JVC

DVD/CD PLAYER
Hi-Fi STEREO
VIDEO CASSETTE RECORDER
USER'S GUIDE

VHS SQPB

4 HEAD

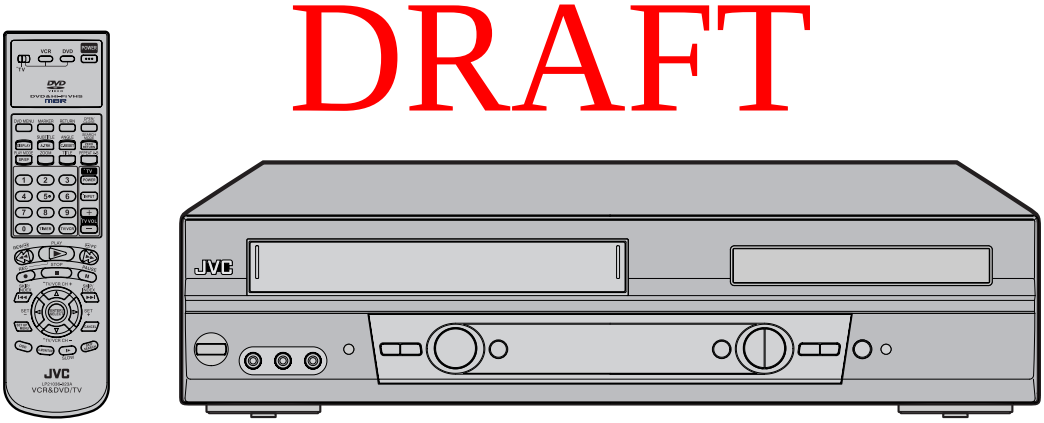
19µm HEAD

Hi-Fi

For model:
HR-XVC20U

DVD VIDEO™ COMPACT disc DIGITAL VIDEO COMPACT disc DIGITAL AUDIO

DRAFT



DOLBY DIGITAL dts DIGITAL OUT SPATIALIZER® N-2-2™

For Customer Use:

Enter below the Model No. and Serial No. which are located on the rear of cabinet. Retain this information for future reference.

Model No. _____

Serial No. _____

LPT0674-001B ?

CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN

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

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

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

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

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS POLARIZED PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

CAUTION: Changes or modifications not expressly approved by the partly responsible for compliance with the FCC Rules could void the user's authority to operate this equipment.

CAUTION:
THIS DIGITAL VIDEO PLAYER EMPLOYS A LASER SYSTEM.

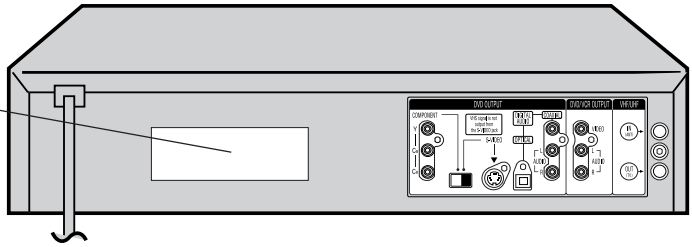
TO ENSURE PROPER USE OF THIS PRODUCT, PLEASE READ THIS USER'S GUIDE CAREFULLY AND RETAIN FOR FUTURE REFERENCE. SHOULD THE UNIT REQUIRE MAINTENANCE, CONTACT A JVC AUTHORIZED SERVICE CENTER.

USE OF CONTROLS, ADJUSTMENTS OR THE PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

TO PREVENT DIRECT EXPOSURE TO LASER BEAM, DO NOT TRY TO OPEN THE ENCLOSURE. VISIBLE LASER RADIATION MAY BE PRESENT WHEN THE ENCLOSURE IS OPENED. DO NOT STARE INTO BEAM.

Location of the required Marking
The rating sheet and the safety caution are on the rear of the unit.

CERTIFICATION: COMPLIES WITH FDA RADIATION PERFORMANCE STANDARDS, 21 CFR SUBCHAPTER J.



CAUTION:
Changes or modifications not approved by JVC could void user's authority to operate the equipment.
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 Rules. 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 into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

IMPORTANT SAFEGUARDS

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 the exterior cabinet only.
6. **ATTACHMENTS**
   The manufacturer of this unit does not make any recommendations for attachments, as they may cause hazards.
7. **WATER AND MOISTURE**
   Do not use this unit near water. For example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool.
8. **ACCESSORIES**
   Do not place this unit on an unstable cart, stand, tripod, bracket, or table. The unit may fall, causing serious injury, and serious damage to the unit. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

PORTABLE CART WARNING
(symbol provided by RETAC)

S3125A

9. **VENTILATION**
   Slots and openings in the cabinet back or bottom 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. The openings should never 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 source. This unit should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided and/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 rating plate. If you are not sure of the type of power supply to your home, consult your appliance dealer or local power company. For units intended to operate from battery power, or other sources, refer to the operating instructions.
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 should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug, if your unit is equipped with a 3-wire grounding-type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This too, is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.
12. **POWER-CORD PROTECTION**
    Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

IMPORTANT SAFEGUARDS

13. LIGHTNING

To protect your unit from 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.

14. POWER LINES

An outside antenna system should not be located in the vicinity of overhead power lines or 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 such power lines or circuits, as contact with them might be fatal.

15. OVERLOADING

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

16. OBJECT AND LIQUID ENTRY

Do not push objects through any openings in this unit, as they may touch dangerous voltage points or short out parts that could result in fire or electric shock. Never spill or spray any type of liquid into the unit.

17. OUTDOOR ANTENNA GROUNDING

If an outside antenna or cable system is connected to the unit, be sure the antenna or cable system is grounded to provide some protection against voltage surges and built-up static charges, Section 810 of the National Electrical Code, ANSI/NFPA 70, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

18. 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.

19. 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, as an 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.

20. REPLACEMENT PARTS

When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer or those that have the same characteristics as the original part.
Unauthorized substitutions may result in fire, electric shock or other hazards.

21. SAFETY CHECK

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

22. HEAT

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

23. DISC TRAY

Keep your fingers away from the disc tray as it is closing. It may cause serious personal injury.

24. CONNECTING

When you connect the product to other equipment, turn off the power and unplug all of the equipment from the wall outlet. Failure to do so may cause an electric shock and serious personal injury. Read the owner's manual of the other equipment carefully and follow the instructions when making any connections.

25. LASER BEAM

Do not look into the opening of the disc tray or ventilation opening of the product to see the source of the laser beam. It may cause sight damage.

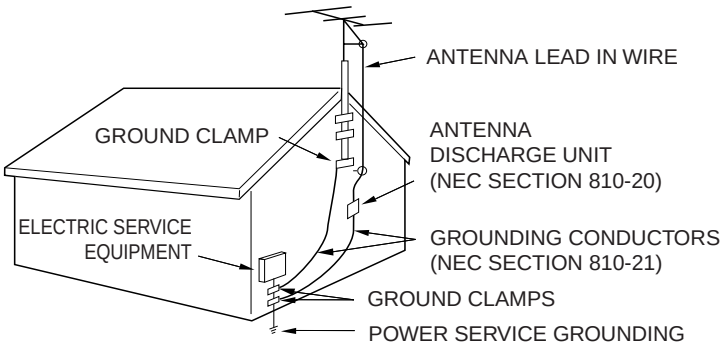
26. DISC

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

27. NOTE TO CATV SYSTEM INSTALLER

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that 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.

EXAMPLE OF ANTENNA GROUNDING AS PER THE NATIONAL ELECTRICAL CODE



NEC-NATIONAL ELECTRICAL CODE
S2898A

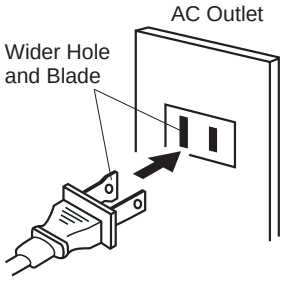
CONDENSATION

Moisture will form in the operating section of the DVD/VCR if the player is brought from cool surroundings into a warm room or if the temperature of the room rises suddenly. And when this happens, DVD/VCR's performance will be impaired.

To prevent this, let the DVD/VCR stand in its new surroundings for about an hour before switching it on, or make sure that the room temperature rises gradually.

Condensation may also form during the summer if the DVD/VCR is exposed to the breeze from an air conditioner. In such cases, change the location of the DVD/VCR.

Power source



Polarized AC Cord Plug
(One blade is wider than the other.)

TO USE AC POWER SOURCE

Use the AC polarized line cord provided for operation on AC. Insert the AC cord plug into a standard 120V 60Hz polarized AC outlet.

NOTES:

- Never connect the AC line cord plug to other than the specified voltage (120V 60Hz). Use the attached power cord only.
- If the polarized AC cord does not fit into a non-polarized AC outlet, do not attempt to file or cut the blade. It is the user's responsibility to have an electrician replace the obsolete outlet.
- If you cause a static discharge when touching the unit and the unit fails to function, simply unplug the unit from the AC outlet and plug it back in. The unit should return to normal operation.

Features

DVD/CD Player/Video Cassette Recorder

- **DVD/CD player with Video Cassette Recorder -** Unique space saving design combines a DVD/CD player and a Hi-Fi Video cassette recorder. The DVD disc has much more capacity, but is the same size as the audio CD disc. Picture quality is higher than Super VHS. Audio quality is higher than audio CD. The DVD PLAYER can play back video CDs and audio CDs.
- **High Quality Picture -** More than 500 lines (VCR mode: 230 lines) of Horizontal Resolution. It exceeds Super VHS (400 lines) or Laser Disc (430 lines) in resolution.

VCR Section

- **Stereo/SAP Reception -** This VCR is designed to receive stereo and separate audio program (SAP) broadcasts where available.
- **SQPB -** Tapes recorded in the S-VHS system can be played back simply on this VCR.
- **4 Video Heads -** Provides optimal picture quality for special effects playback.
- **19µm HEAD -** For superior picture quality even in EP mode, 19micron width technology helps to avoid crosstalk and boost EP picture quality to near SP levels. With precision technology, ghosts and color beats are virtually eliminated.
- **Hi-Fi Stereo Sound -** With a frequency response of 20 to 20,000 Hz and a dynamic range of better than 90dB, this VCR provides a level of excellence that rivals compact discs.
- **Instant Timer Recording (ITR) -** Simply by pressing the REC and PLAY buttons, the VCR can be programmed for up to 5 hours of recording with an immediate start.
- **Skip Search -** When the SKIP SEARCH button is pressed during playback, the VCR will automatically search forward in 30 seconds increments to a maximum of 3 minutes with each press of the SKIP SEARCH button, and then return to normal playback.

