User's Manual

- In the initial settings, exclusive channel for DVD/Video is set to CH 3.
  Set the TV channel to CH3 before using it.
- Region code of DVD/Video player for home is 1 or ALL.
  In inserting a disc with other region code, it does not operate.
  Please only use a disc with region code 1 or ALL.
- ✋ is a 'Prohibition' mark. If this mark is displayed in operating the product, please wait for a while, then use it. If 'Prohibition' mark ✋ continues to be displayed in pressing a button after that, it means the button does not function in the currently played disc.

Important Safeguards

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

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

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and servicing instructions in the literature accompanying the appliance.

WARNING : TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION : TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

IMPORTANT FOR LASER PRODUCTS

LASER : This Digital Video Disc Player employs a Laser System. To ensure proper use of this product please read this owner's manual carefully and retain for future reference. Should the unit require maintenance, contact an authorized service location - see service procedure.
Use of control adjustments or the performance of procedures other than those specified may result in hazardous radiation exposure.
To prevent direct exposure to the laser beam, do not try to open the enclosure. Visible laser radiation when open and interlocks defeated.
DO NOT STARE INTO THE BEAM.

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

CAUTION : Do not open the top cover. There are no user serviceable parts inside the Unit; leave all servicing to qualified service personnel.

FCC NOTICE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rule. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception; which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is
- connected.
- Consult the dealer or an experience radio/TV technical for help.

CAUTION: Any changes or modification in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This set has been designed and manufactured to assure personal safety. Improper use can result in electric shock or fire hazard. The safeguards incorporated in this unit will protect you if you observe the following procedures for installation, use and servicing. This unit is fully transistorized and does not contain any parts that can be repaired by the user.

1 READ INSTRUCTIONS
All the safety and operating instructions should be read before the unit is operated.
2 RETAIN INSTRUCTIONS
The safety and operating instructions should be retained for future reference.
3 HEED WARNINGS
All warnings on the unit and in the operating instructions should be adhered to.
4 FOLLOW INSTRUCTIONS
All operating and use instructions should be followed.
5 CLEANING
Unplug this unit from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
6 ATTACHMENTS
Do not use attachments unless recommended by the unit's manufacturer as they may cause hazards.
7 WATER AND MOISTURE
Do not use this unit near water- for example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement, or near a swimming pool and the like. Caution : Maintain electrical safety. Powerline operated equipment or accessories connected to this unit should bear the UL listing mark or CSA certification mark on the accessory itself and should not be modified so as to defeat the safety features. This will help avoid any potential hazard from electrical shock or fire. If in doubt, contact qualified service personnel.
8 ACCESSORIES
Do not place this unit on an unstable cart, stand, tripod, bracket, or table. The unit may fall, causing serious injury to a child or adult as well as serious damage to the unit. Use this unit only with a cart, stand , tripod, bracket, or table recommended by the manufacturer.

8-A
A unit and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the unit and cart combination to overturn.
9 VENTILATION
Slots and openings in the case are provided for ventilation to ensure reliable operation of the unit and to protect it from overheating. These openings must not be blocked or covered. These openings must not be blocked by placing the unit on a bed, sofa, rug, or other similar surface. This unit should never be placed near or over a radiator or heat radiator. This unit should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
10 POWER SOURCES
This unit should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your dealer or local power company. For units intended to operate from battery power, or other sources, refer to the operating instructions.
PORTABLE CART WARNING
(symbol provided by RETAC)
11 GROUNDING OR POLARIZATION
This unit is equipped with a polarized alternating -current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact your electrician to replace your obsolete outlet.To prevent electric shock, do not use this polarized plug with an extension cord, receptacle, or other outlet unless the blades can be fully inserted without blade exposure. If you need an extension cord, use a polarized cord.

12 POWER-CORD PROTECTION

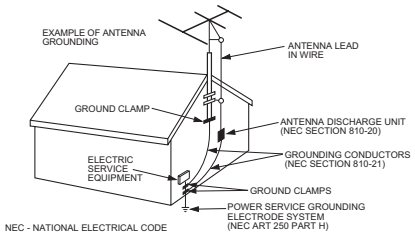
Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.

Note to CATV system installer

This reminder is provided to call the CATV system installer's attention to Section 820-40 of the NEC which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

13 OUTDOOR ANTENNA GROUNDING

If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984 (Section 54 of Canadian Electrical Code, Part 1) provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See example as shown.



14 POWER LINE

An outside antenna system should not be located in the vicinity of overhead power lines, other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching or approaching such power lines or circuits as contact with them might be fatal. Installing an outdoor antenna can be hazardous and should be left to a professional antenna installer.

15 LIGHTNING

For added protection for this unit during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the unit due to lightning and power line surges.

16 DISC TRAY

Keep your fingers well clear of the disc as it is closing. It may cause serious personal injury.

17 OVERLOADING

Do not overload wall outlets of extension cords as this can result in a risk of fire or electric shock.

18 OBJECT AND LIQUID ENTRY

Never push objects of any kind into this unit through openings as they may touch dangerous voltage points or "short-out" parts that could result in a fire or electric shock. Never spill liquid of any kind on the unit.

19 BURDEN

Do not place a heavy object on or step on the product. The object may fall, causing serious personal injury and serious damage to the product.

20 DISC

Do not use a cracked, deformed or repaired disc. These discs are easily broken and may cause serious personal injury and product malfunction.

21 SERVICING

Do not attempt to service this unit yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

22 DAMAGE REQUIRING SERVICE

Unplug this unit from the wall outlet and refer servicing to qualified service personnel under the following conditions.

A. When the power-supply cord or plug is damaged.
B. If liquid has been spilled, or objects have fallen into the unit.
C. If the unit has been exposed to rain or water.
D. If the unit does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the unit to its normal operation.
E. If the unit has been dropped or the cabinet has been damaged.
F. When the unit exhibits a distinct change in performance-this indicates a need for service.

23 REPLACEMENT PARTS

When replacement parts are required, have the service technician verify that the replacements he uses have the same safety characteristics as the original parts. Use of replacements specified by the unit manufacturer can prevent fire, electric shock, or other hazards.

24 SAFETY CHECK

Upon completion of any service or repairs to this unit, ask the service technician to perform safety checks recommended by the manufacturer to determine that the unit is in safe operating condition.

25 WALL OR CEILING MOUNTING

The product should be mounted to a wall or ceiling only as recommended by the manufacturer.

26 HEAT

The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

Read Carefully before Using

Cautions in use of DVD-Video player are described below. Please read carefully before using a DVD-Video player.

Installation place and handling

- When you place this player near other devices, they may affect poorly together.
- When you place DVD-Video player and TV in the upper and lower sides, it may cause flickering of pictures or failure (tape is not ejected).
- When you place this player near strong magnetic materials, it may affect image or voice poorly or damage recording.
- Do not spill volatile liquids like insect spray over the player. Do not leave rubber or plastic products in contact with the player for a long time. They will cause deterioration or paint peel-off.

Not in use

- When the unit is not in use, be sure to remove the disc or tape and turn off the power.
- If you do not use the unit for a long period, remove batteries in REMOTE to prevent leakage.
- In case you don t use the unit for a long time, the unit may not function properly in the future. Turn on and use the player occasionally.

Moving

- Repack the unit as it was originally packed at the factory. Alternatively, pack this product with towel not to be damaged.
- Eject any video tape.

Cleaning

- Dust off dirt in cabinet or control panel part smoothly with a soft cloth.
- For heavy dirt, soak the cloth in a weak detergent solution, wring it well and wipe. Use a dry cloth to wipe it out.
- Follow instructions in using chemical cleaners.
- Do not use any type of solvent such as gasoline or benzene, as they may cause deterioration or paint peel-off.

Checking

- Video is a high precision device. To obtain a clear screen, we recommend regular inspection and maintenance every 1,000 hours of use by technical engineers.
- For checking, contact your dealer or your nearest service center.

Checking and Replacement of Antenna

- Antenna is subject to change in its direction or damage by wind and rain. For clean screen, contact and consult your nearest service center about checking and replacement.

In recording important screen

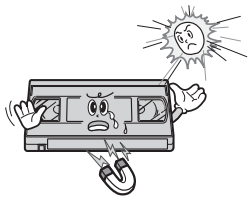
- Be sure to record the screen and check whether recording is performed properly. We beg you to understand compensation of recording if recording is not performed by badness of used tape or video.

Copyright

- Do not use your recordings without permission of a copyrighter except personal usage.

Tape and Disc Handling

- Do not use any tape and disc below. Damage of video head or cut/coiling of tape may cause failure.
  ① Tape with mold
  ② Tape or disc stained with juice or attachments
  ③ Tape having breakage connection
  ④ Disassembled tape
  ⑤ Disc with severe scratch
  ⑥ Moisture condensation may occur in tape. Moisture condensation damages the tape. Please use the tape after the moisture condensation is disappeared.
- After use, store tape vertically in a case to prevent loose.
- Do not store the following places.
  ① High temperature and humidity
  ② Subject generation of mold
  ③ Subject to direct sunlight
  ④ Much dirt or dust
  ⑤ Near strong magnetic materials such as speaker



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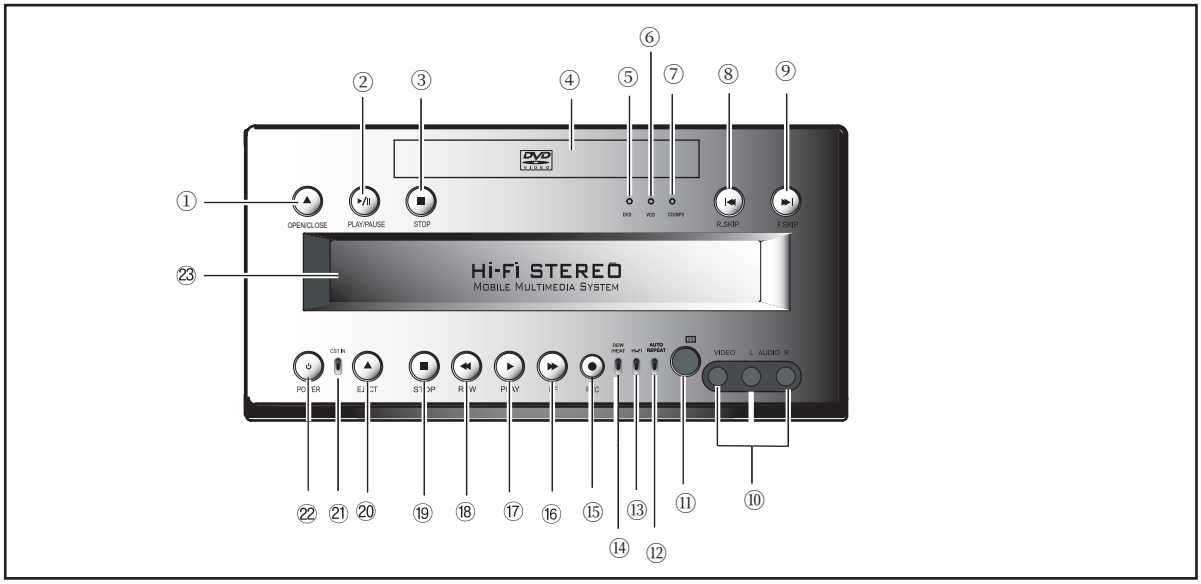
Advantages of This Product Are .....

