

HBP200/200+/200++

DLP Pico Projector

User Guide

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Chapter 1 Important Safety Information

FCC Notice

1. Caution: Modification not expressly approved by the company could void the user's authority to operate the equipment.

2. NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the radio or television off and on, the user is encouraged to try to correct interference by one or more of the following measures:
 - A.. Reorient or relocate the receiving antenna.
 - B.. Increase the separation between the equipment and receiver.
 - C. . Connect the equipment into an outlet on another circuit.
 - D. . Consult the dealer or an experienced radio/TV technician for help.

Important Safety Information

1. To ensure reliable operation of the projector and prevent overheating, make sure the projector is properly ventilated during use

and that all ventilation openings on the projector remain unobstructed and kept free from obstacles. For example, do not place the projector on a sofa, carpet or bed during operation and do not use the projector in an enclosed place, such as a book cabinet or steel cabinet.

2. Do not expose the projector to moisture or rain. (i.e. using the projector near a bathroom sink, kitchen, laundry room, damp corners of a wall or a swimming pool can be very dangerous)
3. Do not operate the projector near sources of heat or equipment that will generate high temperatures. (i.e. heater, cooler, furnace and so forth)
4. Before cleaning the projector, be sure to unplug the power cord from the wall outlet. Do not spray cleaning solvent directly onto the projector, but apply the cleaning solvent on a piece of soft fabric to clean the projector.
5. Be sure to read all instructions printed on the labels on the projectors.
6. In order to prevent short circuit caused by lightning, be sure to turn off the projector's power and unplug the power supply when it will not be attended or used for a long time.
7. Do not attempt to force any objects into the openings of the projector case. It will cause a fire hazard or electric shock caused by direct contact with the high voltage. Do not connect the projector with any cables or connectors that are not compatible with its connectors. Do not spill any liquid onto the projector.
8. If the projector emits strange noise or odors, usually caused by inappropriate operation, turn off the projector immediately and

seek assistance from your dealer. Do not attempt to open the case or repair the projector by yourself as you may get an electrical shock.

9. Should any of the following situations occur, unplug the power supply immediately and contact your dealer to solve the problem:

10. The power cord is damaged or frayed.

11. Liquid has been spilled onto the projector and it seeps through the projector case or when the projector has been exposed to rain or water.

A. The projector has been dropped from a high location.

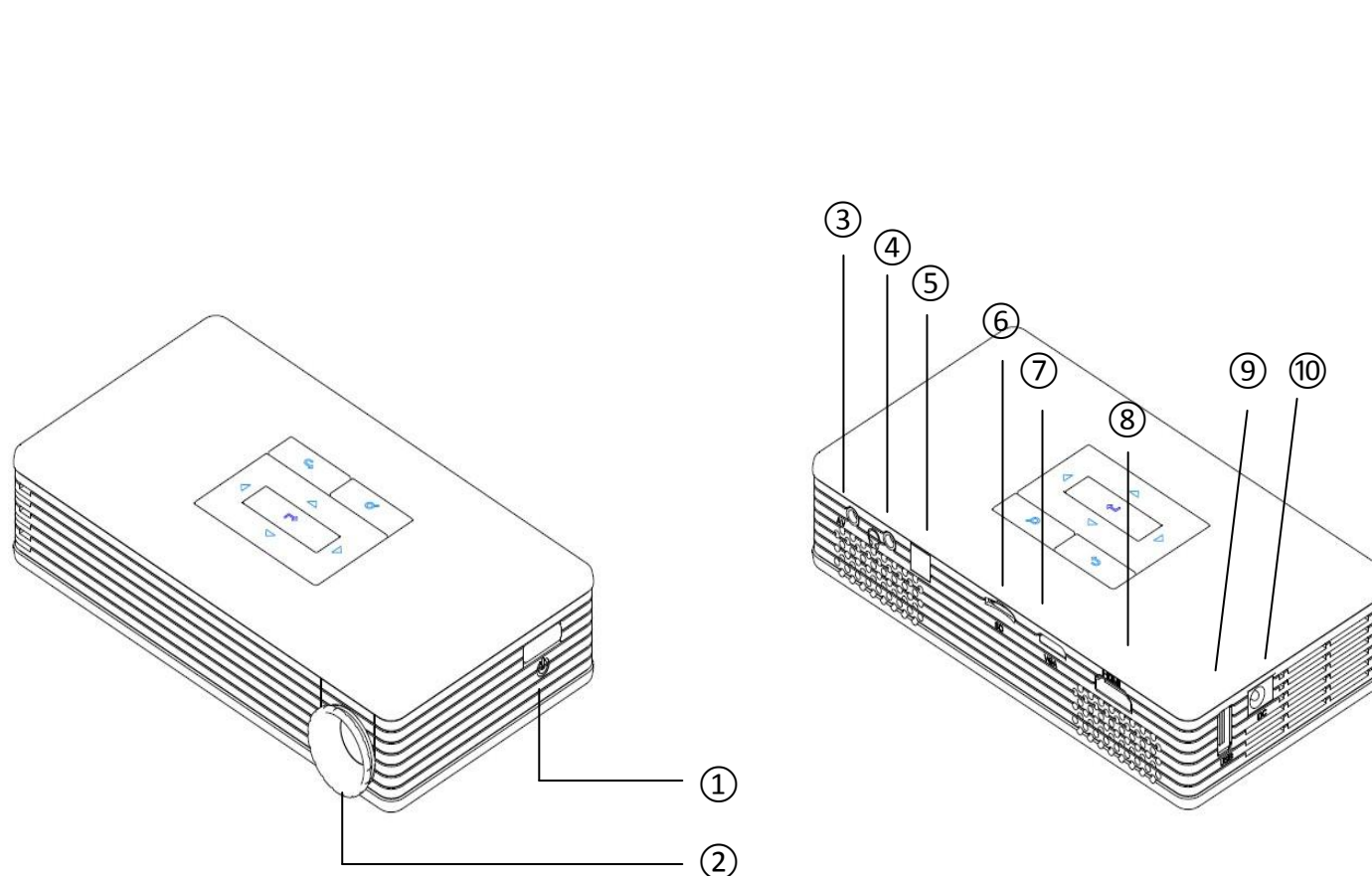
B. Display from the projector shows a noticeable difference.

C. The product fails to function normally when you operate it as instructed in this user's guide.

12. To ensure the projector functions normally, do not attempt to use the power adapter or battery other than the power adapter and battery in the accessory package. We will not be responsible for the damages caused by using the power supply from other manufacturers.

Chapter 2 Getting Started

Product Overview



Package Overview

The following items are the standard accessories of the projector. Please check if you have received all items before you start using the projector. If there is any item missing, please contact your dealer immediately.

❶ Power Adapter with AC plug

❷ Hybrid VGA cable

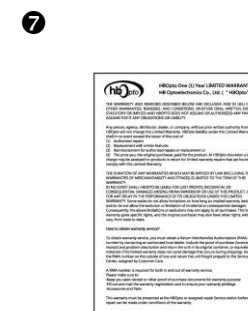
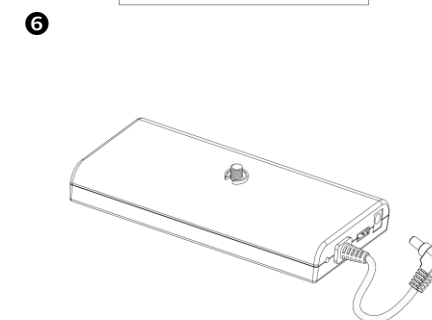
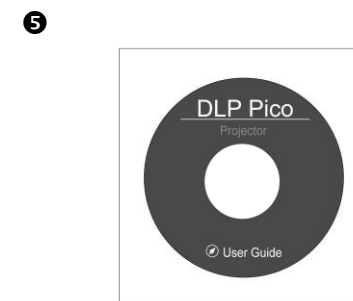
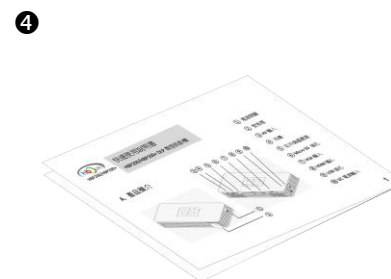
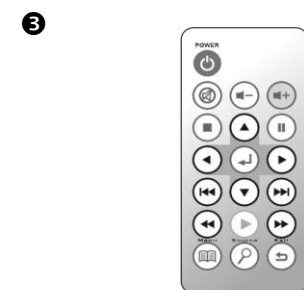
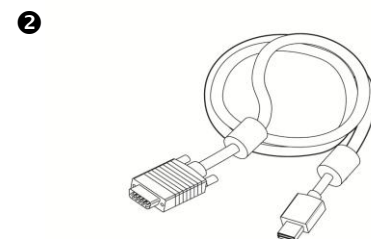
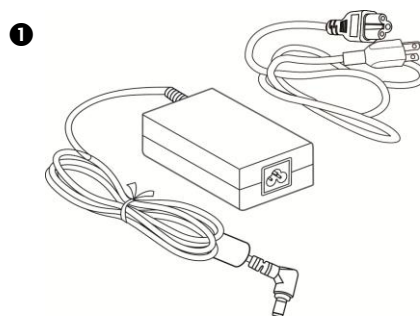
❸ Remote control

❹ Quick Start Guide

❺ User Guide (CD-Rom)

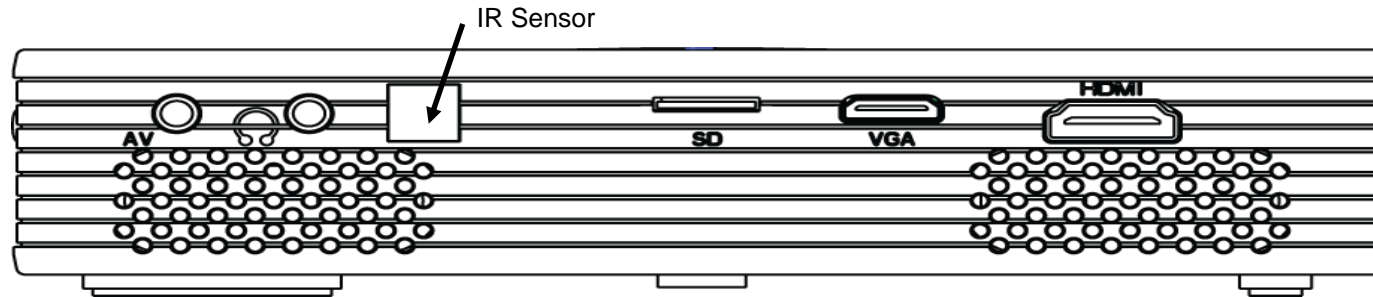
❻ Battery Pack (Optional)

