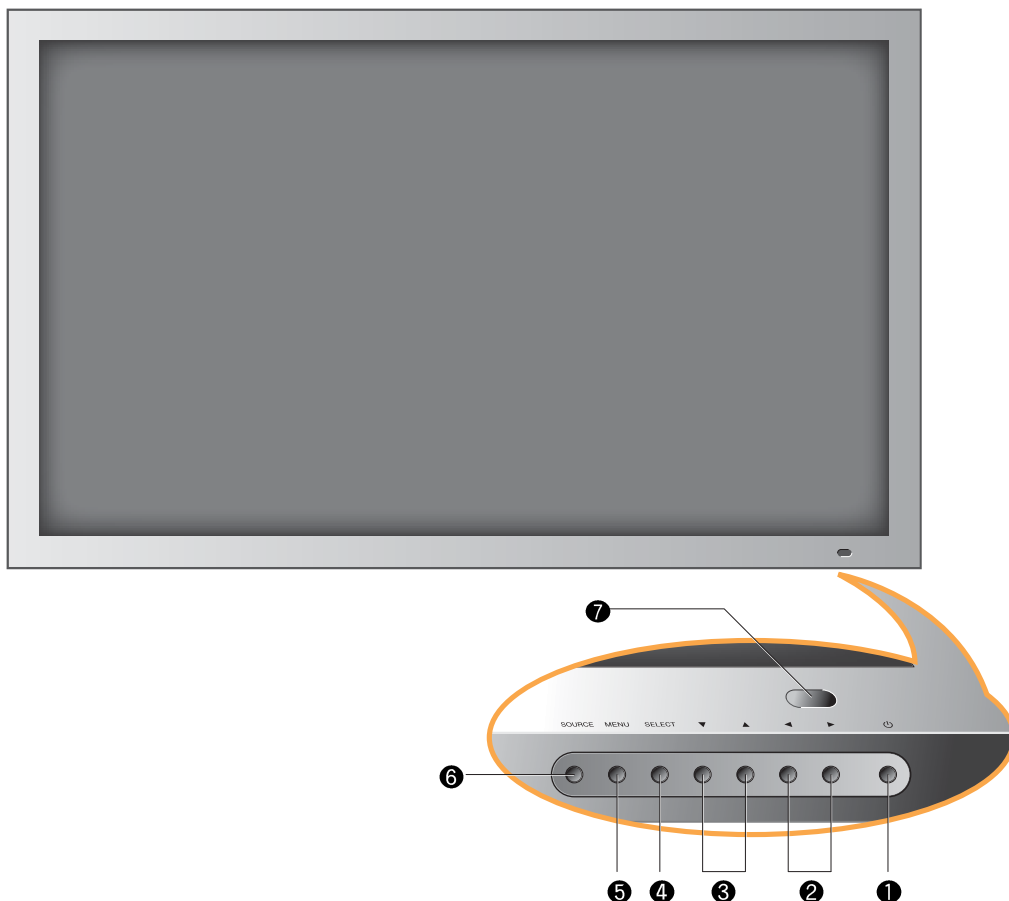


Parts Names and Functions - 42"/50" PDP TV

Front View



* This product image may be a bit different from the actual product.

❶ Power button

Use this button to turn on or off the TV.

❷ Volume buttons

Use these buttons to adjust sound levels. These buttons also serve as the cursors of Select/Adjust in Menu mode.

❸ Channel buttons

Use these buttons to change channels. These buttons also serve as the cursors of Down and Up buttons in Menu mode.

❹ Select button

Use this button to select each item from the menu mode.

❺ Menu button

Use this button to display or exit from the menu mode.

❻ Source button

Use this button to switch among inputs connected to the TV.

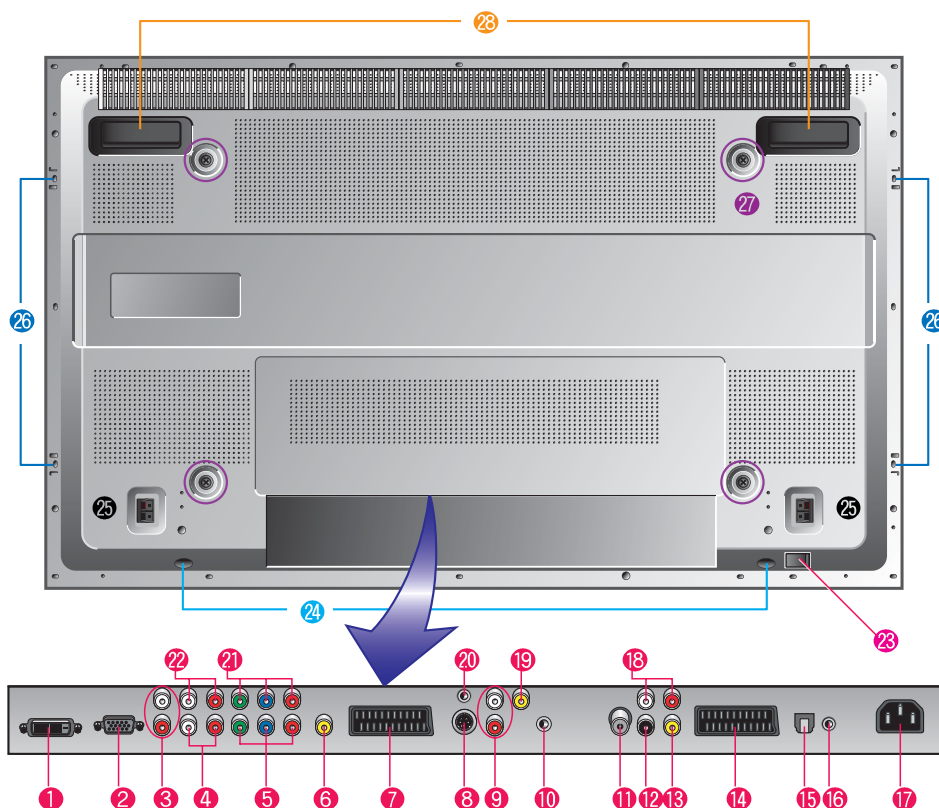
❼ Remote sensor and power LED.

- Point the remote control toward LED.
- It displays standby or operation status.

- Power Indicator Status -

Indicator	Status
Red	Standby
Green	Power on

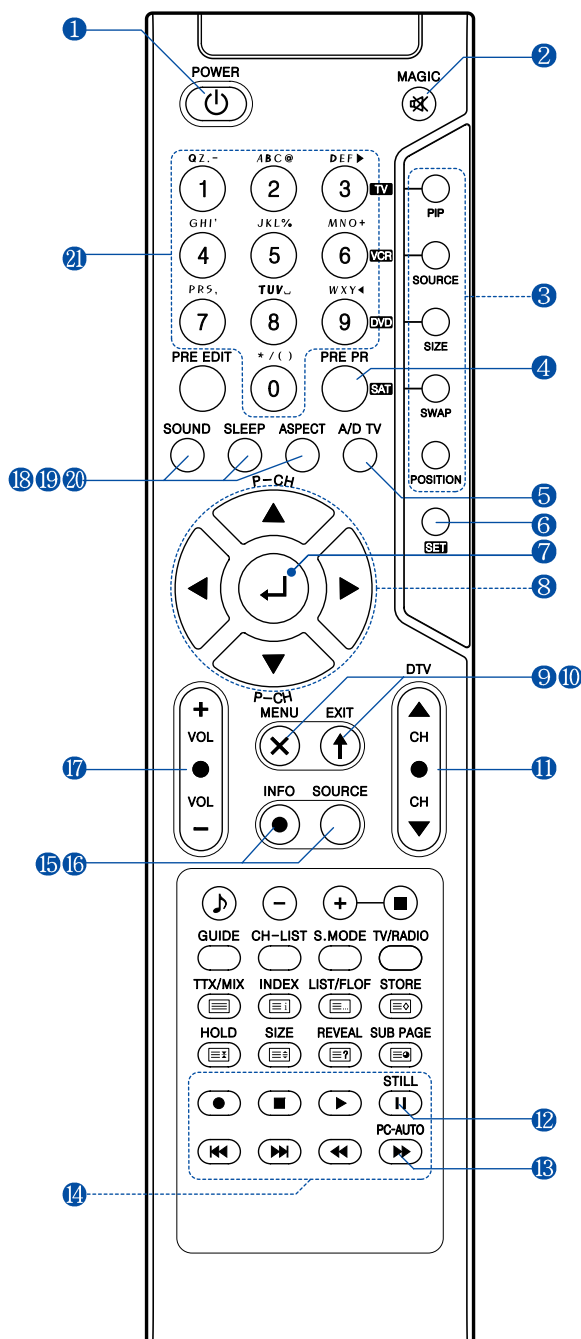
Rear View



* This product image may be a bit different from the actual product.

- | | | |
|------------------------------------|---|------------------------------------|
| ① DVI Video input terminal | ⑫ Digital Audio output terminal for coaxial cable | ⑳ Component 1 Video input terminal |
| ② D-SUB input terminal | ⑬ Subwoofer output terminal | ㉑ Component 1 Audio input terminal |
| ③ DVI/D-SUB Audio input terminal | ⑭ Half Scart input terminal | ㉒ Power switch |
| ④ Component 2 Audio input terminal | ⑮ SPDIF Optical audio output terminal | ㉓ Stand assembly |
| ⑤ Component 2 Video input terminal | ⑯ Extend an RS-232 input for DTV communication | ㉔ Speaker terminal |
| ⑥ CVBS output terminal | ⑰ Power (AC) input terminal | ㉕ Speaker assembly |
| ⑦ Full Scart input terminal | ⑱ Video(CVBS) input terminal | ㉖ Screw hole for fixing on a wall |
| ⑧ S-Video input terminal | ㉑ Extend an RS-232 input for ATV communication | ㉗ Carrying handles |
| ⑨ Audio(CVBS) input terminal | | |
| ⑩ Headphone output terminal | | |
| ⑪ Antenna input terminal | | |

Remote Control



1. POWER/STANDBY

2. MUTE

This button is also used when setting up to use other **external devices**.

3. PIP FUNCTIONS

- PIP

: Use this button for PIP On/Off.

- SOURCE

: Use this button to select the input source of sub-picture.

- SIZE

: Use this button to select the size of sub-picture.

- SWAP

: Use this button to swap main and sub-picture.

- POSITION

: Use this button to select the position of sub-picture.

4. PREVIOUS PROGRAM

5. A/D TV

Use this button to switch the input source from analog to digital

6. Other external device selection (➔ 59P)

7. MENU SELECTION

Use this button to select menu items.

8. LEFT/RIGHT MOVE/ADJUST

- Use these buttons to move between menu items or adjust each item.

- Use UP/DOWN buttons to select Analog TV channels.

9. MENU

Use this button to call the OSD on the screen.

10. EXIT

Use this button to end the OSD.

11. DTV CHANNEL SELECTION

You can also use these buttons when changing pages in TTX mode.

12. STILL

13. PC-AUTO (For PDP TV only)

Use this buttons to use other manufacturer's DVD or VCR.

15. INFORMATION

Use this button to display resolution or various program.

16. SOURCE

Use this button to select External Input.

17. VOLUME

18. SOUND MODE

19. SLEEP

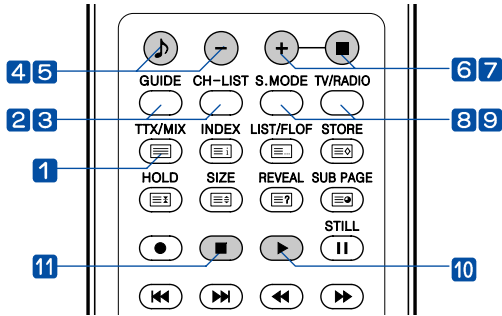
20. ASPECT RATIO

Use this button to change the picture size.

21. NUMERIC KEYS

Teletext & Fastext Function

(See pages 34 for more details.)



1. TTX/MIX

To see Teletext Service Data for Analog TV and Digital TV.

2. GUIDE (EPG-Electronic Program Guide)

To watch the program information. Press once more to return to normal mode.

3. CH. LIST

To watch the channel list for Digital TV. Press $\rightarrow$ key to confirm or press EXIT to return to previous channels.

4. RED rubber

- DTV : To setup favorite channel lists in the Channel List menu.

- ATV : To delete a channel in the Program Edit menu.

5. GREEN rubber

- DTV : To lock favorite channel lists in the channel list menu.

- ATV : To sort channels in the Program Edit menu.

6. YELLOW rubber

- DTV : To move favorite channel lists in the channel list menu.

- ATV : To edit channel names in the Program Edit menu.

7. BLUE rubber

DTV : To delete a channel from the channel List menu. To show extended program information in the EPG menu.

8. S.MODE

To adjust the subtitle and audio condition/status of the current channel for Digital TV

9. TV-RADIO

To switch between the TV channel and radio channel for Digital TV.

10. WHITE rubber

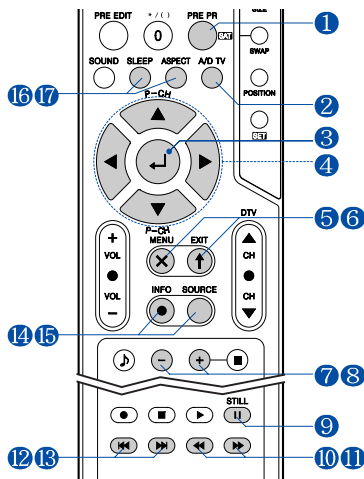
DTV : To add a new channel to the Channel List menu.

11. ORANGE rubber

DTV : To see variant channel lists for user's convenience in the Channel List menu.

Using buttons when in Memory Mode -* For Q320, Q400 Model only

➔ The following buttons are used differently in each menu. (See pages 51~58 for more details.)



