LG
Life's Good

OWNER'S MANUAL

AD Box For Transparent Display

Please read this manual carefully before operating your set and retain it for future reference.

TSP500

www.lg.com

ENGLISH

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SAFETY PRECAUTIONS

Please read these safety precautions carefully before using the product.

⚠ WARNING
- **If you ignore the warning message, you may be seriously injured or there is a possibility of accident or death.**

⚠ CAUTION
- **If you ignore the caution message, you may be slightly injured or the product may be damaged.**

⚠ WARNING
- **Indoor Use Only.**

Precautions in installing the Product

⚠ WARNING
- **Keep away from heat sources like electrical heaters.**
  ►Electrical shock, fire, malfunction or deformation may occur.
- **Keep the packing anti-moisture material or vinyl packing out of the reach of children.**
  ►Anti-moisture material is harmful if swallowed. If swallowed by mistake, force the patient to vomit and visit the nearest hospital. Additionally, vinyl packing can cause suffocation. Keep it out of the reach of children.
- **Do not put heavy objects on the product or sit upon it.**
  ►If the product collapses or is dropped, you may be injured. Children must pay particular attention.
- **Do not leave the power or signal cable unattended on the pathway.**
  ►The passerby can falter, which can cause electrical shock, fire, product breakdown or injury.
- **Install the product in a neat and dry place.**
  ►Dust or moisture can cause electrical shock, fire or product damage.
- **If you can smell smoke or other odors or hear a strange sound unplug the power cord and contact the service center.**
  ►If you continue to use without taking proper measures, electrical shock or fire can occur.
- **If you dropped the product or the case is broken, turn off the product and unplug the power cord.**
  ►If you continue to use without taking proper measures, electrical shock or fire can occur. Contact the service center.
- **Do not drop an object on or apply impact to the product. Do not throw any toys or objects on the product screen.**
  ►It can cause injury to human, problem to product and damage the display.
- **Do not let the product fall or drop when connecting it with an external device.**
  ►This may cause injury and/or damage to the product.
- **When connecting it with a game device, keep a distance of four times as long as the diagonal measurement of the screen from the device.**
  ►If the product falls because of the short cable, this may cause injury and/or damage to the product.
- **Leaving a fixed image on the screen for a long time may cause damage to the screen and cause image burn-in. To use the product for a long period of time, use a screen saver on the PC or utilize the residual image prevention function on the product, and when the product is not used, turn off the power. Burn-in and related problems are not covered by the warranty on this product.**
- **Do NOT install this product on a wall where there is high risk of exposure to oil fumes or mist.**
  ►This may damage product and cause is to fail.

⚠ CAUTION
- **Make sure the product ventilation hole is not blocked. Install the product in a suitably wide place (more than 10cm from the wall)**
  ►If you install the product too close to the wall, it may be deformed or fire can break out due to internal heat.
- **Do not block the ventilation hole of the product by a tablecloth or curtain.**
  ►The product can be deformed or fire can break out due to overheating inside the product.
- **Install the product on a flat and stable place that has no risk of dropping the product.**
  ►If the product is dropped, you may be injured or the product may be broken.
- **Install the product where no EMI occurs.**
- **Keep the product away from direct sunlight.**
  ►The product can be damaged.

- **If you install the product in a place that does not meet the recommended conditions, this may cause serious damage to the product's picture quality, life cycle and appearance. Please check with LG or a qualified installer before installing. This caution applies to a place where there is an abundance of fine dust or oil mist, chemical substances are used, the temperature is very high or low, the humidity is very high, or the product is likely to remain turned on for a long period of time (airport and train station), failure to do so will invalidate the warranty.**
- **Do not install the product in an area with poor ventilation (e.g.on a bookshelf, in a closet) or outside and avoid placing on cushions or carpets.**
- **In addition, do not install it where there are heating objects such as lighting equipment.**

Precautions to the AC Adapter and Electrical Power

⚠ WARNING

- **If water or any foreign substance goes inside the product (TV, monitor, power cord, or AC adapter), disconnect the power cord immediately and contact the service center.**
  ►Otherwise, this may cause a fire or electric shock due to damage to the product.
- **Do not touch the power plug or AC adapter with wet hands. If the pins of the plug are wet or dusty, wipe and dry them before use.**
  ►Otherwise, this may cause a fire or electric shock.
- **Make sure to completely insert the power cord into the AC adapter.**
  ►If loosely connected, the poor connection may cause a fire or electric shock.
- **Be sure to use power cords and AC adapters provided or approved by LG Electronics, Inc.**
  ►The use of non-approved products may cause a fire or electric shock.
- **When unplugging the power cord, always pull it by the plug. Do not bend the power cord with excessive force.**
  ►The power line can be damaged, which may cause electric shock or fire.
- **Be careful not to step or place heavy objects (electronic appliances, clothing, etc.) on the power cord or AC adapter. Be careful not to damage the power cord or AC adapter with sharp objects.**
  ►Damaged power cords may cause a fire or electric shock.
- **Never disassemble, repair or modify the power cord or AC adapter.**
  ►This may cause a fire or electric shock.
- **Make sure to connect the power cable to the grounded current.**
  ►You may be electrocuted or injured.
- **Use the rated voltage only.**
  ►The product can be damaged, or you may be electrocuted.
- **In the presence of thunder and lightning, never touch the power cord and signal cable because it can be very dangerous.**
  ►It can cause electric shock.
- **Do not connect several extension cords, electrical appliances or electrical heaters to a single outlet. Use a power bar with a grounding terminal designed for exclusive use with the computer.**
  ►A fire can break out due to overheating.
- **Do not touch the power plug with wet hands. Additionally, if the cord pin is wet or covered with dust, dry the power plug completely or wipe dust off.**
  ►You may be electrocuted due to excess moisture.
- **If you don't intend to use the product for a long time, unplug the power cable from the product.**
  ►Covering dust can cause a fire, or insulation deterioration can cause electric leakage, electric shock or fire.
- **Fix the power cable completely.**
  ►If the power cable is not fixed completely, a fire can break out.
- **Do not insert a conductor (like a metal chopstick) into one end of the power cable while the other end is connected to the input terminal on the wall. Additionally, do not touch the power cable right after plugging into the wall input terminal.**
  ►You may be electrocuted.
- **The appliance coupler is used as the disconnect device.**

- **Please make sure the device is installed near the wall outlet to which it is connected and that the outlet is easily accessible.**
- **As long as this unit is connected to the AC wall outlet, it is not disconnected from the AC power source even if the unit is turned off.**

⚠ CAUTION

- **Be sure to keep the outlet, AC adapter, and pins of the power plug clean from dust and etc.**
  ►This may cause a fire.
- **Do not unplug the power cord while the product is in use.**
  ►Electrical shock can damage the product.
- **Use only the power cord supplied with the unit. If you use another power cord, make sure that it is certified by the applicable national standards when not provided by the supplier. If the power cable is faulty in any way, please contact the manufacturer or the nearest authorized repair service provider for a replacement.**

Precautions in Moving the Product

⚠ WARNING

- **Make sure to turn off the product.**
  ►You may be electrocuted or the product can be damaged.
- **Make sure to remove all cables before moving the product.**
  ►You may be electrocuted or the product can be damaged.
- **Make sure the panel faces forward and hold it with both hands to move. If you drop the product, the damaged product can cause electric shock or fire. Contact an authorized the service center for repair.**
- **Make sure the product is turned off, unplugged and all cables have been removed. It may take 2 or more people to carry larger apparatus. Do not press against or put stress on the front panel of the apparatus.**

⚠ CAUTION

- **Do not shock the product when moving it.**
  ►You may be electrocuted or the product can be damaged.
- **Do not dispose the product-packing box. Use it when you move.**

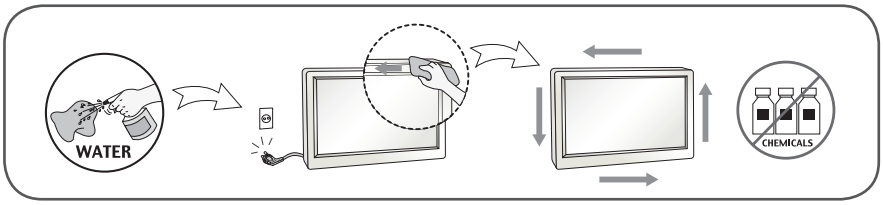
Precautions in Using the Product

⚠ WARNING

- **Do not disassemble, repair or modify the product at your own discretion.**
  ►Fire or electric shock accident can occur.
  ►Contact the service center for check, calibration or repair.
- **When the display is to be left unattended for an extended period of time, unplug it from the wall outlet.**
- **Keep the product away from water.**
  ►Fire or electric shock accident can occur.
- **Do not shock or scratch the front and sides of the screen with metallic objects.**
  ►Otherwise, it may cause damage to the screen.
- **Avoid high temperatures and humidity.**

⚠ CAUTION

- **Do not put or store inflammable substances near the product.**
  ►There is a danger of explosion or fire due to careless handling of the inflammable substances.
- **When cleaning the product, unplug the power cord and scrub gently with a soft cloth to prevent scratching. Do not clean with a wet cloth or spray water or other liquids directly onto the product. An electric shock may occur. (Do not use chemicals such as benzene, paint thinners or alcohol)**
- **Take a rest from time to time to protect your vision.**
- **Keep the product clean at all times.**
- **Take a comfortable and natural position when working with a product to relax the muscles.**
- **Take a regular break when working with a product for a long time.**
- **Do not press strongly upon the panel with a hand or sharp object such as nail, pencil or pen, or make a scratch on it.**
- **Keep the proper distance from the product.**
  ►Your vision may be impaired if you look at the product too closely.
- **Set the appropriate resolution and clock by referring to the User's Guide.**
  ►Your vision can be impaired.
- **Use authorized detergent only when cleaning the product. (Do not use benzene, thinner or alcohol.)**
  ►Product can be deformed.
- **Do not expose to dripping or splashing and do not place objects filled with liquids, such as vases, cups, etc. on or over the apparatus(e.g. on shelves above the unit).**
- **Batteries should not be exposed to excessive heat. For example, keep away from direct sunlight, open fireplace and electric heaters.**
- **Do NOT place non-rechargeable batteries in charging device.**
- **Using headsets (earphones) for a long time or listening loudly can cause damage to your hearing.**
- **Spray water onto a soft cloth 2 to 4 times, and use it to clean the front frame; wipe in one direction only. Too much moisture may cause staining.**



- **Do not use products using high voltage around the Monitor. (ex.Electrical Swatter)**
  ►Monitor may have malfunction as its electrical shock.

Mounting on a wall

- **Do not install this product by yourself. Contact the service technician qualified by the Manufacturer. It may cause injuries.**

LICENSES

Supported licenses may differ by model. For more information of the licenses, visit *www.lg.com.*

The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

This DivX Certified® device has passed rigorous testing to ensure it plays DivX® video.

To play purchased DivX movies, first register your device at *vod.divx.com*. Find your registration code in the DivX VOD section of your device setup menu.

DivX Certified® to play DivX® video up to HD 1080p, including premium content.

DivX®, DivX Certified® and associated logos are trademarks of DivX, LLC and are used under license.

Covered by one or more of the following U.S. patents:

7,295,673; 7,460,668; 7,515,710; 8,656,183; 8,731,369; RE45,052.

Manufactured under license from Dolby Laboratories. Dolby and the double-D symbol are trademarks of Dolby Laboratories.

NOTE

- The warranty will not cover any damages caused by using the product in an excessively dusty environment.

ASSEMBLING AND PREPARING

Accessories

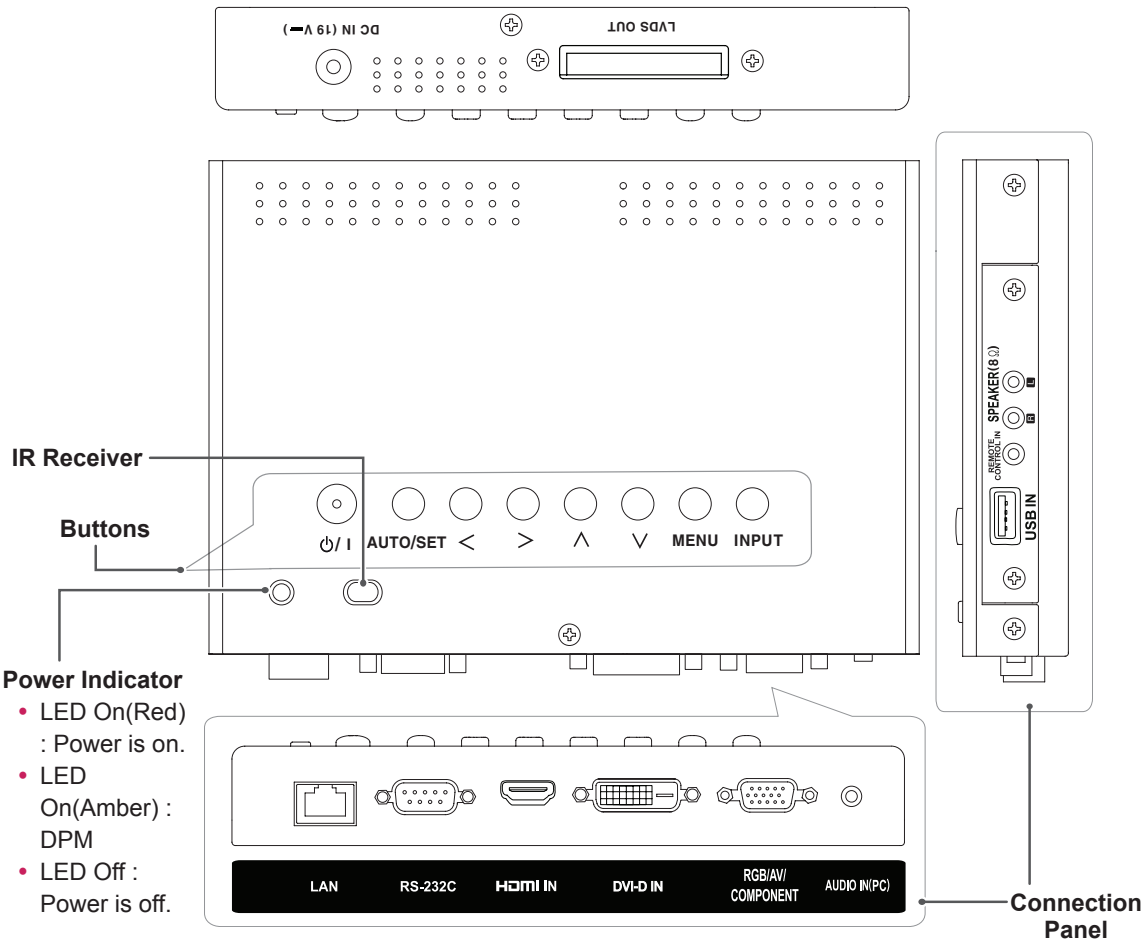
CAUTION

- Do not use any pirated items to ensure the safety and product life span.
- Any damages or injuries by using pirated items are not covered by the warranty.
- Risk of explosion if battery is replaced by an incorrect type.
- Dispose of used batteries according to the instructions.

NOTE

- The accessories supplied with your product may vary depending on the model.
- Product specifications or contents in this manual may be changed without prior notice due to upgrade of product functions.
- SuperSign SW & Manual
  - Downloading from the LG Electronics website.
  - Visit the LG Electronics website (*https://www.lgecommercial.com/supersign*) and download the latest software for your model.

Parts and Buttons



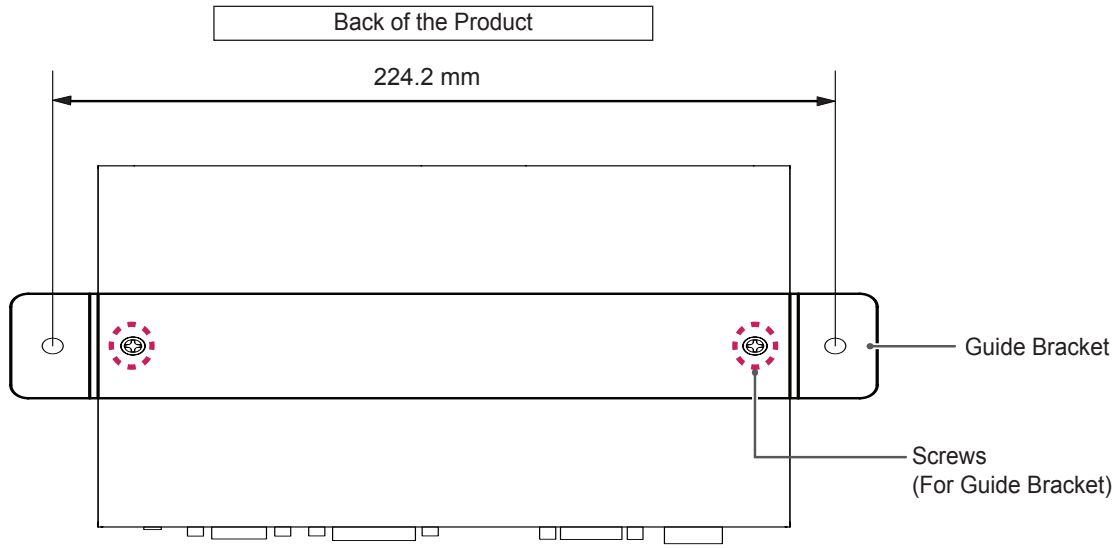
Screen Marks	Description
⏻ / I	Turns the power on or off.
AUTO/SET	Displays the current signal and mode. Press this button to adjust the screen automatically (available only in RGB mode)
< >	Adjusts the volume level.
∧ ∨	Adjusts the up and down.
MENU	Accesses the main menus, or saves your input and exits the menus.
INPUT	Changes the input source.
IR Receiver	This is where the unit receives signals from the remote control.
Power Indicator	Turns red when the TSP500 set is turned on; turns amber when it is in Energy Saving mode.

NOTE

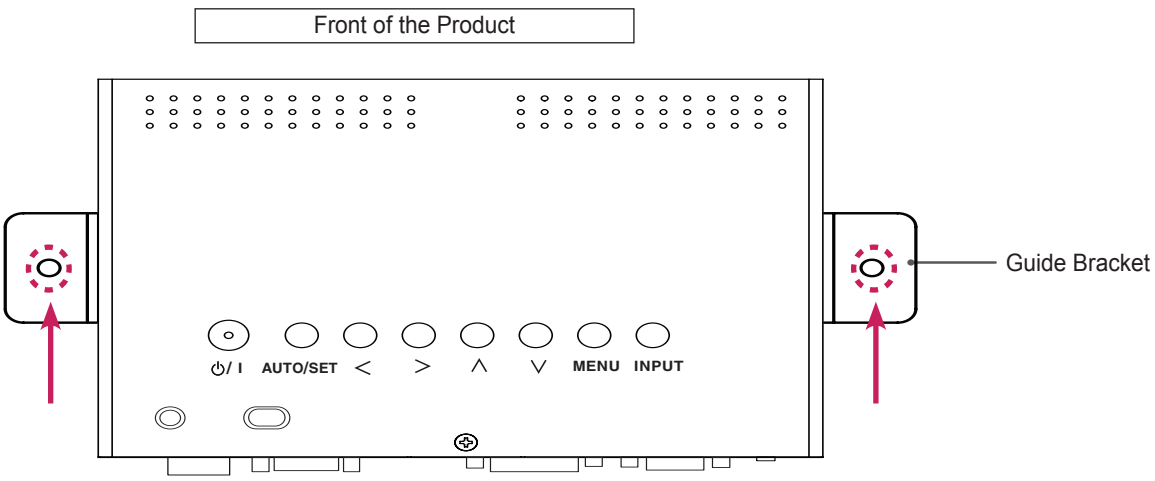
- You can set the Power indicator to on or off by selecting **OPTION** in the main menu.

