

Video Cassette Recorder  
Operating Instruction  
MODEL PV-9400/PV-9450

Record on a tape

- 1 Make all connections (page 4).
- 2 Set VCR Channel on VCR Rear Panel.  
Slide the VCR Channel selector switch to the channel number not used by local broadcast companies (CH3 or 4).  
Back of Model PV-9450 VCR only  
Tune your TV to the channel selected above (3 or 4) whenever you want to see the picture from the VCR on your TV screen.
- 3 Do "One Time Setup" on page 6.  
In order for the VCR to properly interface with your equipment, some setup is necessary.
- 4 Record on a Tape.  
Insert a tape with Record Tab  
Press CH Up/Down. (Select Channel)  
Press SPEED. (Select speed)  
Press REC. (Start Recording)

Play back a tape

- 1 Make all connections (page 4).
- 2 Set VCR Channel on VCR Rear Panel.  
Slide the VCR Channel selector switch to the channel number not used by local broadcast companies (CH3 or 4).  
Back of Model PV-9450 VCR only  
Tune your TV to the channel selected above (3 or 4) whenever you want to see the picture from the VCR on your TV screen.
- 3 Play your Tape.  
Insert a tape  
Press PLAY (Start playback)

TENTATIVE

Please read these instructions carefully before attempting to connect, operate or adjust this product. Please save this manual.  
Spanish Quick Use Guide is included. (Guia para rápida consulta en español está incluida.)  
Quick Use Guide ins on the back cover.

EXHIBIT # 6  
FIG NO.  
FCC ID: A51127 L24H  
MODEL NO. PV-9450  
CUR REF: MKS 88-016

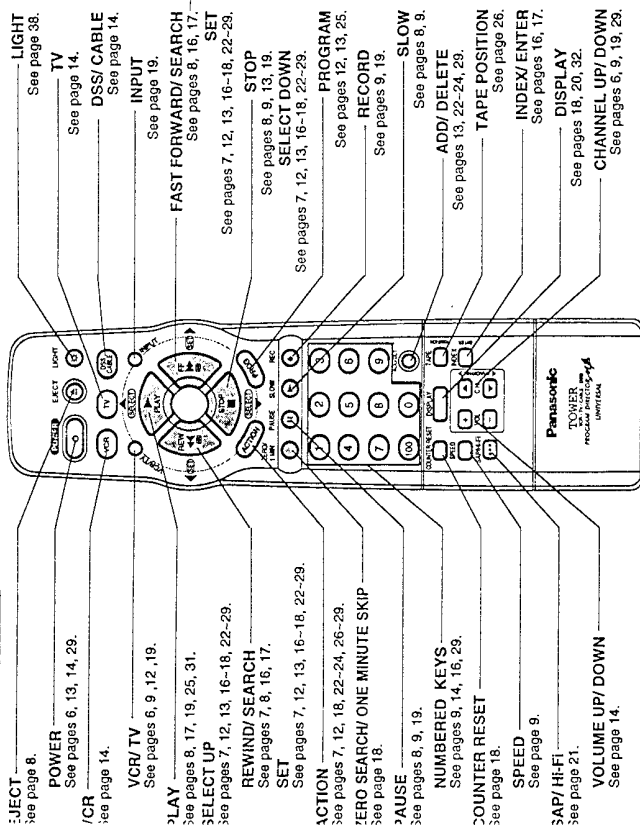
P

Panasonic Sales Company,  
Division of Matsushita Electric of  
Puerto Rico, Inc. (PSC)  
Ave. 65 de Indiantina, Km. 9.5  
San Gabriel Industrial Park, Carolina,  
Puerto Rico 00985

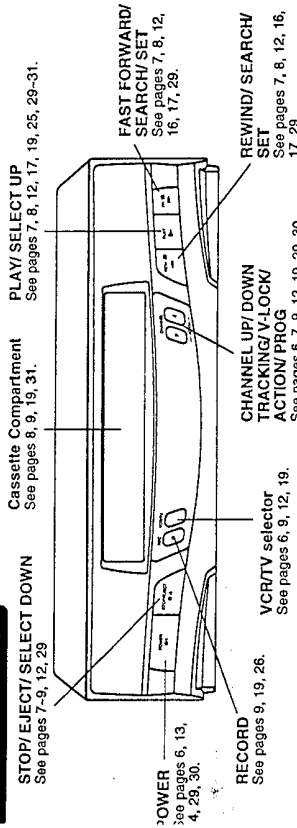
Panasonic Consumer Electronics  
Company, Division of Matsushita  
Electric Corporation of America  
One Panasonic Way, Secaucus,  
New Jersey 07094

Printed in Japan  
VQT53514 (A)

### Remote control Buttons

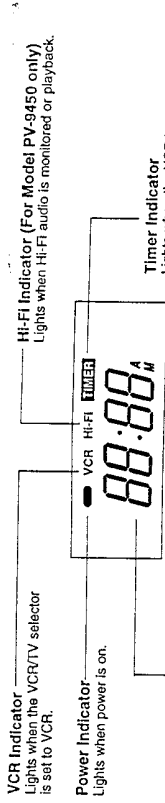


### Front View of the VCR



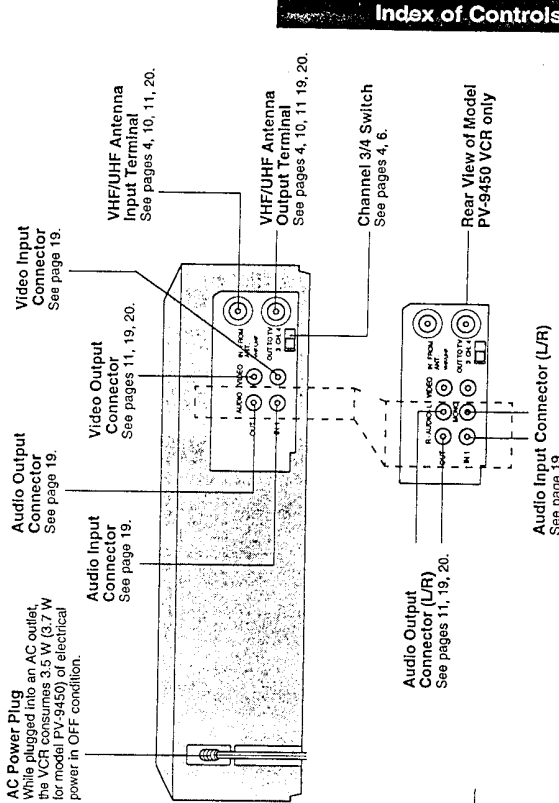
For assistance, call 1-800-211-PANA(7262).

### Multi Function Display



**Clock/Status/Channel/Speed Display**  
Displays the current time. Briefly displays VCR status when a function button is pressed. Briefly displays the channel number, or "L" when a channel or line input is selected. Briefly displays the recording speed when SPEED is pressed.

### Rear View of the VCR



**For Product Information, Operating Assistance, Literature Request, Dealer Locations, and all Customer Service Inquiries please contact**  
**1-800-211-PANA (7262), Monday-Friday 9am-9pm Saturday-Sunday 9am-7pm, EST.**

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

**Accessory Purchases:**

**Customer Orders Only 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**

<b>CALIFORNIA</b> 6550 Katella Avenue Cypress, CA 90630	<b>GEORGIA</b> 8655 Roswell Road Suite 100 Atlanta, GA 30350	<b>MICHIGAN</b> 37048 Van Dyke Avenue Sterling Heights, MI 48312	<b>TENNESSEE</b> 3800 Ezell Road Suite 806 Nashville, TN 37203
800 Dubuque Avenue S. San Francisco, CA 94080	<b>ILLINOIS</b> 9060 Golf Road Niles, IL 60714	<b>MINNESOTA</b> 7850-12th Avenue South Airport Business Center Bloomington, MN 55425	<b>TEXAS</b> 7482 Harwin Drive Houston, TX 77036
20201 Sherman Way Suite 102 Canoga Park, CA 91306	1703 North Randall Road Elgin, IL 60123 (Pick-up / Drop-off only)	<b>OHIO</b> 2236 Waycross Road Civic Center Plaza Forest Park, OH 45240	13615 Welch Road Suite 101 Farmers Branch, TX 75244
3878 Ruffin Road Suite A San Diego, CA 92123	<b>MARYLAND</b> 62 Mountain Road Glen Burnie, MD 21061	<b>PENNSYLVANIA</b> 2221 Cabot Blvd. West Suite B Langhorne, PA 19047	<b>WASHINGTON</b> 20425-84th Avenue South Kent, WA 98032
<b>COLORADO</b> 1640 South Abilene Street Suite D Aurora, CO 80012	<b>MASSACHUSETTS</b> 60 Glacier Drive Suite G Westwood, MA 02090	<b>HAWAII</b> 99-859 Iwaiwa Street Aiea, Hawaii 96701 Phone (808)488-1996 Fax (808)486-4369	
<b>FLORIDA</b> 3700 North 29th Avenue Suite 102 Hollywood, FL 33020			

**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 April '98

**For assistance, call 1-800-211-PANA(7262).**

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

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

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

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

In-home, carry-in or mail-in service, as applicable, in the USA can be obtained during the warranty period by contacting a Panasonic Service Company (PASC) Factory Servicenter listed in the Service Directory. Or call toll free 1-800-211-PANA (7262), to locate an authorized PASC Servicenter. Carry-in or mail-in service in Puerto Rico can be obtained during the warranty period by calling the Panasonic Sales Company telephone number listed in the Servicenter Directory.

