

Panasonic Omnivision



Video Cassette Recorder



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

Spanish Quick Use Guide is Included. (Guía para rápida consulta en español está includo.)

Quick Use Guide is on the back cover.

P29

Connections

P6

~ P9

P10 ~ P14

Things You Should Know

Congratulations

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

Safety Precautions

Date of Purchase _		` ` `` ``
Dealer Purchased	From	
Dealer Address		
Dealer Phone No.	· · · · · · · · · · · · · · · · · · ·	
Model No	PV-7401	
Serial No		

Warning: To prevent fire or shock hazard, do not expose this equipment to rain or moisture. This video recorder, equipped with the HQ (High Quality) System, is compatible with existing VHS equipment. Only use those tapes with the **VHS** mark. It is recommended that only cassette tapes that have been tested and inspected for use in 2, 4, 6, and 8 hour VCR machines be used.

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



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.

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Quick Use Guide	

A 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

POWER SOURCE CAUTION

Operate only from a 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

1

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:

- a. 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.
- b. 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 regulator, 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.

- Support for the unit should be firm, level, and adequately strong.
- 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.

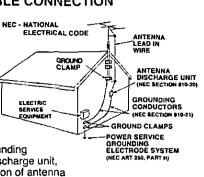


 Carefully follow all operating instructions and use the manufacturer's recommended accessories when operating this unit or connecting it to any other equipment.

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

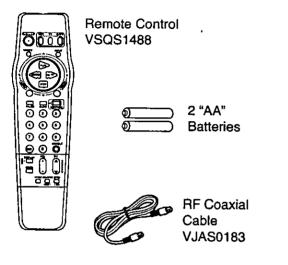
After any service or repairs to the unit, request the service technician to conduct a thorough safety check as described in the manufacture's service literature to insure that the video unit is in safe operating condition.

Unpacking Your VCR • Product Features

Unpacking Your VCR

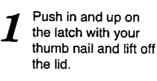
The accessories below are provided to help you use or set up your VCR.

Accessories



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

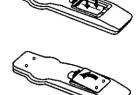
Loading the Batteries



Install two batteries as indicated inside the Battery Compartment.

Fit the lid's hinge

piece into the indent on the case, and snap the lid into place.



Battery replacement caution

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

Product Features

All Channel Auto Set/ 181-CH TV/CATV Tuner	12
Auto Daylight Saving Time	
Auto Features for a Quality Picture	
Auto Operation Functions (Auto Playback, Rewind, Tape Eject, Power off)	
Auto Repeat Function	
Digital Auto Picture	
Easy-to-Read English/Spanish/French On-Screen Displays	12 13 18 19
Multi Brand TV/Cable Box Remote Control	
One Minute Skip	
One Month, 8 Program Timer Recording	
One Touch Recording (OTR)	
Program Director Remote Control	
Special Effects Playback	
Special VCR Features (VCR Lock, Warning Beeper)	
Timer Recording Using VCR Buttons	19
VCR Plus+ Recording	24, 25, 26, 27
VHS Index Search System (Direct Access Search, Index Scan Search)	
Zero Search	



Erase Protection (Record Tab)

Cassettes have a record tab to ensure that recordings are not accidentally erased.

To prevent accidental erasure, break off the tab with a screwdriver.



To record again, cover the hole with <u>cellophane tape</u>.



Maximum Record/Playback Time

Only use tapes with the WHS mark in this unit.

Tape Speed	Type of Video Cassette		
Setting	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 (Super Long Play)	3 Hours	6 Hours	8 Hours

Head Cleaning

Your VCR will not normally require head cleaning, however the heads may become clogged when playing an old or damaged tape.

Head Clog Sensor

If head cleaning becomes necessary, the VCR will display the screen at right while playing back a recorded signal. To exit this screen, push PLAY on the remote control or VCR.

VIDEO HEADS MAY NEED CLEANING PLEASE INSERT HEAD CLEANING CASSETTE OR REFER TO MANUAL END:PLAY KEY

- Use "dry" type head cleaning cassette* only.
- Be sure to follow the cleaning tape instructions carefully. Excessive use of a cleaning cassette can shorten head life.
- If using a head cleaning cassette does not solve the problem, contact your nearest Factory Service Center or authorized Service Center.
- * Cleaning cassette part No. NV-TCL30PT is recommended.

Reset all VCR Memory Functions

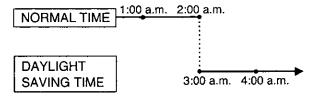
Use when moving the VCR to a new location, or if a mistake was made in the One Time VCR Setup section.

- · Make sure a tape is not inserted in the VCR.
- 1) Turn VCR Power on.
- 2) Push and hold both PLAY and CH ▲ buttons on the VCR for more than 5 seconds.
 The power will shut off.
- 3) Perform the One Time VCR Setup section on page 12.

D.S.T. (Daylight Saving Time)

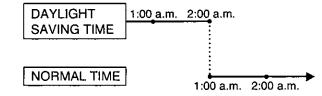
Spring (First Sunday in April)

When the VCR is set to DST:ON, it automatically adds one hour and adjusts the clock.



Autumn (Last Sunday in October)

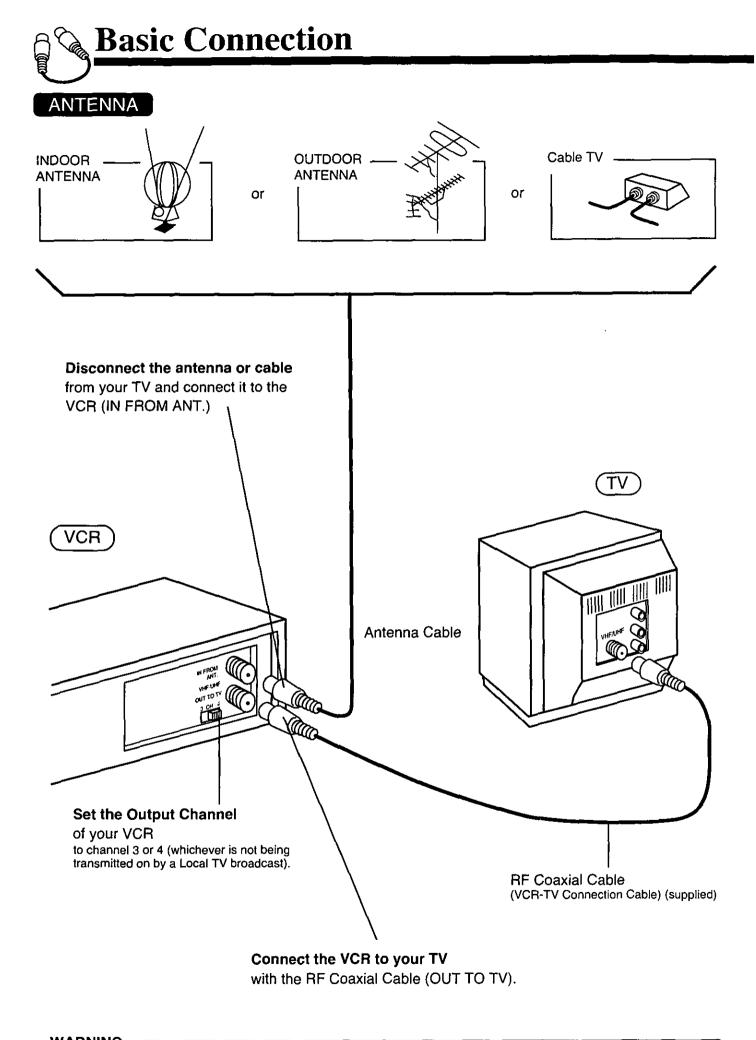
When the VCR is set to DST:ON, it automatically turns back one hour and adjusts the clock.



Specifications

Power Source:	120V AC, 60 Hz
Power Consumption:	Approx. 18 watts (Power on)
-	Approx. 6 watts (Power off)
Video Signal:	EIA Standard NTSC color
Video Recording System	: 4 rotary heads helical
	scanning system
Audio Track:	1 track (Normal)
Tuner:	· · ·
Broadcast Channels:	VHF 2~13, UHF 14~69
CATV 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 CATV channel 5A (01)
	Ultraband 65~94, 100~125
Operating Temperature:	
Operating Humidity:	10%~75%
Weight:	7.5 lbs. (3.4 kg)
Dimensions:	14-15/16" (W) x 3-2/3" (H) x
	11-13/16" (D)
	380 (W) x 93 (H) x 300 (D) mm

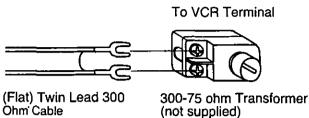
Note: Designs and specifications are subject to change without notice.



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

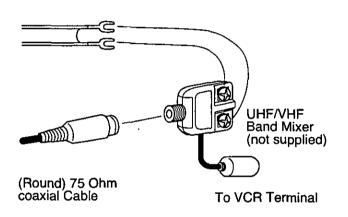
Between Antenna and VCR

Case 1: Twin Lead Cable Only

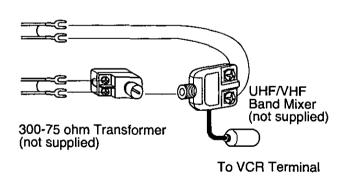


(not supplied)

Case 2: Twin Lead & Coaxial Cables



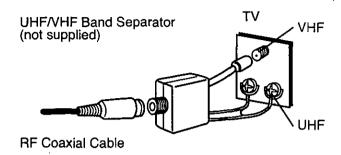
Case 3: Two Twin Lead Cables



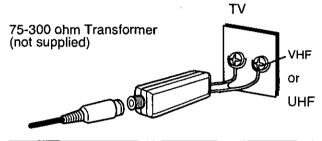
 If your TV has both post and plug-type VHF terminals, the post connection is recommended to minimize signal loss.

