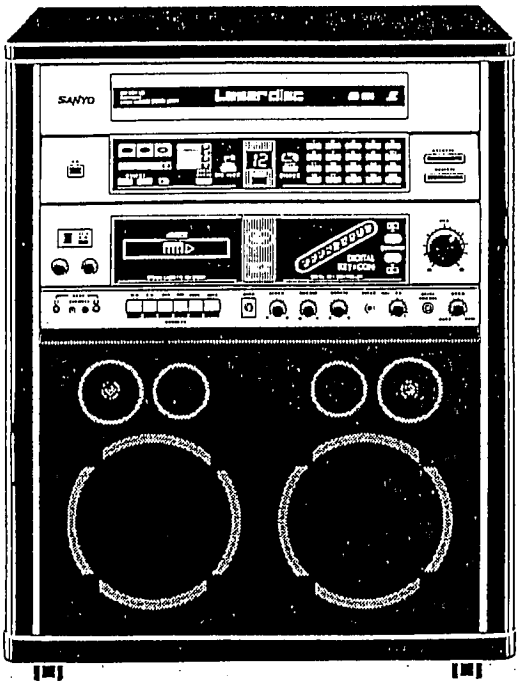
INSTRUCTION
MANUAL

SANYO

LV-K77

Laser Disc Player

NTSC



For this unit, please use discs with symbols indicated below. Please note that VHD system videodiscs cannot be used with this unit.

This unit is applicable to NTSC, the Japanese television system. Please note that the discs having indications of a foreign television system (PAL, SECAM) cannot be used.

LASER DISC

Laser Disc
This is a universally standardized symbol of Laser Disc videodisc.

CD VIDEO

Compact Disc with Video
A disc with this symbol on the label surface, manual, etc.

COMPACT disc DIGITAL AUDIO

Compact Disc
A disc with this symbol on the label surface, manual, etc.

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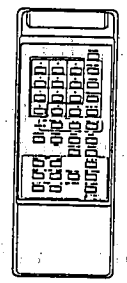
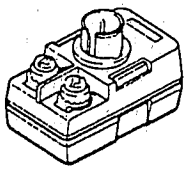
Remote control unit and batteries

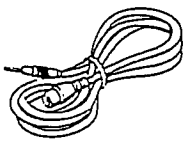
(DRC-K77)



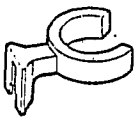
Aerial transformer



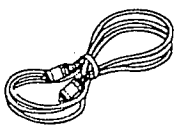
Coaxial cable



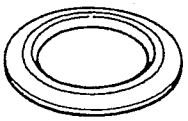
Microphone stands
Quantity: 2



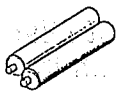
Video cord



Caster stoppers
Quantity: 4



Two HP 7 batteries

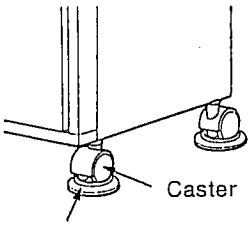


BEFORE USING

Installation

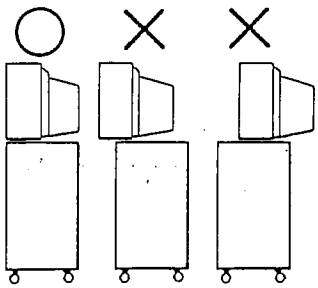
When you decide on the place of installation, set theincluded caster stoppers under the casters so that the systemis stable.

- Make sure there is nothing on top of the system whensetting the stoppers under the casters.
- The casters can be removed.
  To remove: Pull the casters off.
  To install: Insert the casters until you hear a click.
- The colours may be distorted if a TV is set directly next to the system, so set the TV 50cm or more away from the system.



Be careful of the following when setting a TV on top ofthe system.

- 25-inch TVs can be placed on top of the system. Do notplace larger TVs or TVs which weigh more than 35kg on top ofthe system.
- Place the TV in the very center so that it does not stickout over the sides.
- Do not set any objects on top of the TV.



Moving the System

- Do not move the system with a TV or other component set ontop.
  When moving the system, remove all objects from the topand remove the caster stoppers.

If stripes appear on the TV screen:

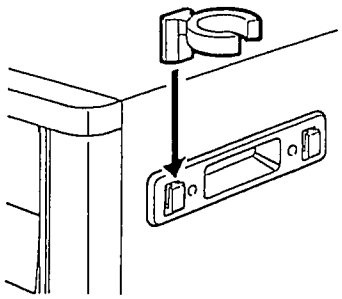
Depending on the strength of the TV broadcast signals,stripes may appear on the screen when watching the TV withthe system's power turned on. This is not a malfunction ofthe TV or the system. Turn the system's power off ifstripes should appear or when you plan to watch the TV for a while.

Notes:

- VHD format video discs cannot be used on this system.
- This system conforms to the NTSC format used in Japan. Discs marked PAL, SECAM, or other formats used overseascannot be used on this system.
- The aluminum-backed discs sometimes used for professional
- LD singles (thin 20cm LDs) can be played without an adapter.
- Video single discs can also be played. Video single discs are CDV discs including video and digital audio parts.

Installing the Microphone Stands

Install the included microphone stands on the mounts located on either side of the system.



Condensation

- When cold water is poured into a glass, water droplets form on the surface of the glass. This is called condensation.
- Condensation may occur on internal operation parts and lenses.

SAFETY TIPS

Location

- Avoid places of high temperature and humidity such as the kitchen or bathroom, and also dusty areas.
- Do not place this unit anywhere near a cooking table or a humidifier where it will be exposed to smoke and steam as unit troubles may occur.
- Do not place this unit in an area that is directly exposed to the sunlight or near heating equipment such as a stove as it will adversely affect the cabinet and component parts.
- In cases where the unit is left in a car with all doors closed or in a similar situations where the temperature is abnormally high, cabinet warping and internal troubles may occur.
- Avoid placement on wobbling or unstable areas. (Level areas only)
- Avoid floor placement near any vibrating appliance or any area where vibration may occur. Doing so may cause unstable function of your unit.

Ventilation Hole

- In order to prevent internal temperature from rising, provided is a hole in the cabinet. When using this unit, caution must be exercised not to cover up this hole.
- Do not place the player in a narrow or unventilated spot such as a book case or cover it with a table cloth or such. Also, do not cover up the ventilation hole by putting it on a carpet or a comforter as problems may occur. Also, do not rest unit on any heat generating component such as an amplifier.

Do not place Objects On Player

- Please do not put flower vases, glasses, cosmetics, or any containers filled with pharmaceuticals, water, etc. if water spillage should occur, unplug unit and contact your nearest merchant, as usage may cause problems.
- Do not place any heavy (more than 35kg) objects on the player as damage to the cabinet, and possible future problems may occur.

Entry of Extraneous Substances

Please do not put or drop metals or combustible foreign matters through the disc lid or the ventilation hole of the player. To prevent entry of such extraneous substances, keep the disc table closed when not in use. If any foreign matters should enter, remove unplug unit and contact your nearest merchant immediately. As usage may cause fire, electrical shock or other technical problems. Extra caution should be exercised in homes with children.

When not in Use

When not in use, always leave the disc out and the power switch OFF.

Long Time Absence or Usage

In the case of a long time absence or usage, it is better to leave player unplugged.

Thunder Precaution

In case of thunder, unplug unit as quickly as possible, taking care not to touch antenna.

Cabinet Precautions

Do not remove cabinet of player, Handling the inside of unit is dangerous and may also cause additional malfunctions. For internal checks or adjustments, please inquire with your merchant's service department.

Playback Precautions

- The disc spins at a high speed during playback. Therefore, caution must be taken not to tilt, vibrate, or shock the player or to carry it around while in the playback mode, as malfunction may occur.
- Also, the player, while in use, may cause radio interference, if placed in the near vicinity.

Cautions for Carrying and Transportation

- When carrying the player, caution should be taken to avoid shock which may cause may functions.
- In case of moving or transportation, be sure to remove disc before packing. Also, be certain to remove the plug and outside connecting wires, such as aerial wires, TV connection wires, etc.

AC Power Cord Protection

- Do not place such heavy objects such as furniture, or carpeting, etc., on the AC power cords. Damaged cords may cause fire and/or electrical shocks. When any AC power cord is damaged, please replace at your nearest merchant.
- If AC power cords are located close to heating devices, take sufficient care so that cords do not come in direct contact with heating devices.
- When removing plug, do not under any circumstances pull on AC power cord, but instead taking hold of the plug itself.

Copyright Licensing

Duplication, broadcasting, screening, public performance, renting of discs without permission from rightful persons are strictly prohibited.

Taking Care of Cabinet

- When taking care of cabinet, firstly unplug the unit.
- Do not wipe unit with benzine or thinner, etc. as the quality of surface may change or peel.
- Do not allow volatile substances such as insecticides to be sprayed on unit. Also, do not leave unit in contact with rubber, or vinyl products, etc., for a long time. Plasticizer contained in the plastic materials may cause the quality changes or peeling.
- Lightly wipe any stains on the cabinet or on the front panel with a soft cloth such as flannel. For harden stains, soak cloth in neutral detergent, squeeze and then wipe stain with cloth and blot with dry cloth.

Unit Problems

It is dangerous to use unit if it is emits smoke or unfamiliar odors. If this problem occurs the plug unit immediately and see your merchant's repair service department.

Dew Condensation

About Dew Condensation

- When cold water is placed in a glass, waterdrops adhere to the surface of the glass. This is dew condensation.
- Player internal mechanisms or lenses may also condensate under certain conditions.

How Dew Condensation Happens

The player will condensate if it moved from a cool area such as an air - conditioned room or car into a high temperature or humidity filled room within a short time, or when the player receives a directly cool wind from a cooling device or air conditioner.

When Condensation Occurs

A condensated player may not work as well as it should. Turn on the player and let it idle for a one or two hour period.

CONTROLS

Front Panel

1. Disc indicators

   CD: When lit, a CD is being played.
   CDV: When lit, a CDV is being played.
   LD: When lit, an LD is being played.

2. MODE indicators

   PROGRAM indicator
   REPEAT indicator
   1/L indicator
   2/R indicator

3. Disc tray

   This is where the discs are set.

4. KARAOKE MODE indicator

5. Chapter/track display

6. Direct search buttons (1 through 20)

7. OPEN/CLOSE button

8. PLAY button

9. JET TURN (SIDE) button

10. Infrared remote control sensor

11. KARAOKE MODE button

    Use this button to switch between continuous playback and single stop playback.
    - When continuous playback is set: The KARAOKE MODE indicator is off.
    - When the single stop mode is set: The KARAOKE MODE indicator is lit.

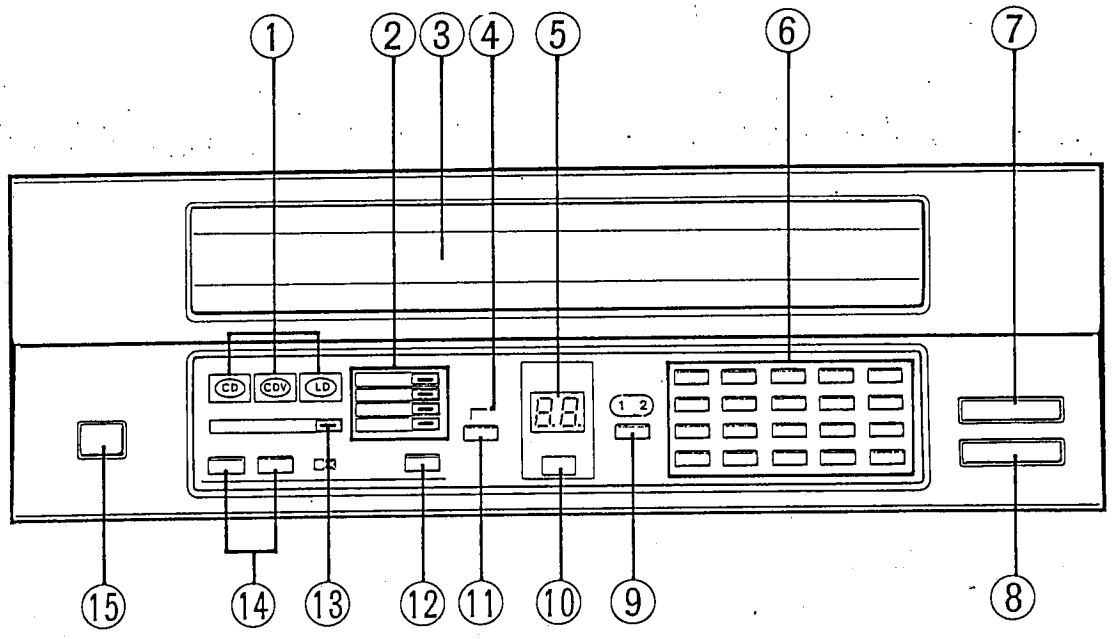
12. DIGITAL/ANALOG button

13. TV/DISC indicator

14. INPUT SELECTOR buttons

    DISC: When lit, a disc is being played.
    TAPE: When lit, a tape is being played.

15. POWER switch

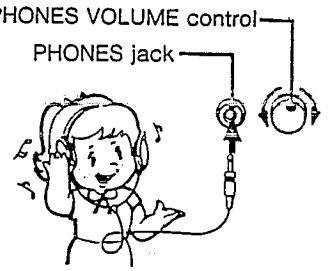


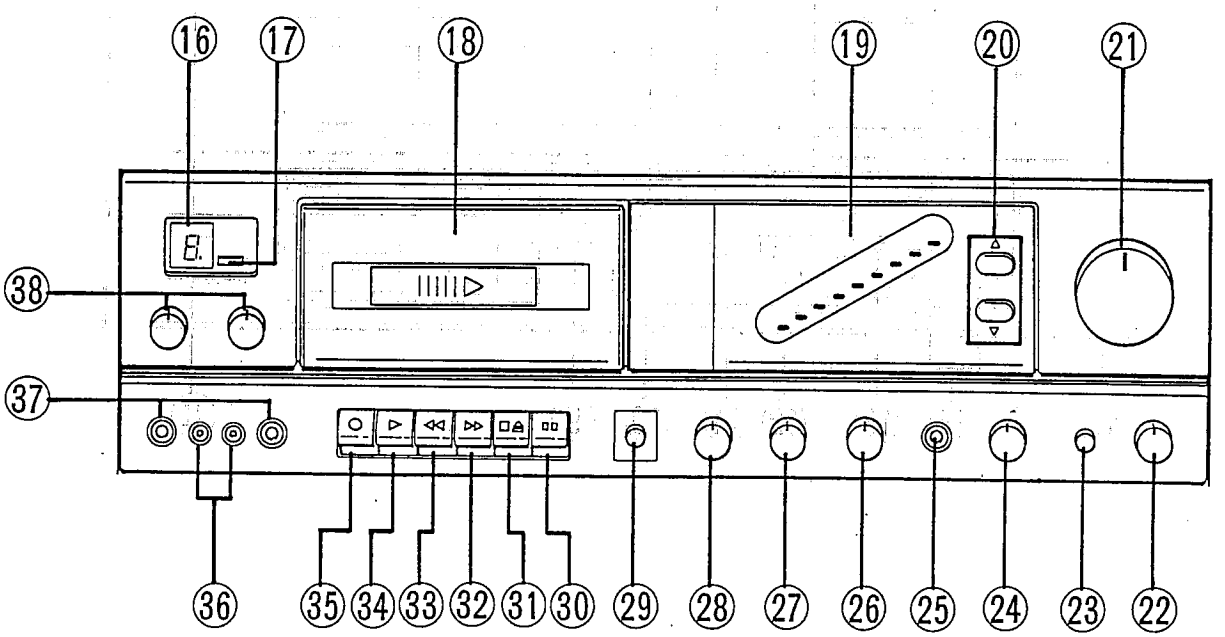
Front Panel

16. Tape search display
17. TAPE SELECTION button
18. Cassette compartment
19. Key control indicators
20. KEY CONTROL buttons
21. VOLUME control
22. BALANCE (multiplex audio balance) control
23. VOCAL CHANGER button
24. PHONES VOLUME control
25. PHONES jack
26. MUSIC LEVEL (Music volume) control
    Use this to adjust the volume of the accompaniment.
    Normally keep the control between the center and the + side.
27. POWERFUL SOUND
    Use this to adjust the sound quality
    (emphasizing the upper treble and lower bass sound).
28. DIGITAL ECHO control
29. DIGITAL MULTIPLE AUDIO button
30. PAUSE button
31. STOP/EJECT button
32. (Fast-Foward) button
33. (REW) button
34. PLAY button
35. (REC) button
36. KEY CONTROL jacks
37. MIC (Microphone) jacks
38. MIC LEVEL (Microphone volume) controls

Headphones

- Use headphones (sold seprately) at night and when you want to play discs quietly by yourself. Use the PHONES VOLUME control to abjust the volume.
- Keep the volume to an appropriate level to protect your ears. Also avoid using the headphones over long periods of time as this can harm your ears.





Rear Panel

39. AERIAL (ANTENNA) terminal
    Connect the coaxial cable from the TV aerial here. re.

40. AUDIO 1 and 2 OUT jacks (Disc monitor)
    Use these to monitor the audio output of CDs, CDVs and LDs.

41. VIDEO 1 AND 2 OUT jacks

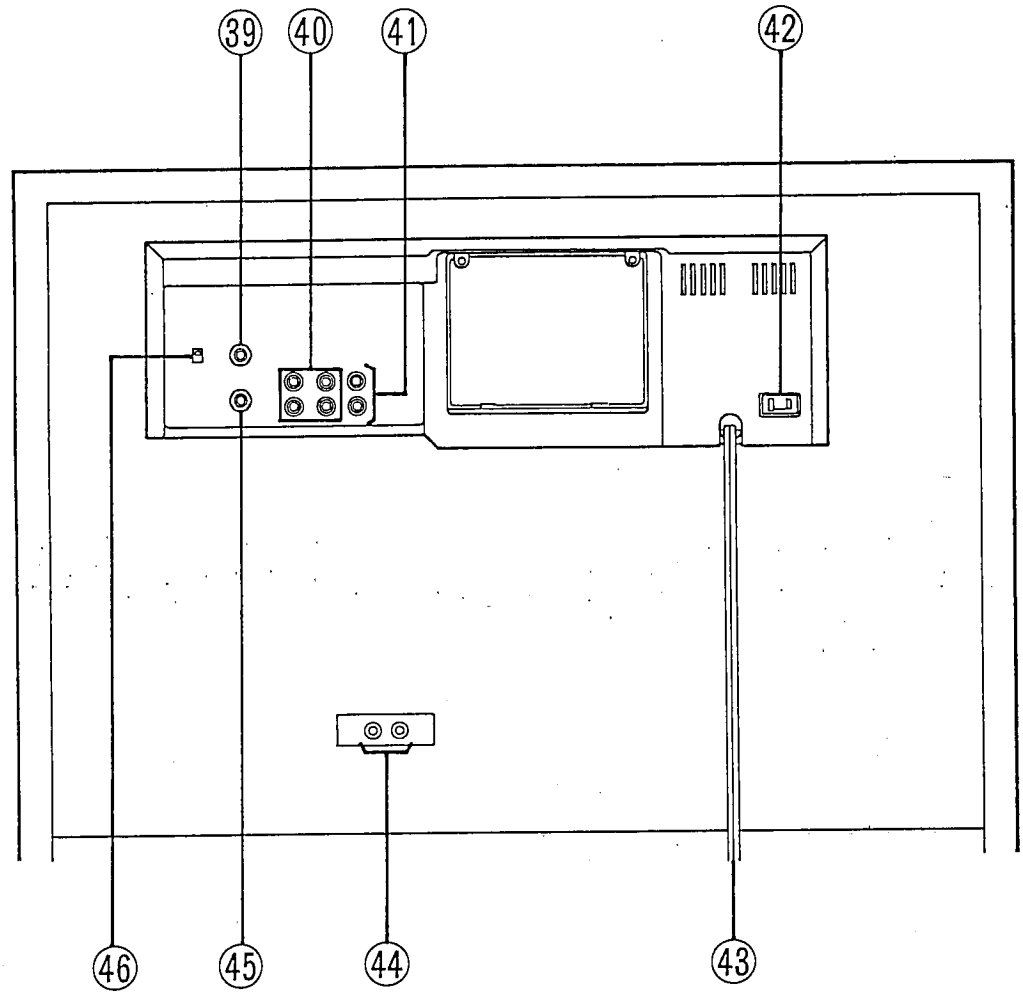
42. POWER OUTLET (NON-SWITCHED)
    Power is supplied from this outlet regardless of whether the power switch on the front panel is on or off.
    The maximum output is 300W.

