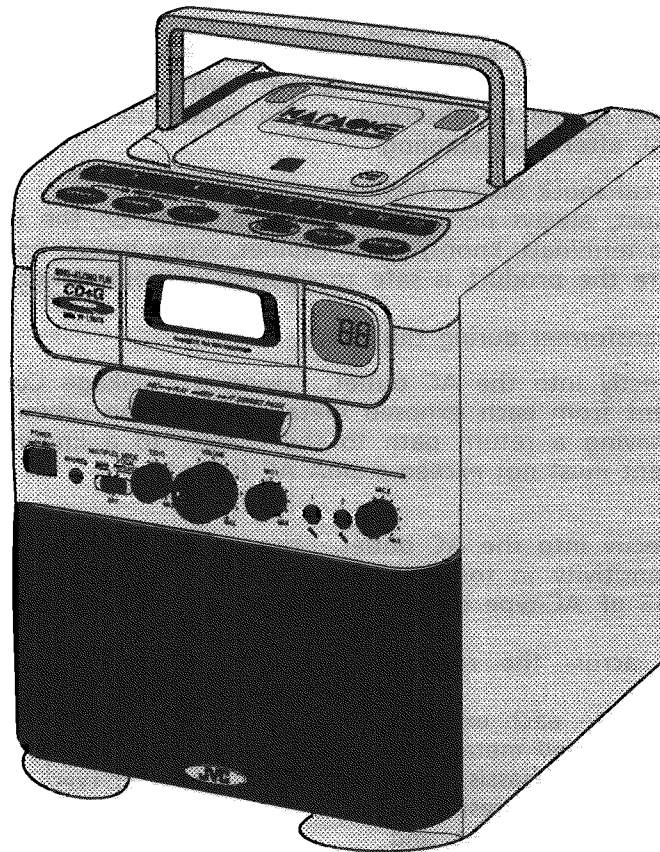


JVC

SERVICE MANUAL

CD GRAPHICS KARAOKE PLAYER

KX-G50



COMPACT
disc
DIGITAL AUDIO

COMPACT
disc
DIGITAL AUDIO
GRAPHICS

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Safety Precautions

1. The 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 (Δ) 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.).

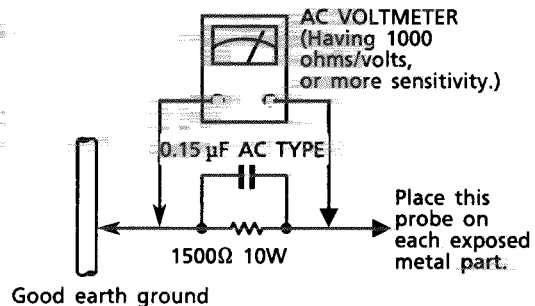
- Alternate check method
Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500 Ω 10 W resistor paralleled by a 0.15 μ F AC-type capacitor between an exposed metal part and a known good earth ground.

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. Any voltage measured 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.

Before using...

Be careful of the following before use

- Moving the machine
To prevent shorts or damaging the wiring when moving the machine, always pull the power cord out of the electrical socket and disengage the cords connecting the machine to the television.
- Save the instruction manual
Read this manual carefully and keep it together with your warranty. Fill out the necessary items under 'For Customer Use' on the LIMITED WARRANTY page.
- Illustrations are drawn for easy comprehension and may differ slightly from the actual parts.

Handling precautions

Read before using

Moisture

Moisture forms on the lens and other components when exposing the machine to a sudden increase in temperature. The laser signals cannot be read or played when the parts are wet. Turn the power on and let the machine sit at room temperature for one or two hours until the moisture evaporates (depending on the amount of moisture) before using.
Moisture may also form in the summer if the machine is exposed directly to air conditioning. Such conditions should be avoided.

For safe use, observe the following:

Avoid moisture, water and dust

Do not set your machine in moist or dusty places.

Do not open the cabinet

It is dangerous to open up the cabinet and touch the internal parts.

Handle power cord with care

Do not pull the plug by the cord. Always pull from the plug portion itself.

Avoid high temperatures

Do not expose your machine to direct sunlight or set near a heating device.

When you're away

When away on travel or otherwise for an extended period of time, pull the plug from the outlet.

Do not insert foreign matter into the machine

Do not insert wires, hairpins, coins, etc. into your machine.

Do not block the vents

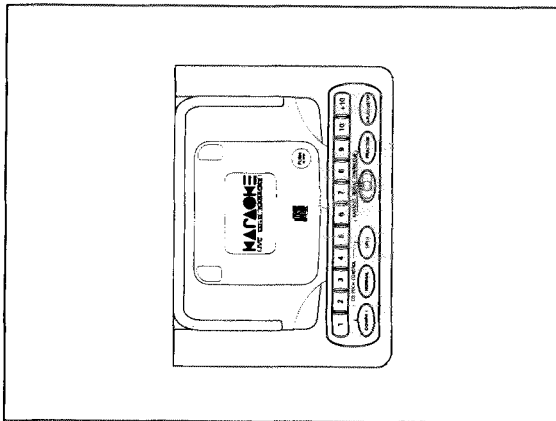
Blocking the vents may damage your machine.

Care of the cabinet

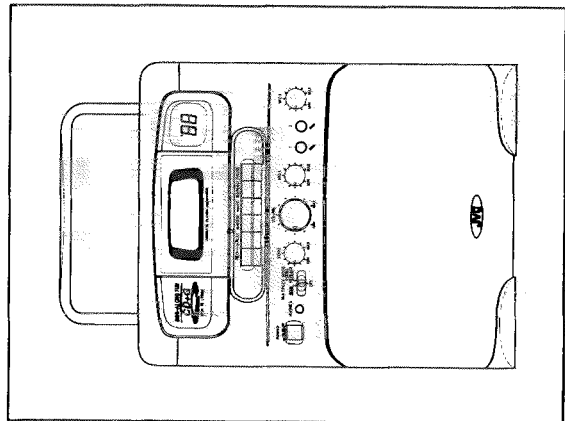
When cleaning your machine, use a soft cloth and follow the relevant instructions on the use of chemically-coated cloths. Avoid applying benzene, thinner or other organic solvents and disinfectants. This may cause deformation or discoloring.

If water gets inside the machine, cut the main power switch and pull the plug from the electrical socket, then call the store where you made your purchase. Using the machine in this state may cause a fire or electrical shock.

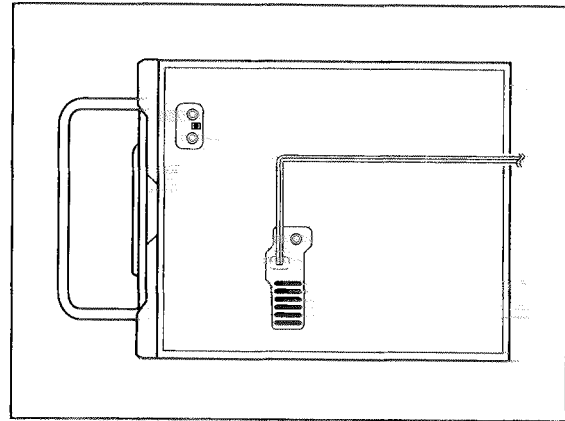
Top view



Front view



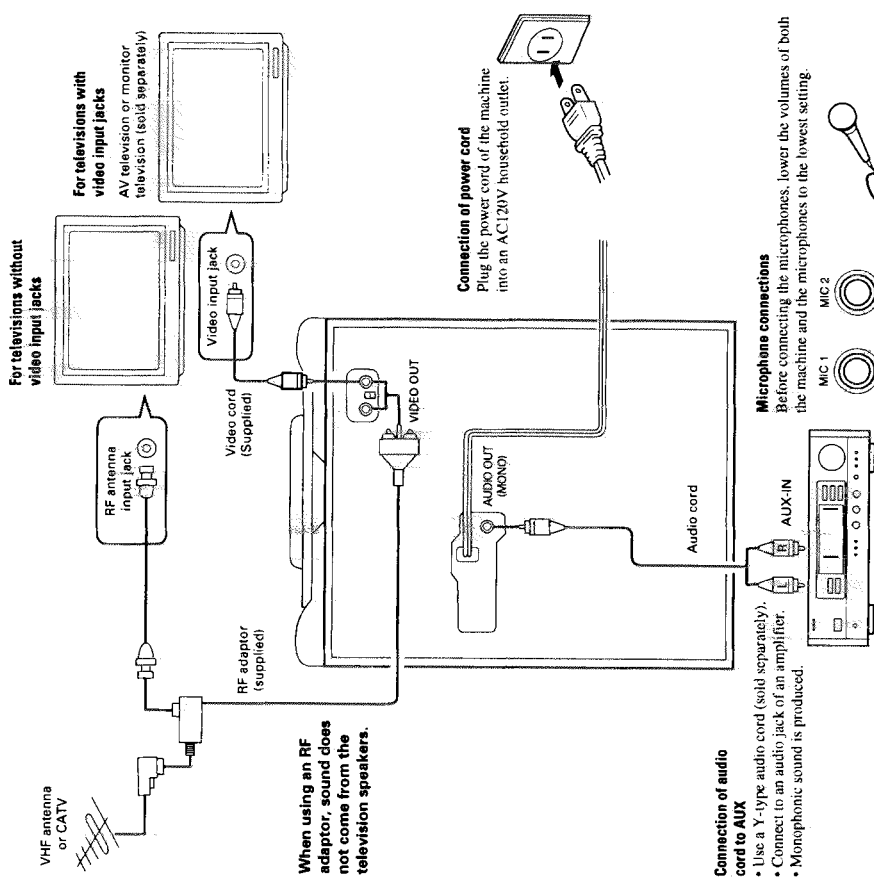
Rear view



Setting up

Precaution

- Do not set this machine next to a television. It may cause color distortion.
- When not using this machine, either turn the power off or keep the television antenna cord and video cord apart. Not doing so may cause interference.

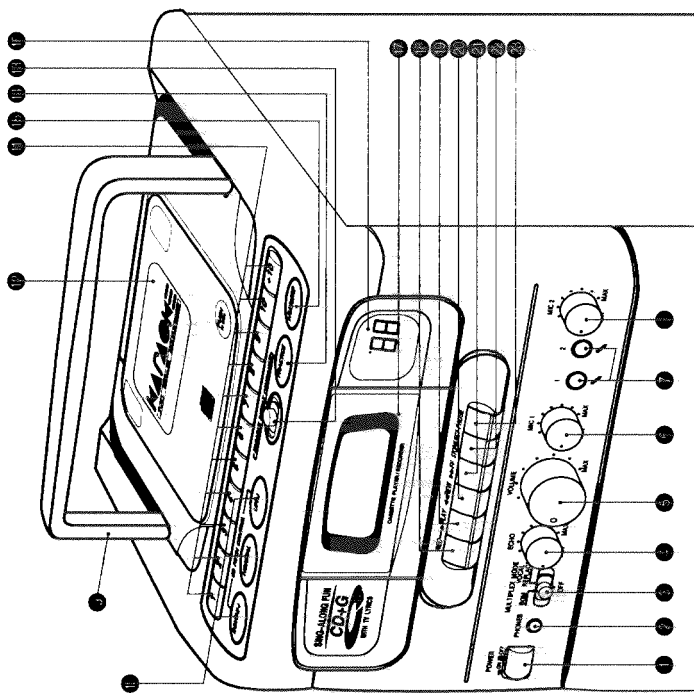


Precaution

- Turning the VOLUME control on the KX-G50 will not change the volume you hear from your stereo (or other audio equipment). This means you can turn the sound of the KX-G50 all the way down and listen to just the sound from your stereo.

- Connect microphones with an impedance of 1 kohm or less (one microphone is supplied) to the microphone jacks. Make sure the microphones have the same capacity when using two of them.

Overview of controls



1. POWER ON/OFF

Press to turn on power. Press again to turn off.

2. PHONES

Plug headphones into jack and sound from speakers is cut.

Precaution

- Turn the volume down before plugging the headphones in to prevent the music from blaring into the headphones.
- Only small headphone plugs may be used.

3. MULTIPLEX MODE

Switch to the function you wish to use.

BGM

This function preserves the background music only, making it possible for you to enjoy singing karaoke. Karaoke CD/CD+G and tapes must be used.

OFF

Use this function for listening to ordinary or non-multiplex Karaoke CD/CD+G and tapes.

VOCAL REPLACE

This function automatically replaces the recorded voice with your voice when you sing into the microphone. When you are not singing, the recorded voice continues playing, making it ideal for practicing or singing duets. Karaoke CD/CD+G and tapes must be used.

4. ECHO

Use to adjust the size of the echo effect. ECHO only works with the microphones.

5. VOLUME

Use to adjust the speaker and headphone volume.

6. MIC 1 volume

Use to adjust the volume of microphone 1.

7. 1 and 2 microphone jacks

Microphones are plugged into these jacks.

8. MIC 2 volume

Use to adjust the volume of microphone 2.

9. HANDLE

Use when moving the set.

10. CD PITCH CONTROL (CD/CD+G player)

(See page 13)
These buttons make it possible to slow down or speed up the music (variable-speed music).

Pitch

DOWN button : Slows down music speed.

NORMAL button : Returns music to normal speed.

UP button : Picks up music speed.

When pitch buttons are pressed, the speed variation is indicated on the DISPLAY WINDOW 16 within 3 seconds. Changes are indicated in units of 1% from -9% to +9%.

Precaution

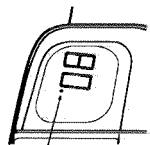
- Changing the speed also changes the musical pitch.
- Pressing NORMAL brings the music back to normal speed. This takes up to three seconds.

15. PLAY/STOP (CD/CD+G player)

Press to stop when in PLAY mode. Press to play when in STOP mode.

16. DISPLAY WINDOW (CD/CD+G player)

Displays song number and pitch.



17. CASSETTE DOOR

Cassette tape is placed here.

18. REC

Press together with PLAY for monophonic recording.

19. PLAY

Press to play cassette tape.

20. REW

Press to rewind tape.

21. FF

Press to fast-forward tape.

22. STOPEJECT

Press to stop tape. Press again to eject tape.

23. PAUSE

Press to temporarily stop the tape while recording or playing.

Precaution

- This tape deck has been designed for use with TYPE I tapes.
- You may not obtain normal recording and playback with TYPE II, III or IV tapes.

11. CD/CD+G DIRECT SELECTION BUTTONS (CD/CD+G player)

(See page 9)

Use to select specific songs, e.g. press 3 for the third song, and [] + [] for the 12th song.

12. CD/CD+G PLAYER LID

Open to put in or take out compact discs.

13. KARAOKE/REPEAT/CONTINUOUS SWITCH (CD/CD+G player)

KARAOKE

This setting is used to play just one song. The player will stop when the song is finished (use when singing karaoke).

REPEAT

At this setting, all songs will be played repeatedly in order when the power is turned on.


CONTINUOUS

At this setting, the player will stop after playing all songs on the CD/CD+G in order once.

14. PRACTICE BUTTON (CD/CD+G player)

Pressing this button will bring the current song back to the beginning.

Playing CDs and CD Graphics

COMPACT DISC DIGITAL AUDIO GRAPHICS
 This machine can play CD sub-code graphics. The video image is also played when discs with this  mark are used.

1 Press **POWER ON/OFF** (00 is displayed in red in the **DISPLAY WINDOW** of the CD/CD+G player. The T.V. display will now turn blue.)

2 Press the **OPEN/CLOSE** mark on the lid of the CD/CD+G player. (Lid of the CD/CD+G player opens)

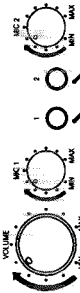
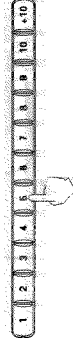
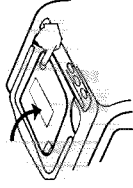
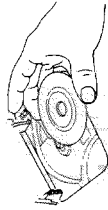
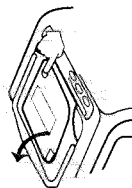
3 Set the printed side of the disc face up in the middle of the turntable device. (See page 15 on how to set and remove the discs)

4 Gently close the lid of the CD/CD+G player. (When the lid is closed, the number of songs is displayed in the **DISPLAY WINDOW**)

5 Use the **CD/CD+G DIRECT SELECTION BUTTONS** to select the song you want to hear. (See page 9) (Song begins to play)

6 Adjust **VOLUME** to the desired level. Then, set **MIC 1** and **MIC 2** appropriately.

7 Use **ECHO** to adjust the size of the echo effect. (Adjust while singing into the microphone) (**ECHO** only works for the microphone voice)



Precaution

- The CD/CD+G player is a high-precision instrument. Touching the lens may result in malfunctioning. (See page 15)
- Open and close the lid of the CD/CD+G player only after the CD/CD+G has stopped turning.

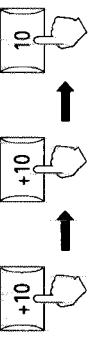
DIRECT SELECTION BUTTONS

Use of DIRECT SELECTION BUTTONS

- Select the song you want to hear.
 - For songs 1-10 : Press one of the buttons 1-10.
 - Example (Song 3) : Press **[3]** to listen to the third song.
- For songs 11 or higher : Press **[10]** plus one of the buttons 1-10.
 - Example (Song 12) : Press **[10]**, **[1]** for song 12.
- Or : Press **[10]**, **[10]** for song 30. (Song 30)



• Or : Press **[10]**, **[10]** for song 30. (Song 30)



The song number is displayed and the music begins.

■ **KARAOKE function**
 When switching the **KARAOKE REPEAT CONTINUOUS SWITCH** to **KARAOKE**, the player will automatically stop when the selected song is finished playing and the **DISPLAY WINDOW** will show the total number of songs.

■ **REPEAT function**
 By selecting **REPEAT**, you can make the Unit return to the first track after the last track has finished playing. At this setting, this **KARAOKE** system starts playing when you turn on the system.

■ **CONTINUOUS function**
 When **CONTINUOUS** is selected, after the last track has finished playing, the Unit will stop playing.

■ **CD+G LAST MEMORY function**
 When setting to **KARAOKE** and playing a **CD+G**, only the **CD+G** screen is left when the song is finished playing.

■ **When pressing the wrong DIRECT SELECTION BUTTON...**
 Press the correct **DIRECT SELECTION BUTTON** and that selection will be played instead.

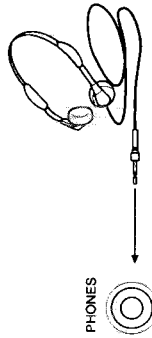
■ **The machine will not play anything if a song number that is not on the CD/CD+G is selected.**

Precaution

- If the machine is exposed to a strong shock while a **CD/CD+G** is playing, the song may skip or stop playing, or the video may flicker. If the song stops playing, restart.
- The sounds originally recorded onto a **CD/CD+G** range from small ones to large ones. This machine is made to handle even discs in the small range. Accordingly, if the volume is turned up when playing a recording with large sounds, there may be some skipping when singing into the microphone. This is normal. If this happens, use the **VOLUME** and **MIC VOLUME** controls to lower the volume.
- The sound from a **CD** and from a **tape** can be played simultaneously, this is not a malfunction. (To prevent simultaneous play stop either the **tape** or the **CD**.)

How to use the headphones...

Use headphones with small plugs. When plugging the headphones into the machine, the sound from the speakers is automatically cut. When using the headphones, set the volume at a level where you can enjoy the music without hurting your ears.

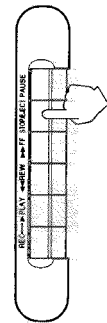


Basic tape recorder operations

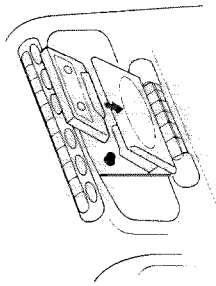
1 **POWER ON/OFF**
Press the **POWER** button. The **DISPLAY WINDOW** will display "00" in red.



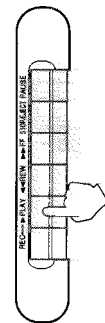
2 Press the **STOP/EJECT** button. The **CASSETTE DOOR** will open.



3 Turn the side of the tape you want to hear toward you, with the tape-exposed side turned downward. Put the karaoke tape in the **CASSETTE DOOR** and shut gently.

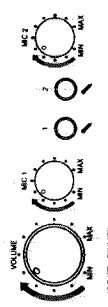


4 Press **PLAY** (tape begins to play). When that side of the tape is finished playing, the **PLAY** button will be automatically released.*



* Auto stop function: When recording, playing, rewinding or fast-forwarding a tape, the buttons will be automatically released when the end of the tape is reached.

5 Adjust **VOLUME** to the desired level. Then, adjust **MIC 1** volume and **MIC 2** volume accordingly.



6 **ECHO** adjusts the size of the echo. Adjust white singing into the microphone. **ECHO** only affects the microphone voice.



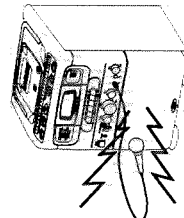
Microphone

Switch the microphone to "ON" when singing.



Reverberation:

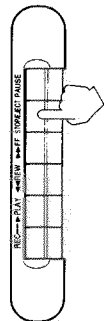
The speakers will reverberate if you bring the microphone too close to the speakers. Move the microphone away from the speakers, or lower the microphone volume. Reverberation is more likely to occur when **ECHO** is being used.



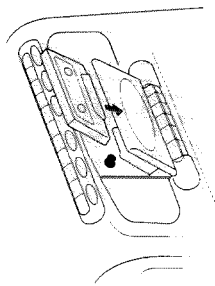
Cassette tape recording

When recording, advance the tape slightly and start from where the leader tape portion (colored portion) ends.

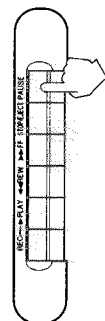
1 Press **STOP/EJECT**. The **CASSETTE DOOR** will open.



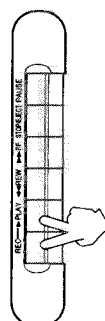
2 Turn the side of the tape you want to hear toward you, with the tape-exposed side turned downward. Put a blank tape in the **CASSETTE DOOR**.



3 Press **PAUSE**.

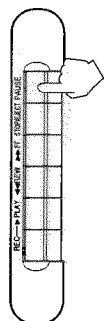


4 Press **REC** and **PLAY** at the same time.



5 Playing CD and CD graphics (see page 8 for procedures)

6 Press the **CD play** button, select a song number and press **PAUSE** again to begin recording.



Do not turn off the power while recording. Always stop the tape deck first.

When erasing the previously recorded portions...

When re-recording, the previously recorded portions will be automatically erased. To erase without re-recording, however, the following steps are necessary.

When the record protect tab is broken and removed, **REC** does not function.

1. Put the tape to be erased in the **CASSETTE DOOR**.
2. Pull the microphone out of the machine or turn the microphone volume down low.
3. Stop the **CD player** to prevent recording.
4. Press **REC** and **PLAY** at the same time to erase the tape.
5. When the tape has finished erasing, press **STOP/EJECT**.

Basic operations

How to use MULTIPLEX MODE



■ Enjoy karaoke

Switch to BGM mode

- This function preserves the background music only, making it possible for you to enjoy singing karaoke. Karaoke CD/CD+G and tapes must be used.

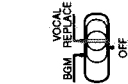
Note: In BGM mode, the output level is quieter than OFF mode or VOCAL REPLACE mode.



■ Enjoy just listening to music, or practice singing together with the real singer

Switch to OFF mode

- Use this function for listening to ordinary music or karaoke CD/CD+G or tapes.



■ Using the VOCAL REPLACE mode

- This is the best function for singing duets and practicing. Multiplex karaoke CD/CD+G and tapes must be used.

Using multiplex karaoke CD/CD+G or tapes for duets:

- Sing the part of the man or the woman and let the karaoke machine play the other part. Your voice automatically replaces the recorded voice when you sing into the microphone.
- When you are not singing, the recorded voice continues playing, making it ideal for practicing duets by yourself.

Using multiplex karaoke CD/CD+G or tapes for practice:

- Sing along with the recorded voice. If you start a note late or don't hold a note long enough, the recorded voice kicks in. This way you know when you've made a mistake.

Duet

Male (female) part

Sing

You can sing a duet with the singer on the CD/CD+G or tapes.

Female (male) part

Listen

Practice

Example: If you fail to hold a note long enough...

Music + Your own voice

Music + Your voice on CD/CD+G or tape

the difference is clear.

Precaution

- Your voice will not be played over the machine if you do not sing loudly enough.
- Singing too close to the microphone will cause speaker reverberation.
- The volume may change when the switch is moved between settings depending on the CD or tape. Use VOLUME to make appropriate adjustments.
- MULTIPLEX MODE cannot be used with karaoke CD/CD+G or tapes in which the singer's voice is recorded on the left channel.

CD PITCH CONTROL

You can slow down or speed up the music with this function. And, with the touch of a button, you can bring it back to normal speed. Changes are indicated in units of 1% from -9% to +9%.

■ Lowering the pitch of the music.

- Before playing, the total number of songs is displayed. While playing, the current song number is displayed.
- Press the DOWN button until you reach the desired pitch.
 - Example** Press the DOWN button three times. After about three seconds, the DISPLAY WINDOW reads [-3] and the pitch has slowed 3%.
- The DISPLAY WINDOW then shows the total number of songs (before playing) or the current song number (while playing).