Between VCR and TV

Case 1: Screw & Plug Type Terminal



Case 2: Screw Type Terminal

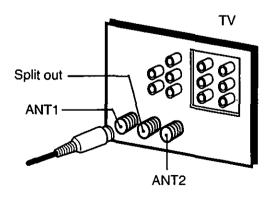


Case 3: Double Screw Type Terminal

UHF/VHF Band Separator τv (not supplied) VHF 100000 UHF

Case 4: Complex TV Terminal

TERMINALS ON BACK OF TV SET



 Connect to one of the ANT terminals and select the same antenna number on the TV.



CATV(Cable) Connections

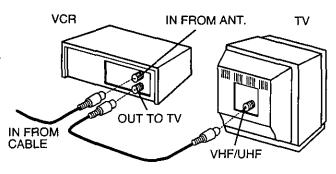
All connections on this page are made with 75 Ohm coaxial cables.

Without a Converter/Descrambler Box

You can:

- 1) Use your VCR Remote Control to select channels.
- 2) Program one or more unscrambled channels for unattended recording.

You cannot: record or view scrambled channels with this connection.



VCR

IN FROM ANT.

Cable TV Converter

Box

IN FROM

CABLE

OUT TO TV

VHF/UHF

τv

With a (CABLE to VCR) Converter/Descrambler Box

You can:

- Record and view any channel including scrambled channels; channel selection must be made at the Cable TV Converter Box.
- Program one channel for unattended recording.

You cannot: select channels from VCR or TV.

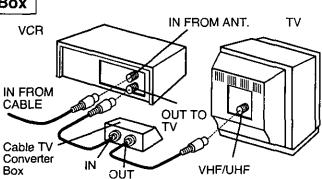


You can:

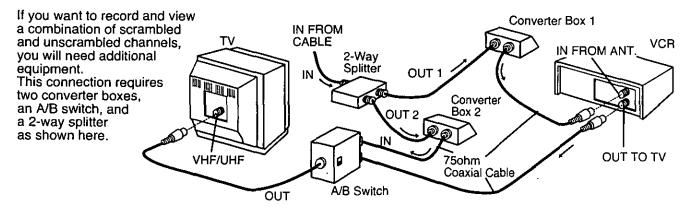
- 1) Use your VCR Remote Control to select channels.
- 2) Program unattended recordings of more than one unscrambled channel.

You cannot:

record scrambled channels with this connection.







With a DSS Receiver

You can:

- Record and view any channel including scrambled channels; channel selection must be made at the DSS Receiver.
- 2) Program one channel for unattended recording.
- NOTE: The DSS receiver must be turned off to view programs from a cable box or antenna. See the DSS manual for details.

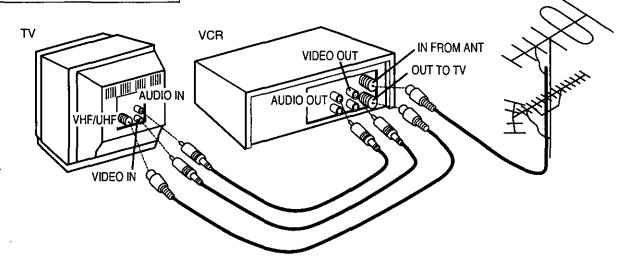
IN FROM CABLE or Antenna IN FROM Satellite Dish OUT TO TV DSS Receiver IN FROM ANT.

**DSS[®] is a registered trademark of DIRECTV, INC., a unit of GM Hughed Electronics.

Audio/Video Connections

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

Audio/Video Connections



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

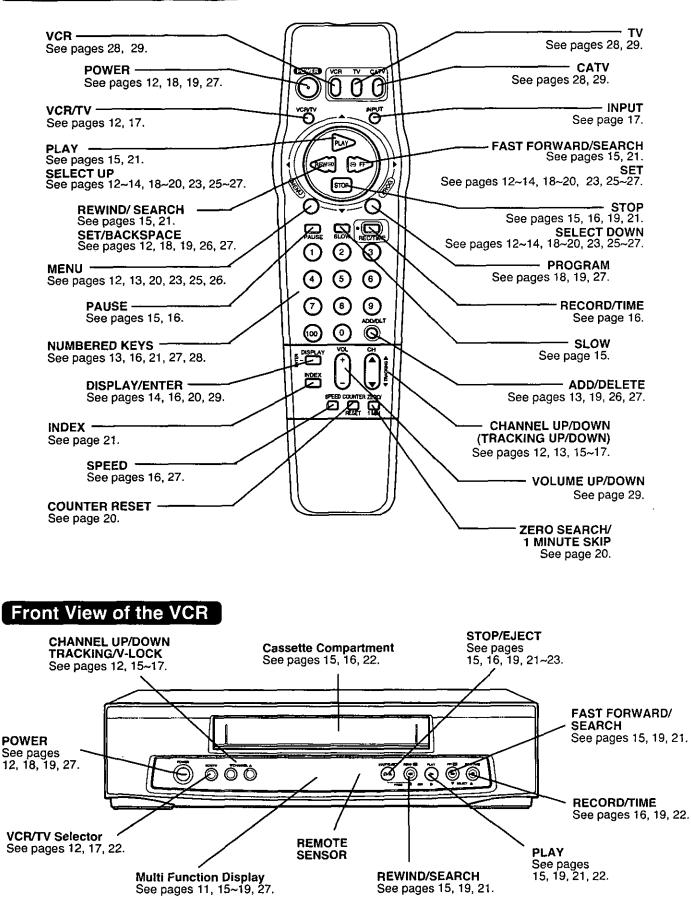
NOTE: To use your TV as a VCR monitor, set the VIDEO/TV selector on the TV (Monitor/Receiver) to "VIDEO."

Note to CATV system installer:

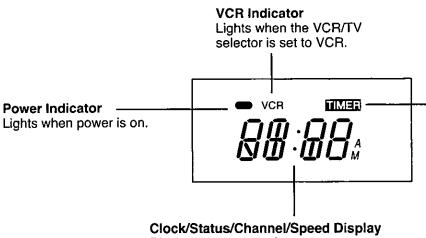
This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC in USA (and to the Canadian Electrical Code in Canada) that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the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



Remote Control Buttons



Multi Function Display



Timer Indicator

Lights when the VCR is set for a Timer Recording, or when a length is set for a normal recording. Flashes when a Timer Recording is set, but a tape has not been inserted into the VCR.

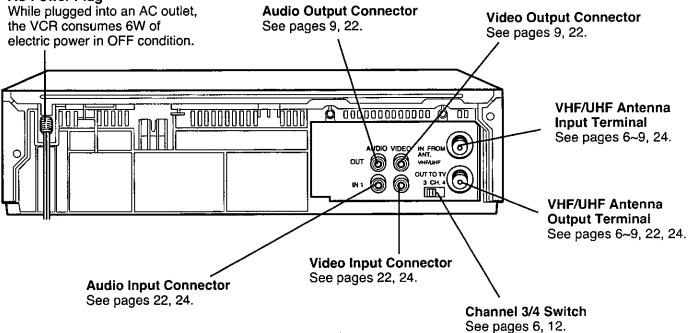
Displays the current time. Briefly displays VCR status when a function button is pushed.

Briefly displays the channel number, or "L" when a channel or line input is selected.

Briefly displays the recording speed when SPEED is pushed.

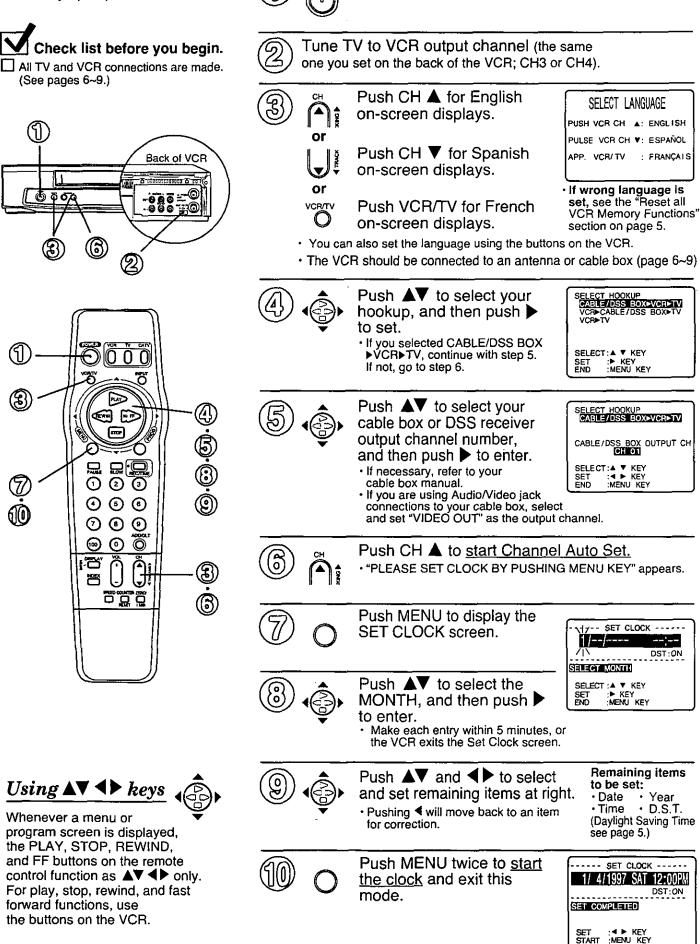
Rear View of the VCR

AC Power Plug





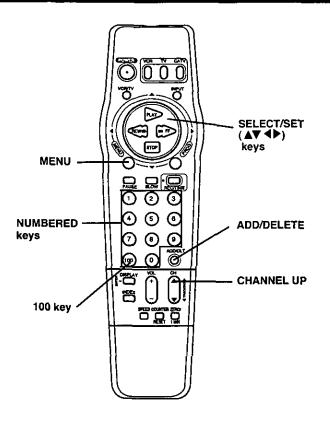
When the VCR power is first turned on, the language select and channel auto set screen appear automatically followed by a prompt to set the clock.



