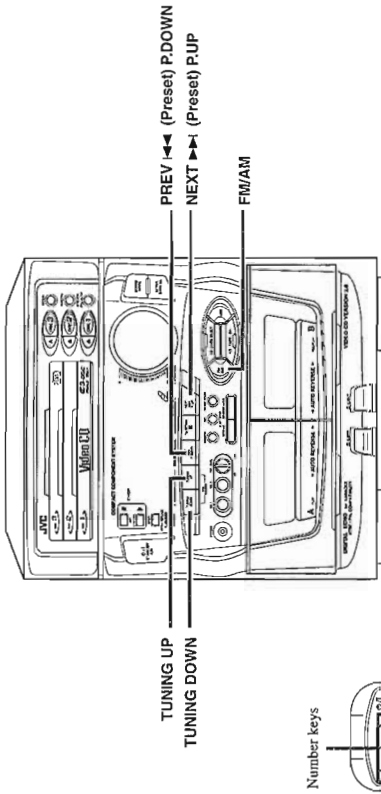


First make sure that the optional equipment is properly connected to the System. (See page 6).

- 1. Set the VOLUME control to 0.**
- 2. Press the AUX button.**
When System is in Standby mode, the Unit is automatically turned on and "AUX" appears on the display.
- 3. Start playing the equipment.**
- 4. Adjust the VOLUME control to the desired listening level.**
- 5. Select a sound mode, if you wish. (See page 8)**

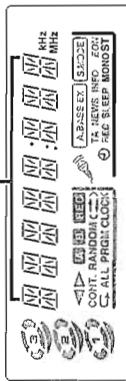
To Cancel the Setting
Change the source by starting any one of the System's built-in sound sources, such as the Tuner or CD Player.

Using the Tuner



Display

Band display, Frequency display, Preset channel



When the System is being used, the display shows other items as well. However, we have only shown the items described in this section.

You can listen to both FM and AM stations. Stations can be tuned in manually, automatically, or from preset memory storage.

- Before listening to the radio:
 - Check that both the FM and AM antennas are firmly connected. (See page 4).

Setting the AM Tuner Interval Spacing

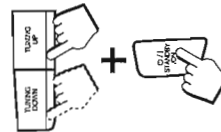
Some countries space AM stations 9 kHz apart, and some countries use 10 kHz spacing. Europe, the U.K., Australia, and some other areas use 9 kHz spacing, while Canada, the United States, and some other Western Hemisphere countries use 10 kHz spacing.

- When shipped, the System is set to 9 kHz spacing. In case of Brazil, the System is set to 10 kHz spacing.
- To select the 10 kHz interval, be sure that the Unit is in STANDBY mode. Turn on by pressing the **STANDBY / ON** button while pressing the **TUNING UP** button on the Unit. "AM -- 10" appears on the display.
- To change back to 9 kHz, be sure that the Unit is in STANDBY mode. Turn on by pressing the **STANDBY / ON** button while pressing the **TUNING DOWN** button on the Unit. "AM -- 9" appears on the display.

One Touch Radio

Just press the **FM/AM** button to turn and start playing the most recent station tuned in.

- You can switch from any other sound source to the radio by pressing the **FM/AM** button.



Tuning In a Station

Press the **FM/AM** button to turn on the radio.
The Frequency of the previously selected channel appears on the display.

Switching between Frequency Bands

Press the **FM/AM** button.

Each time you press the button, the band alternates between **FM** and **AM**.

Three ways to select a station

- Press the **TUNING DOWN** or **TUNING UP** button repeatedly to move from frequency to frequency until you find the one you want. (Manual Tuning).
- Press and hold the **TUNING DOWN** or **TUNING UP** button for a few seconds, the frequency starts changing on the display. When a station is tuned in, the frequency stops changing. (Auto Tuning).
- Possible only after presetting stations.
Press once and release the **PREV** or **P. DOWN** or **NEXT** or **P. UP** button to go to the next preset station.

You can also use the Remote Control to tune in preset channels:

1. Press the **FM/AM** button, so that you can receive the most recent station tuned in.
2. Select the station by entering the preset number in the number keys of the Remote Control.
 - Example: for channel 5, press 5. For channel 15, press +10 then 5. For channel 20, press +10, then 10. For channel 30, press +10 twice then 10.



- After you have selected the preset number and the number is displayed, the broadcast frequency of the selected channel is displayed.

Presetting Stations

You can preset up to 30 FM stations and up to 15 AM stations for the preset numbers.
Notes: In some cases, test frequencies have been already memorized for the tuner since the factory examined the tuner preset function before shipment. This is not a malfunction. You can preset the stations you want into memory by following the presetting method.

1. **Select a band by pressing the FM/AM button.**
2. **Press the TUNING DOWN or TUNING UP button to tune into a station.**
3. **Setting the preset number by pressing the number keys on the Remote Control continuously.**

For preset numbers 1 to 10:

Press the number key for the preset number you want to set.

For preset numbers 11 to 20:

Press the 1 to 10 buttons after pressing the +10 button.

For preset numbers 21 to 30:

Press the 1 to 10 buttons after pressing the +10 button twice.

The preset number appears in the display after you have pressed the number keys. If the key is pressed continuously, the preset number display blinks. Release the button after the number starts to blink. This completes the preset setting.

4. **Repeat steps 1 - 3 for each station you want to store in memory with a preset number.**

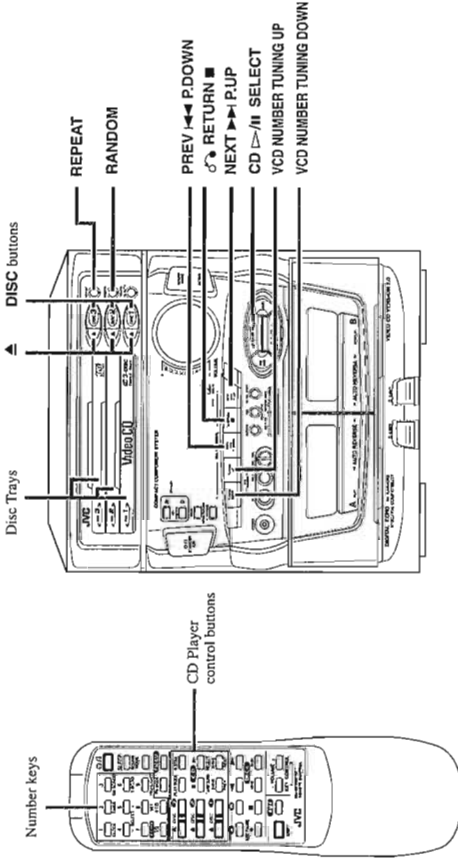
CAUTION: If the Unit is unplugged or if a power failure occurs, the preset stations will be erased after about half a day. If this happens, preset the station again.

To Change the FM Reception Mode

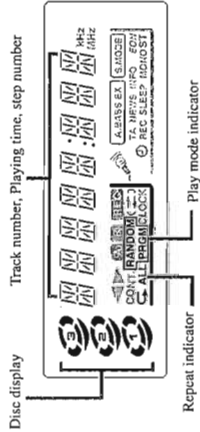
When an FM stereo broadcast is hard to receive or noisy, press the **FM MODE** button on the Remote Control so that the **MONO** indicator lights up in the display. Reception improves, but there is no stereo effect.

To restore the stereo effect, press the **FM MODE** button on the Remote Control so that the **MONO** indicator goes off. In this stereo mode, the **ST** indicator lights up and you can hear stereo effects, when a program is broadcast in stereo.

Using the CD Player



Display



Disc display
A red marker lights on the disc display for the disc number you have selected. This disc display blinks while a CD is being played.
The round indicator of the disc display is not lit while CD player is checking that there is no disc in the disc tray for the corresponding disc number.



Disc marker

When the System is being used, the display shows other items as well. However, we have only shown the items described in this section.

The System's CD Player has an Automatic Change with 3 disc trays. You can use **Random**, **Program** or **Repeat Play** for the discs in **DISC 1**, **DISC 2** and **DISC 3**. **Repeat Play** can repeat all the tracks on all the CD's or one track on one CD. There is also the **Tray Lock** function, which safely keeps discs in the trays.

Here are the basic things you need to know to play a CD and locate the different selections on it. Each selection is called a track, so when we are talking about locating a track, we are also talking about how you find a certain song or performance.

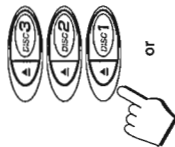
The Quickest Way To Start a CD Is With the One Touch Operation

- You can start playing a disc simply by pressing the CD ▷/II SELECT button (or the ► SELECT button on the Remote Control).
- The power is automatically turned on and the System starts searching discs. If a disc is found, the System start playing in the previously selected play mode (Continuous Play, Random Play or Program Play; for each play mode, see the related pages).

Notes:

- If there is no disc loaded on any disc trays, "NO DISC" will appear on the display. (Playback will not start.)
- If you press any one of the ▲ buttons (for DISC 1 to 3), the power is automatically turned on and the selected disc tray comes out.
- If you press any one of the DISC button (1 to 3), the power is automatically turned on. Only if the System is in Continuous Play mode, the System start searching discs then starts playing if a disc is found.

To Insert Discs



- Press the ▲ button on the left of the Disc button you want to insert the disc into.
The disc tray slides out automatically.
- Place a CD, with its label side up, onto the tray.

ATTENTION: To avoid malfunctions when you play a CD, please set the CD in the right place at the centre of the tray.

- Press the ▲ button to close the tray.

- Repeat steps 1 to 3 to insert other discs into other trays.
 - To continue putting discs into other trays, even if a tray is open, by pressing the ▲ button of another disc tray, the open tray will close automatically, and the new disc tray will slide out.

- To put an 8 cm CD into a tray, insert it so that it is aligned with the groove in the tray's centre.
- If a tray is open when the System switches to Standby mode, the tray is closed automatically.

Basics of Using the CD Player — Continuous Play

To Play a Disc

- Prepare the discs.
If a video CD is inserted, VIDEO CD will appear in the display.
- Press the CD ▷/II SELECT or DISC button (1 to 3) of the disc you want to play.
When using the Remote Control, press the ► SELECT button or the DISC buttons (1 to 3). The first track of the selected disc will begin playing.
The CD Player automatically searches next track when the playback finishes the last track of the CD.
 - If these buttons are pressed while the tray is open, the tray is automatically closed and playback starts.

Note: If the CD can't be read correctly (due to scratches etc.) "01 00:00" appears on the display.

To stop playing the disc, press the ⏏ RETURN button.

To stop playing and removing the disc, press the ▲ button for the disc being played.

To pause, press the CD ▷/II SELECT button (or the II STILL button on the Remote Control) while playing. The Disc playing time will blink.

To cancel pause, press the CD ▷/II SELECT button again (or press the ► SELECT button on the Remote Control). Play continues from the point where it was paused.

To Select a Disc, Track Or Passage Within a Track

- Press the DISC button (1 to 3) for the disc tray containing the track you want to listen to.
 - Example: for the third disc, press 3.

- Press the PREV ◀◀ P.DOWN or NEXT ▶▶ P.UP button to select the track.
 - When using the Remote Control, press the ◀◀ PREV or ▶▶ NEXT button.

The selected track starts playing.

Each time you briefly press and release the PREV ◀◀ P.DOWN or NEXT ▶▶ P.UP button, the track changes by one.

- Press and release the NEXT ▶▶ P.UP button to go ahead one track at a time.
 - Press and release the PREV ◀◀ P.DOWN button to go back one track at a time.
- Holding down the PREV ◀◀ P.DOWN or NEXT ▶▶ P.UP button, during playback, will fast forward/backwards the CD so you can quickly find a particular passage in the selection you are listening to.

Locating a Track With the Remote Control Directly

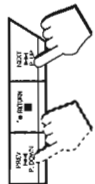
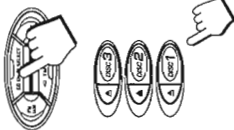
Using the number keys on the Remote Control allows you to go directly to the beginning of any track.

- Press the DISC button (1 to 3) for the disc tray containing the track you want to listen to.
 - Example: for the third disc, press DISC 3.
- Enter the number of the track you want to listen to with the number keys.
 - The selected track starts playing.
 - Example: for track 5, press 5. For track 15, press +10 then 5. For track 20, press +10, then 10. For track 32, press +10 three times, then 2.

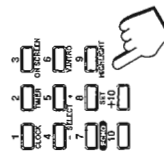
To Change Discs While Playing

You can replace a CD in a tray not being used, while another CD is playing.

- Press the ▲ button of the tray not being used.
The tray opens.
- Replace the disc in the tray.
- Press the ▲ button to close the tray.



or



Programming the Playing Order of the Tracks

You can change the order in which the discs and tracks play, and select only the discs and tracks you want from among those loaded in the CD Player.

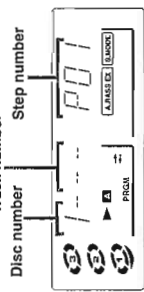
- You can program up to 32 steps in any desired order from among the discs in the player.
- You can only make a program when the CD Player is stopped.
- Use the Remote Control.

1. Press the PLAY MODE button to select "PROGRAM".
The display changes with each press of the PLAY MODE button as shown below.

→ PROGRAM → RANDOM → No play mode indication → (back to the beginning)

- The "PRGM" play mode indicator light up.
- If a program is already in progress, the last step of the program is displayed.

2. Select a disc with the DISC buttons (1 to 3).
The display changes to the Program Entry display.



3. Press the number keys (1 to 10 and +10) to select the track to program.

- Example: for track 5, press 5. For track 15, press +10 then 5. For track 20, press +10 then 10.

4. Repeat steps 1 to 3 to select other tracks for the program.

5. Press the SELECT button.
The Unit plays the tracks in the order you have programmed them.

- When you try to program a track number not existing on a CD:
 - If the target disc has been selected as the source CD, you cannot program a number not existing on the CD. Such an entry will be ignored while programming.
 - If the target disc has not been selected as the source CD, you can program a number (up to 99) even if it does not exist on the CD. However, such entries will be skipped and removed during Program Play.
- You can skip to a particular program step by pressing the PREVIOUS or NEXT button during program play.
- To play the programmed tracks over and over, press the REPEAT button on the unit. The Repeat mode indicators light up in sequence with each press of the REPEAT button. (Refer page 16)

To stop playing, press the RETURN button during Program Play.

To delete the program, press the RETURN button again after stopping the Program Play.

To cancel Program Play Mode, press the RETURN button after deleting the program so that the PRGM indicator on the display goes off.

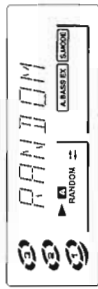
- If you press the PLAY MODE button on the Remote Control, the Program Play mode is cancelled and another play mode will be selected.

Random Play

The tracks will play in no special order when you use this mode.

On the Unit
Press the RANDOM button while the CD Player is stopped.

- RANDOM indicator lights up.
- Playback starts. The tracks are selected from all inserted discs.



On the Remote Control
1. Press the PLAY MODE button while the CD Player is stopped, to select "RANDOM".

- "RANDOM" lights in the Play mode indicator.

The display changes with each press of the PLAY MODE button as shown below.

→ PROGRAM → RANDOM → No play mode indication → (back to the beginning)

2. Press the SELECT button.
Playback starts.

Note: Random Play cannot be activated with the DISC button (1 to 3).

To skip to the next track, press the NEXT button during playback. The next track is jumped to with each press of the button. Press the PREVIOUS button to jump to the start of the track being played.

Press the REPEAT button before or during random play to instruct the System to continue with a different random track selection after the last selection is played.

To cancel random play, press the RETURN button while CD Player is stopped. RANDOM indicator goes out and Continuous Play is resumed. When using the Remote Control, press the RETURN button while the CD Player is stopped to select a different Play mode. The RANDOM indicator goes out and the next Play mode is selected.

Repeating a Selection or the Discs

You can have all the discs, the program or the individual selection currently playing repeat as many times as you like.

Press the REPEAT button.

The display changes with each press of the button, as shown below.

→ REPEAT → ALL → no indication → (back to the beginning)

REPEAT : Repeats one track on a CD.

ALL : For continuous play and Random Play, repeats all the tracks on all inserted CDs. For Program Play, repeats all the tracks in the program.

To exit Repeat Mode, press the REPEAT button until the Repeat mode indicator on the display goes out. If press the REPEAT button ALL, playback a Video CD without the PBC function. (See page 20)

Note:

To enjoy Repeat Play of more than one video CD with the PBC function: Cancel the PBC function first by following steps 1 to 3 in "Playing a Video CD with the PBC function in Continuous Play" on page 19. If you select "ALL", the player automatically searches other discs when the last track of the disc finishes playing.

Tray Lock Function

In order to safely keep the discs in the CD Player, the three trays can be electronically locked in a single operation. When the electronic lock is on, the trays cannot be opened even if the **▲** button is pressed. This function can only be accessed by using the buttons on the Unit itself.

Locking the Electronic Lock _____

1. Put the System's power into STANDBY mode.

2. While pressing the **⊞ RETURN ■ button, press the **▲** button for DISC 1's tray on the Unit.**
"LOCKED" appears on the display to let you know that the trays have been locked.



When the CD Player trays are locked, pressing the **▲** buttons displays the message "LOCKED" on the display and the trays do not open. Also, the **▲** button cannot be used to automatically turn on the power.

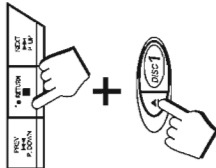
Unlocking the Electronic Lock _____

1. Put the System's power into STANDBY mode.

2. While pressing the **⊞ RETURN ■ button, press the **▲** button for DISC 1's tray on the Unit.**
When the unlock operation is done, "UNLOCKED" appears in the display to show that the lock has been taken off.



The trays can now be opened by pressing the **▲** buttons. The **▲** button can also be used to automatically turn on the power.



English
English

Operation Of Playback Control Function

Playing Video CDs with Playback Control function

This System provides a Playback Control function which utilizes a procedure (menu selection) programmed in a video CD. The playback operation procedure may differ depending on the disc you use.

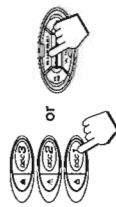
- The Playback Control function is described below and in the figure on the next page.
 - High-resolution still image display: Super-fine reproduction of still images with more than 4 times the resolution of video tape.
 - Menu-driven playback: interactive menus for easy selection of tracks.

- Preparations
 - A video CD with the Playback Control function is required for this operation.
 - The buttons available for use on the remote control: **PREV** ◀, **▶**, **STOP** ■, **SELECT** ■ button, **DISC** (1 to 3) buttons, **⊞** RETURN ■ button and the number keys.

Note: Sometimes due to improper manufacturing video CDs will function differently.

- Operation
Refer also to the instructions supplied for the video CDs.

- 1. Press the DISC (1 to 3) or CD ▷/II SELECT button, and then the Player starts up the PBC function. "PBC" is shown in the Display window.**
- 2. To move through the next menus, press the ◀◀ PREV/▶▶ NEXT buttons.**



- 3. When the menu you want appears, select an item in the menu by using the number keys. (See page 12)**

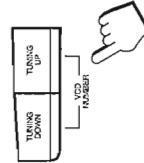
On the front panel

Press the VCD NUMBER button to select an item and then **CD ▷/II SELECT** button.

On the remote control

Press the number key and your selection will start to play.

- 4. To return to a menu and stop the track being played, press the ⊞ RETURN ■ button.**



Notes

- When you press number keys, the track will start playing without pressing the **▶** SELECT button.
- When there is only one menu, pressing the **▶▶** NEXT button will cause the System to start playing.
- Stop a video CD when press and hold the **⊞** RETURN ■ button for more than 2 seconds until the blue screen appears on the TV screen.

■ Buttons available on the unit (basic function).

PREV ◀◀ **P DOWN/NEXT** ▶▶ **P UP** buttons Move through menu.
CD ▷/II SELECT button Starts up a video CD with the PBC function in DISC tray 1 to 3.

DISC (1 to 3) buttons Start up a video CD with the PBC function in the specified DISC tray.

⊞ RETURN ■ button Returns to the menu.

VCD NUMBER TUNING DOWN/UP Select a specific menu item from the television screen or monitor.



What is the Playback Control PBC function?

The Playback Control function, PBC allows you to enjoy menu-driven operation and high-resolution still images having a resolution four times greater than video pictures.

- Menu-driven playback
- You can interact with the screen using a menu display to select and play an entry.
- High-resolution still image display
- You can display high-quality images four times clearer than video pictures.

Playing a Video CD with the PBC function without using menu screen.

Even if a video CD has the PBC function, you can cancel the PBC function and play the disc without using menu screen, as if it were without the PBC function.

- Choose either "C" or "S ALL", then press the DISC button (1 to 3) to select the disc. You can play a Video CD from track 1 without using menu screen.
- Press the number button of the track you want to start during the blue screen appears on the TV screen. For example, to start from the beginning, press 1.

To stop during play and restore the PBC function, Press the ⏪ RETURN ■. If you try to start playing again, the PBC function for the Video CD is restored.

Note: After cancelling the PBC function, you can enjoy Continuous Play of more than one video CD with the PBC function.

Graphic CDs

Playing back a CD-G

Basic CD-playing procedures (described on pages 14 to 16) can also apply to the CD-G playback. When you start playing a CD-G, "GRAPHICS" appears on the display. To use a CD-G as a Karaoke source, see page 32.

Notes:

- The following operations may distort the image on the TV screen.
 - Searching for beginning of the track
 - Fast forwarding/reversing the track
 - Stop/pause
- If paused for more than 10 minutes, the still image disappears and the TV screen becomes fadeout. This is to prevent burn-in of the TV screen.

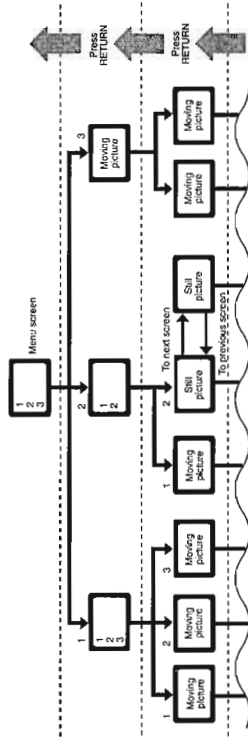
Playing back a video CD without the PBC function

Basic CD-playing procedures (described on pages 14 to 16) can also apply to the playback of video CDs without the PBC function. When you start playing a video CD without the PBC function, "VIDEO CD" appears on the display. To use a video CD without the PBC function as a Karaoke source, see page 33.

Notes:

- The following operations may distort the image on the TV screen.
 - Searching for beginning points of the track
 - Fast forwarding/reversing the track
 - Stop/pause
 - Frame-by-frame playback
- If paused for more than 10 minutes, the still image disappears from the display.

Example of playback by the Playback Control function



A selection menu is displayed when you start playing a video CD disc with the Playback Control function. The selection menu shows a list of numbers for selection. Some discs may show moving pictures or a divided screen.

1. When a list of numbers is displayed, selecting a number shows its contents.
2. When a moving picture is displayed, pressing ► SELECT at the time when a part of the movie you desire is shown plays the movie.
3. When the selection menu is redisplayed after you have played your selection, selecting a number again can replay its contents. (Some discs may show the menu screen several times.)

When ► NEXT and ◀◀ PREV are shown, pressing ► NEXT or ◀◀ PREV can change the selection menu.

4. After playback, press ⏪ RETURN ■ to go back to the previous screen. After playback, pressing ⏩ RETURN ■ for 2 seconds or more causes it to stop. Some discs may return you to the menu screen shown before playback.

Notes

- When a menu is displayed for a long time, about 10 minutes, the screen background automatically fades out to prevent screen burn-in while the setting is suspended.
- When using the REPEAT function the PBC function is not available.

Various Unique Functions

Various Functions to Enhance Your Enjoyment

The following functions are possible only using the buttons on the Remote Control.

Frame-by-Frame Playback

You can advance a still picture frame by frame. Frame-by-Frame Playback is only possible when the moving pictures (of the video CDs with or without the PBC function) are played back.



During playback, press the **II STILL** button.

When you press the **II STILL** button first, play pauses and you see a still picture on the TV screen. Then each time you press the button, the picture advances by one frame. During frame-by-frame playback, no sound comes out.

Display of Operating Status

Using this function, you can watch the operating status on the TV screen.

To show the operating status on the TV screen, press the **ON SCREEN** button while pressing the **SHIFT** button.



If you want to display the disc number, track number and playing time always on the TV screen, press the **ON SCREEN** button repeatedly while pressing the **SHIFT** button. Each time you press the button, the display mode switches On and Off (DISP. OFF). When the display mode is on, these information will always be shown on the TV screen.

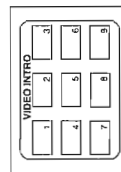
Viewing the Video Intro of a Video CD

Using this function, you can check the contents of a video CD, watching the first five seconds of each track on the video CD.

1. Press the DISC button (1 to 3) for the disc you want to check the contents of. Playback automatically starts.

- If the disc you want to use is a video CD with the PBC function, follow steps 1 to 3 in "Playing a Video CD with the PBC Function in Continuous Play" on page 19 to start playback.

2. Press the V.INTRO button while pressing the SHIFT button after a picture appears on the TV screen. The Video Intro Play starts and shows, in sequence, the first five seconds of nine tracks on the display.



The display can only show the beginnings of nine tracks. If the disc has more than nine tracks, the tracks whose track number is greater than 9 will be shown after the first nine tracks are shown.

To select a track during the Video Intro Play, press the number key for the track you want to watch. The Video Intro Play is cancelled and the Continuous Play starts from the selected track.

To stop and cancel the Video Intro Play, press the **RETURN** button.

English

Viewing the Highlights of a video CD

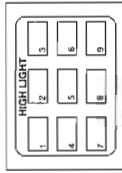
Using this function, you can watch nine highlight scenes of the selected track on a video CD. These highlight scenes are created by dividing the track equally into nine portions and the beginning (five seconds each) of those nine scenes are shown on the display.

1. Press the DISC button (1 to 3), and the number key for the track you want to watch the highlights of. Playback automatically starts.

- If the disc you want to use is a video CD with the PBC function, follow steps 1 to 3 in "Playing a Video CD with the PBC function in Continuous Play" on page 19 to start playback.

2. Press the HIGHLIGHT button while pressing the SHIFT button after a picture appears on the TV screen. The Highlight Play starts and shows, in sequence, the first five seconds of nine divided highlight scenes on the display for one minute.

- If you don't select the highlight scene you want to see, it will automatically start and show Highlight of the next track every one minute.



To select a highlight scene while viewing the highlights, press the number key for the highlight scene you want to watch. The Highlight Play is cancelled and the Continuous Play starts from the selected scene.

If you do not select a highlight scene while nine scenes are shown on the display, nine highlight scenes of the next track will appear on the display.

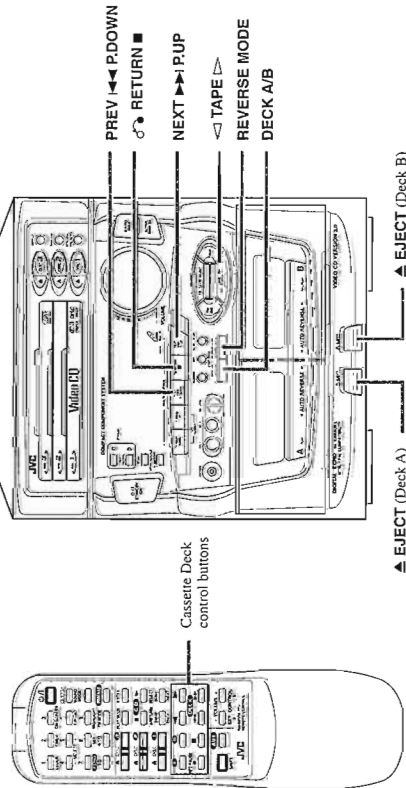
To stop and cancel the Highlight Play, press the **RETURN** button.

Notes

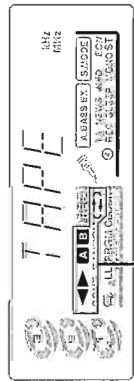
- When you select a highlight scene, playback starts from the beginning of the highlight scene, but not from the still image shown on the display (this is the last part of the highlight scene, not its beginning).
- During the Video Intro or Highlight Plays, images shown on the display may be partially distorted, resulting from noises or incorrect manufacturing of the disc.

Using the Cassette Deck (Listening to a Tape)

English
English



Display



- ▶ : Tape Direction indicator
- A B** : DECK A, B indicator
- (↔) : Reverse Mode indicator

Tape Direction Indicator on the Display
The Tape Direction indicator tells you which direction the selected tape deck will use for playback.

During playback, the direction indicator blinks slowly.
During fast left or fast right, the indicator blinks quickly.
During Music Scan mode, the direction indicator alternates between blinking slowly and quickly repeatedly.

When the System is being used, the display shows other items as well. However, we have only shown the items described in this section.

The Cassette Deck allows you to play, record and dub audio tapes.

- With Automatic Tape Detection, you can listen to type I, II or IV tapes without changing any settings.
- The use of tapes longer than 120 minutes is not recommended, since characteristic deterioration may occur and these tapes easily jam in the pinch-rollers and the capstans.

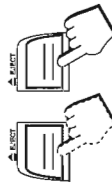
One Touch Play

By pressing the **TAPE** button (or the **◀** or **▶** button on the Remote Control), the Unit will come on, "TAPE" appears in the display, and if a tape is in the deck, it will start to play. If no tape is loaded, the Unit will come on and wait for you to insert a tape, or select another function.

Regular Play

When the power is already on, you can use this basic procedure:

1. Press the **EJECT** button for the deck you want to use.
2. When the cassette holder opens, put the cassette in, with the exposed part of the tape down, toward the base of the System. If the cassette holder does not open, turn the Unit off, then back on and press the **EJECT** button again.



3. Close the holder gently.

When both Deck A and Deck B contain a tape, the last deck to have a tape inserted is selected. To change the selected deck, press the **DECK A/B** button. When using the Remote Control, press the **A** or **B** button.

4. Start playing the tape

On the unit: Press the **TAPE** button. The tape play starts toward the direction currently selected. On the Remote Control: Press the **▶** (rightward) or **▶** (leftward) button. The tape play starts toward the same direction as the button is pressed for. The cassette deck automatically stops when one side of a tape has finished playing.

To stop playing, press the **RETURN** button on the unit. (or the **■** button on Remote Control)
To remove the tape, stop the tape, and press the **EJECT** button.
To change deck while playing a tape, press the **TAPE** button after pressing the **DECK A/B** button on the Unit or press the **◀** or **▶** button after pressing the **A** or **B** button on the Remote Control.

Fast Left And Fast Right

- While the tape is stopped, press the **PREV** button (or **◀** button on the Remote Control) and the tape will wind rapidly onto the left side of the cassette without playing.
- While the tape is stopped, press the **NEXT** button (or **▶** button on the Remote Control) and the tape will wind rapidly onto the right side of the cassette without playing.

Note: Deck A and Deck B cannot be used for playback at the same time.

Music Scan

To find the beginning of a music track during play, use the Music Scan function. Music Scan searches for blank portions that usually separate selections, then plays the next selection.

To Find the Beginning of the Current Selection

Press the **PREV** button (or **◀** button on the Remote Control) or **NEXT** button (or the **▶** button on the Remote Control) during play.

Make sure that you press the **PREV** button (or **◀** button on the Remote Control) or the **NEXT** button (or the **▶** button on the Remote Control) in the opposite direction to that in which the tape is playing. Searching stops at the beginning of the current selection, and the current selection starts automatically.

To Find the Beginning of the Next Selection

Press the **PREV** button (or **◀** button on the Remote Control) or **NEXT** button (or the **▶** button on the Remote Control) during play.

Make sure that you press the **PREV** button (or **◀** button on the Remote Control) or the **NEXT** button (or the **▶** button on the Remote Control) in the same direction as that in which the tape is playing. Searching stops at the beginning of the next selection, and the next selection starts automatically.

Music Scan works by detecting a 4-second long blank at the beginning of each selection, so it won't work well if your tape has:

- No blank at the beginning of a selection.
- Noise (often caused by much use or poor quality dubbing) which fills the blank with noise.
- Long, very soft passages or pauses in a selection. The scan will detect these as 4-second long blanks. If this happens, just scan again until you reach the selection you want.

Reverse Mode

You can play both sides of a cassette, or play both the tapes in the two Cassette Decks continuously.

Press the **REVERSE MODE** button to switch to Reverse Mode.

The indicator changes with each press of the button as shown.

→ ↔ → ↔ → (↔) → (back to the beginning)

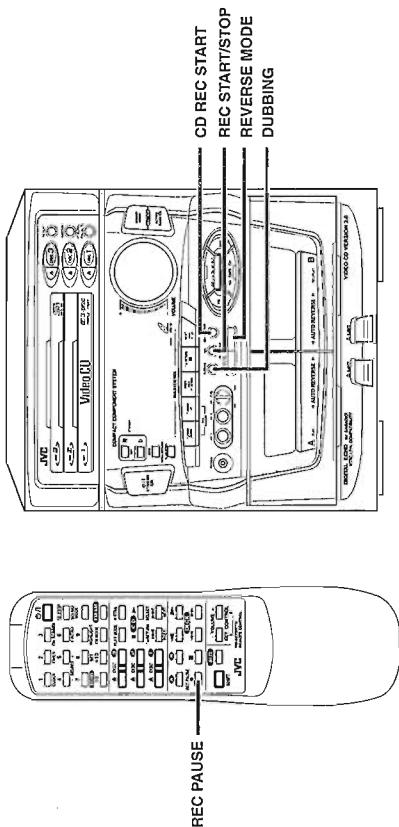
↔ : The Cassette Deck automatically stops after playing one side of the tape.

↔ : The Cassette Deck automatically stops after playing both sides of the tape.

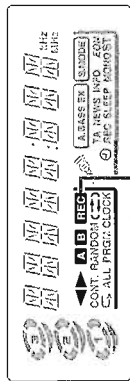
↔ : After playing both sides of the tape, the Unit always checks to see if a tape is in the other deck. If there is, it automatically starts playing that tape. This Continuous Play function works regardless of which deck starts first. The tapes are played continuously until the **RETURN** button on the unit (or the **■** button on the Remote Control) is pressed.

Using the Cassette Deck (Recording)

English
English



Display



REC indicator

When the System is being used, the display shows other items as well. However, we have only shown the items described in this section.

Recording onto a cassette from any of the sound sources is simple. Just place a tape in Deck B, have the source ready, make one or two settings, and you're ready to record. For each source the procedure is a little bit different and now we'll explain just what to do for each one. If you forget, just come back to the section which has the specific procedures you need. But first, here are a few things to make your recordings better.

- **Things To Know Before You Start Recording**
 - It may be unlawful to record or play back copyrighted material without the consent of the copyright owner.
 - When you want to record onto both sides of a tape, you can set Reverse mode on to do so. However, recording automatically stops after recording in the ◀ direction in Reverse mode. Therefore, make sure that the tape direction is ▶ when recording with Reverse mode on.
 - The recording level, which is the volume at which the new tape is being made, is automatically set correctly, so it is not affected by the VOLUME control on the System. Thus, during recording you can adjust the sound you are actually listening to without affecting the recording level.
 - Two small tabs on the back of the cassette tape, one for side A and one for side B, can be removed to prevent accidental erasure or re-recording. To record on a cassette with the tabs removed, you must cover the holes with adhesive tape first. However, when a **Type II** tape is used, only cover part of the hole as shown, since the other part of the hole is used to detect the tape type.
 - When recording, you can hear Sound Mode effects through the speakers or headphones. However, the sound is recorded without Sound Mode effects.
 - Only **Type I** and **Type II** tapes can be used for recording.



Note: At the start and end of cassette tapes, there is leader tape which cannot be recorded onto. Depending on the recording source, the first part of the recording may be missing because of the leader. When recording CDs or radio broadcasts, to get the beginning of the recording on the tape, first wind on the leader before beginning recording.

CAUTION: If recordings you have made have excessive noise or static, the Unit may be too close to a TV which was on during the recording. Either turn off the TV or increase the distance between the TV and the System.

Standard Recording

This is the basic method for recording any source. The System also has special ways for recording CD to tape, and tape to tape, which save you time and effort, as well as give you some special effects. However, when you need to add a selection to a tape you have made, or are combining selections from several sources on one tape, use the method described below; just substitute the source you want into this procedure, such as a tape in Deck A, a CD, or the Tuner. You can also record from Auxiliary source with this procedure.

To Record Any Sound Source To Tape

Follow these steps to record from any sound source onto a tape in Deck B.

Using the Unit

1. Insert a blank or erasable tape into Deck B.
2. Press the REVERSE MODE button if you want to record on both sides of the tape.
 - Press the button until the "◀▶" or "▶◀" indicator is lit.
 - When using Reverse Mode, insert the tape so that it will be recorded in the forwards ▶ direction.
3. Check the recording direction for the tape.
 - If you want to change the tape direction, press the RETURN button (or the button on the remote control) after pressing the TAPE button (or the button on the remote control).
4. Prepare the source, by, for example, tuning in a radio station, playing CDs, inserting a tape in Deck A, or turning on connected equipment.
5. Press the REC START/STOP button.
 - The REC indicator comes on and the System begins recording.

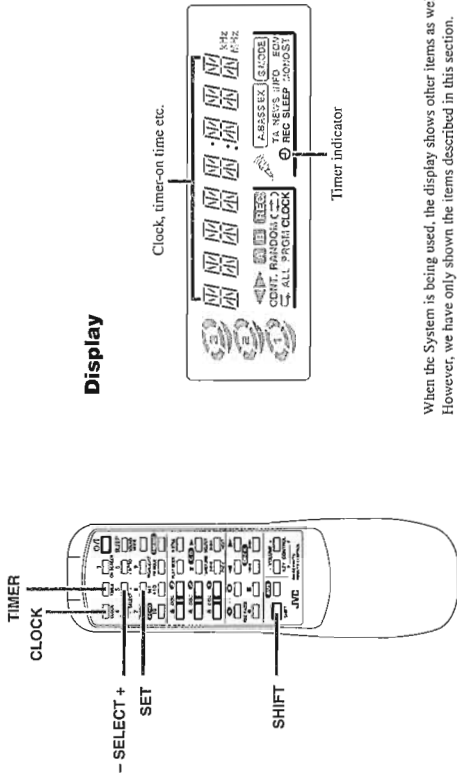
Using the Remote Control

1. Insert a blank or erasable tape into Deck B.
2. Press the REVERSE MODE button on the Unit if you want to record on both sides of the tape.
 - Press the button until the "◀▶" or "▶◀" indicator is lit.
 - When using Reverse Mode, insert the tape so that it will be recorded in the forwards ▶ direction.
3. Prepare the source by, for example, tuning in a radio station, playing CDs, or turning on connected equipment.
4. Press the REC PAUSE button.
 - The REC indicator blinks.
5. Press the ◀ or ▶ button.
 - Recording starts in the direction of the button pressed.
 - When using Reverse Mode to record both sides of a tape, press the ▶ button.

Notes for using Reverse Mode for recording

When recording in Reverse Mode, the System automatically stops when it reaches the end of the reverse ◀ direction. To record on both sides of a tape, make sure that the recording direction for the tape inserted into Deck B is forwards ▶, and that the Tape Direction indicator is also forwards ▶ before you start recording.

Using the Timer



When the System is being used, the display shows other items as well. However, we have only shown the items described in this section.

The timers lets you control listening and recording functions automatically. Use the Remote Control to set the clock and timers.

Setting the Clock

The timers depend on the clock; the clock must be right for the timers to work as you expect. You can set the clock whether the Unit is on or off.

Note that the clock must be set, otherwise the timers cannot be set. finished.

1. Press and hold the SHIFT button until the following procedure is finished.

2. Press the CLOCK button.
The CLOCK indicator on the display light up and the clock time blinks.

3. Press the SELECT + or - button to set the time.
Pressing the + button increases the time and pressing - decreases the time. Pressing the button continuously advances or decreases the time in 10 minute intervals.

4. Press the SET button.

The blinking time display changes from a blinking display to a steady display and the clock timer starts from 0 seconds.

5. Release the SHIFT button.

CAUTION: If there is a power failure, the clock loses its setting. The clock time is reset to "0:00", "CLOCK" on the display starts blinking. The clock must be reset.



To Pause at Any Time During the Recording Process
Press the REC PAUSE button on the Remote Control. Then press either the ◀ or ▶ button (for the same direction as the tape was running) on the Remote Control or REC START/STOP button on the Unit to restart recording.

To Stop at Any Time During the Recording Process
Press the REC START/STOP button on the Unit again, or press the ■ button on the remote control.

Recording AM station to tape
When recording an AM broadcast, beats may be produced which are not heard when listening to the broadcast. In this case, press the REPEAT button on the CD Player to eliminate the beats.

- 1. Set to AM station and start recording.**
- 2. Press the REPEAT button repeatedly until the beats are eliminated.**
Each time you press the button, the display changes as shown below:
→ CUT 1 → CUT 2 → CUT 3 → (back to the beginning)

If you select the proper setting, the beats will be eliminated.

CD Direct Recording

Everything on the CD goes onto the tape in the order it is on the CD, or according to the order you have set in a program.

- 1. Prepare CDs. (See page 13.)**
Check that the CD Player is not playing a CD.
- 2. Insert a cassette in Deck B to record on.**
When you want to record on both sides of a tape, press the REVERSE MODE to turn Reverse Mode on. Check that the recording direction for the tape and the Tape Direction indicator is correct. (See page 26 "Notes for using Reverse Mode for recording.")
- 3. Press CD ▷/I SELECT, then ⏪ RETURN ■ button.**
- 4. Press the CD REC START button.**
The REC indicator comes on and the System begins recording. If you make a recording with Reverse Mode on, the Unit will record the last song at the end of the first side at the beginning of the next side.

To stop at any time during the recording process, press the ⏪ RETURN ■ button or REC START/STOP button.

Note: When making SLEEP timer settings while doing CD Direct recording, set the time so that there is enough leeway to finish the recording before the power goes off. If the time is set to about the length of the CD, the power may go off before recording finishes.

Tape to Tape Recording (Dubbing)

Recording from Deck A to Deck B called dubbing. You can dub tapes simply, with just a single button.

- When dubbing tapes, make sure that the playback direction of Deck A and Deck B are the same.
- When you want to record both sides of a tape, press the REVERSE MODE button to turn Reverse mode on.
- It is preferable that the type of tape (Type I or Type II) you record from be the same as the type you record onto.

How to Use the DUBBING Button _____
Use the buttons on the unit.

- 1. Insert the source cassette you want to copy from into Deck A for playback.**
Insert the cassette so that it will be played in the forwards ▶ direction.
- 2. Insert the blank or erasable cassette you want to copy onto into Deck B for recording.**
Insert the cassette so that it will be recorded in the forwards ▶ direction.
- 3. Press the ◀ TAPE ▷ button, then ⏪ RETURN ■ button.**
- 4. Press the DUBBING button.**
Deck A and Deck B will start simultaneously.

To stop dubbing, press the ⏪ RETURN ■ button or REC START/STOP button.

- When doing dubbing with the DUBBING button, you can hear Sound Mode effects through the speakers or headphones. However, the sound is dubbed without Sound Mode effects.

English
English

Setting the Timer

You can set the Timer whether the Unit is on or off.

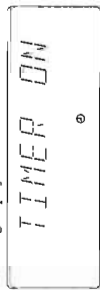
Procedure For Setting the Timer

1. Press and hold the **SHIFT** button until the following procedure is finished.



2. Press the **TIMER** button.

The Timer indicator on the display lights up and the blinking "TIMER ON" changes to the On Time setting display.



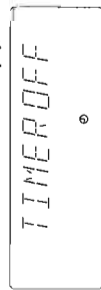
3. Set the time you want the Unit to come on.

Press the **SELECT +** or **-** button to set the On Time. Pressing the button continuously advances or decreases the time in 10 minute intervals.



4. Press the **SET** button.

"TIMER OFF" blinks on the display, and the display changes to the Off Time setting display.



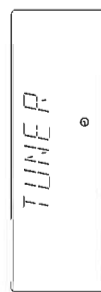
5. Set the time you want the Unit to be turned off.

Press the **SELECT +** or **-** button to set the Off Time.



6. Press the **SET** button.

The name of the source blinks in the display.



7. Press the **SELECT +** or **-** button to select the source.

The display changes with each press of the button as shown.



↔ TUNER ↔ TUNER REC ↔ CD ↔ TAPE ↔

TUNER: Selects the last station you were listening to.

TUNER REC: Records the last station you were listening to.

CD: Plays the last CD you were listening to.

TAPE: Plays the last tape you were listening to.

- In the source "TUNER", "CD", or "TAPE", the timer acts as a Daily timer. Once the Daily timer has been set, it will be activated at the same time every day until the setting is turned off. In the source "TUNER REC", the timer acts as a Once timer. After the Once timer has been performed, the details of the setting remain stored but the Timer status is set to off.

8. Press the **SET** button.

The volume level blinks on the display.



9. Press the **SELECT +** or **-** button to set the volume level.



10. Press the **SET** button.

The display returns to the display before you set the timer.



11. Release the **SHIFT** button.

Before Turning the Unit Off

Check that the selected source is ready.

If you will be recording a source while you are out, set the volume to 0.

To turn the Timer off, press the **TIMER** button while pressing the **SHIFT** button. The Timer indicator on the display goes out.

Note:

The Timer will not work in the following case:

- If the System is turned on and being used when the timer on-time comes.

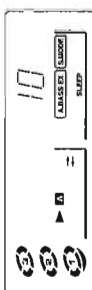
Setting the SLEEP Timer

Use the Sleep Timer to turn the Unit off after a certain number of minutes when it is playing. By setting this timer, you can fall asleep to music and know your Unit will turn off by itself rather than play all night.

You can only set the Sleep Timer when the Unit is on and a source is playing.

To set the **SLEEP** Timer, follow this procedure:

1. With the System on and a source playing, press the **SLEEP** button on the Remote Control.



2. Set the length of time you want the source to play before shutting off.

- Each time you press this button, it changes the number of minutes shown on the display in this sequence:

→ 10 → 20 → 30 → 60 → 90 → 120 → Cancelled → (back to the beginning)

When the number of minutes you want shows on the display, just wait 5 seconds until the number of minutes stops blinking, and is lighted steadily.

The Unit is now set to turn off after the number of minutes you set.

To Change the **SLEEP** Timer Setting

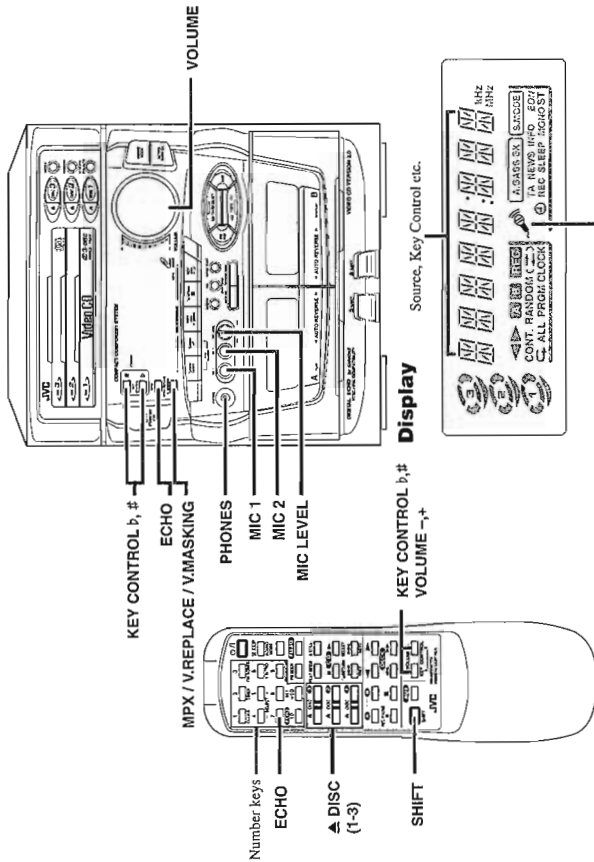
Press the **SLEEP** button until the number of minutes you want appears on the display.

To Cancel the **SLEEP** Timer Setting

Press the **SLEEP** button until the **SLEEP** indicator goes off on the display.

Turning off the Unit also cancels the **SLEEP** Timer.

Using the Microphone



When the System is being used, the display shows other items as well. However, we have only shown the items described in this section.



The System includes two microphone terminals, **MIC 1** and **MIC 2**. By attaching a microphone to one or both of these terminals, you can use the System for Karaoke or microphone mixing. You can also add an echo to the microphone's sound.

- The **MIC LEVEL** control adjusts the volume for both **MIC 1** and **MIC 2** at the same time.
- When you will not be using the microphone, keep the **MIC LEVEL** control set to **MIN**, and disconnect the microphone.

CAUTION: Always set the MIC LEVEL control to MIN when connecting or disconnecting the microphone.

English
English

Singing Along — Karaoke

You can enjoy singing along using conventional audio CDs (or tapes), CD-Gs and video CDs.

To sing along with conventional audio discs or tapes — Vocal Masking

When playing a stereo recorded source such as conventional audio CDs or tapes, you can reduce the lead vocal and replace it with your voice by singing into the microphone. Usually stereo recorded CDs are the best source for Vocal Masking.

- The following sources are not good for Vocal Masking.
 - Monaural sources.
 - Multiplex karaoke tapes and discs.
 - Poorly dubbed tapes.
 - Stereo recorded source, but with only few instruments, with duets, or with strong echo.

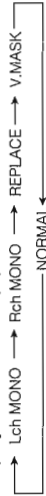
1. Turn down the **MIC LEVEL** control and the **VOLUME** control. The **MIC LEVEL** control adjusts the volume for both **MIC 1** and **MIC 2** at the same time.
2. Connect the microphone (not supplied) into the **MIC 1/2** jack on the front panel.

3. Play the source — a CD, a tape or others.

To play audio CDs, see pages 12 to 16.
To play tapes, see pages 23 to 24.

4. Press the **MPX / V.REPLACE / V.MASKING** button until "V. MASK" appears on the display.

Each time you press the button, the display shows as follows:



- Lch MONO:** See the next page for details.
- Rich MONO:** See the next page for details.
- REPLACE:** See the next page for details.
- V.MASK:** Reduces the lead vocal (but never erase it) recorded on a stereo source.
- NORMAL:** Cancels the Karaoke functions.

5. Turn the **MIC LEVEL** control and the **VOLUME** control to adjust the microphone level and the sound output level.

6. Sing into the microphone.

When you finish singing along, restore the stereo effect by pressing the **MPX/V.REPLACE/V.MASKING** button until "NORMAL" appears on the display. So, you will not lose the stereo effect when you play a stereo disc next time.

To apply echo to your voice
See "Apply Echo to your voice" on page 34.

To adjust the music key
See "Adjusting the Music Key Control" on page 34.

To record your singing along
See "Recording Your Singing-Along" on page 35.

Notes

- For preventing howling and squealing when using the microphone, adjust **MIC LEVEL** and **VOLUME**, and try not to point the microphone at the speakers.
- When you are not going to use the microphone, keep **MIC LEVEL** set to **MIN**, and disconnect the microphone.

English
English

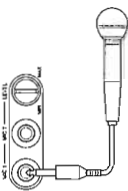
To sing along with Multiplex Karaoke discs or tapes — MPX (Multiplex)/Vocal Replace Sound

If the source you are going to play is a multiplex karaoke disc or tape, you can use the following two functions — Multiplex Sound and Vocal Replace.

Before playing a source, turn on the TV and select the video input so that you can view the pictures from the System.

- **What is Multiplex Sound?**
In a multiplex Karaoke disc or tape, the instrumental parts are recorded on the left channel and the vocal parts are recorded on the right channel. With this System, you can select the playback sound with your voice through the microphone.
- **What is Vocal Replace?**
By using this function, you can replace the lead vocal (recorded on the right channel) while singing along. If you stop singing while a source is still playing, the original lead vocal sound resumes.

- 1. Turn down the MIC LEVEL control and the VOLUME control.**
The MIC LEVEL control adjusts the volume for both MIC 1 and MIC 2 at same time.
- 2. Connect the microphone (not supplied) into the MIC 1/2 jack on the front panel**

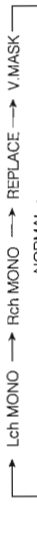


- 3. Play the source — a Multiplex Karaoke disc or tape.**

To play audio CDs, CD-Gs and video CDs without the PBC function, see pages 12 to 16.
To play video CDs with the PBC function, see page 18.
To play tapes, see pages 23 to 24.

- 4. Press the MPX / V.REPLACE / V.MASKING button to select the mode you want to use for your singing along.**

Each time you press the button, the sound changes and the display shows as follows:



- Lch MONO:** Only the left channel (instrumental parts) are played back through both right and left speakers.
- Rich MONO:** Only the right channel (vocal parts) are played back through both right and left speakers.
- REPLACE:** Your voice replaces the right channel (vocal parts) when you sing into the microphone.
- V.MASK:** This cannot be used for multiplex Karaoke sources. See the previous page for details.
- NORMAL:** Cancels the Karaoke functions. Used for conventional stereo sources.

- 5. Turn the MIC LEVEL control and the VOLUME control to adjust the microphone level and the sound output level.**
- 6. Sing into the microphone.**

When you finish singing along, restore the stereo effect by pressing the MPX / V.REPLACE / V.MASKING button until "NORMAL" appears on the display. So, you will not lose the stereo effect when you play a stereo disc next time.

To apply echo to your voice
See "Apply Echo to Your Voice" on page 34.

To adjust the music key
See "Adjust the Music Key Control" on page 34.

To record your singing along
See "Recording Your Singing Along" on page 35.

Apply Echo to Your Voice

You can apply echo to your voice through the microphone(s).

On the unit:
Press the ECHO button.

Each time you press the button, the echo turns on and off and display shows as follows:



ECHO: Echo applies to your voice.

When the echo is applying, the echo indicator (N) lights up on the display.
OFF: Cancels the echo.

Or

On the Remote Control:
Press the ECHO button while pressing the SHIFT button.

Each time you press the button, the echo turns on and off and display shows as follows:



Once the echo is applied, the echo takes effect until you cancel it.

To cancel the echo, press the ECHO button (while pressing the SHIFT button when using the Remote Control) until "OFF" appears on the display.

Adjusting the Music Key Control

You can adjust the key in which the music plays.

On the unit:

Press the KEY CONTROL buttons (b, #) repeatedly.

Each time you press the button, the key level (KEY-6 to KEY-0) appears on the display.

To lower the key, press the KEY CONTROL b button repeatedly.

To raise the key, press the KEY CONTROL # button repeatedly.

Or

On the Remote Control:
Press the KEY CONTROL buttons (b, #) repeatedly while pressing the SHIFT button.

To lower the key, press the KEY CONTROL b button repeatedly.

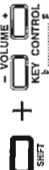
To raise the key, press the KEY CONTROL # button repeatedly.

Once the key is adjusted, the key adjustment takes effect until you cancel it.

To cancel the key adjustment, press the KEY CONTROL buttons (b, #) until "KEY 0" appears on the display.

Note:

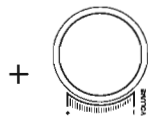
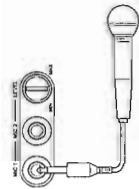
- Once the music key is adjusted, the key level will not return to the previous level automatically after playing a song.
- You cannot adjust the music key while recording.
- The key level returns to 0 when you change the source.
- If you select the Karaoke function (Multiplex Sound, Vocal Replace, Vocal Masking), the key control and the echo, Sound Mode will be cancelled.



Recording Your Singing Along

You can record your singing along with the effects created by the Karaoke functions.

1. **Turn down the MIC LEVEL control and the VOLUME control fully.**
The MIC LEVEL control adjusts the volume for both MIC 1 and MIC 2 at the same time.
2. **Connect the microphone (not supplied) into the MIC 1/2 jack on the front panel.**
3. **Play the source — a CD, video CD, tape or others.**
To play audio CDs, CD-Gs and video CDs without the PBC function, see pages 12 to 16.
To play video CDs with the PBC function, see page 18.
To play tapes, see pages 23 and 24.
4. **If you want to select the Karaoke function available for the source — stereo or multiplex Karaoke source — you are playing:**
Press the MPX / V.REPLACE / V.MASKING button to select the mode you want use for your singing along.
For more details, see pages 32 and 33.
5. **Turn the MIC LEVEL control and the VOLUME control to adjust the microphone level and the sound output level.**
6. **Sing into the microphone.**
7. **If you want to apply echo to your voice and to adjust the music key.**
See page 34.
8. **Start recording.**
You can record your singing along with the effects selected in step 4 to 7.
For details for recording method, see "Standard Recording" on page 26.