■ Raising the pitch of the music.

- Before playing, the total number of songs is displayed. While playing, the current song number is displayed.
- Press the UP button until you reach the desired pitch.
 - Example** Press the UP button five times. After about three seconds, the DISPLAY WINDOW reads [5] and the pitch has slowed 5%.
- The DISPLAY WINDOW then shows the total number of songs (before playing) or the current song number (while playing).

■ The pitch returns to normal with one touch

- Before playing, the total number of songs is displayed. While playing, the current song number is displayed.
- Press the NORMAL button once.
 - Example** In about three seconds, the DISPLAY WINDOW reads [0], indicating that the pitch has returned to normal.
- The DISPLAY WINDOW then shows the total number of songs (before playing) or the current song number (while playing).

Precaution

- Stopping the songs in the following ways when there is a pitch variation, brings the pitch back to normal.
 - Stopping the disc by pressing the stop button.
 - When the disc stops after a single song if finished playing in KARAOKE mode.
 - Opening the lid of the CD/CD+G player.

Cassette tape

Cassette tape

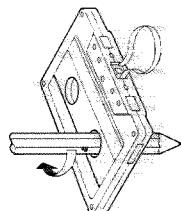
Handling precautions

The tape of C-120 cassettes is very thin and tends to get wrapped around the capstan and pinch roller. These tapes should not be used.

Use normal tapes. Chrome and metal tapes may change and warp the sound.

Tape slack

Avoid using the tape when there is slack. It may get tangled or damaged. Use a pencil or similar implement to wind the tape back.



Storage precautions

Avoid storing in the following locations:

- Hot and humid places
- Dusty places
- Places exposed to direct sunlight
- Magnetic fields (next to televisions, speakers, etc.)

Place in case with reel stoppers to prevent tape slack.

To prevent unintentional erasing

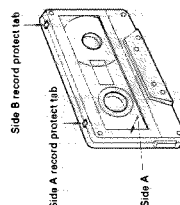
Tapes have record protect tabs. Break and remove this tab to avoid erasing the material you have recorded. If you want to re-record after breaking and removing this tab, use cellophane tape to cover the hole.

Precautions about tapes to be used

This karaoke tape deck is a precision instrument. Use of the following tapes may damage the tape deck:

1. Wrinkled tapes
2. Dirty tapes
3. Folded tapes
4. Sticky tapes

Old tapes often fall under one of these descriptions. You are encouraged to use normal tapes to ensure safe use.



Karaoke Tape

Karaoke tapes are specially designed so you can practice singing with the voice of a professional singer. This is achieved by recording the singer's voice and the instrumental parts on separate tracks.

The way they are played in BGM mode is explained below:

Content by channel		How tape is played-back in MULTIPLEX MODE		
		BGM	OFF	VOCAL REPLACE
L channel	Music	Music + Voice	Music + Voice	Music + Pre-recorded Voice lowered
R channel	Music + voice			When you sing

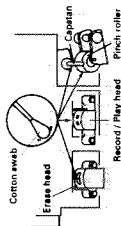
Points on care and handling

Cleaning the heads

When using the tape deck for extended periods, the head capstan, pinch rollers and other parts in contact with the tape become dirty and may cause malfunctioning. We recommend cleaning these parts to ensure clean recordings and listening enjoyment.

Cleaning the heads

- (1) Press STOP/EJECT to open the CASSETTE DOOR.
- (2) Apply a small amount of cleaning solution to a cotton swab and wipe the areas indicated by arrows.

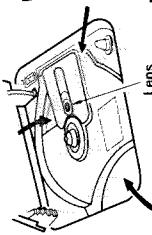


Precaution

- Applying excessive force when cleaning the heads and tape guides may upset the settings.
- After cleaning the heads with a solution, wait up to three minutes until the surface of the heads is completely dry before inserting a tape.
- Do not expose the heads to metal or magnetic objects.

Disc handling

Use the open space on the sides (➔) to remove the disc with your fingers.



Precaution

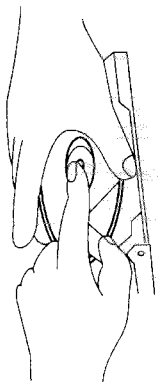
- Touching the lens with your fingers may cause damage.

Compact disc



When removing a disc from the case, press down on the middle part and lift from the outer edge of the disc on both sides.


Lift while pressing on the middle of the disc.

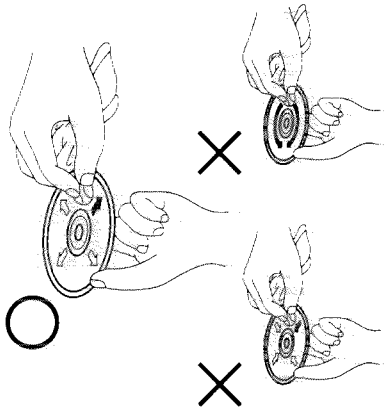


Do not get fingerprints, etc. on the side where signals are recorded (opposite side of label)



Cleaning the disc

The discs that can be played by the CD/CD+G player of this machine are labelled with the mark above. Discs including the  mark play video images.



1. Handling precautions

- Do not get fingerprints, oil, dust, etc. on the discs.
- Be careful, especially when removing a disc from its case, not to scratch the surface.
- Do not bend the disc.
- Do not expose to heat.
- Do not expand the size of the hole in the middle.
- Do not write with a pen or pencil on the label side of the disc.
- When bringing a disc from a cold place to a warm room, moisture may collect on the surface. Do not dry with a hair drier, etc.

2. Storage precautions

- Always remove the disc from the player when finished playing.
- Place the disc in its case to avoid dust, scratches or deformation.
- Avoid the following:
 1. Long exposure to direct sunlight.
 2. Moist, dusty places.
 3. Places exposed to the heat from heaters, etc.

Do not use the following when cleaning a disc:

- Benzene, alcohol or other solvents
- Cleaners with abrasives
- Record spray or cleaner
- Antistatic solutions
- Silicon cloth

Troubleshooting

Check the following to confirm whether or not there is actually any trouble.

If your machine is not operating properly, check the following table. If you cannot identify the trouble, turn off the power, pull the plug and contact the store where you made your purchase, or one of our nearby sales outlets.

- Is everything properly connected?
- Are you operating your machine in accordance with the instruction manual?

Trouble	Cause	Countermeasures	Related pages
Power switch is on, but the song number is not displayed and there is no sound.	<ul style="list-style-type: none"> • The power plug is pulled out or not firmly connected. 	<ul style="list-style-type: none"> • Confirm that the power plug is properly inserted. 	5
The song number is displayed, but there is no sound.	<ul style="list-style-type: none"> • Knobs/buttons are not being used properly. 	<ul style="list-style-type: none"> • Re-read the instruction manual and check operations. 	—
The tape does not move.	<ul style="list-style-type: none"> • Tape is not properly inserted. • The end of the tape has been reached. • PAUSE button is pressed. 	<ul style="list-style-type: none"> • Reinsert the tape. • Rewind the tape, or use the reverse side. • Press PAUSE again. 	10, 11 7
The tape deck does not record.	<ul style="list-style-type: none"> • The record protect tab is broken and removed. • The recording or playing heads are dirty. 	<ul style="list-style-type: none"> • Switch tapes. • Clean the recording and playing heads. 	14 15
The music on the tape bounces or skips. High sounds cannot be heard.	<ul style="list-style-type: none"> • The tape is damaged or does not meet machine specifications. • Tape playing surface is dirty. 	<ul style="list-style-type: none"> • Switch tapes. • Clean the tape playing surface, i.e. heads, capstans, pinch rollers. 	— 15
Cannot erase the tape.	<ul style="list-style-type: none"> • The erase head is dirty. • The tape is scratched, stretched, twisted or otherwise faulty. • The record protect tab is broken and removed. 	<ul style="list-style-type: none"> • Clean the erase head. • Switch tapes. • Use cellophane tape to cover the hole where the tab was. 	15 — 14
Playback quality is not clear.	<ul style="list-style-type: none"> • The heads are dirty. • An electric blanket, heated carpet, light dimmer or similar device is being used nearby. 	<ul style="list-style-type: none"> • Clean the heads. • Move away from the television set. If the noise continues, avoid using electric blankets, heated carpets, and light dimmers near the machine. 	15 —
The CD player does not operate when the buttons are pressed. The music stops in the middle and does not start up again.	<ul style="list-style-type: none"> • The disc is inserted upside down. • Foreign matter is inside the CD player. • The disc is dirty. • The disc is scratched. 	<ul style="list-style-type: none"> • Reinsert the disc. • Take the disc out and remove the foreign matter. • Clean the disc. • Use a disc without scratches. 	8 — 16 —
The picture goes haywire.	<ul style="list-style-type: none"> • The discs scratched, dirty or warped. 	<ul style="list-style-type: none"> • Clean the disc or switch discs. 	16
The picture is warped and colors distorted.	<ul style="list-style-type: none"> • There is a magnetic field near the television. 	<ul style="list-style-type: none"> • Move the machine or speaker away from the television. 	5
The background music is cut off.	<ul style="list-style-type: none"> • There are dust, fingerprints or moisture on the disc. • The disc is scratched. • The machine is set on an unstable surface. 	<ul style="list-style-type: none"> • Clean the disc. • Use a disc without scratches. • Set the machine on a stable surface. 	16 — —

Specifications

Trouble	Cause	Countermeasures	Related pages
The DISPLAY WINDOW reads "00" even when a disc is in the player.	<ul style="list-style-type: none"> The disc is not properly inserted. 	<ul style="list-style-type: none"> Check that the disc is properly inserted. 	8
There is sound, but no picture.	<ul style="list-style-type: none"> A graphics disc is not being used. The disc is scratched or dirty. 	<ul style="list-style-type: none"> Use a disc with the [GRAPHICS] mark. Clean the disc or switch discs. 	16

■ CD specs
 Frequency response : 20Hz - 20kHz
 Video signal format : Conforming to NTSC
 Speed Control : Up to 9%

■ Tape deck specs (recording and playing)
 Motor : Electronic governor DC motor for capstan
 Heads : Permalloy head for recording/playback, 2-gap Ferrite head for erasure
 Frequency response : 60Hz - 10kHz (With TYPE I)
 Wow/flutter : 0.2% (WRMS)
 Fast wind time : Approx. 125 sec. (C-60 cassette)

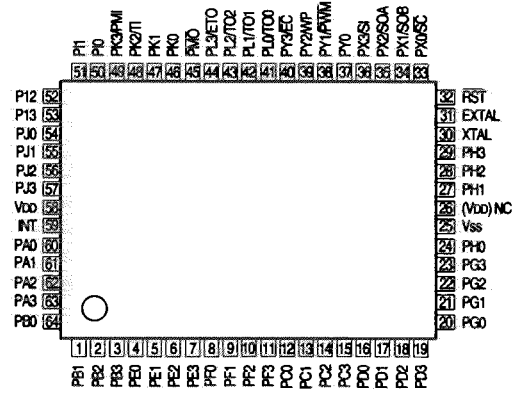
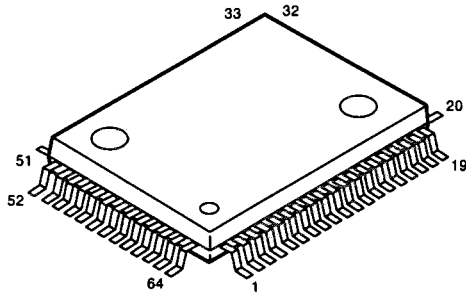
■ General machine specs
 Output power : 14 watts, min. RMS, both channels driven into 4 ohms from 200 Hz to 15 kHz, with no more than 10% total harmonic distortion.
 Echo method : BBD IC electronic echo
 Speakers : 5cm (2") tweeter X 1, 12cm (5") woofer X 1
 Input terminal : Microphone jacks (impedance: 200 ohms 2k ohms) X 2
 Output terminal : 1 Vp/p75ohms (NTSC)
 Video output : Monaural
 Audio output : 3.5mm dia jack X 1
 Head phone : AC120V ϕ 60Hz
 Power source : 29W
 Maximum outer dimensions : 310mm (12" - 1/4) X 420mm (16" - 1/2) X 258mm (10" - 1/16)
 (width) (height) (depth)
 Weight : 8.4kg (18.5 lbs)

■ Accessories
 Dynamic microphone (MV-18) X 1
 RF adaptor (RF-S103) X 1
 Video cord (3m (9.84 ft)) X 1

*Specifications items and numbers are subject to change without prior notification.

Description of Major LSIs

■ CXP5048H-296Q(IC601) : SYSTEM CONTROLLER



Description

Pin No.	Symbol	I/O	Description
1~3	PB1~PB3	I/O	4bit I/O port "B"
4~7	PE0~PE3	I/O	4bit I/O port "E"
8~11	PF0~PF3	I/O	4bit I/O port "F"
12~15	PC0~PD3	I/O	4bit I/O port "C"
16~19	PD0~PC3	I/O	4bit I/O port "D"
20~23	PG0~PG3	O	4bit I/O port "G"
24	PH0	O	4bit I/O port "H"
25	VSS	I	Power supply
26	NC		Non connection
27~29	PH1~PH3	O	4bit I/O port "H"
30	XTAL	O	Output pin for clock generating circuit
31	EXTAL	I	Input pin for clock generating circuit
32	RST	I/O	Output for built-in power on reset circuit
33	SC/PX0	I/O	For bit "0" (input) of Port X and clock I/O pin of serial interface
34	SOB/PX1	I/O	For output pin of serial interface and Port X's bit "1" (input)
35	SOA/PX2	I/O	For SIOA output pin when serial interface (8bit) is converted to 4bit and Port X's bit "2" (input)
36	S1/PX3	I	For output pin of serial interface (8 bit) and Port X's bit "3" (input)
37	PY0	O	Output for port "Y" (bit 0)
38	PWM/PY1	O	For output pin of PWM generator (14bit) and Port Y's bit "3" (output)
39	WP/PY2	I	For wake up input to release stand-by mode and Port X's bit "2" (input).
40	EC/PY3	I	For output pin of bit counter (8 bit) and Port Y's bit "3" (input)
41~44	PL0~PL3	I/O	4bit I/O port which has equivalent function to Port C.
45	PMO	O	Mono/Multi output pin for programmable pulse generator.
46,47	PK0,PK1	I/O	Lower 2bit I/O pin for Port K.
48	TI/PK2	I/O	For Port K bit "2" and external running input for external triggerable timer.
49	PMI/PK3	I/O	For Port K bit "3" and external running input for programmable pulse generator.
50~53	PI0~P13	O	4bit I/O port "I"
54~57	PJ0~PJ3	I	For analog input of A/D converter and 4bit input port.
58	VDD	I	Power supply
59	INT	I	Offering input pin.
60~63	PA0~PA3	I/O	4bit I/O port "A"
64	PB0	I/O	4bit I/O port "B"

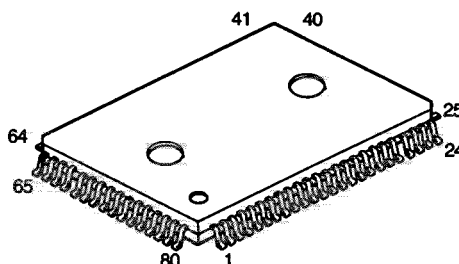
■ CXD2500BQ(IC501) : Digital Signal Processor

1. Outline

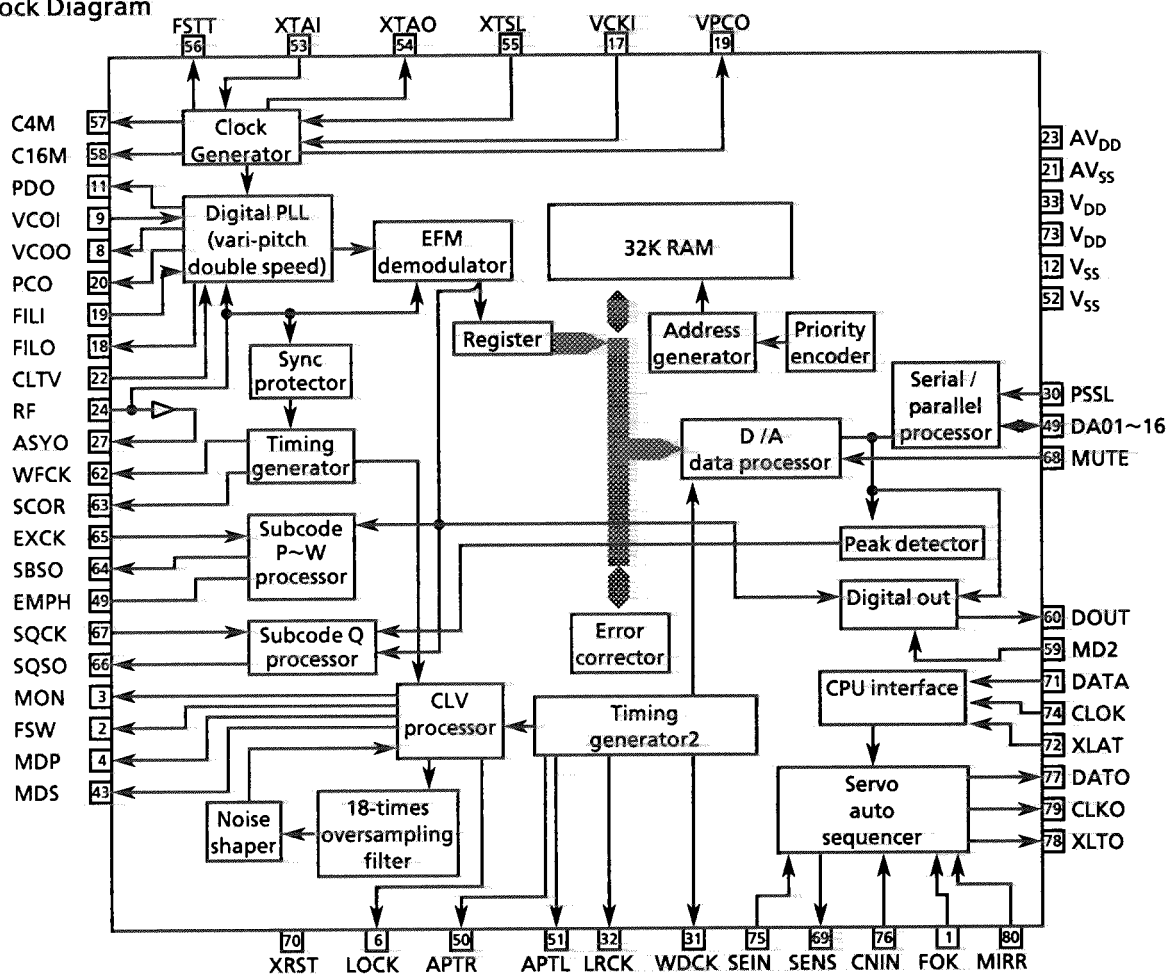
The CXD2500BQ is a digital signal processing LSI designed for use in compact disc players. It has the following functions:

- All digital signals for regeneration are processed using one chip.
- The built-in RAM enables high-integration mounting.
- Generation by the use of a digital PLL of bit clock pulses for strobing the EFM signal.
- EFM data demodulation
- Subcode demodulation and subcode Q data error detection
- Digital spindle servo system (incorporating an oversampling filter)

2. Terminal Layout (TopView)



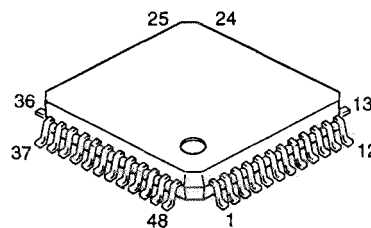
3. Block Diagram



4. Pin Function Description

Pin No.	Symbol	I/O	Description
1	FOK	I	Focus OK input pin. Used for SENS output and servo auto sequencer.
2	FSW	O	Non connection
3	MON	O	Output for spindle motor ON / OFF control.
4	MDP	O	Output for spindle servo control.
5~9		--	Output for spindle servo control (Non connection).
10	TEST	I	Test pin (Normally at 0V)
11	PDO	O	Output of charge pump for analog EFM PLL (Non connection).
12	Vss	--	GND
13~15		--	Non connection
16	VPCO	O	PLL charge pump output for variable pitch.
17	VCOI	I	Clock input from external VCO for vari-pitch control. $f_c = 16.9344\text{MHz}$. Connected to GND.
18	FILO	O	Output of filter for master PLL (Slave = Digital PLL)
19	FILI	I	Input to filter for master PLL.
20	PCO	O	Output of charge pump for master PLL.
21	AVss	--	Analog GND
22	CLTV	O	VCO control voltage input for master PLL.
23	AV _{DD}	--	Analog power supply
24	RF	I	EFM signal input
25	BIAS	I	Input for constant current at asymmetric circuit.
26	ASYI	I	Asymmetry comparator voltage input.
27	ASYO	O	EFM full-swing output
28	ASYO	I	Asymmetry circuit L: off R: on
29	NC	--	Non connection
30	PSSL	I	Input used to switch the audio data output mode. "L" for serial output, "H" for parallel output.
31	WDCK	O	D / A interface for 48-bit slot. Word clock $f = 2F_s$.
32	LRCK	O	D / A interface for 48-bit slot. LR clock $f = F_s$.
33	V _{DD}	--	Power supply
34	DA16	O	Output DA16(MSB) when PSSL = 1 or serial data from 48-bit slot(2's complements, MSB first) when PSSL = 0.
35	DA15	O	Output DA15 when PSSL = 1 or bit clock from 48-bit slot when PSSL = 0.
36~41		--	Non connection
42	DA08	O	Output DA08 when PSSL = 1 or GFS output when PSSL = 0.
43,44	VSS	--	GND
45	DA05	O	Output DA05 when PSSL = 1 or XRAO output when PSSL = 0.
46~49		O	Output DA01~DA05 when PSSL = 1 or MNT0~MNT4 output when PSSL = 0.
50,51		--	Non connection
52	Vss	--	GND
53	XTAI	I	Input of 16.9344MHz Xtal oscillation circuit or 33.8688MHz input.
54	XTAO	O	Output of 16.9344 MHz Xtal oscillation circuit.
55	XTSL	I	Xtal selection input pin. "L" for 16,344MHz Xtal, "H" for 33.8688 MHz Xtal.
56~58		--	Non connection
59	MD2	I	Digital-Out ON/OFF control: "H" for ON, "L" for OFF.
60	DOUT	O	Digital-Out output pin. Non connection
61	EMPH	O	It becomes "H" when playback disc has emphasis. If not, it becomes "L".
62	WFCK	O	WFCK(Write Frame Clock) output
63	SCOR	O	Turns "H" when subcode Sync S0 or S1 is detected.
64	SBSO	O	Serial output of Sub P ~ W.
65	EXCK	I	Clock input for reading SBSO.
66	SQSO	O	Outputs 80-bit Sub Q and 16-bit PCM peak-level data.
67	SQCK	I	Clock input for reading SQSO.
68	MUTE	I	"H" for muting, "L" for release.
69	SENS	--	SENS output to CPU.
70	XRST	I	System reset. "L" for resetting.
71	DATA	I	Inputs serial data from CPU.
72	XLAT	I	Latches serial data input from CPU at falling edge.
73	V _{DD}	--	Power supply(+5V)
74	CLOK	I	Inputs serial data transfer clock from CPU.
75	SEIN	I	Inputs SENSE from SSP(IC601). SSP : Servo Signal Processor
76	CNIN	I	Inputs track jump count signal.
77	DATO	O	Outputs serial data to SSP.
78	XLTO	O	Latches serial data output to SSP at falling edge.
79	CLKO	O	Outputs serial data transfer clock to SSP.
80	MIRR	I	Inputs mirror signal to be used by auto sequencer when jumping 128 or more tracks.

