Operating Instructions

Digital ... ition Plasma TV

System ... U

Model ...

- TH-4 ... ker / Pedestal
  - TH ... ion Plasma Display
  - TY ... ystem
  - TY ...
- TU- ... a Receiver

System N...

Model No.

- TH-50XVS30UP: Display / ...
  - TH-50XVS30: High Definition ...
  - TY-SP50XVS30: Speaker System
  - TY-ST50XVS30: Pedestal
- TU-PT700U: Digital Media Receiver

WARNING: To reduce the risk of electric shock, do not remove cover or back. No user-serviceable parts inside. Refer servicing to qualified service personnel.

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: 1) To prevent electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

2) Do not remove the grounding pin on the power plug. This apparatus is equipped with a three pin grounding-type power plug. This plug will only fit a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician. Do not defeat the purpose of the grounding plug.

Dear Panasonic Customer

Welcome to the Panasonic family of customers. We hope that you will have many years of enjoyment from your new Plasma TV.
To obtain maximum benefit from your set, please read these Instructions before making any adjustments, and retain them for future reference.
Retain your purchase receipt also, and record the model number and serial number of your set in the space provided on the back cover of these instructions.

Visit our Panasonic Web Site for USA : www.panasonic.com
for Puerto Rico : www.panasonic.com
for Canada : www.panasonic.ca

For assistance, please call : 1-888-VIEW-PTV(843-9788) **or send e-mail to : consumerproducts@panasonic.com** **or visit us at www.panasonic.com**	**(U.S.A.)**
For assistance, please call : 787-750-4300 **or visit us at www.panasonic.com**	**(Puerto Rico)**
For assistance, please call : 1-800-561-5505 **or visit us at www.panasonic.ca**	**(Canada)**

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FCC STATEMENT

FCC STATEMENT

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 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 harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC CAUTION:
To assure continued compliance and possible undesirable interference, these products maintain at least 40 cm spacing to other peripheral devices.
Any changes or modifications to these products not expressly approved by Matsushita Electric Corporation of America could result harmful interference and would void the user's authority to operate this device.

FCC Declaration of Conformity
Model No. TH-42XVS30, TH-50XVS30, TU-PT700U

Responsible Party:	Matsushita Electric Corporation of America One Panasonic Way, Secaucus, NJ 07094
Contact Source:	Panasonic Consumer Electronics Company 1-888-843-9788 email: consumerproducts@panasonic.com

CANADIAN NOTICE:
For Models TH-42XVS30, TH-50XVS30, TU-PT700U
This Class B digital apparatus complies with Canadian ICES-003.

Safety Precautions

⚠ WARNING

Set up

Do not place the Plasma TV on sloped or unstable surfaces.
- The Plasma TV may fall off or tip over.

Do not place any objects on top of the Plasma TV.
- If water spills onto the Plasma TV or foreign objects get inside it, a short-circuit may occur which could result in fire or electric shock. If any foreign objects get inside the Plasma TV, please consult an Authorized Service Center.

Do not cover the ventilation holes.
- Doing so may cause the Plasma TV to overheat, which can cause fire or damage to the Plasma TV.

If using the pedestal, leave a space of 3 15/16" (10 cm) or more at the top, left and right, 2 3/8" (6 cm) or more at the bottom, and 2 3/4" (7 cm) or more at the rear. If using some other setting-up method, leave a space of 3 15/16" (10 cm) or more at the top, bottom, left and right, and 3/4" (1.9 cm) or more at the rear.

Avoid installing this product near electronic equipment that easily receives electromagnetic waves.
- It may cause interference in image, sound, etc. In particular, keep video equipment away from this product.

AC Power Supply Cord

The Plasma TV is designed to operate on 120 V AC, 50/60 Hz.

Securely insert the power cord plug as far as it will go.
- If the plug is not fully inserted, heat may be generated which could cause fire. If the plug is damaged or the wall socket plate is loose, they should not be used.

Do not handle the power cord plug with wet hands.
- Doing so may cause electric shocks.

Do not do anything that might damage the power cable. When disconnecting the power cable, hold the plug, not the cable.
- Do not make any modifications, place heavy objects on, place near hot objects, heat, bend, twist or forcefully pull the power cable. Doing so may cause damage to the power cable which can cause fire or electric shock. If damage to the cable is suspected, have it repaired at an Authorized Service Center.

If the Plasma TV will not be used for a long period of time, unplug the power cord from the wall outlet.

If problems occur during use

If a problem occurs (such as no picture or no sound), or if smoke or an abnormal odor is detected from the Plasma TV, unplug the power cord immediately.
- Continuous use of the TV under these conditions might cause fire or permanent damage to the unit. Have the TV evaluated at an Authorized Service Center. Services to the TV by any unauthorized personnel are strongly discouraged due to its high voltage dangerous nature.

If water or foreign objects get inside the Plasma TV, if the Plasma TV is dropped, or if the cabinet becomes damaged, disconnect the power cord plug immediately.
- A short may occur, which could cause fire. Contact an Authorized Service Center for any repairs that need to be made.

⚠ CAUTION

This Plasma TV is for use only with the following optional accessories. Use with any other type of optional accessories may cause instability which could result in the possibility of injury.

(All of the following accessories are manufactured by Matsushita Electric Industrial Co., Ltd.)

- Pedestal (included) TY-ST42XVS30 (TH-42XVS30)
  TY-ST50XVS30 (TH-50XVS30)
- Speaker System (included) TY-SP42XVS30 (TH-42XVS30)
  TY-SP50XVS30 (TH-50XVS30)
- Wall-hanging bracket (Vertical) TY-WK42PV7
- Wall-hanging bracket (Angled) TY-WK42PR7

Always be sure to ask a qualified technician to carry out set-up.

When using the Plasma TV

Do not bring your hands, face or objects close to the ventilation holes of the Plasma TV.

- Top of the Plasma TV is usually very hot due to the high temperature of exhaust air being released through the ventilation holes. Burns or personal injuries can happen if any body parts are brought too close. Placing any object near the top of the TV could also result in heat damages to the object as well as to the TV if its ventilation holes are blocked.

Be sure to disconnect all cables before moving the Plasma TV.

- Moving the TV with its cables attached might damage the cables which, in turn, can cause fire or electric shock.

Disconnect the power plug from the wall outlet as a safety precaution before carrying out any cleaning.

- Electric shocks can result if this is not done.

Clean the power cable regularly to prevent it from becoming dusty.

- Built-up dust on the power cord plug can increase humidity which might damage the insulation and cause fire. Unplug the cord from the wall outlet and clean it with a dry cloth.

This Plasma TV radiates infrared rays, therefore it may affect other infrared communication equipment. Install your infrared sensor in a place away from direct or reflected light from your Plasma TV.

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 TV.
  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.

Note:

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 TV.

Examples of still pictures include logos, video games, computer images, teletext and images displayed in 4:3 mode.

Installation

Receiver Location

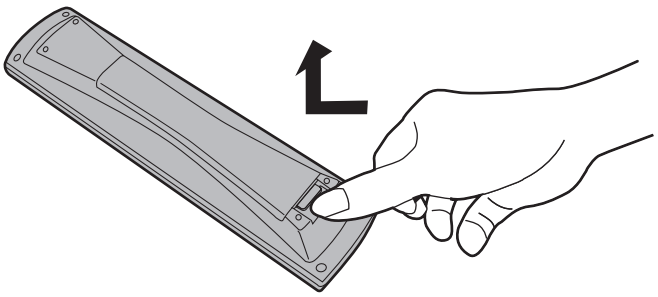
This unit is intended to be used with an optional stand or entertainment center. Consult your dealer for available options. Locate for comfortable viewing. Avoid placing where sunlight or other bright light (including reflections) will fall on the screen.
Use of some types of fluorescent lighting can reduce remote control transmitter range.
Adequate ventilation is essential to prevent internal component failure. Keep away from areas of excessive heat or moisture.

Optional External Equipment

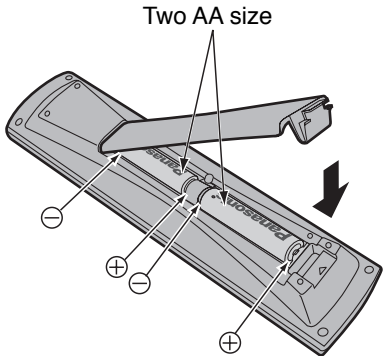
The Video/Audio connection between components can be made with shielded video and audio cables. For best performance, video cables should utilize 75 ohm coaxial shielded wire. Cables are available from your dealer or electronic supply store. Before you purchase any cables, be sure you know what type of output and input connectors your various components require. Also determine the length of cable you will need.

Remote Control Battery Installation

1. Open the cover.



2. Install the batteries and replace the cover.
   Note the correct polarity (+ and –).



Helpful Hints:

For frequent remote control users, replace old batteries with alkaline batteries for longer life.

Helpful Hints:

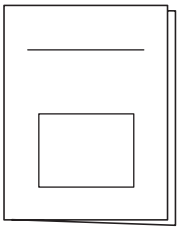
Whenever you remove the batteries, **you may need to reset the remote control infrared codes.** We recommend that you record the code on page 60, prior to setting up the remote control.

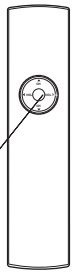
⚠ Precaution on battery use

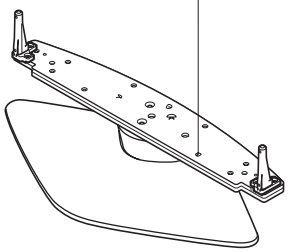
Incorrect installation can cause battery leakage and corrosion that will damage the remote control transmitter.

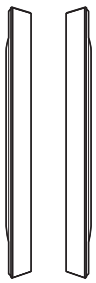
Observe the following precautions:

1. Batteries should always be replaced as a pair. Always use new batteries when replacing the old set.
2. Do not combine a used battery with a new one.
3. Do not mix battery types (example: “Zinc Carbon” with “Alkaline”).
4. Do not attempt to charge, short-circuit, disassemble, heat or burn used batteries.
5. Battery replacement is necessary when remote control acts sporadically or stops operating the TV set.





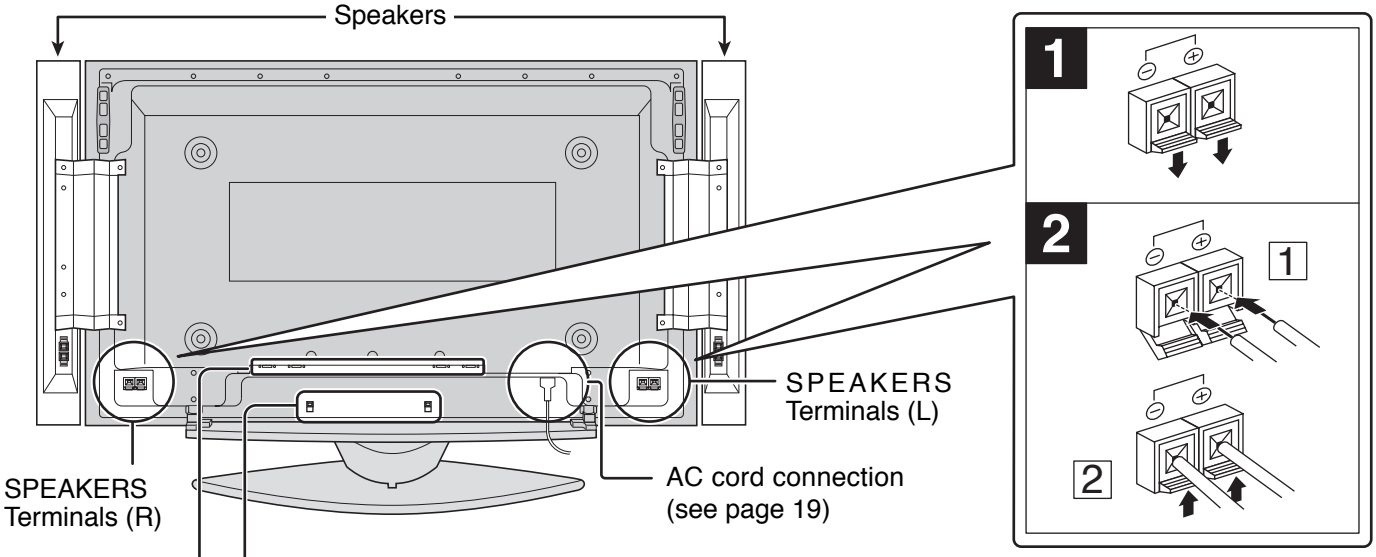




Connection

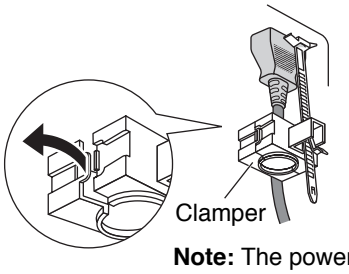
Note:
Please turn off the power of the Plasma Display unit and Digital Media Receiver when connecting or removing Display - Receiver cable.

Display connection
When connecting the speakers, be sure to use only the optional accessory speakers.
For details on installation and connection of the speaker, refer to the Speaker's Installation Manual. (Supplied)

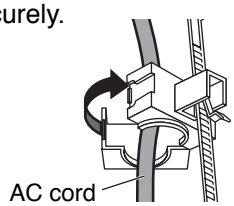


– AC cord fixing

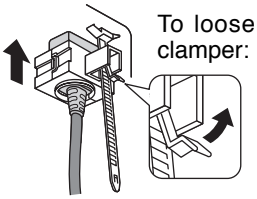
1. Open the clamper.



2. Insert the AC cord and close the clamper securely.



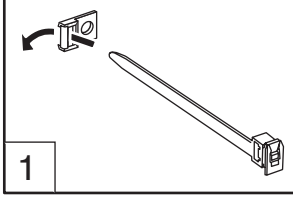
3. Slide up the clamper and fix the AC cord plug securely.



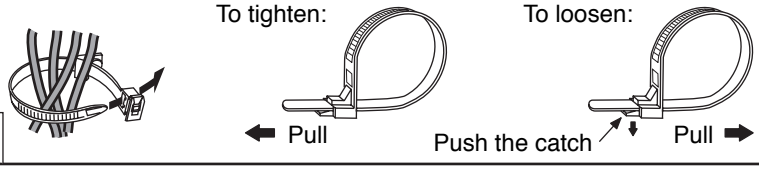
Note: The power plug in the illustration may not be the type fitted to your set.

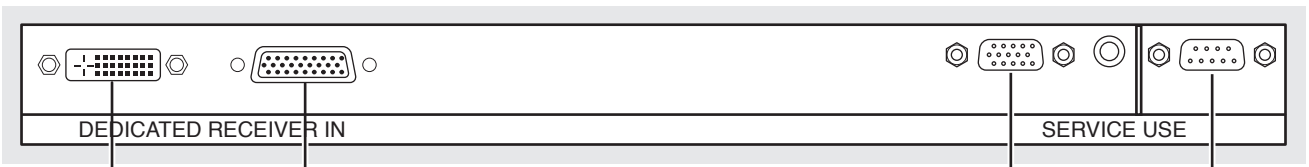
– Cable fixing bands
Secure any excess cables with bands as required.

Pass the attached cable fixing band through the clip as shown in the figure.



To secure cables connected to Terminals, wrap the cable fixing band around them then pass the pointed end through the locking block, as shown in the figure.
While ensuring there is sufficient slack in cables to minimize stress (especially in the power cord), firmly bind all cables with the supplied fixing band.

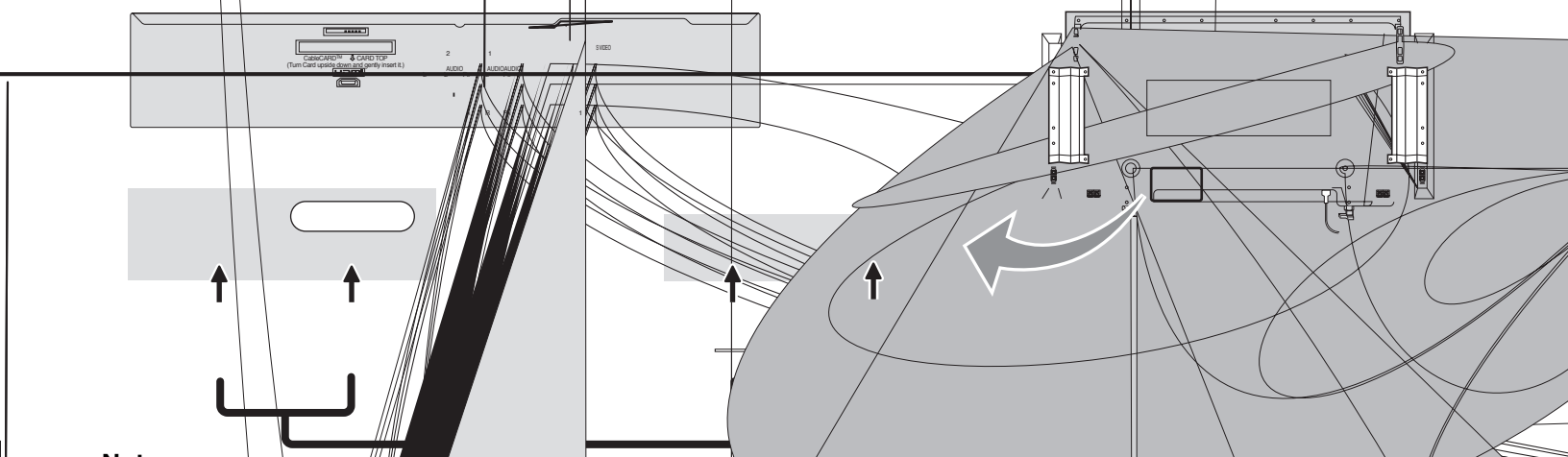




To DEDICATED DISPLAY OUT connector on Digital Media Receiver

These terminals are not in use.

