

BenQ

MP778/MP780 ST

Digital Projector

User Manual

Welcome

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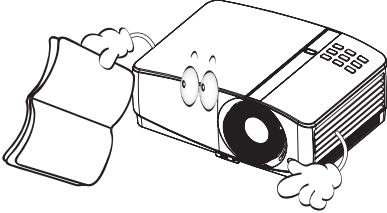
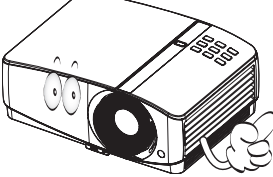
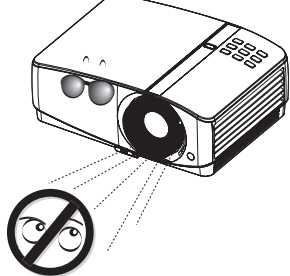
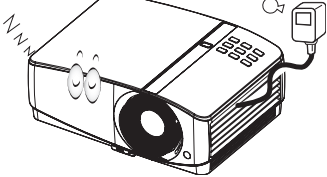
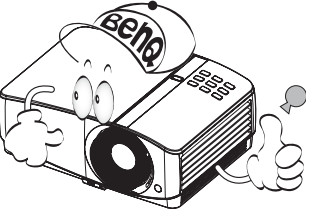
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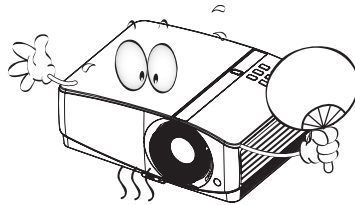
Important safety instructions

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.

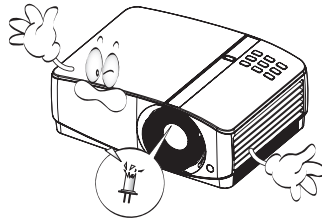
Safety Instructions	
1. Please read this manual before you operate your projector. Save it for future reference. 	4. Always open the lens shutter or remove the lens cap when the projector lamp is on. 
2. Do not look straight at the projector lens during operation. The intense light beam may damage your eyes. 	5. In some countries, the line voltage is NOT stable. This projector is designed to operate safely within a mains voltage between 100 to 240 volts AC, but could fail if power cuts or surges of ± 10 volts occur. In areas where the mains voltage may fluctuate or cut out, it is recommended that you connect your projector through a power stabilizer, surge protector or uninterruptible power supply (UPS). 
3. Refer servicing to qualified service personnel. 	6. Do not block the projection lens with any objects when the projector is under operation as this could cause the objects to become heated and deformed or even cause a fire. To temporarily turn off the lamp, press BLANK on the projector or remote control.

Safety Instructions (Continued)

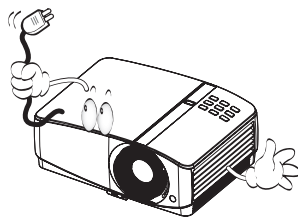
7. The lamp becomes extremely hot during operation. Allow the projector to cool for approximately 45 minutes prior to removing the lamp assembly for replacement.



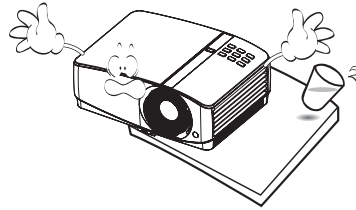
8. Do not operate lamps beyond the rated lamp life. Excessive operation of lamps beyond the rated life could cause them to break on rare occasions.



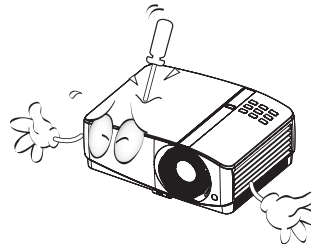
9. Never replace the lamp assembly or any electronic components unless the projector is unplugged.



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



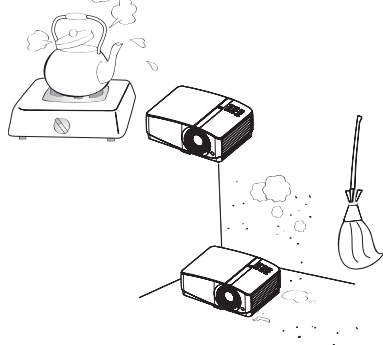
11. Do not attempt to disassemble this projector. There are dangerous high voltages inside which may cause death if you should come into contact with live parts. The only user serviceable part is the lamp which has its own removable cover. Under no circumstances should you ever undo or remove any other covers. Refer servicing only to suitably qualified professional service personnel.



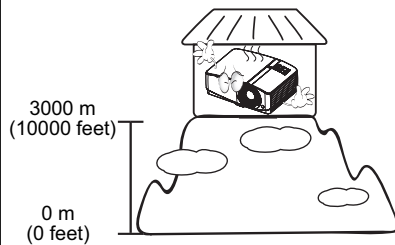
12. When the projector is under operation, you may sense some heated air and odor from its ventilation grill. It is a normal phenomenon and not a product defect.

