ViewSonic®

# EP4320
# Multimedia Digital Poster
## 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.: VS16849

# Thank you for choosing ViewSonic

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)

## CE Conformity for European Countries

The device complies with the EMC Directive 2014/30/EU and Low Voltage Directive 2014/35/EU.

**Following information is only for EU-member states:**

The mark shown to the right is in compliance with the Waste Electrical and Electronic Equipment Directive 2012/19/EU (WEEE).

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.

## Industry Canada Notice

This device complies with Canadian RSS-210.To prevent radio interference to the licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmitting antenna) that is installed outdoors is subject to licensing. The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, obtainable from Health Canada's website www.hc-sc.gc.ca/rpb.

## R&TTE Compliance Statement

This device complies with the Essential Requirements of the R&TTE Directive of the European Union (1999/5/EC). This equipment meets the following conformance standards:

ETSI EN 300 328

EN 301 489-01

EN 301 489-17

EN 62311

**Notified Countries:** Germany, UK, Netherlands, Belgium, Sweden, Denmark, Finland, France, Italy, Spain, Austria, Ireland, Portugal, Greece, Luxembourg, Estonia, Latvia, Lithuania, Czech Republic, Slovakia, Slovenia, Hungary, Poland and Malta.

# 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% |
| Bis (2-ethylhexyl) phthalate (DEHP) | 0.1% | < 0.1% |
| Butyl benzyl phthalate (BBP) | 0.1% | < 0.1% |
| Dibutyl phthalate (DBP) | 0.1% | < 0.1% |
| Diisobutyl phthalate (DIBP ) | 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.

**WARNING:**

Usage of other than specified head- or earphones can result in hearing loss due to excessive sound pressures.

**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:** | EP4320<br>ViewSonic Multimedia Digital Poster |
| **Model Number:** | VS16849 |
| **Document Number:** | EP4320_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/

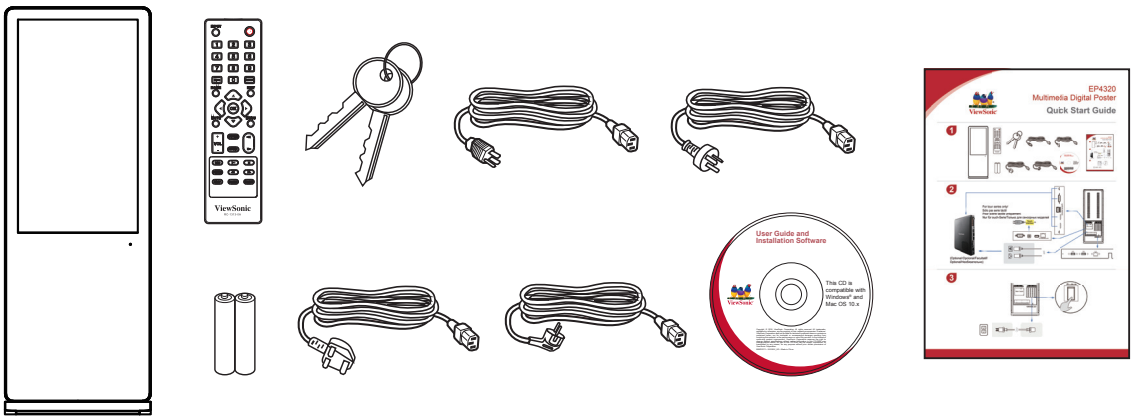
Europe: http://www.viewsoniceurope.com/uk/support/recycling-information/

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

# 1. Getting Started

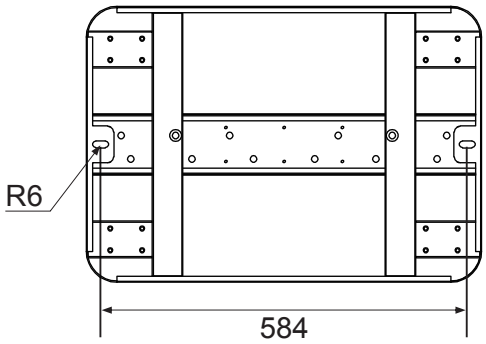
## 1.1. Package Contents

The following items are included in your product box.