Connection to the display

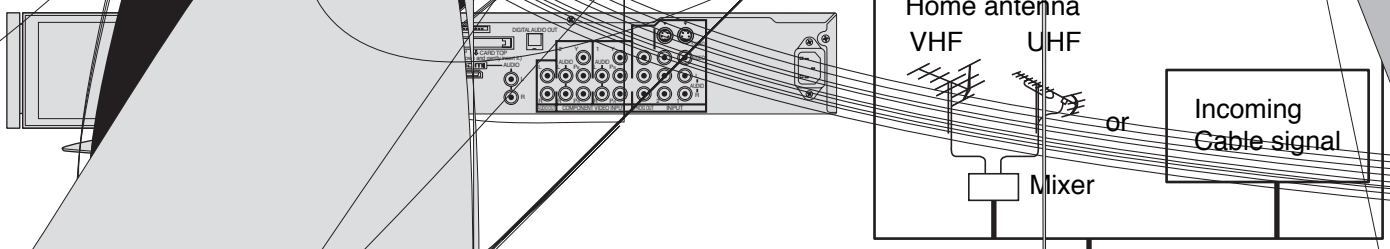


Notes:
- Install the Digital Media Receiver at least 15.7 inch (40 cm) away from the Plasma Display to avoid interference.
- Be sure the power to the Plasma Display and digital media receiver is OFF before connecting cables.
- Do not remove the cable connecting the display and tuner unit while the power is on. If the cable is removed inadvertently, turn off the display and digital media receiver before reconnecting the cable.

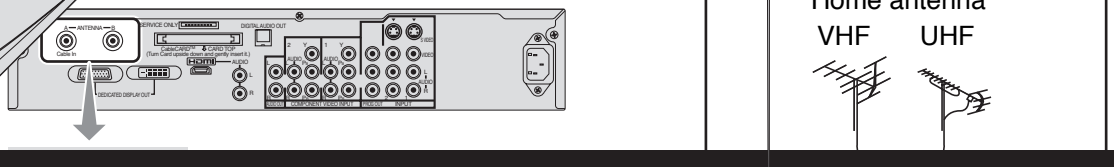
Cable / Antenna Connection

- For proper recept… …els, an e… …or best reception, an outdoor recommended.
- When you enjoy … …only, … …na to ANTENNA (A).
- When you enjo… … co… … cable to ANTENNA (A).
- When you enjo… … …ble TV programs, **connect the cable TV's cable to ANT… (A), and the t… …A (B).**
- Select the an… …ge 22).

Either cable TV or home antenna connection



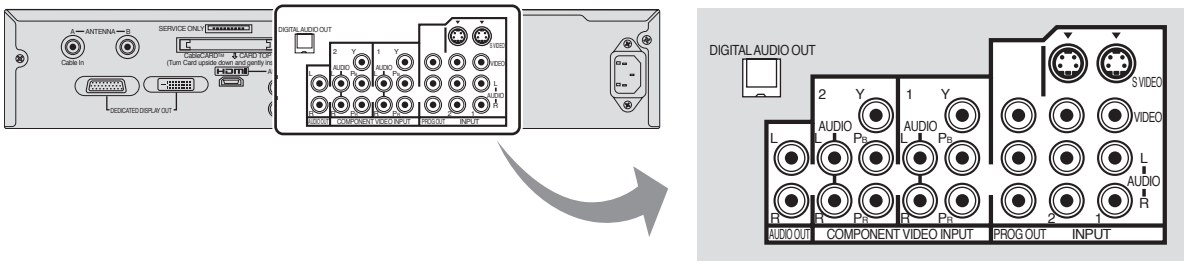
Both cable TV and home antenna connection



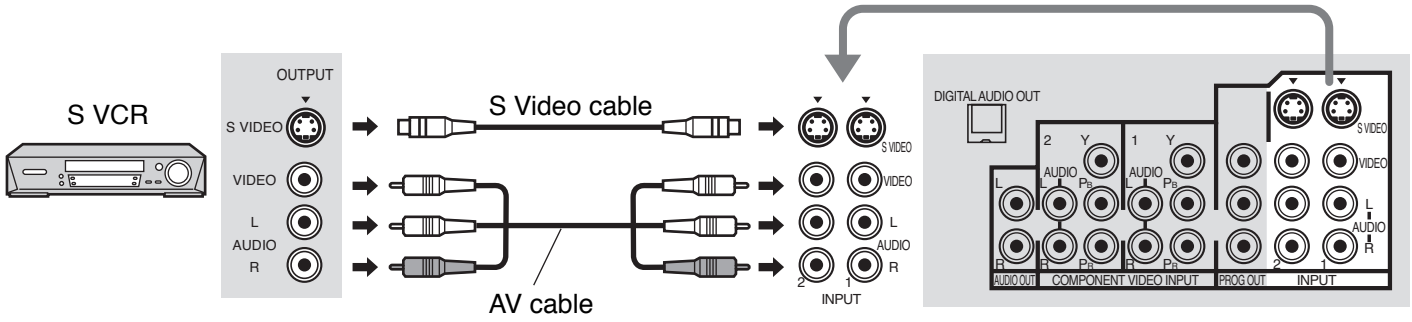
Notes:

- Certain cable systems offset some channels to reduce interference or have Premium (scrambled) channels. A cable converter box is required for proper reception. Check with your local cable company for its compatibility requirements.
- To obtain optimum quality picture and sound, from an antenna, the correct cable (75 Ohm coaxial) and the correct terminating plug are required.
- If a communal antenna system is used, you may require the correct connection cable and plug between the wall antenna socket and your television receiver.
- Your local television service center or dealer may be able to assist you in obtaining the correct antenna system for your particular area and the accessories required.
- Any matters regarding antenna installation, upgrading of existing systems or accessories required, and the costs incurred, are your responsibility.

AV Connection



VCR Connection



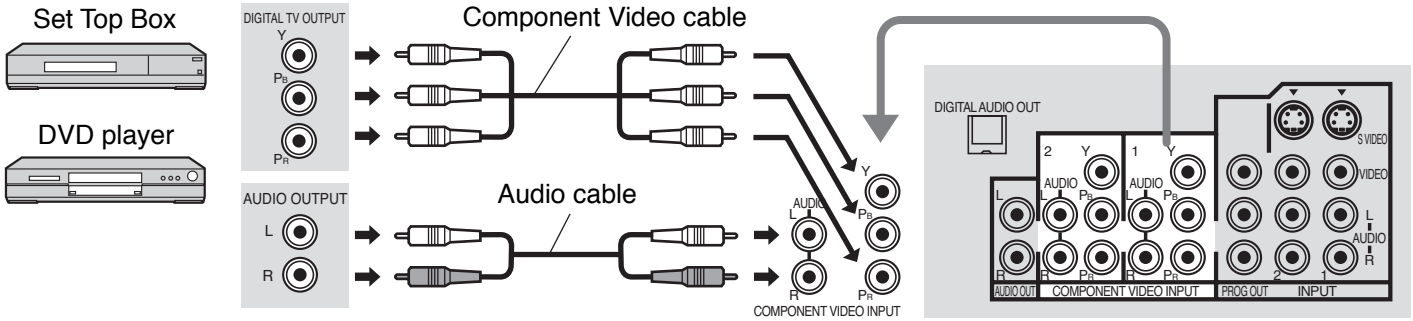
Note:

The S Video input will override the composite video signal when S Video cable is connected.
Connect either S Video cable or Video cable.

Digital TV - Set-Top Box (DTV-STB) or DVD Connection

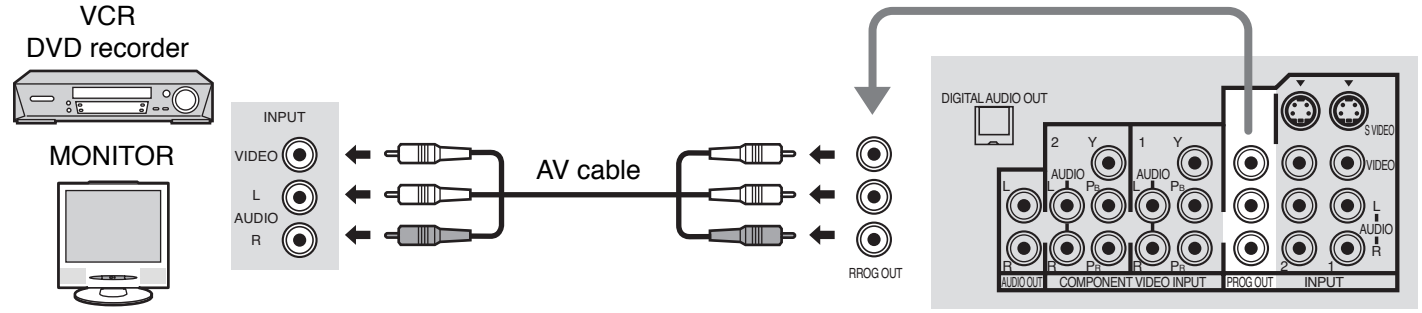
This TV is capable of displaying 480i, 1080i and 480p DTV signals when connected to a DTV Tuner Set-Top-Box (STB) or using the internal DTV Tuner. This TV also utilizes a progressive scan doubler, which de-interlaces the NTSC signal and progressively scans the image.
This allows you to sit close to the TV and not see the thin black horizontal lines (venetian blind effect) associated with interlaced TV pictures.

- To view DTV programs, connect the STB to the component video input terminals (Y, P_B , P_R) of the TV. Component color inputs provide luminance and separate color signal.
- Select the output of the STB to either 480i, 1080i or 480p.
- A DTV signal must be available in your area.
- Use a Panasonic DTV-STB (Digital TV-Set-Top Box) or DVD Player.



Program Out Connection (PROG OUT)

See optional equipment manual for further instructions for recording and monitoring.



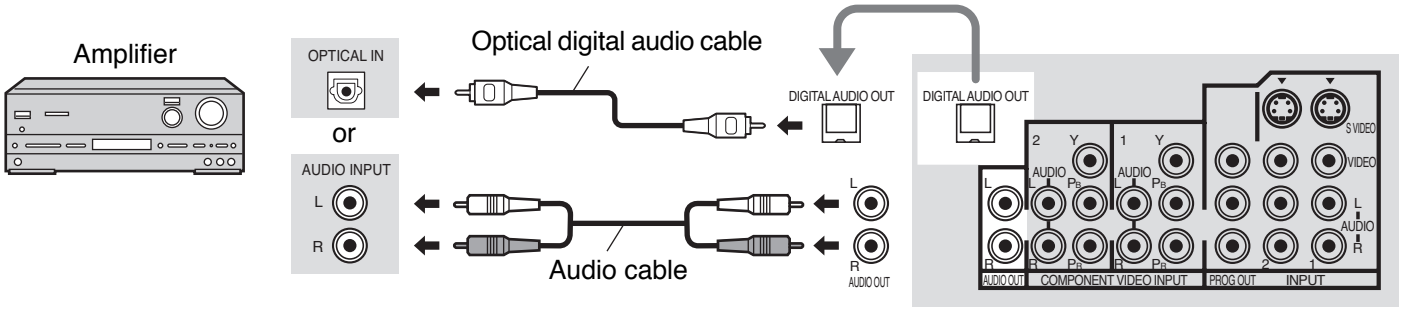
Notes:

- When a device (STB, DVD, etc.) is connected to the HDMI terminal (see page 16), no video or audio is output due to license restrictions.
- Program Out signal may not be available when COMPONENT input (see page 20) is selected for the Main picture during PIP or SPLIT operation (see pages 52, 54).
- When receiving digital channel signals, all digital formats are down-converted to composite NTSC video to be output through Program Out terminals.
- Some programs contain Macrovision signal to prevent VCR recording.

Amplifier Connection

For a full Home Theater sound experience, an external Dolby Digital* decoder and a multichannel amplifier must be connected to the DIGITAL AUDIO OUT terminal on the TV.

* 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.



Procedure

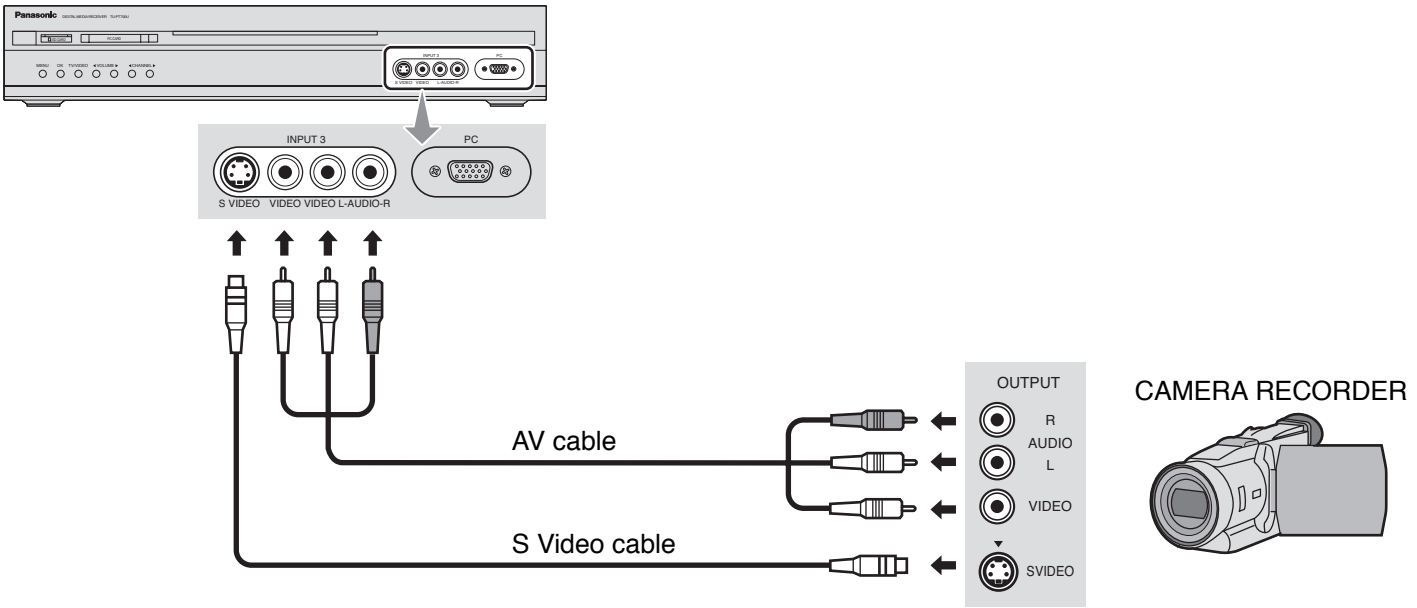
1. Select Speakers “Off” in Audio menu (see page 29).
2. Adjust the amplifier volume to the desired level.

Notes:

- External speakers cannot be connected directly to AUDIO OUT terminals.
- When ATSC channel is selected, the output from the DIGITAL AUDIO OUT jack will be Dolby Digital. When NTSC channel is selected, the output will be PCM.

Front AV Connection

Push to open the front panel and connect equipment to front Audio/Video input terminals.



A second VCR, video disc player, video game equipment and DSS equipment can also be connected to the video input terminals. See the optional equipment manual for details.

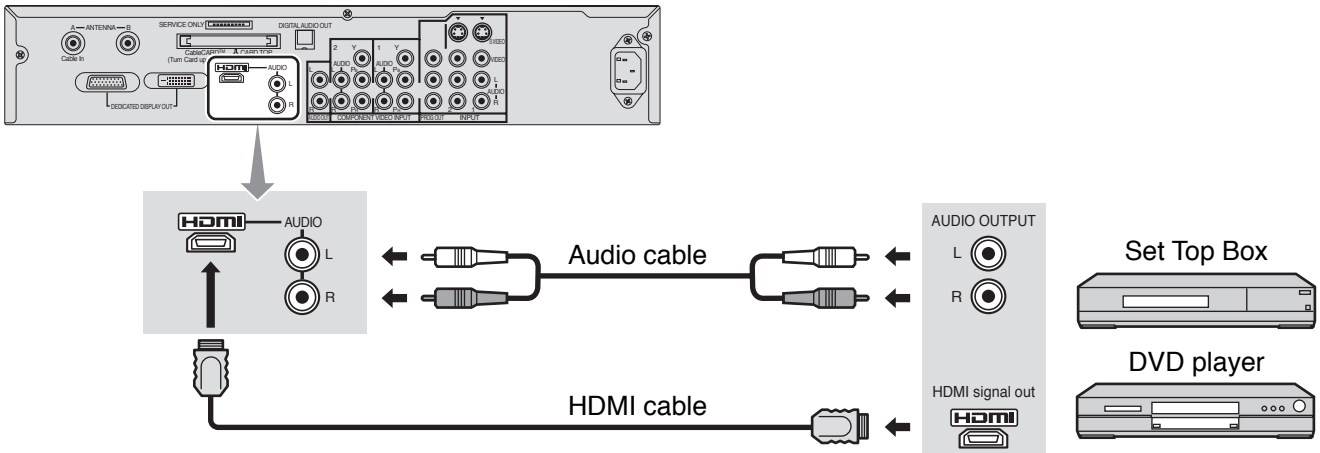
Notes:

- The S VIDEO connection provides higher quality picture. It overrides other VIDEO connections.
- If the connecting equipment has a S Video terminal, connect a S Video cable.

HDMI Connection

HDMI*1 (High Definition Multi media Interface) is the first all digital consumer electronics A/V interface that supports uncompressed standard. The HDMI terminal supports both video and audio information.
To the HDMI*1 input terminal, you can connect an EIA/CEA-861/861B*2 compliant consumer electronic device, such as a Set Top Box or DVD player with HDMI or DVI output terminal.

Input a High-bandwidth Digital Content Protection (HDCP) high-definition picture source to this HDMI terminal, so you can display the high-definition pictures on this TV in the digital form.



Notes:
- An audio cable should be connected only when using a HDMI conversion adapter to connect with a DVI cable.
- If the external device has DVI output only, use a DVI to HDMI adapter cable*3 to connect to the HDMI terminal.
- Connect the audio cables to the AUDIO IN terminals for HDMI.
- Select the audio setting in HDMI In (see page 29).