■ CXA1782BQ (IC504) : Servo Signal Processing Amplifier

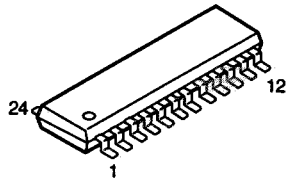


5.Pin Function Description

Pin No	Symbol	I/O	Description
1	FEO	I	Focus drive output.
2	FEI	I	Input pin of focus error.
3	FDFCT	I	Capacitor connecting pin for time constant during defect functions.
4	FGD	I	Connect a capacitor between this pin and pin3 to reduce high-frequency gain.
5	FLB	I	Time constant external pin to raise the low bandwidth of the focus servo.
6	FE-O	O	Inverse input for focus amplifier.
7	FE-M	I	For time constant additional parts to form focus search waveform.
8	SRCH	I	Time constant external pin for formation of focus search waveform.
9	TGU	I	Time constant external pin for the selection of tracking high band gain.
10	TG2	I	Time constant external pin for the selection of tracking high band gain.
11	F SET	I	Pin to set peak frequency of focus tracking phase compensation and fo of CLV LPF.
12	TA-M	I	Inverse input pin for tracking amplifier.
13	TA-O	O	Focus drive out put
14	SL-P	I	Non- inverse input pin for sled amplifier.
15	SL-M	I	Inverse input pin for sled amplifier.
16	SLO	O	Sled drive output.
17	I SET	I	Current is input to determine focus search, track jump, and sled kick height.
18	AVCC	--	Power supply
19	CLK	I	Serial data transfer clock input from CPU.
20	XLT	I	Latch input from CPU.
21	DATA	I	Serial data input from CPU.
22	XRST	I	Reset input pin, reset at "L".
23	C.OUT	O	Track number count signal output.
24	SENS	O	Outputs FZC, AS, TZC and S STOP through command from CPU.
25	FOK	O	Output pin of FOK-comparator.
26	CC2	I	Input pin for the capacitance coupled output of DEFECT bottom hold.
27	CC1	O	Output pin of DEFECT bottom hold.
28	CB	I	Connection pin of DEFECT bottom hold capacitor.
29	CP	I	Connecting pin of MIRR hold condenser. Non-inverted input pin of MIRR comparator.
30	RFI	I	Input pin with coupling capacitor where RF summing amplifier output is connected.
31	RFO	O	Output pin of RF summing amplifier and check point of eye pattern.
32	RF-I	I	Inverse input RF summing amplifier output.This pin and a resistor connected between RFO pins decide RF Amp. gain.
33	LD	O	Output pin of APC amplifier.
34	PHD	I	Input pin of APC amplifier.
35	PHD1	O	Inverse input RF amplifier .It receives current signal after connecting photo detector A+C pins and B+D pins.
36	PHD2	I	Inverse input RF amplifier .
37	FE-BIAS	I	BIAS adjust pin to focus error amplifire.
38	F	I	Inverse input I-V amplifier for F,E.
39	E	I	Inverse input I-V amplifier for F,E.
40	EI	--	Gain adjust pin to I-V amplifire E.(When BAL automatic adjustment is not used.)
41	VEE		
42	TEO	O	Output pin of tracking error amplifier.
43	LPM	I	Input pin of BAL adjust comparator.
44	CC1	I	Output pin of DEFECT bottom hold.
42	DVCC	--	-5V
44	CP	I	Connecting pin of MIRR hold condenser. Non-inverted input pin of MIRR comparator.
45	TEI	I	Input pin of tracking error amplifier.(Input through LPF from TEO.)
46	ATSC	I	Window comparator input pin for ATSC detection.
47	TZC	I	Input pin of tracking zero-cross comparator.
48	VC	O	Output pin of DC Power supply FOR(Vcc+Vee)/2.

KX-G50

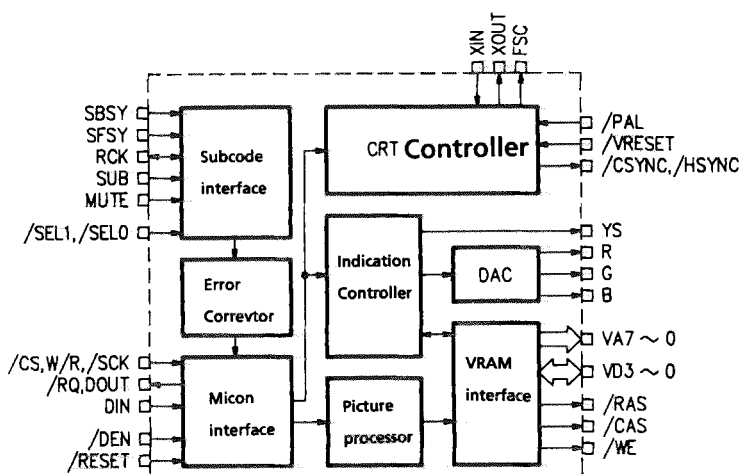
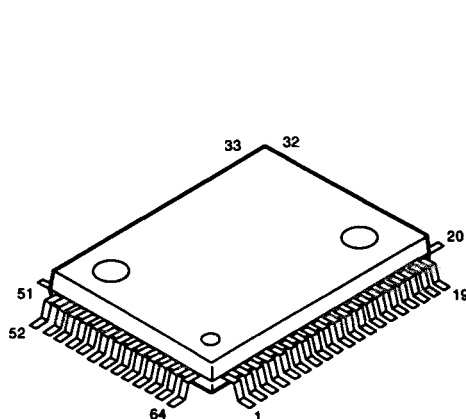
■ CXA1645M(IC703) :R.B.G ENCODER



2. Description

Pin No.	Symbol	I/O	Description
1	GND1	--	4bit I/O port "B"
2	RIN	I	Input pin for Aralog RGB signal.
3	GIN	I	Input pin for Aralog RGB signal.
4	BIN	I	Input pin for Aralog RGB signal.
5	NC	--	Non connection
6	SCIN	I	Input pin for Sub caria signal.
7	NTSC/PAL IN	I	Switching pin for NTSC and PAL mode.
8	BF OUT	O	Output pin for BF pulse motor.
9	YCLPC	I	For Y-signal clamp time constant.
10	C SYNC IN	O	Input pin for composite syink signal.
11		O	
12	Vcc1	--	Power spilly (Except the RGBoutput ,Composite video output)
13	IREF	I	To set inner reference current.
14	VREF	I	Inner reference voltage pin.
15	C OUT	O	Chroma signal output .
16	Y OUT	O	Y signal output pin.
17	Y TRAP	O	For additional trap for Y-signal to YCMIX.
18	Fo	I	For fo adjustment of inner filter.
19	Vcc2	--	Power spilly (RGBoutput ,Composite video output)
20	C VIDEO OUT	O	Out put pin for Composite video output and Y/C output circuit.
21	B OUT	O	Output pin for Aralog RGB signal.
22	G OUT	O	Output pin for Aralog RGB signal.
23	R OUT	O	Output pin for Aralog RGB signal.
24	GND2	--	DND (RGBoutput ,Composite video output)

■ YVZ152B-F(CTX0011) IC701 :CD GRAPHICS DECODER



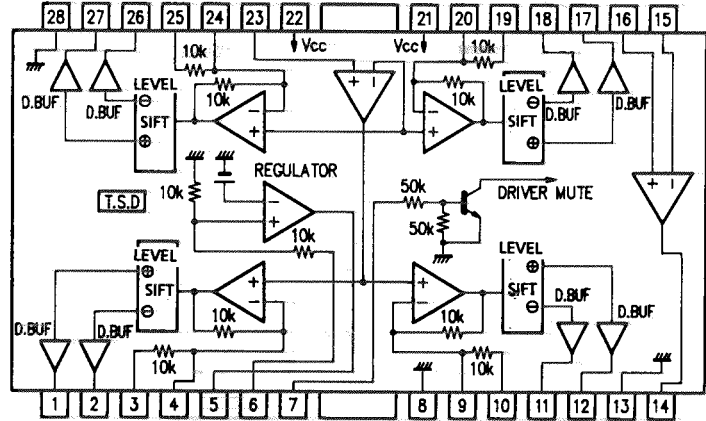
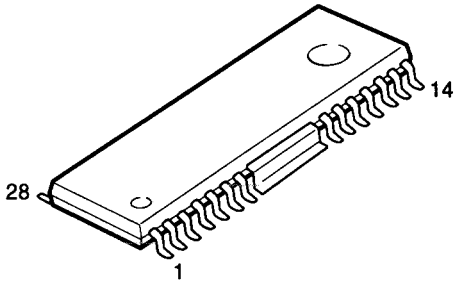
Description

Pin No.	Symbol	I/O	Description
1	Vss	--	GND9Digital)
2	/RESET	I	Reset entrance(Low active)
3	/RAS	O	DRAM Interface RAS
4	/CAS	O	DRAM Interface CAS
5	/WE	O	DRAM Interface WE
6	VD0	I/O	DRAM Interface DATA (LSB)
7	VD1	I/O	DRAM interface DATA
8	VD2	I/O	DRAM Interface DATA
9	VD3	I/O	DRAM interface DATA (MSB)
10	VA0	I	DRAM Interface address (LSB)
11	VA1	I	DRAM Interface address
12	VA2	I	DRAM Interface address
13	VA3	I	DRAM Interface address
14	VA4	I	DRAM Interface address
15	VA5	I	DRAM Interface address
16	VA6	I	DRAM Interface address
17	VA7	I	DRAM Interface address (msb)
18	/SELO	I+	Snbcode Interface (Interface select)
19	/SEL1	I+	Snbcode Interface (Subcodedatamute)
20	MUTE	I	Snbcode Interface (Subcode data mute)
21	SUB	I	Snbcode Interface (Subcodedata)
22	RCK	I/O	Snbcode Interface Clock
23	SFSY	I	Snbcode Interface (Flamesyincronoussignal)
24	SBSY	I	Snbcode Interface (Blokisyincronoussignal)
25	/TEST0	I+	Lsi test pin
26	Vdd	--	+5V(DIGITAL)
27	/TEST1	I+	Lsi test pin
28	/TEST2	I+	Lsi test pin

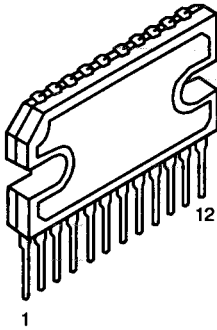
Description

Pin No.	Symbol	I/O	Description
29	DOUT	O	Micon Interface Serial data output
30	DIN	I	Micon Interface Serial data input
31	/CS	I	Micon Interface
32	Vss	--	GND (DIGITAL)
33	/SCK	I	Micon Interface Serial Clock input
34	W/R	I	Micon Interface Read/Write select
35	/RQ	O	Micon Interface (Claim Subcode Read)
36	(NC)		
49	(NC)		
50	YS	O	Super inpouse timingoutput
51	AVss	--	GND (Analog)
52	R	O	DRAM Interface address
53	G	O	DRAM Interface address
54	B	O	DRAM Interface address
55	AVdd	--	DRAM Interface address (msb)
56	/CSYNC	O	Compound synchronizing signal output
57	FSC	O	NTSC Subcaria clock output(3.57945MHz)
58	Vdd	--	Snbcode Interface (Subcode data mute)
59	/VRESET	I+	Vertical timing reset input
60	/HSYNC	O	Horizontal Compared signal output
61	/DEN	I+	Picture indication enable L:Data indication ON
62	/PAL	I+	NTSC/PAL SWiting(H:NTSC mode L: PALmode)
63	XIN	I	X'tal oscirator pin or Clock for the outside input(14.31818MHz)
64	XOUT	O	X'tal oscirator conect pin

KX-G50
BA6296FP
IC505

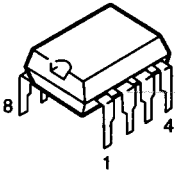


AN716IN
IC201

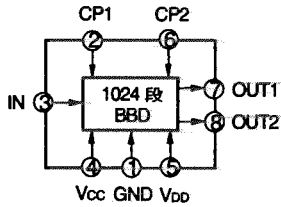


PinNo	Terminal	PinNo	Terminal
1	Power supply	7	Ripple filter
2	Booth trap Ch.2	8	Negative feedback kCh1
3	Out put Ch.2	9	Input
4	GND(Out put)	10	GND(In put)
5	Out put Ch.1	11	Negative feedback Ch2
6	Booth trap Ch.1	12	Out put(H.phon AMP)

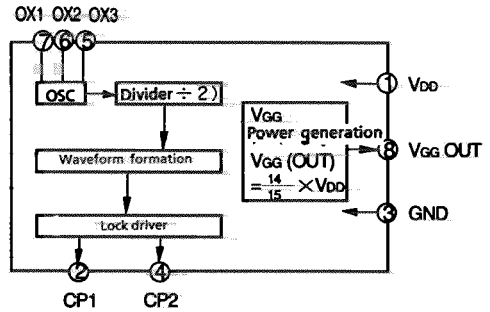
MN3102
MN3207



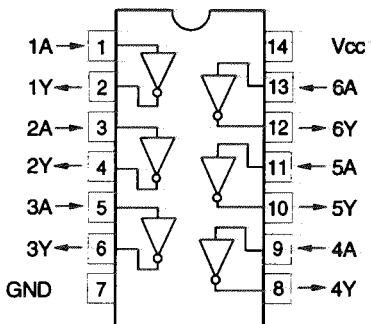
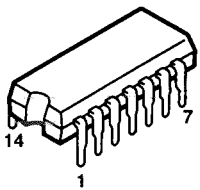
MN3102
IC303



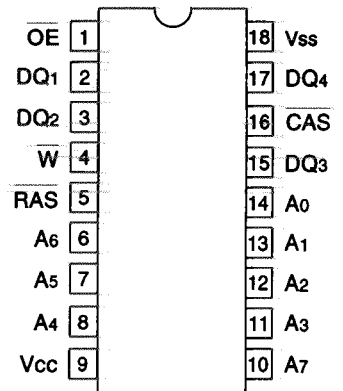
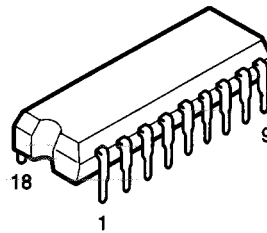
MN3207
IC302



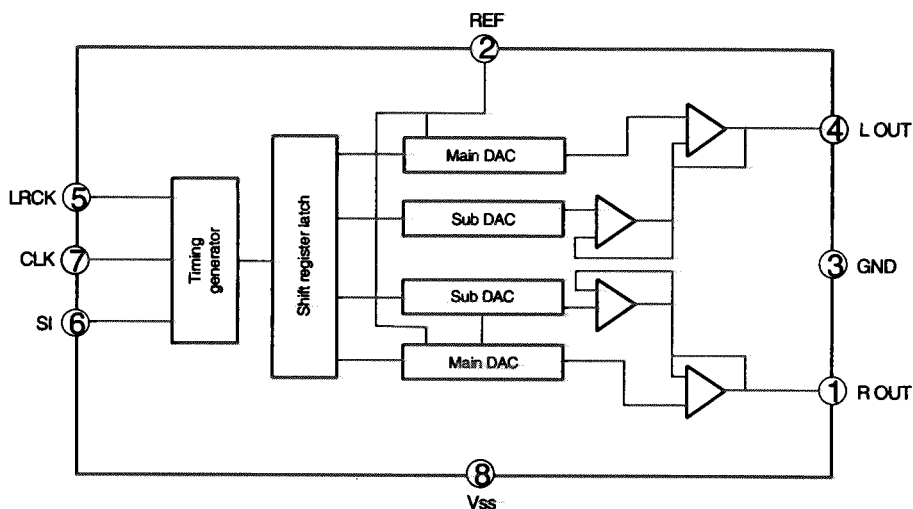
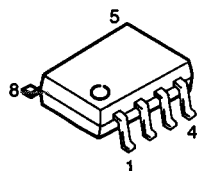
TC74HCU04AP
IC503



MT4067-10-IT
IC702

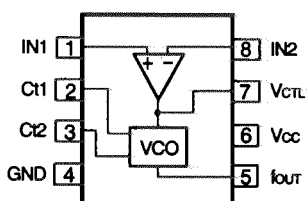
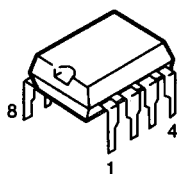


μPD6379A
IC801

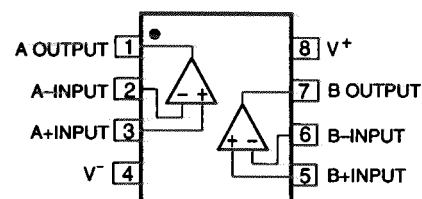
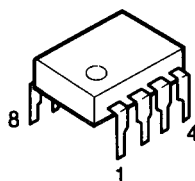


IC301/IC302/IC304/
IC305/IC306/IC308/IC309

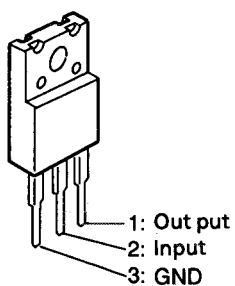
BA7042
IC502



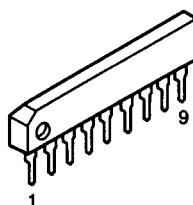
BA15218



NJM78M05FA IC101/IC803
NJM78M08FA(S) IC804

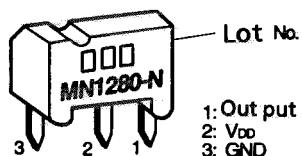


LA3160
IC401



PinNo	Terminal
1	Input Ch.1
2	Negative feedback Ch.2
3	Out put Ch.2
4	Power supply Vcc
5	GND
6	Out put Ch.2
7	Negative feedback Ch.2
8	Input Ch2

MN1280-N
IC602



● IC protector

ICP-N20



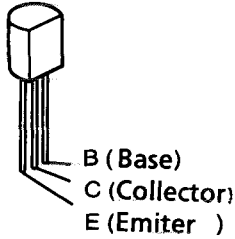
IC804



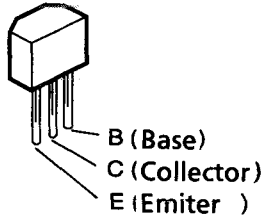
KX-G50

● Transistor

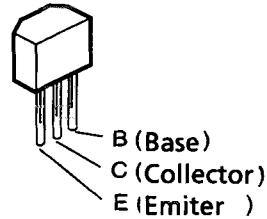
2SA933(R/S)
2SA1015GR
2SC458(D)
2SC1740(S)
2SC2060(Q)



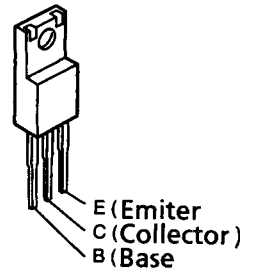
2SC2320L(F)



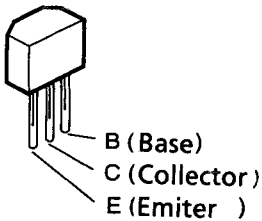
2SC3311A



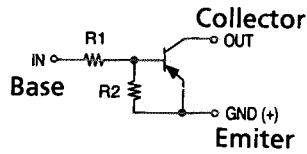
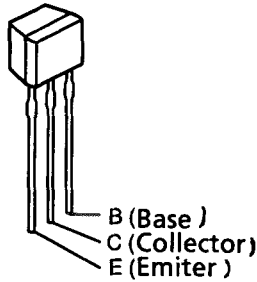
2SD1762(E/F)



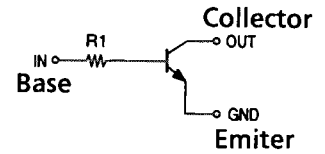
2SA1348
2SC3402



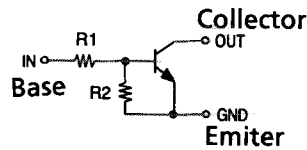
DTA114ES
DTB114ES
DTC114ES
DTC144TS
DTC144ES
DTC143TS
DTC314TS
DTC323TS



	R1	R2
DTA114ES	10k	10k
DTB114ES	10k	10k
2SA1348	10k	10k



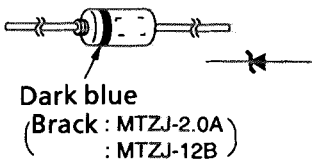
	R1
DTC143TS	4.7k
DTC144TS	47k
DTC314TS	10k
DTC323TS	2.2k



	R1	R2
DTC114ES	10k	10k
DTC144ES	47k	47k
2SC3402	10k	10k

● Diode (Included LED)

HZS2B-1 (MTZJ-2.0A)
HZS3B-1
HZS4A-1
HZS5C-1
HZS12A-1 (MTZJ-12B)

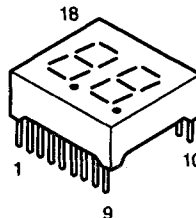


1SS270A
1SS198

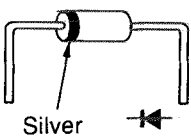


1SS270A : Dark blue
1SS198 : Green

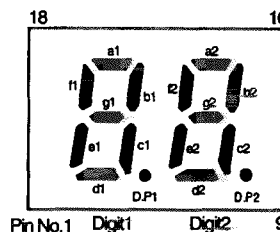
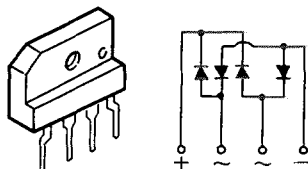
LB-602VA2
(ELD-512IDR)



RK46(3.5A)



D3SBA20



PinNo	Function	
1	I Segment	"e1"
2	I Segment	"d1"
3	I Segment	"c1"
4	D.P1	
5	Segment	"e1"
6	Segment	"d1"
7	Segment	"g1"
8	Segment	"c1"
9	D.P2	
10	Segment	"b1"
11	Segment	"as1"
12	Segment	"f1"
13	DIGITAL 1	Common
14	DIGITAL 2	Common
15	Segment	"b1"
16	Segment	"a1"
17	Segment	"g1"
18	Segment	"f1"

Disassembly Procedures

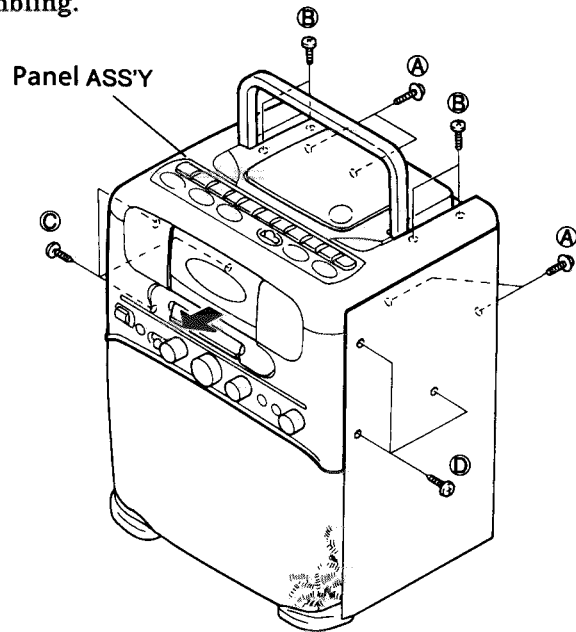
EACH REMOVAL PROCEDURE

* Please follow the reversed order when assembling.

1. Panel ass'y

Remove 4 screws ① on the rear, 4 screws ② on the top and 3 screws of ③ and ④ on the each side to pull the panel ass'y forward from the set. (See an arrow in the figure.)

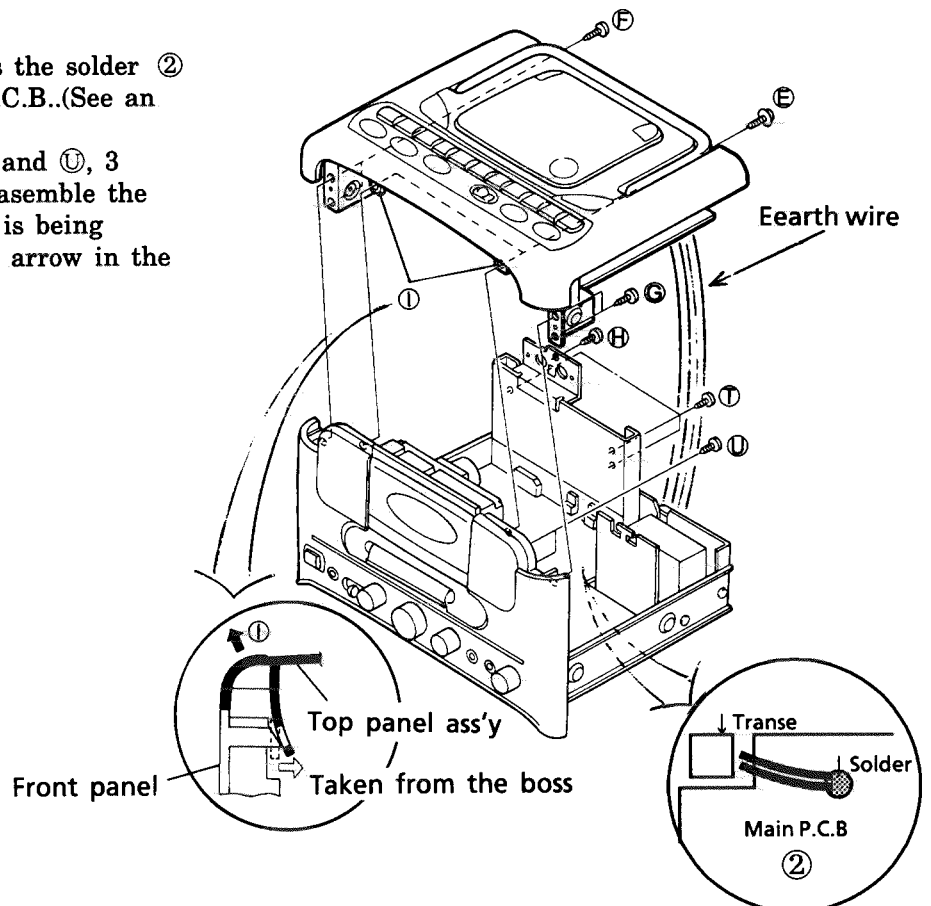
Disconnect the speakers wire (CB201)



2. Top panel ass'y

Disassemble the earth wire as the solder ② is being taken from the main P.C.B..(See an arrow in the figure.)