**NOTE:** The illustrations may differ slightly from the items shipped with your product.

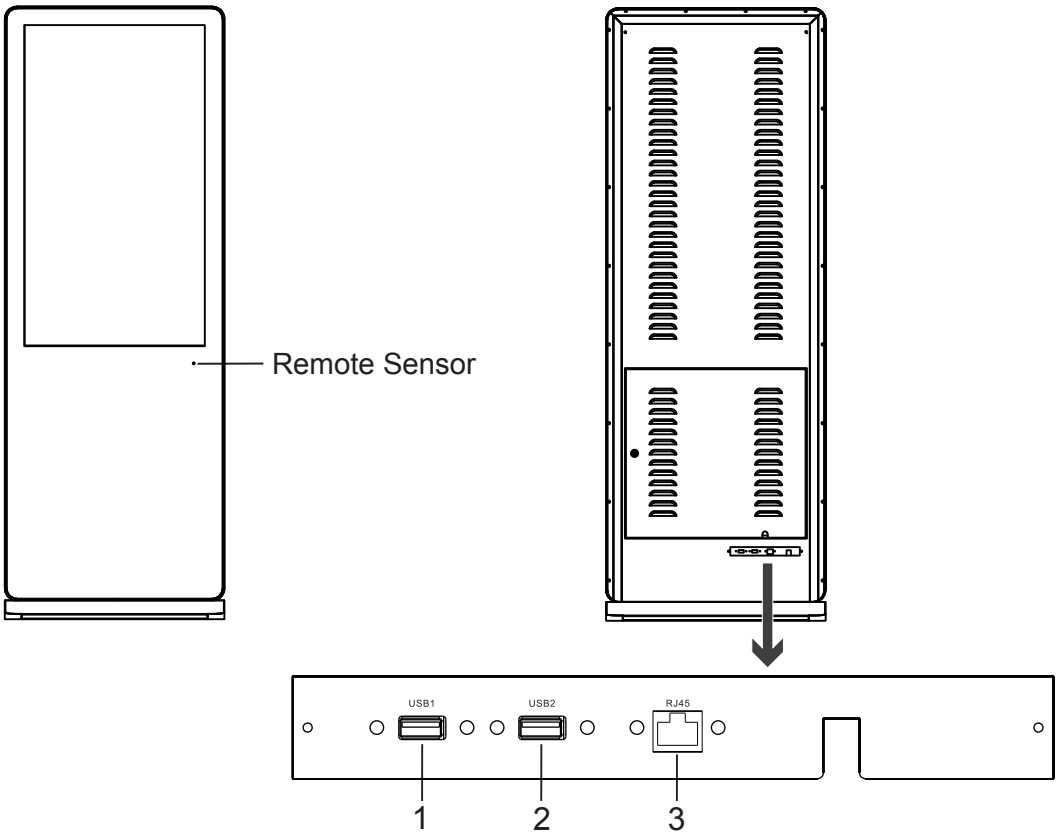
## 1.2. Fastening the poster



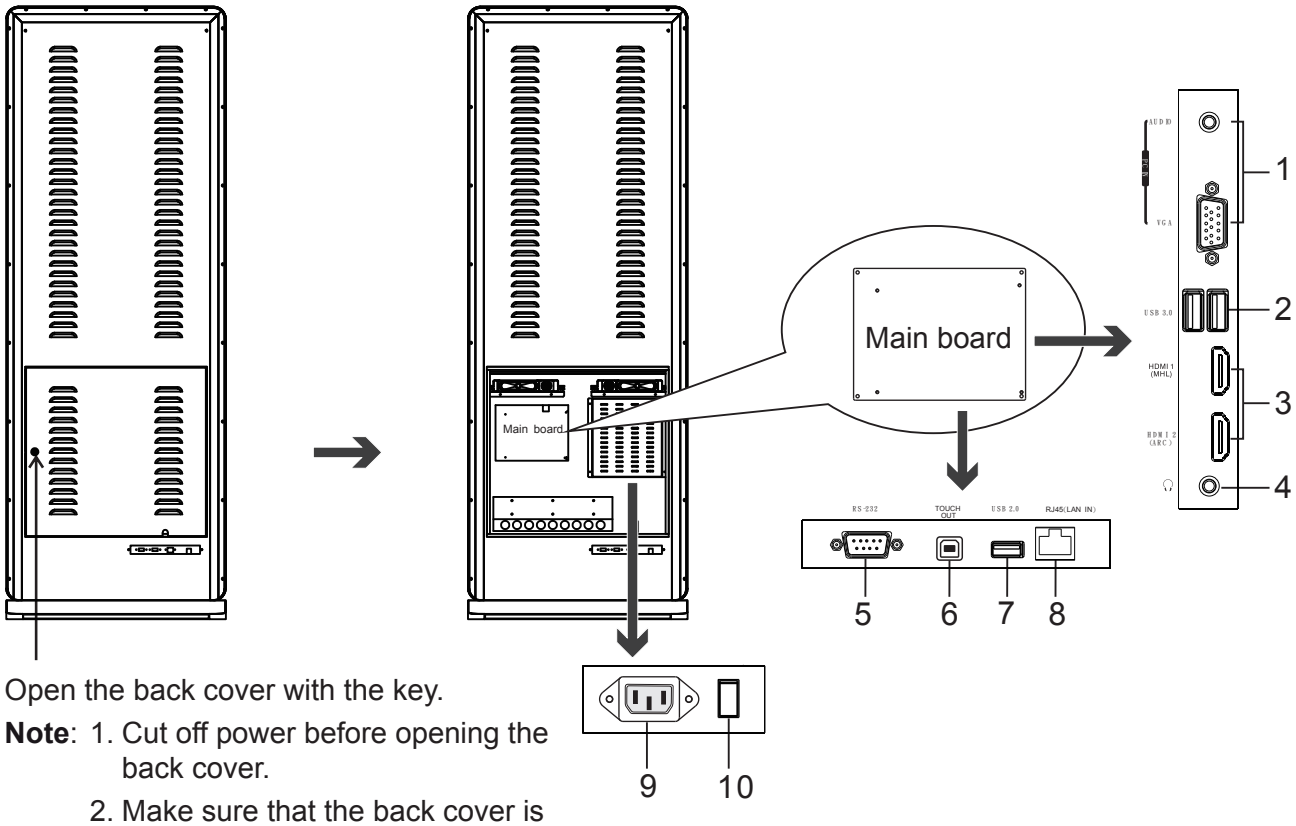

As illustrated in figure, positioning 4 holes on the earth and drill the holes at the corresponding position. The diameter of the hole on the earth should be smaller than the diameter of the screw. Fit the four fastening screws, fastening the poster to earth.

**NOTES:**

1. The appearance of this product in these illustrations may differ from your actual product, and is for comparative purposes only.
2. We may change the design and specifications without notice.




1. USB 1
   USB for PC.
2. USB 2
   USB for the poster. ( Embedded Player )
3. RJ45
   Enable connection to cable and log on to Internet.




Open the back cover with the key.

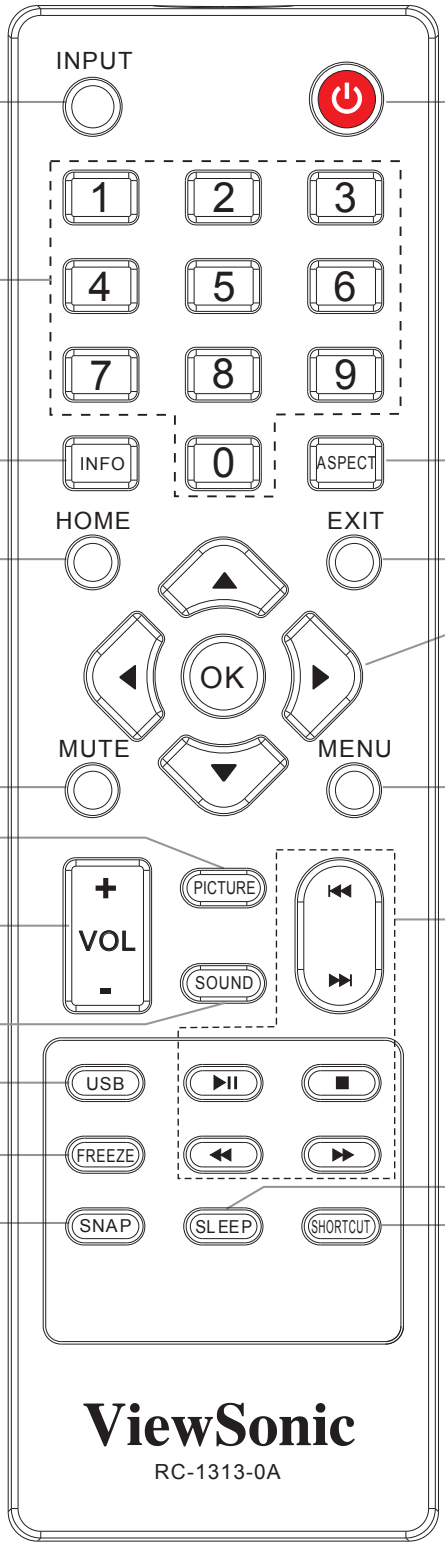
**Note**: 1. Cut off power before opening the back cover.

2. Make sure that the back cover is locked before turning on power.

1. PC IN
   Enable connection to PC or other external devices with VGA/AUDIO ports.
2. USB 3.0
   Connect USB devices to these ports.
3. HDMI1/2 Input
   To connect with those equipments with HDMI or DVI interface.
   HDMI1(MHL): Connect an MHL - enabled device such as a cell phone to this jack to view the external device's screen on your Poster.
   HDMI2(ARC): Connect an ARC-enabled home theater receiver to this jack.
4. 🎧
   Connect headphones to this jack. The Poster is the current audio output.
5. RS-232
   For service, RS232 control and the other uses.
6. TOUCH OUT ( for touch series only)
   Output the touch for external devices connected to PC or HDMI port which support touch system.
7. USB 2.0
   Connect USB devices to this port.
8. RJ45 (LAN IN)
   Enable connection to cable and log on to Internet.
9. AC IN
   Plug the AC cord into this jack and into a power outlet. (~100-240V 50Hz/60Hz)
10. Power SwitchPush to (1) to connect the power, push to (O ) to cut off.
11. AC OUT
    ~100-240V 50Hz/60Hz, Current Max.: 0.65A.

# 2. Parts and Functions

## 2.1. Remote Control




Input source select

Power On/Off

0-9 number buttons

Input source information

Select the screen size

Display desktop (Home page)

Return to previous menu or exit the on-screen menu

Use OK button to confirm selection or enter sub-menu

Use arrow buttons to move the cursor

Mute the sound

Open the menu mainly for picture, audio and schedule setting

Select picture mode

VOLUME UP/DOWN

Control buttons for USB multimedia playback

⏮ / ⏭ : Previous/next

⏯ : Play/Pause button

■ : STOP button

⏩ / ⏪ : Fast forward/fast reverse

Select sound mode

Go to USB mode

Freeze the screen

Set up the sleep timer

Take a screenshot and store to USB drive or internal storage if no USB drive connected.

To list all recently used Apps.

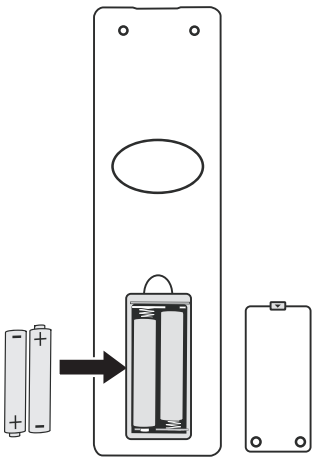
**Notes:**

- For touch model, some functions could be performed through touch directly instead of remote control.

### 2.1.1. Installing remote control Batteries

**To install remote control batteries:**

1. Open the battery cover.
2. Insert two AAA batteries into the battery compartment. Make sure that the + and – symbols on the batteries match the + and – symbols in the battery compartment.
3. Replace the cover.



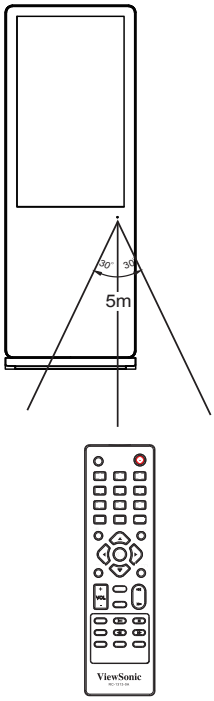
**Battery precautions:**

Improper use of batteries can result in a leakage of chemicals and/or explosion. Be sure to follow the instructions below.

- Place batteries with their terminals corresponding to the (+) and (–)indications.
- Different types of batteries have different characteristics. Do not mix batteries of different types.
- Do not mix old and new batteries. Mixing old and new batteries can shorten the life of new batteries and/or cause old batteries to leak chemicals.
- Remove batteries as soon as they are non-operable. Chemicals that leak from batteries can cause a rash. If chemical leakage is found, wipe with a cloth.
- Dispose of batteries in a proper manner.
- If the remote control is not used for an extended period of time, remove the batteries.
- The batteries shall not be exposed to excessive heat such as sunshine, fire or the like.

### 2.1.2. Aiming the remote control

Use the remote control by pointing it towards the remote sensor on the front of your display. Objects between the remote control and the remote sensor may prevent proper operation.

