

ATTACHMENT E.

- USER'S MANUAL -

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CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION

- TO PREVENT DAMAGE WHICH MAY RESULT IN FIRE OR SHOCK HAZARD.
- DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.
- SHOCK HAZARD DO NOT OPEN.

CAUTION

These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

CAUTION

The stand intended for use only with This TV. Use with other apparatus is capable of resulting in Instability causing possible injury .

WARNING

- Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.
- This is Class B product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.
- To reduce the risk of fire and electric shock, do not expose this product to rain or moisture.

FCC NOTICE

This device has been tested and found to comply with the limits for a Class B device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in home environment as well as in a commercial, industrial or business environment. This equipment can generate, use and radiate radio frequency energy and, if not installed and used in accordance with the instruction, 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.

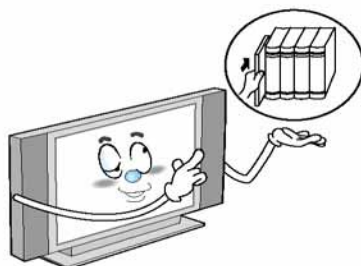
Changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Connecting of peripherals requires the use of grounded shielded signal cables.

- ▶ **Always be careful when using your Monitor. To reduce the risk of fire, electrical shock, and other injuries, keep these safety precautions in mind when installing, using, and maintaining your machine.**



Read all safety and operating instructions before operating your Monitor.



Keep the safety and operating instructions for future reference.



Heed all warnings on the Monitor and in the operating instructions.

Precaution

Always be careful when using your TV. To reduce the risk of fire, electrical shock, and other injuries, keep these safety precautions in mind when installing, using, and maintaining your machine.

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with a dry cloth.
- 7) Do not block any of the ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. When 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 the attachments/accessories specified by the manufacturer.
- 12) Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 15) When installing the LCD TV, do not block the appliance coupler with any structure. User can easily have access to the coupler to disconnect it from AC main power.

Precaution

In case of the following cases, unplug the unit from the wall outlet and contact qualified service center.

- * When power supply cord or plug is damaged
- * If liquid has been spilled on the unit or if alien objects have fallen into the unit.
- * If the monitor has been exposed to rain or water.
- * If the monitor does not operate normally by following the operating instructions.
- * If the monitor dropped or the cabinet has been damaged
- * When the monitor exhibits a distinct change in performance.

Setting



CAUTION



Follow all operating and use instructions.

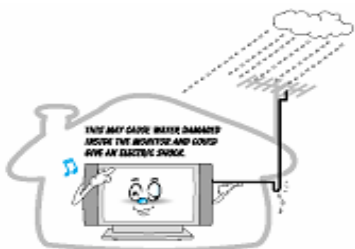


Do not use the Monitor where contact with or immersion in water is a possibility, such as near bath tubs, sinks, washing machines, swimming pools, etc.



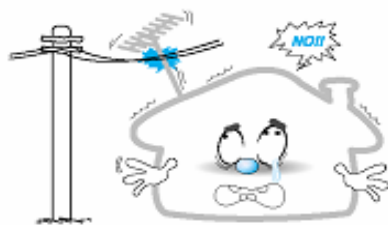
Avoid overhead power lines. An outside antenna system should not be placed in the vicinity of overhead power lines or other electric light or power circuits or where it can fall into such power lines or circuits. When installing an outside antenna system, be extremely careful to keep from touching the power lines or circuits. Contact with such lines can be fatal.

Ground outdoor antennas. If an outside antenna or cable system is connected to the Monitor, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No.70-1984, provides information about proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.



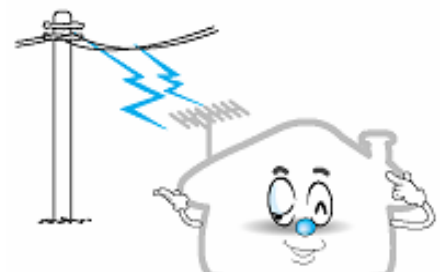
Bend antenna cable between inside and outside building to prevent rain from flowing in.

- This may cause water damaged inside the Monitor and could give an electric shock.



Do not place an outside antenna in the vicinity of overhead power lines, other electric light or power circuits.

- This may cause an electric shock.



There should be enough distance between an outside antenna and power lines to keep the former from touching the latter even when the antenna falls.

- This may cause an electric shock.

Setting



WARNING

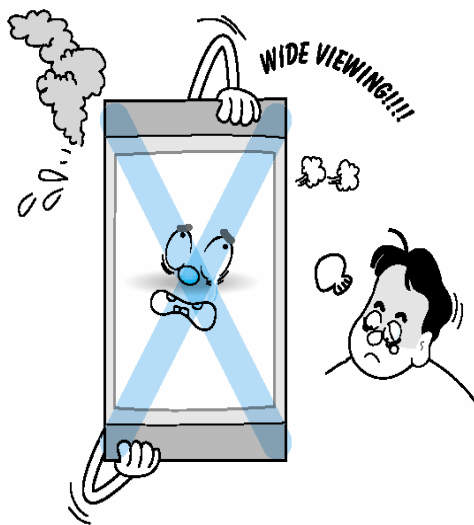


When installing the Monitor on a table, be careful not to place the edge of its stand.

- This may cause the Monitor to fall, causing serious injury to a child or adult, and serious damage to the Monitor.



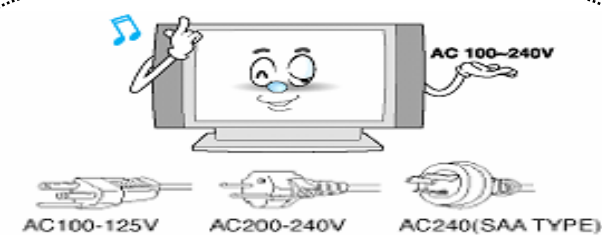
Provide ventilation for the Monitor. The unit is designed with slots in the cabinet for ventilation to protect it from overheating. Do not block these openings with any object, and do not place the Monitor on a bed, sofa, rug or other similar surface. Do not place it near a radiator or heat register. If you place the Monitor on a rack or bookcase, ensure that there is adequate ventilation and that you've followed the manufacturer's instructions for mounting.



This plasma display is designed to be mounted horizontally (wide viewing). Any inquiry regarding its vertical position should be forwarded to the manufacture directly

Precaution

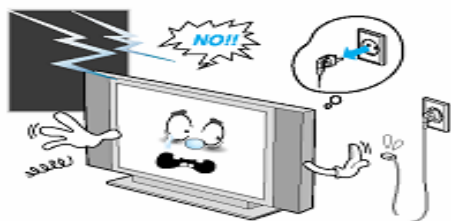
POWER



Use only the accessory cord designed for this product to prevent shock. The power supply voltage rating of this product is AC100-240V, the power cord attached conforms to the following power supply voltage. Use only the power cord designated by our dealer to ensure Safety and EMC. When it is used by other power supply voltage, power cable must be changed. Consult your product dealer.



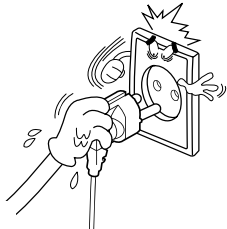
Unplug the Monitor from the wall outlet before cleaning. Use a damp cloth; do not use liquid or aerosol cleaners.



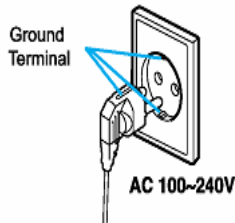
Unplug the Monitor from the wall outlet and disconnect the antenna or cable system during a lightning storm or when left unattended and unused for long periods of time. This will prevent damage to the unit due to lightning and power-line surges.



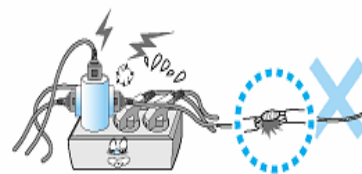
Protect the power cord. Power supply cords should be routed so that they won't be walked on or pinched by objects placed on or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.



Do not touch the plug with wet hand.
- It can make an electric shock.



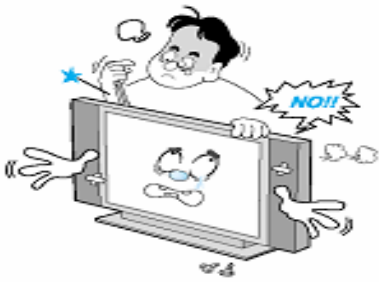
Use only a grounded or polarized outlet. For your safety, this Monitor is equipped with a polarized alternating current line plug having one blade wider than the other. This plug will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still does not fit, contact your electrician to replace your outlet.



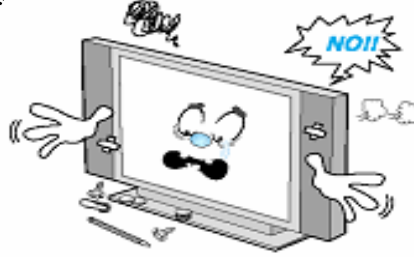
Protect the power cord. Power supply cords should be routed so that they won't be walked on or pinched by objects placed on or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.

Precaution

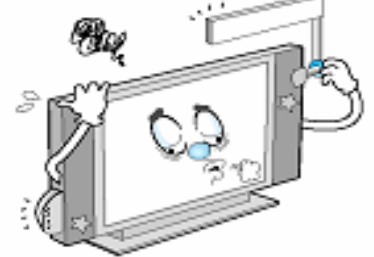
Operation



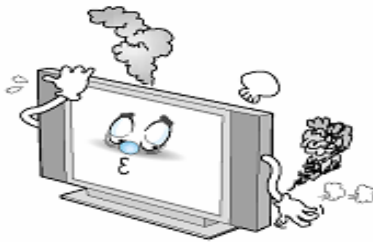
Upon completion of any service or repairs to this Monitor, ask the service technician to perform safety checks to determine that the Monitor is in a safe operating condition.



Do not place anything containing liquid on top of the Monitor.
- This may cause a fire or could give an electric shock.



Never add any attachments and/or equipment without approval of the manufacturer. Such additions can increase the risk of fire, electric shock, or other personal injury.



In case of smoke or strange smell from the Monitor, switch it off, unplug it from the wall outlet and contact your dealer or service center.
- This may cause a fire or could give an electric shock.

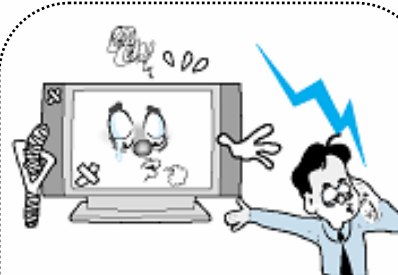


Do not insert anything through the openings in the unit, where they can touch dangerous voltage points or damage parts. Never spill liquid of any kind on the Monitor.

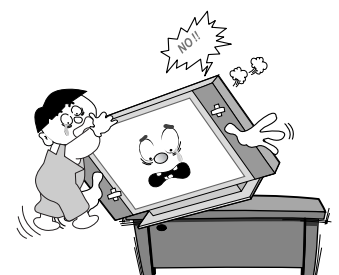
Operation



When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer or those that have the same characteristics as the original part. Unauthorized substitutions may result in additional damage to the unit.



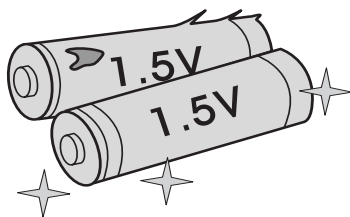
If you make adjustments yourself, adjust only those controls that are covered by the operating instructions. Adjusting other controls may result in damage and will often require extensive work by a qualified technician to restore the Monitor to normal.



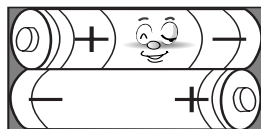
Do not let children hang on or ride on the TV.

Precaution

Operation

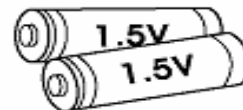


DO not use new battery with old one.
- This can lead a fire or electric shock caused by leakage liquid from abused batteries .

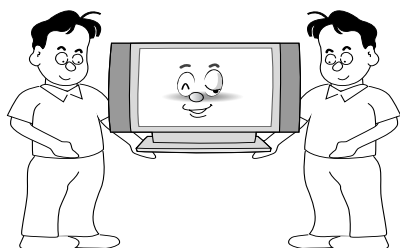


Put the batteries in right direction (+/-).
- Otherwise, it can make a fire, injury and pollution caused by bursting of batteries.

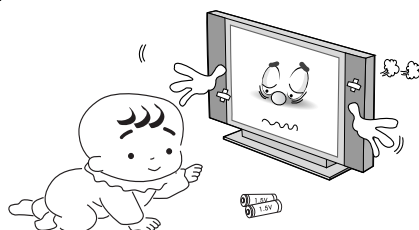
! WARNING



Only use the specified batteries.
- This make cause damaged the Monitor or could give an electric shock.



More than two people are necessary to move or take off the package due to the product's weightiness.
- Otherwise, it can cause personal injury.



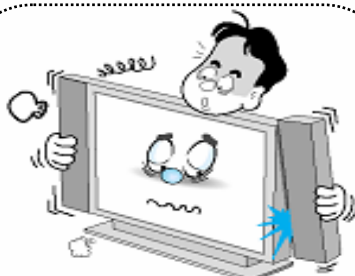
Keep the batteries out of reach of children when exchanged.
- Seek urgent medical advice if child swallows a battery.



Avoid having a fixed image remain on the screen for a long period of time. Typically a frozen still picture from a VCR, 4:3 picture format or if a CH label is present; the fixed image may remain visible on the screen.



The distance between eyes and the screen should be about 5~7 times as long as diagonal length of the screen.
- If not, eyes will strain.

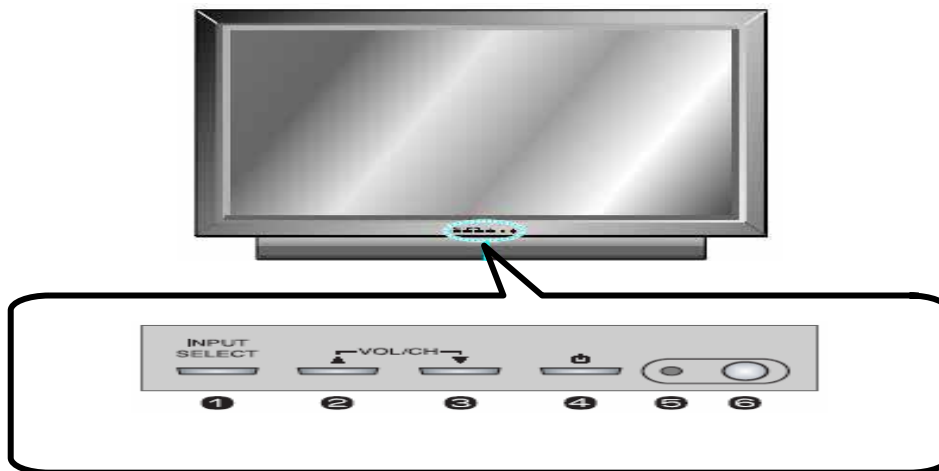


When moving the Monitor assembled with speakers do not carry holding the speakers.
- This may cause the Monitor to fall, causing serious injury to a child or adult, and serious damage to the Monitor.

Viewing the Control Panel

OSD Key Position

Front Panel



OSD key

- | | | |
|-----------------------|-----------------|--------------------------------|
| ❶ Input Source Select | ❷ UP | ❸ DOWN (See the box below) |
| ❹ Stand By | ❺ Remote Sensor | ❻ Status / Power Indicator LED |

OSD Key Function

▶ INPUT SELECT

Select the signal source from multiple input sources such as TV, HDTV, VIDEO 1, VIDEO 2, S-Video / AV, COMPONENT1, COMPONENT2, PC, DVI and HDMI.

▶ VOL/CH ▲/▼

To change the CHANNEL, press ▼ button first and change the channel with ▲, ▼ buttons.
To change the VOLUME, press ▲ button first and change the volume with ▲, ▼ buttons.

▶ Stand By ON/OFF

Turn the TV on and off.

▶ Menu

Call the OSD Menu

Accessories



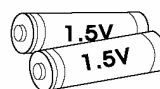
Remote Control Handset



Power Cord



RF Cable



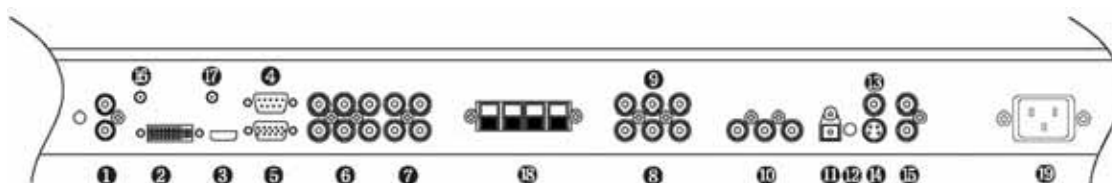
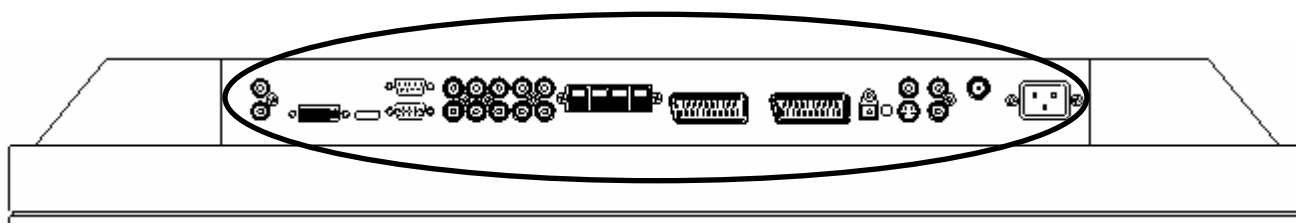
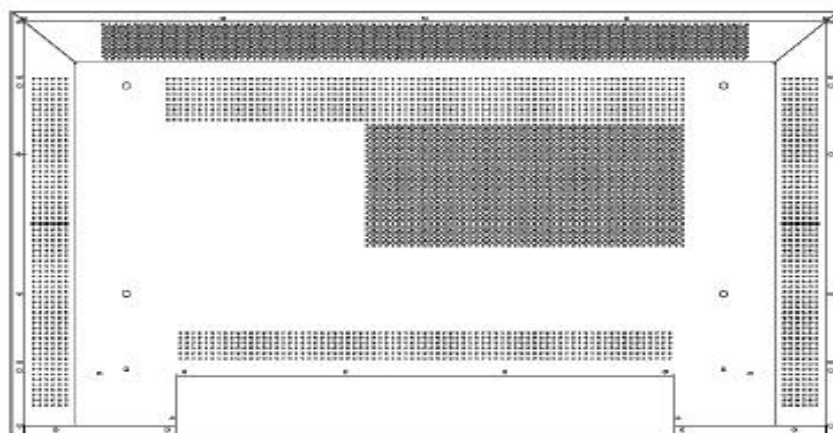
Alkaline Batteries



Owner's Manual

Viewing the Connecting Panel

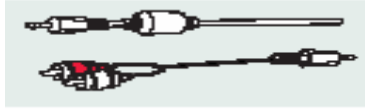
Back Panels and Jacks



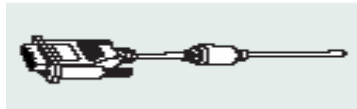
- | | | |
|--------------------------|--------------------|----------------------|
| 1. DVI & D-Sub(PC) Sound | 2. DVI | 3. HDMI |
| 4. RS-232C | 5. D-Sub(PC) | 6. Component1,2 |
| 7. Component Sound1,2 | 8. VIDEO 1 | 9. VIDEO OUTPUT2 |
| 10. VIDEO 2 | 11. SPDIF(optical) | 12. Phone Jack |
| 13. AV | 14. S-VIDEO | 15. S-VIDEO/AV Sound |
| 16. D-TV Antenna | 17. A-TV Antenna | 18. Speak Cable |
| 19. AC Power | | |

Viewing the Connection Panel

-DVI, D-Sub(PC) Sound Cable
Connect (1) port.