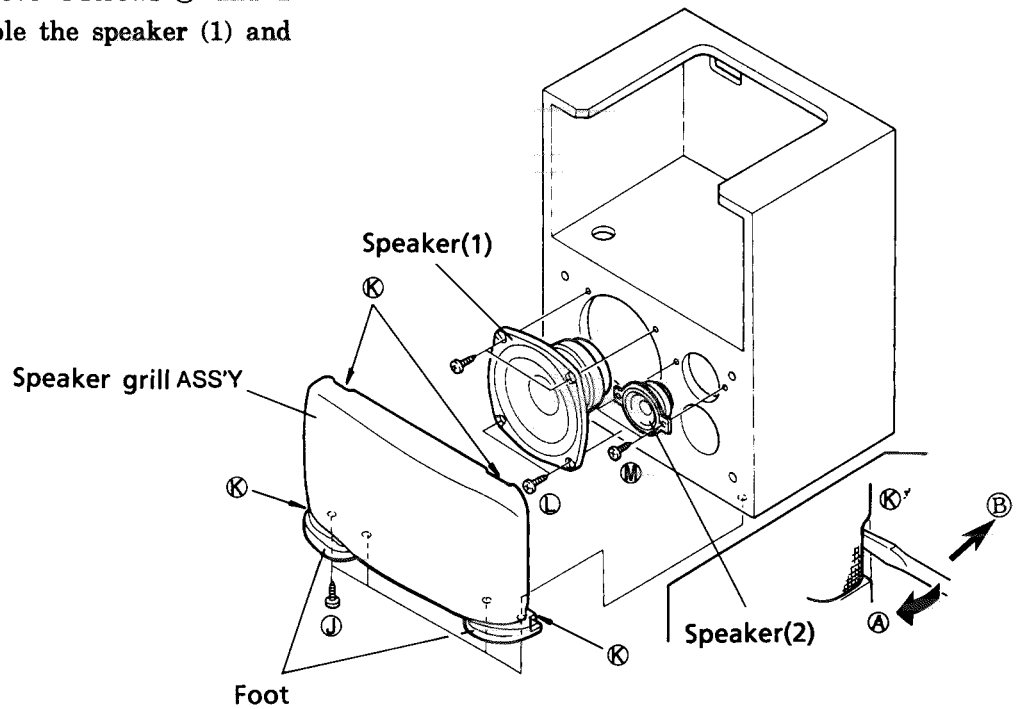
Remove 2 screws of ⑤, ⑥, ⑦ and ⑧, 3 screws ⑨ and 1 screw ⑩. Dissassemble the top panel ass'y as the hook ⑪ is being taken from the boss. (See an arrow in the figure.)



KX-G50

3. Speaker (1) and (2)

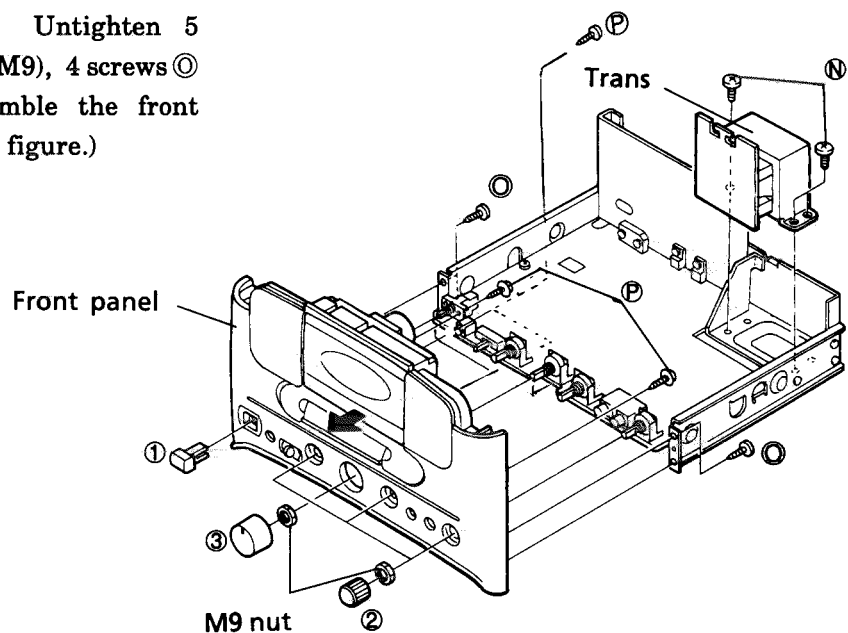
Remove 4 screws ① which secure the foot and lay the cabinet sideways. Put a flat screw driver into the clipping ⑫ on the speaker grill ass'y to push it up with leverage and remove it. (See an arrow "A" in the figure.) Remove 4 screws ⑬ and 2 screws ⑭ to disassemble the speaker (1) and (2).



[NOTE] The cabinet will get damage if you push the grill ass'y in "B" direction.

4. Front panel

Remove 4 screws ⑮ which secure the transformer to remove it. Untighten 5 knobs (①, ② and ③), 4 nuts (M9), 4 screws ⑥ and 4 screws ⑦ to disassemble the front panel. (See an arrow in the figure.)

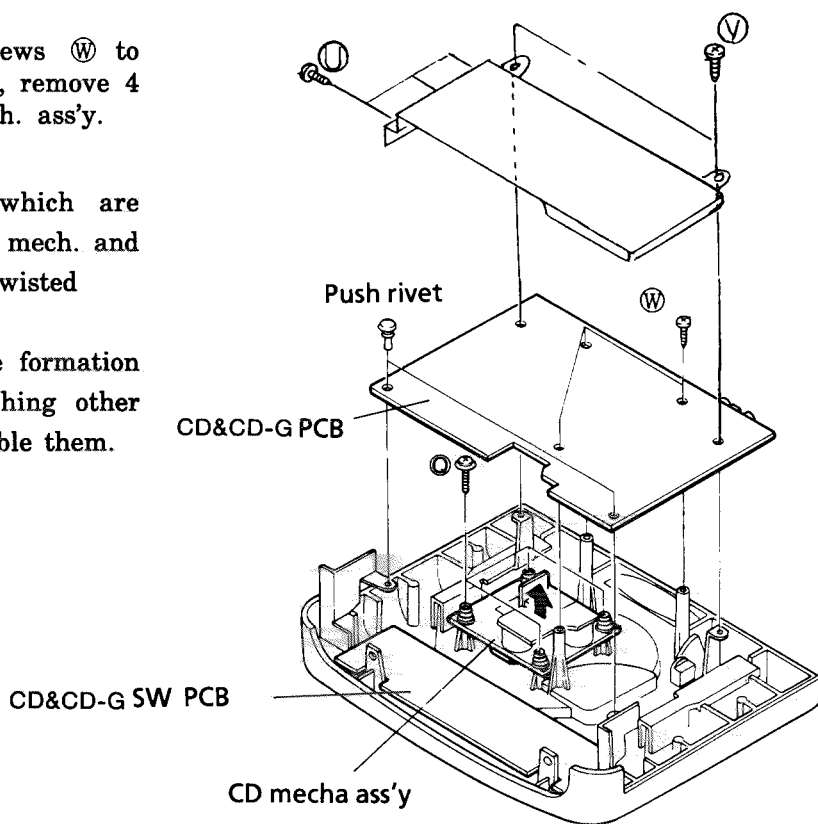


5. CD mech. ass'y

Remove 3 screws ① and 2 screws ② to shield plate.

Remove 2 push rivets and 3 screws ③ to remove CD & CD+G PCB. And, remove 4 screws ④ to disassemble CD mech. ass'y. (See an arrow in the figure.)

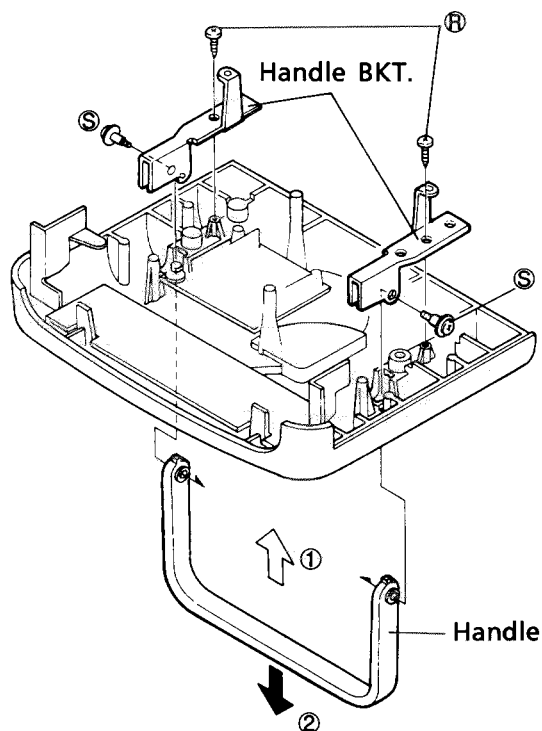
[NOTE] 2 pcs. of 8pin wire, which are connected between CD mech. and CD&CD+G PCB., are twisted three times(360°×3). Please check the wire formation to prevent them touching other parts when you assemble them.



6. Handle

Remove 2 screws ⑥ to raise the handle.

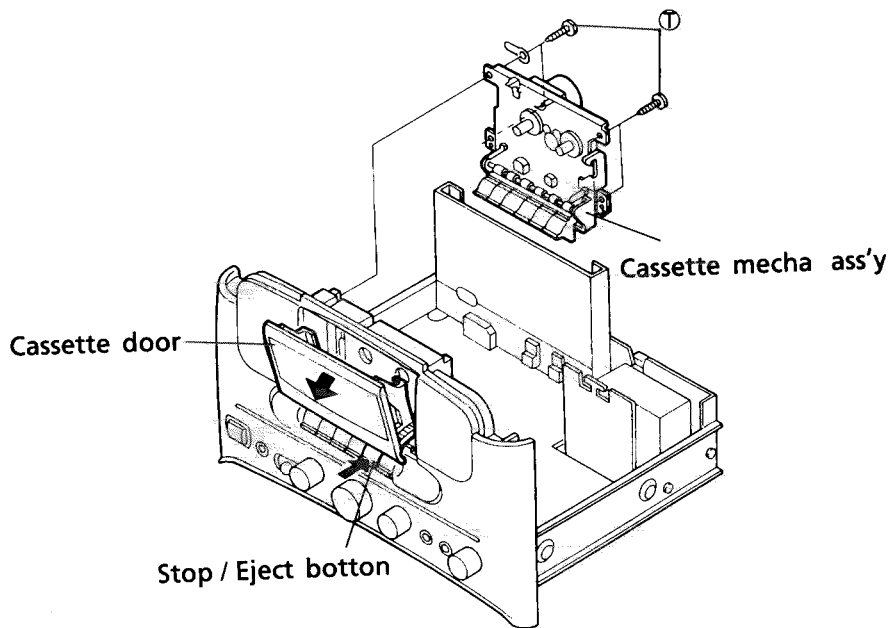
(See an arrow ①.) Then, remove 2 screws ⑤ to lower the handle to pull it out. (See an arrow ②)



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7. Cassette mech. ass'y

Press the STOP/EJECT button to open the cassette door. Remove 4 screws ① to disassemble the cassette mech. ass'y.



ADJUSTMENT AND CONFIRMATION PROCEDURE

CD Player

The microprocessor built in this CD player has "Service Program" to do various servo adjustment more easily. They are operated by functional buttons.


1. Service program start up method

- ① Set the power off.
- ② Put an adjustment disc and close the door.
- ③ Keep pressing switches "4", "5" and "6" simultaneously.
- ④ Set the power on.

(The service program starts to operate and track number "01" is indicated.)

[NOTICE] General functions can not be operated by the function buttons while the service program is on.

2. Each operations while service program is on

Function buttons	Operations	Comments
	Stop the system operation.	Track No. "01" is displayed. Press it when the adjustment is completed or repeated.
1	Make the focus servo operate to rotate a disc.	Press it to confirm the tracking offset. Track No. "02" is displayed after the operation is completed.
2	Automatic adjustment for tracking balance.	The adjustment starts after displaying "—" "3". The result is displayed as "*" "3" after completing the adjustment. * It is classified into 8 steps (0~7).
3	Automatic adjustment for tracking gain.	The adjustment starts after displaying "—" "4". The result is displayed as "*" "4" after completing the adjustment. * It is classified into 8 steps (0~7).
4	Focus servo, tracking servo, slide servo and spindle servo.	Audio and picture mute are set off. The tracking gain becomes "H". Track No. "05" is displayed after completing the operation.
Other buttons	Abnormal operation	Do not press except for the above buttons. Turn the power off immediately if you press those other buttons mistakenly.

* The above operations should follow the order of "1" → "2" → "3" → "4".
You can not skip it like from "1" to "3"

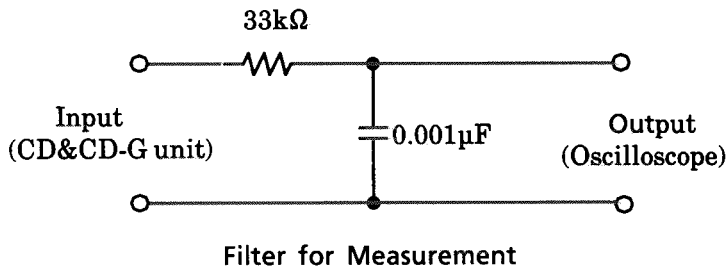
* To stop the sequence, press  button.

KX-G50

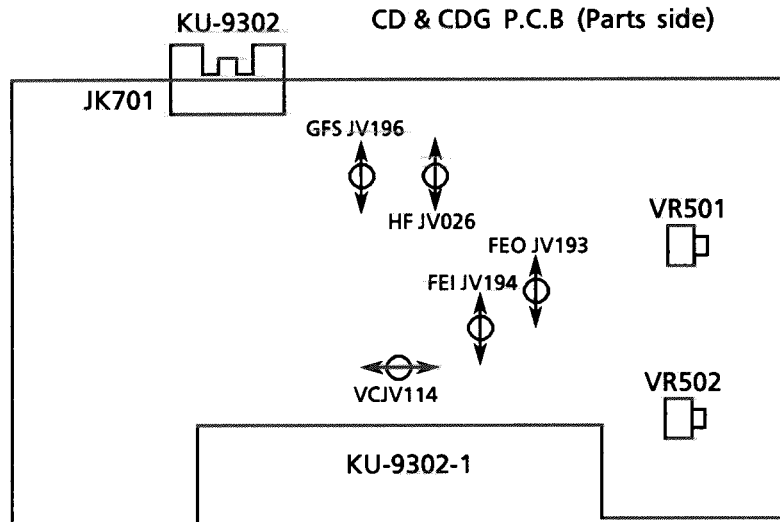
3. Adjustment and its confirmation procedure

(1) Necessary devices

- ① Dual-beam oscilloscope
- ② Disc for adjustment "CTS-1000"CRG-1117.
- ③ Oscillator (10Hz~10kHz, 0~3Vp-p)
- ④ Frequency counter (the one which can measure more than 5kHz.)
- ⑤ Filter for measurement



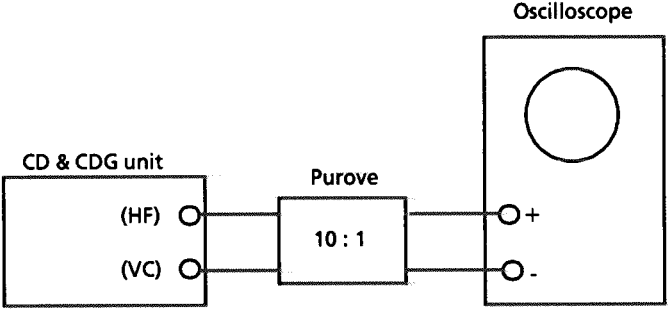
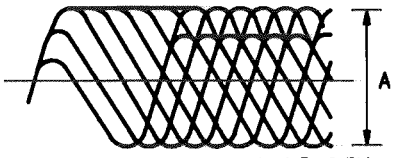
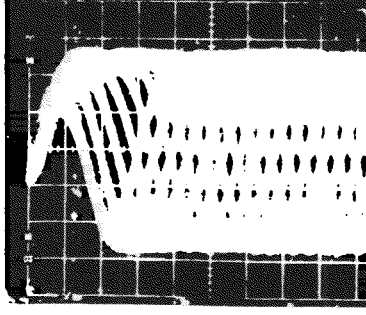
(2) Point of adjustment



(3) Preparation

1.	Start up the service program.	
2.	Set adjusting volume VR501 and VR502 as indicated. (See the figure.)	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="display: flex; align-items: center;"> <div style="text-align: right; margin-right: 10px;">VR502 (F-GAIN)</div> <div style="text-align: center;"> </div> </div> <div style="display: flex; align-items: center; margin-top: 10px;"> <div style="text-align: right; margin-right: 10px;">VR501 (F-OFFSET)</div> <div style="text-align: center;"> </div> </div> </div>
3.	Adjustment order	1. Confirmation of Focus offset and HF level (VR501) 2. focus gain (VR502)

(4) Confirmation of HF(RF) level

Connection Diagram		
		
Oscilloscope		Confirmation Item
V	H	<ol style="list-style-type: none"> 1. Press the buttons in the correct order (“1” → “2” → “3” → “4”). (The track No. “05” is displayed.) 2. Adjust VR501 so that the amplitude (shown “A” in the figure) becomes maximum. 3. Confirm HF level by an oscilloscope. 4. Confirm that the waveform is clear. (Center lozenges of the eye pattern should be clear.) <div style="text-align: center; margin-top: 10px;">  <p>$A = 1.5 \pm 0.5V_{p-p}$</p> </div> <div style="text-align: center; margin-top: 10px;">  <p style="text-align: center;">Eyepattern</p> </div>
50mV/div or 20mV/div	0.2μ/div or 0.5μ/div	
<ul style="list-style-type: none"> • The input mode is set “ALTERNATE” or “CHOPPER”. 		

KX-G50

(5) Focus gain adjustment

Connection Diagram					
Oscillator	Counter	Oscilloscope		Adjust point	Confirmation item
		V	H	(Volume)	(Oscilloscope)
1150Hz 1.5Vp-p (±0.1V)	1150Hz	·DC lenze ·X-Y mode		VR502	<p>Y axes</p> <p>Phase 90°</p> <p>No good reserdyu</p> <p>Y axes</p>
<ol style="list-style-type: none"> 1. Press the buttons in the correct order ("1" → "2" → "3" → "4"). (The track No. "05" is displayed.) 2. Set an oscillator 1150Hz output 1.5Vp-p. 3. Switch the oscilloscope's input mode to X-Y. 4. Adjust VR502 "F-GAIN" so that Lissajous waveform becomes symmetric with respect to X and Y axes. 					

Cassette mech. Adjustment

① Each inspection

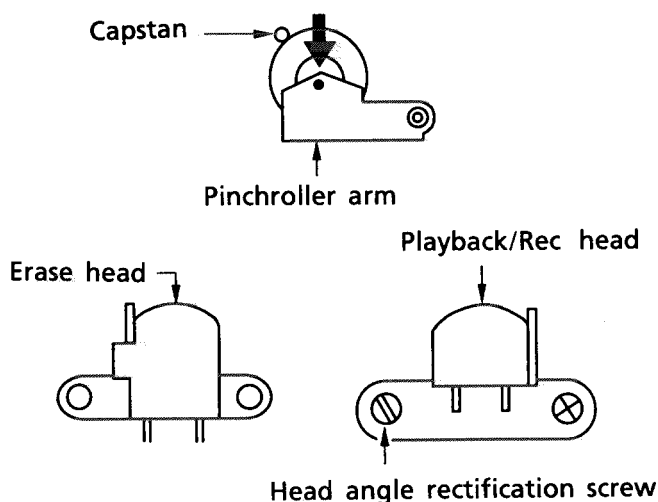
Measurement Item	Standard value
1. Take up torque	30~60g . cm
2. Fast forward and rewind torque	More than 80g . cm
3. Back tension	2~6g . cm
4. Pinch roller contacting force *	300~500g
5. Playback button pressing force	Less than 1.8 kg
6. Recording button pressing force	Less than 2.3 kg
7. Fast forward button pressing force	Less than 1 kg
8. Rewind button pressing force	Less than 1 kg
9. Stop button pressing force	Less than 1 kg
10. Eject button pressing force	Less than 600g
11. Pause button pressing force	Less than 1 kg

[NOTICE] * In playback mode, put a fan-shaped tension gauge on the pinch roller arm. (Follow an arrow in the figure below.) Read a value when the pinch roller stops rotating.

② Angle adjustment of playback head

Reproduce a test tape(VTT-724C:8kHz) for rectifying head angle as the cassette mech. is assembled with the front panel. Adjust a head angle rectification screw so that the speaker output becomes maximum. Fix the screw with paint after the adjustment.

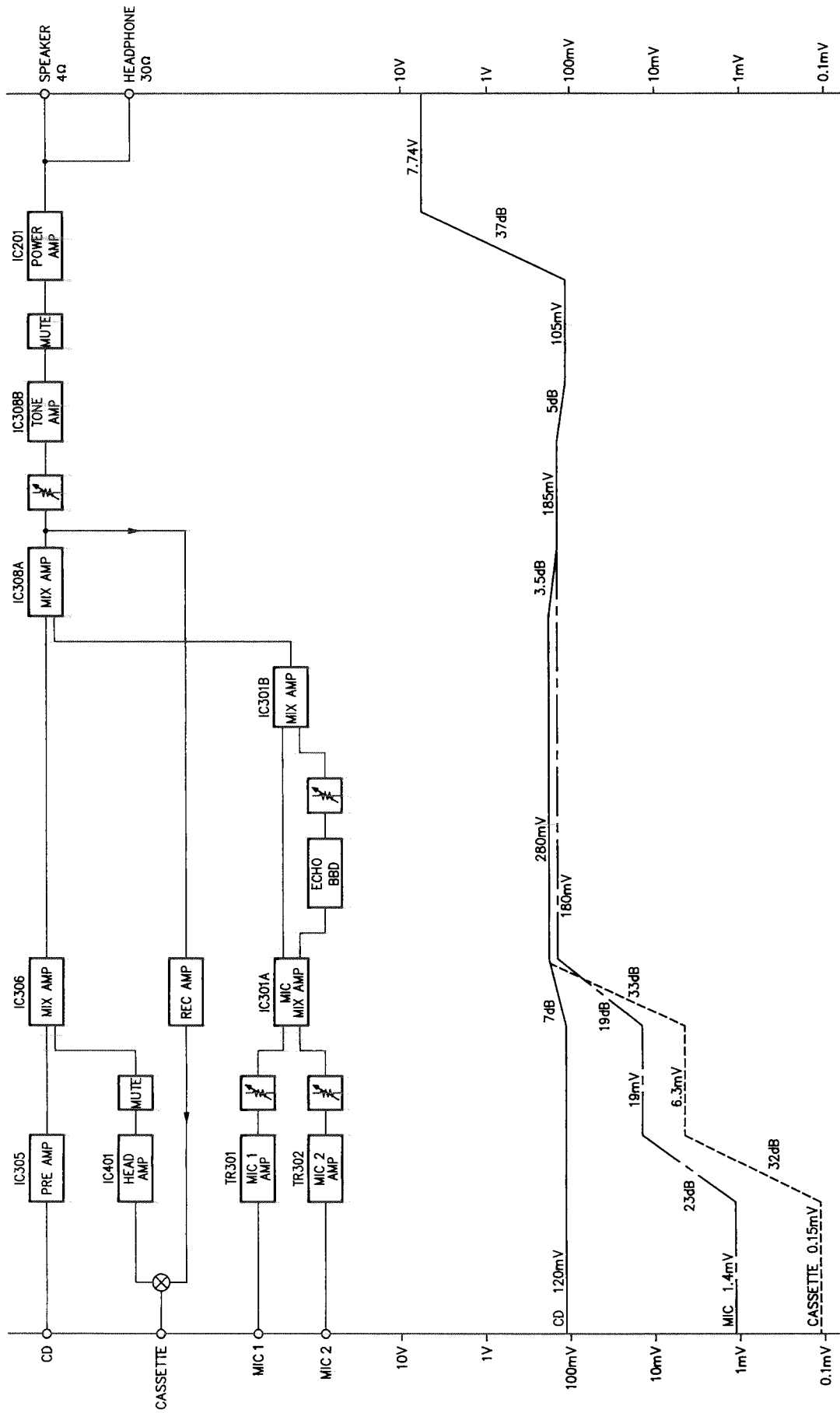
[NOTICE] This adjustment can be done by inserting a small Philips or flat screw driver into a hole for angle adjustment which locates on lower cassette cover.