Safety Instructions (Continued)

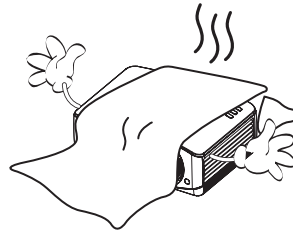
13. Do not place this projector in any of the following environments.
- Space that is poorly ventilated or confined. Allow at least 50 cm clearance from walls and free flow of air around the projector.
 - Locations where temperatures may become excessively high, such as the inside of a car with all windows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



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

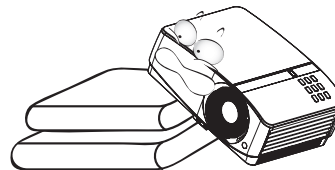


14. Do not block the ventilation holes.
- Do not place this projector on a blanket, bedding or any other soft surface.
 - Do not cover this projector with a cloth or any other item.
 - Do not place inflammables near the projector.



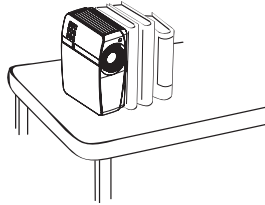
If the ventilation holes are seriously obstructed, overheating inside the projector may result in a fire.

15. Always place the projector on a level, horizontal surface during operation.
- 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. Using the projector when it is not fully horizontal may cause a malfunction of, or damage to, the lamp.

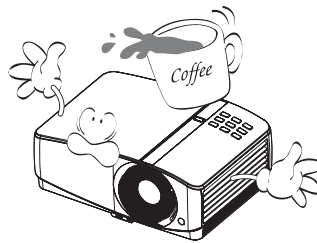


Safety Instructions (Continued)

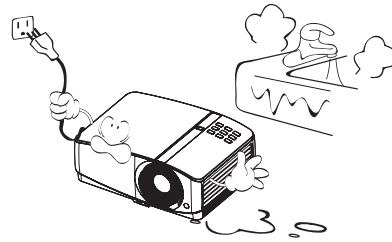
16. Do not stand the projector on end vertically. Doing so may cause the projector to fall over, causing injury or resulting in damage to the projector.



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



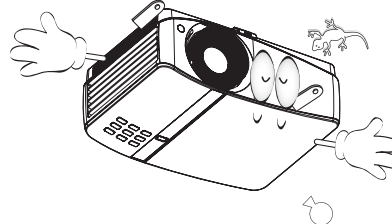
18. Do not place liquids near or on the projector. Liquids spilled into the projector may cause it to fail. If the projector does become wet, disconnect it from the power supply's wall socket and call BenQ to have the projector serviced.



19. This product is capable of displaying inverted images for ceiling mount installation.



Use only BenQ's Ceiling Mount Kit for mounting the projector and ensure it is securely installed.



Introduction

Projector features

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

The projector offers the following features.

- HDMI
- LAN display for network control and web server
- LAN display 4-1 (maximum 4PC/ NB display to 1 projector)
- Remote desktop feature for LAN and USB display 1-M (maximum 1PC/ NB can display to 8 projectors at the same time)
- USB display supports computer connection via USB mini-B type to A type cable
- USB Reader supports USB flash drive or HDD display
- 3D Ready supported
- Variable audio output
- Microphone input with big speakers (10W x2) can save extra audio systems for schools
- Wall color correction allowing projection on surfaces of several predefined colors
- Quick auto search speeding up the signal detecting process
- Selectable password protected function
- 3D color management allowing color adjustments to your liking
- Selectable quick cooling function makes the projector cool in a shorter time
- Presentation timer for better control of time during presentations
- One-key auto-adjustment to display the best picture quality
- Digital keystone correction to correct distorted images
- Adjustable color balance control for data/video display
- High brightness projection lamp
- Multi-language On-Screen Display (OSD) menus
- Switchable normal and economic modes to reduce the power consumption
- Component HDTV compatibility (YPbPr)
- Less than 1 W power consumption in standby mode

The MP778 also offers the following features.

- Big zoom ratio (1.6x) provides the installation flexibility

The MP780 ST also offers the following features.

- PointDraw™ pen interactive projector
- WXGA, perfect for widescreen NB and PC, and provides 30% more images to XGA
- Short throw lens to create larger images with less distance between the projector and the screen



- **The apparent brightness of the projected image will vary depending on the ambient lighting conditions, selected input signal contrast/brightness settings, and is directly proportional to projection distance.**
- **The lamp brightness will decline over time and may vary within the lamp manufacturers specifications. This is normal and expected behavior.**

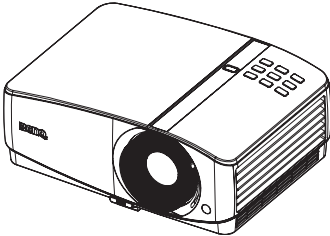
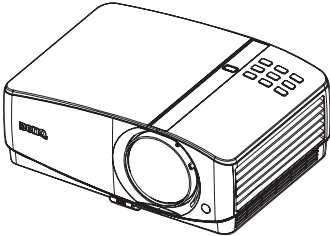
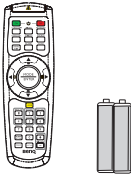
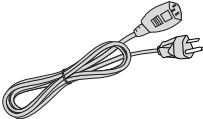
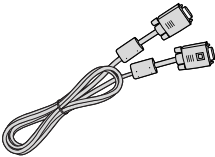
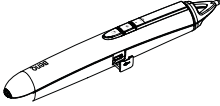
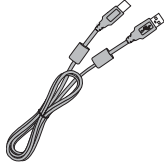
Shipping contents

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

Standard accessories

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

*The warranty card is only supplied in some specific regions. Please consult your dealer for detailed information.