-DVI Cable
Connect (2) port.



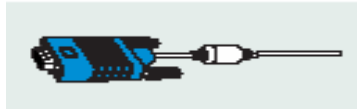
-HDMI Cable
Connect (3) port.



-RS-232C Cable
Connect (4) port.



-D-Sub(PC) Cable
Connect (5) port.



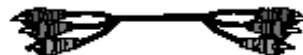
-Component Cable
Connect (6) port.



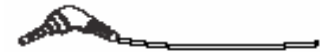
-Component & S-Video
& AV Sound Cable
Connect (7) and (15) port.



-SCART Cable
Connect (8), (9) , (10)port.



-Phone Jack Cable
Connect (12) port.



-AV Cable
Connect (13) port.



-S-Video Cable
Connect (14) port.



-RF Cable
Connect (16) and (17) port.



-AC Power Cable
Connect (15) port.



-SPDIF Cable(optical)
Connect (11)



Connectors

AUDIO INPUT	RCA Pin Jack
COMPOSITE VIDEO INPUT	RCA Pin Jack
COMPOSITE VIDEO OUTPUT	RCA Pin Jack
S-VIDEO INPUT	Mini Din 4 Pin
COMPONENT VIDEO INPUT	RCA Pin Jack
ANALOG RGB INPUT	Mini D-Sub 15pin
HDMI INPUT	HDMI Connect
DIGITAL VIDEO INPUT	DVI-D 24 pin

- Cables connecting the PC vary according to the type of machine, so consult your product dealer.

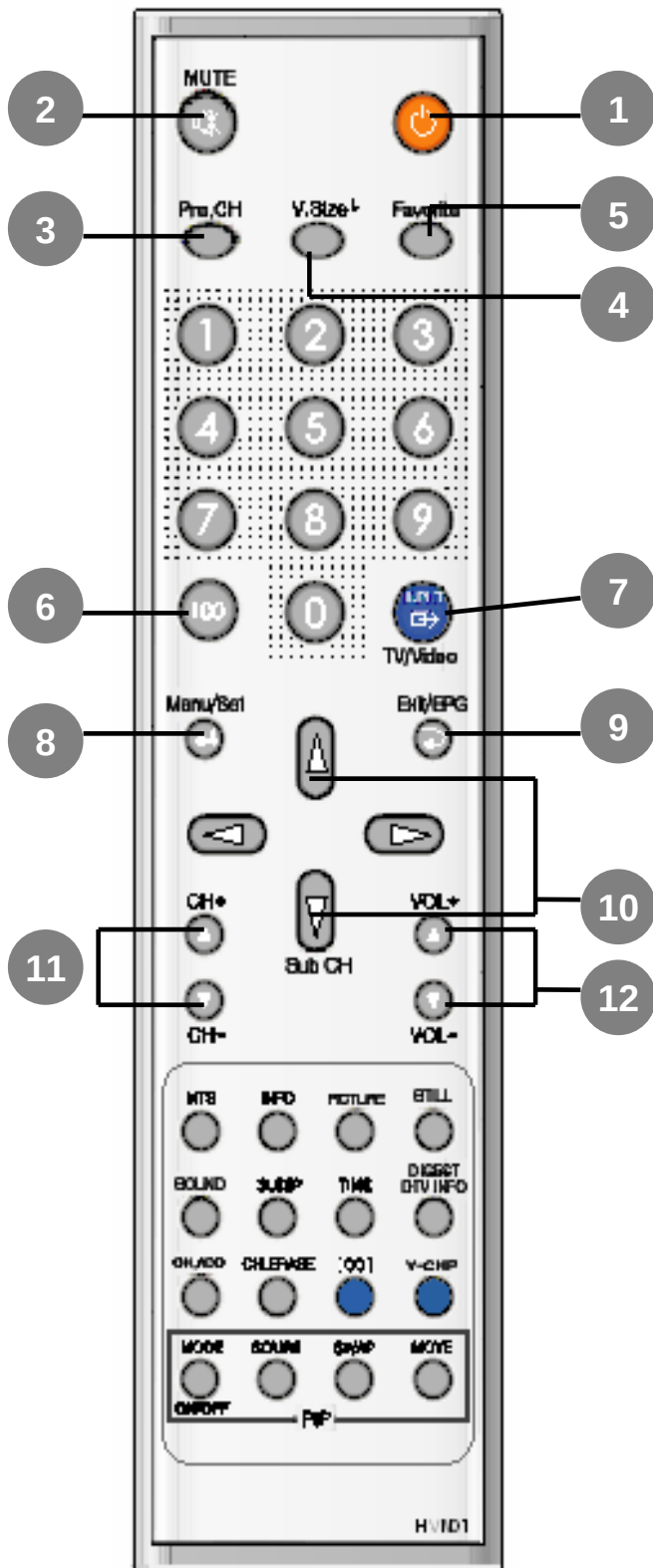
RS-232C Configurations

3-Wire (Non-standard)

	PC	TV	
RXD	2	3	TXD
TXD	3	2	RXD
GND	5	5	GND
DTR	4	4	DTR
DSR	6	6	DSR
RTS	7	7	RTS
CTS	8	8	CTS

Viewing the Remote Control

▶ Buton Description

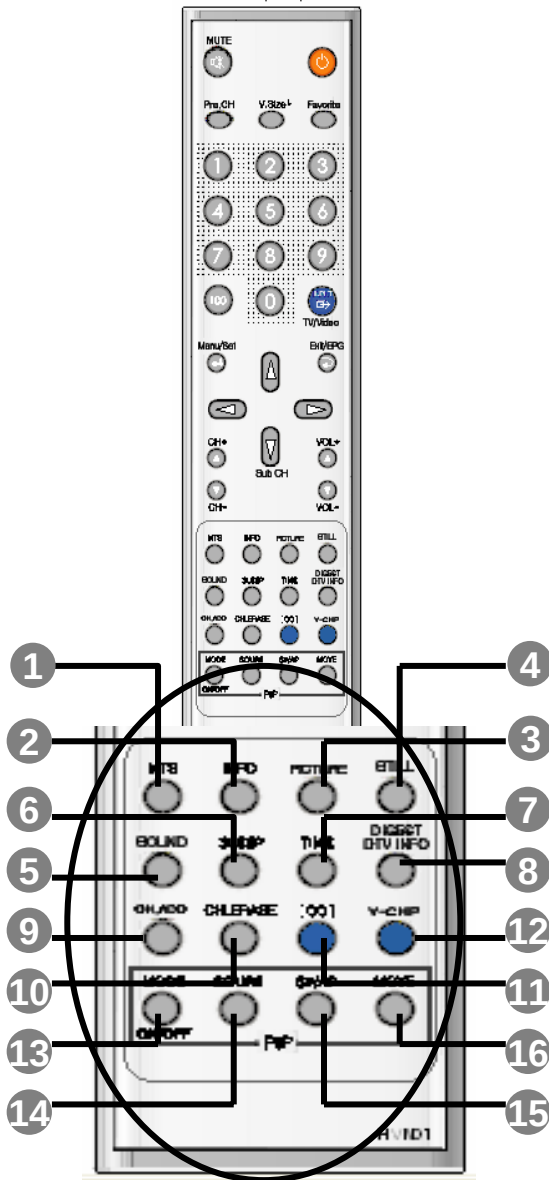


1. **Stand By**
Turn the TV on and off.
2. **Mute**
Temporarily cut the sound and restore it.
3. **Pre PG**
Turn to the previous programme or exit OSD.
4. **V.Size**
Choose the screen form.
16:9 > 4:3 > Panorama > Zoom1 > Zoom2
5. **FAVORITE (FAVOURITE)**
Tune to your next favorite programme.
6. **100**
Press To tune the channels over 100.
7. **INPUT**
Display the input source list.
8. **Menu / Set**
Display the main OSD menu.
Activate your choice in the OSD menu.
9. **Exit/EPG**
Return to the previous OSD menu.
10. **Sub CH+/-**
Change channels of sub window by pressing the Sub CH+/- button after pressing this button in PIP.
11. **CH+/-**
Move to the upper and lower Channel.
12. **VOL+/-**
Increase and decrease the volume level.



Notice

EPG (Electronic Program Guide) on Remote : Perform the function showing channel information. (Title, Time slot) .



▶ PIP (Picture In Picture) Keys

- 13. MODE (On / Off)**
Activate PIP function and change the PIP window size and PIP mode.
Small > Large > Twin (Half) > OFF
- 14. SOURCE**
Change the PIP window source.
- 15. SWAP**
Swap the main screen and the PIP window.
- 16. MOVE**
Move the position of the PIP window.

1. MTS

Choose the MTS (Stereo) mode.

Each time it is pressed, different mode is selected.

Mono > Stereo > SAP

* You can select only available modes depending on the source.

2. INFO

Display the current information about time, screen form, source and MTS mode.

3. PICTURE

There are 4 picture modes.

STANDARD > VIVID > MILD > USER

4. STILL

Temporarily freeze the screen and restore it.

5. SOUND

Choose the sound equalizer settings.

STANDARD > MOVIE > MUSIC > NEWS > USER

6. SLEEP

Set the preset time interval for automatic turn-off.

OFF(Not work) > 10min.> 20 > 30 > 60 > 90 > 120 > 150 > 180

7. TIME

Display the current time on the screen.

8. DIGEST / DTV INFO

Display the 16 TV programmes at the same time.

9. CH ADD

Add the current channel to memory

10. CH ERASE

Erase the current channel to memory.

11. CC(CLOSED CAPTION)

Set the close caption.

Off-> Caption CC1-> Caption CC2-> Caption Text1-> Caption Text2

12. V-CHIP

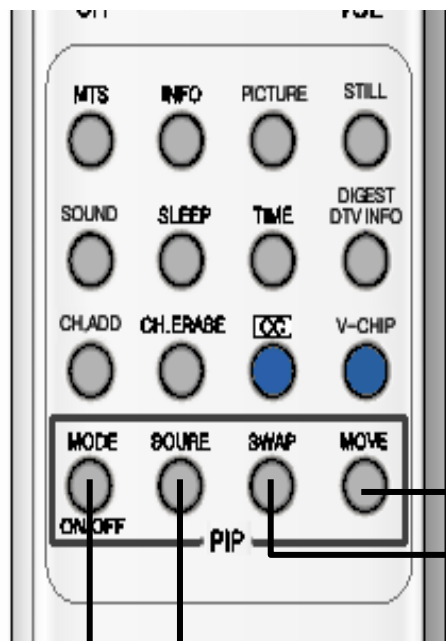
Get into V-Chip menu.



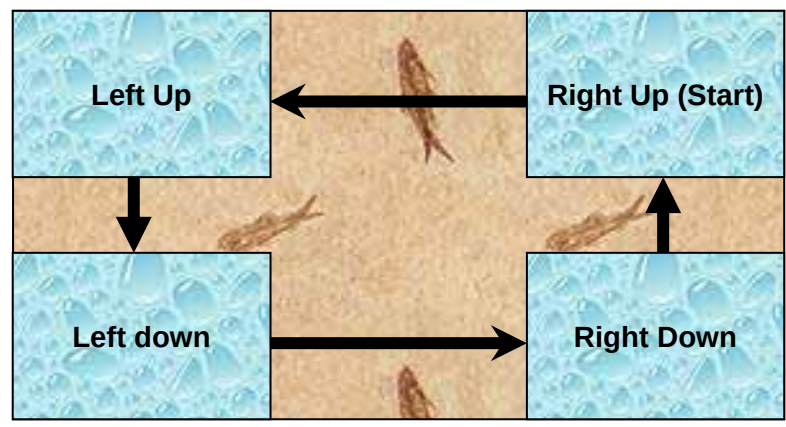
Notice

DTV Info. : Perform the function showing current channel information. (Title, Time slot, Closed Caption, Dolby)

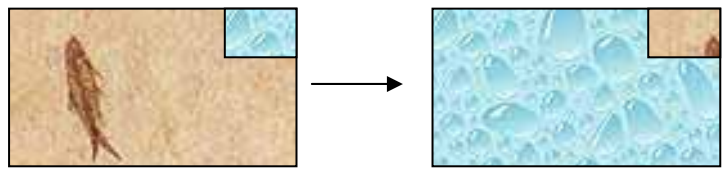
Viewing the Picture-in-Picture



MOVE KEY : Move the position of PIP



SWAP KEY : Swap the sources of the main screen and PIP Window.



MODE KEY : Change the PIP window mode.
OFF→SMALL→LARGE→TWIN



Source Key : Change the source of the PIP window. The available sources are shown as below

Main \ PIP	TV	HDTV	VIDEO 1	VIDEO 2	S-Video / AV	Component1	Component2	PC	DVI	HDMI
TV	O	O	O	O	O	O	O	O	O	O
HDTV	O	X	O	O	O	O	X	O	O	O
VIDEO 1	O	O	X	O	O	O	O	O	O	O
VIDEO 2	O	O	O	X	O	O	O	O	O	O
S-Video/AV	O	O	O	O	X	O	O	O	O	O
Component1	O	O	O	O	O	X	O	O	O	O
Component2	O	X	O	O	O	O	X	O	O	O
PC	O	O	O	O	O	O	O	X	X	X
DVI	O	O	O	O	O	O	O	X	X	X
HDMI	O	O	O	O	O	O	O	X	X	X

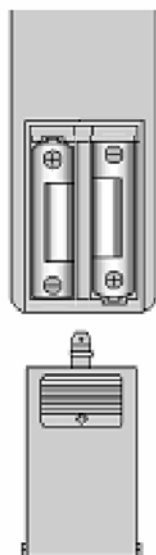
Controls Of The Remote Control

Loading The Batteries

1 Press on the cover and slide in the direction of the arrow.



2 Load two AAA batteries, taking care that the + and - ends face the correct direction.



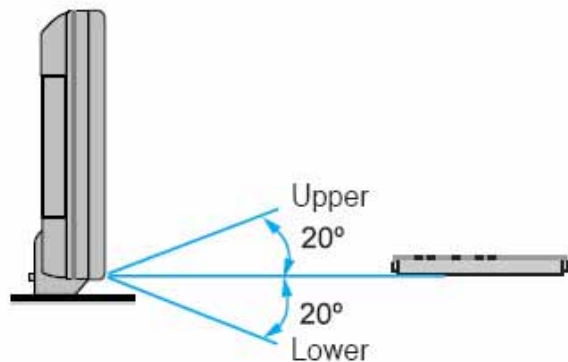
3 Close the cover until it clicks.



Reception range of remote control



Left 30° Right 30°
5m (Front)



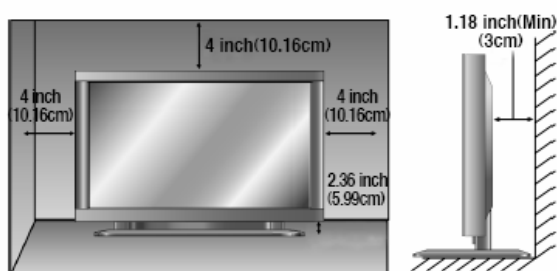
Monitor Installation

Table Stand Installation (optional)



< The TV can be installed on the desk as shown above. >

- Table stand mount minimum allowable clearances for adequate ventilation.

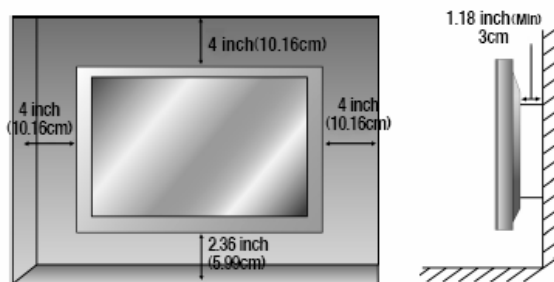


Wall Mount Installation (optional)



< The TV can be installed on the wall as the picture above. >

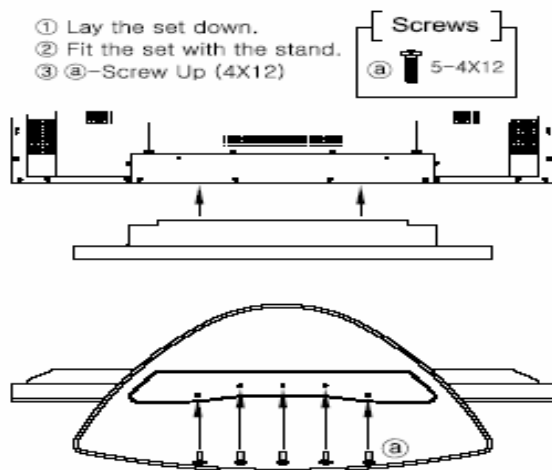
- Install this TV only in a location where adequate ventilation is available.