Installing the Guide Brackets

1 Install the guide brackets to the set using the screws supplied as accessories.



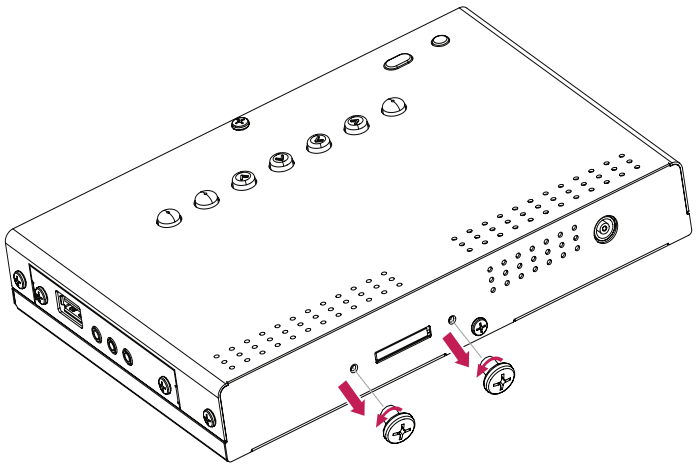
2 Fix the set with the guide brackets installed using the screws supplied as accessories.



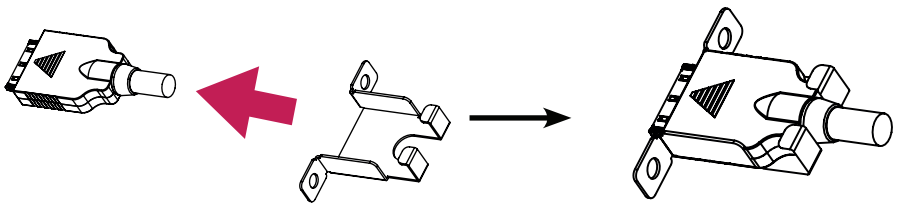
PRODUCT INSTALLATION

TSP500-M LVDS connection

1 Unscrew two screws to assemble LVDS cable and Holder. Don’t throw away the screws.



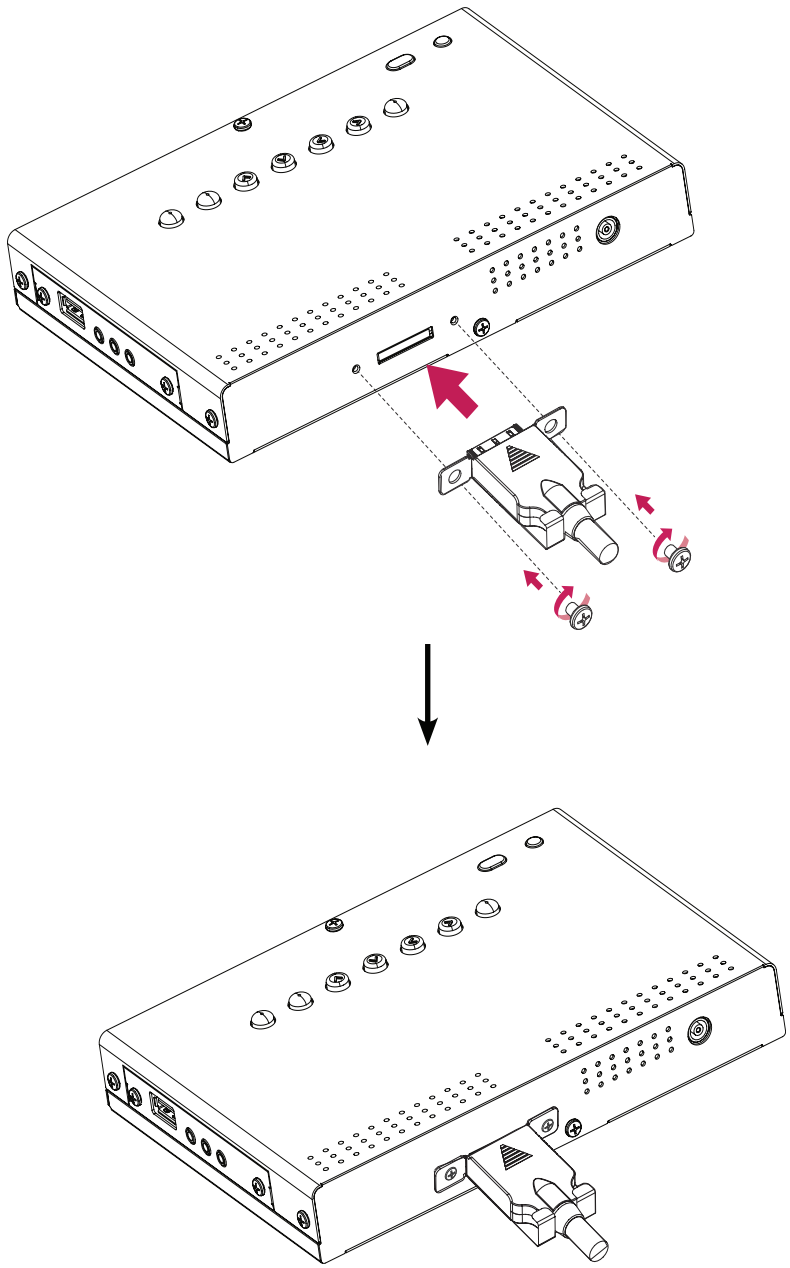
2 Put a LVDS cable in a holder. Cable head has to be properly oriented.



CAUTION

- To prevent the cable from being separated, you must use a holder.
- Check the direction of the LVDS cable to prevent damage to the cable.

3 Attach LVDS cable and holder to TSP500 with two screws saved in step 1.

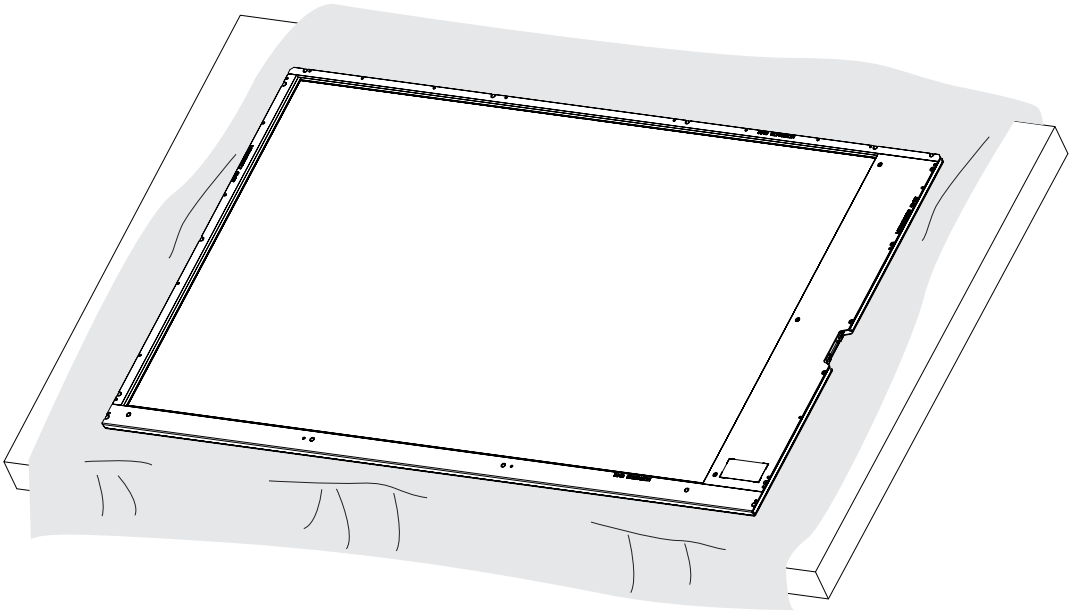


CAUTION

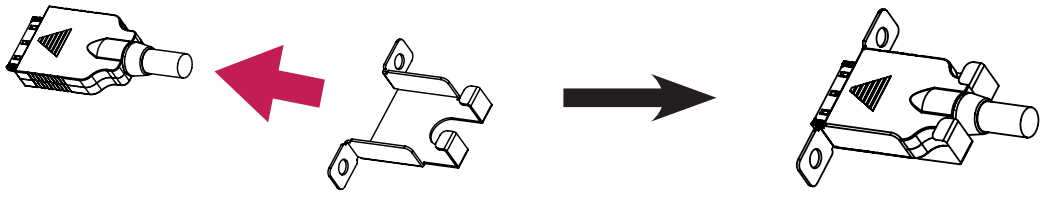
- To prevent the cable from being separated, you must use a holder.
- Check the direction of the LVDS cable to prevent damage to the cable.

47/55WFB LVDS connection

1 Place a soft cloth on the table and put the set on it as illustrated.



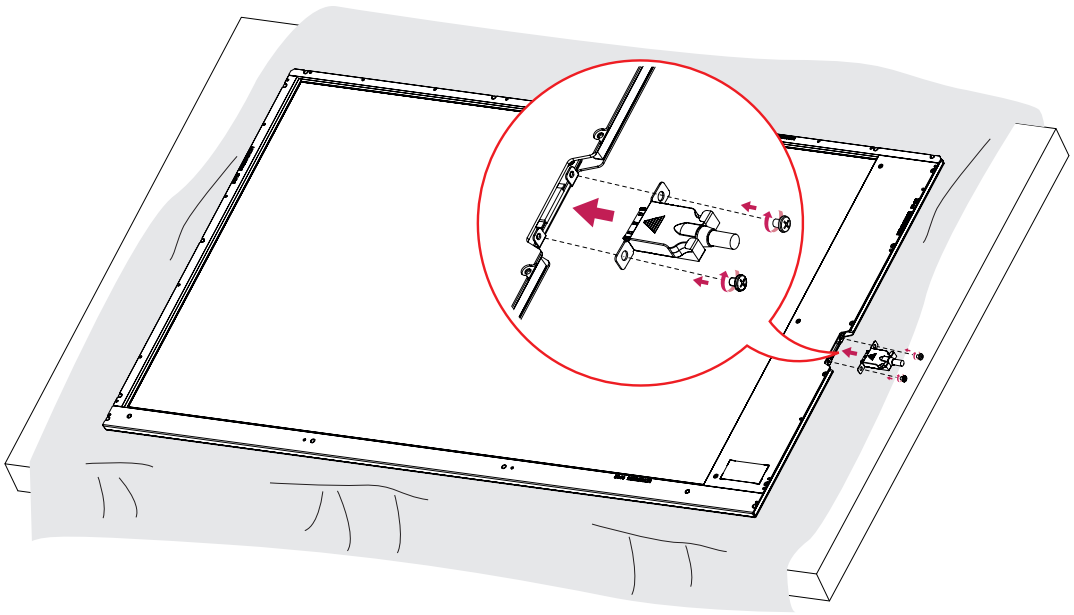
2 Put a LVDS cable in a holder. Cable head has to be properly oriented.



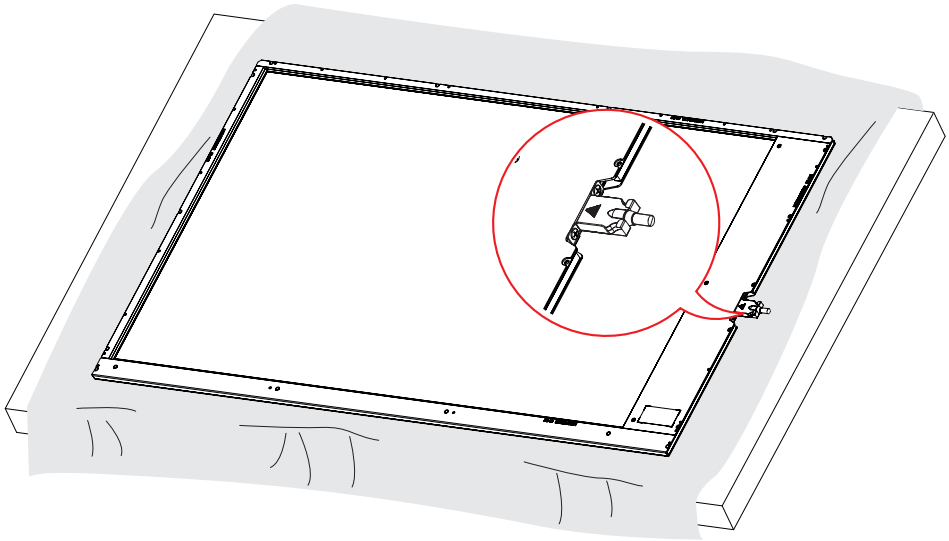
CAUTION

- To prevent the cable from being separated, you must use a holder.
- Check the direction of the LVDS cable to prevent damage to the cable.

3 Attach LVDS cable and holder to the set with two screws. (These screws are included with TSP500-M.)



4 Cable head has to be toward set back. (Label is located on set back.)

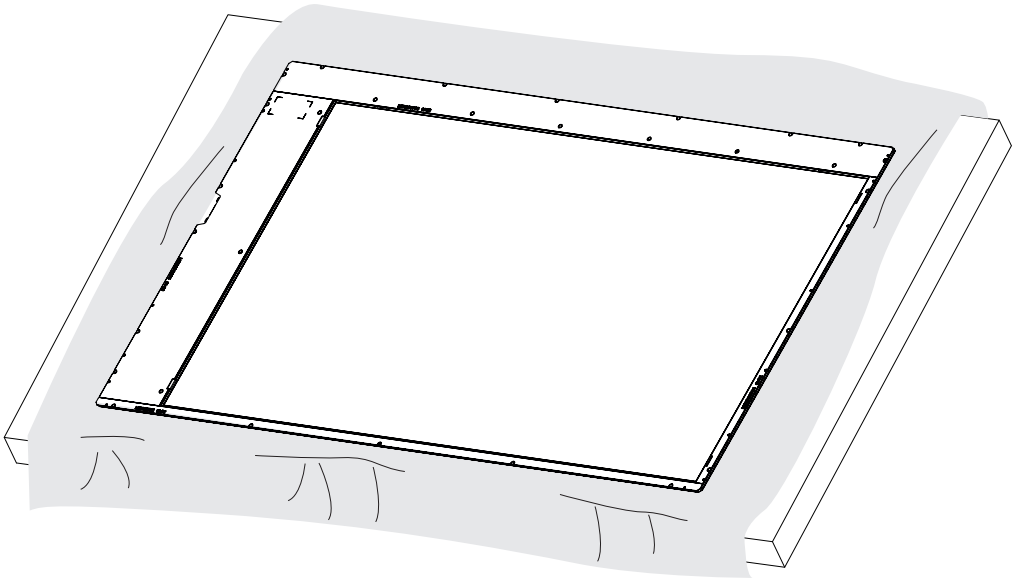


CAUTION

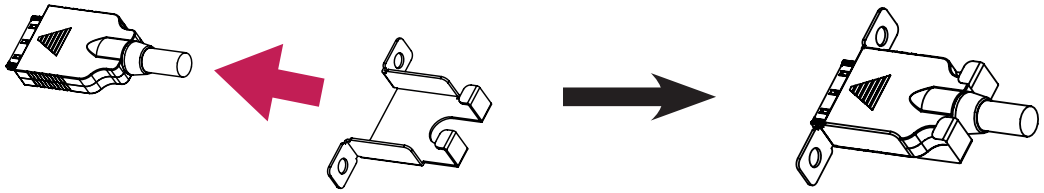
- To prevent the cable from being separated, you must use a holder.
- Check the direction of the LVDS cable to prevent damage to the cable.

49WFB LVDS connection

1 Place a soft cloth on the table and put the set on it as illustrated.



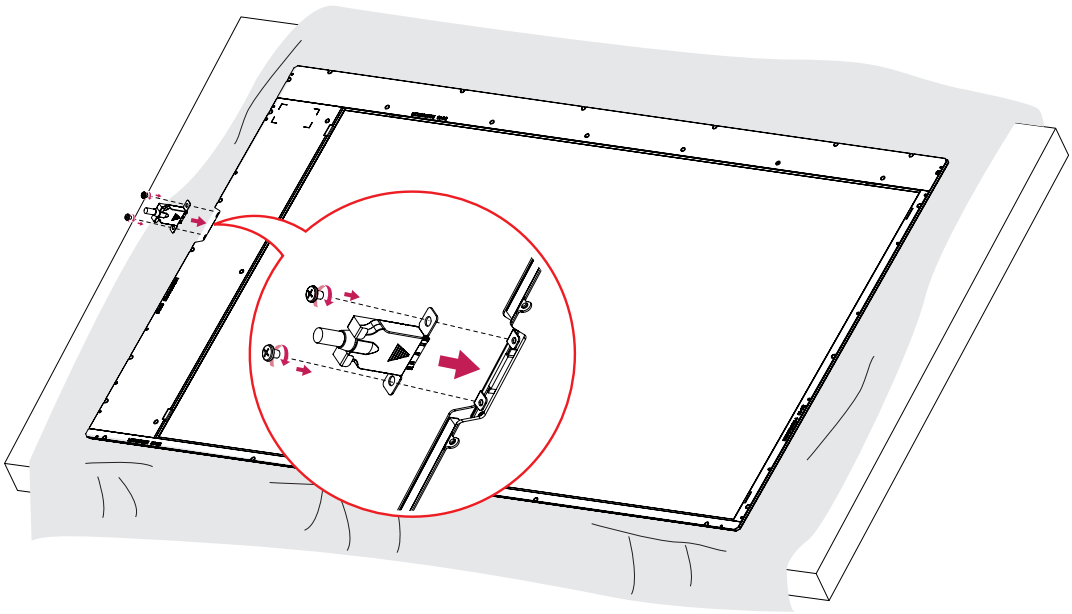
2 Put a LVDS cable in a holder. Cable head has to be properly oriented.



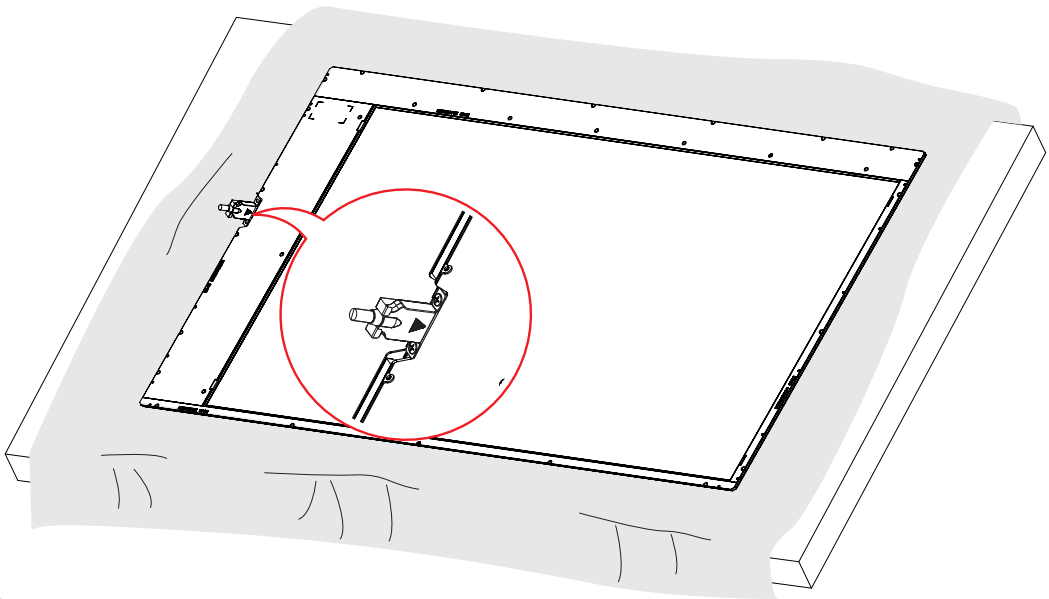
CAUTION

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4 Cable head has to be toward set back. (Label is located on set back.)