POWER

To Set the Language, Channels, and Clock

Turn TV and VCR on.

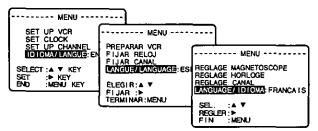


To Change On Screen Display Language

- 1 Push MENU to display the menu.
- 2 Push **▲**▼ to select the language. English: LANGUAGE Spanish: IDIOMA French: LANGUE

MENU
SET UP VCR SET CLOCK SET UP CHANNEL IDTOMAVILANGUE: ENGLISH
SELECT:A ▼ KEY SET :▶ KEY END :MENU KEY

3 Push ▶ repeatedly to change the language.



4 Push MENU to exit this mode.

When Using the 100 key

When selecting CATV channels 100 to 125 with the NUMBERED keys, first push the 100 key and then enter the remaining two digits. For example, to select channel 125: Push NUMBERED keys 100, then 2, then 5.

To Replace Channels in Memory

In case you have cable installed, etc.

- 1 Push MENU to display the menu.
- 2 Push ▲▼ to select "SET UP CHANNEL," and then push to display the "SET UP" CHANNEL" screen.
- 3 Push ▲▼ to select "ANTENNA SYSTEM," and then push ▶ to set your antenna system (TV or CATV).
- 4 Push ▲▼ to select and ▶ to set "AUTO SET."
 - · If you use a cable box, it must be left on for auto channel set.
- 5 Push CH A to start Channel Auto Set. To exit this mode, push MENU twice.

To Set or Reset the Clock

In case the clock is wrong, or a power failure occurred.

- 1 Push MENU to display the menu.
- 2 Push ▲▼ to select "SET CLOCK," and then push ▶ to display the "SET CLOCK" screen.
- 3 Push $\blacktriangle \forall$ and $\blacktriangleleft \flat$ to select and set the time and date.
- **4** Push MENU twice to start the clock and exit this mode.



---- MÉNU -----

--- SET UP CHANNEL ---

ANTENNA SYSTEM : CATV AUTO SET CABLE/DSS BOX SET UP VCR Plus+ CH SET UP

SET CLOCK SET UP CHANNEL ID IOMA/LANGUE: ENGLISH

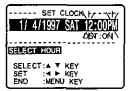
SET UP VCR

SELECT:▲▼ KEY SET :► KEY END :MENU KEY

SELECT : A V KEY : KEY

SET

SET END



CHANNEL 08 ADDED

CHANNEL OS DELETED

To Add or Delete a Channel

- 1 Select a channel using the NUMBERED keys to add or the CH \blacktriangle/∇ to delete.
- 2 Push ADD/DLT to add or delete the channel.
 - · To select a channel once it's deleted, use the NUMBERED keys on the remote control. Deleted channels will flash in the Multi
- - Function Display on the VCR when selected,

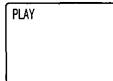


 This VCR will accurately maintain its calendar up to Dec. 31, 2015, 11:59PM. Normal TV or Cable channels are automatically selected and placed in memory depending on how your VCR is hooked up.



Function & Channel Display

When a function button is pushed, e.g. PLAY, or you change channels, a 4 second display appears first in large and then small characters.



Menu Screen

1 Push MENU to display the menu.

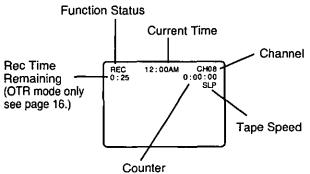
MENU
SET UP VCR
SET UP CHANNEL ID IOMA/LANGUE: ENGLISH
SELECT : A V KEY
SET IN KEY END MENU KEY

- 2 Push $\blacktriangle \nabla$ and \triangleright to make your selection.
 - · To get the most from each feature, please Operating Manual before attempting any o

VCR Status & Clock Display



Push DISPLAY to display or remove the overlay shown be



Blank Tape/ No Video Signal India

When a blank section of tape comes up in mode, or the selected channel has no broa signal, the TV screen will turn solid blue.

Warning and Instruction Displays

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

	If no active channels are found for CHANNEL MEMORY (See page 12.)	NO CH FOUND PLEASE CHECK ANTENNA CABLE CONNECTION THEN PUSH VCR CH UP KEY AGAIN
INU IR JANNEL MGUE: ENGL I SH KEY KEY	If you attempt to set or review a Timer Recording and the Clock is not set (See page 18.)	PLEASE SET CLOCK BEFORE PROGRAMMING
read the peration.	After a Timer Program has been set (See page 18.)	TURN VCR OFF FOR TIMER RECORDING
elow.	If you push REC on the remote control or VCR, and a cassette is inserted with no record tab (See page 16.)	CHECK CASSETTE RECORD TAB
Channel e Speed	If you push PLAY, FF, REW, or REC on the remote control or VCR without a cassette inserted (See pages 15, 16.)	NO CASSETTE PLEASE INSERT A CASSETTE
	If you push POWER or STOP during a Timer Recording (visible in VCR mode only) (See page 19.)	TO CANCEL TIMER REC PUSH POWER THEN STOP KEY
Cation Play adcast	If head cleaning becomes necessary while playing back a tape (See page 5.)	V IDEO HEADS MAY NEED CLEANING PLEASE INSENT HEAD CLEANING CASSETTE OR REFER TO MANUAL END:PLAY KEY
	If you push a function button other than STOP/EJECT or POWER while the VCR is in	VCR LOCK ACTIVATED

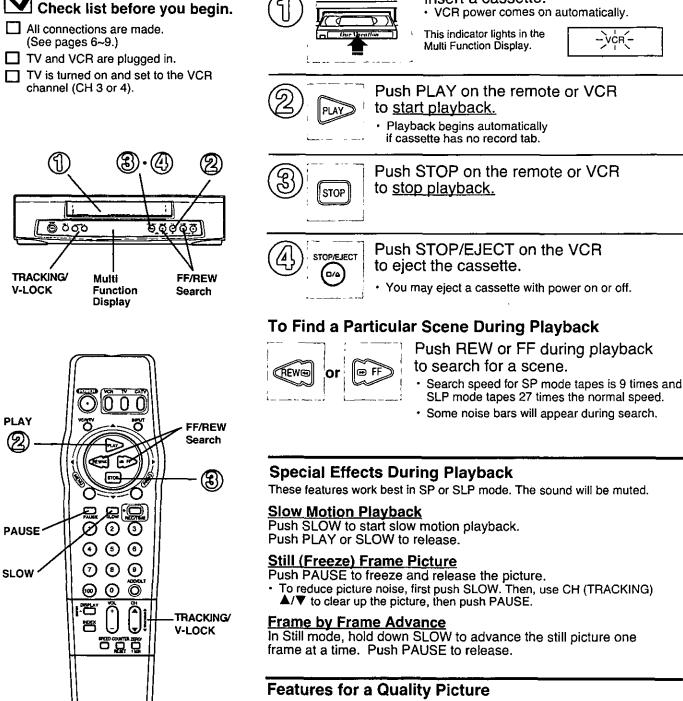
VCR Lock mode... (See page 23.)



Caution:

Please inspect your cassette tapes for

any loose or peeling labels as they may become jammed in your unit.



Digital Auto Picture

This feature automatically controls the video output signal for less noise depending on the tape condition.

<u>Digital Auto Tracking</u>

This feature continuously analyzes the signal and adjusts for optimum picture quality.

Insert a cassette.

-)vcr(-

Manual Tracking Control (to reduce picture noise)

Use during Playback and Slow Motion mode to reduce picture noise. Push CH (TRACKING) ▲/▼ during playback until the picture clears up. To return to Auto Tracking mode, push POWER off and then on again.

V-Lock Control (to reduce picture jitter)

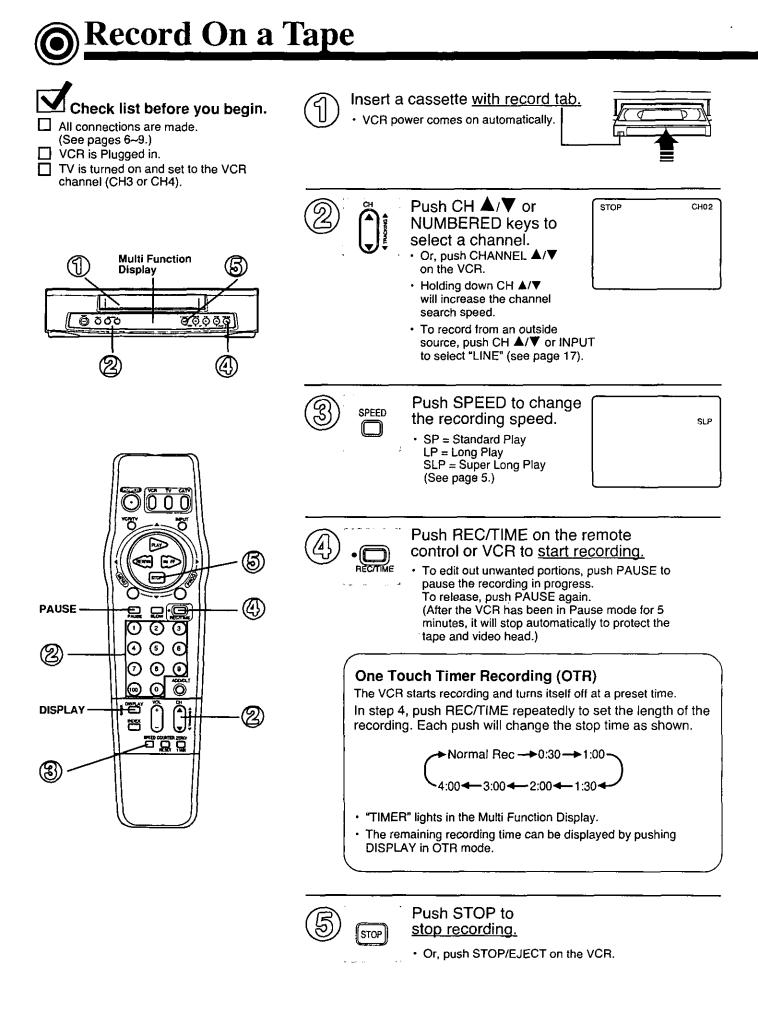
In Still mode, CH (TRACKING) ▲/▼ operate as a V-Lock control. Push \blacktriangle/ \forall until the picture is stabilized.

