



CHI00

Full HD Portable LED Projector

User Manual



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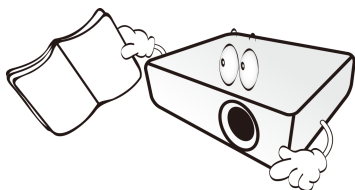
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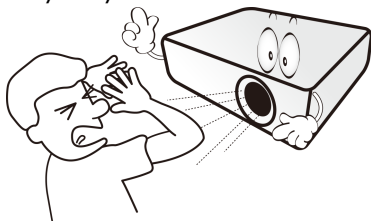
Important safety instructions

Your projector is designed and tested to meet the latest standards for safety of information technology equipment. However, to ensure safe use of this product, it is important that you follow the instructions mentioned in this manual and marked on the product.

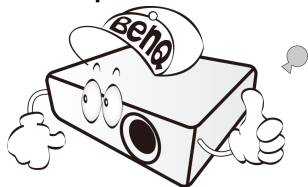
1. **Please read this manual before you operate your projector.** Save it for future reference.



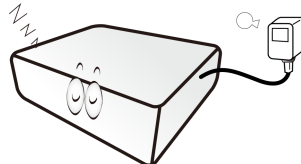
2. **Do not look straight at the projector lens during operation.** The intense light beam may damage your eyes.



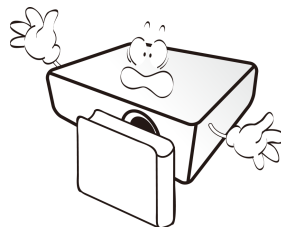
3. **Refer servicing to qualified service personnel.**



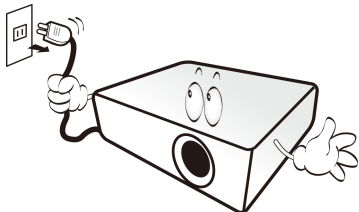
4. In some countries, the line voltage is NOT stable. This projector is designed to operate safely within a mains voltage between 100 to 240 volts AC, but could fail if power cuts or surges of ± 10 volts occur. **In areas where the mains voltage may fluctuate or cut out, it is recommended that you connect your projector through a power stabilizer, surge protector or uninterruptible power supply (UPS).**



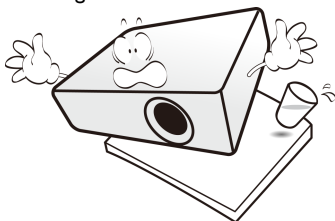
5. Do not block the projection lens with any objects when the projector is under operation as this could cause the objects to become heated and deformed or even cause a fire. To temporarily turn off the lamp, use the **BLANK** function.



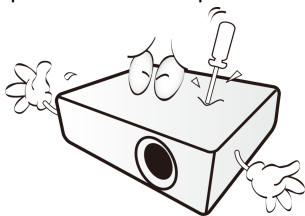
6. Never replace any electronic components unless the projector is unplugged.



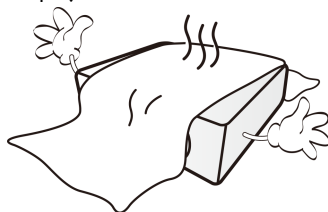
7. Do not place this product on an unstable cart, stand, or table. The product may fall, sustaining serious damage.



8. Do not attempt to disassemble this projector. There are dangerous high voltages inside which may cause death if you should come into contact with live parts. Refer servicing only to suitably qualified professional service personnel.

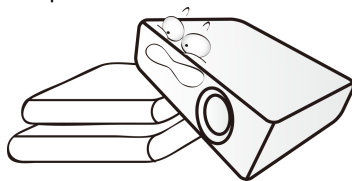


9. Do not block the ventilation holes.
- Do not place this projector on a blanket, bedding or any other soft surface.
 - Do not cover this projector with a cloth or any other item.
 - Do not place inflammables near the projector.

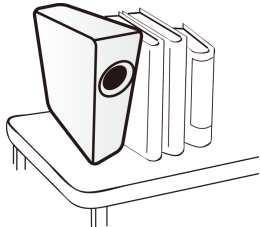


If the ventilation holes are seriously obstructed, overheating inside the projector may result in a fire.

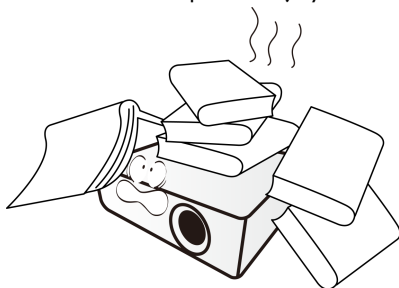
10. Always place the projector on a level, horizontal surface during operation.



11. Do not stand the projector on end vertically. Doing so may cause the projector to fall over, causing injury or resulting in damage to the projector.

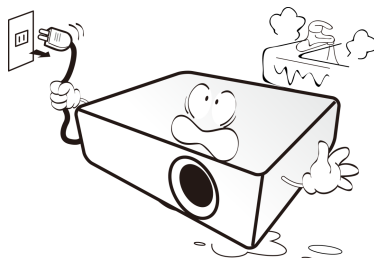


12. Do not step on the projector or place any objects upon it. Besides probable physical damage to the projector; doing so may result in accidents and possible injury.

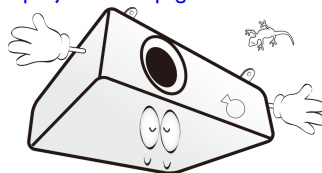


13. When the projector is under operation, you may sense some heated air and odor from its ventilation grill. It is a normal phenomenon and not a product defect.

14. Do not place liquids near or on the projector. Liquids spilled into the projector may cause it to fail. If the projector does become wet, disconnect it from the power outlet and call BenQ to have the projector serviced.

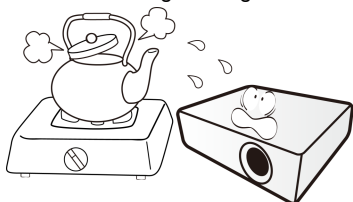


15. This projector is capable of displaying inverted images for ceiling mount installation. Use only BenQ Projector Mounting Kit for mounting. See ["Ceiling mounting the projector"](#) on page 6 for details.

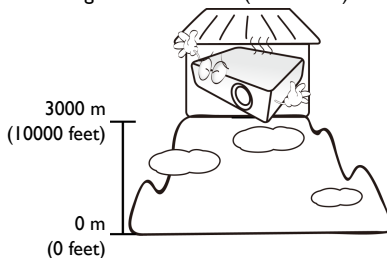


16. This apparatus must be earthed.

17. Do not place this projector in any of the following environments.
- Space that is poorly ventilated or confined. Allow at least 50 cm clearance from walls and free flow of air around the projector.
 - Locations where temperatures may become excessively high, such as the inside of a car with all windows rolled up.
 - Locations where excessive humidity, dust, or cigarette smoke may contaminate optical components, shortening the projector's life span and darkening the image.



- Locations near fire alarms.
- Locations with an ambient temperature above 40°C/104°F.
- Locations where the altitudes are higher than 3000 m (10000 feet).




Ceiling mounting the projector

If you intend to mount your projector on the ceiling, we strongly recommend that you use a proper fitting BenQ Projector Mounting Kit and ensure it is securely and safely installed.

If you use a non-BenQ brand projector ceiling mount kit, there is a safety risk that the projector may fall from the ceiling due to an improper attachment through the use of the wrong gauge or length screws.

You can purchase a BenQ Projector Mounting Kit from the place you purchased your BenQ projector. BenQ recommends that you also purchase a separate Kensington lock compatible security cable and attach it securely to both the Kensington lock slot on the projector and the base of the ceiling mount bracket. This will perform the secondary role of restraining the projector should its attachment to the mounting bracket become loose.

 **Hg - Lamp contains mercury. Manage in accordance with local disposal laws. See www.lamprecycle.org.**

Risk Group 2

1. According to the classification of photobiological safety of lamps and lamp systems, this product is Risk Group 2, IEC 62471-5:2015.
2. Possibly hazardous optical radiation emitted from this product.
3. Do not stare at operating lamp. May be harmful to the eyes.
4. As with any bright source, do not stare into the direct beam.




Overview

Projector features

The projector integrates high-performance optical engine projection and a user-friendly design to deliver high reliability and ease of use.


The projector offers the following features.


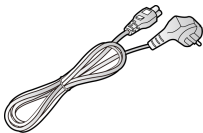

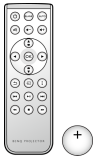
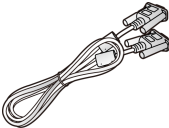



- **Advanced LED light source**
Long lasting LED light source provides a longer life span than traditional lamps.
 - **Optical engine with DLP technologies**
Full HD resolution and a bright picture.
 - **Various useful features**
Supports iPhone/iPad, Android devices, multimedia players, and computers.
 - **Easy to carry**
The projector is small and light, making it useful for business trips and leisure activities.
 - **Multiple input ports**
Multiple input ports, including PC, HDMI, HDMI/MHL, and HDMI/MICRO-B, provide flexible connectivity with peripheral devices.
 - **Audio input & output**
Equipped with 5W x 2 speakers, Audio Input (Mini-Jack $\phi 3.5$ mm), and Audio Headphone Output (Phone-Jack $\phi 3.5$ mm)
 - **Dual OSD**
Two types of OSD menus are designed for different usage scenarios: the Basic OSD is intuitive and easy, while the Advanced OSD offers full range of advanced adjustments.
-  • **The apparent brightness of the projected image will vary depending on the ambient lighting conditions, selected input signal contrast/brightness settings, and is proportional to projection distance.**
- **The lamp brightness will decline over time and may vary within the lamp manufacturers specifications. This is normal and expected behavior.**
 - **When the LED indicator lights up in red or a message appears suggesting it is time to replace the lamp, please contact your local BenQ customer service center for help.**


Shipping contents

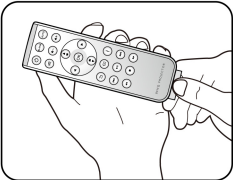
Carefully unpack and verify that you have all of the items shown below. If any of these items are missing, please contact your place of purchase.

Standard accessories

 The supplied accessories will be suitable for your region, and may differ from those illustrated.

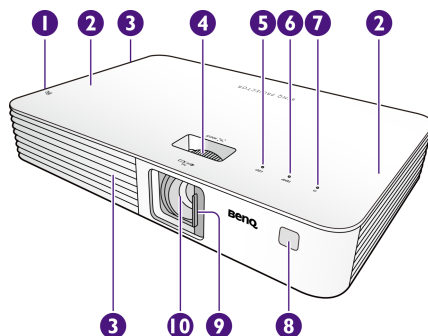
| | | |
|---|--|--|
|  |  |  |
| Projector | Power cord | Quick start guide |
|  |  |  |
| Remote control with battery | VGA cable | User manual CD |
| |  |  |
| | HDMI cable | Warranty card* |

-  • *** The warranty card is only supplied in some specific regions. Please consult your dealer for detailed information.**
- **Pull the tab before using the remote control.**

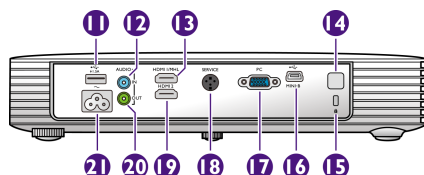


Projector exterior view

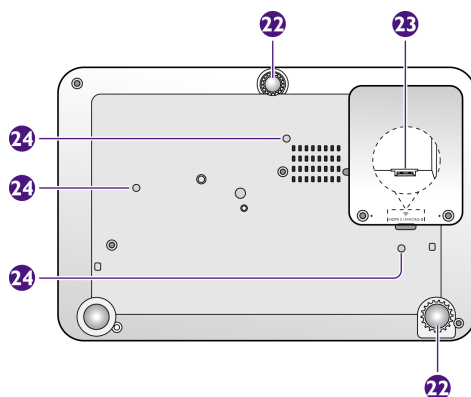
Front/top view



Rear view



Bottom view

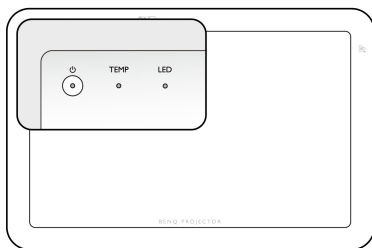


1. Vent (heated air exhaust)
2. Built-in speakers
3. Vents (cold air intake)
4. Focus ring
5. LED indicator
6. TEMP (Temperature) indicator
7. POWER button/POWER indicator
8. Front IR remote sensor
9. Lens cover
10. Projection lens
11. USB Type-A port
- Provides power for charging an HDMI/MHL dongle, such as BenQ QCast (purchased separately). See [page 22](#) for details.
12. Audio input jack
13. HDMI 1/MHL input port
14. Rear IR remote sensor
15. Kensington anti-theft lock slot
16. Mini-B USB port
- Used for service.
17. RGB (PC)/Component Video (YPbPr/YCbCr) signal input jack
18. SERVICE port
- Used for service.
19. HDMI 2 input port
20. Audio output jack
21. AC power jack
22. Adjuster feet
23. HDMI 3/MICRO-B input port
- See [page 23](#) for details.
24. Ceiling mount holes

- Do not block the ventilation openings. Blocking the ventilation openings can cause your projector to overheat and may cause it to fail.**
- Make sure the lens cover is always open when the projector lamp is on.**

Controls and functions


Projector



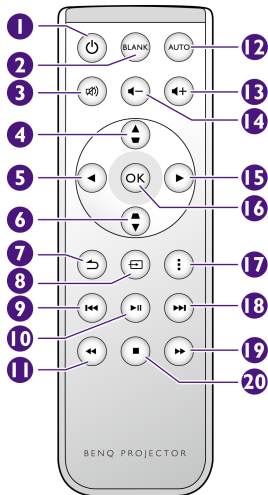
1. **POWER button/POWER indicator**
 - Toggles the projector between standby mode and on. See ["Starting up the projector" on page 26](#) and ["Shutting down the projector" on page 28](#) for details.
 - Lights up or flashes when the projector is under operation.
2. **TEMP (Temperature) indicator**

Lights up in red if the projector's temperature becomes too high.
3. **LED indicator**

Indicates the status of the lamp. Lights up or flashes when the lamp has developed a problem.