CAUTION

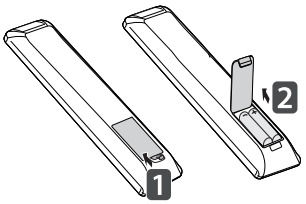
- To prevent the cable from being separated, you must use a holder.
- Check the direction of the LVDS cable to prevent damage to the cable.

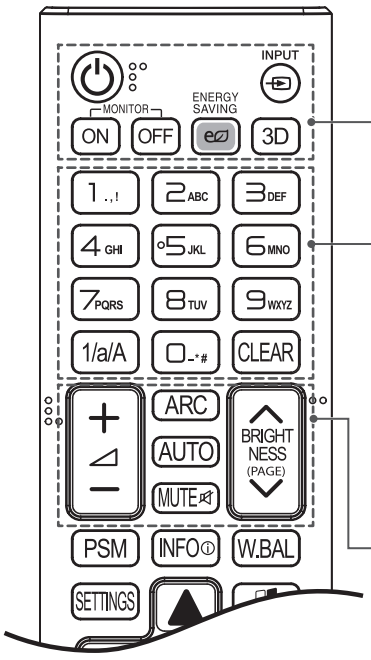
REMOTE CONTROL

The descriptions in this manual are based on the buttons of the remote control. Please read this manual carefully and use the TSP500 set correctly.
To replace batteries, open the battery cover, replace batteries (1.5 V AAA) matching ⊕ and ⊖ ends to the label inside the compartment, and close the battery cover.
To remove the batteries, perform the installation actions in reverse.

CAUTION

- Do not mix old and new batteries, as this may damage the remote control.
- Make sure to point the remote control to the remote control sensor on the TSP500 set.

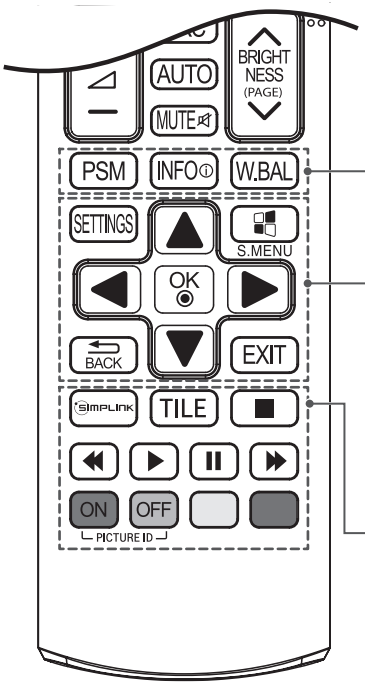




⏻ **(POWER)** Turns the TSP500 set on or off.
MONITOR ON/OFF Turn off the TSP500 and then turn it back on.
ENERGY SAVING Adjusts the brightness of the picture to reduce energy consumption.
INPUT Selects the input mode.
3D Used for viewing 3D videos. (This model does not support this.)

1/a/A Toggles between numerical and alphabetical. (Depending upon the model, this feature may not be supported.)
Number and Alphabet buttons
Enters numerical or alphabetical characters depending upon the setting. (Depending upon the model, this feature may not be supported.)
CLEAR Deletes the entered numerical or alphabetical character. (Depending upon the model, this feature may not be supported.)

Volume Up/Down Button Adjusts the volume.
ARC Selects the Aspect Ratio mode.
AUTO Automatically adjusts picture position and minimizes image instability (available for RGB input only).
MUTE Mutes all sounds.
BRIGHTNESS Adjust the brightness by pressing the Up and Down buttons on the remote control. In USB mode, the OSD menu has the Page function to move to the next file list.



PSM Selects the Picture Mode.
INFO Views the information of the currently program and the screen.
W.BAL Enters the White Balance menu. (This model does not support this.)

SETTINGS Accesses the main menus or saves your input and exit menus.
S.MENU SuperSign menu key. (This model does not support this.)
Navigation Buttons Scrolls through menus or options.
OK Selects menus or options and confirms your input.
BACK Allows you to move back one step in the user interaction function.
EXIT Quit all OSD tasks and applications.

SIMPLINK Allows you to control various multimedia devices to enjoy multimedia simply by using the remote control through the SimpLink menu. (This model does not support this.)
TILE Selects the TILE Mode.
PICTURE ID ON/OFF When the Picture ID number matches the Set ID number, you can control whichever monitor you want in multi-display format.
USB Menu Control Buttons Controls media playback.

USING THE TSP500 SET

Connecting to a PC

The TSP500 does not include the monitor. You can connect TSP500 to a transparent open frame (model: 47/49/55WFB) to view the picture on it.

Your TSP500 set supports the Plug & Play* feature.

* Plug & Play: A PC will have a built-in driver for TSP500, no extra software is needed.

NOTE

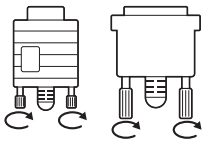
- It is recommended to use the TSP500 set with an HDMI connection for the best image quality.
- To comply with the specifications of the product, use a shielded interface cable with ferrite core, such as the D-sub 15 pin cable and DVI-D/HDMI cable provided with the product.
- If you turn the TSP500 set on when the TSP500 is cold, the screen may flicker. This is normal.
- Some red, green, or blue spots may appear on the screen. This is normal.



- Use the standard Macintosh adapter since an incompatible adapter is available in the market. (Different signaling system)
- Apple computers may require an adapter to connect to this TSP500. Call or visit their web site for more information.

- Use a High Speed HDMI®/™ Cable.
- Please check the PC environment if you cannot hear audio in HDMI mode. Some PCs require you to manually change the default audio output to HDMI.
- If you want to use HDMI-PC mode, you must set the input label to PC/DTV mode.
- When HDMI PC is used, a compatiblity problem might occur.
- Use a certified cable with the HDMI logo attached. If you do not use a certified HDMI cable, the screen may not display or a connection error may occur.
- Recommended HDMI cable types
  - High-Speed HDMI®/™ cable
  - High-Speed HDMI®/™ cable with Ethernet

CAUTION



- Connect the signal input cable and tighten it by turning the screws clockwise.
- Do not press the screen with your finger for a long time as this may result in temporary distortion on the screen.
- Avoid displaying a fixed image on the screen for a long period of time to prevent image burn. Use a screensaver if possible.

Adjusting the Screen

Selecting an Image Mode

Display images in its optimized settings by selecting one of the preset image modes.

1 Press **SETTINGS** to access the main menus.

2 Press the Navigation buttons to scroll to **PICTURE** and press **OK**.

3 Press the Navigation buttons to scroll to **Picture Mode** and press **OK**.

4 Press the Navigation buttons to scroll to an image mode you want and press **OK**.

Mode	Description
Vivid	Adjusts the video image for a retail environment by enhancing the contrast, brightness, color, and sharpness.
Standard	Adjusts the image for a normal environment.
Cinema	Optimizes the video image for a cinematic look to enjoy movies as if you are in a movie theater.
Sport	Optimizes the video image for high and dynamic actions by emphasizing primary colors such as white, grass, or sky blue.
Game	Optimizes the video image for a fast gaming screen such as PCs or games.

5 When you are finished, press **EXIT**.

When you return to the previous menu, press **BACK**.

Customizing Image Options

Customize basic and advanced options of each image mode for the best screen performance.

1 Press **SETTINGS** to access the main menus.

2 Press the Navigation buttons to scroll to **PICTURE** and press **OK**.

3 Press the Navigation buttons to scroll to **Picture Mode** and press **OK**.

4 Press the Navigation buttons to scroll to an image mode you want and press **OK**.

5 Select and adjust the following options, and then press **OK**.

Option	Description
Contrast	Increases or decreases the gradient of the video signal. You may use Contrast when the bright part of the picture is saturated.
Brightness	Adjusts the base level of the signal in the picture. You may use Brightness when the dark part of the picture is saturated.
Sharpness	Adjusts the level of crispness in the edges between the light and dark areas of the picture. The lower the level, the softer the image.
Color	Adjusts intensity of all colors.
Tint	Adjusts the balance between red and green levels.
Color Temp.	Set to warm to enhance hotter Colors such as red, or set to cool to make picture bluish.
Advanced Control	Customizes the advanced options. Refer to the Advanced image options.
Picture Reset	Restores the options to the default setting.

6 When you are finished, press **EXIT**.

When you return to the previous menu, press **BACK**.

Customizing PC Display Options

Customize options of each image mode for the best image quality.

- This function works in the following mode: RGB[PC] mode.

1 Press **SETTINGS** to access the main menus.

2 Press the Navigation buttons to scroll to **PICTURE** and press **OK**.

3 Press the Navigation buttons to scroll to **Screen** and press **OK**.

4 Select and adjust following options, and then press **OK**.

Option	Description
Resolution	Selects a proper resolution.
Auto Config.	Sets to adjust the screen position, clock, and phase automatically. The displayed image may be unstable for a few seconds while the configuration is in progress.
Position/ Size/Phase	Adjusts the options when the picture is not clear, especially when characters are shaky, after the auto configuration.
Reset	Restores the options to the default setting.

5 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

Adjusting the Sound

Selecting an Sound Mode

Play the sound in its optimized settings by selecting one of the preset sound modes.

1 Press **SETTINGS** to access the main menus.

2 Press the Navigation buttons to scroll to **AUDIO** and press **OK**.

3 Press the Navigation buttons to scroll to **Sound Mode** and press **OK**.

4 Press the Navigation buttons to scroll to a sound mode you want and press **OK**.

Mode	Description
Standard	Select when you want standard-quality sound.
Music	Select when you listen to music.
Cinema	Select when you watch movies.
Sports	Select when you watch sports events.
Game	Select when you play games.

5 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

Customizing Sound Options

Customize options of each sound mode for the best sound quality.

1 Press **SETTINGS** to access the main menus.

2 Press the Navigation buttons to scroll to **AUDIO** and press **OK**.

3 Press the Navigation buttons to scroll to **Sound Mode** and press **OK**.

4 Press the Navigation buttons to scroll to a sound mode you want and press **OK**.

5 Select and adjust following options, and then press **OK**.

Option	Description
Infinite Sound	LG's Infinity Sound option provides 5.1 channel stereo sound quality from two speakers.
Treble	Increases the intensity of the high frequency part of audio.
Bass	Increases the intensity of the low frequency part of audio.
Reset	Resets the sound mode to the default setting.

6 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

Using Additional Options

Adjusting Aspect Ratio

Resize the image to view the image at its optimal size by pressing **ARC** while you are watching the display set.

CAUTION

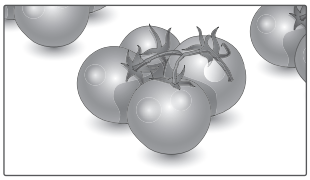
- If a fixed image displays on the screen for a long period of time, it could be imprinted and become a permanent disfigurement on the screen. This is “image burn” or “burn-in” and not covered by the warranty.
- If the aspect ratio is set to 4:3 for a long period of time, image burn may occur on the letterboxed area of the screen.

NOTE

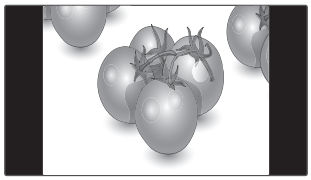
- You can also change the image size by accessing the main menus.

MODE / ARC	AV	Component	RGB	DVI-D	HDMI	
			PC	PC	DTV	PC
16:9	o	o	o	o	o	o
Just Scan	x	o	x	x	o	x
1:1	x	x	o	o	x	o
4:3	o	o	o	o	o	o
Zoom	o	o	x	x	o	x
Cinema Zoom	o	o	x	x	o	x

- **16:9** : This selection will allow you to adjust the picture horizontally, in linear proportion, to fill the entire screen(useful for viewing 4:3 formatted DVDs).



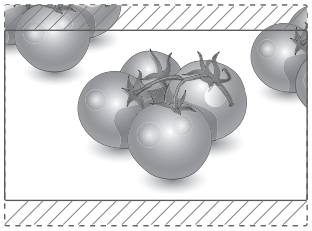
- **4:3** : This selection will allow you to view a picture with an original 4:3 aspect ratio, black bars will appear on both the left and right of the screen.



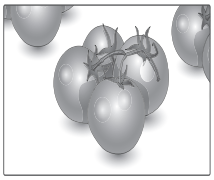
- **Just Scan** : This Selection will allow you view the picture of best quality without loss of original picture in high resolution image.
  Note: If there is noise in original Picture, You can see the noise at the edge.



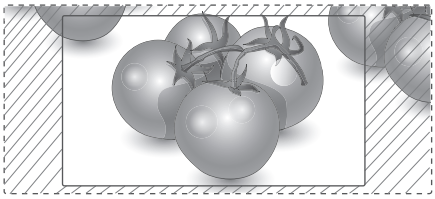
- **Zoom** : This selection will allow you to view the picture without any alteration, while filling the entire screen. However, the top and bottom of the picture will be cropped.



- **1:1** : The aspect ratio is not adjusted from the original. (Only HDMI PC, DVI-D PC, RGB PC)



- **Cinema Zoom** : Choose Cinema Zoom when you want to enlarge the picture in correct proportion.
  Note: When enlarging or reducing the picture, the image may become distorted.



Using the Input List

Selecting an Input Source

1 Press **INPUT** to access the input source list.

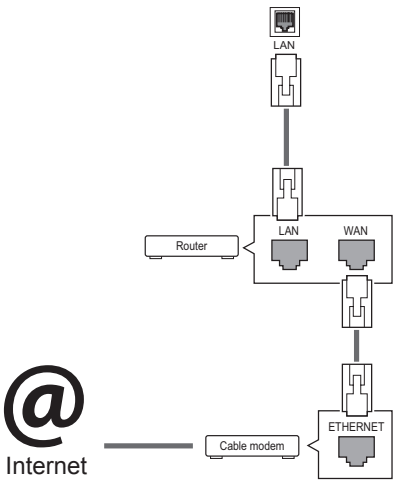
2 Press the Navigation buttons to scroll to one of the input sources and press **OK**.

Input source	Description
AV(CVBS)	Watch video from a VCR or other external devices.
Component	Watch the content from a DVD or other external devices, or through a digital set-top box.
RGB	View a PC display on the screen.
DVI-D	Watch contents from a PC, DVD of Digital set-top box other high definition devices.
HDMI	Watch contents from a PC, DVD of Digital set-top box other high definition devices.
USB	Plays the multimedia file saved in the USB.

ENTERTAINMENT

Connecting to a Wired Network

Connect the display to a local area network (LAN) via the LAN port as shown on the following illustration and set up the network settings.
It only supports wired network connection. After making a physical connection, a small number of networks may require the display network settings to be adjusted. For most networks, the display will connect to automatically without any adjustments. For detail information, contact your internet provider or router manual.



To set up the network settings: (Even if your display has already connected automatically, running setup again will not harm anything),

1. Press **SETTINGS** to access the main menus.
2. Press the Navigation buttons to scroll to **NETWORK** and press **OK**.
3. Press the Navigation buttons to select **Network Setting** and press **OK**.
4. If you already set Network Setting, select **Resetting**. The new connection settings resets the current network settings.
5. Select **IP Auto Setting** or **IP Manual Setting**.
   - If selecting **IP Manual Setting**, press the Navigation and Number buttons. IP addresses will need to be input manually.
   - **IP Auto Setting**: Select this if there is a DHCP server (Router) on the local area network (LAN) via wired connection, the display will automatically be allocated an IP address. If you're using a broadband router or broadband modem that has a DHCP (Dynamic Host Configuration Protocol) server function. The IP address will automatically be determined.
6. When you are finished, press **EXIT**.

CAUTION

- Do not connect a modular phone cable to the LAN port.
- Since there are various connection methods, please follow the specifications of your telecommunication carrier or internet service provider.

CAUTION

- Network setting menu will not be available until the display connected to physical network.
- Since there are various connection methods, please follow the specifications of your telecommunication carrier or internet service provider.

NOTE

- If you want to access the Internet directly on your display, the internet connection should always be on.
- If you cannot access the Internet, check the network conditions from a PC on your network.
- When you use **Network Setting**, check the LAN cable or check if DHCP in the router is turned on.
- If you do not complete the network settings, the network may not work properly.

Tips for Network Setting

- Use a standard LAN cable with this display. Cat5 or better with a RJ45 connector.
- Many network connection problems during set up can often be fixed by re-setting the router or modem. After connecting the display to the network, quickly power off and/or disconnect the power cable of the network router or cable modem. Then power on and/or connect the power cable again.
- Depending on the internet service provider (ISP), the number of devices that can receive internet service may be limited by the applicable terms of service. For details, contact your ISP.
- LG is not responsible for any malfunction of the display and/or the internet connection feature due to communication errors/malfunctions associated with your internet connection, or other connected equipment.
- LG is not responsible for problems within your internet connection.
- You may experience undesired results if the network connection speed does not meet the requirements of the content being accessed.
- Some internet connection operations may not be possible due to certain restrictions set by the Internet service provider (ISP) supplying your Internet connection.
- Any fees charged by an ISP including, without limitation, connection charges are your responsibility.
- A 10 Base-T or 100 Base-TX LAN port is required when using a wired connection to this display. If your internet service does not allow for such a connection, you will not be able to connect the display.
- A DSL modem is required to use DSL service and a cable modem is required to use cable modem service. Depending on the access method of and subscriber agreement with your ISP, you may not be able to use the internet connection feature contained in this display or you may be limited to the number of devices you can connect at the same time. (If your ISP limits sub-scription to one device, this display may not be allowed to connect when a PC is already connected.)
- The use of a “Router” may not be allowed or its usage may be limited depending on the policies and restrictions of your ISP. For details, contact your ISP directly.

Network Status

1 Press **SETTINGS** to access the main menus.

2 Press the Navigation buttons to scroll to **NETWORK** and press **OK**.

3 Press the Navigation buttons to select **Network Status**.

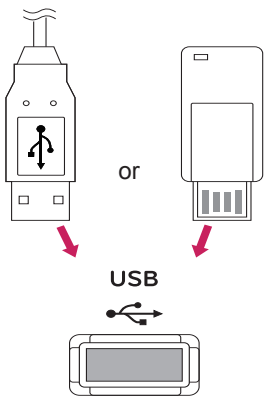
4 Press **OK** to check the network status.

5 When you are finished, press **EXIT**.

Option	Description
Setting	Return to the network setting menu.
Test	Test the current network status after setting the network.
Close	Return to the previous menu.

Connecting USB Storage Devices

Connect USB storage devices such as a USB flash memory or external hard drive to the display to use multimedia features.
Connect a USB flash memory or USB memory card reader to the Display as shown in the following illustration. The My media screen appears.



CAUTION

- Do not turn the display off or remove a USB storage device while the EMF(my media) Menu is activated, as this could result in loss of files or damage to the USB storage device.
- Back up your files saved on a USB storage device frequently, as you may lose or damage the files and this may be not covered by the warranty.

Tips for Using USB Storage Devices

- Only a USB storage device is recognizable.
- If the USB storage device is connected through a USB hub, the device is not recognizable.
- A USB storage device using an automatic recognition program may not be recognized.
- A USB storage device which uses its own driver may not be recognized.
- The recognition speed of a USB storage device may depend on each device.
- Please do not turn off the display or unplug the USB device when the connected USB storage device is working. When such device is suddenly separated or unplugged, the stored files or the USB storage device may be damaged.
- Please do not connect the USB storage device which was artificially maneuvered on the PC. The device may cause the product to malfunction or fail to be played. Only use a USB storage device which has normal music files, image files or movie files.
- Please only use a USB storage device which was formatted as a FAT32 file system, NTFS file system provided with the Windows operating system. In case of a storage device formatted as a different utility program which is not supported by Windows, it may not be recognized.
- Please connect power to a USB storage device(over 0.5 A) which requires an external power supply. If not, the device may not be recognized.
- Please connect a USB storage device with the cable offered by the device maker.
- Some USB storage devices may not be supported or operated smoothly.
- File alignment method of USB storage device is similar to Window XP and filename can recognize up to 100 English characters.
- Be sure to back up important files since data stored in a USB memory device may be damaged. We will not be responsible for any data loss.

