

HT1075/HT1085ST
Digital Projector
Home Cinema Series
User Manual

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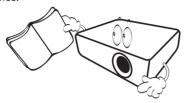
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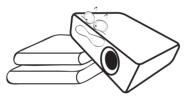
# Important safety instructions

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.

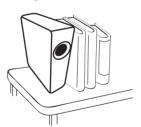
 Please read this user manual before you operate your projector. Keep this manual in a safe place for future reference.



- 2. Always place the projector on a level, horizontal surface during operation.
  - Do not place the projector on an unstable cart, stand, or table as it may fall and be damaged.
  - Do not place inflammables near the projector.
  - Do not use if tilted at an angle of more than 10 degrees left to right, nor at angle of more than 15 degrees front to back.



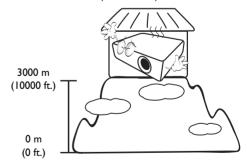
Do not store the projector on end vertically. Doing so may cause the projector to fall over, causing injury or resulting in damage.



- 4. Do not place the 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 closed.
  - Locations where excessive humidity, dust, or cigarette smoke may contaminate optical components, shorten the projector's lifespan and darken the screen.



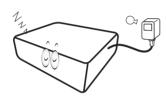
- Locations near fire alarms.
- Locations with an ambient temperature above 35°C/95°F.
- Locations where the altitudes are higher than 3000 m (10000 feet).



- 5. Do not block the vents holes while the projector 9. Do not look straight into the projector lens is on (even in standby mode).
  - Do not cover the projector with any item.
  - Do not place the projector on a blanket. bedding or any other soft surface.



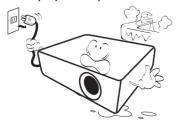
6. In areas where the mains power supply voltage may fluctuate by ±10 volts, it is recommended that you connect the projector through a power stabilizer, surge protector or uninterruptible power supply (UPS) as appropriate to your situation.



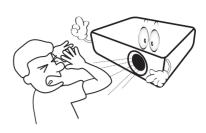
7. Do not step on the projector or place any objects 11. The lamp becomes extremely hot during upon it.



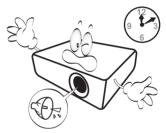
8. Do not place liquids near or on the projector. Liquids spilled into the projector will void your warranty. If the projector does become wet, disconnect it from the power point and call BenQ to have the projector repaired.



during operation. It may harm your sight.



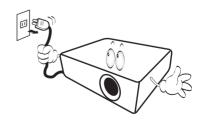
10. Do not operate the projector lamp beyond the rated lamp life. Excessive operation of lamps beyond the rated life could cause a lamp to break on rare occasions.



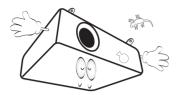
operation. Allow the projector to cool for approximately 45 minutes prior to removing the lamp assembly for replacement.



12. Never attempt to replace the lamp assembly until the projector has cooled down and is unplugged from the power supply.



 This projector is capable of displaying inverted images for ceiling mount installation. Use only BenQ's Ceiling Mount Kit for mounting.



## 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 ceiling mount 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 ceiling mount 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.

14. 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. The only user serviceable part is the lamp. See page 52.

Under no circumstances should you ever undo or remove any other covers. Refer servicing only to suitably qualified professional service personnel.



Please keep the original packing for possible future shipment. If you need to pack your projector after use, adjust the projection lens to an appropriate position, put the lens cushion around the lens, and fit the lens cushion and projector cushion together to prevent damage during transportation.

15. When you think service or repair is required, take the projector only to a suitably qualified technician.



## Moisture condensation

Never operate the projector immediately after moving it from a cold location to a hot location. When the projector is exposed to such a change in temperature, moisture may condense on the crucial internal parts. To prevent the projector from possible damage, do not use the projector for at least 2 hours when there is a sudden change in temperature.

## Avoid volatile liquids

Do not use volatile liquids, such as insecticide or certain types of cleaner, near the projector. Do not have rubber or plastic products touching the projector for a long time. They will leave marks on the finish. If cleaning with a chemically treated cloth, be sure to follow the cleaning product's safety instructions.

## Disposal

This product contains the following materials which are harmful to human bodies and environment.

- · Lead, which is contained in solder.
- Mercury, which is used in the lamp.

To dispose of the product or used lamps, consult your local environment authorities for regulations.

# Overview

# Projector features

### · Full HD compatible

The projector is compatible with Standard Definition TV (SDTV) 480i, 576i, Enhanced Definition television (EDTV) 480p, 576p and High Definition TV (HDTV) 720p, 1080i/p 60Hz formats, with the 1080p format providing a true 1:1 image reproduction.

## · High picture quality

The projector provides excellent picture quality due to its high resolution, excellent home theater brightness, high contrast ratio, vivid color and rich gray-scale reproduction.

### · High brightness

The projector features super high brightness to achieve excellent picture quality in ambient light conditions, outperforming ordinary projectors.

## • Vivid color reproduction

The projector features a 6-segment color wheel to produce realistic color depth and range unattainable with lesser segment color wheels.

### Rich gray-scale

When viewed in a darkened environment, the automatic gamma control provides excellent gray-scale display which reveals details in shadows and in night or darkened scenes.

### • 2D Keystone

The projector offers horizontal (side to side) keystone correction, enabling a wider projector installation area. When the projector is placed off center, the 2D keystone correction feature gives you a wider projector installation flexibility by correcting the trapezoid effect using horizontal and vertical adjustments.

### Dual OSD

Two types of OSD menus are designed for different usage customs: the **Basic** OSD is intuitive and consumerlike, while the **Advanced** OSD offers traditional usability.

### · Wide variety of inputs and video formats

The projector supports a wide variety of inputs for connection to your video, computer, and smart equipment, including component video, composite video, personal computer (both Mac and PC), HDMI source, smart device that supports MHL, and an output trigger for connection to automated screen and environment lighting systems.

### • ISF certified calibration control

To reach a higher standard of performance, the projector incorporates ISF NIGHT and ISF DAY mode settings in its OSD menus, which requires professional calibration service from authorized ISF installers.

### 3D function

To enjoy the 3D movies, videos, and sporting events in a more realistic way by presenting the depth of the images through HDMI.

### Built-in chamber speaker(s)

Built-in speaker(s) providing mixed mono audio when an audio input is connected.

## • Intuitive lens shift (HT1075)

The intuitive control over lens shift lever provides flexibility in setting-up your projector.

## • Short throw ratio (HT1085ST)

The short throw ratio projection provides 1080p picture quality with shorter projection distance.

### • SmartEco

SmartEco<sup>™</sup> technology saves lamp power consumption up to 70% depending on the content brightness level when **SmartEco** mode is selected.

## Wireless FHD Kit supported (optional accessory)

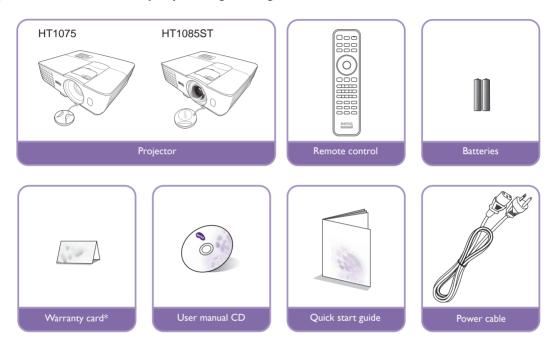
Refer to the kit's documentation to learn how to use it.

# Shipping contents

Carefully unpack and verify that you have the items below. Some of the items may not be available depending on your region of purchase. Please check with your place of purchase.

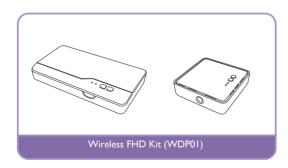
## Standard accessories

Some of the accessories may vary from region to region.



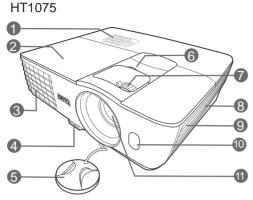
<sup>\*</sup> The warranty card is only supplied in some specific regions. Please consult your dealer for detailed information.

## Optional accessories

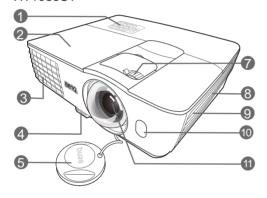


# Projector exterior view

## Front and upper side view

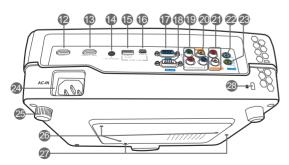


HT1085ST



### Rear and lower side view

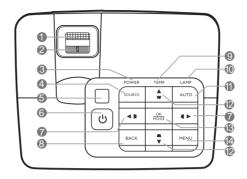
See Connecting with video equipment for connection details.



- Control panel (See Control panel for details.)
- 2. Lamp cover
- 3. Vent (heated air exhaust)
- 4. Quick-release button
- 5. Lens cap
- 6. Lens shift lever
- 7. Focus and Zoom ring
- 8. Vent (cool air intake)
- 9. Speaker grill
- 10. Front IR sensor
- II. Projection lens
- 12. HDMI input port
- 13. MHL/HDMI dual mode port Also can be used for charging the connected MHL compatible smart device as long as the power is fed to the projector.
- 14. 12VDC output terminal
  Used to trigger external devices such
  as an electric screen or light control,
  etc. Consult your dealer for how to
  connect these devices.
- 15. USB Type-A port Used for charging the receiver box of the Wireless FHD Kit (WDP01) (optional accessory).
- 16. Mini USB port Used for service.
- 17. RGB (PC)/Component video (YPbPr/ YCbCr) signal input jack
- 18. RS-232 control port
  Used to interface with a PC or home theater control/automation system.
- Component Video inputs (RCA) support Y/PB/PR or Y/CB/CR video signal
- 20. Video input jack
- 21. Audio (L/R) input jacks
- 22. Audio input jack
- 23. Audio output jack
- 24. AC Power cable inlet
- 25. Rear adjuster foot
- 26. Ceiling mount holes
- 27. Wireless FHD Kit mount holes
- 28. Kensington lock slot

## Controls and functions

## Control panel



### I. Focus ring

Adjusts the focus of the projected image.

### 2. Zoom ring

Adjusts the size of the image.

### 3. POWER indicator light

Lights up or flashes when the projector is under operation.

### 4. SOURCE

Displays the source selection bar.

### 5. Top IR remote sensor

### 6. U POWER

Toggles the projector between standby mode and on.

## 7. Keystone/Arrow keys (◀ / ▶, ◀ / ▶)

Manually corrects distorted images resulting from an angled projection.

When the On-Screen Display (OSD) menu is activated, the #7 and #12 keys are used as directional arrows to select the desired menu items and to make adjustments.

### 8. BACK

Goes back to previous OSD menu, exits and saves menu settings.

### 9. TEMPerature warning light

Lights up red if the projector's temperature becomes too high.

## 10. LAMP indicator light

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

## II.AUTO

Automatically determines the best picture timings for the displayed image.

## I2.Keystone/Arrow keys (▲ / ▼, ▲ / ▼)

Manually corrects distorted images resulting from an angled projection.

When the On-Screen Display (OSD) menu is activated, the #7 and #12 keys are used as directional arrows to select the desired menu items and to make adjustments.

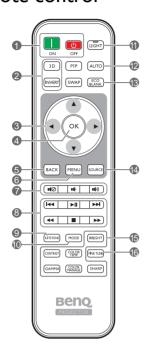
### 13.OK/MODE

- Selects an available picture mode.
- Confirms the selected On-Screen Display (OSD) menu item.

### 14. MENU

- Accesses the On-Screen Display (OSD) menu.
- Goes back to previous OSD menu, exits and saves menu settings.

## Remote control



## I. ON, OFF

Toggles the projector between on and off mode.

### 2. 3D. INVERT

Launches the 3D menu and toggles the invert II.LIGHT function between on and off.

## **▼** Down)

When the On-Screen Display (OSD) menu is activated, these keys are used as directional arrows to select the desired menu items and to make adjustments.

When the OSD menu is off and you are under the MHL connection mode, these arrows keys 13. ECO BLANK are available for controlling your smart device.

### 4. OK

Confirms the selected OSD menu item.

When the OSD menu is off and you are under 15. Picture quality adjustment keys the MHL connection mode, use the key to confirm the selection on the OSD of your smart device.

### 5. BACK

Goes back to previous OSD menu, exits and saves menu settings.

When the OSD menu is off and you are under the MHL connection mode, use the key to return or exit the OSD menu of your smart device.

### 6. MENU

- Accesses the On-Screen Display (OSD) menu.
- Goes back to previous OSD menu, exits and saves menu settings.

### 7. •(②, •(•, •(•))

- Mute: Toggles projector audio between on and off.
- **Volume Down**: Decreases the projector volume.
- **Volume Up**: Increases the projector volume.

### 8. MHL control buttons

(Idd Backward, ►II Play/Pause, ►Forward, ≪ Rewind, ■ Stop, ➤ Fast forward)

Goes to the previous file/Plays/Pauses/Goes to the next file/Rewinds/Stops/Fast-forwards during media playback. Only available when controlling your smart device in MHL mode.

When you are under the MHL connection mode and the OSD is off, these buttons are available for controlling your smart device: arrow keys, OK, BACK, and MHL control buttons.

### 9. KEYSTONE

Launches the 2D Keystone window. Use the Arrow keys to manually correct distorted images resulting from an angled projection.

### 10. MODE

Selects an available picture mode.

The LED backlight lights up and stays on for approximately 30 seconds when pressing any key on the remote control. Pressing any other keys within the 10 second again turns the LED backlight off.

### 12. AUTO

Automatically determines the best picture timings for the displayed image.

Used to blank the screen picture.

### 14. SOURCE

Displays the source selection bar.

These function keys perform the same tasks as specified in the OSD menu.