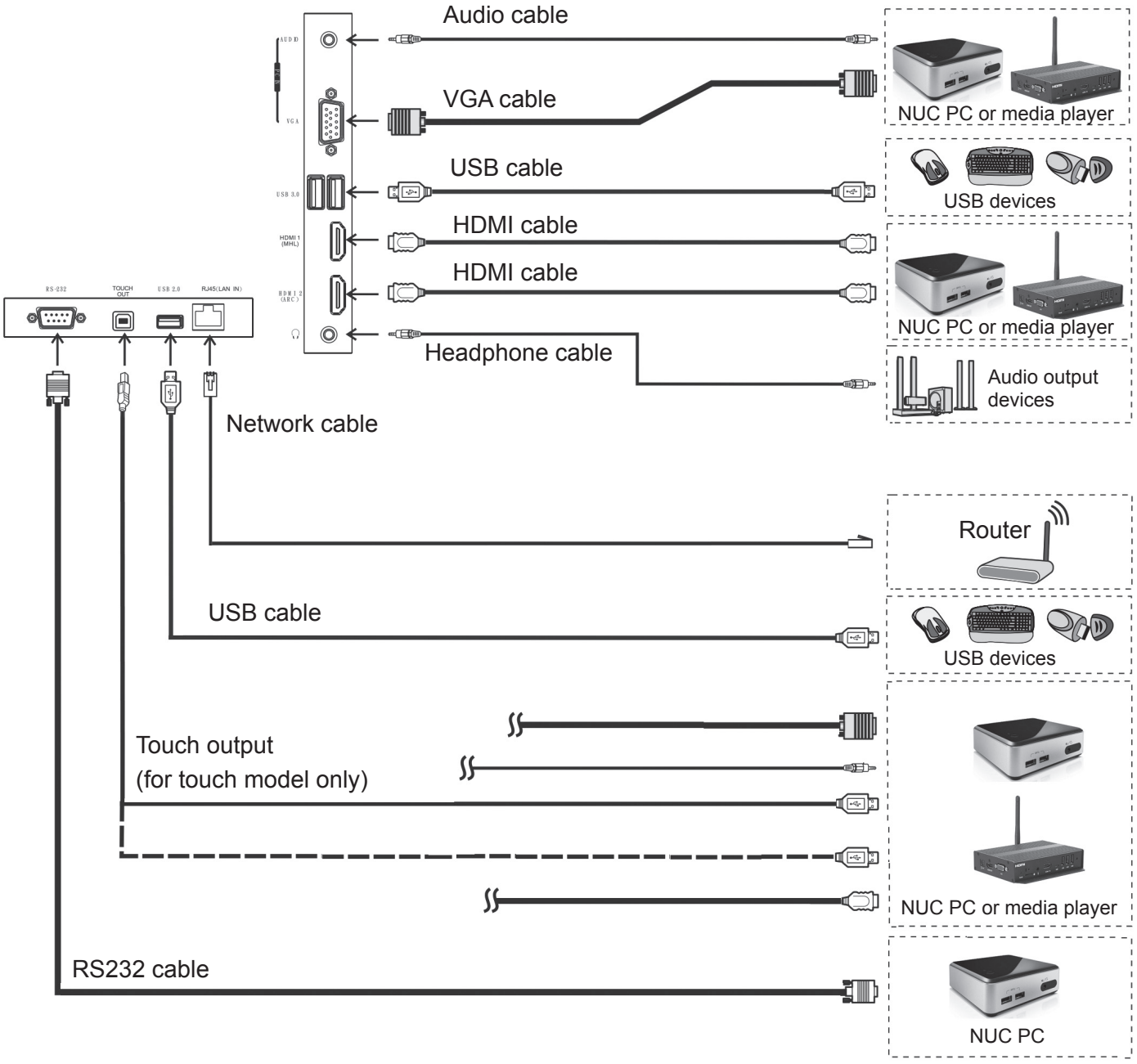



**Cautions regarding use of remote control**

- Do not expose the remote control to shock. In addition, do not expose the remote control to liquids, and do not place in an area with high humidity.
- Do not install or place the remote control under direct sunlight. The heat may cause deformation of the unit.
- The remote control may not work properly if the remote sensor window of the main unit is under direct sunlight or strong lighting. In such a case, change the angle of the lighting or the display set, or operate the remote control closer to the remote sensor window.

## 3. Connections

- Turn off the display and connected device.
- Check the plug type at the ends of cables.
- Make sure the fastened connection.



# 4. Basic Operations

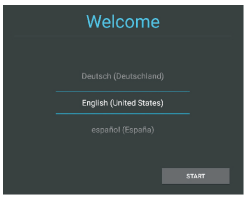
## 4.1. Turn on the display

1. Plug AC power cord and turn on the AC **Power Switch**.
2. The display brightens and indicator turns to blue.
3. Press POWER button on the remote control will turn off the display, then the indicator turns to red.

**NOTE:** If not receiving signal for around 5 mintues, display will turn off automatically.

## 4.2. First initiation

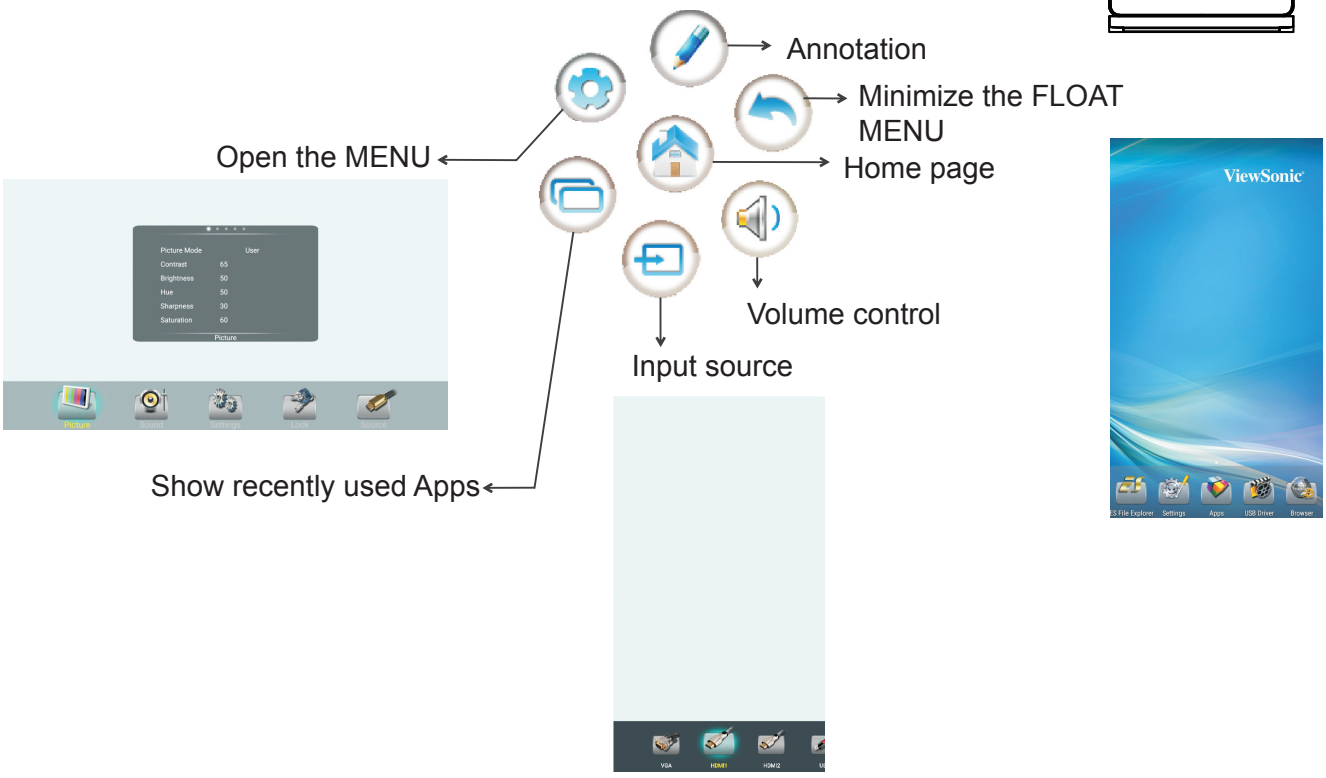
The following installation menu will pop up for first-time power on.




Select desired menu language, then press **START** and turn to next page.

## 4.3. Float menu (for touch series only)

1. Set the **FLOAT MENU** to on in the Lock menu.
2. Slide up from bottom of the screen center by two or more fingers to call in **HOME**.
3. Drag to any place of the screen.
4. Click to show control icons.



### 4.3.1. Home Menu Overview

In this mode, user can only use touch pen to operate.

| Item | | Description |
|---|---|---|
| | Annotation menu | Pop up sub-menu. |
| | Pen | Click to make annotation in the picture.<br>Click to change color. |
| | Eraser | Click to erase symbols.<br>Click to change eraser size. |
| | Screen shot | Click to screenshot the current image. |
| | Clean | Click to clean all the annotation. |
| | Cancel | Click to cancel previous step operation. |
| | Close | Click to close annotation menu. |

## 4.4. Home Menu Overview

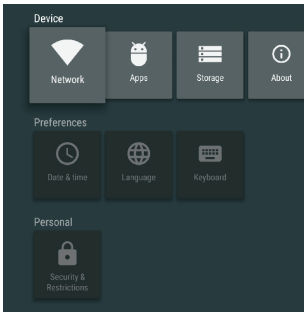
1. Press **HOME** button to show desktop menu.
2. Use arrow and **OK** button for desired selection.
3. Press **EXIT** button to leave.

External **USB storage**

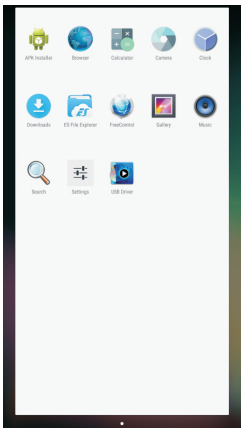
File manager

**web Browser**

Mainly for network, Date & time, and Language setting.

