



INSTRUCTION MANUAL

AVP-4231

42"* Plasma High-definition Colour TV with
ATSC Digital Tuner



* Diagonal measure

For best TV picture quality and channel selection connect to a digital cable or satellite receiver.

Caution! Avoid image burn-in problems. Please consult page 29.

Help Line: 1-800-263-2244
Monday to Friday 9am-5pm (Eastern)

www.sanyo.ca

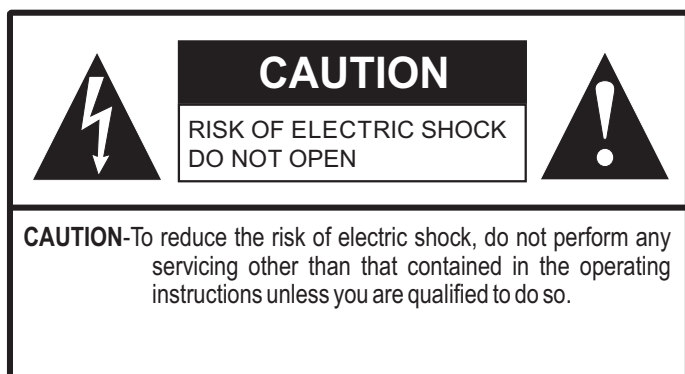
Thank you for choosing SANYO. This product incorporates latest-generation features including an ATSC digital tuner. Please read all instructions carefully to obtain maximum benefit of your product. Questions? Our toll-free number is 1-800-263-2244, 9am-5pm, Monday to Friday (Eastern time).

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Important Information

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

This product utilizes tin-lead solder, and fluorescent lamp containing a small amount of mercury. Disposal of these materials may be regulated due to environmental considerations. For disposal or recycling information, please contact your local authorities or the Electronic Industries Alliance: www.eia.org

FCC STATEMENT

FCC Notice

PDP TV: A CLASS B digital device

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC CAUTION:

Pursuant to 47CFR, Part 15.21 of the FCC rules, any changes or modifications to this monitor not expressly approved by the manufacturer could cause harmful interference and would void the user's authority to operate this device.

WARNING: This is a CLASS B product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures to counter interference.

Important Safety Precautions

Electrical energy can perform many useful functions, but it can also cause personal injuries and property damage if improperly handled. This product has been engineered and manufactured with the highest priority on safety. But **IMPROPER USE CAN RESULT IN POTENTIAL ELECTRICAL SHOCK OR FIRE HAZARD**. In order to prevent potential danger, please observe the following instructions when installing, operating and cleaning the product. To ensure your safety and prolong the service life of your PDP TV product, please read the following precautions carefully before using the product.

- 1. Read these instructions**---All operating instructions must be read and understood before the product is operated.
- 2. Keep these instructions**---These safety and operating instructions must be kept in a safe place for future reference.
- 3. Heed all warnings**---All warnings on the product and in the instructions must be observed closely.
- 4. Follow all instructions**---All operating instructions must be followed.

5. Do not use this apparatus near water---for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like. Do not use immediately after moving from a low temperature to high temperature environment, as this causes condensation, which may result in fire, electric shock, or other hazards.

6. Clean only with dry cloth---Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.



7. Ventilation---Do not block any ventilation openings. Install in accordance with the manufacturer instructions. The vents and other openings in the cabinet are designed for ventilation. Do not cover or block these vents and openings since insufficient ventilation can cause overheating and/or shorten the life of the product. Do not place the product on a bed, sofa, rug or other similar surface, since they can block ventilation openings. This product is not designed for built-in installation; do not place the product in an enclosed place such as a bookcase or rack, unless proper ventilation is provided or the manufacturer's instructions are followed.

8. Heat sources---Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

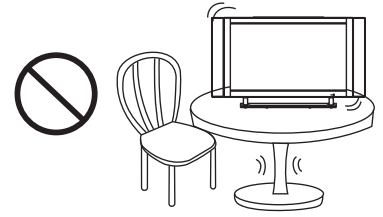
9. Grounding or Polarization---Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10. Power cord protection---Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11. Attachments---Only use attachments/accessories specified by the manufacturer. Do not use attachments not recommended by the manufacturer. Use of improper attachments can result in accidents.

Important Safety Precautions (continued)

12. Stand---Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. Do not place the product on an unstable trolley, stand, tripod or table. Placing the product on an unstable base can cause the product to fall, resulting in serious personal injuries as well as damage to the product. When mounting the product on a wall, be sure to follow the manufacturer's instructions. Use only the mounting hardware recommended by the manufacturer.

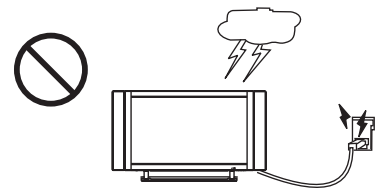


13. Move carefully---When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over. Sudden stops, excessive force and uneven floor surfaces can cause the product to fall from the trolley. Never attempt to move the TV unless the AC power cord has been disconnected.



14. Lightning---Unplug this apparatus during lightning storms or when unused for long periods of time.

For added protection for this television equipment during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna. This will prevent damage to the equipment due to lightning and power-line surges.



15. Servicing---Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

16. Replacement parts---In case the product needs replacement parts, make sure that the service person uses replacement parts specified by the manufacturer, or those with the same characteristics and performance as the original parts. Use of unauthorized parts can result in fire, electric shock and/or other danger.

17. Overloading---Do not overload wall outlets, extension cords, or convenience receptacles on other equipment as this can result in a risk of fire or electric shock.

18. Entering of objects and liquids---Never insert an object into the product through vents or openings. High voltage flows in the product, and inserting an object can cause electric shock and/or short internal parts. For the same reason, do not spill water or liquid on the product.

19. Damage requiring service---If any of the following conditions occurs, unplug the power cord from the AC outlet, and request a qualified service person to perform repairs.

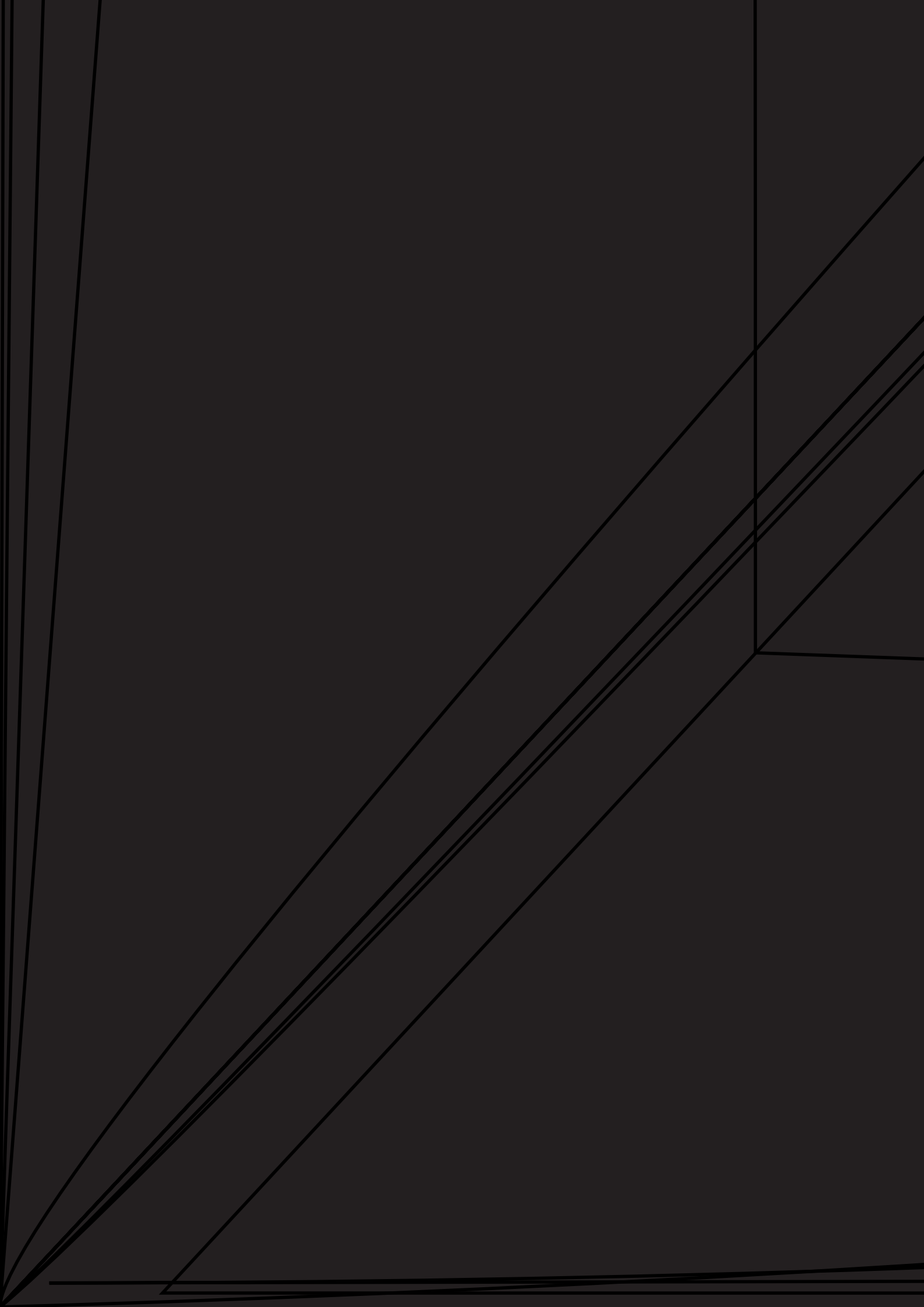
- When the power cord or plug is damaged.
- When a liquid is spilled on the product or when objects have fallen into the product.
- When the product has been exposed to rain or water.
- When the product does not operate properly as described in the operating instructions.