This warranty is extended only to the original purchaser. A purchase receipt or other proof of the date of the original purchase is 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, no antenna or other external antenna, or other improper use of the product. The warranty does not cover damage to the product caused by fire, theft, flood, lightning, or other natural or man-made disasters. The warranty does not cover damage to the product caused by the use of the product by anyone other than a PASC Factory Servicenter or a PASC authorized Servicenter, or damage that is attributable to acts of God.

**LIMITS AND EXCLUSIONS**

There are no express warranties except as listed above.

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

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

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

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

FORM 107097

08  
ABC

When a function button is pressed, e.g. PLAY, or you change channels, a 4 second display appears first in large and then small characters. (Some Station names may also appear.)

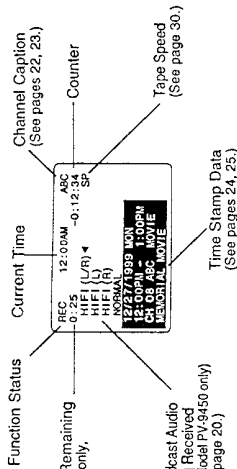
### Signal Indication

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

### VCR Status & Clock Display

To display or remove the overlay.

Press DISPLAY.



### Warning and Instruction Displays

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

OSD	Caution	Pg	OSD	Caution	Pg
NO CH FOUND PLEASE CHECK ANTENNA CABLE CONNECTION THEN PUSH VCR CH UP KEY AGAIN	If no active channels are found for CHANNEL MEMORY...	6	TO CANCEL TIMER REC PUSH POWER THEN STOP KEY	If you press POWER or STOP during a Timer Recording... (Visible in VCR mode only)	13
PLEASE SET CLOCK BEFORE PROGRAMMING	If you attempt to set or review a Timer Recording and the Clock is not set...	6	VIDEO HEADS MAY NEED CLEANING IF VIDEO HEADS CLEANING CASSETTE OR REFER TO MANUAL END: PLAY KEY	If head cleaning becomes necessary while playing back a tape...	31
TURN VCR OFF FOR TIMER RECORDING	After a Timer Program has been set...	13	VCR LOCK ACTIVATED	If you press a function button other than STOP/EJECT or POWER while the VCR is in VCR Lock mode...	20
CHECK CASSETTE RECORD TAB	If you press REC on the remote control or VCR, and a cassette is inserted with no record tab...	30	REMOTE CONTROL IS SET TO CABLE/DSS MODE USE VCR : VCR KEY USE TV : TV KEY	If you press POWER, ACTION, or PROG on the remote while in CABLE/DSS mode...	14 15
NO CASSETTE PLEASE INSERT A CASSETTE	If you press PLAY, FF, REW, or REC on the remote control or VCR without a cassette inserted...	8 9	REMOTE CONTROL IS SET TO TV MODE USE VCR : VCR KEY USE CABLE/DSS : CABLE/DSS	If you press POWER, ACTION, or PROG on the remote while in TV mode...	14 15

32

For assistance, call 1-800-211-PANA(7262).

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

### Power

- Completely insert Power Plug into an AC outlet.
- Set POWER button to ON.
- Make sure power source is active.

### Recording & Playback

- Check connections between VCR, external antenna, and TV.
- Check hook up selection. (P.4-5)
- Make sure your antenna system (CABLE or TV) is correctly set. (Channel [P.28])
- Make sure cassette record tab is intact. (P.30)

- Check clock is set to current time and date.
- Make sure Cable/DSS box (if used) is left on, and tuned to channel to be recorded.
- Set recording start/stop times correctly. (P.12)
- Make sure POWER button is set to OFF. (P.13)
- 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.

- Select channel 3 or 4 on TV to match Channel 3/4 switch on rear panel of VCR (P.4) or select LINE.
- Set VCR/TV selector to "VCR."
- Adjust TRACKING control in either direction. (P.31)
- Try Head Cleaning. (P.31)

- Set TV's Vertical Hold Control to "MANUAL," then adjust.

- Make sure VCR LOCK is set to off. (P.26)
- Make sure remote is in proper mode.
- Make sure unit is not in a Timer Record operation.

### Correction

- Aim Remote Control directly at remote sensor on VCR. (P.39)
- Avoid any object blocking signal path.
- Inspect remote batteries. (P.4)
- Set VCR LOCK is set to off. (P.26)
- Exposing VCR remote sensor to direct fluorescent or outdoor light may cause signal interference.

- Press VCR button for VCR mode. (P.14)
- Check Batteries.

### Correction

- Set VCR/TV selector to "TV." (P.9)
- Make sure proper signal source is selected.
- Insert the cassette with window side up; record tab facing you.
- Insure no other tape is inside unit.
- Completely insert Power Plug into AC outlet.

- Make sure cassette rec tab is intact. (P.30)

- To enable Quick play mechanism, the cylinder will rotate for about 5 minutes. This reduces response time from Stop to Play mode and from Play to Rewind/Search mode.

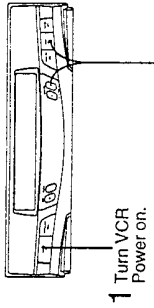
- Because VCR playback signal is not as stable as off-the-air TV signal, top of TV screen may be bent or unstable during playback. Slowly turn TV horizontal Hold control to correct. If you TV has no horizontal Hold control or adjusting control is ineffective, contact your nearest TV service center.

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

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

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

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

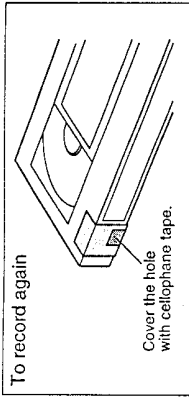
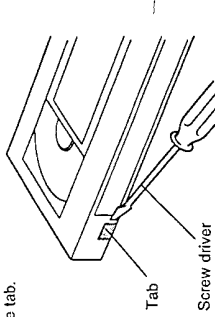


2 Press and hold both **PLAY** and **CHANNEL ▲** on the VCR for more than 5 seconds.

- The power will shut off.

3 Do "One Time VCR Setup" steps on page 6.

Break off the tab.



To record again

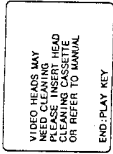
Cover the hole with cellophane tape.

## Video Cleaning

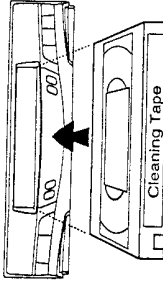
Playing older or damaged tapes may eventually cause video heads to become clogged.

### Video Head Clog Sensor

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



- Use "dry" type head cleaning cassette only. (Part No. NV-TCL30PT is recommended.)



- Follow cleaning tape instructions carefully.
- Excessive use of tape can shorten head life.
- If head clog symptoms persist, contact your nearest Factory Service Center or authorized Service Center. (See page 34)

## Record/Playback Time

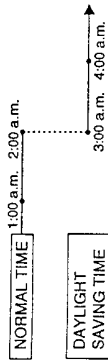
Only use tapes with the **VHS** mark in this unit.

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

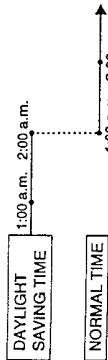
## DST (Daylight Saving Time)

VCR auto adjusts clock for DST. (Page 7.)

