

# Panasonic®

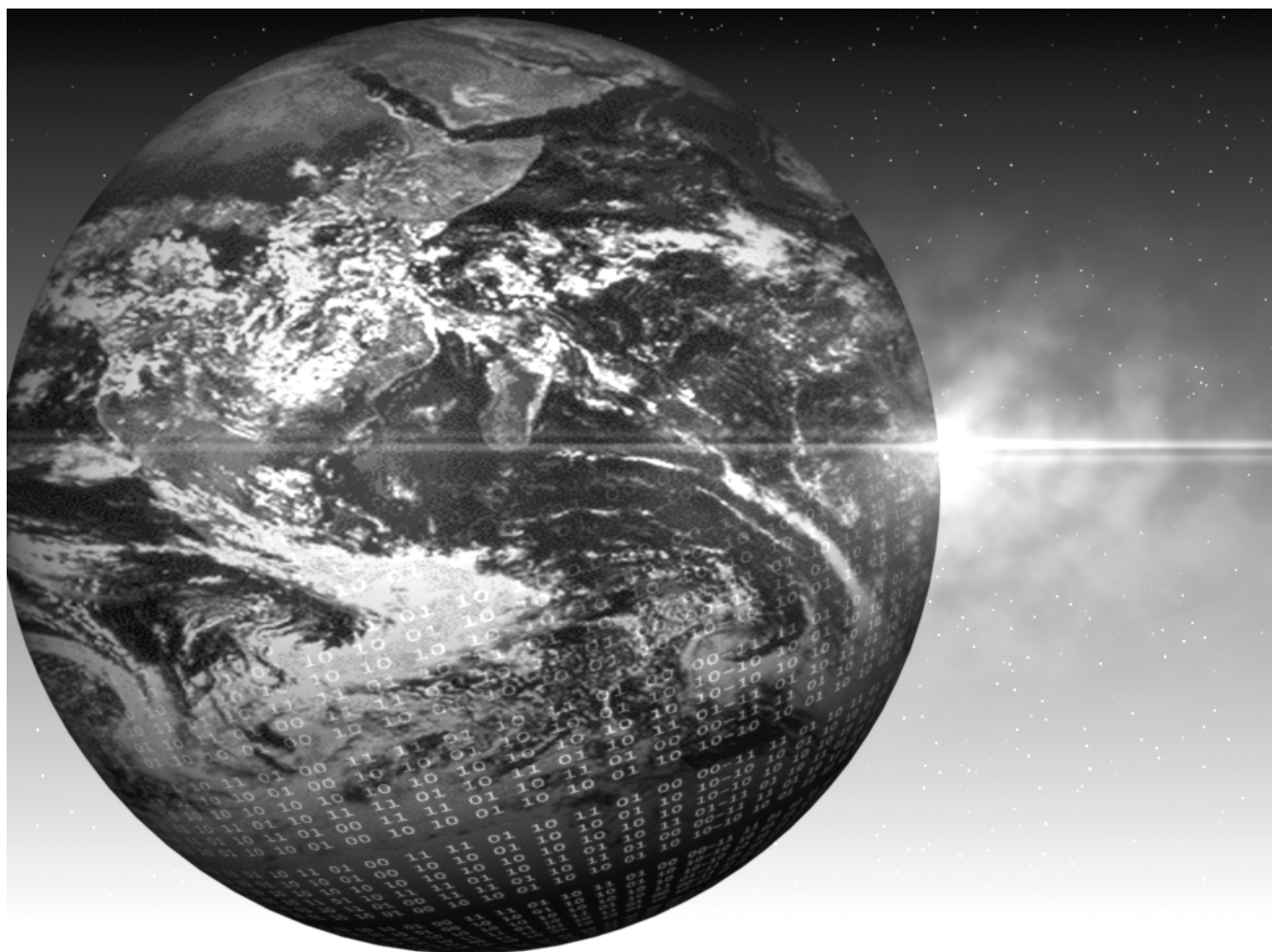
## HDTV Digital Receiver Operating Instructions



TU-DST52



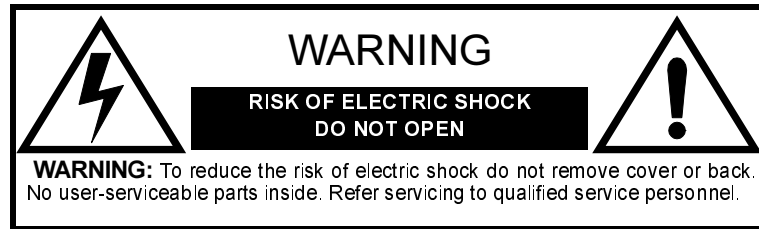
ATSC CERTIFIED  
DIGITAL TELEVISION



\*The presence of the DTV certification mark indicates that this product will successfully receive digital television transmissions that conform to any and all of the video formats described in the ATSC Digital Television Standard.

For product assistance, please call: 1-888-VIEW-PTV (843-9788) or send e-mail to: [consumerproducts@panasonic.com](mailto:consumerproducts@panasonic.com)

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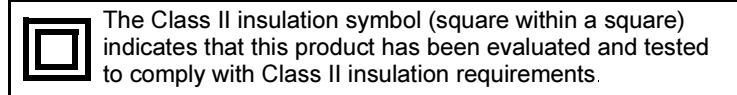


The lightning flash with arrow head within a triangle is intended to tell the user that parts inside the product are a risk of electric shock to persons.



The exclamation point within a triangle is intended to tell the user that important operating and servicing instructions are in the papers with the appliance.

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



**This product incorporates the following U.S. Patent(s) 5,623,311; 5,999,569; 6,049,651; 6,137,539; 6,266,098; 6,301,299; 6,369,861; 6,384,870; 6,411,337; other U.S. and foreign patents pending.**

**Read these instructions completely before operating television.**

**Contents are subject to change without notice or obligation.**

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# **IMPORTANT SAFETY INSTRUCTIONS**

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. 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. 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. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. 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.



## **FCC INFORMATION**

This equipment has been tested and found to comply with the limit for a Class B Digital Device in accordance with the specifications in Part 15 of FCC Rules. The rules are designed to provide reasonable protection against radio and television interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause interference to radio or televisions reception (which you can determine by turning the equipment off and on), try to correct the interference by one or more of the following measures.

- Reposition or relocate the receiving antenna for the radio or television that is "receiving" the interference.
- Change the position of the HDTV Digital receiver with respect to the radio or television equipment that is receiving interference.
- Move the HDTV Digital receiver away from equipment receiving interference.
- Plug the HDTV Digital receiver into a different wall outlet so the HDTV Digital receiver and equipment receiving the interference are on different branch circuits.

If these measures do not eliminate interference, please consult your dealer or an experienced radio/television technician for assistance.

### **FCC CAUTION:**

Pursuant to 47CFR, Part 15.21 of the FCC rules, any changes or modifications to this HDTV DIGITAL RECEIVER not expressly approved by Matsushita Electric Corporation of America could cause harmful interference and would void the user's authority to operate this device.

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## Congratulations

Your Panasonic HDTV Digital tuner features state-of-the-art technology for high-quality picture and sound with complete audio/video output jacks for your home theater system. DTV signals are displayed in either an interlaced or progressive format, providing a clear, crisp picture. When connected to the HDTV Digital Receiver, your HDTV monitor/receiver can display high-definition (HDTV) 1080i format and standard definition (SDTV) 480p or 480i format. Your new HDTV Digital Receiver is designed to give you many years of enjoyment.

## Customer Record

The model and serial number of this product are located on the back of the HDTV Digital Receiver. You should note the model and serial number in the space provided and retain as a permanent record of your purchase. This will aid in identification in the event of theft or loss. Product registration is available on-line at : [www.prodreg.com/panasonic](http://www.prodreg.com/panasonic).

Model Number	<input type="text"/>
Serial Number	<input type="text"/>

## Care and Cleaning

### Set Top Box (Turn HDTV Digital Receiver Off)

- For HDTV Digital Receiver, avoid excessive moisture and wipe dry. DO NOT USE ABRASIVE CLEANERS.
- Avoid bumping or scraping the HDTV Digital Receiver.

### Remote Control

- For remote control, use a soft cloth dampened with water or a mild detergent solution. Avoid excessive moisture and wipe dry.
- Do not use benzene, thinner or other petroleum based products.

## Specifications

<b>Power Source</b>	120V AC, 60Hz
<b>Channel Capability - ATSC/DTV</b>	VHF/UHF - 2-69* CATV - 1-125*
<b>Digital Audio Output</b>	Dolby Digital Fiber Optic
<b>Video Output Jacks</b>	1Vp-p, 75 Ohm, Phono Jack Type
<b>Audio Output Jacks</b>	0-2.0V RMS 4.7K Ohm
<b>DTV Output (Y / P<sub>B</sub> / P<sub>R</sub>)</b>	75 Ohms, Phono Jack Type
<b>S-Video Out Jack</b>	S-Video (Y-C) Connector

Specifications are subject to change without notice or obligation.

\*The digital tuning system allows channel numbers up to 999 to be displayed. The total channel capability, however, remains as stated.

## Installation

### HDTV Digital Receiver Location

Follow these recommendations before deciding the location of your HDTV Digital Receiver.

- Avoid excessive sunlight or bright lights, including reflections.
- Keep away from excessive heat or moisture. Inadequate ventilation may cause internal component failure.
- Fluorescent lighting may reduce remote control transmitting range.
- Keep away from magnetic equipment, including motors, fans and external speakers.

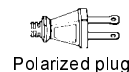
### Connecting Cables

Component Video cables (Y, P<sub>B</sub>, P<sub>R</sub>) are provided for connection to a DTV-Compatible monitor/receiver. Shielded audio and video cables (not provided) should be used between components. For best results:

- Use 75-ohm coaxial shielded cables.
- Use appropriate input and output connectors that match your component connectors.
- Avoid long cables to minimize interference.

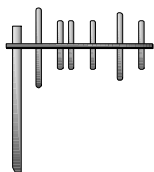
### AC Power Supply Cord

**CAUTION:** TO PREVENT ELECTRIC SHOCK MATCH WIDE BLADE OF PLUG TO WIDE SLOT OF AC OUTLET AND FULLY INSERT. DO NOT USE A PLUG WITH A RECEPTACLE OR OTHER OUTLET UNLESS THE BLADE CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

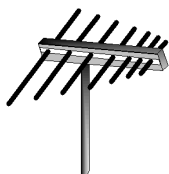


PROTECT POWER CORDS FROM BEING WALKED ON, ROLLED OVER, CRIMPED, BENT OR PINCHED, PARTICULARLY AT PLUGS, CONVENIENCE RECEPTACLES, AND THE POINT WHERE THEY EXIT FROM THE APPARATUS.

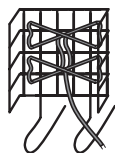
### Antenna Installation and Orientation



Yagi



Log Periodic



Reflector

In many areas, an indoor antenna can be used to receive DTV signals. Certain condition, however, may create a situation where an outdoor antenna is required. Tall buildings, large metal objects (e.g., a water tower) or hills may block the line-of-sight to the TV station and interfere with DTV signal reception. Keep the following in mind when installing and orienting your outdoor antenna. For addition information about antennas, see the Consumer Electronics manufacturing Association (CEMA) website at:

[www.cemacity.org](http://www.cemacity.org) or ask your local dealer.

- Choose an antenna with directional receiving characteristics such as a Yagi, log periodic, or reflector antenna. Avoid loop, wire bowtie, rabbit-ear and omni-directional antennas.
- Use good grade 75 Ohm coax (round) cable to connect the antenna to the HDTV Digital Receiver. Do not use 300 Ohm flat twin-lead cable.
- Place the antenna away from large metal objects. If using an indoor antenna, remember that aluminum siding and foil-covered insulation can greatly reduce the signal strength inside your house.
- Point the antenna in the direction of the TV station. Allow a 4-6 second delay in tuning. Watch for a program to appear on the TV. If the on-screen indicator is "Poor Signal Quality" or if a program comes and goes, try a slightly different position for the antenna. Slowly raising or lowering the antenna by a few feet may help.
- Avoid standing in front of the antenna while adjusting its position. Move a few feet to the rear to avoid changing the signal characteristics.
- If you are located in an area serviced by two (2) different DTV stations in different directions, you may need an antenna rotator to receive signals from both stations.

## Antenna / Cable Connection

For proper reception, antenna or cable connection is required.

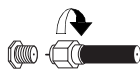
### Antenna Connection

For proper reception of DTV channels, a directional antenna is required (see previous page). For best reception, an outdoor antenna is recommended.

#### Procedure

- Connect the antenna cable from your antenna.
- Select ANTENNA, in the Roller Guide SET UP Menu under Input..

