B321/B421

HP LED Digital Signage Display
User Guide

Safety Instructions

Warnings and Precautions

KNOW THESE SAFETY SYMBOLS

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

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

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

This symbol indicates high voltage is present inside. It is dangerous to make any kind of contact with any inside part of this product.

This symbol alerts you that important literature concerning operation and maintenance has been included with this product.

CAUTION: FCC/CSA regulations state that any unauthorized changes or modifications to this equipment may void the user's authority to operate it.

CAUTION: To prevent electric shock, match the wide blade of plug to the wide slot, and fully insert the plug.

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

The Socket-outlet should be installed near the apparatus and be easily accessible.

Read and follow these instructions when connecting and using your Public Information Display:

- Unplug the display if you are not going to use it for an extensive period of time.
- Unplug the display if you need to clean it with a slightly damp cloth. The screen many be wiped with a dry cloth when the power is off. However, never use alcohol, solvents or ammonia-based liquids.
- Consult a service technician if the display does not operate normally when you have followed the instructions in this manual.
- The casing cover should be opened only by qualified service personnel.
- Keep the display out of direct sunlight and away from stoves or any other heat sources.
- Remove any object that could fall into the vents or prevent proper cooling of the display's electronics.
- Do not block the ventilation holes on the cabinet.
- Keep the display dry. To avoid electric shock, do not expose it to rain or excessive moisture.
- If turning off the display by detaching the power cable, wait for 6 seconds before re-attaching the power cable for normal operation.
- To avoid the risk of shock or permanent damage to the set do not expose the display to rain or excessive moisture.
- When positioning the display, make sure the power plug and outlet are easily accessible.
- **IMPORTANT**: Always activate a screen saver program during your application. If a still image in high contrast remains on the screen for an extended period of time, it may leave an 'after-image' or 'ghost image' on the front of the screen. This is a well-known phenomenon that is caused by the shortcomings inherent in LCD technology. In most cases the afterimage will disappear gradually over a period of time after the power has been switched off. Be aware that the after-image symptom cannot be repaired and is not covered under warranty.

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

WARNING: Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

WARNING: The batteries (batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.

WARNING: The mains plug or appliance coupler is used as the disconnect device,the disconnect device shall remain readily operable.

WARNING: To prevent the spread of fire, keep candles or other open flames away from this product at all times.

WARNING: To prevent injury, this apparatus must be securely attached to the floor/wall in accordance with the installation instructions.

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

CAUTION: Excessive sound pressure from earphones and headphones can cause hearing loss. Adjustment of the equalizer to maximum increases the earphone and headphone output voltage and the sound pressure level. Therefore, to protect your hearing, adjust the equalizer to an appropriate level.

For UL/CUL application: For use only with UL Listed Wall Mount Bracket with minimum weight/load:

Model	Viewable Image Size	Minimum weight/load (kg)
B321	80.0cm(31.5 in.)diagonal	19.8
B421	106.7cm(42 in.)diagonal	35.7

For CB application: The equipment and its associated mounting means still remain secure during the test.

Model	Unit Weight (kg)	VESA Size (mm)	Mounting Screws* (X=Thickness of wall-mount plate)
B321	6.6	200 × 100	M6 × (16 + X)
B421	11.9	400 × 400	M6 × (20 + X)

Federal Communications Commission (FCC) Notice (U.S. Only)

This equipment has been tested and found to comply with the limits for 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 manual, 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 own expense.

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

Use only an RF shielded cable that was supplied with the display when connecting this display to a computer device.

To prevent damage which may result in fire or shock hazard, do not expose this appliance to rain or excessive moisture.

THIS CLASS B DIGITAL APPARATUS MEETS ALL REQUIREMENTS OF THE CANADIAN INTERFERENCE-CAUSING EQUIPMENT REGULATIONS.

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.

Electric, Magnetic and Electronmagnetic Fields ("EMF")

1. We manufacture and sell many products targeted at consumers, which, like any electronic apparatus, in general have the ability to emit and receive electromagnetic signals.

2. One of our leading Business Principles is to take all necessary health and safety measures for our products, to comply with all applicable legal requirements and to stay well within the EMF standards applicable at the time of producing the products.

3. We are committed to develop, produce and market products that cause no adverse health effects.

4. We confirm that if its products are handled properly for their intended use, they are safe to use according to scientific evidence available today.

5. We play an active role in the development of international EMF and safety standards, enabling us to anticipate further developments in standardization for early integration in its products.

Information for U.K. only

WARNING – THIS APPLIANCE MUST BE EARTHED.

Important:
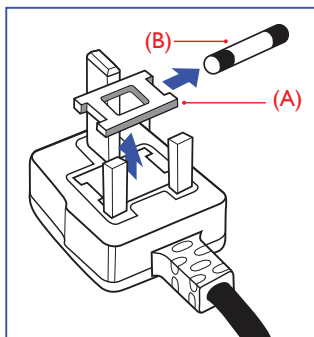
This apparatus is supplied with an approved moulded 13A plug. To change a fuse in this type of plug proceed as follows:

1. Remove fuse cover and fuse.
2. Fit new fuse which should be a BS 1362 5A,A.S.T.A. or BSI approved type.
3. Refit the fuse cover.

If the fitted plug is not suitable for your socket outlets, it should be cut off and an appropriate 3-pin plug fitted in its place.

If the mains plug contains a fuse, this should have a value of 5A. If a plug without a fuse is used, the fuse at the distribution board should not be greater than 5A.

NOTE: The severed plug must be destroyed to avoid a possible shock hazard should it be inserted into a 13A socket elsewhere.

How to connect a plug
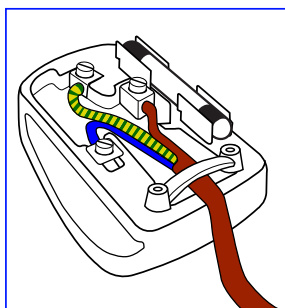
The wires in the mains lead are coloured in accordance with the following code:

BLUE – "NEUTRAL" ("**N**")
BROWN – "LIVE" ("**L**")
GREEN & YELLOW – "EARTH" ("**E**")

1. The GREEN & YELLOW wire must be connected to the terminal in the plug which is marked with the letter "**E**" or by the Earth symbol or coloured GREEN or GREEN & YELLOW.
2. The BLUE wire must be connected to the terminal which is marked with the letter "**N**" or coloured BLACK.
3. The BROWN wire must be connected to the terminal which marked with the letter "**L**" or coloured RED.

Before replacing the plug cover, make certain that the cord grip is clamped over the sheath of the lead – not simply over the three wires.

China RoHS

中国电子信息产品污染控制标识要求

本产品有毒有害物质或元素的名称及含量标识表：

零部件名称		有毒有害物质或元素					
		铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr 6+)	多溴联苯 (PBBs)	多溴二苯醚 (PBDEs)
塑料外框		○	○	○	○	○	○
后壳		○	○	○	○	○	○
LCD 面板	CCFL	×	×	○	○	○	○
	LED	×	○	○	○	○	○
电源基板		×	○	○	○	○	○
主基板		×	○	○	○	○	○
按键基板		×	○	○	○	○	○
底座		○	○	○	○	○	○
电源线		×	○	○	○	○	○
其他线材		×	○	○	○	○	○
遥控器		×	○	○	○	○	○

*：电路板组件包括印刷电路板及其构成的零部件，如电阻、电容、集成电路、连接器等。

○：表示该有害物质在该部件所有均质材料中的含量均在SJ/T11363-2006《电子信息产品中有毒有害物质的限量要求》规定的限量要求以下。

×：表示该有害物质至少在该部件的某一均质材料中的含量超出SJ/T11363-2006《电子信息产品中有毒有害物质的限量要求》规定的限量要求；

备注：以上"×"的部件，部分含有有害物质超过是由于目前行业技术水平所限，暂时无法实现替代或减量化。

环保使用期限

在产品本体上标示的该标志表示环境保护使用期限为 10 年。

电子信息产品的环境保护使用期限是指电子信息产品中所含的有毒有害物质或元素不会向外部泄漏或出现突然变异，并且电子信息产品的用户在使用该电子信息产品时也不会对环境造成严重污染或对人体、财产带来严重损害的期限。

