



Omnivision VHS

# Panasonic

Combination VCR  
Operating Instructions

Model No. PV-C2021/PV-C2031W



- Initial Setup and Connection Procedures are on pages 8 to 13.
- SELF-DEMO Procedure is on page 4.



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

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

Spanish Quick Use Guide is included.

(Guía para rápida consulta en español está incluida.)

LSQT0334B

For assistance, please call : 1-800-211-PANA(7262) or send e-mail to : [consumerproducts@panasonic.com](mailto:consumerproducts@panasonic.com)

Initial Setup

Basic Operation

TV Operation

Timer Operation

Advanced Operation

For Your Information

# Important Safeguards and Precautions

**READ AND RETAIN ALL SAFETY AND OPERATING INSTRUCTIONS. HEED ALL WARNINGS IN THE MANUAL AND ON UNIT**

## INSTALLATION

### 1 POWER SOURCE CAUTION

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

### 2 POWER CORD PLUG

For safety, this unit has a polarized type plug (one wide blade), or a three-wire grounding type plug. Always hold the plug firmly and make sure your hands are dry when plugging in or unplugging the AC power cord. Regularly remove dust, dirt, etc. on the plug.

### POLARIZED PLUG CAUTION:

The plug fits into outlet one way. If it cannot be fully inserted, try reversing it. If it still will not fit, have an electrician install the proper wall outlet. Do not tamper with the plug.

### GROUNDING PLUG CAUTION:

The plug requires a three-hole grounding outlet. If necessary, have an electrician install the proper outlet. Do not tamper with the plug.

### 3 POWER CORD

To avoid unit malfunction, and to protect against electrical shock, fire or personal injury:

- Keep power cord away from heating appliances and walking traffic. Do not rest heavy objects on, or roll such objects over the power cord.
- Do not tamper with the cord in any way.
- An extension cord should have the same type plug (polarized or grounding) and must be securely connected.
- Overloaded wall outlets or extension cords is a fire hazard.
- Frayed cords, damaged plugs, and damaged or cracked wire insulation are hazardous and should be replaced by a qualified electrician.

### 4 DO NOT BLOCK VENTILATION HOLES

Ventilation openings in the cabinet release heat generated during operation. If blocked, heat build-up may result in a fire hazard or heat damage to cassettes.

For your protection:

- Never cover ventilation slots while unit is ON, or operate unit while placed on a bed, sofa, rug, or other soft surface.
- Avoid built-in installation, such as a book case or rack, unless properly ventilated.

### 5 AVOID EXTREMELY HOT LOCATIONS OR SUDDEN TEMPERATURE CHANGES

Do not place unit over or near a heater or regulator, in direct sunlight, etc. If unit is suddenly moved from a cold place to a warm place, moisture may condense in unit and on the tape causing damage.

### 6 TO AVOID PERSONAL INJURY

- Never place unit on support or stand 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.
- Move any appliance and cart combination with care. Quick stops, excessive force, and uneven surfaces may cause objects to overturn.
- Carefully follow all operating instructions.

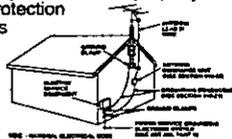


## OUTDOOR ANTENNA INSTALLATION

### 1 SAFE ANTENNA AND CABLE CONNECTION

An outside antenna or cable system must be properly grounded to provide some protection against built up static charges and voltage. Section 810

of the National Electrical Code, ANSI/NFPA 70 (in Canada, part 1 of the Canadian Electrical Code) provides information regarding 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

Locate an outside antenna system well away from power lines and electric light or power circuits so it will never touch these power sources should it ever fall. When installing antenna, absolutely never touch power lines, circuits or other power sources as this could be fatal.

## USING THE UNIT

Before unit is brought out of storage or moved to a new location, refer again to the INSTALLATION section of these safeguards.

### 1 KEEP UNIT WELL AWAY FROM WATER OR MOISTURE, such as vases, sinks, tubs, etc.

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

### 3 ELECTRICAL STORMS

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

### 4 WHEN UNIT IS PLUGGED IN

#### • DO NOT OPERATE IF:

- liquid has spilled into unit.
- unit was dropped or otherwise damaged.
- unit emits smoke, malodors, or noises.

Immediately unplug unit, and have it inspected by a service technician to avoid potential fire and shock hazards.

- Never drop or push any object through openings in unit.

Touching internal parts may cause electrical shock or fire hazard.

- Keep magnetic objects, such as speakers, away from unit to avoid electrical interference.

### 5 USING ACCESSORIES

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

### 6 CLEANING UNIT

Unplug unit. 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 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 PRODUCT YOURSELF

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

### 2 REPLACEMENT OF PARTS

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

### 3 SAFETY CHECK AFTER SERVICING

After unit is serviced or repaired, request that a thorough safety check be done as described in the manufacturer's service literature to insure video unit is in safe operating condition.

# Safety Precautions/Mesures de sécurité

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

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

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

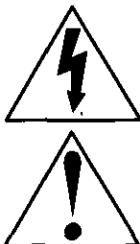
**Attention :** Pour éviter les chocs électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.

This 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.

This television receiver provides display of television closed captioning in accordance with §15.119 of the FCC rules.

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



This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock.

Therefore, it is dangerous to make any kind of contact with any inside part of this unit.

This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included.

Therefore, it should be read carefully in order to avoid any problems.

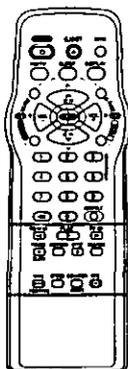
# Before Using

## Congratulations

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

Date of Purchase \_\_\_\_\_  
Dealer Purchased From \_\_\_\_\_  
Dealer Address \_\_\_\_\_  
Dealer Phone No. \_\_\_\_\_  
Model No. \_\_\_\_\_  
Serial No. \_\_\_\_\_

## Accessories



- Remote Control  
LSSQ0278  
(PV-C2021)  
LSSQ0279  
(PV-C2031W)



- Batteries  
2 "AA"

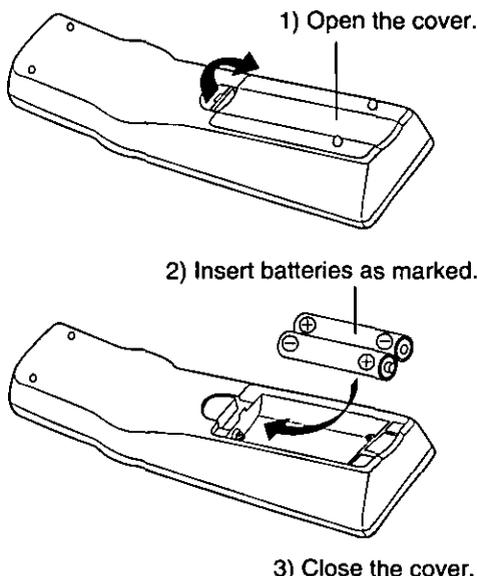
To order accessories,  
call toll free 1-800-332-5368.

## SELF-DEMO Mode

With Power ON, press  
**PLAY/REPEAT** on the  
unit for 7 seconds to  
deactivate the  
**SELF-DEMO Mode.**

Repeat this to display  
demo screen.

## Loading the Batteries

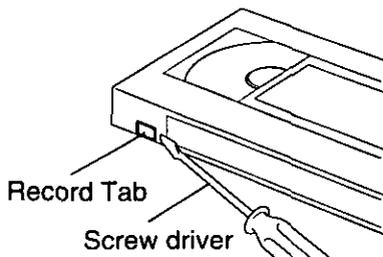


### Battery replacement caution

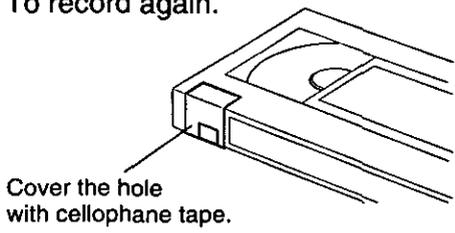
- Do not mix old and new batteries.
- Do not mix alkaline with manganese batteries.

## Prevent Accidental Tape Erasure

Break off the tab to protect.



To record again.



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# Location of Controls

## Remote Control Buttons

### EJECT button:

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

**EJECT**  
Page 6

**POWER**  
Page 8

**FM/TV**  
Page 21

**MUTE**  
Page 16

**CHANNEL UP/DOWN** Pg.16  
**SELECT UP/DOWN** Pg.13

**ACTION**  
Page 12

**NUMBER Keys**  
Page 16

**REWIND/SEARCH**  
Page 14

**PAUSE/SLOW**  
Page 14

**CM SKIP/ZERO SEARCH**  
Page 26

**TAPE POSITION**  
Page 25

**SPEED**  
Page 14

**SLEEP**  
Page 19

**NITE**  
Page 16

**DISPLAY**  
Page 35

**RAPID TUNE**  
Page 16

**VOLUME UP/DOWN** Pg.16  
**SET/BACKSPACE** Pg.13

**PROGRAM**  
Page 22

**TRACKING UP/DOWN**  
Page 37

**ADD/DELETE**  
Page 13

**PLAY**  
Page 14

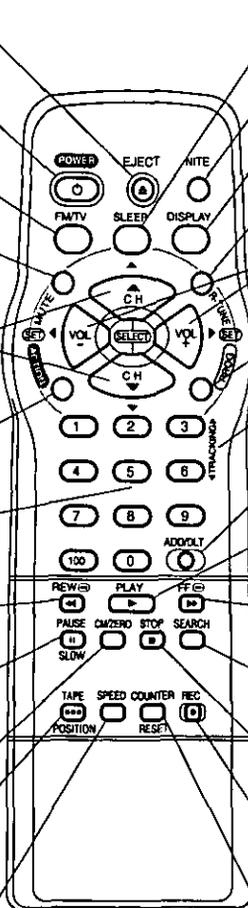
**FAST FORWARD/SEARCH**  
Page 14

**SEARCH**  
Page 24

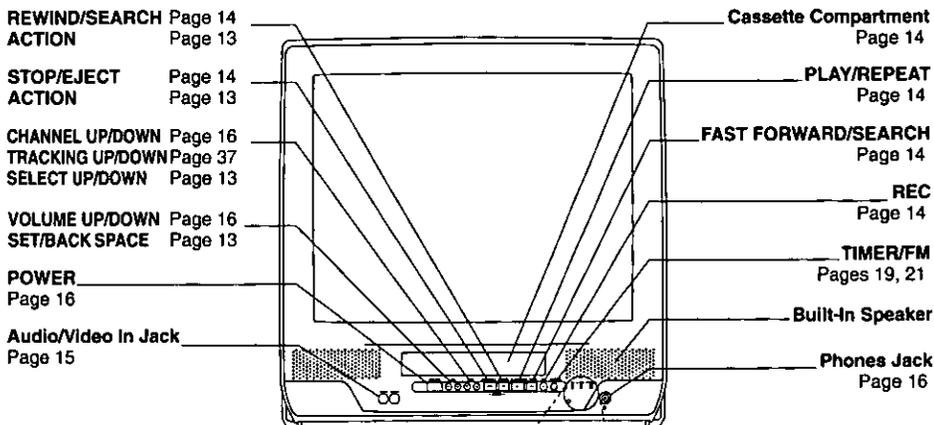
**STOP**  
Page 14

**REC**  
Page 14

**COUNTER RESET**  
Page 26

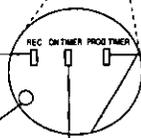


# Front View of the unit and Indicators on the Front Panel



### REC Indicator

Lights during recording. In Rec Pause or OTR Pause mode, the indicator flashes. Page 14



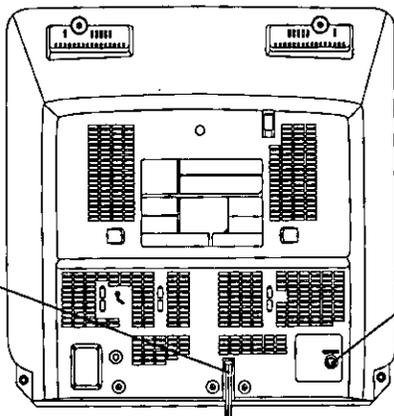
### Remote Sensor

**ON TIMER Indicator**  
 Lights when the On Timer is set Page 18

### PROG TIMER Indicator

Lights when the unit is set for Timer Recording. It flashes when a Timer Recording has been set with no tape inserted, the clock is not set, or the tape is in motion. Page 22

# Rear View of the unit



### AC Power Plug

When plugged into an AC outlet, the unit consumes 4.0 W of electric power in OFF condition.