❼ Warranty Card

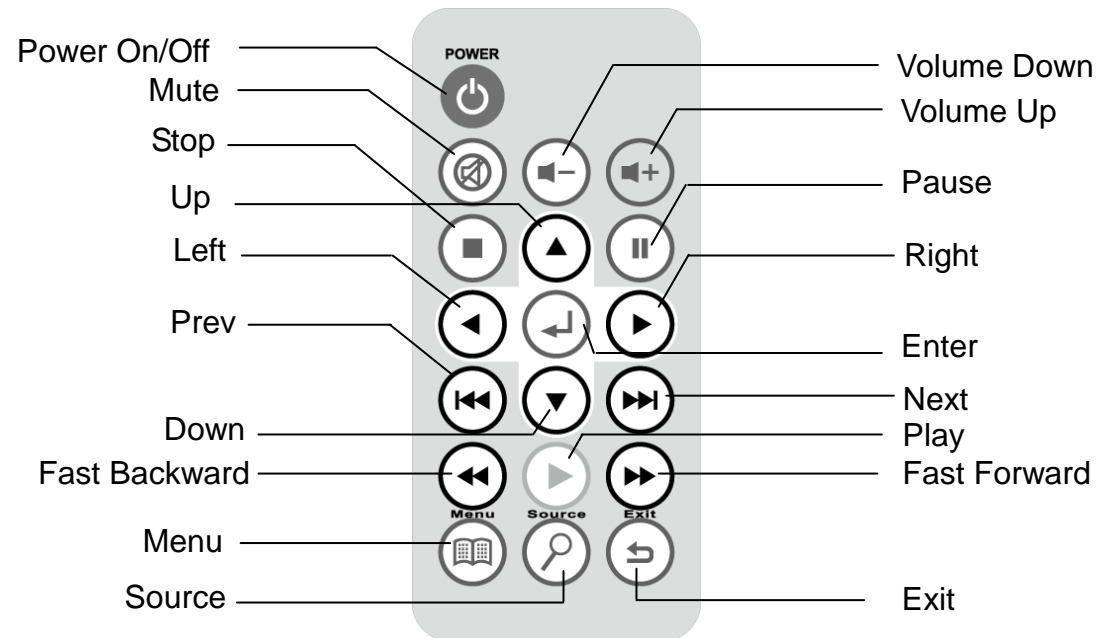


Remote Control

1. Remove the plastic tab from the battery compartment before using the remote control.
2. Point the remote control toward the IR sensor at the back of the projector to make the remote control function normally.



3. Remote Control Key Function



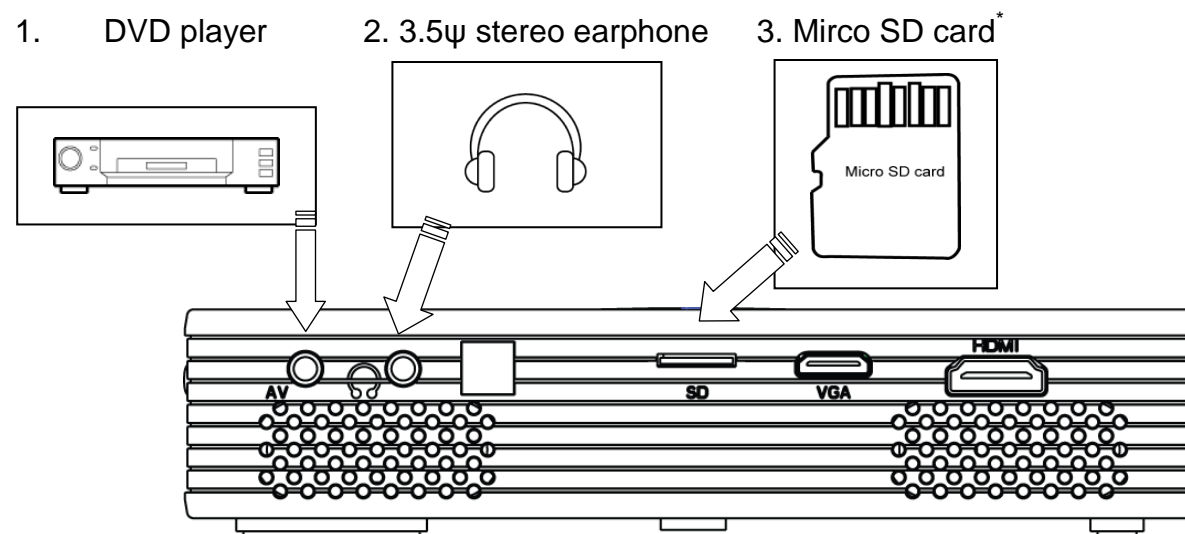
Device Connectivity

The projector can be connected to various multimedia devices through the connectors on the back and right side of the projector.

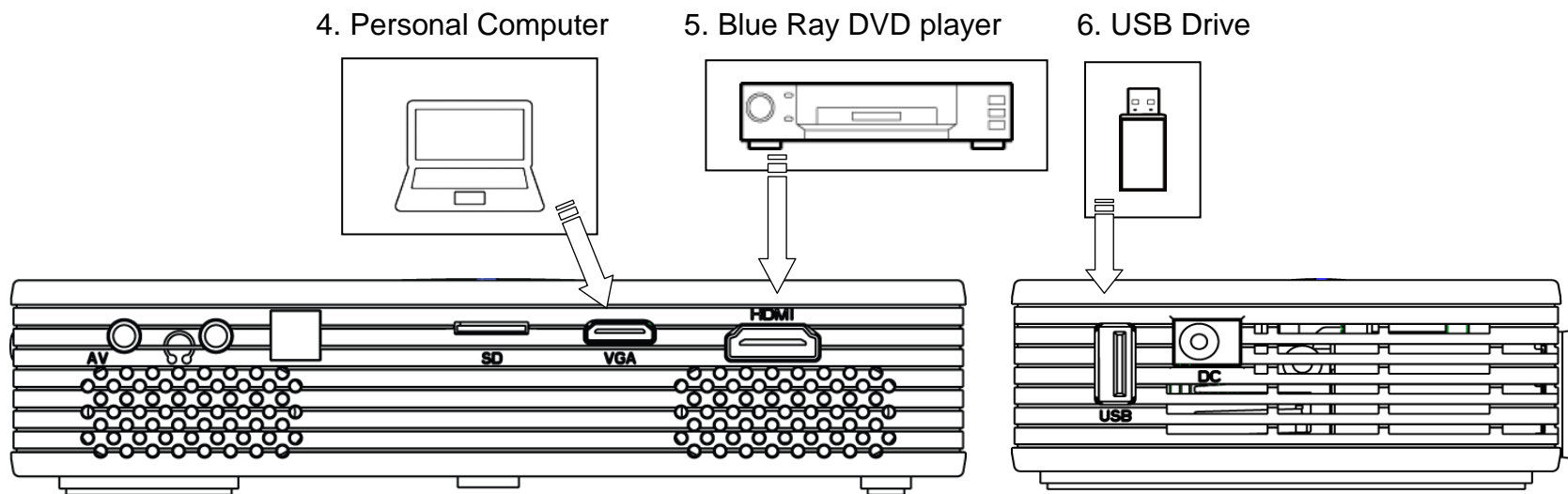
Connect 1. DVD Player and other AV interface multimedia device

2. Earphone

3. Micro SD Card



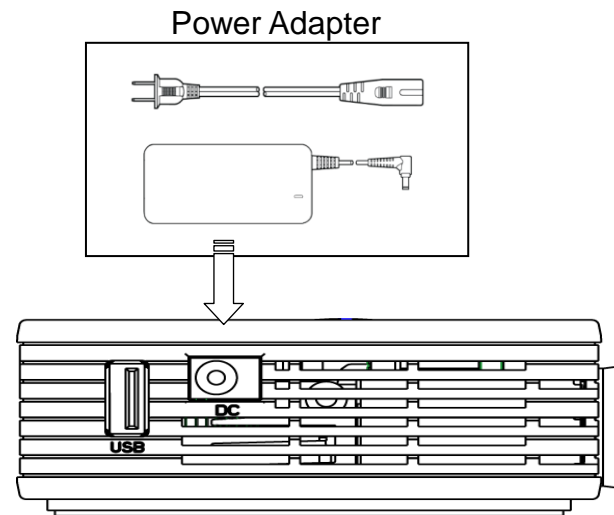
Note: Insert your Micro SD card while the side with flash contacts is faced **upward**.

Connect 4. Personal Computer**5. Blue Ray DVD Player and other HDMI interface multimedia devices****6. USB Drive**

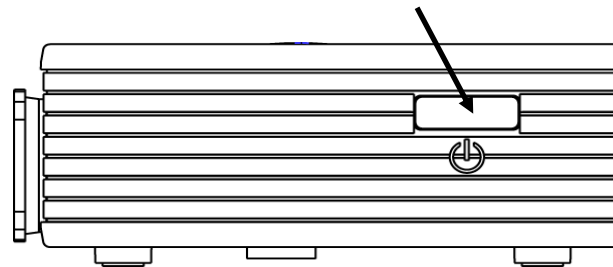
Power on/off the Projector

To Power on the Projector

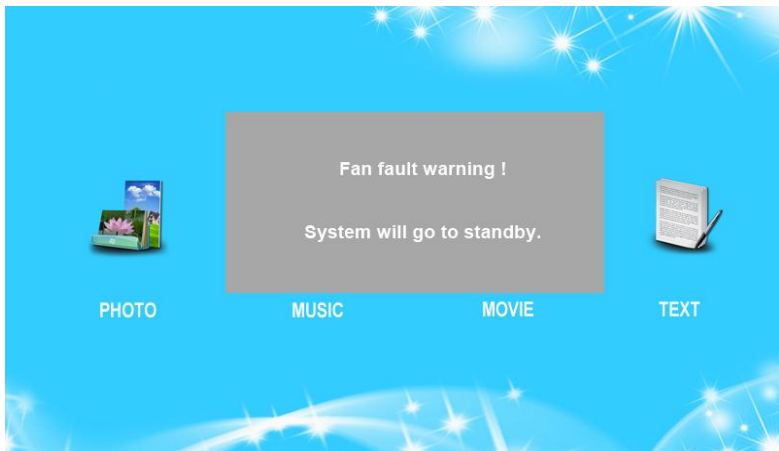
1. Connect the power adapter to the DC connector on the projector and connect the power cord to the wall socket.



