P6 ~ P9
Connections

P10 ~ P18
Getting Started

P19 ~ P23
Basic Operation

P24 ~ P44
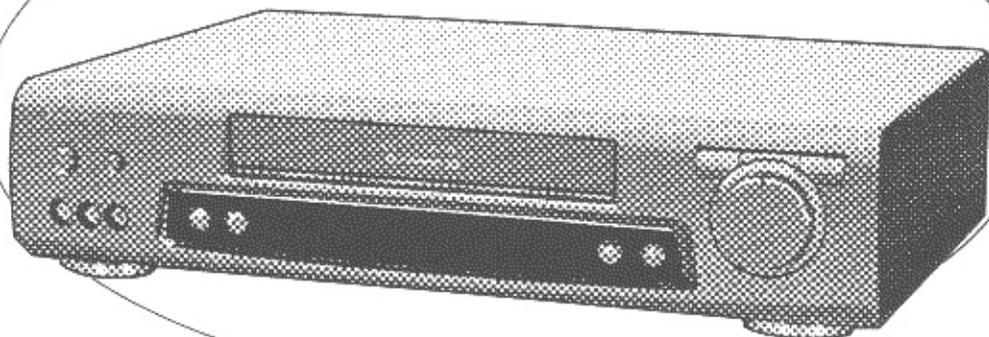More You Can Do

P45 ~ Back Cover
Other Information

Thank you for choosing

Panasonic VHS
Omnivision

Video Cassette Recorder

MODEL PV-8664

Operating
Instructions

ALLSET

VCR *plus+* 3. Cable Box Control
Easy Taping.

VCR *plus+* GOLD

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.)

Quick Use Guide is on the back cover.

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.
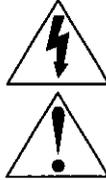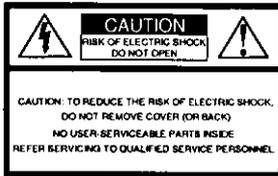
Date of Purchase _____
Dealer Purchased From _____
Dealer Address _____
Dealer Phone No. _____
Model No. _____ PV-8664 _____
Serial No. _____

Safety Precautions

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.

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

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

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.

Table of Contents

⚠️ 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 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
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.
  • 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.
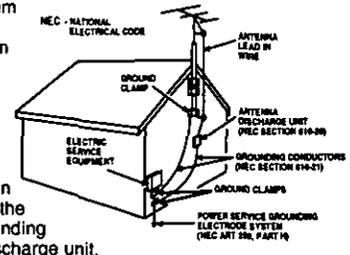
2 KEEP ANTENNA CLEAR OF HIGH VOLTAGE POWER LINES OR CIRCUITS
An outside antenna system should be located well away from power lines,
electric light or power circuits and where it will never come into contact with
these power sources if it should happen to fall. When installing an outside
antenna, extreme 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
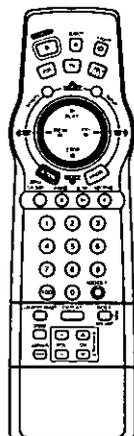After any service or repairs to the unit, request the service technician to
conduct a thorough safety check as described in the manufacture's service
literature to insure that the video unit is in safe operating condition.

Unpacking Your VCR • Product Features

Unpacking Your VCR

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

Accessories

Light Tower™ Universal Remote Control VSQS1577
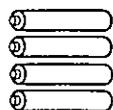
4 "AA" Batteries

RF Coaxial Cable VJAS0196

To order accessories,
call toll free 1-800-211-PANA (7262).

Loading the Batteries

1 Press down on the ▯▸ mark and slide the Battery Compartment lid open.
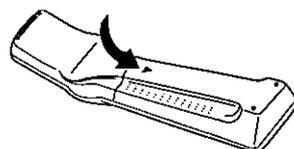
2 Install four batteries as indicated inside the Battery Compartment.
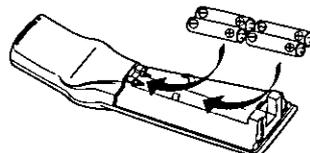
3 Slide the Battery Compartment lid back into place.

Battery replacement caution
• Do not mix old and new batteries.
• Do not mix alkaline with manganese batteries.

Product Features

VCR and Cassette Information

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.

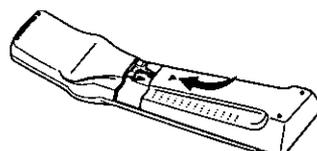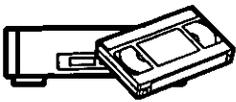**To record again, cover the hole with cellophane tape.**

Maximum 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 (Super Long Play)	3 Hours	6 Hours	8 Hours

Build-in Head Cleaner

A clean video head helps produce a clear picture. So, we have equipped your VCR with a built-in, non chemical head cleaning system that helps prevent clogging of the video heads. Cleaning is performed each time you load or unload a video cassette.
Note: This feature is preventative only. If your video heads are seriously clogged, consider the use of a chemical nonabrasive head cleaning kit or take your VCR to a Service Center.

Head Cleaning

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

Video Heads Sensor System

If head cleaning becomes necessary, the VCR will display the screen shown to the right while playing back a Video Tape. 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. (See page 46.)

* 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) Press and hold both PLAY and CHANNEL ▲ on the VCR for more than 5 seconds.
   • The power will shut off.
3) Perform the One Time VCR Setup section on page 14.

D.S.T. (Daylight Saving Time)

Your VCR can be set to automatically adjust the clock for Daylight Saving Time. (Page 16.)

Spring (First Sunday in April)
When set to DST:ON, the VCR will automatically set the clock ahead one hour.

Autumn (Last Sunday in October)
When set to DST:ON, the VCR will automatically set the clock back one hour.

- If your area does not observe Daylight Saving Time, select DST:OFF.

- Keep these time changes in mind when programming the VCR for timer recordings.

Specifications

Power Source:	120V AC, 60 Hz
Power Consumption:	Approx. 23 watts (Power on)
	Approx. 3.7 watts (Power off)
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 5A (01)
	Ultraband 65~94, 100~125
Operating Temperature:	41°F~104°F (5°C~40°C)
Operating Humidity:	10%~75%
Weight:	7.7 lbs. (3.5 kg)
Dimensions:	16-15/16" (W) x 7-13/16" (H) x 11-13/16" (D)
	430 (W) x 98 (H) x 300 (D) mm

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

5

Basic Connection

ANTENNA
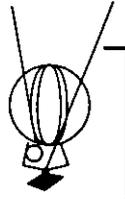
INDOOR
ANTENNA   or   OUTDOOR
                                           ANTENNA   or   Cable TV
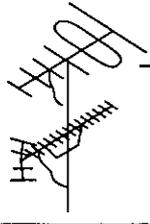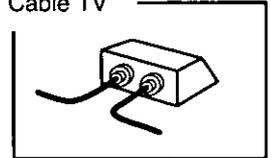
1 Disconnect the antenna or
   cable from your TV and connect
   it to the VCR (IN FROM ANT.)

TV

VCR

IN FROM
ANT.

VHF/UHF

OUT TO TV
3 CH 4

Antenna Cable

VHF/UHF
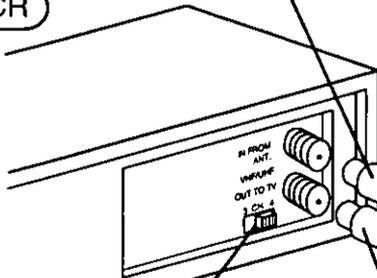
3 Set the Output Channel of your VCR
   to channel 3 or 4 (whichever is not being
   transmitted on by a Local TV broadcast).

RF Coaxial Cable
(VCR-TV Connection Cable) (supplied)
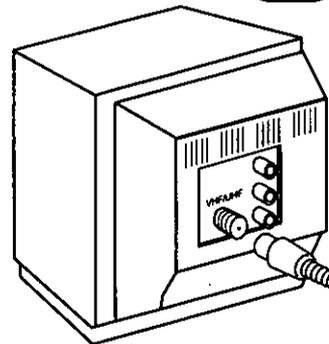
2 Connect the VCR to your TV with
   the RF Coaxial Cable (OUT TO TV).

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

Between Antenna and VCR

Case 1: Twin Lead Cable Only

To VCR Terminal

(Flat) Twin Lead 300 Ohm Cable

300-75 ohm Transformer (not supplied)
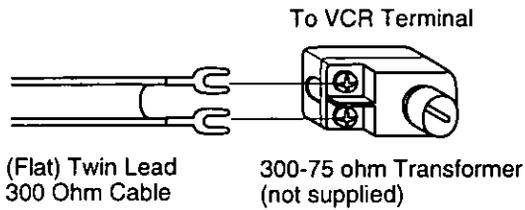
Case 2: Twin Lead & Coaxial Cables

UHF/VHF Band Mixer (not supplied)

(Round) 75 Ohm coaxial Cable

To VCR Terminal
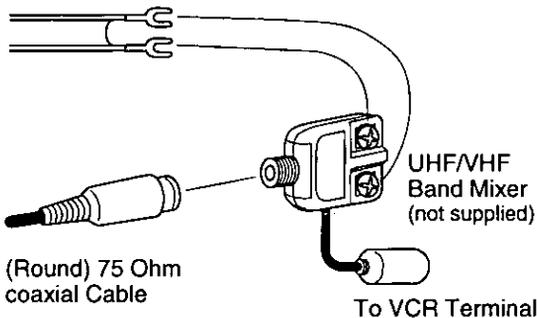
Case 3: Two Twin Lead Cables

UHF/VHF Band Mixer (not supplied)

300-75 ohm Transformer (not supplied)

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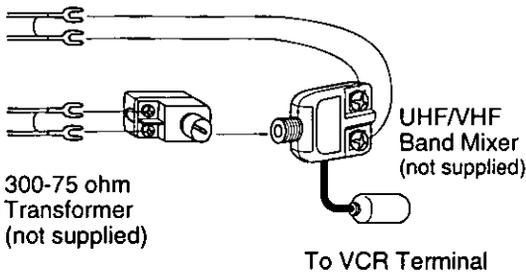
- If your TV has both post and plug-type VHF terminals, the post connection is recommended to minimize signal loss.

Between VCR and TV

Case 1: Screw & Plug Type Terminal

TV

UHF/VHF Band Separator (not supplied)

VHF

UHF

RF Coaxial Cable

Case 2: Screw Type Terminal

TV

75-300 ohm Transformer (not supplied)

VHF

or

UHF
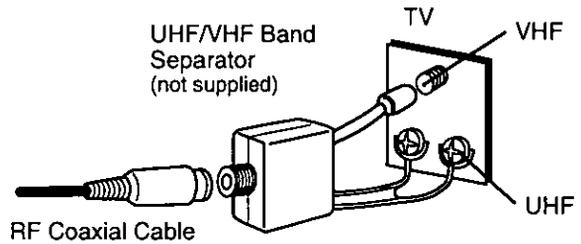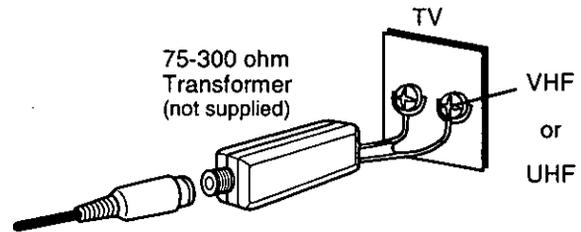
Case 3: Double Screw Type Terminal

TV

UHF/VHF Band Separator (not supplied)

VHF

UHF
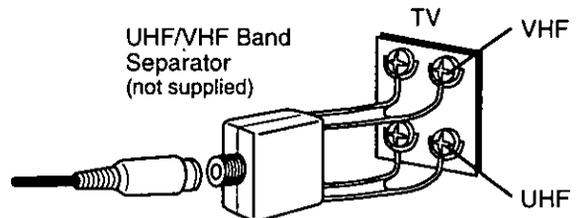
Case 4: Complex TV Terminal

TERMINALS ON BACK OF TV SET

TV

Split out

ANT1

ANT2
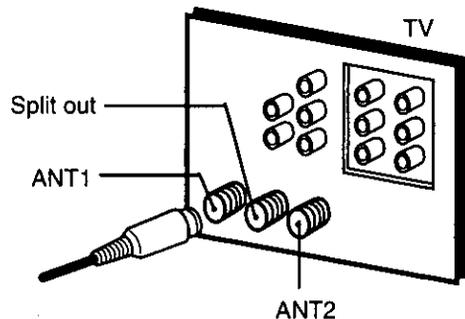
- Connect to one of the ANT terminals and select the same antenna number on the TV.

Other Connections

All connections on these pages 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.
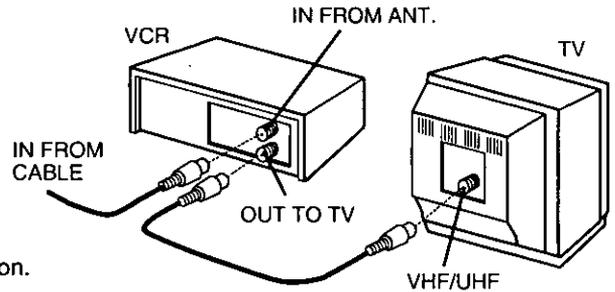
With a (CABLE to VCR) Converter/Descrambler Box

You can:

1) Record and view any channel including scrambled channels; channel selection must be made at the Cable TV Converter Box.

2) Program one channel for unattended recording.

You cannot:
— select channels from VCR or TV.
— watch one station while recording another.
— place channels in memory other than the Cable box output channel.
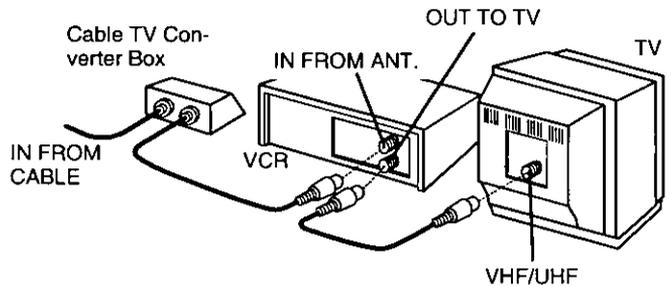
With a (VCR to TV) Converter/Descrambler Box

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.
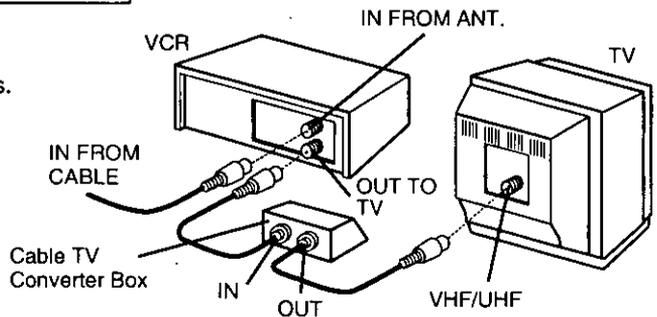
With Two Converter/Descrambler Boxes

If you want to record and view a combination of scrambled and unscrambled channels, you will need additional equipment. This connection requires two converter boxes, an A/B switch, and a 2-way splitter as shown here.
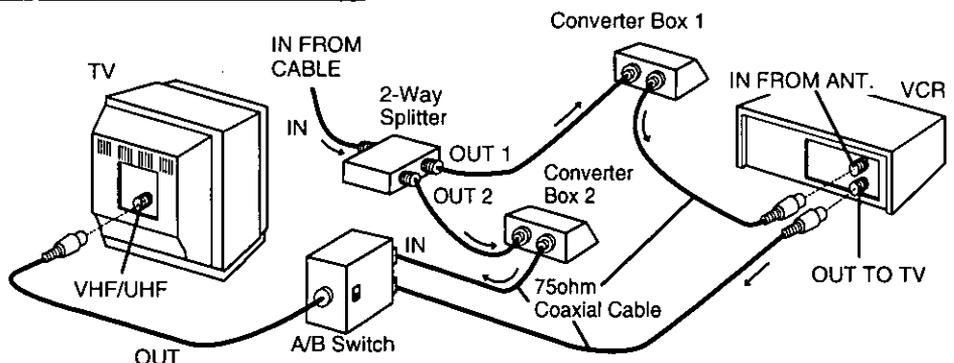
With a DSS Receiver

You can:

1) 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
TV
DSS Receiver
IN FROM ANT.
VCR
VHF/UHF
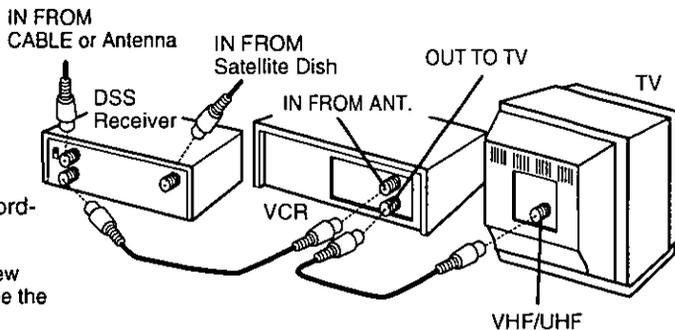
**DSS® is a registered trademark of DIRECTV, INC., a unit of GM Hughed Electronics.

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. If your TV is not stereo, you can connect a stereo amplifier to the VCR to enjoy stereo sound.

Audio/Video Connections

TV
VCR
VIDEO OUT
IN FROM ANT
OUT TO TV
AUDIO IN
R
AUDIO OUT
R L
VHF/UHF
L
VIDEO IN
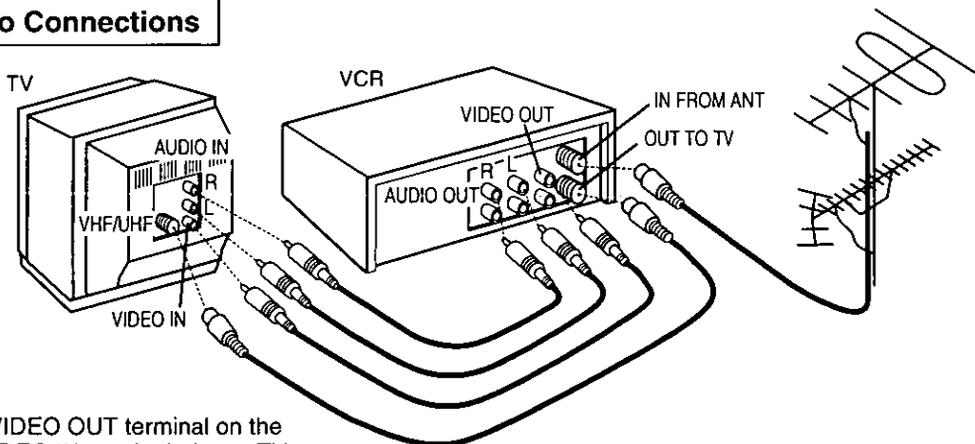
1 Connect the VIDEO OUT terminal on the VCR to the VIDEO IN terminal of your TV.

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."

NOTE: To use your TV as a VCR monitor, set the VIDEO/TV selector on the TV (Monitor/Receiver) to "VIDEO." Use the L Audio In jack for proper sound reproduction when connecting to a monaural TV.

Stereo Amplifier Connections

When you connect your VCR to a Stereo Component System, you can view the picture from the VCR while enjoying stereo from your audio system.

Connect the "L" and "R" AUDIO OUT terminals on the VCR to the "L" and "R" AUDIO IN terminals of your stereo.

VCR
Stereo Amplifier
AUDIO OUT
R L
AUDIO IN
R L
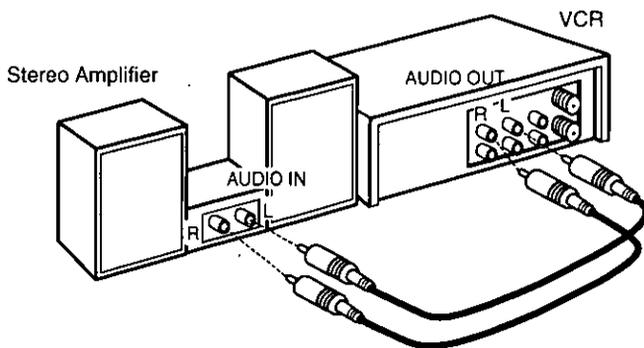
Note to CABLE system installer:

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.

Location of Controls

EJECT
See pages 19, 43.

POWER
See pages 14, 22, 23, 41, 42.

VCR
See pages 42, 43.

VCR/TV
See pages 14, 21, 43.

PLAY
See pages 19, 25, 27, 29, 43.

SELECT UP
See pages 14~18, 22~25, 27~29, 31~35, 37~41.

REWIND/ SEARCH
See pages 19, 28, 29, 43.

SET/BACKSPACE
See pages 16, 17, 22, 23, 32, 33, 39~41.

ACTION
See pages 15~18, 24, 25, 31~35, 37~39.

ZERO SEARCH/ COMMERCIAL ADVANCE
See pages 25, 30, 43.

PAUSE
See pages 19, 20, 44.

NUMBERED KEYS
See pages 17, 20, 24, 28, 41~43.

COUNTER RESET
See pages 30, 43.

SPEED
See pages 20, 43.

SAP/Hi-Fi
See pages 37, 43.

TV
See pages 42, 43.

LIGHT
See page 10.

CABLE/DSS
See pages 42, 43.

INPUT
See pages 20, 21.

FAST FORWARD/SEARCH
See pages 19, 25, 28, 29, 43.

SET
See pages 14~18, 22~25, 27~29, 31~35, 37~41.

STOP
See pages 19, 20, 23, 27, 29.

SELECT DOWN
See pages 14~18, 22~25, 27~29, 31~35, 37~41.

PROGRAM
See pages 22, 23, 41.

RECORD/TIME
See pages 20, 43.

SLOW
See pages 19, 43.

ADD/DELETE
See pages 17, 23, 32, 33, 39~41.

INDEX/ENTER/MOVIE ADVANCE
See pages 27~29, 42, 43.

DISPLAY
See pages 18, 20, 30, 36, 43.

CHANNEL UP/DOWN
(TRACKING UP/DOWN)
See pages 14~17, 19~21, 43.

VOLUME UP/DOWN
See page 43

Light Tower Universal Remote Control

Light button: When the LIGHT button is pressed, the buttons which can be activated in the selected mode will light and the selected mode button (TV/VCR or CABLE DSS) will flash for 5 seconds. If no buttons are pressed within 5 seconds, the light will turn off in order to converse battery power. Also, while holding down the buttons, the selected mode button will flash so you will be able to see, in the dark, which mode has been selected.

EJECT button: When EJECT is pressed, the tape is ejected from Cassette Compartment.
If EJECT is pressed during recording, the VCR will not respond to the command.

CHANNEL UP/DOWN
TRACKING/V-LOCK
See pages 14, 19~21.

VCR/TV Selector
See pages
14, 21, 44.