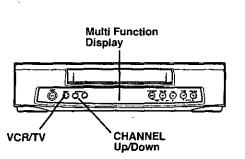


After the VCR is in Still or Slow mode for 3 minutes, it will switch to the Stop mode automatically to protect the tape and the video head.

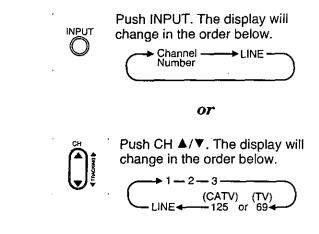
Basic Operation

15





Selecting the Input Mode



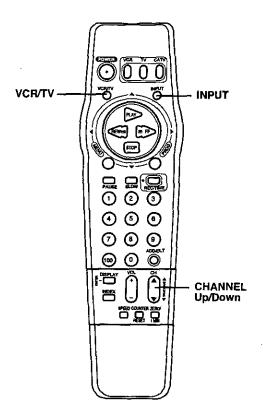
 When LINE is selected, "L" is displayed in the Multi Function Display for about 4 seconds.

Record One Program While Watching Another

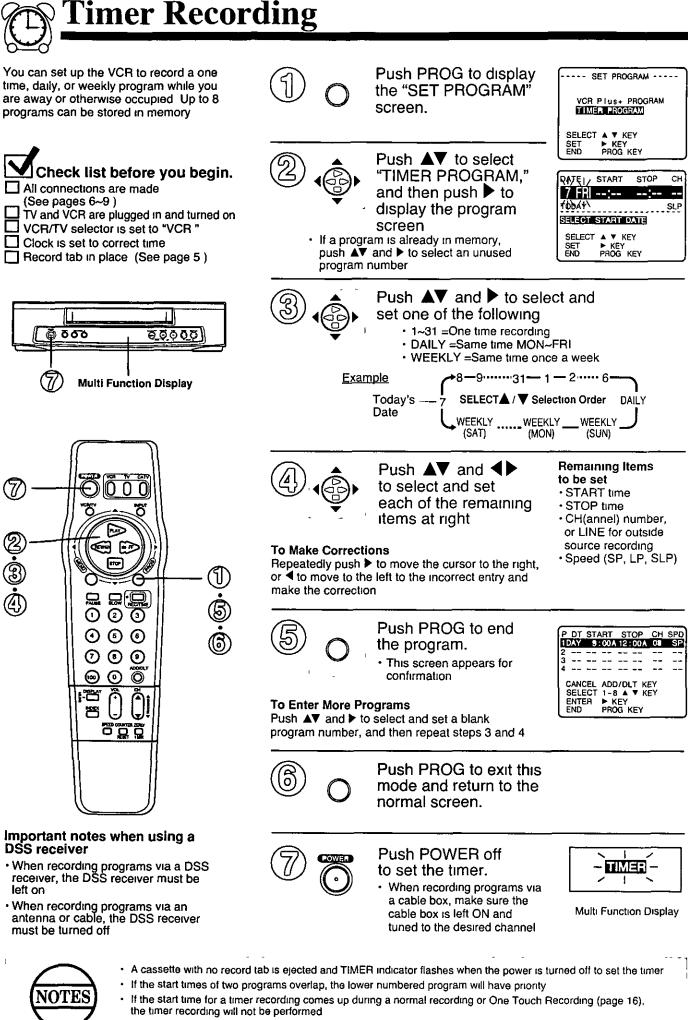
- Push VCR/TV while recording is in progress to turn off the VCR indicator in the Multi Function Display.
- 2 Use the TV channel controls to select a program. The VCR will continue to record your program while you watch any channel you choose.
 - To switch back and forth between the recording and viewing channel, push VCR/TV.

Selecting Channels at the VCR

- 1 Turn your TV and VCR on.
 - VCR Indicator lights on the Multi Function Display. If indicator doesn't light, push VCR/TV to turn it on.
- 2 Use CH ▲/▼ on the remote control or VCR to select channels.
- To switch back to TV channel selection, push VCR/TV to turn VCR indicator off, or simply turn the VCR power off.



Basic Operation



If there is a power interruption of more than one minute, the recording will not be performed or continue

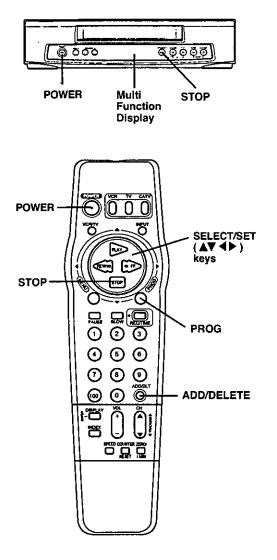
× • •



(Recording is in progress)

Push POWER and then STOP within 10 seconds to cancel the timer recording.

• The TIMER indicator goes out in the Multi Function Display.



Replace Program Contents:

(Recording is not in progress)

- 1 Push PROG to display the "SET PROGRAM" screen.
- 2 Push ▲▼ to select "TIMER PROGRAM," and then push ▶ to display all currently set programs.
- 3 Push ▲▼ and ▶ to select and set a program number. (See page 18.)
- 4 Push ▲▼ and ◀► to select and set replacement timer information.
- **5** Push PROG twice to exit this mode.

Review or Clear	[•] Program	Contents:
------------------------	----------------------	-----------

(Recording is not in progress)

- 1 Push PROG to display the "SET PROGRAM" screen.
- 2 Push ▲▼ to select "TIMER PROGRAM," and then push ▶ to display all currently set programs.
- 3 Push $\blacktriangle \nabla$ to select a program number.
- 4 Push ADD/DLT to clear the program.
- 5 Push PROG to exit this mode.





---- SET PROGRAM -----

VCR Plus+ PROGRAM

P DT START STOP CH SPD 1DAY 9:00A 12:00A 08 SP 2 8 10:00P 12:00P 125 SLP 3 10 8:00P 9:00P 10 SP 4 SU 9:00P 10:00P L SLP

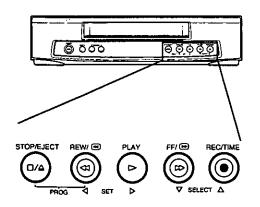
DT START STOP CH SPO

8 10:00P 12:00P 125 SLP 10 8:00P 9:00P 10 SP SU 9:00P 10:00P L SLP

CANCEL :ADD/DLT KEY SELECT 1-8:▲ ▼ KEY ENTER :► KEY END :PROG KEY

SELECT 1-8:▲ ▼ KEY ENTER :► KEY END :PROG KEY

å



Timer Recording Using VCR Buttons

(Make sure a cassette tape is not inserted in the VCR.)

- Hold down STOP/EJECT and push REW to enter the Program mode.
- 2 Push FF or REC/TIME repeatedly or hold down to make selections.
- **3** Push PLAY to set the item and move on.
 - To make corrections, repeatedly push PLAY to move the cursor to the right, or REW to move to the left to the incorrect entry and make the correction.
- 4 Push STOP/EJECT and REW together to display program contents after all items have been entered.
 You cannot clear programs with the VCR buttons.
- 5 Hold down STOP/EJECT and push REW, (release REW first, and then release STOP/EJECT) to exit this mode.
- 6 Insert a cassette with record tab and push POWER off to set the timer.

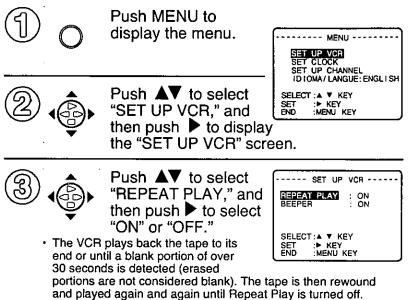


Your VCR is equipped with several time saving features as well as convenient automatic functions making tape operation easier than ever.

000 Ö E \odot 2 3 \odot 60 \odot ര \odot õ \odot õ ට 6

Repeat Play

The VCR will play your recording over and over.





Push MENU twice to return to the normal screen.

One Minute Skip

The VCR rapidly skips over one minute of tape.



Push ZERO/ 1 MIN in Play mode.

The VCR will go into FF search mode and skip over 60 seconds
 of recorded time. Normal playback will then resume.

Auto Operation Functions

Auto Playback

When a tape is inserted, the power turns on (Auto). If the record tab* is removed, playback begins (Auto).

Auto Rewind

When a tape reaches its end during playback, fast forward or manual record, the VCR will rewind and go into Stop mode.

Playback Auto Eject

(Repeat Play is "OFF.") When a tape without a record tab* is played to its end, the VCR will rewind and then eject the tape.

Memory Rewind Off

When the POWER button is pushed during rewind, the VCR will turn off after rewind is complete.

* For record tab information, see page 5.

Zero Search

To quickly return to a specific tape location.



Push DISPLAY to display the Time Counter overlay.

STOP	12:00AM	CH08 0:00:30 SLP
(STEREO) (SAP) MONO	4	5LF

12:00AM

CH08 0:00:00

SLP

STOP

(STEREO)

(SAP) MONO



Push COUNTER RESET to reset the Time Counter to "0:00:00."

• This may be done at as many places as you wish on the tape.

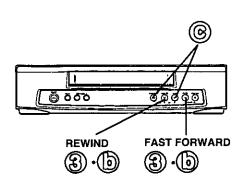


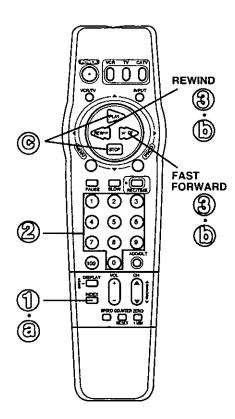
Push ZERO/1MIN in Stop mode.

