# PV Series
# LCD Monitor
## User Manual



# Copyright

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# Power Safety



Please follow these safety instructions for best performance, and long life for your monitor.

- The AC plug isolates this equipment from the AC supply.
- The power supply cord serves as a power disconnect device for pluggable equipment. The socket outlet should be installed near the equipment and be easily accessible.
- This product should be operated from the type of power indicated on the marked label. If you are not sure of the type of power available, consult your dealer or local power company.
- An approved power cord greater or equal to H03VV-F or H05VV-F, 2G or 3G, 0.75mm2 must be used.

# Care And Cleaning

- Cleaning. Always unplug your monitor from the wall outlet before cleaning. Clean the LCD monitor surface with a lint-free, non-abrasive cloth. Avoid using any liquid, aerosol or glass cleaners.
- Slots and openings on the back or top of the cabinet are for ventilation. They must not be blocked or covered. Your monitor should never be placed near or over a radiator or heat source, or in a built-in installation unless proper ventilation is provided.
- Never push objects or spill liquid of any kind into this product.

# Safety warning and precautions

- The warranty may be void if any of the instructions in this user manual are not followed. Improper use will invalidate the guarantee. These safety instructions also apply to original accessories.

- It is the sole responsibility of the user if problems (such as data loss and system failure) occurred due to non-factory provided software, parts, and/or non-original accessories.
- Please use the original accessories (e.g. power cable) only with the device to avoid possible dangers such as electric shock and fire.
- It takes about 30 minutes (under BenQ standard testing condition) for the system to reach to a stable state. For works that involve critical color judgment or image enhancement, please wait for 30 minutes after the monitor is powered on.
- It is recommended to set the monitor to a lower brightness for long-term use to reduce your eye strain, and maintain a stable display in order to extend the display's lifetime. Yet you should always adjust the monitor brightness according to the light condition around the monitor. See Adjusting the backlight on page 33 for more information.

## Servicing

Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltages or other risks. If any of the above mentioned misuse or other accident such as dropping or mishandling occurs, contact qualified service personnel for servicing.

## BenQ ecoFACTS

BenQ has been dedicated to the design and development of greener product as part of its aspiration to realize the ideal of the "Bringing Enjoyment 'N Quality to Life" corporate vision with the ultimate goal to achieve a low-carbon society. Besides meeting international regulatory requirement and standards pertaining to environmental management, BenQ has spared no efforts in pushing our initiatives further to incorporate life cycle design in the aspects of material selection, manufacturing, packaging, transportation, using and disposal of the products. BenQ ecoFACTS label lists key eco-friendly design highlights of each product, hoping to ensure that consumers make informed green choices at purchase. Check out BenQ's CSR Website at http://csr.BenQ.com/ for more details on BenQ's environmental commitments and achievements.



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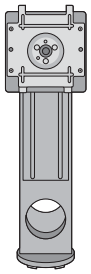
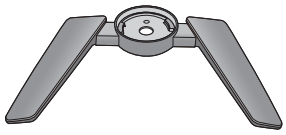
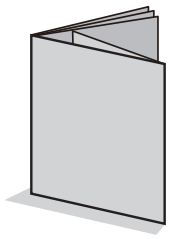
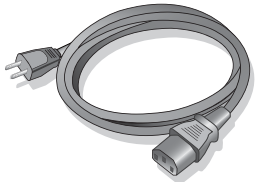
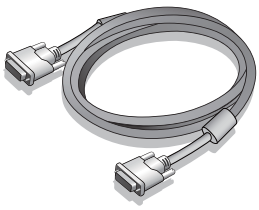
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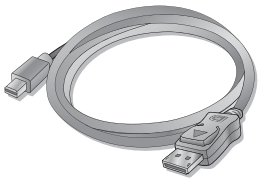
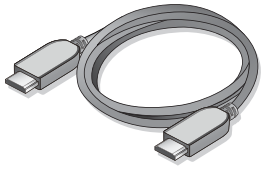
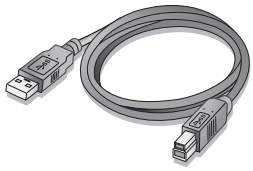
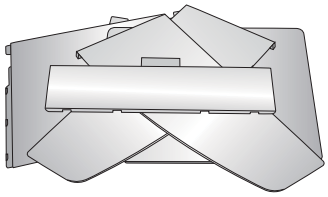
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# Getting started

When unpacking please check you have the following items. If any are missing or damaged, please contact the place of purchase for a replacement.

| | |
|---|---|
| BenQ LCD Monitor |  |
| Monitor Stand |  |
| Monitor Base |  |
| Quick Start Guide |  |
| DVD-ROM |  |
| Power Cord<br>(Picture may differ from product supplied for your region.) |  |
| Video Cable: DVI-DL |  |

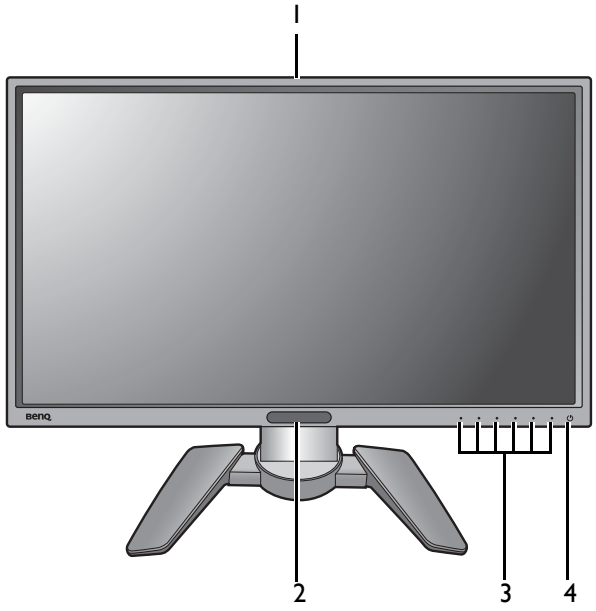
| | |
|---|---|
| Video Cable: DP to mini DP |  |
| Video Cable: HDMI<br>(Optional accessory, sold separately) |  |
| USB Cable |  |
| Shading hood |  |

- Available accessories and the pictures shown here may differ from the actual contents and the product supplied for your region. For cables that are not supplied with your product, you can purchase them separately.
- Consider keeping the box and packaging in storage for use in the future when you may need to transport the monitor. The fitted foam packing is ideal for protecting the monitor during transport.

Always keep the product and accessories out of reach of small children.

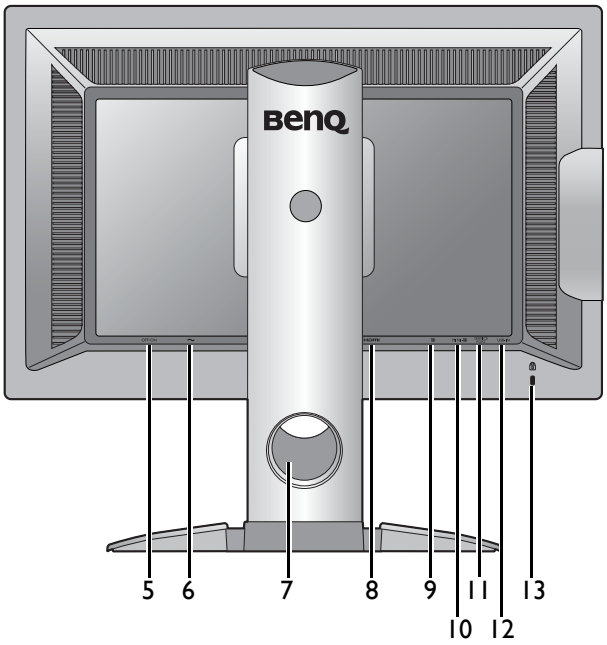
# Getting to know your monitor

## Front view

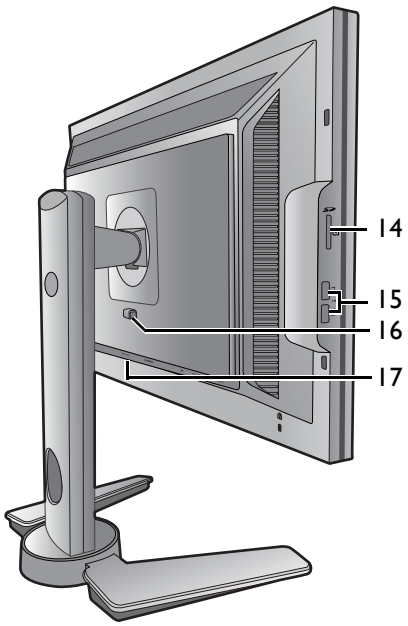



1. Color temperature sensor (see Adjusting color temperature automatically on page 33)
2. Light sensor / ECO sensor
3. Control buttons
4. Power button

## Back view




5. Power switch
6. AC power input jack
7. Cable management hole
8. HDMI socket
9. DisplayPort socket
10. Mini DisplayPort socket
11. Service port (Service only. Do not remove the seal or the warranty is void.)
12. USB port (upstream; connecting to the PC)
13. Kensington lock slot



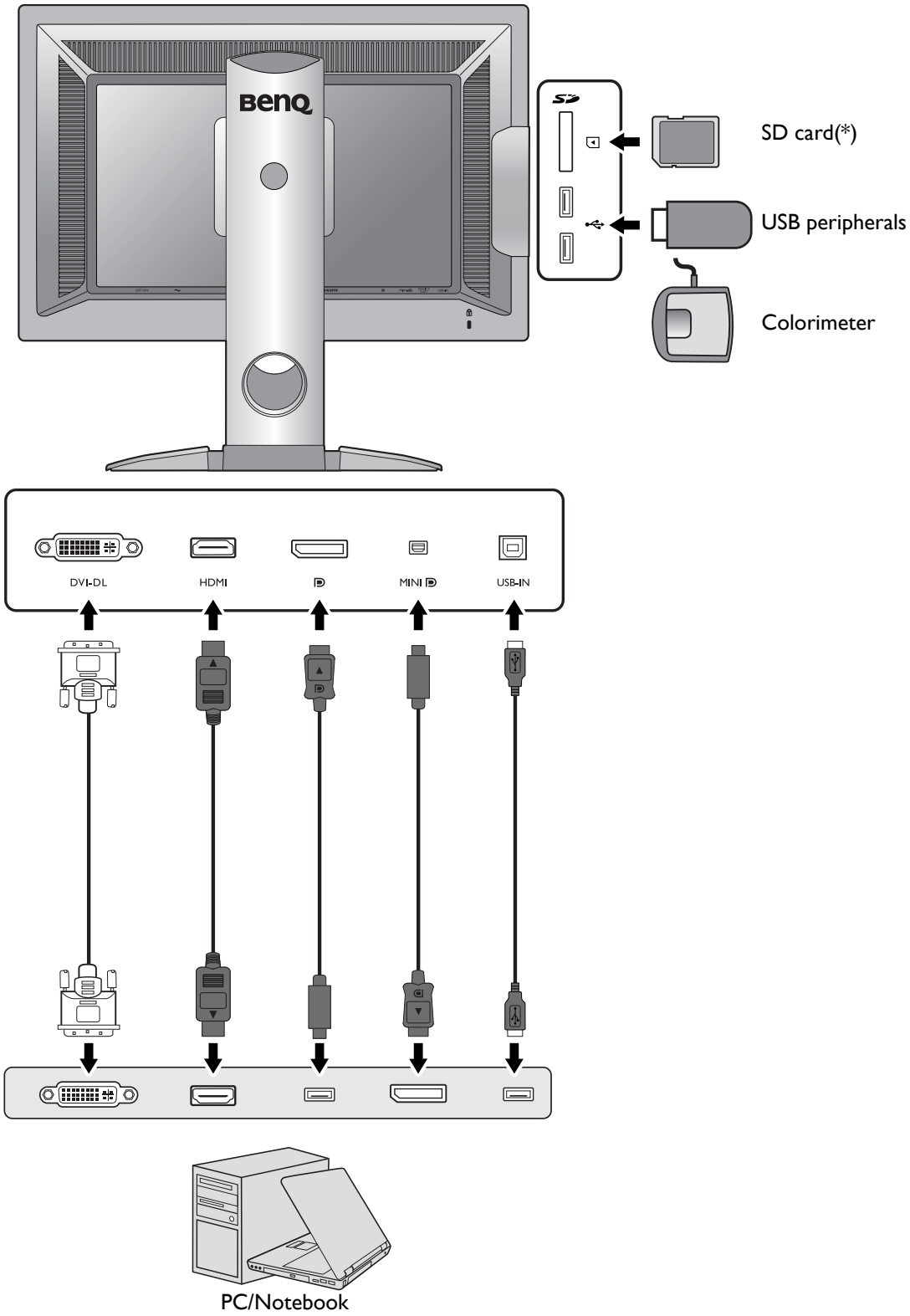

14. SD card slot
15. USB port x 2 (downstream; connecting to USB devices)
16. Quick release button
17. DVI-DL socket

- Above diagram may vary depending on the model.
- Picture may differ from product supplied for your region.