Do not touch the controls other than those described in the operating instructions. Improper adjustment of controls not described in the instructions can cause damage, which often requires extensive adjustment work by a qualified technician.

- If the product has been dropped or the cabinet has been damaged in any way.
- When the product displays an abnormal condition or exhibits a distinct change in performance. Any noticeable abnormality in the product indicates that the product needs servicing.

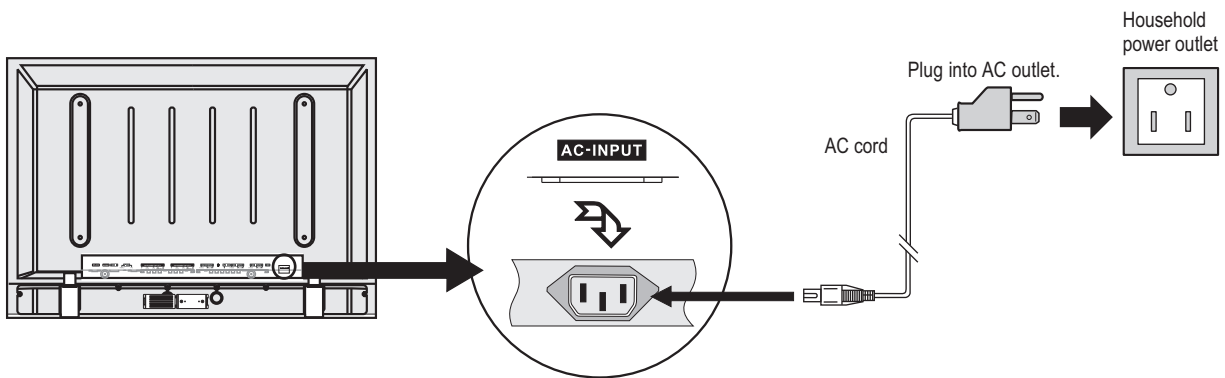
20. Safety checks---Upon completion of service or repair work, request the service technician to perform safety checks to ensure that the product is in proper operating condition.

21. Wall or ceiling mounting---When mounting the product on a wall or ceiling, be sure to install the product according to the method recommended by the manufacturer. This is a safety feature.



Setup

Power connection



1. Connecting the female plug to the AC socket on the unit.
2. Connecting the male plug to the wall outlet as illustrated.

Note:

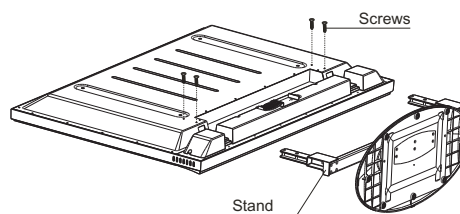
- This product should be operated only from the type of power source indicated on the marking label.
- Always unplug the AC cord from power outlet when not using for a long period of time.

Removing the Stand (for Wall-mount ONLY)

Cautions:

1. Carefully handle the unit during setup and consult authorized service personnel to ensure successful installation.
2. Before performing work spread cushioning over the base area to lay the Display on. This will prevent it from being damaged.
3. Disconnect the AC power cord firstly.

- 🔊 Do not remove the stand from the Display unless using an optional bracket to mount it.
- 🔊 The appearance of the unit may differ from the actual one.
- 🔊 To attach the stand, perform the steps in reverse order.



Loosen the screws on the Stand to remove the Stand.

Setup

Antenna Connection

CABLE TV (CATV) CONNECTION

A 75-ohm coaxial cable connector is built into the set for easy hookup. When connecting the 75-ohm coaxial cable to the set, screw the 75-ohm cable to the ANT. Terminal.

Some cable TV companies offer "premium pay channels". Since the signals of these premium pay channels are scrambled, a cable TV converter/descrambler is generally provided to the subscriber by the cable TV company.

This converter/descrambler is necessary for normal viewing of the scrambled channels. For more specific instructions on installing cable TV, consult your cable TV company. One possible method of utilizing the converter/descrambler provided by your cable TV company is explained below. Please note: An RF switch provided with two inputs (A and B) is required (not supplied).

RF switch (not supplied)

Two-set
signal
splitter
(not
supplied)

Cable TV Line

OUT IN

W

Cable TV converter/
descrambler
(not supplied)

"A" p

"B" p

cha

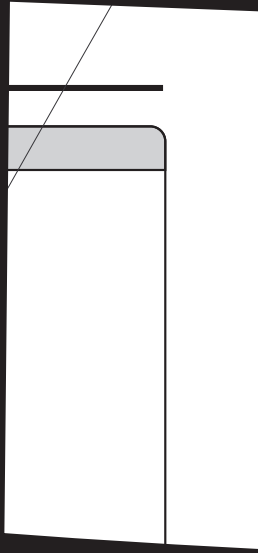
No

Co

You can view all unscrambled channels by using the TV's channel keys.

: You can view the scrambled channels via the converter/descrambler by using the converter's

e type of splitter, RF switch or combiner that might be required.



Identification of Controls (continued)

Main unit (rear view)



gnar
ar

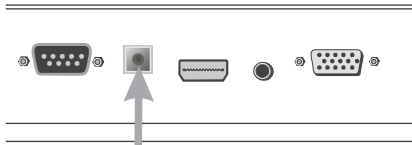
Connections

Cautions before connecting

- Carefully check the terminals for position and type before making any connections.
- The illustration of the external equipment may be different depending on your model.
- Loose connectors can result in image or color problems. Make sure that all connectors are securely inserted into their terminals. Refer to the user manual of the external device as well.
- When connecting an external device, turn the power off on the panel to avoid any issues.

Connect an Audio Processor or Hi-Fi (Digital Audio)

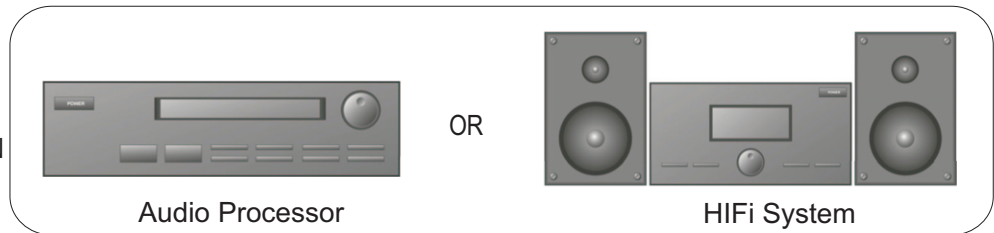
RS-232 S/PDIF HDMI AUDIO D-SUB PIC



For a full Home Theater sound experience, you must connect your Hi-Fi or Audio processor to the S/PDIF (Optical) terminal on the TV rear.

Optical cable

S/PDIF IN
(Optical)



Connect a VCR

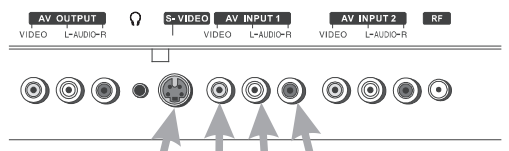
How to connect:

Connect the Audio/Video cables between the Audio (L/R)/Video jacks on the unit and VCR.