■ Compatible VIDEO Signal

	No. of dots (H × V)	Vertical scanning frequency (Hz)
1080i	1,920 × 1,080i	59.94/60
480p	720 × 480p	59.94/60
	640 × 480p	59.94/60
480i	720(1,440) × 480i	59.94/60

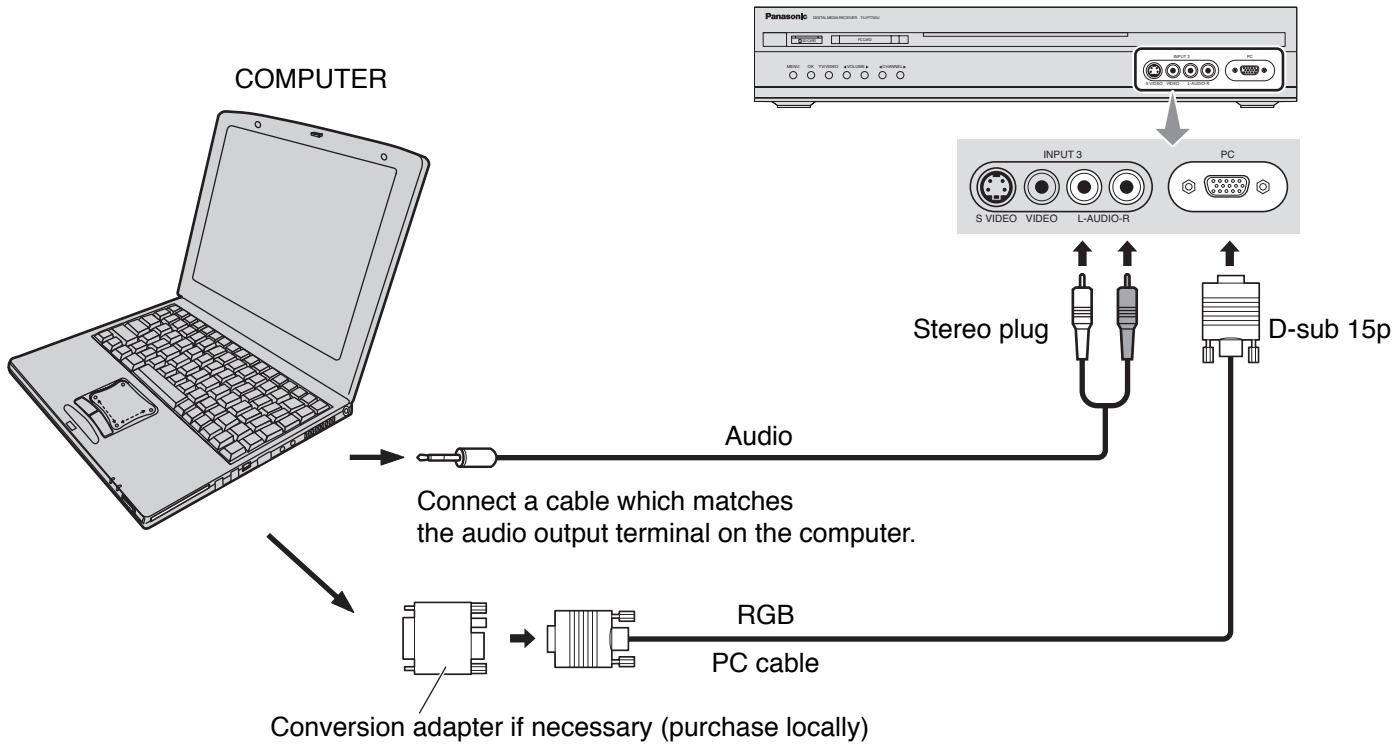
This input terminal is not intended for use with computers.

■ Compatible sampling frequency of AUDIO signal through HDMI (L.PCM) : 48kHz / 44.1kHz / 32 kHz

Notes:
- This HDMI connector is Type A.
- If you connect an equipment without a digital output terminal, connect to the COMPONENT VIDEO, S VIDEO or VIDEO input terminal on the TV so you can enjoy an analog signal.
- The DIGITAL IN terminal can only be used with 1080i, 480i or 480p picture signals. Set the Digital Set -Top -Box DIGITAL OUT terminal Output setting to 1080i, 480i or 480p. For detailed information, refer to the Digital Set -Top -Box instruction manual. If you cannot display the picture because your Digital Set -Top -Box does not have a DIGITAL OUT terminal Output setting, use the component Video Input (or the S Video Input or Video Input). In this case the picture will be displayed as an analog signal.

∗1. HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.
∗2. EIA/CEA-861/861B profiles compliance covers profiles for transmission of uncompressed digital video including high bandwidth digital content protection.
∗3. Consult your consumer electronics dealer for availability details.
[for USA]
HDMI-DVI conversion cable (TY-SCHO3DH): available on Panasonic Website (www.panasonic.com).

PC Connection



Notes:

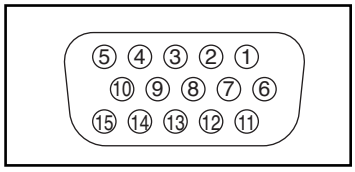
- Computer signals which can be input are those with a horizontal scanning frequency of 15 to 110 kHz and vertical scanning frequency of 48 to 120 Hz. (However, the image will not be displayed properly if the signals exceed 1,200 lines.)
- The maximum resolution:

Model	Aspect	
	4:3	16:9
TH-42XVS30U	768 × 768	1,024 × 768
TH-50XVS30U	1,024 × 768	1,366 × 768

If the display resolution exceeds these maximums, it may not be possible to show fine detail with sufficient clarity.

- Some PC models cannot be connected to the set.
- There is no need to use an adapter for computers with DOS/V compatible D-sub 15P terminal.
- The computer shown in the illustration is for example purposes only.
- Additional equipment and cables shown are not supplied with this set.
- Do not set the horizontal and vertical scanning frequencies for PC signals which are above or below the specified frequency range.

Signal Names for D-sub 15P Connector



Pin Layout for PC Input Terminal

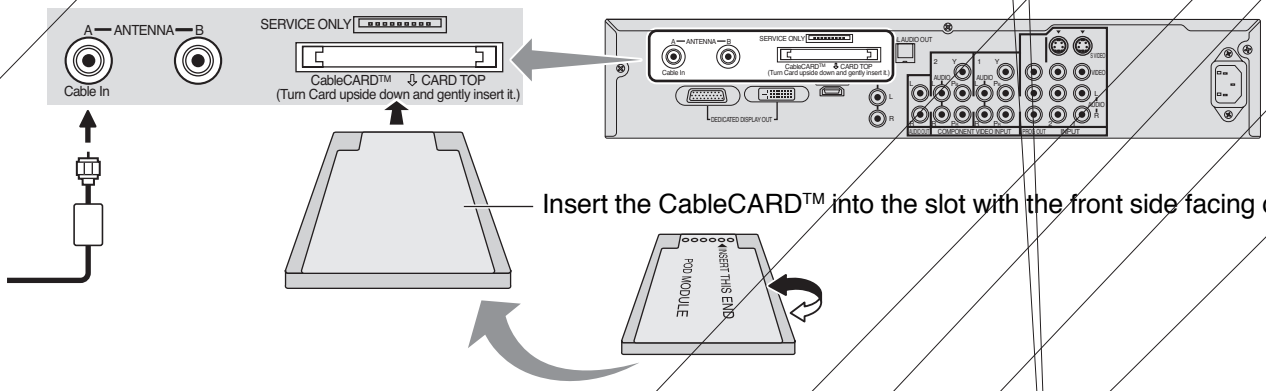
Pin No.	Signal Name	Pin No.	Signal Name	Pin No.	Signal Name
①	R	⑥	GND (Ground)	⑪	NC (not connected)
②	G	⑦	GND (Ground)	⑫	NC
③	B	⑧	GND (Ground)	⑬	HD/SYNC
④	NC (not connected)	⑨	NC (not connected)	⑭	VD
⑤	GND (Ground)	⑩	GND (Ground)	⑮	NC

CableCARD™ Connection

CableCARD™ allows you to tune digital and high definition cable channels through the cable antenna. Consult your cable company on the availability of CableCARD™.

Procedure

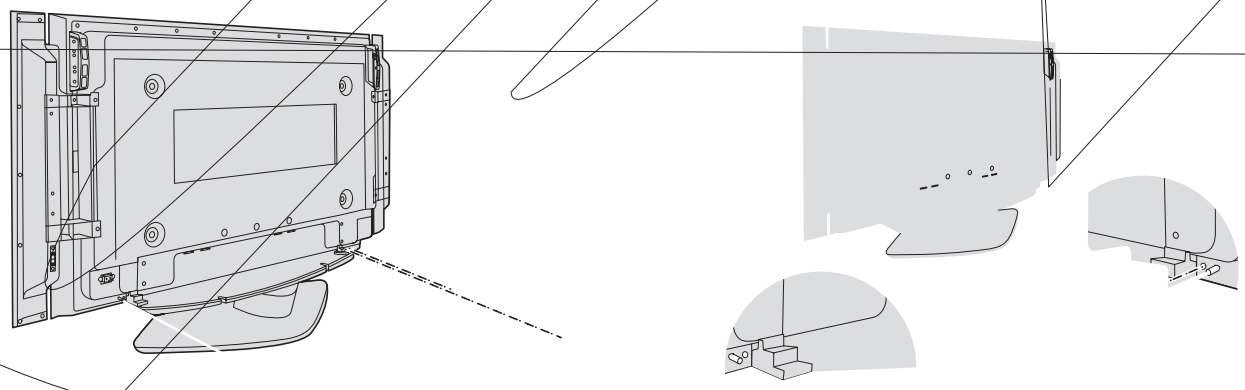
1. Connect the cable antenna to ANTENNA (A).
2. Insert the CableCARD™ (as its front side facing down) into CableCARD™ slot on the back of the Receiver.
3. Turn the TV on (see page 19).
4. Set the input mode to TV (see page 20).
   Follow the messages displayed on the screen.



Notes:

- If you experience keyboard or remote control function hang-up when using CableCARD™, unplug the TV and plug it back on and try the controls again. If this condition still exists, please call Panasonic Customer Call Center for further instructions.
- Do not insert a PCMCIA card into CableCARD™ slot.

Cable cover removal and fitting



Power ON / OFF

POWER
Turn the TV ON or OFF.

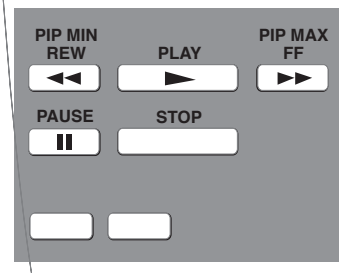
Mode Selection buttons (see page 59, 60)
Selects the operation mode for the remote control.
The operation of each equipment can be done by this remote control.

TV/VIDEO
Change the input mode.

→ TV → Component 1 → Component 2 → HDMI →
← PC ← Video 3 ← Video 2 ← Video 1 ←

SD
Access Photo Viewer (see page 46).

R-TUNE
Switch to previously viewed channel and input modes.



SAP

• Digital channel
Select the audio track (if available).

Audio Track 1 of 1 (English)

• Analog channel
Cycle through different audio modes.
e.g. → Stereo → SAP → Mono →

LIGHT

Light the remote control buttons. The selected button blinks when lit.

A -ANTENNA - B

Switch to (A or B) RF antenna input.

MUTE

Mute the sound. Press again to cancel the mute.

ASPECT

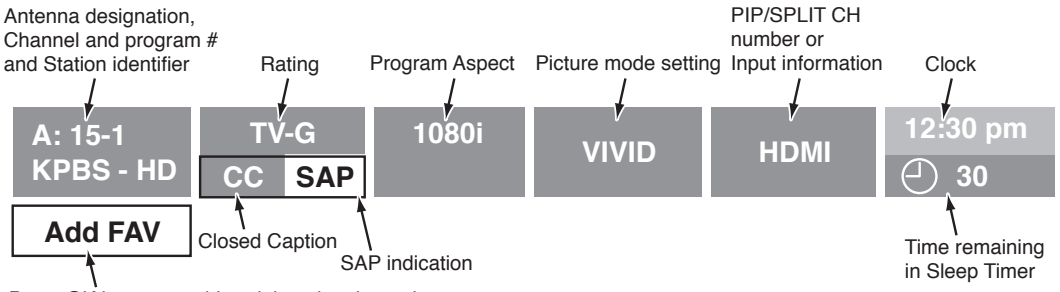
Change the screen aspect (see page 56).

BBE

Turn BBE VIVA 3D OFF or ON (see page 29).

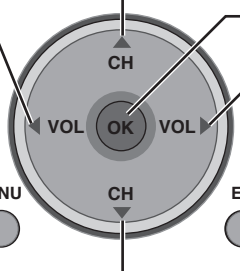
RECALL

Display or remove the channel banner.



▲ **CH**: Change to the next channel up.
▲ : Move cursor upward during menu mode.

◄ **VOL** : Reduces volume.
◄ : Move cursor to the left during menu mode.



Choose menu and submenu entry.

VOL ►: Increase volume.
► : Move cursor to the right during menu mode.

MENU
Display Main Menu or return one step backward in menus (see pages 24, 57).

EXIT
Exit menus.

▼ **CH**: Change to the next channel down.
▼ : Move cursor downward during menu mode.

Direct program number selection buttons

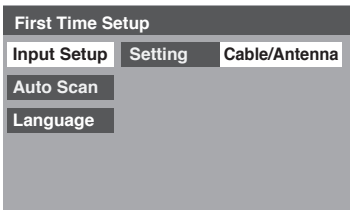
PROG –: When tuning digital channel, press the button to enter the minor number in a compound channel number.
• To enter the channel number
e.g. CH 15-1: [1] → [5] → [-] → [1] → [OK]

First Time Setup

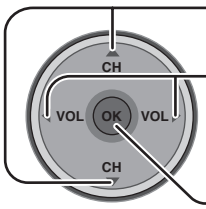
For your convenience, First Time Setup menu will be displayed on screen when the set is turned on for the first time. If needed, follow the menus and procedures displayed on-screen for setting up the features.
You can also make the settings in Setup menu (see pages 36-38).

Input Setup

Select the configuration of RF input depending on the signal source.



1

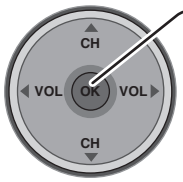


Press to select Input Setup.

Press to select Cable only, Cable/Antenna or Antenna only.

Press to enter your selection.

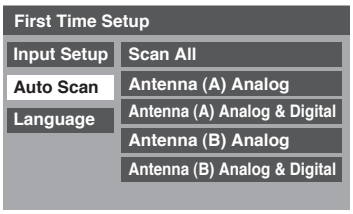
2



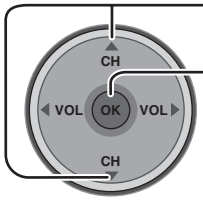
Press to start the Auto Scan.
All available channels with a signal will be programmed into memory.

Auto Scan

This feature allows you to selectively auto scan channels. You can scan All, Analog only channels or Analog & Digital channels.



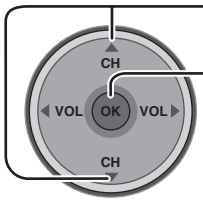
1



Press to select Auto Scan.

Press to enter the sub-menu field.

2



Press to select the sub-menu.

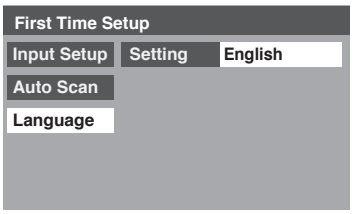
Press to start Auto Scan.
After Auto Scan is completed, the TV tunes to the first channel found during Auto Scan.

Notes:

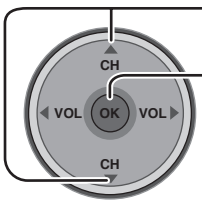
- If the EXIT button is pressed at anytime during Auto Scan, Auto Scan will be cancelled and the TV will return to the First Time Setup menu.
- If a CableCARD™ is present during the First Time Setup and Antenna (A) is set to cable, Antenna (A) will not be scanned due to the CableCARD™ providing the channel map.

Language

Allows you to select the language used for On Screen Displays.



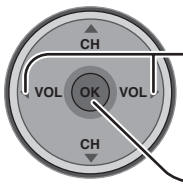
1



Press to select Language.

Press to enter the sub-menu field.

2



Press to select the Language.

English ↔ Spanish ↔ French

Press to enter your selection.

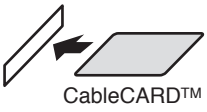
To return to the previous menu

Press MENU

To exit the menu screen

Press EXIT

Watching TV programs



To enjoy cable TV programs, first insert the CableCARD™ (with its front side facing down) into CableCARD™ slot on the back of the Receiver. (see page 18)

Note:
If you enjoy terrestrial TV programs only, you don't need to insert the CableCARD™.

1 TV

Press to operate the TV set with the remote control.

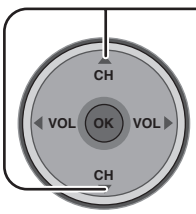
2 POWER

Press to turn the TV on.

3 A -ANTENNA - B

Press ANTENNA (A) or (B) button for desired TV signals. (see pages 12, 13, 14)

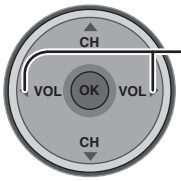
4



Press to select desired channel.

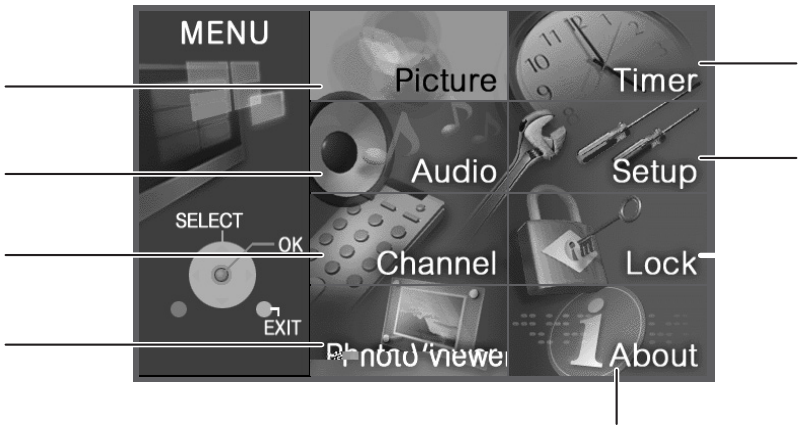
- You can also use the direct program number selection buttons and PROG–button (see page 21).

5

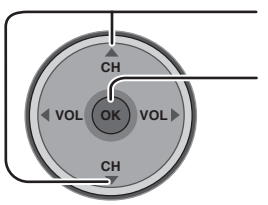


Select the desired volume level.

Note:
The channel number and volume level remain the same even after the TV is turned off.