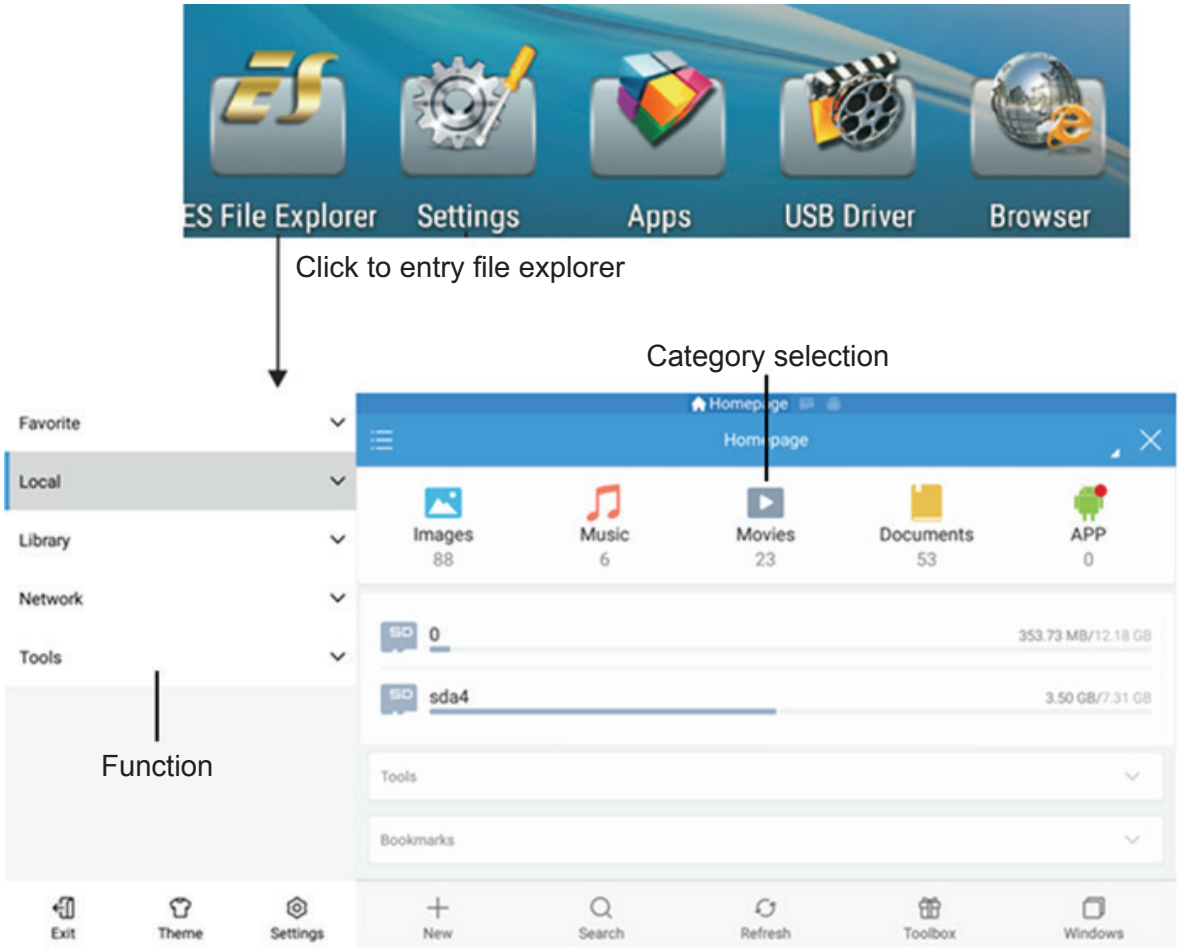



Installed application list.

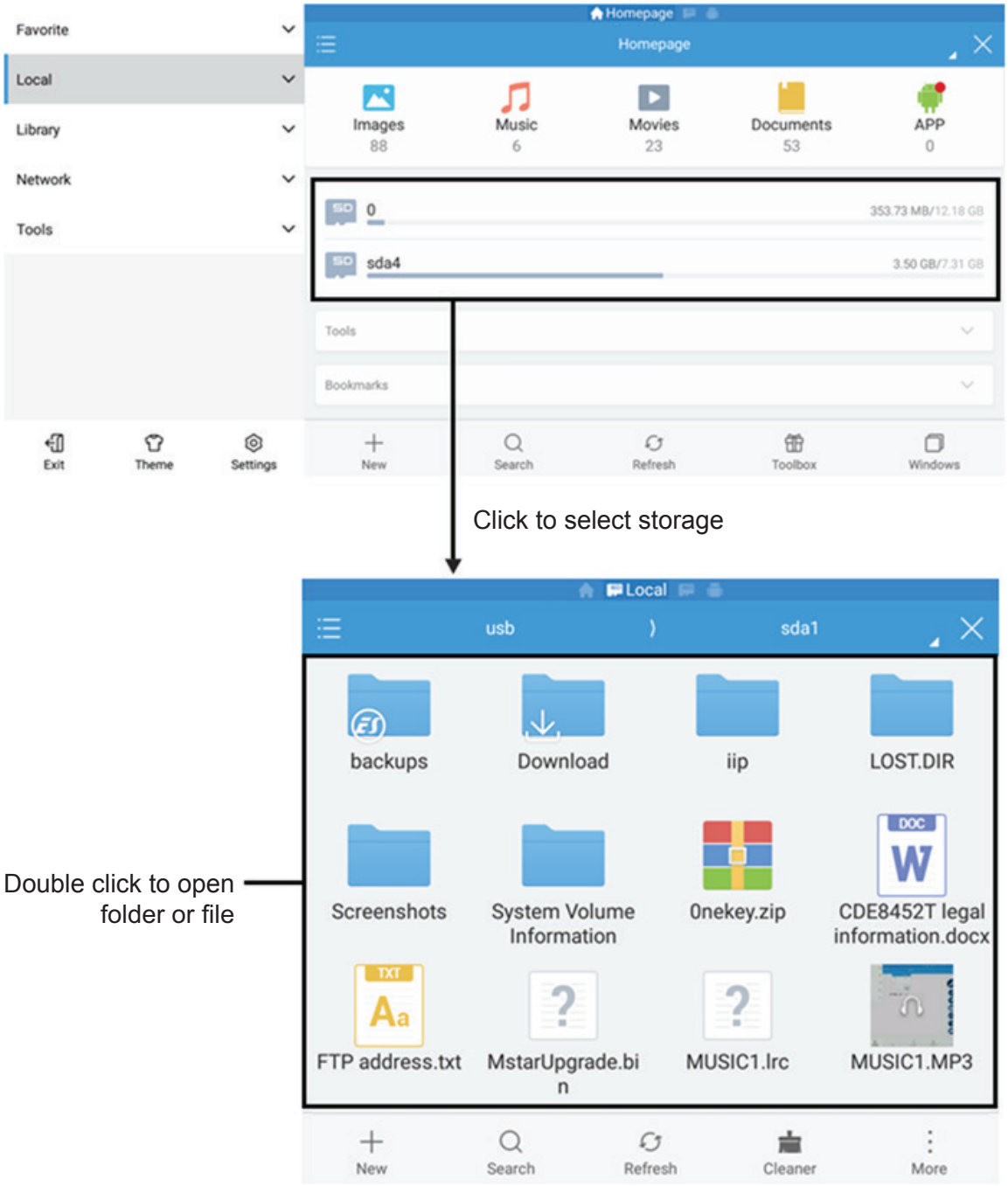


## 5. File Explorer

1. Press **ES File Explorer** button to select file manager.
2. Press **EXIT** button to return to leave.

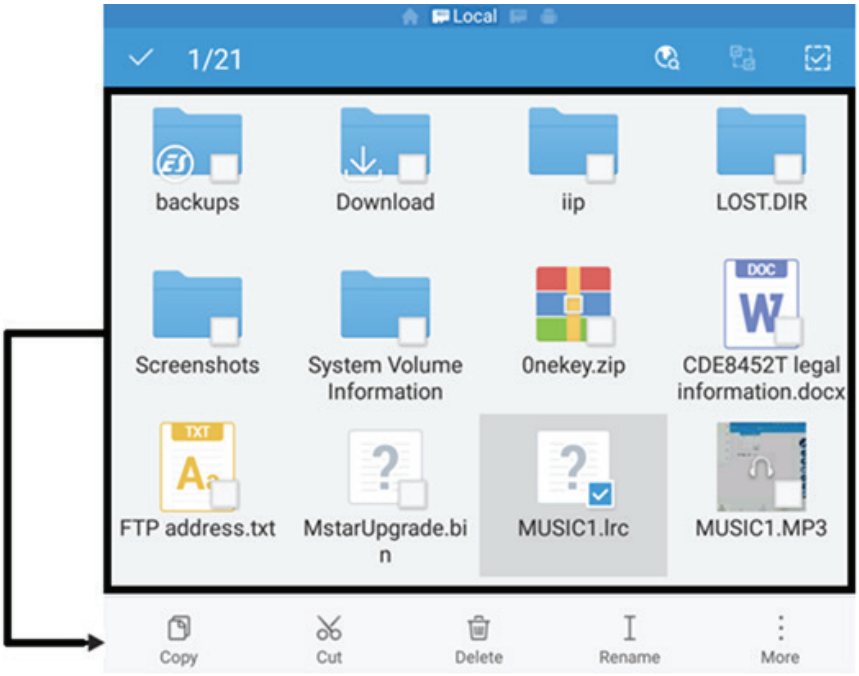



| Item | | Description |
|---|---|---|
| | Exit | Click to exit file manager. |
| | Theme | Click to change the theme. |
| | Settings | Click to entry setting menu page. |




| Item | | Description |
|---|---|---|
| | New | Click to add file or folder. |
| | Search | Click to search file or folder. |
| | Refresh | Click to refresh file status. |
| | Cleaner | Click to clean not necessary file. |
| | More | Click to show more functions. |