在环境保护期限中，请按照使用说明书使用本产品。

本环境保护使用不覆盖易损件：电池。

《废弃电子产品回收处理管理条例》提示性说明

为了更好地关爱及保护地球，当用户不再需要此产品或产品寿命终止时，请遵守国家废弃电器电子产品回收处理相关法律规定，将其交给当地具有国家认可的回收处理资质的厂商进行回收处理。

仅适用于非热带气候条件下安全使用：

汉 文	仅适用于非热带气候条件下安全使用。
蒙古文	᠎᠎᠎
藏 文	ᰰ
维 文	غەيرى ئىسسىق بەلباغ ھاۋا كىلماتى شارائىتىدىلا بىخەتەر ئىشلەتكىلى بولىدۇ
壮 文	Dan hab yungh youq gij dienheiq diuzgen mbouj dwg diegndat haenx ancienz sawjyungh.

仅适用于海拔 2000m 以下地区安全使用：

汉 文	仅适用于海拔 2000m 以下地区安全使用。
蒙古文	《2000m》᠎᠎
藏 文	ᰰ
维 文	دېڭىز يۈزىدىن 2000 مېتىر توۋەن رايونلاردىلا بىخەتەر ئىشلەتكىلى بولىدۇ
壮 文	Hai dou gaxgonq, wngdang sien duenh denvasen bae.

汉 文	"注意 如果电池更换不当会有爆炸危险 只能用同样类型或等效类型的电池来更换"
蒙古文	《᠎᠎》
藏 文	ᰰ
维 文	دىققەت باتارېيەسىنى ئالماشتۇرۇش مۇۋاپىق بولمىسا پارتلاش خەۋپى بار ئوخشاش تىپلىق ياكى تەڭ ئۇنۇملۇك باتارېيەسىنى ئالماشتۇرۇڭ
壮 文	"Louzsim Danghnaeuz denyouz vuenh ndaej mbouj habdangq aiq miz gij yungyiemj fatseng bauqcaq Cijndaej yungh gij denyouz doengzyiengh loihhingz roxnaeuz daengjyauq loihl haenx vuenh"

汉 文	"接入本设备的有线网络天线必须与保护接地隔离，不然可能会引起着火等危险！"
蒙古文	《᠎᠎》
藏 文	ᰰ
维 文	بۇ ئۈسكىنىگە ئۇلايدىغان سىملىق تور ئانتېننىسىنى يەرگە ئۇلاپ بىخەتەرلەشتۈرۈش بىلەن ئايرىۋېتىلگا، بولمىسا ئوت كۆرۈشتەك خەۋپلەر كېلىپ چىقىدۇ
壮 文	"Gij mizsienq vangjloz denhsen ciephaeuj bonj sezbi daeuj haenx itdingh aeu caeuq gij ciepdieg baujhoh doxliz, mboujne aiq miz gij yungyiemj dawzfeiz daengj!"

End-of-Life Disposal

Your new Public Information Display contains materials that can be recycled and reused. Specialized companies can recycle your product to increase the amount of reusable materials and to minimize the amount to be disposed of.

Please find out about the local regulations on how to dispose of your old display from your local dealer.

(For customers in Canada and U.S.A.)

This product may contain lead and/or mercury. Dispose of in accordance to local-state and federal regulations. For additional information on recycling contact www.eia.org (Consumer Education Initiative)

Waste Electrical and Electronie Equipment-WEEE

Attention users in European Union private households

This marking on the product or on its packaging illustrates that, under European Directive 2002/96/EC governing used electrical and electronic appliances, this product may not be disposed of with normal household waste. You are responsible for disposal of this equipment through a designated waste electrical and electronic equipment collection. To determine the locations for dropping off such waste electrical and electronic, contact your local government office, the waste disposal organization that serves your household or the store at which you purchased the product.

End of Life Directives-Recycling

Your new Public Information Display contains several materials that can be recycled for new users.

Please dispose of according to all Local, State, and Federal laws.

As an ENERGY STAR Partner, we have determined that this product meets the ENERGY STAR guidelines for energy efficiency.

Table Of Contents

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
- Documention & Software Disc
- Remote control with AAA batteries
- Power cord (1.8 m)
- VGA cable (1.8 m)
- HDMI cable (1.8 m)
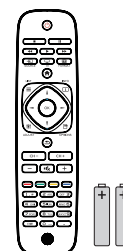
Remote Control
and AAA Batteries

* Only one power cord is provided with your display.

Disc

Power Cord   For China
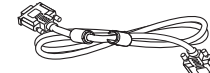
VGA Cable

For North America   For UK
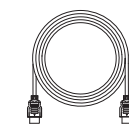
HDMI Cable

NOTE:
- Keep 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 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 2000 m in altitude. In installations at altitudes above 2000 m, some abnormalities may be experienced.
- Note:Display models provided in this guide are available in select countries/regions.Go to www.hp.com/support for additional information.

1.4.   Mounting on a Wall
To mount this display to a wall, you will have to obtain a standard wall-mounting kit. We recommend using a mounting interface that complies with UL1678 standard in North America.

B321:
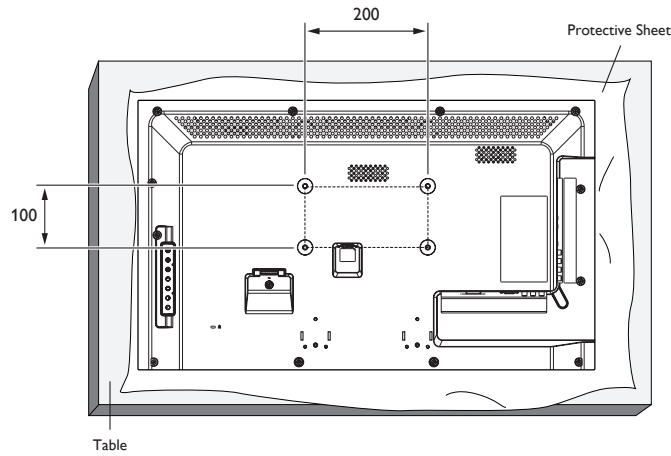
B421:
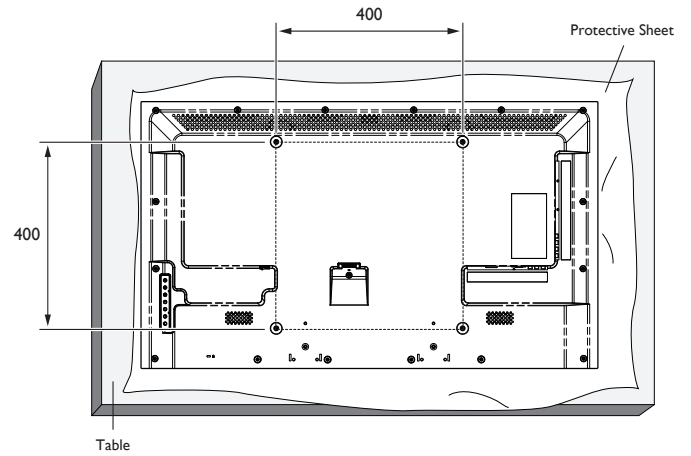
1. Lay a protective sheet on a table, which was wrapped around the display when it was packaged, beneath the screen surface so as not to scratch the screen face.

2. Ensure you have all accessories for mounting this display.

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 mounting screws and tighten them securely.