43. AC Power cord

44. AUDIO OUT jacks
    For example, if they are connected to the AUX terminals on an amplifier, you can adjust the playback volume (karaoke) on the amplifier.

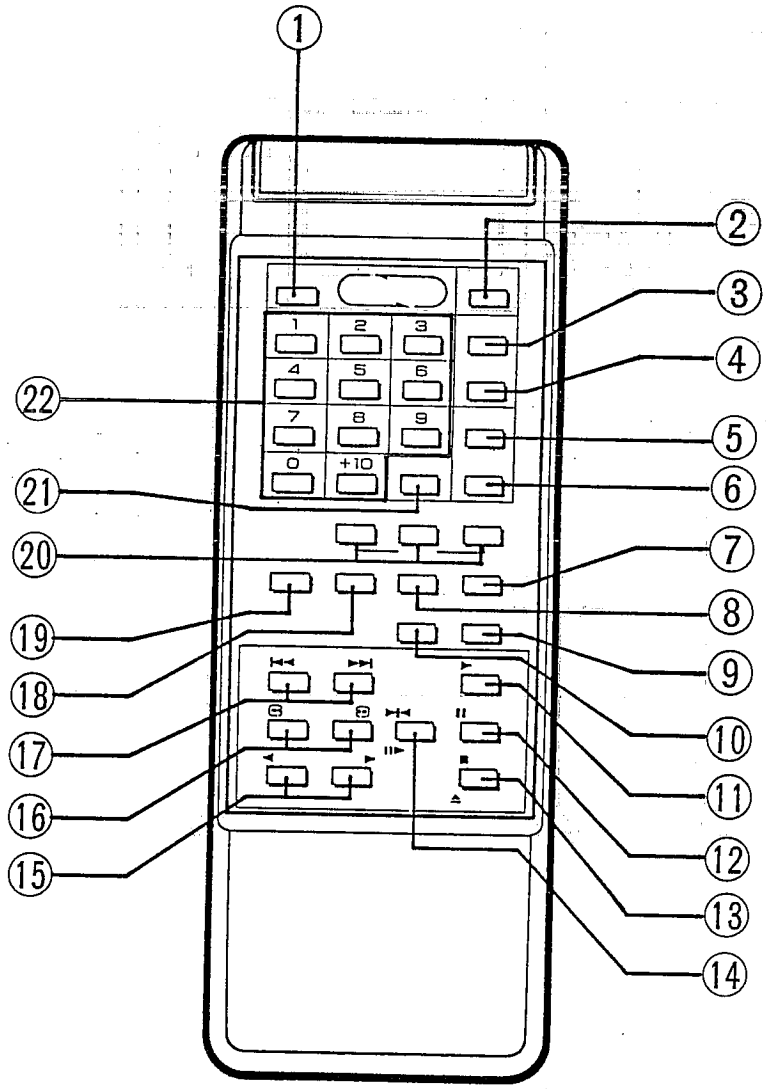
45. VHF OUT terminal
    Connect the aerial input terminal.

46. CHANNEL SELECTOR



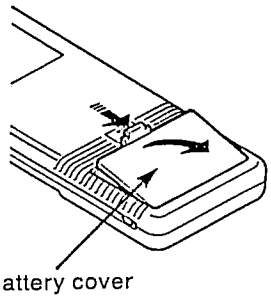
Remote Control Unit

1. JET TURN (SIDE) button
2. TV/DISC button
3. DIG/ANA (Didital/Analog) button
4. AUDIO OUT button
5. PROG (Programme) button
6. MEMORY button
7. EDIT button
8. PART button
9. INTRO button
10. RANDOM button
11. PLAY button
12. PAUSE button
13. STOP/EJECT button
14. STILL/STEP button
15. FAST buttons
16. SCAN buttons
17. SKIP buttons
18. FRAME/TIME button
19. DISPLAY button
20. REPEAT buttons
    (Use these for repeat playback.)
21. CLEAR button
22. Direct search buttons
    Ten buttons, 1 through 0, function as direct search buttons.
    The +10 button is used to input numbers in units of 10. For example, to input number 25, press the +10 button twice then direct search button 5.



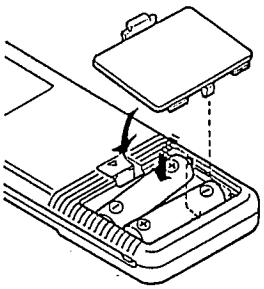
Inserting the Batteries

1. Remove the battery cover.
- Press the latch down and lift the battery cover up.



2. Insert the included batteries and set the battery cover back in place.

- Make sure the batteries are in the proper "+" and "−" directions.

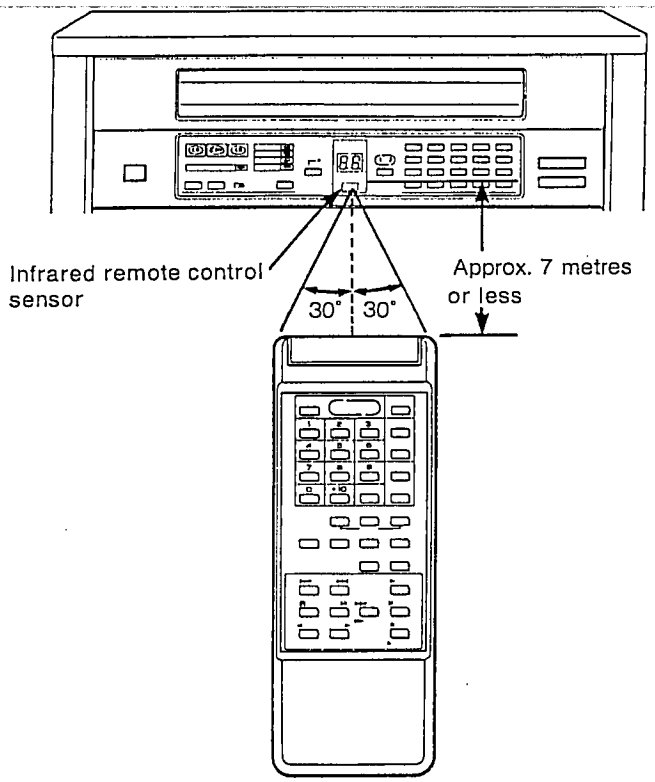


Notes on Batteries

- The batteries should last approximately one year, though this depends on usage conditions. (Replace both batteries with new ones.)
- Remove the batteries when you do not plan to use the remote control unit for a long period of time.

Operation

Point the remote control unit at the remote control sensor.

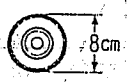
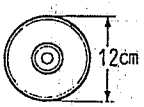
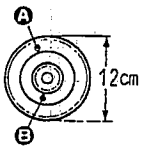
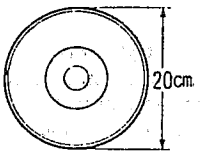
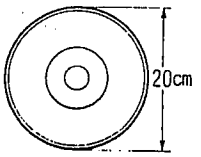
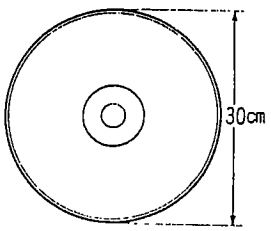


Remote Control Unit Operating Distance

The distance from which the remote control unit will function decreases if there are obstacles between it and the infrared remote control sensor. This distance will also decrease if the batteries become weak.

DISCS

The LV-K77 is a CD/CDV/LD-compatible disc player using the CD Video System. The six different types of discs shown below can be played on this system. The type of disc is indicated on the disc's jacket or label.
All of these discs can be played on this system without using an adapter.

Disc	Size	Max. playing time	Recorded content	Marks
CD	CD single 	20 minutes (one side only)	Digital audio (audio only)	
		74 minutes (one side only)		
CDV		25 minutes (one side only)	Video + digital audio (5 minutes) Digital audio (20 minutes)	
LD	LD single 	CAV: 14 minutes (one side only) CLV: 20 minutes (one side only)	Video + digital/analog audio	
		CAV: 28 minutes CLV: 40 minutes		
		CAV: 60 minutes CLV: 120 minutes		

Laser Discs (LDs)

Standard (CAV) discs ··· Constant speed
These discs are played at a constant speed of 1800 revolutions per minute. 30-minute discs have a playing time on one side of 30 minutes, and include a maximum of 54,000 frames. There is one frame per disc revolution, and each frame has a number, from 1 to 54,000.
The chapter search, direct search, and programmed playback functions can be used with discs on which chapter numbers are recorded.
CAV: Constant Angular Velocity

Long-play (CLV) discs ··· Constant linear speed
With these discs, the speed varies from 1800 rpms at the innermost section to 600 rpms at the outermost section. On 30cm discs, the playing time on one side is 60 minutes, and the elapsed time from the beginning is recorded on the discs. The chapter search, direct search, and programmed playback functions can be used with discs on which chapter numbers are recorded.
CLV: Constant Linear Velocity

Chapter numbers
These correspond to the chapters of a book, and are numbers indicating sections of the program on the disc. Read the disc's jacket, etc., to see if the disc contains chapter numbers. These chapter numbers can be used to easily find the section of the disc you want to see.

Frame numbers
These are the numbers of each frame on the disc, and are recorded on standard (CAV) discs. These frame numbers can be used to easily find frames you want to see.

Time numbers
These indicate the elapsed playing time from the beginning of the disc, and are recorded on long-play (CLV) discs. Use these time numbers to easily find the section of the disc you want to see by the time (minutes and seconds).

Discs including digital audio signals
On these discs, digital audio signals are included in addition to the analog audio signals. On this system, the digital sound indicator lights and the digital audo signalsare played when playing these discs.
Digital audio signals are recorded with a higher volume than analog audio signals. Remember that the volume changes when switching between analog and digital audio playback.
Use the analog audio signals when playing a disc using an open channel on the TV.

Discs with the CX mark
These discs include codes for automatically turning the CX system on and off. The CX system will only function for analog audio signals.
(CX is a CBS trademark.)

Discs with picture stop signals
Some hobby and educational discs, games, and quiz discs include picture stop signals. When these signals are reached during playback, the disc automatically stops and a still frame is shown.

Karaoke laservision discs

When multi audio discs including digital audio signals are played on this system, it is possible to listen to either the digital or analog sound. Read the notes included with the disc.

Example of audio recording on multi audio discs including digital audio signals

	1/L	2/R
Digital audio	Karaoke (left)	Karaoke (right)
Analog audio	Karaoke	Karaoke + vocals

Compact Discs with Video Signals (CDVs)

These discs include 5 minutes of video signals with digital audio signals along the outside (video part), 20 minutes of digital audio signals on the inside (audio part). Normal playback begins with the video part, followed by the audio part. Track numbers are recorded for both the audio and video parts.

Switching parts
Simply press the PART button on the remote control unit during playback of either of the parts to switch to the other part.

Track numbers
These numbers indicate different sections of the program on the disc. These track numbers can be used to easily find the section of the disc you want to hear.

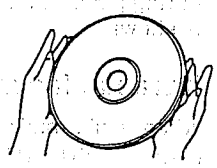
TOC
In addition to the audio signals, all CDs and CDVs include TOC information at the beginning of the disc. This includes information on the number of tracks and playing times. LDs including TOCs are indicated by the CD VIDEO mark.
TOC: Table Of Contents

Handling Discs

Always keep discs clean to ensure good quality pictures and sound. Dirt, scratches, warping, etc., will result in lower picture and sound quality. Protect discs as follows:

Holding Discs

Avoid touching the surface of the disc.

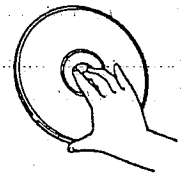


When holding with both hands:

- Hold the disc along the edges.

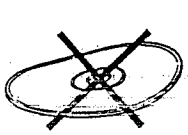
When holding with one hand:

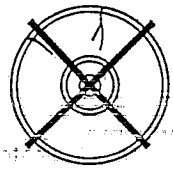
- Hold the disc with one finger in the hole in the middle and another along the edge.



Do not used cracked or warped discs.

- The disc rotates at high speed inside the player during playback.Do not used warped discs, discs on which cracks have been repaired with glue, or discs on which broken parts have been taped or glued back on, as this could result in damage.
- Do not stick paper or stickers on the either the signal surface or labelled surface of the disc, or write on the labelled side with ball-point pens, hard pencils, etc.

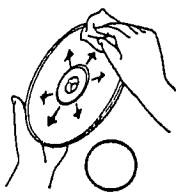


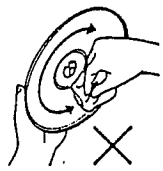


Cleaning

Wipe dirt off from the inner side towards the outer side.

- Use a soft, dry cloth to wipe dirt, dust, or fingerprints off the disc. For tough dirt, apply some neutral detergent diluted with water to the cloth, wring out thoroughly, wipe off the dirt, then wipe off any moisture with a dry cloth.
- Do not wipe around the disc.
- Do not use regular record cleaner, anti-static agents, or benzene, thinner or other solvents.





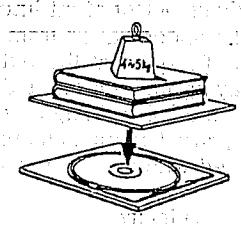
Storage

After playing discs, always remove them from the player, set them in their jackets, and store them vertically in a cool, dry place.

Discs may warp even in their jackets if they are stored at a slant or placed one on top of another. In addition, to not set discs in places exposed to directly sunlight.

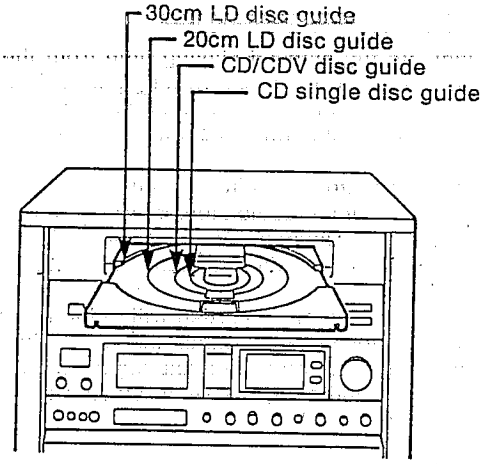
If a disc gets warped:

Put the disc in its inner pouch, set it between sheets of glass or other boards, put a weight of 4 to 5kg on top and leave for one day or so. This sometimes reduces the warping.



Disc Tray

- Load the discs securely into the proper guide.
- Only one disc can be loaded at a time. (Never set a 30cm disc on top of a 20cm disc.)
- Do not place heavy objects on the disc tray or press down strongly on it, as this could result in damage.
- Always keep the disc tray closed except when loading and ejecting discs.

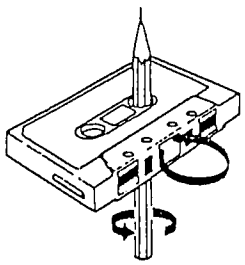


CASSETTE TAPES

Cautions

The cassette deck included with this system is for normal tapes. The sound may be changed or distorted if chrome or metal tapes are used. Also, avoid using the types of tapes described below, as this can result in damage. Use normal tapes to avoid problems.

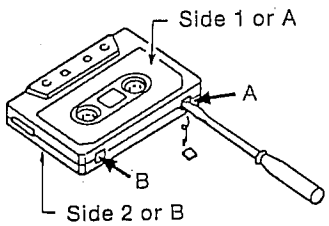
- C120 tapes are extremely convenient as they have a long playing time, but the tape itself is very thin and tends to stretch. If the tape is played, stopped, fast-forwarded or rewound repeatedly, the tape may get stuck inside the mechanism. Avoid using C120 tapes whenever possible.
- If the tape is slack, take up the slack before inserting it, or the tape may get stuck in the mechanism and bedamaged.



Use a pencil, etc., to take up the slack in the tape.

Protecting Important Recordings from Accidental Erasure

- When a recorded tape is recorded again, the previous recording is erased. Break off the accidental erasure prevention tabs on the back of the tape to ensure that important recordings are not erased accidentally.
- To record on a tape whose accidental erasure prevention tabs have been broken off, stick cellophane tape over the holes. When doing so, stick the tape on carefully so that the ends will not peel off.



- Break off tab A to protect the recording on side 1 or A.
- Break off tab B to protect the recording on side 2 or B.

Multiplex Audio Tapes

These tapes are designed so that you can practice singing along with the voice of a professional singer. The vocals and musical accompaniment are recorded on separate channels, so the balance between them can be abjusted using the BALANCE (multiplex audio balance) control.

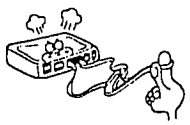
- In general, multiplex audio tapes are recorded as follows:

1	Accompaniment - Left channel	Side 1 or A
2	Singer's voice - Right channel	
3	Singer's voice - Right channel	Side 2 or B
4	Accompaniment - Left channel	

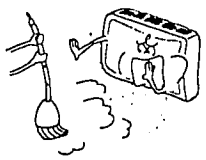
Storing Tapes (avoid the following)

Hot, humid places

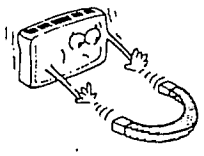
Do not touch the tape with your fingers



Dusty places



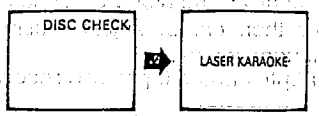
Near magnetic forces



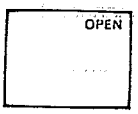
LOADING AND EJECTING DISCS

Loading Discs

1. Press the POWER switch.

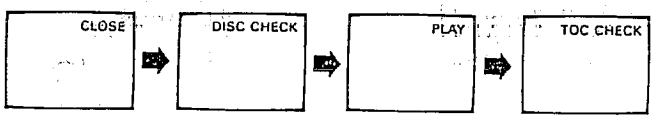


2. Press the OPEN/CLOSE button.

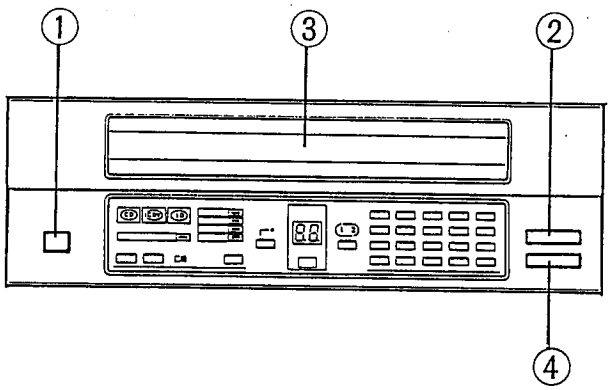


3. Set the disc in the guides.

4. Press the PLAY button.

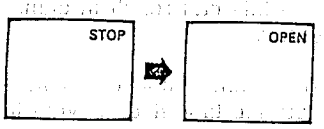


- When the single stop mode is set, "PAUSE" is displayed and the pause mode is set. When the continuous playback mode is set, playback starts.