#### Incoming Cable from Home Antenna



75 Ohm ATSC/DTV input  
on back of HDTV Digital Receiver

### Cable Connection

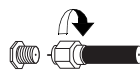
Before connecting your Cable to the HDTV Digital Receiver, contact your local cable provider and ask the following questions:

- Is DTV available through your cable service?
- Do you need a separate cable box to receive DTV signals?

#### Procedure

- Connect the cable wire provided by your local cable provider.
- Select CABLE in the Roller Guide Set Up menu under Input.

#### Incoming Cable from Cable Company

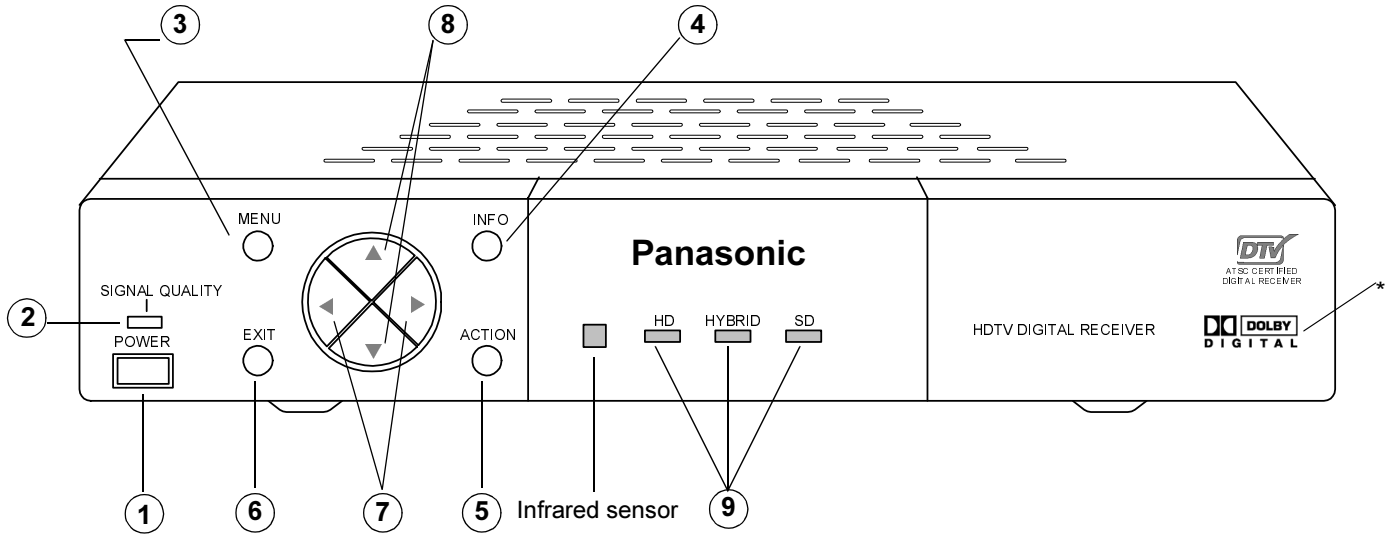


75 Ohm ATSC/DTV input  
on back of HDTV Digital Receiver

**Note:** *The Panasonic HDTV Digital Receiver is able to receive DTV signals from your local cable provider **only if** they are transmitted in the 8VSB modulation format approved by the FCC for DTV transmission. Also, your cable provider may elect to transmit in the 8VSB format for only a limited period of time.*

Front and Rear View of the HDTV Digital Receiver

Front Panel



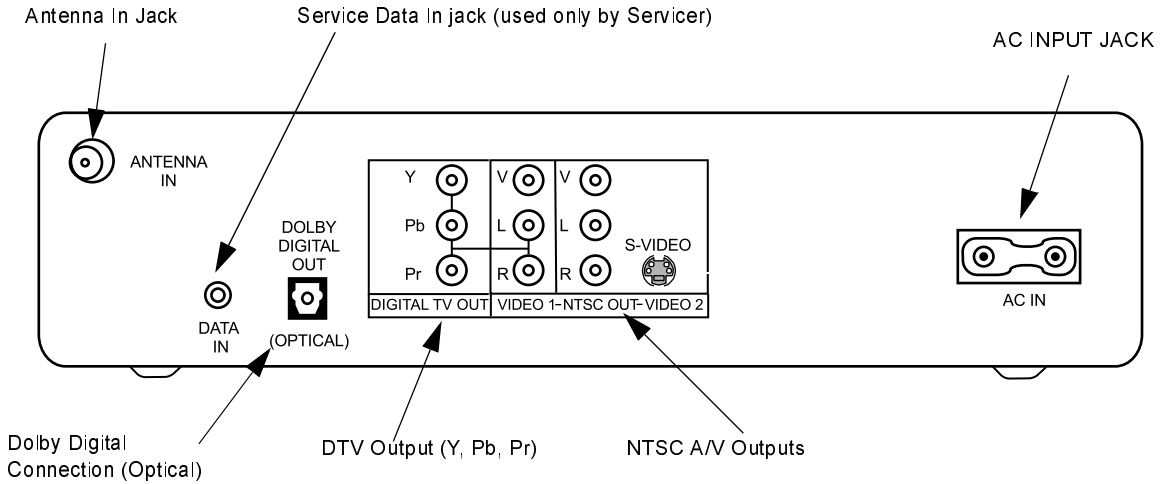
FEATURES	DESCRIPTION
① POWER	Turns the HDTV Digital Receiver On or Off.
② SIGNAL QUALITY	Signal Strength Indicator LED (tri-color): Red: Unlocked Condition Yellow: Locked condition with poor signal strength. Green: Locked condition with adequate signal strength.
③ MENU	Press to display and exit Roller Guide Menu system.
④ INFO	Press to display the Channel Banner or other on-screen displays.
⑤ ACTION	Press to enter the selection from the menu.
⑥ EXIT	Exit Menus.
⑦ Navigation Buttons	Press these Navigation buttons to move the highlight left or right.
⑧ Navigation Buttons	Press to change CH Up / Down or to move the highlight up or down in Roller Guide menus.
⑨ HD, HYBRID, SD	Video Format Indicator LEDs.
INFO + ACTION	Press these two buttons together to change Video Format.

\*Manufactured under license from Dolby Laboratories.

“Dolby”, “Pro Logic”, and the double-D symbol are trademarks of Dolby Laboratories.



Rear Panel



**ANTENNA IN**

Use to connect the antenna to the HDTV DIGITAL RECEIVER.

**DATA IN**

Port used to input service related data. (For service center use only)

**DOLBY DIGITAL OUT (OPTICAL)**

Optical Digital Audio Out connection to Dolby Digital decoder.

**DIGITAL TV OUTPUT**

Component Video Output connection to a HDTV monitor.

**NTSC OUTPUT**

Audio/Video connections to a Conventional TV or a VCR.

**S-VIDEO**

S-VIDEO out connection for an NTSC monitor or a S-VCR. This connection provides better video with NTSC monitor.

**AC INPUT**

AC input jack.

## Features of the HDTV Digital Receiver

### Display Format

The HDTV Digital Receiver converts all eighteen (18) ATSC display formats available in DTV into viewable programming. The display formats are variations on the four (4) formats 1080i, 720p, 480p and 480i. The following table shows the four (4) formats, their resolutions and aspect ratios.

DTV Format	Resolution	Aspect Ratio
1080i 720p	High Definition	16:9
480p 480i	Standard Definition	16:9 or 4:3

### Format Selection

The HDTV Digital Receiver allows you to choose a display format based on the capability of your TV or monitor. To select the appropriate format, use the VIDEO OUT button on the remote control.

#### HD Mode

If your TV is capable of displaying **1080i** high definition signal, set the video out format to **HD** mode. 1080i, 720p, 480p and 480i signals are outputted as **1080i**.

Input Format (from antenna/cable)	Output Format to TV
1080i 720p	1080i
480p 480i	1080i

#### Hybrid Mode

In the Hybrid mode, 1080i and 720p signals are outputted as **1080i**, 480p is outputted as **480p** and 480i is outputted as **480i**.

Input Format (from antenna/cable)	Output Format to TV
1080i 720p	1080i
480p	480p
480i	480i

#### SD Mode

In the SD mode, all formats are outputted as **480i**. If your TV capable of displaying NTSC formats only, then set the Video Out mode to **SD**.

Input Format (from antenna/cable)	Output Format to TV
1080i 720p	480i
480p 480i	480i

## Aspect Ratio Selection

The HDTV Digital Receiver changes the normal aspect ratio (picture display shape) in response to the source signal and monitor format of your TV. You can also change the aspect ratio for your personal viewing preference. To select an aspect ratio, press the **ASPECT** button on your remote control and the HDTV Digital Receiver will cycle to the next available aspect ratio choice. The following table shows the available aspect ratios.

Source Signal	MONITOR FORMAT	
	16:9	4:3
16:9	FULL (No Scaling)	FULL - ZOOM - LETTERBOX
4:3	FULL - SIDEBAR	FULL (No Scaling)

### Full Aspect

16:9 or 4:3 picture will be displayed in the center of the viewing screen at full screen width and height.

### Zoom Aspect (4:3 Monitor receiving 16:9 source signal)

The picture will be expanded uniformly (width and height) to fill the viewing screen. The picture will be cropped, either horizontally or vertically to fit the viewing screen. The cropped portion of the original picture will be lost from view.

### Letterbox Aspect

Video formats with aspect ratios greater than 16:9 will be displayed at the proper width, so no video information is lost. Bars will appear above and below the picture.

### Sidebar Aspect

4:3 picture will be viewed on a widescreen TV with vertical bars on both sides of the picture.

## Aspect Ratio Formats

The table below shows the different aspect ratios available with a 16:9 or a 4:3 format monitors.

### ASPECT RATIO FORMATS

Source Signal	16:9 MONITOR FORMAT		4:3 MONITOR FORMAT		
	FULL	SIDEBAR	FULL	ZOOM	LETTERBOX

The 16:9 and 4:3 pictures represent the incoming source signals received by the HDTV Digital Receiver.

These pictures show the different aspect ratios available with a 16:9 monitor format.

- The top picture shows the 16:9 monitor format available when the HDTV Digital Receiver receives a 16:9 source signal.
- The bottom pictures show the 16:9 monitor formats available when the HDTV Digital Receiver receives a 4:3 source signal.

These pictures show the different aspect ratios available with a 4:3 monitor format.

- The top pictures show the 4:3 monitor formats available when the HDTV Digital Receiver receives a 16:9 source signal.
- The bottom picture shows the 4:3 monitor format available when the HDTV Digital Receiver receives a 4:3 source signal.

### Channel and Program Tuning

Channel and program tuning in digital television is very different from current conventional television. In DTV, up to six (6) multiple programs can exist within a single 6 Mhz channel. These channels behave as sub-channels within the single channel. When tuning to a channel, the HDTV Digital Receiver will also tune to a program. The HDTV Digital Receiver will indicate the channel and program through the on-screen Channel Banner display.

#### Channel and program tuning

The HDTV Digital Receiver allows channel and program selection in the following ways:

- Direct tuning (0 ~ 9 keys) - Using the numeric keys on the Remote Control to directly input the Channel number. If necessary use the PROG button to enter the program number.
- Channel Up/Down Tuning (▲ or ▼ buttons) - Tunes to the next or previous available channel or program.
- Rapid Tuning (R-TUNE) - Switches between the last two channels or programs.

#### Direct Tuning Method

Follow the procedure below to directly enter the channel number using the Remote Control.

##### Procedure

- Press the numeric keys on the Remote Control to enter the Channel number.
- If your channel contains more than one program, press the **PROG** button and enter the program # (1, 2, 3 etc.) using the numeric keys.

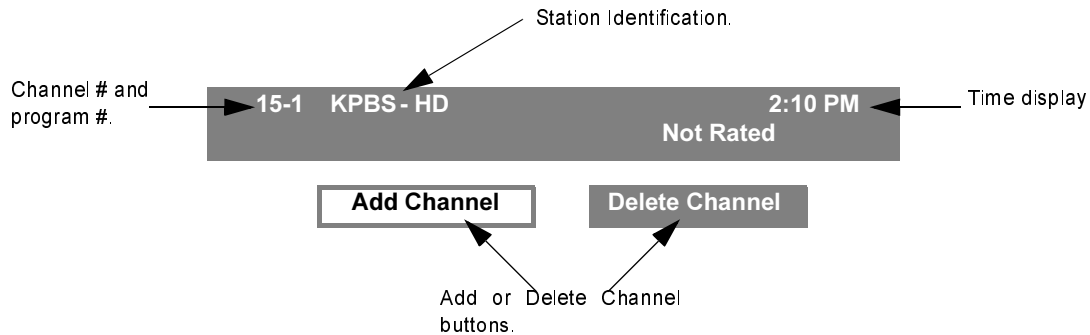
### Channel Banner

The basic Channel Banner will display channel number, and station identification.