### VHF/UHF Antenna Input Terminal

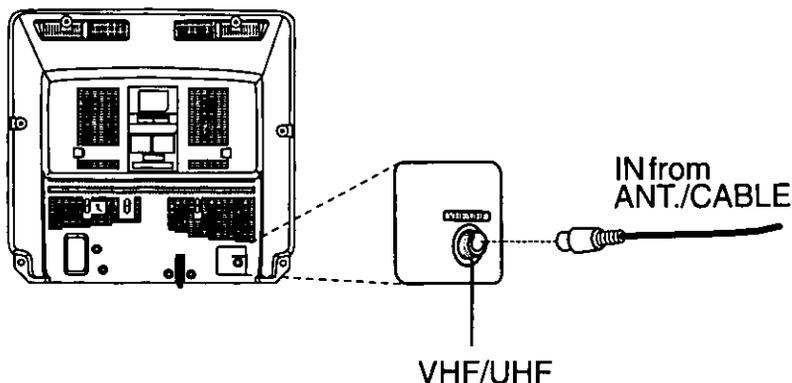
In from your Antenna or Cable. Pages 8, 10.

# Initial Setup for ANT./ Cable Connection

## How to Connect

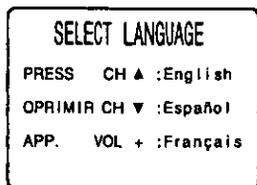
- Connect the Cable from Antenna/Cable to the VHF/UHF terminal on unit.

### UNIT

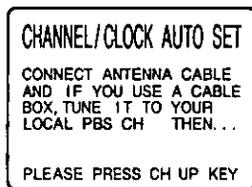


## How to do Initial Setup

- 1 Press **POWER** on the remote or unit.
- 2 When the unit is turned on the first time, **SELECT LANGUAGE** screen appears.



- 3 Press **CH ▲** to select English.  
OR  
Press **CH ▼** to select Spanish (Español).  
OR  
Press **VOL +** to select French (Français).  
**CHANNEL/CLOCK AUTO SET** screen appears.

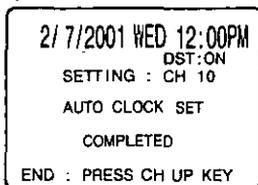


- If wrong language is set, complete "Reset all unit Memory Functions" steps page 9.

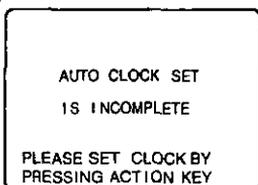
### WARNING:

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

- 4** Press **CH ▲** Key to start CHANNEL / CLOCK AUTO SET operation. Settings are performed automatically. If the setup is completed, the following screen is displayed.



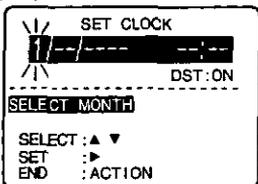
If AUTO CLOCK SET IS INCOMPLETE screen appears, set the clock using MANUAL CLOCK SET procedure as below.



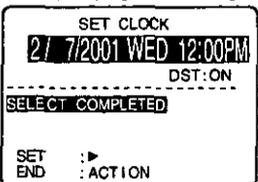
## MANUAL CLOCK SET

If AUTO CLOCK SET was incomplete, manually set the clock as follows.

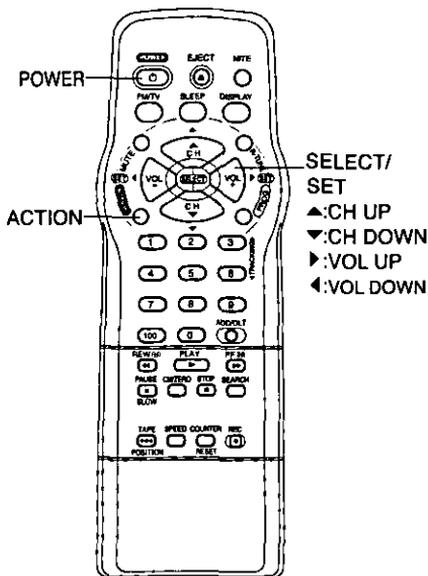
- 1** Press **ACTION** Key on the Remote to display SET CLOCK Menu screen.



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



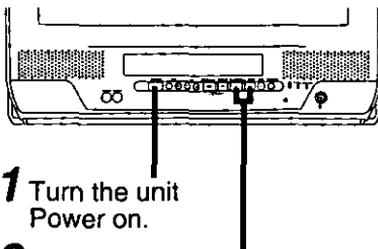
- 3** Press **ACTION** Key twice to start CLOCK and exit.



## Reset all unit Memory Functions

When moving unit to a new location, or if a mistake was made in the Initial Setup section.

- Make sure a tape is not inserted in the unit.



- 2** Press and hold both **PLAY** and **FF** for the unit for more than 5 seconds.
- The power will shut off.
  - Please ignore "NO CASSETTE" warning.

- 3** Do "Initial Setup" on page 8.

# Initial Setup for DSS / Cable box Connection

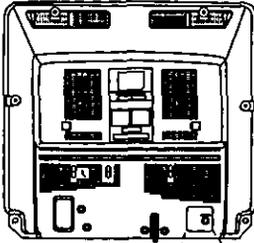
## How to Connect

- Connect the OUT Jack on your cable box to the VHF/UHF terminal on unit with an RF cable.

### WARNING:

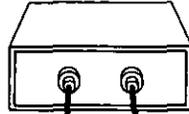
When using "Nut type" RF coaxial cables, tighten with fingers only. Overtightening may damage terminals.

UNIT



VHF/UHF

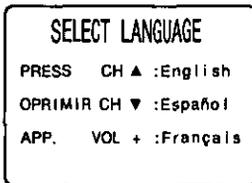
Cable TV  
Converter Box



IN from  
ANT./CABLE

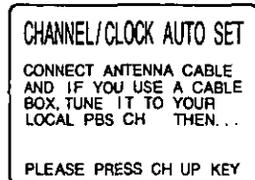
## How to do Initial Setup

- 1 Press **POWER** on the remote or unit.
- 2 When the unit is turned on the first time, **SELECT LANGUAGE** screen appears.



3

- Press **CH ▲** to select English.  
OR  
Press **CH ▼** to select Spanish (Español).  
OR  
Press **VOL +** to select French (Français).  
**CHANNEL/CLOCK AUTO SET** screen appears.



- Turn on your cable box and set it to **PBS(Public Broadcast Station) channel** in your time zone. If you use **DSS receiver**, it must be turned off.

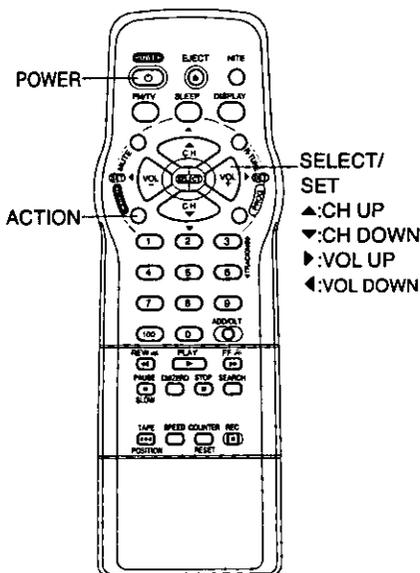
- If wrong language is set, complete "Reset all unit Memory Functions" steps page 9.

**4** Press **CH ▲** Key to start **CHANNEL / CLOCK AUTO SET** operation. Settings are performed automatically. If the setup is completed, the following screen is displayed.

2/7/2001 WED 12:00PM  
 DST:ON  
 SETTING : CH 10  
 AUTO CLOCK SET  
 COMPLETED  
 END : PRESS CH UP KEY

If **AUTO CLOCK SET IS INCOMPLETE** screen appears, set the clock using **MANUAL CLOCK SET** procedure on page 9.

AUTO CLOCK SET  
 IS INCOMPLETE  
 PLEASE SET CLOCK BY  
 PRESSING ACTION KEY

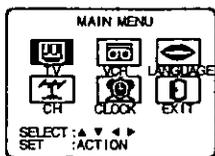


**Note to CABLE System Installer**

This reminder is provided to call the **CABLE (Cable TV) System Installers** attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

# Reset Language, Channels, Clock,

1

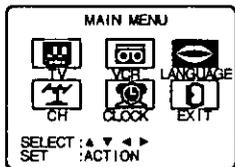


Press **ACTION** to display MAIN MENU.

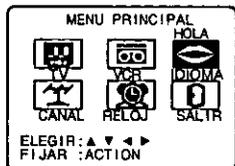
2

## Language

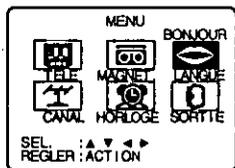
- 1) Press ▲▼◀▶ to select language icon.



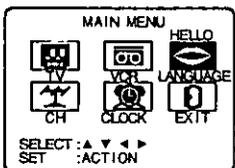
- 2) Press **ACTION** repeatedly.



For Spanish



For French

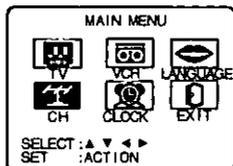


For English

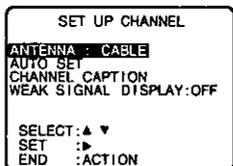
- 3) Press ▲▼◀▶ to select "EXIT." Press **ACTION** to exit.

## Channels

- 1) Press ▲▼◀▶ to select "CH."



- 2) Press **ACTION**.



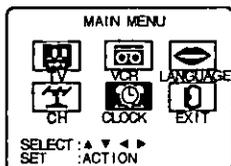
- 3) Press ▲▼ to select "ANTENNA," then press ▶ to set your antenna system ("TV" or "CABLE").

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

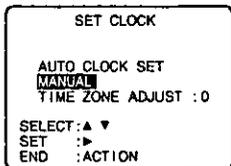
- After Channel Auto Set is finished, Clock Auto Set will be performed.

## Clock

- 1) Press ▲▼◀▶ to select "CLOCK."



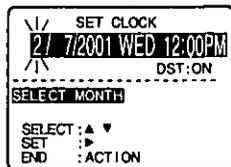
- 2) Press **ACTION**.



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

- 3) Press ▲▼ to select "MANUAL" or "AUTO CLOCK SET" and press ▶.

- For Auto Clock Set, select "AUTO CLOCK SET," then press CH ▲.



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

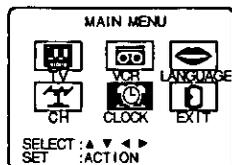
- 5) Press **ACTION** twice to start the clock and exit this mode.

# Time Zone Adjust

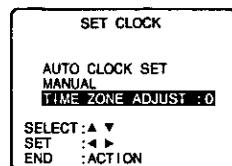
## Time Zone Adjust

(Only when Auto Clock is set.)

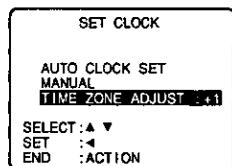
- 1) Press **▲▼◀▶** to select "CLOCK."



- 2) Press **ACTION**.

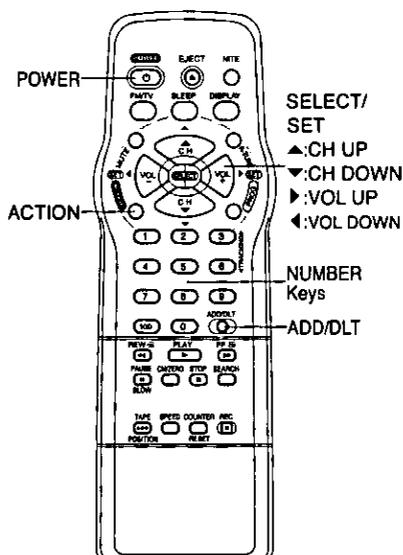


- 3) Press **▲▼** to select TIME ZONE ADJUST and press **◀** or **▶** to subtract or add hour(s) as necessary.