MENU
Picture
Timer
Audio
Setup
SELECT
OK
Channel
Lock
EXIT
Photo Viewer
About

[Channel / Setup]

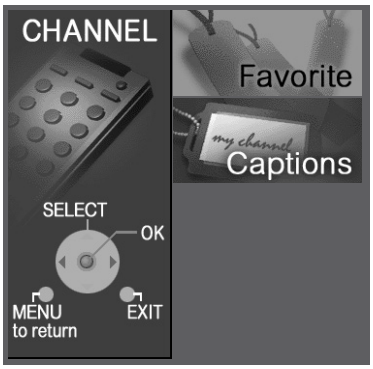


Press to select the menu.

Press to enter the sub-menu field.

↓

Proceed to adjustment and setting.

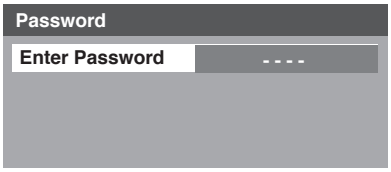


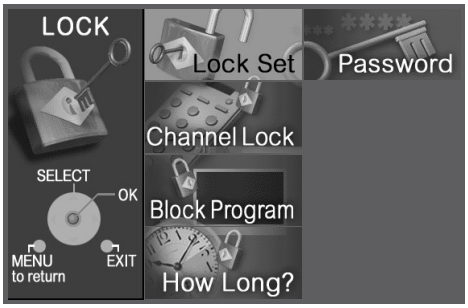
[Lock]

Enter password and repeat step 2.

↓

Proceed to adjustment and setting.





To return to the previous screen

MENU

Press to return.

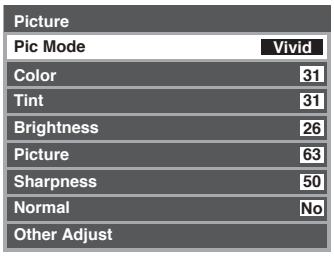
To exit menu

EXIT

Press to return to normal picture.

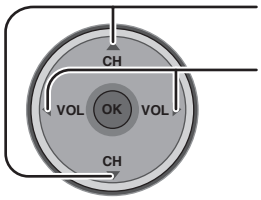
Picture

Press the MENU key to activate the main menu and select Picture. (refer to page 24)



Pic Mode

Lets you choose the pre-set picture modes that best suits the program you are viewing. This feature also affects Color Temp setting (see page 27).



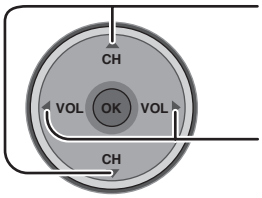
Press to select Pic Mode.

Press to select the picture mode.

- Vivid (default) : Provides enhanced picture contrast and sharpness for viewing in a well-lit room.
- Standard : Recommended for normal viewing conditions with subdued room lighting.
- Cinema : For watching movies in a darkened room. It provides a soft, film-like picture.
- Auto : Automatically senses the ambient light conditions and adjusts the brightness and gradation accordingly, to optimize contrast.

Note:
Each mode has its own picture settings (Color, Tint, Brightness, Picture and Sharpness).

Color / Tint / Brightness / Picture / Sharpness / Normal



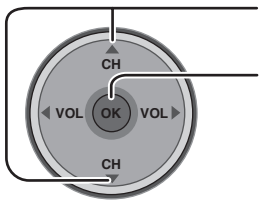
Press to select the sub-menu.

Press to adjust the sub-menu.

Item	Explanations
Color	Adjusts desired color intensity.
Tint	Adjusts natural flesh tones.
Brightness	Adjusts dark areas of picture.
Picture	Adjusts white areas of picture.
Sharpness	Adjusts clarity of outline detail.
Normal	Resets all picture adjustments to factory default settings.

Other Adjust

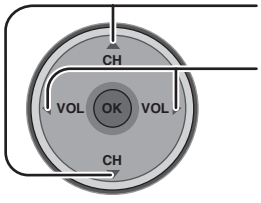
1



Press to select Other Adjust.

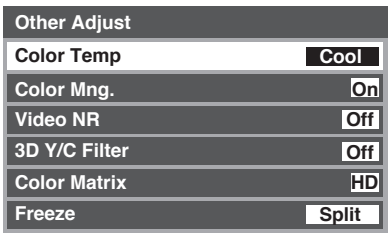
Press to display the sub-menu.

2

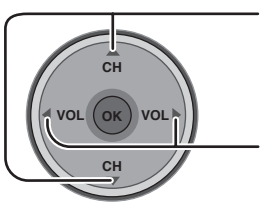


Press to select the sub-menu.

Press to select or activate the sub-menu.



■ Color Temp (temperature) / Color Mng. / Video NR / 3D Y/C Filter



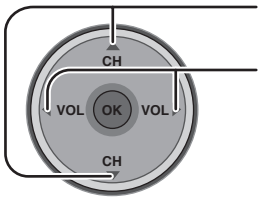
Press to select the sub-menu.

Press to adjust or activate the sub-menu.

Item	Explanations
Color Temp (Temperature)	Select Normal, Warm (red) or Cool (blue) colors to suit personal preferences.
Color Mng. (Color Management)	Color Mng. On Enable vivid color adjustment automatically.
Video NR	Reduces noise in the channel, commonly called snow. Remains off when receiving a strong signal.
3D Y/C Filter	Minimizes noise and cross color in the picture.

■ Color Matrix

Displays 480p input signals in a natural color from digital equipment adapters connected to COMPONENT VIDEO INPUT (Y, P_B, P_R) terminals.
Select HD or SD to automatically adjust color parameters for HD (high definition) or SD (standard definition).



Press to select Color Matrix.

Press to select SD or HD.

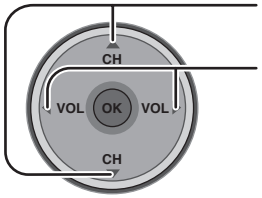
- SD : When the input signal is a normal TV system (NTSC).
- HD : When the input signal is a High-Definition system (ATSC).

Notes:

• This feature is available only with 480p signal and not available with regular TV (NTSC) program.
• When viewing a non-standard DTV signal format, you can change color parameters manually for the best picture quality.

■ Freeze

This feature is used to freeze main picture and display it in a PIP or SPLIT frame, when the **FREEZE** button on the remote control is pressed. Press **FREEZE** again to delete frame (see pages 53, 55).



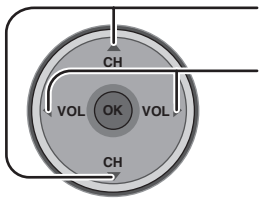
Press to select Freeze.

Press to select Split or PIP.

Audio

Press the MENU key to activate the main menu and select Audio. (refer to page 24)

Bass / Treble / Balance / Normal



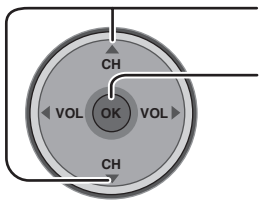
Press to select the sub-menu.

Press to adjust or activate the sub-menu.

Item	Explanations
Bass	Increase or decrease the bass response.
Treble	Increase or decrease the treble response.
Balance	Emphasize the left / right speaker volume.
Normal	Reset Bass, Treble and Balance adjustments to factory default settings.

Other Adjust

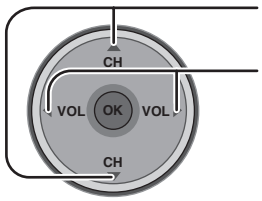
1



Press to select Other Adjust.

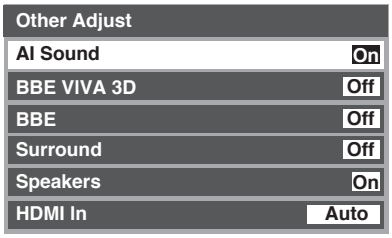
Press to display the sub-menu.

2



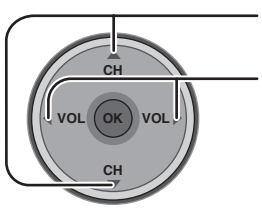
Press to select the sub-menu.

Press to select or activate the sub-menu.



■ AI Sound

Equalize overall volume levels across all channels. AI sound is not available in VIDEO input mode (see page 20). Effective only during internal TV tuner operation.



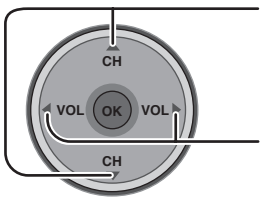
Press to select AI Sound.

Press to select On or Off.

■ BBE VIVA 3D / BBE

BBE VIVA 3D BBE VIVA 3D provides a musically accurate natural 3D image with hi-fi sound. The clarity of the sound is improved by BBE while the width, depth and height of the sound image are expanded by BBE's proprietary 3D sound processing. BBE VIVA 3D is compatible with all TV programs including news, music, dramas, movies and sports as well as electronic games. BBE VIVA 3D enhances the surround sound effect, while maintaining the clarity of dialogue.

BBE Sound technology enhances speech intelligibility and restores the dynamic range of musical passages to provide outstanding natural sound.



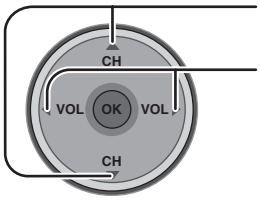
Press to select BBE VIVA 3D or BBE.

Press to select On or Off.

Notes:
• When "BBE VIVA 3D" is set to On, "BBE" and "Surround" setting are fixed to "On" and "3D".
• When "BBE VIVA 3D" is set to Off, "BBE" and "Surround" can be set individually.

■ Surround

Enhances audio response when listening to stereo.



Press to select Surround.

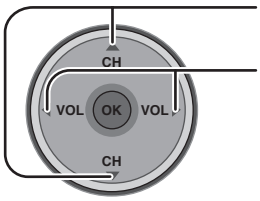
Press to select On or Off.

The benefits of Surround sound are enormous.
You can be completely enveloped in sound; just as if you were at a concert hall or cinema.
The Surround effect can be obtained without the use of external Ambience speakers.

Note:
This feature is effective when BBE VIVA 3D is set to Off.

■ Speakers

This feature is used to turn TV speakers On or Off (see page 15, Amplifier Connection).

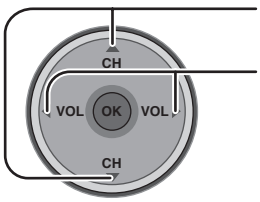


Press to select Speakers.

Press to select On or Off.
• On : TV speakers operate normally.
• Off : TV speakers off.

■ HDMI In

When using HDMI (see page 16), this feature will let you switch between Analog Input and Digital Input.

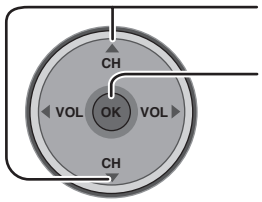


Press to select HDMI In.

Press to select the mode.
• Auto : Automatically selects Analog / Digital signal.
• Digital : Digital Input only.
• Analog : Analog Input only.

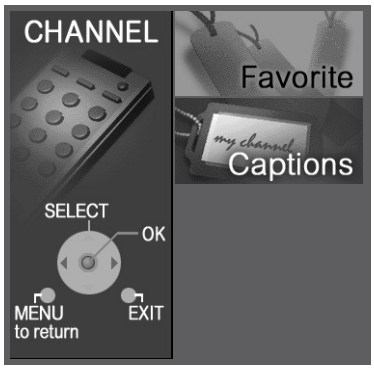
Channel

Press the MENU key to activate the main menu and select Channel. (refer to page 24)



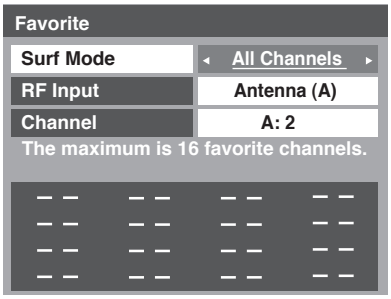
Press to select the menu.

Press to display the sub-menu.

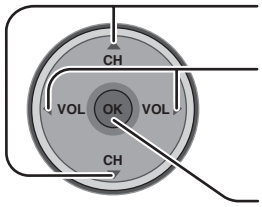


Favorite

Allows you to create Favorite channel list from Antenna (A) or Antenna (B).



■ Surf Mode

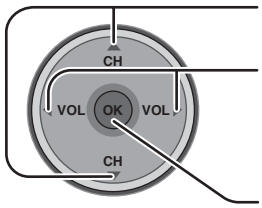


Press to select Surf Mode.

Press to select Favorites or All Channels.

Press to enter your selection.

■ RF Input



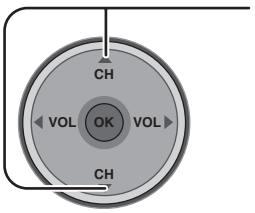
Press to select RF Input.

Press to select Antenna (A) or Antenna (B).

Press to enter your selection.

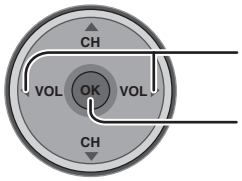
■ Channel

1



Press to select Channel.

2



Press to select the channel.

Press to add the channel.

To delete the channel, press again while the channel number is displayed.

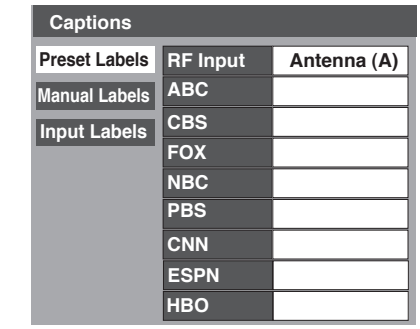
• Repeat step 2 to program up to 16 favorite channels.

Captions

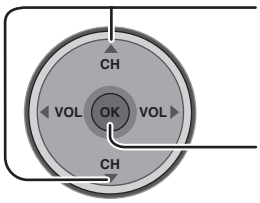
To enter preset and manual labels to desired stations. Also to enter input label to video inputs.

■ Preset Labels

To enter channel numbers for popular TV stations.



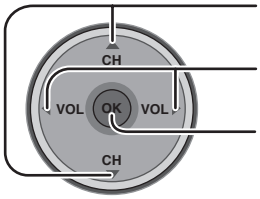
1



Press to select Preset Labels.

Press to enter the sub-menu field.

2

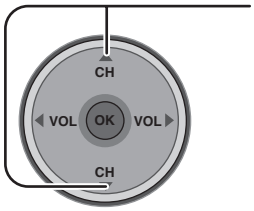


Press to select RF Input.

Press to select Antenna (A) or Antenna (B).

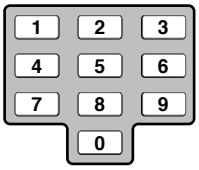
Press to enter your selection.

3



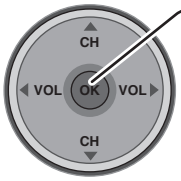
Press to select the desired preset caption.

4



Select the channel (refer to your local TV guide).

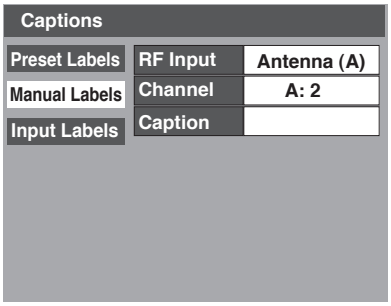
5



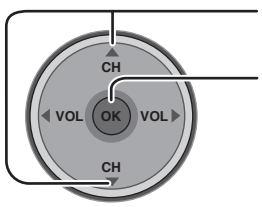
Press to enter your selection.
To delete a channel number, while highlighted press ◀ repeatedly until all numbers are removed, then press **OK** button.

Note:
Only inputs with a signal will be selectable.

■ Manual Labels



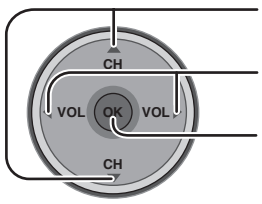
1



Press to select Manual Labels.

Press to enter the sub-menu field.

2

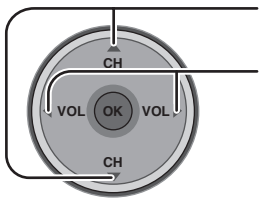


Press to select RF Input.

Press to select Antenna (A) or Antenna (B).

Press to enter your selection.

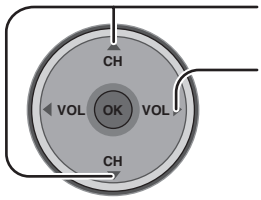
3



Press to select Channel.

Press to select the available channel number.

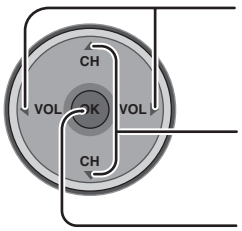
4



Press to select Caption.

Press right to enter edit mode.

5 **[Edit]**



Press to select the character position.

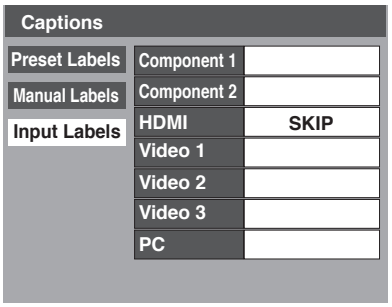
Press to select the character (refer to your local TV guide).
- Repeat until all characters are added, up to 7 characters can be added for each channel.
- To delete the selected character, press until [Blank] is displayed.

Press to enter your selection.

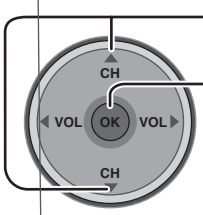
Note: Only inputs with a signal will be selectable.

■ Input Labels

To label video input connections for on-screen display.



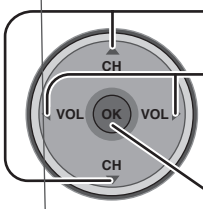
1



Press to select Input Labels.

Press to enter the sub-menu field.

2



Press to select the video input.

Press to select the preset input label.

- To delete Input labels, press until no label is displayed, and then press **OK** button to enter your selection.
- To skip the input, select "**SKIP**". The input will be skipped when you press **TV/VIDEO**.

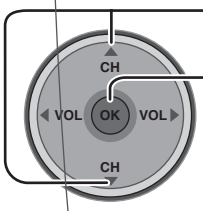
Press to enter your selection.

Timer

Press the MENU key to activate the main menu and select Timer. (refer to page 24)
Set the time in Clock Set (see below) before setting Timer.