Cassette Compartment
See pages 19, 20, 27, 44.

STOP
See pages
19, 23, 27, 29, 44.

PLAY
See pages
19, 25, 27, 29, 44.

POWER
See pages
14, 22, 23, 41.

SHUTTLE Ring
(For Fast Forward
or Rewind Search)
See pages
19, 25, 28~30.

VIDEO Input
Connecter
See page 44.

AUDIO Input
Connecter
See page 44.

Multi Function Display
See pages 11, 20~23, 41, 44.

REMOTE
SENSOR

EJECT
See page 19.

RECORD/TIME
See pages
20, 35, 44.

10

Multi Function Display

Cassette-In Indicator
Lights when a tape is in the VCR.

REC(ord) Indicator
Lights during recording.

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

SPEED Display
Displays the recording speed.

SAP Indicator
Lights when the station you are tuned to is broadcasting SAP.

Power Indicator
Lights when power is on.

STEREO Indicator
Lights when the station you are tuned to is broadcasting stereo.

Hi-Fi Indicator
Lights when Hi-Fi audio is monitored or played back.

Clock/Status/Channel 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.
Displays the tape counter during tape operation.

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

Function Indicator
Shows what the VCR is doing.

REC and ▶	Record
REC and ‖	Record-pause
▶	Playback
	Slow motion or Frame advance
‖	Play-pause
◀ Flashing	Rewind or Rewind search
▶ Flashing	Fast forward or Forward search
‖ Flashing	Cassette ejecting

Rear View of the VCR

AC Power Plug
While plugged into an AC outlet, the VCR consumes 3.7 W of electrical power in OFF condition.

Audio Output Connector (L/R)
See pages 9, 36, 44.

Video Output Connector
See pages 9, 36, 44.

VHF/UHF Antenna Input Terminal
See pages 6~9, 12, 36.

VHF/UHF Antenna Output Terminal
See pages 6~9, 12, 36, 44.

Audio Input Connector (L/R)
See pages 12, 44.

Video Input Connector
See pages 12, 44.

Channel 3/4 Switch
See pages 6, 14.

11

One Time VCR Setup

The setup on pages 14 through 16 is vital for proper VCR operation. Please read the instructions carefully and in the order presented.

NOTE: These first two pages contain reference material needed for setup on pages 14 ~16. Please look over the information before you begin setup procedure.

Setup Overview

You will be performing the following tasks:

- Setting the language you want on-screen displays to appear in (English, Spanish, French).
- Telling the VCR what kind of equipment you are using to receive channels and how it is connected.
- Entering pertinent cable box or DSS receiver information if used.
- Entering a local PBS channel so that the VCR can receive auto clock set data. (Not available in all areas.)
- Placing channels in memory and setting the clock.

Please Note Which Connection Type You are Using.

Make sure all equipment is hooked up as described on pages 6~9.
The diagrams below illustrate some of the basic connection types.
Confirm which type you used for later reference.

Connection Type A

<CABLE BOX → VCR → TV>
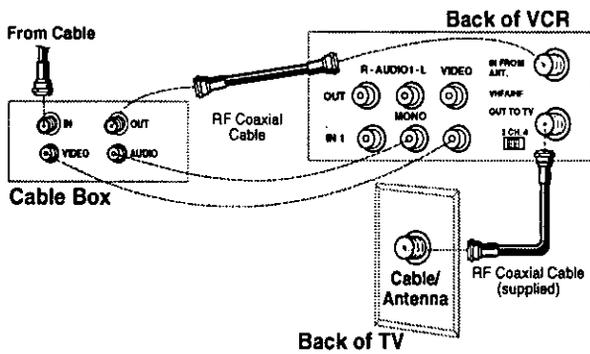
Or, <ANT/CABLE BOX → DSS BOX → VCR → TV>
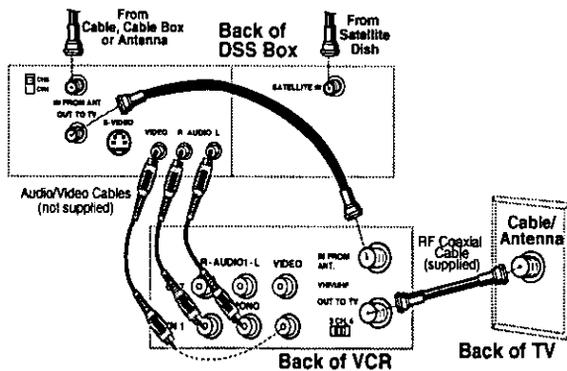
Connection Type B

<VCR → TV>
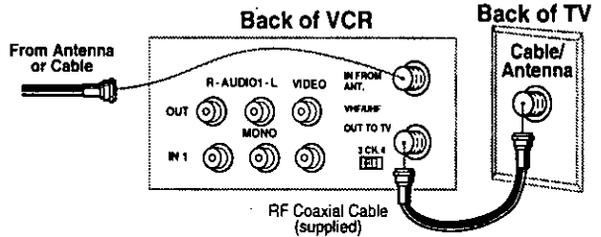
Or, <VCR → CABLE BOX → TV>
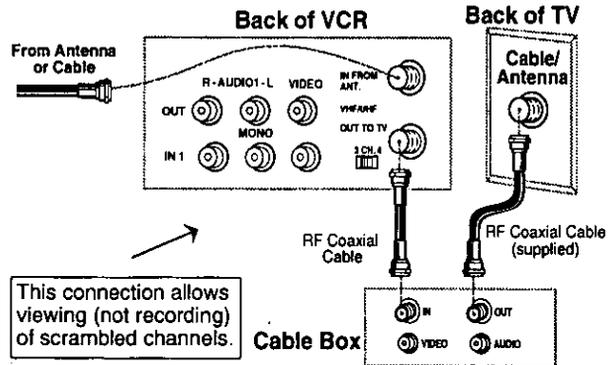
This connection allows viewing (not recording) of scrambled channels.

ONE TIME SETUP IMPORTANT NOTES:

- For detailed DSS receiver connection instruction, please see your DSS operating manual.
- The DSS receiver must be turned off to view programs from the cable box or antenna.
- If you use a DSS receiver, it must be turned off for auto clock set.
- If your cable box is not remote controllable, it must be tuned to your PBS channel.
- If you use Audio/Video Jack connection between the VCR and cable box or DSS receiver, you must also connect the RF coaxial cable in order to use the auto clock set and channel auto set features.

12

Cable Box/ DSS Receiver Code Number List

If your cable box or DSS receiver is remote controllable, refer to this list during setup on page 14.

Cable Box

Brand	Code Numbers
Archer	01, 05, 06, 44, 63
Cabletenna	01, 44, 63
Cableview	04, 30, 42, 44, 52, 63
Century	44, 51, 59, 75
Citizen	04, 30, 42, 44, 52, 63
Components	32, 39, 42, 44
Curtis	08, 09, 53, 61
Diamond	01, 44, 63
Eagle	13, 20, 22, 26, 40, 58, 62
Eastern	28
GC Brand	04, 30, 42, 44, 52, 63
Gemini	04
General Electric	01, 57
General Instruments	01, 02, 03, 04, 34, 55, 83, 65, 67, 68
Hamlin	14, 15, 28, 41, 102, 103, 104
Hitachi	31, 79
Jasco	04
Jerrold	01, 02, 03, 04, 34, 55, 83, 65, 67, 68
Macom	31
Magnavox	26
Matsushita	16, 17
Movietime	32, 39, 42, 44
NEC	32, 38, 40
Novavision	08, 09, 53, 61
NSC	32, 38, 40
Oak	11, 46, 101
Oak Sigma	11, 46, 101
Panasonic	16, 17
Philips	07, 13, 20, 23, 24, 50
Pioneer	05, 06
Pulsar	04, 30, 42, 44, 52, 63
Quest	05, 06
Radio SHACK, RECOTON	44, 51, 59, 75
RCA	16, 17
Realistic	44, 51, 59, 75

Brand	Code Numbers
Regal	14, 15, 28, 41, 102, 103, 104
Regency	28
Rembrandt	01, 29, 32, 39, 42, 44, 63
Samsung	05, 06, 32, 40, 42
Scientific Atlantic	08, 09, 61, 53
Sheritech	27
Signal	26
SL Marx	06, 32, 40, 42, 43, 44, 52, 63
Spucer	16, 17
Standard	32, 39, 42, 44
Stargate	04, 06, 30, 32, 40, 42, 44, 52, 63
Sylvania	19
Telecaption	77
Teknika	74
Teleview	06, 32, 40, 42
Texscan	18, 19
Tocom	01, 33, 34, 42, 66
Toshiba	36
Unika	01, 44, 63
Universal	42, 43, 44, 52, 63
Viewstar	13, 20, 22, 26, 40, 58, 62
Vid Tech	64
Vidtek	36, 64
Videoway	07, 23, 50
Zenith	07, 23, 50

DSS (Digital Satellite System Receiver)

Hitachi	93
Hughes	93
Magnavox 1/ Uniden 1	94
Magnavox 2/ Uniden 2	95
Panasonic	96
RCA	97
Sony	98, 105
Toshiba	92

Note: During setup you will be instructed to enter your brand code number. As some brands have multiple codes, it may be necessary to try different codes to attain the proper results.
These codes are for Cable box or DSS Box setup for Auto Clock and VCR Plus+ recording only.
For TV/Cable Box Multi-Brand Control operation, please see page 42.

Positioning Your Cable Box or DSS Receiver

If your cable box or DSS receiver is remote controllable, place it on or near the VCR as shown in the example below. The VCR transmits an infrared signal from two locations. Be sure not to cover the transmitter windows.
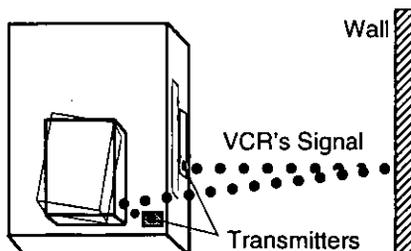
Wall

VCR's Signal

Transmitters

One Time VCR Setup

When the VCR is turned on for the first time, it automatically enters the setup mode.
Setup includes the following:
- Choose the language for on-screen menus and messages.
- Tell the VCR how your equipment is hooked up (pages 6~9) so the VCR can correctly place channels into memory.
- Get the VCR ready for clock set.

1 **10·11**

Back of VCR

3   **2**

1

3

ACTION

4
↕
9

3
10
11

Using ▲▼◄► keys

When a menu screen is displayed, the PLAY, STOP, REWIND, and FF buttons on the remote control function as ▲▼◄► only. Use the buttons on the VCR for play, stop, rewind, and fast forward functions. When a program screen is displayed, the REC, FF, REW, and PLAY buttons on the remote control and the VCR function as ▲▼◄► only. (See Timer Recording Using VCR Buttons on page 23.)

To Set the Language, Cable/DSS Receiver, Channels and Auto Clock

1 Turn the TV and VCR on.*

2 Tune your TV to the VCR output channel (the same one you set on the back of the VCR: CH3 or CH4).
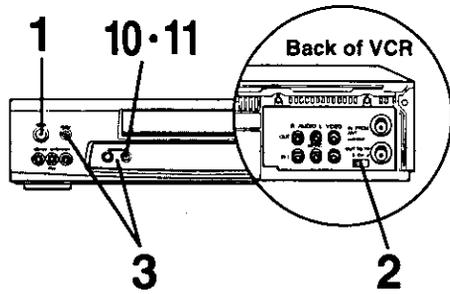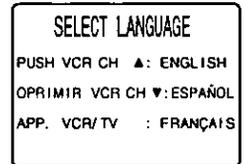- If you used audio/video jack connection, tune the TV to its video input.

3 Press CH ▲ for English on-screen displays.

Or, **press CH ▼ for Spanish** on-screen displays.

Or, **press VCR/TV for French** on-screen displays.

```
SELECT LANGUAGE
PUSH VCR CH  ▲: ENGLISH
OPRIMIR VCR CH ▼:ESPAÑOL
APP. VCR/TV   : FRANÇAIS
```

- You can also set the language using the buttons on the VCR.
- **If the wrong language is set,** see the "Reset all VCR Memory Functions" section on page 5.
- The VCR should be connected to an antenna or cable box (page 6~9).

4 Press ▲▼ to select your hookup, and then press ► to set.

```
SELECT HOOKUP
CABLE/DSS BOX▶VCR▶TV
VCR▶CABLE/DSS BOX▶TV
VCR▶TV


SELECT:▲ ▼ KEY
SET   :▶ KEY
END   :ACTION KEY
```

- If you selected "CABLE/DSS BOX ►VCR ►TV," continue with step 5. If not, go to "Alternate Instructions on page 16.
- If you are using the CABLE/DSS BOX► VCR►TV connection method, only the cable box output channel will be placed in memory.
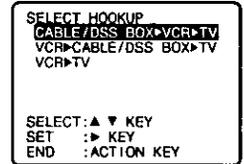
5 Press ▲▼ to select your cable box or DSS receiver output channel number, and then press ► to enter.

```
SELECT HOOKUP
CABLE/DSS BOX▶VCR▶TV

CABLE/DSS BOX OUTPUT CH
CH 01

SELECT:▲ ▼ KEY
SET   :◄ ► KEY
END   :ACTION KEY
```

- If necessary, refer to your cable box manual.
- If both a cable box and DSS receiver are used, set the output channel of the DSS receiver.
- If you are using Audio/Video jack connections to your cable box, select and set "VIDEO OUT" as the output channel.

6 Press ▲▼ to select your cable box or DSS receiver code number, and then press ► to enter. (Refer to the list on page 13.)

```
ENTER CODE NUMBER
REFERRING TO MANUAL

01

SELECT:▲ ▼ KEY
SET   :► KEY
END   :ACTION KEY
```

- If your cable box or DSS receiver doesn't have a remote control, select "NO REMOTE." Then, go to Alternate Instructions on page 16.
- This determines whether the VCR will control your cable box or DSS receiver.

If you use a cable box,
tune it to channel 02.
If you use a DSS receiver,
tune it to channel 270.

If Cable Box

```
PLEASE TUNE YOUR CABLE
BOX TO CH02.
```

If DSS Receiver

```
PR
EN
PLEASE TUNE YOUR DSS
RECEIVER TO CH 270.

PROCEED:▶ KEY
END    :ACTION KEY
```

7 Press ▶ to continue.
• "NOW TRANSMITTING" appears.

---

8 Press ▲▼ to select
"YES" or "NO," **and then
press ▶ to enter.**

If you use a cable box and
selected "YES," go to step 9.

If you use a DSS receiver
and selected "YES," go to
"Alternate Instructions"
on page 16.

If you selected "NO," the screen
in step 6 on page 14 will reappear.
Try entering a different code
assigned to your brand and/ or
repositioning the equipment (see page 13).
If the answer is still "NO," cable box or DSS receiver
control is not available.
For channel and clock auto set, press ACTION to display
the "SET UP CHANNEL" screen. Then, press ▲▼ to select
"AUTO SET." Now, press ▶ and CH ▲ to start the auto set.

If Cable Box

```
IS YOUR CABLE BOX
RECEIVING CH 09 ?
        YES
        NO

SELEC
SET
EI
```

If DSS Receiver

```
IS YOUR DSS RECEIVER
RECEIVING CH 200?
        YES
        NO
SELECT:▲▼ KEY
SET    :▶ KEY
END    :ACTION KEY
```

Confirm that your cable box is on
and that your DSS receiver is off.

9 Press ▲▼ to select your
local PBS channel number
you receive on your cable
box, **and then press ▶** to
display the "CLOCK AUTO
SET" screen.

```
PLEASE ENTER YOUR LOCAL
PBS CHANNEL ON CABLE BOX
        CH 01

SELECT:▲▼ KEY
SET    :▶ KEY
END    :ACTION KEY
```

---

10 Press CH ▲ to start Auto
Clock Set.
• If you live near a different time
zone, be sure to enter the PBS
channel in your time zone.
• "AUTO CLOCK SET
PROCEEDING" appears.

```
CLOCK AUTO SET

CONNECT ANTENNA CABLE
AND IF YOU USE A CABLE
BOX,TUNE IT TO YOUR
LOCAL PBS CH   THEN...

PLEASE PUSH CH UP KEY
```

---

11 This display appears when
auto clock set is completed.

Confirm that the time is
correct and **press CH ▲**
to exit.

```
1/ 4/2000 TUE 12:00PM
              DST:ON
SETTING : CH 02

AUTO CLOCK SET

COMPLETED

END : PUSH CH UP KEY
```

If the Auto Clock Set displayed time is incorrect...

If you use a cable box and receive
more than one PBS station, try auto
clock set again.
Follow the "To Set or Reset the Clock"
section on page 17 and when the
instructions call for you to enter a PBS
station, enter the one you have not
tried yet.

If "AUTO CLOCK SET IS INCOMPLETE" appears...

The screen below will appear on-
screen if auto clock set data is not
available in your area.

```
AUTO CLOCK SET

IS INCOMPLETE

PUSH ACTION TO SET CLOCK
```

Press ACTION to display the "SET
CLOCK" (manual) screen, and
then do steps B and C on page 16.

Note:
If you use a cable box and receive
more than one PBS station, you may
exit the manual clock set screen and
try auto clock set again.
Follow the "To Set or Reset the Clock"
section on page 17 and when the
instructions call for you to enter a PBS
station, enter the one you have not
tried yet.

NOTE • Auto clock set will be performed when the VCR is turned off the first time each day. If you use a cable box
and you want auto clock set to be performed, the cable box must be left on and tuned to the PBS channel
before the VCR power is turned off.

15

One Time VCR Setup

*Important: If the remote control POWER, ACTION, PROG, CH▲/▼, INDEX/ M/A SKIP or ADD/DLT button does not work when pressed, press the VCR button on the remote and try the button again.
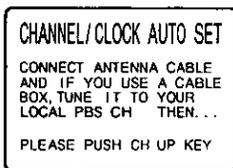
Alternate Instructions

Complete the following steps if, any of the following applies:

- You selected connection type B (VCR▶CABLE/ DSS BOX▶TV or VCR▶TV) in step 4 on page 14.
- You selected "NO REMOTE" in step 6 on page 14 (your cable box or DSS receiver is not remote controllable).
- You use a DSS receiver and selected "YES" in step 8 on page 15.

1 The screen at the right appears.

- If you use a DSS receiver, it must be turned off.

```
CHANNEL/CLOCK AUTO SET

CONNECT ANTENNA CABLE
AND  IF YOU USE A CABLE
BOX, TUNE  IT TO YOUR
LOCAL PBS CH    THEN...

PLEASE PUSH CH UP KEY
```

2 Press CH ▲* to start Channel Auto Set and Auto Clock Set.

- The following messages appear.
  "CH AUTO SET PROCEEDING"
  "AUTO CLOCK SET PROCEEDING"

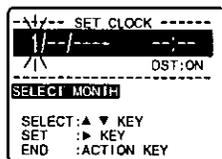This screen appears to confirm that auto clock set is completed.

3 Confirm that the time is correct and press CH ▲ to exit.

```
1/ 4/2000 TUE 12:00PM
               DST:ON
SETTING : CH 02

  AUTO CLOCK SET

  COMPLETED

END  : PUSH CH UP KEY
```

If this screen appears, auto clock set is not available in your area. Please set the clock manually as described below.

```
  AUTO CLOCK SET

  IS INCOMPLETE

PUSH ACTION TO SET CLOCK
```
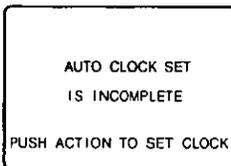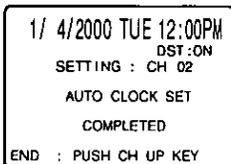
A Press ACTION to display the SET CLOCK screen.

B Press ▲▼ and ◀▶ to select and set the month, date, year, time, and DST. (Daylight Saving Time).

```
--\|/-- SET CLOCK ------
1/--/----       --:--
/|\            DST:ON
----------------------
SELECT MONTH
SELECT:▲ ▼ KEY
SET  :▶ KEY
END   :ACTION KEY
```

To Make Corrections,
repeatedly press ◀▶ to move the cursor to the incorrect entry and make the correction.

C Press ACTION twice to start the clock and exit this mode.

```
------ SET CLOCK ------
1/ 4/2000 TUE 12:00PM
               DST:ON
----------------------
SET COMPLETED

SET  :◀ ▶ KEY
START :ACTION KEY
```


STOP
ACTION
A
C
c
100 key

SELECT/SET (▲▼◀▶) keys
B
d
e
NUMBERED keys
ADD/ DELETE
CHANNEL UP
2
3
a

If the displayed time and DST. are not correct...

If you happen to live close to two time zones, the VCR may have recognized the PBS channel (setting channel) in the wrong time zone. Please do the following to correct the situation.

a Make a note of the SETTING:CH number shown on screen and press CH ▲ to exit.

b Delete the setting channel from the VCR channel memory. (See the "To Add or Delete a Channel" section on page 17.)

c Press ACTION to display the menu.

d Press ▲▼ to select "SET CLOCK," and then press ▶ to display the "SET CLOCK" screen.

e Press ▲▼ and ▶ to select and set "AUTO CLOCK SET."

f Follow the One Time VCR Setup instructions on pages 14~16.

- If you use a cable box and have multiple PBS stations, tune the cable box to a different PBS station and try auto clock set using the menu.

To Change On-Screen Display Language

1 Press ACTION to display the menu.

2 Press ▲▼ to select the language.
English: LANGUAGE
Spanish: IDIOMA
French: LANGUE

```
-------- MENU --------
    SET UP VCR
    SET UP FEATURE
    SET CLOCK
    SET UP CHANNEL
    IDIOMA/LANGUE ENGLISH
SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```

3 Press ► repeatedly to change the language.

```
--------.MENU ---     -------- MENU ---      -------- MENU --------
  SET UP VCR            PREPARAR VCR            REGLAGE MAGNETOSCOPE
  SET UP FEATURE        FIJACION DE FUNCION     REGLAGE MAGNETO SUPPLEM
  SET CLOCK             FIJAR RELOJ             REGLAGE HORLOGE
  SET UP CHANNEL        FIJAR CANAL             REGLAGE CANAL
  IDIOMA/LANGUE EN      LANGUE/LANGUAGE ES      LANGUAGE/IDIOMA FRANÇAIS
SELECT:▲ ▼ KEY          ELEGIR:▲ ▼              SEL.    :▲ ▼
SET    :► KEY           FIJAR :►                REGLER:►
END    :ACTION KEY      TERMINAR:ACTION         FIN    :ACTION
```

4 Press ACTION to exit this mode.

To Add or Delete a Channel

1 Select a channel using the NUMBERED keys to add or CH ▲/ ▼ to delete.

```
CHANNEL 08 ADDED
```

2 Press ADD/DLT to add or delete the channel.
• To select a channel once it's deleted, use the NUMBERED keys on the remote control.