- 4) Press **ACTION** twice to exit.

- TIME ZONE ADJUST returns to "0" if clock is set manually.

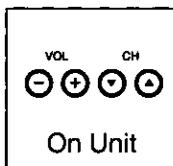
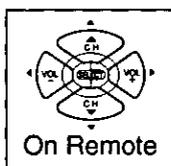


### ACTION key on the unit



You can operate the menu screen using unit buttons. To display the menu, press STOP/EJECT and REW together with no tape inserted. To exit the menu, repeat above with or without tape inserted until normal screen appears.

### Using ▲▼◀▶ keys

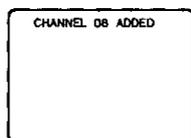


- ▲ : CH UP
- ▼ : CH DOWN
- ▶ : VOLUME UP
- ◀ : VOLUME DOWN

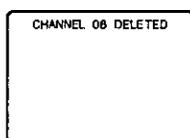
Whenever the menu or program screen is displayed, CHANNEL UP/DOWN function as **▲▼** and VOLUME UP/DOWN function as **◀▶** only.

### Add or Delete a Channel

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



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



# Playback a Tape

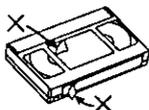
# Record On a Tape

## ✓ Ready Check List

- All connections are made.
- Your unit is plugged in.



**1 Insert a cassette.**  
 • The unit power comes on automatically.



**To prevent tape jam,** remove loose or peeling labels from tapes.

## 2 Press PLAY.

• Playback begins if cassette has no record tab.

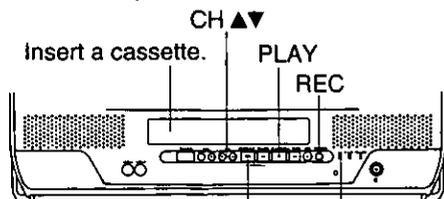
- **Forward/Reverse scene search**  
 → Press **FF** or **REW**  
 → Press again or **PLAY** to release.
- **Still (Freeze) picture**  
 → Press **PAUSE/SLOW**  
 → Press **PLAY** to release.
- **Slow Motion picture**  
 → Hold down **PAUSE/SLOW** in Still mode  
 → Press **PLAY** to release.
- **Frame by Frame picture**  
 → Press **PAUSE/SLOW** in Still mode  
 → Press **PLAY** to release.

### Notes

- These features work best in SLP mode.
- After the unit is in Still or Slow mode for 3 minutes, it will switch to Stop mode automatically to protect the tape and the video head.

- **Stop** → Press **STOP**
- **Rewind tape** → Press **REW** in Stop mode
- **Fast forward tape** → Press **FF** in Stop mode
- **Eject tape** → Press **EJECT** on the remote or **STOP/EJECT** on the unit

### You can operate on the unit



- Press to stop and/or **REC** Indicator eject tape.

## 1 Insert a cassette with record tab.

- The unit power comes on automatically.

## 2 Press CH ▲▼\* or number keys to Select Channel.

- For "LINE" input, see bottom of next page.

## 3 Press SPEED to select recording speed (see page 37).

- SP = Standard Play
- LP = Long Play
- SLP = Super Long Play
- Selected speed is displayed.

## 4 Press REC to start recording.

- To edit out unwanted portions, press **PAUSE/SLOW** to pause and resume recording.
- You cannot view another channel during recording.

- **Stop** → Press **STOP**
- **One Touch Recording (OTR)**

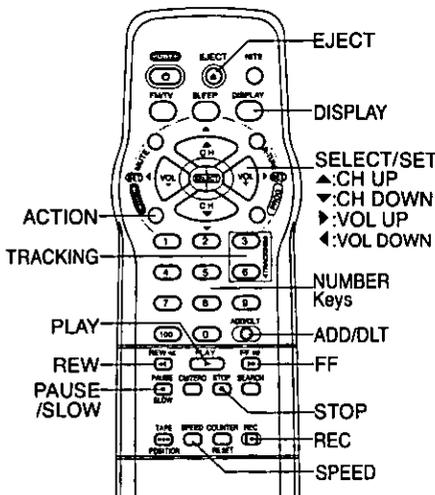
Press **REC** repeatedly to set the recording length (30 min - 4 hours.)

Normal Rec → 0:30 → 1:00  
 ← 4:00 ← 3:00 ← 2:00 ← 1:30

- The unit stops recording at a preset time.
- **PROG TIMER** indicator lights on the unit.

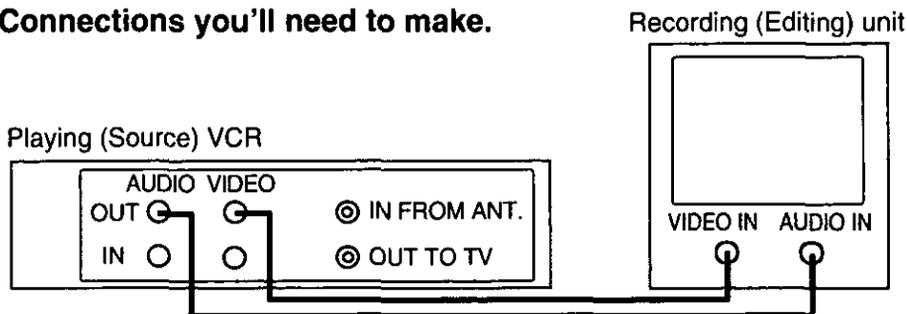
### Notes

- After the unit has been in Rec Pause mode for 5 minutes, it will stop automatically to protect the tape and the video head.
- The remaining recording time of an OTR can be displayed by pressing **DISPLAY**.



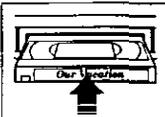
# Copy Your Tapes (Dubbing)

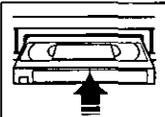
Connections you'll need to make.



## Playback (Source)

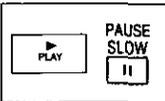
## Recording (Editing) unit

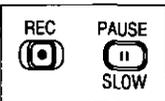
**1**  **Insert pre-recorded tape.**

 **Insert blank tape with record tab.**

- Dubbing tapes protected with Copy Guard will have poor quality results.

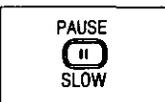
**2** \_\_\_\_\_ **Select "LINE" mode.**  
See "Selecting Input Mode" below.

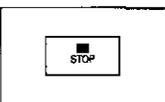
**3**  **Press PLAY then PAUSE at starting point to put in Standby mode.**

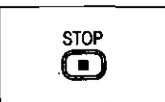
 **Press REC, then PAUSE/SLOW immediately to put in Standby mode.**

(Perform operation of steps 4 and 5 on both units at same time.)

**4**  **Press PLAY to start dubbing.**

 **Press PAUSE/SLOW to start dubbing.**

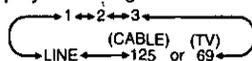
**5**  **Press STOP to stop dubbing.**

 **Press STOP to stop dubbing.**

## Selecting Input Mode

Method 1:

Press CH ▲▼. The display will change as follows.



Method 2:

a Press ACTION for MAIN MENU.

b Press ACTION to select "TV", then press ACTION for SET UP TV screen.

c Press ▲▼ to select "INPUT SELECT," and then press ► to select "TUNER" or "LINE."

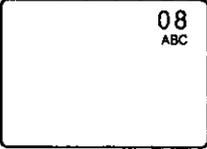
d Press ACTION twice to exit this mode.

### Caution

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

# TV Operation

- 1** Press **POWER** on the remote or unit.

- 2**  Use **CH ▲▼** or **number keys** to select a channel.

- 3**  Press **VOL +** or **VOL -** to adjust volume.

## NIGHT (NITE) Mode

Color and picture intensity levels are adjusted so the screen is easier on your eyes during night time use.

NIGHT

Press **NITE** to set NIGHT mode.

- NIGHT mode may be selected when watching TV, playing a tape, or while in FM mode.

Press **NITE** to cancel.

- Previous settings are restored.
- NIGHT mode is canceled when power is turned off or power failure occurs.

## Using the 100 key

When selecting **CABLE** channels 100 to 125 with the number keys, first press the 100 key, and then enter the remaining two digits.

## Rapid Tune

Press **R-TUNE** to display the last channel you were watching.

## Audio Mute

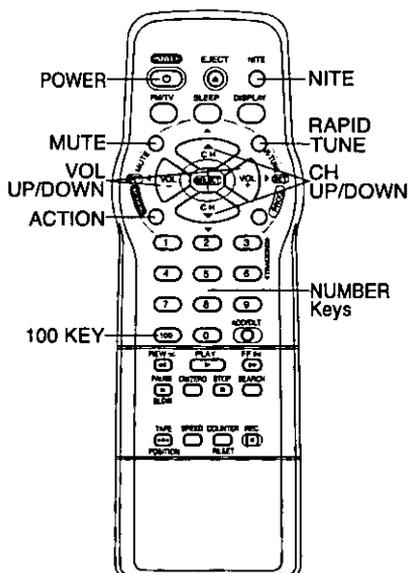
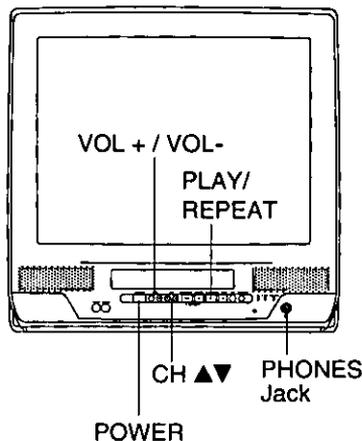
Press **MUTE** to instantly mute the sound. Press again to restore the previous sound level.

## Phones

Connect an earphone (not supplied) or headphones (not supplied) to the Phones Jack.

## Ready Check List

- All connections are made.
- Your unit is plugged in.



# Closed Caption System

## Closed Caption is ...

This multi-use system not only allows the hearing impaired to enjoy selected programs, but also makes useful information from TV stations available to everyone.

## Closed Caption Mode Feature

**1** Press **ACTION** to display MAIN MENU.

**2**

1) Press **▲▼◀▶** to select "TV."  
2) Press **ACTION** to display SET UP TV screen.

**3**

1) Press **▲▼** to select "CAPTION".  
2) Press **▶** to display CAPTION screen.

**4**

1) Press **▲▼** to select CAPTION MODE.  
2) Press **▶** repeatedly to select mode. (See left.)

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

## Recording and Playing Back a Closed Caption/Text Program

**Record** : Record normally. Closed Caption/Text signal, if present, is recorded automatically.

**Playback** : Start playback. Do above steps to select desired caption mode.

## Closed Caption Mode Selections

### Caption Mode: CAP C1 or C2

A narration of selected TV programs is displayed. Check TV program listings for CC(Closed Caption) broadcasts.

### Caption Mode: TEXT C1 or C2

The lower half of the screen will be blocked out. When the TV station broadcasts information, such as program listings, it will appear in this space.

### Caption Mode: OFF

Closed Caption /Text narration will not be displayed.

**NOTE** : The closed caption or text signal may be broadcast over C1, C2, or both.

Also, text contents can vary so you may wish to try different settings.

## Caption On Mute Feature

Closed Caption narration, if available, is displayed when MUTE button is pressed for silence.

**1** Press **ACTION** to display MAIN MENU.

**2**

1) Press **▲▼◀▶** to select "TV."  
2) Press **ACTION** to display SET UP TV screen.

**3**

1) Press **▲▼** to select "CAPTION".  
2) Press **▶** to display CAPTION screen.

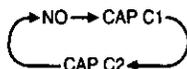
**4**

1) Press **▲▼** to select CAPTION MODE.  
2) Press **▶** repeatedly to select "OFF."

**5**

1) Press **▲▼** to select CC ON MUTE.  
2) Press **▶** repeatedly to select desired mode.

- Each press of **▶** will change the display as shown left.
- The caption may be broadcast over CAP C1 or C2.



**6** Press **ACTION** three times to return to the normal screen.

**7** Press **MUTE** to mute the sound and display closed captioning.  
• To cancel, press MUTE again.

# TV Timer Features

## ON-TIMER with Alarm

This unit can be set to automatically power on in one of 3 modes (TV, Playback, or FM radio.)