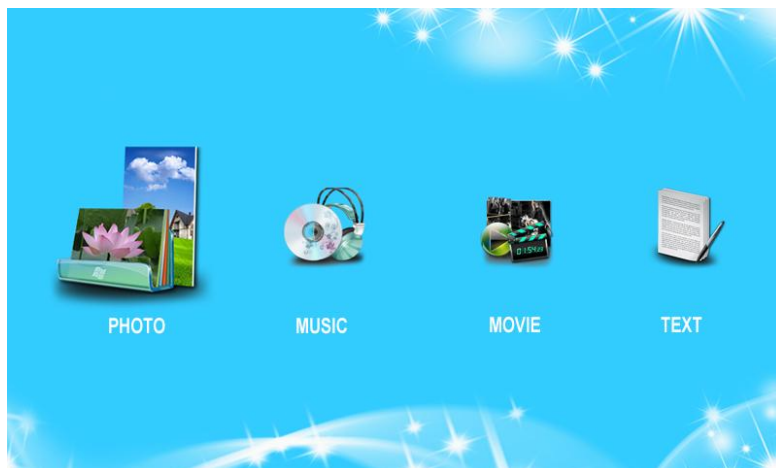
2. Press the power key on the projector and all the LED indicators will turn blue.



Note: LED Indicator will tell you the operating status of the projector.

	Description
Normal Usage	<ul style="list-style-type: none"> • Blinking— The LED blinking will last for about 5-6 seconds while the projector has been switched on. • On—The projector is ready to use after boot up sequences are completed. • Off—The projector has been switched off.
Abnormal Status	<ul style="list-style-type: none"> • Blinking—Circuit Protection: The LED indicator will be blinking when the temperature of the projector is too high. You will see a warning message as below. The indicator will be blinking for 10 seconds and then the projector will be off.  <p style="text-align: center;">Circuit Protection Warning Message</p>

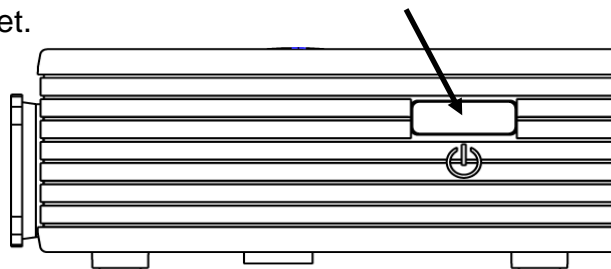
3. A screen with a logo will be displayed and then the system will display the main menu as below.



Main Menu

To Power off the Projector

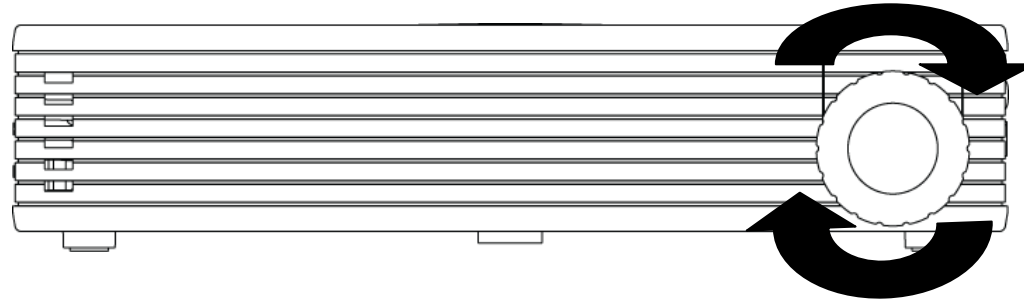
Press the power key on the projector and all the LED indicators will turn off. Then you can pull off the power cord from the wall socket.



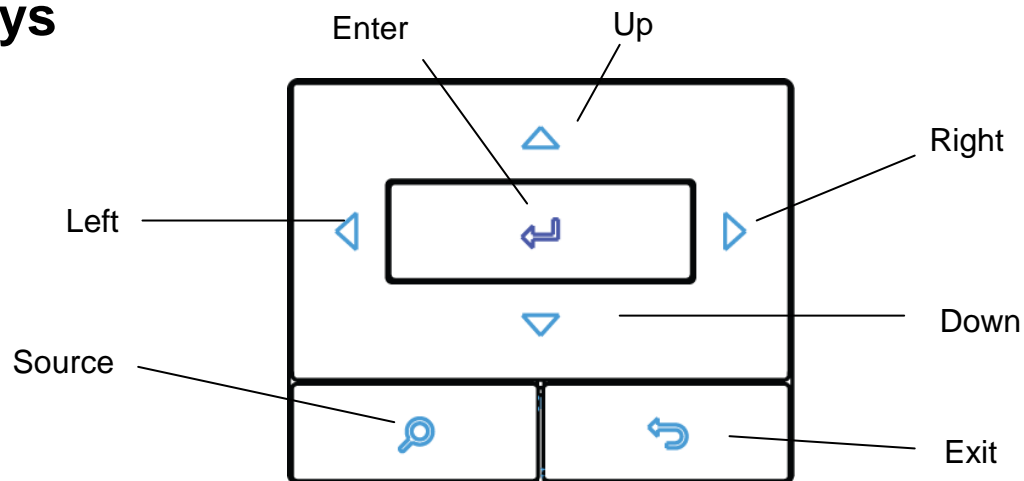
Note: When the projector is connected to devices with a VGA/HDMI/AV interface, the projector will automatically turn off in 12 minutes if no signal is sensed coming from the devices.








Adjust Focus

Rotate the focus ring left or right in order to get a clearer image.





Function Keys

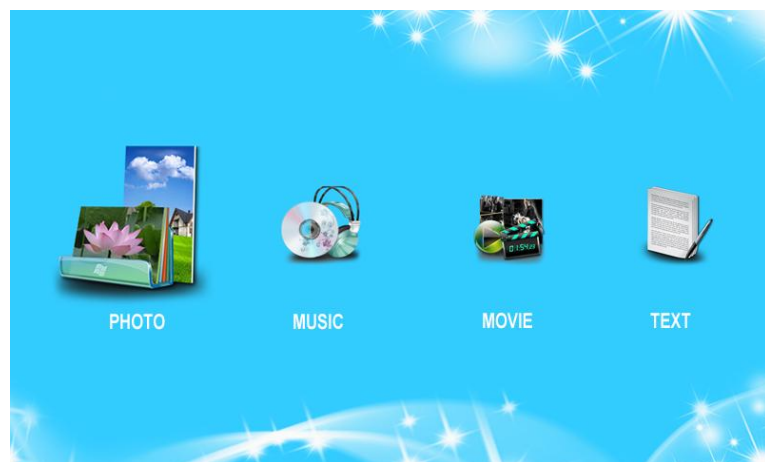


Options	Description	Options	Description
	Move the cursor up.		1. Confirm your choice. 2. Press it for 3 seconds: enter the setting menu.
	Move the cursor down.		Select your input source. (AV/HDMI/VGA/Main Menu)
	1. Move the cursor left. 2. Press it for 3 seconds: Volume Down		Leave the current menu page.
	1. Move the cursor right. 2. Press it for 3 seconds: Volume Up		

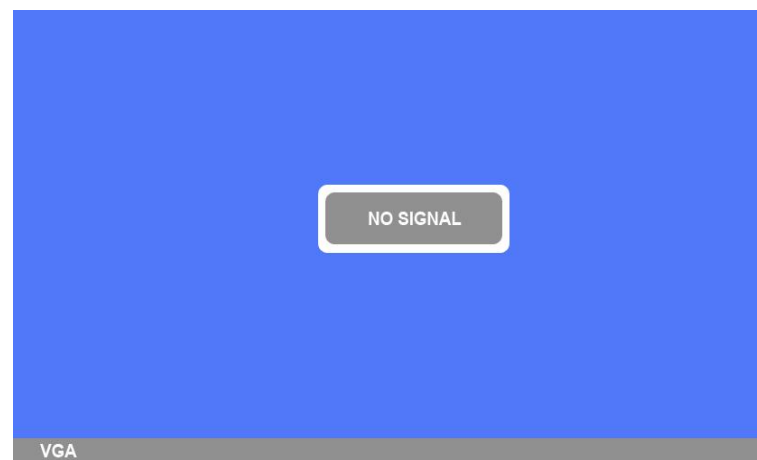
Chapter 3 Playing Your Files

Using AV/HDMI/VGA Devices

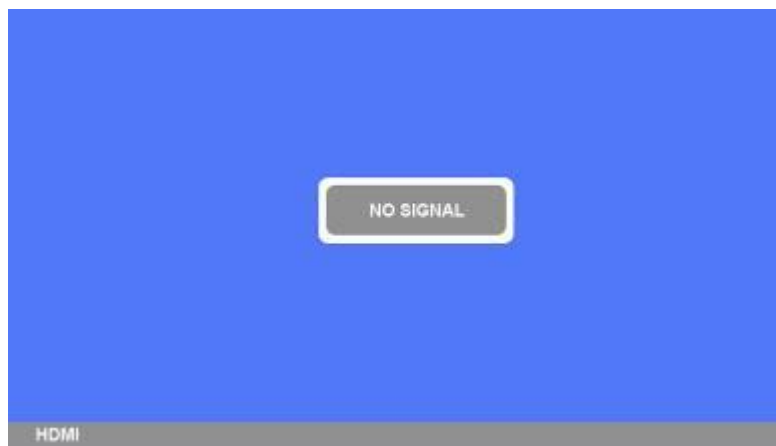
When you connect the projector to devices through AV/HDMI/hybrid VGA cables, press  on the projector to choose the source you desire to use. Keep pressing  and you can switch among the source screens: the main menu, VGA, HDMI, and AV (Composite Video: Traditional composite video). After you select the source, the projector is ready to display files from that source. Follow the instructions of your device to play your files.




Main Menu






Source -VGA

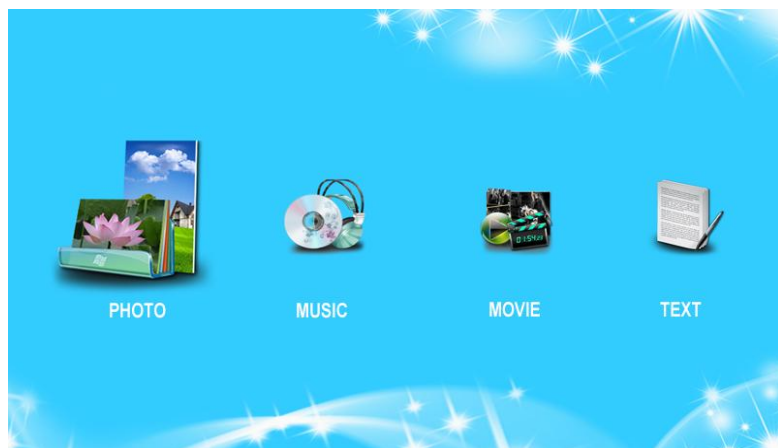
**Source – HDMI****Source – AV**

Note: 1. You can enter the setting menu (press  for 3 seconds or the **Menu** button on the remote control) to enable Signal Auto Detect and then the projector will automatically detect the input source from the device with an AV/HDMI/VGA interface. See p.39 for more instructions.