Note: For better video, you can use the S-video terminal if your source supports it.

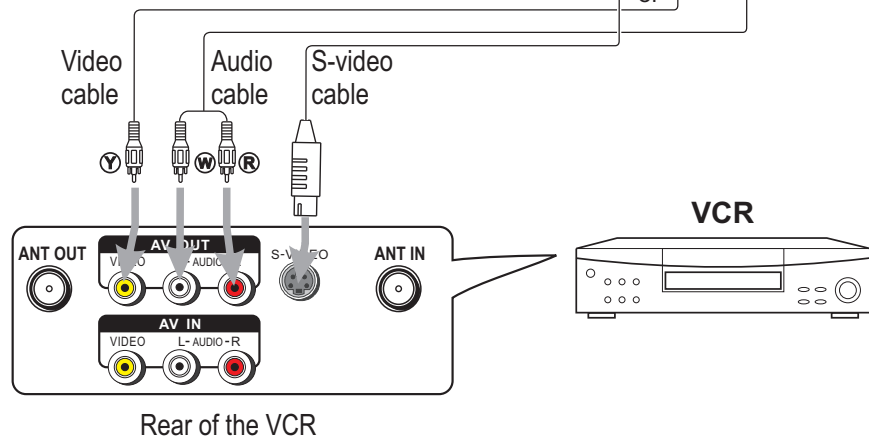
To play VCR

1. Turn on your PDP TV, press **INPUT** button on the remote control to select **Composite1** (or **S-Video** if using S-VIDEO terminal).
2. Turn on your VCR, insert a videotape and press the Play button.



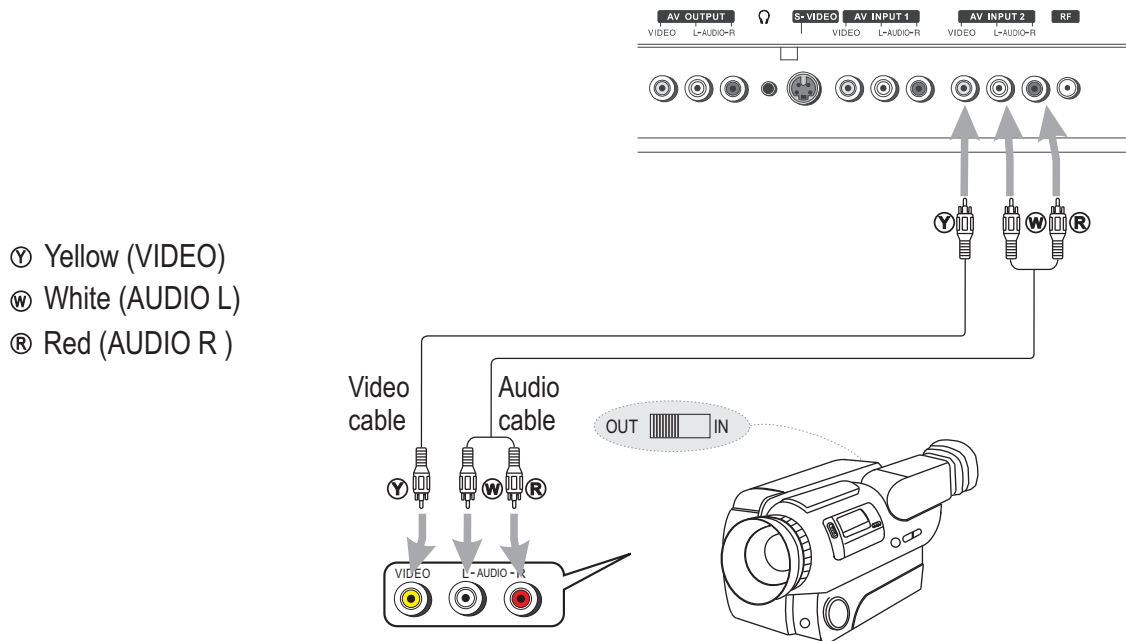
Video cable
Audio cable
S-video cable

- Ⓜ Yellow (VIDEO)
- Ⓜ White (AUDIO L)
- Ⓜ Red (AUDIO R)



Connections (continued)

Connect a Camcorder



How to connect:

Connect the Audio/Video cables between the Audio (L/R)/Video jacks on the unit and camcorder.

To playback Camcorder

1. Turn on your PDP TV , press **INPUT** button on the remote control to select **Composite 1 or 2**.
2. Turn on your camcorder and set it to output mode. (For details, refer to your camcorder user manual.)
3. Insert the tape into the camcorder and press Play button.

Note:

*The operations of the camcorder may be different and is dependant on your model.
Please read the user manual of your camcorder to confirm operation.*

Connect

Connect a DVD player or Digital Cable/Satellite Receiver

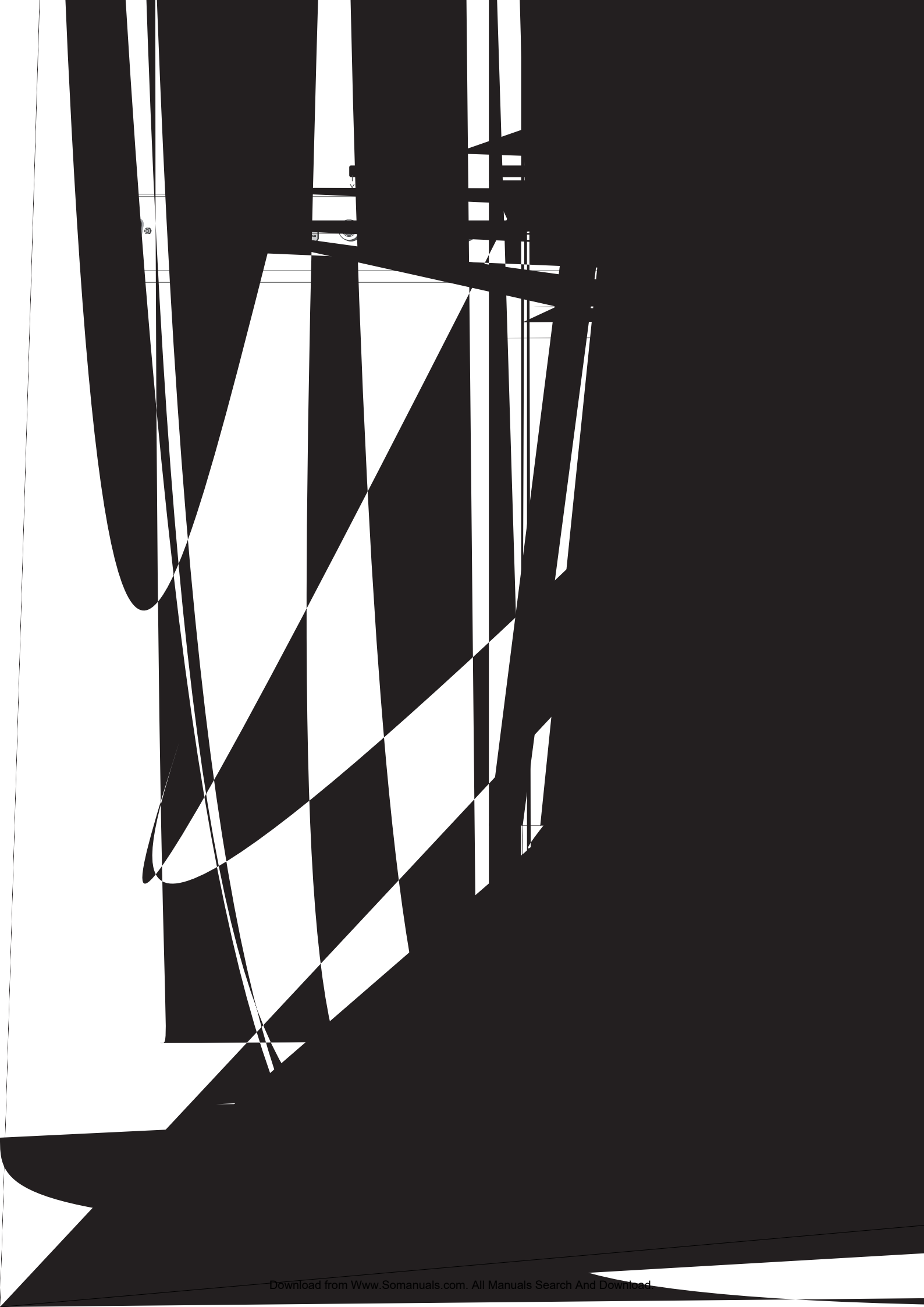


**DVD player with
HDMI interface**

How to connect DVD Player using HDMI Connection:

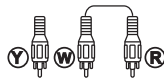
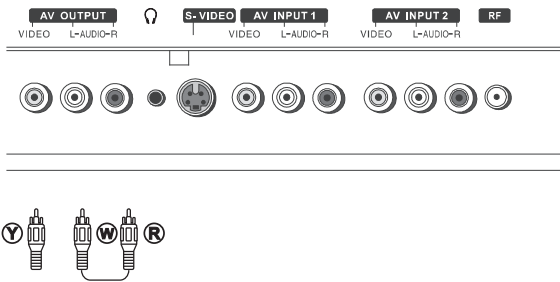
Connect the HDMI cable between the HDMI interface on the unit and HDMI output on the DVD player and/or receiver.