Built-In TV Tuner (TV/CATV) _Option
Hi-Fi stereo system [VCR]
Digital Auto Tracking [VCR]
Back Lighting of Function Buttons
External Ir Remote Controller With Receiver
Dew & Heat Sensor For Tape Protectuon(VCR)
Auto Start Function
DC power Supply (2 kind of DC 12V inputs)
DVD, VCD, CD, CD-R(MP3), CD-RW, VHS playback function
Watching DVD for recording broadcast
Integrated Remote (VCR, DVD)
MP3 file playback function (CD-R disc having records of MP3 files)
Various video type-supported (NTSC and PAL) GUI (Graphical User Interface) OSD (On Screen Display)
Screensaver function [DVD]
Slow Forward / reverse (DVD) playback
Fast Forward / reverse playback
Various TV aspect (DVD)
- 4:3 for Pan Scan, 4:3 for Letter Box, and 16:9 for Wide
Repeat playback (title and chapter for DVD, track and disc for VCD/CD)
Screen zoom function (DVD/VCD)
Parental Lock function (DVD)
- This function can prevent playback of software that may be unsuitable for children.
Multi Angle function (DVD)
- This function allows you to choose the viewing angle of scenes which were shot from a number of different angles, It Depends on the Disc (The number of angles depends on the Disc?)
Multi Subtitle function (DVD)
- The subtitle can be seen in up to 32 languages. In the case of SVCD or CVD, it depends on the disc. (The number of subtitle languages depends on the Disc?)
Multi Audio function (DVD)
- The audio soundtrack can be heard in up to 8 languages. In the case of SVCD or CVD, it depends on the disc.(The number of audio languages depends on the Disc?)
Composite video out

Identification of Controls

Front Panel



① Open/Close Button (DVD)

If this button is pressed while power is supplying . disc tray will open,the open/close button lamp will light up in red then insert the disc and the disc will be played automatically

② Playback/Pause Button(DVD)

Playback disc press this button to pause a screen the pause lamp will blink in pause mode

③ Stop Button(DVD)

Use to stop playing

④ Disc Tray

⑤ DVD Disc Lamp

⑥ VCD Disc Lamp

⑦ CD/MP3 Disc Lamp

⑧ Fast Rewind Button / The Former Track Select Button (DVD)

Press to select the former track or to playback rapidly when the disc is to playback rapidly, the fast rewind button will light up in red

⑨ Fast Forward Button / The Next Track Select Button (DVD)

Press to select the next track or to playback back rapidly when the disc is to playback back rapidly, the fast forward button will light up in red

⑩ Audio/Video in (AUX1)

Connect these jack to the audio/video out jacks terminal of your game machine or camcorder using the RCA cord provided.

⑪ Remote Control Receiver.

⑫ Autorepeat Lamp (VCR)

During auto repeat operation, auto repeat lamp will light up in red.

⑬ HI-FI Lamp (VCR)

In the Hi-Fi out mode, the lamp will light up in red

⑭ DEW/HEAT Lamp (VCR)

When power is on, tis indicator flashes red to indicate excessive moisture buildup inside the VCR. The unit will not operate unit it dries out sufficiently (the tape can be ejected from the unit) When DEW mode has been activated, leave the unit on the allow it to dry out completely.

⑮ REC Button (VCR)

Press the REC Button for at least one second to start recording.

⑯ Fast forward/Cue key

If this button is pressed in the Playback mode, the VCR enters the forward picture search mode. If pressed in stop mode,the the tape will fast forward at high speed. The FF indicator lamp will up in red.

⑰ Play Button.
Press this button to playback a recorded tape, or to release special operation such as the search mode. In the playback mode the playback indicator lamp will be light in red, and Auto Tracking mode, this indicator lamp will blink.

⑱ Rewind / Review Button.
If this button is pressed in the PLAYBACK mode, the VCR enters the reverse picture search mode. If pressed in STOP mode, then the tape will rewind at high speed. The REW indicator lamp will up in red.

⑲ Stop Button.
Press this button to stop tape.

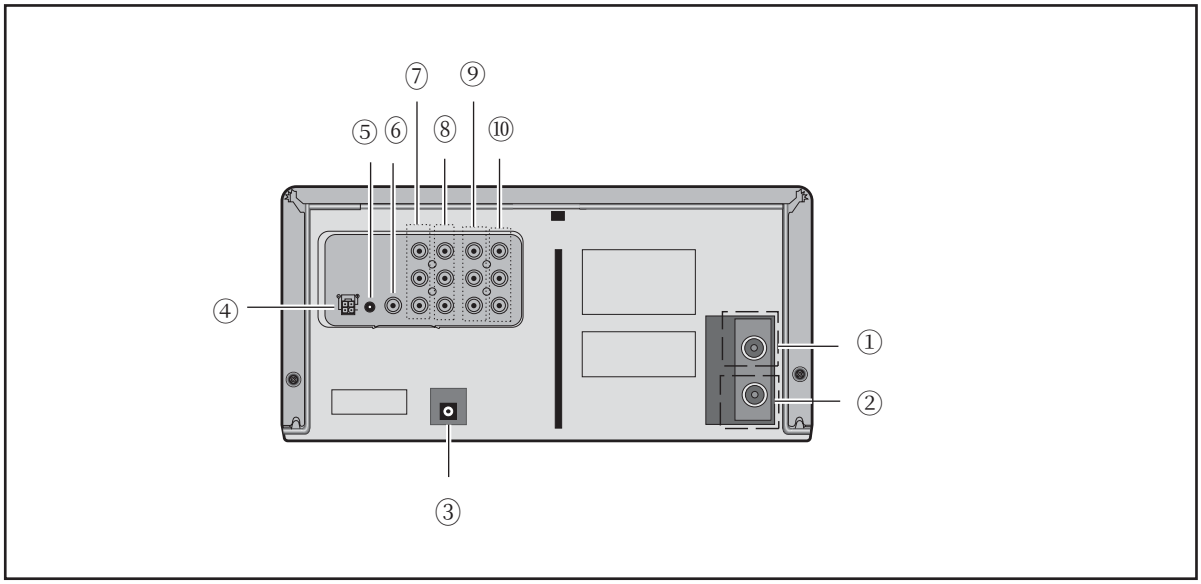
⑳ Eject Button.
Press this button to eject tape.

㉑ Cassette-In Lamp.
When the cassette is inserted, the CST-IN lamp will light up in green.

㉒ Power Button.
When power is supplied to the set, the power indicator lamp will always light up in red. The Power ON and Power OFF mode will be toggled by pressing this button. When the POWER is switched on, the power lamp will light up in red the other buttons will light up in green.

㉓ Cassette Compartment

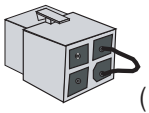
Rear Panel



① ANT .IN Connector._option
Connect the TV antenna
(or cable if available- home use) to this
connector.

② RF OUT Connector._option
This connectors provides an interface
to the antenna input connectors terminal of your
television using a coaxial cable.
Tuner the television to channel 3 or 4
to watch video tapes.

③ DC 12V IN JACK (Round Type)
To use this connector, below Convert-Adapter
accessory should be locked into above connector 4.



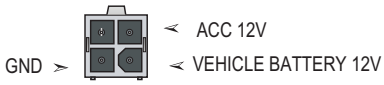
(Convert-Adapter)

Please note :
We highly recommend to connect the unit
corresponding to the 3-wire system of 4.
Thus, to make sure a proper working
of power-off tape guide.
Beyond it, the unit will automatically change
to standby mode after turning off the vehicle in
order to save the car battery.

(Ripple Voltage: Max 500mV)

④ DC JACK IN (DC 12V)
For car using, we recommend to use this connector
with 3-wire system.

* Connector description for 4



⑤ IR INPUT
Connect this terminal to remote out.

⑥ DIGITAL AUDIO OUT Connecter
To enjoy sound quality of theater level in home,
connect this jack with amp or unit embedded with
digital audio decoder

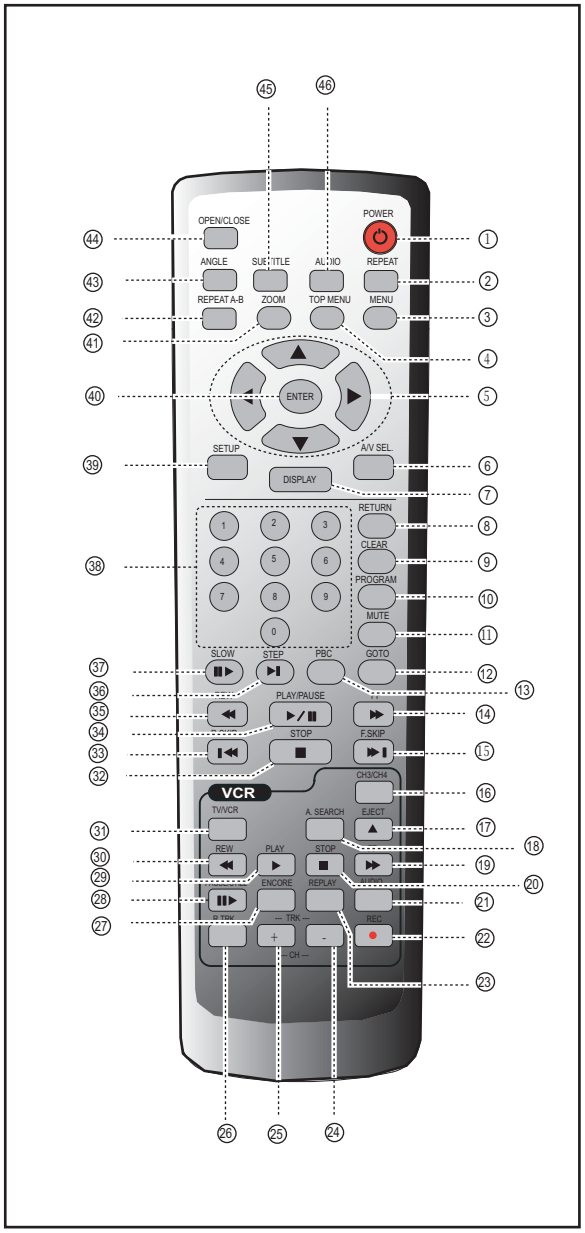
⑦ AUDIO/VIDEO IN (AV2)_option
Connector this terminal to A/V OUT terminal of your
Game machine, Camcorder, using the RCA cord
For displaying this Rear A/V input connected, Input
Signal should be set to "AV2" in A/V select mode, using
the "A/V Sel" button

⑧ S/W OUT Connector
Connect this terminal to AUDIO/VIDEO IN terminal of your TV
, using the RCA cord .