# Connection

The following connection illustrations are for your reference only. For cables that are not supplied with your product, you can purchase them separately.

For detailed connection methods, see page 11 - 13.




*: Requires card reader driver for Windows 8 (8.1) and Windows 10 operating systems. Install the driver from the supplied DVD.

# How to assemble your monitor hardware

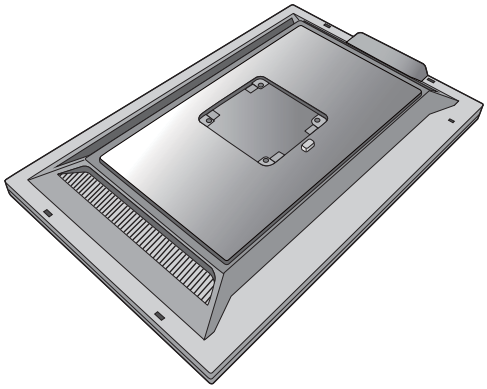
- If the computer is turned on you must turn it off before continuing.
  Do not plug-in or turn-on the power to the monitor until instructed to do so.
- The following illustrations are for your reference only. Available input and output jacks may vary depending on the purchased model.

## 1. Attach the monitor base.

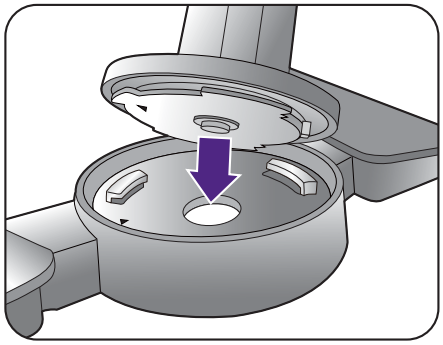
Please be careful to prevent damage to the monitor. Placing the screen surface on an object like a stapler or a mouse will crack the glass or damage the LCD substrate voiding your warranty. Sliding or scraping the monitor around on your desk will scratch or damage the monitor surround and controls.

Protect the monitor and screen by clearing a flat open area on your desk and placing a soft item like the monitor packaging bag on the desk for padding.

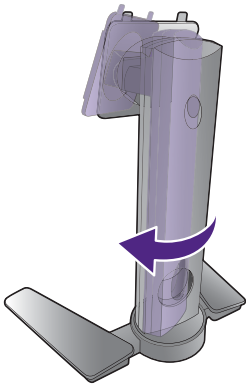
Gently lay the screen face down on a flat clean padded surface.



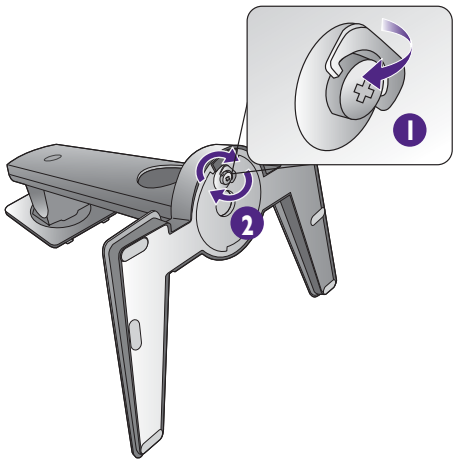
Attach the monitor stand to the monitor base as illustrated. Make sure to align the arrow on the end of the stand to the one on the monitor base.



Turn the stand clockwise until you cannot go further.



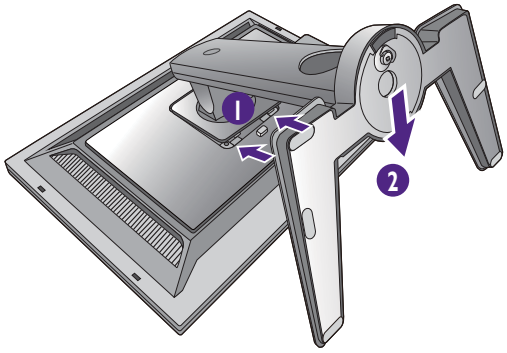
Tighten the thumbscrew on the bottom of the monitor base as illustrated.




Orient and align the stand arm with the monitor (1), push them together until they click and lock into place (2).

Gently attempt to pull them back apart to check that they have properly engaged.

Carefully lift the monitor, turn it over and place it upright on its stand on a flat even surface.




You should position the monitor and angle the screen to minimize unwanted reflections from other light sources.



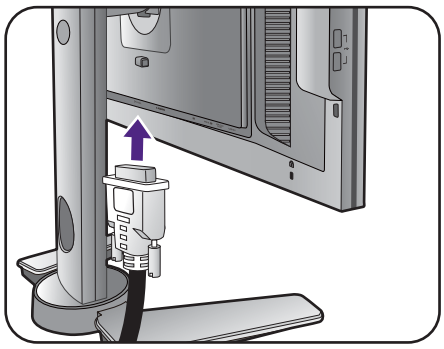
## 2. Connect the PC video cable

Either

<u>To Connect the DVI-DL Cable</u>

Connect the plug of the DVI-DL cable (at the end without the ferrite filter) to the monitor video socket. Connect the other end of the cable (at the end with the ferrite filter) to the computer video socket.

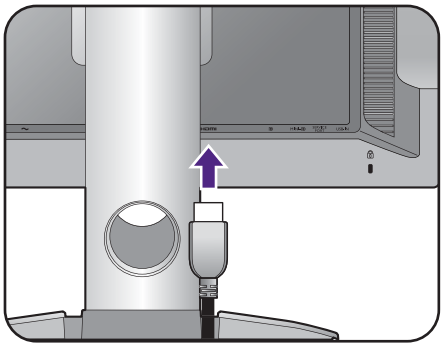
Tighten all finger screws to prevent the plugs from accidently falling out during use.



To Connect the HDMI Cable

Connect the plug of the HDMI cable to the HDMI port on the monitor. Connect the other end of the cable to the HDMI port of a digital output device.

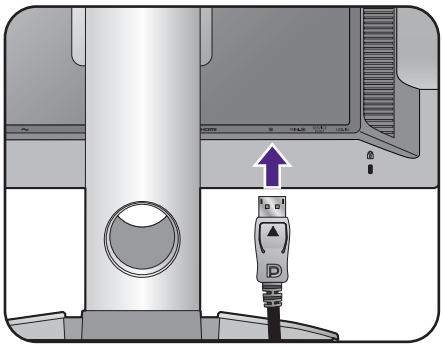
Or



To Connect the DP Cable

Connect the plug of the DP cable to the monitor video socket. Connect the other end of the cable to the computer video socket.

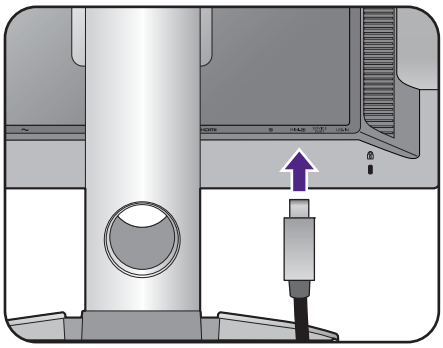
Or



To Connect the mini DP Cable

Connect the plug of the mini DP cable to the monitor video socket. Connect the other end of the cable to the computer video socket.

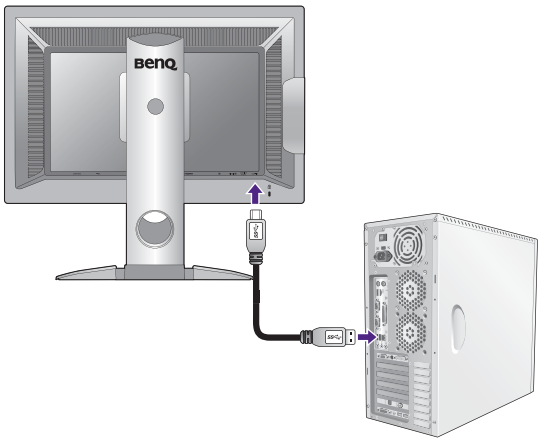
Or



The video cables included in your package and the socket illustrations on the right may vary depending on the product supplied for your region.

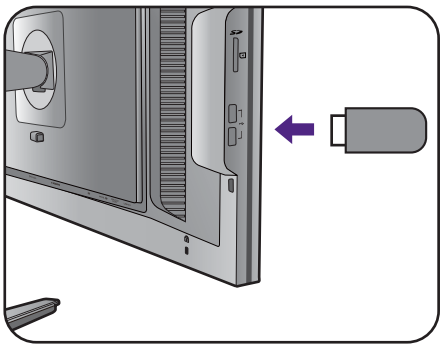
## 3. Connect USB devices.

Connect the USB cable between the PC and the monitor (via the upstream USB port at the back). This upstream USB port transmits data between the PC and the USB devices connected to the monitor.



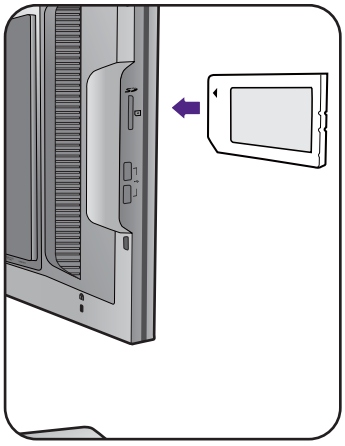
Connect USB devices via other USB ports (downstream) on the monitor. These downstream USB ports transmit data between connected USB devices and the upstream port.

See picture on the right.



## 4. Connect the memory card.

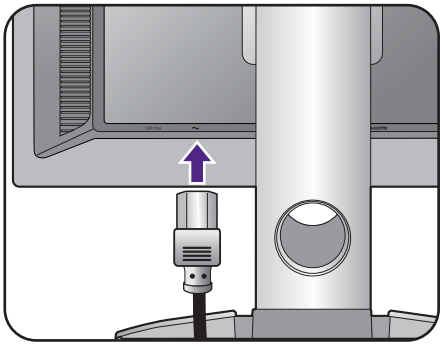
Insert a SD, MMC, or MS memory card following the direction indicated on the card to exchange files.



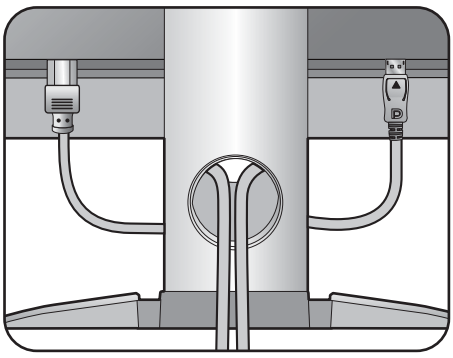
Supported memory card formats are as follows:
- SD/SDHC/SDXC
- MMC
- Memory Stick / Memory Stick Pro
- MS Duo /MS-Pro Duo

## 5. Connect the power cable to the monitor.

Plug one end of the power cord into the socket labelled ~ on the rear of the monitor. Do not connect the other end to a power outlet just yet.

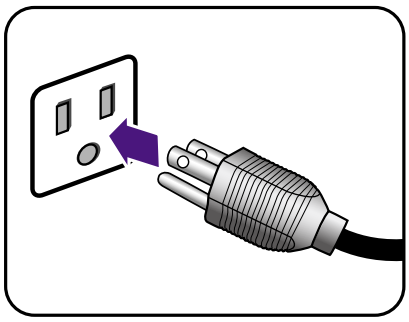


## 6. Organize the cables.



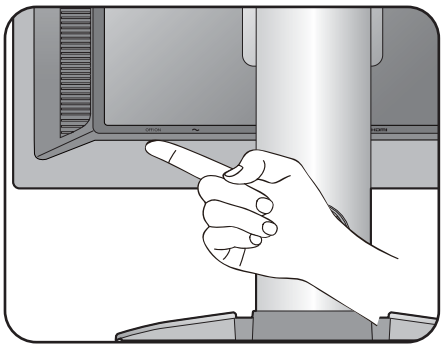
## 7. Connect-to and turn-on the power.