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

VHS Index Search System

Each time you start a recording, an invisible index mark is automatically placed on the tape. You can then use these index marks to access or scan your recordings.





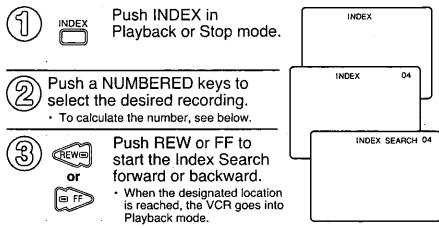


Make each entry within 10 seconds, or the Index Search mode will be canceled. Index marks will be placed for Timer recordings as well.

If the Direct Access index search is initiated extremely close to an index mark, there is a possibility that the index mark will not be counted in the search.

Direct Access

This feature allows you to go directly to the recording you want from anywhere on the tape by entering a specific index number.

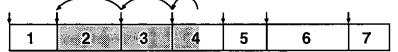


To calculate an Index Number

Count forward or backward each recording start point, including the recording you want to see, from wherever you are on the tape.

Example 1:

If you are watching recording 4 and you want to watch recording 2, count the start points to number 2. Recordings equal 3. Enter 3 in step "2" and push REW.



Example 2:

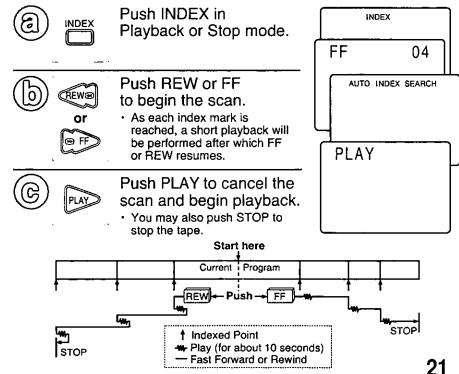
If you are watching recording 2 and you want to watch recording 6, count the start points to number 6. Recordings equal 4. Enter 4 in step "2" and push FF.



NOTE: I indicates start points of each recording.

Index Scan

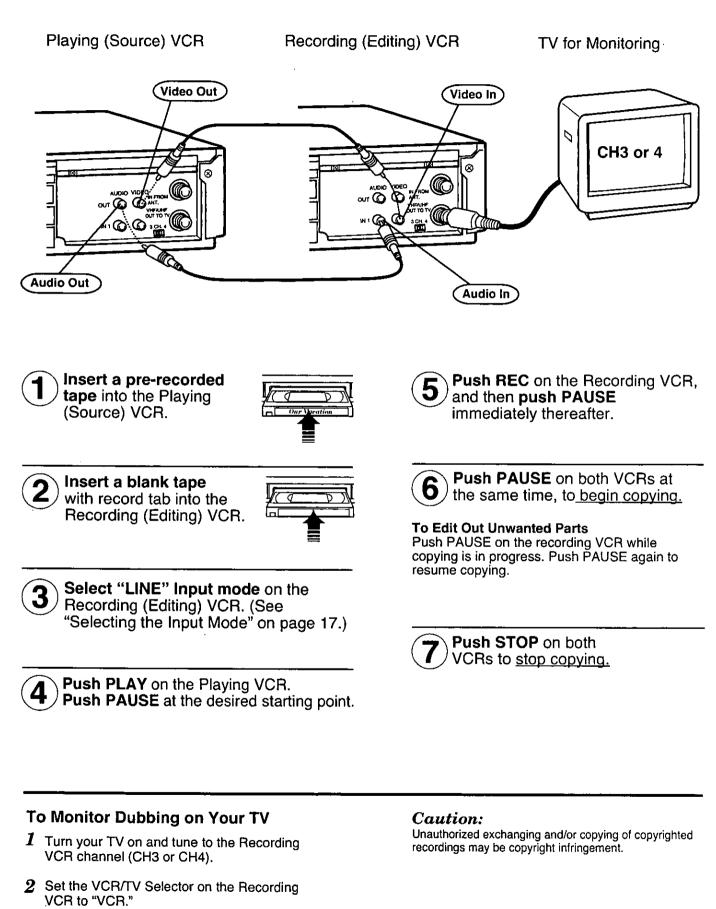
This feature allows you to scan (forward or reverse) each recording for 10 seconds in Playback mode.



More You Can Do



Connections you'll need to make.



Special VCR Features

Check list before you begin.

- All connections are made. (See pages 6~9.)
- (See page
- VCR is Plugged in.
- TV is turned on and set to the VCR channel (CH3 or CH4).

VCR Lock Feature

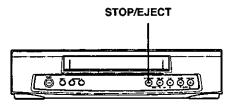
When activated, this feature prohibits all operations except for timer recording and tape eject. This feature is used to keep children from operating the VCR.



Hold down STOP/EJECT on the VCR for 7 seconds while in Stop or Power OFF mode.

VCR LOCK ACTIVATED

To Cancel the VCR Lock feature,



STOP/EJECT

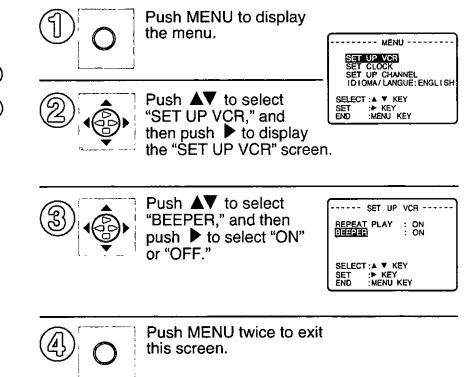
hold down STOP/EJECT on the VCR for 7 seconds again while in Stop or Power OFF mode.



 VCR Lock mode is cancelled automatically after 24 hours as long as the clock is set.

Warning Beeper Feature

When you select BEEPER ON as described below, a short warning will sound each time an invalid entry or incomplete operation is made.



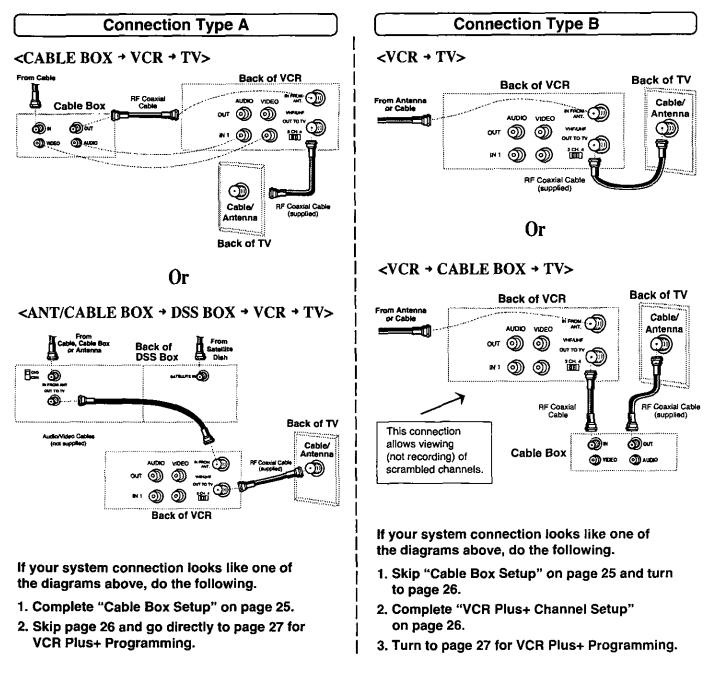
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VCR Plus+ Setup

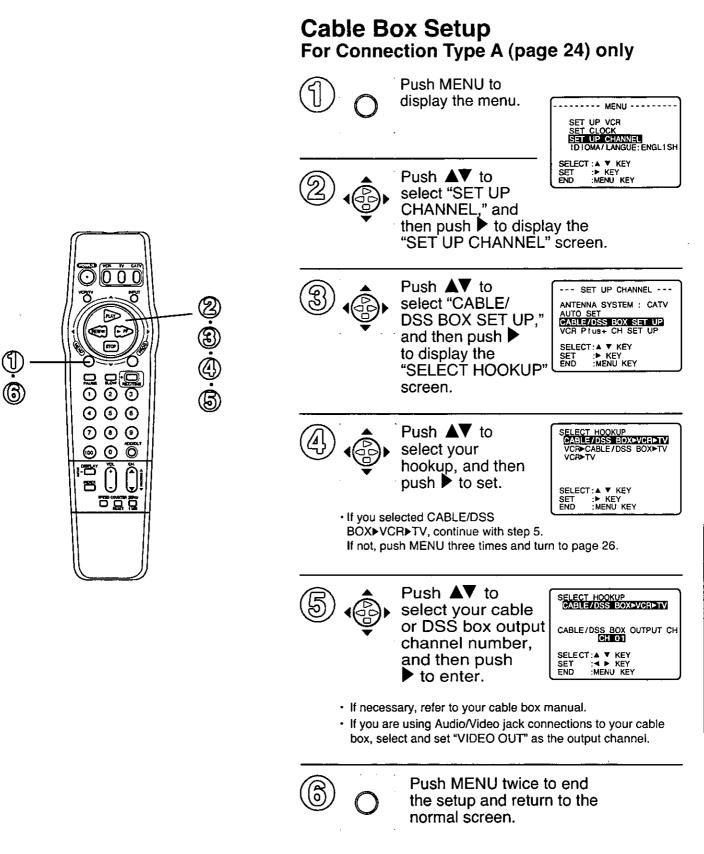
VCR Plus+ programming allows you to set most items of a timer recording by simply entering a special code(PlusCode) found in *TV GUIDE* magazine as well as the TV listings in selected newspapers. In order for your VCR to do a VCR Plus+ recording, or a timer recording of cable stations, some setup is required.

At first, choose your Connection Type.

(Then, follow the instructions under the diagram.)

