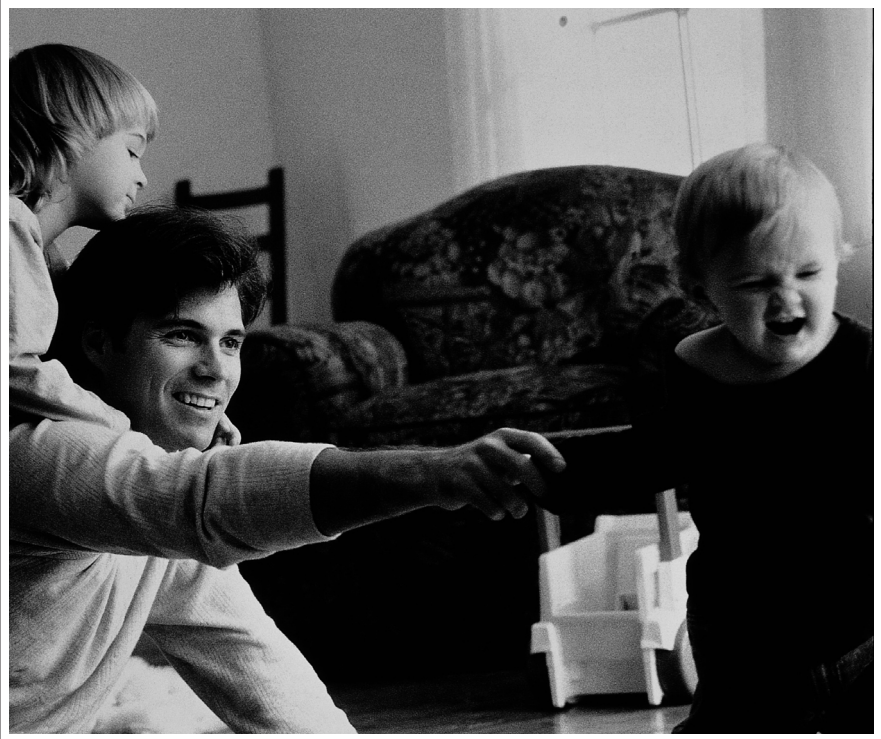




Omnivision **VHS**

Panasonic®

Video Cassette Recorder Operating Instructions Model No. **PV-V4622**



Connections and Initial Setup Procedures are on pages 8 to 11.



VCR Plus+, ALLSET and PlusCode are trademarks of Gemstar Development Corporation. The VCR Plus+ system is manufactured under license from Gemstar Development Corporation.



As an ENERGY STAR® Partner, Matsushita Electric Corporation of America has determined that this product or product model meets the ENERGY STAR® guidelines for energy efficiency.

Please read these instructions carefully before attempting to connect, operate or adjust this product. Please save this manual.

Spanish Quick Use Guide is included.

(Guía para rápida consulta en español está incluida.)

LSQT0509B

Initial Setup
(Connection)

Basic
Operation

Timer
Recording

Advanced
Operation

For Your
Information

Important Safeguards and Precautions

FOR YOUR SAFETY, READ AND RETAIN ALL SAFETY AND OPERATING INSTRUCTIONS. HEED ALL WARNINGS IN THE MANUAL AND ON THE UNIT

INSTALLATION

1 POWER SOURCE CAUTION

Operate only from the power source indicated on the unit or in this manual. If necessary, have your Electric Utility Service Company or Video Products Dealer verify the power source in your home.

2 POLARIZED OR GROUNDING PLUG

As a safety feature, this Video product comes with either a polarized power cord plug (one blade is wider than the other), or a three-wire grounding type plug.

POLARIZED PLUG CAUTION:

This plug will only fit into an outlet one way. If you cannot fully insert the plug, try reversing it. If it still will not fit, have an electrician install the proper wall outlet. Do not defeat the safety feature by tampering with the plug.

GROUNDING PLUG CAUTION:

This plug will only fit into a three-hole grounding outlet. If necessary, have an electrician install the proper outlet. Do not defeat the safety feature by tampering with the plug.

3 POWER CORD

Make sure power cords are routed so that they are not likely to have anything rest on them, roll over them, or be in the way of walking traffic. If an extension cord is used, make sure it also has either a polarized or grounded plug and that the cords can be securely connected. Frayed cords, damaged plugs, and damaged or cracked wire insulation are hazardous and should be replaced by a qualified service technician. Overloaded outlets and extension cords are fire hazards and should be avoided.

4 DO NOT BLOCK VENTILATION HOLES

Ventilation openings in the cabinet release heat generated during operation. If they are blocked, heat build-up inside the unit can cause failures that may result in a fire hazard or heat damage to cassettes. For protection, follow these rules:

- Never cover ventilation slots or the unit while in use, or operate the unit when placed on a bed, sofa, rug, or other soft surface.
- Avoid built-in installation, such as a book case or rack, unless proper ventilation is provided.

5 AVOID EXTREMELY HOT LOCATIONS OR SUDDEN TEMPERATURE CHANGES

Do not place the unit over or near any kind of heater or radiator, in direct sunlight, inside a closed vehicle, etc.. Do not move the unit suddenly between areas of extreme temperature variation. If the unit is suddenly moved from a cold place to a warm place, moisture may condense in the unit and on the tape.

6 TO AVOID PERSONAL INJURY

- Do not place unsecured equipment on a sloping surface.
- Do not place this unit on any support that is not firm, level, and adequately strong. The unit could fall causing serious injury to a child or adult and 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.
- Carefully follow all operating instructions and use the manufacturer's recommended accessories when operating this unit or connecting it to any other equipment.

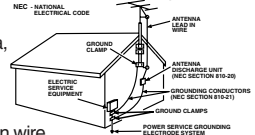


OUTDOOR ANTENNA INSTALLATION

1 SAFE ANTENNA AND CABLE CONNECTION

If an outside antenna or cable system is connected to the equipment, be sure the antenna or cable system is grounded so as to provide some protection against built up static charges and voltage surges. Section

810 of the National Electrical Code, ANSI/NFPA 70 (in Canada, part 1 of the Canadian Electrical Code) 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.



2 KEEP ANTENNA CLEAR OF HIGH VOLTAGE POWER LINES OR CIRCUITS

An outside antenna system should be located well away from power lines, electric light or power circuits and where it will never come into contact with these power sources if it should happen to fall. When installing an outside antenna, extreme care should be taken to avoid touching power lines, circuits or other power sources as this could be fatal. Because of the hazards involved, antenna installation should be left to a professional.

USING THE VIDEO UNIT

If the unit has been in storage or moved to a new location, refer first to the INSTALLATION section of these safeguards.

1 KEEP THIS VIDEO UNIT AWAY FROM WATER OR MOISTURE OF ANY KIND.

2 **IF EQUIPMENT IS EXPOSED TO RAIN, MOISTURE, OR STRONG IMPACT**, unplug the unit and have it inspected by a qualified service technician before use.

3 DURING AN ELECTRICAL STORM

During a lightning storm, whether indoors or outdoors, or before leaving the unit unused for extended periods of time, disconnect all equipment from the power source as well as the antenna and cable system.

4 WHEN THE UNIT IS PLUGGED IN

- Never expose the unit to rain or water. DO NOT OPERATE if liquid has been spilled into the unit. Immediately unplug the unit, and have it inspected by a service technician. Fire and shock hazards can result from electrical shorts caused by liquid contact inside.
- Never drop or push any object through openings in the unit. Some internal parts carry hazardous voltages and contact can cause electric shock or fire hazard.
- Avoid placing the unit directly above or below your TV set as this may cause electrical interference. Keep all magnets away from electronic equipment.

5 USING ACCESSORIES

Use only accessories recommended by the manufacturer to avoid risk of fire, shock, or other hazards.

6 CLEANING THE UNIT

Unplug the unit. Then, use a clean, dry, chemically untreated cloth to gently remove dust or debris. DO NOT USE cleaning fluids, aerosols, or forced air that could over-spray, or seep into the unit and cause electrical shock. Any substance such as wax, adhesive tape, etc. may mar the cabinet surface. Exposure to greasy, humid, or dusty areas may adversely affect internal parts.

SERVICE

1 DO NOT SERVICE THIS PRODUCT YOURSELF

If, after carefully following the detailed operating instructions, this Video product does not operate properly, do not attempt to open or remove covers, or make any adjustments not described in the manual. Unplug the unit and contact a qualified service technician.

2 IF REPLACEMENT PARTS ARE REQUIRED

Make sure the service technician uses only parts specified by the manufacturer, or those having the same safety characteristics as the original parts. The use of unauthorized substitutes may result in fire, electric shock, or other hazards.

3 HAVE THE SERVICE TECHNICIAN PERFORM A SAFETY CHECK

After any service or repairs to the unit, request the service technician to conduct a thorough safety check as described in the manufacturer's service literature to ensure that the video unit is in safe operating condition.

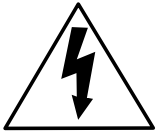
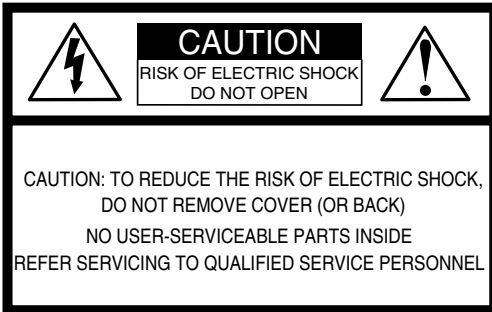
Safety Precautions

WARNING: To prevent fire or shock hazard, do not expose this equipment to rain or moisture.

CAUTION: To prevent electric shock, match wide blade of plug to wide slot, fully insert.

Avertissement: Afin de prévenir tout risque d'incendie ou de chocs électriques, ne pas exposer cet appareil à la pluie ou à une humidité excessive.

Attention: Pour éviter les chocs électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.



This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this unit.



This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

Note to CABLE system installer:

This reminder is provided to call the CABLE system installer's attention to Article 820-40 of the NEC in USA (and to the Canadian Electrical Code in Canada) 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.

FCC Warning: Any unauthorized changes or modifications to this equipment would void the user's authority to operate.

Before Using

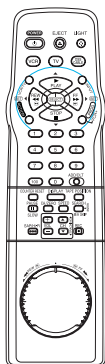
Congratulations

on your purchase of one of the most sophisticated and reliable products on the market today. Used properly, it will bring you years of enjoyment. Please fill in the information below. The serial number is on the tag located on the back of your VCR.

- Date of Purchase _____
- Dealer Purchased From _____
- Dealer Address _____
- Dealer Phone No. _____
- Model No. **PV-V4622** _____
- Serial No. _____

Accessories

- Remote Control LSSQ0314
- Batteries 2 "AA"

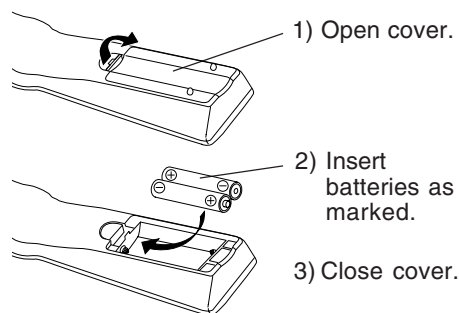


- RF Coaxial Cable VJAS0196



To order accessories, call toll free 1-800-332-5368.

Loading the Batteries

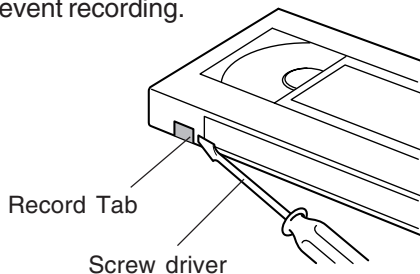


Battery replacement caution

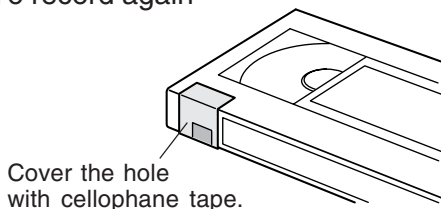
- Do not mix old and new batteries.
- Do not mix alkaline with manganese batteries.

Prevent Accidental Tape Erasure

Break off the tab to prevent recording.



To record again



Record/ Playback Time

Only use tapes with the **VHS** mark in this unit.

Tape Speed Setting	Type of Video Cassette		
	T60	T120	T160
SP (Standard Play)	1 Hour	2 Hours	2 Hours 40 Minutes
LP (Long Play)	2 Hours	4 Hours	5 Hours 20 Minutes
SLP (SuperLongPlay)	3 Hours	6 Hours	8 Hours

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Initial Setup
(Connection)

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For Your
Information

Location of Controls

Remote control Buttons

EJECT
(Ejects tape)

POWER
(Turns VCR off/on)

VCR (mode)
(Enables VCR functions)

VCR/TV
(For TV or VCR mode)

PLAY (Plays a tape)/
FAST FORWARD/SEARCH
(Fast forwards tape/ forward visual search)

REWIND/SEARCH
(Rewinds tape/ reverse visual search)

STOP (Stops tape)

▲▼◀▶ Remote keys

PLAY, STOP, REW, and FF function as ▲▼◀▶ operation keys when menus are displayed.

ACTION
(Displays menu)

COUNTER RESET
(Resets counter to zero)

PAUSE/SLOW
(Displays still, frame by frame, or slow motion picture)

DISPLAY
(Displays VCR status)

SAP/Hi-Fi
(Selects audio mode for play or record)

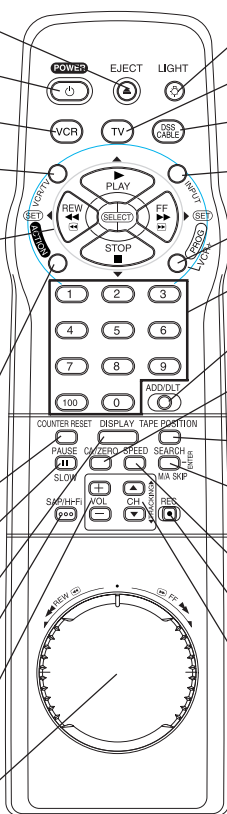
VOLUME +/-
(Adjusts TV volume)

SHUTTLE Ring
(Variable speed search)

Light Tower Universal Shuttle Remote Control

LIGHT button: When pressed, available buttons light and selected mode button (TV, VCR, or DSS CABLE) flashes 5 seconds. If no button is pressed, light goes out in 5 seconds. Also, hold down a button to confirm the selected mode (mode button flashes) in the dark.

EJECT button: Press to eject tape. EJECT is not available during recording.