			
MP778 projector		MP780 ST projector	
			
Remote control with batteries		Power cord	VGA cable
			
Quick start guide		User manual CD	Warranty card*
MP780 ST only			
			
PointDraw™ pen		USB mini-B type to A type cable	USB B type to A type cable

		
USB power adapter	TBD PointDraw™ pen holder	PointDraw™ pen wrist strap
		
PointDraw™ pen quick start guide	Q Draw interactive software	

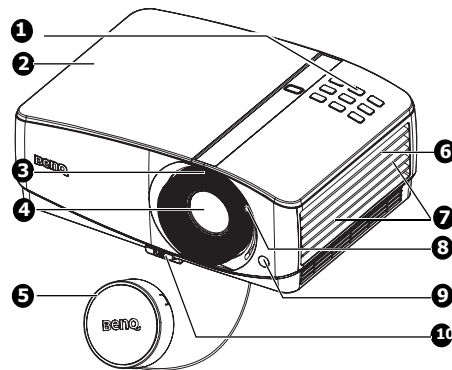
Optional accessories

- | | |
|---|--------------------|
| 1. Spare lamp kit | 4. RS232 cable |
| 2. Ceiling mount kit | 5. Wireless dongle |
| 3. Soft carry case (standard accessory for MP778) | 6. PointDraw™ pen |

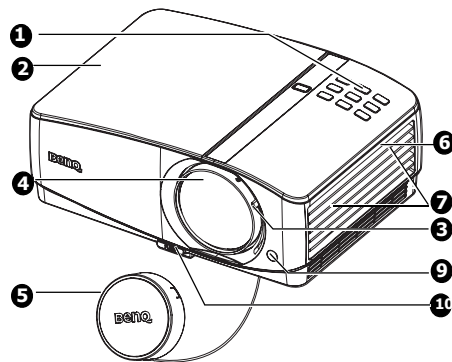
Projector exterior view

Front/upper side

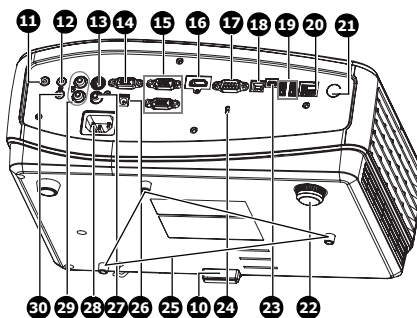
(MP778)



(MP780 ST)



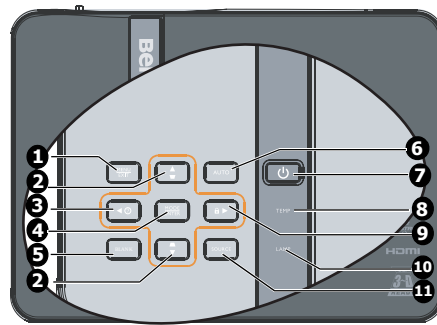
Rear/lower side



1. External control panel
(See "Projector" on page 11 for details.)
2. Lamp cover
3. Focus ring (MP778)
Focus slide lever (MP780 ST)
4. Projection lens
5. Lens cover
6. Vent (heated air exhaust)
7. Speakers
8. Zoom slide lever (MP778 only)
9. Front IR remote sensor
10. Quick-release button
11. Audio output jack
12. Audio input jack
13. S-Video input jack
14. RGB signal output jack
15. RGB (PC)/Component video (YPbPr/ YCbCr) signal input jack
16. HDMI input jack
17. RS-232 control port
18. USB B type jack
19. USB A type jack
20. RJ45 LAN input jack
21. Rear IR remote sensor
22. Rear adjuster foot
23. USB mini-B type jack
24. Kensington anti-theft lock slot
25. Ceiling mount holes
26. 12V DC output terminal Used to trigger external devices such as anelectric screen or light control, etc. Consult your dealer for how to connect these devices.
27. Video input jack
28. AC power cord inlet
29. Audio (L/R) input jack
30. Microphone input jack