Ejecting Discs

1. Press the OPEN/CLOSE button.



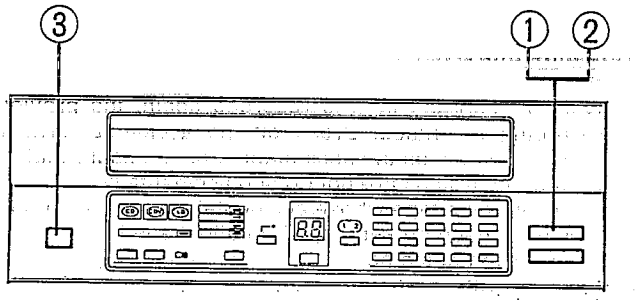
- The disc tray opens out.

2. Press the OPEN/CLOSE button.

- The disc tray is drawn in.

3. Press the POWER switch.

- The picture on the TV turns off and all the indicators turn off.



NOTES:

- If nothing happens when operating buttons are pressed, press the OPEN/CLOSE button and try reloading the disc.
- A popping sound may be heard if the main volume is high when the power is turned on and off, so keep the main volume turned down when turning the power on and off.
- Fingerprints or dirt on the surface of the disc will reduce sound and picture quality, so clean discs before loading them.

PLAYING KARAOKE DISCS (SINGLE STOP MODE)

Preparing the TV

(1) Turn on the TV's power.

(2) Check the type of TV.

For TVs without AV jacks:
(Connected to the AERIAL (ANTENNA) terminal)
- Set the TV to the video channel, channel 1 or channel 2.

For TVs with AV jacks:
(Connected to the VIDEO and AUDIO IN jacks)
- Set the TV's input to "video".

Playing Digital Audio Multiplex Discs in the Single Stop Mode

1. Press the POWER switch.
   When the KARAOKE MODE indicator is lit, the single stop mode is set, and when the indicator is off, the continuous playback mode is set.

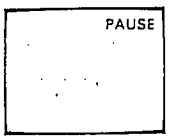
- The single stop mode is set automatically when the power is turned on.
- To set the continuous playback mode, press the KARAOKE MODE button.

2. Connect the microphone to the MIC jacks.
- Connect two microphones for duets.
- Make sure that the MIC LEVEL controls are set to the minimum before connecting the microphones.

3. Press the OPEN/CLOSE button

4. Load the disc.

5. Press the PLAY button.



- After several seconds, the pause mode is set and "PAUSE" is displayed.

6. Press the direct search button for the desired song.
- Playback starts from the song whose button is pressed. (For example, when button 5 is pressed, playback starts from the 5th song on the disc.)
- When that song ends, the pause mode is set and "PAUSE" is displayed.

To select another song in the single stop mode:
Press the direct search button for the desired song.
To change the song currently playing:
Press the direct search button for the desired song.

7. Adjust the VOLUME control.

8. Adjust the BALANCE POWERFUL SOUND, and MUSIC LEVEL controls.

9. Adjust the MIC LEVEL and DIGITAL ECHO controls.

10. Readjust the VOLUME control.

Listening only to the music (digital):
- The digital audio mode is set automatically when digital audio discs are played.
- The DIGITAL indicator lights.

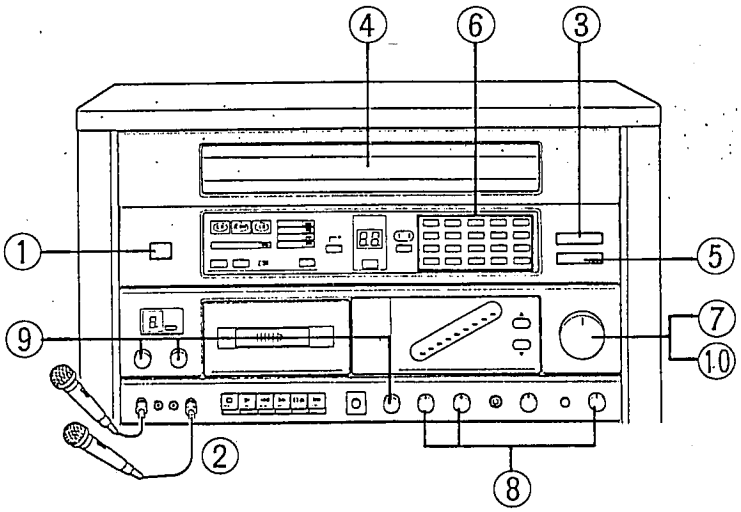
Listening to multiplex sound (analog):
- Select the analog mode to listen to the singer's voice as well.

(1) Set the BALANCE control to the VOCAL side.

(2) Press the DIGITAL/ANALOG button on either the main unit or the remote control unit to set the analog mode.

- The DIGITAL indicator turns off.

To sing a song on the other side:
For example, to sing the 7th song on the other side:
(1) Press JET TURN (SIDE) button.
(2) Press direct search button 7.



PLAYING KARAOKE TAPES

1. Press the POWER switch.
2. Press the STOP/EJECT button.
3. Insert the tape, then close the cassette compartment.
4. Press the TAPE button (the TAPE button lights).
   - The disc playback mode is set automatically (the DISC button lights) when the power is turned on.
5. Connect the microphone to the MIC jacks.
   - Connect two microphones for duets.
   - Make sure that the MIC LEVEL controls are set to the minimum before connecting the microphones.
6. Press the PLAY button.
7. Adjust the VOLUME control.
8. Adjust the BALANCE POWERFUL SOUND, and MUSIC LEVEL controls.
9. Adjust the MIC LEVEL and DIGITAL ECHO controls.
10. Readjust the VOLUME control.

NOTE:
- When listening to tapes recorded in stereo, the sound is monaural if a microphone is connected to one of the MIC jacks.

To stop playback

Press the STOP/EJECT button.

To stop playback temporarily

Press the PAUSE button. Press it again to resame playback.

To fast forward

(1) First press the STOP/EJECT button.

(2) Press the FF button.

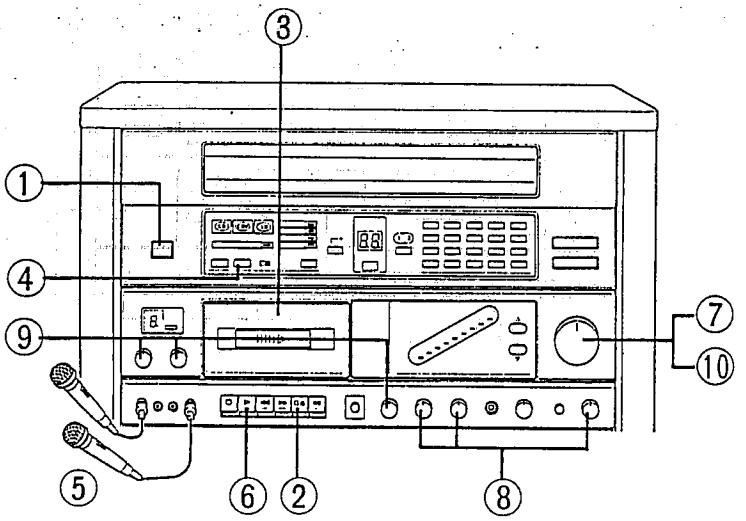
(3) When the tape reaches the end, press the STOP/EJECT button.

To fast rewind

(1) First press the STOP/EJECT button.

(2) Press the REW button.

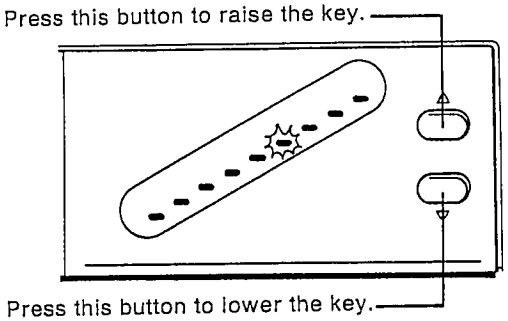
(3) When the tape reaches the end, press the STOP/EJECT button.



KARAOKE ADJUSTMENTS

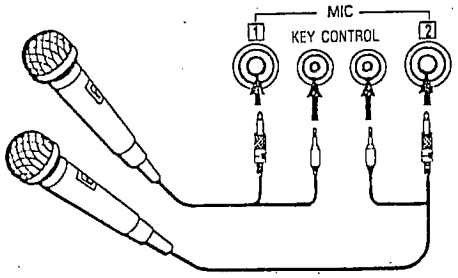
Adjusting the Key on the Main Unit

When the power is turned on, the indicator at the centre of the key control display is lit, indicating standard key.



Adjusting the Key on Microphones with Key Control Switches (sold separately)

- When using a microphone with a key control switch, connect the microphone to one of the KEY CONTROL jacks then operate the key control switch. For details, refer to the microphone's manual. (Separately sold microphone: KA-HM-F70)



NOTE:
The key returns to the standard key (with the indicator at the centre lit) after one song is ended in the single stop mode, and when the disc is ejected.

Listening to the Singer's Voice with Digital Stereo Sound

When listening to digital multiplex karaoke discs (LDs) in the digital audio mode, press the DIGITAL MULTIPLE AUDIO button to listen to the singer's voice with digital stereo sound.

The button lights.

NOTES:
The DIGITAL MULTIPLE AUDIO button will not function (the button will not light) in the following cases:

- When not playing a digital multiplex disc (LD) (for example, when playing a CD, CDV, cassette tape, etc.)
- When the sound is not stereo
- When the analog mode is set

Adjusting the Vocals

Adjusting the Singer's Voice

Gradually turn the BALANCE control from the VOCAL side to the KARAOKE side and stop at the desired position.

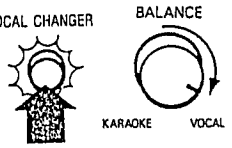
Listening Only to the Karaoke Music

Set the BALANCE control to the KARAOKE side. The vocals turn off and only the karaoke music can be heard.

Replacing the Singer's Voice with Your Voice

When you sing through a microphone, the singer's voice is automatically turned off and only your voice is heard. If you do not sing or stop singing in the middle of the song, the singer's voice automatically turns on.

The button lights

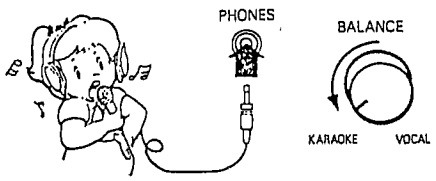


1. Set BALANCE control to the VOCAL side.
2. Press the VOCAL CHANGER button. (The button lights.)

NOTES:

- If the volume is turned up loud, the singer's voice may turn off even if you are not singing. This is caused by the sound from the speaker entering the microphone. If this happens, disconnect the microphone.
- The singer's voice may turn off if the sound entering the microphone is extremely soft or if the microphone is held too far from your mouth.

Turning Off the Singer's Voice and Listening to it Over Headphones



1. Connect headphones to the PHONES jack.
2. Set the BALANCE control to the KARAOKE side.

- Only the karaoke sound is heard from the speakers, but both the karaoke sound and the singer's voice can be heard over the headphones.
  Use this for karaoke lessons, and to sing along with the singer's voice with other people hearing only your voice.
- This function is not possible when the DIGITAL MULTIPLE AUDIO button is lit.

AUTO SEARCH ON CASSETTE TAPES

The auto search mechanism detects the blank, non-recorded sections between the selections on the tape to automatically stop at the beginning of a certain selection. Use this to skip to the desired selection on the tape, either from the beginning of the tape or from the middle.

Preparations
Insert the cassette tape.

- If the tape is not fully rewound, press the REW button to rewind it to the beginning.
- Check that the TAPE button is lit.

Searching for the 5th Selection from the Beginning of the Tape

- To skip to the beginning of the 5th selection on the tape, press the TAPE SELECTION button so that the display reads "4". This means that four selections will be skipped, stopping the tape at the beginning of the fifth selection.

1. Press the TAPE SELECTION button to display "4" one number under the tape at the beginning of the fifth selection.

- The display changes each time the button is pressed, so press it until "4" is displayed.

2. Press the PLAY and FF buttons.

- When the tape is forwarded to the beginning of the fifth selection, the display returns to "0" and playback begins.

NOTES:

- When the TAPE SELECTION button is pressed, the display switches fron 0 to 1 and up to 9, then returns to 1. Because of this, it is only possible to search for selections up to 9 selections away from the current selection.
- The search operation is not possible when "0" is displayed.
- Once the search operation is completed (in either direction), the FF or REW button pops back out.

Skipping Two Selections Forward from a Blank Section or from the Middle of a Selection (counting the current selection as the first selection)

1. Press the TAPE SELECTION button to display "2".

- Press the button the number of times necessary to display "2".

2. Press the PLAY and FF buttons.

- When the tape is forwarded to the beginning of the selection two selections ahead, the display returns to "0" and playback begins.

Skipping Backward Three Selections from a Blank Section or from the Middle of a Selection

1. Press the TAPE SELECTION button to display "3".

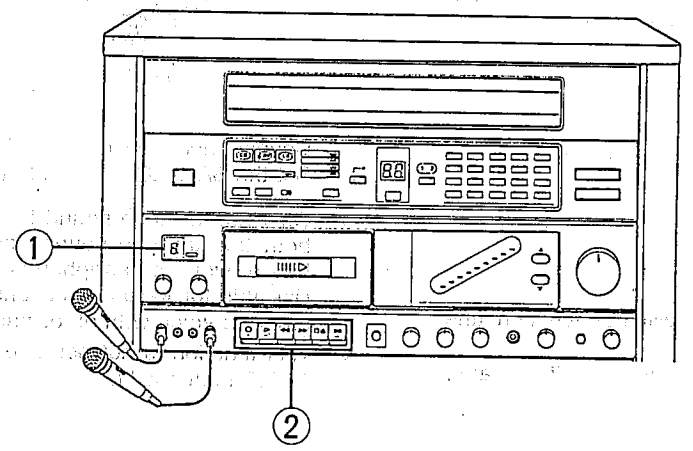
- Press the button the number of times necessary to display "3".

2. Press the PLAY and REW buttons.

- When the tape is rewound to the beginning of the selection three selections before the current position, the display returns to "0" and playback begins.

Notes on Auto Search
The auto search function works by detecting the blank sections on tapes (at least 4 seconds long), so it may not work properly in the following cases:

- When using tapes on which the sound is intermittent, such as tapes of meetings, dialogues, etc.
- When using tapes on which the blank sections are short (under 4 seconds.)
- When using tapes on which there are very soft sections in the middle of selections.
- When using tapes on which there is much noise between selections (the section between selections must be non-recorded).
- When using tapes which are recordings of records on which there is much noise between selections.
- When using this system near TV sets, etc., the signals from the TV may prevent the auto search function from working properly. If this happens, move the system away from the TV.



PLAYING LASER DISCS (CONTINUOUS PLAYBACK)

Preparing the TV

(1) Turn on the TV's power.

(2) Check the type of TV.

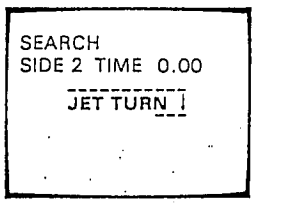
For TVs without AV jacks:
(Connected to the aerial terminal)

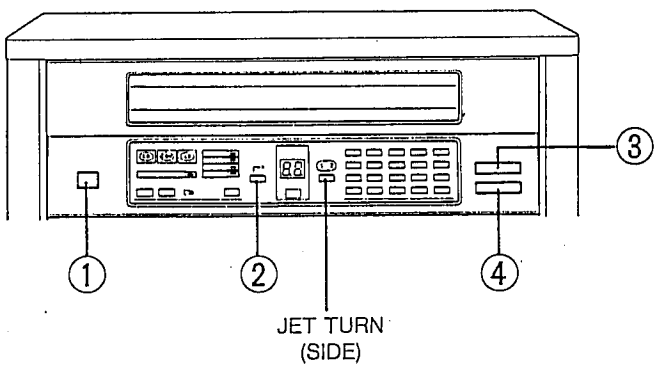
- Set the TV to the video channel, channel 1 or channel 2.

For TVs with AV jacks:
(Connected to the VIDEO and AUDIO IN jacks)

- Set the TV's input to "video".

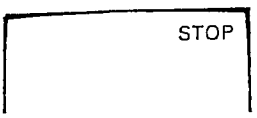
1. Press the POWER switch.
2. Press the KARAOKE MODE button.
   - The KARAOKE MODE indicator turns off and the playback mode is set.
3. Press the OPEN/CLOSE button.
   - The disc tray opens out. Set the disc in the guide with the labelled side facing up.
   - With discs on which signals are recorded on both sides, the disc can be played continuously without turning it over.
4. Press the PLAY button.
   - Once playback on that side is finished, the jet turn operation is performed and playback starts on the other side.





Stopping Playback (on the remote control unit)

- Press the STOP/EJECT button. The screen turns blue, "STOP" flashes then stops flashing, remaining lit.
- To see the disc again, press the PLAY button again to start playback over from the beginning of the disc.

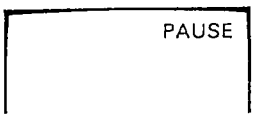


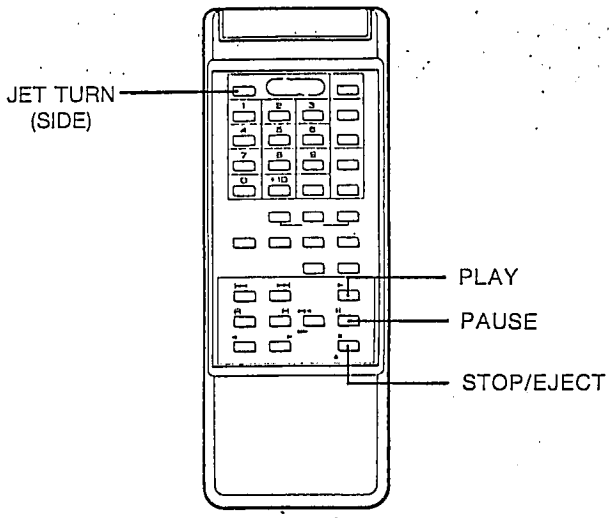
Stopping Playback and Ejecting the Disc (on the remote control unit)

Press the STOP/EJECT button twice.
The screen turns blue and "STOP" flashes on it. "STOP" then stops flashing, "OPEN" appears, and the disc tray opens out.