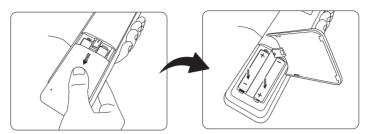
### 16. FINE TUNE

Displays the Color Temperature Fine Tuning window. See Color Temperature Fine Tuning for details.

PIP and SWAP keys are not available.

## Installing/replacing the remote control batteries

- 1. Press and slide off the battery cover, as illustrated.
- 2. Remove the old batteries (if applicable) and install two AAA batteries within. Make sure that the positive and negative ends are positioned correctly, as illustrated.
- 3. Slide the battery cover in until it clicks into place.



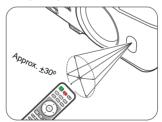
- Avoid leaving the remote control and batteries in an excessive heat or humid environment like the kitchen, bathroom, sauna, sunroom or in a closed car.
  - · Replace only with the same or equivalent type recommended by the battery manufacturer.
  - Dispose of the used batteries according to the manufacturer's instructions and local environment regulations for your region.
  - · Never throw the batteries into a fire. There may be danger of an explosion.
  - If the batteries are dead or if you will not be using the remote control for an extended period of time, remove the batteries to avoid damage to the remote control from possible battery leakage.

## 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.

• Operating the projector from the front • Operating the projector from the top





# 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.

### I. Front:

Select this location with the projector placed near the floor in front of the screen.

This is the most common way to position the projector for quick setup and portability.

Turn on the projector and make the following settings:

MENU > Settings or System Setup : Basic > Projector Position > Front



## 3. Front Ceiling:

Select this location with the projector suspended from the ceiling in front of the screen.

Turn on the projector and make the following settings:

MENU > Settings or System Setup : Basic > Projector Position > Front Ceiling



Purchase the BenQ Projector Ceiling Mount Kit from your dealer to mount your projector on the ceiling.

## 2. Rear:

Select this location with the projector placed near the floor behind the screen.

Turn on the projector and make the following settings:

MENU > Settings or System Setup : Basic > Projector Position > Rear



### 4. Rear Ceiling:

Select this location with the projector suspended from the ceiling behind the screen.

Turn on the projector and make the following settings:

MENU > Settings or System Setup : Basic > Projector Position > Rear Ceiling



A special rear projection screen is required.

A special rear projection screen and the BenQ Projector Ceiling Mount Kit are required.

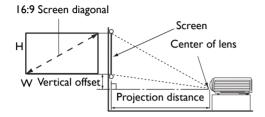
# Obtaining a preferred projected image size

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

HT1075 is equipped with movable lens. See 'Shifting the projection lens vertically (HT1075 only) for details.

## Projection dimensions

Use the illustration and tables 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

### HT1075

| Screen size |       | Projec     | V .: 1      |               |         |               |                      |
|-------------|-------|------------|-------------|---------------|---------|---------------|----------------------|
| Diag        | gonal | H (mm)     | W (mm)      | Min. distance | Average | Max. distance | Vertical offset (mm) |
| Inch        | mm    | 11 (11111) | ** (111111) | (max. zoom)   | Average | (min. zoom)   | ()                   |
| 40          | 1016  | 498        | 886         | 1013          | 1165    | 1316          | 25                   |
| 60          | 1524  | 747        | 1328        | 1519          | 1747    | 1975          | 37                   |
| 80          | 2032  | 996        | 1771        | 2025          | 2329    | 2633          | 50                   |
| 100         | 2540  | 1245       | 2214        | 2532          | 2911    | 3291          | 62                   |
| 120         | 3048  | 1494       | 2657        | 3038          | 3494    | 3949          | 75                   |
| 140         | 3556  | 1743       | 3099        | 3544          | 4076    | 4608          | 87                   |
| 160         | 4064  | 1992       | 3542        | 4051          | 4658    | 5266          | 100                  |
| 180         | 4572  | 2241       | 3985        | 4557          | 5241    | 5924          | 112                  |
| 200         | 5080  | 2491       | 4428        | 5063          | 5823    | 6582          | 125                  |

### HT1085ST

| Screen size |       | Projection distance (mm) |             |               | V .: 1  |               |                      |
|-------------|-------|--------------------------|-------------|---------------|---------|---------------|----------------------|
| Diag        | gonal | H (mm)                   | W (mm)      | Min. distance | Average | Max. distance | Vertical offset (mm) |
| Inch        | mm    |                          | ** (111111) | (max. zoom)   | Average | (min. zoom)   | ()                   |
| 40          | 1016  | 498                      | 886         | 609           | 670     | 731           | 12                   |
| 60          | 1524  | 747                      | 1328        | 913           | 1005    | 1096          | 19                   |
| 80          | 2032  | 996                      | 1771        | 1218          | 1339    | 1461          | 25                   |
| 100         | 2540  | 1245                     | 2214        | 1522          | 1674    | 1826          | 31                   |
| 120         | 3048  | 1494                     | 2657        | 1826          | 2009    | 2192          | 37                   |
| 140         | 3556  | 1743                     | 3099        | 2131          | 2344    | 2557          | 44                   |
| 160         | 4064  | 1992                     | 3542        | 2435          | 2679    | 2922          | 50                   |
| 180         | 4572  | 2241                     | 3985        | 2740          | 3014    | 3288          | 56                   |
| 200         | 5080  | 2491                     | 4428        | 3044          | 3349    | 3653          | 62                   |

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.

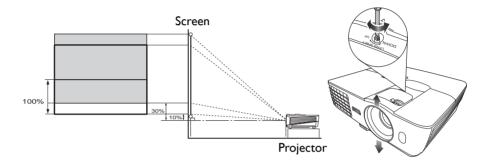
## Shifting the projection lens vertically (HT1075 only)

The vertical lens shift control provides flexibility for installing your projector. It allows the projector to be positioned slightly above or below the top level of the projected images.

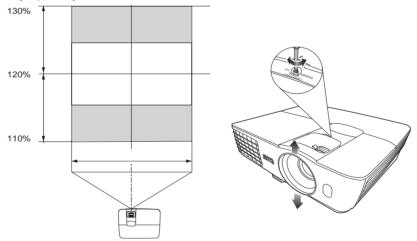
The lens shift (offset) is expressed as a percentage of the projected image height. It is measured as an offset from the projected image's vertical center. Use the lever to shift the projection lens upwards or downwards within the allowable range depending on your desired image position.

### To use the lens shift lever:

- 1. Release the lever by turning it counterclockwise.
- 2. Move the lever to adjust the projected image position.
- 3. Lock the lever by turning it clockwise.
- · When the screen position is fixed



• When the projector position is fixed

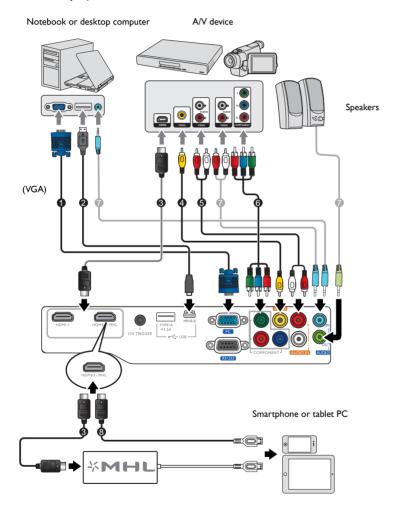


- Do not over-tighten the lever.
  - Lens shift adjustment does not result in a degraded picture quality. In the unlikely event that the image distortion is produced, see Adjusting the projected image for details.

# Connection

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). 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.



- I. VGA cable
- 2. USB cable\*
- 3. HDMI cable
- 4. Video cable
- 5. Audio L/R cable
- 6. Component video cable
- 7. Audio cable
- 8. HDMI-Micro USB cable

<sup>\*</sup>For updating the firmware.

# Connecting with video equipment

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:

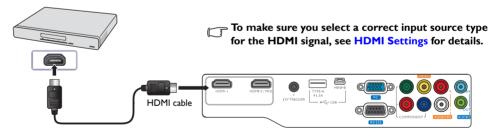
| Terminal name        | Terminal appearance | Reference  | Picture quality |
|----------------------|---------------------|--|-----------------|
| HDMI-I<br>HDMI-2/MHL |                     | <ul><li>Connecting HDMI devices</li><li>Connecting smart devices</li></ul> | Best            |
| COMPONENT            |                     | Connecting component-video devices   | Better          |
| VIDEO                | •                   | Connecting video devices   | Normal          |
| PC<br>(D-SUB)        |                     | Connecting a computer  | Better          |

In the connection illustrations shown below, some cables may not be included with the projector (see Shipping contents). They are commercially available from electronics stores.

## Connecting HDMI devices

HDMI (High-Definition Multimedia Interface) supports uncompressed video data transmission between compatible devices like DTV tuners, DVD players, Blu-ray players and displays over a single cable. You should use an HDMI cable when making a connection between the projector and HDMI devices.

HDMI device: DVD player, digital tuner, etc.



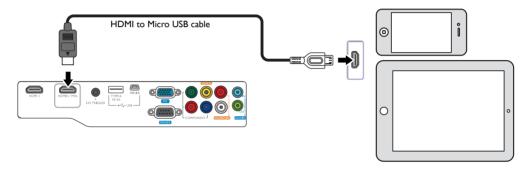
## Connecting smart devices

The projector can project the content directly from a MHL compatible smart device. Using an HDMI to Micro USB cable or an HDMI to Micro USB adaptor, you can connect your smart devices to the projector and then enjoy your content on the big screen.

Some smart devices may not be compatible to the cable that you use. Please consult the manufacturer of your smart device for detailed information.

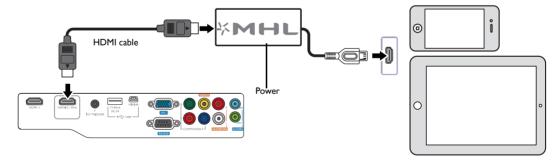
## Using an HDMI to Micro USB cable

- I. Connect one end of the HDMI to Micro USB cable to the HDMI input connector on the projector.
- 2. Connect the other end of the HDMI to Micro USB cable to the Micro USB output socket on your smart device.
- Switch to the HDMI/MHL input source. To switch input signal, see Selecting an input source for details.



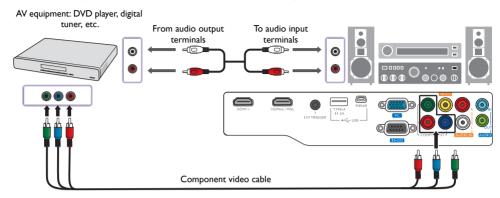
## Using an HDMI to Micro USB adaptor and an HDMI cable

- 1. Connect one end of the HDMI cable to the HDMI input connector on the projector.
- 2. Connect the other end of the HDMI cable to the HDMI input socket on the adaptor.
- 3. Connect the other end of the adaptor to the Micro USB output socket on your smart device.
- Switch to the HDMI/MHL input source. To switch input signal, see Selecting an input source for details.



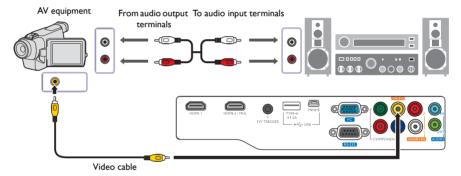
## Connecting component-video devices

The RCA type component video jacks are provided for connection to video output devices. You should also connect the separate audio cable to a suitable audio amplifier.



## Connecting video devices

Connect your video device to the projector with a composite video cable. You should also connect the separate audio cable to a suitable audio amplifier.

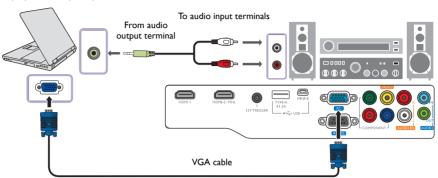


If the selected video image is not displayed after the projector is turned on and the correct video source has been selected, check if the video source device is turned on and operating correctly.

## Connecting a computer

Connect the projector to a computer with a VGA cable.

Laptop or desktop computer



Many laptops 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 laptop. Press Fn and the labeled function key simultaneously. Refer to your laptop's documentation to discover your laptop's key combination.

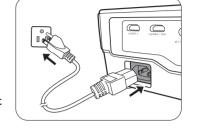
# **Operation**

# Starting up the projector

 Plug the power cable into the projector and into a power outlet.
 Turn on the power outlet switch (where fitted). The **POWER** indicator light on the projector lights orange after power has been applied.

Please use the supplied power cable to avoid possible dangers such as electric shock and fire.

2. Press () on the projector or on the remote control to start the projector. As soon as the lamp lights up, a **Power On Tone** will be heard. The **POWER indicator light** flashes green and stays green when the projector is on.



The fans starts operating, and a start-up image displays on the screen while it warms up. The projector does not respond to further commands while it is warming up.

- To turn off the ring tone, see Power On/Off Ring Tone for details.
  - 3. 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 and move on to step 4.
    - Use the arrow keys (◄/►/▲/▼) on the projector or remote control to move through the menu items.
    - Use **OK** to confirm the selected menu item.

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

### Step 1:

Specify Projector Position.

For more information about projector position, see Choosing a location.



Step 2: Specify OSD **Language**.



Step 3:

Specify 2D Keystone.



Step 4:

Specify Auto Source.

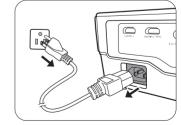
Now you've completed the initial setup.



- 4. If you are prompted to enter the password, use the arrow keys on the projector or remote control to enter a six-digit password. See Utilizing the password function for details.
- 5. Switch on the connected equipment.
- 6. The projector starts to search for available input signals. The current input signal being scanned displays on the screen. If the projector doesn't detect a valid signal, the "No Signal" message appears. You may press SOURCE on the projector or remote control to select your desired input signal.
- 7. If the horizontal frequency of the input source exceeds the range of the projector, the "No Signal" message displays on the screen. It will remain on-screen until you change the input source to an appropriate one.