```
CHANNEL 08 DELETED
```

To Set or Reset the Clock
In case the clock is wrong, or a power failure occurred.

1 Press ACTION to display the menu.

2 Press ▲▼ to select "SET CLOCK," and then press ► to display the "SET CLOCK" screen.

```
-------- MENU --------
    SET UP VCR
    SET UP FEATURE
    SET CLOCK
    SET UP CHANNEL
    IDIOMA/LANGUE:ENGLISH
------ SET CLOCK ------


    AUTO CLOCK SET
    MANUAL

SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```
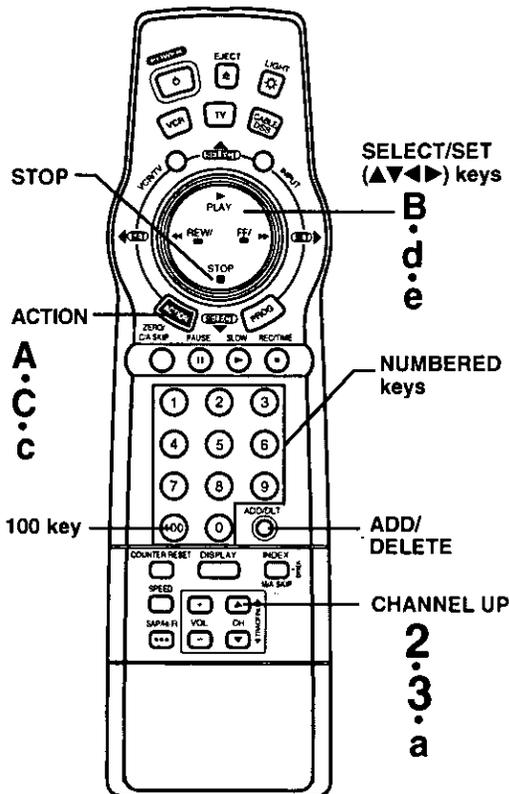
3 Press ▲▼ to select "MANUAL," and then press ► to display the SET CLOCK screen.

4 Press ▲▼ and ◄► to select and set the date, time and DST. (Daylight Saving Time).

```
------ SET CLOCK ---------
 1/ 4/2000 TUE 12:00PM
                  DST:ON
---------------------------
SELECT HOUR
SELECT:▲ ▼ KEY
SET    :◄ ► KEY
END    :ACTION KEY
```

5 Press ACTION twice to start the clock and exit this mode.

• For Auto Clock Set, select "AUTO CLOCK SET," and then follow the One Time VCR Setup instructions on pages 14~16.

To Replace Channels in Memory
In case you have cable installed, etc.

1 Press ACTION to display the menu.

2 Press ▲▼ to select "SET UP CHANNEL," and then press ► to display the "SET UP CHANNEL" screen.

```
-------- MENU --------
    SET UP VCR
    SET UP FEATURE
    SET CLOCK
    SET UP CHANNEL
    IDIOMA/LANGUE:ENGLISH
SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```

3 Press ▲▼ to select "ANTENNA," and then press ► to set your antenna system (TV or CABLE).

```
---- SET UP CHANNEL ----
 ANTENNA : CABLE
 AUTO SET
 CHANNEL CAPTION
 CABLE/DSS BOX SET UP
 VCR Plus+ CH SET UP
SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```

4 Press ▲▼ to select "AUTO SET," and then press ► to display the "CHANNEL/ CLOCK AUTO SET" screen.

5 Follow the One Time VCR Setup instructions on page 14~16.
• Clock Auto Set will be performed when channels are replaced in memory.

```
CHANNEL/CLOCK AUTO SET

CONNECT ANTENNA CABLE
AND IF YOU USE A CABLE
BOX, TUNE IT TO YOUR
LOCAL PBS CH   THEN...

PLEASE PUSH CH UP KEY
```

To cancel, press STOP when "AUTO CLOCK SET PROCEEDING" appears on-screen.

To Setup the VCR in Case a Cable Box or DSS Receiver was Installed or Replaced

1 Press ACTION to display the menu.

2 Press ▲▼ to select "SET UP CHANNEL," and then press ► to display the "SET UP CHANNEL" screen.

```
-------- MENU --------
    SET UP VCR
    SET UP FEATURE
    SET CLOCK
    SET UP CHANNEL
    IDIOMA/LANGUE:ENGLISH
SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```

3 Press ▲▼ to select "CABLE/ DSS BOX SET UP," and then press ► to display the "SELECT HOOKUP" screen.
• To exit this mode, press ACTION three times.

```
---- SET UP CHANNEL ----
 ANTENNA : CABLE
 AUTO SET
 CHANNEL CAPTION
 CABLE/DSS BOX SET UP
 VCR Plus+ CH SET UP
SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```

4 Press ▲▼ and ► to select and set "CABLE/DSS BOX ► VCR ► TV," and then continue with steps 5~8 on pages 14, 15.

```
SELECT HOOKUP
 CABLE/DSS BOX►VCR►TV
 VCR►CABLE/DSS BOX►TV
 VCR►TV

SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```

If these steps are completed, the "SET UP CHANNEL" screen will appear.

When Using the 100 key

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

NOTES
• This VCR will accurately maintain its calendar up to Dec. 31, 2096, 11:59PM.
• Normal TV or Cable channels are automatically selected and placed in memory depending on how your VCR is hooked up.
• If you change your Cable Box or DSS Receiver, please perform the "To Set or Auto Clock Set" section above.
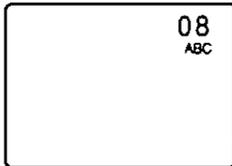
Getting Started

*Important: If the remote control POWER, ACTION, PROG, CHA/▼, INDEX/ M/A SKIP or ADD/DLT button does not work when pressed, press the VCR button on the remote and try the button again.
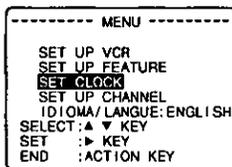
Function & Channel Display

When a function button is pressed, e.g. PLAY, or you change channels, a 4 second display appears first in large and then small characters. (Some Station names may also appear if Channel Caption is set. See pages 32, 33.)
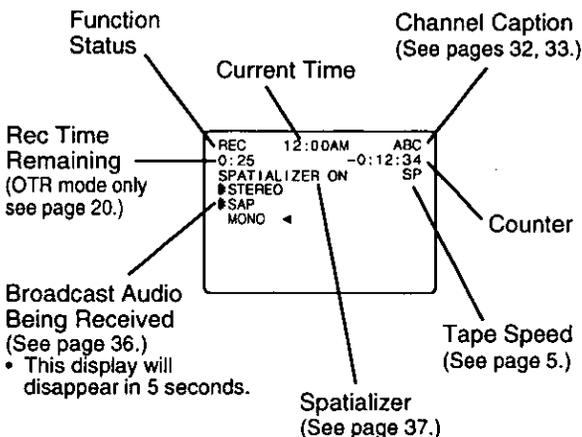
```
                    08
                    ABC
```

Menu Screen

1 Press ACTION* to display the menu.

2 Press ▲▼ and ► to make your selection.

```
-------- MENU --------
SET UP VCR
SET UP FEATURE
SET UP CLOCK
SET UP CHANNEL
     IDIOMA/LANGUE:ENGLISH
SELECT :▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```

- To get the most from each feature, please read the Operating Manual before attempting any operation.

VCR Status & Clock Display

Press DISPLAY to display or remove the overlay shown below.

Function Status

Current Time

Channel Caption (See pages 32, 33.)

Rec Time Remaining (OTR mode only see page 20.)

```
REC    12:00AM    ABC
-0:25        -0:12:34
SPATIALIZER ON     SP
►STEREO
►SAP
 MONO  ◄
```

Counter

Broadcast Audio Being Received (See page 36.)
• This display will disappear in 5 seconds.

Tape Speed (See page 5.)

Spatializer (See page 37.)

Blank Tape/ No Video Signal Indication

Whenever a blank section of a tape comes up in Play mode, or when the selected channel has no broadcast signal with the Blue Back ON/OFF Feature (page 34) set to ON, the TV screen will turn solid blue.
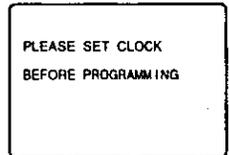
Warning and Instruction Displays

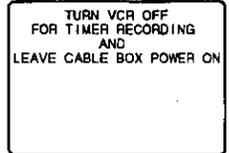These displays will alert you of a missed operation or provide further instructions.

If no active channels are found for CHANNEL MEMORY... (See page 16.)

```
NO CH FOUND
PLEASE CHECK ANTENNA
CABLE CONNECTION THEN
PUSH VCR CH UP KEY AGAIN
```
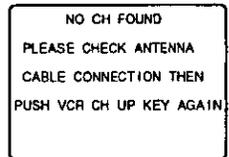
If you attempt to set or review a Timer Recording and the Clock is not set... (See page 22.)

```
PLEASE SET CLOCK
BEFORE PROGRAMMING
```

After a Timer Program has been set... (See page 22.)

```
TURN VCR OFF
FOR TIMER RECORDING
       AND
LEAVE CABLE BOX POWER ON
```

If you press REC on the remote control or VCR, and a cassette is inserted with no record tab... (See page 20.)

```
CHECK CASSETTE
RECORD TAB
```
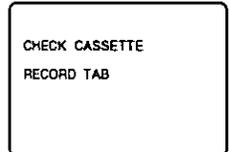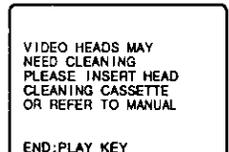
If you press PLAY, FF, REW, or REC on the remote control or VCR without a cassette inserted... (See pages 19, 20.)

```
NO CASSETTE
PLEASE INSERT A CASSETTE
```
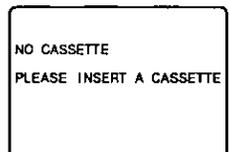
If you press POWER or STOP during a Timer Recording... (visible in VCR mode only) (See page 23.)

```
TO CANCEL TIMER REC
PUSH POWER THEN STOP KEY
```

If head cleaning becomes necessary while playing back a tape... (See page 5.)

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

END:PLAY KEY
```

If you press a function button other than STOP/EJECT or POWER on the VCR, or STOP or EJECT or POWER on the remote control while the VCR is in VCR Lock mode... (See page 35.)

```
VCR LOCK ACTIVATED
```
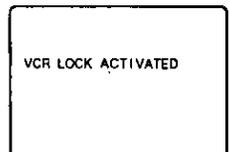
If you press POWER, ACTION or PROG on the remote while in TV or CABLE/DSS mode... (See pages 42, 43.)
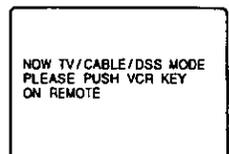
```
NOW TV/CABLE/DSS MODE
PLEASE PUSH VCR KEY
ON REMOTE
```

☑ Check list before you begin.

☐ All connections are made.
(See pages 6~9.)
☐ TV and VCR are plugged in.
☐ TV is turned on and set to the VCR channel (CH 3 or 4).

TRACKING/
V-LOCK **1 4 3 2**

Multi Function Display

FF/REW
Search

2 —
PLAY

FF/REW
Search

4

3

PAUSE —

SLOW —

TRACKING/
V-LOCK

Caution:

Please inspect your cassette tapes and remove any loose or peeling labels to prevent them from becoming jammed in your unit.

1 Insert a cassette.

.• VCR power comes on automatically.
• "VCR" lights in the Multi Function Display.

```
- VCR -
```
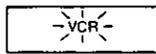
2 Press PLAY on the remote or VCR to start playback.

• Playback begins automatically if cassette has no record tab.

3 Press STOP on the remote or VCR to stop playback.

• To rewind the tape, press REW.

4 Press EJECT on the remote or VCR to eject the cassette.

• You may eject a cassette with power on or off.

To Find a Particular Scene During Playback

Press REW or FF during playback to search for a scene.

• Search speed for SP mode tapes is 7 times and SLP mode tapes is 21 times the normal speed.
• Some noise bars will appear during search.

Special Effects During Playback

These features work best in SP or SLP mode. The sound will be muted.

Slow Motion Playback

Press SLOW to start slow motion playback during playback. Press PLAY or SLOW to release.

Still (Freeze) Frame Picture

Press PAUSE to freeze and release the picture.
• To reduce picture noise, first press SLOW. Then, use CH (TRACKING) ▲/▼ to clear up the picture. Now, press PAUSE.

Frame by Frame Advance

In Still mode, hold down SLOW to advance the still picture one frame at a time. Press PAUSE to release.

Features for a Quality Picture

Digital Auto Picture

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

Digital Auto Tracking

This feature 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) ▲/▼ during playback until the picture clears up. To return to Auto Tracking mode, press POWER off and then on again.
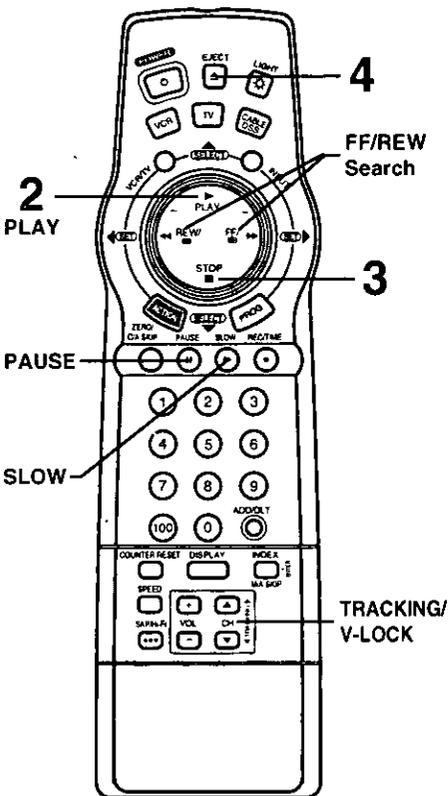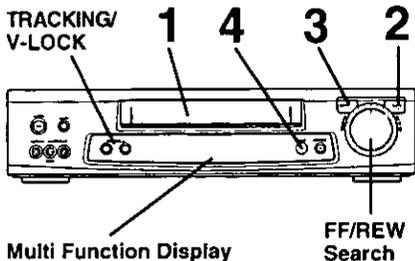
V-Lock Control (to reduce picture jitter)

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

DynAmorphous™ Metal Head/ CNR (Color Noise Reduction)/ ANR (Advanced Noise Reduction)

DynAmorphous™ Metal Head increases playback and record picture quality. Color Noise Reduction reduces the color noise. Advanced Noise Reduction reduces the luminance noise.
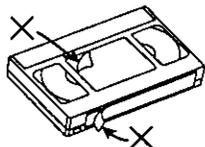
(NOTE) • After the VCR is in Still or Slow mode for 3 minutes, it will switch to the Stop mode automatically to protect the tape and the video head.

⊚ Record On a Tape

☑ Check list before you begin.

☐ All connections are made.
(See pages 6~9.)
☐ VCR is plugged in.
☐ TV is turned on and set to the VCR channel (CH 3 or 4).

2 CHANNEL Up/Down **1** **5**

Multi Function Display **4**

INPUT

PAUSE

2

3

5

4

2

DISPLAY
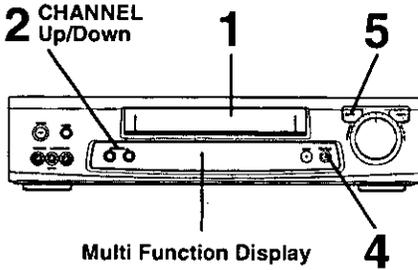
CHANNEL
Up/Down

1 Insert a cassette with record tab.

• VCR power comes on automatically.

2 Press CH ▲/▼* or NUMBERED keys to select a channel.

• Or, press CHANNEL ▲/▼ on the VCR.
• Holding down CH ▲/▼ will increase the channel search speed.
• To record from an outside source, press CH ▲/▼ or INPUT to select "LINE1" or "LINE2" (see page 21).
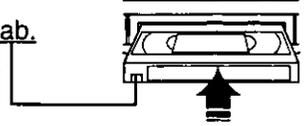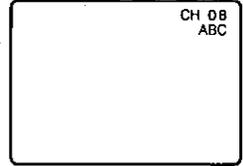
CH 08
ABC

3 Press SPEED to change the recording speed.

• SP = Standard Play ,
LP = Long Play
SLP = Super Long Play
(See page 5.)

SP

4 Press REC/TIME on the remote control or VCR to start recording.

• To edit out unwanted portions, press PAUSE to pause the recording in progress.
To release, press PAUSE again.
(After the VCR has been in Pause mode for 5 minutes, it will stop automatically to protect the tape and video head.)
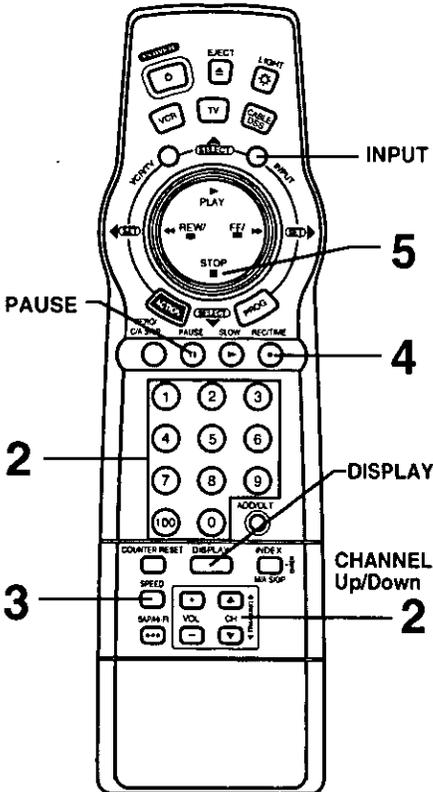
One Touch Timer Recording (OTR)

The VCR starts recording and turns itself off at a preset time.

In step 4, **press REC/TIME** repeatedly to set the length of the recording. Each press will change the stop time as shown.

Normal Rec → 0:30 → 1:00
4:00 ← 3:00 ← 2:00 ← 1:30
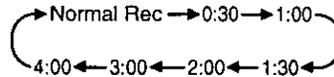
• "TIMER" lights in the Multi Function Display.
• The remaining recording time can be displayed by pressing DISPLAY in OTR mode.

5 Press STOP on the remote or VCR to stop recording.

VCR/TV

CHANNEL Up/Down   Multi Function Display

VCR/TV ──────────── INPUT

CHANNEL Up/Down

Selecting the Input Mode

Press INPUT.
The display will change in the order below.

→ Channel Number → LINE1 →
└──────────── LINE2 ┘

or

Press CH ▲/▼.
The display will change in the order below.

→ 1 ─ 2 ─ 3 ──────────────
    (CABLE) (TV)
└ LINE2 ← LINE1 ← 125 or 69 ←

- LINE1: For rear audio/video connection.
- LINE2: For front audio/video connection.

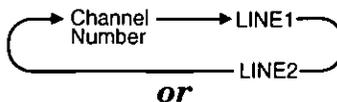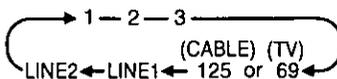- When LINE is selected, "L1" or "L2" is displayed in the Multi Function Display for about 4 seconds.

Record One Program While Watching Another

1 Press 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, press 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, press 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, press VCR/TV to turn VCR indicator off, or simply turn the VCR power off.

Basic Operation
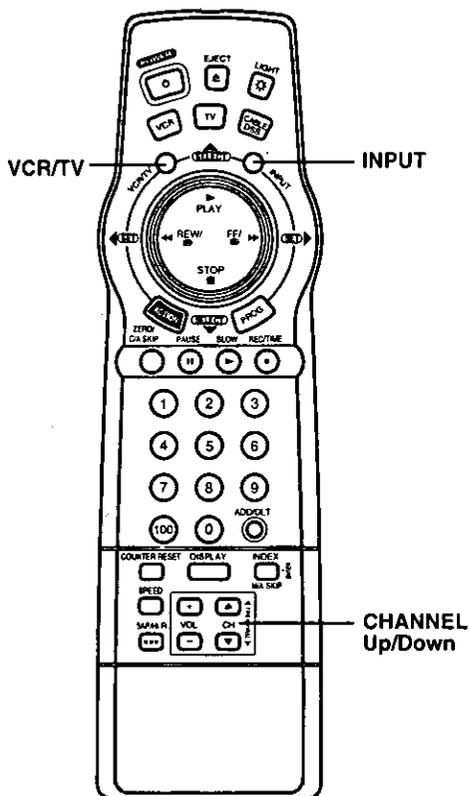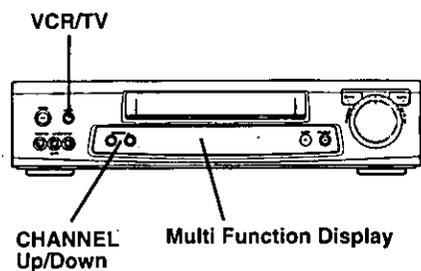
Timer Recording

*Important: If the remote control POWER, ACTION, PROG, CH▲/▼, INDEX/ M/A SKIP or ADD/DLT button does not work when pressed, press the VCR button on the remote and try the button again.

You can set up the VCR to record a one time, daily, or weekly program while you are away or otherwise occupied. Up to 8 programs can be stored in memory.

☑ Check list before you begin.

☐ All connections are made.
(See pages 6~9.)
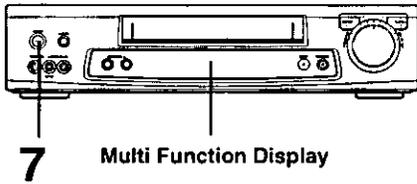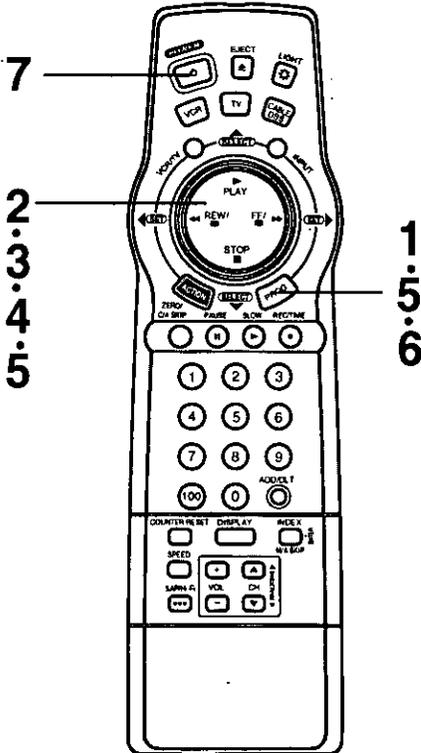☐ TV and VCR are plugged in and turned on.
☐ VCR/TV selector is set to "VCR."
☐ Clock is set to correct time.
☐ Record tab in place. (See page 5.)

Multi Function Display

1 Press PROG* to display the "SET PROGRAM" screen.