15-2 KPBS-DT

#### Complete Channel Banner in DTV mode

When you press the **INFO** button, the complete channel banner is displayed. The channel banner will display channel number, station identification time or day and ratings information. In addition, the banner will display Add Channel and Delete Channel buttons.



### Add Channel or Delete Channel feature

This feature lets you delete channels from memory or add channels to memory.

#### Procedure

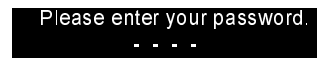
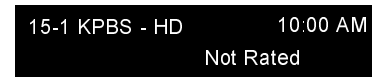
- Tune the desired channel to be added or deleted.
- Press the **INFO** button to display the Channel Banner.
- Highlight Add Channel or Delete Channel button using ◀ or ▶.
- Press **ACTION** button to execute your choice.

### Unavailable Channel selection

The unavailable channel selection screen is displayed when you select an unavailable channel. The following is a list of some possible situations where an unavailable channel selection may occur.

- Tuning a channel that is not transmitting any programs.
- Tuning a channel that stopped broadcasting programs.
- The signal strength of the RF signal is insufficient to obtain consistent error free data.
- Tuning a channel that is locked.

Following are some of the on-screen messages that will be displayed when the above conditions are encountered.



### Digital Audio Out (Dolby Digital)

Dolby Digital 5.1 channel surround sound delivers digital-quality sound. Dolby Digital provides five discrete full-bandwidth channels for front left, front right, center, surround left and surround right, plus a LFE (Low Frequency Effect) subwoofer channel. For a full Home Theater sound experience, an external Dolby Digital decoder and a multichannel amplifier must be connected to the HDTV Digital Receiver.

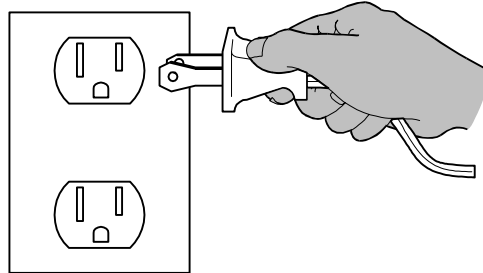
#### Stereo Outputs

The stereo audio outputs are Dolby Surround compatible. You can connect a Dolby Surround Pro Logic decoder (not included) to the stereo audio outputs.

## Getting Started

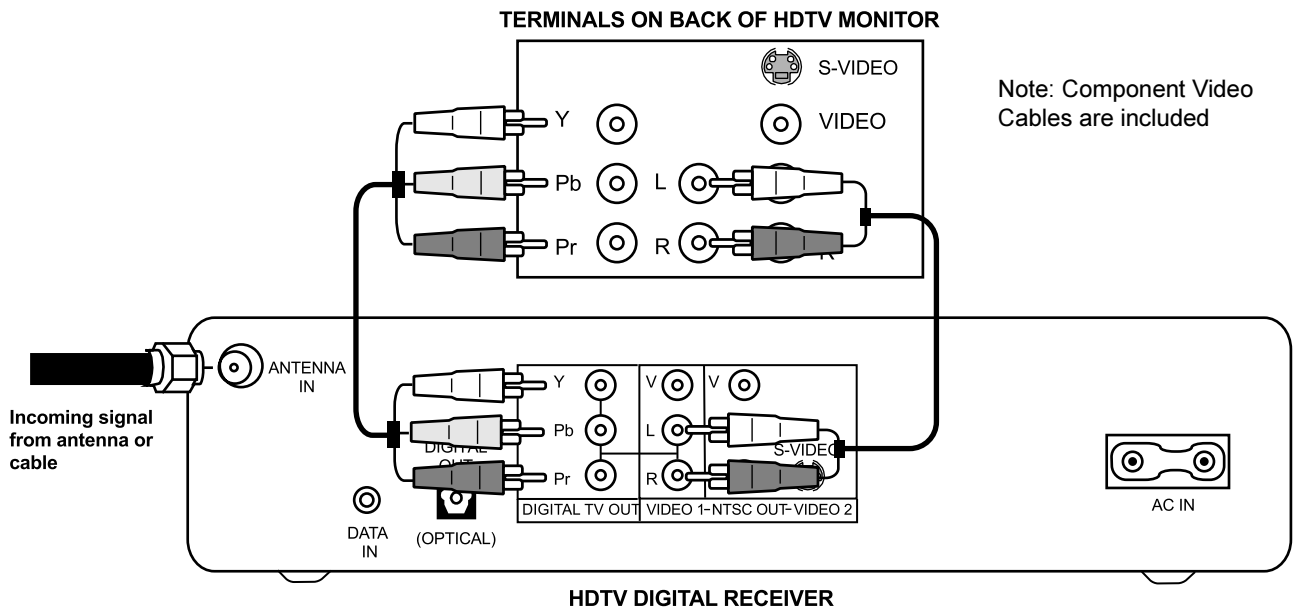
### Connect the AC power cord

Plug in the supplied AC cord to the AC IN jack of the HDTV Digital Receiver and plug-in the other end to the wall socket. Do not turn on any devices until you have finished all necessary connections.



### Connecting the HDTV Digital Receiver to an HDTV monitor

Follow the diagram below to connect the HDTV Digital Receiver to an HDTV Monitor/Receiver.

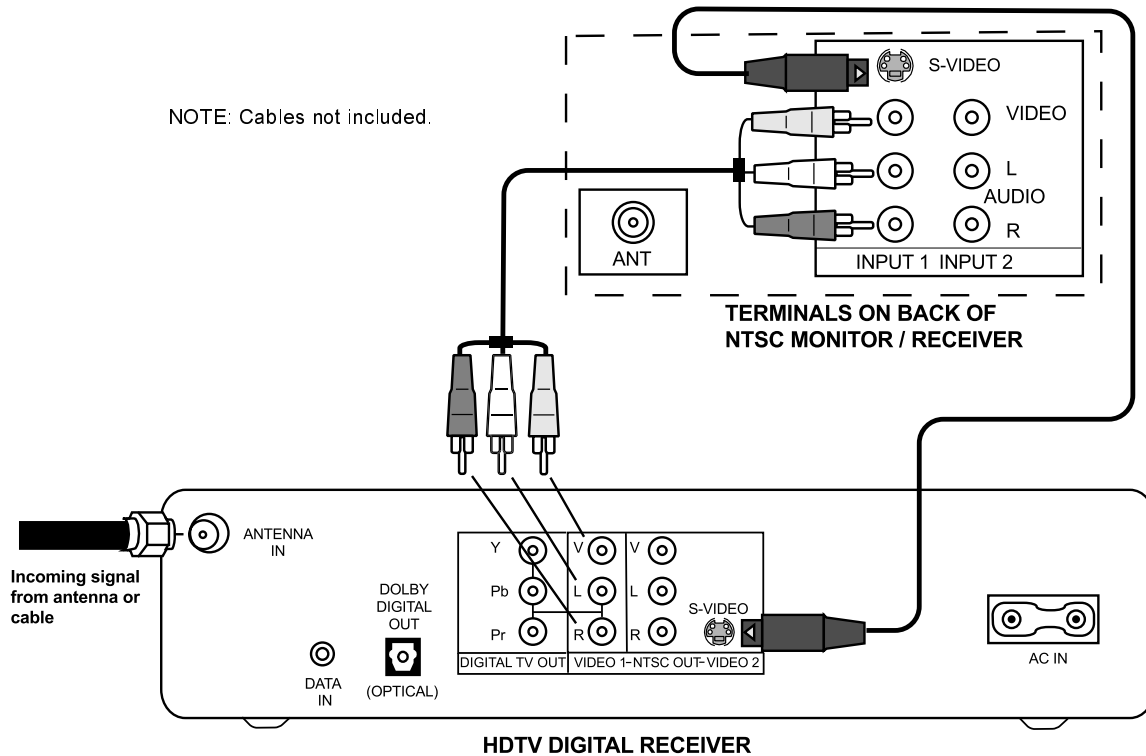


#### Procedure

- Connect video cables from the DIGITAL TV OUTPUT (Y, P<sub>B</sub>, P<sub>R</sub>) jacks on the HDTV Digital Receiver to the Y, P<sub>B</sub>, P<sub>R</sub> Digital TV input jacks on the HDTV monitor.
- Select the Video Format to match the digital display capability of your monitor.
- Connect audio cables from the left and right audio output jacks of VIDEO 1 to the input jacks on the TV. For digital audio, connect the Dolby Digital output to an Dolby Digital amplifier. (Please see the diagram on page 15).

## HDTV Digital Receiver and NTSC Monitor/Receiver connection

Follow this diagram when connecting your HDTV Digital Receiver to a NTSC Monitor/Receiver.



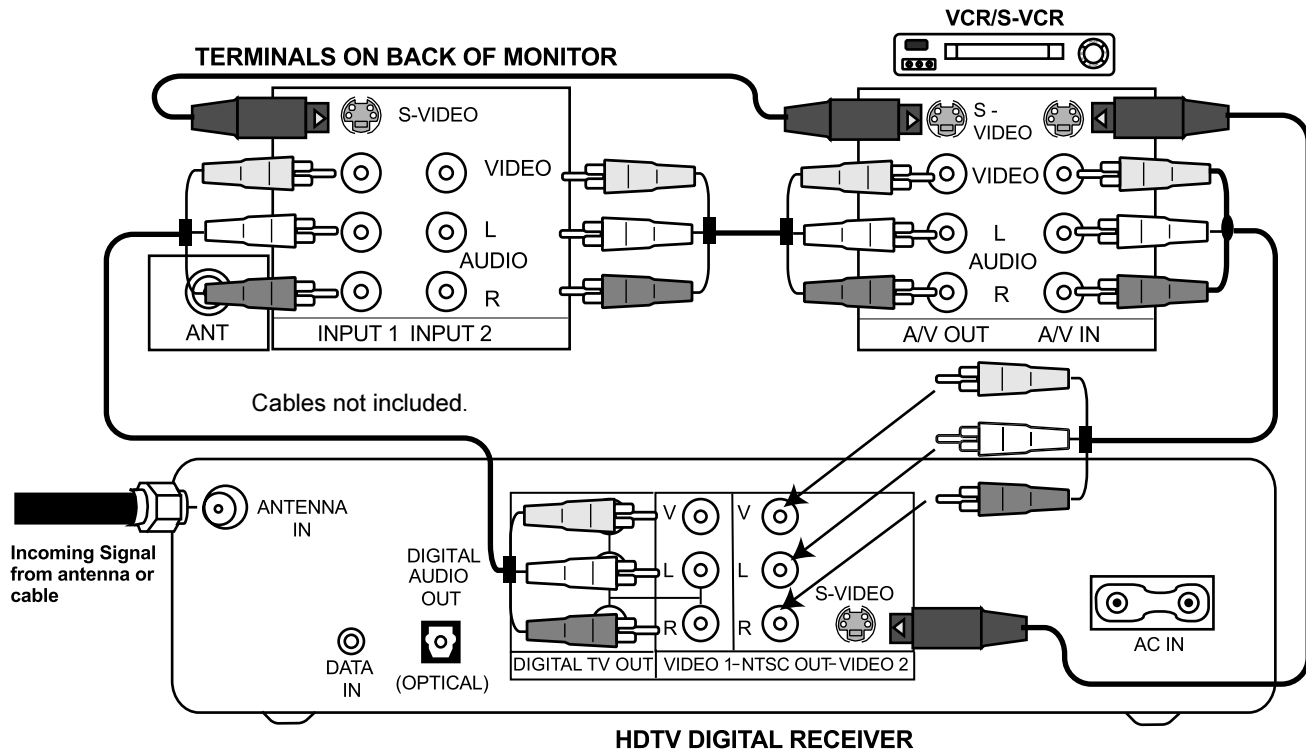
### Procedure

- Connect the A/V output (VIDEO1 or VIDEO 2) to the A/V Input of the NTSC monitor/ receiver.
- If your monitor has S-VIDEO input, connect the S-VIDEO output of the HDTV Digital Receiver to the S-VIDEO in of the monitor/ receiver. This connection will give you better video signal.
- Select **SD** format mode on the HDTV Digital Receiver.

**Note:** If both Video and S-Video are connected to the monitor, S-VIDEO will override the composite video connection.

## HDTV Digital Receiver, NTSC Monitor and VCR / S-VCR connection

Use this diagram to connect the HDTV Digital Receiver with a NTSC monitor and a VCR / S-VCR.



