ViewSonic®



CDX4952
Commercial Display
User Guide

IMPORTANT: Please read this User Guide to obtain important information on installing and using your product in a safe manner, as well as registering your product for future service. Warranty information contained in this User Guide will describe your limited coverage from ViewSonic Corporation, which is also found on our web site at http://www.viewsonic.com in English, or in specific languages using the Regional selection box in the upper right corner of our website. “Antes de operar su equipo lea cu idadosamente las instrucciones en este manual”

Model No. VS16717

Thank you for choosing ViewSonic

With over 25 years as a world leading provider of visual solutions, ViewSonic is dedicated to exceeding the world's expectations for technological evolution, innovation, and simplicity. At ViewSonic, we believe that our products have the potential to make a positive impact in the world, and we are confident that the ViewSonic product you have chosen will serve you well.

Once again, thank you for choosing ViewSonic !

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Compliance Information

NOTE: This section addresses all connected requirements and statements regarding regulations. Confirmed corresponding applications shall refer to nameplate labels and relevant markings on unit.

FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class A/ Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning: To comply with the limits for the Class A/Class B digital device, pursuant to Part 15 of the FCC Rules, this device must be installed in computer equipment certified to comply with the Class A/Class B limits. All cables used to connect the computer and peripherals must be shielded and grounded. Operation with non-certified computers or non-shielded cables may result in interference to radio or television reception. Changes and modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

For Canada

CAN ICES-3 (A/B)/NMB-3(A/B)

The mark indicates the requirement NOT to dispose of the equipment as unsorted municipal waste, but use the return and collection systems according to local law.



If the batteries, accumulators and button cells included with this equipment, display the chemical symbol Hg, Cd, or Pb, then it means that the battery has a heavy metal content of more than 0.0005% Mercury or more than, 0.002% Cadmium, or more than 0.004% Lead.



Declaration of RoHS2 Compliance

This product has been designed and manufactured in compliance with Directive 2011/65/EU of the European Parliament and the Council on restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS2 Directive) and is deemed to comply with the maximum concentration values issued by the European Technical Adaptation Committee (TAC) as shown below:

Substance	Proposed Maximum Concentration	Actual Concentration
Lead (Pb)	0,1%	< 0,1%
Mercury (Hg)	0,1%	< 0,1%
Cadmium (Cd)	0,01%	< 0,01%
Hexavalent Chromium (Cr^{6+})	0,1%	< 0,1%
Polybrominated biphenyls (PBB)	0,1%	< 0,1%
Polybrominated diphenyl ethers (PBDE)	0,1%	< 0,1%

Certain components of products as stated above are exempted under the Annex III of the RoHS2 Directives as noted below:

Examples of exempted components are:

1. Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes not exceeding (per lamp):
   (1) Short length (≦500 mm): maximum 3.5 mg per lamp.
   (2) Medium length (＞500 mm and ≦1,500 mm): maximum 5 mg per lamp.
   (3) Long length (＞1,500 mm): maximum 13 mg per lamp.
2. Lead in glass of cathode ray tubes.
3. Lead in glass of fluorescent tubes not exceeding 0.2% by weight.
4. Lead as an alloying element in aluminium containing up to 0.4% lead by weight.
5. Copper alloy containing up to 4% lead by weight.
6. Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead).
7. Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound.

Safety Precautions

FOR OPTIMUM PERFORMANCE, PLEASE NOTE THE FOLLOWING WHEN SETTING UP AND USING THE LCD COLOR MONITOR:

- DO NOT REMOVE MONITOR BACK COVER. There are no user serviceable parts inside and opening or removing covers may expose you to dangerous shock hazards or other risks. Refer all servicing to qualified service personnel.
- Do not spill any liquids into the cabinet or use your monitor near water.
- Do not insert objects of any kind into the cabinet slots, as they may touch dangerous voltage points, which can be harmful or fatal or may cause electric shock, fire or equipment failure.
- Do not place any heavy objects on the power cord. Damage to the cord may cause shock or fire.
- Do not place this product on a sloping or unstable cart, stand or table, as the monitor may fall, causing serious damage to the monitor.
- Do not place any objects onto the monitor and do not use the monitor outdoors.
- The inside of the fluorescent tube located within the LCD monitor contains mercury. Please follow the laws or rules of your municipality to dispose of the tube properly.
- Do not bend power cord.
- Do not use monitor in high temperature, humid, dusty, or oily areas.
- If monitor or glass is broken, do not come in contact with the liquid crystal and handle with care.
- Allow adequate ventilation around the monitor, so that heat can properly dissipate. Do not block ventilated openings or place the monitor near a radiator or other heat sources. Do not put anything on top of the monitor.
- The power cable connector is the primary means of detaching the system from the power supply. The monitor should be installed close to a power outlet, which is easily accessible.
- Handle with care when transporting. Save packaging for transporting.
- Please clean the holes of back cabinet to reject dirt and dust at least once a year because of set reliability.
- If using the cooling fan continuously, it’s recommended to wipe holes a minimum of once a month.
- When installing the remote control batteries;
  - Align the batteries according to the (+) and (-) indications inside the case.
  - Align the (-) indication of the battery first inside the case.

CAUTION:

Immediately unplug your monitor from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the monitor.
- If the monitor has been exposed to rain or water.
- If the monitor has been dropped or the cabinet damaged.
- If the monitor does not operate normally by following operating instructions.

Recommended Use

CAUTION:

- For optimum performance, allow 20 minutes for warm-up.
- Rest your eyes periodically by focusing on an object at least 5 feet away. Blink often.
- Position the monitor at a 90° angle to windows and other light sources to minimize glare and reflections.
- Clean the LCD monitor surface with a lint-free, nonabrasive cloth. Avoid using any cleaning solution or glass cleaner!
- Adjust the monitor's brightness, contrast and sharpness controls to enhance readability.
- Avoid displaying fixed patterns on the monitor for long periods of time to avoid image persistence (after image effects).
- Get regular eye checkups.

Ergonomics

To realize the maximum ergonomic benefits, we recommend the following:

- Use the preset Size and Position controls with standard signals.
- Use the preset Color Setting.
- Use non-interlaced signals.
- Do not use primary color blue on a dark background, as it is difficult to see and may produce eye fatigue due to insufficient contrast.

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Product Registration

To meet your future needs, and to receive any additional product information as it becomes available, please register your product on the Internet at: www.viewsonic.com.

The ViewSonic® Wizard CD-ROM also provides an opportunity for you to print the registration form, which you may mail or fax to ViewSonic.

For Your Records

Product Name:	CDX4952 ViewSonic Commercial Display
Model Number:	VS16717
Document Number:	CDX4952_UG_ENG Rev. 1A 02-24-17
Serial Number:	_____
Purchase Date:	_____

Product disposal at end of product life

ViewSonic respects the environment and is committed to working and living green. Thank you for being part of Smarter, Greener Computing.

Please visit ViewSonic website to learn more.

USA & Canada: http://www.viewsonic.com/company/green/recycle-program/

Europe: http://www.viewsoniceurope.com/uk/support/recycling-information/

Taiwan: http://recycle.epa.gov.tw/recycle/index2.aspx

1. Unpacking and Installation

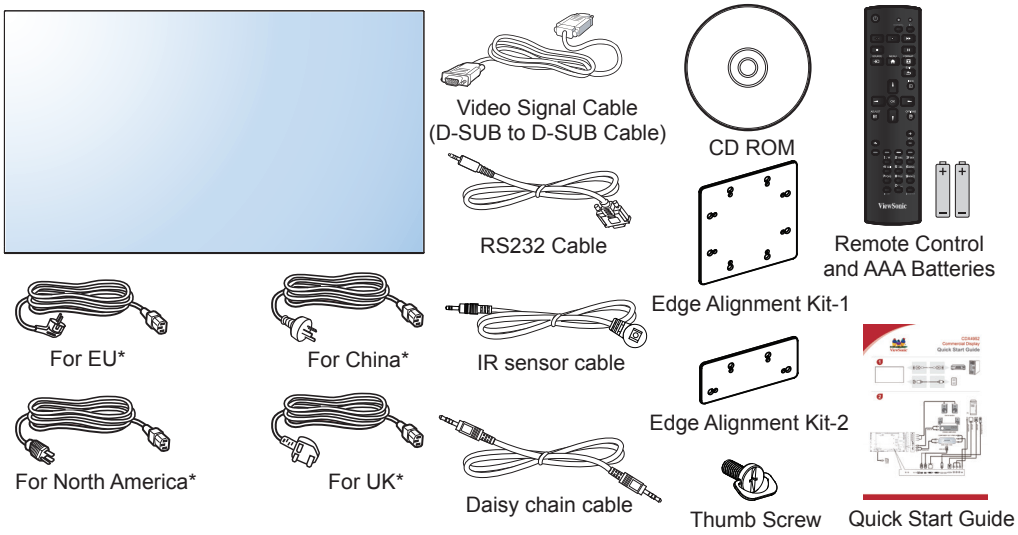
1.1. Unpacking

- This product is packed in a carton, together with the standard accessories.
- Any other optional accessories will be packed separately.
- Due to the size and weight of this display it is recommended for two people to move it.
- After opening the carton, ensure that the contents are complete and in good condition.

1.2. Package Contents

Please verify that you received the following items with your package content:

- LCD display
- CD ROM
- Remote control with AAA batteries
- Power cord (1.8 m)
- VGA cable (1.8 m)
- RS232 cable (1.8 m)
- Daisy chain cable (1.8m)
- IR sensor cable
- Quick Start Guide
- Edge Alignment Kit-1: 1PCS
- Edge Alignment Kit-2: 2PCS
- Thumb Screw: 8PCS



* The supplied power cord varies depending on destination.

NOTES:

- For all other regions, apply a power cord that conforms to the AC voltage of the power socket and has been approved by and complies with the safety regulations of the particular country.
- You might like to save the package box and packing material for shipping the display.

1.3. Installation Notes

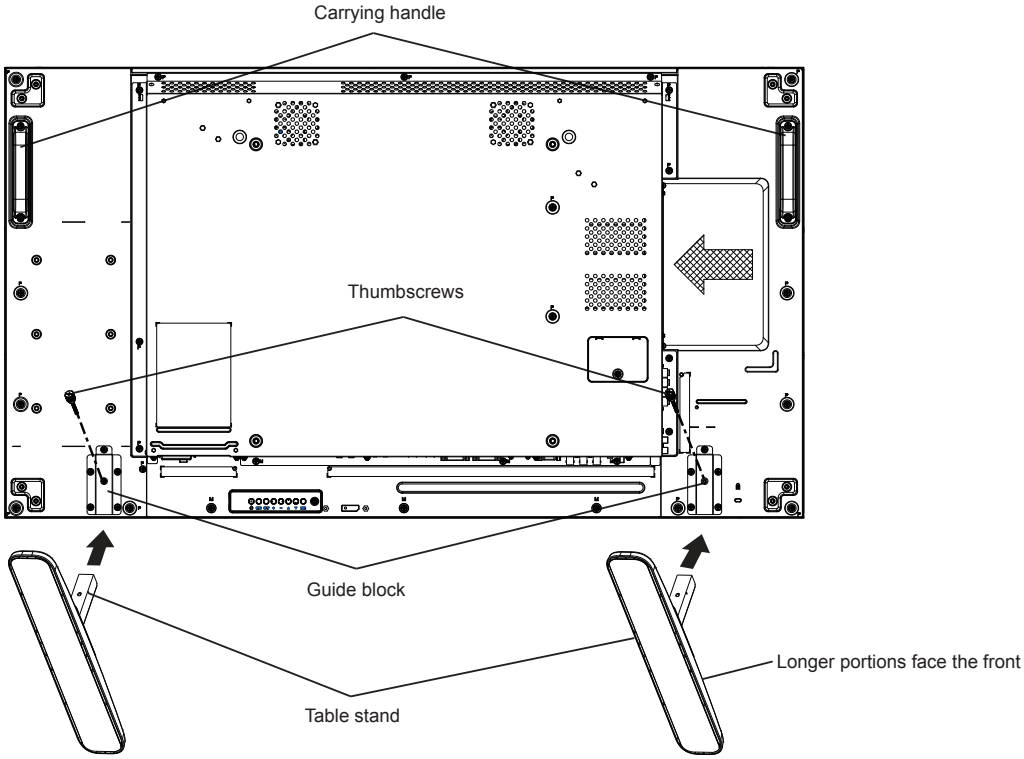
- Due to the high power consumption, always use the plug exclusively designed for this product. If an extended line is required, please consult your service agent.
- The product should be installed on a flat surface to avoid tipping. The distance between the back of the product and the wall should be maintained for proper ventilation. Avoid installing the product in the kitchen, bathroom or any other places with high humidity so as not to shorten the service life of the electronic components.
- The product can normally operate only under 3000m in altitude. In installations at altitudes above 3000m, some abnormalities may be experienced.

1.4. Installing and Removing Table Stands (optional)

To install table stands:

1. Ensure your display is powered off.
2. Spread a protective sheet on a flat surface.
3. Grab the carrying handles and place the display face-down on the protective sheet.
4. After inserting the stand in the guide block, tighten the screws on both sides of the display.

NOTE: The longer side of the stand should face the front of the display.



To remove table stands:

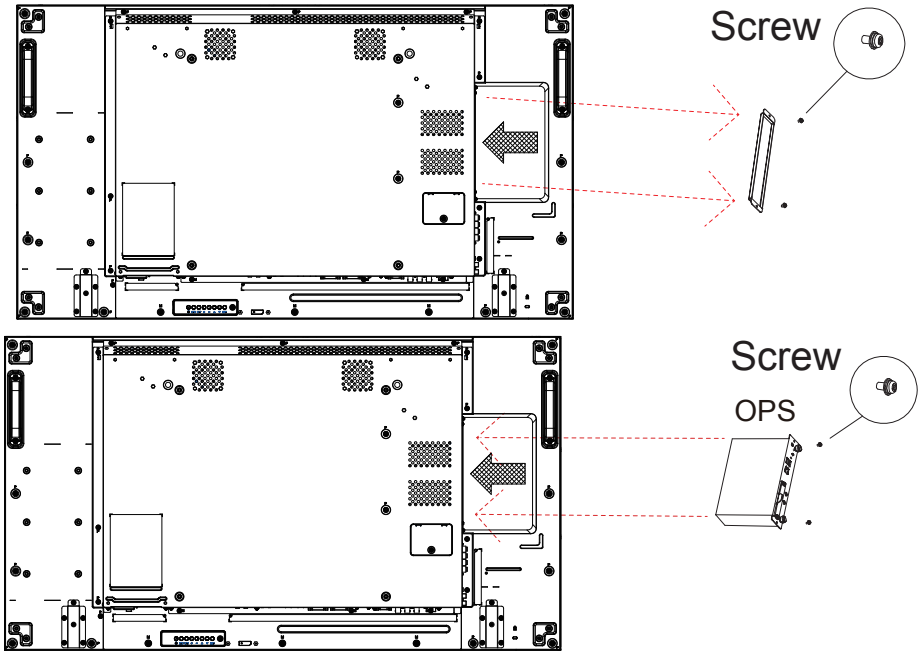
1. Power off the display.
2. Spread a protective sheet on a flat surface.
3. Grab the carrying handles and place the display face-down on the protective sheet.
4. Remove screws using a screwdriver and place them in a safe place for reuse.

1.5. Installing and Removing OPS module

To install OPS Module:

1. Power off the display.
2. Remove the cover of OPS after take screw off.
3. Insert OPS module and then fix by screw.

NOTE: Keep the OPS cover for future use.

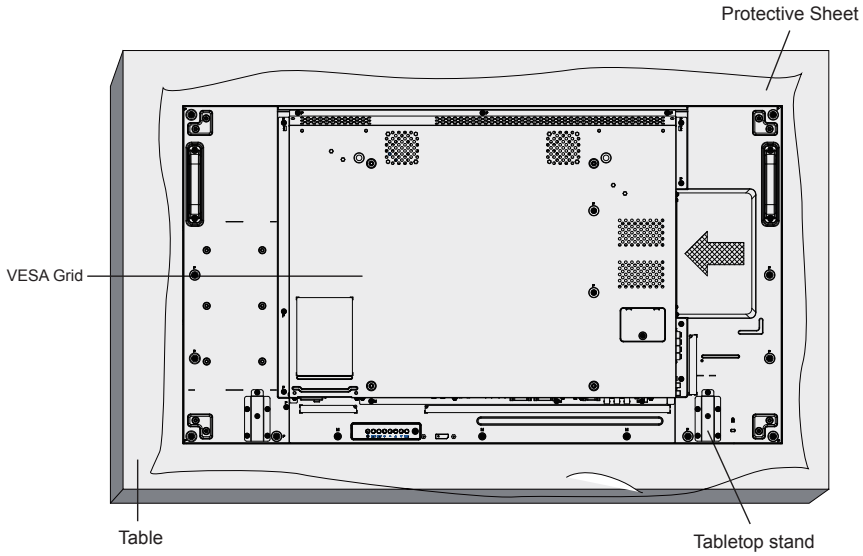


To remove OPS Module:

1. Power off the display.
2. Remove screw and plug out OPS module.
3. Install OPS cover and then fix by screw.

1.6. Mounting on a Wall

To mount this display to a wall, you will have to obtain a standard wall-mounting kit (commercially available). We recommend using a mounting interface that complies with TUV-GS and/or UL1678 standard in North America.



1. Lay a protective sheet on a table, which was wrapped around the display when it was packaged, beneath the screen surface so as not to scratch the screen face.
2. Ensure you have all accessories for mounting this display (wall mount, ceiling mount, table stand, etc).
3. Follow the instructions that come with the base mounting kit. Failure to follow correct mounting procedures could result in damage to the equipment or injury to the user or installer. Product warranty does not cover damage caused by improper installation.
4. For the wall-mounting kit, use M6 mounting screws (having a length 10 mm longer than the thickness of the mounting bracket) and tighten them securely.
5. Unit without base weight = 21.6 kg. The equipment and its associated mounting means still remain secure during the test. For use only with UL Listed Wall Mount Bracket with minimum weight/load: 87.6 kg.

1.6.1. VESA Grid

CDX4952	400(H) x 400(V) mm

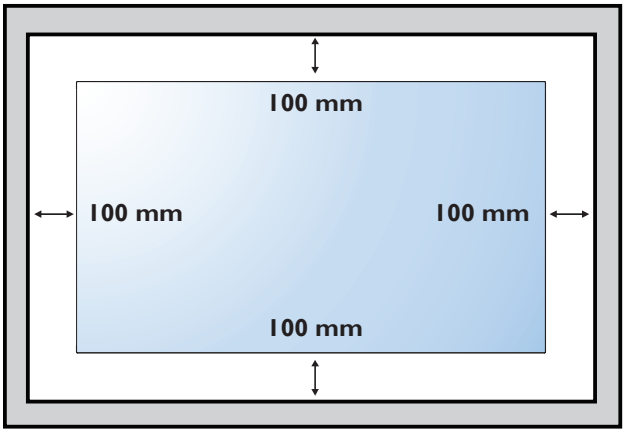
Caution:

To prevent the display from falling:

- For wall or ceiling installation, we recommend installing the display with metal brackets which are commercially available. For detailed installation instructions, refer to the guide received with the respective bracket.
- To lessen the probability of injury and damage resulting from fall of the display in case of earthquake or other natural disaster, be sure to consult the bracket manufacturer for installation location.

Ventilation Requirements for enclosure locating

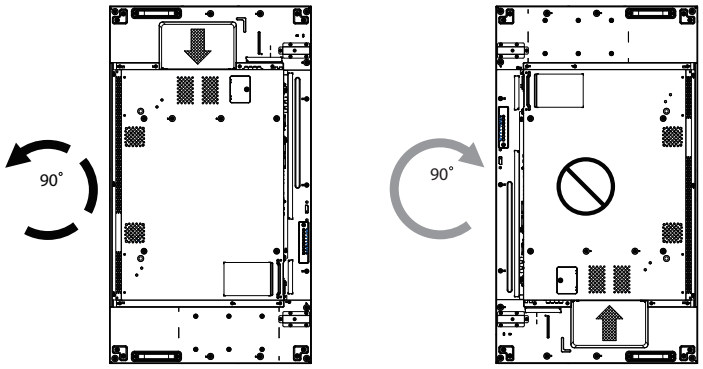
To allow heat to disperse, leave space between surrounding objects as shown in the diagram below.