- If the USB HDD does not have an external power source, the USB device may not be detected. So be sure to connect the external power source.
  - Please use a power adaptor for an external power source. We do not guarantee an USB cable for an external power source.
- If your USB memory device has multiple partitions, or if you use a USB multi-card reader, you can use up to 4 partitions or USB memory devices.
- If a USB memory device is connected to a USB multi-card reader, its volume data may not be detected.
- If the USB memory device does not work properly, disconnect and reconnect it.
- How fast a USB memory device is detected differs from device to device.
- If the USB is connected in Standby Mode, specific hard disk will automatically be loaded when the display is turned on.
- The recommended capacity is 1 TB or less for a USB external hard disk and 32 GB or less for USB memory.
- Any device with more than the recommended capacity may not work properly.
- If a USB external hard disk with a “Energy Saving” function does not work, turn the hard disk off and on again to make it work properly.
- USB storage devices below USB 2.0 are supported as well. But they may not work properly in the movie list.
- Maximum of 999 folders or files can be recognized under one folder.
- A USB 3.0 storage device may not work.

Browsing Files

Access the photo, music, or movie lists and browse files.

1. Connect a USB storage device.
2. Press **SETTINGS** to access the main menus.
3. Press the Navigation buttons to scroll to **My Media** and press **OK**.
4. Press the Navigation buttons to choose from **Movie List, Photo List**, **Music List** or **Contents List** and press **OK**.

Supported File Format

Type	Supported file format
Movie	**DAT,MPG,MPEG,VOB,AVI,DIVX,MP4,MKV,TS,TRP,TP,ASF,WMV,FLV)** **Movie**(*.mpg/*.mpeg/*dat/*.ts/*.trp/*.tp/*.vob/ *.mp4/*.mov/*.mkv/*.divx/*.avi/*.asf/*.wmv/*.flv/ *.avi(motion-jpeg)/*. mp4(motion-jpeg)/ *.mkv(motion-jpeg))supporting file **Video format** : DivX 3.11, DivX4, DivX5, DivX6 Xvid1.00, Xvid1.01, Xvid1.02, Xvid1.03, Xvid1.10 beta-1/beta-2, Mpeg-1, Mpeg-2, Mpeg-4, H.264/AVC, VC1, JPEG, Sorenson H.263 **Audio format** : Dolby Digital, AAC, Mpeg, MP3, LPCM, HE-AAC, ADPCM, WMA **Bit rate** : within 32 kbps to 320 kbps(MP3) **External Subtitle format** : *.smi/*.srt/*.sub(MicroDVD,Subviewer1.0/2.0)/*.ass/*.ssa/ *.txt(TMPlayer)/*.psb(PowerDivX) **Internal Subtitle format** : only, XSUB (It is the subtitle format used in DivX6 files)
Photo	JPEG Baseline : 64 x 64 to 15360 x 8640 Progressive : 64 x 64 to 1920 x 1440 • You can play JPEG files only. • Non-supported files are displayed in the form of predefined icon.
Music	MP3 Bit rate 32 to 320 • Sampling rate MPEG1 Layer3 : 32 kHz, 44.1 kHz, 48 kHz • Sampling rate MPEG2 Layer3 : 16 kHz, 22.05 kHz, 24 kHz • Sampling rate MPEG2.5 Layer3 : 8 kHz, 11.025 kHz, 12 kHz

Type	Supported file format			
Content (when using SuperSign Manager)	File Extensions : *.cts/ *.cse Movie **File Extensions**: *.mpg/*.mpeg/*.dat/*.ts/ *.trp/*.tp/*.vob/*.mp4/*.mov/*.mkv/*.avi/*.asf/ *.wmv/*.avi(motion JPEG)/*.mp4(motion JPEG)/ *.mkv(motion JPEG) **Video format**: MPEG1, MPEG2, MPEG4,H.264/AVC, DivX 3.11, DivX4, DivX5. DivX6 Xvid 1.00, Xvid 1.01, Xvid 1.02, Xvid 1.03,Xvid 1.10-beta1/2, JPEG, VC1(WVC1/WMV3) **Audio format**: MP2,MP3,Dolby Digital, LPCM, AAC, HE-AAC,LPCM, ADPCM, WMA, MP3			
		File Extensions	Item	Profile
	Photo	JPEG JPG BMP	supported file format	SOF0: baseline SOF1: Extend Sequential SOF2: Progressive
			Photo size	Min: 64 x 64 Max Type: 1366 x 768
	Music	MP3	Bit rate	32 kbps to 320 kbps
			Sampling rate	32 kHz, 44.1 kHz, 48 kHz (MPEG1 L3) 16 kHz, 22.05 kHz, 24 kHz (MPEG2 L3) 8 kHz, 11.025 kHz, 12 kHz (MPEG2.5 L3)

Viewing Movies

Play video files on display. Your display shows all of the video files saved in a USB storage device or shared folder on a PC.

1 Press the Navigation buttons to scroll to **My Media** and press **OK**.

2 Press the Navigation buttons to scroll to **Movie List** and press **OK**.

3 Press the Navigation buttons to scroll to a folder you want and press **OK**.

4 Press the Navigation buttons to scroll to a file you want and press **OK**.

Menu	Description
Play Marked	Play the selected movie file. Once a movie file finishes playing, the next selected one will be played automatically.
Mark All	Mark all movie files on the screen.
Unmark All	Deselect all marked movie files.
Exit Mark Mode	Exit the Mark Mode.

5 Play a movie.

NOTE

- Non-supported files are displayed the preview image by icon only ⚠.
- Abnormal files are displayed in the form of bitmap ⓧ.

6 Control playback by using the following buttons.

Button	Description
■	Stops the playback.
▶	Plays a video.
❚❚	Pauses or resumes the playback.
◀◀	Scans backward in a file.
▶▶	Scans forward in a file.
MENU	Show the **Option** menu.
HIDE	Hide the menu on the full-sized screen.
EXIT	Return to **Movie List**.
< or >	Skips to specific points in a file during playback. The time of a specific point will appear on the status bar. In some files, this function may not work properly.
ENERGY SAVING	Adjusts the screen brightness to save energy. *Backlight function is not supported.

Tips for Using Playing Video Files

- Some user-created subtitles may not work properly.
- Some special characters are not supported in subtitles.
- HTML tags are not supported in subtitles.
- Subtitles in languages other than the supported languages are not available.
- The screen may suffer temporary interruptions (image stoppage, faster playback, etc.) when the audio language is changed.
- A damaged movie file may not be played correctly, or some player functions may not be usable.
- Movie files produced with some encoders may not be played correctly.
- If the video and audio structure of recorded file is not interleaved, either video or audio is outputted.
- Videos with resolutions higher than 1920 X 1080 @ 25/30p may not work properly depending on the frame.
- Movie files other than the specified types and formats may not work properly.
- Max bitrate of playable movie file is 20 Mbps. (only, Motion JPEG : 10 Mbps)
- We do not guarantee smooth playback of profiles encoded level 4.1 or higher in H.264/AVC.
- DTS Audio codec is not supported.
- A movie file more than 30 GB in file size is not supported for playback.
- A DivX movie file and its subtitle file must be located in the same folder.
- A video file name and its subtitle file name must be identical for it to be displayed.
- Playing a video via a USB connection that doesn't support high speed may not work properly.
- Files encoded with GMC(Global Motion Compensation) may not be played.
- When you are watching the movie by Movie List function, you can adjust an image by Energy Saving key on the remote control. User setup for each image mode does not operate.

Video Options

1 Press **SETTINGS** to access the **Pop-Up** menus.

2 Press the Navigation buttons to scroll to **Set Video Play., Set Video.** or **Set Audio.** and press **OK**.

NOTE

- Option values changed in **Movie List** does not affect **Photo List** and **Music List**.
- Option value changed in **Photo List** and **Music List** are changed likewise in **Photo List** and **Music List** excluding **Movie List**.
- When replaying the video file after stopping, you can play from where it stopped previously.

When you select the **Set Video Play,**

1 Press the Navigation buttons to scroll to show the **Picture Size, Audio Language, Subtitle Language** or **Repeat**.

2 Press the Navigation buttons to scroll to make appropriate adjustments.

Menu	Description
Picture Size	Selects your desired picture format during movie play.
Audio Language	Changes the Language Group of the audio during movie play. Files with a single audio track cannot be selected.
Subtitle Language	Turn on/off the subtitle.
Language	Activated for SMI subtitle and can select the language within the subtitle.
Code Page	Can select the font for subtitle. When set to default, same font as general menu will be used.
Sync	Adjusts the time synchronization of the subtitle from -10 secs to +10 secs by steps of 0.5 secs during movie play.
Position	Changes the position of the subtitle either up or down during movie play.
Size	Selects your desired Subtitle size during movie play.
Repeat	Turn on/off repeat function of movie playback. When turned on, the file within the folder will be played back repeatedly. Even when the repeated playback is turned off, it can run the playback if the file name is similar to the previous file.

Code Page	Support Language
Latin1	English, Spanish, French, German, Italian, Portuguese, Danish, Romanian, Norwegian, Albanian, Gaelic, Welsh, Irish, Catalan,Valencian
Latin2	Bosnian, Polish, Croatian, Czech, Slovak, Slovenian, Serbian, Hungarian
Latin4	Estonian, Latvian, Lithuanian
Cyrillic	Bulgarian, Macedonian, Russian, Ukrainian, Kazakh
Greek	Greek
Turkish	Turkish
Korean	Korean

NOTE

- Only 10,000 of sync blocks can be supported within the subtitle file.
- When playing a video, you can adjust the Picture Size by pressing the ARC button.
- Subtitles in your language are only supported when the OSD menu is also in this language.
- The code page options may be disabled depending on the language of the subtitle files.
- Select the appropriate code page for the subtitle files.

When you select the **Set Video,**

1 Press the Navigation buttons to scroll to make appropriate adjustments.

When you select the **Set Audio,**

1 Press the Navigation buttons to scroll to show the **Sound Mode, Clear Voice II** or **Balance**.

2 Press the Navigation buttons to scroll to make appropriate adjustments.

Viewing Photos

View image files saved on a USB storage device. The displays on the screen may differ from the model.

1 Press the Navigation buttons to scroll to **My Media** and press **OK**.

2 Press the Navigation buttons to scroll to **Photo List** and press **OK**.

3 Press the Navigation buttons to scroll to a folder you want and press **OK**.

4 Press the Navigation buttons to scroll to a file you want and press **OK**.

Menu	Description
View Marked	Display the selected photo file.
Mark All	Mark all photo files on the screen.
Unmark All	Deselect all marked photo files.
Exit Mark Mode	Exit the Mark Mode.

5 View photos.

NOTE

- Non-supported files are displayed the pre-view image by icon only ⚠.
- Abnormal files are displayed in the form of bitmap ⓧ.

Using Photo Options

Use the following options while viewing photos.

Option	Description
Slideshow	Starts or stops a slideshow with selected photos. If there are no selected photos, all photos saved in the current folder display during a slideshow. To set a slideshow speed, select **Option**.
BGM	Turns the background music on or off. To set the background music folder, select **Option**. You can adjust Option by SETTINGS button on the remote control.
↻ **(Rotate)**	Rotates photos clockwise (90°, 180°, 270°, 360°). **NOTE** • The supported photo size is limited. You cannot rotate a photo if the resolution of the rotated width is larger than the supported resolution size.
🔍	View the photo by zoom in 2, 4 times. **NOTE** • Photos with a resolution of 960 x 540 or less cannot be enlarged.

Option	Description
ENERGY SAVING	Adjusts the screen brightness to save energy. *Backlight function is not supported.
Option	• **Slide Speed**: Selects a slideshow speed (**Fast**, **Medium**, **Slow**). • **TransitionEffect:** Set the view mode of the slideshow. • **BGM**: Selects a music folder for the background music. Press the Navigation buttons to scroll to select the Repeat or Random. Press the Navigation buttons to scroll to make appropriate adjustments. **NOTE** • You cannot change the music folder while the background music is playing. • You can only select the MP3 folder saved on the device that currently displays the photo.
Hide	Hides the option window. To display the options, press **OK**.
EXIT	Return to **Photo List**.

Photo Options

1 Press **SETTINGS** to show the **Option** menus.

2 Press the Navigation buttons to scroll to **Set Photo View, Set Video** or **Set Audio** and press **OK**.

NOTE

- Option values changed in **Movie List** does not affect **Photo List** and **Music List.**
- Option value changed in **Photo List** and **Music List** are changed likewise in **Photo List** and **Music List** excluding **Movie List**.

When you select the **Set Photo View**,

1 Press the Navigation buttons to scroll to select **Slide Speed,Transition Effect** or **BGM**.

2 Press the Navigation buttons to scroll to make appropriate adjustments.

Transition Effect Option

Option	Description
Sliding	Pushes the current slide out of view as it plays to the next slide. 
Stairs	Pushes the current slide in a staircase shape as it plays to the next slide. 
Door Open /Close	Pushes the current slide like opening or closing the door as it plays to the next slide. 
Shutter	Pushes the current slide like drawing or pulling down the blind as it plays to the next slide. 
Fade In	The current photo disappears and the next photo appears slowly. 

When you select the **Set Video**,

1 Press the Navigation buttons to scroll to make appropriate adjustments.

When you select the **Set Audio,**

1 Press the Navigation buttons to scroll to show the **Sound Mode, Clear Voice II** or **Balance**.

2 Press the Navigation buttons to scroll to make appropriate adjustments.

Listening to Music

1 Press the Navigation buttons to scroll to **My Media** and press **OK**.

2 Press the Navigation buttons to scroll to **Music List** and press **OK**.

3 Press the Navigation buttons to scroll to a folder you want and press **OK**.

4 Press the Navigation buttons to scroll to a file you want and press **OK**.

Menu	Description
Play Marked	Display the selected music file.
Mark All	Mark all music files on the screen.
Unmark All	Deselect all marked music files.
Exit Mark Mode	Exit the Mark Mode.

5 Play music.

6 Control playback by using the following buttons.

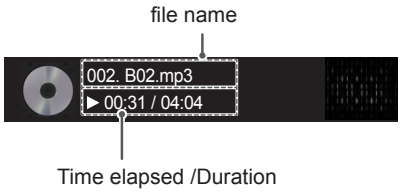
Button	Description
■	Stops playing back the file and moves back to the music list.
▶	Plays a music file.
❚❚	Pauses or resumes playback.
▶▶	Skips to the next file.
◀◀	Skips to the previous file.
Green button	Start playing the selected music files and then move to the **Photo List**.
ENERGY SAVING	Adjusts the screen brightness to save energy.
MENU	Show the Option menu.
HIDE	Hides the option window. To display the options, press **OK**.
EXIT	When you press the **EXIT** button while the Music player is displayed, only the music will be stopped and the player will not return to normal viewing. When you press the **EXIT** button while the music is stopped or while the music player is hidden, the player will return to normal viewing.
< or **>**	When using the **<** or **>** button during playback a cursor indicating the position can be played.

Tips for Playing Music Files

- This unit cannot support the ID3 Tag embedded MP3 files.

NOTE

- Non-supported files are displayed the pre-view image by icon only ⚠.
- Abnormal files are displayed in the form of bitmap ⓧ.
- A damaged or corrupted music does not play but displays 00:00 in playtime.
- A music downloaded from a paid service with copyright protection does not start but displays inappropriate information in playtime.
- If you press **OK**, ■ buttons, screen saver is stopped.
- The ▶, ❚❚, ■, ▶▶, ◀◀ buttons on the remote control are also available in this mode.
- You can use the ▶▶ button to select the next music and the ◀◀ button to select the previous music.



Music Options

1 Press **SETTINGS** to access the **Pop-Up** menus.

2 Press the Navigation buttons to scroll to **Set Audio Play** or **Set Audio** and press **OK**.

NOTE

- Option values changed in **Movie List** does not affect **Photo List** and **Music List**.
- Option value changed in **Photo List** and **Music List** are changed likewise in **Photo List** and **Music List** excluding **Movie List**.

When you select the **Set Audio Play**,

1 Press the Navigation buttons to scroll to select the **Repeat** or **Random**.

2 Press the Navigation buttons to scroll to make appropriate adjustments.

When you select the **Set Audio,**

1 Press the Navigation buttons to scroll to select the **Sound Mode, Clear Voice II** or **Balance**.

2 Press the Navigation buttons to scroll to make appropriate adjustments.

Viewing the Contents List

Plays back the stored files using the Export option in SuperSign Manager.

1 Press the Navigation buttons to scroll to **My Media** and press **OK**.

2 Press the Navigation buttons to scroll to **Contents List** and press **OK**.

3 Press the Navigation buttons to scroll to a folder you want and press **OK**.

4 Press the Navigation buttons to scroll to a file you want and press **OK**.

NOTE

- While playing media files from Contents List, only the BACK, EXIT or Volume button are available. Selecting the BACK or EXIT button stops playing media files and returns to the screen view mode.
- If there is the AutoPlay folder in the USB device and its files are in supported formats, they can be played back automatically when the USB device is connected to the TSP500 set.

DivX® VOD Guide

DivX® VOD Registration

In order to play purchased or rented DivX® VOD contents, you should register your device with 10 digit DivX registration code from your device at *www.divx.com/vod*.

1 Press **SETTINGS** to access the main menus.

2 Press the Navigation buttons to scroll to **MY MEDIA** and press **OK**.

3 Press the Blue button.

4 Press the Navigation buttons to scroll to **DivX Reg. Code** and press **OK**.

5 View the registration code of your display.

6 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

NOTE

- While you are checking the registration code, some buttons may not work.
- If you use the DivX registration code of another device, you cannot play the rented or purchased DivX file. Make sure to use the DivX registration code assigned to your product.
- The video or audio files that are not converted by the standard DivX codec may be corrupted or not be played.
- The DivX VOD code allows you to activate up to 6 devices under one account.

DivX® VOD Deregistration

You should deregister your device with 8 digit DivX deregistration code from your device at *www.divx.com/vod*.

1 Press **SETTINGS** to access the main menus.

2 Press the Navigation buttons to scroll to **MY MEDIA** and press **OK**.

3 Press the Blue button.

4 Press the Navigation buttons to scroll to **Deactivation** and press **OK**.

5 Press the Navigation buttons to select **Yes** to confirm.

6 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

NOTE

- Once the deregistration is executed, you must register your device again to see DivX® VOD contents.

Using PIP/PBP

Displays videos or photos stored on a USB device on a single display by dividing it into the main and sub screens.

1 Press the **SETTINGS** button to move to **OPTION** and press **OK**.

2 Press **PIP/PBP** to select **PIP** or **PBP** and then press **OK**.

3 Select **Movie List** or **Photo List** from **My Media**. (With **PIP/PBP** selected, the **Music List** and **Contents List** are deactivated.)

4 Select a file you want and then press **OK**.

5 Select the PIP or PBP icon from the play list.



< Movie List >



< Photo List >

6 Select either Main or Sub for sound. You must to select the output sound before running the PIP or PBP function.

7 The sub screen is displayed on the main screen.

CUSTOMIZING SETTINGS

Accessing the Main Menus

1 Press **SETTINGS** to access the main menus.

2 Press the Navigation buttons to scroll to one of the following menus and press **OK**.

3 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.