 For more information, see ["Indicators" on page 61](#).

Remote control



1. **POWER**

Toggles the projector between standby mode and on. See ["Starting up the projector" on page 26](#) and ["Shutting down the projector" on page 28](#) for details.

2. **Blank**

Hides the screen picture. See ["Hiding the image" on page 35](#) for details.

3. **Mute**

Toggles projector audio between on and off.

4. **Up arrow key**

When the On-Screen Display (OSD) menu is on:

- Navigates up to select the desired menu items.

When the On-Screen Display (OSD) is off:

- Launches the **Vertical Keystone** window. Use this button to manually correct distorted images resulting from an angled projection.

5. **Left arrow key**

When the On-Screen Display (OSD) menu is on:

- Navigates left to select the desired menu items.
- Makes adjustments, such as brightness, contrast, etc.

6. **Down arrow key**

When the On-Screen Display (OSD) menu is on:

- Navigates down to select the desired menu items.

When the On-Screen Display (OSD) is off:

- Launches the **Vertical Keystone** window. Use this button to manually correct distorted images resulting from an angled projection.

7. **Back**

Goes back to upper level of OSD.

8. **Source**

Displays the source selection bar.

9. **Previous**

Plays previous video, audio, photo slideshow, or document (working with MHL only).

10. **Play/Pause**

Plays or pauses a video, music, or photo slideshow (working with MHL only).

11. **Rewind**

Rewinds video and audio playback (working with MHL only).

12. **AUTO**

Automatically determines the best picture timings for the displayed image. See ["Auto-adjusting the image" on page 34](#) for details.

13. Volume up key

Increases the projector audio volume.

14. Volume down key

Decreases the projector audio volume.

15. Right arrow key

When the On-Screen Display (OSD) menu is on:

- Navigates right to select the desired menu items.
- Makes adjustments, such as brightness, contrast, etc.

16. OK

Confirms a selected function when a menu is displayed.

17. Menu

Opens/closes the On-Screen Display (OSD) menu.

18. Next


Plays next video, audio, photo slideshow, or document (working with MHL only).

19. Fast-forward

Fast-forwards video and audio playback (working with MHL only).


20. Stop

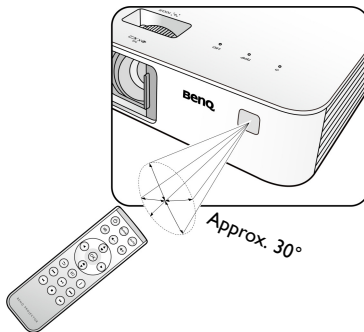
Stops video and audio playback. (working with MHL only).

 Certain remote control functions might not work under MHL operation because the MHL device being used may not support these functions. Please check your MHL device for available functions.

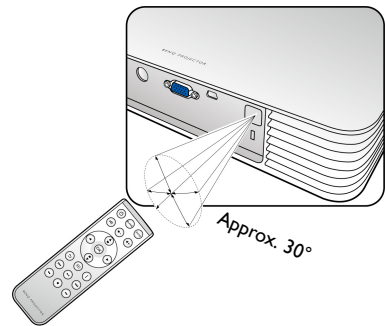
Remote control effective range

The remote control must be held at an angle within 30 degrees perpendicular to the projector's IR remote control sensor(s) to function correctly. The distance between the remote control and the sensor(s) should not exceed 8 meters (~ 26 feet).

 Make sure that there are no obstacles between the remote control and the IR sensor(s) on the projector that might obstruct the infra-red beam.



Operating the projector from the front side

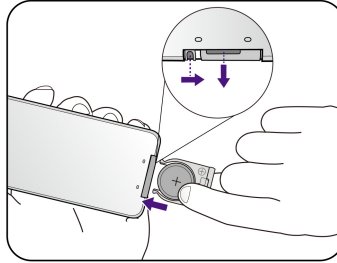


Operating the projector from the rear side

Replacing the remote control battery

1. Pull out the battery holder.

 Please follow the illustrated instructions. Push and hold the locking arm while pulling out the battery holder.



2. Insert the new battery in the holder. Note the positive polarity should face outward.
3. Push the holder into the remote control.



- **Avoid excessive heat and humidity.**
- **There may be battery damage if the battery is incorrectly replaced.**
- **Replace only with the same or equivalent type recommended by the battery manufacturer.**
- **Dispose of the used battery according to the battery manufacturer's instructions.**
- **Never throw the battery into fire. There may be danger of an explosion.**
- **If the battery is dead or if you do not plan to use the remote control for a long time, remove the battery to prevent damage to the remote control from possible battery leakage.**

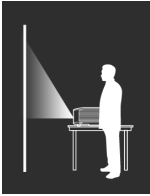

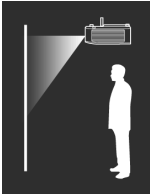


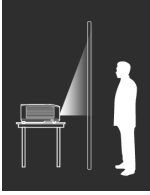


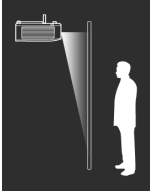


Installation

Choosing a location

Before choosing an installation location for your projector, take the following factors into consideration:

- Size and position of your screen
- Electrical outlet location
- Location and distance between the projector and the rest of your equipment

You can install your projector in the following ways.


| | |
|--|--|
| <p>1. Front: Select this location with the projector placed near the floor in front of the screen.</p>  <p>This is the most common way to position the projector for quick setup and portability.</p> <p>Turn on the projector and make the following settings:</p> <p>Press  and select Settings or System Setup : Basic > Projector Position > Front.</p> | <p>2. Front Ceiling: Select this location with the projector suspended from the ceiling in front of the screen.</p>  <p>Turn on the projector and make the following settings:</p> <p>Press  and select Settings or System Setup : Basic > Projector Position > Front Ceiling.</p> <p> Purchase the BenQ Projector Mounting Kit from your dealer to mount your projector on the ceiling.</p> |
| <p>3. Rear: Select this location with the projector placed near the floor behind the screen.</p>  <p>Turn on the projector and make the following settings:</p> <p>Press  and select Settings or System Setup : Basic > Projector Position > Rear.</p> <p> A special rear projection screen is required.</p> | <p>4. Rear Ceiling: Select this location with the projector suspended from the ceiling behind the screen.</p>  <p>Turn on the projector and make the following settings:</p> <p>Press  and select Settings or System Setup : Basic > Projector Position > Rear Ceiling.</p> <p> A special rear projection screen and the BenQ Projector Mounting Kit are required.</p> |

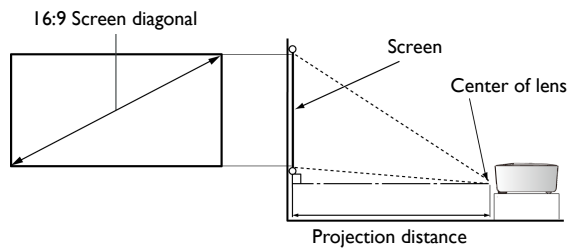
Obtaining a preferred projected image size

The projected image size is determined by the distance from the projector lens to the screen and the video format.


Projection dimensions

Use the illustration and the table below to help you determine the projection distance.

 The screen aspect ratio is 16:9 and the projected picture is in 16:9 aspect ratio.



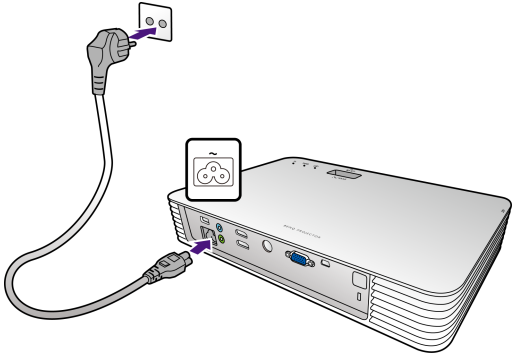
| Screen Size | | | Projection distance in mm |
|-------------|------|-----------------|---------------------------|
| Diagonal | | W (mm) x H (mm) | |
| Inch | mm | | |
| 30 | 762 | 664 x 374 | 736 |
| 40 | 1016 | 886 x 498 | 981 |
| 50 | 1270 | 1107 x 623 | 1226 |
| 60 | 1524 | 1328 x 747 | 1472 |
| 70 | 1778 | 1550 x 872 | 1717 |
| 80 | 2032 | 1771 x 996 | 1962 |
| 90 | 2286 | 1992 x 1121 | 2208 |
| 100 | 2540 | 2214 x 1245 | 2453 |
| 120 | 3048 | 2657 x 1494 | 2943 |
| 150 | 3810 | 3321 x 1868 | 3679 |
| 180 | 4572 | 3985 x 2241 | 4415 |
| 200 | 5080 | 4428 x 2491 | 4906 |
| 250 | 6350 | 5535 x 3113 | 6132 |
| 280 | 7112 | 6199 x 3487 | 6868 |

 All measurements are approximate and may vary from the actual sizes. If you want a permanent installation of the projector, we recommend that you use the actual projector to physically test the projection size, distance, and the projector's optical characteristics prior to the installation. This helps you determine the exact mounting position which best suits your installation.


Connection

Connecting the power

1. Insert one end of the supplied power cord into the AC power jack.





2. Insert the plug of the power cord into a power outlet. The POWER indicator on the projector lights up in orange after power has been applied.

-  • Please use the supplied power cord to avoid possible dangers such as electric shock and fire.
- Power systems and plug types may vary depending on your country/region.

Connecting video source devices

You need only connect the projector to a video source device using just one of the connecting methods. Each video source provides different picture quality. The method you choose most likely depends upon the availability of matching terminals on both the projector and the video source device as described below:

| Terminal name | Terminal appearance | Picture quality |
|----------------|---|-----------------|
| PC |  | Good |
| HDMI 1/MHL |  | Best |
| HDMI 2 | | |
| HDMI 3/MICRO-B | | |

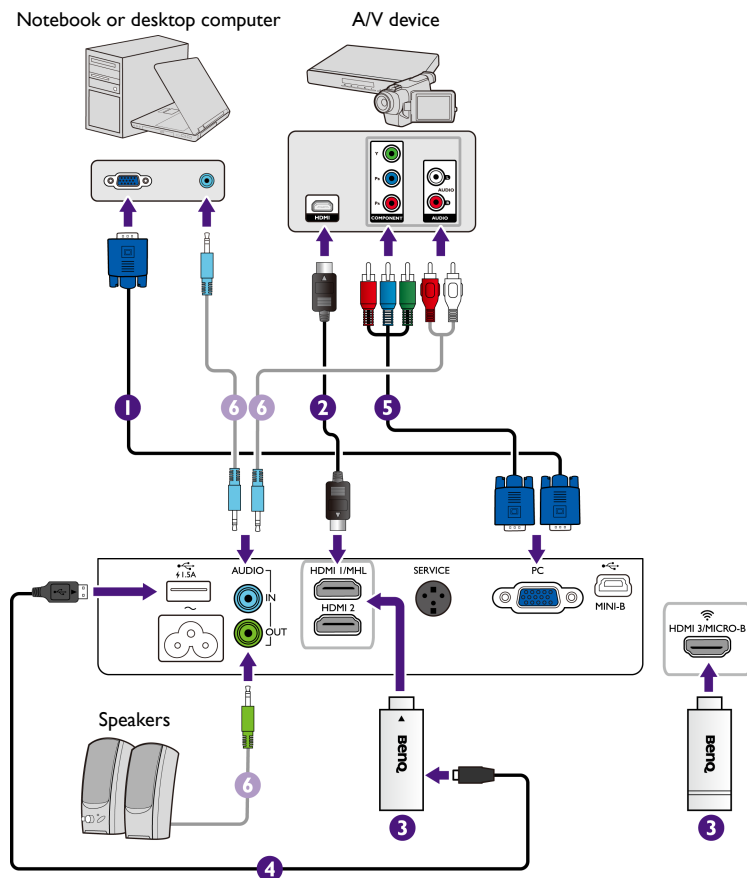
-  If the selected video image is not displayed after the projector is turned on and the correct video source has been selected, check that the video source device is turned on and operating correctly. Also, check and confirm that the signal cables have been connected correctly.

Overview of possible connections

When connecting a signal source to the projector, be sure to:

1. Turn all equipment off before making any connections.
2. Use the correct signal cables for each source.
3. Make sure the cables are firmly inserted.

- In the connection illustrations shown below, some cables may not be included with the projector (see **"Shipping contents"** on page 8 for details). They are commercially available from electronics stores.
- The illustrations below are for reference only. The rear connecting jacks available on the projector vary with each projector model.



- | | |
|--|---|
| 1. VGA (D-Sub) cable | 4. USB cable |
| 2. HDMI cable | 5. Component Video to VGA (D-Sub) adapter cable |
| 3. Video streaming dongle (such as BenQ QCast) | 6. Audio cable |

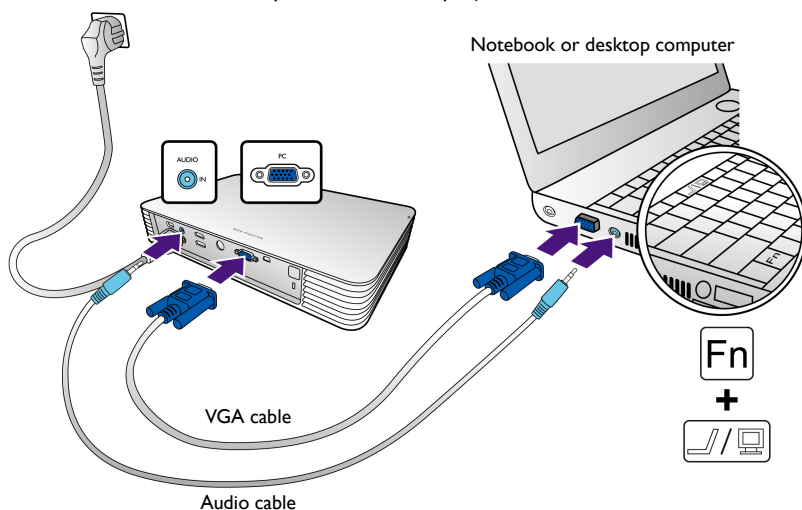
Connecting a computer


The projector provides a VGA (D-Sub) input socket that allows you to connect it to both IBM® compatibles and Macintosh® computers. A Mac adapter is needed if you are connecting legacy version Macintosh computers.