⑨ DVD OUT Connector.
Connect this terminal to AUDIO/VIDEO IN terminal of your TV
, using the RCA cord .

⑩ VIDEO OUT Connector.
Connect this terminal to AUDIO/VIDEO IN terminal of your TV
, using the RCA cord .

Remote Controller



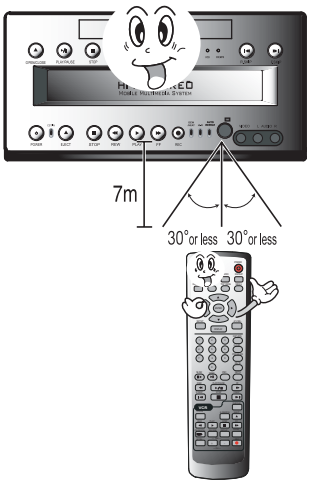
① DVD & VCR Power On/Off
② REPEAT Playback button [DVD]
③ MENU button [DVD]
④ TITLE MENU button [DVD]
⑤ MOVE in OSD button [DVD]
⑥ A/V SEL button
⑦ OSD DISPLAY button [DVD]
⑧ RETURN button
⑨ CLEAR button [DVD]
⑩ PROGRAM button [DVD]
⑪ MUTE button
⑫ GOTO button [DVD]
⑬ PBC button [DVD]
⑭ FF button [DVD]
⑮ F.SKIP button [DVD]
⑯ CH3/CH4 button [VCR] _ option
⑰ EJECT button [VCR]
⑱ Auto Search button [VCR] _option
⑲ FF button [VCR]
⑳ STOP button [VCR]
㉑ AUDIO button [VCR]
㉒ REC button [VCR]
㉓ REPLAY button [VCR]
㉔ Tracking - (Manually Tracking in playback mode) /Channel - (in TV or CATV mode)button [VCR] _option
㉕ Tracking + (Manually Tracking in playback mode) /Channel + (in TV or CATV mode)button [VCR] _ option
㉖ Re -Tracking button [VCR]
㉗ Encore button [VCR]
㉘ Pause/Still button [VCR]
㉙ Playback button [VCR]
㉚ Rewind button [VCR]

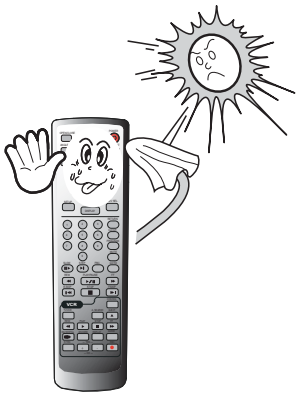
㉛ TV /VCR button [VCR] _ option
㉜ STOP button [DVD]
㉝ R.SKIP button [DVD]
㉞ Play/Pause button [DVD]
㉟ Rewind button [DVD]
㊱ Step button [DVD]
㊲ Slow button [DVD]
㊳ Number button

㊴ Setup button
㊵ Enter button [DVD]
㊶ Zoom button [DVD]
㊷ Repeat A-B button [DVD]
㊸ Angle button [DVD]
㊹ Open/Close button [DVD]
㊺ Subtitle button [DVD]
㊻ Audio button [DVD]

Instructions in Using Remote

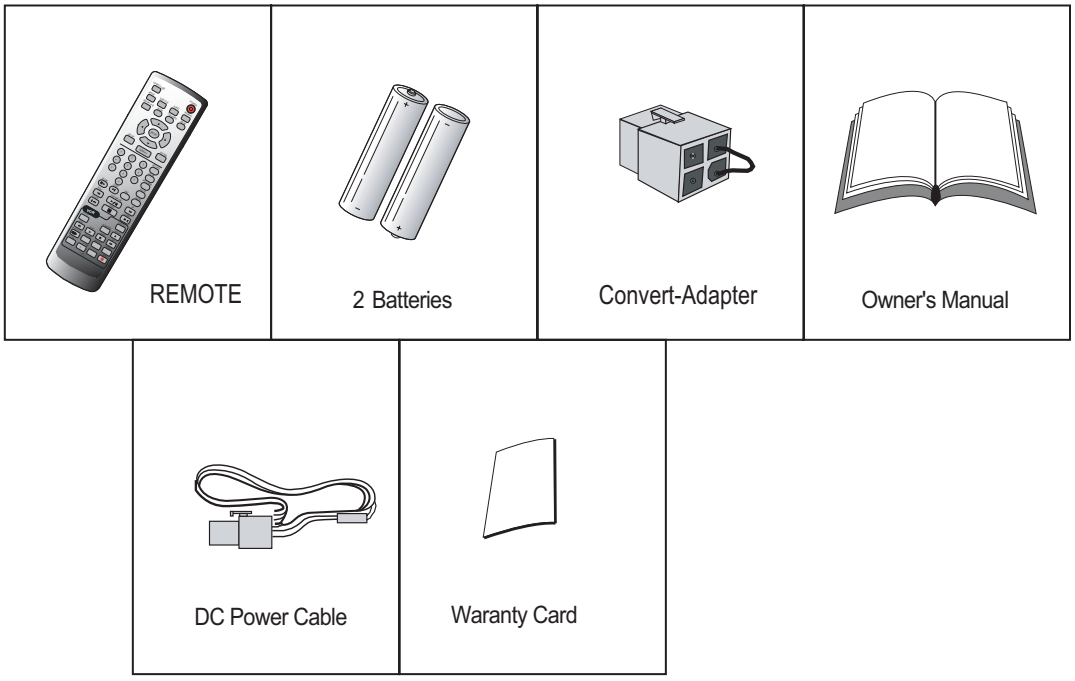
- ▶ Operate REMOTE within 7m from the unit.
- ▶ Do not press 2(two) buttons at the same time.
- ▶ Do not light up sending part of REMOTE
- ▶ Do not keep in the place with much dust and humidity





Accessories

- ▶ To purchase accessories or not supplied parts additionally, contact your nearest dealer or service center. But, owner's manual and warranty are not sold additionally.

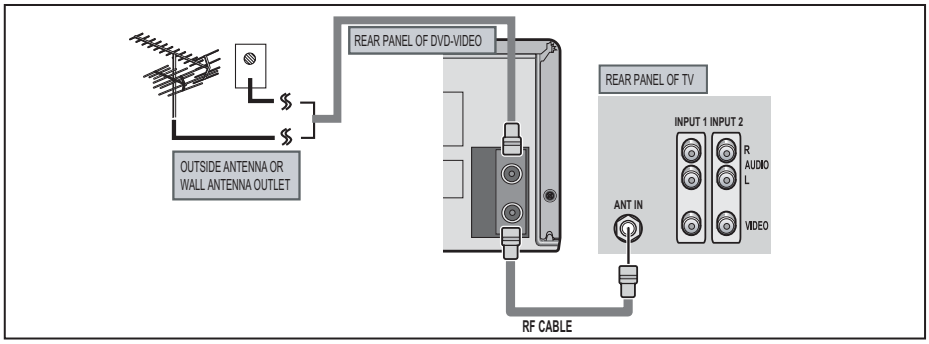


Connecting with TV

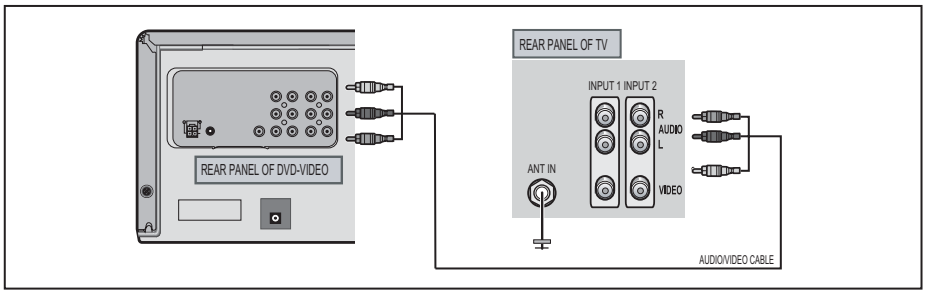
■ In the initial SET, exclusive channel for video is set to CH 3. To change this setting, set again in "CHANNEL SET "screen in VCR operation.

■ In connecting RF cable to TV, set TV channel to CH3.

How to Connect with RF cable



1. Remove circular cable (RF cable) (surplus cable) plugged in "ANT.IN "Jack in rear panel of TV. Connect the cable to "ANT.IN "jack in rear panel of DVD-Video.
2. Connect TV to DVD-Video. Connect "RF OUT "jack in DVD-Video with "ANT.IN "jack in TV with RF cable.



3. (If there is AUDIO/VIDEO INPUT jack in TV)
   Connect VIDEO OUT jack in DVD-Video to VIDEO IN jack in TV, and AUDIO OUT jack in DVD-Video to AUDIO IN jack in TV with connecting cable of Audio/Video jack.
   Select VCR mode by pressing TV/INPUT button in TV, you can view more clear screen and sound than connection with RF cable only.

CHECK UP!