1.7. Mounting in Portrait Position

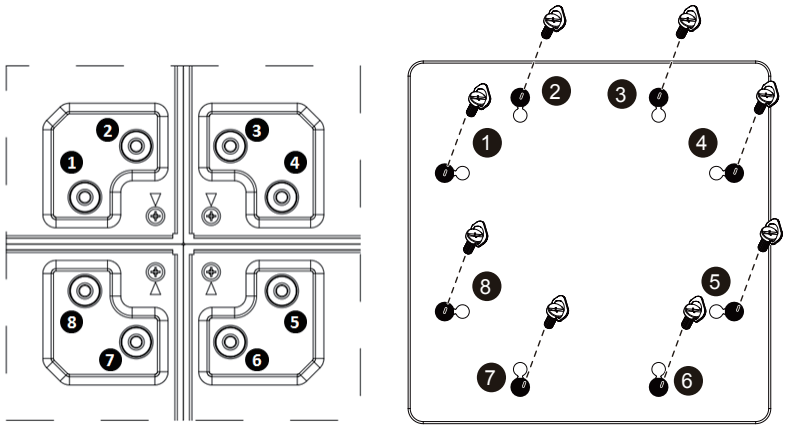
This display can be installed in por trait position.

1. Remove the table stand, if attached.
2. Rotate 90 degrees anticlockwise.The terminals logo should be bristling when facing the display at the back.

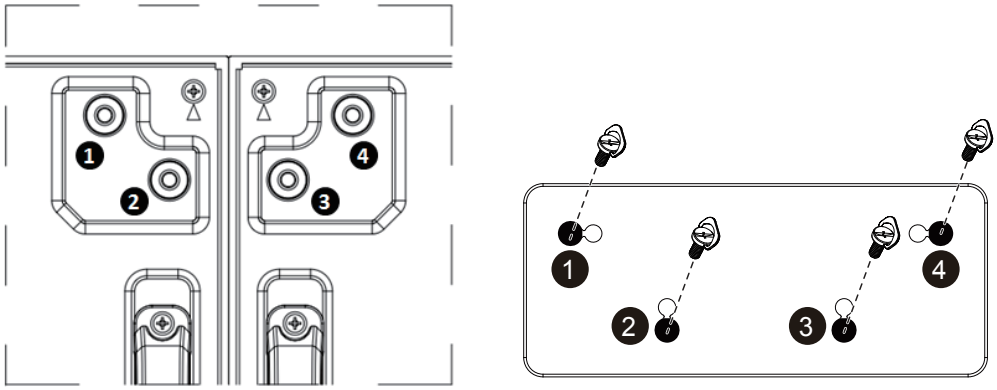


1.8. Operating Instructions of Edge Alignment Kit

- Before install edge alignment kit, displays must be mounted to
- video wall frame correctly.
- Using “Thumb Screw” for easy installing.
- Using “Edge Alignment Kit-1” on adjacent four displays.ck.



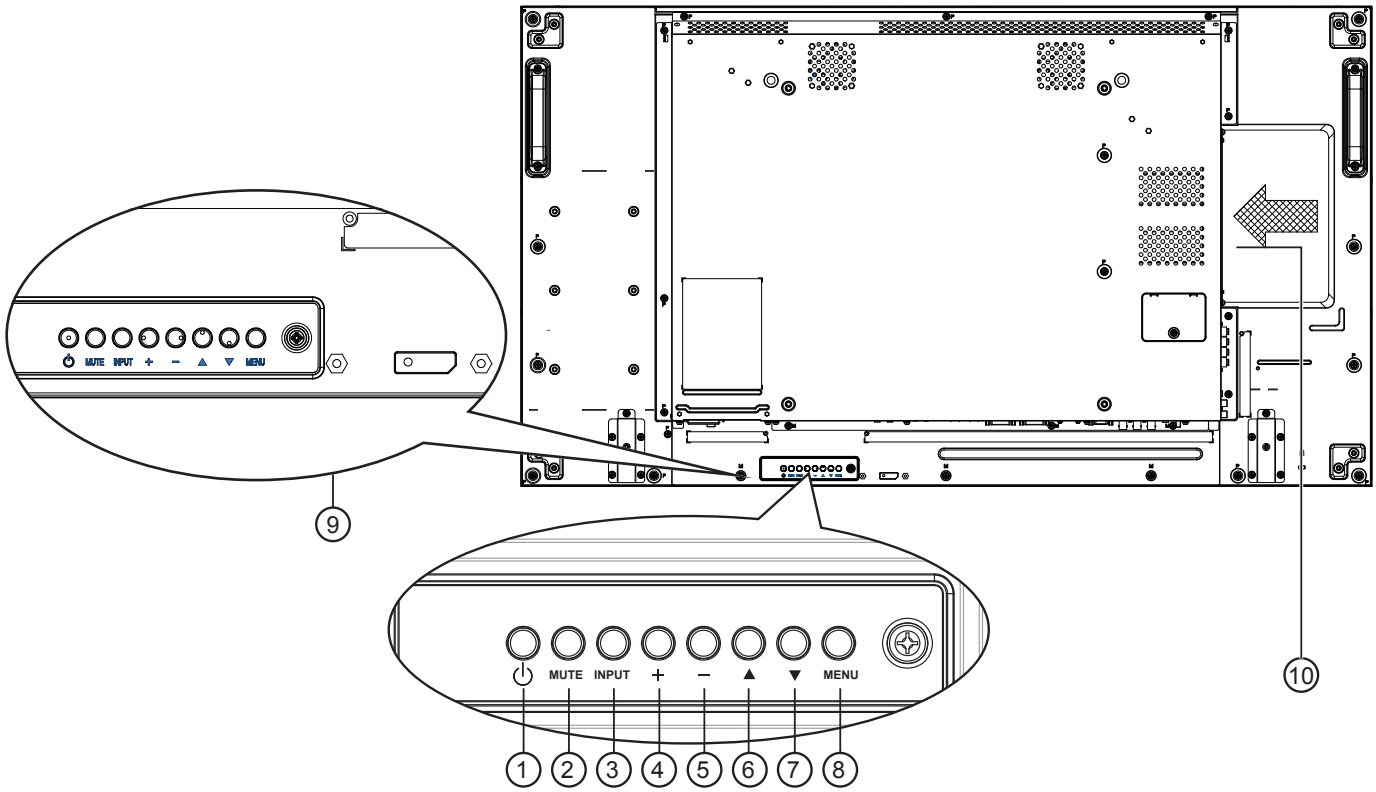
- Using “Edge Alignment Kit-2” on adjacent two displays.
- Install the “Edge Alignment Kit-2” with 2 PCS of M4 screw.



NOTE: When installing the edge alignment kit, please consult a professional technician for proper installation. We accept no liability for installations not performed by a professional technician.

2. Parts and Functions

2.1. Control Panel



① **[⏻] button**
Use this button to turn the display on or put the display to standby.

② **[MUTE] button**
Switch the audio mute ON/OFF.

③ **[INPUT] button**
Choose the input source.
- Used as [**OK**] button in the On-Screen-Display menu.

④ **[+] button**
Increase the adjustment while OSD menu is on, or increase the audio output level while OSD menu is off.

⑤ **[—] button**
Decrease the adjustment while OSD menu is on, or decrease the audio output level while OSD menu is off.

⑥ **[▲] button**
Move the highlight bar up to adjust the selected item while OSD menu is on.

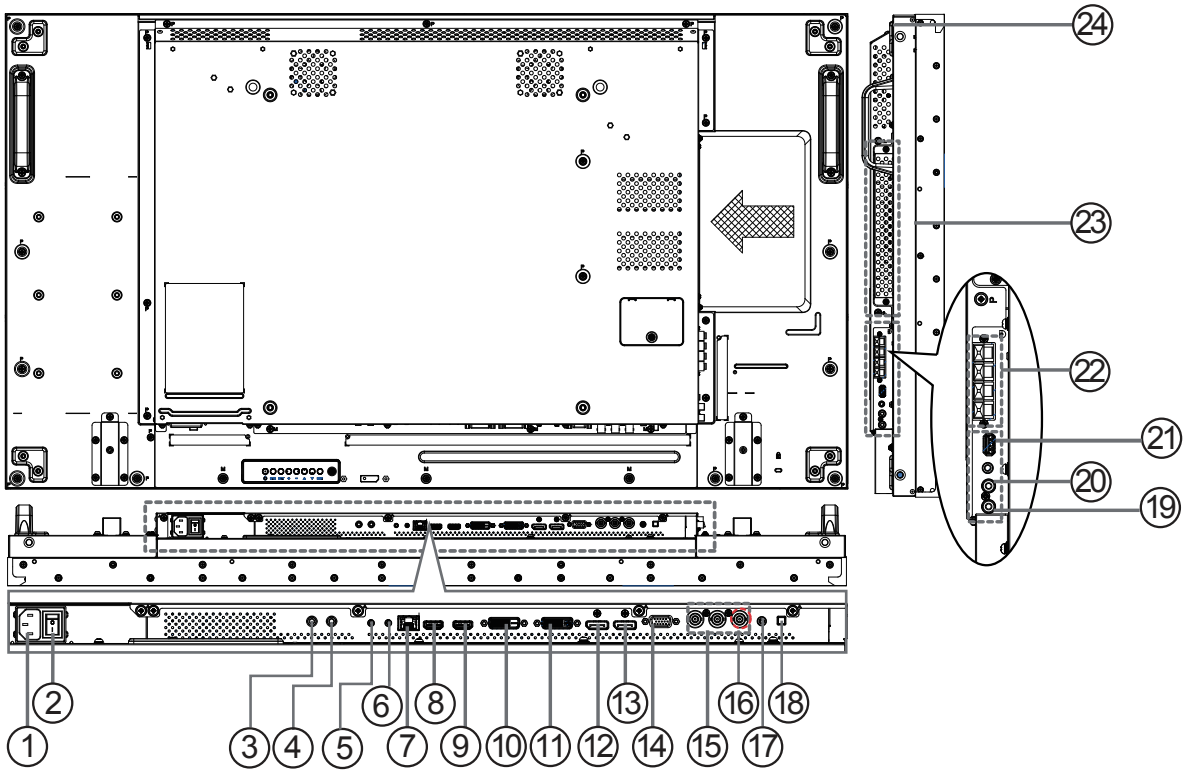
⑦ **[▼] button**
Move the highlight bar down to adjust the selected item while OSD menu is on.

⑧ **[MENU] button**
Return to previous menu while OSD menu is on, or to activate the OSD menu when OSD menu is off.

⑨ **Remote control sensor and power status indicator**
- Receives command signals from the remote control.
- Indicates the operating status of the display without OPS:
  - Lights green when the display is turned on
  - Lights red when the display is in standby mode
  - Lights amber when the display enters APM mode
  - When {**SCHEDULE**} is enabled, the light blinks green and red
  - If the light blinks red, it indicates that a failure has been detected
  - Lights off when the main power of the display is turned off

⑩ **OPS slot**
Expansion slot adapter for Open Pluggable Specification (OPS) card.

2.2. Input/Output Terminals



① **AC IN**
AC power input from the wall outlet.

② **MAIN POWER SWITCH**
Switch the main power on/off.

③ **IR IN** / ④ **IR OUT**
IR signal input / output for the loop-through function.

NOTE:
- This display's remote control sensor will stop working if the jack **[IR IN]** is connected
- To remotely control your A/V device via this display, refer to page 14 for **IR Pass Through** connection.

⑤ **RS232C IN** / ⑥ **RS232C OUT**
RS232C network input / output for the loop-through function.

⑦ **RJ-45**
LAN control function for the use of remote control signal from control center.

⑧ **HDMI IN** / ⑨ **HDMI2 IN**
HDMI video/audio input.

⑩ **DVI IN**
DVI-D video input.

⑪ **DVI OUT / VGA OUT**
DVI or VGA video output.

⑫ **DisplayPort IN** / ⑬ **DisplayPort OUT**
DisplayPort video input / output.

⑭ **VGA IN (D-Sub)**
VGA video input.

⑮ **COMPONENT IN (BNC)**
Component YPbPr video source input.

⑯ **Y/CVBS**
Video source input.

⑰ **PC LINE IN**
Audio input for VGA source (3.5mm stereo phone).

⑱ **SPEAKER SWITCH**
Internal speaker on/off switch.

⑲ **AUDIO IN**
Audio input from external AV device (RCA).

⑳ **AUDIO OUT**
Audio output to external AV device.

㉑ **USB PORT**
Connect your USB storage device.

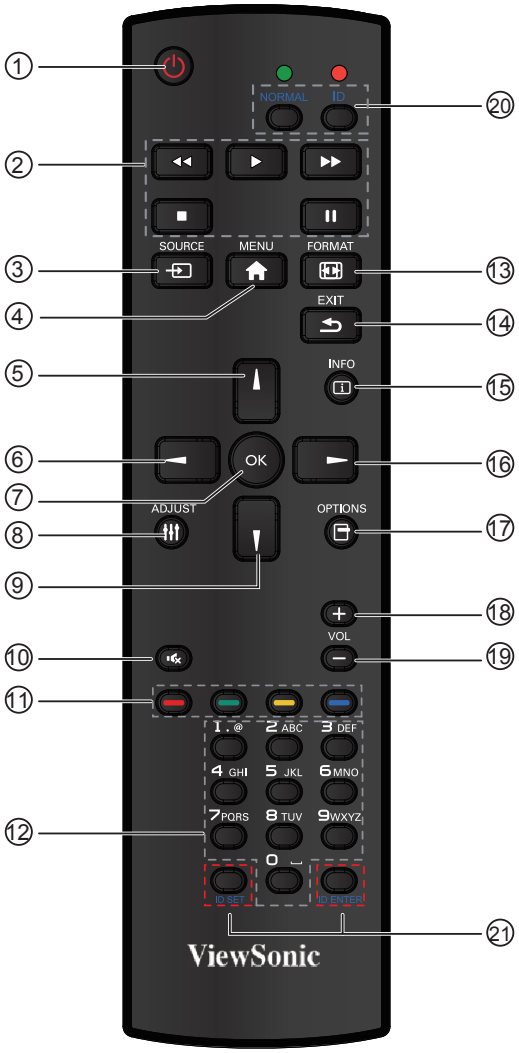
㉒ **SPEAKERS OUT**
Audio output to external speakers.

㉓ **OPS SLOT**
Slot for installing the optional OPS module.

㉔ **SECURITY LOCK**
Used for security and theft prevention.

2.3. Remote Control

2.3.1. General functions



① **[POWER] button**
Press to switch on the display from standby mode. Press again to turn it off and back into standby mode.

② **[PLAY] button**
Control playback of media files.

③ **[SOURCE] button**
Press to toggle Video Source Menu. Press [▲] or [▼] button to select one of the video sources among **Displayport**, **DVI-D**, **VGA**, **HDMI**, **Component**, or **Video**. Press [**OK**] button.

④ **[MENU] button**
Press to turn the OSD menu on/off.

⑤ **[▲] button**
- Press to move the selection up in OSD menu.
- Press to increase the value in OSD menu.

⑥ **[◀] button**
Press to move the selection left in OSD menu.

⑦ **[OK] button**
Press to activate the setting inside the OSD menu.

⑧ **[ADJUST] button**
Press to run the Auto Adjust function.
NOTE: This button is functional for VGA input only.

⑨ **[▼] button**
- Press to move the selection down in OSD menu.
- Press to decrease the value in OSD menu.

⑩ **[ ] MUTE button**
Press to turn the mute function on/off.

⑪ **COLOR buttons**
Select tasks or options.

⑫ **[NUMERIC] buttons**
Enter text for network setting.

⑬ **Format button**
Press to switch screen aspect ratio.
- For PC signal: **FULL**, **NORMAL**, **CUSTOM**, and **REAL**.
- For Video signal: **FULL**, **NORMAL**, **DYNAMIC**, **CUSTOM**, and **REAL**.

⑭ **[EXIT] button**
Press to turn back to the previous OSD menu.

⑮ **[INFO] button**
Press to turn on/off the information OSD displayed on the upper right corner of the screen.

⑯ **[▶] button**
Press to move the selection right in OSD menu.

⑰ **[OPTION] button**
Access currently available options, picture and sound menus.

⑱ **[VOL UP] button**
Press to increase the audio output level.

⑲ **[VOL DOWN] button**
Press to decrease the audio output level.

⑳ ㉑ **[ID SET] button**
If a single large- screen matrix (video wall) is created, set ID key to control each dispaly.

ID Remote Control:
You can set the remote control ID when you want to use this remote control on one of several different displays.
Press [**ID**] button. The red LED blinks twice.

1. Press [**ID SET**] button for more than 1 second to enter the ID ode. The red LED lights up.
   Press the [**ID SET**] button again will exit the ID Mode. The red LED lights off.
   Press the digit number [**0**] ~ [**9**] to select the display you want to control.
   For example: press [**0**] and [**1**] for display No.1, press [**1**] and [**1**] for display No. 11.
   The numbers available are from [**01**] ~[**255**].
2. Not pressing any button within 10 seconds will exit the ID Mode.
3. If an error pressing of buttons other than the digits occurred, wait 1 second after the red LED lights off and then lights up again, then press the correct digits again.
4. Press [**ID ENTER**] button to confirm. The red LED blinks twice and then lights off.

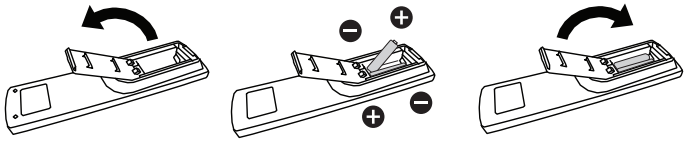
NOTE:
- Press [**NORMAL**] button. The green LED blinks twice, indicating the display is in normal operation.
- It is ncecssary to set up the ID number for each display before selecting its ID number.

2.3.2. Inserting the batteries in the remote control

The remote control is powered by two 1.5V AAA batteries.

To install or replace batteries:

1. Press and then slide the cover to open it.
2. Align the batteries according to the (+) and (–) indications inside the battery compartment.
3. Replace the cover.



Caution:

The incorrect use of batteries can result in leaks or bursting. Be sure to follow these instructions:

- Place “AAA” batteries matching the (+) and (–) signs on each battery to the (+) and (–) signs of the battery compartment.
- Do not mix battery types.
- Do not combine new batteries with used ones. It causes shorter life or leakage of batteries.
- Remove the dead batteries immediately to prevent them from liquid leaking in the battery compartment. Don’t touch exposed battery acid, as it can damage your skin.

NOTE: If you do not intend to use the remote control for a long period, remove the batteries.

2.3.3. Handling the remote control

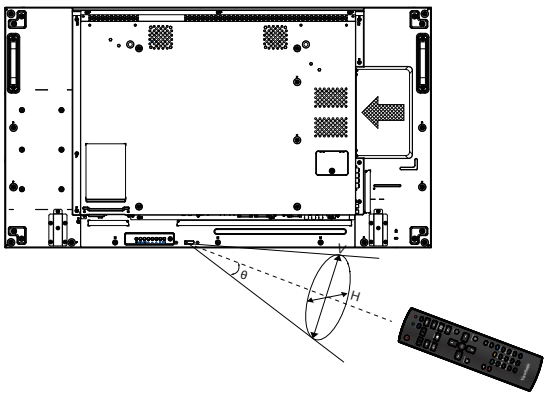
- Do not subject to strong shock.
- Do not allow water or other liquid to splash the remote control. If the remote control gets wet, wipe it dry immediately.
- Avoid exposure to heat and steam.
- Other than to install the batteries, do not open the remote control.