# Shutting down the projector

- 1. Press ( on the projector or on the remote control. The projector displays a shutdown confirmation message.
- 2. Press (¹) or ① a second time. The **POWER** indicator light flashes orange and the fans run for about two minutes to cool the lamp. The projector doesn't not respond to any commands during the cooling process.
- When the cooling process ends, a "Power Off Ring Tone" will be heard, and the POWER indicator light will show a solid orange.



- To turn off the ring tone, see Power On/Off Ring Tone for details.
  - If the projector will not be used for an extended period, unplug the power cable 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 lock slot on the projector. See item 28 on page 9 for details.

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.

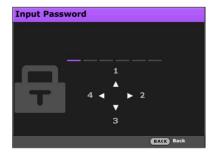
1 You will be inconvenienced if you enable the password function yet forget the password somehow. Do make a note of your password, and keep the note in a safe place for later recall.

## Setting a password

Once a password has been set and the power on lock 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 30 for details).

- 1. Go to **System Setup : Advanced > Password** to display the **Password** window.
- 2. Select Change Password and press OK to display the Input Password window.

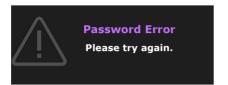


- 3. As the window indicates, the four arrow keys (▲/►/▼/◄) respectively represent 4 digits (1, 2, 3, 4). Use the arrow keys on the projector or remote control to set a six-digit password. The digits display as \*\*\*\*\*\*\* when you enter them.
- 4. Re-enter the same password to verify and return to the **Password** window.
- 5. Select **Power On Lock** and use **◄/**▶ to set **On**.
- 6. Enter the current password to enable the function.
- 7. Press **BACK** 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 Password** window follows.

Under the Advanced OSD menu



Under the Basic OSD menu



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 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 screen, then press and hold **AUTO** on the projector or remote control for 3 seconds. The projector will display a coded number on the screen.
  - Under the Advanced OSD menu



Under the Basic OSD menu

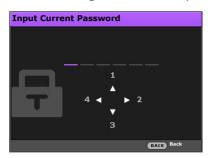


- 2. Write down the number and turn off the projector.
- 3. Seek help from the local BenQ service center to decode the number. You may be required to provide proof of purchase documentation to verify that you are an authorized user of the projector.
- "XXX" shown in the above messages are numbers that vary depending on different models.

## Changing the password

To do this, first and foremost, you have to access the Advanced OSD menu (see 30 for details).

- 1. Go to System Setup: Advanced > Password to display the Password window.
- 2. Select Change Password and press OK to display the Input Current Password window.



- 3. Use the arrow keys on the projector or remote control to enter the old password.
  - If the password is correct, the **Input New Password** window displays.
  - If the password is incorrect, the error message displays, and the **Input Current Password** window displays for your retry. You can either try another password or press **BACK** 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 then 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 **BACK** 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 30 for details).

- 1. Go to System Setup: Advanced > Password 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
    BACK to cancel the change.
- 4. Press **BACK** 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 Auto Source. (see "Auto Source" on page 43)
- Under the Basic OSD menu, if there's no signal connected to the projector, go to Auto Source and
  enable it; if there are signals connected, go to the Settings menu, and then enable Auto Source.
  (see "Auto Source" on page 32 and 34)

To select the video source:

1. Press **SOURCE** on the projector or remote control to display the source selection bar.



- Press ▲ /▼ until your desired signal is selected and press OK.
   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 I-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 30 for details).

- 1. Press **MENU** and then use  $\blacktriangleleft/\triangleright$  to go to **System Setup : Basic**.
- 2. Press ▼ to select Source Rename and press OK to display the Source Rename window.
- 3. Press  $\triangle/\nabla/\blacktriangleleft/\triangleright$  until your desired character is selected.
- 4. When done, press **BACK** to save your changes and exit.

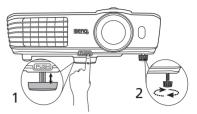
# Adjusting the projected image

## Adjusting the projection angle

The projector is equipped with a quick-release adjuster foot and a rear adjuster foot. These adjusters change the image height and projection angle.

To adjust the projector:

- Press the quick-release button and lift the front of the projector. Once the image is positioned as desired, release the quick-release button to lock the foot in position.
- 2. Screw the rear adjuster foot to fine-tune the horizontal angle. To retract the foot, hold up the projector while pressing the quick-release button, then slowly lower the projector. Screw the rear adjuster foot in a reverse direction.
- If the screen and the projector are not perpendicular to each other, the projected image becomes vertical trapezoidal. To correct this, see Auto-adjusting the image 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 press the quick-release button as it is close to the exhaust vent where hot air comes from.

## Auto-adjusting the image

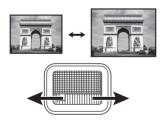
In some cases, you may wish to optimize the picture quality. To do this, press **AUTO** on the projector or remote control. Within 3 seconds, the built-in Intelligent Auto Adjustment function will re-adjust the values of Frequency and Clock to provide the best picture quality.

The current input source information will be displayed in the corner of the screen for 3 seconds.

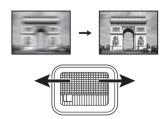
This function is only available when PC signal is selected.

## Fine-tuning the image size and clarity

To adjust the projected picture size, turn the zoom ring on the projector.



To sharpen the picture, rotate the focus ring on the projector.



## 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.

You may correct this in ONE of these ways.

- Using the remote control
   Press KEYSTONE to display the 2D Keystone window.
- Using the projector

Press  $\triangle/igspace$ ,  $\blacktriangleleft/igspace$ , or  $\bigvee/igspace$  to display the **2D Keystone** window.







- To correct keystoning at the top of the image, use ▼ or ▲/▼.
- To correct keystoning at the bottom of the image, use ▲ or ▲/▼.
- To correct keystoning at the right side of the image, use ◀ or ◀/■.
- To correct keystoning at the left side of the image, use ▶ or ¶/▶.

When done, press **BACK** to save your changes and exit.

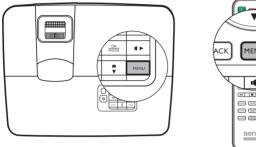
# Menu Functions

## 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)
- Advanced OSD menu: provides full menu functions. (See Using the Advanced OSD menu)

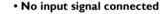
To access the OSD menu, press **MENU** on the projector or remote control.





The first time you use the projector (after finishing the initial setup), one of the following Basic OSD menu overviews displays, depending on whether or not any video signal is connected.

· 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 ( ◀ / ▶ / ▲ / ▼ ) on the projector or remote control 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 Type** menu.
    - ii. Use **▲/▼** to select **Advanced** and press **OK**.
    - iii. Press MENU again to access the Advanced OSD menu.
  - · When there is NO video signal connected to the projector
    - i. Go to the **Menu Type** menu.
    - ii. Use  $\blacktriangle/\blacktriangledown$  to select **Advanced** and press **OK**.
    - iii. Press MENU again to access the Advanced OSD menu.

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

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 Settings > Menu Type** menu.
- ii. Use **◄/▶** to select **Basic**.
- iii. Press **MENU** again to access the **Basic** OSD menu.

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

# 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 **MENU** on the projector or remote control.

- Use the arrow keys (◄/►/▲/▼) on the projector or remote control to move through the menu items.
- Use OK to confirm the selected menu item.
- To switch from the Basic OSD menu to the Advanced OSD menu, see page 30.

| Menu         | Submenus and Descriptions   |  |  |
|--------------|---|--|--|
| Picture Mode | <ul> <li>Selects a preset picture mode to suit your operating environment and input signal picture type.</li> <li>The preset picture modes are described as below:         <ul> <li>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.</li> <li>Cinema: With well-balanced color saturation and contrast with a low brightness level, this is most suitable for enjoying movies in a totally dark environment (as you would find in a commercial cinema).</li> <li>Standard: Being slightly brighter than Cinema mode, it is suitable for use in rooms where there is a small amount of ambient light.</li> <li>3D: It is optimized to bring up 3D effects when watching 3D contents.</li> </ul> </li> <li>This mode is only available when 3D function is enabled.</li> <li>User I/User 2: Recalls the customized settings. Access the Advanced OSD menu and see User Mode Management for details.</li> <li>The function is accessible through the remote control.</li> </ul> |  |  |
| Sound Mode   | Selects a sound effect mode to your preference. The following preset sound modes are provided: <b>Standard</b> , <b>Cinema</b> , <b>Music</b> , <b>Sport</b> , and <b>User</b> .  To specify the sound settings of the <b>User</b> mode, access the <b>Advanced</b> OSD menu and see <b>User</b> EQ for details.  If the Mute function is activated, adjusting Sound Mode will turn off the Mute function.  |  |  |

