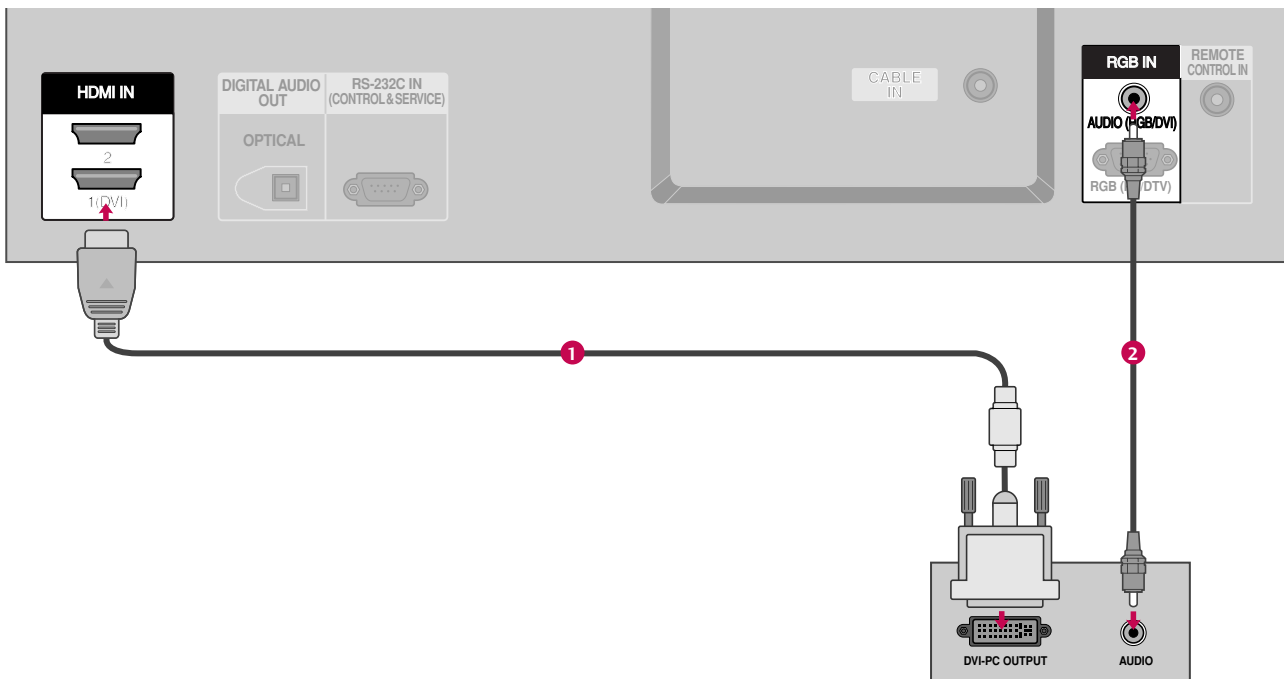


# CONNECTIONS & SETUP

## When connecting HDMI to DVI cable



### 1. How to connect

- 1 Connect the DVI output of the PC to the **HDMI IN 1 (DVI)** jack on the set.
- 2 Connect the PC audio output to the **AUDIO (RGB/DVI)** jack on the set.

### 2. How to use

- Turn on the PC and the set
- Select **HDMI1/DVI** input source with using the **INPUT** button on the remote control.

#### ! NOTE

- ▶ HDMI2 source does not support DVI source.
- ▶ If the PC has a DVI output and no HDMI output, a separated audio connection is necessary.
- ▶ If the PC does not support Auto DVI, you need to set the output resolution appropriately. To get the best picture quality, adjust the output resolution of PC graphics card's output resolution to 1024x768, 60Hz.

## ! NOTES

- ▶ To get the the best picture quality, adjust the PC graphics card to 1024x768, 60Hz.
- ▶ Depending on the graphics card, DOS mode may not work if a HDMI to DVI Cable is in use.
- ▶ When Source Devices are connected with HDMI/DVI Input, the output PC Resolution (VGA, SVGA, XGA), Position and Size may not fit on the Screen. As shown in the picture, press the ADJUST button to adjust the screen Position of the TV SET and contact a PC graphics card service center.
- ▶ When Source Devices connected with HDMI/DVI Input, output TV SET Resolution (480p, 720p, 1080i) and TV SET Display fit EIA/CEA-861-B Specification to Screen. If not, refer to the Manual of HDMI/DVI Source Devices or contact your service center.
- ▶ If the HDMI/DVI Source Device is not connected to the Cable or if there is a poor cable connection, "No signal" is displayed in the HDMI/DVI Input. In this case, that Video Resolution is not supported. If "Invalid Format" is displayed, refer to the Source Device manual or contact your service center.
- ▶ Avoid keeping a fixed image on the screen for a long period of time. The fixed image may become permanently imprinted on the screen.
- ▶ The synchronization input form for Horizontal and Vertical frequencies is separate.

### Supported Display Specifications (RGB/HDMI-PC)

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
640x350	31.468	70.09
720x400	31.469	70.08
640x480	31.469	59.94
	37.861	72.80
	37.500	75.00
800x600	35.156	56.25
	37.879	60.31
	48.077	72.18
	46.875	75.00
1024x768	48.363	60.00
	56.476	70.06
	60.023	75.02
1280x768	47.776	59.870
1360x768	47.720	59.799

\* RGB-PC mode only: 640x350, 720X400

\* HDMI-PC mode only: 1280x768

### Supported Display Specifications (RGB/HDMI-DTV)

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
720x480	31.47	60
	31.47	59.94
1280x720	45.00	60.00
	44.96	59.94
1920x1080	33.75	60.00
	33.72	59.94

# CONNECTIONS & SETUP

## Screen Setup for PC mode

### Overview

When RGB connect to PC output and select the RGB-PC in Main Input, this function is used.

When HDMI IN 1 (DVI) connect to PC output and select HDMI1/DVI input, this function is used.

In RGB-DTV mode, SIZE and PHASE is not available.

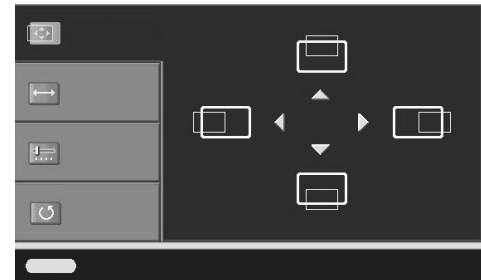
### Adjustment for screen Position, Size, Phase, Reset

Press the **ADJUST** button and then use ▲ or ▼ button to select **Position**, **Size**, or **Phase**.