► Stand Installation

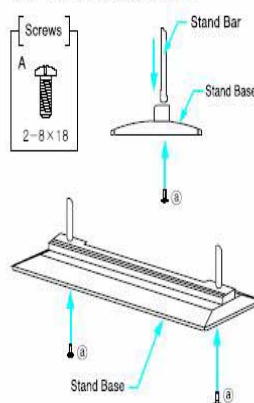
32", 37", 40"

- ① Lay the set down.
- ② Fit the set with the stand.
- ③ ③-Screw Up (4X12)

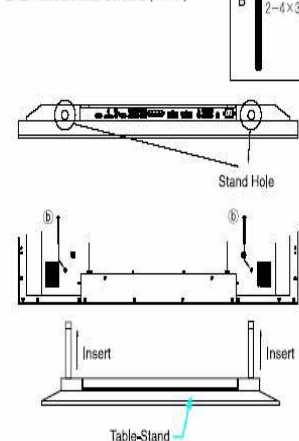


40", 42", 46"

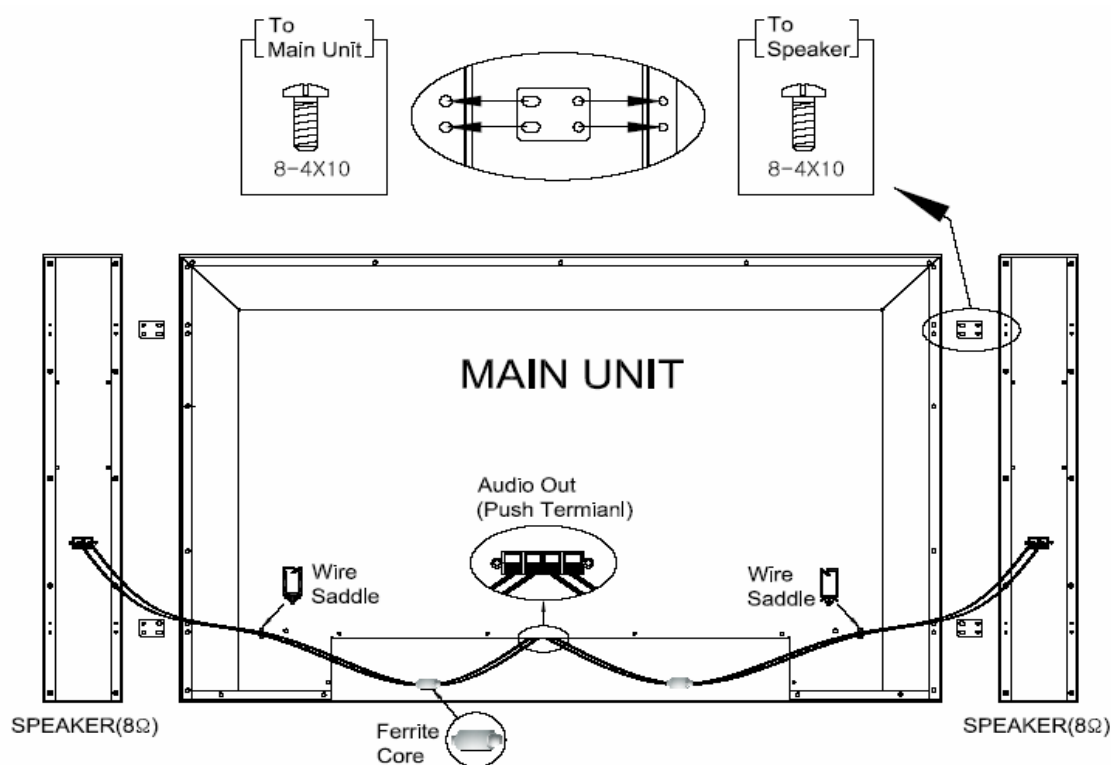
- ① Insert Stand Bars into the Stand Base as shown below
- ② ②-Secure with Screw A (8 x 18)



- ③ Insert a Table-Stand as below
- ④ ④-Secure with Screw B (4 x 30)



Speaker Installation (Optional)



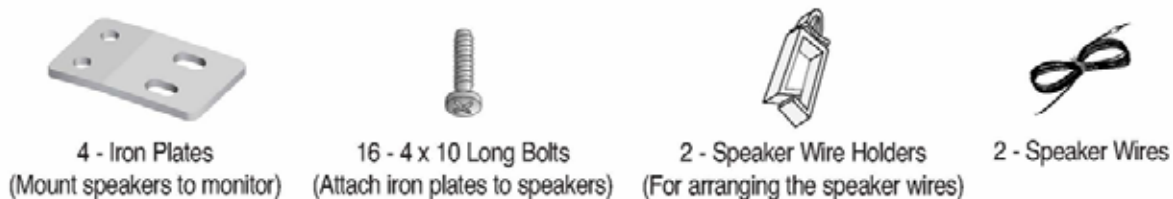
• **CAUTION:** Please make sure Speaker Wires should be connected as above, ferrite core are to be nearer to the main unit not to speakers to avoid possible electromagnetic-interference.

Be sure monitor power is turned off before making any connections.

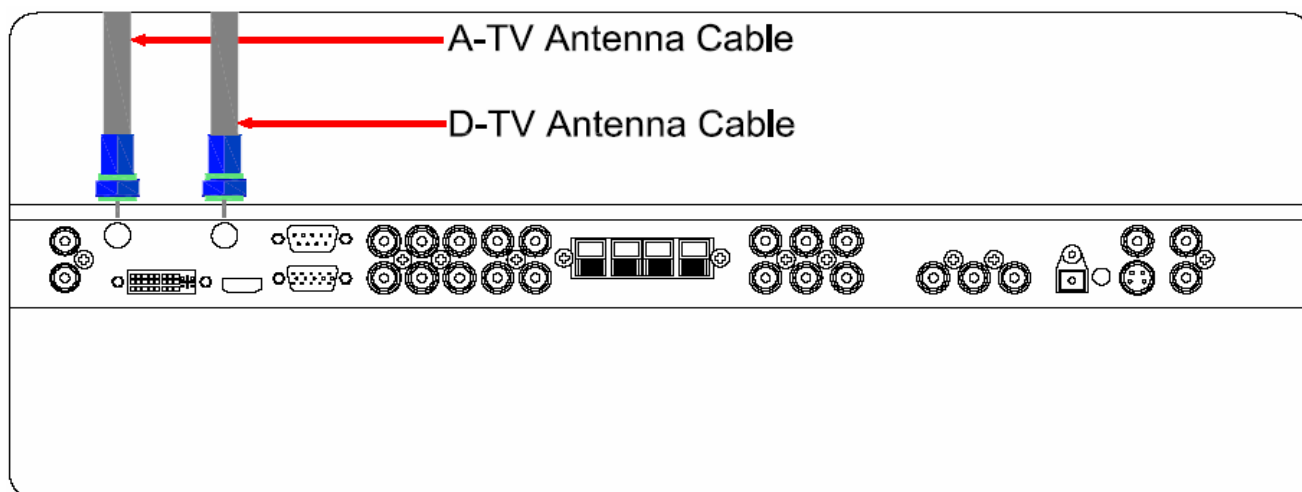
Place the speakers in the position you want. Install the speaker wires on the monitor and speaker. Be sure to connect the positive "+" wire to the "+" input and the negative "-" wire to the "-" input. Connect left monitor input to left speaker and right monitor input to right speaker. Any extra speaker wire length remaining can be bunched into the wire holders provided. (Caution: Once installed, the speaker wire holders lock into position and can't be removed.)

• **Always lift the monitor itself (not the speakers) when handling or moving the monitor after speakers have been installed.**

Speaker Accessories

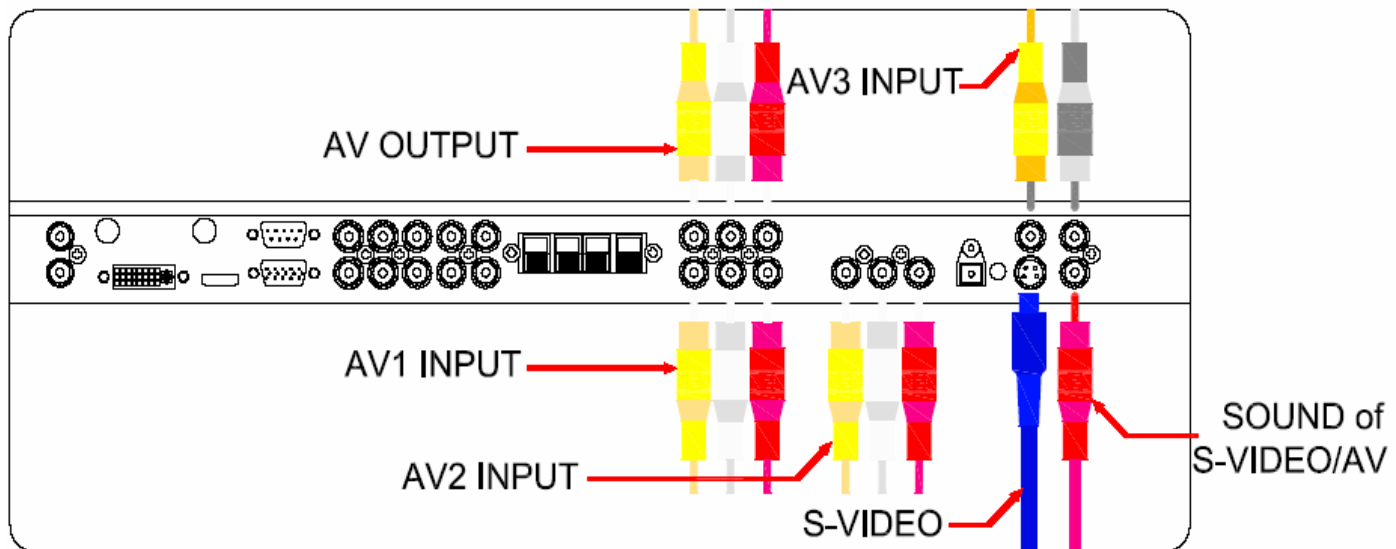


Watching TV



Connection the TV Cable

- 1 Connect the TV antenna cable to the TV input jack. Press INPUT button on the remote control and select TV or HD TV on OSD.
- 2 Use CH+, CH- button or numeric key to change TV channel for your channel selection.
- 3 Press Pre CH key on the remote control to tune the previous channel.
- 4 Also, you can tune to cable service provided channel using the cable box. For further information regarding cable TV service, contact cable TV service provider(s).



Connecting the VCR

With S-Video

Connect a S-Video cable to the S-Video jacks of the VCR and the TV.

Connect L (White), R (Red) sound cable (composite) to the sound jacks of the VCR and the TV.

With AV input

Connect a composite cable to the AV video jacks of the VCR and the TV.

Connect L (White), R (Red) sound cable (composite) to the sound jacks of the VCR and the TV.

Watching VCR

- 1 Press INPUT button on the remote control and select Video Sources.
- 2 Insert a video tape into the VCR and press the PLAY key on the VCR.



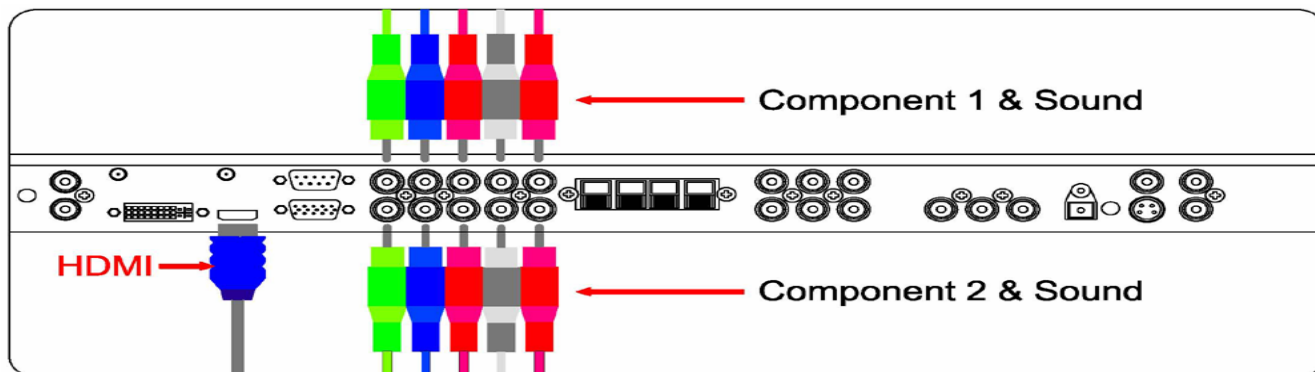
Notes

- **To avoid picture noise** (interference), leave an adequate distance(over 3m) between the VCR and monitor.
- When connecting the TV with external equipments, match the colour of connecting ports (e.g. Video -yellow, Audio(L) - white, Audio(R) - red).
- If you have a mono VCR, connect the audio cable from the VCR to the AUDIO(L/MONO) input of the TV.
- If you connect an S-VHS VCR to the S-VIDEO input socket, you can get a better picture quality than normal video input (AV).
- **Avoid having a fixed image remain on the screen for a long period of time.** Typically a frozen still picture from a VCR 4:3 picture format or if a programme information is present.

Watching DVD

Connecting the DVD

- Connect the three separate component video cables to the DVD player's Y, Pb and Pr jacks and to the Component jacks on the TV.
- Connect the audio cable to the DVD player's audio L (White) and R (Red) jacks and to the L and R audio jacks beside the Component jacks on the TV.
- Connect the HDMI cables to the DVD player's and to the HDMI cables on the TV.



How to use

- 1 Turn on the DVD player.
- 2 Press INPUT button on the remote control of the TV and select HDMI, Component1 or Component2.

	Supported Signals				
	Component1	Component2	PC	DVI	HDMI
480i/60Hz	O	O	X	X	X
480p/60Hz	O	O	O	O	O
576i/50Hz	O	O	X	X	X
576p/50Hz	O	O	O	O	O
720p/55Hz	O	O	O	O	O
720p/60Hz	O	O	O	O	O
1080i/50Hz	O	O	O	O	O
1080i/60Hz	O	O	O	O	O

▶ Component Input ports

You can get better picture quality if you connect DVD player with component input sockets as below.

Component ports of the Monitor	Y	PB	PR
Video output ports of DVD player	Y Y Y Y	Pb B-Y Cb PB	Pr R-Y Cr PR



Notice

- Normal DVD source is based on 480i, which should be through normal YPbPr of Component signal.

What is HDMI?



-HDMI, or high-definition multimedia interface, is a next-generation interface that enables the transmission of digital audio and video signals using a single cable without compression.

- “Multimedia interface” is a more accurate name for it especially because it allows multiple channels of digital audio (5.1 channels). The difference between HDMI and DVI is that the HDMI device is smaller in size, has the HDCP (High Bandwidth Digital Copy Protection) coding feature installed, and supports multi - channel digital audio.
- Use the HDMI/DVI terminal for DVI connection to an extended device. You should use the DVI-to-HDMI cable or DVI-HDMI Adapter for the connection.
- HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

Connecting HDMI/DVI

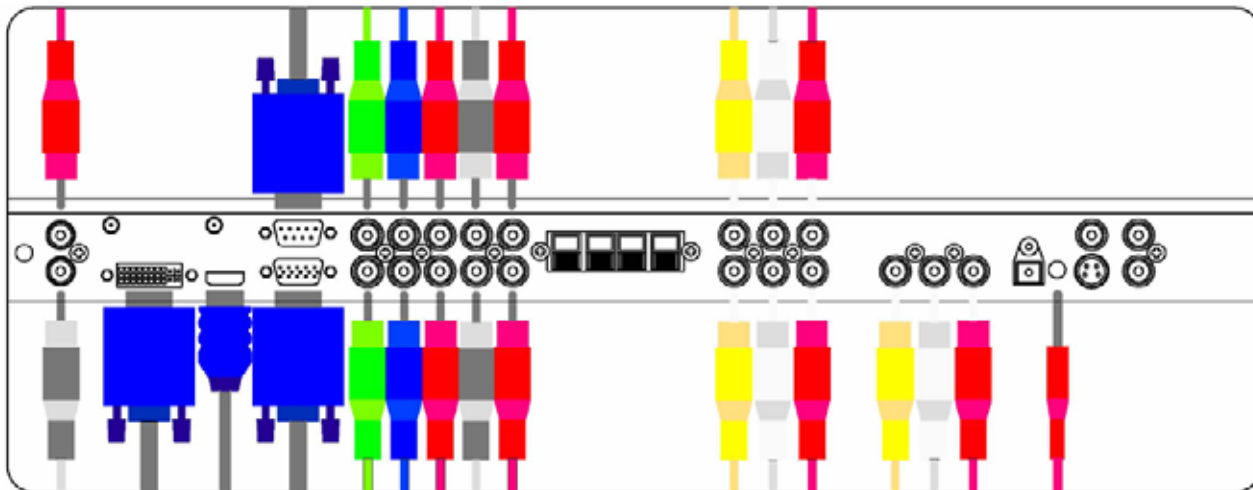
- Supports connections between HDMI-connection-enabled AV devices (set top boxes, DVD players, AV receivers and digital TVs).
- No sound connection is needed for an HDMI to HDMI connection

Watching Set Top Box

How to connect

Connect Set Top Box video inputs to AV, COMPONENT, HDMI, PC or DVI jacks on the TV.

Audio inputs to Audio sockets beside the **L** (White) and **R** (Red) audio jacks which you connect video inputs..



How to use

- 1 Turn on the Set Top Box.
- 2 Press INPUT button on the remote control of the TV and select Component1, Component2, HDMI, PC or DVI.

	Supported Signals				
	Component1	Component2	PC	DVI	HDMI
480i/60Hz	O	O	X	X	X
480p/60Hz	O	O	O	O	O
576i/50Hz	O	O	X	X	X
576p/50Hz	O	O	O	O	O
720p/55Hz	O	O	O	O	O
720p/60Hz	O	O	O	O	O
1080i/50Hz	O	O	O	O	O
1080i/60Hz	O	O	O	O	O

How to connect

With AV

Connect a AV cable to the AV jacks of the STB and the TV.

With Component

Connect a three separate component cables to the component jacks of the STB and the TV.

Connect L (White) and R (Red) sound cables (composite) to the sound jacks of the STB and the TV.

With HDMI

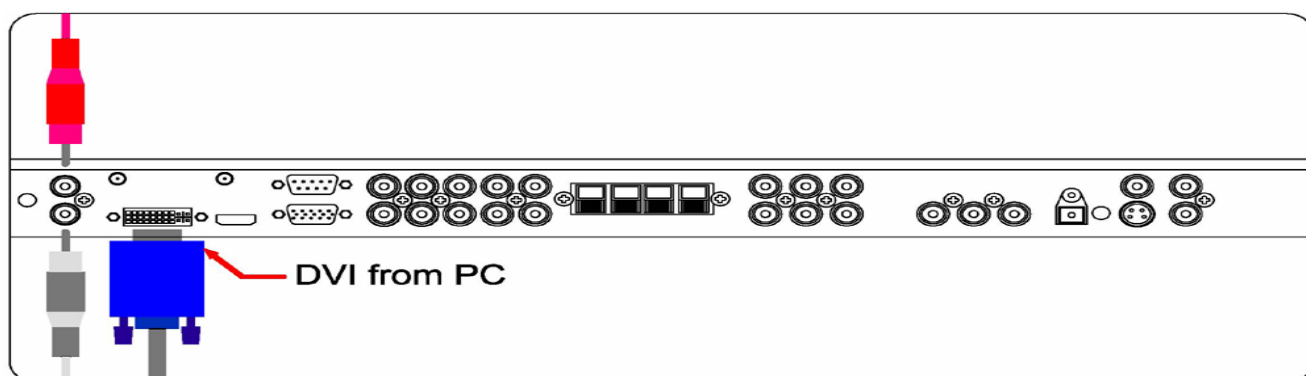
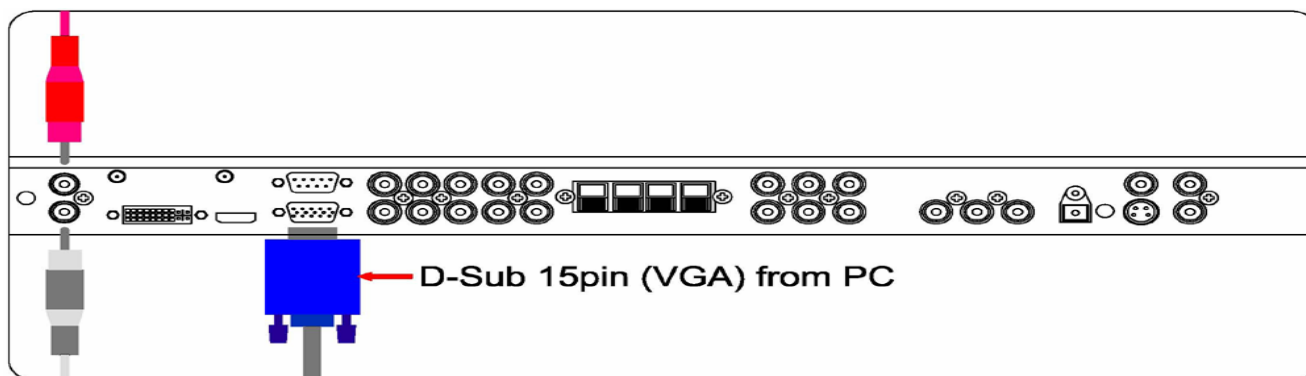
Connect a HDMI cable to the HDMI jacks of the STB and the TV

With RGB or DVI

Connect a D-Sub or DVI cable to the AV video jacks of the STB and the TV.