To connect the projector to a notebook or desktop computer:

• Using a VGA cable

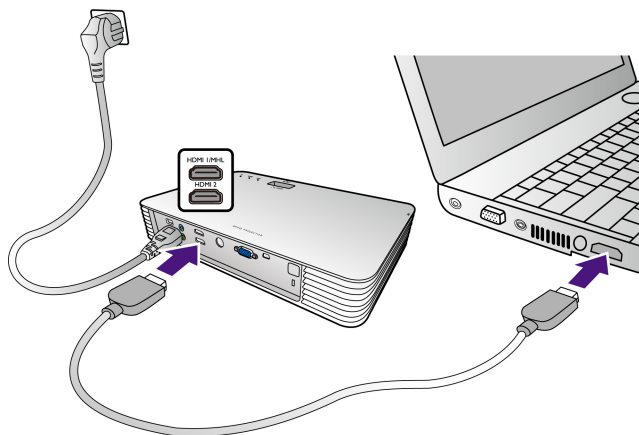
1. Take the supplied VGA cable and connect one end to the D-Sub output socket of the computer.
2. Connect the other end of the VGA cable to the PC socket on the projector.
3. If you wish to make use of the projector's built-in speakers, take a suitable audio cable and connect one end of the cable to the audio output socket of the computer, and the other end to the audio input socket on the projector.



 Many notebooks do not turn on their external video ports when connected to a projector. Usually a key combination like **FN + F3** or **CRT/LCD** key turns the external display on/off. Locate a function key labeled **CRT/LCD** or a function key with a monitor symbol on the notebook. Press **FN** and the labeled function key simultaneously. Refer to your notebook's documentation to find your notebook's key combination.

- **Using an HDMI cable**

1. Take an HDMI cable and connect one end to the HDMI output port of the computer.
2. Connect the other end of the HDMI cable to an HDMI input port on the projector.



Connecting an HDMI source device

The projector provides an HDMI input jack that allows you to connect it to an HDMI source device like a Blu-ray player, a DTV tuner or a display.

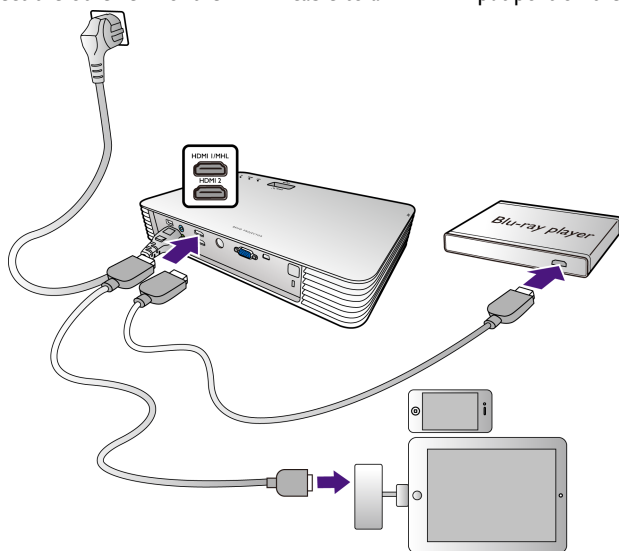
HDMI (High-Definition Multimedia Interface) supports uncompressed video data transmission between compatible devices like DTV tuners or Blu-ray players, and transmits signal over a single cable. It provides pure digital viewing and listening experience.


Examine your video source device to determine if it has a set of unused HDMI output jacks available:

- If so, you can continue with this procedure.
- If not, you will need to reassess which method you can use to connect to the device.

To connect the projector to an HDMI source device:

1. Take an HDMI cable and connect one end to the HDMI output port of the HDMI source device.
2. Connect the other end of the HDMI cable to an HDMI input port on the projector.



 The Apple Digital AV Adapter can be purchased from www.apple.com.

Connecting an MHL source device

This projector supports MHL devices (MHL-enabled) through the use of HDMI input jack. You can connect your MHL-enabled mobile device to the projector with an MHL cable to play high-definition video with fluidity.

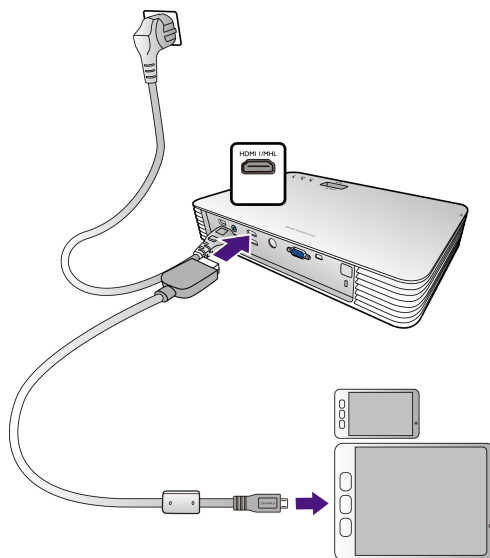
MHL (Mobile High-definition Link) supports uncompressed video and audio transmission between compatible devices like mobiles phones, tablets and other portable consumer electronics devices and transmits signal over a single cable. It provides pure digital viewing and listening experience.

Examine your mobile device to determine if it is MHL-enabled:

- If so, you can continue with this procedure.
- If not, you will need to reassess which method you can use to connect to the device.

To connect the projector to an MHL source device:

1. Take an MHL cable and connect the MHL end to the MHL output port of the MHL source device.
2. Connect the HDMI end of the MHL cable to the HDMI I/MHL input port on the projector.



 **Not all mobile devices are MHL-enabled. Consult with your mobile device dealer to verify MHL capabilities.**

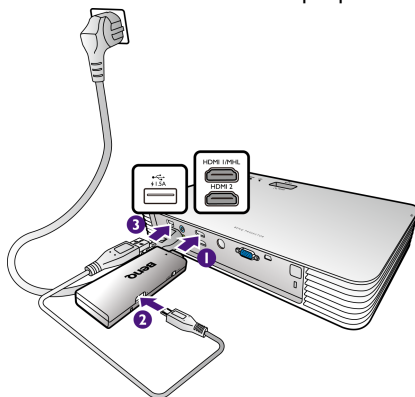
Connecting a video streaming dongle

A video streaming dongle, such as BenQ QCast (purchased separately), allows you to perform a wireless projection from your smart device or computer.

- **Make sure the projector is powered on before making the connection.**
- **Compatibility with HDMI/MHL dongles of other brands is not guaranteed.**
- **The BenQ QCast dongle can be activated via either the MHL or HDMI input port on your projector. Be sure to slide the switch on the dongle to a correct position as required. Refer to the BenQ QCast user manual for details.**

Connecting the dongle to the HDMI 1/MHL or HDMI 2 input port

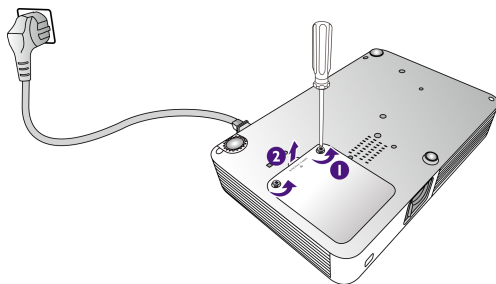
Connect the dongle to the HDMI 1/MHL or HDMI 2 input port as illustrated below.



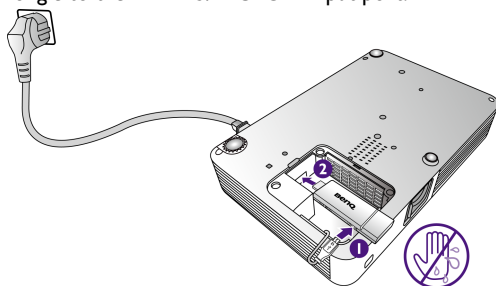
- **The USB cable is used to provide power for charging the dongle.**

Connecting the dongle to the HDMI 3/MICRO-B input port


1. Place the projector on a flat surface with the bottom facing up.
2. Loosen the screw that secures the HDMI 3/MICRO-B cover and open the cover.



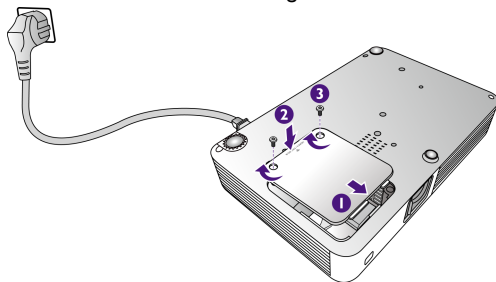
3. Connect the USB cable inside the projector to the USB port on the dongle, and then connect the dongle to the HDMI 3/MICRO-B input port.



 The USB cable is used to provide power for charging the dongle.

 To avoid electric shock, do not plug or unplug with wet hands.

4. Replace the HDMI 3/MICRO-B cover and tighten the screw that secures the cover.



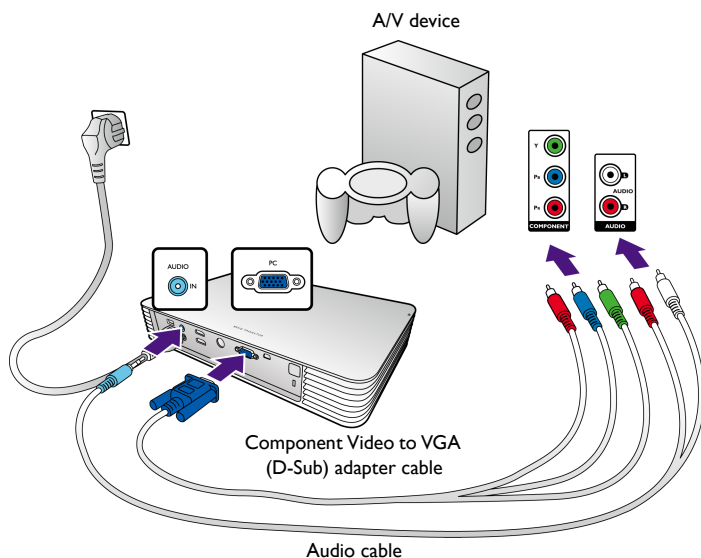
Connecting a component video source device

Examine your video source device to determine if it has a set of unused component video output sockets available:

- If so, you can continue with this procedure.
- If not, you will need to reassess which method you can use to connect to the device.

To connect the projector to a component video source device:

1. Take a Component Video to VGA (D-Sub) adapter cable and connect the end with 3 RCA type connectors to the component video output sockets of the video source device. Match the color of the plugs to the color of the sockets; green to green, blue to blue, and red to red.
2. Connect the other end to the PC socket on the projector.
3. If you wish to make use of the projector's built-in speakers, take a suitable audio cable and connect one end of the cable to the audio output sockets of the video source device, and the other end to the audio input socket on the projector.



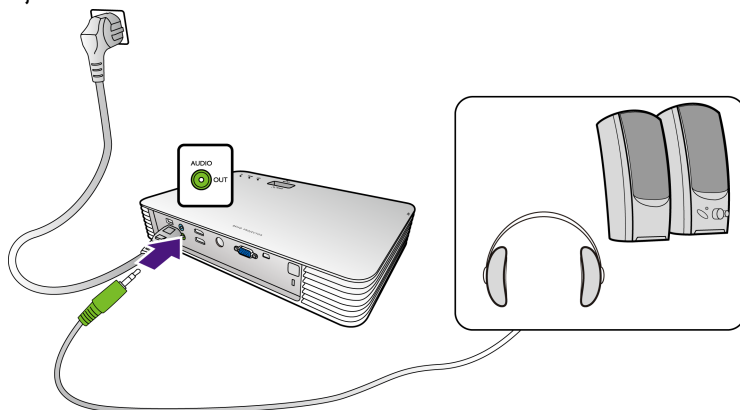
- ☞ **When audio output jack is connected with the earphone or external speaker, the sound will not come out from the projector's built-in speakers.**
- **No sound will come out from the projector's built-in speakers or audio output jack if video signals are not input. Besides, the sound cannot be adjusted either.**

Connecting an external speaker

You can hear sound through an external speaker instead of the projector's built-in speakers.

To connect the projector to an external speaker source device:

Connect an appropriate stereo cable to the external speaker and the audio output jack on the projector.

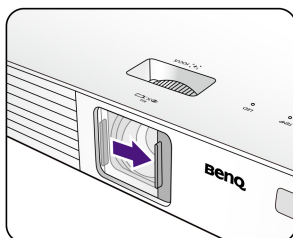


 **When the audio cable is connected to the audio output jack, the projector's built-in speakers are muted.**


Operation

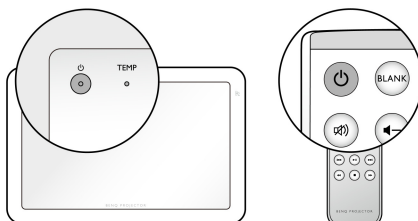
Starting up the projector

1. Make sure you have connected the projector to power correctly. See ["Connecting the power" on page 16](#) for details.
2. Slide the lens cover open before turning on the projector.



 **Make sure the lens cover is always open when the projector lamp is on.**

3. Press  to start the projector.









The POWER indicator flashes in green, and the fans start operating.

The lamp will light up and a start-up image displays on the screen while the projector warms up. The projector doesn't respond to further commands while it is warming up.

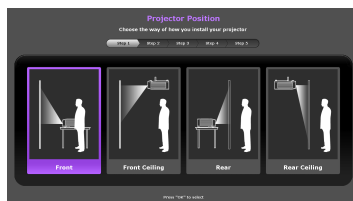
A Power On Ring Tone will be heard and the POWER indicator turns into solid green when the projector is turned on.

 **To turn off the ring tone, see ["Power On/Off Ring Tone" on page 51](#) for details.**

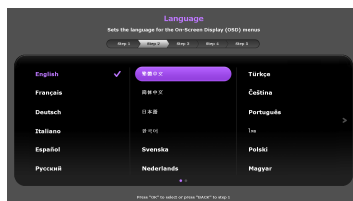
4. If this is the first time you turn on the projector, the setup wizard appears to guide you through setting up the projector. If you have already done this, skip this step.
 - Use the arrow keys (, , , ) to move through the menu items.
 - Use  to confirm the selected menu item.

