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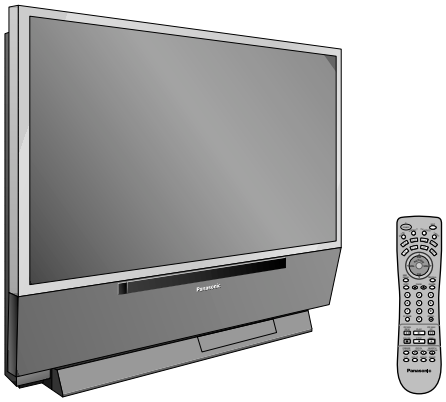
The following projector manual has not been modified or altered in any way.



Panasonic®

# Projection Television
# Operating Instructions

Model No. **PT-52DL52**

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

**English**

TQBC0512-1

**WARNING**

**RISK OF ELECTRIC SHOCK**
**DO NOT OPEN**

**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.

The pictorial representation of a hot surface within a triangle is intended to tell the user that parts inside the product are a risk of burns to persons.

**WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. Do not place liquid containers (flower vase, cups, cosmetics, etc.) above the set. (including on shelves above, etc.)**

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

## Trademarks

- DLP is a registered trademark of Texas Instruments.
- Certain audio features of this product are manufactured under a license from Desper Products, Inc. Spatializer® and the circle-in-square device are trademarks owned by Desper Products, Inc.
- VGA is a trademark of International Business Machines Corporation.
- Macintosh is a registered trademark of Apple Computer, USA.
- S-VGA is a registered trademark of the Video Electronics Standard Association.

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Licensed by BBE Sound, Inc. under USP4638258 and 4482866.
BBE and BBE symbol are registered trademarks of BBE Sound, Inc.

# Important Safety Instructions

1) Read these instructions.
   All the safety and operating instructions should be read before the appliance is operated.
2) Keep these instructions.
   The safety and operating instructions should be retained for future reference.
3) Heed all warnings.
   All warnings on the appliance and in the operating instructions should be adhered to.
4) Follow all instructions.
   All operating and use instructions should be followed.
5) Do not use this apparatus near water, for example, near a bathtub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like.
6) Clean only with dry cloth. Do not use liquid cleaners or aerosol cleaners. Use a dry cloth for cleaning.
7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
   Slots and Openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface.
8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
   This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11) Only use attachments / accessories specified by the manufacturer.
12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart / apparatus combination to avoid injury from tip-over.
    Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

13) Unplug this apparatus during lightning storms or when unused for long periods of time.
    This will prevent damage to the product due to lightning and power-line surges.
14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

**WARNING:** Because the temperature of the lamp unit is elevated immediately after its use, a direct touch to it may cause burns. After the lamp has cooled enough, replace the lamp unit.

**CAUTION :**

(1) This TV set is intended to be used with the following TV stand: model TY-S52DL52 for the PT-52DL52. Use with other stands may result in the TV set becoming unstable, possibly causing injury.

(2) Slots and openings in the cabinet and the back or bottom are provided for ventilation, and to ensure reliable operation of the projection TV and protect it from overheating. These openings must not be blocked or covered. There should be at least 10 cm of space from these openings.

# *Dear Panasonic Customer*

*Welcome to the Panasonic family of customers. We hope that you will have many years of enjoyment from your new projection television set.*
*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)**<br>**or send e-mail to : consumerproducts@panasonic.com**<br>**or visit us at www.panasonic.com** | **(U.S.A)** |
| **For assistance, please call : 787-750-4300**<br>**or visit us at www.panasonic.com** | **(Puerto Rico)** |
| **For assistance, please call : 1-800-561-5505**<br>**or visit us at www.panasonic.ca** | **(Canada)** |

**Notice: [ For USA only]**
This product has a High Intensity Discharge (HID) lamp that contains a small amount of mercury. It also contains lead in some components. Disposal of these materials may be regulated in your community due to environmental considerations. For disposal or recycling information please contact your local authorities, or the Electronics Industries Alliance: <http:// www.eiae.org.>

**FCC STATEMENT:**
**NOTE:** 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.

**FCC CAUTION:**
To assure continued compliance and prevent undesirable interference, use only the provided shielded VGA cable with 2 ferrite cores (Part# K1HA30DA0003) and shielded DIGITAL IN cable with 2 ferrite cores (Part# K1HA24DA0005) while connecting the Projection TV to a computer. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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

**FCC Declaration of Conformity**
**PT-52DL52**

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

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.

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# 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.
To ensure optimum color purity do not position magnetic equipment (motors, fans, other speakers, etc.) nearby.

## 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 electronics 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.

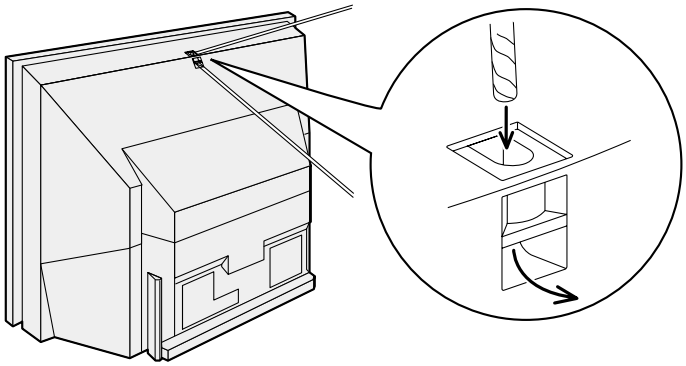
## AC Power Supply Cord

**CAUTION:** To prevent electric shock, match wide blade of plug to wide slot of AC outlet and fully insert. Do not use this (polarized) plug with a receptacle or other outlet unless the blade can be fully inserted to prevent blade exposure.

## Safety Precaution

Please take safety precautions to prevent the unit from falling over.
The unit may fall over during earthquakes, or if someone stands on or shakes the projection TV.

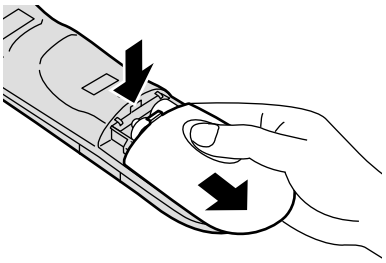
**Affixing to a wall**
Use a strong rope or a chain (not included) to fasten the projection TV firmly to a strong support such as a wall or pillar.



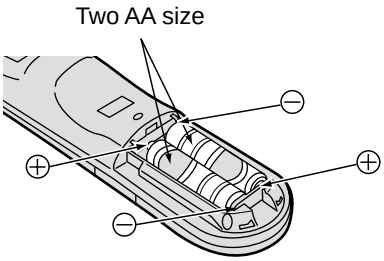
## Remote Control Battery Installation

Requires two AA batteries.

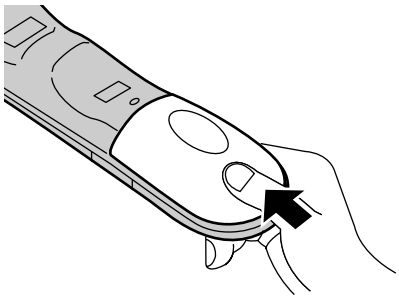
1. Turn the Transmitter face down. Remove top cover by pressing down on marking and sliding cover off in the direction indicated.



2. Install the batteries as shown in the battery compartment. (Polarity + or – must match the markings in the compartment.)




3. Replace the cover and slide in reverse until the lock snaps.



| *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 the remote control acts sporadically or stops operating the projection TV set.

# Replacing the lamp unit

The lamp unit is sold separately. To purchase a replacement, call the Panasonic accessory department, toll free at: 1-800-332-5368. (USA only)

**Lamp unit Part No. : TY-LA2000**

## Lamp unit replacement period

The lamp unit for the projection TV should be replaced after approximately 5,000 hours of use in the normal usage mode.

- Warning display after 5,000 hours of use
  When the power has been turned on after over 5000 hours of continued use, LAMP REPLACE will be displayed for approximately 1 min.
  A warning message to urge the replacement of the lamp will be displayed in red at the center of the screen.

LAMP REPLACE

**Important Points to keep in mind**
When replacing the lamp unit with a new one, pay attention to the following points.

**Warning:**
- Because the temperature of the lamp unit is elevated immediately after its use, a direct touch to it may cause burns. Please allow the lamp to cool before handling or replacing the lamp unit.

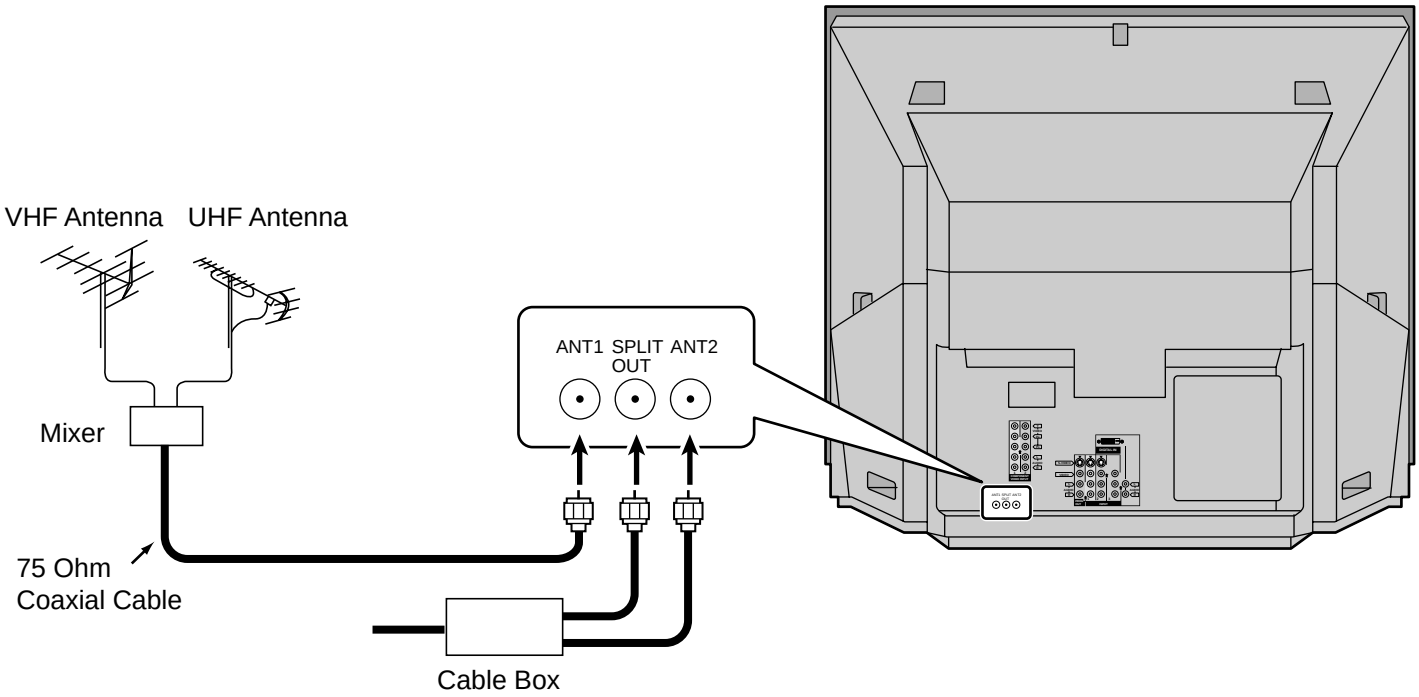
**Cautions for Lamp Unit Replacement:**
- Handle the removed old lamp unit carefully. If abusing it, it may have a risk of explosion.
- Wear gloves when replacing the lamp unit.
- If replacing the lamp unit becomes necessary during the operation of the TV, follow the procedure below to turn off the power and wait until the lamp unit cools completely.

1. Press the POWER button on the remote control unit to turn off the power.
2. Wait for about 90 seconds until the cooling fan stops.
   **∗ The lamp cooling fan will continue to operate for about 90 seconds after turning off the power. Do not unplug the power cord from the outlet until the fan has stopped. Avoid interrupting the power line such as by using circuit breakers or switchable power strips.**
3. Unplug the power cord from the outlet.

**Refer to the instructions enclosed with the lamp unit (part no.: TY-LA2000) when replacing the lamp.**

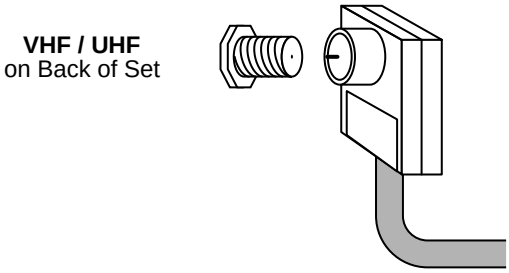
# Connecting the Aerial cable to the RF In Terminal

**Antenna Connection -** For proper reception of VHF / UHF channels, an external antenna is required. For best reception an outdoor antenna is recommended. Antenna Mode must be set to projection TV.



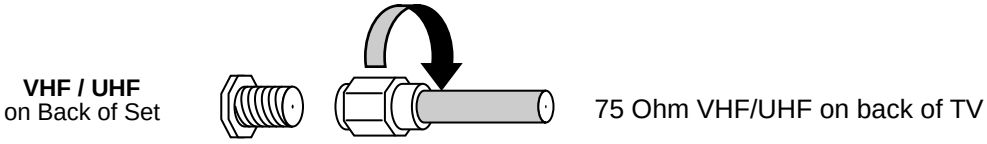

# Antenna / Cable Connection

### Incoming Cable from Home Antenna




**Cable Connection -** For reception of cable channels (01 - 125) connect the cable supplied by your local cable company. Antenna Mode must be set to CABLE. (Refer to Antenna Mode section.)

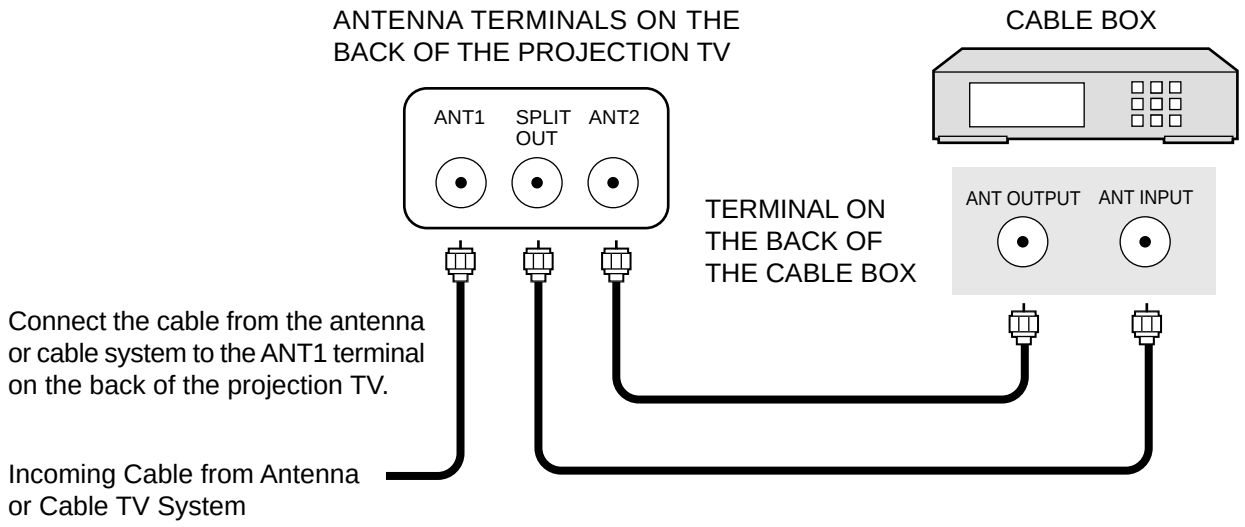
### Incoming Cable from Cable Company




**Note:**
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.

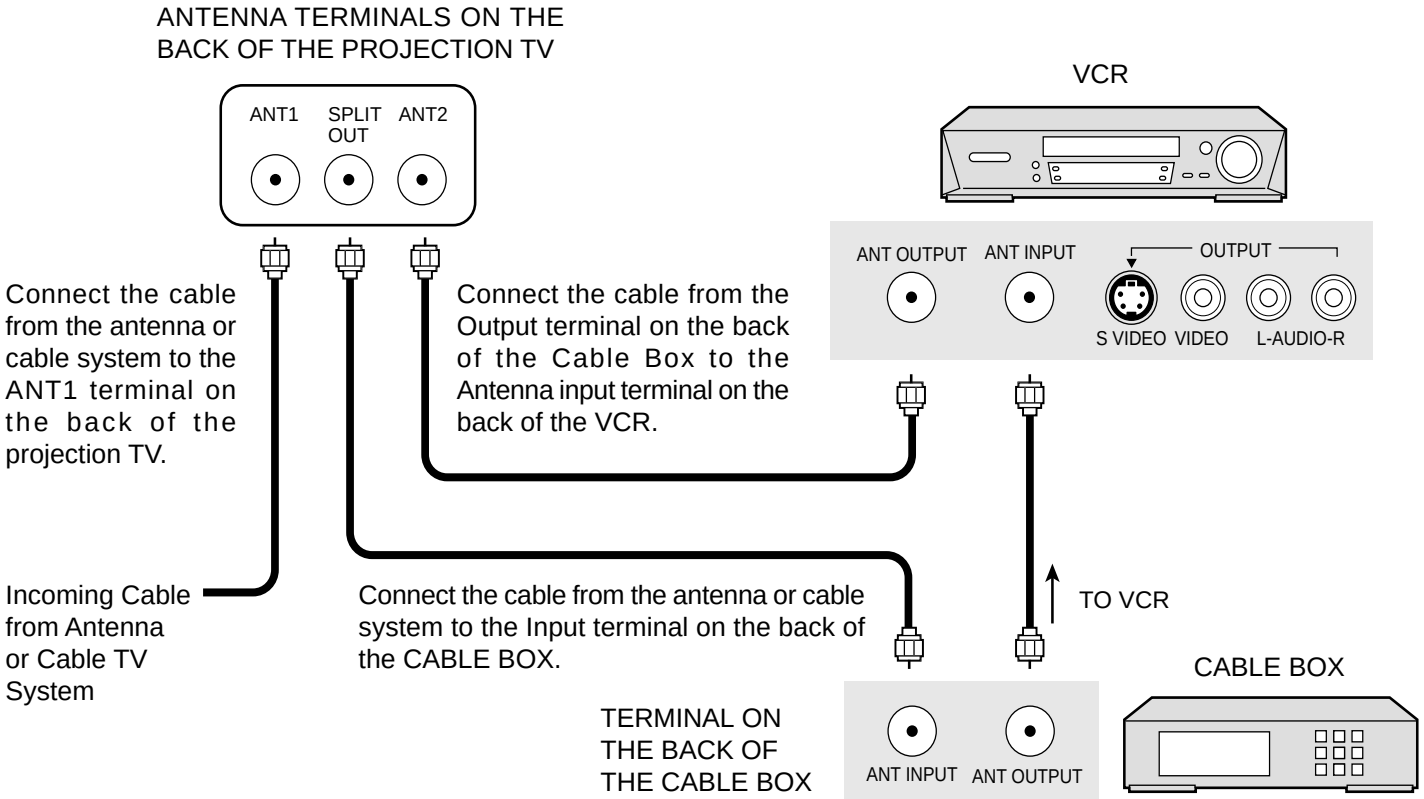
## Antenna Connection (Cable Box, no VCR)

Use this configuration when connecting the projection TV to a cable TV system using a Cable Box.




## Antenna Connection (Cable Box, and VCR)

Use this configuration when connecting the projection TV to a cable TV system using a Cable Box and VCR.



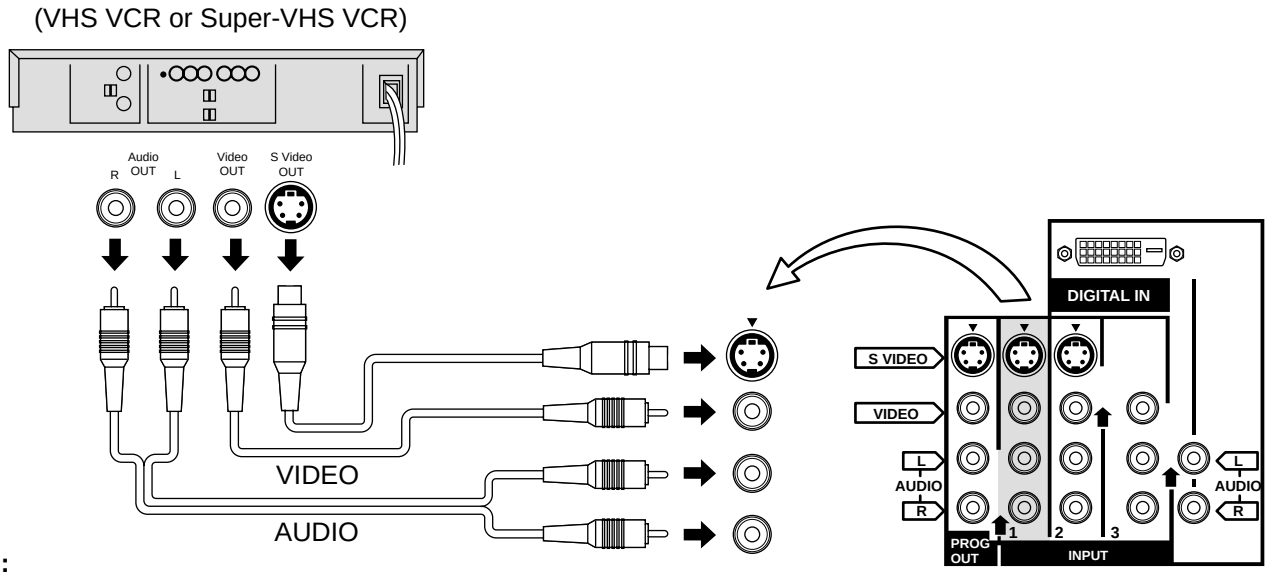

**Notes:**

(1) When the antenna cable is connected to the projection TV antenna terminal via a cable box or VCR, set the TV channel to CH3 or CH4 cable, after select ANT2 in the PROGRAM CHANNELS. (See page 23) This does not apply when signal is input from VIDEO INPUT.

(2) To use special features such as Favorite Channel Captions, ANT1 must be selected in the PROGRAM CHANNELS. (See page 23)

# How to connect the “1, 2, 3, 4” Input Terminals

### Connects VCRs and other peripheral equipment



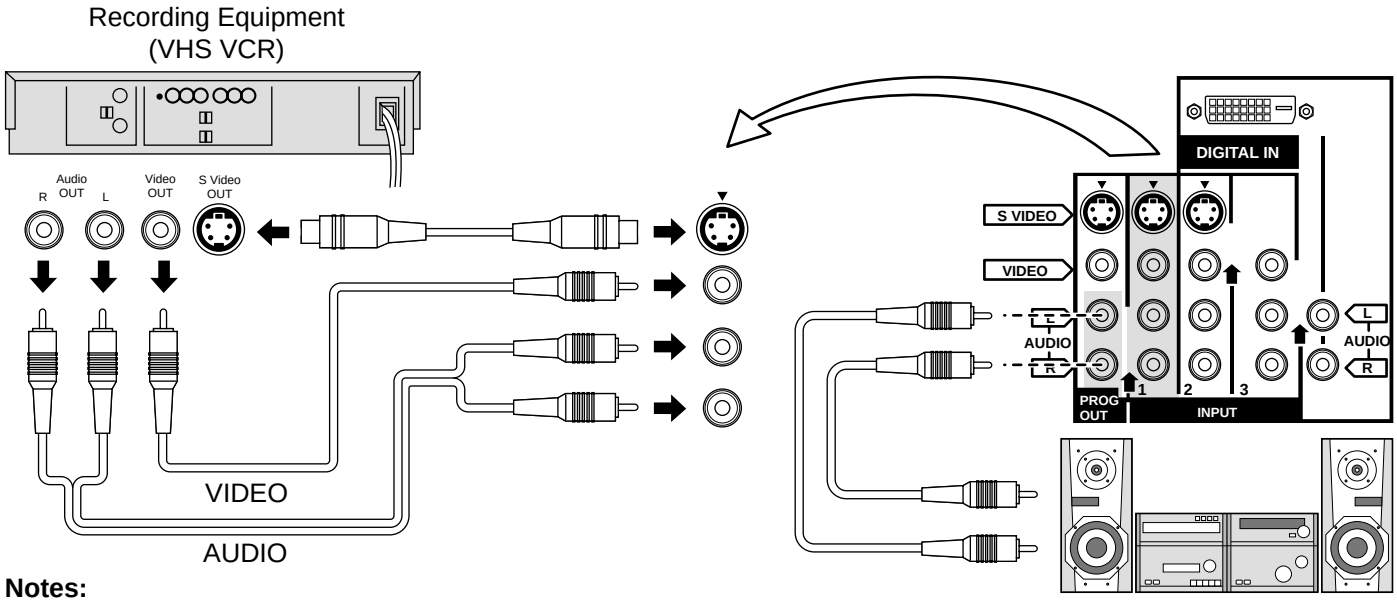

**Notes:**

(1) Similar connections are available at the INPUT 1, 2, 3, 4 input terminals.
Input 4 is located on the front of the unit.
Select the desired VIDEO input position by pushing the TV/VIDEO button. (See page 15)

(2) When connecting video cables, priority is given to the S Video cable when the S Video input terminal and the video input terminal are connected at the same time.