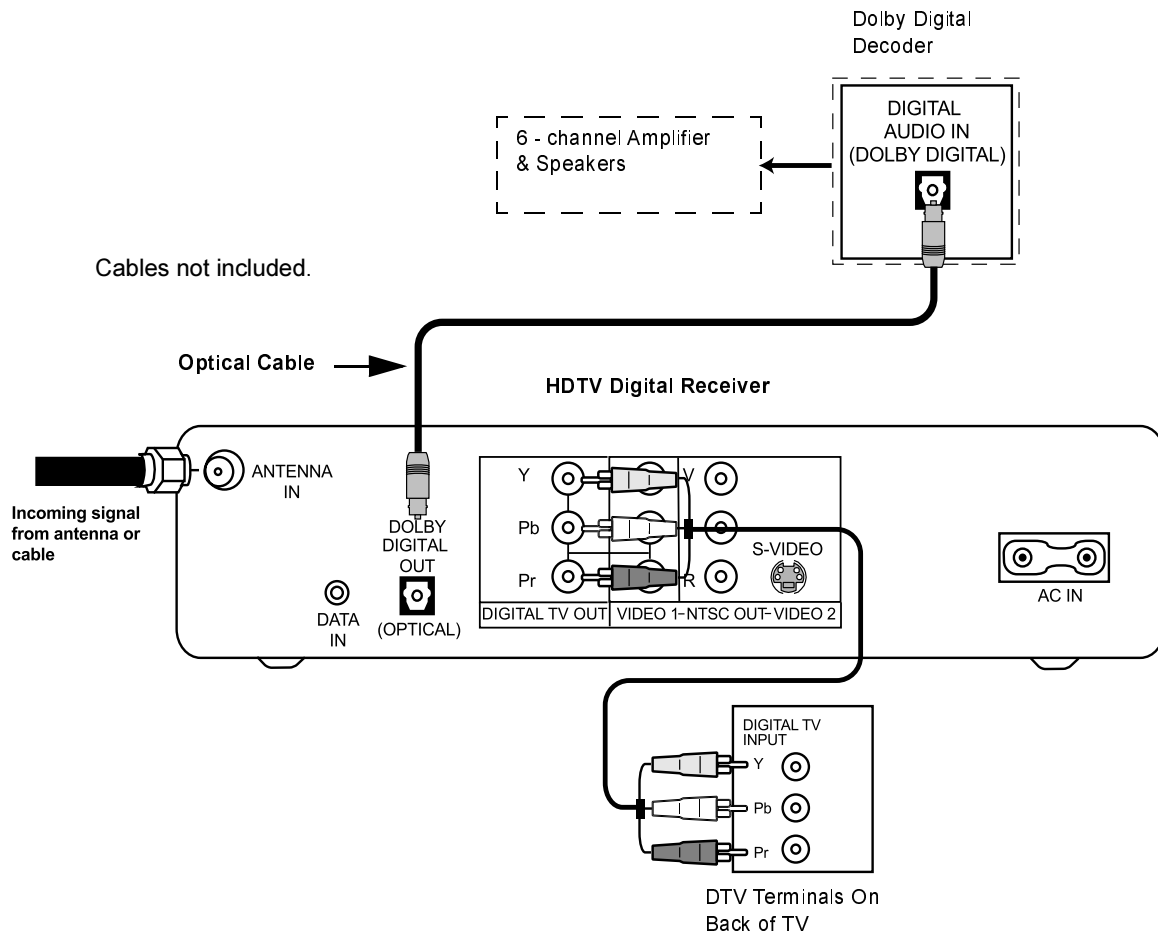
### Procedure

- Connect the VIDEO 1 or VIDEO 2 output to VCR's AV IN JACK. If you have a S-VCR, connect the S-VIDEO output from the HDTV Digital Receiver to the S-VIDEO input of the S-VCR.
- Connect the AV out to the video input of your NTSC monitor/Receiver. If your monitor has S-VIDEO, connect the S-VIDEO out from the S-VCR to the monitor.
- Select HDTV Digital Receiver output to **SD** mode.



## Connecting the HDTV Digital Receiver to Dolby Digital decoder

Use the following diagram to connect Dolby Digital output of your HDTV Digital Receiver to a Dolby Digital decoder.




### Procedure

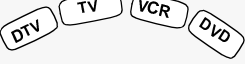
- Connect the Digital Audio cable from the Digital Audio Out connection on the HDTV Digital Receiver to the Digital Audio In connection on the Dolby Digital decoder.
- If using a HDTV monitor, use component video cables to connect the TV to the HDTV Digital Receiver.
- If using a conventional TV, use either composite video or S-Video cable to connect the TV to the HDTV Digital Receiver.

## Remote Control Operation

**POWER**




Press to turn ON and OFF.




Press to select device operation.  
Note: Press DTV to control HDTV Digital Receiver.

**ACTION**




Press to access menus or submenus.

**MENU**



Press to access Rollerguide menus.

**EXIT**

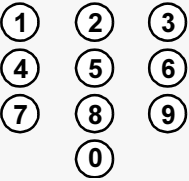


Press to exit menus.

**TV/VIDEO**




Press to select TV or VIDEO mode.



Press numeric keypad to select any channel.

**R-TUNE**




Press to switch to previously viewed channel or video mode.



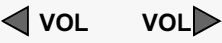
EUR7613Z50

**SAP**



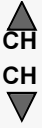
Press to cycle through multiple audio tracks (if available) in DTV mode or select audio modes in TV mode.

**VOL**



Press to navigate in menus and adjust volume in TV mode.

**CH**




Press to navigate in menus and select next or previous channel.

**INFO**




Press to display time, channel and other information.

**TV/VCR**




Press to select TV or VCR.

**ASPECT**











Select picture shape to match signal and monitor format (DTV only).

**PROG**



Press to enter the program number in a channel number.

<b>REW</b> 	<b>PLAY</b> 	<b>FF</b> 
<b>PAUSE</b> 	<b>STOP</b> 	<b>VIDEO OUT* REC</b> 
<b>MUTE</b> 	<b>TV VOL</b> 	

Component function buttons  
\*Press to switch Video Output formats in DTV mode.

### Battery Installation

#### Use two AA batteries:

- Remove battery cover by pressing down on the marking on the battery cover and sliding it back.
- Install batteries matching (+) and (-) polarity signs.
- Replace the battery cover.

**Note:** Incorrect installation can cause battery leakage and corrosion that will damage the Remote Control.

### Precautions

- Replace batteries in pairs.
- Do not mix battery types (zinc carbon with alkaline).
- Do not recharge, heat, short-circuit, disassemble, or burn batteries.

### Mode Operational Key Chart

This chart defines the keys that are operational in the selected component modes (DTV, TV, VCR or DVD) after programming (if needed).

KEY NAME	DTV MODE	TV MODE	VCR MODE	DVD MODE
POWER	DBS POWER	TV POWER	VCR POWER	DVD POWER
SAP	DTV AUDIO TRACK	SELECTS AUDIO MODE* (STEREO, SAP OR MONO)	-	-
CH ▲	NAVIGATION UP	CHANNEL UP	VCR CHAN UP	NEXT CHAPTER
CH ▼	NAVIGATION DOWN	CHANNEL DOWN	VCR CHAN DOWN	PREVIOUS CHAPTER
VOL ►	DTV NAV RIGHT	TV VOL +	TV VOL +	NAVIGATION RIGHT
◀ VOL	DTV NAV LEFT	TV VOL -	TV VOL -	NAVIGATION LEFT
ACTION	DTV ACTION	TV MENU / ENTER	-	-
MENU	DTV ROLLERGUIDE MENU	-	-	-
INFO	DTV CHAN BANNER	TV DISPLAY	ON-SCREEN VCR DISPLAY	DVD DISPLAY
EXIT	EXIT MENUS	-	-	-
TV/VIDEO	TV INPUT SELECTION	TV INPUT SELECTION	TV INPUT SELECTION	TV INPUT SELECTION
TV/VCR	-	TV VCR SWITCH	TV/VCR SWITCH	-
ASPECT	DTV ASPECT	-	-	-
R-TUNE	PREVIOUS DTV CHAN	PREVIOUS CHAN OR VIDEO MODE	-	-
PROG	DTV PROG/-	-	-	-
1	DIGIT 1	DIGIT 1	-	-
2	DIGIT 2	DIGIT 2	-	-
3	DIGIT 3	DIGIT 3	-	-
4	DIGIT 4	DIGIT 4	-	-
5	DIGIT 5	DIGIT 5	-	-
6	DIGIT 6	DIGIT 6	-	-
7	DIGIT 7	DIGIT 7	-	-
8	DIGIT 8	DIGIT 8	-	-
9	DIGIT 9	DIGIT 9	-	-
0	DIGIT 0	DIGIT 0	-	-
<<REW	-	VCR REWIND	VCR REWIND	SKIP / SEARCH REVERSE
PLAY	-	VCR PLAY	VCR PLAY	DVD PLAY
FF >>	-	VCR FF	VCR FF	SKIP / SEARCH FF
PAUSE	-	VCR PAUSE	VCR PAUSE	DVD STILL
STOP	-	VCR STOP	VCR STOP	DVD STOP
VIDEO OUT RECORD	DTV VIDEO FORMAT SELECTION	VCR RECORD	VCR RECORD	-
MUTE	TV AUDIO MUTE	TV AUDIO MUTE	TV AUDIO MUTE	TV AUDIO MUTE
	TV VOL UP or DOWN	TV VOL UP or DOWN	TV VOL UP or DOWN	TV VOL UP or DOWN

\*This feature may not function in all televisions.

## Programming The Remote

The Universal Remote Control can be programmed to operate many manufacturers' components, using the component function buttons for TV, VCR or DVD. Follow the procedures for programming your Remote Control with or without a code for the component.

Default Modes For Remote Control

Device	Operates	Default
DTV	DTV (Panasonic Only)	Panasonic DTV Code
TV	TV (Preset)	Panasonic TV Code
VCR	VCR (Preset)	Panasonic VCR Code
DVD	DVD (Preset)	Panasonic DVD Code

Determine the manufacturer of the component and look in the table for the code.

## Programming With a Code

### Procedure

- Confirm that the external component is plugged in and operating.
- Turn the component off.
- Press the Remote Control **ACTION** ● and **POWER** together, **for at least 5 seconds**.
- Press appropriate component button on the Remote Control TV, VCR or DVD.
- Enter the 3-digit component code using the Remote Control numeric keypad (0 ~ 9 buttons).
- Press the Remote Control **POWER** to test the component. If the procedure was successful, the component will turn on.

#### Helpful Hints: Unsuccessful Code

If the component does not operate with the Remote Control, repeat the procedure using another code. (Some brands have multiple codes).  
If an incorrect code is entered, or if the procedure takes longer than 30 seconds, the programming will fail.

## Programming Without A Code

This procedure searches all codes and is called the "sequence method."

- Confirm that the external component is plugged in and on.
  - Turn the component off.
  - Press the Remote Control **ACTION** ● and **POWER** together, **for at least 5 seconds**.
  - Press appropriate component button on the Remote Control.
  - Press **VOL ►** to move forward to the next code. Press **◀ VOL** to move backward.
  - Press the Remote Control **POWER** to test the component. If the procedure was successful, the component will turn on.
- Note:** Repeat the above steps until the component code is found. It may take many attempts before the correct code is found.
- After the code is found, press **ACTION** ● to store the code.

## Component Codes

The Universal Remote Control is capable of operating many component brands after entering a code. Some components may not operate because the codes are not available due to limited memory. The Universal Remote Control does not control all features found in each model.

**Write the code numbers from tables in this space. This will serve as a reference if you need to program your Remote Control.**

TV	VCR	DVD	
<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>	

## Codes for TV

Brand	Code
Admiral	112, 124, 125
Alwa	138, 142, 143
Akai	104
AOC	105
Bell & Howell	124, 126, 178
Broksonic	104, 105, 144, 180
Centurion	105
CIS Hotel	199
Coltina	203
Coronad	164
Craig	108, 109, 110
Crosley	115
Curtis Mathes	104, 107, 110
Daewoo	104, 106, 135, 196
Emerson	104, 108, 109, 110, 120, 133, 134, 180
Fisher	111
Fujitsu	139, 156, 157, 160
Funai	136, 137, 140, 141, 146, 147, 155
GE	101, 104, 112, 132
Goldstar	104, 105, 165
Hitachi	104, 113, 183
Inteq	126, 127
JC Penny	104, 112
JVC	114, 158, 159, 167, 184
KTV	104, 110, 166
LXI	104, 105, 107, 111, 112, 115
Magnasonic	178
Magnavox	104, 105, 115, 116, 129, 168
Marantz	117
Memorex	178
MGA	104, 105

Brand	Code
Mitsubishi	104, 105, 117, 124, 172
MTC	101, 103
National	100, 101, 102, 151
NEC	104, 105
Orion	128
Panasonic	100, 101, 102, 151, 193, 200, 201
Philco	104, 115
Philips	115
Pioneer	101, 107, 118
Portland	104
Prism	101
Proscan	104, 112, 119, 121, 122, 185
Quasar	101, 103
Radioshack	105, 110, 112, 117
RCA	104, 112, 119, 121, 122, 130, 131, 132, 161, 162, 163, 169, 186, 202
Samsung	104, 105, 123, 170, 203
Sanyo	111, 149, 152, 153, 154, 197
Scott	105, 110
Sears	104, 105, 107, 111, 112, 115
Sharp	120, 124, 150, 187
Signature2000	124, 126
Sony	125, 188, 192
Sylvania	104, 105, 115
Symphonic	110, 171
Technics	100
Toshiba	107, 124, 189
Vidtech	104, 105, 113
Wards	104, 105, 120
Zenith	126, 127, 144, 190

Component Codes (Contd.)