Controls and functions

Projector



1. **MENU/EXIT**
Turns on the On-Screen Display (OSD) menu. Goes back to previous OSD menu, exits and saves menu settings.
2. **Keystone/Arrow keys** (▽ / ▲ Up, ▴ / ▼ Down)
Manually corrects distorted images resulting from an angled projection. See ["Correcting keystone" on page 32](#) for details.
3. **◀ Left/ (?)**
Starts the FAQ function. See ["Utilizing FAQ function" on page 44](#) for details.
4. **MODE/ENTER**
Selects an available picture setup mode. See ["Selecting a picture mode" on page 39](#) for details.
Activates the selected On-Screen Display (OSD) menu item. See ["Using the menus" on page 33](#) for details.
5. **BLANK**
Used to hide the screen picture. See ["Hiding the image" on page 44](#) for details.
6. **AUTO**
Automatically determines the best picture timings for the displayed image. See ["Auto-adjusting the image" on page 31](#) for details.
7. **⏻ Power/POWER indicator light**
Toggles the projector between standby mode and on. See ["Starting up the projector" on page 30](#) and ["Shutting down the projector" on page 69](#) for details.
Lights up or flashes when the projector is under operation. See ["Indicators" on page 89](#) for detail.
8. **TEMPerature indicator light**
Lights up red if the projector's temperature becomes too high. See ["Indicators" on page 89](#) for details.
9. **▶ Right/ 🔒**
When the On-Screen Display (OSD) menu is activated, the #2, #3, and #9 keys are used as directional arrows to select the desired menu items and to make adjustments. See ["Using the menus" on page 33](#) for details.
Activates panel key lock. See ["Locking control keys" on page 45](#) for details.
10. **LAMP indicator light**
Indicates the status of the lamp. Lights up or flashes when the lamp has developed a problem. See ["Indicators" on page 89](#) for details.
11. **SOURCE**
Displays the source selection bar. See ["Switching input signal" on page 36](#) for details.

Ceiling mounting the projector

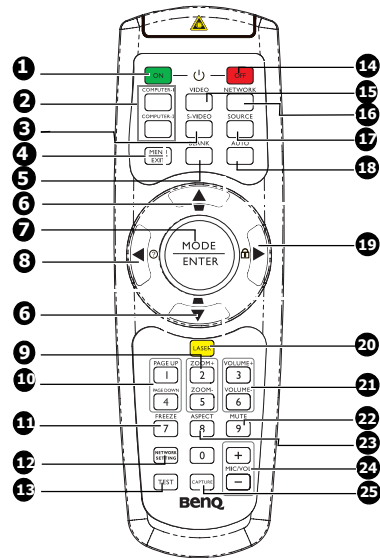
We want you to have a pleasant experience using your BenQ projector, so we need to bring this safety matter to your attention to prevent possible damage to person and property.

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 that you 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.

Remote control



1. **ON**
Turns on the projector. See ["Starting up the projector" on page 30](#) for details.
2. **COMPUTER-1/COMPUTER-2**
Displays RGB (PC)/Component video (YPbPr/ YCbCr) signal.
3. **S-VIDEO**
Displays S-video signal.
4. **MENU/EXIT**
Turns on the On-Screen Display (OSD) menu. Goes back to previous OSD menu, exits and saves menu settings. See ["Using the menus" on page 33](#) for details.
5. **BLANK**
Used to hide the screen picture. See ["Hiding the image" on page 44](#) for details.
6. **Keystone/Arrow keys (▾ / ▴ Up, ▸ / ▹ Down)**
Manually corrects distorted images resulting from an angled projection. See ["Correcting keystone" on page 32](#) for details.
7. **MODE/ENTER**
Selects an available picture setup mode. See ["Selecting a picture mode" on page 39](#) for details.
Activates the selected On-Screen Display (OSD) menu item. See ["Using the menus" on page 33](#) for details.
8. **◀ Left/ ?**
Starts the FAQ function. See ["Utilizing FAQ function" on page 44](#) for details.
9. **ZOOM+/ZOOM-**
Magnifies or reduces the projected picture size. See ["Magnifying and searching for details" on page 37](#) for details.
10. **PAGE UP/PAGE DOWN**
Page up/down arrows when connected through USB to a PC. See ["Remote paging operations" on page 43](#) for details.
11. **FREEZE**
Freezes the projected image. See ["Freezing the image" on page 44](#) for details.
12. **Network Setting**
Enables Network Settings OSD menu.
13. **TEST**
Displays the test pattern. See ["Test Pattern" on page 72](#) for details.
14. **OFF**
Turns off the projector. See ["Shutting down the projector" on page 69](#) for details.
15. **VIDEO**
Displays video signal.
16. **NETWORK**
Enables the network mode.
17. **SOURCE**
Displays the source selection bar. See ["Switching input signal" on page 36](#) for details.

18. **AUTO**
Automatically determines the best picture timings for the displayed image. See ["Auto-adjusting the image" on page 31](#) for details.
19. **► Right/ **
When the On-Screen Display (OSD) menu is activated, the #6, #8, and #19 keys are used as directional arrows to select the desired menu items and to make adjustments. See ["Using the menus" on page 33](#) for details.
Activates panel key lock. See ["Locking control keys" on page 45](#) for details.
20. **LASER**
Emits visible laser pointer light for presentation purposes.
21. **VOLUME+/VOLUME-**
Adjusts the projector's sound level. See ["Adjusting the sound" on page 46](#) for details.
22. **MUTE**
Toggles projector audio between on and off. See ["Muting the sound" on page 46](#) for details.
23. **ASPECT**
Selects the display aspect ratio. See ["Selecting the aspect ratio" on page 37](#) for details.
24. **MIC/VOL**
Adjusts the microphone's sound level. See for details. See ["Adjusting the microphone's sound level" on page 46](#) for details.
25. **CAPTURE**
Captures current displayed screen to be MyScreen. See ["Creating your own startup screen" on page 42](#) for details.