 The Setup Wizard screenshots below are for reference only and may differ from the actual design.


- i. Step 1:
Specify **Projector Position**.

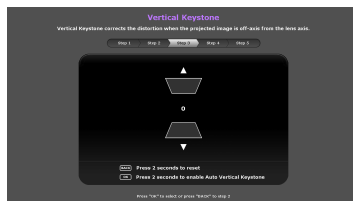


- ii. Step 2:
Specify OSD **Language**.




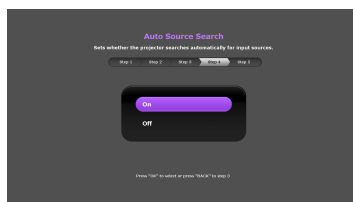
- iii. Step 3:
Specify **Vertical Keystone**.

 For more information about vertical keystone, see ["Correcting keystone" on page 35](#).



- iv. Step 4:
Specify **Auto Source Search**.

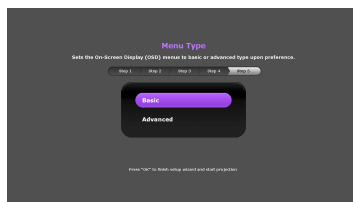
 Select "On" if you want the projector to always search for available signals automatically when the projector is turned on.




- v. Step 5:
Specify **Menu Type**.


 For more information about menu types, see ["About the OSD menus" on page 36](#).

Now you've completed the initial setup.



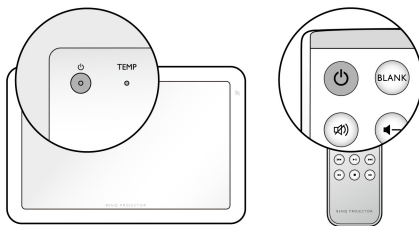
5. If you are prompted to enter the password, use the arrow keys to enter a six-digit password. See ["Utilizing the password function" on page 29](#) for details.
6. Switch on all the connected equipment.


7. The projector starts to search for available input signals automatically. The current input signal being scanned displays on the screen. If the projector does not detect a valid signal, the **No Signal** message appears. You may press  to select your desired input signal.

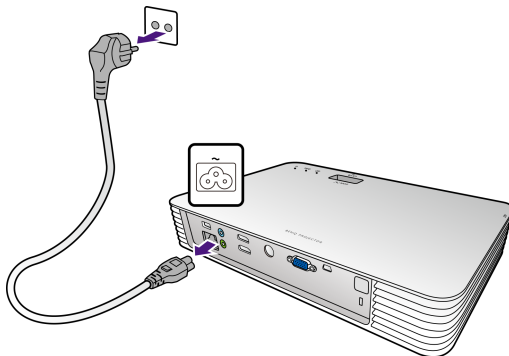
 If the frequency/resolution of the input signal exceeds the projector's operating range, you will see the message "Out of Range" displayed on a blank screen. Please change to an input signal which is compatible with the projector's resolution or set the input signal to a lower setting. See ["Timing chart" on page 67](#) for details.

Shutting down the projector

1. Press . The projector displays a shutdown confirmation message.




2. Press  a second time. The POWER indicator flashes in orange and the fans run to cool the lamp. The projector doesn't respond to any commands during the cooling process.



3. When the cooling process ends, a Power Off Ring Tone will be heard, and the POWER indicator turns into solid orange.

 To turn off the ring tone, see ["Power On/Off Ring Tone" on page 51](#) for details.

If the projector will not be used for an extended period, unplug the power cord from the power outlet.

 Avoid turning on the projector immediately after turning it off as excessive heat may shorten lamp life. The actual lamp life may vary due to different environmental conditions and usage.

Securing the projector


Using a security cable lock

The projector has to be installed in a safe place to prevent theft. Otherwise, purchase a lock, such as the Kensington lock, to secure the projector. You can locate a Kensington anti-theft lock slot on the projector.


A Kensington security cable lock is usually a combination of key(s) and the lock. Refer to the lock's documentation to learn how to use it.

Utilizing the password function



For security purposes and to prevent unauthorized use, you may set up password security via the On-Screen Display (OSD) menu. Once the password is set and the function is enabled, the projector is password-protected. Users who do not know the correct password may not use the projector.

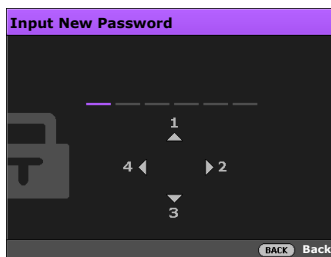
 **You will be inconvenienced if you enable the password function yet forget the password somehow. Do make a note of your password, and keep the note in a safe place for later recall.**







Setting a password


 **Once a password has been set and the “Power On Lock” function is enabled, the projector cannot be used unless the correct password is entered every time the projector is started.**

To do this, first and foremost, you have to access the **Advanced** OSD menu (see [page 37](#) for details).

1. Press .
2. Go to the **System Setup : Advanced** menu > **Password** to display the **Password** window.
3. Select **Change Password** and press  to display the **Input New Password** window.

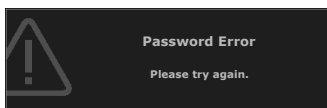


4. As the window indicates, the four arrow keys (, , , ) respectively represent 4 digits (1, 2, 3, 4). Use the arrow keys to set a six-digit password. The digits display as * when you enter them.
5. Re-enter the same password to verify and return to the **Password** window.
6. Select **Power On Lock** and use / to set **On**.

7. Enter the current password to enable the function.
8. Press  to save your changes and exit.

If you forget the password


If you enable the password function, you'll have to enter your password each time you turn on the projector. Once you enter an incorrect password, the error message displays, and the **Input Current Password** window follows.

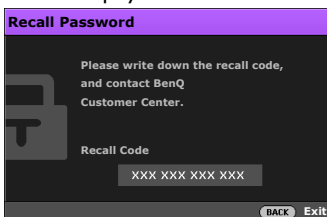


You can retry by entering another six-digit password, or if you absolutely do not remember it, use the password recall procedure. See ["Entering the password recall procedure" on page 30](#) for details.


If you have entered an incorrect password 5 times in succession, the projector will automatically shut down in a short time.

Entering the password recall procedure

1. Make sure the **Password** window displays on the screen, then press and hold  for 3 seconds. The projector will display a coded number on the screen.




2. Write down the number and turn off the projector.
3. Seek help from your local BenQ customer service center to decode the number. You may be required to provide proof of purchase documentation to verify that you are an authorized user of the projector.

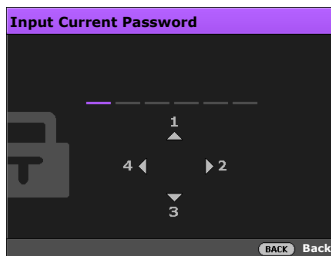
 The "XXX" shown in the above messages are numbers that vary depending on different models.




Changing the password

To do this, first and foremost, you have to access the **Advanced** OSD menu (see [page 37](#) for details).

1. Go to the **System Setup : Advanced > Password** menu to display the **Password** window.





2. Select **Change Password** and press  to display the **Input Current Password** window.




3. Use the arrow keys to enter the old password.
 - If the password is correct, the **Input New Password** window displays.
 - If the password is incorrect, the password error message displays, and the **Input Current Password** window displays for your retry. You can either try another password or press  to cancel the change.
 4. Enter a new password.
 5. Re-enter the same password to verify.
-  **Do make a note of your password, and keep the note in a safe place for later recall.**
6. You have successfully set a new password. Remember to enter the new password next time you turn on the projector.
 7. Press  to save your changes and exit.

Disabling the password function

To do this, first and foremost, you have to access the **Advanced** OSD menu (see [page 37](#) for details).

1. Go to the **System Setup : Advanced > Password** menu to display the **Password** window.
2. Select **Power On Lock** and use / to set **Off**.
3. Enter the current password.
 - If the password is correct, the **Password** window displays that **Power On Lock** is **Off**. You will not be asked to enter the password next time when turning on the projector.
 - If the password is incorrect, the password error message displays, and then the **Input Current Password** window displays for your retry. You can either try another password or press  to cancel the change.
4. Press  to save your changes and exit.

 **Though the password function is disabled, you need to keep a note of the old password in case you ever need to re-activate the password function by entering the old password.**


Selecting an input source

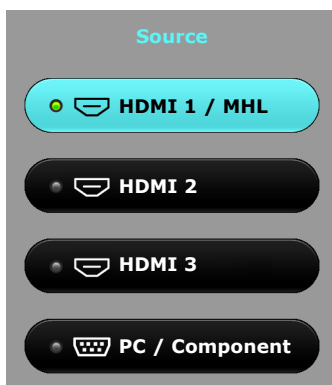
The projector can be connected to multiple equipment at the same time. However, it only displays one full screen at a time. When starting up, the projector automatically searches for the available signals.

If you want the projector to always automatically search for the signals:

- Under the **Advanced** OSD menu, go to the **System Setup : Basic** menu, and enable **Quick Auto Search** (see "**Quick Auto Search**" on page 54).
- Under the **Basic** OSD menu, if there's no signal connected to the projector, go to **Auto Source Search** and enable it; if there are signals connected, go to the **Settings** menu, and then enable **Auto Source Search**.


To select the video source:

1. Press  to display the source selection bar.



2. Press / until your desired signal is selected and press .














Once detected, the selected source information displays on the screen for seconds. If there are multiple pieces of equipment connected to the projector, repeat steps 1 to 2 to search for another signal.

 **The native display resolution of this projector is in a 16:9 aspect ratio. For best display picture results, you should select and use an input signal which outputs at this resolution. Any other resolutions will be scaled by the projector depending upon the Aspect Ratio setting, which may cause some image distortion or loss of picture clarity. See "**Aspect Ratio**" for details.**

Renaming an input source

You may rename the current input source on the source selection bar.

To do this, first and foremost, you have to access the **Advanced** OSD menu (see [page 37](#) for details).

1. Press  and then use / to go to the **System Setup : Basic** menu.
2. Press  to select **Source Rename** and press  to display the **Source Rename** window.
3. Press /// to move the cursor until your desired character is selected and press  to confirm.
 - To delete a character, move to the **Del** key and press .
 - To delete all characters, move to the **Reset** key and press .
4. When done, press  to save your changes and exit.

Adjusting the projected image

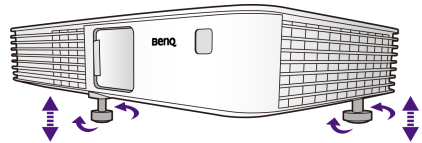
Adjusting the image height

The projector is equipped with 2 adjuster feet. These adjusters change the image height.

To adjust the projector:

- Screw the adjuster feet to adjust the image height.
- To retract the feet, screw the adjuster feet in reverse direction.

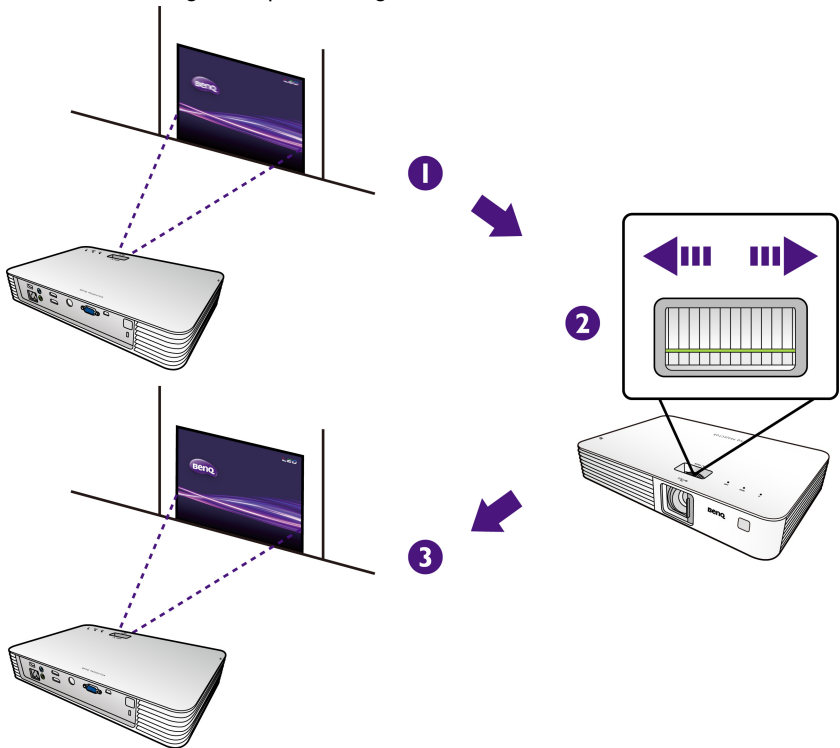
If the projector is not placed on a flat surface or the screen and the projector are not perpendicular to each other, the projected image becomes trapezoidal. To correct this situation, see "[Correcting keystone](#)" on [page 35](#) for details.



- ⚠ **Do not look into the lens while the lamp is on. The strong light from the lamp may cause damage to your eyes.**
- **Be careful when you screw the adjuster foot as it is close to the exhaust vent where hot air comes from.**

Fine-tuning the image clarity

Rotate the focus ring to sharpen the image.



Auto-adjusting the image

In some cases, you may need to optimize the picture quality. To do this, press **AUTO**. Within 3 seconds, the built-in Intelligent Auto Adjustment function will re-adjust the values of Frequency and Clock to provide the best picture quality. The current source information will be displayed on the upper left corner of the screen for 3 seconds.

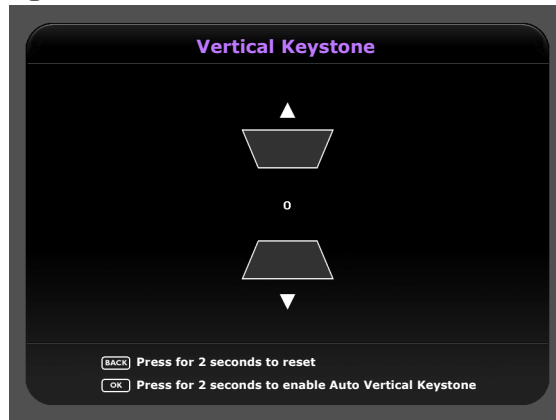
 This function is only available when PC signal (analog RGB) is selected.