Clock Set

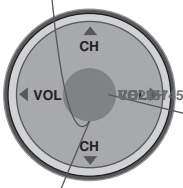
1



Press to select Clock Set.

Press to enter the time field.

2



Press to select the hour (AM or PM) or the minutes position.

Press to set the hour (AM or PM) and the minutes.

3

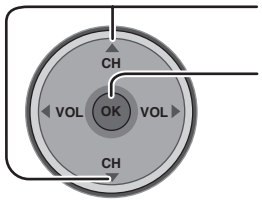
Press to enter your selection.

Day Set

Set the day of the week.

Timer

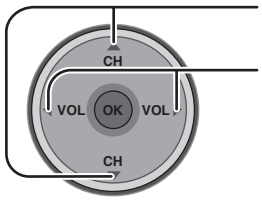
Select timer to turn the TV on and off at selected times and on selected day.



Press to select Timer.

Press to enter the Timer sub-menu.

■ Day

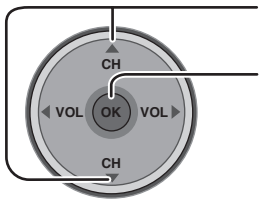


Press to select Day.

Press to select appropriate day setting.

■ On Time / Off Time

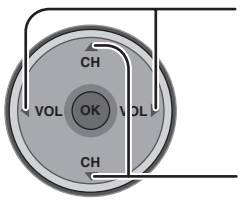
1



Press to select On Time or Off Time.

Press to enter the time field.

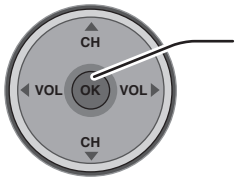
2



Press to select the hour (AM or PM) or the minutes position.

Press to set the hour (AM or PM) and the minutes.

3

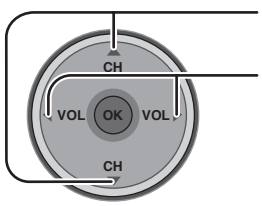


Press to enter your selection.

Notes:

- The TV automatically turns Off after 90 minutes when turned On by the Timer. It will be cancelled if the Off Time is selected or if a key is pressed.
- When the power to the TV set is disrupted due to a power outage or similar problem, the off-timer will be deactivated and the TV will be in standby mode even after power is restored.

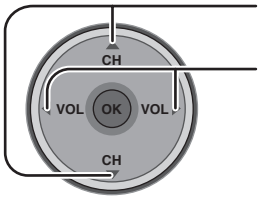
■ Set



Press to select Set.

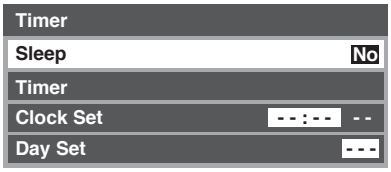
Press to select Yes or No.

Sleep



Press to select Sleep.

Press to select the desired sleep time (No, 30, 60 or 90).
- To turn off the timer, select No.
- To confirm the remaining time, press RECALL button (see page 21).



To return to the previous screen

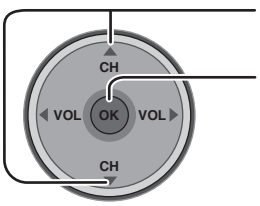
Press to return.

To activate Timer

Select the channel and turn off the TV.

Setup

Press the MENU key to activate the main menu and select Setup. (refer to page 24)



Press to select the menu.

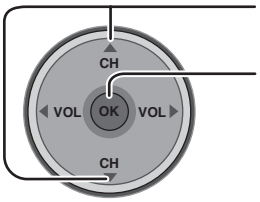
Press to display the sub-menu.

Program CH

■ Input Setup

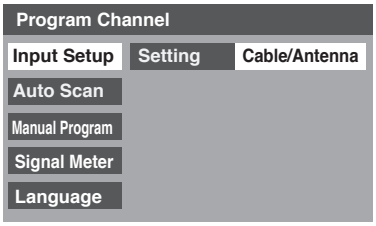
Lets you specify the antenna mode (Cable only, Cable/Antenna or Antenna only).

1

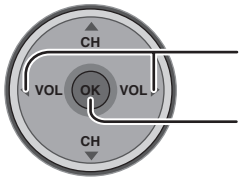


Press to select Input Setup.

Press to enter the sub-menu field.



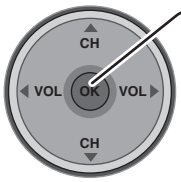
2



Press to select the antenna mode.

Press to enter your selection.
• The confirmation message appears.

3



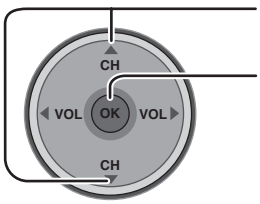
Press to start Auto Scan.

Notes:
- Auto scan is necessary when you select the input signal for the first time or whenever you change the antenna configuration.
- If CableCARD™ is not inserted, the Auto scan performs Scan All.
- When CableCARD™ is inserted and Cable only is selected, Auto Scan will be skipped.
- When CableCARD™ is inserted and Cable/Antenna is selected, Antenna (B) Analog & Digital Auto Scan will be performed.
- In order to manually select Antenna B from the remote, Auto Scan must first be performed.

Auto Scan

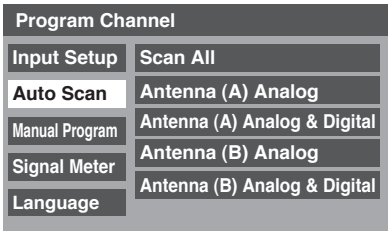
Automatically scans all available channels, Antenna (A) Analog, Antenna (A) Analog & Digital, Antenna (B) Analog and Antenna (B) Analog & Digital.

1

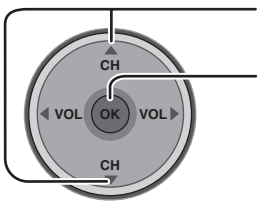


Press to select Auto Scan.

Press to enter the sub-menu field.



2



Press to select the sub-menu.

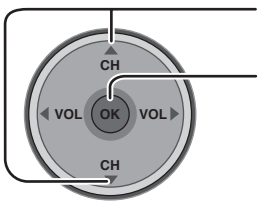
Press to start Auto Scan.

• After Auto Scan is completed, press MENU to return to the previous screen.

Manual Program

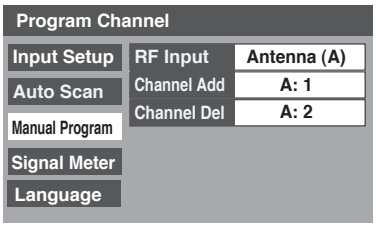
To add or delete channels from either channels list (A/B) manually.

1

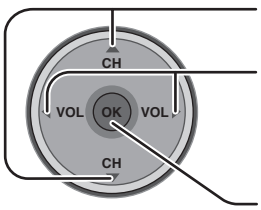


Press to select Manual Program.

Press to enter the sub-menu field.



2

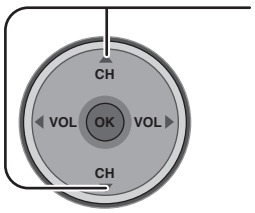


Press to select RF Input.

Press to select Antenna (A) or Antenna (B).

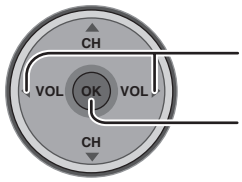
Press to enter your selection.

3



Press to select Channel Add or Channel Del.

4



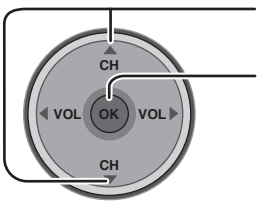
Press to select the channel.

Press to add or delete the channel.

Signal Meter

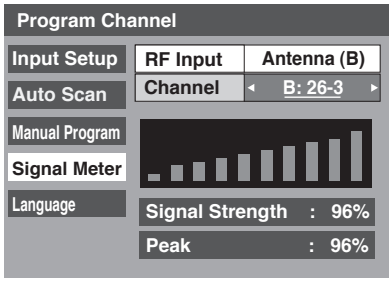
(For digital channels only)
Displays the signal strength of the ATSC digital channel in either Antenna (A) or Antenna (B).

1

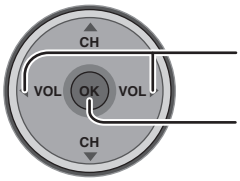


Press to select Signal Meter.

Press to enter the sub-menu field.



2



Press to select the channel.

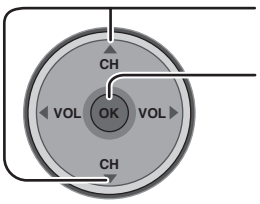
Press to display the Signal Strength.

• The color of the signal bar usually indicates the strength of the received signal.
Green - Adequate signal for a good reception.
Yellow - Poor signal strength.
Red - Very poor signal strength.

Language

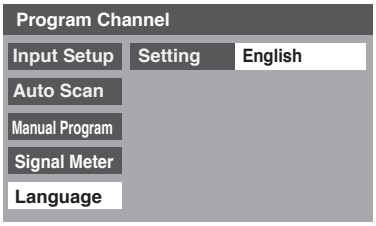
Allows you to select the language used for On Screen Displays.

1

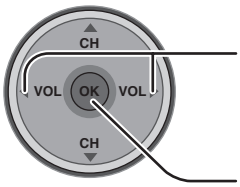


Press to select Language.

Press to enter the sub-menu field.



2



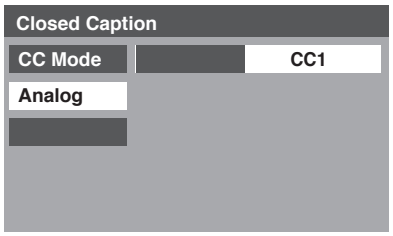
Press to select the Language.

→ English ↔ Spanish ↔ French ←

Press to enter your selection.

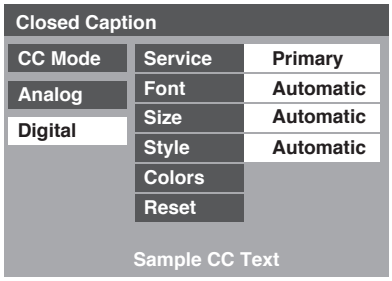
Press to select Analog.

Press to enter the sub-menu field.

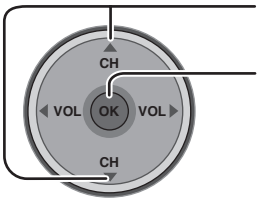


■ Digital

The Digital Closed Caption menu lets you configure the way you choose to view the digital captioning.



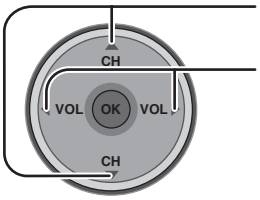
1



Press to select Digital.

Press to enter the sub-menu field.

2 **[Service / Font / Size / Style]**



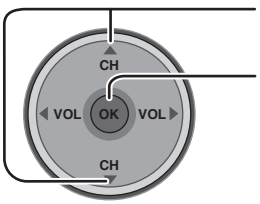
Press to select the sub-menu.

Press to select the setting.

- Service : Primary, Secondary, Service 3, Service 4, Service 5, Service 6
- Font : Automatic, Default, Mono-serif, Pro-serif, Mono, Prop, Casual, Cursive, Small Caps
- Size : Automatic, Normal, Small, Large
- Style : Automatic, None, Raised, Depressed, Uniform, Drop Shadow

[Colors]

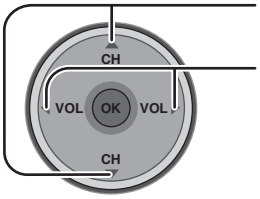
①



Press to select color.

Press to enter the sub-menu field.

②



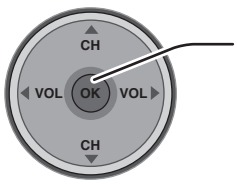
Press to select the sub-menu.

Press to select the setting.

- Colors : Foreground ..... The opacity of the font (Automatic, Black, White, Red, Green, Blue, Yellow, Magenta, Cyan)
  Fore Opacity ..... The opacity of the text box (Automatic,Transparent, Translucent, Solid, Flashing)
  Background ..... The color of the text box (Automatic, Black, White, Red, Green, Blue, Yellow, Magenta, Cyan)
  Back Opacity .... The opacity of the text box (Automatic, Transparent, Translucent, Solid, Flashing)
  Outline ..... The outline of the dropshadow (if selected under style)(Automatic, Black, White, Red, Green, Blue, Yellow, Magenta, Cyan).

- Reset : Reset the Digital CC settings.

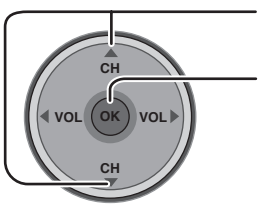
3



Press to enter your selection.

Other Adjust

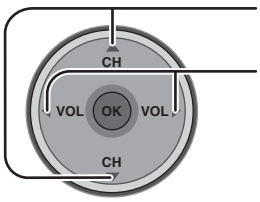
1



Press to select Other Adj.

Press to display the sub-menu.

2



Press to select the sub-menu.

Press to select or activate the sub-menu.

■ Side Bar (Off, Dark, Mid, Bright)

Displaying a picture in 4:3 mode for an extended period may cause an after-image. Change the brightness of the side bars to reduce the risk of after-image.

Notes:
- To reduce the occurrence of after-images, set the Side Bar to Bright.
- The side bar may flash (alternate black/white) depending on the picture. Using Cinema mode will reduce such flashing (see page 26).

■ Power Save (Off or On)

Suppress the luminous level of the TV to reduce power consumption.

■ Input Skip (Off or On)

Skip unconnected input when you press TV/AV. (Except HDMI and PC)

Note:
To skip HDMI and PC, set the Input Label of “HDMI” and “PC” to “SKIP” in Captions. (see page 33)

CableCARD™

This menu provides information when a CableCARD™ is inserted into the CableCARD™ slot (see page 18).

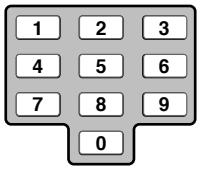
Notes:
- If CableCARD™ is not inserted and you access the CableCARD™ Info, the message “Cable Module Not present” appears.
- To receive the features offered by your cable company, you may have to subscribe to those services. Contact your cable company regarding availability of the CableCARD™. The CableCARD™ is required to receive premium digital services (where available) through the cable input. You may also be able to order call-ahead pay per view events.

Lock

Press the MENU key to activate the main menu and select LOCK. (refer to page 24)

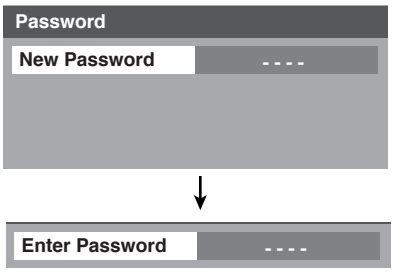
New Password / Enter Password

Create a 4-digit password to enter the Lock menu.

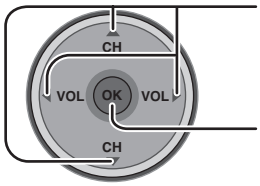


Enter a 4-digit password.

After entering your password for the first time, “New Password” will change to “Enter Password”.

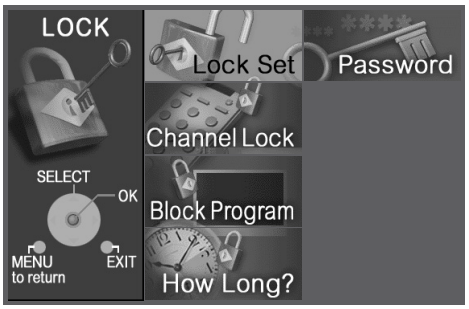


Notes:
- Use a code that is easy to remember and record it in a safe place.
- If Always is selected in How Long? (see page 45) and you forget your secret code, the TV must be serviced by a qualified technician to clear the Lock setup.



Press to select the menu.

Press to display the sub-menu.

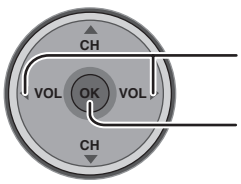


Password

If you would like to change the password to enter the Lock menu, change the password here.

Lock Set

Select Lock Set to prevent viewing video games, VCR tapes, channels and Video modes.



Press to select the setting.

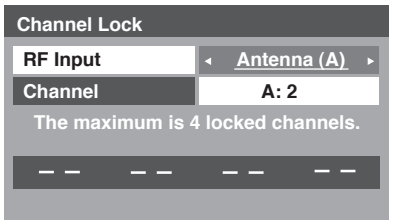
Press to enter your selection.

- Off : Turns off Lock set functions.
- Lock All : All channels are locked regardless of the rating level.
- Game Lock : Locks out CH 3, 4 and Video inputs.
- Channel Lock : Locks out specific analog and digital channels. Password is required to view any of the locked channels.

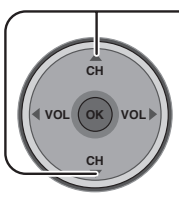
Channel Lock

■ RF Input

Select either Antenna (A) or Antenna (B).

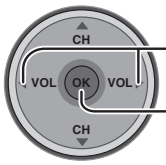


1



Press to select RF Input.

2



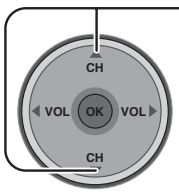
Press to select the setting.

Press to enter your selection.

■ Channel

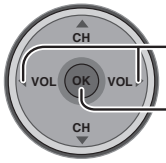
Select up to four (4) channels to be blocked out. These channels will be blocked out regardless of the program rating.

1



Press to select Channel.

2



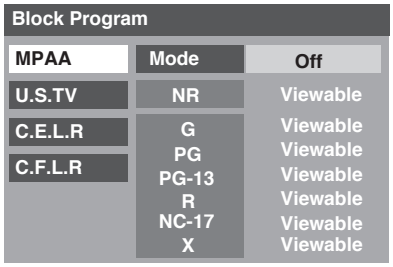
Press to select the setting.

Press to enter your selection.
• To clear the channel number from the list, select the channel number and press **OK**.