Press the **ENTER** button and then use ▲ ▼ ◀ ▶ button to make appropriate adjustments.

- The **Phase** adjustment range is **-16 ~ +16**.
- The **Size** adjustment range is **-30 ~ +30**.

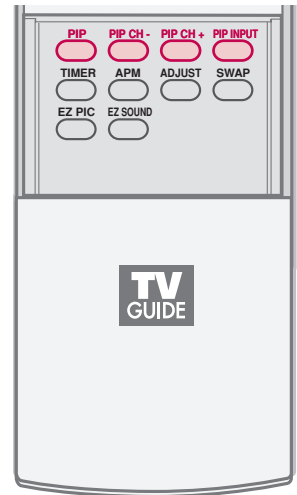
Press the **ENTER** button.



# SPECIAL FUNCTIONS | PIP / POP / Twin Picture

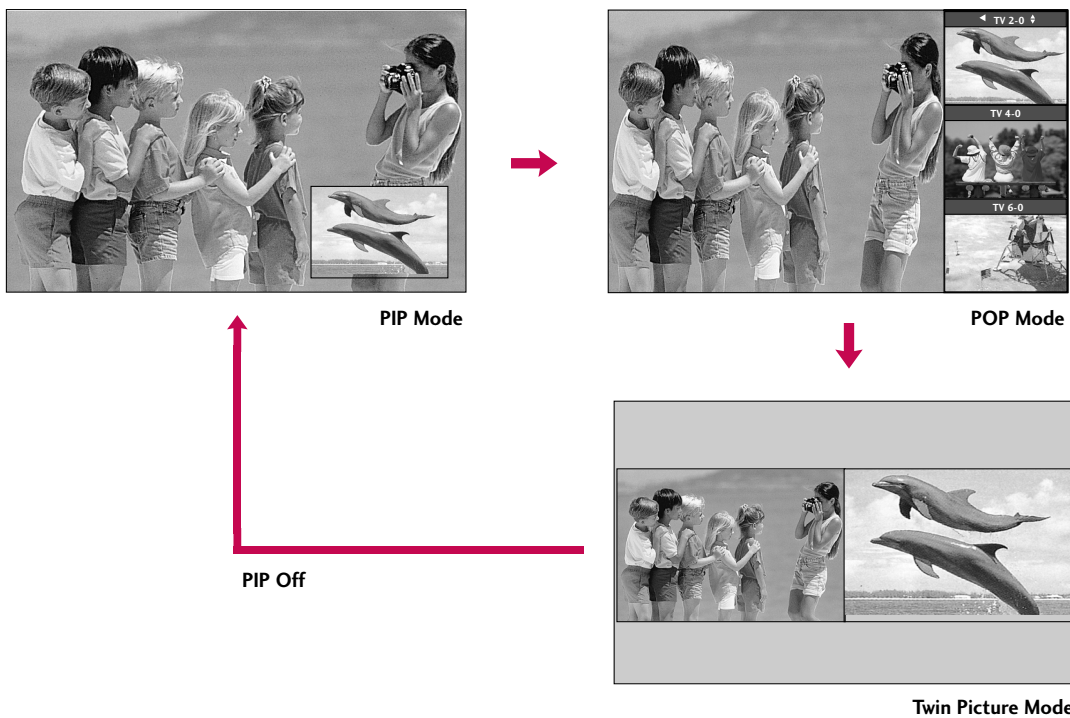
PIP lets you view 2 different inputs (sources) on your TV screen at the same time. One source will be large, and the other source will show a smaller inset image.

Twin Picture mode splits the screen into two images, allowing two picture sources to be shown on the TV screen at the same time. Each source is given half the screen.



## Watching PIP/POP/Twin Picture

Press the **PIP** button to access the sub picture.  
Each press of PIP changes the PIP options as shown below.



SPECIAL FUNCTIONS / PIP / POP / TWIN PICTURE

## Selecting an Input Signal Source for PIP/Twin Picture

Use the **PIP INPUT** button to select the input source for the sub picture. Each press of **PIP INPUT** button changes the PIP source. You can also select sources for the **Sub Input** in the **SETUP** menu.

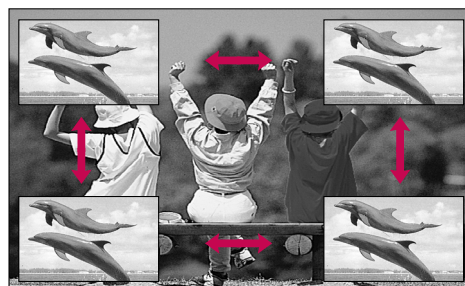
Main Picture Source	Available Sub Picture Sources
DTV/CADTV	Analog (TV/CATV), AV1, and AV2
TV/CATV, AV1, AV2, Component1, Component2, RGB-PC/RGB-DTV, HDMI1/DVI, HDMI2	DTV/CADTV, Analog(TV/CATV), AV1, and AV2

## TV Program Selection for PIP

- 1 Press the **PIP** button.
- 2 Select the **Antenna** or **Cable** option on the Sub input menu or with the **PIP INPUT** button. Use the **PIP CH+** / **PIP CH-** button to select a channel for the sub picture.  
(You can't select DTV for main and sub picture simultaneously).