You can also combine the On-Timer with a one minute alarm that gradually increases in volume.

### Ready Check List

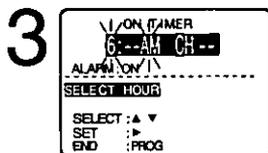
- The clock is set to correct time.

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



1) Press **▲▼** to select "ON TIMER."

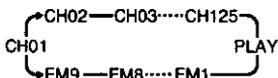
2) Press **►** to display ON TIMER screen.



1) Press **▲▼** to select desired settings.

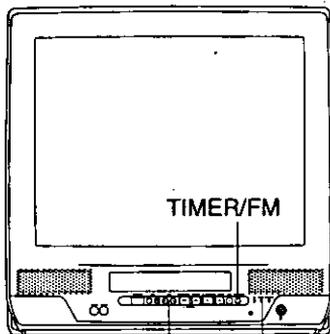
2) Press **►** to set the ON-TIMER TIME or ON-TIMER mode.

• ON-TIMER mode selection order



• Make sure a tape is inserted if Playback mode is selected.

• See "FM Radio" on page 21 for instructions on how to preset FM stations.



CH **▲▼** ON TIMER Indicator



Press **▲▼** to select ALARM "ON" or "OFF."

When "ON" is selected, an alarm will gradually increase in volume for one minute or until canceled by pressing any button (including VOL + -).

To Make Corrections, use **▲▼** and **◀▶** to move back and correct.

**5** Press **PROG** to set ON TIMER.

- "ON TIMER SET" is displayed.
- ON TIMER Indicator lights on the unit.

To Cancel ON-TIMER set,

Repeat steps 1 and 2. Then, press **ADD/OLT** to clear the time in step 3. Now, press **PROG** to end. "ON TIMER END" briefly appears on-screen.

### Note

If no button on the remote or unit (including a button used to turn off the alarm) is pressed within 60 minutes after unit turns itself on, it will turn itself back off.

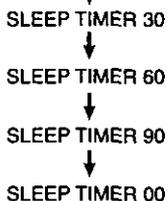
## SLEEP TIMER

This unit can be set for auto power off.

Press **SLEEP** repeatedly to set SLEEP TIMER.

• Pressing **DISPLAY** with sleep timer set displays remaining time.

Press **SLEEP** repeatedly until "SLEEP TIMER 00" appears to cancel.

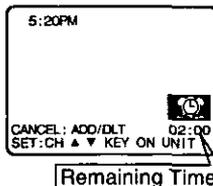


## INSTANT ALARM

You can set a timer alarm up to 60 min. Useful when you are cooking, etc.

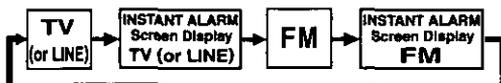
**1** Press **TIMER/FM** on the unit to display the instant alarm CANCEL/SET screen.

**2**



Press **CH ▲▼** on the unit with CANCEL/SET screen displayed to set alarm. (Time changes in the order shown left.)

• Pressing **TIMER/FM** repeatedly on the unit will change display as follows.



**To cancel**, press **TIMER/FM** then press **ADD/HLT** on the remote while CANCEL/SET screen is displayed.

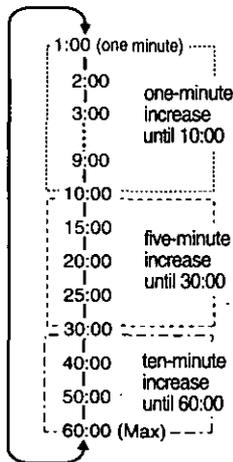
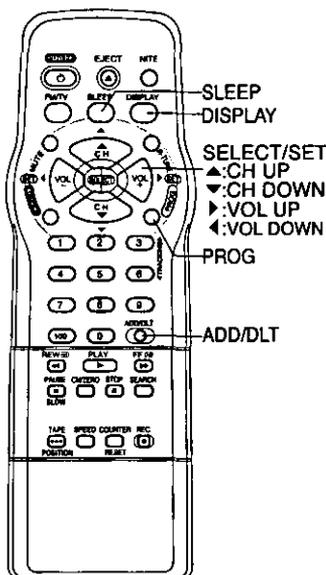
**To increase timer in progress**, repeat step 2. Time will be rounded up to next 1, 5, or 10 minute interval. (See chart left.)

<Example>

- If current time remaining is 12:15, countdown will restart from 15:00.
- If current time remaining is 9:15, countdown will restart from 10:00.

**3** Alarm will sound at 0:00. Press any button to stop

- The volume of the alarm gradually increases for one minute and then continues to beep until any button is pressed.

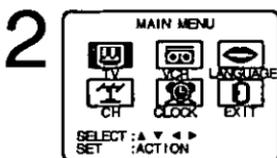


### Note

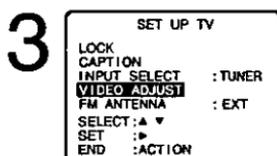
While timer function is in progress, you can change channels on the unit with **CH ▲▼** while "CANCEL/SET" screen is not displayed.

# Picture Adjustment

- 1** Press **ACTION** to display MAIN MENU.



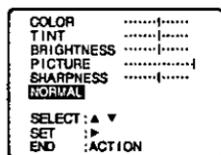
- 1) Press **▲▼◀▶** to select "TV."  
2) Press **ACTION** to display SET UP TV screen.



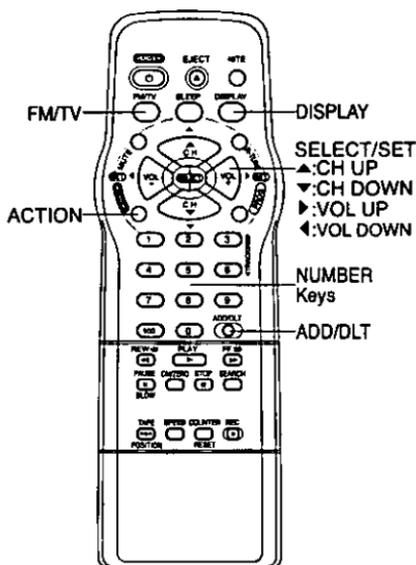
- 1) Press **▲▼** to select VIDEO ADJUST.  
2) Press **▶** to display adjustment screen.



- 1) Press **▲▼** to select an adjustment item. (See below right.)  
2) Press **◀▶** to adjust.



- To Reset Picture Controls.**  
Press **▲▼** and **▶** to select and set "NORMAL."  
All controls return to their factory settings.



- 5** Press **ACTION** three times to exit.

## Picture Adjustment

- **COLOR Control**  
Adjust color intensity.
- **TINT Control**  
Adjust for natural flesh tones.
- **BRIGHTNESS Control**  
Adjust picture brightness.
- **PICTURE Control**  
Adjust picture intensity by adjusting both contrast and color level in the proper balance.
- **SHARPNESS Control**  
Adjust picture sharpness.

# FM Radio

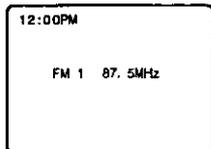
## FM Radio is ...

This unit has an FM radio with built-in antenna, 9 station preset, and a band range of 87.5 ~ 108.1 MHz. You can even set the On-Timer (page 18) to wake up to your favorite radio station.

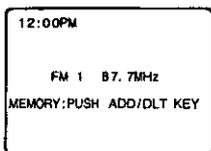
## FM Radio Setup

**1** Press **FM/TV** on the remote or press **TIMER/FM** twice on the unit to display FM radio mode.

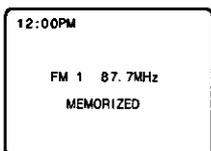
**2** Press a number key (1~9) to select the FM number.



**3** Press **CH** **▲▼** to select the desired radio station. (Each press changes frequency 200 KHz.)



**2) Press ADD/ DLT** to set the radio station.



**Hold down CH ▲ or ▼** for a few seconds, then release to quickly scan for FM stations in your area.

• To cancel, press **CH ▲** or **▼** while in search mode.

**To Make Corrections,** select station with a number key, then do step 3 again.

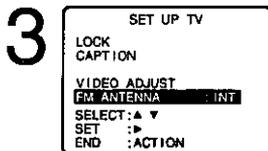
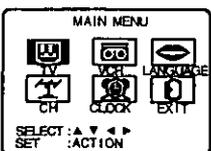
**To exit FM mode,** press **FM/TV** on the remote or **TIMER/FM** twice on the unit.

## FM ANTENNA Setup

**Make sure FM tuning is done correctly (see FM Radio Setup).**

**1** Press **ACTION** to display MAIN MENU.

**2** Press **▲▼◀▶** to select "TV." **2) Press ACTION** to display SET UP TV screen.



- For cable TV users → "INT"
- For antenna users → "EXT"

**1) Press ▲▼** to select **FM ANTENNA**.  
**2) Press ▶** to select "INT (INTERNAL)" or "EXT (EXTERNAL)" whichever sounds the best.

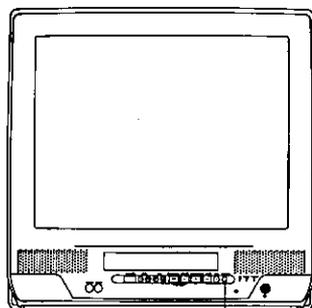
**4** Press **ACTION** twice to end setup.

## Using FM Radio

**1** Press **FM/TV** on the remote or press **TIMER/FM** twice on the unit to display FM radio mode.

**2** Press a number key (1~9) to select a preset FM number (see steps 2 and 3 on this page).

**To cancel,** press **FM/TV** on the remote or **TIMER/FM** twice on the unit.



TIMER/FM

### Notes

- FM radio cannot be recorded on a Video cassette.
- You may get better reception by repositioning the unit.
- You cannot select FM Radio mode during playback or record, or while a blue back screen (PROG, ACTION, MENU) is displayed.
- Once stations are set, the selected station and current time are displayed when FM Radio mode is entered. To remove time, press **DISPLAY**. If **DISPLAY** is pressed again, the unit status screen appears.

TV Operation

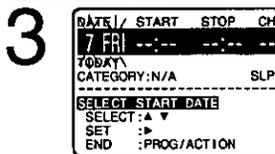
# Timer Recording

You can set up to 8 programs to be recorded while you are away.

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



1) Press ▲▼ to select **TIMER PROGRAMMING**.  
2) Press ► to display screen.  
• If a program is already in memory, press ▲▼, and ► to select an unused program number.



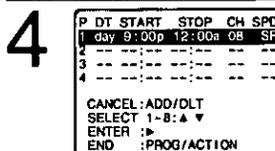
Press ▲▼ to select and ► or ◀ to set the recording **DATE**.  
• 1-31 = One time  
• DAILY = MON-FRI  
• WEEKLY SUN-SAT = Same time once a week

## Example



## Repeat step 3 to set:

- start time, stop time
- Channel (or LINE for outside source)
- Category [N/A (not applicable), SPORTS, MOVIE, COMEDY, MUSIC, DRAMA]
- Speed (SP, LP, SLP)



Press **PROG** (or **ACTION**) to end the program.

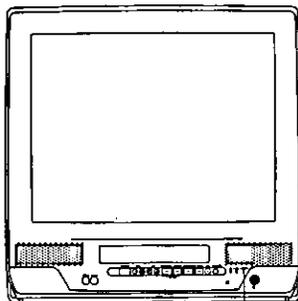
**To Enter More Programs**  
Press ▲▼ to select and ► to set a blank program number, and then repeat step 3.

**5 Press PROG twice (or ACTION)**  
to exit this mode.

- 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.
- PROG TIMER indicator lights on the unit.

## ✓ Ready Check List

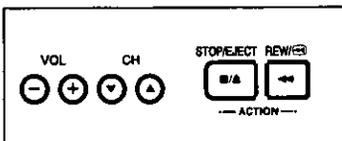
- All connections are made.
- Your unit is plugged in.
- The clock is set to correct time.
- The tape is long enough.
- The record tab is in place.



PROG TIMER Indicator

## Timer Recording Using unit Buttons

You can set a Timer Recording using **ACTION** key on the unit. (See page 13.)