① Power Saving Function when listening to music

② Music Playback Setting (Repeat 1, Repeat All, Sequence)

③ Select, Start, Pause/Playback

④ Move between file listings, Previous Track/Next Track, Reverse/Fast Forward, Photo Rotation

⑤ Exit, Cancel

⑥ Eject Card

⑦ Slide Show

⑧ Zoom In

⑨ Check Version (Initial Screen), Check Running Time (Movie Mode)

⑩ Hide Menu

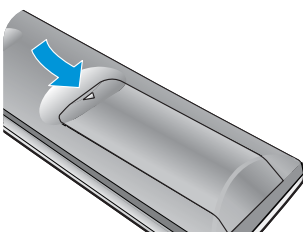
⑪ When Shifting into Memory Mode

➔ Other buttons available in Memory Mode

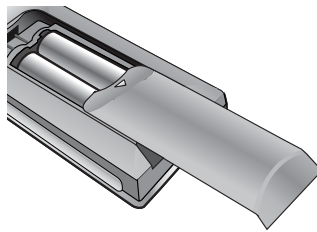
⑫ ⑬ ⑭ ⑮ ⑯ ⑰

How to Insert Batteries in the Remote Controller

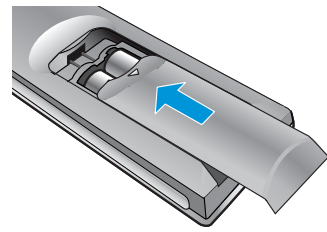
* Battery type :1.5V/AAA



Press and hold Δ part and push to open cover.



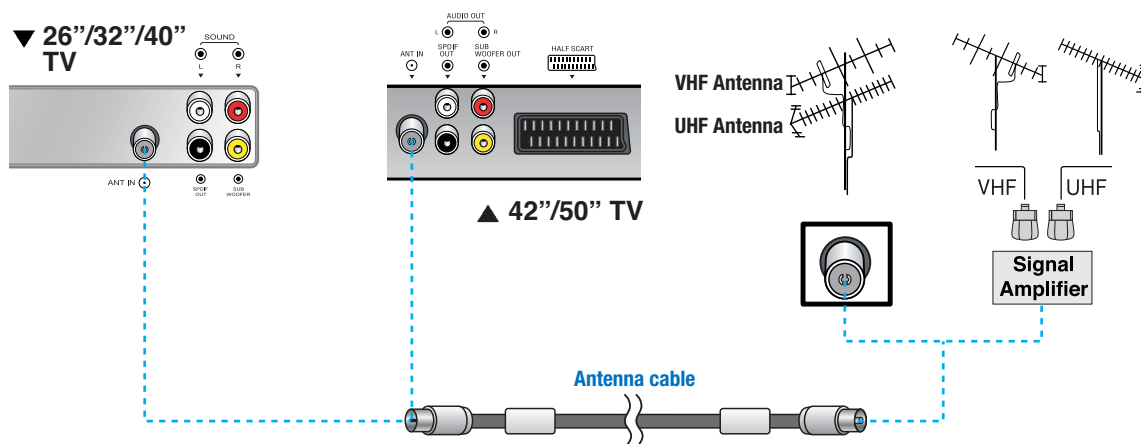
Insert batteries with proper polarities of + and -.



Use the remote control with cover closed.

Connecting Indoor/Outdoor TV Antenna(UHF/VHF)

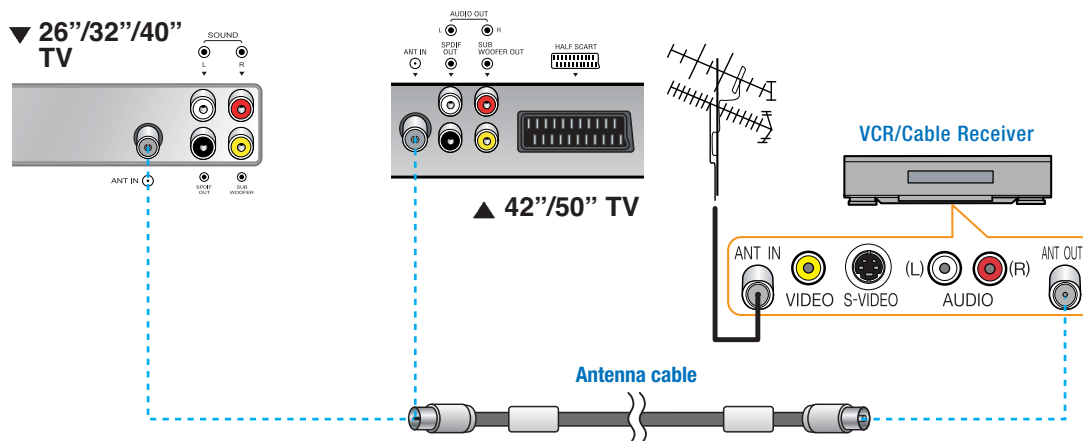
- Antenna or Cable service without cable box connections
- For on optimum picture quality, adjust the direction of antenna if needed.



- ✓ When inserting a 75 Ω ohm coaxial cable into the input connection, ensure the wire tip not to bend.
- ✓ If you experience poor signal reception, we recommend you purchase a signal amplifier for better picture quality.

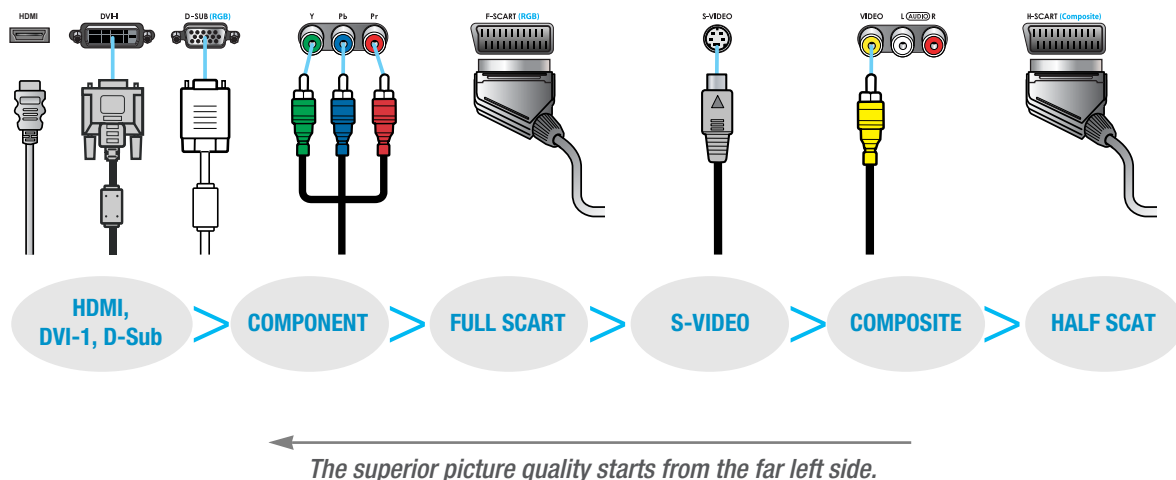
Connecting Antenna Input Connection to External Equipments

1. Connect an antenna cable to VCR/Cable/Satellite Receiver with the antenna input.
2. Use a coaxial cable to connect VCR/Cable/Satellite Receiver's antenna output to the antenna input on your TV.



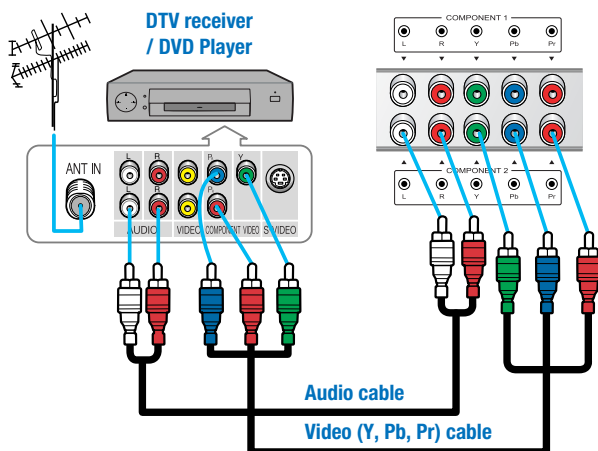
Before Connecting the Video/Audio Connections to External Devices...

Please make sure to read the following instruction to enjoy the best picture quality.
Best picture quality is displayed in the following order.



How to Connect a DTV Receiver or DVD Player

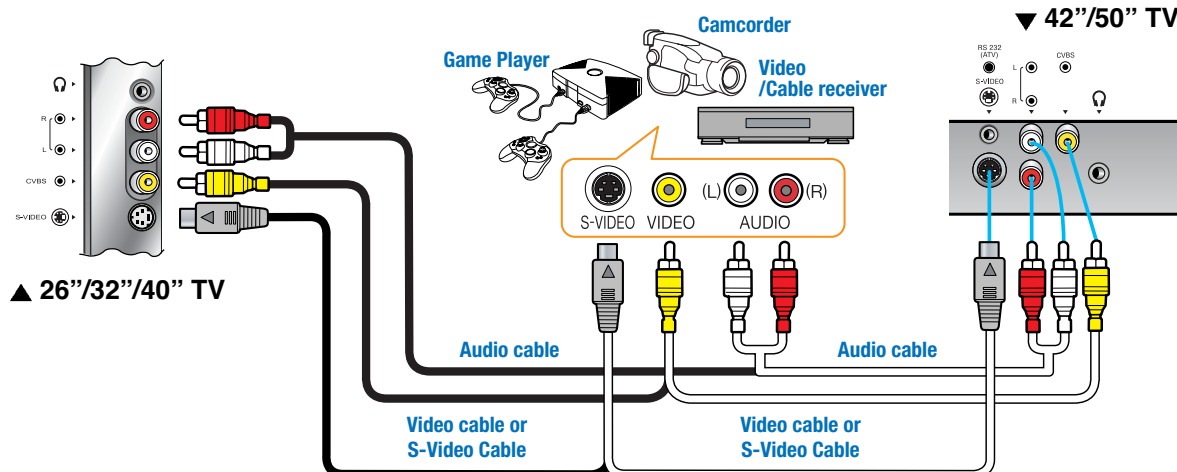
1. Connect the Video cable (Y, Pb, Pr) between output terminals (Y, Pb, Pr) of DTV receiver or DVD player and the input terminals (Y, Pb, Pr) of DTV/DVD (576i/576p/720p/1080i) on the rear of TV.
(Connect the jacks to terminals in the same color.)
2. Connect the Audio cable between Audio output terminals of DTV receiver or DVD player and Audio input terminal for DTV/DVD Audio on the rear of TV. (Connect the jacks to terminals in the same color.)



- ✓ Output terminal mark (Y, Pb, and Pr) of DVD player may be indicated as Y, B-Y, R-Y/Y-Cb-Cr /Y-Pb-Pr according to the type of DVD player models.
- ✓ If your DVD player or Set Top Box supports HDMI/DVI or D-SUB, see Connecting to a PC (page 22) for connection. You can enjoy more clear picture quality.

How to Connect a VCR, Cable Receiver, Camcorder, Game Player

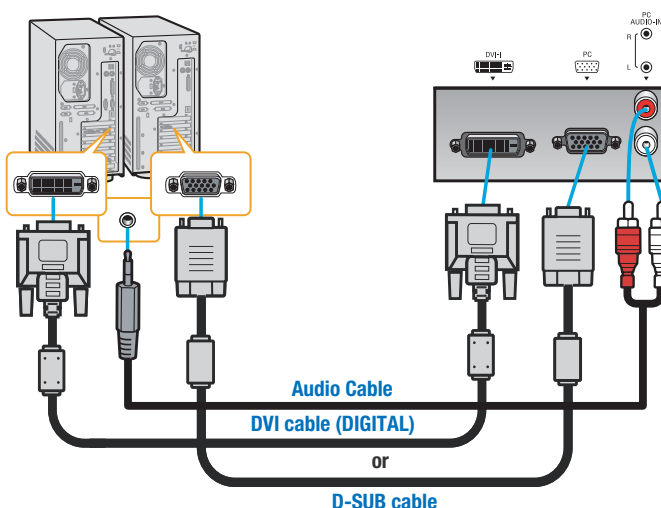
1. Connect the Video cable or S-Video cable between Video/S-Video output terminals of VCR or Cable receiver and Video/S-Video input terminal of TV. (Connect the jacks to terminals in the same color.)
2. Connect the Audio cable (Left: white, Right: red) between Audio output terminals of VCR or cable receiver and Audio input terminal of TV. (Connect the jacks to terminals in the same color.)



✓ To enjoy a better picture quality, use the S-Video cable rather than the composite cable.

How to Connect to a PC

1. Connect the PC signal cable (15-pin D-sub) between the output terminal of PC and the D-sub input terminal of TV.
2. Connect the Audio cable between Audio output terminal of PC and Audio input terminal for PC on the rear of TV. (Connect the jacks to terminals in the same color.)



- ✓ If you use DVI/HDMI connection, you can enjoy better picture quality.
- ✓ This product supports Plug-and-Play function.
- ✓ We recommend the above method if the DVD player or set top box supports DTV signal with DVI/D-sub (15 pin) cable for better picture quality.
- ✓ If you input an unsupported resolution in PC or DVI/HDMI mode, the screen won't be displayed properly.

