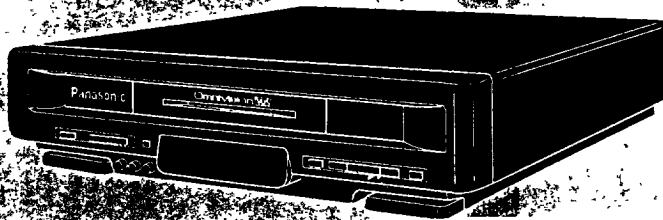


Service Manual

Video Cassette Recorder

Panasonic
Omnivision **VHS**



PV-4308/PV-4311
PV-4315S/PV-4325S
PV-4351/PV-4358
PV-4355S/PV-4311-K
PV-4351-K

ITEM	SPECIFICATION	1	2	ITEM	SPECIFICATION	1	2
Power	Source : 120V AC ±10% 60Hz ±0.5%	○	○	RF Out	CH 3/CH 4 switchable 72dBu (Open voltage) 75Ω unbalanced	○	○
	Consumption : 49 watts 23 watts	○	—		Tuner	Broadcast Channels : VHF 2 ~ 13, UHF 14 ~ 69 CATV Channels : Midband A through I (14 ~ 22) Superband J through W (23 ~ 36) Hyperband AA ~ EEE (37 ~ 64) Lowband A ~ S (65 ~ 99) Special CATV channel 5A (01) Ultraband 65 ~ 94, 100 ~ 125	○
Video	Head : 4 rotary heads helical scanning system	○	○	Video Signal		EIA Standard (525 lines, 60 fields) NTSC Color Signal	○
	Input Level : VIDEO IN Jack (Phono type) 1.0 Vp-p 75Ω unbalanced Output Level : VIDEO OUT Jack (Phono type) 1.0 Vp-p 75Ω unbalanced Signal-to-Noise Ratio : SP : more than 43dB LP/SLP : more than 41dB Horizontal Resolution : Color/Monochrome : more than 230 lines	○	○		Tape Speed	SP : 1.5/16 i.p.s (33.35mm/sec), LP : 21/32 i.p.s (16.67mm/sec) SLP : 7/16 i.p.s (11.12mm/sec) Record/Playback Time : 8 Hrs with 160min. type tape used in SLP mode FF/REW Time : Less 5min. (120min. type tape)	○
Audio	Head : Normal Mono : 1 stationary head Hi-Fi Stereo : 2 rotary heads	○	○	Tape Format		Tape width 1/2" (12.7mm) high density tape	○
	Input Level : AUDIO IN Jack (Phono type) -10dBV 50kΩ unbalanced Output Level : AUDIO OUT Jack (Phono type) -8dBV 600Ω unbalanced Output Level : AUDIO OUT Jack (Phono type) -8dBV 1kΩ unbalanced	○	○		Operating Condition	41°F(5°C) ~ 104°F(40°C) (Temperature) 10% ~ 75% (Humidity)	○
	Frequency Response : Normal Mono : SP : 100Hz ~ 8kHz LP : 100Hz ~ 6kHz SLP : 100Hz ~ 5kHz Hi-Fi Stereo : SP/LP/SLP : 20Hz ~ 20kHz	○	○	Dimension		14-15/16" (380mm) (W) x 3-1/2" (89mm) (H) x 11-1/2" (292mm) (D)	○
	Signal-to-Noise Ratio : Normal Mono : SP : more than 42dB LP/SLP : more than 40dB Hi-Fi Stereo : SP/LP/SLP : more than 60dB	○	○		Weight	Approx. 8.6lbs (3.9kg) Approx. 8.8lbs (4.0kg)	○
	Wow and Flutter : Normal Mono : SP : Less than 0.2% WRMS LP : Less than 0.3% WRMS SLP : Less than 0.4% WRMS Hi-Fi Stereo : Less than 0.015% WRMS	○	○				○

1. PV-4308/PV-4311/PV-4315S/PV-4325S/PV-4311-K
2. PV-4351/PV-4358/PV-4355S/PV-4351-K

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

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I. SUMMARY

A. BASIC OPERATIONS

One Time Set Ups

Place Channels in Memory Main Operation

Press **▲** or **▼** to select the desired language for on-screen displays, English or Spanish.

Then, press **▲** to start Auto Set.