Model	VESA Size (mm)	Mounting Screws* (X=Thickness of wall-mount plate)
B321	200 × 100	M6 × (16 + X)
B421	400 × 400	M6 × (20 + X)

Caution:

To prevent the display from falling:

• 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.
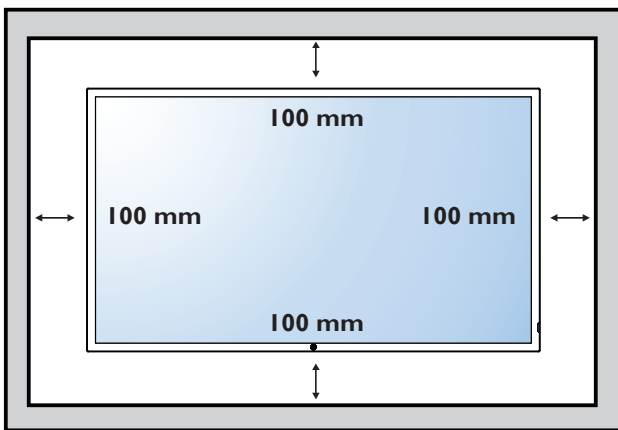
NOTES: When installing the display on a wall, please consult a professional technician for proper installation. We accept no liability for installations not performed by a professional technician.

The display can be installed on a wall and viewed in only the landscape position.

Using the display for more than 14 hours per day may result in image retention damage,which is not covered under the HP warranty.To avoid image tetention damage,always turn off the monitor when it is not in use.

This product does not support a single image video wall solution.

2.   Parts and Functions

2.1.   Control Panel
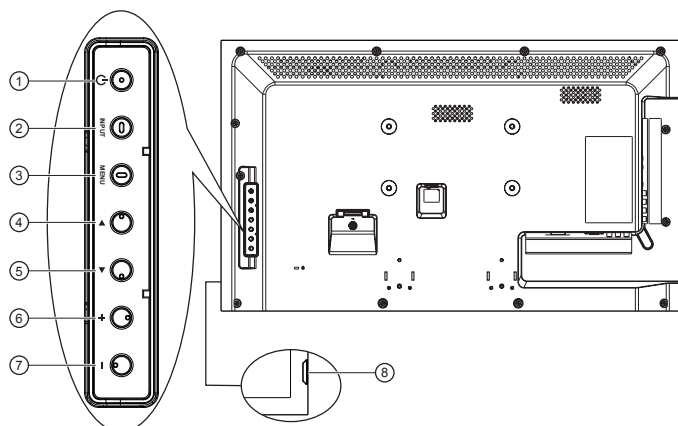
B321:   **B421:**
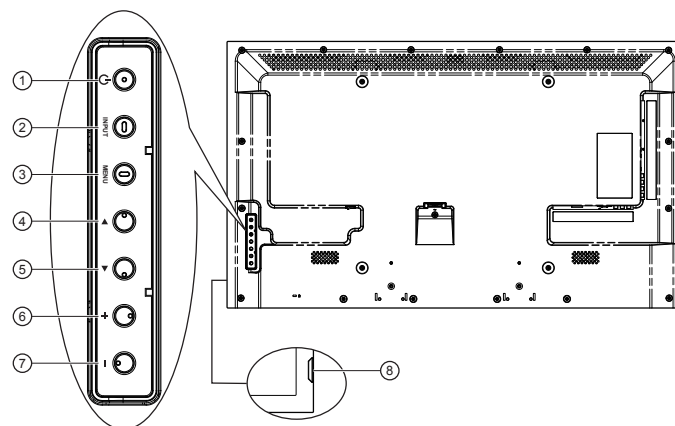
① **[POWER] button**
Press to switch the display on or off.

② **[INPUT] button**
Press to select input source.

③ **[MENU] button**
Press to access the OSD menu.

④ **[▲] button**
Press to move the highlight bar up to adjust the selected item while OSD menu is on.

⑤ **[▼] button**
Press to move the highlight bar down to adjust the selected item while OSD menu is on.

⑥ **[+] button**
Press to increase the adjustment while OSD menu is on, or to increase the audio output level while OSD menu is off.

⑦ **[—] button**
Press to decrease the adjustment while OSD menu is on, or to decrease the audio output level while OSD menu is off.

⑧ **Remote control sensor and power status indicator**

•   Receives command signals from the remote control.
   - Lights green when this display is turned on
   - Lights red when this display is in standby mode
   - Lights off when the main power of this display is turned off

2.2. Input/Output Terminals
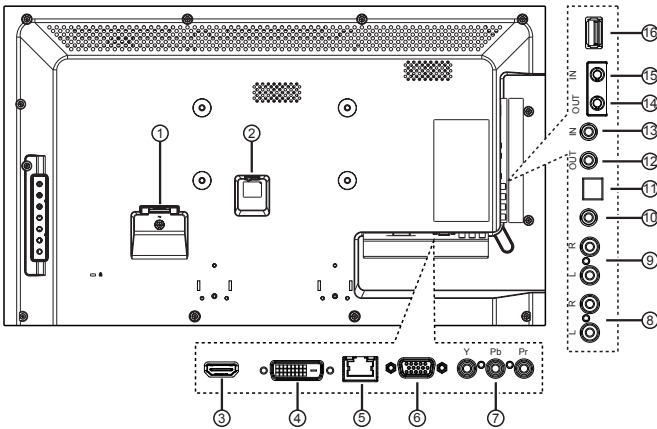
B321:   **B421:**
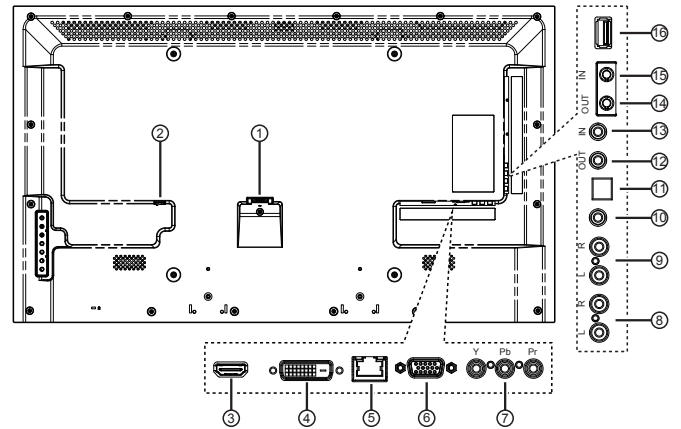
① **AC IN**
AC power input.

② **MAIN POWER SWITCH**
Main power on/off switch.

③ **HDMI IN**
HDMI video/audio input.

④ **DVI IN**
DVI-D video input.

⑤ **RJ-45**
LAN control function for the use of remote control signal from control center.

⑥ **VGA IN (D-Sub)**
VGA video input.

⑦ **COMPONENT IN (RCA)**
Component YPbPr video source input.

⑧ **AUDIO IN (RCA)**
Audio input from external AV device.

⑨ **AUDIO OUT (RCA)**
Audio signal output to connect your external AV device.

⑩ **AUDIO IN (3.5mm)**
Audio input from your PC.

⑪ **SPDIF OUT**
Digital audio signal output to connect your external AV device.

⑫ **IR OUT / ⑬ IR IN (3.5 mm)**
IR signal output/input for the loop-through function.

NOTES:
- 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 8 for **IR Pass Through** connection.

⑭ **RS232C OUT / ⑮ RS232C IN (2.5 mm)**
RS232C network output/input for the loop-through function.

⑯ **USB PORT**
Connect your USB storage device.