Correcting keystone

Keystoning refers to the situation where the projected image is noticeably wider at either the top or bottom. It occurs when the projector is not perpendicular to the screen.

To correct this, besides adjusting the height of the projector, you will need to manually correct it following these steps.

1. Press / to display the **Vertical Keystone** window.



2. Press to correct keystoning at the bottom of the image or press to correct keystoning at the top of the image.

The illustrations below show how to correct keystone distortion:

- To correct keystoning at the top of the image, use .
- To correct keystoning at the bottom of the image, use .



3. When done, press to save your changes and exit.

If you want to correct the image by using “Auto Vertical Keystone”, press for 2 seconds to enable this function.

Hiding the image

In order to draw the audience's full attention to the presenter, you can:

Press to hide the screen image. Press again or any keys to restore the image.

Do not block the projection lens from projecting as this could cause the blocking object to become heated and deformed or even cause a fire.

Menu functions

About the OSD menus

To let you make various adjustments or settings on the projector and the projected image, the projector is equipped with 2 types of multilingual On-Screen Display (OSD) menus:

- **Basic** OSD menu: provides primary menu functions (see ["Using the Basic OSD menu" on page 38](#)).
- **Advanced** OSD menu: provides full menu functions (see ["Using the Advanced OSD menu" on page 44](#)).

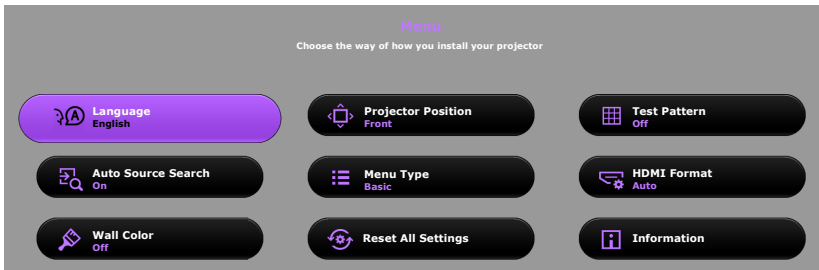
To access the OSD menu, press .

If the **Menu Type** you have selected during the initial setup is **Basic**, one of the following **Basic** OSD menu overviews displays, depending on whether or not a video signal is connected.

- **Input signal connected**



- **No input signal connected**



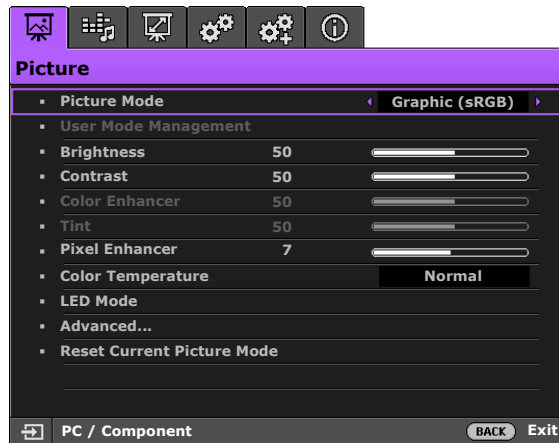
If you intend to switch from the **Basic** OSD menu to the **Advanced** OSD menu, follow the instructions below:

Use the arrow keys (⬆️/⬇️/⬅️/➡️) to move through the menu items, and use (OK) to confirm the selected menu item.

- **When there is a video signal connected to the projector:**
 - i. Go to the **Settings** menu > **Menu Type** and press (OK).
 - ii. Use (⬆️/⬇️) to select **Advanced** and press (OK).
 - iii. Press (➡️) to exit.
 - iv. Press (ⓘ) again to access the **Advanced** OSD menu.
- **When there is NO video signal connected to the projector:**
 - i. Go to **Menu Type** and press (OK).
 - ii. Use (⬆️/⬇️) to select **Advanced** and press (OK).
 - iii. Press (➡️) to exit.
 - iv. Press (ⓘ) again to access the **Advanced** OSD menu.


Next time when you turn on the projector, you may access the **Advanced** OSD menu by pressing (ⓘ).

Below is the overview of the **Advanced** OSD menu.



Likewise, when you wish to switch from the **Advanced** OSD menu to the **Basic** OSD menu, follow the instructions below:

- i. Go to the **System Setup : Basic** menu > **Menu Settings** > **Menu Type**.
- ii. Use (⬅️/➡️) to select **Basic**.
- iii. Press (➡️) repeatedly until the OSD menu is closed.
- iv. Press (ⓘ) to access the **Basic** OSD menu.

Next time when you turn on the projector, you may access the **Basic** OSD menu by pressing .

Using the Basic OSD menu

Depending on whether or not any video signal is connected to the projector, the **Basic** OSD menu offers different available functions.

Check the following links to learn more.




- [Basic OSD menu - with input signals connected](#)
- [Basic OSD menu - without input signals connected](#)


(limited menus are available)

Basic OSD menu - with input signals connected



The **Basic** OSD menu provides primary menu functions. Available menu items may vary depending on the connected video sources or specified settings. Menu options that are not available will become grayed out.





To access the OSD menu, press .


- Use the arrow keys (///) to move through the menu items.
- Use  to confirm the selected menu item.

 To switch from the **Basic OSD** menu to the **Advanced OSD** menu, see [page 37](#).

| Menu | Submenus and Descriptions |
|---------------------|---|
| Picture Mode | <p>Selects a preset picture mode to suit your operating environment and input signal picture type.</p> <p>The preset picture modes are described as below:</p> <ul style="list-style-type: none">• Bright: Maximizes the brightness of the projected image. This mode is suitable for environments where extra-high brightness is required, such as using the projector in well-lit rooms.• Graphic (sRGB): This mode is best for making a still-image presentation when your presentation slides use mostly graphics and minimal text. A small amount of ambient light is required.• Motion Video: This mode is best for playing a video clip in your presentation. A small amount of ambient light is required.• Lectures: This mode is best for making a presentation when your presentation slides use mostly text and minimal graphics. A small amount of ambient light is required.• Cinema (Film): With well-balanced color saturation and contrast with a low brightness level, this is most suitable for enjoying movies at home where there is a small amount of ambient light.• Vivid Color: Maximizes the visual effects and displays images in bright and vivid colors.• User: Recalls the customized settings. Access the Advanced OSD menu and see User Mode Management for details. |


| Menu | Submenus and Descriptions |
|---------------------|--|
| Aspect Ratio | <p>The native display resolution of this projector is in a 16:9 aspect ratio. However, you may use this function to display projected picture in a different aspect ratio.</p> <ul style="list-style-type: none"> • Auto <p>Scales a picture proportionally to fit the projector's native resolution in its horizontal or vertical width. This makes the most use of the screen and maintains the aspect ratio of a picture.</p> <ul style="list-style-type: none"> • 4:3 <p>Scales a picture so that it is displayed in the center of the screen with a 4:3 aspect ratio.</p> <ul style="list-style-type: none"> • 16:9 <p>Scales a picture so that it is displayed in the center of the screen with a 16:9 aspect ratio.</p> <ul style="list-style-type: none"> • Wide <p>Stretches a picture in a horizontal direction to fit the screen width. It does not alter the height of a picture.</p> <ul style="list-style-type: none"> • Letter Box <p>Scales a picture to fit the projector's native resolution in its horizontal width and resizes the picture height to the 3/4 of the projection width. This makes a picture greater than the screen height. The top and bottom edges of the displayed picture are cropped. This suits the contents which are produced in letter box format (with black bars on the top and bottom).</p> |
| Sound Mode | <p>Sound Mode utilizes MaxxAudio sound enhancement technology, which incorporates Waves' algorithms to deliver great effects of the bass and treble and provide you with immersive cinematic audio experience. The following preset sound modes are provided: Motion Video, Music, and Cinema.</p> <p> If the Mute function is activated, adjusting "Sound Mode" will turn off the Mute function.</p> |
| Volume | <p>Adjusts the volume level of the projector's built-in speakers or the volume being output from the audio output jack.</p> <p> If the Mute function is activated, adjusting "Volume" will turn off the Mute function.</p> |
| Mute | <p>Select On to temporarily turn off the projector's built-in speakers or the volume being output from the audio output jack. To restore the audio, select Off.</p> |







| Menu | Submenus and Descriptions |
|-----------------------------|---|
| Settings | <ul style="list-style-type: none"> Press  to enter its submenu. Press  to save your changes and exit. <p>See below for details.</p> |
| • Language | Sets the language for the On-Screen Display (OSD) menus. |
| • Projector Position | The projector can be installed on a ceiling or behind a screen, or with one or more mirrors. See "Choosing a location" on page 14 for details. |
| • Test Pattern | Enable this function to display the grid test pattern, which helps you adjust the image size and focus so as to check if the projected image is free of distortion. |
| • Auto Source Search | <p>Sets whether the projector searches automatically for input sources.</p> <p>Select On to enable the projector to scan for input sources until it acquires a signal. If the function is set to Off, the projector selects the last used input source.</p> |
| • Menu Type | Switches to the Advanced OSD menu. |
| • HDMI Format | <p>Selects an input source type for the HDMI signal. You can also manually select the source type. The different source types carry different standards for the brightness level.</p> <p> "HDMI Format" is only available when the HDMI signal is selected.</p> |
| • Wall Color | Enable this function to help correct the projected picture's color when the projection surface is not white. You may choose a color similar to that of the projection surface from these options: Light Yellow, Pink, Light Green, or Blue. |
| • Reset All Settings | <p>Returns all settings to the factory preset values.</p> <p> The following settings will still remain: "Keystone", "Projector Position", "Source Rename", "Reset Lamp Timer", "Test Pattern", "High Altitude Mode", "Password", and "Key Lock".</p> |


| Menu | Submenus and Descriptions |
|--|--|
| <ul style="list-style-type: none"> Information | <p>Displays the following information about your projector.</p> <ul style="list-style-type: none"> Source: Displays the current signal source. Picture Mode: Displays the current Picture Mode. Resolution: Displays the native resolution of the input source. Color System: Displays input system format. LED Usage Time: Displays the number of hours the lamp has been used. Firmware Version: Displays the firmware version of your projector. <p> Some information is given only when certain input sources are in use.</p> |

Basic OSD menu - without input signals connected




As there's no input signal to your projector, only the submenus of **Settings** under **Basic** OSD menu - with input signals connected are available. Menu options that are not available will become grayed out.

To access the OSD menu, press .

- Use the arrow keys () to move through the menu items.
- Use  to confirm the selected menu item.
- Use  to save your changes and exit.

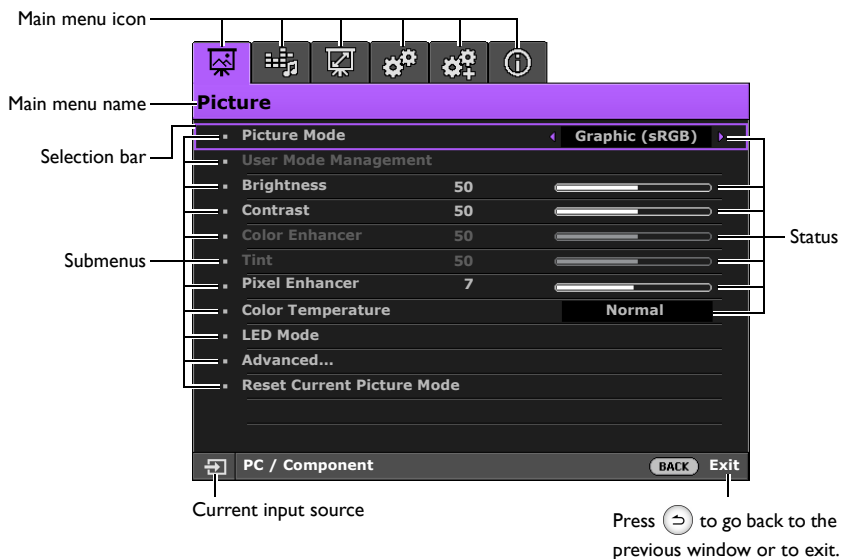
 To switch from the **Basic OSD** menu to the **Advanced OSD** menu, see [page 37](#).

| Menu | Submenus and Descriptions |
|---------------------------|--|
| Language | Sets the language for the On-Screen Display (OSD) menus. |
| Projector Position | The projector can be installed on a ceiling or behind a screen, or with one or more mirrors. See " Choosing a location " on page 14 for details. |
| Test Pattern | Enable this function to display the grid test pattern, which helps you adjust the image size and focus so as to check if the projected image is free of distortion. |
| Auto Source Search | Sets whether the projector searches automatically for input sources. Select On to enable the projector to scan for input sources until it acquires a signal. If the function is set to Off , the projector selects the last used input source. |
| Menu Type | Switches to the Advanced OSD menu. |

| Menu | Submenus and Descriptions |
|---------------------------|--|
| HDMI Format | <p>Selects an input source type for the HDMI signal. You can also manually select the source type. The different source types carry different standards for the brightness level.</p> <p> "HDMI Format" is only available when the HDMI signal is selected.</p> |
| Wall Color | <p>Enable this function to help correct the projected picture's color when the projection surface is not white. You may choose a color similar to that of the projection surface from these options: Light Yellow, Pink, Light Green, or Blue.</p> |
| Reset All Settings | <p>Returns all settings to the factory preset values.</p> <p> The following settings will still remain: "Keystone", "Projector Position", "Source Rename", "Reset Lamp Timer", "Test Pattern", "High Altitude Mode", "Password", and "Key Lock".</p> |
| Information | <p>Displays the following information about your projector.</p> <ul style="list-style-type: none"> • Source: Displays the current signal source. • Picture Mode: Displays the current Picture Mode. • Resolution: Displays the native resolution of the input source. • Color System: Displays input system format. • LED Usage Time: Displays the number of hours the lamp has been used. • Firmware Version: Displays the firmware version of your projector. <p> Some information is given only when certain input sources are in use.</p> |

Using the Advanced OSD menu

The **Advanced** OSD menu offers complete menu functions.



The **Advanced OSD menu overview** above is for reference only and may differ from the actual design and the projector model you are using.