Plug the other end of the power cord into a power outlet and turn it on.



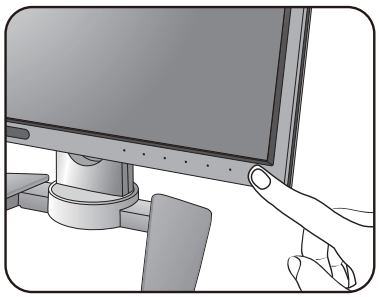
Picture may differ from product supplied for your region.

Switch the power switch next to the AC power input jack to **ON**.



Turn on the monitor by pressing the power button on the monitor.

Turn on the computer too, and follow the instructions in Getting the most from your BenQ monitor on page 24 to install the monitor software.



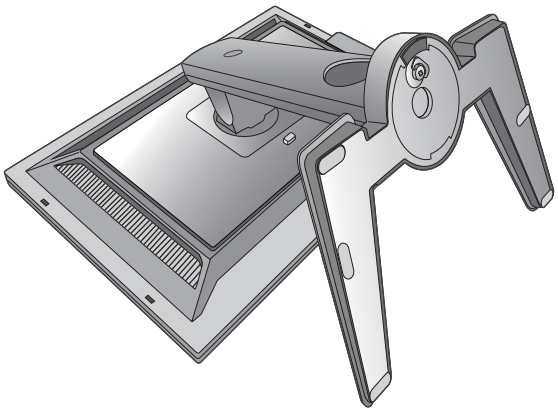
To extend the service life of the product, we recommend that you use your computer's power management function.

# How to detach the stand and the base

## 1. Prepare the monitor and area.

Turn off the monitor and the power before unplugging the power cable. Turn off the computer before unplugging the monitor signal cable.

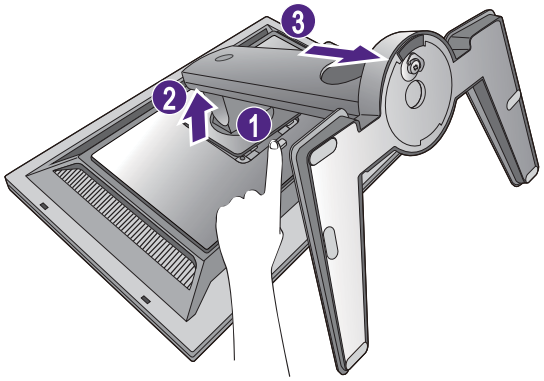
Protect the monitor and screen by clearing a flat open area on your desk and placing a soft item like a towel on the desk for padding, before laying the screen face down on a flat clean padded surface.



Please be careful to prevent damage to the monitor. Placing the screen surface on an object like a stapler or a mouse will crack the glass or damage the LCD substrate voiding your warranty. Sliding or scraping the monitor around on your desk will scratch or damage the monitor surround and controls.

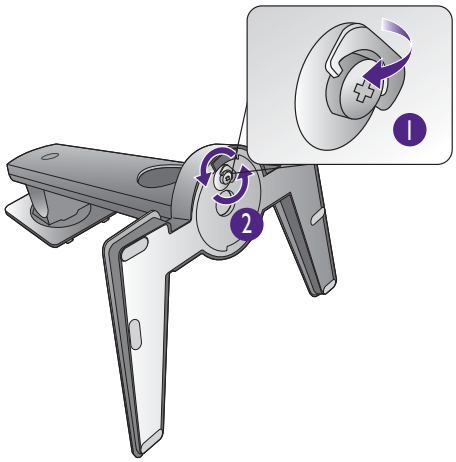
## 2. Remove the monitor stand.

While pressing and holding the quick release button (1), detach the stand from the monitor (2 and 3).

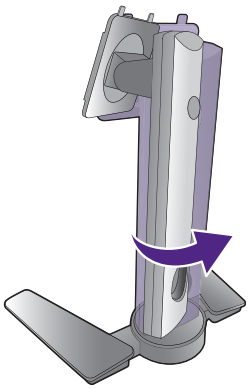



## 3. Remove the monitor base.

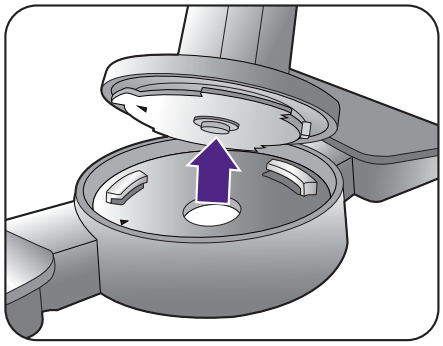
Release the thumbscrew on the bottom of the monitor base.



Turn the stand counterclockwise until you cannot go further.



And then detach the base from the stand.



# Installing shading hood

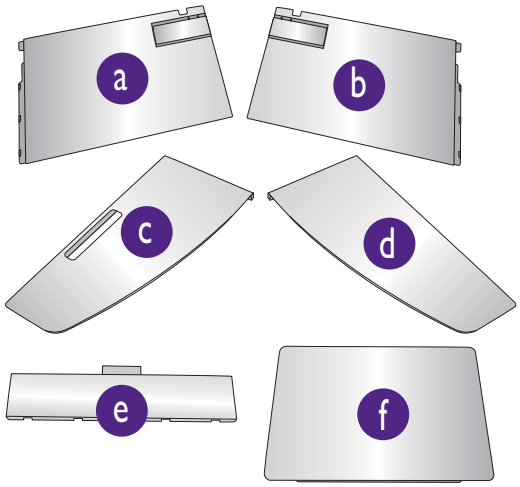
To prevent glare or most of unwanted reflections from other light sources off your screen, you can install the shading hood.

Please be careful to prevent damage to the shading hood and the monitor. Different pieces of shading hood are well-designed and can fit into your monitor properly. Do not use excessive force when installing the shading hood to avoid possible damage.

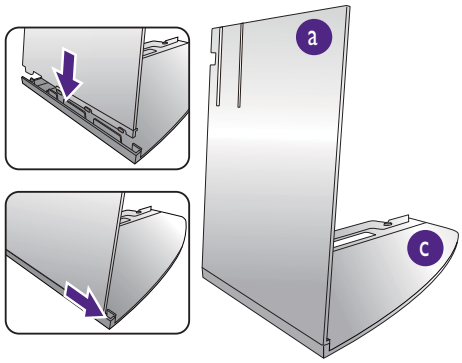
## 1. Prepare for the shading hood installation.

Place the monitor upright on its stand on a flat even surface. Make sure the monitor is rotated to the landscape mode.

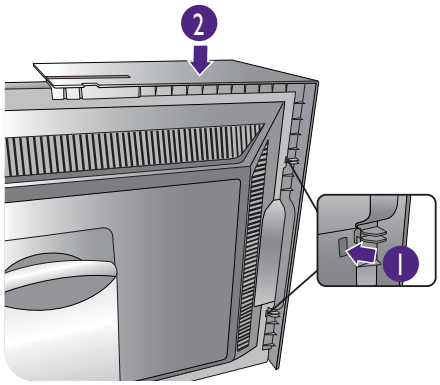
There are 6 different pieces of the shading hood. Follow the illustrations to complete the installation carefully.



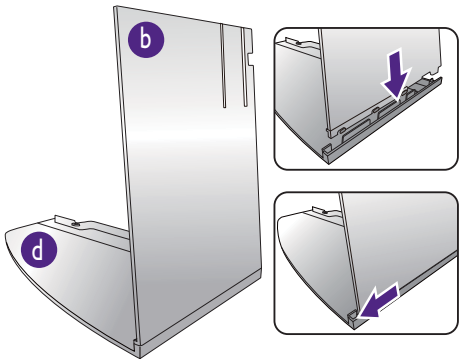

## 2. Install the left part of shading hood.



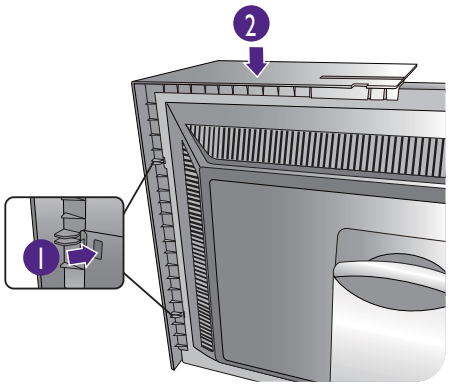

## 3. Attach to the left side of the monitor.



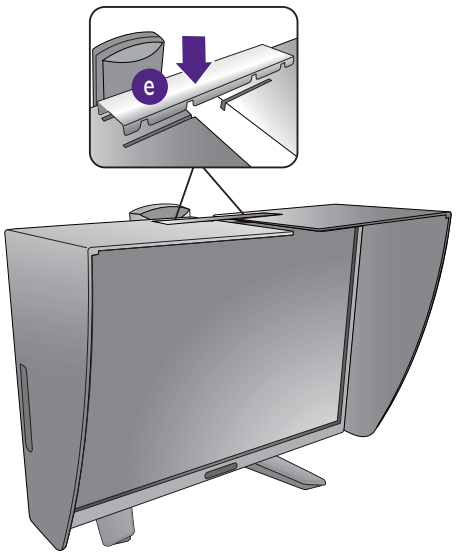
4. Install the right part of shading hood.



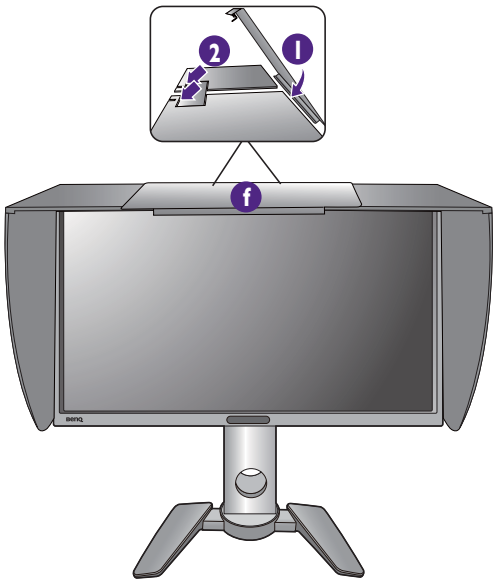

5. Attach to the right side of the monitor.



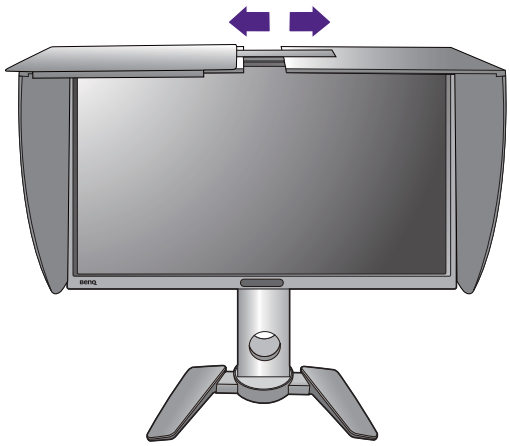

6. Place the piece e on the top of the monitor.



7. Install the piece f.



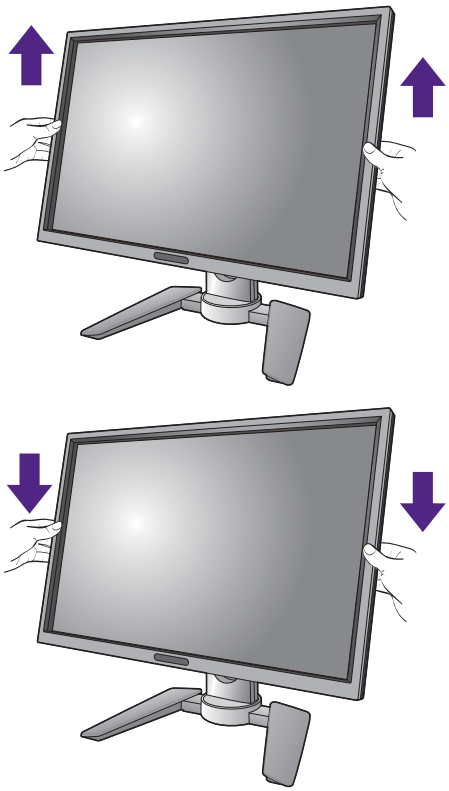

8. If you intend to calibrate the display's color by a colorimeter, slide the piece f to the left end so the colorimeter can be installed.