When you finish singing along, restore the stereo effect by pressing the MPX / V.REPLACE / V.MASKING button until "NORMAL" appears on the display. So, you will not lose the stereo effect when you play a stereo disc next time.

Note:

- If you want to change Karaoke function during recording, stop recording and repeat the same procedure from step 4 to 7.

Care And Maintenance

English
English

Compact Discs

Handle your compact discs, cassette tapes, and Cassette Deck carefully, and they will last a long time.

- Remove the CD from the case by holding it at the edges while pressing the centre hole lightly.
- Do not touch the shiny surface of the CD, or bend the CD.
- Put the CD back in its case after use to prevent warping.
- Be careful not to scratch the surface of the CD when placing it back in the case.
- Avoid exposure to direct sunlight, temperature extremes, and moisture.
- A dirty CD may not play correctly. If a CD does become dirty, wipe it with a soft cloth in a straight line from centre to edge.



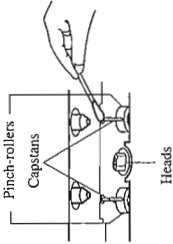
Cassette Tapes

- If the tape is loose in its cassette, take up the slack by inserting a pencil in one of the reels and rotating.
- If the tape is loose, it may get stretched, cut, or caught in the cassette.
- Do not touch the tape surface.
- Do not store the tape:
 - In dusty places.
 - In direct sunlight or heat.
 - In moist areas.
 - On a TV or speaker.
 - Near a magnet.



Cassette Deck

- If the heads, capstans, and pinch-rollers of the Cassette Deck become dirty, the following will occur:
 - Loss of sound quality.
 - Discontinuous sound.
 - Fading.
 - Incomplete erasure.
 - Difficulty recording.
- Clean the heads, capstans, and pinch-rollers using a cotton swab moistened with alcohol.



- If the heads become magnetized, the Unit will produce noise or lose high frequencies.
- To demagnetize the heads, turn off the Unit, and use a head demagnetizer (available at electronics and record shops).

General Notes

- In general, you will have the best performance by keeping your tapes, CDs, and the mechanism clean.
- Store tapes and CDs in their cases, and keep them in cabinets or on shelves.
 - Keep the Cassette Deck's tape doors and the CD trays closed when not in use.

Moisture Condensation

- Moisture may condense on the lens inside the Unit in the following cases:
- After starting the heating in the room.
 - In a damp room.
 - If the unit is brought directly from a cold to a warm place.
- Should this occur, the Unit may malfunction. In this case, leave the unit turned on for a few hours until the moisture evaporates, unplug the AC power cord, and then plug it in again.



CAUTION: Do not use any solvent (for example, conventional record cleaner, spray thinner, benzene, etc.) to clean a CD.

Troubleshooting

- If you are having a problem with your System, check this list for a possible solution before calling for service.
- If you cannot solve the problem from the hints given here, or the Unit has been physically damaged, call a qualified person, such as your dealer, for service.

Symptom	Possible Cause	Action
No sound is heard.	Connections are incorrect, or loose.	Check all connections and make corrections. (See pages 4 - 6.)
Unable to record.	Cassette record protect tabs are removed.	Cover holes on back edge of cassette with tape.
Poor radio reception	<ul style="list-style-type: none"> • The antenna is disconnected. • The AM Loop Antenna is too close to the Unit. • The FM Wire Antenna is not properly extended and positioned. 	<ul style="list-style-type: none"> • Reconnect the antenna securely. • Change the position and direction of the AM Loop Antenna. • Extend FM Wire Antenna to the best reception position.
The CD skips.	The CD is dirty or scratched.	Clean or replace the CD.
Unable to operate the Remote Control.	<ul style="list-style-type: none"> • The path between the Remote Control and the sensor on the Unit is blocked. • The batteries have lost their charge. 	<ul style="list-style-type: none"> • Remove the obstruction. • Replace the batteries.
The CD tray cannot be opened.	<ul style="list-style-type: none"> • The main AC power cord is not plugged in. • The tray is locked. 	<ul style="list-style-type: none"> • Plug in the AC power plug. • See page 17.
The CD does not play. Operations are disabled.	The CD is upside down. The built-in microprocessor has malfunctioned due to external electrical interference.	Put the CD in with the label side up. Unplug the Unit then plug it back in.
The cassette door cannot be opened.	During tape playing, the power cord was unplugged.	Plug in the power cord, press the ⊕/I STANDBY / ON button, and then press the ▲ EJECT button.
The image on the TV screen loses its colour.	VIDEO OUT select is unmatching.	Press NTSC / PAL / PAL AUTO button. (See page 5)
The disc sound loses stereo effect.	The MPX sound, Vocal Masking or Vocal Replace function is in use.	Press the MPX/REPLACE/MASKING button until "NORMAL" appears on the display.
The pictures of the video CD or CD-G is distorted.	When you pause or advance the pictures manually, the pictures are distorted. This is not a malfunction.	

English
English

Specifications

MX-V505T/MX-V507T Specifications CD/AMP/DECK/TUNER UNIT Specifications

CA-V505T Black in colour, CA-V507T Silver in colour.

Amplifier

Output Power (IEC 268-3/DIN) 27 watts per channel, min. RMS, both channels driven into 6 ohms at 1 kHz with no more than 0.9% total harmonic distortion.

Input Sensitivity/Impedance (1 kHz)

AUX 300 mV/50 kohms

MIC 1 4 mV/4.7 kohms

MIC 2 4 mV/4.7 kohms

Speaker terminals 6 - 16 ohms

Video out (composite) 1.0Vp-p (75Ω)

Cassette Deck

Frequency Response

Type II (CrO₂) High Position : 50 - 14,000 Hz

Type I (NORMAL) Normal Position : 50 - 14,000 Hz

Wow And Flutter 0.15% (WRMS)

CD Automatic Change

CD Capacity 3 discs

Dynamic Range 85 dB

Signal-To-Noise Ratio 90 dB

Wow And Flutter Unmeasurable

Playback disc Video CD (with/without Playback Control function), CD Graphics, Audio CD

Tuner

FM Tuner

Tuning Range 87.5 - 108.0 MHz

AM Tuner

Tuning Range 531 - 1,602 kHz (at 9 kHz channel space)

530 - 1,710 kHz (at 10 kHz channel space)

General

Dimensions (W/H/D)

265 x 295 x 339 mm

(10-7/16 x 11-5/8 x 13-3/8 inches)

7.3 kg

Power Specifications

Power Requirements AC 110/127/220/230 - 240 V~, adjustable with the voltage selector, 50/60 Hz

Power Consumption 85 watts

12 watts (in standby mode)

185 watts (Taiwan only)

Max. Power Consumption SP-V505 Black in colour, SP-V507 Silver in colour.

Speaker Specifications

SP-V505/SP-V507

Speakers

Woofer

Mid Range 16 cm (6-5/16 inches) cone x 1

Tweeter 5 cm (2 inches) cone x 1

Power Handling Capacity 2 cm (13/16 inches) dome x 1

Impedance 80 watts

Frequency Range 6 ohms

Sound Pressure Level 45 Hz - 20,000 Hz

Dimensions (W/H/D) 90 dB/w • m

Mass 215 x 295 x 275 mm

(8-1/2 x 11-5/8 x 10-7/8 inches)

3.2 kg (7.1 lbs) each

Accessories

AM Loop Antenna (1)

Remote Control (1)

Batteries R6P (SLIM-3)/AA (15F) (2)

FM Wire Antenna (1)

AC Plug Adaptor (except for Hong Kong) (1)

Video Cord (1)

Design and specifications are subject to change without notice.

Location of Main Parts

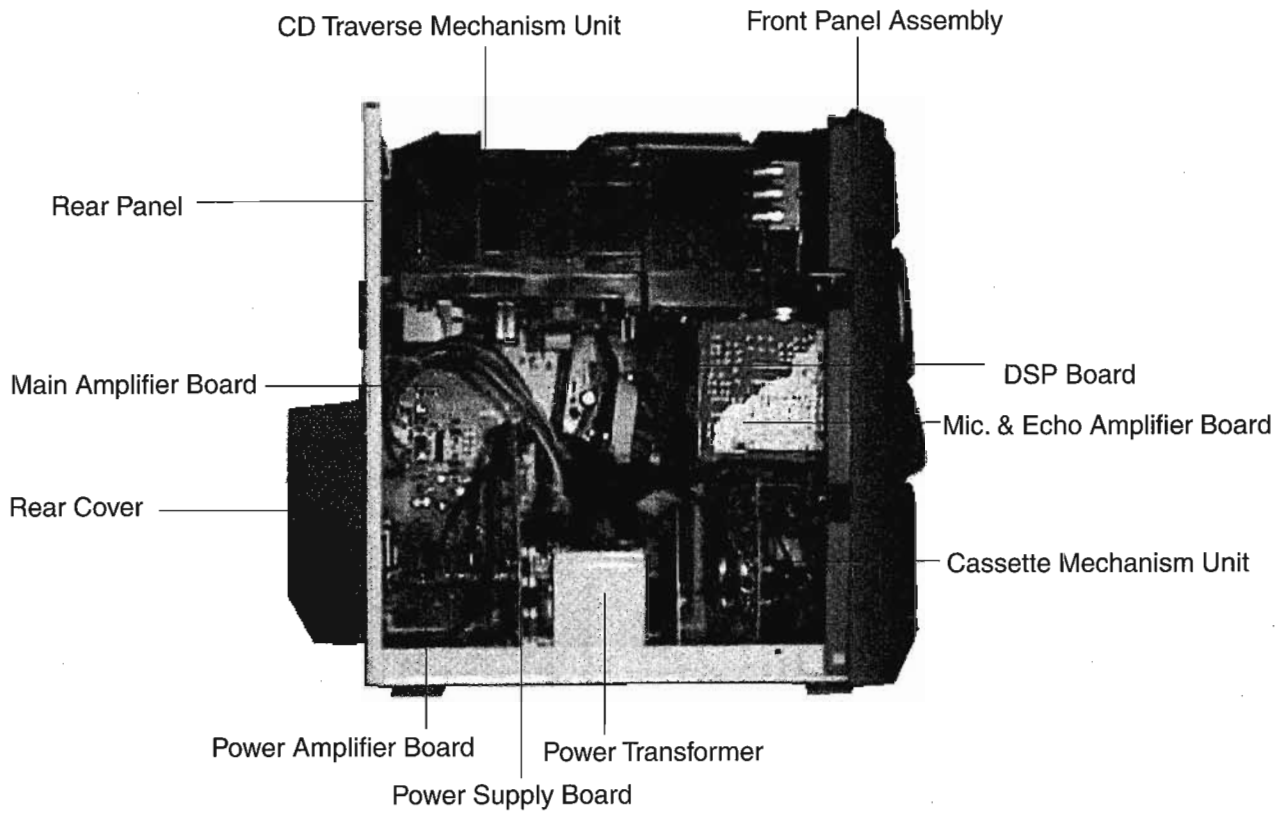


Fig. 2-1

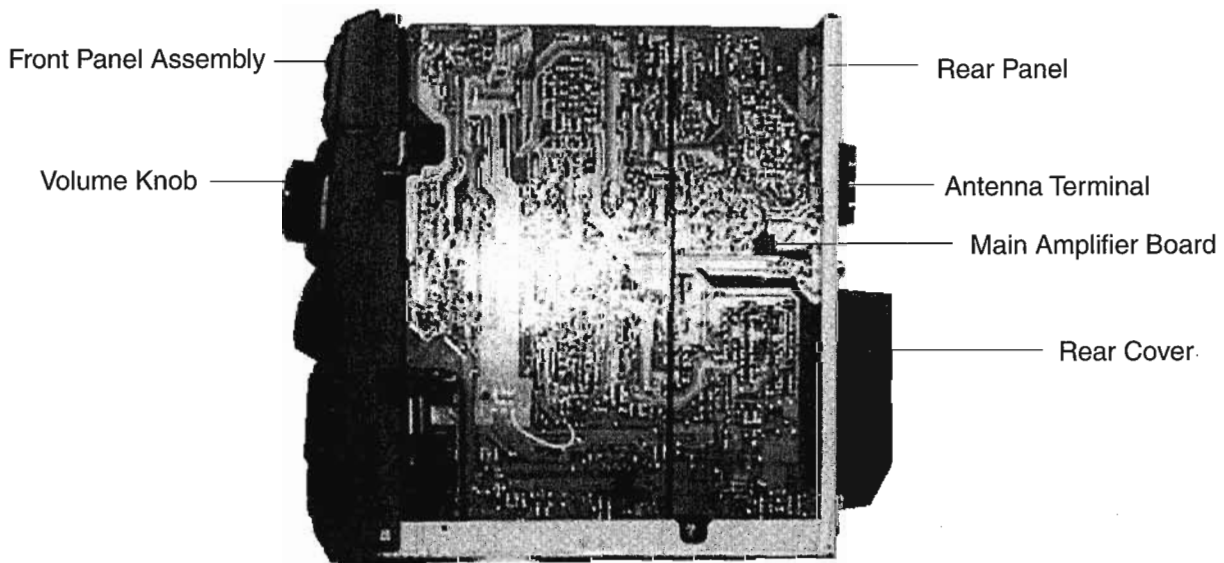


Fig. 2-2

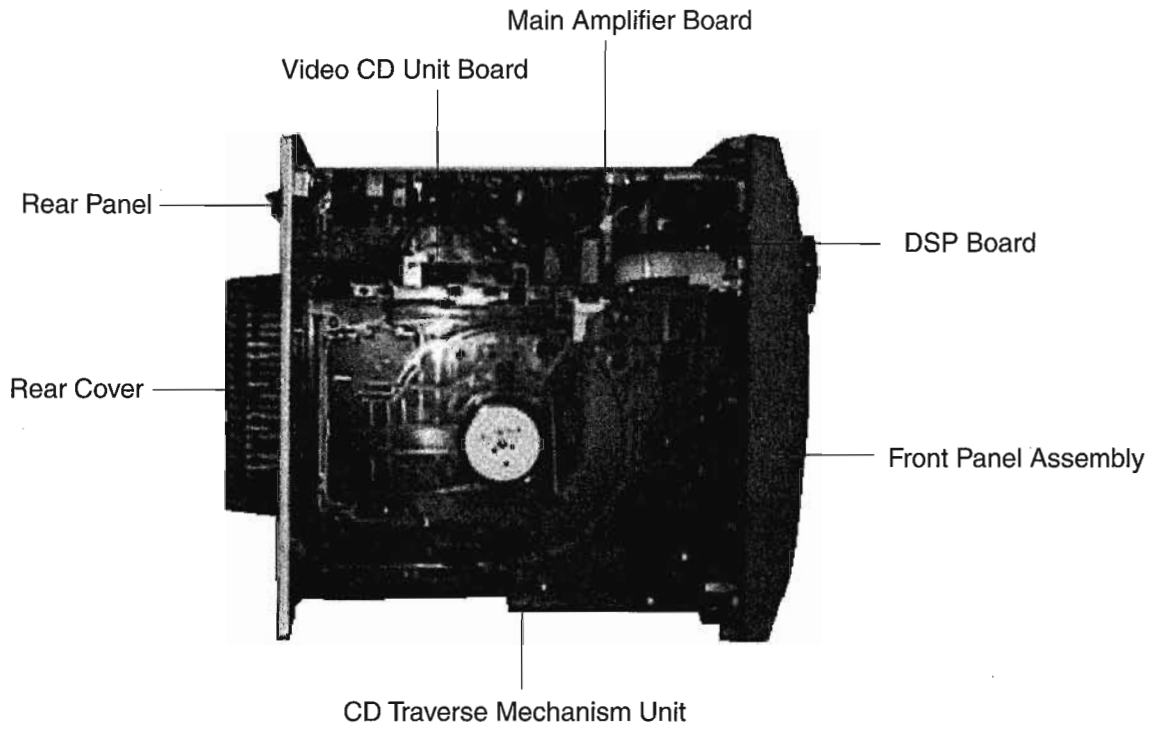


Fig. 2-3

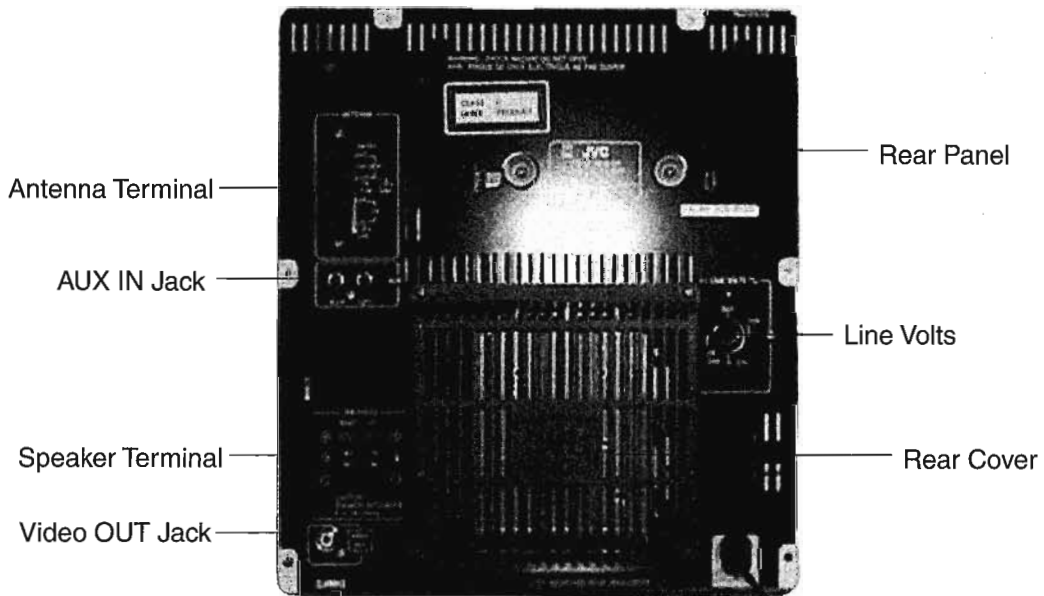


Fig. 2-4

Removal of Main Parts

■ Removal of the Metal Cover (See Fig. 3-1, 2)

1. Remove the six screws ① fastening the metal cover to the rear panel of the main unit. (See Fig. 3-1)
2. Remove the two screws ② fastening the metal cover to the side panel of the main unit. (See Fig. 3-2)
3. Spread both sides of the metal cover outward and remove from the back panel by lifting upward.

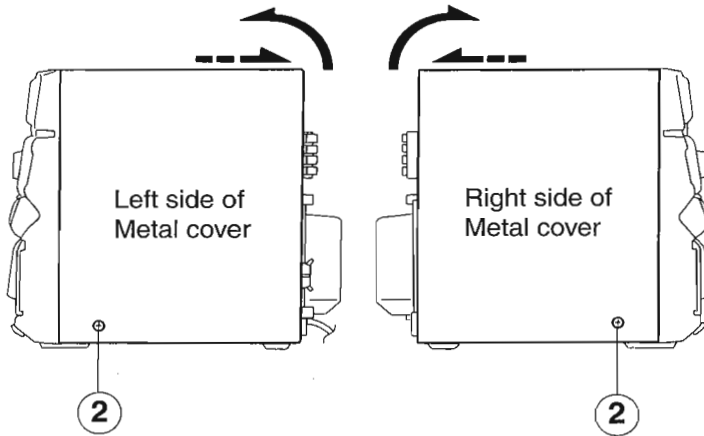


Fig. 3-2

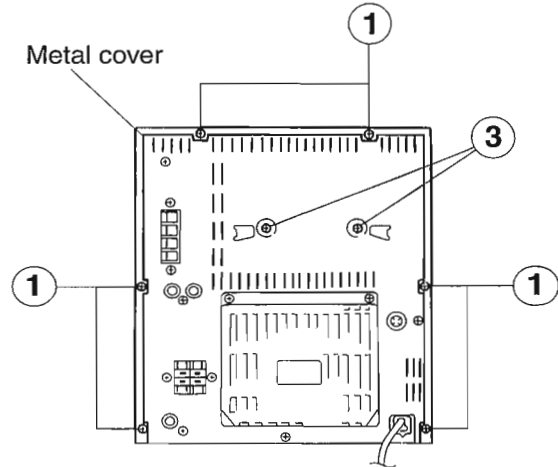


Fig. 3-1

■ Removal of the CD Traverse Mechanism Assembly (See Fig. 3-1, 3, 4)

1. Remove the metal cover.
2. Remove the two screws ③ fastening the CD traverse mechanism assembly to the rear panel of the main unit. (See Fig. 3-1)
3. Remove the two screws ④ fastening the CD traverse mechanism assembly to the top panel of the main unit. (See Fig. 3-3)
4. Disconnect the card wires connected to the CD traverse mechanism assembly from connectors CN304, CN305 and CN306 on the main amplifier board on the right side of the main unit. (See Fig. 3-3, 4)
5. Tilt the front panel assembly slightly forward and remove the CD traverse mechanism assembly by shifting in the direction of the arrow and lifting upward. (See Fig. 3-3)

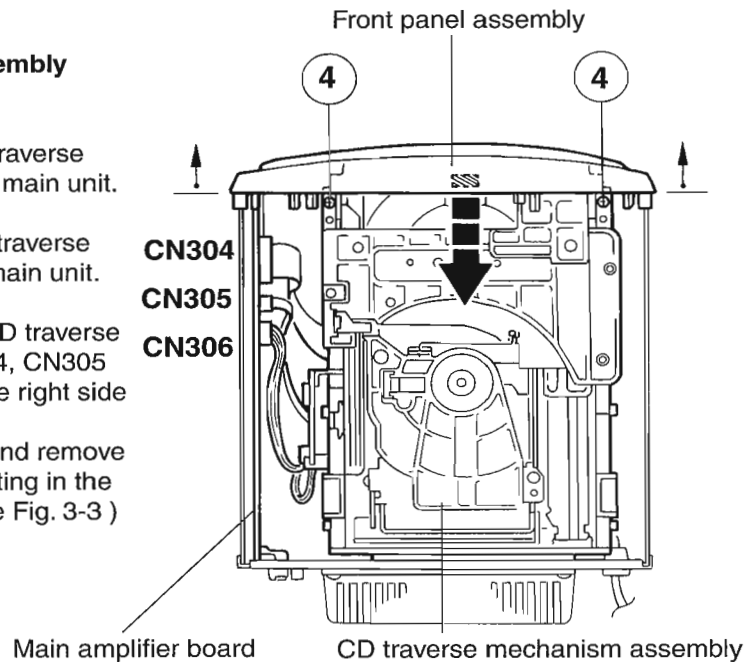


Fig. 3-3

■ **Removal of the Front Panel Assembly (See Figs. 3-4-8)**

1. Remove the metal cover.
2. Remove the CD traverse mechanism assembly.
3. Remove the plastic rivet (a) fastening the main amplifier board and front panel assembly to the left side of the main unit. (See Fig. 3-4)
4. Remove the four screws (5) fastening the front panel assembly to the side of the main unit. (See Fig. 3-5)
5. Use a screwdriver, etc., to disengage clips (b) and (c) from the side panels of the main unit. (See Fig. 3-6,7)
6. Disconnect the card wires connected to the front panel assembly from connectors CN302, CN303 and CN310 on the main amplifier board.(See Fig. 3-4)
7. Remove the wire clamp holding the parallel wires protruding from fastening the front panel assembly and the parallel wires protruding from the power supply board. (See Fig. 3-4, 8)
8. Disconnect connector CN904 on the power amplifier board and then disconnect the parallel wires protruding from the front panel assembly .(See Fig. 3-4, 8)
9. Remove the front panel assembly

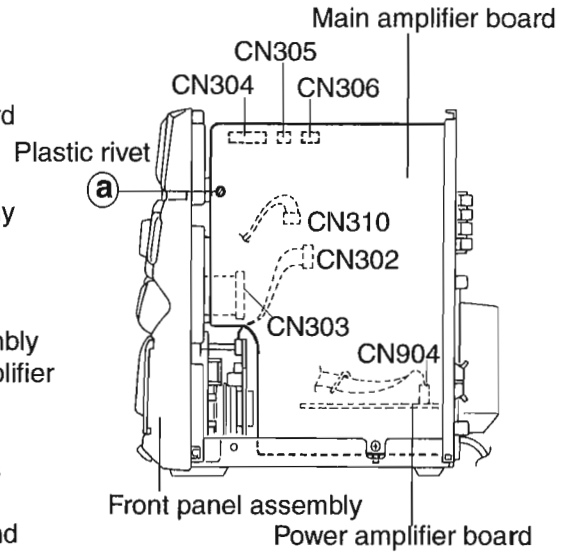


Fig. 3-4

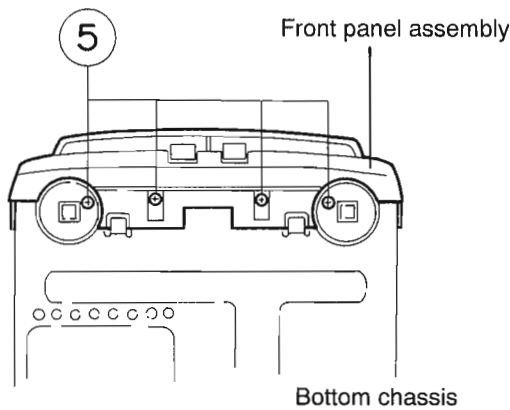


Fig. 3-5

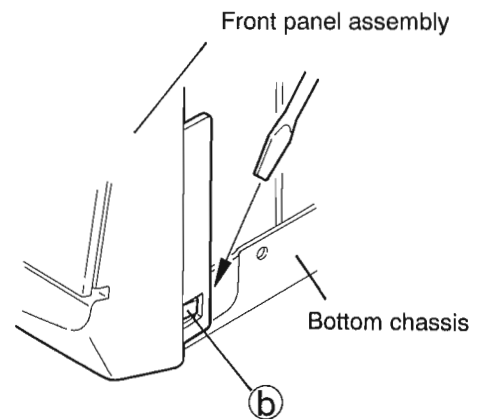


Fig. 3-6

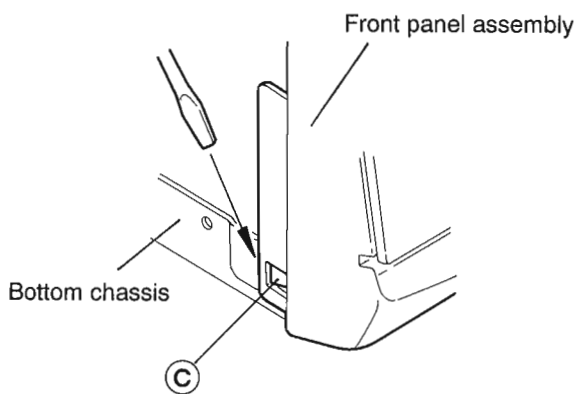


Fig. 3-7

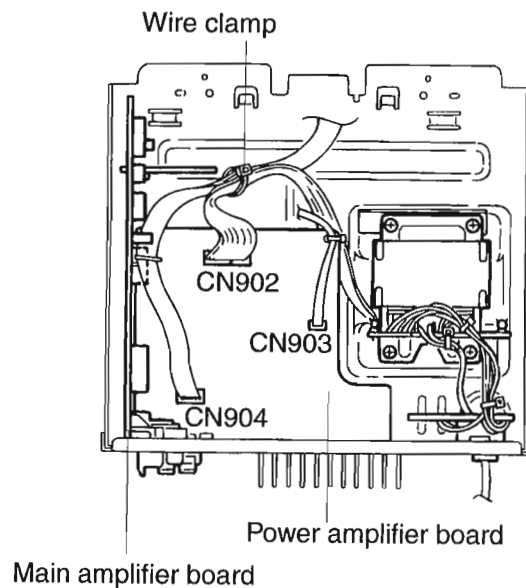


Fig. 3-8

■ Removal of the Rear Panel Assembly (See Figs. 3-9-13)

1. Remove the metal cover.
2. Remove the CD traverse mechanism assembly.
3. Remove the front panel assembly.
4. Remove the screw ⑥ fastening the main amplifier board and both chassis to the side panels of the main unit.
(See Fig. 3-9)
5. Remove the screw ⑦ fastening the rear panel and bottom chassis to the rear panel of the main unit.
(See Fig. 3-10)
6. Use a screwdriver, etc., to disengage the two engagements bottom chassis clips (d) and (e) from the bottom part of the side panels of the rear panel assembly. (See Fig. 3-11,12)
7. Disconnect the parallel wires protruding from the power supply board from connector CN902 on the power amplifier board.(See Fig. 3-13)
8. Remove the rear panel assembly from the bottom chassis by disengaging the protrusion (f) of the main amplifier board from the cutout in the bottom chassis. (See Fig. 3-9)

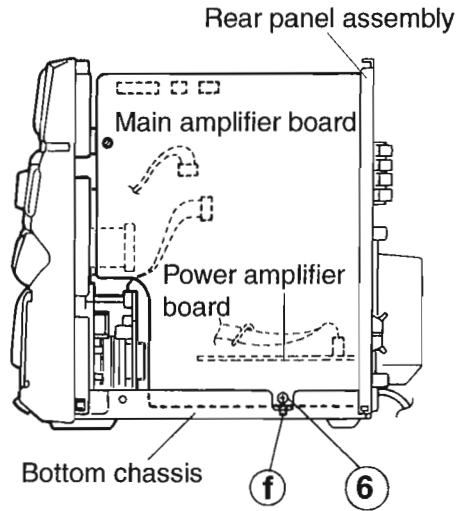


Fig. 3-9

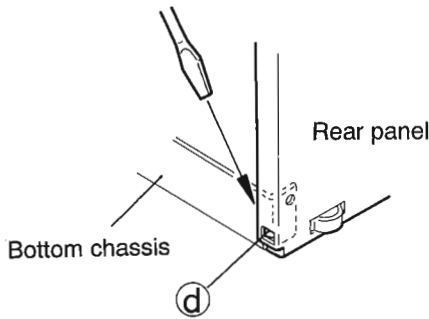


Fig. 3-11

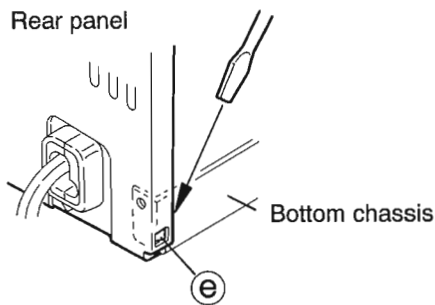


Fig. 3-12

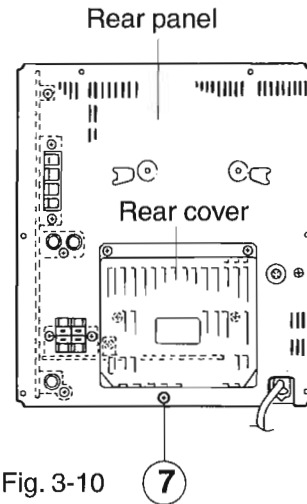


Fig. 3-10

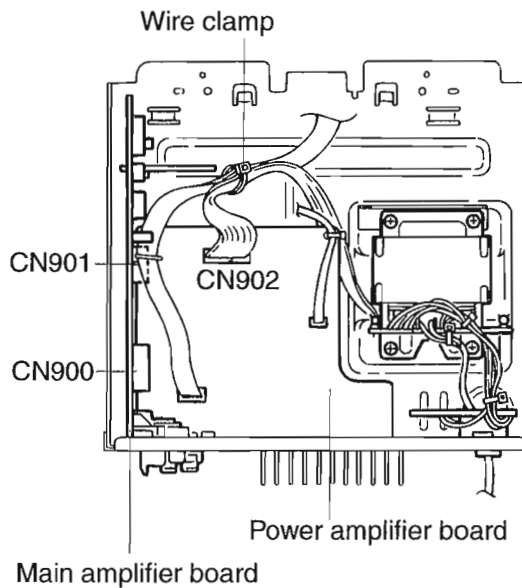


Fig. 3-13

■ Removal of the Main Amplifier Board (See Figs. 3-14, 15)

1. Remove the metal cover.
2. Remove the CD traverse mechanism assembly.
3. Remove the front panel assembly.
4. Remove the rear panel assembly.
5. Remove the five screws ⑧ fastening the main amplifier board to the rear panel assembly.
(See Fig. 3-14)
6. Disconnect the connectors CN307 and CN308 on the main amplifier board from the power amplifier board. (See Fig. 3-15)
7. Remove the connectors CN311 and CN312 on the DSP board. (See Fig. 3-15)

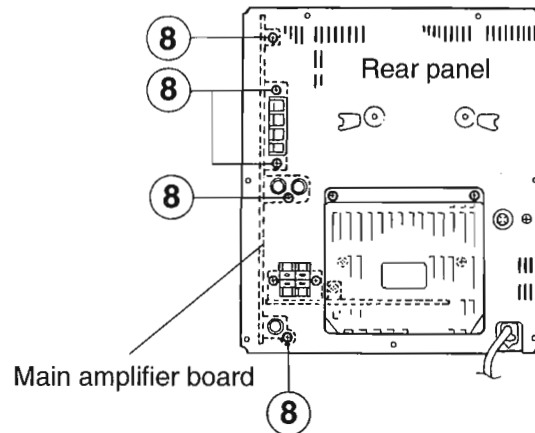


Fig. 3-14

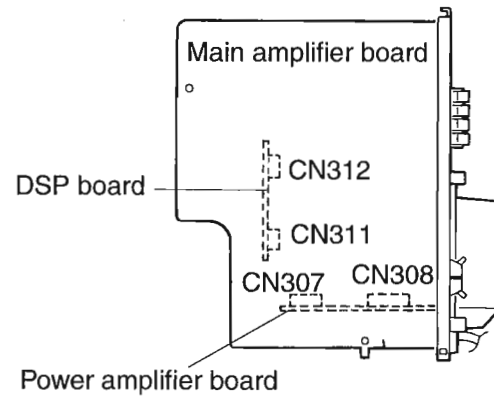


Fig. 3-15

■ Removal of the Power Amplifier Board (See Figs. 3-16)

1. Remove the metal cover.
2. Remove the CD traverse mechanism assembly.
3. Remove the front panel assembly.
4. Remove the rear panel assembly.
5. Remove the two screws ⑨ fastening the rear cover to the rear panel assembly and then remove the rear cover.
6. Remove the five screws ⑩ fastening the power amplifier board to the rear panel assembly.
7. Remove the two screws ⑪ fastening the voltage selector board to the rear panel assembly.

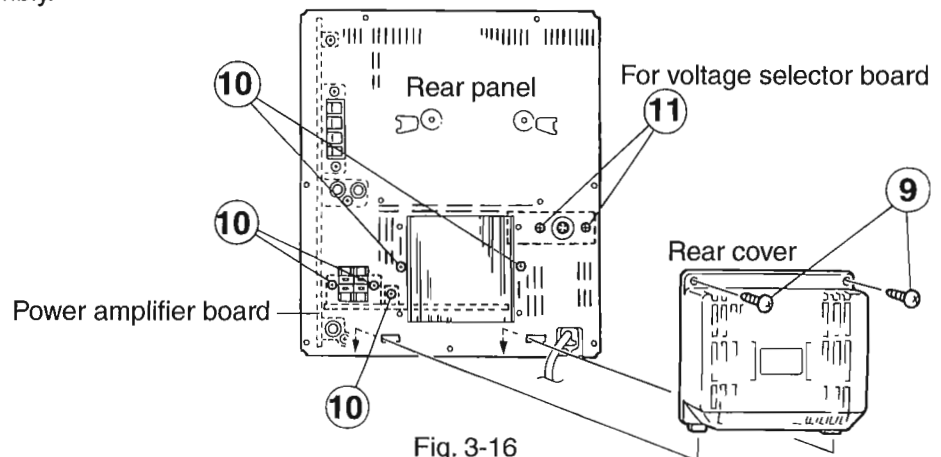


Fig. 3-16

Removal of the Power Transformer
(See Figs. 3-17, 18)

1. Remove the metal cover.
2. Remove the CD traverse mechanism assembly.
3. Remove the front panel assembly.
4. Remove the rear panel assembly.
5. Remove the main amplifier board.
6. Remove the power amplifier board.
7. Remove the four screws ⑫ fastening the power transformer.
8. Disconnect the power amplifier board connector CN902 and then disconnect the parallel wire.
9. Either unsolder the power cord from the power supply board terminals TB001 and TB002 or remove the cord clamp inserted into the bottom chassis and remove.

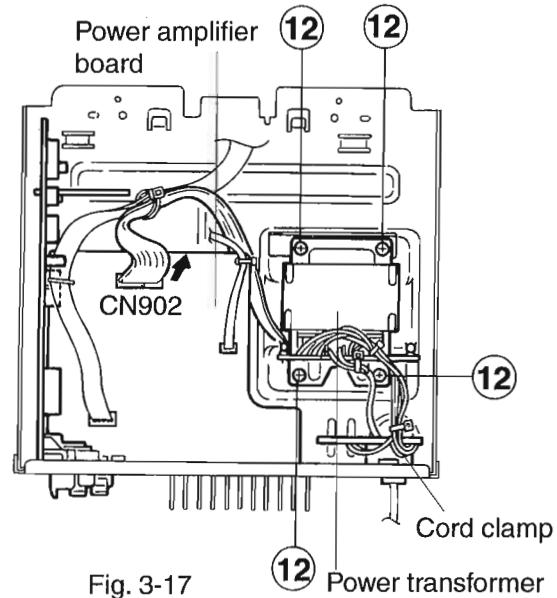


Fig. 3-17

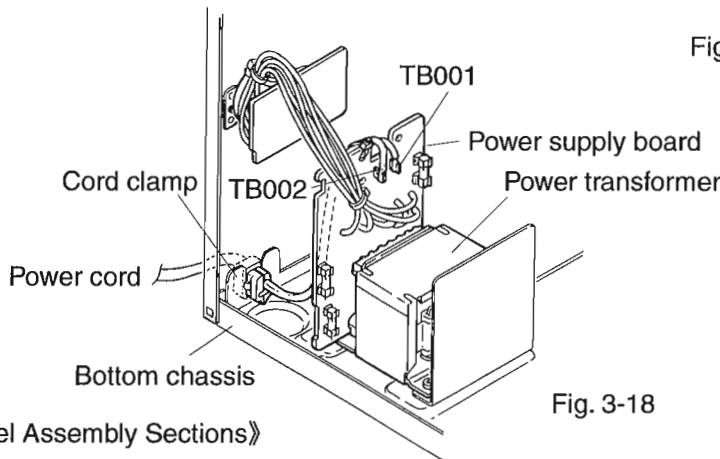


Fig. 3-18

《Front Panel Assembly Sections》

Removal of the Front Panel
(See Figs. 3-19,20)

1. Remove the metal cover.
2. Remove the CD traverse mechanism assembly.
3. Remove the front panel assembly.
4. Remove the volume knob from the front of the frontpanel assembly. (See Fig. 3-19)
5. Remove the nut fastening the volume control from the front panel assembly. (See Fig. 3-19)
6. Pull out to Mic. knob from the front of front panel.
7. Remove the eight screws ① fastening the stay bracket inside the front panel assembly. (See Fig. 3-20)

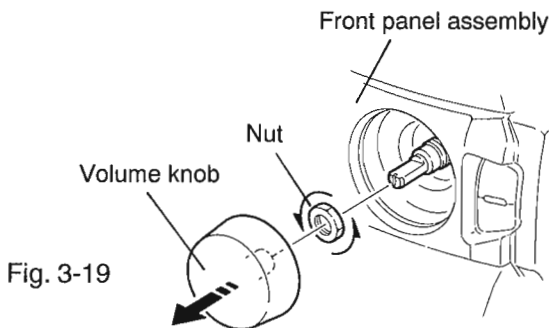


Fig. 3-19

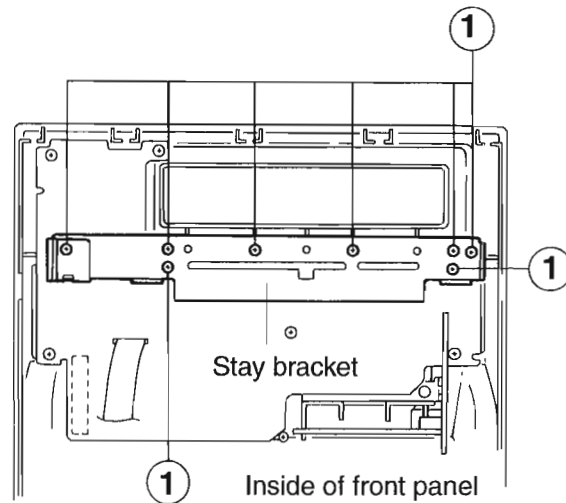


Fig. 3-20

8. Remove the nine screws ② fastening the system CPU board . (See Fig. 3-21)
9. Disconnect the card wires protruding from connector CN700 on the system CPU board.
10. Remove the two screws ③ fastening the headphone & Mic jack board assembly inside the front panel. (See Fig. 3-21)
11. Remove the screw ④ fastening the Mic & Echo amplifier board from the headphone & Mic jack board assembly. (See Fig. 3-22,22a)
12. Remove the six screws ⑤ fastening the operation switch board. (See Fig. 3-22,22a)
13. Remove the screw ⑥ fastening the LED standby board.

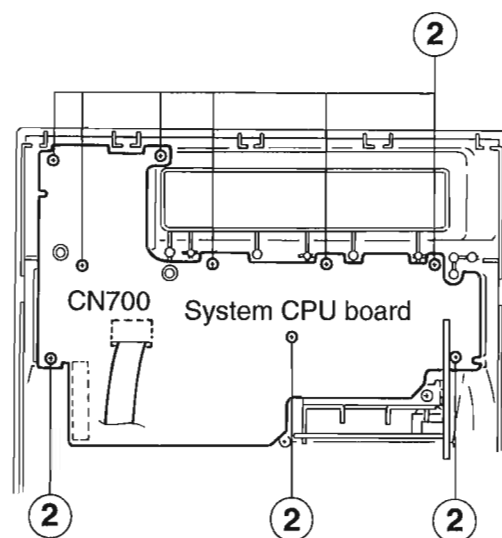


Fig. 3-21

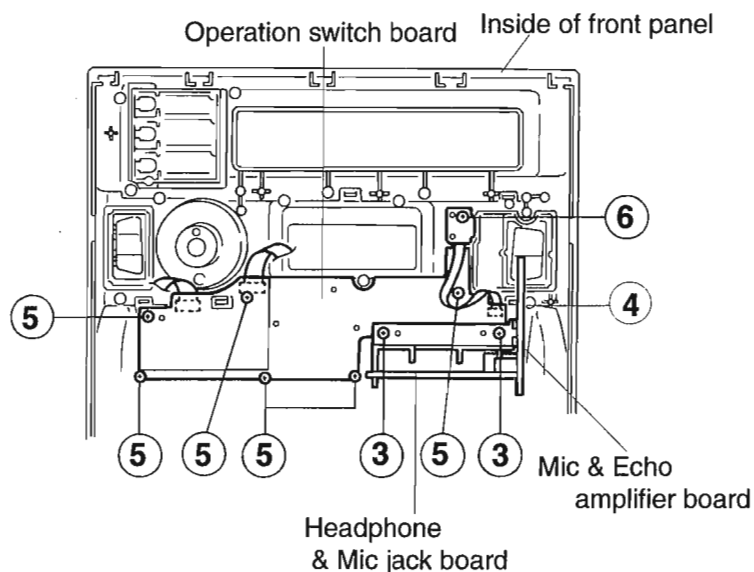


Fig. 3-22

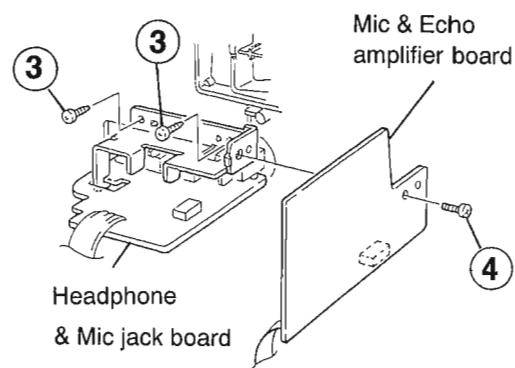


Fig. 3-22a

■ Removal of the Cassette Mechanism Assembly (See Figs. 3-23)

1. Remove the metal cover.
2. Remove the CD traverse mechanism assembly.
3. Remove the front panel assembly.
4. Remove the eight screws ⑦ fastening the cassette mechanism assembly to the inside of front panel assembly.
5. Disconnect the card wires from connectors CN305 and CN306 on the head amplifier & mechanism control board.

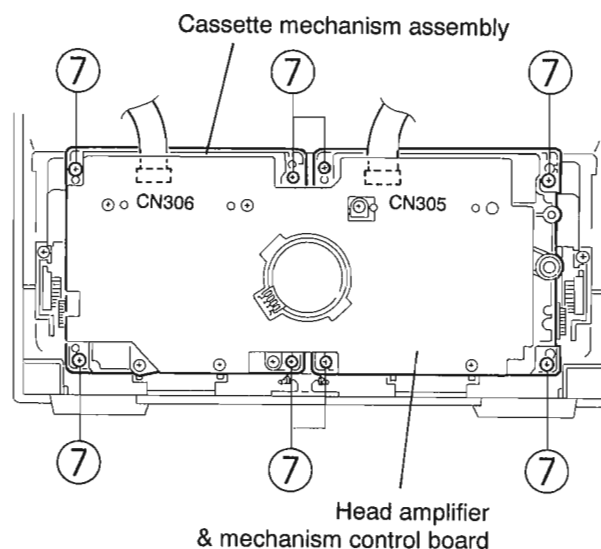


Fig. 3-23

《Cassette Mechanism Section》

■ Removing the Playback,Recording and Eraser Heads

(See Figs.3-24~26)

1. While shifting the trigger arms seen on the right side of the head mount in the arrow direction, turn the flywheel R in counterclockwise direction until the head mount has gone out with a click (See Fig. 3-24).
2. When the flywheel R is rotated in counterclockwise direction,the playback head will be turned in counterclockwise direction from the position in Fig.3-25 to that in Fig.3-26.
3. At this position,disconnect the flexible P.C.board (outgoing from the playback head) from the connector CN301 on the head amp.& mechanism control P.C. board.
4. After dismantling the FPC holder, remove the flexible P.C.board.
5. Remove the flexible P.C.board from the chassis base.
6. Remove the spring @ from behind the playback head.
7. Loosen the reversing azimuth screw retaining the playback head.
8. Take out the playback head from the front of the head mount.
9. The recording and eraser heads should also be removed similarly according to Steps 1~8 above.

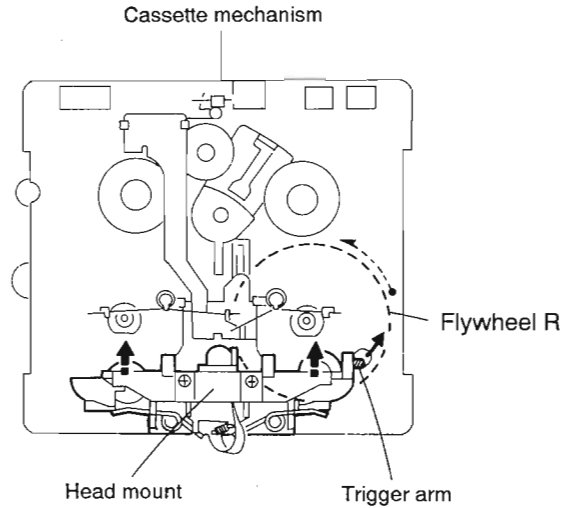


Fig.3-24 (Mechanism A side)

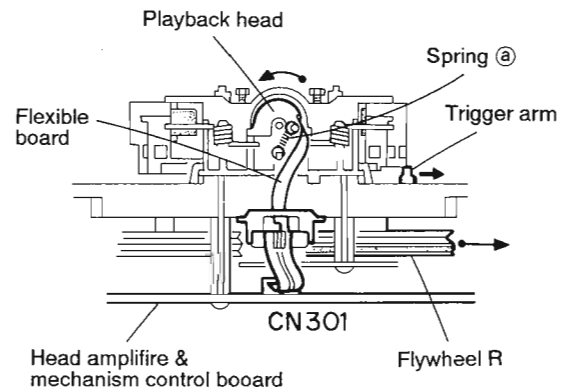


Fig.3-25 (Mechanism A side)

■ Reassembling the Playback,Recording and Eraser Heads (See Fig.3-26)

1. Reassemble the playback head from the front of the head mount to the position as shown in Fig.3-26.
2. Fix the reversing azimuth screw.
3. Set the spring @ from behind the playback head.
4. Attach the flexible P.C.board to the chassis base,and fix it with the FPC holder as shown in Fig.3-26.
5. The recording and eraser heads should also be reassembled similarly according to Steps 1~4 above.

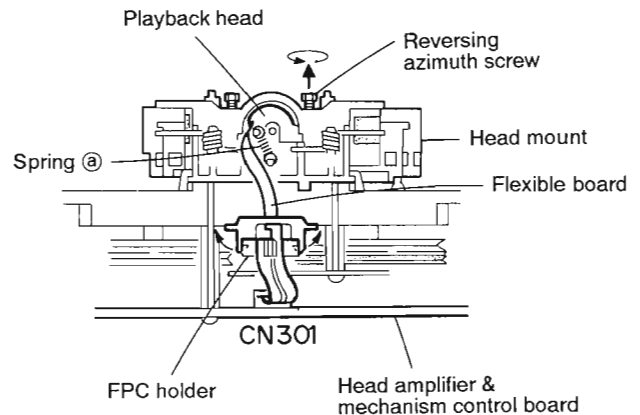


Fig.3-26 (Mechanism B side)

■ **Removing the Head Amp. & Mechanism Control P.C. Board (See Fig. 3-27)**

1. Remove the cassette mechanism assembly.
2. After turning over the cassette mechanism assembly, remove the five screws ① retaining the head amp. & mechanism control P.C. board.
3. Disconnect the connectors CN303 and CN304 on the P.C. board and the connectors CN1 on both the right and left side reel pulse P.C. boards.
4. When necessary, remove the four pin parallel wire soldered to the main motor.

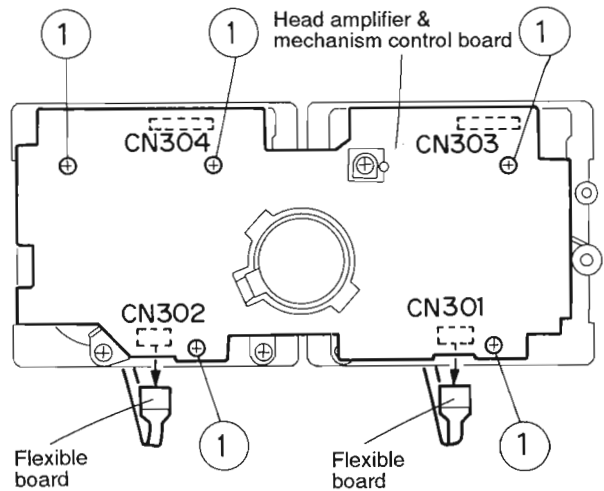


Fig.3-27

■ **Removing the Capstan Motor Assembly (See Figs. 3-28~30)**

1. Remove the six screws ② retaining the capstan motor assembly (See Fig.3-28).
2. While raising the capstan motor, remove the capstan belts A and B respectively from the motor pulley (see Figs.3-28,3-29)

Caution 1: Be sure to handle the capstan belts so carefully that these belts will not be stained by grease and other foreign matter. Moreover, these belts should be hanged while referring to the capstan belt hanging method in Fig.3-29,3-30.

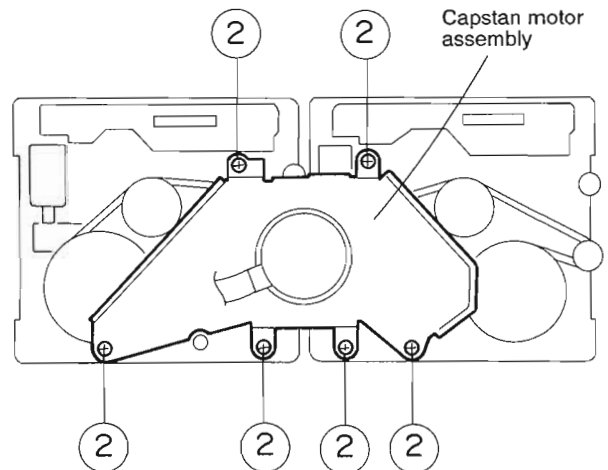


Fig.3-28

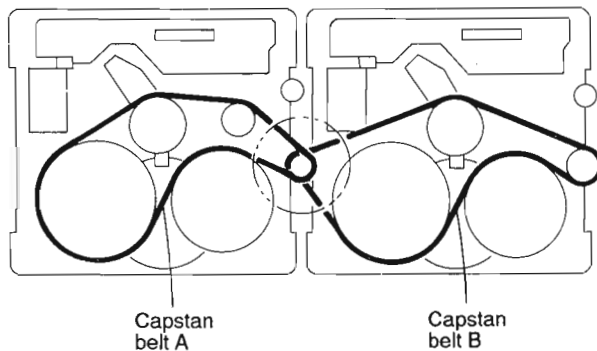


Fig.3-29

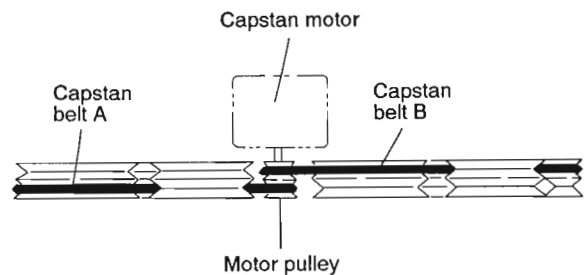


Fig.3-30

■ **Removing the Capstan Motor (See Fig. 3-31)**

From the joint bracket,remove the two screws ③ retaining the capstan motor.

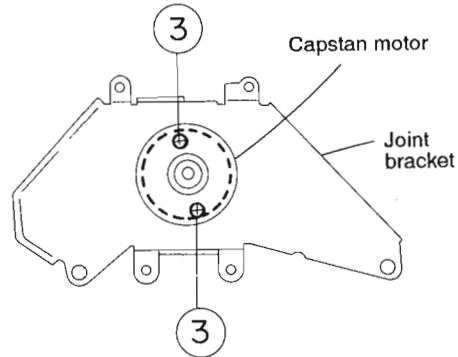


Fig.3-31

■ **Removing the Flywheel (See Figs. 3-32,3-33)**

1. Remove the head amp. & mechanism control P.C. board
2. Remove the capstan motor assembly.
3. After turning over the cassette mechanism,remove the slit washers ① and ② fixing the capstan shafts R and L,and pull out the flywheels R and L respectively from behind the cassette mechanism.

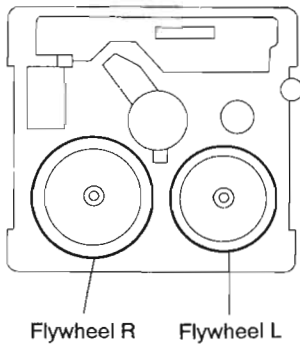


Fig.3-32

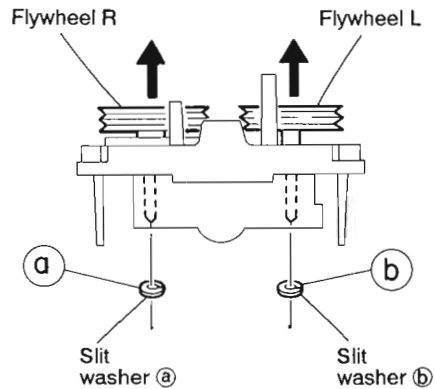


Fig.3-33

■ **Removing the Reel Pulse P.C. Board and Solenoid (See Fig. 3-34)**

1. Remove the five pawls (③,④,⑤,⑥ and ⑦) retaining the reel pulse P.C. board
2. From the surface of the reel pulse P.C. board parts,remove the two pawls ⑧ and ⑨ retaining the solenoid.