To access the OSD menu, press . It consists of the following main menus. Check the links after the menu items below to learn more details.

1. **Picture** menu (see [page 45](#))
2. **Audio Setup** menu (see [page 51](#))
3. **Display** menu (see [page 52](#))
4. **System Setup : Basic** menu (see [page 53](#))
5. **System Setup : Advanced** menu (see [page 54](#))
6. **Information** menu (see [page 56](#))
























Available menu items may vary depending on the connected video sources or specified settings. Menu items that are not available will become grayed out.


- Use the arrow keys (, , ,) to move through the menu items.
- Use to confirm the selected menu item.

To switch from the **Advanced OSD** menu to the **Basic OSD** menu, see [page 37](#).


Picture menu

| Submenu | Functions and Descriptions |
|----------------------------|--|
| <p>Picture Mode</p> | <p>Selects a preset picture mode to suit your operating environment and input signal picture type.</p> <p>The preset picture modes are described as below:</p> <ul style="list-style-type: none"> • Bright: Maximizes the brightness of the projected image. This mode is suitable for environments where extra-high brightness is required, such as using the projector in well-lit rooms. • Graphic (sRGB): This mode is best for making a still-image presentation when your presentation slides use mostly graphics and minimal text. A small amount of ambient light is required. • Motion Video: This mode is best for playing a video clip in your presentation. A small amount of ambient light is required. • Lectures: This mode is best for making a presentation when your presentation slides use mostly text and minimal graphics. A small amount of ambient light is required. • Cinema (Film): With well-balanced color saturation and contrast with a low brightness level, this is most suitable for enjoying movies at home where there is a small amount of ambient light. • Vivid Color: Maximizes the visual effects and displays images in bright and vivid colors. • User: Recalls the customized settings. Access the Advanced OSD menu and see User Mode Management for details. |





| Submenu | Functions and Descriptions |
|------------------------------------|--|
| <p>User Mode Management</p> | <p> The functions are only available when “Picture Mode” is set to “User”.</p> <ul style="list-style-type: none"> Load Settings From Allows you to manually adjust a preset picture mode and make it an available option on the picture mode list. <ol style="list-style-type: none"> Go to Picture > Picture Mode. Then, select User. Press  to select User Mode Management and press . On the User Mode Management window, select Load Settings From and press . Press / to select a picture mode that is close to your need. When done, press  and  to return to the Picture menu. Press  to select other submenus you want to make changes and use / to adjust the values. The adjustments define the selected user mode. Rename User Mode Select to rename the customized picture mode (User). <ol style="list-style-type: none"> Go to Picture > Picture Mode. Then, select User. Press  to select User Mode Management. On the User Mode Management window, select Rename User Mode and press . On the Rename User Mode window, use /// to select desired characters for the selected mode. When done, press  and  to exit. |
| <p>Brightness</p> | <p>Adjusts the brightness of the picture. When adjusting this control, the black areas of the picture appear just as black and details in the dark areas are visible.</p> <p>The higher the value, the brighter the picture, while the lower the value, the darker the picture.</p> <div data-bbox="501 1321 927 1420">  <div style="display: flex; justify-content: space-around; margin-top: 5px;">  30  60  70 </div> </div> |

| Submenu | Functions and Descriptions |
|---------------------------|---|
| Contrast | <p>Adjusts the degree of difference between dark and light areas in the picture. After adjusting the Brightness value, adjust Contrast to set the peak white level.</p> <p>The higher the value, the greater the contrast.</p>  |
| Color Enhancer | <p>Adjusts the color saturation level - the amount of each color in a video picture. Lower settings produce less saturated colors; setting to the minimum value makes the image black and white.</p> <p>If the setting is too high, colors on the image will be overpowering, which makes the image unrealistic.</p> <p>☞ “Color Enhancer” is not supported in the RGB color system.</p> |
| Tint | <p>Adjusts the red and green color tones of the picture.</p> <p>The higher the value, the more reddish the picture becomes.</p> <p>The lower the value, the more greenish the picture becomes.</p> <p>☞ “Tint” is not supported in the RGB color system.</p> |
| Pixel Enhancer | <p>Detects the change in color between an object and its background to produce a sharpened image of crisp edges and enhanced surface textures.</p> <p>The higher the setting, the sharper the image reveals.</p> <p>The lower the setting, the tenderer the image reveals.</p> |
| Color Temperature* | <p>The options available for color temperature* settings vary according to the connected input signal.</p> <ul style="list-style-type: none"> • Normal: Maintains normal colorings for white. • Cool: Makes pictures appear bluish white. • Lamp Native: With the lamp's original color temperature and higher brightness. This setting is suitable for environments where high brightness is required, such as projecting pictures in well lit rooms. • Warm: Makes pictures appear reddish white. <p>*About color temperatures: There are many different shades that are considered to be “white” for various purposes. One of the common methods of representing white color is known as the “color temperature”. A white color with a low color temperature appears to be reddish white. A white color with a high color temperature appears to have more blue in it.</p> |




| Submenu | Functions and Descriptions |
|--------------------|---|
| LED Mode | <p>Select the projector lamp power from the following modes.</p> <ul style="list-style-type: none"> • Normal: Provides full lamp brightness. • Economic: Reduces system noise and lamp power consumption by 30%. <p>If the Economic mode is selected, the light output will be reduced and result in darker projected pictures.</p> |
| Advanced... | <ul style="list-style-type: none"> • Black Level <p>Sets the picture grayscale to 0 IRE or 7.5 IRE.</p> <p>The grayscale video signal is measured in IRE units. In some areas which use NTSC TV standard, the grayscale is measured from 7.5 IRE (black) to 100 IRE (white); however, in other areas where PAL equipment or Japanese NTSC standards are used, the grayscale is measured from 0 IRE (black) to 100 IRE (white). We suggest you to check if the input source is with 0 IRE or with 7.5 IRE, and then make your selection accordingly.</p> |

| Submenu | Functions and Descriptions |
|---|--|
| <p>Advanced...</p> <p>(Continued)</p> | <ul style="list-style-type: none"> Gamma Selection Gamma refers to the relationship between input source and picture brightness. <ul style="list-style-type: none"> 1.6/1.8/2.0/2.1/BenQ: Select these values according to your preference. 2.2/2.3: Increases the average brightness of the picture. Best for a lit environment, meeting room or family room. 2.4: Best for viewing movies in a dark environment. 2.6/2.8: Best for viewing movies which are mostly composed of dark scenes. <div style="display: flex; justify-content: space-between; font-size: small;"> High Brightness Low Brightness </div> <div style="display: flex; justify-content: space-between; font-size: small;"> Low Contrast High Contrast </div>  Color Management In most installation situations, color management is not necessary, such as in classroom, meeting room, or lounge room situations where lights remain on, or where building external windows allow daylight into the room. Only in permanent installations with controlled lighting levels, such as boardrooms, lecture theaters, or home theaters, should color management be considered. Color management provides fine color control adjustment to allow for more accurate color reproduction. Proper color management can be achieved under controlled and reproducible viewing conditions. Use a colorimeter (color light meter) and provide a set of suitable source images to measure color reproduction. These tools are not provided with the projector, however, your projector supplier should be able to give guidances or send an experienced professional installer for you. The Color Management function provides six sets (RGBCMY) of colors to be adjusted. You can select any of them to adjust its color range and saturation. |


| Submenu | Functions and Descriptions |
|---|--|
| <p>Advanced...</p> <p>(Continued)</p> | <ol style="list-style-type: none"> 1. Press OK to display the Color Management window. 2. Select Primary Color and use ◀/▶ to select a color from Red, Green, Blue, Cyan, Magenta, and Yellow. 3. Press ⬇ to select Hue and use ◀/▶ to set its range. Increase in the range will include colors consisted of more proportions of its two adjacent colors. <div data-bbox="420 391 700 654"> </div> <p>The illustration shows how the colors relate to each other. For example, if you select Red and set its range at 0, only pure red is selected. Increasing its range will include both the red color close to yellow and red color close to magenta.</p> <ol style="list-style-type: none"> 4. Press ⬆ to select Gain and use ◀/▶ to adjust its values. The contrast level of the primary color you just selected are affected. Every adjustment made reflects to the image immediately. 5. Press ⬇ to select Saturation* and use ◀/▶ to adjust its values. Every adjustment made reflects to the image immediately. For example, if you select Red and set its value at 0, only the saturation of pure red will be affected. 6. Repeat steps 2 to 5 until you have made all of the desired adjustments. 7. When done, press ⏵ to save your changes and exit. <p>*About saturation: It is the amount of that color in a video picture. Lower settings produce less saturated colors; a setting of "0" removes that color from the image entirely. If the saturation is too high, that color will be overpowering and unrealistic.</p> <ul style="list-style-type: none"> • Noise Reduction Reduces electrical image noise caused by different media players. The higher the value, the less the noise. • Film Mode Enhances picture quality when projecting composite image from a filmsourced DVD or Blu-ray Disc. Setting Off disables the function. |




| Submenu | Functions and Descriptions |
|-----------------------------------|--|
| Reset Current Picture Mode | <p>All of the adjustments you've made for the selected Picture Mode (including preset modes and User) return to the factory preset values.</p> <ol style="list-style-type: none"> 1. Press . The confirmation message displays. 2. Use / to select Reset and press . The picture mode returns to the factory preset settings. 3. Repeat steps 1 to 2 if you want to reset other picture modes. |

Audio Setup menu


| Submenu | Functions and Descriptions |
|-------------------------------|---|
| Sound Mode | <p>Sound Mode utilizes MaxxAudio sound enhancement technology, which incorporates Waves' algorithms to deliver great effects of the bass and treble and provide you with immersive cinematic audio experience. The following preset sound modes are provided: Motion Video, Music, and Cinema.</p> <p> If the Mute function is activated, adjusting "Sound Mode" will turn off the Mute function.</p> |
| Mute | <p>Select On to temporarily turn off the projector's built-in speakers or the volume being output from the audio output jack. To restore the audio, select Off.</p> |
| Volume | <p>Adjusts the volume level of the projector's built-in speakers or the volume being output from the audio output jack.</p> <p> If the Mute function is activated, adjusting "Volume" will turn off the Mute function.</p> |
| Power On/Off Ring Tone | <p>Sets the ring tone for the projector On or Off.</p> <p> "Power On/Off Ring Tone" can only be adjusted here. Setting the sound mute or adjusting the sound level do not affect the "Power On/Off Ring Tone".</p> |
| Reset Audio Settings | <p>All of the adjustments you've done under the Audio Setup menu return to the factory preset values.</p> |







Display menu

| Submenu | Functions and Descriptions |
|---------------------|---|
| Aspect Ratio | <p>The native display resolution of this projector is in a 16:9 aspect ratio. However, you may use this function to display projected picture in a different aspect ratio.</p> <ul style="list-style-type: none"> • Auto Scales a picture proportionally to fit the projector's native resolution in its horizontal or vertical width. This makes the most use of the screen and maintains the aspect ratio of a picture. • 4:3 Scales a picture so that it is displayed in the center of the screen with a 4:3 aspect ratio. • 16:9 Scales a picture so that it is displayed in the center of the screen with a 16:9 aspect ratio. • Wide Stretches a picture in a horizontal direction to fit the screen width. It does not alter the height of a picture. • Letter Box Scales a picture to fit the projector's native resolution in its horizontal width and resizes the picture height to the 3/4 of the projection width. This makes a picture greater than the screen height. The top and bottom edges of the displayed picture are cropped. This suits the contents which are produced in letter box format (with black bars on the top and bottom). |
| Wall Color | <p>Enable this function to help correct the projected picture's color when the projection surface is not white. You may choose a color similar to that of the projection surface from these options: Light Yellow, Pink, Light Green, or Blue.</p> |
| Image Position | <p>Displays the Image Position window. You may use the directional arrow keys to adjust the position of the projected picture.</p> <p>The values shown on the lower position of the window change with every key press you made.</p> <p> This function is only available when the PC signal is selected.</p> |
| Overscan Adjustment | <p>Conceals the poor picture quality in the four edges.</p> <p>The greater the value, the more portion of the picture is concealed while the screen remains filled and geometrically accurate. Setting 0 means the picture is 100% displayed.</p> |


| Submenu | Functions and Descriptions |
|--|--|
| PC & Component YPbPr Tuning | <ul style="list-style-type: none"> • H. Size Adjusts the horizontal width of the picture.  This function is only available when the Component or PC signal is selected. • Phase Adjusts the clock phase to reduce picture distortion.  This function is only available when the Component or PC signal is selected. • Auto Adjusts the phase and frequency automatically.  This function is only available when the PC signal is selected. |


System Setup : Basic menu




| Submenu | Functions and Descriptions |
|---------------------------|---|
| Language | Sets the language for the On-Screen Display (OSD) menus. |
| Background Color | Sets the background color when there is no signal to the projector. You can choose Black , Blue , or Purple background color. |
| Splash Screen | Allows you to select which logo screen displays during projector start-up. You can choose BenQ logo screen, Black screen, or Blue screen. |
| Projector Position | The projector can be installed on a ceiling or behind a screen, or with one or more mirrors. |
| Auto Off | Prevents unnecessary projection when no signal is detected for a long time. |
| Direct Power On | When the function is set to On , the projector will be turned on automatically once the power is fed through the power cord. When the function is set to Off , you'll have to turn on the projector by pressing  on the projector or remote control. |

| Submenu | Functions and Descriptions |
|--------------------------|--|
| Menu Settings | <ul style="list-style-type: none"> • Menu Type Switches to the Basic OSD menu. • Menu Position Sets the OSD menu position. • Menu Display Time Sets the length of time the OSD will remain active after your last key press. • Blank Reminder Message Sets whether the reminder message is displayed by the projector while the image is hidden. |
| Source Rename | <p>Renames the current input source to your desired name.</p> <p>On the Source Rename window, use /// to set the desired characters for the connected source item.</p> <p>When done, press  and  to exit.</p> |
| Quick Auto Search | <p>Sets whether the projector searches automatically for input sources.</p> <p>Select On to enable the projector to scan for input sources until it acquires a signal. If the function is set to Off, the projector selects the last used input source.</p> |