- Normal or Cable channels are automatically placed in memory.
- This screen should appear followed by the lowest numbered channel and finally a prompter to set the clock: "IS ANTENNA CABLE CONNECTED PROPERLY?" appears if no active channels were located.

SELECT LANGUAGE
PUSH CH-UP ENGLISH
PUSH CH-DOWN SPANISH

CHANNEL AUTO SET
CONNECT ANTENNA CABLE
YES
P. LABEL PUSH CH-UP KEY
NO
P. LABEL PUSH CH-UP KEY

CHANNEL AUTO SET COMPLETED

If your Antenna System Changes

For example, if you have cable installed, you can revise the channel memory by completing the following steps:

- Press **MENU** to select the menu screen.
- Press **2** to select CHANNEL AUTO SET.
- Press **1** to select "TV" (normal antenna) or "CATV" (cable TV).
- Press **2** to start Auto Set.

SELECT MENU NUMBER
1 MENU REVIEW
2 CHANNEL AUTO SET
3 SET RECORD MODE
4 DUBA BROADCAST

CHANNEL AUTO SET
ANTENNA SYSTEM
PUSH 1 TV → CATV
PUSH 2 AUTO SET
TO END PUSH MENU KEY

To Add or Delete a Channel

Select a channel using the NUMBERED keys on the remote control.

Then, press **ADD/DEL** to add or delete the channel.

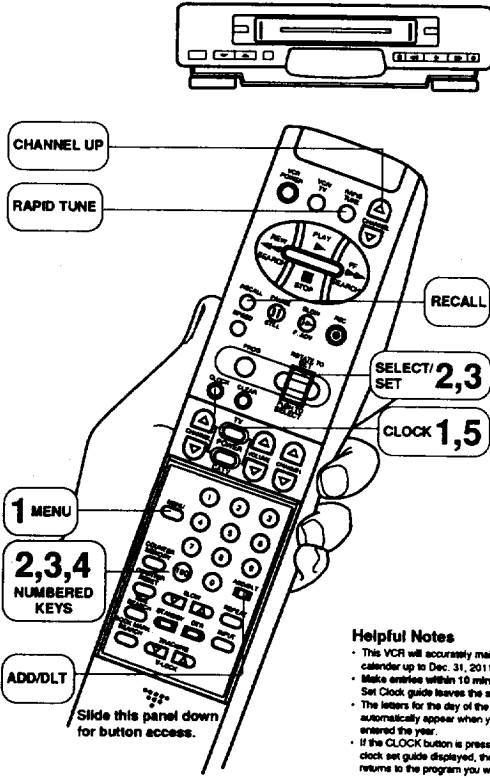
- To select a deleted channel, use the NUMBERED keys on the remote control. Each time a deleted channel is selected, it will flash in the Multi Function Display.

CHANNEL IS DELETED
ADD

Rapid Tuning

Press **○** to instantly select the last channel you were watching.

Previous channel CH08 → Present channel CH10



Helpful Notes

- The VCR will accurately maintain its calendar up to Dec. 31, 2011, 11:59PM.
- Makes entries within 10 minutes, or the Set Clock guide leaves the screen.
- The letters for the day of the week will automatically appear when you have entered the year.
- If the CLOCK button is pressed with the clock set guide displayed, the TV screen returns to the program you were watching.

Set the Clock

- Press **CLOCK** to select the SET CLOCK screen. The month is flashing.
- Rotate **SELECT/SET** in either direction to change the numbers of the month.
- Press **○** (like a button) to lock in your entry and move on to the next item.
- Repeat steps 2 and 3 to set the Date, Year, Hour, Minute and D.S.T. (Daylight Saving Time).
 - When the year is entered, the day of the week automatically appears.
 - When "DST ON" is selected, the clock will automatically adjust for Daylight Saving Time. (See page 31 for details.)
- Press **CLOCK** to start the clock and exit the Set Clock mode.

Corrections After Clock is Started:
Press the CLOCK button.
Press the SELECT/SET wheel repeatedly until the item you want to change is flashing. Rotate the wheel to change the numbers.
Press the CLOCK button to restart the clock.

Display the Time

Press **RECALL** to display the overlay shown at right.

Press again to remove. (See page 6.)