DVD Section

- **Compatible with a wide range of DVD audio outputs**
  Digital Audio Jack (Optical or Coaxial):
  - When a component with a built-in Dolby Digital decoder is connected, Dolby Digital sound can produce the effect of being in a movie theater or a concert hall.
  - Surround standard different from Dolby Digital. This format is already in use in many theaters. By connecting this unit to a DTS decoder or an AV amplifier with a built-in DTS decoder, the DTS audio of DVD discs recorded in this format can be enjoyed. However, audio will not be output from the analog audio output jacks.
  - The MPEG audio of DVD discs recorded in this format can be enjoyed.
  - The Linear PCM sound of a 48 kHz/16 bit through 96 kHz/20 bit exceeds audio CD sound.
- **Surround audio -** This DVD equipped with a “SPATIALIZER N-2-2”. It can produce the effect of being in a cinema or a concert hall.
- **Multi-Language -** Since this DVD matches with 124 language-subtitles/-soundtracks, you can enjoy selecting a favorite one. (You can not select the language that is not recorded on the disc.)
- **Multi-Angle -** Pictures of Sports or a Live Concert are recorded with many cameras. When you play such a disc, you can change the angles during playback. (If a Multi-Angle is not recorded on the disc, you can not change the angle.)
- **Repeat Playback -** You can repeat chapter, track, title, sides or material between two selected points.
- **Program/Random Playback (CD) -** You can play back tracks in programmed or random-selected sequences.
- **Zoom -** You can zoom in on the selected subject on the screen during playback.
- **Video Aspect Ratio -** You can change the aspect ratio of the screen for your monitor/television on a suitable disc.
- **Parental Control -** You can limit the playback of scenes or sounds of adult DVD discs which have a parental level rating.
- **MP3/WMA/JPEG file Compatibility -** This DVD can play back MP3/WMA/JPEG file recorded on the CD-R/RW and FUJICOLOR CD and Kodak Picture CD formats.

* This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation or other rights owners and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation or other rights owners. Reverse engineering or disassembly is prohibited.

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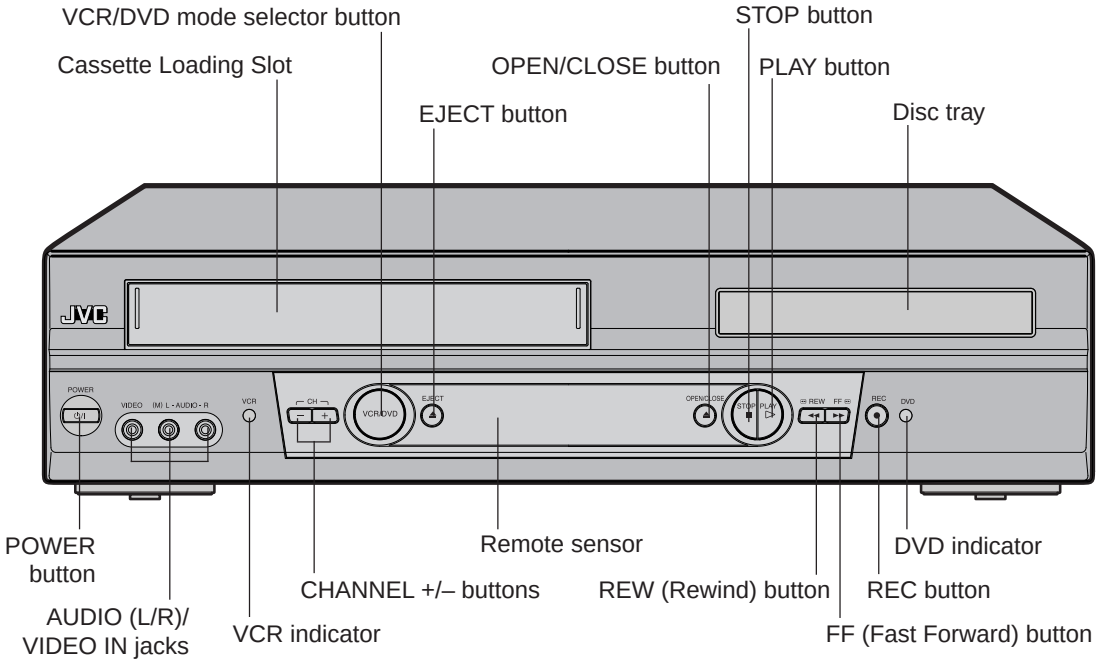
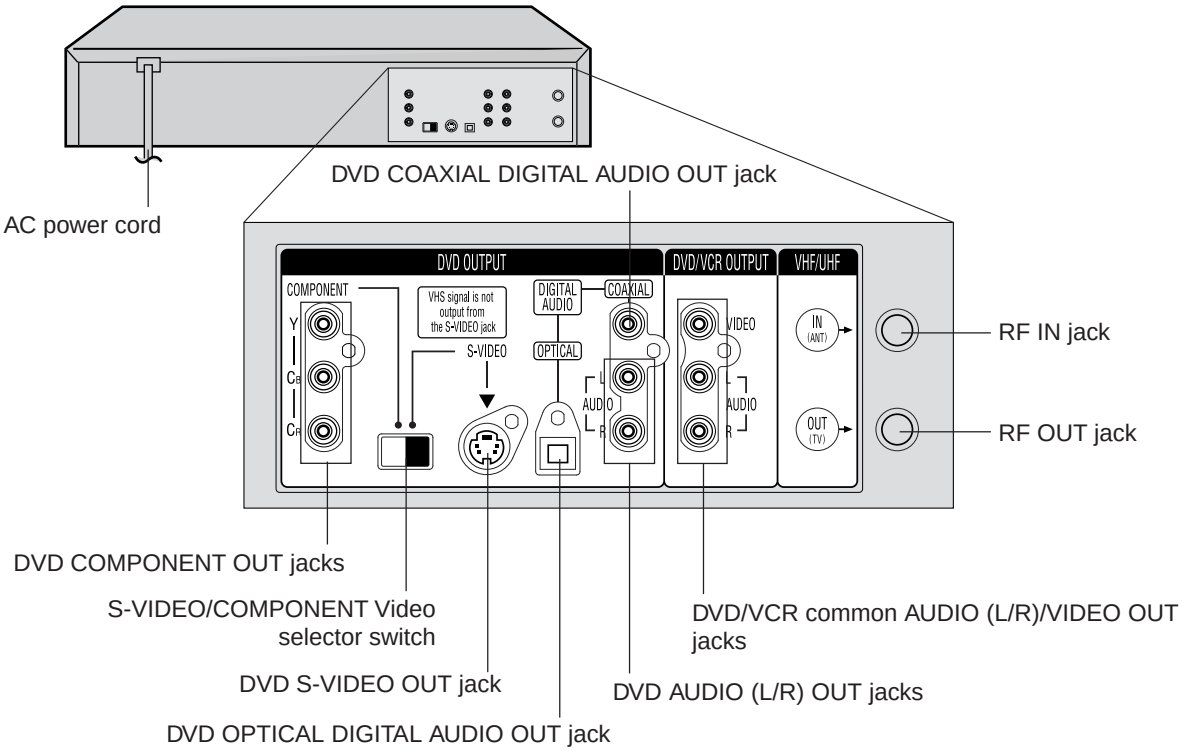
Parts and functions

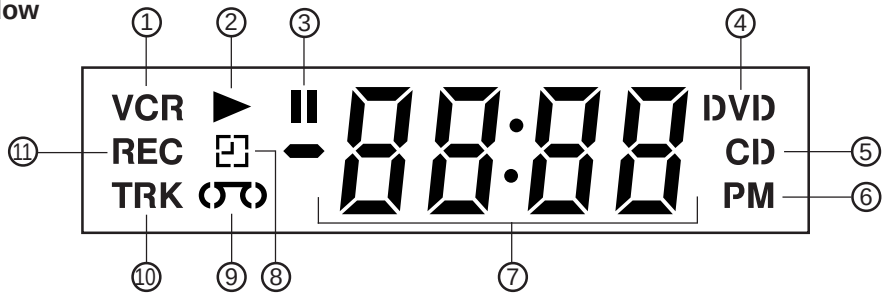
Front



Rear



Display window



No.	Display	Description
①	VCR	VCR mode
②	▶	Playback (lights) / Auto resume (flashes)
③	❚❚	Still picture
④	DVD	DVD disc is inserted.
⑤	CD	CD is inserted.
⑥	PM	Display for afternoon (lights out in the morning)
⑦	10 : 00	Clock display (colon[:] flashes)
	01 : 00	Counter display by hour/minute at VCR/DVD / by minute/second at CD
	2	Track number display for CD
	CH02	TV channel display for VCR
	C036	CATV channel display
	Err	Error display
	L	External input display
	Pbc	Playback Control (Video CD)
⑧		Timer recording display
⑨		Video tape is in the unit
⑩	TRK	Track display for CD
⑪	REC	Normal recording display (flashes during Instant Timer Recording - ITR)

Explanation for On-Screen-Symbol (DVD):

- ▶ Playback
- ■ Stop
- ❚❚ Still picture
- Frame advanced playback
- Forward slowmotion
- Fast Forward playback
- Review playback
- Skip chapter to forward direction
- Skip chapter to reverse direction
- Open or Close the tray
- Auto resume
- ◀▶▲▼ Direction button's mark
- A–B A-B repeat
- Off Repeat off
- Subtitle language
- Soundtrack language
- Angle
- Zoom
- Parental level locked
- Parental level unlocked
- Screen size: Normal TV
- Screen size: PAN SCAN
- Screen size: WIDE
- Shows prohibited act
- Output sound for Video-CD

Note:
Some discs may be displayed wrong or e.g. chapter number, playback time, etc. may not be displayed.

Remote control

TV Multi-Brand Remote Control

This Remote can control some functions (**TV POWER**, **NUMBER(0-9)**, **INPUT**, **TV VOL +/–**, **TV CH +/–** and **ENTER**) of a remote controllable TV of JVC and the brands listed on page 12 by slide **TV/VCR/DVD** switch to TV.
(The POWER button on the upper right is not effective for the TV.)

NOTES:

- It's not possible to operate a unit not equipped with a remote sensor.
- When you operate the VCR or DVD, the **TV/VCR/DVD** switch must be slided to VCR/DVD again. Otherwise the DVD/VCR may not operate properly.
- Since this unit is combined type of DVD and VCR, the remote code of DVD is individual. So please note that the DVD-keys on the RCU of the other JVC RECEIVER/TV is not effective for this unit.

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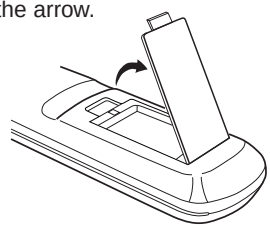
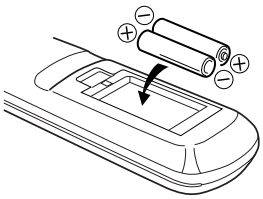
Inserting Batteries

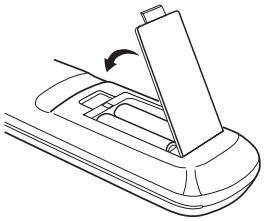
1 Open the battery compartment cover in the direction of the arrow.



2 Install two "AA" batteries (supplied), paying attention to the polarity diagram in the battery compartment.



3 Replace the compartment cover.



Battery precautions

The precautions below should be followed when using batteries in this device:

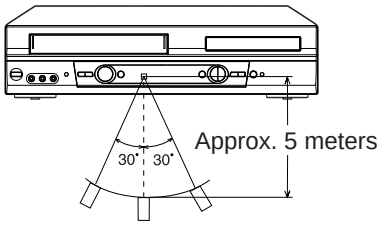
1. Use only the size and type of batteries specified.
2. Be sure to follow the correct polarity when installing the batteries as indicated in the battery compartment. Reversed batteries may cause damage to the device. To avoid a potential short circuit, insert the "–" end first.
3. Do not mix different types of batteries together (e.g. Alkaline and Carbon-zinc) or old batteries with fresh ones.
4. If the device is not to be used for a long period of time, remove the batteries to prevent damage or injury from possible battery leakage.
5. Do not try to recharge batteries not intended to be recharged; they can overheat and rupture. (Follow battery manufacturer's directions.)