LIGHT
(Remote buttons light up)

TV (mode)
(Enables TV functions)

DSS/CABLE mode
(Enables DSS/CABLE functions)

INPUT
(For LINE or channel)

PROGRAM/VCR+
(Displays Timer Program screen)

NUMBER Keys
(Selects channel directly)

ADD/DELETE
(Adds or deletes a channel)

**COMMERCIAL ADVANCE/
ZERO SEARCH**
(Set MOVIE ADVANCE/ Zero search)

TAPE POSITION
(Locates tape position)

SEARCH/ENTER
(Set search system /Tunes TV channel)

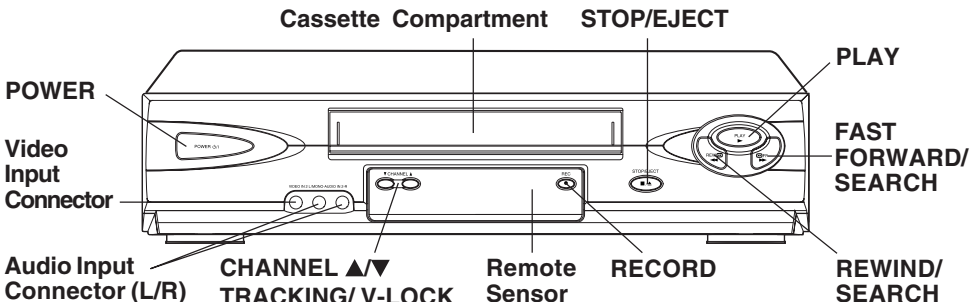
MOVIE ADVANCE
(Set MOVIE ADVANCE)

SPEED
(Changes tape speed)

RECORD
(Records a program, etc.)

**CHANNEL ▲/▼
TRACKING/ V-LOCK**
(Selects channel/ reduces picture noise during Play and Slow mode)

Front View of the VCR



Multi Function Display

Power Indicator

Lights up when power is on.

Timer Indicator

Lights up when the VCR is set for Timer Recording, or when One Touch Recording (OTR) is used. Flashes when a Timer Recording is set, but tape has not been inserted into the VCR.



VCR Indicator

Lights up when the VCR/TV selector is set to VCR.

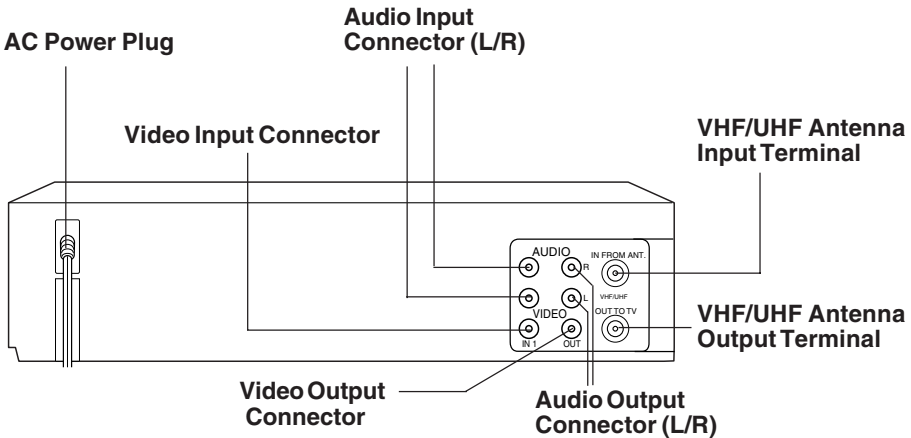
Hi-Fi Indicator

Lights up when Hi-Fi audio is monitored in Playback Mode.

Clock/ Status/ Channel/ Speed Display

Displays the current time. Briefly displays VCR status when a function button is pressed. Briefly displays the channel number, or "L1" or "L2" when a channel or line input is selected. Briefly displays the recording speed when SPEED is pressed.

Rear View of the VCR



Note

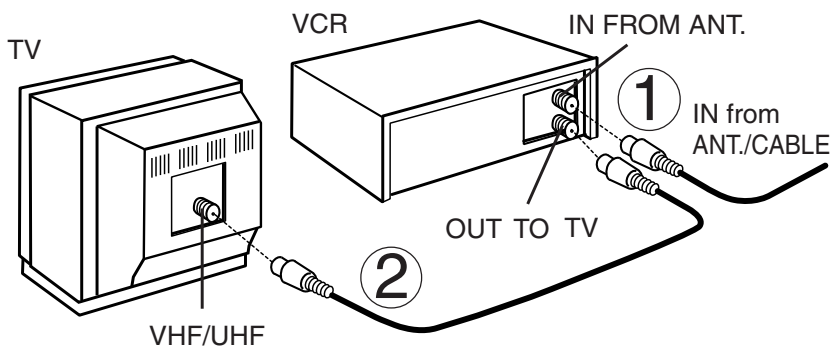
- While plugged into an AC outlet, the VCR consumes 3.0 W of electrical power in off mode.

Initial Setup for ANT./Cable → VCR → TV Connection

Please make all cable or antenna connections before plugging into the AC outlet. Plugging the VCR Power Cord into an AC wall outlet starts auto channel and clock set.

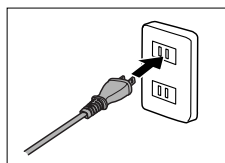
How to Connect

- 1 Connect cable from Antenna/Cable to VCR's IN FROM ANT. jack.
- 2 Connect VCR's OUT TO TV jack to TV's ANT. IN jack with included RF Cable accessory.

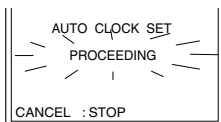
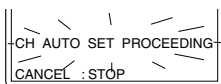


Doing Initial Setup (Ready to Play)

- 1 Turn TV on and tune to channel 3.
- 2 Plug VCR Power Cord into AC wall outlet. VCR comes on and auto channel and clock set starts.
 - If screen at right does not appear, check VCR - TV connection and, if TV is tuned to channel 3, try switching it to channel 4.
 - To change VCR's output channel, please refer to "VCR's Output Channel" on page 13.



Plugging the AC Power Plug into an AC outlet

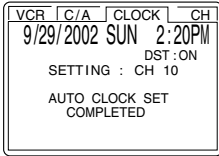


WARNING

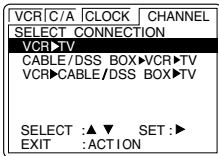
When using "Nut type" RF coaxial cables, tighten with fingers only. Overtightening may damage terminals.

***Important:** If a remote control button does not work when pressed, press the VCR button on the remote and try the button again.

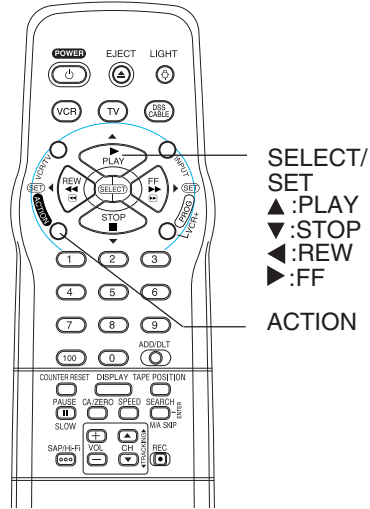
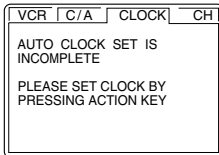
3 Settings are made automatically. When setup is done, this screen appears.



4 SELECT CONNECTION screen is displayed. Press ▲▼* to select connection “VCR ► TV” or “VCR ► CABLE/DSS BOX ► TV”, and press ► to set.



If “AUTO CLOCK SET IS INCOMPLETE” appears, manually set clock. See below right.

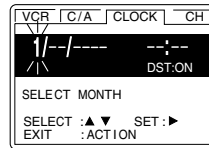


**Initial Setup
(Connection)**

Manual Clock Set

If Auto Clock Set was incomplete.

a Press **ACTION** on remote to display **CLOCK** screen.



b Press ▲▼ to select the month and ► to set. In the same manner, select and set the date, year, time, and DST (Daylight Saving Time).



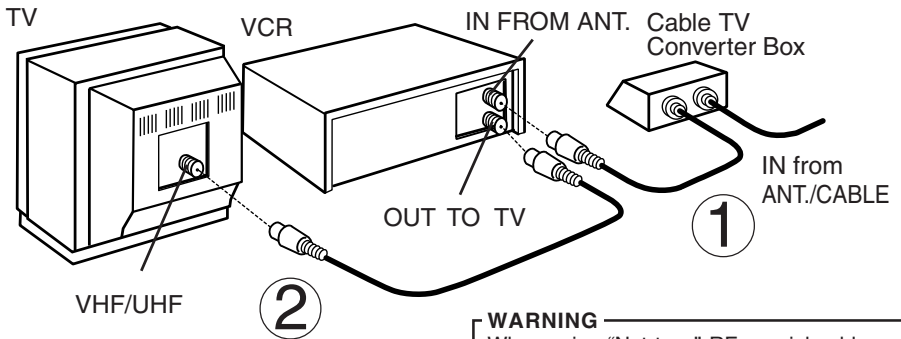
c Press **ACTION** to start clock, and go to step 4 above left.

Initial Setup for DSS/Cable Box → VCR → TV Connection

Please make all cable or antenna connections before plugging into the AC outlet. Plugging the VCR Power Cord into an AC wall outlet starts auto channel and clock set.

How to Connect

- 1 Connect the OUT Jack on your cable box to the IN FROM ANT. terminal on the VCR with the RF Cable.
- 2 Connect the OUT TO TV terminal on the rear of VCR to the ANT. IN terminal on TV using the RF Cable (included accessory).

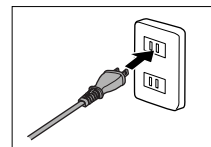


WARNING

When using "Nut type" RF coaxial cables, tighten with fingers only. Overtightening may damage terminals.

Doing Initial Setup (Ready to Play)

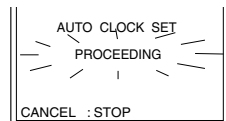
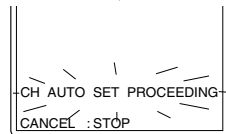
- 1 Turn TV on and tune to channel 3.
 - Turn on your cable box and set it to your Public Broadcasting Station (PBS) channel in your time zone. If you use a DSS receiver, it must be turned off.



Plugging the AC Power Plug into an AC outlet

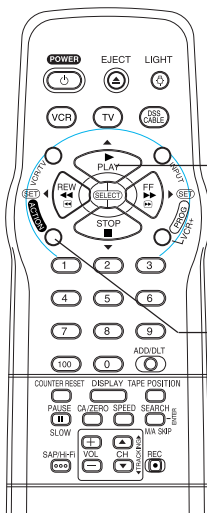
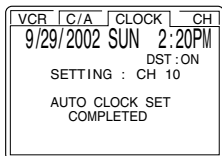
- 2 Plug VCR Power Cord into AC wall outlet. VCR comes on and auto channel and clock set starts.

- If screen at right does not appear, check VCR - TV connection and, if TV is tuned to channel 3, try switching it to channel 4.
- To change VCR's output channel, please refer to "VCR's Output Channel" on page 13.



***Important:** If a remote control button does not work when pressed, press the VCR button on the remote and try the button again.

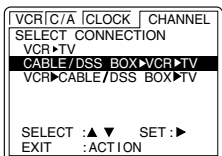
3 Settings are made automatically. When setup is done, this screen appears.



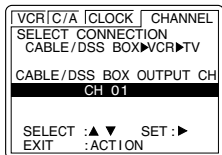
SELECT/SET
 ▲:PLAY
 ▼:STOP
 ◀:REW
 ▶:FF
 ACTION

**Initial Setup
(Connection)**

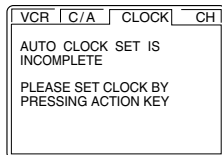
4 SELECT CONNECTION screen is displayed. Press ▲▼* to select connection "CABLE/DSS BOX ► VCR ► TV" and press ► to set.



Confirm the output channel of your cable box or DSS receiver. Press ▲▼ to select the same channel as the cable box or DSS receiver output channel. Press ► to enter.



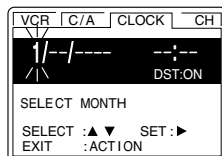
If "AUTO CLOCK SET IS INCOMPLETE" appears, manually set clock. See right.



Manual Clock Set

If Auto Clock Set was incomplete.

a Press ACTION on remote to display CLOCK screen.



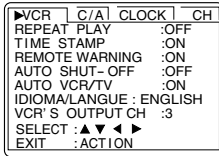
b Press ▲▼ to select the month and ► to set. In the same manner, select and set the date, year, time, and DST (Daylight Saving Time).



c Press ACTION to start clock, and go to step 4 above left.

Reset Language, Channels, Clock,

1



Press **ACTION*** to display menu.

2

Language

- 1) Press **▲▼** to select language item.



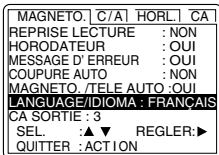
- 2) Press **▶** repeatedly.



For English



For Spanish

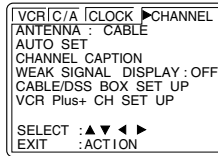


For French

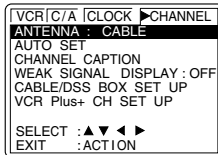
- 3) Press **ACTION** to exit.

Channels

- 1) Press **◀▶** to select CHANNEL.

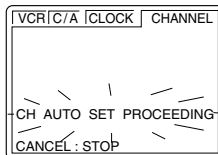


- 2) Press **▲▼** to select "ANTENNA," then **press ▶** to set your antenna system ("TV" or "CABLE").



- 3) Press **▲▼** to select "AUTO SET," then **press ▶**.

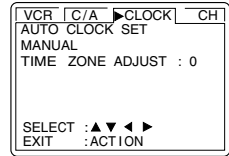
- If you use Cable Box, set it to the PBS channel in your time zone.



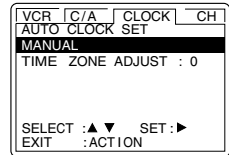
- After Channel Auto Set is finished, Auto Clock Set will be performed.

Clock

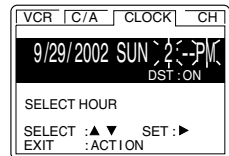
- 1) Press **◀▶** to select CLOCK.



- 2) Press **▲▼** to select "MANUAL," and **press ▶**. (For Auto Clock Set, select "AUTO CLOCK SET.")



- ("TIME ZONE ADJUST" appears only when auto clock is set.)

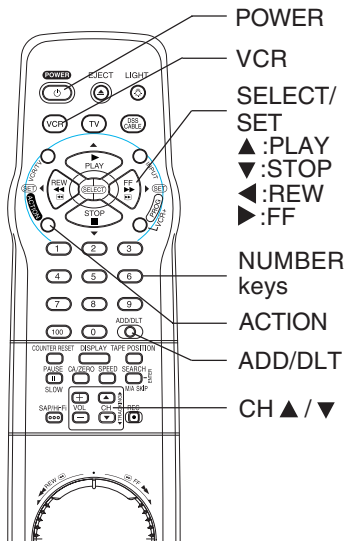


- 3) Press **▲▼** and **◀▶** to select and set the date, time, and DST (Daylight Saving Time).

- 4) Press **ACTION** to start the clock and exit this mode.

VCR's Output Channel

***Important:** If a remote control button does not work when pressed, press the VCR button on the remote and try the button again.

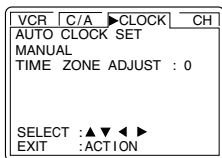


Basic Operation

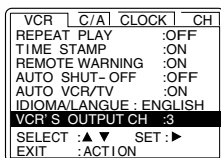
Time Zone Adjust ■ VCR's Output Channel

(Only when Auto Clock is set.)