4 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

- **PICTURE :** Adjusts the image size, quality, or effect.
- **AUDIO :** Adjusts the sound quality, effect, or volume level.
- **TIME :** Sets the time, date, or timer feature.
- **OPTION :** Customizes the general settings.
- **NETWORK :** Sets up the network setting.
- **MY MEDIA :** Display and play movie, photo and music contents stored on your USB or signage device.

PICTURE Settings

1 Press **SETTINGS** to access the main menus.

2 Press the Navigation buttons to scroll to **PICTURE** and press **OK**.

3 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.
- To return to the previous level, press **BACK**.

4 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

The available picture settings are described in the following:

Setting	Description	
Aspect Ratio	Changes the image size to view images at its optimal size.	
Energy Saving	Sets to automatically adjust the screen brightness corresponding to the surroundings.	
	Level	
	Off	Disables Energy Saving function.
	Minimum/ Medium/ Maximum	Selects the brightness level of the backlight. *Backlight function is not supported.
	Screen Off	The screen turns off in 3 seconds.
Easy Brightness Control	Adjusts the backlight according to the schedule you set.	
	Mode	
	Off	Disables Easy Brightness Control.
	On	Enables Easy Brightness Control.
	NOTE • Easy Brightness Control is disabled if the current time is not set. • If Energy Saving is set to Maximum, Easy Brightness Control is disabled. • You can set up to six schedules and they will be sorted in time ascending order. • If more than six schedules are added, the latest schedule will be automatically deleted. • You can delete a schedule by pressing the OK button. • Duplicate schedules are not added, but the backlight value changes. • It may not be supported depending on the model.	
Smart Energy Saving	Adjusts the backlight and contrast depending on the screen brightness. *Backlight function is not supported.	
	Level	
	Off	Disables the Smart Energy Saving function.
	On	Enables the Smart Energy Saving function to save power consumption as much as the value set in the smart energy saving rate.

Setting	Description	
Picture Mode	Selects one of the preset image or customizes options in each mode for the best screen performance. You are also able to customize advanced options of each mode. The available preset picture modes vary depending on the display set.	
	Mode	
	Vivid	Adjusts the video image for the retail environment by enhancing the contrast, brightness, Color, and sharpness.
	Standard	Adjusts the image for the normal environment.
	Cinema	Optimizes the video image for a cinematic look to enjoy movies as if you are in a movie theater.
	Sport	Optimizes the video image for high and dynamic actions by emphasizing primary Colors such as white, grass, or sky blue.
	Game	Optimizes the video image for a fast gaming screen such as PCs or games.
SCREEN (In RGB Mode Only)	Customizes the PC display options in RGB mode.	
	Option	
	Resolution	Selects a proper resolution. See “Customizing PC display options”.
	Auto Configure	Sets to adjust the screen position, clock, and phase automatically. The displayed image may be unstable for a few seconds while the configuration is in progress.
	Position/Size/ Phase	Adjusts the options when the picture is not clear, especially when characters are shaky, after the auto configuration.
	Reset	Restores the options to the default setting.

Basic Image Options

Setting	Description
Backlight	Adjusts the brightness of the screen by controlling the LCD backlight. If you decrease the brightness level, the screen becomes darker and the power consumption will be reduced without any video signal loss. *Backlight function is not supported.
Contrast	Increases or decreases the gradient of the video signal. You may use Contrast when the bright part of the picture is saturated.
Brightness	Adjusts the base level of the signal in the picture. You may use Brightness when the dark part of the picture is saturated.
Sharpness	Adjusts the level of crispness in the edges between the light and dark areas of the picture. The lower the level, the softer the image.
Color	Adjusts intensity of all colors.
Tint	Adjusts the balance between red and green levels.
Color Temp .	Set to warm to enhance hotter Colors such as red, or set to cool to make picture bluish.
Advanced Control	Customizes the advanced options. Refer to the Advanced image options.
Picture Reset	Restores the options to the default setting.

Advanced Control

Setting	Description
Dynamic Contrast (Off/High/ Medium/Low)	Adjusts the contrast to keep it at the best level according to the brightness of the screen. The picture is improved by making bright parts brighter and dark parts darker. (This function can be used only under Component.)
Dynamic Color (Off/High/Low)	Adjusts screen Colors so that they look livelier, richer and clearer. This feature enhances hue, saturation and luminance so that red, blue, green and white look more vivid. (This function can be used only Component.)
Clear White (Off/High/Low)	Make the white area of screen brighter and more white.
Skin Color (-5 to 5)	It detects the skin area of video and adjusts it to express a natural skin color.
Noise Reduction (Off/High/ Medium/Low)	Reduces screen noise without compromising video quality. (This function can be used only under Component.)
Digital Noise Reduction (Off/High/ Medium/Low)	This option reduces the noise produced while creating digital video signals.
Gamma (High/Medium/ Low)	Set your own gamma value. On the display, high gamma values display whitish images and low gamma values display high contrast images.
Black Level (High/Low)	● Low: The picture of the screen gets darker. ● High: The picture of the screen gets brighter. Set black level of the screen to proper level. (Function works in the following mode - Component, HDMI-DTV, DVI-D)

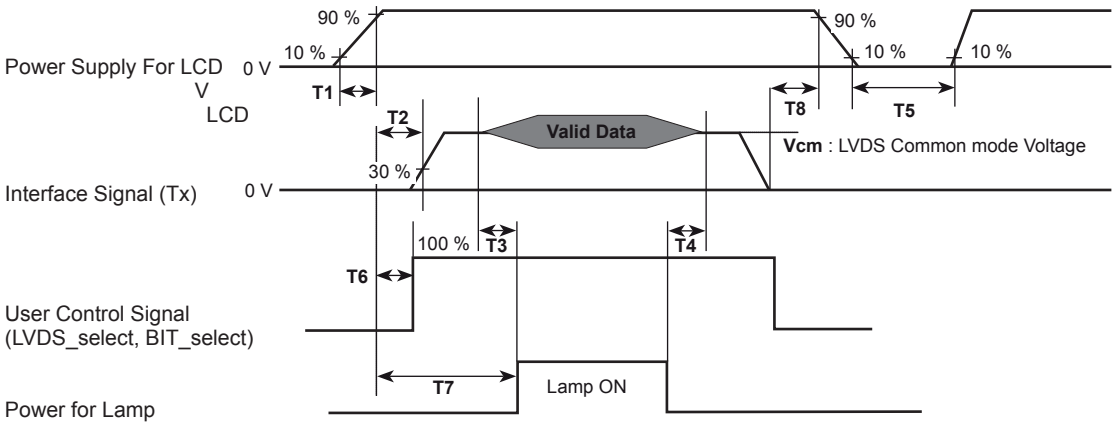
NOTE

- If the '**Picture Mode**' setting in the Picture menu is set to **Vivid, Standard, Cinema, Sport** or **Game** the subsequent menus will be automatically set.
- You cannot adjust **Sharpness**, **Color** and **Tint** in the RGB-PC/ DVI-D-PC(DTV)/ HDMI-PC mode.
- When using the Smart Energy Saving function, the screen may look saturated in the white area of a still image.
- If Energy Saving is set to Minimum, Medium, or Maximum, the Smart Energy Saving function is disabled.

Power Sequence

CAUTION

- TSP500 requires additional transparent display and backlight in order to display image properly.
- If you do not follow the booting sequence below while launching backlight, the screen may be displayed abnormally (blinking or vertical stripes).



Parameter	Value			Unit	Notes
	Min	Typ	Max		
T1	0.5	-	20	ms	
T2	0	-	-	ms	4
T3	200	-	-	ms	3
T4	200	-	-	ms	3
T5	1.0	-	-	s	5
T6	-	-	T2	ms	4
T7	0.5	-	-	s	
T8	100	-	-	ms	6

- The T3 / T4 is recommended value, the case when failed to meet a minimum specification, abnormal display would be shown. There is no reliability problem.

AUDIO Settings

1 Press **SETTINGS** to access the main menus.

2 Press the Navigation buttons to scroll to **AUDIO** and press **OK**.

3 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.
- To return to the previous level, press **BACK**.

4 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

The available audio options are described in the following:

Setting	Description	
Clear Voice II	By differentiating the human sound range from others, it helps users make dialog more clear.	
Balance	Adjusts balance between the left and right speakers according to your room environment.	
Sound Mode	The best sound tone quality will be selected automatically depending on the video type that you're currently watching.	
	Mode	
	Standard	The most commanding and natural audio.
	Music	Select this option to enjoy the original sound when listening to the music.
	Cinema	Select this option to enjoy sublime sound.
	Sport	Select this option to watch sports broadcasting.
	Game	To enjoy dynamic sound when playing a game.
	NOTE If sound quality or volume is not at the level you want, it is recommended to use a separate home theater system or amplifier to cope with different user environments.	
	Option	
	Infinite Sound	LG's Infinity Sound option provides 5.1 channel stereo sound from two speakers.
	Treble	Controls the dominant sounds in the output. When you turn up the treble, it will increase the output to the higher frequency range.
	Bass	Makes the output sound softer. When you turn up the bass, it will increase the output to the lower Frequency.
	Reset	Resets the sound mode to the default setting.
Digital Audio Input	**HDMI:** Outputs the sound of digital signal from HDMI through the TSP500 speaker. **Audio In:** Outputs the sound through the TSP500 by connecting HDMI to the Audio In port.	
Speaker	**ON**: Enables sound to the TSP500 speaker. (* The TSP500 speaker is sold separately.) **OFF**: Disables sound to the TSP500 speaker. Use this option when using an external sound device.	

TIME Settings

1 Press **SETTINGS** to access the main menus.

2 Press the Navigation buttons to scroll to **TIME** and press **OK**.

3 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.
- To return to the previous level, press **BACK**.

4 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

The available time settings are described in the following:

Setting	Description
Clock	Sets the time feature.
On/Off Time	Sets the time to turn on or off the TSP500 set.
Sleep Timer	Sets the length of time until the TSP500 set to turns off. When you turn the TSP500 set off and turn it on again, the Sleep Timer will be set to off.
Power on delay	When connecting multiple TSP500s and turning the power on, the TSP500s are turned on individually to prevent overload.
Auto off	If Auto off is active and there is no input signal, the TSP500 set switches to off mode automatically after 15 minutes.
Automatic Standby	If you do not use the TSP500 for more than 4 hours, it will be in standby mode automatically.

NOTE

- Once the on or off time is set, these functions operate daily at the preset time.
- The scheduled power-off function works properly only when the TSP500 set time is set correctly.
- When the scheduled power-on and power-off times are the same, the power-off time has priority over the power-on time if the set is turned on, and vice versa if the TSP500 set is turned off.
- The "Auto Off, Automatic Standby" function may not be available depending on the country.
- If time has not been reset for a long period of time, tolerance may occur due to environmental conditions, for example temperature.

OPTION Settings

1 Press **SETTINGS** to access the main menus.

2 Press the Navigation buttons to scroll to **OPTION** and press **OK**.

3 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.
- To return to the previous level, press **BACK**.

4 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

The available option settings are described in the following:

Setting	Description	
Language	To choose the language in which the control names are displayed.	
Power Indicator	Use this function to set the power indicator on the front side of the product to On or Off. (It may not be supported depending on the model.)	
ISM Method	A frozen or still picture from a PC/Video game displayed on the screen for prolonged periods could result in a ghost image remaining even when you change the image. Avoid allowing a fixed image to remain on the screen for a long period of time.	
	Setting	
	Normal	Leave on normal if you don't foresee image burn in being a problem.
	Orbiter	May help prevent ghost images. However, it is best not to allow any fixed image to remain on the screen. To avoid a permanent image on the screen, the screen will move every 2 minutes.
	Inversion	This function inverts the panel color of the screen. The panel color is automatically inverted every 30 minutes.
	White Wash	White wash fills the screen with solid white. This helps removes permanent images burned into the screen. A permanent image may be impossible to clear entirely with white wash.
DPM Select	A user can choose to turn the power saving mode on / off. **NOTE** • You can set Energy Saving to Off or set the length of time before entering Energy Saving mode to 5 sec./10 sec./15 sec./1 min./3 min./5 min./10 min. • It makes a little difference according to your environment. • It may not be supported depending on the model.	
Fail Over	If there is no input signal, it automatically switches to another input with signal.	
	Setting	
	Off	Stops auto switch of the input source.
	Auto	Switches to another input source with video signal if no video signal comes from the current input source.
	Manual	Selects the priority of input source for auto switch. When several input sources are found, the input source with a higher priority will be selected.

Setting	Description	
Factory Reset	Select this option to return to the default factory settings.	
Set ID	You can assign a unique Set ID NO (name assignment) to each product when several products are connected for display. Specify the number (1 to 255) using the button and exit. Use the assigned Set ID to individually control each product using the Product Control Program.	
Tile Mode	**Tile Mode**	To use this function - Must be displayed with various other products. - Must be in a function that can be connected to RGB Cable by distributor and RS-232C. Tile mode and choose Tile alignment and set the ID of the current product to set location. * Only after pressing the SET button the adjustments made to the settings will be saved. - Tile mode : column x row (c = 1 to 15 r = 1 to 15) - 15 x 15 available. - Configuration of an integration screen is also available as well as configuration of One by one Display.
	Auto Config.	Sets to adjust the screen position, clock, and phase automatically. The displayed image may be unstable for a few seconds while the configuration is in progress.
	Position	Moving the screen position horizontally and vertically.
	Size	Adjust the horizontal and vertical size of the screen taking into account the size of the bezel.
	Natural	The image is omitted by the distance between the screens to be naturally shown.
	Reset	Function to initialize and release Tile. All Tile setting are released when selecting Tile recall and the screen returns to Full screen.
PIP/PBP	Displays videos or photos stored in the USB device on a single display by dividing it into the main and sub screens.	
	Option	
	Mode	Sets the type of secondary screen. *__OFF__: Disables the secondary screen. *__PIP (Picture In Picture)__: Displays the secondary screen in the main screen. *__PBP (Picture By Picture)__: Displays the secondary screen next to the main screen.
	Position	Adjusts the position of the sub screen (top left, bottom left, top right, bottom right). The default value is the bottom right.
	Size	Adjusts the size of the sub screen (Size 0 to 10).
	NOTE • The Position and Size options are enabled only in PIP mode.	

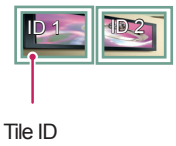
Setting	Description
Key Lock	Key input does not work. This prevents invalid key input.
USB Content Recovery	Replays the content in a USB when the power is back on if it is turned off during playing a content. (This function operates the same when a USB is disconnected and connected again.)
Product/Service Info.	Displays the model name, software version, serial number, IP address, MAC address and home page.

Tile Mode

This TSP500 set can be tiled with additional displays to create a large tiled display.

Off
When the Tile Mode option is disabled

1X2
When using 2 displays



2X2
When using 4 displays



3X3
When using 9 displays



4X4
When using 16 displays



5X5
When using 25 displays



Tile Mode - Natural Mode

When active, the part of the image that would normally be displayed in the gap between the displays is omitted.

Before



After

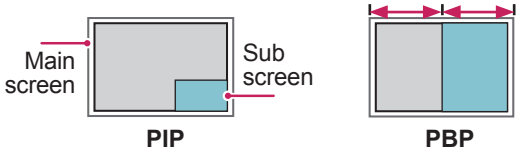


PIP/PBP

Displays videos or photos stored in the USB device on a single display by dividing it into the main and sub screens.

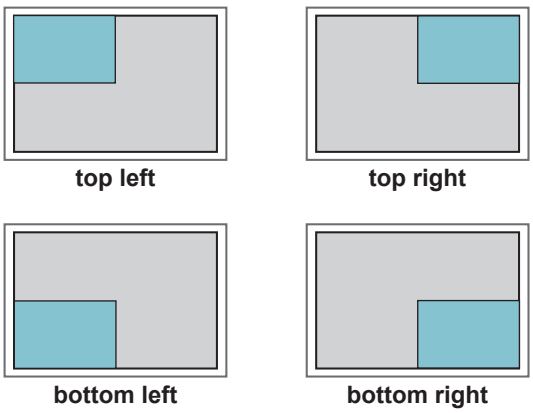
Mode

***PIP(Picture In Picture)**: Displays the Sub screen in the main screen.
***PBP(Picture By Picture)**: Displays the Sub screen next to the main screen.



Position

Adjusts the position of the subscreen (top left, bottom left, top right, bottom right)



Size

Adjusts the size of the subscreen (Size 0-10).

NOTE

- The subscreen is only supported when using the USB device.

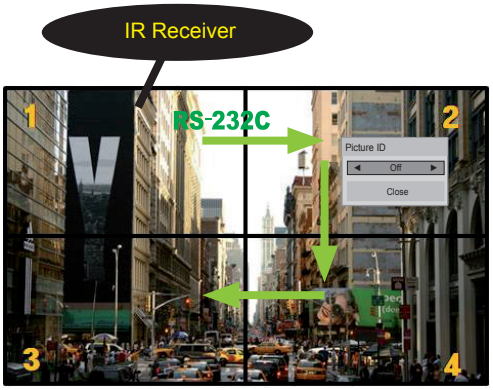
		Sub
		USB
Main	Component	O
	RGB	O
	HDMI/DVI-D	O
	AV	X

- You can only change the size and position in PIP mode.
- With PBP selected, the Aspect Ratio option in the PICTURE menu is disabled (Fixed as 16:9).
- While running the PBP function, the Tile Mode function does not work.
- You must select the output sound before running the PIP or PBP functions. (Select either Main or Sub.)
- If you fail to select Main or Sub from the sound selection box, and if the OSD disappears after either a period of time or when the Exit or Back key is pressed, the PIP/PBP subscreen is not activated.
- You cannot change the sound while running the PIP or PBP functions. If you want to change the sound, please restart PIP/PBP.
- The picture quality of the subscreen is set according to the values selected in the main menu, not the USB device.
- If you play videos you selected in PIP/PBP mode, the videos will play back repeatedly in succession.
- The buttons below work in PIP mode.

Button	Photo	Movie
<	O	X
>	O	X
▶	X	O
■	X	X
▶▶	X	O
◀◀	X	O
II	X	O

Picture ID Settings

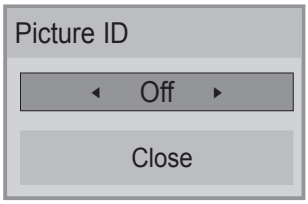
Picture ID is used to change the settings of a specific display using a single IR receiver for multi-vision. The set receiving the IR signal communicates with another set via an RS-232C connection. Each set is identified by a Set ID. If you assign the Picture ID using the remote control, only displays with the same Picture ID and Set ID can be controlled remotely.



2X2 Multi-Vision (Total Set ID: 4)
Set IDs are assigned as shown in the picture.

1 Press the red ON button on the remote control to assign the Picture ID.

2 If you press the left/right buttons or press the ON button repeatedly, the Picture ID cycles through OFF and 1 to 4. Assign the ID you want.



- If you assign the Set ID to each set with multi-vision, and then assign the Picture ID using the red button on the remote control, the key command is displayed for the set with the same Set ID and Picture ID. A set with different Set IDs and Picture IDs cannot be controlled by IR signals.
- For more information on how to assign the Set ID, see "Set ID".
- The maximum value of the Picture ID can be set in the Total Set ID menu.
- Please refer to the Installation Manual for more information on Total Set ID assignment.

NOTE

- For example, if the Picture ID is assigned to 2, the upper right display (Set ID: 2) can be controlled by IR signals.
- For each set, you can change the settings for the PICTURE, AUDIO, TIME, NETWORK and MY MEDIA menus or the hot keys on the remote control.
- If you press the green OFF button for Picture IDs, the Picture IDs for all sets are turned off. If you then press any button on the remote control, all sets will start working again.
- Picture ID will be disabled while using the MY MEDIA menu.