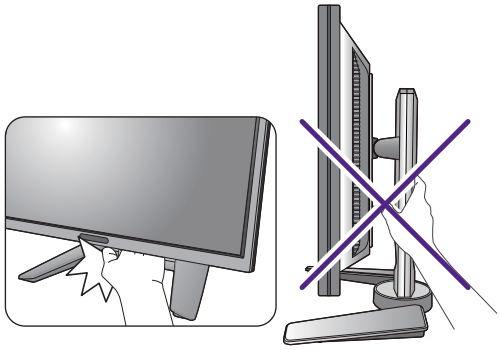
Follow the instruction manuals of the colorimeter you purchased and the provided software to complete the installation and calibration process.

## Adjusting the monitor height

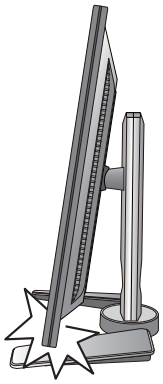
To adjust the monitor height, hold both the left and the right sides of the monitor to lower the monitor or lift it up to the desired height.



- Avoid placing hands on the upper or lower part of the height-adjustable stand or at the bottom of the monitor, as ascending or descending monitor might cause personal injuries. Keep children out of reach of the monitor while performing this operation.



- If the monitor has been rotated to portrait mode and height adjustment is desired, you should be noted that the wide screen will keep the monitor from being lowered to its minimum height.



# Rotating the monitor

## 1. Pivot the display.

Before rotating the monitor with a portrait viewing orientation, the display has to be rotated 90 degrees.

Right-click the desktop and select **Screen resolution** from the popup menu. Select **Portrait** in **Orientation**, and apply the setting.

Depending on the operating system on your PC, different procedures should be followed to adjust the screen orientation. Refer to the help document of your operating system for details.

## 2. Pivot the OSD menu.

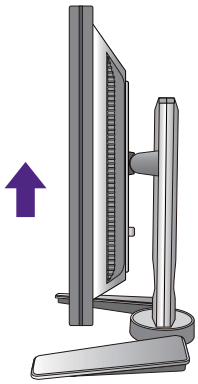
Once the display is rotated, you also need to rotate the OSD menu.

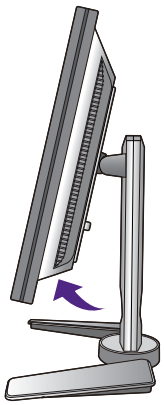
Go to **System** and **Auto Pivot**. Select **On**. The OSD menu rotates with the monitor.

## 3. Fully extend the monitor and tilt it.

Gently lift the display up and extend it to the maximum extended position. Then tilt the monitor.

The monitor should be vertically extended to allow to rotate from landscape to portrait mode.





## 4. Rotate the monitor 90 degrees clockwise as illustrated.



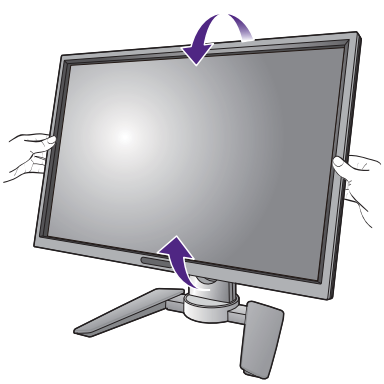
To avoid the edge of the LCD display hitting the monitor base surface while it is being rotated, do tilt and extend the monitor to the highest position before you start to rotate the display. You should also make sure there are no obstacles around the monitor and there is enough room for cables.

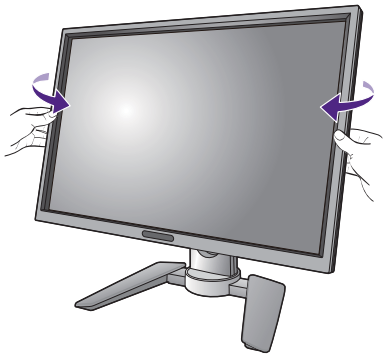
5. Adjust the monitor to the desired viewing angle.

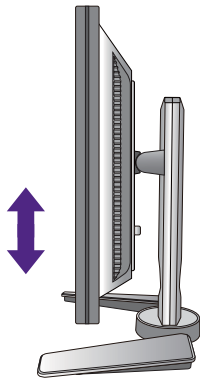


## Viewing angle adjustment

You may position the screen to the desired angle with the monitor tilt, swivel, and height adjustment functions. Refer to the product specifications for details.







# Using the monitor wall mounting kit

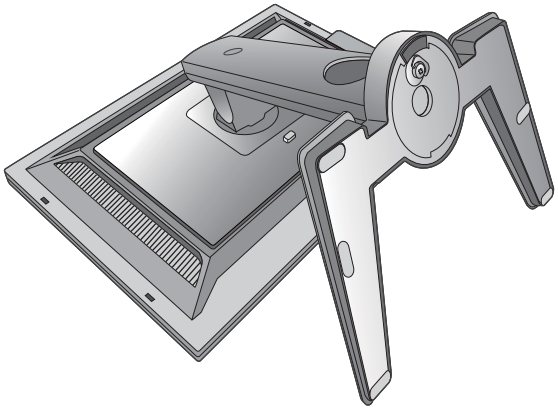
The back of your LCD monitor has a VESA standard mount with 100mm pattern, allowing the installation of a wall mount bracket. Before starting to install a monitor wall mounting kit, please read the precautions carefully.

## Precautions

- Install your monitor and monitor mounting kit on a wall with flat surface.
- Ensure that the wall material and the standard wall mount bracket (purchased separately) are stable enough to support the weight of the monitor. Refer to the product specifications for weight information.
- Turn off the monitor and the power before disconnecting the cables from the LCD monitor.

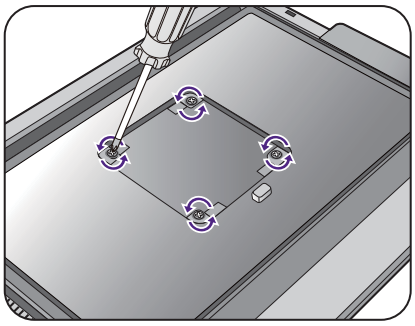
### 1. Remove the monitor stand.

Lay the screen face down on a clean and well-padded surface. Detach the monitor stand as instructed in step 1~2 in How to detach the stand and the base on page 15.



### 2. Remove the screws on the back cover.

Use a cross-pointed screwdriver to release the screws on the back cover. The use of a magnetic-head screwdriver is recommended to avoid of losing the screws.



In case you intend to use your monitor on the stand in the future, please keep the monitor base, monitor stand, and screws somewhere safe for future use.

### 3. Follow the instruction manuals of the wall mount bracket you purchased to complete the installation.

Use four M4 x 10 mm screws to fix a VESA standard wall mount bracket to the monitor. Make sure that all screws are tightened and secured properly. Consult a professional technician or BenQ service for wall mount installation and safety precautions.

# Getting the most from your BenQ monitor

To gain the most benefit from your new BenQ LCD monitor, you should install the custom BenQ LCD Monitor driver software as provided on the BenQ LCD Monitor DVD-ROM.

The circumstances under which you connect and install your BenQ LCD Monitor will determine which process you need to follow to successfully install the BenQ LCD Monitor driver software. These circumstances relate to which version of Microsoft Windows you are using, and whether you are connecting the monitor and installing the software onto a new computer (without existing monitor driver software), or whether you are upgrading an existing installation (which already has existing monitor driver software) with a newer monitor.

In either case however, the very next time you turn on your computer (after connecting the monitor to your computer), Windows will automatically recognize the new (or different) hardware, and will launch its **Found New Hardware wizard**.

Follow the wizard instructions until it asks you to select a monitor model. At that point, click the **Have Disk** button, insert the BenQ LCD Monitor DVD-ROM and select the appropriate monitor model. Further details and step-by-step instructions for either an automatic (new) or upgrade (existing) installation, see:


- How to install the monitor on a new computer on page 25.
- How to upgrade the monitor on an existing computer on page 26.


- If you require a User Name and Password to login to your Windows computer, you must be logged on as an Administrator or as a member of the Administrators group in order to install the monitor driver software. Furthermore, if your computer is connected to a network which has security access requirements, network policy settings may prevent you from installing software on your computer.
- To check the name of the purchased model, refer to the specification label on the back of the monitor.

# How to install the monitor on a new computer

This instruction details the procedure for selecting and installing the BenQ LCD Monitor driver software on a new computer which has never had a monitor driver installed before. This instruction is only suitable for a computer which has never been used before, and for which the BenQ LCD Monitor is the first ever monitor to be connected to it.

If you are adding the BenQ LCD Monitor to an existing computer that has already had another monitor connected to it (and has monitor driver software installed), you should not be following these instructions. You should instead be following the instructions for How to upgrade the monitor on an existing computer.

1. Follow the instructions in How to assemble your monitor hardware on page 10.
   When Windows starts, it will automatically detect the new monitor and launch the **Found New Hardware Wizard**. Follow the prompts until it displays the option to **Install Hardware Device Drivers**.
2. Insert the BenQ LCD Monitor DVD-ROM into a DVD drive on the computer.
3. Check **Search for a suitable driver for my device** option, and click **Next**.
4. Check the option for DVD-ROM drives (uncheck all others) and click **Next**.
5. Look to confirm that the wizard has selected the correct name of your monitor and click **Next**.
6. Click **Finish**.
7. Restart the computer.

# How to upgrade the monitor on an existing computer

This instruction details the procedure for manually updating the existing monitor driver software on your Microsoft Windows computer. It is currently tested as compatible for Mac OS, Windows 10, Windows 8 (8.1), and Windows 7 Operating System (OS).

The BenQ LCD Monitor driver for your model may well function perfectly with other versions of Windows, however, as at the time of writing, BenQ has done no testing of this driver on other versions of Windows and cannot guarantee its operation on those systems.

Installing monitor driver software involves selecting an appropriate information file (.inf) on the BenQ LCD Monitor DVD-ROM for the particular model monitor you have connected, and letting Windows install the corresponding driver files from the DVD. You need only steer it in the right direction. Windows has an Upgrade Device Driver Wizard to automate the task and guide you through the file selection and installation process.

See:


- How to install on Windows 10 system on page 27.
- How to install on Windows 8 (8.1) system on page 28.
- How to install on Windows 7 system on page 29.

## How to install on Windows 10 system

1. Open **Display Properties**.

   Go to **Start**, **Settings, Devices, Devices and Printers** and right-click the name of your monitor from the menu.

2. Select **Properties** from the menu.
3. Click the **Hardware** tab.
4. Click **Generic PnP Monitor**, and then the **Properties** button.
5. Click the **Driver** tab and the **Update Driver** button.
6. Insert the BenQ LCD Monitor DVD-ROM into a DVD drive on the computer.
7. In the **Update Driver Software** window, select the option **Browse my computer for driver software**.
8. Click **Browse** and navigate to the following directory: d:\BenQ_LCD\Driver\ (where d is the drive letter designator for the DVD-ROM drive).



The drive letter for your DVD drive may differ from the example above depending upon your system - it may be 'D:' or 'E:' or 'F:' etc.

9. Select the correct folder name of your monitor from provided driver list, and click **Next**.

   This will copy and install the appropriate monitor driver files to your computer.

10. Click **Close**.

    You may be prompted to restart your computer after the driver update is complete.

## How to install on Windows 8 (8.1) system

1. Open **Display Properties**.

   Move the cursor to the lower-right of the screen or press the **Windows** + **C** buttons on the keyboard to bring up the **Charm** bar. Go to **Settings**, **Control Panel**, **Devices and Printers** and right-click the name of your monitor from the menu.

   Alternatively, right-click the desktop and select **Personalize**, **Display**, **Devices and Printers**, and right-click the name of your monitor from the menu.