Pausing Playback (on the remote control unit)

Press the PAUSE button.
The screen turns blue and "PAUSE" appears.
To cancel the pause mode, press the PLAY button or the PAUSE button again.





Switching Sides During Playback
Press the JET TURN (SIDE) button on either the main unit or the remote control unit.

- During playback, it is possible to switch from the currently playing side to the beginning of the other side simply by pressing the JET TURN (SIDE) button.
- If the JET TURN (SIDE) button is pressed again during the jet turn operation (before playback on the opposite side begins), playback returns to the side which was originally playing.

RECORDING YOUR VOICE ALONG WITH THE KARAOKE MUSIC

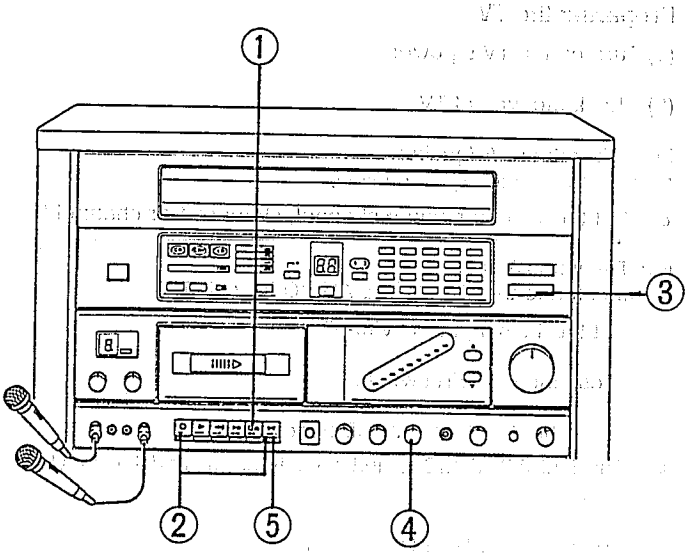
- Use a normal tape for recording.
- Check that the DISC button is lit.

1. Press the STOP/EJECT button and insert the tape on which you want to record.
2. Press the PAUSE then the REC button.
   - When the REC button is pressed, the PLAY button is also pressed in.
3. Press the PLAY button to start playback.
4. Adjust the MUSIC LEVEL control (recording level). Set the control to the "REC" position.
5. Press the PAUSE button again.
   - Recording starts.
     When the end of the tape is reached, the auto stop mechanism is activated and the recording and play buttons automatically pop out.

Erasing the recorded sound

1. Insert the tape you want to erase into the cassette deck.
2. Disconnect the microphones from the MIC jacks and set the MUSIC LEVEL control, MIC 1 and 2 LEVEL controls, and DIGITAL ECHO control to the minimum.
3. Press the REC button.

Recording the sound of a digital multiplex disc (LD) onto a cassette tape
The sound is monaural when the analog sound (karaoke music and vocals) is recorded onto a cassette deck. Also, the VOCAL CHANGER button and BALANCE control will not operate with cassette tapes.



NOTES:

- Recordings made on your cassette deck are for your own personal enjoyment and under copyright laws may not be used without the consent of the copyright holder.
- The recording differs according to the position of the various controls, so we recommend making a trial recording before the actual recording.
- Before recording, forward the tape a little to be sure to start after the leader tape.

SPECIAL PLAYBACK AND AUDIO FUNCTIONS

Scan forward, scan reverse, fast forward, fast reverse, and still and frame-by-frame playback are possible using the operations below.

Finding the Desired Section Very Quickly

Press and hold in the SCAN forward button (▶▶) to move forward, the SCAN reverse button (◀◀) to move backward.

- The picture will be disturbed for long-play (CLV) discs.
- No sound is produced for LDs and the video part of CDVs.
- Only a little sound is produced for CDs and the audio part of CDVs.
- Release the button to return to normal playback.

Finding the Desired Section More or Less Quickly

LDs (no sound is produced)
Press the FAST forward (◀) or FAST reverse (▶) button.

- For long-play (CLV) discs, the picture jumps.
- Press the PLAY button to return to normal playback.

Watching Still Frames and Playing Frame-by-Frame

LD Standard Discs (CAVs) (no sound is produced)

1. Press the STILL/STEP button once. "STILL" appears on the screen and a still frame is shown.

2. Press the STILL/STEP button again to move ahead frame-by-frame.
3. Press the PLAY button to resume normal playback.

NOTE:
The "SCAN FWD", "SCAN REV" and "STILL" indicators on the screen turn off after about two seconds. When normal playback is resumed, "PLAY FWD" is displayed, and this also turns off after about two seconds.

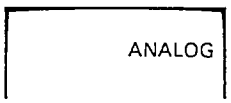
Listening to the Analog Sound of Discs Including Digital Audio Signals (Multi Audio Discs)

For discs including digital audio signals, the digital audio mode is set automatically when the disc is played.

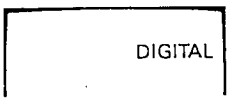
Press the DIG/ANA button.

- The mode switches between digital and analog each time the button is pressed.
- The sound from both the left and right speakers is analog or digital, according to the set mode.

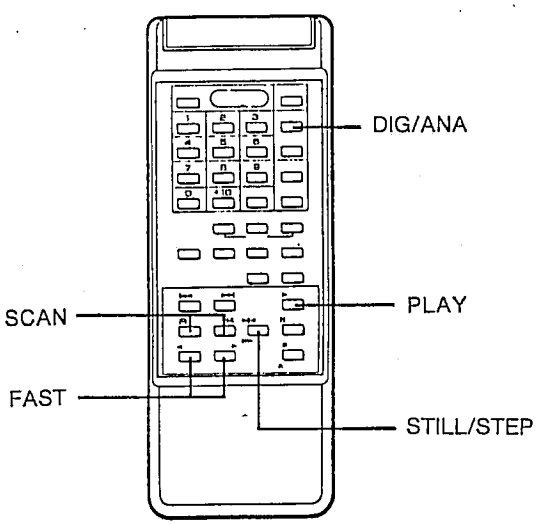
When the DIG/ANA button on the remote control unit is pressed, the DIGITAL/ANALOG button on the main unit turns off, and "ANALOG" is displayed on the screen.



When the DIG/ANA button on the remote control unit is pressed again, the DIGITAL/ANALOG button on the main unit turns on, and "DIGITAL" is displayed on the screen.



- Once the analog mode is set, it remains set until the power is turned off.

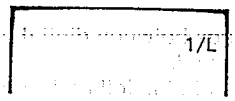


Listening to Only One Channel (Left or Right) on a Stereo Disc Selecting the Audio 1 or Audio 2 Part on an Audio Multiplex Disc

When the power is turned on, both the 1/L and 2/R indicators on the main unit turn on.

Press the AUDIO OUT button.

- When the AUDIO OUT button on the remote control unit is pressed once, the 1/L indicator on the main unit lights, and "1/L" appears on the screen.

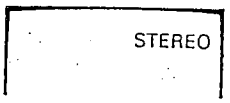


The left channel is heard from both the left and right speakers for stereo discs, and the audio 1 part is heard from both the left and right speakers for audio multiplex discs.

- When the AUDIO OUT button on the remote control unit is pressed again, the 2/R indicator on the main unit lights, and "2/R" appears on the screen.

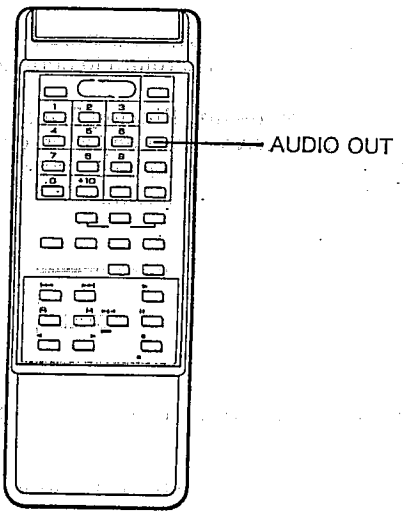
The right channel is heard from both the left and right speakers for stereo discs, and the audio 2 part is heard from both the left and right speakers for audio multiplex discs.

- When the AUDIO OUT button on the remote control unit is pressed still again, both the 1/L and 2/R indicators on the main unit light, and "STEREO" is displayed on the screen.



The left channel is heard from the left speaker, the right channel from the right speaker for stereo discs, and the audio 1 part is heard from the left speker, the audio 2 part from the right speaker for audio multiplex discs.

NOTE:
The "1/L", "2/R", "STEREO", "DIGITAL" and "ANALOG" indicators on the screen turn off after approximately 2 seconds.

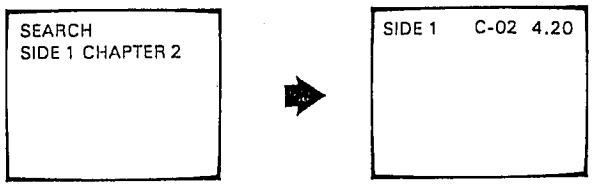


CHAPTER SEARCH

- Use the SKIP buttons to move to the beginning of other chapters.
- In the following example, chapter 2 is currently being played.

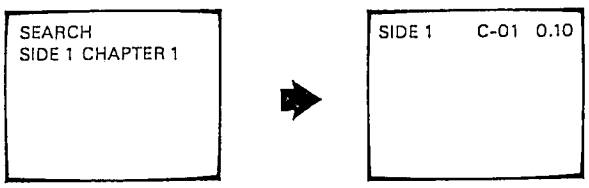
Returning to the Beginning of the Currently Playing Chapter

Example:
Returning to the beginning of chapter 2
Press the I◀◀ SKIP button once.



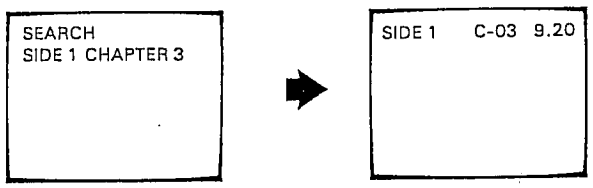
Moving Back to the Beginning of the Previous Chapter

Example:
Moving from chapter 2 to the beginning of chapter 1.
Press the I◀◀ SKIP button twice.



Moving Ahead to the Beginning of the Following Chapter

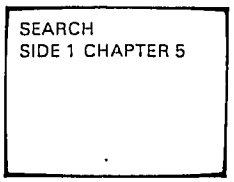
Example:
Moving from chapter 2 to the beginning of chapter 3.
Press the ▶▶I SKIP button once.



Direct Chapter Search

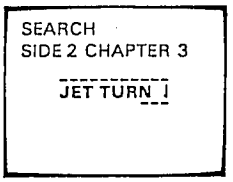
The desired chapter can also be found by specifying the chapter number.

Example: Search on one side only
To move to chapter 5, press the direct search button 5.



Searching for a Chapter on the Other Side

Example: Searching for chapter 3 on the other side

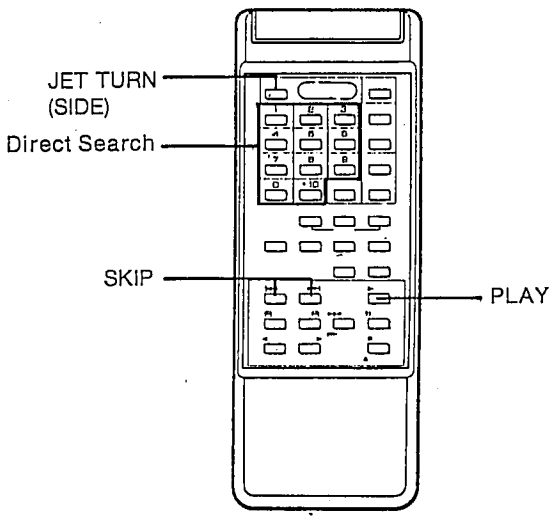


1. Press the JET TURN (SIDE) button.
2. Press the direct search button 3.

- If no number button is pressed within 10 seconds after pressing the JET TURN button, playback starts from the beginning of the opposite side.
  If this happens, press the desired number button once playback on the opposite side begins.

Operation on LDs with TOCs (CD VIDEO)
- "0" flashes if a number not recorded on the disc is input.
  If this happens, input another number.

Operation on LDs without TOCs
- If a number not recorded on the disc is input, "NO ADDRESS" appears on the screen after several seconds. Check the number on the disc's jacket and input the correct number.



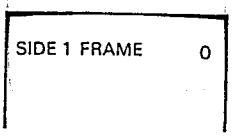
FRAME/TIME SEARCH

Frame Search

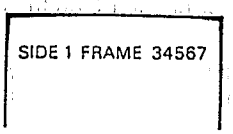
The desired frame can be found by specifying the frame number.
[The frame search function is only possible on standard (CAV) discs. Check the disc's jacket.]

Example:
- Searching on One Side Only
- Calling out frame number 34567

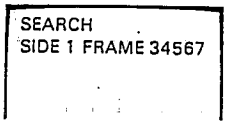
1. Press the FRAME/TIME button.



2. Press the direct search buttons 3, 4, 5, 6 and 7.



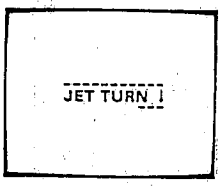
3. Press the PLAY button.



NOTE:
There are some discs on which one side is in the standard disc (CAV) format, while the other side is in the long-play disc (CLV) format. If the frame search operation is specified for the other side (CLV) when playing the CAV side, playback will start from the beginning of the CLV side.

To Search (Frame and Time Search) on the Opposite Side

- Press the JET TURN (SIDE) button before pressing the FRAME/TIME button in step 1 above. "JET TURN" appears on the screen. Now follow steps 1, 2 and 3.
- Do steps 1, 2 and 3 within 10 seconds after pressing the JET TURN (SIDE) button. If you do not finish within 10 seconds, playback will start from the beginning of the opposite side. If this happens, repeat steps 1, 2 and 3.

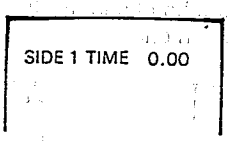


Time Search

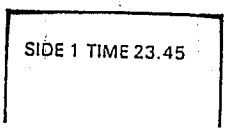
The desired spot can be found by specifying the time number.
[The time search function is only possible on long-play (CLV) discs. Check the disc's jacket.]

Example:
- Searching on One Side Only
- Calling out time number 23 minutes, 45 seconds.

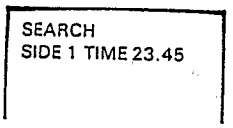
1. Press the FRAME/TIME button.



2. Press the direct search buttons 2, 3, 4 and 5.



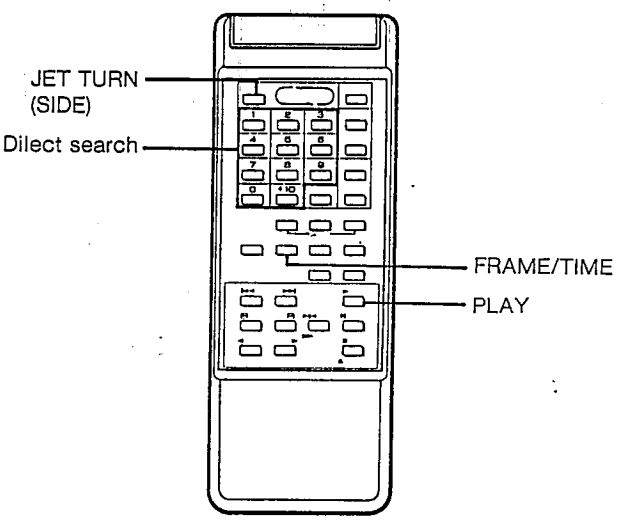
3. Press the PLAY button.



NOTE:
There are some discs on which one side is in the long-play disc (CLV) format, while the other side is in the standard disc (CAV) format. If the time search operation is specified for the other side (CAV) when playing the CLV side, playback will start from the beginning of the CAV side.

Operation on LDs with TOCs (CD VIDEO)
"0" flashes if a number not recorded on the disc is input. If this happens, input another number.

Operation on LDs without TOCs
- If a number not recorded on the disc is input, "NO ADDRESS" appears on the screen after several seconds. Check the number on the disc's jacket and input the correct number.
- If a number of over 60 minutes or 60 seconds is input, the display will read "0.00". Input another number.



REPEAT PLAY

Single-Side Repeat

Press the SINGLE/DOUBLE/RANDOM button once.

- The single-side repeat indicator, "REPEAT-S", appears on the screen.
  Once the end of that side is reached, the screen turns blue and "REPEAT" is displayed.
  After several seconds, playback starts over again from the beginning of that side and continues to the end of that side.

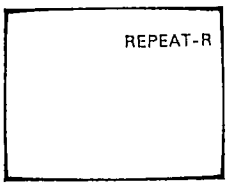
Double-Side Repeat

Press the SINGLE/DOUBLE/RANDOM button twice.

- The double-side repeat indicator, "REPEAT-D", appears on the screen.
  Once both sides have been played, the screen turns blue,"REPEAT" is displayed, and the disc jet-turns to the front side.
  After several seconds, playback starts over again from the beginning of that side and continues through the end of the other side.

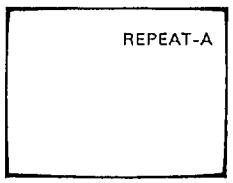
Random Repeat

Press the SINGLE/DOUBLE/RANDOM button after pressing the RANDOM button on the remote control unit and setting the random play mode "REPEAT-R" is displayed and the disc is played in random order.

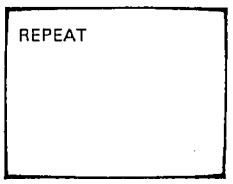


A-B Repeat

1. Press the A-B button at the beginning of the section you want to repeat.

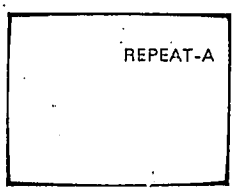


2. Press the A-B button again at the end of the section you want to repeat.
- The screen turns blue, "REPEAT" is displayed, and after several seconds the specified section is played repeatedly.



Memory Repeat

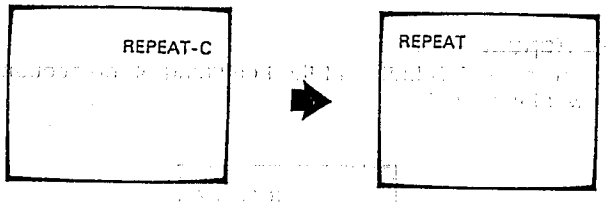
1. During playback, press the A-B button at the position you want to return to.
- That spot is stored in the memory and "REPEAT-A"appears.



2. To return to the stored position, press the PLAY button.
- The screen turns blue, "SEARCH" and the number of the specified position appear on the display, and after several seconds playback starts from that position.
- Playback returns to the stored position each time the PLAY button is pressed.

Chapter Repeat

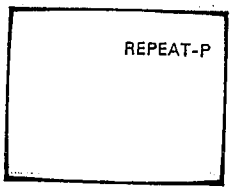
Press the CHAP/PROG button.