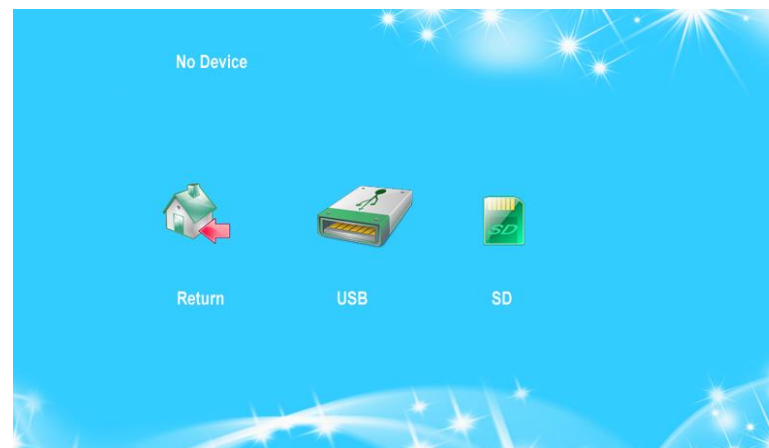
2. When you choose the source as VGA and see the reminder message “Please switch to 800 x 600 resolution,” please adjust the resolution of your VGA display to receive the best image quality.

Using USB Drive/Micro SD Card

1. When you insert a USB flash drive or a micro SD card, choose the type of the files you are to play on the main menu: Photo, Music, Movie, and Text. Press  to enter the submenu. Use  or  to select your source.

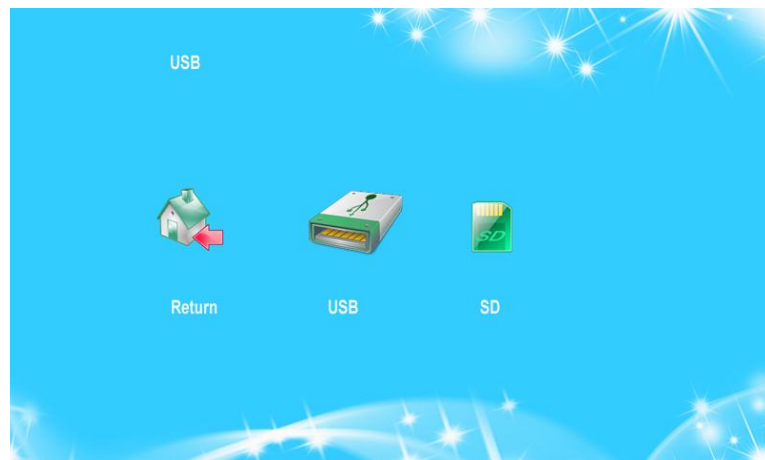


Main Menu

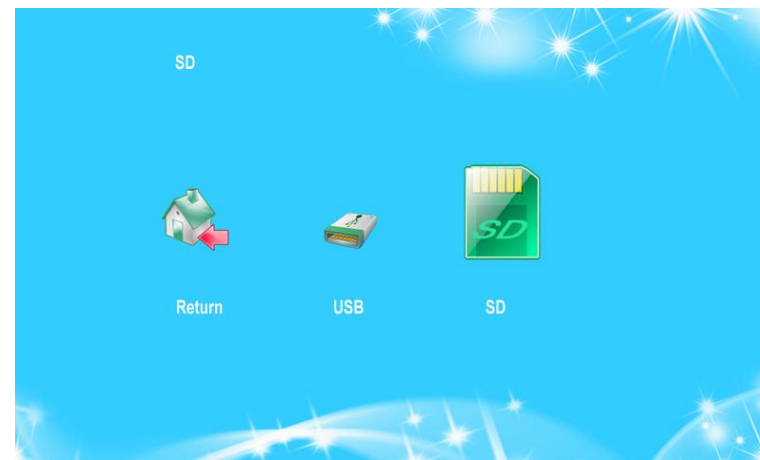


USB/Micro SD card Select Menu

2. The projector will show “USB” or “SD” on the top of the submenu after it has successfully read your storage device.



Source – USB Drive















Source – Micro SD Card

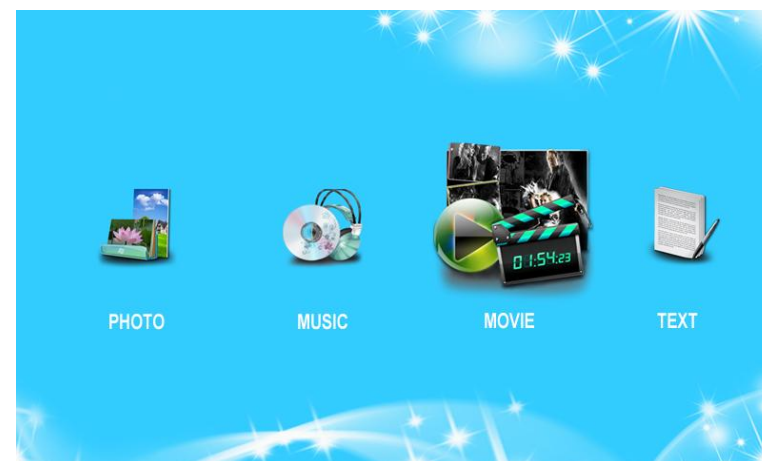
3. The projector is ready to play your files. Read the sections below to know more about playing video, audio, image, and text files with the projector.

Watching Videos

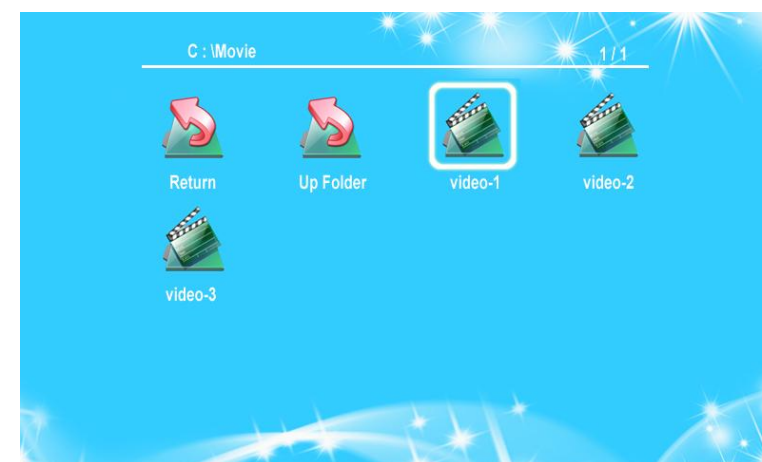
The projector supports most of the popular video file formats. If you cannot play your files, please contact your dealer.

Playing Video Files

Step	Description
1	Choose MOVIE on the main menu and press  .
2	After you select your file source, the screen will display the available folders with video files. Use     to move to the folder you want and press  to go inside the folder.
3	Use     to move to the file you want to play. The projector will provide a file preview and show the information of the selected file.
4	Press  to play the file. Press  to finish and return to the previous page.


















Watching Videos

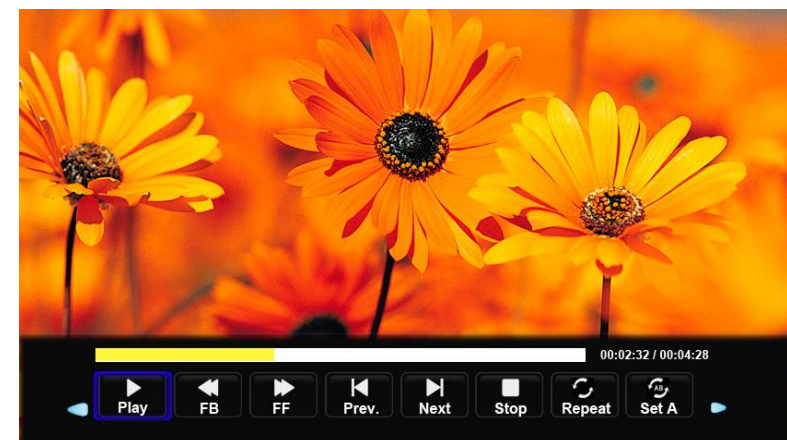


Folder Menu












Video Play Option Menu (Remote Control Only)

While the video file is being played, press  on the remote control and Video Play Option Menu will be displayed. Use  and  to highlight your choice and press  to confirm. Press  to close the menu.

Item	Description
	Play/pause the file.
	Search fast backward or fast forward. When you move to the point you want, press the PLAY button  to start playing.
	Skip to the previous/next file
	Stop playing the file and return to the previous page.
Repeat	<p>Select the mode of playing files.</p> <p>None: Stop after playing the selected file.</p> <p>Repeat 1: Repeat the selected file.</p> <p>Repeat All: Repeat all the files in the folder.</p>
Set A	<p>Mark point A and point B to play from A to B. Use  to set the marks and the projector will show “AB Loop” on the screen and start playing. Press  to stop and the file will be played normally.</p> <p>Set A: Point A</p> <p>Set B: Point B</p> <p>None: Stop playing from A to B.</p>
List	Show the playlist menu. It will list all the files in the selected folder. Use   to highlight your choice and press  to















Video Play Option Menu

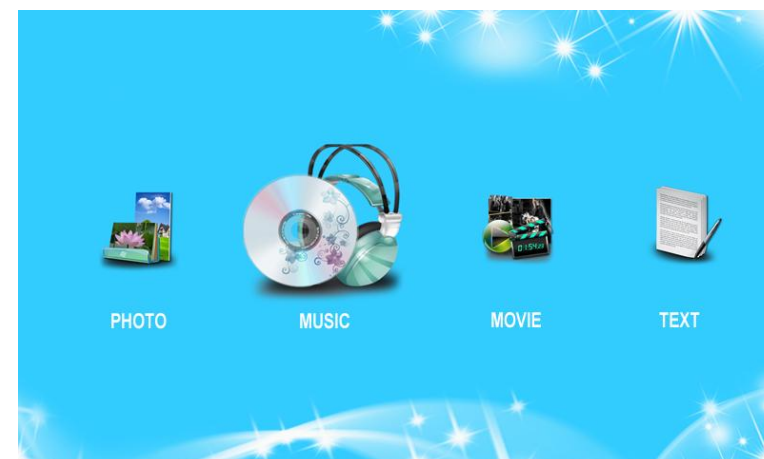
	confirm. Use  to move the cursor to “Cancel” and press  to close this menu.
Info	List the information of the selected file.
Slow	Slow down the play speed. Use  to select the preferred speed (SF2X/4X/8X/16X) and press Play button  to return to the normal play speed.
Step	Play the file in frame steps. Use  to step forward through the file frame by frame.
Timing	Play the file from an exact time point. Use   to set the time (hour/minute/second) and press  .
Zoom in	Move the image closer. Use  to select the preferred level (2X, 4X, 8X).
Zoom out	Move the image farther. Use  to select the preferred level (1X, 1/2X, 1/4X).
Scaling	Set up the projection screen ratio. Use  to select the preferred ratio (16:9, 4:3, Zoom 1, Zoom 2).
Move	Move the location of your projected image. (Available only when you have enlarged your image by using zoom in)
L+R/L+L/R+R	Adjust the setup of the sound channel of the speaker. (Available only when your file is stereo) L+R: Enable both left and right channel L+L: Enable only the left channel R+R: Enable only the right channel