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 VCR for timer recordings.

## Specifications

**Power Source:** 120V AC, 60 Hz  
**Power Consumption:** **Power On:** Approx. 18 watts (PV-9400)  
Approx. 23 watts (PV-9450)  
**Power Off:** Approx. 3.5 watts (PV-9400)  
Approx. 3.7 watts (PV-9450)  
**Video Signal:** EIA Standard NTSC color  
**Video Recording System:** 4 rotary heads helical scanning system  
**Audio Track:** 1 track (Normal)  
2 channel (Hi-Fi Audio Sound) (PV-9450)

**Tuner:** **Broadcast Channels:** VHF 2-13, UHF 14-69  
**CABLE Channels:** Midband A through J (14-22)  
Superband J through W (23-36)  
Hyperband AA-EEE (37-64)  
Lowband A-5-A-1 (65-99)  
**Special CABLE channel 5A (01)**  
Ultra-band 65-94, 100-125

**Operating Temperature:** 41°F-104°F (5°C-40°C)  
**Operating Humidity:** 10%-75%  
**Weight:** 7.7 lbs. (3.5 kg) (PV-9450)  
14-15/16" (W) x 3-2/3" (H) x 12-3/16" (D)  
**Dimensions:** 380 (W) x 93 (H) x 310 (D) mm

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

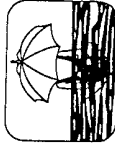
## VCR & Cassette Information

### Features for a Quality Picture

**Digital Auto Picture**  
Automatically controls the video output signal for less noise depending on the tape condition.

**Digital Auto Tracking**  
Continuously analyzes the signal and adjusts for optimum picture quality.

**Manual Tracking Control (to reduce picture noise)**  
Use during Playback and Slow Motion mode to reduce picture noise. To return to Auto Tracking, press **POWER** off, then on again.



**V-Lock Control (to reduce picture jitter)**  
In Still mode, **CH (TRACKING) ▲▼** operate as a V-Lock control.

1

**Display menu.**  
Press ACTION.\*



2

**Select menu item.**



```

MENU
SET UP VCR
SET UP FEATURE
SET UP CLOCK
SET UP CHANNEL
SELECT: < > KEY
SET: < > KEY
END: ACTION KEY
    
```

3

**Language**

1) Press < > to highlight language item.

```

MENU
SET UP VCR
SET UP FEATURE
SET UP CLOCK
SET UP CHANNEL
DIGITAL LANGUAGE ENGLISH
SELECT: < > KEY
SET: < > KEY
END: ACTION KEY
    
```

2) Press < > repeatedly.

```

MENU
SET UP VCR
SET UP FEATURE
SET UP CLOCK
SET UP CHANNEL
DIGITAL LANGUAGE ENGLISH
SELECT: < > KEY
SET: < > KEY
END: ACTION KEY
    
```

For English

```

MENU
PREPARAR VCR
PREPARAR FUNCIONES
FMAR RELD
FMAR CANAL
LANGUAGE LANGUAGE ESPAÑOL
FLUAR
TERMINAR ACTION
    
```

For Spanish

```

MENU
REGLAGE MAGNETOSCOPE
REGLAGE MAGNETO SUPPLEM
REGLAGE MAGNETO SUPPLEM
REGLAGE CANAL
LANGUAGE LANGUAGE FRANÇAIS
SEL
FIN
    
```

For French

**Add or Delete a Channel**

To add channel:  
Select channel with NUMBERED keys and press ADD/DLT.

```

CHANNEL OR ADDED
    
```

To delete channel:  
Select channel with CH < > keys and press ADD/DLT.

```

CHANNEL OR DELETED
    
```

**Clock**

1) Press < > to select SET CLOCK.

```

MENU
SET UP VCR
SET UP FEATURE
SET CLOCK
SET UP CHANNEL
DIGITAL LANGUAGE ENGLISH
SELECT: < > KEY
SET: < > KEY
END: ACTION KEY
    
```

2) Press < >.

```

SET CLOCK
AUTO CLOCK SET
MANUAL
TIME ZONE ADJUST : 0
SELECT: < > KEY
SET: < > KEY
END: ACTION KEY
    
```

3) Press < > to select MANUAL and press < >.

For Auto Clock Set, select "AUTO CLOCK SET," then press CH < >.

```

SET CLOCK
MANUAL
TIME ZONE ADJUST : 1
SELECT: < > KEY
SET: < > KEY
END: ACTION KEY
    
```

4) Press < > and < > to select and set the date, time, and DST (Daylight Saving Time).

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

**Clock (Time Zone Adjust)**

1) Press < > to select SET CLOCK.

```

MENU
SET UP VCR
SET UP FEATURE
SET CLOCK
SET UP CHANNEL
DIGITAL LANGUAGE ENGLISH
SELECT: < > KEY
SET: < > KEY
END: ACTION KEY
    
```

2) Press < >.

```

SET CLOCK
AUTO CLOCK SET
MANUAL
TIME ZONE ADJUST : 0
SELECT: < > KEY
SET: < > KEY
END: ACTION KEY
    
```

3) Press < > to select TIME ZONE ADJUST and press < > repeatedly to adjust.

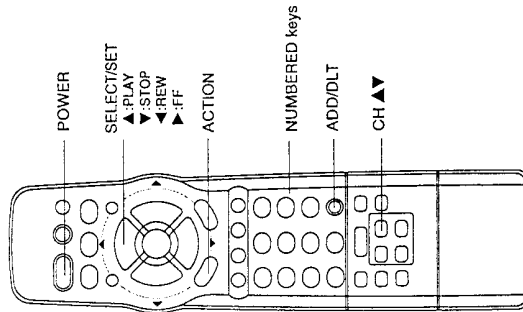
```

SET CLOCK
MANUAL
TIME ZONE ADJUST : 1
SELECT: < > KEY
SET: < > KEY
END: ACTION KEY
    
```

4) Press ACTION twice.

5) Press POWER off to perform AUTO CLOCK SET.

\* The numerical value set here is returned to "0" if clock is set manually.



Model PV-9450 remote is shown here.

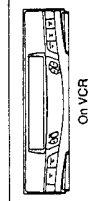
**Using < > keys**

You can also operate the menu screen using VCR buttons.

If you use VCR buttons, press CH < > and CH < > together to display the menu screen.



On Remote



On VCR

When menu screens are displayed, PLAY, STOP, REWIND, and FF buttons function as < > only.

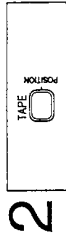
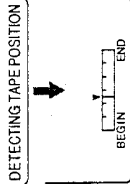
### Tape Position Display Feature

To find out the present tape position.  
Tape position cannot be found for C-Cassette type.



**Display TAPE SELECT.**  
Press TAPE POSITION.

- It takes several seconds for correct indication to appear.
- Indication is standard.



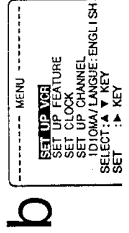
**Return to normal screen.**  
Press TAPE POSITION.

### Remote Warning ON/OFF Feature

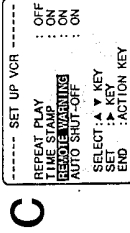
If Multi-brand feature is used (page 14), and this feature is set to on, a warning appears whenever an invalid key is pressed in TV, DSS, or Cable mode.



**Display menu.**  
Press ACTION.\*



**Display SET UP VCR.**  
1) Press < > to select.  
2) Press < > to display.



**Set ON or OFF.**  
1) Press < > to select.  
2) Press < > to set.

- \*OFF\* -> remote warning will not appear even if invalid key is pressed.

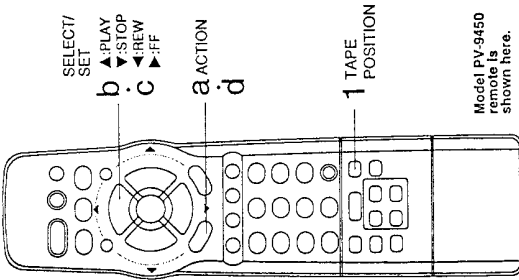


**Return to normal screen.**  
Press ACTION twice.

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### Check list before you begin.

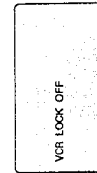
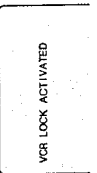
- All connections are made. (See pages 4-5.)
- VCR is plugged in.
- TV is turned on and set to the VCR channel (CH 3 or 4).