To play

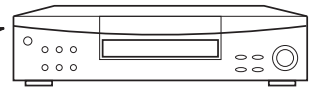


Connect a VCR (for recording) or external amplifier

- Ⓜ Yellow (VIDEO)
- Ⓜ White (AUDIO L)
- Ⓜ Red (AUDIO R)



VCR for recording



Basic Operations


Turning the Unit On and Off

Turning On

Insert the power cord into the wall outlet.

Press the **Power**  button on the remote control, the unit will be turned on and you will be ready to use its features.

Turning Off









With the power on, press the **Power**  button on the remote control to turn off.

Note: You can also use the **Power**  button on the control panel on the main unit.

Viewing the Menus and Displays

This unit has a simple, easy-to-use menu system that appears on the screen. This system makes it convenient and fast to use features on the unit. The unit also lets you display the status of many of your TV features.

Menu navigation







- 1 With the power on, press the **MENU** button to display the main menu.
- 2 Press  or  button to select menu page.
- 3 Press **OK** or  button to enter the menu page.
- 4 Within the menu, use , ,  or  to navigate or adjust.
Press **OK** or  button to confirm, enter sub-menu or toggle the settings of the selected menu item.
- 5 Press **MENU** button to return to the previous level menu.
Press **EXIT** button to exit the main menu and return to your program.

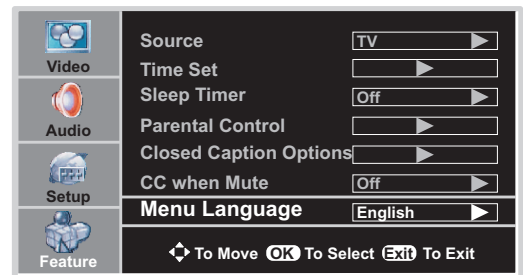
Note: to clearly introduce the menu operations, this operation manual provides a description based on operation with the remote control.

Displaying Status Information


Press the **INFO** button on the remote control, the unit will display current status information such as channel number or signal source, etc.

On-screen Menu Language Selection

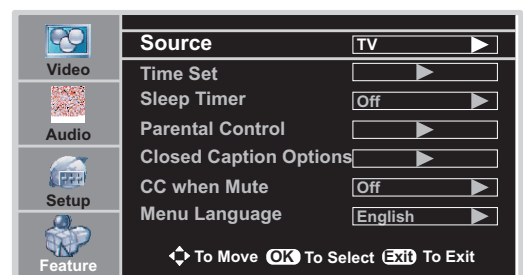
- 1 Press **MENU**.
- 2 Press  or  to select **Feature** menu, press **OK** or  to access the submenu.
- 3 Press  or  to select **Menu Language** item, press **OK** or  to select your desired language.
- 4 Press **EXIT** button to return to TV viewing.



Selecting Input Source Signal

- 1 Navigate to the **Feature** menu and highlight **Source**.
- 2 Press **OK** or  to select your desired input source.

Note: You may directly press **INPUT** button on the remote control to select input source.



TV -----Select TV signal.

Composite1-----Select signal from AV INPUT1 terminals.

Composite2-----Select signal from AV INPUT2 terminals.

Component1-----Select signal from COMPONENT INPUT1 terminals.

Component2-----Select signal from COMPONENT INPUT2 terminals.

VGA-----Select signal from D-SUB input interface.

HDMI-----Select signal from HDMI input interface.

S-Video-----Select signal from S-VIDEO input terminal.

Memorizing the Channels

This unit can automatically find all channels available through antenna or cable inputs, and store them in memory.

Note: Be sure to select the **TV** source before operation.

Selecting the Tuning Band

Before your TV can memorize the available channels, you must specify the type of signal source that is connected to the unit. (i.e., an antenna or cable system)

- 1 Press **MENU** to display the menu main page.
- 2 Press **▲** or **▼** repeatedly to select **Setup** menu.
- 3 Press **OK** or **▶** to access the submenu.
- 4 Press **▲** or **▼** to select **Tuning Band** item.
- 5 Press **OK** or **▶** to select the Tuning Band.



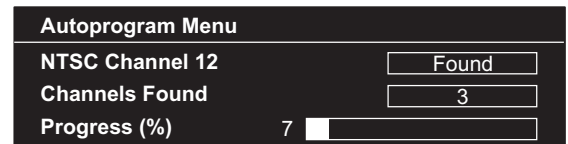
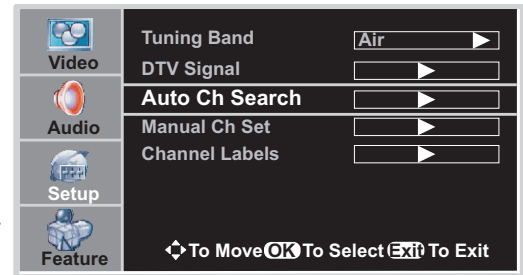
Air, Cable, Cable HRC, Cable IRC and **Cable Auto** can be selected.

- ◆ If using antenna, select **Air**;
- ◆ If using cable, select one of **Cable/Cable HRC/Cable IRC/Cable Auto** according to your local area's cable system. **Normally please select Cable Auto.** (For further band information, contact your cable service provider.)

Auto Channel Search

- 1 Navigate to the **Setup** sub-menu and highlight **Auto Ch Search**.
- 2 Press **OK** or **▶** to begin the auto channel search. The unit will automatically search for all available TV/DTV (if using antenna), CATV/CADTV (if using cable) program.

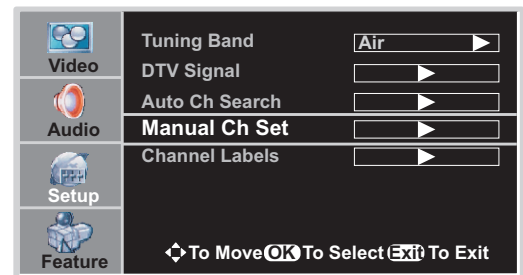
Note: If you want to stop the auto-search, press **EXIT** button. Digital (CADTV) cable systems may cause several unviewable channels to be memorized.



Manual Channel Set

After setting channels into memory, you can add or delete channels from the default channel list as follows:

- 1 Navigate to the **Setup** sub-menu and highlight **Manual Ch Set**.
- 2 Press **OK** or **▶** to open **Manual Channel Set Menu** sub-menu.
- 3 Use **▲** or **▼** button to select a channel, then press the **OK** button to add or delete the channel.
- 4 Press **EXIT** button to exit.



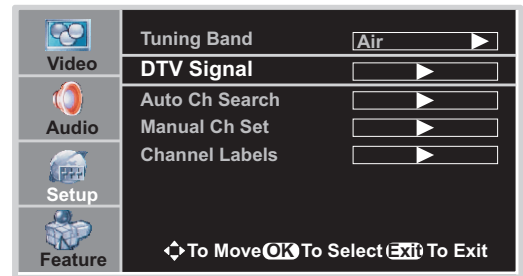
Now when you use **CH+/-** button to cycle among the channels, the deleted channels can not be selected.

Memorizing the Channels (continued)

DTV Signal Strength

You can make use of DTV signal strength monitor to check how strong your DTV signal is and whether you need to adjust your antenna or digital cable input. The higher the signal strength, the less likely you are to experience picture degradation.

- 1 Navigate to the **Setup** sub-menu and highlight **DTV Signal**.
- 2 Press **OK** or **▶** to view the on-screen signal strength monitor to see the quality of the signal being received.

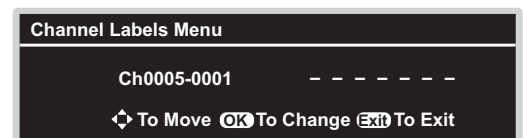


Channel Label Setup

If required, you can give a name to the programs.