| Adjusts the volume level or the projector's internal speaker or the volume being output from the audio output jack.    If the Mute function is accessible through the remote control.   Selects On to temporarily turn off the projector's internal speaker or the volume being output from the audio output jack.   To restore the audio, select Off.   The function is accessible through the remote control.    This projector supports playing three-dimensional (3D) content transferred through your 3D-compatible video devices and contents, such as PlayStation consoles (with 3D game discs), 3D Blu-ray 3D players (with 3D Blu-ray 3dscs), 3D TV (with 3D channel), and so on. After you have connected the 3D video devices to the projector wear the BenQ 3D glasses and make sure the power is on to view 3D contents.   When watching 3D contents,   |                | A di ah a     -f ah a   -       - |
|--|----------------|---|
| Mute  Selects On to temporarily turn off the projector's internal speaker or the volume being output from the audio output jack.  To restore the audio, select Off.  The function is accessible through the remote control.  This projector supports playing three-dimensional (3D) content transferred through your 3D-compatible video devices and contents, such as PlayStation consoles (with 3D game discs), 3D Blu-ray 3D players (with 3D Blu-ray discs), 3D TV (with 3D channel), and so on. After you have connected the 3D video devices to the projector, wear the BenQ 3D glasses and make sure the power is on to view 3D contents.  When watching 3D contents,  the image may seem misplaced, however, this is not a product malfunction.  take appropriate breaks when watching 1D content.  stop watching 3D content if you feel fatigue or discomfort.  keep a distance from the screen of about three times the effective height of the screen when watching 3D content.  children and people with a history of oversensitivity to light, heart problems, or have any other existing medical condition should be refrained from watching 3D contents.  The default setting is Auto and the projector automatically chooses an appropriate 3D format when detecting 3D contents. If the projector cannot recognize the 3D format, manually choose a 3D mode according to your preference.  When this function is enabled:  The brightness level of the projected image decreases.  The Picture Mode cannot be adjusted.  The function is accessible through the remote control.  When your 3D image is distorted, enable this function to switch between the image for the left eye and the right eye for the more comfortable 3D viewing experience.  The function is accessible through the remote control.  When your 3D image is distorted, enable this function to switch between the image for the left eye and the right eye for the more comfortable 3D viewing experience.  The function is accessible through the remote control.  The projector or can be installed on a ceiling or behind a scree |                | Adjusts the volume level of the projector's internal speaker or the volume being output from the audio output jack.   |
| Selects On to temporarily turn off the projector's internal speaker or the volume being output from the audio output jack.  To restore the audio, select Off.  The function is accessible through the remote control.  This projector supports playing three-dimensional (3D) content transferred through your 3D-compatible video devices and contents, such as PlayStation consoles (with 3D game discs.), 3D Blu-ray 3D players (with 3D Blu-ray discs), 3D TV (with 3D channel), and so on. After you have connected the 3D video devices to the projector, wear the BenQ 3D glasses and make sure the power is on to view 3D contents.  When watching 3D contents,  the image may seem misplaced, however, this is not a product malfunction. take appropriate breaks when watching 3D content. stop watching 3D content if you feel fatigue or discomfort. keep a distance from the screen of about three times the effective height of the screen when watching 3D content. children and people with a history of oversensitivity to light, heart problems, or have any other existing medical condition should be refrained from watching 3D content.  The default setting is Auto and the projector automatically chooses an appropriate 3D format when detecting 3D contents. If the projector cannot recognize the 3D format, manually choose a 3D mode according to your preference.  When this function is enabled: The brightness level of the projected image decreases. The Picture Mode cannot be adjusted. The Picture Mode cannot be adjusted. When your 3D image is distorted, enable this function to switch between the image for the left eye and the right eye for the more comfortable 3D viewing experience.  The function is accessible through the remote control.  When your 3D image is distorted, enable this function to switch between the image for the left eye and the right eye for the more comfortable 3D viewing experience.  The function is accessible through the remote control.  When your 3D image is distorted, enable this function to switch between the image for the left e | Volume         | · -   |
| being output from the audio output jack.  To restore the audio, select Off.  The function is accessible through the remote control.  This projector supports playing three-dimensional (3D) content transferred through your 3D-compatible video devices and contents, such as PlayStation consoles (with 3D game discs), 3D Blu-ray 3D players (with 3D Blu-ray discs), 3D TV (with 3D channel), and so on. After you have connected the 3D video devices to the projector, wear the BenQ 3D glasses and make sure the power is on to view 3D contents.  When watching 3D contents,  the image may seem misplaced, however, this is not a product malfunction. take appropriate breaks when watching 3D content.  stop watching 3D content if you feel fatigue or discomfort. keep a distance from the screen of about three times the effective height of the screen when watching 3D content.  children and people with a history of oversensitivity to light, heart problems, or have any other existing medical condition should be refrained from watching 3D content.  The default setting is Auto and the projector automatically chooses an appropriate 3D format when detecting 3D contents. If the projector cannot recognize the 3D format, manually choose a 3D mode according to your preference.  When this function is enabled:  The brightness level of the projected image decreases. The Picture Mode cannot be adjusted. The 2D Keystone can only be adjusted within limited degrees.  The function is accessible through the remote control.  When your 3D image is distorted, enable this function to switch between the image for the left eye and the right eye for the more comfortable 3D viewing experience.  The function is accessible through the remote control.  Settings  Press OK to enter its submenu. See below for more details.  Language  Sets the language for the On-Screen Display (OSD) menus.  Projector rose can be installed on a ceiling or behind a screen, or with one or more mirrors. See Choosing a location for details.  Enables this function to display the grid test  |                | The function is accessible through the remote control.  |
| To restore the audio, select Off.  The function is accessible through the remote control.  This projector supports playing three-dimensional (3D) content transferred through your 3D-compatible video devices and contents, such as PlayStation consoles (with 3D game discs), 3D Blu-ray 3D players (with 3D Blu-ray discs), 3D TV (with 3D channel), and so on. After you have connected the 3D video devices to the projector, wear the BenQ 3D glasses and make sure the power is on to view 3D contents.  When watching 3D contents,  the image may seem misplaced, however, this is not a product malfunction. take appropriate breaks when watching 3D content. stop watching 1D content if you feel fatigue or discomfort. keep a distance from the screen of about three times the effective height of the screen when watching 3D content. children and people with a history of oversensitivity to light, heart problems, or have any other existing medical condition should be refrained from watching 3D content.  The default setting is Auto and the projector automatically chooses an appropriate 3D format when detecting 3D contents. If the projector cannot recognize the 3D format, manually choose a 3D mode according to your preference.  When this function is enabled:  The brightness level of the projected image decreases. The Picture Mode cannot be adjusted. The Picture Mode cannot be adjusted. The projector can only be adjusted within limited degrees.  The function is accessible through the remote control.  When your 3D image is distorted, enable this function to switch between the image for the left eye and the right eye for the more comfortable 3D viewing experience.  The function is accessible through the remote control.  Press OK to enter its submenu. See below for more details.  Language  Projector reposition  The projector can be installed on a ceiling or behind a screen, or with one or more mirrors. See Choosing a location for details.  Enables this function to display the grid test pattern, which helps you adjust the image size and focus |                |   |
| This projector supports playing three-dimensional (3D) content transferred through your 3D-compatible video devices and contents, such as PlayStation consoles (with 3D game discs), 3D Blu-ray 3D players (with 3D Blu-ray discs), 3D TV (with 3D channel), and so on. After you have connected the 3D video devices to the projector, wear the BenQ 3D glasses and make sure the power is on to view 3D contents.  When watching 3D contents,  the image may seem misplaced, however, this is not a product malfunction. take appropriate breaks when watching 3D content. Stop watching 3D content if you feel fatigue or discomfort. keep a distance from the screen of about three times the effective height of the screen when watching 3D content. children and people with a history of oversensitivity to light, heart problems, or have any other existing medical condition should be refrained from watching 3D content. The default setting is Auto and the projector automatically chooses an appropriate 3D format when detecting 3D contents. If the projector cannot recognize the 3D format, manually choose a 3D mode according to your preference.  When this function is enabled: The brightness level of the projected image decreases. The Picture Mode cannot be adjusted. The 2D Keystone can only be adjusted. The JD Keystone can only be adjusted within limited degrees. The function is accessible through the remote control.  When your 3D image is distorted, enable this function to switch between the image for the left eye and the right eye for the more comfortable 3D viewing experience. The function is accessible through the remote control.  Settings Press OK to enter its submenu. See below for more details.  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 for details.  Enables this function to display the grid test pattern, which helps you adjust the image size and focus so as to check if the projec | Mute           |   |
| your 3D-compatible video devices and contents, such as PlayStation consoles (with 3D game discs), 3D Blu-ray 3D players (with 3D Blu-ray discs), 3D TV (with 3D channel), and so on. After you have connected the 3D video devices to the projector, wear the BenQ 3D glasses and make sure the power is on to view 3D contents.  When watching 3D contents,  the image may seem misplaced, however, this is not a product malfunction. take appropriate breaks when watching 3D content. stop watching 3D content if you feel fatigue or discomfort. keep a distance from the screen of about three times the effective height of the screen when watching 3D content. children and people with a history of oversensitivity to light, heart problems, or have any other existing medical condition should be refrained from watching 3D content. The default setting is Auto and the projector automatically chooses an appropriate 3D format when detecting 3D contents. If the projector cannot recognize the 3D format, manually choose a 3D mode according to your preference.  When this function is enabled:  The brightness level of the projected image decreases. The Picture Mode cannot be adjusted. The Function is accessible through the remote control.  When your 3D image is distorted, enable this function to switch between the image for the left eye and the right eye for the more comfortable 3D viewing experience.  The function is accessible through the remote control.  When your 3D image is distorted, enable this function to switch between the image for the left eye and the right eye for the more comfortable 3D viewing experience.  The function is accessible through the remote control.  Settings  Language  Press OK to enter its submenu. See below for more details.  Finables 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.  Sets whether the projector searches automatically for input sources. Select On to enable the projector to scan for input sources  |                | The function is accessible through the remote control.  |
| <ul> <li>the image may seem misplaced, however, this is not a product malfunction.</li> <li>take appropriate breaks when watching 3D content.</li> <li>stop watching 3D content if you feel fatigue or discomfort.</li> <li>keep a distance from the screen of about three times the effective height of the screen when watching 3D content.</li> <li>children and people with a history of oversensitivity to light, heart problems, or have any other existing medical condition should be refrained from watching 3D content.</li> <li>The default setting is Auto and the projector automatically chooses an appropriate 3D format when detecting 3D contents. If the projector cannot recognize the 3D format, manually choose a 3D mode according to your preference.</li> <li>When this function is enabled: <ul> <li>The brightness level of the projected image decreases.</li> <li>The Picture Mode cannot be adjusted.</li> <li>The Picture Mode cannot be adjusted.</li> <li>The 1D Keystone can only be adjusted within limited degrees.</li> <li>The function is accessible through the remote control.</li> </ul> </li> <li>3D Sync Invert  When your 3D image is distorted, enable this function to switch between the image for the left eye and the right eye for the more comfortable 3D viewing experience.</li> <li>The function is accessible through the remote control.</li> </ul> <li>Settings  Press OK to enter its submenu. See below for more details.  Language  Projector  Projector  Position  The projector can be installed on a ceiling or behind a screen, or with one or more mirrors. See Choosing a location for details.</li> <li>Enables 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.  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.</li>                            |                | your 3D-compatible video devices and contents, such as PlayStation consoles (with 3D game discs), 3D Blu-ray 3D players (with 3D Blu-ray discs), 3D TV (with 3D channel), and so on. After you have connected the 3D video devices to the projector,  |
| * take appropriate breaks when watching 3D content.  * stop watching 3D content if you feel fatigue or discomfort.  * keep a distance from the screen of about three times the effective height of the screen when watching 3D content.  * children and people with a history of oversensitivity to light, heart problems, or have any other existing medical condition should be refrained from watching 3D content.  The default setting is Auto and the projector automatically chooses an appropriate 3D format when detecting 3D contents. If the projector cannot recognize the 3D format, manually choose a 3D mode according to your preference.  When this function is enabled:  * The Picture Mode cannot be adjusted.  * The Picture Mode cannot be adjusted.  * The Picture Mode cannot be adjusted.  * The Volkeystone can only be adjusted within limited degrees.  The function is accessible through the remote control.  When your 3D image is distorted, enable this function to switch between the image for the left eye and the right eye for the more comfortable 3D viewing experience.  The function is accessible through the remote control.  Settings  Press OK to enter its submenu. See below for more details.  * Language  Projector Position  The projector can be installed on a ceiling or behind a screen, or with one or more mirrors. See Choosing a location for details.  Enables 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.  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.   |                | When watching 3D contents,  |
| 3D format when detecting 3D contents. If the projector cannot recognize the 3D format, manually choose a 3D mode according to your preference.  When this function is enabled:  • The brightness level of the projected image decreases. • The Picture Mode cannot be adjusted. • The 2D Keystone can only be adjusted within limited degrees.  The function is accessible through the remote control.  When your 3D image is distorted, enable this function to switch between the image for the left eye and the right eye for the more comfortable 3D viewing experience.  The function is accessible through the remote control.  Settings  Press OK to enter its submenu. See below for more details.  Language  • Projector Position  The projector can be installed on a ceiling or behind a screen, or with one or more mirrors. See Choosing a location for details.  Test Pattern  Finalles 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.  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.  | 3D Mode        | <ul> <li>take appropriate breaks when watching 3D content.</li> <li>stop watching 3D content if you feel fatigue or discomfort.</li> <li>keep a distance from the screen of about three times the effective height of the screen when watching 3D content.</li> <li>children and people with a history of oversensitivity to light, heart problems, or have any other existing medical condition should be refrained from</li> </ul>  |
| <ul> <li>The brightness level of the projected image decreases.</li> <li>The Picture Mode cannot be adjusted.</li> <li>The 2D Keystone can only be adjusted within limited degrees.</li> <li>The function is accessible through the remote control.</li> <li>When your 3D image is distorted, enable this function to switch between the image for the left eye and the right eye for the more comfortable 3D viewing experience.</li> <li>The function is accessible through the remote control.</li> <li>Settings</li> <li>Press OK to enter its submenu. See below for more details.</li> <li>Language</li> <li>Sets the language for the On-Screen Display (OSD) menus.</li> <li>Projector Position</li> <li>The projector can be installed on a ceiling or behind a screen, or with one or more mirrors. See Choosing a location for details.</li> <li>Test Pattern</li> <li>Auto Source</li> <li>Auto Source</li> <li>Off, 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.</li> </ul>   |                | 3D format when detecting 3D contents. If the projector cannot recognize the 3D  |
| <ul> <li>The Picture Mode cannot be adjusted.</li> <li>The 2D Keystone can only be adjusted within limited degrees.</li> <li>The function is accessible through the remote control.</li> <li>When your 3D image is distorted, enable this function to switch between the image for the left eye and the right eye for the more comfortable 3D viewing experience.</li> <li>The function is accessible through the remote control.</li> <li>Press OK to enter its submenu. See below for more details.</li> <li>Language</li> <li>Projector Position</li> <li>The projector can be installed on a ceiling or behind a screen, or with one or more mirrors. See Choosing a location for details.</li> <li>Test Pattern</li> <li>Auto Source</li> <li>Auto Source</li> <li>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.</li> </ul>  |                | When this function is enabled:  |
| When your 3D image is distorted, enable this function to switch between the image for the left eye and the right eye for the more comfortable 3D viewing experience.  The function is accessible through the remote control.  Press OK to enter its submenu. See below for more details.  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 for details.  Enables 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.  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.   |                | The Picture Mode cannot be adjusted.  |
| for the left eye and the right eye for the more comfortable 3D viewing experience.  The function is accessible through the remote control.  Press OK to enter its submenu. See below for more details.  Language  Projector Position  The projector can be installed on a ceiling or behind a screen, or with one or more mirrors. See Choosing a location for details.  Test Pattern  Enables 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.  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.   |                | The function is accessible through the remote control.  |
| Press OK to enter its submenu. See below for more details.  Language  Projector Position  The projector can be installed on a ceiling or behind a screen, or with one or more mirrors. See Choosing a location for details.  Test Pattern  Enables 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.  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.   | 3D Sync Invert | for the left eye and the right eye for the more comfortable 3D viewing experience.  |
| <ul> <li>Language Sets the language for the On-Screen Display (OSD) menus.</li> <li>Projector Position The projector can be installed on a ceiling or behind a screen, or with one or more mirrors. See Choosing a location for details.</li> <li>Test Pattern Enables 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.</li> <li>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.</li> </ul>  |                |   |
| <ul> <li>Projector         Position</li></ul>  | Settings       | Press <b>OK</b> to enter its submenu. See below for more details.   |
| <ul> <li>Position mirrors. See Choosing a location for details.</li> <li>Test Pattern Enables 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.</li> <li>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.</li> </ul>   | • Language     | Sets the language for the On-Screen Display (OSD) menus.  |
| size and focus so as to check if the projected image is free of distortion.  Sets whether the projector searches automatically for input sources. Select <b>On</b> to enable the projector to scan for input sources until it acquires a signal. If the function is set to <b>Off</b> , the projector selects the last used input source.  | -              |   |
| • Auto Source 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.  | • Test Pattern | size and focus so as to check if the projected image is free of distortion.   |
| Menu Type Switches to the Advanced OSD menu.   | • Auto Source  | enable the projector to scan for input sources until it acquires a signal. If the function  |
|  | • Menu Type    | Switches to the <b>Advanced</b> OSD menu.   |

| • HDMI<br>Format        | 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.  ### HDMI Format is only available when the HDMI signal is selected.  #### Action to a think function only after a new lower is installed. When you select Poset as  |
|-------------------------|---|
| • Reset Lamp<br>Timer   | Activates this function only after a new lamp is installed. When you select <b>Reset</b> , a " <b>Reset Successfully</b> " message displays to notify that the lamp time has been reset to "0".   |
| • Reset All<br>Settings | Returns all settings to the factory preset values.  The following settings will still remain: Keystone, Language, Projector Position, and Reset Lamp Timer.   |
| • Information           | Displays the following information about your projector.  • 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.  • Equivalent Lamp Hour: Displays the number of hours the lamp has been used.  • 3D Format: Displays the current 3D mode.   3D Format is only available when 3D Mode is enabled.  • Firmware Version: Displays the firmware version of your projector.  Some information is given only when certain input sources are in use. |

## Basic OSD menu - without input signals connected

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

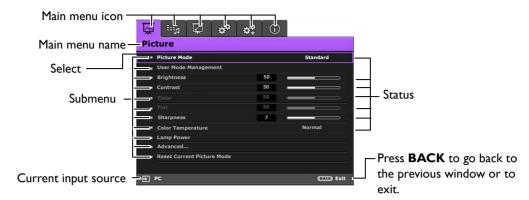
To access the OSD menu, press **MENU** on the projector or remote control.