Remote control basics

- Press **POWER** to turn the DVD/VCR on or off.
- Make sure **TV/VCR/DVD** switch is set to VCR/DVD.
- Tap **VCR CH +** or **VCR CH –** to move through the channels one channel at a time.
- The **VCR CH +/–** and **SET +/–** are also used to navigate on-screen menu system.
- You can directly access specific channels using **Number keys** pad.
- Each press of **VCR** or **DVD**, switches the screen between the VCR screen (VCR mode) and the DVD screen (DVD mode).

Operation

- Aim the remote control at the remote sensor and press control buttons to operate.
- Operate the remote control within 30° angle on either side of the remote sensor, up to a distance of Approx. 5 meters.



TV multi-brand remote control

The DVD/VCR's remote control can control several functions on JVC remote control TVs and on the brands of remote control TVs listed below.

NOTE:
Depending on the type of TV, there may be cases where some or all functions cannot be operated using the remote control.

Preparation:
- Turn the power off the TV using theTV's remote control.
- Make sure **TV/VCR/DVD** switch has been slided to TV.

1 Press and hold **VCR** on the remote control until you finish the step 2.

2 Enter your TV's brand code using the **Number keys**, then press **ENTER**.

- Once you have set the remote control to operate the TV, you don't have to repeat this step until you replace your remote control's batteries.
- PANASONIC has two codes. If the TV does not function with one code, try entering the other.

3 First, press **TV POWER** on the remote to see if the TV's power goes on as it should. If it does, try other operations.

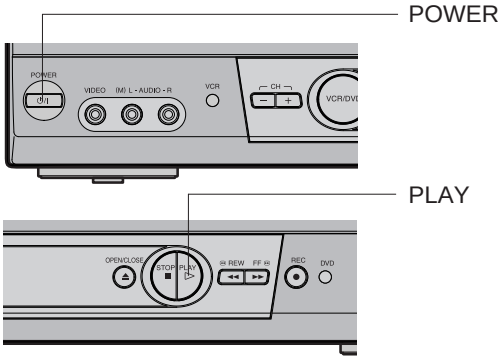
- The **TV POWER**, **TV CH+/–**, **TV VOL+/–**, **ENTER, INPUT** and **Number keys** on the remote can all be used to operate the TV. *For some brands of TV, you must press **ENTER** after having pressed the **Number keys.**

TV BRAND NAME	BRAND CODE
JVC	01
MAGNAVOX	02
MITSUBISHI	03
PANASONIC	04, 11
RCA	05
SHARP	06
SONY	07
TOSHIBA	08
ZENITH	09
HITACHI	10
SAMSUNG	12
SANYO	13
SEARS	13

?

Control four JVC VCRs

The remote control is capable of controlling two JVC VCRs independently; one set to respond to your remote control's A code control signals and the other set to respond to B, C, D code control signals. The remote control is preset to send A code signals because your DVD/VCR is initially set to respond to A code signals. You can easily modify your DVD/VCR to respond to the other code signals.



Preparation:
Make sure **TV/VCR/DVD** switch has been slided to VCR/DVD.

1 Press and hold **VCR** on the remote control until you finish the step 2.

2 Press one of the following buttons to enter the deesired code, then press **ENTER**. The current setting code of the remote control appears on the display window.

2:	sets the remote control code to "B"
3:	sets the remote control code to "C"
4:	sets the remote control code to "D"
1:	sets the remote control code to "A"

3 To turn off the unit, press **POWER** on the front panel.

4 Press **PLAY** on the front panel for 5 seconds. The current setting code of the unit appears on the display.

A

5 Press **STOP** on the remote control. The new code is transmitted to the unit and blinks for about 4 seconds on the display, then the clock time appears.

-b-

6 Press **POWER** on the remote control. When the unit is turned on, the setting is complete. If the unit is NOT turned on, repeat from step 1.

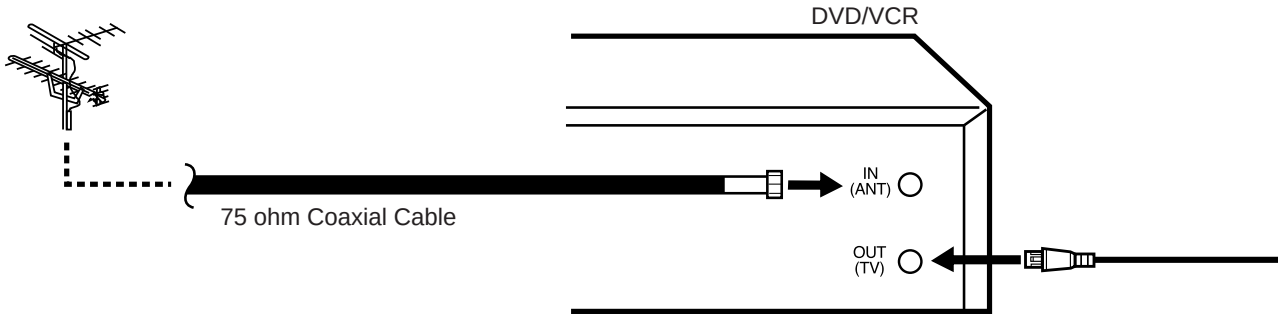
Basic connections

If you are using an antenna system, follow these instructions. If you are a cable (CATV) subscriber,skip ahead to page 16 for the proper connections.

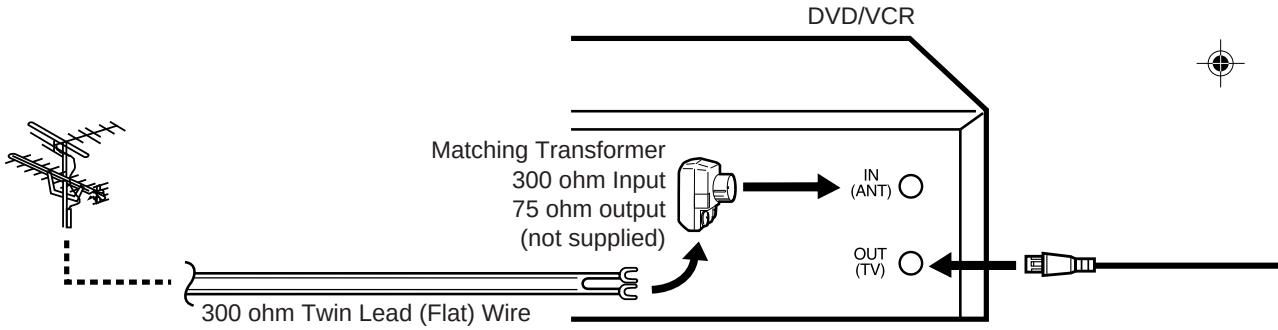
ANTENNA TO DVD/VCR CONNECTION

The DVD/VCR must be connected "between" the antenna and the TV. First, disconnect the antenna from the TV and connect it to the DVD/VCR. Then connect the DVD/VCR to the TV. Below are 3 common methods of connecting an antenna system to a DVD/VCR. Find the type of antenna system you are using and follow the connection diagram.

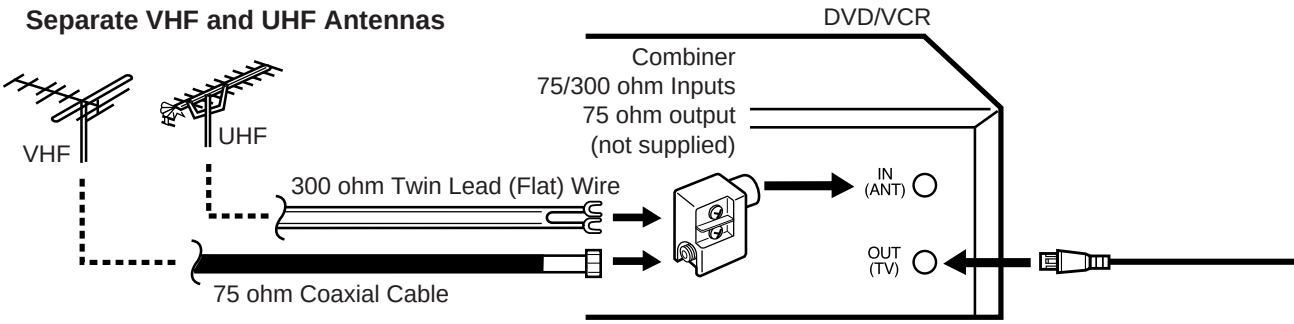
1 **Combination VHF/UHF Antenna with 75 ohm Coaxial Cable**



2 **Combination VHF/UHF Antenna with 300 ohm Twin Lead (Flat) Wire**



3 **Separate VHF and UHF Antennas**



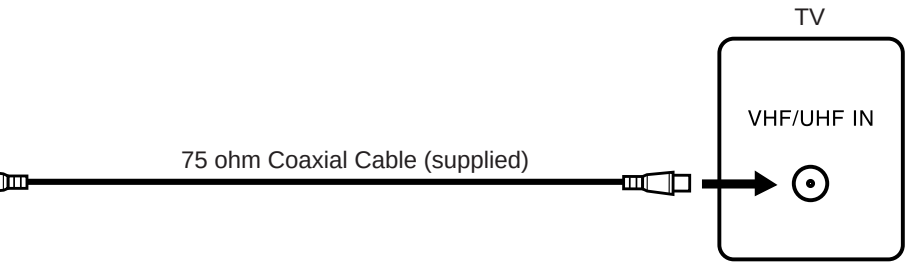
NOTE: If both VHF and UHF antennas have 300 ohm twin lead (flat) wires, use a combiner having two 300 ohm inputs and one 75 ohm output.

NOTES:
- A clear picture will not be obtained by the DVD/VCR unless the antenna signal is good. Connect the antenna to the DVD/VCR properly.
- For better quality recording, an indoor antenna or a telescopic antenna is not recommended. The use of an outdoor type antenna is required.
- If you are not sure about the connection, please refer to qualified service personnel.

DVD/VCR TO TV CONNECTION

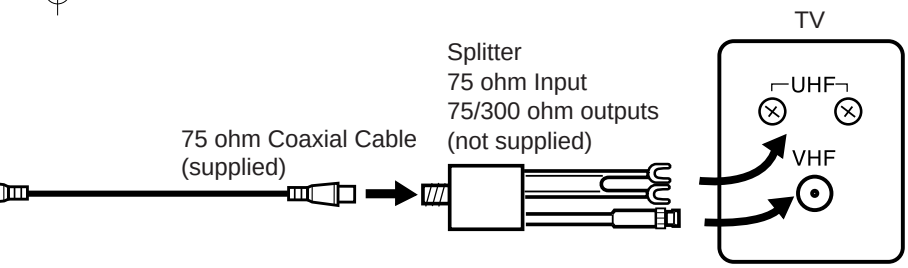
After you have connected the antenna to the DVD/VCR, you must connect the DVD/VCR to the TV.
Below are 3 common methods of connecting your DVD/VCR to a TV. Find the type of TV you are using and follow the connection diagram.

This DVD/VCR has a single 75 ohm output for connection to a TV. If your TV has separate VHF and UHF antenna inputs (numbers 2 and 3 below), use a splitter to connect the DVD/VCR to the TV for VHF and UHF reception.