2. Select **Properties** from the menu.
3. Click the **Hardware** tab.
4. Click **Generic PnP Monitor**, and then the **Properties** button.
5. Click the **Driver** tab and the **Update Driver** button.
6. Insert the BenQ LCD Monitor DVD-ROM into a DVD drive on the computer.
7. In the **Update Driver Software** window, select the option **Browse my computer for driver software**.
8. Click **Browse** and navigate to the following directory: d:\BenQ_LCD\Driver\ (where d is the drive letter designator for the DVD-ROM drive).



The drive letter for your DVD drive may differ from the example above depending upon your system - it may be 'D:' or 'E:' or 'F:' etc.

9. Select the correct folder name of your monitor from provided driver list, and click **Next**.

   This will copy and install the appropriate monitor driver files to your computer.

10. Click **Close**.

    You may be prompted to restart your computer after the driver update is complete.

## How to install on Windows 7 system

1. Open **Display Properties**.

   Go to **Start**, **Control Panel, Hardware and Sound, Devices and Printers** and right-click the name of your monitor from the menu.

   Alternatively, right-click the desktop and select **Personalize**, **Display**, **Devices and Printers**, and right-click the name of your monitor from the menu.

2. Select **Properties** from the menu.
3. Click the **Hardware** tab.
4. Click **Generic PnP Monitor**, and then the **Properties** button.
5. Click the **Driver** tab and the **Update Driver** button.
6. Insert the BenQ LCD Monitor DVD-ROM into a DVD drive on the computer.
7. In the **Update Driver Software** window, select the option **Browse my computer for driver software**.
8. Click **Browse** and navigate to the following directory: d:\BenQ_LCD\Driver\ (where d is the drive letter designator for the DVD-ROM drive).



The drive letter for your DVD drive may differ from the example above depending upon your system - it may be 'D:' or 'E:' or 'F:' etc.

9. Select the correct folder name of your monitor from provided driver list, and click **Next**.

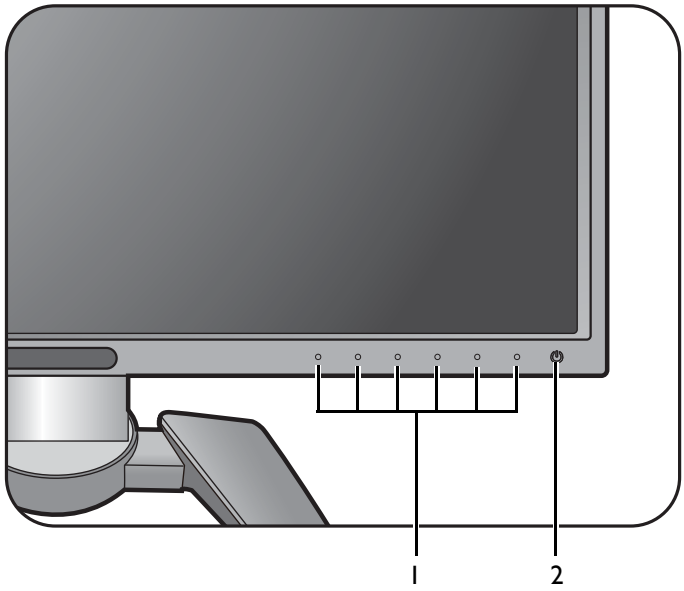
   This will copy and install the appropriate monitor driver files to your computer.

10. Click **Close**.

    You may be prompted to restart your computer after the driver update is complete.

# How to adjust your monitor

## The control panel

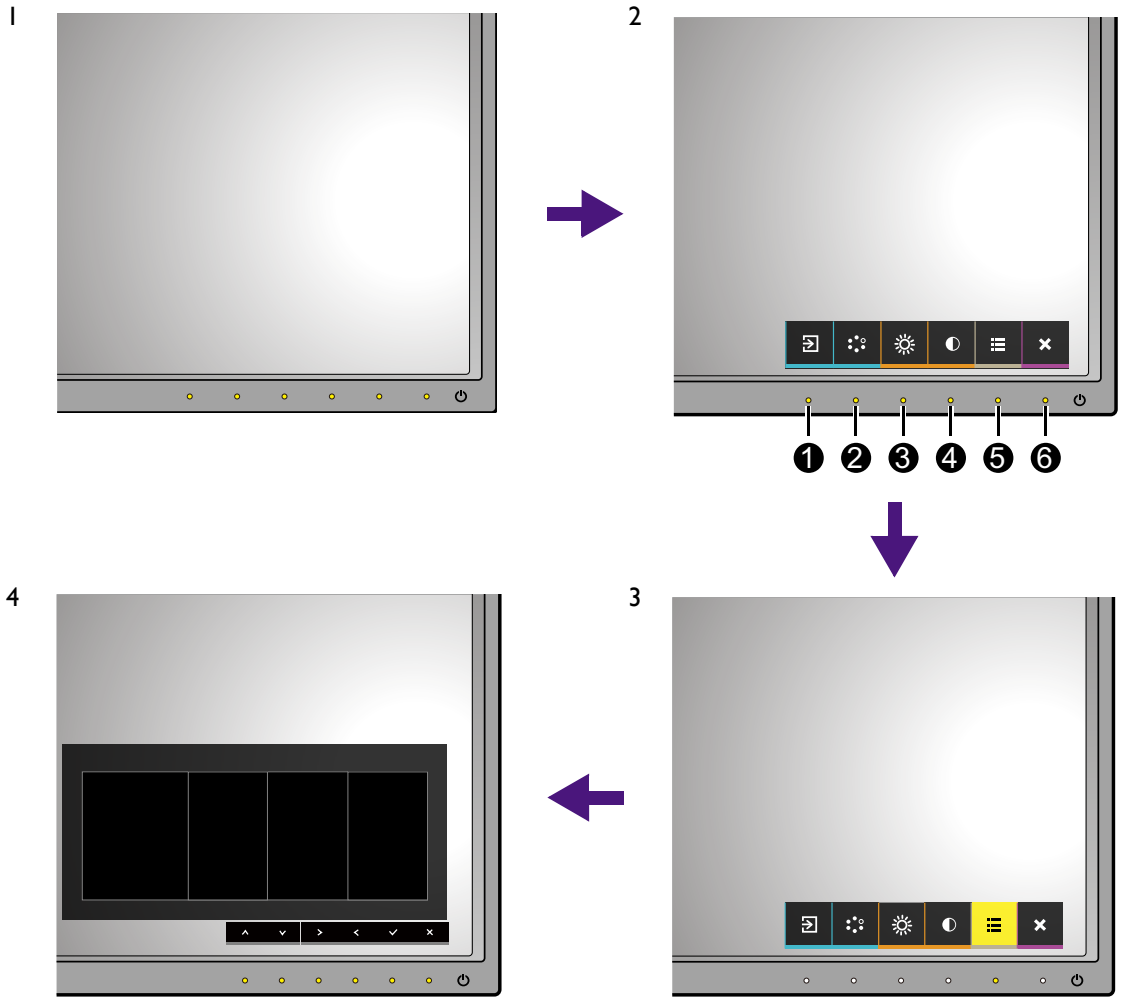



| No. | Name | Description |
|---|---|---|
| 1. | Control keys | Accesses the functions or menu items displayed on the screen, right next to each key. |
| 2. | Power key | Turns the power on or off. |

The control keys are embedded in a touchpad and are indicated by the LED indicators. Touch of an LED indicator represents pressing the corresponding control key.

## Basic menu operation

All OSD (On Screen Display) menus can be accessed by the control keys. You can use the OSD menu to adjust all the settings on your monitor.




1. Press any of the control keys.
2. The hot key menu is displayed. The left four controls are custom keys and are designated for particular functions.
3. Select (**Menu**) to access the main menu.
4. In the main menu, follow the icons next to the control keys to make adjustments or selection. See Navigating the main menu on page 35 for details on the menu options.

| No. | OSD in hot key menu | OSD icon in main menu | Function |
|---|---|---|---|
| ❶ | **Custom Key 1** | ∧ | • By default, the key is the hot key for **Input**. To change the default settings, see Customizing the hot keys on page 32.<br>• For Up/Increase adjustment. |

| No. | OSD in hot key menu | OSD icon in main menu | Function |
|---|---|---|---|
| ❷ | **Custom Key 2** | ∨ | • By default, the key is the hot key for **Color Mode**. To change the default settings, see Customizing the hot keys on page 32.<br>• For Down/Decrease adjustment. |
| ❸ | **Custom Key 3** | > | • By default, the key is the hot key for **Brightness**. To change the default settings, see Customizing the hot keys on page 32.<br>• Enters sub menus. |
| ❹ | **Custom Key 4** | < | • By default, the key is the hot key for **Contrast**. To change the default settings, see Customizing the hot keys on page 32.<br>• Enters sub menus. |
| ❺ | **Menu** | ✓ | Activates the main menu. |
| ❻ | **Exit** | ✕ | Exits OSD menu. |

• OSD = On Screen Display.
The hot keys only operate while the main menu is not currently displaying. Hot key displays will disappear after a few seconds of no key activity.

• To unlock the OSD controls, press and hold any key for 10 seconds.

## Customizing the hot keys

The left 4 control keys (also called custom keys) perform as hot keys to provide direct access to pre-defined functions. You can change the default setting and designate different functions for these keys.

1. Press any of the control keys to bring up the hot key menu, and press (**Menu**) to access the main menu.
2. Go to **System**.
3. Select the custom key you want to change.
4. In the sub menu, select a function that can be accessed by this key. A pop-up message will appear, showing that the setup is complete.

## Adjusting the display color

To adjust the display color, you can do one of the following:

• Apply the standard color settings from **Color Adjustment** > **Color Mode**.

• Change the display and color settings manually from the OSD menu. Settings you might want to change are:

- Color Temp. (see page 39)

- Gamma (see page 40)
- Color Gamut (see page 40)
- Hue (see page 40)
- Saturation (see page 40)
- Black Level (see page 40)
- Uniformity (see page 50)

Depending on the **Color Mode** you just set, the available options for color adjustment may vary. See Available menu options for each color mode on page 41 for more information.
Once the adjustment is done, you can save the customized settings from **Color Adjustment** > **Save Color Settings**.

- Use a colorimeter (purchased separately) to work with the provided software named **Palette Master** and optimize the display color. The calibration result will be saved and applied immediately. Visit www.BenQ.com for software download and more information (Palette Master How-to-Use Guide).
  To apply the calibrated result, go to **Color Adjustment** > **Color Mode** > **Calibration 1** or **Calibration 2**.

## Adjusting color temperature automatically

Your monitor comes with a color temperature sensor, which detects the light condition around the monitor and adjusts the color settings accordingly. This is to help keep the similar display color in different light conditions.

The color temperature sensor needs to be activated and managed by the **Color Display Clone** software in **Calibration 1** or **Calibration 2** mode.

1. Go to **Color Adjustment** > **Color Mode** and set the monitor to **Calibration 1** or **Calibration 2**.
2. Download the software and its user guide from www.BenQ.com.
3. Install the software and launch it to activate the sensor.

## Adjusting the backlight

To adjust the backlight of the monitor, you can do one of the following:

- Enable the light sensor of the monitor to adjust the backlight automatically. See Eye Protect on page 42 for more information
- Change the backlight manually from **Color Adjustment** > **Brightness**. See Brightness on page 39 for more information.

## Enabling GamutDuo in PBP mode

You can use Picture-by-Picture (PBP) function if there are video signals from 2 input sources. And GamutDuo allows you to set color settings of each window independently.

1. Establish cable connections between the monitor and 2 video sources appropriately.
2. While the monitor is powered on, turn on the PBP function from **PIP/PBP** > **Mode**.
3. Go to **Display** > **Input** and select one input for the main window.

4. Go to **PIP/PBP** > **PIP/PBP Source** to set the other input for the sub window.
5. To adjust the color settings of the main window, navigate to the **Display** and the **Color Adjustment** menus. See Available menu options for each color mode on page 41 for more information.
6. To adjust the color settings of the sub window, go to the **PIP/PBP** menu. See Available menu options for each color mode on page 41 for more information.



If one of the custom keys has been set as the hot key for **PIP/PBP** and the PIP/PBP function is activated, you can obtain the main and the sub (inset) window information quickly by pressing the hot key.