Playing Music

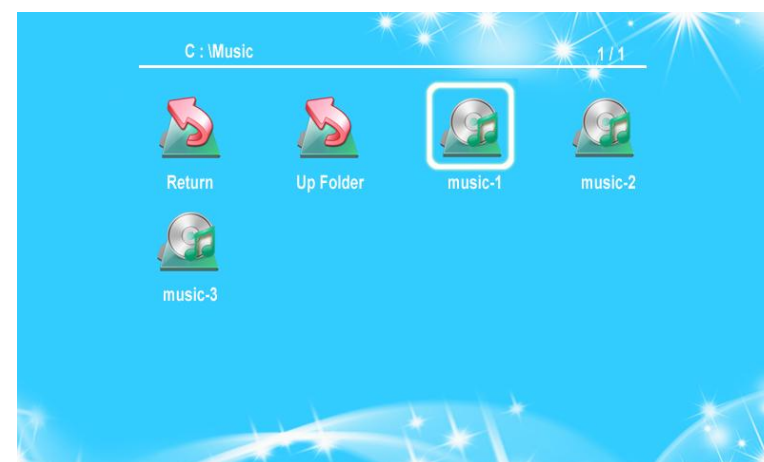
The projector supports most of the popular audio file formats. If you cannot play your files, please contact your dealer.

Playing Audio Files

Step	Description
1	Choose MUSIC on the main menu and press  .
2	After you select your file source, the screen will display the available folders with audio files. Use     to move to the folder you want and press  to go inside the folder.
3	Use     to move to the file you want to play. The projector will provide a file preview and show the information of the selected file.
4	Press  to play the file. Press  to finish and return to the previous page.




Playing Music







Folder Menu





Music Play Option Menu (Remote Control Only)






While the audio file is being played, press  on the remote control and you will see the sound wave on the left of the screen, Playlist Menu on the right and Music Play Option Menu at the bottom. The cursor will stay at Playlist Menu at first.

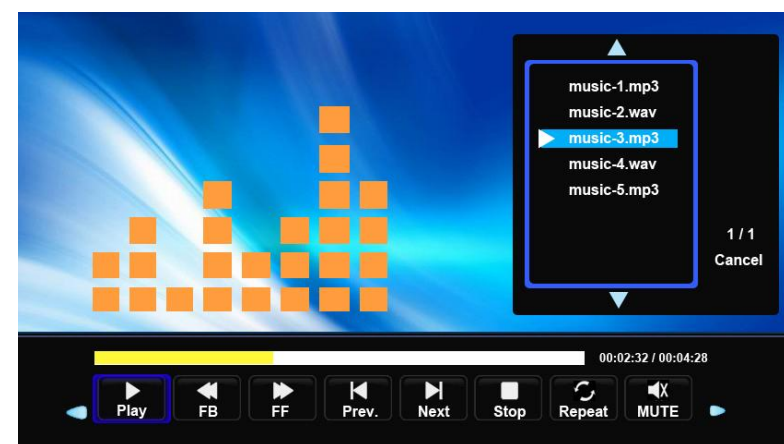
<Playlist Menu>

Use  and  to select the file you want to play. When you want to leave the playlist menu, use  to move the cursor to “Cancel” and press . The cursor will move to the Music Play Option Menu at the bottom.


<Music Play Option Menu>

Use  and  to highlight your choice and press  to confirm. Press  twice to close the menu and return to the file folder page.

Item	Description
	Play/pause the file.
	Search fast backward or fast forward. When you move to the point you want, press the PLAY button  to start playing.
	Skip to the previous/next file.
	Stop playing the file and return to the previous page.


















Playlist & Music Play Option Menu

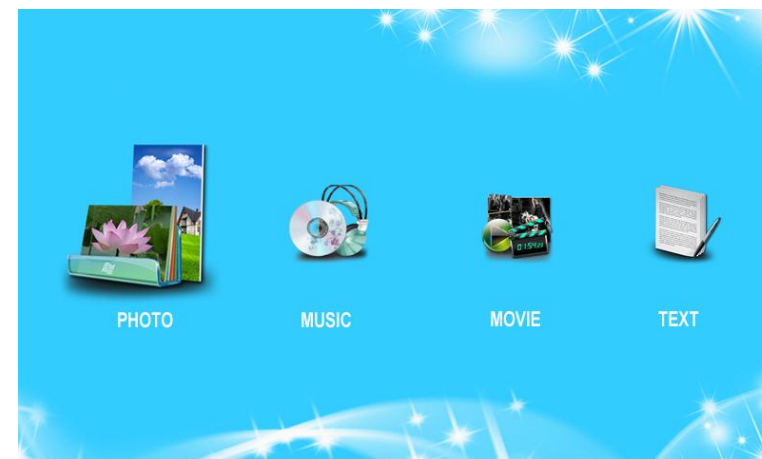
Repeat	Select the mode of playing files. None: Stop after playing the selected file. Repeat 1: Repeat the selected file. Repeat All: Repeat all the files in the folder.
Mute	Turn off the sound.
List	Show Playlist Menu.
Info	List the information of the selected file.
Timing	Play the file from an exact time point. Use $\triangle \nabla$ to set the time (hour/minute/second) and then press  .

Viewing Photos

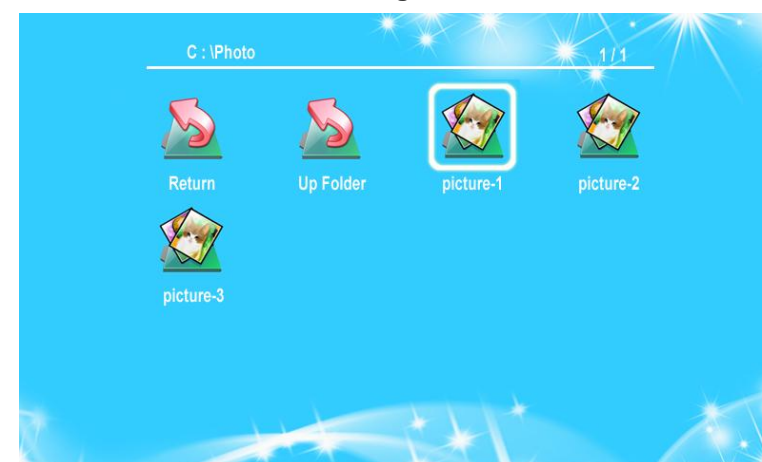
The projector supports most of the popular image file formats. If you cannot view your files, please contact your dealer.

Viewing Image Files

Step	Description
1	Choose PHOTO on the main menu and press  .
2	After you select your file source, the screen will display the available folders with image files. Use     to move to the folder you want and press  to go inside the folder.
3	Use     to move to the file you want to view. The projector will provide a file preview and show the information of the selected file.
4	Press  to view the file.
5	Slide show mode: When an image file is displayed, press  and all the image files in the selected folder will be displayed in a slideshow. Press  to pause and press  again to resume.
6	Press  to finish and return to the previous page.








Viewing Photos



Folder Menu

Photo View Option Menu (Remote Control Only)

While a photo is being displayed, press  on the remote control and Photo View Option Menu will be displayed. Use  and  to highlight your choice and press  to confirm. Press  to close the menu.












Item	Description
 / II	Play/pause the file.
	Move to the previous/next file.
	Stop playing the file and return to the previous page.
Repeat	<p>Select the mode of playing files.</p> <p>None: Stop after playing the selected file.</p> <p>Repeat 1: Repeat the selected file.</p> <p>Repeat All: Repeat all the files in the folder.</p>
Music	If there are music files in the selected folder, Press  to enable this function. The projector will play the music while your image files are displayed, or you may press again to disable it.
List	Show the playlist menu. It will list all the files in the selected folder. Use   to highlight your choice and press  to confirm. Use  to move the cursor to "Cancel" and press  to close this menu.
Info	List the information of the selected file.















Photo View Option Menu

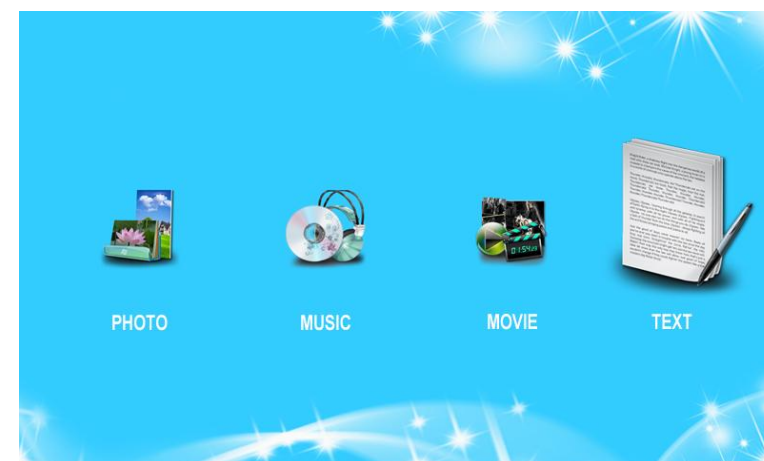
Rotate (Clockwise)	Rotate the selected file clockwise.
Rotate (Counter- clockwise)	Rotate the selected file counterclockwise.
Zoom in	Move the image closer. Use  to select the preferred level (2X, 4X, 8X).
Zoom out	Move the image farther. Use  to select the preferred level (1X, 1/2X, 1/4X).
Move	Move the location of your projected image. (Available only when you have enlarged your image by using zoom in)

Browsing Text Files

The projector supports the .txt file format and you can use it to browse your text files.

Browsing Text Files

Step	Description
1	Choose TEXT on the main menu and press  .
2	After you select your file source, the screen will display the available folders with text files. Use     to move to the folder you want and press  to go inside the folder.
3	Use     to select the file you want to browse. The projector will provide a file preview and show the information of the selected file.
4	Press  to browse the file. Press  to finish and return to the previous page.


















Browsing Text Files



Folder Menu

Text View Option Menu (Remote Control Only)

While a text file is being displayed, press  on the remote control and Text View Option Menu will be displayed. Use  and  to highlight your choice and press  to confirm. Press  to close the menu.