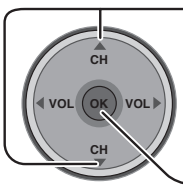
Block Program

This television incorporates V-CHIP technology to block the viewing of movies and television programs according to the rating category. There are four (4) Content Advisory Categories: MPAA (Motion Picture Association of America) and TV Parental Guidelines Ratings. These categories are used as guidelines for blocking the programs.

• The default mode for the Lock category is the Unlocked state.



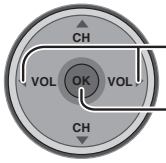
1



Press to select MPAA, U.S.TV, C.E.L.R or C.F.L.R.
MPAA : for U.S movie ratings
U.S. TV : for U.S TV program ratings
C.E.L.R : for Canadian English ratings
C.F.L.R : for Canadian French ratings

Press to enter the Mode field.

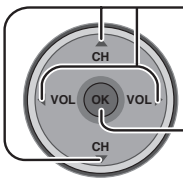
2



Press to select On or Off.

Press to enter your selection.

3



Press to highlight the desired rating level.

Press to change the rating limit to “Blocked” or “Viewable”.

Notes:

• The NR rating is independent of other ratings.

• Placing a block on a specific age based rating level, the NR rating and any other more restrictive ratings will also be blocked.

U.S. MOVIES RATINGS CHART

NR	CONTAINS NO RATING (NOT RATED) AND NA (NOT APPLICABLE) PROGRAMS. Movie been rated or rating does not apply.
G	GENERAL AUDIENCES. All ages admitted.
PG	PARENTAL GUIDANCE SUGGESTED. Some material may not be suitable for children.
PG-13	PARENTS 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	ADULTS ONLY.

U.S. TV PROGRAMS RATINGS CHART

The TV Parental Guidelines has 7 levels of age-based ratings that can be selected. 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).The table below shows the age-based ratings selection.

Age-based Group	Age-based Ratings	Possible Content Selections	Description
NR (Not Rated)	**TV-NR**		Not Rated. See CUSTOMER CAUTION on page 45.
Youth	**TV-Y**		All children. The themes and elements in this program are specifically designed for a very young audience, including children from ages 2-6.
	TV-Y7		Directed to older children. Themes and elements in this program may include mild physical or comedic violence, or may frighten children under the age of 7.
Guidance	**TV-G**		General audience. It contains little or no violence, no strong language, and little or no sexual dialogue or situations.
	TV-PG		Parental guidance suggested. The program may contain infrequent coarse language, limited violence, some suggestive sexual dialogue and situations.
	TV-14		Parents strongly cautioned. This program may contain sophisticated themes, sexual content, strong language and more intense violence.
	TV-MA		Mature audiences only. This program may contain mature themes, profane language, graphic violence, and explicit sexual content.

CANADIAN ENGLISH RATINGS CHART

E	Exempt - Exempt programming includes: news, sports, documentaries and other information programming, talk shows, music videos, and variety programming.
C	Programming intended for children under age 8. No offensive language, nudity or sexual content.
C8+	Programming generally considered acceptable for children 8 years and over. No profanity, nudity or sexual content.
G	General programming, suitable for all audiences.
PG	Parental Guidance suggested. Some material may not be suitable for children.
14+	Programming contains themes or content which may not be suitable for viewers under the age of 14. Parents are strongly cautioned to exercise discretion in permitting viewing by pre-teens and early teens.
18+	18+ years old. Programming restricted to adults. Contains constant violence or scenes of extreme violence.

CANADIAN FRENCH RATINGS CHART

E	Exempt - Exempt programming.
G	General - Programming intended for audience of all ages. Contains no violence, or the violence content is minimal or is depicted appropriately.
8 ANS+	8+ General - Not recommended for young children. Programming intended for a broad audience but contains light or occasional violence. Adult supervision recommended.
13ANS+	Programming may not be suitable for children under the age of 13 - Contains either a few violent scenes or one or more sufficiently violent scenes to affect them. Adult supervision strongly suggested.
16ANS+	Programming may not be suitable for children under the age of 16 - Contains frequent scenes of violence or intense violence.
18ANS+	Programming restricted to adults. Contains constant violence or scenes of extreme violence.

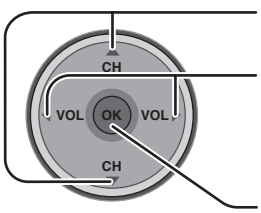
Customer Caution

The V-Chip system that is used in this set is capable of blocking “NR” programs (non rated, not applicable and none) per FCC Rules Section15.120(e)(2). If the option of blocking “NR” programs is chosen “unexpected and possibly confusing results may occur, and you may not receive emergency bulletins or any of the following types of programming:”

- Emergency Bulletins (Such as EAS messages, weather warnings and others)
- Locally originated programming • News • Political • Public Service Announcements • Religious • Sports
- Weather

How Long?

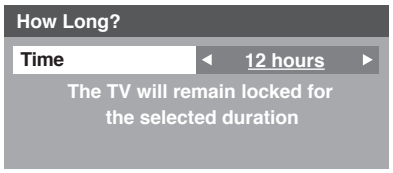
The Lock settings remain for the selected duration.



Press to select How Long?

Press to select 12 hours, 24 hours, 48 hours or “Always”. (see Note below)

Press to enter your selection.



Note:
When you select “Always” and you forget your secret code, the TV must be serviced by a qualified technician to clear the Lock setup.

Blocking Messages

Various Blocking messages are displayed on-screen depending upon the type of blocking you have selected in the Lock menu.

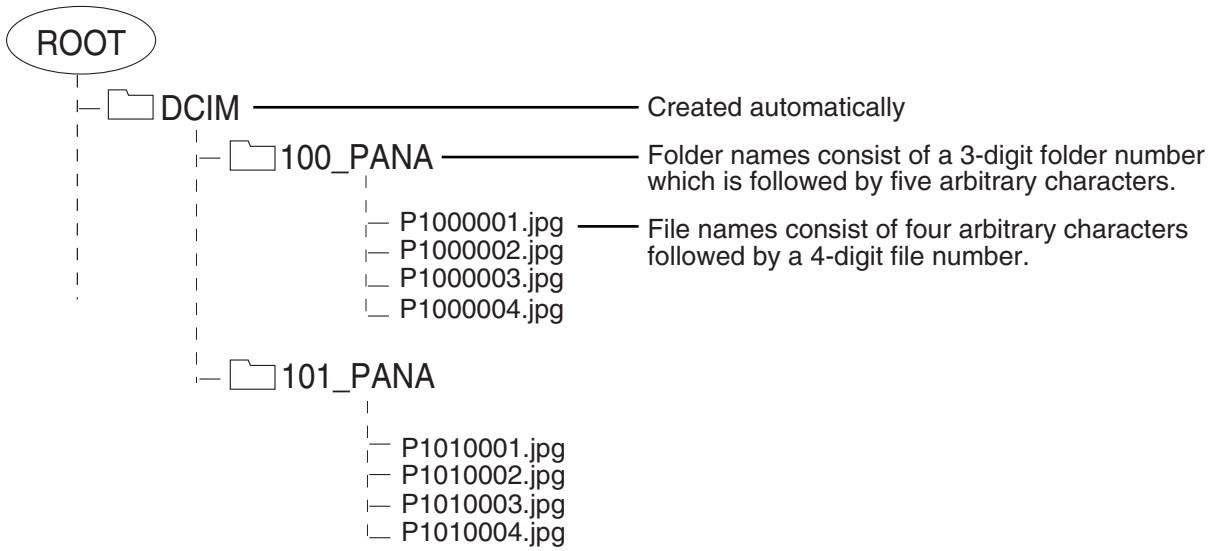
Note:
Entering the password will override the block condition. However, the ratings selection will be retained.

Message	Possible cause
Video Inputs Locked.	The [TV/VIDEO] button was pressed when the Game Lock had been selected.
Channel Locked. Press OK to enter password for temporary unlock.	Tuned to the designated channel when the Channel Lock had been selected. Tuned to 3 ch and 4 ch when the Game Lock had been selected.
All Channels and Video Inputs Locked. Press OK to enter password for temporary unlock.	Lock All is selected.
Rating Limit Exceeded. Press OK to enter password.	Received programs that exceed the Block Program rating level.

Folders and Files

- Photo Viewer can only show still images recorded by a digital still camera with DCF* and EXIF standard JPEG file.
  *DCF (Design rule for Camera File system)
  Unified standard established by Japan Electronics and Information Technology Industries Association (JEITA).
- Memory cards must be formatted with FAT12 or FAT16 in order to be viewed on TV. If the card is not formatted, it may cause incompatibility with certain memory card adapters. If this happens, reformat the card using your digital camera. **Reformatting the card will erase the images stored in it.** Refer to your camera manual for more information.
- Maximum number of folders that can be displayed: **100**.
- Maximum number of files that can be displayed: **3000**.
- **Picture resolution:** Compatible in the range 64 x 64 - 8192 x 8192 (sub-sampling 4:2:2 or 4:2:0)
- If the image is imported from a PC, it must follow the EXIF (Exchangeable image file format) 2.0, 2.1, 2.2 in addition to the DCF (design rule for Camera File system) format.
- The JPEG modified using a PC will not be displayed on TV.
- The Photo Viewer cannot display Motion JPEG and still image not DCF formatted (i.e. TIFF, BMP).
- If the file is partially corrupted, it may be shown in lower resolution.
- The displayed image size depends on the recorded size.

Example folder structure
JPEG images in all the folders are displayed sequentially.



Notes:
- Folder and file names may vary according to the digital still camera.
- Use the characters “a-z”, “A-Z”, “0-9” and “_” to name a directory or a file. Do not use two-byte characters or other special codes.

Thumbnail Mode

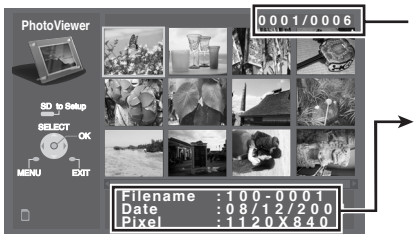
The thumbnail screen is the initial entry screen from the main menu.

- When both SD card and PCMCIA card are inserted, the TV plays SD card. To play a PCMCIA card, select “PC” in “Card” (see page 50) after inserting the PCMCIA card.

1 Insert the card into the appropriate slot (see page 46).

OR

Press to display the thumbnail screen.



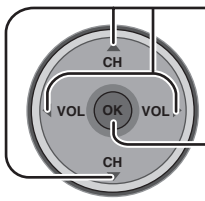
Picture No. / Total No. of pictures

File name, the date and the pixel (resolution) of the picture

Notes:

- You can also enter the thumbnail screen from MENU screen (see page 24).
- It may take long time to display the thumbnail if there are lots of files or the file size is large.
- The video disappears from the screen while the Photo Viewer access the information from the card. After accessing the images from the card, a thumbnail screen is displayed.

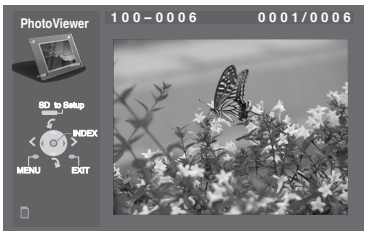
2



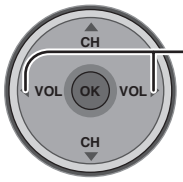
Select the thumbnail image.

Press to display the image in the single picture view mode.

Single picture view mode



3

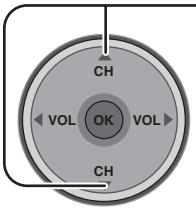


Press to select the next or the previous picture.

- Press **OK** to return to the thumbnail screen.

To rotate the picture

While in the single picture view mode



Press to rotate the picture ninety degrees.

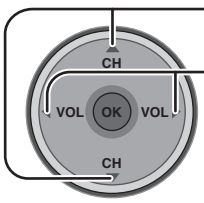
Photo Viewer Setup Menu

This menu allows you to customize features in the Photo Viewer Setup Menu.

While in the thumbnail mode or the single picture view mode (see page 48)

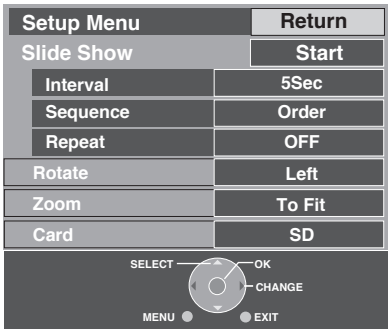
1

Press to display the Setup Menu screen.

2 

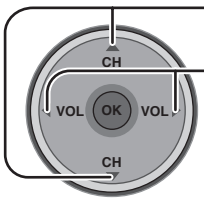
Press to select the sub-menu.

Press to adjust or activate the sub-menu.



Slide Show

Select the settings of Interval, Sequence and Repeat before starting the slide show.

1 

Press to select the sub-menu.

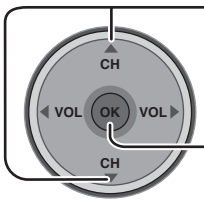
Press to adjust or activate the sub-menu.

■ **Interval**

Allows you to change the length of time that a slide is being displayed on screen. (5Sec, 10Sec, 15Sec, 30Sec, 60Sec, 90Sec, 10Min).

■ **Sequence (Order or Random)**

■ **Repeat (OFF or ON)**

2 

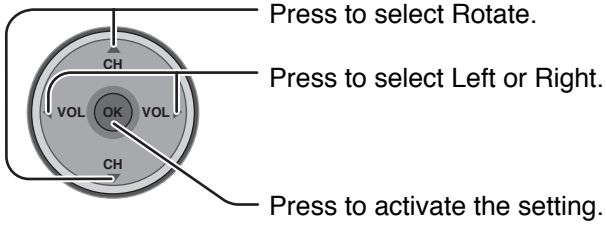
Press to select Start.

Press to start the slide show.

- Press again to stop.
- Press **ASPECT** to change the aspect of the image (see page 56).

Rotate

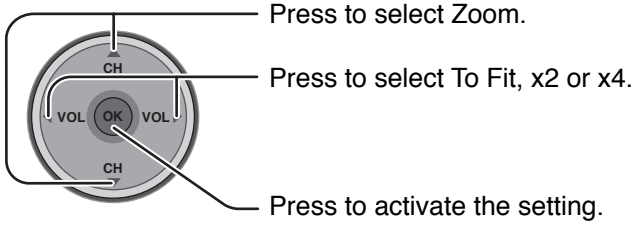
To access menu see page 49.
Allows you to rotate the image (see also page 48).



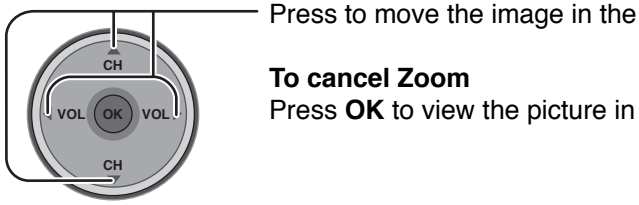
Zoom

To access menu see page 49.
(While in the single picture view mode only)
Lets you select the magnification of the single picture display.

1



2



To cancel Zoom
Press **OK** to view the picture in normal magnification.

Card

To access menu see page 49.
Select either SD or PC when both cards are inserted in the slots.

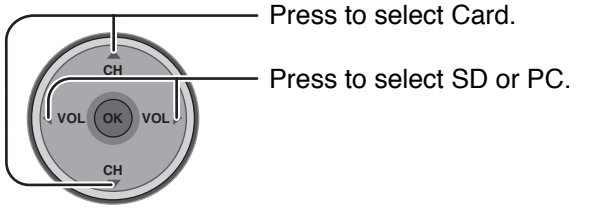


Photo Viewer Troubleshooting

Symptom	Cause and remedy	Page
Cannot read the content of the card.	• Incompatible format. Must be formatted with FAT 12 or FAT 16. • The extension is not “JPG”. • The folders not under DCF standard.	**47** **47** **47**
PC card cannot be ejected.	Push the card all the way in, and eject.	**46**
Poor picture quality.	If the main image cannot be read (the file is partially corrupted), the Photo Viewer will read the thumbnail. Please confirm the format of the image.	**47**
Long time to display.	There are lots of images or the file size is large.	**48**
The screen turns black.	If the TV is left with no operation for longer than 5 minutes during the thumbnail screen or the single picture view mode, the screen turns black to avoid image retention. Press any key to return to the normal display.	–

■ Error messages

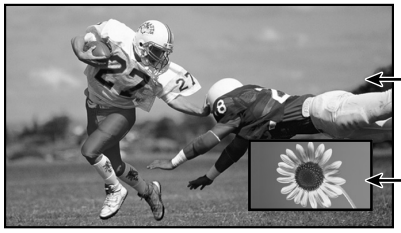
“Card is not inserted correctly.”	Insert a card.
“This type of image is not supported.”	The JPEG file is corrupted and cannot be decoded.
“This type of format is not supported.”	The card is not formatted with FAT 12 or FAT 16 or if it is not DCF standard.
“ ”	Thumbnail and main picture cannot be shown.
“Photo Viewer cannot support over 3000 JPEG files.”	Over 3000 image files.
“Photo Viewer cannot support over 8192 x 8192 pixels.”	Resolution over.
“This type of card is not supported.”	Incompatible card is inserted.
“Press any key to return.”	The screen turned black to avoid image retention. Press any key to return to the normal display.

PIP (Picture in Picture) Operation

This television includes a two-tuner Picture In Picture (PIP) feature. This allows you to watch two (2) live broadcasts at the same time with or without an external video source such as a VCR, cable box, etc.

1 PIP

Press to display the PIP frame.



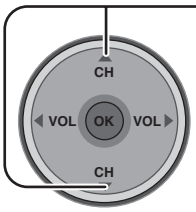
Notes:
- Audio is from Main picture only.
- PIP frame displays analog channel signal of ANTENNA (A) only, and cannot display ANTENNA (B) or digital channel signal.

2 **In the PIP frame**

SPLIT CH DVD/VCR CH ▼ ▲

Select the channel.