## Video source selection in PIP/PBP mode

Your monitor scans for the available video sources in the following order: DVI, HDMI, DP, and mini DP, and displays the first available one. This video source will become the main source in PIP/PBP mode. You will need to decide the second source for PIP/PBP mode from the menu in **PIP/PBP Source** on page 47. Menu options that are not available will become grayed out.

Refer to the following table to find your main source and its supporting second sources.

| | | Possible second sources | | | |
|---|---|---|---|---|---|
| | Inputs | DVI | HDMI | DP | Mini DP |
| Main source | DVI | | V | V | V |
| | HDMI | V | | V | V |
| | DP | V | V | | V |
| | Mini DP | V | V | V | |

# Navigating the main menu

You can use the OSD (On Screen Display) menu to adjust all the settings on your monitor.

Press any of the control keys to bring up the hot key menu, and press (**Menu**) to access the main menu. See Basic menu operation on page 31 for details.

Available menu options may vary depending on the input sources, functions and settings. Menu options that are not available will become grayed out. And keys that are not available will be disabled and the corresponding OSD icons will disappear.

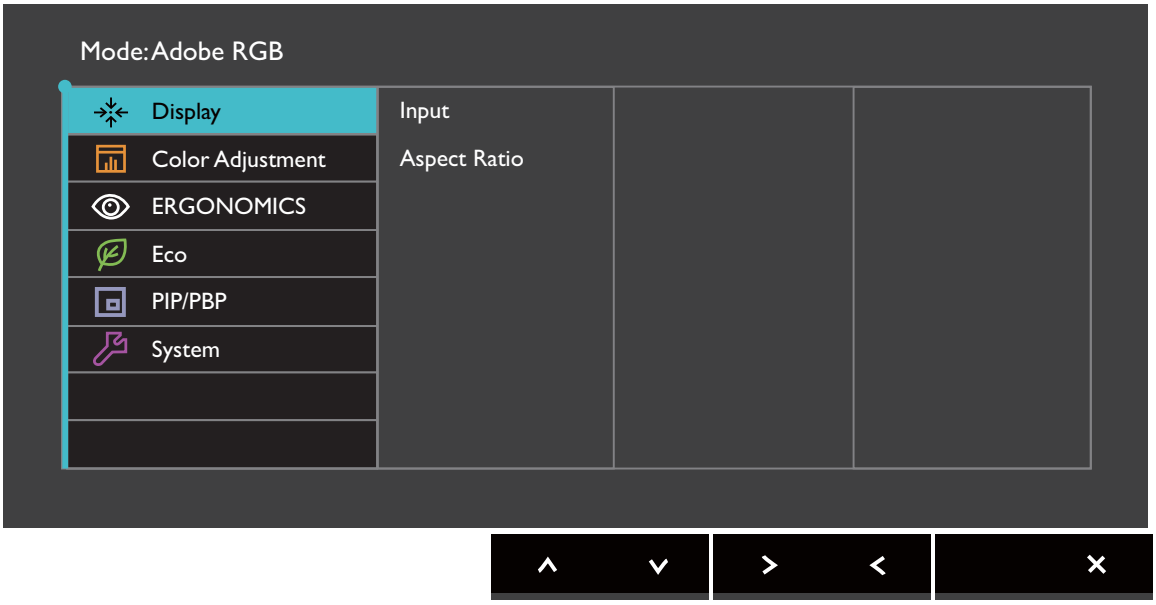
The OSD menu languages may differ from the product supplied to your region, see Language on page 50 under **System** and **OSD Settings** for more details.

For more information on each menu, please refer to the following pages:


- Display menu on page 36
- Color Adjustment menu on page 38
- ERGONOMICS menu on page 42
- Eco menu on page 44
- PIP/PBP menu on page 46
- System menu on page 49

# Display menu

Available menu options may vary depending on the input sources, functions and settings. Menu options that are not available will become grayed out. And keys that are not available will be disabled and the corresponding OSD icons will disappear.



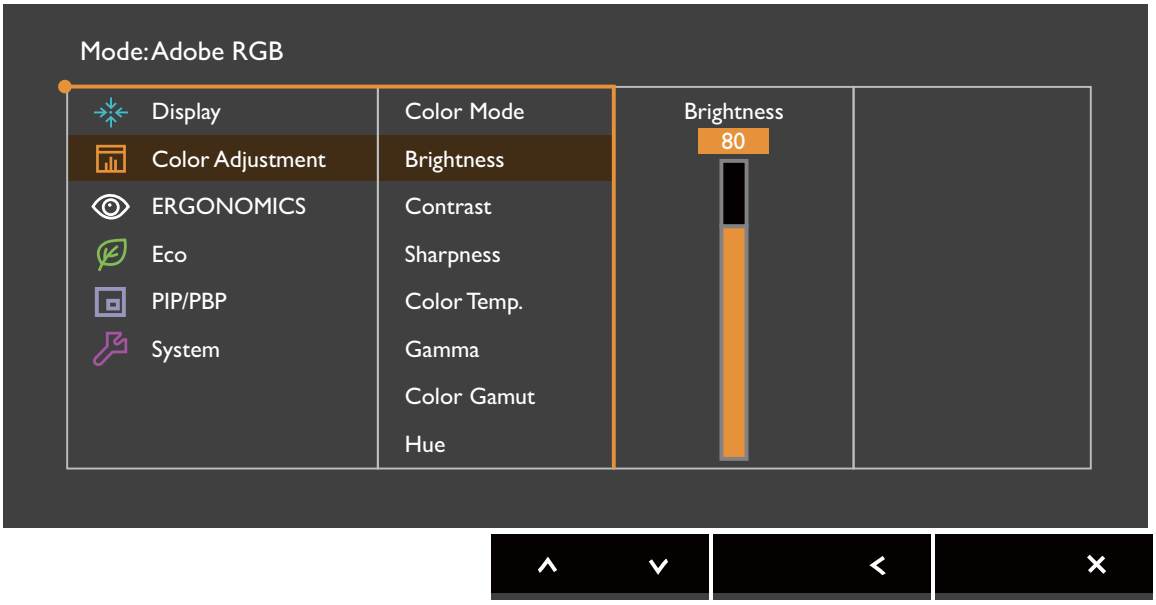

1. Select (**Menu**) from the hot key menu.
2. Use ∧ or ∨ to select **Display**.
3. Select > to go to a sub menu, and then use ∧ or ∨ to select a menu item.
4. Use ∧ or ∨ to make adjustments, or use √ to make selection.
5. To return to the previous menu, select <.
6. To exit the menu, select ×.

| Item | Function | | Range |
|---|---|---|---|
| **Input** | Use this to change the input to that appropriate to your video cable connection type. | | • **DVI**<br>• **HDMI**<br>• **DP**<br>• **Mini DP** |
| **Aspect Ratio** | This feature is provided to allow aspect ratios other than 16:9 to be displayed without geometric distortion. | | |
| | **Full** | Scales the input image to fill the screen. Ideal for 16:9 aspect images. | |
| | **Aspect** | The input image is displayed without geometric distortion filling as much of the display as possible. | |

| Item | Function | | Range |
|---|---|---|---|
| | **1:1** | Displays the input image in its native resolution without scaling. | |

# Color Adjustment menu

Available menu options may vary depending on the input sources, functions and settings. Menu options that are not available will become grayed out. And keys that are not available will be disabled and the corresponding OSD icons will disappear.




1. Select (**Menu**) from the hot key menu.
2. Use ∧ or ∨ to select **Color Adjustment**.
3. Select > to go to a sub menu, and then use ∧ or ∨ to select a menu item.
4. Use ∧ or ∨ to make adjustments, or use √ to make selection.
5. To return to the previous menu, select <.
6. To exit the menu, select ×.

| Item | Function | | Range |
|---|---|---|---|
| **Color Mode** | Select a color mode that best suits the type of images shown on the screen. | | |
| | **Standard** | For basic PC application. | |
| | **Adobe RGB** | For better color matching representation with Adobe® RGB compatible peripherals. | |
| | **sRGB** | For better color matching representation with sRGB compatible peripherals. | |
| | **DCI-P3** | For better color matching representation with Standard DCI-P3. | |
| | **Rec. 709** | For better color matching representation with Standard Rec. 709. | |

| Item | Function | | Range |
|---|---|---|---|
| | **D50** | For better color matching representation with Standard Daylight Illuminant D50. | |
| | **D65** | For better color matching representation with Standard Daylight Illuminant D65. | |
| | **Calibration 1** | Applies the calibration result optimized by the provided calibration software named **Palette Master** and your colorimeter (purchased separately). Visit www.BenQ.com for software download and more information (Palette Master How-to-Use Guide). | |
| | **Calibration 2** | | |
| | **Custom 1** | Applies a combination of color settings defined by users. | |
| | **Custom 2** | | |
| **Brightness** | Adjusts the balance between light and dark shades. | | 0 to 100 |
| **Contrast** | Adjusts the degree of difference between darkness and lightness. | | 0 to 100 |
| **Sharpness** | Adjusts the clarity and visibility of the edges of the subjects in the image. | | 0 to 10 |
| **Color Temp.** | **2800K** | Applies a color tint (cool or warm) to the image. Color temperature is measured in K (Kelvin) degrees. The display becomes reddish if the color temperature is low, and becomes bluish if the color temperature is high.<br>Some color gradations may not be displayed well if this the setting has been adjusted. | |
| | **3700K** | | |
| | **5000K** | | |
| | **5500K** | | |
| | **6500K** | | |
| | **7000K** | | |
| | **7500K** | | |
| | **8200K** | | |
| | **9300K** | | |
| | **Custom** | Allows to adjust color temperature by 100K. | 2800K ~ 9300K |
| | **User Define** | The blend of the Red, Green and Blue primary colors can be altered to change the color tint of the image. Go to the succeeding **R** (red), **G** (green), and **B** (blue) menus to change the settings.<br>Decreasing one or more of the colors will reduce their respective influence on the color tint of the image. (e.g. if you reduce the Blue level the image will gradually take on a yellowish tint. If you reduce Green, the image will become a magenta tint.) | • **R Gain** (0~100)<br>• **G Gain** (0~100)<br>• **B Gain** (0~100) |

| Item | Function | | Range |
|---|---|---|---|
| **Gamma** | Adjusts the tone luminance. | | • **1.6**<br>• **1.8**<br>• **2.0**<br>• **2.2**<br>• **2.4**<br>• **2.6** |
| **Color Gamut** (available when **Color Mode** is set to **Custom**, **D50**, or **D65**) | **Adobe RGB** | Suitable for Adobe® RGB compatible peripherals. | |
| | **sRGB** | Suitable for sRGB compatible peripherals. | |
| | **EBU** | For better color matching representation with Standard EBU. | |
| | **SMPTE-C** | For better color matching representation with Standard SMPTE-C. | |
| | **DCI-P3** | For better color matching representation with Standard DCI-P3. | |
| | **Rec. 709** | For better color matching representation with Standard Rec. 709. | |
| | **Rec. 2020** | For better color matching representation with Standard Rec. 2020. | |
| **Hue** | Adjusts the degree of how we perceive colors.<br>Some color gradations may not be displayed well if this the setting has been adjusted. | | • **R**<br>• **G**<br>• **B**<br>• **C**<br>• **M**<br>• **Y** |
| **Saturation** | Adjusts the purity degree of colors.<br>Some color gradations may not be displayed well if this the setting has been adjusted. | | • **R**<br>• **G**<br>• **B**<br>• **C**<br>• **M**<br>• **Y** |
| **Black Level** | Adjusts the luminance of the dark areas in an image. | | 0~10 |
| **Save Color Settings** | Saves a new set of customized color settings. | | • **Custom Mode 1**<br>• **Custom Mode 2** |

| Item | Function | Range |
|---|---|---|
| **Reset Color** | Resets the custom color settings to the factory defaults. | • **YES**<br>• **NO** |

## Available menu options for each color mode

Depending on the **Color Mode** you just set, the available options for color adjustment may vary. Color modes and the available display options are as follows:

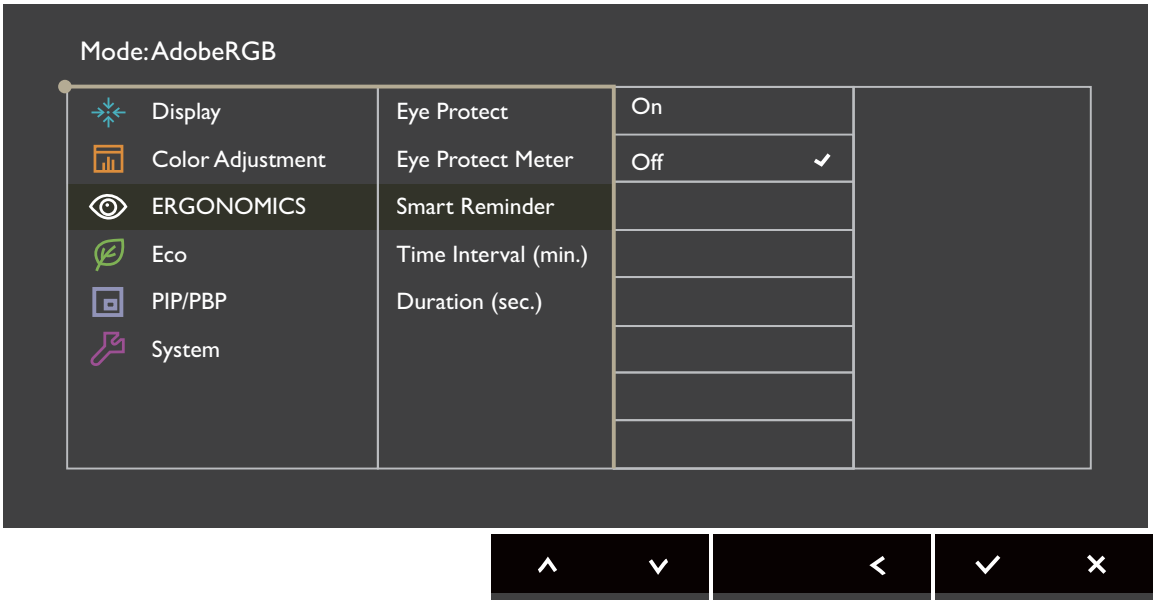
| | Color Mode | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Setting | **Standard** | **Adobe RGB** | **sRGB** | **DCI-P3** | **Rec. 709** | **D50** | **D65** | **Calibration** | **Custom** |
| **Brightness** | V | V | V | V | V | V | V | N/A | V |
| **Contrast** | V | V | V | V | V | V | V | N/A | V |
| **Sharpness** | V | V | V | V | V | V | V | V | V |
| **Color Temp.** | 2800K / 3700K / 5000K / 5500K / 6500K / 7000K / 7500K / 8200K / 9300K | 5000K / 6500K | 5000K / 6500K | N/A | N/A | N/A | N/A | N/A | V |
| **Gamma** | 1.8 / 2.2 | N/A | N/A | 2.2 / 2.4 / 2.6 | 2.2 / 2.4 | 1.8 / 2.2 | 1.8 / 2.2 | N/A | V |
| **Color Gamut** | sRGB / EBU / SMPTE-C / Rec. 709 / Adobe RGB / DCI-P3 / Rec. 2020 | N/A | N/A | N/A | N/A | Adobe RGB / sRGB | Adobe RGB / sRGB | N/A | V |
| **Hue** | N/A | N/A | N/A | N/A | N/A | N/A | N/A | V | V |
| **Saturation** | N/A | N/A | N/A | N/A | N/A | N/A | N/A | V | V |
| **Black Level** | V | V | V | V | V | V | V | N/A | V |

V: all options are available for adjustment.

N/A: all options are not available for adjustment.

# ERGONOMICS menu

Available menu options may vary depending on the input sources, functions and settings. Menu options that are not available will become grayed out. And keys that are not available will be disabled and the corresponding OSD icons will disappear.



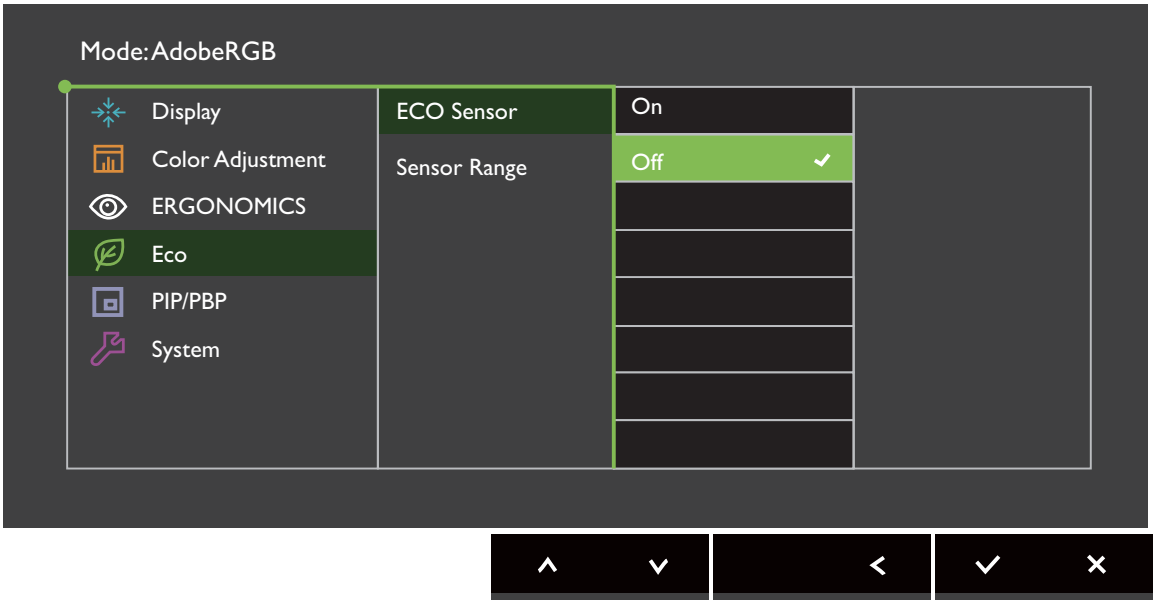

1. Select (**Menu**) from the hot key menu.
2. Use ∧ or ∨ to select **ERGONOMICS**.
3. Select > to go to a sub menu, and then use ∧ or ∨ to select a menu item.
4. Use ∧ or ∨ to make adjustments, or use √ to make selection.
5. To return to the previous menu, select <.
6. To exit the menu, select ×.

| Item | Function | Range |
|---|---|---|
| **Eye Protect** (available when **Color Mode** is set to **Standard** or **Custom**) | Your monitor comes with a light sensor, which detects the light condition around the monitor and adjusts the monitor backlight automatically. This is to protect your eyes from overexposure to bright light.<br>If the light is sufficient, the monitor brightness is increased.<br>If the monitor is in a poor light, the monitor brightness is decreased.<br>If you prefer to adjust the monitor brightness manually, go to **Color Adjustment** > **Brightness**.<br>Color performance may be compromised if light sensor is enabled. | • **ON**<br>• **OFF** |

| Item | Function | Range |
|---|---|---|
| **Eye Protect Meter** (available when **Color Mode** is set to **Standard** or **Custom**) | Sets to display the light condition around the monitor on the screen. | • **ON**<br>• **OFF** |
| **Smart Reminder** | Decides to display the pop-up message that reminds you to rest your eyes. | • **ON**<br>• **OFF** |
| **Time Interval (min.)** | Sets the interval of the reminder message. | • **20**<br>• **40**<br>• **60**<br>• **80**<br>• **100** |
| **Duration (sec.)** | Sets the time the reminder message lasts on the screen.<br>Alternatively, when the reminder message is displayed, press any key except the power button to hide the message. | • **5**<br>• **10**<br>• **15**<br>• **20**<br>• **25** |

# Eco menu

Available menu options may vary depending on the input sources, functions and settings. Menu options that are not available will become grayed out. And keys that are not available will be disabled and the corresponding OSD icons will disappear.



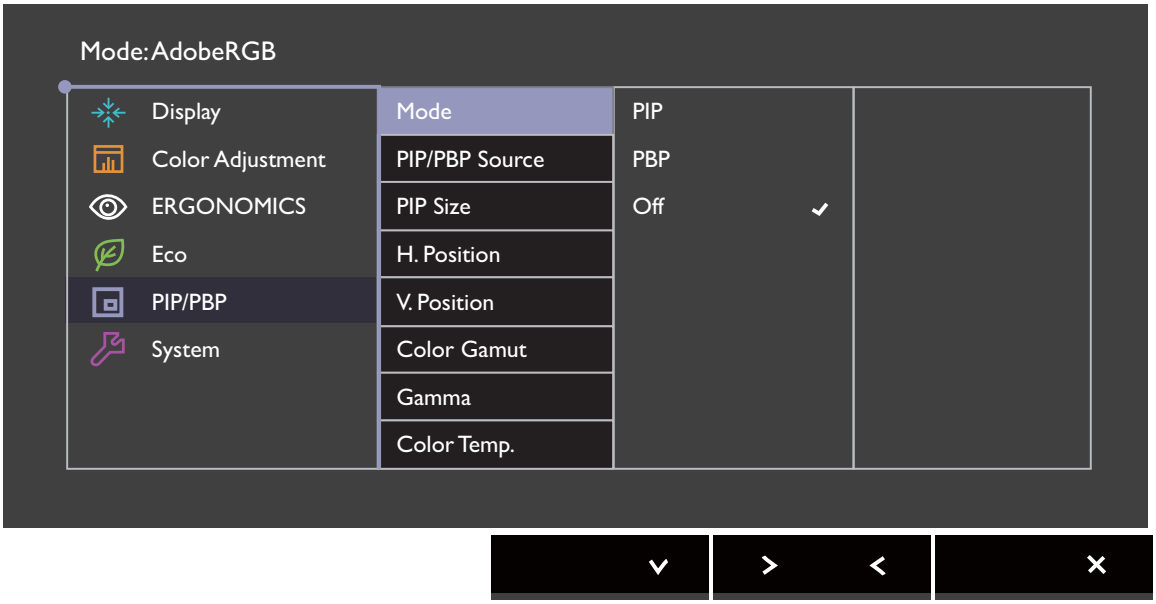

1. Select (**Menu**) from the hot key menu.
2. Use ∧ or ∨ to select **Eco**.
3. Select > to go to a sub menu, and then use ∧ or ∨ to select a menu item.
4. Use ∧ or ∨ to make adjustments, or use √ to make selection.
5. To return to the previous menu, select <.
6. To exit the menu, select ×.

| Item | Function | Range |
|---|---|---|
| **ECO Sensor** | Your monitor comes with a proximity sensor (called ECO sensor), which detects your presence in front of the monitor within the set range. If the sensor detects no presence, the monitor is turned off in 40 seconds to save power.<br>If the monitor is turned off by the ECO sensor, the power button flashes in white.<br>If the ECO sensor detects no presence for over 2 hours, the monitor will be powered off. Press the power button to turn on the monitor.<br>Color performance may be compromised if ECO sensor is enabled. | • **ON**<br>• **OFF** |

| Item | Function | Range |
| --- | --- | --- |
| **Sensor Range** | Decides how far the sensor can detect. | • **Near**<br>• **Middle**<br>• **Far** |

# PIP/PBP menu

Available menu options may vary depending on the input sources, functions and settings. Menu options that are not available will become grayed out. And keys that are not available will be disabled and the corresponding OSD icons will disappear.




1. Select (**Menu**) from the hot key menu.
2. Use ∧ or ∨ to select **PIP/PBP**.
3. Select > to go to a sub menu, and then use ∧ or ∨ to select a menu item.
4. Use ∧ or ∨ to make adjustments, or use ✓ to make selection.
5. To return to the previous menu, select <.
6. To exit the menu, select ✕.