Codes For VCR

Brand	Code
Admiral	135
Aiwa	127, 132, 181
Akai	114, 115, 116, 129
Audio Dynamic	111, 139
Bell & Howell	105, 113
Broksonic	120, 126, 180
Canon	123, 125
CCE	143
Citizen	106
Craig	105, 106, 129
Curtis Mathes	124, 127, 145
Daewoo	101, 124, 143, 175
DBX	110, 111, 139
Dimensia	145
Emerson	103, 118, 119, 120, 125, 126, 142, 143
Fisher	105, 107, 108, 109, 113, 165
Funai	120, 126, 127, 134
GE	124, 133, 145
Go Video	137, 149, 150, 151, 163, 182
Goldstar	106
Gradiente	134, 156, 168, 170, 171
Hitachi	100, 123, 127, 145, 168
Instant Replay	123, 124
Jensen	139
JVC	110, 111, 134, 139, 157, 158, 184, 185
Kenwood	106, 110, 111, 139
LG	159
LXI	100, 105, 106, 107, 108, 109, 127
Magnavox	123, 124, 131, 173
Marantz	110, 111, 139
Marta	106
Memorex	109, 124
MGA	138, 140, 141, 142, 147, 148
Minolta	100, 145
Mitsubishi	138, 140, 141, 142, 147, 148, 161, 164
Multitech	104, 127, 147
NEC	110, 111, 134, 139
Olympic	123, 124

Brand	Code
Optimus	106, 121, 128, 135
Orion	120, 126
Panasonic	121, 122, 123, 124
J.C. Penney	100, 105, 110, 111, 124, 139, 145
Pentax	100, 111, 145
Philco	120, 123, 124, 126, 127, 131, 143
Philips	123, 124, 131, 173
Pioneer	123
Proscan	100, 101, 102, 123, 124, 131, 133, 145, 146
Quasar	121, 122, 123, 124
Radio Shack	105, 109, 124, 127, 133, 136, 140
RCA	100, 101, 102, 123, 124, 131, 133, 145, 146, 170, 172, 174, 176, 183
Realistic	105, 109, 124, 127, 136, 140
Samsung	102, 104, 133, 137
Samtron	163
Sansui	120, 126, 139, 152
Sanyo	105, 109, 113
Scott	101, 102, 104, 109, 120, 126, 138, 140, 147, 148
Sears	100, 105, 106, 107, 108
Sharp	135, 136, 162, 167
Shintom	117
Signature 2000	127, 135
Singer	117
Sony	128, 129, 130, 153, 154, 155
SV2000	127
Sylvania	123, 124, 127, 131, 178
Symphonic	127, 168, 177
Tashiro	106
Tatung	110, 111, 139
Teac	110, 111, 127, 139
Technics	121, 122, 123, 124
Teknika	112, 124, 127
Thompson	179, 183
Toshiba	101, 146, 160, 166
Vector Research	111
Wards	106, 109, 135, 136, 144
Yamaha	105, 110, 111, 139
Zenith	106, 144, 169, 180

Component Codes (contd.)

**Codes for DVD**

Brand	Code
Aiwa	123
Apex	120
Denon	100, 117
Ferguson	101
Funai	118, 132
Hitachi	111
JVC	109
Kenwood	115, 129
Konka	119
Mitsubishi	105
Nordmende	101
Onkyo	121
Oritron	124
Panasonic	100
Philips	103, 116
Pioneer	102
Raite	113
RCA	101, 106
Saba	101
Sampo	114
Samsung	110
Sharp	108
SMC	125
Sony	104, 126, 127, 128
Sylvania	118, 132,
Technics	100
Thomson	101
Toshiba	103
Vialta	131
Wave	122
Yamaha	100, 130
Zenith	107, 112

## Special Function Remote Buttons

**ASPECT** 

The ASPECT button changes the aspect ratio (picture display shape) in response to the source signal and monitor format. You can also change the aspect ratio for your personal viewing preference. Each time ASPECT button is pressed, the HDTV Digital Receiver will cycle to the next available aspect ratio choice.

**MENU** 

The MENU button is used to enter and exit the Roller Guide Menu System. Each time the MENU button is pressed, the Roller Guide will appear and disappear from the viewing screen.

**INFO** 

The INFO button lets you view the complete Channel banner and other on-screen displays when you are in DTV, TV, VCR or DVD operating modes. When in DTV mode, the channel banner screen lets you add or delete channels.

**EXIT** 

The EXIT button lets you quit all on-screen displays and return to normal viewing.

**TV/VIDEO** 

The TV/VIDEO button lets you select TV or Video modes.

**TV/VCR** 

The TV/VCR button lets you switch between TV and VCR programming.

**R-TUNE** 

IN DTV or TV mode, the R-TUNE button quickly switches between two channels or programs.

In DVD mode, it will let you select titles.

**PROG** 

In DTV mode, press the PROG button to enter the 2 digit minor number in a compound channel number.

**VIDEO OUT/REC** 


In DTV mode, press this button to select the various video format modes of the HDTV Digital Receiver.

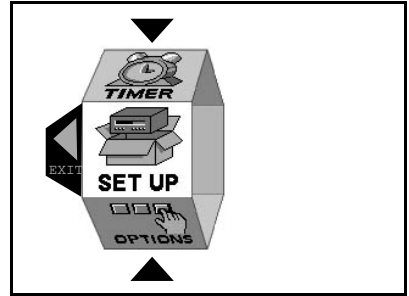
**TV VOL** 

When the Remote control is in DTV or DVD mode, use these buttons to adjust the TV volume.

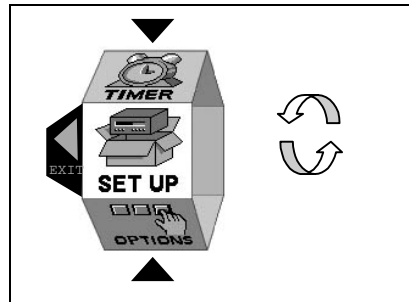


Rollerguide Menu Navigation

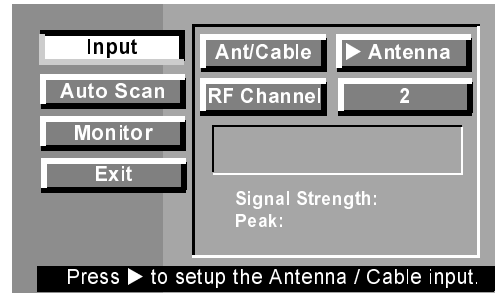
Press  to display the Roller guide menu.



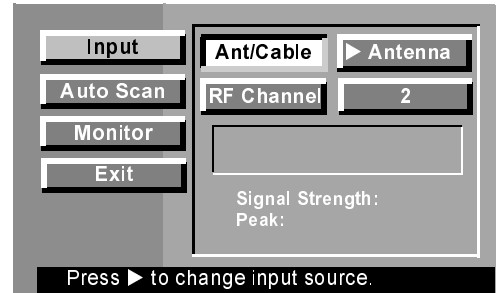
Press  to rotate to desired icon.



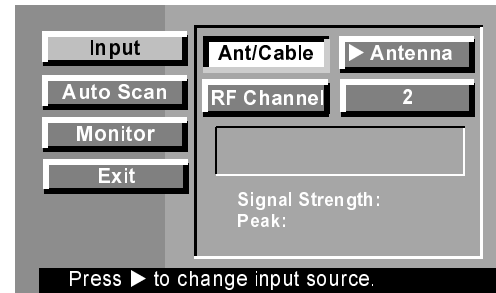
Press  or  to display main menu and submenu field.



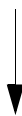
Press  to select desired main menu feature.



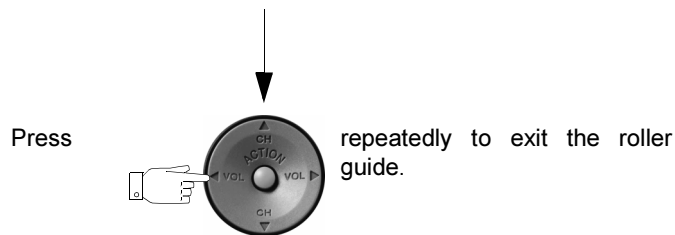
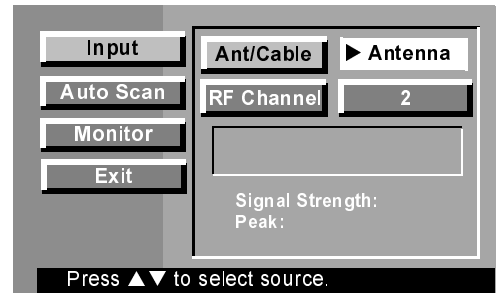
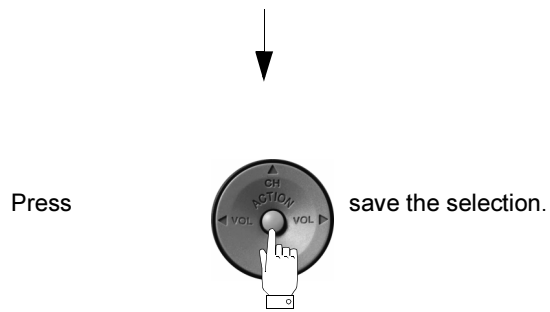
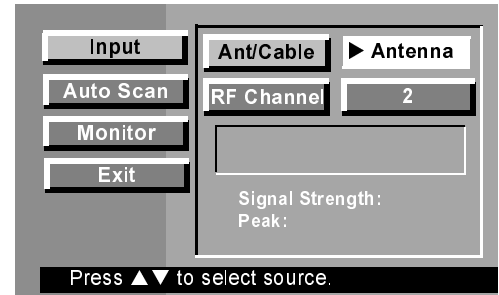
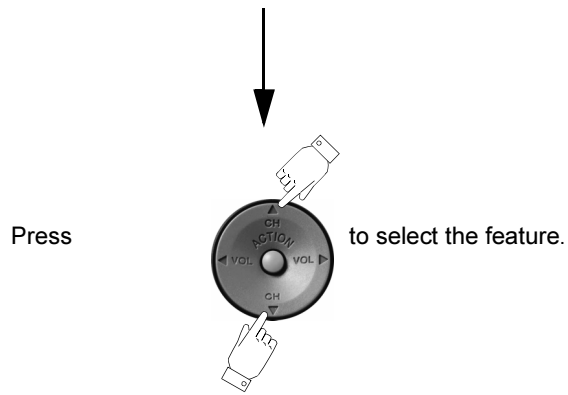
Press  to enter submenu field.



Contd.



Contd.