In the Main picture



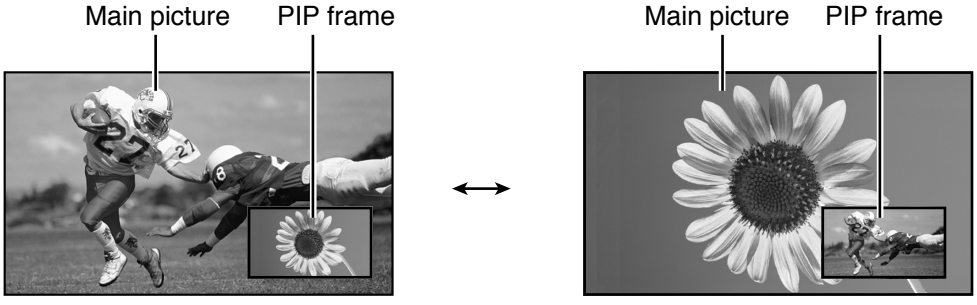
Press to select the channel.
- You can also use the numbered buttons.

To cancel the PIP operation

PIP

To swap the pictures

SWAP



To change the size of PIP frame

PIP MIN REW ◄◄ : smaller PIP MAX FF ►► : larger

To freeze the picture

PIP frame

FREEZE
TV/VCR

• Press again to cancel Freeze.

Main Picture

While PIP frame is not displayed

FREEZE
TV/VCR

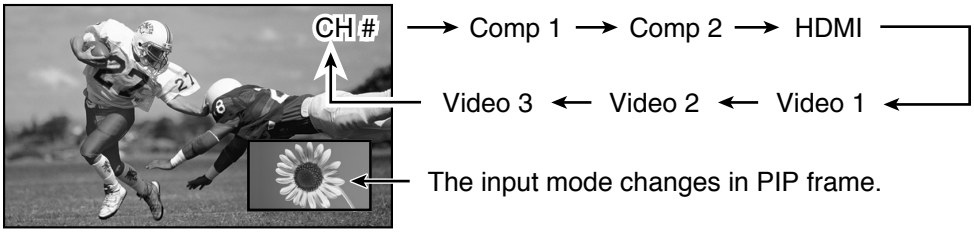
• Select PIP or Split (see page 27, Freeze) when freezing the Main picture.

Notes:

• Freeze is canceled after 3 minutes.
• Only MOVE (see below) is active while the Main picture is frozen.

To select the input mode of PIP frame

TV/VIDEO



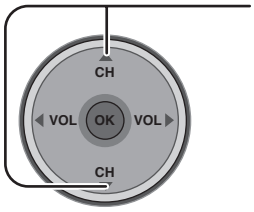
To search the channel

(For analog channels only)

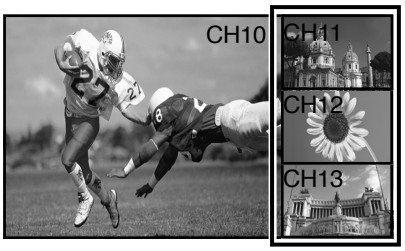
1 SEARCH
OPEN/CLOSE

Press to display search frames.
• Press again to cancel Search.

2 **In the Main picture**



Press to select the channel.
• You can also use the numbered buttons.

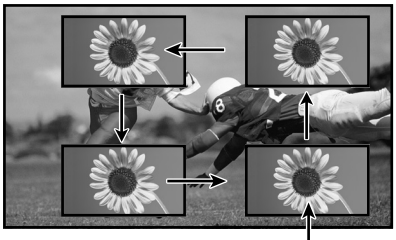


Search frames

To move PIP frame

MOVE

Press to position PIP frame to one of the four corners.



PIP Frame

SPLIT Operation

This feature lets you watch two different channels side by side with or without an external video source.

1 SPLIT

Press to display the SPLIT frame.

Notes:

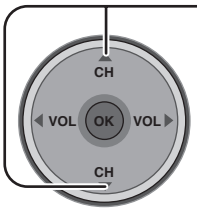
- Audio is from Main picture only.
- SPLIT frame displays analog channel signal of ANTENNA (A) only, and cannot display ANTENNA (B) or digital channel signal.

2 **In the SPLIT frame**

SPLIT CH DVD/VCR CH ▼ ▲

Select the channel.

In the Main picture



Press to select the channel.

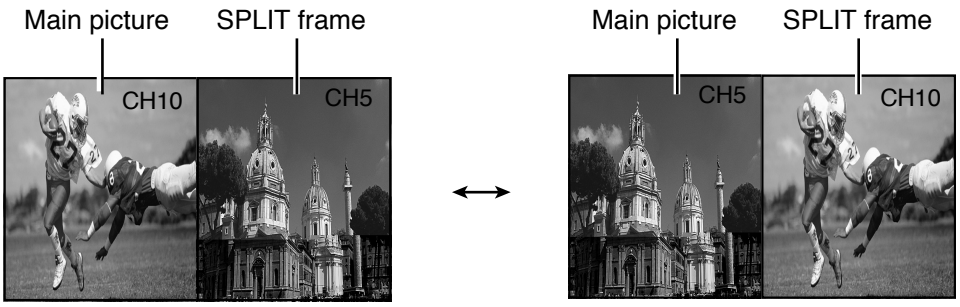
- You can also use the numbered buttons.

To cancel the SPLIT operation.

SPLIT

To swap the pictures

SWAP



To freeze the picture

SPLIT frame

FREEZE
TV/VCR

• Press again to cancel Freeze.

Main Picture

While SPLIT frame is not displayed

FREEZE
TV/VCR

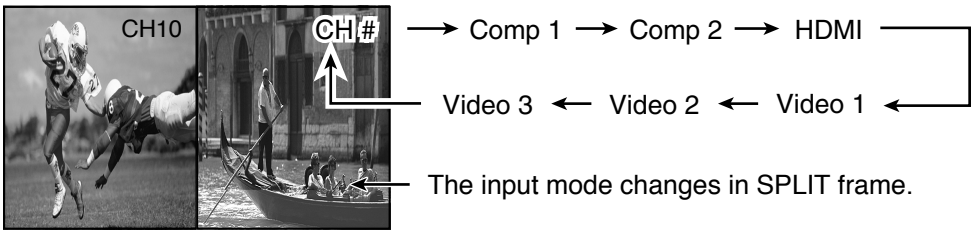
• Select PIP or Split (see page 27, Freeze) when freezing the Main picture.

Note:

• Freeze is canceled after 3 minutes.

To select the input mode of SPLIT frame

TV/VIDEO

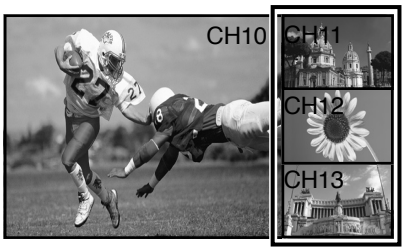


To search the channel

(For analog channels only)

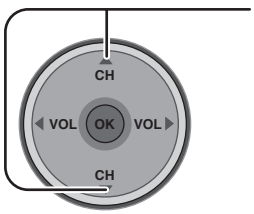
1 SEARCH
OPEN/CLOSE

Press to display search frames.
• Press again to cancel Search.



Search frames

2 **In the Main picture**



Press to select the channel.
• You can also use the numbered buttons.

Notes:

• The Main picture and the SPLIT frame are processed by individual circuits, and may have a slight difference in image quality.
• You cannot display the same picture in the Main picture and the SPLIT frame at the same time.
• While Main picture freeze frame is displayed, you cannot select or search the channel, swap the pictures, or select the input mode.

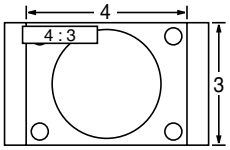
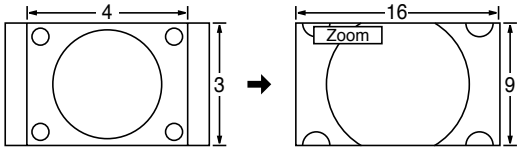
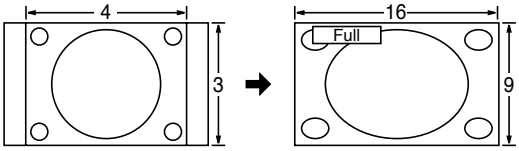
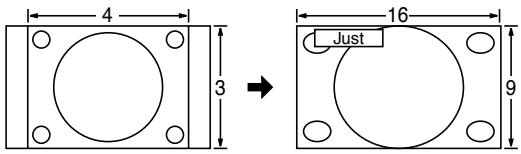
Aspect Controls

Lets you choose the aspect depending on the format of the received signal and your preference.

ASPECT Press to change the aspect mode.

Note: The available aspect modes depend on the receiving signal.

- 480i : 4:3, Full, Just or Zoom
- 480p (4:3) : 4:3, Full or Zoom
- 480p (16:9) : 4:3, Full or Zoom
- 1080i : 16:9 only
- PC mode : NORMAL, FULL, JUST or ZOOM
  (In PC mode, "4:3" indication is displayed as "NORMAL".)

Mode	Picture	Explanation
4 : 3 (**NORMAL** in PC mode)		Displays a 4:3 picture at its standard 4:3 size with gray side bars. (It may create an after-image on screen if displayed for a prolonged period of time.)
Zoom		Expands a 4:3 picture uniformly (width and height) to full screen width and then reposition the picture vertically. (Recommended for letterbox. This will show picture at full screen size.)
Full		Displays a picture at full screen size. (Recommended for anamorphic pictures.)
Just		Stretches the right and left edges of a 4:3 picture to fill the screen, and the center of the screen have aspect correction applied. The size of the picture depends on the original signal. (Recommended for regular TV viewing.)

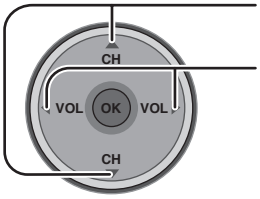
Note:
In PC mode, aspect mode information is displayed in the top right of the screen.

PC MENU

1 Press to display the PC MENU.

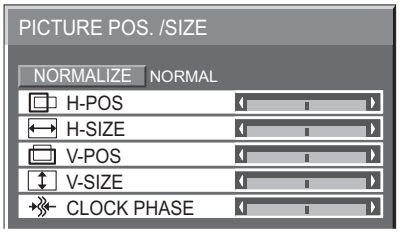
2 Press to select the sub-menu.

Press to display the sub-menu screen.



PICTURE POS./SIZE (To access menu see page 57.)

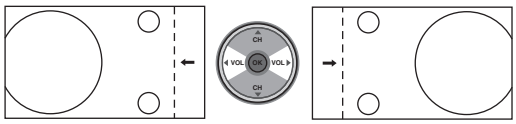
Note:
If a “Cue” or “Rew” signal from a VCR or may DVD player is received, the picture position may shift up or down despite of the PICTURE POS./SIZE settings.



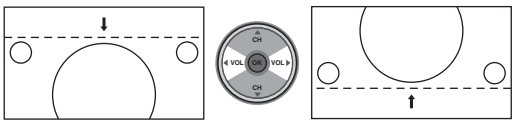
■ NORMALIZE

Select “NORMALIZE” to reset adjustments to the factory default setting.
Note:
• You can select “NORMALIZE” when you change the settings.

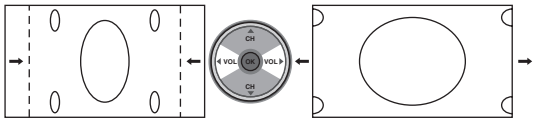
H-POS Adjust the horizontal position.



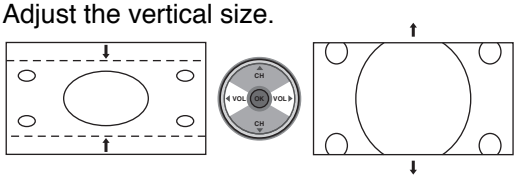
H-SIZE Adjust the horizontal size.



V-POS Adjust the vertical position.



V-SIZE Adjust the vertical size.

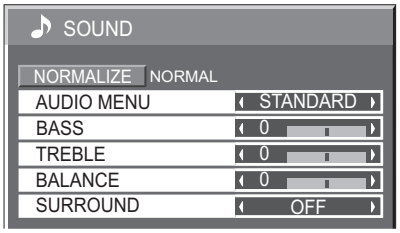


CLOCK PHASE (RGB/PC in mode) Eliminate flickering and distortion.

SOUND (To access menu see page 57.)

■ NORMALIZE

Select “NORMALIZE” to reset adjustments to the factory default setting.
Note:
• You can select “NORMALIZE” when you change the settings.



■ AUDIO MENU

MENU	Function
STANDARD	Emits the original sound.
AUTO	Automatically controls proper volume level.

■ BASS, TREBLE, BALANCE, SURROUND

Item	Function
BASS	Adjusts low sounds
TREBLE	Adjusts high sounds
BALANCE	Adjusts left and right volumes
SURROUND	Select ON or OFF

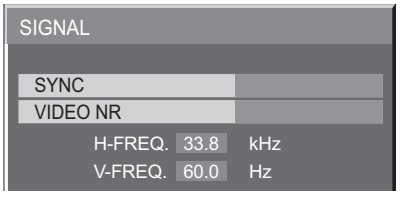
Note:
BASS, TREBLE and SURROUND settings are memorized separately for each AUDIO MENU (STANDARD, AUTO).

SIGNAL (To access menu see page 57.)

■ H-FREQ. (kHz) / V-FREQ. (Hz) (Only for RGB input signal)

Displays the H (Horizontal)/V (Vertical) frequencies.

Display range: Horizontal 15 - 110 kHz
Vertical 48 - 120 Hz



Note:
Sync : The H and V sync or synchronized signal are automatically selected. If both input, it is selected the H and V sync.
VIDEO NR : Not effective for this model.

Operating peripheral equipment

Programming the remote control code

You can operate other manufacturers' components using this TV's remote control.

Preparation:
- Connect the plug of the external component to the wall outlet.
- Make sure the component is turned off.

1 POWER + OK

Press and hold **POWER** and **OK** together, **for at least 5 seconds**.
- The mode selection buttons flashes, and then release the **POWER** and **OK**.

2 TV VCR DVD DBS RCVR CBL AUX

Select the type of the component.
- The selected button light and all others go out.

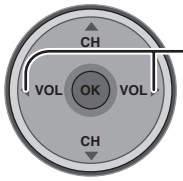
3 1 2 3 4 5 6 7 8 9 0

Enter the 3-digit infrared code (see pages 60-62).
- Factory default setting : Panasonic
- Press **POWER** to test the operation.

Notes:
- 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.

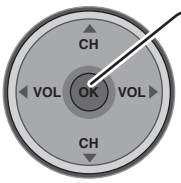
To find a code not listed in the index

1 After selecting the type of component (step 2, above)



Press to select the code.
- The code starts from the current device.
- Press **POWER** button to test the operation.
- Repeat the steps until the component code is found. It may take many attempts before the correct code is found.

2



Press to store the code.

Infrared Code Index

The remote control is capable of operating many brands of peripheral equipment. Refer to page 59 for programming procedures.

Notes:

- The remote control memory is limited and therefore some models may not operate. The remote control is not designed to control all features available in all models.
- After entering the proper infrared code, press the desired Mode Selection buttons (see page 20). Refer to pages 63 and 64 for details on operating peripheral equipment using the remote control.

Infrared Remote Codes for Specific Components

Helpful Hint: Write down the code numbers for your components in the space provided below. This will serve as a handy reference whenever you need to reprogram your remote control.

CABLE Cable Box		**VCR** Video Cassette Recorder		**CD** Compact Disc Player	
DBS Digital Broadcast System		**RCVR** Receiver or Amplifier		**LD** Laser Disc Player	
_____ Other Component		_____ Other Component		_____ Other Component	
_____ Other Component		_____ Other Component		_____ Other Component	

VCR

AUX

Codes for VCR

Brand	Code
Admiral	335
Aiwa	332
Akai	314, 315, 316, 329
Audio Dynamic	311, 339
Bell &Howell	305, 313
Broksonic	320, 326
Canon	323, 325
CCE	343
Citizen	306
Craig	305, 306, 329
Curtis Mathes	324, 345
Daewoo	301, 324, 343
DBX	310, 311, 339
Dimensia	345
Emerson	303, 319, 320, 325, 326, 343
Fisher	305, 307, 308, 309, 313
Funai	320, 326, 334
GE	324, 333, 345
Goldstar	306
Gradiente	334
Hitachi	300, 323, 345
Instant Replay	323, 324
Jensen	339
JVC	310, 311, 334, 339
Kenwood	306, 310, 311, 339
LXI	300, 305, 306, 307, 308, 309
Magnavox	323, 324, 331
Marantz	310, 311, 339
Marta	306
Memorex	309, 324
MGA	338, 340, 341, 347, 348
Minolta	300, 345
Mitsubishi	338, 340, 341, 347, 348
Multitech	304, 347
NEC	310, 311, 334, 339
Olympic	323, 324
Optimus	306, 321, 328, 335
Orion	320, 326
Panasonic	321, 322, 323, 324
Penney	300, 305, 310, 311, 324, 339, 345
Pentax	300, 311, 345
Philco	320, 323, 324, 326, 331, 343
Philips	323, 324, 331
Pioneer	323
Proscan	300, 301, 302, 323, 324, 331, 333, 345, 346
Quasar	321, 322, 323, 324
Radio Shack	305, 309, 324, 333, 336, 340
RCA	300, 301, 302, 323, 324, 331, 333, 345, 346
Realistic	305, 309, 324, 336, 340
Samsung	302, 304, 333
Sansui	320, 326, 339, 352
Sanyo	305, 309, 313
Scott	301, 302, 304, 309, 320, 326, 338, 340, 347, 348
Sears	300, 305, 306, 307, 308
Sharp	335, 336
Shintom	317
Signature 2000	335
Singer	317
Sony	328, 329, 330
Sylvania	323, 324, 331
Tashiro	306
Tatung	310, 311, 339
Teac	310, 311, 339
Technics	321, 322, 323, 324
Teknika	324
Toshiba	301, 346
Vector Research	311
Wards	306, 309, 335, 336, 344
Yamaha	305, 310, 311, 339
Zenith	306, 344

DVD

Codes for DVD

Brand	Code
Denon	100
Ferguson	101
JVC	109
Mitsubishi	105
Nordmende	101
Panasonic	100
Philips	103
Pioneer	102
RCA	101

Brand	Code
Saba	101
Samsung	110
Sharp	108
Sony	104
Technics	100
Thomson	101
Toshiba	103
Yamaha	100
Zenith	107

DVD

Codes for CD

Brand	Code
Admiral	226
Aiwa	233, 235
Carver	229
Denon	242
Emerson	239
Fisher	205
Harman Kardon	219, 220, 221, 223
Hitachi	207
Jensen	234
JVC	240, 241, 245
Kardon	223
Kenwood	200, 201, 211, 245
LXI/Sears	236
Magnavox	229, 232
Marantz	229
McIntosh	221
Nakamichi	210
Onkyo	214, 215