Resolutions Supported in PC

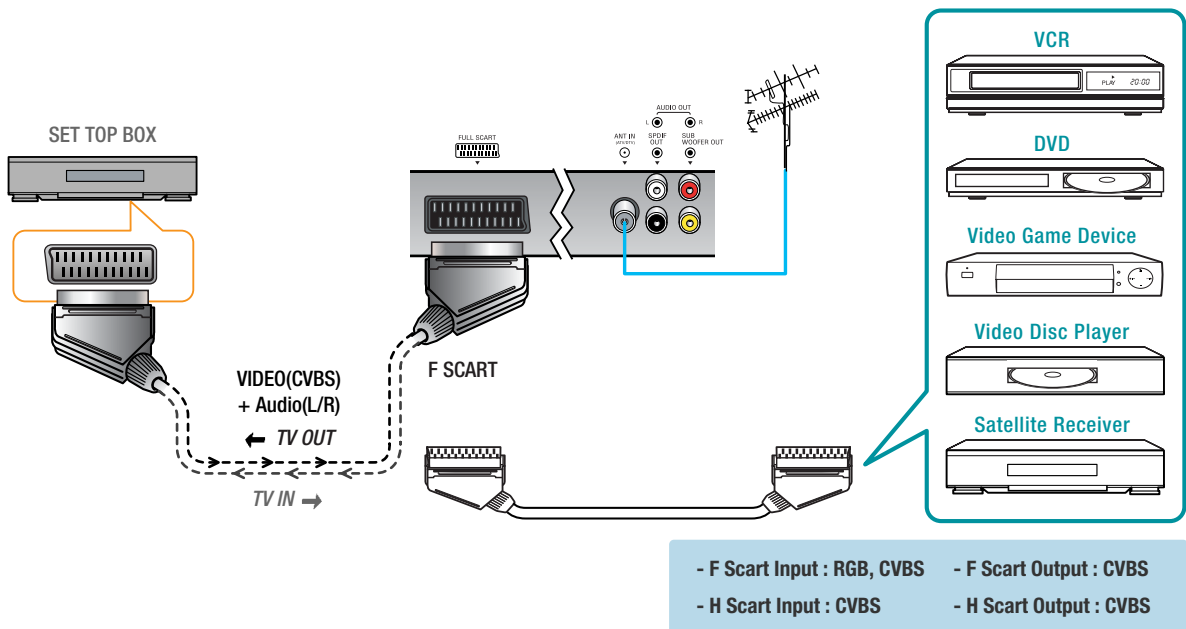
Model	26" / 32" / 40" LCD TV		42" / 50 PDP TV	
Resolution	Horizontal frequency	Vertical frequency	Horizontal frequency	Vertical frequency
640 x 350	31.47	70.00	31.47	70.09
	-	-	37.86	85.08
640 x 480	37.86	72.80	31.47	59.94
	31.50	75.00	37.86	72.80
	-	-	37.50	75.00
	-	-	43.27	85.01
720 x 400	31.47	70.08	31.47	70.08
800 x 600	37.88	60.32	37.88	60.32
	46.88	75.00	48.08	72.18
	48.08	72.19	46.88	75.00
			53.67	85.06
832 x 624	49.73	74.55	49.72	74.55
1024 x 768	48.36	60.00	48.36	60.00
	56.48	70.07	60.02	75.03
	60.02	75.03	68.68	85.00
1280 x 1024	63.98	60.02	-	-
1366 x 768	61.27	74.99	-	-

Scart Connection to the External Input/Output

If you have a second VCR and wish to copy cassettes tape. Connect the source VCR to "F Scart" and the target VCR to "H Scart" so that you can redirect the signal from "F Scart" to "H Scart".

*** “F Scart” sends the TV broadcast signal received through an antenna to a set-top box and receives the descrambled signal back, which allows you to view TV broadcasts in AV Mode.**

* "H Scart" you are capable to record live TV broadcasts on the TV screen. (Please make sure that your TV is "ON".)

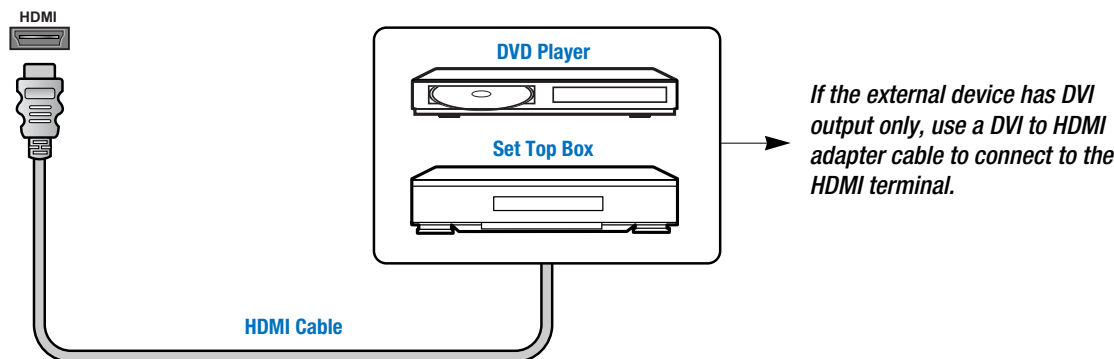


✓ When switching voltage comes into the Scart-Pin 8 during viewing a TV program, the current mode will be switched to Scart mode.

HDMI Connection (For HDMI model only)

HDMI*¹ (High Definition Multi media Interface) is the first all digital consumer electronics A/V interface that supports uncompressed standard. The HDMI terminal supports both video and audio information.

To the HDMI™ input terminal, you can connect an EIA/CEA-861/861*² compliant consumer electronic device, such as a Set Top Box or DVD player with HDMI or DVI output terminal.



► Compatible VIDEO Signal

Model	Resolution	Vertical frequency
1080i	1,920 x 1,080i	50
576p	720 x 576p	50
	640 x 576p	50
720p	1280 x 720p	50

- This input terminal is not intended for use with computers.

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

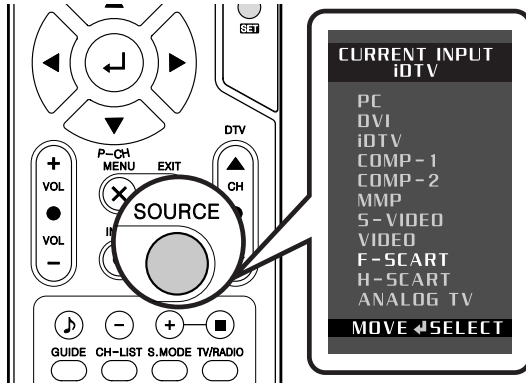
► Notes :

- This HDMI connector is Type A.
- If you connect an equipment without a digital output terminal, connect to the COMPONENT VIDEO, S VIDEO or VIDEO input terminal on the TV so you can enjoy an analog signal.
- The DIGITAL IN terminal can only be used with 1080i, 720p or 576p picture signals. Set the Digital Set -Top -Box DIGITAL OUT terminal Output setting to 1080i, 720p or 576p. For detailed information, refer to the Digital Set -Top -Box instruction manual. If you cannot display the picture because your Digital Set -Top -Box does not have a DIGITAL OUT terminal Output setting, use the component Video Input (or the S Video Input or Video Input). In this case the picture will be displayed as an analog signal.

*1. HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

*2. EIA/CEA-861/861B profiles compliance covers profiles for transmission of uncompressed digital video including high bandwidth digital content protection.

How to Set the OSD Screen



PC : For supporting Personal Computer connection.

DVI* : Digital Visual Interface for using TMDS transmission reduces the loss of signal.

➔ **Notes : "DVI" is changed to "HDMI" in HDMI model.*

HDMI* : High Definition Multi media Interface that supports both video and audio information.

COMP-1 / COMP-2 : For supporting greater color accuracy than composite video or S-VIDEO by splitting chrominance into one video signal.

S-VIDEO : For supporting better resolution than composite video, which carries the signals together.

VIDEO : For supporting the color shade(chrominance) and brightness(luminance) information into one video signal.

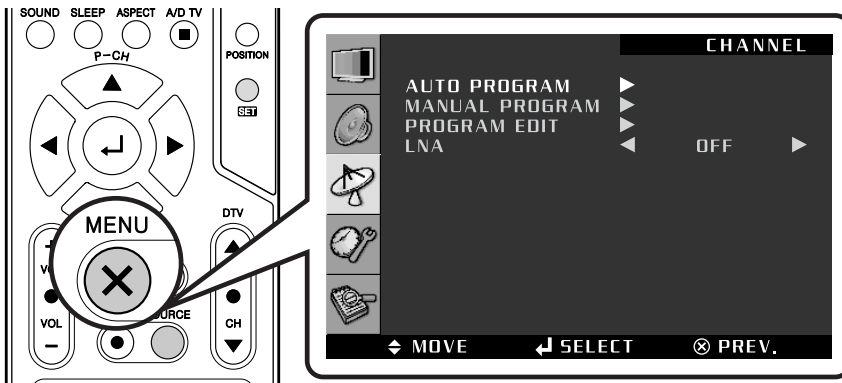
F-SCART - For supporting composite video and RGB video signals. SCART connectors is used with many European video equipments.

H-SCART - Basically the same as Full SCART in function but not supporting RGB Video signals.

ANALOG TV - Terrestrial broadcasting for supporting analog PAL/SECAM system.

Different OSD Menu

You can confirm OSD menu of three different type.



✓ The menu button "EXIT" or "PREV." may occur depending on the model.

✓ In case of the source in Analog TV, S-VIDEO, VIDEO, F-SCART, H-SCART



✓ In case of the source in iDTV



✓ In case of the source in PC, DVI, COMP-1, COMP-2

How to Select the Picture Mode

Users can automatically adjust the picture mode according to the input mode.



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press $\downarrow$ button to select "Picture" Icon.
"PICTURE MODE" is highlighted.
- 3 Press $\leftarrow$ / $\rightarrow$ buttons, then the menu changes in the following order.
→ STANDARD → DYNAMIC → MOVIE → MILD → USER →
- 4 Press EXIT button to TV viewing or press MENU button to return to the previous menu.

- ♦ STANDARD : Most video contents are appropriate to this mode.
- ♦ DYNAMIC : Clear display
- ♦ MOVIE : When watching a movie
- ♦ MILD : Soft display.
- ♦ USER : When the user wants to set the values directly.

✓ In the user's mode, the users can adjust their desired contrast, brightness, sharpness, hue, saturation.

How to Set the Desired Picture

Users can manually adjust their desired picture



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press $\downarrow$ button to select "Picture" Icon.
"PICTURE MODE" is highlighted.
- 3 Press $\leftarrow$ / $\rightarrow$ buttons to select "USER".
- 4 Select required option by pressing the $\blacktriangle$ / $\blacktriangledown$ button, then Press $\leftarrow$ / $\rightarrow$ button to adjust.
- 5 Press EXIT button to TV viewing or press MENU button to return to the previous menu.

- ♦ CONTRAST : Adjust the brightness and darkness of the object and backgrounds.
- ♦ BRIGHTNESS : Adjust the brightness of the entire picture.
- ♦ SHARPNESS : Adjust the clarity of object outlines.
- ♦ SATURATION : Adjust colors into deeper or lighter colors.

How to Set the Desired Picture in PC, DVI/HDMI Input Modes

Users can adjust Color as users want.



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press $\downarrow$ button to select "Picture" Icon.
"CONTRAST" is highlighted.
- 3 Select required option by pressing the $\blacktriangle$ / $\blacktriangledown$ buttons, then Press $\blacktriangleleft$ / $\blacktriangleright$ buttons to adjust.

After selecting COLOR TEMP, then the menu changes in the following order.
→ NORMAL → WARM → COOL → sRGB → USER →
- 4 Press EXIT button to TV viewing or press MENU button to return to the previous menu.

- ♦ NORMAL : For a general Color Tone.
- ♦ WARM : For warm colors with reddish tone.
- ♦ COOL : For cool colors with bluish tone.
- ♦ USER : When the user wants to set the degree of RGB directly.

How to Select a Color Temperature

Users can adjust Color as users want.



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press $\downarrow$ button to select "Picture" Icon.
"PICTURE MODE" is highlighted.
- 3 Press $\blacktriangle$ / $\blacktriangledown$ buttons to move to "COLOR TONE".
- 4 Press $\blacktriangleleft$ / $\blacktriangleright$ buttons, then the menu changes in the following order.
→ STANDARD → WARM → COOL →
- 5 Press EXIT button to TV viewing or press MENU button to return to the previous menu.

- ♦ STANDARD : For a general Color Tone.
- ♦ WARM : For warm colors with reddish tone.
- ♦ COOL : For cool colors with bluish tone.

How to Set the Display Scale

Users can adjust the display scale as they want



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press $\downarrow$ button to select "Picture" Icon.
"PICTURE MODE" is highlighted.
- 3 Press $\blacktriangle$ / $\blacktriangledown$ buttons to move to "SCALE".
- 4 Press $\blacktriangleleft$ / $\blacktriangleright$ buttons, then the mode change in the following order.
→ WIDE → ZOOM1 → ZOOM2 → 4:3 → 14:9 →
- 5 Press EXIT button to TV viewing or press MENU button to return to the previous menu.

- ♦ WIDE - General broadcast picture is adjusted to 16:9.
- ♦ ZOOM 1 - Picture enlarged to 16:9 format, letter box format.
- ♦ ZOOM 2 - Zoom in 16:9 in vertical direction
- ♦ 4:3 - 4:3 general picture size
- ♦ 14:9 - 14:9 picture size

How to Set Noise Reduction

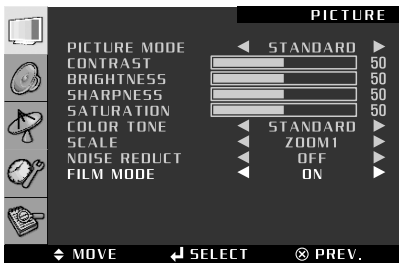
User can eliminate noises on the screen in Video mode



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press $\downarrow$ button to select "Picture" Icon.
"PICTURE MODE" is highlighted.
- 3 Press $\blacktriangle$ / $\blacktriangledown$ buttons to move to "NOISE REDUCT".
- 4 Press $\blacktriangleleft$ / $\blacktriangleright$ buttons to set "ON/OFF".
- 5 Press EXIT button to TV viewing or press MENU button to return to the previous menu.

How to Set Film Mode

Set Film Mode to receive a crisp, clear picture without flickering.



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press $\downarrow$ button to select "Picture" Icon.
"PICTURE MODE" is highlighted.
- 3 Press $\blacktriangle$ / $\blacktriangledown$ buttons to move to "FILM MODE".
- 4 Press $\blacktriangleleft$ / $\blacktriangleright$ buttons to set 'ON/OFF'.
- 5 Press EXIT button to TV viewing or press MENU button to return to the previous menu.