Operating the LASER pointer

The Laser Pointer is a presentation aid for professionals. It emits red colored light when you press it and the indicator lights up red.

The laser beam is visible. It is necessary to press and hold **LASER** for continuous output.



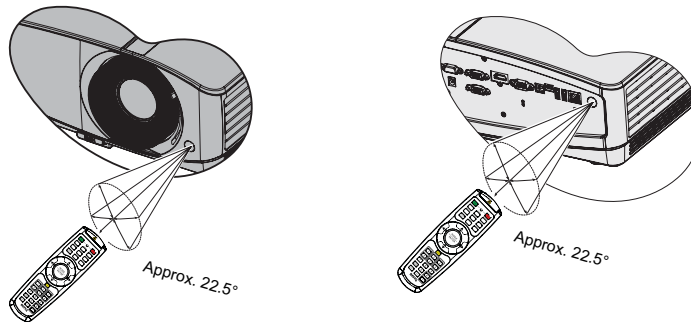
Do not look into the laser light window or shine the laser light beam on yourself or others. See the warning messages on the back of the remote control prior to using it.

The laser pointer is not a toy. Parents should be mindful of the dangers of laser energy and keep this remote control out of the reach of children.

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

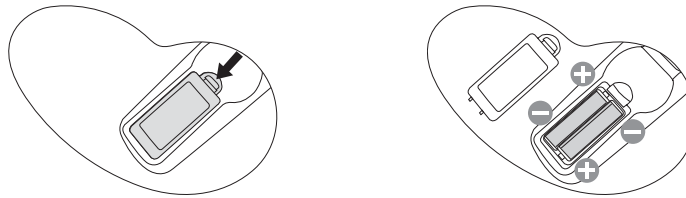
Make sure that there are no obstacles between the remote control and the IR sensor on the projector that might obstruct the infra-red beam.

- **Operating the projector from the front**
- **Operating the projector from the rear**



Replacing the remote control battery

1. To open the battery cover, turn the remote control over to view its back, push on the finger grip on the cover and slide it up in the direction of the arrow as illustrated. The cover will slide off.
2. Remove any existing batteries (if necessary) and install two AAA batteries observing the battery polarities as indicated in the base of the battery compartment. Positive (+) goes to positive and negative (-) goes to negative.
3. Refit the cover by aligning it with the base and sliding it back down into position. Stop when it clicks into place.



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

Positioning your projector

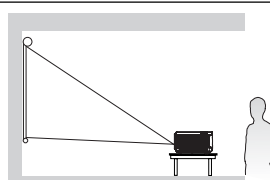
Choosing a location

Your room layout or personal preference will dictate which installation location you select. Take into consideration the size and position of your screen, the location of a suitable power outlet, as well as the location and distance between the projector and the rest of your equipment.

Your projector is designed to be installed in one of four possible installation locations:

1. Front Table

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.

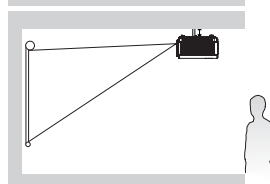


2. Front Ceiling

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

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

Set **Front Ceiling** in the **SYSTEM SETUP: Basic > Projector Position** menu after you turn the projector on.

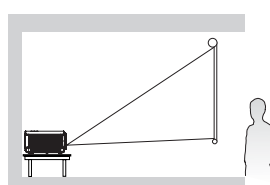


3. Rear Table

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

Note that a special rear projection screen is required.

Set **Rear Table** in the **SYSTEM SETUP: Basic > Projector Position** menu after you turn the projector on.

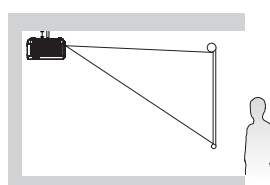


4. Rear Ceiling

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

Note that a special rear projection screen and the BenQ Projector Ceiling Mounting Kit are required for this installation location.

Set **Rear Ceiling** in the **SYSTEM SETUP: Basic > Projector Position** menu after you turn the projector on.



 Your room layout or personal preference will dictate which installation location you select. Take into consideration the size and position of your screen, the location of a suitable power outlet, as well as the location and distance between the projector and the rest of your equipment.

Obtaining a preferred projected image size

The distance from the projector lens to the screen, the zoom setting (if available), and the video format each factors in the projected image size.

The projector should always be placed horizontally level (like flat on a table), and positioned directly perpendicular (90° right-angle square) to the horizontal center of the screen. This prevents image distortion caused by angled projections (or projecting onto angled surfaces).

If the projector is mounted on a ceiling, it must be mounted upside-down so that it projects at a slightly downward angle.