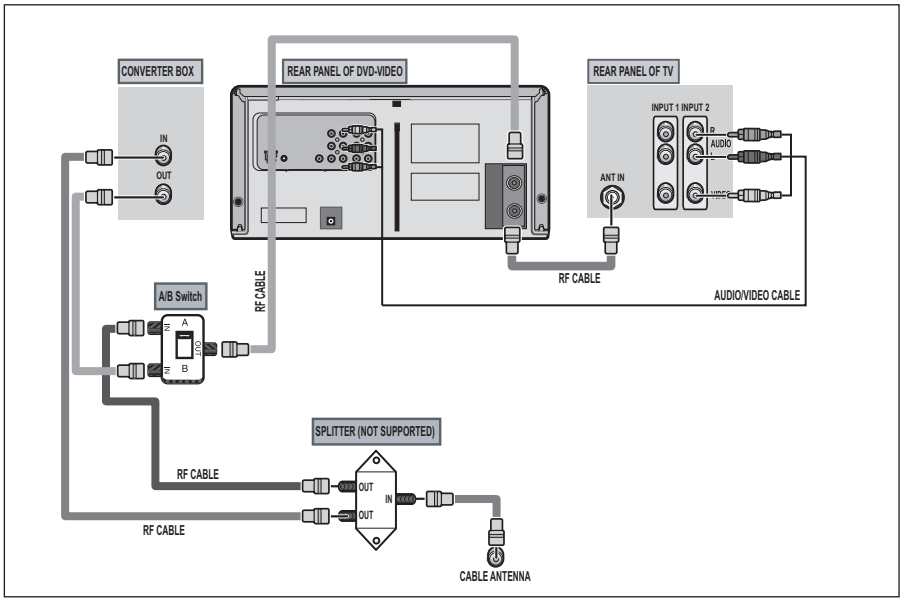
VHF: 2 ~13 channels of TV
UHF: 14~69 channels of TV
CATV: Broadcasting is transmitted with cable from broadcasting station by contract with the station and consumers. It does not need any antenna.
In/Out jack in Audio/Video terminal:
- In: A jack used to receive signal required in this unit from other units.
- Out: A jack used to send signal of this unit to other units.

Connect with Audio/Video terminal, you can enjoy more clear video and audio.
(Use A/V Sel button in this REMOTE to select video mode.)

Connecting with Cable Box

■ You should install a distributor additionally

How to connect



If your cable system only requires you to use a converter box for some channels (i.e., pay-TV channels), follow these steps: Find the primary incoming RF cable. Plug this cable into a splitter (available at your local electronics store.) Connect one RF cable between one OUT terminal on the splitter and the IN terminal on the converter box. Connect another RF cable between the other OUT terminal on the splitter and the A-IN terminal on an A/B switch available at your local electronics store.)Connect a third RF cable between the OUT terminal on the converter box and the B-IN terminal on the A/B switch. Connect a RF cable between the OUT terminal on the A/B switch and the ANT. IN on your DVD-VIDEO. When the A/B switch is in the B position,use the converter box to change channels when the A/B switch is in the A position, use the DVD-VIDEO to change channels.

How to watch general broadcasting with recording CATV

1. Set Channel Select switch of Converter Box to CH 3 or 4 as same as video exclusive channel.
2. Press channel button of Converter Box to select channel to be recorded. In this case, if you want to watch CATV to be recorded, press [TV/VCR] button of TV to select "VCR ".
3. Press [REC] button in DVD-Video.
4. To watch general broadcasting, press channel button in TV to select the desired channel.

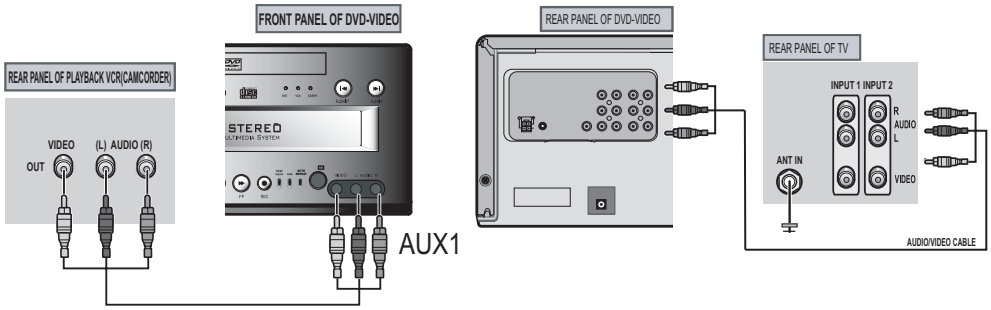
CHECK UP!

For some types of TV, you should press [TV/VCR] button in TV REMOTE and convert from AV 1 (VCR 1) or AV2(VCR 2) mode to Broadcasting Channel mode to change TV channel.

Change channel selection of CATV receiver in recording, contents of recording is changed.

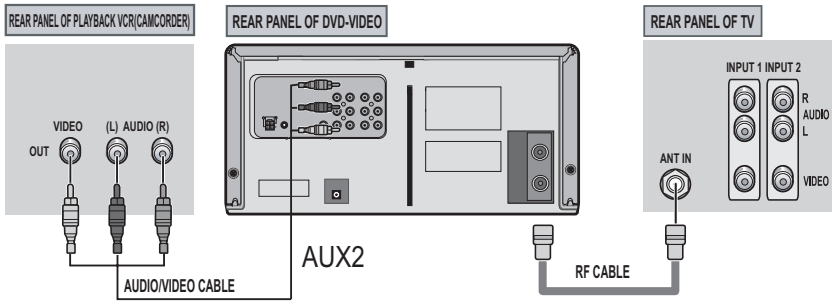
Connecting with Other VCR or Camcorder

How to Connect with Jack in Front Panel



※ The AUX1 is only able to line recording

How to Connect with Jack in Rear Panel - Option



1. Connect AUDIO/VIDEO OUT jack in Camcorder(or playback video) to AUDIO/VIDEO IN jack in front panel (or rear panel-option) of DVD-Video with connecting cable.
2. Connect "ANT. IN "jack in TV to "RF.OUT "jack in DVD-Video with RF cable.
3. To record contents of camcorder or playback other VCR, insert recording tape attached recording tab in DVD-Video.

How to Copy(Edit) Tape with Other VCR or Camcorder

1. Turn on DVD-Video.
2. Press A/V Sel button of remote control and select DVD-Video to display "AUX 1" or "AUC 2" in TV screen.
3. Press [PLAY] button in Camcorder or playback other VCR.
4. Press [REC] button in DVD-Video if you want to record contents of camcorder or playback video.
5. Press [Pause] button in DVD-Video when unnecessary or undesired scene is displayed in recording.
   (Caution) Recording is released automatically after 5 minutes since pressing [PAUSE] button.
   Press [REC] button if you want to record again.

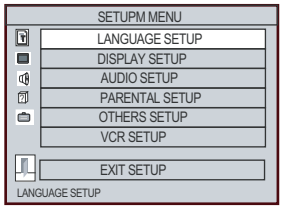
How to Playback Chapter Photographed by Camcorder

1. Turn DVD-Video on.
2. Press A/V Sel button of remote control and select DVD-Video to display "AUX 1 " or "AUX 2 "in TV screen.
3. Insert tape in camcorder and playback it.

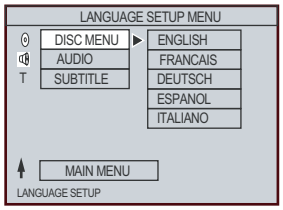
LANGUAGE SETUP MENU

Select DISC Menu Language

1. Press the "SETUP" button on the remote control.
   The initial MENU is displayed.

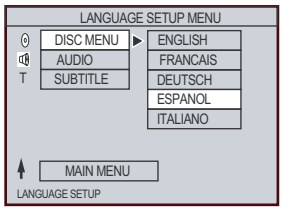


2. Press the select(ENTER) button
   then the LANGUAGE SETUP MENU is displayed.



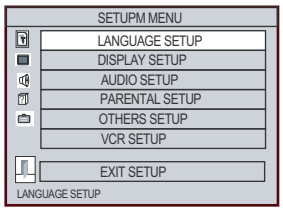
3. Press the Right ▶ button
   to enter the selected menu.

4. Press the Down ▼ (or Up ▲) button unit for the appropriate system is selected. and Press the ENTER button to activate the selected.
   (ENGLISH → FRANCAIS → DEUTSCH → ESPANOL → ITALIANO)

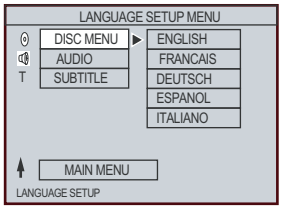


Select AUDIO Language

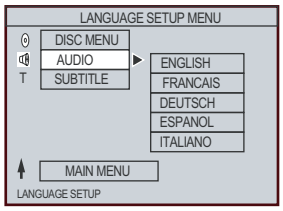
1. Press the "SETUP" button on the remote control.
   The initial MENU is displayed.



2. Press the select(ENTER) button.
   then the LANGUAGE SETUP menu is displayed.

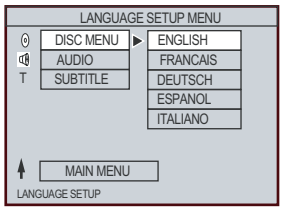


3. Press the Down ▼ button to select(ENTER) the "AUDIO", then the AUDIO menu is displayed.



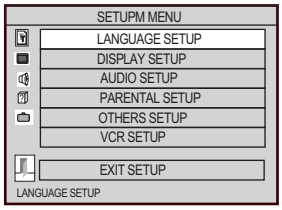
4. Press the Right ▶ button.
   to enter the selected menu.

5. Press the Down ▼ (or UP ▲) button unit for the appropriate system is selected. and Press the ENTER button to activate the selected.
   (ENGLISH → FRANCAIS → DEUTSCH → ESPANOL → ITALIANO)

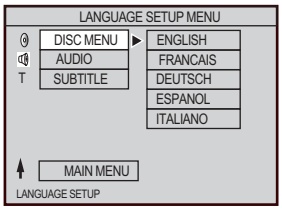


Select SUBTITLE Language

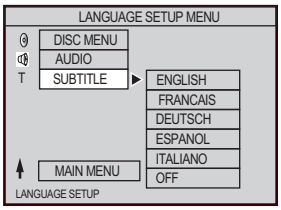
1. Press the "SETUP" button on the remote control.
   The initial MENU is displayed.



2. Press the select(ENTER) button
   then the "LANGUAGE SETUP" is displayed.



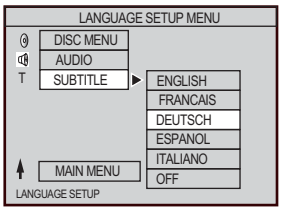
3. Press the Down ▼ button to select (ENTER)
   the "SUBTITLE".
   Then the SUBTITLE menu is displayed.