System Setup : Advanced menu

| Submenu | Functions and Descriptions |
|----------------------|---|
| Lamp Settings | <ul style="list-style-type: none"> • Reset Lamp Timer Activate this function only after a new lamp is installed. When you select Reset, a Reset Successfully message displays to notify that the lamp time has been reset to “0”. • Lamp Timer Select to learn the duration (in hours) of lamp usage which is automatically calculated by the built-in timer. Total (equivalent) lamp hours = 1.5 x (hours used in Normal mode) + 1 x (hours used in Economic mode) |
| HDMI Settings | <ul style="list-style-type: none"> • HDMI Format Select an input source type for the HDMI signal. You can also manually select the source type. Different source types carry different standards for the brightness level. <p> “HDMI Format” is only available when the HDMI signal is selected.</p> |

| Submenu | Functions and Descriptions |
|---------------------------|---|
| Test Pattern | Enable this function to display the grid test pattern, which helps you adjust the image size and focus so as to check if the projected image is free of distortion. |
| Closed Caption | <ul style="list-style-type: none"> • Closed Caption Enable Activate the function by selecting On when the selected input signal carries closed captions*. *About caption An on-screen display of the dialogue, narration, and sound effects of TV programs and videos that are closed captioned (usually marked as “CC” in TV listings). • Caption Version Select a preferred closed captioning mode. To view captions, select CC1, CC2, CC3, or CC4 (CC1 displays captions in the primary language in your area). |
| High Altitude Mode | <p>The mode is for operation in areas like high altitude or high temperature environments. Activate the function when your environment is between 1500 m–3000 m above sea level and ambient temperature is between 0°C–30°C.</p> <p> Do not use this function if your altitude is between 0 m and 1500 m and ambient temperature is between 0°C and 35°C. If you turn on the mode under such a condition, the projector will be over cooled.</p> <p>Operation under High Altitude Mode may cause a higher decibel operating noise level because of increased fan speed necessary to improve overall system cooling and performance.</p> <p>If you use this projector under other extreme conditions excluding the above, it may display auto shut-down symptoms, which is designed to protect your projector from over-heating. In cases like this, you should switch to High Altitude Mode to solve these symptoms. However, this is not to state that this projector can operate under any and all harsh or extreme conditions.</p> |
| Password | <p>For security purposes and to prevent unauthorized use, you may set up password security for the projector. See "Utilizing the password function" on page 29 for details.</p> <ul style="list-style-type: none"> • Change Password You will be asked to enter the current password before changing to a new one. • Power On Lock Limits use of the projector to only those who know the correct password. |

| Submenu | Functions and Descriptions |
|---------------------------|---|
| Key Lock | <p>With the keys on the remote control locked, you can prevent your projector settings from being changed accidentally (by children, for example).</p> <p>When you select On to enable this function, no keys on the remote control will function, except for  POWER.</p> <p>To unlock the keys, press and hold  on the remote control for 3 seconds.</p> |
| LED Indicator | <p>When you select On, all the indicators on the projector function normally. See "Indicators" on page 61 for details.</p> <p>When you select Off, all the indicators (POWER, TEMP, LED) are off after you turn on the projector and the splash screen displays. However, if the projector is not working properly, the indicators light up or flash to remind you that a problem may occur. See also "Indicators" on page 61 for details.</p> |
| Reset All Settings | <p>Returns all settings to the factory preset values. The OSD menu type will return to the Basic OSD menu.</p> <p> The following settings will still remain: "Keystone", "Projector Position", "Source Rename", "Reset Lamp Timer", "Test Pattern", "High Altitude Mode", "Password", and "Key Lock".</p> |

Information menu

| Submenu | Functions and Descriptions |
|-------------------------|--|
| Source | Displays the current signal source. |
| Picture Mode | Displays the current picture mode under the Picture menu. |
| Resolution | Displays the native resolution of the input source. |
| Color System | Displays input system format. |
| LED Lamp Life | Displays the number of hours the lamp has been used. |
| Firmware Version | Displays the firmware version of your projector. |

 Some information is given only when certain input sources are in use.

Advanced OSD menu structure

 The OSD menus vary according to the signal type selected.

| Main menu | Submenu | Options |
|-------------|-----------------------------|--|
| Picture | Picture Mode | Bright/Graphic (sRGB)/Motion Video/Lectures/Cinema (Film)/Vivid Color/User |
| | User Mode Management | Load Settings From Rename User Mode |
| | Brightness | 0-100 |
| | Contrast | 0-100 |
| | Color Enhancer | 0-100 |
| | Tint | 0-100 |
| | Pixel Enhancer | 0-15 |
| | Color Temperature | Normal/Cool/Lamp Native/Warm |
| | LED Mode | Normal/Economic |
| | Advanced... | Black Level 0 IRE/7.5 IRE |
| | | Gamma Selection 1.6/1.8/2.0/2.1/2.2/2.3/2.4/2.6/2.8/BenQ |
| | | Color Management Primary Color/Hue/Gain/Saturation |
| | | Noise Reduction 0-31 |
| | | Film Mode On/Off |
| | Reset Current Picture Mode | Reset/Cancel |
| Audio Setup | Sound Mode | Motion Video/Music/Cinema |
| | Mute | On/Off |
| | Volume | 0-20 |
| | Power On/Off Ring Tone | On/Off |
| | Reset Audio Settings | Reset/Cancel |
| Display | Aspect Ratio | Auto/4:3/16:9/Wide/Letter Box |
| | Wall Color | Off/Light Yellow/Pink/Light Green/Blue |
| | Image Position | |
| | Overscan Adjustment | Video: 0-3 Others: 0-3 |
| | PC & Component YPbPr Tuning | H. Size Phase Auto |

| Main menu | Submenu | Options | |
|----------------------------|--------------------|---|--|
| System Setup : Basic | Language | English / Français / Deutsch / Italiano / Español / Русский / 繁體中文 / 简体中文 / 日本語 / 한국어 / Svenska / Nederlands / Türkçe / Čeština / Português / বাংলা / Polski / Magyar / Hrvatski / Română / Norsk / Dansk / Български / Suomi / Indonesian / Ελληνικά / العربية / हिन्दी | |
| | | Background Color | Black/Blue/Purple |
| | Splash Screen | BenQ/Black/Blue | |
| | Projector Position | Front/Front Ceiling/Rear/Rear Ceiling | |
| | Auto Off | Disable/5 min/10 min/15 min/20 min/25 min/30 min | |
| | Direct Power On | On/Off | |
| | Menu Settings | Menu Type | Basic/Advanced |
| | | Menu Position | Center/Top-Left/Top-Right/Bottom-Right/Bottom-Left |
| | | Menu Display Time | Always On/5 sec/10 sec/15 sec/20 sec/25 sec/30 sec |
| | | Blank Reminder Message | On/Off |
| | Source Rename | | |
| | Quick Auto Search | On/Off | |
| System Setup : Advanced | Lamp Settings | Reset Lamp Timer | Reset/Cancel |
| | | Lamp Timer | Lamp Usage Time/ Equivalent Lamp Hour |
| | HDMI Settings | HDMI Format | Auto/PC Signal/Video Signal |
| | Test Pattern | On/Off | |
| | Closed Caption | Closed Caption Enable | On/Off |
| | | Caption Version | CC1/CC2/CC3/CC4 |
| | High Altitude Mode | On/Off | |
| | Password | Change Password | |
| | | Power On Lock | On/Off (input current password) |
| | Key Lock | On/Off | |
| | LED Indicator | On/Off | |
| | Reset All Settings | Reset/Cancel | |
| Information | Source | | |
| | Picture Mode | | |
| | Resolution | | |
| | Color System | | |
| | LED Lamp Life | | |
| | Firmware Version | | |

Maintenance

Care of the projector


Your projector needs little maintenance. The only thing you need to do on a regular basis is to keep the lens clean.

Never remove any parts of the projector. Contact your dealer if other parts need replacing.

Cleaning the lens

Clean the lens whenever you notice dirt or dust on the surface.


- Use a canister of compressed air to remove dust.
- If there is dirt or smears, use lens-cleaning paper or moisten a soft cloth with lens cleaner and gently wipe the lens surface.
- Never use any type of abrasive pad, alkaline/acid cleaner, scouring powder, or volatile solvent, such as alcohol, benzene, thinner or insecticide. Using such materials or maintaining prolonged contact with rubber or vinyl materials may result in damage to the projector surface and cabinet material.

 **Never touch the lens with your finger or rub the lens with abrasive materials. Even paper towels can damage the lens coating. Only ever use a proper photographic lens brush, cloth, and cleaning solution. Do not attempt to clean the lens while the projector is switched on or is still hot from previous use.**

Cleaning the projector case

Before you clean the case, turn the projector off using proper shutdown procedure as described in ["Shutting down the projector" on page 28](#) and unplug the power cord.

- To remove dirt or dust, wipe the case with a soft, lint-free cloth.
- To remove stubborn dirt or stains, moisten a soft cloth with water and a neutral pH detergent. Then wipe the case.

 **Never use wax, alcohol, benzene, thinner or other chemical detergents. These can damage the case.**

Storing the projector

If you need to store the projector for an extended period of time, please follow the instructions below:

- Make sure the temperature and humidity of the storage area are within the recommended range for the projector. Please refer to ["Specifications" on page 64](#) or consult your dealer about the range.
- Retract adjuster feet.
- Remove battery from the remote control.
- Pack the projector in its original packing or equivalent.

Transporting the projector

It is recommended that you ship the projector with its original packing or equivalent.







Lamp information

Getting to know the lamp hour










When the projector is in operation, the duration (in hours) of lamp usage is automatically calculated by the built-in timer.

Total (equivalent) lamp hours = 1.5 x (hours used in **Normal** mode) + 1 x (hours used in **Economic** mode)

To obtain the lamp hour information:

1. Press  and then use the arrow keys (///) to go to **Information** (while under the **Basic** OSD menu) or **Settings > Information** (while under the **Advanced** OSD menu).
2. The **LED Usage Time** information displays.
3. Press  to exit.

or

1. Under the **Advanced** OSD menu, press  and then use the arrow keys (///) to go to **System Setup : Advanced > Lamp Settings**.
2. Press  to display the **Lamp Settings** window.
3. Use  to select **Lamp Timer** and press . The **Lamp Timer** information displays.
4. Press  to exit.

Extending lamp life

The projection lamp is a consumable item. To keep the lamp life as long as possible, you can do the following settings via the **Advanced** OSD menu.




To access the **Advanced** OSD menu, see [page 37](#) for details.

Setting Lamp Power

Setting the projector in **Economic** mode extends the lamp life.

| Lamp mode | Description |
|-----------------|----------------------------------|
| Normal | 100% lamp brightness |
| Economic | Saves 30% lamp power consumption |

Using **Economic** mode reduces system noise and power consumption by 30%.

1. Under the **Advanced** OSD menu, go to **Picture > LED Mode**.
2. Press  to display the **Lamp Power** window.
3. Press  to move to your desired mode, and press  to save your changes and exit.

Indicators

| Light | | | Status & Description |
|------------------|-------|--------------|----------------------------------|
| POWER | TEMP | LED | |
| System messages | | | |
| Orange | Off | Off | Stand-by mode |
| Green Flashing | Off | Off | Powering up |
| Green | Off | Off | Normal operation |
| Orange Flashing | Off | Off | Normal power-down cooling |
| Red | Off | Off | Downloading |
| Red Flashing | Off | Off | Scaler shutdown fail |
| Red | Off | Red | Scaler reset fail |
| Burn-in messages | | | |
| Green | Off | Off | Burn-in On |
| Green | Green | Green | Burn-in Off |
| Lamp events | | | |
| Off | Off | Red | Lamp I error in normal operation |
| Off | Off | Red Flashing | Lamp is not lit up. |

| Thermal events | | | |
|-----------------------|-----------------------|------------|--|
| Red | Red | Off | Fan 1 error (the actual fan speed is $\pm 25\%$ outside the desired speed) |
| Red | Red Flashing | Off | Fan 2 error (the actual fan speed is $\pm 25\%$ outside the desired speed) |
| Red | Green | Off | Fan 3 error (the actual fan speed is $\pm 25\%$ outside the desired speed) |
| Red | Green Flashing | Off | Fan 4 error (the actual fan speed is $\pm 25\%$ outside the desired speed) |
| Green | Red | Off | Temperature 1 error (over limited temperature) |
| Green | Green Flashing | Off | Thermal IC#1 I2C connection error |
| Green Flashing | Red | Off | Temperature 2 error (over limited temperature) |

Troubleshooting

⑦ The projector does not turn on.

| Cause | Remedy |
|---|---|
| There is no power from the power cord. | Plug the AC adapter into the DC IN socket on the projector, plug the power cord into the AC inlet on the AC adapter, plug the power cord into the power outlet. If the power outlet has a switch, make sure that it is switched on. |
| Attempting to turn the projector on again during the cooling process. | Wait until the cooling down process is complete. |

⑦ No picture.

| Cause | Remedy |
|--|--|
| The source is not turned on or the cable is not connected correctly. | Turn the source on and check that the signal cable is connected correctly. |
| The projector is not correctly connected to the input signal device. | Check the connection. |
| The input signal has not been correctly selected. | Select the correct input signal with the ◀/▶ key. |

⑦ Blurred image.

| Cause | Remedy |
|--|---|
| The projection lens is not correctly focused. | Adjust the focus of the lens using the focus ring. |
| The projector and the screen are not aligned properly. | Adjust the projection angle and direction as well as the height of the unit if necessary. |

⑦ Remote control does not work.

| Cause | Remedy |
|--|--|
| The battery is out of power. | Replace the battery with new one. |
| There is an obstacle between the remote control and the projector. | Remove the obstacle. |
| You are too far away from the projector. | Stand within 8 meters (~26 feet) of the projector. |

⑦ The password is incorrect.

| Cause | Remedy |
|-----------------------------------|---|
| You do not remember the password. | Please see "Entering the password recall procedure" on page 30 for details. |

Specifications

Projector specifications

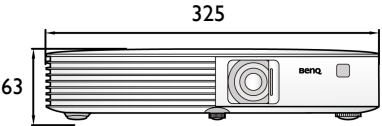
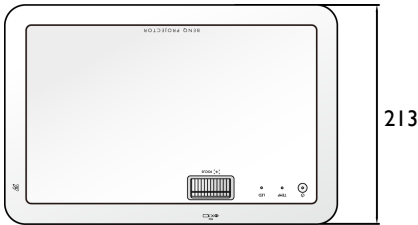
 All specifications are subject to change without notice.