✓ During the reproduction of a DVD or VCR it can come to a distortion of the picture edges. Usually it happens due to a low quality film edition. In case you experience this, please switch in the menu the function "film mode" to "ON".

✓ You may experience tearing effects on the flowing texts during general broadcasting. If you come across this symptom, select 'OFF' in the Film Mode.

How to Set Image Adjust in PC Mode



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press $\downarrow$ button to select "PC" Icon.
"H-POSITION" is highlighted.
- 3 Select required option by pressing the $\blacktriangle$ / $\blacktriangledown$ button, then Press $\blacktriangleleft$ / $\blacktriangleright$ button to adjust.
- 4 Press EXIT button to TV viewing or press MENU button to return to the previous menu.

- ◆ H-POSITION : To adjust the horizontal position of the picture.
- ◆ V-POSITION : To adjust the vertical position of the picture.
- ◆ CLOCK : To adjust the horizontal size of the entire screen image.
- ◆ PHASE : To eliminate the shake of the picture.
- ◆ Auto ADJUST : Horizontal/vertical positions are automatically adjusted.

➡ How To Directly Select Auto Track : Press PC-AUTO button.

How to Select the Audio Mode

Users can adjust sound mode automatically as they want.



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press ▲ / ▼ buttons to move to "SOUND" icon.
- 3 Press ⏏ button to select "SOUND" icon.
"SOUND MODE" is highlighted.
- 4 Press ◀ / ▶ buttons, then the menu changes in the following order.
→ STANDARD → MUSIC → MOVIE → NEWS → USER →
- 5 Press EXIT button to TV viewing or press MENU button to return to the previous menu.

- ♦ STANDARD : For the general sound. Most audio contents are appropriate to this mode.
- ♦ MUSIC : For enjoying original sound.
- ♦ MOVIE : Grandiose sound.
- ♦ NEWS : Clear sound.
- ♦ USER : When the user wants to set the values directly.

➔ **How To Directly Select Picture Mode : Press SOUND button.**

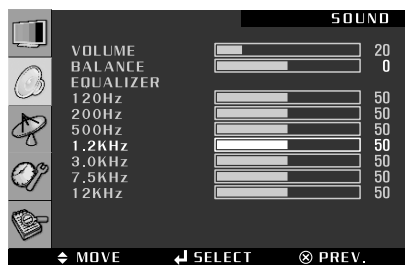
Users can select STANDARD → MUSIC → MOVIE → NEWS → USER in order.

How to Adjust the Desired Audio Mode

Users can adjust sound mode automatically as they want.



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press ▲ / ▼ buttons to move to "SOUND" icon.
- 3 Press ⏏ button to select "SOUND" icon.
"SOUND MODE" is highlighted.
- 4 Press ◀ / ▶ buttons to select "USER".
- 5 Press ▲ / ▼ buttons to move to "SOUND CUSTOM".
- 6 Press ⏏ buttons to select "SOUND CUSTOM".
SOUND CUSTOME menu appears.
- 7 Select required option by pressing the ▲ / ▼ buttons, then Press ◀ / ▶ buttons to adjust.
- 8 Press EXIT button to TV viewing or press MENU button to return to the previous menu



- ♦ VOLUME : Adjusts the volume.
- ♦ BALANCE : Adjusts the balance of left and right speakers.
- ♦ EQUALIZER : Adjusts the audio output signal in the desired band.

How to Select AVL

This function will automatically give a similar volume size to each channel.



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press ▲ / ▼ buttons to move to "SOUND" icon.
- 3 Press ◀ button to select "SOUND" icon.
"SOUND MODE" is highlighted.
- 4 Press ▲ / ▼ buttons to move to "AVL".
- 5 Press ◀ / ▶ buttons to set to "ON/OFF".
- 6 Press EXIT button to TV viewing or press MENU button to return to the previous menu

How to Select S. Mode

Depending on the particular program being broadcast, you can select stereo or mono.



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press ◀ button to select "SOUND" Icon.
"SOUND MODE" is highlighted.
- 3 Press ▲ / ▼ buttons to move to "S.MODE".
- 4 Press ◀ / ▶ buttons to set to "MONO/STEREO".
- 5 Press EXIT button to TV viewing or press MENU button to return to the previous menu.

➡ How To Directly Select S. MODE : Press S. MODE button.

To select "MONO" or "STEREO".

- ♦ Choose "STEREO" for channels that are broadcasting in STEREO.
- ♦ Choose "MONO" for channels that are broadcasting in MONO, or if you are having difficulty receiving a STEREO signal.

✓ If the signal reception conditions deteriorate, setting to Mono will make sound conditions better.

How to Select TruSurround XT

This function processes multi-channel surround sound through two speakers.



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press $\downarrow$ button to select "SOUND" Icon.
"SOUND MODE" is highlighted.
- 3 Press $\blacktriangle$ / $\blacktriangledown$ buttons to move to "TRUSURROUND XT".
- 4 Press $\blacktriangleleft$ / $\blacktriangleright$ buttons to set to "ON/OFF".
- 5 Press EXIT button to TV viewing or press MENU button to return to the previous menu.

- ✓ If you want to connect a device with only one RCA audio output terminal (white-colored), connect it to the white audio input terminal (also white-colored!) and turn TruSurround XT "ON". If not, you will hear just one speaker.
- ✓ You can't adjust sound mode, AVL and S.mode after selecting TruSurround XT.



is a trademark of SRS Labs, Inc.

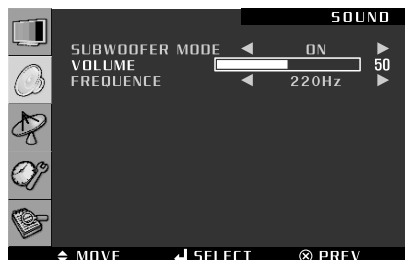
TruSurround XT technology is incorporated under license from SRS Labs, Inc.

How to Set the Output of Subwoofer

You can set this function when you wish to install your subwoofer speaker system.



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press $\blacktriangle$ / $\blacktriangledown$ buttons to move to "SOUND" icon.
- 3 Press $\downarrow$ button to select "SOUND" icon.
"SOUND MODE" is highlighted.
- 4 Press $\blacktriangle$ / $\blacktriangledown$ buttons to move to "SUBWOOFER".
- 5 Press $\downarrow$ buttons to select "SUBWOOFER".
SUBWOOFER menu appears.
- 6 Press $\blacktriangleleft$ / $\blacktriangleright$ button to set to "ON".
- 7 Select required option by pressing the $\blacktriangle$ / $\blacktriangledown$ buttons, then Press $\blacktriangleleft$ / $\blacktriangleright$ buttons to adjust.
- 8 Press EXIT button to TV viewing or press MENU button to return to the previous menu



- ✓ The frequencies in the entry are the subwoofer's frequency range.
- ✓ Make sure to use a subwoofer speaker system with built-in amplifier.

How to Select Earphone

User can adjust earphone volume.



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press ▲ / ▼ buttons to move to “SOUND” icon.
- 3 Press ◀ button to select “SOUND” icon.
“SOUND MODE” is highlighted.
- 4 Press ▲ / ▼ buttons to move to “EARPHONE”.
- 5 Press ◀ / ▶ buttons to adjust volume.
- 6 Press EXIT button to TV viewing or press MENU button to return to the previous menu

✓ Check the audio cable when the sound outputs in just one speaker only.

Automatic Program Searching

Automatic program searching enables to search/store channels of countries where the user is located automatically.



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press ▲ / ▼ Buttons to move to "CHANNEL" icon.
- 3 Press ▣ button to select "CHANNEL" Icon.
"AUTO PROGRAM" is highlighted.
- 4 Press ▣ buttons to select "AUTO PROGRAM".
Auto program menu appears, then "COUNTRY" is highlighted.
- 5 Press ◀ / ▶ buttons to select your country.
- 6 Press ▲ / ▼ Buttons to move to "PAL/SECAM" or "SECAM L".
- 7 Press ◀ / ▶ Buttons to select "PAL/SECAM" or "SECAM L", then store the selected channels.
- 8 Press EXIT button to TV viewing or press MENU button to return to the previous menu.

♦ PAL/SECAM : Phase Alternation by Line system.

♦ SECAM L : System Electronique Avec Memoire.

Manual Program Searching

Manual Program searching enables to searching channels which the user want manually.



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press ▲ / ▼ Buttons to move to "CHANNEL" icon.
- 3 Press ▣ button to select "CHANNEL" Icon.
"AUTO PROGRAM" is highlighted.
- 4 Press ▲ / ▼ Buttons to move to "MANUAL PROGRAM".
- 5 Press ▣ button to select "MANUAL PROGRAM".
Manual program menu appears, then "SYSTEM" is highlighted.
- 6 Press ◀ / ▶ buttons to select your country.
- 7 Select required option by pressing the ▲ / ▼ button, then Press ◀ / ▶ button to set or adjust.
- 8 To store the setting, press ▲ / ▼ buttons, move to STORE and press ◀ / ▶ buttons to store and finish.

✓ In order to display the channel name in the MANUAL PROGRAM, you have to set "COUNTRY" sub menu in AUTO PROGRAM previously.

How to Set the Program Edit

Program edit enables users to edit the searched programs.



PROGRAM EDIT				
PR.	NAME	FREQ	TO	SORT DEL.
1	ARTE	198 MHz	NO	NO
2	ZDF	482 MHz	NO	NO
3	VOX	578 MHz	NO	NO
4	N24	738 MHz	NO	NO
5	BA---	762 MHz	1	NO NO

● NAME EDIT ◀ ▶ MENU SELECT

PROGRAM EDIT				
PR.	NAME	FREQ	TO	SORT DEL.
1	ARTE	198 MHz	NO	NO
2	ZDF	482 MHz	NO	NO
3	BAYER	762 MHz	NO	NO
4	VOX	738 MHz	NO	NO
5	N24	578 MHz	3	OK NO

● SORT ◀ ▶ MENU SELECT

PROGRAM EDIT				
PR.	NAME	FREQ	TO	SORT DEL.
1	ARTE	198 MHz	NO	NO
2	ZDF	482 MHz	NO	NO
3	BAYER	762 MHz	NO	NO
4	VOX	738 MHz	NO	NO
5	-----	818 MHz	3	NO OK

● SORT ◀ ▶ MENU SELECT

- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press ▲ / ▼ Buttons to move to "CHANNEL" icon.
- 3 Press ◀ button to select "CHANNEL" Icon.
"AUTO PROGRAM" is highlighted.
- 4 Press ▲ / ▼ Buttons to move to PROGRAM EDIT".
- 5 Press ◀ button to select "PROGRAM EDIT".
The program table appears on the screen. One program table contains five programmes.
- 6 Press ▲ / ▼ Buttons to move the program list, and press ◀ / ▶ buttons to move the menu list.

Assigning Names to Channel

- a. Place the cursor on NAME blank and press the Yellow button.
Select a letter (A~Z), a number (0~9) or blank space. If you need to erase, press ◀ button, which is the same feature as back space.
- b. To store the setting, press the Yellow button once again.

Sorting the Stored Channels

- a. Place the cursor on TO, press ▲ / ▼ the buttons to choose the swapping PR number.
- b. Place the cursor on SORT, press the Green button. An "OK" message will appear and sort the stored channels.

Skipping Unwanted Channels

Place the cursor on DEL, press the RED button and delete the selected channel. An "OK" message will appear and delete the selected channels.

Using the LNA(Low-Noise-Amplifier) Feature

If the reception is clear, users don't have to use this feature.

If the signal is weak or distorted, try the followings.



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press $\downarrow$ button to select "CHANNEL" Icon.
"AUTO PROGRAM" is highlighted.
- 3 Press $\uparrow$ / $\downarrow$ buttons to move to "LNA".
- 4 Press $\leftarrow$ / $\rightarrow$ buttons to set to "ON/OFF".
- 5 Press EXIT button to TV viewing or press MENU button to return to the previous menu.

✓ This function is not supported in HDMI model.

How to Set PIP/TWIN

This is to set PIP(Picture In Picture) or Twin Picture mode.

You can watch two programs or source at the same time.

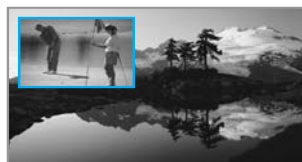


- 1 Press Menu button.
Menu items appear on the screen.
- 2 Press Up and Down buttons to move to "Function" icon.
- 3 Press $\downarrow$ button to select "Function".
"PIP/TWIN" is highlighted.
- 4 Press $\downarrow$ button to select "PIP/TWIN".
New Menu items appears, then "MODE" is highlighted.
- 5 Press $\downarrow$ button, then the menu changes in the following order.
→ PIP → TWIN → OFF →

➔ How to Directly Turn PIP FUNCTION ON/OFF : Press PIP button.

◆ TWIN : To watch two screens in half and half.

◆ PIP : To watch the Sub screen in the main screen at once.



<PIP>

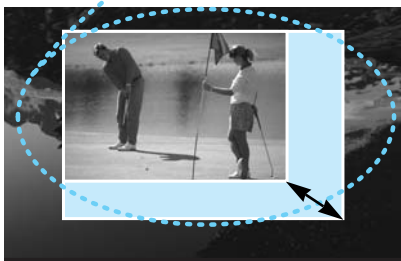
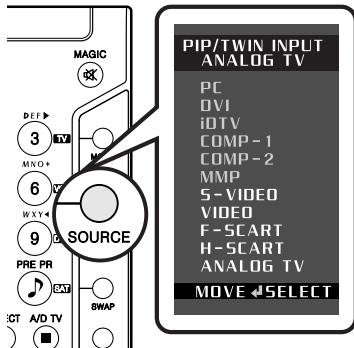


<TWIN>

✓ "Swap" function is not supported in PDP TV OSD menu.

✓ "Twin" function is not supported in HDMI model.