4. Press the Right ▶ button
   to enter the selected menu.

5. Press the Down ▼ (or Up ▲) button unit for the
   appropriate system is selected.
   and Press the ENTER button to activate the selected menu.

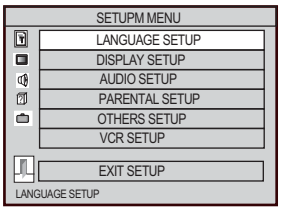
   (ENGLISH → FRANCAIS → DEUTSCH → ESPANOL
   → ITALIANO → OFF)



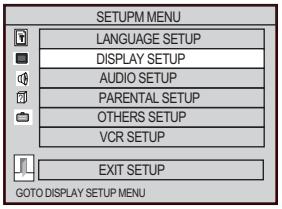
DISPLAY SETUP MENU

Set TV Display Mode

1. Press the "SETUP" button on the remote control.
   The initial MENU is displayed.

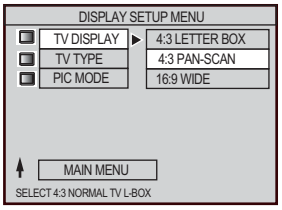


2. Press the Down ▼ button to select (ENTER) the "DISPLAY SETUP".
   Then the DISPLAY SETUP menu is displayed.



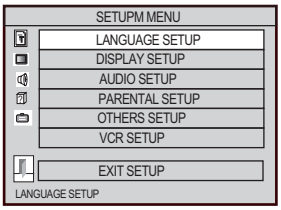
3. Press the Right ▶ button to enter the selected menu.

4. Press the Down ▼ (or Up ▲) button unit for the appropriate system is selected. and Press the ENTER button to activate the selected menu.
   (4:3 LETTER BOX → 4:3 PAN-SCAN → 16:9 WIDE)

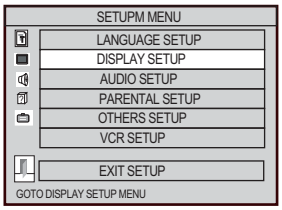


Set TV Type

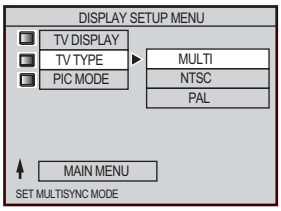
1. Press the "SETUP" button on the remote control.
   The initial MENU is displayd.



2. Press the Down ▼ button to select (ENTER) the "DISPLAY SETUP".
   Then the DISPLAY SETUP menu is displayed.

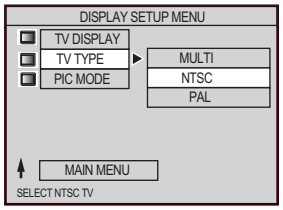


3.Press the Down ▼ button to select (ENTER) the "TV TYPE".



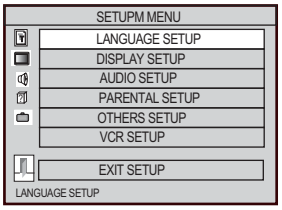
4. Press the Right ▶ button to enter the selected menu.

5. Press the Down ▼ (or Up ▲) button unit for the appropriate system is selected. and Press the ENTER button to activate the selected menu
   (MULTI → NTSC → PAL)

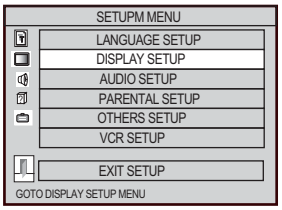


Set Picture Mode

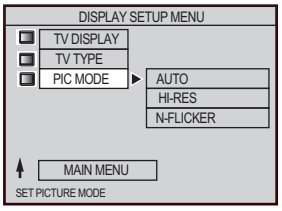
1. Press the "SETUP" button on the remote control.
   The initial MENU is displayed.



2. Press the Down ▼ button to select (ENTER)
   the "DISPLAY SETUP".
   Then the DISPLAY SETUP menu is displayed.

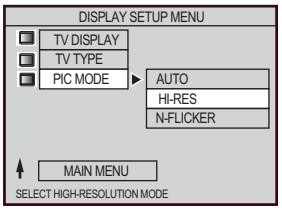


3. Press the Down ▼ button to select (ENTER)
   the "PIC MODE".



4. Press the Right ▶ button
   to enter the selected menu.

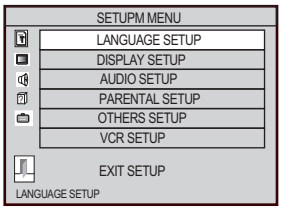
5. Press the Down ▼ (or Up ▲) button unit for the
   appropriate system is selected. and Press the
   ENTER button to activate the selected menu.
   (AUTO → HI-RES → N-FLICKER)



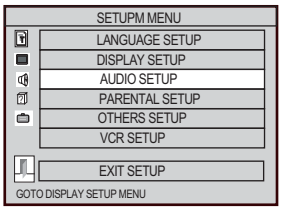
AUDIO SETUP MENU

Digital Out Setup

1. Press the "SETUP" button on the remote control.
   The initial MENU is displayed.

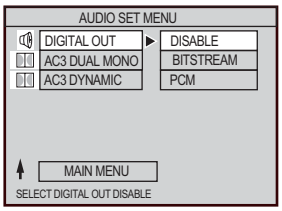


2. Press the Down ▼ button to select (ENTER) the "AUDIO SETUP".
   Then the AUDIO SETUP menu is displayed.



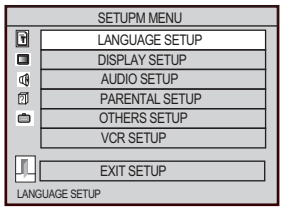
3. Press the Right ▶ button to enter the selected menu.

4. Press the Down ▼ (or Up ▲) button unit for the appropriate system is selected.
   and Press the ENTER button to activate the selected menu.
   (DISABLE → BITSTREAM → PCM)

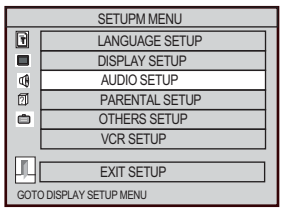


Dual Mono (1+1) Setup

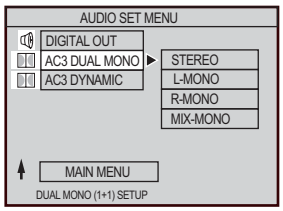
1. Press the "SETUP" button on the remote control.
   The initial MENU is displayed.



2. Press the Down ▼ button to select (ENTER) the "AUDIO SETUP".
   Then the AUDIO SETUP menu is displayed.

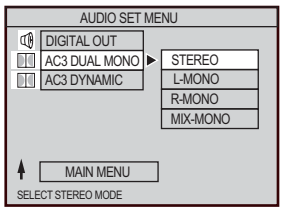


3. Press the Down ▼ button to select (ENTER) the "AC3 DUAL MONO".



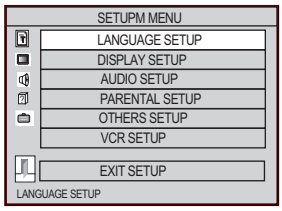
4. Press the Right ▶ button to enter the selected menu.

5. Press the Down ▼ (or Up ▲) button unit for the appropriate system is selected. and Press the ENTER button to activate the selected menu.
   (STEREO → L-MONO → R-MONO → MIX-MONO)

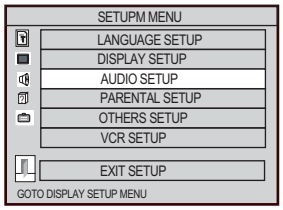


Dynamic Range Compression Setup

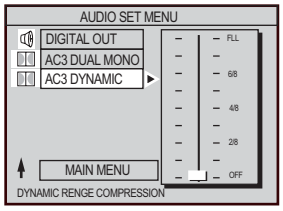
1. Press the "SETUP" button on the remote control.
   The initial MENU is displayed.



2. Press the Down ▼ button to select (ENTER) the "AUDIO SETUP".
   Then the AUDIO SETUP menu is displayed.

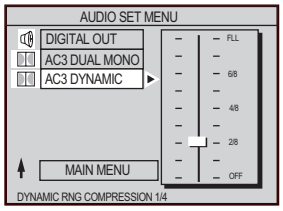


3. Press the Down ▼ button to select (ENTER) the "AC3 DYNAMIC".



4. Press the Right ▶ button to enter the selected menu

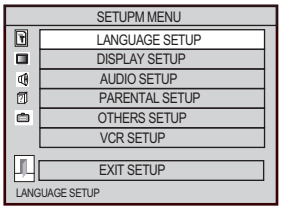
5. Press the Down▼ (or Up ▲) button unit for the appropriate system is selected. and Press the ENTER button to activate the selected menu.



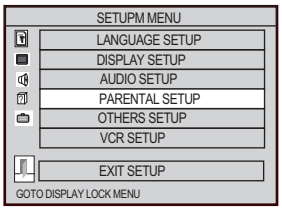
PARENTAL LOCK SETUP MENU

Setup Parental Lock

1. Press the "SETUP" button on the remote control.
   The initial MENU is displayed.

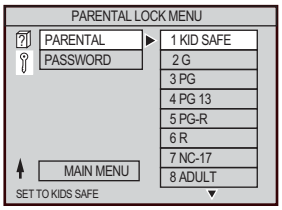


2. Press the Doen ▼ button to select (ENTER)
   the "PARENTAL LOCK".
   Then the PARENTAL LOCK menu is displayed.

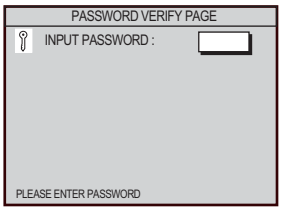


3. Press the Right ▶ button to enter
   the selected menu

4. Press the Down ▼ (or Up ▲) button unit
   for the appropriate system is selected.
   (KID SAFE → G → PG → PG 13 → PG -R →
   R → NC-17 → ADULT)
   Then the PARENTAL VERIFY PAGE menu is
   displayed.

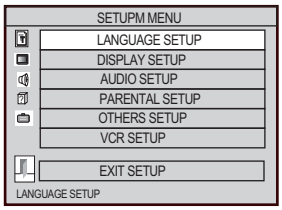


5. Then entering a user ̇s password, a user can resettle
   a user ̇s PARENTAL.

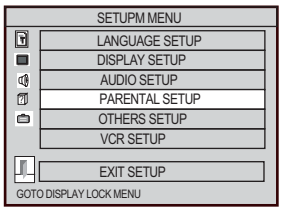


Change the Password

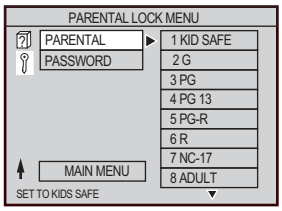
1. Press the "SETUP" button on the remote control.
   The initial MENU is displayed.