- The chapter repeat indicator, "REPEAT-C", appears on the screen.
  When the end of the chapter is reached, the screen turns blue, "REPEAT" is displayed, and after several seconds playback starts over the beginning of that chapter and continues through the end of that chapter.
- This function only works with discs on which chapters are recorded. Refer to the disc's jacket.

Programme Repeat

Press the CHAP/PROG button once the programme has been set.



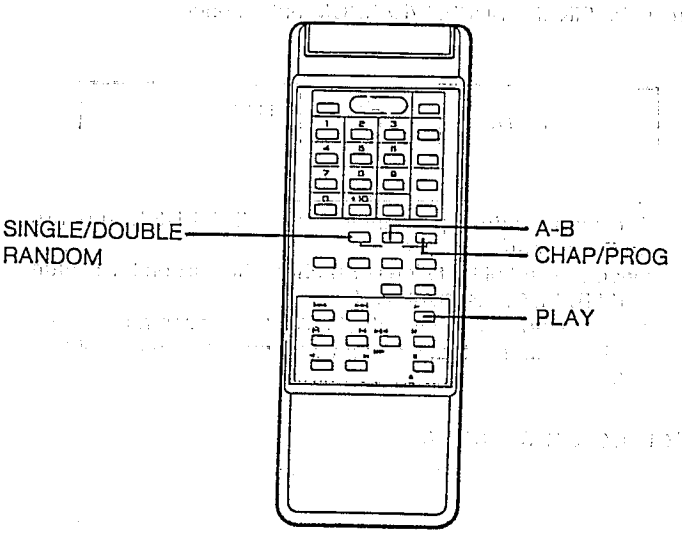
- The programme must first be set before using the programme repeat function.
- The programme repeat indicator, "REPEAT-R", appers on the screen.
  The method of playback differs for the single stop and continuous play modes.

In the Single Stop Mode:

Each time the end of a chapter is reached, the disc moves to the beginning of the next programmed chapter, "PAUSE" appears, and the pause mode is set.
Press the PLAY button to begin playback. The programmed chapters are playback repeatedly.

In the Continuous Play Mode:

- The programmed chapters are playback repeatedly.
- If the CHAP/PROG button is pressed while you are setting the programme, the "REPEAT-P" indicator does not appear but the programme repeat mode is set.



NOTES:

- Once the repeat mode is set, repeated playback continues until the repeat mode is cancelled.
- The REPEAT indicator flashes during memory repeat playback, and remains lit during other repeat modes.
- The "REPEAT-S/-D/-R/-A/-C or -P" indicator on the screen turns off after approximately 2 seconds.
- The repeat function is cancelld and the corresponding mode is set if stop, eject or programme operations are performed during the repeat mode.

Cancelling the Repeat Mode:

Press the CLEAR button.

PROGRAMMED PLAYBACK

Chapter Programming

With discs on which chapter numbers are recorded, up to 20 chapters can be programmed to play in any order.
Programmed playback can be set to either the continuous play or the single stop mode.

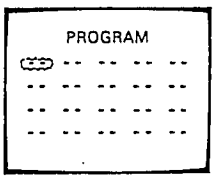
Selecting the Continuous Play or Single Stop Mode

- To set the continuous play mode:
  Press the button on the main unit to turn off the KARAOKE MODE indicator.
- To set the single stop mode:
  Press the KARAOKE MODE selector button to turn the KARAOKE MODE indicator on.

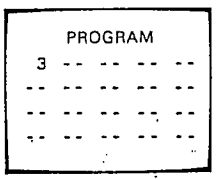
Example:

- Programming Chapters on the front side (side 1) in the Single Stop Mode
- Programming chapters 3 and 12 on the front side (side 1) of the disc

1. Press the PROG button.

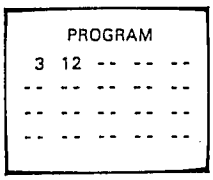


2. Press the direct search button 3, then press the MEMORY button.

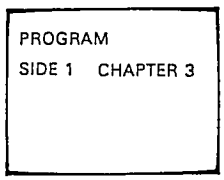


- If a number on the back side of the disc (side 2) is set, that number and "*" are displayed. ("*" indicates side 2.)

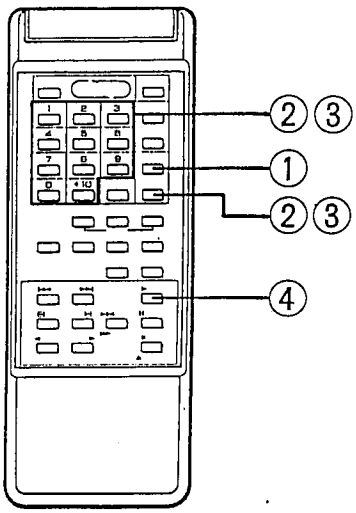
3. Press the direct search button 12, then press the MEMORY button.



4. Press the PLAY button.



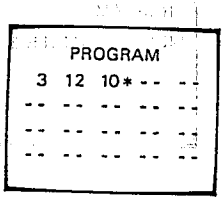
- When playback ends, "PAUSE" appears and the pause mode is set. Press the PLAY button to sing the next song.
- When the end of the last programmed chapter is reached, "PAUSE" appers and programme is cleared.



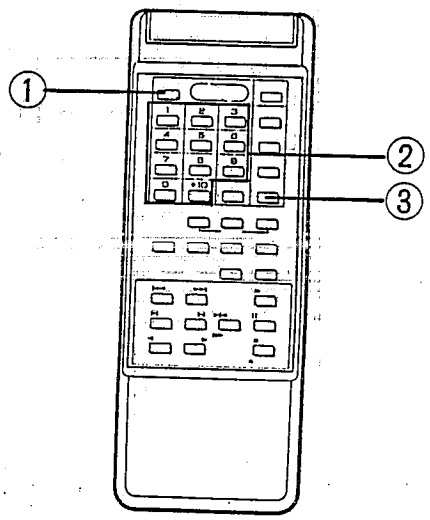
Programming Chapters on the Back Side (or Both Sides)

Chapters on the back side of the disc can also be programmed by performing the operations below before step 4.

Example
Programming chapter 10 on the back side:



1. Press the JET TURN (SIDE) button. "*" flashes at the third position.
2. Press the direct search bottons 1 and 0. "10*" flashes.
3. Press the MEMORY button. "10*" stops flasing, remaining lit, and the 10th chapter on the back side is set in the programme.



Checking the content of the programme:
Press the PROG button. The content of the programme is displayed on the screen, and the number for the chapter currently playing flashes. Press the PROG button again to turn off the programme display.

NOTES:
- The entire programme is cleared if the CLEAR button is pressed while programming.
- The programme is cleared if the repeat, stop, or eject operations are performed while programming.

Operation on LDs with TOCs (CD VIDEO)
"0" flashes if a number not recorded on the disc is input.
If this happens, input another number.

Operation on LDs without TOCs
- If a number not recorded on the disc is set in the programme and playback is started, "NO ADDRESS" appers on the screen after several seconds, after which the programmed chapters are searched for and played.
- If there is no corresponding chapter on the disc, "NO ADDRESS" is first displayed, followed by one of the indicators below. Set the programme over again or press a number button etc.

  For the single stop mode: "END"
  For the continuous play mode: "STOP"

PLAYING CDs AND CDVs

Preparing the TV

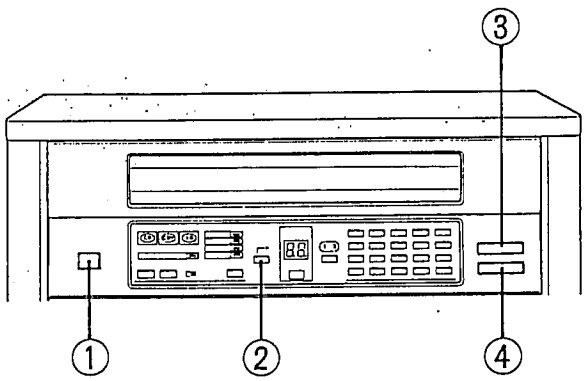
(1) Turn on the TV's power.

(2) Check the type of TV.

For TVs without AV jacks:
(Connected to the AERIAL (ANTENNA) terminal)
- Set the TV to the video channel, channel 1 or channel 2.

For TVs with AV jacks:
(Connected to the VIDEO and AUDIO IN jacks)
- Set the TV's input to "video".

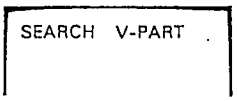
1. Press the POWER switch.
2. Press the KARAOKE MODE button.
- The KARAOKE MODE indicator turns off and the continuous playback mode is set.
3. Press the OPEN/CLOSE button.
- The disc tray opens out. Set the disc in the guide with the labelled side facing up.
4. Press the PLAY button.
- The screen turns blue, "SEARCH V-PART" appears, and playback of the video part begins after several seconds.
- Once the video part ends, the screen turns blue, "SEARCH A-PART" appears, and playback of the audio part begins after several seconds.



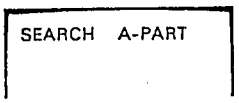
Switching Between Parts (Audio and Video)

- Normally, playback begins with the video part, followed by the audio part, but it is possible to switch between these by pressing the PART button.
- To start playback from the audio part, load the disc on the disc tray then press the PART button.

When playing the video part



When playing the audio part



Stopping Playback (on the remote control unit)

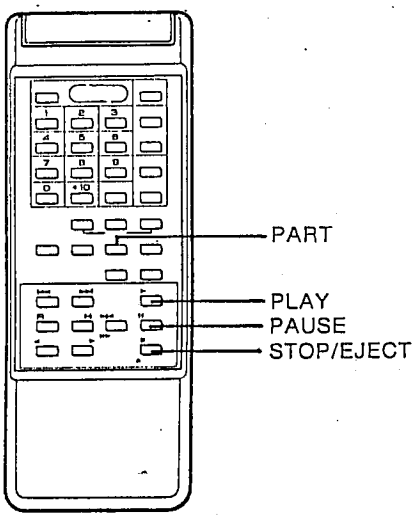
- Press the STOP/EJECT button.
- To see the disc again, press the PLAY button again to start playback over from the beginning of the disc.

Stopping Playback and Ejecting the Disc (on the remote control unit)

Press the STOP/EJECT button twice.

Pausing Playback (on the remote control unit)

Press the PAUSE button.
To cancel the pause mode, press the PLAY button or the PAUSE button again.



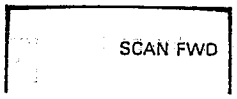
TRACK SEARCH

Scanning

- Operate from the remote control unit.

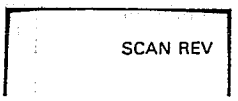
To scan forward:

Press and hold in the SCAN ▶▶ button.



To scan backward:

Press and hold in the SCAN ◀◀ button.



- For the video part of CDVs, "SCAN FWD" or "SCAN REV" appears on the screen.
- The volume is low during the scan forward and reverse operations.

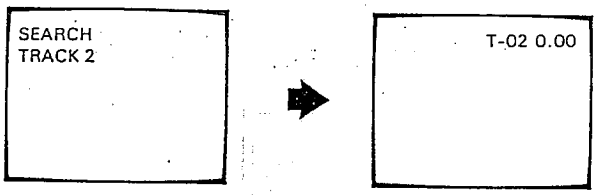
Track Search

- Use the SKIP buttons to move to the beginning of other tracks.
- In the following example, track 2 is currently being played.

Returning to the Beginning of the Currently Playing Track

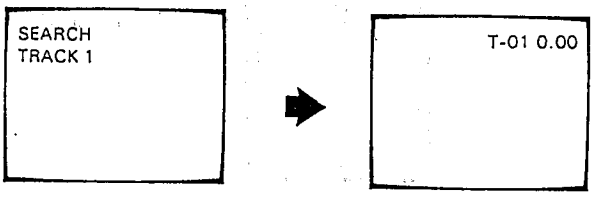
Example:
Returning to the beginning of track 2

Press the I◀◀ SKIP button once.



Moving Back to the Beginning of the Previous Track

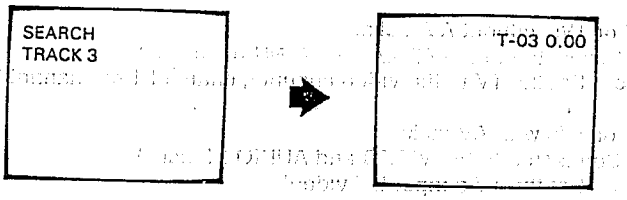
Example:
Moving from track 2 to the beginning of track 1
Press the I◀◀ SKIP button once.



- When playing the video part of the CDV, the search operation moves to the audio part if the button is held in.

Moving Ahead to the Beginning of the Following Track

Example:
Moving from track 2 to the beginning of track 3
Press the ▶▶I SKIP button once.



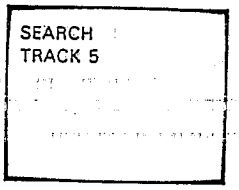
- When playing the audio part of the CDV, the search operation moves to the video part if the button is held in.

Direct Track Search

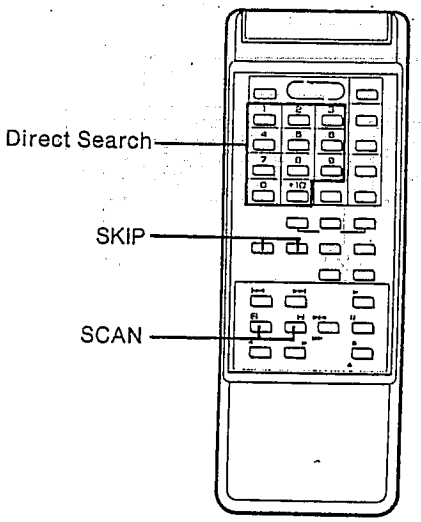
The desired track can also be found by specifying the track number.

For example to move to track 5:

Press the direct search button 5.



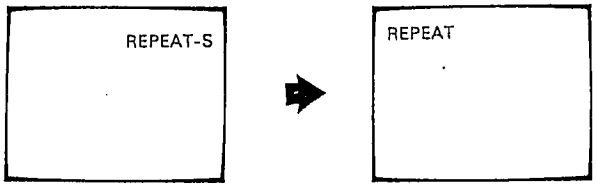
NOTE:
"0" flashes if a track number not recorded on the disc is specified. Check the numbers on the jacket, etc., and input another number.

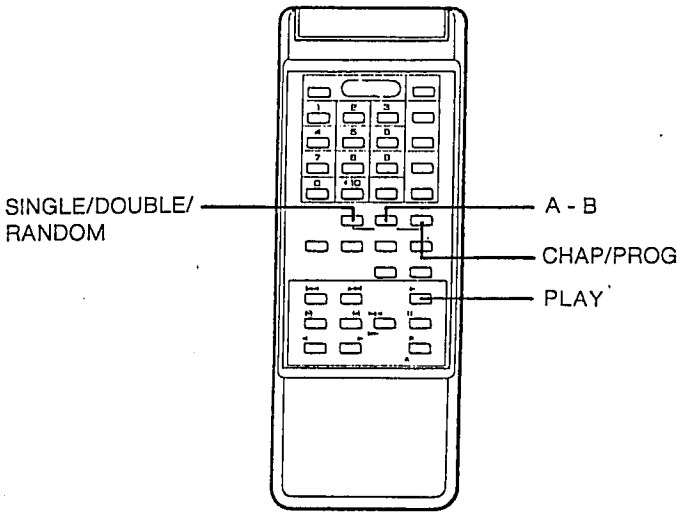


REPEAT PLAY

Single-Side Repeat

Press the SINGLE/DOUBLE/RANDOM button once.

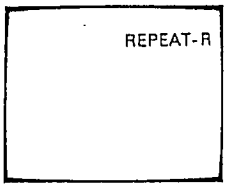




- The single-side repeat indicator, "REPEAT-S", appears on the screen. Once the end is reached, the screen turns blue and "REPEAT" is displayed.
  After several seconds, playback starts over again from the beginning of that side and continues to the end of that side.

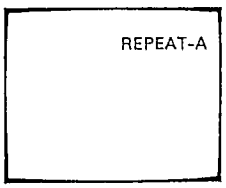
Random Repeat

Press the SINGLE/DOUBLE/RANDOM button after pressing the RANDOM button on the remote control unit and setting the random play mode.
"REPEAT-R" is displayed and the disc is played in random order.

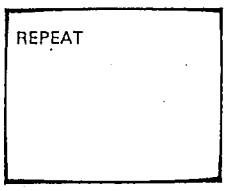


A-B Repeat

1. Press the A-B button at the beginning of the section you want to repeat.



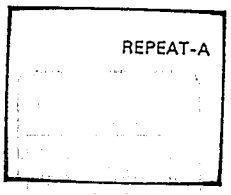
2. Press the A-B button again at the end of the section you want to repeat.
   The screen turns blue, "REPEAT" is displayed, and after several seconds the specified section is played repeatedly.



Memory Repeat

1. During playback, press the A-B button at the position you want to return to.

- That spot is stored in the memory and "REPEAT-A" appears.

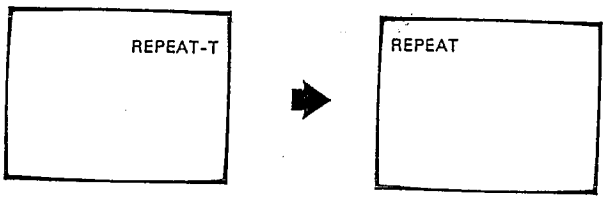


2. To return to the stored position, press the PLAY button.

- "SEARCH" and the number of the specified position appear on the display, and after several seconds playback starts from that position.
- Playback returns to the stored position each time the PLAY button is pressed.

Track Repeat

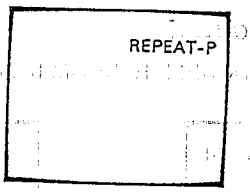
Press the CHAP/PROG button.



- The track repeat indicator, "REPEAT-T", appears on the screen.
  When the end of the track is reached, the screen turns blue, "REPEAT" is displayed, and after several seconds playback starts over the beginning of that track and continues through the end of that track.

Programme Repeat

Press the CHAP/PROG button once the programme has been set.



- The programme must first be set before using the programme repeat function.
- The programme repeat indicator, "REPEAT-P", appears on the screen.
  The method of playback differs for the single stop and continuous play modes.

In the Single Stop Mode:

Each time the end of a track is reached, the disc moves to the beginning of the next programmed track, "PAUSE" appears, and the pause mode is set. Press the PLAY button to begin playback. The programmed tracks are playback repeatedly,

In the Continuous Play Mode

- The programmed tracks are playback repeatedly.
- If the CHAP/PROG button is pressed while you are setting the programme, the "REPEAT-P" indicator does not apper but the programme repeat mode is set.

NOTES:

- Once the repeat mode is set, repeated playback continues until the repeat mode is cancelled.
- The REPEAT indicator flashes during memory repeat playback, and remains lit during other repeat modes.
- The "REPEAT-S/-R/-A/-T or -P" indicator on the screen turns off after approximately 2 seconds.
- The repeat function is cancelled and the corresponding mode is set if the
  (stop, eject, programme, or editing operations are performed during the repeat mode)

Cancelling the Repeat Mode

Press the CLEAR button.