2.3.4. Operating range of the remote control

Point the top of the remote control toward the display’s remote control sensor when pressing a button.

Use the remote control within the range which is shown in the following table.

Operation Angle	RC operational distance
θ= 00 (for H & V)	≥ 8m
θ= 200 (for H & V)	≥ 5m
θ= 450 (for H only)	≥ 2m

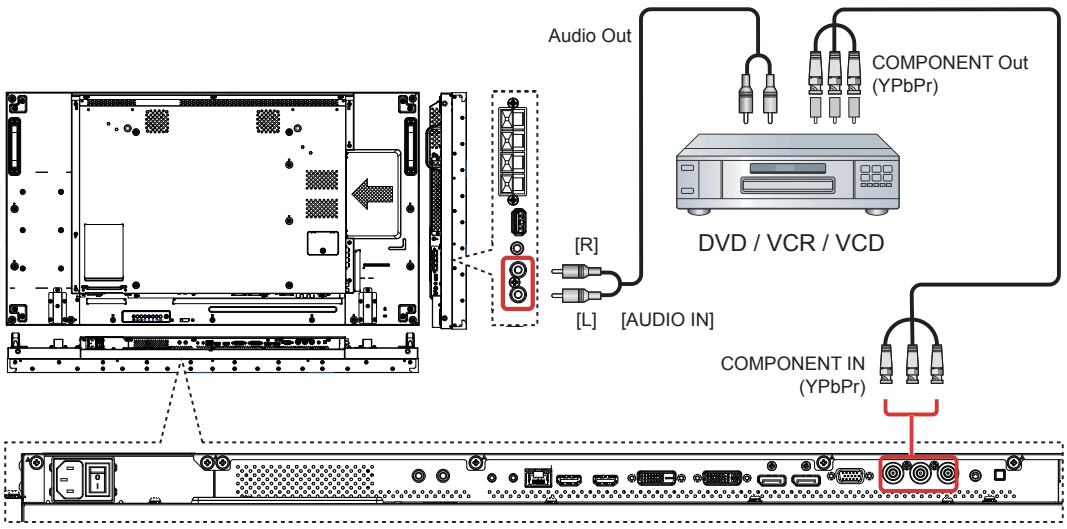


NOTE: The remote control may not function properly when the remote control sensor on the display is under direct sunlight or strong illumination, or when there is an obstacle in the path of signal transmission.

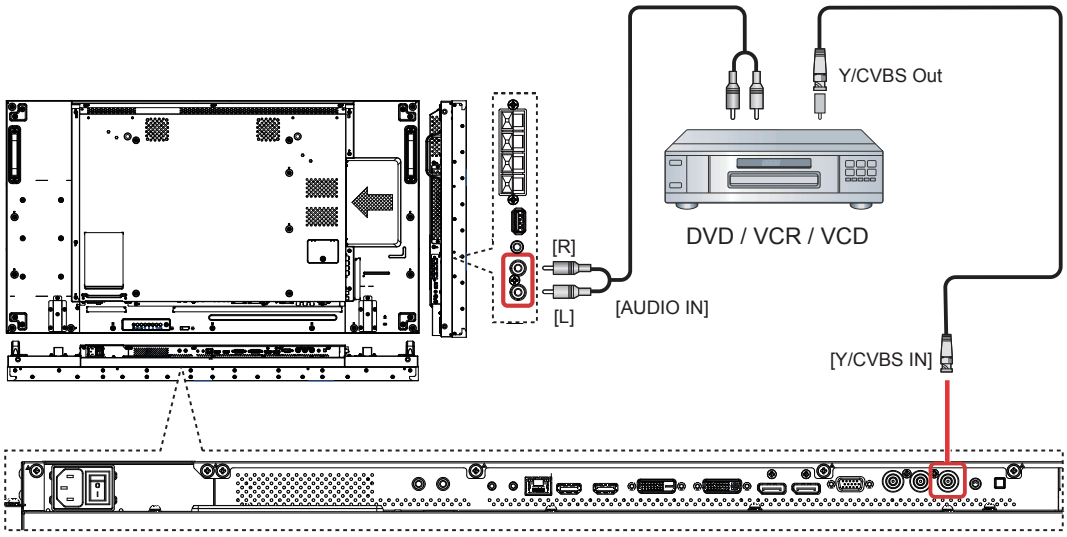
3. Connecting External Equipment

3.1. Connecting External Equipment (DVD/VCR/VCD)

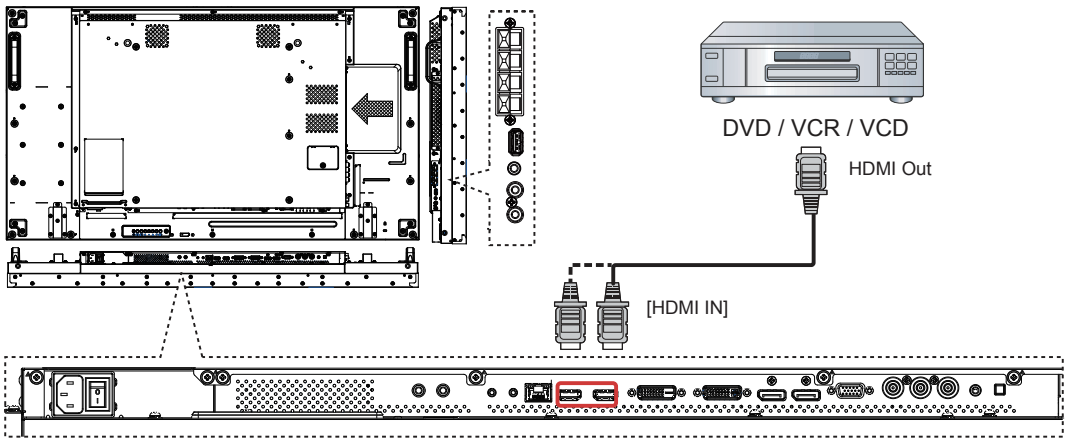
3.1.1. Using COMPONENT video input



3.1.2. Using Video Source input

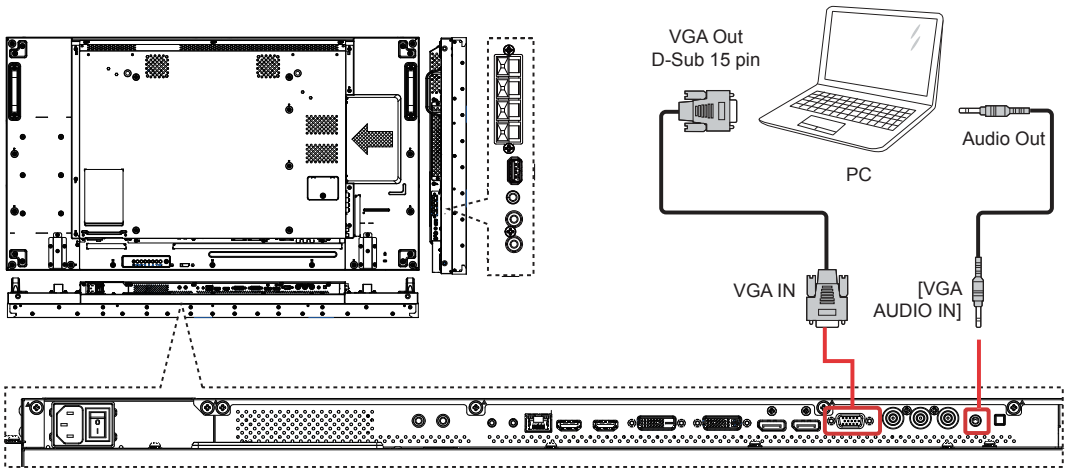


3.1.3. Using HDMI video input

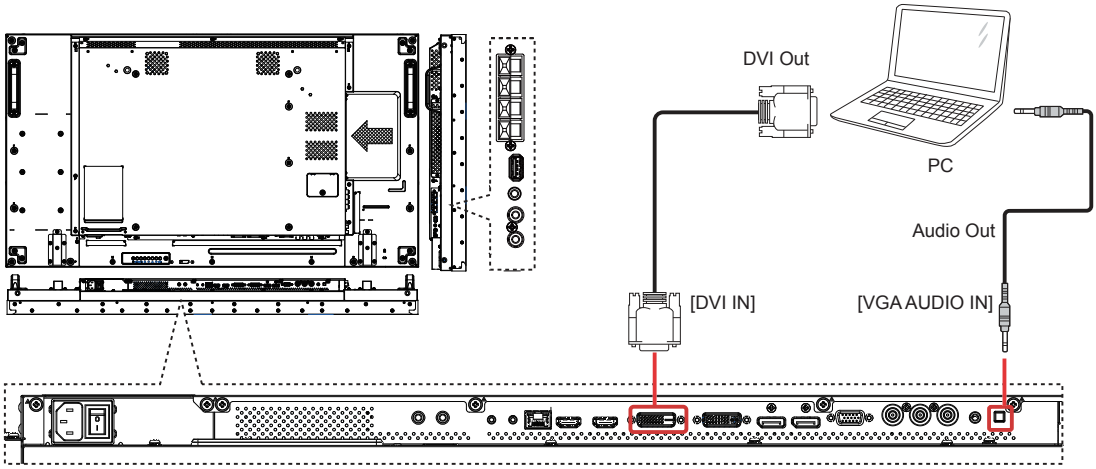


3.2. Connecting a PC

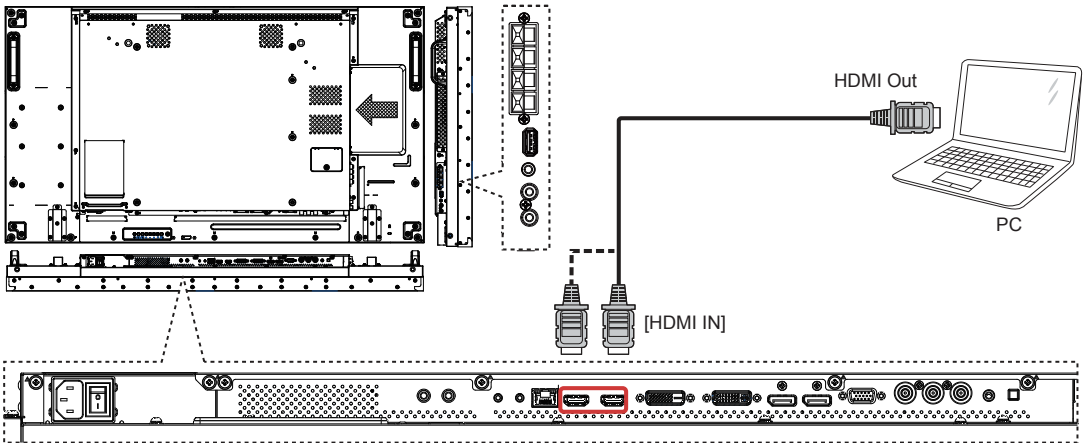
3.2.1. Using VGA input



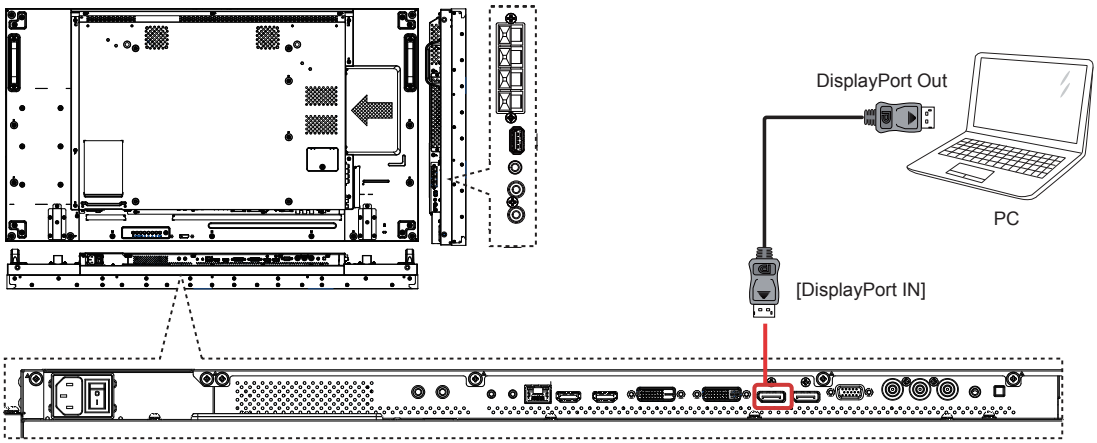
3.2.2. Using DVI input



3.2.3. Using HDMI input

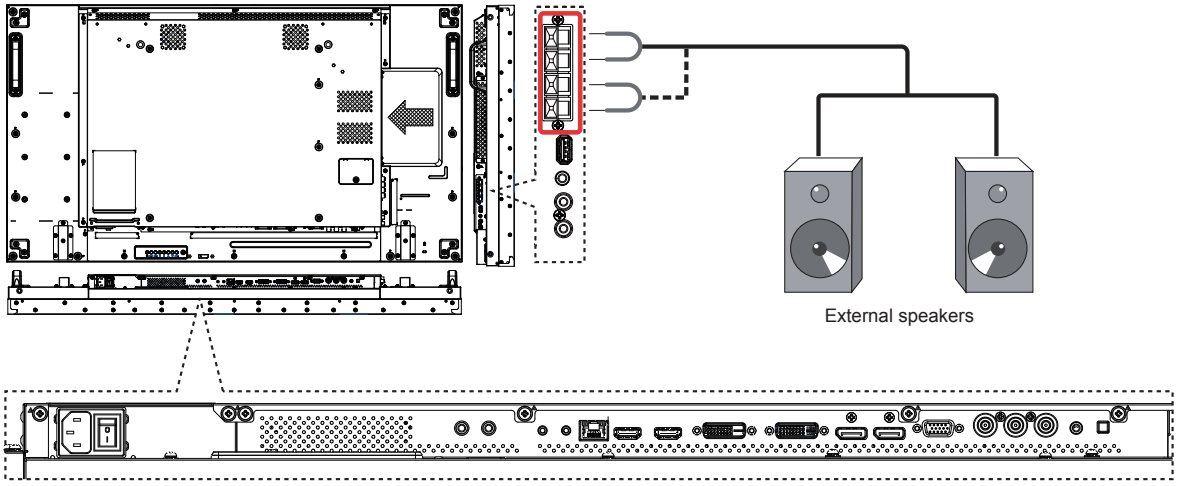


3.2.4. Using DisplayPort input

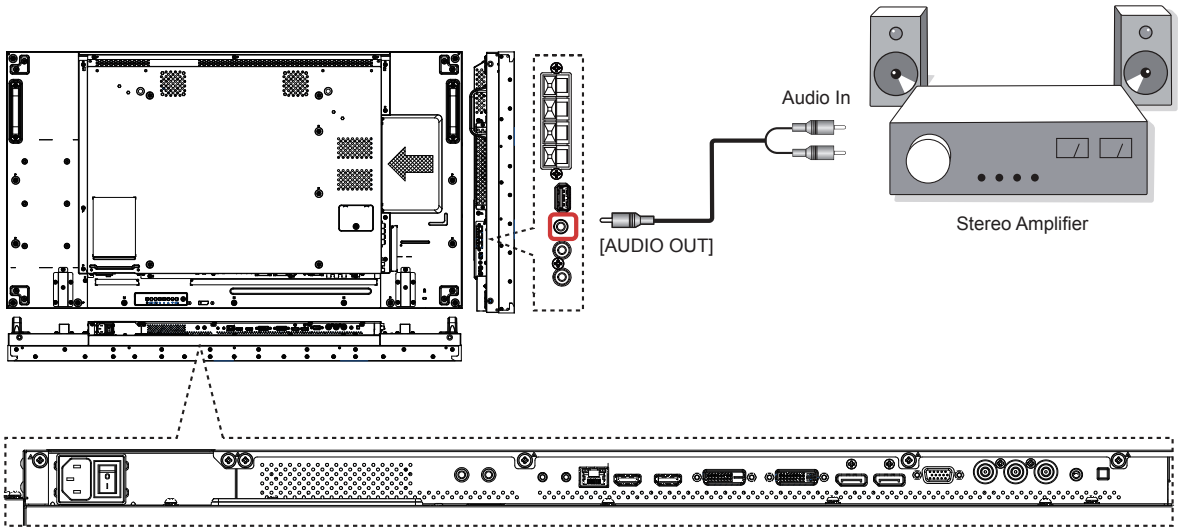


3.3. Connecting Audio Equipment

3.3.1. Connecting external speakers



3.3.2. Connecting an external audio device

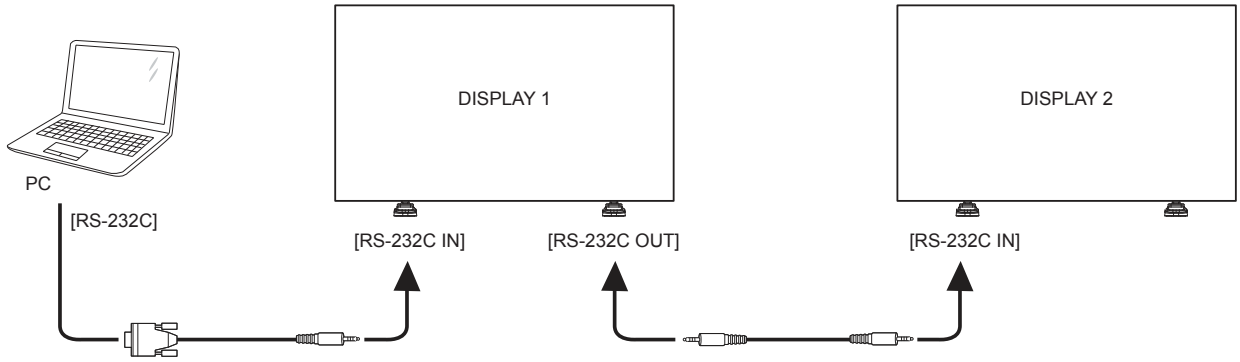


3.4. Connecting Multiple Displays in a Daisy-chain Configuration

You can interconnect multiple displays to create a daisy-chain configuration for applications such as a video wall.

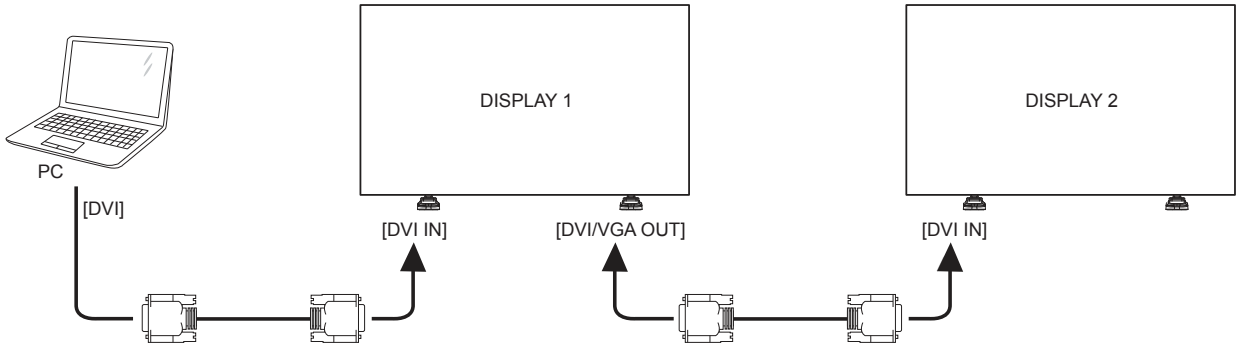
3.4.1. Display control connection

Connect the [RS232C OUT] connector of DISPLAY 1 to the [RS232C IN] connector of DISPLAY 2.