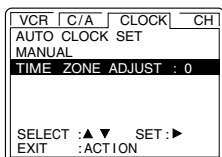
1) Press **◀▶** to select **CLOCK**.



1) Press **▲▼** to select **VCR'S OUTPUT CH.**

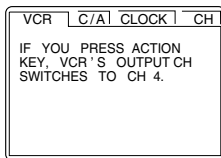


2) Press **▲▼** to select **"TIME ZONE ADJUST."**

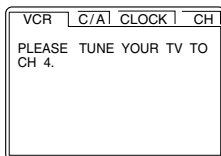


and press **▶** to subtract or add hour(s) as necessary.

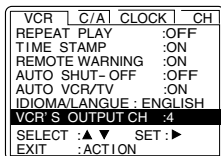
2) Press **▶**.



3) Press **ACTION**.



After 3 seconds



• To Make Corrections, repeat steps 1) ~ 3).

Add or Delete a Channel

To add channel:
Select channel with **NUMBER keys** and press **ADD/HLT**.

CHANNEL 08 ADDED

To delete channel:
Select channel with **CH ▲/▼** or **NUMBER keys** and press **ADD/HLT**.

CHANNEL 08 DELETED

DST (Daylight Saving Time)

VCR auto adjusts clock for DST. (p. 9.)

Spring (First Sunday in April)
DST:ON → Sets clock ahead one hour.

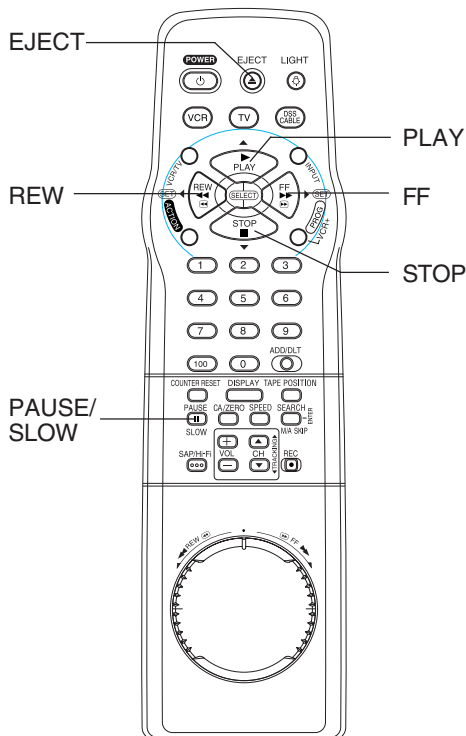
Autumn (Last Sunday in October)
DST:ON → Turns clock back one hour.

- If your area does not observe Daylight Saving Time, select DST:OFF.
- Keep these time changes in mind when programming VCR for timer recordings.

Playback a Tape

Ready Checklist

- All connections are made (p. 8, 10, 24).
- TV and VCR are plugged in.
- TV is on and tuned to CH 3, 4, or VIDEO.
- Remote is in VCR mode. (Press VCR)



Playback using VCR controls

- 1 Insert a tape.
- 2 Press PLAY.

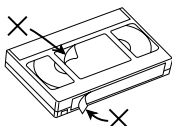


Multi Function Display

- Press STOP/EJECT to stop and/or eject tape.

Note

Remove loose or peeling labels from tapes to prevent tape jam.



- 1 Insert a tape,
 - VCR power comes on. "VCR" lights on Multi Function Display. If Auto VCR/TV (p. 35) is set to "OFF," press VCR/TV until "VCR" lights on the Multi Function Display.

- 2 Press PLAY to play tape.
 - If tape has no rec. tab (p. 4), auto play begins.

Special Features During Play

- Forward/ Reverse scene search
 - ➔ Press FF or REW.
 - ➔ Press PLAY to release.
 After search has begun, each additional press of FF or REW changes speed as shown below.
 - [SLP] : Approx. 21X ↔ Approx. 43X
 - [LP] : Approx. 9X ↔ Approx. 15X
 - [SP] : Approx. 7X ↔ Approx. 13X
 - If picture is interrupted at 43X, 15X, or 13X speed, speed changes to 21X, 9X, or 7X.
 - It may take a moment for 43X, 15X, or 13X search to start while tape condition is being determined.
 - 43X, 15X, or 13X search may not be possible with some tapes.

Notes

- Picture interruption may occur with some TVs.
- FF and REW search speed may vary depending on current tape position.

- Still (Freeze) picture
 - ➔ Press PAUSE/SLOW.
 - ➔ Press PLAY to release.
- Frame by Frame picture
 - ➔ Press PAUSE/SLOW in Still mode.
 - ➔ Press PLAY to release.

- Slow Motion picture
 - ➔ Hold down PAUSE/SLOW in Still mode.
 - ➔ Press PLAY to release.

Notes

- These features work best in SP or SLP mode.
- The sound will be muted.
- To reduce picture noise, see "Manual Tracking Control" on page 37.
- After the VCR is in Still or Slow mode for 3 minutes, it will switch to Stop mode automatically to protect the tape and the video head.

- 3 Press STOP to stop tape.

- Rapid Rewind/ Fast Forward (E.g., T-120 tape rewinds in approx. 1 minute.) Press REW or FF in Stop mode.

Notes

- Rewind or FF starts after VCR detects tape length. This may take a moment.
- Rew/ FF speed slows down at start and end portions of the tape.
- Press EJECT on remote, or STOP/EJECT on VCR to eject tape.

Record on a Tape

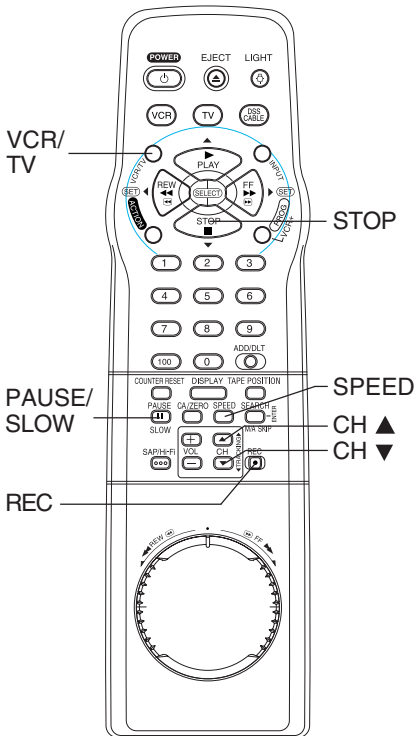
***Important:**

If a remote control button does not work when pressed, press the VCR button on the remote and try the button again.



Ready Checklist

- All connections are made (p. 8, 10, 24).
- TV and VCR are plugged in.
- TV is on and tuned to CH3, 4, or VIDEO.
- Remote is in VCR mode. (Press VCR)



Record using VCR controls

- 2 Select Channel.
- 1 Insert a tape.
- 4 Press REC to start Recording.



Multi Function Display

- 5 Press STOP/EJECT to stop.

This video recorder, equipped with HQ (High Quality) system, is compatible with existing VHS equipment. Only use tapes with the **VHS** mark. Only tapes tested and inspected for use in 2, 4, 6, and 8 hour machines are recommended.

- 1 Insert a tape with a record tab (p. 4).
 - VCR power comes on. "VCR" lights on Multi Function Display. If Auto VCR/TV (p. 35) is set to "OFF," press VCR/TV until "VCR" lights on the Multi Function Display.

- 2 Press CH ▲▼* or NUMBER keys to select the channel.
 - For "LINE" input, see p. 36.
 - For channel over 100, first press 100 key then the other 2 digits.

- 3 Press SPEED to select the record speed (p. 4).
 - SP = Standard Play LP = Long Play
 - SLP = Super Long Play
 - Speed appears on-screen and on Multi Function Display.

- 4 Press REC to start recording.
 - To edit, press PAUSE/SLOW to pause, and again to resume recording.

- 5 Press STOP to stop recording.

- **One Touch Recording** (recording in progress),
 - VCR shuts off after the preset record length.
 - each press of REC adds 30 min. to the recording length up to 4 hours.
- **Record one station, watch another,**
 - press VCR/TV ("VCR" goes out on Multi Function Display),
 - select channels at TV (recording continues).

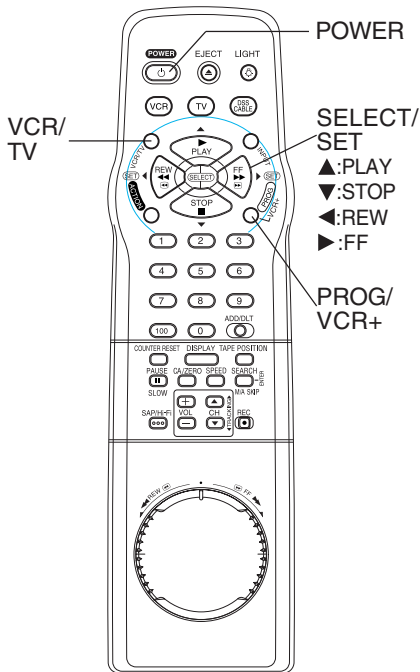
Note • **Watching one channel and recording another is NOT possible when using a Cable Box or a Satellite Receiver.**

- **Select channels at VCR,**
 - Other channels cannot be viewed during recording.
 - press VCR/TV ("VCR" lights up on Multi Function Display),
 - select channels at VCR.

Note • After 5 min. in Pause mode, VCR stops to protect the tape and the video head.

Basic Operation

Timer Recording

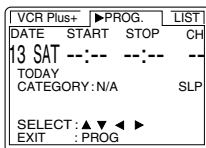


Ready Checklist

- All connections are made (p. 8, 10, 24).
- TV and VCR plugged in and turned on.
- VCR/TV selector set to "VCR."
- Clock set correctly.
- Tape has rec. tab (p. 4).
- Remote is in VCR mode. (Press VCR)**

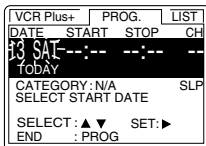
1 Press **PROG/VCR+*** button to display PROGRAM.

2



Press ▼ to display Program screen.

3



1) Set record DATE, press ▲▼ to select: 1~31= one time, or DAILY= MON~ FRI, or WEEKLY= same time each week and press ▶ to set.

• See selection order below left.

2) To set remaining items, press ▲▼ to select and press ▶ to set START/ STOP times, CH (channel) or LINE input (p. 36), Category and tape speed (SP, LP, SLP).**

Press **PROG/VCR+** button to end the program.

Example

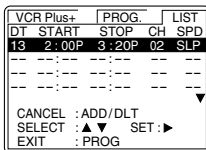


**Category Items
N/A (not applicable),
SPORTS, MOVIE, COMEDY,
MUSIC, DRAMA

Notes

- If you are using a Cable Box, VCR Timer Programming Channel (Step 3) must be set to the Cable Box output channel and your Cable Box must be manually set to the desired channel. The Cable Box must be left on.
- If a power interruption occurs while programming the timer, the timer program(s) may be canceled. If "TIMER PROGRAMS WERE LOST DUE TO POWER INTERRUPTION" appears on-screen, please reenter the timer programs.

4



To Enter More Programs, press ▲▼ to select and press ▶ to set an unused program number and repeat step 3.

Or
Press **PROG/VCR+** button again to exit.

5

Press **POWER** off to set the Timer Recording. ("TIMER" lights up on Multi Function Display.)

***Important:** If a remote control button does not work when pressed, press the VCR button on the remote and try the button again.

Review, Replace or Clear Program Contents:

(Recording is not in progress)

1

VCR Plus+	PROG.	LIST
DT	START	STOP CH SPD
7	9:00A	12:00A 08 SP
8	10:00P	12:00P 02 SP
10	8:00P	9:00P 10 SP
SU	9:00P	10:00P L1 LP

SELECT : ▲▼▶▶
EXIT : PROG

- 1) Press **PROG/VCR+** button.
- 2) Press **◀▶** to select LIST.

To cancel a Timer Recording in progress...

Press **POWER** and then press **STOP** within 10 seconds to cancel the Timer Recording. (The **TIMER** indicator goes out on Multi Function Display.)

2

VCR Plus+	PROG.	LIST
DT	START	STOP CH SPD
7	9:00A	12:00A 08 SP
8	10:00P	12:00P 02 SP
10	8:00P	9:00P 10 SP
SU	9:00P	10:00P L1 LP

CANCEL : ADD/DLT
SELECT : ▲▼ SET : ▶
EXIT : PROG

- Press **▲▼** to select number.

3 To Replace program...

VCR Plus+	PROG.	LIST
DATE	START	STOP CH SPD
7	SUN-9:00A	12:00A 08
TODAY		
CATEGORY:	N/A	SP
SELECT START DATE		

SELECT : ▲▼ SET : ▶
END : PROG

- 1) Press **▶** to display.
- 2) Repeat Step 3 (p.16) to set new programs.

or

To Clear program...

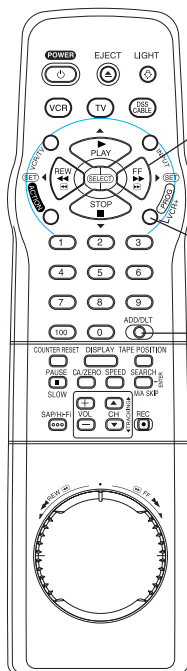
VCR Plus+	PROG.	LIST
DT	START	STOP CH SPD
8	10:00P	12:00P 02 SP
10	8:00P	9:00P 10 SP
SU	9:00P	10:00P L1 LP

CANCEL : ADD/DLT
SELECT : ▲▼ SET : ▶
EXIT : PROG

- Press **ADD/DLT**.

4 Press **PROG/VCR+** button to end the programming.

- If there are set programs, press **POWER** off to set timer.



SELECT/
SET
▲:PLAY
▼:STOP
◀:REW
▶:FF

PROG/
VCR+

ADD/DLT

**Timer
Recording**

Important notes when using a DSS receiver

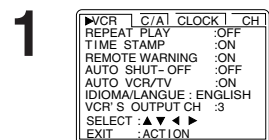
- When recording programs via a DSS receiver, the DSS receiver must be left on.
- When recording programs via an antenna or cable, the DSS receiver must be turned off.

Timer Recording Using VCR Plus+® System

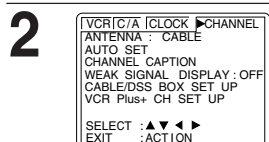
Auto VCR Plus+ System Channel Setup (Part 1)

For [VCR-TV] or [VCR-cable box-TV] connection only.

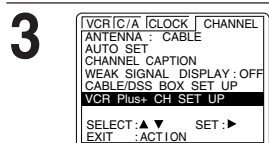
In order for VCR to read PlusCode numbers, some set up is required. Guide channel numbers are assigned to each local broadcast and cable station. Because this number sometimes differs from the channel your TV receives the station on, it is necessary to program the VCR with local channel information. To receive VCR Plus+ channels automatically, perform the steps below. Or, see "Manual VCR Plus+ System Channel Setup" section on page 20.



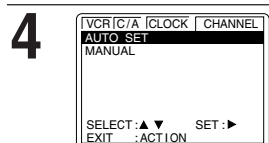
Press ACTION*
to display menu.