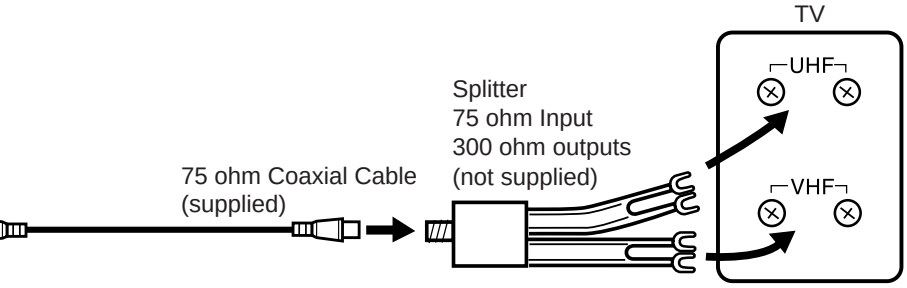
NOTE: If a VHF or UHF antenna is used, set the TV/CATV menu option to the "TV" mode.

TV with single 75 ohm VHF/UHF antenna input



NOTE: If a VHF or UHF antenna is used, set the TV/CATV menu option to the "TV" mode.

TV with 300 ohm UHFand 75 ohm VHF antenna inputs



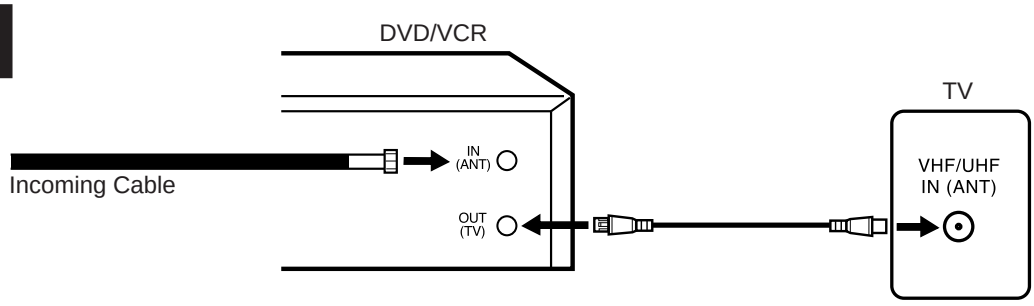
NOTE: If a VHF or UHF antenna is used, set the TV/CATV menu option to the "TV" mode.

TV with 300 ohm UHF and 300 ohm VHF antenna inputs

CATV (CABLE TV) connections

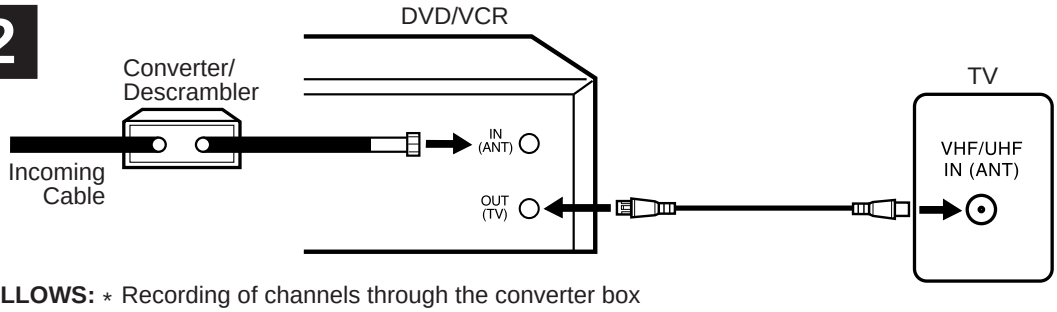
Many cable companies offer services permitting reception of extra channels including pay or subscription channels. This DVD/VCR has an extended tuning range and can be tuned to most cable channels without using a cable company supplied converter box, except for those channels which are intentionally scrambled. If you subscribe to a special channel which is scrambled, you must have a descrambler box for proper reception.

1



ALLOWS:
* Recording of nonscrambled channels.
* Use of the programmable timer.
* Recording of one channel while watching another.

2

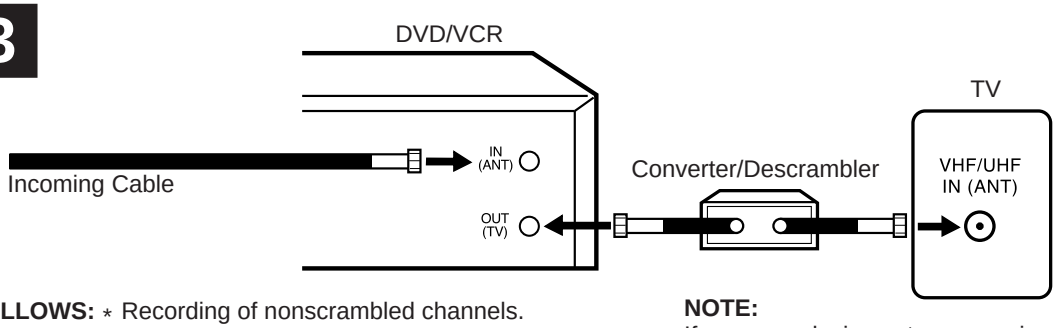


ALLOWS:
* Recording of channels through the converter box (scrambled and unscrambled).
* Using the programmable timer to record only the channel selected at the converter box.

PREVENTS:
* Recording one channel while watching another.
* Using the DVD/VCR tuner to select channels.

NOTE:
To record from converter/descrambler, DVD/VCR tuner must be tuned to the converter output channel, usually channel 3 or 4.

3



ALLOWS:
* Recording of nonscrambled channels.
* Use of the programmable timer.
* Recording an unscrambled channel while watching any channel selected at the converter box.

PREVENTS: Recording scrambled channels.

NOTE:
If you are playing a tape or using the tuner built into the DVD/VCR, the converter must be set to the video channel output of the DVD/VCR (either 3 or 4).

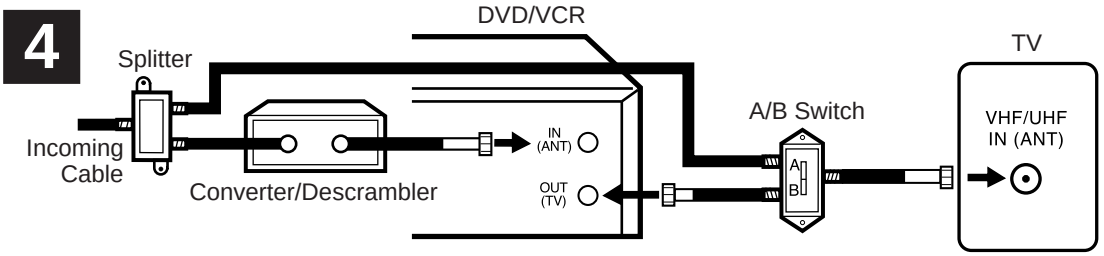
NOTE: Whenever a Converter/Descrambler box is placed before the DVD/VCR, you must tune the DVD/VCR to the output of the Converter/Descrambler box, usually channel 3 or 4.

CATV (CABLE TV) connections

IMPORTANT: Make sure the TV/CATV menu option is set to the "CATV" mode.

This DVD/VCR cannot receive scrambled programs since it does not contain a descrambler. In order to receive scrambled programs, your existing descrambler must be used. Descrambler boxes are available from cable companies. Consult your local cable company for more information concerning connection to their descrambler equipment. There are many ways to connect your DVD/VCR to a cable system. Below are six common methods of connection.

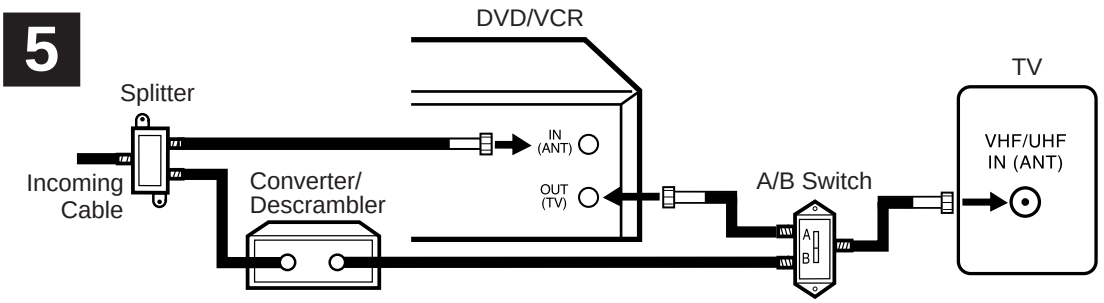
4



ALLOWS:
* Recording of one channel while watching another.
* Using the programmable timer to record only the channel selected at the converter box.
* Recording of all channels through the converter box.

PREVENTS:
* Watching scrambled channels while recording another channel.
* Using the DVD/VCR tuner to select channels.

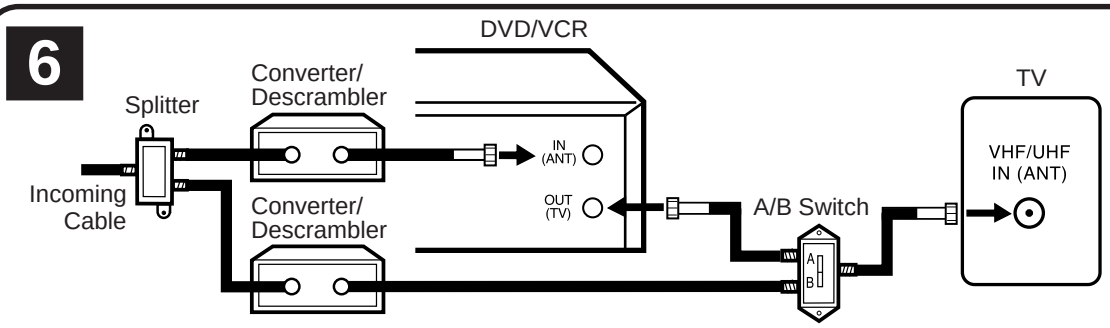
5



ALLOWS:
* Recording of nonscrambled channels.
* Recording of one channel while watching another.
* Watching premium channels through the converter while recording nonscrambled channels.
* Using the programmable timer.

PREVENTS: Recording scrambled channels.

6



ALLOWS:
* Recording of all channels through the converter box.
* Recording a scrambled or unscrambled channel while watching another (scrambled or unscrambled) channel.
* Using the programmable timer to record only the channel selected at the converter box.

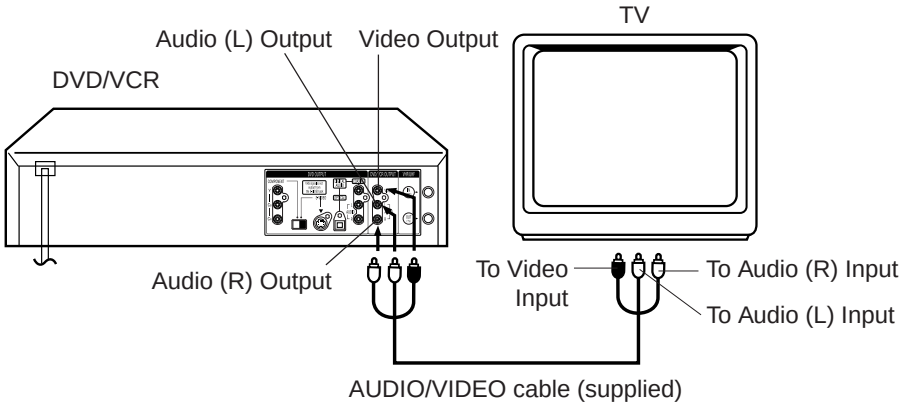
PREVENTS: Using the DVD/VCR tuner to select channels.