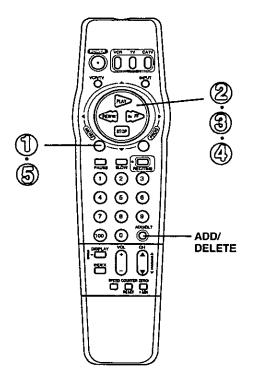


VCR Plus+ and PlusCode are trademarks of Gemstar Development Corporation. The VCR Plus+ system is manufactured under license from Gemstar Development Corporation. If you are using a cable box and it is connected to your VCR in one of the ways shown in Connection Type A on page 24, you will need to complete the Cable Box Setup steps below.



Go directly to "VCR Plus+ Programming" on page 27.

In order for the VCR to read the VCR Plus+ code, some set up is required. A Guide (VCR Plus+) channel number is 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.



Channel Setup Preparations

NOTE: Complete the steps on this page if your VCR hook-up resembles "B" on page 24. Prepare a list like the example below. This list will help you smoothly enter the information needed in step "4" at right.

You will need the following to complete the list:

- A line up of normal and/or cable stations you receive along with the channel numbers your TV receives them on. A cable channel line-up chart is supplied by your cable company.
- A list of Guide (VCR Plus+) channel numbers assigned to the stations you receive. This list is available in *TV Guide* and the TV listings found in selected newspapers.
- 1 Make a chart with 3 columns like the example below. In the left column, fill in the name or call letters of the stations you receive.
- 2 In the middle column, fill in each station's assigned Guide (VCR Plus+) number found in TV Guide, newspapers, etc.
- 3 In the right column, fill in the channel number that your TV receives the station on from your channel line-up.

EXAMP	1 6	
C / V / V / V / V	~~~	

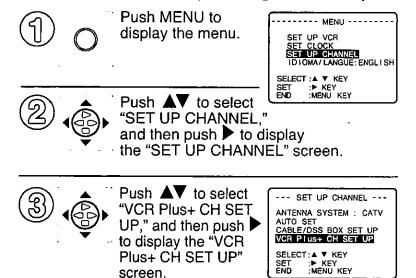
Broadcast or Cable Station Name	Assigned Guide (VCR Plus+) channel no.	Channel no. your TV receives the station on
НВО	33	15
Nickelodeon	38	20
CBS	04	04
FOX	11	

VCR Plus+ Channel Setup

For Connection Type B (page 24) only • Before you begin, complete the Channel Setup

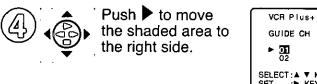
Preparations below left. Important Note:

If your VCR connection type changes from type A to B, repeat steps 1~4 of page 25 and select VCR▶CABLE/DSS BOX▶TV or VCR▶TV before proceeding with these steps.



IMPORTANT NOTE:

For step "4," use the list you prepared. You may leave lines blank if you don't receive that station, or if the GUIDE CH number and the CATV (or TV) CH numbers are the same.



Then, push ▲▼ to change CATV or TV CH number.

Next, push ◀ to set the number.

Now, push **AV** to continue.

Repeat this operation until the list is complete.

VCR Plus+	CH SET UP	
GUIDE CH	CATV CH	
► 31 02		
SELECT:▲ ▼ KEY SET :► KEY END :MENU KEY		
VCR Plus+		
VOR FIUS+	UN SET UP	

VCR Plus+	CH SET UP
GUIDE CH	CATV CH
► 01 02	
SELECT:▲▼ K SET :◀ KEY END :MENU	

To Make Corrections

Push $\blacktriangle \forall$ and \triangleright to select the incorrect CATV or TV CH number. Then, push $\blacktriangle \forall$ to change, or ADD/DLT to delete the channel.

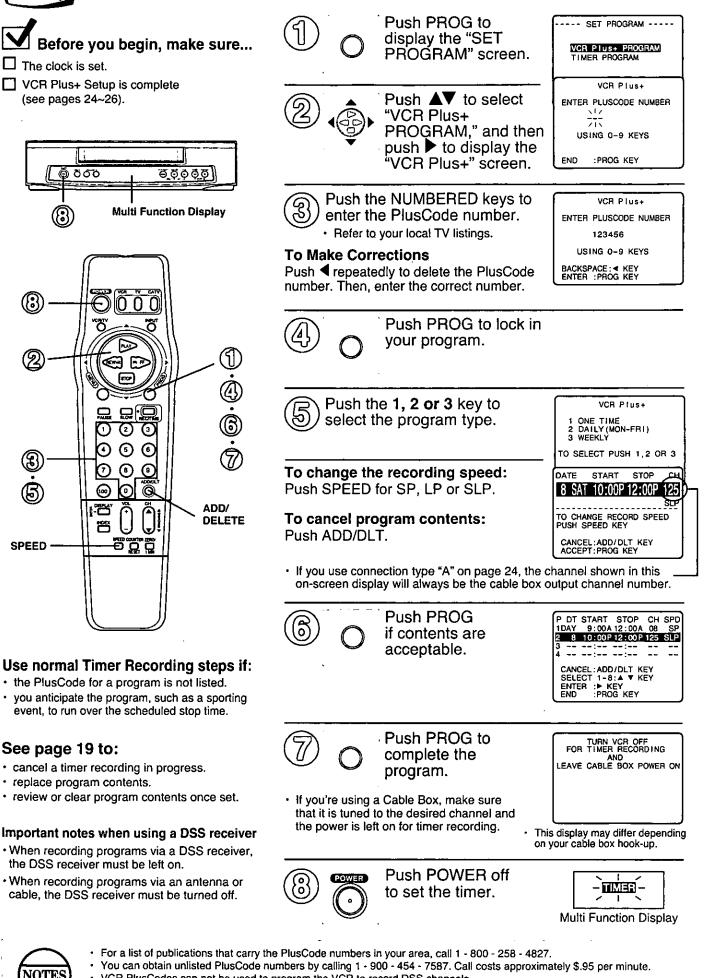


Push MENU three times to exit the VCR Plus+ CH SET UP mode.

NOTES

Make each entry within 5 minutes or the VCR will leave this mode. Once local channels have been programmed, they will stay in memory, even in the case of a power failure.

VCR Plus+ Programming



VCR PlusCodes can not be used to program the VCR to record DSS channels.

- Avoid overlapping program times.
 - An on-screen display will indicate if an invalid PlusCode number has been entered or when all timer programs are full.

Multi-Brand Control Feature

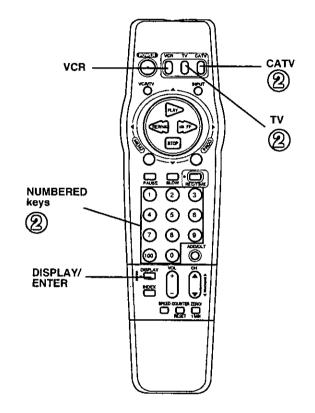
The Remote Control may be set up to control some of the functions on your TV or Cable Box.

TV Brand Code Numbers

Panasonic 01, 02 Quasar 01, 02 RCA 03 GE 03 Jamith 04	Sharp 06, 07 Sony 08 Toshiba 09	Samsung
Zenith	Sanyo 10	Gold Star 15, 16, 17

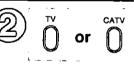
Cable Box Brand Code Numbers

Cable DOX Drand Code Numbers
Archer 01, 29, 44, 88, 91
Cableview04, 30, 42, 44, 52, 63, 85, 88
Citizen
Curtis04, 30, 42, 44, 52, 63, 85, 88
Diamond 01, 29, 44, 88, 91
Drake 37, 67, 71
Eagle 13, 20, 22, 26, 40, 58, 62, 98
Eastern 28
GC Brand 04, 30, 42, 44, 52, 63, 85, 88
Gemini 04, 85
General Electric 57
General Instruments
. 01, 02, 03, 04, 34, 55, 83, 85, 91, 93, 95
Hamlin
Hitachi
Jerrold
. 01, 02, 03, 04, 34, 55, 83, 85, 91, 93, 95
Macom
Magnavox
Matsushita 16, 17, 101
Movietime 29, 32, 38, 39, 40, 42, 44, 88
NSC 32, 38, 40
Oak 10, 11, 46, 99
Panasonic 16, 17, 101
Philips 13, 20, 23, 24, 96
Pioneer
Pioneer
Radio Shack
RCA 16, 17, 101
Realistic 44, 51, 88
Regal 14, 41
Regency
Rembran 29, 32, 39, 42, 44, 88
Salora 68, 72
Samsung 32, 40, 42, 78, 94
Scientific Atlanta 08, 09, 56, 61, 87, 90
Sheritech
SL Marx
Spucer 16, 17, 101
Stargate
04, 30, 32, 40, 42, 44, 52, 63, 78, 85, 88, 94
Sylvania
Teknika
Telecaption
Teleview
Tevener 10, 40, 42, 78, 94
Texscan
Tocom
Toshiba
Uniden Satellite 65, 69
Unika01, 29, 44, 88, 91
Universal 42, 43, 44, 52, 63, 88
Viewstar 13, 20, 22, 26, 40, 58, 62, 98
Videoway 07, 23, 50
Vid Tech
Vidter
Zenith 07, 23, 50
07, 20, 50



Universal Remote Control Setup

Find your TV or Cable Box Brand Code Number from the chart at left.



Hold down TV or CATV. Use the NUMBERED keys to enter your TV or Cable Box Brand code number.

• For code numbers 100 or greater, first push the 100 key. Then, enter the remaining digit. E.g. for 102, push 100, then push 2.

 γ Try each of the functions on page 29.

 Due to changes in infra-red commands used by some manufacturers, some TV or Cable Box brands are listed more than once. If your TV or Cable Box does not respond to the first code, please try entering the next code.



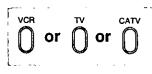
Please repeat the TV/Cable Box Set Up procedure when you replace the remote's batteries.