- Use the arrow keys (◀/►/▲/▼) on the projector or remote control to move through the menu items.
- Use OK to confirm the selected menu item.
- To switch from the Basic OSD menu to the Advanced OSD menu, see page 30.

| Menu                  | Submenus and Descriptions  |
|-----------------------|--|
| Language              | Sets the language for the On-Screen Display (OSD) menus.   |
| Projector<br>Position | The projector can be installed on a ceiling or behind a screen, or with one or more mirrors. See Choosing a location for details.  |
| Test Pattern          | Enables 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           | Sets whether the projector searches automatically for input sources. Select <b>On</b> to enable the projector to scan for input sources until it acquires a signal. If the function is set to <b>Off</b> , the projector selects the last used input source. |
| Menu Type             | Switches to the <b>Advanced</b> OSD menu.  |
| HDMI Format           | 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.   |
|                       | HDMI Format is only available when the HDMI signal is selected.  |
| Reset Lamp<br>Timer   | Activates this function only after a new lamp is installed. When you select <b>Reset</b> , a " <b>Reset Successfully</b> " message displays to notify that the lamp time has been reset to "0".  |
| Reset All             | Returns all settings to the factory preset values.   |
| Settings              | The following settings will still remain: Keystone, Language, Projector Position, and Reset Lamp Timer.  |
|                       | Displays the following information about your projector.   |
|                       | 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.  |
| Information           | Equivalent Lamp Hour: Displays the number of hours the lamp has been used.   |
|                       | 3D Format: Displays the current 3D mode.   |
|                       | 3D Format is only available when 3D Mode is enabled.   |
|                       | Firmware Version: Displays the firmware version of your projector.   |
|                       | Some information is given only when certain input sources are in use.  |

# 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 **MENU** on the projector or remote control. It is consisted of the following main menus. Check the links after the menu items below to learn more details.

- I. **Picture** menu (see page 36)
- 2. Audio Setup menu (see page 40)
- 3. **Display** menu (see page 41)
- 4. **System Setup : Basic** menu (see page 43)
- 5. System Setup: Advanced menu (see page 44)
- 6. Information menu (see page 46)

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 (◄/►/▲/▼) on the projector or remote control to move through the menu items.
- Use OK to confirm the selected menu item.
- To switch from the Advanced OSD menu to the Basic OSD menu, see page 30.

## Picture menu

| Submenu                 | Functions and Descriptions   |  |
|-------------------------|--|--|
| Picture Mode            | <ul> <li>Selects a preset picture mode to suit your operating environment and input signal picture type.</li> <li>The preset picture modes are described as below: <ul> <li>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.</li> <li>Cinema: With well-balanced color saturation and contrast with a low brightness level, this is most suitable for enjoying movies in a totally dark environment (as you would find in a commercial cinema).</li> <li>Standard: Being slightly brighter than Cinema mode, it is suitable for use in rooms where there is a small amount of ambient light.</li> <li>3D: It is optimized to bring up 3D effects when watching 3D contents.</li> </ul> </li> <li>This mode is only available when 3D function is enabled.</li> <li>User I/User 2: Recalls the customized settings. See User Mode Management for more details.</li> <li>The function is accessible through the remote control.</li> </ul>  |  |
| User Mode<br>Management | The function is accessible through the remote control.  The functions are only available when Picture Mode is set to User I or User 2.  Load Settings From  Allows you to manually adjust a preset picture mode and make it an available option on the picture mode list.  Go to the Picture > Picture Mode menu, select User I or User 2.  Press ▼ to select User Mode Management.  On the User Mode Management window, select Load Settings From and press OK.  Press ▼ to select a picture mode that is close to your need.  When done, press OK and BACK 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  Selects to rename the customized picture modes (User I or User 2).  Go to the Picture > Picture Mode menu, select User I or User 2.  Press ▼ to select User Mode Management.  On the User Mode Management window, select Rename User Mode and press OK.  On the Rename User Mode window, use ▲/▼/◄/▶ to select desired characters for the selected mode.  When done, press OK and BACK to exit. |  |
| Brightness              | 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.  The higher the value, the brighter the picture, while the lower the value, the darker the picture.  The function is accessible through the remote control.   |  |

|              | 1.0  |  |  |
|--------------|--|--|--|
|              | Adjusts the degree of difference between dark and light in the picture. After adjusting the <b>Brightness</b> value, adjust <b>Contrast</b> to set the peak white level. |  |  |
| Contrast     | The higher the value, the greater the contrast.  |  |  |
|              | 30 50 70   |  |  |
|              | The function is accessible through the remote control.   |  |  |
|              | Adjusts the color saturation level the amount of each color in a video picture.  |  |  |
| Color        | Lower settings produce less saturated colors; setting to the minimum value makes the image black and white.  |  |  |
| Color        | If the setting is too high, colors on the image will be overpowering, which makes the  |  |  |
|              | image unrealistic.   |  |  |
|              | Adjusts the red and green color tones of the picture.  |  |  |
| Tint         | The higher the value, the more reddish the picture becomes. The lower the value, the   |  |  |
|              | more greenish the picture becomes.  Adjusts to make the picture look sharper or softer.  |  |  |
|              | The higher the value, the sharper the  |  |  |
|              | picture becomes. The lower the   |  |  |
| Sharpness    | value, the softer the picture becomes.   |  |  |
|              | 12   |  |  |
|              | The function is accessible through the remote control.   |  |  |
|              | The options available for color temperature* settings vary according to the connected  |  |  |
|              | input signal.  • 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.   |  |  |
| Color        | Normal: Maintains normal colorings for white.     Cool: Makes pictures appear bluish white.  |  |  |
| Temperature* | Cool: Makes pictures appear bluish white.  *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.  |  |  |
|              | The function is accessible through the remote control.   |  |  |
|              | Selects the projector lamp power from the following modes.   |  |  |
|              | Normal: Provides full lamp brightness.   |  |  |
|              | Economic: Reduces system noise and power consumption by 30%.   |  |  |
| Lamp Power   | SmartEco: Reduces system noise and lamp power consumption by up to 70%.  |  |  |
|              | If the <b>Economic</b> or <b>SmartEco</b> mode is selected, the light output will be reduced   |  |  |
|              | and result in darker projected pictures.   |  |  |
|              | See Setting Lamp Power for details.  |  |  |

#### Black Level

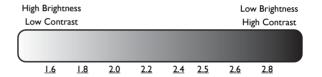
Sets the picture grayscale to 0 IRE or 7.5 IRE.

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.

#### · Gamma Selection

Gamma refers to the relationship between input source and picture brightness.

- **1.6/1.8/2.0/BenQ**: Selects these values according to your preference.
- **2.2**: Increases the average brightness of the picture. Best for a lit environment, meeting room or family room.
- 2.4/2.5: Best for viewing movies in a darkened environment.
- 2.6/2.8: Best for viewing movies which are mostly composed of dark scenes.



#### Advanced...

#### Brilliant Color

This function utilizes a new color-processing algorithm and system level enhancements to enable higher brightness while providing truer, more vibrant colors in picture. It enables a greater than 50% brightness increase in mid-tone images, which are common in video and natural scenes, so the projector reproduces images in realistic and true colors. If you prefer images with that quality, select **On**. Selecting **Off** disables **Brilliant Color**, and **Color Temperature** becomes unavailable for access at the same time.

#### Color Temperature Fine Tuning

Allows you to manually adjust the pre-defined color temperature modes:

- 1. Press OK to display the Color Temperature Fine Tuning window.
- Press ▲/▼ to select the item(s) you want to make changes and use ◀/► to adjust the values.
  - Red Gain/Green Gain/Blue Gain: Adjusts the contrast levels of Red, Green, and Blue.
  - Red Offset/Green Offset/Blue Offset: Adjusts the brightness levels of Red, Green, and Blue.
- 3. When done, press **OK** and **BACK** to exit.
- The function is accessible through the remote control.

#### 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.

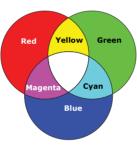
Only in permanent installations with controlled lighting levels, such as boardrooms, lecture theaters, or home theaters, should color management be considered. Color management provides fine color control adjustment to allow for more accurate color reproduction.

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.

- 1. Press **OK** to display the **Color Management** window.
- 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.

#### Advanced...



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.

- 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.
- 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 **OK** and **BACK** to exit.

\*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.

#### The function is accessible through the remote control.

### **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.

|                               | All of the adjustments you've made for the selected <b>Picture Mode</b> (including preset modes, <b>User I</b> , and <b>User 2</b> ) return to the factory preset values.                            |  |  |
|-------------------------------|--|--|--|
| Reset Current<br>Picture Mode | <ol> <li>Press <b>OK</b>. The confirmation message displays.</li> <li>Use <b>◄/▶</b> to select <b>Reset</b> and press <b>OK</b>. The picture mode returns to the factory preset settings.</li> </ol> |  |  |
|                               | 3. Repeat steps I and 2 if you want to reset other picture modes.  |  |  |

# Audio Setup menu

| Submenu                   | Functions and Descriptions  |  |  |
|---------------------------|---|--|--|
|                           | Effect Mode   |  |  |
|                           | Selects a sound effect mode to your preference. The following preset sound modes are provided: <b>Standard</b> , <b>Cinema</b> , <b>Music</b> , <b>Sport</b> , and <b>User</b> .  |  |  |
|                           | When selecting the <b>User</b> mode, you may make manual adjustments with the <b>User EQ</b> function.  |  |  |
| Sound Mode                | If the Mute function is activated, adjusting Sound Mode will turn off the Mute function.  |  |  |
|                           | • User EQ   |  |  |
|                           | Selects desired frequency bands (100 Hz, 300 Hz, 1k Hz, 3k Hz, and 10k Hz) to adjust the levels according to your preference. The settings made here define the <b>User</b> mode. |  |  |
|                           | Selects <b>On</b> to temporarily turn off the projector's internal speaker or the volume  |  |  |
| Mute                      | being output from the audio output jack.  |  |  |
| ridec                     | To restore the audio, select <b>Off</b> .   |  |  |
|                           | The function is accessible through the remote control.  |  |  |
|                           | Adjusts the volume level of the projector's internal speaker or the volume being  |  |  |
|                           | output from the audio output jack.  |  |  |
| Volume                    | If the Mute function is activated, adjusting Mute will turn off the Mute function.  |  |  |
|                           | The function is accessible through the remote control.  |  |  |
| Davis On IOS              | Sets the ring tone for the projector <b>On</b> or <b>Off</b> .  |  |  |
| Power On/Off<br>Ring Tone | The 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.                               |  |  |
| Reset Audio<br>Settings   | All of the adjustments you've done under the <b>Audio Setup</b> menu return to the factory preset values.   |  |  |

# **Display** menu

| The native display resolution of this projector is in a 16:9 aspect ratio. How may use this function to display projected picture of different aspect ratio.  In the following illustrations, the black portions are inactive areas and white portions are active areas.  Auto  Scales a picture proportionally to fit the proportionally to fit the proportionally to fit the proportionally to fit the proportional or vertical and the aspect ratio of a picture.  4:3  Scales the picture so that it is displayed in the screen and the screen and the aspect ratio of a picture.  | d the<br>Djector's<br>Il width.<br>Maintains   |  |  |  |
|--|--|--|--|--|
| may use this function to display projected picture of different aspect ratio.  In the following illustrations, the black portions are inactive areas and white portions are active areas.  • Auto  Scales a picture proportionally to fit the propative resolution in its horizontal or vertical This makes the most use of the screen and the aspect ratio of a picture.  • 4:3  Scales the picture so that it is displayed in the screen and the aspect ratio of a picture.  | d the<br>Djector's<br>Il width.<br>Maintains   |  |  |  |
| Scales a picture proportionally to fit the proportional p | ojector's<br>Il width.<br>maintains  |  |  |  |
| Scales a picture proportionally to fit the proportional p | l width.<br>maintains  |  |  |  |
| Scales a picture proportionally to fit the proportional p | l width.<br>maintains  |  |  |  |
| native resolution in its horizontal or vertical This makes the most use of the screen and the aspect ratio of a picture.  • 4:3  Scales the picture so that it is displayed in the screen and the aspect ratio of a picture.   | l width.<br>maintains  |  |  |  |
| Scales the picture so that it is displayed in the  | ne center  |  |  |  |
|  | ie center  |  |  |  |
| of the screen with a 4:3 aspect ratio.   |  |  |  |  |
| • 16:9   |  |  |  |  |
| Aspect Ratio  Scales a picture so that it is displayed in the of the screen with a 16:9 aspect ratio.  | e center   |  |  |  |
| • Wide   | • Wide   |  |  |  |
| Stretches a picture in a horizontal direction the screen width. It does not alter the heigh picture.   |  |  |  |  |
| Letter Box   | Letter Box   |  |  |  |
| Scales a picture to fit the projector's native resolution in its horizontal width and resize picture height to the 3/4 of the projection. This makes a picture greater than the screet. The top and bottom edges of the displayer.   | es the<br>width.<br>en height.<br>d picture  |  |  |  |
| are cropped. This suits the contents which produced in letter box format (with black the top and bottom).  |  |  |  |  |
| Displays the <b>Image Position</b> window. You may use the directional arrow ke  | ys on the  |  |  |  |
|  | projector or remote control to adjust the position of the projected picture.               |  |  |  |
| Image Position The values shown on the lower position of the window change with every keyou made.  | The values shown on the lower position of the window change with every key press you made. |  |  |  |
| This function is only available when the PC signal is selected.  | This function is only available when the PC signal is selected.                            |  |  |  |
| Conceals the poor picture quality in the four edges.   |  |  |  |  |
| Overscan Adjustment The greater the value, the more portion of the picture is concealed while the remains filled and geometrically accurate. Setting 0 means the picture is 100 displayed.   |  |  |  |  |

|              | • H. Size  |
|--------------|--|
| PC &         | Adjusts the horizontal width of the picture.   |
|              | This function is only available when the Component or PC signal is selected.   |
|              | • Phase  |
| Component    | Adjusts the clock phase to reduce picture distortion.  |
| YPbPr Tuning | 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.  |
|              | This projector supports playing three-dimensional (3D) content transferred through your 3D-compatible video devices and contents, such as PlayStation consoles (with 3D game discs), 3D Blu-ray 3D players (with 3D Blu-ray discs), 3D TV (with 3D channel), and so on. After you have connected the 3D video devices to the projector, wear the BenQ 3D glasses and make sure the power is on to view 3D contents.  |
|              | When watching 3D contents,   |
|              | <ul> <li>the image may seem misplaced, however, this is not a product malfunction.</li> <li>take appropriate breaks when watching 3D content.</li> <li>stop watching 3D content if you feel fatigue or discomfort.</li> <li>keep a distance from the screen of about three times the effective height of the screen when watching 3D content.</li> <li>children and people with a history of oversensitivity to light, heart problems, or have any other existing medical condition should be refrained from watching 3D content.</li> </ul> |
| 3D           | The following functions help enhance your 3D viewing experience.   |
|              | • 3D Mode  The default setting is <b>Auto</b> and the projector automatically chooses an appropriate 3D format when detecting 3D contents. If the projector cannot recognize the 3D format, manually choose a 3D mode according to your preference.  |
|              | When this function is enabled:   |
|              | <ul> <li>the brightness level of the projected image decreases.</li> <li>the Picture Mode cannot be adjusted.</li> <li>the 2D Keystone can only be adjusted within limited degrees.</li> </ul>   |
|              | • 3D Sync Invert   |
|              | When your 3D image is distorted, enable this function to switch between the image for the left eye and the right eye for the more comfortable 3D viewing experience.   |
|              | These functions are accessible through the remote control.   |