NETWORK Settings

1 Press **SETTINGS** to access the main menus.

2 Press the Navigation buttons to scroll to **NETWORK** and press **OK**.

3 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.
- To return to the previous level, press **BACK**.

4 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

The available option settings are described in the following:

Setting	Description
Player Name Setting	Sets the player name used in SuperSign Manager.(Up to 20 characters)
Network Setting	Configure the network settings.
Network Status	Display the network status. - Internet is connected : Externally connected - Network is connected : Only internally connected - Not connected : When there is no network connection
Server IP Setting	Sets the IP address of the computer (server) on which SuperSign Manager is installed.
Server IP Status	Displays the connection status with the server. - Not connected : When there is no network connection with SuperSign server - Waiting for approval : When network connection with SuperSign server has been made, but access to server has not been approved by the server - Rejected : When network connection with SuperSign server has been made, but access to server has been rejected by the server - Internet is connected : When network connection with SuperSign server has been made and access to server has also been approved by the server

CAUTION

- When setting the Player Name, input delay may occur if you press the buttons on the remote control continuously.

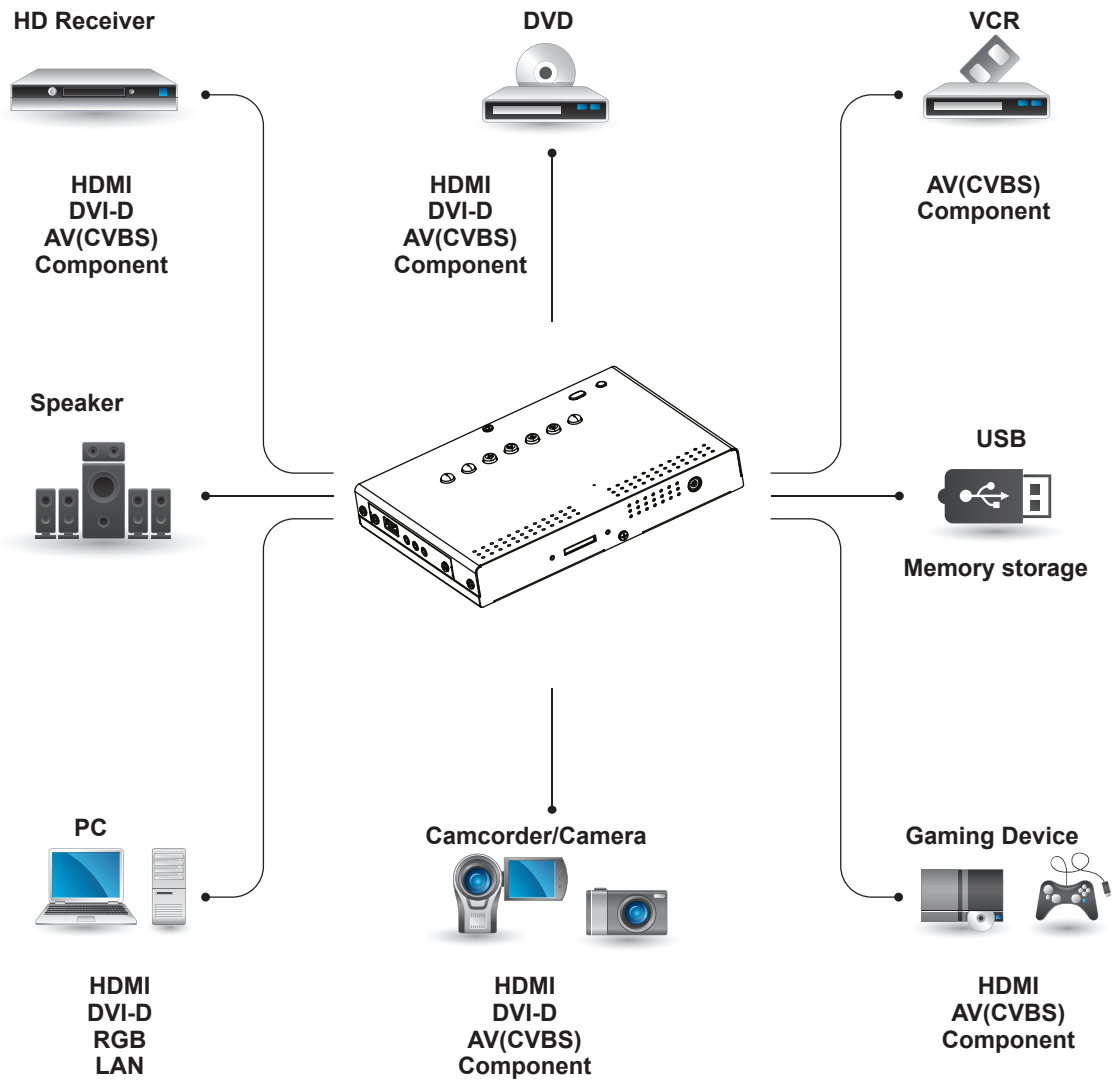
MAKING CONNECTIONS

Connect various external devices to the ports on the TSP500 set's panel.

1 Find an external device you want to connect to your TSP500 set shown on the following illustration.

2 Check the connection type of the external device.

3 Go to the appropriate illustration and check the connection details.



NOTE

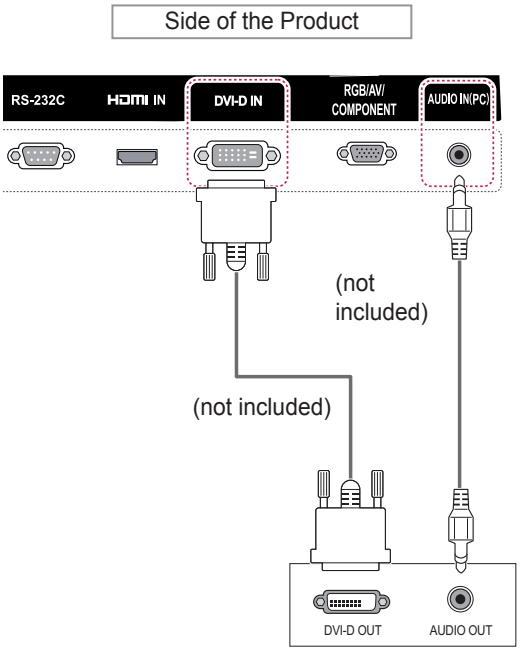
- If you connect a gaming device to the TSP500 set, use the cable supplied with the gaming device.

External Device Connection

Connect a HD receiver, DVD player, or VCR to the TSP500 set and select an appropriate input mode.

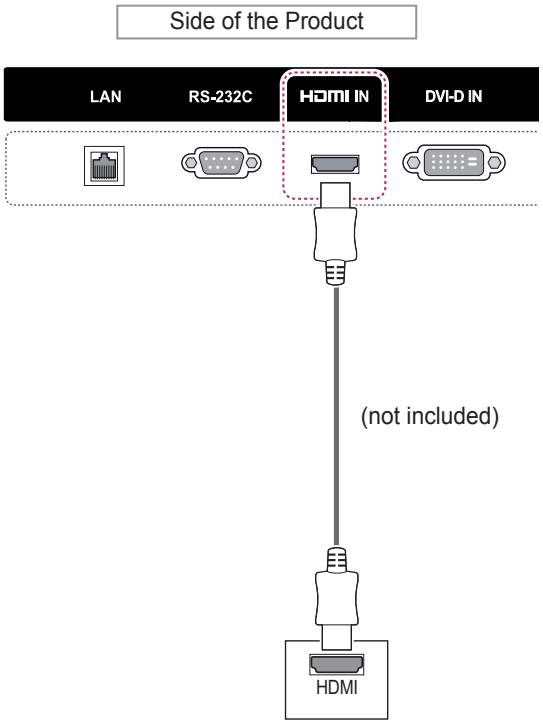
DVI-D Connection

Transmits the digital video signal from an external device to the TSP500 set. Connect the external device and the TSP500 set with the DVI-D cable as shown in the following illustration. To transmit an audio signal, connect an optional audio cable.



HDMI Connection

Transmits the digital video and audio signals from an external device to the TSP500 set. Connect the external device and the TSP500 set with the HDMI cable as shown on the following illustration.

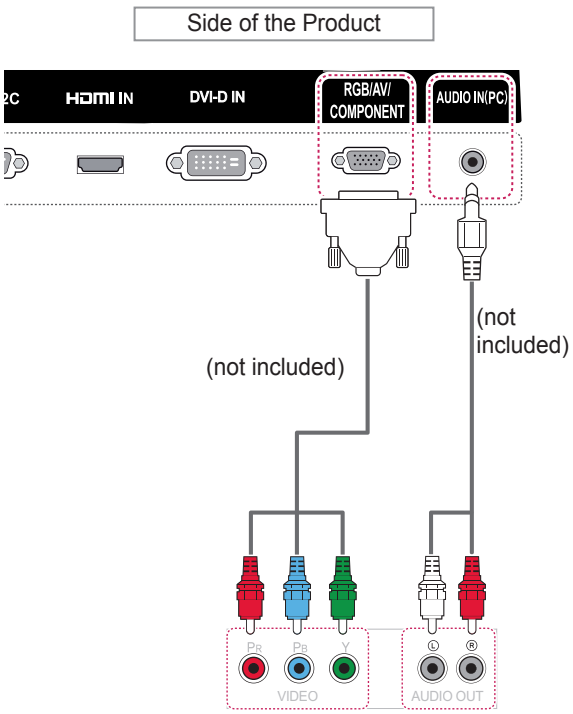


NOTE

- Use a High Speed HDMI®/™ Cable.
- High Speed HDMI®/™ Cables are tested to carry an HD signal up to 1080p and higher.
- Use a certified cable with the HDMI logo attached. If you do not use a certified HDMI cable, the screen may not display or a connection error may occur.
- Recommended HDMI cable types
  - High-Speed HDMI®/™ cable
  - High-Speed HDMI®/™ cable with Ethernet

Component Connection

Transmits the analog video and audio signals from an external device to the TSP500 set. Connect the external device and the TSP500 set with the RCA-Component cable as shown in the following illustration. To display images by using progressive scan, make sure to use the component cable.

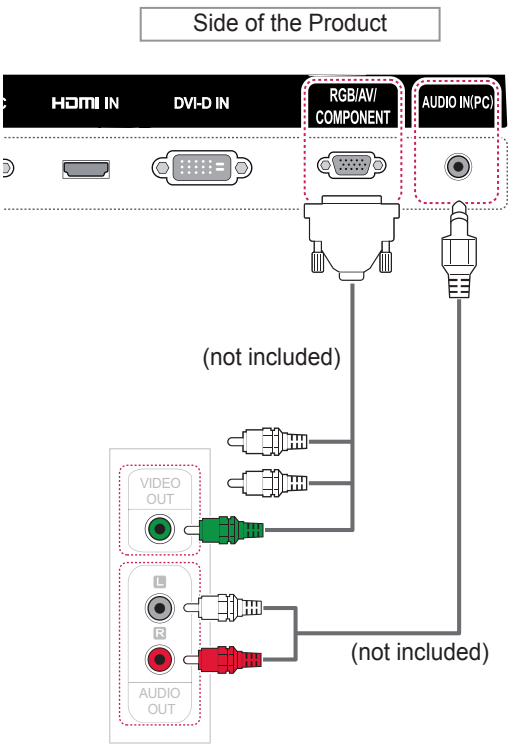


NOTE

- When connecting to the AV or Component port using the shared interface, the port must match up to the input source. Otherwise, noise may occur.

AV(CVBS) Connection

Transmits the analog video and audio signals from an external device to the TSP500 set. Connect the external device and the TSP500 set with the Composite cable as shown in the following illustration.

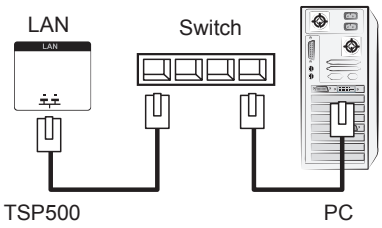


NOTE

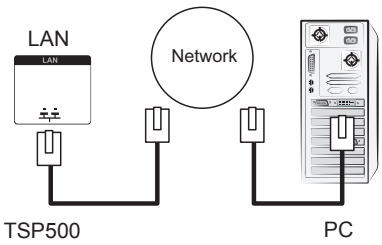
- For AV (CVBS) connection, the red and blue cables in a shared interface are not in use.

Connecting to the LAN

A Using a router(Switch)

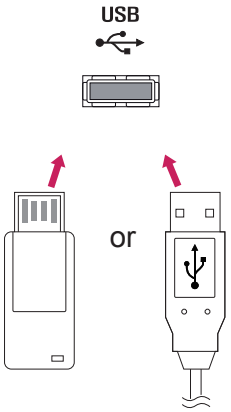


B Using the Internet.



Connecting to a USB

Connect a USB storage device such as a USB flash memory, external hard drive, MP3 player or a USB memory card reader to the TSP500 set and access the USB menu to use various multimedia files.



TROUBLESHOOTING

No image is displayed.

Problem	Resolution
Is the product power cord connected?	• See if the power cord is properly connected to the outlet.
Is the power indicator light on?	• See if the power switch is turned on. • May need service.
Power is on but the screen appears extremely dark.	• Adjust brightness and contrast again.
The power indicator is blinking?	• If the product is in power saving mode, move the mouse or press any key. • Turn both devices off and then back on.
Does the 'Invalid Format' message appear?	• The signal from the PC (graphic card) is out of the vertical or horizontal frequency range of the product. Adjust the frequency range by referring to the Specifications in this manual. * Maximum resolution RGB : 1920 x 1080 @ 60 Hz HDMI/DVI-D : 1920 x 1080 @ 60 Hz
Does the 'No signal' message appear?	• The signal cable between PC and product is not connected. Check the signal cable. • Press the 'INPUT' menu in the remote Control to check the input signal.

'Unknown Product' message appears when the product is connected.

Problem	Resolution
Did you install the driver?	• See if the plug&play function is supported by referring to the graphic card user manual.

'Key Lock On' message appears.

Problem	Resolution
The 'Key Lock On' message appears when pressing the SETTINGS button.	• The Lock function prevents the OSD settings from being changed inadvertently. To release the lock, go to SETTINGS and Option and disable the Key Lock option.

The screen image looks abnormal.

Problem	Resolution
Is the screen position wrong?	• D-Sub analog signal - Press the "AUTO" button in the remote control to automatically select the optimal screen status that fits into the current mode. If adjustment is not satisfactory, select [PICTURE] - [Screen] - [Position] in OSD menu. • See if the video card resolution and frequency are supported by the product. If the frequency is out of range, set to the recommended resolution in the Control Panel "Display" Setting menu.
Do thin lines appear on the background screen?	• D-Sub analog signal - Press the "AUTO" button in the remote control to automatically select an optimal screen status that fits into the current mode. If adjustment is not satisfactory, select [PICTURE] - [Screen] - [Size] in OSD menu.
Horizontal noise appears or the characters look blurred.	• D-Sub analog signal - Press the "AUTO" button in the remote control to automatically select an optimal screen status that fits into the current mode. If adjustment is not satisfactory, select [PICTURE] - [Screen] - [Phase] in OSD menu.
The screen is displayed abnormally.	• The proper input signal is not connected to the signal port. Connect the signal cable that matches with the source input signal.
Vertical, horizontal lines and meshes appear on the screen momentarily and they are shaking.	• Stop using items such as wireless telephones, hair dryers, or electrical drills, etc. because the problem is caused by high frequency electronic devices or strong electro-magnetic sources. If you use the product near these devices, it may be powered off.

After-image appears on the product.

Problem	Resolution
After-image appears when the product is turned off.	• If you use a fixed image for a long time, the pixels may be damaged quickly. Use the screen-saver function. • When a dark image is displayed on the screen after an image with high contrast (black and white or gray), this may cause image sticking. This is normal for LCD screen.

The audio function does not work.

Problem	Resolution
No sound?	• See if the audio cable is connected properly. • Adjust the volume. • See if the sound is set properly.
Sound is too dull.	• Select the appropriate equalize sound.
Sound is too low.	• Adjust the volume.

Screen color is abnormal.

Problem	Resolution
Screen has poor color resolution (16 colors).	• Set the number of colors to more than 24 bits (true color). Select Control Panel - Display - Settings - Color Table menu in Windows.
Screen color is unstable or mono-colored.	• Check the connection status of the signal cable. Or, re-insert the PC graphic card.
Do black spots appear on the screen?	• Several pixels (red, green, white or black color) may appear on the screen, which can be attributable to the unique characteristics of the LCD panel. It is not a malfunction of the LCD.

The operation does not work normally.

Problem	Resolution
The power suddenly turned off.	• Is the sleep timer set? • Check the power control settings. Power interrupted.

SPECIFICATIONS

Video Signal	Max. Resolution	RGB : 1920 x 1080 @ 60 Hz HDMI/DVI-D : 1920 x 1080 @ 60 Hz - It may not be supported depending on the OS or graphic card type.
	Recommended Resolution	RGB : 1920 x 1080 @ 60 Hz HDMI/DVI-D : 1920 x 1080 @ 60 Hz - It may not be supported depending on the OS or graphic card type.
	Horizontal Frequency	RGB : 30 kHz to 83 kHz HDMI/DVI-D : 30 kHz to 83 kHz
	Vertical Frequency	RGB : 56 Hz to 60 Hz HDMI/DVI-D : 56 Hz to 60 Hz
	Synchronization Type	Separate Sync
Input Connector		LAN, RS-232C, HDMI IN, DVI-D IN, RGB/AV/ COMPONENT, AUDIO IN, USB IN, REMOTE CONTROL IN, SPEAKER
Power	Rated Voltage	19 V ⎓ 3.42 A
	Power Consumption	On Mode : 30 W (Max.) Sleep Mode (RGB): 1 W Sleep Mode (HDMI/ DVI-D): 1.4 W Off Mode : 1 W
AC/DC Adapter	PA-1650-68 type, manufactured by LITE-ON DA-65G19 type, manufactured by APD Output: 19 V ⎓ 3.42 A	
Embedded battery		Applied
Environmental conditions	Operating Temperature Operating Humidity	0 °C to 40 °C 10 % to 80 %
	Storage Temperature Storage Humidity	-20 °C to 60 °C 5 % to 95 %
Dimensions (Width x Height x Depth) / Weight	198.2 mm x 144.7 mm x 29.3 mm / 700 g	

Product specifications shown above may be changed without prior notice due to upgrade of product functions.
"~" refers to alternating current (AC), and "⎓" refers to direct current (DC).

*** Applicable only for models that support the speakers**

Audio	RMS Audio Output	5 W + 5 W (R + L)
	Input Sensitivity	0.7 Vrms
	Speaker Impedance	8 Ω

Product specifications shown above may be changed without prior notice due to upgrade of product functions.

RGB (PC) Supported Mode

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
1920 x 1080	67.5	60

Power Indicator

Mode	Product
On Mode	Red
Sleep Mode	Amber
Off Mode	-

HDMI/DVI-D(PC) Supported Mode

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
1920 x 1080	67.5	60

NOTE

- PC resolutions available as the input label option in RGB and HDMI/DVI-D input mode : 640 x 480 / 60 Hz, 1280 x 720 / 60 Hz, 1920 x 1080 / 60 Hz and DTV resolutions : 480p, 720p, 1080p.