 The remote control is designed to control the brands listed. However, it will not operate all TVs or Cable Boxes made by these manufacturers. If you get no results, your particular product brand cannot be controlled by this remote.

28

Using the Universal Remote Control

Once the remote control has been properly set up, you can select VCR, TV, or CATV mode depending on which functions you wish to control.



Push VCR or TV or CATV on the remote control to select the desired mode. (See below for the controllable functions of each mode.) <u>NOTE:</u> In TV or CATV mode, it may be necessary to push DISPLAY/ENTER after pushing NUMBERED keys for channel selection.

VCR Mode

TV Mode

In VCR mode, the following buttons are available.

VCR All function buttons. TV VOL UP/DOWN buttons are available. <u>TV</u> POWER, INPUT, NUMBERED keys, DISPLAY/ENTER, CH UP/DOWN, VOL UP/DOWN

COUNTER RESET, ZERO/1 MIN.

VCR VCR/TV, PLAY, STOP, FF, REW, PAUSE, SLOW, REC, SPEED.

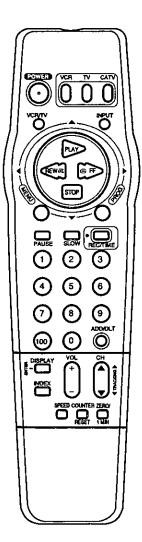
In TV mode, the following

CATV Mode

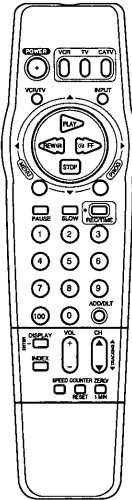
In CATV mode, the following buttons are available.

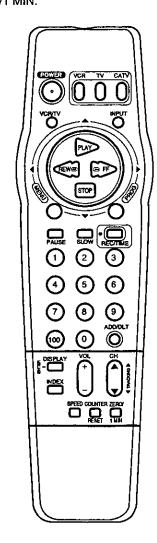
CATV POWER, NUMBERED keys, DISPLAY/ENTER, CH UP/DOWN

TV VOL UP/DOWN VCR VCR/TV, PLAY, STOP, FF, REW, PAUSE, SLOW, REC, SPEED, COUNTER RESET, ZERO/1 MIN.



NOTES





Some TV and Cable Box brands require you to turn on the power manually.
Not all functions listed may be controlled by this remote control.

29

Before Requesting Service

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

Power	Correction
No power	 Completely insert the Power Plug into an AC outlet. Set the POWER button to ON.
Recording & Playback	Correction
TV program cannot be recorded	 Check connections between VCR, external antenna, and your TV. Make sure your antenna system (CATV or TV) is entered correctly. (To Replace Channels in Memory [P.13]) Make sure that the record tab is intact on the cassette. (P.5)
Timer recording cannot be performed	 Set the recording start/stop times correctly. (P.18) Make sure that the POWER button is set to OFF. (P.18) Timer recording may not be performed or continued if a power interruption of more than 1 minute occurs before or during, a Timer Recording, even if power resumes thereafter.
There is no playback picture, or the playback picture is noisy or contains streaks	 Select channel 3 or 4 on the TV to match the Channel 3/4 switch located on the rear panel of the VCR. (P.6) Set the VCR/TV selector to "VCR." Check that channel 3 or 4 of the TV is properly adjusted. Adjust the TRACKING control in either direction. (P.15)
Special effects playback, picture may contain some vertical jitter when using a TV with an Automatic Vertical Hold Control	Set the TV's Vertical Hold Control to "MANUAL" and then adjust it.
VCR can't be controlled	Make sure that VCR LOCK is set to off. (P.23)
Remote Control	Correction
VCR cannot be remote controlled	 Aim the Remote Control directly at the remote sensor on the VCR. (P.10) Avoid all obstacles which may interfere with the signal path. Inspect the remote batteries for possible replacement. (P.4) Make sure that VCR LOCK is set to off. (P.23) Exposing the VCR remote sensor to direct fluorescent or outdoor light may cause signal interference.
The MENU and PROG buttons can't be used.	Push the VCR button to select VCR mode. (P.29)

Miscellaneous	Correction
Programs cannot be viewed on TV	Set the VCR/TV selector to "TV". (P.16)
Video cassette cannot be inserted	Insert cassette with window side up and the record tab facing you.
Video cassette cannot be removed	Completely insert the Power Plug into an AC wall outlet.
Video cassette ejects when a recording is started or the power is turned off for timer recording	 Make sure the record tab is intact on the cassette. (P.5)
In Stop mode, the motor (CYLINDER) continues to rotate	 To enable the quick play mechanism, the cylinder will rotate for about 5 minutes. This reduces response time from Stop to Play mode from Play to Rewind Search mode.
The top of the playback picture waves back and forth excessively	 Because the VCR playback signal is not as stable as an off-the-air TV signal, the top of your TV screen may be bent or unstable during playback. To solve this problem, slowly turn the horizontal hold control on your TV to correct the wavy picture. If your TV does not have a horizontal hold control or adjusting the control does not help, please contact your local TV service center.

If you cannot resolve your problem, please call the Customer Satisfaction Center for product assistance at 201-348-9090.

To locate an authorized servicenter, please call toll free 1-800-545-2672.

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PRODUCT INFORMATION • OPERATION ASSISTANCE • LITERATURE REQUESTS • DEALER LOCATIONS

Customer Service Center 2F-3, One Panasonic Way, Secaucus, NJ 07094 (Headquarters) 201-348-9090 (9:00am-8:00pm Monday-Friday, EST)

ACCESSORY PURCHASES

Panasonic Services Company 20421 84th Avenue South Kent, WA 98032 (6 am to 6 pm Monday - Friday ; 6 am to 10:30 am Saturday ; PST) (Visa, Mastercard, Discover card, American Express, Check)

AUTHORIZED SERVICENTERS • PARTS DISTRIBUTOR LOCATIONS

To locate an independent authorized servicenter or parts distributor in your area, within the USA dial toll free **1-800-545-2672**, 24 hours a day, 7 days a week.

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CALIFORNIA 6550 Katella Avenue Cypress, CA 90630 Phone (714) 373-7425 Fax (714) 894-8534 800 Dubuque Avenue S. San Francisco, CA 94080 Phone (415) 871-6373 Fax (415) 871-6840 20201 Sherman Way Suite 102 Canoga Park, CA 91306 Phone (818) 709-1775 Fax (818) 709-2165 3878 Ruffin Road Suite A San Diego, CA 92123 Phone (619) 560-9200 Fax (619) 560-1831 COLORADO 1640 South Abilene Suite D Aurora, CO 80012 Phone (303) 752-2024

Fax (303) 752-0610 FLORIDA 3700 North 29th Avenue Suite 102 Hollywood, FL 33020

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*pick-up/drop-off only

MICHIGAN 37048 Van Dyke Avenue

Sterling Heights, MI 48312 Phone (810) 939-2060 Fax (810) 939-2638 MINNESOTA

7850-12th Avenue South Airport Business Center Bloomington, MN 55425 Phone (612) 854-8624 Fax (612) 854-2089

OHIO 2236 Waycross Road Cincinnati, OH 45240 Phone (513) 851-4180 Fax (513) 851-8443

PENNSYLVANIA 2221 Cabot Boulevard West Suite B Langhorne, Pa 19047 Phone (215) 741-0661 Fax (215) 741-0521 Chartiers Valley Shopping Center 1025 Washington Pike Bridgeville, PA 15017 Phone (412) 257-4522 Fax (412) 257-4550 TENNESSEE 919-8th Avenue South Nashville, TN 37203 Phone (615) 244-4434 Fax (615) 244-6713

TEXAS

7482 Harwin Drive Houston, TX 77036 Phone (713) 781-1528 Fax (713) 781-0643

13615 Welch Road Suite 101 Farmers Branch, TX 75244 Phone (214) 385-1975 Fax (214) 960-7626

WASHINGTON 20425-84th Avenue South Kent, WA 98032 Phone (206) 872-7922 Fax (206) 872-0918

Service in Puerto Rico

Matsushita Electric of Puerto Rico, Inc. Panasonic Sales Company/ Factory Servicenter Ave. 65 de Intantería, Km. 9.5 San Gabriel Industrial Park Carolina, Puerto Rico 00985 Phone (809) 750-4300 Fax (809) 768-2910

Regional Customer Care Department

EAST (PCE) 1225 Northbrook Parkway Suite 2-390 Suwanee, GA 30174 Phone (770) 338-6860 Fax (770) 338-6548 Covers: AL, FL, GA, MS, NC, SC, TN CENTRAL (PCC) 1707 North Randall Road Elgin, IL 60123 Phone (847) 468-5530 Fax (847) 468-5528

Covers: AR, IL, IN, IA, KS, KY, LA, MI, MN, MO, NE, ND, OK, SD, TX, WI, OH WEST (PCW) 6550 Katella Avenue Cypress, CA 90630 Phone (714) 373-7440 Fax (714) 373-7447

Covers: AK, AZ, CA, CO, ID, MT, NV, NM, OR, UT, WA, WY, HI 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

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PANASONIC Video Products Limited Warranty

Panasonic Consumer Electronics Company or Panasonic Sales Company (collectively referred to as "the Warrantor") will repair this product with new or refurbished parts, free of charge, in the USA or Puerto Rico, in the event of a defect in materials or workmanship as follows (all time periods commence from the date of the original purchase):

PRODUCT	<u>PARTS</u>	
CAMCORDER	ONE (1) YEAR, EXCEPT CCD IMAGE SENSOR CCD IMAGE SENSOR - SIX (6) MONTHS	NINETY (90) DAYS NINETY (90) DAYS
VCR	ONE (1) YEAR	NINETY (90) DAYS
A/V MIXER	ONE (1) YEAR	NINETY (90) DAYS
MONITOR-VCR	ONE (1) YEAR, EXCEPT CRT CRT - TWO (2) YEARS	NINETY (90) DAYS CRT LABOR ONE (1) YEAR SECOND YEAR CUSTOMER PAYS ALL LABOR CHARGES

Monitor-VCR In-home or carry-in Service: 19" (diagonal) CRT / LCD and Larger Monitor-VCR Carry-in Service: 18" (diagonal) CRT / LCD and smaller

Batteries (if included) - New rechargeable batteries in exchange for defective rechargeable batteries for ten (10) days from the date of original purchase. Non-rechargeable batteries are not warranted.