Item	Description
	Turn to the previous/next page in the file.
	Move to the previous/next file.
	Stop displaying the file and return to the previous page.
Music	If there are music files in the selected folder, Press  to enable this function. The projector will play the music while your image files are displayed, or you may press  again to disable it.
List	Show the playlist menu. It will list all the files in the selected folder. Use   to highlight your choice and press  to confirm. Use  to move the cursor to “Cancel” and press  to close this menu.
Info	List the information of the selected file.


Important Safety Information

1. To ensure reliable operation of the projector and prevent overheating, make sure the projector is properly ventilated during use and that all ventilation openings on the projector remain unobstructed and kept free from obstacles.
For example, do not place the projector on a sofa, carpet or bed during operation and do not use the projector in an enclosed place, such as a book cabinet or steel cabinet.
2. Do not expose the projector to moisture or rain. (i.e. using the projector near a bathroom sink, kitchen, laundry room, damp corners of a wall or a swimming pool)
3. Do not operate the projector near sources of heat or equipment that will generate high temperatures. (i.e. heater, cooler, furnace and so forth)
4. Before cleaning the projector, be sure to unplug the power cord from




Text View Option Menu

Chapter 4 Adjusting Setting


This chapter will describe how to adjust the setting of the projector. To enter the setting menu, press  on the projector for 2 to 3 seconds or press the **Menu** button on the remote control. There are three major sections in this menu:

- **Picture**
- **Sound**
- **Option**

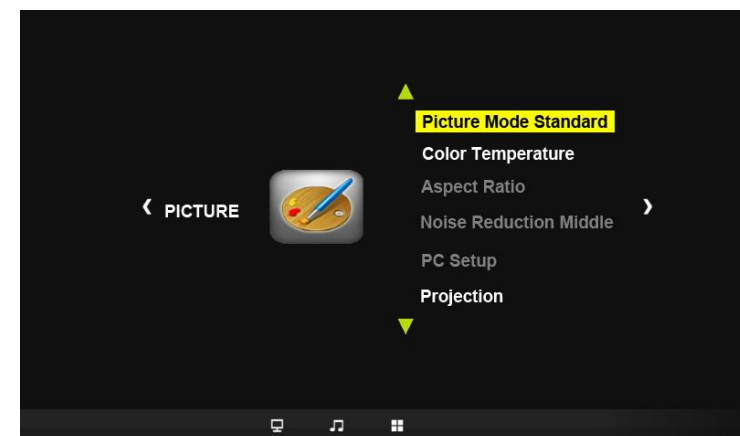
Use ◀ or ▶ to select the section you want, and then use △ or ▽ to choose the item you want to adjust. See the pages below for the instructions on each section. Press  to close the setting menu.

Picture

Picture Mode

You can use Picture Mode to adjust the quality of the projected image. Use  to select among the give modes or user mode.

Mode	Description
Standard	The picture mode used under the standard brightness mode(default)
Video	The picture mode used under the video mode
Bright	The picture mode used under the bright mode
User	Use ◀ or ▶ to set the value of Contrast/Brightness/Color/Sharpness/Tint. Contrast: Level 0 --- 100 (default 50) Brightness: Level 0 --- 100 (default 50) Color: Level 0 --- 100 (default 50) Sharpness: Level 0 --- 100 (default 50) Tint: Level 0 --- 100 (default 50)




Picture Mode

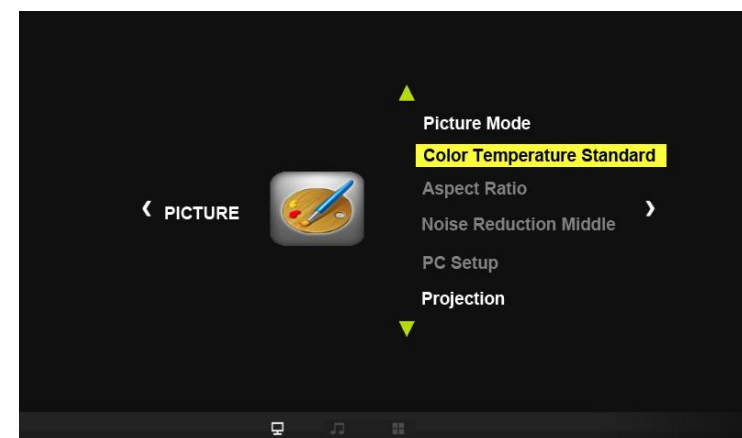


Picture Mode - User

Color Temperature

Color temperature decides the hue of your projected image. Use  to select among the given color temperature mode or user mode.

Mode	Description
Standard	The color temperature mode used under the standard brightness mode(default)
Video	The color temperature mode used under the video mode
Bright	The color temperature mode used under the bright mode
User	Use ◀ or ▶ to adjust the Red/Green/Blue color value. Red: Level 0 --- 100 (default 50) Green: Level 0 --- 100 (default 50) Blue: Level 0 --- 100 (default 50)



Color Temperature



Color Temperature - User

Aspect Ratio

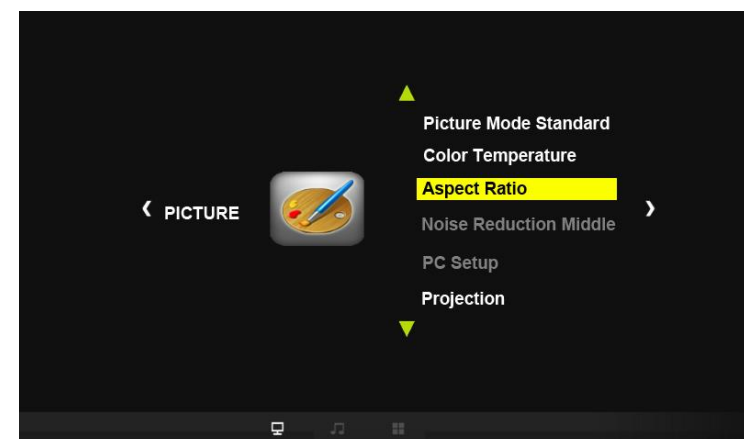
Aspect ratio is the ratio between the width and height of your projected image. It can only be adjusted when you play the media files via the devices with an AV or HDMI interface. Use \triangle or ∇ to preview each option and highlight your preferred one.

Option	Description
Auto	Adjust the ratio automatically
16:9	Project the image in the widescreen ratio. (default)
4:3	Project the image in the common ratio of 4:3.
Zoom 1	Scale the image in three different degrees.
Zoom 2	
Zoom 3	

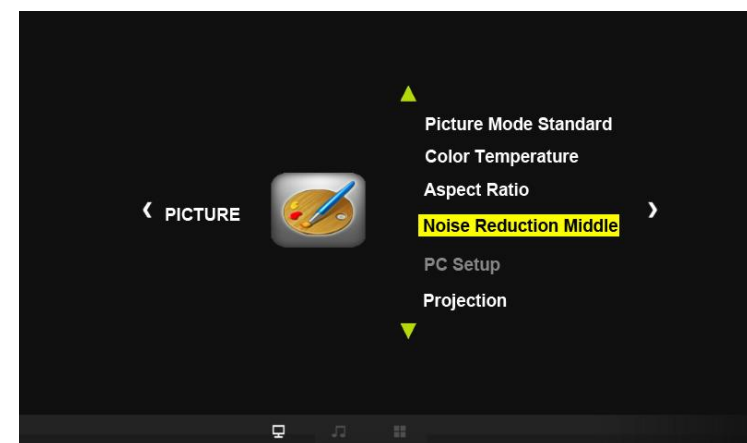
Noise Reduction

When you play files via the devices with an AV or HDMI interface, Noise Reduction can enhance the quality of your projected image. You can just use the default option or use \triangle or ∇ to select other options to fit your use.

Option	Description
Off	Disable the function
Low	Reduce the noise slightly.
Middle	Reduce the noise modestly. (default)
High	Reduce the noise greatly.



Aspect Ratio



Noise Reduction

PC Setup

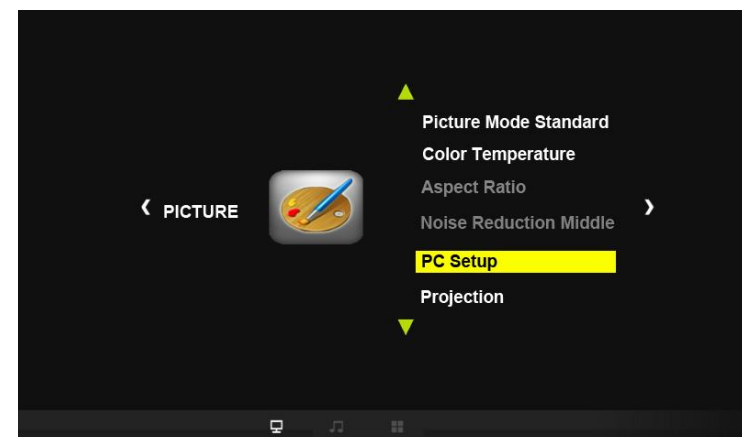
When you play files through your computer or laptop, you can use PC Setup to adjust the direction of the projected screen. Use \triangle or ∇ to select the item you want to adjust and then use \triangleleft or \triangleright to set the value.

Item	Description
Auto Adjust	Configure the vertical and horizontal positions automatically (default)
Horizontal pos.	Adjust the horizontal position of the VGA display.
Vertical pos.	Adjust the vertical position of the VGA display.
Size	Adjust the screen size of the VGA display.
Phase	Adjust the phase of the VGA display.

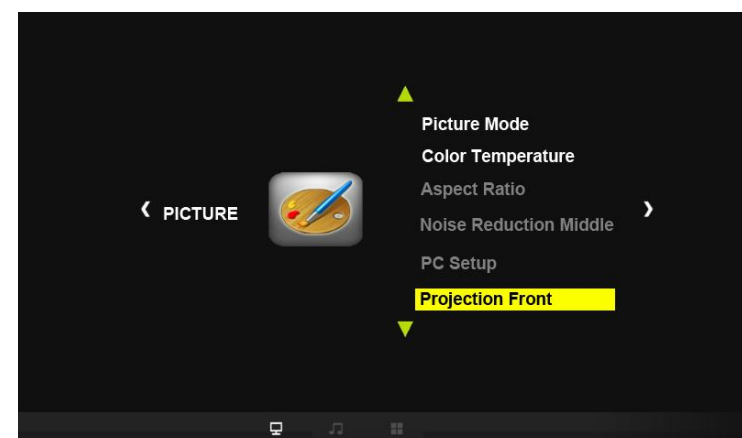
Projection

Use Projection to adjust the direction of the projected screen to. Use \triangleleft or \triangleright to preview each option and choose your preferred one.