## Moving the PIP Sub Picture

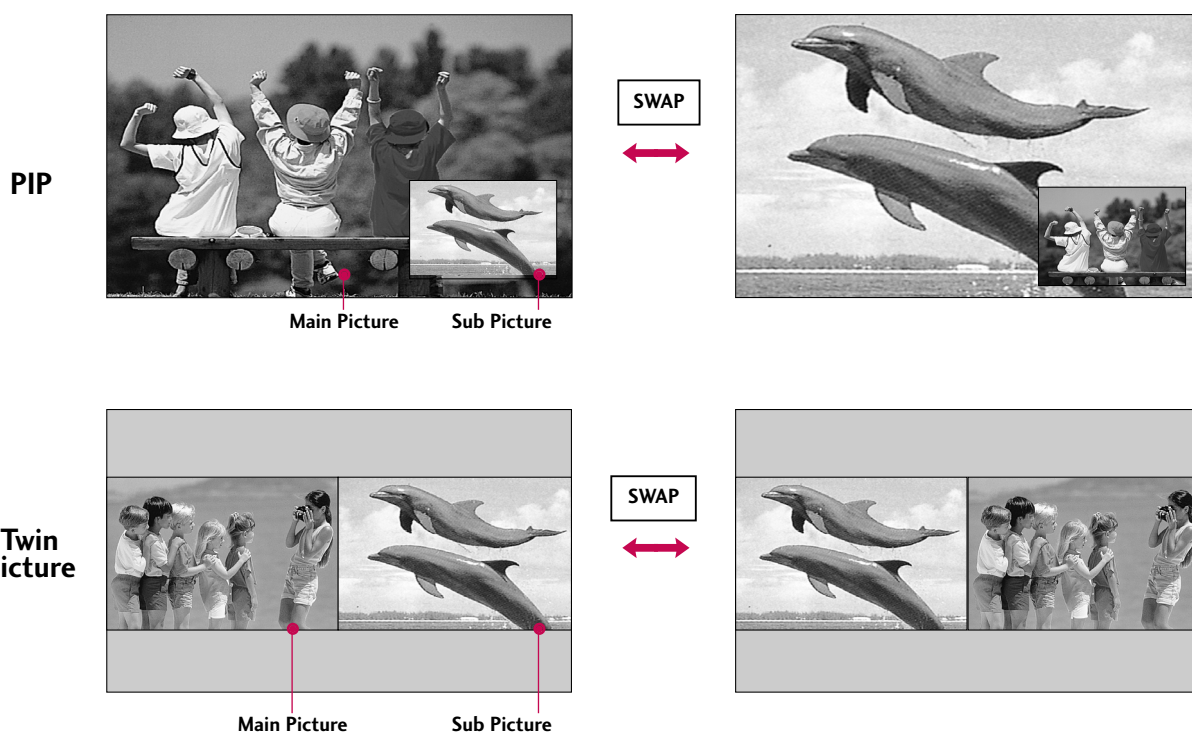
- 1 In PIP mode, press the **▲▼◀▶** button to move the sub picture to a different location on the screen.



# SPECIAL FUNCTIONS | PIP / POP / Twin Picture

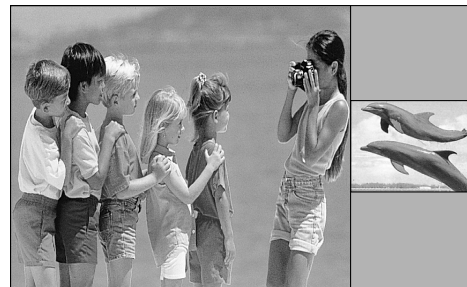
## Swapping the PIP/Twin Picture

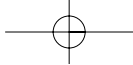
- 1 Repeatedly, use the **SWAP** button to switch the main and sub pictures.
  - Component 1, Component 2, RGB-PC (or RGB-DTV), HDMI1/DVI, HDMI2 input sources for the main picture can't be used to swap the main and sub pictures.



## Adjusting Main and Sub Picture Sizes for Twin Picture

- 1 Use the **▲▼◀▶** button to change main and sub picture sizes in Twin Picture mode.
  - If screen is adjusted to the maximum size, the large screen is filled with entire screen vertically as shown.

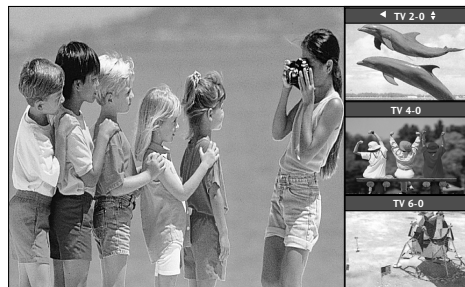




## POP (Picture-out-of-Picture : Channel Scan)

Use POP to search the programs of all the memorized channels one-by-one on the 3 PIP screen display, (while the main picture source remains the current channel). The pictures of all the programmed channels are searched with the 3 POP screens.

- 1 Press the **PIP** button to activate the **POP mode** while in **PIP mode**.
  - **Channel selection** : Use ◀ button to enlarge the selected channel being searched on the PIP screen to shift it for viewing on the Main screen.
  - **PIP selection** : Use ▲ or ▼ button to select one of 3 PIP screen pictures in **POP** mode.
  - When watching TV/CATV, TV/DTV or CATV/CADTV Sub pictures are scanned. However, when watching DTV/CADTV, only TV/CATV Sub pictures are scanned.



- 2 Press the **EXIT** button to cancel POP mode.

### ! NOTE

- ▶ Run EZ Scan channel search before using POP mode.
- ▶ When Sub pictures are changed from the TV/DTV to CATV/CADTV in POP mode, you may hear a noise from the Tuner switch.