DTV Mode

Resolution	HDMI(DTV)
1080p	o

NOTE

- Vertical frequency: To enable the user to watch the product display, screen image should be changed tens of times every second like a fluorescent lamp. The vertical frequency or refresh rate is the times of image display per second. The unit is Hz.
- Horizontal frequency: The horizontal interval is the time to display one vertical line. When 1 is divided by the horizontal interval, the number of horizontal lines displayed every second can be tabulated as the horizontal frequency. The unit is kHz.

IR CODES

- All models do not support the HDMI/USB function.
- Some key codes are not supported depending on the model.

Code (Hexa)	Function	Note
08	⏻ (Power)	R/C BUTTON
0B	INPUT	R/C BUTTON
C4	MONITOR ON	R/C BUTTON
C5	MONITOR OFF	R/C BUTTON
95	ENERGY SAVING	R/C BUTTON
DC	3D	R/C BUTTON
10 to 19	Number Key 0 to 9	R/C BUTTON
32	1/a/A	R/C BUTTON
2F	CLEAR	R/C BUTTON
02	Volume ◿ (+)	R/C BUTTON
03	Volume ◿ (-)	R/C BUTTON
79	ARC	R/C BUTTON
99	AUTO	R/C BUTTON
09	MUTE	R/C BUTTON
E0	BRIGHTNESS ∧ (Page UP)	R/C BUTTON
E1	BRIGHTNESS ∨ (Page Down)	R/C BUTTON
4D	PSM	R/C BUTTON
AA	INFO	R/C BUTTON
5F	W.BAL	R/C BUTTON
43	SETTINGS	R/C BUTTON
40	Up ▲	R/C BUTTON
41	Down ▼	R/C BUTTON
07	Left ◄	R/C BUTTON
06	Right ►	R/C BUTTON
3F	S.MENU	R/C BUTTON
44	OK	R/C BUTTON
28	BACK	R/C BUTTON
5B	EXIT	R/C BUTTON
7E	SIMPLINK	R/C BUTTON
7B	TILE	R/C BUTTON
B1	■	R/C BUTTON
B0	▶	R/C BUTTON
BA	⏸	R/C BUTTON
8F	⏪	R/C BUTTON
8E	⏩	R/C BUTTON
72	Red (PICTURE ID ON)	R/C BUTTON
71	Green (PICTURE ID OFF)	R/C BUTTON
63	Yellow	R/C BUTTON
61	Blue	R/C BUTTON

CONTROLLING THE MULTIPLE PRODUCT

Command Reference List

	COMMAND		DATA (Hexadecimal)
	1	2	
01. Power	k	a	00 to 01
02. Input Select	x	b	Refer to ‘Input Select.’
03. Aspect Ratio	k	c	Refer to ‘Aspect Ratio.’
04. Energy Saving	j	q	Refer to ‘Energy Saving.’
05. Picture mode	d	x	Refer to ‘Picture mode.’
06. Contrast	k	g	00 to 64
07. Brightness	k	h	00 to 64
08. Sharpness	k	k	00 to 64
09. Color	k	i	00 to 64
10. Tint	k	j	00 to 64
11. Color Temperature	x	u	00 to 64
12. H Position	f	q	00 to 64
13. V Position	f	r	00 to 64
14. H Size	f	s	00 to 64
15. Auto configuration	j	u	01
16. Balance	k	t	00 to 64
17. Sound mode	d	y	Refer to ‘Sound mode.’
18. Treble	k	r	00 to 64
19. Bass	k	s	00 to 64
20. Speaker	d	v	00 to 01
21. Volume Mute	k	e	00 to 01
22. Volume Control	k	f	00 to 64
23. Time 1(Years/ Months/ Days)	f	a	Refer to ‘Time 1.’
24. Time 2(Hours/ Minutes/Seconds)	f	x	Refer to ‘Time 2.’
25. Off Timer(Repeat mode/ Time)	f	e	Refer to ‘Off Timer.’
26. On Timer(Repeat Mode/ Time)	f	d	Refer to ‘On Timer.’
27. On Timer Input	f	u	Refer to ‘On Timer Input.’
28. Sleep Time	f	f	00 to 08
29. Power On Delay	f	h	00 to 64
30. Automatic Standby	m	n	00 to 01
31. Auto Off	f	g	00 to 01
32. Language	f	i	Refer to ‘Language.’
33. Power Indicator(Standby Light)	f	o	00 to 01
34. Power Indicator(Power Light)	f	p	00 to 01
35. ISM mode	j	p	Refer to ‘ISM Method.’
36. Fail Over Select	m	i	00 to 02
37. Fail Over Input Select	m	j	Refer to ‘Fail Over Input Select.’
38. Reset	f	K	00 to 02

	COMMAND		DATA (Hexadecimal)
	1	2	
39. Tile Mode	d	d	00 to 01
40. Tile Mode Check	d	z	FF
41. Tile ID	d	i	Refer to 'Tile ID.'
42. Tile H Position	d	e	00 to 32
43. Tile V Position	d	f	00 to 32
44. Tile H Size	d	g	00 to 32
45. Tile V Size	d	h	00 to 32
46. Natural Mode (In Tile mode)	d	j	00 to 01
47. DPM Select	f	j	00 to 01
48. FAN Control	d	o	00 to 03
49. FAN Fault Check	d	w	FF
50. Temperature Value	d	n	FF
51. Remote Lock/ key Lock	k	m	00 to 01
52. Key	m	c	Refer to 'Key.'
53. OSD Select	k	l	00 to 01
54. Elapsed time return	d	l	FF
55. Serial No. Check	f	y	FF
56. S/W Version	f	z	FF
57. White Balance Red Gain	j	m	00 to FE
58. White Balance Green Gain	j	n	00 to FE
59. White Balance Blue Gain	j	o	00 to FE
60. Backlight	m	g	00 to 64
61. PC Power Control	d	t	00 to 01
62. PC Power	d	s	00 to 01
63. Easy Brightness Control Mode	s	m	00 to 01
64. Easy Brightness Control Schedule	s	s	Refer to 'Easy Brightness Control Schedule.'
65. Status check	s	v	Refer to 'Status check.'
66. BLU Maintenance	m	t	00 to 01
67. Screen mute	k	d	00 to 01

- Note : During USB operations such as Dvix or EMF, all commands except Power (k a) and Key (m c) are not executed and treated as NG.
- Some commands are not supported depending on the model.
- The 'f f' command which shows the status of a certain command does not display the OSD as the result in order to be compatible with SuperSign program.

Transmission / Receiving Protocol

Transmission

[Command1][Command2][ ][Set ID][ ][Data][Cr]

* [Command1]: First command to control the set.
* [Command2]: Second command to control the set.
* [Set ID]: Set ID with which you want to communicate. Enter [Set ID] = '00(0 x 00' to communicate with all sets regardless of their Set ID numbers.
* [Data]: Information passed to the set.
* [Data1]: Information passed to the set.
* [Data2]: Information passed to the set.
* [Data3]: Information passed to the set.
* [Cr]: Carriage Return. ASCII code '0 x 0D'.
* [ ]: ASCII code space '0 x 20'

Acknowledgement

[Command2][ ][Set ID][ ][OK/NG][Data][x]

* When the product receives data normally, it sends an acknowledgement (ACK) in the format above. If data is in read mode, it indicates the data that shows the current status. If data is in read mode, it simply indicates the data that is sent from the PC.
* If a command is sent with Set ID '00' (=0 x 00), the data is reflected to all monitor sets and they do send any acknowledgement (ACK).
* If the data value 'FF' is sent in control mode via RS-232C, the current setting value of a function can be checked (only for some functions).
* Some commands are not supported depending on the model.

01. Power (Command: k a)

To control the Power On/Off the display.

Transmission

[k][a][ ][Set ID][ ][Data][Cr]

Data 00 : Off
01 : On

Acknowledgement

[a][ ][Set ID][ ][OK/NG][Data][x]

* Only when the monitor set is fully powered on, the Acknowledgement signal is returned properly.
* There may be a certain time of delay between the Transmission and Acknowledgement signals.

02. Input Select (Command: x b)

To select the Input Source for display.

Transmission

[x][b][ ][Set ID][ ][Data][Cr]

Data 20: Input (AV)
40: Component
60: RGB
70: DVI-D(PC)
80: DVI-D(DTV)
90: HDMI(HDMI1)(DTV)
A0: HDMI(HDMI1)(PC)
C0: Display Port(DTV)
D0: Display Port(PC)
91: HDMI2/SDI(DTV)
A1: HDMI2/SDI(PC)
B0: SuperSign

Acknowledgement

[b][ ][Set ID][ ][OK/NG][Data][x]

* Some input signals may not be supported depending on the model.

03. Aspect Ratio (Command: k c)

To adjust the screen format.

Transmission

[k][c][ ][Set ID][ ][Data][Cr]

Data 01: 4:3
02: 16:9
04: Zoom
(AV, Component, HDMI/ DVI-D/ Display Port DTV)
09: Just scan (720p or more)
(Component, HDMI/ DVI-D/ Display Port DTV)
* RGB, DVI-D, HDMI/Display Port PC mode (1:1)
10 to 1F: Cinema Zoom 1 to 16
(AV, Component, HDMI/ DVI-D/ Display Port DTV)

* Available data types differ depending on the input signal. For more information, see the aspect ratio section of the owner's manual.
* The aspect ratio may differ depending on the model's input configuration.

Acknowledgement

[c][ ][Set ID][ ][OK/NG][Data][x]

04. Energy Saving (Command: j q)

To set the Energy Saving function.

Transmission

[j][q][ ][Set ID][ ][Data][Cr]

Data 00: Off
01: Minimum
02: Medium
03. Maximum
04: Auto
05. Screen Off

Acknowledgement

[q][ ][Set ID][ ][OK/NG][Data][x]

** It may not be supported depending on the model.

05. Picture Mode (Command: d x)

To select the Picture Mode.

Transmission

[d][x][ ][Set ID][ ][Data][Cr]

Data 00: Vivid
01: Standard
02. Cinema
03. Sport
04: Game

Acknowledgement

[x][ ][Set ID][ ][OK/NG][Data][x]

06. Contrast (Command: k g)

To adjust the screen contrast.

Transmission

[k][g][ ][Set ID][ ][Data][Cr]

Data 00 to 64: Contrast 0 to 100

Acknowledgement

[g][ ][Set ID][ ][OK/NG][Data][x]

07. Brightness (Command: k h)

To adjust the screen brightness.

Transmission

[k][h][ ][Set ID][ ][Data][Cr]

Data 00 to 64: Brightness 0 to 100

Acknowledgement

[h][ ][Set ID][ ][OK/NG][Data][x]

08. Sharpness (Command: k k)

To adjust the screen sharpness.

* This function is available only in AV/Component input.

Transmission

[k][k][ ][Set ID][ ][Data][Cr]

Data 00 to 64: Sharpness 0 to 100

Acknowledgement

[k][ ][Set ID][ ][OK/NG][Data][x]

09. Color (Command: k i)

To adjust the screen color.

* This function is available only in AV/Component input.

Transmission

[k][i][ ][Set ID][ ][Data][Cr]

Data 00 to 64: Color 0 to 100

Acknowledgement

[i][ ][Set ID][ ][OK/NG][Data][x]

10. Tint (Command: k j)

To adjust the screen tint.

* This function is available only in AV/Component input.

Transmission

[k][j][ ][Set ID][ ][Data][Cr]

Data 00 to 64: Tint R50 to G50

Acknowledgement

[j][ ][Set ID][ ][OK/NG][Data][x]

11. Color Temperature (Command: x u)

To adjust the screen Color Temperature.

Transmission

[x][u][ ][Set ID][ ][Data][Cr]

Data 00 to 64: Warm 50 to Cool 50

Acknowledgement

[u][ ][Set ID][ ][OK/NG][Data][x]

12. H Position (Command: f q)

To adjust the screen Horizontal Position.

* This function is available only when the Tile Mode is set to Off.
* The operational range varies depending on the RGB input resolution.
(Only available for RGB-PC input.)

Transmission

[f][q][ ][Set ID][ ][Data][Cr]

Data 00 to 64: min. -50 (Left) to max. 50 (Right)

Acknowledgement

[q][ ][Set ID][ ][OK/NG][Data][x]

13. V Position (Command: f r)

To adjust the screen Vertical Position.
* This function is available only when the Tile Mode is set to Off.
* The operational range varies depending on the RGB input resolution.
(Only available for RGB-PC input.)

Transmission

[f][r][ ][Set ID][ ][Data][Cr]

Data 00 to 64: min. -50 (Bottom) to max. 50 (Top)

Acknowledgement

[r][ ][Set ID][ ][OK/NG][Data][x]

14. H Size (Command: f s)

To adjust the screen Horizontal Size.
* This function is available only when the Tile Mode is set to Off.
* The operational range varies depending on the RGB input resolution.
(Only available for RGB-PC input.)

Transmission

[f][s][ ][Set ID][ ][Data][Cr]

Data 00 - 64: Min. -50 (Reduce) - Max. 50 (Expand)

Acknowledgement

[s][ ][Set ID][ ][OK/NG][Data][x]

15. Auto Configuration (Command: j u)

To adjust the picture position and minimize image shaking automatically.
(Only available for RGB-PC input.)

Transmission

[j][u][ ][Set ID][ ][Data][Cr]

Data 01 : Set

Acknowledgement

[u][ ][Set ID][ ][OK/NG][Data][x]

16. Balance (Command: k t)

To adjust the sound balance.

Transmission

[k][t][ ][Set ID][ ][Data][Cr]

Data 00 to 64: Left 50 to Right 50

Acknowledgement

[t][ ][Set ID][ ][OK/NG][Data][x]

17. Sound Mode (Command: d y)

To select the Sound Mode.

Transmission

[d][y][ ][Set ID][ ][Data][Cr]

Data 01: Standard
02: Music
03: Cinema
04: Sport
05. Game

Acknowledgement

[y][ ][Set ID][ ][OK/NG][Data][x]

18. Treble (Command: k r)

To adjust the Treble values.

Transmission

[k][r][ ][Set ID][ ][Data][Cr]

Data 00 to 64: Treble 0 to 100

Acknowledgement

[r][ ][Set ID][ ][OK/NG][Data][x]

19. Bass (Command: k s)

To adjust the Bass values.

Transmission

[k][s][ ][Set ID][ ][Data][Cr]

Data 00 to 64: Bass 0 to 100

Acknowledgement

[s][ ][Set ID][ ][OK/NG][Data][x]

20. Speaker (Command: d v)

To select the speaker on/off.

Transmission

[d][v][ ][Set ID][ ][Data][Cr]

Data 00: Off
01: On

Acknowledgement

[v][ ][Set ID][ ][OK/NG][Data][x]

21. Volume Mute (Command: k e)

To control the Volume Mute on/off.

Transmission

[k][e][ ][Set ID][ ][Data][Cr]

Data 00 : Mute (Volume Off)
01 : Current volume (Volume On)

Acknowledgement

[e][ ][Set ID][ ][OK/NG][Data][x]

22. Volume Control (Command: k f)

To set the playback volume.

Transmission

[k][f][ ][Set ID][ ][Data][Cr]

Data 00 to 64: Volume 0 to 100

Acknowledgement

[f][ ][Set ID][ ][OK/NG][Data][x]

23. Time 1(Year/ Month/ Day) (Command: f a)

To set the Time 1(Year/ Month/ Day) values.

Transmission

[f][a][ ][Set ID][ ][Data1][ ][Data2][ ][Data3][Cr]

Data 1 00 to 14: 2010 to 2030
Data 2 01 to 0C: January to December
Data 3 01 to 1F: 1 to 31
* Enter “fa [Set ID] ff” for checking Time 1(Year/ Month/ Day) values.

Acknowledgement

[a][ ][Set ID][ ][OK/NG][Data1][Data2][Data3][x]

24. Time 2(Hour/ Minute/ Second) (Command: f x)

To set the Time 2(Hour/ Minute/ Second) values.

Transmission

[f][x][ ][Set ID][ ][Data1][ ][Data2][ ][Data3][Cr]

Data1 00 to 17: 00 to 23 hours
Data2 00 to 3B: 00 to 59 minutes
Data3 00 to 3B: 00 to 59 seconds
* Enter “fx [Set ID] ff” for checking Time 2(Hour/ Minute/ Second) values.
** This command won’t work if Time 1(Year/ Month/ Day) has not been set in advance.

Acknowledgement

[x][ ][Set ID][ ][OK/NG][Data1][Data2][Data3][x]

25. Off Timer(Repeat Mode/ Time) (Command: f e)

To set the Off Timer(Repeat Mode/ Time) function.

Transmission

[f][e][ ][Set ID][ ][Data1][ ][Data2][ ][Data3][Cr]

Data1
1. F1 to F7 (Read data)
F1: Read the 1st Off Time data
F2: Read the 2nd Off Time data
F3: Read the 3rd Off Time data
F4: Read the 4th Off Time data
F5: Read the 5th Off Time data
F6: Read the 6th Off Time data
F7: Read the 7th Off Time data
2. E1-E7 (Delete one index), E0 (Delete all indexes)
E0: Delete all Off Time data
E1: Delete the 1st Off Time data
E2: Delete the 2nd Off Time data
E3: Delete the 3rd Off Time data
E4: Delete the 4th Off Time data
E5: Delete the 5th Off Time data
E6: Delete the 6th Off Time data
E7: Delete the 7th Off Time data
3. 01 to 0C (Set the day of week for Off Time)
00: Off
01: Once
02. Daily
03: Monday to Friday
04: Monday to Saturday
05: Saturday to Sunday
06: Sunday
07: Monday
08: Tuesday
09: Wednesday
0A: Thursday
0B: Friday
0C: Saturday
Data2 00 to 17: 00 to 23 Hours
Data3 00 to 3B: 00 to 59 Minutes
* To read or delete the Off Time list, set FFH for [Data2] and [Data3].
(Example 1: fe 01 f1 ff ff - Read the 1st Off Time data.)
(Example 2: fe 01 e1 ff ff - Delete the 1st Off Time data.)
(Example 3: fe 01 04 02 03 - Set the Off Time to "Monday to Saturday, 02:03".)
* This function is supported only when 1 (Year/Month/Day) and 2 (Hour/Minute/Second) are set.

Acknowledgement

[e][ ][Set ID][ ][OK/NG][Data1][Data2][Data3][x]

26. On Timer(Repeat Mode/ Time) (Command: f d)

To set the On Timer(Repeat mode/ Time) function.

Transmission

[f][d][ ][Set ID][ ][Data1][ ][Data2][ ][Data3][Cr]

Data1
1. F1 to F7 (Read data)
F1: Read the 1st On Time data
F2: Read the 2nd On Time data
F3: Read the 3rd On Time data
F4: Read the 4th On Time data
F5: Read the 5th On Time data
F6: Read the 6th On Time data
F7: Read the 7th On Time data
2. E1-E7 (Delete one index), E0 (Delete all indexes)
E0: Delete all On Time data
E1: Delete the 1st On Time data
E2: Delete the 2nd On Time data
E3: Delete the 3rd On Time data
E4: Delete the 4th On Time data
E5: Delete the 5th On Time data
E6: Delete the 6th On Time data
E7: Delete the 7th On Time data
3. 01 to 0C (Set the day of week for On Time)
00: Off
01: Once
02: Daily
03: Monday to Friday
04: Monday to Saturday
05: Saturday to Sunday
06: Sunday
07: Monday
08: Tuesday
09: Wednesday
0A: Thursday
0B: Friday
0C: Saturday
Data2 00 to 17: 00 to 23 Hours
Data3 00 to 3B: 00 to 59 Minutes
* To read or delete the Off Time list, set FFH for [Data2] and [Data3].
(Example 1: fd 01 f1 ff ff - Read the 1st On Time data.)
(Example 2: fd 01 e1 ff ff - Delete the 1st On Time data.)
(Example 3: fd 01 04 02 03 - Set the On Time to "Monday to Saturday, 02:03".)
* This function is supported only when 1 (Year/Month/Day) and 2 (Hour/Minute/Second) are set.