```
----- SET PROGRAM -----

VCR Plus+ PROGRAM
TIMER PROGRAM

SELECT :▲ ▼ KEY
SET    :▶ KEY
END    :PROG KEY
```

2 Press ▲▼ to select "TIMER PROGRAM," and then press ▶ to display the program screen.

• If a program is already in memory, press ▲▼ and ▶ to select an unused program number.

```
DATE/ START   STOP   CH
7 FRI --:--   --:--
7 DAY\
CATEGORY:N/A          SLP
------------------------
SELECT START DATE
SELECT :▲ ▼ KEY
SET    :▶ KEY
END    :PROG KEY
```

3 Press ▲▼ and ▶ to select and set one of the following:

• 1~31 =One time recording
• DAILY =Same time MON~FRI
• WEEKLY (SUN~SAT) =Same time once a week

Example

Today's Date ── 7

┌─8─9 ········31─ 1 ─ 2 ······ 6─┐
7 SELECT▲ /▼ Selection Order   DAILY
└─ WEEKLY ...... WEEKLY __ WEEKLY ─┘
   (SAT)   (MON)   (SUN)

4 Press ▲▼ and ◄►
to select and set each
of the remaining
items at right.

Remaining Items to be set:
• START time   • STOP time
• CH(annel) number, or LINE
  for outside source recording
• Category (N/A [not applicable],
  SPORTS, MOVIE, COMEDY,
  MUSIC, DRAMA)
• Speed (SP, LP, SLP)

To Make Corrections
Repeatedly press ▶ to move the cursor to the right, or ◄ to move to the left to the incorrect entry and make the correction.

5 Press PROG to end the program.
• This screen appears for confirmation.

```
P DT START  STOP   CH SPD
1DAY 9:00A 12:00A 08 SP
2 -- --:-- --:-- -- --
3 -- --:-- --:-- -- --
4 -- --:-- --:-- -- --

CANCEL :ADD/DLT KEY
SELECT 1-8:▲ ▼ KEY
ENTER :▶ KEY
END   :PROG KEY
```
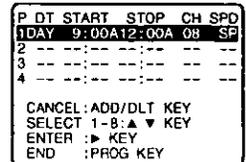
If you use a DSS receiver and enter a channel number of 100~125, the screen at right appears.

Press ▲▼ to select "DSS" or "CABLE," and then press ▶ to enter.
• The confirmation screen appears above right after this selection.

```
IS IT CABLE OR DSS
RECEIVER?

DSS
CABLE

SELECT :▲ ▼ KEY
SET   :▶ KEY
```
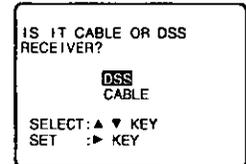
To Enter More Programs
Press ▲▼ and ▶ to select and set a blank program number, and then repeat steps 3 and 4.

6 Press PROG to exit this mode.

7 Press POWER off to set the timer.
• **When recording programs via a cable box, make sure the cable box is left ON and tuned to the desired channel.**
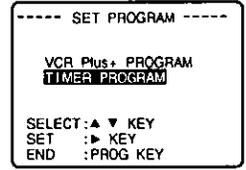
```
-TIMER-
```
Multi Function Display

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.

22

Cancel a Timer Recording:
(Recording is in progress)

Press POWER and then STOP within 10 seconds to cancel the timer recording.
- The TIMER indicator goes out in the Multi Function Display.

POWER   **STOP**

Multi Function Display

POWER

SELECT/SET
(▲▼◀▶)
keys

STOP

PROG

ADD/
DELETE

Replace Program Contents:
(Recording is not in progress)

1 Press PROG to display the "SET PROGRAM" screen.

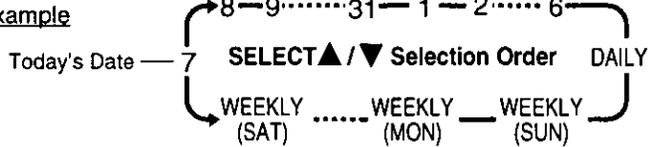2 Press ▲▼ to select "TIMER PROGRAM," and then press ▶ to display all currently set programs.

3 Press ▲▼ and ▶ to select and set a program number. (See page 22.)

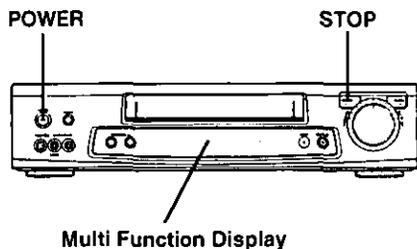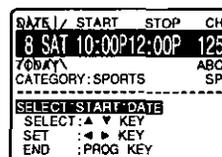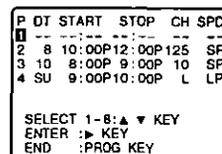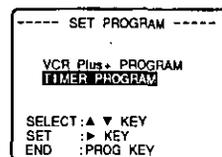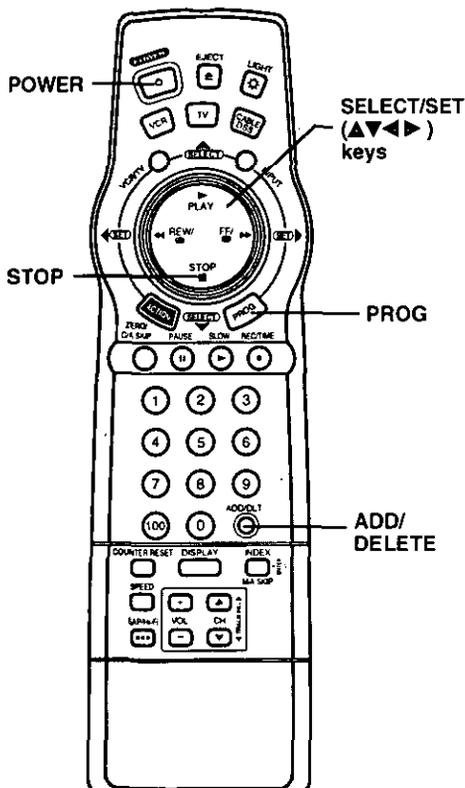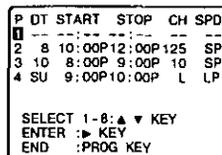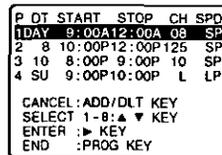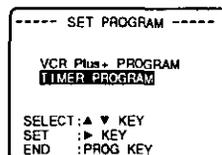4 Press ▲▼ and ◀▶ to select and set replacement timer information.

5 Press PROG twice to exit this mode.

```
----- SET PROGRAM -----

VCR Plus+ PROGRAM
TIMER PROGRAM

SELECT :▲ ▼ KEY
SET    :► KEY
END    :PROG KEY
```

```
P DT START  STOP  CH SPD
1 -- --:-- --:--  --  --
2  8 10:00P12:00P 125  SP
3 10  8:00P 9:00P  10  SP
4 SU  9:00P10:00P   L  LP

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

```
DATE1/ START  STOP   CH
8 SAT 10:00P12:00P  125
TODAY\                ABC
CATEGORY:SPORTS       SP
----------------------
SELECT START DATE
SELECT :▲ ▼ KEY
SET    :◀ ► KEY
END    :PROG KEY
```

Review or Clear Program Contents:
(Recording is not in progress)

1 Press PROG to display the "SET PROGRAM" screen.

2 Press ▲▼ to select "TIMER PROGRAM," and then press ▶ to display all currently set programs.

3 Press ▲▼ to select a program number.

4 Press ADD/DLT if you want to clear the program.

5 Press PROG to exit this mode.

```
----- SET PROGRAM -----

VCR Plus+ PROGRAM
TIMER PROGRAM

SELECT :▲ ▼ KEY
SET    :► KEY
END    :PROG KEY
```

```
P DT START  STOP  CH SPD
1 DAY  9:00A12:00A  08  SP
2  8 10:00P12:00P 125  SP
3 10  8:00P 9:00P  10  SP
4 SU  9:00P10:00P   L  LP

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

```
P DT START  STOP  CH SPD
1 -- --:-- --:--  --  --
2  8 10:00P12:00P 125  SP
3 10  8:00P 9:00P  10  SP
4 SU  9:00P10:00P   L  LP

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

Basic Operation

NOTES
- A cassette with no record tab is ejected and "TIMER" flashes when the power is turned off to set the timer.
- If the start times of two programs overlap, the lower numbered program will have priority.
- If the start time for a timer recording comes up during a normal recording or One Touch Recording (page 20), the timer recording will not be performed.
- If there is a power interruption of more than one minute, the recording will not be performed or continue.

Our Vacation

*Important: If the remote control POWER, ACTION, PROG, CH▲/▼, INDEX/ M/A SKIP or ADD/DLT button does not work when pressed, press the VCR button on the remote and try the button again.

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 the 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 26 for answers to the most commonly asked questions about this feature.

☑ Check list before you begin

☐ All connections have been made and the One Time Setup is completed.

☐ Your TV and VCR are plugged in and turned on.

☐ TV is tuned to the VCR channel (CH 3 or 4).
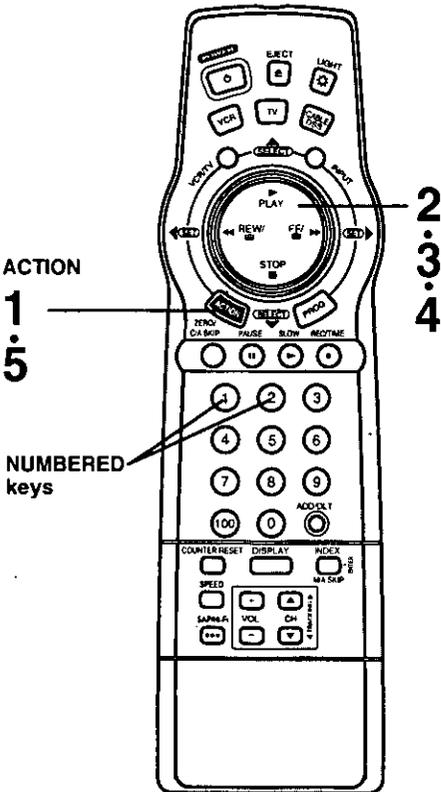
ACTION

1
·
5

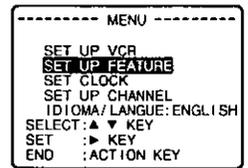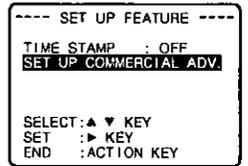**NUMBERED keys**

COMMERCIAL ADVANCE® Marking

When the COMMERCIAL ADVANCE RECORD setting is ON, the 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.
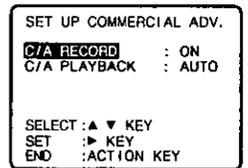
1 Press ACTION* to display the menu.

```
-------- MENU --------
SET UP VCR
SET UP FEATURE
SET CLOCK
SET UP CHANNEL
IDIOMA/LANGUE:ENGLISH
SELECT:▲ ▼ KEY
SET   :► KEY
END   :ACTION KEY
```

2 Press ▲▼ to select "SET UP FEATURE," and then press ► to display the "SET UP FEATURE" screen.

```
---- SET UP FEATURE ----
TIME STAMP  : OFF
SET UP COMMERCIAL ADV.

SELECT:▲ ▼ KEY
SET   :► KEY
END   :ACTION KEY
```

3 Press ▲▼ to select "SET UP COMMERCIAL ADV.," and then press ► to display the "SET UP COMMERCIAL ADV." screen.

```
SET UP COMMERCIAL ADV.
C/A RECORD    : ON
C/A PLAYBACK  : AUTO

SELECT:▲ ▼ KEY
SET   :► KEY
END   :ACTION KEY
```

4 Press ▲▼ to select "C/A RECORD," and then press ► to set "ON" or "OFF."

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

The screen at right appears when STOP is pressed during a normal recording. Select one of the following:

Press the 1 NUMBERED key to mark the recording now. The screen below right will appear.

Press the 2 NUMBERED 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, the commercials may not be marked correctly.

Press ACTION to cancel the marking of this recording.

```
THE VCR IS WAITING TO
MARK COMMERCIALS IN THE
PROGRAM YOU RECORDED.

MARKING
NOW    : PUSH 1 KEY
LATER  : PUSH 2 KEY
CANCEL : PUSH ACTION KEY
```

```
NOW MARKING COMMERCIALS




CANCEL : PUSH STOP KEY
```
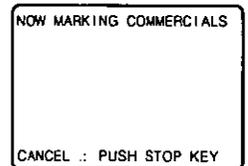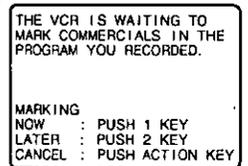
OFF The VCR will not mark commercials. Off should be selected when you are editing or dubbing a tape, or when you simply do not wish to use this feature.

5 Press ACTION three times to return to the normal screen.

COMMERCIAL ADVANCE®

✅ Check list before you begin

☐ All connections have been made and the One Time Setup is completed.

☐ Your TV and VCR are plugged in and turned on.

☐ TV is tuned to the VCR channel (CH 3 or 4).

PLAY

FAST FORWARD/
SEARCH

FAST FORWARD/
SEARCH

PLAY

2
.
3
.
4

1
.
5

ZERO/
C/A SKIP

COMMERCIAL ADVANCE® Playback

When playing back recordings which have been marked using the COMMERCIAL ADVANCE® feature, you can either set the VCR to automatically advance through marked commercial blocks, or set it so that commercials are only skipped on your command.
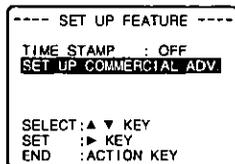
1 Press ACTION to display the menu.

```
-------- MENU --------
   SET UP VCR
   SET UP FEATURE
   SET CLOCK
   SET UP CHANNEL
    IDIOMA/LANGUE:ENGLISH
SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```

2 Press ▲▼ to select "SET UP FEATURE," **and then press ►** to display the "SET UP FEATURE" screen.

```
---- SET UP FEATURE ----
TIME STAMP    : OFF
SET UP COMMERCIAL ADV.

SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```

3 Press ▲▼ to select "SET UP COMMERCIAL ADV.," **and then press ►** to display the "SET UP COMMERCIAL ADV." screen.

4 Press ▲▼ to select "C/A PLAYBACK," **and then press ►** to set "AUTO" or "MANUAL."

```
SET UP COMMERCIAL ADV.

C/A RECORD     : ON
C/A PLAYBACK   : AUTO

SELECT :▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```
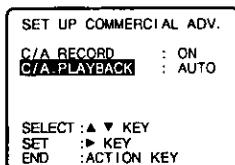
AUTO The VCR will automatically advance through marked commercial blocks recorded on the tape and then resume playback.

MANUAL The VCR will advance through commercials only when ZERO/ C/A SKIP 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 eight minutes.

5 Press ACTION three times to return to the normal screen.

COMMERCIAL ADVANCE®is a trademark of SRT, Inc.
A Jerry Iggulden·invention licensed in association with Arthur D. Little Enterprises, Inc.

U.S.Pat. No. 5,333,091
other patents pending

NOTES
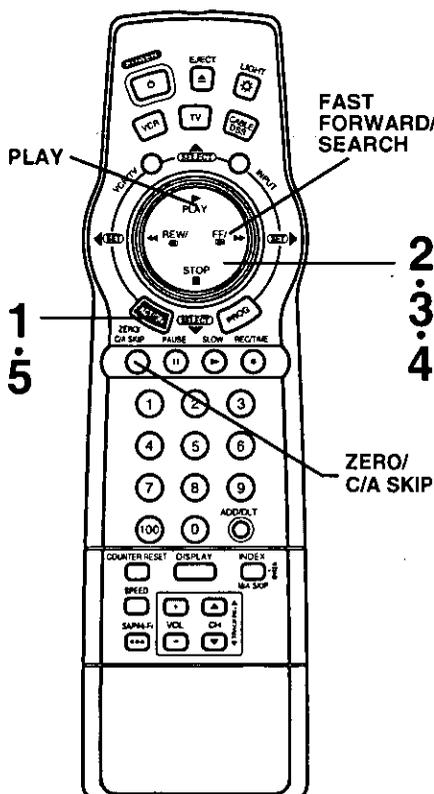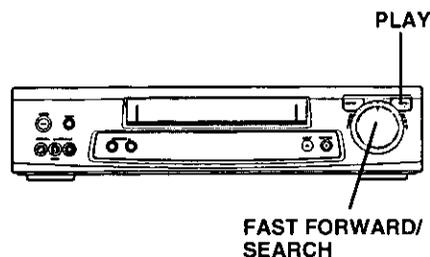
- The selection made in step 4 remains set unless there is a power outage in which case the original factory setting will be restored.
- A commercial may not be skipped if playback is started in the middle of a commercial, only a single isolated commercial is shown, or an individual commercial is longer than one minute. Press FAST FORWARD/ SEARCH to quickly advance through the commercial.
- Part of a recorded program may be skipped over if the program portion between commercials is less than one minute, or there are frequent dark and quiet scenes. Rewind the tape to the beginning of the skipped portion and press PLAY.

More You Can Do

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 25, 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 25, 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?	Rewind the tape to where the program should have started, and press PLAY to view the program.

Additional Notes:
- 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.
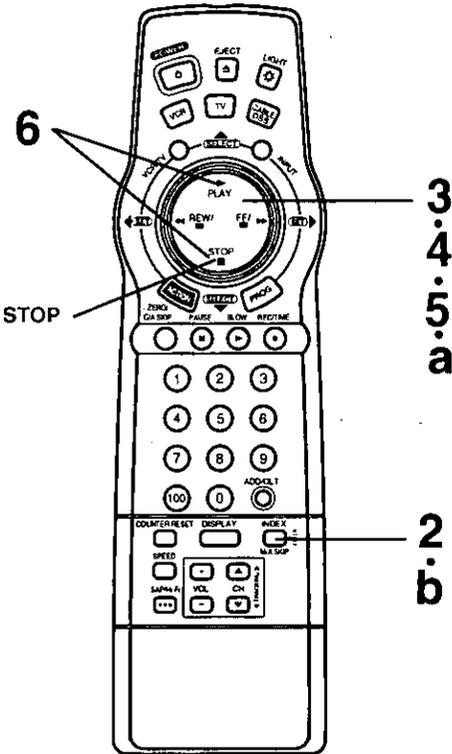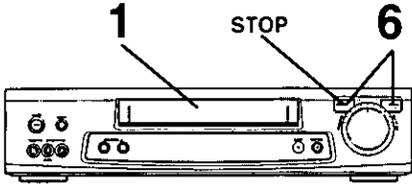
COMMERCIAL ADVANCE® is a trademark of SRT, Inc.
A Jerry Iggulden invention licensed in association with Arthur D. Little Enterprises, Inc.

U.S.Pat. No. 5,333,091
other patents pending

☑ Check list before you begin

☐ All connections have been made and the One Time Setup is completed.

☐ Your TV and VCR are plugged in and turned on.

☐ TV is tuned to the VCR channel (CH 3 or 4).

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 cassette recorded in the SP speed with the record tab removed.
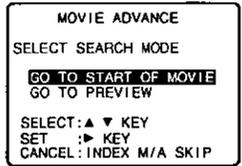
1 Insert a cassette without record tab.
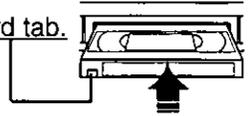
2 Press INDEX/ M/A SKIP* to display the "SELECT SEARCH MODE" screen.

- If you inserted a cassette with the record tab or if you selected "INDEX SEARCH." go to page 28.

```
SELECT SEARCH MODE

  INDEX SEARCH
  MOVIE ADVANCE

SELECT:▲ ▼ KEY
SET   :▶ KEY
CANCEL:INDEX M/A SKIP
```
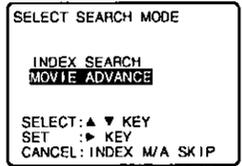
3 Press ▲▼ to select "MOVIE ADVANCE," and then press ▶ to display the "MOVIE ADVANCE" screen.

```
MOVIE ADVANCE

SELECT SEARCH MODE

  GO TO START OF MOVIE
  GO TO PREVIEW

SELECT:▲ ▼ KEY
SET   :▶ KEY
CANCEL:INDEX M/A SKIP
```

4 Press ▲▼ to select "GO TO START OF MOVIE" or "GO TO PREVIEW."

Select "GO TO START OF MOVIE," if you want to advance directly to beginning of the movie. And then, continue with step 5.

Select "GO TO PREVIEW," if you want to view the first (next) preview. And then, go to the "To Search for Preview" section at left.

To Search for Preview

a In step 4 at right, select "GO TO PREVIEW," and then press ▶ to start the preview searching.
- If you want to playback, press PLAY.

When a preview is detected, the VCR will start playback...

b Press INDEX/ M/A SKIP to start the next preview searching.
- To cancel, press STOP.

```
NEXT PREVIEW : M/A SKIP
```

5 Press ▶ to start the searching.
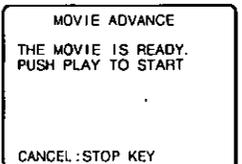- To cancel, press STOP and go to step 6.

```
MOVIE ADVANCE

SEARCHING FOR START

OF MOVIE

CANCEL:STOP KEY
```

When the movie is found...

6 Press PLAY to start or press STOP to cancel.
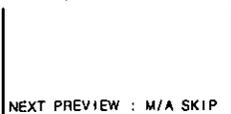- The display will time out after 3 minutes and the VCR will enter the Stop mode.

```
MOVIE ADVANCE

THE MOVIE IS READY.
PUSH PLAY TO START

CANCEL:STOP KEY
```

More You Can Do

27

Tape Operation (continued)

*Important: If the remote control POWER, ACTION, PROG, CH▲/▼, INDEX/ M/A SKIP or ADD/DLT button does not work when pressed, press the VCR button on the remote and try the button again.

VHS Index Search System

Each time you start a recording, an invisible index mark is placed on the tape. When timer recordings are made, program index and program information (see "Time Stamp Feature" on page 34) are also included. You can then use these index marks to access or scan your recordings.

REWIND/ FAST FORWARD

4
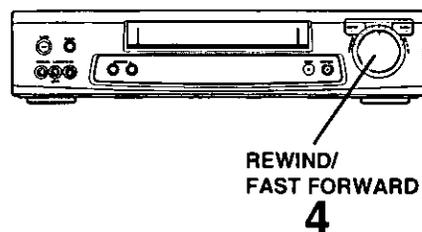
## Direct Access
(For normal and/or timer recordings)

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

1 Press INDEX/ M/A SKIP* to display the "SELECT SEARCH MODE" screen.

• This screen appears only if there are timer recordings on the Program Index list. If this screen does not appear, go to step 3.
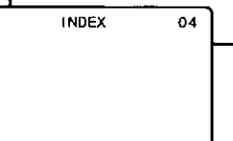
```
SELECT SEARCH MODE

INDEX SEARCH
PROGRAM INDEX SEARCH

SELECT:▲ ▼ KEY
SET   :► KEY
CANCEL: INDEX M/A SKIP
```
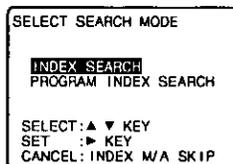
2 Press ▲▼ to select "INDEX SEARCH," and then press ► to display the "INDEX" screen.