After setting this, go to step 6 to set the SOURCE.



▲ Adjust the size in PIP

- 6 Press ▲ / ▼ buttons to move to "SOURCE".
- 7 Press ◀ / ▶ button, then source changes.
→ see the refer supported PIP table.

➔ **How To Directly Change Sub Source : Press SOURCE button.**

In case of PIP mode, go to step 8

if you need to set the "SWAP" of Main and sub pictures.

- 8 Press ▲ / ▼ buttons to move to "SWAP", then Press ↵ buttons.

➔ **How To Directly Set the SWAP : Press SWAP button.**

In case of PIP mode, go to step 9

if you need to set the "SIZE" of Sub picture.

- 9 Press ▲ / ▼ buttons to move to "Size"
- 10 Press ◀ / ▶ button, then mode will changes in order below.
→ SMALL → MEDIUM → LARGE →

➔ **How To Directly Adjust PIP SIZE : Press SIZE button.**

In case of PIP mode, go to step 11

if you need to set the "POSITION" of Sub picture.

- 11 Press ▲ / ▼ buttons to move to "Positon".
- 12 Press ◀ / ▶ button, then the mode will changes the following order.
→ LEFT TOP → RIGHT TOP → RIGHT BOTTOM → LEFT BOTTOM →

➔ **How To Directly Set the POSITION : Press POSITION button.**

In case the Input source in Sub picture is TV,

go to step 13 when you wish to change the channels of Sub picture.

- 13 Press ▲ / ▼ buttons to move to "CHANNEL", then press ◀ / ▶ buttons to select channel number.
- 14 Press EXIT button to TV viewing or press MENU button to return to the previous menu.

Supported PIP Table

PIP : 0 → Supported, X → Not Supported

Main \ Sub	PC	DVI/HDMI	COMP-1	COMP-2	S-Video	Video	FSCRT	HSCRT	Analog TV
PC	X	X	X	X	0	0	0	0	0
DVI/HDMI	X	X	X	X	0	0	0	0	0
COMP-1	X	X	X	X	0	0	0	0	0
COMP-2	X	X	X	X	0	0	0	0	0
S-Video	0	0	0	0	X	0	0	0	0
Video	0	0	0	0	0	X	0	0	0
FSCRT	0	0	0	0	0	0	X	0	0
HSCRT	0	0	0	0	0	0	0	X	0
Analog TV	0	0	0	0	0	0	0	0	X
Memory	X	X	X	X	X	X	X	X	X

How to Set Key-Lock

User can lock the control buttons on the front bottom of the TV.



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press button to select "Function" Icon.
"PIP/TWIN" is highlighted.
- 3 Press / buttons to move to "KEY LOCK".
- 4 Press / buttons to set to **ON/OFF**.
- 5 Press EXIT button to TV viewing or press MENU button to return to the previous menu.

✓ If you want to deselct "Key-Lock" without the remote controller, press the front keys in the following order. SOURCE → MENU → LEFT → RIGHT

Using the Pixel Shift / Full White (Only for the PDP model)

This feature is designed to reduce image sticking effects during displaying a static picture.
(Brightness degradation is caused by the scale effects of a panel, which is characteristic of a TV.)



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press button to select "Function" Icon.
"PIP/TWIN" is highlighted.
- 3 Press / buttons to move to "PIXEL SHIFT or FULL WHITE".
- 4 Press / buttons to set to **ON/OFF**.
- 5 Press EXIT button to TV viewing or press MENU button to return to the previous menu.

Choosing the Your Languages

Using the TV for the first time, users must select thier preferred language preference in order to display main menus and sub menus, etc.



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press button to select "OSD" Icon.
"LANGUAGE" is highlighted.
- 3 Press / buttons, then the menu changes in the following order.
→ ENGLISH → DEUTSCH → FRANÇAIS → NEDERLAND → ITALIANO → ESPAÑOL → SUOMI →
- 4 Press EXIT button to TV viewing or press MENU button to return to the previous menu.

How to Set Teletext in ATV

You can use Teletext service in analog TV mode.
If it is included in you receiving channels.



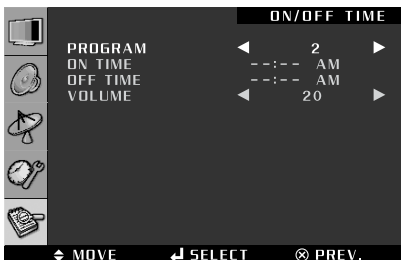
- 1 Press "TTX/MIX" button and wait.
If the "*" sign pops up left upside of the screen as the following picture, wait until the teletext service menu is displayed "*" means it provides teletext service. So wait a moment.
- 2 Select your interesting item with numeric keys.

Selecting Teletext Display Options in ATV Mode

When users have displayed a teletext page, they can have various options to suit their requirements.

DISPLAY(ACTION)	BUTTON
• Hidden Text (Answers to Quiz Games, for Example) • The Normal Screen	 REVEAL REVEAL AGAIN
• A Second Page • Normal screen	 SUB PAGE SUB PAGE AGAIN
• Double-Size Letters in the : - Upper half of the screen - Lower half of the screen • Normal Screen :	 SIZE - ONCE - TWICE - THREE TIMES
Stops the automatic page change which will occur if teletext page consists of 2 or more sub pages. The stop symbol is displayed at the top left-hand corner of the screen.	 HOLD HOLD AGAIN
• FLOF —————> INDEX (Full Level One Facilities) • TOP —————> INFO. (Table of Page)	 INDEX
• To Store Page	 STORE
• Return to List or FLOF mode	 LIST/FLOF

How to Set Clock, Sleep Time, ON/OFF Time



- 1 Press Menu button.
Menu items appear on the screen.
- 2 Press $\downarrow$ button to select "OSD" Icon.
"LANGUAGE" is highlighted.
- 3 Press $\uparrow$ / $\downarrow$ buttons to move to "TIME".
- 4 Press $\downarrow$ buttons to select "TIME".
Time menu appears, then "MANUAL CLOCK" is highlighted.
- 5 Press $\leftarrow$ / $\rightarrow$ buttons to move between Hour, Minute and AM/PM and Press $\uparrow$ / $\downarrow$ buttons to set Hour, Minute and AM/PM.

✓ When the power supply(AC main power) is cut off, the clock is reset to the value before the Time set.

Go to step 6 if you need to set the "SLEEP TIME".

- 6 Press $\uparrow$ / $\downarrow$ buttons to move to "SLEEP TIME".
- 7 Press $\leftarrow$ / $\rightarrow$ buttons, then the menu changes in the following order.
→ 30 → 60 → 90 → 120 → 240 →

➡ How To Directly Start Sleep : Press SLEEP button.

✓ One minute before the preset Sleep Time, "TURN OFF AFTER 1 MIN" message will appear.

Go to step 8 if you need to set the "ON/OFF TIME".

- 8 Press $\uparrow$ / $\downarrow$ buttons to move to "ON/OFF TIME".
- 9 Press $\downarrow$ buttons to select "ON/OFF TIME".
On/Off time menu appears, then "PROGRAM" is highlighted.
- 10 Press $\leftarrow$ / $\rightarrow$ buttons to select program number.
- 11 Press $\uparrow$ / $\downarrow$ buttons to move to "ON TIME or OFF TIME".
- 12 Press $\leftarrow$ / $\rightarrow$ buttons to move between Hour, Minute and AM/PM and Press $\uparrow$ / $\downarrow$ buttons to set Hour, Minute and AM/PM.
- 13 Press $\uparrow$ / $\downarrow$ buttons to move to "VOLUME".
- 14 Press $\leftarrow$ / $\rightarrow$ buttons to adjust volume.

How to Search Automatically

This function can be used to get the latest program data while the receiver is still in use.

Through this function, the receiver searches for all the available program and saves them in the memory.



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press ▲ / ▼ Buttons to move to "DTV CHANNEL" icon.
- 3 Press ⏏ button to select "DTV CHANNEL" Icon.
"AUTO SCAN" is highlighted.

- 4 Press ⏏ buttons to select "AUTO SCAN"
Automatic Scan menu appears, then auto scan activates.
While searching, you can see the following menu on the screen.

When scanning is finished, you can see the following information on the screen. After the scanning process, the first program of the last scanned channel will be displayed on the back screen



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

✓ Now you have completed all steps needed for watching programs. If you could not see the program after finishing these procedures, please contact your engineer or representative.

✓ If you press the MENU or EXIT button in the middle of AUTO SCAN, the first stored channel will be displayed, and the AUTO SCAN stops.

How to Search Manually

You can edit parameters of certain channels and scan them.



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press ▲ / ▼ Buttons to move to "DTV CHANNEL" icon.
- 3 Press ⏏ button to select "DTV CHANNEL" Icon.
"AUTO SCAN" is highlighted.

- 4 Press ▲ / ▼ Buttons to move to "MANUAL SCAN".

- 5 Press ⏏ buttons to select "MANUAL SCAN"
MANUAL Scan menu appears.

- 6 Press ▲ / ▼ buttons to move to "Channel".

- 7 Press ◀ / ▶ buttons to select a channel or press button and choose them directly with using the numeric keys.

- 8 Press ▲ / ▼ buttons to move to "Tx Mode".

- 9 Press ◀ / ▶ buttons, then mode changes in order below.
→ Auto → 8K → 2K →

- 10 Press ▲ / ▼ buttons to move to "Bandwidth".





- 11 Press ◀ / ▶ buttons to select “Bandwidth”, and set the proper value for the selected Channel.
- 12 Press Up and Down buttons to move to “Scan”.
- 13 Press ⏎ buttons to store all the entered channel data. Then you can get the following menu showing the scanning process.
After scanning process, the first channel of scanned channel will be displayed.
- 14 Press EXIT button to TV viewing or press MENU button to return to the previous menu.

✓ If the scan fails, please check whether your entered values are correct or not and the signal reception sensitivity is good or bad.

How to Check Tuner State

Users can check parameters of certain channels and scan them.



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press ▲ / ▼ Buttons to move to “DTV CHANNEL” icon.
- 3 Press ⏎ button to select “DTV CHANNEL” Icon.
“AUTO SCAN” is highlighted.
- 4 Press ▲ / ▼ Buttons to move to “CHANNEL STATE” icon.
- 5 Press ⏎ buttons to select “CHANNEL STATE”
Tuner State menu appears.
- 6 Press ▲ / ▼ buttons to select the channel you want.
- 7 Press EXIT button to TV viewing or press MENU button to return to the previous menu.



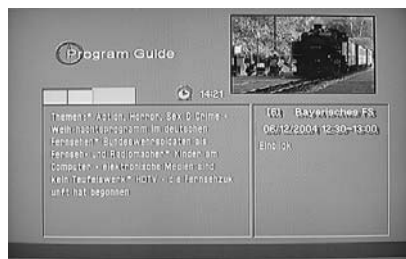
- ♦ Level : Indicating selected network signal strength level.
- ♦ Quality : Indicating signal to noise ratio.

✓ When the channel is selected, you can check the reception status of the signal.
If the reception signal status is bad, adjust antenna to get the following result.

- ♦ Tuner : Lock
- ♦ FEC : 1/2, 2/3, 3/4, 5/6 or 7/8
- ♦ Level : over 30%
- ♦ Quality : over 40%

How to Use the Guide (EPG : Electronic Program Guide)

Users can check the channel information on the channels of the transponder they are watching.



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press ▲ / ▼ Buttons to move to "DTV CHANNEL" icon.
Press ⏏ button to select "DTV CHANNEL" Icon.
"AUTO SCAN" is highlighted.
- 3 Press ▲ / ▼ Buttons to move to "GUIDE".
- 4 Press ⏏ buttons to select "GUIDE"
Program Guide menu appears.
- 5 Press ▲ / ▼ buttons to select Channel, you can see the current or next program information of the selected channel.
➔ Press "GREEN" button. The current or next program information would be converted to the next or current program information respectively.
➔ Press "YELLOW" button. You can see the program schedule list of the selected channel.
- 6 If you want to see the program information of a program in the schedule list, Press ▲ / ▼ buttons to select the program. You will see the information in the right window.
➔ Press "BLUE" button. You will see extended information of the selected program.
- 7 Press EXIT button to TV viewing or press MENU button to return to the previous menu.

How to Select Channel List

Users can change the current channel to any other channel they want.



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press ▲ / ▼ buttons to move to "DTV CHANNEL" icon.
- 3 Press ▢ button to select "DTV CHANNEL" Icon.
"AUTO SCAN" is highlighted.
- 4 Press ▲ / ▼ buttons to move to "CHANNEL LIST".
- 5 Press ▢ buttons to select "CHANNEL LIST"
Channel List menu will appear, detailed information of the selected channel will be displayed in the right section (Name of network, frequency, bandwidth, etc).
- 6 Press ◀ / ▶ (page up/down) or ▲ / ▼ buttons (scroll up/down) buttons to select the channel you want
- 7 Press ▢ buttons, The selected channel appears on the screen.
- 8 Press EXIT button to TV viewing or press MENU button to return to the previous menu.

How to Set Favorite Channel

Users can store frequently watched channels to quickly access a preferred channel.



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press ▲ / ▼ buttons to move to "DTV CHANNEL" icon.
- 3 Press ▢ button to select "DTV CHANNEL" Icon.
"AUTO SCAN" is highlighted.
- 4 Press ▲ / ▼ buttons to move to "CHANNEL LIST".
- 5 Press ▢ button to select "CHANNEL LIST"
- 6 Press ◀ / ▶ (page up/down) or ▲ / ▼ buttons (scroll up/down) buttons to select the channel you want
- 7 ➡ Press RED button, then Favorite State menu appears.
- 8 Press ▲ / ▼ buttons to move to favorite state list of 1~5.
- 9 ➡ Press WHITE button. You can rename them for their convenience.
- 10 Press ▢ button. You favorite state list will be stored. An apple symbol will occur on the ALL LIST MENU.
- 11 Press EXIT button to TV viewing or press MENU button to return to the previous menu.