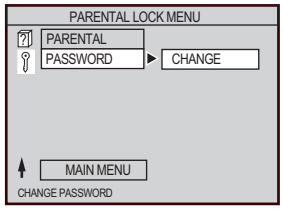
2. Press the Down ▼ button to select (ENTER)
   the "PARENTAL LOCK".
   Then the PARENTAL LOCK menu is displayed.



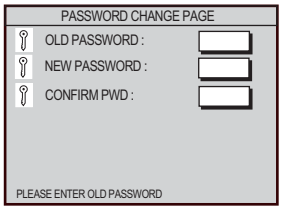
3. Press the Down ▼ button to select (ENTER)
   the "PASSWORD".



4. Press the Right ▶button to enter the
   selected menu.
   Then the CHANGE menu is displayed.



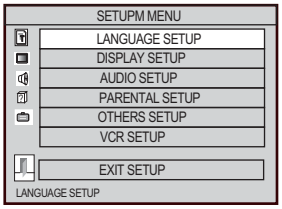
5. Then enter the user ̇s old password,
   and new password.



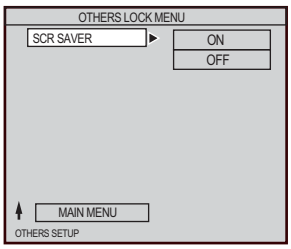
OTHERS SETUP MENU

Screen Saver

1. Press the "SETUP" button on the remote control.
   The initial MENU is displayed.

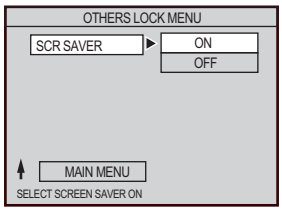


2. Press the Down ▼ button to select (ENTER)
   the "OTHERS SETUP".
   Then the OTHERS SETUP menu is displayed.



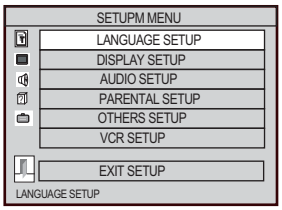
3. Press the Right ▶ button to enter the
   selected menu.

4. Press the Down ▼ (or Up ▲) button unit for the
   appropriate system is selected. and Press the
   ENTER button to activate the selected menu.
   ("ON" or "OFF")

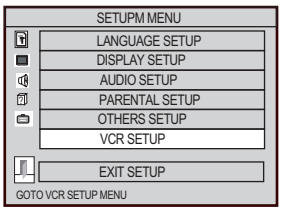


VCR Auto Repeat

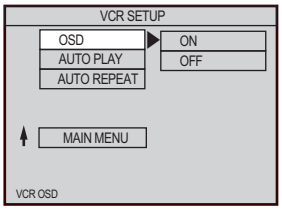
1. Press the "SETUP" button on the remote control.
   The initial MENU is displayed.



2. Press the Down ▼ button to select(ENTER) the "VCR SETUP",
   then the VCR SETUP menu is displayed.

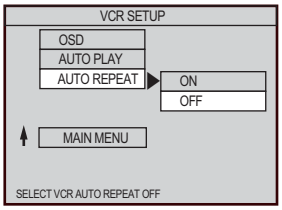


3. Press the Down ▼ button to select(ENTER) the "AUTO REPEAT",
   then the AUTO PLAY menu is displayed.



4. Press the Right ▶ button to enter the selected menu.

5. Press the Down ▼ (or Up ▲) button unit for the appropriate system is selected. and Press the ENTER button to activate the selected menu.
   ("ON" or "OFF")



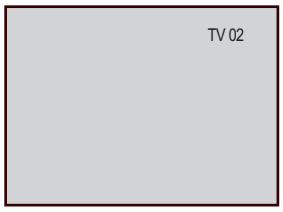
OPERATING TV TUNER (Option Function)

TV Channel Set

※ NOTE : If RF-Signal is not input, searching channel will be displayed blue-back picture.

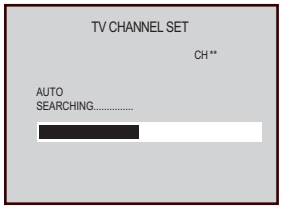
1. Press "A/V SEL." button on the remote control, until " TV" is selected.

   (DVD ▶ TV ▶ CATV ▶ AV1 ▶ AV2)



2. Press "A.SEARCH" button on the remote control, then channels will be found and stored automatically.

   While the "AUTO SEARCHING" is progressing, channels will be changed up to 69.



3. When searching and storing is completed, the TV mode will be displayed.

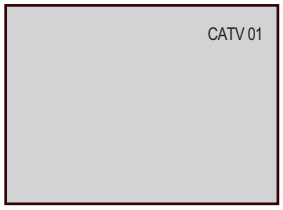
※ NOTE:
While searching and storing channels, no button will be operated.
When "AUTO REPAT" function is "OFF" and VCR is "STOP" mode, this function will be operated.

CATV Channel Set

※ NOTE : If RF-Signal is not input, searching channel will be displayed blue-back picture.

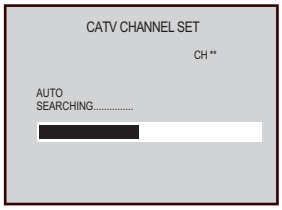
1. Press "A/V SEL." button on the remote control, until " CATV" is selected.

   (DVD ▶ TV ▶ CATV ▶ AV1 ▶ AV2)



2. Press "A.SEARCH" button on the remote control, then channels will be found and stored automatically.

   While the "AUTO SEARCHING" is progressing, channels will be changed up to 125.



3. When searching and storing is completed, the CATV mode will be displayed.

※ NOTE:
While searching and storing channels, no button will be operated.
When "AUTO REPAT" function is "OFF" and VCR is "STOP" mode, this function will be operated.

OTHER'S OPERATIO

Using a zoom function

A user can enlarge the current screen about 2,4 or 8 times.

Keep pressing [ZOOM] button till the preferred zoom appears.

Every time a user presses [ZOOM] button,
a zoom magnification changes 2 times (X2) → 4 times (X4) → 8 times (X8) → OFF → 2 times (X2) ... one by one.

A base point to be enlarged is center and the point can be changed with the operation of [◀, ▶, ▲, ▼] button.

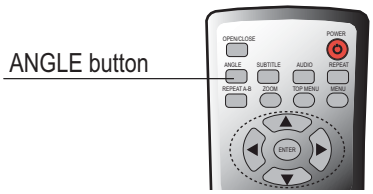
Playable Disc : DVD,VCD

Angle

If a disc includes multi angle information, a user can watch a screen in multi angles,
The function is limited to a DVD disc supporting multi angle information.

Keep pressing [ANGLE] button till the preferred angle appears.

Every time a user presses [ANGLE] button, an angle changes in a consecutive order.



Playable Disc : DVD

To Play It Skip

1. Press POWER button to power on.
2. Press [OPEN/CLOSE] button to open the disc tray.
3. Insert the disc and press [OPEN/CLOSE] button to close the tray.
4. To playback it, press [PLAY/PAUSE] button.
5. To move to next chapter, press F.SKIP(▶▶I) button.
   The current chapter moves to the next chapter.
6. To move to next chapter,Press R.SKIP(I◀◀) button.
   The current chapter moves to the next chapter.

Playable Disc : DVD,VCD,CD,MP3

To Play It Fast

1. Press FF (▶▶) button to start fast-play in playing.

   If Every time you press the button, play speed changes like the below orders
   DVD : x 2 FF → x 4 FF → x 8 FF → x 16 FF → x 32 FF → x 64 FF → PLAY → x 2 FF ....
   VCD,CD : x 2 FF → x 3 FF → x 4 FF → x 5 FF →PLAY→ x 2 FF....
   MP3 : x 2 FF → x 4 FF → x 6FF → x 8 FF →PLAY→ x 2 FF....
   Also you can return to normal speed by pressing play/pause (▶/II) button.

FF,REW Button

2. Press REW (◀◀) button to start reverse fast-play in playing.
   If Every time you press the button, play speed changes like the below orders
   DVD : x 2 FR → x 4 FR → x 8 FR → x 16 FR → x 32 FR → x 64 FR → PLAY → x 2 FR ....
   VCD,CD : x 2 FR → x 3 FR → x 4 FR → x 5 FR → PLAY → x 2 FR ....
   MP3 : x 2 FR → x 4 FR → x 6 FR → x 8 FR → PLAY → x 2 FR....
   Also you can return to normal speed by pressing (▶/II) button.

Playable Disc : DVD,VCD,CD,MP3

To Play It Slow

1. Press the SLOW button to play it slowly in PLAYBACK.
   Every time you press the button, play speed changes like the below orders
   DVD : x 2 SF → x 4 SF → x 8 SF→ x 2 SR→ x 4 SR → x 8 SR→ PLAY → x 2 SF.....
   VCD : x 2 SF → x 3 SF → x 4 SF → STEP BWD → x 2 SF.....
   Also you can return to normal speed by pressing PLAY/PAUSE (▶/II) button.
   *For the case of SVCD or VCD, Slow playback is available.
   * When "STEP BWD" status, every time you press the STEP ( ) button playback waed stop.

Slow Button

Playable Disc : DVD,DCD

Repeating a Defined Period

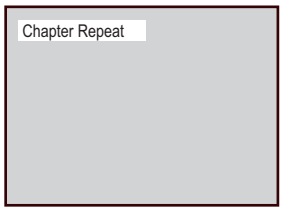
You may repeat a desired chapter or track.

1. Keep pressing REPEAT button till the preferred system appears.

DVD : Chapter Repeat on → Title Repeat on → Repeat off → Chapter Repeat on.....

VCD(CD) : Repeat Track → Repeat Disc→Repeat OFF.....

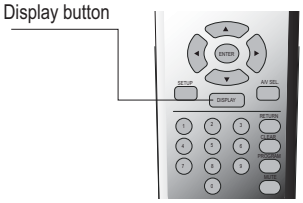
MP3 : Repeat One → Folder Rep → Folder → Repeat One.....