```
INDEX
```
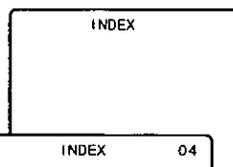
3 Press a NUMBERED key to select the desired recording.

• To calculate the number, see below.

```
INDEX        04
```

4 Press REW or FF to start a reverse or forward search.

• When the designated location is reached, the VCR goes into Playback mode.

```
INDEX SEARCH 04
```

REWIND
4
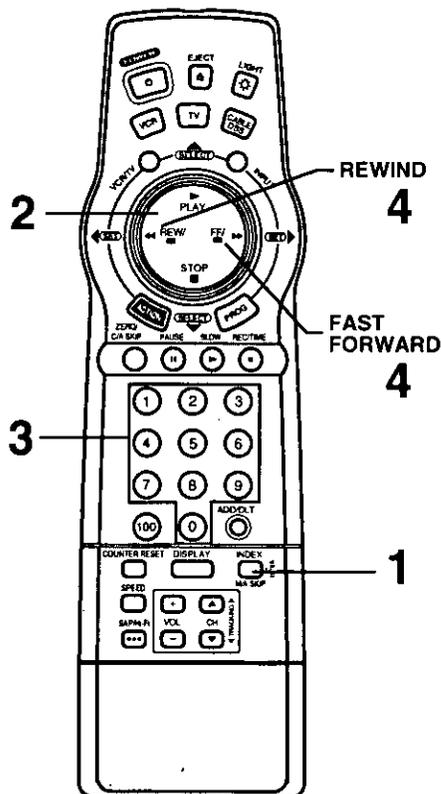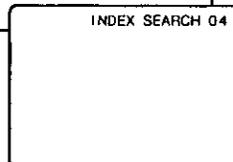
FAST FORWARD
4

To calculate the Index Number

Count forward or backward each recording starting 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. The total is 3. Enter 3 in step "3" and press REW.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
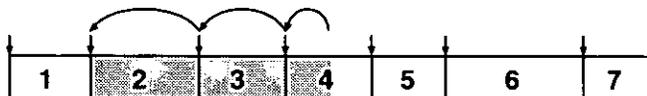
Example 2:
If you are watching recording 2 and you want to watch recording 6, count the start points to number 6. The total is 4. Enter 4 in step "3" and press FF.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

NOTE: ↓ indicates start points of each recording.

NOTES
• 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 any of the VHS Index Search System are initiated extremely close to an index mark, the index mark may not be counted in the search.
• In the Program Index Search mode, this VCR can memorize a total of 8 programs in order of recording. If you memorize more than 8 programs, the first program will be deleted and the new program will be listed.

Important for Program Index Search:
Timer recordings must be
recorded back to back in order for
them to be placed on the Program
Index list. If a timer recording is
followed by a function, such as
REW or PLAY, the data is lost.

Program Index Search
(For timer recordings only)
This feature allows you to choose a timer recorded program from a
Program Index list and then start a search for that program.
Once the tape is ejected or normal recording is started, all program
Index data are deleted.

1 **Press INDEX/ M/A SKIP** to display
the "SELECT SEARCH MODE" screen.

2 **Press ▲▼** to select "PROGRAM
INDEX SEARCH," **and then press ▶**
to display the "PROGRAM INDEX"
screen.

3 **Press ▲▼** to select the desired
recorded program, **and then**
press ▶ to start the forward or
rewind search.

• When the designated program is reached,
the VCR automatically goes into Playback
mode.

```
SELECT SEARCH MODE

INDEX SEARCH
PROGRAM INDEX SEARCH

       PROGRAM INDEX
DATE   START CATEGORY   CH
12/28  10:00A SPORTS   ABCD
1/  4  12:30P MOVIE     NBC
1/  4   8:00P COMEDY    CBC
1/  7   3:00P MUSIC     NBC

SELECT:▲ ▼ KEY
SEARCH:▶ KEY
END    : INDEX M/A SKIP
```

```
FF
```

```
PROGRAM INDEX SEARCH
```

Index Scan
(For normal and/or timer recordings)
This feature allows you to scan (forward or reverse)
each recording for 10 seconds in Playback mode.

a **Press INDEX/ M/A SKIP** to display
the "SELECT SEARCH MODE" screen.

• This screen appears only if there are timer
recordings on the Program Index list. If this
screen does not appear, go to step c.

b **Press ▲▼** to select "INDEX
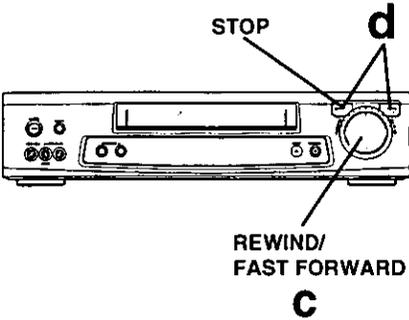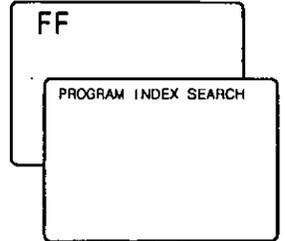SEARCH," **and then press ▶**
to display the "INDEX" screen.

c **Press REW or FF** to begin the scan.

• As each index mark is reached,
a short playback will be performed
after which FF or REW resumes.

d **Press PLAY** to cancel the scan
and begin playback.

• You may also press STOP to stop the tape.
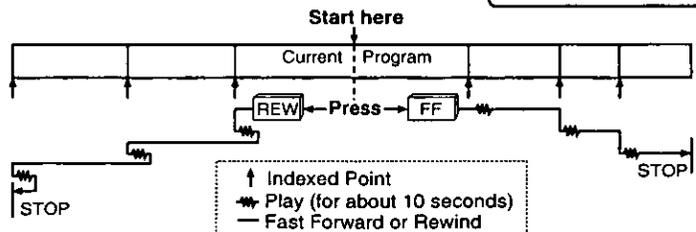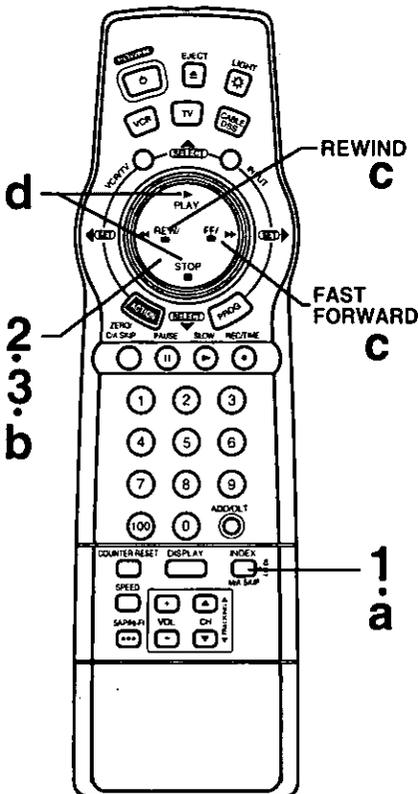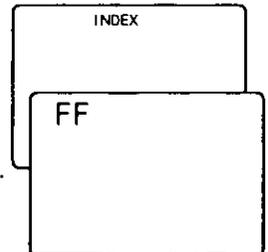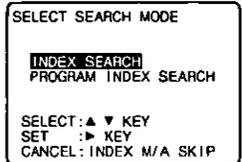
```
SELECT SEARCH MODE

INDEX SEARCH
PROGRAM INDEX SEARCH

SELECT:▲ ▼ KEY
SET   :▶ KEY
CANCEL: INDEX M/A SKIP
```

```
INDEX
```

```
FF
```

```
AUTO INDEX SEARCH
```

Start here

| Current Program |

REW ← Press → FF

↑ Indexed Point
↔ Play (for about 10 seconds)
— Fast Forward or Rewind

STOP

STOP

More You Can Do

29

Tape Operation (continued)

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

Shuttle Variable Speed Search

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

1 **Turn SHUTTLE Ring** on the VCR <u>while in Play or Still mode</u> to place the forward or reverse search.

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

2 **Press a function button** such as: PLAY, STOP, etc. on the VCR or remote control to release the Shuttle mode.

- The VCR performs the function of the button pressed.

1

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.

Zero Search

To quickly return to a specific tape location.

a **Press DISPLAY** to display the Time Counter overlay during playback.

```
STOP      12:00AM      ABC
                       0:00:30
SPATIALIZER ON          SP
●STEREO
●SAP
 MONO  ◄
```
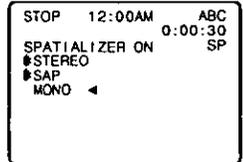
b **Press COUNTER RESET** to reset the Time Counter to "0:00:00" at the desired position.

c **Continue playback, rewind, or fast forward.**

d **Press ZERO/ C/A SKIP** in Stop mode when you want to return to "0:00:00."
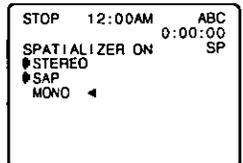
- The VCR will go into FF or REW mode and stop at the last point the Time Counter was set to 0:00:00.

```
STOP      12:00AM      ABC
                       0:00:00
SPATIALIZER ON          SP
●STEREO
●SAP
 MONO  ◄
```

d

a

b
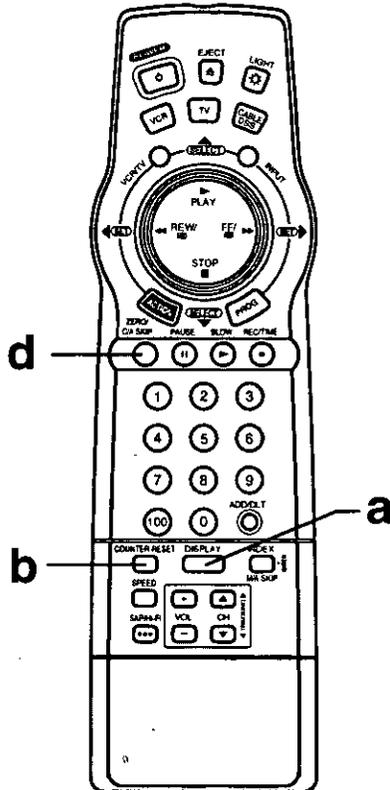
Repeat Play

The VCR will play your recording over and over.
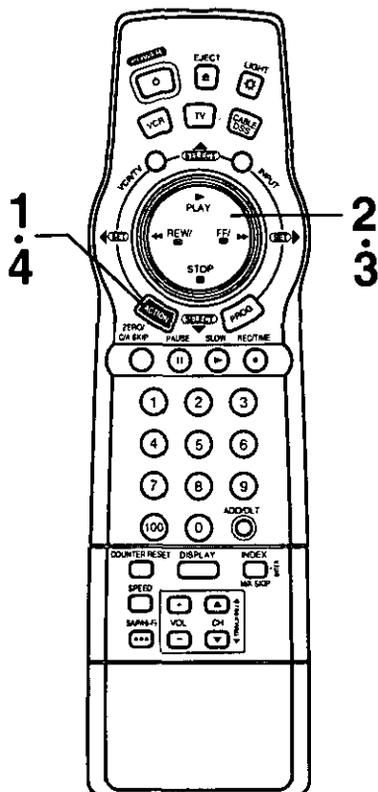
1 Press ACTION* to display the menu.

```
--------- MENU ---------
SET UP VCR
SET UP FEATURE
SET CLOCK
SET UP CHANNEL
  IDIOMA/LANGUE:ENGLISH
SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```
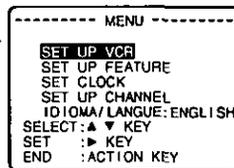
2 Press ▲▼ to select "SET UP VCR," **and then press ►** to display the "SET UP VCR" screen.

3 Press ▲▼ to select "REPEAT PLAY," **and then press ►** to select "ON" or "OFF."

```
------ SET UP VCR ------
REPEAT PLAY        : OFF
BEEPER             : ON
NOISY CH BLUE BACK : ON
SPATIALIZER        : ON

SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```

- When "ON" is selected, the VCR plays the tape to its end or until a blank portion of over 30 seconds is detected (erased portions are not considered blank). The tape is then rewound and played again and again until Repeat Play is turned off.

4 Press ACTION twice to return to the normal screen.

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 pressed during rewind, the VCR will turn off after rewind is complete.

* For record tab information, see page 5.

More You Can Do

*Important: If the remote control POWER, ACTION, PROG, CH▲/▼, INDEX/ M/A SKIP or ADD/DLT button does not work when pressed, press the VCR button on the remote and try the button again.

Channel Caption

You can set channel names, i.e. ABC, CBS, so that when selected, the channel name and number appear on-screen for easy identification. You can go with preset names (up to 24), or manually create your own (up to 10).

Note: You will need a list of channels received in your area and the channel numbers you receive them on.

Preset Caption

1 Press ACTION* to display the menu.

```
--------- MENU ---------
SET UP VCR
SET UP FEATURE
SET CLOCK
SET UP CHANNEL
IDIOMA/LANGUE:ENGLISH
SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```
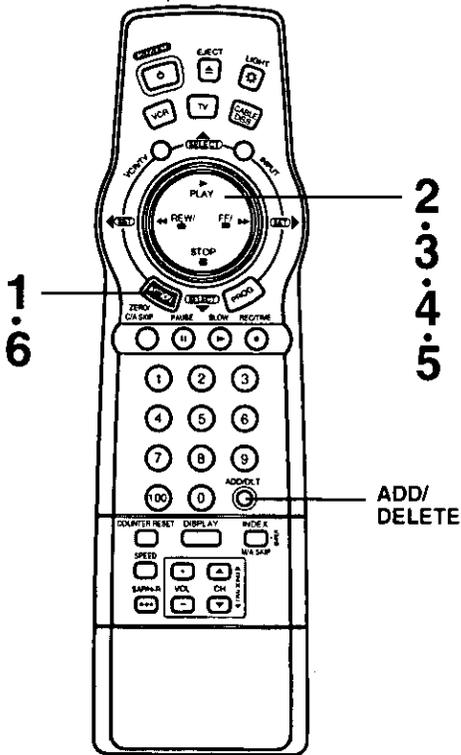
2 Press ▲▼ to select "SET UP CHANNEL," and then press ► to display the "SET UP CHANNEL" screen.

```
---- SET UP CHANNEL ----
ANTENNA : CABLE
AUTO SET
CHANNEL CAPTION
CABLE/DSS BOX SET UP
VCR Plus+ CH SET UP
SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```

3 Press ▲▼ to select "CHANNEL CAPTION," and then press ► to display the "CHANNEL CAPTION" screen.

```
--- CHANNEL CAPTION ---
PRESET CAPTION
MANUAL CAPTION


SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```

4 Press ▲▼ to select "PRESET CAPTION," and then press ► to display the "PRESET CAPTION" screen.

- You can set up to twenty-four channel captions. If you want to set a station name other than these, go to the "Manual Caption" section on the following page.

5 Press ► to move the shaded area to the right side.

Then, press ▲▼ to change the memorized channel number to match the caption.

Next, press ◄ to set the memorized channel number.

Now, press ▲▼ to continue.

Repeat step 5 until the Caption List is complete.

```
---- PRESET CAPTION ----
ABC   --   PBS   --
CBS   --   CNN   --
FOX   --   ESPN  --
NBC   --   HBO   --
SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```

```
---- PRESET CAPTION ----
TNT   42   CBC   62
UPN   --   CTN   21
WB    35   TSN   52
DSC   --   GLOB 123
CLEAR :ADD/DLT KEY
SELECT:▲ ▼ KEY
SET    :◄ KEY
END    :ACTION KEY
```

To Make Corrections
Press ▲▼ and ► to select the memorized channel number. Then, press ▲▼ to change, or ADD/DLT to delete the channel number.

6 Press ACTION four times to exit this mode and return to the normal screen.

ADD/
DELETE

Manual Caption

a Follow steps 1~3 in the "Preset Caption" section on page 32.

---

b In step 4, press ▲▼ to select "MANUAL CAPTION," **and then press ▶** to display the "MANUAL CAPTION" screen.

```
--- CHANNEL CAPTION ---
PRESET CAPTION
MANUAL CAPTION


SELECT:▲ ▼ KEY
SET    :▶ KEY
END    :ACTION KEY
```

---
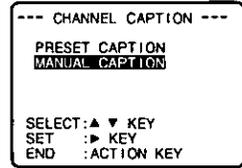
c Press ▲▼ to select "CH NUMBER," **and then press ▶** to move the shaded area to the right.
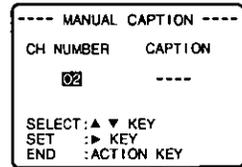
- Channels already set in the "Preset Caption" section and channels deleted from Channel Memory are not displayed.

- You can set a total of ten channel captions with up to four characters each.

```
---- MANUAL CAPTION ----
CH NUMBER    CAPTION
   02        ----

SELECT:▲ ▼ KEY
SET    :▶ KEY
END    :ACTION KEY
```

---

d Press ▲▼ to select, **and then press ▶** to enter each character of the caption.
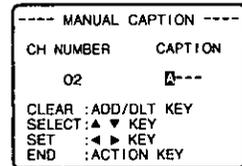
- Characters will change in the following order.

```
---- MANUAL CAPTION ----
CH NUMBER    CAPTION
   02        A---

CLEAR  :ADD/DLT KEY
SELECT:▲ ▼ KEY
SET    :◀ ▶ KEY
END    :ACTION KEY
```

$$\rightarrow A \rightarrow B \rightarrow C \cdots \rightarrow Z \rightarrow BLANK \rightarrow - \rightarrow \& \rightarrow$$
$$\leftarrow 9 \leftarrow \cdots 2 \leftarrow 1 \leftarrow 0 \leftarrow / \leftarrow ! \leftarrow$$
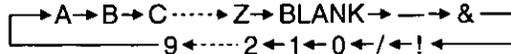
Now, press ◀ repeatedly to move the cursor back to CH NUMBER.
Repeat steps "c" and "d" as desired.

To Make Corrections, repeatedly press ▶ to move the cursor to the right, or ◀ to move to the left to the incorrect entry and make the correction.
To Clear the Caption, press ADD/DLT.

---

e Press ACTION four times to exit this mode and return to the normal screen.
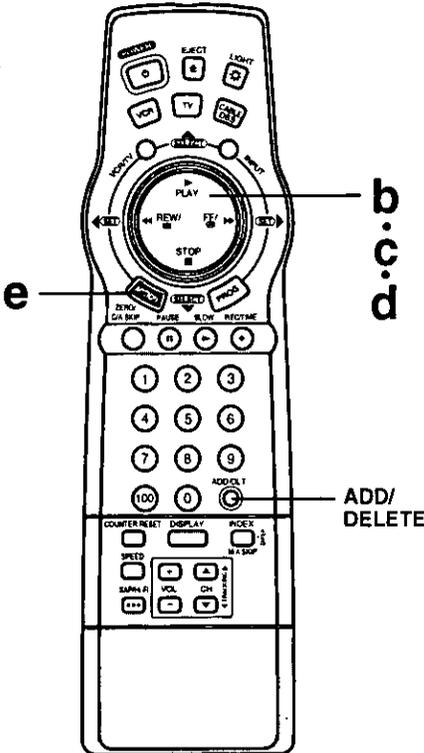
ADD/
DELETE

*Important:
If the remote control POWER, ACTION, PROG, CH▲/▼, INDEX/ M/A SKIP or ADD/DLT button does not work when pressed, press the VCR button on the remote and try the button again.

☑ **Check list before you begin.**

☐ Clock is set to correct time.
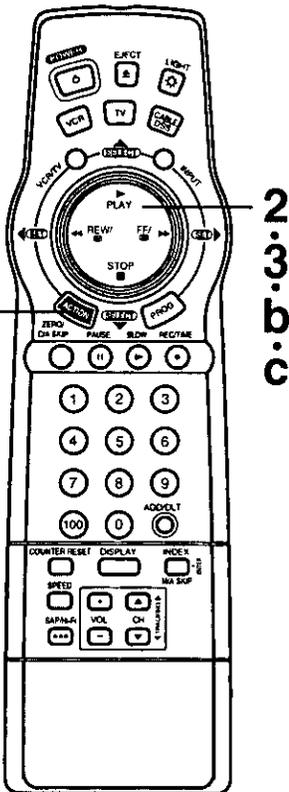
Time Stamp Feature

For about the first 10 seconds of each recording, the VCR automatically writes the following program data on the tape: Date, Start time, Scheduled stop time (for Timer Rec. only), Channel No. and Category (for Timer Rec. only). Then, if playback is started at the starting point of the recording, this information will be displayed about 7 seconds after playback begins for a few seconds.

1 Press ACTION* to display the menu.

```
--------- MENU ---------
     SET UP VCR
     SET UP FEATURE
     SET CLOCK
     SET UP CHANNEL
     IDIOMA/LANGUE:ENGLISH
SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```

2 Press ▲▼ to select "SET UP FEATURE," **and then press ►** to display the "SET UP FEATURE" screen.

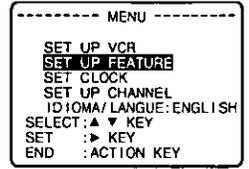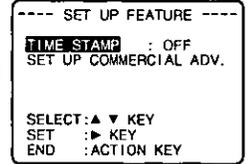**3 Press ▲▼** to select "TIME STAMP," **and then press ►** to select "ON" or "OFF."

```
---- SET UP FEATURE ----
  TIME STAMP   : OFF
  SET UP COMMERCIAL ADV.

SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```

- When "OFF" is selected, the program data is written on the tape, but will not be displayed for the first 7 seconds of playback.

4 Press ACTION twice to exit.

<Time Stamp Example>
Normal/
One Touch Recording

```
12/28/1998 MON
12:00PM
CH 08 ABC
```

Timer Recording

```
12/28/1998 MON
12:00PM - 1:00PM
CH 08 ABC  SPORTS
```

When Clock is not set...

```
--/--/----
--:--
CH 08 ABC
```

- If the tape speed is changed immediately after recording begins, the display may be incorrect.

Blue Back ON/OFF Feature

You may choose whether or not you want the VCR to display a solid blue screen when the broadcast signal is very weak or nonexistent.

a Press ACTION to display the menu.