Model PV-9450 remote is shown here.

### VCR Lock Feature

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



**To turn ON:**  
In Stop mode, hold down REC on the VCR without a cassette inserted for 7 seconds.

**To turn OFF:**  
Repeat above.

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

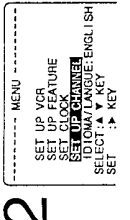
For assistance, call 1-800-211-PANA(7262).

### Weak Signal Display ON/OFF Feature

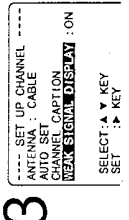
When "on" is selected, picture is displayed even when broadcast signal is weak or nonexistent.



**Display menu.**  
Press ACTION.



**Display SET UP CHANNEL.**  
1) Press < > to select.  
2) Press < > to display.



**Set ON or OFF.**  
1) Press < > to select.  
2) Press < > to set.

- ON -> Picture is displayed regardless of signal condition, and the screen turns solid blue when signal is absent or weak.
- If VCR is connected to equipment which has blue back feature, selecting ON will have no effect on the other equipment.

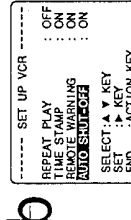


**Return to normal screen.**  
Press ACTION twice.

### Auto Shut-Off Feature

When "ON" is selected, VCR shuts itself off when playback of a blank portion of tape continues or no signal is detected for over 5 minutes.

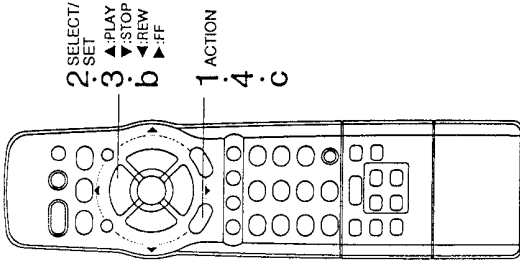
Repeat step "a" and "b" on page 26 to display SET UP VCR.



**Set ON or OFF.**  
1) Press < > to select.  
2) Press < > to set.



**Return to normal screen.**  
Press ACTION twice.



Model PV-9450 remote is shown here.

### Time Stamp Feature

The VCR writes program data (see example below) about the first 10 seconds of every recording. The information is then displayed the first 7 seconds of playback. To change the data, see "To Change Time Stamp Data" on page 25.

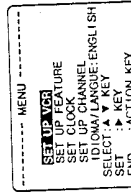
**1**

Display menu.  
Press ACTION.\*



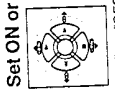
**2**

Display SET UP VCR.  
1) Press **▲** to select.  
2) Press **▶** to display.



**3**

Set ON or OFF.  
1) Press **▲** to select.  
2) Press **▶** to set.



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

**4**

Return to normal screen.  
Press ACTION twice.



<Time Stamp Example>

One Touch Recording

Timer Recording

12/27/1998 MON  
12:00PM  
CH 08 ABC  
MEMORIAL MOVIE

When Clock is not set.  
---:--:--  
CH 08 ABC

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

For assistance, call 1-800-211-PANA(7262).

### Changing Time Stamp Data

You may change the Date, Time, Channel, Category, and Notes.

**1**


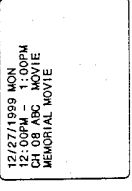


Display Time Stamp Data.  
1) Insert cassette with record tab.  
2) Press PLAY.




**2**

Display TIME STAMP EDIT.  
Press PROG while the data is displayed.

**3**


Change Time Stamp Data.  
1) Press **▲** to select.  
2) Press **▶** to enter and continue.  
\* Characters in NOTES will change in the following order.



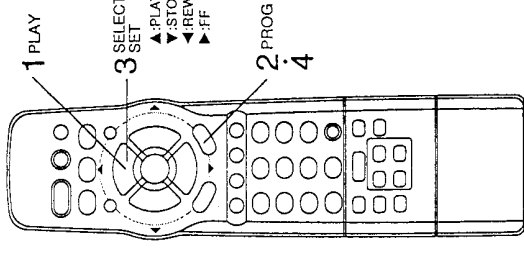
A → B → C → Z → BLANK → → & ← ← 0 → / → + → 1

**4**

Write the new data.  
Press PROG.



When data is written, VCR returns to Playback mode.



Model PV-9450 remote is shown here.



### Channel Caption

When set, station name, e.g. ABC, CBS, and channel number appear on-screen. Set up to 24 preset captions, and/or 10 manually created captions.

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

### Preset Caption

1 Display menu.  
Press ACTION.\*

```

----- MENU -----
SET UP VCR
SET UP FEATURE
SET UP CHANNEL
ID/ON/ LANGUAGE: ENGLISH
SELECT: ▲ KEY
SET: ► KEY
END: : ACTION KEY
    
```

2 Display SET UP CHANNEL.  
1) Press ▲▼ to select.  
2) Press ► to display.



```

----- SET UP CHANNEL -----
ANTENNA: CABLE
CHANNEL: 10
WEAK SIGNAL DISPLAY: ON
SELECT: ▲ KEY
SET: ► KEY
END: : ACTION KEY
    
```

3 Display CHANNEL CAPTION.  
1) Press ▲▼ to select.  
2) Press ► to display.



```

----- CHANNEL CAPTION -----
PRESET CAPTION
MANUAL CAPTION
SELECT: ▲ KEY
SET: ► KEY
END: : ACTION KEY
    
```

4 Display PRESET CAPTION.  
1) Press ▲▼ to select.  
2) Press ► to display.  
• To create your own captions go to "Manual Caption" on page 23.



```

----- PRESET CAPTION -----
ABC --- PBS ---
--- FOX --- ESPN ---
--- NBC --- HBO ---
SELECT: ▲ KEY
SET: ► KEY
----- PRESET CAPTION -----
TNT 42 CBC 82
--- VLN 51 TSN 52
--- DSC 55 GLOB 123
CLEAR: ADD/DEL KEY
SELECT: ▲ KEY
END: : ACTION KEY
    
```

5 Assign preset captions.  
1) Press ▲▼ to highlight caption.  
2) Press ► to move cursor to the right.  
3) Press ▲▼ to select CH number.  
4) Press ◀ to set.  
• Repeat step 5 until the list is complete.



To make corrections:  
Press ▲ and ► to select the channel number, or ADD/DEL to change, or ADD/DEL to delete the number.

6 End setup.  
Press ACTION four times.



22

### Manual Caption

1 Do "Preset Caption" steps 1-3 on page 22.

```

----- CHANNEL CAPTION -----
PRESET CAPTION
MANUAL CAPTION
SELECT: ▲ KEY
SET: ► KEY
END: : ACTION KEY
    
```

2 Display MANUAL CAPTION.  
1) Press ▲▼ to select.  
2) Press ► to display.



```

----- MANUAL CAPTION -----
CH NUMBER: 02
CAPTION:
SELECT: ▲ KEY
SET: ► KEY
END: : ACTION KEY
    
```

3 Select channel number.  
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.



```

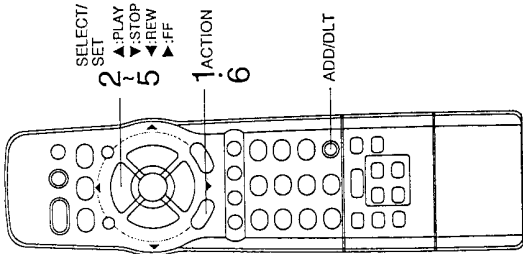
----- MANUAL CAPTION -----
CH NUMBER: 02
CAPTION:
CLEAR: ADD/DEL KEY
SELECT: ▲ KEY
SET: ► KEY
END: : ACTION KEY
    
```

4 Enter CAPTION.  
1) Press ▲▼ to select.  
2) Press ► to enter.  
• Characters change in following order:  
→ A → B → C → ... → Z → BLANK → → &  
→ 9 → ... → 2 → 1 → 0 → / → | → ←



To make corrections,  
Press ▲ and ► to select the channel number, then press ADD/DEL to change, or ADD/DEL to delete the number.

5 End input.  
Press ACTION four times.



Model PV-9450 remote is shown here.