# 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.  |  |  |  |
| Splash Screen             | Allows you to select which logo screen displays during projector start-up. You can choose <b>BenQ</b> logo screen, <b>Blue</b> screen, or <b>Black</b> screen.   |  |  |  |
| <b>Projector Position</b> | The projector can be installed on a ceiling or behind a screen, or with one or more mirrors. See Choosing a location for details.  |  |  |  |
| Auto Off                  | Prevents unnecessary projection when no signal is detected for a long time.  See Setting Auto Off for details.   |  |  |  |
| Direct Power On           | When the function is set to <b>On</b> , the projector will be turned on automatically once the power is fed through the power cable. When the function is set to <b>Off</b> , you'll have to turn on the projector by pressing () on the projector or on the remote control.   |  |  |  |
| Menu Settings             | <ul> <li>Menu Type         Switches to the Basic OSD menu.     </li> <li>Menu Display Time</li> <li>Sets the length of time the OSD will remain active after your last key press.</li> <li>Blank Reminder Message</li> <li>Sets whether the reminder message is displayed by the projector while the image is hidden.</li> </ul> |  |  |  |
| Source Rename             | Renames the current input source to your desired name.  On the <b>Source Rename</b> window, use $\triangle/\nabla/\blacktriangleleft/\triangleright$ to set the desired characters for the connected source item.  When done, press <b>OK</b> to save the changes.   |  |  |  |
| Auto Source               | Sets whether the projector searches automatically for input sources.  Select <b>On</b> to enable the projector to scan for input sources until it acquires signal. If the function is set to <b>Off</b> , the projector will select the last used inp source.  |  |  |  |

# System Setup : Advanced menu

| Submenu            | Functions and Descriptions  |
|--------------------|---|
| Reset Lamp Timer   | Activates this function only after a new lamp is installed. When you select <b>Reset</b> , a " <b>Reset Successfully</b> " message displays to notify that the lamp time has been reset to "0".   |
|                    | HDMI Format   |
|                    | Selects 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.  |
| HDMI Settings      | HDMI Format is only available when the HDMI signal is selected.   |
| Tibini Sectings    | · CEC   |
|                    | When you connect an HDMI CEC-compatible device to your projector with an HDMI cable, turning on the HDMI CEC compatible device automatically turns on the projector, while turning off the projector automatically turns off the HDMI CEC compatible device.  |
| Baud Rate          | Selects a baud rate that is identical with your computer's so that you can connect the projector with a suitable RS-232 cable and update or download the projector's firmware. This function is intended for qualified service personnel.   |
| Test Pattern       | Enables 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 Enable   |
|                    | Activates the function by selecting <b>On</b> when the selected input signal carries closed captions*.  *About caption  |
| Closed 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   |
|                    | Selects a preferred closed captioning mode. To view captions, select CC1, CC2, CC3, or CC4 (CC1 displays captions in the primary language in your area).  |
| Quick Cooling      | Selects <b>On</b> to shorten the projector cooling time from a normal 90-second duration to approximately 15 seconds.   |
|                    | It is a mode for operation in areas like high altitude or high temperature. Activate the function when your environment is between 1500 m -3000 m above sea level and ambient temperature is between 0°C-30°C.  |
|                    | 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.   |
| High Altitude Mode | Operation under <b>High Altitude Mode</b> may cause a higher decibel operating noise level because of increased fan speed necessary to improve overall system cooling and performance.  |
|                    | 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 <b>High Altitude Mode</b> to solve these symptoms. However, this is not to state that this projector can operate under any and all harsh or extreme conditions. |

| Password           | For security purposes and to prevent unauthorized use, you may set up password security for the projector. See Utilizing the password function for details.  • 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.   |
|                    | With the control keys on the projector locked, you can prevent your projector settings from being changed accidentally (by children, for example).   |
| Key Lock           | When you select <b>On</b> to enable this function, no control keys on the projector  |
|                    | will operate, except $\circlearrowleft$ <b>POWER</b> .   |
|                    | To unlock the keys, press and hold ▶ on the projector for 3 seconds.   |
|                    | When you select <b>On</b> , all LED indicators on the projector function normally. See Indicators for more details.  |
| LED Indicator      | When you select <b>Off</b> , the LED indicators ( , LAMP) are off after you turn on the projector and the splash screen displays. However, if the projector is not working properly, the LED indicators light or flash to remind you that a problem may occur. See also Indicators for more details.   |
| D. (All C. (d)     | Returns all settings to the factory preset values. The OSD menu type will return to the <b>Basic</b> OSD menu.   |
| Reset All Settings | The following settings will still remain: Keystone, Language, Projector Position, Reset Lamp Timer, High Altitude Mode, Password, Key Lock, and ISF.   |
| ISF                | The ISF calibration menu is password protected and only accessible by authorized ISF calibrators. The ISF (Imaging Science Foundation) has developed carefully crafted, industry-recognized standards for optimal video performance and has implemented a training program for technicians and installers to use these standards to obtain optimal picture quality from BenQ video display devices. Accordingly, we recommend that setup and calibration be performed by an ISF certified installation technician. |
|                    | For more information, go to www.imagingscience.com or contact the dealer or retailer from whom you purchased the projector.  |

## **Information** menu

| Submenu                 | Functions and Descriptions   |  |
|-------------------------|--|--|
| Source                  | Displays the current signal source.  |  |
| Picture Mode            | Displays the current picture mode under the <b>Picture</b> menu.             |  |
| Resolution              | Displays the native resolution of the input source.                          |  |
| Color System            | Displays input system format.  |  |
| Equivalent Lamp<br>Hour | Displays the number of hours the lamp has been used.                         |  |
| 3D Format               | Displays the current 3D mode. Only available when <b>3D Mode</b> is enabled. |  |
| 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   | Sub                            | menu                          | Options   |
|-------------|--------------------------------|-------------------------------|---|
|             | Picture Mode                   | Cinema/Bright/Standard/       | User I/User 2/3D/ISF Night/ISF Day                                    |
|             | User Mode<br>Management        | Load Settings From            |   |
|             |                                | Rename User Mode              |   |
|             | Brightness                     |                               | 0–100   |
|             | Contrast                       |                               | 0-100   |
|             | Color                          |                               | 0-100   |
|             | Tint                           |                               | 0-100   |
|             | Sharpness                      |                               | 0-15  |
|             | Color Temperature              |                               | Normal/Cool/Lamp Native/Warm  |
| Picture     | Lamp Power                     |                               | Normal/Economic/SmartEco  |
|             |                                | Black Level                   | 0 IRE/7.5 IRE   |
|             |                                | Gamma Selection               | 1.6/1.8/2.0/2.2/2.4/2.5/2.6/2.8/BenQ                                  |
|             |                                | Brilliant Color               | On/Off  |
|             | Advanced                       | Color Temperature Fine Tuning | Red Gain/Green Gain/Blue Gain/Red Offset<br>Green Offset/Blue Offset  |
|             |                                | Color Management              | Primary Color/Hue/Gain/Saturation                                     |
|             |                                | Noise Reduction               | 0-31  |
|             |                                | Film Mode                     | On/Off  |
|             | Reset Current Picture Mode     |                               | Reset/Cancel  |
|             | Sound Mode                     | Effect Mode                   | Standard/Cinema/Music/Sport/User                                      |
|             | Sound Plode                    | User EQ                       | 100 Hz/300 Hz/1k Hz/3k Hz/10k Hz                                      |
| Audio Setup | Mute                           |                               | On/Off  |
| Audio Setup | Volume                         |                               | 0-10  |
|             | Power On/Off Ring Tone         | <b>2</b>                      | On/Off  |
|             | Reset Audio Settings           |                               | Reset/Cancel  |
|             | Aspect Ratio                   |                               | Auto/4:3/16:9/Wide/Letter Box   |
|             | Image Position                 |                               |   |
|             | Overscan Adjustment            |                               | 0/1/2/3   |
| D: 1        | PC & Component<br>YPbPr Tuning | H. Size                       |   |
| Display     |                                | Phase                         |   |
|             |                                | Auto                          |   |
|             | 3D                             | 3D Mode                       | Auto/3D Off/Frame Sequential/Frame<br>Packing/Top-Bottom/Side-by-Side |
|             |                                | 3D Sync Invert                | Invert  |

|                      | Language             |                        | English/Français/Deutsch<br>Italiano/Español/Русский<br>繁體中文/简体中文/日本語/한국어/<br>Svenska/Nederlands/Türkçe/<br>Čeština/Português/ Ἰոս/ Polski<br>Magyar/ Hrvatski/Română/<br>Norsk/Dansk/Български/Suomi/<br>Indonesian/Ελληνικά/ પાર્ટ્યા/ हिन्दी |
|----------------------|----------------------|------------------------|---|
|                      | Background Color     |                        | Black/Blue/Purple   |
| System Setup         | Splash Screen        |                        | BenQ/Black/Blue   |
| System Setup : Basic | Projector Position   |                        | Front/Front Ceiling/Rear/Rear Ceiling   |
| Dasic                | Auto Off             |                        | Disable/5 min/10 min/15 min/20 min/25 min/<br>30 min  |
|                      | Direct Power On      |                        | On/Off  |
|                      |                      | Menu Type              | Basic/Advanced  |
|                      | Menu Settings        | Menu Display Time      | 5 sec/10 sec/15 sec/20 sec/25 sec/30 sec/<br>Always On  |
|                      |                      | Blank Reminder Message | On/Off  |
|                      | Source Rename        |                        |   |
|                      | Auto Source          |                        | On/Off  |
|                      | Reset Lamp Timer     |                        | Reset/Cancel  |
|                      | HDMI Sattings        | HDMI Format            | Auto/PC Signal/Video Signal   |
|                      | HDMI Settings        | CEC                    | On/Off  |
|                      | Baud Rate            |                        | 2400/4800/9600/14400/19200/38400/57600/<br>115200   |
|                      | Test Pattern         |                        | On/Off  |
|                      | Closed Caption       | Closed Caption Enable  | On/Off  |
| System Setup:        | Closed Caption       | Caption Version        | CC1/CC2/CC3/CC4   |
| Advanced             | Quick Cooling        |                        | On/Off  |
|                      | High Altitude Mode   |                        | On/Off  |
|                      | Password             | Change Password        |   |
|                      | - assword            | Power On Lock          | On/Off (input current password)   |
|                      | Key Lock             |                        | On/Off  |
|                      | LED Indicator        |                        | On/Off  |
|                      | Reset All Settings   |                        | Reset/Cancel  |
|                      | ISF                  |                        | (input password)  |
|                      | Source               |                        |   |
|                      | Picture Mode         |                        |   |
|                      | Resolution           |                        |   |
| Information          | Color System         |                        |   |
|                      | Equivalent Lamp Hour |                        |   |
|                      | 3D Format            |                        |   |
|                      | Firmware Version     |                        |   |

# **Maintenance**

## Care of the projector

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

Never remove any parts of the projector except the lamp. Contact your dealer or local customer service center if the projector fails to operate as expected.

### Cleaning the lens

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

Before cleaning any part of the projector, turn it off using the proper shutdown procedure (see Shutting down the projector), unplug the power cable, and let it cool down completely.

- 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 cleaning any part of the projector, turn it off using the proper shutdown procedure (see Shutting down the projector), unplug the power cable, and let it cool down completely.

- To remove dirt or dust, wipe the case with a soft, dry, lint-free cloth.
- To remove stubborn dirt or stains, moisten a soft cloth with water and a neutral detergent. Then wipe the case.
- PNever use wax, alcohol, benzene, thinner or other chemical detergents. These can damage the case.

### Storing the projector

To store the projector for an extended time:

- Make sure the temperature and humidity of the storage area are within the recommended range for the projector. Refer to Specifications or consult your dealer about the range.
- · Retract the adjuster feet.
- Remove the batteries 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.

To obtain the lamp hour information:

- Press MENU and then use the arrow keys (◄/►/▲/▼) to go to Information or Settings > Information.
- 2. The Equivalent Lamp Hour information displays.
- 3. Press BACK 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 30 for details.