Playback connections

The exact arrangement you use to interconnect various video and audio components to the DVD/VCR is dependent on the model and features of each component. Check the Owner's Manual provided with each component for the location of video and audio inputs and outputs.

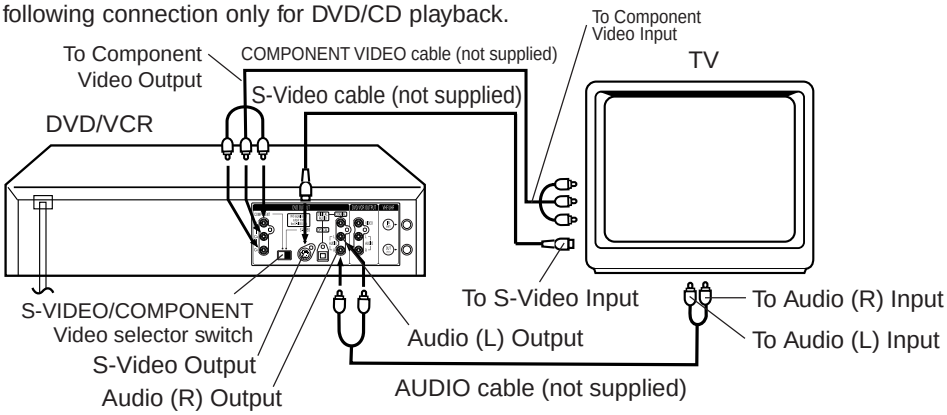
Connect to a TV with Audio/Video Output

Use the supplied AUDIO/VIDEO cable.



Connect to a TV with S-Video Output / Component Video Output

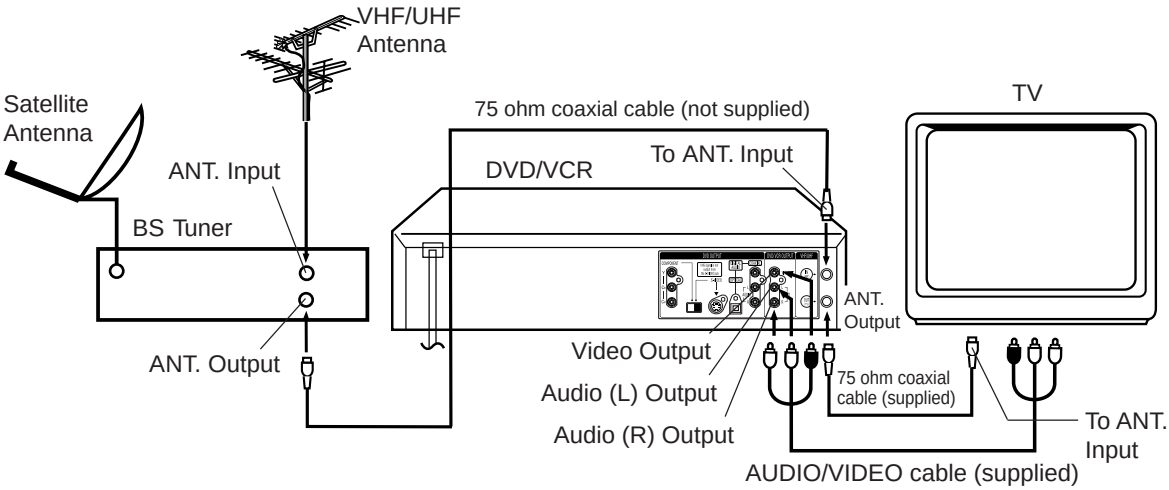
You can use the following connection only for DVD/CD playback.



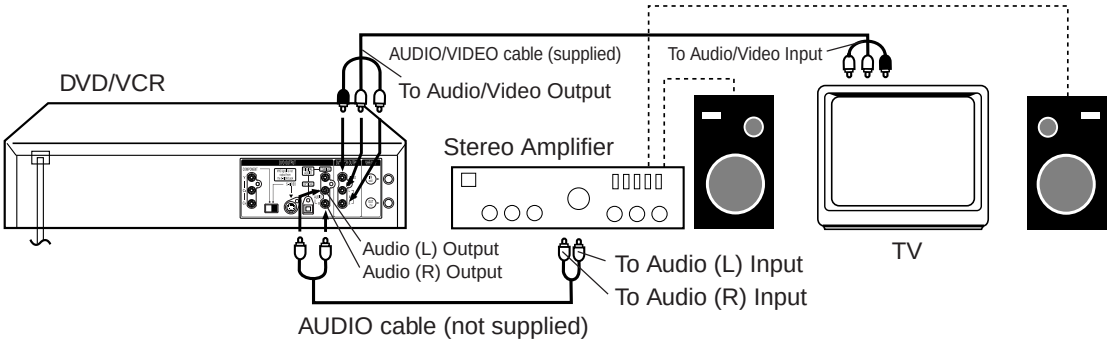
NOTE:

When you make this connection, set the S-VIDEO/COMPONENT Video selector switch to the desired position. And also you must select the corresponding video input on your TV.

Connect to a BS TUNER



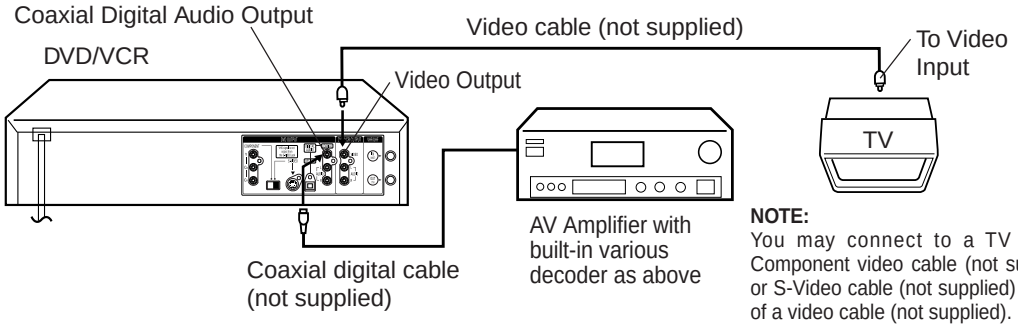
Connect to a Stereo Amplifier with Audio Output



Connect to an AV Amplifier with built-in digital surround

If you are using an Amplifier with a built-in digital surround as follows, you can enjoy the various audio systems such as Dolby Digital and DTS by using the Optical or Coaxial Digital Output.

Use this connection to connect an:
- **AV amplifier with built-in *Dolby Digital decoder**
- **AV amplifier with built-in *DTS decoder**



NOTE:
You may connect to a TV with a Component video cable (not supplied) or S-Video cable (not supplied) instead of a video cable (not supplied).

Connecting the optical digital cable

You may connect to an AV Amplifier with an Optical digital cable (not supplied) instead of a Coaxial digital cable.

When you connect the optical digital cable (not supplied), remove the dust protection cap from the rear panel. When not using the optical digital cable, attach the dust protection cap to protect against dust.

NOTES:
- The OPTICAL, COAXIAL, AUDIO L/R, S-VIDEO and COMPONENT jacks are useful only for DVD section. The VHS signal is output only from the composite jack(DVD/VCR VIDEO OUTPUT) and UHF/VHF OUT.
- When you make the connections above, do not set DOLBY DIGITAL to DOLBY DIGITAL or DTS to ON on the AV Amplifier. If you do, a loud noise will suddenly come out from the speakers, affecting your ears or causing the speakers to be damaged.
- Caution for the **optical** digital audio output connector: Do not connect to an amplifier (with an optical digital input connector) which does not contain a Dolby Digital or DTS decoder. Otherwise, any attempt to play DVDs may cause such a high level of noise that it may be harmful to your ears and damage your speakers.
- DTS audio will be output only from the COAXIAL or OPTICAL output. To hear DTS audio, DTS-Decoder is necessary.
- When playing DTS-encoded CDs, only noise will be heard from the speakers or analogue stereo outputs.
- Some DTS decoders which do not support DVD-DTS interface may not work properly with the unit.

Setting the video channel / Setting the language

Setting the Video Channel

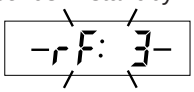
To view playback of a recorded tape, or to watch a program selected by the VCR's channel selector, the TV must be set to channel 3 or 4 (video channel).

NOTES:

- **If the unit does not operate properly, or No key operation (by the unit and/ or the remote control):** Static electricity, etc., may affect the player's operation. Disconnect the AC power cord once, then connect it again.
- If no buttons are pressed for more than 60 seconds,the MENU screen will return to normal TV operation automatically.
- Both the VCR and the DVD have their own menu options (See page 38).

When a TV is connected with the 75 ohm coaxial cable only.

1 Press and hold **3** or **4** on the remote for 3 seconds in standby mode. The video channel will start to flash for 3 seconds in the display window.



2 Press **POWER** to turn on the DVD/VCR.

3 Slide **TV/VCR/DVD** switch to VCR/DVD. Then press **VCR** to select the VCR mode. The VCR indicator on the front panel will light.

4 Turn ON the TV and set to CH 3 or 4 to correspond with the channel selected in step **1**.

5 Press **TV/VCR** to select the VCR position.
The VCR indicator will appear in the display window.

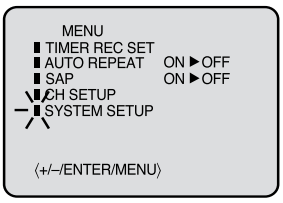
6 Select any channel to receive a TV station in your area.
The channel number will appear on the screen for about 4 seconds.

For a push-button TV tuner
If CH 3 or 4 corresponding to the video channel cannot be tuned on your TV, proceed as follows: set the VCR 3/4 channel selector and the TV to CH 3 or 4, play back a prerecorded tape and tune the TV to receive a sharp color picture from the video cassette recorder. Refer to your TV owner's manual for details.

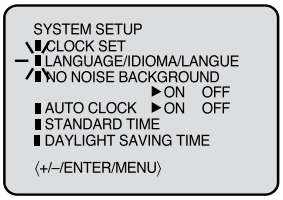
Setting the language

You can choose from three different languages (English, French and Spanish) for the on-screen displays.

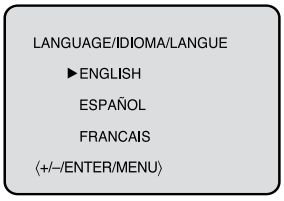
1 Press **SET UP MENU**.
If you use the unit for the first time and press **SET UP MENU**, instead of the main menu screen on the right the "SYSTEM SETUP" menu screen in step **2** may appear.



2 Press ◀ or ▶ to select the "LANGUAGE" option, then press **ENTER**.



3 Press ◀ or ▶ to select the desired language: English (ENGLISH), Spanish (ESPAÑOL) or French (FRANCAIS), then press **ENTER**.