STOP 8:58M CH08 1:27P

Basic Playback

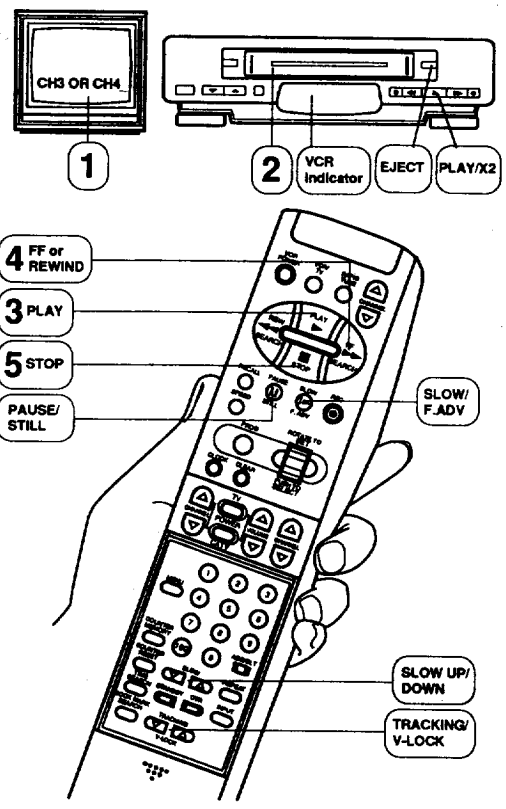
Before you begin, make sure ...

- connectors are made
- VCR is plugged in.

Basic Playback Operation

- Turn TV on. Select VCR Channel (CH3 or CH4).
- Insert a cassette into the VCR.
 - VCR power comes on automatically. Playback will begin if cassette has no record tab.
- Press **▶** to start playback. The VCR indicator appears in the Multi Function Display.
- Press **◀** or **▶** to quickly locate a scene during playback.
 - SP mode search speed is 9 times and SLP mode is 27 times the normal speed.
 - Some noise bars will appear during search.
- Press **STOP** to stop playback.

Then, press **REJECT** on the VCR to eject the cassette.



Special Playback Features

Special Effects During Playback

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

Double Speed Playback
Press **2x** on the VCR. Press again to release.

Slow Motion Playback
Press **SLOW** to vary the tape speed.

Still Frame Picture
Press **STILL** to release. Press again to release.

Frame Advance
Hold down **F.ADV** in Still mode to advance the still picture one frame at a time.

Other Features for a Quality Picture

Digital Auto Picture
This feature automatically controls the video output signal for improved picture resolution or less noise depending on the condition of the tape.

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

Manual Tracking Control
During Playback, Slow Motion, and Double Speed Playback, use this feature to reduce noise in the picture.
Press **TRACKING** until the picture clears up.

V-Lock Control
Use during Still mode to reduce jitter.
Press **V-LOCK** until the picture is stabilized.

Basic Recording

Before you begin, make sure ...

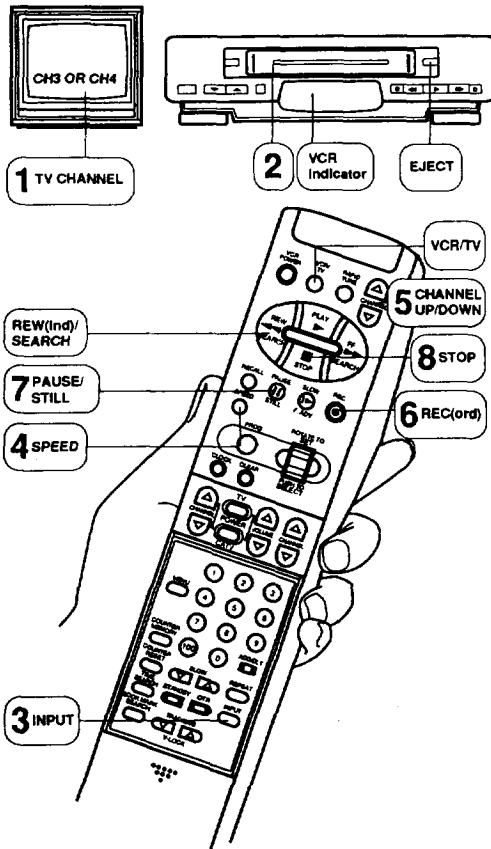
- connections are made
- VCR is plugged in

Make a Simple Recording

- Turn TV on. Select VCR Channel (CH3 or CH4)
- Insert a cassette with record tab
 - VCR power comes on automatically
- Press until channel number appears on-screen.
- Press until the desired speed appears on-screen.
- Press to select a channel to be recorded.
- Press to start recording.
 - Or you may hold the REC button in and press the PLAY button on the VCR.
- Press to pause or resume the recording.
- Press to stop recording.