2.3. Remote Control

2.3.1. General functions
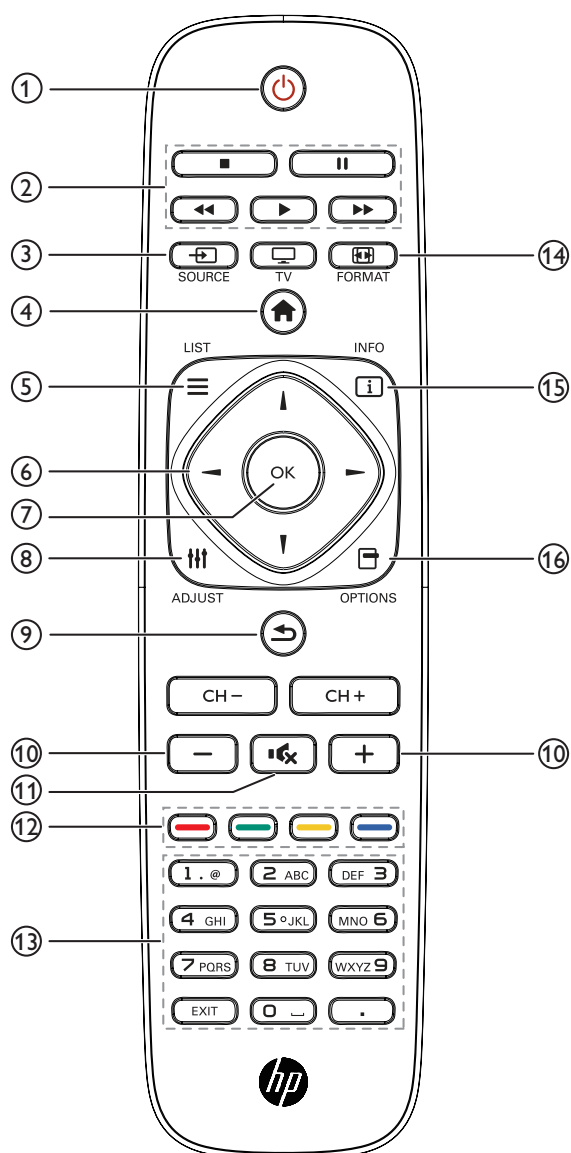
⑥ ▮▮ ◄ ► **NAVIGATION buttons**
Navigate through menus and select items.

⑦ OK **button**
Confirm an entry or selection.

⑧ ▮▮▮ **ADJUST button**
Access currently available options, picture and sound menus.

⑨ ↩ **BACK button**
Return to the previous menu page or exit from the previous function.

⑩ — ╋ **VOLUME button**
Adjust volume.

⑪ 🔇 **MUTE button**
Press to turn the mute function on/off.

⑫ ━━ ━━ ━━ ━━ **COLOR buttons**
Select tasks or options.

⑬ **NUMERIC buttons**
Enter text for network setting.

⑭ 🔲 **FORMAT button**
Change picture format.

⑮ ℹ️ **INFO button**
Display information about current activity.

⑯ 🗐 **OPTIONS**
Access currently available options, picture and sound menus.

① ⏻ **POWER button**
Switch this display on or off.

② **PLAY buttons**
Control playback of media files.

③ ➔ **SOURCE button**
Select input source. Press [◄] or [►] button to select from **USB, Network, HDMI, DVI, YPbPr, AV,** or **VGA**. Press [OK] button to confirm and exit.

④ ⌂ **HOME button**
Access the OSD menu.

⑤ ☰ **LIST**
No function.

2.3.2. Inserting 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.
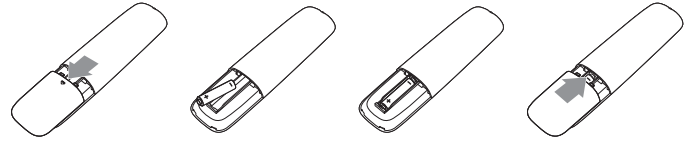
Caution:

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 front of the remote control toward this display's remote control sensor when pressing a button.

Use the remote control within a distance of less than 10m/33ft from this display's sensor, and a horizontal and vertical angle of less than 30 degrees.

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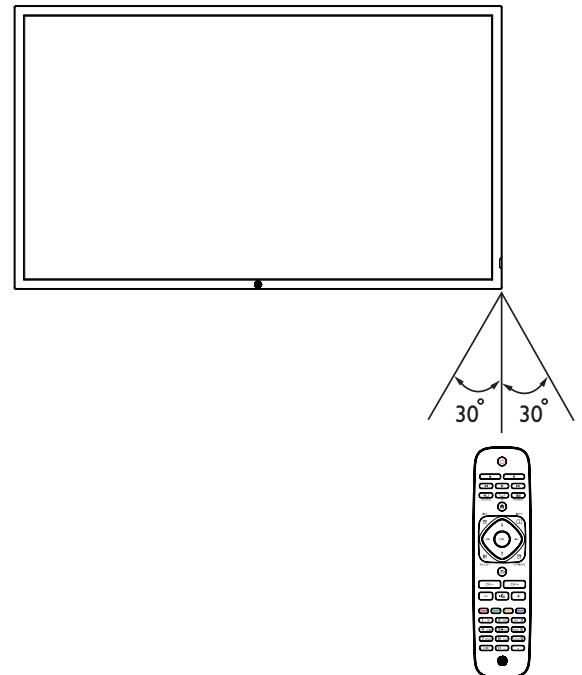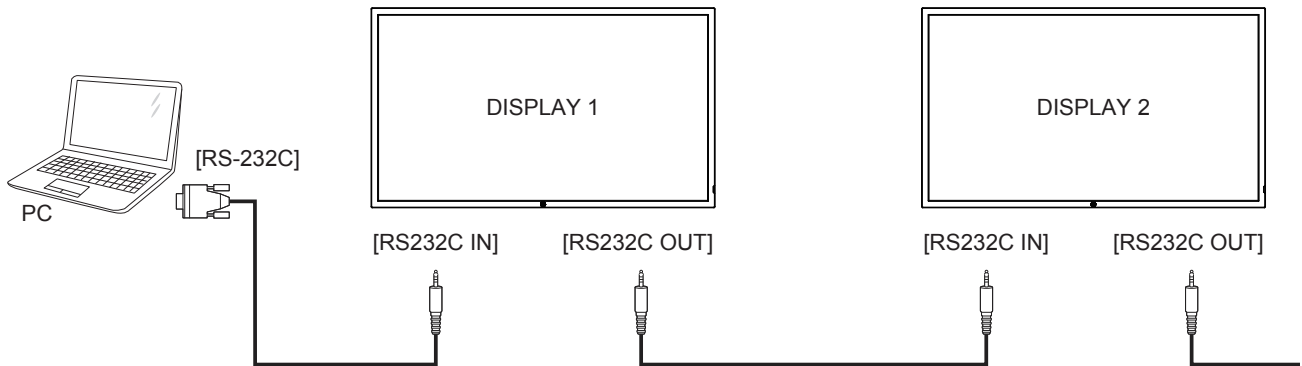
3. Connection