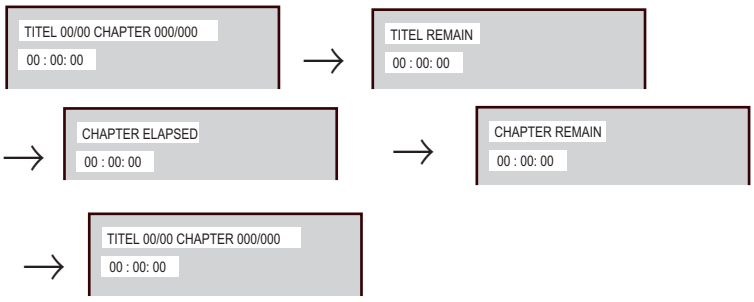
A certain disc may not be repeated.
Playable Disc : VCD,DVD,MP3(CD)

Confirming The Current Disc Mode

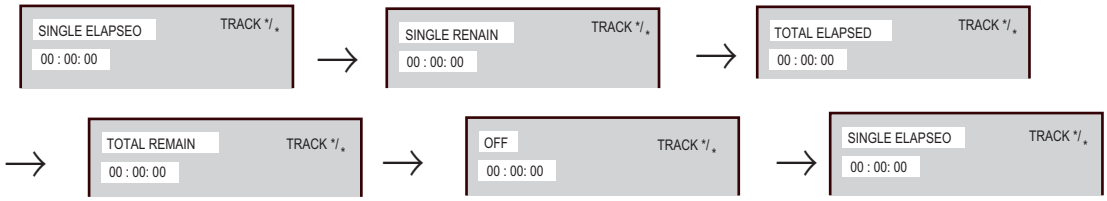
While in playing, Keep pressing "DISPLAY" button till the preferred system appears.



Playable Disc : DVD



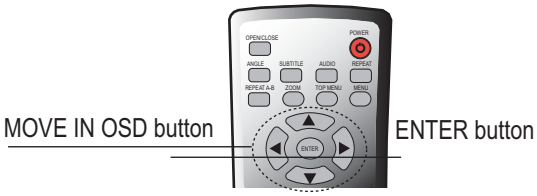
Playable Disc : VCD,CD



To Display Menus In a Disc

If a disc includes menus, a user may use them.

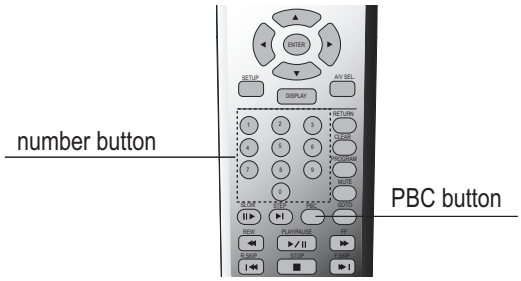
1. Press "MENU" button.
   It shows menus in the disc. Also they are different according to discs.
   Move a cursor to a relative item with "MOVE IN OSD" buttons of ◀ , ▶, ▼, ▲ button and select one with "ENTER" button or "PLAY" button.



Playable Disc : DVD

2. Press "PBC" button.
   Every time pressing "PBC" button, PBC function turns ON and OFF over and over.
   Menu screen only appears when selecting "PBC ON".

   Select a number of menu screen and press "ENTER" button.
   If you watch a movie without menu screen, select "PBC OFF" mode by pressing "PBC" button and "PLAY" button.



Playable Disc : VCD 2.0

CD and VCD1.1 do not support the function.

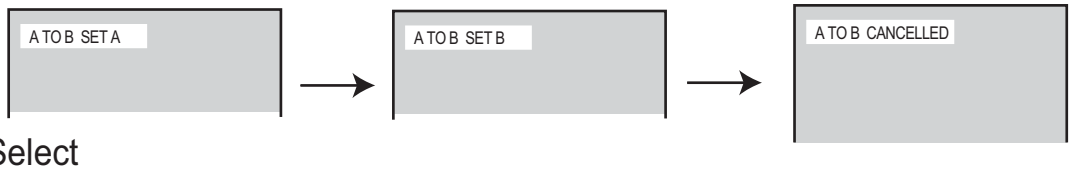
Repeating a defined period (DVD)

You may repeat a desired chapter or track.

1 . Mark the Starting Point.
Press the "REPEAT A-B" button at the beginning of the segment you want to repeat (Point A)
- "A TO B SET A" will Display after point A is selected.

2. Mark the Ending Point.
Press the "REPEAT A-B" button again at the end of the segment you want to repeat (Pint B)
- "A TO B SET B" will be displayed after point B is selected.
- The segment will begin repeating in a continuous loop.

3. Cancel A-B Repeat.
When you want to cancel "A - B Repeat", Press the "REPEAT A-B" button.
- "A TO B CANCELLED" will be displayed after "A-B REPEAT" is cancelled.



A/V Select

1 Press A/V Select Button on the remote control, If input Signal is TV and Aux2 (with TV tuner)
VCR Playback Status; DVD → VCR → AUX2 → DVD
VCR STOP Status; DVD → TV → CATV → AUX1 → AUX2 → DVD
REC or Auto Channel Search Status ; DVD → TV(CATV) → AUX2 → DVD

2 Press A/V Select Button on the remote control, If input Signal is Only AUX2 (withouth TV tuner)
VCR Playback Status; DVD → VCR → AUX2 → DVD
VCR STOP Status; DVD → AUX1 → AUX2 → DVD

※ This VCR will Automatically power on and into PLAYBACK mode when a cassette is inserted.
< WHEN VCR SETUP FUNCTION IS ONLY SETTED TO AUTOPLAY ON MENU>

※This DVD willl Automatically power on and into PLAYBACK mode when disc is inserted.

Random Play

1. Press [Open/Close] button to open disc tray
2. Insert a Disc and press [Open/Close] button to close disc tray
3. The system can be Play automatically
4. In Play mode, press the [STOP] button, then using the right/left key to move play mode menu
5. To playback it, press [PLAY/PAUSE]button.

Playable Disc : MP3

Track setting up play

1. Press [Open/Close] button to open disc tray
2. Insert a Disc and press [Open/Close] button to close disc tray
3. The system can be Play automatically
4. In Play mode, press the [STOP] button, and then press PROGRAM button to change PLAY MODE(PROG - STAR0) from PLAY MODE(DISC)
5.Using the up/down button to select(ENTER) wanted music
6.Press [STOP] button to change PLAY MODE(PROG - END) from PLAY MODE (PROGRAM)
7. To palyback it, press [PLAY/PAUSE] button.

Playable Disc : MP3

ABOUT VCR

Video Head Cleaning

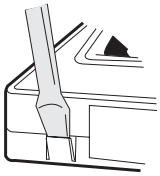
The video heads enable the VCR to read video information pictures from the tape during playback.
In the unlikely event that the heads become clogged with dirt video playback will be impossible.
This can easily be determined during playback of a known good tape, there is good sound, but the picture is extremely snowy.
If this si the case, have the video cassette recorder checked by qualified service personnel.

NOTES
During normal operation of the VCR, the video and audio heads can accumulate dirt over a period of time, especially when using an old or poor quality tape. When the heads are dirty, the picture can get snowy and the tracking control will have little or no effect.
If this condition occurs, head cleaning cartridges may take care of the problem and restore normal picture.
We recommend that head cleaning cartridges be used sparingly since they are very abrasive and can damage the video heads during prolonged use.
If the problem is not resolved with the head cleaning cartridge then the unit needs to be checked by a qualified service personnel.

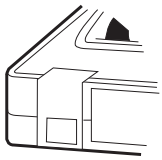
Erasure Protevtion

Video cassettes are equipped with a safety tab to prevent accidental erasure.
When the tab is removed, recording can not be performed.

TO PREVENT ACCIDENTAL ERASURE
-After recording, break off the safety tab with a screwdriver if you don't want to record over the tape.

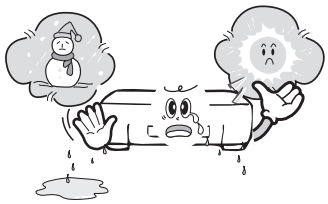


TO RECORD AGAIN
- Cover the hold with cellophane tape.



What Is Dew Condensation Symptom?

If a VCR is moved from a cool place to a warm and damp place or a place facing a direct cool wind from air-conditioner...and others, temperature varies sharply, which makes dew on head drums of VCR.



If dew condensation occurs,

1 First, turn it on for one or two hours before using it.
2 Do not use it because it may develop troubles of a VCR or video tape.

ABOUT DVD

Playable Disc

DVD,Video CD (Version 1.1,2.0),S-VCD , Audio CD and MP3

Disc type	Playable	Restriction
DVD	Possible	Region number 1 or Region number All
Video CD	Possible	Version 1.0/1.1/2.0, SVCD/CVD
CD	Possible	PCM or dts
CD-R	Possible	Video-CD/CD/CD-ROM (MP3 File)
CD-RW	Possible	Video-CD/CD/CD-ROM (MP3 File)
DVD-R	Possible	DVD Video
S-VCD	Possible	SUPER Video CD

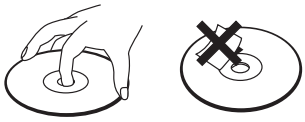
REGION MANAGEMENT INFORMATION

(Region 1)

(Region ALL)

This unit is designed and manufactured to respond to
the Region Management information that is recorded on a DVD disc.
The region number of this player is "1".
If the region number described on the DVD discs
does not correspond to the Region number of this player, the player will not play this disc.
This player will play DVD discs made for "ALL" regions.
Therefore, this player will play DVD discs marked with labels
containing the region number "1" or "ALL".

Handling Disc



- To keep a disc clean condition, please do not touch a side containing play information.
- Do not attach a bit of paper or sticky tape on it.
- Do not expose a disc to a direct sunlight or electric heating systems.
- After using it, please keep a disc in a case.

Cleaning Disc

- Before using it, please rub it from center toward outside with clean clothes.
- Do not use any type of solvent such as thinner, benzol (benzene), commercial cleaning goods or antistatic sprays.

Terms Related With DVD

DVD

A DVD (abbreviation of Digital Versatile Disc or Digital Video Disc) can include 135 minutes of video information. And for audio, it can hold up to 8 kinds of languages and 32 kinds of subtitle languages.
By using MPEG-2 video compression and digital 3D surround sound, DVD realizes highdefined screen and quality sound like a movie theater.

CDDA

A CDDA (abbreviation of Compact disc digital audio) is a music disc that is currently used.