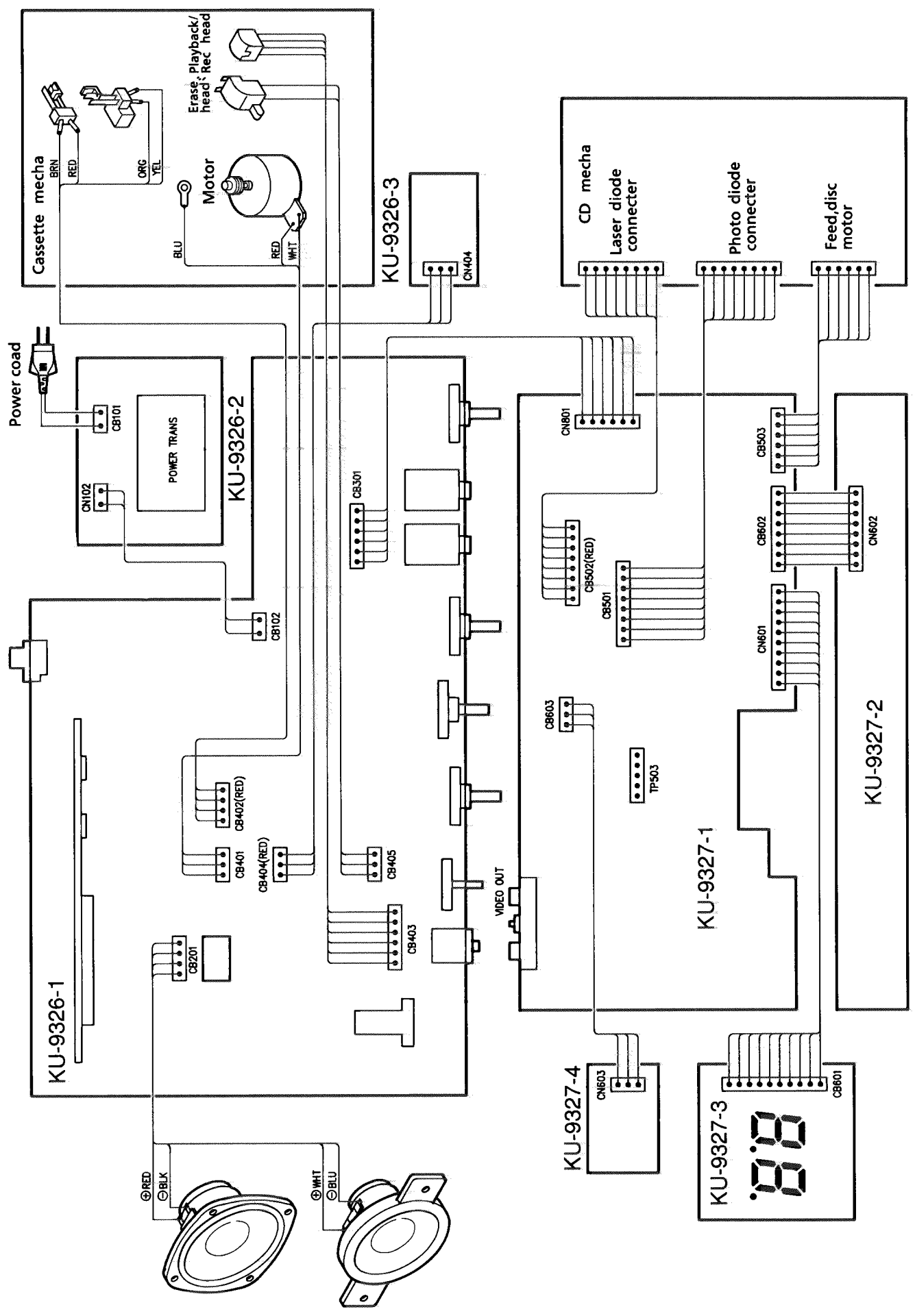
③ Tape speed adjustment

Put a test tape TEAC(VTT-712) into the unit to set playback mode and connect a frequency counter with headphone output terminal. Adjust semi-fixed volume inside the motor so that the value becomes 2,970MHz ~ 3,030MHz.

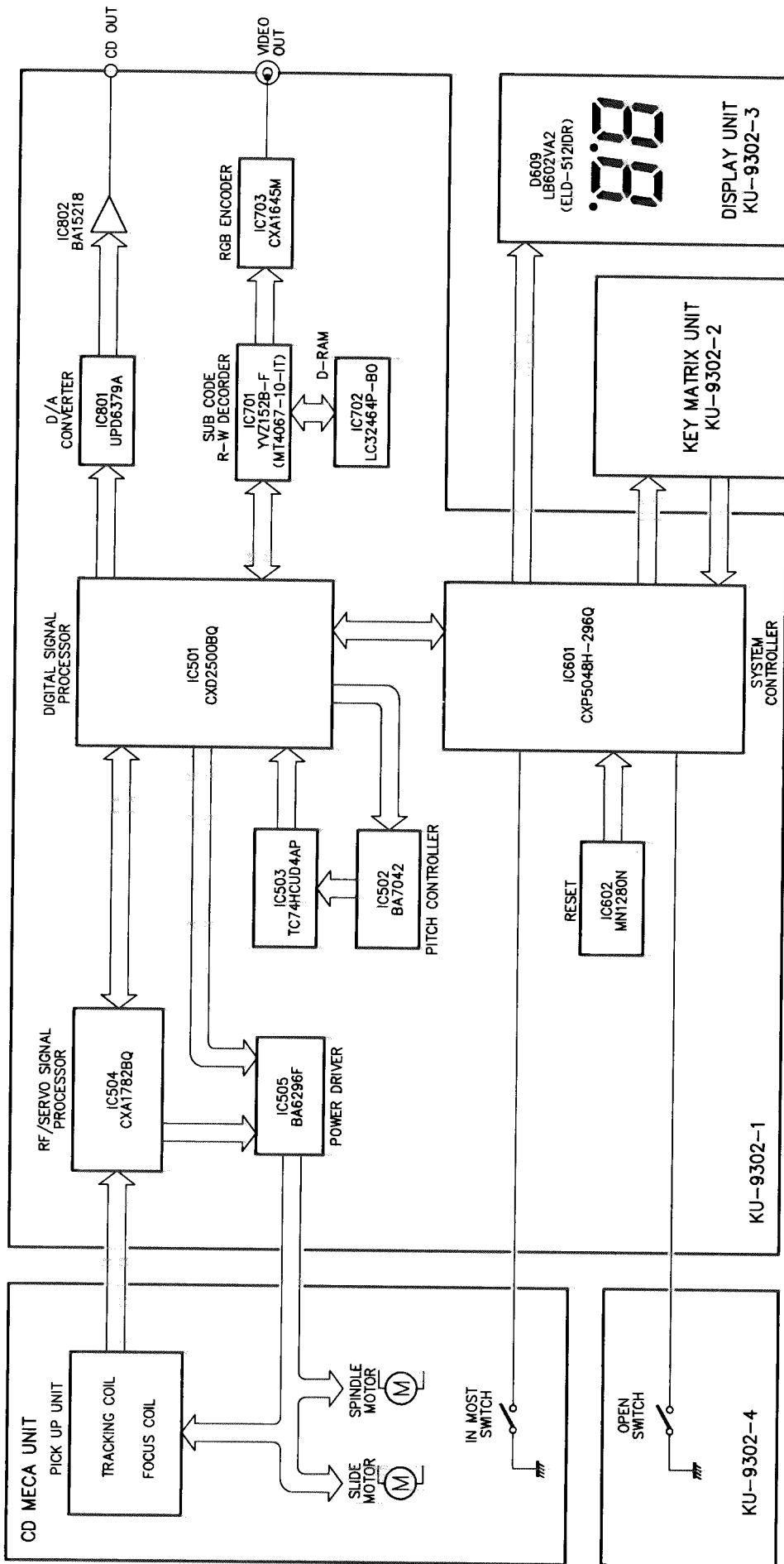
Block Level Diagram



■ Connection Diagram

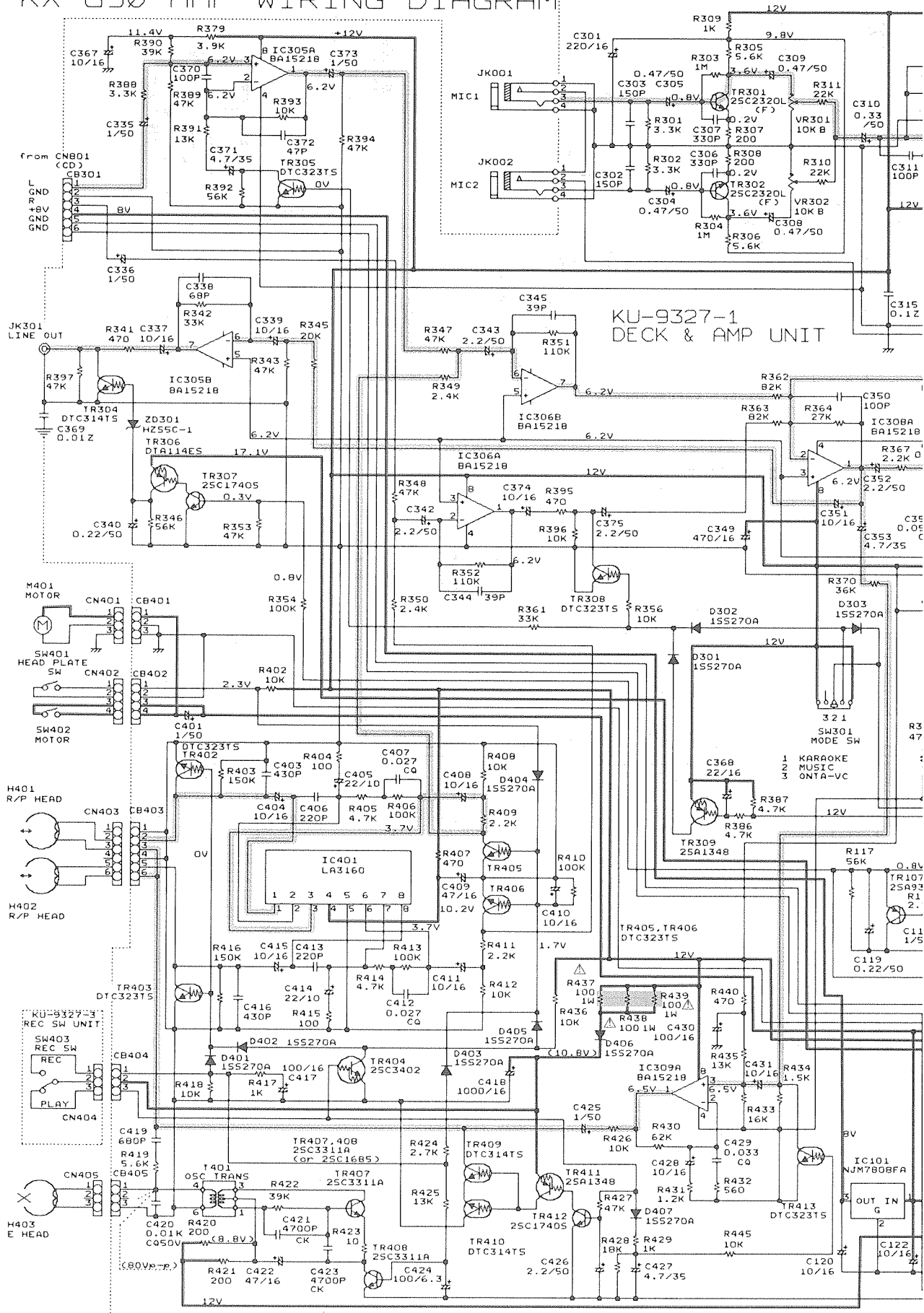


CD section



Schematic Diagram

KX-G50 AMP WIRING DIAGRAM

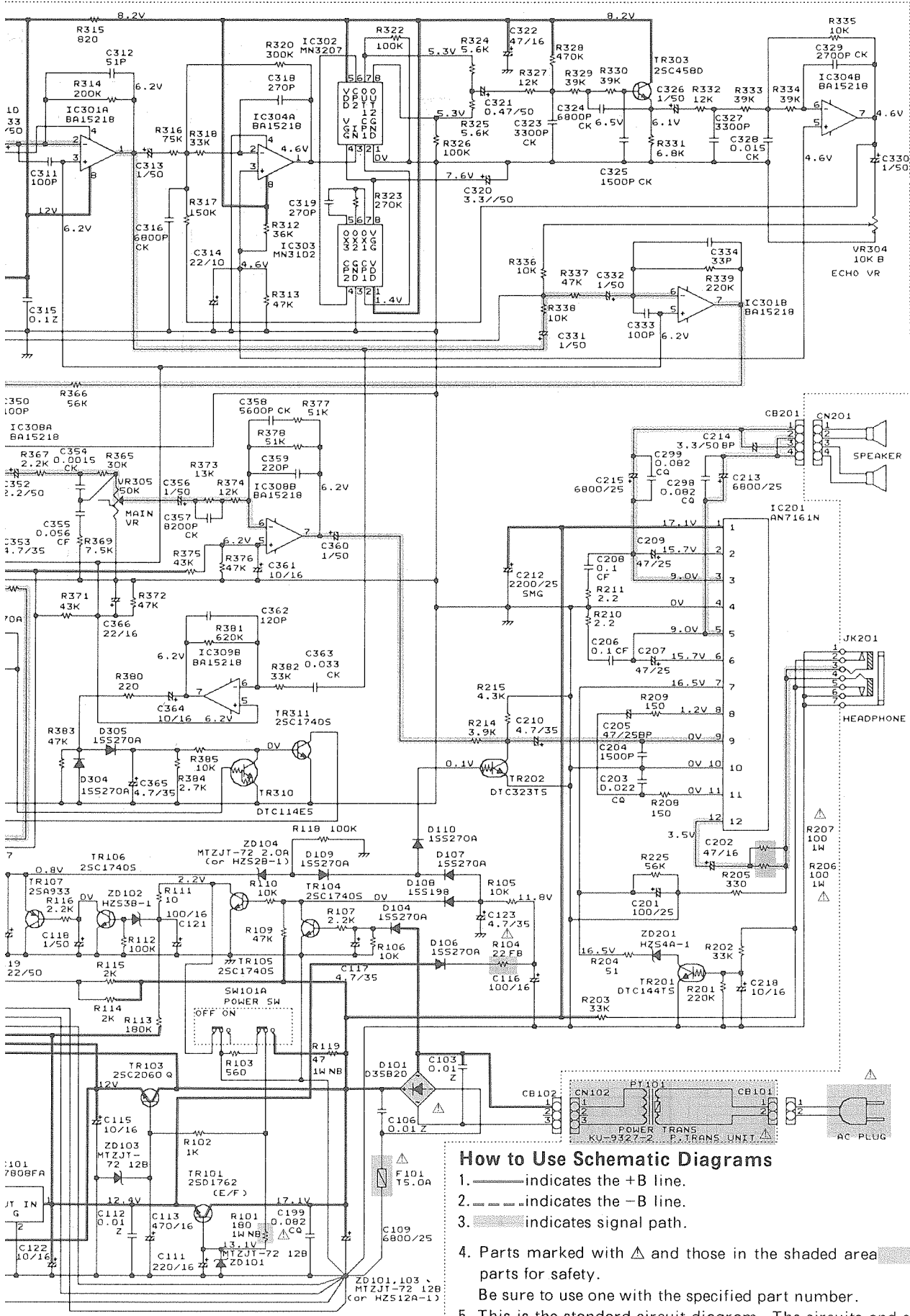


A

B

C

D

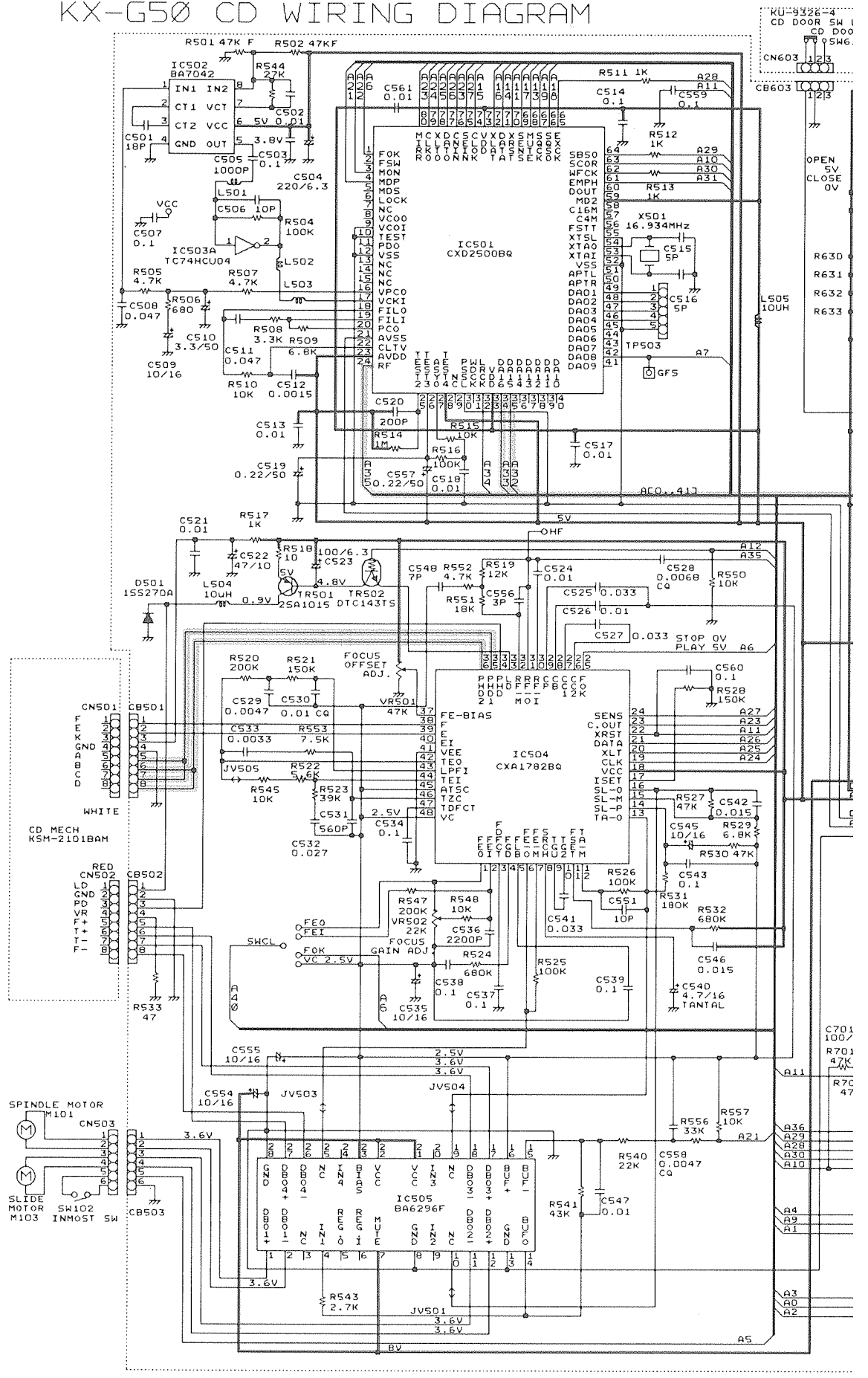


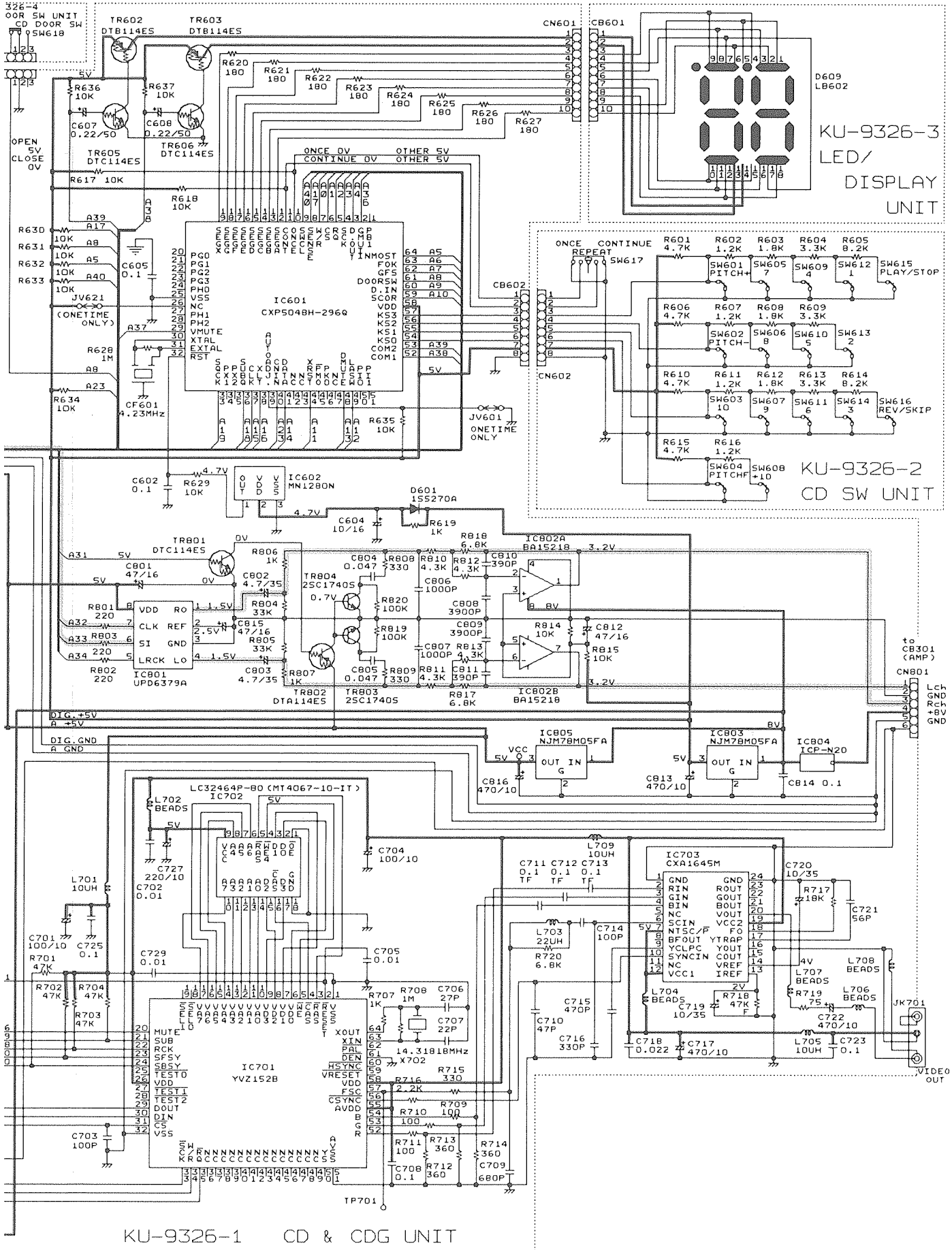
How to Use Schematic Diagrams

1. ——— indicates the +B line.
2. - - - - indicates the -B line.
3. ■■■■■ indicates signal path.
4. Parts marked with Δ and those in the shaded area are parts for safety. Be sure to use one with the specified part number.
5. This is the standard circuit diagram. The circuits and circuit constants are subject to change for improvement without notice.