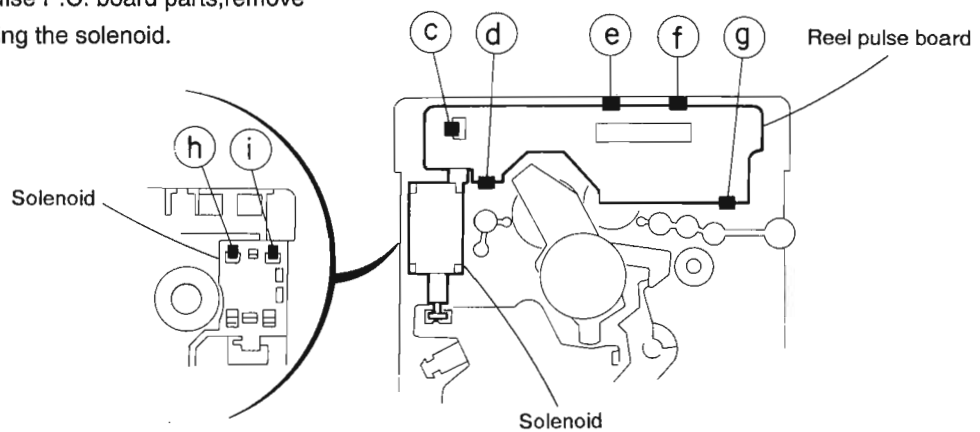


Fig.3-34

《CD Traverse Mechanism Sections》

■ Removing the CD Servo control board (See Fig.3-35)

1. Remove the Metal cover.
2. Remove the CD Traverse mechanism assembly.
3. From bottom side the CD Traverse mechanism assembly,remove the one screw ① retaining the CD Servo control board.
4. From the connectors CN601,CN603,CN604 on the CD Servo control board,disconnect the card wire,from the connector CN602,disconnect the six pin connector wire.
5. Disengage the two engagements "A",remove the CD Servo control board.

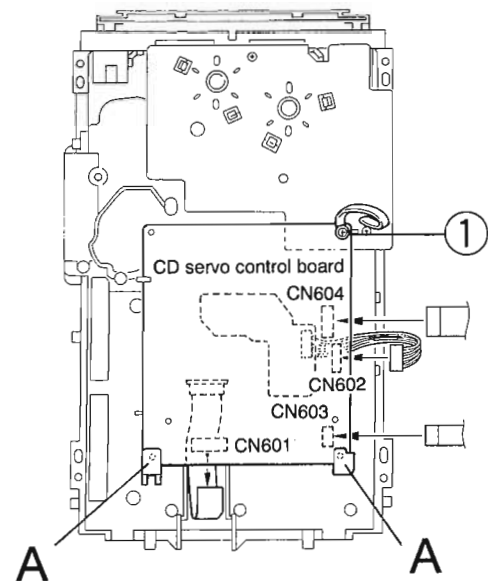


Fig.3-35

■ Removing the CD tray assembly (See Figs.3-36~3-38)

1. Remove the front panel assembly.
2. Remove the CD Traverse mechanism assembly.
3. Remove the CD Servo control board.
4. From the T.bracket section "B" and clamber base section "C",remove both of the edges fixing the rod (See Figs.3-36 and 3-37).
5. Remove the screw ② retaining the Disc stopper (See Fig.3-37).
6. Remove the three screws ③ retaining the T.bracket (See Fig.3-37).
7. Remove the screws ④ retaining the clamber assembly (See Fig.3-37).
8. From the left side face of the chassis assembly,remove the one screw ⑤ retaining both of the return spring and lock lever. (See Fig.3-38).
9. By removing the pawl at the section "D" fixing the return spring,dismount the return spring (See Fig.3-38).
10. Remove the three lock levers (See Fig.3-38).

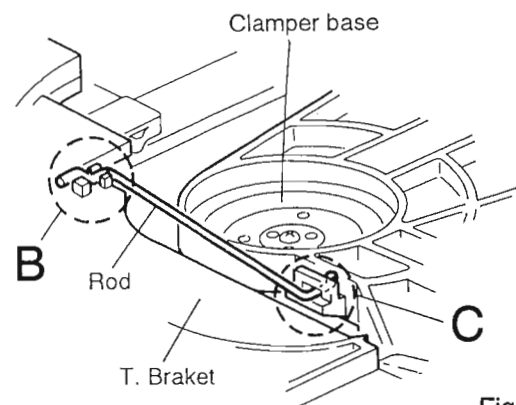


Fig.3-36

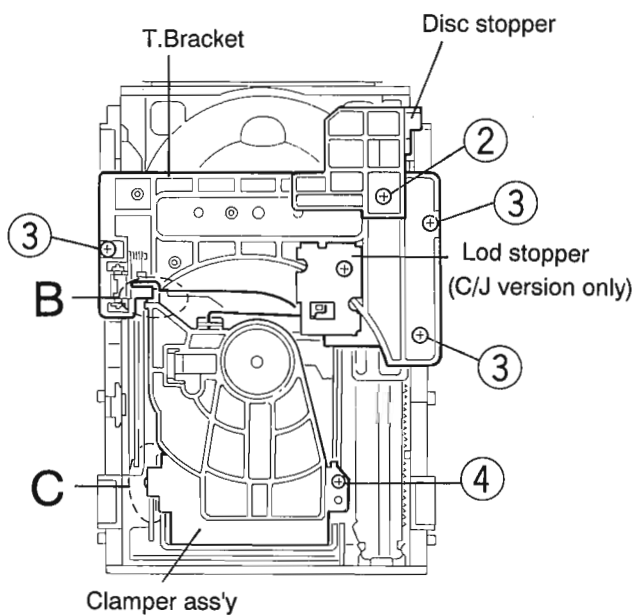


Fig.3-37

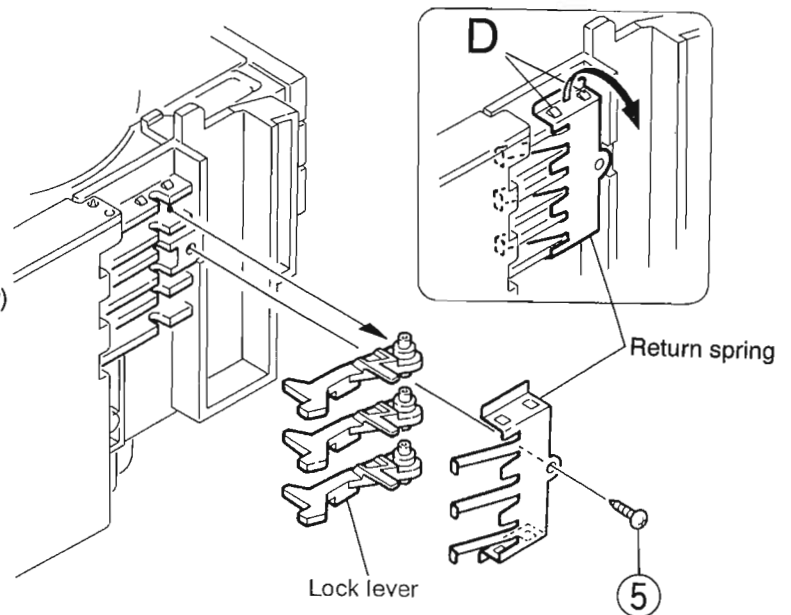


Fig.3-38

11. Check whether the lifter unit stopper has been caught into the hole at the section "E" of CD tray assembly as shown in Fig.3-39.

12. Make sure that the driver unit elevator is positioned as shown in Fig.3-40 from to the second or fifth hole on the left side face of the CD Traverse mechanism assembly.

[Caution] In case the driver unit elevator is not at the above position, set the elevator to the position as shown in Fig.3-41 by manually turning the pulley gear as shown in Fig.3-42.

13. Manually turn the motor pulley in the clockwise direction until the lifter unit stopper is lowered from the section "E" of CD tray assembly (See Fig.3-42).

14. Pull out all of the three stages of CD tray assembly in the arrow direction "F" until these stages stop (See Fig.3-40).

15. At the position where the CD tray assembly has stopped, pull out the CD tray assembly while pressing the two pawls "G and G'" on the back side of CD tray assembly (See Fig.3-43). In this case, it is easy to pull out the assembly when it is pulled out first from the stage CD tray assembly.

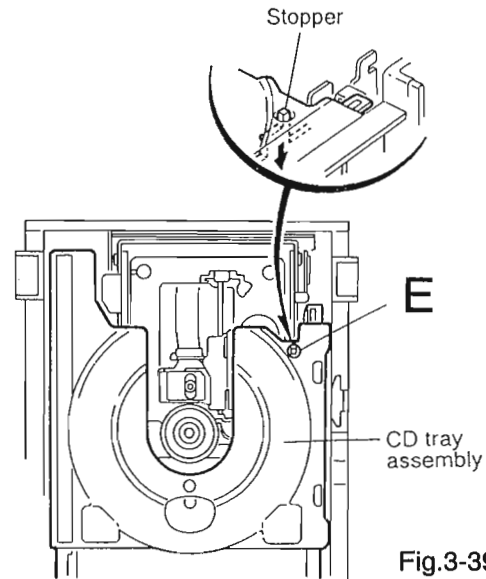


Fig.3-39

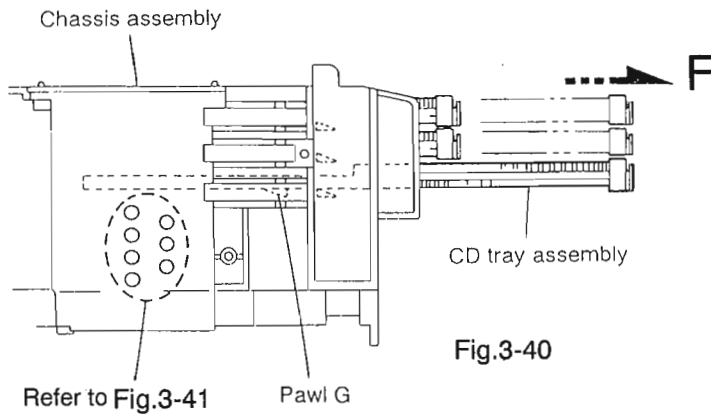


Fig.3-40

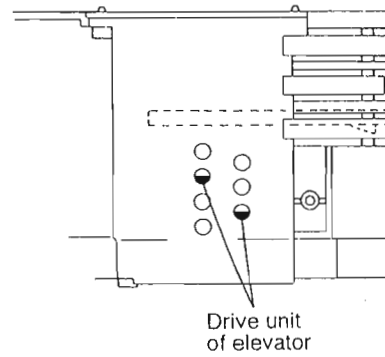


Fig.3-41

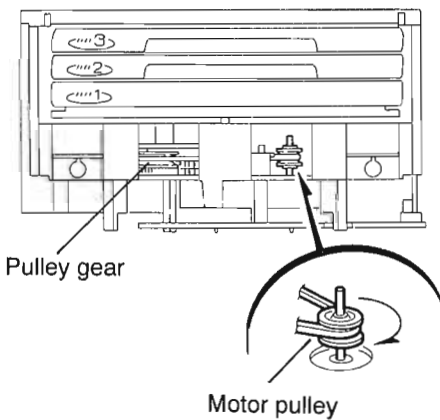


Fig.3-42

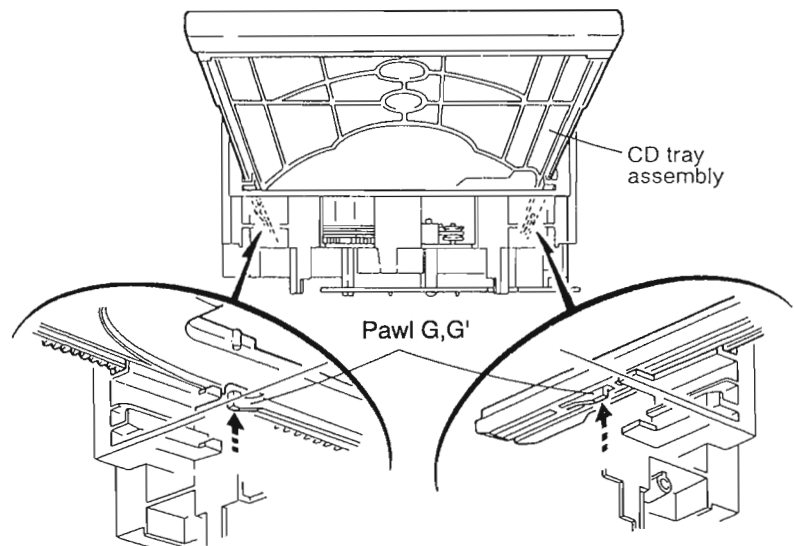


Fig.3-43

■ **Removing the CD mechanism assembly**
(See Fig.3-44)

1. While turning the cams R1 and R2 assembly in the arrow direction "H", align the shaft "I" of the CD mechanism assembly to the position shown in Fig.3-44.
2. Remove the four screws ⑥ retaining the CD mechanism assembly.

■ **Removing the CD mechanism**
(See Figs.3-45 and 3-46)

1. For dismantling only the CD mechanism without removing the CD mechanism assembly, align the shaft "J" of the CD mechanism assembly to the position shown in Fig.3-45 while turning the cam R1 and R2 assembly in the arrow direction "K".
2. By raising the CD mechanism assembly in the arrow direction "L", remove the assembly from the lifter unit (Fig.3-46).

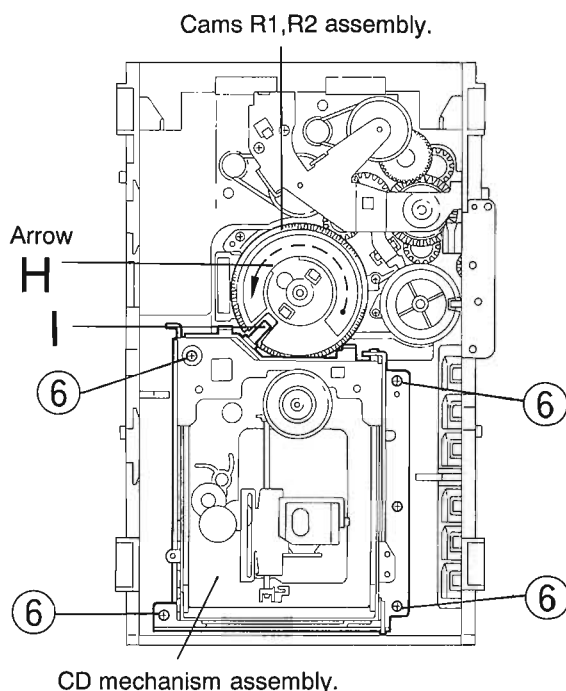


Fig.3-44

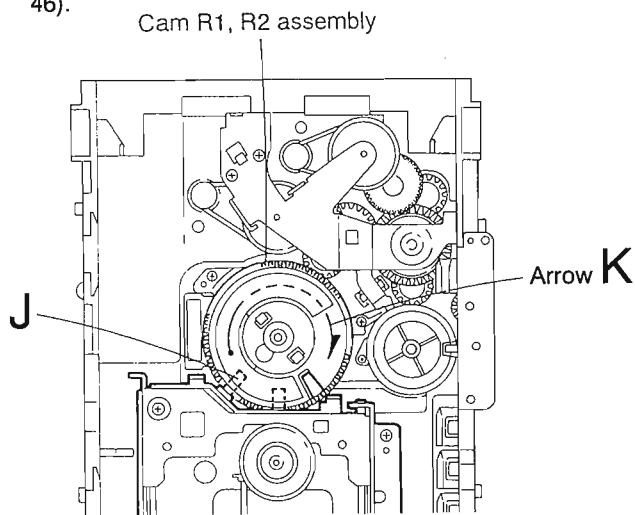


Fig.3-45

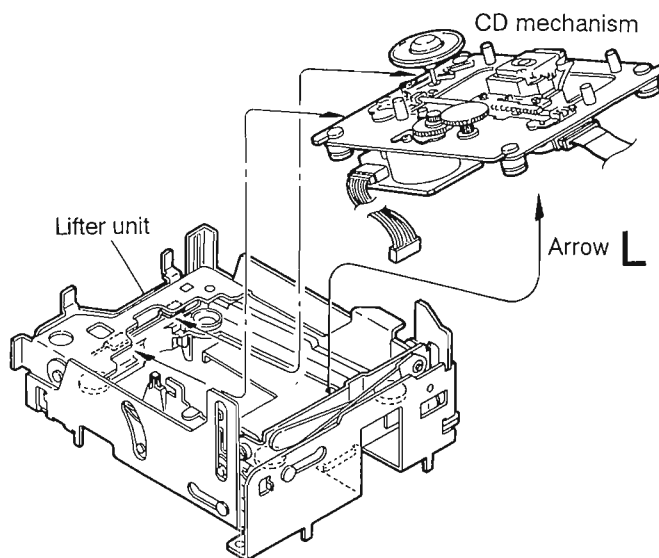


Fig.3-46

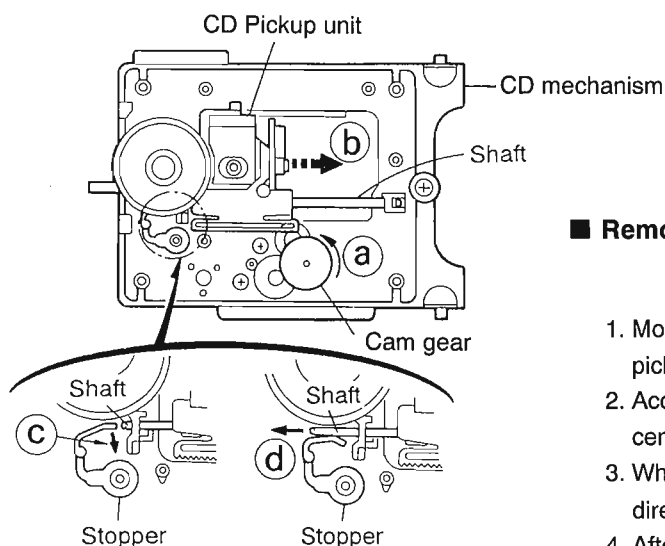


Fig.3-47

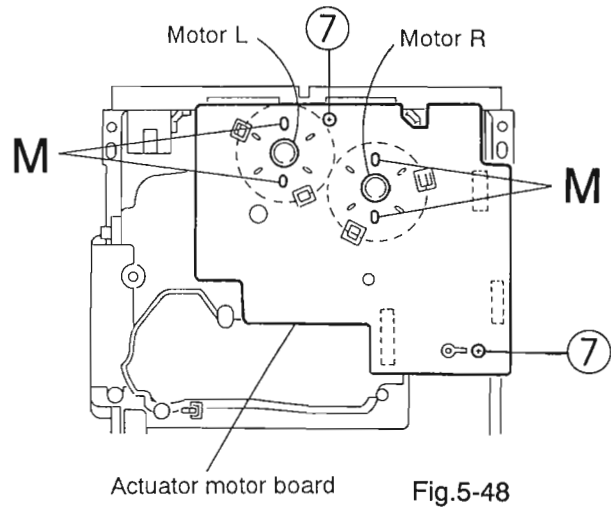
■ **Removing the CD pickup unit** (See Fig.3-47)

1. Move the cam gear in the arrow direction ③. Then, the CD pickup unit will be moved in the arrow direction ②.
2. According to the above step, shift the CD pickup unit to the center position.
3. While pressing the stopper retaining the shaft in the arrow direction ③, pull out the shaft in the arrow direction ④.
4. After dismantling the shaft from the CD pickup unit, remove the CD pickup unit.

■ Removing the actuator motor board

(See Figs.3-48,3-49)

1. Absorb the four soldered positions "M" of the right and left motors with a soldering absorber (See Fig.3-48).
2. Remove the two screws ⑦ retaining the actuator motor board (See Fig.3-48).
3. Remove the two screws ⑧ retaining the tray select switch board (See Fig.3-49).



■ Removing the cam unit (See Figs.3-50~3-52)

1. Remove the CD mechanism assembly.
2. While turning the cam gear L, align the pawl "N" position of the drive unit to the notch position (Fig.3-50) on the cam gear L.
3. Pull out the drive unit and cylinder gear (See Fig.3-51).
4. While turning the cam gear L, align the pawl "O" position of the select lever to the notch position (Fig.3-52) on the cam gear L.
5. Remove the four screws ⑨ retaining the cam unit (cam gear L and cams R1/R2 assembly) (See Fig.3-52).

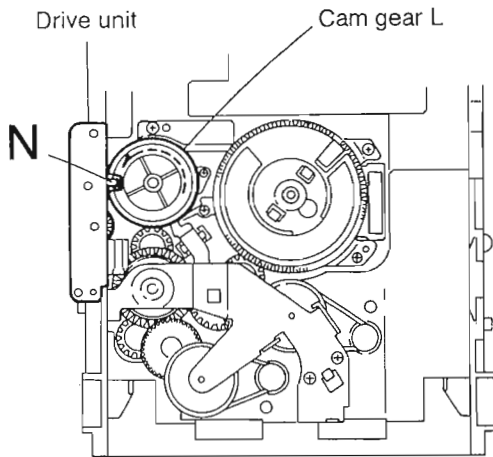


Fig.3-50

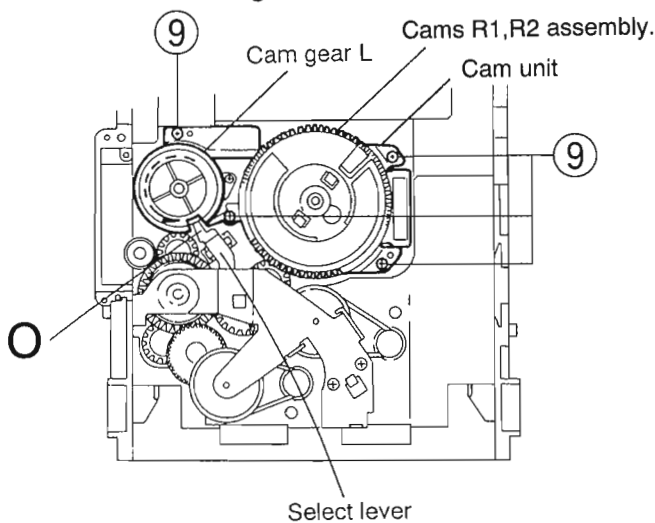


Fig.3-52

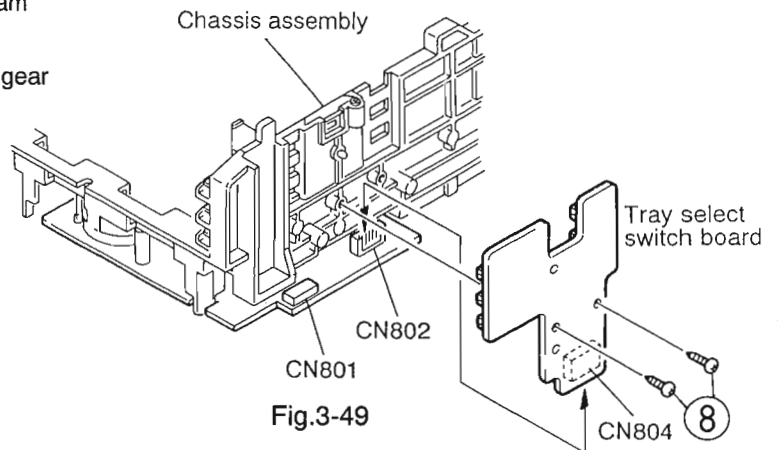


Fig.3-49

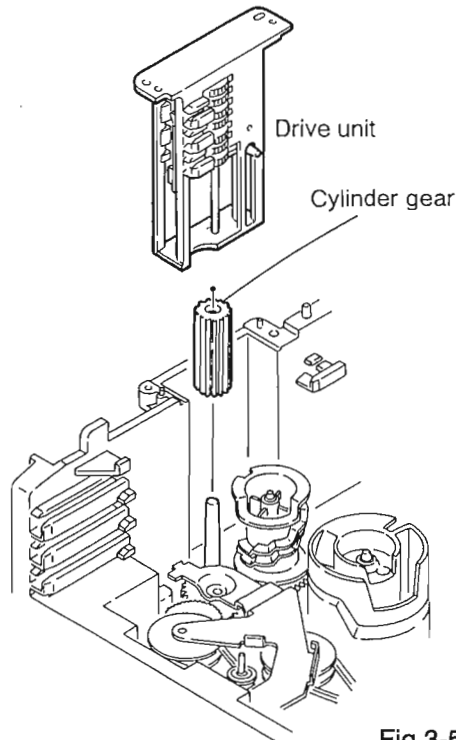


Fig.3-51

■ Removing the actuator motor and belt

(See Figs.3-53~3-56)

1. Remove the two screws ⑩ retaining the gear bracket (See Fig.3-53).
2. While pressing the pawl "P" fixing the gear bracket in the arrow direction, remove the gear bracket (see Fig.3-53).
3. From the notch "Q section" on the chassis assembly fixing the edge of gear bracket, remove and take out the gear bracket (See Fig.3-54).
4. Remove the belts respectively from the right and left actuator motor pulleys and pulley gears (See Fig.3-53).
5. After turning over the chassis assembly, remove the actuator motor while spreading the four pawls "R" fixing the right and left actuator motors in the arrow direction (See Fig.3-55).

[Note] When the chassis assembly is turned over under the conditions wherein the gear bracket and belt have been removed, then the pulley gear as well as the gear, etc.constituting the gear unit can possibly be separated to pieces. In such a case, assemble these parts by referring to the assembly and configuration diagram in Fig.3-56.

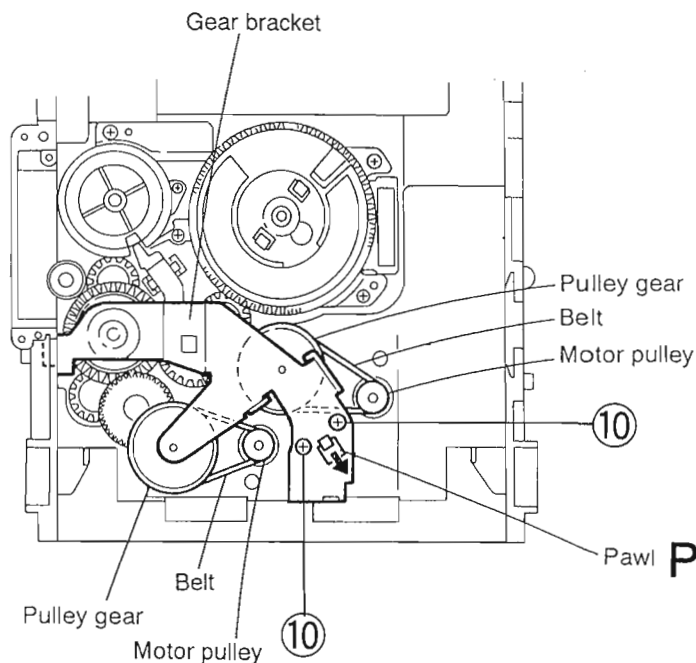


Fig.3-53

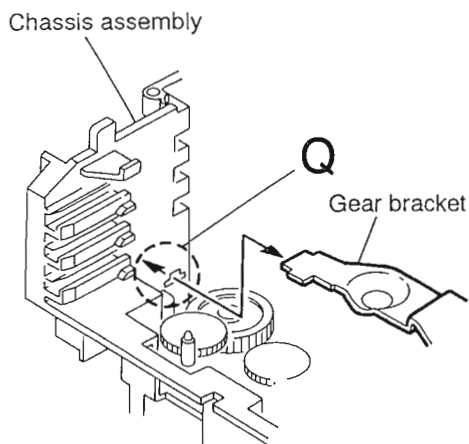


Fig.3-54

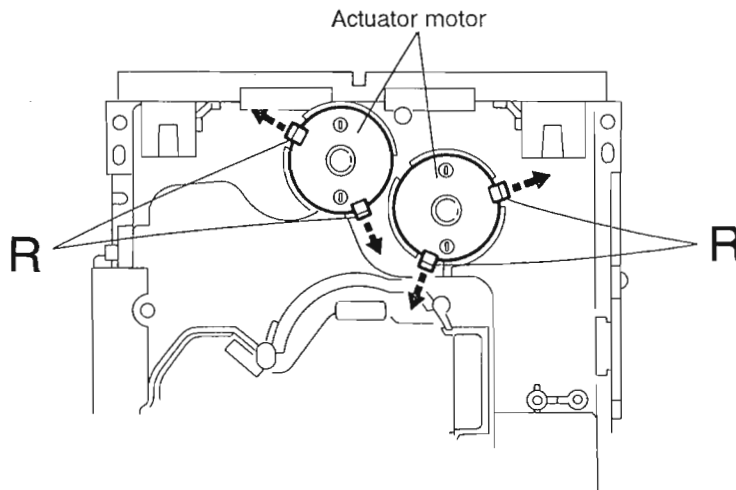


Fig.3-55

Assembly and Configuration Diagram

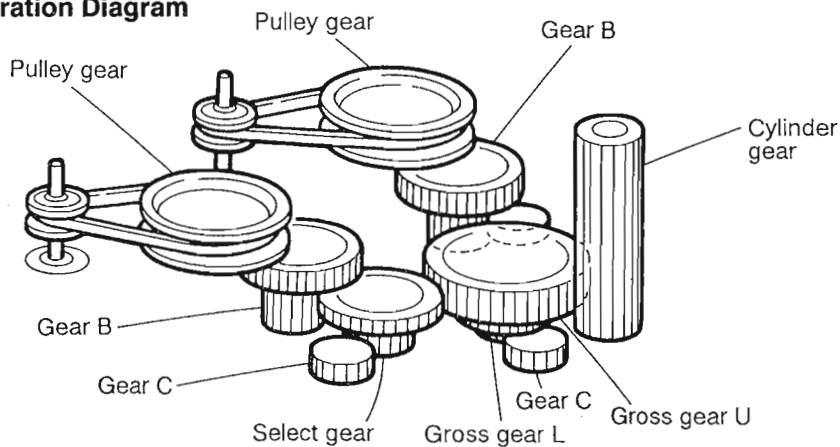


Fig.3-56

■ **Removing the cams R1/R2 assembly and cam gear L**
(See Fig.3-57)

1. Remove the slit washer fixing the cams R1 and R2 assembly.
2. By removing the two pawls "S" fixing the cam R1, separate R2 from R1.
3. Remove the slit washer fixing the cam gear L.
4. Pull out the cam gear L from the C.G. base assembly.

■ **Removing the C.G. base assembly**
(See Figs.3-57 and 3-58)

Remove the three screws ⑪ retaining the C.G. base assembly.

[Caution] To reassemble the cylinder gear, etc. with the cam unit (cam gear and cans R1/R2 assembly), gear unit and drive unit, align the position of the pawl "N" on the drive unit to that of the notch on the cam gear L. Then, make sure that the gear unit is engaged by turning the cam gear L. (See Fig.3-58)

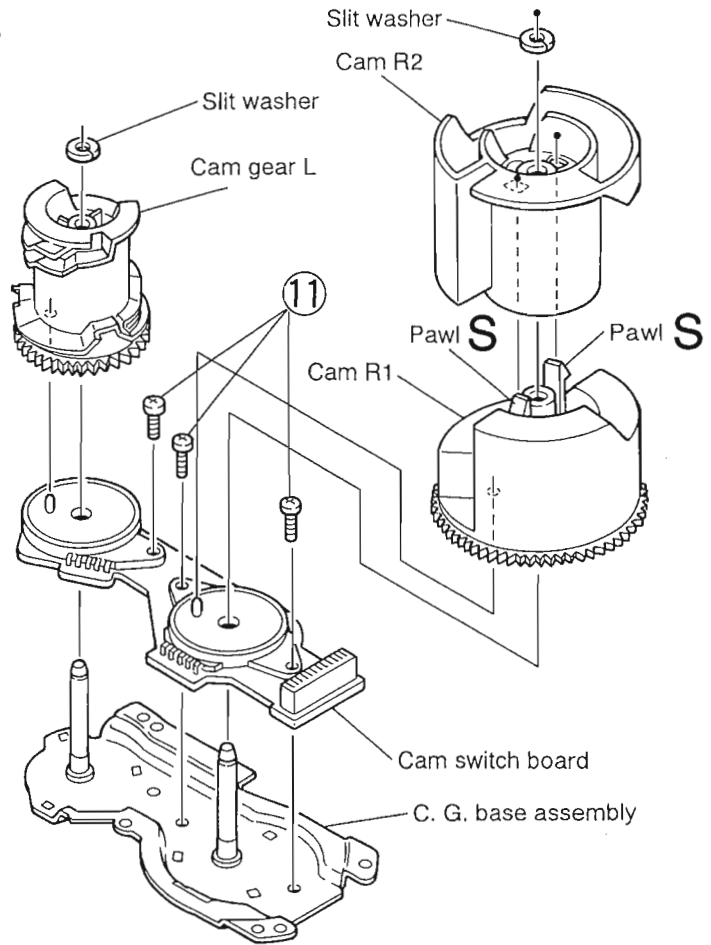


Fig.3-57

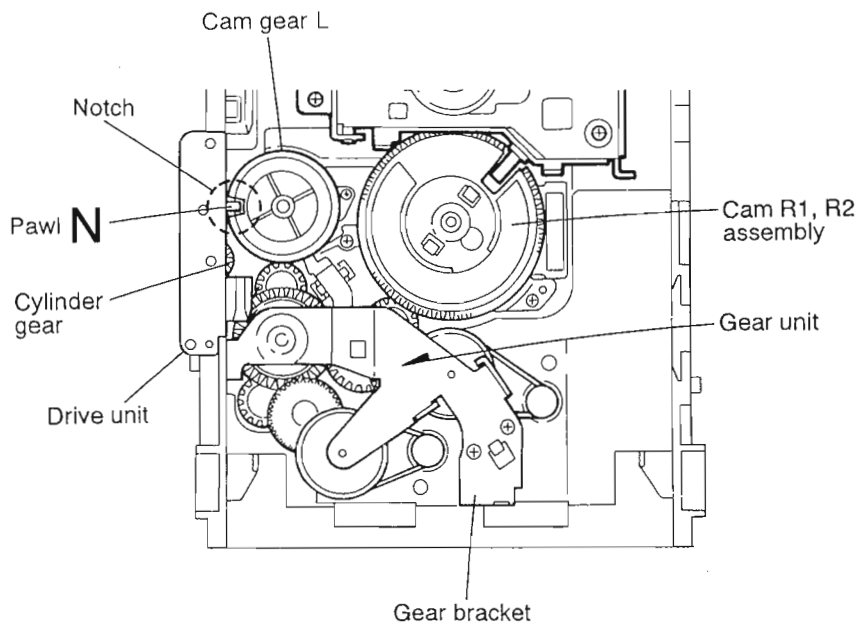


Fig.3-58

Main Adjustment

■ Measurement Instruments Required for Adjustment

1. Low frequency oscillator
This oscillator should have a capacity to output 0 dBs to 600 ohme at an oscillation frequency of 50Hz-20kHz.
2. Attenuator impedance : 600 ohme
3. Electronic voltmeter
4. Distortion meter
5. Frequency counter
6. Wow & Flutter meter
7. Test Tape
VTT712 : Tape Speed & Wow flutter (3kHz)
VTT724 : Reference level (1kHz)
VTT703L : Head azimuth (10kHz)
TMT 7036 : Playback frequency characteristics (63,1k,10kHz)
8. Test Tape for Recording/ playback
TYPE I : AC-225 (Normal position), TYPE II : AC-514(Chrome position)
9. Torque gauge : For playback tension
Foward (TW211A), Reverse (TW2121A), First foward & Rewind (TW2231A)

■ Measurement Conditions

Source voltage : AC110/127/220/230 - 240V (50/60Hz)
 Reference output : Speaker 0dBs (0.775V)/ 6 ohme, Headphone -20dBs (0.075V)/ 32 ohme or 33 ohme
 Standard position of Function switches
 Function switch : to AUX, Active Bass switch : off
 Standard position of Volume control
 Sound Mode : Normal (Flat), Main volume : Adjusting to 0dBs output
 Standard test frequency : 1kHz unless otherwise specified
 Reference input level : AUX 300mV (-8dBs), Mic : 4.4mV (-45dBs)
 Input for Recording/playback (Use for checking & measuring): AUX 300mV (-8dBs)
 Output for measuring : at speaker terminal (Dummy load 6 ohme), TP101 measuring for Tuner/CD & Deck

■ Tuner Section

Reference output : Measure at TP101
 Feed signal : AM modulation frequency : 400Hz, modulation factor 30%
 : FM modulation frequency : 400Hz, deviation 22.5kHz
 Standard position of switches and controllers
 No effect to volume / sound mode Active hyper bass due to measure at TP101
 Measure point : HOT / GND for FM (Antenna terminal)
 : MW/LW (Standard Loop antenna)

《 Arrangement of Adjusting Positions 》

● Cassette mechanism section (Mechanism A section)

● Cassette mechanism section (Back side)

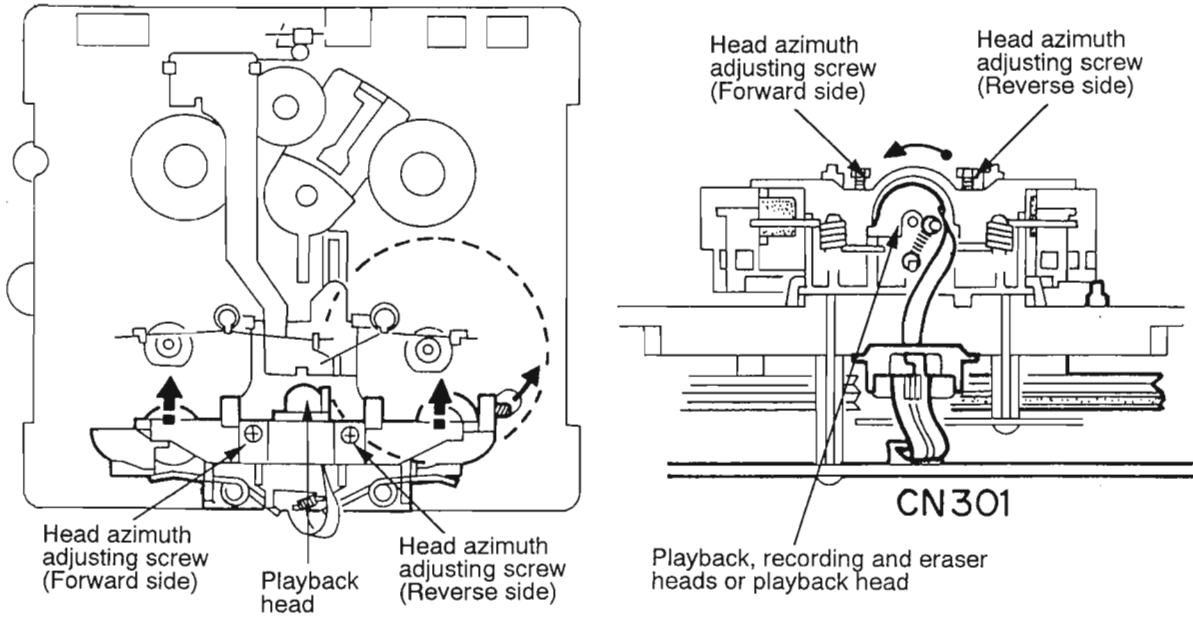


Fig.4-1

■ Cassette Mechanism Unit Section

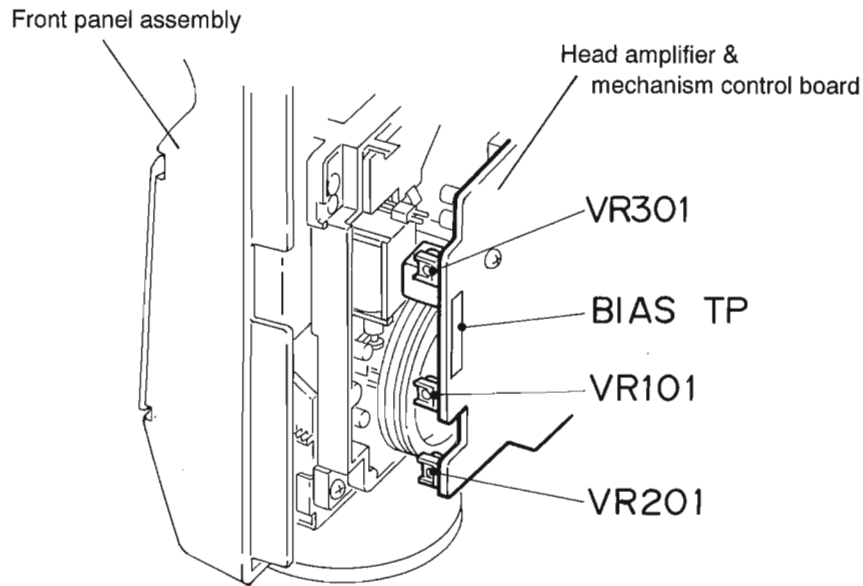


Fig.4-2

■ Tape Recorder Section

Items	Measurement conditions	Measurement method	Standard values	Adjusting positions
Confirmation of head angle	Test tape : TMT7036 (10kHz) Measurement output terminal : Speaker terminal Speaker R (Load resistance: 3 Ω) : Headphone terminal	① Play back the test tape TMT7036 (10kHz). ② With the playback mechanism or recording & playback mechanism, adjust the head azimuth screw so that the forward and reverse output levels become maximum. After adjustment, lock the head azimuth at least by half a turn. ③ In either case, this adjustment should be performed in both the forward and reverse directions with the head azimuth screw.	Maximum output	Adjust the head azimuth screw only when the head has been changed.
Confirmation of tape speed	Test tape : VTT712 (3kHz) or TMT7036 (3kHz) Measurement output terminal : Headphone terminal	《Constant speed》 Adjust VR301 so that the frequency counter reading becomes 3,010Hz ± 15Hz when playing back the test tape VTT712 (3kHz) with the playback mechanism or playback and recording mechanism after ending forward winding of the tape.	Tape speed of decks (A and B) : 3,010Hz ± 15Hz	VR301

■ Reference Values for Confirmation Items

Items	Measurement conditions	Measurement method	Standard values	Remarks
Double tape speed	Test tape : TMT7036 (10kHz) Measurement output terminal : Speaker terminal Speaker R (Load resistance: 3 Ω) measurement output terminal : Headphone terminal	① After setting to the double speed motor, confirm that the frequency counter reading becomes 4,800 +400/- 300Hz when the test tape VTT712 (3kHz) has been played back with the playback mechanism.	4,800 +400/- 300Hz	Playback mechanism side
Difference between the forward and reverse speed	Test tape : TMT7036 (10kHz) Measurement output terminal : Speaker terminal Speaker R (Load resistance: 3 Ω) measurement output terminal : Headphone terminal	When the test tape VTT712 (3kHz) has been played back with the playback mechanism or recording and playback mechanism at the beginning of forward winding, the frequency counter reading of the difference between both of the mechanisms should be 6.0Hz or less.	6.0Hz or less	Both the playback and recording & playback mechanisms
Difference between the playback mechanism and recording and playback mechanism speed	Test tape : TMT7036 (10kHz) Measurement output terminal : Speaker terminal Speaker R (Load resistance: 3 Ω) measurement output terminal : Headphone terminal	When the test tape VTT712 (3kHz) has been played back with the playback mechanism or recording and playback mechanism at the beginning of forward winding, the frequency counter reading of the difference between both of the mechanisms should be 6.0Hz or less.	6.0Hz or less	Both the playback and recording & playback mechanisms
Wow & flutter	Test tape : TMT7036 (10kHz) Measurement output terminal : Headphone terminal	When the test tape VTT712 (3kHz) has been played back with the playback mechanism or recording and playback mechanism at the beginning of forward winding, the frequency counter reading of wow & flutter should be 0.25% or less (WRMS).	0.25% or less (WRMS)	Both the playback and recording & playback mechanisms

■ Electrical Performance

Items	Measurement conditions	Measurement method	Standard values	Adjusting positions
Adjustment of recording bias current (Reference value)	<ul style="list-style-type: none"> • Mode: Forward or reverse mode • Recording mode • Test tape : AC-514 and AC-225 Measurement output terminal : Both recording and headphone terminals	<ol style="list-style-type: none"> ① With the recording and playback mechanism, load the test tapes (AC-514 to TYP II and AC-225 to TYP I), and set the mechanism to the recording and pausing conditions in advance. ② After connecting 100 Ω in series to the recorder head, measure the bias current with a valve voltmeter at both of the terminals. ③ After resetting the [PAUSE] mode, start recording. At this time, adjust VR101 for LcH and VR201 for RcH so that the recording bias current values become 4.0 μ A (TYP I) and 4.20 μ A (TYP II). 	AC-225 : 4.20 μ A AC-514 : 4.0 μ A	LcH : VR101 RcH : VR201
Adjustment of recording and playback frequency characteristics	Reference frequency : 1kHz and 10kHz (REF.: -20DB) Test tape : TYP II : AC-514 Measurement input terminal : OSC IN	<ol style="list-style-type: none"> ① With the recording and playback mechanism, load the test tape (AC-514 to TYP II), and set the mechanism to the recording and pausing conditions in advance. ② While repetitively inputting the reference frequency signal of 1kHz and 10kHz from OSC IN, record and play back the test tape. ③ While recording and playing back the test tape in TYP II, adjust VR101 for LcH and VR 201 for RcH so that the output deviation between 1kHz and 10kHz becomes -1dB ± 2dB. 	Output deviation between 1kHz and 10kHz : -1dB ± 2dB	LcH : VR101 RcH : VR201

■ Reference Values for Electrical Function Confirmation Items

Items	Measurement conditions	Measurement method	Standard values	Remarks
Recording bias frequency	<ul style="list-style-type: none"> • Recording and playback side forward or reverse • Test tape : TYP II : AC-514 • Measurement terminal: BIAS TP on P.C. board 	<ol style="list-style-type: none"> ① While changing over to and from BIAS 1 and 2, confirm that the frequency is changed. ② With the recording and playback mechanism, load the test tape (AC-514 to TYP II), and set the mechanism to the recording and pausing conditions in advance. ③ Confirm that the BIAS TP frequency on the P.C. board is 100kHz ± 6kHz. 	100kHz ± 6kHz	
Eraser current (Reference value)	<ul style="list-style-type: none"> • Recording and playback side forward or reverse • Recording mode • Test tape : AC-514 and AC-225 Measurement terminal: Both of the eraser head	<ol style="list-style-type: none"> ① With the recording and playback mechanism, load the test tapes (AC-514 to TYP II and AC-225 to TYP I), and set the mechanism to the recording and pausing conditions in advance. ② After setting to the recording conditions, connect 1W in series to the eraser head on the recording and playback mechanism side, and measure the eraser current from both of the eraser terminals. 	TYP II : 120mA TYP I : 75mA	

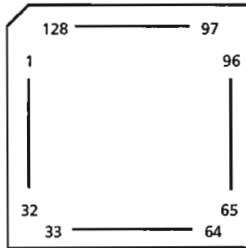
Out Line of Main IC

■ CL480(IC101) : MPEG DECODER

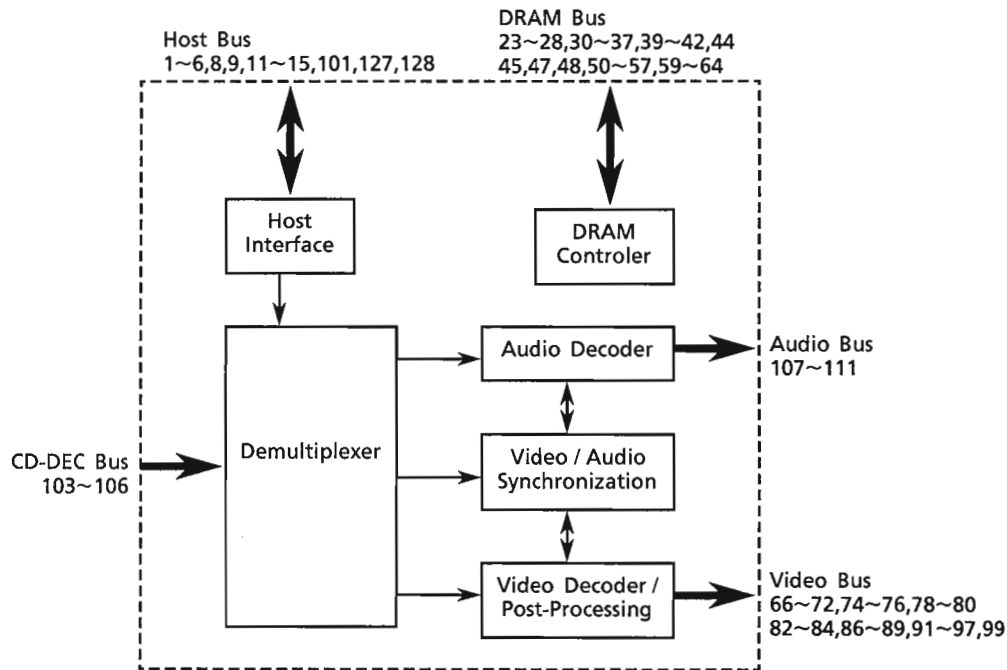
1. Functions

CL480 is MPEG-1 Audio / Video decoder

2. Terminal Layout



3. Block Diagram

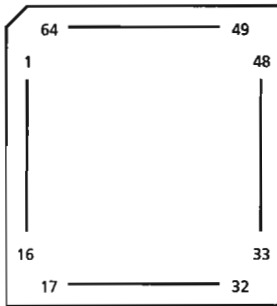


4. Terminal Discription

Pin No.	symbol	I/O	Function	Pin No.	symbol	I/O	Function
1	HA2	I	Host address terminal	78~80	VD10~VD12	O	Video data terminal (G2~4/Y2~4)
2	DS	I	Data strobe terminal	81	IO VDD	--	Power suply for Input/Output
3	W/R	I	I/O read terminal	82~84	VD13~VD15	O	Video data terminal (G5~7/Y5~7)
4	IRQ	O	Interact terminal	85	CKT VSS	--	Connected to GND
5	DTACK	O	Acknowledge data output	86~89	VD16~VD19	O	Video data terminal (B0~B3)
6	HD0	I/O	Host data terminal	90	IO VSS	--	Ground terminal for Input/Output
7	IO VDD	--	Power suply for Input/Output	91~94	VD20~VD23	O	Video data terminal (B4~7)
8,9	HD1,2	I/O	Host data terminal	95	VSYNC	I/O	Vertical comparator / Composite comparator output
10	CKT VSS	--	Connected to GND	96	HSYNC	I/O	Horizontally synchronizing signal
11~15	HD3~HD7	I/O	Host data terminal	97	VOE	I	Video output enable signal
16	IO VSS	--	Ground terminal for Input/Output	98	VCO VDD	--	Power suply of VCO
17	TEST	I	Test terminal	99	VCLK	I/O	Video clock terminal
18	XTL VSS	--	Oscillator grand terminal	100	VCO VSS	--	Ground of VCO
19	XTLIN	I	Oscillator input terminal	101	RESET	I	Reset signal input
20	XTLOUT	O	Oscillator output terminal	102	IO VSS	--	Ground terminal for input/output
21	XTL VDD	--	Power suply for Oscillator	103	C2PO	I	Data error flag input
22	CKT VDD	--	Power suply	104	CDLRCK	I	L / R word clock input
23~28	MD0~MD5	I/O	DRAM data / ROM data terminal	105	CDDATA	I	Bit serial data input
29	IO VDD	--	Power suply for Input/Output	106	CDBCK	I	Bit clock output
30,31	MD6,7	I/O	DRAM data / ROM data terminal	107	DALRCK	O	L / R clock output
32,33	MCE0,1	O	Chip enable output for ROM bank	108	DADATA	O	Bit serial PCM audio signal output
34~37	MD8~MD11	I/O	DRAM data / ROM data terminal	109	DABCK	O	Bit clock output
38	IO VSS	--	Ground terminal for Input/Output	110	IO VDD	--	Power suply for input/output
39~42	MD12~MD15	I/O	DRAM data / ROM address terminal	111	XCK	I	Bit clock input terminal from outside
43	5V VDD	--	Power suply (+5V)	112	CKT VDD	--	Power suply
44	LCAS	O	DRAM LCAS/ROM address terminal	113	PIO12	O	Interact 2 signal output
45	LCASIN	I	DRAM LCAS input	114	PIO11	O	Non connection
46	CKT VSS	--	GND	115	PIO10	I	Host enable signal input
47	MWE	O	DRAM write enable signal output	116	PIO9	I	Boot rom enable signal input
48	UCAS	O	DRAM UCAS/ROM address terminal	117	PIO8	O	Non conection
49	IO VDD	--	Power suply for input/output	118	PIO7	O	DAC emphasis signal output
50	UCAS IN	I	DRAM UCAS input terminal	119	PIO6	I	CD-DA emphasis signal input
51,52	RAS0,1	O	DRAM RAS0,1 terminal	120	PIO5	O	Non connection
53~57	MA9~MA5	O	DRAM data / ROM address terminal	121	PIO4	O	FMV detect signal output
58	IO VSS	--	Ground terminal for Input/Output	122	PIO3	O	CD-DA Video CD select signal output Low : Video CD
59~63	MA4~MA0	O	DRAM data / ROM address terminal	123	5V VDD	--	Power suply (+5V)
64	PIO0	O	ROM address extention terminal	124	PIO2	O	Non conection
65	IO VDD	--	Power suply for Input/Output	125	IO VSS	--	Ground for input/output
66~72	VD0~VD6	O	Video data terminal (R0~6/CrCb0~6/YCrCb0~6)	126	PIO1	O	Non connection
73	IO VSS	--	Ground terminal for Input/Output	127	HA0	I	Host address input
74~76	VD7~VD9	O	Video data terminal (R7/CrCb7/YCrCb7)(G0,1/Y0,1)	128	HA1	I	Host address input
77	CKT VDD	--	Power suply				

■ MN171601(IC111) : HOST Micro Computer

1. Terminal Layout

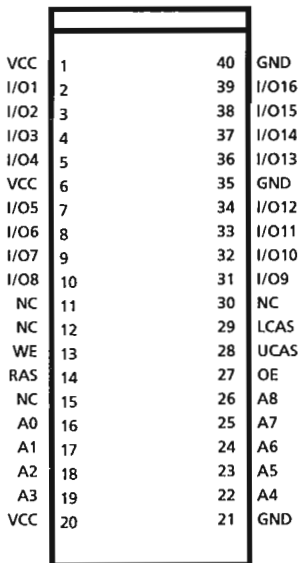


2. Terminal description

Pin No.	Symbol	I/O	Description	Pin No.	Symbol	I/O	Description
1	480 RST	O	Reset signal output	41~48	SD1~SD8	I/O	SRAM data input/output terminal
2	MREQ	I	Input the transfer request data signal	49	SR/W	O	SRAM Read / Write signal input/output
3	ACT INT	I	Interact 2 signal input	50	PAL60	--	Not use
4	G DET	I	CD-G detect terminal H : CD-G	51	RESET	I	Reset signal input
5	GND	--	Connected to GND	52	X1	--	Non connection
6	DTACK	I	Acknowledge signal input	53	X2	--	Non connection
7	GND	--	Connected to GND	54	VSS	--	Ground terminal
8	GND	--	Connected to GND	55	OSC2	--	Non connection
9	DIR		Input/Output control for IC114	56	OSC1	I	Clock input terminal
10	N/PAL	--	Not use	57	VDD	--	Power supply
11	RGB	O	Video out control signal (H : RGB, L : composite)	58	HREQ	O	Communication signal output
12	W/R	I/O	Read / Write signal input/output	59	SRCLK	I	Clock signal for Data request to IC201
13~15	HA0~HA2	O	Address signal output for MPEG LSI	60	M2HDT	O	Serial data output
16	DS	O	Data strobe signal output	61	H2MDT	I	Serial data input
17~24	HD0~HD7	I/O	Data terminal for MPEG LSI	62	HRDY	O	Communication signal output
25~39	SA0~SA14	I/O	SRAM address signal output	63	VCD/G	O	Video switch switching signal output
40	SCS	O	SRAM chip select signal output	64	PALCDG	O	CD-G PAL?NTSC clock select terminal