Note: if a channel label is provided on the signal from the broadcasting station, the TV displays a short name for a DTV channel even if you didn't setup a label for the channel.

- 1 Navigate to the **Setup** sub-menu and highlight **Channel Labels**.
- 2 Press **OK** or **▶** to open **Channel Labels Menu**.
- 3 Within the menu, use **◀ / ▶** to move the highlight or cursor. Use **▲ / ▼** to select channel number, or select character. You may use **OK** button to return to the previous level menu.



- 4 To quit, press **EXIT** button.

Channel Selection

Information about USA and Canadian channel numbering in the digital era

- An ATSC channel has two part channel number:

- Major channel number
- Minor channel number

For example: Channel: 5-1
Major channel number ↑ Minor channel number

- In most situations the major channel number is same for both analog and digital channels (It is equal to the NTSC channel number for existing broadcasters.)
- A minor channel number of zero is used for a broadcaster's analog channel.

Channel Numbering Example

- Original NTSC Channels for Des Moines (via antenna):
— 5, 8, 11, 13, 17
- Possible NTSC + ATSC Channels for Des Moines (via antenna):
— 5-0, 8-0, 11-0, 13-0, 17-0 (channel numbers for existing analog channels)
— 5-1, 5-2, 8-1, 8-2, 8-3, 8-4, 13-1 (channel numbers for digital channels)

In Canada, ATSC digital reception areas via antenna are limited. However digital coverage via cable or satellite is widespread (digital cable or satellite receiver required).

Channel Selection

Using the Channel up/down buttons (CH+ or CH-)

Press the **CH+** or **CH-** to cycle among available channels found.

Using the direct select buttons (0-9 and dash buttons)

Press the **number buttons (0-9)** and the **dash button (-)** to go directly to a channel.
For example, if you want to select channel 8-3, just key in '8', '-', '3' on the remote control.

Note:

- *When you use the number buttons, you can directly select any channel within the channel range.*
- *In some situations virtual channel numbers have no correspondence to physical frequencies.*
- *To select an analog channel, you may directly input its major channel number. It is unnecessary to input the minor channel number of zero.*

Using the ↻ button

Press this button to switch between the current channel and the last viewed channel.

Screen Setup for HDMI, S-Video, regular audio/video inputs and analog TV

Customizing the Picture

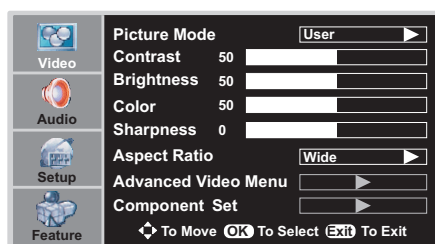
- 1 Press **MENU** to display the menu main page.
- 2 Press **▲** or **▼** repeatedly to select **Video** menu.
- 3 Press **OK** or **▶** to access the submenu.
- 4 Within the menu, use **▲**, **▼**, **◀** or **▶** to navigate or adjust.
Press **OK** or **▶** button to confirm, enter sub-menu or toggle the settings of the selected menu item.
- 5 Press **EXIT** button to exit.

Option		Function	Choice/remarks
Picture Mode		Selects a desired picture mode.	User/Nature/Soft/Bright Note: you may directly press PICTURE button on the remote control to select.
Contrast		Adjusts image contrast.	▶ : stronger ◀ : weaker
Brightness		Adjusts screen brightness for easier viewing of dark picture such as night scenes and black hair.	▶ : lighter ◀ : darker
Color		Adjusts color saturation.	▶ : stronger ◀ : weaker
Sharpness		Adjusts image sharpness and displays a sharp image.	Wide/Cinema/Normal/Zoom
Aspect Ratio		Selects screen aspect ratio.	
Advanced Video Menu	Noise Reduction	Spatial/Speckle/Temporal Reduces noise (snow) in the picture.	On/Off
	Tint	Adjusts tint for image.	▶ : greenish ◀ : purplish
	Color Temperature	Selects one of three automatic color adjustments. Sets to warm to enhance hotter colors such as red, or set to cool to see less intense colors with more blue.	Cool/Warm/Normal
	3D Y/C		On/Off

Screen Setup for Component 1 & 2 inputs

Customizing the picture

- 1 Navigate to the **Video** sub-menu.
- 2 Within the menu, use **▲**, **▼**, **◀** or **▶** to navigate or adjust.
Press **OK** or **▶** button to confirm, enter sub-menu or toggle the settings of the selected menu item.
- 3 Press **EXIT** button to exit



Option		Function	Choice/remarks
Picture Mode		Selects a desired picture mode.	User/Nature/Soft/Bright Note: you may directly press PICTURE button on the remote control to select.
Contrast		Adjusts image contrast.	▶ : stronger ◀ : weaker
Brightness		Adjusts screen brightness for easier viewing of dark picture such as night scenes and black hair.	▶ : lighter ◀ : darker
Color		Adjusts colour saturation.	▶ : stronger ◀ : weaker
Sharpness		Adjusts image sharpness and displays a sharp image.	▶ : sharper ◀ : softer
Aspect Ratio		Selects screen aspect ratio.	Wide/Cinema/Normal/Zoom Note: you may directly press ZOOM button on the remote control to select. See page 20.
Advanced Video Menu	Noise Reduction--Spatial Noise Reduction--Speckle Noise Reduction--Temporal	Spatial/Speckle/Temporal Reduces noise (snow) in the picture.	On/Off
	Tint	Adjusts tint for image.	▶ : greenish ◀ : purplish
	Color Temperature	Selects one of three automatic color adjustments. Sets to warm to enhance hotter colors such as red, or set to cool to see less intense colors with more blue.	Cool/Warm/Normal
	3D Y/C	Selects 3D comb filter on/off, normally please select On.	On/Off
Component Set	H-Pos	Adjusts the horizontal position of the image.	▶ : rightward ◀ : leftward
	V-Pos	Adjusts the vertical position of the image.	▶ : upward ◀ : downward
	Clock	Adjusts the sample frequency for improved clarity under certain conditions.	
	Phase	Improves the focussing of stable image.	
	Setting	Selects and activates Preset to reset the adjusted values to original factory values.	
	Auto Adjust	Automatically adjusts the settings based on the signal input.	

Setting Sound

Adjusting the Volume

Using the volume buttons (VOL+ and VOL-)

Press the **VOL +** or **VOL-** to increase or decrease the volume.

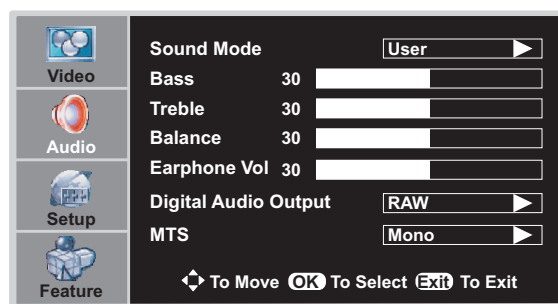
Using the Mute

At any time, you can temporarily cut off the sound using the **MUTE** button.

- 1 Press the **MUTE** button and the sound cuts off.
- 2 To turn mute off, press the **MUTE** button again.

Customizing the sound

- 1 Press **MENU** to display the menu main page.
- 2 Press **▲** or **▼** repeatedly to select **Audio** menu.
- 3 Press **OK** or **▶** to access the submenu.
- 4 Within the menu, use **▲**, **▼**, **◀** or **▶** to navigate or adjust. Press **OK** or **▶** button to confirm, enter sub-menu or toggle the settings of the selected menu item.
- 5 Press **EXIT** button to exit.