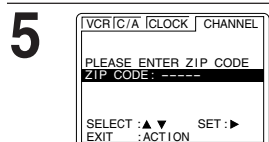
Press ◀▶
to select CHANNEL.



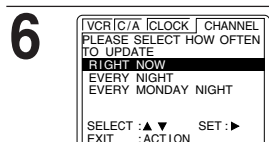
Press ▲▼
to select VCR Plus+
CH SET UP and
press ▶ to display.



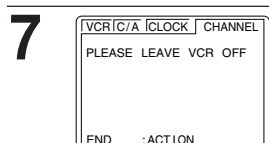
Press ▲▼
to select AUTO SET
and
press ▶ to set.



Press ▲▼◀▶
to enter Zip Code and
enter each number.
Press ▶ or ACTION to
set.



Press ▲▼
to select When to
Update and
press ▶ to set.



Press ACTION to
return to normal screen.

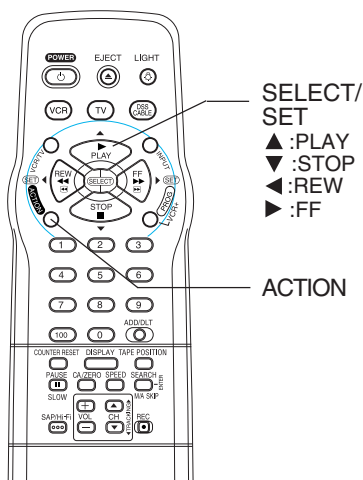
- Make sure to leave VCR off (overnight).

VCR Plus+ System is ...

a feature that allows you to set **most items** of a timer recording by simply entering a special code number (PlusCode programming number) found in TV GUIDE and selected newspaper TV listings.

Important Note

• "Initial Setup" on pages 8 ~ 11 must be completed before "Auto VCR Plus+ System Channel Setup" can be done. If any part of setup is incomplete, a warning screen appears.



Notes

- When Auto Set is performed, channels set in initial setup (pp. 8 ~ 11) will be replaced by automatically downloaded data.
- Make each entry within 1 minute or VCR will leave this mode.
- Once local channels have been programmed, they will stay in memory, even in the case of a power failure.
- If the start time for a timer recording comes up during Auto VCR Plus+ System Setup, the timer recording will have priority.

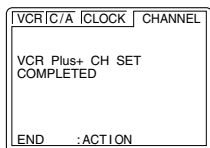
***Important:** If a remote control button does not work when pressed, press the VCR button on the remote and try the button again.

Auto VCR Plus+ System Channel Setup (Part 2)

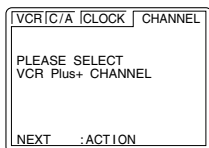
Before you perform the following steps, you should have:

- completed “Auto VCR Plus+ System Channel Setup (Part 1)” on page 18.
- left VCR off overnight, and turned it back on after 9:00 AM the next day.

- 1** If channel updating was successful... If VCR could not distinguish channel map...

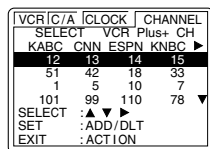


Press **ACTION** to exit this mode.



Press **ACTION** to display SELECT VCR Plus+ CH. Continue with step 2.

- 2** Press **▲▼◀▶** to select channel map for your area and press **ADD/DLT** to set.



Press **ACTION** to return to normal screen.

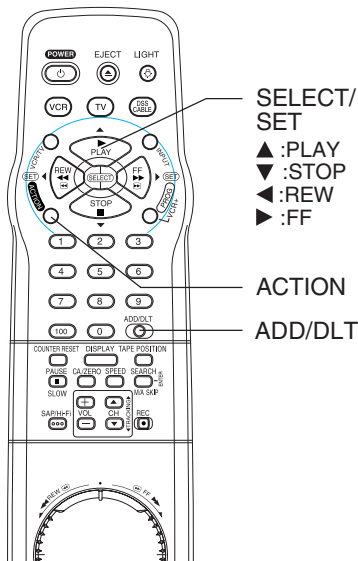
- Make sure to leave VCR off (overnight).

- 3**
-
- PLEASE LEAVE VCR OFF
- END :ACTION

Channel map will be updated (overnight). If it was successful, “VCR Plus+ CH SET COMPLETED” appears on screen. Press **ACTION** to exit.

Repeat these steps as necessary.

If Auto Setup fails, do “Manual VCR Plus+ System Channel Setup” on page 20.

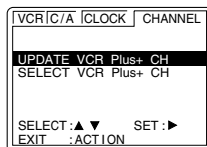


Timer
Recording

To Change or Update Auto VCR Plus+ System Channel Setup

(E.g. you selected wrong channel map or zip code.)

- a** Do “Auto VCR Plus+ System Channel Setup (Part 1)” steps 1~4 on page 18.



- b** Press **▲▼** to select UPDATE VCR Plus+ CH or SELECT VCR Plus+ CH, then press **▶**.
- c** If you selected UPDATE VCR Plus+ CH, perform steps 5~7 in the “Auto VCR Plus+ System Channel Setup (Part 1)” section on page 18.

If you selected SELECT VCR Plus+ CH, perform steps 2~3 in the “Auto VCR Plus+ System Channel Setup (Part 2)” section on this page.

Timer Recording Using VCR Plus+® System (continued)

Initial Setup.....

In order to use Timer Recording Using VCR Plus+ System, the Initial Setup on page 8 to 11 must be completed for setting Clock and Channel.

Channel Setup.....

Since numbers assigned to channels found in TV Guide and selected newspapers may differ from channels in your viewing area, you'll need to enter your local TV channel number for each corresponding Guide Channel.

If you perform the VCR Plus+ Channel set up procedures shown below, you will be able to perform timer recordings using the PlusCode programming number listed in your local TV listing.

Manual VCR Plus+ Channel Setup

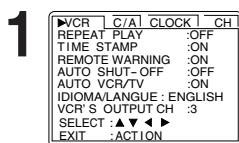
For [VCR→TV] or [VCR→cable box→TV] connection only.

To complete step 5 of setup, do the following:

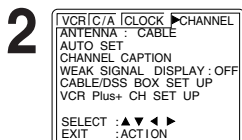
- Prepare a TV/Cable station line-up and channels they are received on. Also, the Guide channel numbers assigned to your stations (found in TV Guide and selected newspapers.)
- Make a 3-column chart (see sample).
 Left column → all stations you receive.
 Middle column → each station's assigned Guide channel number from TV Guide, etc.
 Right column → channel number on which your TV receives the station.

SAMPLE ONLY

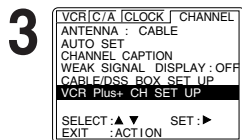
Broadcast or Cable station name	Assigned Guide channel No.	Channel No. on which my TV receives the station.
HBO	33	15
Nickelodeon	38	20
CBS	04	04
FOX	11	



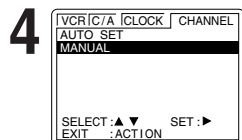
Press **ACTION*** to display menu.



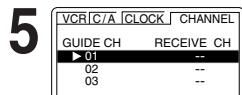
Press **◀▶** to select CHANNEL.



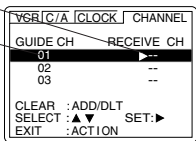
Press **▲▼** to select VCR Plus+ CH SET UP, and press **▶** to set.



Press **▲▼** to select MANUAL, and press **▶** to set.



To enter VCR Plus+ channels, press **▶** to move cursor to right, press **▲▼** to enter number, press **▶** to set, and press **▲▼** to scroll up/down.



• Repeat step 5 until list is complete.

To Make Corrections, press **▲▼** and **▶** to move to error, then **▲▼** to change, or **ADD/DLT** to erase number.

6 Press **ACTION** twice to return to normal screen.

***Important:** If a remote control button does not work when pressed, press the VCR button on the remote and try the button again.

VCR Plus+ System Programming

✓ Ready Checklist

- Clock is set.
- VCR Plus+ Setup is complete (see pp. 18 - 20).

1

VCR Plus+	PROG.	LIST
DATE	START	STOP
13 SAT	--:--	--:--
TODAY		
CATEGORY: N/A		SLP
SELECT : ▲▼◀▶		
EXIT : PROG		

Press **PROG/VCR+** button to display PROGRAM.

2

VCR Plus+	PROG.	LIST
ENTER PLUSCODE NUMBER		
-		
USING 0-9 KEYS		
SELECT : ▲▼◀▶		
EXIT : PROG		

Press **◀▶** to select display VCR Plus+ screen.

3

VCR Plus+	PROG.	LIST
ENTER PLUSCODE NUMBER		
1		
USING 0-9 KEYS		
BACKSPACE : ◀		
END : PROG		

Press **NUMBER** keys to enter PlusCode number and **press PROG/VCR+** button to set.

To Make Corrections, press **◀** repeatedly to delete number, then repeat step 3.

- If the PlusCode number entered begins with "0," skip to step 5. Display in step 4 will not appear.

4

VCR Plus+	PROG.	LIST
ONCE		
DAILY(MON-FRI)		
WEEKLY		
SELECT : ▲▼		
END : PROG		

Press **▲▼** to select ONCE, DAILY(MON~FRI), or WEEKLY record frequency and **press PROG/VCR+** button to set.

5

VCR Plus+	PROG.	LIST
DATE	START	STOP
13 SAT	2:20P	3:20P
TODAY	N/A	ABC
CATEGORY: N/A		SLP
SELECT RECORO SPEED		
SELECT : ▲▼	SET: ▶	
END : PROG		

Press **▲▼** to select category and recording speed.

Press **▶** to set. Press **PROG/VCR+** button to end program.

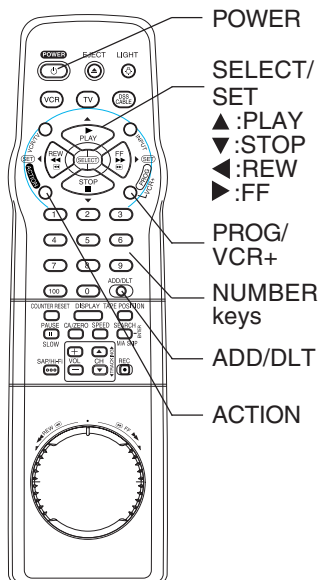
6

VCR Plus+	PROG.	LIST
DT	START	STOP
13	2:00P	3:20P
		02
		SLP
CANCEL : ADD/DLT		
SELECT : ▲▼	SET: ▶	
EXIT : PROG		

Press **PROG/VCR+** button **again** to exit.

- Press **ADD/DLT** to delete the program.

7 Press **POWER** off to set the timer. ("TIMER" lights up on Multi Function Display.)



Do normal Timer Record if...

- PlusCode number is not listed for program.
- the program (e.g. sports event) may run over set stop time.

See page 17 to:

- cancel a timer recording in progress.
- review, replace, or clear program contents.

Important for DSS/Cable Box Users

- When recording via DSS, the receiver must be left on. When recording via cable or antenna, DSS receiver must be off.
- When recording via a cable box, leave box on and tuned to channel to be recorded.

Notes

- Do not overlap program times.
- PlusCode numbers cannot be used to program VCR to record DSS and cable box channels.
- Make each entry within 1 minute or the VCR will exit setup mode.
- Once VCR Plus+ channel setup is done, channels stay in memory. If a power interruption occurs, VCR Plus+ channel setup may be lost. Please do VCR Plus+ channel setup again.
- Obtain unlisted PlusCode numbers by calling 1 - 900 - 454 - 7587. Call costs about \$.95 per minute.

Timer Recording

Multi-Brand Control Feature

Multi-Brand Control Setup

The Remote Control can be set to control some TV and Cable box/DSS functions.

1 Find your TV and Cable Box/DSS Receiver Brand Code Number on the following page.

- 2**
- **Setup for TV control,**
 - ➔ hold down **TV** button,
 - ➔ enter code with **NUMBER** keys.
 - **Setup for Cable or DSS control,**
 - ➔ hold down **DSS/CABLE** button,
 - ➔ enter code with **NUMBER** keys.

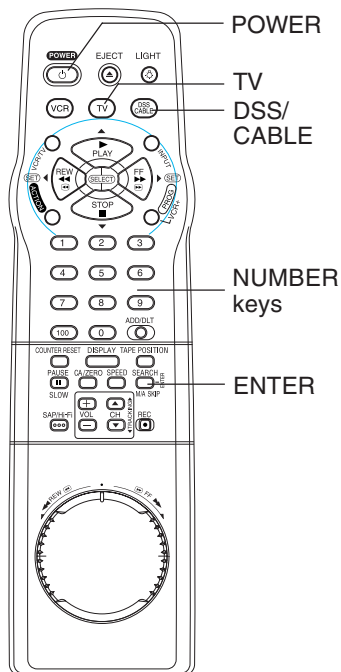
- If code number is 100 or greater,
 - ➔ **press 100 key**, then other digits.
- E.g., press 100 - 0 - 2 for 102.

3 Confirm code entry,

- ➔ **press POWER** to turn selected unit on or off.
- See table below for controllable functions in each mode.

Notes

- Repeat setup after remote battery replacement.
- Remote will not control every TV, cable box, or DSS made by the manufacturer listed. If you get no response, your particular unit cannot be controlled. There are **NO** additional codes for the products listed. If your product is not listed, then the remote is not compatible with that product.



Using Multi-Brand Control

After remote is set up, you can select VCR, TV, or DSS/CABLE for the desired function.

Press VCR, or TV, or DSS/CABLE on the remote. (Table below shows available unit buttons for each mode.)

Mode \ Unit	VCR	TV	CABLE/ DSS
VCR	All	VOL UP/DOWN	_____
TV	VCR/TV, PLAY, STOP EJECT, SAP/ Hi-Fi, DISPLAY, FF, REW, PAUSE/ SLOW, REC, SPEED, CA/ZERO, COUNTER	POWER, INPUT, number keys, ENTER, CH UP/ DOWN, VOL UP/DOWN	_____
CABLE/ DSS	RESET, TAPE POSITION	VOL UP/ DOWN	POWER, ENTER, number keys (except 100key), CH UP/ DOWN

Notes

- Not all functions listed may be controllable.
- In TV or DSS/CABLE mode, it may be necessary to press ENTER after pressing NUMBER keys for channel selection.