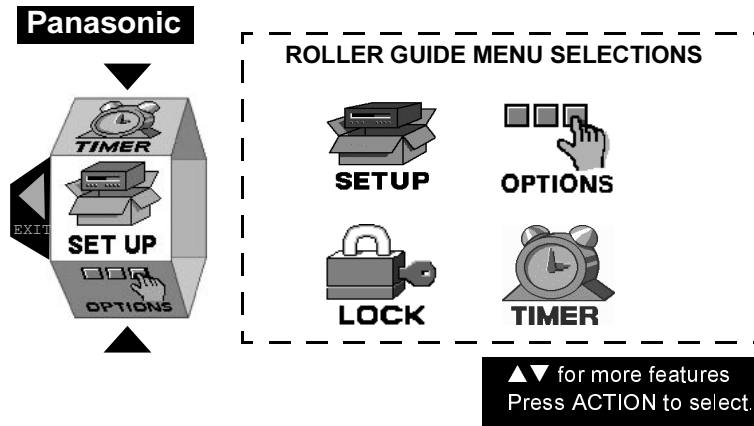


or





NORMAL PICTURE


Rollerguide Menu Icons




Icon menus

 SETUP	REFER TO PAGE
<b>Input</b> <input type="checkbox"/> Ant/Cable) <input type="checkbox"/> RF Channel)	27
<b>Auto Scan</b>	27
<b>Monitor</b> <input type="checkbox"/> Aspect (4:3 or 16:9) <input type="checkbox"/> Backdrop (Gray or Black) <input type="checkbox"/> Exit	28

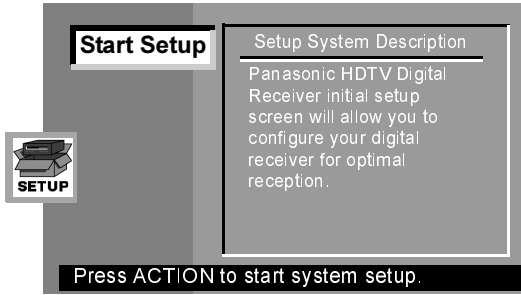
 OPTIONS	REFER TO PAGE
<b>Clock</b> <input type="checkbox"/> Day and Time	29
<b>CC (Closed Captioning)</b> <input type="checkbox"/> Digital • Service, Font, Size, Style, Colors, Automatic)	30
<input type="checkbox"/> Analog • Off, CC1, CC2, CC3, CC4, T1, T2, T3, T4	31
<b>About</b> Information on HDTV Digital Receiver	31

 LOCK	REFER TO PAGE
<b>MODE</b> <input type="checkbox"/> Movie Limits <input type="checkbox"/> TV Limits	34 35
<b>Ch Locks</b> <input type="checkbox"/> Channels <input type="checkbox"/> Lock All <input type="checkbox"/> Unlock All	36
<b>PASSWORD</b>	32

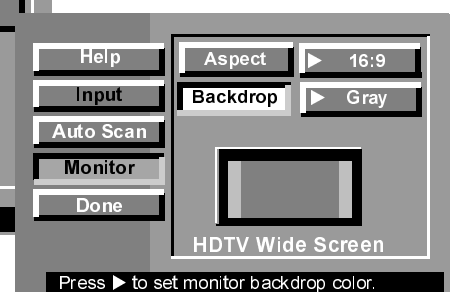
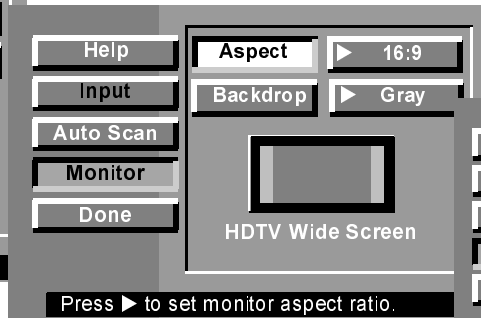
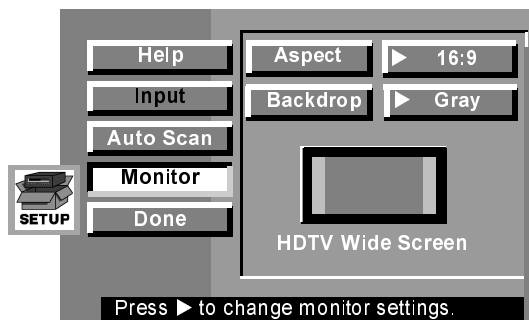
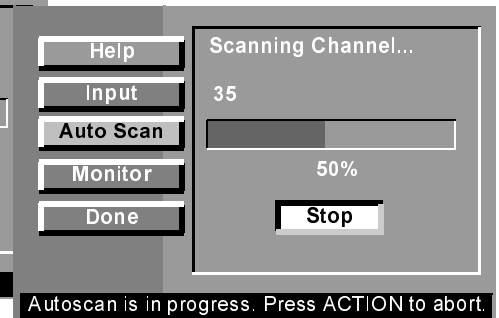
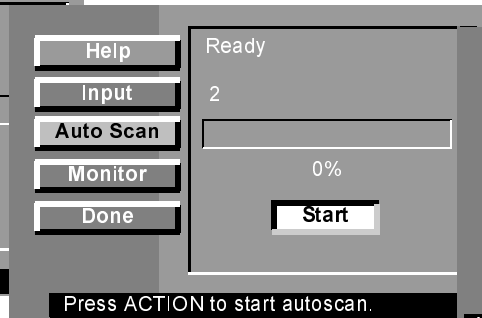
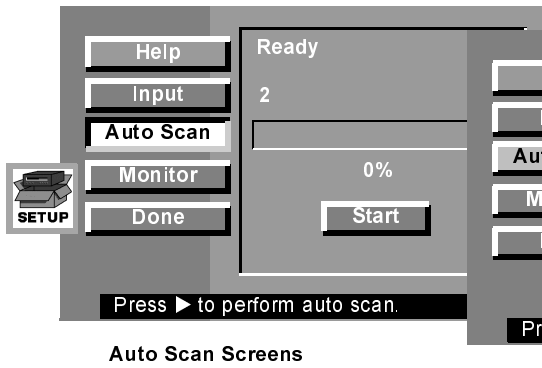
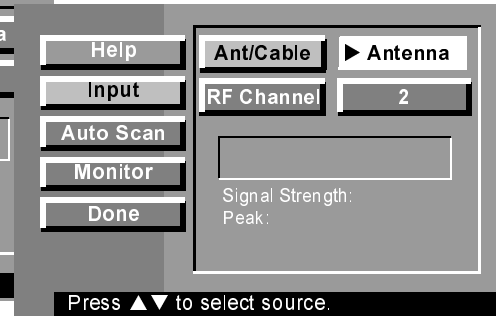
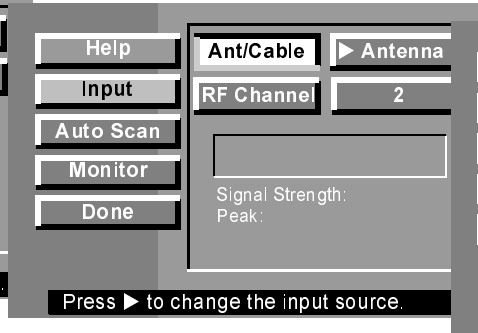
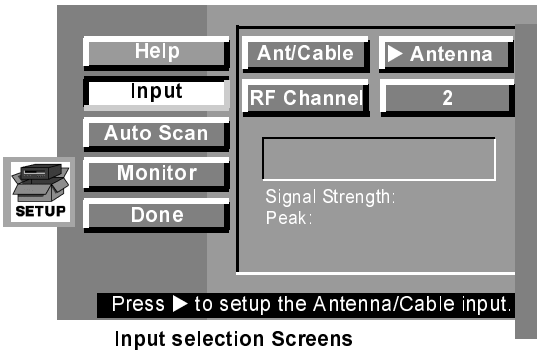
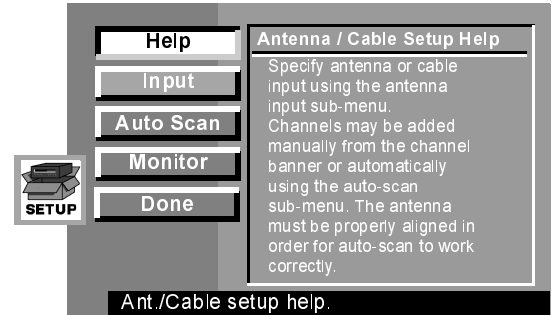
 TIMER	REFER TO PAGE
<b>TIMER</b> <input type="checkbox"/> Chan <input type="checkbox"/> Day <input type="checkbox"/> Start Time <input type="checkbox"/> End Time <input type="checkbox"/> Mode (Off, View or View Rpt)	37

Start Setup Menu

To help you with the initial configuration of the HDTV Digital Receiver, the Start Setup menu is displayed automatically when the unit is turned on for the first time. The Start Setup menu will let you select the type of Input signal, auto program all the available channels, choose the aspect format of your monitor/receiver and the backdrop of your display. Press **ACTION** to save the settings. Make sure to select **Done** and press **ACTION** to finish setup. Otherwise, Start Setup Menu will come up again the next time you turn on the HDTV Digital Receiver.



Press ACTION to display the next menu.



## Roller Guide Menu Operations



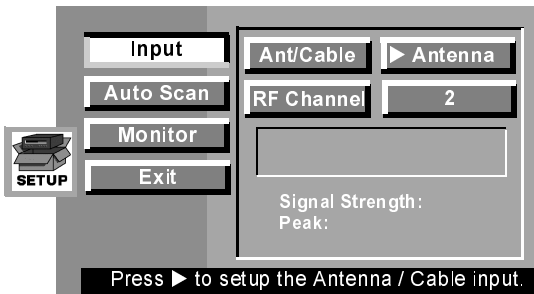
### SET UP

**Note:** Refer to page 23 for Icon Menu Navigation procedures.

The Setup menu will let you select the Input signal, auto program all the available channels, choose the aspect format of your monitor/receiver and to select the background of your display. Follow the instructions on the screen.

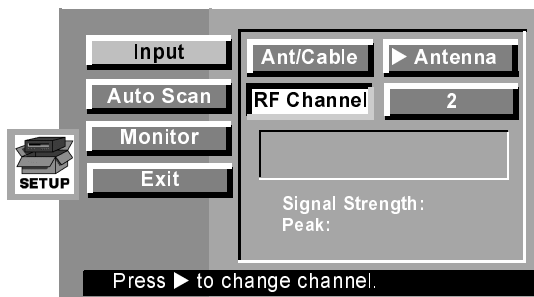
#### Input

- Ant/Cable - To select TV (antenna) or CABLE mode depending on the signal source.



- Press **MENU** to display Rollerguide.
- Press **▲▼** to rotate the Rollerguide to Setup icon.
- Press **ACTION** or **>** to display the Setup menu.
- Press **>** to setup the Antenna / Cable input.
- Press **>** to change input source.
- Press **▲▼** to select Antenna or Cable.
- Press **ACTION** to save the selection.
- Press **<** to return to Setup menu.
- To exit the menu, highlight **EXIT** and press **ACTION**.

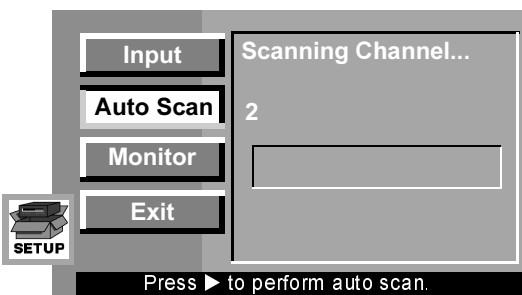
- RF Channel - This feature lets you check the signal strength of any RF channel.



- In Setup menu, press **>** once to enter the sub-menu field.
- Press **▼** to highlight RF Channel.
- Press **>** to change channel number.
- Enter RF (Ch) number using the remote numeric keypad or using the **▲▼** buttons.
- Press **ACTION** to display the signal strength bar. The display shows the current signal strength and the Peak signal strength.
- Press **<** twice to return to Setup menu.

#### Auto Scan

To automatically program all channels with a signal. If the channel has been received, the channel number moves to the right. When the auto scan is completed, the HDTV Digital Receiver will display the first available channel. As more digital channels become available in your area, the Auto Scan must be performed to store the new digital channels into memory.

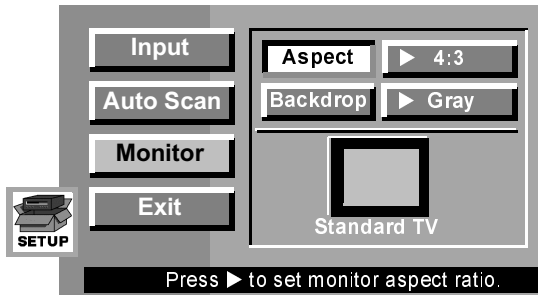


- In Setup menu, press **▼** to highlight Auto Scan
- Press **>** to perform auto scan
- Press **ACTION** to start auto scan.
- Press **ACTION** to cancel the auto scan.

**Note:** The auto scan feature may take several minutes to complete. No video or audio signal are output during auto scan. As more and more digital channels are available in your area, Auto scan must be performed to store the new channels into memory.

**Monitor**

- Aspect - The Aspect feature allows you to select your monitor/receiver type. This will assure that the digital signals are displayed in the correct aspect ratio on your monitor.

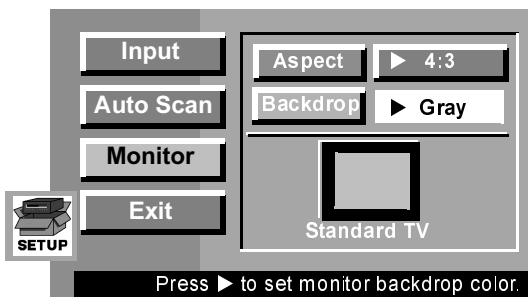


- In Setup menu, press ▼ button to select Monitor.
- Press ► to change monitor settings.
- Press ► to set monitor aspect ratio.
- Press ▲▼ to select 4:3 or 16:9.
- Press **ACTION** to save the selection.
- Press ▼ to highlight Backdrop.

The following table shows the icon and messages displayed for each of the monitor types.

Type	Picture Icon	Message
4:3		"Standard TV"
16:9		"HDTV Wide Screen"

- Backdrop - This feature lets you select the backdrop color of the monitor.