Press and hold to show the file management tool




| Item | | Description |
|---|---|---|
| | Copy | Click to copy file. |
| | Cut | Click to cut file. |
| | Delete | Click to delete file. |
| | Rename | Click to rename file. |
| | More | Click to show more functions. |

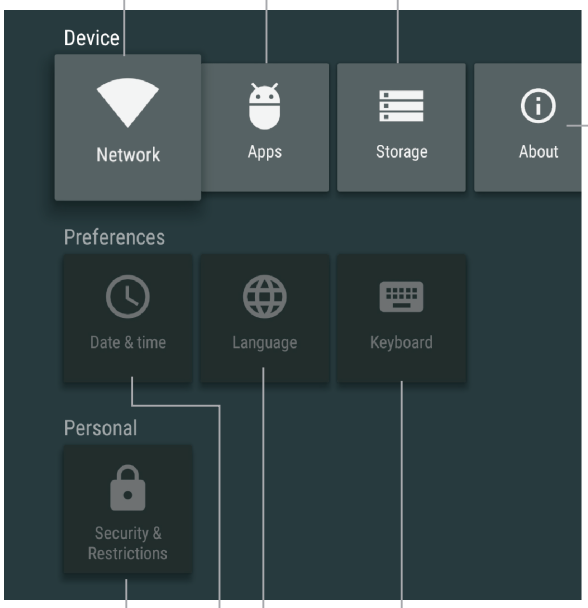
## 6. System Settings

1. Press ▲▼◄► button to select desktop menu option, press **OK** to confirm.
2. Press **EXIT** button to leave.

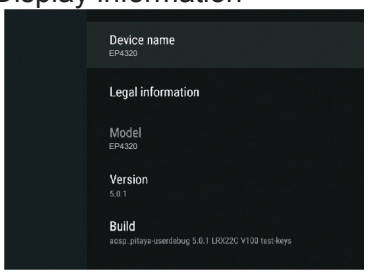
Apps manager

Network Setting

Display system Storage.




Display information




To set default input method

To set Android keyboard (AOSP)

To set on-screen language

To set Date and time

**Note:** Date & time synchronizes with web site automatically through internet. For manual setting, please turn “Automatic Data & time” to Off.

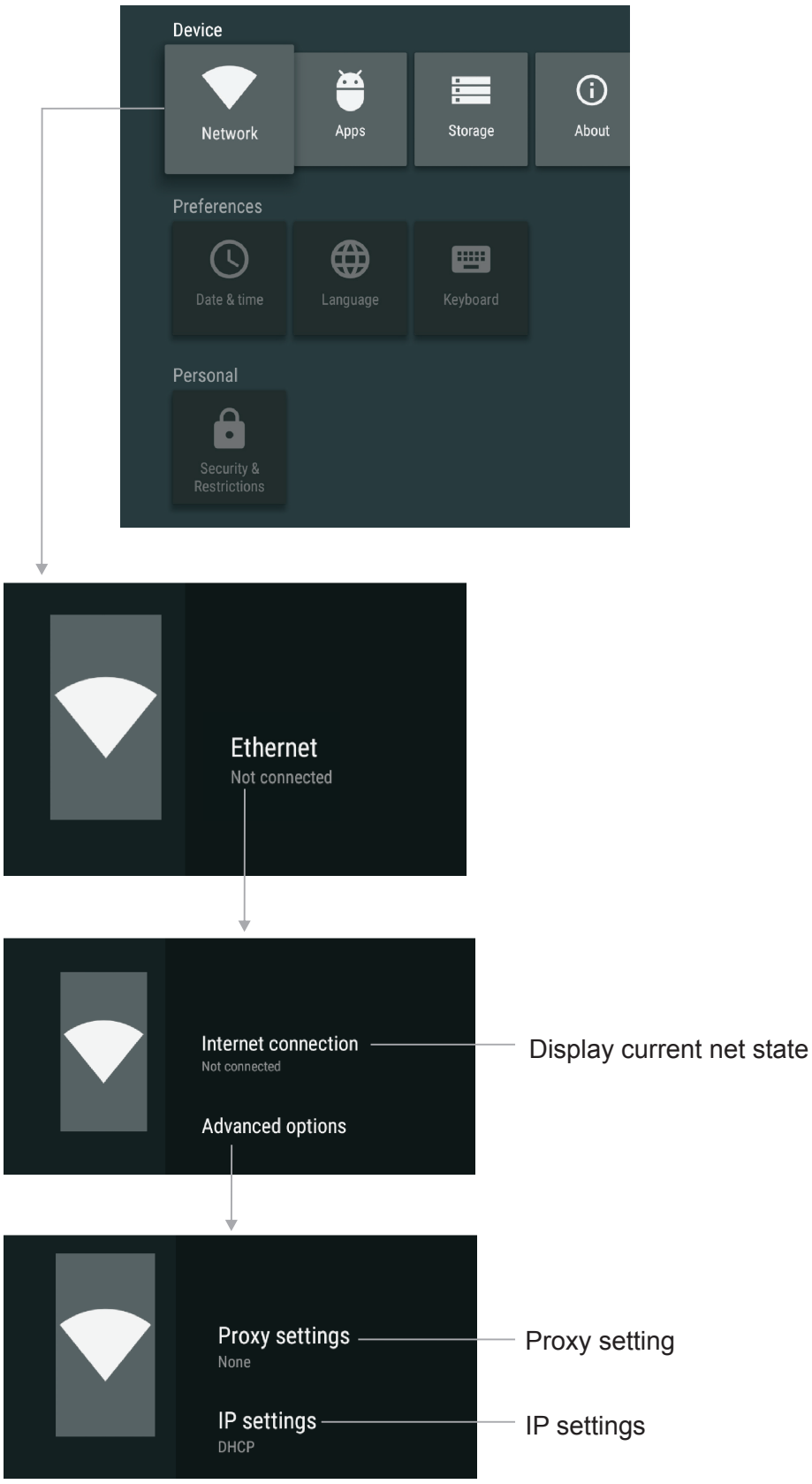
To set Security and Restrictions

Allow installation of apps from sources other than the Play Store.