Connect L (White) and R (Red) sound cables (composite) to the sound jacks of the STB and the TV.

Connecting The PC (D-Sub and DVI)



▶ Connecting a PC to the TV

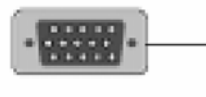
- Connect a PC (15pin) video cable between the Video Output port on the PC and the PC port on the TV.

▶ Pin Configuration

- 15Pin Signal Cable
(based on protruded pin)

▶ To watch the PC screen

- 1 Turn on the TV and press INPUT button to select the PC MODE.
- 2 Turn on the PC and check for the PC requirements.
- 3 Adjust the PC screen in Geometry menu.
(See 38 page.)



Pin NO.	Description
1	Red(R)
2	Green(G)
3	Blue(B)
4	Grounding
5	Grounding(DDC)
6	Red(R) Grounding
7	Green(G) Grounding
8	Blue(B) Grounding
9	Resered
10	Sync Grounding
11	Grounding
12	Data(DDC)
13	Horizontal sync.
14	Vertical sync.
15	Clock(DDC)

Displayable Monitor Specification

Resolution	Horizontal Frequency (KHz)	Vertical Frequency (Hz)
720 X 400	31.469	70.08
	37.927	85.03
640 X 480	31.469	59.94
	35.000	66.66
	37.861	72.80
	37.500	75.00
	43.269	85.00
	45.913	90.03
	53.011	100.04
800 X 600	35.156	56.25
	37.879	60.31
	48.077	72.18
	46.875	75.00
	53.674	85.06
	56.000	90.00
	64.016	100.00
832 X 624	49.725	74.55
1024 X 768	48.363	60.00
	56.476	70.06
	60.023	75.029
	68.677	84.997
1152 X 864	67.50	75.00
1280 X 1024	64.00	60.00



Notes

- **Synchronization input form : separate**
- **The Monitor recognizes 640x480@60Hz signal as 480p DTV signal. So the signal is expanded, please try other signals like 640x480@75HZ**
- The Monitor operates abnormally if a non-standard video format is selected.
- **852 x 480 : 42" Native Resolution** Horizontal Polarity is Positive(+) Vertical Polarity is Negative(-)
- **1366 x 768 : 50/55/63" Native Resolution** Horizontal Polarity is Positive(+) Vertical Polarity is Negative(-)
- **Depending on the manufacturer, your PC screen might appear differently (and depending on your particular version of Windows). Check your PC instruction book for information about connecting your PC to the monitor**
- The Monitor may operate abnormally if a non-standard video signal
- **"Out of Range"** message box will appear when an over-spec video signal is input. Change the video settings of PC when the message is displayed

Basic Operation

Turning the Monitor On And Off

Press the Power key on the remote control. The TV will turn on and you will be ready to use its features. You can also use the Power key on the front panel.

Select Source

Press INPUT key on the remote control. Then you can see the source list menu shown as below.



Select the source to watch with  /  key on the remote control and press the Menu / Set button.

Source list menu

TV program Selection

1. Connect the signal source (TV antenna) to TV input. Press INPUT button on the remote control and select TV on the source list.
2. Use CH+, CH- key or numeric key to change TV programme you want.
3. Press Pre.CH key on the remote control to watch the previous programme.
4. Also, you can tune the cable service, provided programmes while using the cable box. For further information regarding cable TV service, contact your TV service provider(s).

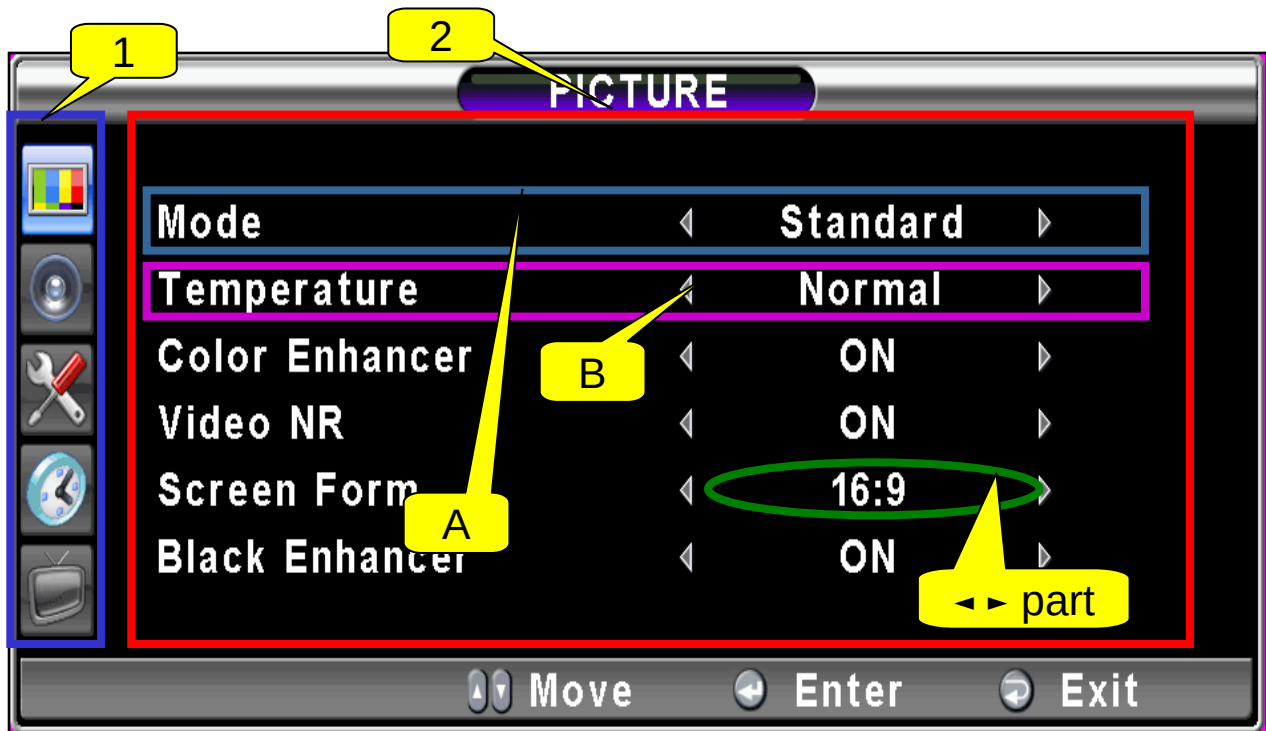
Volume Control

Use VOL+ / VOL- key on the remote control to adjust the volume level.
Press MUTE key on the remote control when you need to cut the sound temporarily.

OSD Menu Structure

- OSD (On Screen Display) allows users to control or adjust various features and settings in accordance with his/her preferences.
- Press the Menu/Set button on the remote control to see the main OSD menu.

▶ EXAMPLE of OSD Menu



1. Main Menu

Press Menu / Set key on the remote control to enter the main OSD menu.

First, select Main menu item you need with & key.

To select a main menu items, just press or Menu/Set button on the Remote Control.

2. Sub Menu

Each menu item has its own sub menu items to set.

3. Sub Menu items

A : If there is no part, the item has an sub menu.

You can enter the under menu and adjust an item you need.

Select sub-menu item with / keys on the remote control and press or Menu/Set button

to enter the submenu.

B : If there is a part, you can set the item by selecting . Ex) ON or OFF

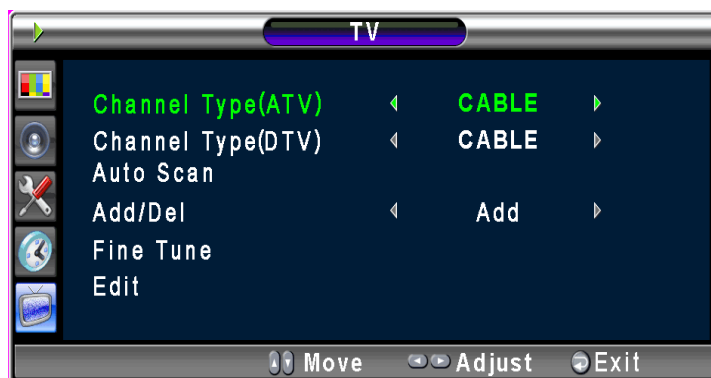
Press or Menu/Set key to set a part, and adjust it with / keys.

Setting The Cahnnel (ATV)

Choosing the Channel Type

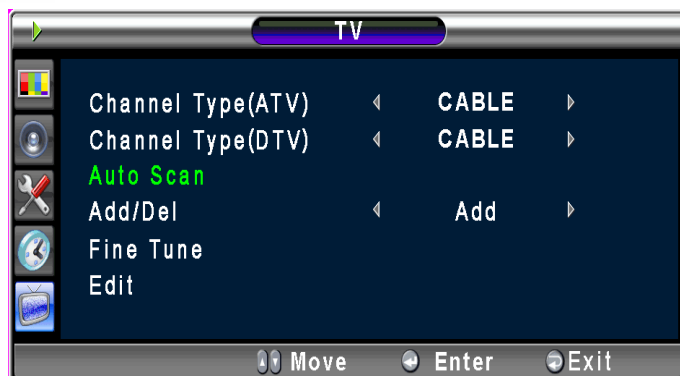
Before your television can begin memorizing the available channels, you must specify the type of signal source that is connected to the TV.(i.e., an antenna, a standard cable system)

- 1 Press Menu/set button to display the main OSD menu.
- 2 Select the TV Main menu.
- 3 Press Menu/Set to enter the sub menu.
- 4 Select **Channel Type(ATV)** or **Channel Type(DTV)**
- 5 Select the **Channel Type(ATV)** or **Channel Type(DTV)** with   button and press Exit button. You Can select Air or CABLE.



Storing the Channel Automatically

- 1 Press Menu/Set button to display the main OSD menu
- 2 Select The TV main menu.
- 3 Press Menu/Set button to enter the sub menu.
- 4 Select Auto Scan With  /  Button and press Menu/Set Button on the remote control. Then the tuning bar will appear and scanning will start.



(HDTV Scan)



(ATV Scan)

*** Analog Scan precedes Digital Scan on Auto Scan mode.**



Notes

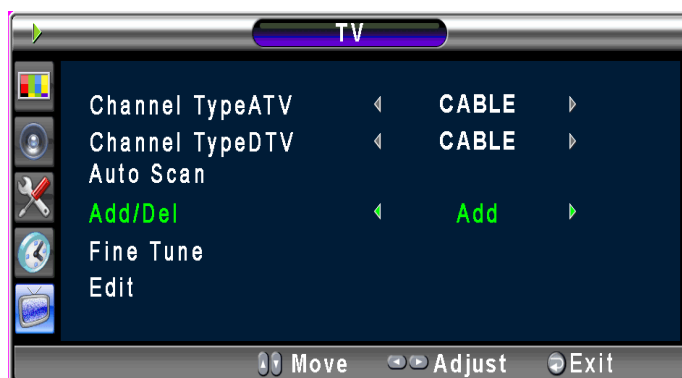
You can enter the TV menu and HDTV menu in TV mode only. (When you watch a TV programme.)

CHANNEL (TV)

▶ Add/Del

You can add or erase the current channel

- 1 Press Menu/set button on the remote control to display the main OSD menu.
- 2 Select the TV main menu with  /  key on the remote control.
- 3 Press Menu/Set button to enter the sub menu.
- 4 Select **Add/Del** menu.
- 5 Select the Add/Del with  /  button and press Exit button. You Can select Add or Del.



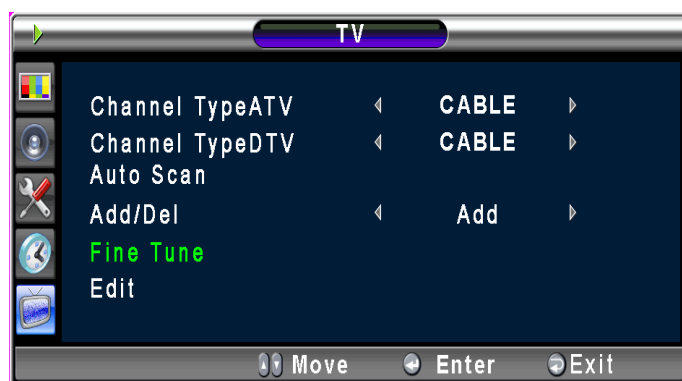
Notes

Only scanned programmes can be stored as Favorite programmes.

▶ Fine Tune

The Fine Tuning function lets you manually adjust the TV's tuner if you have difficulty tuning analog Channels.

1. Press Menu/set button to display the main OSD menu.
2. Select the TV main menu.
3. Press Menu/Set to enter the Fine tune sub menu.
4. Select **Fine tune** with  /  button and press Menu/Set button. Then you can see the adjust bar.
5. Adjust the fine tune with  or  button.



Fine Tune only operates on TV mode.



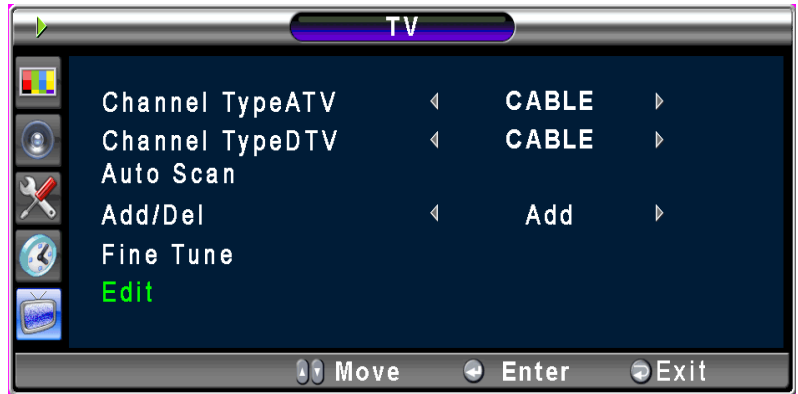
CHANNEL (TV)

▶ Edit Favorite programme List

You can store of your favorite channels for each available input source.

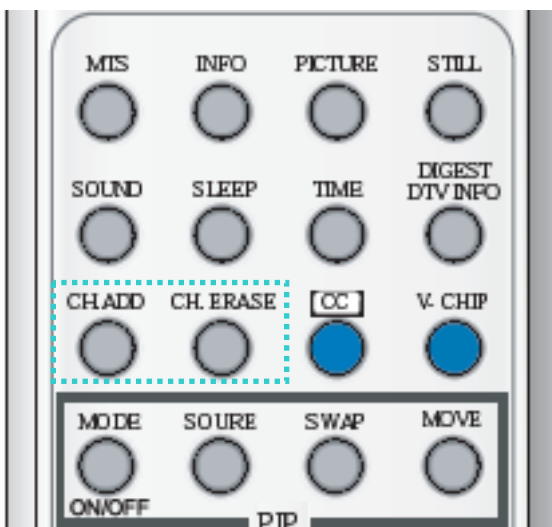
Then, when you press the Favorite button on the remote control,

- 1 Press Menu/Set button to display the main OSD Menu.
- 2 Select the TV main menu.
- 3 Press Menu/Set button to enter the TV Sub menu.
- 4 Select Edit and press the Menu/Set button.
- 5 Select the channel to Skip or Set as the Favorite Channels.
- 6 Select CH and set the values with ◀ / ▶ button.



DTV	ATV	
CH	Skip	Fav
8	YES	NO
9	YES	NO
10	YES	NO
11	YES	NO
12	YES	NO
13	YES	NO
14	YES	NO
15	YES	NO
16	YES	NO
17	YES	NO

Navigation buttons at the bottom: Enter, Ch Move, Exit



- 1 **CH ADD**
Add the current channel into the scanned channel list.
- 2 **CH ERASE**
Remove the current channel from the scanned channel list



Notes

Only scanned channels can be set as Favorite Channels.

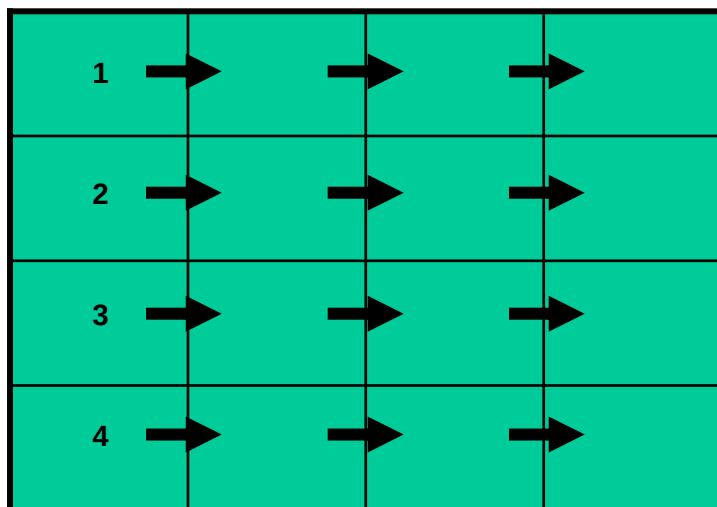
CHANNEL (TV)

Digest

With the Digest function, you can select a TV programme watching 16 programmes at once. This function works in TV mode only.



- 1 Press the DIGEST button on the remote control. .
- 2 You can make off the Digest Function by pressing Digest button again.



16 side windows are renewed clockwise. Next memorized programme appear in the renewed windows.

To choose the programme, press the channel number with the numeric buttons on the remote control.

PICTURE

Mode

- Your TV has 3 automatic factory preset picture settings (“**Standard**”, “**Sharp**” and “**Mild**”). You can choose **Standard**, **Vivid** or **Mild** by pressing “Picture” key on the remote control (or by making a selection from the menu). Or you can select **USER** which automatically recalls your personalized picture settings.

1. Press Menu/set button to display the main OSD menu.
2. Select the picture main menu.
3. Press Menu/Set to enter the sub menu.
4. Select **Mode** and press Menu/Set to enter the sub menu. Then the picture sub mode appear.
5. Select the picture mode and press Menu/Set button.
6. You will see the picture setting bars. Just Press EXIT button on the remote control. You can adjust each values of the picture setting, but the changed values are stored as in USER mode.