■ HM514260CJ-7X(IC103) : 4Mbit DYNAMIC RAM

1. Terminal layout

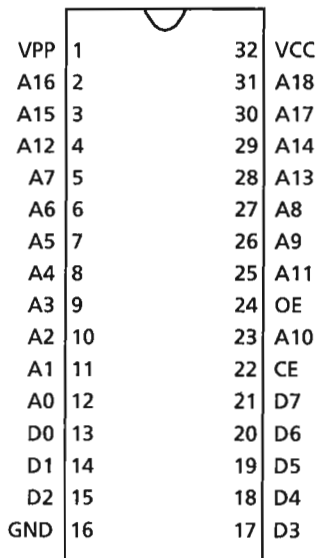


2. Pin Function

Pin No.	Synble	I/O	Function
1	VCC	--	Power suply
2~5	I/O1~I/O4	I/O	Data input/output terminal
6	VCC	--	Power suply
7~10	I/O5~I/O8	I/O	Data input/output terminal
11,12	NC	--	Non connection
13	WE	I	Write enable terminal
14	RAS	I	Low address strove terminal
15	NC	--	Non connection
16~19	A0~A3	I	Address input/output terminal
20	VCC	--	Non connection
21	GND	--	GND
22~26	A4~A8	I	Address input/output terminal
27	OE	I	Output Enable terminal
28	UCAS	I	Calm address strove terminal (upper)
29	LCAS	I	Colm address strove terminal (lower)
30	NC	--	Non conection
31~34	I/O9~I/O12	I/O	Data input/output terminal
35	GND	--	GND
36~39	I/O13~I/O16	I/O	Data input/output terminal
40	GND	--	GND

■ MX27C1000MC002X (IC102) : 1Mbit ·ROM

1. Pin layout

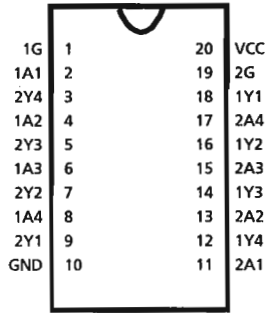


2. Pin function

Pin No.	Synble	I/O	Function
1	VPP	--	Power suply
2~4,5~12	A16~A12,A7~A0	I	Address input terminal
13~15	D0~D2	I/O	Data input/output terminal
16	GND	--	GND
17~21	D3~D7	I/O	Data input/output terminal
22	CE	O	Output chip enable terminal
23	A10	I	Address input terminal
24	OE	I	Output enable terminal
25	A11	I	Address input/output terminal
26,27	A9,A8	I	Address input terminal
28,29	A13,A14	I	Address input terminal
30,31	A17,A18	I	Address input terminal
32	VCC	--	Power suply

- HD74HCT244PF(IC113) : Line Driver
- HD74HCT245PF(IC114) : Line Driver

1.Pin layout

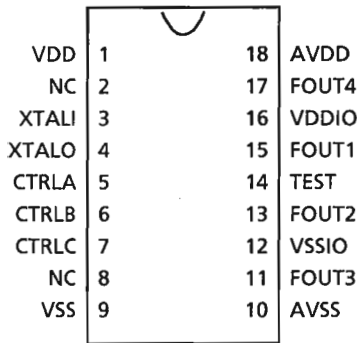


2. Truth table

1G or 2G	OPERATION
L	1A1~4 data to 1Y1~4 bus 2A1~4 data to 2Y1~4 bus
H	---

- BU2173F (IC105) : VCO

1.Pin layout

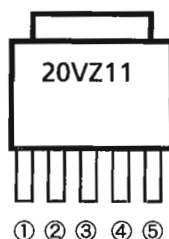


2. Terminal Function

Pin No.	Symbol	I/O	Function
1	VDD	--	Digital VDD
2	NC	--	Not use
3	XTALI	I	Input of X'tal oscillation circuit
4	XTALO	O	Output of X'tal oscillation circuit
5	CTRLA	I	Select of clock Video-CD / CD-G
6	CTRLB	I	Nomal mode = H
7	CTRLC	I	Select of clock CD-G PAL / NTSC
8	NC	--	Connected to GND
9	VSS	--	Digital GND
10	AVSS	--	Analog GND
11	FOUT3	--	Not use
12	VSSIO	--	Connected to GND
13	FOUT2	O	Clock output terminal 2
14	TEST	--	Connected to GND
15	FOUT1	O	Clock output terminal 1
16	VDDIO	--	Power supply
17	FOUT4	O	Clock output terminal 4
18	AVDD	--	Analog VDD

- PQ20VZ11(IC107) : REGULATOR

1.Pin layout

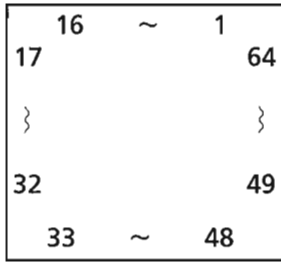


2. Terminal Function

Pin No.	Symble	I/O	FUction
1	VIn	I	DC input
2	Vc	I	ON/OFF control
3	Vo	O	DC output
4	Vadj	I	Output voltage adjust
5	GND	--	GND

■ BU1417K(IC104) : DIGITAL RGB-TV ENCODER

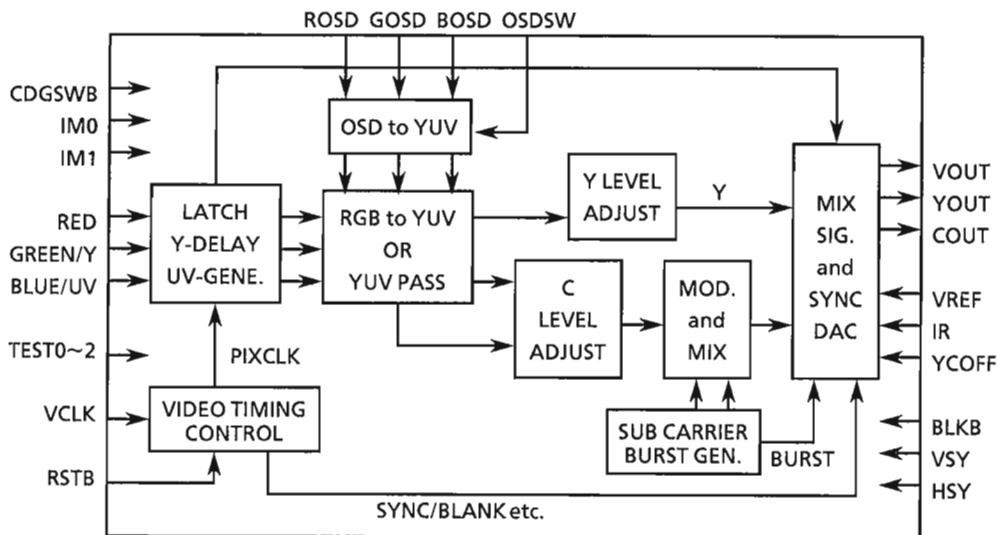
1. Terminal Layout



2. Pin function

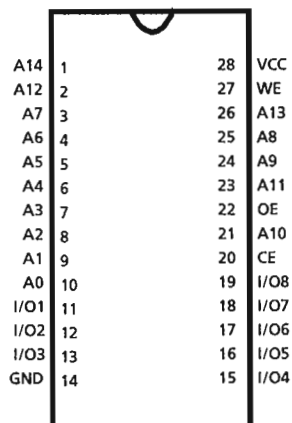
Pin No.	Symble	I/O	Function
1	BOSD	I	OSD Blue data input
2~8	GD0~GD6	I	Green/Y data bit0~bit6 input
9	GND	--	GND
10	GD7	I	Green / Y data bit7 input (MSB)
11~14	BD0~BD3	I	Blue / UV data bit0~bit3 input
15	OSDSW	I	OSD input enable (Input data H : ROSD, GOSD,BOSD color output)
16	CDGSWB	I	Select Videi-CD / CD-G Video-CD(H) ,CD-G(L)
17~20	BD4~BD7	I	Blue / UV data bit4~bit7 input
21	GND	--	GND
22	NC	I	Select NTSC/PAL L : NTSC, H : PAL
23,24	IM0,IM1	I	Not use
25,26	TEST1,2	I	Connected to GND
27	CVSY	I	C - sync input
28	HSY	I	H -Sync input
29	PIXCLK	O	1/2 Frequency of internal clock
30	BLKB	I	Data blanking enable L : output OK
31	VDD	--	Power suply
32	INT	I	Select Interlace(H) / Non - interlace(L)
33	SLABEB	I	Set mode Master(H) / Slabe(L)
34	ADDH	I	ADD one_line at non - inter.
35	VREF	I	Reference Voltage (1.29V)
36	CGND	--	Chroma output GND
37	COUT	O	Chroma output for 'S' terminal
38	VGND	--	Composite output GND
39	VOUT	O	Composite output
40	AVSS	--	GND
41	NC	--	Non connection
42	IR	I	Reference resistor (Set the output vertical for DAC)
43	AVDD	--	Power suply
44	YGND	--	Luminance output GND
45	YOUT	O	Luminance output for 'S' terminal
46	G4FSC	--	Non connection
47	GCLK	--	Video clock input for VCD
48	YCOFF	--	onnected to GND
49	DVSS	--	GND
50	DVDD	--	Pal 60 on at NTB=high
51	VCLK	I	Video clock input for VCD
52	RSTB	I	Logic part initial reset
53	TEST0	--	Divide input CLK enable
54~56	RD0~RD2	I	Red data bit0~bit2
57	ROSD	I	OSD Red data input
58~60	RD3~RD5	I	Red data bit3~bit5
61	VDD	--	Digital VDD
62,63	RD6,RD7	I	Red data bit6~bit7
64	GOSD	I	OSD Green data input

3. Block



■ TC55257DFLL-85E(IC112) : 256K Bit STATIC RAM

1.Pin layout

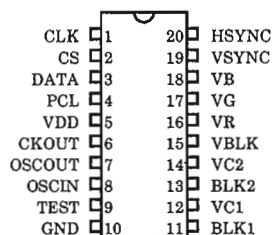


2. Terminal Function

Pin No.	Symble	I/O	Function
1~10	A14,12,7~0	I	Address input terminal
11~13	I/O1~I/O3	I/O	Data input/output terminal
14	GND	--	Connected to GND
15~19	I/O4~I/O8	I/O	Data input/output terminal
20	CE	I	Chip enable terminal
21	A10	I	Address input terminal
22	OE	I	Output enable terminal
23~26	A11,9,8,13	I	Address input terminal
7	WE	I	Write enable terminal
28	VCC	--	Power suply

■ μ PD6461GS-635(IC106): OSD

1.Pin layout

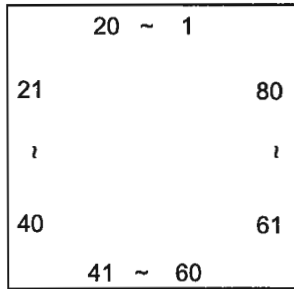


2. Description

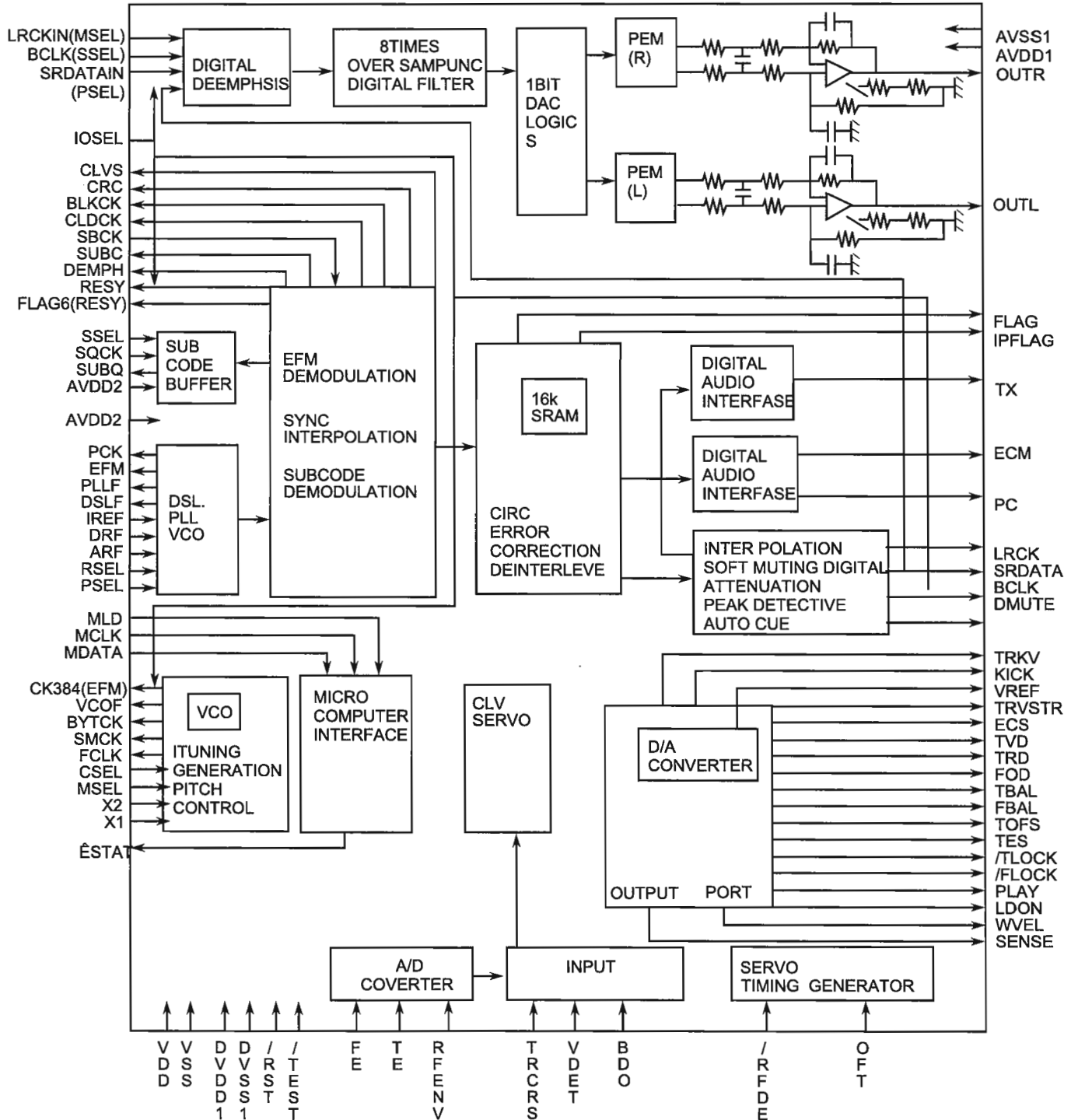
Pin No.	symbol	I/O	Description	Pin No.	symbol	I/O	Description
1	CLK	I	Clock signal input	11	BLK1	O	Not used
2	CS	I	Able to transmit serial in L	12	VC1	O	Not used
3	DATA	I	Control data input	13	BLK2	O	Not used
4	PCL	I	Clear pin in power on	14	VC2	O	Not used
5	VDD	--	+5V	15	VBLK	O	Blanking signal output
6	CKOUT	O	Not used	16	VR	O	Character signal output
7	OSCOUT	O	Not used	17	VG	O	Character signal output
8	OSCIN	I	Dot Clock signal input	18	VB	O	Character signal output
9	TEST	--	GND	19	VSYNC	I	Vertical syncro signal input
10	GND	--	GND	20	HSYNC	I	Horizontal syncro signal input

■ MN35510(IC651):DIGITAL SERVO&DIGITAL SIGNAL PROCESSER

1. Terminal Layout



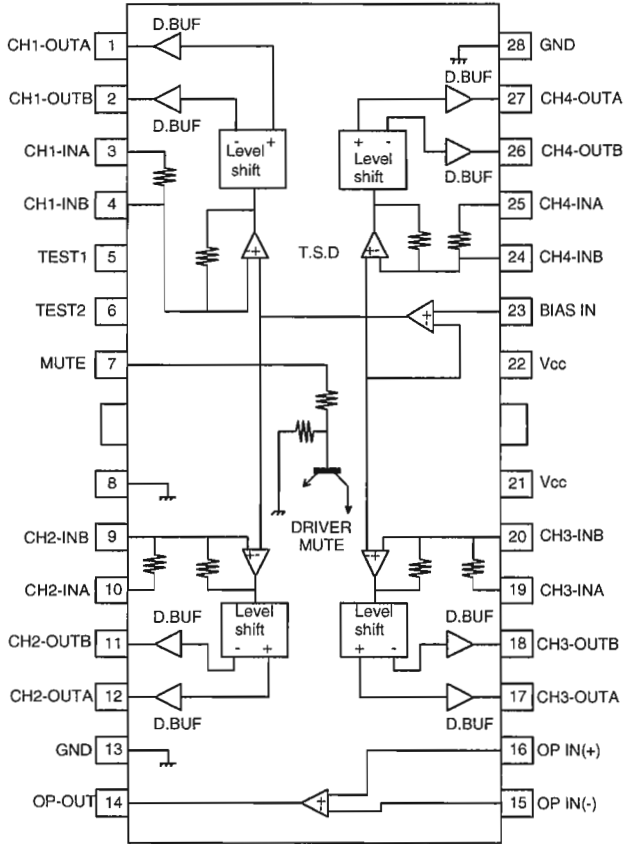
2. Block Diagram



3. Description

Pin No.	symbol	I/O	Description	Pin No.	symbol	I/O	Description
1	BCLK	O	Not used	41	TES	O	Tracking error shunt signal output(H:shunt)
2	LRCK	O	Not used	42	PLAY	—	Not used
3	SRDATA	O	Not used	43	WVEL	—	Not used
4	DVDD1	—	Power supply (Digital)	44	ARF	I	RF signal input
5	DVSS1	—	Connected to GND	45	IREF	I	Reference current input pin
6	TX	O	Digital audio inter output	46	DRF	I	Bias pin for DSL
7	MCLK	I	μ com command clock signal input (Data is latched at signal's rising point)	47	DSLIF	I/O	Loop filter pin for DSL
8	MDATA	I	μ com command data input	48	PLLF	I/O	Loop filter pin for PLL
9	MLD	I	μ com command load signal input	49	VCOF	—	Not used
10	SENSE	O	Sence signal output	50	AVDD2	—	Power supply(Analog)
11	FLOCK	O	Focus clock signal output Active :Low	51	AVSS2	—	Connected to GND(Analog)
12	TLOCK	O	Tracking clock signal output Active :Low	52	EFM	—	Not used
13	BLKCK	O	sub-code·block·clock signal output	53	PCK	—	Not used
14	SQCK	I	Outside lock for sub-code Q resister input	54	PDO	—	Not used
15	SUBQ	O	Sub-code Q -code output	55	SUBC	—	Not used
16	DMUTE	—	Connected to GND	56	SBCK	—	Not used
17	STATUS	O	Status signal (CRC,CUE,CLVS,TTSTOP,ECLV,SQOK)	57	VSS	—	Connected to GND(for X'tal cscillation circuit)
18	RST	I	Reset signal input (L:Reset)	58	XI	I	Input of 16.9344MHz X'tal oscillation circuit
19	SMCK	—	Not used	59	X2	O	Output of X'tal oscillation circuit
20	PMCK	—	Not used	60	VDD	—	Power supply(for X'tal cscillationcircuit)
21	TRV	O	Traverse enforced output	61	BYTCK	—	Not used
22	TVD	O	Traverse drive output	62	CLDCK	—	Not used
23	PC	—	Not used	63	FLAG	—	Not used
24	ECM	O	Spindle motor drive signal (Enforced mode output) 3-State	64	IPPLAG	—	Not used
25	ECS	O	Spindle motor drive signal (Servo error signal output)	65	FLAG	—	Not used
26	KICK	O	Kick pulse output	66	CLVS	—	Not used
27	TRD	O	Tracking drive output	67	CRC	—	Not used
28	FOD	O	Focus drive output	68	DEMPH	—	Not used
29	VREF	I	Reference voltage input pin for D/A output block (TVD,FOD,FBA,TBAL)	69	RESY	—	Not used
30	FBAL	O	Focus Balance adjust signal output	70	IOSEL	—	pull up
31	TBAL	O	Tracking Balance adjust signal output	71	TEST	—	pull up
32	FE	I	Focus error signal input(Analog input)	72	AVDD1	—	Power supply(Digital)
33	TE	I	Tracking error signal input(Analog input)	73	OUT L	O	Lch audio output
34	RF ENV	I	RF envelope signal input(Analog input)	74	AVSS1	—	Connected to GND
35	VDET	I	Vibration detect signal input(H:detect)	75	OUT R	O	Rch audio output
36	OFT	I	Off track signal input(H:off track)	76	RSEL	—	pull up
37	TRCRS	I	Track cross signal input	77	CSEL	—	Connected to GND
38	RFDET	I	RF detect signal input(L:detect)	78	PSEL	—	Connected to GND
39	BDO	I	BDO input pin(L:detect)	79	MSEL	—	Connected to GND
40	LDON	O	Laser ON signal output(H:on)	80	SSEL	—	Pull up

■ BA6897FP : 4channel DRIVER

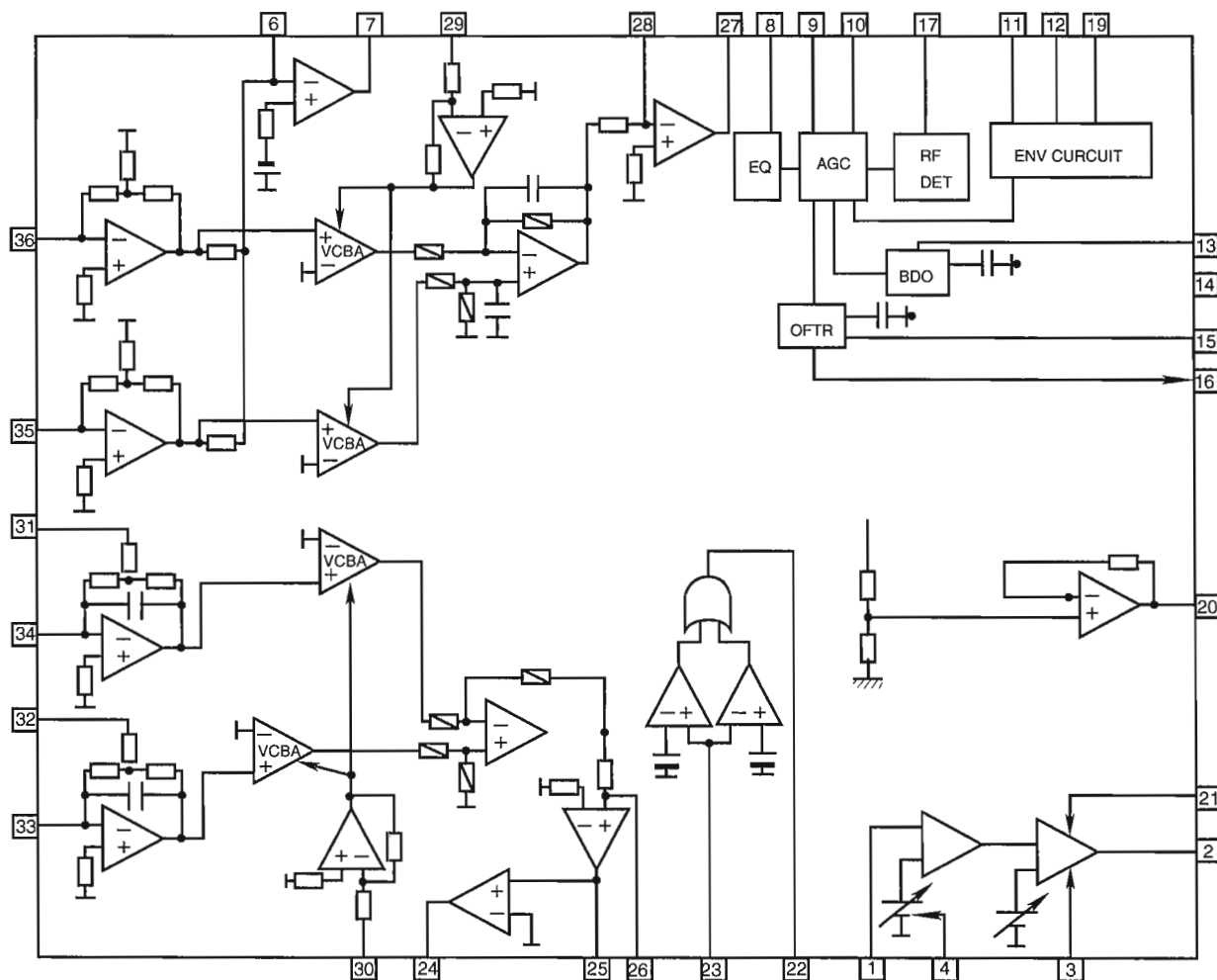


■ AN8806SB(IC601):RF&SERVO AMP

1.Terminal Layout

PD	1	36	PDAC
LD	2	35	PDBD
LDON	3	34	PDE
LDP	4	33	PDF
VCC	5	32	PDER
RF-	6	31	PDFR
RF OUT	7	30	TBAL
RF IN	8	29	FBAL
C.AGC	9	28	EF-
ARF	10	27	EF OUT
C.ENV	11	26	TE-
C.EA	12	25	TE OUT
CS BDO	13	24	CROSS
BDO	14	23	TE BPF
CS BRT	15	22	VDET
OFTR	16	21	LD OFF
/NRFDET	17	20	VREF
GND	18	19	ENV

2.Block Diagram



3. Functions

Pin No.	Symbol	I/O	Functions and operations
1	PD	I	APC amp input terminal
2	LD	O	APC amp output terminal
3	LD ON	I	APC ON/OFF control terminal
4	LDP	--	Connect to ground
5	VCC	--	Power supply
6	RF-	I	Inverse input pin for RF amp
7	RF OUT	O	RFamp output
8	RF IN	I	RF input
9	C.AGC	I/O	Connecting pin of AGC loop filter
10	ARF	O	RF output
11	C.ENV	I/O	A capacitor is connected to this terminal to detect the envelope of RF signal
12	C.EA	I/O	A capacitor is connected to this terminal to detect the envelope of RF signal
13	CS BDO	I/O	A capacitor is connected to detect the lower envelope of RF signal
14	BDO	O	BDO output pin
15	CS BRT	I/O	A capacitor is connected to detect the lower envelope of RF signal
16	OFTR	O	Of-track status signal output
17	/NRFDET	O	RF detection signal output
18	GND	--	Ground
19	ENV	O	Envelope output
20	VREF	O	Reference voltage output
21	LD OFF	--	Connect to ground
22	VDET	O	Vibration detection signal output
23	TE BPF	I	Input pin of tracking error through BPF
24	CROSS	O	Tracking error cross output
25	TE OUT	O	Tracking error signal output
26	TE-	I	Inverse input pin for tracking error amp
27	FE OUT	O	Output pin of focus error
28	FE-	I	Inverse input pin for focus error amp
29	FBAL	I	Focus balance control
30	TBAL	I	Tracking balance control
31	PDFR	I/O	F I-V amp gain control
32	PDER	I/O	E I-V amp gain control
33	PDF	I	I-V amp input
34	PDE	I	I-V amp input
35	PD BD	I	I-V amp input
36	PD AC	I	I-V amp input

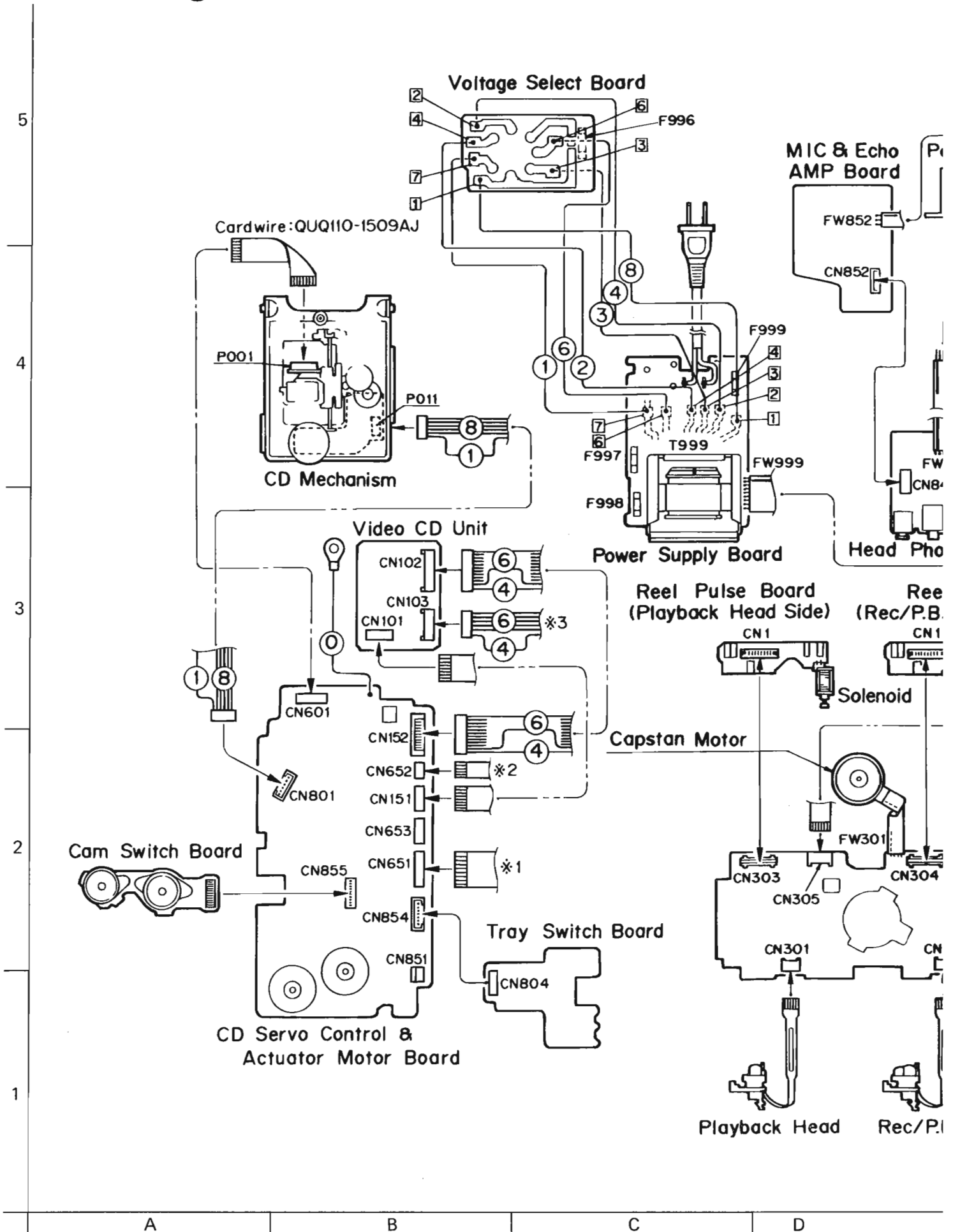
■ IC701 : μ PD78044FGF-066(System CPU) Port Map Table

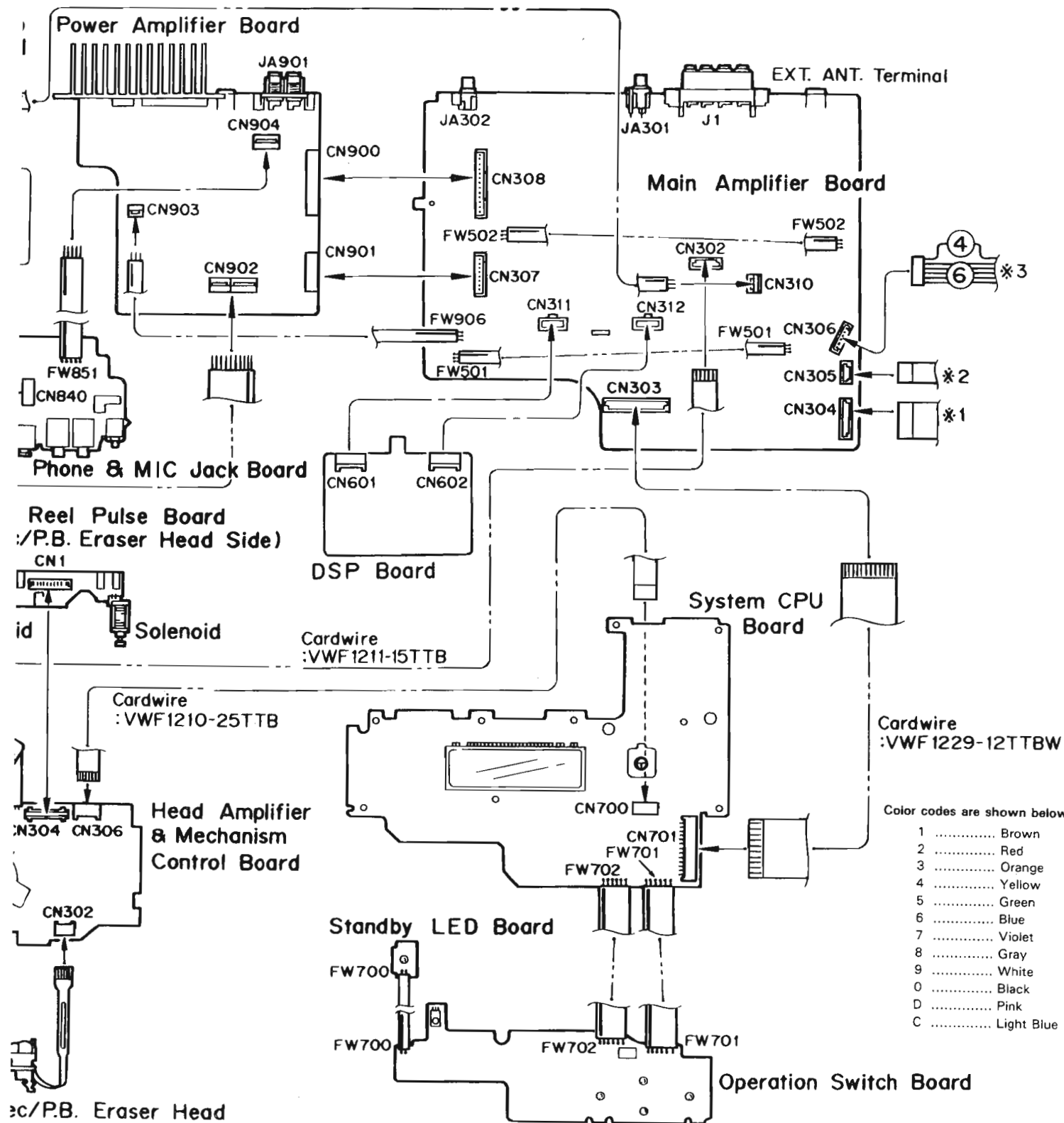
Pin No.	Port Name	I/O	Function
1	7G	0	FL Grid 7
2	6G	0	FL Grid 6
3	5G	0	FL Grid 5
4	4G	0	FL Grid 4
5	3G	0	FL Grid 3
6	2G	0	FL Grid 2
7	1G	0	FL Grid 1
8	VDD	-	+ 5V
9	SCK	0	Serial Clock (PLL, SLC, Vol, C3)
10	SDATA	I/O	Serial data (PLL, SLC, Vol, C3)
11	F. AUX	0	AUX Mute
12	LED TAPE	0	LED TAPE
13	STTA	0	Strobe Tape Control
14	SOCK	0	Sub Code Clock
15	NC		Non connection
16	SUBO/RDA	I	Sub Code Data/RDS Data
17	REST	I	System Reset
18	A REEL	I	Tape A mechanism runing detection
19	B REEL	I	Tape B mechanism runing detection
20	AVss	-	AD Ground
21	REST/REQ	I	Reset Switch/Changer Request
22	SAFETY	I	Trouble Detection
23	TAPE3	I	
24	TAPE2	I	
25	TAPE3	I	
26	KEY3	I	
27	KEY2	I	
28	KEY1	I	
29	AVdd	-	AD + 5V
30	AVREF	-	AD REF + 5V
31	XT1	I	Sub Clock 32.768kHz
32	XT2	0	
33	Vss	-	Ground
34	X1	I	Main Clock 4.19MHz
35	X2	0	
36	BEAT	0	Main Clock Shift
37	MS	I	Music Scan
38	MPX	I	Stereo Detect
39	+BCTL	0	5V Switch
40	MLCK	0	

Pin No.	Port Name	I/O	Function
41	XRST	0	
42	MLD	0	
43	MDATA	0	
44	STCH	0	Strobe Changer Control
45	STATUS	I	CD STATUS (PO) /RDS CLK (INT)
46	POUT	0	Power on/off
47	REM	I	Remote Control
48	Vss	-	Ground
49	SMUTE	0	System Mute
50	F.CD	0	Function CD
51	F.TU	0	Function CD
52	Vdd	-	+ 5V
53	VOL -	I	Volume Encoder Input (-)
54	VOL +	I	Volume Encoder Input (+)
55	SPK	0	Speaker Relay on/off
56	PROTECT	I	Protector Input
57	BUP	I	Buck up Detect
58	LATCH	0	Volume IC Strobe
59	PERIOD	0	Tuner PLL Strobe
60	S1	0	FL Segment 1
61	S2	0	FL Segment 2
62	S3	0	FL Segment 3
63	S4	0	FL Segment 4
64	S5	0	FL Segment 5
65	S6	0	FL Segment 6
66	S7	0	FL Segment 7
67	S8	0	FL Segment 8
68	S9	0	FL Segment 9
69	S10	0	FL Segment 10
70	S11	0	FL Segment 11
71	VLOAD	-	
72	S12	0	FL Segment 12
73	S13	0	FL Segment 13
74	S14	0	FL Segment 14
75	S15	0	FL Segment 15
76	S16	0	FL Segment 16
77	11G	0	FL Grid 11
78	10G	0	FL Grid 10
79	9G	0	FL Grid 9
80	8G	0	FL Grid 8

-MEMO-

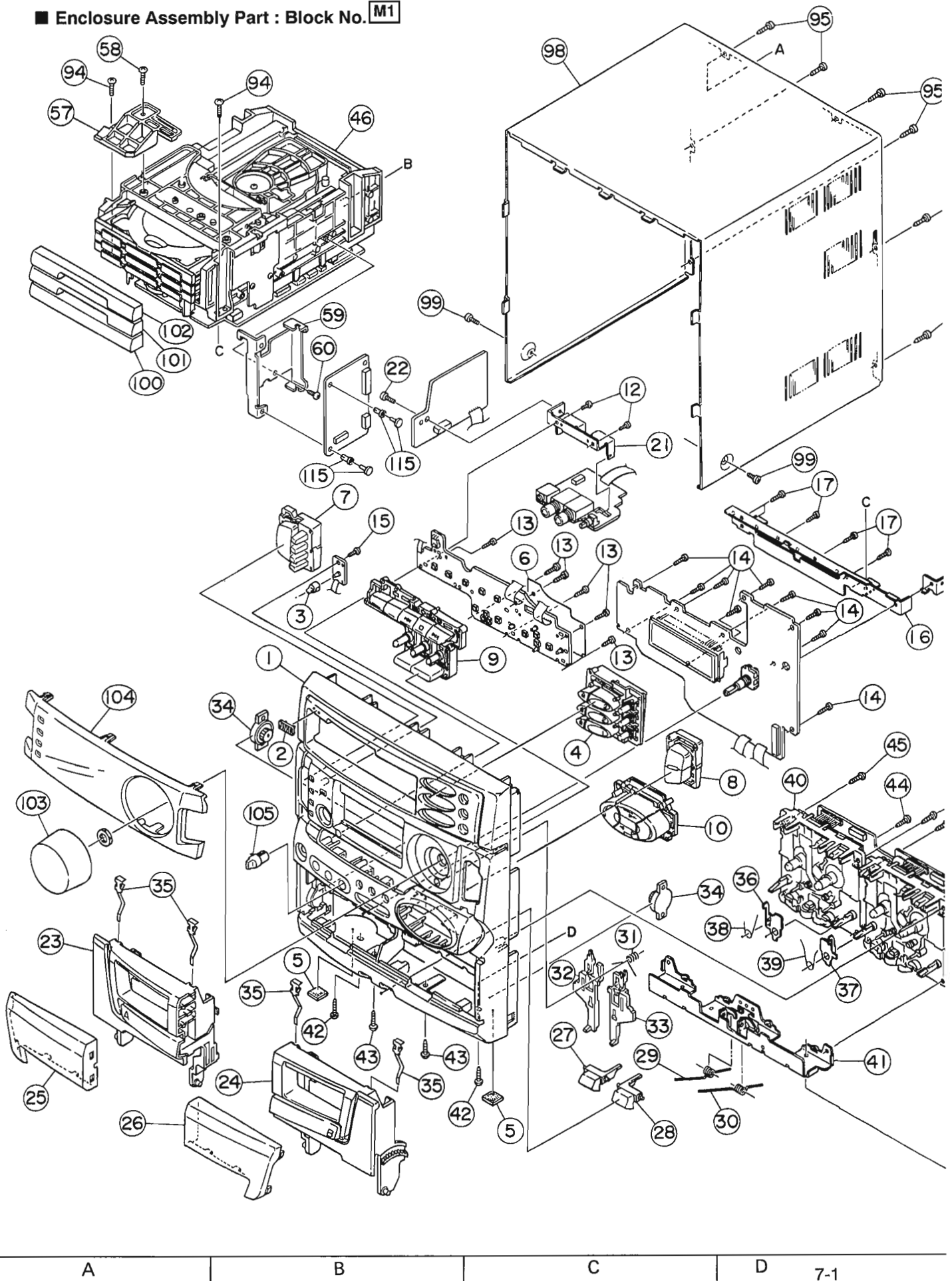
Wiring Connections





Analytic Drawing and Parts List

■ Enclosure Assembly Part : Block No. **M1**



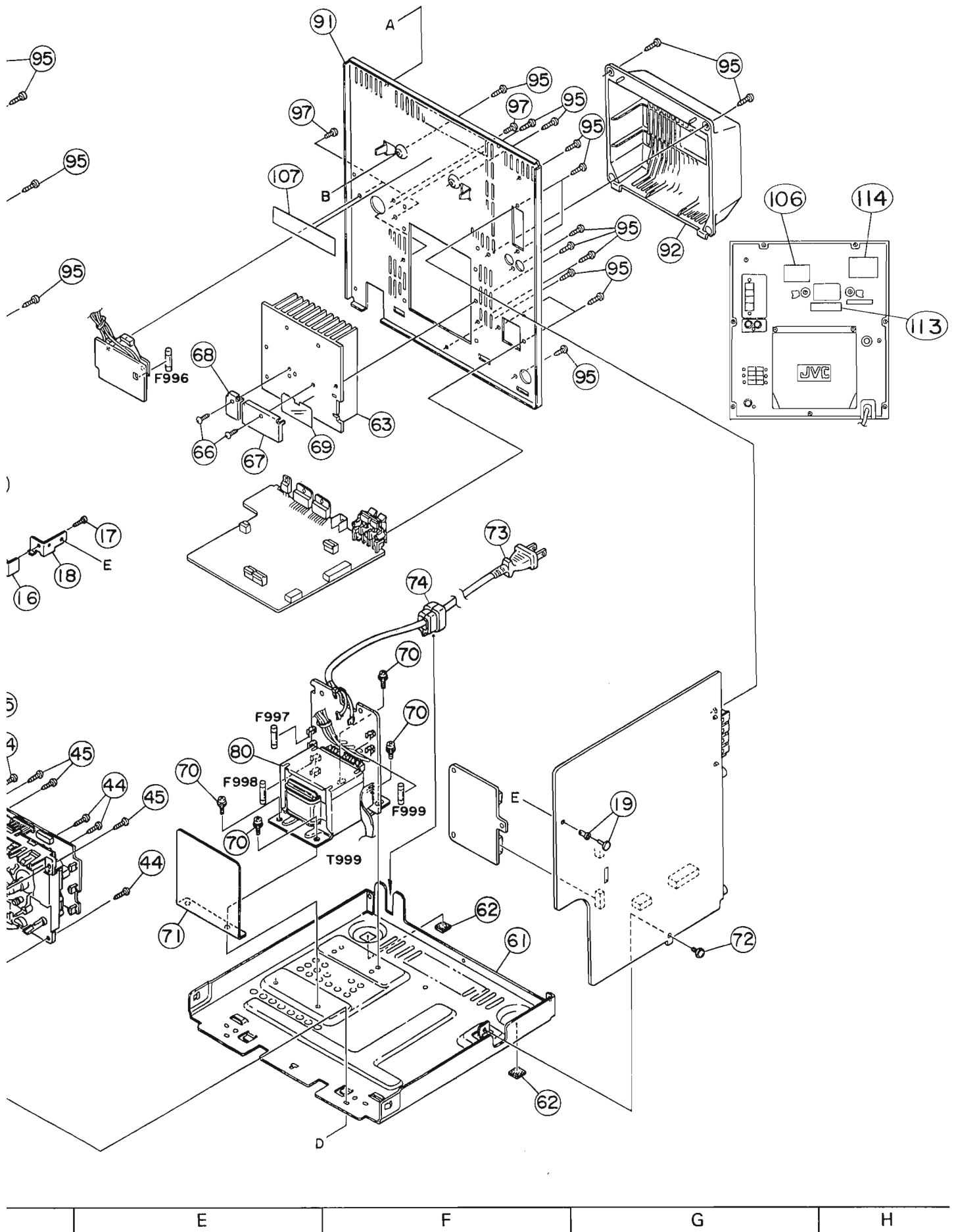
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MX-V505T



■ Enclosure Assembly Parts List

BLOCK NO. M1MM

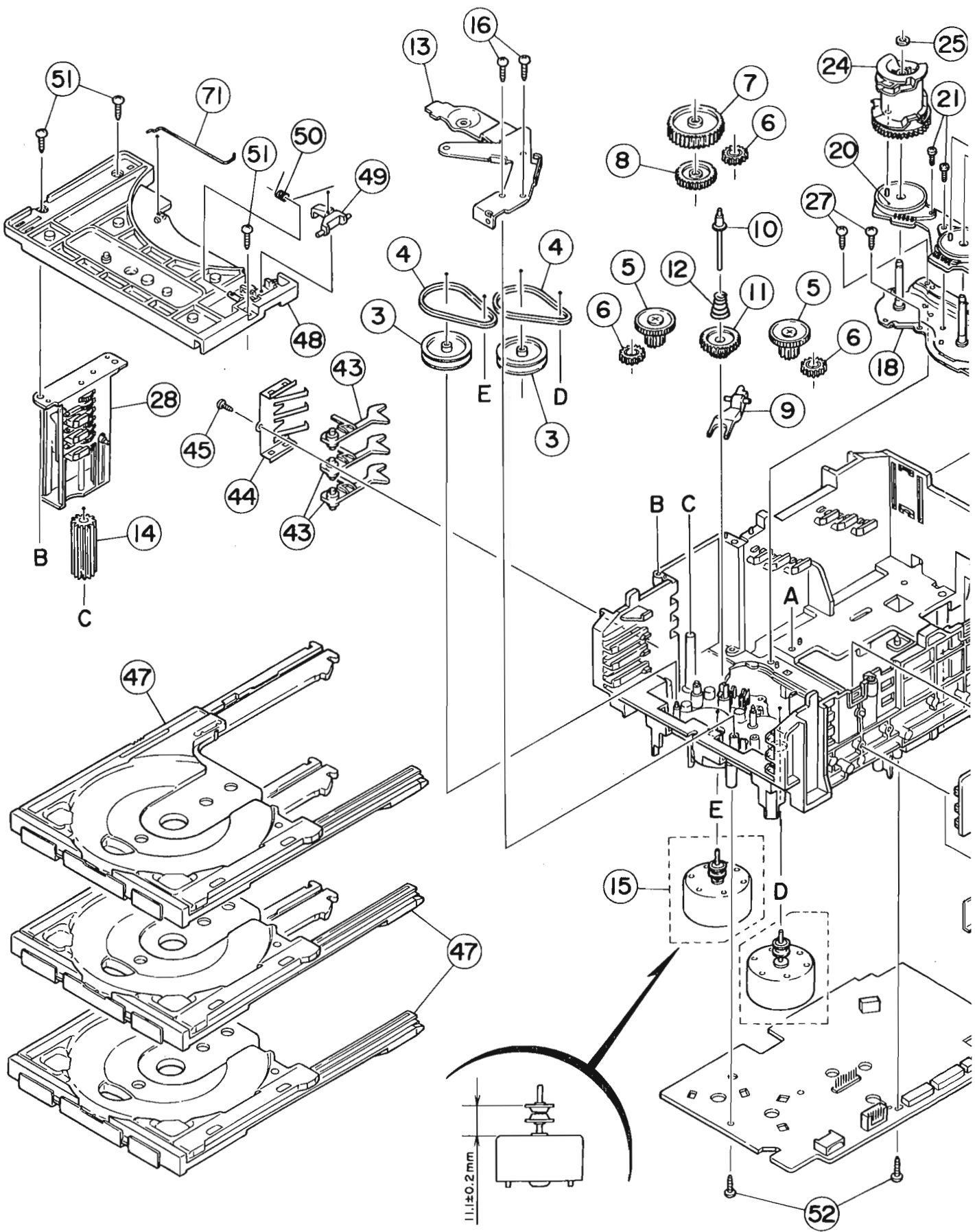
△ REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
1	FMJC1015-004KP	FRONT PANEL		1		
2	E406971-001SM	JVC MARK		1		
3	FMJK4013-001	STANDEBY INDICA		1		
4	FMXP2009-001	CD BOTTOM		1		
5	E75896-001	SPACER	FRONT PANEL FOO	2		
6	FMMA4004-001KP	PROTECT SHEET		1		
7	FMXP2004-006	POWER BUTTON	STANDBY/ON PRT.	1		
8	FMXP3017-002	SOUND BUTTON		1		
9	FMXP2003-002KP	CONTROL BUTTON		1		
10	FMXP2010-00BKP	FUN.BUTT.ASS'Y		1		
12	SBSF2610Z	SCREW	PHONES BRACKET	2		
13	GBSF2608Z	SCREW	SWITCH BOARD	6		
14	SDSF2608Z	SCREW	MICOM BOARD	9		
15	GBSF2608Z	SCREW	STANBY LED BOAR	1		
16	E309495-002SM	STAY BKT		1		
17	SDSF2608Z	SCREW	FOR STAY BRACKE	6		
18	FMKL4011-001	BRACKET		1		
19	FMYH4004-001	PLASTIC RIVET	MAIN BOARD&BKT.	1		
21	FMKL4014-001	PHONE BRACKET		1		
22	SBST3006Z	SCREW	ECHO B.PHONE BK	1		
23	FMJT2004-001	CASS HOLDER(L)		1		
24	FMJT2004-002	CASS HOLDER(R)		1		
25	FMJK2003-001	CASS LENS(L)		1		
26	FMJK2003-002	CASS LENS(R)		1		
27	FMXP3018-001	EJECT BUTTON(A)		1		
28	FMXP3019-001	EJECT BUTTON(B)		1		
29	FMKW4009-001	HOLDER SPRING A		1		
30	FMKW4010-001	HOLDER SPRING B		1		
31	FMKW4011-001	SPRING	FOR EJECT LEVER	1		
32	FMKS3002-001	EJECT LEVER (A)		1		
33	FMKS3003-001	EJECT LEVER (B)		1		
34	VYH7779-00B	DUMPER ASS'Y		2		
35	VKY4180-001	CASSETTE SPRING		4		
36	FMKL4012-003	EJECT SAFETY(A)		1		
37	FMKL4013-001	EJECT SAFETY(B)		1		
38	FMKW4007-001	SPRING (A)	EJECT SAFETY A	1		
39	FMKW4008-001	SPRING (B)	EJECT SAFETY B	1		
40	-----	CASSETTE MECHA		1		
41	FMKL2002-001	HOLDER BRACKET		1		
42	SBSG3010Z	T.SCREW	F.P.TO H.BRKT.	2		
43	SBSG3010Z	T.SCREW	F.P.TO CHS.BASE	2		
44	SBSG3010Z	T.SCREW	MECHA & H.BRKT.	4		
45	SBSF3010Z	SCREW	MECHA & F.PANEL	4		
46	-----	CHANGER MECHA		1		
57	E309662-001	DISC STOPPER		1		
58	SBSF3008Z	SCREW	FOR DISC STOPPE	1		
59	FMKL4016-001KP	BRACKET	FOR VIDEO BOARD	1		
60	SBSF2608Z	SCREW	BRACKET & CHANG	1		
61	FMKL1004-002	CHASSIS BASE		1		
62	E75896-006	FELT SPACER	CHAS.BASE FOOT	2		
63	FMMH3005-001	HEAT SINK		1		
66	SBSG3014CC	T.SCREW	POWER IC& TRANS	2		
67	FMKL4007-001	BRACKET	FOR POWER IC	1		
68	FMKL4015-001	BRACKET	FOR TRANSISTOR	1		
69	FMPK4003-001	MICA SHEET		1		

BLOCK NO. M1MM

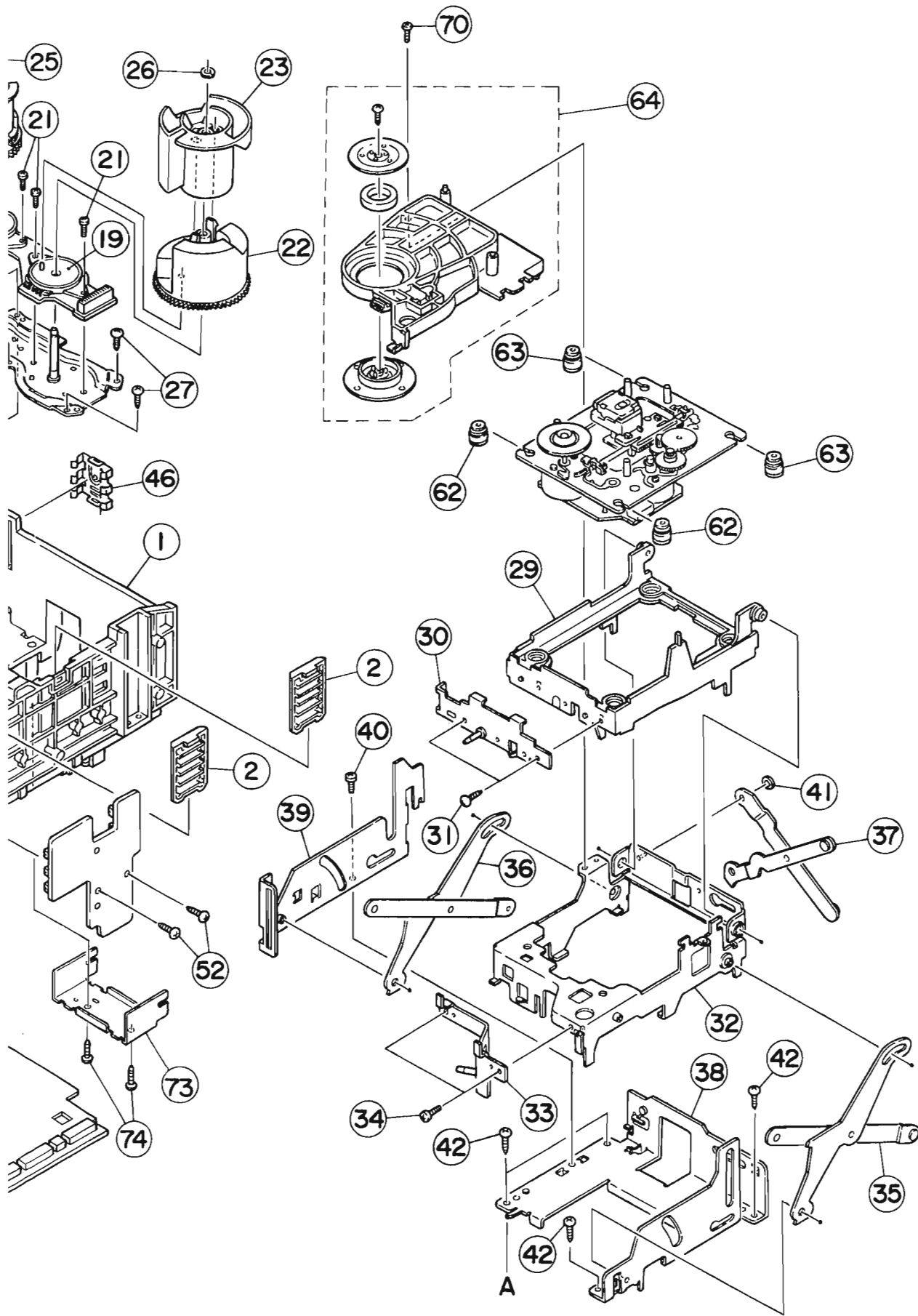
REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
70	E65389-002	SPECIAL SCREW		4		
71	FMMA4003-001	TRANS.SHIELD		1		
72	GBST3006Z	SCREW	M.BOARD & C.BAS	1		
73	QMP7520-200	POWER CORD		1	UF,UT,U	
	QMP39E0-200	POWER CORD		1	US	
	QMP5530-0085BS	POWER CORD		1	UB	
74	QHS3771-108	CORD STOPPER		1		
91	FMJC1016-016KP	REAR PANEL		1		
92	E207356-001SM	REAR COVER		1		
94	SBSG3008Z	T.SCREW	C3 & STAY BRKT.	2		
95	E73273-003	SPECIAL SCREW		21		
97	E73273-003	SPECIAL SCREW	VOL.SEL/R.PANEL	2		
98	FMJC1013-005	METAL COVER		1		
99	SDSG3006M	T.SCREW		2		
100	FMJD2003-004KP	CD FITTING		1		
101	FMJD2003-002	CD FITTING		1		
102	FMJD2003-005KP	CD FITTING		1		
103	FMXL3001-001	MAIN VOL KNOB		1		
104	FMJK2004-004KP	WINDOW SCREEN		1		
105	E408765-004SM	MIC KNOB		1		
106	E70891-001	CLASS 1 LABEL		1		
107	E406709-001	LASER CAUTION		1		
113	LE40210-001A	CAUTION LABEL		1	UT	
114	FMND3007-009	RATING LABEL		1	UT	
115	E310243-002	PLASTIC RIVET	BRACKET & V. BO	2		
F 996	QMF51E2-R80SBS	FUSE		1		
F 997	QMF51E2-1R25	FUSE		1		
F 998	QMF51E2-1R25	FUSE		1		
F 999	QMF51E2-1R6J1	FUSE		1		
T 999	FMP66U8-65A	TRANSFORMER		1		