# How to connect the AV Prog. Out Terminals

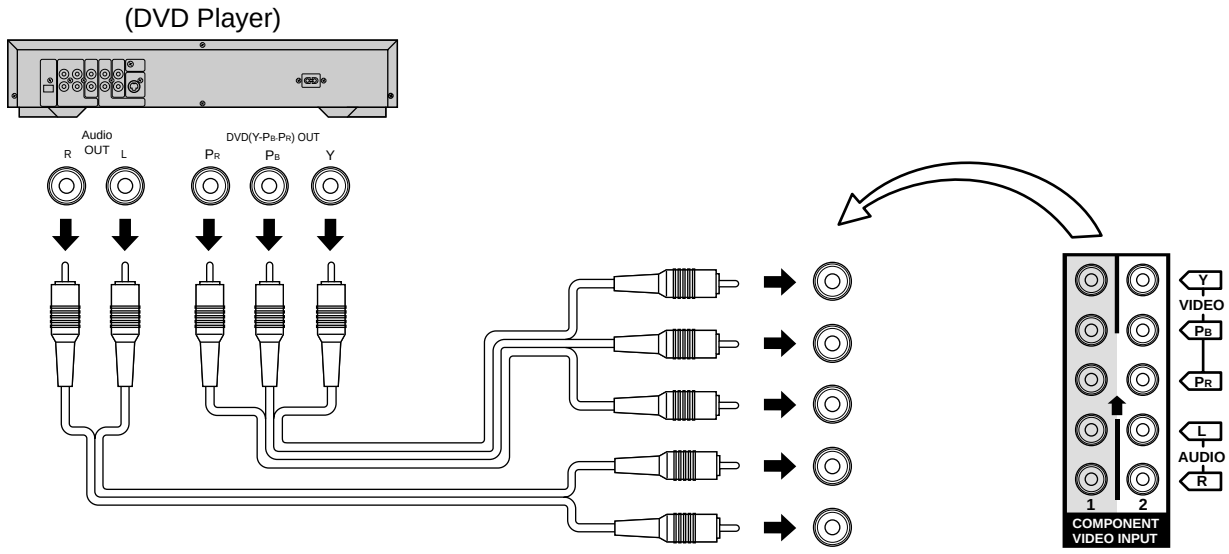
The “Prog. Out” Terminals output the same signals as the main picture on the projection TV screen and sound from the speaker at that time, e.g. TV programs or signals from INPUT 1, 2, 3, 4 terminals.




**Notes:**

(1) Never connect the VIDEO IN and Prog. OUT terminals to the same video recorder, as this could cause incorrect operation.
(2) The monitor output emits the main picture’s normal video and audio signals.
(3) Even if the television is in picture-out-picture condition, Prog. OUT terminals output the same signals as main picture on the screen and sound from speaker. Sub picture including still, channel search, etc. will not be output at the PROG. OUT terminals.
(4) Signal (Y, PB, PR) is not output at the Prog. OUT terminals.
(5) To AUDIO AMP terminals cannot be used directly with external speakers.

# How to connect the COMPONENT VIDEO Input Terminals

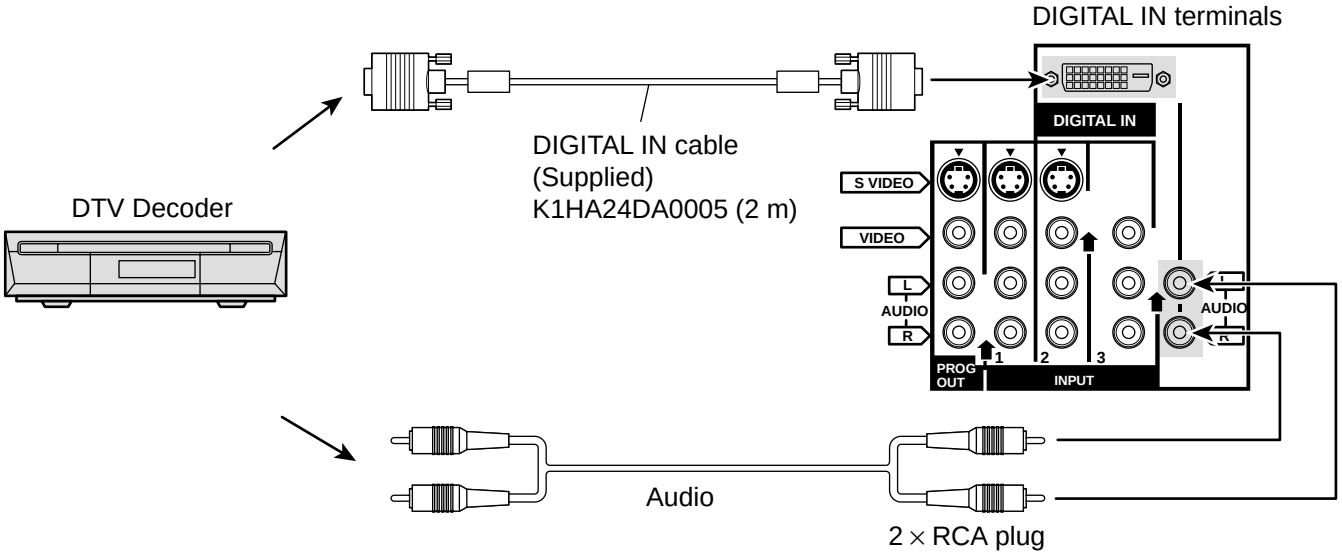



**Note:**
Similar connections are available at the COMPONENT VIDEO Input 1, 2 Terminals.

# How to connect the DIGITAL IN Terminals

## 1. Connecting a DTV Decoder to DIGITAL IN

When connecting a DTV decoder to DIGITAL-IN, be sure not to select “SKIP” or “PC” from the INPUT LABEL menu. Failing to do so may result in a distorted display or black out (refer to page 36).

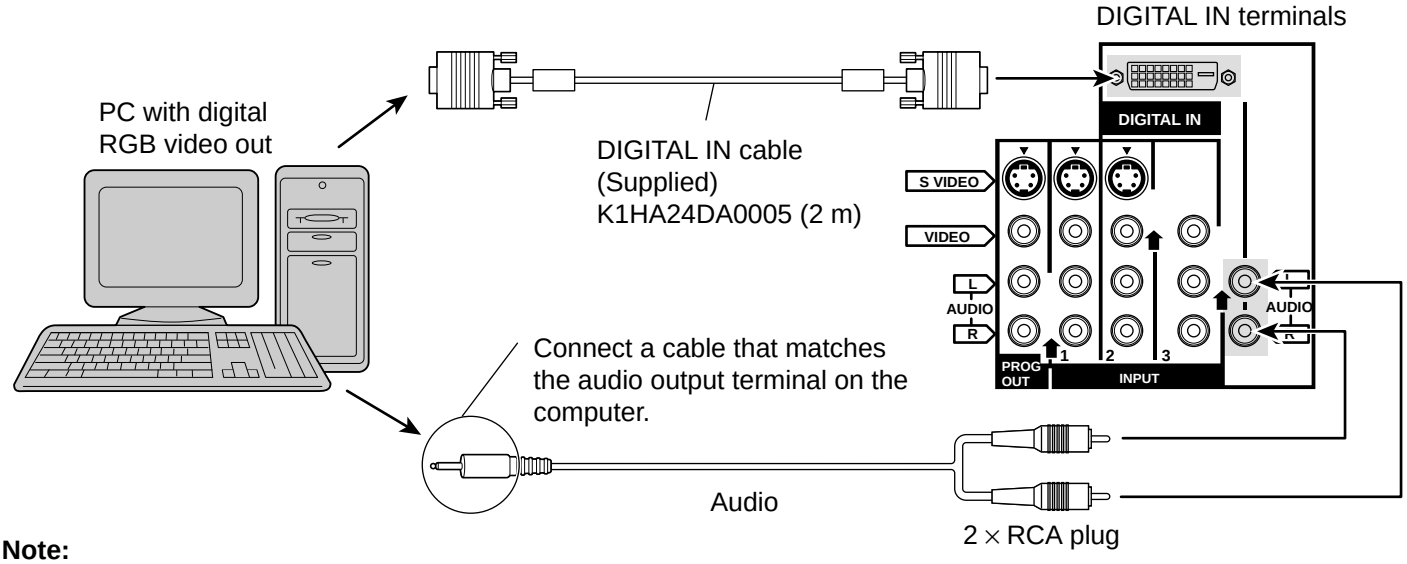



By inputting a High-bandwidth Digital Content Protection high-definition picture source to the DIGITAL IN terminal of this television, high-definition pictures can be displayed on the screen in their digital form. (This terminal is for use in the future when High-bandwidth Digital Content Protection DTV decoders, DVD players and D-VHS are put on the market.)

**Note:**
The DIGITAL IN terminal can only be used with 1080i, 720p and 480p picture signals. Set the DTV Decode DIGITAL OUT terminal Output setting to 1080i, 720p or 480p. For detailed information, refer to the DTV decoder instruction manual. If you cannot display the picture because your DTV decoder 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.

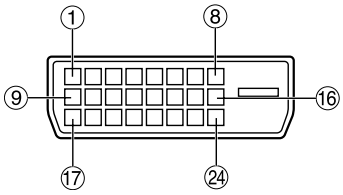
## 2. Connecting a PC to DIGITAL IN

When connecting a PC to DIGITAL-IN, be sure to select “PC” from the INPUT LABEL menu. Failing to do so may result in a distorted display or black out (refer to page 36).




**Note:**
If your PC does not support the Plug-and-Play capability (DDC1/2B) for displays, it will require reconfiguration after the display is connected to the PC.

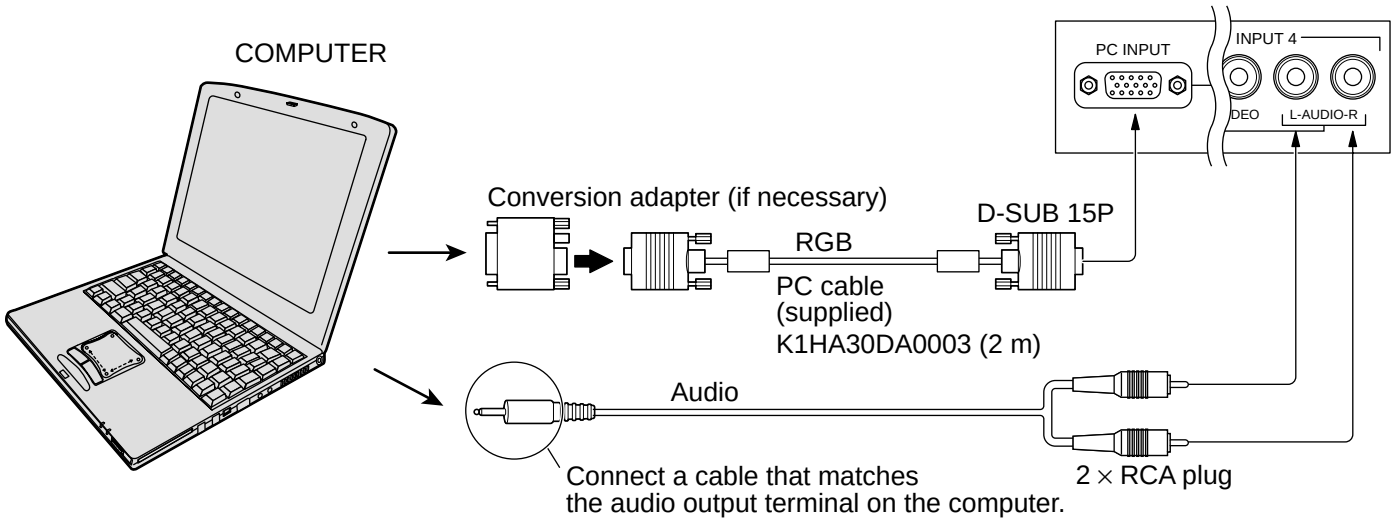
**Digital RGB Input Connector Pin Layouts**



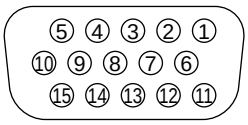

Connection port view

| Pin No. | Signal Name | Pin No. | Signal Name |
|---|---|---|---|
| ① | T.M.D.S. data 2- | ⑬ | ——— |
| ② | T.M.D.S. data 2+ | ⑭ | +5 V DC |
| ③ | T.M.D.S. data 2 shielded | ⑮ | Ground |
| ④ | ——— | ⑯ | Hot plug sense |
| ⑤ | ——— | ⑰ | T.M.D.S. data 0- |
| ⑥ | DDC clock | ⑱ | T.M.D.S. data 0+ |
| ⑦ | DDC data | ⑲ | T.M.D.S. data 0 shielded |
| ⑧ | ——— | ⑳ | ——— |
| ⑨ | T.M.D.S. data 1- | ㉑ | ——— |
| ⑩ | T.M.D.S. data 1+ | ㉒ | T.M.D.S. clock shield |
| ⑪ | T.M.D.S. data 1 shielded | ㉓ | T.M.D.S. clock+ |
| ⑫ | ——— | ㉔ | T.M.D.S. clock- |

# How to connect the PC Input Terminals




**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 | GND (Ground) |
| ② | G | ⑦ | GND (Ground) | ⑫ | SDA |
| ③ | B | ⑧ | GND (Ground) | ⑬ | HD / SYNC |
| ④ | GND (Ground) | ⑨ | NC (not connected) | ⑭ | VD |
| ⑤ | GND (Ground) | ⑩ | GND (Ground) | ⑮ | SCL |

**Notes:**

(1) The PC input terminals are DDC1/2B-compatible. If the computer being connected is not DDC1/2B-compatible, you will need to make setting changes to the computer at the time of connection.
(2) Some PC models cannot be connected to the set.
(3) There is no need to use an adapter for computers with PC / AT compatible D-SUB 15P terminal.
(4) The computer shown in the illustration is for example purposes only.
(5) Additional equipment and cables shown are not supplied with this set.
(6) The picture will become dark if a PC signal with a vertical scanning frequency of 62 Hz is input. To obtain the optimum picture quality with the projection TV, a vertical scanning frequency of 60 Hz is recommended.
(7) Do not set the horizontal and vertical scanning frequencies for PC signals which are above or below the specified frequency range.

# Digital and analog RGB signals that can be input

The table below lists the different types of digital and analog RGB signals that can be input.
If a signal which differs greatly from any of the types listed below is input, the picture image may not be displayed correctly, or a black background may displayed.

∗ Mark:
Input signal can be displayed.

| Display mode name | No. of dots (H × V) | Horizontal scanning frequency (kHz) | Vertical scanning frequency (Hz) | DIGITAL IN | PC INPUT (Analog) |
|---|---|---|---|---|---|
| VGA400 | 640 × 400 | 31.5 | 70.1 | ∗ | ∗ |
| VGA480 | 640 × 480 | 31.5 | 59.9 | ∗ | ∗ |
| SVGA | 800 × 600 | 37.9 | 60.3 | ∗ | ∗ |
| XGA | 1024 × 768 | 48.4 | 60.0 | ∗ | ∗ |
| MAC16 | 832 × 624 | 49.7 | 74.6 | | ∗ |
| 720p | 1280 × 720 | 45.0 | 60.0 | ∗ | |

**Note:**
The number of dots for this set is 800 × 600 for NORMAL display. Number of dots other than 800 × 600 in the above data, will be converted to 800 × 600 (with the exception of MAC 16, which will be displayed in 832 × 624 dots).

# Location of Controls

## Illuminated Remote Control

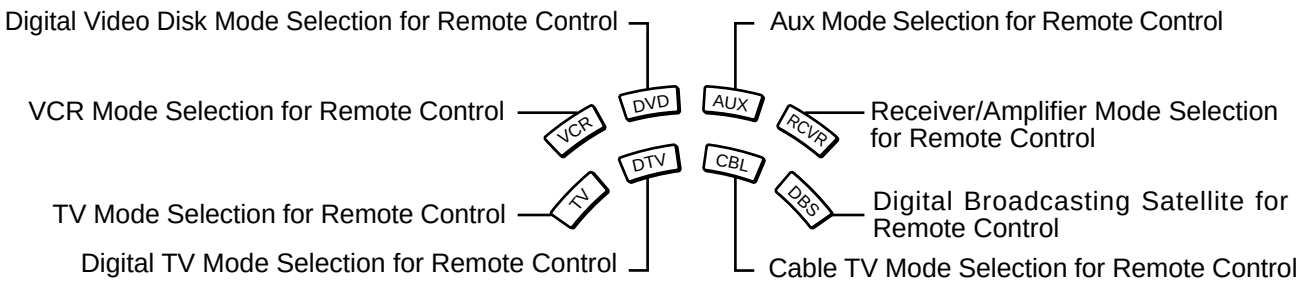
**Power button**
Press to turn the TV ON or OFF (See page 18, 19).
**Note:** The TV's power cord must first be plugged into the wall outlet and then turned on at the POWER switch (standby mode).

**ASPECT button**
Change of screen size (See page 44).

→ JUST → 4 : 3 → ZOOM1 → ZOOM2 → FULL

**MUTE button**
Press this button to mute the sound, press again to cancel the mute.

**Mode Selection buttons**
Selects the operation mode for the remote control. (See page 58)




R-TUNE

**R-TUNE button**
Switches to previously viewed channel or video mode.

**Operation of other Device**

| Buttons / Device | PIP MIN REW / PIP MAX FF | PLAY | PAUSE | STOP |
|---|---|---|---|---|
| TV | PIP Minimize/Maximize | – | – | – |
| VCR | VCR REW/FF | PLAY | Pause | STOP |
| CABLE/DBS | – | – | – | – |
| DVD/LD/CD | Skip Search REW/FF | PLAY | Pause | STOP |
| RCVR | Surround –/+ | – | – | – |

| Buttons / Device | REC | FREEZE TV/VCR | PIP CH VCR CH | SEARCH OPEN/CLOSE |
|---|---|---|---|---|
| TV | – | PIP or SPLIT FREZE | PIP or SPLIT CH up/down | PIP Search |
| VCR | VCR RECORD | TV/VCR Switch | VCR CH up/down | – |
| CABLE/DBS | DBS RECORD | TV/DBS Switch | TV/DBS CH up/down | – |
| DVD/LD/CD | – | – | – | OPEN/CLOSE |
| RCVR | – | – | – | – |

**TV/VIDEO button**
The input mode changes each time this button is pressed.
[Example]

→ TV → COMPONENT 1 → COMPONENT 2 → VIDEO 1 → VIDEO 2 → VIDEO 3 → VIDEO 4 → DIGITAL-IN → PC →

**SAP button**
Selects Audio mode (See page 37).

→ STEREO → SAP → MONO →

**Lights the remote control buttons.**
Press to illuminate remote buttons.

**Changes to the next channel up**
Moves cursor upward during menu mode.

**Reduces volume**
Moves cursor to the left during menu mode.

**Increases volume**
Moves cursor to the right during menu mode.

**Displays menu**
Press to access DTV, DBS or DVD menus.
During TV mode press to select BBE ON or BBE OFF.

Press to display time, channel, sleep timer and other options.

**Changes to the next channel down**
Moves cursor downward during menu mode.

Page up/down for DBS, skip +/- for DVD & CD.

GUIDE button for DBS.

Returns to normal viewing from the MENU screen.
Previous item in MENU.

**Direct program number selection buttons**

PROG ⊖ **PROG dash button**
Program dash channel numbers for DTV and DBS.

**Swap pictures in Split Screen and Picture in Picture operation** (See page 40, 43).

**Move PIP frame in Picture in Picture Operation** (See page 41).

**Split Screen** (see page 42)

**Picture in Picture Operation** (see page 40)

# Controls and Terminals on the Projection TV

## ■ FRONT

POWER INDICATOR
G-POWER ON
(see page 18, 19)

LAMP
This indicator lights up when there is a malfunction with the lamp unit (see page 7, 65)

TEMP
This indicator lights up when there is an abnormal temperature in the unit (see page 65)

POWER SWITCH
(see page 18)

POWER
G-POWER ON LAMP TEMP

Remote Control Sensor (see page 18, 19)

Volume up(+) / down(–) buttons (see page 15, 17)

Input mode selection buttons (see page 15)

Action button (Press to make selections.)

Channel up / down buttons
(see page 15, 17)

Open

ACTION TV/VIDEO ◀VOLUME▶ ▼CHANNEL▲

Press the ▲ mark on the center of the front cover to open.

Lamp unit
(see page 7)

Speaker panel

Open

PC INPUT

INPUT 4
S-VIDEO VIDEO L–AUDIO–R

PC Input terminal

Input4 terminals
Video camera and TV game cable terminal

## ■ REAR

Y
VIDEO
PB
PR
L
AUDIO
R
1 2
COMPONENT VIDEO INPUT

Component signal input
(see page 11)

DIGITAL IN Terminals (see page 11, 12)

Prog out terminals
(see page 10)

DIGITAL IN

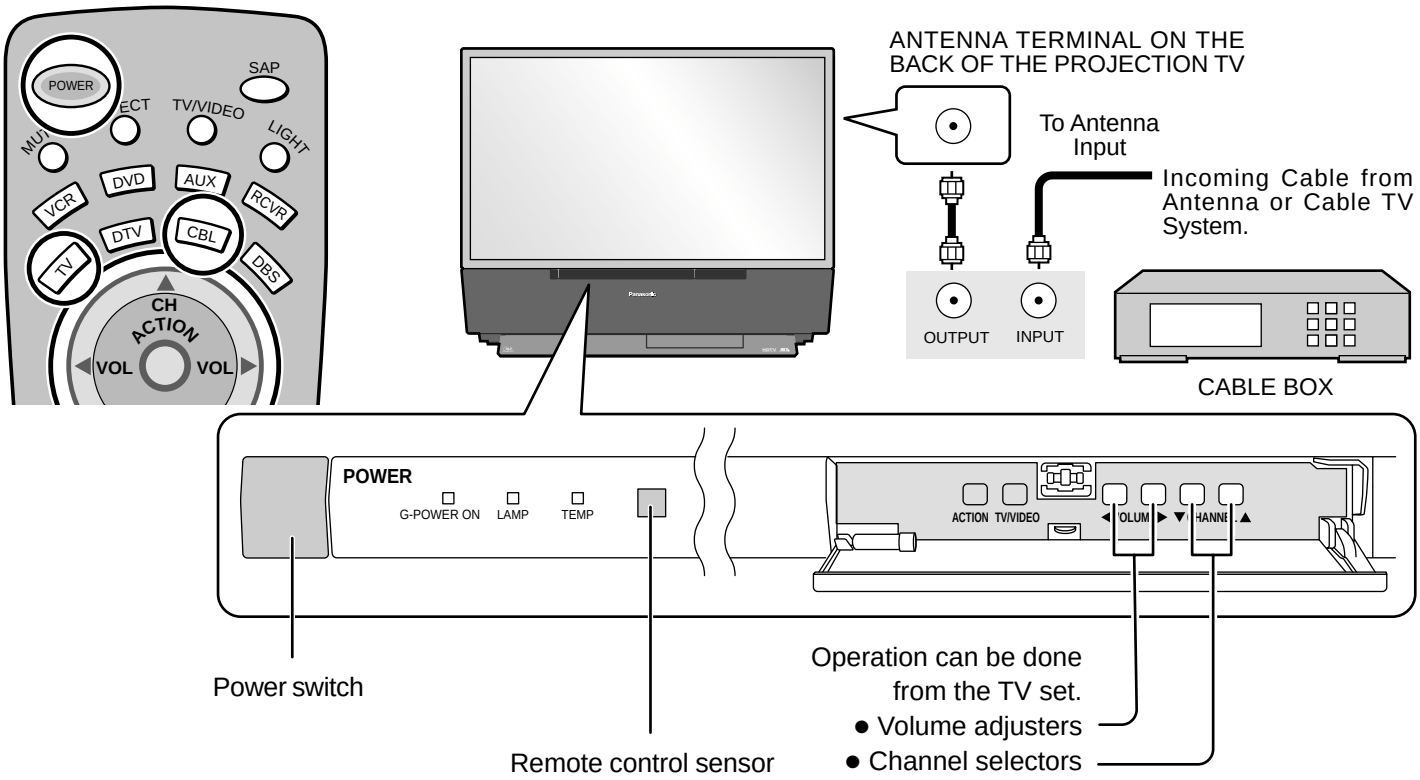
S VIDEO
VIDEO
L
AUDIO
R
1 2 3
PROG OUT
INPUT

Input1 terminals
(see page 10)

Input2 terminals (see page 10)

Input3 terminals (see page 10)

# Cable TV / VHF, UHF and CATV




## Cable TV

When the antenna cable is connected to the TV antenna terminal via a cable box or VCR, set the TV channel to CH3 or CH4.
This does not apply when signal is input from VIDEO INPUT.