PROGRAMMED PLAYBACK

Track Programming

Up to 20 tracks can be programmed to play in any order. Programmed playback can be set to either the continuous play or the single stop mode.

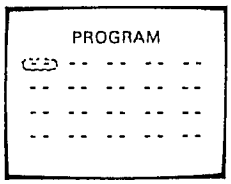
Selecting the Continuous Play or Single Stop Mode

- To set the continuous pla mode:
  Press the KARAOKE MODE button on the main unit to turn off the KARAOKE MODE indicator.
- To set the single stop mode:
  Press the KARAOKE MODE selector button to turn the KARAOKE MODE indicator on .

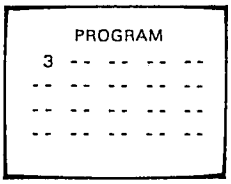
Programming in the Single Stop Mode

Example:
Programming tracks 3 and 12 to play in that order

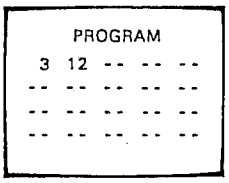
1. Press the PROG button.



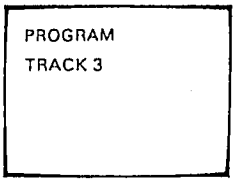
2. Press the direct search button 3, then press the MEMORY button.



3. Press the direct search button 12, then press the MEMORY button.



4. Press the PLAY button.



NOTES:

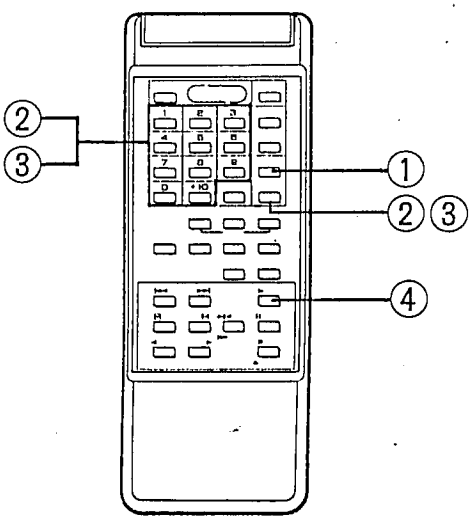
- When playback ends, "PAUSE" appears and the pause mode is set. Press the PLAY button to sing the next song. Also, when the end of the last programmed track is reached, "PAUSE" appears and the programme is cleared.
- The PROGRAM indicator on the main unit is lit during programming.

The following operations are possible during programmed playback and the single stop mode:

- Checking the content of the programme: Press the PROG button. The content of the programme is displayed on the screen, and the number for the track currently playing flashes. Press the PROG button again to turn off the programme display.
- Searching for the beginning of programmed tracks: Use the SKIP buttons to move to the beginning of other programmed tracks, in either direction.
- Selecting a non-programmed track in the single stop mode: Press the desired number (direct search) button.
  (The programme is cleared if this operation is performed.)

NOTES:

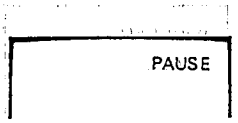
- The entire programme is cleared if the CLEAR button is pressed while programming.
- The programme is cleared if the repeat, stop, or eject operations are performed while programming.
- "0" appears if a track number not recorded on the disc is specified. Input another number.



Changing the programme During Programmed Playback

The procedure for changing and adding to the programme is the same for LDs, CDs and CDVs.

1. Press the PAUSE button.



2. Changing or adding to programmes

To change chapter/track 12 to 9:

a) Press the I◄◄ SKIP button.

b) Press the direct search button 9, then press the MEMORY button.

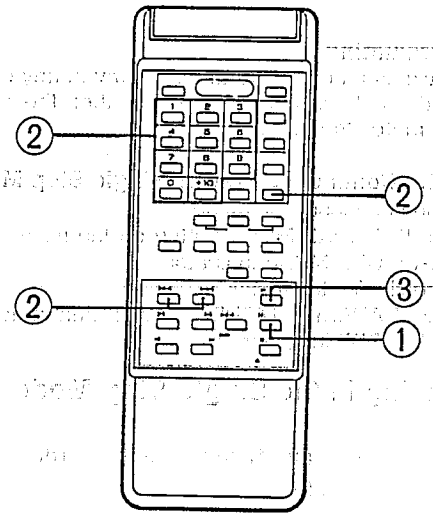
To add chapter/track 6:

a) Press the ►►I SKIP button.

b) Press the direct search buttton 6, then press the MEMORY button.

3. Return to programmed playback.

Press the PLAY button.



Function of SKIP Buttons

- When ►►I is pressed once, the next empty space (—) and "*" flash. When pressed again, the number of the currently playing chapter/track flashes.
- When I◄◄ is pressed once, the number of the last programmed chapter/track and "*" flash. When pressed again, the number of the previous chapter/track flashes.
- When only a number is flashing (when "*" is not flashing), that number is the chapter/track which is currently playing. It is not possible to change the chapter/track which is currently playing.

NOTES:

- It is not possible to change the chapter/track which is currently playing.
- The stop mode is set and the programme is cleared once all programmed chapters/tracks have been played.

EDITING OPERATION FOR EDITED RECORDING ON TAPES

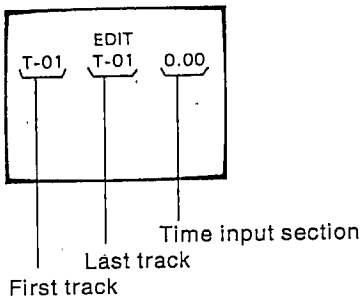
This is a convenient function for recording the tracks of compact discs onto cassette tapes. Simply specify the length of one side of the tape, and the times of the tracks on the CD are automatically calculated to fit on the tape.

Example 1:
Edited Recording in Order from Track 1

- Recording a CD including 12 tracks with a playing time of 42 minutes, 50 seconds onto a C46 cassette tape (23 minutes recordable on one side) in order from track 1

- Input the recordable time on one side of the cassette tape.
  For example:
  23 for C-46 cassette tapes
  30 for C-60 cassette tapes
  45 for C-90 cassette tapes

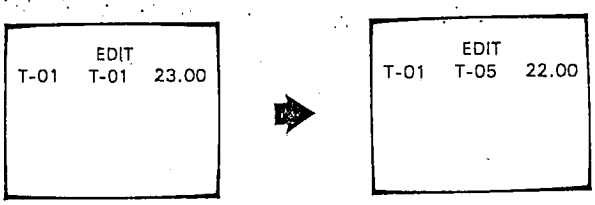
1. Press the EDIT button.



- The pause mode is set when the EDIT button is pressed during playback.

2. Input the recordable time on one side of the cassette tape.

   Press the direct search buttons 2 and 3, in that order.

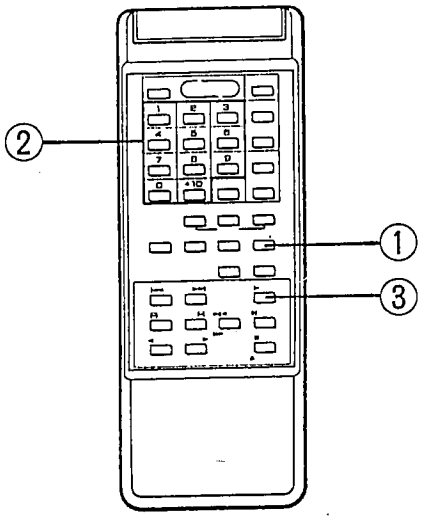


- The display shows that five tracks (from 1 to 5, with a total time of 22 minutes) can be recorded onto 23 minutes of tape.

3. Start edited recording.

   Press the PLAY button.

- "STOP" appears when edited recording is ended. Press the PLAY button to return to normal playback.
- To conduct another editing operation directly after one editing operation is completed, repeat steps ① and ② before pressing the PLAY button.
- The pause mode is set and "PAUSE" is displayed once the first specified editing operation is completed. Press the PLAY button to start the next editing operation.

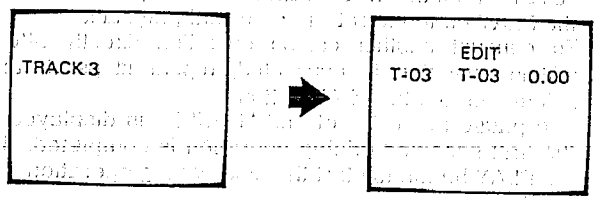


NOTE:
When inputting the time with the direct search buttons, press the buttons with 2 seconds of each other. "0" is set if more then 2 seconds pass since a button waspressed.

Example 2:
Edited Recording Starting from a Certain Track

- Recording a CD including 12 tracks with a playing time of 40 minutes, 30 seconds onto a C46 cassette tape (23 minutes recordable on one side), starting from track 3

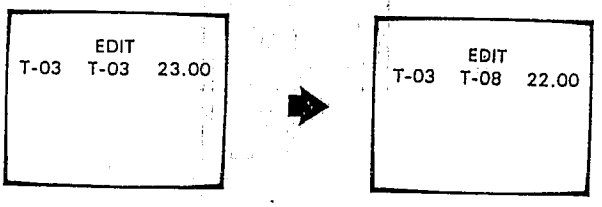
1. Press the direct search button 3, then immediately press the EDIT button.



- Press the EDIT button within 2 seconds after pressing the direct search button. If not, the search operation will be performed for that track.

2. Input the recordable time on one side of the cassettetape.

   Press the direct search buttons 2 and 3, in that order.

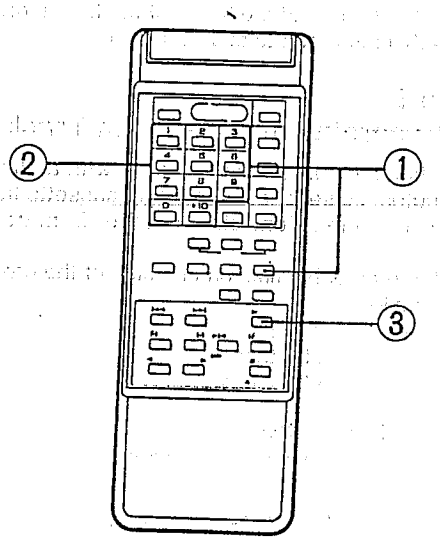


- The display shows that six tracks (from 3 to 8, with a total time of 22 minutes) can be recorded onto 23 minutes of tape.

3. Start edited recording.

   Press the PLAY button.

- "STOP" appears when edited recording is ended. Press the PLAY button to return to normal playback.
- To conduct another editing operation recording directly after one editing operation is completed, repeat steps ① and ② before pressing the PLAY button.
- The pause mode is set and "PAUSE" is displayed once the first specified editing operation is completed. Press the PLAY button to start the next editing operation.



Checking the Editing Setting

- Press the EDIT button.
  The editing screen appears and the editing operation currently being performed flashes. Press the EDIT button again to return to the previous display.

Cancelling the Editing Operation

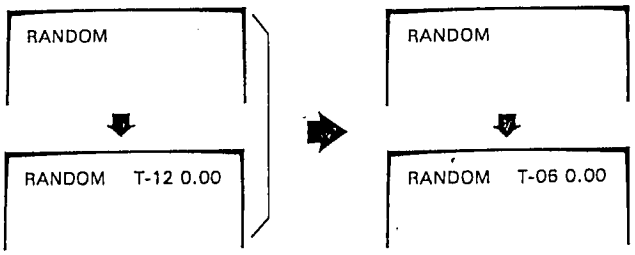
- Press the CLEAR button. The editing operation is cancelled.

RANDOM PLAYBACK AND INTRO SCAN

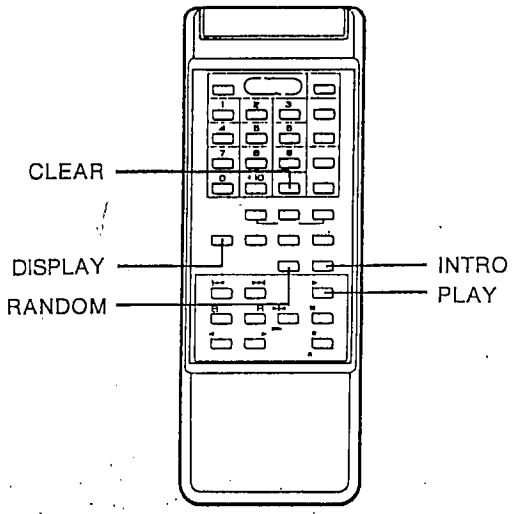
CDs/CDVs/LDs (including TOCs and chapter numbers)

Playing in Random Order (Random Playback)

Press the DISPLAY button, then press the RANDOM button.



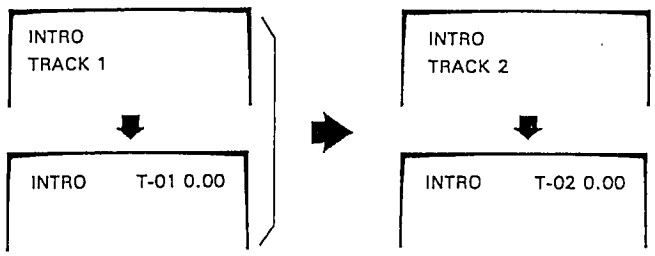
(This is an example of the display for a CD.)



Continuous Playback of the Beginnings of the Tracks/Chapters (Intro Scan)

Press the DISPLAY button, then press the INTRO button.

- The first 7 seconds of each chapter is played.



(This is an example of the display for a CD.)

To resume regular playback at a certain track during intro scan:
Press the PLAY button. This cancels intro scan.

Random Playback and Intro Scan on Two-sided LDs
When the random playback mode is set, the first side is played once in random order, then the second side is played in random order. When the intro scan mode is set, the beginnings of the chapters on the first side are played through, then the beginnings of the chapters on the second side are played.

On-screen Display
The chapter numbers, etc., are displayed on the screen during random playback and intro scan so they can be checked. If you do not want to see them, press the DISPLAY button to turn the on-screen display off.

CLEAR button

Press this to cancel the random playback or intro scan modes and return to normal playback.

RANDOM playback button

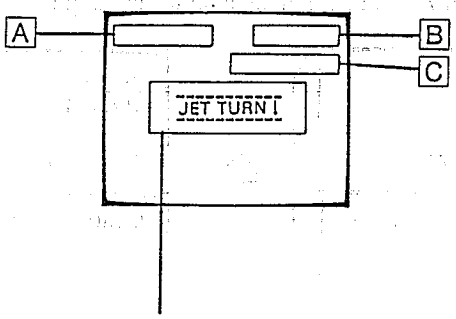
Press the to play each chapter on the disc once in random order. The stop mode is set once each track/chapter has been played.

INTRO SCAN button

Press this to play the first 7 seconds og each track/chapter. The stop mode is set once the beginning of each track/chapter on the disc has been played.

ON-SCREEN DISPLAY

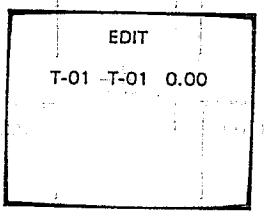
Before playback starts, during standby, etc., the screen turns blue and various displays appear. It is also possible to display the operations currently being performed over the picture on the screen. The following are displayed on the screen:



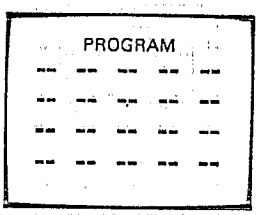
JET TURN display (LDs only)
This appears when the JET TURN (SIDE) button is pressed to switch from the front side to the back side and vice versa.

Turn Signal (— on the JET TURN display)
The turn signal is displayed in order near the end of both sides and playback begins on the opposite side. The position in which the turn signal is displayed depends on what part of the disc is currently being played. Use it as a rough indicator of when playback on the other side is to be played.

EDIT display (CDs only)
This appears when the EDIT button is pressed and the tape's recording time is input, and indicates the track swhich can be recorded. Two editing operations can be input (for sides A and B on a tape).



PROGRAM display
This appears when the PROGRAM button is pressed. Up to 20 chapters/tracks can be programmed. "--" indicates positions at which chapters/tracks can be programmed.



A

Operation	On-screen Display
When the INTRO button is pressed.	INTRO
When the RANDOM button is pressed:	RANDOM

B

When the POWER switch is pressed, a disc is loaded, and playback is started:	LASER KARAOKE (at center of screen) DISC CHECK, TOC CHECK, CLOSE, OPEN, PLAY, STOP
During standby in the single stop mode and when the PAUSE button is pressed:	PAUSE
When the end of the disc is reached with the scan operation, etc.:	END
When a number not recorded on the disc is input:	NO ADDRESS

C

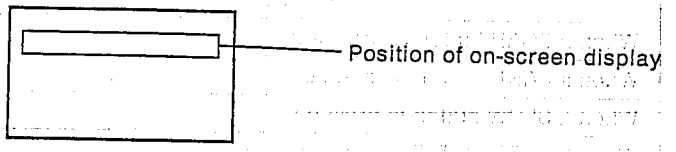
Operation	On-screen Display
When a SCAN button is pressed:	SCAN FWD, REV
When a FAST button is pressed:	FAST FWD, REV
When a SLOW button is pressed:	SLOW FWD, REV
When the STILL/STEP button is pressed:	STILL
When the AUDIO OUT button is pressed:	1/L → 2/R → STEREO
When the DIGITAL/ANALOG button is pressed:	ANALOG ⟷ DIGITAL
(Repeat) • When the SINGLE/DOUBLE/RANDOM button is pressed:	REPEAT-S (single side) REPEAT-D (both sides) REPEAT-R (random)
• When the A-B button is pressed:	REPEAT-A
• When the CHAP/PROG button is pressed:	REPEAT-C (chapter) REPEAT-T (track) REPEAT-P (programme)

NOTES:
The on-screen display is different during the programme, repeat, and search modes, etc. Refer to displayed for the various operations.

Calling Out the On-screen Display

Press the DISPLAY button to display the frame or time numbers on the screen during playback.

- The display changes as follows each time the DISPLAY button is pressed: Call out the numbers recorded on the disc.



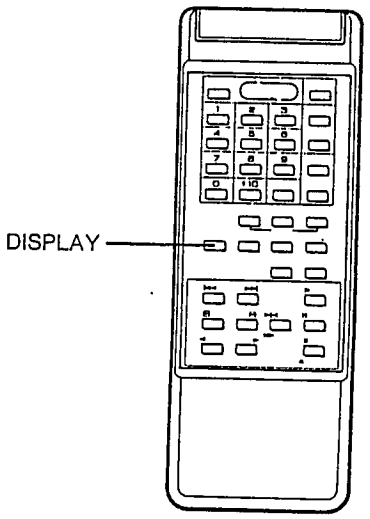
On-screen Display for CDs and CDVs

CDs or audio part of CDVs	Video part of CDVs
The track and time are displayed. T-01 0.00	The track and time are displayed. T-05 0.00
↓	↓
The remaining playing time is displayed. REMAIN 51.29	The total track time is displayed. TOTAL T-12 51.29
↓	↓
The total track time is displayed. TOTAL T-12 51.29	The on-screen display turns off.
↓	↓
The on-screen display turns off.	The track and time are displayed.
↓	
The track and time are displayed.	