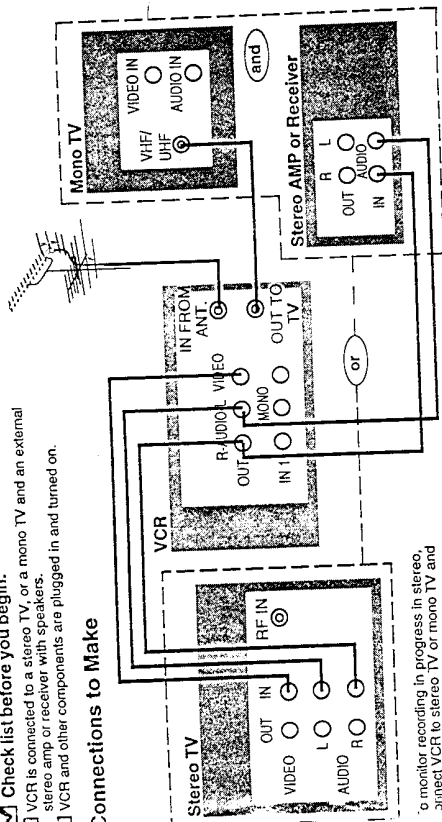
Model PV-9450 remote is shown here.

For assistance, call 1-800-211-PANA(7262).

# For Model PV-9450 only

- ✓ Check list before you begin.
- VCR is connected to a stereo TV, or a mono TV and an external stereo amp or receiver with speakers.
- VCR and other components are plugged in and turned on.

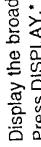
## Connections to Make



To monitor recording in progress in stereo, connect VCR to stereo TV or mono TV and stereo amp with speakers.

## Receivable Broadcast Types

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



Display the broadcast signal being received. Press DISPLAY.

### MTS Stereo and SAP broadcast

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

### MTS Stereo broadcast

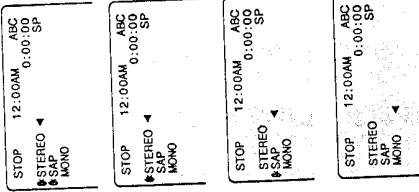
Multi-channel Television Sound Stereo broadcast. Select STEREO audio mode. If stereo broadcasts are received and display flickers, select VCR audio mode for possibly better results.

### SAP broadcast

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

### MONO broadcast

Normal monaural sound broadcast.



Equipped with dbx® TV Noise Reduction for true MTS reproduction. dbx® TV Noise Reduction is required for dbx® as a separation mark, and is licensed by dbx® Technology Licensing.

For assistance, call 1-800-211-PANA(7262).

## When set to proper audio mode VCR can:

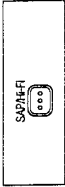
- 1) record/playback MTS stereo broadcasts (main language) in Hi-Fi stereo.
- 2) record/playback mono (main language) or SAP (sub language) broadcasts.
- 3) playback non Hi-Fi tapes in monaural.

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

## Audio Mode for Recording

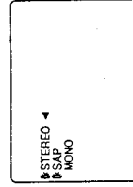
### 1 Display audio mode.

Press SAP/Hi-Fi.



### 2 Select desired mode.

Press SAP/Hi-Fi repeatedly (each press within 5 seconds).



- Refer to the "Receivable Broadcast Types" on page 20.
- The arrow indicates your selection.

### 3 Do a recording.

See page 9.

## Audio Mode for Playback

### a Start playback.

See page 8.

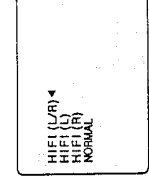
### b Display audio mode.

Press SAP/Hi-Fi.

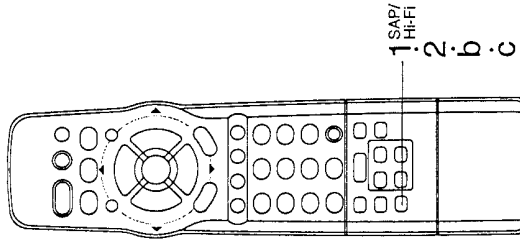


### c Select desired mode.

Press SAP/Hi-Fi repeatedly (each press within 5 seconds).



- Select "Hi-Fi (L/R)" or "Hi-Fi (L)" or "Hi-Fi (R)" to listen to stereo recordings in stereo sound. Select "NORMAL" for monaural sound.
- The arrow indicates your selection.



## Notes

- Only tapes recorded in Hi-Fi stereo will play back in Hi-Fi stereo. Stereo tapes recorded in monaural sound will play back in monaural sound.
- To listen to Hi-Fi stereo playback, the VCR AUDIO (L/R) jacks must be connected to a stereo TV or an external stereo amp and speakers. (See page 20.)
- If tracking is adjusted during playback, Hi-Fi audio may revert to normal audio.
- Hi-Fi and normal audio playback volume level may differ.



# VHS Index Search System

Each time 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.

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

Go directly to desired recording.

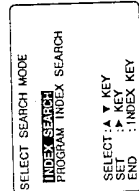


**1** Display SELECT SEARCH MODE. Press INDEX.

- If there are no timer recordings on the Program Index List, go to step 3.

**2** Display INDEX.

- 1) Press  $\blacktriangle$  to select.
  - 2) Press  $\blacktriangleright$  to display.
- This screen appears only if there are timer recordings.

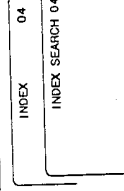


**3** Select the recording number. Press NUMBERED key.

- To calculate number, see below.

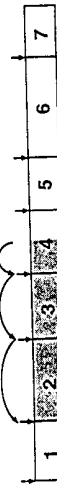
**4** Start search. Press FF or REW.

- When search is finished, playback begins.



## To calculate Index Number

**Example 1:** If you are watching recording 4 and you want to watch recording 2, enter 3 in step "3" and press REW.

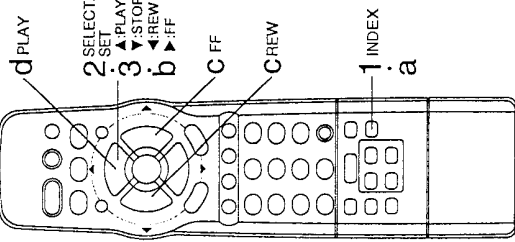


**Example 2:** If you are watching recording 2 and you want to watch recording 6, enter 4 in step "3" and press FF.



NOTE: † indicates start points of each recording.

For assistance, call 1-800-211-PANA(7262).



Model PV-9450 remote is shown here.

## Auto Operation Functions

- **Auto Playback**  
Tape insert  $\rightarrow$  Power turn on  $\rightarrow$  Start playback if record tab (see page 30) is removed.
- **Auto Rewind**  
Manual Record  $\rightarrow$  Tape end  $\rightarrow$  Fast Forward  $\rightarrow$  Rewind (Auto)
- **Playback Auto Eject (Repeat Play is "OFF")**  
Playback  $\rightarrow$  Rewind  $\rightarrow$  Tape eject (Without record tab)
- **Memory Rewind Off**  
Rewind  $\rightarrow$  Press POWER  $\rightarrow$  Turn off after complete

**1** Choose a timer recorded program from a Program Index List. When the tape is ejected or normal recording is started, all program index data are deleted. Display SELECT SEARCH MODE. Press INDEX.

**2** Display PROGRAM INDEX. Press  $\blacktriangle$  to select. Press  $\blacktriangleright$  to display.

**3** Select the desired recorded program.

- 1) Press  $\blacktriangle$  to select.
  - 2) Press  $\blacktriangleright$  to start the forward or rewind search.
- When search is finished, playback begins.

## Index Scan (For normal and/or timer recordings)

In Play mode, the first 10 seconds of each recording can be scanned (forward or reverse).

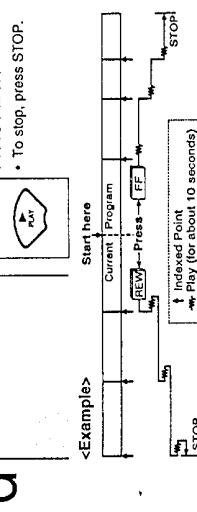
**a** Display SELECT SEARCH MODE. Press INDEX.

- If there are no timer recordings on the Program Index List, go to step c.

**b** Display INDEX. Press  $\blacktriangle$  to select. Press  $\blacktriangleright$  to display.

**c** Start scan. Press FF or REW.

**d** Cancel scan, start playback. Press PLAY.



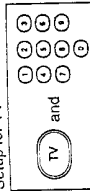
INDEXED POINT  
Play (for about 10 seconds)  
Fast Forward or Rewind

The Remote Control may be set up to control some TV or Cable/DSS Box functions.