**Confirming**
Confirm that registration with cable TV provider and connection of equipment are completed. Turn the CABLE BOX on and select the desired volume level.

**1**  Press  to confirm.

**2** Press while pointing the remote control towards the CABLE BOX.

**Note:**
The remote control code number is set for Panasonic products.
When peripheral equipment does not operate, reset code (See page 58 - 59).

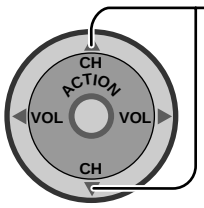
**3** Operate the CABLE BOX and select the desired volume level.

## VHF, UHF and CATV

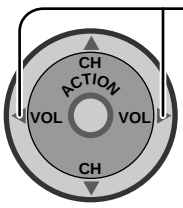
**1** Press to operate the TV set with the remote control.

**2** Press to turn the TV on (See page 18, 19).

**3** Press to select the desired channel.



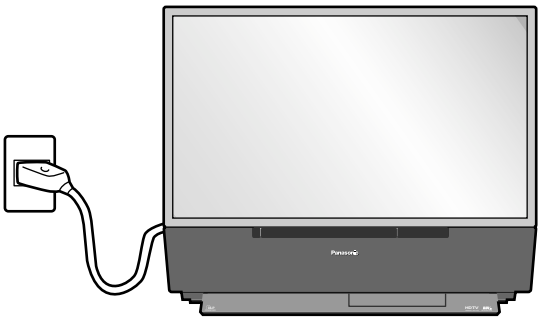

**4** Select the desired volume level.




**Notes:**
(1) The channel number and volume level remain the same even after the TV is turned off.
(2) Power consumption and howls can be reduced if the volume level is lowered.

# Power ON / OFF

## Connecting the Plug to the Wall Outlet

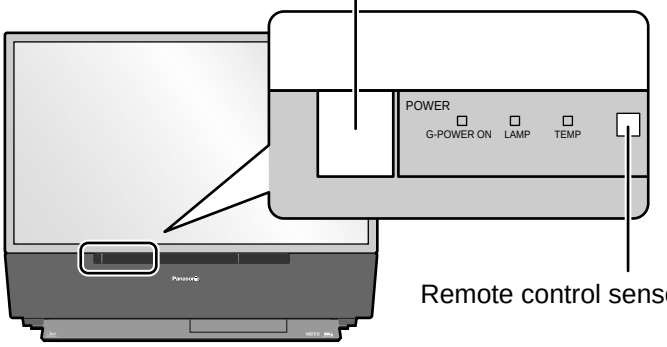


The projection TV must first be switched on at the wall outlet.
The projection TV will become standby mode.

## Turning the Power ON and OFF

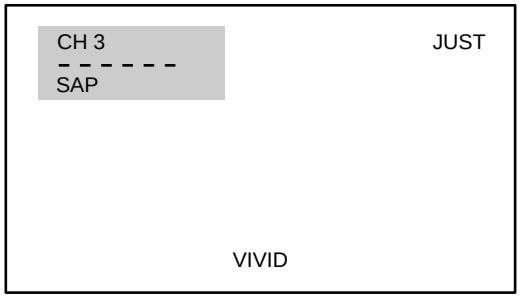
Always be sure to follow the procedure given below to turn the projection TV power ON and OFF.

- The lamp cooling fan will continue to operate for approximately 90 seconds after the power is turned off by the remote control. After the cooling fan has stopped, the power indicator will not illuminate (Stand-by).
  If you wish to turn the power ON while the cooling fan is operating, press the power button on the remote controller. The power indicator on the TV will then flash in green, and the projection TV will turn ON as soon as the cooling fan stops.
  In normal circumstances, use the remote control to turn the power OFF (turning the picture OFF).
  **Do not disconnect the power cord from the power outlet and do not open any circuit breakers while the cooling fan is still operating.**



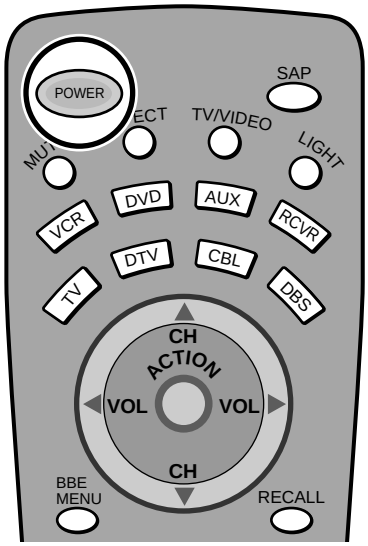

Push the Power switch on the projection TV to turn the power on.

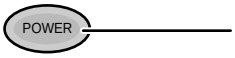
Push the Power switch on the projection TV to turn the set off.




Example: The screen above is displayed for a while after the projection TV is turned on. (Setting condition is an example.)

**Power (ON/Off) button**




Push the Power button to turn the projection TV ON, from Stand-by mode.

The Power Indicator will blink Green.

↓ Approximately 10 seconds

The Power Indicator will become Green.

Push the Power button to turn the projection TV to Stand-by mode.

The Power Indicator will become Orange.

↓ Approximately 10 seconds

The Power Indicator will blink Orange.

↓ Approximately 90 seconds.

The power Indicator light will go out.

**Note:**
The TV will still consume some power as long as the power cord is still inserted into the wall outlet.

### The Power Indicator

| LED | ACTION |
|---|---|
| Not illuminated | Stand – by |
| Green | Power – ON |
| Green blink | Power – ON<br>(approximately 10 seconds after) |
| Orange | Power – OFF (Blanking mode)<br>(approximately 10 seconds after) |
| Orange blink | Power – OFF (Cooling mode)<br>(approximately 90 seconds after) |

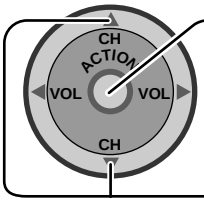
## Menu Language Selection

In SET UP Menu, Select IDIOMA/LANGUE to change menu language to ENGLISH, ESPAÑOL (Spanish) or FRANÇAIS (French). (refer to page 22)

→ ENGLISH ⟷ ESPAÑOL ⟷ FRANÇAIS ←

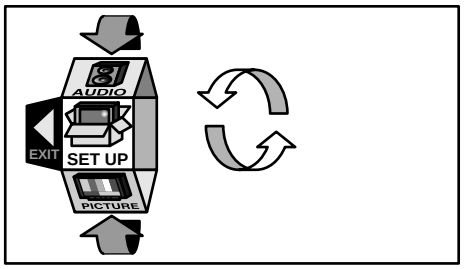
# Roller Guide Menu Navigation

**1**

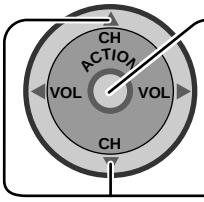



Press to display the roller guide menu.

Press to rotate to desired icon.

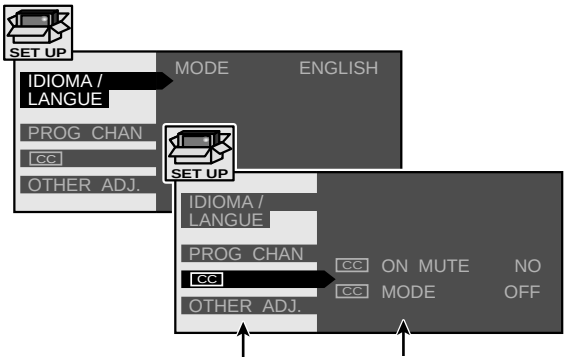



**2**




Press to display the main menu and submenu field.

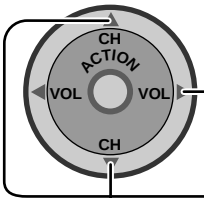
Press to select main menu feature.




Main menu field

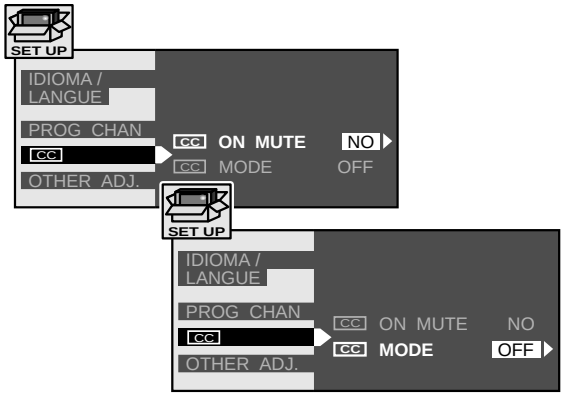
Submenu field

**3**

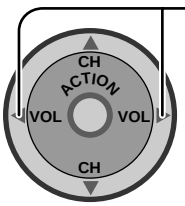



Press to enter submenu field.

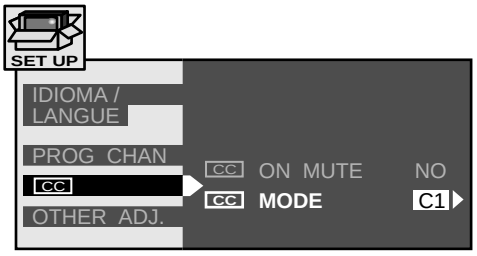
Press to select desired submenu feature.



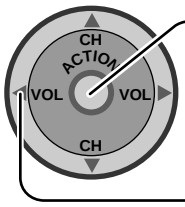

**4**




Press to select or adjust.

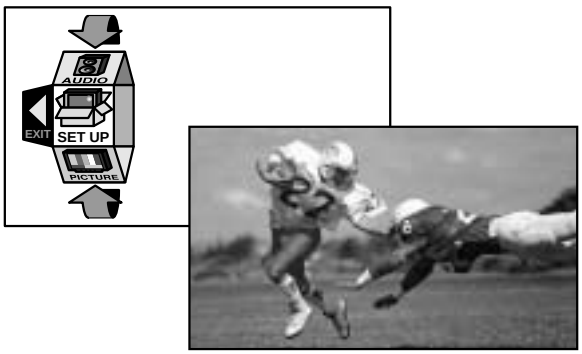



**5**




Press twice to return to the roller guide.

Press to exit roller guide.
This returns the set to the normal viewing.




NORMAL PICTURE

## SET UP

SET UP
- IDIOMA / LANGUE
  - MODE ENGLISH
- PROG CHAN
- CC
- OTHER ADJ.

SET UP
- IDIOMA / LANGUE
- PROG CHAN
- CC
  - CC ON MUTE NO
  - CC MODE OFF
- OTHER ADJ.

SET UP
- IDIOMA / LANGUE
- PROG CHAN
  - MODE CABLE
  - ANTENNA ANT1
  - AUTO PROGRAM
  - MANUAL PROGRAM
- CC
- OTHER ADJ.

SET UP
- IDIOMA / LANGUE
- PROG CHAN
- CC
- OTHER ADJ.
  - AUTO POWER ON OFF
  - CHAN BANNER OFF

## PICTURE

PICTURE
- VIDEO ADJ.
  - PIC MODE STANDARD
  - COLOR
  - TINT
  - BRIGHTNESS
  - PICTURE
  - SHARPNESS
  - NORMAL NO
- OTHER ADJ.
- POS ADJ.
- PC ADJ.

PICTURE
- VIDEO ADJ.
- OTHER ADJ.
  - COLOR TEMP NORMAL
  - BLACK EXT. ON
  - VIDEO NR OFF
  - 3D Y / C FILTER ON
  - COLOR MATRIX SD
  - FREEZE SPLIT
- POS ADJ.
- PC ADJ.

PICTURE
- VIDEO ADJ.
- OTHER ADJ.
- POS ADJ.
  - V-POSITION 0
  - H-POSITION 0
- PC ADJ.

## CHANNELS

CHANNELS
- FAVORITES
  - CHANNEL SCAN FAV
  - ENTER CHANNEL 15
  - FAVORITE CHANNELS
    2 5 8 10
    15 18 25
- CAPTION

CHANNELS
- FAVORITES
- CAPTION
  - PRESET CAPTION
  - MANUAL CAPTION
  - INPUT LABEL

PICTURE
- VIDEO ADJ.
- OTHER ADJ.
- POS ADJ.
- PC ADJ.
  - CLOCK PHASE 16
  - DOT CLOCK 0
  - SIZE 2

## LOCK

LOCK
- MODE
  - LOCK SET CHANNEL
  - BLOCK PROGRAMS : U.S. MOVIES
  - STATUS ON
  - CHANGE CODE - - - -
- HOW LONG ?

LOCK
- MODE
- HOW LONG ?
  - 12HOURS

## TIMER

TIMER
- CLOCK SET
  - TIME 12 : 00 AM
  - DAY SUN
- SLEEP
- TIMER1
- TIMER2

TIMER
- CLOCK SET
- SLEEP
  - HOW LONG ? 30
- TIMER1
- TIMER2

TIMER
- CLOCK SET
- SLEEP
- TIMER1
  - DAY Daily
  - ON TIME 12 : 00 PM
  - OFF TIME 13 : 00 PM
  - ENTER CHANNEL 5
- TIMER2
  - SET YES

## AUDIO

AUDIO
- AUDIO ADJ.
  - MODE STEREO SAP MONO
  - BASS
  - TREBLE
  - BALANCE
  - NORMAL NO
- OTHER ADJ.
- SURROUND
- SPEAKERS

AUDIO
- AUDIO ADJ.
- OTHER ADJ.
- SURROUND
  - MODE ON
- SPEAKERS

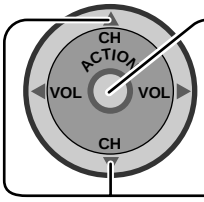
AUDIO
- AUDIO ADJ.
- OTHER ADJ.
  - AI SOUND ON
  - BBE ON
- SURROUND
- SPEAKERS

AUDIO
- AUDIO ADJ.
- OTHER ADJ.
- SURROUND
- SPEAKERS
  - ON

# SET UP Operation

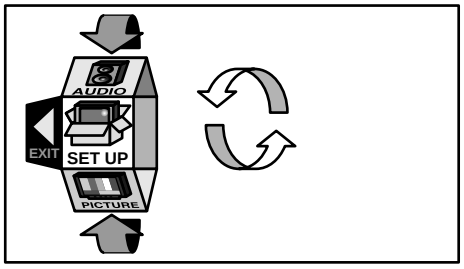
## SET UP

**1**

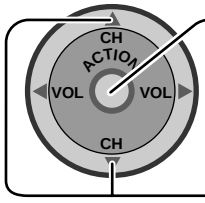



Press to display the roller guide menu.

Press to rotate to SET UP.




**2**

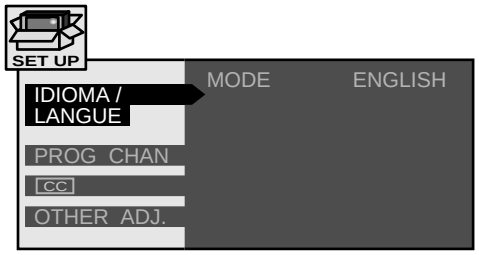



Press to display SET UP.

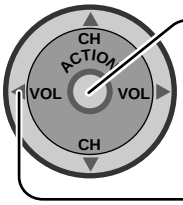
Press to select the main menu.

⇩

Proceed to each adjustment item of the selected main menu.

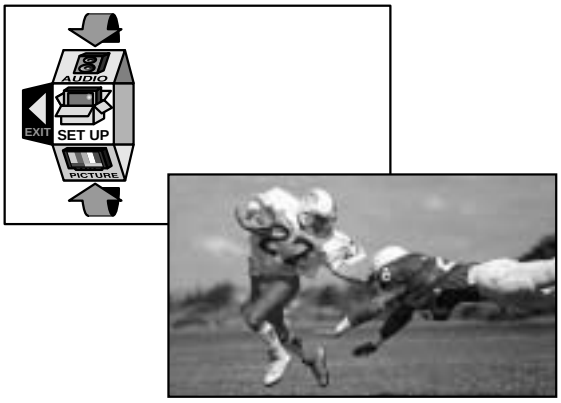



**3 To end Adjustment:**




Press twice to return to the roller guide.

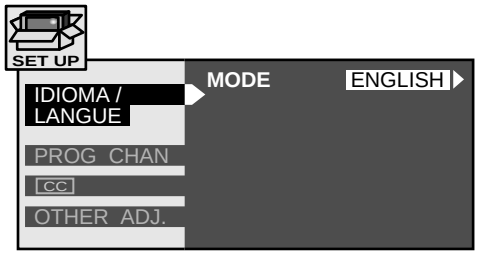
Press to exit roller guide.
This returns the set to normal viewing.



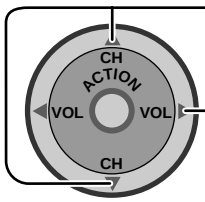

NORMAL PICTURE

## MENU Languages

In SET UP Menu, select IDIOMA / LANGUE to change menu language to ENGLISH, ESPAÑOL (Spanish) or FRANÇAIS (French).



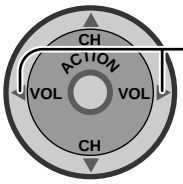

**1**




Press to select IDIOMA / LANGUE.

Press to enter submenu field.

**2**



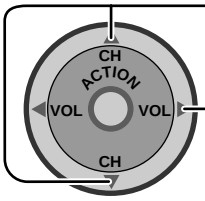

Press to select ENGLISH, SPANISH or FRENCH.

→ ENGLISH ⟷ ESPAÑOL ⟷ FRANÇAIS ←

## MODE Selection

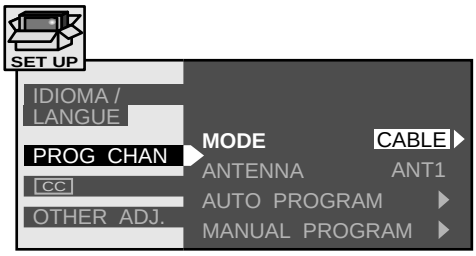
To select either CABLE or TV.

**1**

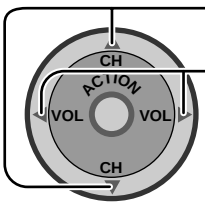



In SET UP menu press to select PROG CHAN.

Press to enter submenu field.




**2**




Press to select MODE.

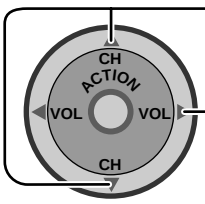
Press to select CABLE or TV.

CABLE ⟷ TV

## ANTENNA Selection

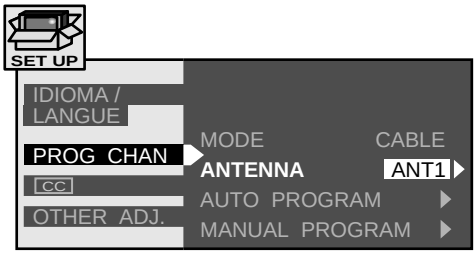
To select either ANT1 or ANT2.

**1**

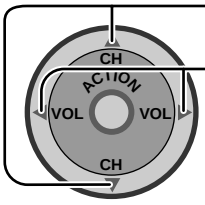



In SET UP menu press to select PROG CHAN.

Press to enter submenu field.




**2**




Press to select ANTENNA.

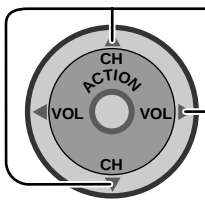
Press to select ANT1 or ANT2.

ANT1 ⟷ ANT2

# AUTO PROGRAM

To automatically program all channels with a signal.

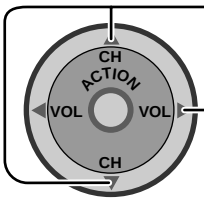
**1**




In SET UP menu press to select PROG CHAN.

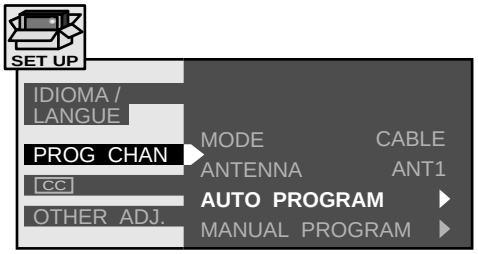
Press to enter submenu field.

**2**




Press to select AUTO PROGRAM.

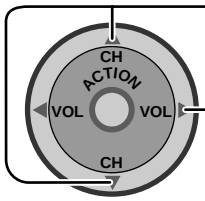
Press to start AUTO PROGRAM.




# MANUAL PROGRAM

To manually add or delete channels.

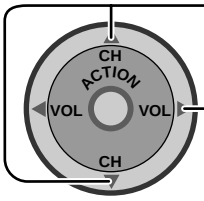
**1**




In SET UP menu press to select PROG CHAN.

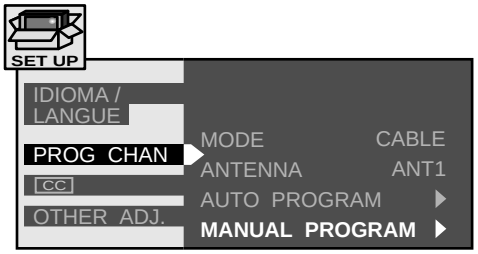
Press to enter submenu field.

**2**

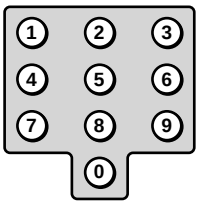



Press to select MANUAL PROGRAM.

Press to display next menu.




**3**




Use remote numeric keypad to select desired channel.

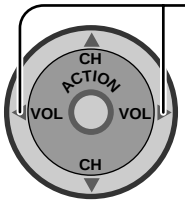
MANUAL PROGRAM

ENTER CHANNEL 3

▶ TO ADD

◀ TO DELETE

**4**

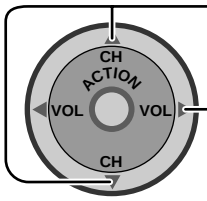



Press to ADD or DELETE the channel.

## AUTO POWER

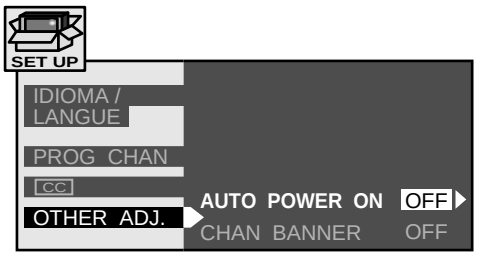
Select SET to power up the TV at the same time as the cable box or other components or select OFF.

**1**

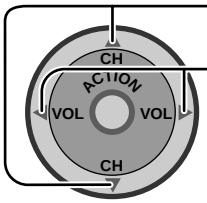



In SET UP menu press to select OTHER ADJ.

Press to enter submenu field.




**2**




Press to select AUTO POWER.

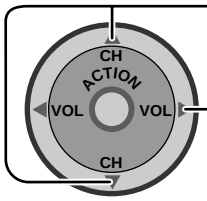
Press to select SET or OFF.

SET ⟷ OFF

## CHAN BANNER

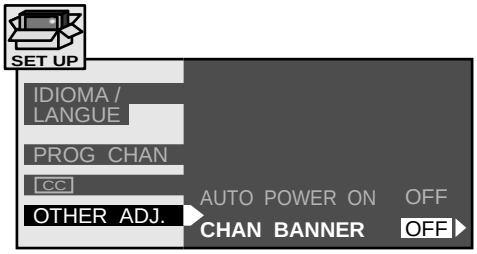
Select ON to display the CHANNEL BANNER on the screen or select OFF.

**1**

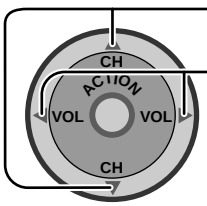



In SET UP menu press to select OTHER ADJ.

Press to enter submenu field.




**2**




Press to select CHAN BANNER.

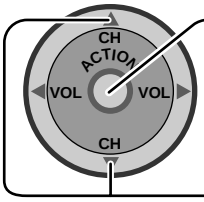
Press to select ON or OFF.

ON ⟷ OFF

# Closed Captions

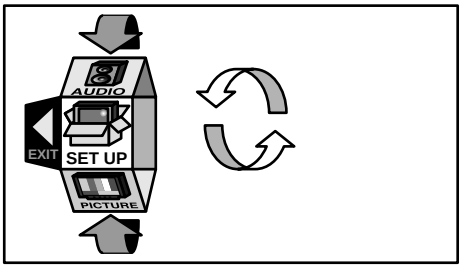
This receiver has a built in decoder that provides a visual depiction of the audio portion of a television program in the form of written words across the screen (white or colored letters on a black background). It allows the viewer to read the dialogue of a television program or other information. The program being viewed must be broadcast with Closed Caption.