TV Brand Code Numbers

Panasonic 01, 02	Sylvania 05	JVC 11
Quasar 01, 02	Sharp 06, 07	Hitachi 12
RCA 03	Sony 08	Mitsubishi 07, 13
GE 03	Toshiba 09	Samsung 14
Zenith 04	Sanyo 10	Gold Star 15, 16, 17
Magnavox 05	Fisher 10	

Cable Box Brand Code Numbers

Archer 44, 06, 01, 120, 05, 63, 126	Oak Sigma 46, 11, 129, 101
Cableview 29, 09, 01, 63, 120, 44, 42, 30 52, 04, 124, 126	Panasonic 17, 16, 08, 87, 109
Citizen 44, 52, 30, 63, 42, 04, 124, 126	Philips 23, 24, 20, 13, 07, 50, 128, 129
Curtis 08, 09, 25, 61, 53, 87	Pioneer 06, 05, 12
Century 44, 51, 75, 59, 126	Pulsar 04, 42, 63, 44, 30, 52, 124, 126
Cabletenna 29, 09, 01, 63, 120, 44, 126	Quest 06, 05, 12
Cable Cinema 29, 09, 01, 63, 120, 44, 126	Radio Shack 44, 51, 75, 59, 126
Diamond 29, 09, 01, 63, 120, 44, 126	RCA 17, 16, 08, 87, 109
Eagle 62, 40, 22, 13, 58, 20, 26, 107	Realistic 44, 51, 75, 59, 126
Eastern 28, 29, 130	Recoton 44, 51, 75, 59, 126
Explorer 08, 09, 25, 61, 53, 87	Regal 41, 14, 15, 28, 102, 104, 103, 130
Gemini 30, 04, 124	Regency 28, 29, 130
General Electric 01, 57, 120	Rembrandt 44, 42, 63, 29, 01, 32, 39, 120, 126
General Instruments . 01, 84, 83, 34, 03, 02, 04, 55 65, 66, 67, 68, 120, 106, 121, 122, 115, 117, 118, 124	Samsung 42, 06, 32, 05, 40
Gerrard 44, 51, 75, 59	Scientific Atlanta 08, 09, 25, 61, 53, 87
GC Electronics 44, 42, 63, 29, 30, 52, 04 124, 126	Sheritech 27
Hamlin 41, 14, 15, 28, 102, 104, 103, 130	Signal 26, 112
Hitachi 31	SL Marx 42, 06, 32, 40, 43, 44, 52, 63, 126
Jerrold 01, 84, 83, 34, 03, 02, 04, 55, 65, 66 67, 68, 120, 106, 121, 122, 115, 117, 118, 124	Sprucer 17, 16, 08, 87, 109
Jasco 30, 04, 124	Standard Components 32, 39, 42, 44, 126
Macom 31	Stargate 04, 42, 32, 40, 63, 44, 30, 52, 06 124, 126
Magnavox 26, 112	Sylvania 19, 18
Matsushita 17, 16, 08, 87, 109	Teknika 74, 35
Movietime 32, 39, 42, 44, 126, 38, 40	Telecaption 77, 127
Maestro 74, 35	Television 40, 19, 38, 32, 42, 06
NEC 40, 19, 38, 32	Texscan 19, 18
NSC 40, 19, 38, 32	Tocom 34, 33, 01, 42, 66, 120
Novavision 08, 09, 25, 61, 53, 87	Toshiba 36
Next Level 01, 84, 83, 34, 03, 02, 04, 55, 65 66, 67, 68, 120, 106, 121, 122	Unika 44, 42, 63, 29, 01, 126, 120
Oak 46, 11, 129, 101	Universal 52, 43, 44, 63, 42, 126
	Viewstar 62, 40, 22, 13, 58, 20, 26, 107
	Videoway 07, 23, 50, 129
	Vidtek 64
	Zenith 07, 23, 50, 129

DSS Brand Code Numbers

Toshiba 90	Optimus 94, 95
Hitachi/ Hughes 91, 99	Panasonic 96
Primestar 92	ProScan 97
Drake 93	RCA 97
Magnavox 94, 95	SONY 98, 105
Uniden 94, 95	

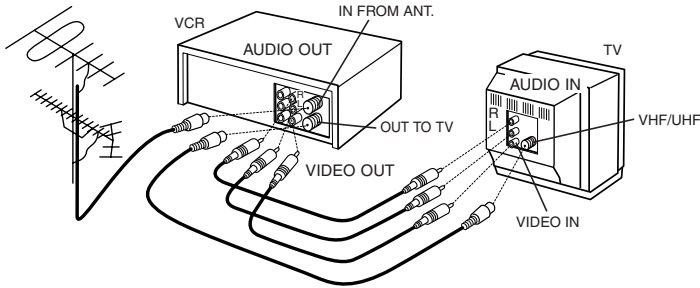
Important Notes

- Due to changes in infra-red commands used by manufacturers, some brands have several codes. If your unit does not respond to the first code, please try the next one.
- Some TV, Cable Box and DSS Box brands require you to turn on the power manually.

Advanced Connections

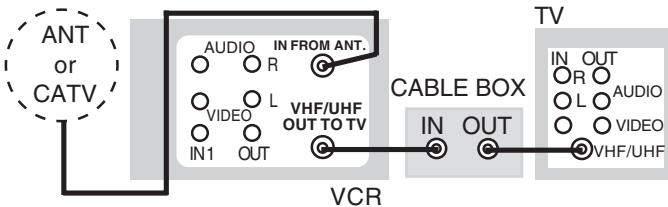
Audio/Video Connection

If your TV has AUDIO IN and VIDEO IN terminals, you can connect your VCR to them to receive higher quality picture and sound.



- 1 Connect the VIDEO OUT terminal on the VCR to the VIDEO IN terminal of your TV.
- 2 Connect the "L" and "R" AUDIO OUT terminals on the VCR to the "L" and "R" AUDIO IN terminals of your TV.
- 3 Set the VIDEO/TV selector of your TV (Monitor/Receiver) to "VIDEO."

With a Cable Box (VCR → Cable Box)



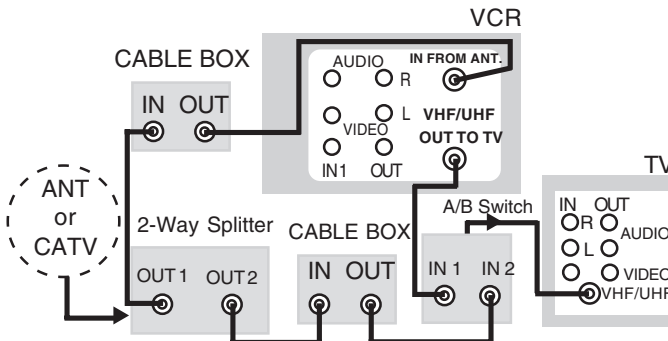
You Can

- view any (including scrambled) channel.
- use VCR Remote Control to select channels without using Multi-brand control feature.

You Cannot

- record scrambled channels.

Connect With Two Cable Boxes



You Can

- record and view both scrambled and unscrambled channels if additional equipment is added. This connection requires: two converter boxes, an A/B switch, and a 2-way splitter.

You Cannot

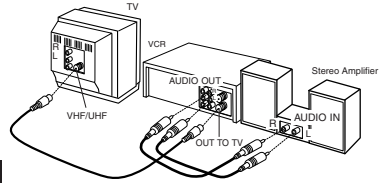
- view channel other than the one selected for any type of recording.
- do a Timer recording of a channel unless you select it at the cable box.

MTS Broadcast/ VHS Hi-Fi Stereo System

Connection

Make the Audio/Video Connection as shown on the previous page.

- You can use a TV connected to a Stereo amplifier and speakers instead of a Stereo TV.



Receivable Broadcast Types

The following are possible audio broadcast types and on-screen displays. The signal being received is indicated with an "Ⓜ" mark while the selected audio mode is indicated with an arrow.

To display the broadcast signal being received, → **press DISPLAY.**

MTS Stereo and SAP broadcast

Multi-channel Television Sound Stereo (main language) and Secondary Audio Program (sub language) broadcasts are being received simultaneously. Select STEREO or SAP audio mode.

MTS Stereo broadcast

Multi-channel Television Sound Stereo broadcast. Select STEREO audio mode.

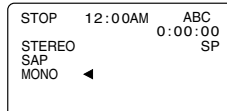
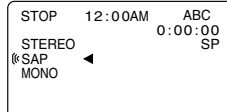
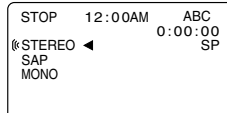
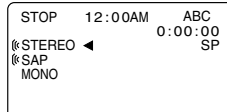
- If stereo broadcast is weak and display flickers, select MONO audio mode for possibly better results.

SAP broadcast

Secondary Audio Program (sub language) broadcast. Select SAP audio mode for the sub language.

MONO broadcast

Normal monaural sound broadcast.



DISPLAY

SAP/Hi-Fi

Equipped with **dbx**[®]-TV Noise Reduction for true MTS reproduction. **dbx**[®]-TV Noise Reduction is required for good stereo separation and audio fidelity. **dbx**[®] is a registered trademark, and is licensed by **dbx**[®] Technology Licensing.

Audio Mode for Recording

- Press **SAP/ Hi-Fi** to display audio mode. (Display disappears after 5 seconds.)

- Press **SAP/ Hi-Fi repeatedly** to select desired mode.

- Refer to "Receivable Broadcast Types" above.

- Arrow indicates selection.

- Do a recording. See page 15.

Notes

- Only tapes recorded in Hi-Fi stereo will playback with true stereo sound. Standard stereo tapes will playback in monaural sound.
- To listen to Hi-Fi stereo playback, the VCR AUDIO (L/R) jacks must be connected to a stereo TV or an external stereo amplifier and speakers. (See top of this page.)
- If tracking is adjusted during playback, Hi-Fi audio may revert to normal audio.
- Hi-Fi and normal audio playback volume level may differ.

Audio Mode for Playback

- Start playback. See page 14.
- Press **SAP/ Hi-Fi** to display audio mode. (Display disappears after 5 seconds.)

- Press **SAP/ Hi-Fi repeatedly** to select desired mode.

- Arrow indicates selection.

- Select "HIFI(L/R)" or "HIFI(L)" or "HIFI(R)" to listen to stereo recordings in stereo sound. Select "NORMAL" for monaural sound.

Advanced
Operation

Tape Operation

COMMERCIAL▶▶ADVANCE®

COMMERCIAL▶▶ADVANCE® detects and marks the beginning and end points of commercials on your tape for recordings over 15 minutes in length. When COMMERCIAL▶▶ADVANCE® marked tape is played back, the VCR automatically advances through the commercial segments at high speed. You can also set this feature to Manual so as to have more control over the advance process. The effectiveness of this system can vary due to differences in the way television stations broadcast. See page 28 for answers to the most commonly asked questions about this feature.

COMMERCIAL▶▶ADVANCE® Marking

When C/A RECORD: ON, VCR automatically rewinds the tape after a recording has been made and marks the beginning and end of any detected commercial blocks. After marking is done, the tape is returned to the end of the recording. Commercials are not erased from the tape.

1

▶VCR	C/A	CLOCK	CH
REPEAT PLAY	:OFF		
TIME STAMP	:ON		
REMOTE WARNING	:ON		
AUTO SHUT-OFF	:OFF		
AUTO VCR/TV	:ON		
IDIOMA/LANGUE	:ENGLISH		
VCR'S OUTPUT CH	:3		
SELECT	:▲▼◀▶		
EXIT	:ACTION		

Press **ACTION*** to display menu.

2

VCR	C/A	CLOCK	CH
SET UP COMMERCIAL ADV.	:		
C/A RECORD	:ON		
C/A PLAYBACK	:AUTO		
SELECT	:▲▼◀▶		
EXIT	:ACTION		

Press **◀▶** to select C/A and display SET UP COMMERCIAL ADV.

3

VCR	C/A	CLOCK	CH
SET UP COMMERCIAL ADV.	:		
C/A RECORD	:ON		
C/A PLAYBACK	:AUTO		
SELECT	:▲▼	SET	:▶
EXIT	:ACTION		

Press **▲▼** to select C/A RECORD and press **▶** to set.

ON Timer Recording, VCR Plus+ System, and One Touch recordings are marked automatically.

THE VCR IS WAITING TO MARK COMMERCIALS IN THE PROGRAM YOU RECORDED.	
MARKING	
NOW	:PRESS 1
LATER	:PRESS 2
CANCEL	:PRESS ACTION

When STOP is pressed during normal recording, Select One of a) or b) or c).

- Press 1 key to mark the recording now. "NOW MARKING COMMERCIALS" appears.
- Press 2 key to mark the recording later (after the power has been turned off).
- If the tape is rewound and another recording started before the power is turned off, commercials may not be marked correctly.
- Press ACTION to cancel the marking of this recording.

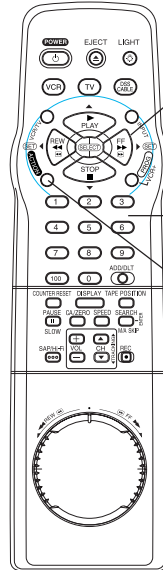
OFF The VCR will not mark commercials.

When you are editing or dubbing a tape, or when you do not wish to use this feature, OFF should be selected.

4 Press **ACTION** again to return to normal screen.

✓ Ready Checklist

- All connections are made.
- One time Setup completed.
- VCR is plugged in.
- TV is turned on and set to CH3, 4 or Video on TV.



SELECT/
SET

- ▲:PLAY
- ▼:STOP
- ▶:FF
- ◀:REW

NUMBER
keys

ACTION

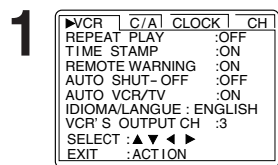
Note

- When using the timer to record two adjacent shows on the same channel, better accuracy can be obtained by programming each show separately.

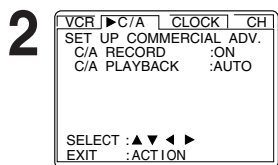
***Important:** If a remote control button does not work when pressed, press the VCR button on the remote and try the button again.

COMMERCIAL▶▶**ADVANCE**® Playback

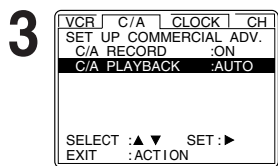
When playing back a recording which has been marked using the **COMMERCIAL▶▶ADVANCE**® feature, you can either set VCR to automatically advance through marked commercial blocks, or set it so that commercials are only skipped on your command.



Press ACTION
to display menu.



Press ◀▶
to select C/A and
display SET UP
COMMERCIAL ADV.



Press ▲▼
to select C/A PLAYBACK
and **press ▶** to set
"AUTO" or "MANUAL".

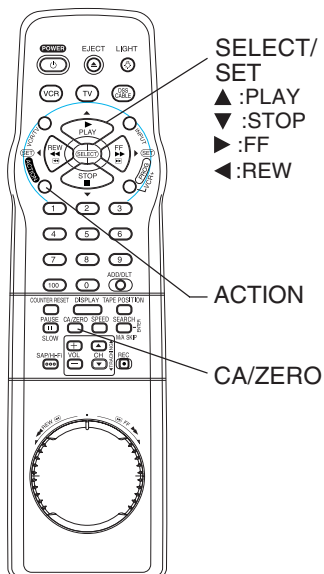
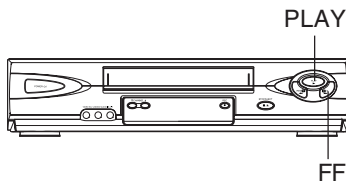
AUTO : VCR will automatically advance through marked commercial blocks recorded on the tape and then resume playback.

MANUAL: VCR will advance through commercials only when CA/ZERO is pressed. Playback will resume when the end mark of a commercial block is found, or a new recording or blank portion is detected, or after 8 minutes.

4 Press ACTION again
to return to normal screen.

Notes

- The selection mode in step 3 remains set unless there is a power outage in which case the original factory setting will be restored.
- If playback is started in the middle of a commercial, only a single commercial is shown, or an individual commercial is longer than 1 minute, the commercial may not be skipped. Press FF to quickly advance through the commercial.
- Part of a recorded program may be skipped over if the program portion between commercials is less than 1 minute or there are frequent dark and quiet scenes during the program. To view the portion of tape being incorrectly skipped, press PLAY while the VCR is skipping, reverse the tape to a point just prior to where the skipping began and press PLAY again. This time the group will not be automatically skipped. Automatic skipping will be re-enabled when the end of the marked group is detected.