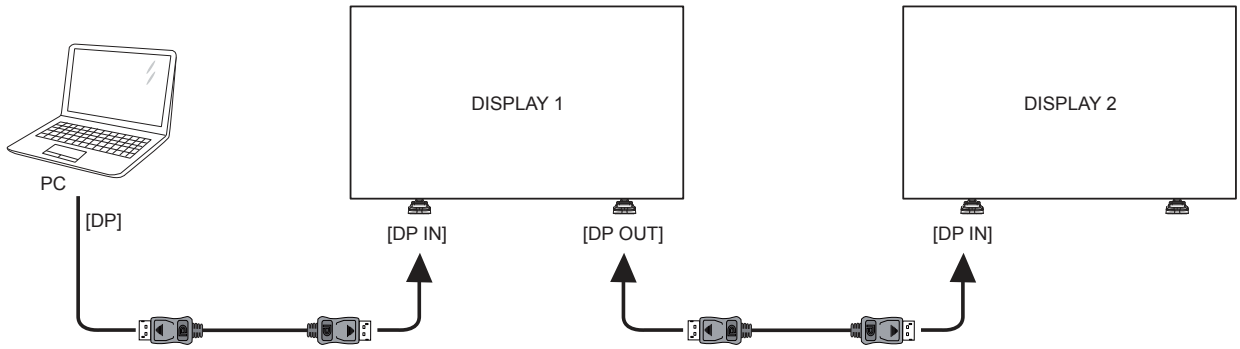


3.4.2. Digital video connection

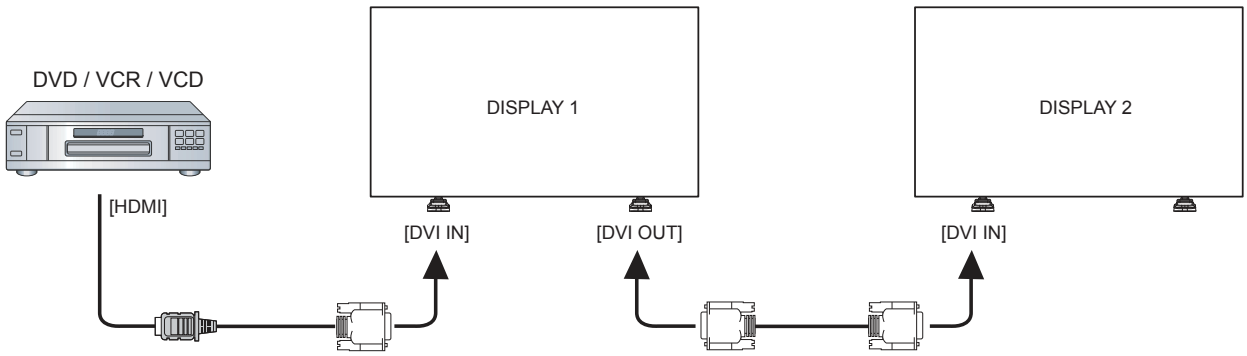
Connect the [DVI OUT / VGA OUT] connector of DISPLAY 1 to the [DVI IN] connector of DISPLAY 2.



Connect the [DP OUT] connector of DISPLAY 1 to the [DP IN] connector of DISPLAY 2.

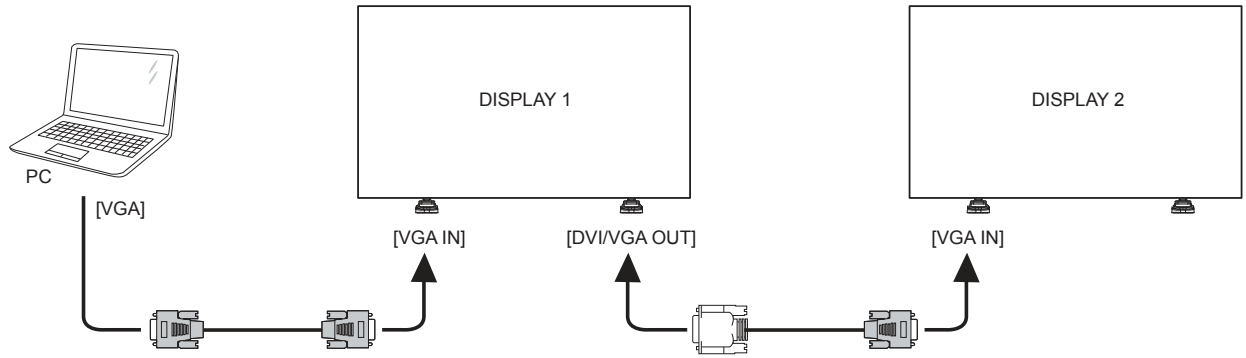


Connect the [DVI OUT] connector of DISPLAY 1 to the [DVI IN] connector of DISPLAY 2.



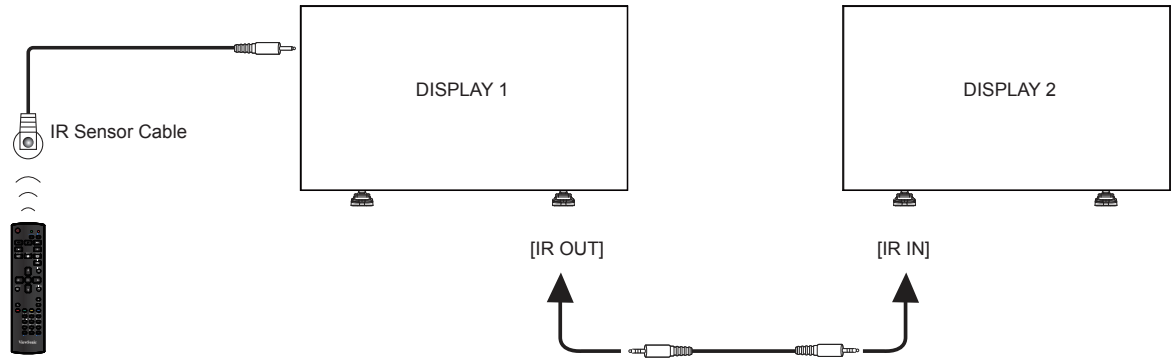
3.4.3. Analog video connection

Connect the [DVI OUT / VGA OUT] connector of DISPLAY 1 to the [VGA IN] connector of DISPLAY 2.

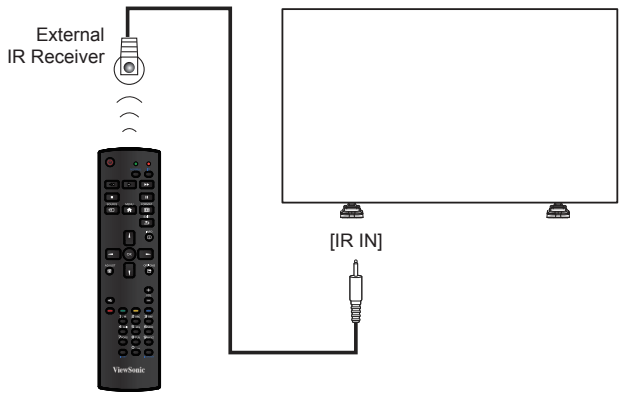


3.4.4. IR daisy-chain Connection

Connect [IR Sensor Cable] to DISPLAY 1, and connect the [IR OUT] connector of DISPLAY 1 to the [IR IN] connector of DISPLAY 2.

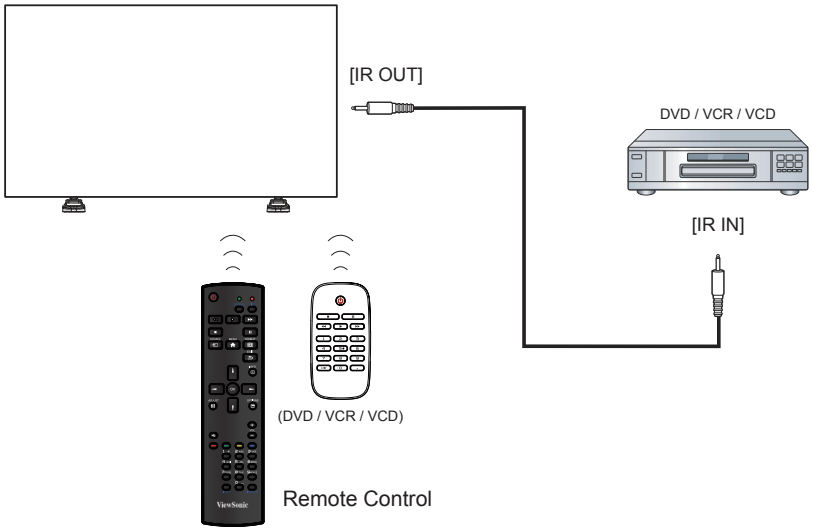


3.5. IR connection



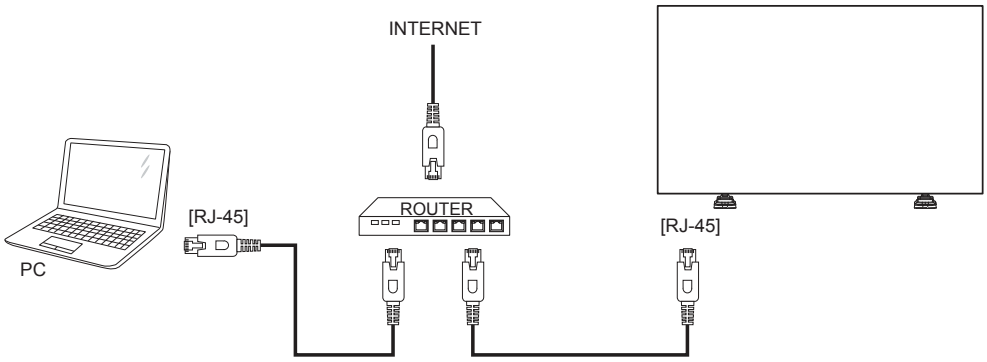
NOTE: This display's remote control sensor will stop working if the [**IR IN**] is connected.

3.6. IR Pass-through Connection



3.7. Wire-connecting to Network

If you connect this display to a home network, you can play photos, music and videos from your computer. See *Play multimedia files via Local Area Network* (Page 15) for more detail.



To setup the network:

1. Switch on the router and switch on its DHCP setting.
2. Connect the router to this display with an Ethernet cable.
3. Press [⌂] **MENU** button to display the OSD menu.
4. Press ▲ or ▼ button to select the menu item {**Network setting**}. Press **OK** button to enter its submenu.
5. Press ▲, ▼, ◄, ► or number button to adjust its value. Press **OK** button to confirm.

NOTE: Connecting with a shielded CAT-5 Ethernet cable to comply with the EMC directive.

4. Operation

NOTE: The control button described in this section is mainly on the remote control unless specified otherwise.

4.1. Watch the Connected Video Source

See page 9 for external equipments connection.

1. Press [⊡] **SOURCE** button.
2. Press [▲] or [▼] button to choose a device then press [**OK**] button.

4.2. Change Picture Format

You can change the picture format to suit the video source. Each video source has its available picture formats.

The available picture formats depend on the video source:

1. Press [⊞] **FORMAT** button.
2. Press [▲] or [▼] button to choose a picture format, then press [**OK**] button.
   - {**FULL**}: Enlarge the picture to fill the screen. Recommended for minimal screen distor tion but not for **HD** or **PC**.
   - {**DYNAMIC**}: Scale 4:3 format to 16:9. Not recommended for **HD** or **PC**.
   - {**CUSTOM**}: Shows wide screen format content unstretched. Not recommended for **HD** or **PC**.
   - {**REAL**}: Provide maximum detail for **PC**. Only available when **PC** mode is selected in the {**Picture**} menu.
   - {**NORMAL**}: Display the classic 4:3 format.

4.3. Choose your Preferred Picture Settings

1. While this display is playing video source press [⚙] **ADJUST** button.
2. Press [◄] or [►] button to choose **Picture style**, then press [**OK**] button.
3. Press [▲] or [▼] button to choose an option, then press [**OK**] button:
   - {**Personal**}: Apply your personalised picture settings.
   - {**Vivid**}: Rich and dynamic settings, ideal for daytime viewing.
   - {**Natural**}: Natural picture settings.
   - {**Standard**}: Default settings that suit most environments and types of video.
   - {**Movie**}: Ideal settings for movies.
   - {**Photo**}: Ideal settings for photos.
   - {**Energy saving**}: Settings that conser ve the most energy.

4.4. Choose your Preferred Sound Settings

1. While this display is playing video source press [⚙] **ADJUST** button.
2. Press [◄] or [►] button to choose **Sound style**, then press [**OK**] button.
3. Press [▲] or [▼] button to choose an option, then press [**OK**] button:
   - {**Personal**}: Apply your personalised sound settings.
   - {**Original**}: Settings that suit most environments and types of audio.
   - {**Movie**}: Ideal settings for movies.
   - {**Music**}: Ideal settings for listening to music.
   - {**Game**}: Ideal settings for games.
   - {**News**}: Ideal settings for spoken audio such as the news.

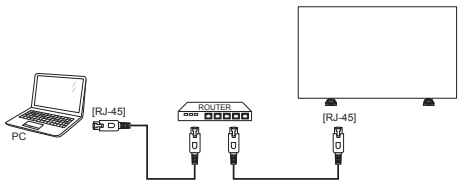
4.5. Play multimedia files via Local Area Network

To play files via Local Area Network, you will need:

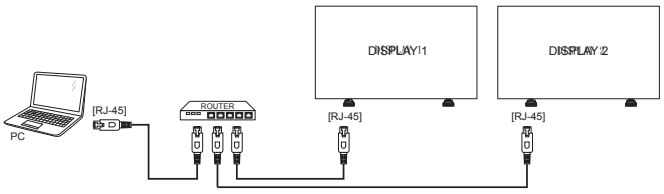
- A wired home network, connected with a Universal Plug and Play (uPnP) router.
- Optional: A LAN cable that connects your display to your home network.
- A media server running on your computer.
- Appropriate settings on your computer firewall to allow you to run the media server.

4.5.1. Set up the network

1. Connect your display and the computer to the same home network.
   See illustration below to connect your display to a network.
2. Switch on your computer and the router.
   - **Single display setup:**



   - **Multiple display setup:**



NOTE: If the apparatus does not return to DLNA mode due to external electrical disturbances (e.g. electrostatic discharge), user inter vention is required.

Set up media sharing

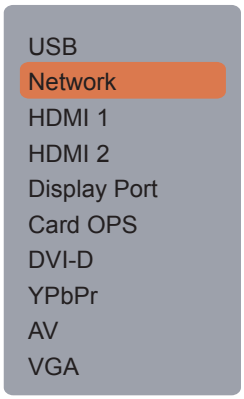
1. Install a media server on your computer to share media files. These are some media ser vers:
   - For **PC**: Windows Media Player 11 (or higher) or TVersity.
   - For **Mac**: Twonky.
2. Switch on media sharing on your computer using the media server. For more information on how to set up the media server refer to the website of the media server.

4.5.2. How to use DLNA-DMP

1. Please connect display and your PC to the same router via RJ-45.
2. Run windows media player. Set stream handling as public sharing.

Play fles from display

1. Press SOURCE button, choose **network** and press [**OK**] button.

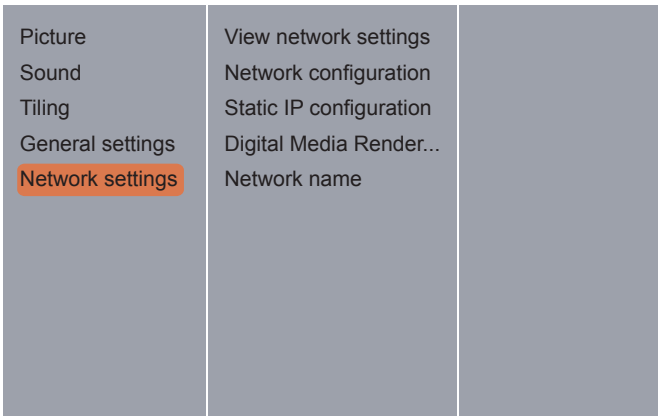


2. Now you can see all the PC's connected to the same router on the screen. Choose the right one.
3. Press [ı] and [►] to choose the director y and files to play.
4. You can connect up to 4 displays to the same PC and play same media stream.

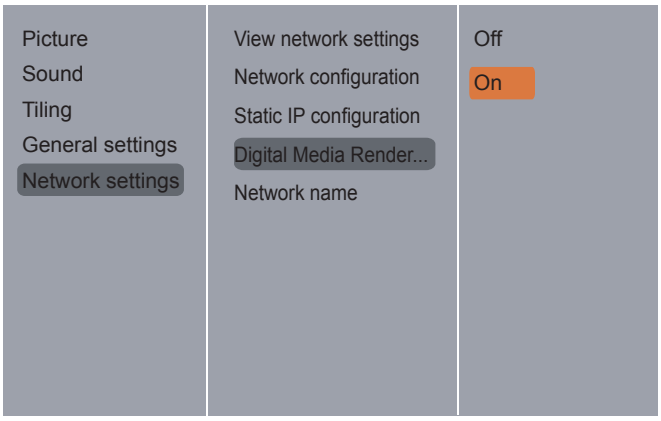
We suggest to use DLNA-DMP function via wired network for the sake of higher security and sufficient network bandwidth.

4.5.3. How to use DLNA-DMR from PC

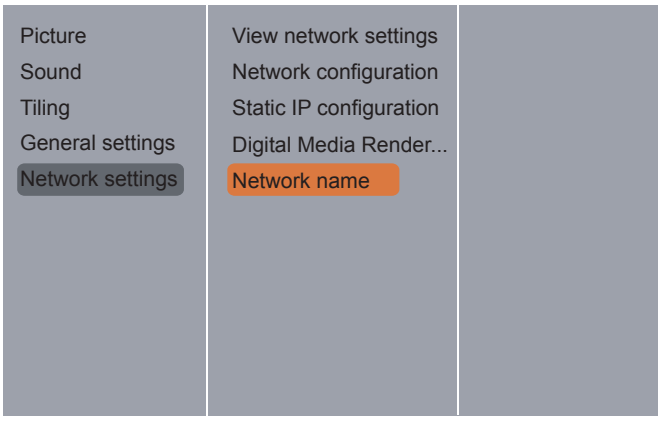
1. Press [⌂] **MENU** button, Choose **Network Settings** and press [**OK**].

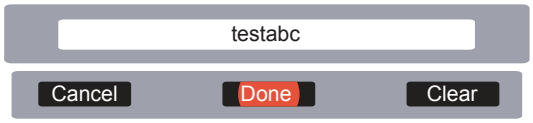


2. Set **DMR** as **ON**.



3. Set the name of your display.





4. Press SOURCE button, choose **network** and press [**OK**] button.
5. On your PC, go to **Network and Sharing Center**, and click **Choose homegroup and sharing options**.
6. Check the media formats.Then, click **Choose media streaming options....**.
7. Go to **Advanced sharing settings**, and check Turn on **network discovery**.

8. Now, go to the director y of your media files. Choose the media file by right click. on the submenu from **Play To**, You can find all displays connected to your network. Choose the display, and click the media file to play.

Play fles

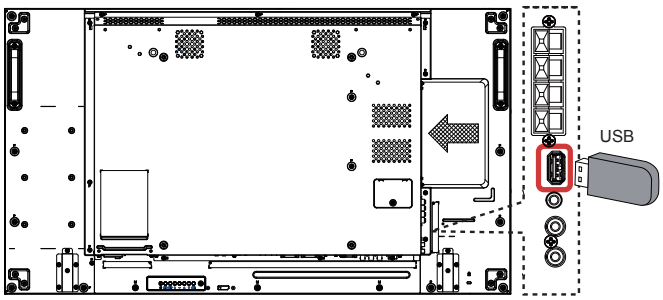
1. Press [⏎] **SOURCE** button.
2. Choose **Network**, and press [**OK**] button.
3. Choose a file from the content browser, and press [**OK**] button to start playing.
4. Press the [**PLAY**] buttons on the remote control to control playing.