You can see from the diagram on page [19-20](#), that this type of projection causes the bottom edge of the projected image to be vertically offset from the horizontal plane of the projector. When ceiling mounted, this refers to the top edge of the projected image.

If the projector is positioned further away from the screen, the projected image size increases, and the vertical offset also increases proportionately.

When determining the position of the screen and projector, you will need to account for both the projected image size and the vertical offset dimension, which are directly proportional to the projection distance.

BenQ has provided a table of 4:3-aspect-ratio screen sizes for MP778 and a table of 16:9-aspect-ratio screen sizes for MP780 ST to assist you in determining the ideal location for your projector. There are two dimensions to consider, the perpendicular horizontal distance from the center of the screen (projection distance), and the vertical offset height of the projector from the horizontal edge of the screen (offset).

How to determine the position of the projector for a given screen size

1. Select your screen size.
2. Refer to the table on page 19-20 and find the closest match to your screen size in the left columns labelled "Screen size". Using this value, look across this row to the right to find the corresponding average distance from screen value in the column labelled "Average". This is the projection distance.
3. On that same row, look across to the right column and make note of the "Vertical offset (mm)" value. This will determine the final vertical offset placement of the projector in relation to the edge of the screen.
4. The recommended position for the projector is aligned perpendicular to the horizontal center of the screen, at the distance from the screen determined in step 2 above, and offset by the value determined in step 3 above.

For example, if you are using the MP778 and a 120-inch screen, the average projection distance is 4420 mm and with a vertical offset of 274 mm. If you are using the MP780 ST and a 120-inch screen, the average projection distance is 1274 mm and with a vertical offset of 202 mm.

How to determine the recommended screen size for a given distance

This method can be used for situations where you have purchased this projector and would like to know what screen size will fit in your room.

The maximum screen size is limited by the physical space available in your room.

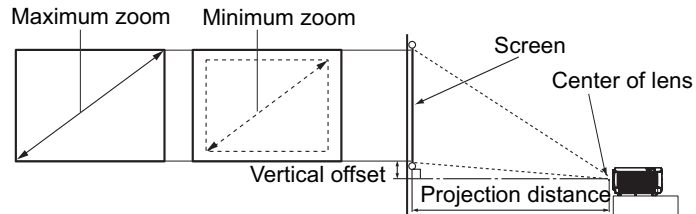
1. Measure the distance between the projector and where you want to position the screen. This is the projection distance.
2. Refer to the table on page 19-20 and find the closest match to your measurement in the average distance from screen column labelled "Average". Check that your measured distance is between the min and max distances listed on either side of the average distance value.
3. Using this value, look across that row to the left to find the corresponding "Screen size" listed in that row. That is the projected image size of the projector at that projection distance.
4. On that same row, look across to the right column and make note of the "Vertical offset (mm)" value. This will determine the final placement of the screen in relation to the horizontal plane of the projector.

For example, if you are using the MP778 and your measured projection distance is 3.0 m (3000 mm), the closest match in the "Average" column is 2947 mm. Looking across this row shows that a 80-inch screen is required. If you are using the MP780 ST and your measured projection distance is 3.0 m (3000 mm), the closest match in the "Average" column is 2698 mm. Looking across this row shows that a 250-inch screen is required.

If you place the projector in a different position (to that recommended), you will have to tilt it down or up to center the image on the screen. In these situations, some image distortion will occur. Use the Keystone function to correct the distortion. See "Correcting keystone" on page 32 on page 32 for details.

MP778 Projection dimensions

Refer to "Dimensions" on page 92 for the center of lens dimensions of this projector before calculating the appropriate position.

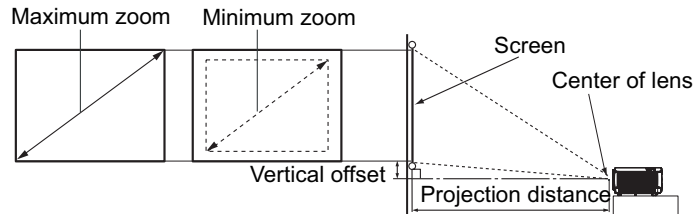


Screen size				Distance from screen (mm)			Vertical offset (mm)
Diagonal		W (mm)	H (mm)	Min length	Average	Max length	
Inch	mm			(max. zoom)		(min. zoom)	
30	762	610	457	850	1105	1360	69
40	1016	813	610	1133	1473	1813	91
50	1270	1016	762	1417	1842	2267	114
60	1524	1219	914	1700	2210	2720	137
80	2032	1626	1219	2267	2947	3627	183
100	2540	2032	1524	2833	3683	4533	229
120	3048	2438	1829	3400	4420	5440	274
150	3810	3048	2286	4250	5525	6800	343
200	5080	4064	3048	5667	7367	9067	457
220	5588	4470	3353	6233	8103	9973	503
250	6350	5080	3810	7083	9208	11333	572
300	7620	6096	4572	8500	11050	13600	686

 There is 3% tolerance among these numbers due to optical component variations. BenQ recommends that if you intend to permanently install the projector, you should physically test the projection size and distance using the actual projector in situ before you permanently install it, so as to make allowance for this projector's optical characteristics. This will help you determine the exact mounting position so that it best suits your installation location.