### Multi-Brand Control Setup

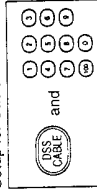
**1** Find your TV, Cable or DSS Receiver Brand Code Number on following page.

**2** Setup for TV



**Setup remote.**  
Hold down TV and enter code with NUMBERED keys.\*

Setup for Cable or DSS



Hold down DSS/CABLE and enter code with NUMBERED keys.  
\* For code 100 or greater, press the 0 key first, then remaining digit. For 102, press 100, then press 0, and then press 2.

**3** Confirm code entry.



Press POWER to turn selected unit ON or OFF.  
\* See table below for list of controllable functions in each mode.

**Note**

- Please repeat Multi-Brand Control setup after replacing remote control batteries.
- The remote control will not operate all TVs, Cable Boxes, and DSS receivers made by manufacturers listed. If you get no results, your particular brand cannot be controlled.

### Using the Multi-Brand Control

After remote control is setup, you can select VCR, TV, or DSS/CABLE for the desired function. Press VCR or TV or DSS/CABLE on the remote control. This table shows which buttons are available for each mode.

Mode	Available Buttons	VCR	TV	DSS/CABLE
VCR	All Functions	VOL UP/DOWN		
TV	VCR/TV, PLAY, STOP, EJECT, SAP/Hi-Fi (PV, 9450 only), DISPLAY, FF, REW, PAUSE, SLOW, REC/TIME, SPEED, ZERO/1MIN, COUNTER RESET	POWER, INPUT, NUMBERED keys, ENTER, CH UP/DOWN, VOL UP/DOWN		
DSS/CABLE	VCR/TV, PLAY, STOP, EJECT, SAP/Hi-Fi (PV, 9450 only), DISPLAY, FF, REW, PAUSE, SLOW, REC/TIME, SPEED, ZERO/1MIN, COUNTER RESET	VOL UP/DOWN		POWER, ENTER, NUMBERED keys (except 100key), CH UP/DOWN

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

### TV Brand Code Numbers

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

### Cable Box Brand Code Numbers

Archer	01, 05, 06, 44, 63, 91, 126	Realistic/ Recoton	44, 51, 59, 75, 126
Cableview/ Citizen	04, 30, 42, 44, 52, 63, 124, 126	Rembran	01, 32, 39, 42, 44, 63, 126
Curtis/ Scientific Atlanta	08, 09, 53, 61, 87	Salora	05, 06, 32, 40, 42
Century	44, 51, 59, 75	Shentech	06, 32, 40, 42, 43, 44, 52, 63, 126
Cabletennar/ Diamond/ Unika	01, 44, 63, 91, 126	SL Marx	06, 32, 40, 42, 43, 44, 52, 63, 126
Drake	13, 20, 22, 26, 40, 58, 62, 107	Standard Components	32, 39, 42, 44, 126
Eagle/ Viewstar	13, 20, 22, 26, 40, 58, 62, 107	Stargate	04, 06, 30, 32, 40, 42, 44, 52, 63, 124, 126
Eastlan/ Regency	28, 130	Sylvania	04, 06, 30, 32, 40, 42, 44, 52, 63, 124, 126
GC Brand	04, 30, 42, 44, 52, 63, 124, 126	Teknika	04, 124
Gemini	04, 124	Telescan	77, 127
General Electric	01, 57	Television	06, 32, 40, 42
General Instruments/ Jerrild	01, 02, 03, 04, 34, 55, 65, 67, 68, 83, 91, 115, 117, 118, 124	Texscan	01, 33, 34, 42, 66, 91
Hamiltiv/ Regal	14, 15, 28, 41, 102, 103, 104, 108, 130	Toshiba	01, 33, 34, 42, 66, 91
Hitech	31	Uniden Satellite	65
Jasco	04, 124	Universal	42, 43, 44, 52, 63, 126
Macom	31	Videoway/ Zenith	07, 23, 50, 129
Magnavox/ Signal	26, 112	Vid Tech/ Vidler	64
Matsushita/ Panasonic/ RCA/ Spucon	16, 17, 97, 109		
Movielime	32, 38, 39, 40, 42, 44, 126		
NSC/ NEC	32, 38, 40		
NOVA/ VISION	08, 09, 53, 61		
Oak/ Oak Sigma	11, 45, 129		
Philips	07, 13, 20, 23, 24, 50, 128, 129		
Pioneer/ Quest	05, 06		
Pulsar	04, 30, 42, 44, 52, 63, 124, 126		
Radio Shack	44, 51, 59, 75		

### DSS Brand Code Number

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

### Important Notes

- Please repeat Multi-Brand Control setup after replacing remote control batteries.
- Due to changes in infra-red commands used by manufacturers, some brands have several codes. If your unit does not respond to the first code, please try the next one.
- Some TV, Cable Box and DSS Box brands require you to turn on the power manually.
- Not all functions listed may be controlled by this remote control.

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

### 1 Display menu.

Press **ACTION**.  
 Press **ACTION**.  
 You can also set up using VCR buttons. See the bottom right of this page.

### 2 Display SET UP FEATURE.

1) Press **▲** to select.  
 2) Press **▶** to display.

### 3 Display TIMER PROGRAM.

1) Press **▶** to display.  
 • If a program is already in memory, press **▲** and **▶** to select an unused program number.

### 4 Set the recording DATE.

1) Press **▲** to select.  
 2) Press **▶** or **◀** to set.  
 • 1-31 = One time  
 • DAILY = MON-FRI  
 • WEEKLY = Same time once a week

Example: 9-31-1-2-6  
 Repeat step 3 to set start time, stop time Channel (or LINE for outside source), Category\*, tap speed (SP, LP, SLP).

### 5 Make the notes.

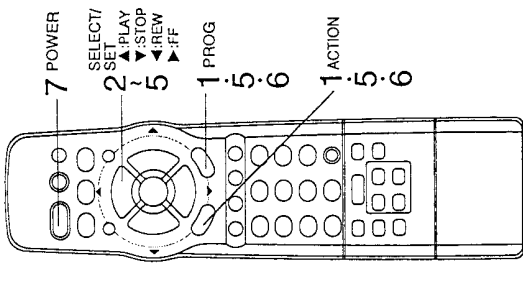
1) Press **▶** to begin.  
 2) Press **▲** to select.  
 3) Press **▶** to set.  
 • Characters will change in the following order:  
 A → B → C → ... → Z → BLANK → ... → \* → #

4) Press **PROG** (or **ACTION**) to end.  
 Continued on the next page.

**Important notes when using a DSS receiver**

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

- Check list before you begin.
- All connections are made.
  - TV and VCR are plugged in and turned on.
  - VCR/TV selector is set to "VCR".
  - Clock is set to correct time.
  - Record tab in place. (See page 30.)
  - Remote in VCR mode.



Model PV-9450 remote is shown here.

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

**Using ▲/▼ keys**  
 You can also operate the menu screen using VCR to docks.  
 If you use VCR buttons, press CH▲ and CH▼ together to display the menu screen.  
 On Remote: ▲: PLAY, ▼: STOP, ◀: REW, ▶: FF  
 When menu screens are displayed, PLAY, STOP, REW, and FF buttons function as ▲/▼ only.

For assistance, call 1-800-211-PANA(7262)

**b** To Enter More Programs  
 Press **▲** to select, and **▶** to display a blank program number. Then repeat steps 4 and 5.

**7** Set the timer.  
 Press **POWER OFF**.  
 • When recording a program, make sure the cable box is left ON and tuned to the desired channel.

**a** Repeat steps 1-3 on page 12.  
 • If necessary, press **POWER ON**.

**b** Select program.  
 1) Press **▲** to select number.

**c** To Replace program...  
 1) Press **▶** to display.  
 2) Press **▲/▼** to set new program contents.

**d** To Clear program...  
 1) Press **ADD/DLT**.

**End the program.**  
 1) Press **PROG** (or **ACTION**).  
 • If there are programs, press **POWER OFF**.

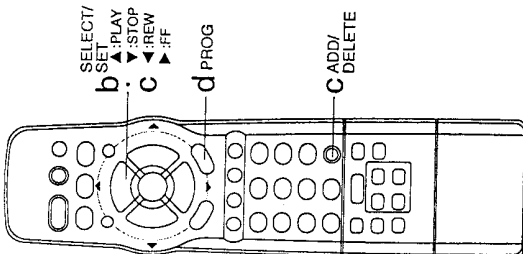
**(To cancel Timer Recording (Recording is in progress))**  
 Press **POWER** and then **STOP** within 10 seconds to cancel the timer recording. (The **TIMER** indicator goes out in the Multi Function Display.)