(The above menu is shown as an example. It is in TV mode and the signal is analog)

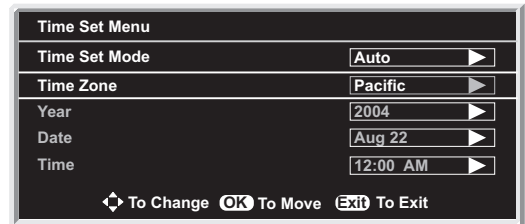
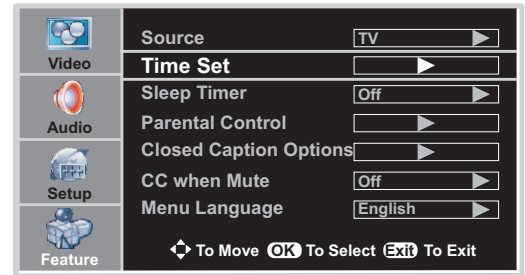
Option	Function	Choice/Range/Remarks
Sound Mode	Selects sound mode.	User/News/Music/Movie Note: you may directly press AUDIO button on the remote control to select.
Bass	Adjusts Bass (low sounds)	▶ : stronger ◀ : weaker
Treble	Adjusts Treble (high sounds).	▶ : stronger ◀ : weaker
Balance	Adjusts volume balance (left and right volumes).	▶ :Higher volume from right speaker. ◀ :Higher volume from left speaker.
Earphone Vol	Adjusts earphone volume.	▶ : stronger ◀ : weaker
Digital Audio Output	Selects audio output mode from SPDIF. RAW: AC-3 in AC-3 out PCM: AC-3 in PCM out PCM in PCM out PCM in PCM out	RAW/PCM
MTS (In analog signal only)	Selects MTS (multi-channel TV sound) mode: Mono, Stereo and SAP (Second Audio Program).	The choice may be different in different situation Note: you may directly press MTS/SAP button on the remote control to select.
Audio Language (In digital signal only)	Other languages may be available if a digital signal is provided by the broadcasting station.	The choice may be different in different situation

Time Set and Sleep Timer

Auto Clock Setup

- The time is set automatically from a digital channel signal.
- The digital channel signal includes information for the current time provided by the broadcasting station.
- Set the clock manually, if the current time is set incorrectly by the auto clock function.

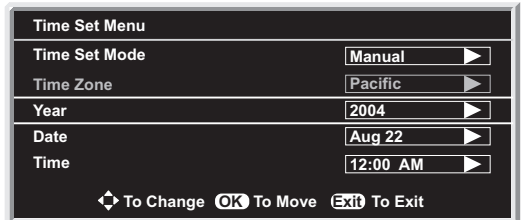
- 1 Press **MENU** to display the menu main page.
- 2 Press **▲** or **▼** repeatedly to select **Feature** menu, press **OK** or **▶** to access the submenu.
- 3 Highlight **Time Set** menu item, press **OK** or **▶** to access the **Time Set Menu**.
- 4 Highlight **Time Set Mode** and then use **OK** or **▶** to select **Auto**.
- 5 Highlight **Time Zone** and then use **OK** or **▶** to select your viewing area time zone: **Pacific, Alaska, Hawaii, Eastern, Central, Mountain**.
- 6 Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.



Manual Clock Setup

- If current time setting is wrong, reset the clock manually.

- 1 Navigate to the **Feature** sub-menu, highlight **Time Set Mode** and then use **OK** or **▶** to select **Manual**.
- 2 Press **▲** or **▼** to select either the Year, Date, or Time option. Once selected, use **OK** or **◀ / ▶** to set the year, date, and time options.
- 3 Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.



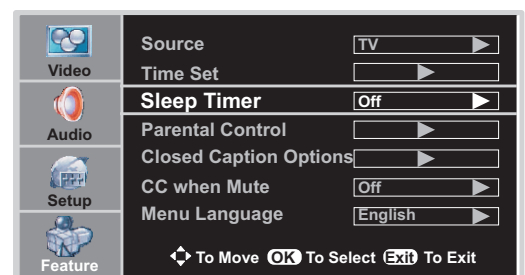
Note: if you power off the TV set, the clock setting will be cleared.

Sleep timer


Sleep timer lets you select the amount of time before your TV turns itself off automatically.

Navigate to the **Feature** sub-menu, highlight **Sleep Timer** and then use **OK** or **▶** to select the amount of time. To turn off sleep timer, select **Off**.

Note: you may directly press **SLEEP** button on the remote control to set sleep timer.



Viewing Closed Captions

The unit decodes and displays the closed captions that are broadcast with certain TV shows. These captions are usually subtitles for the hearing impaired or foreign language translations. All VCRs record the closed caption signal from television programs, so home-recorded video tapes also provide closed captions. Most prerecorded commercial video tapes provide closed captions as well. Check for the closed caption symbol in your television schedule and on the tape's packaging: .

Note:

The Caption feature does not work with Component, VGA, HDMI.

Not all the programs and videos will offer closed captioning. Please look for the  symbol to ensure that captions will be shown.

Analog Broadcasting System Captions

- Select a caption mode for displaying captioning information if provided on a program.
- Analog caption displays information on the screen usually the program's dialog.

Press **CCD** button on the remote control to select caption mode: CC1, CC2, CC3, CC4, TEXT1, TEXT2, TEXT3 or TEXT4.

To turn off closed captioning, press **CCD** repeatedly to select **Off**.

The Closed Caption broadcasts can be viewed in two modes: CAPTION and TEXT. For each mode, four channels are available.

The [CAPTION] mode shows subscripsts of dialogues and commentaries of TV dramas and news programs while allowing a clear view of the picture.

The [TEXT] mode displays various information over the picture (such as TV program schedule, weather forecast, etc.) that is independent of the TV programs.

Digital Broadcasting System Captions

- You may use **CCD** button on the remote control to select caption mode.

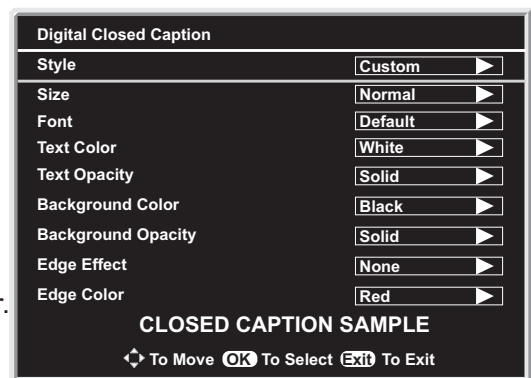
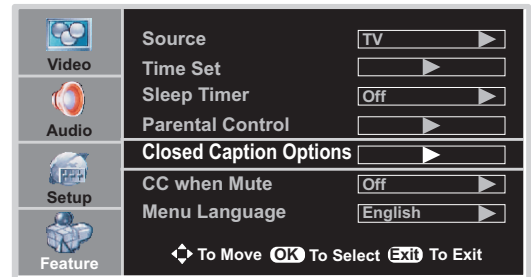
● You can customize the digital closed captions that appear on your screen.

1 Navigate to the **Feature** sub-menu, highlight **Closed Caption Options** and then use **OK** or **▶** to open the **Digital Closed Caption** sub-menu.

2 Highlight **Style** and then use **OK** or **▶** to select **Custom**.

3 Press **▲** or **▼** to select your desired item, and then use **OK** or **▶** to customize the Size, Font, etc. to your preference. A preview sample is provided at the bottom of the menu screen for you to see the effect.

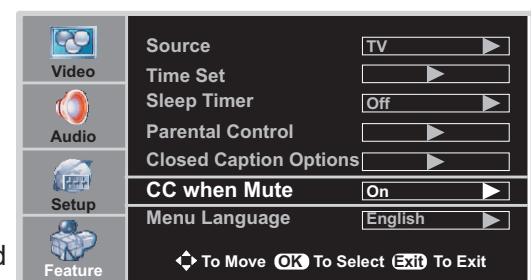
- **Size:** Set the size the words will appear in.
- **Font:** Select a typeface for the words.
- **Text Color:** Choose a color for the text.
- **Text Opacity:** Specify the opacity for the text color.
- **Background Color:** Select a background color.
- **Background Opacity:** Select the opacity for the background color.
- **Edge Effect:** Select an edge effect.
- **Edge Color:** Select a color for the edges.



Setting CC When Mute

1 Navigate to the **Feature** sub-menu, highlight **CC when Mute**.

2 Press **OK** or **▶** to select **On** or **Off**. When **On** is selected, the unit will automatically display closed caption when you mute the sound.



Setting Parental Control

Parental Control

This function allows TV programs to be restricted and TV usage to be controlled based on FCC data. It prevents children from watching violent or sexual scenes that may be harmful.

Restriction of TV programs includes two ratings that contain information about the program: the MPAA rating and the TV Parental Guidelines. The MPAA rating is restricted by age. TV Parental Guidelines are restricted by age and content.

Since a TV program may use either the MPAA rating or the TV Guidelines, both should be adjusted for complete control.