NOTE: The peripherals and cables shown are for example purposes only.
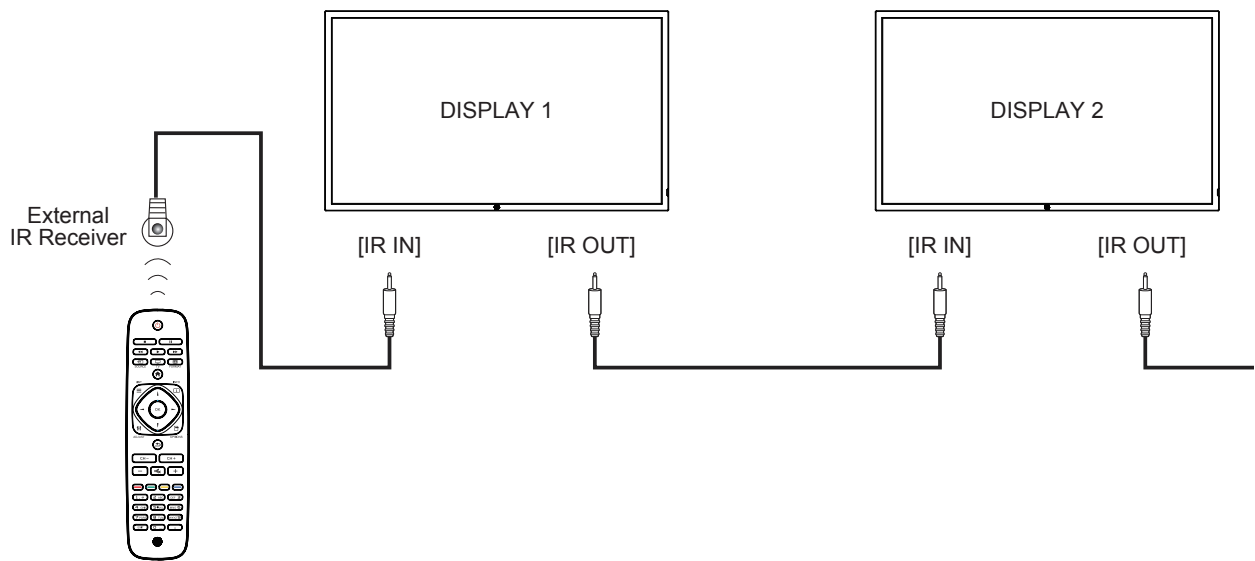
3.1. Connecting External Equipments
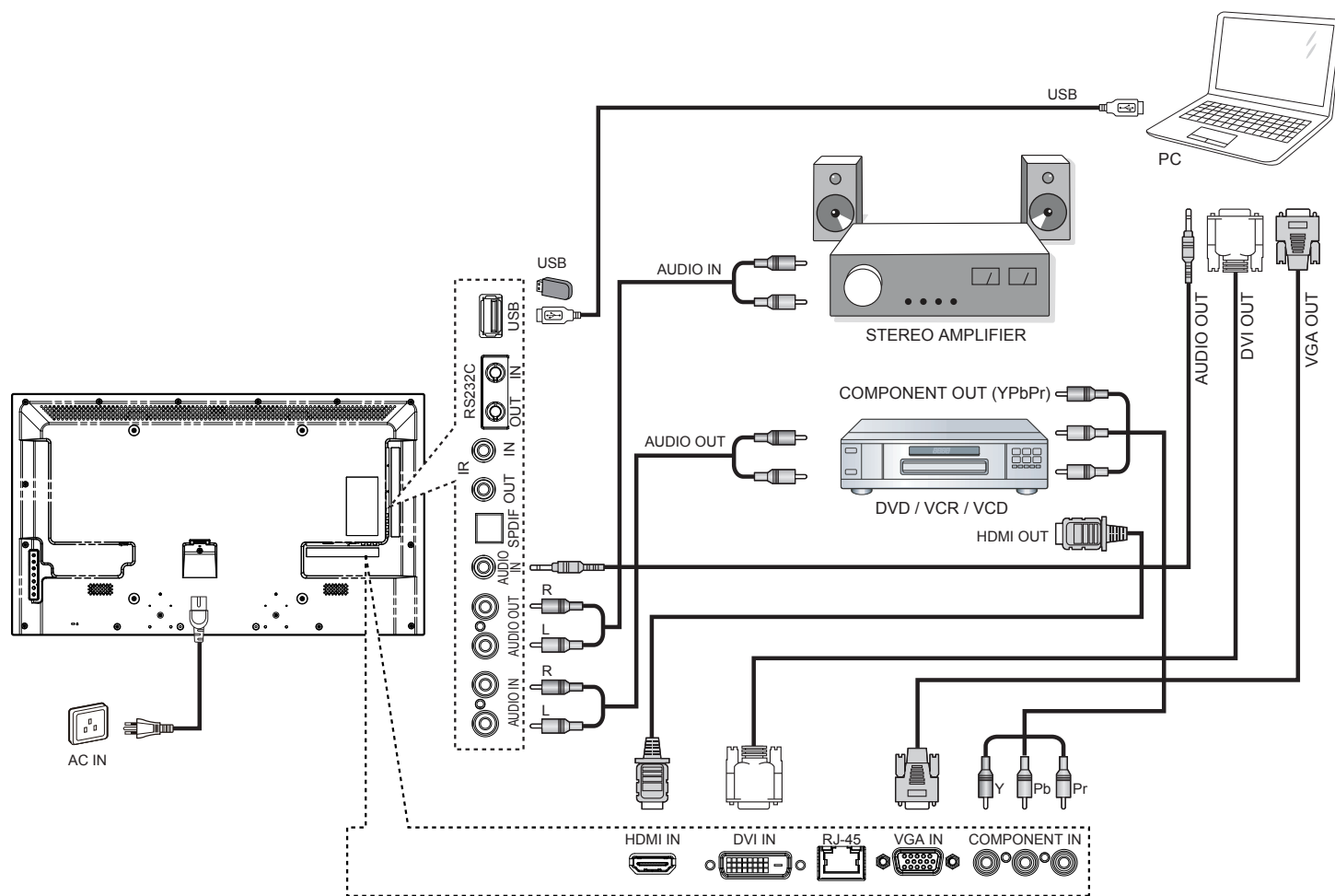
3.2. Connecting Multiple Displays

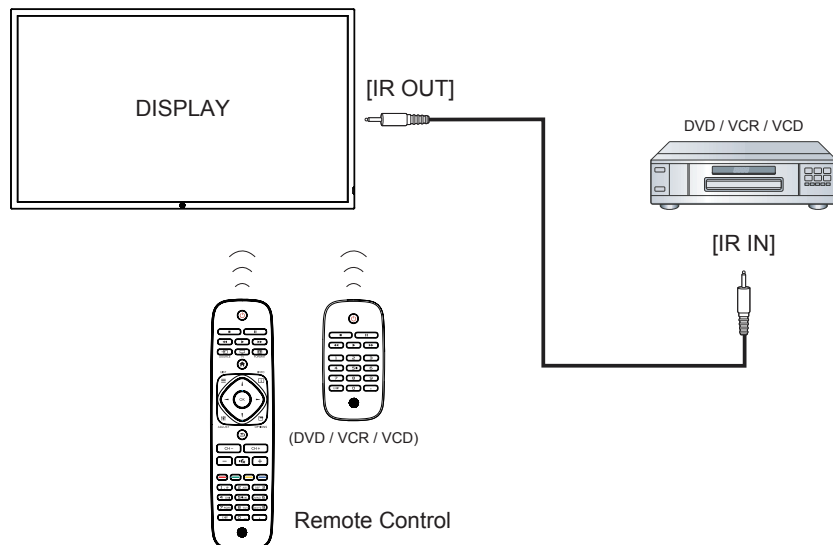### 3.2.1. RS232C control connection (optional)
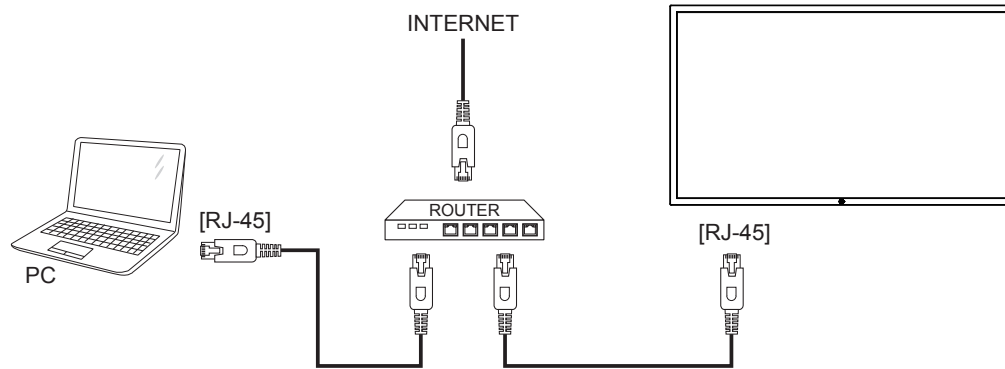

3.2.2. IR connection (optional)

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

3.3. IR Pass-through Connection (optional)

3.4. Wire-connecting to Network (optional)

If you connect this display to a network, you can play photos, music and videos from your computer. See *Play multimedia files* (Page 10) 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 ↑ HOME button to display the OSD menu.
4. Press ⬆ or ⬇ button to select the menu item {**Network settings**}. 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 7 for external equipments connection.