- In Setup menu, press ▼ button to select Monitor.
- Press ► to enter the sub-menu.
- Press ▼ to highlight Backdrop.
- Press ► to adjust the backdrop.
- Press ▲▼ to select either Gray (recommended) or Black (not recommended).
- Press **ACTION** to save the selection.
- Press ◀ twice to return to Roller Guide.

## Options

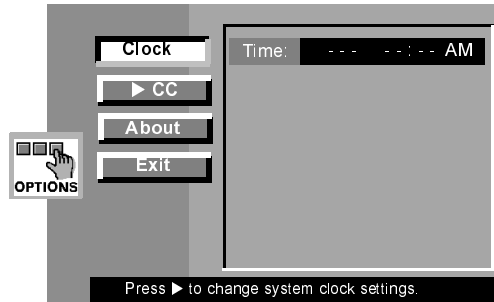
**Note:** Refer to page 23 for Icon Menu Navigation procedures.

The Options menu gives you the ability to configure the HDTV Digital Receiver. These options can affect the overall behavior of the HDTV Digital Receiver. Options menu has the following sub-options:

- Clock
- CC (Closed Captioning) : Digital or Analog
- About

### Options : Clock

The Clock option allows you to set the system clock. Time will be displayed when INFO button is pressed. (Clock must be set to use the Timer feature of the HDTV Digital Receiver).

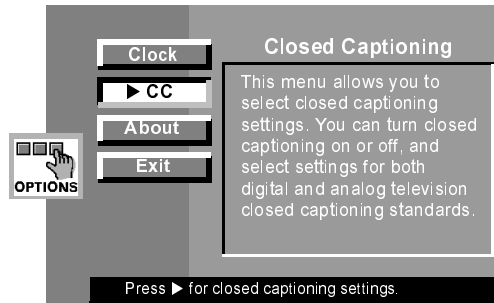


### Procedure

- Select OPTIONS from the Rollerguide.
- Press **ACTION** or ► to display the Options menu.
- Press ► button to change the clock settings. The 'day' field is highlighted.
- Press ▲▼ buttons to adjust the day of the week.
- Press ► button to select the hour.
- Press ▲▼ buttons to adjust the hour (AM or PM).
- Press ► button to enter the minutes field and press ▲▼ buttons to adjust the minutes.
- Press **ACTION** to save the settings.

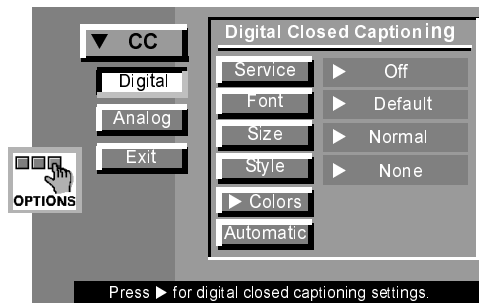
### CC (Closed Captioning)

The HDTV Digital Receiver contains a built-in decoder that is capable of providing a visual display of the audio portion. The program viewed must provide Closed Captioning (CC) for the television to display it. You can set your preferences for both digital and analog Closed Captioning. When you highlight CC, following screen is displayed to explain the capabilities of the Closed Captioning feature.



#### Procedure

- Select OPTIONS from Rollerguide.
- Press ACTION to display the Options menu.
- Press ▼ to select CC (Closed Captioning).
- Press ► to display the CC menu.

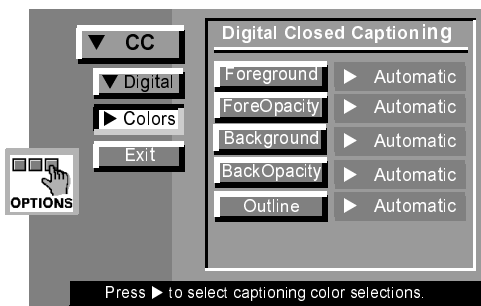


#### Digital Closed Captioning

- The Digital Closed Captioning menu lets you configure the way you choose to view the digital captioning. This menu will let you choose the type of closed captioning service, font type, font size, font style. The colors sub-menu lets you set the color of the font, (Foreground), color of the text box (Background) on which the closed caption text is displayed, the opacity of the font (ForeOpacity), the opacity of the text box (BackOpacity), and the Outline of the dropshadow (if selected under Style).

#### Colors sub menu:

In the digital closed captioning sub-menu, select Colors and press ► to display the menu.



Foreground color      Outline      Background Color

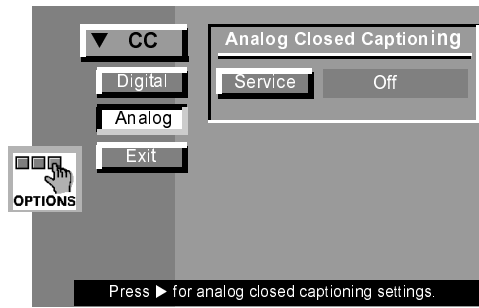
Example of Colors Sub menu screen



**Closed Captioning (Contd.)**

**CC : Analog Closed Captioning**

In Options menu, select CC and press ► to display the closed captioning menu.



**Procedure**

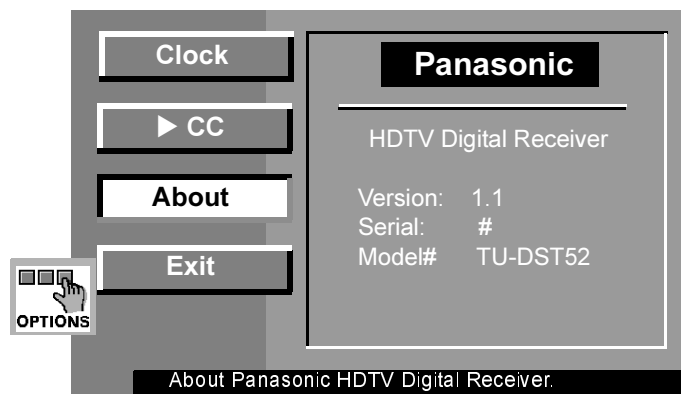
- Press ▲▼ to highlight Analog.
- Press ► to enter Analog Closed Captioning sub-menu.
- Press ► to change the settings.
- Press ▲▼ to select the desired settings: Off, CC1, CC2, CC3, CC4, T1, T2, T3 or T4.
  - Off - Use when closed captioning is not desired.
  - CC1 - For video related information that can be displayed (up to 4 lines of script on the screen, where it does not disturb the relevant parts of the picture). Script can be in any language.
  - CC2 - Another mode used for video related information.
  - CC3 and CC4 - Other modes used for video related information.
  - T1 - Blanks out a large portion of the picture on the television screen, and displays program guide or any other information currently being transmitted.
  - T2, T3 and T4 - Other modes that display information and blank out a large portion of the picture of the television screen.
- Press **ACTION** once, then press ◀ twice to return to Options menu.

**Note:** Do not set Closed Caption on HDTV Digital Receiver and the TV at the same time. This will prevent captioning from superimposing.

**Options : About**

The About screen displays assorted information about the manufacturer, including the following:

- Product Description
- Version
- Serial # of the HDTV Digital Receiver
- Model #



**LOCK** 

**Note:** Refer to page 23 for Icon Menu Navigation procedures.

The HDTV Digital Receiver incorporates V-CHIP technology to block the viewing of movies and television programs according to the rating category. There are 2 Content Advisory Categories: MPAA (Motion Picture Association of America) and TV Parental Guidelines Ratings and are used as guidelines for blocking the programs.

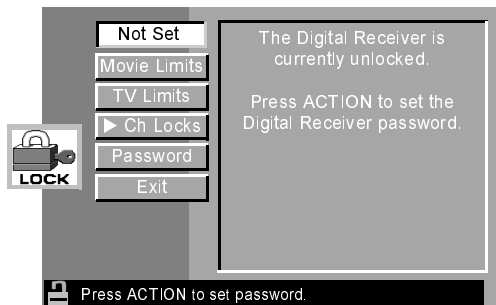
**Lock : Password**

Before you can access the LOCK menu settings, you need to create a 4 digit secret code. When you first display the LOCK menu, follow the directions on the screen to set up the password.

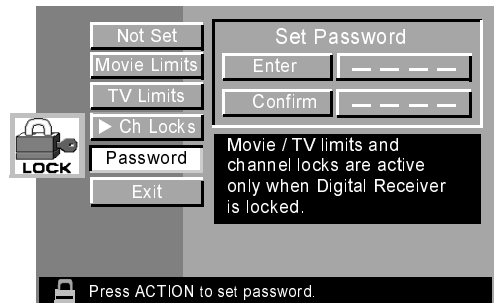
**Procedure**

- In the Roller Guide menu, press the ▲▼ buttons to highlight the LOCK icon.
- Press **ACTION** button or ► to display the LOCK menu.
- Press **ACTION** button again to display the Password screen.
- Press ► to enter the Password sub-menu.
- Use the numeric keypad to enter a four-digit secret code. *(Use a code that is easy to remember and record it in a safe place).*

Once you create the 4 digit password, you can select various features of the menu. The HDTV Digital Receiver will be in the lock mode. The next time you want to enter the Lock menu, you should enter your 4-digit secret code.



**Initial Lock Screen**



**Lock : Set Password Screen**

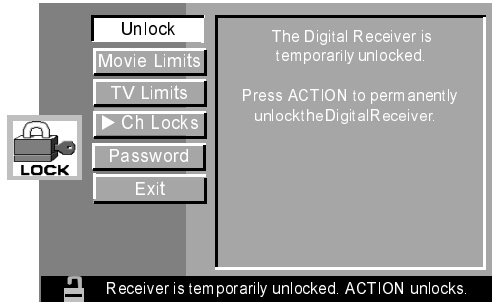
Once you gain access to the user profile, the user can have access to the following areas.

Settings	Description
<b>Movie Limits</b>	This allows the user to set the movie ratings limit, according to MPAA.
<b>TV Limits</b>	This allows the user to set TV ratings limit.
<b>Ch Locks</b>	This allows the user to lock selected channel(s), all channels from being displayed or unlock all channels.
<b>Password</b>	The user can change the current password.

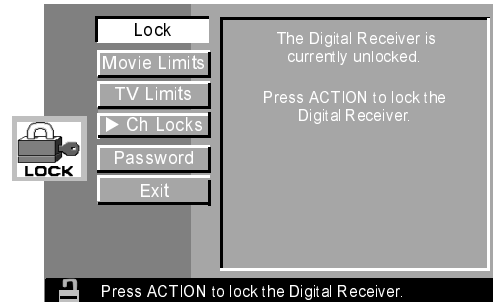
**Note:** Movie / TV limits and channel locks are active only when the HDTV Digital Receiver is locked.

**Lock: Unlock / Lock**

After creating the password, the HDTV Digital Receiver will be in the locked state. You can set the HDTV Digital Receiver into a temporary unlocked state by entering the correct password. When in temporary unlocked state, all channels will be displayed regardless the channels are locked or they exceed the ratings level. The ratings level settings and the Channel lock settings will be stored in the memory. However, you will be required to enter the password to change any lock menu settings. When the HDTV Digital Receiver is turned off, it will return to the locked state.



**Unlock Screen**



**Lock Screen**

**Procedure**

- Press **MENU** button to display the Roller Guide.
- In the Roller Guide menu, press the **▲▼** buttons to highlight the **LOCK** icon.
- Press **ACTION** button or **▶** to display the **LOCK** menu.
- Press the numeric keys on the remote control to enter the 4 digit secret code. The temporary unlock screen is displayed.
- Press **ACTION** button to permanently unlock the HDTV Digital Receiver. The screen on the right will be displayed.

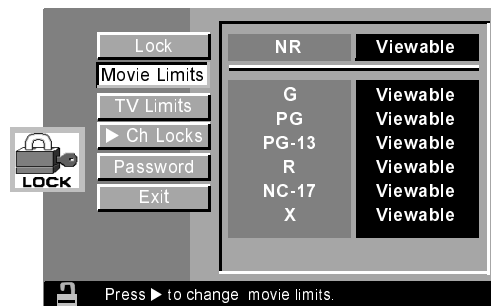
**Note:** *Movie / TV limits and channel locks are active only when the HDTV Digital Receiver is locked.*

### Lock : Movie Limits

The MPAA uses the standard movie ratings. The TV Parental Guidelines provides rating schemes of its own: age-based ratings, content-based ratings or combination of the two.

The following table and figure shows the MPAA ratings system.