Tips:

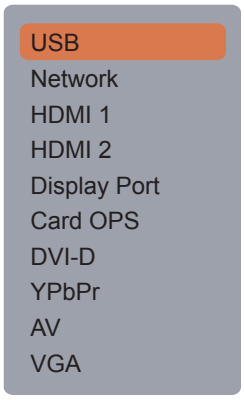
- Choose the top bar to filter your files by type.
- Choose **Sort** to arrange the files by album name, artist, or other fields.
- To clear the list of offine media servers, press [☰] **OPTIONS** button. Then, choose **Clear offline servers** and press [**OK**] button.

4.6. Play multimedia files from USB device

1. Connect your USB device to the USB por t on the display.



2. Press [⏎] SOURCE button, choose **USB**, and press [**OK**] button.



3. The connected USB device is detected automatically for all its playable files, which will be automatically sor ted into 3 types: ♫ **Music**, 🎞 **Movie**, and 📷 **Photo**.
4. Press [↩] EXIT button to go up to the top layer in the screen. Press [◄] or [►] button to choose the file type. Press [**OK**] button to enter its play list.
5. Choose the file you want. Press [**OK**] button to start playing.
6. Follow the on-screen instruction to control the play option.
7. Press [**PLAY**] buttons (■ ❚❚ ◄◄ ► ►►) to control playing.

4.7. Play options

4.7.1. Playing music files

1. Choose ♫ **Music** in the top bar.



2. Choose one music track, and press [**OK**] button.
   - To play all the tracks in a folder, choose one music file. Then, press [▬] to **Play All**.
   - To skip to the next or previous track, press [▲] or [▼] button.
   - To pause the track, press [**OK**] button. Press [**OK**] button again to resume playback.
   - To skip backward or forward 10 seconds, press [◄] or [►] button.
   - To search backward or forward, press [◄◄] or [►►] button, press repeatedly to toggle between different speeds.
   - To stop the music, press [■] button.

Music options

While you play music, press [☰] **OPTIONS** button, then press [**OK**] button to choose an option:

- {**Shuffe**}: Enable or disable random play of tracks.
- {**Repeat**}: Choose {**Repeat**} to play a track or an album repeatedly, or choose {Play once} to play a track once.

NOTE: To view information about a song (for example, title, artist or duration), choose the song, then press [ⓘ] **INFO** button. To hide the information, press [ⓘ] **INFO** button again.

4.7.2. Playing movie files

1. Choose **Movie** in the top bar.



2. Choose a video, and press [**OK**] button.
   - To play all the tracks in a folder, choose one music file. Then, press [▬] to **Play All**.
   - To skip to the next or previous track, press [▲] or [▼] button.
   - To pause the track, press [**OK**] button. Press [**OK**] button again to resume playback.
   - To skip backward or forward 10 seconds, press [◄] or [►] button.
   - To search backward or forward, press [◄◄] or [►►] button, press repeatedly to toggle between different speeds.
   - To stop the music, press [■] button.

Movie options

While playing video, press [▭] **OPTIONS** button, then press [**OK**] button to choose an option:

- {**Subtitles**}: Choose the available subtitle settings.
- {**Subtitle Language**}: Choose the language for subtitles if available.
- {**Shuffe**}: Enable or disable random play of video files.
- {**Repeat**}: Choose {**Repeat**} to play the video file repeatedly or {**Play once**} to play the video file once.
- {**Status**}: To view information about a video (for example, played position, duration, title, or date).

4.7.3. Playing photo files

1. Choose **Photo** in the top bar.



2. Choose a photo thumbnail, then press [**OK**] button.

Start a slideshow

If there are multiple photos in a folder, choose a photo. Then, press [▬] to **Play All**.

- To skip to the previous or next photo, press [◄] or [►] button and then press [**OK**] button.
- To stop the slideshow, press [■] button.

Slideshow options

While you play a slideshow, press [▭] **OPTIONS** button, then press [**OK**] button to choose an option:

- {**Shuffe**}: Enable or disable random display of pictures in the slideshow.
- {**Repeat**}: Choose {**Repeat**} to watch a slideshow repeatedly or {**Play once**} to watch once.
- {**Slideshow Time**}: Choose the displaying time for each photo in the slideshow.
- {**Slideshow Transitions**}: Choose the transition from one photo to the next.

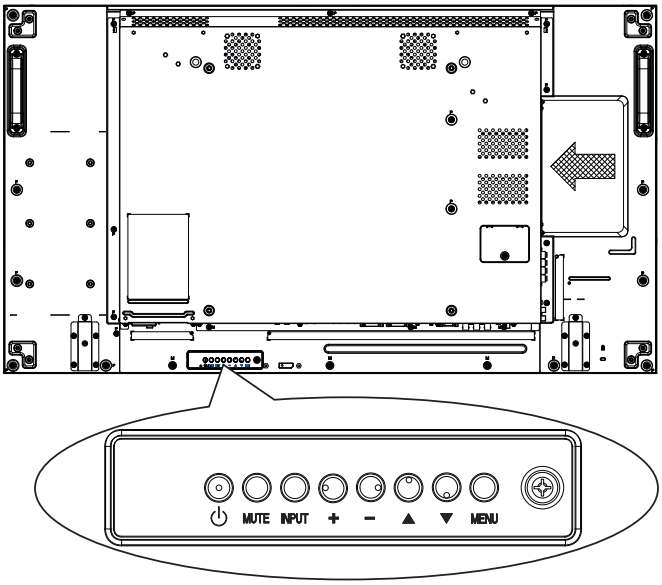
5. Change your settings

Using the remote control:



1. Press [🏠] **MENU** button to display the OSD menu.
2. Press [▲] [▼] [◄] or [►] button to choose **Picture**, **sound**, **Tiling**, **General Settings** or **Network settings**. Press [**OK**] button to enter.
3. Press [▲] [▼] [◄] or [►] button to choose its menu item or to adjust its value. Press [**OK**] button to confirm.
4. Press [⮌] **EXIT** button to go back to the previous menu layer.
5. Press [🏠] **MENU** button to exit the OSD menu.

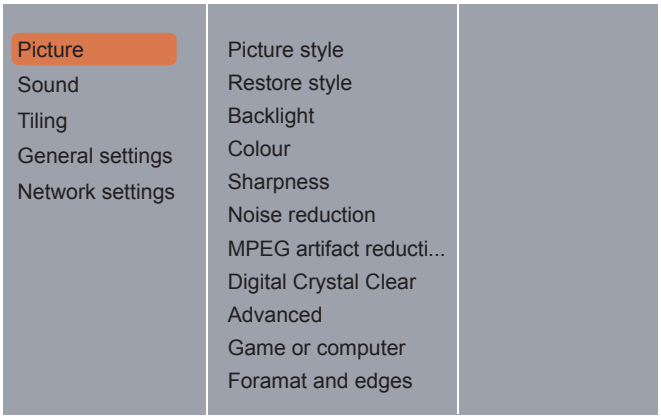
Using the display's control buttons



1. Press [**MENU**] button to display the OSD menu.
2. Press [▲] [▼] [+] or [-] button to choose menu item or adjust its value.
3. Press [**INPUT**] button to confirm menu selection and enter its submenu.
4. Press [**MENU**] button to exit the OSD menu.

5.1. Settings

5.1.1. Picture



Picture style

Choose a predefined picture setting.

Restore style

Restore the last-selected predefined picture setting.

Backlight

Adjust the brightness of this display's backlight.

Colour

Adjust the colour saturation of the picture.

Sharpness

Adjust the sharpness of the picture.

Noise reduction

Choose the amount of noise reduction for the picture.

MPEG artifact reduction

Smoothen transitions and haziness in the digital picture.

Digital Crystal Clear

Fine-tune each pixel to match surrounding pixels and produce a brilliant, high-definition image.

- {**Advanced sharpness**}: Enable superior sharpness, especially on lines and contours in the picture.
- {**Dynamic contrast**}: Dynamically enhance the details in the dark, medium and light areas of the picture.
- {**Colour enhancement**}: Dynamically enhance the vividness and details of colours.

Advanced

Access advanced settings such as gamma, tint, video contrast and so on.

- {**Gamma**}: Adjust the non-linear setting for picture luminance and contrast.
- {**Color temp.**}: Change the colour balance.

- {**Custom tint**}: Customise colour balance setting. Only available if {**Tint**} → {**Custom**} is chosen.
- {**Video contrast**}: Adjust video contrast.
- {**Brightness**}: Adjust screen brightness.
- {**Hue**}: Adjust screen hue.
- {**Blue Light Filter**}: Adjust screen blue light

Game or computer

When viewing content from a connected game console, choose {**Game**} to apply game settings. When a computer is connected through HDMI, choose {**Computer**}.

Make sure that {**Format and edges**} → {**Picture format**} → {**Unscaled**} is selected so as to view maximum detail.

Format and edges

- {**Picture format**}: Change the picture format. See page 16 for the descriptions about **Picture format**.

5.1.2. Sound



Sound style

Access predefined sound settings.

Restore style

Restore the last-selected predefined sound setting.

Bass

Adjust to increase or decrease lower-pitched sounds.

Treble

Adjust to increase or decrease higher-pitched sounds.

Balance

Adjust to emphasize left or right audio output balance.

Surround mode

Enhance your audio experience.

Audio out

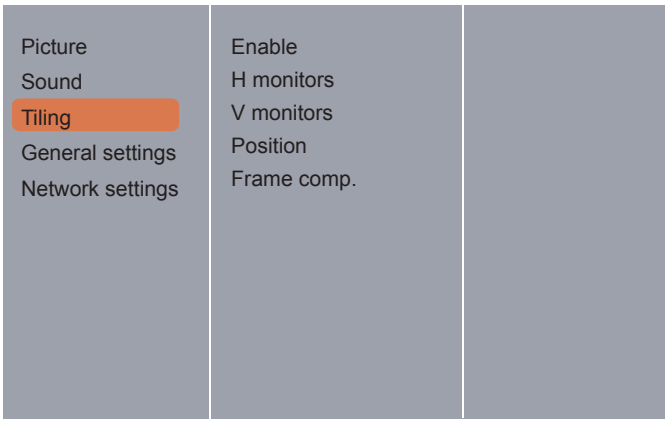
Adjust audio output volume.

Advanced

Access advanced settings to enhance your audio experience.

- {**Auto volume leveling**}: Enable the reduction of sudden volume changes.
- {**Speaker settings**}: Turn on or off the internal speakers.
- {**Clear sound**}: Enhance sound quality.

5.1.3. Tiling



With this function you can create a single large-screen matrix (video wall) that consists of up to 100 sets of this display (**up to 10-sets on the vertical and 10-sets on the horizontal sides**).

Enable

Choose to {**On**} or {**Off**} the Tiling function. If {**On**}, the display will apply the settings in {**H monitors**}, {**V monitors**}, {**Position**}, and {**Frame comp.**}.

H monitors

Adjust displays on the horizontal side.

V monitors

Adjust displays on the ver tical side.

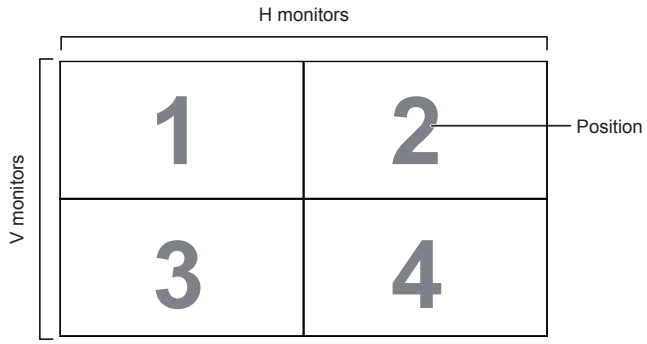
Position

Adjust the position of this display in the screen matrix.

Example: 2 x 2 screen matrix (4 displays)

H monitors = 2 displays

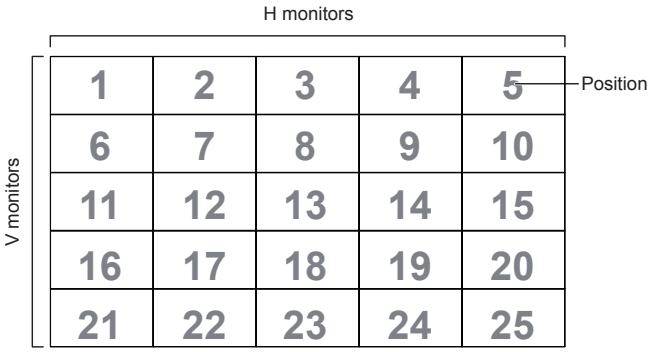
V monitors = 2 displays



Example: 5 x 5 screen matrix (25 displays)

H monitors = 5 displays

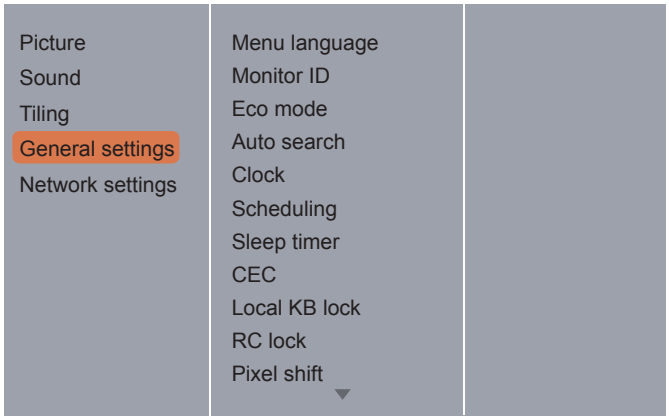
V monitors = 5 displays



Frame comp.

Choose to turn the frame compensation function on or off. If selected {**On**}, the display will adjust the image to compensate for the width of the display bezels in order to accurately display the image.

5.1.4. General settings



Menu language

Choose language used for OSD menus.

Monitor ID

Adjust the ID number for controlling the display via the RS232C connection. Each display must have a unique ID number when multiple sets of this display are connected. Monitor ID number range is between 1 to 255.The default setting is 1.

Eco mode

Set this display to reduce the power consumption automatically.

Auto search

Choose to let this display detect and display available signal sources automatically.

Clock

Set the current date and time for the display's internal clock.

Scheduling

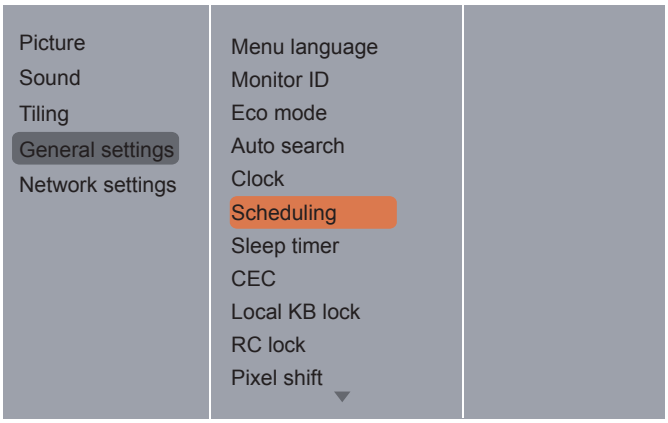
This function allows you to program up to 7 different scheduled time inter vals for this display to activate.

You can set:

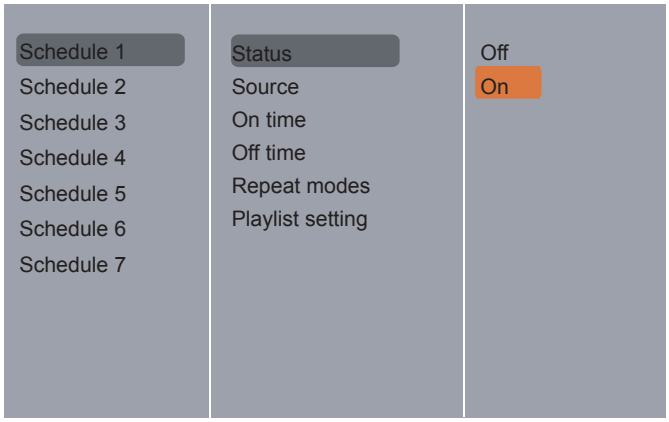
- Which input source the display will use for each scheduled activation period.
- The time for the display to turn on and turn off.
- The days in a week for the display to activate.

NOTES:

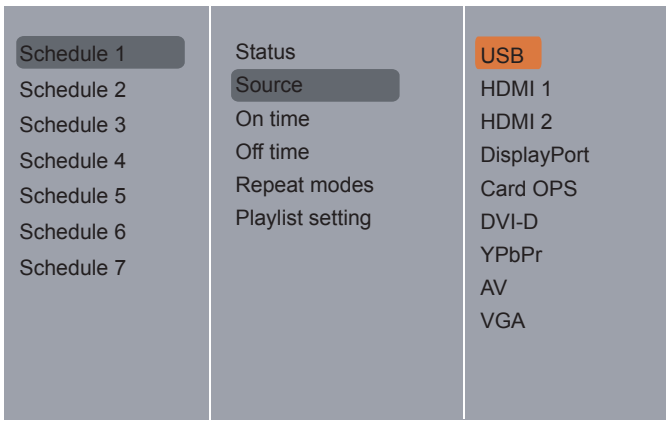
- We recommend you to set up current date and time in the {**Clock**} menu before using this function.
- After changing the {**Clock**} option in the {**General settings**} menu, you need to set this {**Scheduling**} again.



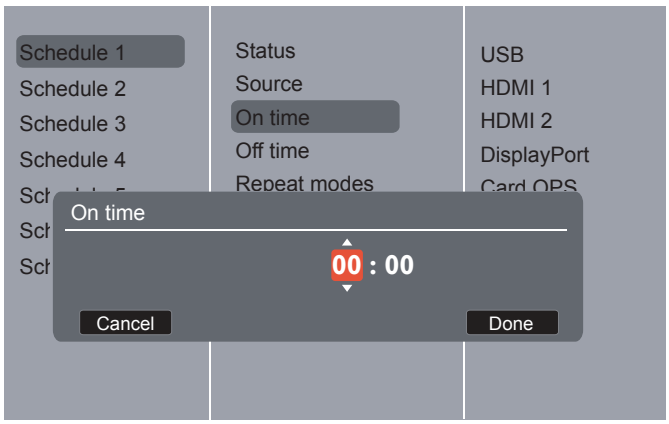
1. There are 7 schedule can be set. Go to **Status** and choose **On**.



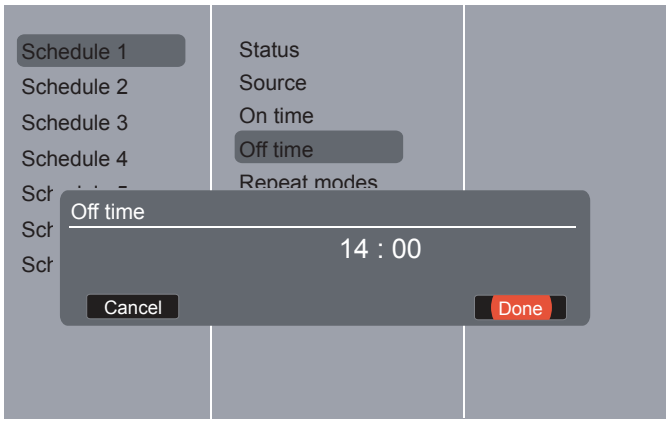
2. Go to **Source** and choose input source. If {**Source**} → {**USB**} is chosen.You need to set playliist.