COMMERCIAL▶▶ADVANCE® and **MOVIE▶▶ADVANCE**® are registered trademarks of SRT, Inc. A Jerry Iggulden invention licensed in association with Arthur D. Little Enterprises, Inc.
U.S.Pat. No. 5,333,091;
5,692,093; 5,696,866
other patents pending

Tape Operation (continued)

The most commonly asked questions about **COMMERCIAL↔ADVANCE**® are answered below.

Question	Answer
How fast does the VCR advance through commercials?	The VCR advances through a 3-minute commercial block in about 8 to 12 seconds if the tape speed is SLP. In SP, it takes about 25 to 35 seconds.
Are commercials advanced through only when I playback a recording?	Yes. The commercials are not marked until after the recording is finished.
Are commercials still recorded on the tape in case I choose to view them sometime?	Yes. By setting the C/A PLAYBACK to MANUAL (see page 27), you can view or advance through commercials as desired.
Does COMMERCIAL↔ADVANCE ® work in all recording speeds?	Yes. COMMERCIAL↔ADVANCE ® works in SP, LP, and SLP.
Does the VCR advance through commercials each time I playback tapes which were recorded using COMMERCIAL↔ADVANCE ®?	Yes. As long as C/A PLAYBACK is set to AUTO (see page 27), the VCR should advance through commercials each time the tape is played back.
After marking commercials, does the VCR stop at the end of the tape, or rewind to the beginning?	The tape stops at the end of the recording so that any additional timer recordings can be performed.
Can I play my COMMERCIAL↔ADVANCE ® recordings in non- COMMERCIAL↔ADVANCE ® VCRs?	Yes. COMMERCIAL↔ADVANCE ® marked recordings will play in non- COMMERCIAL↔ADVANCE ® VCRs, but commercials will not be advanced through.
Does the marking process interfere with other programmed recordings?	No. If the interval between 2 or more timer programs is not sufficient to mark the recording, marking will be done after all recordings are complete and the power goes off.
What happens if I cancel the marking in progress so I can use the VCR?	Marking will be resumed when the VCR's power is turned off as long as the tape has not been ejected.
What if part of my program is advanced through along with the commercials?	Please see the 3rd note on page 27.
<p>Additional Notes:</p> <ul style="list-style-type: none"> • Because of the various ways in which commercials are broadcast, the VCR may not be able to recognize all commercials. • If a timer recording is scheduled for the middle of the night, please be aware that the VCR will make some noise as it rewinds and fast forwards the tape while marking commercials. 	

COMMERCIAL↔ADVANCE® and **MOVIE↔ADVANCE**® are registered trademarks of SRT, Inc. A Jerry Iggulden invention licensed in association with Arthur D. Little Enterprises, Inc.

U.S.Pat. No. 5,333,091;
5,692,093; 5,696,866
other patents pending

***Important:** If a remote control button does not work when pressed, press the VCR button on the remote and try the button again.

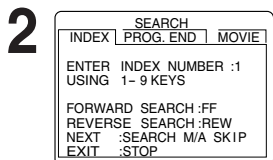
MOVIE ▶▶ ADVANCE®

MOVIE ▶▶ ADVANCE® helps you locate certain parts of prerecorded movies (rented or purchased). The feature works in two ways.

- You can go to the beginning of the movie.
- You can skip from one preview to the next.

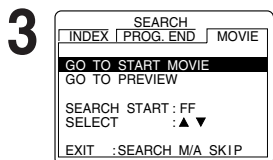
MOVIE ▶▶ ADVANCE® works only on tapes recorded in SP speed with the record tab removed.

1 Insert a tape without record tab.



Press **SEARCH/ M/A SKIP*** to display **SEARCH**.

- If you inserted a cassette with the record tab or if you selected "INDEX SEARCH" go to page 30.



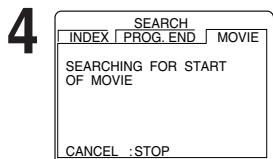
Press **SEARCH/ M/A SKIP** twice to select **MOVIE** and press **▲▼** to select **GO TO START MOVIE** or **GO TO PREVIEW**.

Select "**GO TO START MOVIE**," if you want to advance directly to beginning of the movie.

➔ continue with step 4.

Select "**GO TO PREVIEW**," if you want to view the first (next) preview.

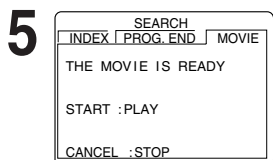
➔ see "To Search for Preview" at right.



Press **FF** to start searching.

- To cancel, press **STOP**.

When the movie is found...

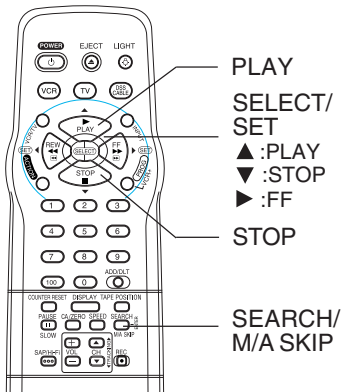


Press **PLAY** to start playback.

- To cancel, press **STOP**.

✓ Ready Checklist

- All connections are made.
- One time Setup completed.
- VCR is plugged in.
- TV is turned on and set to CH3, 4 or Video on TV.



To Search for Preview.

You can override the operation of MOVIE ▶▶ ADVANCE® SEARCH FOR PREVIEWS mode by pressing SEARCH/ M/A SKIP during tape searching. MOVIE ▶▶ ADVANCE® works by searching the tape past each preview and then reversing back to the start of the detected preview. While the tape is reversing back, if SEARCH/ M/A SKIP is pressed, MOVIE ▶▶ ADVANCE® will begin searching for the next preview. While searching for the next preview, if you see the start of a preview which you wish to watch, press SEARCH/ M/A SKIP and MOVIE ▶▶ ADVANCE® will immediately reverse back to the start of that preview, instead of searching further past the preview start point. Once the VCR is playing a preview, press SEARCH/ M/A SKIP to advance to the next preview, long commercial or the start of the movie (whichever is next).

1 Start preview searching.

1) In step 3 at left, select **GO TO PREVIEW**.

2) Press **FF**.

- If you want to playback, press **PLAY**.

When a preview is detected, VCR will start playback.

2 Start next preview searching.

Press **SEARCH/ M/A SKIP**.

- To cancel, press **STOP**.

Tape Operation (continued)

Search System

For each recording, an invisible index mark is placed on the tape. A program index and information are also included for timer recordings. These marks are used to access or scan recordings.

Index Search

1

SEARCH	INDEX	PROG. END	MOVIE
ENTER INDEX NUMBER :1			
USING 1-9 KEYS			
FORWARD SEARCH :FF			
REVERSE SEARCH :REW			
NEXT :SEARCH M/A SKIP			
EXIT :STOP			

Press **SEARCH/ M/A SKIP*** to display SEARCH in Stop or Play mode, and then press **NUMBER** keys to select recording number.

- To calculate number, see below.

Press **FF** or **REW** on the remote to start search.

2

INDEX SEARCH
FORWARD SEARCH :FF
REVERSE SEARCH :REW

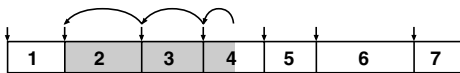
Play begins at end of search. To search forward or back 1 index, press **FF** or **REW** on the remote or VCR while screen left is displayed (10 sec.).

- To cancel, press **PLAY** or **STOP**.

To Calculate Index Number

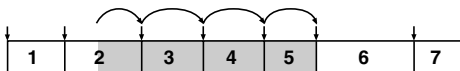
Example 1:

To go to rec. 2 from rec. 4, enter 3 and press **REW**.



Example 2:

To go to rec. 6 from rec. 2, enter 4 and press **FF**.



NOTE: ↓ indicates start points of each recording.

Note

- If Index Search is started very close to an index mark, that index mark may not be counted in the search.

Program End Search

Locates end point of recording for continuity.

1 Press **SEARCH/ M/A SKIP** twice to display SEARCH in Stop or Play mode.

2

SEARCH	INDEX	PROG. END	MOVIE
SEARCH START :FF			
NEXT :SEARCH M/A SKIP			
EXIT :STOP			

Press **FF** on the remote to start PROGRAM END SEARCH.

- To cancel, press **PLAY** or **STOP**.

Examples of Program End Search.

Fig. 1

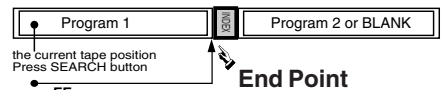


Fig. 2

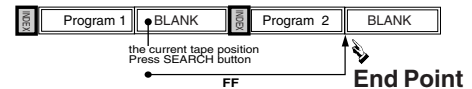
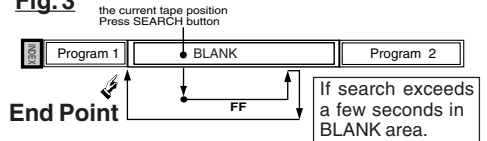


Fig. 3



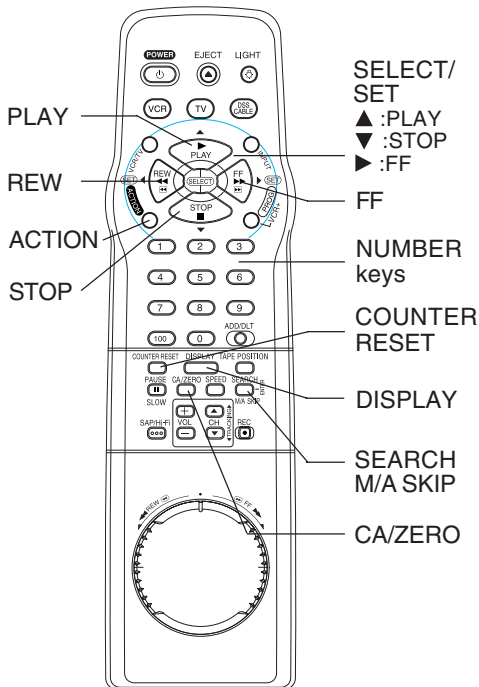
Upon locating end point,

- search continues 7 sec. past end point,
- tape rewinds to 10 sec. before end point,
- tape plays to end point and stops.

Note

- If Program End Search is started very close to an index mark, that mark may be skipped over.

***Important:** If a remote control button does not work when pressed, press the VCR button on the remote and try the button again.



Zero Search

To quickly return to a specified tape location.

1 Press **DISPLAY** during play to display Counter.

2 Press **COUNTER RESET** at desired position to reset to "0:00:00".

3 Continue to record, playback etc.

4 Press **STOP**.

5 Press **CA/ZERO** in Stop mode to start ZERO SEARCH.

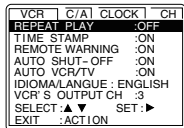
• Unit will go into FF or REW mode and stop at the last point the Counter was set to 0:00:00.

Repeat Play

Set to playback a recording over and over.

1 Press **ACTION** to display menu.

2 Press **▲▼** to select **REPEAT PLAY** and **press ►** to set ON or OFF.



ON: Play repeats at tape end or if unrecorded portion over 30 sec. is detected.

3 Press **ACTION** to return to normal screen.

Auto Operation Functions

Auto Play

Insert a tape → Power comes on, → Play starts if there is no record tab (see p. 4).

Auto Rewind

Play
Fast Forward } → Tape end, → Rewind

Play Auto Eject

(Repeat Play must be off)

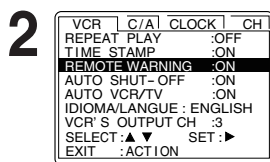
Play, → Tape end, → Rewind,
→ Tape ejects if there is no record tab

***Important:** If a remote control button does not work when pressed, press the VCR button on the remote and try the button again.

Remote Warning ON/OFF Feature

If Multi-brand feature is used (p. 22), and this feature is set to on, a warning appears whenever an invalid key is pressed in TV, DSS, or Cable mode.

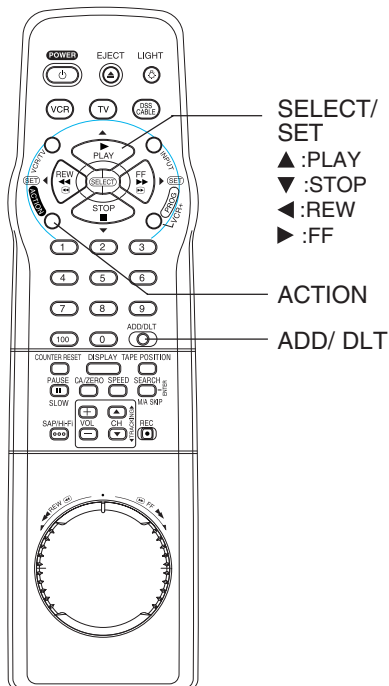
1 Press ACTION
to display menu.



Press **▲▼**
to select REMOTE WARNING and
press **▶** to set ON or OFF.

• If "OFF," remote warning will not appear if invalid key is pressed.

3 Press ACTION
to return to normal screen.



VCR Lock Feature

When set to ON, all operations except for timer record and tape eject are prohibited. Useful for households with small children.

VCR LOCK ACTIVATED

To turn on,
hold down REC on the VCR in Stop mode with no tape inserted for 7 sec.
(Please ignore the NO CASSETTE warning.)

VCR LOCK OFF

To turn off,
repeat above.



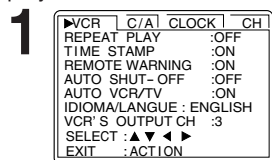
REC

• VCR Lock cancels in 24 hours if clock is set.

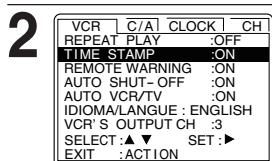
Special VCR Features (continued)

Time Stamp Feature

The VCR writes program data (see example below) about the first 10 seconds of every recording. The information is then displayed the first 10 seconds of playback.



Press **ACTION*** to display menu.



Press **▲▼** to select **TIME STAMP** and press **▶** to set.

- When "OFF" is selected, the program data is written on the tape, but will not be displayed.

3 Press **ACTION** again to return to normal screen.

<Time Stamp Example>

One Touch Recording

11/11/2001 SUN
12:00PM - 1:00PM
CH 08 ABC

Timer Recording

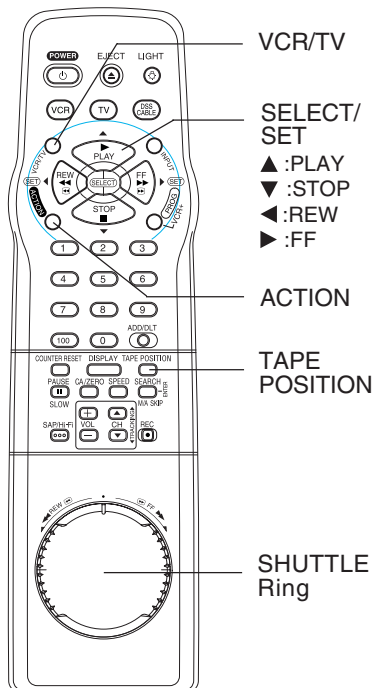
11/11/2001 SUN
12:00PM - 1:00PM
CH 08 ABC MOVIE

When Clock is not set...