**1**

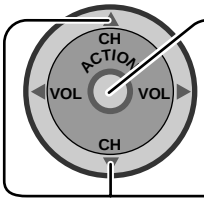



Press to display the roller guide menu.

Press to rotate to SET UP.

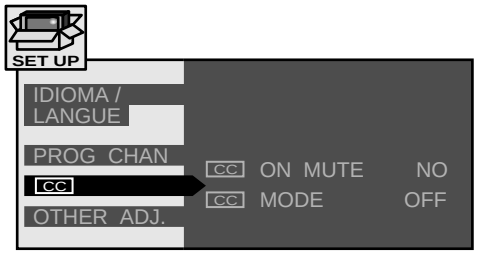



**2**

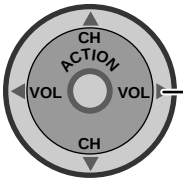



Press to display SET UP.

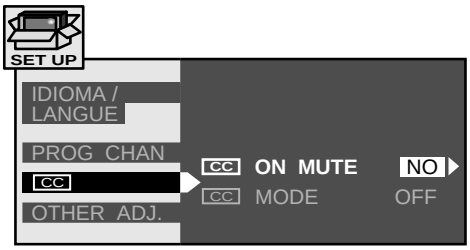
Press to select CC.




**3**




Press to enter submenu field.

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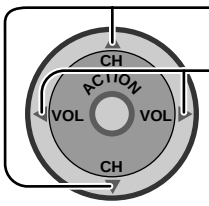
## CC ON MUTE

Activates the On-Screen Closed Caption feature, when the MUTE button on the Remote Control is pressed. To deactivate, press the MUTE button again.

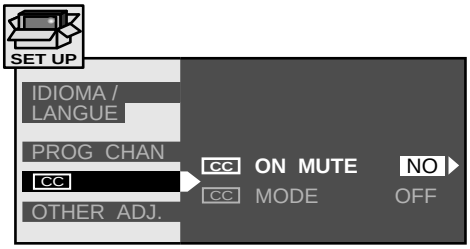
**Note:**
This feature functions when the Closed Caption Mode is in the “OFF” position.




In the submenu field press to select CC ON MUTE.

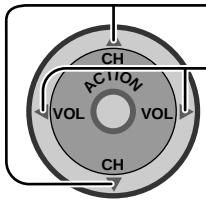
Press to select from the following:

NO (OFF) ↔ C1 ↔ C2 ↔ C3 ↔ C4



## CC MODE

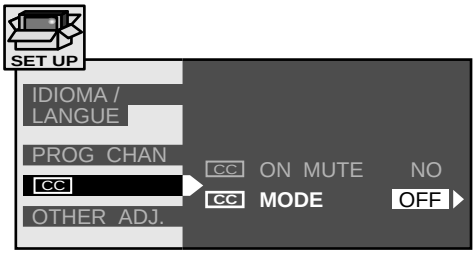
Activates the On-Screen Closed Caption feature. When activated this feature will remain on until OFF is selected in this menu.




In the submenu field press to select CC MODE.

Press to select from the following:

OFF ↔ C1 ↔ C2 ↔ T1 ↔ T2 ↔ T4 ↔ T3 ↔ C4 ↔ C3




- **CAPTION OFF -** Recommended mode when Closed Caption is not being used.
- **CAPTION C1 -** For video related information that can be displayed (up to 4 lines of script strategically placed on the television screen so that it does not obstruct relevant parts of the picture).
- **CAPTION C2 -** Another mode used for video related information.
- **TEXT T1 -** Blanks out a large portion of the picture on the television screen, and displays program guide or any other information currently being transmitted.
- **TEXT T2 -** Another mode which displays information and blanks out a large portion of the picture on the television screen.
- **CAPTION C3 -** Another mode used for video related information.
- **CAPTION C4 -** Another mode used for video related information.
- **TEXT T3 -** Another mode which displays information and blanks out a large portion of the picture on the television screen.
- **TEXT T4 -** Another mode which displays information and blanks out a large portion of the picture on the television screen.

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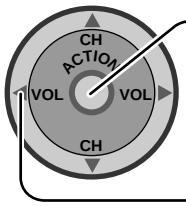
**Notes:**

(1) Recommended menu Set Up for Closed Caption when using Mute Button.
CC ON MUTE: C1
CC MODE: OFF

(2) The setting for CC ON MUTE is valid only when the CC MODE is OFF. CC MODE set to ON will override CC ON MUTE. This menu cannot be selected when the MAIN picture is displaying a COMPONENT VIDEO INPUT of 480i or more.

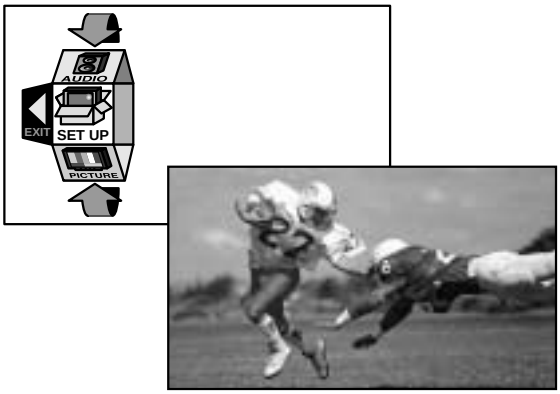
(3) When aspect is ZOOM, Closed Caption cannot be used.

## 4 To end Adjustment:




Press twice to return to the roller guide.

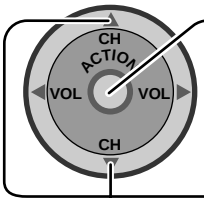
Press to exit roller guide.
This returns the set to normal viewing.




NORMAL PICTURE

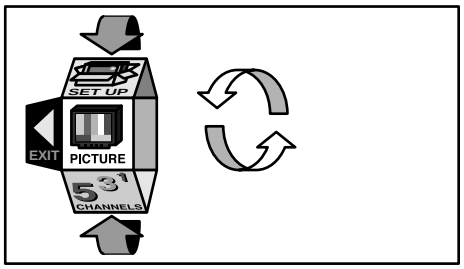
# PICTURE Adjustment

**1**

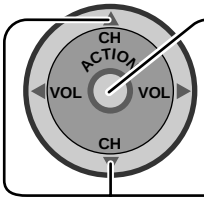



Press to display the roller guide menu.

Press to rotate to PICTURE.

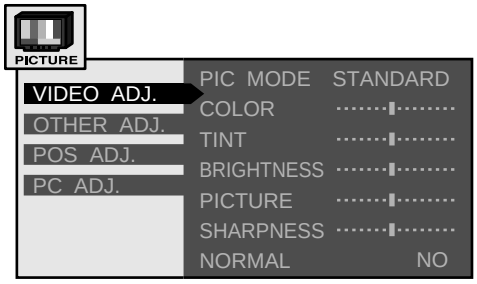



**2**




Press to display PICTURE menu.

Press to select the main menu.

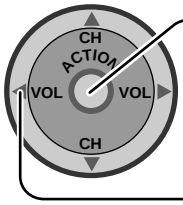



→ VIDEO ADJ. ⟷ OTHER ADJ. ⟷ POS ADJ. ⟷ PC ADJ. ←

⇩

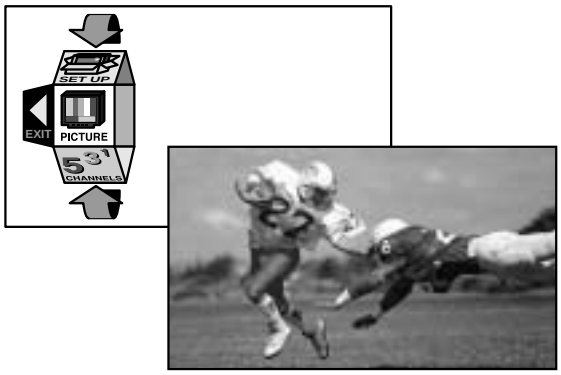
Proceed to each adjustment item of the selected main menu.

**3 To end Adjustment:**




Press twice to return to the roller guide.

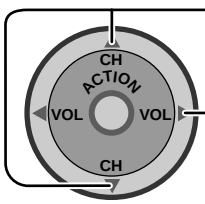
Press to exit roller guide.
This returns the set to normal viewing.




NORMAL PICTURE

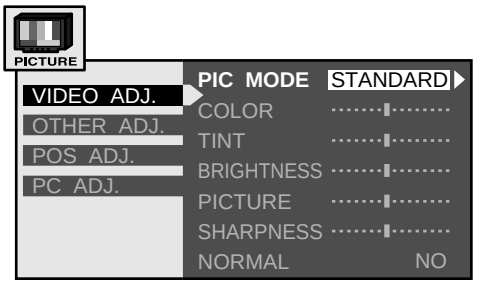
## PICTURE MODE

**1**

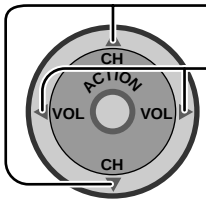



In PICTURE menu press to select VIDEO ADJ.

Press to enter submenu field.




**2**




In VIDEO ADJ. submenu field press to select PIC MODE.

Press to select your desired PICTURE MODE.

→ VIVID ⟷ STANDARD ⟷ CINEMA ←

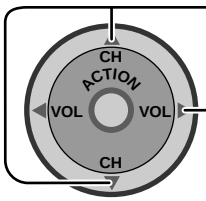
[During PC input mode and PC setting in DIGITAL-IN input mode only]

→ VIVID ⟷ STANDARD ⟷ PHOTO ←

**Note:**
When PIC MODE is set to PHOTO, COLOR and TINT setting are fixed and adjustment is not available.

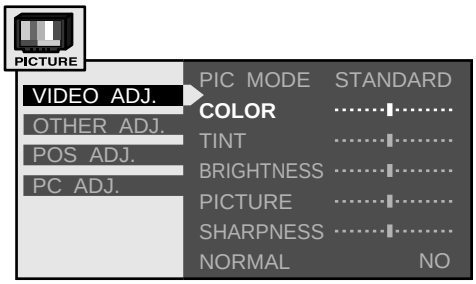
## COLOR / TINT / BRIGHTNESS / PICTURE / SHARPNESS / NORMAL

**1**

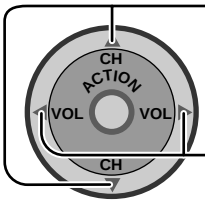



In PICTURE menu press to select VIDEO ADJ.

Press to enter submenu field.




**2**



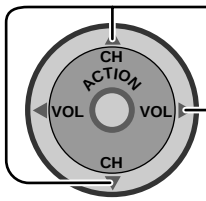

In VIDEO ADJ. submenu field press to select each submenu (COLOR / TINT / BRIGHTNESS / PICTURE / SHARPNESS / NORMAL).

Press to adjust the desired level by looking at the picture behind the menu.

| Item | Function |
|---|---|
| **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. |

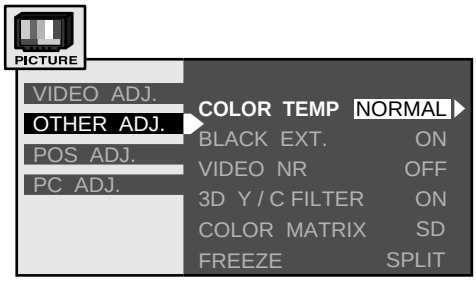
## COLOR TEMP (Temperature) / BLACK EXT. / VIDEO NR / 3D Y/C FILTER

**1**

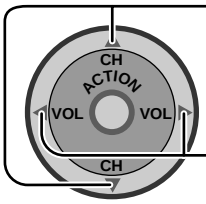



In PICTURE menu press to select OTHER ADJ.

Press to enter submenu field.




**2**




In OTHER ADJ. submenu field press to select each submenu (COLOR TEMP / BLACK EXT. / VIDEO NR / 3D Y/C FILTER).

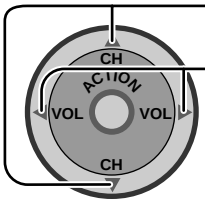
Press to adjust the desired level by looking at the picture behind the menu.

| Item | Mode | Explanations |
|---|---|---|
| **COLOR TEMP (temperature)** | NORMAL ⟷ WARM ⟷ COOL | To increase or decrease WARM (red) and COOL (blue) colors to suit personal preferences. |
| **BLACK EXT.** | ON ⟷ OFF | Adjusts the dark shades of the images in gradation. |
| **VIDEO NR** | ON ⟷ OFF | Reduces noise in the channel, commonly called snow. Remains off when receiving a strong signal. |
| **3D Y/C FILTER** | ON ⟷ OFF | Minimizes noise and cross color in the picture. |

# COLOR MATRIX

Displays input signals (480p signals) in a natural color from digital equipment adaptors connected to COMPONENT VIDEO INPUT (Y, Pb/Cb ,Pr/Cr input terminals) and DIGITAL-IN.

Select HD or SD to automatically adjust color parameters for HD (high definition) and SD (standard definition).

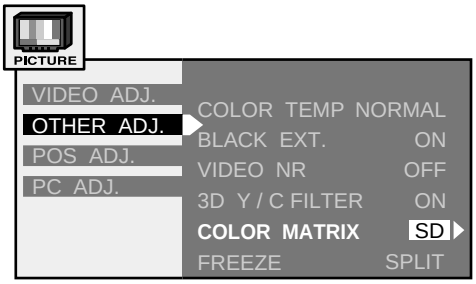



In OTHER ADJ submenu field press to select COLOR MATRIX.

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 (HD).




**Note:**

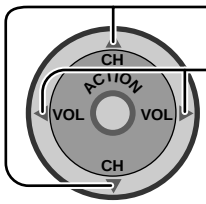
(1) When viewing a non-standard DTV signal format, you can change color parameters manually for the best picture quality.

(2) COLOR MATRIX does not need to be set when using High-Definition equipment or 480i output equipment. Use only for 480p signal source.

# FREEZE

Select SPLIT or PIP to determine the frozen picture frame during single screen.
During PC and DIGITAL-IN input mode, FREEZE function is not available.

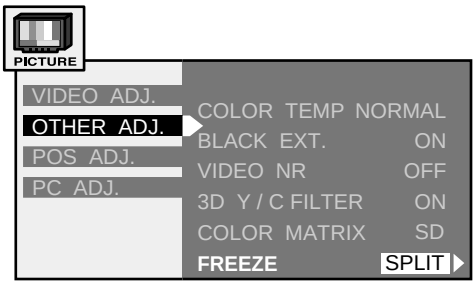
**1**



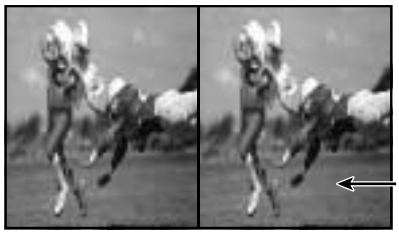

In OTHER ADJ submenu field press to select FREEZE.

Press to select SPLIT or PIP.

SPLIT ⟷ PIP




**2** FREEZE TV/VCR When the screen is single, press FREEZE TV/VCR to freeze the screen.



FREEZE

When FREEZE SPLIT is selected.

FREEZE

When FREEZE PIP is selected.

**3** FREEZE TV/VCR Press FREEZE TV/VCR again to recover.

**Notes:**

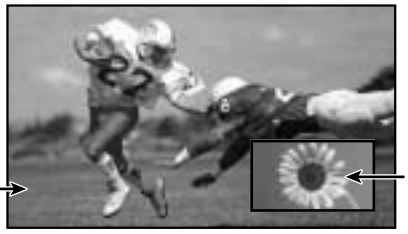
(1) When FREEZE TV/VCR is pressed during Split Screen, the Split Screen will be frozen and the main picture continues action (see page 42).

(2) When FREEZE TV/VCR is pressed during PIP Operation, the PIP frame will be frozen and the main picture continues action (see page 41).

Main Picture

Split Screen (FREEZE)

Main Picture

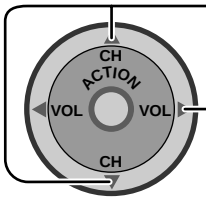


PIP frame (FREEZE)

# POS ADJ.

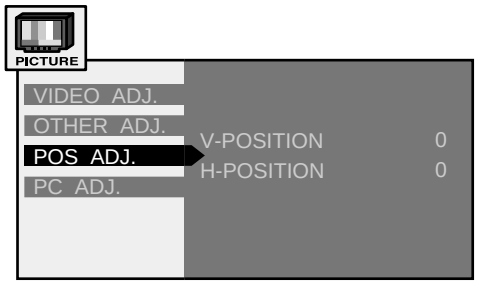
POS ADJ. is valid durring ZOOM mode (ZOOM1, ZOOM2), PC input mode and PC setting in DIGITAL-IN input mode.

**1**

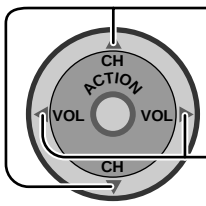



In PICTURE menu press to select POS ADJ.

Press to enter submenu field.

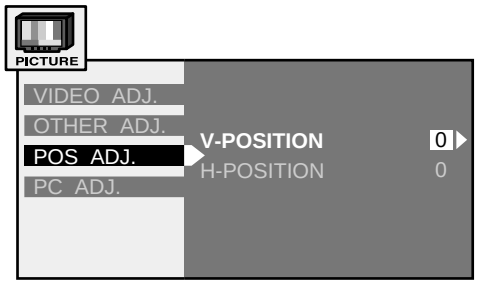



**2**




In POS ADJ. submenu field press to select V-POSITION or H-POSITION.

Press to adjust the position.




| | | | | |
|---|---|---|---|---|
| During Zoom mode: | V-POSITION | -32 | – | +32 |
| During PC input mode: | V-POSITION | -16 | – | +16 |
| | H-POSITION | -32 | – | +32 |

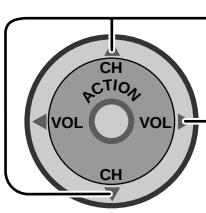
**Notes:**

(1) This projection TV is equipped with various screen modes. If a screen mode with a different aspect from the broadcast program is selected, image will appear differently. Select the proper screen mode with this in mind.
(2) Be careful when using this projection TV for commercial purposes or for public use, such as in cafes and hotels. Shrinking and enlarging images by using screen mode switching function (zoom, etc.) may violate copyright laws.
(3) Images displayed on a wide screen TV will be cut off or distorted at the edges, when viewing normal aspect images of 4:3 in ZOOM1, ZOOM2, FULL or JUST mode. Display in NORMAL mode to view the original image intended by the producer.
(4) For 1080i and 720p input images, screen position cannot be adjusted.
(5) The adjusted setting will be kept even when the projection TV is turned off.
(6) The signals output from the monitor output terminal on the back of the projection TV is not affected when the screen position is adjusted.

# CLOCK PHASE / DOT CLOCK

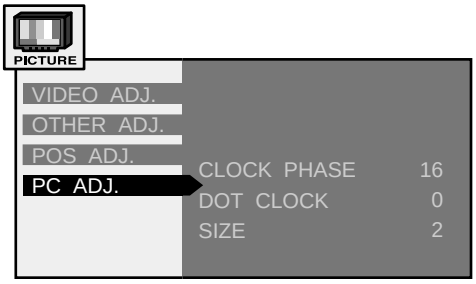
CLOCK PHASE and DOT CLOCK are valid only during PC input mode.
When an RGB signal is projected, minor adjustments of the DOT CLOCK frequency and adjustments of the phase can be made.

**1**

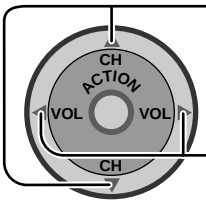



In PICTURE menu press to select PC ADJ.

Press to enter submenu field.




**2**

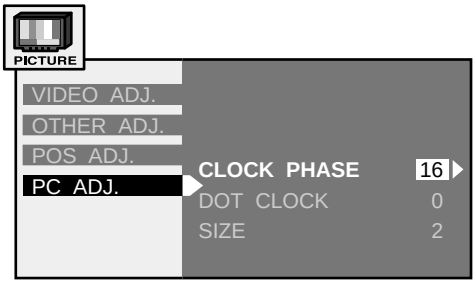



In PC ADJ. submenu field press to select CLOCK PHASE or DOT CLOCK.

Press to adjust the level.

CLOCK PHASE: 0 – +31

DOT CLOCK: -8 – +8




CLOCK PHASE: Phase adjustment.
Flickering or bleeding of the contour appearing on the screen when projecting a PC signal, can be adjusted so that it does not appear.
During PC setting in DIGITAL-IN input mode, the adjustment range is 0-1.

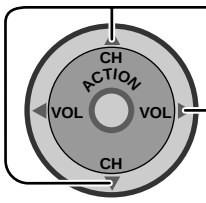
DOT CLOCK: Minor adjustments of the dot clock frequency.
When a PC signal is projected, the display area of the computer image can be adjusted.
During PC setting in DIGITAL-IN input mode, adjustment is not available.

**Note:**
The DOT CLOCK advances in increments of 2.

# SIZE

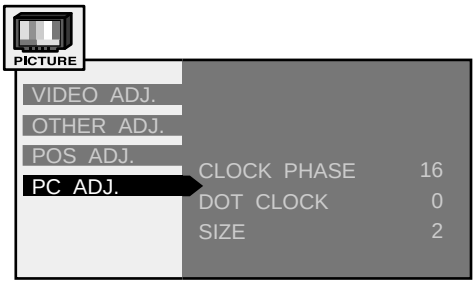
SIZE is valid only during 720 × 1280 RGB signal input in DIGITAL-IN mode.

**1**

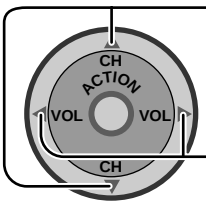



In PICTURE menu press to select PC ADJ.

Press to enter submenu field.




**2**

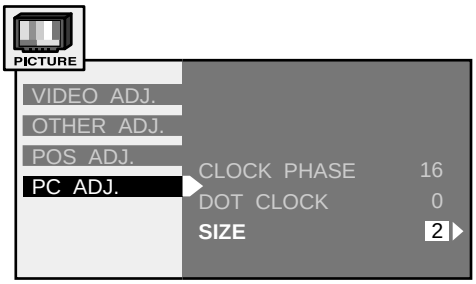



In PC ADJ. submenu field press to select SIZE.

Press to select 1 or 2.

SIZE1: Over scan (Native)

SIZE2: Under scan (compression)

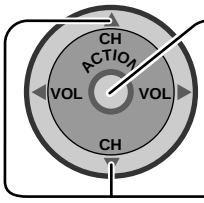


# CHANNEL SCAN

**CHANNEL SCAN** Lets you select the channel scanning mode either FAV or ALL.

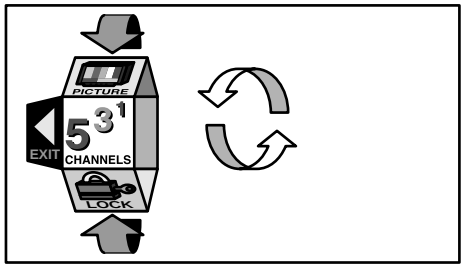
CHANNEL SCAN FAV To enter up to 16 favorite channels.
CHANNEL SCAN ALL To scan all channels when using the CH up/down buttons.

**1**

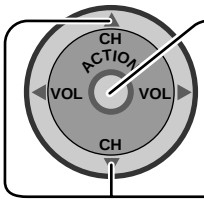



Press to display the roller guide menu.

Press to rotate to CHANNELS.

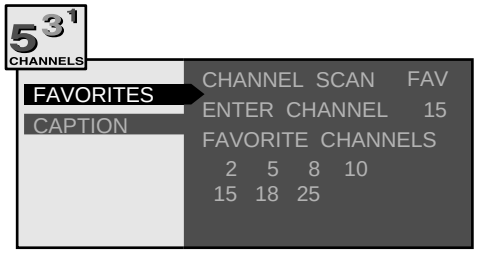



**2**

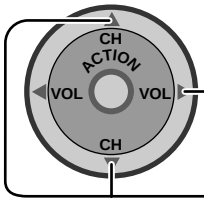



Press to display CHANNELS.

Press to select FAVORITES.

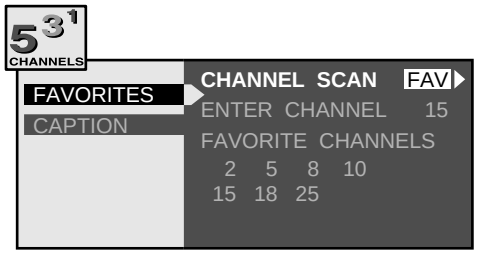



**3**

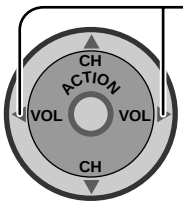



Press to enter submenu field.

Press to select CHANNEL SCAN.