MP3

Audio compression format that enables audio files to be stored and transferred on a computer with a relatively small file size. It enables you to enjoy CD quality music. (Short for MPEG-1 Layer 3)

PBC

This is recorded on a Video CD 2.0, Video CD 3.0, SVCD and CVD.
The scenes or information to be viewed (or listened to) can be selected interactively with the TV monitor by looking at the menu shown on the TV monitor. It stands for PlayBack Control.

CHAPTER

It means the information recorded in a DVD. A title in a DVD is divided into many tracks, of which a track is called as a chapter.
A certain scene of a screen can be quickly searched with the chapter number.

TITLE

It means the information recorded in a DVD. A DVD can be divided into may titles.

TRACK

It means the information recorded in a video CD and audio CD.
A disc consists of many a track, for which a user can search a certain position.

Angle

Some DVD discs contain the various scenes that have been simultaneously shot from a number of different angles.

BEFORE DOUBTING ABOUT TROUBLES (DVD)

Symptom	Checks
The recorder does not play.	- If a DVD is from overseas, it may not be played. Please check a DVD's region code whether it has the relative region code 1 or All. - Please check whether a DVD is inserted in a right direction. - If it is a CD-ROM for PC or DVD-ROM, it does not work.
No sound comes through.	- Play mode may be "SLOW" or "PAUSE"(In abnormal speed play, no sound comes through) - Did you connect the parts in right way? - Please check the operative condition of TV or amplifier. - From SETUP, please check "AUDIO" items.
A disc is playing but screen does not appear or poor screen appears.	- Did you turn on your TV sets? - Did you connect the parts in right way? - The play may be in "PAUSE". - A disc may have some contaminants or be damaged. - A disc may be bad one.
Sound is irregular	- Please check the connection with Dolby Digital amplifier. - Please check the plugs are connected with one another tightly. - Some contaminants may be remained in connection terminal.
REMOTE does not work.	- a Please check the degree of remote control, distance or any interruption. - a Battery may be weak or exhausted. - a When you operate DVD, use it by pressing [DVD] button.
"AUDIO" or "SUBTITLE" button does not work.	- If a DVD does not include language information, it does not support the function.
"ANGLE" button does not work while a DVD is playing.	- "ANGLE" is supported only in a DVD contains multi angle scenes. Also a user can confirm the support with the "ANGLE" mark on screen.
"MENU" does not appear while a DVD is playing.	- A DVD may not contain menu information.
Screen shakes or appears only in black and white. (or Subtitle shakes)	- The recorder may not coincide with your TV system. Please press "SYSTEM" to match to NTSC system. - A disc may have some contaminants or be damaged. - If you playback a DVD disc of PAL system whose region code is "ALL", the playback screen may shake.

BEFORE DOUBTING ABOUT TROUBLES (VCR)

Symptom	Checks
"Power On" does not work.	- Please check whether a power plug is inserted in an electric outlet. - The Polarity of power cord is not correct.
It does not work even in "Power On".	- Please check whether a videotape is inserted in. - Try to insert a plug again. - Check circuit fuse at source of power. (see vehicle/converter manual.)
A videotape is not inputted in.	- Please check whether a power plug is inserted in an electric outlet. - Please check whether a videotape is in. - Please check whether a videotape is inserted in a right direction (a side of transparent window should be on the upside) - Have you inputted a videotape again just after the tape was ejected? Please try it again after fully ejecting it. - When a videotape forces to be ejected, the tape may not be inputted. In the case, please pull out an outlet, and then push the tape smoothly.
On inputting a videotape, the tape is re-ejected.	- That's why a safe mode to protect a videotape is operated automatically. Please pull out the tape and input it again.
A videotape is not ejected.	- In case the product is used for a long time, a videotape may not be ejected for a film inside may be stretched. In the case, please pull out a power plug for about 10mins and then press "EJECT" button.
A channel on video and a play screen does not appear.	- Please check your antenna's connection. - TV channel should be fixed on video channel (3 or 4). - Please check your antenna's signal whether it may be weak. In case of its weakness, please use a frequency amplifier connected with the device.
Noise (screen noise) appears on screen.	- While in no use of VCR, was it turned on? - While in recording a program, do you watch another channel?
While in playing, noise appears.	- Please press "TRACKING" for better screen. Videotape may be poor. Try to change it to another one.
Sound and screen are irregular. Sound comes out but screen does not appear. Screen is irregular and stripes appears. "Screen Error" message is displayed in a screen.	- Please use a head-cleaner to clean VCR heads. VCR heads may be contaminated.

Symptom	Checks
While recording and playing, the top of screen extremely waves.	- Since VCR Play signals are not stable like a TV signals, screen
A screen is not clear.	- In case videotape is the one recorded by other products or old one, stripe may appear on the screen. - Try to adjust the screen by [TRACKING+/-] button - Try to use a head-cleaner.
A screen at pause is trembling or slow screen is not clear.	- Try to use a head-cleaner. - Try to adjust the screen
Recording a TV program is impossible.	- For recording, you should use videotape with a tab. - Please check whether a channel is fixed on video. If not, you have to turn it into "TV" by pressing "OUTPUT" button. - Are RF cables inputted antenna connection terminal correctly? - Does a CH number selected in display section appear? - Please check a tab on a tape whether it is broken or not. (If it was broken, please scotch-tape it) - Check whether a tape attached with a recording tap is inserted. - Is the rounded line (RF cable) connected in "ANT.IN" terminal? - Is the selected channel number shown in Display? - Is a tab of cassette tape broken? (Please cover a tab hole with cellophane adhesive tape (Scotch tape).)
In spite of pressing "CHANNEL", a channel can not be set.	- You may not memorize channels. - Please check your channel setting or press a number button.
While duplicating, screen is not clean and distorted.	- Some tapes or discs distributed in the market for lending is set to prevent copy in manufacturing. These tapes cannot be duplicated in a good condition.
remote control does not work.	- Battery may be weak or exhausted. - A receiver of remote control may be different with a sender.
Buttons on remote control do not work.	- In case a videotape is positioned in the beginning, "VISS REW" and "REW" do not work. - In case a videotape is positioned in the end, "FF", "VISS FF", "PLAY" and "REC" do not work. - Please check whether another button is pressed.
Cable broadcasting can not be selected.	- Please select "CABLE" not "NETWORK" from the "CHANNEL SETTING".

SPECIFICATIONS

VCR Part

Power Supply	DC 12V
Consumed electricity	24W
Weight	approx 3.9 Kg
Dimension (WxHxD)	265mm x130mm x 275mm
Operative temperature	5 ℃~35 ℃ (Humidity : 80% maximum)
Installation condition	Horizontal
Received channels	VHF: 2-13 CH / UHF: 14-69 CH / Cable: 1-125
Signal type	NTSC-M
Antenna Input/output	U/V-mixed: 75½unbalanced
VIDEO input	1.0 Vp-p 47k ohm unbalanced, RCA JACK
AUDIO input	Line Input -8.8dBm, 47k ohm minimum
VHF output	3 or 4 CH
VIDEO output	1.0 Vp-p 47k ohm unbalanced, RCA JACK
TAPE WIDTH	12.65mm (1/2INCH) VHS
Record System of Luminance Signal	Frequency Modulation Recording
Record System of Color Signal	Down converted sub carrier phase shift system
Tape Speed	SP : 33.35 mm/s EP : 11.12 mm/s (FOR NTSC)
REC Time (T-120)	SP : 2Hours EP : 6 Hours (FOR NTSC WITH T-120)
FF/REW Time	ABOUT 4 Min (T-120)
Luminance S/N	SP : 43 dB Min EP : 41 dB Min
Audio Signal Output	1.Mono EE/SN-1 : -5.8dBm±2dBm(1Khz) 1Kohm Maximum SN-2 : SN-1+2,-5dBm(7Khz) 1Kohm Maximum 2. Hi-Fi EE/REC => PB;SP -5.8dBm±2dBm(400Hz) 1Kohm Maximum SN-7A; -5.8dBm± 2dBm(1Khz) 1Kohm Maximum
Audio S/N (A.W)	MONO ; SP 42 dB Minimum SLP 40dB mINIMUM Hi-Fi ; SP/SLP 68dB Minimum
A.Frequency Range	Hi-Fi ; SP/SLP 0+1,-3dB [20Hz-20KHz]

Distortion	Hi-Fi; sp/slp 0.7% Maximum Mono ; SP 4.0% Maximum/SLP 5.0% Maximum
Wow Flutter	Hi-Fi ; SP/SLP 0.012% Maximum Mono ; SP0.0300% Maximum/SLP 0.400% Maximum
Hi-Fi Channel Balance	SP/SLP ±3.0 Miximum
Hi-Fi CH Seperation (A.Weighted)	sp/slp : 45dB Min

DVD Part

Pick-up System	Non-contact Optical Pick-up System AT Attachment Packet Interface (ATAPI)
Playable disc	* DVD/VCD/CD/CD-R/CD-RW/MP3/ SVCD/DVD-R * DVD : DVD-5, DVD-9, DVD-10, DVD-18, DVD-R * CD : CD-DA, CD-R, CD-R/W, Video CD, DVCD, SVCD, * Disc diameter : 12cm, 8cm * Disc Capacity DVD : 4.7GB(DVD-5, single layer) 8.5GB(DVD-9, dual layer) 9.4GB(DVD-10, double side & single layer) 17.1GB(DVD-18, double side & dual layer) CD : 550MB(Mode 1,12cm) 680MB(Mode 2,12cm) 180MB(8cm) * Disc Thickness : 1.2mm (CD & DVD) * Disc Center Hole : 15mm diameter * Track pitch : 1.6mm (CD), 0.74mm (DVD) * Scanning velocity : 1.2~ 1.4 m/sec (CD) 3.49 m/sec (DVD Single Layer) 3.84 m/sec (DVD Dual Layer) * Block Size DVD : 2,048 bytes CD : Mode 0 2,352 bytes Mode 1 2,048 bytes Mode 2 2,336/2,048/2,328 bytes
Audio Signal Output	* 2.0 Vrms
Audio S/N(A. W)	* 100dB(RCA JACK) Digital audio output
Audio Frequency range	* 20 Hz (CH 3) : - 0.3 ±1 dB 1 KHz(CH 2) REFERENCE : 0 dB 20 KHz(CH 6) : - 1.5 (±1 dB)
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Operating time	* Spin-up time : Less than 13 sec (Typical) * Stop time : Less than 2 sec(Typical)
Laser parameters	* DVD Semiconductor Laser / Wave length : 650nm / Emission power : 0.28 mV *CD Semiconductor Laser / Wave length : 780nm Emission power : 0.30 mV