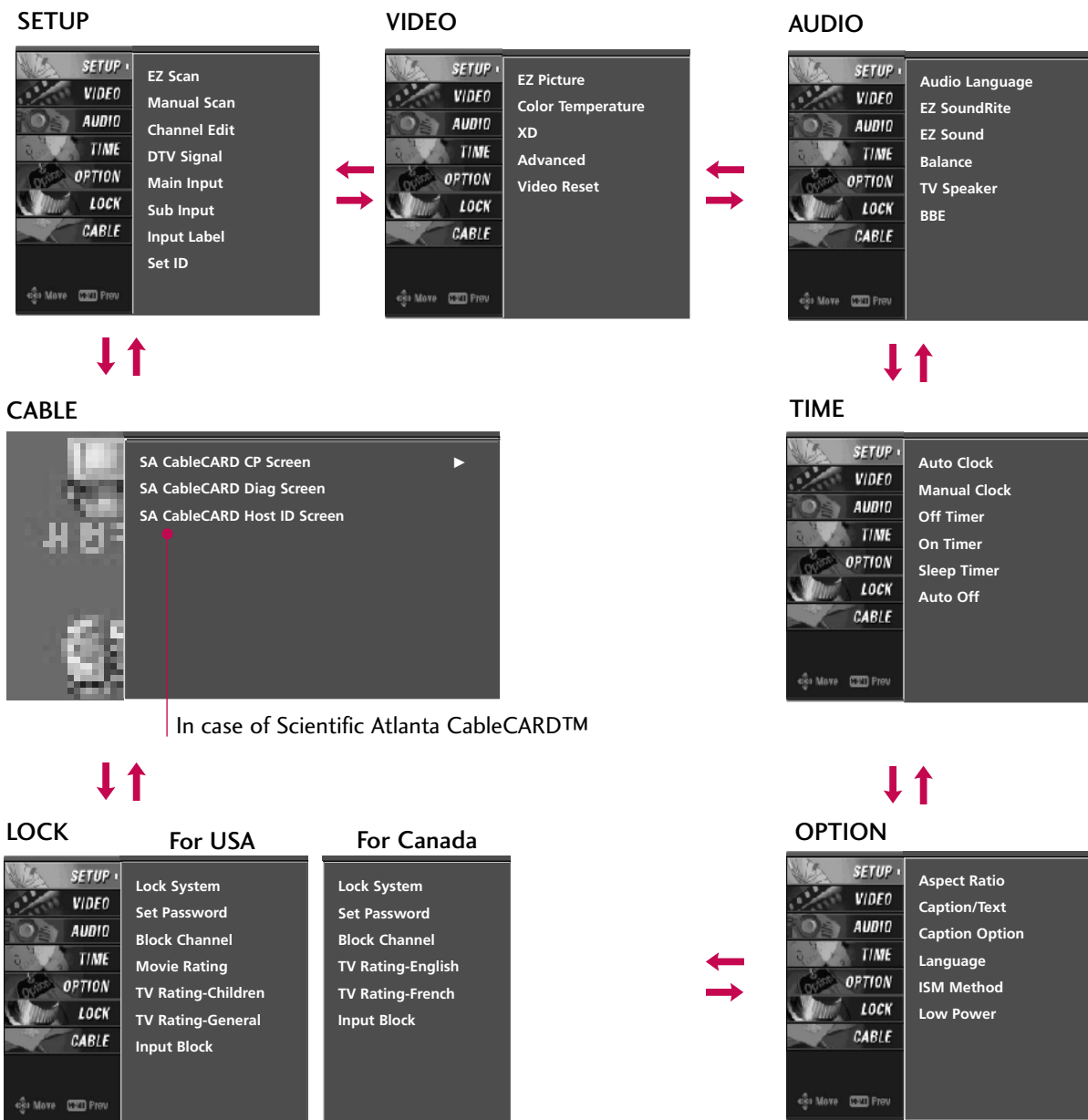
# TV MENU

## ON SCREEN MENUS SELECTION AND ADJUSTMENT

Your TV's OSD (On Screen Display) may differ slightly from what is shown in this manual.

**1** Press the **MENU** button and then use **▲** or **▼** button to select the each menu.

**2** Press the **▶** button and then use **▲ ▼ ◀ ▶** button to display the available menus.



TV MENU



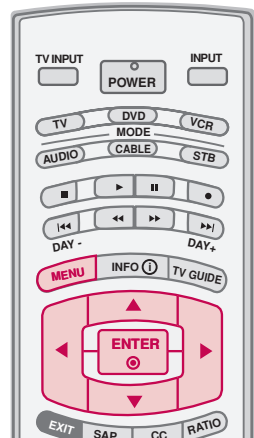
# TV MENU | SETUP(Channel)

## AUTO CHANNEL SEARCH (EZ SCAN)

Automatically finds all channels available through antenna or cable inputs, and stores them in memory on the channel list.

Run EZ Scan again after any Antenna/Cable connection changes.

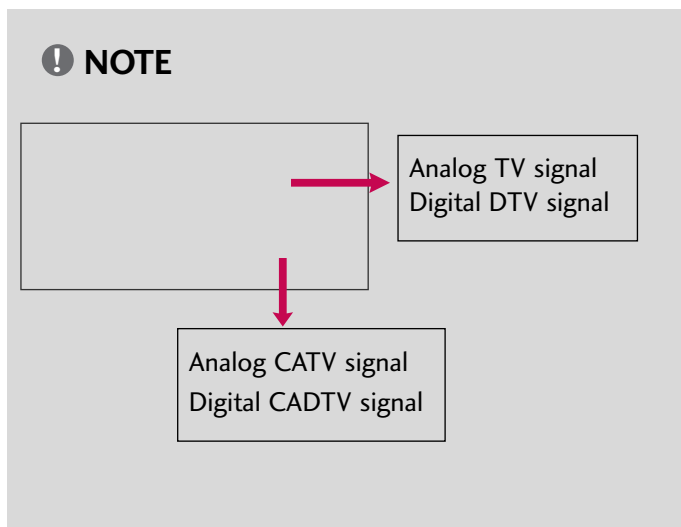
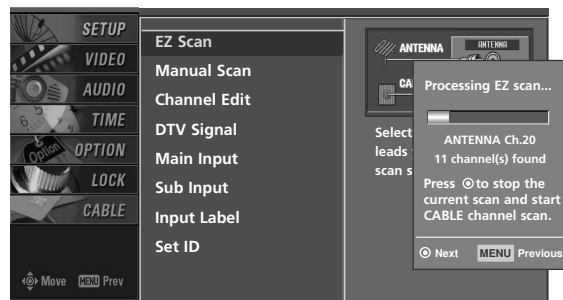
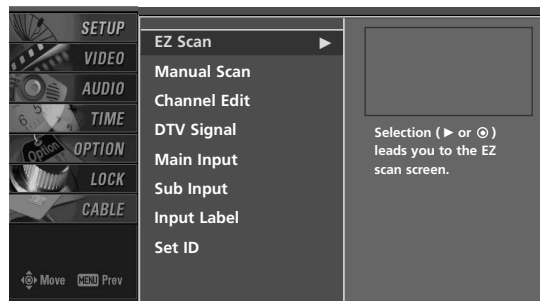
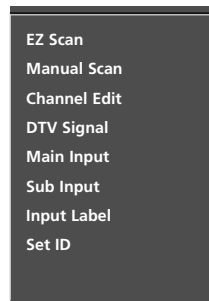
A password is required to gain access to EZ Scan menu if the Lock System is turned on.



**1** Press the **MENU** button and then use ▲ or ▼ button to select the **SETUP** menu.

**2** Press the ► button and then use ▲ or ▼ button to select **EZ Scan**.

**3** Press the **ENTER** button to begin the channel search. Allow **EZ Scan** to complete the channel search cycle for **ANTENNA** and **CABLE**.

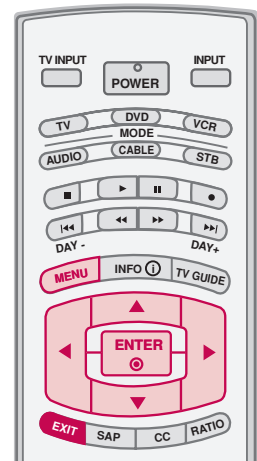


## TV MENU | SETUP(Channel)

### MANUAL CHANNEL SEARCH (MANUAL SCAN)

A password is required to gain access to Manual Scan menu if the Lock System is turned on.