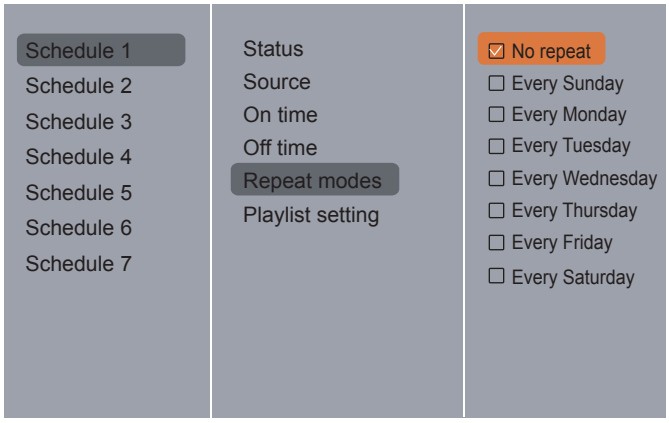
3. Set **On time**.



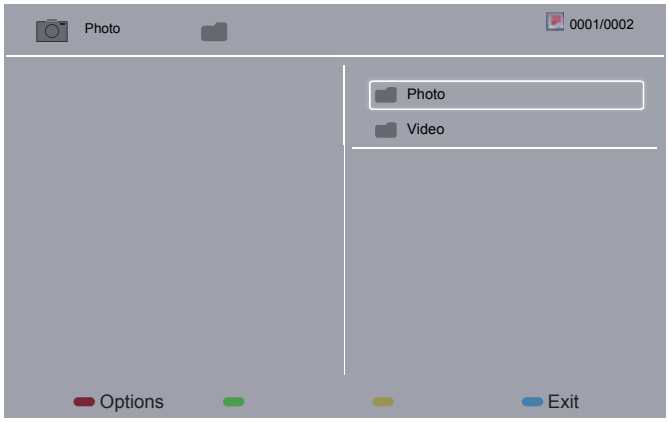
4. Set **Off time**.



5. Go to **Repeat modes** and choose.

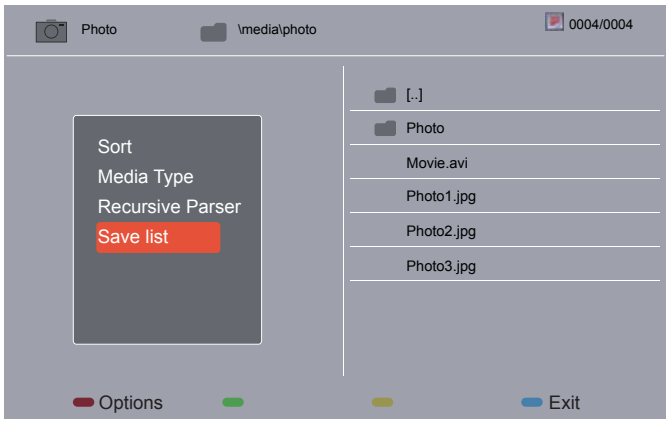


6. If {**Source**} → {**USB**} is chosen. Go to **Playlist setting**.



- Press [▲] [▼] buttons to choose files.
- Press [◄] [►] buttons to switch Playlist and File Manager.
- Press [**OK**] button to set or clear the playlist.

7. To save the playlist, press [▬] and choose **Save list**.



NOTES:

- Each Playlist suppor ts up to 30 files.
- Playlist will not be cleared after {**Factory settings**}.You have to manually remove the files or delete usb_schedulinglist.txt in the USB.

Sleep timer
Switch off this display after a specified time.

CEC
Connect and control your HDMI-CEC compliant devices through HDMI port to this display with the same remote control.

Auto adjust
Use this function to automatically optimize the display of VGA input image.

NOTE: This item is functional for **VGA** input only.

Local KB lock
Choose to enable or disable the keyboard (control buttons) function of the display.

- {**Unlock**}: Enable the keyboard function.
- {**Lock all**}: Lock all keyboard function.
- {**Lock but volume**}: Disable all the keyboard function except the [-] and [+] button.
- {**Lock but power**}: Disable all the keyboard function except the [⏻] button.
- {**Lock all expect volume and power**}: Disable all the keyboard function except the [-], [+] and [⏻] button:

RC lock
Choose to enable or disable the button function of the remote control.

- {**Unlock**}: Enable the keyboard function.
- {**Lock all**}: Lock all keyboard function.
- {**Lock but volume**}: Disable all the keyboard function except the [-] and [+] button.
- {**Lock but power**}: Disable all the keyboard function except the [⏻] POWER button.
- {**Lock all expect volume and power**}: Disable all the keyboard function except the [-] [+] and [⏻] **POWER** button:

NOTE: To disable the lock function from **Local KB lock** or -**RC lock** item. **1. ID mode**: Press menu 993 keys on the remote control. **2. Normal mode**: Press [**INFO**] key and hold 6 seconds on the remote control.

Pixel shift
For video input sources, you may choose {**On**} to move the screen image automatically to protect the display from “burn-in” or “after-image” symptoms 30 seconds after not operating the display.

Smart power
Choose a backlight level to optimise dynamic power consumption and picture contrast.
The options are: {**Off**}, {**Standard**}, {**Best Power**}, {**Best Picture**}.

Wake on lan
Choose {**On**} and you can turn on the display by network.

Switch on state
Choose the display status used for the next time you connect the power cord.

- {**On**} - The display will turn on when the power cord is connected to a wall outlet.
- {**Standby**} - The display will remain Standby when the power cord is connected to a wall outlet.
- {**Last status**} - The display will return to the previous power status (on/off/standby) when removing and replacing the power cord.

LED
Choose {Off} to turn off the indicator.

Switch on delay
Adjust the power-on delaying time (in seconds) allows a sequential powering-on for each display by their ID number when multiple displays are connected.

Logo
Chose {**Off**} and the display will not display the ViewSonic logo when you switch on.

APM
Choose {**On**}.Then, when no signal, the display will automatically turn off.

Information OSD
When you press [⏻] POWER button to turn on the display from standby mode or change the input signal, the information OSD is displayed on the upper left corner of the screen.
Choose {**Off**} to turn off this function.

DisplayPort Ver.:
Choose Display Port Version 1.1a or 1.2.

Cooling Fan
Select {**On**} to turn on the cooling fan all the time. Select {**Auto**} to turn on/off the cooling fan according to the display's temperature.

NOTES:

- The default {**Auto**} option will start running the cooling fan if the temperature of 60°C (140°F) is reached.
- A temperature-warning message will be shown on the screen if the temperature reaches 70°C (158°F).
- After the temperature reaches 70°C (158°F), for three successive mininutes and a temperature-waning message shown on the screen for 10 seconds, the display power will be shut down automatically while Power LED will be blinking red & green.

Network control port
Choose the RS232 control form Card OPS or embedded RS232 in PD set.

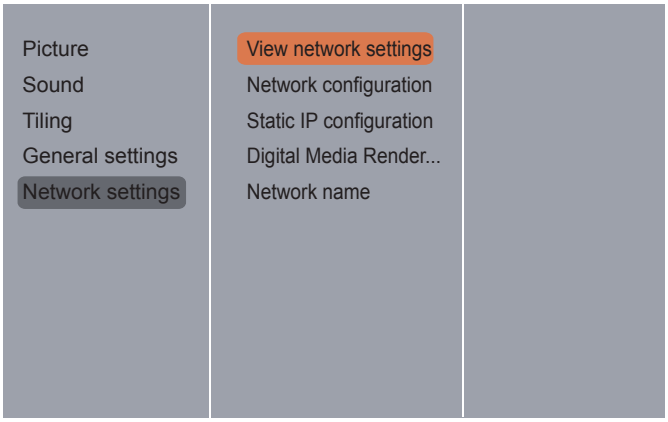
QR code

Scan for more information

Factory settings
Reset all your customized settings to the factory defaults.

5.2. Network Settings

1. Press [🏠] **MENU** button, choose **Network Settings** and press [**OK**] button.



View network settings
View connected network status.

Network Confguration
{**Network configuration**}: Choose how this display should assign addresses to the network resources.
The user can choose {**DHCP & Auto IP**} (suggested) or {**Static IP**}.

Static IP Confguration
Define {**IP address**}, {**Netmask**}, {**Gateway**}, {**DNS1**}, and {**DNS2**} for this display. If {**Network settings**} → {**Static IP**} is chosen.

Digital Media Renderer - DMR
Receive multimedia files from the connected device by your network.

Network name
In the multiple-display connection, you can rename each display for easy identification.
Use the on-screen keyboard or the remote control keypad to enter the name.

6. USB device compatibility

USB Video Subtitle Formats (for language subtitles, etc.)

File Extensions	Container	Video codec	Maximum resolution	Max.Frame Rate (fps)	Max.Bit Rate (Mbps)	Audio codec
.mpg .mpeg .vob	PS	MPEG-1	1920x1080	25p, 30p, 50i, 60i	30	MPEG-1 (L1 & L2), MPEG-1, 2, 2.5 L3, AAC/HE-AAC (v1 & v2), DVD-PCM, AC3
		MPEG-2	1920x1080	25p, 30p, 50i, 60i	30	
		MPEG-4 ASP	1920x1080	25p, 30p, 50i, 60i	30	
		H.264	1920x1080	25p, 30p, 50p, 60p, 60i	30	
.ts	TS	MPEG-2	1920x1080	25p, 30p, 50i, 60i	30	MPEG-1 (L1 & L2), MPEG-1, 2, 2.5 L3, AAC/HE-AAC (v1 & v2), AC3, E-AC3, Dolby Pulse
		MPEG-4 ASP	1920x1080	25p, 30p, 50i, 60i	30	
		H.264	1920x1080	25p, 30p, 50p, 60p, 60i	30	
		MVC	1920x1080i@field rate=50, 60Hz 1920x1080p@frame rate=24, 25, 30Hz 1280x720p@frame rate=50, 60Hz	-	30	
.ts .m2ts .mts .mt2	MaTS TTS	MPEG-2	1920x1080	25p, 30p, 50i, 60i	30	MPEG-1 (L1 & L2), MPEG-1, 2, 2.5 L3, AAC/HE-AAC (v1 & v2), AC3, E-AC3, Dolby Pulse
		MPEG-4 ASP	1920x1080	25p, 30p, 50i, 60i	30	
		H.264	1920x1080	25p, 30p, 50p, 60p, 60i	30	
		MVC	1920x1080i@field rate=50, 60Hz 1920x1080p@frame rate=24, 25, 30Hz 1280x720p@frame rate=50, 60Hz	-	30	
.ts .m2ts .mts	AVCHD	MPEG-2	1920x1080	25p, 30p, 50i, 60i	30	MPEG-1 (L1 & L2), MPEG-1, 2, 2.5 L3, AAC/HE-AAC (v1 & v2), AC3, E-AC3, Dolby Pulse
		MPEG-4 ASP	1920x1080	25p, 30p, 50i, 60i	30	
		H.264	1920x1080	25p, 30p, 50p, 60p, 60i	30	
.ts .m2ts .mts	AVCHD	MVC	1920x1080i@field rate=50, 60Hz 1920x1080p@frame rate=24, 25, 30Hz 1280x720p@frame rate=50, 60Hz	-	30	MPEG-1 (L1 & L2), MPEG-1, 2, 2.5 L3, AAC/HE-AAC (v1 & v2), AC3, E-AC3, Dolby Pulse
.m4v	M4V	H.264	1920x1080	25p, 30p, 50p, 60i	30	AAC
.ism/ Manifest .mpd	frag MP4	H.264	1920x1080	25p, 30p, 50p, 60i	30	AAC/HE-AAC (v1 & v2), AC3, E-AC3, WMA WMA-PRO
		MVC	1920x1080i@field rate=50, 60Hz 1920x1080p@frame rate=24, 25, 30Hz 1280x720p@frame rate=50, 60Hz	-	30	
.mp4	MP4	MPEG-4 ASP	1920x1080	25p, 30p, 50i, 60i	30	AAC/HE-AAC (v1 & v2), AC3, E-AC3, WMA WMA-PRO
		H.264	1920x1080		30	
		MVC	1920x1080i@field rate=50, 60Hz 1920x1080p@frame rate=24, 25, 30Hz 1280x720p@frame rate=50, 60Hz	-	30	
		WMV9/VC1	1920x1080	30p, 60i	30	
.mkv .mk3d	MKV	MPEG-4 ASP	1920x1080	25p, 30p, 50i, 60i	30	MPEG-1 (L1 & L2), MPEG-1, 2, 2.5 L3, AAC/HE-AAC (v1 & v2), AC3, E-AC3, WMA WMA-PRO
		H.264	1920x1080		30	

USB Multimedia Formats

File Extensions	Container	Video codec	Maximum resolution	Frequency (kHz)	Max.Bit Rate (Mbps)	Audio codec
.mp3	MP3	-	-	48	384	MPEG-1, 2, 2.5 L3
.wma .asf	WMA (V2 up to V9.2)	-	-	48	192	WMA
.wma	WMA Pro	-	-	96	768	WMA, WMA Pro
.wav (PC)	LPCM	-	-	192	768	LPCM
.aif (mac) .aiff (mac)	LPCM	-	-	192	768	LPCM
.aac .mp4 .m4a	AAC	-	-	48	1024	AAC, HE-AAC (v1 & v2)
.pls .m3u	Playlists	-	-	-	-	-
.m4a	M4A	-	-	48	1024	AAC, HE-AAC (v1 & v2)

NOTES:

- Sound or video may not work if the contents have a standard bit rate/frame rate above the compatible Frame/sec listed in the table above.
- Video content with a Bit rate or Frame rate larger than the rate specified in the table above can cause choppy video during playback.

7. Input Mode

VGA Resolution:

Standard Resolution	Active Resolution		Refresh Rate	Pixel Rate	Aspect Ratio	Stand for Mode
	H Pixels	V Lines				
VGA	640	480	60 Hz	25.175 MHz	4:3	Video Graphic Array
			72 Hz	31.5 MHz		
			75 Hz	31.5 MHz		
WVGA	720	400	70 Hz	33.75 MHz	16:9	Wide Video Graphic Array
SVGA	800	600	60 Hz	40 MHz	4:3	Super VGA
		600	75 Hz	49.5 MHz		
XGA	1024	768	60 Hz	65 MHz	4:3	Extended Graphic Array
		768	75 Hz	78.75 MHz		
WXGA	1280	768	60 Hz	79.5 MHz	5:3	Wide XGA
WXGA	1280	800	60 Hz	79.5 MHz	16:10	Wide XGA
SXGA	1280	960	60 Hz	108 MHz	4:3	Super XGA
SXGA	1280	1024	60 Hz	108 MHz	5:4	Super XGA
WXGA	1360	768	60 Hz	85.5 MHz	16:9	Wide XGA
WXGA	1366	768	60 Hz	85.5 MHz	16:9	Wide XGA
UXGA	1600	1200	60 Hz	162 MHz	4:3	Ultra XGA
HD1080	1920	1080	60 Hz	148.5 MHz	16:9	HD1080

SDTV Resolution:

Standard Resolution	Active Resolution		Refresh Rate	Pixel Rate	Aspect Ratio	Stand for Mode
	H Pixels	V Lines				
480i	720	480	29.97 Hz	13.5 MHz	4:3	Modified NTSC Standard
480p			59.94 Hz	27 MHz		
576i	720	576	25 Hz	13.5 MHz	4:3	Modified PAL Standard
576p			50 Hz	27 MHz		

HDTV Resolution:

Standard Resolution	Active Resolution		Refresh Rate	Pixel Rate	Aspect Ratio	Stand for Mode
	H Pixels	V Lines				
720p	1280	720	50 Hz	74.25 MHz	16:9	Normally DVB Mode
			60 Hz			
1080i	1920	1080	25 Hz	74.25 MHz	16:9	Normally ATSC Mode
			30 Hz			
1080p	1920	1080	50 Hz	148.5 MHz	16:9	Normally ATSC Mode
			60 Hz			
4K2K[*1, *2, *3]	3840	2160	30 Hz	262.75 MHz	16:9	

NOTE: Technical specifications are subject to change without notice.

*1: Expanded daisy chain options with DP enables 4K resolution.
4K2K daisy chain limitation applied e.g. compressed images and no support when HDCP (high-bandwidth digital content protection) is utilized

*2: Displayed text may be blurred.

*3: 4K2K timing only support on HDMI and DisplayPort input source. Recommend graphic card for timing 4K2K@30Hz as below. MSI HD7970/ASUS GTX770/Gigabyte GTX980.

- The PC text quality is optimum in HD 1080 mode (1920 x 1080, 60Hz).
- Your PC display screen might appear different depending on the manufacturer (and your particular version of Windows).
- Check your PC instruction book for information about connecting your PC to a display.
- If a vertical and horizontal frequency-select mode exists, select 60Hz (vertical) and 31.5KHz (horizontal). In some cases, abnormal signals (such as stripes) might appear on the screen when the PC power is turned off (or if the PC is disconnected). If so, press the [**SOURCE**] button to enter the video mode. Also, make sure that the PC is connected.
- When horizontal synchronous signals seem irregular in RGB mode, check PC power saving mode or cable connections.
- The display settings table complies with IBM/VESA standards, and based on the analog input.
- The DVI support mode is regarded to be the same as the PC support mode.
- The best vertical frequency timing for each mode is 60Hz.

8. Cleaning and Troubleshooting

8.1. Cleaning

Caution When Using the Display

- Do not bring your hands, face or objects close to the ventilation holes of the display. The top of the display is usually very hot due to the high temperature of exhaust air being released through the ventilation holes. Burns or personal injuries may occur if any body parts are brought too close. Placing any object near the top of the display could also result in heat related damage to the object as well as the display itself.
- Be sure to disconnect all cables before moving the display. Moving the display with its cables attached may damage the cables and thus cause fire or electric shock.
- Disconnect the power plug from the wall outlet as a safety precaution before carrying out any type of cleaning or maintenance procedure.

Front Panel Cleaning Instructions

- The front of the display has been specially treated. Wipe the surface gently using only a cleaning cloth or a soft, lint-free cloth.
- If the surface becomes dirty, soak a soft, lint-free cloth in a mild detergent solution. Wring the cloth to remove excess liquid. Wipe the surface of the display to remove dirt. Then use a dry cloth of the same type to dry.
- Do not scratch or hit the surface of the panel with fingers or hard objects of any kind.
- Do not use volatile substances such as insert sprays, solvents and thinners.

Cabinet Cleaning Instructions

- If the cabinet becomes dirty, wipe the cabinet with a soft, dry cloth.
- If the cabinet is extremely dirty, soak a lint-free cloth in a mild detergent solution. Wring the cloth to remove as much moisture as possible. Wipe the cabinet. Use another dry cloth to wipe over until the surface is dry.
- Do not allow any water or detergent to come into contact with the surface of the display. If water or moisture gets inside the unit, operating problems, electrical and shock hazards may result.
- Do not scratch or hit the cabinet with fingers or hard objects of any kind.
- Do not use volatile substances such as insert sprays, solvents and thinners on the cabinet.
- Do not place anything made from rubber or PVC near the cabinet for any extended periods of time.

8.2. Troubleshooting

Symptom	Possible Cause	Remedy
No picture is displayed	1. The power cord is disconnected. 2. The main power switch on the back of the display is not switched on. 3. The selected input has no connection. 4. The display is in standby mode.	1. Plug in the power cord. 2. Make sure the power switch is switched on. 3. Connect a signal connection to the display.
Interference displayed on the display or audible noise is heard	Caused by surrounding electrical appliances or fluorescent lights.	Move the display to another location to see is the interference is reduced.
Color is abnormal	The signal cable is not connected properly.	Make sure that the signal cable is attached firmly to the back of the display.
Picture is distorted with abnormal patterns	1. The signal cable is not connected properly. 2. The input signal is beyond the capabilities of the display.	1. Make sure that the signal cable is attached firmly. 2. Check the video signal source to see if it is beyond the range of the display. Please verify its specifications with this display's specification section.
Display image doesn't fill up the full size of the screen	Zoom mode is not correctly set.	Use the Zoom mode or Custom zoom function in the Screen menu to fine tune display geometry and time frequency parameter.
Can hear sound, but no picture	Improperly connected source signal cable.	Make sure that both video inputs and sound inputs are correctly connected.
Can see picture but no sound is heard	1. Improperly connected source signal cable. 2. Volume is turned all the way down. 3. [**MUTE**] is turned on. 4. No external speaker connected.	1. Make sure that both video inputs and sound inputs are correctly connected. 2. Press [**+**] or [**-**] button to hear sound. 3. Switch MUTE off by using the [🔇] button. 4. Connect external speakers and adjust the volume to a suitable level.
Some picture elements do not light up	Some pixels of the display may not turn on.	This display is manufactured using an extremely high level of precision technology: however, sometimes some pixels of the display may not display. This is not a malfunction.
After-Images can still be seen on the display after the display is powered off. (Examples of still pictures include logos, video games, computer images, and images displayed in 4:3 normal mode)	A still picture is displayed for an over extended period of time	Do not allow a still image to be displayed for an extended period of time as this can cause a permanent after-image to remain on the display.