---/---/---
---:00PM - ---:00PM
CH 08 ABC

Ready Checklist

- Clock is set to correct time.
- Record tab in place. (See p. 4.)



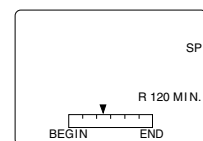
Tape Position and Tape Status Feature

To find out the present tape position and amount of tape remaining. **Tape position is displayed for VHS-C type Cassettes, tapes under 30 minute long, and some other tapes, but the position is not correct.**

1 Press **TAPE POSITION** to detect current tape position.

DETECTING TAPE POSITION

- "DETECTING TAPE POSITION" is displayed only when a cassette is first inserted, and it takes several seconds for correct tape position to appear.



- The present tape position indication and amount of tape remaining (according to tape speed) is displayed.
- Tape remaining time display may not be precise.

Note

This function cannot display exact amount of tape remaining for tapes 30 minutes or less, or for tapes over 120 minutes in length.

2 Press **TAPE POSITION** to return to normal screen.

***Important:** If a remote control button does not work when pressed, press the VCR button on the remote and try the button again.

Auto Shut-Off Feature

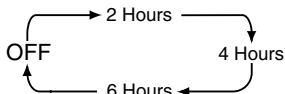
The power shuts off at a preset time.

1 Press **ACTION** to display menu.

2 Press **▲▼** to select **AUTO SHUT-OFF**. Press **▶** repeatedly to change shutoff time as shown below.

VCR	C/A	CLOCK	CH
REPEAT PLAY		OFF	
TIME STAMP		:ON	
REMOTE WARNING		:ON	
AUTO SHUT-OFF		:ON	
AUTO VCR/TV		:ON	
IDIOMA/LANGUE		: ENGLISH	
VCR'S OUTPUT CH		: 3	
SELECT	▲▼	▶	SET: ▶
EXIT		:ACTION	

3 Press **ACTION** to return to normal screen.



Note

The shut-off countdown will not function during Play or Record.

VCR/TV Selector Feature

The VCR VCR/TV selection can be set to auto or manual.

1 Press **ACTION** to display menu.

VCR	C/A	CLOCK	CH
REPEAT PLAY		OFF	
TIME STAMP		:ON	
REMOTE WARNING		:ON	
AUTO SHUT-OFF		:OFF	
AUTO VCR/TV		:ON	
IDIOMA/LANGUE		: ENGLISH	
VCR'S OUTPUT CH		: 3	
SELECT	▲▼	▶	SET: ▶
EXIT		:ACTION	

2 Press **▲▼** to select **AUTO VCR/TV**. Press **▶** to set ON or OFF.

VCR	C/A	CLOCK	CH
REPEAT PLAY		OFF	
TIME STAMP		:ON	
REMOTE WARNING		:ON	
AUTO SHUT-OFF		:ON	
AUTO VCR/TV		:ON	
IDIOMA/LANGUE		: ENGLISH	
VCR'S OUTPUT CH		: 3	
SELECT	▲▼	▶	SET: ▶
EXIT		:ACTION	

- OFF(Manual): You select "VCR" or "TV" mode using the VCR/TV button on the unit or remote.
- ON(Auto): "VCR" mode is automatically set when VCR is turned on, or in Play mode.

3 Press **ACTION** to return to normal screen.

Note

For more on VCR/TV selection, see "Record one station, watch another" and "Select channels at VCR" sections (p.15).

Weak Signal Display ON/OFF Feature

When set to "ON," picture is displayed regardless of signal strength.

1 Press **ACTION** to display menu.

VCR	C/A	CLOCK	CH
REPEAT PLAY		OFF	
TIME STAMP		:ON	
REMOTE WARNING		:ON	
AUTO SHUT-OFF		:OFF	
AUTO VCR/TV		:ON	
IDIOMA/LANGUE		: ENGLISH	
VCR'S OUTPUT CH		: 3	
SELECT	▲▼	▶	SET: ▶
EXIT		:ACTION	

2 Press **◀▶** to select and display **CHANNEL**. Press **▲▼** to select **WEAK SIGNAL DISPLAY**, and press **▶** to set ON or OFF.

VCR	C/A	CLOCK	CHANNEL
ANTENNA		: CABLE	
AUTO SET		: ON	
CHANNEL CAPTION		: ON	
WEAK SIGNAL DISPLAY		: OFF	
CABLE/DSS BOX SET UP		: ON	
VCR Plus+ CH SET UP		: ON	
SELECT	▲▼	▶	SET: ▶
EXIT		:ACTION	

- ON: Picture is displayed despite signal condition and may be of poor quality.
- OFF: Screen turns solid blue when signal is weak or non-existent.
- Selecting ON has no effect on connected equipment with blue back feature.

3 Press **ACTION** to return to normal screen.

Shuttle Variable Speed Search

The SHUTTLE Ring allows you to smoothly control the tape speed during special effects playback in both forward or reverse.

Begin the forward or reverse search.

Turn SHUTTLE Ring while in Play or Still mode.

- The more you turn the Ring, the faster the search speed will be.

Release the Shuttle mode.

Press a function button such as : PLAY, STOP, etc.

- The VCR performs the function of the button pressed.

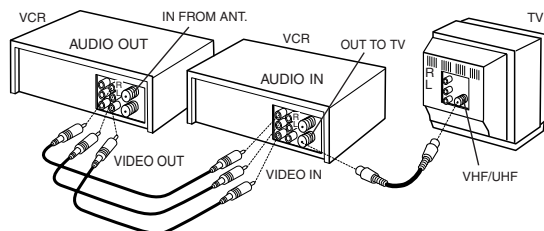
Notes

- When the SHUTTLE Ring is turned more than half in Stop mode, normal Fast Forward or Rewind will begin.
- Some noise bars are normal during Shuttle operation.
- After 3 minutes in Still or Slow, the VCR will go into Stop mode.
- When the SHUTTLE Ring is released, the VCR goes into Still mode.

Copying Your Tapes (Dubbing)

Connection

(Rear Connection shown.)



Front of VCR



(Audio/Video In Terminals on the front of VCR are available)

- ① Connect VIDEO OUT terminal on Playing VCR to VIDEO IN terminal on Recording VCR. To monitor the dubbing, also connect a TV as shown.
- ② Connect "L" and "R" AUDIO OUT terminals on Playing VCR to "L" and "R" AUDIO IN terminals on Recording VCR.

In place of a Playing VCR, you can use other equipment, such as a Camcorder. Simply connect the unit's Audio/Video outputs to the Recording VCR.

Playing (Source) VCR

Recording (Editing) VCR

- | | |
|--|--|
| <ol style="list-style-type: none"> 1 Insert pre-recorded tape. | <ol style="list-style-type: none"> Insert blank tape with record tab. |
| <ol style="list-style-type: none"> 2 _____ | <ol style="list-style-type: none"> Press INPUT to set VCR Input mode to LINE1 for Video Input (Rear) or to LINE2 for Video Input (Front). (See "Selecting the Input Mode" below.) |
| <ol style="list-style-type: none"> 3 Press PLAY, then PAUSE/SLOW immediately to enter PLAY/PAUSE mode. | <ol style="list-style-type: none"> Press REC, then PAUSE/SLOW immediately to enter REC/PAUSE mode. |
| <p>The operation of steps 4 and 5 must be done on the playing and recording VCRs at the same time.</p> | |
| <ol style="list-style-type: none"> 4 Press PLAY to start dubbing. Playing VCR starts playback. | <ol style="list-style-type: none"> Press PAUSE/SLOW to start dubbing. Recording VCR starts recording. |
| <ol style="list-style-type: none"> 5 Press STOP to stop dubbing. | <ol style="list-style-type: none"> Press STOP to stop dubbing. |

■ To Monitor Dubbing on Your TV

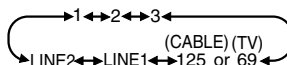
- 1** Turn your TV on and tune to the Recording VCR channel (CH3 or CH4).
- 2** Set the VCR/ TV Selector on the Recording VCR to "VCR."

Note

Dubbing tapes protected with Copy Guard will result in poor quality recordings.

■ Selecting the Input Mode

- Method 1: Press INPUT repeatedly.
Channel Number ↔ LINE1 ↔ LINE2
- Method 2: Press CH ▲ / ▼.
Display will change as below.



- "L1" or "L2" lights on Multi-Function Display (about 4 sec.) when LINE1 or LINE2 is selected.
- LINE1: For rear audio/video connection.
- LINE2: For front audio/video connection.

Caution: Unauthorized exchanging and/or copying of copyrighted recordings may be copyright infringement.

VCR & Cassette Information

Head Cleaning

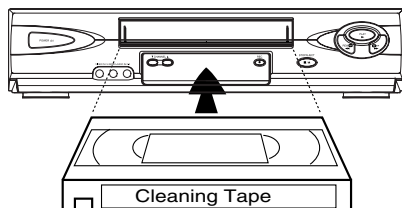
Playing older or damaged tapes may eventually cause video heads to become clogged.

Video Head Clog Sensor

During playback, this screen appears if clogging is detected. To remove screen, press PLAY on the remote or VCR.

VIDEO HEADS MAY
NEED CLEANING
PLEASE INSERT HEAD
CLEANING CASSETTE
OR REFER TO MANUAL

END :PLAY



- Use “dry” type head cleaning cassette only. (Part No. NV-TCL30PT is recommended.)
- Follow cleaning tape instructions carefully. Excessive use of tape can shorten head life.
- If head clog symptoms persist, contact your nearest Factory Servicenter or authorized Servicenter. (See page 41.)

Cleaning the VCR

Use a soft cloth or dusting attachment of a vacuum cleaner to remove dust from the ventilation holes on the back sides and bottom of the cabinet.

Plastic surfaces are easily scratched and can be marred by alcohol and various solvents. Avoid excessive use of oil-based furniture polishes since the materials used in the cabinet will accumulate more dust. We recommend using a nonabrasive, antistatic cleaner and polisher.

Specifications

Power Source: 120 V AC, 60 Hz

Power Consumption: Power On
Approx. 23 watts
Power Off
Approx. 3.0 watts

Video Signal: EIA Standard NTSC color

Video Recording System: 4 rotary heads helical scanning system

Audio Track: 1 track (Normal)
2 channel (Hi-Fi Audio Sound)

Tuner:

Broadcast Channels: VHF 2 ~ 13, UHF 14 ~ 69

CABLE Channels: Midband A through I (14 ~ 22)
Superband J through W (23 ~ 36)
Hyperband AA ~ EEE (37 ~ 64)
Lowband A-5 ~ A-1 (95 ~ 99)
Special CABLE channel 5 A (01)
Ultraband 65 ~ 94, 100 ~ 125

Operating Temperature: 5 °C ~ 40 °C (41 °F ~ 104 °F)

Operating Humidity: 10 % ~ 75 %

Weight: 2.7 kg (6.0 lbs).

Dimensions: 430 (W) x 98 (H) x 242 (D) mm
16-15/16” (W) x 3-7/8” (H)
x 9-9/16” (D) inch

Note: Designs and specifications are subject to change without notice.

Features for a Quality Picture

Digital Auto Picture

Automatically controls the video output signal for less noise depending on the tape condition.

Digital Auto Tracking

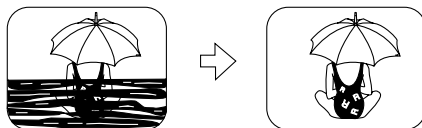
Continuously analyzes the signal and adjusts for optimum picture quality.

Manual Tracking Control (to reduce picture noise)

Use during Playback and Slow Motion mode to reduce picture noise.

Press CH (TRACKING) ▲/▼ on the remote control or VCR until the picture clears up.

To return to Auto Tracking, **press POWER** off, then on again a few seconds later.

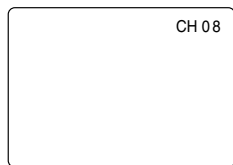


V-Lock Control (to reduce picture jitter)

In Still mode, **CH (TRACKING) ▲/▼** operate as a V-Lock control.

On-Screen Displays (OSD)

Function & Channel Displays



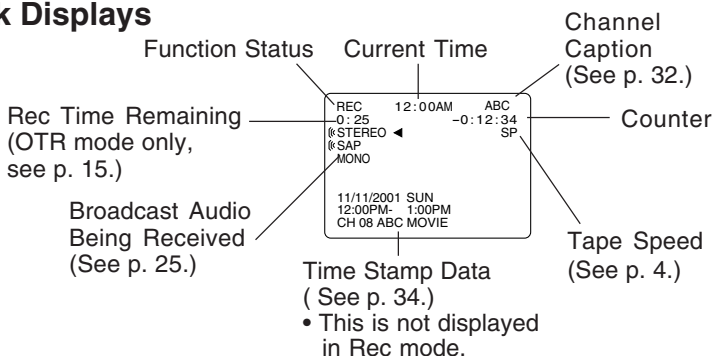
When a function button is pressed, e.g. PLAY, or you change channels, a 5 second display appears. (Some Station names may also appear if Channel Caption is set. See page 32.)

Blank Tape/ No Video Signal Indications

Whenever a blank section of a tape comes up in Play mode, or when the selected channel has no broadcast signal with the Weak Signal Display Feature (p. 35) set to OFF, the TV screen will turn solid blue.

VCR Status & Clock Displays

To display or remove overlay at right,
→ press DISPLAY.



Warning and Instruction Displays

These displays will alert you to a missed operation or provide further instructions.

OSD	Caution	Page	OSD	Caution	Page
PLEASE SET CLOCK BY PRESSING ACTION KEY	If you attempt to set or review a Timer Recording and the Clock is not set...	16	VIDEO HEADS MAY NEED CLEANING PLEASE INSERT HEAD CLEANING CASSETTE OR REFER TO MANUAL END :PLAY	If head cleaning becomes necessary while playing back a tape...	37
TURN VCR OFF FOR TIMER RECORDING	After a Timer Program has been set...	16	VCR LOCK ACTIVATED	If you press a function buttons other than STOP/EJECT or POWER while the VCR is in VCR Lock mode...	33
CHECK CASSETTE RECORD TAB	If you press REC on the remote control or VCR, and a cassette is inserted with no record tab...	4	REMOTE CONTROL IS SET TO CABLE/DSS MODE USE VCR : VCR KEY	If you press an invalid key on the remote while in CABLE/DSS mode...	22 23 35
NO CASSETTE	If you press PLAY, FF, REW, or REC on the remote control or VCR without a cassette inserted...	14 15	REMOTE CONTROL IS SET TO TV MODE USE VCR : VCR KEY	If you press an invalid key on the remote while in TV mode...	22 23 35
TO CANCEL TIMER REC PRESS POWER THEN STOP KEY	If you press POWER or STOP during a Timer Recording... (visible in VCR mode only)	16			

Before Requesting Service

Check the following points if you are having trouble with your VCR.