| General | |
|---------------------|-------------------------------------|
| Product name | Full HD Portable LED Projector |
| Model name | CH100 |
| Optical | |
| Resolution | 1920 x 1080 |
| Display system | I-CHIP DLP system |
| Lens F/Number | F = 1.5 |
| Lamp | R, G, B LED |
| Throw Ratio | 1.108 (95±3%@2.33m) |
| Electrical | |
| Power supply | AC100–240V, 50–60 Hz (Automatic) |
| Power consumption | < 146 W (Max.) < 0.5 W (Standby) |
| Keystone Adjustment | 1D, Vertical +/- 20 degrees |
| Mechanical | |
| Dimensions | 325 mm (W) x 63 mm (H) x 213 mm (D) |
| Weight | 2.5 kg |
| Input terminal | |
| Multi-input | |
| Computer input | D-Sub 15-pin (female) x 1 |
| HDMI/MHL | HDMI/MHL x 1 HDMI x 2 |
| Audio input | 3.5 mm stereo mini jack x 1 |
| mini-B USB type | Used for service. |

| Output terminal | |
|-----------------------------|--|
| USB-A type | Supplies power for an HDMI/MHL dongle (purchased separately) |
| Audio output | 3.5 mm stereo mini jack x 1 |
| Speaker | 5 watt x 2 |
| Environmental requirements | |
| Operating temperature | 0°C–40°C at sea level (without condensation) |
| Operating relative humidity | 10%–90% (without condensation) |
| Operating altitude | 0–1499 m at 0°C–35°C 1500–3000 m at 0°C–30°C (with High Altitude Mode on) |

Dimensions

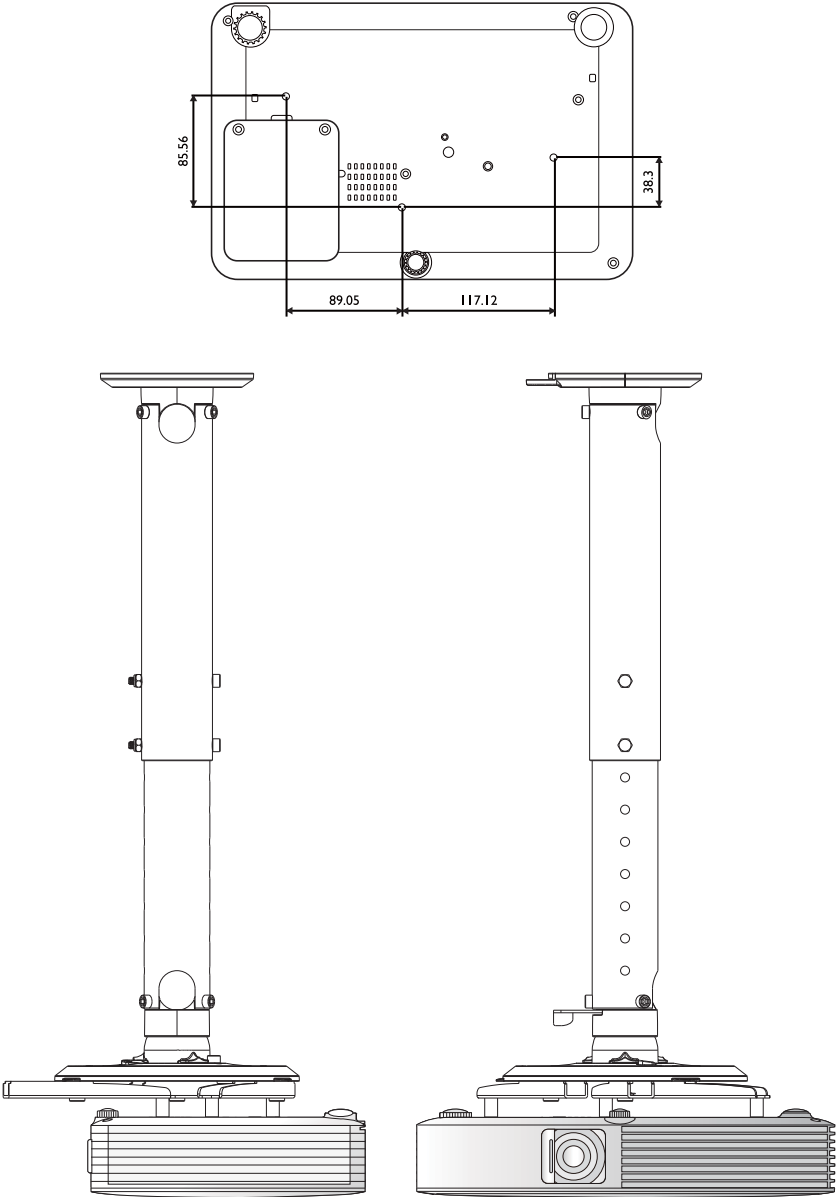
325 mm (W) x 63 mm (H) x 213 mm (D)



Unit: mm

Ceiling mount installation

- Ceiling mount screws: M4
(Max. L = 25 mm; Min. L = 20 mm)



Timing chart

Supported timing for PC input

| Resolution | Mode | Refresh Rate (Hz) | Horizontal Frequency (kHz) |
|------------|-------------------------------|-------------------|----------------------------|
| 640 x 480 | VGA_60 | 59.940 | 31.469 |
| | VGA_72 | 72.809 | 37.861 |
| | VGA_75 | 75.000 | 37.500 |
| | VGA_85 | 85.008 | 43.269 |
| 720 x 400 | 720 x 400_70 | 70.087 | 31.469 |
| 800 x 600 | SVGA_60 | 60.317 | 37.879 |
| | SVGA_72 | 72.188 | 48.077 |
| | SVGA_75 | 75.000 | 46.875 |
| | SVGA_85 | 85.061 | 53.674 |
| | SVGA_120 (Reduce Blanking) | 119.854 | 77.425 |
| 1024 x 768 | XGA_60 | 60.004 | 48.363 |
| | XGA_70 | 70.069 | 56.476 |
| | XGA_75 | 75.029 | 60.023 |
| | XGA_85 | 84.997 | 68.667 |
| | XGA_120 (Reduce Blanking) | 119.989 | 97.551 |
| 1152 x 864 | 1152 x 864_75 | 75.00 | 67.500 |
| 1024 x 576 | BenQ Notebook Timing | 60.0 | 35.820 |
| 1024 x 600 | BenQ Notebook Timing | 64.995 | 41.467 |
| 1280 x 720 | 1280 x 720_60 | 60 | 45.000 |
| 1280 x 768 | 1280 x 768_60 | 59.870 | 47.776 |
| 1280 x 800 | WXGA_60 | 59.810 | 49.702 |
| | WXGA_75 | 74.934 | 62.795 |
| | WXGA_85 | 84.880 | 71.554 |
| | WXGA_120 (Reduce Blanking) | 119.909 | 101.563 |

| Resolution | Mode | Refresh Rate (Hz) | Horizontal Frequency (kHz) |
|------------------|-------------------------------------|-------------------|----------------------------|
| 1280 x 1024 | SXGA_60 | 60.020 | 63.981 |
| | SXGA_75 | 75.025 | 79.976 |
| | SXGA_85 | 85.024 | 91.146 |
| 1280 x 960 | 1280 x 960_60 | 60.000 | 60.000 |
| | 1280 x 960_85 | 85.002 | 85.938 |
| 1360 x 768 | 1360 x 768_60 | 60.015 | 47.712 |
| 1440 x 900 | WXGA+_60 | 59.887 | 55.935 |
| 1600 x 1200 | UXGA | 60.000 | 75.000 |
| 1680 x 1050 | 1680 x 1050_60 | 59.954 | 65.290 |
| 640 x 480@67Hz | MAC13 | 66.667 | 35.000 |
| 832 x 624@75Hz | MAC16 | 74.546 | 49.722 |
| 1024 x 768@75Hz | MAC19 | 74.93 | 60.241 |
| 1152 x 870@75Hz | MAC21 | 75.06 | 68.68 |
| 1920 x 1080@60Hz | 1920 x 1080_60 (Reduce Blanking) | 60 | 67.5 |
| 1920 x 1200@60Hz | 1920 x 1200_60 (Reduce Blanking) | 59.95 | 74.038 |

Supported timing for Component Video input

| Timing | Resolution | Vertical Frequency (Hz) | Horizontal Frequency (kHz) |
|----------|-------------|-------------------------|----------------------------|
| 480i | 720 × 480 | 59.94 | 15.73 |
| 480p | 720 × 480 | 59.94 | 31.47 |
| 576i | 720 × 576 | 50 | 15.63 |
| 576p | 720 × 576 | 50 | 31.25 |
| 720/50p | 1280 × 720 | 50 | 37.5 |
| 720/60p | 1280 × 720 | 60 | 45.00 |
| 1080/50i | 1920 × 1080 | 50 | 28.13 |
| 1080/60i | 1920 × 1080 | 60 | 33.75 |
| 1080/24P | 1920 × 1080 | 24 | 27 |
| 1080/25P | 1920 × 1080 | 25 | 28.13 |
| 1080/30P | 1920 × 1080 | 30 | 33.75 |
| 1080/50P | 1920 × 1080 | 50 | 56.25 |
| 1080/60P | 1920 × 1080 | 60 | 67.5 |

Supported timing for HDMI (HDCP) input

Video timings:

| Timing | Resolution | Vertical Frequency (Hz) | Horizontal Frequency (kHz) |
|----------|------------------|-------------------------|----------------------------|
| 480i | 720 (1440) × 480 | 59.94 | 15.73 |
| 480p | 720 × 480 | 59.94 | 31.47 |
| 576i | 720 (1440) × 576 | 50 | 15.63 |
| 576p | 720 × 576 | 50 | 31.25 |
| 720/50p | 1280 × 720 | 50 | 37.5 |
| 720/60p | 1280 × 720 | 60 | 45.00 |
| 1080/24P | 1920 × 1080 | 24 | 27 |
| 1080/25P | 1920 × 1080 | 25 | 28.13 |
| 1080/30P | 1920 × 1080 | 30 | 33.75 |
| 1080/50i | 1920 × 1080 | 50 | 28.13 |
| 1080/60i | 1920 × 1080 | 60 | 33.75 |
| 1080/50P | 1920 × 1080 | 50 | 56.25 |
| 1080/60P | 1920 × 1080 | 60 | 67.5 |

PC timings:

| Resolution | Mode | Refresh Rate (Hz) | Horizontal Frequency (kHz) |
|------------|-------------------------------|-------------------|----------------------------|
| 640 × 480 | VGA_60 | 59.940 | 31.469 |
| | VGA_72 | 72.809 | 37.861 |
| | VGA_75 | 75.000 | 37.500 |
| | VGA_85 | 85.008 | 43.269 |
| 720 × 400 | 720 × 400_70 | 70.087 | 31.469 |
| 800 × 600 | SVGA_60 | 60.317 | 37.879 |
| | SVGA_72 | 72.188 | 48.077 |
| | SVGA_75 | 75.000 | 46.875 |
| | SVGA_85 | 85.061 | 53.674 |
| | SVGA_120 (Reduce Blanking) | 119.854 | 77.425 |

| Resolution | Mode | Refresh Rate (Hz) | Horizontal Frequency (kHz) |
|------------------|-------------------------------------|-------------------|----------------------------|
| 1024 x 768 | XGA_60 | 60.004 | 48.363 |
| | XGA_70 | 70.069 | 56.476 |
| | XGA_75 | 75.029 | 60.023 |
| | XGA_85 | 84.997 | 68.667 |
| | XGA_120 (Reduce Blanking) | 119.989 | 97.551 |
| 1152 x 864 | 1152 x 864_75 | 75.00 | 67.500 |
| 1024 x 576 | BenQ Notebook Timing | 60.00 | 35.820 |
| 1024 x 600 | BenQ Notebook Timing | 64.995 | 41.467 |
| 1280 x 720 | 1280 x 720_60 | 60 | 45.000 |
| 1280 x 768 | 1280 x 768_60 | 59.870 | 47.776 |
| 1280 x 800 | WXGA_60 | 59.810 | 49.702 |
| | WXGA_75 | 74.934 | 62.795 |
| | WXGA_85 | 84.880 | 71.554 |
| | WXGA_120 (Reduce Blanking) | 119.909 | 101.563 |
| 1280 x 1024 | SXGA_60 | 60.020 | 63.981 |
| | SXGA_75 | 75.025 | 79.976 |
| | SXGA_85 | 85.024 | 91.146 |
| 1280 x 960 | 1280 x 960_60 | 60.000 | 60.000 |
| | 1280 x 960_85 | 85.002 | 85.938 |
| 1360 x 768 | 1360 x 768_60 | 60.015 | 47.712 |
| 1440 x 900 | WXGA+_60 | 59.887 | 55.935 |
| 1600 x 1200 | UXGA | 60.000 | 75.000 |
| 1680 x 1050 | 1680 x 1050_60 | 59.954 | 65.290 |
| 640 x 480@67Hz | MAC13 | 66.667 | 35.000 |
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| 1920 x 1080@60Hz | 1920 x 1080_60 (Reduce Blanking) | 60 | 67.5 |
| 1920 x 1200@60Hz | 1920 x 1200_60 (Reduce Blanking) | 59.95 | 74.038 |

Warranty and Copyright information

Limited warranty

BenQ warrants this product against any defects in material and workmanship, under normal usage and storage.

Proof of purchase date will be required with any warranty claim. In the event this product is found to be defective within the warranty period, BenQ's only obligation and your exclusive remedy shall be replacement of any defective parts (labor included). To obtain warranty service, immediately notify the dealer from which you purchased the product of any defects.

Important: The above warranty shall be void if the customer fails to operate the product in accordance with BenQ's written instructions, especially the ambient humidity must be in-between 10% and 90%, temperature in-between 0°C and 35°C, altitude lower than 4920 feet, and avoiding to operate the projector in a dusty environment. This warranty gives you specific legal rights, and you may have other rights which vary from country to country.

For other information, please visit www.BenQ.com.

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Patents

Please go to <http://patmarking.benq.com/> for the details on BenQ projector patent coverage.