Then, press to rewind the tape.

Now, press on the VCR to eject the tape.



Record One TV Program While Watching Another

Press to turn off the VCR indicator in the Multi Function Display while the recording is in progress. The TV program being recorded will disappear.

Then, use the TV channel controls

to select a program for viewing. The program you selected at the VCR will continue to be recorded while the channel you select with the TV controls appears on the screen. You can switch back and forth using the VCR/TV button anytime.

Select Channels at the VCR for Recording or Viewing

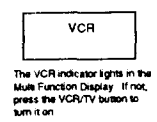
Turn TV on. Select VCR Channel. Channel 3 or 4

Then, press to select channel number display. If "LINE" appears, press the INPUT button again to change it.

Now, press to select channels.

To select channels with the TV controls

Press to turn the VCR indicator off. Or simply turn the VCR off.



One Touch Recording

Before you begin, make sure ...

- connections have been completed
- the clock is set to the correct time
- the desired tape speed (SP, LP, SLP) is selected
- the record tab is not missing on the cassette
- the tape is long enough

Set up an Instant OTR

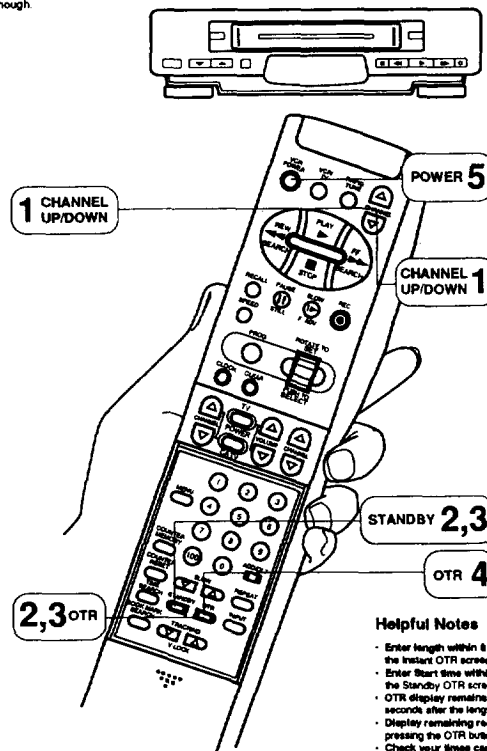
- Press to enter the channel. Or use the NUMBERED keys.
 - Press the INPUT button to select LINE input when recording an external source. "LINE" appears instead of the channel number.
- Press to select the OTR Screen.
 - If the record tab is missing, the cassette will eject.
- Press repeatedly to set the recording length and start the recording.
 - Each press will add 30 minutes. "TO TAPE END" indicates that the recording will continue to the end of the tape.
 - To do an Instant OTR at the VCR, hold down the REC button and press the CHANNEL UP key until the Length is set.

Enter a New Length

Repeat steps 2 and 3.

Cancel the OTR

- Press to select the OTR Screen.
- Then, press to cancel the OTR.
- The VCR will go into Stop mode.



Helpful Notes

- Enter length within 8 seconds. If not, the Instant OTR screen will disappear.
- Enter Start time within 8 seconds, if not, the Standby OTR screen will disappear.
- OTR display remains on-screen 8 seconds after the length is set.
- Display remaining record time, by pressing the OTR button once.
- Check your times carefully, so that you don't overlap a Timer Recording with a One Touch Recording.

Set up a Standby OTR

- Press to enter the channel. Or use the NUMBERED keys.
 - Press the INPUT button to select LINE input when recording an external source. "LINE" appears instead of the channel number.
- Press to select the Standby OTR Screen.
- Press repeatedly to set the start time.
- Press repeatedly to set the recording length.
 - To do a Standby OTR at the VCR, hold down the REC button and press the CHANNEL DOWN key until the Start Time is set. Set the Recording Length by holding down the REC button and pressing the CHANNEL UP key.
 - "TURN VCR OFF FOR TIMER RECORDING" will appear on-screen.
- Press off to set the Standby Timer.
 - If the record tab is missing, the cassette will eject and Timer indicator will flash.