* **USER** mode require more settings.
It has an under menu: See next page.



Notes

Alternative method : Just press the “Picture” button on the remote control. Each time it is pressed, different mode is selected.

▶ Adjust USER Mode

You can change the Contrast, Brightness, Color, Sharpness, and Tint according to personal preference in USER mode. (The function for Tint Adjustment is activated when NTSC signal is input.)

- 1 Select the item to adjust with ,  button.
- 2 Press Menu/Set button.
- 3 Adjust the item with ,  button.
- 4 To cancel all adjust, select **Recall** and press Menu/Set button.

For a more detailed description of these settings, see the next page.

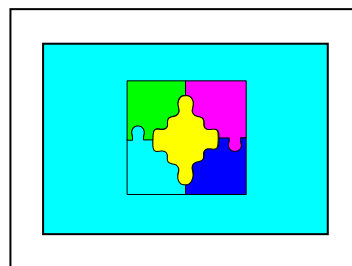
Select **USER** mode (Previous page)



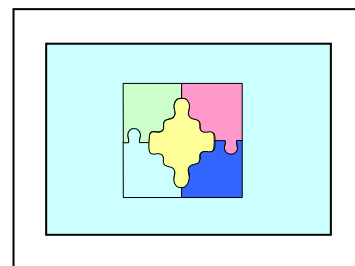
PICTURE

▶ Contrast

Adjust brightness difference between bright part of the screen and dark part.



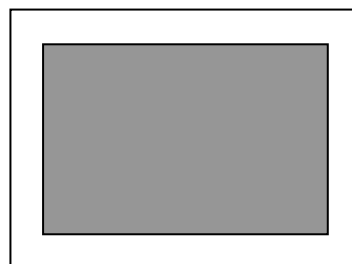
Distinct ◀



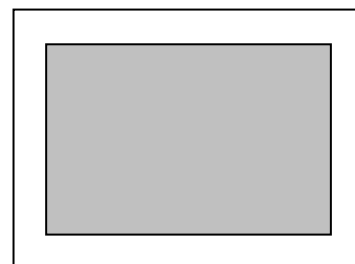
▶ Vague

▶ Brightness

Adjust brightness of the screen.



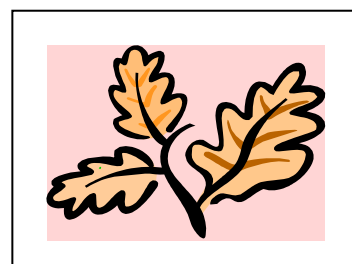
Dark ◀



▶ Bright

▶ Color

Adjust deep and light color of the screen.



Decrease ◀



▶ Increase

▶ Sharpness

Adjust vividness of the screen.



Less sharp ◀



▶ Sharp

▶ Tint

Adjusts the balance between green and yellow



Green color is deeper ◀



▶ Red color is deeper

▶ Temperature

- Your TV has 5 screen temperatures (color settings):

- 1 Press Menu/set key to display the main OSD menu.
- 2 Select the picture main menu.
- 3 Press  button the picture menu.
- 4 Select **Temperature** and press Menu/Set to enter the under menu. Then the Picture-Temperature under menu appear.
- 5 Select the Temperature mode with / button.
- 6 Press EXIT button to return.



- Cool 1,2
Screen seems warm: Strong Blue
- NORMAL
Normal: Factory default.
- Warm 1,2
Screen seems cool: Strong Red



▶ Color Enhancer

-This function will enhance the color level. Green, Blue and Skin color on the picture will enhance, while others areas remain unchanged.

- 1 Press Menu/Set button to display the main OSD menu.
- 2 Select the picture main menu item.
- 3 Press  button the sub menu.
- 4 Select Color Enhancer menu. Then the cursor moves into the ◀▶ parts.
- 5 Turn on or off Film mode function with / button and press Exit button.



Video NR (Noise Reduction)

- This function automatically filters out and reduces the image noise and improves picture quality where receiving weak signals.



- 1 Press Menu/Set button to display the main OSD menu.
- 2 Select the picture main menu item.
- 3 Press Menu/Set to enter the sub menu.
- 4 Select **Video NR** menu. Then the cursor moves into the ◀▶ parts.
- 5 Turn on or off Video NR function with ◀/▶ button and press EXIT button.



Screen Format

- Your TV has four Screen Formats: **16:9**, **4:3**, **PANORAMA**, **ZOOM1**, **ZOOM2**.
(For more detail description for these modes, refer to the next page.)

- 1 Press Menu/Set button to display the main OSD menu.
- 2 Select the picture main menu.
- 3 Press ▶ enter the picture menu.
- 4 Select **Screen Form** and press ▶ button to enter the under menu. Then the Screen Format under menu appear.
- 5 Select the screen format you want and press ▲/▼ button and EXIT button.



▶ Screen Format Description

16 : 9

16:9 video: No change.

4:3 video: Expands 4:3 video signal horizontally to fit the 16 : 9 screen.

Panorama

16:9 video: No change.

4:3 video: Expands 4:3 video horizontally to fit the 16 : 9 screen and to minimize distortion, sides are expanded more than center.

Zoom 1

Expands 16 : 9 mode screen vertically.

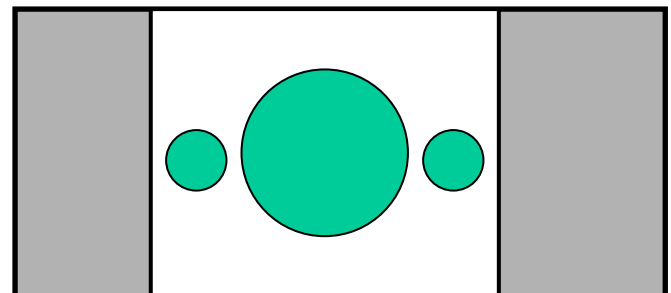
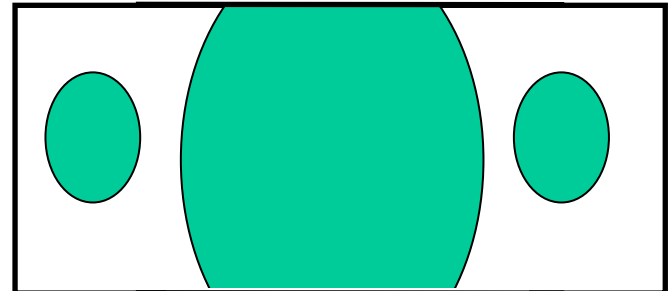
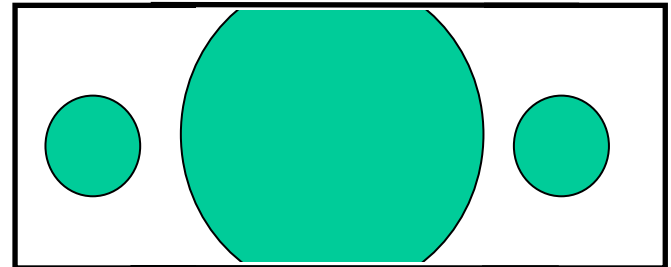
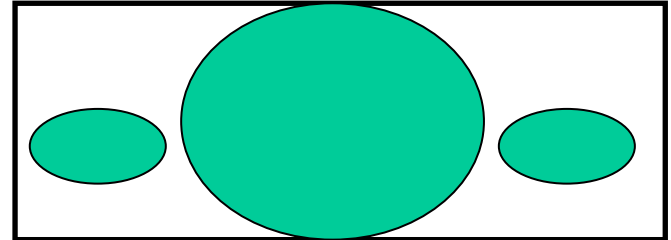
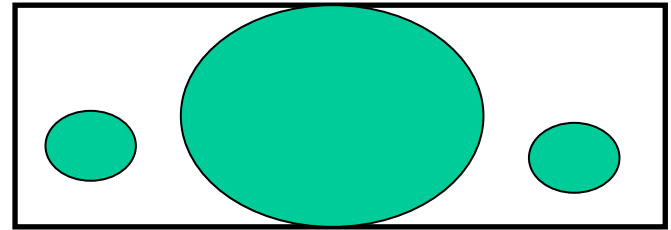
Zoom 2

Expands zoom 1 mode screen vertically.

4:3

16:9 video: The image is suppressed.

4:3 video: No expansion. There are gray areas besides the image.



▶ Black Enhancer

- This will enhance the black level/ the contrast of the picture. The dark regions of the picture are made Darker, while bright areas remain unchanged. The advantage of this black-level expansion is that the black expansion is performed only if it is noticeable to the viewer.



PICTURE (PC)

In PC mode, you can adjust the H,V-Position, Divide ,Native Mode and Phase. Also you can adjust them automatically.

▶ Geometry

You can change H, V-Position, Divide and Phase in PC mode like usual PC monitors. You can also adjust them automatically. (Auto adjust function.)

- 1 Press Menu/set button to display the main OSD menu.
- 2 Select the picture main menu with ,  button.
- 3 Press Menu/Set to enter the sub menu.
- 4 Select **Geometry** and press Menu/Set to enter the under menu. Then the picture Geometry under menu will appear.

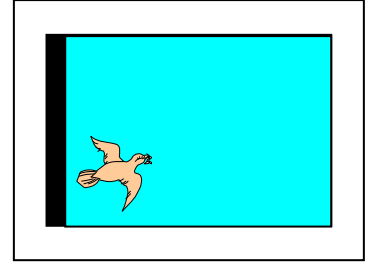
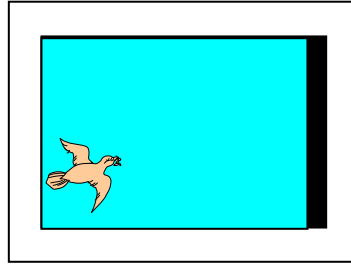


- 1 Select the item to adjust with ,  button.
- 2 Press Menu/Set button.
- 3 Then the cursor moves on the bar and you can adjust the value with ,  button.
- 4 To adjust these items, automatically, select **Auto Adjust** and press Menu/Set button.

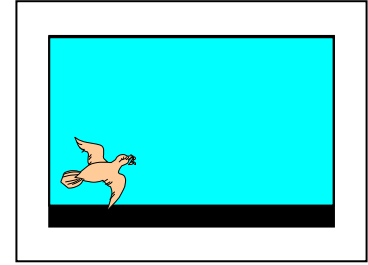
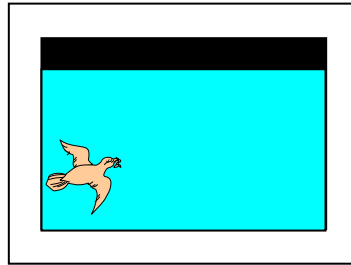


* For more detail description refer to the next page.

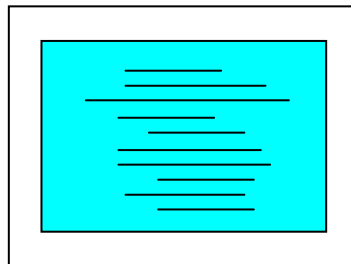
▶ H-POSITION



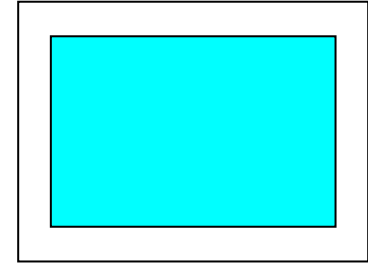
▶ V-POSITION



▶ PHASE



Mismatch



Match

SOUND

In SOUND Menu, you can adjust balance, MTS (Multi-Track Sound), AVC (Auto Volume Control) and select the equalizer settings.

▶ Balance

This control allows you to adjust the balance of the left and right speaker output.

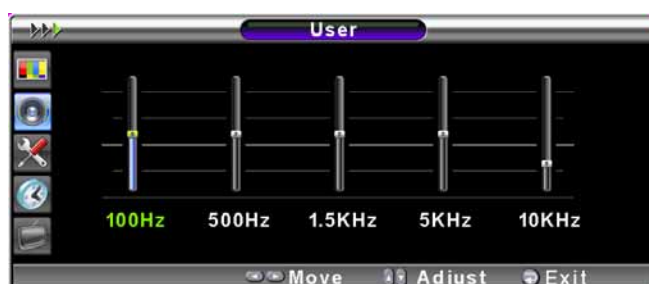
1. Press Menu/set button to display the main OSD menu.
2. Select the SOUND main menu.
3. Press Menu/Set to enter the sub menu.
4. Select **Balance** and press Menu/Set key.
5. Adjust the balance with ◀, ▶ keys and press Exit button.



▶ Sound Mode

Your TV has four automatic sound settings (“Standard”, “Movie”, “Music” and “News”) that are preset at the factory. You can activate either Standard, Movie, Music or News by pressing “SOUND” on the remote control (or by making a selection from the menu) or you can select “Custom” which automatically recalls your personalized sound settings.

1. Press Menu/set button to display the main OSD menu.
2. Select the SOUND main menu.
3. Press Menu/Set to enter the sub menu.
4. Select **Mode** and press Menu/Set to enter the sub menu. Then the Mode sub menu appear.
5. Select the equalizer setting and press Menu/Set button.
6. You will see the equalizer bars. Just press EXIT button on the remote control. You can adjust each values of equalizer, but the changed values are stored as in USER mode.



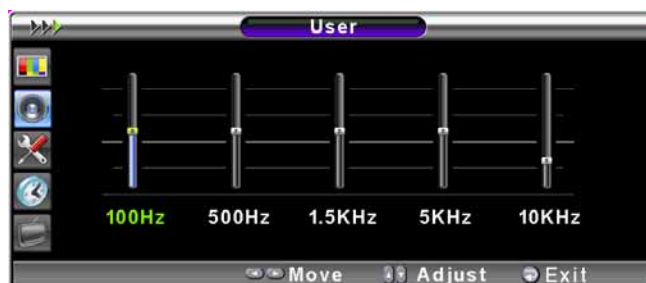
* **USER** mode require more settings.
It has sub menu: See next page.

▶ User Adjust

You can use the OSD menu to change the Treble, Bass, Balance and DRC according to your preference.

- 1 equalizer menu appear when you select USER mode.
- 2 Select a gain bar with ◀▶ button on the remote control and adjust it with ▲/▼ button.
- 3 Press EXIT button on the remote control to exit equalizer. The result will be saved automatically.

Select **USER** mode (Previous page)



▶ Spatial Effect

This function can create surround effect such as the sound seems to come from all directions.

- 1 Press Menu/set key to display the main OSD menu.
- 2 Select the SOUND main menu item with ▲/▼ button.
- 3 Press Menu/Set to enter the sub menu.
- 4 Select **Spatial effect** menu.
- 5 Turn on or off Spatial effect function with ◀▶ button and press Exit button.



▶ AVC (Auto Volume Control)

This function adjust sound volume level automatically depending on the source.

- 1 Press Menu/set button to display the main OSD menu.
- 2 Select the SOUND main menu.
- 3 Press Menu/Set to enter the sub menu.
- 4 Select **AVC** menu . Then the cursor moves into the ◀▶ parts.
- 5 Turn on or off AVC function with ◀▶ button and press EXIT button.



SOUND

▶ MTS

- Select sound signal format from the input source. There are Mono, Stereo, SAP sound formats.

- 1 Press Menu/set button to display the main OSD menu.
- 2 Select the SOUND main menu with  /  button on the remote control.
- 3 Press Menu/Set to enter the sub menu.
- 4 Select **MTS** and press Menu/Set to enter the sub menu. Then the MTS sub menu appear.
- 5 Select the MTS format with  /  and press Menu/Set button.

** The available sound formats are displayed. Usually, you can see Mono and Stereo.

MTS (Multi Sounds) supports English, French and Spanish. The available languages vary according to TV programs from broadcasting stations.

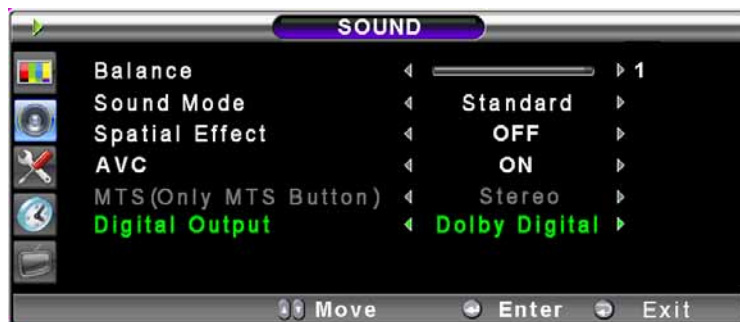


SOUND

▶ Digital Output (HDTV Mode Only)

- Use this menu to select Sound Type, PCM or Dolby Digital on SPDIF Output Mode.

- 1 Press Menu/Set button to display the main OSD menu.
- 2 Select the Sound main menu with  /  button on the remote control
- 3 Press Menu/Set to enter the sub menu
- 4 Select **Digital Output** and press Menu/Set to enter the sub menu. Then the Digital Output sub menu appear.
- 5 Select PCM or Dolby Digital and press Exit Button.



* Select PCM for general speakers L, R and select Dolby Digital for 5.1 channel speakers system.



Notes



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In SET UP menu, you can adjust the transparency of the OSD menu and set PIP and others.

▶ Translucent

- Adjust the transparency of the OSD menu. There are 8 step from OFF to 7.

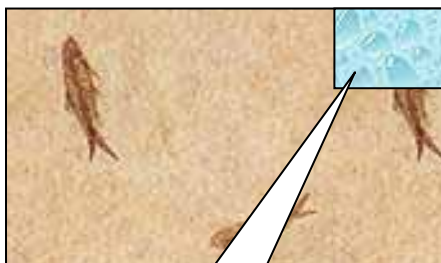
1. Press Menu/set button to display the main OSD menu.
2. Select the SETUP main menu with  /  keys on the remote control.
3. Press Menu/Set to enter the sub menu.
4. Select **Translucent** menu. Then the cursor moves into the ◀▶ parts.
5. Adjust with  &  button and press EXIT button.



▶ PIP (Picture In Picture)

- You can watch two programmes or sources at the same time. And set up PIP size and position

1. Press Menu/set button to display the main OSD menu.
2. Select the SET UP main menu with  /  keys on the remote control.
3. Press Menu/Set to enter the sub menu.
4. Select **PIP** and press Menu/Set to enter the sub menu. Then the PIP sub menu appear.



PIP Window



SET UP

▶ Size in PIP (Picture In Picture)

- Change the size of the PIP window. There are 3 sizes: SMALL, Large, Twin

- 1 Select **Size** and press  button .
- 2 Adjust size function with  button and press Menu/Set button.



SMALL



LARGE



TWIN

▶ Source in PIP

- Change the source of the PIP window.

- 1 Select **Source** and press Menu/Set to enter the sub menu. Then the PIP sub menu appear.
- 2 The available sources will be displayed. Select the source and press Menu/Set button.