[1] Movie Rating (MPAA)

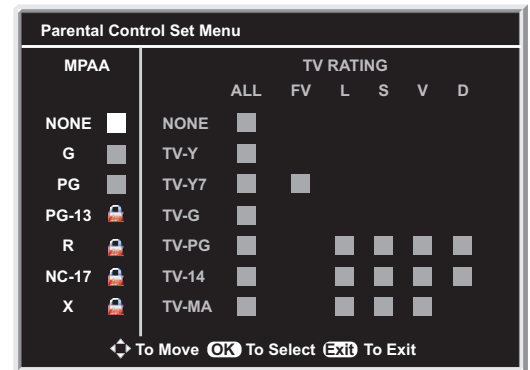
Rating		
age based	G	GENERAL AUDIENCES. All ages admitted.
	PG	PARENTAL GUIDANCE SUGGESTED. Some material may not be suitable for children.
	PG-13	PARENTAL STRONGLY CAUTIONED. Some material may be inappropriate for children under 13.
	R	RESTRICTED. Under 17 requires accompanying parent or adult guardian.
	NC-17	NO ONE 17 AND UNDER ADMITTED.
	X	X Rating is an older rating that is unified with NC-17 but may be encoded in the data of older movies.
	NONE	NOT RATED.

Note:

The Movie rating is only age-based.

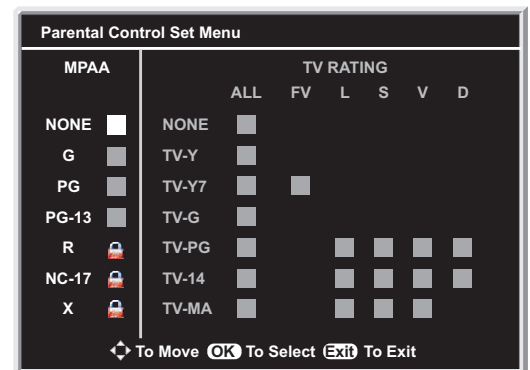
Example 1:

“PG-13” in the age-based rating is blocked, this will automatically block the higher ratings “R”, “NC-17”, “X” also.



Example 2:

“R” in the age-based rating is blocked, this will automatically block the higher rating “NC-17”, “X” also.



Setting Parental Control(continued)

[2] TV Rating

Rating		← content based →				
		D	V	S	L	FV
age based	TV-Y (All children)	×	×	×	×	×
	TV-Y7 (Direct to Older Children)	×	×	×	×	●
	TV-G (General Audience)	×	×	×	×	
	TV-PG (Parental Guidance Suggested)	●	●	●	●	
	TV-14 (Parents Strongly Cautioned)	●	●	●	●	
	TV-MA (Mature Audience Only)		●	●	●	

× ——— Content Rating can be set but this Rating is not normally broadcast by TV Station.

● ——— Content Rating can be set.

D: Sexually Suggestive Dialog

V: Violence

S: Sexual Situation

L: Adult Language

FV: Fantasy Violence

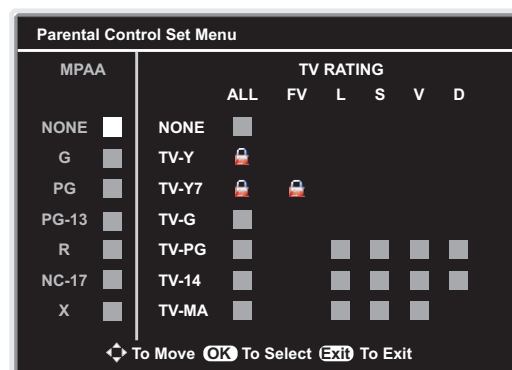
Note:

Age-based ratings can be modified by the content-based ratings but only in the combinations indicated by an ● in the table above.

Choosing lower age-based rating blocks the higher age-based ratings regardless of content ratings settings.

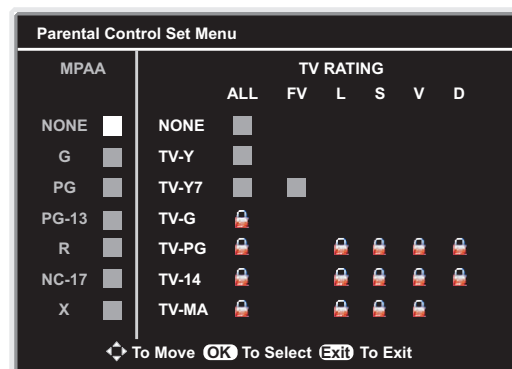
Example 1:

When TV-Y in the age-based rating is set to BLOCK, this will automatically block the higher rating: TV-Y7.



Example 2:

When TV-G in the age-based rating is set to BLOCK, this will automatically block the higher ratings: TV-PG, TV-14, TV-MA.

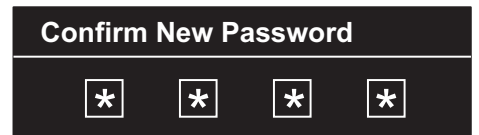
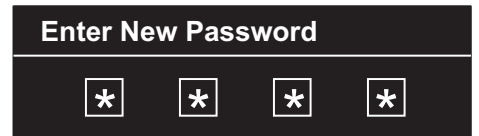
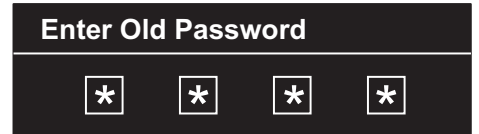
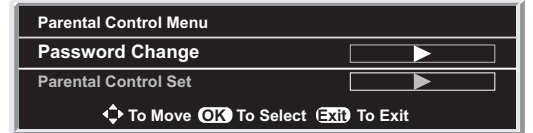
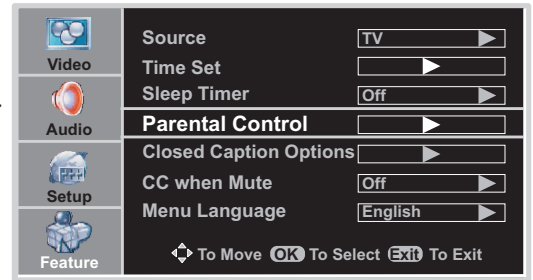


Setting Parental Control(continued)

Password Setup

To use the Parental Control function, you first need to set your password.

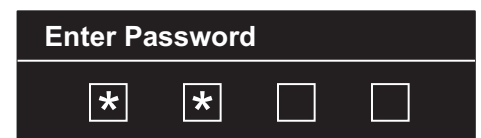
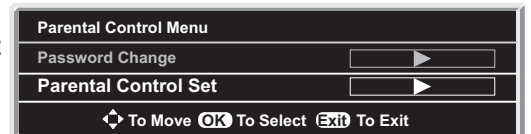
- 1 Navigate to the **Feature** sub-menu, highlight **Parental Control** and then use **OK** or **▶** to access **Parental Control Menu**.
- 2 Highlight **Password Change** and then use **OK** or **▶** to access.
- 3 Input old password (4-digit, the preset password is 0000), then input a new password and then confirm again. Now your new password has been created successfully. **Be sure to write down your password and retain it for future use.**



MPAA Rating Setup

- 1 Navigate to the **Feature** sub-menu, highlight **Parental Control** and then use **OK** or **▶** to access **Parental Control Menu**.
- 2 Highlight **Parental Control Set** and then use **OK** or **▶** to access.
- 3 Input your password correctly to access **Parental Control Set Menu**.
- 4 Within the menu, use **▲**, **▼**, **◀** or **▶** to navigate, use **OK** to block or unblock the rating.

When "PG-13" in the age-based rating is blocked, this will automatically block the higher ratings "R", "NC-17", "X" also.

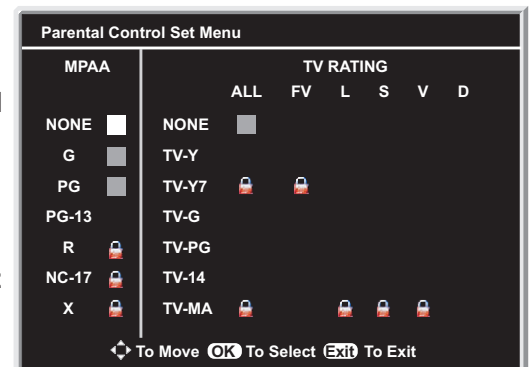


TV Rating Setup

- 1 Navigate to the **Feature** sub-menu, highlight **Parental Control** and then use **OK** or **▶** to access **Parental Control Menu**.
- 2 Highlight **Parental Control Set** and then use **OK** or **▶** to access.
- 3 Input your password correctly to access **Parental Control Set Menu**.
- 4 Within the menu, use **▲**, **▼**, **◀** or **▶** to navigate, use **OK** to block or unblock the rating.