### Setting Lamp Power

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

| Lamp mode | Description  |  |
|-----------|--|--|
| Normal    | 100% lamp brightness   |  |
| Economic  | Saves 30% lamp power consumption   |  |
| SmartEco  | Saves up to 70% lamp power consumption depending on the content brightness level |  |

Using **Economic** mode reduces system noise and power consumption by 30%. Using **SmartEco** mode reduces system noise and lamp power consumption by up to 70%. If the **Economic** or **SmartEco** mode is selected, the light output will be reduced and result in darker projected pictures.

- I. Go to Picture > Lamp Power.
- 2. Press to **OK** display the **Lamp Power** window.
- 3. Press **◄/▶** to move to your desired mode, and press **OK**.
- 4. When done, press **BACK** to save your changes and exit.

### Setting **Auto Off**

This function allows the projector to turn off automatically if no input source is detected after a set period of time.

- 1. Go to System Setup: Basic > Auto Off.
- Press ◄/► to select a time period. If the preset time lengths are not suitable for your presentation, select **Disable**, and the projector will not automatically shut down in a certain time period.
- 3. When done, press **BACK** to save your changes and exit.

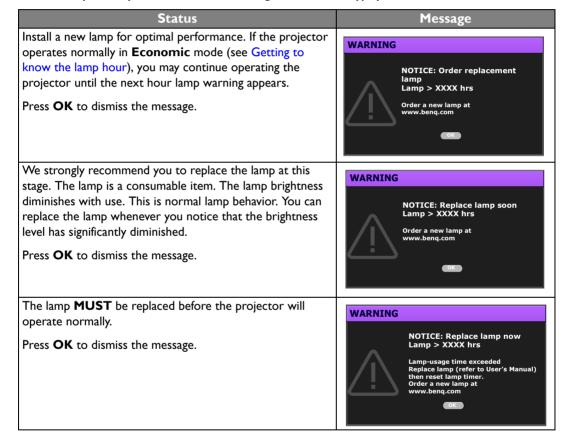
## Timing of replacing the lamp

When the Lamp indicator lights up red or a message appears suggesting it is time to replace the lamp, please install a new lamp or consult your dealer. An old lamp may cause a malfunction in the projector and in some instances the lamp may explode. Go to <a href="http://www.BenQ.com">http://www.BenQ.com</a> for a replacement lamp.

The Lamp indicator light and Temperature warning light will light up if the lamp becomes too hot. Turn the power off and let the projector cool for 45 minutes. If the Lamp or Temp indicator still lights up after turning the power back on, please contact your dealer. See <u>Indicators</u> for details.

Please replace the lamp when the following lamp warning messages appear.

The illustrations show the examples of messages you will see under the Advanced menu. They are for reference only and may differ from the actual design and the menu type you've selected.

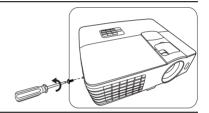


"XXXX" shown in the above messages are numbers that vary depending on different models.

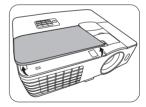
## Replacing the lamp



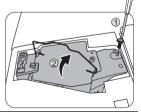
- To reduce the risk of electrical shock, always turn the projector off and disconnect the power cable before changing the lamp.
- To reduce the risk of severe burns, allow the projector to cool for at least 45 minutes before replacing the lamp.
- To reduce the risk of injuries to fingers and damage to internal components, use caution when removing lamp glass that has shattered into sharp pieces.
- To reduce the risk of injuries to fingers and/or compromising image quality by touching the lens, do not touch the empty lamp compartment when the lamp is removed.
- This lamp contains mercury. Consult your local hazardous waste regulations to dispose of this lamp in a proper manner.
- To assure optimal performance from the projector, it is recommended that you purchase a qualified projector lamp for lamp replacement.
- If lamp replacement is performed while the projector is suspended upside-down from the ceiling, make sure that no one is underneath the lamp socket to avoid any possible injury or damage to the human eyes caused by fractured lamp.
- Ensure good ventilation when handling broken lamps. We recommend that you use respirators, safety
  glasses, goggles or face shield and wear protective clothing such as gloves.
- 1. Turn the power off and disconnect the projector from the power outlet. If the lamp is hot, avoid burns by waiting for approximately 45 minutes until the lamp has cooled.
- 2. Loosen the screw that secures the lamp cover on the side of the projector until the lamp cover loosens.



- 3. Remove the lamp cover from the projector.
- <u>/!\</u>
- Do not turn the power on with the lamp cover removed.
- Do not insert your fingers between the lamp and the projector as the sharp edges inside the projector may cause injuries.



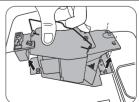
- 4. Loosen the screw that secures the lamp.
- 5. Lift the handle so that it stands up.



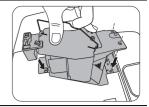
6. Use the handle to slowly pull the lamp out of the projector.



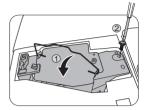
- Pulling it too quickly may cause the lamp to break and scatter broken glass in the projector.
- Do not place the lamp in locations where water might splash on it, children can reach it, or near flammable materials.
- Do not insert your hands into the projector after the lamp is removed. If you touch the optical components inside, it could cause color unevenness and distortion of the projected images.



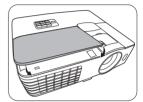
7. As shown in the illustration, lower the new lamp.



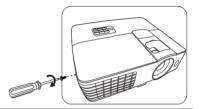
- 8. Tighten the screw that secures the lamp.
- 9. Ensure the handle is fully laid flat and locked in place.
- ⚠
- Loose screw may cause a bad connection, which could result in malfunction.
- · Do not over tighten the screw.



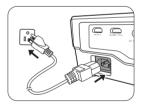
10. Replace the lamp cover on the projector.



- 11. Tighten the screw that secures the lamp cover.
- <u>(1)</u>
- Loose screw may cause a bad connection, which could result in malfunction.
- · Do not over tighten the screw.



12. Connect the power and restart the projector.



- 13. After the startup logo displays, resetting the lamp timer via the OSD menu.
- Under the Advanced OSD menu, go to System Setup: Advanced > Reset Lamp Timer, and select Reset.
- Under the Basic OSD menu, if there's no signal connected to the projector, go to Reset Lamp Timer and select Reset; if there are signals connected, go to Settings > Reset Lamp Timer, and select Reset.
- Do not reset if the lamp is not new or replaced as this could cause damage.
  - A "Reset Successfully" message displays to notify that the lamp time has been reset to "0".

## **Indicators**

There are three indicators which show the status of the projector. Check the following information about the indicator lights. If there is anything wrong, turn the projector off and contact your dealer.

#### • When the projector is in a normal state

| POWER              | TEMP | LAMP | Status & Description   |
|--------------------|------|------|--|
| Orange             | Off  | Off  | Stand-by mode  |
| Green<br>Flashing  | Off  | Off  | Powering up  |
| Green              | Off  | Off  | Normal operation   |
| Orange<br>Flashing | Off  | Off  | <ul> <li>The projector needs 90 seconds to cool down as it was abnormally shut down without the normal cooling down process.</li> <li>The projector needs to cool for 90 seconds after the power is turned off.</li> </ul> |

#### • When the projector is in an abnormal state

| POWER | TEMP              | LAMP               | Status & Description   |  |  |
|-------|-------------------|--------------------|--|--|--|
| Off   | Off               | Red                | The lamp has been damage<br>customer center for purch  | ed. Please contact your local BenQ<br>lasing a new lamp.     |  |
|       |                   | Red                | The lamp is not properly a   |  |  |
| Off   | Off               | Flashing           | <ul> <li>The lamp has been damage<br/>customer center for purch</li> </ul>                         | ed. Please contact your local BenQ lasing a new lamp.        |  |
| Off   | Off               | Orange<br>Flashing | The lamp is not lit up.  |  |  |
| Green | Off               | Orange             | The lamp life exhausted. Please contact your local BenQ customer center for purchasing a new lamp. |  |  |
| Red   | Red               | Off                |  |  |  |
| Red   | Red<br>Flashing   | Off                | The ferre are not weaking  | The projector has shut down automatically. If you try to re- |  |
| Red   | Green             | Off                | The fans are not working.  | start the projector, it will shut down again. Please contact |  |
| Red   | Green<br>Flashing | Off                |  | your dealer for assistance.                                  |  |
|       |                   |                    | The internal temperature is too high.  |  |  |
| 6     | D. J              | Red Off            | The intake ventilation or to   | he exhaust ventilation is blocked.                           |  |
| Green | Red               |                    | The projector may be in a  | poorly ventilated location.                                  |  |
|       |                   |                    | The ambient temperature  | may be too high.   |  |

# **Troubleshooting**

| Problem                                 | Cause   | Remedy  |
|---|---|---|
| The projector does                      | There is no power from the power cable.   | Plug the power cable into the AC inlet on the rear of the projector, and plug the power cable into to the power outlet. If the power outlet has a switch, make sure that it is switched on. |
| not turn on.                            | Attempting to turn the projector on again during the cooling process.                   | Wait until the cooling down process has completed.  |
|   | The lamp cover is not securely attached.  | Correctly attach the lamp cover.  |
|   | The video source is not turned on or connected correctly.                               | Turn the video source on and check that the signal cable is connected correctly.  |
| No picture.                             | The projector is not correctly connected to the input source device.                    | Check the connection.   |
|   | The input source has not been correctly selected.                                       | Select the correct source with the <b>SOURCE</b> key on the projector or remote control.  |
| Image is unstable.                      | The connection cables are not securely connected to the projector or the signal source. | Correctly connect the cables to the appropriate terminals.  |
|   | The projection lens is not correctly focused.   | Adjust the focus of the lens using the focus ring.  |
| Picture is blurred.                     | The projector and the screen are not aligned properly.                                  | Adjust the projection angle and direction as well as the height of this projector if necessary.   |
|   | The lens cover is still closed.   | Remove the lens cover.  |
|   | The batteries are out of power.   | Replace both of the batteries with new ones.  |
| Remote control does not work correctly. | There is an obstacle between the remote control and the projector.                      | Remove the obstacle.  |
| not work correctly.                     | You are too far away from the projector.  | Stand within 8 meters (26.2 feet) of the projector.   |
|   | The 3D glasses are out of battery.  | Recharge the 3D glasses.  |
| 3D content does not                     | The settings in the <b>3D</b> menu are not set correctly.                               | Correctly set the settings in the <b>3D</b> menu.   |
| not display correctly                   | Your Blu-ray Disc is not in 3D format.  | Use a 3D Blu-ray Disc and try again.  |
|   | The input source has not been correctly selected.                                       | Select the correct source with the <b>SOURCE</b> key on the projector or remote control.  |

## **Specifications**

## Projector specifications

All specifications are subject to change without notice.

### **Optical**

Resolution

1920 (H) x 1080 (V)

Display system

Single-chip DLP<sup>TM</sup> system

Lens F/Number

F = 2.59 to 2.87, f = 16.88 to 21.88 mm

(HT1075)

F = 2.6 to 2.78, f = 10.2 to 12.24 mm

(HT1085ST)

Lamp

240 W lamp

### **Electrical**

Power supply

AC100-240V, 3.5 A, 50-60 Hz (Automatic)

Power consumption

375 W (Max); < 0.5 W (Standby)

### Mechanical

Weight

2.75 Kg (6.06 lbs) (HT1075) 2.85 Kg (6.28 lbs) (HT1085ST)

### Output terminals

Speaker

(Stereo) 10 watt x 1

Audio signal output

PC audio jack x 1

#### Control

RS-232 serial control

9 pin x 1

IR receiver x 2

12VDC (Max. 0.5 A) x 1

### Input terminals

Computer input

RGB input

D-Sub 15-pin (female) x 1

Video signal input

**VIDEO** 

RCA jack x 1

SD/HDTV signal input

Analog - Component RCA jack x 3

(through RGB input)

Digital - HDMI x 1

Digital - HDMI/MHL x 1

Audio signal input

Audio in

RCA audio jack (L/R) x 2

PC audio jack x 1

USB port (Type-A x 1; Mini-B x 1)

## **Environmental Requirements**

Operating temperature

0°C-40°C at sea level

Operating relative humidity

10%–90% (without condensation)

Operating altitude

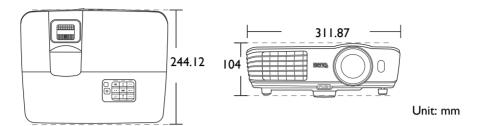
0-1499 m at 0°C-35°C

1500-3000 m at 0°C-30°C (with

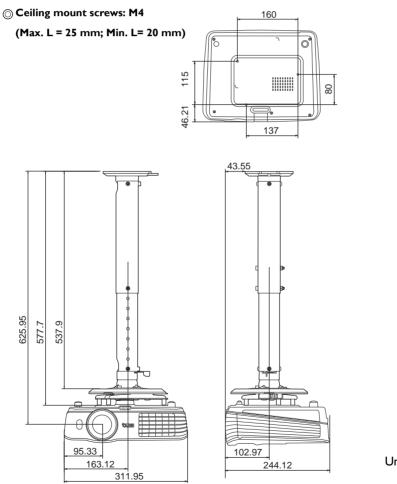
High Altitude Mode on)

## **Dimensions**

311.87 mm x 244.12 mm x 104 mm (W x D x H)