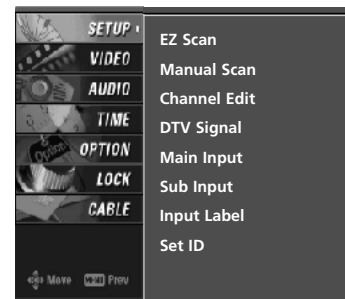
While using the CableCARD™, CATV, CADTV is not working in Manual Scan.



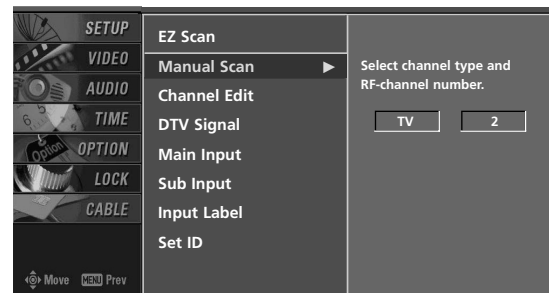
- 1 Press the **MENU** button and then use ▲ or ▼ button to select the **SETUP** menu.
- 2 Press the ► button and then use ▲ or ▼ button to select **Manual Scan**.
- 3 Press the ► button and then use ▲ or ▼ button to select **TV, DTV, CATV, and CADTV**.
- 4 Press the ► button and then use ▲ or ▼ button to select channel you want to add or delete.
- 5 Press the **ENTER** button to add or delete the channel.
- 6 Press the **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.

#### ! NOTE

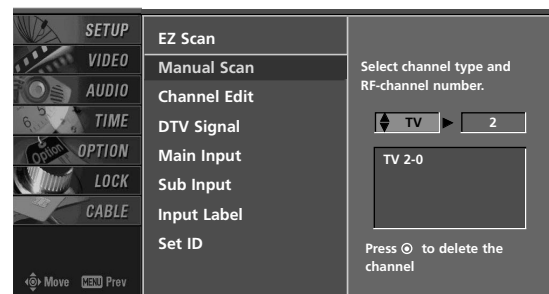
- This digital channel number is a physical channel number, which is different from the normal channel number shown in Channel Edit.



1



2



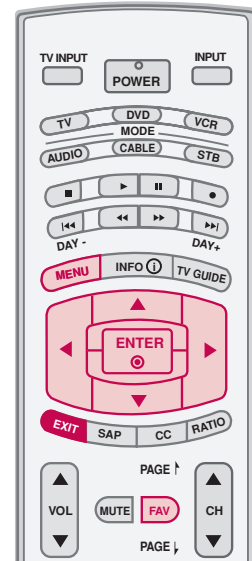
3 4 5

## CHANNEL EDIT

From the default channel list created from the EZ Scan channel search, you can create two different types of channel lists in memory: “custom list” and “favorite channel list”.

A custom list can be created by toggling each channel on or off with **ENTER** button. The channels in the Custom List are displayed in black and the channels deleted from the Custom List are displayed in gray. Once a channel is highlighted you can add or delete the channel by referring to the small window at the top-left corner of the screen.

You can create your own Favorite List. Use the **FAV** button on the remote control when a channel is highlighted and then add or delete the channel to/from your Favorite List.



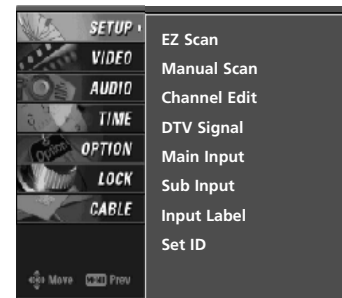
1 Press the **MENU** button and then use **▲** or **▼** button to select the **SETUP** menu.

2 Press the **▶** button and then use **▲** or **▼** button to select **Channel Edit**.

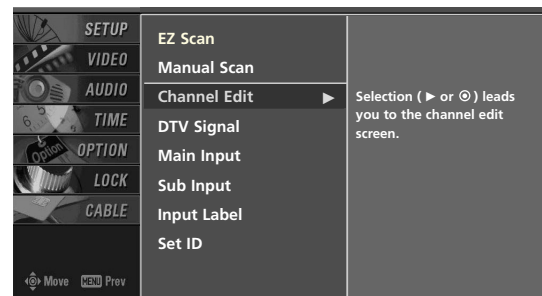
3 Press the **▶** button. You will now see a screen filled with channel numbers and a preview picture.

4 Use **▲ ▼ ◀ ▶** button to select a channel and then use the **ENTER** button to add or delete it. Press **FAV** button to add the channel to the Favorite List. The surfing icon mark will appear in front of that channel number.

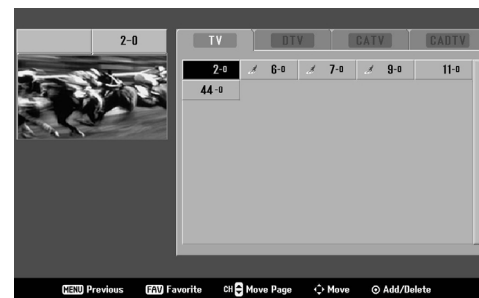
5 Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.



1



2



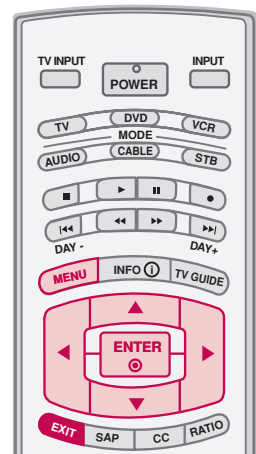
3 4

## TV MENU | SETUP(Channel)

### DTV SIGNAL STRENGTH

This feature displays the DTV signal levels being received and indicates whether you need to adjust your antenna or digital cable input. The higher the signal strength, the less likely you are to experience picture degradation.