1. Press ⊕ **SOURCE** button.
2. Press ◄ or ► button to select 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 select a picture format, then press **OK** button.

   • {**Auto zoom**}: Enlarge the picture to fill the screen. Recommended for minimal screen distortion but not for **HD** or **PC**.

   • {**Movie expand 16:9**}: Scale 4:3 format to 16:9. Not recommended for **HD** or **PC**.

   • {**Wide screen**}: Shows widescreen format content unstretched. Not recommended for **HD** or **PC**.

   • {**Unscaled**}: Provide maximum detail for **PC**. Only available when **PC** mode is selected in the {**Picture**} menu.

   • {**4:3**}: Display the classic 4:3 format.

4.3. Play Multimedia Files

You can play videos, photos, and music on your display from:

• Your computer connected through your network.

• A USB device connected to this display.

4.3.1. Play files from computer

To play files from computer, you will need:

• A wired network, connected with a Universal Plug and Play (uPnP) router.

• Optional: A LAN cable that connects your display to your network.

• A media server running on your computer.

• Appropriate settings on your computer firewall to allow you to run the media server.

Set up the network

1. Connect your display and the computer to the same network. See page 9 for connecting your display to a network.

2. Switch on your computer and the router.

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

Set up media sharing

1. Install a media server on your computer to share media files. These are some media servers:

   • 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.

Play files

1. Press ⊕ **SOURCE** button.

2. Select [**Browse network**], then press **OK** button.

3. Select a file from the content browser, then press **OK** button to start playing.

4. Press the **Play buttons** on the remote control to control playing.

Tips:

• Select the top bar to filter your files by type.

• Select [**Sort**] to arrange the files by album name, artist, or other fields.

• To clear the list of offline media servers, press ⊟ **OPTIONS** button, then select [**Clear offline servers**] and press **OK** button.

4.3.2. Play multimedia files from USB device

This display can play music, movie, WMV file formats or photo files from your USB device.

1. Connect your USB device to the USB port on this display.
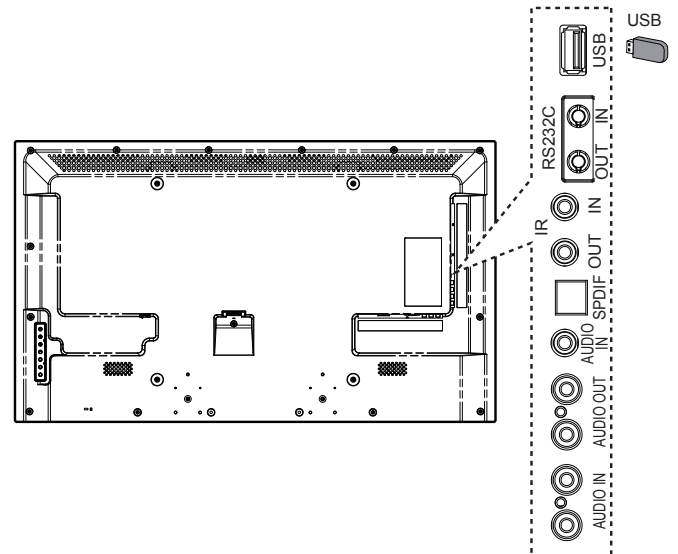
2. Press ⊕ **SOURCE** button, select **USB**, then press **OK** button.

3. The connected USB device is detected automatically for all its playable files, which will be automatically sorted into 3 types: **Music** 🎵, **Movie** 🎬, and **Photo** 📷.
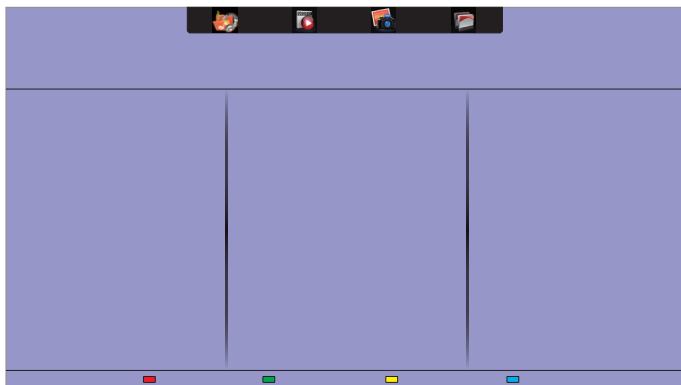
4. Press the ↩ BACK button to go up to the top layer in the screen. Press ◄ ► button to select the file type. Press **OK** button to enter its play list.
5. Select the file you want. Press **OK** button to start playing.
6. Follow the on-screen instruction to control the play option.
7. Press the PLAY buttons (■ ▐▐ ◄◄ ► ►►) to control playing.

Supported file system:

- FAT32

Supported file format:

- **Music**: MP3, WMA, M4A, AAC, AC3
- **Movie**: AVI, MP4, MOV, MPG/MPEG
- **Photo**: JPEG, BMP, GIF

Caution:

- The manufacturer is not responsible if the USB device is not supported, nor is it responsible for damage to or loss of data in the device.
- Do not overload the USB port. If you connect a USB storage device that consumes more than 500mA power, make sure that it is connected to its own external power supply.

4.4. Play options

4.4.1. Playing music files

1. Select **Music** 🎵 in the top bar.
2. Select one music track, then press **OK** button.
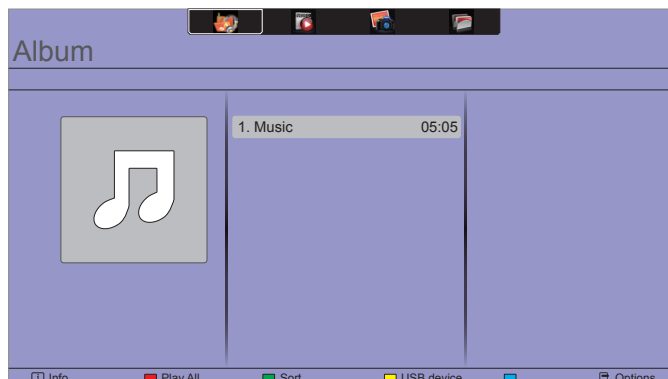
- To play all the tracks in a folder, select one music file, then select {**Play All**}.
- To skip to the next or previous track, press **CH+** or **VOL–** button.
- To pause the track, press **OK** button. Press **OK** button again to resume playback.
- To skip backward or forward 10 seconds, press ◄ 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 select an option:

- {**Repeat**}: Select {**Repeat**} to play a track or an album repeatedly, or select {Play once} to play a track once.
- {**Media Server**}: When you play content from a media server, you can select another media server.
- {**Shuffle On**} / {**Shuffle Off**}: Enable or disable random play of tracks.

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

4.4.2. Playing movie files

1. Select **Movie** 🎬 in the top bar.
2. Select a video, then press **OK** button.

- • To play all the videos in a folder, select one video file, then select {**Play All**}.
- • To skip to the next or previous video, press **CH+** or **VOL−** button.
- • To pause the video, 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.
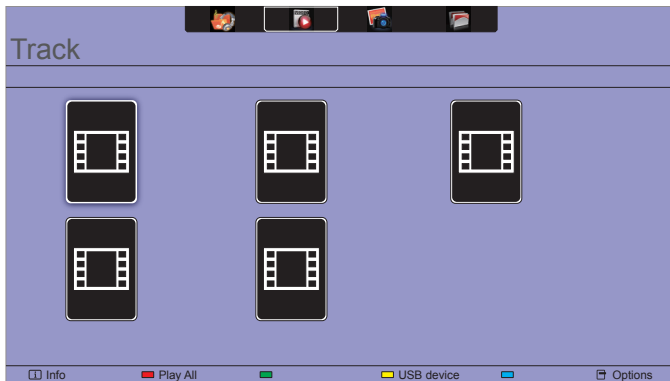- • To stop the video, press ■ button.