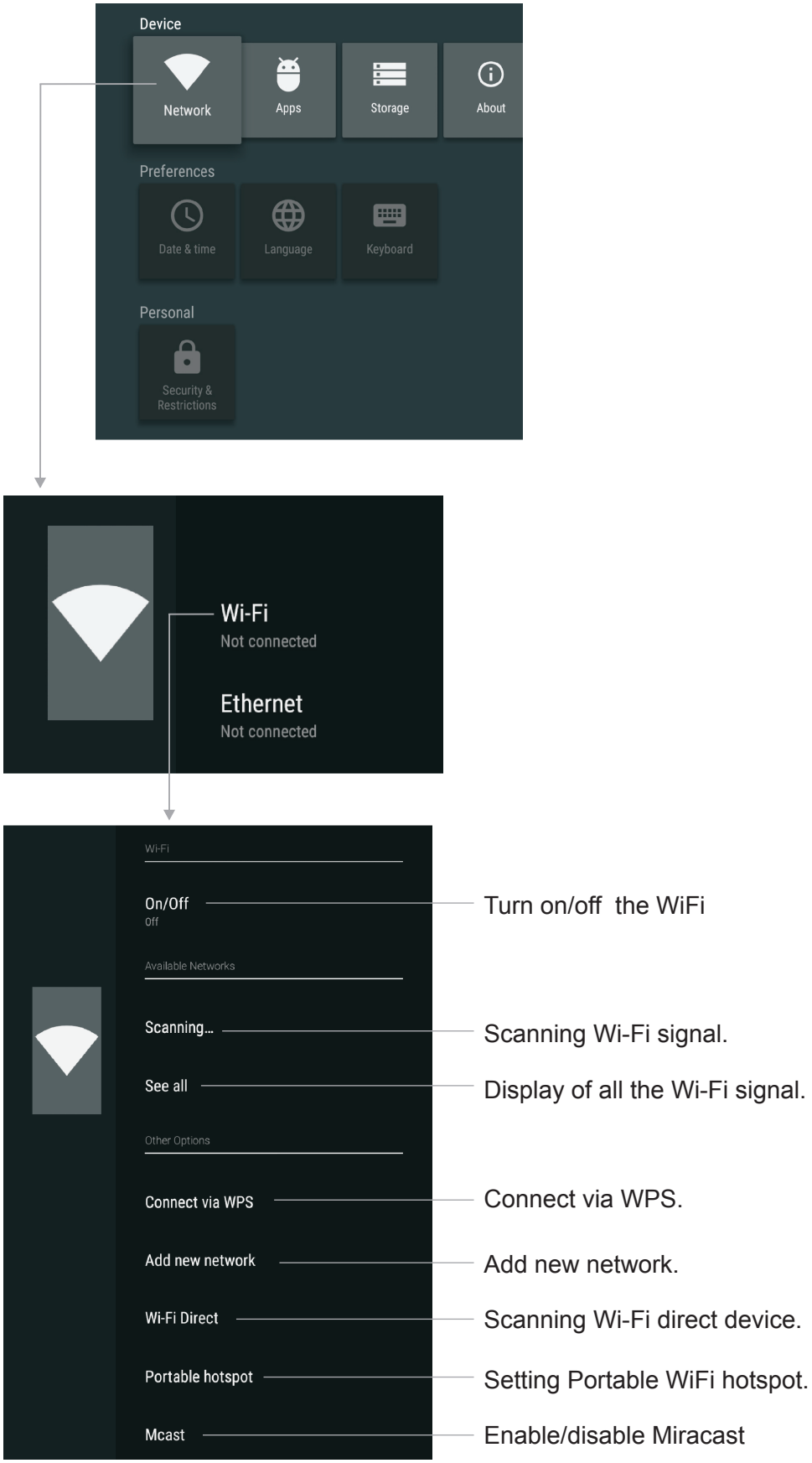
## 7. Network Settings

1. Press ▲▼◄► button to select desktop menu option, press OK to confirm.
2. Press **EXIT** button to leave.

**Wired network**



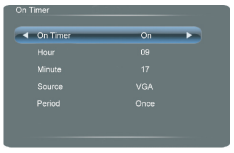
## Wireless Network (USB WiFi dongle)



# 8. Menu List

| | | | |
|---|---|---|---|
| Picture | Picture Mode | | Select your favourite picture mode for each input. |
| | Contrast | | Adjust the contrast. |
| | Brightness | | Adjust the brightness. |
| | Hue | | Adjust the image hue. (Only for NTSC system) |
| | Sharpness | | Adjust the sharpness. |
| | Saturation | | Adjust the color saturation. |
| | Anti-Flicker | | Turn on/off the Anti-Flicker function. |
| | Backlight | | Set up the overall brilliance of the screen.<br>The Anti-Flicker select Off, you can set the level of the Backlight as your desired. |
| | Screen | Clock | Adjust the screen size. |
| | | Phase | Adjust the focus of stable images. |
| | | H-Position | Move the image right or left. |
| | | V-Position | Move the image up or down. |
| | | Auto Tune | Automatically adjust the image settings such as position and phase. |
| | Color temperature | | Select the color temperature. |
| | Bluelight Filter | | Reduce the bluelight disturbance to sight, protect sight health. The Color temperature select User, you can set the level of the Bluelight Filter as your desired. |
| | Zoom Mode | | Select the aspect ratio (display proportions) according to your video signal type or personal preference [**16:9**] /[**4:3**] / [**Panorama**] / [**Just Scan**]/ [**Zoom1**] / [**Zoom2**] |
| | OverScan | | Adjust the reproduction ratio, you may activate this function to obtain a cleaner picture. |
| | Image NR | | Select the noise reduction mode to reduce picture noise. |

| | | |
|---|---|---|
| Sound | Sound Mode | Select your favourite sound mode for each input. |
| | Bass | Adjust Bass (low sounds). |
| | Treble | Adjust Treble (high sounds). |
| | Balance | Adjust volume level of right and left speakers. |
| | Surround | Turn the Surround sound effect on or off. |
| | Alone | Press **OK** to turn off the picture on your display and listen to the program audio only. |

| | | |
|---|---|---|
| Setting | MHL Auto Switch | Select **ON** to automatically switch to the MHL input when it connected. |
| | Menu Timeout | Select OSD menu display time. |
| | Data / Time | Display Date and Time. |
| | Off Timer | With Off Timer function On, the display will automatically turn off at a preset time. |
| | On Timer | With On Timer function On, the display will automatically turn on at a preset source at a preset time.<br>Highlight **Period** item, press ◀ or ▶ button to select **Once**, **Everyday**, **Mon.~Fri.**, **Mon.~Sat.** or **Sat.~Sun.**.<br>  |
| | Sleep Time | Set the duration of time until the display automatically goes into Standby mode.<br>[**Off**] / [**10 Minutes**] / [**20 Minutes**] / [**30 Minutes**] / [**60 Minutes**] / [**90 Minutes**] / [**120 Minutes**] / [**180 Minutes**] / [**240 Minutes**]. |

| | | |
|---|---|---|
| Lock | Set Password | Password settings.<br>(The default password is 0000 and the super one is “2580”) |
| | Float Menu | Turn on/off the float menu display. |
| | System ID | Setting the device ID. (The ID must be in the range of 1-98.) |
| | Lock Keypad | The display buttons is locked.<br>**OFF:** Select to enable the panel buttons.<br>**ON:** Select to disable the panel buttons. |
| | LowerPower Standby | Set to **ON**, the display goes into lower power standby mode, turn off the picture and audio. RS232 can wake up and turn on the display. |
| | Auto Play | Set to **ON**, the display will copy media file from external storage to internal storage then to play the media file automatically. |
| | Slideshow interval | Setting the photo slideshow interval. |
| | Restore To Default | Reset all settings to factory defaults. |

## 9. Using USB multi media player

1. Insert the USB drive with mutimedia content including photo, movie and music.
2. Switch the input source to USB mode.

**Notes:**

- It is recommended to back up your USB device data.
- Please name your files in English, Otherwise the file names can not be shown correctly.
- Some USB device may not be compatible with this display.

### USB multi media interface introduction

Exit

Select browse format

File folder.

(you can select from local disk device (USB device), network SAMBA device)

**Video:** Show **video** files to play.

**Music:** Show **music** files to play.

**Picture:** Show **picture** files to play.

**All:** Show **all files**.

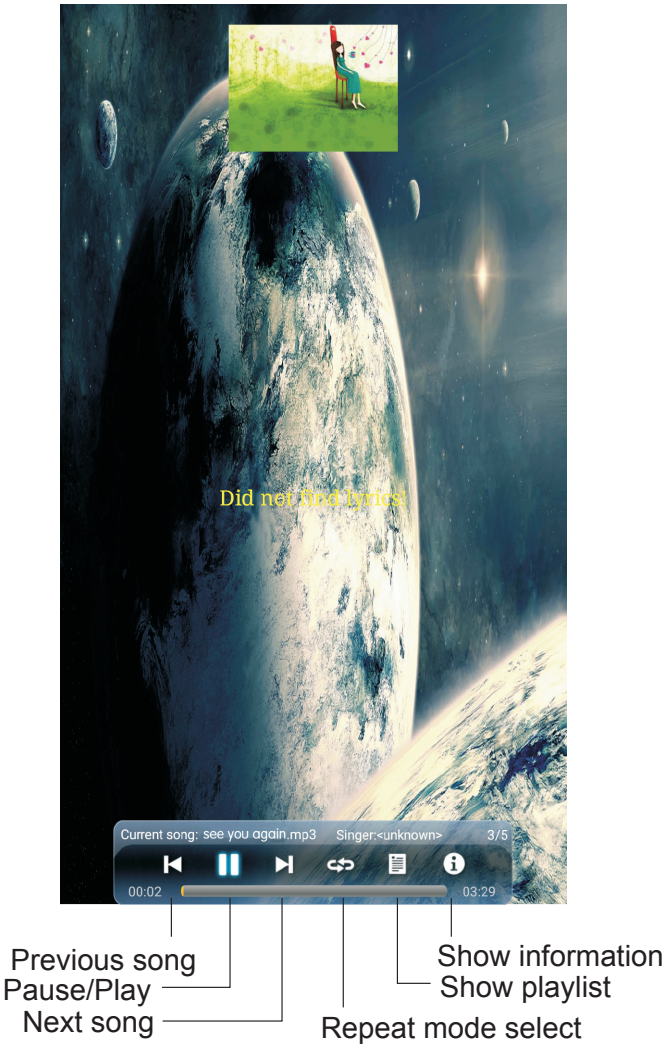
## 9.1. Playing Photo

Support photo (in JPG, BMP or PNG format).

**Notes:** You can also use ⏯ (Play/Pause), ■ (STOP), ⏮ (Previous), ⏭ (Next) on the remote control to operate.

## 9.2. Playing Music

Support music (in MP3 or AAC format).




**Repeat Mode**

repeat to play single music.