On-screen Display for LDs

Standard (CAV) LDs	Long-play (CLV) LDs
The side, chapter, and frame number are displayed. SIDE 1 C-01 12345	The side, chapter, and time number are displayed. SIDE 1 C-01 2.24
↓	↓
The total time is displayed. TOTAL C-12 43.00	The total time is displayed. TOTAL C-12 45.15
↓ with TOCs (CD VIDEO).	↓
The on-screen display turns off.	
↓	↓
The side, chapter, and frame/time number are displayed.	

- SIDE 1 and 2 displays
  These indicate the sides of the disc. Some discs do not include side signals, in which case the side is not displayed.



Calling Out the Input On-screen Display

Press the FRAME/TIME button to call out the input on-screen-display.

- The display changes as follows each time the FRAME/TIME button is pressed:

On-screen Display for CDs and CDVs	
CDs or audio part of CDVs	Video part of CDVs

The track input is displayed.

T-01 TIME 0.00

↓

Nothing happens.

The time input is displayed.

TIME 0.00

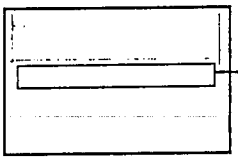
↓

The track input is displayed.

TRACK 0

↓

The time input is displayed.



Position of input on-screen display

On-screen Display for LDs	
Standard (CAV) LDs	Long-play (CLV) LDs

The frame input is displayed.

SIDE 1 FRAME 0

↓

The chapter input is displayed.

SIDE 1 CHAPTER 0

The time input is displayed.

SIDE 1 TIME 0.00

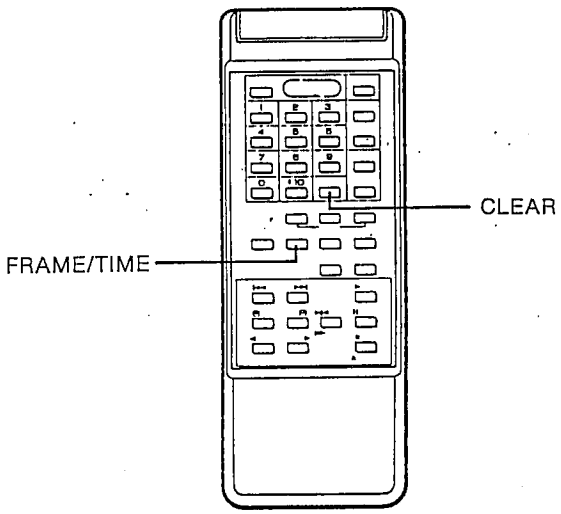
↓

The chapter input is displayed.

SIDE 1 CHAPTER 0

The frame/time input is displayed.

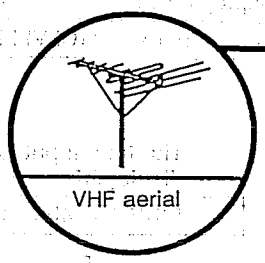
- Press the CLEAR button to turn off the input on-screen-display.

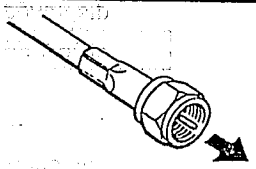
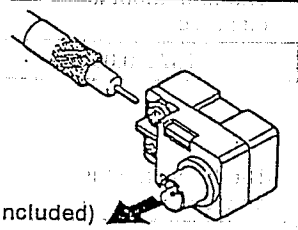
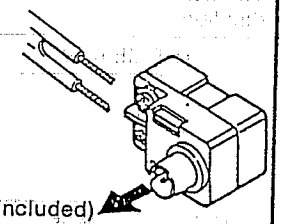


CONNECTIONS

Connections to a TV Without Video/Audio Input Jacks

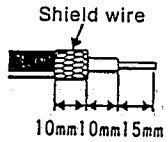
The method of connection differs according to the type of aerial wire.



Coaxial cables (with F-shaped connector)	Coaxial cables (without F-shaped connector)	Feeder wires
		
• Connect to the input terminal as such.	(included)	(included)

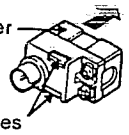
Installing the Coaxial Cable and aerial Transformer (with no F-shaped connector)

1 Prepare the end of the cable.



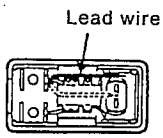
Use a cutter to peel off the cable's shielding.

2 Take off the aerial transformer's cover.



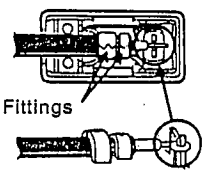
Press on the catches and push the cover in the direction of the arrow.

3 Disconnect the lead wire.



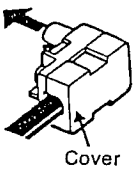
Disconnect the lead wire and set it so that it does not touch other parts.

4 Insert the cable and tighten the fittings with pinchers.



Grasp the core wire with pinchers and twist the tip.

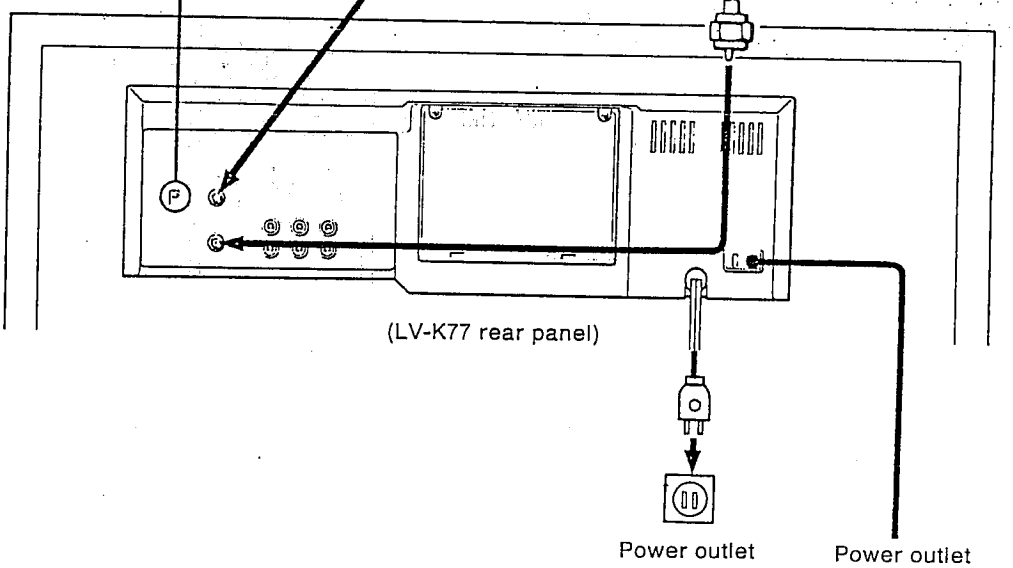
5 Instal l the cover and connect.



Set the TV channel.

To AERIAL (ANTENNA) terminal

To VHF OUT terminal



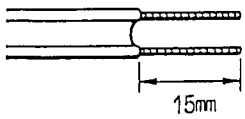
(LV-K77 rear panel)

Power outlet

Power outlet

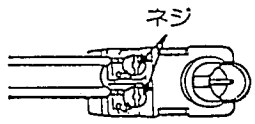
Connecting the Feeder Wire to the Aerial Transformer

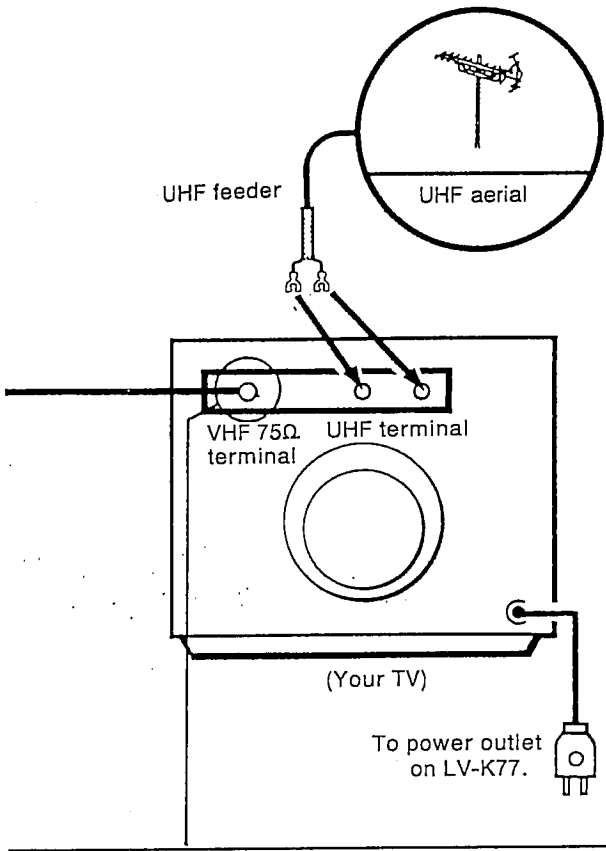
1 Prepare the end of the feeder wire.



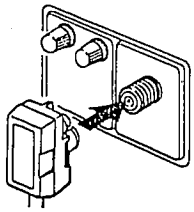
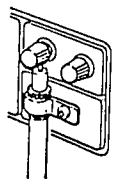
- Expose the core wires.

2 Connect the core wires and tighten the screws.





Prepare the end according to the type of aerial terminal.

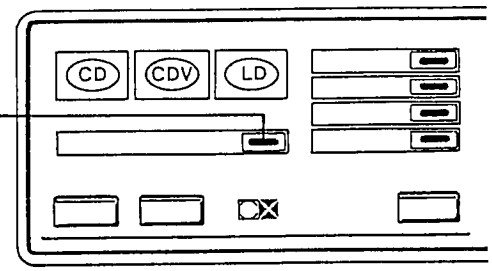
Connecting the F-shaped connector	Connecting the coaxial cable
	
• Use the F-shaped connector included with the TV or purchase a new one.	

Setting the TV Channel On Which to Watch Video Discs

Set the CHANNEL SELECTOR switch on the rear panel of the LV-K77 to an open channel.

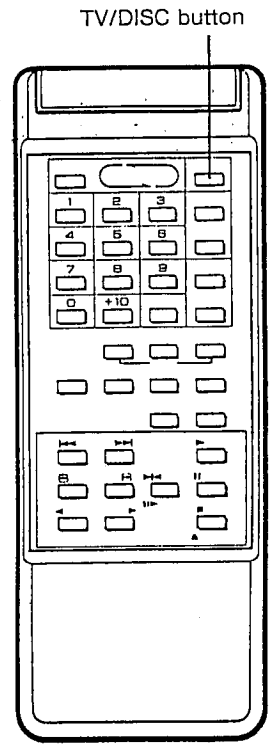
CHANNEL SELECTOR

For Watching TV Broadcasts



Watching TV broadcasts during playback:

- Press the TV/DISC button. The TV/DISC indicator on the main unit turns off and the TV mode is set. Select the desired channel.
- The mode switches between the TV mode and the disc playback mode each time the TV/DISC button is pressed.

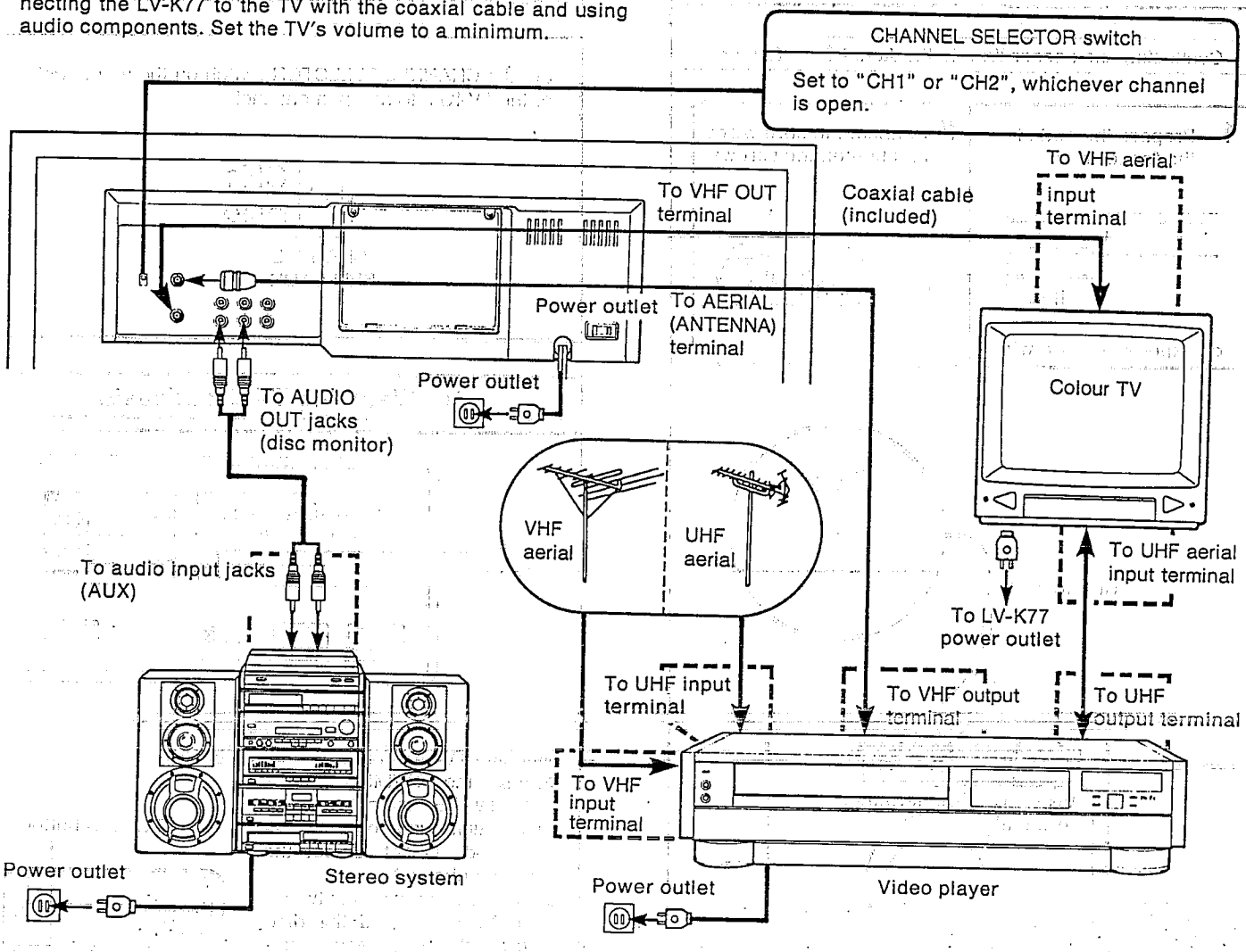


Only watching TV broadcasts

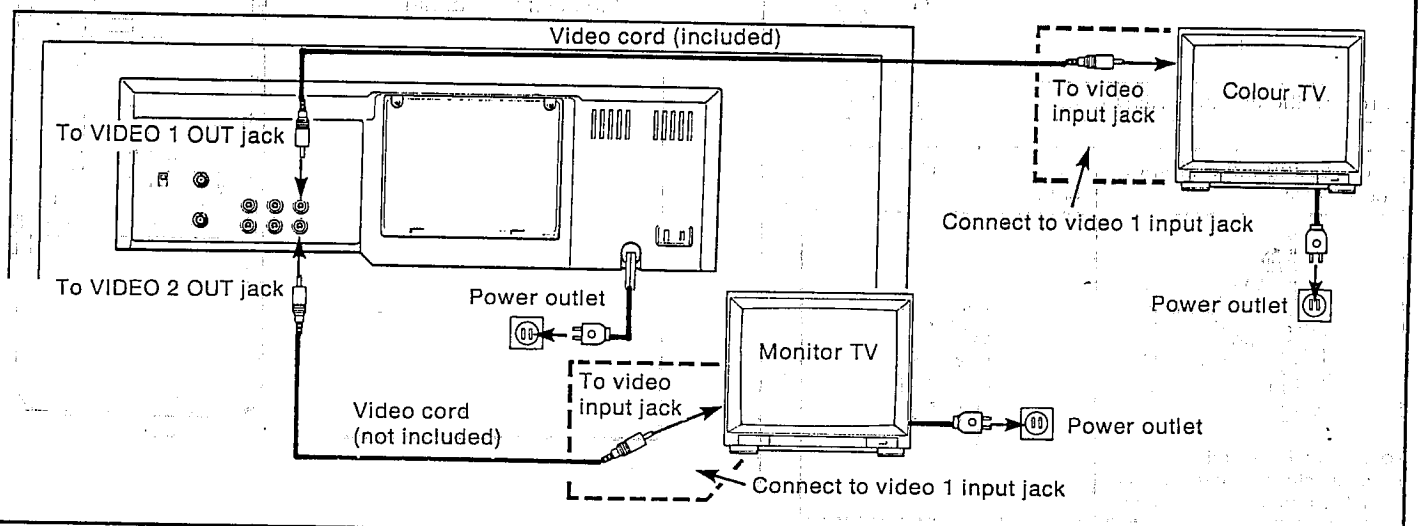
- Eject the disc, turn off the system's power, then select the desired channel.

Connections to a TV Without Video/Audio Input Jacks, a Video

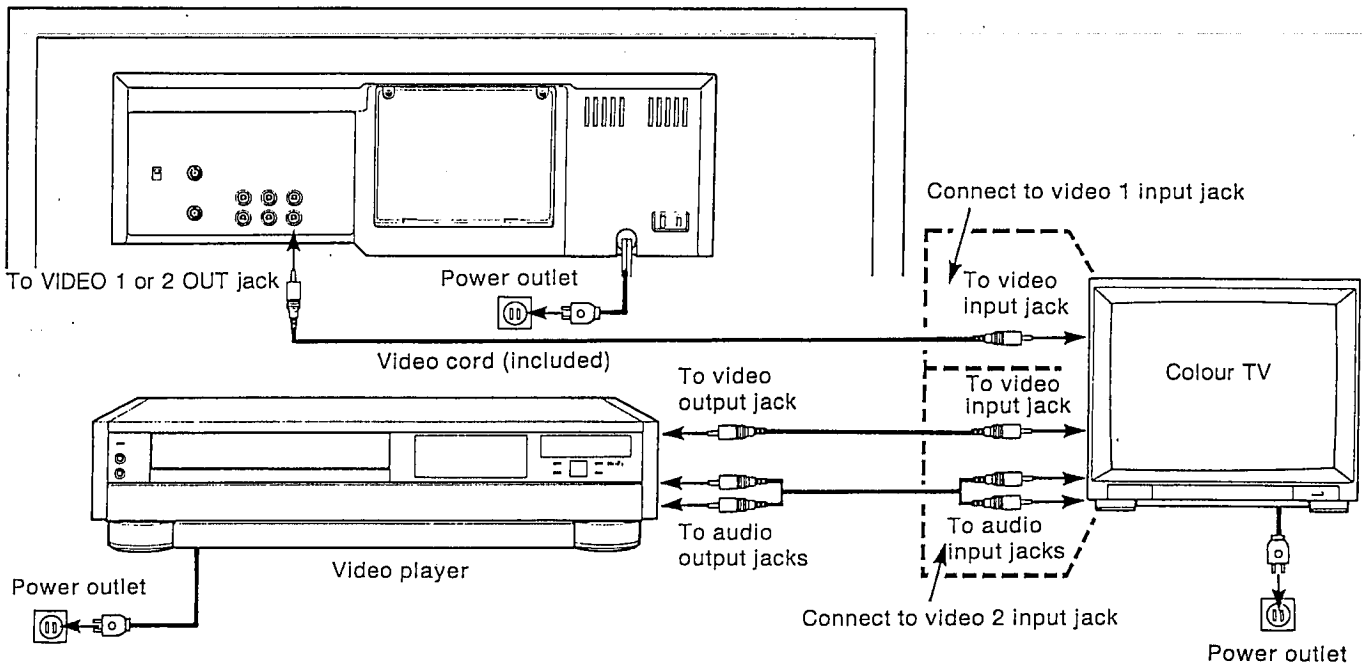
Set the amplifier's volume to an appropriate level when connecting the LV-K77 to the TV with the coaxial cable and using audio components. Set the TV's volume to a minimum.