Movie options

While playing video, press ▭ **OPTIONS** button, then press **OK** button to select an option:

- • {**Subtitles**}: Select the available subtitle settings.
- • {**Subtitle Language**}: Select the language for subtitles if available.
- • {**Character Set**}: Select the correct character set for the subtitles.
- • {**Audio Language**}: Select an audio language.
- • {**Repeat**}: Select {**Repeat**} to play the video file repeatedly or {**Play once**} to play the video file once.
- • {**Media server**}: When you play content from a media server, you can select another media server.
- • {**Shuffle On**} / {**Shuffle Off**}: Enable or disable random play of video files.

NOTE: To view information about a video (for example, played position, duration, title, or date), select the video, then press ⓘ **INFO** button. To hide the information, press ⓘ **INFO** button again.

4.4.3. Playing photo files

1. Select **Photo** 🖼 in the top bar.
2. Select a photo thumbnail, then press **OK** button.

Start a slideshow

If there are multiple photos in a folder, select a photo, then select {**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 select an option:

- • {**Shuffle Off**} / {**Shuffle On**}: Enable or disable random display of pictures in the slideshow.
- • {**Repeat**}: Select {**Repeat**} to watch a slideshow repeatedly or {**Play once**} to watch once.
- • {**Slideshow Time**}: Select the displaying time for each photo in the slideshow.
- • {**Slideshow Transitions**}: Select the transition from one photo to the next.
- • {**Media Server**}: When you play content from a media server, you can select another media server.

5.   Change your settings

Using the remote control:
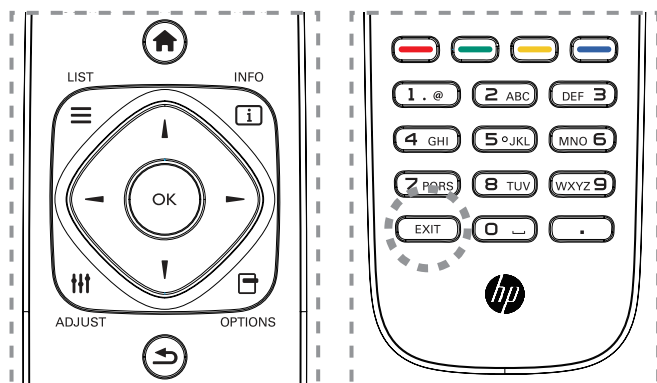
1. Press 🏠 **HOME** button to display the OSD menu.

2. Press ⬆, ⬇, ⬅, or ➡ button to select its menu item or to adjust its value. Press **OK** button to confirm.

3. Press ⬅ **BACK** button to go back to the previous menu layer.

4. Press **EXIT** button to exit the OSD menu.

Using this display's control buttons:
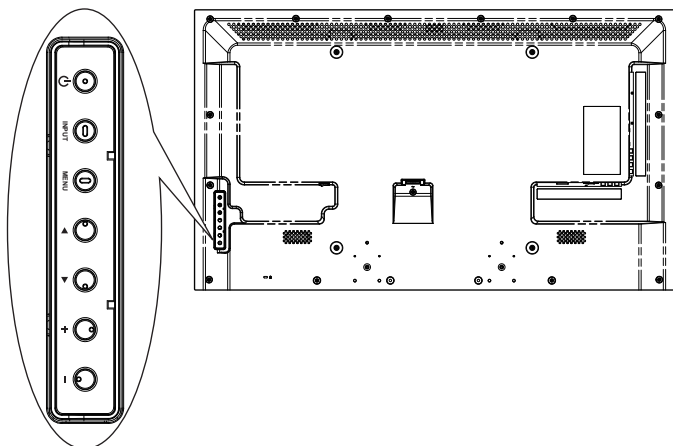
1. Press **MENU** button to display the OSD menu.

2. Press[▲] [▼] [➕] or [➖] button to select 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 menu

Picture style

Select a predefined picture setting.

Restore style

Restore the last-selected predefined picture setting.

Backlight

Adjust the brightness of this display's backlight.

Contrast

Adjust video contrast.

Brightness

Adjust screen brightness.

Colour

Adjust the colour saturation of the picture.

Sharpness

Adjust the sharpness of the picture.

Advanced

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

- {**Noise reduction**}: Select the amount of noise reduction for the picture.
- {**Gamma**}: Adjust the non-linear setting for picture luminance and contrast.
- {**Color temp.**}: Change the colour balance.
- {**Custom color temp.**}: Customise colour balance setting.
- {**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.
- {**Dynamic backlight**}: Select a backlight level to optimise dynamic power consumption and picture contrast.
- {**Colour enhancement**}: Dynamically enhance the
- vividness and details of colours.

Game or computer

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

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

Format and edges

Access advanced settings to control the displaying format of the picture.

- {**Picture format**}: Change the picture format.
- {**Screen edges**}: Change the picture size.
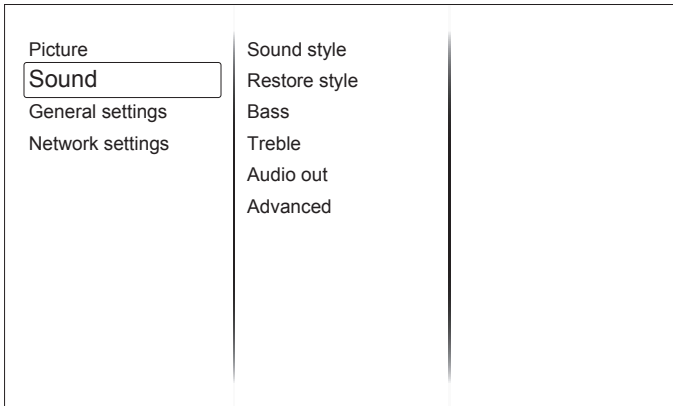- {**Picture shift**}: If available, move the position of the picture.

5.1.2. Sound menu

Picture	Sound style
Sound	Restore style
General settings	Bass
Network settings	Treble
	Audio out
	Advanced

Sound style

Access predefined sound settings.

Restore style

Restore the last-selected predefined sound setting.

Bass

Adjust the bass level of the speaker and headphones.

Treble

Adjust the treble level of the speaker and headphones.
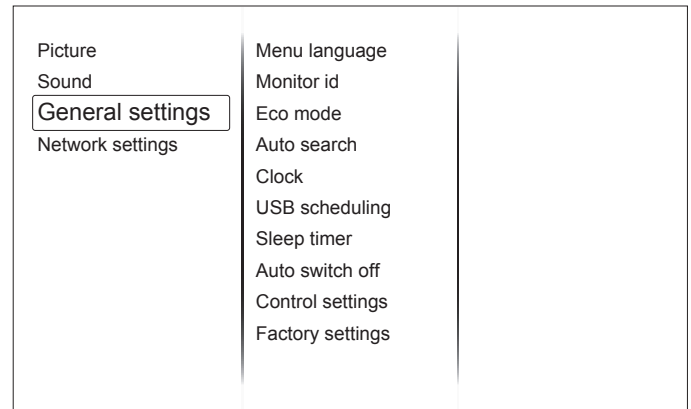
Audio out

Adjust audio output volume.

Advanced

Access advanced settings to enhance your audio experience.

- {**Auto volume leveling**}: Enable the reduction of sudden volume changes.
- {**Speaker**}: Turn on or off the internal speakers.
- {**Clear sound**}: Enhance sound quality.
- {**Audio out format**}: Select the type of audio output through the digital audio output connector.
- {**Audio out delay**}: Automatically sync the image on this display to the audio from a connected home theatre.
- {**Audio out offset**}: Adjust the setting for audio output delay. Available if {**Audio out delay**} is switched on.