**DTV Signal:** This function is only available when the input signal is DTV or CADTV.

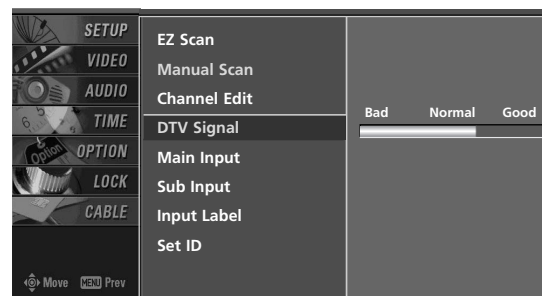
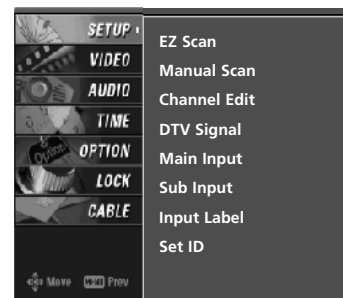


**1** Press the **MENU** button and then use ▲ or ▼ button to select the **SETUP** menu.

**2** Press the ► button and then use ▲ or ▼ button to select **DTV Signal**.

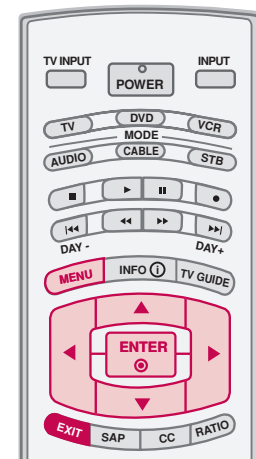
**3** View the on-screen signal strength monitor to see the quality of the signal being received.

**4** Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.

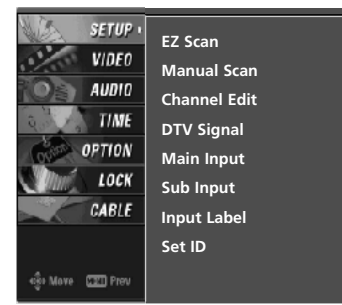


## MAIN PICTURE SOURCE SELECTION

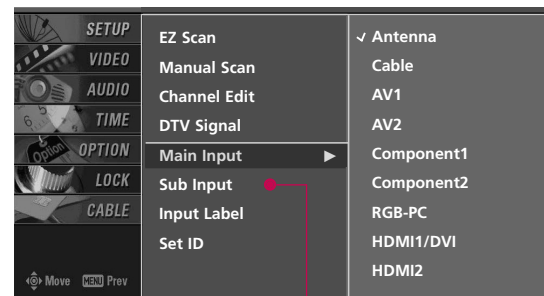
Changes the picture source so you can watch your off-air TV, cable TV, VCR, DVD, or any other devices that are connected to your TV.



- 1 Press the **MENU** button and then use ▲ or ▼ button to select the **SETUP** menu.
- 2 Press the ► button and then use ▲ or ▼ button to select **Main Input**.
- 3 Press the ► button and then use ▲ or ▼ button to select the source: **Antenna, Cable, AV1, AV2, Component1, Component2, RGB-PC (or RGB-DTV), HDMI1/DVI, or HDMI2.**
  - To toggle RGB-DTV and RGB-PC, select RGB-PC (or RGB-DTV) and press the ► button.
- 4 Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.



1



2 3

### Sub Picture Source Selection

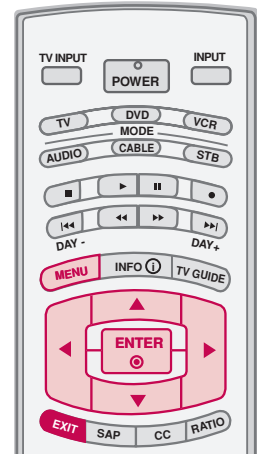
Select sources for the **Sub Input** in the **SETUP** menu.

See Page 59 for selecting the input source for the sub picture by pressing the **PIP INPUT** button.

## TV MENU | SETUP(Channel)

### INPUT LABEL

Sets a label to each input source which is not in use when you press the **INPUT** button.



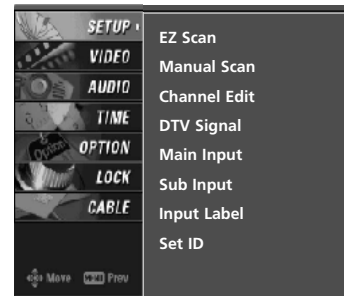
**1** Press the **MENU** button and then use **▲** or **▼** button to select the **SETUP** menu.

**2** Press the **▶** button and then use **▲** or **▼** button to select **Input Label**.

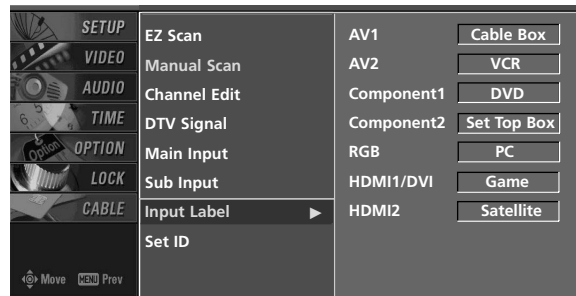
**3** Press the **▶** button and then use **▲** or **▼** button to select the source: **AV1**, **AV2**, **Component1**, **Component2**, **RGB**, **HDMI1/DVI** or **HDMI2**.

**4** Press the **◀** or **▶** button to select the label.

**5** Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.



**1**



**2 3 4**

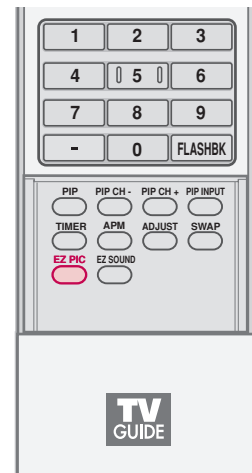
# TV MENU | VIDEO ADJUSTMENT

## AUTO PICTURE CONTROL (EZ PICTURE)

EZ Picture adjusts the TV for the best picture appearance. Select the preset value in the EZ Picture menu based on the program category.

**Daylight, Normal, Night Time** Settings are preset for optimum picture quality at the factory and are not adjustable.

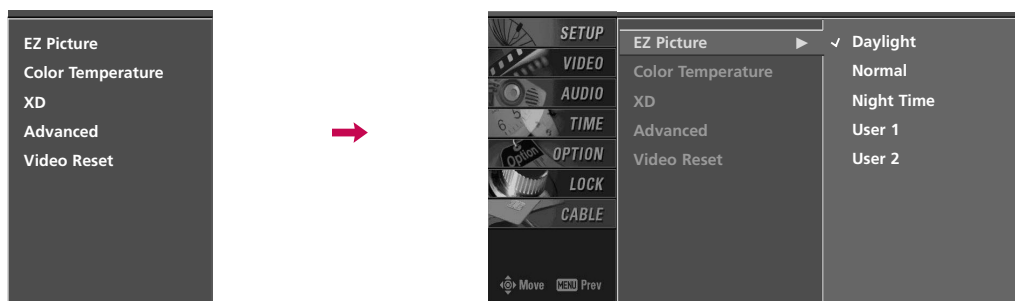
In the **User1**, and **User2** modes only, user can directly adjust the contrast, brightness, color, sharpness, tint.