1) Press **PROG** (or **ACTION**).

2) Press **PROG** (or **ACTION**) again to exit.

3) Press **PROG** (or **ACTION**) again to exit.

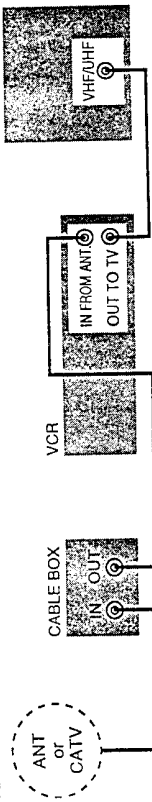
4) Press **PROG** (or **ACTION**) again to exit.



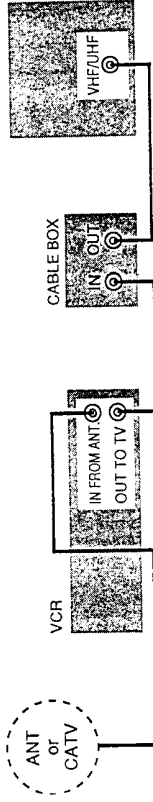
Model PV-9450 remote is shown here.

## CATV Connection

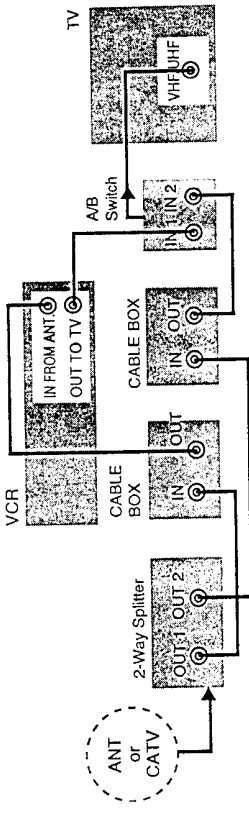
### With a Cable Box (Cable Box VCR)



### With a Cable Box (VCR Cable Box)

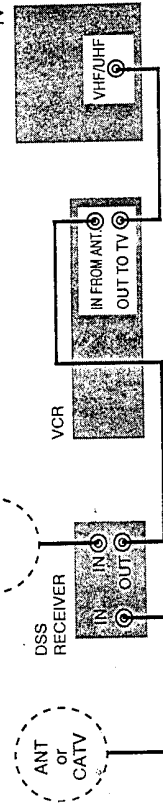


### With Two Cable Boxes



## DSS Connection

\* DSS® is a registered trademark of DIRECTV, INC., a unit of GM Hughes Electronics.

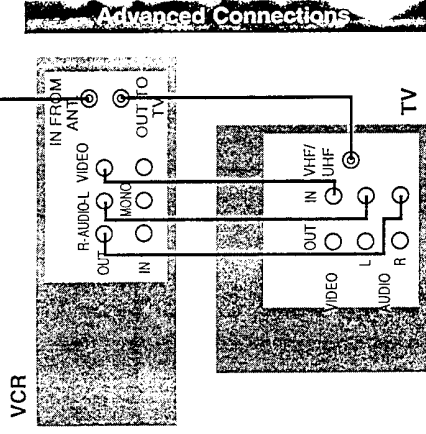


## You Can

- record or view any (including scrambled) channel.
- use VCR Remote Control to select channels using Multi-brand control feature.

## Audio/Video Connections

If your TV has AUDIO and VIDEO IN terminals, connect them to VCR for higher quality picture and sound. You can enjoy stereo sound even if your TV is not stereo by connecting a stereo amplifier to the VCR.



## NOTE:

To use your TV as a VCR monitor, set the VIDEO/TV selector on the TV (Monitor/Receiver) to "VIDEO." For model PV-9450, use the L Audio IN jack for proper sound reduction when connecting to a monaural TV.

## Note to CABLE system installer:

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

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

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.

## You Cannot

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

- record scrambled channels.

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

- record and view both unscrambled and scrambled channels if additional equipment is added. This connection requires: two converter boxes, an A/B switch, and a 2-way splitter.
- view channel selected for any type of recording.
- do a Timer recording of a channel unless you select it at the cable box.

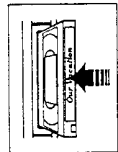
- record and view any (including scrambled) channel.
- use your VCR Remote Control to select channels using Multi-brand control feature.

- do a Timer recording of a channel unless you select it at the DSS box.

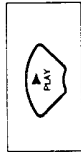
NOTE: DSS receiver must be used to view cable box or antenna programs.

**Check list before you begin.**

- All connections are made.
- TV and VCR are plugged in.
- TV is turned on and set to the VCR channel (CH 3 or 4).
- Remote is in VCR mode.



**1 Insert a cassette.**  
 • VCR power comes on and VCR appears on display.



**2 Press PLAY.**  
 • Playback begins if cassette has no record lab.

- To Find a Particular Scene Forward Search --> Press FF Reverse Search --> Press REW
- For Slow Motion --> Press SLOW
- For Still (Freeze) picture --> Press PAUSE
- For Frame by Frame picture --> Press SLOW in Still mode.

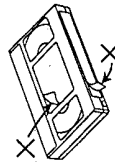
**Notes** After the VCR is in Still or Slow mode for 3 minutes, it will switch to Stop mode automatically to protect the tape and the video head.

- To stop --> Press STOP
- To rewind tape --> Press REW
- To eject tape --> Press EJECT on the remote or STOP/EJECT on the VCR.

Model PV-9450 remote is shown here.

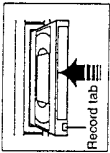
**Note**

- To prevent tape jam inspect your cassette tapes and remove any loose or peeling labels.

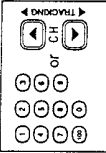


**For assistance, call 1-800-211-PANA(7262).**

- Check list before you begin.
- All connections are made.
- TV is turned on and set to the VCR channel (CH 3 or 4).
- Cassette with record lab in place.
- Remote in VCR mode.



**1 Insert a cassette.**  
 • VCR power comes on automatically.



**2 Select Channel.**  
 Press CH ▲▼ or NUMBERED keys.  
 • To select "LINE", see page 19.  
 • To select channels over 100, first press 100 key, then enter remaining two digits.



**3 Select Recording speed.**  
 (See page 30.) Press SPEED.  
 • SP = Standard Play  
 LP = Long Play  
 SLP = Super Long Play  
 • Selected speed is displayed on TV screen.



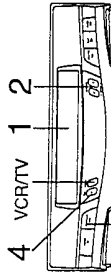
**4 Start Recording.**  
 Press REC.  
 • To edit out unwanted portions, press PAUSE to pause and resume recording.

- To stop --> Press STOP
- One Touch Recording Press REC repeatedly to set the recording length (30 min. - 4 hours).
- The VCR turns itself off at a preset time.



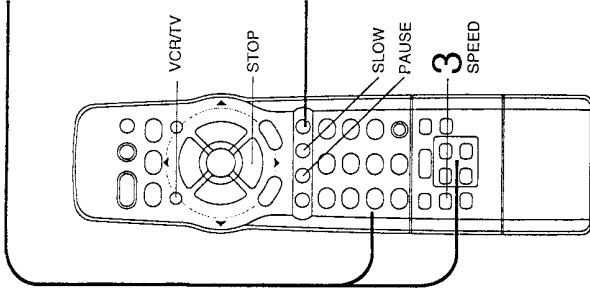
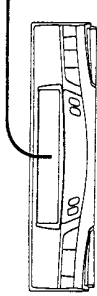
- Record One Program While Watching Another Press VCR/TV --> "VCR" disappears on VCR display --> Select Channel at the TV.
- Selecting Channel at the VCR Press VCR/TV --> "VCR" appears on VCR display --> Select Channel at the VCR.

You can operate on the VCR



Press to stop.