Acknowledgement

[d][ ][Set ID][ ][OK/NG][Data1][Data2][Data3][x]

27. On Timer Input (Command: f u)

To select an external input for the current On Time setting and add a new schedule or change the existing schedule.

Transmission

[f][u][ ][Set ID][ ][Data1][Cr]

[f][u][ ][Set ID][ ][Data1][Data2][Cr]

Data (Add schedule)
20: Input (AV)
40: Component
60: RGB
70: DVI-D
90: HDMI (HDMI1)
C0: Display Port
91: HDMI2/SDI
B0:SuperSign
Data1 (Change schedule)
1. F1 to F7 (Read data)
F1: Select the 1st schedule input
F2: Select the 2nd schedule input
F3: Select the 3rd schedule input
F4: Select the 4th schedule input
F5: Select the 5th schedule input
F6: Select the 6th schedule input
F7: Select the 7th schedule input
Data2
20: Input (AV)
40: Component
60: RGB
70: DVI-D
90: HDMI (HDMI1)
C0: Display Port
91: HDMI2/SDI
B0:SuperSign
* To read the schedule input, enter FFH for [Data2]. If no schedule is available for [Data1] when attempting to read or change the schedule data, the text NG will be displayed and the operation fails.
(Example 1: fu 01 60 - Move each schedule input down one row and save the 1st schedule input in RGB mode.)
(Example 2: fu 01 f1 ff - Read the 1st schedule input.)
(Example 3: fu 01 f3 20 - Change the 3rd data schedule input to the current On Time and AV input. If there is no third schedule, the text NG will be displayed and the operation fails.)
* This function is supported only when 1 (Year/Month/Day), 2 (Hour/Minute/Second), On Time (Repeat Mode/Time) are set.
** It may not be supported depending on the model.

Acknowledgement

[u][ ][Set ID][ ][OK/NG][Data][x]

[u][ ][Set ID][ ][OK/NG][Data1][Data2][x]

28. Sleep Time (Command: f f)

To set the Sleep Time.

Transmission

[f][f][ ][Set ID][ ][Data][Cr]

Data 00: Off (Sleep Timer off)
01: 10 min.
02: 20 min.
03: 30 min.
04: 60 min.
05: 90 min.
06: 120 min.
07: 180 min.
08: 240 min.

Acknowledgement

[f][ ][Set ID][ ][OK/NG][Data][x]

29. Power On Delay (Command: f h)

To set the schedule delay when the power is turned on. (Unit: Second)

Transmission

[f][h][ ][Set ID][ ][Data][Cr]

Data 00 to 64: min. 0 to max. 100 (sec.)

Acknowledgement

[h][ ][Set ID][ ][OK/NG][Data][x]

30. Automatic Standby (Command: m n)

To set the Automatic Standby function.

Transmission

[m][n][ ][Set ID][ ][Data][Cr]

Data 00: Off (No off after 4 hours)
01: 4 Hours (Off after 4 hours)

Acknowledgement

[n][ ][Set ID][ ][OK/NG][Data][x]

31. Auto Off (Command: f g)

To set the Auto Off function.

Transmission

[f][g][ ][Set ID][ ][Data][Cr]

Data 00: Off (No off after 15 minutes)
01: 15 min.(Off after 15 minutes)

Acknowledgement

[g][ ][Set ID][ ][OK/NG][Data][x]

32. Language (Command: f i)

To set the language for OSD.

Transmission

[f][i][ ][Set ID][ ][Data][Cr]

Data 00: Czech
01: Danish
02: German
03: English
04: Spanish (EU)
05: Greek
06: French
07: Italian
08: Dutch
09: Norwegian
0A: Portuguese
0B: Portuguese (BR)
0C: Russian
0D: Finnish
0E: Swedish
0F: Korean
10: Chinese (Mandarin)
11: Japanese
12: Yue Chinese (Cantonese)

Acknowledgement

[i][ ][Set ID][ ][OK/NG][Data][x]

33. Power Indicator (Standby Light) (Command: f o)

To set the Power Indicator (Standby Light) function.

Transmission

[f][o][ ][Set ID][ ][Data][Cr]

Data 00: Off
01: On

** It may not be supported depending on the model.

Acknowledgement

[o][ ][Set ID][ ][OK/NG][Data][x]

34. Power Indicator (Power Light) (Command: f p)

To set the Power Indicator (Power Light) function.

Transmission

[f][p][ ][Set ID][ ][Data][Cr]

Data 00: Off
01: On

** It may not be supported depending on the model.

Acknowledgement

[p][ ][Set ID][ ][OK/NG][Data][x]

35. ISM mode (Command: j p)

To select ISM method for avoiding having a fixed image remain on screen.

Transmission

[j][p][ ][Set ID][ ][Data][Cr]

Data 01: Inversion
02: Orbiter
04: White Wash
08. Normal

Acknowledgement

[p][ ][Set ID][ ][OK/NG][Data][x]

36. Fail Over Select (Command: m i)

To set the Fail Over function.

Transmission

[m][i][ ][Set ID][ ][Data][Cr]

Data 00: Off
01: Auto
02: Manual

Acknowledgement

[i][ ][Set ID][ ][OK/NG][Data][x]

37. Fail Over Input Select (Command: m j)

To select the input source for auto switch.

* This command is only available when the fail over (auto) mode is set to Custom.

Transmission

[m][j][ ][Set ID][ ][Data1][ ][Data2][ ][Data3][Cr]
[ ][Data4][ ][Data5][Cr]

Data 1 to 5 (Priority 1 to 5)
60: RGB
70: DVI-D
90: HDMI(HDMI1)
C0: Display Port
91: HDMI2/SDI

* The number of data items differs depending on the model.

Acknowledgement

[j][ ][SetID][ ][OK/NG][Data1][Data2][Data3][Data4]
[ ][Data5][x]

38. Reset (Command: f k)

To execute the Picture, Screen, Audio and Factory reset function.
(Screen Reset can only be performed in RGB input mode.)

Transmission

[f][k][ ][Set ID][ ][Data][Cr]

Data 00: Picture Reset
01: Screen Reset
02: Factory Reset
03: Audio Reset

Acknowledgement

[k][ ][Set ID][ ][OK/NG][Data][x]

39. Tile Mode (Command: d d)

To set a Tile Mode and Tile Column/ Row values.

Transmission

[d][d][ ][Set ID][ ][Data][Cr]

Data 00 to FF: 1st byte - Tile Row
2nd byte - Tile Column

*00, 01, 10, 11 means Tile Mode Off

** It may not be supported depending on the model.

Acknowledgement

[d][ ][Set ID][ ][OK/NG][Data][x]

40. Tile Mode Check (Command: d z)

To check Tile Mode status.

Transmission

[d][z][ ][Set ID][ ][Data][Cr]

Data FF: Check Tile Mode status.

** It may not be supported depending on the model.

Acknowledgement

[z][ ][Set ID][ ][OK/NG][Data1][Data2][Data3][x]

Data1 00: Tile Mode Off
01: Tile Mode On
Data2 00 to 0F: Tile Row
Data3 00 to 0F: Tile Column

41. Tile ID (Command: d i)

To set Tile ID.

Transmission

[d][i][ ][Set ID][ ][Data][Cr]

Data 01 to E1: Tile ID 01 to 225**
FF: Check Tile ID

** Data could not be set over (Tile Column) x (Tile Row).

** It may not be supported depending on the model.

Acknowledgement

[i][ ][Set ID][ ][OK/NG][Data][x]

*NG will be return if data is over (Tile Column) x (Tile Row), except 0xFF.

42. Tile H Position (Command: d e)

To adjust the Tile Horizontal position.

* This function is available only when the Natural option of the Tile Mode is set to Off while the Tile Mode set to On.

Transmission

[d][e][ ][Set ID][ ][Data][Cr]

Data 00 to 32: -50 (Left) to 0 (Right)

*Left/Right values depend on Tile H size.

** It may not be supported depending on the model.

Acknowledgement

[e][ ][Set ID][ ][OK/NG][Data][x]

43. Tile V Position (Command: d f)

To adjust the Tile Vertical position.

* This function is available only when the Natural option of the Tile Mode is set to Off while the Tile Mode set to On.

Transmission

[d][f][ ][Set ID][ ][Data][Cr]

Data 0 to 32: 0 (Bottom) to 50 (Top)

* Bottom/Top values depend on Tile Vertical size.

** It may not be supported depending on the model.

Acknowledgement

[f][ ][Set ID][ ][OK/NG][Data][x]

44. Tile H Size (Command: d g)

To adjust the Tile Horizontal Size.

*Set Tile H Position to 0x32 before setting Tile H Size.

* This function is available only when the Natural option of the Tile Mode is set to Off while the Tile Mode set to On.

Transmission

[d][g][ ][Set ID][ ][Data][Cr]

Data 00 to 32: 0 to 50

** It may not be supported depending on the model.

Acknowledgement

[g][ ][Set ID][ ][OK/NG][Data][x]

45. Tile V Size (Command: d h)

To adjust the Tile Vertical size.

*Set Tile V Position to 0x00 before setting Tile V Size.

* This function is available only when the Natural option of the Tile Mode is set to Off while the Tile Mode set to On.

Transmission

[d][h][ ][Set ID][ ][Data][Cr]

Data 00 to 32: 0 to 50

** It may not be supported depending on the model.

Acknowledgement

[h][ ][Set ID][ ][OK/NG][Data][x]

46. Natural Mode (In Tile Mode) (Command : d j)

To display the image naturally, the part of the image that would normally be displayed in the gap between the monitors is omitted.

Transmission

[d][j][ ][Set ID][ ][Data][Cr]

Data 00: Off
01: On

Acknowledgement

[j][ ][Set ID][ ][OK/NG][Data][x]

47. DPM Select (Command: f j)

To set the DPM (Display Power Management) function.

Transmission

[f][j][ ][Set ID][ ][Data][Cr]

Data 00: Off
01: On

* Data settings may vary depending on your model as below.

Data 00: Off
01: 5 sec.
02: 10 sec.
03: 15 sec.
04: 1 min.
05: 3 min.
06: 5 min.
07: 10 min.

Acknowledgement

[j][ ][Set ID][ ][OK/NG][Data][x]

48. FAN Control (Command : d o)

To set the Fan mode.

Transmission

[d][o][ ][Set ID][ ][Data][Cr]

Data 00: Auto
01: On
02: Manual
03: Off

** It may not be supported depending on the model.

Acknowledgement

[o][ ][Set ID][ ][OK/NG][Data][x]

49. FAN Fault Check (Command: d w)

To check the fan errors.

Transmission

[d][w][ ][Set ID][ ][Data][Cr]

Data FF: Read the status

Acknowledgement

[w][ ][Set ID][ ][OK/NG][Data][x]

Data 00: Fan fault
01: Fan OK
02: Model without a Fan

50. Temperature Value (Command: d n)

To check the inside temperature value.

Transmission

[d][n][ ][Set ID][ ][Data][Cr]

Data FF: Check the status

Acknowledgement

[n][ ][Set ID][ ][OK/NG][Data][x]

[n][ ][Set ID][ ][OK/NG][Data1][Data2][Data3][x]

* Temperature is displayed in hexadecimal.

51. Remote Controller Lock/ Key Lock (Command: k m)

When the remote control and front keys are locked in standby mode, the power cannot be turned on using the remote control or front power button.

Transmission

[k][m][ ][Set ID][ ][Data][Cr]

Data 00: Off (Lock Off)
01: On (Lock On)

* Display will not be turned on by power on key of remote controller and front panel control keys, if key is locked on in standby mode.

Acknowledgement

[m][ ][Set ID][ ][OK/NG][Data][x]

** It may not be supported depending on the model.

52. Key (Command: m c)

To send a key code of the IR remote control.

Transmission

[m][c][ ][Set ID][ ][Data][Cr]

Data IR_KEY_CODE

Acknowledgement

[c][ ][Set ID][ ][OK/NG][Data][x]

For a key code, see the IR Code.

* Some key codes are not supported depending on the model.

53. OSD Select (Command: k l)

To select OSD(On Screen Display) on/off.

Transmission

[k][l][ ][Set ID][ ][Data][Cr]

Data 00: Off
01: On

Acknowledgement

[l][ ][Set ID][ ][OK/NG][Data][x]

54. Elapsed time return (Command: d l)

To check the panel used time.

Transmission

[d][l][ ][Set ID][ ][Data][Cr]

Data FF: Read the status

Acknowledgement

[l][ ][Set ID][ ][OK/NG][Data][x]

* Returned data means used hours in hexadecimal.

55. Serial No.Check (Command: f y)

To check the Serial Numbers.

Transmission

[f][y][ ][Set ID][ ][Data][Cr]

Data FF: Check the product Serial Number

Acknowledgement

[y][ ][Set ID][ ][OK/NG][Data][x]

* Data is ASCII code.

56. S/W Version (Command: f z)

To check the Software Version.

Transmission

[f][z][ ][Set ID][ ][Data][Cr]

Data FF: Check the Software version

Acknowledgement

[z][ ][Set ID][ ][OK/NG][Data][x]

57. White Balance Red Gain (Command: j m)

To set the White Balance Red Gain.

Transmission

[j][m][ ][Set ID][ ][Data][Cr]

Data 00 to FE: Red Gain 0 to 254

Acknowledgement

[m][ ][Set ID][ ][OK/NG][Data][x]

58. White Balance Green Gain (Command: j n)

To set the White Balance Green Gain.

Transmission

[j][n][ ][Set ID][ ][Data][Cr]

Data 00 to FE: Green Gain 0 to 254

Acknowledgement

[n][ ][Set ID][ ][OK/NG][Data][x]

59. White Balance Blue Gain (Command: j o)

To set the White Balance Blue Gain.

Transmission

[j][o][ ][Set ID][ ][Data][Cr]

Data 00 to FE: Blue Gain 0 to 254

Acknowledgement

[o][ ][Set ID][ ][OK/NG][Data][x]

60. Backlight (Command: m g)

To adjust the screen backlight.

Transmission

[m][g][ ][Set ID][ ][Data][Cr]

Data 00 to 64: Backlight 0 to 100

Acknowledgement

[g][][set ID][][OK/NG][Data][x]

** It may not be supported depending on the model.

61. PC Power Control (Command: d t)

To control the PC power if the PC and the monitor are synchronized.

Transmission

[d][t][ ][Set ID][ ][Data][Cr]

Data

00: Synchronized (When the monitor is off, the PC is also turned off.)

01: Not synchronized (The monitor is off but the PC is on.)

02: Maintain the power-on state of the PC. (When you turn on the monitor while the Media Player is turned off, the Media Player is turned on.)

** It may not be supported depending on the model.

Acknowledgement

[t][ ][Set ID][ ][OK][Data][x]

62. PC Power (Command: d s)

Control the PC power.

Transmission

[d][s][ ][Set ID][ ][Data][Cr]

Data 00: PC is turned off.
01: PC is turned on.

** It may not be supported depending on the model.

Acknowledgement

[s][ ][Set ID][ ][OK][Data][x]

63. Easy Brightness Control Mode (Command: s m)

Selects ON/OFF of Easy Brightness Control Mode.

Transmission

[s][m][ ][Set ID][ ][Data][Cr]

Data 00: Easy Brightness Control OFF
01: Easy Brightness Control ON

* It does not work if the current time is not set up.

** It may not be supported, depending on the model.

Acknowledgement

[m][ ][Set ID][ ][OK/NG][Data][x]

64. Easy Brightness Control Schedule (Command: s s)

Sets the Easy Brightness Control Schedule.

Transmission

[s][s][ ][Set ID][ ][Data1][ ][Data2][ ][Data3][Cr]

Data1

1. F1 - F6 (Data Reading Functions)

F1: Reads the data of the 1st Easy Brightness Control

F2: Reads the data of the 2nd Easy Brightness Control

F3: Reads the data of the 3rd Easy Brightness Control

F4: Reads the data of the 4th Easy Brightness Control

F5: Reads the data of the 5th Easy Brightness Control

F6: Reads the data of the 6th Easy Brightness Control

2. E1-E6 (Deletes One Index), E0 (Delete All Indexes)

E0: Deletes all Easy Brightness Controls

E1: Deletes the 1st Easy Brightness Control

E2: Deletes the 2nd Easy Brightness Control

E3: Deletes the 3rd Easy Brightness Control

E4: Deletes the 4th Easy Brightness Control

E5: Deletes the 5th Easy Brightness Control

E6: Deletes the 6th Easy Brightness Control

3. 00-17: 00 - 23:00

Data2 00-3B: 00 - 59 minutes

Data3 00-64: backlight 0 - 100

* To read or delete the configured Easy Brightness Control list, set [Data2][Data3] to FF.

(ex1: ss 01 f1 ff ff - Reads the 1st index data from the Easy Brightness Control.

ex2: ss 01 e1 ff ff - Deletes the 1st index data from the Easy Brightness Control.

ex3: ss 01 07 1E 46 - Adds a schedule to the backlight 70 at 07:30.)

Acknowledgement

[s][ ][Set ID][ ][OK/NG][Data1][Data2][Data3][x]

** It may not be supported, depending on the model.

65. Status check (Command: s v)

Check various statuses.

Transmission

[s][v][ ][Set ID][ ][Data][ ][FF][Cr]

Data 05: Check the normal operation of No.1 and No.2 luminance sensors.
06: luminance sensor being used:
07: Check the normal operation of top, bottom, or main temperature sensors.

Acknowledgement

[v][ ][Set ID][ ][OK/NG][Data][Data1][x]

When the Data is 05
Data1 00: All normal
01: BLU sensor 1 normal, BLU sensor 2 fail
02: BLU sensor 1 fail, BLU sensor 2 normal
03: All fail
When the Data is 06
Data1 00: No.1 luminance sensor is being used
01: No.2 luminance sensor is being used

When the Data is 07
Data1 00: All temperature sensors fail
01: Top normal, Bottom fail, Main fail
02: Top fail, Bottom normal, Main fail
03: Top normal, Bottom normal, Main fail
04: Top fail, Bottom fail, Main normal
05: Top normal, Bottom fail, Main fail
06: Top fail, Bottom normal, Main fail
07: All temperature sensors normal

When the Data is 08

Acknowledgement

[v][ ][SetID][ ][OK/NG][Data][Data1][Data2][Data3][x]

Data1: Temperature of the top sensor area when the set is powered off.
Data2: Temperature of the bottom sensor area when the set is powered off.
Data3: Temperature of the main sensor area when the set is powered off.

When the Data is 09

Acknowledgement

[v][ ][SetID][ ][OK/NG][Data][Data1][Data2][x]

Data1 00-ff: Upper 2-byte of Fan Speed
Data2 00-ff: Lower 2-byte of Fan Speed
Fan Speed: Hex 0-20D0, Decimal 0-8400
** It may not be supported, depending on the model.

66. BLU Maintenance (Command: m t)

Select ON/OFF of BLU Maintenance.

Transmission

[m][t][ ][Set ID][ ][Data][Cr]

Data 00: BLU Maintenance OFF
01: BLU Maintenance ON
** It may not be supported, depending on the model.

Acknowledgement

[t][ ][Set ID][ ][OK/NG][Data][x]

67. Screen mute (Command: k d)

Turns the screen on or off.

Transmission

[k][d][ ][Set ID][ ][Data][Cr]

Data 00: Turns the screen on.
01: Turns the screen off.

Acknowledgement

[d][ ][Set ID][ ][OK/NG][Data][x]



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Make sure to read the Safety Precautions before using the product.
The model and serial number of the SET is located on the back and one side of the SET. Record it below should you ever need service.

MODEL _____

SERIAL _____

WARNING -This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Temporary noise is normal when powering ON or OFF this device.