How to Use Channel List Mode

Users can see variant channel lists which may enable them to edit and select channels more conveniently.



- 1 Press CH. LIST button.
Channel list appears on the screen.
- 2 Press "ORANGE" button, then you can see "Channel List Mode" window.
- 3 Select required option by pressing the ▲/▼ buttons, then Press ◀/▶ buttons to select you want.
- 4 Press ⏏ buttons.
You will see the following mode.
 - ♦ Favorite Mode : You can see favorite 1 ~ 5 channel list.
 - ♦ Alphabet Mode : You can see the channel alphabetical listed.
 - ABC : If you want to see all channels listed in alphabetic order, select 'ABC'.
 - ETC : If you want to see channels without numeric or alphabetic initials.
 - ♦ Network Mode : You can see the channel list in network style.
- 5 Press EXIT button to TV viewing or press MENU button to return to the previous menu.

How to Lock Channel

This menu enables users to prevent children from viewing programs unsuitable for their age.



- 1 Press CH. LIST button.
Channel list menu appears on the screen.
- 2 Press ▲/▼ or ◀/▶ buttons to select the channel you want to lock.
- 3 Press "GREEN" button.
Then the selected channel is locked.
- 4 Press MENU, EXIT or ⏏ button to finish the process.
- 5 Without entering your password, you cannot watch a locked channel's program. The original password is programmed to 0-0-0-0. Please refer to 48 page "How to Factory Set" for changing the password.

✓ If you want to cancel the channel lock, go to the channel list and select the channel and press GREEN.

How to Set the Channel Order

Users can organize the number or sequence of the channels.



- 1 Press CH. LIST button.
Channel list menu appears on the screen.
- 2 Press ▲ / ▼ or ◀ / ▶ buttons to select the channel you want to move.
- 3 Press "YELLOW" buttons.
- 4 Press ▲ / ▼ or ◀ / ▶ buttons to move to the position you want to move.
- 5 Press ↵ buttons, the channels will move automatically to the programmed position.
- 6 Press MENU, EXIT or ↵ button to finish the process.

How to Delete Channel

Users can delete channels from the channel list.



- 1 Press CH. LIST button.
Channel list menu appears on the screen.
- 2 Press ▲ / ▼ or ◀ / ▶ buttons to select the channel you want to remove.
- 3 Press BLUE buttons.
Then, you need to confirm the deletion.
If you definitely want to delete, press ↵ buttons. If not, press EXIT.
You can find the deleted list in left window.
- 4 Press MENU, EXIT or ↵ button to finish the process.

How to Add Channel

Users add channels they want.



- 1 Press CH. LIST button.
Channel list menu appears on the screen.
- 2 Press WHITE buttons.
The Add Digital Channel window will appear.
- 3 Select the channels with ◀ / ▶ buttons or numeric keys.
- 4 Select required option by pressing the ▲ / ▼ buttons, then Press numeric keys to enter the proper value.
- 5 Press MENU, EXIT or ⏏ button to finish the process.

✓ The above mentioned VIDEO PID, AUDIO PID, PCR PID are very important for optimal terrestrial signal reception. We recommend you to get professional advices where available. You can't setup "VIDEO PID" for RADIO channels.

How to Factory Set

The status of the Digital-TV will return to factory default parameters by using this function.



- 1 Press MENU button.
Menu items appear on the screen.
- 2 Press ▲ / ▼ Buttons to move to "DTV CHANNEL" icon.
- 3 Press ⏏ button to select "DTV CHANNEL" Icon.
"AUTO SCAN" is highlighted.
- 4 Press ▲ / ▼ Buttons to move to "FACTORY SET".
- 5 Press ⏏ buttons to select "FACTORY SET"
"Factory Set" is highlighted.
- 6 Press ⏏ button to select "Factory Set".
A window will appear, asking you to confirm.
- 7 When the menu asks you to confirm the reset, press ⏏ if you want to reset or press EXIT key if you want to void the reset.

✓ When you forgot your new password, please consult the shop where you bought the TV or the nearest dealer.
✓ After choosing Factory Set, reset the power.

How to TV/RADIO switching

Users can use this menu when they want to change a TV channel to a Radio channel or vice versa.



➡ Press "TV/RADIO" button.



Avoid listening to the radio for a long time, without changing the screen image. It can cause "Image Sticking".

Check "Image Retention Effect (Image Sticking)" at the beginning of the manual.

How to Subtitle / Audio

Users can adjust the subtitle and audio condition/status of the current channel.



- 1 Press "S.MODE" button.
Subtitle and audio related window will be displayed on the screen.
 - 2 Select required option by pressing the ▲ / ▼ buttons, then Press ◀ / ▶ buttons to select you want.
- If Dig. Output is supported, you can select MPEG Stereo or Dolby Digital/AC3.

✓ These subtitle and audio parameters are workable only when the receiving channel supports these functions

How to Select Channel / Information

Brief information is displayed, such as current channel type, name, local start/end time, guide information, current time, fav/normal mode, Audio mode and Audio ID.



➡ Press "INFO" button.

The information bar will pop-up.

✓ If you have no information : Check if your local time settings are correct or information is not sent by the channel provider.

How to Set Teletext in DTV

You can use Teletext service in iDTV mode.

The  icon on the screen means your TV is receiving Teletext service.



- 1 Press "TTX/MIX" button and wait.
If the "*" sign pops up left upside of the screen as the following picture, wait until the teletext service menu is displayed "*" means it provides teletext service. So wait a moment.
- 2 Select your interesting item with numeric keys.

How to Use Memory Mode - * For Q320, Q400 Model only

Please read the following instructions carefully before using it.



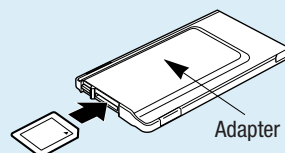
Remaining for a long time in Memory mode (Still Image) can cause "Image Sticking".

► Precautions when using a Memory Card

- Ensure to use a memory card labeled with the manufacturer's name and manufacture number.
- Do not insert other objects such as a coin into the memory card slot, which may cause a malfunction.
- Do not drop or apply a shock to memory cards.
- Keep a memory card in the provided case after using it.
- Do not dismantle or modify memory cards.
- Avoid static electricity or electronic noise, this may damage data stored in it.
- We shall not be liable for misuse of the TV set, any troubles during use, or other problems, or incorrect settings, except for those cases for which we are liable by law.
- Any damages arising out of the misuse of the TV set may result in damage to or loss of data.
- We are not responsible for any damaged data. To avoid them, ensure to back up.
- This unit is designed for personally converted MP3 files, for personal use only. In case of listening to any copyright-protected files, ensure to use a separate MP3 player.

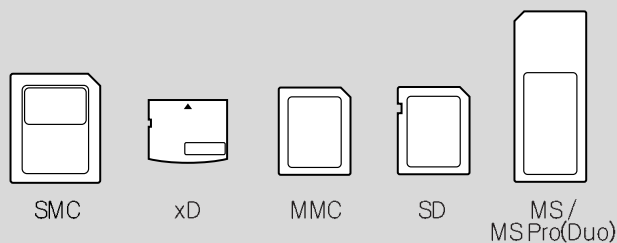
► Precautions when inserting a Memory Card

- Turn the TV set off before connecting all necessary cables.
- Insert a memory card with the label facing up avoiding twisting or skewing.
- Insert a memory card with the label facing up and the arrow on the label pointing toward the unit. Inserting the memory in upside down may result in damage to the memory card or unit.
- Do not attempt to remove a memory card while it is in operation. This may cause serious damage to the memory card or unit. Ensure to stop all memory cards before removing a memory card from the unit.
- Make sure the cards are completely and firmly inserted into the appropriate slots. Improperly seated cards will cause serious damage to memory cards or unit.
- Make sure the RSMMC, miniSD, T-FLASH, MS Duo and MS Pro Duo memory cards are inserted into an adapter. Contact the dealer where you purchased it.



Commercially available memory cards (Sold separately)

- The available types of memory cards by slot are shown on the side of the TV.
- The playback speed varies depending on their types.



Memory Card Slot 1 (MT)



Memory Card Slot 2 (CF)

Supported Files

Available memory card capacity	• CompactFlash : 8MB ~ 4GB • Microdrive : 1GB, 2GB, 4GB / 2.5GB, 5GB • SmartMedia : 8MB ~ 128MB • xD-Picture : 16MB ~ 512MB / 1GB(M-CARD) • MultiMediaCard/RS MMC : 8MB ~ 1GB • Secure Digital/miniSD : 8MB ~ 1GB • Memory Stick/Duo : 4MB ~ 128MB • Memory Stick Pro/Duo : 256MB, 512MB, 1GB		• Using a memory card with capacity larger than supported may cause an error. • A very high capacity of a memory card may result in slow speed. • Some non-supported Jpeg or MP3 files may not be played back.
USB HOST	USB 1.1 HOST	• USB HDD, Flash Memory Bar • MP3 Player (Available only in portable disk mode) • Cellular Phone (Available only in portable disk mode)	
	Power Supply	• Make sure to use TV USB power for USB HDD with 2.5" or less. Never use separate power. • Make sure to use separate power for 3.5" USB HDD.	

Supported Media File Types

Photo	Support	JPEG : JIFF, EXIF (.jpg)
	Compatibility	Baseline JPEG : 5120x3840 (Max. Resolution) Progressive JPEG : 2048x1536 (Max. Resolution)
Movie	Support	• DivX3, DivX4 • XviD (.avi) • MPEG-1 (.mpeg/.mpg) • MPEG-2 (.mpeg/.mpg/.vob) • MPEG-4 (.mpeg/.mpg, asf)
	Compatibility	• DivX - 720 x 480 30fps or less, - 720 x 576 25fps or less - AC3 support, MPEG-1 audio layer-2 and 3 encoded files - GMC(Global Motion Compression), Q-Pel(Quarter Pixel) not supported. • MPEG-2 - Main profile@Main level, - 2Mbps below supported • MPEG-4 - 640 x 480 (4Mbps or less), - MPEG-4V1 : not supported - MPEG-4V2 : Simple Profile supported. • Motion JPEG(.avi) - 640 x 480 15 frames/sec
Music	Support	MP3
	Compatibility	ID3 tag not supported • MP3i, MP3 PRO not supported

Supported Compressed Jpeg/Image File Format

	Compression method		Color format		
	Standard (Baseline)	Optimization (Progressive)	4:4:4 11:11:11(Y,Cb,Cr)	4:2:2, 21:11:11(Y,Cb,Cr) 12:11:11(Y,Cb,Cr)	4:2:0 22:11:11(Y,Cb,Cr)
JPG compression	0	0	X	0	0
Image display	Image	Image	Not supported	Image	Image

Using a Memory Card

1. Insert a memory card or USB memory into Slot 1/2 or USB port.

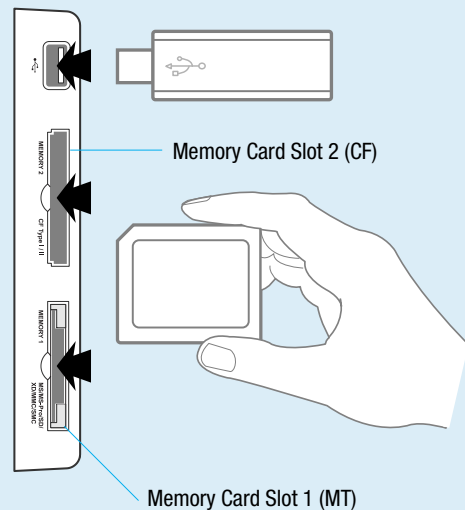
2. Press  to power on.

3. Press  to select Memory Mode.

4. Refer to icons listed below menu screen to manipulate.

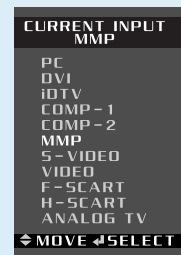
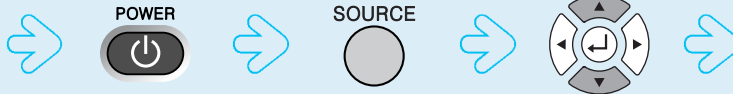
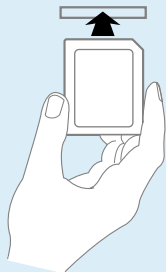
CAUTION !

- ➔ When you are going to remove the memory card, press the  button on the remote control. You can go back to the initial screen anytime to remove the memory card safely while keeping the damage to stored data to a minimum level.
- ➔ If you have pressed the EXIT button, you have to remove and then insert the memory card or turn the power off and on to use the memory card. Otherwise, a message "No device" will appear when selecting.
- ➔ Only one memory card is allowed for each slot.



Shifting into Memory Mode

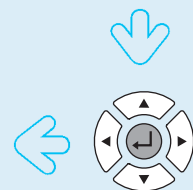
- Memory Mode allows you to play back photos, music, movies and motion pictures files that are stored in memory cards.
- When selecting a slot into which no memory card is inserted, a message, "No device" will appear.