Option	Description
Front	Front projection (default)
Front/Ceiling	Front and ceiling mount projection
Rear	Rear projection
Rear/Ceiling	Rear and ceiling mount projection



PC Setup



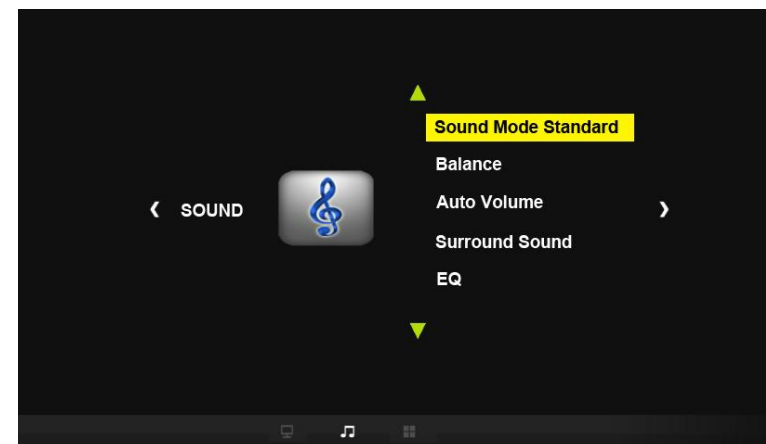
Projection

Sound

Sound Mode

Use ◀ or ▶ to select the sound mode to suit your files.

Mode	Description
Standard	General settings (default)
Music	The sound mode for music
Movie	The sound mode for movies
Sports	The sound mode for sport programs
User	Use ◀ or ▶ to adjust the value of treble and base.
Treble	Level 0 --- 100 (default 50)
Base	Level 0 --- 100 (default 50)



Sound Mode




Sound Mode - User

Balance

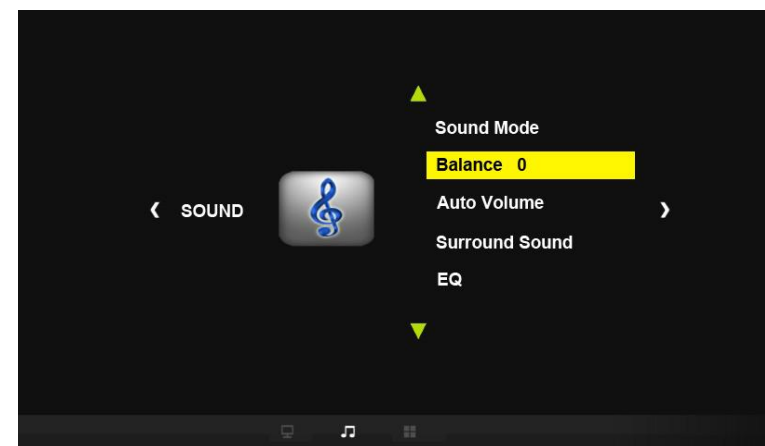
Use ◀ or ▶ to adjust the audio balance of the projector.

Item	Description
Value	-50 ----- 0 -----+ 50 (default 0)

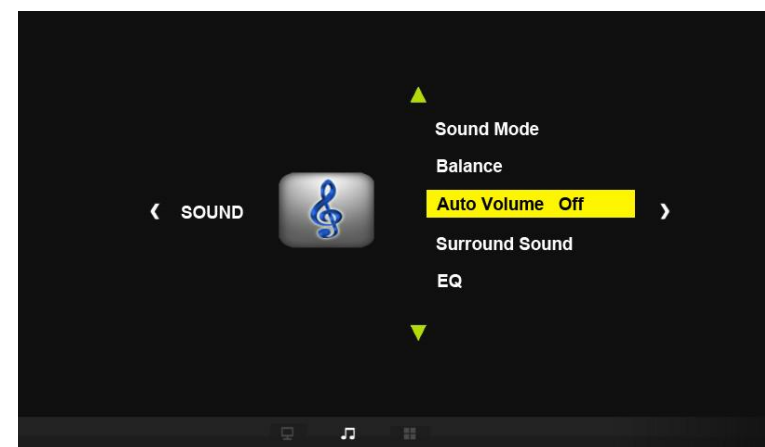
Auto Volume

When Auto Volume is on, the projector can adjust the volume automatically to avoid the volume peak in your audio files. Use  to enable or disable the function.

Option	Description
On	Enable Auto Volume
Off	Disable Auto Volume (default)




Balance

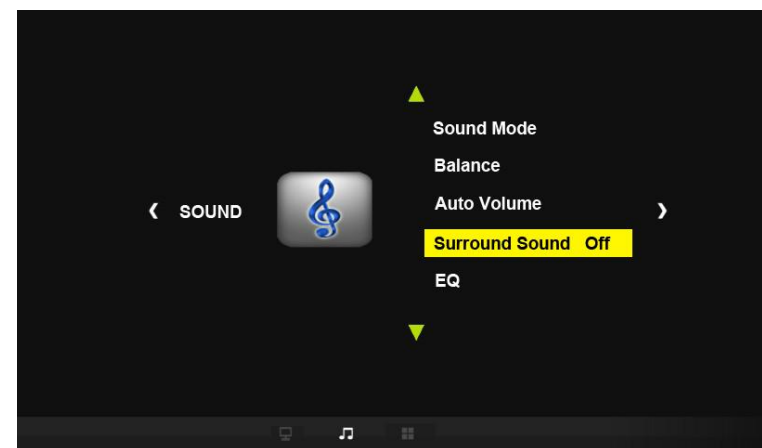


Auto Volume

Surround Sound

Surround Sound provides your files with an excellent sound quality. Use  to enable or disable the function.

Option	Description
Surround	Enable Surround Sound
Off	Disable Surround Sound (default)

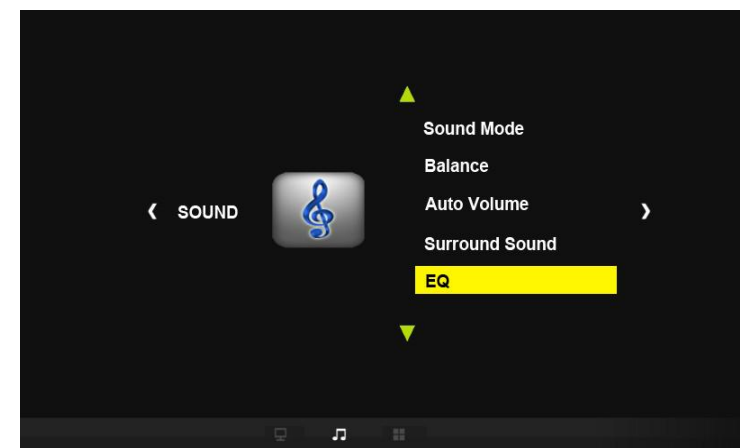


Surround Sound

EQ

Adjust the value of different frequencies and so the projector can give a sound performance that fits your files. Use \triangle or ∇ to select the frequency you want to adjust. Use \triangleleft or \triangleright to set the value.

Item	Description
120Hz	Level 0 --- 100 (default 50)
500Hz	Level 0 --- 100 (default 50)
1.2KHz	Level 0 --- 100 (default 50)
7.5KHz	Level 0 --- 100 (default 50)
12KHz	Level 0 --- 100 (default 50)



EQ



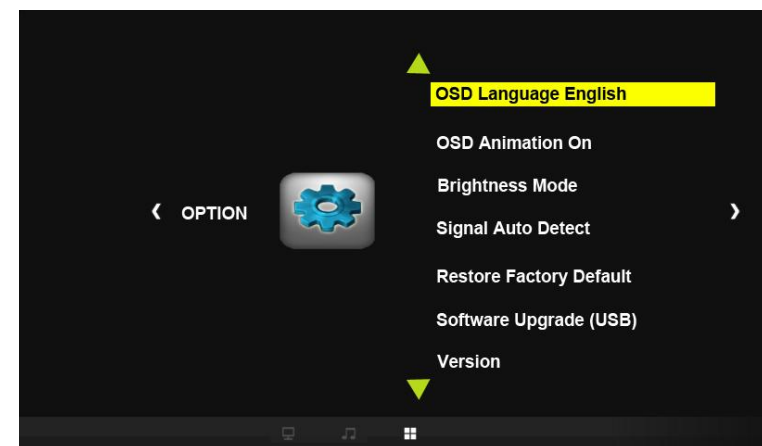
Adjusting Frequency Level

Option

OSD Language


You can change the language displayed in the menu. Press $\triangle \nabla \triangleleft \triangleright$ to select and press \hookrightarrow to close the menu.

Option	Description
1	English (default)
2	French
3	German
4	Italian
5	Portuguese
6	Spanish
7	Simplified Chinese
8	Traditional Chinese
9	Japanese




OSD Language

OSD Animation

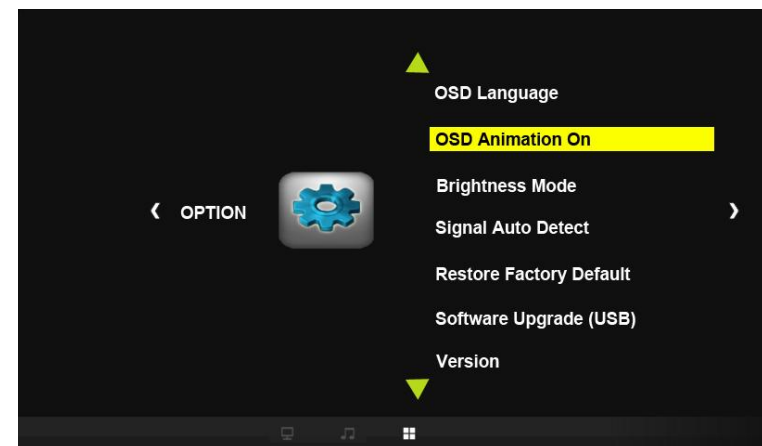
OSD Animation is the page transition effect of the setting menu. When OSD Animation is on, the menu page will flip when you move from one setting menu to another. Use  to enable or disable the function.

Option	Description
On	Enable OSD Animation (default)
Off	Disable OSD Animation

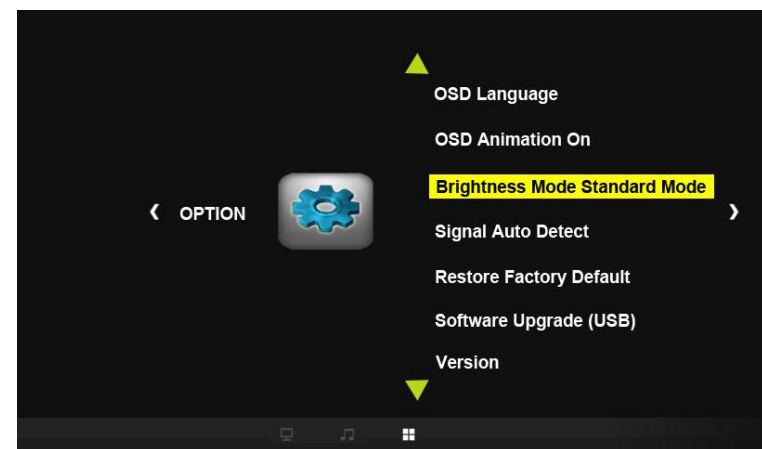
Brightness Mode

Use  to adjust the brightness mode of the projector to give your files the best display effect.