Main \ PIP										
	TV	HDTV	VIDEO 1	VIDEO 2	S-Video / AV	Component1	Component2	PC	DVI	HDMI
TV	O	O	O	O	O	O	O	O	O	O
HDTV	O	X	O	O	O	O	X	O	O	O
VIDEO 1	O	O	X	O	O	O	O	O	O	O
VIDEO 2	O	O	O	X	O	O	O	O	O	O
S-Video/AV	O	O	O	O	X	O	O	O	O	O
Component1	O	O	O	O	O	X	O	O	O	O
Component2	O	X	O	O	O	O	X	O	O	O
PC	O	O	O	O	O	O	O	X	X	X
DVI	O	O	O	O	O	O	O	X	X	X
HDMI	O	O	O	O	O	O	O	X	X	X

▶ Picture Swap in PIP (Picture In Picture)

- Swap the sources of the main screen and the PIP window.

*** Select Picture Swap and press Menu/Set button.**

▶ Position in PIP

- Change the position of the PIP window.

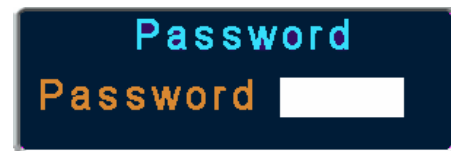
- 1 Select **Position** with  /  button on the remote control and press Menu/Set to enter the sub menu. Then the PIP sub menu appear.
- 2 In Sub Menu, there are four positions. Select the position with  /  button on the remote control and press EXIT button.



▶ V-Chip (TV Parental Guidelines)

- Parental restrictions can be Setup using either of two methods: The TV guidelines or the MPAA rating

- 1 Press Menu/Set button to display the main OSD menu.
- 2 Select the Setup main menu with  button on the remote control.
- 3 Press Menu/Set button to enter the sub menu.
- 4 After enter the password, the V-Chip sub menu appear.



Notes

* The factory default number is 0000 and the master button number is 9673.

▶ TV Block in V-Chip

- You can Setup restrictions using the "TV Parental Guidelines" of FCC.

- 1 Select TV Block with  /  button on the remote control and press Menu/Set button to enter the sub menu. Then the TV Block sub menu appear.
- 2 You can independently lock the TV ratings. The locked TV(FCC) ratings are indicated by the symbol.
- 3 Press  /  /  /  buttons and the Menu/Set button to activate the appropriate restrictions for TV(FCC) rating system.



Note : These categories consist of two separate groups: TV-Y and TV-Y7(Young children through age 7(, and TV-G through TV-MA (everybody else).

The restrictions for these two groups work independently: If a household includes very young children as well as young adults, the TV guidelines must be Setup separately for each age group

▶ Movie Block in V-Chip

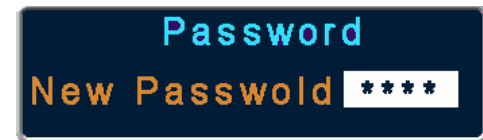
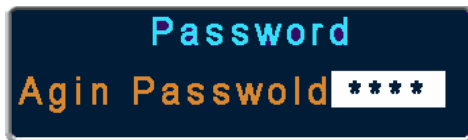
- The Movie Block uses the motion picture association of America (MPAA) system, and its main application is for movies. When the rating controls is on, the TV will automatically block any programs that are coded with objectionable ratings (either MPAA or TV-Ratings).

- 1 Select Movie Block with  /  button on the remote control and press Menu/Set button to enter the sub menu. Then the Movie Block sub menu appear.
- 2 You can independently lock the TV ratings. The locked TV(FCC) ratings are indicated by the symbol.
- 3 Press  /  buttons and the Menu/Set button to activate the appropriate restrictions for MPAA rating system



▶ Change Password in V-Chip

- 1 Select Change Password with  /  button on the remote control and press Menu/Set button to enter the sub menu. Then the Password change sub menu appear.
- 2 Enter the new password with numeric buttons on the remote control.



▶ V-Chip Blocking in V-Chip

- 1 Select V-Chip Blocking with  /  button on the remote control.
- 2 Enter to the ◀▶ part by pressing  button. Then the cursor moves into the ◀▶ parts.
- 3 On or off the V-Chip Blocking with  /  buttons.
- 4 Exit with Exit button on the remote control.



SET UP

▶ Advanced

- You can set ID, Burn Protect, Blue Back, Language and Front Key Lock in Advanced Menu.

- 1 Press Menu/set button to display the main OSD menu.
- 2 Select the SETUP main menu with  /  button on the remote control.
- 3 Press Menu/Set to enter the sub menu.
- 4 Select **Advanced** and press Menu/Set to enter the Advanced menu. Then the Advanced sub menu appear.



▶ Set ID in Advanced

- Set the ID of TV for mass-controlling through the serial port.

- 1 Select **Set ID** menu. Then the cursor moves into the   part.
- 2 Adjust with  /  button and press Exit button.



▶ Blue Back in Advanced

You can set to display blue-color screen instead of noise screen.

- 11 Select **Blue Back** menu. Then the cursor moves into the ◀▶ parts.
- 22 Turn the function on or off with ◀▶/▶▶ button and press EXIT button.



▶ Language in Advanced

Set the language to use in OSD.

Supported languages are English, French, Spanish.

- 1 Select **language** menu and press ▶▶ button to enter the ◀▶ parts. Then the cursor moves into the ◀▶ parts.
- 2 Choose the Language with ▲/▼ button and press EXIT button.



▶ Front key Lock in Advanced

Lock the OSD panel of the TV monitor. It can protect the TV monitor from children's power on/off or other operation by miss.

- 1 Select **Front key Lock**. Then the cursor moves into the ◀▶ parts.
- 2 Turn the function on or off with ◀▶/▶▶ button and press EXIT button.



SET UP

▶ Burn Protect in Advanced

The monitor may be damaged from displaying a static image long time (over 30 minutes). It is called as image sticking, and burn protect function moves image regularly to relieve image sticking. You can set the moving range of burn protection function. (How much the image will move.) Burn Protection function moves image 1 pixel per 2 minutes, and the set range, image starts to go back to the original position

- 1 Select Burn Protect menu. Then the cursor moves into the ◀▶ parts.
- 2 Turn the function on or off with ◀▶ / ▶◀ button and press Exit button.



▶ HDTV Setup (HDTV mode)

- Use this menu to set Time Zone and put Daylight Saving Time into effect.

1. Press Menu/set button to display the main OSD menu.
2. Select the SETUP main menu with  /  button on the remote control.
3. Press Menu/Set to enter the sub menu.
4. Select **HDTV Setup** and press Menu/Set to enter the HDTV Setup menu. Then the HDTV Setup sub menu appear.



▶ Time Zone in HDTV Setup (HDTV mode)

- Use this menu to select or change Time Zone in the US.

- 1 Select **Time Zone** menu and press  button to enter the   parts. Then the cursor moves into the   parts.
- 2 Choose the Time Zone with  /  button and press EXIT button.



▶ Daylight in HDTV Setup(HDTV mode)

- Use this menu to adopt Daylight Saving Time.

- 1 Select **Daylight** menu and press  button to enter the  parts. Then the cursor moves into the  parts.
- 2 Choose the Daylight with  /  button and press EXIT button.



▶ HDCCD Setup(HDTV Mode Only)

- Use this menu to select a font style, a font type, a text color, a back color, a edge type, a edge color and a display type of subtitles.

- 1 Press Menu/set button to display the main OSD menu.
- 2 Select the SETUP main menu with  /  button on the remote control.
- 3 Press Menu/Set to enter the sub menu.
- 4 Select **HDCCD Setup** and press Menu/Set to enter the HDCCD Setup menu. Then the HDCCD Setup sub menu appear.



HDCCD Setup

Font Style : Select a font style (Default, Serifmono ,Serif , Sanserifmono , Casual , Cursive)

Font Type : Select a font type (Normal , Small , Large)

Text Color : Select a text color (Black, White, Green, Blue, Yellow, Magenta)

Back Color : Select a back color (Black, White , Green , Blue , Yellow , Magenta)

Edge Type : Select an edge type (None, Raised, Depressed, Uniform, Drop-Shadow)

Edge Color : Select an edge color (Black, White, Green, Blue, Yellow, Magenta)

Display Type : Select a display type

- Origin : Normal display of subtitles from broadcasting stations
- User : User's display set on HDCCP setup menu

TIME

In the TIME menu, you can set the current time and auto power on / off.

▶ Time Set

Set the current time.

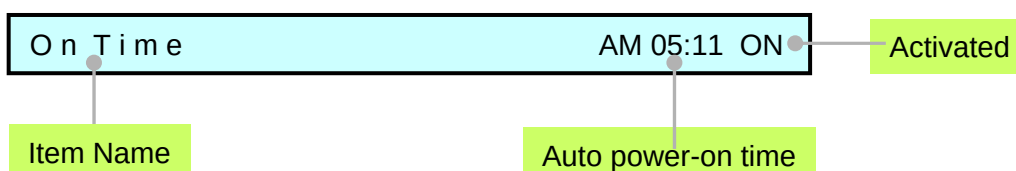
- 1 Press Menu/set button to display the main OSD menu.
- 2 Select the **TIME** main menu.
- 3 Press Menu/Set to enter the sub menu.
- 4 Select **Time Set** by pressing  button.
- 5 Move the cursor by pressing ,  button and adjust time by ,  button.



▶ On Time

This TV can be set to turn on automatically at specific time that you choose. Before using the timer, you must set the TV's Time as described previously.

- 1 Press Menu/set button to display the main OSD menu.
- 2 Select the **TIME** main menu with  /  button on the remote control.
- 3 Press Menu/Set to enter the sub menu.
- 4 Select **On Time** with ,  keys and press  button.
- 5 Move the cursor by ,  button and adjust time by ,  button.

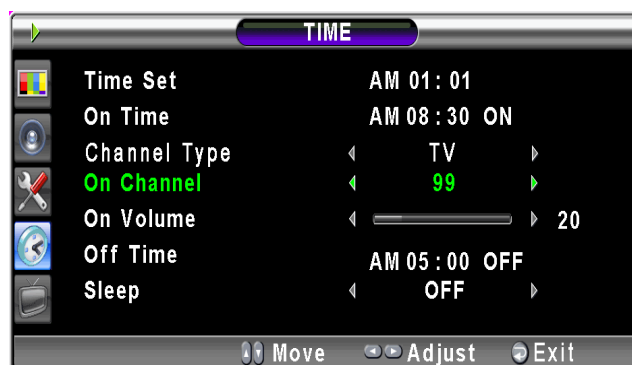


▶ On Channel

Set the channel when TV power turn on automatically.

** Available only when the Time is set and **On Time** is ON.

- 1 Press Menu/set button to display the main OSD menu.
- 2 Select the **TIME** main menu with  /  button on the remote control.
- 3 Press Menu/Set to enter the sub menu.
- 4 Select **On Channel**.
- 5 Then the cursor moves into the   parts.
- 6 Adjust the channel with   button. Press EXIT button to return.



▶ On Volume

Set the sound volume level when TV power on automatically.

** Available only when the Time is set and **On Time** is ON.

- 1 Press Menu/set button to display the main OSD menu.
- 2 Select the **TIME** main menu with  /  button on the remote control.
- 3 Press Menu/Set to enter the sub menu.
- 4 Select **On Volume**.
- 5 Then the cursor moves into the   parts.
- 6 Adjust the sound volume level with  /  button.

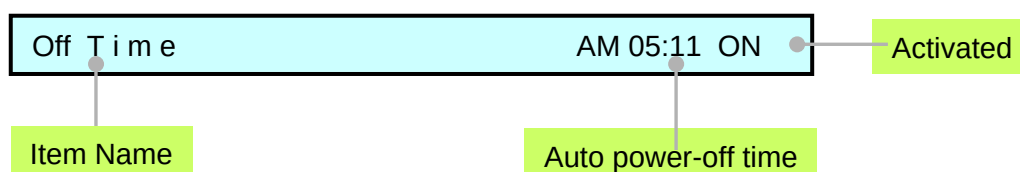


TIME

▶ Off Time

This TV can be set to turn off automatically at specific times that you choose. Before using the timer, you must set the TV's clock as described previously.

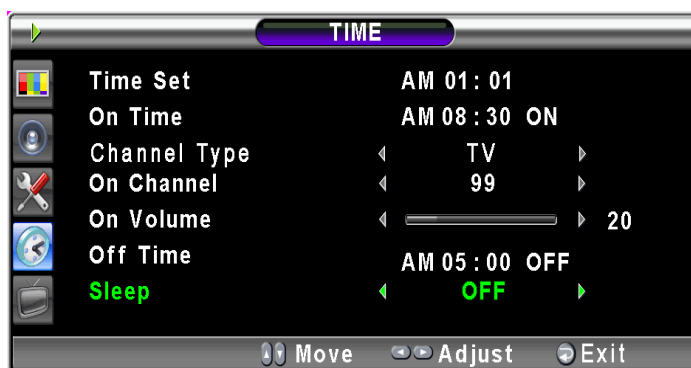
1. Press Menu/set button to display the main OSD menu.
2. Select the **TIME** main menu with  /  button on the remote control.
3. Press Menu/Set to enter the sub menu.
4. Select **Off Time** with ,  button on the remote control and press  button.
5. Move the cursor with  /  button and adjust time with  /  button.



▶ Sleep

You can set your TV to automatically turn off after a preset interval. If you turn off the TV in the state of setting up sleep time and turn on again, sleep time erased therefore set up again. The time period runs from OFF(0min) to 180min. (OFF, 10min, 20, 30, 60, 90, 120, 150, 180)

1. Press Menu/set button to display the main OSD menu.
2. Select the **TIME** main menu. with  /  button on the remote control.
3. Press Menu/Set to enter the sub menu.
4. Select **Sleep** with ,  button on the remote control.
5. Then the cursor moves into the   parts.
6. Set the time period with  /  button.
7. Press EXIT button to return.



PICTURE

MODE

- Standard
- Vivid
- Mild
- User

- Contrast
- Brightness
- Color
- Sharpness
- Tint (Only For NTSC)
- Recall

TEMPERATURE

→ WARM2, WARM1, NORMAL, COOL1, COOL2

COLOR ENHANCER

→ COLOR ENHANCER ON/OFF

VIDEO NR

→ VIDEO NR ON/OFF

SCREEN FORM

→ 16:9, PANORAMA, ZOOM1, ZOOM2, 4:3

BLACK ENHANCER

→ BLACK ENHANCER ON/OFF

SOUND

BALANCE

SOUND MODE

- STANDARD
- MOVIE
- MUSIC
- NEWS
- USER

EQUALIZER (PRESS SET)

→ 100Hz, 500Hz, 1.5KHz, 5KHz, 10KHz

SPATIAL EFFECT

→ SPATIAL EFFECT ON/OFF

AVC

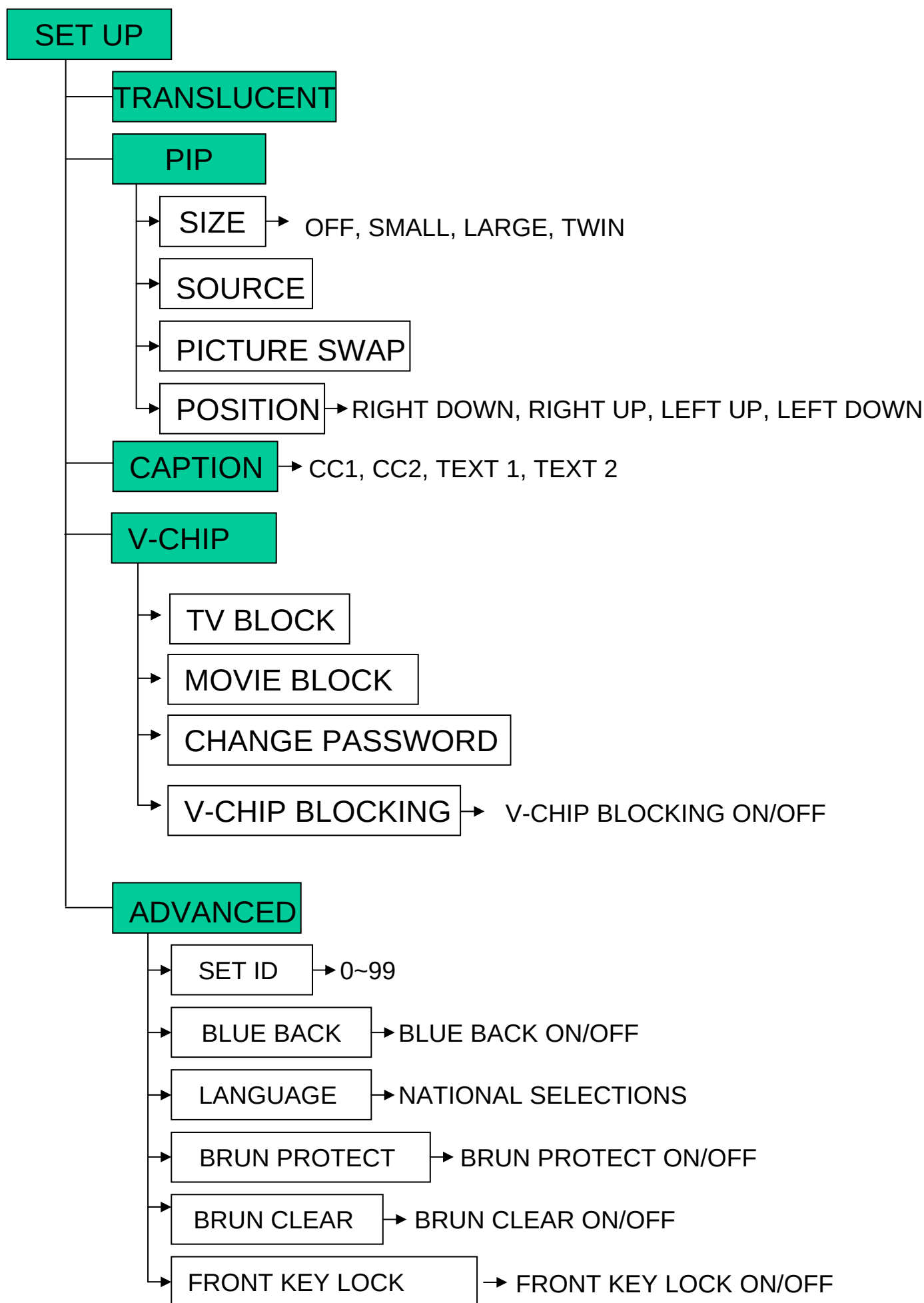
→ AVC ON/OFF

MTS

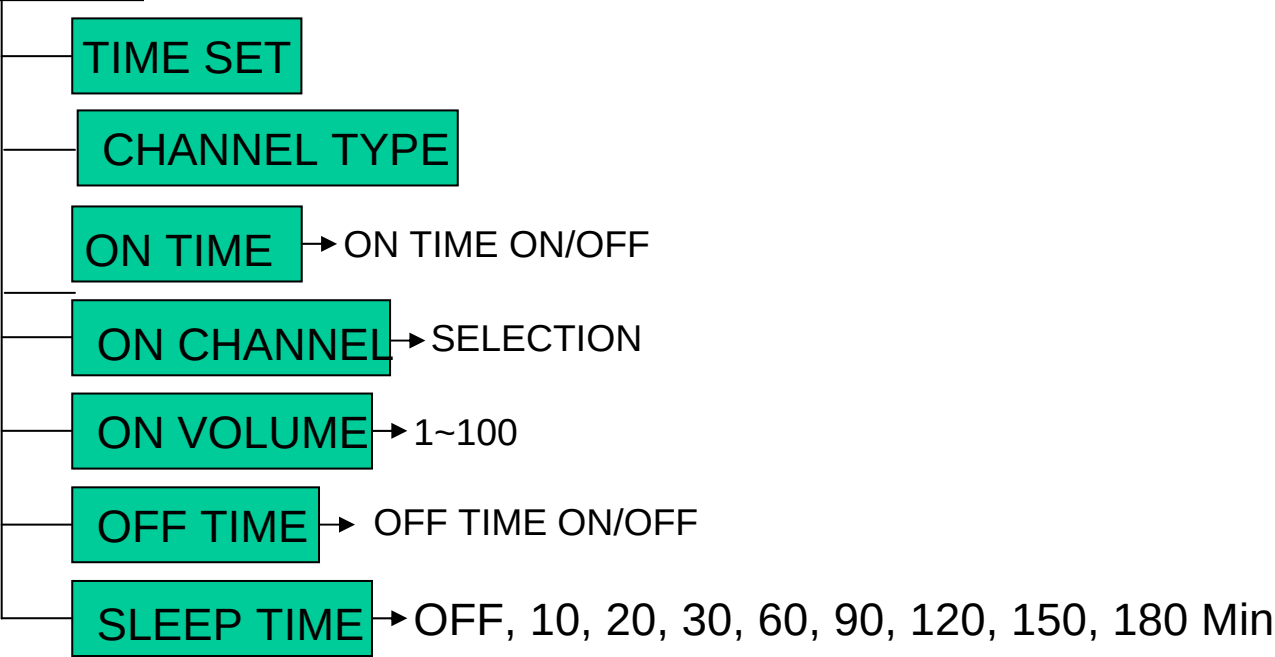
→ MONO, STEREO, SAP

Digital Output(Only HDTV MODE)