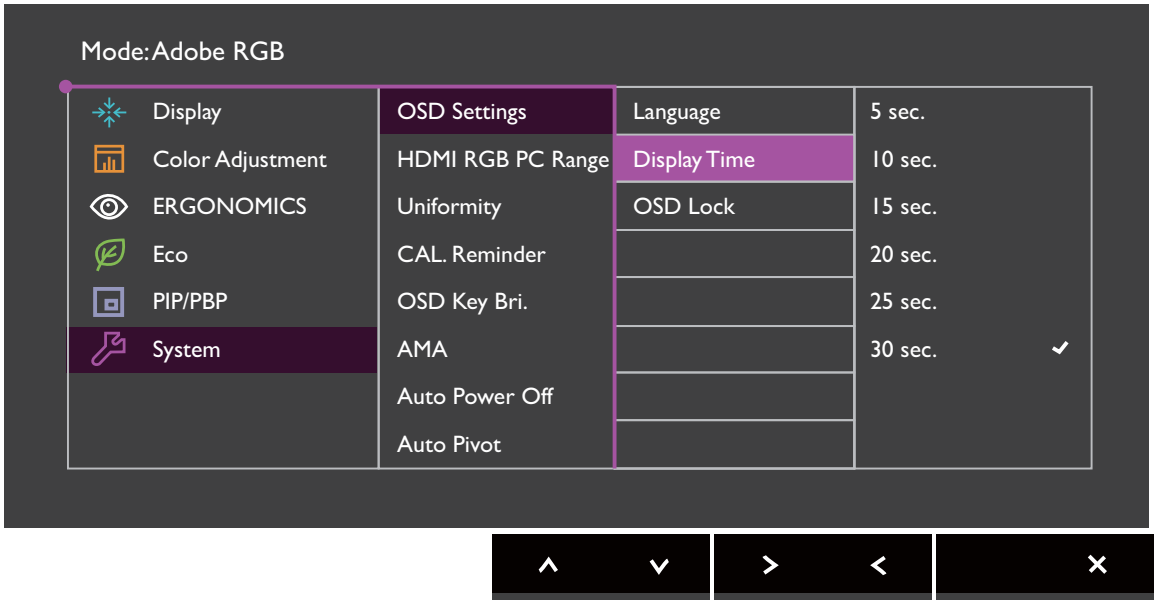
| Item | Function | | Range |
|---|---|---|---|
| **Mode** | Sets the PIP or PBP mode. Pictures from two independent video sources are displayed on the screen at the same time. | | |
| | **PIP** | The Picture-in-Picture (PIP) mode displays the main video source on the screen while the second source in an inset window (sub window). | |
| | **PBP** | Allows to display images from two different video sources side-by-side. | |
| | **OFF** | Disables PIP/PBP mode. | |

| Item | Function | Range |
|---|---|---|
| **PIP/PBP Source** | Sets the second video source for the PIP/PBP mode. | • **DVI**<br>• **HDMI**<br>• **DP**<br>• **Mini DP** |
| **PIP Size** | Determines the size of the inset window in the PIP mode. | • **Small**<br>• **Medium**<br>• **Large** |
| **H. Position** | Adjusts the horizontal position of the inset window in the PIP mode. | 0~100 |
| **V. Position** | Adjusts the vertical position of the inset window in the PIP mode. | 0~100 |
| **Color Gamut** | Reproduces the color gamut set by specified standards of the inset window in PBP mode. | • **Adobe RGB**<br>• **sRGB**<br>• **EBU**<br>• **SMPTE-C**<br>• **DCI-P3**<br>• **Rec. 709**<br>• **Rec. 2020** |
| **Gamma** | Adjusts the tone luminance of the inset window in PBP mode. | • **1.6**<br>• **1.8**<br>• **2.0**<br>• **2.2**<br>• **2.4**<br>• **2.6** |
| **Color Temp.** | Applies a color tint (cool or warm) to the image of the inset window in PBP mode. Color temperature is measured in K (Kelvin) degrees. The display becomes reddish if the color temperature is low, and becomes bluish if the color temperature is high. | • **2800K**<br>• **3700K**<br>• **5000K**<br>• **5500K**<br>• **6500K**<br>• **7000K**<br>• **7500K**<br>• **8200K**<br>• **9300K** |
| **Contrast** | Adjusts the contrast of the inset window (sub window) in the PIP/PBP mode. | 0~100 |

| Item | Function | Range |
|---|---|---|
| **Sharpness** | Adjusts the sharpness of the inset window (sub window) in the PIP/PBP mode.<br><br>To adjust the contrast and the sharpness of the main source, go to the **Color Adjustment** menu. See page 39 for more information. | 0~10 |

# System menu

Available menu options may vary depending on the input sources, functions and settings. Menu options that are not available will become grayed out. And keys that are not available will be disabled and the corresponding OSD icons will disappear.




1. Select (**Menu**) from the hot key menu.
2. Use ∧ or ∨ to select **System**.
3. Select > to go to a sub menu, and then use ∧ or ∨ to select a menu item.
4. Use ∧ or ∨ to make adjustments, or use ✓ to make selection.
5. To return to the previous menu, select <.
6. To exit the menu, select ×.

| Item | Function | | Range |
|---|---|---|---|
| **OSD Settings** | **Language** | Sets the OSD menu language.<br>The language options displayed on your OSD may differ from those shown on the right, depending on the product supplied in your region. | • **English**<br>• **Français**<br>• **Deutsch**<br>• **Italiano**<br>• **Español**<br>• **Polski**<br>• **Česky**<br>• **Magyar**<br>• **SiCG/BiH/CRO**<br>• **Română**<br>• **Nederlands**<br>• **Русский**<br>• **Svenska**<br>• **Português**<br>• 日本語<br>• 繁體中文<br>• 简体中文 |
| | **Display Time** | Adjusts the display time of the OSD menu. | • **5 sec.**<br>• **10 sec.**<br>• **15 sec.**<br>• **20 sec.**<br>• **25 sec.**<br>• **30 sec.** |
| | **OSD Lock** | Prevents all the monitor settings from being accidentally changed. When this function is activated, the OSD controls and hotkey operations will be disabled.<br>To unlock the OSD controls, press and hold any key for 10 seconds. | |
| **HDMI RGB PC Range** | Determines the range of color scales. Select an option that matches the RGB range setting on the connected HDMI device. | | • **RGB (0~255)**<br>• **RGB (16~235)** |
| **Uniformity** | If activated, this function compensates the variation in brightness across the display area so the whole display area looks uniform in brightness. However, if high contract and brightness are desired, please turn off this function. | | • **ON**<br>• **OFF** |
| **CAL. Reminder** | Sets to remind you when monitor calibration is recommended. When the monitor is in use, the used time is automatically calculated by a built-in timer. | | • **ON**<br>• **OFF** |

| Item | Function | Range |
|---|---|---|
| **OSD Key Bri.** | Adjusts the LED indicators' brightness of the OSD control keys. | 0~5 |
| **AMA** | Improves the gray level response time of the LCD panel. | • **ON**<br>• **OFF** |
| **Auto Power Off** | Sets the time to power off the monitor automatically in power saving mode. | • **OFF**<br>• **10 min.**<br>• **20 min.**<br>• **30 min.** |
| **Auto Pivot** | Sets to rotate the OSD menu with the monitor. | • **ON**<br>• **OFF** |
| **Resolution Notice** | Sets whether to display the resolution notice of the recommended resolution when a new input source is detected by the monitor. | • **ON**<br>• **OFF** |
| **Custom Key 1** | Sets the function to be accessed by custom key 1. | • **Brightness**<br>• **Contrast**<br>• **Input**<br>• **Color Mode**<br>• **Color Temp.**<br>• **Gamma**<br>• **Color Gamut**<br>• **Black Level**<br>• **PIP / PBP** |
| **Custom Key 2** | Sets the function to be accessed by custom key 2. | |
| **Custom Key 3** | Sets the function to be accessed by custom key 3. | |
| **Custom Key 4** | Sets the function to be accessed by custom key 4. | |
| **DDC/CI** | Allows the monitor settings to be set through the software on the PC.<br> DDC/CI, short for Display Data Channel/Command Interface, which was developed by Video Electronics Standards Association (VESA). DDC/CI capability allows monitor controls to be sent via the software for remote diagnostics. | • **ON**<br>• **OFF** |
| **Information** | Displays the current monitor property settings. | • **Input**<br>• **Current Resolution**<br>• **Optimum Resolution** (best with the monitor)<br>• **PIP Status**<br>• **PIP Source**<br>• **PIP Resolution**<br>• **Model Name** |

| Item | Function | Range |
|---|---|---|
| **Reset All** | Resets all mode, color and geometry settings to the factory default values. | • **YES**<br>• **NO** |

# Troubleshooting

## Frequently asked questions (FAQ)

The image is blurred.

Read the instructions on the link **"Adjusting the Screen Resolution"** on the DVD, and then select the correct resolution, refresh rate and make adjustments based on these instructions.

Does the blurring only occur at resolutions lower than the native (maximum) resolution?

Read the instructions on the link **"Adjusting the Screen Resolution"** on the DVD. Select the native resolution.

Pixel errors can be seen.

One of several pixels is permanently black, one or more pixels are permanently white, one or more pixels are permanently red, green, blue or another color.

- Clean the LCD screen.
- Cycle power on-off.
- These are pixels that are permanently on or off and is a natural defect that occurs in LCD technology.

The image has a faulty coloration.

It has a yellow, blue or pink appearance.

Go to **Color Adjustment** and **Reset Color**, and then choose **YES** to reset the color settings to the factory defaults.

If the image is still not correct and the OSD also has faulty coloration, this means one of the three primary colors is missing in the signal input. Now check the signal cable connectors. If any pin is bent or broken off, please contact your dealer to get necessary support.

The LED indicator is white.

- If the LED lights up in solid white, the monitor is powered on.
- If the LED is illuminated in white and there is a message **Out of Range** on the screen, this means you are using a display mode that this monitor does not support, please change the setting to one of the supported mode. Please read the **"Preset display modes"** section from the link **"Adjusting the Screen Resolution"**.
- If the LED is illuminated in white, the power management mode is active. Press any button on the computer keyboard or move the mouse. If that does not help, check the signal cable connectors. If any pin is bent or broken off, please contact your dealer to get necessary support.
- If the LED is off, check the power supply mains socket, the external power supply and the mains switch.

Faint shadow from the static image displayed is visible on the screen.

- Activate the power management function to let your computer and monitor go into a low power "sleep" mode when not actively in use.
- Use a screensaver to prevent the occurrence of image retention.

The image is distorted, flashes or flickers.

Read the instructions on the link **"Adjusting the Screen Resolution"** on the DVD, and then select the correct resolution, refresh rate and make adjustments based on these instructions.

You are running the monitor at its native resolution, but the image is still distorted.

Images from different input sources may appear distorted or stretched on the monitor running at its native resolution. To have the optimal display performance of each type of input sources, you can use the **Aspect Ratio** function to set a proper aspect ratio for the input sources. See Aspect Ratio on page 36 for details.

The image is displaced in one direction.

Read the instructions on the link **"Adjusting the Screen Resolution"** on the DVD, and then select the correct resolution, refresh rate and make adjustments based on these instructions.

The OSD controls are inaccessible.

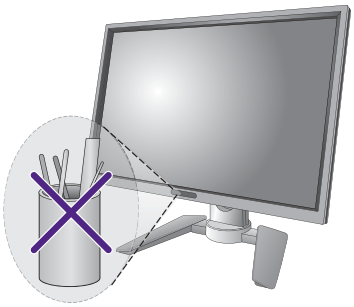
To unlock the OSD controls when it is preset to be locked, press and hold any key for 10 seconds.

The light sensor of the monitor does not work well.

The light sensor is located at the front bottom of the monitor. Please check:

- If the Eye Protect function is set to **ON**. Check **ERGONOMICS** > **Eye Protect**.
- If there are any obstacles in front of the sensor that keep the sensor from detecting the light properly.
- If there are any objects or clothing in bright colors in front of the sensor. Bright colors (especially white and fluorescent colors) reflect light and the sensor cannot detect the main light sources.

The ECO sensor of the monitor does not work well.



- The ECO sensor is located at the front bottom of the monitor. Check if there are any obstacles in front of the sensor that keep the sensor from detecting your presence properly.
- The colors and the materials of your clothes may affect the detection. Adjust the sensor range if needed. See Sensor Range on page 45 for more information.
- Adjust the distance between you and the monitor.

If none of the proceeding actions works, it is probably because the materials of your clothes are unique and cannot be detected by the ECO sensor. Please be noted that this is neither a manufacturing defect nor is the sensor damaged. You should turn off the ECO sensor for now in **Eco** > **ECO Sensor**.

## Need more help?

If your problems remain after checking this manual, please contact your place of purchase or visit the local website from www.BenQ.com for more support and local customer service.