```
--------- MENU ---------
  SET UP VCR
  SET UP FEATURE
  SET CLOCK
  SET UP CHANNEL
  IDIOMA/LANGUE:ENGLISH
SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```
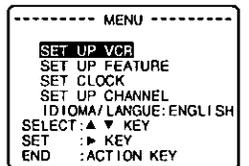
b Press ▲▼ to select "SET UP VCR," **and then press ►** to display the "SET UP VCR" screen.

c Press ▲▼ to select "NOISY CH BLUE BACK," **and then press ►** to select "ON" or "OFF."

```
------ SET UP VCR ------
REPEAT PLAY        : OFF
BEEPER             : ON
NOISY CH BLUE BACK : ON
SPATIALIZER        : ON

SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```

- When "ON" is selected, a solid blue screen appears whenever the signal is weak or nonexistent. When "OFF" is selected, the picture is displayed regardless of the signal condition.
- The picture can not always be seen clearly when "OFF" is selected.

d Press ACTION twice to exit.

(NOTE)
- When the VCR is connected to a Combination VCR which has a Blue Back feature, even if the VCR Blue Back is set to "OFF" on the VCR, the screen will go to a blue background.

☐ All connections are made.
(See pages 6~9.)
☐ VCR is plugged in.
☐ TV is turned on and set to the VCR channel (CH 3 or 4).

VCR Lock Feature

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

Hold down REC/TIME on the VCR without a cassette inserted for 7 seconds during Power On mode.

* "NO CASSETTE PLEASE INSERT A CASSETTE" is displayed when REC/TIME is pressed. Please disregard this warning and continue to hold down REC/TIME for 7 seconds.

```
VCR LOCK ACTIVATED
```
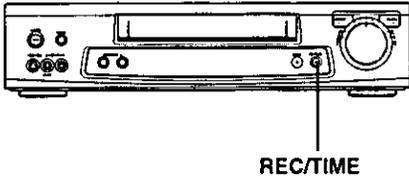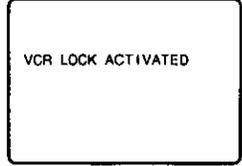
To Cancel the VCR Lock feature,

with or without a cassette inserted, hold down REC/TIME on the VCR for 7 seconds again while in Stop mode.

```
VCR LOCK OFF
```

REC/TIME
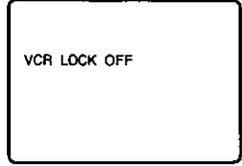
* VCR Lock mode is cancelled automatically after about 24 hours as long as the clock is set.
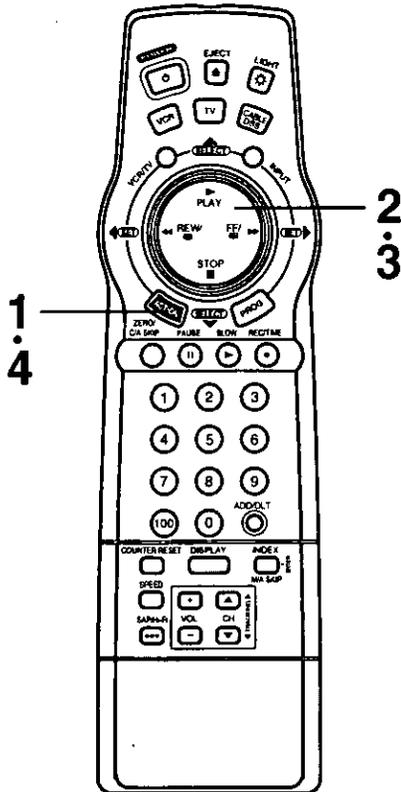
Warning Beeper Feature

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

1 Press **ACTION** to display the menu.

```
--------- MENU ---------
SET UP VCR
SET UP FEATURE
SET CLOCK
SET UP CHANNEL
IDIOMA/LANGUE: ENGLISH
SELECT: ▲ ▼ KEY
SET    :▶ KEY
END    :ACTION KEY
```
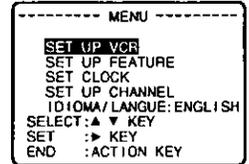
2 Press **▲▼** to select "SET UP VCR," **and then press ▶** to display the "SET UP VCR" screen.

3 Press **▲▼** to select "BEEPER," **and then press ▶** to select "ON" or "OFF."

```
------ SET UP VCR ------
REPEAT PLAY        : OFF
BEEPER             : ON
NOISY CH BLUE BACK : ON
SPATIALIZER        : ON

SELECT: ▲ ▼ KEY
SET    :▶ KEY
END    :ACTION KEY
```
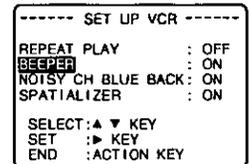
4 Press **ACTION twice** to exit this screen.

More You Can Do
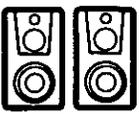
✓ Check list before you begin.

☐ The VCR is connected to a stereo TV, or a mono TV and an external stereo amp or receiver with speakers.
☐ The VCR and other components are plugged in and turned on.

Connections to Make

Audio Out (L/R)

Video Out

In from Antenna

Mono TV

and

Stereo AMP or Receiver

Stereo TV

or

When recording, you may monitor in stereo, by connecting the VCR to either a stereo TV, or a mono sound TV with an external stereo amp and speakers.

DISPLAY

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.

Receivable Broadcast Types

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

Press DISPLAY to display the broadcast signal currently being received.

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.
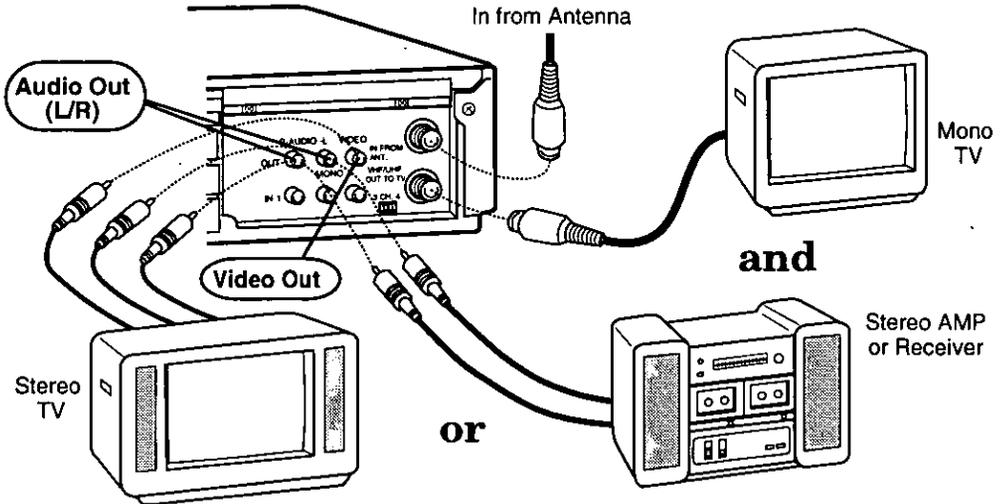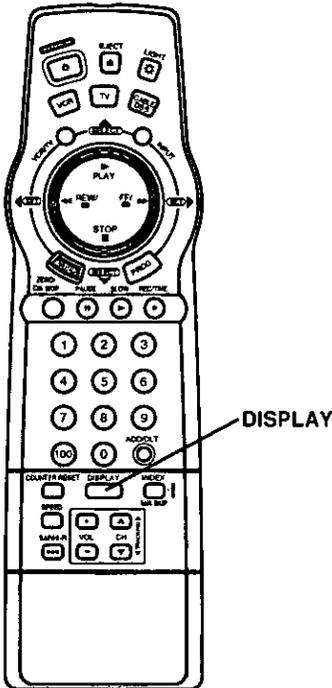
```
STOP    12:00AM       ABC
                    0:00:00
SPATIALIZER ON        SP
▶STEREO◀
▶SAP
 MONO
```
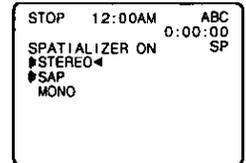
MTS Stereo broadcast

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

* If a stereo broadcast is weak and the display flickers, you may want to select the MONO audio mode for better results.

```
STOP    12:00AM       ABC
                    0:00:00
SPATIALIZER ON        SP
▶STEREO◀
 SAP
 MONO
```
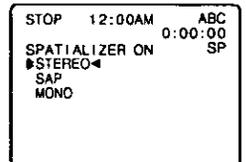
SAP broadcast

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

```
STOP    12:00AM       ABC
                    0:00:00
SPATIALIZER ON        SP
 STEREO
▶SAP   ◀
 MONO
```
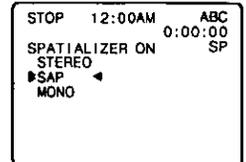
MONO broadcast

Normal monaural sound broadcast.

```
STOP    12:00AM       ABC
                    0:00:00
SPATIALIZER ON        SP
 STEREO
 SAP
 MONO ◀
```

*Important:
If the remote control POWER, ACTION, PROG, CH▲/▼, INDEX/ M/A SKIP or ADD/DLT button does not work when pressed, press the VCR button on the remote and try the button again.

With the proper audio mode setting, your VCR can:

1) record and playback an MTS stereo broadcast (main language) in stereo Hi-Fi.
2) record and playback a monaural broadcast (main language) or Secondary Audio Program (sub language) on the Hi-Fi tracks for better quality monaural sound.
3) playback non Hi-Fi tapes in monaural.

• When recording, the selected broadcast sound is always recorded on the left and right Hi-Fi tracks as well as the normal monaural track. This means your tapes can be played back on Hi-Fi as well as non-Hi-Fi VCRs.

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Audio Mode for Recording

1 **Press SAP/Hi-Fi repeatedly** (each press within 5 seconds) to select the desired audio mode (STEREO, SAP, or MONO).
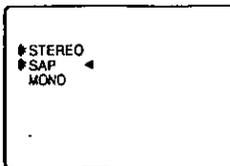
• Please refer to the "Receivable Broadcast Types" section on page 36.

```
♦STEREO
♦SAP   ◄
 MONO
```

• The arrow indicates your selection.

2 **Do a recording.**
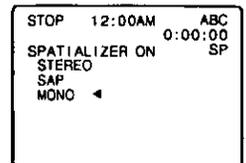See the "Record On a Tape" section on page 20.

Audio Mode for Playback

A **Playback the tape.**
See the "Playback a Tape" section on page 19.

B **Press SAP/Hi-Fi repeatedly** (each press within 5 seconds) to select the desired audio mode (HIFI or NORMAL).

• Select "HIFI" to listen to your stereo recordings with stereo sound, or "NORMAL" for monaural sound.

```
HIFI  ◄
NORMAL
```
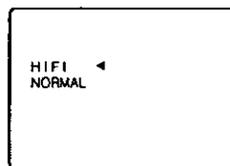
• The arrow indicates your selection.
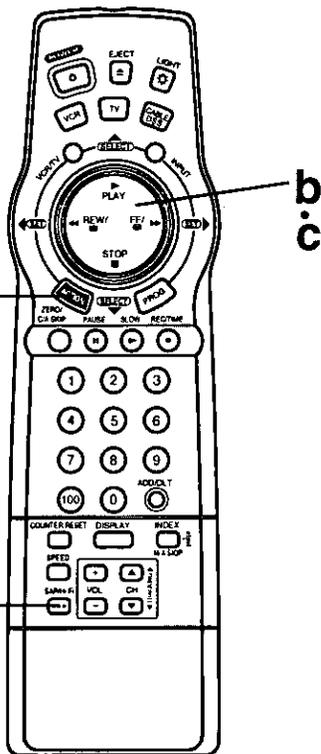
Spatializer Feature

This feature allows you to enhance the stereo sound so that it seems to surround you.
Note: Your VCR needs to be hooked up to a stereo TV or stereo amp/receiver with speakers (see page 36). For playback, tapes must be recorded in Hi-Fi stereo. For TV viewing, programs must be broadcast in stereo.

a **Press ACTION*** to display the menu.

```
--------- MENU ---------
SET UP VCR
SET UP FEATURE
SET CLOCK
SET UP CHANNEL
 IDIOMA/ LANGUE: ENGLISH
SELECT:▲ ▼ KEY
SET   :► KEY
END   :ACTION KEY
```

b **Press ▲▼** to select "SET UP VCR," **and then press** ► to display the "SET UP VCR" screen.

```
------ SET UP VCR ------
REPEAT PLAY        : OFF
BEEPER             : ON
NOISY CH BLUE BACK : ON
SPATIALIZER        : ON

SELECT:▲ ▼ KEY
SET   :► KEY
END   :ACTION KEY
```

C **Press ▲▼** to select "SPATIALIZER," **and then press** ► to select "ON" or "OFF."

d **Press ACTION twice** to exit this screen.

• When purchasing or renting prerecorded tapes, remember that only those recorded in Hi-Fi stereo will play back with true stereo sound. Standard stereo tapes will play back with monaural sound.
• In order to listen to Hi-Fi stereo playback, the VCR AUDIO (L/R) jacks must be connected to a stereo TV or an external stereo amp and speakers. (See page 36.)
• When adjusting the tracking during playback, the Hi-Fi audio sound may revert to normal audio sound. This is normal.
• There may be a difference in audio level between Hi-Fi and normal audio playback.

37

VCR Plus+ Setup

*Important: If the remote control POWER, ACTION, PROG, CH▲/▼, INDEX/ M/A SKIP or ADD/DLT button does not work when pressed, press the VCR button on the remote and try the button again.

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. To receive the VCR Plus+ channels automatically, perform the steps below. Or, see the "Manual VCR Plus+ Channel Setup" section on page 40.

Important Note:

- **The "One Time VCR Setup" section on page 12~17 must be completed before the "Auto VCR Plus+ Channel Setup" section can be done. If any part of the setup is not completed, a warning screen appears.**
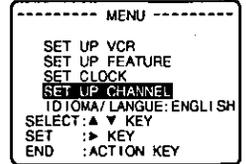
- **If your VCR connection type changes from type A to B, perform "To Setup the VCR in Case a Cable Box or DSS Receiver was Installed or Replaced" section on page 17 before proceeding with these steps.**
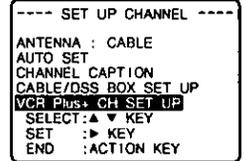

Auto VCR Plus+ Channel Setup (Part 1)

Complete this page only if Type B connection method (pg. 12) is used.

1 Press ACTION* to display the menu.

```
-------- MENU --------
  SET UP VCR
  SET UP FEATURE
  SET CLOCK
  SET UP CHANNEL
  IDIOMA/LANGUE:ENGLISH
SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```

2 Press ▲▼ to select "SET UP CHANNEL," and then press ► to display the "SET UP CHANNEL" screen.

```
---- SET UP CHANNEL ----
ANTENNA : CABLE
AUTO SET
CHANNEL CAPTION
CABLE/DSS BOX SET UP
VCR Plus+ CH SET UP
SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```

3 Press ▲▼ to select "VCR Plus+ CH SET UP," and then press ► to display the "VCR Plus+ CH SET UP" screen.

```
VCR Plus+ CH SET UP

     AUTO SET
     MANUAL SET

SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```
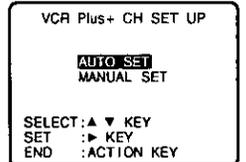
4 Press ▲▼ to select "AUTO SET," and then press ► to set.
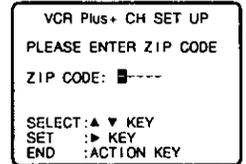
5 Press ▲▼◄► to select and enter each number of your zip code. And then press ► or ACTION to set.

```
VCR Plus+ CH SET UP

PLEASE ENTER ZIP CODE

ZIP CODE: ▇----

SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```
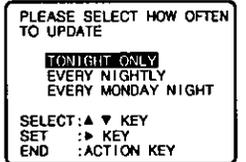
6 Press ▲▼ to select the update frequency, and then press ► to set.

- You may choose "EVERY NIGHTLY" or "EVERY MONDAY NIGHT" so that the channel map is updated regularly.

```
PLEASE SELECT HOW OFTEN
TO UPDATE

    TONIGHT ONLY
    EVERY NIGHTLY
    EVERY MONDAY NIGHT

SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```

7 Press ACTION twice to exit this mode.

- Make sure to leave your VCR off overnight. If controllable, leave your cable box on.

```
VCR Plus+ CH SET UP

PLEASE LEAVE VCR OFF
AND CABLE BOX ON
OVERNIGHT



END    :ACTION KEY
```
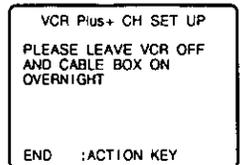
- This display may differ depending on your cable box hook-up.

Anytime after 7:00 AM the next day, do "Auto VCR Channel Setup (Part 2)" section on page 39.
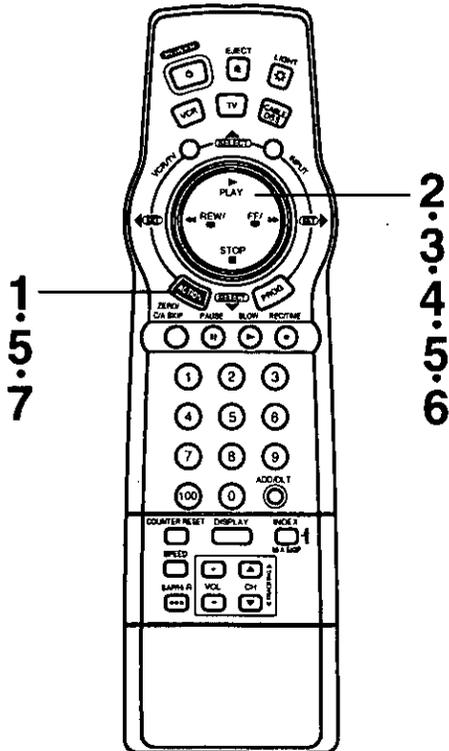
NOTES
- Make each entry within 5 minutes or the VCR will leave this mode.
- Once local channels have been programmed, they will stay in memory, even in the case of a power failure.
- "SET" indicator will flash during Auto VCR Plus+ Setup.
- If the start time for a timer recording comes up during Auto VCR Plus+ Setup, the timer recording will have priority.

Auto VCR Plus+ Channel Setup (Part 2)

Before you perform the following steps, you should have:
- **completed "Auto VCR Plus+ Channel Setup (Part 1)" on page 38.**
- **left your VCR on overnight, and turned it back on after 7:00 AM the next day.**

1 If channel updating was successful and all the channel numbers received match up with the stations you receive (single channel map), the screen at right appears.

```
VCR Plus+ CH SET UP

VCR Plus+ CH SET
COMPLETED



END    :ACTION KEY
```

Press ACTION to display the normal screen.

- -

If your VCR could not distinguish the channel map for your stations, the screen at right appears.

```
VCR Plus+ CH SET UP

PLEASE SELECT
VCR Plus+ CHANNEL
--------------------
NEXT   :ACTION KEY
```

Press ACTION to display the "SELECT VCR Plus+ CH" screen.
And then, continue with step 2.

2 Press ▲▼ ◄► to select the correct channel map for your area, **and then press ADD/DLT** to set.

```
SELECT VCR Plus+ CH
KMEX KCAL KWHY KVCR ►
  12    13    14    15
  51    42    18    33
   1     5    10     7
 101    99   110    78
---------------------- ▼
SELECT:▲ ▼ ► KEY
SET    :ADD/DLT KEY
END    :ACTION KEY
```

3 If your selected channel map is already <u>received</u>, the screen at right appears.

```
VCR Plus+ CH SET UP

VCR Plus+ CH SET
COMPLETED



END    :ACTION KEY
```

Press ACTION to display the normal screen.

- -
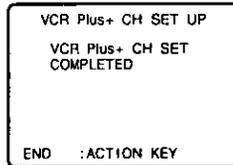
If your selected channel map is <u>not</u> already <u>received</u>, the screen at right appears. (The channel map will be updated overnight.)

```
VCR Plus+ CH SET UP

PLEASE LEAVE VCR OFF
AND CABLE BOX ON
OVERNIGHT



END    :ACTION KEY
```
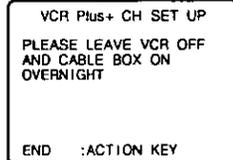
Press ACTION to display the normal screen. (If the clock is not set, please set it.)

- This display may differ depending on your cable box hook-up.

- Make sure to leave your VCR off overnight. If controllable, leave your cable box on.

Repeat these steps as necessary.
If Auto VCR Plus+ Channel Setup failed, do the "Manual VCR Plus+ Channel Setup" section on page 40.

ACTION **1 3**

SELECT/SET (▲▼◄►) keys **2**

ADD/ DELETE
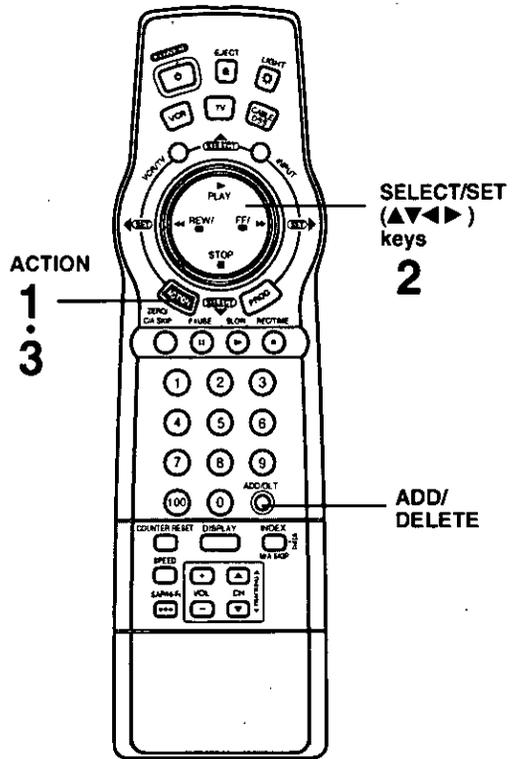
To Change or Update the Auto VCR Plus+ Channel Setup

(E.g. you selected the wrong channel map, or your zip code changed.

1 Press ACTION to display the menu.
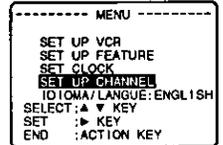
```
-------- MENU --------
SET UP VCR
SET UP FEATURE
SET CLOCK
SET UP CHANNEL
  IDIOMA/LANGUE:ENGLISH
SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```

2 Press ▲▼ to select "SET UP CHANNEL," and then press ► to display the "SET UP CHANNEL" screen.