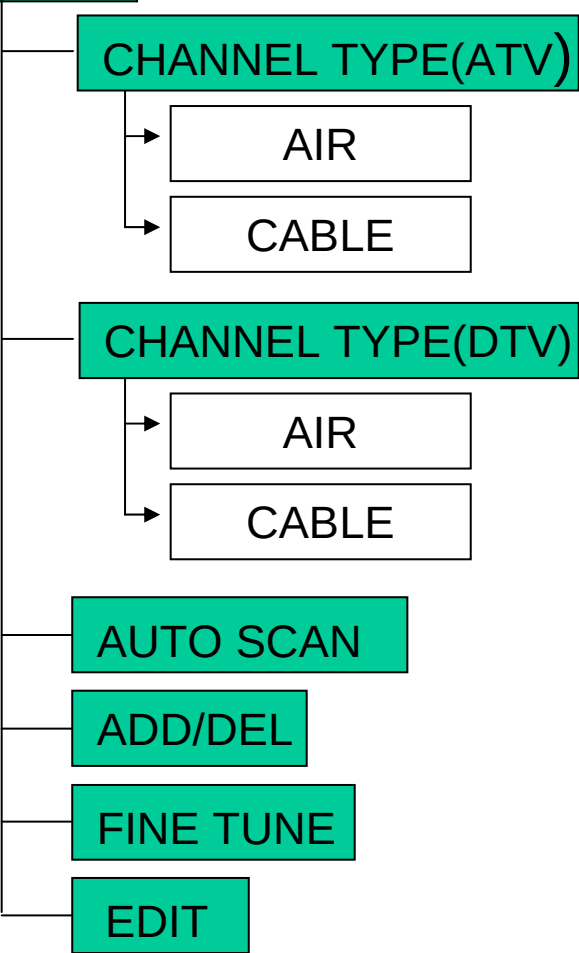
- USER
- PCM



TIME



TV



PICTURE

MODE

- Standard
- Vivid
- Mild
- User

- Contrast
- Brightness
- Color
- Sharpness
- Tint (Only For NTSC)
- Recall

TEMPERATURE

WARM2, WARM1, NORMAL, COOL1, COOL2

COLOR ENHANCER

COLOR ENHANCER ON/OFF

VIDEO NR

VIDEO NR ON/OFF

SCREEN FORM

16:9, PANORAMA, ZOOM1, ZOOM2, 4:3

BLACK ENHANCER

BLACK ENHANCER ON/OFF

SOUND

BALANCE

SOUND MODE

- STANDARD
- MOVIE
- MUSIC
- NEWS
- USER

EQUALIZER (PRESS SET)

100Hz, 500Hz, 1.5KHz, 5KHz, 10KHz

SPATIAL EFFECT

SPATIAL EFFECT ON/OFF

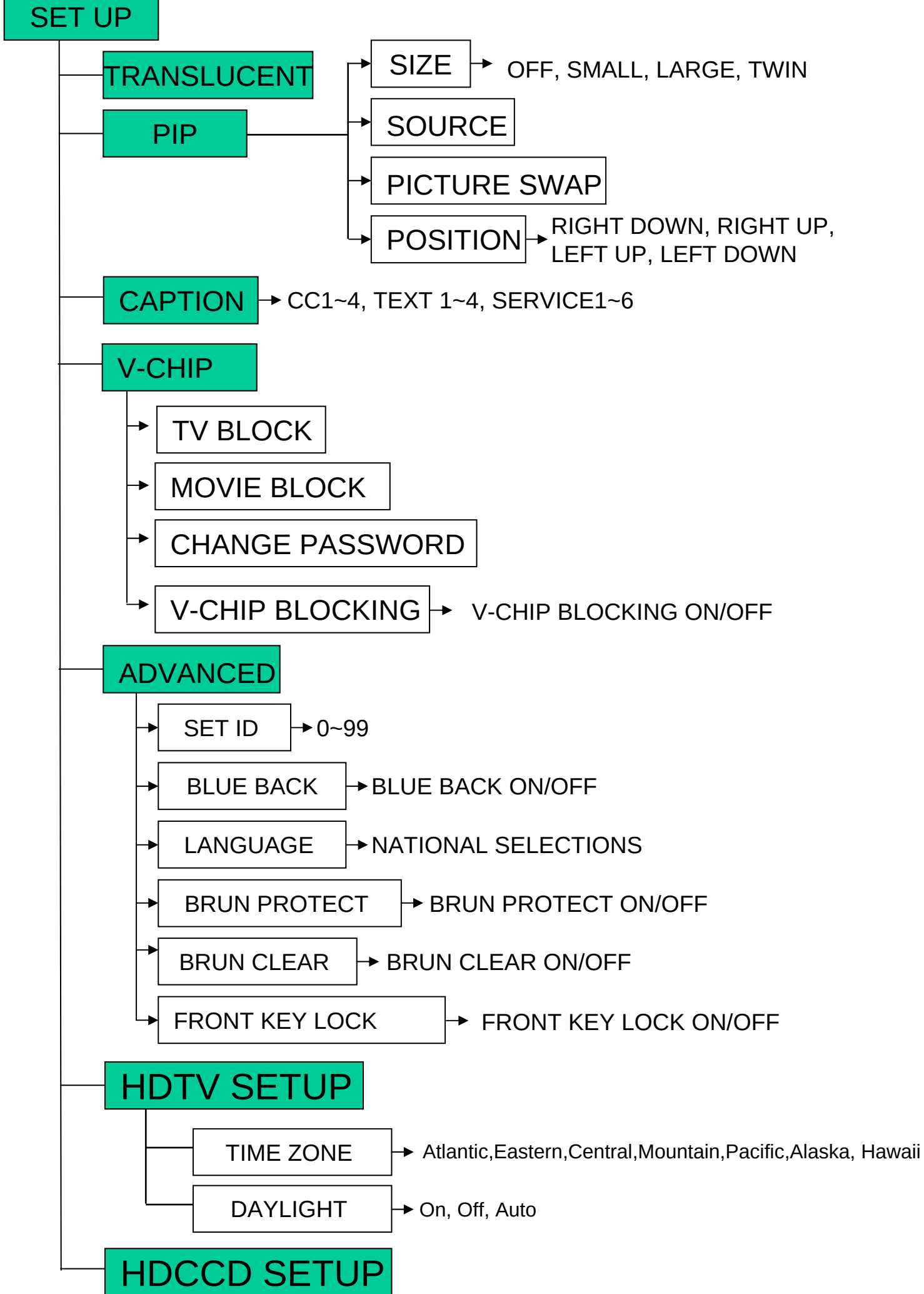
AVC

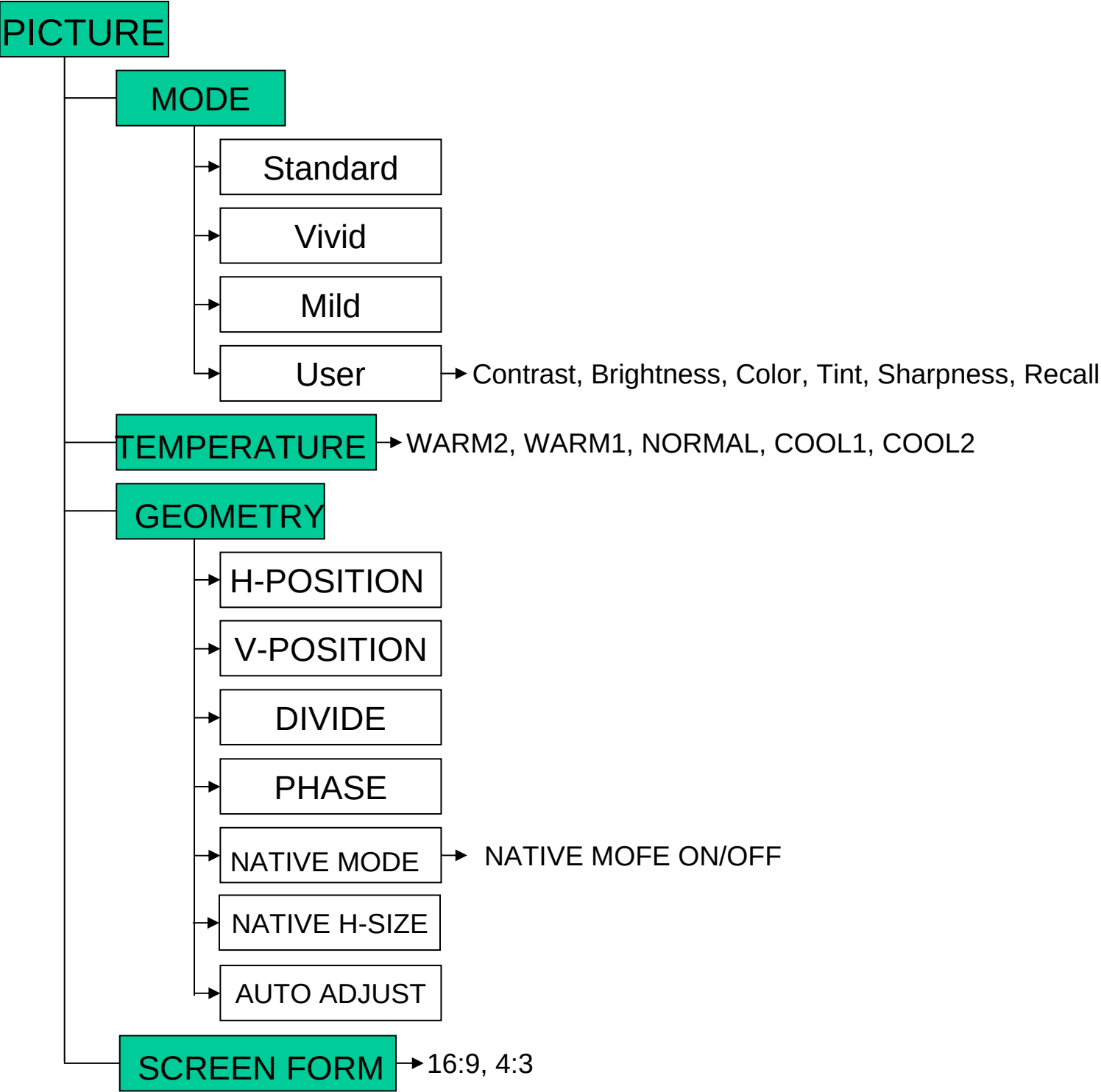
AVC ON/OFF

MTS (Only MTS Button)

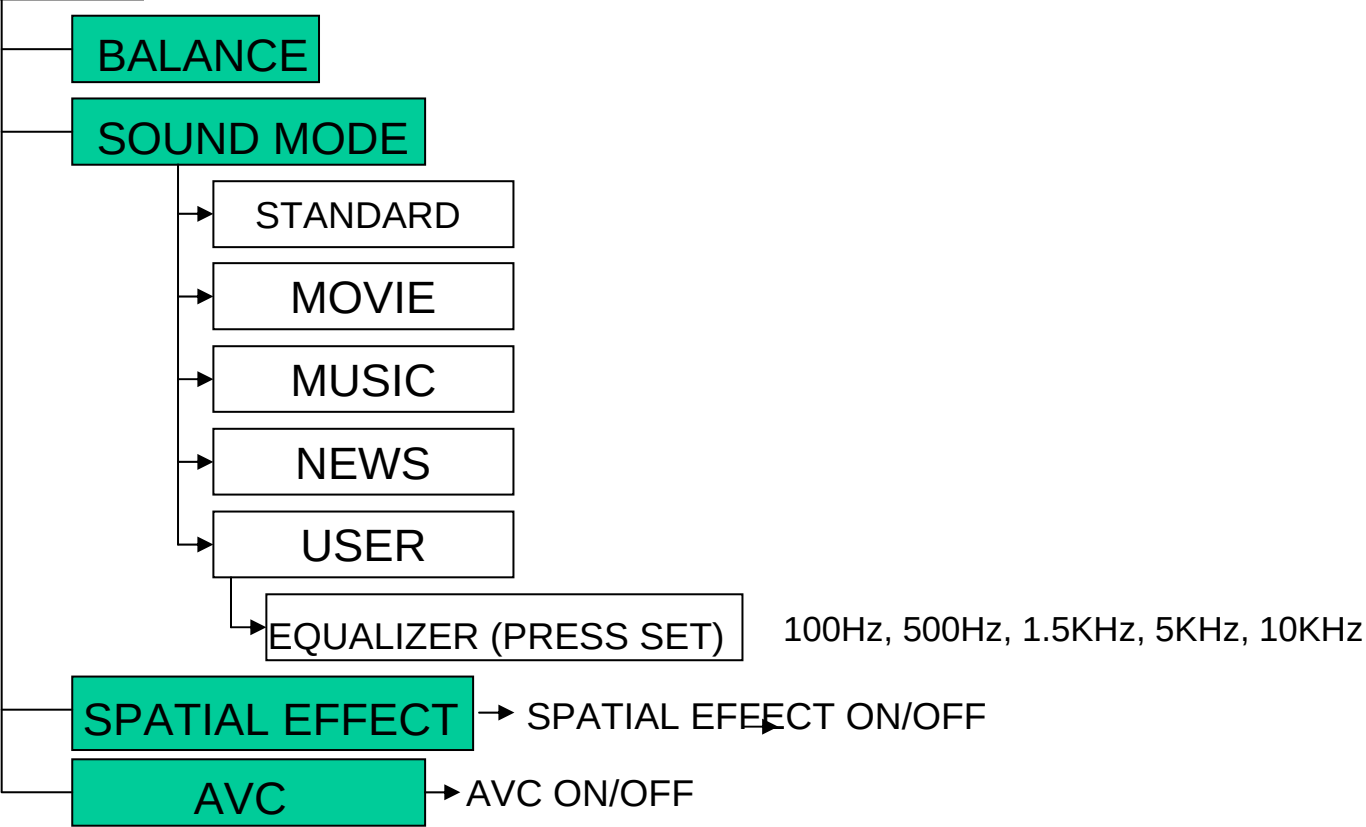
Digital Output(Only HDTV MODE)