MP780 ST Projection dimensions

Refer to ["Dimensions" on page 92](#) for the center of lens dimensions of this projector before calculating the appropriate position.



Screen size				Distance from screen (mm)	Vertical offset (mm)
Diagonal		W	H		
Inch	mm	(mm)	(mm)		
30	762	610	457	289	50
40	1016	813	610	398	67
50	1270	1016	762	508	84
60	1524	1219	914	617	101
80	2032	1626	1219	836	135
100	2540	2032	1524	1055	168
120	3048	2438	1829	1274	202
150	3810	3048	2286	1603	252
200	5080	4064	3048	2150	337
220	5588	4470	3353	2369	370
250	6350	5080	3810	2698	421
300	7620	6096	4572	3245	505

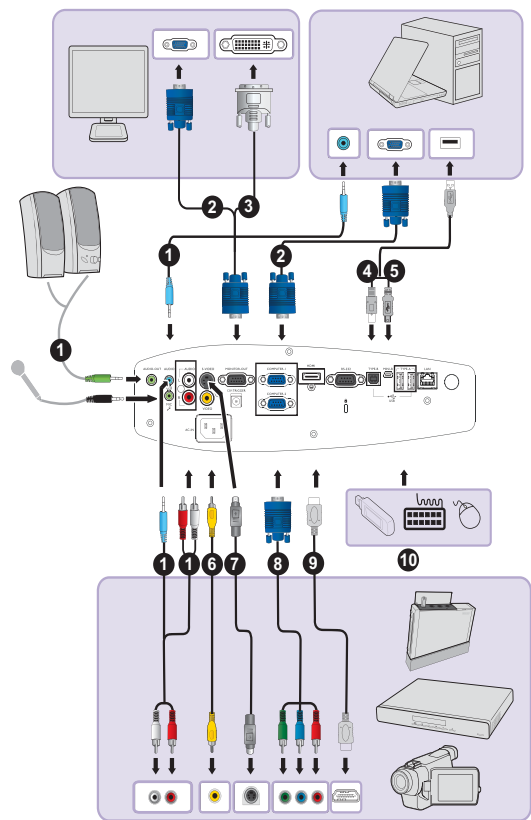
 There is 3% tolerance among these numbers due to optical component variations. BenQ recommends that if you intend to permanently install the projector, you should physically test the projection size and distance using the actual projector in situ before you permanently install it, so as to make allowance for this projector's optical characteristics. This will help you determine the exact mounting position so that it best suits your installation location.

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. Ensure the cables are firmly inserted.

- In the connections shown below, some cables may not be included with the projector (see "Shipping contents" on page 8). They are commercially available from electronics stores.
- For detailed connection methods, see pages 22-29.



1. Audio cable	6. Video cable
2. VGA cable	7. S-Video cable
3. VGA to DVI-A cable	8. Component Video to VGA (DSub) adapter cable
4. USB B type to A type cable	9. HDMI cable
5. USB mini-B type to A type cable	10. USB flash drive/HDD/wireless dongle/ keyboard/mouse

Computer system requirements for USB display::

Operation System Requirements	Minimum Hardware Requirements
Windows XP Windows Vista	Supports USB 2.0 CPU: Pentium 1G RAM: 512MB RAM Disk: 20MB hard driver space

Computer system requirements for WiFi display::

Operation System Requirements	Minimum Hardware Requirements
Windows XP Windows Vista	WiFi: 54 Mbps CPU: Pentium 1G RAM: 512MB RAM 20MB hard driver space

Computer system requirements for LAN display::

Operation System Requirements	Minimum Hardware Requirements
Windows XP Windows Vista	LAN: 100 Mbps CPU: Pentium 1G RAM: 512MB RAM 20MB hard driver space

Connecting a computer or monitor

Connecting a computer

The projector can connect to both IBM® compatibles and Macintosh® computers. A Mac adapter is needed if you are connecting legacy version Macintosh computers.

To connect the projector to a notebook or desktop computer (using VGA):

1. Take the supplied VGA cable and connect one end to the D-Sub output socket of the computer.
2. Connect the other end of the VGA cable to the **COMPUTER 1** or **COMPUTER 2** signal input jack on the projector.
3. If you wish to make use of the projector speaker(s) in your presentations, take a suitable audio cable and connect one end of the cable to the audio output jack of the computer, and the other end to the **AUDIO** or **AUDIO (L/R)** jack of the projector. When you connect audio output signal from a computer, please balance out the volume control bar to obtain an optimal sound effects.
4. If you wish, you can use another suitable audio cable and connect one end of the cable to the **AUDIO OUT** jack of the projector, and the other end to your external speakers (not supplied).

Once connected, the audio can be controlled by the projector On-Screen Display (OSD) menus. See "[Audio Settings](#)" on page 72 for details.

The built-in speaker will be muted when the **AUDIO OUT** jack is connected.