**4**

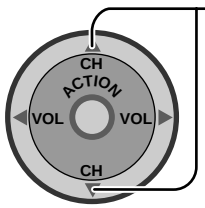



Press to select FAV or ALL.

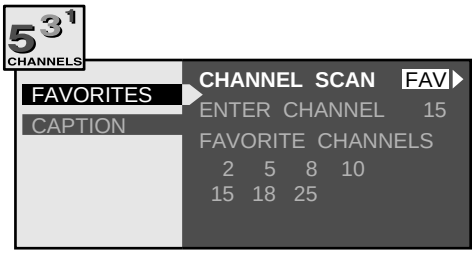
FAV ⟷ ALL

### FAVORITE CHANNELS Selection

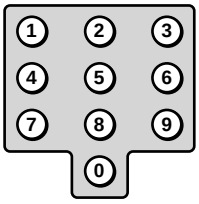
**1**



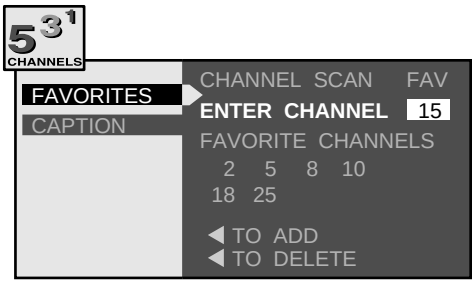

Under CHANNEL SCAN FAV press to select ENTER CHANNEL.




**2**

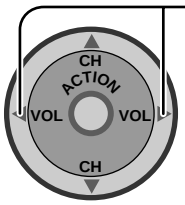



Use remote numeric keypad to select desired channel.

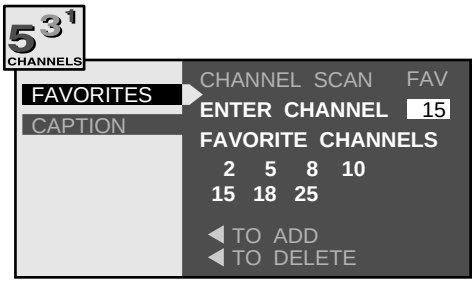



(Example: Channel 15 is selected)

**3**

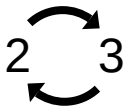



Press ▶ to add or ◀ to delete the selected channel.



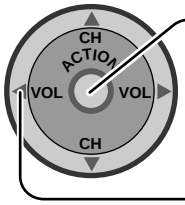

(Example: Channel 15 is added)

**4**



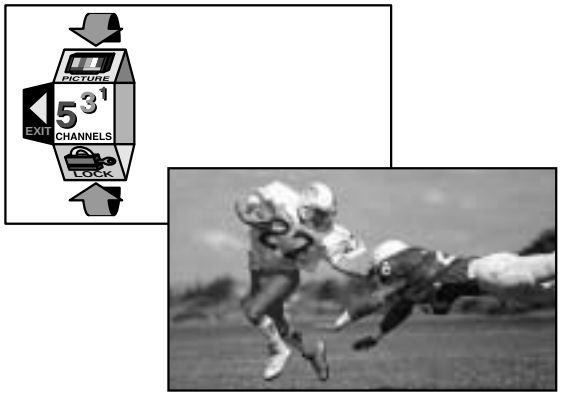

Repeat step 2 to 3 up to 16 favorite channels.

### To end Adjustment:




Press twice to return to the roller guide.

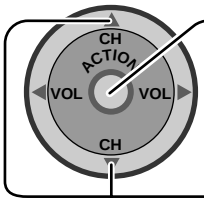
Press to exit roller guide.
This returns the set to normal viewing.




NORMAL PICTURE

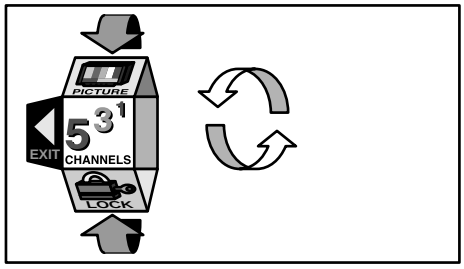
# CAPTION

**1**

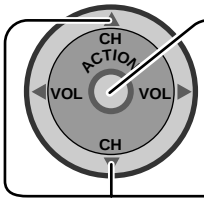



Press to display the roller guide menu.

Press to rotate to CHANNELS.

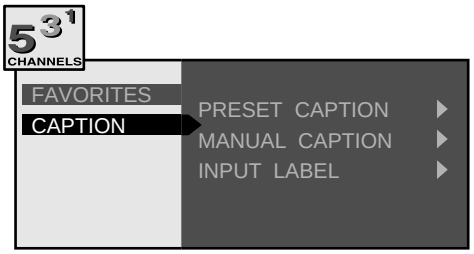



**2**

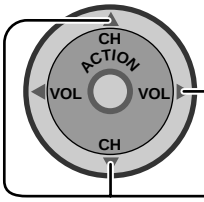



Press to display CHANNELS.

Press to select CAPTION.




**3**




Press to enter submenu field.

Press to select PRESET CAPTION / MANUAL CAPTION / INPUT LABEL.

⇩

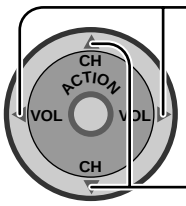
Proceed to each adjustment menu.

---

## PRESET CAPTION

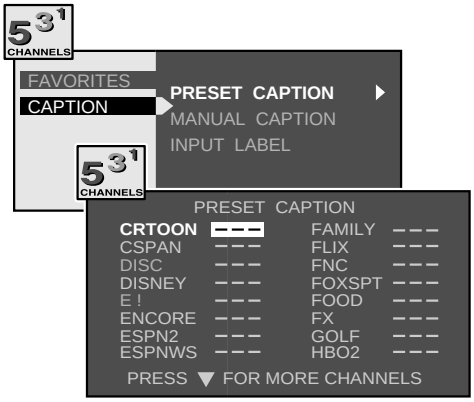
Assign channel numbers to pre-set popular TV stations.

**1**

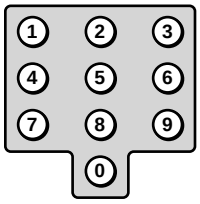



Under PRESET CAPTION press to display next menu.

Press to select desired preset caption.




**2**



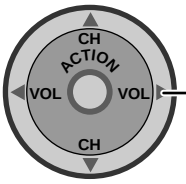

Use remote numeric keypad to select desired channel (refer to your local TV guide).

**Note:**
To delete a channel, press ◀ **VOL** while a channel is highlighted.

## MANUAL CAPTION

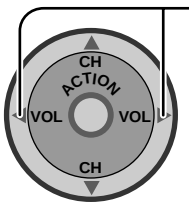
Enter channel numbers and captions manually.

**1**



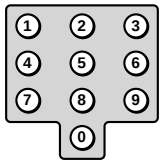

Under MANUAL CAPTION press to display next menu.

**2**

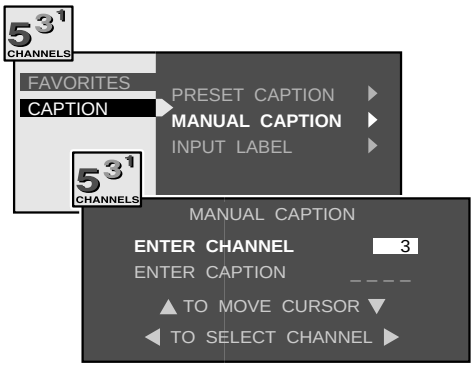



Press to enter desired channel.

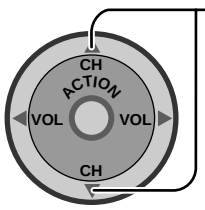
**OR**



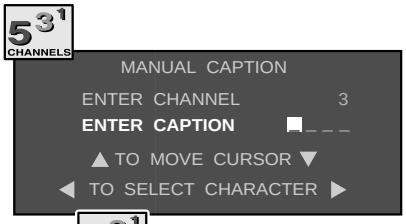

Use remote numeric keypad to select desired channel (refer to your local TV guide).



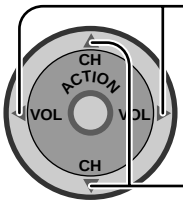
**3**



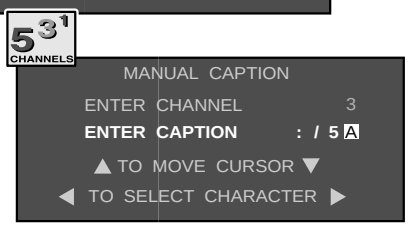

Press to select ENTER CAPTION.




**4**




Press to select characters.



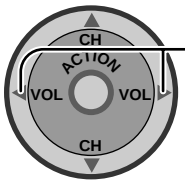

Press to move cursor.
Repeat Step 4 up to 4 characters.

**Note:**
In MANUAL CAPTION up to 4 characters can be selected as a CAPTION.

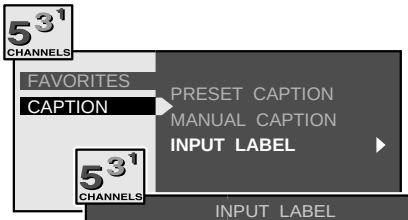
## INPUT LABEL

Label video input connections to display optional equipment.

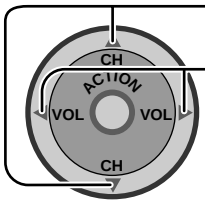
**1**




Under INPUT LABEL press to display next menu.



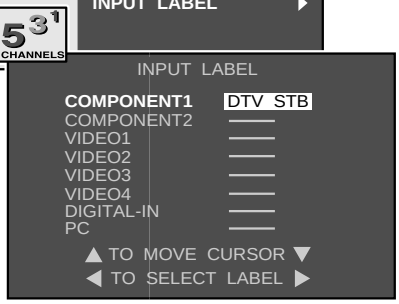

**2**




Press to move cursor.

Press to select desired LABEL.

**Note:**
To delete, select LABEL, then press ◀ **VOL** or **VOL** ▶ to select ''**SKIP**''. The selected INPUT mode will be skipped when TV/VIDEO button is pressed.

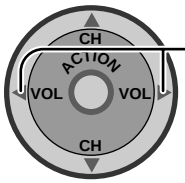



### LABEL setting during DIGITAL-IN input mode

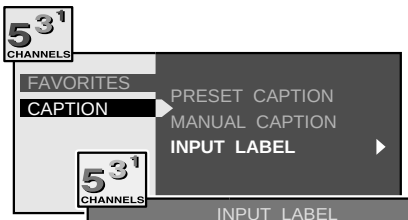
When connecting a DTV decoder to DIGITAL-IN, be sure not to select “SKIP” or “PC” from the INPUT LABEL menu. Failing to do so may result in a distorted display or black out .

When connecting a PC to DIGITAL-IN, be sure to select “PC” from the INPUT LABEL menu. Failing to do so may result in a distorted display or black out .

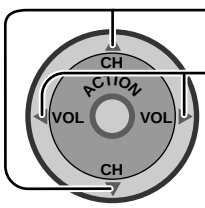
**1**



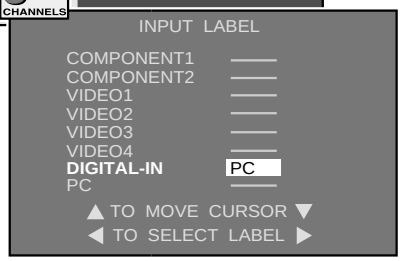

Under INPUT LABEL press to display next menu.




**2**

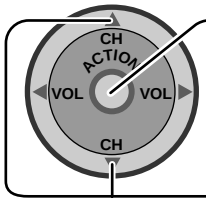



Press to move cursor until DIGITAL-IN is highlighted.
Press to select DVD / CABLE / DBS / DTV STB / PC / –.



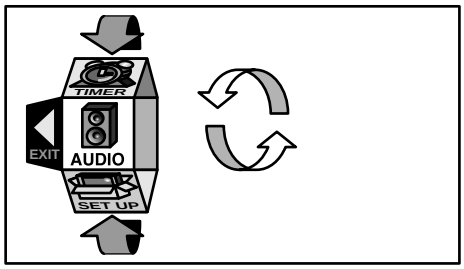
# Audio Adjustment

**1**

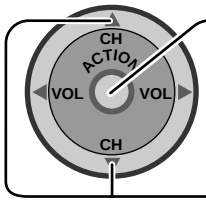



Press to display the roller guide menu.

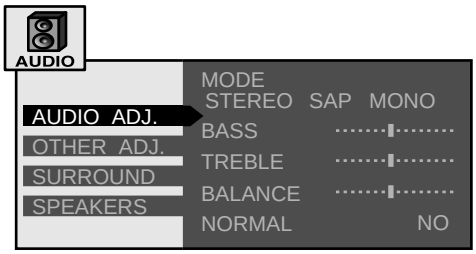
Press to rotate to AUDIO.




**2**




Press to display AUDIO menu.




Press to select the main menu.

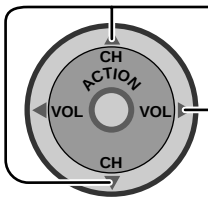
→ AUDIO ADJ. ⟷ OTHER ADJ. ←
→ SPEAKERS ⟷ SURROUND ←

⇩

Proceed to each adjustment item of the selected main menu.

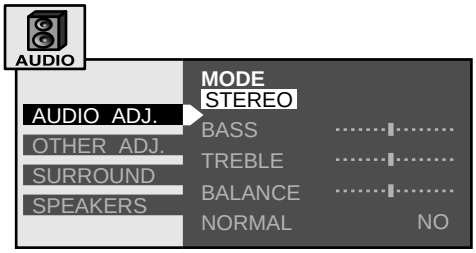
## Selecting STEREO/SAP/MONO

**1**

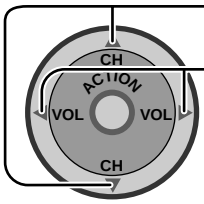



In AUDIO menu press to select AUDIO ADJ.

Press to enter submenu field.



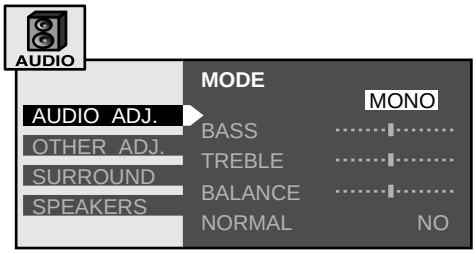

**2**




Press to select MODE.

Press to select STEREO / SAP / MONO.

Red display - Signal available
White display - Signal not available




- **STEREO -** Two channel Audio reception.
- **SAP -** Second Audio Programming (typically used for bilingual audio).
- **MONO -** Use when stereo signal is weak.

**Notes:**

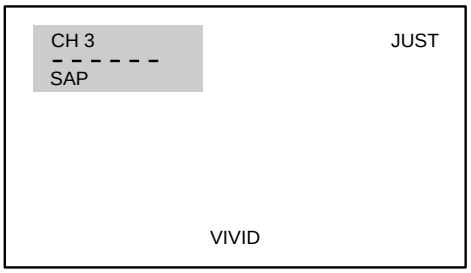
(1) AUDIO MODE selection is also possible by pressing the SAP button on the remote control (see page 15).

(2) When SAP is selected, the color of the status display that appears on the upper left of the screen after turning the power ON will differ depending on whether or not there is a signal and whether or not selection has been made by the user.

SAP

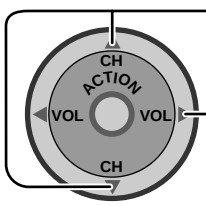
Background ..... GREEN : With signal
TRANS : Without signal

Charactor ..... WHITE : Selection made by the user.
GRAY : Selection not made by the user.



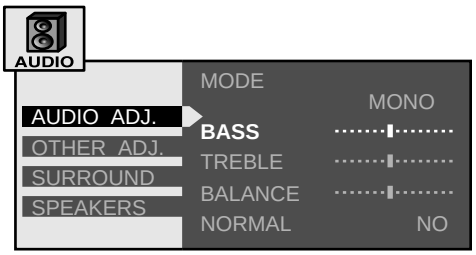
# Selecting BASS / TREBLE / BALANCE / NORMAL

**1**

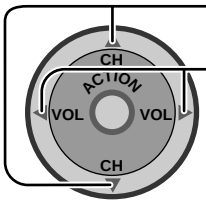



In AUDIO menu press to select AUDIO ADJ.

Press to enter submenu field.




**2**




Press to select BASS / TREBLE / BALANCE / NORMAL.

Press to adjust the desired level by listening to the sound.

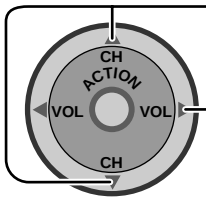
| Item | Effect | Function |
|---|---|---|
| **BASS** | ◀ Less ▶ More | Increase or decrease the bass response. |
| **TREBLE** | ◀ Less ▶ More | Increase or decrease the treble response. |
| **BALANCE** | ◀ Left SP. ▶ Right SP. | Emphasize the left / right speaker volume. |
| **NORMAL** | ▶ SET | Reset BASS, TREBLE and BALANCE adjustments to factory default settings. |

# AI SOUND / BBE

**AI SOUND** Equalize overall volume levels across all channels.(AI sound is not available in VIDEO mode).

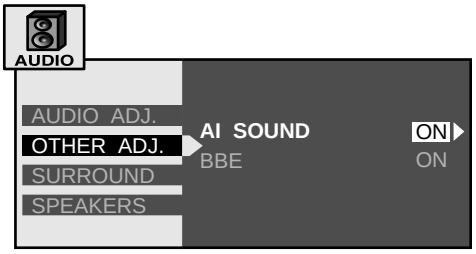
**BBE** Use special signal processing to accurately reproduce the "attack" of each sound, in order to make it immediate and superbly faithful to the original, while retaining its natural feel.

**1**

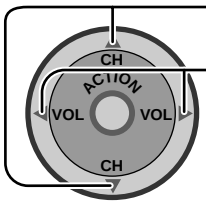



In AUDIO menu press to select OTHER ADJ.

Press to enter submenu field.




**2**

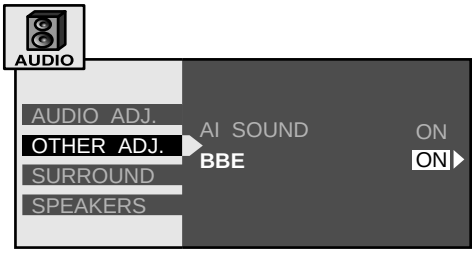



Press to select AI SOUND or BBE.

AI SOUND ⟷ BBE

Press to select ON or OFF.

ON ⟷ OFF

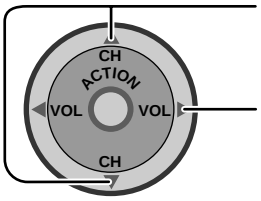



**Note:**
AI SOUND is not available in VIDEO mode.

## SURROUND

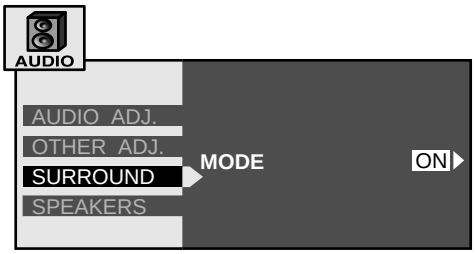
To enjoy a concert hall effect, turn the SURROUND to ON.

**1**

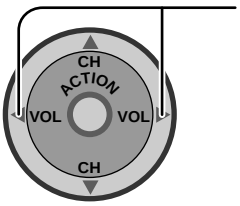



In AUDIO menu press to select SURROUND.

Press to enter submenu field (MODE).




**2**




Press to select ON or OFF.

ON ⟷ OFF

**Notes:**

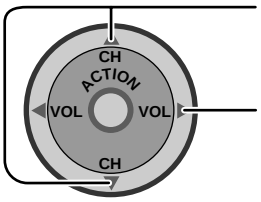
During stereo sound or soft playing : SURROUND ⟶ set to ON.

During normal sound : SURROUND ⟶ set to OFF.

## SPEAKERS

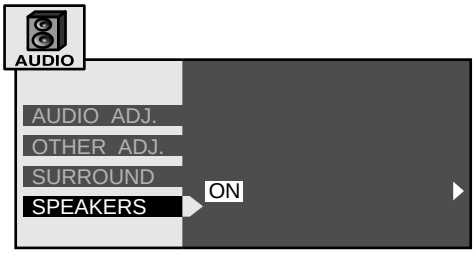
In AUDIO menu under SPEAKERS, select the desired SPEAKER mode.

**1**

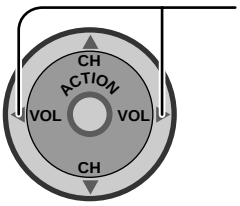



In AUDIO menu press to select SPEAKERS.

Press to enter submenu field.




**2**




Press to select your desired mode.

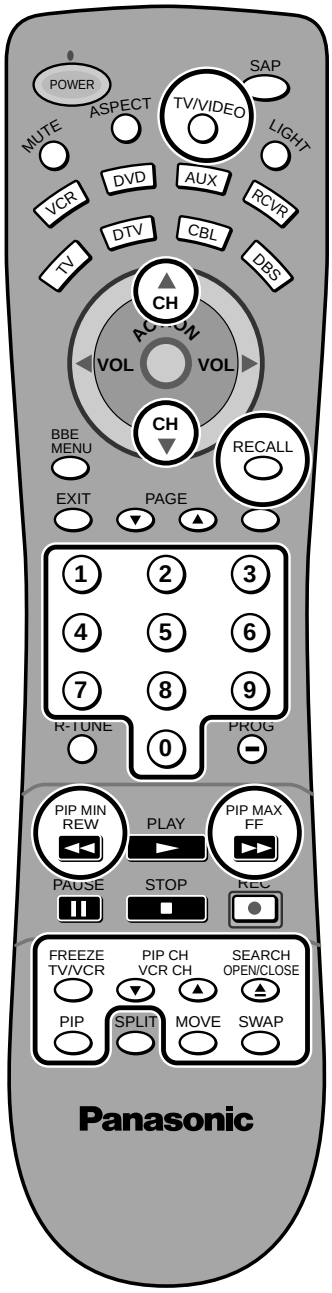
ON ⟷ OFF & VARIABLE AUDIO OUT

OFF & FIXED AUDIO OUT

| Mode | Function |
|---|---|
| **ON** | TV speakers operate normally. |
| **OFF & Variable Audio Out** | TV speakers off -audio adjustable by television. |
| **OFF & Fixed Audio Out** | TV speakers off -audio adjustable by the external amplifier only. |

# 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.
During PC and DIGITAL-IN input mode Picture in Picture Operation is not available.




## Basic PIP Operation

**1** PIP

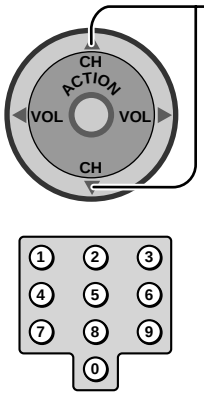
Press the PIP button on the remote control to display the PIP Frame on screen.

**Note:**
Audio is from Main Picture only.

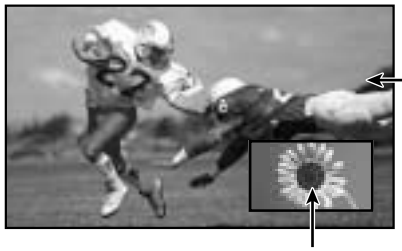
**2** PIP CH VCR CH

Select channels for the PIP frame by pressing PIP CH VCR CH .

**3**




Press to select channel for the Main Picture.
or
Use the remote control numeric keypad.



Main Picture

Picture-in-Picture Frame

**4** RECALL

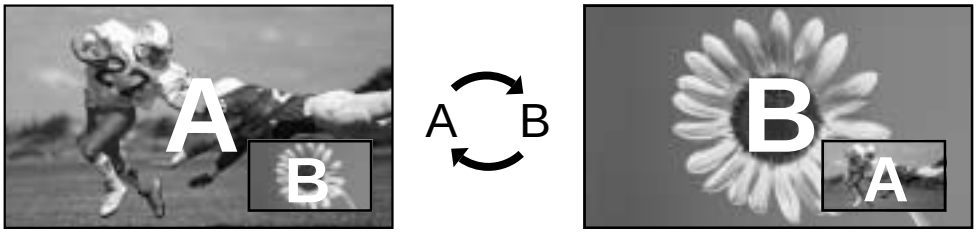
Press to view picture source status.

**5** PIP

Press PIP again to cancel the PIP Frame.

**SWAP** SWAP

Press SWAP to switch the PIP and MAIN PICTURE source.

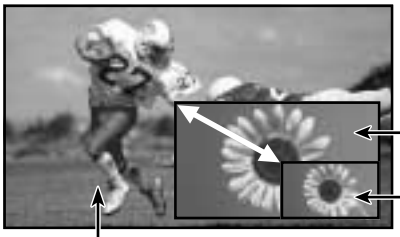


## PIP MIN, PIP MAX

PIP MIN REW / PIP MAX FF

These features are used to size PIP Frame.