■ CD Traverse Mechanism Part : Block No. **M2**

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MX-V505T



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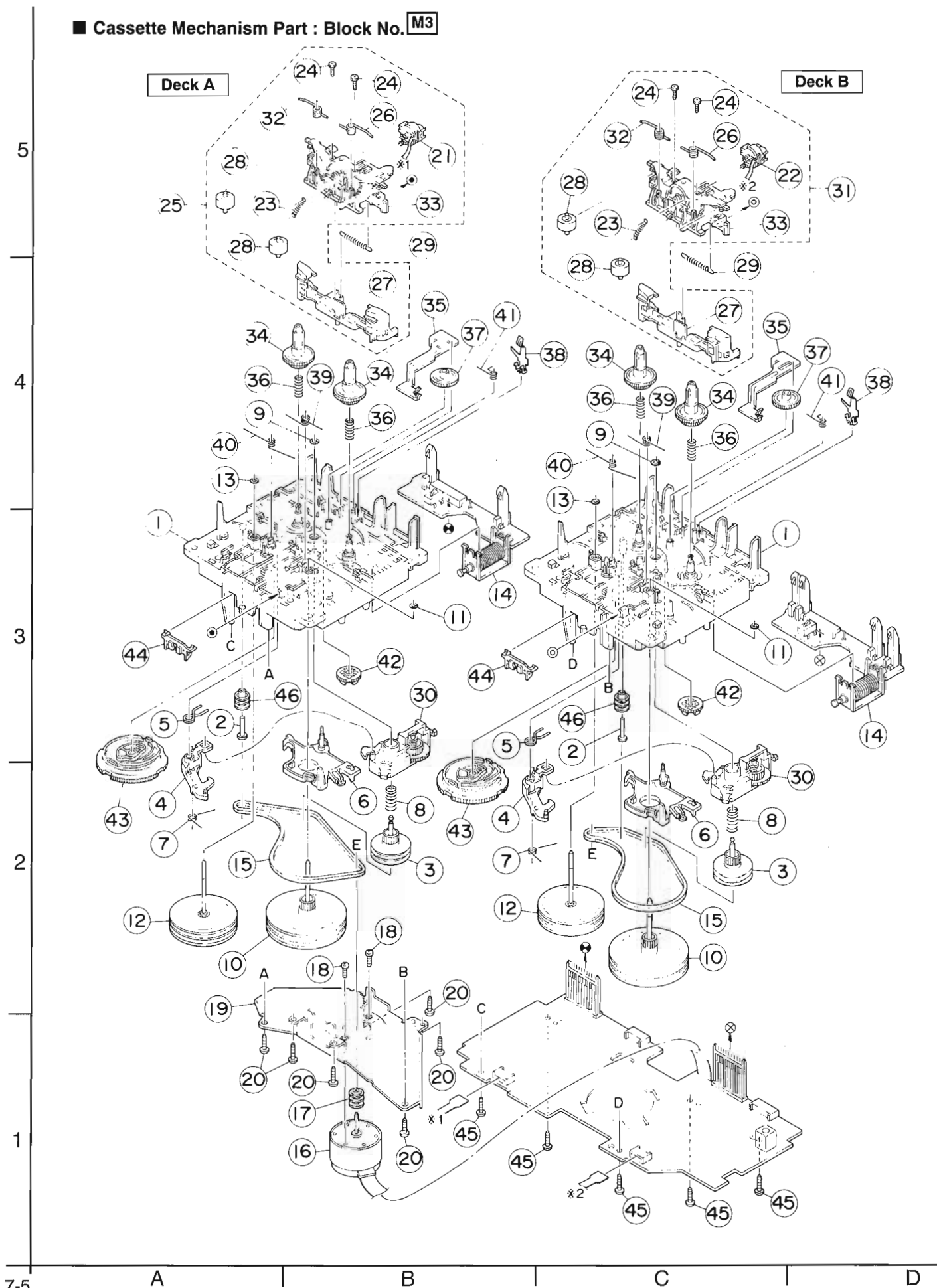
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■ CD Traverse Mechanism Parts List

BLOCK NO. M2MM

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	1	VKS1144-003	AHASSIS		1		
	2	VKS3698-003	TRAY GUIDE		2		
	3	VKS5532-003	PULLEY GEAR		2		
	4	VKB3000-164	BELT		2		
	5	VKS5505-003	GEAR B		2		
	6	VKS5506-002	GEAR C		3		
	7	VKS5507-002	CROSS GEAR U		1		
	8	VKS5508-002	CROSS GEAR L		1		
	9	VKS5510-003	SELECT LEVER		1		
	10	VKH5769-001	S.G.SHAFT		1		
	11	VKS5511-002	SELECT GEAR		1		
	12	VKW5155-003	COMP.SPRING	FOR SELECT GEAR	1		
	13	VKM3846-002	GEAR BRACKET		1		
	14	VKS5509-002MM	CYLINDER GEAR		1		
	15	MSN5D257A-SA2	DC MOTOR ASS'Y		2		
	16	DPSP2616Z	SCREW	FOR MOTOR	2		
	18	VKM3825-00AMM	C.G.BASE ASS'Y		1		
	19	VKZ3172-00A	CAM SW. R ASS'Y		1		
	20	VKZ3173-00A	CAM SW. L ASS'Y		1		
	21	SPST2606Z	SCREW	FOR CAM SW.	3		
	22	VKS2263-002MM	CAM R1		1		
	23	VKS2264-002MM	CAM R2		1		
	24	VKS2265-002MM	CAM GEAR L		1		
	25	WDL316050	SLIT WASHER	FOR CAM GEAR L	1		
	26	WDL316050	SLIT WASHER		1		
	27	SBSF2608Z	SCREW	FOR C.GEAR BASE	4		
	28	VKS3702-00FMM	DRIVE UNIT		1		
	29	VKS2247-004	MECHA HOLDER A		1		
	30	VKL7767-00B	BRACKET ASS'Y		1		
	31	SBSF2606Z	SCREW	FOR BRACKET	2		
	32	VKM3860-00A	M.HOLDER B AS'Y		1		
	33	VKL7802-00C	M.HOLDER C AS'Y		1		
	34	SDST2604Z	SCREW	FOR M.HOLDER C	2		
	35	VKL7810-00A	LIFTER ASS'Y R		1		
	36	VKL7811-00A	LIFTER ASS'Y L		1		
	37	VKL7812-00A	LIFTER ASS'Y H		1		
	38	VKL2732-002	LIFTER BASE		1		
	39	VKM3823-001	LIFTER BRACKET		1		
	40	SDST2604Z	SCREW		1		
	41	WDL266035-2	SLIT WASHER		1		
	42	SBSF2608Z	SCREW		4		
	43	VKS5514-002MM	LOCK LEVER		3		
	44	VKY3133-002MM	RETURN SPRING		1		
	45	SBSF2608Z	SCREW	FOR RETURN SP.	1		
	46	VKY3134-003MM	CLICK SPRING		1		
	47	VKS2252-00DMM	TRAY ASS'Y		3		
	48	VKS2250-003	TOP BRACKET		1		
	49	VKS5515-002	S.TRAY STOPPER		1		
	50	VKW5156-004	TORSION SPRING		1		
	51	SBSF2608Z	SCREW		3		
	52	SBSF2608Z	SCREW		4		
	62	FMYH4003-002	INSULATOR		2		
	63	FMYH4003-001	INSULATOR		2		
	64	VKS3703-00F	CLAMPER ASS'Y		1		
	65	-----	CD MECHA.ASS'Y		1		
	70	SPST2606Z	SCREW		1		
	71	VKW5187-001	ROD		1		
	72	VYSA1R2-033	SPACER	FOR EWS176-008	1		
	73	LE30611-001AKP	C.B HOLDER	FOR CD CB	1		
	74	SBSF3008Z	SCREW	FOR HOLDER	2		

■ Cassette Mechanism Part : Block No. **M3**



■ Cassette Mechanism Parts List

BLOCK NO. M3MM

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	1	VKS1165-00D	CHASSIS B. ASSY		2		
	2	VKH5786-002	SHAFT		2		
	3	VKR3199-001	MAIN PULLEY		2		
	4	VKS3785-001MM	FR ARM		2		
	5	VKW5284-002	SWING SPRING		2		
	6	VKS2278-001	TRIGGER ARM		2		
	7	VKW5301-001	FR SPRING		2		
	8	VKW5266-001	ELEVATOR SPRING		2		
	9	WDL214025	WASHER		2		
	10	VKF3205-00B	F.WHEEL ASSY(R)		2		
	11	WDL183425	SLIT WASHER		2		
	12	VKF3207-00B	F.WHEEL ASSY(L)		2		
	13	WDL173525-6	SLIT WASHER		2		
	14	VGP2401-00A	DC SOLENOID		2		
	15	VKB3000-174	CAPSTAN BELT(B)		2		
	16	MSI-5U2LWA	D.C.MOTOR ASS'Y		1		
	17	VKR4761-001	MOTOR PULLEY		1		
	18	SPSP2604Z	SCREW		2		
	19	VKM3907-001	JOINT BRACKET		1		
	20	SBSF2608Z	SCREW		6		
	21	VGH0424-037	HEAD ASS'Y	PB SIDE	1		
	22	VGH0425-544	HEAD ASS'Y	R/P&ESIDO	1		
	23	VKW5302-001	HEAD SPRING		2		
	24	VKZ4730-001	SPECIAL SCREW		4		
	25	VKS2279-00CKP	HEAD MOUNT ASSY		1		
	26	VKW5299-001	PIN.ROL.SP.(R)		2		
	27	VKS2277-005	DIRECTION LEVER		2		
	28	VKP4233-00A	PINCH ROL. ASSY		4		
	29	VKW5285-001	RETURN SPRING		2		
	30	VKS3786-00EKP	CLUTCH ASSY		2		
	31	VKS2275-00C	HEAD MOUNT ASSY		1		
	32	VKW5300-001	PIN.ROL.SP.(L)		2		
	33	VKS1167-001KP	HEAD MOUNT BASE		2		
	34	VKS2274-002	REEL GEAR		4		
	35	VKM3906-002	PLAY SW.LEVER		2		
	36	VKW5286-002	B.T. SPRING		4		
	37	VKS5559-001	PLAY IDLE GEAR		2		
	38	VKY3149-001	CASSETTE SP.		2		
	39	VKW5279-001	HEAD BASE SP(R)		2		
	40	VKW5280-001	HEAD BASE SP(L)		2		
	41	VKW5296-001	EARTH SPRING		2		
	42	VKS5560-001	FR IDLE GEAR		2		
	43	VKS1166-001	CONTROL CAM		2		
	44	VKS5577-001	FPC HOLDER		2		
	45	SBSF2608Z	SCREW	FOR P.W.B.	5		
	46	VKR4749-002	IDLE PULLEY		2		

■ CD Mechanism Part : Block No. **M4**

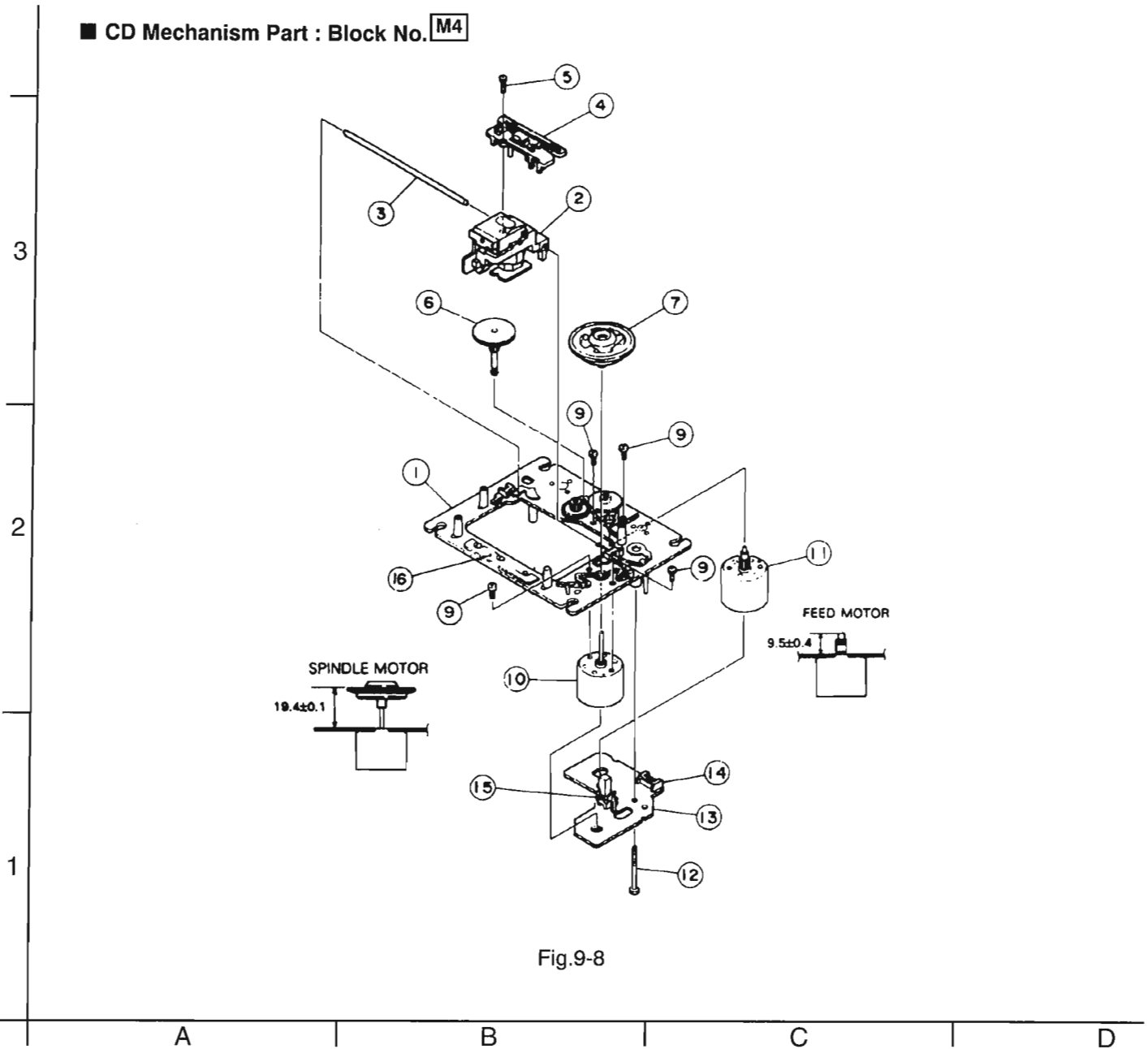


Fig.9-8

■ CD Mechanism Parts List

BLOCK NO. **M4**

△ REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
1	EPB-002A	MECHA BASE ASSY		1		
2	OPTIMA-6S	C.D PICK UNIT	E11363	1		
3	E407782-001	CD SHAFT		1		
4	E307746-001	CD RACK		1		
5	SDSF2006Z	SCREW		1		
6	EPB-003A	MECHA GEAR		1		
7	E75807-302	TURN TABLE		1		
9	SDSP2003N	SCREW	FOR SP MOTOR	4		
10	E406783-001	SP MOTOR		1		
11	E406784-001SA	FEED MOTOR		1		
12	E75832-001	S.SCREW	FOR M.CB	1		
13	EMW10190-001	PRINTED BOARD		1		
14	EMV5109-006B	CONN.TERMINAL		1		
15	ESB1100-005	LEAF SWITCH		1		
16	E407212-001	DAMPER		1		

Block Diagrams

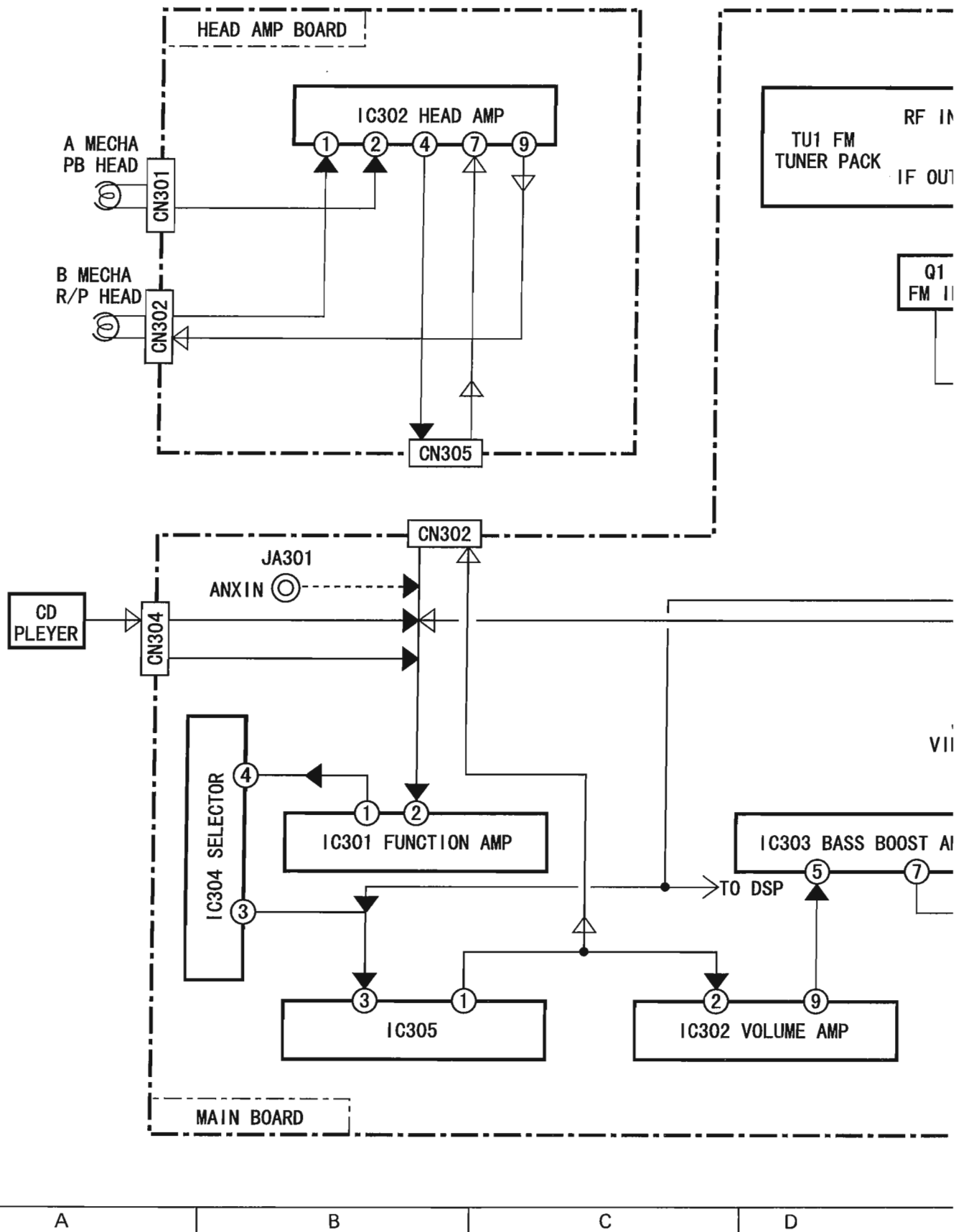
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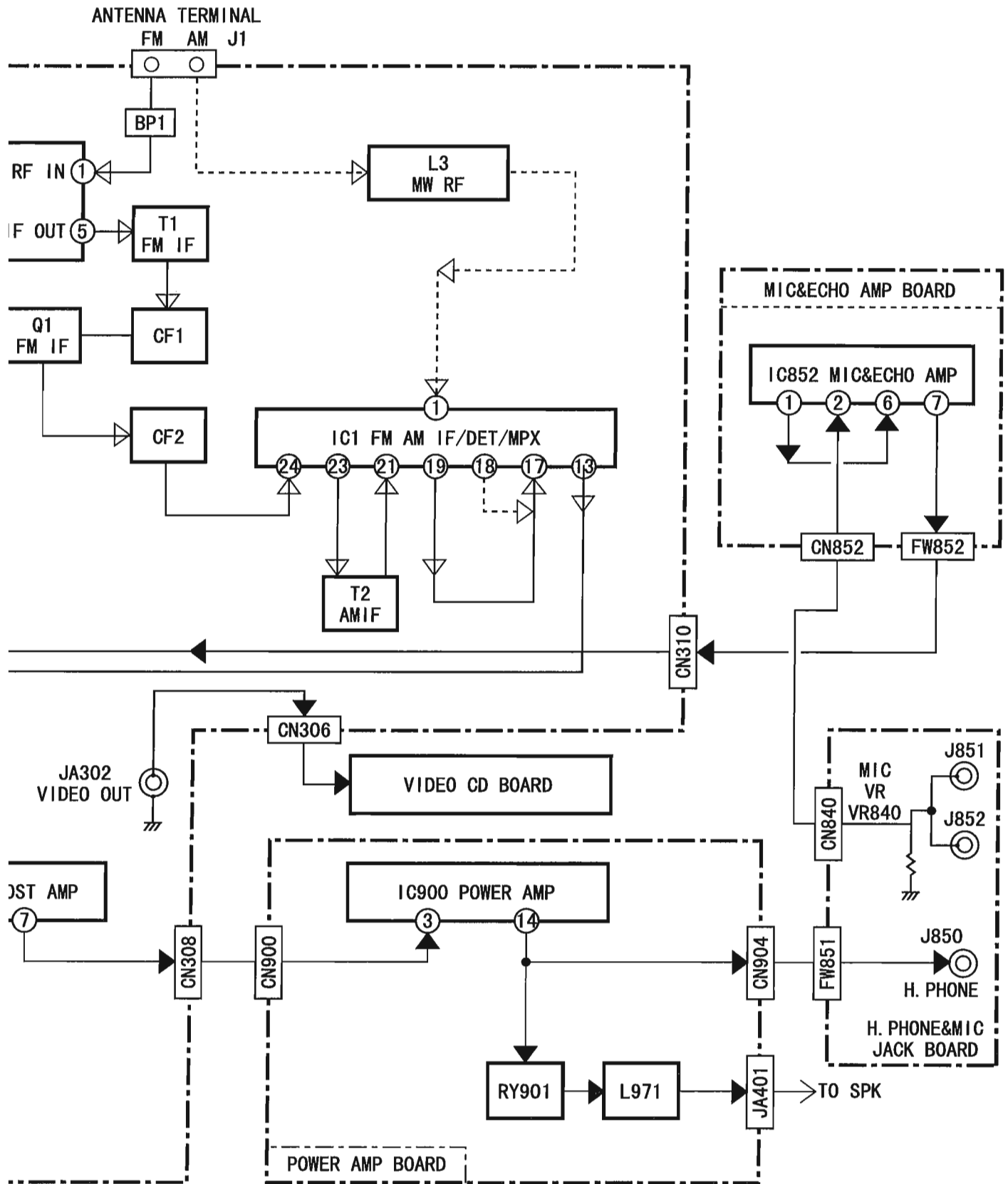
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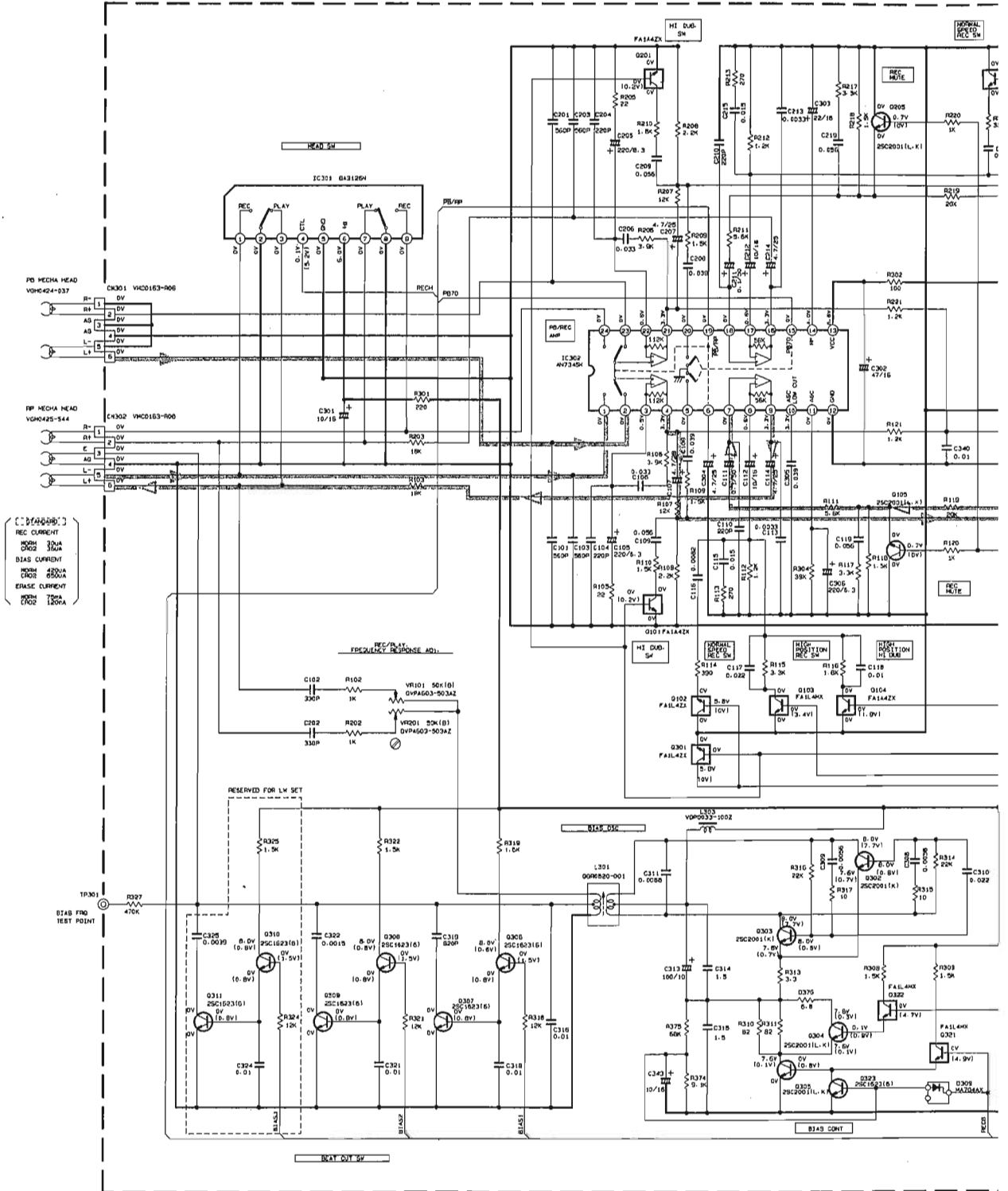


VII



Standard Schematic Diagrams

Head Amplifier & Mechanism Control Circuit



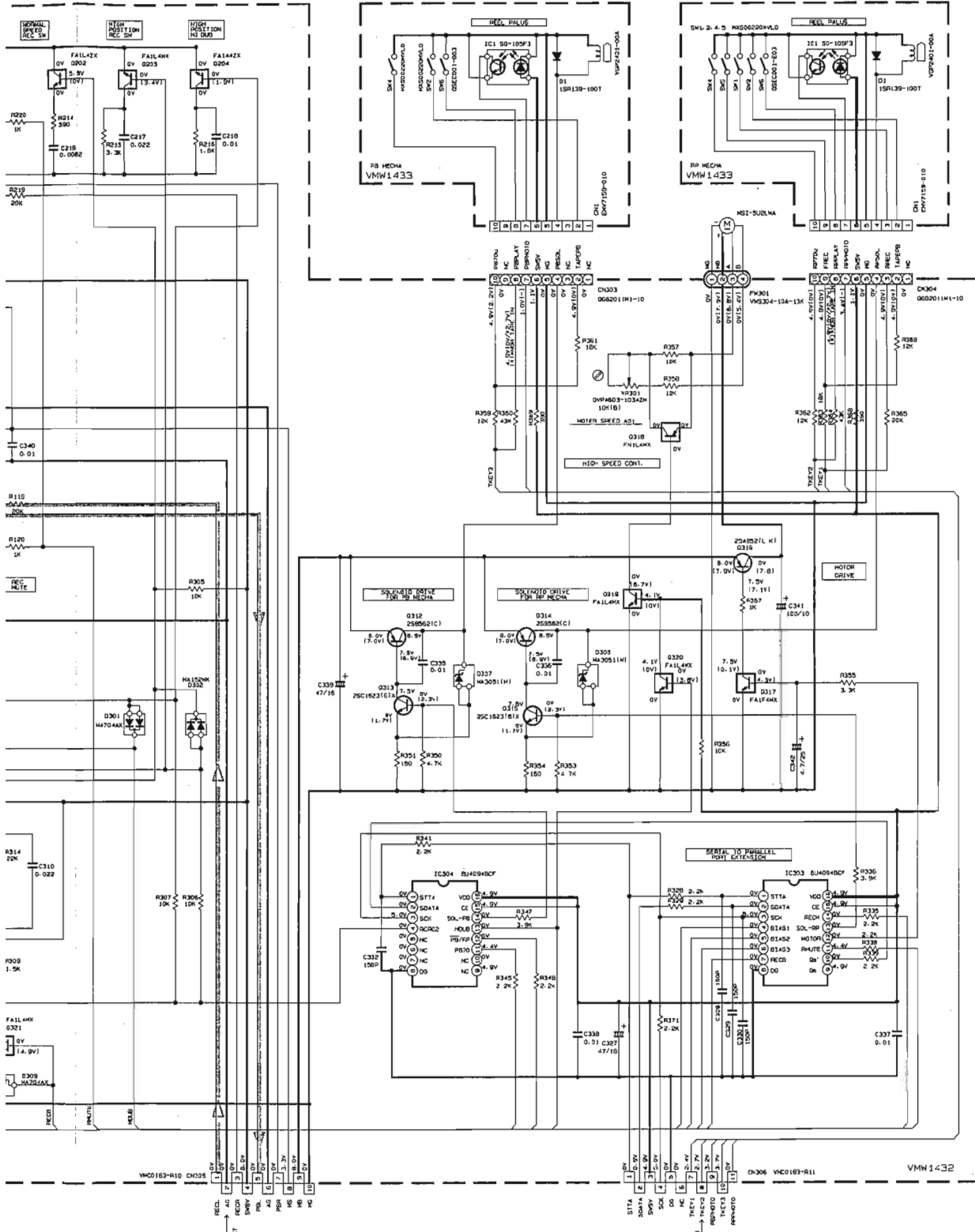
- REC CURRENT
- BIAS CURRENT
- ERASE CURRENT

NOTES
 1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL. | | IS INVERT MODE
 2. UNLESS OTHERWISE SPECIFIED
 ALL RESISTANCE VALUES ARE IN OHMS (Ω).
 ALL CAPACITORS ARE CERAMIC CAPACITOR
 ALL CAPACITANCE VALUES ARE IN μF (PF=10⁻⁶).
 ALL INDUCTANCE VALUES ARE IN mH (MH=10⁻³).
 ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).
 PLYPROPYLENE CAPACITOR

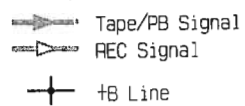
TABLE 1: DIGITAL TR LIST

PART-NO	CONSTRUCTION	REF. NO
FA1L4H		0310
FA1L4Z		0101/0201 0104/0204
FA1L4Z		0102/0202 0301

Note : VDH103301pv(/s/G)



U002	0317
U001	0103/0203
	0319
	0320/0321/0322



CD Servo Control & Traverse Mechanism Control Circuit

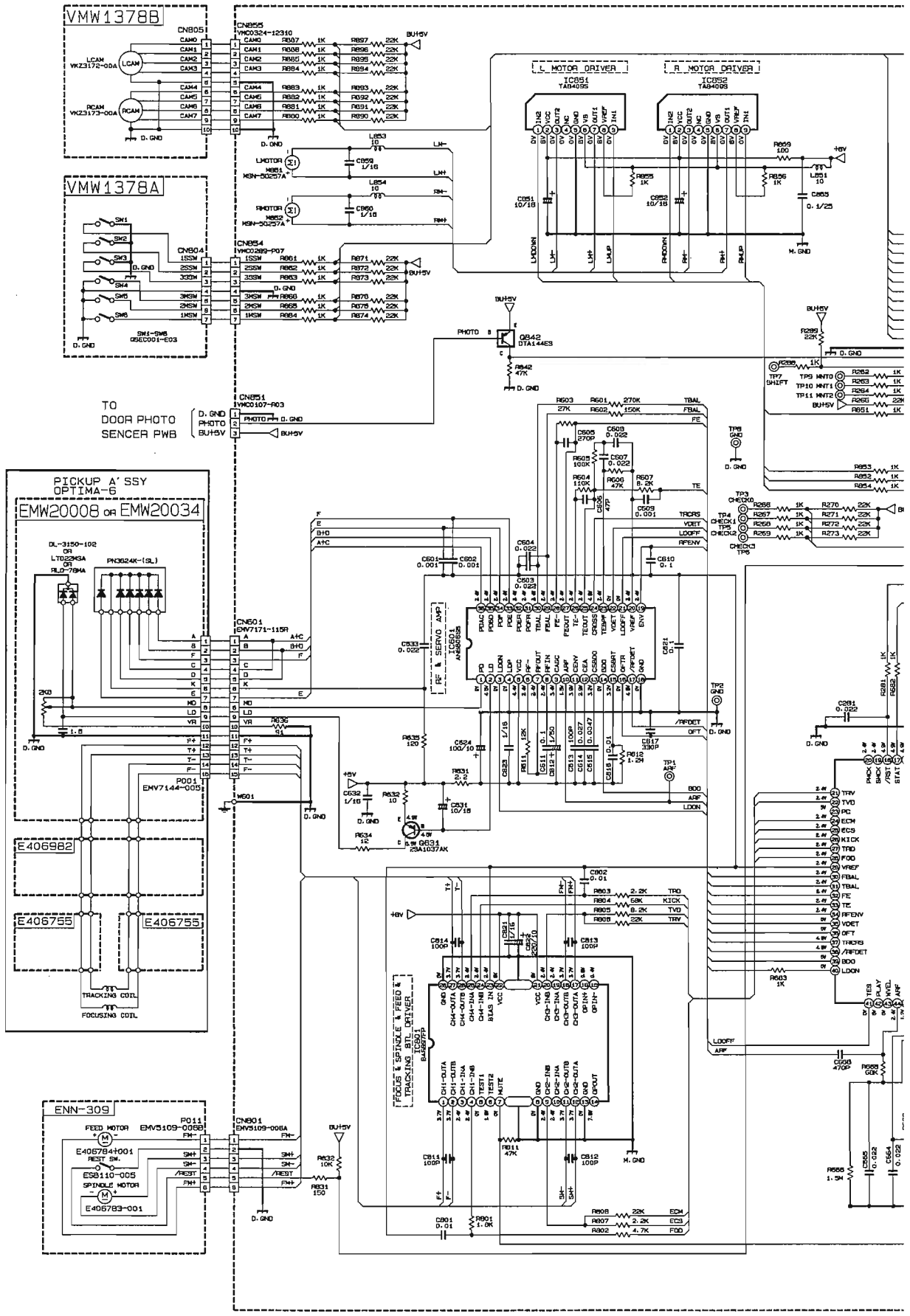
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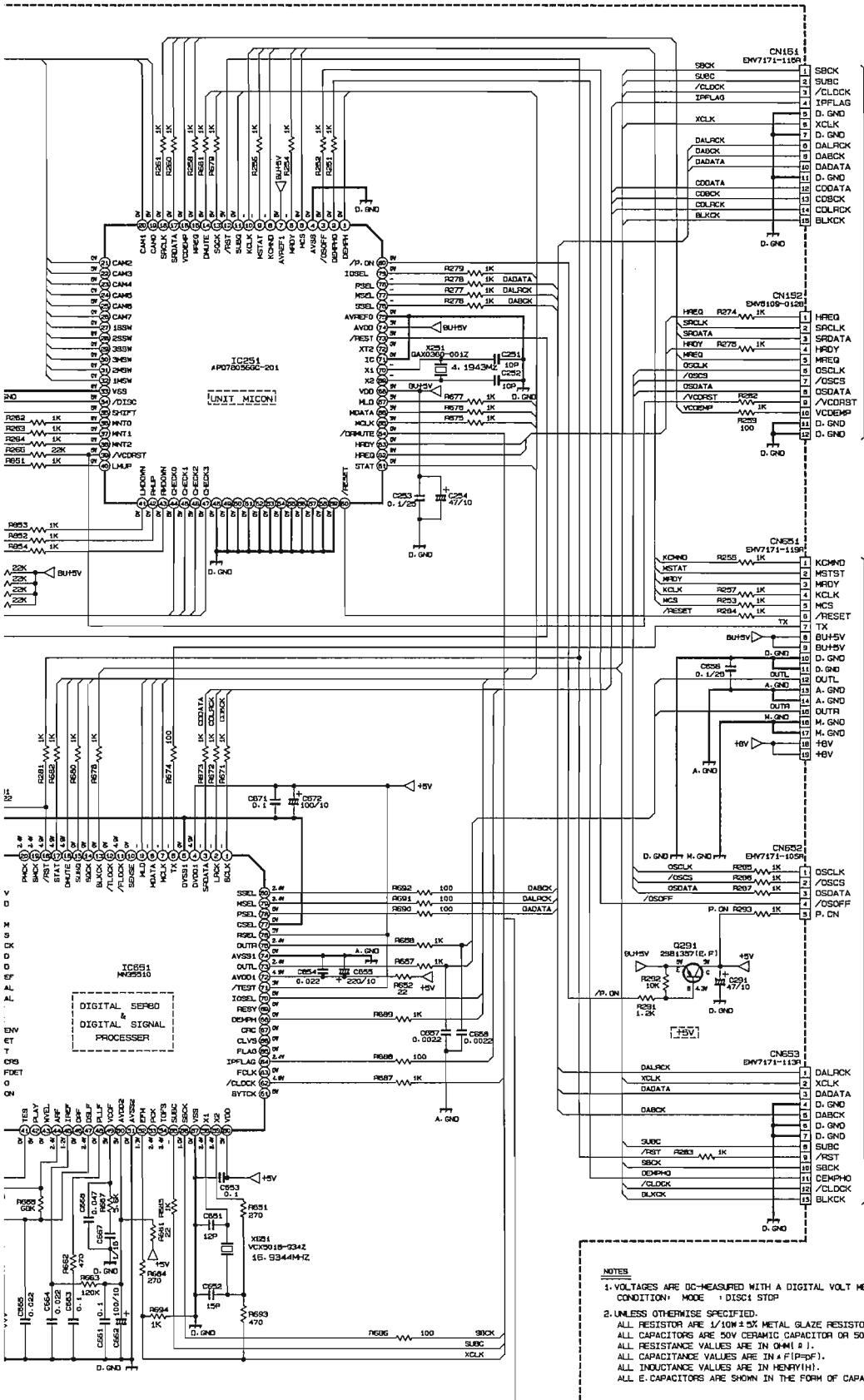


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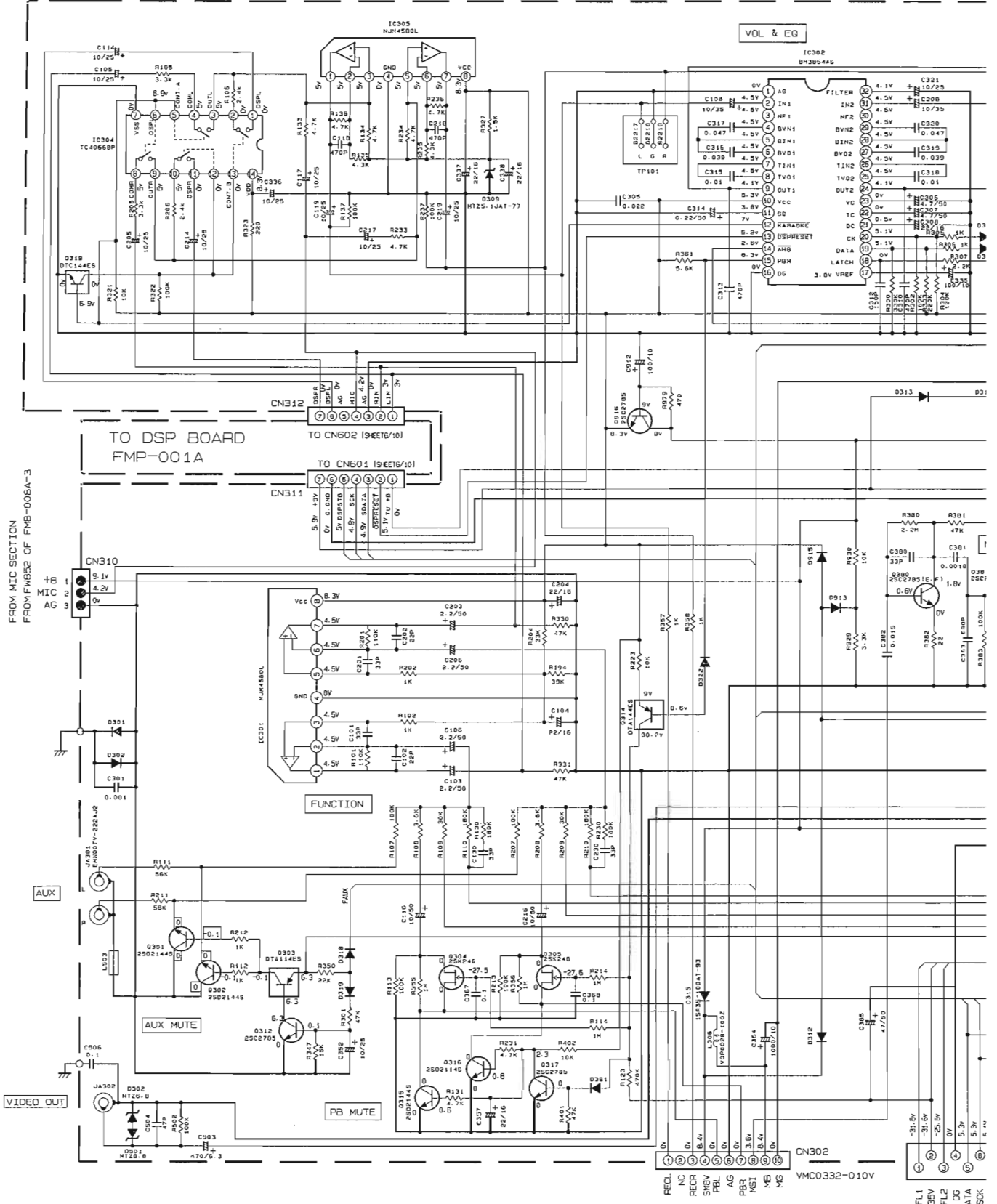
TO ENV-004 VIDEO CD BOARD

TO AMP

- NOTES**
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER
CONDITION: MODE = DISC1 STOP
 2. UNLESS OTHERWISE SPECIFIED.
ALL RESISTOR ARE 1/10W ± 5% METAL GLAZE RESISTOR.
ALL CAPACITORS ARE 50V CERAMIC CAPACITOR OR 50V MYLAR CAPACITOR.
ALL RESISTANCE VALUES ARE IN OHM (Ω).
ALL CAPACITANCE VALUES ARE IN nF (nF) OR pF (pF).
ALL INDUCTANCE VALUES ARE IN HENRY (H).
ALL E. CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (± F1) / RATED VOLTAGE (V).

EMW10729

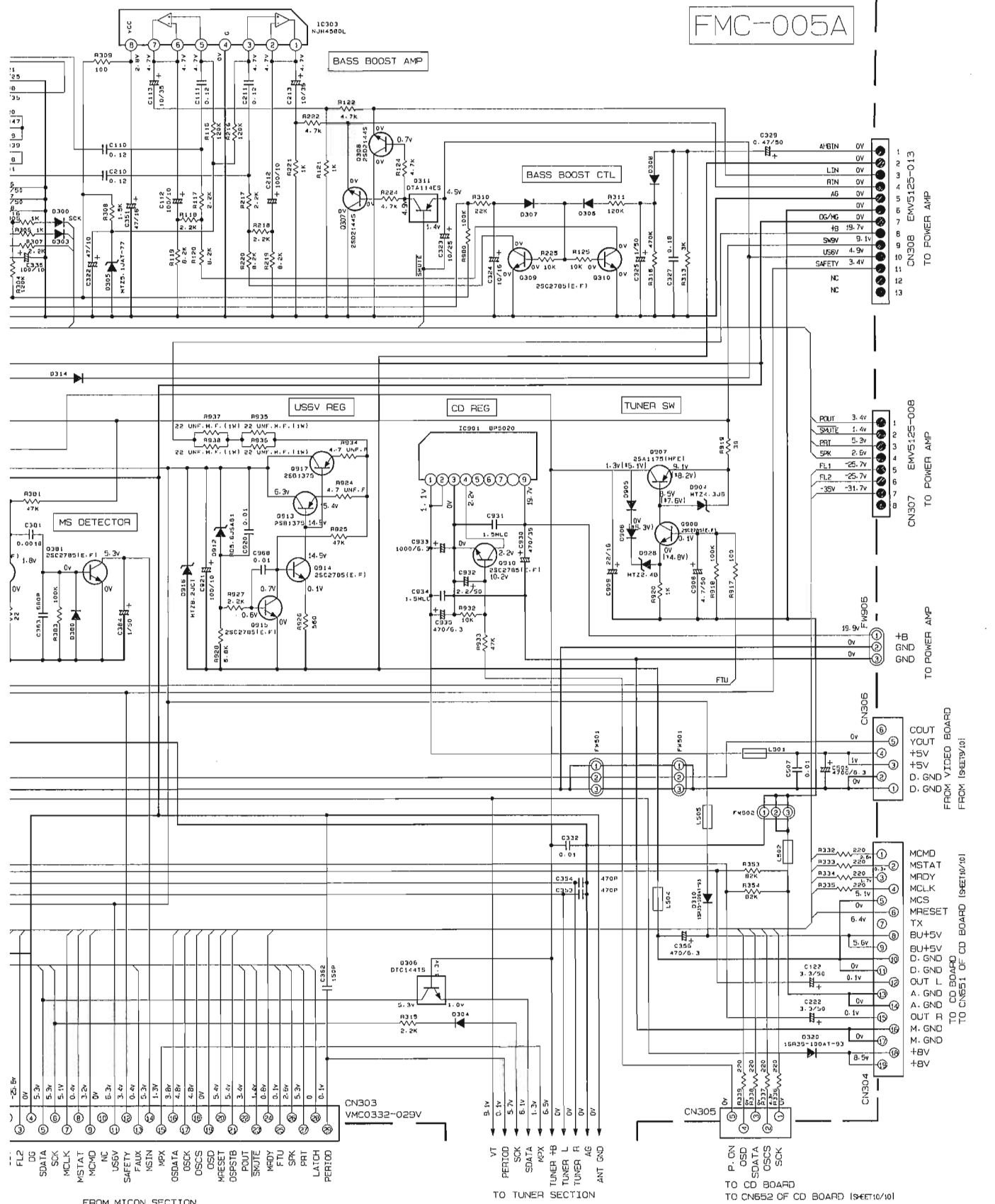
■ Fuction & Bass Boost Amplifier / Regulator Circuit



NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL.
CONDITION --- CD MODE
VOLTAGE VALUE MARKED * IS IN TUNER POSITION
2. UNLESS OTHERWISE SPECIFIED, RESISTORS ARE 1/8W, 5% CARBON RESISTOR.
ALL RESISTANCE VALUES ARE IN OHM(Ω).
ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR CAPACITOR.
ALL CAPACITANCE VALUES ARE IN μF(μF).
ALL INDUCTANCE VALUES ARE IN mH(mH).
ALL C CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).
ALL DIODES ARE 1SS133T-77 (INDI INDICATE 0100E)
ALL MPN TRANSISTORS ARE 2SC930(S,T) OR 2SC2785(E,F).

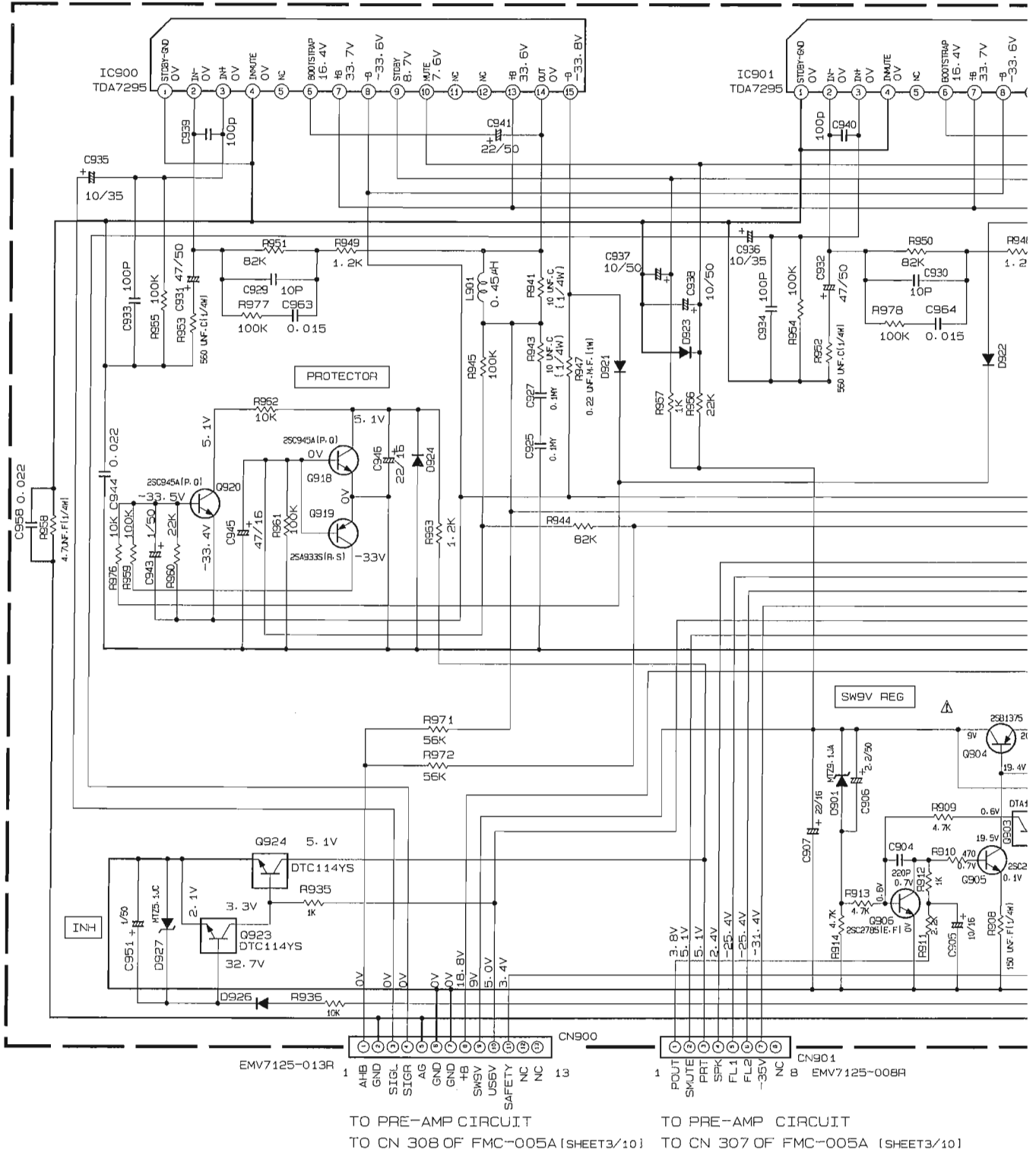
FMC-005A



FROM MICON SECTION
FROM CN701 OF FMB-00BA-1 (194ET10/10)

TO TUNER SECTION
TO CD BOARD
TO CN552 OF CD BOARD (194ET10/10)

Power Amplifier & Regulator Circuit



NOTE:

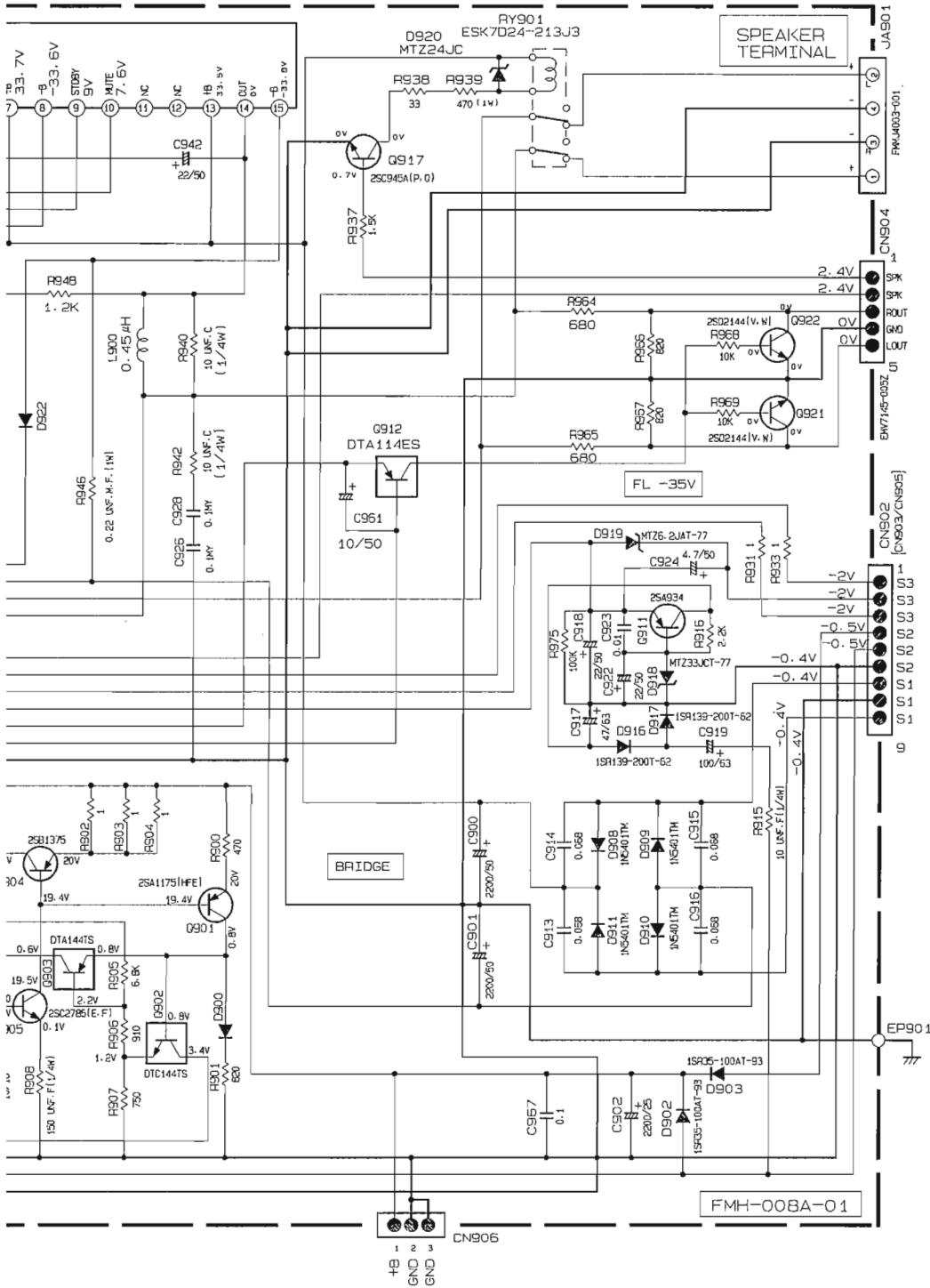
- VOLTAGES ARE DC-MEASURED USING AN OSCILLOSCOPE WITHOUT INPUT SIGNAL CONDITION.
- UNLESS OTHERWISE SPECIFIED
ALL RESISTORS ARE 1/8W ± 5% CARBON RESISTOR.
ALL CAPACITORS ARE 50V CERAMIC CAPACITOR OR 50V NYLON CAPACITOR.
ALL RESISTANCE VALUES ARE IN OHMS (Ω).
ALL CAPACITANCE VALUES ARE IN μF (PpF).
ALL CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE/μF/RATED VOLTAGE (V).
ALL DIODES ARE 1SS133T-77 TYPE.
Ⓢ POLYPROPYLENE CAPACITOR
Ⓣ 50V ± 5% NYLON CAPACITOR OR 50V ± 5% THIN FILM CAPACITOR
- THOSE PART WITH BRACKET IS NOT USED.
FOR RESISTOR IT WOULD BE A SHORT.
FOR CAPACITOR IT WOULD BE AN OPEN.