- 1) Press STOP/EJECT and REW together without a tape inserted to display MAIN MENU.
- 2) Press ▲▼ + - to select "VCR" and STOP/EJECT and REW together to display SET UP VCR screen.
- 3) Press ▲▼ to select "TIMER PROGRAM" and + to display the TIMER PROGRAM screen.
- 4) Repeat main steps 3 ~ 5.

## Cancel a Timer Recording: (Recording is in progress)

Hold down STOP for a few seconds to cancel the Timer Recording.

- Any future daily or weekly recordings will be performed as programmed.

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

**1** Repeat steps 1 and 2 on page 22.

**2**

P	DT	START	STOP	CH	SPD
1	Day	9:00p	12:00a	08	SP
2	8	10:00a	12:00p	12S	SP
3	10	8:00p	9:00p	10	SP
4	SU	9:00p	10:00p	L	LP

CANCEL : ADD/HLT  
SELECT 1-8 : ▲ ▼  
ENTER : ►  
END : :PROG/ACTION

Press ▲▼ to select the desired program.

**3** To Replace program...

DATE	START	STOP	CH
8 SAT	9:00P	12:00A	08
TODAY		ABC	
CATEGORY: MOVIE		SP	
SELECT START DATE			
SELECT : ▲ ▼			
SET : ►			
END : :PROG/ACTION			

- 1) Press ► to display.
- 2) Press ▲▼ to select and press ◀ or ▶ to set new program contents.
- 3) Press PROG (or ACTION).

To Clear program...

P	DT	START	STOP	CH	SPD
1	---	---	---	---	---
2	8	10:00p	12:00a	12S	SP
3	10	8:00p	9:00p	10	SP
4	SU	9:00p	10:00p	L	LP

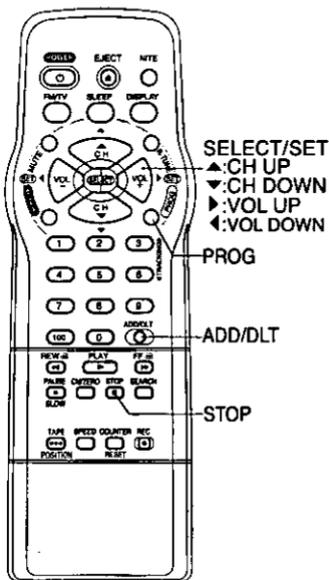
SELECT 1-8 : ▲ ▼  
ENTER : ►  
END : :PROG/ACTION

Press ADD/HLT.

**4** Press PROG twice (or ACTION) to exit this mode.

### Notes

- 2 minutes before Timer recording is performed, "PLEASE PREPARE FOR TIMER REC" appears and/or the PROG TIMER Indicator flashes. Be sure a cassette with record tab is loaded and the unit is in Stop mode.
- 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 14), the Timer Recording will not be performed.
- If there is a power interruption of more than one minute, the recording may not be performed or continued.
- If "INCOMPLETE" appears after all items have been set, check all entries and make necessary corrections.



# Tape Operation

## Search System is ...

Each time a recording is made, an invisible index mark is placed on the tape.  
When timer recordings are made, program index and information are also included.  
These index marks can be used to access or scan recordings.

## Index Search

Go directly to the desired recording.

**1**

INDEX SEARCH

ENTER INDEX NUMBER:1  
USING 1-9 KEYS

FORWARD SEARCH:FF  
REVERSE SEARCH:REW  
NEXT:SEARCH  
EXIT:STOP

Press **SEARCH** in Playback or Stop mode to display INDEX SEARCH screen.

**2**

INDEX SEARCH 3

INDEX SEARCH

Press number keys to select the recording number.  
• To calculate number, see below.

**3**

INDEX SEARCH

FORWARD SEARCH:FF  
REVERSE SEARCH:REW

Press **FF** or **REW** to start search.  
• Play begins at search end. To search forward or back 1 index, press **FF** or **REW** while screen left in displayed (10 seconds).

## ■ To calculate the Index Number

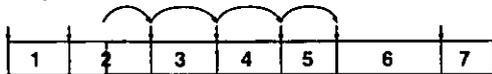
### Example 1:

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



### Example 2:

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



NOTE: † indicates start points of each recording.

## Notes

- Make each entry within 10 seconds, or the Index Search mode will be canceled.
- If Index Search is started very close to an index mark, that index mark may not be counted in the search.

## Program End Search

It is easy to detect the end of a recorded program so that you may continue or begin a new recording.

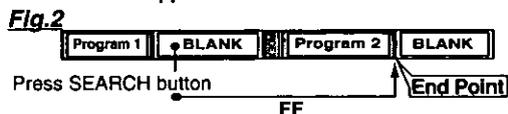
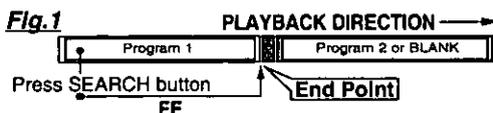
**1** Press **SEARCH** twice in Playback or Stop mode to display PROGRAM END SEARCH screen.

**2** Press **FF** to start search.

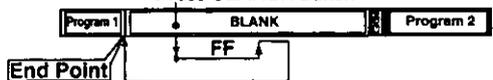
PROGRAM END SEARCH

SEARCH START:FF  
EXIT:SEARCH

Example of Program End Search operation.

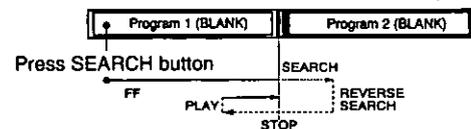


**Fig.3** If search exceeds a few seconds in BLANK area. Press **SEARCH** button



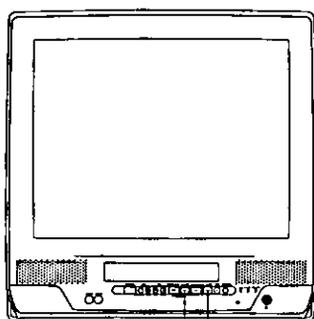
## Upon locating end point...

The unit searches slightly past end point, reverse searches, and plays the last few seconds of the program, then stops.

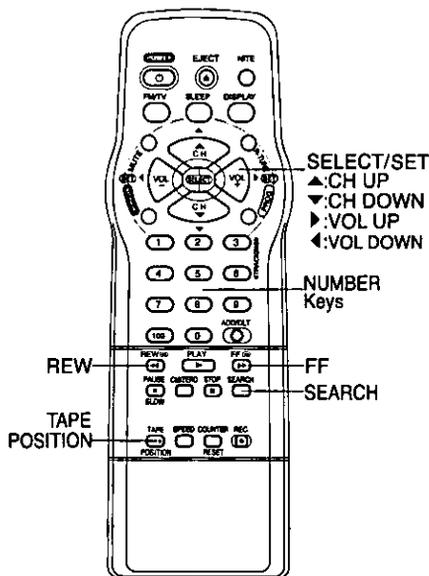


## Notes

- If Program End Search is started very close to an index mark, that mark may be skipped over.
- To cancel, press **PLAY** or **STOP**.



REW FF



SELECT/SET  
▲:CH UP  
▼:CH DOWN  
▶:VOL UP  
◀:VOL DOWN

NUMBER  
Keys

REW

FF

SEARCH

TAP  
POSITION

## Auto Operation Functions

- **Auto Shut Off**  
No broadcast signal in TV, blank tape is Played for 5 minutes  
→ Power turns off
  - This feature is canceled if any button is pressed during above mode.
- **Auto Playback**  
Insert a tape in Power off mode  
→ Power turns on
  - Playback begins if tape has no record tab.
- **Auto Rewind**  
Tape reaches its end  
→ Rewind, → Stop
- **Playback Auto Eject (Repeat Play is "OFF")**  
Tape with no record tab reaches its end  
→ Rewind, → Stop, → Eject

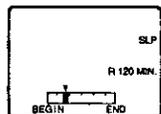
## Tape Position Display

To find out present tape position and amount of tape remaining.

**Tape position cannot be detected for C-Cassettes, tapes under 30 minutes, and some other tapes.**

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

DETECTING TAPE POSITION



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

• The present tape position indication and amount of tape remaining (according to tape speed) is displayed.

• Tape remaining time display may not be precise.

- 2 Press **TAPE POSITION** (or wait 5 seconds) to return to normal screen.

### Note

- This function cannot display exact amount of tape remaining for tapes over 120 minutes.

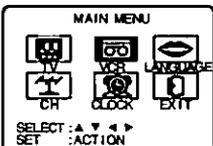
# Tape Operation (continued)

## Repeat Play

Set to see a recording over and over.

- 1** Press **ACTION** to display MAIN MENU.

**2**



1) Press **▲▼◀▶** to select "VCR."  
2) Press **ACTION** to display SET UP VCR screen.

**3**



1) Press **▲▼** to select "REPEAT PLAY."  
2) Press **▶** to set REPEAT PLAY "ON" or "OFF."

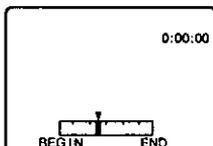
- 4** Press **ACTION** twice to end setup.

## Zero Search

To quickly return to a specific tape counter location.

- 1** Press **DISPLAY** during playback to display the Counter.

**2**

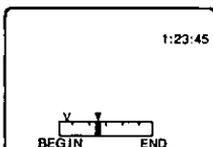


Press **COUNTER RESET** at the desired position to reset to "0:00:00."

- 3** Continue playback, rewind, or fast forward.

- 4** Press **STOP**.

**5**



Press **CM/ZERO** in stop mode to start ZERO SEARCH.

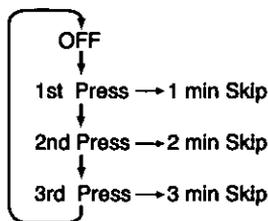
- ▼ : Present position mark
- ∨ : Zero position mark
- Unit goes into FF or REW mode and stops at the last point the Counter was set to 0:00:00.

## Commercial Skip

By pressing the **CM/ZERO** button in Playback mode you can skip over 1 to 3 minutes of recorded tape in just a few seconds.

- 1** Press **CM/ZERO** repeatedly to select skip time in Play mode.

- No indication appears.



### Repeat Play Notes

- Playback repeats when tape end is reached or unrecorded portion over 30 seconds is detected.
- During playback, you may also press **PLAY/REPEAT** repeatedly on the unit to select REPEAT "ON" or "OFF."

### Zero Search Note

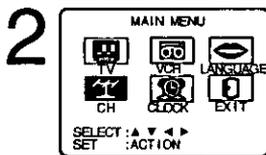
- If a blank portion exists on the tape, and depending on the position of the ∨ mark, the ∨ mark display may be out of position.

# Special VCR Features

## Weak Signal Display ON/OFF

When "ON" is selected, the picture is displayed even when a broadcast signal is weak or non-existent.

**1** Press **ACTION** to display MAIN MENU.



**1)** Press **▲▼◀▶** to select "CH."  
**2)** Press **ACTION** to display SET UP CHANNEL screen.



**1)** Press **▲▼** to select WEAK SIGNAL DISPLAY.  
**2)** Press **▶** to set "ON" or "OFF."

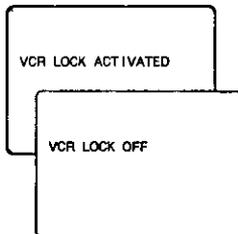
### Notes

- "ON" = Picture is displayed regardless of signal condition, and may not always be clearly visible.
- "OFF" = Screen turns solid blue when signal is absent or weak.
- If unit is connected to equipment which has blue back feature, selecting "ON" will have no effect on the other equipment.