Press PIP MIN REW or PIP MAX FF to size the PIP Frame.




## Freeze

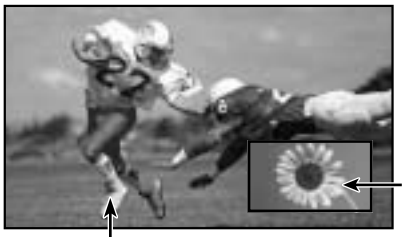
FREEZE TV/VCR

During PIP operation this feature is used to stop action in PIP frame.

**1** Press FREEZE TV/VCR to stop PIP frame action.

**2** Press FREEZE TV/VCR again to continue action.

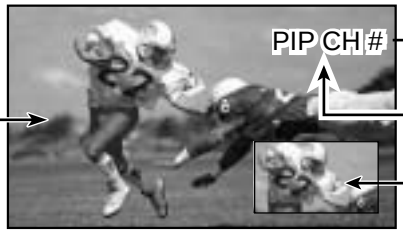
**Note:**
To stop action for Main picture:
1 In PICTURE MENU OTHER ADJ., select FREEZE PIP or SPLIT (see p29).
2 Press FREEZE TV/VCR while PIP frame is not displayed.




## TV/VIDEO Button

TV/VIDEO

Press when PIP frame is displayed to select desired input mode.



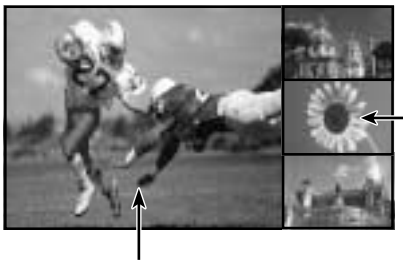

## Search

SEARCH OPEN/CLOSE

This feature lets you scan through all available channels. During PC and DIGITAL-IN input mode Search feature is not available.

**1** Press SEARCH OPEN/CLOSE to display search frames.

**2** Press SEARCH OPEN/CLOSE again to stop search feature. This returns the screen to the previous condition (single screen, PIP screen or SPLIT screen).

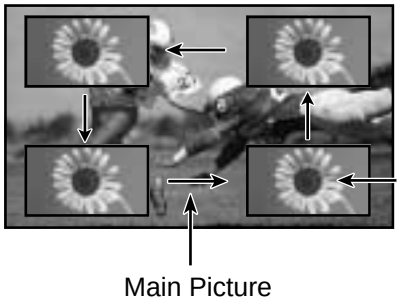



## Move

MOVE

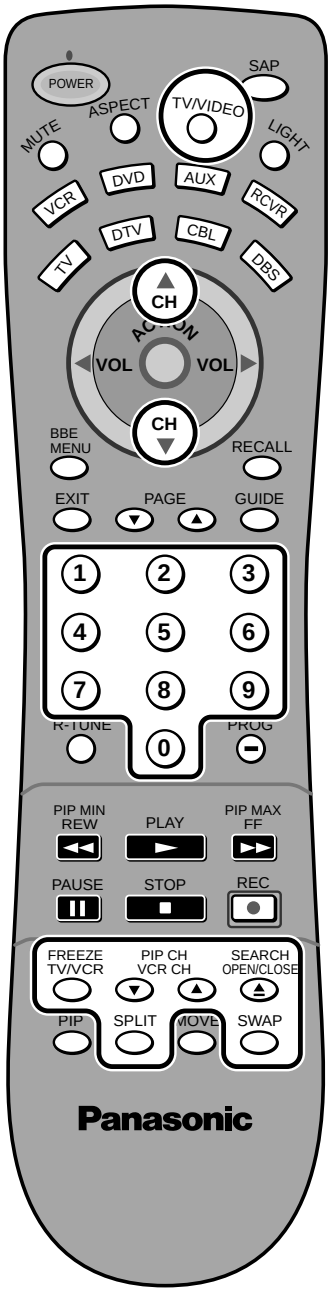
This feature is used to move PIP frame to one of four corners.

Press MOVE to position PIP frame to desired corner.



# Split Screen

This feature lets you watch two different channels side by side with or without an external video source.
The audio is from the Main picture only (left side).
Split screen enables you to search other channels on the right screen or check video recording status.
During PC and DIGITAL-IN input mode, Split Screen is not available.




## Splitting the screen

**1** Press SPLIT to display Split screen.

(The previously selected screen appears.)

**2** Returning to one screen.
Press SPLIT again to return.

Main Picture

## Freezing pictures

During Split Screen this feature is used to stop action in SPLIT screen.

**1** FREEZE TV/VCR Press FREEZE TV/VCR to stop action in SPLIT screen.

**2** Press FREEZE TV/VCR again to recover.

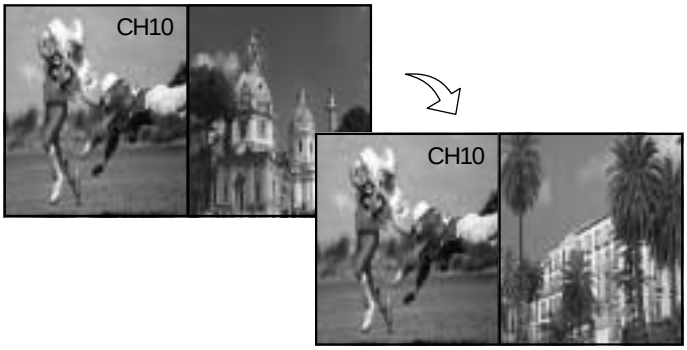
**Note:**
To stop action for Main picture:
1 In PICTURE MENU OTHER ADJ., select FREEZE PIP or SPLIT (see p30).
2 Press FREEZE TV/VCR while SPLIT frame is not displayed.

**Notes:**
(1) Sound from the left screen is output from the speakers on the TV set (and earphone jacks).
(2) When the screen is split, signals of the left screen are output from the rear monitor output terminal.
(3) The left and right screen are processed by individual circuits, and therefore, may have slight variation in sound and image quality.
(4) Split screen returns to single screen when the TV is turned off.
(5) The right and left screens cannot display the same picture at the same time.
(6) Use the right screen when playing video games on a split screen (to avoid distortion of images).

## Changing the channels for the Split Screen

PIP CH VCR CH

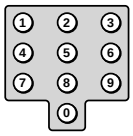
Select channels for the Split Screen by pressing PIP CH VCR CH .



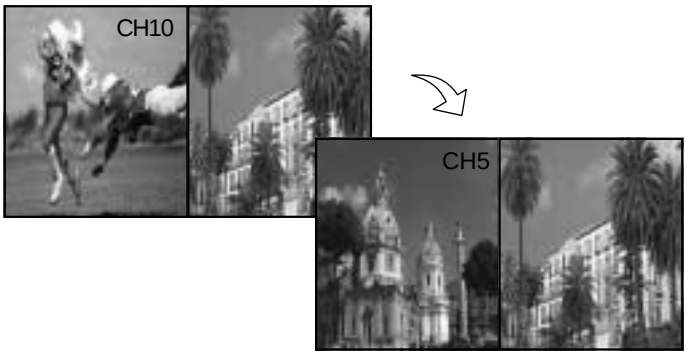

## Changing the channels for the Main Picture

CH

CH



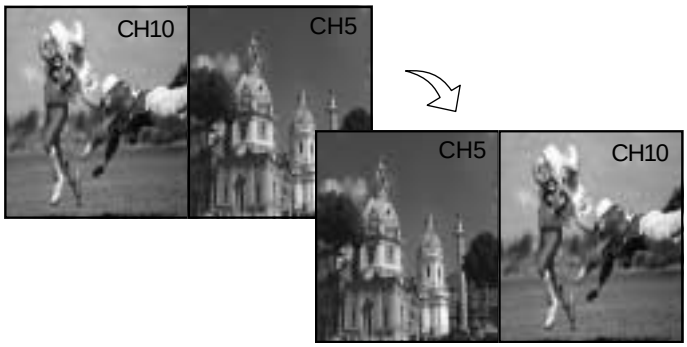
Select channels for the Main Picture by pressing CH CH or use the remote control numeric keypad.




## Swapping left and right screens

SWAP

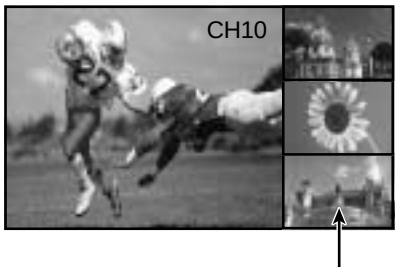
Press SWAP to switch the SPLIT SCREEN and MAIN PICTURE source.




## Searching the other channels

SEARCH OPEN/CLOSE

Press SEARCH OPEN/CLOSE to search the other channels.



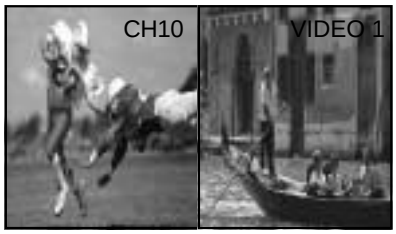

Search Frames

Press SEARCH OPEN/CLOSE again to stop the search.
This returns the screen to its previous condition.

## Viewing Videos

TV/VIDEO

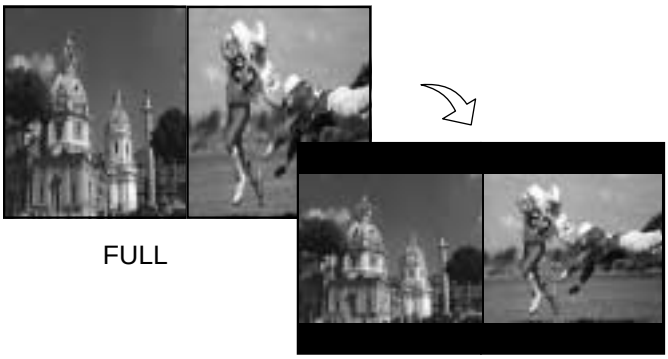
While Split screen is displayed, press TV/VIDEO to switch modes.




## ASPECT SWITCHING

ASPECT

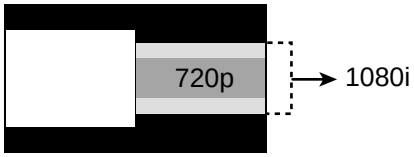
Press ASPECT to switch the ASPECT mode.



FULL

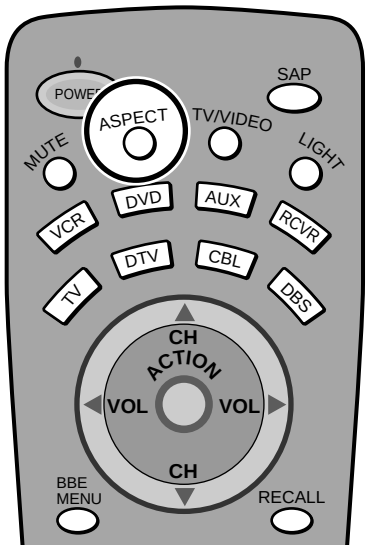
NORMAL

**Note:**
When 720p or 1080i signal is being received in the MAIN PICTURE screen during NORMAL mode, the SPLIT SCREEN will become oblong.



# ASPECT Controls

The color monitor will allow you to enjoy viewing the picture at its maximum size, including wide screen cinema format picture.




ASPECT

**ASPECT button**
The aspect mode changes each time the ASPECT button is pressed.

JUST → 4 : 3 → ZOOM1 → ZOOM2 → FULL

**Note:** ASPECT MODE will change as follows depending on the receiving signals.

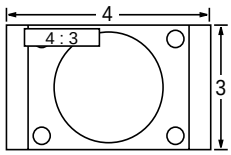
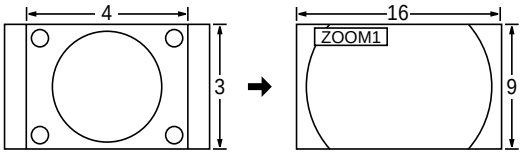
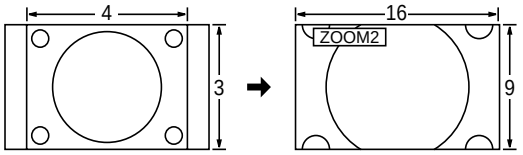
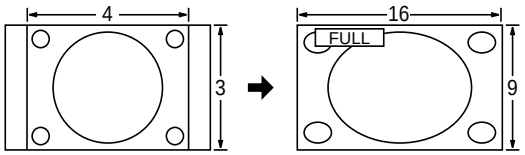
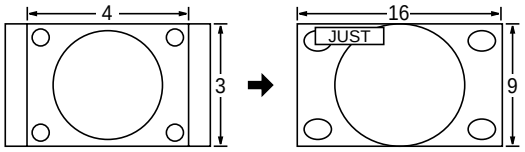
(1) 480i : JUST → 4 : 3 → ZOOM1 → ZOOM2 → FULL

(2) 480p (including DIGITAL-IN) : 4 : 3 → ZOOM → FULL

(3) SVGA, XGA, MAC16 (including DIGITAL-IN) : 4 : 3 → FULL

(4) 1080i, 720p, VGA, 720p/280RGB : FULL only

(5) SPLIT SCREEN: NORMAL → FULL

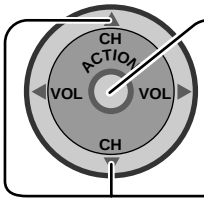
| Mode | Picture | Explanation |
|---|---|---|
| **4 : 3** |   | 4 : 3 will display a 4:3 picture at its standard 4:3 size. |
| **ZOOM1** |   | ZOOM1 mode magnifies the central section of the picture at a greater magnification than the ZOOM2 mode does. |
| **ZOOM2** |   | ZOOM2 mode magnifies the central section of the picture. |
| **FULL** |   | FULL will display the picture at its maximum size but with slight elongation. |
| **JUST** |   | JUST mode will display a 4:3 picture at its maximum size but with aspect correction applied to the sides of the screen so that elongation is only apparent at the left and right edges of the screen. The size of the picture will depend on the original signal. |

**Note:**
The S VIDEO terminal on this set can detect specially encoded signals that are compatible with a wide screen monitor. When a full image from the S VIDEO terminal of specially encoded video is detected by the set, the screen size is automatically set to FULL mode.

# TIMER

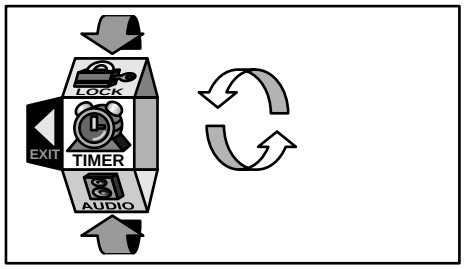
The TIMER can switch the TV ON or OFF. Before attempting TIMER1 and TIMER2 confirm the CLOCK SET and adjust if necessary. Then set TIMER1 and TIMER2.

**1**

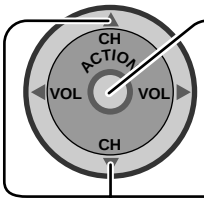



Press to display the roller guide menu.

Press to rotate to TIMER.




**2**

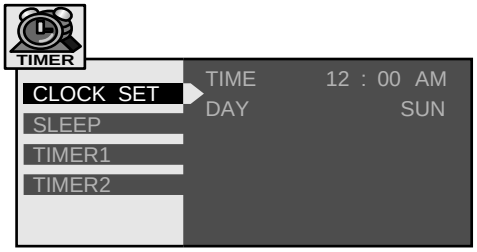



Press to display TIMER.

Press to select the main menu.

⇩

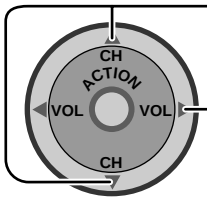
Proceed to each adjustment item of the selected main menu.




## CLOCK SET

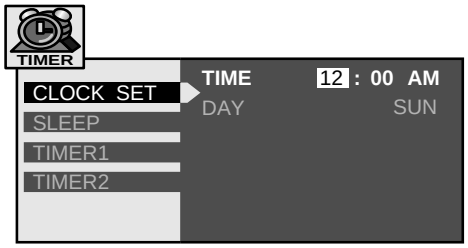
CLOCK SET sets the present time. This is necessary to operate the TIMER features.

**1**

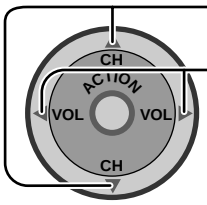



In TIMER menu press to select CLOCK SET.

Press to enter submenu field.

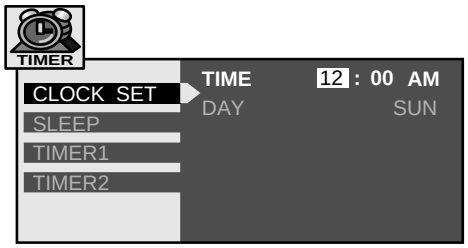



**2** **TIME** Set the time of day.

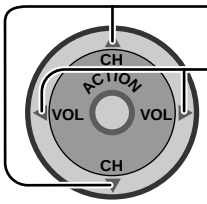



Press to select TIME

Press to set hours AM or PM.

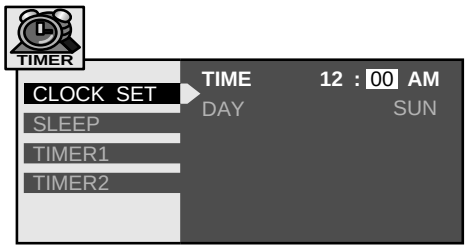



**3**

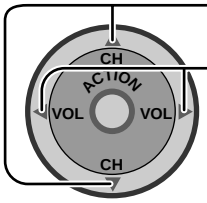



Press to move to minutes position.

Press to set minutes.

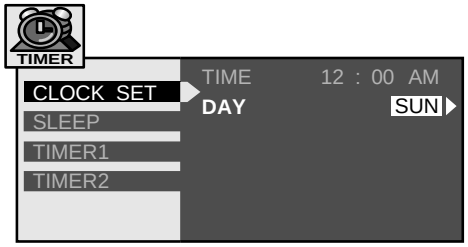



**4** **DAY** Set the day of the week.




Press to select DAY.

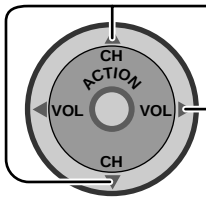
Press to select the day of the week.



# SLEEP

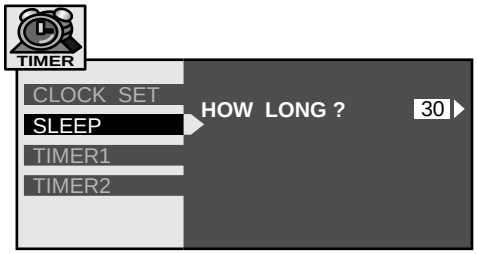
SLEEP sets the sleep time.

**1**

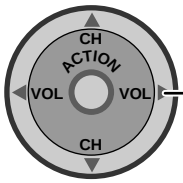



In TIMER menu press to select SLEEP.

Press to enter submenu field.




**2**

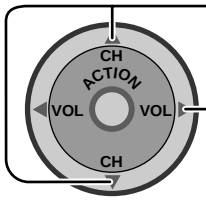



Press to select the desired sleep time.
To turn off the timer select NO.

→ NO → 30 → 60 → 90 ↩

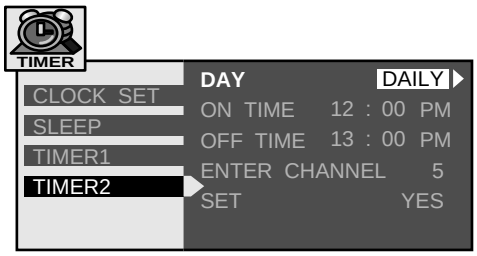
# Timer1 and Timer2

In TIMER menu, select one or both timers to turn the television on and off at selected times, on selected channels, and on selected days.TIME must be entered in CLOCK SET to operate the TIMER features.

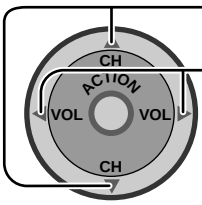



In TIMER menu press to select TIMER1 or TIMER2.

Press to enter submenu field.

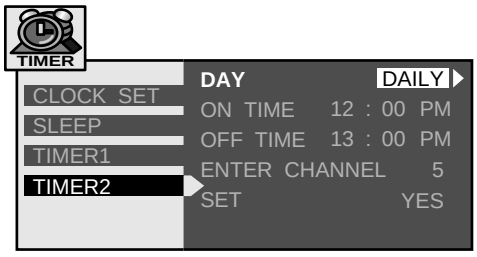



**DAY** Set the day of the week.



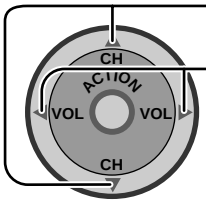

Press to select DAY.

Press to set the day of the week.
(select day or days)



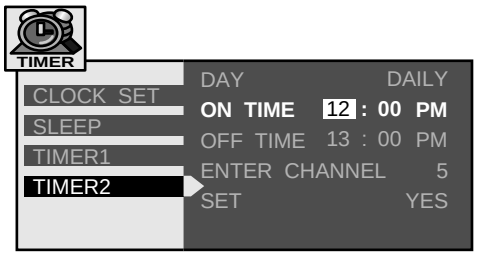

**ON TIME** Set the time of day.

**1**

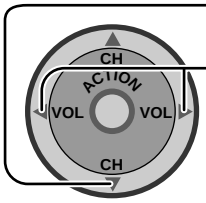



Press to select ON TIME.

Press to set hours AM or PM.




**2**



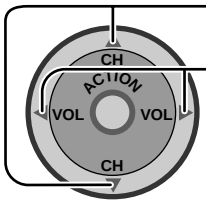

Press to move to minutes position.

Press to set minutes.

## OFF TIME

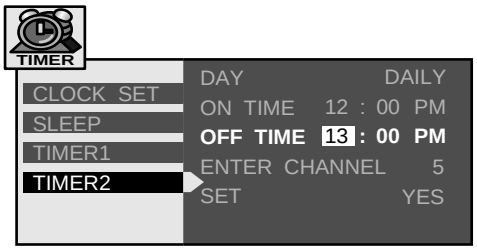
Set the time of day.

**1**

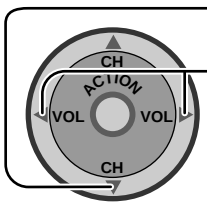



Press to select OFF TIME.

Press to set hours AM or PM.

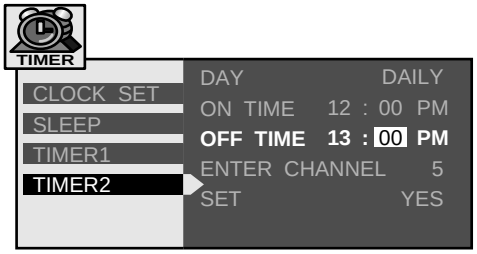



**2**



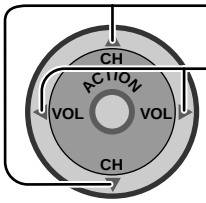

Press to move to minutes position.

Press to set minutes.



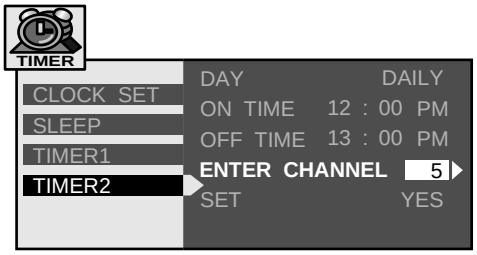

## ENTER CHANNEL

**1**

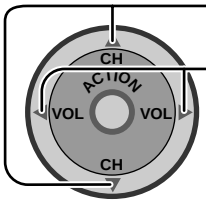



Press to select ENTER CHANNEL.

Press to select channel.



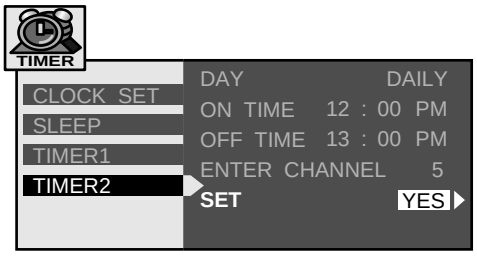

**2**




Press to select SET.

Press to select YES.

YES ⟷ NO




| ***TIMER Activation*** |
|---|
| The TIMER is active when the television is OFF or ON. The television will switch to the selected channel at the selected time set in the TIMER. |

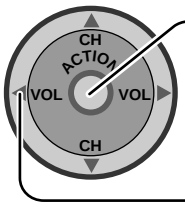
| ***Turn Off After 90 Minutes*** |
|---|
| The television automatically turns OFF after 90 minutes when turned ON by the TIMER. If the OFF time is selected or if a key is pressed, the automatic OFF after 90 minutes will be cancelled. |

**Notes:**

(1) When the power to the TV set is disrupted due to a power outage or similar problem, after power is restored, the off-timer will be deactivated and the TV will be in standby mode.