```
---- SET UP CHANNEL ----
ANTENNA : CABLE
AUTO SET
CHANNEL CAPTION
CABLE/DSS BOX SET UP
VCR Plus+ CH SET UP
SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```
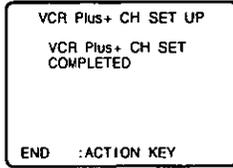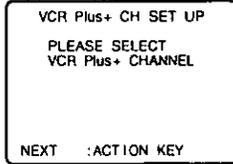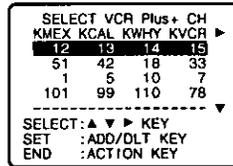
3 Press ▲▼ to select "VCR Plus+ CH SET UP," and then press ► to display the "VCR Plus+ CH SET UP" screen.

```
VCR Plus+ CH SET UP

AUTO SET
MANUAL SET


SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```

4 Press ▲▼ to select "AUTO SET," and then press ► to set.

```
VCR Plus+ CH SET UP

UPDATE VCR Plus+ CH
SELECT VCR Plus+ CH


SELECT:▲ ▼ KEY
SET    :► KEY
END    :ACTION KEY
```
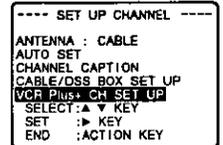
5 Press ▲▼ to select "UPDATE VCR Plus+ CH" or "SELECT VCR Plus+ CH," and then press ► to set.
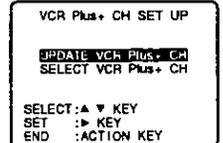
6 <u>If you select "UPDATE VCR Plus+ CH,"</u> perform steps 5~7 in the "Auto VCR Plus+ Channel Setup (Part 1)" section on page 38. <u>If you selected "SELECT VCR Plus+ CH,"</u> perform steps 2~3 in the "Auto VCR Plus+ Channel Setup (part 2)" section on this page.

More You Can Do

39

VCR Plus+ Setup (continued)

*Important: If the remote control POWER, ACTION, PROG, CH▲/▼, INDEX/ M/A SKIP or ADD/DLT button does not work when pressed, press the VCR button on the remote and try the button again.

2
3

4

ADD/
DELETE

Channel Setup Preparations

NOTE: Complete the steps on this page if your cable box can be controlled with the VCR, or your VCR hook-up resembles "B" on page 12.

Prepare a list like the example below.
This list will help you smoothly enter the information needed in step "3" 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.
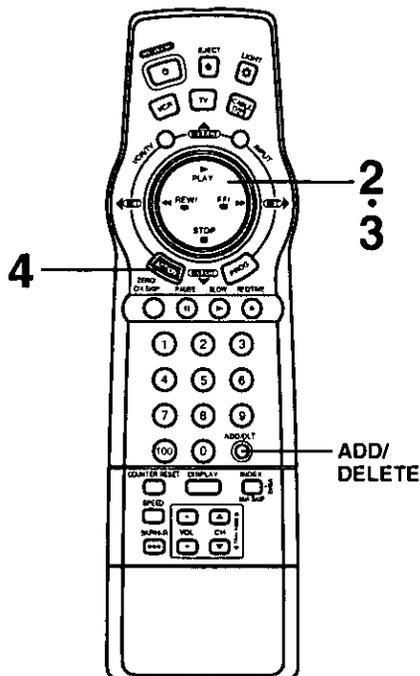
2 In the middle column, fill in each station's assigned Guide (VCR Plus+) number found in TV Guide, newspapers, etc.

3 In the right column, fill in the channel number that your TV receives the station on from your channel line-up.

EXAMPLE ONLY

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

Manual VCR Plus+ Channel Setup
Complete this page only if Type B connection method (pg. 12) is used.
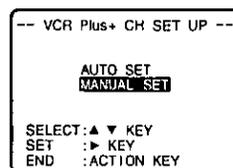- Before you begin, complete the Channel Setup Preparations below left.

Important Note:
If your VCR connection type changes from type A to B, perform "To Setup the VCR in Case a Cable Box or DSS Receiver was Installed or Replaced" section on page 17 before proceeding with these steps.
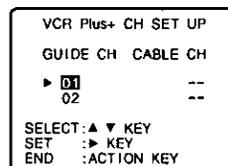
1 Follow steps 1 ~ 3 on page 38.

2 In step 4 on page 38, press ▲▼ to select "MANUAL SET," and then press ▶ to SET.

```
-- VCR Plus+ CH SET UP --

          AUTO SET
          MANUAL SET

SELECT:▲ ▼ KEY
SET   :▶ KEY
END   :ACTION KEY
```

IMPORTANT NOTE:
For step "3," 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 CABLE (or TV) CH numbers are the same.

3 Press ▶ to move the shaded area to the right side.

```
VCR Plus+ CH SET UP

GUIDE CH  CABLE CH

▶ 01        --
  02        --

SELECT:▲ ▼ KEY
SET   :▶ KEY
END   :ACTION KEY
```
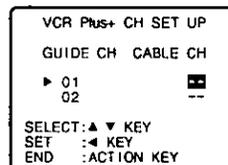
Then, press ▲▼ to change CABLE or TV CH number.

Next, press ◀ to set the number.

Now, press ▲▼ to continue.

Repeat this operation until the list is complete.

```
VCR Plus+ CH SET UP

GUIDE CH  CABLE CH

▶ 01        ██
  02        --

SELECT:▲ ▼ KEY
SET   :◀ KEY
END   :ACTION KEY
```

To Enter More Programs
Press ▲▼ and ▶ to select the incorrect CABLE or TV CH number. Then, press ▲▼ to change, or ADD/DLT to delete the channel.

4 Press ACTION 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.

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VCR Plus+ GOLD

Multi Function Display

9

2·6

3·5

1·4·7·8

ADD/
DELETE

Use normal Timer Recording steps if:
• the PlusCode for a program is not listed.
• you anticipate the program, such as a sporting event, to run over the scheduled stop time.

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.

---

1 Press **PROG** to display the "SET PROGRAM" screen.

```
----- SET PROGRAM ------

  VCR Plus+ PROGRAM
  TIMER PROGRAM

  VCR Plus+

ENTER PLUSCODE NUMBER
      ---
      ---
  USING 0-9 KEYS

END    :PROG KEY
```

2 Press ▲▼ to select "VCR Plus+ PROGRAM," and then press ► to display the "VCR Plus+" screen.

3 Press the **NUMBERED** keys to enter the PlusCode number.
• Refer to your local TV listings.

```
  VCR Plus+

ENTER PLUSCODE NUMBER

     123456

  USING 0-9 KEYS

BACKSPACE :◄ KEY
ENTER     :PROG KEY
```
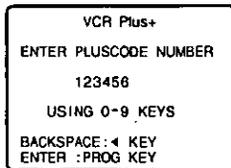
To Make Corrections
Press ◄ repeatedly to delete the PlusCode number. Then, enter the correct number.

4 Press **PROG** to lock in your program.

5 Press the **1, 2 or 3 key** to select the program type.

6 Press ▲▼ and ► to select and set each of the remaining items as follows.
Remaining Items
• Category (N/A [not applicable], SPORTS, MOVIE, COMEDY, MUSIC, DRAMA)
• Speed (SP, LP, SLP)

```
        VCR Plus+

1 ONE TIME
2 DAILY(MON-FRI)
3 WEEKLY

TO SELECT PUSH 1,2 OR 3
DATE  START  STOP  CH
8 SAT 10:00P 12:00P 125
TODAY
CATEGORY:N/A         SP
---------------------
SELECT CATEGORY
SELECT:▲ ▼ KEY
SET   :◄ ► KEY
END   :PROG KEY
```

To Make Corrections
Repeatedly press ► to move the cursor to the right, or ◄ to move to the left to the incorrect entry and make the correction.

• If you use connection type "A" on page 12, the channel shown in this on-screen display will always be the cable box output channel number.

7 Press **PROG** if contents are acceptable.

To cancel program contents:
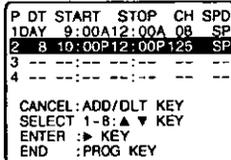Press ADD/DLT.

```
P DT START STOP CH SPD
1DAY  9:00A12:00A 08  SP
2  8 10:00P12:00P125  SP
3 -- --:-- --:--  --  --
4 -- --:-- --:--  --  --

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

8 Press **PROG** to complete the program.
• If you're using a Cable Box, make sure that it is tuned to the desired channel and the power is left on for timer recording.

```
   TURN VCR OFF
FOR TIMER RECORDING
      AND
LEAVE CABLE BOX POWER ON
```

• This display may differ depending on your cable box hook-up.

9 Press **POWER** off to set the timer.

`–TIMER–`

Multi Function Display

More You Can Do

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

DSS Brand Code Numbers

Toshiba	103
Hitachi/ Hughes	104
Magnavox/ Uniden 1	105
Magnavox/ Uniden 2	106
Sony	107
RCA	108
Panasonic	109

Cable Box Brand Code Numbers

|	
Archer	01, 29, 44, 88, 91
Cableview	04, 30, 42, 44, 52, 63, 85, 88
Citizen	04, 30, 42, 44, 52, 63, 85, 88
Curtis	08, 09, 56, 61, 87, 90
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	14, 15, 28, 41, 97, 100, 102
Hitachi	31, 79
Jerrold	
	01, 02, 03, 04, 34, 55, 83, 85, 91, 93, 95
Macom	31, 79
Magnavox	25, 26
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	05, 06, 78
Pulsar	04, 30, 42, 44, 52, 63, 85, 88
Radio Shack	44
RCA	16, 17, 101
Realistic	44, 51, 88
Regal	14, 41
Regency	28
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	27
SL Marx	32, 40, 42, 78, 94
Spucer	16, 17, 101
Stargate	
	04, 30, 32, 40, 42, 44, 52, 63, 78, 85, 88, 94
Sylvania	19
Teknika	74
Telecaption	77, 92
Teleview	32, 40, 42, 78, 94
Texscan	18, 19
Tocom	01, 33, 34, 42, 48, 49, 91
Toshiba	36
Uniden Satellite	65, 69
Unika	01, 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	64
Vidter	64
Zenith	07, 23, 50

3
VCR
CABLE/DSS 2
TV 2
NUMBERED keys 2
ENTER
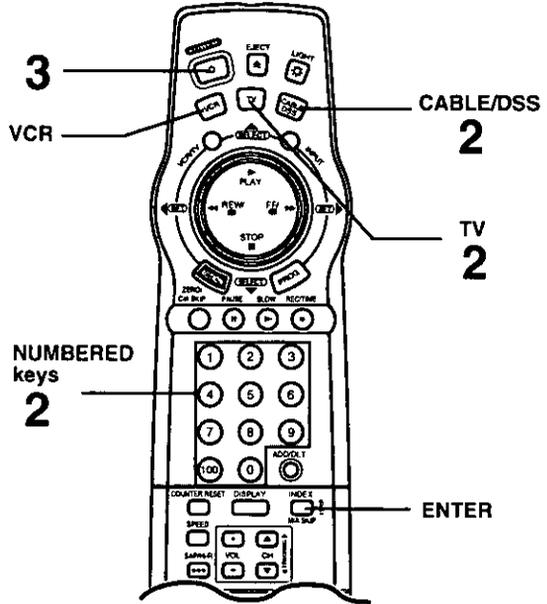
Multi-Brand Control Setup

1 Find your TV or Cable Box or DSS Box Brand Code Number from one of the charts on this page.

2 Hold down TV or CABLE/DSS. Use the NUMBERED keys to enter your TV or Cable Box Brand code number.
- For code numbers 100 or greater, first press the 100 key. Then, enter the remaining digit. E.g. for 102, press 100, then press 2.

3 To confirm that the correct code was entered, **press POWER** to turn your TV or Cable Box or DSS Box On/Off.

4 Try each of the functions listed on page 43.
- Due to changes in infra-red commands used by some manufacturers, more than one code may be listed for some TV or Cable Box brands. If your TV or Cable Box does not respond to the first code, please try entering the next code.

(NOTES)
- 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, Cable Boxes or DSS Boxes made by these manufacturers**. If you get no results, your particular product brand cannot be controlled by this remote control.

Using the Multi-Brand Control

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

Press VCR or TV or CABLE/DSS on the remote control to select the desired mode.
(See below for the controllable functions of each mode.)

NOTE:
In TV or CABLE/DSS mode, it may be necessary to press ENTER after pressing NUMBERED keys for channel selection.

VCR Mode

In VCR mode, the following buttons are available.

VCR
All function buttons.

TV
VOL UP/DOWN

TV Mode

In TV mode, the following buttons are available.

TV
POWER, INPUT, NUMBERED keys, ENTER, CH UP/DOWN, VOL UP/DOWN

VCR
EJECT, LIGHT, VCR/TV, PLAY, STOP, FF, REW, PAUSE, ZERO/ C/A SKIP, SLOW, REC, SAP/Hi-Fi, SPEED, COUNTER RESET, DISPLAY

CABLE/DSS Mode

In CABLE/DSS mode, the following buttons are available.

CABLE/DSS
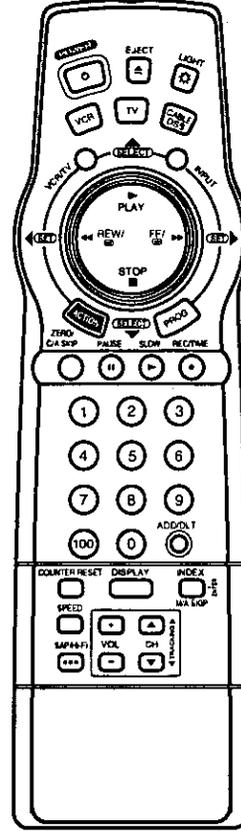POWER, NUMBERED keys, ENTER, CH UP/DOWN

TV
VOL UP/DOWN

VCR
EJECT, LIGHT, VCR/TV, PLAY, STOP, FF, REW, PAUSE, ZERO/ C/A SKIP, SLOW, REC, SAP/Hi-Fi, SPEED, COUNTER RESET, DISPLAY
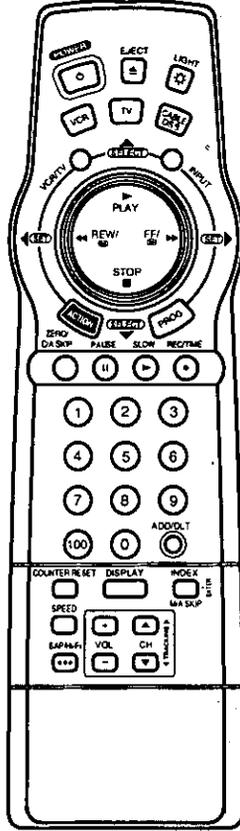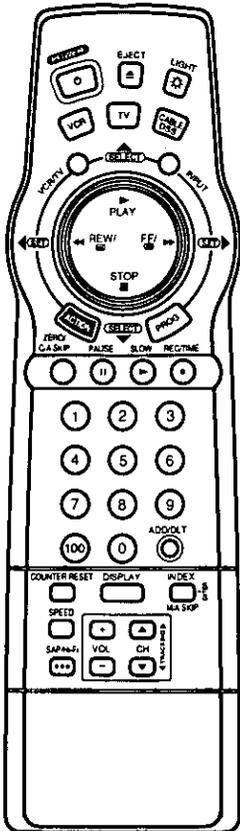
(NOTES) • Some TV, Cable Box and DSS Box brands require you to turn on the power manually.
• Not all functions listed may be controlled by this remote control.

More You Can Do

Connections you'll need to make. (Choose front or rear connection.)

• When connecting to a normal VCR, use the L Audio In jack for proper sound reproduction.

Playing (Source) VCR   Recording (Editing) VCR   TV for Monitoring
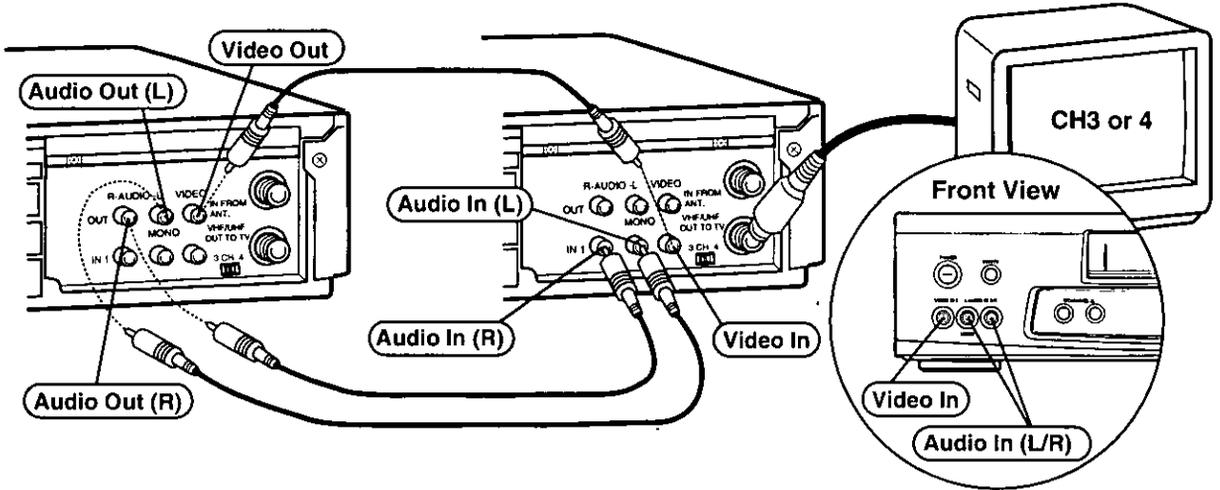
1 Insert a pre-recorded tape into the Playing (Source) VCR.

2 Insert a blank tape with record tab into the Recording (Editing) VCR.

3 Select "LINE" Input mode on the Recording (Editing) VCR. (See "Selecting the Input Mode" on page 21.)
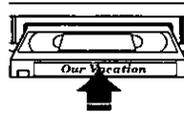
4 Press PLAY on the Playing VCR. Press PAUSE at the desired starting point.
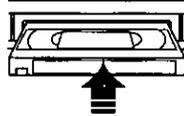
5 Press REC on the Recording VCR, and then press PAUSE immediately thereafter.

6 Press PAUSE on both VCRs at the same time, to begin copying.

To Edit Out Unwanted Parts
Press PAUSE on the recording VCR while copying is in progress. Press PAUSE again to resume copying.

7 Press STOP on both VCRs to stop copying.

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."

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

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 (CABLE or TV) is correctly set. (To Replace Channels in Memory [P.17]) • 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.22) • Make sure that the POWER button is set to OFF. (P.22) • 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 after power is restored.
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 tuned in. • Adjust the TRACKING control in either direction. (P.19)
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 cannot be controlled...	• Make sure that VCR LOCK is set to off. (P.35)

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.35) • Exposing the VCR remote sensor to direct fluorescent or outdoor light may cause signal interference.
ACTION and PROG buttons cannot be used...	• Press the VCR button to select VCR mode. (P.43)

Miscellaneous	Correction
Programs cannot be viewed on TV...	• Set the VCR/TV selector to "TV." (P.21)
Video cassette cannot be inserted...	• Insert the cassette with window side up; 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. 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 the problem, please call the Customer Satisfaction Center for product assistance at 201-348-9090.

To locate an authorized servicenter, please call toll free 1-800-211-PANA (7262).

Other Information

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Service Center List

Factory Servicenters Locations

CALIFORNIA
6550 Katella Avenue
Cypress, CA 90630

800 Dubuque Avenue
S. San Francisco,
CA 94080

20201 Sherman Way
Suite 102
Canoga Park, CA 91306

3878 Ruffin Road
Suite A
San Diego, CA 92123

COLORADO
1640 South Abilene Street
Suite D
Aurora, CO 80012

FLORIDA
3700 North 29th Avenue
Suite 102
Hollywood, FL 33020

GEORGIA
8655 Roswell Road
Suite 100
Atlanta, GA 30350

ILLINOIS
1703 North Randall
Road
Elgin, IL 60123
(Pick-up / Drop-off only)

9060 Golf Road
Niles, IL 60714

MARYLAND
62 Mountain Road
Glen Burnie, MD 21061

MASSACHUSETTS
60 Glacier Drive
Suite G
Westwood, MA 02090

MICHIGAN
37048 Van Dyke Avenue
Sterling Heights, MI 48312

MINNESOTA
7850-12th Avenue South
Airport Business Center
Bloomington, MN 55425

OHIO
2236 Waycross Road
Civic Center Plaza
Forest Park, OH 45240

PENNSYLVANIA
2221 Cabot Blvd. West
Suite B
Langhorne, PA 19047

Chartiers Valley
Shopping Center
1025 Washington Pike
Bridgeville, PA 15017

TENNESSEE
919-8th Avenue South
Nashville, TN 37203

TEXAS
7482 Harwin Drive
Houston, TX 77036

13615 Welch Road
Suite 101
Farmers Branch,
TX 75244

WASHINGTON
20425-84th Avenue South
Kent, WA 98032

HAWAII
99-859 Iwaiwa Street
Aiea, Hawaii 96701
Phone (808)488-1996
Fax (808)486-4369

Service in Puerto Rico

Matsushita Electric of Puerto rico, Inc. Panasonic Sales Company/ Factory Servicenter:

Ave. 65 de Infanteria, Km. 9.5, San Gabriel Industrial Park, Carolina, Puerto Rico 00985
Phone (787)750-4300 Fax (787)768-2910

Accessory Purchases:

Customer Orders Only 800-211-PANA (7262)

As of October '97

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 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	PARTS	LABOR
CAMCORDER	ONE (1) YEAR, EXCEPT CCD IMAGE SENSOR	NINETY (90) DAYS
	CCD IMAGE SENSOR - SIX (6) MONTHS	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	NINETY (90) DAYS
	CRT - TWO (2) YEARS	CRT - NINETY (90) DAYS CUSTOMER PAYS ALL LABOR CHARGES AFTER 90 DAYS

Monitor-VCR In-home or carry-in Service: 22" (diagonal) CRT / LCD and Larger
Monitor-VCR Carry-in Service: 21" (diagonal) CRT / LCD and smaller

Batteries (if included) - New rechargeable batteries in exchange for defective rechargeable batteries for ten (10) days. Non-rechargeable batteries are not warranted.

Tape (if included) - New video cassette tape in exchange for a defective video cassette tape for five (5) days.

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 toll free 1-800-211-PANA (7262), 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, improper voltage supply, lightning damage, commercial use such as hotel, office, restaurant, or other business or rental use of the product, or service by anyone other than a PASC Factory Servicenter or a PASC authorized 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 10/20/97

Other Information

Spanish Quick Use Guide/Guía para rápida consulta

Para ajustar el lenguaje, el sintonizador de cable/DSS, los canales y el reloj automático

1 Encienda el televisor y la videograbadora.

2 Sintonice el televisor al canal de salida de la videograbadora (el mismo canal que ha fijado en la parte trasera de la videograbadora; canal 3 o 4).