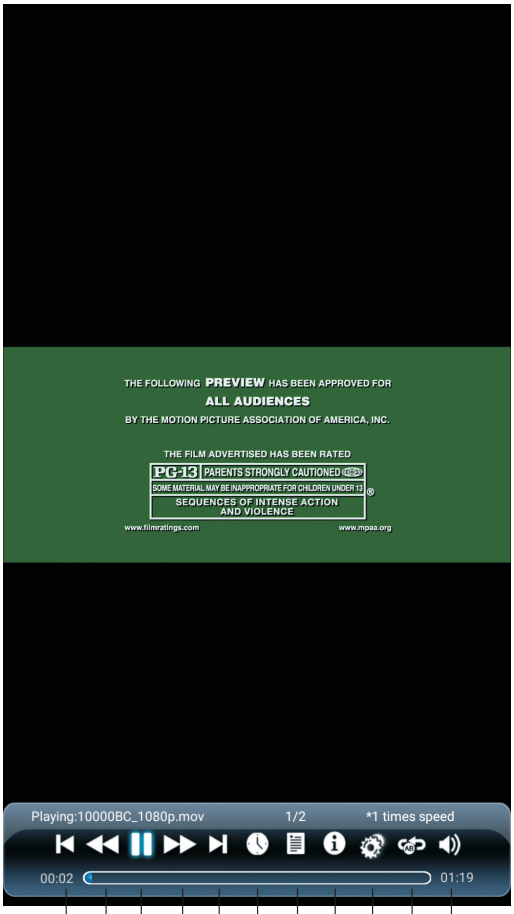
repeat to play all music files in current folder when it plays to the end.

no repeat when it plays to the end.

**Notes:** For touch model, when the control bar disappears during playback, please touch the lower portion of the screen to show it up.

## 9.3. Playing Movie

Support movie in MPG, MKV, DAT, MP4, MOV or VOB format.




Previous movie

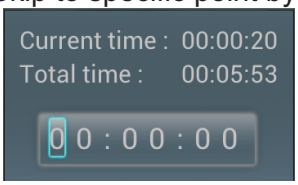
Fast reverse

Play/pause

Fast forward

Next movie

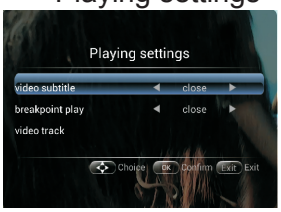
Skip to specific point by input time




Show playlist

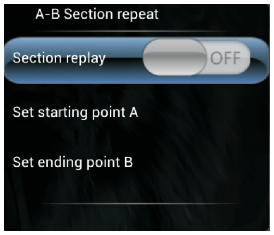
Show information

Playing settings




Adjust the volume

AB Section repeat




A-B repeat : Trun the **Section Replay** to On, then set starting point A and ending point B.

No repeat: Turn the **Section Replay** to Off.

## 10. Troubleshooting

If, after reading these operating instructions, you have additional questions related to the use of your display, please call the services center in your local area.

Before calling service, please check the symptoms and follow suggested solutions.

**Remote Control**

| Problem | Possible Solutions |
|---|---|
| Remote control does not operate | • The batteries could be weak. Replace the batteries.<br>• Check the orientation of the batteries.<br>• Make sure the power cord is plugged in. |

**Video and Audio**

| Problem | Possible Solutions |
|---|---|
| No picture (screen not lit), No sound | • Make sure the power cord is plugged in.<br>• Press POWER on the display or on the remote control. |
| Dark, poor or no picture (Screen lit), good sound | • Select a proper picture mode.<br>• Adjust the brightness in the video setting. |
| No color/dark picture/abnormal color | • Adjust the color saturation in the video setting. |
| Dotted lines or stripes | • Move the display away from noise sources such as cars, neon signs, or hair dryers. |
| Good picture, no sound | • The sound may be muted. Press MUTE again to cancel. |
| Audio noise | • Communication problems may occur if infrared communication equipment (e.g., infrared cordless headphones) is used near the display. Move the infrared communication equipment away from the display until the noise is eliminated. |

**General**

| Problem | Possible Solutions |
|---|---|
| Some items can’t be accessed | • If a setting option appears in gray, this indicates that the settings option is unavailable in current input mode. |
| Remote control command is not effect in some cases. | • During the timing of USB device detection (i.e. when the display is turned on with USB device connected, or when you plug in USB device during display working), the display may not act by remote control buttons in such case. Wait some time, then it is OK. |
| Control buttons do not operate | • Disconnect the power cord and wait for a few seconds. Then re-plug the power cord and turn on the unit again. |
| POWER button responds slowly after power is connected. | • When you push POWER SWITCH to power on the display, in about 3 seconds the POWER button starts to respond after pressed. |

**Note:** If your problem is not solved, turn your unit off and then on again.

**Cautions:** Never attempt to repair a defective display yourself.

## 11. Specifications

**Poster:**

| Item | Specification |
|---|---|
| Screen Size (Active Area) | 43” (109.22 cm) LCD |
| Aspect Ratio | 16:9 |
| Number of pixels | 1920 (H) x 1080 (V) |
| Pixel pitch | 0.4902 (H) x 0.4902 (V) [mm] |
| Displayable colors | 16.7M colors |
| Brightness (typical) | 450 cd/$m^2$ |
| Contrast ratio (typical) | 1200:1 |
| Viewing angle | 178 degrees |

**In/Out Terminals:**

| Item | | Specification |
|---|---|---|
| Speaker Output | Internal Speakers | 10W (L) + 10W (R) [RMS]/16Ω<br>1 Way 1 Speaker System<br>82 dB/W/M/160 Hz ~ 13 KHz |
| Audio Input | 3.5mm phone jack x 1 | 0.5V [rms] (Normal) / 2 Channel (L+R) |
| RS232C | | RS232C in |
| RJ-45 | RJ-45 Jack x 1 (8 pin) | 10/100 LAN Port |
| HDMI Input | HDMI Jack x 2<br>(Type A) (18 pin) | Digital RGB: TMDS (Video + Audio)<br>MAX: Video - 720p, 1080p, 1920 x 1080/60 Hz (WUXGA)<br>Audio - 48 KHz/ 2 Channel (L+R)<br>Supports LPCM only |
| VGA Input | D-Sub Jack x 1<br>(15 pin) | Analog RGB: 0.7V [p-p] (75Ω), H/CS/V: TTL (2.2kΩ),<br>SOG: 1V [p-p] (75Ω)<br>MAX: 720p, 1080p, 1920 x 1080/60 Hz (WUXGA) |

**General:**

| Item | Specification |
|---|---|
| Power Supply | 100V-240V, 50/60Hz (AC) |
| Power Consumption (Max) | 44W |
| Power Consumption (typ.) | 38W |
| Power Consumption (Standby & Off) | <0.5W |
| Dimensions (Without Stand) [W x H x D] | 644 x 1799.50 x 68.20 mm |
| Weight (Without Stand) | 48 Kg |
| Gross Weight (Without Stand) | 60 Kg |

**Environmental Condition:**

| Item | | Specification |
|---|---|---|
| Temperature | Operational | 0°C – 50°C |
| | Storage | -20°C – 60°C |
| Humidity | Operational | 10 % – 90 % ( non-condensing) |
| | Storage | 10 % – 90 % ( non-condensing) |
| Atmospheric pressure | | 86 kPa ~106 kPa |

**Internal Speaker:**

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

**Notes:**

1. Design and specifications are subject to change without notice.
2. Weight and dimensions shown are approximate.
3. Specifications and external appearance may be changed for the sake of improvement.

# 12. RS232 Protocol

## 12.1. 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.

## 12.2. Description

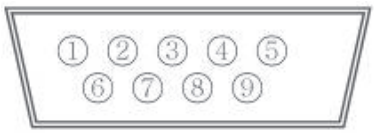
### 12.2.1.Hardware specification

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 | |

### 12.2.2.Communication Setting

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

### 12.2.3.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)

## 12.3. Protocol

### 12.3.1.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<br>0x32 | 0x73 | 0x24 | 0x30 | 0x37 | 0x36 | 0x0D |

**Reply (Hex Format)**

| Name | Length | ID | Command Type | CR |
|---|---|---|---|---|
| Hex | 0x34 | 0x30<br>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<br>0x32 | 0x73 | 0x24 | 0x31 | 0x37 | 0x36 | 0x0D |