<u>Tape (if includes)</u> - New video cassette tape in exchange for a defective video cassette tape for five (5) days from the date of the original purchase.

In-home, carry-in or mail-in service, as applicable, in the USA can be obtained during the warranty period by contacting a Panasonic Services Company (PASC) Factory Servicenter listed in the Service Directory. Or call 1-800-545-2672, toll free, to locate an authorized PASC Servicenter. Carry-in or mail-in service in Puerto Rico can be obtained during the warranty period by calling the Panasonic Sales Company telephone number listed in the Servicenter Directory.

This warranty is extended only to the original purchaser. A purchase receipt or other proof of the date of the original purchase is requires before warranty service is rendered.

This warranty only covers failures due to defects in materials and workmanship which occur during normal use and does not cover normal maintenance, including, but not limited to, video and audio head cleaning. The warranty does not cover damage which occurs in shipment, or failures which are caused products not supplied by the warrantor, or failures which result from accident, misuse, abuse, neglect, mishandling, misapplication, alteration, modification, faulty installation, set-up adjustments, improper antenna, inadequate signal pickup, maladjustment of consumer controls, improper operation, power line surge, lightning damage, commercial use such as hotel, office, restaurant, or other business or rental use of the product, or serviced by anyone other than a PASC Factory Servicenter or an authorized PASC Servicenter, or damage that is attributable to acts of God.

LIMITS AND EXCLUSIONS

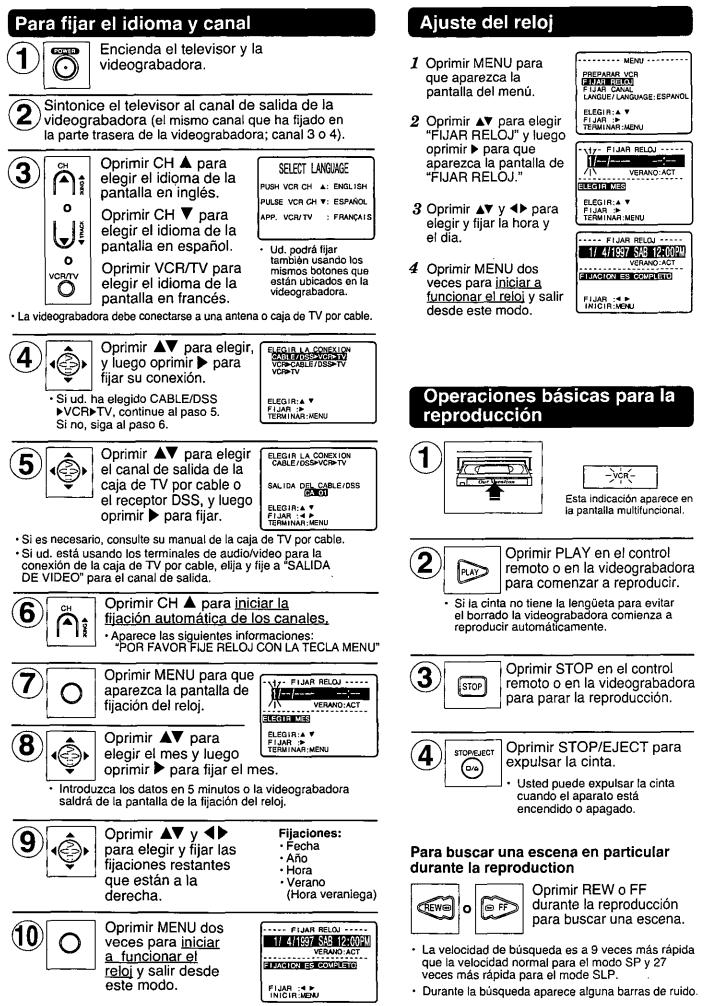
There are no express warranties except as listed above.

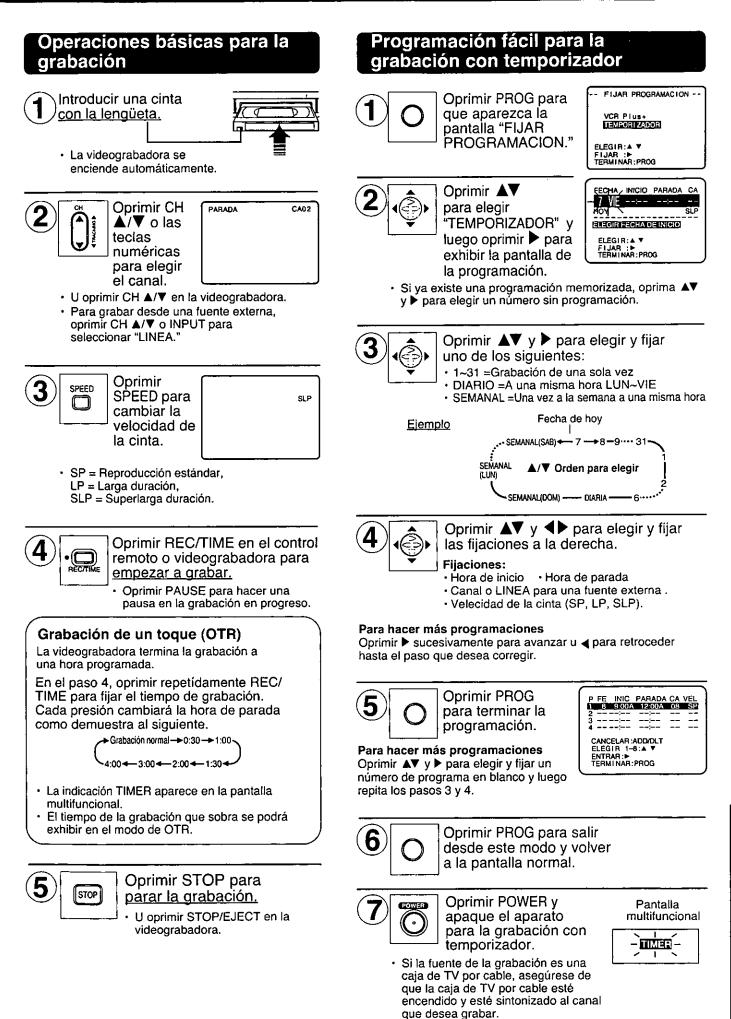
THE WARRANTOR SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING, WITHOUT LIMITATION, DAMAGE TO TAPES) RESULTING FROM THE USE OF THIS PRODUCTS, OR ARISING OUT OF ANY BREACH OF THE WARRANTY. ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, ARE LIMITED TO THE APPLICABLE WARRANTY PERIOD SET FORTH ABOVE. Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

If a problem with this product develops during or after the warranty period, you may contact your dealer or Servicenter. If the problem is not handled to your satisfaction, then write to the Customer Satisfaction Center at the Panasonic Consumer Electronics Company address above.

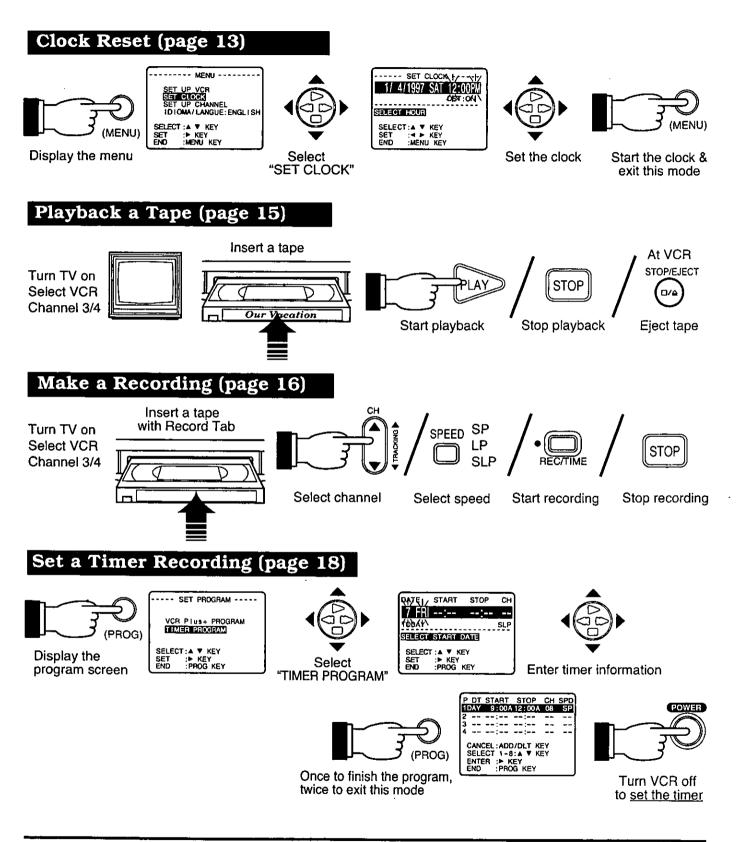
SERVICE CALLS WHICH DO NOT INVOLVE DEFECTIVE MATERIALS OR WORKMANSHIP AS DETERMINED BY THE WARRANTOR. IN ITS SOLE DISCRETION, ARE NOT COVERED. COSTS OF SUCH SERVICE CALLS ARE THE RESPONSIBILITY OF THE PURCHASER. warvid 8/20/96





Quick Use Guide

This guide should only be used once you are familiar with the operations inside this manual. If you have any problems or need more information, please refer to the page listed.



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. ("PSC") Ave. 65 de Infantería. Km. 9.5 San Gabriel Industrial Park, Carolina, Puerto Rico 00985

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