To connect the projector to a notebook or desktop computer (using USB):

1. Take a USB mini-B type to USB A type cable and connect one end to the A type jack of the computer.
2. Connect the other end of the cable to the **MINI-B** jack on the projector.
3. If you wish to make use of the projector speaker(s) in your presentations, take a suitable audio cable and connect one end of the cable to the audio output jack of the computer, and the other end to the **AUDIO** or **AUDIO (L/R)** jack of the projector. When you connect audio output signal from a computer, please balance out the volume control bar to obtain an optimal sound effects.
4. If you wish, you can use another suitable audio cable and connect one end of the cable to the **AUDIO OUT** jack of the projector, and the other end to your external speakers (not supplied).

Once connected, the audio can be controlled by the projector On-Screen Display (OSD) menus. See "[Audio Settings](#)" on page 72 for details.

The built-in speaker will be muted when the **AUDIO OUT** jack is connected.

To connect the projector to a notebook or desktop computer (using LAN):

1. Take a RJ45 cable and connect one end to the LAN input jack of the projector and the other end to the RJ45 port.
2. Make sure that your computer is also connected to an internet cable. Please use Q Presenter program to connect network display and transfers the desktop contents of the host PC via local network connection. See "[Displaying image through Q Presenter](#)" on page 57 for details.
3. If you wish to make use of the projector speaker(s) in your presentations, take a suitable audio cable and connect one end of the cable to the audio output jack of the

computer, and the other end to the **AUDIO** or **AUDIO (L/R)** jack of the projector.

When you connect audio output signal from a computer, please balance out the volume control bar to obtain an optimal sound effects.

4. If you wish, you can use another suitable audio cable and connect one end of the cable to the **AUDIO OUT** jack of the projector, and the other end to your external speakers (not supplied).

Once connected, the audio can be controlled by the projector On-Screen Display (OSD) menus. See "[Audio Settings](#)" on page 72 for details.

The built-in speaker will be muted when the **AUDIO OUT** jack is connected.



Do not use the RJ45 cable to connect the projector to your computer. Because this connection needs an IP router.

To connect the projector to a notebook or desktop computer (using HDMI):

1. Take a HDMI cable and connect one end to the HDMI jack of the computer.
2. Connect the other end of the cable to the HDMI jack on the projector.



- **Many notebooks do not turn on their external video ports when connected to a projector. Usually a key combo like FN + F3 or CRT/LCD key turns the external display on/off. Locate a function key labeled CRT/LCD or a function key with a monitor symbol on the notebook. Press FN and the labeled function key simultaneously. Refer to your notebook's documentation to find your notebook's key combination.**
- **Transmission speed and image quality will vary according to the bandwidth of local area network and the status of network usage.**

Connecting a monitor

If you want to view your presentation close-up on a monitor as well as on the screen, you can connect the **MONITOR OUT** signal output jack on the projector to an external monitor following the instructions below:

To connect the projector to a monitor:

1. Connect the projector to a computer as described in ["Connecting a computer" on page 23](#).
2. Take a suitable VGA cable (only one supplied) and connect one end of the cable to the D-Sub input jack of the video monitor.
Or if your monitor is equipped with a DVI input jack, take a VGA to DVI-A cable and connect the DVI end of the cable to the DVI input jack of the video monitor.
3. Connect the other end of the cable to the **MONITOR OUT** jack on the projector.

-  • The output signal for **MONITOR OUT** jack only works when the input signal comes from **COMPUTER 1** or **COMPUTER 2** jack. When the projector is powered on, the output signal from **MONITOR OUT** jack varies depending on the input signal from **COMPUTER 1** or **COMPUTER 2** jack.
- If you wish to use this connection method when the projector is in standby mode, make sure the Standby Monitor Out function is turned on in the **SYSTEM SETUP: Advanced** menu. See ["Standby Settings" on page 81](#) for details.

Connecting Video source devices

You need only connect the projector to a Video source device using just one of the above connecting methods, however each provides a different level of video quality. The method you choose will most likely depend 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	HDMI 	"Connecting an HDMI source device" on page 27	Best
Component Video	COMPUTER 	"Connecting a Component Video source device" on page 28	Better
S-Video	S-VIDEO 	"Connecting an S-Video/composite source device" on page 29	Good
Video	VIDEO 		Normal

Connecting an HDMI source device

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

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

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

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

To connect the projector to an HDMI source device:

1. Take an HDMI cable and connect one end to the HDMI output jack of the HDMI source device. Connect the other end of the cable to the HDMI signal input jack on the projector. Once connected, the audio can be controlled by the projector On-Screen Display (OSD) menus. See "[Audio Settings](#)" on page 72 for details..
2. Connect the other end of the HDMI cable to the **HDMI** jack on the projector.



- **If the selected video image is not displayed after the projector is turned on and the correct video source has been selected, check that the Video source device is turned on and operating correctly. Also check that the signal cables have been connected correctly.**
- **In the unlikely event that you connect the projector to a DVD player via the projector's HDMI input and the projected picture displays wrong colors, please change the color space to YUV. See "[Changing Color Space](#)" on page 36 for details.**