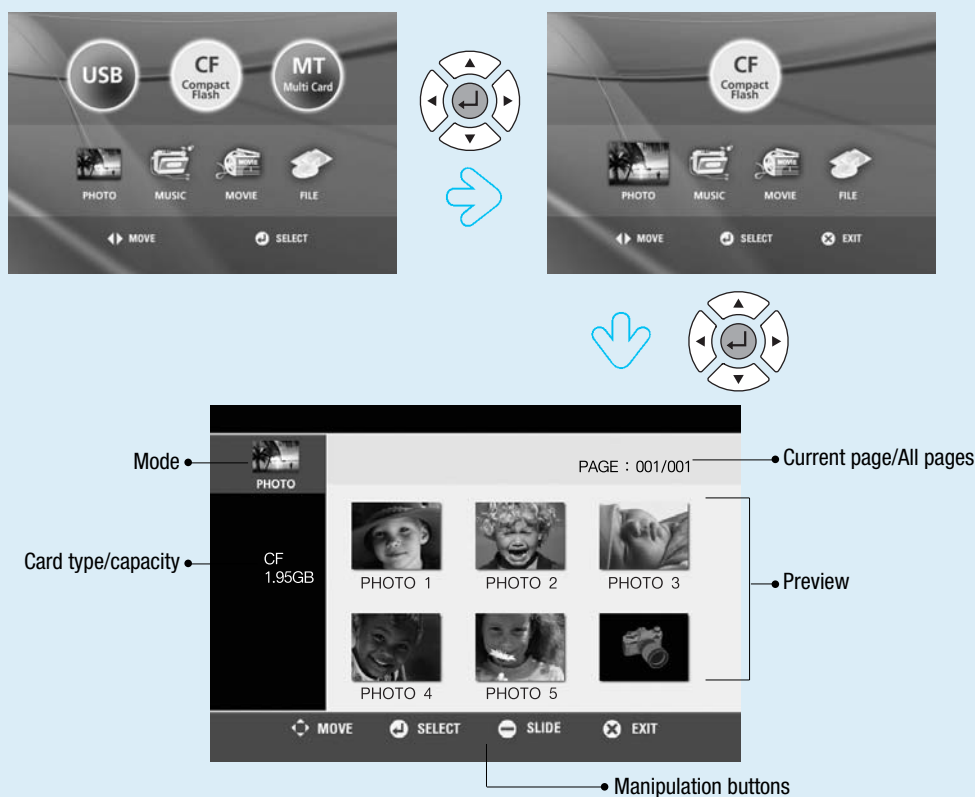
Move one of the slots you want.



The initial screen of the memory mode will appear.



Viewing the stored photo files



► Viewing full-size photos

1. Press  to move a photo file you want.

2. Press  to select.

➔ To the icon menus, press the  button.

1) JFIF

- As decoding is required when making a listing, decoding time is different according to file sizes.
- While the slide show is in operation, music may be paused temporarily or corrupted according to the performance of the memory card or USB device.

2) EXIF

Listed files are quickly displayed when making a listing.
For example EXIF files created by a digital camera, etc, which are already listed.



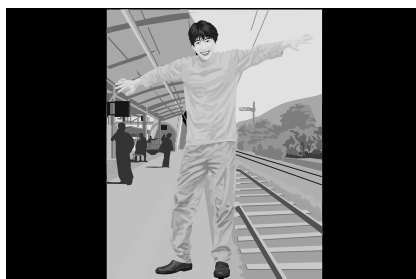
► Viewing full-size photos

- ➔ Whenever you press  from the current screen, magnifying powers are shifted in sequence ➔1.5X ➔2X ➔2.5X ➔1X(original size).
- ➔ After zooming in a photo, press  to move.



► Rotating a photo

- ➔ To rotate the photo by 90 degrees clockwise, press  button. To rotate the photo by 90 degrees counterclockwise, press  button.



► Viewing images using Slide Show

1. Press  to display Option Menu.
 2. Press  to move between items and press  to change.
 3. After setting, press  buttons to move to PLAY.
- Press  to start a slide show.

SLIDESHOW OPTION

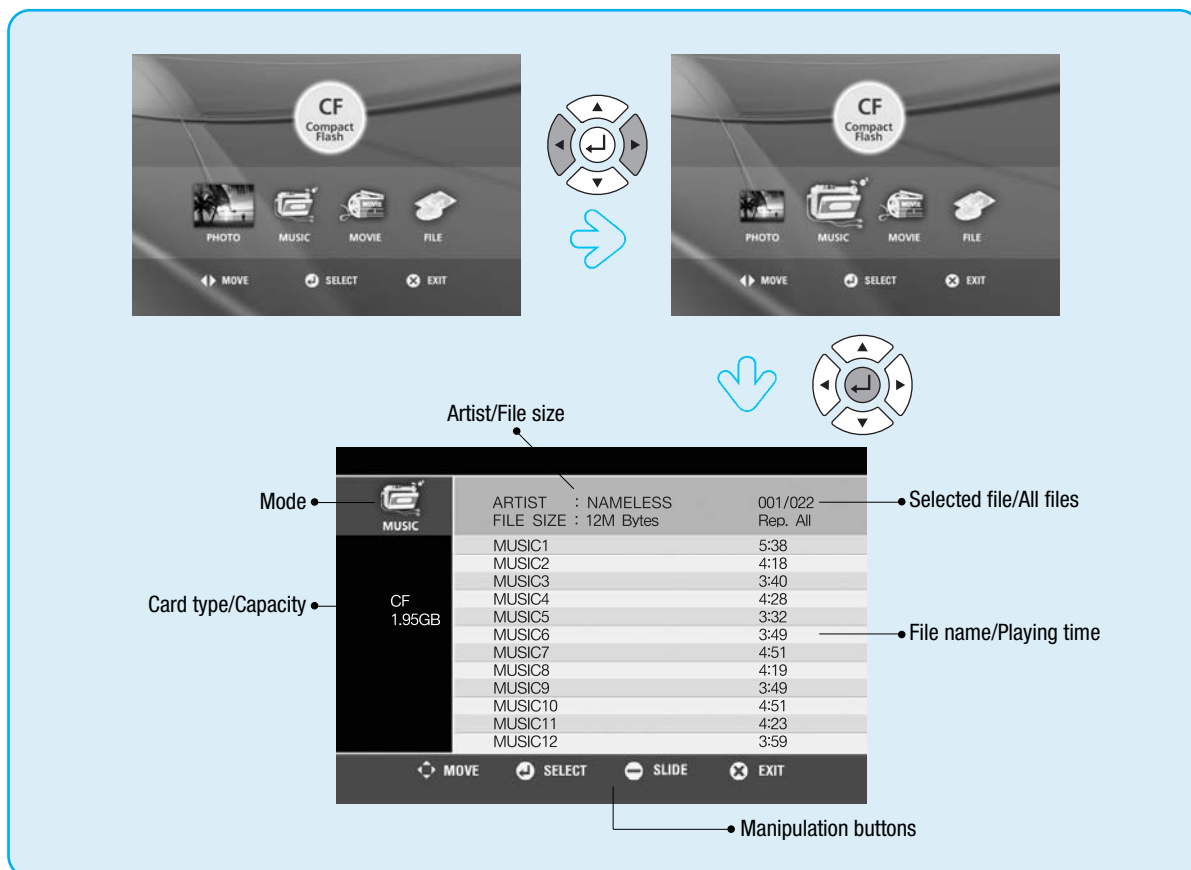
TIME	◀	MEDIUM	▶
EFFECT	◀	RANDOM	▶
MUSIC ON	◀	ON	▶
PLAY		EXIT	

➔ FAST ➔ MEDIUM ➔ SLOW ➔
 ➔ RANDOM ➔ TOP>BOTTOM ➔ CENTER>LEFT/RIGHT
 ➔ LEFT>RIGHT (BLIND) ➔ CLOSS FADE ➔
 ➔ ON ➔ OFF ➔



Slow access may take place according to file sizes, selected effect mode and card types (MMC/MS) or due to unsupported image files. This may result in time difference taken to display images or corrupted music sound.

Viewing the stored music files



➔ When you press , the slide show function starts playing back music files according to the selected options in photo mode.

▶ Playing back music files

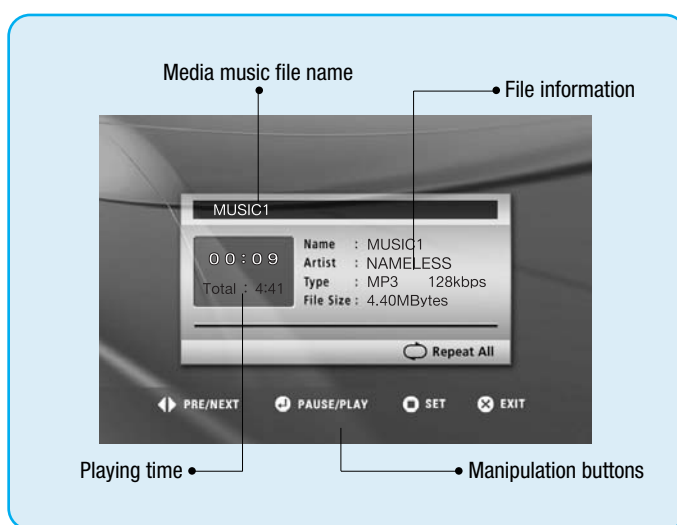
1. Press  to display Option Menu.

1. Press  to play back.

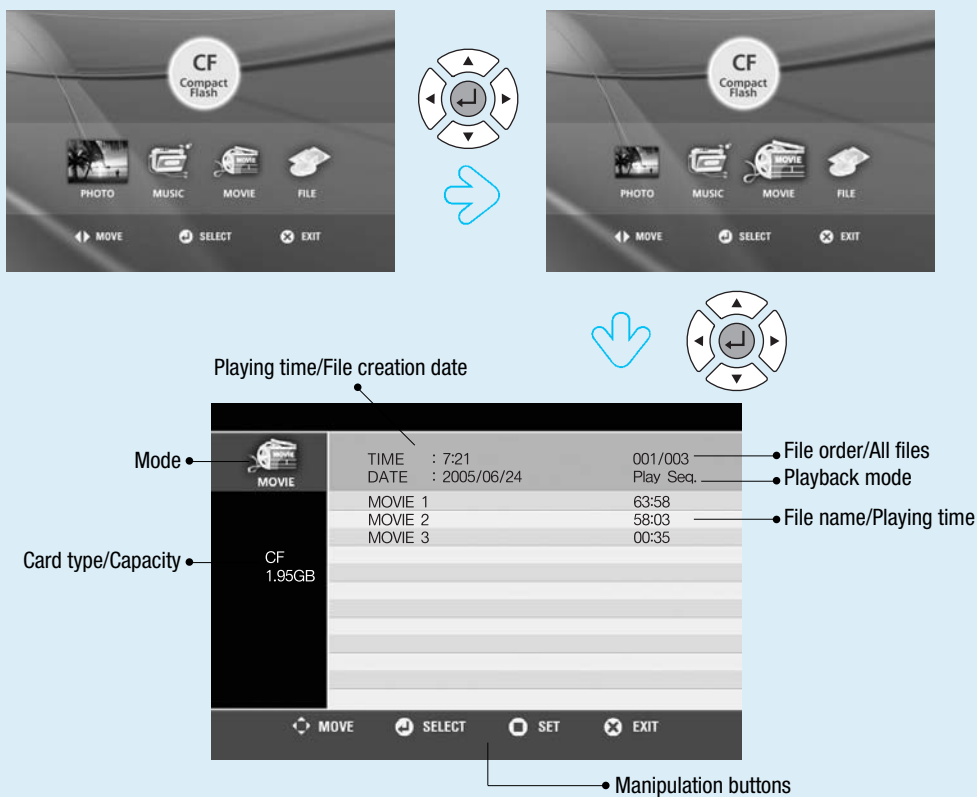
➔ Whenever you press , you can set

⇒ Repeat 1 ⇒ Repeat All ⇒ Play Sequence.

➔ When you press , you can listen to music in power saving mode.



Checking the stored movie files



➔ You can set to play back all files (Play Sequence) or selected file (Play One)

in sequence by pressing .

▶ Playing back movie files

1. Press to move to movie file you want.

2. Press to select a movie file to play back.

➔ To hide the icon menus on the bottom of the screen, press .

➔ To perform Rewind or Fast Forward, press .

To pause, press .

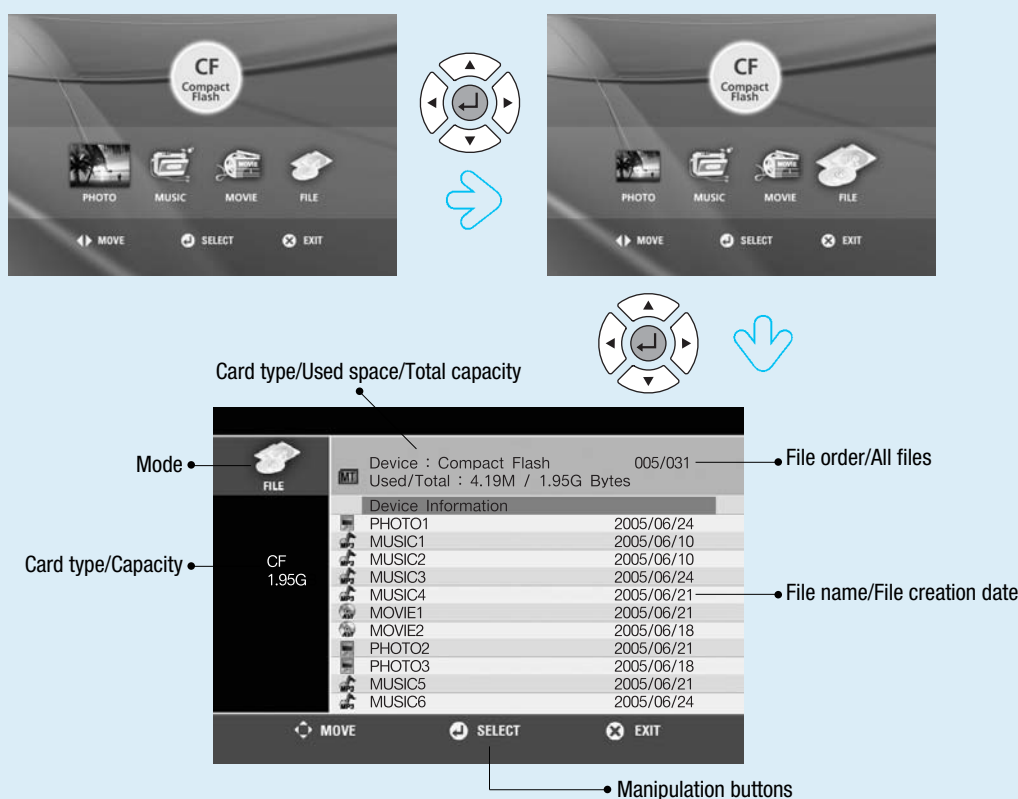
➔ To see running time, press .