**4** Press **ACTION** twice to return to the normal screen.

## VCR Lock

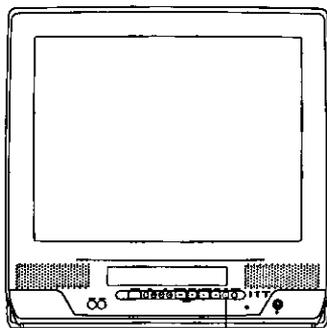
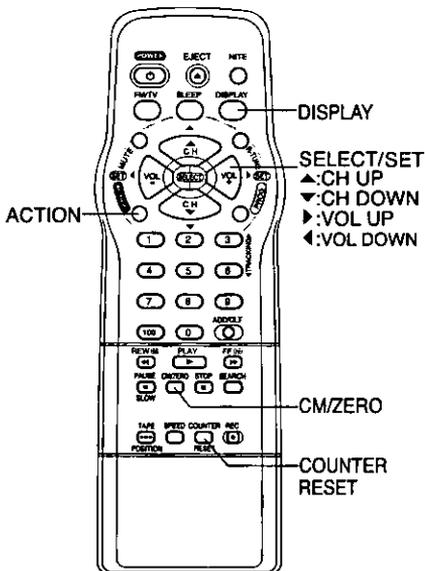
All operations are prohibited except Timer recording and tape eject. Useful for families with small children.



In stop mode, **hold down REC** on the unit without a cassette inserted for 7 seconds to turn "ON." Please ignore NO CASSETTE warning.

Repeat above with or without cassette to turn "OFF."

- VCR Lock is canceled automatically after about 24 hours if clock is set.

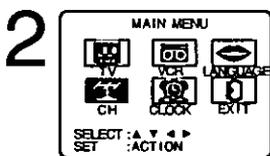


REC

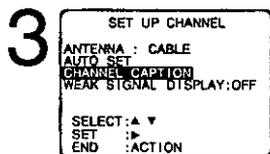
# Special VCR Features (continued)

## Preset Caption

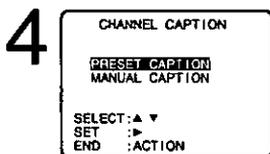
- 1** Press **ACTION** to display MAIN MENU.



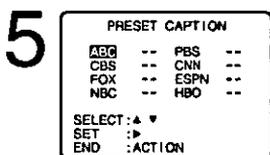
- 1) Press **▲▼◀▶** to select "CH."  
2) Press **ACTION** to display SET UP CHANNEL screen.



- 1) Press **▲▼** to select CHANNEL CAPTION.  
2) Press **►** to display screen.

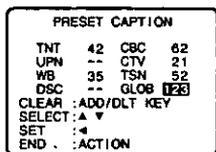


- 1) Press **▲▼** to select PRESET CAPTION.  
2) Press **►** to display screen.
- To create your own captions, go to "Manual Caption" on page 29.



- 1) Press **▲▼** to select a station.  
2) Press **►** to move cursor to the right.  
3) Press **▲▼** to select channel number.  
4) Press **◀** to set preset captions.

- Repeat step 5 until the Caption List is complete.



### To Make Corrections

Press **▲▼**, then **►** to select channel number.  
Press **▲▼** to change, or **ADD/HLT** to delete.

- 6** Press **ACTION** four times to end setup.

**Channel Caption is ...**  
Station names, e.g. ABC, TNN, etc. are set so they will appear when a channel is selected. Choose 24 preset names (Preset Caption), or make up to 10 names of your own (Manual Caption).

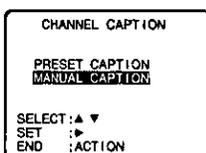
**Ready Check List**

- You need a list of stations and the channel numbers you receive them on.

## Manual Caption

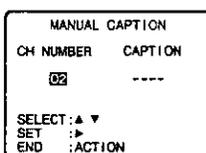
### 1 Do "Preset Caption" steps 1-3 (page 28).

### 2



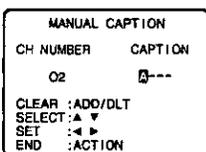
- 1) Press ▲▼ to select **MANUAL CAPTION**.
- 2) Press ► to display screen.

### 3



- 1) Press ▲▼ to select **CH NUMBER**.
  - 2) Press ► to move cursor to the right.
- Channels already set and channels deleted from Channel Memory are not displayed.
  - You can set a total of ten channel captions with up to four characters each.

### 4



- Press ▲▼ to select and ► to enter your caption.
- Characters change in the following order.

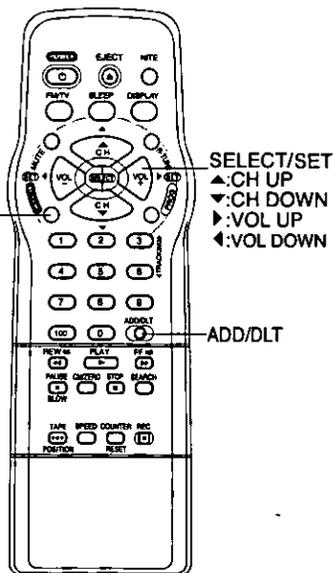
→ A - B - C ..... Z - BLANK - - - & ←  
 → 9 ..... 2 - 1 - 0 - / - ! ←

- Press ◀ repeatedly to move the cursor to "CH NUMBER." Repeat steps 3 and 4 as desired.

### To Make Corrections

Press ▲▼, then ► to select channel number.  
 Press ▲▼ to change, or ADD/HLT to delete.

### 5 Press ACTION four times to end setup.



# Special VCR Features (continued)

## Time Stamp Feature

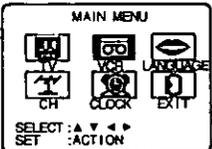
This unit writes program data (see example below) for about the first 10 seconds of every recording. The information is then displayed about 10 seconds after playback begins.

### Ready Check List

- The clock is set to correct time.
- The record tab is in place.

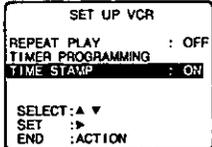
**1** Press **ACTION** to display MAIN MENU.

**2**



1) Press **▲▼◀▶** to select "VCR."  
2) Press **ACTION** to display SET UP VCR screen.

**3**



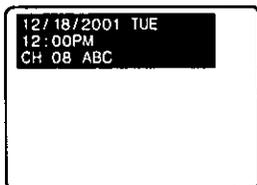
1) Press **▲▼** to select TIME STAMP.  
2) Press **▶** to set "ON" or "OFF."

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

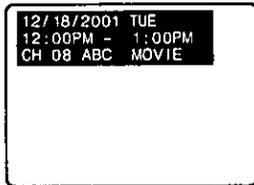
**4** Press **ACTION** twice to return to normal screen.

### <Time Stamp Example >

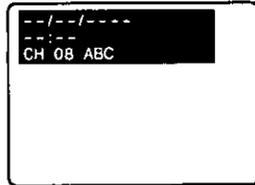
Normal/ One Touch Recording



Timer Recording



When Clock is not set...



# V-Chip Control Feature

## Process of V-Chip Control Feature

Enter Code → Setup → Blocking

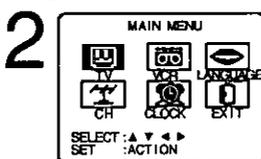
## V-Chip Control Feature is...

This unit has a built-in V-Chip Control which allows you to block unwanted TV usage based on US MOVIES and US TV PROGRAMS Ratings.

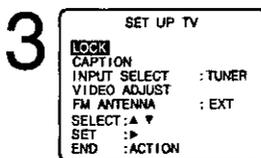
## Enter Secret Code

A 4-digit code must be entered to view a blocked program or change rating settings.

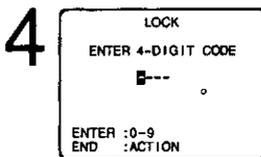
**1** Press **ACTION** to display MAIN MENU.



- 1) Press **▲▼◀▶** to select "TV."
- 2) Press **ACTION** to display SET UP TV screen.



- 1) Press **▲▼** to select **LOCK**.
- 2) Press **▶** to display screen.

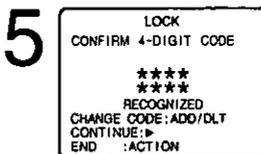


- 1) Press **number keys** to enter your secret code.
- 2) Enter **same code** again for confirmation.

- Step 2) not necessary when changing rating or secret code.
- Take care that you are not observed entering the secret code.

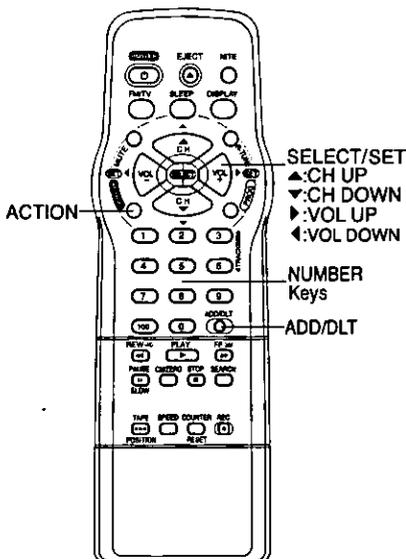
## To Make Corrections

Press **◀** repeatedly to move the cursor. Press number keys to make the correction.



Press **▶** to display US Ratings menu (see page 32).

Or Press **ACTION** three times to exit.



## Changing your secret code

- You will need your current code. Do steps 1 ~ 4. In step 5, press ADD/HLT to clear current code. Repeat steps 4 and 5 to enter new code.

## Notes

- DO NOT forget your secret code.
- Once ratings are set, restricted tapes or programs cannot be accessed unless the secret code is entered.

# V-Chip Control Feature (continued)

If LOCK menu is not displayed, do "Enter Secret Code" steps on page 31.

## Setup US MOVIES Ratings

**1**

LOCK

US MOVIES : OFF

CHANGE SETTINGS

US TV PROGRAMS : OFF

CHANGE SETTINGS

NEXT PAGE

SELECT: ▲ ▼

SET : ►

END : ACTION

1) Press ▲▼ to select US MOVIES.

2) Press ► to set "ON" or "OFF."

- "ON" → V-Chip Control Is activated.
- "OFF" → V-Chip Control Is deactivated.

### Note

• "NEXT PAGE" displays CANADIAN V-Chip setting menu. Not necessary except when viewing Canadian tapes or broadcasts.

**2**

LOCK

US MOVIES : OFF

CHANGE SETTINGS

US TV PROGRAMS : OFF

CHANGE SETTINGS

NEXT PAGE

SELECT: ▲ ▼

SET : ►

END : ACTION

1) Press ▲▼ to select CHANGE SETTINGS.

2) Press ► to display screen.

**3**

VIEW NR PROGRAMS? : YES

UNLOCKED

G

PG

PG-13

R

NC-17

X

CONTAINS NO RATING

SELECT: ▲ ▼ SET: ►

END : ACTION

1) Press ▲▼ to select VIEW NR PROGRAMS?.

2) Press ► to set "YES" or "NO."

### NR (Not Rated) PROGRAMS

Some movies, such as old movies or foreign movies usually have no ratings.

**4**

VIEW NR PROGRAMS? : YES

UNLOCKED

G

PG

PG-13

R

NC-17

X

GENERAL AUDIENCE

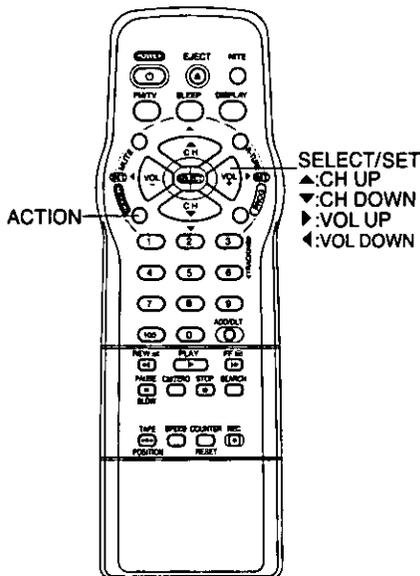
SELECT: ▲ ▼ SET: ►

END : ACTION

Press ▲▼ to select and ► to set ratings to be blocked. (See ratings chart right.)

**5** Press ACTION to redisplay LOCK menu and continue with US TV PROGRAMS Ratings Setup (next page). Or, press ACTION four times to exit.