Brand	Code
Optimus	208, 218, 220, 222
Panasonic	224, 225, 227
Philips	229, 230
Pioneer	208
Quasar	224, 225, 227
RCA	231, 237, 238, 247
Sansui	210, 246
Sanyo	205
Scott	210, 246
Sharp	242, 243
Sherwood	220
Sony	228
Soundesign	244
Teac	212, 216, 218
Technics	224, 225, 227
Victor	240, 241, 245
Yamaha	202, 203, 204

AUX

Codes for Personal Video Recorders

Brand	Code
Panasonic Replay TV	100
Philips Tivo	101
Sony Tivo	102

AUX

Codes for Cassette Deck

Brand	Code
Aiwa	223, 224, 225
Denon	231
Fisher	203
Jensen	214
JVC	229, 230
Kenwood	200, 207
Marantz	202
Nakamichi	205
Onkyo	208, 209, 213
Panasonic	216, 218

Brand	Code
Philips	222
Pioneer	204
RCA	226, 227, 228
Sansui	205, 210
Sharp	231
Sony	219, 220
Teac	210, 211, 215
Technics	216, 218
Yamaha	201, 202

RCVR

Codes for Receivers

Brand	Code
Admiral	120
Aiwa	125, 126
Denon	134, 135, 136
Fisher	104
Garrard	113
Harman Kardon	115, 123
Jensen	129
JVC	132, 133
Kenwood	100, 108
Magnavox	127
Marantz	124
McIntosh	116
Nakamichi	106
Onkyo	109, 114

Brand	Code
Optimus	103, 127, 130, 131
Panasonic	118, 119, 121
Philips	123
Pioneer	105, 107
Quasar	118, 119, 121
RCA	103, 105, 127, 130, 131
Sansui	103, 111, 139
Sharp	134, 137
Sony	122
Soundesign	138
Teac	111, 112, 113
Technics	118, 119, 121
Victor	132, 133
Yamaha	101, 102

CBL

Codes for Cable Box

Brand	Code
ABC	124
Archer	125, 132
Cableview	105, 132
Citizen	105, 122
Curtis	112, 113
Diamond	124, 125, 132
Eagle	129
Eastern	134
GC Brand	105, 132
Gemini	122
General Instrument/Jerrold	111, 119, 120, 121, 122, 123, 124, 125, 126, 127
Hamlin	112, 118, 140, 141, 142, 145
Hitachi	103, 124
Macom	103, 104, 105
Magnavox	133
Memorex	130
Movietime	105, 132
Oak	102, 137, 139
Panasonic	109, 110, 114
Philips	106, 107, 128, 129, 130
Pioneer	101, 116
Pulsar	105, 132

Brand	Code
Puser	132
RCA	115
Realistic	132
Regal	112, 118, 140, 141, 142, 145
Regency	134
Rembrandt	105, 132, 137
Samsung	105
Scientific Atlanta	111, 112, 113
Slmark	101, 105
Sprucer	105, 110
Stargate	105, 132
Tel eview	101, 105
Texscan	144
Tocom	135
Toshiba	104
Unika	125, 132
Universal	122, 132
Videoway	106
Viewstar	129, 130
Zenith	100, 117
Zenith /Drae Satellite	100

DBS

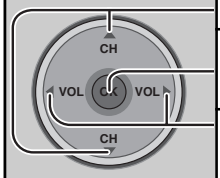
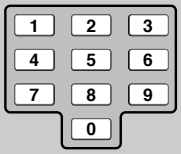
Codes for DBS

Brand	Code
Dish Network	105, 115, 116
Echo Star (Echostar)	105
Express VU	105, 115
G.E.	106
G.I. (General Instrument)	108
Gradiente	114
Hitachi	103, 111, 112
HNS (Hughes)	103

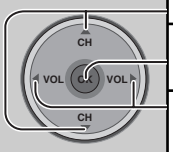
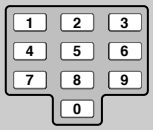
Brand	Code
Magnavox	101, 102
Panasonic	104
Philips	101, 102
Primestar	108
Proscan	106, 109, 110, 113
RCA	106, 109, 110, 113
Sony	107
Star Choice	103, 108
Toshiba	100
Uniden	101, 102

Mode Operational Key Chart

This chart defines which keys that are operational after programming (if needed), while in the selected remote control mode, DTV, CABLE, DBS, VCR, DVD ...etc.

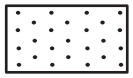
KEY NAME	DTV MODE	CABLE MODE	DBS MODE
POWER	POWER	POWER	POWER
	NAVIGATION UP/DOWN	CABLE CHANNEL UP/DOWN	DBS NAVIGATION UP/DOWN
	OK	–	DBS MENU
	NAVIGATION RIGHT/LEFT	–	DBS NAVIGATION RIGHT/LEFT
MENU	DTV MENU	–	–
RECALL	PROGRAM INFO.	–	DBS PROGRAM INFO.
EXIT	EXIT (EPG)ELECTRONIC PROGRAM GUIDE	–	EXIT DBS MENU
	Select Channel	Select Channel	Select Channel
R-TUNE	PREVIOUS STB CHAN	CABLE PREVIOUS CHAN	DBS PREVIOUS CHAN
PROG	DTV PROGRAM/DASH	–	–
REC	Info (EPG) ELECTRONIC PROGRAM GUIDE	–	–
SPLIT CH DVD/VCR CH	–	–	DBS CHANNEL UP/DOWN

Operating peripheral equipment

KEY NAME	VCR MODE	DVD/CD MODE (DVD)	DVD/CD MODE (CD)	AUX MODE (PVR)	AUX MODE (VCR2)	AUX MODE (TAPE)	RCVR MODE
POWER	POWER	POWER	POWER	POWER	POWER	POWER	POWER
MUTE	–	–	–	–	–	–	RCVR MUTE
TV/VIDEO	TV INPUT SW	–	–	–	TV INPUT SW	–	RCVR INPUT SW
LIGHT	–	–	–	–	–	–	REMOTE BUTTONS
	–	NAVIGATION UP/DOWN	NEXT/PREVIOUS TRACK	NAVIGATION UP/DOWN	–	–	TUNER +/–
	–	–	–	–	–	–	–
	–	–	–	NAVIGATION RIGHT/LEFT	–	VOLUME +/–	RCVR VOLUME +/–
MENU	–	–	–	PVR MENU	–	–	–
RECALL	ONSCREEN VCR DISPLAY	DVD DISPLAY	TIME FORMAT	–	ONSCREEN VCR DISPLAY	–	–
EXIT	–	–	–	EXIT PVR MENU	–	–	–
	–	–	–	Select Channel	–	–	1.... AV1 2.... AV2 3.... AV3 4.... AV4 5.... CD 6.... TUNER 7.... PHONO 8.... TAPE 9.... AUX
R-TUNE	–	–	–	PREVIOUS CHAN RELAY ZONES	–	DECK A/B	–
PROG	–	–	–	PVR RETURN TO LIVE	–	–	–
PIP MIN REW / PIP MAX FF	VCR REW/FF	SKIP SEARCH REW/FF	SEARCH REW/FF	–	VCR REW/FF	TAPE REW/FF	SURROUND –/+
PLAY	PLAY	PLAY	PLAY	PLAY	PLAY	PLAY	–
PAUSE	PAUSE	STILL/PAUSE	PAUSE	PAUSE	PAUSE	PAUSE	–
STOP	STOP	STOP	STOP	–	STOP	STOP	–
REC	VCR RECORD	–	–	PVR RECORD	VCR RECORD	TAPE RECORD	–
FREEZE TV/VCR	TV/VCR SWITCH	SLOW +/–	–	–	TV/VCR SWITCH	–	–
SPLIT CH DVD/VCR CH	VCR CHANNEL UP/DOWN	–	–	PVR CHANNEL UP/DOWN	VCR CHANNEL UP/DOWN	–	RCVR CENTER +/–
SEARCH OPEN/CLOSE	–	OPEN/CLOSE	OPEN/CLOSE	PVR QUICK SKIP	–	–	–

Troubleshooting Chart

Before calling for service, determine the symptoms and follow suggested solutions.

Symptoms		Solutions	Page
VIDEO	AUDIO		
Snowy Video	Noisy Audio	• Adjust the antenna location and connection.	12, 13
Multiple Image	Noisy Audio	• Adjust the antenna location and connection. • Check the antenna lead-in cable.	12, 13 12, 13
Interference	Noisy Audio	• Move the television away from electrical appliances, lights, vehicles and medical equipment.	–
Normal Video	No Audio	• Increase volume. • Check Mute. • Check Speaker connection. • Check Television Speakers on/off. • Change channel.	23 21 11 29 23
 No Video with Snow	Noisy Audio	• Set Input Setup properly. • Check the antenna cables.	36 12, 13
No Video / No PIP	No Audio	• Check the power cord is plugged into the wall outlet. • Adjust Brightness and Audio controls. • Change channel. • Check the cable connections. • Program the remote control code. • Check the second video source operation. • Make sure that a PC is not connected to HDMI input. Rarely, the TV will not display video in HDMI input from devices with HDMI or DVI output due to bad communication between the TV and the devices. Should this happens, unplug the HDMI/DVI device and plug it back on.	19 26,28,29 23 13-18 59-62 59-64 16
No Color	Normal Audio	• Adjust Color settings. • Change channel.	26, 27 23
Digitalization of image Image freeze up	Audio Break up	• Re-orient the ATSC antenna. • Check signal meter. If the signal is weak, add a signal booster to boost the signal strength.	– 38
Normal Video	Wrong Audio	• Check the audio mode is set to Stereo or Mono, Not SAP. • Change the audio of the HDMI device to Linear PCM. • Check the audio setting for HDMI. If there is functional problem with Digital Audio, use Analog audio.	21 – 29
Black Box on Screen	Normal Audio	• Change CC (Closed Caption).	39, 40
Normal Video	Normal Audio	• Replace the remote control batteries.	9
Intermittent Remote Control Operation			
Cannot select Antenna B		• Perform Auto Scan.	36

Troubleshooting Chart

Plasma Display panel

Symptoms	Check	Page
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.	–
An after-image appears	• 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 TV. 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 TV resulting from fixed image use is not an operating defect and as such is not covered by the Warranty. This product is not designed to display fixed images for extended periods of time.	41, 56
Whirring sounds can be heard from the display unit.	• The TV is fitted with a cooling fan to dissipate heat generated during normal use. The rotating fan may cause a whirring sound but it is not a malfunction. • The TV slightly consumes power and rotates the cooling fan even when turned off in order to receive program guide data etc. through the Cable CARD. The rotating fan may cause a whirring sound but it is not a malfunction.	– –
When turning the unit on, the PDP LED momentarily turns blue then the unit shuts off and LED turns Red.	Check the 2 main interconnection cables (24pin and 26pin) rear of PDP and Tuner box. Make sure they are firmly connected. (Loose connection of 24pin will cause no power on symptom.)	
Occasionally on-screen-menus appear while connection cable is not inserted, but these on-screen-menus are not effective. Remote control is not accessible to those menus.	Power off both the display and the receiver, and check the cable connection.	

Specifications

Digital Media Receiver

		TU-PT700U	
Power Source		120 V AC, 60 Hz	
Power Consumption			
	Maximum	45 W	
	Stand-by condition	22 W	
Dimensions (W × H × D)		16.9” (430 mm) × 3.4” (86 mm) × 14.8” (377 mm)	
Mass (weight)		approx. 13.2 lbs	
Channel Capability-ATSC / NTSC		VHF/ UHF : 2-69, CATV:1-135	
FEATURES		Two screen display functions BBE VIVA 3D CLOSED CAPTION 3D Y/C FILTER CableCARD™ slot	LINEAR PIP V-Chip HDMI JPEG Viewer
Accessories Supplied		AC cord Display-Receiver cable	
Operating condition			
	Temperature	32 °F - 104 °F (0 °C - 40 °C)	
	Humidity	20 % - 80 %	
Connection terminals			
	RGB input	D-SUB 15pin	R,G,B / 0.7 Vp-p (75 Ω) HD, VD / TTL Level (high impedance)
	AV INPUT 1- 3	VIDEO (Phono Jack Type) S-VIDEO (Mini DIN 4-pin) AUDIO L-R (Phono Jack Type × 2)	1.0 Vp-p (75 Ω) Y : 1.0 Vp-p (75 Ω), C : 0.286 Vp-p (75 Ω) 0.5 Vrms
	AV PROG. OUT	VIDEO (Phono Jack Type) AUDIO L-R (Phono Jack Type × 2)	1.0 Vp-p (75 Ω) 0.5 Vrms
	AUDIO OUT	AUDIO L-R (Phono Jack Type × 2)	0.5 Vrms
	COMPONENT VIDEO INPUT1-2	Y P_B / P_R AUDIO L-R (Phono Jack Type × 2)	1.0 Vp-p (including sync) 0.7 Vp-p 0.5 Vrms
	HDMI/AUDIO INPUT	HDMI type A Connector AUDIO L-R (Phono Jack Type × 2)	 0.5 Vrms
	DIGITAL AUDIO OUT	PCM / Dolby Digital, Fiber Optic	
	Display out	D-sub 26-pin, Digital RGB 24-pin	

Plasma Display unit

		TH-42XVS30UP	TH-50XVS30UP
Power Source		120 V AC, 50/60 Hz	
Power Consumption			
	Maximum	357 W	480 W
	Stand-by condition	Save OFF 0.8 W, Save ON 0.5 W	Save OFF 0.8 W, Save ON 0.5 W
	Power off condition	0.1 W	0.1 W
Display panel		Drive method : AC type 42-inch, 16:9 aspect ratio	Drive method : AC type 50-inch, 16:9 aspect ratio
	Contrast Ratio	3000:1	
Screen size		920 mm (W) × 518 mm (H) × 1,056 mm (diagonal)	1,106 mm (W) × 622 mm (H) × 1,269 mm (diagonal)
	(No.of pixels)	786,432 (1,024 (W) × 768 (H)) [3,072 × 768 dots]	1,049,088 (1,366 (W) × 768 (H)) [4,098 × 768 dots]
Dimensions (W × H × D)			
	Display unit only	42.6” (1,082 mm) × 25.4” (646 mm) × 3.6” (91 mm)	50.1” (1,272 mm) × 29.9” (760 mm) × 3.9” (98 mm)
	with speakers and pedestal	49.4” (1,254 mm) × 30” (763 mm) × 14.5” (369 mm)	56.9” (1,444 mm) × 34.5” (877 mm) × 15.7” (398 mm)
Mass (weight)			
	Display unit only	approx. 76.1 lbs	approx. 104.7 lbs
	with speakers and pedestal	approx. 107.6 lbs	approx. 142.6 lbs
Sound Speaker out (6 Ω)		16W [8 W + 8 W] (10 % THD)	
Accessories Supplied			
	Remote control	EUR7627Z40	
	Batteries for the remote control	2 × AA Size	
	AC cord		
	Cable fixing bands	(TMME203 or TMME187) × 2	
	F-Type antenna adapter	(for 5C-2V) × 2	
	Cable cover		
	Pedestal	TY-ST42XVS30	TY-ST50XVS30
	Speakers	TY-SP42XVS30	TY-SP50XVS30
Operating condition			
	Temperature	32 °F - 104 °F (0 °C - 40 °C)	
	Humidity	20 % - 80 %	
Connection terminals			
	Display in terminals	D-sub 26-pin Digital RGB 24-pin	

Note: Design and Specifications are subject to change without notice. Weight and Dimensions shown are approximate.

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VIDEO/COMPONENT/RGB/PC/HDMI input signals

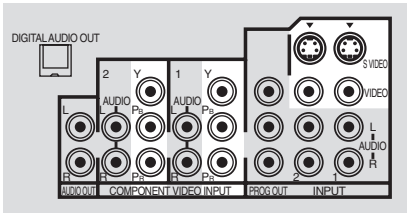
VIDEO input

	signal name	horizontal frequency(kHz)	vertical frequency(Hz)
1	NTSC	15.73	59.94

Applicable input signals (∗ mark)

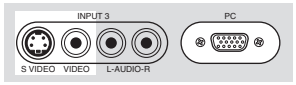
	signal name	horizontal frequency(kHz)	vertical frequency(Hz)	COMPONENT	PC	HDMI
1	525 (480) /60i	15.73	59.94	∗	∗	∗
2	525 (480) /60p	31.47	59.94	∗	∗	∗
3	750 (720) /60p	45.00	60.00		∗	
4	1,125 (1,080) /60i	33.75	59.94	∗	∗	∗
5	640 × 400 @70	31.47	70.00		∗	
6	640 × 480 @60	31.47	59.94		∗	
7	Macintosh 13” (640 × 480)	35.00	66.67		∗	
8	640 × 480 @75	37.50	75.00		∗	
9	852 × 480 @60	31.50	60.00		∗	
10	800 × 600 @60	37.88	60.32		∗	
11	800 × 600 @75	46.88	75.00		∗	
12	800 × 600 @85	53.67	85.06		∗	
13	Macintosh 16” (832 × 624)	49.73	74.55		∗	
14	1,024 × 768 @60	48.36	60.00		∗	
15	1,024 × 768 @70	56.48	70.07		∗	
16	1,024 × 768 @75	60.02	75.03		∗	
17	1,024 × 768 @85	68.68	85.00		∗	
18	Macintosh 21” (1,152 × 870)	68.68	75.06		∗	
19	1,280 × 1,024 @60	63.98	60.02		∗	
20	1,280 × 1,024 @75	79.98	75.03		∗	
21	1,280 × 1,024 @85	91.15	85.02		∗	
22	1,600 × 1,200 @60	75.00	60.00		∗	

Note: Signals without above specification may not be displayed properly.

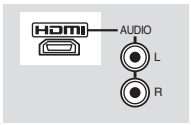


VIDEO input

COMPONENT input



VIDEO input **PC RGB input**



HDMI input

Customer’s Record

The model number and serial number of this product can be found on its back cover. You should note this serial number in the space provided below and retain this book, plus your purchase receipt, as a permanent record of your purchase to aid in identification in the event of theft or loss, and for Warranty Service purposes.

Model Number _____ Serial Number _____

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