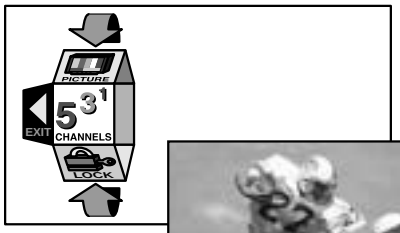
(2) To see the remaining sleep time, press the RECALL button.

## To end Adjustment:




Press twice to return to the roller guide.

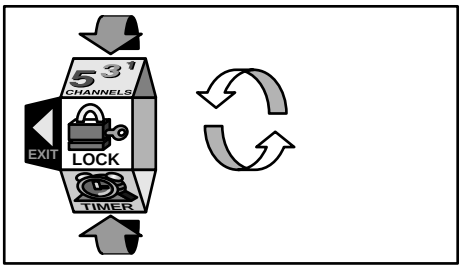
Press to exit roller guide.
This returns the set to the normal viewing.



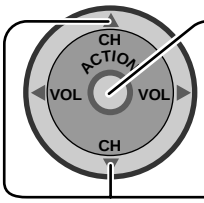
NORMAL PICTURE

# LOCK Feature

Select LOCK SET to prevent video games and VCR tapes from being viewed.



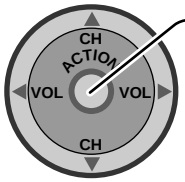

**1**



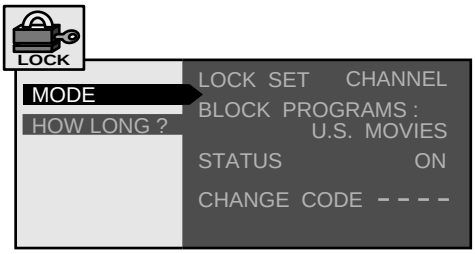

Press to display the roller guide menu.

Press to rotate to LOCK.

**2**

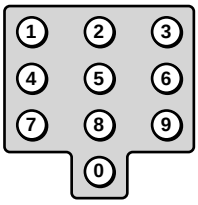



Press to display LOCK menu.



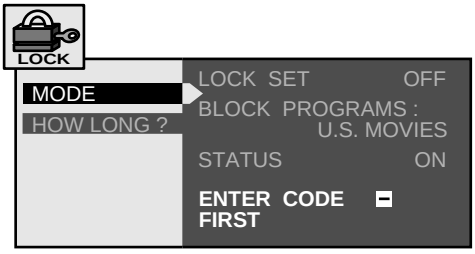

## MODE

To use LOCK options ENTER CODE FIRST.




Use the remote numeric keypad to enter a four-digit secret code.

After entering your secret code for the first time, the onscreen display will change to CHANGE CODE.



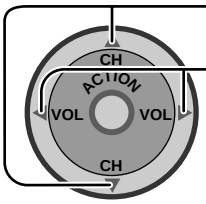

**Notes:**

(1) Use a code that is easy to remember and record it in a safe place.

(2) If you do not remember your code, LOCK will unlock in 12, 24, or 48 hours, depending on the current setup. Be cautious when selecting ALWAYS. If ALWAYS is selected, and you forget your secret code, the TV must be serviced by a qualified technician to clear the LOCK setup.

(3) If you select CHANGE CODE, and you change your code from the one used in the LOCK menu, your new code becomes the controlling code.

## LOCK SET



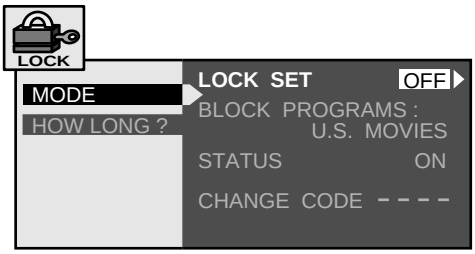

In MODE submenu press to select LOCK SET.

Press to select LOCK MODE.

→ OFF ⟷ GAME ⟷ CHANNEL ⟷ ALL ←

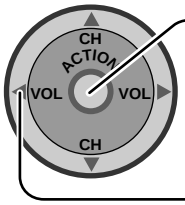
⇩

Proceed to each adjustment menu.



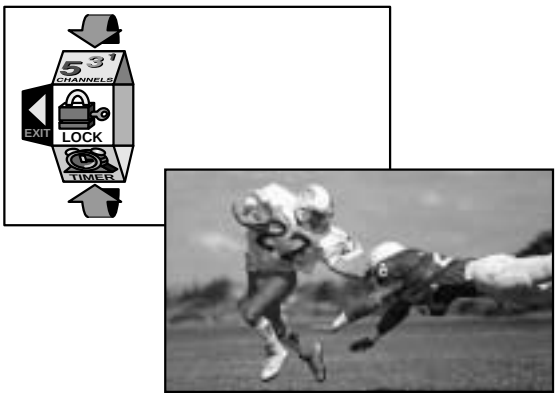

| MODE | Function |
|---|---|
| **OFF** | Turns Lock function off. |
| **GAME** | Lock CH 3, 4 and Video inputs. |
| **CHANNEL** | Lock up to four channels. |
| **ALL** | Locks all channels and video inputs. |

### To end Adjustment:



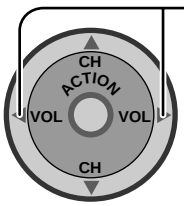

Press twice to return to the roller guide.

Press to exit roller guide.
This returns the set to normal viewing.

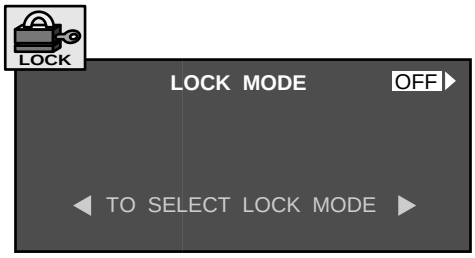



NORMAL PICTURE

### OFF

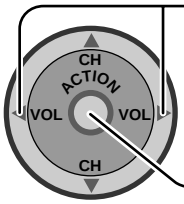



In LOCK MODE press to select OFF.



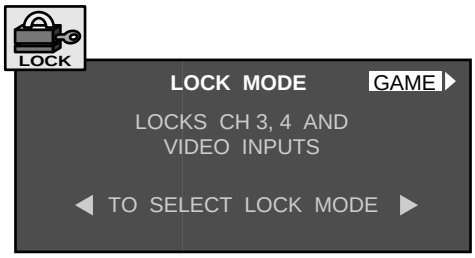

### GAME

**1**

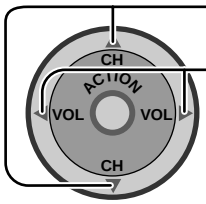



In LOCK MODE press to select GAME.

Press ACTION twice.



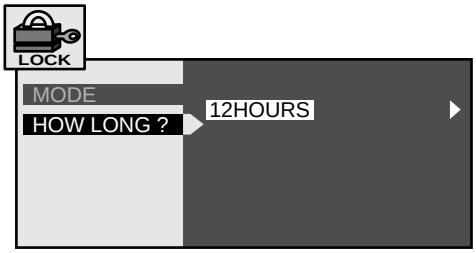

**2**




Press to highlight HOW LONG ?

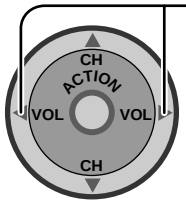
Press to select 12HOURS, 24HOURS, 48HOURS or ALWAYS.

12HOURS ⟷ 24HOURS
ALWAYS ⟷ 48HOURS

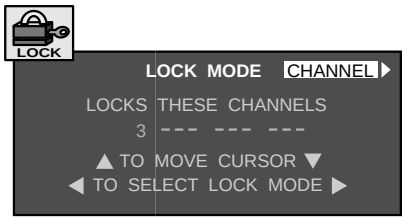


## CHANNEL

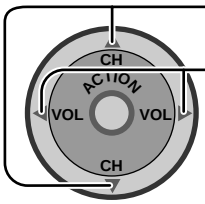
**1**




In LOCK MODE press to select CHANNEL.

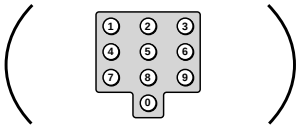


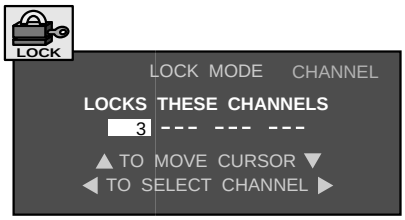

**2**




Press to select channel position.

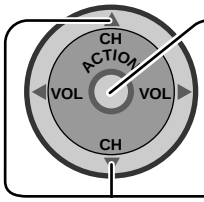
Press to select channels.
(Or use remote numeric keypad to select channels.)



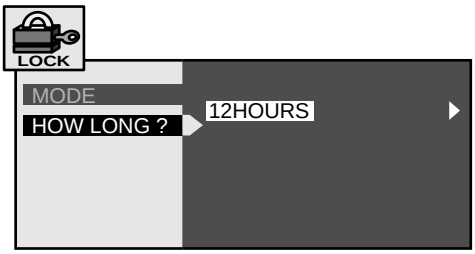

**3** Repeat step 2 for up to four channels.

**4**

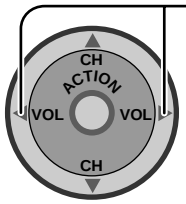



Press ACTION twice.

Press to highlight HOW LONG ?




**5**

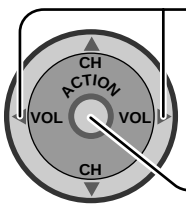



Press to select 12HOURS, 24HOURS, 48HOURS or ALWAYS.

12HOURS ⟷ 24HOURS
ALWAYS ⟷ 48HOURS

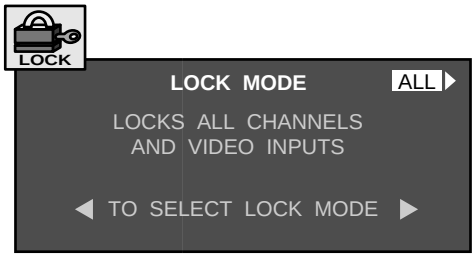
## ALL

**1**

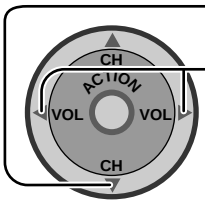



In LOCK MODE press to select ALL.

Press ACTION twice.



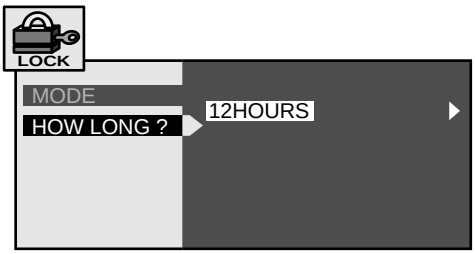

**2**




Press to highlight HOW LONG ?

Press to select 12HOURS, 24HOURS, 48HOURS or ALWAYS.

12HOURS ⟷ 24HOURS
ALWAYS ⟷ 48HOURS

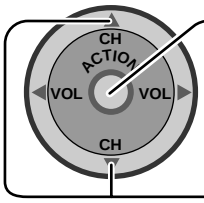



**Note:**
PG will display on screen if a blocked channel or video input is selected.

# V-CHIP Menu OPERATION

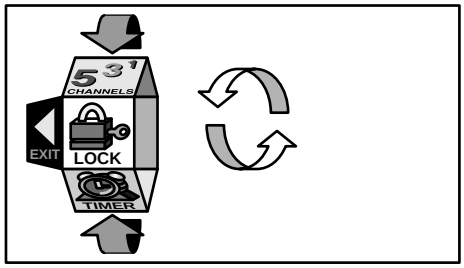
In the United States and Canada, the V-CHIP consists of two rating systems, which are MPAA (MOTION PICTURE) and TV PARENTAL GUIDELINES. Its function is to block programs by following the rating data in the XDS data packets sent from broadcasting stations. The user can select which rating programs should be blocked by using the LOCK MENU options.

**1**

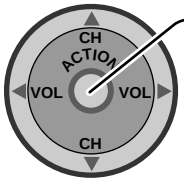



Press to display the roller guide menu.

Press to rotate to LOCK.

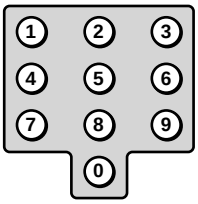



**2**

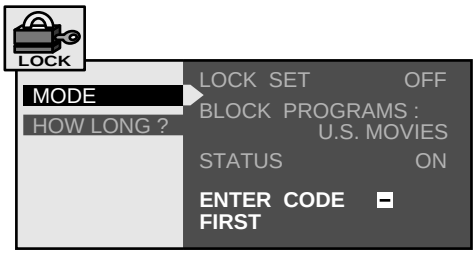



Press to display LOCK menu.

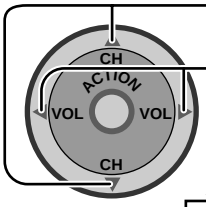
**3**




Use the numeric keypad to enter your number digit code.
(Use a code that is easy to remember and record it in a safe place.)




**4**




Press to enter the BLOCK PROGRAM field.

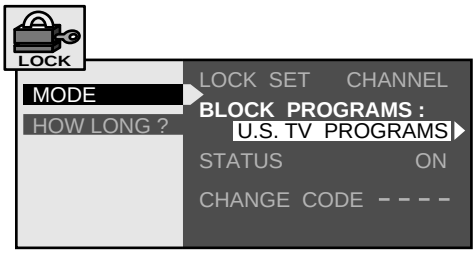
Press to select the desired menu.

The menu will change as follows:

U.S. TV PROGRAMS ⟷ CANADIAN ENGLISH
U.S. MOVIES ⟷ CANADIAN FRENCH

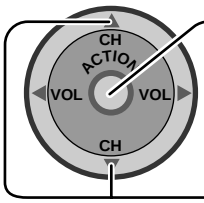
⇩

Proceed to the selected menu.



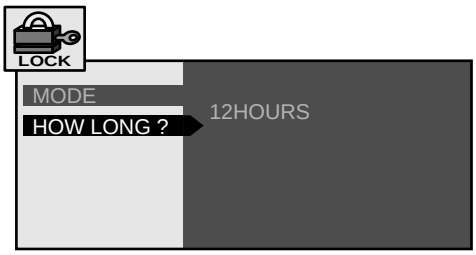

### After finished with adjustments in the selected menu:

**1**

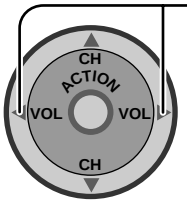



Press twice to return to MODE in LOCK menu.

Press to select HOW LONG?

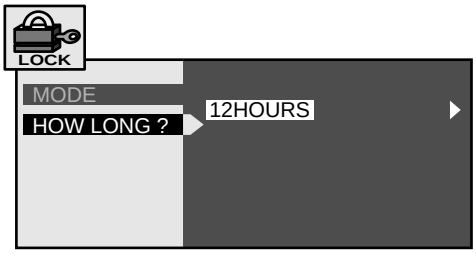



**2**



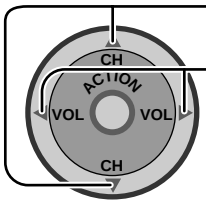

Press to select 12HOURS/24HOURS/48HOURS / ALWAYS.

12HOURS ⟷ 24HOURS
ALWAYS ⟷ 48HOURS



# U.S. TV PROGRAMS

This TV model features the “V-Chip technology” which allows you to use U.S. TV PROGRAMS Guide ratings to block various types of TV programs. PIP will also be blocked automatically.

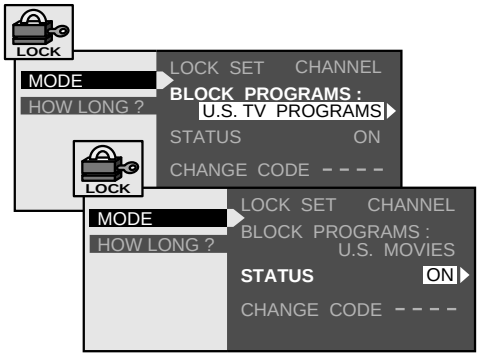



In U.S. TV PROGRAMS press to highlight STATUS.

Press to display U.S. TV PROGRAMS RATING CHART.

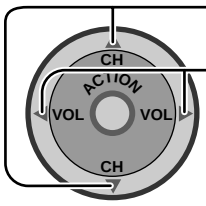
⇩

Proceed to the following adjustments.




**U.S. TV PROGRAMS RATING CHART**

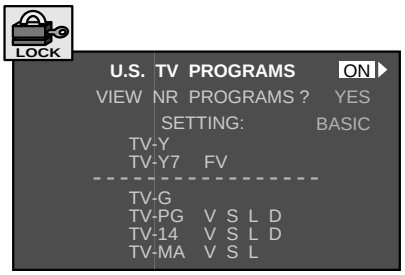
**1**



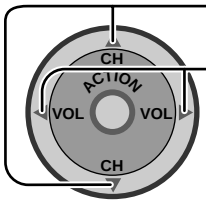

Press to select U.S. TV PROGRAMS.

Press to select U.S. TV PROGRAMS ON or OFF.

ON ⟷ OFF



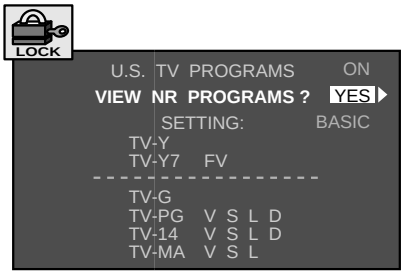

**2**



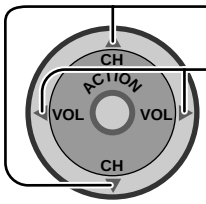

Press to select VIEW NR PROGRAMS?.

Press to select VIEW NR PROGRAMS? YES or NO.

YES: NR programs will be received.
NO: NR programs will be blocked.




**3**



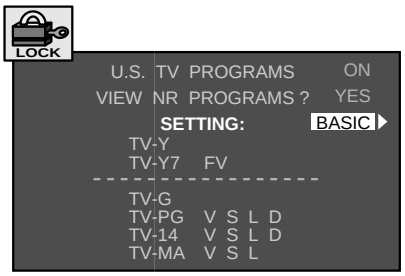

Press to select SETTING.

Press to select BASIC or DETAILED.

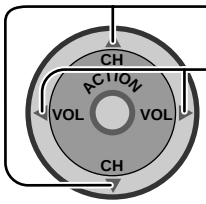
BASIC: Allows you to select only general ratings such as TV-Y, TV-PG, etc.

DETAILED: Allows you to select both general ratings and content such as V, L, etc.

**Note:** See Customer Caution (next page).




**4**

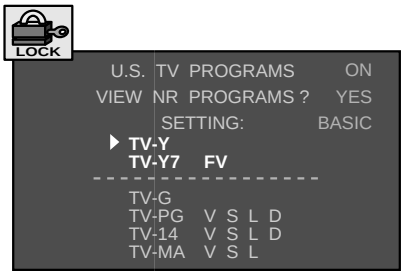



Press to move between different ratings.

Press to select ratings you would like to block (RED) and unblock (GREEN).

Perform Step 4 for each rating.

**Note:** See the U.S. TV PROGRAMS RATINGS CHART (next page).



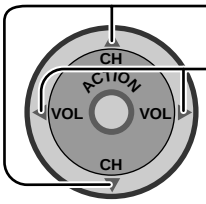
| *Customer Caution* |
|---|
| The V-Chip system that is used in this set is capable of blocking “NR” programs (non rated, not applicable and none) per FCC Rules Section15.120(e)(2). If the option of blocking “NR” programs is chosen “unexpected and possibly confusing results may occur, and you may not receive emergency bulletins or any of the following types of programming:”<br>• Emergency Bulletins (Such as EAS messages, weather warnings and others)<br>• Locally originated programming<br>• News<br>• Political<br>• Public Service Announcements<br>• Religious<br>• Sports<br>• Weather |

**U.S. TV PROGRAMS RATINGS CHART**

| | |
|---|---|
| **NR** | Not Rated. SEE CUSTOMER CAUTION above. |
| **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. |
| **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. |
| **FV** | FANTASY/CARTOON VIOLENCE |
| **V** | VIOLENCE |
| **S** | SEX |
| **L** | OFFENSIVE LANGUAGE |
| **D** | DIALOGUE WITH SEXUAL CONTENT |

# U.S. MOVIES

This TV model features the “V-Chip technology” which allows you to use Motion Picture Ratings when viewing movies or video tapes. This innovation allows parents to block various types of movies and video tapes at their discretion. PIP will also be blocked automatically.

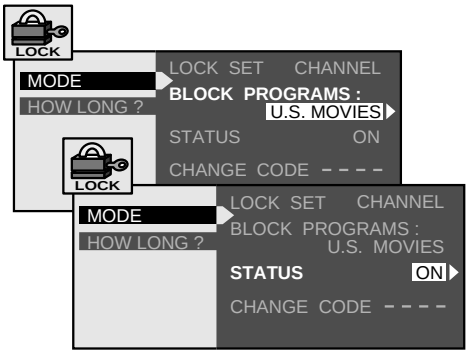



In U.S. MOVIES press to highlight STATUS.

Press to display U.S. MOVIES RATING CHART.

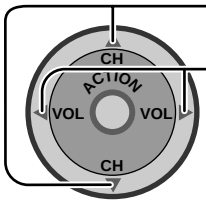
⇩

Proceed to the following adjustments.




**U.S. MOVIES RATING CHART**

**1**

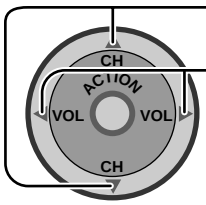



Press to select U.S. MOVIES.

Press to select U.S. MOVIES ON or OFF.

ON ⟷ OFF

**2**

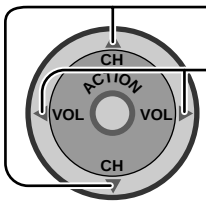



Press to select VIEW NR MOVIES?.

Press to select VIEW NR PROGRAMS? YES or NO.

**Note:**
Some movies are not rated for a variety of reasons.
Old movies and foreign films are usually not rated.

**3**




Press to move between different ratings.

Press to select ratings you would like to block (RED) and unblock (GREEN).

Perform Step 3 for each rating.

**Note:** See the U.S. MOVIES RATINGS CHART.

**PG-13, R, NC-17 and X will be blocked.**

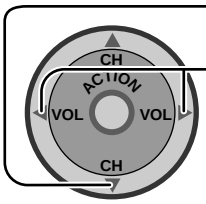
**U.S. MOVIES RATINGS CHART**

| | |
|---|---|
| **NR** | CONTAINS NO RATING (NOT RATED) AND NA (NOT APPLICABLE) PROGRAMS. Movie has not 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. |

# Canadian English

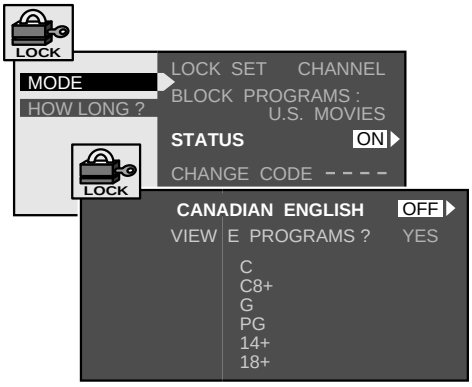
The V-CHIP used in this TV model allows you to block various types of movies and television programs based on the two rating systems used in Canada. PIP will also be blocked automatically.

**1**

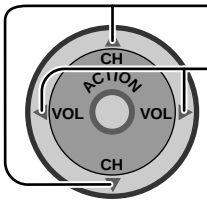



In CANADIAN ENGLISH press to highlight STATUS.

Press to display CANADIAN ENGLISH RATING CHART.




**2**

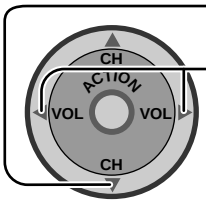



Press to select CANADIAN ENGLISH.

Press to select CANADIAN ENGLISH ON or OFF.

ON ⟷ OFF

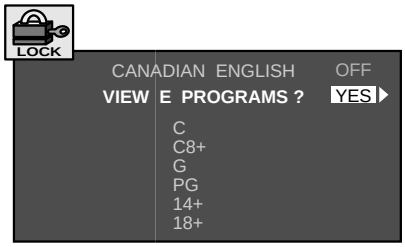
**3**



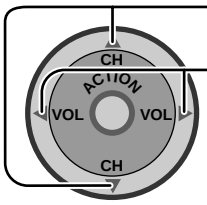

Press to select VIEW E PROGRAMS?

Press to select VIEW E PROGRAMS? YES or NO.