4 Press **SET UP MENU** until the MENU screen is cleared.

Tuner setting

This DVD/VCR is equipped with a channel memory feature which allows channels to skip up or down to the next channel set into memory, skipping over unwanted channels. Before selecting channels, they must be programmed into the DVD/VCR's memory. In addition to normal VHF and UHF channels, this DVD/VCR can receive up to 113 Cable TV channels. To use this DVD/VCR with an antenna, set the TV/CATV menu option to the TV mode. When shipped from the factory, this menu option is in the CATV mode.

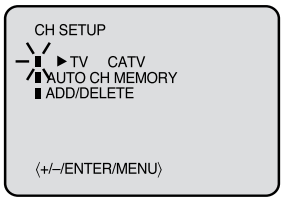
NOTE:
You can not select "CH SETUP" if you set the channel to "L".

Preparation:
- Turn ON the TV and set it to the video input mode.
- Make sure **TV/VCR/DVD** switch has been slided to VCR/DVD. Then press **VCR** to select the VCR mode. (The VCR indicator will light.)

TV/CATV Selection

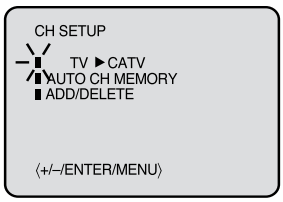
1 Press **SET UP MENU**. The VCR menu screen will appear. Press ◀ or ▶ to select "CH SETUP", then press **ENTER**.

2 Press ◀ or ▶ to select the "TV/CATV" option.



3 Then press **ENTER** to select the TV or CATV mode. The arrow indicates the selected mode.

TV	- VHF/UHF channels
CATV	- CABLE TV channels

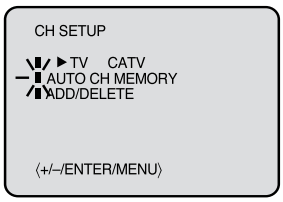


4 Press **SETUP MENU** until the menu screen is cleared.

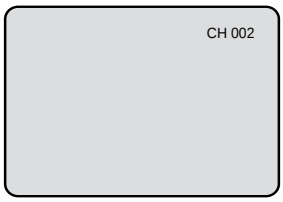
Setting channels automatically

The VCR can receive a maximum of 181 channels by presetting the channels into memory.

1 Repeat above step **1** and press ◀ or ▶ to select "AUTO CH MEMORY".



2 Then press **ENTER**.
The auto tuning will start. The channel display will count up and when finished, the screen returns to normal.



To ADD/DELETE channels / Noise elimination

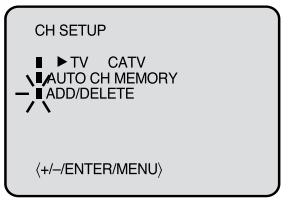
To ADD/DELETE channels

You can add the channels you want or delete the channels you do not want manually.

Preparation:

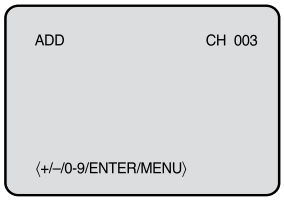
- Turn ON the TV and set it to the video input mode.
- Make sure **TV/VCR/DVD** switch has been slided to VCR/DVD. Then press **VCR** to select the VCR mode. (The VCR indicator will light.)

1 Repeat the step **1** on page 21. Then press ◀ or ▶ to select the "ADD/DELETE" option and press **ENTER**.



2 **To Add or Delete desired channels**

1 Press **Number keys** or ◀ / ▶ to select a channel number you want to add or delete.



2 **To add channels**
Press **ENTER** until "ADD" appears on the screen to set to add the unmemorized channel.

To delete channels
Press **ENTER** until "DELETE" appears on the screen to set to delete the channel from memory. The channel number will blink.

3 Repeat 1 to 2 to add or delete other channel.

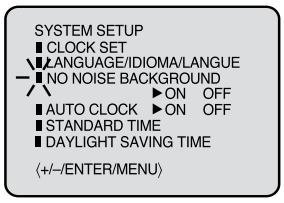
3 Press **SET UP MENU** until the menu screen is cleared.

Noise elimination

When you don't want to receive a weak signal broadcast, the Blue back screen can be obtained by selecting the NO NOISE BACKGROUND "ON". When the unit is shipped from the factory, the NO NOISE BACKGROUND is set to the "ON".

1 Repeat the steps **1**~**2** on page 20 and press ◀ or ▶ to select "NO NOISE BACKGROUND".

2 Press **ENTER** to select the "ON" position.



3 Press **SET UP MENU** until the menu screen is cleared.

Auto clock setting

The Auto Clock feature enables the automatic clock setting and updating, and also to set the Time Zone and Daylight Saving Time by receiving XDS (Extended Data Service) information carried on the channel signal.

NOTES:

- After Auto Clock setting, in some case the clock may display the other time zone's. You can correct the clock by selecting your Time Zone setting above.
- When the clock is not set or you set the clock manually, Time Zone setting is not available.

Preparation:

- **You must set the antenna connection before the AC cord plug is inserted into the AC outlet.**
- **Make sure the AUTO CH MEMORY (on P.21) is done.**

Auto clock setting

WAIT 30 MINUTES! when the power switch is off, after the connections of the antenna and the power plug. Because the Auto Clock setting feature is activate.
After the clock is set automatically, you may have to set the Time Zone and Daylight Saving Time.
Press **POWER** to turn on the DVD/VCR after the Auto Clock operation completed.

- When shipped from factory, the AUTO CLOCK option is set to ON position.
- The Auto Clock setting will be performed at 6:00 AM, 12:00 PM and 6:00 PM everyday when the DVD/VCR is turned off.
  If you turn the DVD/VCR on during Auto Clock setting, the clock is not set.
- With cable box connection, if the Auto Clock Setting is unsuccessful, please select the PBS channel carrying the XDS information, then turn the DVD/VCR off. After 30 minutes, turn the DVD/VCR on, and if the clock is not set automatically, set the clock manually. (See page 25)

Canadian Viewers:
Please see note regarding the Auto Clock setting option on page 62.

Time Zone setting (STANDARD TIME)

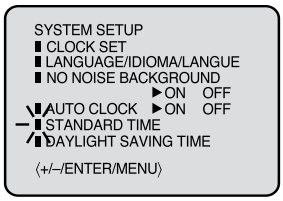
In the rare event that you live within broadcast range of two stations in two different time zones, the DVD/VCR may recognize the wrong station for the Auto Clock setting.
To correct the situation:

Preparation:

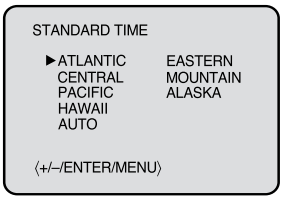
- Turn ON the TV.
- When a TV is connected with an audio/video cable, select the video input mode on the TV.
- When a TV is connected only with an antenna cable, set to the video channel 3 or 4. Then select VCR position with **TV/VCR**.
- Make sure **TV/VCR/DVD** switch has been slided to VCR/DVD. Then press **VCR** to select the VCR mode. (The VCR indicator will light.)

1 Press **SET UP MENU**. The VCR menu screen will appear. Press ◀ or ▶ to select the "SYSTEM SETUP" menu, then press **ENTER**.

2 Press ◀ or ▶ to select the "STANDARD TIME" option, then press **ENTER**.



3 Press ◀ or ▶ to select your Time Zone, then press the **ENTER**.



4 Press **SET UP MENU** until the MENU screen is cleared.

Auto clock setting

Daylight Saving Time setting

You can set the Daylight Saving Time automatically or manually.

Preparation:

- Turn ON the TV.
- When a TV is connected with an audio/video cable, select the video input mode on the TV.
- When a TV is connected only with an antenna cable, set to the video channel 3 or 4. Then select VCR position with **TV/VCR**.
- Make sure **TV/VCR/DVD** switch has been slided to VCR/DVD. Then press **VCR** to select the VCR mode. (The VCR indicator will light.)

1 Repeat the step **1** on page 23 and press ◀ or ▶ to select "DAYLIGHT SAVING TIME", then press **ENTER**.

SYSTEM SETUP
CLOCK SET
LANGUAGE/IDIOMA/LANGUE
NO NOISE BACKGROUND ▶ON OFF
AUTO CLOCK ▶ON OFF
STANDARD TIME
DAYLIGHT SAVING TIME
⟨+/–/ENTER/MENU⟩

2 Press ◀ or ▶ to select one of the options, then press **ENTER**.

DAYLIGHT SAVING TIME
ON
OFF
▶AUTO
⟨+/–/ENTER/MENU⟩

ON: for manual setting (forward one hour)
OFF: for manual setting (back one hour)
AUTO: for automatic setting (read XDS in the signal)

When you want to set the Daylight Saving Time manually, on the first Sunday in April you set to "ON", and on the last Sunday in October you set to "OFF".

3 Press **SET UP MENU** until the menu screen is cleared.

NOTES:

- When shipped from factory, the DAYLIGHT SAVING TIME option is set to "AUTO" position.
- When the clock is not set, Daylight Saving Time setting is not available.
- When there is no Daylight Saving Time in your area, always select "OFF" position in step **2**.

Manual clock setting

You must set the date and time manually for timer recordings and Daylight Saving Time if the Auto Clock process did not set them correctly.

NOTE:
After a power failure or disconnection of the power, the timer settings will be lost. In this case, reset the present time.

Preparation:
- Turn ON the TV and set to the video input mode.
- Make sure **TV/VCR/DVD** switch has been slided to VCR/DVD. Then press **VCR** to select the VCR mode. (The VCR indicator will light.)

EXAMPLE: Setting the clock to "8:30 AM" March, 26 (WED), 2003.

1 Press **SET UP MENU**. The VCR menu screen will appear.

2 Press ◀ or ▶ to select the "SYSTEM SETUP" menu, then press **ENTER**.

MENU
TIMER REC SET
AUTO REPEAT ON ▶OFF
SAP ON ▶OFF
CH SETUP
SYSTEM SETUP
⟨+/–/ENTER/MENU⟩

3 Press ◀ or ▶ to select the "CLOCK SET" option, then press **ENTER**.

SYSTEM SETUP
CLOCK SET
LANGUAGE/IDIOMA/LANGUE
NO NOISE BACKGROUND
▶ON OFF
AUTO CLOCK ▶ON OFF
STANDARD TIME
DAYLIGHT SAVING TIME
⟨+/–/ENTER/MENU⟩

4 Press ◀ or ▶ to set the month, then press **ENTER** button.

MONTH 3
DAY 1 (SAT)
YEAR 2003
TIME 12 : 00AM
⟨+/–/ENTER/CANCEL/MENU⟩

To make corrections any time during the process
Press **CANCEL** repeatedly until the item you want to change blinks, then press ◀ or ▶.

5 Set the day, year and time as in step **4**.

MONTH 3
DAY 26 (WED)
YEAR 2003
TIME 8 : 30AM
⟨+/–/ENTER/CANCEL/MENU⟩

6 After setting the clock, date and time starts functioning automatically.

8 : 30AM WED

Loading and Unloading a cassette tape

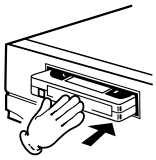
Use only video cassette tapes marked VHS and S-VHS.