If the remote control POWER, ACTION, PROG, CH ▲▼, INDEX, NUMBERED keys, INPUT, DISPLAY, TAPE POSITION, or ADD/DLT button does not work when pressed, press the VCR button on the remote and try the button again.



Model PV-9450 remote is shown here.

**Note**

- After the VCR has been in Pause mode for 5 minutes, it will stop automatically to protect the tape and video head.



Process of Setup

Language → Channel → Clock

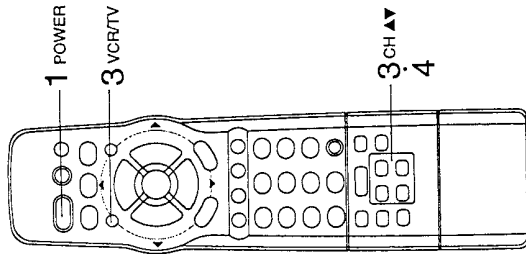
When VCR is turned on the first time, setup mode is entered automatically.

Turn the TV and VCR on.  
Press POWER.\*



Tune to VCR output channel.  
Tune TV to CH3 or CH4.

(Same as back of VCR)  
• Always tune TV to this channel to monitor the VCR.  
• If you used audio/video jack connection, tune the TV to its video input.



Model PV-9450 remote is shown here.

Select the language.

PUSH VCR CH ▲: ENGLISH  
OPRIMIR VCR CH ▼: ESPAÑOL  
APP. VCR/TV : FRANÇAIS  
(TV Screen)

• Use remote or VCR buttons.  
• If wrong language is set, do "Reset all VCR Memory Functions" steps page 30.

Start Channel Auto Set and Clock Auto Set.

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

Press CH▲

CH AUTO SET PROCEEDING

AUTO CLOCK SET PROCEEDING

Case 1 (Setup completed)

1/ 4/2000 TUE 12:00PM  
DST:ON  
SETTINGS : CH 02  
AUTO CLOCK SET COMPLETED  
END : PUSH CH UP KEY

Press CH▲ to exit.

Case 2 (Setup incomplete)

AUTO CLOCK SET IS INCOMPLETE  
PUSH ACTION TO SET CLOCK

See next page.

\* If the displayed time is not correct, do the "Clock" section on page 28.

For assistance, call 1-800-211-PANA(7262).

Case 2 Clock Setup incomplete.

Set the clock manually.

AUTO CLOCK SET IS INCOMPLETE  
PUSH ACTION TO SET CLOCK



1) Press ACTION.

2) Press ▲ to select month.

3) Press ► to set.

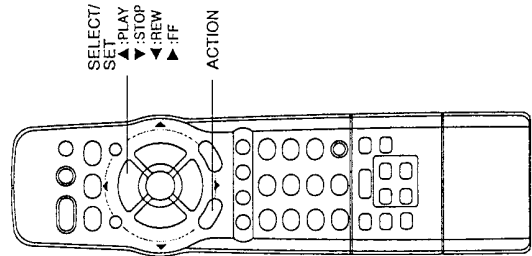
• Likewise, set date, year, time, DST (Daylight Saving Time).

To Make Corrections, repeatedly press ◀▶ to move to error, then correct.

4) Press ACTION. (Clock starts.)

• For exit this mode, press ACTION again.

SET CLOCK  
1/ 4/2000 TUE 12:00PM  
DST:ON  
SET COMPLETED  
SET : ▲▶ KEY  
START : ACTION KEY



Model PV-9450 remote is shown here.

Notes

- VCR calendar is accurately maintained to Dec. 31, 2097 11:59PM.
- Channel auto set selects normal TV or Cable channels depending on your VCR hookup.

IMPORTANT NOTE FOR AUTO CLOCK SET

- Auto clock set is performed the first time the VCR is turned off each day. If used, a cable box must be left on and tuned to the PBS channel at the time VCR power is turned off if you want auto clock set to be done.
- If used, a DSS receiver must be turned off for auto clock set.
- If Cable Box or DSS receiver is connected to VCR via Audio/Video jacks, an RF coaxial cable must also be connected for auto clock set and channel auto set features.

Using ▲▼◀▶ keys

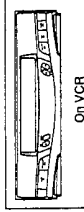
You can also operate the menu screen using VCR buttons.

If you use VCR buttons, press CH ▲ and CH ▼ together to display the menu screen.

When menu screens are displayed, PLAY, STOP, REWIND, and FF buttons function as ▲▼◀▶ only.



On Remote



On VCR

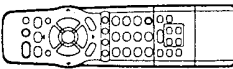
## Congratulations

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 VCR.

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

## Accessories

- Remote Control  Batteries 2 "AA"  
VSGSXXXX (PV-9400)  
VSGST596 (PV-9450)



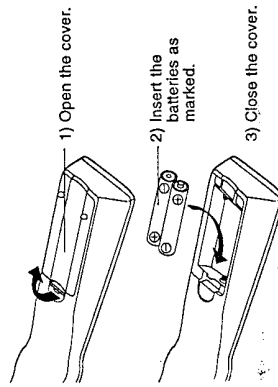
- RF Coaxial Cable  
VJAS0196



Model PV-9450  
remote is  
shown here.

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

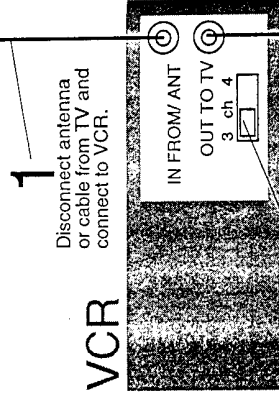
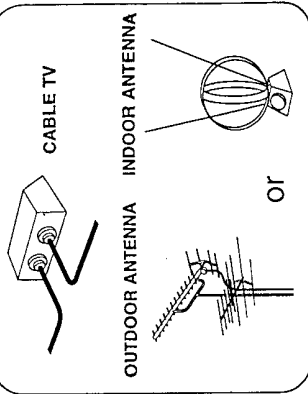
## Loading the Batteries



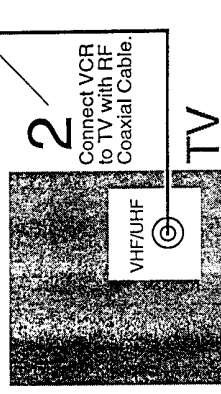
- Battery replacement caution
- Do not mix old and new batteries.
- Do not mix alkaline with manganese batteries.

4

## ANTENNA (See page 5)



3 Set VCR Output to channel 3 or 4 (not an active station).

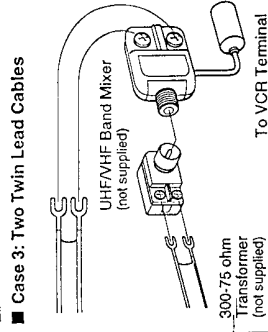
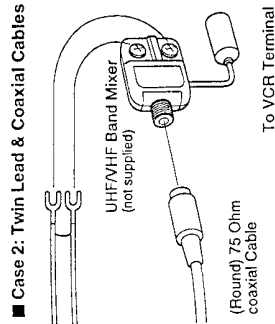
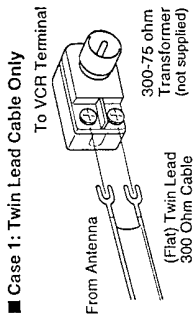


Tune TV to VCR output channel the same one you set in step 3.

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

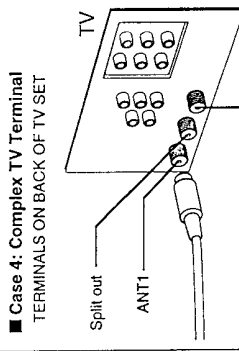
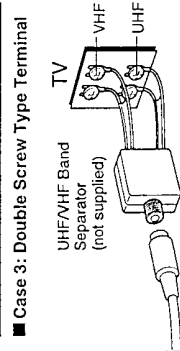
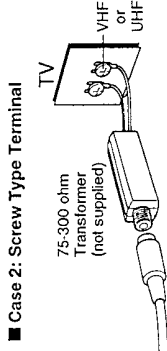
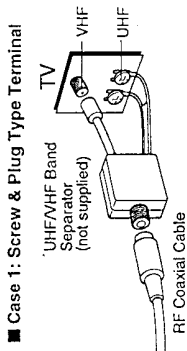
For assistance, call 1-800-211-PANA(7262)

## 1 Between ANT. and TV



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

## 2 Between VCR and TV



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

5