**Note:**
E (Exempt) programming includes: news, sports, documentaries and other information programming, talk shows, music videos, and variety programming.



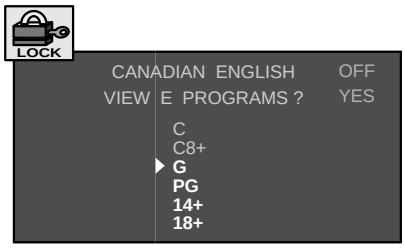

**4**




Press to move between different ratings.

Press to select ratings you would like to block (RED) and unblock (GREEN).

**Note:** See the CANADIAN ENGLISH RATING CHART.



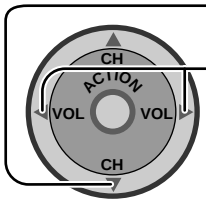

**CANADIAN ENGLISH RATINGS CHART**

| | |
|---|---|
| **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+** | ADULTS ONLY |

# Canadian French

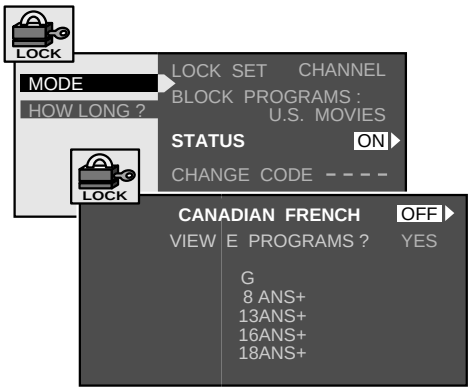
The V-CHIP used in this TV model also lets you block or unblock Canadian French programs according to various ratings categories. PIP will also be blocked automatically.

**1**

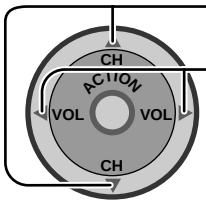



In CANADIAN FRENCH press to highlight STATUS.

Press to display CANADIAN FRENCH RATING CHART.




**2**

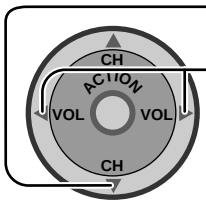



Press to select CANADIAN FRENCH.

Press to select CANADIAN FRENCH ON or OFF.

ON ⟷ OFF

**3**

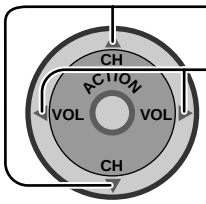



Press to select VIEW E PROGRAMS?

Press to select VIEW E PROGRAMS? YES or NO.

**Note:**
E (Exempt) programming includes: news, sports, documentaries and other information programming, talk shows, music videos, and variety programming.

**4**




Press to move between different ratings.

Press to select ratings you would like to block (RED) and unblock (GREEN).

**Note:** See the CANADIAN FRENCH RATINGS CHART.

**13ANS+, 16ANS+ and 18ANS+ will be blocked.**

**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+** | 18+ ans Programming restricted to adults. Contains constant violence or scenes of extreme violence. |

# Blocking Message

If V-Chip is enabled and the program exceeds the rating limit set by you, the blocking message will appear and the audio will be muted. Enter your four-digit secret code if you wish to continue viewing the program. After entering your code, all locks and rating blocks are disabled until the TV is turned off or until all settings are off.

**Note:**
If you enter your four-digit secret code to override rating blocks, you must reset all rating blocks by either reprogramming or turning the TV off.

PROGRAM RATING EXCEEDED

ACCESS CODE - - - -

## Split Screen Blocking Message

Split Screen function is available when V-Chip is activated. If the program being viewed in Split Screen exceeds the set rating limit, Split Screen will disappear and a blocking message will appear on screen for 5 seconds.

**Note:**
Enable Split Screen functions by setting Lock Set, U.S. TV PROGRAM, U.S. MOVIES, CANADIAN ENGLISH and/or CANADIAN FRENCH to OFF.

PROGRAM RATING EXCEEDED

ACCESS CODE - - - -

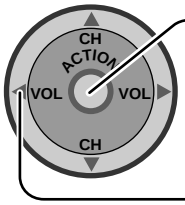
## PIP Blocking Message

PIP function is available when V-Chip is activated. If the program being viewed in PIP exceeds the set rating limit, PIP will disappear and a blocking message will appear on screen for 5 seconds.

**Note:**
Enable PIP functions by setting Lock Set, U.S. TV PROGRAM, U.S. MOVIES, CANADIAN ENGLISH and/or CANADIAN FRENCH to OFF.

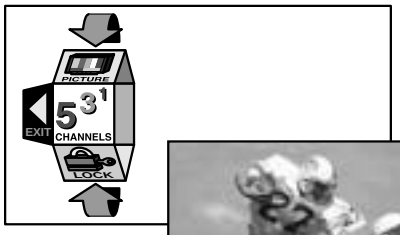
PIP RATING EXCEEDED

### To end Adjustment:




Press twice to return to the roller guide.

Press to exit roller guide.
This returns the set to normal viewing.



NORMAL PICTURE

# Operating peripheral equipment using the remote control

## Programming The Illuminated Remote Control Using Access Codes

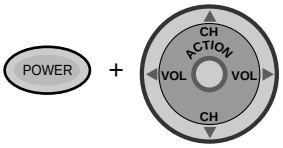
The Universal Remote Control can be programmed to operate many manufacturers' components, using the component function buttons for VCR, DVD, AUX, RCVR, TV, DTV CABLE or DBS. Follow the procedures for programming your Remote Control with or without a code for the component.

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

**1** Confirm that the external component is plugged in and operating.

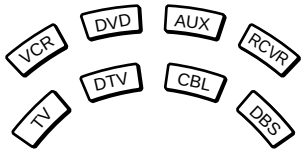
**2** Turn the component off.

**3**



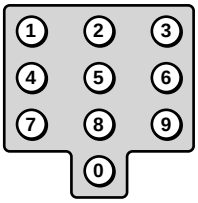

Press **POWER** and **ACTION** together, **for at least 5 seconds**.
After 5 seconds, all the illuminated mode keys will begin to flash.
Release the POWER and ACTION keys.

**4**




Press the mode key.
The mode key will illuminate steadily, all others will go out.

**5**




Enter the 3-digit component code using the Remote Control numeric keypad.

**6**

Press the Remote Control POWER to test the component. If the procedure is successful, the component will turn on.

**Default Modes For Remote Control**

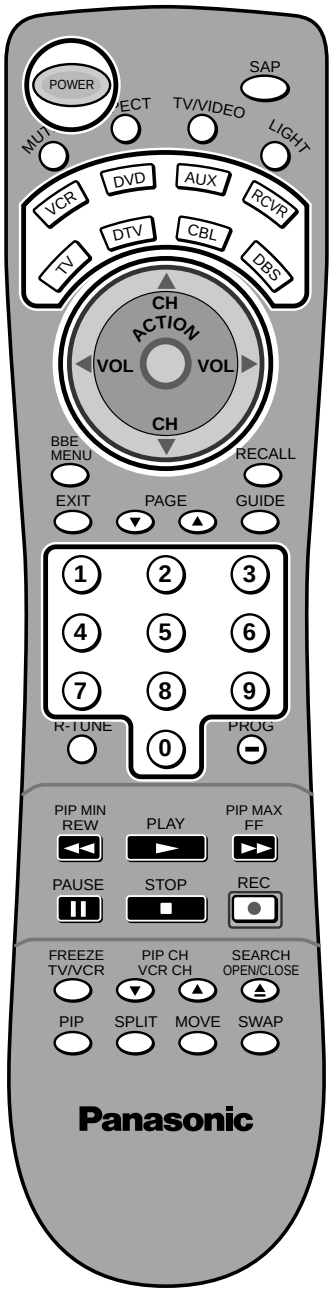
| Device | Operates | Default |
|---|---|---|
| **TV** | TV (Panasonic Only) | Panasonic TV Codes |
| **DTV** | DTV (Panasonic Only) | Panasonic DTV Codes |
| **CABLE** | CABLE (Preset) | Panasonic CABLE Codes |
| **DBS** | DBS (Preset) | Panasonic DBS Codes |
| **VCR** | VCR (Preset) | Panasonic VCR Codes |
| **DVD/CD** | DVD and CD (Preset) | Panasonic DVD Codes |
| **AUX** | Personal Video Recorders, Tape and VCR2 | Panasonic Personal Video Recorders Code |
| **RCVR** | Audio Receiver (Preset) | Panasonic RCVR Code |

***Helpful Hints: Unsuccessful Code***

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

## Programming Without A Code (When the code is not known)

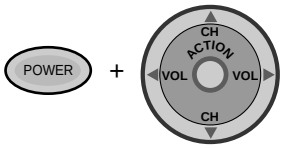
This procedure searches all codes and is called the “sequence method.”




**1** Confirm that the external component is plugged in and on.

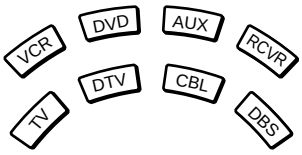
**2** Turn the component off.

**3**



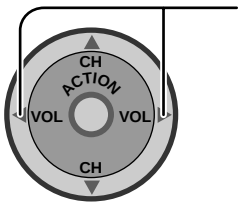

Press **POWER** and **ACTION** together, **for at least 5 seconds**.
After 5 seconds, all the illuminated mode keys will begin to flash.
Release the **POWER** and **ACTION** key.

**4**




Press the mode key.
The mode key will illuminate steadily, all others will go out.

**5**




Press to move forward to the next code, or to move backward.

**6**

Press the Remote Control POWER to test the component. If the procedure was successful, the component will turn on.

**Note:**
Repeat the above steps until the component code is found. It may take many attempts before the correct code is found.

**7**

After the code is found, press ACTION to store the code.

**Note:**
The step and set mode will start from the current device (not the beginning of the list, except for the first time).

# Infrared Codes Index

The remote control is capable of operating many brands of peripheral equipment. Refer to pages 58 and 59 for programming procedures.

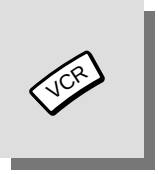
**Note:** The remote control memory is limited and therefore some models may not operate. The remote control is not designed to control all features available in all models.

**Note:** After entering the proper infrared code, press the desired Mode Selection Button on the remote control. Refer to pages 14 and 63 - 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 | | |




## 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 |
| 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 |

| Brand | Code |
|---|---|
| Orion | 320, 326 |
| Panasonic | 321, 322, 323, 324 |
| J.C.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 Shac | 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 |

VCR

## Codes for Personal Video Recorders

| Brand | Code |
|---|---|
| Panasonic Replay | 100 |
| Philips Tivo | 101 |
| Sony Tivo | 102 |

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 |

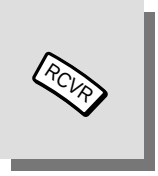
| Brand | Code |
|---|---|
| Optimus | 208, 218, 220, 222 |
| Panasonic | 224, 225, 227 |
| Philips | 229, 230 |
| Pioneer | 208 |
| Quasar | 224, 225, 227 |
| RCA | 231, 237, 238, 247 |
| Sansui | 210, 246 |
| Sanyo | 205 |
| Scott | 210, 246 |
| Sharp | 242, 243 |
| Sherwood | 220 |
| Sony | 228 |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

AUX

## Codes for 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 |

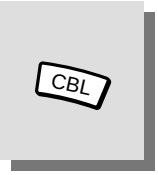
| Brand | Code |
|---|---|
| Philips | 222 |
| Pioneer | 204 |
| RCA | 226, 227, 228 |
| Sansui | 205, 210 |
| Sharp | 231 |
| Sony | 219, 220 |
| Teac | 210, 211, 215 |
| Technics | 216, 218 |
| Yamaha | 201, 202 |




## 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 |

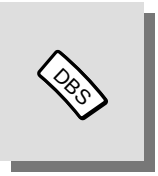
| Brand | Code |
|---|---|
| Optimus | 103, 127, 130, 131 |
| Panasonic | 118, 119, 121 |
| Philips | 123 |
| Pioneer | 105, 107 |
| Quasar | 118, 119, 121 |
| RCA | 103, 105, 127, 130, 131 |
| Sansui | 103, 111, 139 |
| Sharp | 134, 137 |
| Sony | 122 |
| Soundesign | 138 |
| Teac | 111, 112, 113 |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




## 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 |




## Codes for DBS

| Brand | Code |
|---|---|
| Dish Network | 105, 115, 116 |
| (Echostar) | |
| Echo Star | 105 |
| Express VU | 105, 115 |
| G.E. | 106 |
| G.I. | 108 |
| (General Instrument) | |
| 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 TV, DTV, CABLE, DBS, VCR, DVD etc.

| KEY NAME | TV MODE | DTV MODE | CABLE MODE | DBS MODE |
|---|---|---|---|---|
| POWER | POWER | POWER | POWER | POWER |
| SAP | SAP ON/OFF | – | – | – |
| MUTE | MUTE | TV MUTE | CBL MUTE | TV MUTE |
| ASPECT | TV ASPECT | DTV ASPECT | – | DBS ASPECT |
| TV/VIDEO | TV INPUT SW | TV INPUT SW | TV INPUT SW | TV INPUT SW |
| LIGHT | REMOTE BUTTONS | REMOTE BUTTONS | REMOTE BUTTONS | REMOTE BUTTONS |
| CH ACTION VOL VOL | CHANNEL UP/DOWN | NAVIGATION UP/DOWN | CABLE CHANNEL UP/DOWN | DBS NAVIGATION UP/DOWN |
| | ACTION | ACTION | ENTER | DBS ACTION |
| | VOL + / – | NAVIGATION RIGHT/LEFT | CABLE VOL + / – | DBS NAVIGATION RIGHT/LEFT |
| BBE MENU | – | MENU | – | DBS MENU |
| RECALL | DISPLAY | PROGRAM INFO. | TV DISPLAY | DBS PROG.INFO |
| EXIT | – | EXIT (EPG)ELECTRONIC PROGRAM GUIDE | – | DBS EXIT |
| PAGE ▼ ▲ | – | – | – | DBS PAGE UP/DOWN |
| GUIDE | – | GUIDE (EPG)ELECTRONIC PROGRAM GUIDE | – | DBS GUIDE |
| 1 2 3 4 5 6 7 8 9 0 | Select Channel | Select Channel | Select Channel | Select Channel |
| R-TUNE | PREVIOUS CHAN OR VIDEO MODE | PREVIOUS STB CHAN | CABLE PREVIOUS | DBS PREVIOUS |
| PROG | – | DTV PROGRAM/DASH | – | DBS PROGRAM/DASH |
| PIP MIN REW / PIP MAX FF | PIP MINIMIZE/ MAXIMIZE | – | – | – |
| PLAY | – | – | – | – |
| PAUSE | – | – | – | – |
| STOP | – | – | – | – |
| REC | – | Info (EPG) ELECTRONIC PROGRAM GUIDE | VCR RECORD | DBS RECORD |
| FREEZE TV/VCR | PIP FREEZE | – | – | TV/DBS SWITCH |
| PIP CH VCR CH ▼ ▲ | PIP or SPLIT CHAN UP/DOWN | – | TV CHANNEL UP/DOWN | DBS CHANNEL UP/DOWN |
| SEARCH OPEN/CLOSE ▲ | PIP SEARCH | – | – | – |
| PIP | PIP ON/OFF | – | – | – |
| SPLIT | SPLIT ON/OFF | – | – | – |
| MOVE | MOVE PIP | – | – | – |
| SWAP | PIP or SPLIT SWAP | – | – | – |

# Operating peripheral equipment using the remote control

| KEY NAME | VCR MODE | DVD MODE (DVD) | DVD MODE (CD) | AUX MODE (VCR2) | AUX MODE (TAPE) | RCVR MODE |
|---|---|---|---|---|---|---|
| POWER | POWER | POWER | POWER | POWER | POWER | POWER |
| SAP | – | – | – | – | – | – |
| MUTE | TV MUTE | TV MUTE | RCVR MUTE | TV MUTE | RCVR MUTE | RCVR MUTE |
| ASPECT | – | – | – | – | – | – |
| TV/VIDEO | TV INPUT SW | TV INPUT SW | – | TV INPUT SW | TV INPUT SW | TV INPUT SW |
| LIGHT | REMOTE BUTTONS | REMOTE BUTTONS | REMOTE BUTTONS | REMOTE BUTTONS | REMOTE BUTTONS | REMOTE BUTTONS |
| CH ACTION VOL VOL | VCR CHAN UP/DOWN | NAVIGATION UP/DOWN | NEXT/PREVIOUS TRACK | VCR CHANNEL UP/DOWN | – | TUNER +/– |
| | TV ACTION | SELECT | – | TV ACTION | – | – |
| | TV VOLUME +/– | NAVIGATION UP/DOWN | RCVR VOLUME UP/DOWN | TV VOLUME +/– | RCVR VOLUME +/- | RCVR VOLUME +/- |
| BBE MENU | – | DVD MENU | – | – | – | – |
| RECALL | ONSCREEN VCR DISPLAY | DVD DISPLAY | TIME FORMAT | ONSCREEN VCR DISPLAY | – | – |
| EXIT | – | – | – | – | – | – |
| PAGE | – | SKIP +/– | SKIP +/– | – | – | – |
| GUIDE | – | TITLE | NEXT TRACK | – | – | – |
| 1 2 3 4 5 6 7 8 9 0 | Select Channel | Select Chapter Number | Select Track Number | Select Channel | – | 1.... AV1<br>2.... AV2<br>3.... AV3<br>4.... AV4<br>5.... CD<br>6.... TUNER<br>7.... PHONO<br>8.... TAPE<br>9.... AUX |
| R-TUNE | – | – | – | – | DECK A/B | – |
| PROG | – | – | – | – | – | – |
| 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 | – |
| PAUSE | PAUSE | PAUSE | PAUSE | PAUSE | PAUSE | – |
| STOP | STOP | STOP | STOP | STOP | STOP | – |
| REC | VCR RECORD | – | – | VCR RECORD | TAPE RECORD | – |
| FREEZE TV/VCR | TV/VCR SWITCH | – | – | TV/VCR SWITCH | – | – |
| PIP CH VCR CH | VCR CHANNEL UP/DOWN | – | – | VCR CHANNEL UP/DOWN | – | – |
| SEARCH OPEN/CLOSE | – | OPEN/CLOSE | OPEN/CLOSE | – | OPEN/CLOSE | – |
| PIP | – | – | – | – | – | – |
| SPLIT | – | – | – | – | – | – |
| MOVE | – | – | – | – | – | – |
| SWAP | – | – | – | – | – | – |

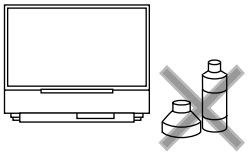
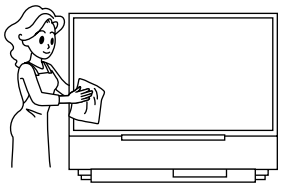
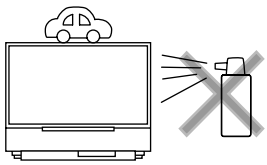
# Troubleshooting Chart

Before you call for service, determine the symptoms and make a few simple checks as shown below.

| Symptoms | Checks | Page |
|---|---|---|
| Power does not turn ON | ● Is the power plug plugged in?<br>● Is the Power Indicator blink Orange? | 18<br>19 |
| The power turns OFF (the Power LED blinks Orange and the TEMP LED and LAMP LED lights up Red). | ● Check whether or not the air vents are clogged.<br>● The lamp may be malfunctioning. Please consult your nearest dealer. | –<br>– |
| Remote control does not function | ● Are the batteries dead or inserted incorrectly?<br>● Is the remote control sensor in direct light of florescent lamps or other strong sources of light? | 6<br>– |
| Image shakes<br>Image is not clear<br>Color patches or no color | ● Is the antenna or antenna cable old, broken or shorted?<br>● Is the antenna cable connected properly?<br>● When using a VCR and selecting channels on the TV, is the TV/VIDEO mode for the VCR set to TV? | –<br>8, 9<br>– |
| Image appears doubled or tripled. | ● Is the antenna facing the right direction?<br>● Is the antenna receiving any signals reflected off of mountains or buildings? | –<br>– |
| A black stripe appears for a moment when changing channels using the VCR. | ● The image distorts when channels are changed. | – |
| Images disappear at the top and bottom of the screen | ● When using 16:9 image software, there is no picture at the top and bottom of the screen (cinema vision size software, etc.). | – |
| During ZOOM1, ZOOM2 or JUST modes, the image is cut off at the top and bottom. | ● Has the screen position been changed?<br>→ If so, adjust screen positioning. | 31 |
| Channel number remains displayed. | ● Press the RECALL button.<br>During VIDEO input, channel number is displayed until an image is displayed. | 15 |
| The projection TV set makes a cracking sound | ● If there are no problems with image or sound, it is the sound of the cabinet shrinking due to room temperature changes. This is not a malfunction. | – |
| The projection TV set makes a high whistling sound when the power is ON. | ● This is the sound of the internal DLP™ starting UP. This is not a malfunction. | – |
| Some parts of the screen do not light up. | ● DLP™ is manufactured using an extremely high level of precision technology, however sometimes some parts of the screen may be missing picture elements. This is not a sign of a malfunction. | – |

# Cleaning

To ensure continued excellent performance by this product, periodic cleaning is recommended.

| | | | |
|---|---|---|---|
|  | The unit contains many plastic parts. For this reason DO NOT use benzine, thinner or other chemicals to clean the unit. |  | Dust will accumulate on the picture screen. Please wipe with the supplied soft cloth (Part No: TPEX007) from time to time. If you use a chemically treated cloth, please be careful to follow the instructions that come with the cloth. |
|  | DO NOT bring into contact with insecticide or other volatile substances.<br>DO NOT allow the unit to come into contact for extended periods with rubber or vinyl products. | | Remove dirt and soiling by wiping with a light cloth.<br>Even if the unit is heavily soiled, do not apply cleaner directly to the unit. Soak a cloth in a solution of neutral cleanser thinned with water. Then wring out the cloth, wipe the unit clean, and finish by wiping with a dry cloth.<br>Do not use any type of cleansers on the picture screen. |

# Specifications

| | | |
|---|---|---|
| **Power Source** | | AC 120 V, 60 Hz |
| **Power Consumption** | | Average use : 310W<br>Stand-by condition : 0.65 W (when cooling fan is stopped) |
| **Display** | | 52-inch, 16 : 9 aspect ratio |
| **Screen Size** | | 45.31 ″ (1151 mm) (W) × 25.49 ″ (647.5 mm) (H) × 52 ″ (1321 mm) (diagonal) |
| **Sound** | **Speaker** | 4 Speakers |
| | **Audio Output** | 30 W [15 W + 15 W ] (10 % THD) |
| **HID Lamp** | | 200 W HID (High Intensity Discharge) Lamp (recommended replacement period approximately 5000 hours) |
| **Channel Capability-181** | | VHF-12 : UHF-56 : Cable-125 |
| **Accessories Supplied** | | Remote control Transmitter EUR7603Z70<br>R6 (AA) Battery × 2<br>RGB cable : K1HA30DA0003<br>DIGITAL IN cable: K1HA24DA0005 |
| **Input signals** | | RGB input — D-SUB 15pin — Digital RGB<br>AV INPUT 1- 4 — VIDEO (RCA Pin Jack Type) — 1.0 Vp-p (75 Ω)<br>S VIDEO (not supplied for AV INPUT 3) (Mini DIN 4pin) — Y : 1 Vp-p (75 Ω), C : 0.286 Vp-p (75 Ω)<br>AUDIO L-R (RCA Pin Jack Type × 2) — 0.5 Vrms<br>COMPONENT VIDEO INPUT 1,2 — Y — 1.0 Vp-p (including synchronization)<br>$P_B$ / $P_R$ — ± 0.35 Vp-p<br>AUDIO L-R (RCA Pin Jack Type × 2) — 0.5 Vrms<br>DIGITAL IN INPUT — DVI 1.0 — 24 pin<br>AUDIO L-R (RCA Pin Jack Type × 2) — 0.5 Vrms |
| **Output signals** | | AV PROG. OUT — VIDEO (RCA Pin Jack Type) — 1.0 Vp-p (75 Ω)<br>S VIDEO (Mini DIN 4pin) — Y : 1 Vp-p (75 Ω), C : 0.286 Vp-p (75 Ω)<br>AUDIO L-R (RCA Pin Jack Type × 2) — 0.5 Vrms |
| **Dimensions ( W × H × D )** | | 47.7 ″ (1211 mm) × 39.2 ″ (995 mm) × 17.7 ″ (450 mm) |
| **Mass (Weight)** | | 108 lbs. (49 kg) Net |

| | |
|---|---|
| **Operating conditions** | Temperature : 32 °F - 95 °F (0 ° – 35 °C)<br>Humidity : 20 % - 80 % (non-condensing) |

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

**Customer's Record**
The 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 PT-52DL52 _____ Serial Number _____

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