9. Technical Specifications

9.1. CDX4952

Display:

Item	Specifications
Screen Size (Active Area)	48.5” (123.2 cm) LCD
Aspect Ratio	16:9
Number of pixels	1920 (H) x 1080 (V)
Pixel pitch	0.55926 (H) x 0.55926 (V) [mm]
Displayable colors	1.07B colors
Brightness (typical)	450 cd/m^2
Contrast ratio (typical)	1300:1
Viewing angle	178 degrees

In/Out Terminals:

Item		Specifications
Speaker Output	Internal Speakers External Speakers	10W (L) + 10W (R) [RMS]/8Ω 1 Way 1 Speaker System 75dBA
Audio Output	3.5mm phone jack x 1	0.5V [rms] (Normal) / 2 Channel (L+R)
Audio Input	RCA Jack x 2 3.5mm phone jack x 1	0.5V [rms] (Normal) / 2 Channel (L+R)
RS232C	2.5mm phone jack x 2	RS232C in/RS232C out
RJ-45	RJ-45 Jack x 1 (8 pin)	10/100 LAN Port
HDMI Input	HDMI Jack x 1 (Type A) (18 pin)	Digital RGB: TMDS (Video + Audio) MAX: Video - 720p, 1080p, 1920 x 1080/60 Hz (WUXGA) Audio - 48 KHz/ 2 Channel (L+R) Supports LPCM only
DVI-D Input	DVI-D jack	Digital RGB: TMDS (Video)
VGA Input	D-Sub Jack x 1 (15 pin)	Analog RGB: 0.7V [p-p] (75Ω), H/CS/V: TTL (2.2kΩ), SOG: 1V [p-p] (75Ω) MAX: 720p, 1080p, 1920 x 1080/60 Hz (WUXGA)
DVI-I (DVI-D & VGA) Output	DVI-I Jack x 1 (29 pin)	Digital RGB: TMDS (Video) Analog RGB: 0.7V [p-p] (75Ω), H/CS/V: TTL (2.2kΩ), SOG: 1V [p-p] (75Ω) MAX: 720p, 1080p, 1920 x 1080/60 Hz (WUXGA)
Component Input	BNC Jack x 3	Y: 1V [p-p] (75Ω), Pb: 0.7V [p-p] (75Ω), Pr: 0.7V [p-p] (75Ω) MAX: 480i, 576i, 480p, 576p, 720p, 1080i, 1080p
Video Input	BNC x 1 (Share with Component_Y)	Composite 1V [p-p] (750)
Displayport in/out	Displayport Jack x 2 (20 pin)	Digital RGB: TMDS (Video + Audio) MAX: Video - 720p, 1080p, 1920 x 1080/60 Hz (WUXGA) Audio - 48 KHz/ 2 Channel (L+R) Supports LPCM only
IR Pass Through	3.5mm jack x 2	IR in/IR out

General:

Item	Specifications
Power Supply	AC 100 ~ 240V, 50 ~ 60Hz, 3.5A
Power Consumption (Max)	235W
Power Consumption (typ.)	110W
Power Consumption (Standby & Off)	<0.5W (RS232 in active)
Dimensions (With Stand) [W x H x D]	1077.6 x 648.7 x 400 mm
Dimensions (Without Stand) [W x H x D]	1077.6 x 607.8 x 93.5 mm (@Wall Mount)/103.8 (@Handle)
Weight (With Stand)	23.9 Kg
Weight (Without Stand)	21.6 Kg
Gross Weight (Without Stand)	34.3 Kg

Environmental Condition:

Item		Specifications
Temperature	Operational	5°C~40°C(Landscape), 5°C~35°C (Portrait)
	Storage	-20 ~ 60°C
Humidity	Operational	20 ~ 80% RH (No condensation)
	Storage	10 ~ 90% RH (No condensation)
Altitude	Operational	0 ~ 3,000 m
	Storage / Shipment	0 ~ 9,000 m

Internal Speaker:

Item	Specifications
Type	1 Way 1 Speaker
Input	10 W (RMS)
Impedance	8Ω
Output Sound Pressure	82 dB/W/M
Frequency Response	160 Hz ~ 13 KHz

10. RS232 Protocol

10.1. Introduction

This document describes the hardware interface spec and software protocols of RS232 interface communication between ViewSonic Commercial TV / Digital Signage and PC or other control unit with RS232 protocol.

The protocol contains three sections command:

- Set-Function
- Get-Function
- Remote control pass-through mode

※ In the document below, “PC” represents all the control units that can send or receive the RS232 protocol command.

10.2. Description

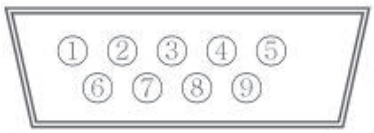
10.2.1.Hardware specification

Viewsonic TV communication port on the rear side:

(1) Connector type: DSUB 9-Pin Male

(2) Pin Assignment

Male DSUB 9-Pin
(outside view)



Pin #	Signal	Remark
1	NC	
2	RXD	Input to Commercial TV or DS
3	TXD	Output from Commercial TV or DS
4	NC	
5	GND	
6	NC	
7	NC	
8	NC	
9	NC	
frame	GND	

* Use of crossover (null modem) cable required for use with PC

[Special case]3.5mm barrel connector

Pin #	Signal	Remark
Tip	TXD	Output from Commercial TV or DS
Ring	RXD	Input to Commercial TV or DS
Sleeve	GND	

10.2.2.Communication Setting

- Baud Rate Select: 9600bps (fixed)
- Data bits: 8 bits (fixed)
- Parity: None (fixed)
- Stop Bits: 1 (fixed)

10.2.3.Command Message Reference

PC sends to Monitor command packet followed by “CR”. Every time PC sends control command to the Monitor, the Monitor shall respond as follows:

1. If the message is received correctly it will send “+” (02Bh) followed by “CR” (00Dh)
2. If the message is received incorrectly it will send “-” (02Dh) followed by “CR” (00Dh)

10.3. Protocol

10.3.1.Set-Function Listing

The PC can control the TV/DS for specific actions. The Set-Function command allows you to control the TV/DS behavior in a remote site through the RS232 port. The Set-Function packet format consists of 9 bytes.

Set-Function description:

Length: Total Byte of Message excluding “CR”.

TV/DS ID Identification for each of TV/DS (01~98; default is 01)
ID “99” means to apply the set command for all connected displays. Under such circumstances, only ID#1 display has to reply.
The TV/DS ID can be set via the OSD menu for each TV/DS set.

Command Type Identify command type,
“s” (0x73h) : Set Command
“+” (0x2Bh) : Valid command Reply
“-“ (0x2Dh) : Invalid command Reply

Command: Function command code: One byte ASCII code.

Value[1~3]: Three bytes ASCII that defines the value.

CR 0x0D

Set-Function format

Send: (Command Type=”s”)

Name	Length	ID	Command Type	Command	Value1	Value2	Value3	CR
Byte Count	1 Byte	2 Byte	1 Byte	1 Byte	1 Byte	1 Byte	1 Byte	1 Byte
Bytes order	1	2~3	4	5	6	7	8	9

NOTE: For VT2405LED-1 and VT3205LED, the set “Power on” command is the exception

Reply: (Command Type=”+” or “-”)

Name	Length	ID	Command Type	CR
Byte Count	1 Byte	2 Byte	1 Byte	1 Byte
Bytes order	1	2~3	4	5

NOTE:

1. The reply for “Power on” command is the exception for VT2405LED-1 and VT3205LED. It’s 0x322B0D (2+<CR>).
2. When PC applies command to all displays (ID=99), only the #1 set needs to reply by the name of ID=1.

Example1: Set Brightness as 76 for TV-02 and this command is valid

Send (Hex Format)

Name	Length	ID	Command Type	Command	Value1	Value2	Value3	CR
Hex	0x38	0x30 0x32	0x73	0x24	0x30	0x37	0x36	0x0D

Reply (Hex Format)

Name	Length	ID	Command Type	CR
Hex	0x34	0x30 0x32	0x2B	0x0D

Example2: Set Brightness as 176 for TV-02 and this command is NOT valid Send (Hex Format)

Name	Length	ID	Command Type	Command	Value1	Value2	Value3	CR
Hex	0x38	0x30 0x32	0x73	0x24	0x31	0x37	0x36	0x0D

Reply (Hex Format)

Name	Length	ID	Command Type	CR
Hex	0x34	0x30 0x32	0x2D	0x0D

Set function table:

Set Function	Length	ID	Command Type	Command		Value Range	Comments
				Code (ASCII)	Code (Hex)	(Three ASCII bytes)	
Power on/off (standby)	8		s	!	21	000: STBY 001: ON	Controlled power status: ON or Standby
Input Select	8		s	“	22	000 : TV 001 : AV 002 : S-Video 003 : YPbPr 004 : HDMI 014 : HDMI2 024 : HDMI3 005 : DVI 006 : VGA1(PC) 016 : VGA2 007 : OPS 008 : Internal Mem 009 : DP	1. No need for USB 2. For the case of two more same sources, the 2nd digital is used to indicate the extension.
Contrast	8		s	#	23	000 ~ 100	
Brightness	8		s	$	24	000 ~ 100	
Sharpness	8		s	%	25	000 ~ 100	
Color	8		s	&	26	000 ~ 100	
Tint	8		s	‘	27	000 ~ 100	
Color Mode	8		s	)	29	000 : Normal 001 : Warm 002 : Cold 003 : Personal	
Bass	8		s	.	2E	000 ~ 100	Sets Bass value
Treble	8		s	/	2F	000 ~ 100	Sets Treble value
Balance	8		s	0	30	000 ~ 100	Sets Balance position
Picture Size	8		s	1	31	000 : FULL 001 : NORMAL 002 : CUSTOM 003 : DYNAMIC 004 : REAL	
OSD Language	8		s	2	32	000 : English 001 : French 002 : Spanish	
Power Lock	8		s	4	34	000 : Unlock 001 : Lock	

Volume	8		s	5	35	000 ~ 100 900 : Volume down (-1) 901 : Volume up (+1)	
Mute	8		s	6	36	000: OFF 001: ON (mute)	
Button Lock	8		s	8	38	000 : Unlock 001 : Lock	
Menu Lock	8		s	>	3E	000 : Unlock 001 : Lock	
Key Pad	8		s	A	41	000 : UP 001 : DOWN 002 : LEFT 003 : RIGHT 004 : ENTER 005 : INPUT 006 : MENU/EXIT	
Remote Control	8		s	B	42	000: Disable	**Disable:** RCU has no effect on Monotor.
						001: Enable	**Enabled:** RCU controls the Monitor. This is the power up default on the Monitor.
						002: Pass through	**Pass through:** RCU has no effect on Monitor and all RCU command codes are transmitted to PC via the RS232 port.
Date	8		s	V	56	0xx: Year 1xx: Month+Day (See example in Note)	For specific models only
Tiling-Mode	8		s	P	50	000: OFF 001: ON	(for DS)
Tiling-Compensation	8		s	Q	51	000: OFF 001: ON	(for DS) Bezel width compensation
Tiling-H by V Monitors	8		s	R	52	01x~09x: H 0x1~0x9: V	(for DS) 1. 2nd digital for H monitors 2. 3rd digital for V monitors
Tiling-Position	8		s	S	53	001~025	(for DS) Copy the screen of Position# to identified display
Time	8		s	W	57	0xx: Hour+Min 10x: Sec (See example in Note)	For specific models only
Factory reset	8		s	~	7E	0	Rests Monitor to factory setting

NOTE:

1. Behavior at lock modes

Lock Mode	Behavior
Button Lock	1. Lock all buttons on the front panel and RCU, except for “Power” 2. All the SET functions should be workable via RS32, even the ones with according hot key in RCU like Mute,…etc.
MENU Lock	1. Lock “MENU’ key of front panel and RCU 2. The Factory and Hospitality modes should not be blocked for the model using MENU-combined key to enter these two modes. Alternative approach will be indicated separately if any limitation by model.
POWER Lock	1. Lock “POWER” key on the front and RCU. 2. The SET_POWER on/off should be workable via RS232, but does not mean the POWER lock will be released under this case. 3. Can not be unlocked by reset in OSD setting 4. Will auto AC power-on in power-lock 5. Under power-lock, the set will not enter power saving when no PC signal and neither not turn off when no other video signals after 15min.
Remote control disable	Lock the RCU keys, but keep the front panel buttons workable.

2. Example for value setting of SET_TV channel DTV

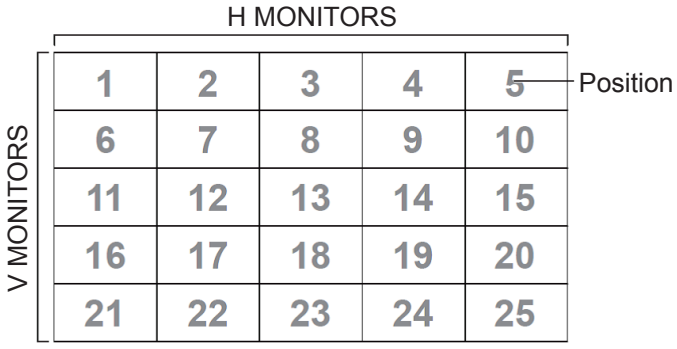
012-0: 0x 30 31 32

012-1: 0x 30 31 42

1012-2: 0x 41 31 52

1512-3: 0x 46 31 62

3. Tiling definition of H Monitors/ V Monitors/ and Position



4. Date & Time format definition

	Value 1	Value 2	Value 3
Date	0: Year	Year code of the first 2 digis	Year code of the last 2 digis
	1: Month+Day	Month code	Day code
Time	0: Hour(24-hr format)+Min	Hour code	Minute code
	1: Sec	0	Second code

Hex code (in hex) = Original data (in dec) + 20

Date & Time	Code (ASCII)	Code (Hex)	Date & Time	Code (ASCII)	Code (Hex)	Date & Time	Code (ASCII)	Code (Hex)	Date & Time	Code (ASCII)	Code (Hex)
0	space	20	16	6	36	32	R	52	48	h	68
1	!	21	17	7	37	33	S	53	49	i	69
2	“	22	18	8	38	34	T	54	50	p	70
3	#	23	19	9	39	35	U	55	51	q	71
4	$	24	20	@	40	36	V	56	52	r	72
5	%	25	21	A	41	37	W	57	53	s	73
6	&	26	22	B	42	38	X	58	54	t	74
7	’	27	23	C	43	39	Y	59	55	u	75
8	(	28	24	D	44	40	`	60	56	v	76
9	)	29	25	E	45	41	a	61	57	w	77
10	0	30	26	F	46	42	b	62	58	x	78
11	1	31	27	G	47	43	c	63	59	y	79
12	2	32	28	H	48	44	d	64			
13	3	33	29	I	49	45	e	65			
14	4	34	30	P	50	46	f	66			
15	5	35	31	Q	51	47	g	67			

Month: 1~12
Day: 1~31
Hour: 00~23
Min:: 00~59
Sec: 00~59

5. Set Date & Time example

Date: 2015-1/31
Time: 16:27:59

Send: 0x 38 30 31 73 56 30 40 35 0D (Year “20” “15”)
Send: 0x 38 30 31 73 56 31 21 51 0D (Month “1”, Day ”31”)
Send: 0x 38 30 31 73 57 30 36 47 0D (Hour “16”, Min “27”)
Send: 0x 38 30 31 73 57 31 30 79 0D (“0”, Sec “59”)

10.3.2. Get-Function Listing

The PC can interrogate the TV/DS for specific information. The Get-Function packet format consists of 9 bytes which is similar to the Set-Function packet structure. Note that the “Value” byte is always = 000

Get-Function description:

Length: Total Byte of Message excluding “CR”.

TV/DS ID Identification for each of TV/DS (01~98; default is 01).

Command Type Identify command type,
“g” (0x67h) : Get Command
“r” (0x72h) : Valid command Reply
“-“ (0x2Dh) : Invalid command Reply

Command: Function command code: One byte ASCII code.

Value[1~3]: Three bytes ASCII that defines the value.

CR 0x0D

Get-Function format

Send: (Command Type=”g”)

Name	Length	ID	Command Type	Command	Value1	Value2	Value3	CR
Byte Count	1 Byte	2 Byte	1 Byte	1 Byte	1 Byte	1 Byte	1 Byte	1 Byte
Bytes order	1	2~3	4	5	6	7	8	9

NOTE: “Power STBY status” is the exception for VT2405LED-1 and VT3205LED.

Reply: (Command Type=”r” or “-”)

If the Command is valid, Command Type =”r”

Name	Length	ID	Command Type	Command	Value1	Value2	Value3	CR
Byte Count	1 Byte	2 Byte	1 Byte	1 Byte	1 Byte	1 Byte	1 Byte	1 Byte
Bytes order	1	2~3	4	5	6	7	8	9

NOTE: The reply for “Power STBY status” command is the exception for VT2405LED-1 and V3205LED. It’s 0x36 72 6C 30 30 30 0D (6rl000<CR>).

If the Command is Not valid, Command Type=”-“

Name	Length	ID	Command Type	CR
Byte Count	1 Byte	2 Byte	1 Byte	1 Byte
Bytes order	1	2~3	4	5

Example1: Get Brightness from TV-05 and this comm and is valid. The Brightness value is 67.

Send (Hex Format)

Name	Length	ID	Command Type	Command	Value1	Value2	Value3	CR
Hex	0x38	0x30 0x35	0x67	0x62	0x30	0x30	0x30	0x0D

Reply (Hex Format)

Name	Length	ID	Command Type	Command	Value1	Value2	Value3	CR
Hex	0x38	0x30 0x35	0x72	0x62	0x30	0x36	0x37	0x0D

Example2: Get Brightness from TV-05, but the Brightness command ID is error and it is NOT in the command table.