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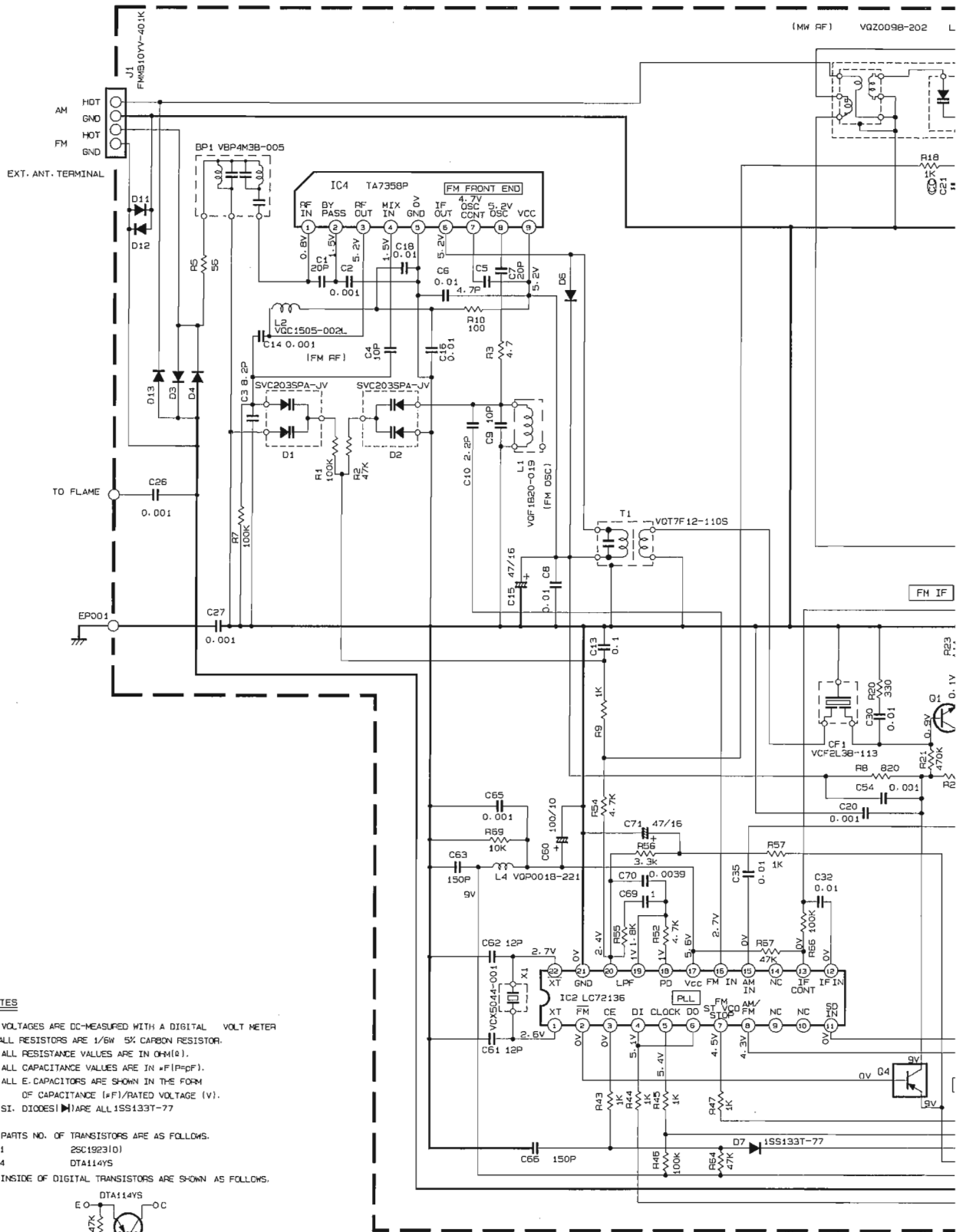


TO HEADPHONE BOARD
 TO FW851 OF FMB-008A-4 (SHEET5/10)

FROM TRANSFORMER BOARD
 FROM FW999 FMH-008A-02 (SHEET1/10)

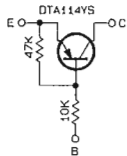
TO PRE-AMP CIRCUIT
 TO FW906 OF FMC-005A (SHEET3/10)

■ Tuner Circuit



NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER
2. ALL RESISTORS ARE 1/6W 5% CARBON RESISTOR.
3. ALL RESISTANCE VALUES ARE IN OHM(Ω).
4. ALL CAPACITANCE VALUES ARE IN *P(F)=P(F).
5. ALL E. CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (P F)/RATED VOLTAGE (V).
6. SI. DIODES (▶) ARE ALL 1SS133T-77
7. PARTS NO. OF TRANSISTORS ARE AS FOLLOWS.
 01 2SC1923(10)
 04 DTA114YS
8. INSIDE OF DIGITAL TRANSISTORS ARE SHOWN AS FOLLOWS.

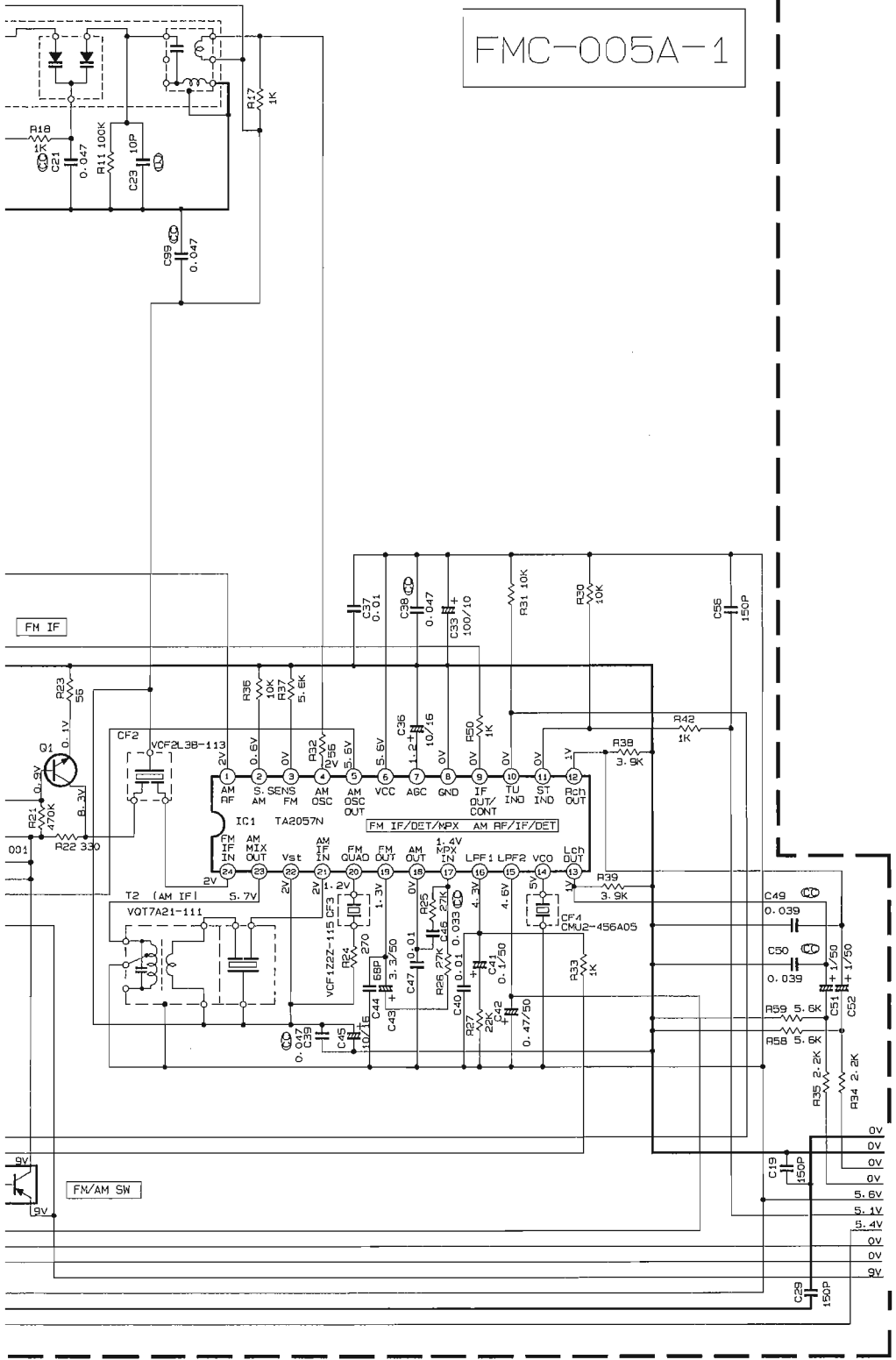


CONNECTION	PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Tr
IC1	FM NO SIGNAL	2.0	0.6	0	2.0	3.2	5.2	0.9	0	0	5.2	5.2	1.1	1.1	4.5	3.7	3.7	1.4	0	1.2	1.2	2.0	0.5	2.2	0	FM 7
IC1	FM 60dB STEREO	2.0	0.6	0	2.0	4.3	4.4	1.1	0	0	0	1.1	1.1	4.4	4.4	3.7	1.4	0	1.3	1.1	2.0	0.5	2.2	0	0	AM 5
IC1	AM NO SIGNAL	2.0	0.6	0	2.0	4.0	5.2	0	0	0	5.2	5.2	1.1	1.1	4.8	0.8	0.2	1.4	1.5	1.5	2.0	0.5	2.2	0	0	AM 5
IC2	FM NO SIGNAL	2.6	0	0	5.5	5.2	5.2	3.7	3.7	0	5.2	0	0	0	0	0	2.5	5.2	0.8	0.1	0	2.5	0	0	0	FM 7
IC2	FM NO SIGNAL	0.8	1.5	5.7	1.5	0	0	5.0	5.0	5.7	5.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	AM 5

MX-V505T

3-202 L3

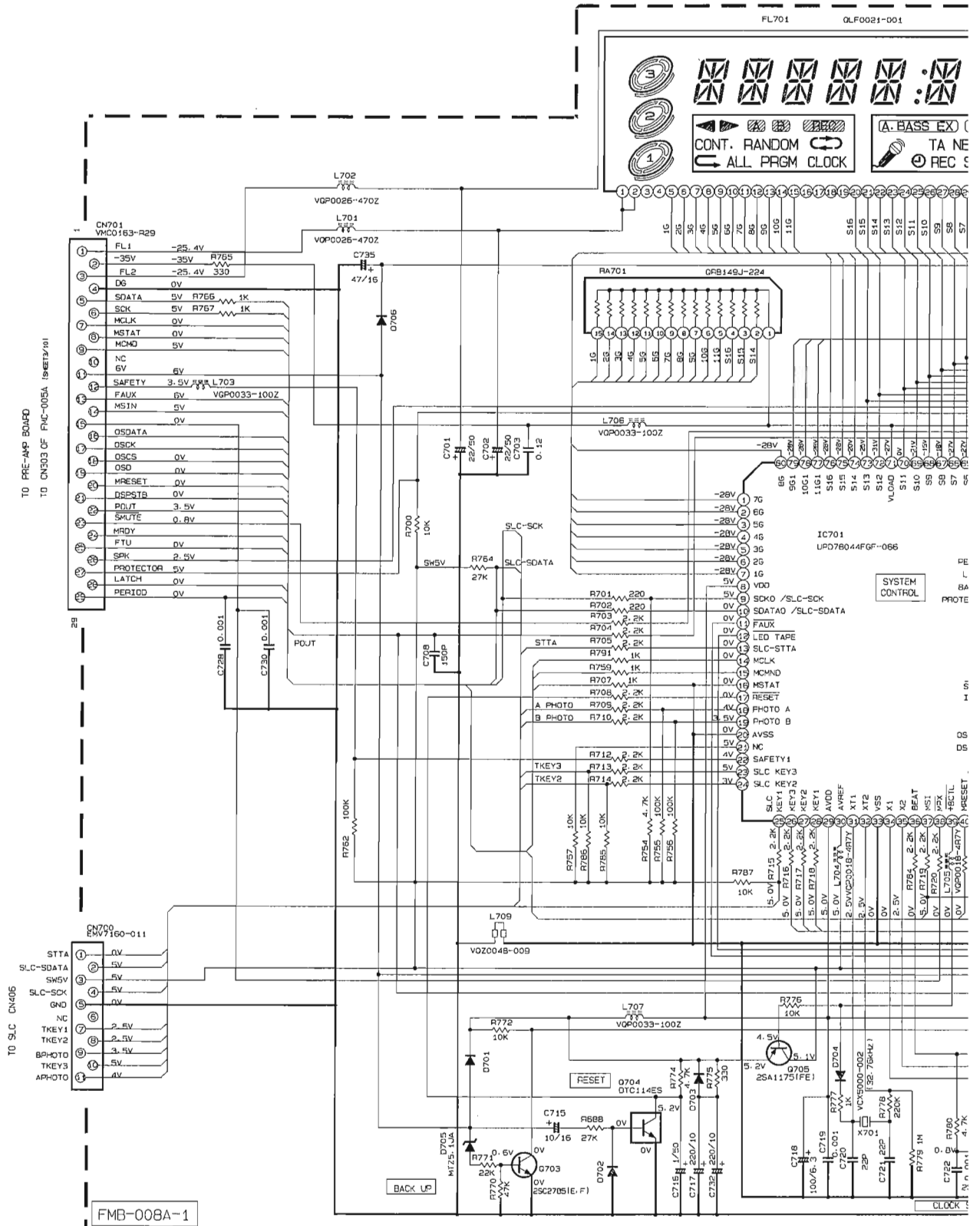
FMC-005A-1



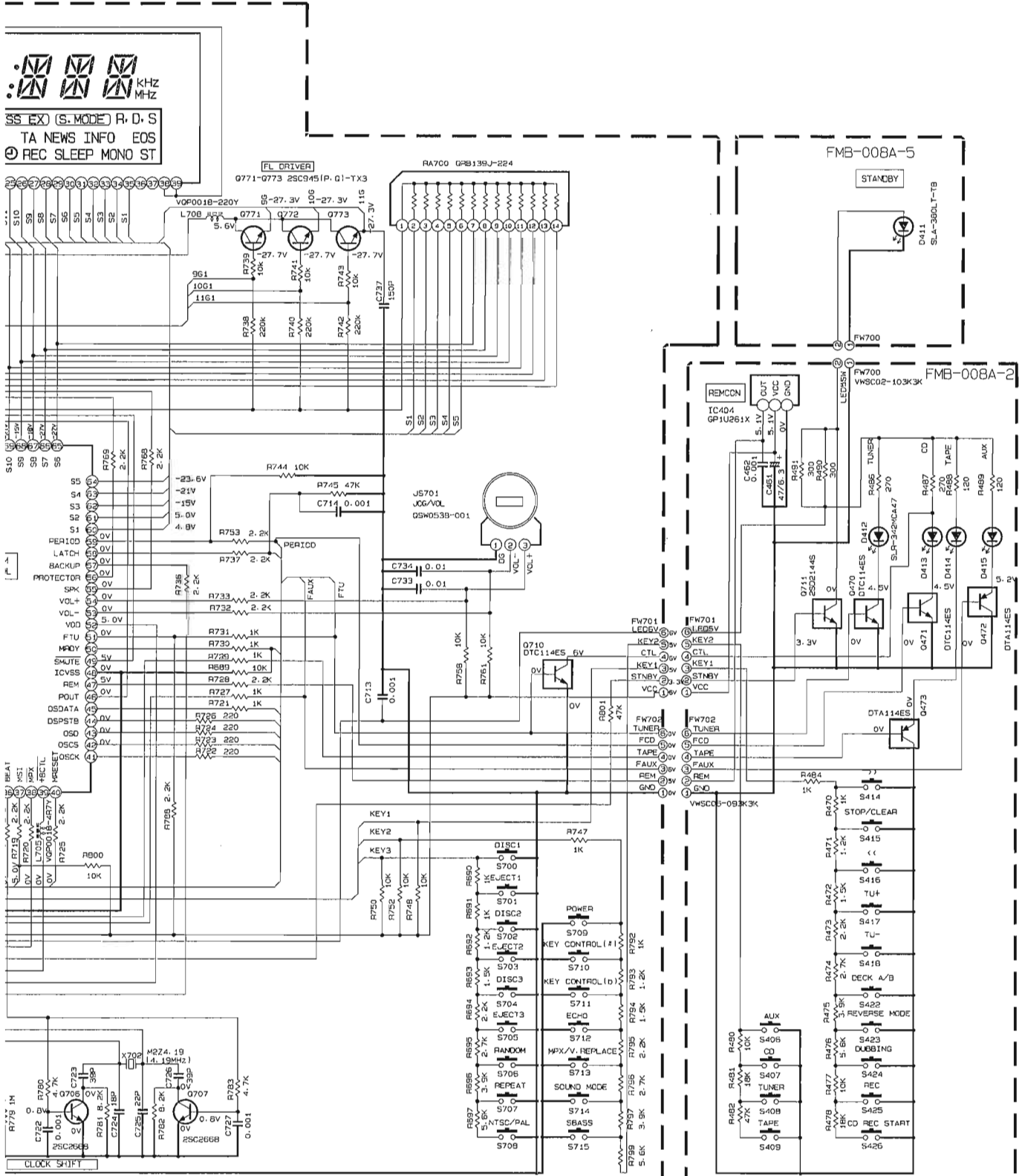
- ANTG 0V
- TUNER AG 0V
- TUNER R 0V
- TUNER L 0V
- TUNER +B 5.6V
- MPX 5.1V
- SDATA 5.1V
- SCK 0V
- PERIOD 0V
- Vt /FM+B 9V

Tr No.	01	04
PIN NAME	E C B E C B	E C B
FM 76.0MHz	0 9 1 0 7 9 8 9 7 0 1	
AM 531KHZ	0 0 0 9 8 0 9 0	

System CPU & Operation Switch Circuit



- NOTES
- VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL.
CONDITION --- TAPE RE MODE
 - UNLESS OTHERWISE SPECIFIED
RESISTORS ARE 1/8W ±5% CARBON RESISTOR.
ALL RESISTANCE VALUES ARE IN OHM (Ω).
ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR CAPACITOR.
ALL CAPACITANCE VALUES ARE IN PICO (P).
ALL INDUCTANCE VALUES ARE IN MILLI (M).
ALL E. CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (P/F)/RATED VOLTAGE (V).
ALL DIODES ARE 1SS133



Video CD Unit Circuit

ENV-003

5

4

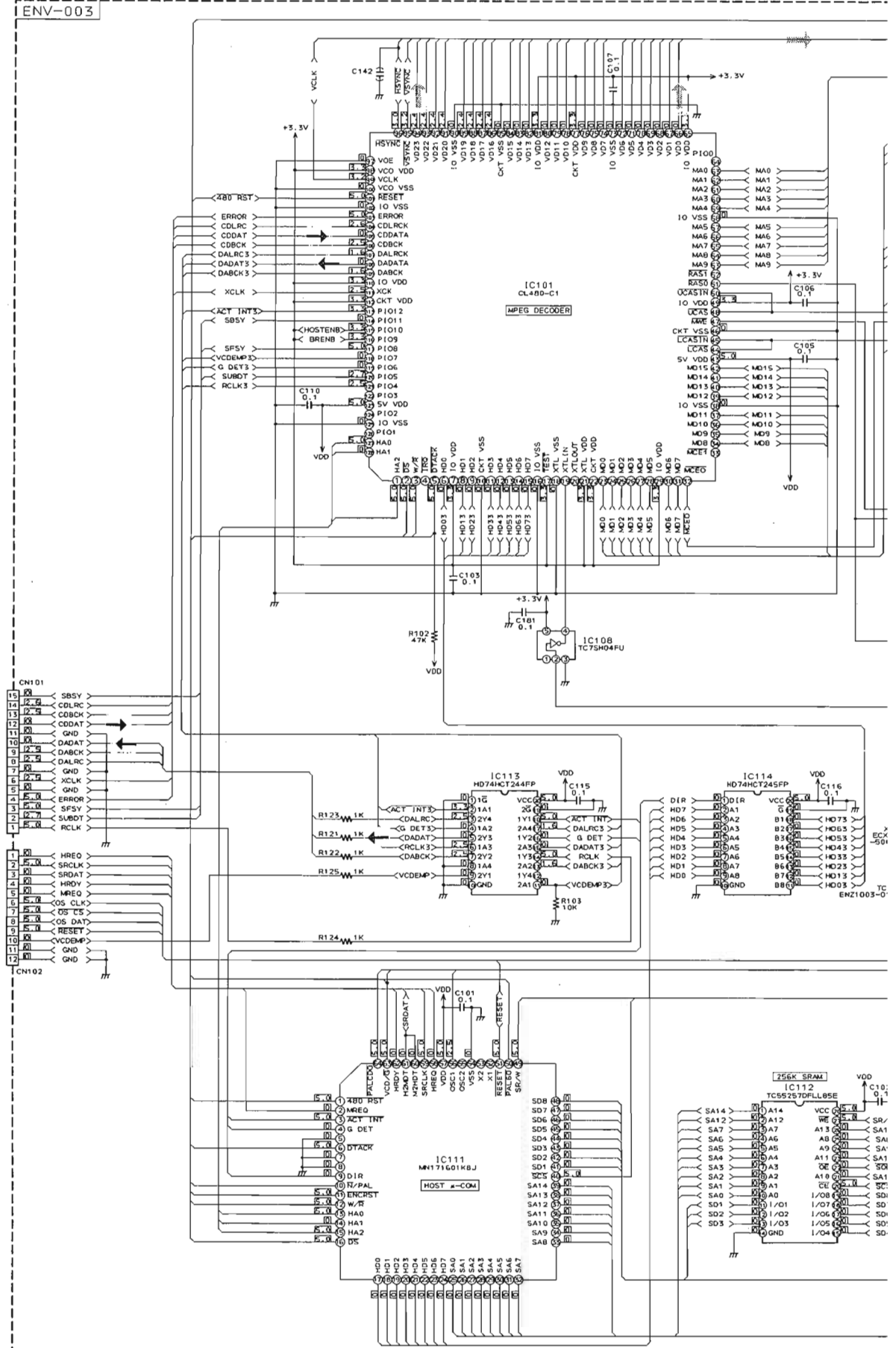
3

2

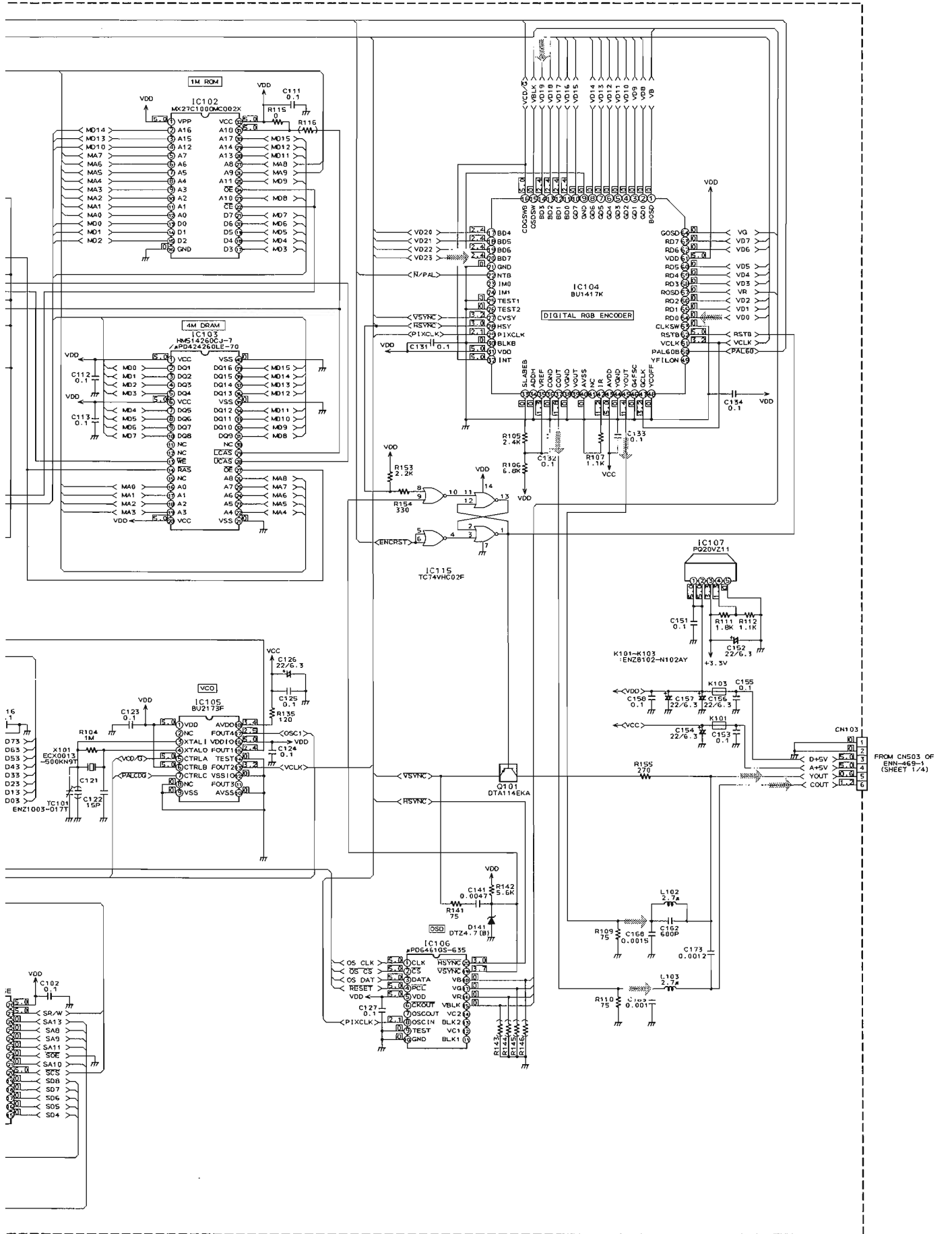
1

FROM CN501 OF ENN-469-1 (SHEET 1/4)

FROM CN502 OF ENN-469-5 (SHEET 1/4)



MX-V505T



FROM CH503 OF ENN-463-1 (SHEET 1/4)

5

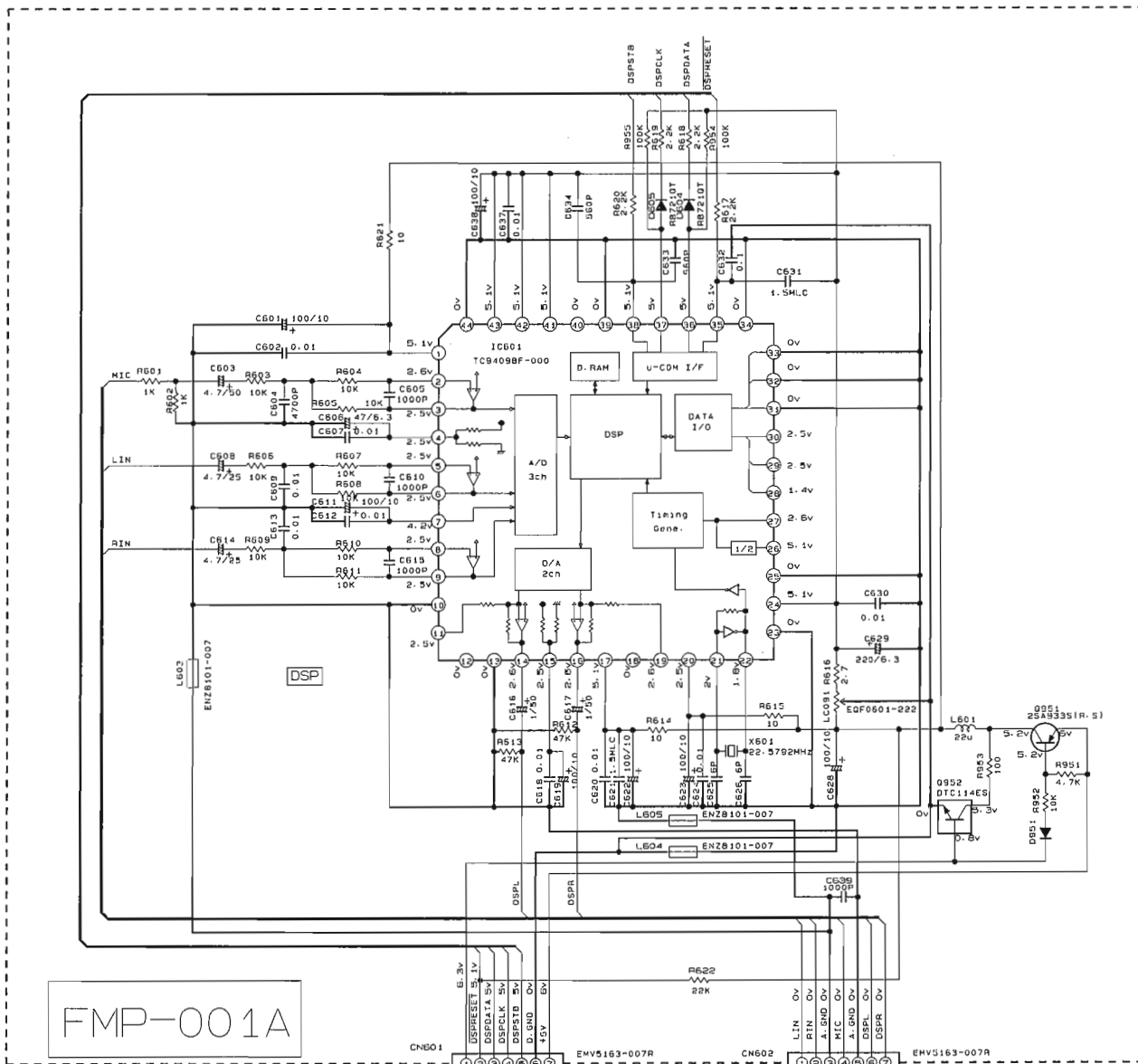
DSP (Digital Sound Processor) Circuit

4

3

2

1



NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL. CONDITION — TAPE STOP MODE
I MEANS INVERT MODE.
2. UNLESS OTHERWISE SPECIFIED, RESISTORS ARE 1/8W ± 5% CARBON RESISTOR. ALL RESISTANCE VALUES ARE IN Ω(M|R). ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR CAPACITOR. ALL CAPACITANCE VALUES ARE IN μ(F|P|D|F). ALL INDUCTANCE VALUES ARE IN μ(H|MM|H). ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF|)RATED VOLTAGE (V). ALL DIODES ARE 1SS133T-77

FROM PRE-AMP BOARD
FROM CN311 OF FMC-005A (S-EET3/101)

FROM PRE-AMP BOARD
FROM CN312 OF FMC-005A (S-EET3/101)

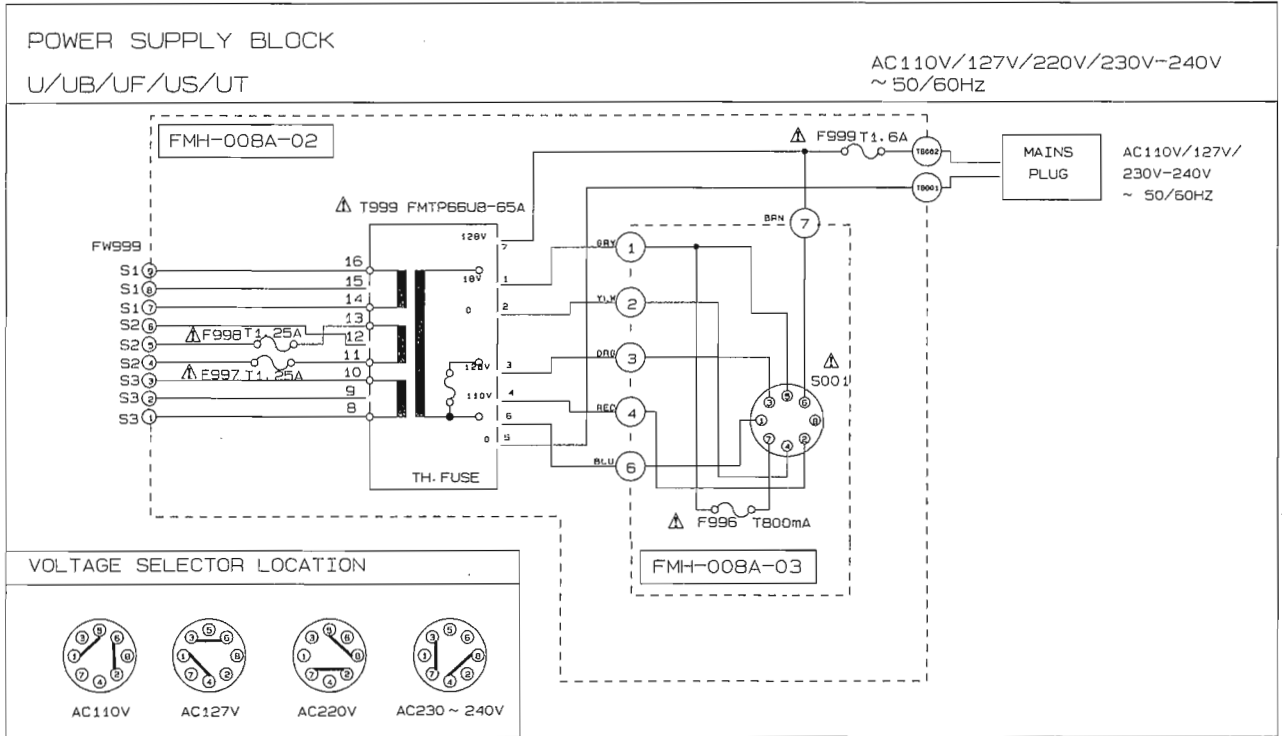
A

B

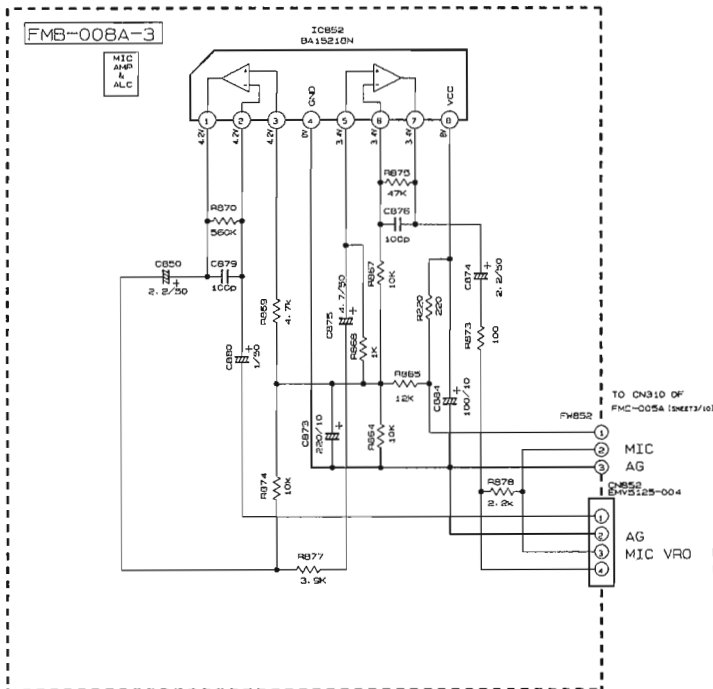
C

D

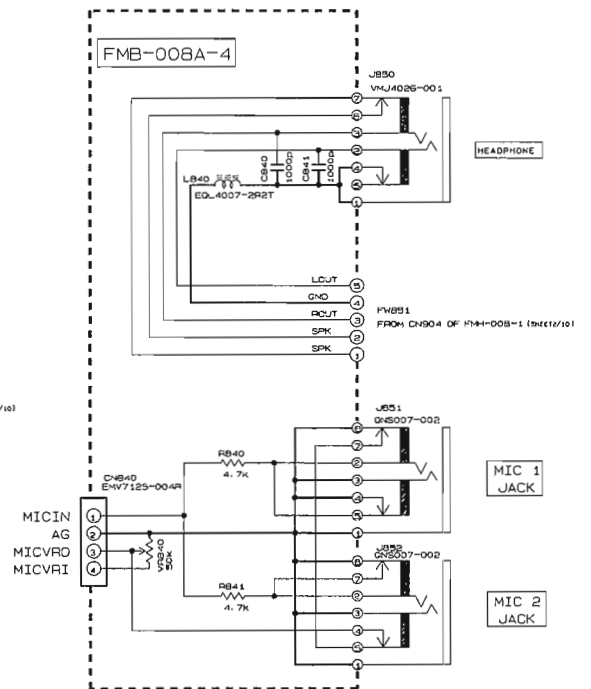
Power Supply Circuit



Mic & Echo Amplifier Circuit



Headphone & Mic Jack Circuit



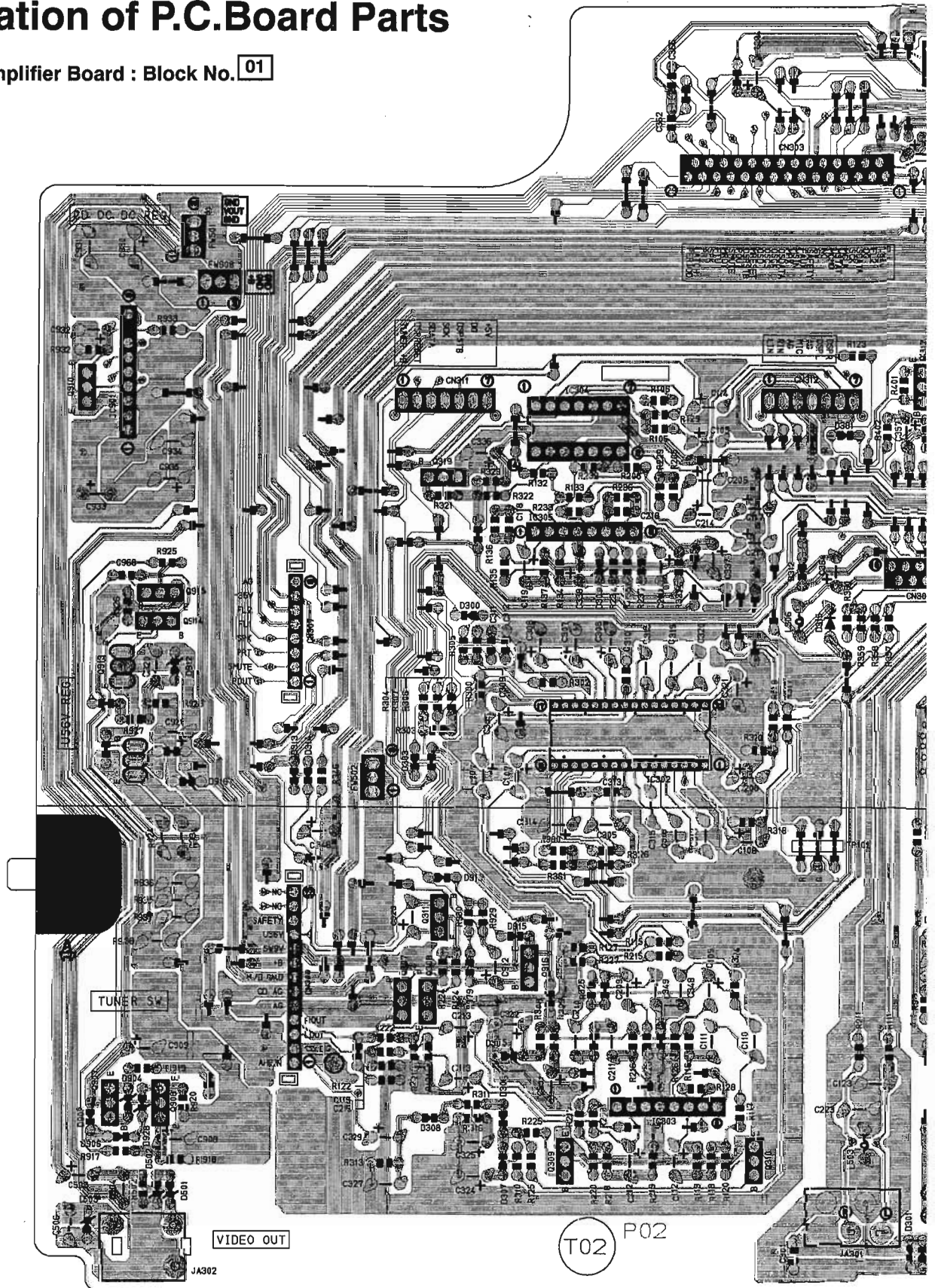
NOTES

- VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL. CONDITION --- TARE BITP MODE
1 MEANS INVERT MODE.
- UNLESS OTHERWISE SPECIFIED, RESISTORS ARE 1/4W ± 5% CARBON RESISTOR. ALL RESISTANCE VALUES ARE IN OHMS. ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR CAPACITOR. ALL CAPACITANCE VALUES ARE IN nF(pF). ALL INDUCTANCE VALUES ARE IN mH(mHmH). ALL ELECTROLYTIC CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE ± VOLTAGE (V). ALL DIODES ARE 1SS133T-77.

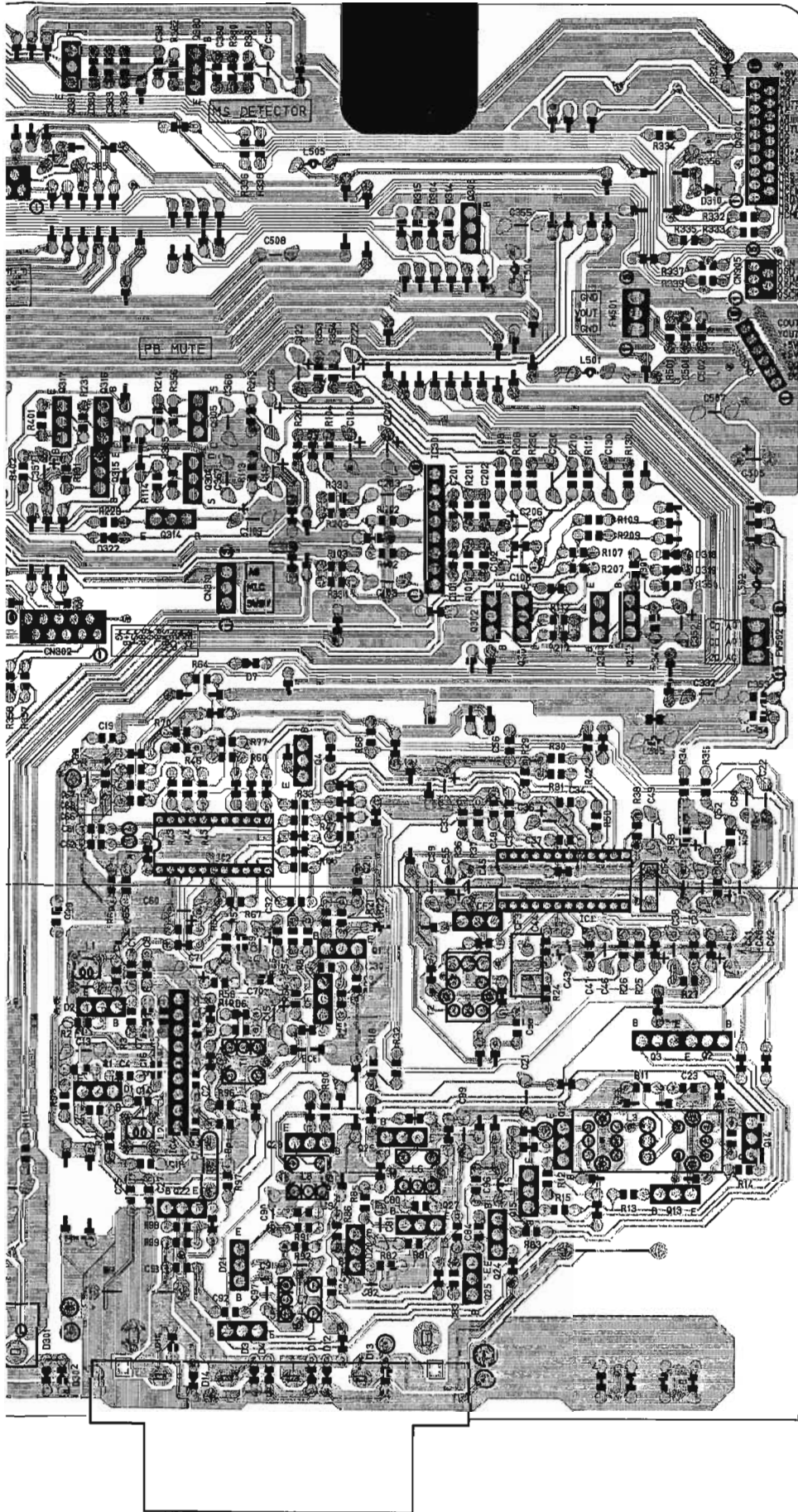
Location of P.C.Board Parts

■ Main Amplifier Board : Block No. **01**

5
4
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MX-V505T



E

F

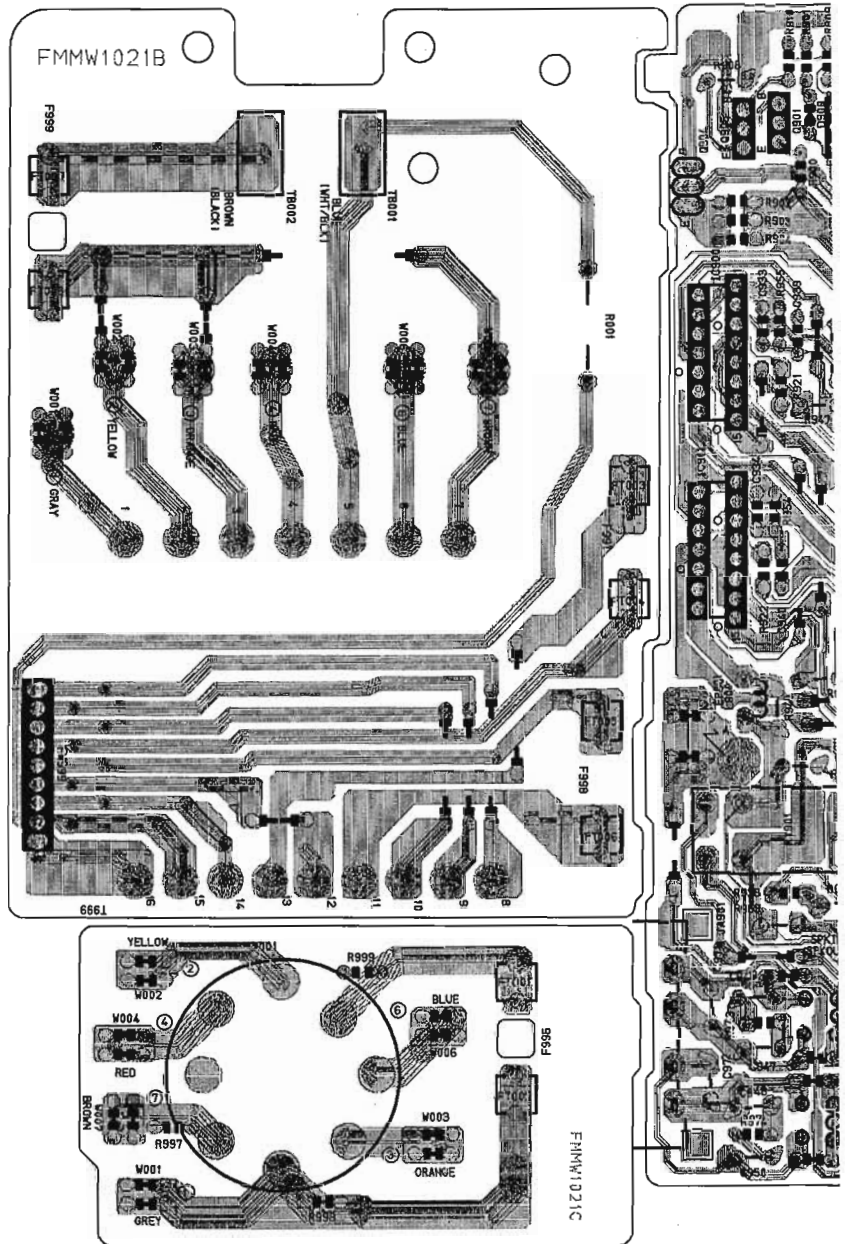
G

H

■ Power Supply & Power Amplifier Board : Block No. 02

5
4
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2
1

● Power Supply Board



● Voltage Select Board

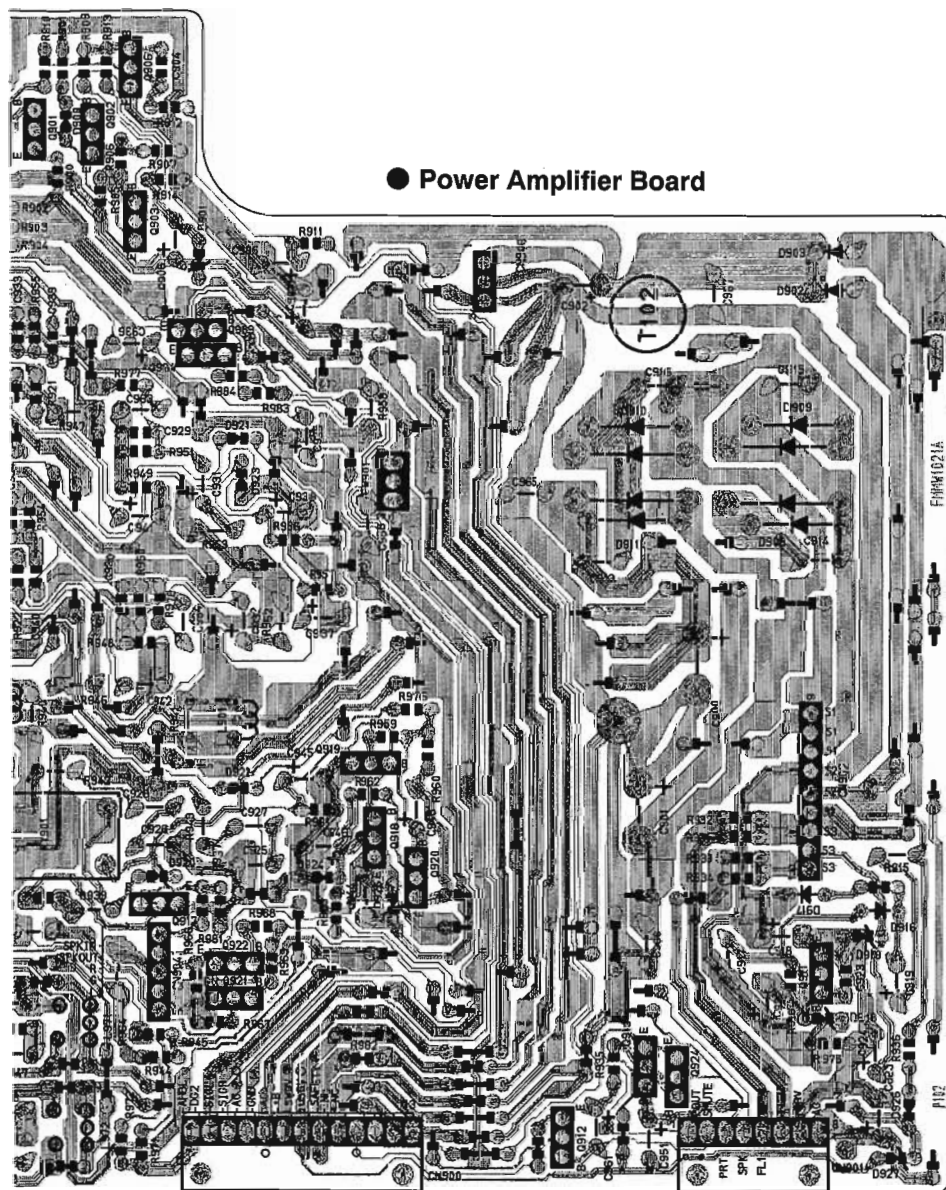
A

B

C

D

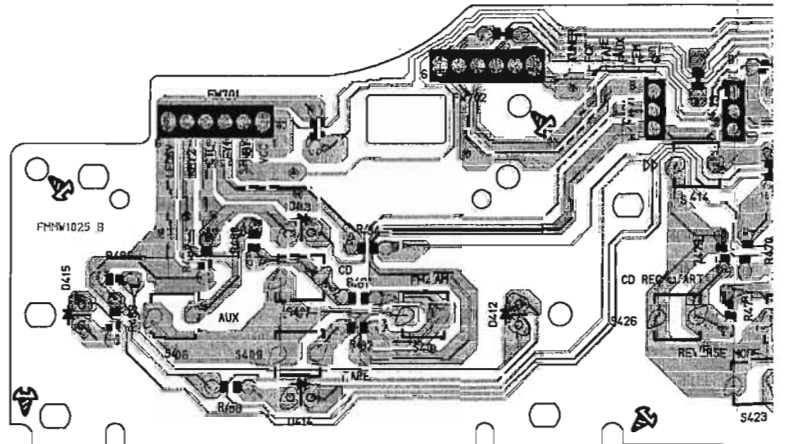
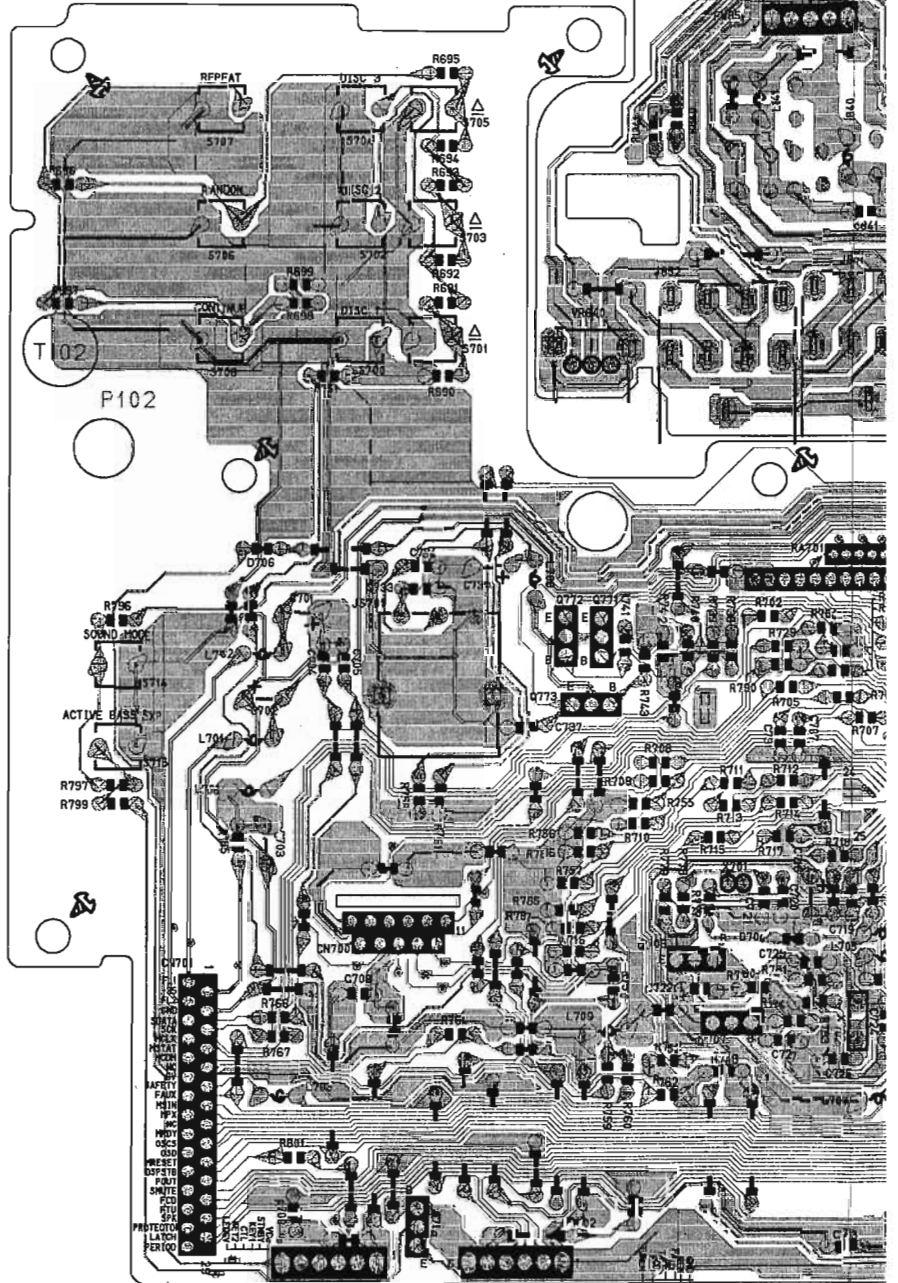
● Power Amplifier Board