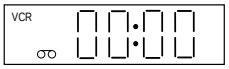
SQPB

- Cassettes marked “VHS” (or “S-VHS”) can be used with this video cassette recorder. However, S-VHS recording is not possible with this model.
- This model is equipped with SQPB (S-VHS QUASI PLAYBACK) that makes it possible to play back S-VHS recordings with regular VHS resolution.
- HQ VHS is compatible with existing VHS equipment.

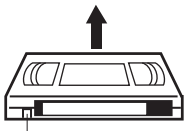
Loading

Push the center of the tape until it is automatically inserted.

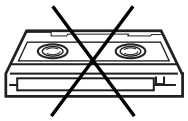




Insert the cassette tape with its labeled side facing up and the erase prevention tab positioned at your left. An inverted cassette tape cannot be inserted.



Erase prevention tab



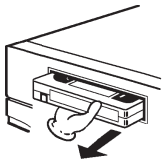
Automatic power ON
When you insert a cassette tape the VCR power will turn ON automatically.

Automatic playback
When loading a cassette tape without an erase prevention tab, playback will start automatically.

Unloading

1 Press **EJECT** on the unit.

2 Remove the cassette tape.



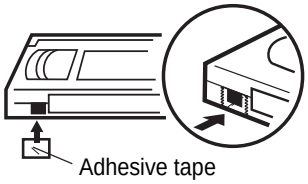
Automatic tape eject
This VCR will automatically rewind the tape when the tape has ended. And when the tape is rewinded to its beginning, the cassette tape will be ejected automatically.

To prevent accidental erasure

Remove the erase prevention tab with a screwdriver.

To record again

Cover the hole with a piece of adhesive tape.



Tape speed and maximum recording time

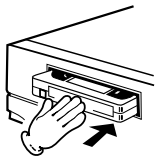
Tape Speed	Video cassette tape				
	T-160	T-120	T-90	T-60	T-30
SP (Standard Play)	2-2/3 hours	2 hours	1-1/2 hours	1 hour	30 minutes
EP (Extended Play)	8 hours	6 hours	4-1/2 hours	3 hours	1-1/2 hours

Cassette tape playback

NOTES:
- This VCR selects the playback tape speed SP or EP automatically.
- The Cassette tape and DVD disc can be played back simultaneously. If you press **VCR** or **DVD**, the tape playback and DVD playback alternate with each other on the screen.

Preparation:
- Turn ON the TV and set to the video input mode.
- Make sure **TV/VCR/DVD** switch has been slided to VCR/DVD. Then press **VCR** to select the VCR mode. (The VCR indicator will light.)

1 Load a prerecorded tape (When loading a cassette tape without the erase prevention tab, playback will start automatically).



2 **To start playback**
Press **PLAY**.
Playback will start.
" ▶ " will appear on the screen for about 4 seconds.

To stop playback

Press **STOP** once.
The tape will stop but remain fully loaded and ready to play.
" ■ " will appear on the screen for about 4 seconds.

To rewind the tape or forward it rapidly

Stop the playback or recording with **STOP**.

To rewind the tape:

Press **REW**.

To forward the tape:

Press **FF**.

To stop the tape-winding, press **STOP**. To switch to playback directly (without **STOP**), press **PLAY**.

Forward/Reverse picture search mode

When the tape is being winded, you can switch to picture search mode (see next page). To do this, press **REW** or **FF** and hold it down. The unit will resume the tape winding as soon as the button is released.

Special playback

Picture Search

Reverse picture search function

Press **REW** x 1 or x 2 during the playback.

Forward picture search function

Press **FF** x 1 or x 2 during the playback.

To return to playback: Press **PLAY**.

Still Picture

Press **PAUSE** during playback. To resume normal playback: Press **PLAY**.

Slow Motion

During playback press **SLOW**.

To return to playback: Press **PLAY** or **SLOW**.

Slow tracking and vertical lock adjustment

If noise bars appear in the picture during slow motion, press the **SET +** or **–** to reduce the noise bars.
If the still picture jitters excessively, press **SET +** or **–** to stabilize the still picture.

Frame by Frame picture

Press **PAUSE** during playback.
Press **SLOW** one by one: The picture advances frame by frame.
To return to playback: Press **PLAY** or **PAUSE**.

Adjusting tracking condition

Automatic tracking adjustment

Whenever you insert a tape and start playback, automatic tracking starts working and continuously analyzes the signal to enable optimum picture quality during playback.

Manual tracking adjustment

If automatic tracking cannot eliminate noises well during playback, press **SET +/–** to eliminate the noises. “MANUAL TR.” will appear. Press it briefly for a fine adjustment, or press and hold for a coarse adjustment.

- Press **A.TRK** to reactivate automatic tracking again. “AUTO TR.” will appear.

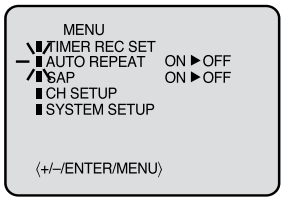
NOTES:

- The audio output is muted during SPEED SEARCH, STILL, FRAME ADVANCE and SLOW MOTION.
- During picture search mode there will be noise bars which are caused by the system.
- The Special Playback will automatically change to playback after approx. 5 minutes to protect the video tape against excessive wear.

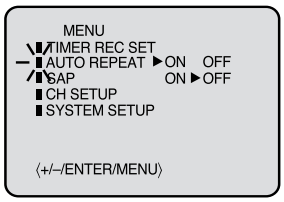
Repeat playback

The entire video tape will be played until its end.The tape will then automatically rewind to the beginning and the playback will be repeated.

1 Press **SET UP MENU**. Press ◀ or ▶ to select “AUTO REPEAT”.



2 Then press **ENTER** to select “ON” or “OFF”. If “ON” is selected, the playback will be repeated endlessly.



3 Press **SETUP MENU** until the menu screen is cleared.
If you press **OSD**, "↻" will appear on the screen.

4 To start the playback, press **PLAY**.
The playback will be repeated endlessly.

To cancel repeat mode:
Follow the above step **1**, then press **ENTER** to select the “OFF” position. Press **SET UP MENU** to return to the TV.

Skip Search

Each time you press **SKIP SEARCH** while a tape is playing, the unit will fast-forward ahead 30 seconds on the tape. You may press the button up to six times in a row to move 180 seconds (three minutes) ahead.

For example:	1 press:	30 seconds of tape
	2 presses:	60 seconds of tape
	3 presses:	90 seconds of tape

ZERO RETURN function / Video Index Search system

NOTES for Counter Display:

- If you rewind the tape beyond "00:00:00", a minus sign ("–") will be displayed in front of the time counter.
- When you load a tape, the counter will reset to "00:00:00".
- The counter does not function on nonrecorded (blank) sections of the tape. When you rewind, fast forward or play tapes through blank sections, the counter stops.

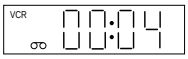
NOTES for Video Index Search system:

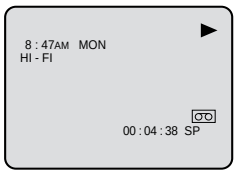
- When you record an INDEX mark at the very beginning of the tape, the mark may not be found.
- During INDEX search, the tape may stop and begin to play at a slightly different location.
- INDEX may not function properly with old or worn out video tapes.
- INDEX marks may not be found if it is extremely close to the point where the search began.
- In recording, if you stop recording temporarily, the INDEX mark is not recorded on the tape.

ZERO RETURN function

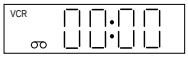
This function makes tape-rewinding stop at the counter 00:00:00 position automatically.

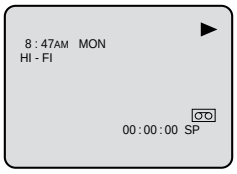
1 Press **OSD**.
The counter display shows the tape running time during playback or recording.





2 Press **C. RESET** at the desired tape position. The counter display will be reset to the "00:00:00" position (e.g. the begining of recording).

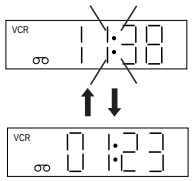




3 Press **STOP** when playback or recording is finished.
Press **ZERO RETURN**.
The tape will be rewinded or fast forwarded and automatically stop at the "00:00:00" position.

The DISPLAY-button

Press **DISPLAY**. The clock and tape counter alternate with each other in the display.

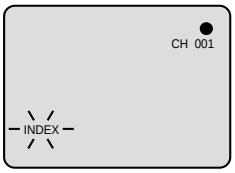


Video Index Search system

This function enables you to locate the beginning of any recording made on the VCR.

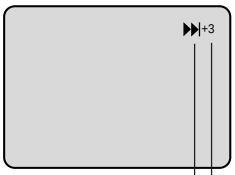
Recording an INDEX MARK

The Index Search function automatically records an INDEX mark on the tape whenever a recording is initiated.



Index Search

Press **INDEX** ▶▶I or I◀◀ during stop or play mode.
For Succeeding programs: Press **INDEX** ▶▶I .
For Preceding programs: Press **INDEX** I◀◀ .
(Additional press increases the INDEX NO. up to 9.)
When the **INDEX** ▶▶I or I◀◀ is pressed, the unit starts searching the INDEX NO. selected and finds the portion, then playback starts automatically.
To stop the Index Search, press **STOP**.



▶▶I or I◀◀ is displayed

INDEX NO. (up to 9)

Recording a TV program

Recording and viewing the same TV program

NOTES:

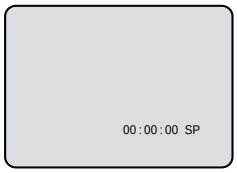
- If the erase prevention tab is removed, the tape will eject when both the **REC** and **PLAY** are pressed for recording.
- If you wish to watch the DVD playback during the normal recording on VCR, press **DVD** to change to DVD mode and perform the DVD playback (see P.37).

Preparation:

- Turn ON the TV and set it to the video input mode.
- Make sure **TV/VCR/DVD** switch has been slided to VCR/DVD. Then press **VCR** to select the VCR mode. (The VCR indicator will light.)

1 Load a cassette tape with the erase prevention tab intact.
The VCR will automatically turn on.

2 Press **SP/EP** to select the desired tape speed SP or EP.
The tape counter and “SP” or “EP” will appear on the screen for about 4 seconds.

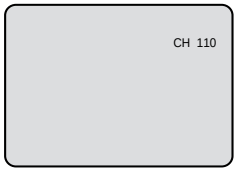


3 Set the TV/CATV option to the appropriate position (See page 21).

TV	- VHF/UHF channels
CATV	- CABLE TV channels

4 Press **Number keys** or **VCR CH +/–** to select the channel to be recorded.

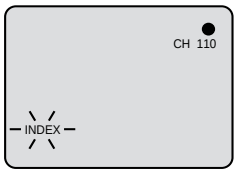
1-9	Press **0** twice and then **1-9** as required. Example: To select 2, Press “**002**”.
10-12	Press **0** first and then the remaining 2 digits in order from left to right. Example: Press **012** for “12”.
13-99	Press 2 digits in order. Example: Press **22** for “22”.
100-125	Press the 3 digits in order. Example: Press **110** for “110”.



VHF/UHF/CATV CHANNELS

TV	CATV
VHF 2-13	VHF 2-13
UHF 14-69	STD/HRC/IRC 14-36 (A) (W) 37-59 (AA) (WW) 60-85 (AAA) (ZZZ) 86-94 (86) (94) 95-99 (A-5) (A-1) 100-125 (100)(125) 01 (5A)

5 On the VCR, press **REC**.
Or on the Remote, while holding **REC**, press **PLAY**.
" ● " will appear on the screen for about 4 seconds and “REC” will appear on the display.