5.1.3. General settings menu

Picture	Menu language
Sound	Monitor id
General settings	Eco mode
Network settings	Auto search
	Clock
	USB scheduling
	Sleep timer
	Auto switch off
	Control settings
	Factory settings

Menu language

Select language used for OSD menus.

Monitor id

Set the ID number for controlling this display via the RS232C connection. Each display must have a unique ID number when multiple sets of this display are connected.

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

Adjust clock settings.

USB scheduling

This function allows you to program up to 3 different scheduled time intervals for this display to activate, and auto play USB media file of your setting.

*After changing the {**Clock**} option in the {**General settings**} menu, you need to set this {**USB scheduling**} again.*

Sleep timer

Switch off this display after a specified time.

Auto switch off

Set the time for this display to be switched off after a period of no activity. Press any key on the remote control to disable this function.

Control settings

- {**Local KB lock**}: Choose to enable or disable the keyboard (control buttons) function of this display.
  - {**Unlock**}: Enable the keyboard function.
  - {**Lock all**}: Lock all keyboard function.
  - {**Lock but volume**}: Disable all the keyboard function except the **VOL+** and **VOL–** button.
  - {**Lock but power**}: Disable all the keyboard function except the ⏻ **POWER** button.
- {**RC lock**}: Choose to enable or disable the button function of the remote control.
  - {**Unlock**}: Enable the button function.
  - {**Lock all**}: Lock all button function.

- {**Lock but volume**}: Disable all the button function except the ━━╋ **VOLUME** button.

- {**Lock but power**}: Disable all the button function except the ⏻ **POWER** button.

NOTE: To disable the lock function from [**Local KB lock**] or [**RC lock**] item, press buttons 🏠 **1 9 9 8** on the remote control.

Factory settings

Reset all your customized settings to the factory defaults.

5.2.   Network Settings

Picture	View network settings	
Sound	Network configuration	
General settings	Static IP configuration	
Network settings	Digital Media Render...	
	Network name	

View network settings

View connected network status.

Network settings

Select how this display should assign addresses to the network resources.

Static IP Configuration

Assign {**IP address**}, {**Netmask**}, {**Gateway**}, {**DNS1**}, and {**DNS2**} for this display.

Digital Media Renderer - DMR

Receive multimedia files from Smart Phones or Tablets connected to your network.

Network name

Rename this display for easy identification if you have more than one display connected to your network.

6.　Input mode

PC 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
		480	72 Hz	31.5 MHz		
		480	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	1024	60 Hz	108 MHz	5:4	Super XGA
WXGA	1360	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	480	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			

- The PC text quality is optimum in HD 1080 mode (1920 × 1080, 60 Hz).
- 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 60 Hz (vertical) and 31.5 KHz (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 [**INPUT**] 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.
- This display settings table complies to the IBM/VESA standards, and based on the analog input.
- The DVI support mode is regarded as same to the PC support mode.
- The best timing for the vertical frequency to each mode is 60 Hz.

7. Cleaning and Troubleshooting

7.1. 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.

7.2. 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	The 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 🔇 [**MUTE**] 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.

8.   Technical Specifications

8.1.   B321

Display:

Item	Specifications
Screen Size (Active Area)	31.5" LCD (80 cm)
Aspect Ratio	16:9
Number of Pixels	1920 (H) × 1080 (V)
Pixel Pitch	0.36375 (H) × 0.36375 (V) [mm]
Displayable Colors	16.7 Million colors
Brightness	350 cd/m²
Contrast Ratio (Typical)	3000:1
Viewing Angle	178 degrees

In/Out Terminals:

Item		Specifications
Speaker Output	Internal Speakers	5W (L) + 5W (R) [RMS]/16Ω, 1 Way 1 Speaker System
		82 dB/W/M/160 Hz ~ 13 KHz
Audio Output	RCA Jack × 2	0.5V [rms] (Normal) / 2 Channel (L+R)
Audio Input	3.5 mm Stereo × 1	0.5V [rms] (Normal) / 2 Channel (L+R)
	RCA Jack × 2	
RS232C Input/Output	2.5 mm × 2	TXD + RXD (1:1)
LAN	RJ-45 Jack × 1 (8 pin)	10/100 LAN Port
HDMI Input	HDMI Jack × 1 (Type A) (19 pin)	Digital RGB: TMDS (Video + Audio)
		MAX: Video: 720p, 1080p, 1920 × 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 × 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 × 1080/60 Hz (WUXGA)
Component Input	RCA Jack × 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
SPDIF Output	SPDIF Port	Serial digital audio output when input is HDMI
IR Input/Output	3.5 mm × 2	IR pass through or IR daisy chain
USB Input	USB × 1 (Type B)	USB 2.0, External PC connection

General:

Item	Specifications
Power Input	100-240V〜 50-60Hz, 1.5A
Power Consumption (Max.)	68 W
Power Consumption (Typical)	55 W
Power Consumption (EPA6.0)	40 W
Power Consumption (Standby & Off)	< 0.5W (OSD: APM mode off)
Dimensions [W × H × D]	745 × 439.5 × 39.8 mm
Weight	6.6 Kg
Gross Weight	9.0 Kg

Environmental Condition:

Item		Specifications
Temperature	Operational	5 ~ 40°C
	Storage	-20 ~ 60°C
Humidity	Operational	20 ~ 80% RH (No condensation)
	Storage	10 ~ 90% RH (No condensation)
Altitude	Operational	0 ~ 2,000 m
	Storage	0 ~ 5,000 m

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Display:

Item	Specifications
Screen Size (Active Area)	42" LCD (106.7 cm)
Aspect Ratio	16:9
Number of Pixels	1920 (H) × 1080 (V)
Pixel Pitch	0.4845 (H) × 0.4845 (V) [mm]
Displayable Colors	16.7 Million colors
Brightness	350 cd/m²
Contrast Ratio (Typical)	3000:1
Viewing Angle	178 degrees

In/Out Terminals:

Item		Specifications
Speaker Output	Internal Speakers	7W (L) + 7W (R) [RMS]/16Ω, 1 Way 1 Speaker System
		82 dB/W/M/160 Hz ~ 13 KHz
Audio Output	RCA Jack × 2	0.5V [rms] (Normal) / 2 Channel (L+R)
Audio Input	3.5 mm Stereo × 1	0.5V [rms] (Normal) / 2 Channel (L+R)
	RCA Jack × 2	
RS232C Input/Output	2.5 mm × 2	TXD + RXD (1:1)
LAN	RJ-45 Jack × 1 (8 pin)	10/100 LAN Port
HDMI Input	HDMI Jack × 1 (Type A) (19 pin)	Digital RGB: TMDS (Video + Audio)
		MAX: Video: 720p, 1080p, 1920 × 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 × 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 × 1080/60 Hz (WUXGA)
Component Input	RCA Jack × 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
SPDIF Output	SPDIF Port	Serial digital audio output when input is HDMI
IR Input/Output	3.5 mm × 2	IR pass through or IR daisy chain
USB Input	USB × 1 (Type B)	USB 2.0, External PC connection

General:

Item	Specifications
Power Input	100-240V〜 50-60Hz, 2.5A
Power Consumption (Max.)	104 W
Power Consumption (Typical)	88 W
Power Consumption (EPA6.0)	61 W
Power Consumption (Standby & Off)	< 0.5W (OSD: APM mode off)
Dimensions [W × H × D]	980.4 × 572.9 × 38.5 mm
Weight	11.9 Kg
Gross Weight	15.3 Kg

Environmental Condition:

Item		Specifications
Temperature	Operational	5 ~ 40°C
	Storage	-20 ~ 60°C
Humidity	Operational	20 ~ 80% RH (No condensation)
	Storage	10 ~ 90% RH (No condensation)
Altitude	Operational	0 ~ 2,000 m
	Storage	0 ~ 5,000 m

Specifications are subject to change without notice.