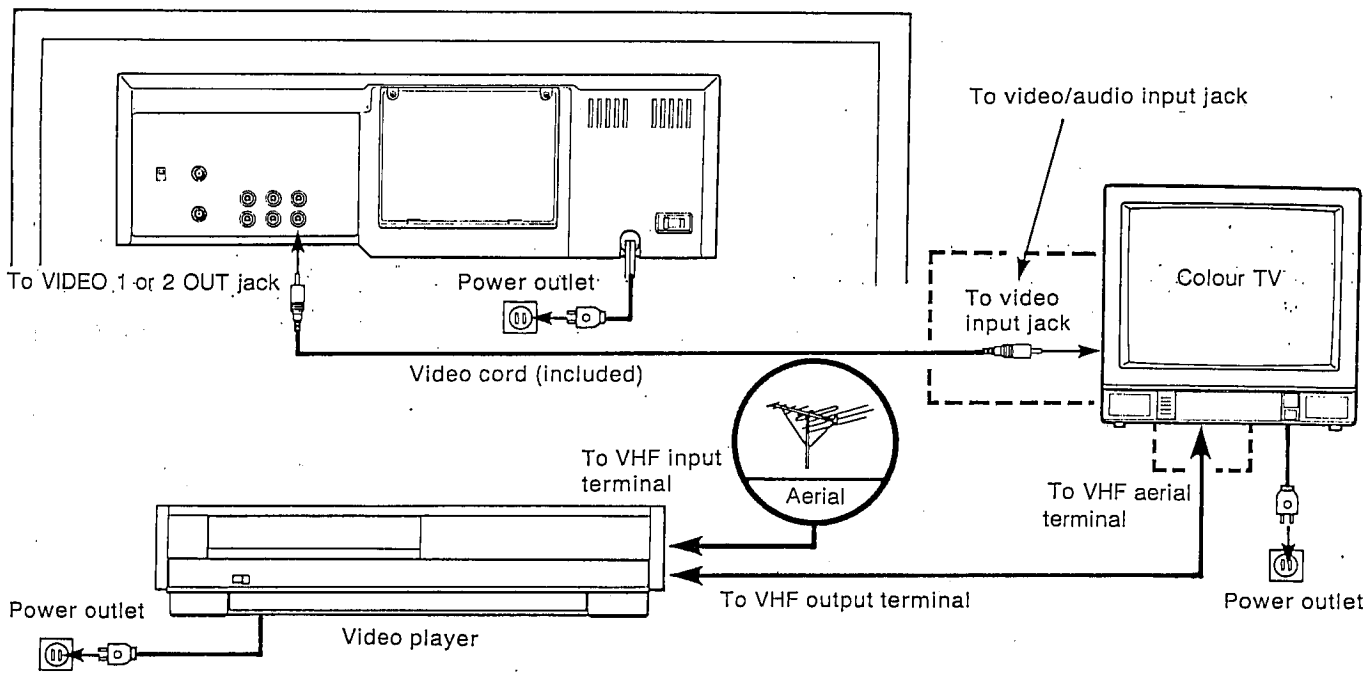
Connections to an AV TV (with Video/Audio Input Jacks) and a Monitor TV



Connections to an AV TV (with Video/Audio Input Jacks) and a Video Player



Connections to an AV TV (with One System of Video/Audio Input Jacks) and a Video Player



NOTES:

- Be sure to turn off the power switches for all components before connecting and disconnecting cords.
- The colours on the TV may be distorted if the speakers are placed near the TV, so keep them away whenever possible.
- Noise (induction humming, etc.) may be produced through mutual interference if an amplifier, tuner, player, etc., is placed near the TV. Keep such components far enough away so as not to cause noise.
- Noise may be produced on the tuner if the LV-K77 and tuner are used simultaneously.

TROUBLESHOOTING

For LDs and CDVs (video part)

Take the proper measures, as shown on the table.

	Problems	Causes	Measures
Mechanism	Power does not turn on.	● Power cord is not plugged in.	● Plug in power cord securely.
	Disc tray does not open.	● Power is not on.	● Turn on power.
	Disc tray opens.	● Disc is dirty or scratched. ● Disc is deformed (warped). ● Disc is not set properly in disc tray.	● Clean disc. ● Correct warping. ● Set disc properly.
Playback	Playback does not start.	● Connections are poor. ● TV/DISC button is set to TV mode (TV/DISC indicator off). ● No disc is loaded. ● "PAUSE" is displayed on screen and KARAOKE MODE indicatoris lit. ● Side on which no video signals are recorded is beingplayed. (LD) ● Disc is loaded upside-down. (CDV)	● Connect properly. ● Set TV/DISC button to disc mode (TV/DISC indicator on). ● Load disc and press PLAY button. ● Press KARAOKE MODE button to set continuous mode (KARAOKE MODE indicator off), then press PLAY button. ● Play with labelled surface to be played facing up, or press JET TURN button. ● Set with labelled surface facing up.
	Playback does not stop after one song.	● Continuous playback mode (KARAOKE MODE indicator off) is set.	● Press KARAOKE MODE button to set continuous mode (KARAOKE MODE indicator off), then press PLAY button.
	TV program does not appear on screen.	● Connections are poor. ● Connect properly.	● TV/DISC button is set to disc mode. ● Set TV/DISC button to TV mode (TV/DISC indicator off).
	Picture from disc does not appear on screen.	For TVs with video/audio inputs: ● TV's power is off. ● Connections are poor. ● TV's input setting is wrong.	● Turn TV on. ● Connect properly. ● Press TV's video button to set to video input mode.
		For TVs without video/audio inputs: ● TV not set to open channel. ● TV channel not adjusted properly.	● Set TV to open channel, 1 or 2. ● Adjust TV channel properly.
Video/audio quality	Picture our sound quality is poor.	● Connections are poor. ● Noise source nearby. ● Disc is dirty or scratched. ● Disc is deformed (warped).	● Connect properly. ● Move noise source away. ● Clean disc. ● Correct warping.
	For TVs without video/audio inputs:	● TV not set to open channel.	● Set TV to open channel, 1 or 2.
	Picture is stopped.	● Disc with picture stop signal is being played.	● Press PLAY button.
	Still picture is shaky.	● Still pictures may be shaky even with standard discs at scenes with much movement. This is not a problem with the LV-K77 or the disc.	
	Starting time or searching time is long, or much time is required to return to beginning of repeat section.	● For some discs, extra time is required to read the codes. (This is not a defect.) ● If the required time is extremely long, press the CLEAR button on the remote control unit. (Note that in this case playback may not start fromexactly the right position.)	
Sound	No sound is produced.	● Connections are poor. ● VOLUME control set to minimum. ● MUSIC LEVEL control set to minimum. ● Scan, still or frame-by-frame mode is set. ● TAPE button is lit.	● Connect properly. ● Adjust VOLUME control to appropriate position. ● Adjust MUSIC LEVEL control to appropriate position. ● This is normal. ● Press DISC button.

	Problems	Causes	Measures
Karaoke	Sound from microphones is not produced.	• MIC LEVEL controls set to minimum.	• Adjust MIC LEVEL controls to appropriate position.
	Multiplex balance cannot be adjusted.	• Microphones not connected to MIC jacks.	• Connect microphones to MIC jacks.
	Singer's voice not heard on disc with digital audio signals.	• Digital audio mode is set.	• Press DIGITAL/ANALOG audio selector button on main unit or remote control unit to switch to analog mode, then set BALANCE to VOCAL side.
	Digital sound not heard on disc with digital audio signals.	• Analog audio mode is set.	• Press DIGITAL/ANALOG audio selector button on main unit or remote control unit to switch to digital mode.
Remote control unit	Does not operate.	• Batteries are not inserted properly. • Batteries are dead. • Obstacle between remote control unit and sensor.	• Insert batteries properly. • Replace both batteries. • Remove obstacle or move remote control unit.

For CDs and CDVs (audio part)

	Problems	Causes	Measures
Sound	Playback starts but stops immediately.	• Disc is loaded upside-down. • Disc is extremely dirty. • Disc is not set properly in disc tray.	• Load disc with labelled side facing up. • Clean disc. • Set disc properly.
	No sound is produced.	• TAPE button is lit. • "PAUSE" is displayed on screen and KARAOKE MODE indicatoris lit.	• Press DISC button. • Press KARAOKE MODE button to set continuous mode (KARAOKE MODE indicator off), then press PLAY button.

For Cassette Tapes

	Problems	Causes	Measures
Playback	Cassette tape does not move.	• PAUSE button is pressed in.	• Press PAUSE button.
		• Tape is at end.	• Rewind tape.
		• Cassette tape is defective.	• Load another cassette tape.
	No sound is produced.	• DISC button is lit. • Nothing is recorded on tape.	• Press TAPE button. • Replace with a recorded tape.
	Pitch is off or sound is distorted.	• Heads, capstan and pinch roller are dirty.	• Clean heads, capstan and pinch roller.
		• Heads are magnetized.	• Demagnetize heads.
	Auto search operation does not work.	• Auto search program is not set.	• Input desired selection number.
		• Blank sections on tape are under 4 seconds long.	• Use another tape.
Recording	Recording is not possible.	• Cassette tape's tabs are broken off.	• Place cellophane tape over holes or use another tape.
	Recording quality is poor.	• Recording/playback head is dirty.	• Clean.
	Previous recording is not erased.	• Erasing head is dirty.	• Clean.

- If the problem persists after the above measures are taken, consult your store of purchase.

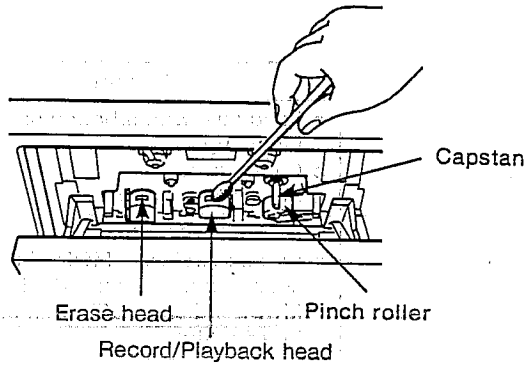
CLEANING THE CASSETTE DECK HEADS

Dirt on the surfaces which come in contact with the tape (heads, capstan and pinch roller) can cause the problems listed below during recording and playback. Wipe dirt off the surfaces of contact periodically.

- Poor sound quality
- Low volume
- Impossibility to erase
- Impossibility to record
- Tape getting caught on capstan

Cleaning

- Press the STOP/EJECT button to open the cassette door.
- Use a cotton swab to wipe off the dirt. For tough dirt, apply a little absolute alcohol or cleaning solution to the cotton swab.
- If you use a cleaning solution, wait until the parts have completely dried before loading a cassette.



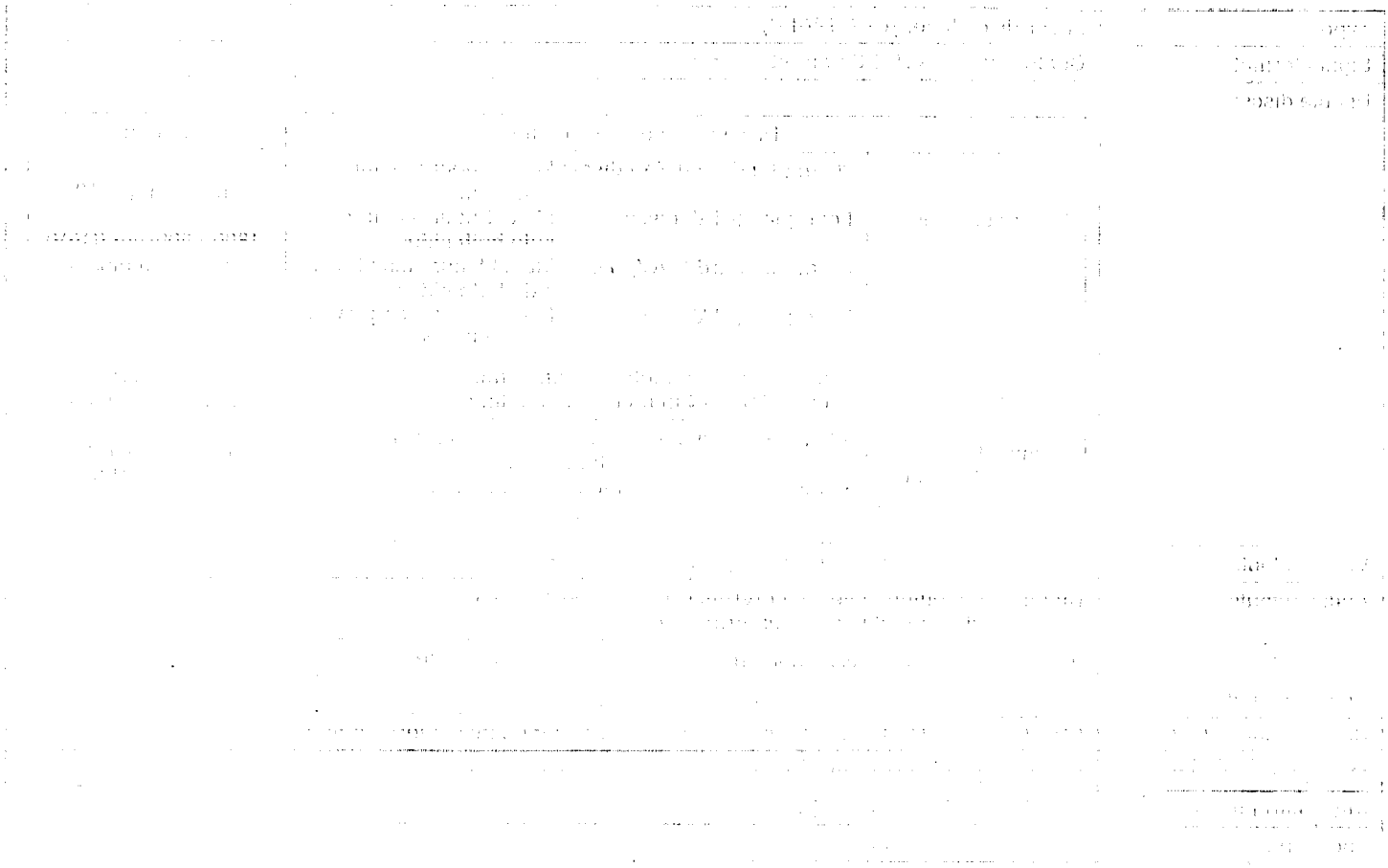
Demagnetizing the Heads

After extended use, the heads become magnetized, resulting in noise or poor quality. Demagnetize the heads once a month using a demagnetizer tape, available in stores.
Be sure to turn the power off when demagnetizing the heads.
For details, refer to the demagnetizer's manual.

SPECIFICATIONS

<table>
<tr><td>Type:</td><td>Laser disc player (CD/CDV/LD)</td></tr>
<tr><td>Signal format:</td><td>Conforming to NTSC Colour standards.</td></tr>
<tr><td>Usable discs:</td><td>
<table>
<tr><th></th><th>Disc size and playing time</th><th>Speed</th></tr>
<tr><td>Laservision discs:</td><td>30cm Standard (CAV) discs: Max. 1 hour playing side both sides
Long-play (CLV) discs: Max. 1 hour playing side both sides
20cm Standard (CAV) discs: Max. 28 minutes playing side both sides
Long-play (CLV) discs: Max. 40 minutes playing side both sides</td><td>1800rpm (CAV)
1800~600rpm (CAV) (for 30cm discs)</td></tr>
<tr><td>Compact discs:</td><td>8cm ··· Max. 20 minutes playing time
12cm ··· Max. 74 minutes playing time</td><td>600~200rpm (for 12cm discs)</td></tr>
<tr><td>Compact discs with video:</td><td>12cm discs Video part: Max. 5 minutes playing time (CLV)
Audio part: Max. 20 minutes playing time (digital)</td><td>2700~1800rpm
600~340rpm</td></tr>
</table>
</td></tr>
<tr><td>Video outputs:</td><td>1Vp-p, 75Ω, unbalanced, sync. negative, pinjack x 2</td></tr>
<tr><td>Audio outputs:</td><td>Digital audio output level: 200mVrms (1kHz, −20dB) pinjack
Analog audio output level: 200mVrms (1kHz, 40%) pinjack</td></tr>
<tr><td>RF output:</td><td>VHF, F-shaped jack, 75Ω, unbalanced, channel 1 or 2 switchable</td></tr>
<tr><td>Antenna input:</td><td>VHF, F-shaped jack, 75Ω, unbalanced</td></tr>
<tr><td>Headphones output:</td><td>Standard jack, M6 terminal (one), 8Ω appropriate impedance, stereo output</td></tr>
<tr><td>Microphone inputs:</td><td>Standard jacks, M6 terminals (two), 3.3kΩ input impedance</td></tr>
<tr><td>Key control input:</td><td>Mini-jacks, M3 terminals (two)</td></tr>
<tr><td>Speakers:</td><td>20cm woofer (8Ω) x 2, 8cm tweeter (8Ω) x 2</td></tr>
<tr><td>Amplifier output:</td><td>60W (30W x 2)</td></tr>
<tr><td>Cassette deck:</td><td>
<table>
<tr><td>Track format</td><td>4 tracks, 2 channel stereo</td><td>Fast-forward time</td><td>Approx. 2 min. (C-60)</td></tr>
<tr><td>Recording format</td><td>AC bias</td><td>Rewind time</td><td>Approx. 2 min. (C-60)</td></tr>
<tr><td>Erasing format</td><td>AC erasing</td><td>Frequency range</td><td>100 ~ 10,000Hz</td></tr>
</table>
</td></tr>
<tr><td>Power source:</td><td>AC240V ±10%, 50Hz</td></tr>
<tr><td>Power consumption:</td><td>76W</td></tr>
<tr><td>Weight:</td><td>42kg</td></tr>
<tr><td>External dimensions:</td><td>600 (width) x 773 (height) x 455 (depth) mm</td></tr>
<tr><td>Operating temperature range:</td><td>+5°C ~ +35°C</td></tr>
<tr><td>Operating humidity range:</td><td>5% ~ 90%</td></tr>
</table>

- Please note that the design and specifications are subject to change without advanced notice.



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