- 1 Press the **EZ PIC** button repeatedly to select the picture appearance setup option as below :  
**Daylight, Normal, Night Time, User1**, and **User2** (your own settings).

- 2 Press the **EXIT** button to save and return to TV viewing.

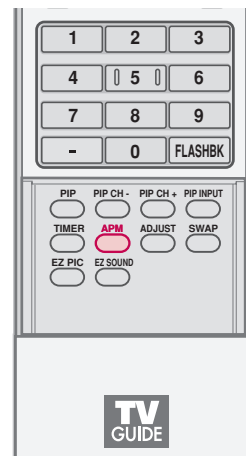
- You can also use the **VIDEO** menu to adjust **EZ Picture**.



## TV MENU | VIDEO ADJUSTMENT

### ADAPTIVE PICTURE MODE (APM)

Allows you to select your preferred picture mode after comparing the four different picture (Daylight, Normal, Night Time, User1 (or User2)) settings.



**1** Press the **APM** button at once. As shown below, the screen is divided to 4-split.

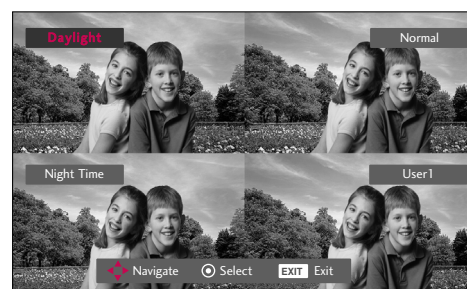
**2** Use the **▲ ▼ ◀ ▶** button to navigate 4 EZ Pictures. By pressing the **ENTER** button, you can select the desired mode.

**3** Press the **APM** button twice. The 4-same screens are displayed. You can easily compare with 4 modes.

**4** Use the **▲ ▼ ◀ ▶** button to navigate 4 EZ Pictures. By pressing the **ENTER** button, you can select the desired mode.



**1 2**



**3 4**

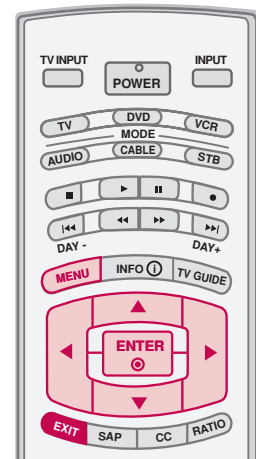
#### ! NOTE

- ▶ While operating the 4-split, any button except **APM**, **ENTER**, **EXIT**, **▲ ▼ ◀ ▶**, **VOLUME ▲** or **▼**, **MUTE** button on the remote control are not usable.
- ▶ APM screen will automatically disappear after approx. 40 seconds unless a button is pressed.



## MANUAL PICTURE CONTROL (EZ Picture-User option)

Adjust the picture appearance to suit your preference and viewing situations.



- 1 Press the **MENU** button and then use ▲ or ▼ button to select the **VIDEO** menu.

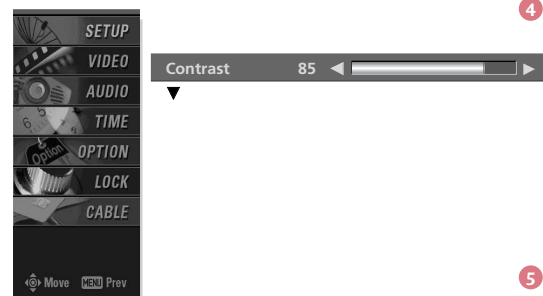
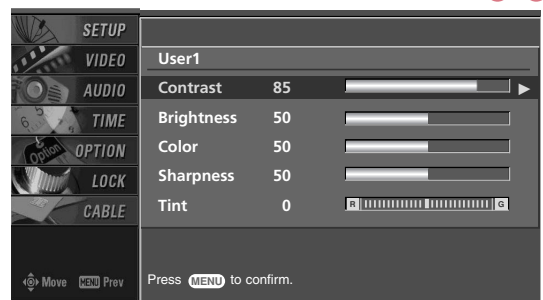
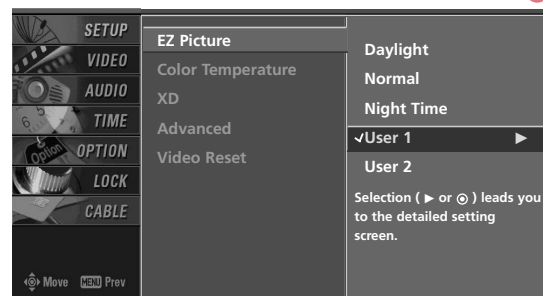
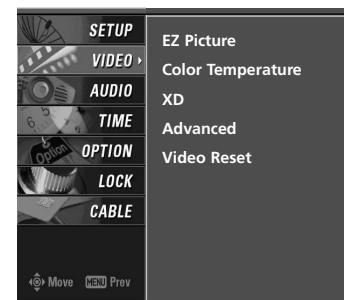
- 2 Press the ► button and then use ▲ or ▼ button to select **EZ Picture**.

- 3 Press the ► button and then use ▲ or ▼ button to select **User 1** or **User 2**.

- 4 Press the ► button and then use ▲ or ▼ button to select the desired picture option (**Contrast**, **Brightness**, **Color**, **Sharpness**, or **Tint**).

- 5 Press the ► button and then use ◀ or ▶ button to make appropriate adjustments.

- 6 Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.