MPAA Rating	Description
None	Not Rated by MPAA
G	General Audience
PG	Parental Guidance Suggested. Some material may not be suitable for children.
PG-13	Parent Strongly Cautioned. Some material may be inappropriate for children under 13.
R	Restricted. Under 17 requires accompanying parent or guardian.
NC-17	No one 17 and under admitted
X	No one 17 and under admitted



**Lock : Movie Limits Screen**

### Procedure

- In the Roller Guide Menu, press ▲▼ buttons to highlight LOCK icon.
- Press **ACTION** button or ► to display the LOCK menu.
- Press ▲▼ buttons to highlight Movie Limits.
- Press ► button to display the sub-menu.

**Note:** You will need to enter your password to change any ratings.

- Press ▲▼ buttons to move between different ratings.
- Press **ACTION** to change the movie rating limit to "Viewable" or "Locked".

**Lock : TV Limits**

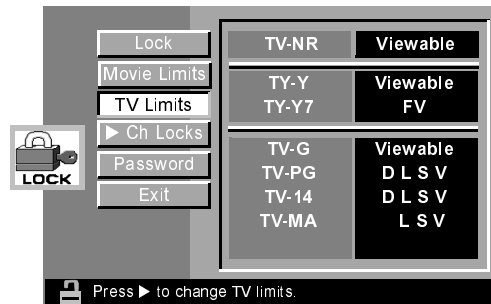
The TV Parental Guidelines has 7 levels of age-based ratings that the user can select. These 7 levels are split into 2 age-based groups: Youth Age-based Ratings and Guidance Age-based Ratings.

Some of these age-based ratings can also have content-based ratings, denoted as D (Dialog), L (Language), S (Sex) and V (Violence). Any non-rated program that does not provide Content Advisory information will be viewable. Following table shows the Age-based Ratings Selection.

Age-based Group	Age-based Ratings	Possible Content Selections
NR (Not Rated)	TV-NR	<ul style="list-style-type: none"> <li>Viewable</li> <li>Blocked</li> </ul>
Youth	TV - Y	<ul style="list-style-type: none"> <li>Viewable</li> <li>Blocked</li> </ul>
	TV - Y7	<ul style="list-style-type: none"> <li>FV (Fantasy Violence)</li> <li>Viewable</li> <li>Blocked</li> </ul>
Guidance	TV - G	<ul style="list-style-type: none"> <li>Viewable</li> <li>Blocked</li> </ul>
	TV - PG	<ul style="list-style-type: none"> <li>D,L,S,V (all selected)</li> <li>Any combination of D, L, S, V</li> </ul>
	TV - 14	<ul style="list-style-type: none"> <li>D, L S, V (all selected)</li> <li>Any combination of D, L, S, V</li> </ul>
	TV - MA	<ul style="list-style-type: none"> <li>L, S, V (all selected)</li> <li>Any combination of L, S, V</li> </ul>

**Procedure**

- In the Roller Guide Menu, press ▲▼ buttons to highlight LOCK icon.
- Press ACTION button or ► to display the LOCK menu.



**Lock : TV Limits Screen**

- Press ▲▼ buttons to highlight TV Limits.
- Press ► button to display the sub-menu.

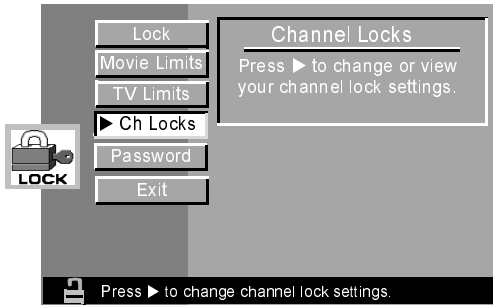
**Note:** You will need to enter your password to change any ratings.

- Press ▲▼ buttons to move between different ratings.
- Press ACTION button to activate or deactivate the rating level.

### Lock : Ch Locks

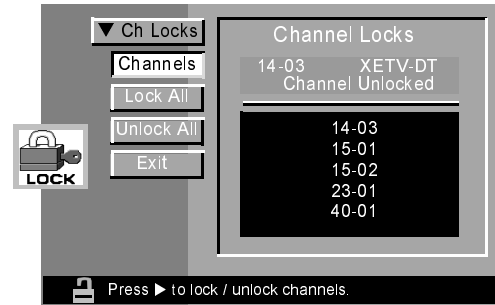
The user can lock channels from being displayed. To access these channels when channel surfing, the user is required to enter the 4 digit secret password.

Once the user has highlighted Ch Locks, the user will be able to easily “Unlock All” or “Lock All” available channels. When you lock or unlock each channel, the on-screen display will indicate whether the channel is locked or unlocked.



Lock : Ch Lock Screen

Press ► to display the Ch Locks sub-menu.



Lock : Ch Lock sub-menu

### Procedure

- In the LOCK menu, press ▲ or ▼ button to highlight **Ch Locks**.
- Press ► button twice.
- Press numeric keys on the Remote control to enter channel number directly or press ▲ or ▼ button to select the Channel number from the list displayed.
- Press **ACTION** to lock or unlock the channel.

To “Lock All” or “Unlock All” channels, highlight the desired feature and press **ACTION**.

Once the user has created a channel lock list, the HDTV Digital Receiver will channel surf (when pressing ▲ or ▼ key) to the locked channels, however the user is then required to enter in the 4-digit password to view the video.

**TIMER** 

**Note:** Refer to page 23 for Rollerguide Menu Navigation procedures.

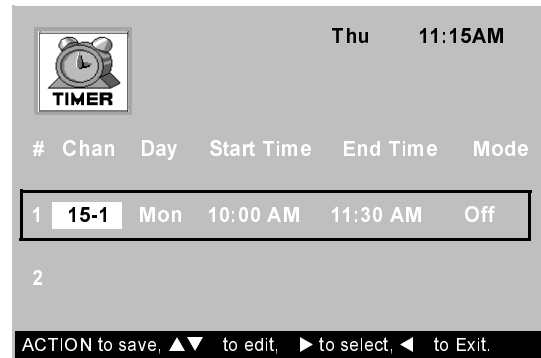
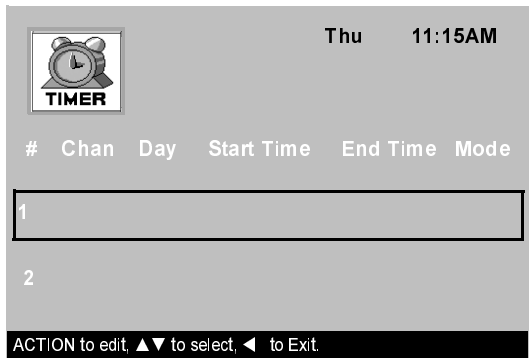
This HDTV Digital Receiver has two timers that are capable of turning the HDTV Digital Receiver on and off at selected times, on selected channels and on selected days.

**Timer Set up**

- Press **MENU** to display the Rollerguide.
- Press **▲▼** to rotate the Rollerguide to select **TIMER** icon.
- Press **ACTION** or **▶** to display the Timer menu.

**Note:** *TIME must be entered in Clock under Options menu to operate TIMER features.*

- In **TIMER** Menu, press the **▲** and **▼** arrows to select either **TIMER 1** or **TIMER 2**.




- Press **ACTION** to edit the timer menu. Channel number field is highlighted.
- Press **▲▼** or remote control numeric keys to select the channel number.
- Press the **▶** arrow to move to the day field.
  - Use the **▲** and **▼** arrows to select the day.
- Press **▶** to move to the first time field (start time).
  - Use the **▲** and **▼** arrows to select the hour.
- Press the **▶** arrow to move to the minutes.
  - Use the **▲** and **▼** arrows to select the minutes.
- Press the **▶** arrow to move to the second time field (end time).
  - Use the **▲** and **▼** arrows to select the hour.
- Press the **▶** arrow to move to the minutes.
  - Use the **▲** and **▼** arrows to select the minutes.
- Press the **▶** to select Mode.
- Press the **▲** and **▼** arrows to select Off, View or View Rpt.
  - Off - Disables the timer.
  - View - Turns on the HDTV Digital Receiver according to the settings within the specific timer.
  - View Rpt (repeat) - Repeats the specified timer settings every week.

**Note:** To clear the timer fields while editing, press the **PROG** button on the remote control.

- Press **ACTION** to save the settings.
- Press **▼** to select Timer 2 and follow steps above to program Timer 2.

**Note:** All data fields must be entered prior to selecting a mode.

- Press **ACTION** once, then the **◀** arrow once, to return to Roller Guide. The first entered timer (either Timer 1 or Timer 2) will override the second entered timer.



**TIMER Activation**

---

The **TIMER** is active when the HDTV Digital Receiver is OFF or ON. The HDTV Digital Receiver will switch to the selected channel at the selected time set in the **TIMER**.

## Troubleshooting

Before requesting service for this unit, check the table below for a possible cause of the problem you are experiencing. Some simple checks or minor adjustment on your part may eliminate the problem and restore proper operation.

If you are in doubt about some of the check points, or if the remedies indicated in the table do not solve the problem, consult your dealer or call **1-888-VIEW-PTV (843-9788)** for assistance.

**Note:** *Before you call for assistance, please make sure that the antenna signal is strong. Check the signal strength using the RF Channel feature in the Setup menu. Since this receiver is digitally operated, it will suddenly lose channel when signal becomes too weak.*

Symptom	Remedy
No power	Check that the AC power cord is securely plugged into the AC IN jack. Check that the AC power plug is securely plugged into the power outlet.
No reception	<ul style="list-style-type: none"> <li>•Check that equipment is connected properly.</li> <li>•Check that antenna is properly installed and oriented.</li> <li>•Check that the antenna or cable wire is connected properly.</li> </ul>
No picture	<ul style="list-style-type: none"> <li>•Check that equipment is connected properly.</li> <li>•Check if the channel is available.</li> </ul>
Available channels are missing	•Rerun the Automatic Channel Programming to make sure all available channels are captured and stored into memory.
Picture is distorted	<ul style="list-style-type: none"> <li>•Make sure the proper display format is selected.</li> <li>•Make sure the proper aspect ratio is selected.</li> </ul>
Cannot letterbox or zoom 16:9 video on a 4:3 monitor	•Insure that the HDTV Digital Receiver is selected to output to a 4:3 monitor.
No sound	Check that equipment is connected properly.
The remote control is not responding	<ul style="list-style-type: none"> <li>•Check that the batteries are installed with the correct polarities (+ and -).</li> <li>•The batteries are depleted: Replace them with new ones.</li> <li>•Point the remote control unit at the remote control sensor and operate.</li> <li>•Operate the remote control unit at a distance of not more than 23 feet (7 meters) from the remote control sensor.</li> <li>•Remove any obstacles between the remote control unit and remote control sensor.</li> </ul>
The remote control is operational, but the HDTV Digital Receiver is not responding	<ul style="list-style-type: none"> <li>•Check that the AC power plug is securely plugged into the power outlet.</li> <li>•Make sure the HDTV Digital Receiver is on.</li> <li>•Make sure the remote control is in DTV mode.</li> </ul>
The remote control is operational, but other component(s) are not responding	<ul style="list-style-type: none"> <li>•Check that the AC power plug is securely plugged into the power outlet.</li> <li>•Make sure the component(s) are on.</li> <li>•Reprogram the remote control to make sure it is programmed properly to operate the component(s).</li> <li>•Make sure the remote control is in the proper component mode (i.e. TV, VCR, DVD, etc.).</li> </ul>
The ACTION button is not responding	•Make sure the remote control is in DTV or TV mode.
No key operation (by the unit and/or the remote control) is effective.	Set the POWER button to OFF and then back to ON. Alternatively, turn off the power, disconnect the power plug and then reconnect it. (The HDTV Digital Receiver may not be operating properly due to lightning, static electricity or some other external factor).
VCR is not responding	<ul style="list-style-type: none"> <li>•Check that the AC power plug is securely plugged into the power outlet.</li> <li>•Check that equipment is connected properly.</li> <li>•Make sure remote control is in VCR mode.</li> </ul>
Timer does not work	<ul style="list-style-type: none"> <li>•Make sure the clock is set.</li> <li>•Check if the timer did not reset to default settings.</li> </ul>



Customer Services Directory

# Panasonic

## PRODUCT INFORMATION - OPERATING ASSISTANCE

For Customer Service Inquires please contact: **1-888-VIEW-PTV (843-9788)**  
Monday-Friday 8am - 10pm EST, Saturday-Sunday 10am - 10pm EST.

## PANASONIC WEB SITE

<http://www.panasonic.com>

You can purchase parts or accessories by visiting our Web Site.

## PRODUCT SUPPORT

Should you require assistance with operating information, or hardware related service for your Digital Receiver, please contact the Panasonic HDTV Digital Receiver Call Center at:

**1-888-VIEW-PTV (843-9788)**

Monday-Friday 8am - 10pm, EST  
Saturday-Sunday 10am - 10pm, EST

## ACCESSORY PURCHASES

**1-800-332-5368 (Customer Orders Only)**

Panasonic Services Company 20421 84<sup>th</sup> 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)

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