Cancel a Standby OTR

- Standby OTR has been set, or is in progress.
- Press or to display the Standby OTR contents.
- Then press to cancel the Standby OTR.


Timer Recording

- Record a program up to one month away
- Record only Monday through Friday
- Record weekly on the same day

Before you begin, make sure ...

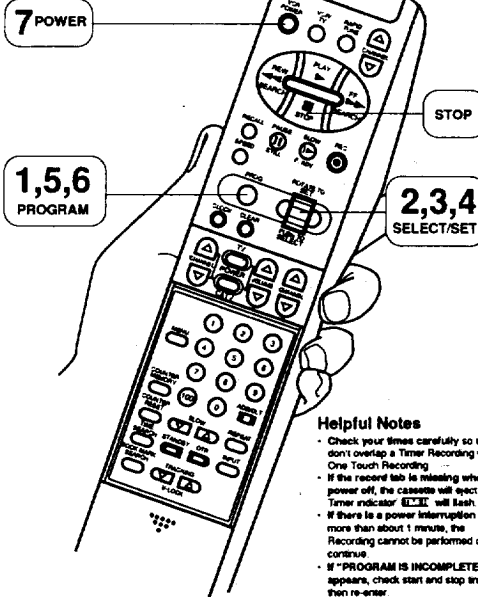
- connections are made (see separate Connection Guide)
- TV and VCR are plugged in
- VCR/TV selector is set to "VCR"
- clock is set
- tape is long enough
- record tab is in place
- selections are made within 5 minutes or VCR leaves this mode

Set up a Timer Recording Main Operation



- Press** to display this screen (If a program has already been set, the screen in step 5 will appear.)
- Rotate** to set a Start Date. To set up a Daily or Weekly Timer Recording.
- Press** (like a button) to lock in your entry and move on to the next item.
- Repeat steps 2 and 3** to set the Start Time, Stop Time, Channel to be recorded and Record Speed (SP, LP, SLP).
- Press** to finish the program. "PROGRAM COMPLETED" will appear followed by this screen. Select the next program by rotating and pressing the wheel then repeat steps 2-5.
- Press** again to exit the programming mode. This reminder appears.
- Press** off to set the Timer.

The TIMER indicator lights in the Multi Function Display.



Set up a Daily or Weekly Timer Recording

In step 2, rotate the wheel until DAILY or WEEKLY appears in place of the Date.

For a weekly recording, rotate the wheel until the desired day of the week appears.

Then, continue with steps 3-7.

Making a Daily or Weekly Selection
For example if today were the 7th

Make Corrections While Programming:

Press the wheel repeatedly to move to the desired item then rotate it to change the numbers.

Cancel a Timer Recording in Progress

Press .

Then, press within 10 seconds to cancel the Timer Recording.

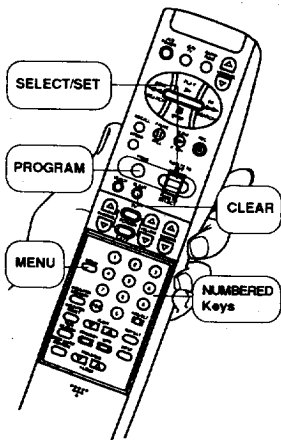
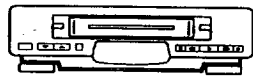
Now, press to turn the VCR OFF.

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

Helpful Notes

- Check your times carefully so that you don't overlap a Timer Recording with a One Touch Recording.
- If the record tab is missing when power off, the cassette will eject and Timer indicator "EJECT" will flash.
- If there is a power interruption of more than about 1 minute, the Recording cannot be performed or continue.
- If "PROGRAM IS INCOMPLETE" appears, check start and stop times and then re-enter.
- When recording from an external source, rotate the wheel until "L" appears instead of the Channel.

Timer Recording continued



Review Program Contents

Press to display the Menu screen.

Then, press to display all currently set programs.

Now, press twice to return to the TV screen.

Replace Program Contents

(Recording is not in progress.)

Press to display all currently set programs.

Then, rotate and press to select and open the desired program.

Now, do steps 2-7.

Clear Program Contents

(Recording is not in progress.)

Press to display all programs.

Next, rotate to select the desired program number.

Then, press to clear the program.

Now, press to return to the TV screen.

Helpful Note

- Another way to review program contents is to press the PROGRAM button while a timer recording is in progress.