TIP

- Slow access may take place according to card types (MMC/MS). This may result in interruption of a motion picture being played back.
- When playing back a motion picture stored in a USB memory, an interruption may take place. This phenomenon is not because the product yields its low performance but because the transmission speed differs depending on the USB memory types.

Checking the stored movie files



► Running a file

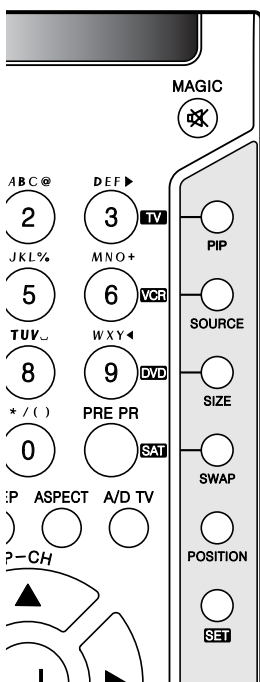
1. Press  to move to a file you want.
2. Press  to run.

TIP

If you select, in Photo Mode, Music Mode or Movie Mode, one of the non-executable files or unrecognized files stored in the memory card, an error message, "No file in this mode" will appear.

How to Use an External Device Using the Remote Control

When setting other manufacturer's product using the remote control, some of the buttons on the remote control may not operate or different functions may be activated, or some of other manufacturer's products may not work. Some of DVD/VCR combos are allowed only either in DVD mode or VCR mode.



1. Turn on the external device you want to set.

2. Whenever you press  button on the remote control, the mode shifts $\Rightarrow$ TV $\Rightarrow$ VCR $\Rightarrow$ DVD $\Rightarrow$ SAT (Satellite Receiver) $\Rightarrow$ in order.

Or Press the  button and the preferred device (TV/VCR/DVD/SAT) at once.

3. If the external device has been chosen, press the  button and  button at the same time for two seconds.

4. Enter an appropriate 3-digit number of the manufacturer from the DVD Setting Number Table. (If the product brand you want to set has multiple setting numbers, attempt to enter the setting numbers repeatedly until the product is turned off.)

5. When the product has turned off, press the  button again.

(The appropriate button associated with the product will flash 3 times to show the product operates properly.)

6. Check that the Power button works normally and then check that other function buttons work normally.

➔ If the Power button works normally but other function buttons do not, repeat the above steps from the beginning.

➔ Depending on product brands or setting numbers, the power button may work normally but other function buttons do not work.

VCR Setting Number Table

MAKER	Setting Number	MAKER	Setting Number
AIWA	001, 002, 014, 044, 052, 064, 066	NORDMENDE	014, 024, 039, 054, 055, 067, 073, 074, 076
AKAI	007, 014, 021, 031, 047, 053, 066	PANASONIC	035, 045, 046
DAEWOO	007, 017, 044, 048, 066	PHILCO	012, 025
DAYTRON	048	PHILIPS	033, 068
EMERSON	017, 025	PIONEER	015, 024
FERGUSON	002, 014, 021, 032, 048, 054, 055, 073	PORTLAND	007, 048
FISHER	007, 012, 018, 019, 029	SALORA	018, 016, 029, 031
FUNAI	002	SAMSUNG	011, 047
GRUNDIG	004, 041, 045, 054, 064, 068	SANYO	018, 019, 020, 024, 029
HITACHI	002, 014, 015, 029, 036, 047, 068, 070	SHARP	001, 020, 023
JVC	005, 014, 024, 042, 067	SONY	006, 008, 009, 010, 022, 027, 030, 031, 034, 037
KENWOOD	012, 014	SYMPHONIC	002, 025
LG	001, 002, 003, 048	TASHIKO	001, 002, 020, 047
MANGAVOX	068		
MARANTZ	012, 023, 033, 044, 051	TATUNG	002, 014, 016, 020, 021, 044, 064, 066
MATSUI	001, 002, 028, 040, 043, 044, 047, 051	TEAC	001, 002, 014, 048, 052
	058, 064, 066, 070	TOSHIBA	014, 016, 017, 067, 068
MEMOREX	001, 002, 018, 019, 020, 029	UNITECH	047
MITSUBISHI	016, 024, 026, 038	VICTOR	005, 024
MULTITECH	002, 007, 025, 029, 056		
NEC	001, 012, 013, 014, 024, 029		

DVD Setting Number Table

MAKER	Setting Number	MAKER	Setting Number
APEX DIGITAL	022	ORION	026
DAEWOO	001, 029, 032	PANASONIC	042, 055
DAEWOO INTERNATIONAL	028	PHILIPS	002, 056
DENON	015, 042	PIONEER	051
ELTA	001, 025, 046, 047	PROSCAN	003
FERGUSON	018	RCA	003, 018
GE	034	SAMSUNG	009, 042
GOODMANS	018, 025, 045, 047, 049, 050	SANYO	021, 026, 047
GRUNDIG	018, 021, 026, 029, 031, 047	SCHNEIDER	018, 029, 045, 046, 047
HANSEATIC	039	SEG	020, 031
JVC	002, 011, 057	SHARP	013, 026
LG	010, 039, 054	SONY	004, 009, 053
MAGNAVOX	002, 049	THOMSON	003, 007
MATSUI	018, 026	TOSHIBA	002
MITSUBISHI	031	YAMADA	050
MUSTEK	037	YAMAHA	042
NAD	039	ZENITH	002, 010, 039
ONKYO	002, 012	MARANTZ	006

Satellite Receiver Setting Number Table

MAKER	Setting Number	MAKER	Setting Number
HANSEATIC	090	PHILIPS	020, 024, 025, 064, 084, 087, 092, 101, 102, 109, 117, 123, 126, 147
HITACHI	064	PREMIERE	140
HOUSTON	025, 066, 088, 102	PROSAT	034, 096
KATHREIN	004, 020, 039, 049, 057, 063, 067, 073, 092, 102, 111, 126, 147	QUADRAL	034, 054, 077, 087, 096, 102, 109
HUMAX	032, 137	SAMSUNG	033, 062
LG	042	SEG	006, 040, 054, 062, 076, 077, 082, 090, 116
LUXOR	046, 071, 140	SMART	011
MATSUI	020, 045, 084, 109	SONY	064, 108
NEXTWAVE	114	TECHNISAT	031, 065, 071, 076, 083
PACE	026, 027, 043, 064, 069, 112, 119, 122, 146	TELESTAR	071
PANASAT	094, 141	TOSHIBA	015, 064
PANASONIC	064	UNIDEN	022, 120, 130

Troubleshooting

Installation Problems

Symptom	Possible solution
How can I install an antenna?	Refer to page 20.
TV screen is not clear after installing an indoors antenna.	Indoors antenna may experience poor reception due to surrounding buildings. Please install an outdoors antenna or wireless antenna.
How can I view cable broadcasting?	Please install a cable broadcasting receiver (Converter).

Picture Problems

Symptom	Possible solution
Neither picture nor sound comes up.	Check whether power is on. Check whether the power is cut or whether the power cord is properly connected. Try to plug another product's power cord to the same outlet to check the outlet itself.
Picture turns on slowly after power is on.	This symptom is not a malfunction. This delay is designed to prevent the distorted and noisy picture when the power is on. However, if the picture does not appear more than 5 minutes after the power is on, call a service center.
Picture is distorted or frozen while watching digital broadcasting.	This symptom may be caused by weak reception. Contact your local station or cable company.
Input Source information only appears on black screen.	Check whether your TV is properly connected to external devices.
Poor reception on some channels.	Check whether you selected proper channels. Try re-orienting your antenna. Ensure LNA is activated.
Black and white on some channels.	Check other channels for black and white screen. Adjust colour.
TV won't turn on.	Ensure the power cord is plugged.
Screen is too bright or too dark.	Adjust brightness.
Auto On does not work.	Ensure to use the remote control or power button on the product to turn off your TV. If you unplug the power cord, the stand-by consumption power becomes 0 (zero), which causes the programmed time to be erased.

After setting the time, I turned TV off and turn it on. The programmed information has been erased.

Ensure to use the remote control or power button on the product to turn off your TV. If you unplug the power cord, the stand-by consumption power becomes 0 (zero), which causes the programmed time to be erased.

Sound Problems

Symptom	Possible solution
Too much noise occurs.	Check whether the audio setting is in the Stereo mode. In the Stereo mode, the sound may be distorted in areas with poor reception or located far away from a TV broadcasting station.
No sound while viewing a cable channel	Make sure audio or audio/video components are securely inserted into the appropriate jacks. Check other channels for sound. Check the volume settings on the cable broadcasting receiver.
Picture is OK but sound does not come out.	Try to press volume up/volume down buttons of your remote control.
One of the speakers does not produce sound.	Select sound balance and make proper adjustment. (Page 30) Check the speaker connection cables.

General

Symptom	Possible solution
Remote control won't work.	Check whether there is a blocking object between the remote control and PDP. Make sure your PDP is Power On. (Normally, the LED on the front panel is red.) Check whether batteries are inserted with proper polarities(+, -). When the batteries are worn out, replace them.
Where does the S-Video cable plug in for audio output?	Connect the two Audio jacks from the S-Video cable to the left and right ports on the Composite.
Strange noises are heard.	Ticking noises during or after watching are caused by the change of ambient environment such as humidity and temperature, which is characterized by plastic products. Strange ticking noises occur because a signal is suddenly transmitted to the PDP panel. So, It is not a malfunction.
I tried to use the TV screen as a PC monitor but it doesn't work.	Adjust the resolution referring to the standard signal mode table. Check the specification of your video card installed in your PC. If your video card does not work in the supported hardware, try upgrading the video card's driver.

Product Specifications

Model		Q261	Q321 / Q320	Q401 / Q400
Input	Full-Scart	1 (A/V)	1 (A/V)	1 (A/V)
	Half-Scart	1 (A/V)	1 (A/V)	1 (A/V)
	S-Video	1 (A/V audio common)	1 (A/V audio common)	1 (A/V audio common)
	Video (RCA)	1 (Audio included)	1 (Audio included)	1 (Audio included)
	Component(Y/Cb/Cr)	2 (Audio included)	2 (Audio included)	2 (Audio included)
	Antenna	1	1	1
	PC Connection jack	D-SUB	D-SUB	D-SUB
	Max. resolution	1366 X 768 @ 75 Hz	1366 X 768 @ 75 Hz	1366 X 768 @ 75 Hz
	Audio	L/R	L/R	L/R
	DVI-HDCP / HDMI	1	1	1
	Memory Slot	No	Slot 1, Slot 2, USB (For Q320 model only)	Slot 1, Slot 2, USB (For Q400 model only)
Video Output		1 (Audio included)	1 (Audio included)	1 (Audio included)
Audio Output	Digital SPDIF Optical	1	1	1
	Digital SPDIF Coaxial	1	1	1
	Subwoofer	1	1	1
TV/Video	Color system	PAL/SECAM L	PAL/SECAM L	PAL/SECAM L
	Sound system	FM, NTCAM	FM, NTCAM	FM, NTCAM
	Video system	Component, S-Video, Composite, PC, DVI/HDMI	Component, S-Video, Composite, PC, DVI/HDMI	Component, S-Video, Composite, PC, DVI/HDMI
Power	Supply	AC 100 - 240 V, 50/60 Hz	AC 100 - 240 V, 50/60 Hz	AC 100 - 240 V, 50/60 Hz
	Consumption power	Typical 120W	Typical 150W	Typical 225W
	Stand-by power	Typical 3W	Typical 3W	Typical 3W
Dimension (W x D x H mm - Stand included)		640 x 230 x 485	772 x 230 x 563	988 x 297 x 715.5
Weigh (Stand included)		17.5 Kg	19.3 Kg	23.0 Kg
Control type		Remote control, Key control	Remote control, Key control	Remote control, Key control

- The above specifications may be subject to change without prior notice.

Product Specifications

Model		Q421S	Q421H	Q501
Input	Full-Scart	1 (A/V)	1 (A/V)	1 (A/V)
	Half-Scart	1 (A/V)	1 (A/V)	1 (A/V)
	S-Video	1 (A/V audio common)	1 (A/V audio common)	1 (A/V audio common)
	Video (RCA)	1 (Audio included)	1 (Audio included)	1 (Audio included)
	Component(Y/Cb/Cr)	2 (Audio included)	2 (Audio included)	2 (Audio included)
	Antenna	1	1	1
	PC Connection jack	D-SUB	D-SUB	D-SUB
	Max. resolution	1024 X 768 @ 85 Hz	1024 X 768 @ 85 Hz	1024 X 768 @ 85 Hz
Video Output	Audio	L/R	L/R	L/R
	DVI-HDCP	1	1	1
		1 (Audio included)	1 (Audio included)	1 (Audio included)
Audio Output	Digital SPDIF Optical	1	1	1
	Digital SPDIF Coaxial	1	1	1
	Subwoofer	1	1	1
TV/Video	Color system	PAL/SECAM L	PAL/SECAM L	PAL/SECAM L
	Sound system	FM, NTCAM	FM, NTCAM	FM, NTCAM
	Video system	Component, S-Video, Composite, PC, DVI/HDMI	Component, S-Video, Composite, PC, DVI/HDMI	Component, S-Video, Composite, PC, DVI/HDMI
Power	Supply	AC 100 - 240 V, 50/60 Hz	AC 100 - 240 V, 50/60 Hz	AC 100 - 240 V, 50/60 Hz
	Consumption power	Typical 280W	Typical 380W	-
	Stand-by power	Typical 3.5W	Typical 3.5W	Typical 3.5W
Dimension (W x D x H mm - Stand included)		1030 x 79 x 716	1030 x 79 x 716	1208 x 79 x 810
Weight (Stand included)		32 Kg	32 Kg	46 Kg
Control type		Remote control, Key control	Remote control, Key control	Remote control, Key control

- The above specifications may be subject to change without prior notice.