When TV-Y in the age-based rating is set to BLOCK, this will automatically block the higher rating: TV-Y7.

When TV-G in the age-based rating is set to BLOCK, this will automatically block the higher ratings: TV-PG, TV-14, TV-MA.



Troubleshooting

Before calling for repair service, check the following items for possible remedies to an encountered symptom.

Symptoms	Check item
No power	<ul style="list-style-type: none"> • Check that the AC power cord is plugged into the mains socket. • Unplug the power cord, wait for 60 seconds. Then re-insert plug into the mains socket and turn on the unit again.
No picture	<ul style="list-style-type: none"> • Check video connections at the rear of the unit to see if it is properly connected to the unit. • Adjust the contrast and brightness settings. • Select a correct input. • Is a non-compatible signal being input?
Good picture but no sound	<ul style="list-style-type: none"> • Increase the VOLUME. • Check that the unit is not muted.
Good sound but poor color	<ul style="list-style-type: none"> • Adjust the contrast, color and brightness settings.
Poor picture	<ul style="list-style-type: none"> • Sometimes, poor picture quality occurs when an activated S-VHS camera or camcorder is connected while another activated peripheral is connected. In this case, switch off one of the peripherals. • Check whether the room is too bright.
Horizontal dotted line	<ul style="list-style-type: none"> • This may be caused by electrical interference (e.g. hairdryer, nearby neon lights, etc.). • Turn off the equipment.
Remote operation fails.	<ul style="list-style-type: none"> • This remote control is a universal remote control. If the remote control does not work correctly when operating the monitor, try pressing the TV button. • Check whether the batteries are working. Replace if necessary. • Clean the remote control sensor lens on the unit. • Do not use the remote control under strong or fluorescent lighting. • The batteries should be inserted with polarity (+, -) aligned.
Snowy picture and noise	<ul style="list-style-type: none"> • Check the A/V connections.
No stable or not synchronized VGA picture	<ul style="list-style-type: none"> • Check if you have selected the correct VGA mode in your PC.
No output from one of the speakers	<ul style="list-style-type: none"> • Adjust Balance in the SOUND menu.
Control buttons do not work.	<ul style="list-style-type: none"> • Unplug the power cord, wait for a few seconds. Then re-plug the power cord and turn on the unit again.

Do not use in hot and cold rooms (locations)

- When the unit is used in rooms (locations) with low temperature, the picture may leave trails or appear slightly delayed. This is not a malfunction, and the unit will recover when the temperature returns to normal.
- Do not leave the unit in a hot or cold location. Also, do not leave the unit in a location exposed to direct sunlight or near a heater, as this may cause the cabinet to deform and the PDP panel to malfunction.
(Storage temperature: 0°C to +50°C Working temperature: 5°C to +40°C)

Note:

*If your problem is not solved, turn your unit off and then on again.
Never attempt to repair a PDP TV yourself.*

Troubleshooting / Care and Maintenance

Plasma Display panel

Symptoms	Check item
Some parts of the screen do not light up.	The plasma display panel is manufactured using an extremely high level of precision technology, however, sometimes some parts of the screen may be missing picture elements or have luminous spots. This is not a malfunction.
After-images appear	Do not allow a still picture to be displayed for an extended period, as this can cause a permanent after-image to remain on the Plasma Display. Examples of still pictures include logos, video games, computer images, teletext and images displayed in 4:3 mode. Note: The permanent after-image on the Plasma Display resulting from fixed image use is not an operating defect. This product is not designed to display fixed images for extended periods of time.
Snapping sounds may be heard from the display unit.	This sound is produced when the cabinet expands or contracts due to variations in temperature and is not a malfunction.

Cleaning and Maintenance

The front of the display panel has been specially treated. Wipe the panel surface gently using only a cleaning cloth or a soft, lint-free cloth.

- If the surface is particularly dirty, soak a soft, lint-free cloth in a weak detergent solution and then wring the cloth to remove excess liquid. Use this cloth to wipe the surface of the display panel, then wipe it evenly with a dry cloth, of the same type, until the surface is dry.
- Do not scratch or hit the surface of the panel with fingernails or other hard objects. Furthermore, avoid contact with volatile substances such as insect sprays, solvents and thinner, otherwise the quality of the surface may be adversely affected.

If the cabinet becomes dirty, wipe it with a soft, dry cloth.

- If the cabinet is particularly dirty, soak the cloth in a weak detergent solution and then wring the cloth dry. Use this cloth to wipe the cabinet, and then wipe it dry with a dry cloth.
- Do not allow any detergent to come into direct contact with the surface of the Plasma Display.
- If water droplets get inside the unit, operating problems may result.
- Avoid contact with volatile substances such as insect sprays, solvents and thinner, otherwise the quality of the cabinet surface may be adversely affected or the coating may peel off. Furthermore, do not leave it for long periods in contact with articles made from rubber or PVC.



Programming your Remote Control

Introduction

Your remote lets you c

A Quick Look at Programming a Device

Searching

Checking





Surprise	2059
er	2191
ai	2067
eway	21158
	20522
Video	20744
enhill	20717
nan/Kardon	20582, 2
chi	20573, 2
ker	0672
l	0717
gra	20627, 21
	20702
	20558, 206
wood	20490, 2053
	20717, 21020
s	20651, 21980
Lonic	20798
L	20591, 20869, 2
Ld Video	21980
L On	2158, 21058
Lve	20511
Mnavox	20503, 20539, 21976,
Mantz	20539
Mmorex	0695
Mrosoft	20522
Mtek	20717
Mubis	20521, 20521
Nea	20717
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S
A
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a



Totevision
Touch
Unitech

2007, 20
2007
2007

SANYO COMFORT WARRANTY

WARRANTY APPLICATION

New, unused SANYO Color Television products purchased in Canada through a SANYO authorized dealer are warranted against manufacturing defects in materials and workmanship for ONE YEAR for parts and labor, from the date of purchase by the original retail purchaser for non-commercial use. This warranty only applies in favor of the original retail purchaser of the warranted product.

SANYO CANADA INC.'S RESPONSIBILITY

During the warranty period, SANYO Canada Inc. will repair, or at our option, replace a Color Television product which shows evidence of a manufacturing defect in materials or workmanship.

Replacement PARTS are warranted for the remaining portion of the warranty period.

WHAT IS NOT COVERED

- (a) Color Television products purchased outside Canada.
- (b) Color Television products purchased in a used condition.
- (c) Problems due to product set-up and installation.
- (d) Adjustments that are outlined in the Operating Manual.
- (e) Accessory items including antenna, batteries and connecting cables.
- (f) Damage in or due to transportation.
- (g) Damage due to improper maintenance, accident, abuse, misuse or negligence.
- (h) Damage caused by lightning and power surges.

ORIGINAL RETAIL PURCHASER'S RESPONSIBILITY

You, the original retail purchaser, must present your original, dated bill-of-sale together with this warranty to SANYO Canada Inc. or to an authorized Sanyo Service Depot* when you make a claim under this warranty.

You, the original retail purchaser, are responsible for any costs of TRANSPORTING the product to and from SANYO Canada Inc. or an authorized SANYO Service Depot. You also are responsible for the cost of any MAINTENANCE necessary in respect of the product.

*In-home service is only available to the units whose screen size is 40 inches or over, and limited to the locations within a 30-km radius of any authorized SANYO Service Depot, throughout Canada.

WARRANTY BECOMES VOID This warranty becomes void if the product's serial numbers are altered or removed or if any repair to the product is made other than by SANYO Canada Inc. or by an authorized Sanyo Service Depot.

LIMITATIONS

- (a) SANYO Canada Inc. reserves the right to change or improve the design of the model of the product warranted hereunder without incurring any obligation to make any modifications to or to install any improvement in or on the product.
- (b) In no event shall SANYO Canada Inc. or any of its Authorized Dealers be liable for special or consequential damage arising from the use of this product.

STATUTORY WARRANTIES

The above provisions do not preclude the operation of any applicable provincial statute which in certain circumstances may not allow some of the limitations and exclusions described in this Warranty. Where any terms of this Warranty are prohibited by such a statute, they shall be deemed null and void but the remainder of this warranty shall remain in effect.

HOW TO OBTAIN WARRANTY SERVICE

Please contact the SANYO Authorized Dealer from whom the product was purchased or contact us directly at:

SANYO Canada Inc.
300 Applewood Cres.
Concord Ont. L4K 5C7
(905) 760-9944
1-800-263-2244



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