### Process of V-Chip Control Feature



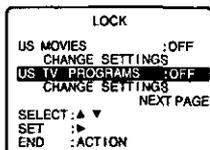
### US MOVIES RATINGS

G	<b>GENERAL AUDIENCE:</b> All ages admitted.
PG	<b>PARENTAL GUIDANCE:</b> Some material may not be suitable for children.
PG-13	<b>PARENTS CAUTIONED:</b> Some material may be inappropriate for children under 13.
R	<b>RESTRICTED:</b> Children under 17 must be accompanied by a parent or adult.
NC-17	<b>OVER AGE 17 ONLY:</b> No one 17 and under admitted.
X	<b>ADULTS ONLY:</b>

If **LOCK** menu is not displayed, do "Enter Secret Code" steps on page 31.

## Setup US TV PROGRAMS Ratings

1



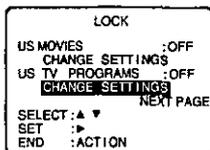
- 1) Press **▲▼** to select **US TV PROGRAMS**.
- 2) Press **▶** to set "ON" or "OFF."

- "ON" → V-Chip Control is activated.
- "OFF" → V-Chip Control is deactivated.

### Note

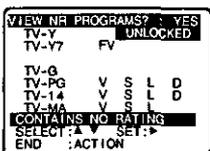
- "NEXT PAGE" displays CANADIAN V-Chip setting menu. Not necessary except when viewing Canadian tapes or broadcasts.

2



- 1) Press **▲▼** to select **CHANGE SETTINGS**.
- 2) Press **▶** to display screen.

3

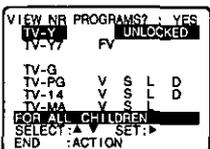


- 1) Press **▲▼** to select **VIEW NR PROGRAMS?**.
- 2) Press **▶** to set "YES" or "NO."

### NR (Not Rated) PROGRAMS

Some TV shows, such as news, sports, weather, bulletins, emergency information usually have no ratings.

4



- Press **▲▼** to select and **▶** to set ratings to be blocked.  
(See ratings chart right.)

- Ratings highlighted in Green will be blocked. Ratings in white letters will not be blocked.

### Note

You may select from standard TV ratings (chart 1), or customize to a specific content rating (chart 2.)

5 Press **ACTION** four times to exit this mode.

## US TV PROGRAMS RATINGS: Chart 1

TV-Y	<b>FOR ALL CHILDREN:</b> Content specifically geared to young viewers ages 2-6.
TV-Y7	<b>FOR AGE 7 AND OLDER:</b> May contain mild physical or comedic violence which may frighten children under 7.
TV-G	<b>GENERAL AUDIENCE:</b> Contains little or no violence, strong language, or sexual dialogue or situations.
TV-PG	<b>PARENTAL GUIDANCE:</b> May contain infrequent coarse language, limited violence, some suggestive sexual dialogue and situations.
TV-14	<b>PARENTS CAUTIONED:</b> May contain sophisticated themes, sexual situations, strong language, and more intense violence.
TV-MA	<b>MATURE AUDIENCE:</b> May contain mature themes, profane language, graphic violence, and sexual situations.

## US TV PROGRAMS RATINGS: Chart 2

FV	Fantasy Violence
V	Violence
S	Sexual Situations
L	Adult Language
D	Sexually Suggestive Dialogue

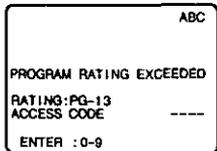
# V-Chip Control Feature (continued)

## Process of V-Chip Control Feature

Enter Code ⇄ Setup ⇄ Blocking

## Blocking Message

<When V-Chip Control Is activated>



- If a program or movie exceeds the ratings you have set, a message will appear on a black background and sound is muted.

## To View a Blocked Program / Movie

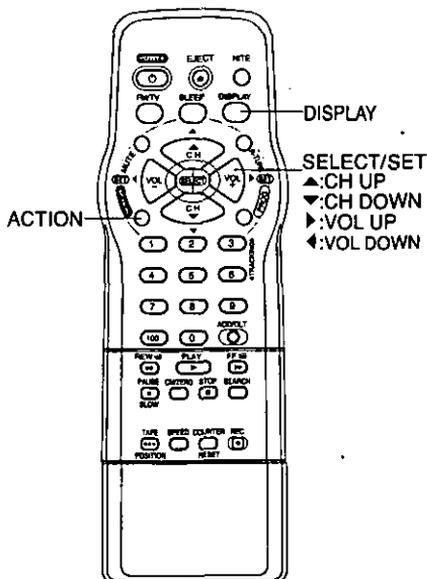
### [Temporarily Deactivate V-Chip Control]

Enter your secret code (ACCESS CODE) in the Blocking Message screen.

- V-Chip Control is reactivated when power is turned off or power failure occurs.

### [Deactivate V-Chip Control]

Enter your secret code (steps 1-4 page 31). Then, set US MOVIES and/or US TV PROGRAMS to "OFF" using ▲▼ and ► keys. (Ratings set on pages 32, 33 are retained and will be in effect when V-Chip Control is activated again.)

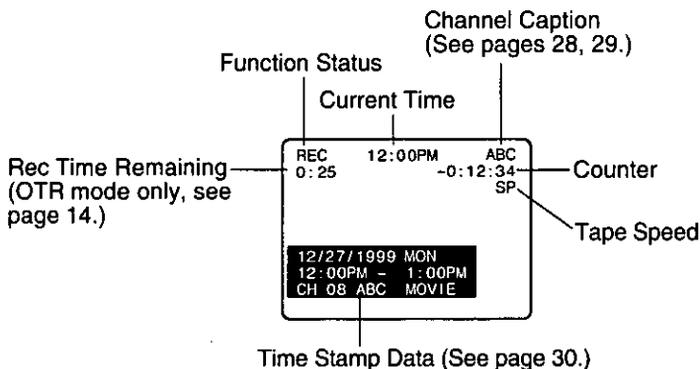


# On-Screen Display (OSD)

## VCR Status & Clock Display

Press **DISPLAY**

to display or remove the overlay.

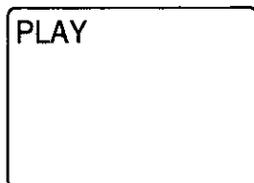
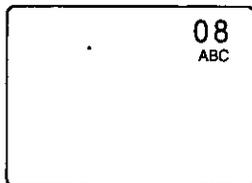


## Blue Screen Display

Whenever a blank section of a tape comes up in Play mode, or when the selected channel has no broadcast signal with the Weak Signal Display set to "OFF" (see page 27), the screen will turn solid blue.

## Channel & Function Display

When a function button is pressed (PLAY, FF, etc.) or you change channels, the unit mode or channel number will be displayed. (Some station names may also appear if Channel Caption is set. See pages 28, 29.)



# Warning and Instruction Displays

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

<b>OSD</b>	<b>Caution</b>	<b>Page</b>
<b>NO CH FOUND PLEASE CHECK ANTENNA CABLE CONNECTION THEN PUSH CH UP KEY AGAIN</b>	<ul style="list-style-type: none"><li>• If no active channels are found for CHANNEL MEMORY...</li></ul>	<b>8 - 11</b>
<b>PLEASE SET CLOCK BEFORE PROGRAMMING</b>	<ul style="list-style-type: none"><li>• If you attempt to set or review a Timer Recording, or set the On-Timer and the Clock is not set...</li></ul>	<b>8 - 13</b>
<b>CHECK CASSETTE RECORD TAB</b>	<ul style="list-style-type: none"><li>• If you press REC, and a cassette is inserted with no record tab...</li></ul>	<b>4, 14</b>
<b>TO CANCEL TIMER REC HOLD DOWN STOP KEY FOR APPROX 3 SEC</b>	<ul style="list-style-type: none"><li>• If you press STOP during a Timer Recording...</li></ul>	<b>23</b>
<b>NO CASSETTE PLEASE INSERT A CASSETTE</b>	<ul style="list-style-type: none"><li>• If you press PLAY, FF, REW, or REC without a cassette inserted...</li></ul>	<b>14</b>
<b>PLEASE PREPARE FOR TIMER REC</b>	<ul style="list-style-type: none"><li>• If the unit is not in Stop mode or a cassette with record tab is not inserted two minutes before a Timer Recording is about to begin...</li></ul>	<b>22, 23</b>
<b>VIDEO HEADS MAY NEED CLEANING PLEASE INSERT HEAD CLEANING CASSETTE OR REFER TO MANUAL END: PLAY KEY</b>	<ul style="list-style-type: none"><li>• If head cleaning becomes necessary while playing back a tape...</li></ul>	<b>37</b>
<b>VCR LOCK ACTIVATED</b>	<ul style="list-style-type: none"><li>• If you press a function button other than STOP/EJECT or POWER while the unit is in VCR Lock mode...</li></ul>	<b>27</b>

# Unit Information

## Head Cleaning

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

### Head Clog Sensor

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

- Use "dry" type head cleaning cassette only. (Part No. NV-TCL30PT is recommended.)
- Follow cleaning tape directions carefully. Excessive use of head cleaning tape can shorten the video head life.
- If head clog symptoms persist, contact your nearest Factory Service Center or authorized Service Center. (See Page 39.)

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

END:PLAY KEY

## DST (Daylight Saving Time)

Unit auto adjusts clock for DST (Daylight Saving Time.)

### ■ Spring (First Sunday in April)

DST : ON → Sets clock ahead one hour.

### ■ Autumn (Last Sunday in October)

DST : ON → Turns clock back one hour.

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

## 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

## Specifications

### Display

Picture Tube: 20 inch measured diagonal 90° deflection Picture Tube

### VCR

Video Recording System: 2 rotary heads helical scanning system

Audio Track: 1 track

### 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

### FM Radio

Band range: 87.5 ~ 108.1 MHz

### General

Power Source: 120 V AC, 60 Hz

Power Consumption: Approx. 110 watts (Power on)

Approx. 4.0 watts (Power off)

Television System: EIA Standard NTSC color

Speaker: 1 piece

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

Operating Humidity: 10% ~ 75%

Weight: 23 Kg (50.6 lbs.)

Dimensions: 515 (W) X 505 (H) X

474 (D) mm

20-5/16" (W) X 19-7/8" (H)

X 18-11/16" (D)

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

## Features for a Quality Picture

### Digital Auto Tracking

Continuously analyzes the signal and adjusts for optimum picture quality.

### Manual Tracking Control (to reduce picture noise)

Use during Playback and Slow Motion mode to reduce picture noise. Press the 3 or 6 number key on the remote control or CH ▲▼ on the unit until the picture clears up. To return to Auto Tracking, press POWER off, then on again a few seconds later.

### PanaBlack™ Picture Tube

This unit uses a PanaBlack™ picture tube for better color reproduction and picture contrast.