**Reply (Hex Format)**

| Name | Length | ID | Command Type | CR |
|---|---|---|---|---|
| Hex | 0x34 | 0x30<br>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<br>001: ON | Controlled power status: ON or Standby |
| Input Select | 8 | | s | “ | 22 | 000 : TV<br>001 : AV<br>002 : S-Video<br>003 : YPbPr<br>004 : HDMI<br>014 : HDMI2<br>024 : HDMI3<br>005 : DVI<br>006 : VGA1(PC)<br>016 : VGA2<br>007 : OPS<br>008 : Internal Mem<br>009 : DP | 1. No need for USB<br>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<br>001 : Warm<br>002 : Cold<br>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<br>001 : NORMAL<br>002 : CUSTOM<br>003 : DYNAMIC<br>004 : REAL | |
| OSD Language | 8 | | s | 2 | 32 | 000 : English<br>001 : French<br>002 : Spanish | |
| Power Lock | 8 | | s | 4 | 34 | 000 : Unlock<br>001 : Lock | |
| Volume | 8 | | s | 5 | 35 | 000 ~ 100<br>900 : Volume down (-1)<br>901 : Volume up (+1) | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Mute | 8 | | s | 6 | 36 | 000: OFF<br>001: ON (mute) | |
| Button Lock | 8 | | s | 8 | 38 | 000 : Unlock<br>001 : Lock | |
| Menu Lock | 8 | | s | > | 3E | 000 : Unlock<br>001 : Lock | |
| Key Pad | 8 | | s | A | 41 | 000 : UP<br>001 : DOWN<br>002 : LEFT<br>003 : RIGHT<br>004 : ENTER<br>005 : INPUT<br>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<br>1xx: Month+Day<br>(See example in Note) | For specific models only |
| Tiling-Mode | 8 | | s | P | 50 | 000: OFF<br>001: ON | (for DS) |
| Tiling-Compensation | 8 | | s | Q | 51 | 000: OFF<br>001: ON | (for DS)<br>Bezel width compensation |
| Tiling-H by V Monitors | 8 | | s | R | 52 | 01x~09x: H<br>0x1~0x9: V | (for DS)<br>1. 2nd digital for H monitors<br>2. 3rd digital for V monitors |
| Tiling-Position | 8 | | s | S | 53 | 001~025 | (for DS)<br>Copy the screen of Position# to identified display |
| Time | 8 | | s | W | 57 | 0xx: Hour+Min<br>10x: Sec<br>(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”<br>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<br>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.<br>2. The SET_POWER on/off should be workable via RS232, but does not mean the POWER lock will be released under this case.<br>3. Can not be unlocked by reset in OSD setting<br>4. Will auto AC power-on in power-lock<br>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**

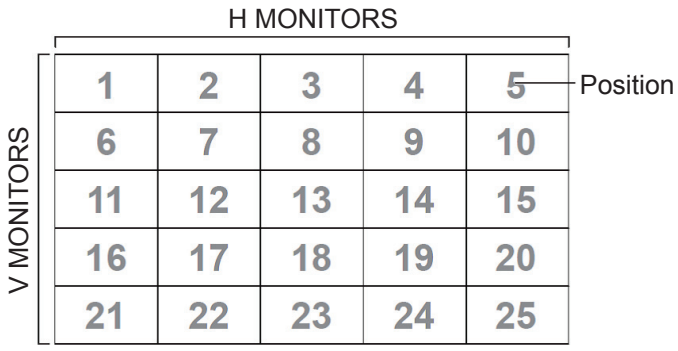
012-0: 0x 30 31 32

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”)

### 12.3.2.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<br>0x35 | 0x67 | 0x62 | 0x30 | 0x30 | 0x30 | 0x0D |

**Reply (Hex Format)**

| Name | Length | ID | Command Type | Command | Value1 | Value2 | Value3 | CR |
|---|---|---|---|---|---|---|---|---|
| Hex | 0x38 | 0x30<br>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<br>0x35 | 0x67 | 0XD3 | 0x30 | 0x30 | 0x30 | 0x0D |

**Reply (Hex Format)**

| Name | Length | ID | Command Type | CR |
|---|---|---|---|---|
| Hex | 0x34 | 0x30<br>0x35 | 0x2D | 0x0D |

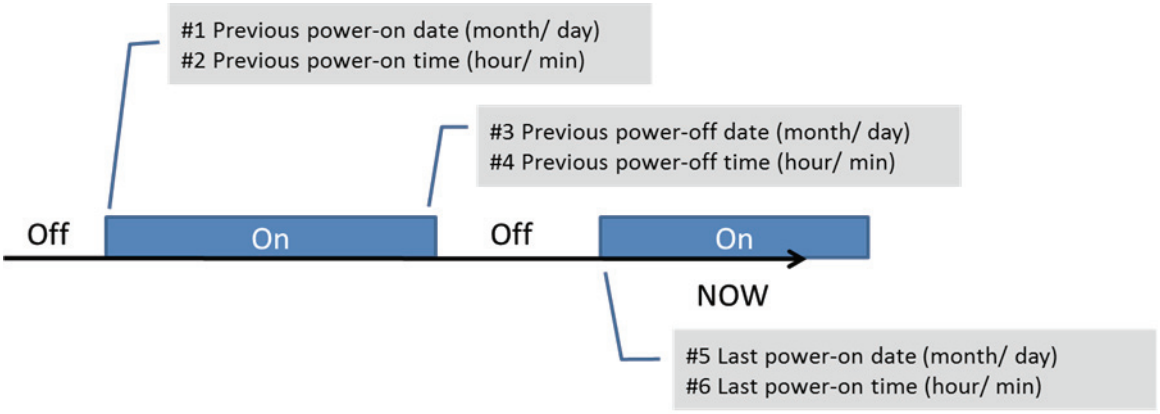
**Get function table:**

| 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)<br>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<br>001: ON | |
| Get-Remote control | 8 | | g | n | 6E | 000 : Disable<br>001 : Enable<br>002 : Pass through | |
| Get-Power Lock | 8 | | g | o | 6F | 000 : Unlock<br>001 : Lock | |
| Get-Button Lock | 8 | | g | p | 70 | 000 : Unlock<br>001 : Lock | |
| Get-Menu Lock | 8 | | g | q | 71 | 000 : Unlock<br>001 : Lock | |
| Get-Tiling Mode | 8 | | g | v | 76 | 000: OFF<br>001: ON | (for DS) |
| Get-Tiling Compensation | 8 | | g | w | 77 | 000: OFF<br>001: ON | (for DS)<br>Bezel width compensation |
| Get-Tiling H by V monitors | 8 | | g | x | 78 | 01x~09x: H monitors<br>0x1~0x9: V monitors | (for DS)<br>1. 2nd digital for H monitors<br>2. 3rd digital for V monitors |
| Get-Tiling position | 8 | | g | y | 79 | 000: OFF<br>001~025 | (for DS)<br>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:<br>0~+100 deg C<br>-01~-99:<br>-1~-99 deg C | For specific models only |
| Get-Power on/ off log | 8 | | g | 1 | 31 | 000<br>(See below note) | For specific models only |
| Get-Date | 8 | | g | 2 | 32 | 000<br>(See the Set-Date command) | For specific models only |
| Get- Time | 8 | | g | 3 | 33 | 000<br>(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<br>0: Off<br>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”)

### 12.3.3.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<br>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.

## 13. 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<br>C = CHAT ONLINE | Email |
|---|---|---|---|
| Australia<br>New Zealand | www.viewsonic.com.au | AUS= 1800 880 818<br>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.<br>Tel: 55) 6547-6454  55) 6547-6484<br>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)<br>C= http://www.viewsonic.com/la/soporte/servicio-tecnico | service.us@viewsonic.com<br>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:***<br>México, Av. de la Palma #8 Piso 2 Despacho 203, Corporativo Interpalmas,<br>Col. San Fernando Huixquilucan, Estado de México<br>Tel: (55) 3605-1099<br>http://www.viewsonic.com/la/soporte/index.htm | |
| **NÚMERO GRATIS DE ASISTENCIA TÉCNICA PARA TODO MÉXICO: 001.866.823.2004** | |
| ***Hermosillo:***<br>Distribuciones y Servicios Computacionales SA de CV.<br>Calle Juarez 284 local 2<br>Col. Bugambilias C.P: 83140<br>Tel: 01-66-22-14-9005<br>E-Mail: disc2@hmo.megared.net.mx | ***Villahermosa:***<br>Compumantenimietnos Garantizados, S.A. de C.V.<br>AV. GREGORIO MENDEZ #1504<br>COL, FLORIDA C.P. 86040<br>Tel: 01 (993) 3 52 00 47 / 3522074 / 3 52 20 09<br>E-Mail: compumantenimientos@prodigy.net.mx |
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| ***Guerrero Acapulco***<br>GS Computación (Grupo Sesicomp)<br>Progreso #6-A, Colo Centro<br>39300 Acapulco, Guerrero<br>Tel: 744-48-32627 | ***Monterrey:***<br>Global Product Services<br>Mar Caribe # 1987, Esquina con Golfo Pérsico<br>Fracc. Bernardo Reyes, CP 64280<br>Monterrey N.L. México<br>Tel: 8129-5103<br>E-Mail: aydeem@gps1.com.mx |
| ***MERIDA:***<br>ELECTROSER<br>Av Reforma No. 403Gx39 y 41<br>Mérida, Yucatán, México CP97000<br>Tel: (52) 999-925-1916<br>E-Mail: rrrb@sureste.com | ***Oaxaca, Oax.:***<br>CENTRO DE DISTRIBUCION Y<br>SERVICIO, S.A. de C.V.<br>Murguía # 708 P.A., Col. Centro, 68000, Oaxaca<br>Tel: 01(52)95-15-15-22-22<br>Fax: 01(52)95-15-13-67-00<br>E-Mail. gpotai2001@hotmail.com |
| ***Tijuana:***<br>STD<br>Av Ferrocarril Sonora #3780 L-C<br>Col 20 de Noviembre<br>Tijuana, Mexico | ***FOR USA SUPPORT:***<br>ViewSonic Corporation<br>14035 Pipeline Ave. Chino, CA 91710, USA<br>Tel: 800-688-6688 (English); 866-323-8056 (Spanish);<br>E-Mail: http://www.viewsonic.com |

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