Send (Hex Format)

Name	Length	ID	Command Type	Command	Value1	Value2	Value3	CR
Hex	0x38	0x30 0x35	0x67	0XD3	0x30	0x30	0x30	0x0D

Reply (Hex Format)

Name	Length	ID	Command Type	CR
Hex	0x34	0x30 0x35	0x2D	0x0D

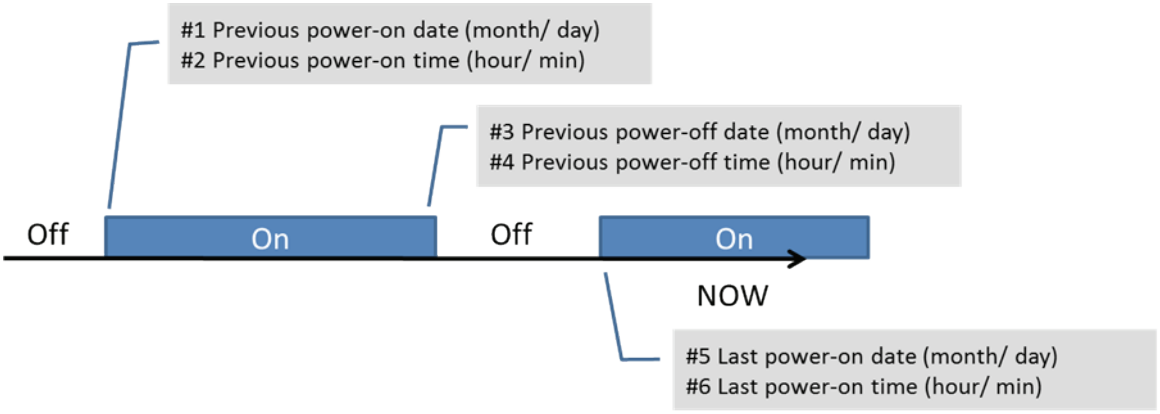
Get function table:

Get Function	Length	ID	Command Type	Command		Value Range	Comments
				Code (ASCII)	Code (Hex)	(Three ASCII bytes)	
Get-Contrast	8		g	a	61	000 ~ 100	Gets Contrast value
Get-Brightness	8		g	b	62	000 ~ 100	Gets Brightness value
Get-Sharpness	8		g	c	63	000 ~ 100	Gets Sharpness value
Get-Color	8		g	d	64	000 ~ 100	Gets Color value
Get-Tint	8		g	e	65	000 ~ 100	Gets Tint value
Get-Volume	8		g	f	66	000 ~ 100	Gets Volume value
Get-Mute	8		g	g	67	000: OFF (unmuted) 001: ON (muted)	Gets Mute ON/OFF status
Get-Input select	8		g	j	6A	000~	See Set-function table
Get-Power status : ON/ STBY	8		g	l	6C	000: STBY 001: ON	
Get-Remote control	8		g	n	6E	000 : Disable 001 : Enable 002 : Pass through	
Get-Power Lock	8		g	o	6F	000 : Unlock 001 : Lock	
Get-Button Lock	8		g	p	70	000 : Unlock 001 : Lock	
Get-Menu Lock	8		g	q	71	000 : Unlock 001 : Lock	
Get-Tiling Mode	8		g	v	76	000: OFF 001: ON	(for DS)
Get-Tiling Compensation	8		g	w	77	000: OFF 001: ON	(for DS) Bezel width compensation
Get-Tiling H by V monitors	8		g	x	78	01x~09x: H monitors 0x1~0x9: V monitors	(for DS) 1. 2nd digital for H monitors 2. 3rd digital for V monitors
Get-Tiling position	8		g	y	79	000: OFF 001~025	(for DS) Copy the screen of Position# to identified display
Get-ACK	8		g	z	7A	000	This command is used to test the communication link.

Get-Thermal	8		g	0	30	000~100: 0~+100 deg C -01~-99: -1~-99 deg C	For specific models only
Get-Power on/ off log	8		g	1	31	000 (See below note)	For specific models only
Get-Date	8		g	2	32	000 (See the Set-Date command)	For specific models only
Get- Time	8		g	3	33	000 (See the Set-Time command)	For specific models only

NOTE:

1. Power on/off log data is replied as 6 sequential strings in following order.



2. Time log data definition

Value 1	Value 2	Value 3
On/ Off indicator 0: Off 1: On	Month code	Day code
	Hour code	Minute code

Hex code (in hex) = Original data (in dec) + 20

Date & Time	Code (ASCII)	Code (Hex)	Date & Time	Code (ASCII)	Code (Hex)	Date & Time	Code (ASCII)	Code (Hex)	Date & Time	Code (ASCII)	Code (Hex)
0	space	20	16	6	36	32	R	52	48	h	68
1	!	21	17	7	37	33	S	53	49	i	69
2	“	22	18	8	38	34	T	54	50	p	70
3	#	23	19	9	39	35	U	55	51	q	71
4	$	24	20	@	40	36	V	56	52	r	72
5	%	25	21	A	41	37	W	57	53	s	73
6	&	26	22	B	42	38	X	58	54	t	74
7	’	27	23	C	43	39	Y	59	55	u	75
8	(	28	24	D	44	40	`	60	56	v	76
9	)	29	25	E	45	41	a	61	57	w	77
10	0	30	26	F	46	42	b	62	58	x	78
11	1	31	27	G	47	43	c	63	59	y	79
12	2	32	28	H	48	44	d	64			
13	3	33	29	I	49	45	e	65			
14	4	34	30	P	50	46	f	66			
15	5	35	31	Q	51	47	g	67			

Month: 1~12
Day: 1~31
Hour: 00~23
Min:: 00~59

3. Get Time log data example

Assumed the power-on/off record of display#01 as below
2014-8/31 08:00 On
2014-8/31 22:00 Off
2014-9/1 10:30 On
2014-9/1 11:00 To send “GET-Time log” command

Send: 0x 38 30 31 67 31 30 30 30 0D
Reply:
#1 0x 38 30 31 72 31 31 28 51 0D (On 8/31)
#2 0x 38 30 31 72 31 31 28 20 0D (On 08:00)
#3 0x 38 30 31 72 31 30 28 51 0D (Off 8/31)
#4 0x 38 30 31 72 31 30 42 20 0D (Off 22:00)
#5 0x 38 30 31 72 31 31 29 21 0D (On 9/1)
#6 0x 38 30 31 72 31 31 30 50 0D (On 10:30)

4. Get Date & Time example

Assumed the current date/time of display#01 as below

Date: 2015-1/31

Time: 16:27:59

Send: 0x 38 30 31 67 32 30 30 30 0D (Get Date)

Reply:

#1 0x 38 30 31 72 32 30 40 35 0D (Year “20” “15”)

#2 0x 38 30 31 72 32 31 21 51 0D (Month “1”, Day ”31”)

Send: 0x 38 30 31 67 33 30 30 30 0D (Get Time)

Reply:

#1 0x 38 30 31 72 33 30 36 47 0D (Hour “16”, Min “27”)

#2 0x 38 30 31 72 33 31 30 79 0D (“0”, Sec “59”)

10.3.3.Remote Control Pass-through mode

When the PC sets the TV/DS to Remote Control Pass through mode, the TV/DS will send a 7-byte packet (followed by “CR”) in response to RCU button activation. Note, that in this mode the RCU shall have no effect on the TV/DS function. For example: “Volume+” will not change the volume in the LCD but only sends “Volume+” code to PC over the RS232 port.

IR Pass Through-Function format

Reply: (Command Type=”p”)

Name	Length	ID	Command Type	RCU Code1 (MSB)	RCU Code2 (LSB)	CR
Byte Count	1 Byte	2 Byte	1 Byte	1 Byte	1 Byte	1 Byte
Bytes order	1	2~3	4	5	6	7

Example1: Remote Control pass-through when “VOL+” key is pressed for TV-05 Send (Hex Format)

Name	Length	ID	Command Type	Command	Value1	CR
Hex	0x36	0x30 0x35	0x70	0x31	0x30	0x0D

Key	Code (HEX)
1	01
2	02
3	03
4	04
5	05
6	06
7	07
8	08
9	09
0	0A
-	0B
RECALL (LAST)	0C
INFO (DISPLAY)	0D
	0E
ASPECT (ZOOM, SIZE)	0F
VOLUME UP (+)	10
VOLUME DOWN (-)	11
MUTE	12
CHANNEL/PAGE UP (+)/ BRIGHTNESS+	13
CHANNEL/PAGE DOWN (-)/ BRIGHTNESS-	14
POWER	15
SOURCES (INPUTS)	16
	17
	18
SLEEP	19
MENU	1A
UP	1B
DOWN	1C
LEFT (-)	1D
RIGHT (+)	1E
OK (ENTER, SET)	1F
EXIT	20
	21
	22
	23
	24
	25
	26
	27
	28
	29
	2A
	2B
RED ■ (F1)	2C
GREEN ■ (F2)	2D
YELLOW ■ (F3)	2E
BLUE ■ (F4)	2F

NOTE:

1. This IR-pass-through code is different from the RCU key code.
2. Special control sequence for POWER key under IR-pass through mode.
   - 2-1. When TV/DS is OFF and receives the IR POWER code: TV/DS will turn itself on, then forward the POWER code to the host via RS232.
   - 2-2. When TV/DS is ON and receives the IR POWER code: TV/DS will forward the POWER code to the host via RS232, then turn off itself.
   - 2-3. When SET-POWER LOCK is enabled, the TV/DS will not respond to POWER key pressing.
3. The VOLUME UP and VOLUME DOWN code will repeatedly output when you press and hold the keys.

11. Other Information

Customer Support

For technical support or product service, see the table below or contact your reseller.

NOTE: You will need the product serial number.

Country/Region	Website	T = Telephone C = CHAT ONLINE	Email
Australia New Zealand	www.viewsonic.com.au	AUS= 1800 880 818 NZ= 0800 008 822	service@au.viewsonic.com
Canada	www.viewsonic.com	T= 1-866-463-4775	service.ca@viewsonic.com
Europe	www.viewsoniceurope.com	www.viewsoniceurope.com/uk/support/call-desk/	
Hong Kong	www.hk.viewsonic.com	T= 852 3102 2900	service@hk.viewsonic.com
India	www.in.viewsonic.com	T= 1800 419 0959	service@in.viewsonic.com
Korea	ap.viewsonic.com/kr/	T= 080 333 2131	service@kr.viewsonic.com
Latin America (Argentina)	www.viewsonic.com/la/	C= http://www.viewsonic.com/la/soporte/servicio-tecnico	soporte@viewsonic.com
Latin America (Chile)	www.viewsonic.com/la/	C= http://www.viewsonic.com/la/soporte/servicio-tecnico	soporte@viewsonic.com
Latin America (Columbia)	www.viewsonic.com/la/	C= http://www.viewsonic.com/la/soporte/servicio-tecnico	soporte@viewsonic.com
Latin America (Mexico)	www.viewsonic.com/la/	C= http://www.viewsonic.com/la/soporte/servicio-tecnico	soporte@viewsonic.com
Nexus Hightech Solutions, Cincinnati #40 Desp. 1 Col. De los Deportes Mexico D.F. Tel: 55) 6547-6454 55) 6547-6484 Other places please refer to http://www.viewsonic.com/la/soporte/servicio-tecnico#mexico			
Latin America (Peru)	www.viewsonic.com/la/	C= http://www.viewsonic.com/la/soporte/servicio-tecnico	soporte@viewsonic.com
Macau	www.hk.viewsonic.com	T= 853 2870 0303	service@hk.viewsonic.com
Middle East	ap.viewsonic.com/me/	Contact your reseller	service@ap.viewsonic.com
Puerto Rico & Virgin Islands	www.viewsonic.com	T= 1-800-688-6688 (English) C= http://www.viewsonic.com/la/soporte/servicio-tecnico	service.us@viewsonic.com soporte@viewsonic.com
Singapore/ Malaysia/ Thailand	www.viewsonic.com.sg	T= 65 6461 6044	service@sg.viewsonic.com
South Africa	ap.viewsonic.com/za/	Contact your reseller	service@ap.viewsonic.com
United States	www.viewsonic.com	T= 1-800-688-6688	service.us@viewsonic.com

Limited Warranty

ViewSonic® LCD Commercial Display

What the warranty covers:
ViewSonic warrants its products to be free from defects in material and workmanship, under normal use, during the warranty period. If a product proves to be defective in material or workmanship during the warranty period, ViewSonic will, at its sole option, repair or replace the product with a like product. Replacement product or parts may include remanufactured or refurbished parts or components.

Who the warranty protects:
This warranty is valid only for the first consumer purchaser.

What the warranty does not cover:
1. Any product on which the serial number has been defaced, modified or removed.
2. Damage, deterioration or malfunction resulting from:
   a. Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
   b. Any damage of the product due to shipment.
   c. Removal or installation of the product.
   d. Causes external to the product, such as electrical power fluctuations or failure.
   e. Use of supplies or parts not meeting ViewSonic's specifications.
   f. Normal wear and tear.
   g. Any other cause which does not relate to a product defect.
3. Any product exhibiting a condition commonly known as "image burn-in" which results when a static image is displayed on the product for an extended period of time.
4. Removal, installation, one way transportation, insurance, and set-up service charges.

How to get service:
1. For information about receiving service under warranty, contact ViewSonic Customer Support (Please refer to Customer Support page). You will need to provide your product's serial number.
2. To obtain warranty service, you will be required to provide (a) the original dated sales slip, (b) your name, (c) your address, (d) a description of the problem, and (e) the serial number of the product.
3. Take or ship the product freight prepaid in the original container to an authorized ViewSonic service center or ViewSonic.
4. For additional information or the name of the nearest ViewSonic service center, contact ViewSonic.

Limitation of implied warranties:
There are no warranties, express or implied, which extend beyond the description contained herein including the implied warranty of merchantability and fitness for a particular purpose.

Exclusion of damages:
ViewSonic's liability is limited to the cost of repair or replacement of the product. ViewSonic shall not be liable for:

1. Damage to other property caused by any defects in the product, damages based upon inconvenience, loss of use of the product, loss of time, loss of profits, loss of business opportunity, loss of goodwill, interference with business relationships, or other commercial loss, even if advised of the possibility of such damages.
2. Any other damages, whether incidental, consequential or otherwise.
3. Any claim against the customer by any other party.
4. Repair or attempted repair by anyone not authorized by ViewSonic.

Effect of state law:
This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow limitations on implied warranties and/or do not allow the exclusion of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

Sales outside the U.S.A. and Canada:
For warranty information and service on ViewSonic products sold outside of the U.S.A. and Canada, contact ViewSonic or your local ViewSonic dealer.
The warranty period for this product in mainland China (Hong Kong, Macao and Taiwan Excluded) is subject to the terms and conditions of the Maintenance Guarantee Card.
For users in Europe and Russia, full details of warranty provided can be found in www.viewsoniceurope.com under Support/Warranty Information.

Mexico Limited Warranty

ViewSonic® LCD Commercial Display

What the warranty covers:
ViewSonic warrants its products to be free from defects in material and workmanship, under normal use, during the warranty period. If a product proves to be defective in material or workmanship during the warranty period, ViewSonic will, at its sole option, repair or replace the product with a like product. Replacement product or parts may include re-manufactured or refurbished parts or components.

Who the warranty protects:
This warranty is valid only for the first consumer purchaser.

What the warranty does not cover:
1. Any product on which the serial number has been defaced, modified or removed.
2. Damage, deterioration or malfunction resulting from:
   a. Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
   b. Any damage of the product due to shipment.
   c. Removal or installation of the product.
   d. Causes external to the product, such as electrical power fluctuations or failure.
   e. Use of supplies or parts not meeting ViewSonic's specifications.
   f. Normal wear and tear.
   g. Any other cause which does not relate to a product defect.
3. Any product exhibiting a condition commonly known as "image burn-in" which results when a static image is displayed on the product for an extended period of time.
4. Removal, installation, one way transportation, insurance, and set-up service charges.

How to get service:
For information about receiving service under warranty, contact ViewSonic Customer Support (Please refer to the attached Customer Support page). You will need to provide your product's serial number, so please record the product information in the space provided below on your purchase for your future use. Please retain your receipt of proof of purchase to support your warranty claim.

For Your Records
Product Name: _____
Document Number: _____
Purchase Date: _____
Model Number: _____
Serial Number: _____
Extended Warranty Purchase? _____(Y/N)
If so, what date does warranty expire? _____

1. To obtain warranty service, you will be required to provide (a) the original dated sales slip, (b) your name, (c) your address, (d) a description of the problem, and (e) the serial number of the product.
2. Take or ship the product in the original container packaging to an authorized ViewSonic service center.
3. Round trip transportation costs for in-warranty products will be paid by ViewSonic.

Limitation of implied warranties:
There are no warranties, express or implied, which extend beyond the description contained herein including the implied warranty of merchantability and fitness for a particular purpose.

Exclusion of damages:
ViewSonic's liability is limited to the cost of repair or replacement of the product. ViewSonic shall not be liable for:
1. Damage to other property caused by any defects in the product, damages based upon inconvenience, loss of use of the product, loss of time, loss of profits, loss of business opportunity, loss of goodwill, interference with business relationships, or other commercial loss, even if advised of the possibility of such damages.
2. Any other damages, whether incidental, consequential or otherwise.
3. Any claim against the customer by any other party.
4. Repair or attempted repair by anyone not authorized by ViewSonic.

Contact Information for Sales & Authorized Service (Centro Autorizado de Servicio) within Mexico:	
Name, address, of manufacturer and importers: México, Av. de la Palma #8 Piso 2 Despacho 203, Corporativo Interpalmas, Col. San Fernando Huixquilucan, Estado de México Tel: (55) 3605-1099 http://www.viewsonic.com/la/soporte/index.htm	
NÚMERO GRATIS DE ASISTENCIA TÉCNICA PARA TODO MÉXICO: 001.866.823.2004	
Hermosillo: Distribuciones y Servicios Computacionales SA de CV. Calle Juarez 284 local 2 Col. Bugambilias C.P: 83140 Tel: 01-66-22-14-9005 E-Mail: disc2@hmo.megared.net.mx	***Villahermosa:*** Compumantenimietnos Garantizados, S.A. de C.V. AV. GREGORIO MENDEZ #1504 COL, FLORIDA C.P. 86040 Tel: 01 (993) 3 52 00 47 / 3522074 / 3 52 20 09 E-Mail: compumantenimientos@prodigy.net.mx
Puebla, Pue. (Matriz): RENTA Y DATOS, S.A. DE C.V. Domicilio: 29 SUR 721 COL. LA PAZ 72160 PUEBLA, PUE. Tel: 01(52).222.891.55.77 CON 10 LINEAS E-Mail: datos@puebla.megared.net.mx	***Veracruz, Ver.:*** CONEXION Y DESARROLLO, S.A DE C.V. Av. Americas # 419 ENTRE PINZÓN Y ALVARADO Fracc. Reforma C.P. 91919 Tel: 01-22-91-00-31-67 E-Mail: gacosta@qplus.com.mx
Chihuahua Soluciones Globales en Computación C. Magisterio # 3321 Col. Magisterial Chihuahua, Chih. Tel: 4136954 E-Mail: Cefeo@soluglobales.com	***Cuernavaca*** Compusupport de Cuernavaca SA de CV Francisco Leyva # 178 Col. Miguel Hidalgo C.P. 62040, Cuernavaca Morelos Tel: 01 777 3180579 / 01 777 3124014 E-Mail: aquevedo@compusupportcva.com
Distrito Federal: QPLUS, S.A. de C.V. Av. Coyoacán 931 Col. Del Valle 03100, México, D.F. Tel: 01(52)55-50-00-27-35 E-Mail : gacosta@qplus.com.mx	***Guadalajara, Jal.:*** SERVICRECE, S.A. de C.V. Av. Niños Héroes # 2281 Col. Arcos Sur, Sector Juárez 44170, Guadalajara, Jalisco Tel: 01(52)33-36-15-15-43 E-Mail: mmiranda@servicrece.com
Guerrero Acapulco GS Computación (Grupo Sesicomp) Progreso #6-A, Colo Centro 39300 Acapulco, Guerrero Tel: 744-48-32627	***Monterrey:*** Global Product Services Mar Caribe # 1987, Esquina con Golfo Pérsico Fracc. Bernardo Reyes, CP 64280 Monterrey N.L. México Tel: 8129-5103 E-Mail: aydeem@gps1.com.mx
MERIDA: ELECTROSER Av Reforma No. 403Gx39 y 41 Mérida, Yucatán, México CP97000 Tel: (52) 999-925-1916 E-Mail: rrrb@sureste.com	***Oaxaca, Oax.:*** CENTRO DE DISTRIBUCION Y SERVICIO, S.A. de C.V. Murguía # 708 P.A., Col. Centro, 68000, Oaxaca Tel: 01(52)95-15-15-22-22 Fax: 01(52)95-15-13-67-00 E-Mail. gpotai2001@hotmail.com
Tijuana: STD Av Ferrocarril Sonora #3780 L-C Col 20 de Noviembre Tijuana, Mexico	***FOR USA SUPPORT:*** ViewSonic Corporation 14035 Pipeline Ave. Chino, CA 91710, USA Tel: 800-688-6688 (English); 866-323-8056 (Spanish); E-Mail: http://www.viewsonic.com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