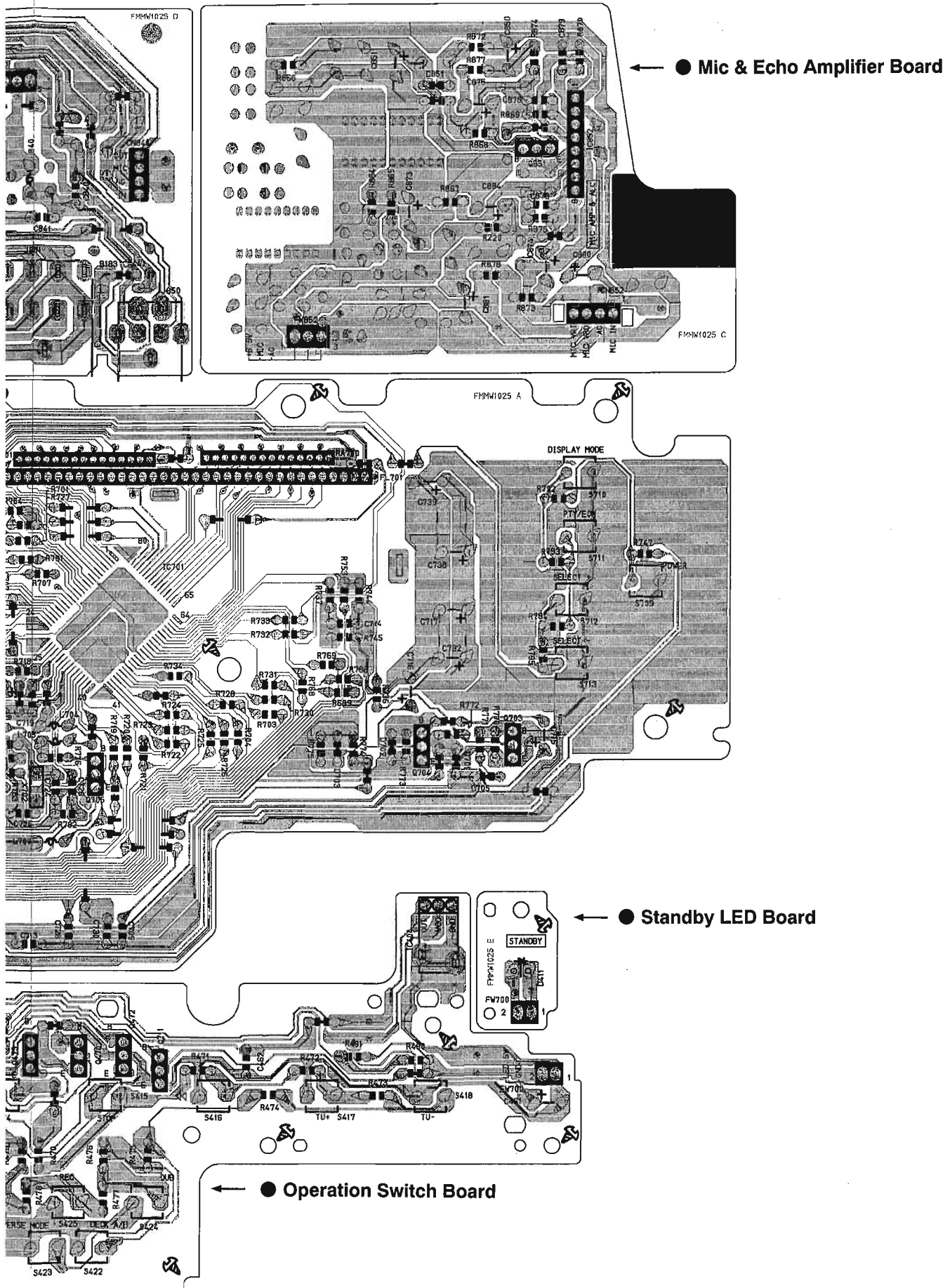
■ System CPU & Operation Switch Board : Block No. 03

● Headphone & Mi

● System CPU Board →



e & Mic Jack Board



■ DSP (Digital Sound Processor) Board : Block No. 04

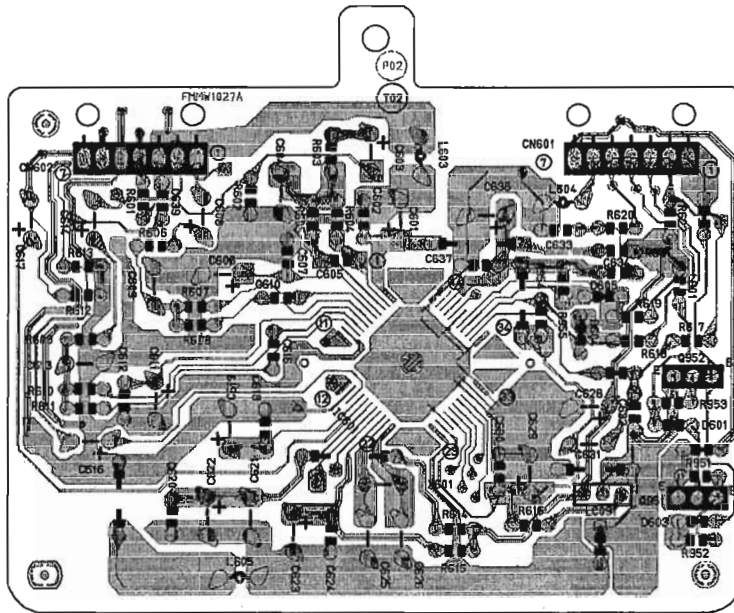
5

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3

2

1



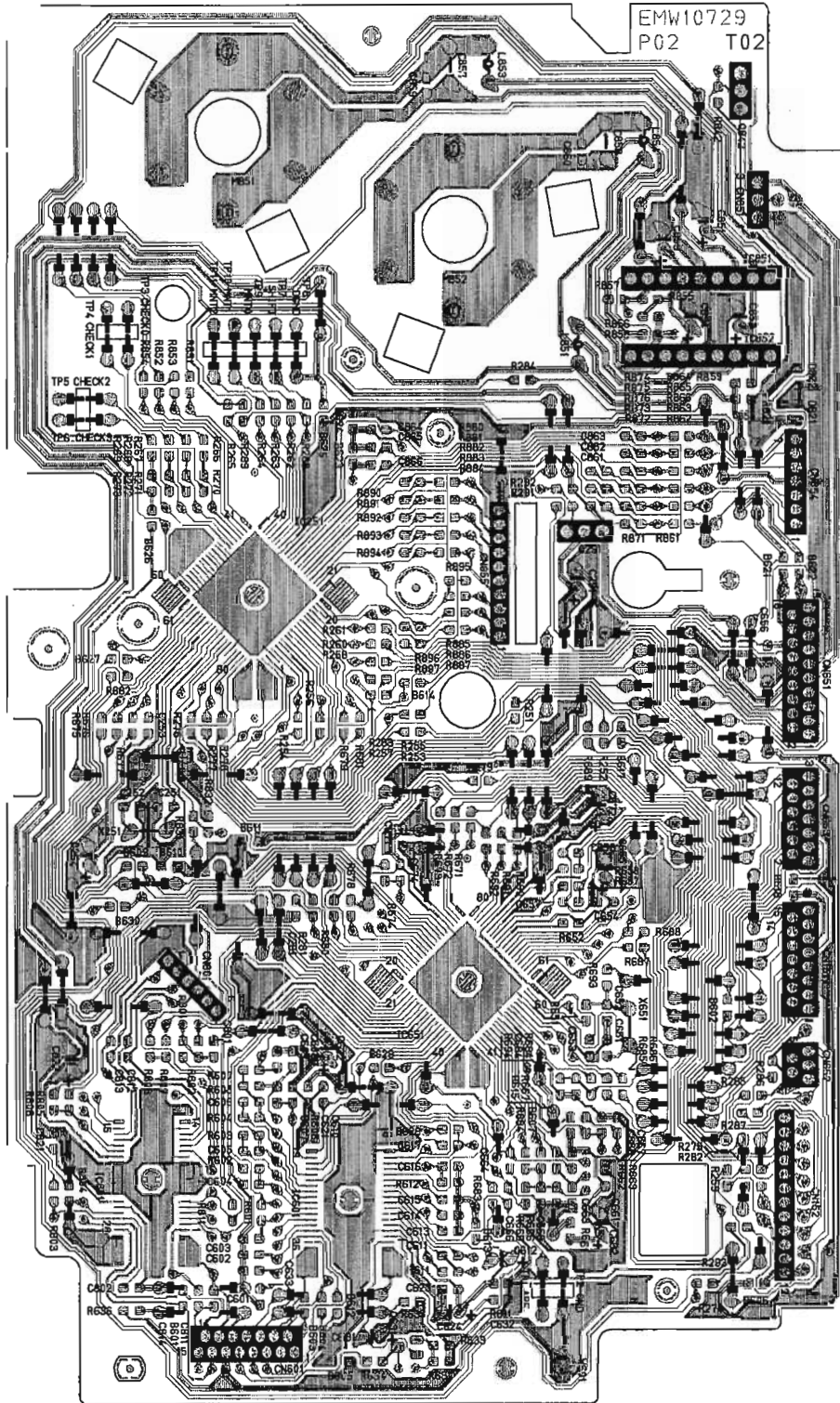
A

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D

■ CD Servo & Actuator Motor Board : Block No. **05**



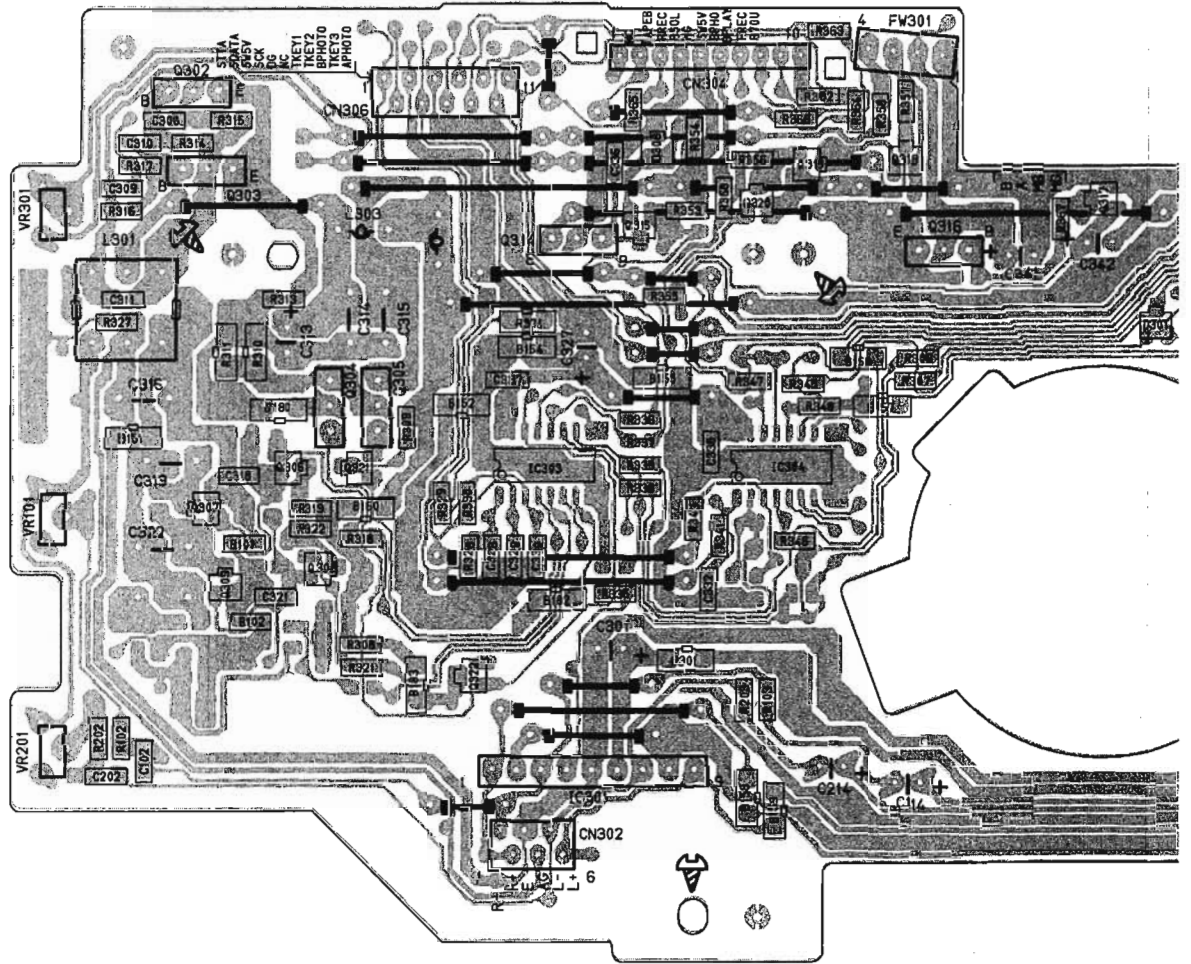
E

F

G

H 10-4

■ Head Amplifier & Mechanism Control Board : Block No. 08



A

B

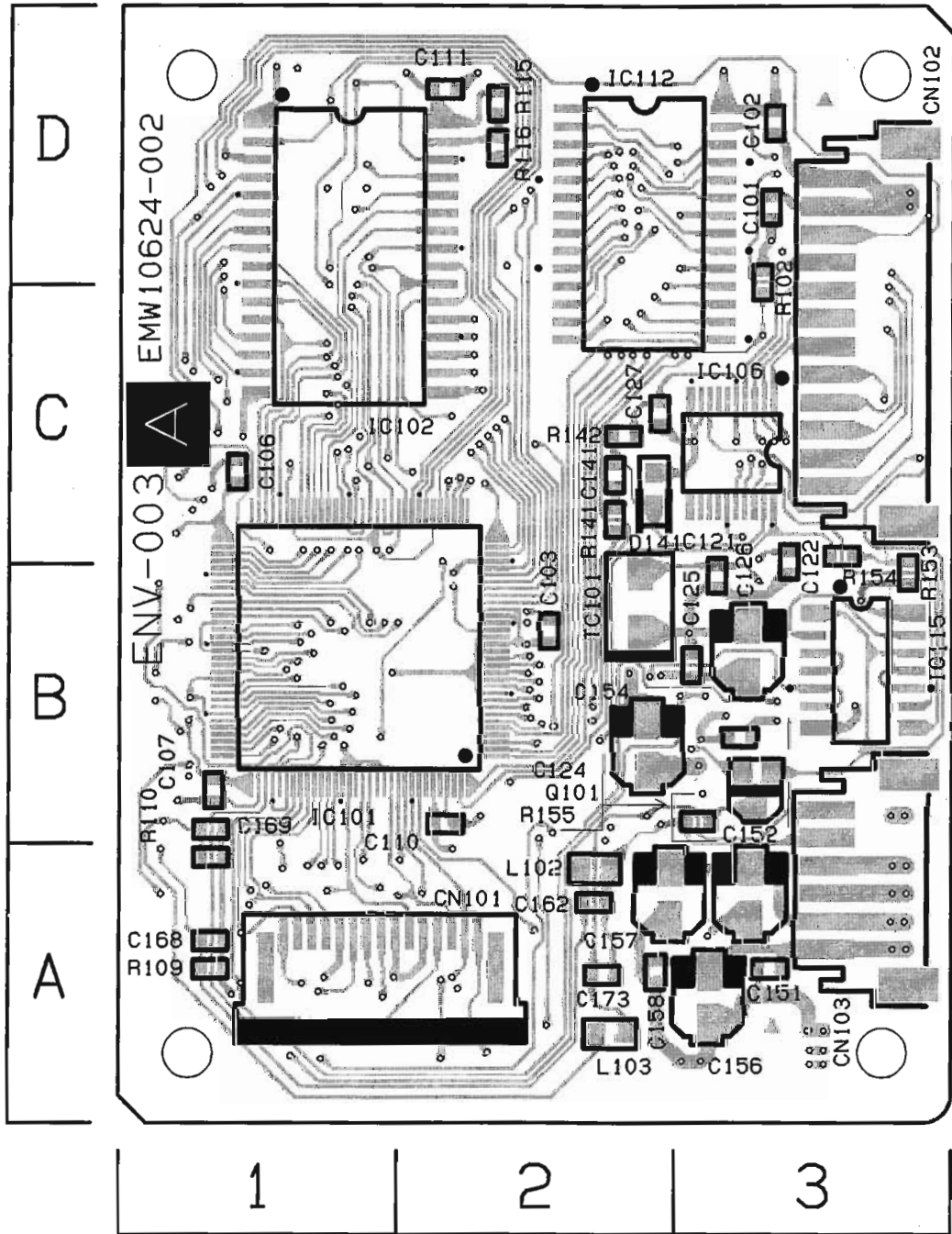
C

D

■ Video CD unit Board : Block No. 10

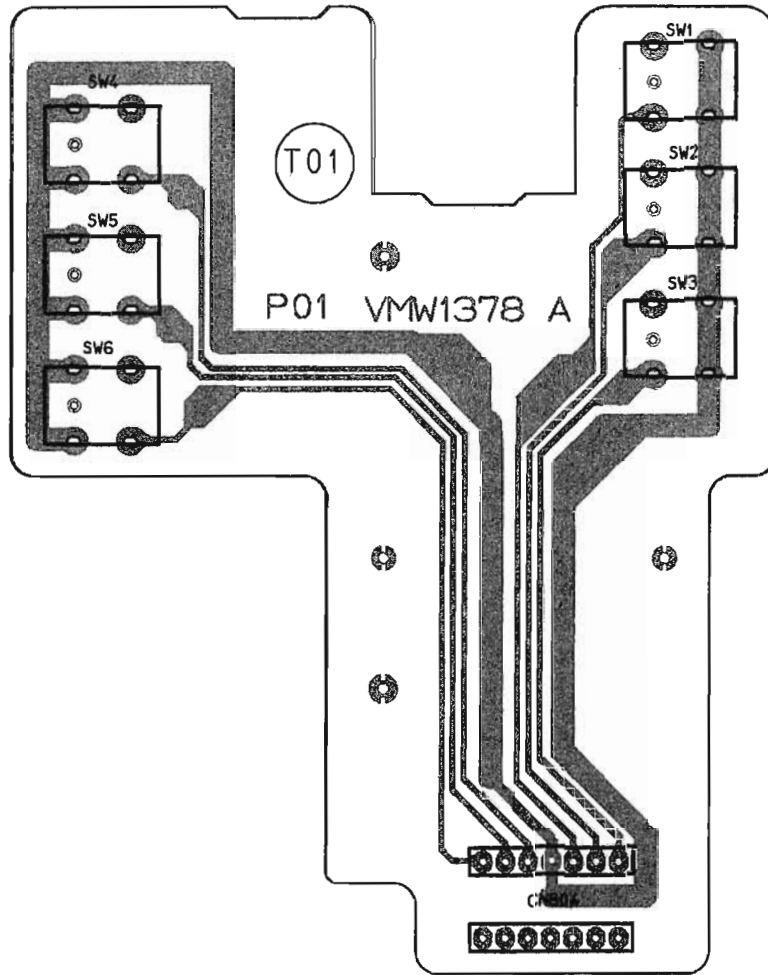
● Front side

5
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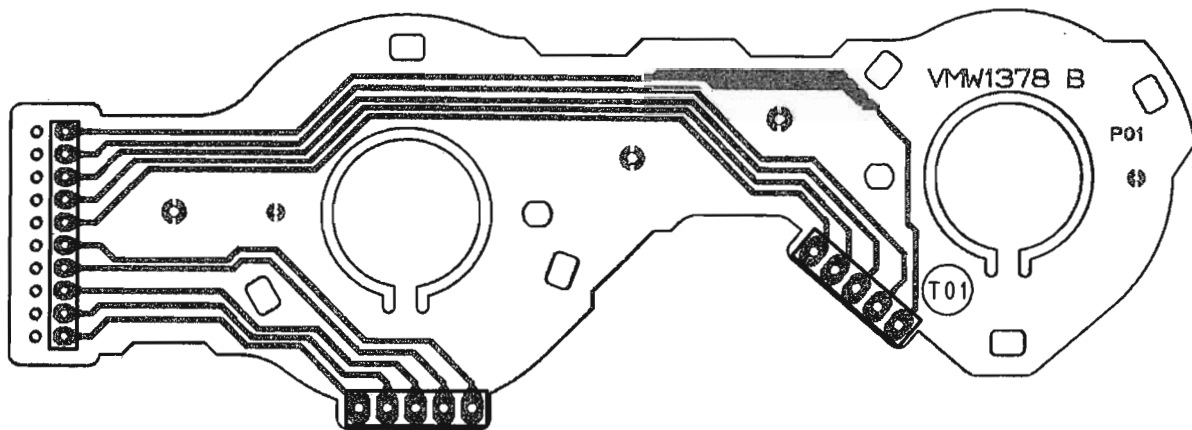


A B C D

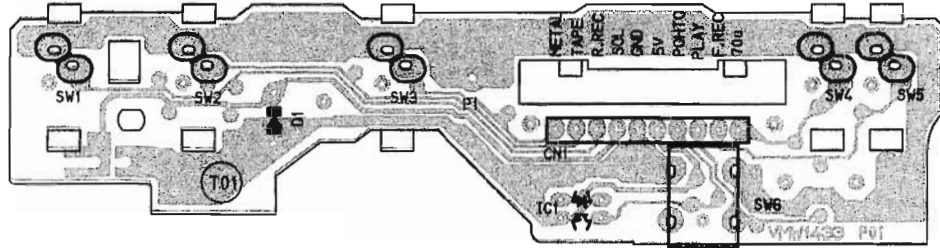
■ CD Tray Select Switch Board : Block No. 06



■ Cam Switch Board : Block No. 07



■ Reel Pulse Board : Block No. 09



BLOCK NO. 01

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 325	EETB1HM-105E	E-CAPACITOR		
C 327	QEV71HJ-184ZM	M-M. CAPACITOR	.18MF 5% 50V	
C 329	QETB1HM-474N	E-CAPACITOR	.47MF 20% 50V	
C 332	QFLC1HJ-103ZM	M CAPACITOR	.010MF 5% 50V	
C 335	EETB1AM-107E	E-CAPACITOR		
C 336	EETB1EM-106E	E-CAPACITOR		
C 337	EETB1CM-226E	E-CAPACITOR		
C 338	EETB1CM-226E	E-CAPACITOR		
C 351	EETB1CM-476	E-CAPACITOR		
C 352	EETB1EM-106E	E-CAPACITOR		
C 353	QGBB1HK-471Y	C-CAPACITOR	470PF 10% 50V	
C 354	QGBB1HK-471Y	C-CAPACITOR	470PF 10% 50V	
C 356	QETCOJM-477ZN	E-CAPACITOR	470MF 20% 6.3V	
C 357	EETB1CM-226E	E-CAPACITOR		
C 362	QGBB1HK-151Y	C-CAPACITOR	150PF 10% 50V	
C 364	QET41AM-108	E-CAPACITOR	1000MF 20% 10V	
C 367	QFLC1HJ-104ZM	M CAPACITOR	-10MF 5% 50V	
C 368	QFLC1HJ-104ZM	M CAPACITOR	-10MF 5% 50V	
C 380	QCS11HJ-330	C-CAPACITOR	33PF 5% 50V	
C 381	QCXB1CM-182Y	C-CAPACITOR	1800PF 20% 16V	
C 382	QFLC1HJ-153ZM	M CAPACITOR	.015MF 5% 50V	
C 383	QGBB1HK-681Y	C-CAPACITOR	680PF 10% 50V	
C 384	EETB1HM-105E	E-CAPACITOR		
C 385	QET41HM-476	E-CAPACITOR	47MF 20% 50V	
C 503	QETCOJM-477ZN	E-CAPACITOR	470MF 20% 6.3V	
C 504	QCS11HJ-470	C-CAPACITOR	47PF 5% 50V	
C 505	QETMOJM-478	CAPACITOR	4700MF 20% 6.3V	
C 506	QEV41HJ-104ZM	FILM CAPACITOR	-10MF 5% 50V	
C 507	QCF1HP-103	C-CAPACITOR	.010MF +100%-0%	
C 508	QCS11HJ-821	C-CAPACITOR	820PF 5% 50V	
C 908	EETB1HM-475E	E-CAPACITOR		
C 909	EETB1CM-226E	E-CAPACITOR		
C 912	EETB1AM-107E	E-CAPACITOR		
C 920	QFLC1HJ-103ZM	M CAPACITOR	.010MF 5% 50V	
C 921	EETB1AM-107E	E-CAPACITOR		
C 930	QETB1VM-477E	E-CAPACITOR	470MF 20% 35V	
C 931	QCZ0205-155	ML-C. CAPACITOR	1.5MF	
C 932	QETC1HM-225ZN	E-CAPACITOR	2.2MF 20% 50V	
C 933	QETBOJM-108N	E-CAPACITOR	1000MF 20% 6.3V	
C 934	QCZ0205-155	ML-C. CAPACITOR	1.5MF	
C 935	QETCOJM-477ZN	E-CAPACITOR	470MF 20% 6.3V	
C 968	QCVB1CM-103Y	C-CAPACITOR	.010MF 20% 16V	
CF 1	VCF2L3B-108Z	C FILTER		
CF 2	VCF2L3B-108Z	C FILTER		
CF 3	VCF122-115Z	CERAMIC FILTER		
CF 4	CMU2-456A05	CERA LOCK		
CN302	VMC0332-010V	CONNECTOR		
CN303	VMC0163-029	CONNECTOR		
CN304	EMV7171-119	CONNECTOR		
CN305	EMV7171-105	CONNECTOR		
CN306	EMV5109-0066A	6P PLUG ASSY		
CN307	EMV5125-008	CONNECTOR		
CN308	EMV5125-013	CONNECTOR		
CN310	EMV7145-003Z	SOCKET		
CN311	EMV7163-007	CONNECTOR		

BLOCK NO. 01

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
CN312	EMV7163-007	CONNECTOR		
D 1	SVC203SPA-AB-AL	VARI CAP		
D 2	SVC203SPA-AB-AL	VARI CAP		
D 3	1SS133	SI DIODE		
D 4	1SS133	SI DIODE		
D 6	1SS133	SI DIODE		
D 7	1SS133	SI DIODE		
D 11	1SS133	SI DIODE		
D 12	1SS133	SI DIODE		
D 13	1SS133	SI DIODE		
D 300	RB721Q	DIODE		
D 301	1SS133	SI DIODE		
D 302	1SS133	SI DIODE		
D 303	RB721Q	DIODE		
D 304	1SS133	SI DIODE		
D 305	MTZ5.1JAT-77	ZENER DIODE		
D 306	1SS133	SI DIODE		
D 307	1SS133	SI DIODE		
D 308	1SS133	SI DIODE		
D 309	MTZ5.1JAT-77	ZENER DIODE		
D 310	1SR35-100	SI DIODE		
D 312	1SS133	SI DIODE		
D 313	1SS133	SI DIODE		
D 314	1SS133	SI DIODE		
D 315	1SR35-100	SI DIODE		
D 318	1SS133	SI DIODE		
D 319	1SS133	SI DIODE		
D 320	1SR35-100	SI DIODE		
D 322	1SS133	SI DIODE		
D 380	1SS133	SI DIODE		
D 381	1SS133	SI DIODE		
D 501	MTZ6.8JC	ZENER DIODE		
D 502	MTZ6.8JC	ZENER DIODE		
D 904	MTZ4.3JB	ZENER DIODE		
D 905	1SS133	SI DIODE		
D 906	1SS133	SI DIODE		
D 912	RD5.6JSAB1	ZENER DIODE		
D 913	1SS133	SI DIODE		
D 915	1SS133	SI DIODE		
D 916	MTZ8.2JC	ZENER DIODE		
D 928	MTZ2.4JB	Z-DIODE		
EP001	E409182-001SM	GRAND TERMINAL		
FW501	EWR33D-26SS	FLAT WIER		
FW502	EWR33D-24SS	FLAT WIER		
FW906	EWR33D-26LS	FLAT WIER		
IC 1	TA2057N	IC		
IC 2	LC72136N	IC		
IC 4	TA7358P	IC		
IC301	NJM4580L	IC		
IC302	BH3854AS	IC		
IC303	NJM4580L	IC		
IC304	TC4066BP	IC		
IC305	NJM4580L	IC		
IC901	BP5020	P-W-B. MODULE		
J 1	FMMB10YV-401K	ANT. TERMINAL		

BLOCK NO. 01111111

A	REF.	PARTS NO.	PARTS NAME	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R	22	GRD161J-331	CARBON RESISTOR	330	5% 1/6W		
R	23	GRD161J-560	CARBON RESISTOR	56	5% 1/6W		
R	24	GRD161J-271	CARBON RESISTOR	270	5% 1/6W		
R	25	GRD161J-273	CARBON RESISTOR	27K	5% 1/6W		
R	26	GRD161J-273	CARBON RESISTOR	27K	5% 1/6W		
R	27	GRD161J-223	CARBON RESISTOR	22K	5% 1/6W		
R	30	GRD161J-103	CARBON RESISTOR	10K	5% 1/6W		
R	31	GRD161J-103	CARBON RESISTOR	10K	5% 1/6W		
R	32	GRD161J-560	CARBON RESISTOR	56	5% 1/6W		
R	33	GRD161J-102	CARBON RESISTOR	1.0K	5% 1/6W		
R	34	GRD161J-222	CARBON RESISTOR	2.2K	5% 1/6W		
R	35	GRD161J-222	CARBON RESISTOR	2.2K	5% 1/6W		
R	36	GRD161J-103	CARBON RESISTOR	10K	5% 1/6W		
R	37	GRD161J-562	CARBON RESISTOR	5.6K	5% 1/6W		
R	38	GRD161J-392	CARBON RESISTOR	3.9K	5% 1/6W		
R	39	GRD161J-392	CARBON RESISTOR	3.9K	5% 1/6W		
R	42	GRD161J-102	CARBON RESISTOR	1.0K	5% 1/6W		
R	43	GRD161J-102	CARBON RESISTOR	1.0K	5% 1/6W		
R	44	GRD161J-102	CARBON RESISTOR	1.0K	5% 1/6W		
R	45	GRD161J-102	CARBON RESISTOR	1.0K	5% 1/6W		
R	46	GRD161J-104	CARBON RESISTOR	100K	5% 1/6W		
R	47	GRD161J-102	CARBON RESISTOR	1.0K	5% 1/6W		
R	50	GRD161J-102	CARBON RESISTOR	1.0K	5% 1/6W		
R	52	GRD161J-472	CARBON RESISTOR	4.7K	5% 1/6W		
R	54	GRD161J-472	CARBON RESISTOR	4.7K	5% 1/6W		
R	55	GRD161J-182	CARBON RESISTOR	1.8K	5% 1/6W		
R	56	GRD167J-332	CARBON RESISTOR	3.3K	5% 1/6W		
R	57	GRD161J-102	CARBON RESISTOR	1.0K	5% 1/6W		
R	58	GRD161J-562	CARBON RESISTOR	5.6K	5% 1/6W		
R	59	GRD161J-562	CARBON RESISTOR	5.6K	5% 1/6W		
R	64	GRD161J-473	CARBON RESISTOR	4.7K	5% 1/6W		
R	66	GRD161J-104	CARBON RESISTOR	100K	5% 1/6W		
R	67	GRD161J-473	CARBON RESISTOR	4.7K	5% 1/6W		
R	69	GRD161J-103	CARBON RESISTOR	10K	5% 1/6W		
R	101	GRD161J-114	C-RESISTOR	110K	5% 1/6W		
R	102	GRD161J-102	CARBON RESISTOR	1.0K	5% 1/6W		
R	104	GRD161J-393	CARBON RESISTOR	39K	5% 1/6W		
R	105	GRD167J-332	CARBON RESISTOR	3.3K	5% 1/6W		
R	106	GRD161J-242	CARBON RESISTOR	2.4K	5% 1/6W		
R	107	GRD161J-104	CARBON RESISTOR	100K	5% 1/6W		
R	108	GRD161J-362	CARBON RESISTOR	3.6K	5% 1/6W		
R	109	GRD161J-303Y	CARBON RESISTOR	30K	5% 1/6W		
R	110	GRD161J-184	CARBON RESISTOR	180K	5% 1/6W		
R	111	GRD161J-563	CARBON RESISTOR	56K	5% 1/6W		
R	112	GRD161J-102	CARBON RESISTOR	1.0K	5% 1/6W		
R	113	GRD161J-104	CARBON RESISTOR	100K	5% 1/6W		
R	114	GRD161J-105	CARBON RESISTOR	1.0M	5% 1/6W		
R	116	GRD161J-124	CARBON RESISTOR	120K	5% 1/6W		
R	117	GRD161J-222	CARBON RESISTOR	2.2K	5% 1/6W		
R	118	GRD161J-222	CARBON RESISTOR	2.2K	5% 1/6W		
R	119	GRD161J-822	CARBON RESISTOR	8.2K	5% 1/6W		
R	120	GRD161J-822	CARBON RESISTOR	8.2K	5% 1/6W		
R	121	GRD161J-102	CARBON RESISTOR	1.0K	5% 1/6W		
R	122	GRD161J-472	CARBON RESISTOR	4.7K	5% 1/6W		
R	123	GRD161J-474	CARBON RESISTOR	470K	5% 1/6W		

BLOCK NO. 01111111

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
J	A301	ERN00TV-222AJ2	PIN JACK		
J	A302	EMN00TV-117A	PIN JACK		
L	1	VRF1B20-019	OSC COIL		
L	2	VQC1505-002T	RF COIL		
L	3	VWZ0098-202	COIL BLOCK		
L	4	VGP0018-221	INDUCTOR		
L	306	VGP0028-100Z	INDUCTOR		
L	501	ENZ8101-007	F-BEADS		
L	502	ENZ8101-007	F-BEADS		
L	503	ENZ8101-007	F-BEADS		
L	504	ENZ8101-007	F-BEADS		
L	505	ENZ8101-007	F-BEADS		
PP	303	VMZ0015-005	POST PIN		
Q	1	2SC1923	TRANSISTOR		
Q	4	DTA114YS	TRANSISTOR		
Q	301	2SD2144S(VW)	TRANSISTOR		
Q	302	2SD2144S(VW)	TRANSISTOR		
Q	303	DTA114ES	TRANSISTOR		
Q	304	2SK246(GR-BL)	FET		
Q	305	2SK246(LGR-BL)	FET		
Q	306	DTC144TSTP	TRANSISTOR		
Q	307	2SD2144S(VW)	TRANSISTOR		
Q	308	2SD2144S(VW)	TRANSISTOR		
Q	309	2SC2785	TRANSISTOR		
Q	310	2SC2785	TRANSISTOR		
Q	311	DTA114ES	TRANSISTOR		
Q	312	2SC2785	TRANSISTOR		
Q	314	DTA144ES	D. TRANSISTOR		
Q	315	2SD2144S(VW)	TRANSISTOR		
Q	316	2SD2144S(VW)	TRANSISTOR		
Q	317	2SC2785	TRANSISTOR		
Q	319	DTC144ES	D. TRANSISTOR		
Q	380	2SC2785	TRANSISTOR		
Q	381	2SC2785	TRANSISTOR		
Q	907	2SA1175	TRANSISTOR		
Q	908	2SC2785	TRANSISTOR		
Q	910	2SC2785	TRANSISTOR		
Q	913	2SB1375	TRANSISTOR		
Q	914	2SC2785	TRANSISTOR		
Q	915	2SC2785	TRANSISTOR		
Q	916	2SC2785	TRANSISTOR		
Q	917	2SB1375	TRANSISTOR		
R	1	GRD161J-104	CARBON RESISTOR	100K	5% 1/6W
R	2	GRD161J-473	CARBON RESISTOR	47K	5% 1/6W
R	3	GRD167J-4R7	CARBON RESISTOR	4.7	5% 1/6W
R	5	GRD161J-560	CARBON RESISTOR	56	5% 1/6W
R	7	GRD161J-104	CARBON RESISTOR	100K	5% 1/6W
R	8	GRD161J-821	CARBON RESISTOR	820	5% 1/6W
R	9	GRD161J-102	CARBON RESISTOR	1.0K	5% 1/6W
R	10	GRD161J-101	CARBON RESISTOR	100	5% 1/6W
R	11	GRD161J-104	CARBON RESISTOR	100K	5% 1/6W
R	17	GRD161J-102	CARBON RESISTOR	1.0K	5% 1/6W
R	18	GRD161J-102	CARBON RESISTOR	1.0K	5% 1/6W
R	20	GRD161J-331	CARBON RESISTOR	330	5% 1/6W
R	21	GRD161J-474	CARBON RESISTOR	470K	5% 1/6W

BLOCK NO. 01111111

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 322	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 323	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
R 327	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
R 330	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 331	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 332	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
R 333	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
R 334	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
R 335	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
R 336	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
R 337	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
R 338	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
R 339	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
R 347	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
R 350	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 353	QRD161J-823	CARBON RESISTOR	82K 5% 1/6W	
R 354	QRD161J-823	CARBON RESISTOR	82K 5% 1/6W	
R 355	QRD161J-105	CARBON RESISTOR	1.0M 5% 1/6W	
R 356	QRD161J-105	CARBON RESISTOR	1.0M 5% 1/6W	
R 357	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 358	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 361	QRD161J-562	CARBON RESISTOR	5.6K 5% 1/6W	
R 380	QRD161J-225	CARBON RESISTOR	2.2M 5% 1/6W	
R 381	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 382	QRD161J-220	CARBON RESISTOR	22 5% 1/6W	
R 383	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 401	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 402	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 502	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 917	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
R 918	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 919	QRD161J-390	CARBON RESISTOR	39 5% 1/6W	
R 920	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 924	GRZ0077-4R7X	FUSE RESISTOR	4.7 1/0W	
R 925	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 926	QRD161J-561	CARBON RESISTOR	560 5% 1/6W	
R 927	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 928	QRD167J-682	CARBON RESISTOR	6.8K 5% 1/6W	
R 929	QRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R 930	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 932	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 933	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 934	GRZ0077-4R7X	FUSE RESISTOR	4.7 1/0W	
R 935	QRG01DJ-220X	DMF-RESISTOR	22 5% 1/1W	
R 936	QRG01DJ-220X	DMF-RESISTOR	22 5% 1/1W	
R 937	QRG01DJ-220X	DMF-RESISTOR	22 5% 1/1W	
R 938	QRG01DJ-220X	DMF-RESISTOR	22 5% 1/1W	
R 979	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
R 980	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
T 1	VQ17F12-110	IPT		
T 2	VQ17A21-111	IPT		
X 1	VCX5044-001	CRYSTAL		

BLOCK NO. 01111111

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 124	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 125	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 130	QRD161J-184	CARBON RESISTOR	180K 5% 1/6W	
R 131	QRD161J-472	CARBON RESISTOR	47K 5% 1/6W	
R 133	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 134	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 135	QRD161J-432	CARBON RESISTOR	4.3K 5% 1/6W	
R 136	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 137	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 201	QRD161J-114	CARBON RESISTOR	110K 5% 1/6W	
R 202	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 204	QRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
R 205	QRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R 206	QRD161J-242	CARBON RESISTOR	2.4K 5% 1/6W	
R 207	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 208	QRD161J-362	CARBON RESISTOR	3.6K 5% 1/6W	
R 209	QRD161J-303Y	CARBON RESISTOR	30K 5% 1/6W	
R 210	QRD161J-184	CARBON RESISTOR	180K 5% 1/6W	
R 211	QRD161J-563	CARBON RESISTOR	56K 5% 1/6W	
R 212	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 213	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 214	QRD161J-105	CARBON RESISTOR	1.0M 5% 1/6W	
R 216	QRD161J-222	CARBON RESISTOR	220 5% 1/6W	
R 217	QRD161J-102	CARBON RESISTOR	10K 5% 1/6W	
R 218	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 219	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
R 220	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
R 221	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 222	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 223	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 224	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 225	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 230	QRD161J-184	CARBON RESISTOR	180K 5% 1/6W	
R 231	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 233	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 234	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 235	QRD161J-432	CARBON RESISTOR	4.3K 5% 1/6W	
R 236	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 237	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 300	QRD161J-334	CARBON RESISTOR	330K 5% 1/6W	
R 301	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 302	QRD161J-184	CARBON RESISTOR	180K 5% 1/6W	
R 303	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
R 304	QRD161J-124	CARBON RESISTOR	120K 5% 1/6W	
R 305	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 306	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 307	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 308	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
R 309	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
R 310	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 311	QRD161J-124	CARBON RESISTOR	120K 5% 1/6W	
R 313	QRD161J-302	CARBON RESISTOR	3.0K 5% 1/6W	
R 315	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 316	QRD161J-474	CARBON RESISTOR	470K 5% 1/6W	
R 321	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	

Power Supply & Power Amplifier Board

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C 900	QETM1HM-228	E CAPACITOR	2200MF 20% 50V	
	C 901	QETM1HM-228	E CAPACITOR	2200MF 20% 50V	
	C 902	QETM1EM-228	E CAPACITOR	2200MF 20% 25V	
	C 904	QCB81HK-221Y	C.CAPACITOR	220PF 10% 50V	
	C 905	EETC1CM-1067JC	E.CAPACITOR		
	C 906	QETN1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 907	EETB1CM-226E	E.CAPACITOR		
	C 913	QFLC1HJ-683ZM	M CAPACITOR	.068MF 5% 50V	
	C 914	QFLC1HJ-683ZM	M CAPACITOR	.068MF 5% 50V	
	C 915	QFLC1HJ-683ZM	M CAPACITOR	.068MF 5% 50V	
	C 916	QFLC1HJ-683ZM	M CAPACITOR	.068MF 5% 50V	
	C 917	QETN1JN-476Z	E CAPACITOR	47MF 20% 63V	
	C 918	EETC1HM-226ZE	E.CAPACITOR		
	C 919	QETB1JN-107	E CAPACITOR	100MF 20% 63V	
	C 922	EETC1HM-226ZE	E.CAPACITOR		
	C 923	QCVB1CM-103Y	C.CAPACITOR	.010MF 30% 16V	
	C 924	EETB1HM-475E	E.CAPACITOR		
	C 925	QFLC1HJ-104ZM	M CAPACITOR	.10MF 5% 50V	
	C 926	QFLC1HJ-104ZM	M CAPACITOR	.10MF 5% 50V	
	C 927	QFLC1HJ-104ZM	M CAPACITOR	.10MF 5% 50V	
	C 928	QFLC1HJ-104ZM	M CAPACITOR	.10MF 5% 50V	
	C 929	QCS11HJ-100	C.CAPACITOR	10PF 5% 50V	
	C 930	QCS11HJ-100	C.CAPACITOR	10PF 5% 50V	
	C 931	QET14HM-476	E CAPACITOR	47MF 20% 50V	
	C 932	QET14HM-476	E CAPACITOR	47MF 20% 50V	
	C 933	QCB81HK-101Y	C.CAPACITOR	100PF 10% 50V	
	C 934	QCB81HK-101Y	C.CAPACITOR	100PF 10% 50V	
	C 935	QET1V06-106Z	E.CAPACITOR		
	C 936	QET1V06-106Z	E.CAPACITOR		
	C 937	QETC1HM-106ZM	E.CAPACITOR		
	C 938	QETC1HM-106ZM	E.CAPACITOR	10MF 20% 50V	
	C 939	QCB81HK-101Y	C.CAPACITOR	10MF 20% 50V	
	C 940	QCB81HK-101Y	C.CAPACITOR	100PF 10% 50V	
	C 941	EETC1HM-226ZE	E.CAPACITOR	100PF 10% 50V	
	C 942	EETC1HM-226ZE	E.CAPACITOR		
	C 943	EETB1HM-103E	E.CAPACITOR		
	C 944	QFLC1HJ-223ZM	M CAPACITOR	.022MF 5% 50V	
	C 945	EETB1CM-476	E.CAPACITOR		
	C 946	EETB1CM-226E	E.CAPACITOR		
	C 951	QEK41HM-105	E.CAPACITOR	1.0MF 20% 50V	
	C 958	QCF11HP-223	C.CAPACITOR	.022MF +100% -0%	
	C 961	QETC1HM-106ZM	E.CAPACITOR	10MF 20% 50V	
	C 963	QFLC1HJ-153ZM	M CAPACITOR	.015MF 5% 50V	
	C 964	QFLC1HJ-153ZM	M CAPACITOR	.015MF 5% 50V	
	C 967	QFLC1HJ-104ZM	M CAPACITOR	.10MF 5% 50V	
	CN900	EMV7125-013R	CONNECTOR		
	CN901	EMV7125-008R	CONNECTOR		
	CN903	EMV7145-004Z	SOCKET		
	CN904	EMV7145-005Z	SOCKET		
	CN905	EMV7145-005Z	SOCKET		
	CN906	EMV7145-003Z	SOCKET		
	D 900	1SS133	SI DIODE		
	D 901	MTZ6-1JA	ZENER DIODE		
	D 902	1SR35-100	SI DIODE		
	D 903	1SR35-100	SI DIODE		

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	D 908	1N5401TM	SI DIODE		
	D 909	1N5401TM	SI DIODE		
	D 910	1N5401TM	SI DIODE		
	D 911	1N5401TM	SI DIODE		
	D 916	1SR139-200	SI DIODE		
	D 917	1SR139-200	SI DIODE		
	D 918	MTZ6-2JAT-77	ZENER DIODE		
	D 919	MTZ6-2JAT-77	ZENER DIODE		
	D 920	MTZ24JC	ZENER DIODE		
	D 921	1SS133	SI DIODE		
	D 922	1SS133	SI DIODE		
	D 923	1SS133	SI DIODE		
	D 924	1SS133	SI DIODE		
	D 926	1SS133	SI DIODE		
	D 927	MTZ5-1JC	ZENER DIODE		
	EP901	E409182-001SM	GRAND TERMINAL		
	FT001	EMG7331-003Z	FUSE CLIP		
	FT002	EMG7331-003Z	FUSE CLIP		
	FT003	EMG7331-003Z	FUSE CLIP		
	FT004	EMG7331-003Z	FUSE CLIP		
	FT005	EMG7331-003Z	FUSE CLIP		
	FT006	EMG7331-003Z	FUSE CLIP		
	FT007	EMG7331-003Z	FUSE CLIP		
	FT008	EMG7331-003Z	FUSE CLIP		
	FW999	EMR39D-25LS	FLAT WIRE		
	IC900	DA7295	IC		
	IC901	DA7295	IC		
	J901	8NB0077-001	SPK.TERMINAL		
	L 900	EQL0011-R45J1	INDUCTOR		
	L 901	EQL0011-R45J1	INDUCTOR		
	PP900	VMZ0015-005	POST PIN		
	Q 901	2SA1175	TRANSISTOR		
	Q 902	DTC144TSTP	TRANSISTOR		
	Q 903	DTA144TSTP	TRANSISTOR		
	Q 904	2SB1375	TRANSISTOR		
	Q 905	2SC2785	TRANSISTOR		
	Q 906	2SC2785	TRANSISTOR		
	Q 911	2SA934(Q,R)	TRANSISTOR		
	Q 912	DTA114ES	TRANSISTOR		
	Q 917	2SC945A	TRANSISTOR		
	Q 918	2SC945A	TRANSISTOR		
	Q 919	2SA935S(RS)	TRANSISTOR		
	Q 920	2SC945A	TRANSISTOR		
	Q 921	2SD2144S(VW)	TRANSISTOR		
	Q 922	2SD2144S(VW)	TRANSISTOR		
	Q 923	DTC114YSTP	D.TRANSISTOR		
	Q 924	DTC114YSTP	D.TRANSISTOR		
	R 900	GRD161J-471	CARBON RESISTOR	470 5% 1/6W	
	R 901	GRD161J-821	CARBON RESISTOR	820 5% 1/6W	
	R 902	GRD161J-1R0	CARBON RESISTOR	1.0 5% 1/6W	
	R 903	GRD161J-1R0	CARBON RESISTOR	1.0 5% 1/6W	
	R 904	GRD161J-1R0	CARBON RESISTOR	1.0 5% 1/6W	
	R 905	GRD167J-682	CARBON RESISTOR	6.8K 5% 1/6W	
	R 906	GRD161J-911	CARBON RESISTOR	910 5% 1/6W	
	R 907	GRD167J-751	CARBON RESISTOR	750 5% 1/6W	

BLOCK NO. 02

BLOCK NO. 02111111

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 908	QRZ0077-151X	F-RESISTOR	150 1/6W	
R 909	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 910	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
R 911	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 912	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 913	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 914	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 915	QRZ0077-100X	FUSE RESISTOR	10 1/6W	
R 916	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 931	QRD161J-1R0	CARBON RESISTOR	1.0 5% 1/6W	
R 933	QRD161J-1R0	CARBON RESISTOR	1.0 5% 1/6W	
R 935	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 936	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 937	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
R 938	QRD161J-330	CARBON RESISTOR	33 5% 1/6W	
R 939	GRG01DJ-471X	DMF RESISTOR	470 5% 1/1W	
R 940	QRD14CJ-100SX	CARBON RESISTOR	10 5% 1/4W	
R 941	QRD14CJ-100SX	CARBON RESISTOR	10 5% 1/4W	
R 942	QRD14CJ-100SX	CARBON RESISTOR	10 5% 1/4W	
R 943	QRD14CJ-100SX	CARBON RESISTOR	10 5% 1/4W	
R 944	QRD161J-823	CARBON RESISTOR	82K 5% 1/6W	
R 945	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 946	QRX014J-R22	UNF. MF. RESISTOR	5% 1/1W	
R 947	QRX014J-R22	UNF. MF. RESISTOR	5% 1/1W	
R 948	QRD161J-122	CARBON RESISTOR	1.2K 5% 1/6W	
R 949	QRD161J-122	CARBON RESISTOR	1.2K 5% 1/6W	
R 950	QRD161J-823	CARBON RESISTOR	82K 5% 1/6W	
R 951	QRD161J-823	CARBON RESISTOR	82K 5% 1/6W	
R 952	QRD141J-561	UNF. C. RESISTOR	560 5% 1/4W	
R 953	QRD141J-561	UNF. C. RESISTOR	560 5% 1/4W	
R 954	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 955	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 956	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 957	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 958	QRZ0077-4R7X	FUSE RESISTOR	4.7 1/6W	
R 959	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 960	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 961	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 962	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 963	QRD161J-122	CARBON RESISTOR	1.2K 5% 1/6W	
R 964	QRD161J-681	CARBON RESISTOR	680 5% 1/6W	
R 965	QRD161J-681	CARBON RESISTOR	680 5% 1/6W	
R 966	QRD161J-821	CARBON RESISTOR	820 5% 1/6W	
R 967	QRD161J-821	CARBON RESISTOR	820 5% 1/6W	
R 968	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 969	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 971	QRD161J-563	CARBON RESISTOR	56K 5% 1/6W	
R 972	QRD161J-563	CARBON RESISTOR	56K 5% 1/6W	
R 975	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 976	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 977	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 978	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 979	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 998	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 999	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	

BLOCK NO. 02111111

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
RY901	ESK7D24-213R	RELAY		
S 001	QSW0524-001	VOLTAGE SW		
T8001	EMZ4001-002Z	TAB		
T8002	EMZ4001-002Z	TAB		
W 001	QWE888-24RR	WIRE		
W 002	QWE884-20RR	PIN WIRE		
W 003	QWE883-24RR	WIRE		
W 004	QWE882-20RR	WIRE		
W 006	QWE886-22RR	WIRE		
W 007	QWE881-24RR	WIRE		

System CPU & Operation Switch Board

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 461	QER50JM-476	E. CAPACITOR	47MF 20% 6.3V	
C 462	QCB81HK-102Y	C. CAPACITOR	1000PF 10% 50V	
C 701	QEK51HM-226	E. CAPACITOR	22MF 20% 50V	
C 702	QEK51HM-226	E. CAPACITOR	22MF 20% 50V	
C 703	QFV71HJ-12ZM	FILM CAPACITOR	.12MF 5% 50V	
C 708	QCB81HK-151Y	C. CAPACITOR	150PF 10% 50V	
C 713	QCB81HK-102Y	C. CAPACITOR	1000PF 10% 50V	
C 714	QCB81HK-102Y	C. CAPACITOR	1000PF 10% 50V	
C 715	QER41CM-106	E. CAPACITOR	10MF 20% 16V	
C 716	QER41HM-105VM	E. CAPACITOR	1.0MF 20% 50V	
C 717	QEK61AM-227ZM	E. CAPACITOR	220MF 20% 10V	
C 718	QEK60JM-107ZM	E. CAPACITOR	100MF 20% 6.3V	
C 719	QCB81HK-102Y	C. CAPACITOR	1000PF 10% 50V	
C 720	QCS11HJ-220	C. CAPACITOR	22PF 5% 50V	
C 721	QCS11HJ-220	C. CAPACITOR	22PF 5% 50V	
C 722	QCB81HK-102Y	C. CAPACITOR	1000PF 10% 50V	
C 723	QCS31HJ-390Z	C. CAPACITOR	39PF 5% 50V	
C 724	QCS11HJ-180	C. CAPACITOR	18PF 5% 50V	
C 725	QCS11HJ-220	C. CAPACITOR	22PF 5% 50V	
C 726	QCS31HJ-390Z	C. CAPACITOR	39PF 5% 50V	
C 727	QCB81HK-102Y	C. CAPACITOR	1000PF 10% 50V	
C 728	QCB81HK-102Y	C. CAPACITOR	1000PF 10% 50V	
C 730	QCB81HK-102Y	C. CAPACITOR	1000PF 10% 50V	
C 732	QEK61AM-227ZM	E. CAPACITOR	220MF 20% 10V	
C 733	QCV81CM-103Y	C. CAPACITOR	.010MF 30% 16V	
C 734	QCV81CM-103Y	C. CAPACITOR	.010MF 30% 16V	
C 735	QEK41CM-476	E. CAPACITOR	47MF 20% 16V	
C 737	QCB81HK-151Y	C. CAPACITOR	150PF 10% 50V	
C 840	QCB81HK-102Y	C. CAPACITOR	1000PF 10% 50V	
C 841	QCB81HK-102Y	C. CAPACITOR	1000PF 10% 50V	
C 850	QETC1HM-225ZM	E. CAPACITOR	2.2MF 20% 50V	
C 873	QEK61AM-227ZM	E. CAPACITOR	220MF 20% 10V	
C 874	QETC1HM-225ZM	E. CAPACITOR	2.2MF 20% 50V	
C 875	EETB1HM-475E	E. CAPACITOR	100PF 10% 50V	
C 876	QCB81HK-101Y	C. CAPACITOR	100PF 10% 50V	
C 879	QCB81HK-101Y	C. CAPACITOR	100PF 10% 50V	
C 880	EETB1HM-105E	E. CAPACITOR	100MF 20% 10V	
C 884	QEK61AM-107Z	E. CAPACITOR	100MF 20% 10V	
CN700	EMV7160-011	CONNECTOR		
CN701	VMC0163-R29	CONNECTOR		
CN840	EMV7123-004R	CONNECTOR		
CN852	EMV5125-004	CONNECTOR		
D 411	SLA-380LT	LED		
D 412	SLR-342MCA47	LED		
D 413	SLR-342MCA47	LED		
D 414	SLR-342MCA47	LED		
D 415	SLR-342MCA47	LED		
D 701	1S5133	SI DIODE		
D 702	1S5133	SI DIODE		
D 703	1S5133	SI DIODE		
D 704	1S5133	SI DIODE		
D 705	MT25.1JAT-77	ZENER DIODE		
FL701	QLF0021-001	SI DIODE		
FW700	EMR32D-10SFSF	FL TUBE WIRE		