- USER
- PCM

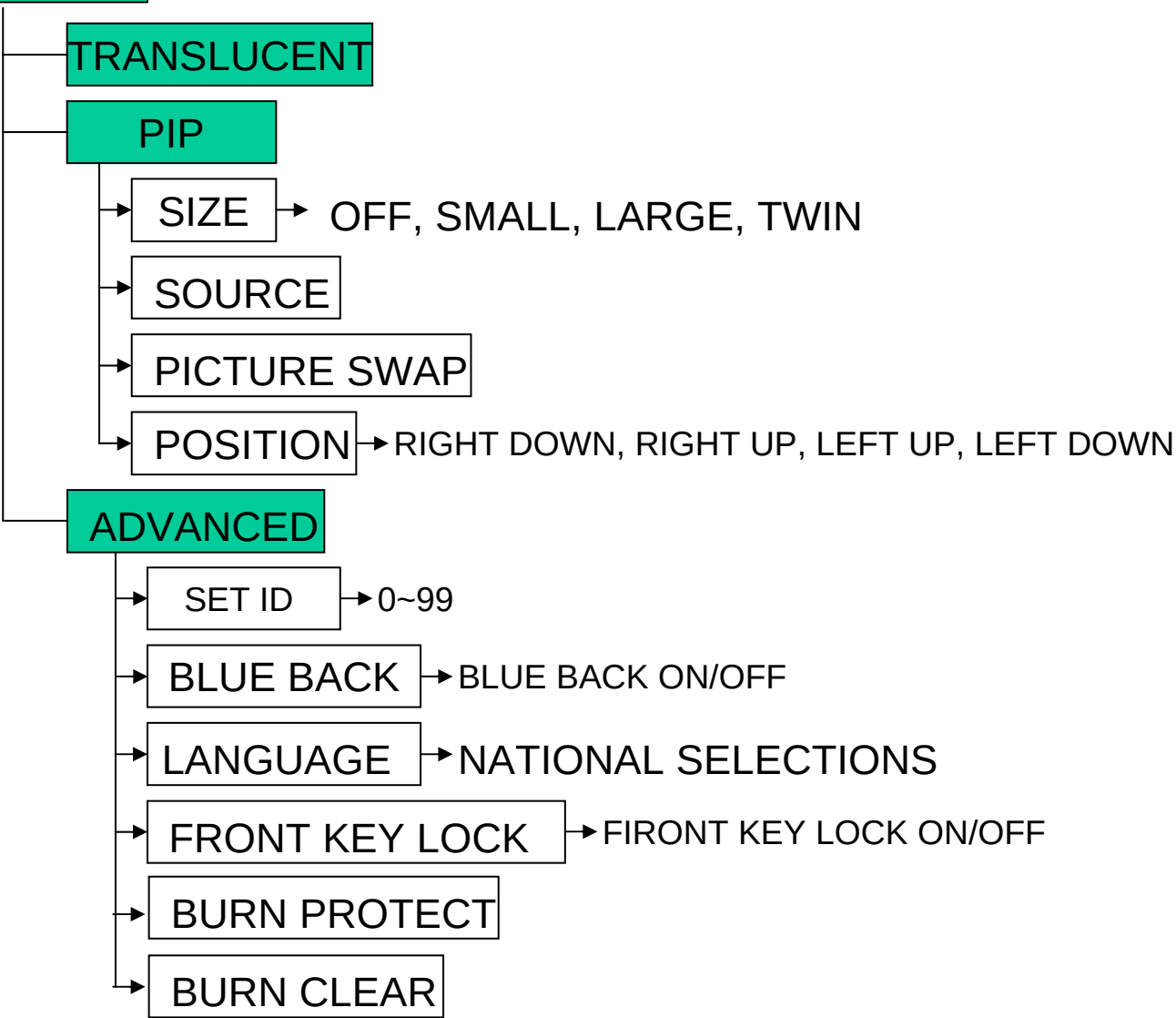




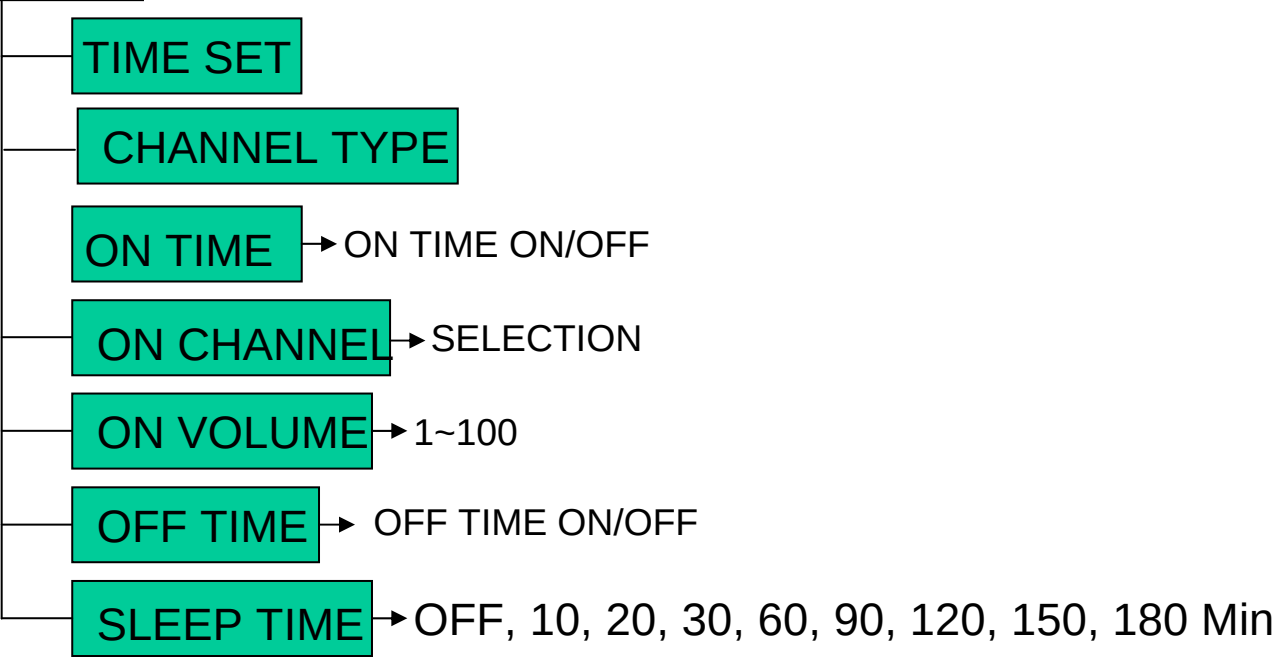
SOUND



SET UP



TIME



Troubleshooting

Before you call a service technician, please scan this list of problems and possible solutions. It may save you time and money.

Problem	Quick Action for Possible Solution
No picture & No sound	Check whether the Monitor is turned on. Power cord inserted into wall outlet? Plug another product's power cord into the wall outlet where the Monitor's power cord was plugged in.
Picture OK & No sound	Press the VOLUME(►) key. Check the audio input signal.
The remote control doesn't work	Check to see if there is any object between the Plasma Display and the remote control causing obstruction. Check to see if the batteries are installed with the correct polarities.
Digital broadcasting screen problem	Check the digital signal strength and input antenna.
No or Poor color or Poor picture	Select Color in the Picture and press VOLUME(►) key. Keep a certain distance between the Monitor and the VCR. Activate any function to restore the brightness of the picture. Check to see that both the monitor and the source are plugged in and turned on.
The image is too light or too dark	Adjust the Brightness or Contrast settings.
The image is too large or too small	Adjust the Size settings.
No output from one of the speakers	Adjust Balance in the Sound Menu.
Strange sound form the Monitor	Typical sound due to normal Monitor operation, Monitor is not faulty.

Specification – 32” LCD[HP-3210V]

32” LCD TV

Function and Display Specification

Display Size	32-Inch 16 : 9 Diagonal Screen
Display Mode	Variable 4 Modes (4:3 Mode/ 16:9 X 3 Modes)
Pixel Format	852x480 Physical Pixel
Contrast Ratio	1200:1
Brightness	600 cd/m ²
Max Input Resolution	1280 X 1024 / 60Hz
PIP	Advanced multi-windows viewing PIP(picture in picture) with four selectable window positions on Video mode
Input compatible	Multiple input compatible
Video	Advanced motion digital / Motion-Adaptive De-interlace process, Digital progressive line scaling.
Tuner Module	TV/CATV (ATSC)
programming	Favorite channel programming, Time Set, Set the Sleep timer
HDTV Input	480i/p(60Hz) , 576ip(50Hz), 720p(60Hz) , 1080i(50,60Hz)
Color temperature	Selectable 5 Mode (Warm1,2, Normal, Cool1,2)

Dimension / Weight

Main Only	792(W) X 486.6(H) X 101(D) / 18 kg
With Stand	792(W) X 554.6(H) X 270(D) / 20 kg
With Stand and Speaker	992(W) X 554.6(H) X 270(D) / 24 kg

Miscellaneous

Audio	Built-in amplifier and two speaker(7Watt/Typ.) systems (optional), Selectable fixed/variable audio output(optional)
External Control	Front OSD Key Control, Remote control, RS232C Control

Power Consumption

Input Power	AC 100 ~ 240V 50/60Hz
Power consumption	150 Watt

Connectivity

TV1,2 Input	RF/CATV (ATSC)
Composite Input/Output	RCA X 4Port(AV Input 1,2,3/ AV Output 1)
Component1,2 Input	RCA X 2Port (Y, Pb/Cb, Pr/Cr : 480i, 480p, 576i, 576p, 720p, 1080i)
S-Video Input	Mini Din 4Pin X 1Port
PC Input	Mini D-Sub 15Pin X 1Port / HDTV Input(480p, 576p, 720P(50/60Hz), 1080i(50/60Hz))
DVI Input	Mini D-Sub 29Pin X 1Port / HDTV Input(480p, 576p, 720P(50/60Hz), 1080i(50/60Hz)) HDCP (Factory Option)
Audio Input/Output	RCA X 6Port
Speaker Output	Cinch Type X 4Port(Stereo L/R), Head Phone Jack X 1Port
External Control Port	Mini D-Sub 9Pin X 1Port
HDMI Port	HDMI X 1Port
SPDIF Port	SPDIF (Optical) X 1Port (5.1 Channel)

Specification – 37” LCD[HL-3710V]

37” LCD TV

Function and Display Specification

Display Size	37-Inch 16 : 9 Diagonal Screen
Display Mode	Variable 4 Modes (4:3 Mode/ 16:9 X 3 Modes)
Pixel Format	1024x768 Physical Pixel
Contrast Ratio	1200:1
Brightness	600 cd/m ²
Max Input Resolution	1280 X 1024 / 60Hz
PIP	Advanced multi-windows viewing PIP(picture in picture) with four selectable window positions on Video mode
Input compatible	Multiple input compatible
Video	Advanced motion digital / Motion-Adaptive De-interlace process, Digital progressive line scaling.
Tuner Module	TV/CATV (ATSC)
programming	Favorite channel programming, Time Set, Set the Sleep timer
HDTV Input	480i/p(60Hz) , 576ip(50Hz), 720p(60Hz) , 1080i(50,60Hz)
Color temperature	Selectable 5 Mode (Warm1,2, Normal, Cool1,2)

Dimension / Weight

Main Only	915(W) X 557(H) X 102(D) / 24 kg
With Stand	915(W) X 625(H) X 270(D) / 26 kg
With Stand and Speaker	1108(W) X 625(H) X 270(D) / 30 kg

Miscellaneous

Audio	Built-in amplifier and two speaker(7Watt/Typ.) systems (optional), Selectable fixed/variable audio output(optional)
External Control	Front OSD Key Control, Remote control, RS232C Control

Power Consumption

Input Power	AC 100 ~ 240V 50/60Hz
Power consumption	180 Watt

Connectivity

TV1,2 Input	RF/CATV (ATSC)
Composite Input/Output	RCA X 4Port(AV Input 1,2,3/ AV Output 1)
Component1,2 Input	RCA X 2Port (Y, Pb/Cb, Pr/Cr : 480i, 480p, 576i, 576p, 720p, 1080i)
S-Video Input	Mini Din 4Pin X 1Port
PC Input	Mini D-Sub 15Pin X 1Port / HDTV Input(480p, 576p, 720P(50/60Hz), 1080i(50/60Hz))
DVI Input	Mini D-Sub 29Pin X 1Port / HDTV Input(480p, 576p, 720P(50/60Hz), 1080i(50/60Hz)) HDCP (Factory Option)
Audio Input/Output	RCA X 6Port
Speaker Output	Cinch Type X 4Port(Stereo L/R), Head Phone Jack X 1Port
External Control Port	Mini D-Sub 9Pin X 1Port
HDMI Port	HDMI X 1Port
SPDIF Port	SPDIF (Optical) X 1Port (5.1 Channel)

Specification – 40” LCD[HL-4010V]

40” LCD TV

Function and Display Specification

Display Size	40-Inch 16 : 9 Diagonal Screen
Display Mode	Variable 4 Modes (4:3 Mode/ 16:9 X 3 Modes)
Pixel Format	1366x768 Physical Pixel
Contrast Ratio	1000:1
Brightness	500 cd/m ²
Max Input Resolution	1280 X 1024 / 60Hz
PIP	Advanced multi-windows viewing PIP(picture in picture) with four selectable window positions on Video mode
Input compatible	Multiple input compatible
Video	Advanced motion digital / Motion-Adaptive De-interlace process, Digital progressive line scaling.
Tuner Module	TV/CATV (ATSC)
programming	Favorite channel programming, Time Set, Set the Sleep timer
HDTV Input	480i/p(60Hz) , 576ip(50Hz), 720p(60Hz) , 1080i(50,60Hz)
Color temperature	Selectable 5 Mode (Warm1,2, Normal, Cool1,2)

Dimension / Weight

Main Only	985(W) X 598(H) X 101.5(D) / 29 kg
With Stand	985(W) X 666(H) X 270(D) / 30.8 kg
With Stand and Speaker	1185(W) X 666(H) X 270(D) / 43.8 kg

Miscellaneous

Audio	Built-in amplifier and two speaker(7Watt/Typ.) systems (optional), Selectable fixed/variable audio output(optional)
External Control	Front OSD Key Control, Remote control, RS232C Control

Power Consumption

Input Power	AC 100 ~ 240V 50/60Hz
Power consumption	250 Watt

Connectivity

TV1,2 Input	RF/CATV (ATSC)
Composite Input/Output	RCA X 4Port(AV Input 1,2,3/ AV Output 1)
Component1,2 Input	RCA X 2Port (Y, Pb/Cb, Pr/Cr : 480i, 480p, 576i, 576p, 720p, 1080i)
S-Video Input	Mini Din 4Pin X 1Port
PC Input	Mini D-Sub 15Pin X 1Port / HDTV Input(480p, 576p, 720P(50/60Hz), 1080i(50/60Hz))
DVI Input	Mini D-Sub 29Pin X 1Port / HDTV Input(480p, 576p, 720P(50/60Hz), 1080i(50/60Hz)) HDCP (Factory Option)
Audio Input/Output	RCA X 6Port
Speaker Output	Cinch Type X 4Port(Stereo L/R), Head Phone Jack X 1Port
External Control Port	Mini D-Sub 9Pin X 1Port
HDMI Port	HDMI X 1Port
SPDIF Port	SPDIF (Optical) X 1Port (5.1 Channel)

Specification – 42” LCD[HL-4210V]

42” LCD TV

Function and Display Specification	
Display Size	42-Inch 16 : 9 Diagonal Screen
Display Mode	Variable 4 Modes (4:3 Mode/ 16:9 X 3 Modes)
Pixel Format	1366x768 Physical Pixel
Contrast Ratio	1200:1
Brightness	600 cd/m ²
Max Input Resolution	1280 X 1024 / 60Hz
PIP	Advanced multi-windows viewing PIP(picture in picture) with four selectable window positions on Video mode
Input compatible	Multiple input compatible
Video	Advanced motion digital / Motion-Adaptive De-interlace process, Digital progressive line scaling.
Tuner Module	TV/CATV (ATSC)
programming	Favorite channel programming, Time Set, Set the Sleep timer
HDTV Input	480i/p(60Hz) , 576ip(50Hz), 720p(60Hz) , 1080i(50,60Hz)
Color temperature	Selectable 5 Mode (Warm1,2, Normal, Cool1,2, User)
Dimension / Weight	
Main Only	1056(W) X 648(H) X 102(D) / 38 kg
With Stand	1056(W) X 712(H) X 305(D) / 37 kg
With Stand and Speaker	1256(W) X 712(H) X 305(D) / 41 kg
Miscellaneous	
Audio	Built-in amplifier and two speaker(7Watt/Typ.) systems (optional), Selectable fixed/variable audio output(optional)
External Control	Front OSD Key Control, Remote control, RS232C Control
Power Consumption	
Input Power	AC 100 ~ 240V 50/60Hz
Power consumption	180 Watt
Connectivity	
TV1,2 Input	RF/CATV (ATSC)
Composite Input/Output	RCA X 4Port(AV Input 1,2,3/ AV Output 1)
Component1,2 Input	RCA X 2Port (Y, Pb/Cb, Pr/Cr : 480i, 480p, 576i, 576p, 720p, 1080i)
S-Video Input	Mini Din 4Pin X 1Port
PC Input	Mini D-Sub 15Pin X 1Port / HDTV Input(480p, 576p, 720P(50/60Hz), 1080i(50/60Hz))
DVI Input	Mini D-Sub 29Pin X 1Port / HDTV Input(480p, 576p, 720P(50/60Hz), 1080i(50/60Hz)) HDCP (Factory Option)
Audio Input/Output	RCA X 6Port
Speaker Output	Cinch Type X 4Port(Stereo L/R), Head Phone Jack X 1Port
External Control Port	Mini D-Sub 9Pin X 1Port
HDMI Port	HDMI X 1Port
SPDIF Port	SPDIF (Optical) X 1Port (5.1 Channel)

Specification – 46” LCD[HL-4610V]

46” LCD TV

Function and Display Specification	
Display Size	46-Inch 16 : 9 Diagonal Screen
Display Mode	Variable 4 Modes (4:3 Mode/ 16:9 X 3 Modes)
Pixel Format	1366x768 Physical Pixel
Contrast Ratio	1000:1
Brightness	450 cd/m ²
Max Input Resolution	1280 X 1024 / 60Hz
PIP	Advanced multi-windows viewing PIP(picture in picture) with four selectable window positions on Video mode
Input compatible	Multiple input compatible
Video	Advanced motion digital / Motion-Adaptive De-interlace process, Digital progressive line scaling.
Tuner Module	TV/CATV (ATSC)
programming	Favorite channel programming, Time Set, Set the Sleep timer
HDTV Input	480i/p(60Hz) , 576ip(50Hz), 720p(60Hz) , 1080i(50,60Hz)
Color temperature	Selectable 5 Mode (Warm1,2, Normal, Cool1,2, User)
Dimension / Weight	
Main Only	1118(W) X 672.4(H) X 101.5(D) / 48.7 kg
With Stand	1118(W) X 735.8(H) X 305(D) / 53.7 kg
With Stand and Speaker	1318(W) X 735.8(H) X 305(D) / 58.7 kg
Miscellaneous	
Audio	Built-in amplifier and two speaker(7Watt/Typ.) systems (optional), Selectable fixed/variable audio output(optional)
External Control	Front OSD Key Control, Remote control, RS232C Control
Power Consumption	
Input Power	AC 100 ~ 240V 50/60Hz
Power consumption	220 Watt
Connectivity	
TV1,2 Input	RF/CATV (ATSC)
Composite Input/Output	RCA X 4Port(AV Input 1,2,3/ AV Output 1)
Component1,2 Input	RCA X 2Port (Y, Pb/Cb, Pr/Cr : 480i, 480p, 576i, 576p, 720p, 1080i)
S-Video Input	Mini Din 4Pin X 1Port
PC Input	Mini D-Sub 15Pin X 1Port / HDTV Input(480p, 576p, 720P(50/60Hz), 1080i(50/60Hz))
DVI Input	Mini D-Sub 29Pin X 1Port / HDTV Input(480p, 576p, 720P(50/60Hz), 1080i(50/60Hz)) HDCP (Factory Option)
Audio Input/Output	RCA X 6Port
Speaker Output	Cinch Type X 4Port(Stereo L/R), Head Phone Jack X 1Port
External Control Port	Mini D-Sub 9Pin X 1Port
HDMI Port	HDMI X 1Port
SPDIF Port	SPDIF (Optical) X 1Port (5.1 Channel)

1-Year Limited Warranty

Warranty Service is only available in the country of original purchase. This is an important document. Attach your bill of sale to this card and keep it in a safe place. Your bill of sale is your warranty.

Our warranty remains in effect for one year from the date of the first consumer purchase.

WHO IS PROTECTED BY THIS WARRANTY

Our warranty protects the original owner and all subsequent owners, provided that our product was purchased from an authorized dealer. A copy of the original dated bill of sale must be presented whenever warranty service is required.

WHAT IS COVERED BY THIS WARRANTY

Except as specified below, the warranty covers all defects in material and workmanship. The following are not covered: damage caused by accident, misuse, abuse, product modification or neglect; damage occurring during shipment; damage from failure to follow instructions contained in the instruction manual; damage resulting from the performance of repairs by someone not authorized by us; damage by natural disaster such as lightning, flood etc.; damage caused by installation of parts that do not conform to the specification; units used for other than home and office use; units not used for their intended purpose; any claims based on misrepresentations by the seller; products sold on an "as-is" or final sales basis; or the cost of installing, removing, or reinstalling the unit. Our liability is limited to the repair or replacement, at our option, if any defective product and shall not include incidental or consequential damages. We reserve the right to replace a discontinued model. Any replacement units or parts may be new or rebuilt.

TO OBTAIN WARRANTY SERVICE

If you require warranty service, please return the product to your dealer.