KX-G50 CD WIRING DIAGRAM

5
4
3
2
1





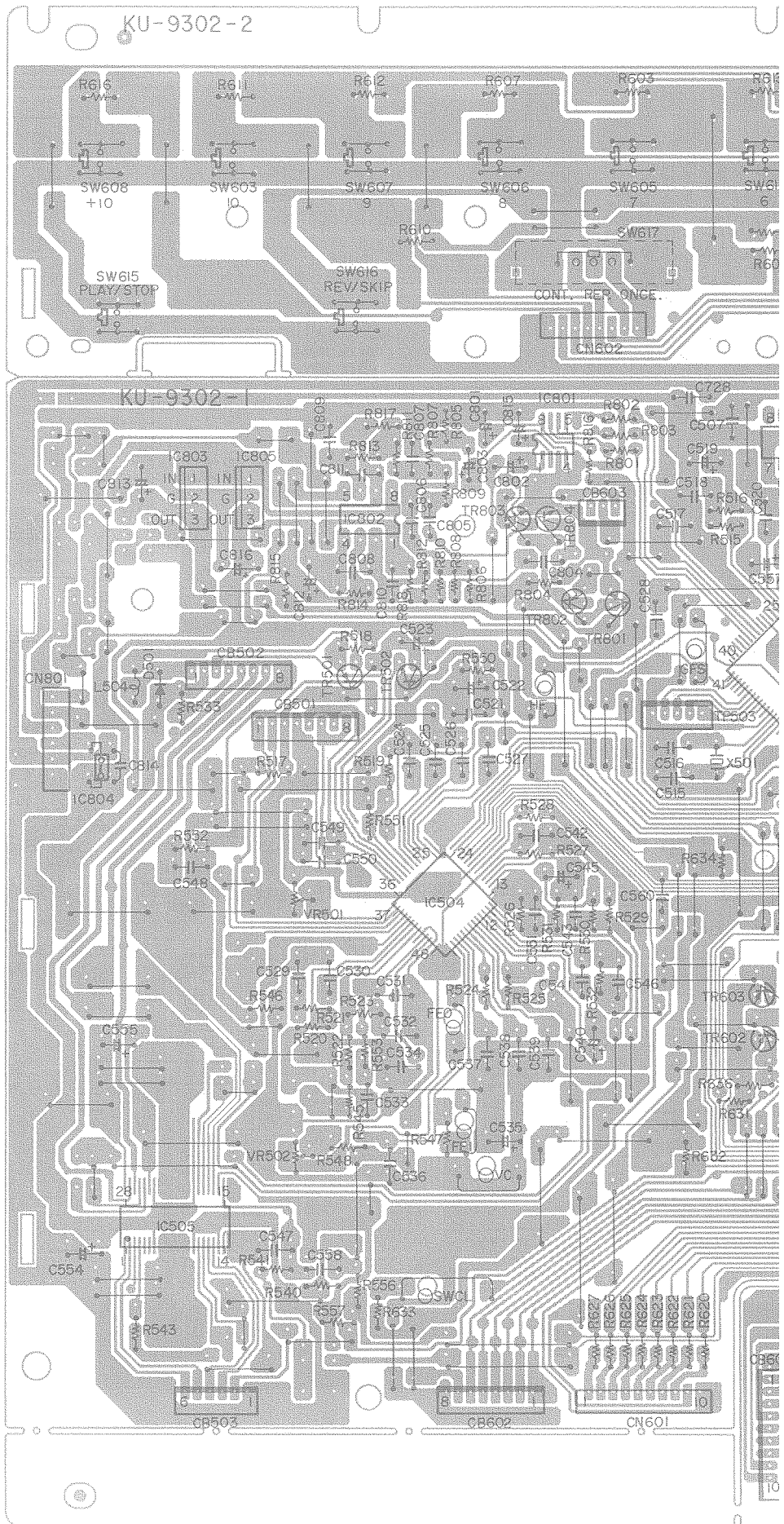
KU-9326-1 CD & CDG UNIT

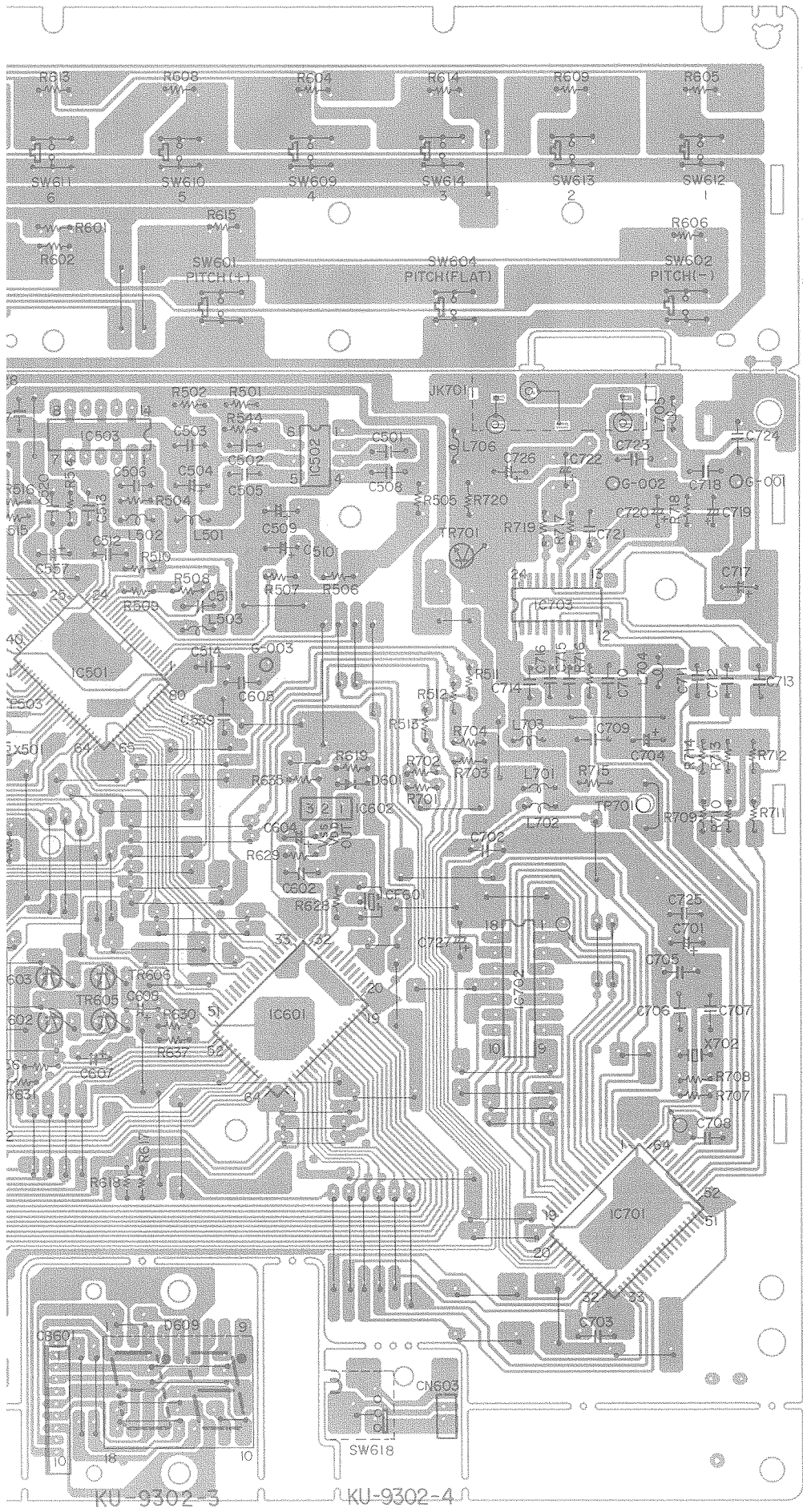
KU-9326-3 LED/ DISPLAY UNIT

KU-9326-2 CD SW UNIT

Printed Circuit Board

■ CD P.C Board





KU-9302-3

KU-9302-4

E

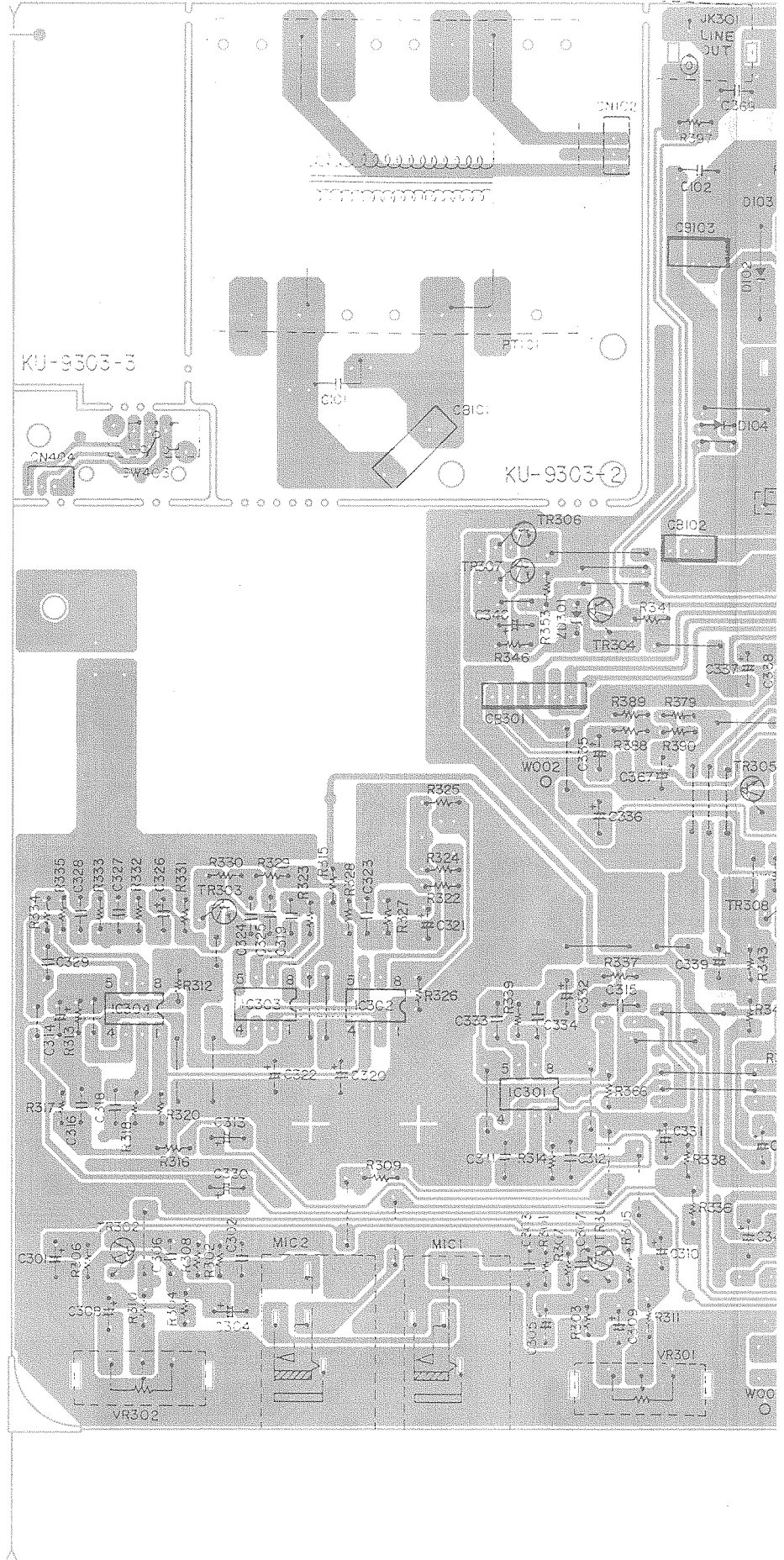
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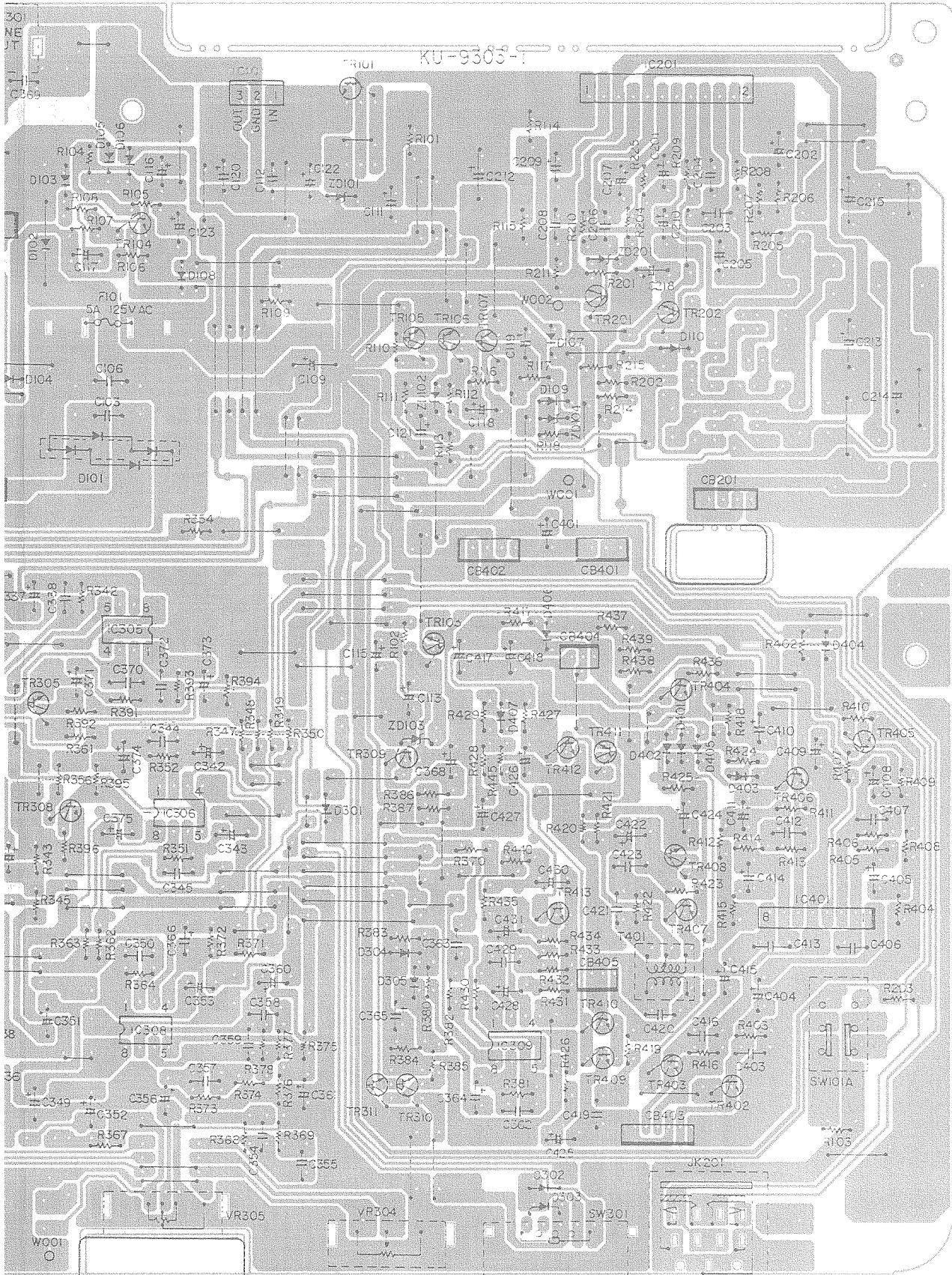
G

KX-G50

■ MAIN P.C Board

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KX-G50

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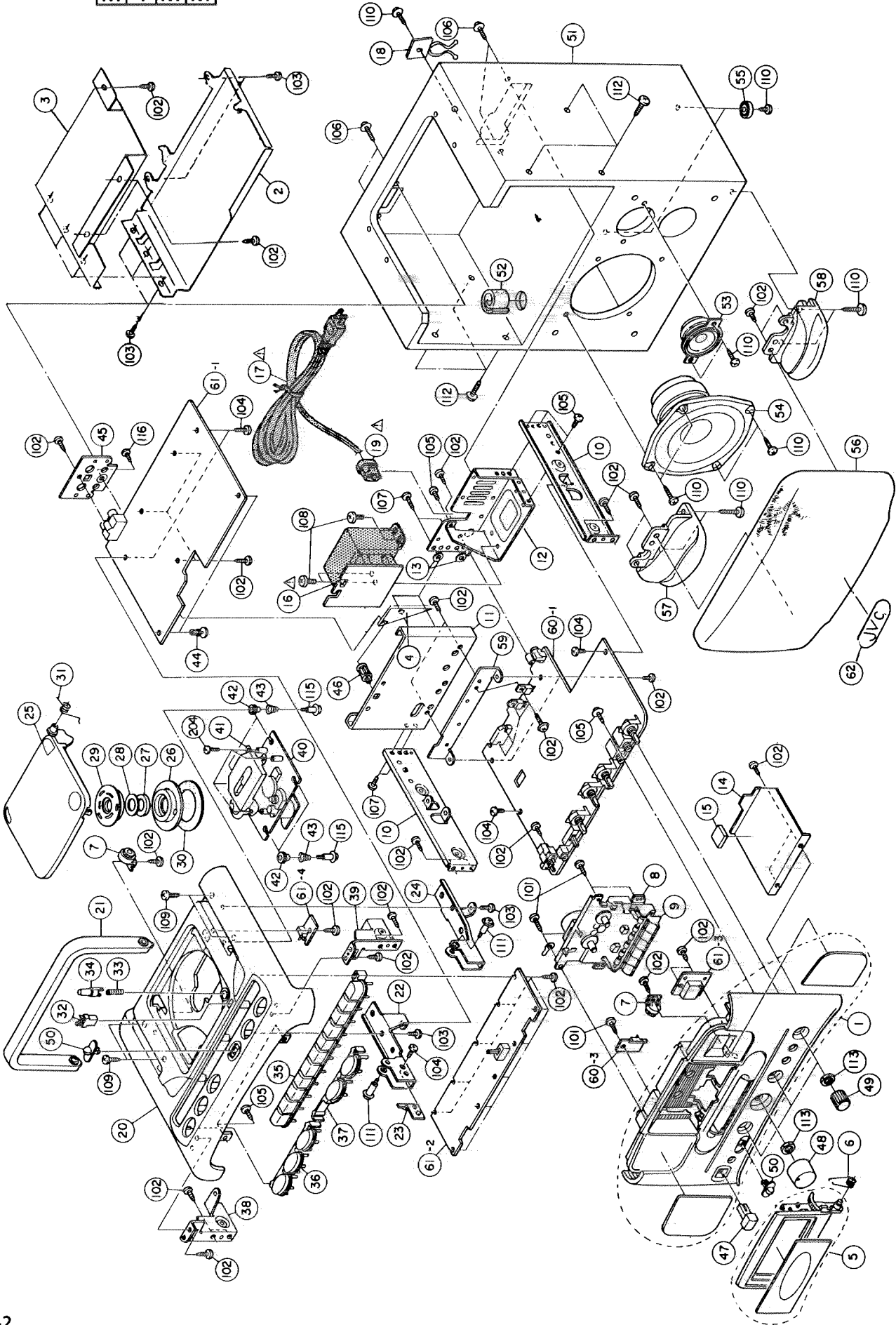
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General Exploded View and Parts List

Symbol No. **M 1 M M**



■ Parts List

Symbol No. **M** | **1** | **M** | **M**

△	Item	Part Number	Part Name	Q'ty	Description	Area
	1	1039208005	FRONT PANEL ASSY	1		
	2	4149189008	SHIELD PLATE	1	KU9327 PCB(BOTTOM SIDE)	
	3	4149188009	SHIELD PLATE	1	KU9327 PCB(UP SIDE)	
	4	4149190000	SHIELD PLATE	1		
	5	1469333003	CASSETTE DOOR	1		
	6	4639077002	SPRING	1		
	7	4219007007	DAMPER	1		
	8	3389027002	CASSETTE MECHA	1		
	9	1131240152	CASSETTE BUTTON	1		
	10	4129414007	SIDE BRACKET	2		
	11	4179084102	HEAT SINK	1		
	12	4129417114	BACK BRACKET	1		
	13	4770224028	SPRING WASHER	1		
	14	4149174204	SHEELD PLATE	1		
	15	4619057000	RUBBER SHEET	1		
△	16	2339680005	POWER TRANSFORMER	1		
△	17	2062061001	POWER CORD	1		
	18	4499039002	CORD HOLDER	1		
△	19	4450056008	CORD BUSHING	1		
	20	1039210006	TOP PANEL	1		
	21	1060075223	HANDLE	1		
	22	4129419002	HANDLE BRACKET	1		
	23	4129421003	STOPPER PLATE	1		
	24	4129420004	HANDLE BRACKET	1		
	25	1469334992	CD DOOR	1		
	26	4339012008	CLAMPER BASE	1		
	27	3410045005	MAGNET	1		
	28	4339014006	YOKE PLATE	1		
	29	4339011106	CD CLAMPER	1		
	30	1229031011	HIMELON SHEET	1		
	31	4630767104	SPRING	1		
	32	4350113009	LATCH	1		
	33	4630631007	SPRING	1		
	34	1461084114	PUSH BUTTON	1		
	35	1139318002	PUSH BUTTON	1		
	36	1139319001	PUSH BUTTON	1		
	37	1139320003	PUSH BUTTON	1		
	38	4129415006	SIDE BRACKET	1	(L)	
	39	4129416005	SIDE BRACKET	1	(R)	
	40	3379010003	CD MECHA UNIT	1		
	41	4129413105	MECHA COVER	1		
	42	4629011007	RUBBER CUSHION	1		
	43	4639078001	SPRING	1		
	44	4770096007	FASTENER	1		
	45	4129418003	TERMINAL BRACKET	1		
	46	4123548005	P.W.BOARD HOLDER	1		
	47	1131383022	POWER BUTTON	1		
	48	1129115008	VOLUME KNOB	1	MAIN VR	
	49	1120601113	VOLUME KNOB	1	ECHO	
	50	1129114009	SLIDE KNOB	1		
	51	1019109302	SPEAKER CABINET	1		
	52	4610831005	RUBBER SHEET	1		
	53	3040118001	CONE SPEAKER	1		
	54	3020165003	CONE SPEAKER	1		
	55	1049043001	FOOT	2	REAR	

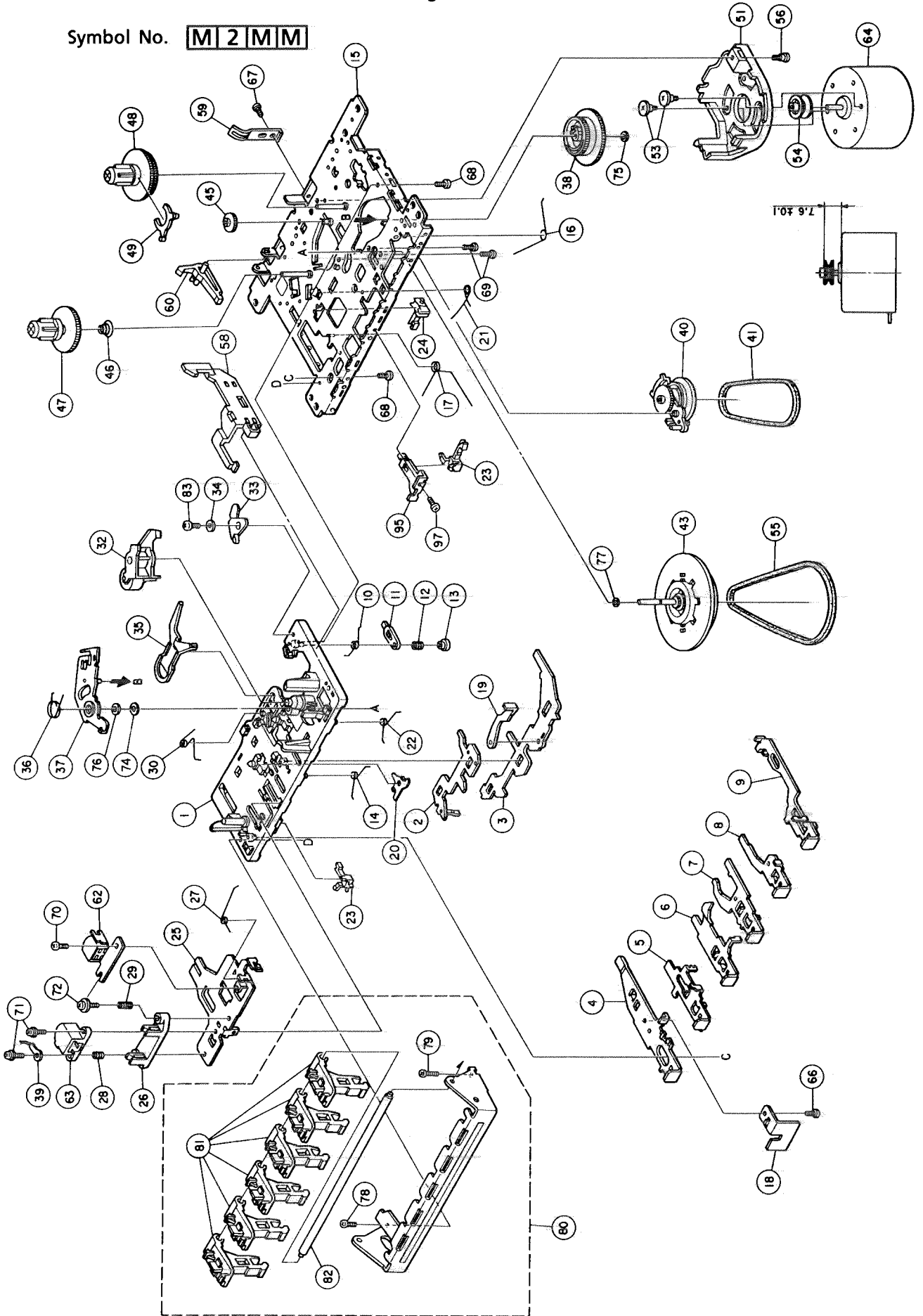
KX-G50

⚠	Item	Part Number	Part Name	Q'ty	Description	Area
	56	1019113000	SARAN BOARD	1		
	57	1049041100	FOOT	1	(L)	
	58	1049042109	FOOT	1	(R)	
	59	4179085004	HEAT SINK BRACKET	1		
	60	KU-9326	PRINTED WIRING BOARD ASSY	1	DEAK & AMP UNIT	
	61	KU-9327	PRINTED WIRING BOARD ASSY	1	CD & CD+G UNIT	
	62	1339011002	JVC MARK	1		
	102	4737508017	SCREW	11		
	103	4737511004	SCREW	2		
	104	4737002018	SCREW	4		
	105	4770262006	SCREW	2		
	106	4719031010	SCREW	4		
	107	4770064107	SCREW	2		
	108	4737004003	SCREW	4		
	109	4713409020	SCREW	4		
	110	4733818002	SCREW	10		
	111	4738053105	SCREW	2		
	112	4719025000	SCREW	6		
	113	4756138002	NUT	4		
	114	4737506006	SCREW	1		
	115	4738055006	SCREW	4		
	116	4737508046	SCREW	1		
	204	4737506006	SCREW	4		