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
FW701	VMSC06-093K3K	EF FLAT WIRE		
FW702	VMSC06-093K3K	EF FLAT WIRE		
FWB51	EMR35D-35LS	FLAT WIRE	H-PONE WIRE	
FWB52	EMR35D-30LS	FLAT WIRE		
IC404	GP1U261X	IR DETECT UNIT		
IC701	UPD78044FGF-066	IC		
IC852	BA15218N	JACK	HEAD PHONE	
J 850	VMJ4024-001	JACK		
J 851	QNS0007-002	6.3 JACK		
J 852	QNS0007-002	6.3 JACK		
JS701	GSW0358-001	ROTARY ENCODER		
L 701	VQP0026-470Z	INDUCTOR		
L 702	VQP0026-470Z	INDUCTOR		
L 703	VQP0033-100Z	INDUCTOR		
L 704	VQP0018-4R7	INDUCTOR		
L 705	VQP0018-4R7	INDUCTOR		
L 706	VQP0033-100Z	INDUCTOR		
L 707	VQP0033-100Z	INDUCTOR		
L 708	VQP0018-220	INDUCTOR		
L 709	VQZ0048-009	INDUCTOR		
L 840	EQL4007-2R2T	INDUCTOR		
Q 470	DTC114ESTP	TRANSISTOR		
Q 471	DTC114ESTP	TRANSISTOR		
Q 472	DTA114ES	TRANSISTOR		
Q 473	DTA114ES	TRANSISTOR		
Q 703	2SC2785	TRANSISTOR		
Q 704	DTC114ESTP	TRANSISTOR		
Q 705	2SA1175	TRANSISTOR		
Q 706	2SC2668(O)	TRANSISTOR		
Q 707	2SC2668(O)	TRANSISTOR		
Q 710	DTC114ESTP	TRANSISTOR		
Q 711	2SD2144S(VW)	TRANSISTOR		
Q 771	2SC945(P-A)	TRANSISTOR		
Q 772	2SC945(P-A)	TRANSISTOR		
Q 773	2SC945(P-A)	TRANSISTOR		
R 220	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
R 470	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 471	QRD161J-122	CARBON RESISTOR	1.2K 5% 1/6W	
R 472	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
R 473	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 474	QRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
R 475	QRD161J-392	CARBON RESISTOR	3.9K 5% 1/6W	
R 476	QRD161J-562	CARBON RESISTOR	5.6K 5% 1/6W	
R 477	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 478	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
R 480	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 481	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
R 482	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 484	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 486	QRD161J-271	CARBON RESISTOR	270 5% 1/6W	
R 487	QRD161J-271	CARBON RESISTOR	270 5% 1/6W	
R 488	QRD161J-121	CARBON RESISTOR	120 5% 1/6W	
R 489	QRD161J-121	CARBON RESISTOR	120 5% 1/6W	
R 490	QRD161J-301	CARBON RESISTOR	300 5% 1/6W	
R 491	QRD161J-301	CARBON RESISTOR	300 5% 1/6W	

BLOCK NO. 03

BLOCK NO. 03

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 752	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 753	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 754	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 755	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 756	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 757	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 758	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 759	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 761	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 762	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 764	QRD161J-273	CARBON RESISTOR	27K 5% 1/6W	
R 765	QRD161J-331	CARBON RESISTOR	330 5% 1/6W	
R 766	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 767	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 768	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 769	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 770	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 771	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 772	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 774	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 775	QRD161J-331	CARBON RESISTOR	330 5% 1/6W	
R 776	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 777	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 778	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
R 779	QRD161J-105	CARBON RESISTOR	1.0M 5% 1/6W	
R 780	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 781	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
R 782	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
R 783	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 784	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 785	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 786	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 787	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 788	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 791	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 792	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 793	QRD161J-122	CARBON RESISTOR	1.2K 5% 1/6W	
R 794	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
R 795	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 796	QRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
R 797	QRD161J-392	CARBON RESISTOR	3.9K 5% 1/6W	
R 799	QRD161J-562	CARBON RESISTOR	5.6K 5% 1/6W	
R 800	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 801	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 840	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 841	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 864	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 865	QRD161J-123	CARBON RESISTOR	12K 5% 1/6W	
R 867	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 868	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 869	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 870	QRD161J-564	CARBON RESISTOR	560K 5% 1/6W	
R 873	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
R 874	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 875	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 688	QRD161J-273	CARBON RESISTOR	27K 5% 1/6W	
R 689	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 690	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 691	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 692	QRD161J-122	CARBON RESISTOR	1.2K 5% 1/6W	
R 693	QRD161J-132	CARBON RESISTOR	1.3K 5% 1/6W	
R 694	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 695	QRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
R 696	QRD161J-392	CARBON RESISTOR	3.9K 5% 1/6W	
R 697	QRD161J-562	CARBON RESISTOR	5.6K 5% 1/6W	
R 700	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 701	QRD161J-220	CARBON RESISTOR	220 5% 1/6W	
R 702	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
R 703	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 704	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 705	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 707	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 708	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 709	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 710	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 712	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 713	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 714	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 715	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 716	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 717	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 718	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 719	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 720	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 721	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 722	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
R 723	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
R 724	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
R 725	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 726	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
R 727	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 728	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 729	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 730	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 731	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 732	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 733	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 736	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 737	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 738	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
R 739	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 740	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
R 741	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 742	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
R 743	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 744	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 745	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 747	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 748	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 750	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	

DSP Board

BLOCK NO. 04

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 601	EETB1A1M-107E	E.CAPACITOR		
C 602	QCVB1CM-103Y	C.CAPACITOR	.010MF 20% 16V	
C 603	QET41HM-105	E.CAPACITOR	1.0MF 20% 50V	
C 604	QFLM1HJ-472Z	M.CAPACITOR	4700PF 5% 50V	
C 605	QCB1HK-102Y	C.CAPACITOR	1000PF 10% 50V	
C 606	EETB1A1M-476E	E.CAPACITOR		
C 607	QCVB1CM-103Y	C.CAPACITOR	.010MF 20% 16V	
C 608	QEK41HM-105	E.CAPACITOR	1.0MF 20% 50V	
C 609	QFLC1HJ-103ZM	M.CAPACITOR	.010MF 5% 50V	
C 610	QCB1HK-102Y	C.CAPACITOR	1000PF 10% 50V	
C 611	EETB1A1M-107E	E.CAPACITOR		
C 612	QCVB1CM-103Y	C.CAPACITOR	.010MF 20% 16V	
C 613	QFLC1HJ-103ZM	M.CAPACITOR	.010MF 5% 50V	
C 614	QEK41HM-105	E.CAPACITOR	1.0MF 20% 50V	
C 615	QCB1HK-102Y	C.CAPACITOR	1000PF 10% 50V	
C 616	EETB1HM-105E	E.CAPACITOR		
C 617	EETB1HM-105E	E.CAPACITOR		
C 618	QCVB1CM-103Y	C.CAPACITOR	.010MF 20% 16V	
C 619	EETB1A1M-107E	E.CAPACITOR		
C 620	QCVB1CM-103Y	C.CAPACITOR	.010MF 20% 16V	
C 621	QCZ0205-155	ML.C.CAPACITOR	1.5MF	
C 622	EETB1A1M-107E	E.CAPACITOR		
C 623	EETB1A1M-107E	E.CAPACITOR		
C 624	QCVB1CM-103Y	C.CAPACITOR	.010MF 20% 16V	
C 625	QCS11HJ-6R0	C.CAPACITOR	6.0PF 5% 50V	
C 626	QCS11HJ-6R0	C.CAPACITOR	6.0PF 5% 50V	
C 628	QET41A1M-107	E.CAPACITOR	100MF 20% 10V	
C 629	QETB0JM-227	E.CAPACITOR	220MF 20% 6.3V	
C 630	QCVB1CM-103Y	C.CAPACITOR	.010MF 20% 16V	
C 631	QCZ0205-155	ML.C.CAPACITOR	1.5MF	
C 632	QCFB1HZ-104Y	C.CAPACITOR	.10MF +80% -20%	
C 633	QCB1HK-561Y	C.CAPACITOR	560PF 10% 50V	
C 634	QCB1HK-561Y	C.CAPACITOR	560PF 10% 50V	
C 637	QCVB1CM-103Y	C.CAPACITOR	.010MF 20% 16V	
C 638	EETB1A1M-107E	E.CAPACITOR		
C 639	QCB1HK-102Y	C.CAPACITOR	1000PF 10% 50V	
CN601	EMV5163-007R	CONNECTOR		
CN602	EMV5163-007R	CONNECTOR		
D 604	RB721Q	DIODE		
D 605	RB721Q	DIODE		
D 951	1S133	SI DIODE		
IC601	TC9409BF-000	IC		
L 601	EQL4007-220	INDUCTOR		
L 603	ENZ8101-007	F-BEADS		
L 604	ENZ8101-007	F-BEADS		
L 605	ENZ8101-007	F-BEADS		
LC091	EQF0601-222	EMI FILTER		
Q 951	2SA933S(RS)	TRANSISTOR		
Q 952	DTC114ESTP	TRANSISTOR		
R 601	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 602	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 603	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 604	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 605	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 606	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	

DSP Board

BLOCK NO. 05

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 877	QRD161J-392	CARBON RESISTOR	3.9K 5% 1/6W	
R 878	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
RA700	QRB139J-224	NET RESISTOR	220K 5% 1/3W	
RA701	QRB149J-224	R-NETWORK	220K 5% 1/4W	
S 406	QSQA11-V04Z	TACT SWITCH		
S 407	QSQA11-V04Z	TACT SWITCH		
S 408	QSQA11-V04Z	TACT SWITCH		
S 409	QSQA11-V04Z	TACT SWITCH		
S 414	QSQA11-V04Z	TACT SWITCH		
S 415	QSQA11-V04Z	TACT SWITCH		
S 416	QSQA11-V04Z	TACT SWITCH		
S 417	QSQA11-V04Z	TACT SWITCH		
S 418	QSQA11-V04Z	TACT SWITCH		
S 422	QSQA11-V04Z	TACT SWITCH		
S 423	QSQA11-V04Z	TACT SWITCH		
S 424	QSQA11-V04Z	TACT SWITCH		
S 425	QSQA11-V04Z	TACT SWITCH		
S 426	QSQA11-V04Z	TACT SWITCH		
S 700	QSQA11-V04Z	TACT SWITCH		
S 701	QSQA11-V04Z	TACT SWITCH		
S 702	QSQA11-V04Z	TACT SWITCH		
S 703	QSQA11-V04Z	TACT SWITCH		
S 704	QSQA11-V04Z	TACT SWITCH		
S 705	QSQA11-V04Z	TACT SWITCH		
S 706	QSQA11-V04Z	TACT SWITCH		
S 707	QSQA11-V04Z	TACT SWITCH		
S 708	QSQA11-V04Z	TACT SWITCH		
S 709	QSQA11-V04Z	TACT SWITCH		
S 710	QSQA11-V04Z	TACT SWITCH		
S 711	QSQA11-V04Z	TACT SWITCH		
S 712	QSQA11-V04Z	TACT SWITCH		
S 713	QSQA11-V04Z	TACT SWITCH		
S 714	QSQA11-V04Z	TACT SWITCH		
S 715	QSQA11-V04Z	TACT SWITCH		
SP701	VYH7653-001	IC HOLDER		
VR840	QVQ0045-B54	V RESISTOR		
X 701	VCX5000-002	CRYSTAL		
X 702	M224.19	CERA LOCK		

CD Servo & Actuator Motor Board

BLOCK NO. 05

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 251	NCS21HJ-100AY	C-CAPACITOR		X1
C 252	NCS21HJ-100AY	C-CAPACITOR		X2
C 253	NCB21HK-104	C-CAPACITOR	VDD-VSS	
C 254	QERF1AM-476Z	E-CAPACITOR	VDD-VSS	
C 281	NCB21HK-223AY	C-CAPACITOR	/RST_CD LSI	
C 291	QERF1AM-476Z	E-CAPACITOR	+5V-D.GND	
C 601	NCB21HK-102AY	C-CAPACITOR	PU E	
C 602	NCB21HK-102AY	C-CAPACITOR	PU F	
C 603	NCB21HK-223AY	C-CAPACITOR	TBAL	
C 604	NCB21HK-223AY	C-CAPACITOR	FBAL	
C 605	NCS21HJ-271AY	C-CAPACITOR	FE	
C 606	NCS21HJ-470AY	C-CAPACITOR	TE	
C 607	NCB21HK-223AY	C-CAPACITOR	TEBPF	
C 608	NCB21HK-223AY	C-CAPACITOR	TEBPF	
C 609	NCB21HK-102AY	C-CAPACITOR	TE	
C 610	NCB21HK-104	C-CAPACITOR	ENV	
C 611	NCB21HK-104	C-CAPACITOR	RF	
C 612	QER41HM-105VM	E-CAPACITOR	CAGC	
C 613	NCS21HJ-101AY	C-CAPACITOR	CEW	
C 614	NCB21HK-273AY	C-CAPACITOR	CEA	
C 615	NCB21HK-472AY	C-CAPACITOR	CSBDO	
C 616	NCB21HK-103AY	C-CAPACITOR	CSBDO	
C 617	NCS21HJ-331AY	C-CAPACITOR	OFT	
C 621	NCB21HK-104	C-CAPACITOR	VREF-D.GND	
C 623	NCF21CZ-105AY	C-CAPACITOR	VCC-D.GND	
C 624	QER41AM-107	E-CAPACITOR	VCC-D.GND	
C 631	QER41CM-106	E-CAPACITOR	APC +5V-BASE	
C 632	NCF21CZ-105AY	C-CAPACITOR	APC +5V-D.GND	
C 633	NCB21HK-223AY	C-CAPACITOR	PU K-VREF	
C 651	NCS21HJ-120AY	C-CAPACITOR	X1	
C 652	NCS21HJ-150AY	C-CAPACITOR	X2	
C 653	NCB21HK-104	C-CAPACITOR	VDD-VSS	
C 654	NCB21HK-223AY	C-CAPACITOR	AVDD1-AVSS1	
C 655	QERF1AM-227Z	E-CAPACITOR	AVDD1-AVSS1	
C 656	NCB21HK-104	C-CAPACITOR	D.GND-A.GND	
C 657	NCB21HK-222AY	C-CAPACITOR	OUTL	
C 658	NCB21HK-222AY	C-CAPACITOR	OUTR	
C 661	NCB21HK-104	C-CAPACITOR	AVDD2-AVSS2	
C 662	QER41AM-107	E-CAPACITOR	AVDD2-AVSS2	
C 663	NCB21HK-104	C-CAPACITOR	PLLF	
C 664	NCB21HK-223AY	C-CAPACITOR	IRF	
C 665	NCB21HK-223AY	C-CAPACITOR	DSL F	
C 666	NCS21HJ-471AY	C-CAPACITOR	ARF	
C 667	NCF21CZ-105AY	C-CAPACITOR	VCOF	
C 668	NCB21HK-473AY	C-CAPACITOR	VCOF	
C 671	NCB21HK-104	C-CAPACITOR	DVDD1-DVSS1	
C 672	QER41AM-107	E-CAPACITOR	DVDD1-DVSS1	
C 801	NCB21HK-103AY	C-CAPACITOR	FOD	
C 802	NCB21HK-103AY	C-CAPACITOR	TRD	
C 811	NCS21HJ-101AY	C-CAPACITOR	FOCUS	
C 812	NCS21HJ-101AY	C-CAPACITOR	SPINDLE	
C 813	NCS21HJ-101AY	C-CAPACITOR	FEED	
C 814	NCS21HJ-101AY	C-CAPACITOR	TRACKING	
C 821	NCF21CZ-105AY	C-CAPACITOR	VCC-M.GND	
C 822	QERF1AM-227Z	E-CAPACITOR	VCC-M.GND	

BLOCK NO. 04

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 607	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 608	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 609	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 610	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 611	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 612	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 613	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 614	QRD161J-100	CARBON RESISTOR	10 5% 1/6W	
R 615	QRD161J-100	CARBON RESISTOR	10 5% 1/6W	
R 616	QRD161J-2R7	CARBON RESISTOR	2.7 5% 1/6W	
R 617	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 618	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 619	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 620	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R 621	QRD161J-100	CARBON RESISTOR	10 5% 1/6W	
R 622	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 951	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R 952	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 953	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
R 954	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 955	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
SP081	VYH7653-003	IC HOLDER		
X 601	VCK5062-001Z	CRYSTAL		

BLOCK NO. 05

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 279	NRSA02J-102NY	MG RESISTOR	IOSEL	
R 281	NRSA02J-102NY	MG RESISTOR	/RST CD LSI	
R 282	NRSA02J-102NY	MG RESISTOR	/VCDRST	
R 283	NRSA02J-102NY	MG RESISTOR	/RST OTHER	
R 284	NRSA02J-102NY	MG RESISTOR	/RESET MICOM	
R 285	NRSA02J-102NY	MG RESISTOR	OSCLK	
R 286	NRSA02J-102NY	MG RESISTOR	/OSCS	
R 287	NRSA02J-102NY	MG RESISTOR	OSDATA	
R 288	NRSA02J-102NY	MG RESISTOR	SHIFT	
R 289	NRSA02J-223NY	MG RESISTOR	SHIFT PULL-UP	
R 291	NRSA02J-122NY	MG RESISTOR	/P.ON	
R 292	NRSA02J-103NY	MG RESISTOR	BASE-EMITTER	
R 293	NRSA02J-102NY	MG RESISTOR	P.ON	
R 601	NRSA02J-274NY	MG RESISTOR	TBAL	
R 602	NRSA02J-154NY	MG RESISTOR	FBAL	
R 603	NRSA02J-273NY	MG RESISTOR	FE	
R 604	NRSA02J-114NYM	MG RESISTOR	TE	
R 605	NRSA02J-104NY	MG RESISTOR	TEBPF	
R 606	NRSA02J-473NY	MG RESISTOR	TEBPF	
R 607	NRSA02J-822NY	MG RESISTOR	TE	
R 611	NRSA02J-123NY	MG RESISTOR	RF	
R 612	NRSA02J-125NY	MG RESISTOR	CSBRT	
R 631	NRSA02J-2R2NYM	MG RESISTOR	+5V DE-COUPLE	
R 632	NRSA02J-100NY	MG RESISTOR	APC EMITTER	
R 634	NRSA02J-120NY	MG RESISTOR	APC COLLECTOR	
R 635	NRSA02J-121NY	MG RESISTOR	PU K	
R 636	NRSA02J-910NY	MG RESISTOR	PU LD	
R 651	NRSA02J-271NY	MG RESISTOR	X2	
R 652	NRSA02J-220NY	MG RESISTOR	AVDD1 DE-COUPLE	
R 657	NRSA02J-102NY	MG RESISTOR	OUTL	
R 658	NRSA02J-102NY	MG RESISTOR	OUTR	
R 661	NRSA02J-220NY	MG RESISTOR	AVDD2 DE-COUPLE	
R 662	NRSA02J-471NY	MG RESISTOR	PLLF	
R 663	NRSA02J-124NY	MG RESISTOR	IREF	
R 665	NRSA02J-683NY	MG RESISTOR	ARF	
R 666	NRSA02J-155NY	MG RESISTOR	1.5M 5% 1/10W	
R 667	NRSA02J-562NY	MG RESISTOR	VCOF	
R 671	NRSA02J-102NY	MG RESISTOR	CDBCK	
R 672	NRSA02J-102NY	MG RESISTOR	CDLRCK	
R 673	NRSA02J-102NY	MG RESISTOR	CDATA	
R 674	NRSA02J-101NY	MG RESISTOR	TX	
R 675	NRSA02J-102NY	MG RESISTOR	MCLK	
R 676	NRSA02J-102NY	MG RESISTOR	MDATA	
R 677	NRSA02J-102NY	MG RESISTOR	MLD	
R 678	NRSA02J-102NY	MG RESISTOR	BLKCK	
R 679	NRSA02J-102NY	MG RESISTOR	SCK	
R 680	NRSA02J-102NY	MG RESISTOR	SUB0	
R 681	NRSA02J-102NY	MG RESISTOR	DMUTE	
R 682	NRSA02J-102NY	MG RESISTOR	STAT	
R 683	NRSA02J-102NY	MG RESISTOR	L00N	
R 684	NRSA02J-271NY	MG RESISTOR	XCLK	
R 685	NRSA02J-102NY	MG RESISTOR	SUBC	
R 686	NRSA02J-101NY	MG RESISTOR	SBCK	
R 687	NRSA02J-102NY	MG RESISTOR	/CLDCK	
R 688	NRSA02J-101NY	MG RESISTOR	IPFLAG	

BLOCK NO. 05

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 851	QER41CM-106	E-CAPACITOR	LM VCC-M.GND	
C 852	QER41CM-106	E-CAPACITOR	RM VCC-M.GND	
C 855	NCR21HK-104	C CAPACITOR	VCC-M.GND	
C 859	NCF21CZ-105AY	C CAPACITOR	L MOTOR	
C 860	NCF21CZ-105AY	C CAPACITOR	R MOTOR	
CN151	EMV7171-115R	15FFC CONNECTOR	VIDEO CD	
CN152	EMV5109-012B	12P CN RIG	VIDEO CD	
CN601	EMV7171-115R	15FFC CONNECTOR	TRAVERSE	
CN651	EMV7171-119R	CONNECTOR	MAIN	
CN652	EMV7171-105R	CONNECTOR	OSD	
CN653	EMV7171-113R	CONNECTOR	CD TEXT	
CN801	EMV5109-006A	6P PLUG ASSY	TRAVERSE	
CN851	VMC0107-R03	SOCKET	DISC DETECTION	
CN854	VMC0289-P07	CONNECTOR	TRAY SWITCH	
CN855	VMC0324-12310	CONNECTOR	CAM SWITCH	
IC251	UPD78056GC-201	IC	RF AMP	
IC601	AN88065B	IC	DSP & DAC	
IC651	MN35510	IC	PU DRIVE	
IC801	BA6897FPW	IC	L MOTOR DRIVE	
IC851	TA8409S	IC	R MOTOR DRIVE	
IC852	TA8409S	IC	L MOTOR DRIVE	
L 851	VP0033-100Z	INDUCTOR	VS DE-COUPLE	
L 853	VP0033-100Z	INDUCTOR	R MOTOR	
L 854	VP0033-100Z	INDUCTOR	L MOTOR	
Q 291	2SB1357(E-F)	TRANSISTOR	/P.ON	
Q 631	2SR1037AKT146	CHIP TRANSISTOR	APC	
Q 842	DTA144ES	TRANSISTOR	/DISC	
R 251	NRSA02J-102NY	MG RESISTOR	DEMPHO	
R 252	NRSA02J-102NY	MG RESISTOR	/OSOFF	
R 253	NRSA02J-102NY	MG RESISTOR	MCS	
R 254	NRSA02J-102NY	MG RESISTOR	MRDY	
R 255	NRSA02J-102NY	MG RESISTOR	KCMD	
R 256	NRSA02J-102NY	MG RESISTOR	MSTAT	
R 257	NRSA02J-102NY	MG RESISTOR	KCLK	
R 258	NRSA02J-102NY	MG RESISTOR	MREQ	
R 259	NRSA02J-101NY	MG RESISTOR	VCDEMP	
R 260	NRSA02J-102NY	MG RESISTOR	SRDATA	
R 261	NRSA02J-102NY	MG RESISTOR	SRCLK	
R 262	NRSA02J-102NY	MG RESISTOR	MNT0	
R 263	NRSA02J-102NY	MG RESISTOR	MNT1	
R 264	NRSA02J-102NY	MG RESISTOR	MNT2	
R 265	NRSA02J-223NY	MG RESISTOR	/VCDRST PULL-UP	
R 266	NRSA02J-102NY	MG RESISTOR	CHECK0	
R 267	NRSA02J-102NY	MG RESISTOR	CHECK1	
R 268	NRSA02J-102NY	MG RESISTOR	CHECK2	
R 269	NRSA02J-102NY	MG RESISTOR	CHECK3	
R 270	NRSA02J-223NY	MG RESISTOR	CHECK0 PULL-UP	
R 271	NRSA02J-223NY	MG RESISTOR	CHECK1 PULL-UP	
R 272	NRSA02J-223NY	MG RESISTOR	CHECK2 PULL-UP	
R 273	NRSA02J-223NY	MG RESISTOR	CHECK3 PULL-UP	
R 274	NRSA02J-102NY	MG RESISTOR	HREQ	
R 275	NRSA02J-102NY	MG RESISTOR	HRDY	
R 276	NRSA02J-102NY	MG RESISTOR	DABCK	
R 277	NRSA02J-102NY	MG RESISTOR	DALRCK	
R 278	NRSA02J-102NY	MG RESISTOR	DADATA	

CD Tray Select Switch Board

BLOCK NO. 06

A REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
CM804	VMC0289-S07	CONNECTOR		
SW 1	QSECC001-E03	LEVER SWITCH		
SW 2	QSECC001-E03	LEVER SWITCH		
SW 3	QSECC001-E03	LEVER SWITCH		
SW 4	QSECC001-E03	LEVER SWITCH		
SW 5	QSECC001-E03	LEVER SWITCH		
SW 6	QSECC001-E03	LEVER SWITCH		

BLOCK NO. 05

A REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 689	NRSA02J-102NY	MG RESISTOR	DEMPH	
R 690	NRSA02J-101NY	MG RESISTOR	DADATA	
R 691	NRSA02J-101NY	MG RESISTOR	DALRCK	
R 692	NRSA02J-101NY	MG RESISTOR	DABCK	
R 693	NRSA02J-471NY	MG RESISTOR	470 5% 1/10W	
R 694	NRSA02J-102NY	MG RESISTOR	XCLK	
R 801	NRSA02J-162NY	MG RESISTOR	FOD	
R 802	NRSA02J-472NY	MG RESISTOR	FOD	
R 803	NRSA02J-222NY	MG RESISTOR	TRD	
R 804	NRSA02J-683NY	MG RESISTOR	KICK	
R 805	NRSA02J-822NY	MG RESISTOR	TVD	
R 806	NRSA02J-223NY	MG RESISTOR	TRV	
R 807	NRSA02J-222NY	MG RESISTOR	ECS	
R 808	NRSA02J-223NY	MG RESISTOR	ECM	
R 811	NRSA02J-473NY	MG RESISTOR	/DRMUTE	
R 831	NRSA02J-151NY	MG RESISTOR	/REST	
R 832	NRSA02J-103NY	MG RESISTOR	/REST PULL-UP	
R 842	NRSA02J-473NY	MG RESISTOR	/DISC	
R 851	NRSA02J-102NY	MG RESISTOR	LMUP	
R 852	NRSA02J-102NY	MG RESISTOR	RMUP	
R 853	NRSA02J-102NY	MG RESISTOR	LMDOWN	
R 854	NRSA02J-102NY	MG RESISTOR	RMDOWN	
R 855	NRSA02J-102NY	MG RESISTOR	LM VCC-VREF	
R 856	NRSA02J-102NY	MG RESISTOR	RM VCC-VREF	
R 859	NRSA02J-181NY	MG RESISTOR	VCC DE-COUPLE	
R 861	NRSA02J-102NY	MG RESISTOR	1SSW	
R 862	NRSA02J-102NY	MG RESISTOR	2SSW	
R 863	NRSA02J-102NY	MG RESISTOR	3SSW	
R 864	NRSA02J-102NY	MG RESISTOR	1MSW	
R 865	NRSA02J-102NY	MG RESISTOR	2MSW	
R 866	NRSA02J-102NY	MG RESISTOR	3MSW	
R 871	NRSA02J-223NY	MG RESISTOR	1SSW PULL-UP	
R 872	NRSA02J-223NY	MG RESISTOR	2SSW PULL-UP	
R 873	NRSA02J-223NY	MG RESISTOR	3SSW PULL-UP	
R 874	NRSA02J-223NY	MG RESISTOR	1MSW PULL-UP	
R 875	NRSA02J-223NY	MG RESISTOR	2MSW PULL-UP	
R 876	NRSA02J-223NY	MG RESISTOR	3MSW PULL-UP	
R 880	NRSA02J-102NY	MG RESISTOR	CAM0	
R 881	NRSA02J-102NY	MG RESISTOR	CAM1	
R 882	NRSA02J-102NY	MG RESISTOR	CAM2	
R 883	NRSA02J-102NY	MG RESISTOR	CAM3	
R 884	NRSA02J-102NY	MG RESISTOR	CAM4	
R 885	NRSA02J-102NY	MG RESISTOR	CAM5	
R 886	NRSA02J-102NY	MG RESISTOR	CAM6	
R 887	NRSA02J-102NY	MG RESISTOR	CAM7	
R 890	NRSA02J-223NY	MG RESISTOR	CAM0 PULL-UP	
R 891	NRSA02J-223NY	MG RESISTOR	CAM1 PULL-UP	
R 892	NRSA02J-223NY	MG RESISTOR	CAM2 PULL-UP	
R 893	NRSA02J-223NY	MG RESISTOR	CAM3 PULL-UP	
R 894	NRSA02J-223NY	MG RESISTOR	CAM4 PULL-UP	
R 895	NRSA02J-223NY	MG RESISTOR	CAM5 PULL-UP	
R 896	NRSA02J-223NY	MG RESISTOR	CAM6 PULL-UP	
R 897	NRSA02J-223NY	MG RESISTOR	CAM7 PULL-UP	
W 601	EFW102-047	TER-WIRE	D-GND	
X 251	QAX0360-001Z	CRYSTAL	FOR IC251	
X 651	VXC5016-954V	CRYSTAL	FOR IC651	

■ Cam Switch Board

BLOCK NO. **07** [] [] [] [] [] [] [] [] [] []

△ REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
CN	VMC0325-010	CONNECTOR		

■ Head Amplifier & Mechanism Control Board

BLOCK NO. **08** [] [] [] [] [] [] [] [] [] []

△ REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 101	NCS21HJ-561AY	C CAPACITOR	560PF 5% 50V	
C 102	NCS21HJ-331AY	C CAPACITOR	330PF 5% 50V	
C 103	NCS21HJ-561AY	C CAPACITOR	560PF 5% 50V	
C 104	NCS21HJ-221AY	C CAPACITOR	220PF 5% 50V	
C 105	QEK40JM-227	E.CAPACITOR	220MF 20% 6.3V	
C 106	NCB21HK-333AY	C CAPACITOR	.033MF 10% 50V	
C 107	QEK41EM-475	E.CAPACITOR	4.7MF 20% 25V	
C 108	NCB21HK-393AY	C CAPACITOR	.039MF 10% 50V	
C 109	NCB21HK-563AY	C CAPACITOR	.056MF 10% 50V	
C 110	NCS21HJ-221AY	C CAPACITOR	220PF 5% 50V	
C 111	QEK41HM-104	E.CAPACITOR	.10MF 20% 50V	
C 112	QEK41CM-106	E.CAPACITOR	10MF 20% 16V	
C 113	NCB21HK-332AY	C CAPACITOR	3300PF 10% 50V	
C 114	QEK41EM-475	E.CAPACITOR	4.7MF 20% 25V	
C 115	NCB21HK-153AY	C CAPACITOR	.015MF 10% 50V	
C 116	NCB21HK-822AY	C CAPACITOR	8200PF 10% 50V	
C 117	NCB21HK-223AY	C CAPACITOR	.022MF 10% 50V	
C 118	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 119	NCB21HK-563AY	C CAPACITOR	.056MF 10% 50V	
C 120	NCS21HJ-330AY	C CAPACITOR	33PF 5% 50V	
C 201	NCS21HJ-561AY	C CAPACITOR	560PF 5% 50V	
C 202	NCS21HJ-331AY	C CAPACITOR	330PF 5% 50V	
C 203	NCS21HJ-561AY	C CAPACITOR	560PF 5% 50V	
C 204	NCS21HJ-221AY	C CAPACITOR	220PF 5% 50V	
C 205	QEK40JM-227	E.CAPACITOR	220MF 20% 6.3V	
C 206	NCB21HK-333AY	C CAPACITOR	.033MF 10% 50V	
C 207	QEK41EM-475	E.CAPACITOR	4.7MF 20% 25V	
C 208	NCB21HK-393AY	C CAPACITOR	.039MF 10% 50V	
C 209	NCB21HK-563AY	C CAPACITOR	.056MF 10% 50V	
C 210	NCS21HJ-221AY	C CAPACITOR	220PF 5% 50V	
C 211	QEK41HM-104	E.CAPACITOR	.10MF 20% 50V	
C 212	QEK41CM-106	E.CAPACITOR	10MF 20% 16V	
C 213	NCB21HK-332AY	C CAPACITOR	3300PF 10% 50V	
C 214	QEK41EM-475	E.CAPACITOR	4.7MF 20% 25V	
C 215	NCB21HK-153AY	C CAPACITOR	.015MF 10% 50V	
C 216	NCB21HK-822AY	C CAPACITOR	8200PF 10% 50V	
C 217	NCB21HK-223AY	C CAPACITOR	.022MF 10% 50V	
C 218	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 219	NCB21HK-563AY	C CAPACITOR	.056MF 10% 50V	
C 220	NCS21HJ-330AY	C CAPACITOR	33PF 5% 50V	
C 301	QEK41CM-106	E.CAPACITOR	10MF 20% 16V	
C 302	QEK41CM-476	E.CAPACITOR	47MF 20% 16V	
C 303	QEK41CM-226	E.CAPACITOR	22MF 20% 16V	
C 304	QEK41EM-475	E.CAPACITOR	4.7MF 20% 25V	
C 305	NCB21HK-393AY	C CAPACITOR	.039MF 10% 50V	
C 306	QEK40JM-227	E.CAPACITOR	220MF 20% 6.3V	
C 308	NCB21HK-562AY	C CAPACITOR	5600PF 10% 50V	
C 309	NCB21HK-562AY	C CAPACITOR	5600PF 10% 50V	
C 310	NCB21HK-223AY	C CAPACITOR	.022MF 10% 50V	
C 311	NCB21HK-682AY	C CAPACITOR	6800PF 10% 50V	
C 313	QEK41AM-107ZM	E.CAPACITOR	100MF 20% 10V	
C 314	QCZ0205-155	ML.C.CAPACITOR	1.5MF	
C 315	QCZ0205-155	ML.C.CAPACITOR	1.5MF	
C 316	QFG32AJ-103ZN	PP CAPACITOR	.010MF 5% 100V	
C 318	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	

BLOCK NO. 08

BLOCK NO. 08

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
Q 313	2SC1623(6)	TRANSISTOR		
Q 314	2SB562(C)	TRANSISTOR		
Q 315	2SC1623(6)	TRANSISTOR		
Q 316	2SA952(L,K)	TRANSISTOR		
Q 317	DTC124EK	TRANSISTOR		
Q 318	DTA144EKA-X	TRANSISTOR		
Q 319	DTC144EKA-X	TRANSISTOR		
Q 320	DTC144EKA-X	TRANSISTOR		
Q 321	DTC144EKA-X	TRANSISTOR		
Q 322	DTC144EKA-X	TRANSISTOR		
Q 323	2SC1623(6)	TRANSISTOR		
R 102	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 103	NRSA02J-183NY	MG RESISTOR	18K 5% 1/10W	
R 105	NRSA02J-220NY	MG RESISTOR	22 5% 1/10W	
R 106	NRSA02J-392NY	MG RESISTOR	3.9K 5% 1/10W	
R 107	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W	
R 108	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
R 109	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
R 110	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
R 111	NRSA02J-562NY	MG RESISTOR	5.6K 5% 1/10W	
R 112	NRSA02J-122NY	MG RESISTOR	1.2K 5% 1/10W	
R 113	NRSA02J-271NY	MG RESISTOR	270 5% 1/10W	
R 114	NRSA02J-391NY	MG RESISTOR	390 5% 1/10W	
R 115	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
R 116	NRSA02J-182NY	MG RESISTOR	1.8K 5% 1/10W	
R 117	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
R 118	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
R 119	NRSA02J-203NY	MG RESISTOR	20K 5% 1/10W	
R 120	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 121	NRSA02J-122NY	MG RESISTOR	1.2K 5% 1/10W	
R 202	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 203	NRSA02J-183NY	MG RESISTOR	18K 5% 1/10W	
R 205	NRSA02J-220NY	MG RESISTOR	22 5% 1/10W	
R 206	NRSA02J-392NY	MG RESISTOR	3.9K 5% 1/10W	
R 207	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W	
R 208	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
R 209	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
R 210	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
R 211	NRSA02J-562NY	MG RESISTOR	5.6K 5% 1/10W	
R 212	NRSA02J-122NY	MG RESISTOR	1.2K 5% 1/10W	
R 213	NRSA02J-271NY	MG RESISTOR	270 5% 1/10W	
R 214	NRSA02J-391NY	MG RESISTOR	390 5% 1/10W	
R 215	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
R 216	NRSA02J-182NY	MG RESISTOR	1.8K 5% 1/10W	
R 217	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
R 218	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
R 219	NRSA02J-203NY	MG RESISTOR	20K 5% 1/10W	
R 220	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 221	NRSA02J-122NY	MG RESISTOR	1.2K 5% 1/10W	
R 301	NRS181J-221NY	MG RESISTOR	220 5% 1/8W	
R 302	NRS181J-101NY	MG RESISTOR	100 5% 1/8W	
R 304	NRSA02J-393NY	MG RESISTOR	39K 5% 1/10W	
R 305	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 306	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 307	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 319	QF632AJ-821ZN	TF CAPACITOR	820PF 5% 100V	
C 321	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 322	QF632AJ-152ZN	M CAPACITOR	1500PF 5% 100V	
C 327	QEK41CM-476	E CAPACITOR	47MF 20% 16V	
C 328	NCB21HK-151AY	C CAPACITOR	150PF 5% 50V	
C 329	NCB21HK-151AY	C CAPACITOR	150PF 5% 50V	
C 330	NCB21HK-151AY	C CAPACITOR	150PF 5% 50V	
C 332	NCB21HK-151AY	C CAPACITOR	150PF 5% 50V	
C 335	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 336	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 337	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 338	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 339	QEK41CM-476	E CAPACITOR	47MF 20% 16V	
C 340	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 341	QEK41EM-475	E CAPACITOR	4.7MF 20% 25V	
C 342	QEK41EM-475	E CAPACITOR	4.7MF 20% 25V	
C 343	QET41CM-106	E CAPACITOR	10MF 20% 16V	
C 344	NCB21HK-472AY	C CAPACITOR	4700PF 10% 50V	
CN301	VMC0163-R06	CONNECTOR		
CN302	VMC0163-R06	CONNECTOR		
CN303	Q6B201M1-10	PWB CONNECTOR		
CN304	Q6B201M1-10	PWB CONNECTOR		
CN305	VMC0163-R10	CONNECTOR		
CN306	VMC0163-R11	CONNECTOR		
D 301	MA704A	S.K.DIODE		
D 302	MA152WK-TX	SI DIODE		
D 307	MA3051(M)	ZENER DIODE		
D 308	MA3051(M)	ZENER DIODE		
D 309	MA704A	S.K.DIODE		
IC301	BA3126N	IC		
IC302	AN7345K	IC		
IC303	BU4094BCF-X	IC		
IC304	BU4094BCF-X	IC		
L 301	QR0620-001	OSC COIL (BIAS)		
L 303	VQP0033-100Z	INDUCTOR		
Q 101	DTC114TKT146	TRANSISTOR		
Q 102	DTC144TKA-X	TRANSISTOR		
Q 103	DTC144EKA-X	TRANSISTOR		
Q 104	DTC114TKT146	TRANSISTOR		
Q 105	2SC2001(L,K)	TRANSISTOR		
Q 201	DTC114TKT146	TRANSISTOR		
Q 202	DTC144TKA-X	TRANSISTOR		
Q 203	DTC144EKA-X	TRANSISTOR		
Q 204	DTC114TKT146	TRANSISTOR		
Q 205	2SC2001(L,K)	TRANSISTOR		
Q 301	DTC144TKA-X	TRANSISTOR		
Q 302	2SC2001(L,K)	TRANSISTOR		
Q 303	2SC2001(L,K)	TRANSISTOR		
Q 304	2SC2001(L,K)	TRANSISTOR		
Q 305	2SC2001(L,K)	TRANSISTOR		
Q 306	2SC1623(6)	TRANSISTOR		
Q 307	2SC1623(6)	TRANSISTOR		
Q 308	2SC1623(6)	TRANSISTOR		
Q 309	2SC1623(6)	TRANSISTOR		
Q 312	2SB562(C)	TRANSISTOR		

Reel Pulse Board

BLOCK NO. 09		BLOCK NO. 09		BLOCK NO. 09		BLOCK NO. 09		BLOCK NO. 09	
REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
CN	1 EMV7159-010	10P PLUG ASSY							
CN	1 EMV7159-010	10P PLUG ASSY							
D	1 1SR139-100	SI DIODE							
D	1 1SR139-100	SI DIODE							
IC	1 SG-105F3-BB-C	PHOTO SENSER							
IC	1 SG-105F3-BB-C	PHOTO SENSER							
P	1 VMZ0015-002	POST PIN							
P	1 VMZ0015-002	POST PIN							
SW	1 MXS00220MVLO	CASSETTE SWITCH	R-REC						
SW	2 MXS00220MVLO	CASSETTE SWITCH	TAPE						
SW	4 MXS00220MVLO	CASSETTE SWITCH	70U						
SW	4 MXS00220MVLO	CASSETTE SWITCH	70U						
SW	5 MXS00220MVLO	CASSETTE SWITCH	F-REC						
SW	6 0SEC001-E03	SWITCH							
SW	6 0SEC001-E03	SWITCH							

BLOCK NO. 08		BLOCK NO. 08		BLOCK NO. 08		BLOCK NO. 08		BLOCK NO. 08	
REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 308	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W						
R 309	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W						
R 310	NRS181J-820NY	MG RESISTOR	82 5% 1/8W						
R 311	NRS181J-820NY	MG RESISTOR	82 5% 1/8W						
R 313	NRSA02J-3R3NYM	MG RESISTOR	3.3 5% 1/10W						
R 314	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W						
R 315	NRSA02J-100NY	MG RESISTOR	10 5% 1/10W						
R 316	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W						
R 317	NRSA02J-100NY	MG RESISTOR	10 5% 1/10W						
R 318	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W						
R 319	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W						
R 321	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W						
R 322	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W						
R 327	NRSA02J-474NY	MG RESISTOR	470K 5% 1/10W						
R 328	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W						
R 329	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W						
R 330	NRSA02J-ORONY	MG RESISTOR	5% 1/10W						
R 335	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W						
R 336	NRSA02J-392NY	MG RESISTOR	3.9K 5% 1/10W						
R 338	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W						
R 339	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W						
R 341	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W						
R 343	NRSA02J-ORONY	MG RESISTOR	5% 1/10W						
R 345	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W						
R 346	NRSA02J-ORONY	MG RESISTOR	5% 1/10W						
R 347	NRSA02J-392NY	MG RESISTOR	3.9K 5% 1/10W						
R 348	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W						
R 350	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W						
R 351	NRSA02J-151NY	MG RESISTOR	150 5% 1/10W						
R 353	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W						
R 354	NRSA02J-151NY	MG RESISTOR	150 5% 1/10W						
R 355	NRSA02J-352NY	MG RESISTOR	3.3K 5% 1/10W						
R 356	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W						
R 357	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W						
R 358	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W						
R 359	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W						
R 360	NRSA02J-433NYT	MG RESISTOR	43K 5% 1/10W						
R 361	NRSA02J-183NY	MG RESISTOR	18K 5% 1/10W						
R 362	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W						
R 363	NRSA02J-183NY	MG RESISTOR	18K 5% 1/10W						
R 364	NRSA02J-433NYT	MG RESISTOR	43K 5% 1/10W						
R 365	NRSA02J-203NY	MG RESISTOR	20K 5% 1/10W						
R 366	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W						
R 367	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W						
R 368	NRSA02J-391NY	MG RESISTOR	390 5% 1/10W						
R 369	NRSA02J-391NY	MG RESISTOR	390 5% 1/10W						
R 371	NRS181J-222NY	MG RESISTOR	2.2K 5% 1/8W						
R 374	NRSA02J-942NY	MG RESISTOR	9.4K 5% 1/10W						
R 375	NRSA02J-683NY	MG RESISTOR	68K 5% 1/10W						
R 376	NRS181J-688NY	MG RESISTOR	6.8 5% 1/8W						
VR101	QVPA603-503A	SEMI.-V.RESISTOR							
VR201	QVPA603-503A	SEMI.-V.RESISTOR							
VR501	QVPA603-103M	SEMI.-V.RESISTOR							

Video CD Unit Board

BLOCK NO. 09000000

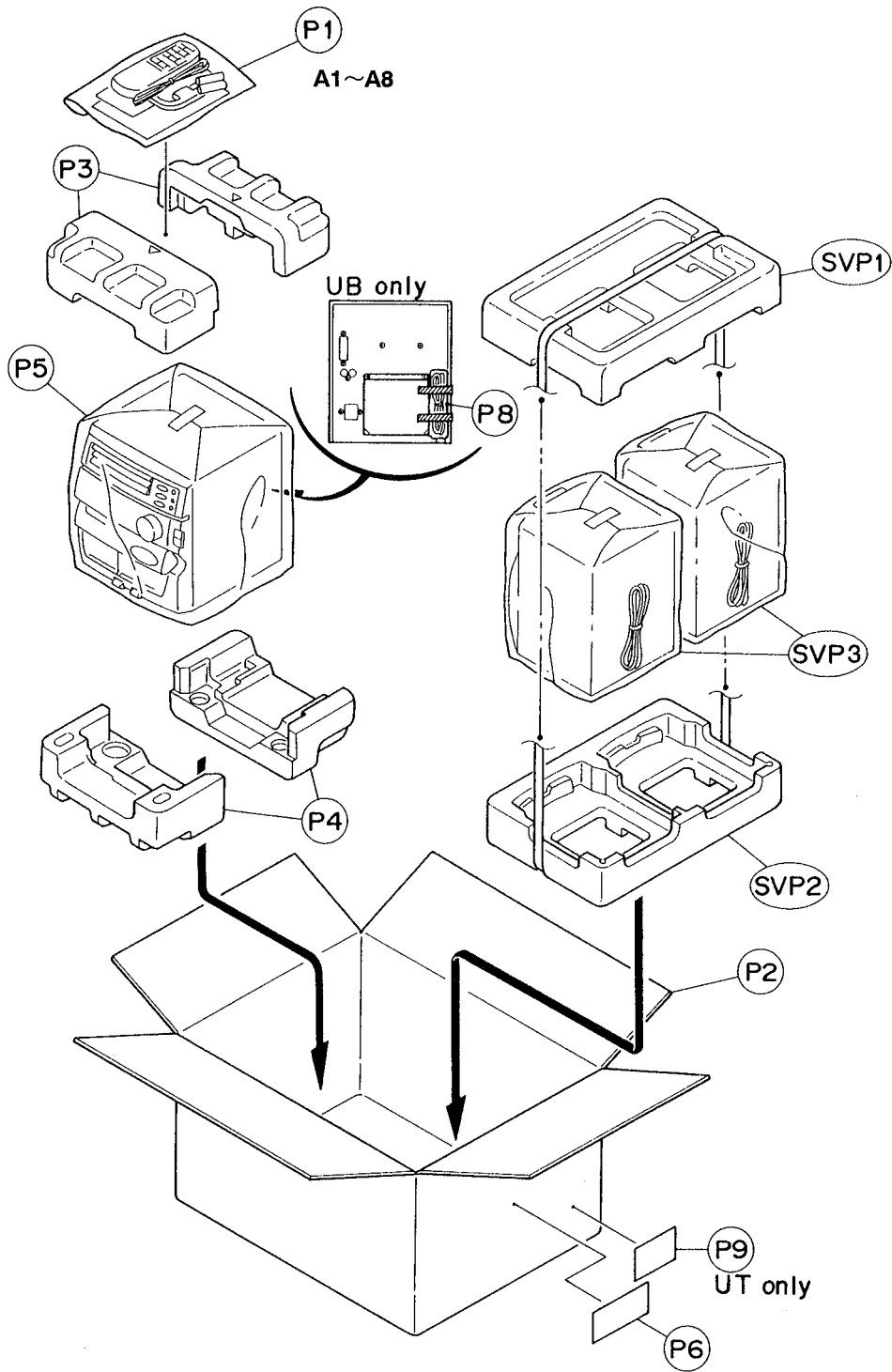
A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C	101	NGF31E7-104AY	C CAPACITOR	.10MF +80:-20%	
C	102	NGF31E7-104AY	C CAPACITOR	.10MF +80:-20%	
C	103	NGF31E7-104AY	C CAPACITOR	.10MF +80:-20%	
C	105	NGF31E7-104AY	C CAPACITOR	.10MF +80:-20%	
C	106	NGF31E7-104AY	C CAPACITOR	.10MF +80:-20%	
C	107	NGF31E7-104AY	C CAPACITOR	.10MF +80:-20%	
C	110	NGF31E7-104AY	C CAPACITOR	.10MF +80:-20%	
C	111	NGF31E7-104AY	C CAPACITOR	.10MF +80:-20%	
C	112	NGF31E7-104AY	C CAPACITOR	.10MF +80:-20%	
C	113	NGF31E7-104AY	C CAPACITOR	.10MF +80:-20%	
C	115	NGF31E7-104AY	C CAPACITOR	.10MF +80:-20%	
C	116	NGF31E7-104AY	C CAPACITOR	.10MF +80:-20%	
C	122	NGS31HJ-150AY	C CAPACITOR	.15PF 5% 50V	
C	123	NGF31E7-104AY	C CAPACITOR	.10MF +80:-20%	
C	124	NGF31E7-104AY	C CAPACITOR	.10MF +80:-20%	
C	125	NGF31E7-104AY	C CAPACITOR	.10MF +80:-20%	
C	132	NGF31E7-104AY	C CAPACITOR	.10MF +80:-20%	
C	134	NGF31E7-104AY	C CAPACITOR	.10MF +80:-20%	
C	141	NCB31HK-472AY	C CAPACITOR	4700PF 10% 50V	
C	151	NGF31E7-104AY	C CAPACITOR	.10MF +80:-20%	
C	152	NEA20JM-226NZ	E CAPACITOR	22MF 20% 6.3V	
C	153	NGF31E7-104AY	C CAPACITOR	.10MF +80:-20%	
C	154	NEA20JM-226NZ	E CAPACITOR	22MF 20% 6.3V	
C	155	NGF31E7-104AY	C CAPACITOR	.10MF +80:-20%	
C	156	NEA20JM-226NZ	E CAPACITOR	22MF 20% 6.3V	
C	157	NEA20JM-226NZ	E CAPACITOR	22MF 20% 6.3V	
C	162	NGS31HJ-681AYM	C CAPACITOR	.680PF 5% 50V	
C	168	NCB31HK-152AY	C CAPACITOR	1500PF 10% 50V	
C	169	NGS31HJ-102AYM	C CAPACITOR	1000PF 5% 50V	
C	173	NCB31HK-182AY	C CAPACITOR	1200PF 10% 50V	
C	181	NGF31E7-104AY	C CAPACITOR	.10MF +80:-20%	
CN101	EMV7154-215E	CONNECTOR			
CN102	EMV5109-012BE	CONNECTOR			
CN103	EMV5109-006BE	CONNECTOR			
D	141	DIZ4.7(B)-X	Z DIODE		
IC101	CL480-F1	IC			
IC102	JCE8006-X	IC			
IC103	HM514260CJ-7X	IC			
IC104	BU1417K	IC			
IC105	BU2173F-X	IC			
IC106	UPD6461GS-635X	IC			
IC107	PQ20V711X	IC			
IC108	TC7SH04FU	IC			
IC111	MN171601AKBJ2	IC			
IC112	TC55257DFLL85EX	IC			
IC113	HD74HCT244FP-XE	IC			
IC114	HD74HCT245FP-XE	IC			
IC115	TC74VHC02F-X	IC			
K	101	EMZ8102-N102AY	F-BEADS		
K	103	ENZ8102-N102AY	F-BEADS		

BLOCK NO. 10000000

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
L	102	VQP1007-2R7Y	INDUCTOR		
L	103	VQP1007-2R7Y	INDUCTOR		
Q	101	DTA114EKA-X	TRANSISTOR		
R	102	NRSA63J-473NY	MG RESISTOR	47K 5%	
R	103	NRSA63J-103NY	MG RESISTOR	10K 5%	
R	104	NRSA63J-105NY	MG RESISTOR	1.0M 5%	
R	105	NRSA63J-242NY	MG RESISTOR	2.4K 5%	
R	106	NRSA63J-682NY	MG RESISTOR	6.8K 5%	
R	107	NRSA63J-112NY	MG RESISTOR	1.1K 5%	
R	109	NRSA63J-750NY	RESISTOR	75 5%	
R	110	NRSA63J-750NY	RESISTOR	75 5%	
R	111	NRSA63J-182NY	MG RESISTOR	1.8K 5%	
R	112	NRSA63J-112NY	MG RESISTOR	1.1K 5%	
R	115	NRSA63J-0R0AY	MG RESISTOR	5%	
R	121	NRSA63J-102NY	MG RESISTOR	1.0K 5%	
R	122	NRSA63J-102NY	MG RESISTOR	1.0K 5%	
R	123	NRSA63J-102NY	MG RESISTOR	1.0K 5%	
R	124	NRSA63J-102NY	MG RESISTOR	1.0K 5%	
R	125	NRSA63J-102NY	MG RESISTOR	1.0K 5%	
R	135	NRSA63J-121NY	MG RESISTOR	120 5%	
R	141	NRSA63J-750NY	RESISTOR	75 5%	
R	142	NRSA63J-562NY	MG RESISTOR	5.6K 5%	
R	153	NRSA63J-222NY	MG RESISTOR	2.2K 5%	
R	154	NRSA63J-331NY	MG RESISTOR	330 5%	
R	155	NRSA63J-271NY	MG RESISTOR	270 5%	
R	191	NRSA63J-820NY	MG RESISTOR	82 5%	
R	192	NRSA63J-820NY	MG RESISTOR	82 5%	
R	193	NRSA63J-820NY	MG RESISTOR	82 5%	
R	194	NRSA63J-750NY	RESISTOR	75 5%	
TC101	ENZ1003-017T	TRIM.CAPACITOR			

-MEMO-

Packing



■ Packing parts list

BLOCK NO. M5MM [] [] [] []

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	P 1	E309758-002	POLY BAG		1		
	P 2	FMPC9006-001	CARTON ASSY		1		
	P 3	FMPH1011-001	CUSHION UPPER		1		
	P 4	FMPH1012-001	CUSHION BOTTOM		1		
	P 5	E309758-017	POLY BAG		1		
	P 6	-----	COMPUTER LABEL		1		
	P 9	FMND3007-009	RATING LABEL		1	UT	
	SVP 1	720-TPD401-00	SIDE CUSHION	UPPER	1		
	SVP 2	720-BPD401-00	SIDE CUSHION	BOTTOM	1		

■ Accessories parts list

BLOCK NO. M6MM [] [] [] []

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	A 1	EQB4001-015	AM LOOP ANT		1		
	A 2	FMUN9027-191M	INSTRUCTIONS		1		
	A 3	EWP304-014W	SIGNAL CORD		1		
	A 4	EWP201-011	B. IN ANT		1		
	A 5	VMZ0139-001	CONTHI PLUG		1	UT,U	
	A 6	ENZ2202-001	AC PLUG ADAPTER		1	US	
	A 7	RM-SEV507TUKP	REMCON		1		
	A 8	R6SPTT-2ST	BATTERY		1		
	SVP 3	MXV505T-SPBOX	SPEAKER BOX		2		



JVC

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