## Ceiling mount installation



Unit: mm

# Timing chart

## Supported timing for PC input

| Format     | Resolution                      | Refresh rate<br>(Hz) | H. Frequency<br>(KHz) | Pixel<br>Frequency<br>(MHz) |
|------------|---------------------------------|----------------------|-----------------------|-----------------------------|
| 720 × 400  | 720 × 400_70                    | 70.087 31.469        |                       | 28.3221                     |
|            | VGA_60*                         | 59.940               | 31.469                | 25.175                      |
| 640 × 480  | VGA_72                          | 72.809               | 37.861                | 31.500                      |
| 640 X 480  | VGA_75                          | 75.000               | 37.500                | 31.500                      |
|            | VGA_85                          | 85.008               | 43.269                | 36.000                      |
|            | SVGA_60*                        | 60.317               | 37.879                | 40.000                      |
|            | SVGA_72                         | 72.188               | 48.077                | 50.000                      |
| 800 × 600  | SVGA_75                         | 75.000               | 46.875                | 49.500                      |
|            | SVGA_85                         | 85.061               | 53.674                | 56.250                      |
|            | SVGA_120**<br>(Reduce Blanking) | 119.854              | 77.425                | 83.000                      |
|            | XGA_60*                         | 60.004               | 48.363                | 65.000                      |
| 1024 × 749 | XGA_70                          | 70.069               | 56.476                | 75.000                      |
| 1024 x 768 | XGA_75                          | 75.029               | 60.023                | 78.750                      |
|            | XGA_85                          | 84.997               | 68.667                | 94.500                      |
|            | XGA_I20**<br>(Reduce Blanking)  | 119.989              | 97.551                | 115.500                     |
| 1152 × 864 | 1152 x 864_75                   | 75.00                | 67.500                | 108.000                     |
| 1024 x 576 | BenQ Notebook<br>Timing         | 60.0                 | 35.820                | 46.966                      |
| 1024 x 600 | BenQ Notebook<br>Timing         | 64.995               | 41.467                | 51.419                      |
| 1280 × 720 | 1280 x 720_60*                  | 60                   | 45.000                | 74.250                      |
| 1280 × 768 | 1280 × 768_60*                  | 59.870               | 47.776                | 79.5                        |
|            | WXGA_60*                        | 59.810               | 49.702                | 83.500                      |
|            | WXGA_75                         | 74.934               | 62.795                | 106.500                     |
| 1280 × 800 | WXGA_85                         | 84.880               | 71.554                | 122.500                     |
|            | WXGA_I20**<br>(Reduce Blanking) | 119.909              | 101.563               | 146.25                      |

|                 | SXGA_60***        | 60.020 | 63.981 | 108.000 |
|-----------------|-------------------|--------|--------|---------|
| 1280 x 1024     | SXGA_75           | 75.025 | 79.976 | 135.000 |
|                 | SXGA_85           | 85.024 | 91.146 | 157.500 |
| 1280 x 960      | 1280 x 960_60***  | 60.000 | 60.000 | 108     |
| 1280 X 760      | 1280 x 960_85     | 85.002 | 85.938 | 148.500 |
| 1360 x 768      | 1360 x 768_60***  | 60.015 | 47.712 | 85.500  |
| 1440 × 900      | WXGA+_60***       | 59.887 | 55.935 | 106.500 |
| 1400 × 1050     | SXGA+_60***       | 59.978 | 65.317 | 121.750 |
| 1600 x 1200     | UXGA***           | 60.000 | 75.000 | 162.000 |
| 1680 × 1050     | 1680 x 1050_60*** | 59.954 | 65.290 | 146.250 |
| 640 × 480@67Hz  | MAC13             | 66.667 | 35.000 | 30.240  |
| 832 × 624@75Hz  | MAC16             | 74.546 | 49.722 | 57.280  |
| 1024 x 768@75Hz | MAC19             | 74.93  | 60.241 | 80.000  |
| 1152 x 870@75Hz | MAC21             | 75.06  | 68.68  | 100.00  |

<sup>\*</sup>Supported timing for 3D signal with Frame Sequential, Top-Bottom and Side-by-Side format.

<sup>\*\*</sup>Supported timing for 3D signal with Frame Sequential format.

<sup>\*\*\*</sup>Supported timing for 3D signal with Top-Bottom and Side-by-Side format.

The timings showing above may not be supported due to EDID file and VGA graphic card limitations. It is possible that some timings cannot be chosen.

# Supported timing for HDMI (HDCP) input

| Format      | Resolution                      | Refresh rate<br>(Hz) | H. Frequency<br>(KHz) | Pixel<br>Frequency<br>(MHz) |
|-------------|---------------------------------|----------------------|-----------------------|-----------------------------|
| 440 400     | VGA_60*                         | 59.940               | 31.469                | 25.175                      |
|             | VGA_72                          | 72.809               | 37.861                | 31.500                      |
| 640 × 480   | VGA_75                          | 75.000               | 37.500                | 31.500                      |
|             | VGA_85                          | 85.008               | 43.269                | 36.000                      |
| 720 × 400   | 720 × 400_70                    | 70.087               | 31.469                | 28.3221                     |
|             | SVGA_60*                        | 60.317               | 37.879                | 40.000                      |
|             | SVGA_72                         | 72.188               | 48.077                | 50.000                      |
| 800 × 600   | SVGA_75                         | 75.000               | 46.875                | 49.500                      |
|             | SVGA_85                         | 85.061               | 53.674                | 56.250                      |
|             | SVGA_I20**<br>(Reduce Blanking) | 119.854              | 77.425                | 83.000                      |
|             | XGA_60*                         | 60.004               | 48.363                | 65.000                      |
|             | XGA_70                          | 70.069               | 56.476                | 75.000                      |
| 1024 x 768  | XGA_75                          | 75.029               | 60.023                | 78.750                      |
|             | XGA_85                          | 84.997               | 68.667                | 94.500                      |
|             | XGA_120**<br>(Reduce Blanking)  | 119.989              | 97.551                | 115.500                     |
| 1152 x 864  | 1152 x 864_75                   | 75.00                | 67.500                | 108.000                     |
| 1024 x 576  | BenQ Notebook<br>Timing         | 60.00                | 35.820                | 46.996                      |
| 1024 × 600  | BenQ Notebook<br>Timing         | 64.995               | 41.467                | 51.419                      |
| 1280 x 720  | 1280 x 720_60*                  | 60                   | 45.000                | 74.250                      |
| 1280 x 768  | 1280 x 768_60*                  | 59.870               | 47.776                | 79.5                        |
|             | WXGA_60*                        | 59.810               | 49.702                | 83.500                      |
|             | WXGA_75                         | 74.934               | 62.795                | 106.500                     |
| 1280 x 800  | WXGA_85                         | 84.880               | 71.554                | 122.500                     |
|             | WXGA_120**<br>(Reduce Blanking) | 119.909              | 101.563               | 146.25                      |
|             | SXGA_60***                      | 60.020               | 63.981                | 108.000                     |
| 1280 x 1024 | SXGA_75                         | 75.025               | 79.976                | 135.000                     |
|             | SXGA_85                         | 85.024               | 91.146                | 157.500                     |

| 1280 × 960    | 1280 x 960_60***  | 60.000 | 60.000 | 108     |
|---------------|-------------------|--------|--------|---------|
| 1260 X 760    | 1280 x 960_85     | 85.002 | 85.938 | 148.500 |
| 1360 x 768    | 1360 x 768_60***  | 60.015 | 47.712 | 85.500  |
| 1440 × 900    | WXGA+_60***       | 59.887 | 55.935 | 106.500 |
| 1400 × 1050   | SXGA+_60***       | 59.978 | 65.317 | 121.750 |
| 1600 x 1200   | UXGA***           | 60.000 | 75.000 | 162.000 |
| 1680 ×1050    | 1680 x 1050_60*** | 59.954 | 65.290 | 146.250 |
| 640×480@67Hz  | MAC13             | 66.667 | 35.000 | 30.240  |
| 832×624@75Hz  | MAC16             | 74.546 | 49.722 | 57.280  |
| 1024×768@75Hz | MAC19             | 75.020 | 60.241 | 80.000  |
| 1152x870@75Hz | MAC21             | 75.06  | 68.68  | 100.00  |

<sup>\*</sup>Supported timing for 3D signal with Frame Sequential, Top-Bottom and Side-by-Side format.

The timings showing above may not be supported due to EDID file and VGA graphic card limitations. It is possible that some timings cannot be chosen.

| Timing        | Resolution       | Vertical<br>Frequency<br>(Hz) | Horizontal<br>Frequency<br>(KHz) | Pixel<br>Frequency<br>(MHz) | Remark    |
|---------------|------------------|-------------------------------|----------------------------------|-----------------------------|-----------|
| 480i****      | 720 (1440) x 480 | 59.94                         | 15.73                            | 27                          | HDMI only |
| 480p****      | 720 × 480        | 59.94                         | 31.47                            | 27                          | HDMI only |
| 576i          | 720 (1440) x 576 | 50                            | 15.63                            | 27                          | HDMI/DVI  |
| 576p          | 720 × 576        | 50                            | 31.25                            | 27                          | HDMI/DVI  |
| 720/50p**     | 1280 x 720       | 50                            | 37.5                             | 74.25                       | HDMI/DVI  |
| 720/60p*      | 1280 x 720       | 60                            | 45.00                            | 74.25                       | HDMI/DVI  |
| 1080/24P**    | 1920 x 1080      | 24                            | 27                               | 74.25                       | HDMI/DVI  |
| 1080/25P      | 1920 x 1080      | 25                            | 28.13                            | 74.25                       | HDMI/DVI  |
| 1080/30P      | 1920 x 1080      | 30                            | 33.75                            | 74.25                       | HDMI/DVI  |
| 1080/50i***** | 1920 x 1080      | 50                            | 28.13                            | 74.25                       | HDMI/DVI  |
| 1080/60i***** | 1920 x 1080      | 60                            | 33.75                            | 74.25                       | HDMI/DVI  |
| 1080/50P***   | 1920 x 1080      | 50                            | 56.25                            | 148.5                       | HDMI/DVI  |
| 1080/60P***   | 1920 × 1080      | 60                            | 67.5                             | 148.5                       | HDMI/DVI  |

<sup>\*</sup>Supported timing for 3D signal with Frame Packing, Top-Bottom format, Side-by-Side, and Frame Sequential format.

<sup>\*\*</sup>Supported timing for 3D signal with Frame Sequential format.

<sup>\*\*\*</sup>Supported timing for 3D signal with Top-Bottom and Side-by-Side format.

<sup>\*\*</sup>Supported timing for 3D signal with Frame Packing, Top-Bottom format, and Side-by-Side format.

<sup>\*\*\*</sup>Supported timing for 3D signal with Top-Bottom and Side-by-Side format.

<sup>\*\*\*\*</sup>Supported timing for 3D signal with Frame Sequential format.

<sup>\*\*\*\*\*</sup>Supported timing for 3D signal with Side-by-Side format.

## Supported timing for MHL input

| Timing              | Resolution       | V. Frequency<br>(Hz) | H. Frequency<br>(KHz) | Pixel Freq.<br>(MHz) | Remark |
|---------------------|------------------|----------------------|-----------------------|----------------------|--------|
| 480i                | 720 (1440) x 480 | 59.94                | 15.73                 | 27                   | MHL    |
| 480p                | 720 × 480        | 59.94                | 31.47                 | 27                   | MHL    |
| 576i                | 720 (1440) x 576 | 50                   | 15.63                 | 27                   | MHL    |
| 576p                | 720 × 576        | 50                   | 31.25                 | 27                   | MHL    |
| 720/50p             | 1280 x 720       | 50                   | 37.5                  | 74.25                | MHL    |
| 720/60 <sub>P</sub> | 1280 x 720       | 60                   | 45.00                 | 74.25                | MHL    |
| 1080/50i            | 1920 × 1080      | 50                   | 28.13                 | 74.25                | MHL    |
| 1080/60i            | 1920 × 1080      | 60                   | 33.75                 | 74.25                | MHL    |
| 1080/24P            | 1920 × 1080      | 24                   | 27                    | 74.25                | MHL    |
| 1080/25P            | 1920 × 1080      | 25                   | 28.13                 | 74.25                | MHL    |
| 1080/30P            | 1920 × 1080      | 30                   | 33.75                 | 74.25                | MHL    |

## Supported timing for EDTV and HDTV (via Component inputs)

| Format   | Resolution  | Refresh rate (Hz) | H. Freq. (KHz) | Pixel Freq. (MHz) |
|----------|-------------|-------------------|----------------|-------------------|
| 480i*    | 720 × 480   | 59.94             | 15.73          | 13.5              |
| 480p*    | 720 × 480   | 59.94             | 31.47          | 27                |
| 576i     | 720 × 576   | 50                | 15.63          | 13.5              |
| 576p     | 720 × 576   | 50                | 31.25          | 27                |
| 720/50p  | 1280 x 720  | 50                | 37.5           | 74.25             |
| 720/60p* | 1280 x 720  | 60                | 45.00          | 74.25             |
| 1080/50i | 1920 x 1080 | 50                | 28.13          | 74.25             |
| 1080/60i | 1920 × 1080 | 60                | 33.75          | 74.25             |
| 1080/24P | 1920 × 1080 | 24                | 27             | 74.25             |
| 1080/25P | 1920 x 1080 | 25                | 28.13          | 74.25             |
| 1080/30P | 1920 × 1080 | 30                | 33.75          | 74.25             |
| 1080/50P | 1920 × 1080 | 50                | 56.25          | 148.5             |
| 1080/60P | 1920 × 1080 | 60                | 67.5           | 148.5             |

<sup>\*</sup>Supported timing for 3D signal with Frame Sequential format.

## Supported timing for Video input

| Format   | Resolution | Refresh rate (Hz) | H. Freq. (KHz) | Pixel Freq.<br>(MHz) |
|----------|------------|-------------------|----------------|----------------------|
| NTSC*    | -          | 60                | 15.73          | 3.58                 |
| PAL      | -          | 50                | 15.63          | 4.43                 |
| SECAM    | -          | 50                | 15.63          | 4.25/4.41            |
| PAL-M    | -          | 60                | 15.73          | 3.58                 |
| PAL-N    | -          | 50                | 15.63          | 3.58                 |
| PAL-60   | -          | 60                | 15.73          | 4.43                 |
| NTSC4.43 | -          | 60                | 15.73          | 4.43                 |

<sup>\*</sup>Supported timing for 3D signal with Frame Sequential format.

# Warranty and Copyright information

## 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 3000 meters, 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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