Cassette Mechanism Ass'y and Parts List

Symbol No. **M 3 M M**

Symbol No. **M 2 M M**



KX-G50

■ Parts List

Symbol No. **M 2 M M**

Item	Part Number	Part Name	Q'ty	Description	Area
1	192114318T	PANEL BASE	1		
2	9D19211409	ACTUATOR	1		
3	9D19211408	ACTUATOR	1		
4	9D19211422	RECORDING LEVER	1		
5	9D19211423	PLAY BUTTON ASSY	1		
6	9D19211453	REWIND LEVER	1		
7	9D19211452	F.F.LEVER	1		
8	9D19211426	STOP LEVER	1		
9	9D19211461	PAUSE LEVER	1		
10	9H05000324	SPRING	1		
11	9D19211455	GUIDE PLATE	1		
12	9D19211412	SPRING	1		
13	9D19211411	STOPPER	1		
14	9D19211414	SPRING	1		
15	192101501	SHASSIS ASSY	1		
16	9D19211416	SPRING	1		
17	9D19211417	SPRING	1		
18	9D19210206	SPRING PLATE	1		
19	19211464T	KICK LEVER	1		
20	19211420T	ARM STOPPER	1		
21	19211421T	SPRING	1		
22	9D19211415	SPRING	1		
23	MSW-1541T	REAF SWITCH	1		
24	640101161T	LEAF SWITCH	1		
25	9D19210314	HEAD PLATE	1		
26	9D19210306	HEAD BASE	1		
27	9D19210309	SPRING	1		
28	9D18210308	SPRING	1		
29	9D18210307	SPRING	1		
30	19211418AT	SPRING	1		
32	192104309T	PINCH ROLLER	1		
33	9D19211434	PINCH ROLLER LEVER	1		
34	9D19211437	COLLAR	1		
35	9H05000321	KICK LEVER	1		
36	9D19212605	SPRING	1		
37	192126502ZT	GEAR PLATE	1		
38	9D19212602	CAM GEAR	1		
39	9D18550207	EARTH PLATE	1		
40	192107304T	RF CRATCH	1		
41	9D19210703	DRIVE BELT	1		
43	192109304ZT	FLYWHEEL	1		
45	9D18211070	CAM GEAR	1		
46	9D18211099	SPRING	1		
47	192105304T	SUPPLY REEL DISK	1		
48	192105303T	TAKE-UP REEL DISK	1		
49	9D19210506	SENSOR PLATE	1		
51	9D19211204	MOTOR BRACKET	1		
53	9D19211202	SCREW	1		
54	9D19211201	MOTOR PULLEY	1		
55	9H05000309	MAIN BELT	1		
56	9D19211203	SCREW	1		
58	9D19211302	EJECT LEVER	1		
59	9D18291001	LEAF SPRING	1		
60	9D18211069	SAFETY LEVER	1		
62	RP-7442BS-0951	REC/PLAY HEAD	1		

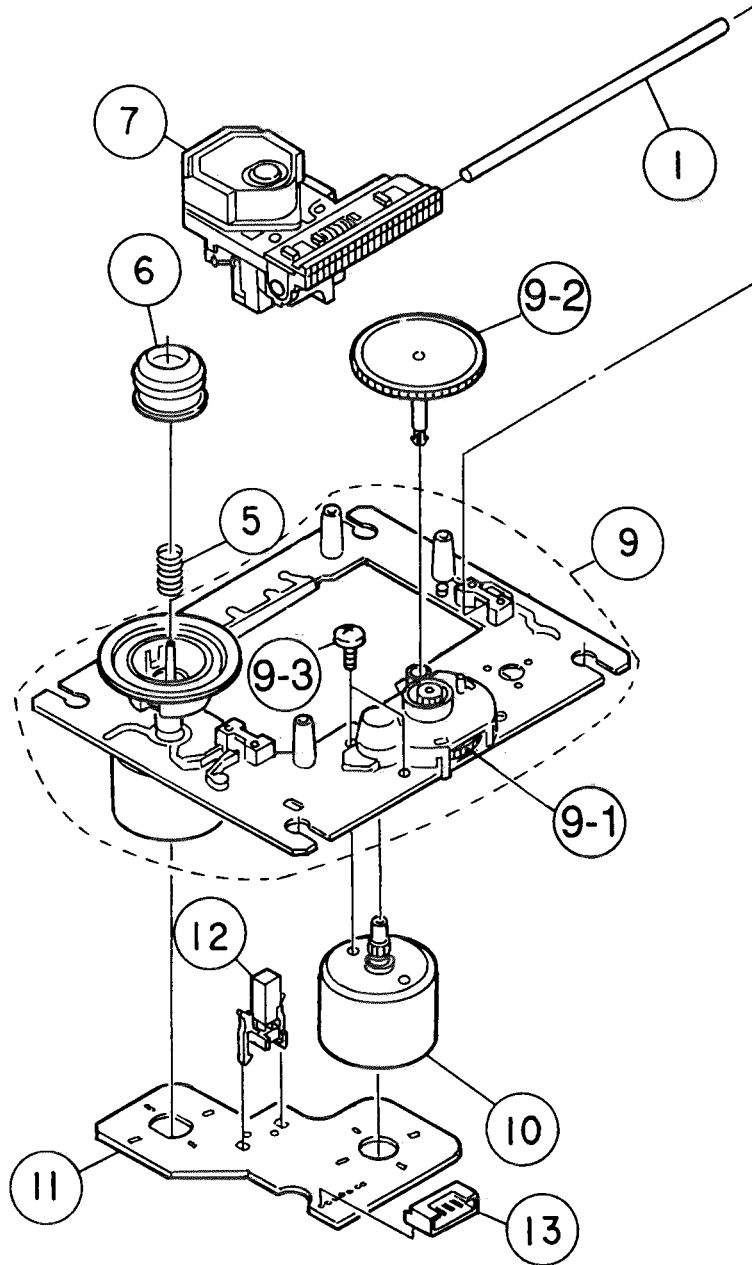
⚠	Item	Part Number	Part Name	Q'ty	Description	Area
	63	9D62011404	ERASE HEAD	1		
	64	9H05000411	DC MOTOR	1		
	66	9D91790000	TAPPING SCREW	1		
	67	9P3320032T	DEL TIGHT SCREW	1		
	68	9D96790000	SCREW	1		
	69	9D99991809	TAPPING SCREW	1		
	70	9D91150000	SCREW	1		
	71	9D98210000	SCREW	1		
	72	9D99220000	SCREW	1		
	74	9D99990003	WASHER	1	2.1×4×0.13	
	75	9D94220000	WASHER	1	1.2×3.8×0.3	
	76	9D99997001	WASHER	1	1.45×3.8×0.5	
	77	9D98820000	WASHER	1	2×3.5×0.3	
	78	9D91800000	SCREW	1		
	79	9D99991402	SCREW	1		
	80	3470060004	BUTTON HOLDER	1		
	81	9D18213107	ACTION LEVER	1		
	82	9D18293103	LEVER SHAFT	1		
	83	9D99992041	SCREW	1		
	95	9D19211503	SWITCH BRACKET	1		
	97	9D98200000	SCREW	1		

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CD Mechanism Ass'y and Parts List

Symbol No.

M	3	M	M
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■ Parts List

Symbol No. **M|3|M|M**

△	Item	Part Number	Part Name	Q'ty	Description	Area
	1	S491756501	SLIDE SHAFT	1		
	5	S262519101	COIL SPRING	1		
	6	S262518601	ADAPTOR RING	1		
	7	KSS-210B(H)-RS		1		
	8	S262518802	CAM GEAR	1		
	9	SX26251331	MECHA BASE ASSY	1		
	10	SX26251321	DC MOTOR	1		
	11	S163678913	PRINTED BOARD	1		
	12	S157208511	LEAF SWITCH	1		
	13	S156472211	CONNECT TERMINAL	1		

Printed Circuit Board Ass'y and Parts List

■ KU-9326

Deck & Power Amplifier PC Board Ass'y

I. C. S.

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	IC101	NJM7808FA	I.C.(MONO-AN DAINICHI	
	IC201	AN7161N	I.C.(MONO-AN MATSUSHITA	
	IC301	BA15218	I.C.(MONO-AN ROHM	
	IC302	MN3207	I.C.(DIGI-MO MATSUSHITA	
	IC303	MN3102	I.C.(DIGI-MO RRRR	
	IC304	BA15218	I.C.(MONO-AN ROHM	
	IC305	BA15218	I.C.(MONO-AN ROHM	
	IC306	BA15218	I.C.(MONO-AN ROHM	
	IC308	BA15218	I.C.(MONO-AN ROHM	
	IC309	BA15218	I.C.(MONO-AN ROHM	
	IC401	LA3160	I.C.(MONO-AN SANYO	

DIODES

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	D101	2760623000		
	D104	2760432903	SI.DIODE 9875	
	D106	2760432903	SI.DIODE 9875	
	D107	2760432903	SI.DIODE 9875	
	D108	1SS198	SI.DIODE 0021	
	D109	2760432903	SI.DIODE 9875	
	D110	2760432903	SI.DIODE 9875	
	D301	2760432903	SI.DIODE 9875	
	D302	2760432903	SI.DIODE 9875	
	D303	2760432903	SI.DIODE 9875	
	D304	2760432903	SI.DIODE 9875	
	D305	2760432903	SI.DIODE 9875	
	D401	2760432903	SI.DIODE 9875	
	D402	2760432903	SI.DIODE 9875	
	D403	2760432903	SI.DIODE 9875	
	D404	2760432903	SI.DIODE 9875	
	D405	2760432903	SI.DIODE 9875	
	D406	2760432903	SI.DIODE 9875	
	D407	2760432903	SI.DIODE 9875	

CAPACITORS

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	C103	2531146907		
	C106	2531146907		
	C109	QETB1EM-688N	6800MF 25V E CAPACITO	
	C111	QETB1CM-227	220MF 16V AL E.CAPAC	
	C112	2531146907		
	C113	QETB1CM-477E	470MF 16V ELECTRO	
	C115	QETB1CM-106N	10MF 16V E.CAPACITO	
	C116	QETB1CM-107	100MF 16V AL E.CAPAC	
	C117	QETB1VM-475	4.7MF 35V E.CAPACITO	
	C118	QETB1HM-105	1MF 50V AL E.CAPAC	
	C119	QETB1HM-224	0.22MF 50V AL E.CAPAC	
	C120	QETB1CM-106N	10MF 16V E.CAPACITO	
	C121	QETB1CM-107	100MF 16V AL E.CAPAC	
	C122	QETB1CM-106	10MF 16V ELECTRO	
	C123	QETB1VM-475	4.7MF 35V E.CAPACITO	
	C199	QFN81HJ-823	0.082MF 50V METAL.MYLA	
	C201	QETB1EM-107	100MF 25V AL E.CAPAC	
	C202	QETB1CM-476	47MF 16V AL E.CAPAC	
	C203	QFN81HJ-223	0.022MF 50V METAL.MYLA	
	C204	2539030918		
	C205	QEN51HM-476	47MF 50V NP E.CAPAC	
	C206	QFN81HJ-104	0.1MF 50V METAL.MYLA	
	C207	QETB1EM-476	47MF 25V AL E.CAPAC	
	C208	QFN81HJ-104	0.1MF 50V METAL.MYLA	
	C209	QETB1EM-476	47MF 25V AL E.CAPAC	
	C210	QETB1VM-475	4.7MF 35V E.CAPACITO	
	C212	QETB1EM-228	2200MF 25V E.CAPACITO	
	C213	QETB1EM-688N	6800MF 25V E.CAPACITO	
	C214	QEN51HM-335	3.3MF 50V AL E.CAPAC	
	C215	QETB1EM-688N	6800MF 25V E.CAPACITO	

CAPACITORS

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	C218	QETB1CM-106	10MF 16V ELECTRO	
	C298	QFN81HJ-823	0.082MF 50V METAL.MYLA	
	C299	QFN81HJ-823	0.082MF 50V METAL.MYLA	
	C301	QETB1CM-227	220MF 16V AL E.CAPAC	
	C302	QCB1HK-151	150PF 50V CER.CAPACI	
	C303	QCB1HK-151	150PF 50V CER.CAPACI	
	C304	QETB1HM-474	0.47MF 50V ELECTRO	
	C305	QETB1HM-474	0.47MF 50V ELECTRO	
	C306	QCB1HK-331Y	330PF 50V CER.CAPACI	
	C307	QCB1HK-331Y	330PF 50V CER.CAPACI	
	C308	QETB1HM-474	0.47MF 50V ELECTRO	
	C309	QETB1HM-474	0.47MF 50V ELECTRO	
	C310	QETB1HM-334	0.33MF 50V AL E.CAPAC	
	C311	QCB1HK-101Y	100PF 50V CER.CAPACI	
	C312	2534537979		
	C313	QETB1HM-105	1MF 50V AL E.CAPAC	
	C314	QETB1AM-226	22MF 10V ELECTRO	
	C315	2531027000		
	C316	2539030950		
	C318	QCB1HK-271Y	270PF 50V CER.CAPACI	
	C319	QCB1HK-271Y	270PF 50V CER.CAPACI	
	C320	QETB1HM-335	3.3MF 50V AL E.CAPAC	
	C321	QETB1HM-474	0.47MF 50V ELECTRO	
	C322	QETB1CM-476	47MF 16V AL E.CAPAC	
	C323	2539030934		
	C324	2539030950		
	C325	2539030918		
	C326	QETB1HM-105	1MF 50V AL E.CAPAC	
	C327	2539030934		
	C328	2539030976		
	C329	2539031962		
	C330	QETB1HM-105	1MF 50V AL E.CAPAC	
	C331	QETB1HM-105	1MF 50V AL E.CAPAC	
	C332	QETB1HM-105	1MF 50V AL E.CAPAC	
	C333	QCB1HK-101Y	100PF 50V CER.CAPACI	
	C334	2534537924		
	C335	QETB1HM-105	1MF 50V AL E.CAPAC	
	C336	QETB1HM-105	1MF 50V AL E.CAPAC	
	C337	QETB1CM-106N	10MF 16V E.CAPACITO	
	C338	2534538907		
	C339	QETB1CM-106N	10MF 16V E.CAPACITO	
	C340	QETB1HM-224	0.22MF 50V AL E.CAPAC	
	C342	QETB1HM-225	2.2MF 50V AL E.CAPAC	
	C343	QETB1HM-225	2.2MF 50V AL E.CAPAC	
	C344	2534537940		
	C345	2534537940		
	C349	QETB1CM-477E	470MF 16V ELECTRO	
	C350	QCB1HK-101Y	100PF 50V CER.CAPACI	
	C351	QETB1CM-106N	10MF 16V E.CAPACITO	
	C352	QETB1HM-225	2.2MF 50V AL E.CAPAC	
	C353	QETB1VM-475	4.7MF 35V E.CAPACITO	
	C354	2539030918		
	C355	QFN31HJ-563Z	0.056MF 50V MYLAR CAPA	
	C356	QETB1HM-105	1MF 50V AL E.CAPAC	
	C357	2539031991		
	C358	2539031988		
	C359	QCB1HK-221Y	220PF 50V CER.CAPACI	
	C360	QETB1HM-105	1MF 50V AL E.CAPAC	
	C361	QETB1CM-106N	10MF 16V E.CAPACITO	
	C362	QCB1HK-121Y	120PF 50V CER.CAPACI	
	C363	2539030992		
	C364	QETB1CM-106N	10MF 16V E.CAPACITO	
	C365	QETB1VM-475	4.7MF 35V E.CAPACITO	
	C366	QETB1CM-226	22MF 16V E.CAPACITO	
	C367	QETB1CM-106N	10MF 16V E.CAPACITO	
	C368	QETB1CM-226	22MF 16V E.CAPACITO	
	C369	2531146907		
	C370	QCB1HK-101Y	100PF 50V CER.CAPACI	
	C371	QETB1VM-475	4.7MF 35V E.CAPACITO	
	C372	2534537966		
	C373	QETB1HM-105	1MF 50V AL E.CAPAC	
	C374	QETB1CM-106	10MF 16V ELECTRO	
	C375	QETB1HM-225	2.2MF 50V AL E.CAPAC	
	C401	QETB1HM-105	1MF 50V AL E.CAPAC	
	C403	2534451903		
	C404	QETB1CM-106	10MF 16V ELECTRO	
	C405	QETB1AM-226	22MF 10V ELECTRO	
	C406	QCB1HK-221Y	220PF 50V CER.CAPACI	
	C407	QFN81HJ-273	0.027MF 50V METAL.MYLA	
	C408	QETB1CM-106	10MF 16V ELECTRO	

Δ : SAFETY PARTS

CAPACITORS

ITEM	PART NUMBER	DESCRIPTION	AREA
C409	QETB1CM-476	47MF 16V AL E.CAPAC	
C410	QETB1CM-106	10MF 16V ELECTRO	
C411	QETB1CM-106	10MF 16V ELECTRO	
C412	QFN81HJ-273	0.027MF 50V METAL.MYLA	
C413	QCBB1HK-221Y	220PF 50V CER.CAPACI	
C414	QETB1AM-226	22MF 10V ELECTRO	
C415	QETB1CM-106	10MF 16V ELECTRO	
C416	2534451903		
C417	QETB1CM-107	100MF 16V AL E.CAPAC	
C418	QETB1CM-108	1000MF 16V AL E.CAPAC	
C419	QCBB1HK-681Y	680PF 50V CER.CAPACI	
C420	QFN81HJ-103	0.01MF 50V METAL.MYLA	
C421	2539030947		
C422	QETB1CM-476	47MF 16V AL E.CAPAC	
C423	2539030947		
C424	QER50JM-107	100MF 6.3V AL E.CAPAC	
C425	QETB1HM-105	1MF 50V AL E.CAPAC	
C426	QETB1HM-225	2.2MF 50V AL E.CAPAC	
C427	QETB1VM-475	4.7MF 35V E.CAPACITO	
C428	QETB1CM-106	10MF 16V ELECTRO	
C429	QFN81HJ-333	0.033MF 50V MYLAR CAPA	
C430	QETB1CM-107	100MF 16V AL E.CAPAC	
C431	QETB1CM-106	10MF 16V ELECTRO	

RESISTORS

ITEM	PART NUMBER	DESCRIPTION	AREA
R326	QRD148J-104S	100K 1/4W CARBON	
R327	QRD148J-123S	12K 1/4W CARBON	
R328	QRD148J-474S	470K 1/4W CARBON	
R329	QRD148J-393S	39K 1/4W CARBON	
R330	QRD148J-393S	39K 1/4W CARBON	
R331	QRD148J-682S	6.8K 1/4W CARBON	
R332	QRD148J-123S	12K 1/4W CARBON	
R333	QRD148J-393S	39K 1/4W CARBON	
R334	QRD148J-393S	39K 1/4W CARBON	
R335	QRD148J-103S	10K 1/4W CARBON	
R336	QRD148J-103S	10K 1/4W CARBON	
R337	QRD141J-473	47K 1/4W CARBON RES	
R338	QRD148J-103S	10K 1/4W CARBON	
R339	QRD148J-224S	220K 1/4W CARBON	
R341	QRD148J-471S	470 1/4W CARBON	
R342	QRD141J-333S	33K 1/4W CARBON RES	
R343	QRD141J-473	47K 1/4W CARBON RES	
R345	QRD148J-203S	20K 1/4W CARBON RES	
R346	QRD148J-563S	56K 1/4W CARBON	
R347	QRD148J-473S	47K 1/4W CARBON	
R348	QRD148J-473S	47K 1/4W CARBON	
R349	QRD141J-242SZ	2.4K 1/4W CARBON RES	
R350	QRD141J-242SZ	2.4K 1/4W CARBON RES	
R351	2412403947		
R352	2412403947		
R353	QRD148J-473S	47K 1/4W CARBON	
R354	QRD148J-104S	100K 1/4W CARBON	
R356	QRD148J-103S	10K 1/4W CARBON	
R361	QRD141J-333S	33K 1/4W CARBON RES	
R362	QRD143J-823S	82K 1/4W CARBON RES	
R363	QRD143J-823S	82K 1/4W CARBON RES	
R364	QRD148J-273S	27K 1/4W CARBON	
R365	QRD148J-303S	30K 1/4W CARBON RES	
R366	QRD148J-563S	56K 1/4W CARBON	
R367	QRD148J-222	2.2K 1/4W CARBON	
R369	QRD141J-752SZ	7.5K 1/4W CARBON RES	
R370	QRD148J-363S	36K 1/4W CARBON	
R371	QRD148J-433S	43K 1/4W CARBON	
R372	QRD141J-473	47K 1/4W CARBON RES	
R373	QRD148J-133S	13K 1/4W CARBON RES	
R374	QRD148J-123S	12K 1/4W CARBON	
R375	QRD148J-433S	43K 1/4W CARBON	
R376	QRD141J-473	47K 1/4W CARBON RES	
R377	QRD148J-513S	51K 1/4W CARBON	
R378	QRD148J-513S	51K 1/4W CARBON	
R379	QRD148J-392S	3.9K 1/4W CARBON	
R380	QRD148J-221S	220 1/4W CARBON	
R381	2412405929		
R382	QRD141J-333S	33K 1/4W CARBON RES	
R383	QRD141J-473	47K 1/4W CARBON RES	
R384	QRD141J-272S	2.7K 1/4W CARBON RES	
R385	QRD148J-103S	10K 1/4W CARBON	
R386	QRD148J-472	4.7K 1/4W CARBON	
R387	QRD148J-472	4.7K 1/4W CARBON	
R388	QRD148J-332S	3.3K 1/4W CARBON	

RESISTORS

ITEM	PART NUMBER	DESCRIPTION	AREA
R101	2442050933	METAL FILM	
R102	QRD148J-102S	1K 1/4W CARBON	
R103	QRD141J-561	560 1/4W CARBON RES	
R104	QRZ0077-220X	22 1/4W FUSIBLE RE	
R105	QRD148J-103S	10K 1/4W CARBON	
R106	QRD148J-103S	10K 1/4W CARBON	
R107	QRD148J-222	2.2K 1/4W CARBON	
R109	QRD141J-473	47K 1/4W CARBON RES	
R110	QRD148J-103S	10K 1/4W CARBON	
R111	QRD141J-100S	10 1/4W CARBON RES	
R112	QRD148J-104S	100K 1/4W CARBON	
R113	QRD148J-184S	180K 1/4W CARBON	
R114	QRD148J-202SZ	2K 1/4W CARBON	
R115	QRD148J-202SZ	2K 1/4W CARBON	
R116	QRD148J-222	2.2K 1/4W CARBON	
R117	QRD148J-563S	56K 1/4W CARBON	
R118	QRD148J-104S	100K 1/4W CARBON	
R119	2442052928	METAL FILM	
R201	QRD148J-224S	220K 1/4W CARBON	
R202	QRD141J-333S	33K 1/4W CARBON RES	
R203	QRD141J-333S	33K 1/4W CARBON RES	
R204	QRD148J-510S	51 1/4W CARBON	
R205	QRD141J-331SX	330 1/4W CARBON	
R206	2442051961		
R207	2442051961		
R208	QRD148J-151S	150 1/4W CARBON	
R209	QRD148J-151S	150 1/4W CARBON	
R210	QRD148J-2R2S	2.2 1/4W CARBON	
R211	QRD148J-2R2S	2.2 1/4W CARBON	
R214	QRD148J-392S	3.9K 1/4W CARBON	
R215	QRD148J-432S	4.3K 1/4W CARBON	
R225	QRD148J-563S	56K 1/4W CARBON	
R301	QRD148J-332S	3.3K 1/4W CARBON	
R302	QRD148J-332S	3.3K 1/4W CARBON	
R303	QRD141J-105S	1M 1/4W CARBON RES	
R304	QRD141J-105S	1M 1/4W CARBON RES	
R305	ERD141J-562S	5.6K 1/4W CARBON RES	
R306	ERD141J-562S	5.6K 1/4W CARBON RES	
R307	QRD148J-201S	200 1/4W CARBON	
R308	QRD148J-201S	200 1/4W CARBON	
R309	QRD148J-102S	1K 1/4W CARBON	
R310	QRD148J-223S	22K 1/4W CARBON	
R311	QRD148J-223S	22K 1/4W CARBON	
R312	QRD148J-363S	36K 1/4W CARBON	
R313	QRD141J-473	47K 1/4W CARBON RES	
R314	2412404904		
R315	QRD148J-821S	820 1/4W CARBON	
R316	QRD148J-753S	75K 1/4W CARBON RES	
R317	QRD148J-154S	150K 1/4W CARBON	
R318	QRD141J-333S	33K 1/4W CARBON RES	
R320	2412404946		
R322	QRD148J-104S	100K 1/4W CARBON	
R323	QRD148J-274S	270K 1/4W CARBON	
R324	ERD141J-562S	5.6K 1/4W CARBON RES	
R325	ERD141J-562S	5.6K 1/4W CARBON RES	

△ SAFETY PARTS

RESISTORS

Δ ITEM	PART NUMBER	DESCRIPTION	AREA
R428	QRD148J-183S	18K 1/4W CARBON	
R429	QRD148J-102S	1K 1/4W CARBON	
R430	2412402980		
R431	QRD148J-122S	1.2K 1/4W CARBON	
R432	QRD141J-561	560 1/4W CARBON RES	
R433	QRD148J-163S	16K 1/4W CARBON RES	
R434	QRD148J-152S	1.5K 1/4W CARBON	
R435	QRD148J-133S	13K 1/4W CARBON RES	
R436	QRD148J-103S	10K 1/4W CARBON	
R437	2442051961		
R438	2442051961		
R439	2442051961		
R440	QRD148J-471S	470 1/4W CARBON	
R445	QRD148J-103S	10K 1/4W CARBON	
VR301	2110484006	VARIABLE R	
VR302	2110484006	VARIABLE R	
VR304	2110484006	VARIABLE R	
VR305	2110779009	VARIABLE R	