# Before Requesting Service

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

<b>Power</b>	<b>Correction</b>
No power...	<ul style="list-style-type: none"><li>• Completely insert Power Plug into an AC outlet.</li><li>• Set POWER button to ON.</li></ul>
<b>Monitor</b>	<b>Correction</b>
No picture or sound...	<ul style="list-style-type: none"><li>• Make sure your antenna system (TV or CABLE), is correctly set. (P. 8-11)</li><li>• Completely insert Power Plug into an AC outlet.</li><li>• Set POWER button to ON.</li></ul>
Poor picture with normal sound...	<ul style="list-style-type: none"><li>• Adjust BRIGHTNESS, SHARPNESS, and PICTURE controls in the SET UP TV menu. (P. 20)</li></ul>
Poor sound with normal picture...	<ul style="list-style-type: none"><li>• Adjust VOLUME control. (P. 16)</li></ul>
Poor TV reception...	<ul style="list-style-type: none"><li>• Adjust SHARPNESS and PICTURE controls in the SET UP TV menu. (P. 20)</li></ul>
No color or poor color...	<ul style="list-style-type: none"><li>• Adjust TINT and COLOR controls in the SET UP TV menu. (P. 20)</li></ul>
Ghost (multiple) images...	<ul style="list-style-type: none"><li>• Install a directional antenna.</li></ul>
TV programs cannot be watched...	<ul style="list-style-type: none"><li>• Make sure the selected channel is in unit's memory. (P. 12, 13)</li></ul>
Channel cannot be selected...	<ul style="list-style-type: none"><li>• Only the channel being recorded can be viewed on this unit.</li></ul>
<b>VCR</b>	<b>Correction</b>
TV program cannot be recorded...	<ul style="list-style-type: none"><li>• Make sure your antenna system (TV or CABLE), is correctly set. (P. 8-11)</li><li>• Make sure cassette record tab is intact. (P.4)</li></ul>
Timer recording cannot be performed...	<ul style="list-style-type: none"><li>• Check that clock is set to current time and date.</li><li>• Make sure DSS/CABLE box (if used) is left on and tuned to channel to be recorded.</li><li>• Set recording Start/Stop times correctly. (P. 22-23)</li><li>• 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.</li></ul>
No playback picture, or the playback picture is noisy or contains streaks... VCR cannot be controlled...	<ul style="list-style-type: none"><li>• Adjust TRACKING control in either direction. (P. 37)</li><li>• Try Head Cleaning. (P. 37)</li><li>• Make sure VCR LOCK is set to off. (P. 25)</li><li>• Make sure unit is not in a Timer Record operation.</li></ul>
<b>Remote Control</b>	<b>Correction</b>
Unit cannot be controlled...	<ul style="list-style-type: none"><li>• Aim remote at remote sensor on unit (P. 7) so that signal is unobstructed.</li><li>• Inspect the remote batteries. (P. 4)</li><li>• Make sure VCR LOCK is set to off. (P. 27)</li><li>• Exposing unit remote sensor to direct fluorescent or outdoor light may cause signal interference.</li><li>• Check remote batteries.</li></ul>
ACTION, PROG and FM/TV buttons cannot be selected...	
<b>Miscellaneous</b>	<b>Correction</b>
Video cassette cannot be inserted...	<ul style="list-style-type: none"><li>• Insert the cassette window side up; record tab facing you.</li></ul>
Video cassette cannot be removed...	<ul style="list-style-type: none"><li>• Completely insert Power Plug into an AC outlet.</li></ul>
Tape cannot be ejected or inserted...	<ul style="list-style-type: none"><li>• Try ejecting or inserting the tape again after turning POWER off, then back on.</li></ul>
Video cassette ejects when a recording is started, or the power is turned off for timer recording...	<ul style="list-style-type: none"><li>• Make sure cassette record tab is intact. (P. 4)</li></ul>
In Stop mode, the VCR motor (CYLINDER) continues to rotate...	<ul style="list-style-type: none"><li>• To enable Quick Play mechanism, the VCR cylinder will rotate for about 3 minutes. This reduces response time from Stop to Play mode and from Play to Rewind Search mode.</li></ul>
VCR cannot be controlled...	<ul style="list-style-type: none"><li>• Make sure VCR LOCK is set to off. (P. 27)</li></ul>

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

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

or send e-mail to : [consumerproducts@panasonic.com](mailto:consumerproducts@panasonic.com).

# Service Center List

For Product Information, Operating Assistance, Literature Request, Dealer Locations, and all Customer Service inquiries please contact:  
1-800-211-PANA (7262), Monday-Friday 9 am-9 pm Saturday-Sunday 9 am-7 pm, EST.  
or send e-mail to : [consumerproducts@panasonic.com](mailto:consumerproducts@panasonic.com)

Web Site: <http://www.panasonic.com>  
You can purchase parts, accessories or locate your nearest servicer by visiting our Web Site.

## Accessory Purchases:

1-800-332-5368 (Customer Orders Only)  
Panasonic Services Company 20421 84th Avenue South, Kent, WA 98032  
(6 am to 5 pm Monday - Friday; 6 am to 10:30 am Saturday; PST)  
(Visa, MasterCard, Discover Card, American Express, Check)

## 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

9060 Golf Road  
Niles, IL 60714

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

### 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

### TEXAS

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

As of January 2000

## Como realizar la Configuración Inicial

**1** Presione **POWER** en el control remoto o en la unidad.

**2** Cuando encienda el VCR por primera vez, aparecerá la pantalla **SELECT LANGUAGE**.

SELECT LANGUAGE  
PUSH CH ▲ : English  
OPRIMIR CH ▼ : Español  
APP. VOL + : Français

- Si ajusta el idioma incorrecto, realice los pasos de la página 9 "Reajuste de todas las Funciones de Memoria de la unidad".
- Active la caja de cables y ajústela al canal PBS en su huso horario. Si usted utiliza receptor DSS, este debe estar apagado.

**3** FIJACION AUTO. (CARELOJ)

CONECTE EL CABLE DE LA ANTENA Y SI ESTA USANDO UNA CAJA DE TV POR CABLE SINTONICE AL CANAL PES DE SU LOCAL. LUEGO...  
POR FAVOR OPRIMIR CH UP

Presione **CH ▲** para seleccionar Inglés (English).

Presione **CH ▼** para seleccionar Español.

Presione **VOL +** para seleccionar Francés (Français). Aparecerá la pantalla **CHANNEL / CLOCK AUTO SET**.

**4** 6/7/2000 MIE 12:00PM  
HORA VERANIEGA: CA 10  
CANAL FIJADO : CA 10  
FIJACION AUTOMATICA

COMPLETO  
TERMINAR : OPRIMIR CH UP

Presione la tecla **CH ▲** para iniciar el funcionamiento de **CHANNEL / CLOCK AUTO SET**. El ajuste del **CHANNEL / CLOCK** se lleva a cabo automáticamente, si la configuración se ha terminado, se visualiza la pantalla siguiente.

Si aparece la pantalla "FIJACION AUTOMATICA DEL RELOJ INCOMPLETO", ajuste el reloj utilizando los procedimientos de "AJUSTE MANUAL DEL RELOJ" mostrados en la página 9.

FIJACION AUTOMATICA DEL RELOJ ES INCOMPLETO

OPRIMIR ACTION PARA FIJAR EL RELOJ

## Ajuste Manual del Reloj

Si el ajuste automático del reloj no se ha completado, ajuste el reloj manualmente de la siguiente manera:

- 1) Presione la tecla **ACTION** en el control remoto para visualizar la pantalla del menú **RELOJ**.
- 2) Presione **▲▼** para seleccionar el mes y **▶** para ajustar. De la misma forma, seleccione y ajuste la fecha, año, hora y **DST** (Hora de Verano).
- 3) Presione dos veces la tecla **ACTION** para poner el **RELOJ** en marcha y salir.

## Ajustar de nuevo el reloj

**1** Presione **ACTION** para exhiba el menú.

**2** Presione **▲▼◀▶** para seleccionar "RELOJ". Presione **ACTION**.

MENU PRINCIPAL  
TV CH  
DSS  
CANAL  
RELOJ  
SALIR  
ELEGIR: ▲ ▼ ▶ ◀ ▶  
FIJAR : ACTION

**3** Presione **▲▼** para seleccionar "MANUAL" y luego presione **▶**.

FIJAR RELOJ  
FIJACION AUTOMATICA  
MANUAL  
AJUSTE ZONA HORA : 0  
ELEGIR: ▲ ▼  
FIJAR : ▶ ◀ ▶  
TERMINAR: ACTION

**4** Presione **▲▼** y **▶▶** para seleccionar y ajustar la hora y la fecha.

FIJAR RELOJ  
VERANO: ACT  
ELEGIR: ▲ ▼  
FIJAR : ▶ ◀ ▶  
TERMINAR: ACTION

**5** Presione **ACTION** dos veces para que el reloj comience a funcionar y salir desde este modo.

## Operaciones básicas para la reproducción

- 1 Inserte un casete.**
  - El videograbador combinado se enciende automáticamente.
- 2 Presione PLAY.**
  - La reproducción comienza automáticamente si el casete no tiene la lengüeta para prevención de grabación.
  - Para encontrar una escena en particular
    - Búsqueda hacia adelante → Presione FF
    - Búsqueda hacia atrás → Presione REW
  - Para ver una imagen fija (congelada) → Presione PAUSE/SLOW
  - Para ver en cámara lenta → Mantenga pulsado el botón PAUSE/SLOW en el modo de imagen fija
  - Para ver imágenes cuadro a cuadro → Presione PAUSE/SLOW en el modo de imagen fija
  - Para parar → Presione STOP
  - Para rebobinar la cinta → Presione REW
  - Para hacer avanzar la cinta rápidamente → Presione FF
  - Para expulsar la cinta → Presione EJECT en el control remoto o STOP/EJECT en el videograbador combinado

## Operaciones básicas para la grabación

- 1 Inserte un casete con la lengüeta para prevención de grabado.**
  - El videograbador combinado se enciende automáticamente.
- 2 Seleccione el canal.**

Presione CH ▲▼ o las teclas numéricas correspondiente.
- 3 Seleccione la velocidad de grabación.**

Presione SPEED.

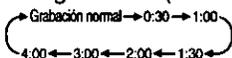
SP = reproducción normal  
 LP = reproducción larga  
 SLP = reproducción super larga

  - La velocidad seleccionada debe aparecer en la pantalla.
- 4 Comience la grabación.**

Presione REC.

  - Para editar partes no deseadas de una grabación, presione PAUSE/SLOW para hacer una pausa durante la grabación.
  - No podrá ver otro canal durante la grabación.
  - Para parar → Presione STOP.
  - El videograbador combinado deja de grabar a una hora prefijada.** (Grabación de un toque)

Presione REC repetidamente para ajustar la hora de grabación (30 min - 4 horas.)



## Grabación con temporizador

- 1 Exhiba FIJAR PROGRAMACION.**

Presione PROG.
- 2 Exhiba TEMPORIZADOR.**

Presione ▲▼ para seleccionar.

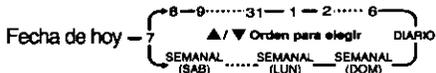
Presione ► para exhibir.

  - Si ya existe un programa en la memoria, presione ▲▼ y ► para seleccionar un número de programa sin usar.
- 3 Ajuste la fecha de grabación.**

Presione ▲▼ para seleccionar.

Presione ► o ◀ para ajustar.

  - 1 - 31 = Grabación única
  - DIARIO = a la misma hora de lunes a viernes
  - SEMANTAL = a la misma hora una vez a la semana



Repita el paso 3 para ajustar: hora de comienzo, hora de parada, canal (o LINEA para una fuente exterior), categoría (N/O (no aplicable), DEPORTE, CINE, COMEDIA, MUSICA, DRAMA), velocidad (SP, LP, SLP)

- 4 Termine el programa.**

Presione PROG (o ACTION.)

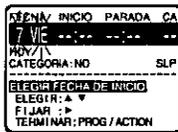
**Para introducir más programas.**

presione ▲▼ y ► para seleccionar y ajustar el número de programa en blanco, y luego repita los pasos 3 y 4.

- 5 Salga de este modo.**

Presione PROG dos veces (o ACTION.)

  - Si está usando un decodificador de TV cable, asegúrese que se encuentra en el canal deseado y que la alimentación queda conectada para grabar con temporizador.
  - El indicador PROG TIMER se enciende en el videograbador combinado.



# Limited Warranty

Panasonic Consumer Electronics Company,  
Division of Matsushita Electric Corporation  
of America, One Panasonic Way  
Secaucus, New Jersey 07094

Panasonic Sales Company,  
Division of Matsushita Electric of Puerto Rico, Inc.  
AVE. 65 de Infanteria, 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	SERVICE	CONTACT NUMBER
CAMCORDER	ONE (1) YEAR, EXCEPT CCD IMAGE SENSOR CCD IMAGE SENSOR -SIX (6) MONTHS	NINETY (90) DAYS  NINETY (90) DAYS	Carry-In or Mail In	1-800-211-PANA(7262)
VCR	ONE (1) YEAR	NINETY (90) DAYS	Carry-In or Mail In	1-800-211-PANA(7262)
A/V MIXER	ONE (1) YEAR	NINETY (90) DAYS	Carry-In or Mail In	1-800-211-PANA(7262)
MONITOR- VCR/DVD Combination	ONE (1) YEAR, EXCEPT CRT CRT - TWO (2) YEARS	NINETY (90) DAYS CRT - NINETY (90) DAYS	Carry-In: 21" CRT and Smaller  In-home or carry-in: 22" CRT and Larger	1-800-211-PANA(7262)

**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 contact number listed above, 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 required 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 by 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 RECORDING MEDIA) 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 Consumer Affairs Department 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.

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San Gabriel Industrial Park, Carolina, Puerto Rico 00985



Printed in U.S.A  
LSQT0334B  
S1200-0