Auto Rewind feature

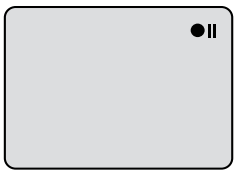
This VCR will automatically rewind the tape when the tape has ended (except during ITR and TIMER REC). It will also eject the tape.

To stop recording

Press **STOP** to stop recording.
" ■ " will appear on screen for about 4 seconds.

To stop recording temporarily

Press **PAUSE** to avoid recording unwanted material. Press again to continue the recording.
" ●II " will appear on screen for about 4 seconds.



NOTES:

- The pause function will be released after 5 minutes to prevent damage to the tape or the VCR. The VCR will change to the STOP mode.
- You can select a recording channel in the recording pause mode.

Recording one program while watching another

While the VCR is recording, press **TV/VCR** to select the TV position. The "VCR" will go off and recording will continue.
Select the TV channel you want to watch by using the TV channel selector. If the connected TV is JVC's, use **TV CH +/–** after slide **TV/VCR/DVD** switch to TV.

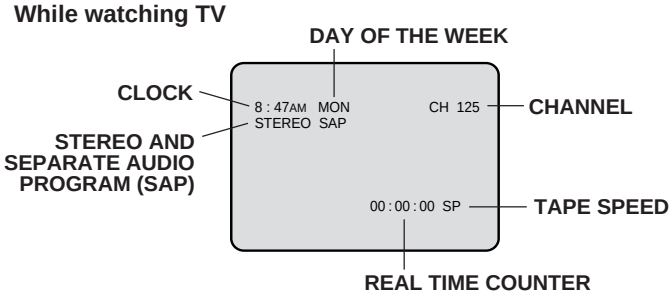
NOTE:

Some CATV hookups do not permit viewing one channel while recording another. See pages 16,17.

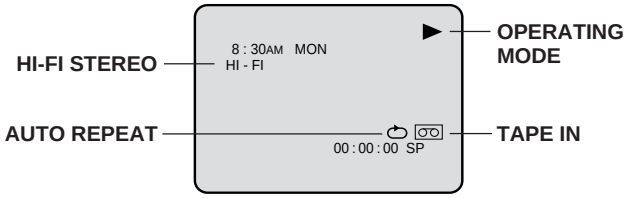
To Display VCR operation Status

Press **OSD**. The clock, day of the week and more information will be indicated.

While watching TV



While operating a tape



To cancel the display: Press **OSD** until all indicators disappear.

Instant Timer Recording (ITR)

The Instant Timer Recording feature provides a simple and convenient way to make a timed recording.

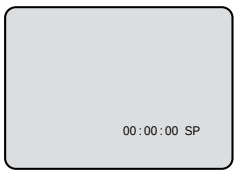
NOTE:
If you wish to watch the DVD playback during the ITR, press **DVD** to change to DVD mode and perform the DVD playback (see P.39).

Preparation:
- Turn ON the TV and set it to the video input mode.
- Make sure **TV/VCR/DVD** switch has been slided to VCR/DVD. Then press **VCR** to select the VCR mode. (The VCR indicator will light.)

Example: Instant Timer Recording for 30 minutes.

1 Load a cassette tape with the erase prevention tab intact.
The VCR will automatically turn on.

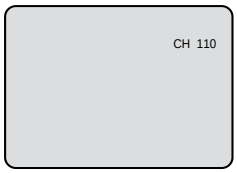
2 Press **SP/EP** to select the desired tape speed SP or EP.
The tape counter and “SP” or “EP” will appear on the screen for about 4 seconds.



3 Set the TV/CATV option to the appropriate position (See page 21).

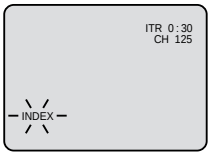
TV	- VHF/UHF channels
CATV	- CABLE TV channels

4 Press **Number keys** or **VCR CH +/–** to select the channel to be recorded.



5 Press **REC** on the VCR or while holding **REC**, press **PLAY** on the Remote to begin recording. Press **REC** on the VCR again to stop recording after 30 minutes. Each additional press of **REC** will increase recording time as shown in the chart below, up to a maximum of 6 hours. The ITR and recording time will appear on the screen for about 4 seconds. And, REC will keep blinking in the display.

Press	Recording time	Press	Recording time
once	NORMAL REC	6 times	3:00
twice	0:30	7 times	4:00
3 times	1:00	8 times	5:00
4 times	1:30	9 times	6:00
5 times	2:00	10 times	NORMAL REC



To cancel ITR

Press **STOP** or turn off the power.
" ■ " will appear on screen for about 4 seconds.

Timer recording

Timer recording can be programmed on-screen with the remote control. The built-in timer allows automatic unattended recording of up to 8 programs within 1 month.

NOTES:

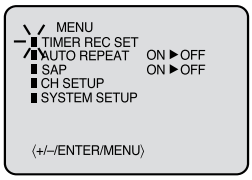
- If the clock symbol (⏲) blinks when the timer recording ended, the TV program has not been completely recorded because of an insufficient tape supply. In this case, press **TIMER** to cancel the timer program or press **EJECT** to remove the cassette tape.
- During timer recording standby mode, the VCR mode cannot be selected. To use the VCR, press **TIMER** at first, then press **VCR** to change to VCR mode. After you use the VCR, press **TIMER** again to put the VCR into timer recording standby mode.
- If you press **TIMER** during timer recording, the recording operation will be interrupted. If you press **TIMER** again within the programmed time, the recording operation will start again.
- After a power failure or disconnection of the power plug, all programmed recording settings and time display will be lost upon resumption of power. In this case, reset the clock (see pages 23-25) and reprogram any timer recordings.

Preparation:

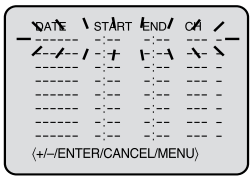
- Make sure **TV/VCR/DVD** switch has been slided to VCR/DVD. Then press **VCR** to select the VCR mode.
- Load a cassette tape with the erase prevention tab intact.
- Press **OSD** to verify that the time and date are correct (see page 31).

Example: Program a timer recording for the 26th day, channel 125 (CATV), 11:00 - 11:30 PM on timer program number 1 (Tape speed: EP).

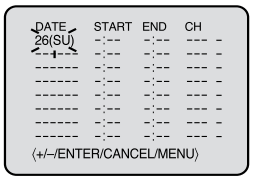
1 Press **SET UP MENU**. Select the TIMER REC SET option, then press **ENTER**.



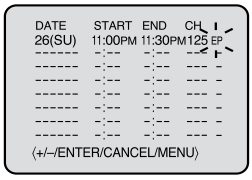
2 Press **SET +** or **–** to select one of the program line, then press **ENTER**.



3 Press **SET +** or **–** to select the date, then press **ENTER**.



4 Set the **start time**, **end time**, **channel** and **tape speed** as in step **3**.

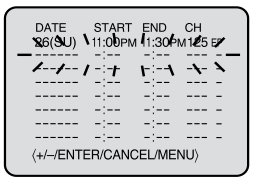


NOTES:

- Press **CANCEL** to move cursor backward for correction.
- To record from external source set the channel to "L". "L" will appear next to CH 125 (or 69).

5 To enter other programs, repeat step **2** through **4**.

- To return to the normal screen, press **SET UP MENU** twice.



6 Press **TIMER**. The clock symbol (⏲) will appear on the display and the VCR stands by for recording. At the same time, VCR mode will change to DVD mode automatically. You can use DVD even if the VCR is in the timer recording mode. If you do not use the DVD, turn the power off.
The timer recording will start at 5 seconds before the time you predetermined.

NOTES:

- If the clock symbol (⏲) does not appear on the display in spite of the pressing of **TIMER**, the cassette may not have been loaded yet. (see page 26)
- If the cassette is ejected in spite of the pressing of **TIMER** , the erase prevention tab of the cassette may have been removed. (see page 26)

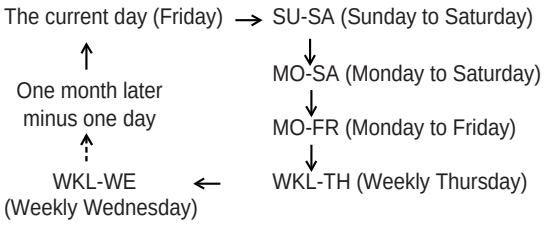
Timer-recording

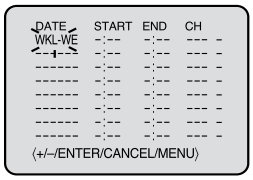
Timer recording special case

Weekly (e.g. WKL-TU: each Tuesday) or daily (e.g. MO-SA: Monday to Saturday) timer recording

Follow the procedure of timer recording on the previous page. At picture **3** press **SET +** or **–** repeatedly until the desired setting appears. Then press **ENTER**.

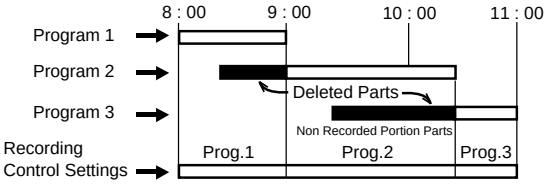
When you press **SET –** repeatedly, the indicator at DATE will change as follows, in this case the today is Friday.





In case timer programs-overlap

- Do not overlap timer programs as portions of the conflicting programs will be lost. The first recording time has priority over the next recording time as shown in the diagram below.



NOTES:

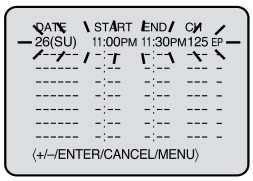
- The daily/weekly recording can be made continuously until the recording is canceled or the tape reaches the end.
- During timer recording the automatic rewinding mechanism does not function.

Confirmation / Cancellation of the timer recording

1 If the timer has been activated, press **TIMER** to deactivate the timer. The clock symbol (⏲) will disappear. Then press **VCR** to change to VCR mode.

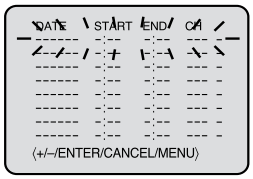
2 **To confirm timer program:**

At picture **1** on the previous page select the "TIMER REC SET" option and press **ENTER**. Then the timer program list as right will appear on the screen.

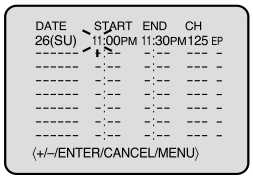


3 **To cancel timer program:**

Press **SET +** or **–** to select the unnecessary program, then press **CANCEL** to cancel the program.



4 Press **SET UP MENU** repeatedly until the TV-picture appears.

NOTES:

- If there are other timer record programs remaining, **TIMER** must be pressed to reactivate the timer, otherwise the remaining timer record programs will be ignored.
- You cannot confirm the timer program during timer recording operation.
- You can also correct the programmed setting in program confirm mode.
  At step **2** above, press **ENTER** to enter the program input mode. Then press **ENTER** repeatedly until the item you wish to correct blinks. Then correct the data with **SET +** or **–**.
  Then press **SET UP MENU** repeatedly until the TV-picture appears.