OTHERS

Δ ITEM	PART NUMBER	DESCRIPTION	AREA
TR305	2690072909		
TR306	DTA114ES	DIGITAL TRA	
TR307	2SC1740(R,S)	SI.TRANSIST	
TR308	2690072909		
TR309	2SA1348	SI.TRANSIST	
TR310	DTC114ES	DIGITAL TRA	
TR311	2SC1740(R,S)	SI.TRANSIST	
TR402	2690072909		
TR403	2690072909		
TR404	2SC3402A	SI.TRANSIST	
TR405	2690072909		
TR406	2690072909		
TR407	2SC3311A(Q,R)	SI.TRANSIST	
TR408	2SC3311A(Q,R)	SI.TRANSIST	
TR409	2690073908	DIGITAL TRA	
TR410	DTC144TS	DIGITAL TRA	
TR411	2SA1348	SI.TRANSIST	
TR412	2SC1740(R,S)	SI.TRANSIST	
TR413	2690072909		
ZD101	2760474903	ZENER DIODE	
ZD102	2760453908	ZENER DIODE	
ZD103	2760474903	ZENER DIODE	
ZD104	2760650905		
ZD201	2760455906	ZENER DIODE	
ZD301	2760460904	ZENER DIODE	

OTHERS

Δ ITEM	PART NUMBER	DESCRIPTION	AREA
	2020047009	FUSE HOLDER	
	2030576007	1P SIN CON ASSY	
	2030578021	SIN-SIN CORD	
	2030607002	2T-3T CORD	
	2030636002	1P CONNECT ASSY	
	2030636015	1P CONNECT ASSY	
	2229327009	P.W BOARD	
F101	QMF51U1-5R0	FUSE	
T401	2318045001	OSCILLATOR	
CB101	2050606025		
CB102	2050233032	CONNECT TER	
CB201	2050233045	CONNECT TER	
CB301	2050233061	CONNECT TER	
CB401	2050233032	CONNECT TER	
CB402	2050277043	CONNECT TER	
CB403	2050343061	CONNECT TER	
CB404	2050321038	CONNECT TER	
CB405	2050271036	CONNECT TER	
CB501	2050343087	CONNECT TER	
CB502	2050321083	CONNECT TER	
CB503	2050343061	CONNECT TER	
CB601	2050375000	CONNECT TER	
CB602	2050343087	CONNECT TER	
CN102	2035034007	CONNECTOR W	
CN401	2034652066		
CN402	2036455012		
CN403	2040437013		
CN404	2035037017	CONNECTOR W	
CN405	2034906013	CONNECTOR W	
CN501	2042698009		
CN502	2042699008		
CN503	2040459004		
CN601	2042700007	SOCKET WIRE	
CN602	2042704003	SOCKET WIRE	
CN603	2035033008	SOCKET WIRE	
CN801	2040460019	CONNECTOR W	
JK001	2048475006	MICROPHONE	
JK002	2048475006	MICROPHONE	
JK201	2048477004	HEADPHONE J	
JK301	2048476005	PIN JACK	
SW101	9KSKOW011	PUSH SWITCH	
SW301	2122618006	SLIDE SWITC	
SW403	2124516009	PUSH SWITCH	
TR101	2SD1762DEF	SI.TRANSIST	
TR103	2SC2060(Q,R)	SI.TRANSIST	
TR104	2SC1740(R,S)	SI.TRANSIST	
TR105	2SC1740(R,S)	SI.TRANSIST	
TR106	2SC1740(R,S)	SI.TRANSIST	
TR107	2SA933(R,S)	SI.TRANSIST	
TR201	DTC144TS	DIGITAL TRA	
TR202	2690072909		
TR301	2SC2320	SI.TRANSIST	
TR302	2SC2320	SI.TRANSIST	
TR303	2SC458(C,D)	SI.TRANSIST	
TR304	2690073908	DIGITAL TRA	

■ KU-9326 CD & CD+G PC Board Ass'y

I. C. S.

Δ ITEM	PART NUMBER	DESCRIPTION	AREA
IC501	CXD2500BQ	I.C(MICRO-P 1680	
IC502	BA7042	I.C(MONO-AN ROHM	
IC503	TC74HCU04AP	I.C(DIGI-MO TOSHIBA	
IC504	CXA1782AQ	I.C(MONO-AN ASHI	
IC505	BA6296FP	I.C(MONO-AN ROHM	
IC601	2622042004	I.C(M) 9875	
IC602	MN1280(P,Q)	I.C(DIGI-MO MATSUSHITA	
IC701	YVZ152B-F	I.C(M) YAMAHA	
IC702	2622077008	I.C(M) 9875	
IC703	CXA1645MX	I.C(MONO-AN 1680	
IC801	2630983003	I.C(DIGI-MO 9875	
IC802	BA15218	I.C(MONO-AN ROHM	
IC803	NJM78M05FA	I.C(MONO-AN DAINICHI	
IC804	2680074904	I.C.	
IC805	NJM78M05FA	I.C(MONO-AN DAINICHI	

DIODES

Δ ITEM	PART NUMBER	DESCRIPTION	AREA
D501	2760432903	SI.DIODE 9875	
D601	2760432903	SI.DIODE 9875	
D609	LB-602VA2	L.E.D. ROHM	

CAPACITORS

Δ ITEM	PART NUMBER	DESCRIPTION	AREA
C501	QCT30GH-180Y	18PF 50V CER.CAPACI	
C502	2539030963		
C503	2539036909		
C504	2544250932		
C505	2539030905		
C506	QCT30GH-100Y	10PF 50V CER.CAPACI	
C507	2539036909		
C508	2539031904		
C509	QETB1CM-106	10MF 16V ELECTRO	
C510	QETB1HM-335	3.3MF 50V AL.E.CAPAC	

▲ ISHIAI ELECTRIC PARTS

CAPACITORS

Δ ITEM	PART NUMBER	DESCRIPTION	AREA
C511	2539031904		
C512	2539030918		
C513	2539030963		
C514	2539036909		
C515	2534535955		
C516	2534535955		
C517	2539030963		
C518	2539030963		
C519	QETB1HM-224	0.22MF 50V AL E.CAPAC	
C520	2534443908		
C521	QFN81HJ-103	0.01MF 50V METAL.MYLA	
C522	QETB1AM-476	47MF 10V E.CAPACITO	
C523	2544250929		
C524	QFN81HJ-103	0.01MF 50V METAL.MYLA	
C525	QFN81HJ-333	0.033MF 50V MYLAR CAPA	
C526	QFN81HJ-103	0.01MF 50V METAL.MYLA	
C527	QFN81HJ-333	0.033MF 50V MYLAR CAPA	
C528	QFN81HJ-682	6800PF 50V METAL.MYLA	
C529	QCXB1CM-472Y	4700PF 16V CER.CAPACI	
C530	QFN81HJ-103	0.01MF 50V METAL.MYLA	
C531	QCBB1HK-561Y	560PF 50V CER.CAPACI	
C532	2539035926		
C533	2531118906		
C534	2539036909		
C535	QETB1CM-106	10MF 16V ELECTRO	
C536	2539030921		
C537	QFN81HJ-104	0.1MF 50V METAL.MYLA	
C538	QFN81HJ-104	0.1MF 50V METAL.MYLA	
C539	QFN81HJ-104	0.1MF 50V METAL.MYLA	
C540	2541016001		
C541	QFN81HJ-333	0.033MF 50V MYLAR CAPA	
C542	QFN81HJ-153	0.015MF 50V MYLAR CAPA	
C543	QFN81HJ-104	0.1MF 50V METAL.MYLA	
C545	QETB1CM-106	10MF 16V ELECTRO	
C546	QFN81HJ-153	0.015MF 50V MYLAR CAPA	
C547	2539030963		
C548	2534535971		
C551	QCT30CH-100Y	10PF 50V CER.CAPACI	
C554	QETB1CM-106	10MF 16V ELECTRO	
C556	QETB1CM-106	10MF 16V ELECTRO	
C556	2534535939		
C557	QETB1HM-224	0.22MF 50V AL E.CAPAC	
C558	QFN81HJ-472	4700PF 50V MYLAR CAPA	
C559	2539036909		
C560	2539036909		
C561	QCF21HP-103A	0.01MF 50V CER.CAPACI	
C602	2539036909		
C604	QETB1CM-106	10MF 16V ELECTRO	
C605	2539036909		
C607	QETB1HM-224	0.22MF 50V AL E.CAPAC	
C608	QETB1HM-224	0.22MF 50V AL E.CAPAC	
C701	QETB1AM-107	100MF 10V AL E.CAPAC	
C702	2539030963		
C703	QCBB1HK-101Y	100PF 50V CER.CAPACI	
C704	QETB1AM-107	100MF 10V AL E.CAPAC	
C705	2539030963		
C706	2534537908		
C707	QCT30CH-220	22PF 50V CERAMIC	
C708	2539036909		
C709	QCBB1HK-681Y	680PF 50V CER.CAPACI	
C710	2534537966		
C711	QFN81HJ-104	0.1MF 50V METAL.MYLA	
C712	QFN81HJ-104	0.1MF 50V METAL.MYLA	
C713	QFN81HJ-104	0.1MF 50V METAL.MYLA	
C714	QCBB1HK-101Y	100PF 50V CER.CAPACI	
C715	QCBB1HK-471Y	470PF 50V CER.CAPACI	
C716	QCBB1HK-331Y	330PF 50V CER.CAPACI	
C717	QETB1AM-477	470MF 10V E.CAPACITO	
C718	QCHB1EZ-223	0.22MF 25V CER.CAPACI	
C719	QETB1VM-106	10MF 35V E.CAPACITO	
C720	QETB1VM-106N	10MF 35V ELECTRO	
C721	2534537982		
C722	QETB1AM-477	470MF 10V E.CAPACITO	
C723	2539036909		
C724	2539030963		
C725	2539036909		
C727	QETB1AM-227	220MF 10V E.CAPACITO	
C729	QCF21HP-103A	0.01MF 50V CER.CAPACI	
C801	QETB1CM-476	47MF 16V AL E.CAPAC	
C802	QETB1VM-475	4.7MF 35V E.CAPACITO	
C803	QETB1VM-475	4.7MF 35V E.CAPACITO	
C804	2539031904		
C805	2539031904		
C806	2539030905		
C807	2539030905		

RESISTORS

Δ ITEM	PART NUMBER	DESCRIPTION	AREA
C808	2539031975		
C809	2539031975		
C810	QCBB1HK-391Y	390PF 50V CER.CAPACI	
C811	QCBB1HK-391Y	390PF 50V CER.CAPACI	
C812	QETB1CM-476	47MF 16V AL E.CAPAC	
C813	QETB1AM-477	470MF 10V E.CAPACITO	
C814	2539036909		
C815	QETB1CM-476	47MF 16V AL E.CAPAC	
C816	QETB1AM-477	470MF 10V E.CAPACITO	

RESISTORS

Δ ITEM	PART NUMBER	DESCRIPTION	AREA
R501	2452370988		
R502	2452370988		
R504	QRD148J-104S	100K 1/4W CARBON	
R505	QRD148J-472	4.7K 1/4W CARBON	
R506	QRD148J-681S	680 1/4W CARBON	
R507	QRD148J-472	4.7K 1/4W CARBON	
R508	QRD148J-332S	3.3K 1/4W CARBON	
R509	QRD148J-682S	6.8K 1/4W CARBON	
R510	QRD148J-103S	10K 1/4W CARBON	
R511	QRD148J-102S	1K 1/4W CARBON	
R512	QRD148J-102S	1K 1/4W CARBON	
R513	QRD148J-102S	1K 1/4W CARBON	
R514	QRD141J-105S	1M 1/4W CARBON RES	
R515	QRD148J-103S	10K 1/4W CARBON	
R516	QRD148J-104S	100K 1/4W CARBON	
R517	QRD148J-102S	1K 1/4W CARBON	
R518	QRD141J-100S	10 1/4W CARBON RES	
R519	QRD148J-123S	12K 1/4W CARBON	
R520	2412404904		
R521	QRD148J-154S	150K 1/4W CARBON	
R523	QRD148J-393S	39K 1/4W CARBON	
R524	QRD148J-684S	680K 1/4W CARBON	
R525	QRD148J-104S	100K 1/4W CARBON	
R526	QRD148J-104S	100K 1/4W CARBON	
R527	QRD148J-473S	47K 1/4W CARBON	
R528	QRD148J-154S	150K 1/4W CARBON	
R529	QRD148J-682S	6.8K 1/4W CARBON	
R530	QRD148J-473S	47K 1/4W CARBON	
R531	QRD148J-184S	180K 1/4W CARBON	
R532	QRD148J-684S	680K 1/4W CARBON	
R540	QRD148J-223S	22K 1/4W CARBON	
R541	2412402948		
R543	QRD141J-272S	2.7K 1/4W CARBON RES	
R544	QRD148J-273S	27K 1/4W CARBON	
R545	QRD148J-103S	10K 1/4W CARBON	
R547	2412404904		
R548	QRD148J-103S	10K 1/4W CARBON	
R550	QRD148J-103S	10K 1/4W CARBON	
R551	QRD148J-183S	18K 1/4W CARBON	
R552	ERD141J-472	4.7K 1/4W CARBON	
R553	QRD148J-470S	47 1/4W CARBON	
R553	2412400-063		
R556	QRD141J-333S	33K 1/4W CARBON RES	
R557	QRD148J-103S	10K 1/4W CARBON	
R601	QRD148J-472S	4.7K 1/4W CARBON	
R602	QRD148J-122S	1.2K 1/4W CARBON	
R603	QRD148J-182S	1.8K 1/4W CARBON RES	
R604	QRD148J-332S	3.3K 1/4W CARBON	
R605	QRD148J-822S	8.2K 1/4W CARBON	
R606	QRD148J-472S	4.7K 1/4W CARBON	
R607	QRD148J-122S	1.2K 1/4W CARBON	
R608	QRD148J-182S	1.8K 1/4W CARBON RES	
R609	QRD148J-332S	3.3K 1/4W CARBON	
R610	QRD148J-472S	4.7K 1/4W CARBON	
R611	QRD148J-122S	1.2K 1/4W CARBON	
R612	QRD148J-182S	1.8K 1/4W CARBON RES	
R613	QRD148J-332S	3.3K 1/4W CARBON	
R614	QRD148J-822S	8.2K 1/4W CARBON	
R615	QRD148J-472S	4.7K 1/4W CARBON	
R616	QRD148J-122S	1.2K 1/4W CARBON	
R617	QRD148J-103S	10K 1/4W CARBON	
R618	QRD148J-103S	10K 1/4W CARBON	
R619	QRD148J-102S	1K 1/4W CARBON	
R620	QRD14CJ-181S	180 1/4W UNF. CARBON	
R621	QRD14CJ-181S	180 1/4W UNF. CARBON	

Δ : SAFETY PARTS

RESISTORS

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
Δ	R622	QRD14CJ-181S	180 1/4W UNF. CARBON	
Δ	R623	QRD14CJ-181S	180 1/4W UNF. CARBON	
	R624	QRD148J-181S	180 1/4W CARBON	
	R625	QRD148J-181S	180 1/4W CARBON	
	R626	QRD148J-181S	180 1/4W CARBON	
	R627	QRD148J-181S	180 1/4W CARBON	
	R628	QRD141J-105S	1M 1/4W CARBON RES	
	R629	QRD148J-103S	10K 1/4W CARBON	
	R630	QRD148J-103S	10K 1/4W CARBON	
	R631	QRD148J-103S	10K 1/4W CARBON	
	R632	QRD148J-103S	10K 1/4W CARBON	
	R633	QRD148J-103S	10K 1/4W CARBON	
	R634	QRD148J-103S	10K 1/4W CARBON	
	R635	QRD148J-103S	10K 1/4W CARBON	
	R636	QRD148J-103S	10K 1/4W CARBON	
	R637	QRD148J-103S	10K 1/4W CARBON	
	R701	QRD141J-47S	47K 1/4W CARBON RES	
	R702	QRD148J-473S	47K 1/4W CARBON	
	R703	QRD148J-473S	47K 1/4W CARBON	
	R704	QRD148J-473S	47K 1/4W CARBON	
	R707	QRD148J-102S	1K 1/4W CARBON	
	R708	QRD141J-105S	1M 1/4W CARBON RES	
	R709	QRD141J-101S	100 1/4W CARBON RES	
	R710	QRD141J-101S	100 1/4W CARBON RES	
	R711	QRD141J-101S	100 1/4W CARBON RES	
	R712	QRD148J-361S	360 1/4W CARBON RES	
	R713	QRD148J-361S	360 1/4W CARBON RES	
	R714	QRD148J-361S	360 1/4W CARBON RES	
	R715	QRD141J-331SX	330 1/4W CARBON	
	R716	QRD148J-222	2.2K 1/4W CARBON	
	R717	QRD148J-183S	18K 1/4W CARBON	
	R718	2452370988		
	R719	QRD148J-750	75 1/4W CARBON	
	R720	QRD148J-682S	6.8K 1/4W CARBON	
	R801	QRD148J-221S	220 1/4W CARBON	
	R802	QRD148J-221S	220 1/4W CARBON	
	R803	QRD148J-221S	220 1/4W CARBON	
	R804	QRD141J-333S	33K 1/4W CARBON RES	
	R805	QRD141J-333S	33K 1/4W CARBON RES	
	R806	QRD148J-102S	1K 1/4W CARBON	
	R807	QRD148J-102S	1K 1/4W CARBON	
	R808	QRD141J-331SX	330 1/4W CARBON	
	R809	QRD141J-331SX	330 1/4W CARBON	
	R810	QRD148J-432S	4.3K 1/4W CARBON	
	R811	QRD148J-432S	4.3K 1/4W CARBON	
	R812	QRD148J-432S	4.3K 1/4W CARBON	
	R813	QRD148J-432S	4.3K 1/4W CARBON	
	R814	QRD148J-103S	10K 1/4W CARBON	
	R815	QRD148J-103S	10K 1/4W CARBON	
	R817	QRD148J-682S	6.8K 1/4W CARBON	
	R818	QRD148J-682S	6.8K 1/4W CARBON	
	R819	QRD148J-104S	100K 1/4W CARBON	
	R820	QRD148J-104S	100K 1/4W CARBON	
	VR501	2116095923	VARIABLE R	
	VR502	2116095936		

OTHERS

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
		2229326000	P.W BOARD	
	L501	2350049007	INDUCTOR	
	L502	2350049900		
	L503	2350049900		
	L504	2350060950	INDUCTOR	
	L505	2350060950	INDUCTOR	
	L701	2350060950	INDUCTOR	
	L702	2350049900		
	L703	2350070911	INDUCTOR	
	L704	2350049900		
	L705	2350060950	INDUCTOR	
	L706	2350049900		
	L707	2350049907	INDUCTOR	
	L708	2350049907	INDUCTOR	
	L709	2350060950	INDUCTOR	
	X501	3990115002	CERAMIC RES	
	X601	3990111006	CERAMIC RES	
	X702	9KXK00010	CRYSTAL	
	CB603	2050271036	CONNECT TER	
	JK701	2048425014	PIN JACK	
	SW601	2124388910	TACT SWITCH UP(+)	
	SW602	2124388910	TACT SWITCH DOWN(-)	
	SW603	2124388910	TACT SWITCH 10'	
	SW604	2124388910	TACT SWITCH (NORMAL)	
	SW605	2124388910	TACT SWITCH 7	
	SW606	2124388910	TACT SWITCH 8	
	SW607	2124388910	TACT SWITCH 9	
	SW608	2124388910	TACT SWITCH +10	
	SW609	2124388910	TACT SWITCH 4	
	SW610	2124388910	TACT SWITCH 5	
	SW611	2124388910	TACT SWITCH 6	
	SW612	2124388910	TACT SWITCH 1	
	SW613	2124388910	TACT SWITCH 2	
	SW614	2124388910	TACT SWITCH 3	
	SW615	2124388910	TACT SWITCH PLAY/STOP	
	SW616	2124388910	TACT SWITCH PRACTICE	
	SW617	2124773004	SLIDE SWITC REPEAT	
	SW618	2122613001	SLIDE SWITC CD DOOR	
	TR501	2SA1015(GR)	TR.	
	TR502	DTC143TS	DIGITAL TRA	
	TR602	DTB114ESTP	DIGITAL TRA	
	TR603	DTB114ESTP	DIGITAL TRA	
	TR605	DTC114ES	DIGITAL TRA	
	TR606	DTC114ES	DIGITAL TRA	
	TR801	DTC114ES	DIGITAL TRA	
	TR802	DTA114ES	DIGITAL TRA	
	TR803	2SC1740(R,S)	SI. TRANSIST	
	TR804	2SC1740(R,S)	SI. TRANSIST	

Δ USA/FBTV PARTS

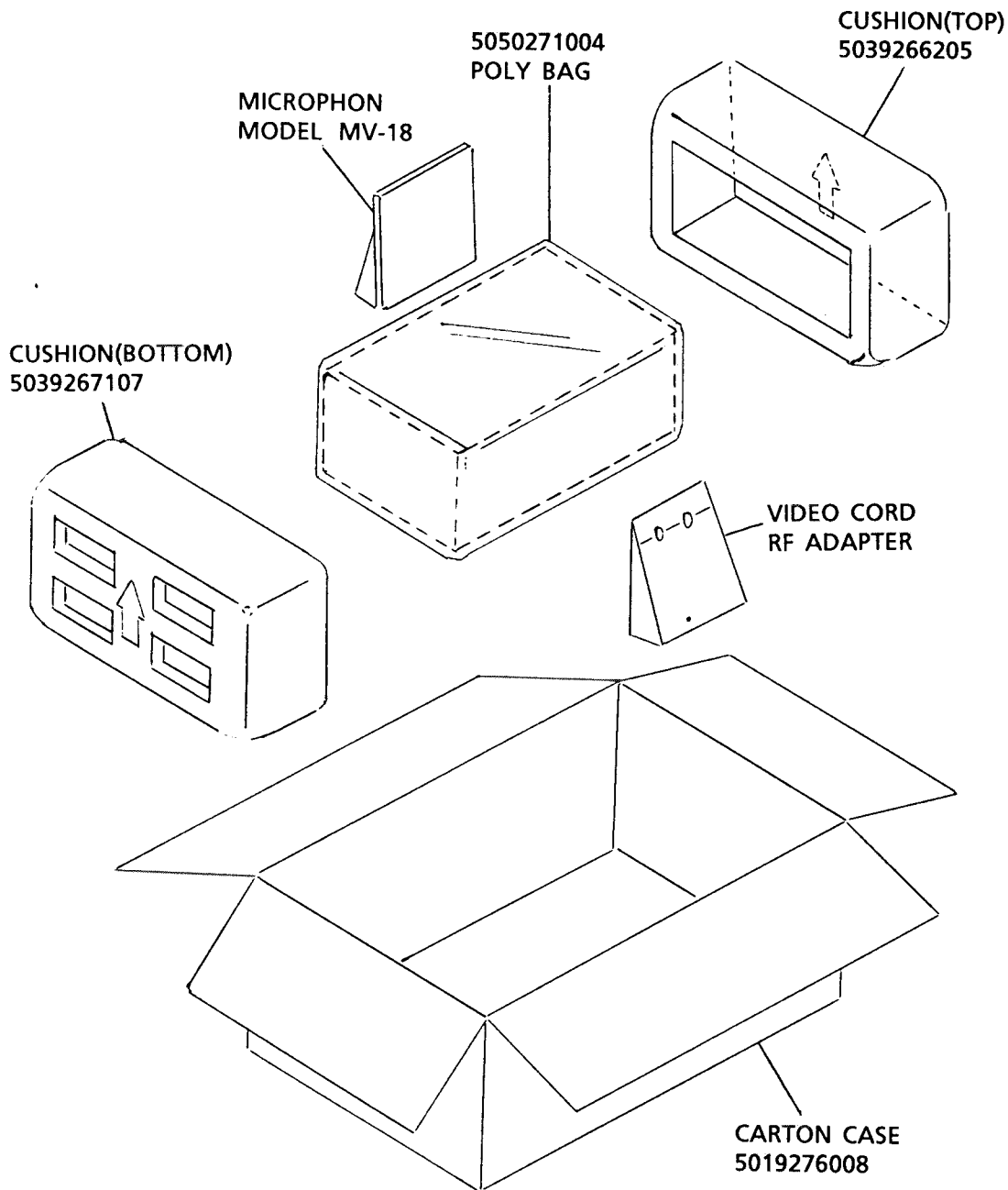
Accessories

Symbol No. **M 4 M M**

Δ	Item	Part Number	Part Name	Q'ty	Description	Area
	1	5119422008	INSTRUCTION BOOK	1		
	2	E43486-603B	INSTRUCTION SHEET	1		
	3	2030473016	SIGNAL CORD	1		
	4	RF-510J	RF UNIT	1		
	5	QPGA025-03505B	POLY BAG	1		
	6	E308942-001	CAUTION LABEL	1		
	7	BT-2044G	SAFTY SHEET	1		
	8	BT-51006-1	REGISTER CARD	1		

Packing Materials and Part Numbers

Symbol No. **M 5 M M**



KX-G50

JVC

VICTOR COMPANY OF JAPAN, LIMITED

AUDIO DIVISION, 1644, SHIMOTSURUMA, YAMATO-SHI, KANAGAWA-KEN, 242, JAPAN

(No.20519)



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