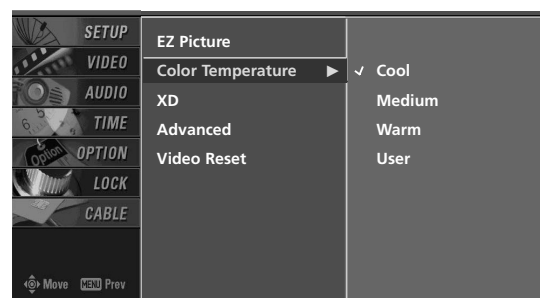
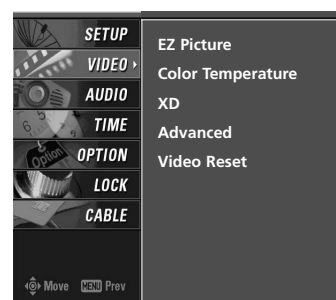
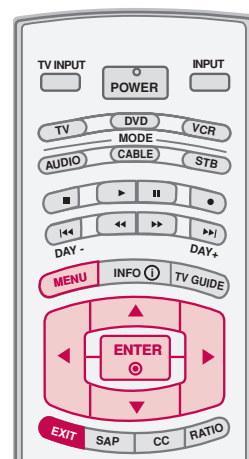
## TV MENU | VIDEO ADJUSTMENT

### COLOR TEMPERATURE CONTROL

#### Auto Color Temperature Control

Choose one of three automatic color adjustments. Set to warm to enhance hotter colors such as red, or set to cool to see less intense colors with more blue.

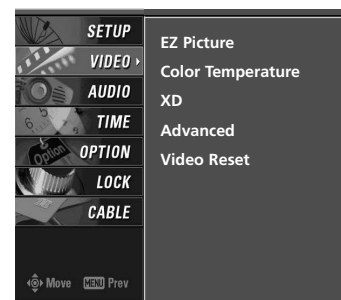
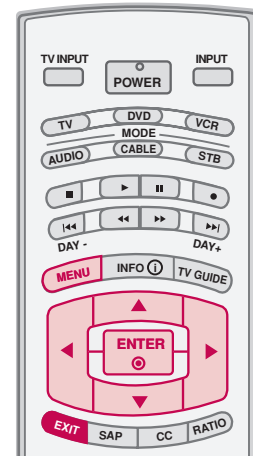
- 1 Press the **MENU** button and then use ▲ or ▼ button to select the **VIDEO** menu.
- 2 Press the ► button and then use ▲ or ▼ button to select **Color Temperature**.
- 3 Press the ► button and then use ▲ or ▼ button to select either **Cool**, **Medium**, **Warm** or **User**.
- 4 Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.



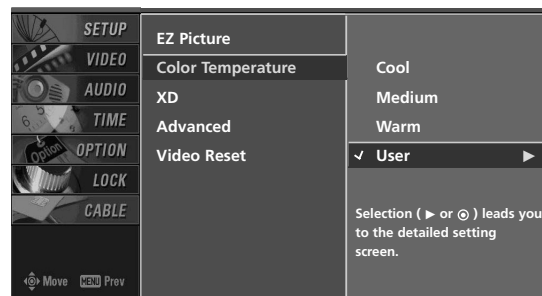
## Manual Color Temperature Control

You can also adjust the detailed settings (Red, Green, Blue) by selecting the **User** menu.

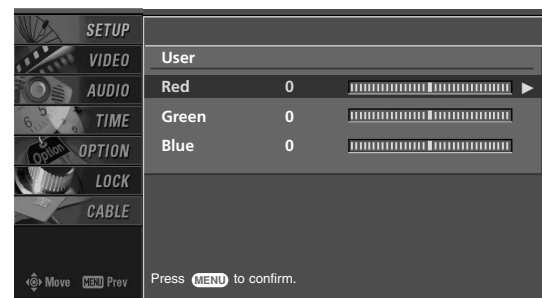
- 1 Press the **MENU** button and then use ▲ or ▼ button to select the **VIDEO** menu.
- 2 Press the ► button and then use ▲ or ▼ button to select **Color Temperature**.
- 3 Press the ► button and then use ▲ or ▼ button to select **User**.
- 4 Press the ► button and then use ▲ or ▼ button to select **Red, Green, or Blue**.
- 5 Press the ► button and then use ◀ or ▶ button to make appropriate adjustments.
  - The adjustment range of **RGB, Green, or Blue** is -20~ +20.
- 6 Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.



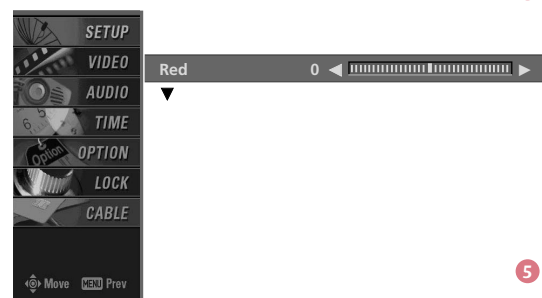
1



2 3



4



5

# TV MENU | VIDEO ADJUSTMENT

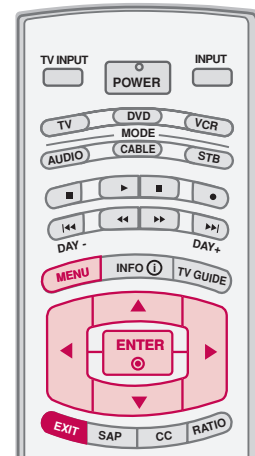
## XD

XD is LG Electronic's unique picture improving technology to display a real HD source through an advanced digital signal processing algorithm.

When selecting EZ Picture options (Daylight, Normal and Night time), XD is automatically changed to Auto.

When selecting EZ Picture options (User 1 and User 2), you can choose the Auto / Manual.

When selecting the Manual, you can adjust the XD Contrast, XD color and XD Noise.



- 1 Press the **MENU** button and then use **▲** or **▼** button to select the **VIDEO** menu.

- 2 Press the **▶** button and then use **▲** or **▼** button to select **XD**.

- 3 Press the **▶** button and then use **▲** or **▼** button to select **Auto** or **Manual**.

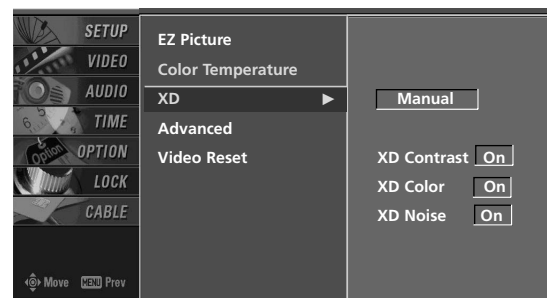


### Selecting the Manual

1. Press the **▶** button and then use **◀** or **▶** button to select **XD Contrast**, **XD Color** or **XD Noise**.

- **XD Contrast:** Optimizing the contrast automatically according to the brightness of the reflection.
- **XD Color:** Adjusting the colors of the reflection automatically to reproduce as closely as possible to the natural colors.
- **XD Noise :** Removing the noise up to the point where it does not damage the original picture.

2. Use the **▲** or **▼** button to select **On** or **Off**.



- 4 Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.