• Si esta usando los terminales de audio/video para su conexión, fije el televisor al modo de entrada de video.

3 Oprimir CH ▲ para elegir el idioma de la pantalla en inglés.

Oprimir CH ▼ para elegir el idioma de la pantalla en español.

```
SELECT LANGUAGE

PUSH VCR CH  ▲: ENGLISH
OPRIMIR VCR CH ▼: ESPAÑOL
APP. VCR/TV    : FRANÇAIS
```

Oprimir VCR/TV para elegir el idioma de la pantalla en francés.

• Ud. podrá fijar también usando los mismos botones que están ubicados en la videograbadora.
• La videograbadora debe conectarse a una antena o caja de TV por cable.
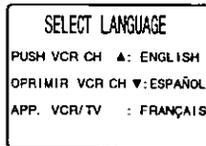
4 Oprimir ▲▼ para elegir, y luego oprimir ► para fijar su conexión.

```
ELEGIR LA CONEXION
CABLE/DSS►VCR►TV
VCR►CABLE/DSS►TV
VCR►TV

ELEGIR:▲ ▼
FIJAR :►
TERMINAR:ACTION
```

• Si ud. ha elegido CABLE/DSS ► VCR ► TV, continue al paso 5. De lo contrario, vaya a la sección "Instrucciones alternativas" en la página 49.
• Si está usando el método de conexión CABLE/DSS BOX ► VCR ► TV, sólo el canal de salida del cable será memorizado.
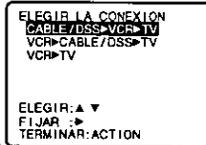
5 Oprimir ▲▼ para elegir el canal de salida de la caja de TV por cable o el receptor DSS, y luego oprimir ► para fijar.

```
ELEGIR LA CONEXION
CABLE/DSS►VCR►TV

SALIDA DEL CABLE/DSS
CA 01

ELEGIR:▲ ▼
FIJAR :◄ ►
TERMINAR:ACTION
```

• Si es necesario, consulte su manual de la caja de TV por cable.
• Si ud. está usando los terminales de audio/video para la conexión de la caja de TV por cable, elija y fije a "SALIDA DE VIDEO" para el canal de salida.
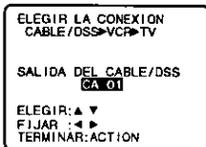
6 Oprimir ▲▼ para elegir el número de código de la caja de TV por cable o el receptor DSS, y luego oprimir ► para fijar. (Consulte su lista de la página 13.)
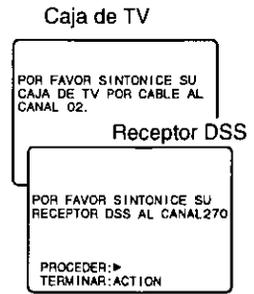
```
INTRODUCIR NUMERO/CODIGO
REFERIENDO AL MANUAL
01

ELEGIR:▲ ▼
FIJAR :►
TERMINAR:ACTION
```

• Si su caja de TV por cable o su receptor DSS no tiene un control remoto, elija "SIN CONTROL REMOTO."
• Luego, vaya a la sección "Instrucciones alternativas" en la página 49.
• De esta manera se determina si el videograbador va a controlar el sintonizador de cable o DSS.
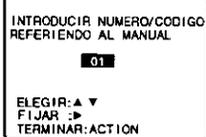
7 Si ud. usa una caja de TV por cable, sintonice al canal 2. Si usa un receptor DSS, sintonice al canal 270.

Oprimir ► para continuar.

• "ESTA TRANSMITIENDO" aparece.

Caja de TV
```
POR FAVOR SINTONICE SU
CAJA DE TV POR CABLE AL
CANAL 02.
```

Receptor DSS
```
POR FAVOR SINTONICE SU
RECEPTOR DSS AL CANAL 270

PROCEDER:►
TERMINAR:ACTION
```

8 Oprimir ▲▼ para elegir "SI" o "NO," y luego oprimir ► para fijar.

Caja de TV
```
ESTA RECIBIENDO SU CAJA
DE TV POR CABLE EL
CANAL 09 ?
SI
NO
```

Si ud. usa una caja de TV por cable y ha elegido "SI," siga al paso 9.

Si ud. usa un receptor DSS y ha elegido "SI," siga las instrucciones alternativas de la página 49.

Receptor DSS
```
ESTA RECIBIENDO SU
RECEPTOR DSS EL CA. 200?
SI
NO
ELEGIR:▲ ▼
FIJAR :►
TERMINAR:ACTION
```

Si ha elegido "NO," aparecerá de nuevo la pantalla del paso 6.

Intente fijar un código diferente para su marca y/o cambie la conexión de su equipo.

Si su respuesta es todavía "NO," el control de la caja de TV por cable o el receptor DSS no es disponible.
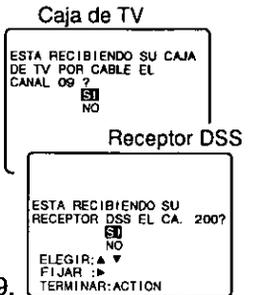
Verifique que su caja de TV por cable esté encendido y su receptor DSS esté apagado.

9 Oprimir ▲▼ para elegir el canal PBS de su local que está recibiendo en su caja de TV por cable, y luego oprimir ► para que aparezca la pantalla "FIJACION AUTO. (RELOJ)."
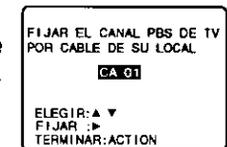
```
FIJAR EL CANAL PBS DE TV
POR CABLE DE SU LOCAL
CA 01

ELEGIR:▲ ▼
FIJAR :►
TERMINAR:ACTION
```

10 Oprimir CH ▲ para iniciar la fijación automática del reloj.

```
FIJACION AUTO. (RELOJ)

CONECTE EL CABLE DE LA
ANTENA Y SI ESTA USANDO
UNA CAJA DE TV POR CABLE
SINTONICE AL CANAL PBS
DE SU LOCAL   LUEGO...

POR FAVOR OPRIMIR CH UP
```

• Si ud. vive cerca de una zona con diferente hora, fije el canal de su zona.
• "FIJACION AUTOMATICA DE RELOJ EN PROCESO" aparece.

11 Esta pantalla aparece cuando la fijación automática del reloj es completo.

Comprobar si la hora está fijada correctamente y luego oprimir ▲ CH para terminar la fijación.

```
1/ 4/2000 MAR 12:00PM
HORA VERANIEGA:ACT
CANAL FIJADO : CA 02

FIJACION AUTOMATICA
COMPLETO

TERMINAR :OPRIMIR CH UP
```

48
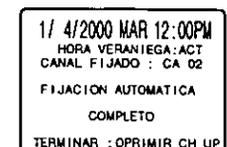
Si la hora fijada automáticamente es incorrecto

Si ud. usa una caja de TV por cable y recibe emisiones de más de un canal PBS, intente fijar automáticamente otravez. Siga la "Para fijar o fijar de nuevo el reloj" en la página 50 y cuando las instrucciones de la pantalla requiere la fijación del canal PBS, fije un canal que no ha intentado anteriormente.
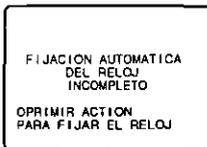
Si aparece en la pantalla FIJACION DEL RELOJ INCOMPLETO

La pantalla a la derecha aparecerá si no es disponible en su zona la fijación automática de la hora.

```
FIJACION AUTOMATICA
    DEL RELOJ
    INCOMPLETO

OPRIMIR ACTION
PARA FIJAR EL RELOJ
```

Presione ACTION para exhibir la pantalla "FIJAR RELOJ" (manual), y luego realice los pasos B y C en la página 49.

Notas:
Si ud. usa una caja de T.V por cable y recibe emisiones de más de un canal PBS, ud. debe salir desde la pantalla de la fijación del reloj manual e intente fijar automáticamente otravez.
Siga la "Para fijar o fijar de nuevo el reloj" en la página 50 y cuando las instrucciones de la pantalla requiere la fijación del canal PBS, fije un canal que no ha intentado anteriormente.

(NOTA) • La fijación automática de la hora se efectuará cada día al apagar la videograbadora por primera vez. Si ud. usa una caja de TV por cable y desea efectuar la fijación automática de la hora, la caja de TV por cable debe permanecer encendido y sintonizado al canal PBS cuando la videograbadora se apaga.

Instrucciones alternativas

Complete los siguientes pasos si ha efectuado una de las siguientes explicaciones.

• Ud. ha elegido la segunda conexión (VCR▶CABLE/ DSS▶TV o VCR▶TV) en el paso 4 de la página 48.

• Ud. ha elegido "SIN CONTROL REMOTO" en el paso 6 de la página 48 (su caja de TV por cable o receptor DSS no tiene un control remoto).

• Ud. está usando un receptor DSS y ha elegido "SI" en el paso 8 de la página 48.

1 Encienda la caja de TV por cable y fije la caja de TV por cable al canal PBS de su local.

• Si ud. vive cerca de una zona con diferente hora, asegúrese de fijar el canal de su zona.
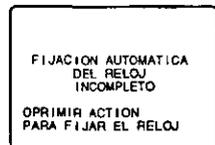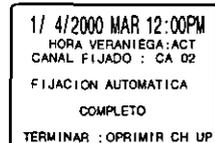• Si ud. usa un receptor DSS, éste debe estar apagado.

```
FIJACION AUTO. (CA/RELOJ)

CONECTE EL CABLE DE LA
ANTENA Y SI ESTA USANDO
UNA CAJA DE TV POR CABLE
SINTONICE AL CANAL PBS
DE SU LOCAL   LUEGO...

POR FAVOR OPRIMIR CH UP
```

2 Oprimir CH ▲ para iniciar la fijación automática de los canales y la fijacion de la hora.

• Aparace las siguientes informaciones:
"AUTOPROGRAMACION EN PROCESO"
"FIJACION AUTOMATICA DEL RELOJ EN PROCESO"

Esta pantalla aparece para informarle que la fijación automática de la hora es incompleto.

3 Comprobar si la hora está fijada correctamente y luego oprimir CH ▲ para terminar la fijación.

Si aparece esta pantalla, la fijación automática no es disponible en su zona. Ajuste el reloj a mano tal como se describe a continuación.

```
1/ 4/2000 MAR 12:00PM
    HORA VERANIEGA:ACT
CANAL FIJADO : CA 02

FIJACION AUTOMATICA

    COMPLETO

TERMINAR :OPRIMIR CH UP
```

```
FIJACION AUTOMATICA
    DEL RELOJ
    INCOMPLETO

OPRIMIR ACTION
PARA FIJAR EL RELOJ
```

A Oprimir ACTION para que aparezca la pantalla de la fijación del reloj.

B Oprimir ▲▼ y ◀▶ para elegir y fijar el mes, la fecha, el año, la hora y la hora veraniega.

Para hacer correcciones
Oprimir ◀▶ sucesivamente para avanzar o para retroceder hasta el paso que desea corregir.

C Oprimir ACTION dos veces para <u>iniciar a funcionar el reloj</u> y salir desde este modo.

```
--\|/--FIJAR RELOJ------
1/--/----    --:--
/|\       VERANO:ACT

ELEGIR MES

ELEGIR:▲ ▼
FIJAR :▶
TERMINAR:ACTION
```

```
------FIJAR RELOJ------
1/ 4/2000 MAR 12:00PM
          VERANO:ACT

FIJACION ES COMPLETO

FIJAR :◀ ▶
INICIR:ACTION
```

Si la hora y la hora veraniega es incorrecta,
Raras veces, en caso de que ud. vive cerca de
dos zonas con hora diferente, el aparato puede
elegir un canal PBS con diferente hora de su
zona. En este caso, haga los siguientes pasos:

a Tome nota del canal que está fijado en la
pantalla y salga desde este modo oprimiendo el
botón CH ▲.

b Anule este canal desde los canales
memorizados en la combinación de VCR/TV.

c Oprimir el botón ACTION para que aparezca la
pantalla del ACTION.

d Oprimir ▲▼ para elegir "FIJAR RELOJ" y luego
oprimir ▶ para que aparezca la pantalla de
"FIJAR RELOJ."

e Oprimir ▲▼ y para elegir y fijar "FIJACION
AUTOMATICA".

f Siga las instruccions en la páginas 48 y 49.
• Si ud. esta usando una caja de TV por cable y tiène
muchos canales PBS, sintonize la caja de TV por
cable a un canal PBS diferente e intente la fijación
automática otravez.

Para fijar o fijar de nuevo el reloj

En caso de que el reloj es incorrecto
o ha ocurrido un corte eléctrico.

1 Oprimir ACTION para que
aparezca la pantalla del menú.

```
--------- MENU ----------
PREPARAR VCR
FIJACION DE FUNCIONES
FIJAR RELOJ
FIJAR CANAL
LANGUE/LANGUAGE:ESPANOL
 ELEGIR:▲ ▼
 FIJAR :▶
 TERMINAR:ACTION
```

2 Oprimir ▲▼ para elegir
"FIJAR RELOJ" y luego
oprimir ▶ para que
aparezca la pantalla de
"FIJAR RELOJ."

```
----- FIJAR RELOJ ------
FIJACION AUTOMATICA
MANUAL
 ELEGIR:▲ ▼
 FIJAR :▶
 TERMINAR:ACTION
```

3 Oprimir ▲▼ para elegir
"MANUAL," y luego
oprimir ▶ para que
aparezca la pantalla de
la fijacion del reloj.

4 Oprimir ▲▼ y ◀▶ para elegir
y fijar la hora y la fecha.

```
-----FIJAR RELOJ------
1/ 4/2000 MAR 12:00PM
       VERANO:ACT/▲
ELEGIR HORA
 ELEGIR:▲ ▼
 FIJAR :◀ ▶
 TERMINAR:ACTION
```

5 Oprimir ACTION dos veces
para iniciar a funcionar el reloj
y salir desde este modo.
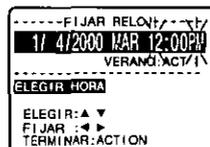
• Para ajustar el reloj automático, seleccione "FIJACION
AUTOMATICA" y luego siga las instrucciones de ajuste
de una vez del videograbador en las páginas 48 y 49.

Operaciones básicas para la reproducción

1 Introducir una cinta
• Esta indicación aparece en la
pantalla multifuncional.

```
-VCR-
```
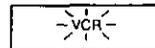
2 Oprimir PLAY en el control remoto o en la
videograbadora para comenzar a reproducir.

• Si la cinta no tiene la lengüeta para evitar el
borrado la videograbadora comienza a reproducir
automáticamente.

3 Oprimir STOP en el control remoto o en la
videograbadora para parar la reproducción.

4 Oprimir EJECT en el control remoto o en la
videograbadora para expulsar la cinta.

• Usted puede expulsar la cinta cuando el aparato está
encendido o apagado.

Para buscar una escena en particular durante la reproducción

Oprimir REW o FF durante la reproducción
para buscar una escena.

• La velocidad de búsqueda es a 7 veces más rápida que
la velocidad normal para el modo SP y 21 veces más
rápida para el mode SLP.

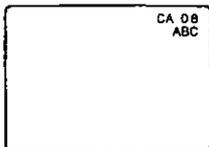• Durante la búsqueda aparece alguna barras de ruido.

Operaciones básicas para la grabación

1 Introducir una cinta con la lengüeta.
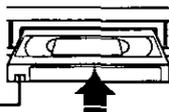
* La videograbadora se enciende automáticamente.

2 Oprimir CH ▲/▼ o las teclas numéricas para elegir un canal.

	CA 08
	ABC

* U oprimir CH ▲/▼ en la videograbadora.
* Manteniendo presionado CH ▲/▼ se aumentará la velocidad de búsqueda de canal.
* Para grabar desde una fuente externa, oprimir CH ▲/▼ o INPUT para elegir "LINEA1" o " LINEA2."

**3** Oprimir SPEED para cambiar la velocidad de la cinta.

	SP

* SP = Reproducción estándar,
LP = Larga duración,
SLP = Superlarga duración.

4 Oprimir REC/TIME en el control remoto o videograbadora para empezar a grabar.

* Oprimir PAUSE para hacer una pausa en la grabación en progreso.
Para continuar, vuelva a presionar PAUSE.
(Después que el videograbador se encuentre en el modo de pausa durante 5 minutos, se detendrá automáticamente para proteger la cinta y los cabezales de vídeo.)

Grabación de un toque (OTR)
La videograbadora termina la grabación a una hora programada. En el paso 4, oprimir repetídamente
REC/TIME para fijar el tiempo de grabación.
Cada presión cambiará la hora de parada como demuestra al siguiente.

Grabación normal→0:30→1:00
4:00←3:00←2:00←1:30

5 Oprimir STOP en el control remoto o videograbadora para parar la grabación.
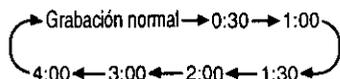
Programación fácil para la grabación con temporizador

1 Oprimir PROG para que aparezca la pantalla "FIJAR PROGRAMACION."

```
-- FIJAR PROGRAMACION --

VCR Plus+
TEMPORIZADOR

ELEGIR:▲ ▼
FIJAR :▶
TERMINAR:PROG
```

2 Oprimir ▲▼ para elegir "TEMPORIZADOR" y luego oprimir ▶ para exhibir la pantalla de la programación.
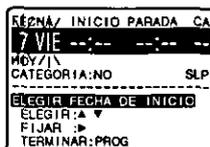
* Si ya existe una programación memorizada, oprimir ▲▼ y ▶ para elegir un número sin programación.

```
FEZNA/ INICIO PARADA CA
7 VIE --:-- --:-- --
HOY/|\
CATEGORIA:NO          SLP
-------------------------
ELEGIR FECHA DE INICIO
ELEGIR:▲ ▼
FIJAR :▶
TERMINAR:PROG
```

3 Oprimir ▲▼ y ▶ para elegir y fijar uno de los siguientes:

* 1~31 =Grabación de una sola vez
* DIARIO =A una misma hora LUN~VIE
* SEMANAL =Una vez a la semana a una misma hora

Ejemplo

```
8—9·······31— 1 — 2······6
Fecha de — 7    ▲/▼ Orden para elegir    DIARIA
hoy         SEMANAL......SEMANAL __ SEMANAL
            (SAB)       (LUN)       (DOM)
```
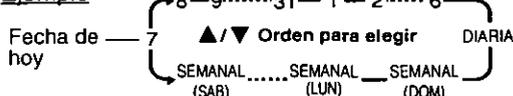
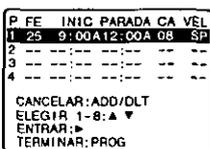**4** Oprimir ▲▼ y ◄▶ para elegir y fijar las siguientes fijaciones.

Fijaciones:
* Hora de inicio   • Hora de parada
* Canal o LINEA para una fuente externa .
* Categoria (NO, DEPORTE, CINE, COMEDIA, MUSICA, DRAMA)
* Velocidad de la cinta (SP, LP, SLP).

Para hacer correcciones
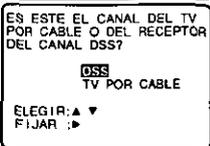Oprimir ▶ sucesivamente para avanzar u ◄ para retroceder hasta el paso que desea corregir.

5 Oprimir PROG para terminar la programación.

* Esta pantalla aparece para confirmación.

```
P FE   INIC PARADA CA VEL
1 25  9:00A12:00A 08  SP
2 -- --:-- --:-- -- --
3 -- --:-- --:-- -- --
4 -- --:-- --:-- -- --

CANCELAR:ADD/DLT
ELEGIR 1-8:▲ ▼
ENTRAR:▶
TERMINAR:PROG
```

Si usa un receptor DSS y fija un canal de 100~125, aparecera la pantalla a la derecha.

Oprimir ▲▼ para elegir "DSS" o "CABLE" y luego oprimir ▶ para fijar.

```
ES ESTE EL CANAL DEL TV
POR CABLE O DEL RECEPTOR
DEL CANAL DSS?

DSS
TV POR CABLE

ELEGIR:▲ ▼
FIJAR :▶
```

* La pantalla para la confirmación como demuestra arriba aparecera luego de la fijación.

Para hacer más programaciones
Oprimir ▲▼ y ▶ para elegir y fijar un número de programación en blanco y luego repita los pasos 3 y 4.

6 Oprimir PROG para salir desde este modo y volver a la pantalla normal.

7 Oprimir POWER y apague el aparato para la grabación con temporizador.

```
TIMER
```
Pantalla multifuncional

* Si la fuente de la grabación es una caja de TV por cable, asegúrese de que la caja de TV por cable esté encendido y esté sintonizado al canal que desea grabar.

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.

Clock Reset (page 17)

Display the menu

```
-------- MENU --------
SET UP VCR
SET UP FEATURE
SET CLOCK
SET UP CHANNEL
IDIOMA/LANGUE:ENGLISH
SELECT:▲ ▼ KEY
SET    :▶ KEY
END    :ACTION KEY
```

Select "SET CLOCK"

```
------ SET CLOCK ------
AUTO CLOCK SET
MANUAL
SELECT:▲ ▼ KEY
SET    :▶ KEY
END    :ACTION KEY
```

Select "MANUAL"

```
------ SET CLOCK ------
1/ 4/2000 TUE 12:00PM
              DST:ON
SELECT HOUR
SELECT:▲ ▼ KEY
SET    :◀ ▶ KEY
END    :ACTION KEY
```

Set the clock

Start the clock & exit this mode

Playback a Tape (page 19)

Turn TV on
Select VCR
Channel 3/4

Insert a tape

PLAY
Start playback

/

STOP
Stop playback

/

EJECT
Eject tape

Make a Recording (page 20)

Turn TV on
Select VCR
Channel 3/4

Insert a tape with Record Tab

Select channel

/

SPEED
SP
LP
SLP
Select speed

/

REC/TIME
Start recording

/

STOP
Stop recording

Set a Timer Recording (page 22)

Display the program screen

```
----- SET PROGRAM -----
VCR Plus+ PROGRAM
TIMER PROGRAM
SELECT:▲ ▼ KEY
SET    :▶ KEY
END    :PROG KEY
```

Select "TIMER PROGRAM"

```
DATE/ START  STOP  CH
7 FRI --:--  --:-- --
TODAY
CATEGORY:N/A         SLP
SELECT START DATE
SELECT:▲ ▼ KEY
SET    :▶ KEY
END    :PROG KEY
```

Enter timer information

Once to finish the program, twice to exit this mode

```
P DT START  STOP  CH SPD
1 DAY 9:00A 12:00A 08  SP
2   -- --:-- --:-- -- --
3   -- --:-- --:-- -- --
4   -- --:-- --:-- -- --
CANCEL:ADD/DLT KEY
SELECT 1-8:▲ ▼ KEY
ENTER :▶ KEY
END    :PROG KEY
```

Turn VCR off to set the timer

P