Power	Correction
No power...	<ul style="list-style-type: none"> • Completely insert Power Plug into an AC outlet. • Set POWER button to on. • Make sure power source is active.
Recording & Playback	Correction
TV program cannot be recorded...	<ul style="list-style-type: none"> • Check connections between VCR, external antenna, and TV. • Check channel selections. • Make sure your antenna system (CABLE or TV) is correctly set. (Channels [P. 12]) • Make sure cassette record tab is intact. (P. 4)
Timer recording cannot be performed...	<ul style="list-style-type: none"> • Confirm that clock is set to current time and date. • Make sure Cable/DSS box (if used) is left on and tuned to channel to be recorded. • Set recording start/stop times correctly. (P. 16) • Make sure VCR POWER button is pressed off. (P. 16) • Timer recording may not be performed or continued if a power interruption occurs before or during a Timer Recording, even after power is restored.
There is no playback picture, or the playback picture is noisy or contains streaks...	<ul style="list-style-type: none"> • Select channel 3 or 4 on TV to match VCR output channel (3 or 4) (P. 8) or select LINE. • Set VCR/TV selector to "VCR." • Adjust TRACKING control in either direction. (P. 37) • Try Head Cleaning. (P. 37)
During special effects playback, picture may contain some vertical jitter when using a TV with an Automatic Vertical Hold Control...	<ul style="list-style-type: none"> • Set TV's Vertical Hold Control to MANUAL, then adjust.
VCR cannot be controlled...	<ul style="list-style-type: none"> • Make sure VCR power is on. • Check Remote batteries. • Make sure VCR LOCK is set to off. (P. 33) • Make sure Remote is in proper mode. (P. 22) • Make sure Timer Recording is not in progress.
Remote Control	Correction
VCR cannot be remote controlled...	<ul style="list-style-type: none"> • Make sure VCR power is on. • Make sure Remote is in VCR mode. • Aim Remote Control directly at remote sensor on VCR. (P. 6) • Avoid any object blocking signal path. • Check Remote batteries. (P. 4) • Make sure VCR LOCK is set to off. (P. 33) • Exposing VCR remote sensor to direct fluorescent or outdoor light may cause signal interference.
ACTION and PROG/VCR+ buttons do not respond...	<ul style="list-style-type: none"> • Check connections between VCR, external antenna, and TV. • Press VCR button for VCR mode. (P. 22) • Check Remote batteries. (P. 4)
Miscellaneous	Correction
Programs cannot be viewed on TV...	<ul style="list-style-type: none"> • Make sure TV power is on. • Make sure TV is set to output of VCR. • Check connections between VCR, external antenna, and TV. • Set VCR/TV selector to "TV." (P. 15) • Make sure proper signal source is selected.
Video cassette cannot be inserted...	<ul style="list-style-type: none"> • Insert the cassette with window side up; record tab facing you. • Check if a tape is already in the unit.
Video cassette cannot be removed...	<ul style="list-style-type: none"> • Completely insert Power Plug into an AC outlet.
Video cassette ejects when a recording is started or the power is turned off for timer recording...	<ul style="list-style-type: none"> • Make sure cassette record tab is intact. (P. 4)
In Stop mode, the motor (CYLINDER) continues to rotate...	<ul style="list-style-type: none"> • To enable Quick play mechanism, the cylinder will rotate for about 3 minutes. This reduces response time from Stop to Play mode and from Play to Rewind Search mode.

If you cannot resolve the problem, please call the Customer Call Center for product assistance at 1-800-211-PANA (7262).

To locate an authorized servicer, please call toll free 1-800-211-PANA (7262).
or send e-mail to : consumerproducts@panasonic.com

Limited Warranty

PANASONIC CONSUMER ELECTRONICS COMPANY,
DIVISION OF MATSUSHITA ELECTRIC
CORPORATION OF AMERICA
One Panasonic Way
Secaucus, New Jersey 07094

PANASONIC SALES COMPANY,
DIVISION OF MATSUSHITA
ELECTRIC OF PUERTO RICO, INC.,
Ave. 65 de Infantería, Km. 9.5
San Gabriel Industrial Park,
Carolina, Puerto Rico 00985

Panasonic VHS VCR Products Limited Warranty

Limited Warranty Coverage

If your product does not work properly because of a defect in materials or workmanship, Panasonic Consumer Electronics Company or Panasonic Sales Company (collectively referred to as "the warrantor") will, for the length of the period indicated on the chart below, which starts with the date of original purchase ("warranty period"), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor.

Product or Part Name	Parts	Labor
All components of VCR except item listed below	One (1) Year	Ninety (90) Days
Video Tape (in exchange for defective video tape)	Five (5) Days	Not Applicable

During the "Labor" warranty period there will be no charge for labor. During the "Parts" warranty period, there will be no charge for parts. You must mail-in your product during the warranty period. If non-rechargeable batteries are included, they are not warranted. This warranty only applies to products purchased and serviced in the United States or Puerto Rico. This warranty is extended only to the original purchaser of a new product which was not sold "as is".

Mail-In Service

For assistance in the continental U.S.A. in obtaining repairs please ship the product to:

**Panasonic Services Company
Customer Servicenter
Suite B
4900 George McVay Drive
McAllen, TX 78503**

For assistance in Puerto Rico call Panasonic Sales Company
(787) 750-4300 or fax (787)768-2910

When shipping the unit carefully pack and send it prepaid, adequately insured and preferably in the original carton. Include a letter detailing the complaint and provide a day time phone number where you can be reached.

IF REPAIR IS NEEDED DURING THE WARRANTY PERIOD THE PURCHASER WILL BE REQUIRED TO FURNISH A SALES RECEIPT/PROOF OF PURCHASE INDICATING DATE OF PURCHASE, AMOUNT PAID AND PLACE OF PURCHASE. CUSTOMER WILL BE CHARGED FOR THE REPAIR OF ANY UNIT RECEIVED WITHOUT SUCH PROOF OF PURCHASE.

Limited Warranty continued on next page.

Limited Warranty Limits And Exclusions

This warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage. The warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, misadjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, introduction of sand, humidity or liquids, commercial use such as hotel, office, restaurant, or other business or rental use of the product, or service by anyone other than a Factory Servicenter or other Authorized Servicer, or damage that is attributable to acts of God.

THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE". THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. (As examples, this excludes damages for lost time, cost of having someone remove or re-install an installed unit if applicable, travel to and from the servicer, loss of or damage to media or images, data or other recorded content. The items listed are not exclusive, but are for illustration only.)

ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY, ARE LIMITED TO THE PERIOD OF THE LIMITED WARRANTY.

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Customer Services Directory

*For Product Information, Operating Assistance, Literature Request, Dealer Locations, and all Customer Service inquiries please contact:
1-800-211-PANA (7262), Monday-Friday 9 am-9 pm; Saturday-Sunday 9 am-7 pm, EST.
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You can purchase parts, accessories or locate your nearest servicenter by visiting our Web Site.*

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Panasonic Services Company 20421 84th Avenue South, Kent, WA 98032
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Phone (787)750-4300 Fax (787)768-2910

Spanish Quick Use Guide/ Guía para rápida consulta

Conexiones/Configuración Inicial (READY TO PLAY)

Favor realice la conexión de antena o cable antes de conectar el cordón de AC a la toma de pared. Conectando el cordón de AC de la VCR en toma de pared iniciará automáticamente la búsqueda de canales y colocación de tiempo.

Conectando

Para Ant/Cable → VCR → TV

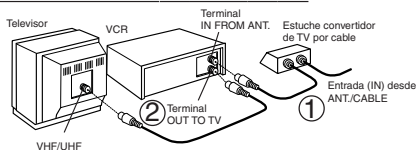
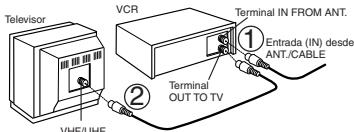
- 1 Conecte Ant/Cable a la entrada de antena de la VCR (VCR In)
- 2 Conecte la salida de la VCR (VCR Out) a la entrada de antena de la TV (TV In) con el cable-accesorio RF incluido.

Para Sistema Digital de Satélite (DSS)/ Convertidor de cable → VCR → TV

- 1 Conecte la salida del convertidor de cable a la "VCR In" con el RF cable accesorio incluido.
- 2 Conecte "VCR Out" a la "TV In" con el cable-accesorio incluido.

PRECAUCION

Si se sobre ajusta "NUT TYPE" el cable coaxial RF podría dañar las terminales de conexión. Ajusta ligeramente utiliza solo los dedos.



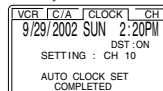
Realizando configuración inicial

- 1 Presione el botón VCR del control remoto para dicha modalidad. Encienda la TV y cambie a canal 3.

- 2 Conecte cordón de AC de la VCR a la toma de pared. La VCR se activará e iniciará búsqueda de canales y colocación de tiempo.

- Si la pantalla abajo no aparece cheque la conexión VCR-TV y si la TV fue cambiada a el canal 3, trate cambiando a el canal 4.
- Para cambios a el canal de salida de la VCR favor hacer referencia a "VCR's Output Channel" (p. 19).

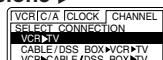
- 3 Selecciones se realizaran automáticamente cuando la configuración termine, esta pantalla aparece.



- 4 SELECCION DE CONEXION en el menu desplegado en pantalla.

■ (Si la conexión es ANT/CABLE → VCR → TV.)

Presione ▲▼ para obtener las conexiones "VCR ► TV", o "CABLE ► TV", y presione ► para seleccionar.



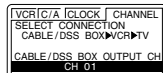
■ (Si la conexión es DSS/Convertidor de cable → VCR → TV.)

Presione ▲▼ para obtener la conexión "CABLE/DSS ► VCR ► TV" y presione ► para seleccionar.

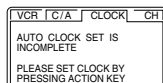


Confirme el canal de salida de su convertidor de cable o receptor de DSS presione ▲▼ que permitan seleccionar el mismo canal de salida que su convertidor o DSS.

Presione ► para selección.

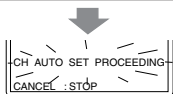


Si "AUTO CLOCK SET IS INCOMPLETE" aparece, coloque manualmente el tiempo, vealo abajo.



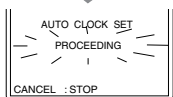
- 5 Presione dos veces la tecla ACTION para poner el RELOJ en marcha y pase al paso 4 anterior.

Conectando cordón de AC a la toma de pared.



Al inicio, el idioma de la pantalla está fijado a inglés.

Para cambiar el idioma consulte la página 12.



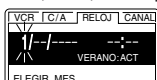
Si usa convertidor de cable solo enciendala y seleccione el canal PBS en su horario de uso u horario de zona. Si utiliza receptor DSS este debe estar apagado.

Realizando configuración inicial

Si la colocación de tiempo fue incompleta.

- a Presione la tecla ACTION en el control remoto para visualizar la pantalla del menú RELOJ.

- b Presione ▲ ▼ para seleccionar el mes y ► para ajustar. De la misma forma, seleccione y ajuste la fecha, año, hora y DST (Hora de Verano).



***Importante:** Si un botón del control remoto no funciona al ser presionado, presione el botón VCR del control remoto y vuelva a intentarlo.

Operaciones básicas para la reproducción

- 1 Inserte un cassette,
- 2 Presione **PLAY** para reproducir el cassette.
 - Si el cassette no tiene lengüeta de prevención de grabación (página 4), se inicia la reproducción automáticamente.

Detalles especiales durante la grabación

- Presione **FF** o **REW** para búsqueda de escenas hacia delante/ hacia atrás.
- Presione **PLAY** para liberar.
- Presione **FF** o **REW** para búsqueda de escenas Hacia delante/ Hacia atrás. Presione **PLAY** para liberar. Después que la búsqueda ha iniciado.
- Presione **FF** o **REW** en cada uno de los cambios de velocidades mostradas abajo.
 - [SLP] aprox. 43X ↔ aprox. 21X
 - [LP] aprox. 15X ↔ aprox. 9X
 - [SP] aprox. 13X ↔ aprox. 7X
 Si a velocidad de 43X, 15X, o 13X la imagen se interrumpe cambie a velocidad 21X, 9X o 7X.
- Presione **PAUSE/SLOW** para imagen Fija (Congelada). Presione **PLAY** para liberar.
- Presione **PAUSE/SLOW** en el modo de imagen fija para imágenes cuadro a cuadro. Presione **PLAY** para liberar.
- Mantenga presionado **PAUSE/SLOW** en el modo de imagen fija para imágenes en cámara lenta. Presione **PLAY** para liberar.

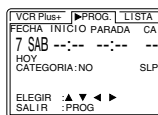
- 3 Presione **STOP** para detener el cassette.
- Presione **REW** o **FF** en el modo de parada para rebobinado/avance rápido del cassette.
- Presione **EJECT** en el control remoto, o **STOP/EJECT** en el VCR para expulsar la cassette.

Operaciones básicas para la grabación

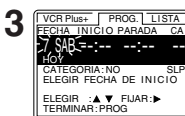
- 1 Inserte el cassette con lengüeta de protección de grabación (pág. 4).
- 2 Presione **CH ▲▼**, o las teclas de números para seleccionar el canal.
- 3 Presione **SPEED** para seleccionar la velocidad de grabación (pág.4)
 - SP = Reproducción estándar,
 - LP = Larga duración,
 - SLP = Superlarga duración.
- 4 Presione **REC** para comenzar a grabar.
 - Para eliminar escenas indeseadas, presione **PAUSE/SLOW** para pausar, y al presionar nuevamente se reanuda la grabación.
 - No podrá ver otro canal durante la grabación.
- 5 Presione **STOP** para detener la grabación
 - **Grabación de Un Toque** (grabar en marcha),
 - El VCR se apaga después de preajustar la extensión de la grabación.
 - ➔ Cada vez que se presiona **REC** se añaden 30 min. a la extensión de grabación hasta un máximo de 4 horas.

Programación fácil para la grabación con temporizador

- 1 Presione **PROG/VCR+** para visualizar PROGRAM.

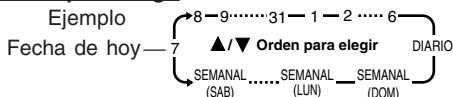


Presione ▼ para visualizar la pantalla de Programación.



- 1) Para ajustar la **FECHA de grabación**, presione ▲▼ para seleccionar:
 - 1-31 = una vez, o
 - DIARIO = a la misma hora de lunes a viernes, o
 - SEMANA = a la misma hora cada semana y presione ► para ajustar.

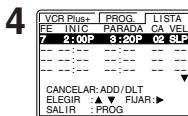
Orden para elegir



- 2) Para ajustar los ítems que quedan, presione ▲▼ para seleccionar y presione ► para ajustar los tiempos de INICIO/PARADA, CANAL, o entrada de LINEA (pág. 36), CATEGORIA**, y velocidad del cassette (SP, LP, SLP).

Presione **PROG/VCR+** para finalizar el programa.

**Categoría
NO, DEPORTE, CINE, COMEDIA,
MÚSICA, DRAMA



Presione ▲▼ para seleccionar un número que no está usando para ingresar mas programas y presione ► para ajustar. Luego repita el paso 3.

Presione nuevamente **PROG/VCR+** para salir.

- 5 Presione **POWER off** para ajustar el temporizador. (Se ilumina "TIMER" en el panel delantero)

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