Option	Description
Video Mode	The mode for video files. (default)
Standard Mode	The standard mode of the projector
Bright Mode	The mode with higher brightness




OSD Animation

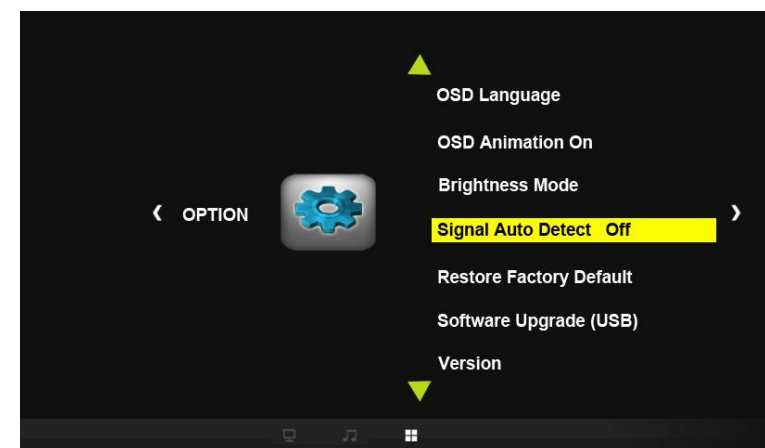


Brightness

Signal Auto Detect

When Signal Auto Detect is on, the projector can automatically detect the input source when it is connected to a VGA/HDMI/AV interface device. Use  to enable or disable the function.

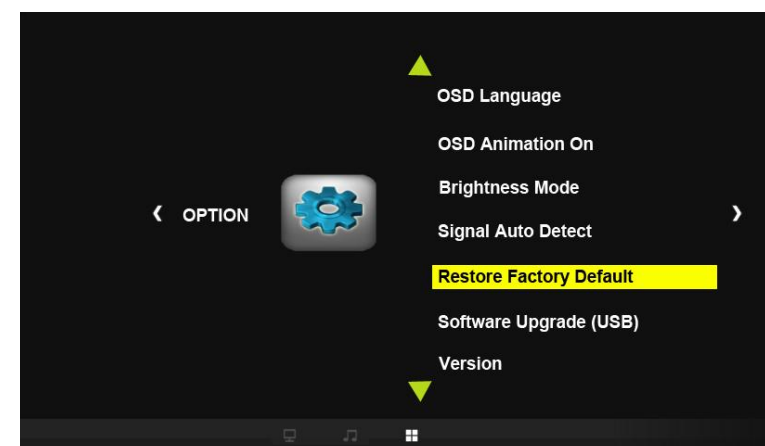
Option	Description
On	Enable Signal Auto Detect
Off	Disabled Signal Auto Detect (default)



Signal Auto Detect

Restore Factory Default

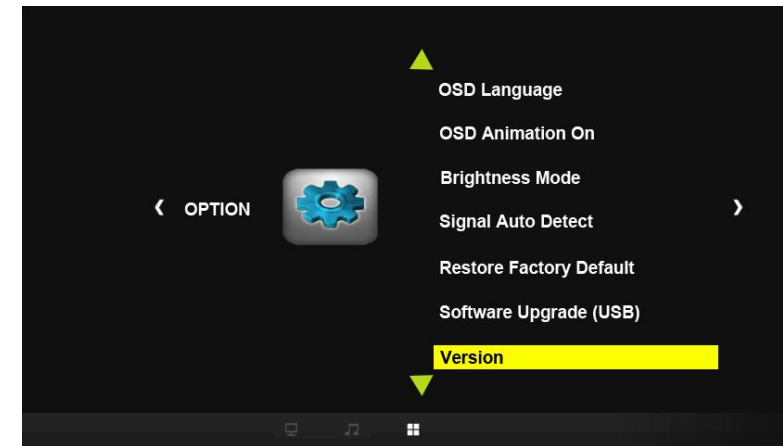
Restore Factory Default can reset the projector and restore all the setting back to the factory default setting.



Restore Factory Default

Version

Version shows the software release information of the projector.



Version

Appendix Battery Pack

Safety Instructions

<Usage/Storage>

1. Please read the instructions below and the label on its surface before use. Do not use this battery to power other devices. We do not guarantee and are not responsible for the safety of powering the devices other than our projector.
2. The battery has its protective component and circuit inside. Do not disassemble the battery by yourself.
3. When you use the battery, it should be kept out of high voltage and amplified current.
4. Do not use the battery or keep it near any equipment that will generate magnetic waves, such as a cell phone or magnet.
5. Do not drop the battery from high places.
6. Keep the battery out of children's reach and prevent them from biting or swallowing the battery.
7. Keep the battery in dry places. Do not put the battery in the damp place or immerse the battery in the water.
8. Keep the battery in cool places. Do not use the battery near the fire, stove, or any heated equipments (eg., microwave oven). Nor should you use the battery in a place with temperature over 80°C or place the battery under the sunlight. Over-heating will cause the short circuit and make the battery out of function.
9. Do not wrap the battery with any conduct materials.

10. When the battery emits any abnormal smell, please stop using it and contact your dealer. Do not repair the battery by yourself.
11. When the battery emits any liquid, do not touch the liquid directly by your hands. Contact your dealer and do not repair the battery by yourself. If the liquid happens to contact your eyes or skin, do not rub your eyes or skin but rinse them with clean water immediately, and then go to the hospital for further treatments.

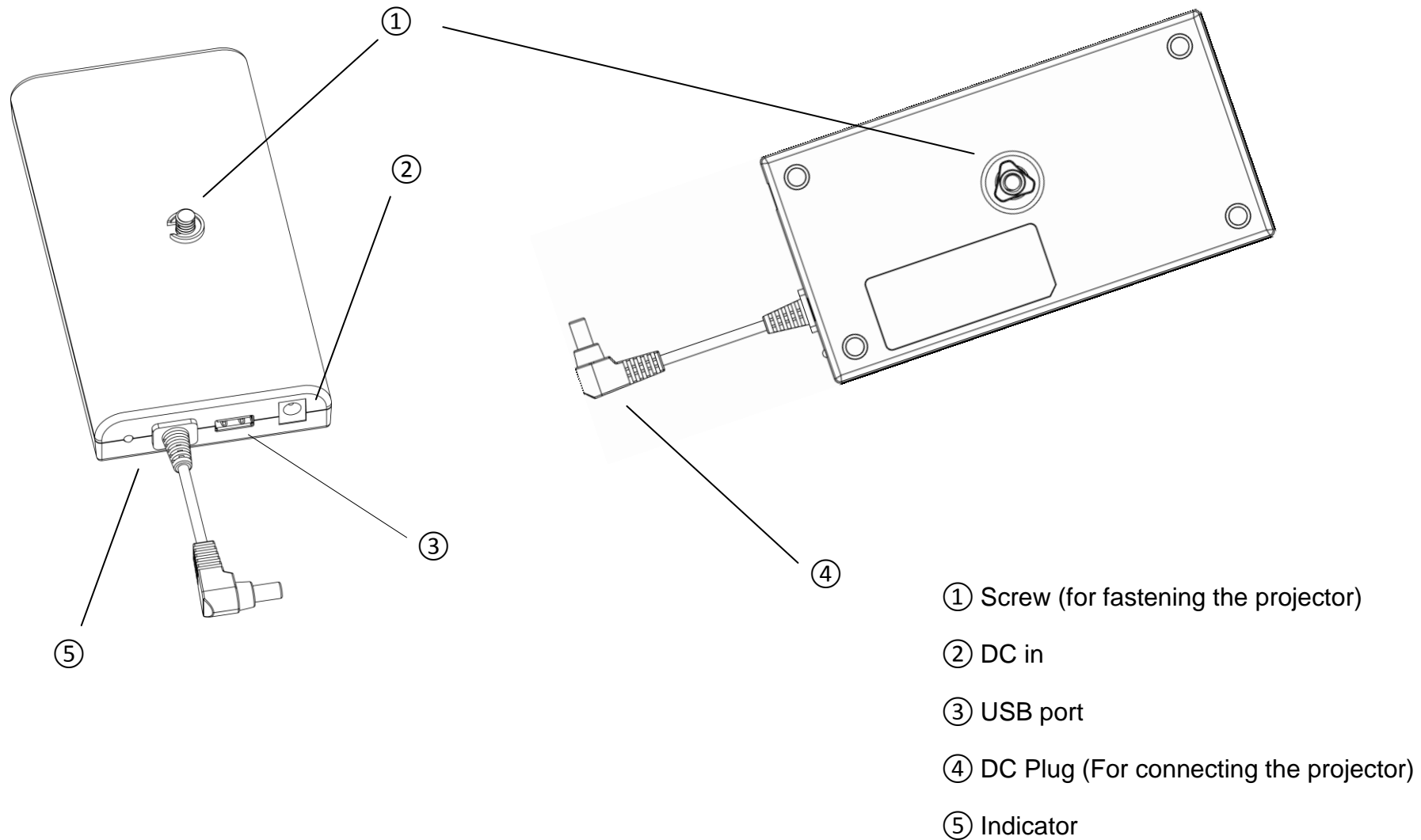
<Charging>

12. When you charge the battery, do not place it in the environment described above in the instruction no. 6. Otherwise, it will cause the battery to be out of function.
13. Please charge the battery by following the steps in the section below. Please stop charging when you see the LED indicator turn green. Do not overcharge the battery, or it will cause the battery to be out of function.
14. When the battery is not going to be used for a long period, keep the battery in 50% charged status. We recommend to charge the battery up to 50% of the total capacity every 3 months and maintain the voltage 10.8~11.0V.

Specification

Model Name	MP7800/ Battery Pack for HBP200+		MP15600/ Battery Pack for HBP200++
Spec	Lithium Ion Battery Pack		Lithium Ion Battery Pack
Input	19V/2A		19V/2A
Output	DC: 9-12.6 V/1.5A USB: 5V/1A		DC: 9-12.6V/1.5A USB: 5V/2A
Capacity	11.1V/2600mAh		11.1V/5200mAh
Ambient Conditions	Charge Temperature	0°C ~45°C	
	Discharge Temperature	-20°C ~60°C	
	Humidity	65°C±20%	
Overcharged Detection Voltage	13.05±0.025 V		13.05±0.025 V
Overdischarged Detection Voltage	6.9±0.05 V		6.9±0.05 V

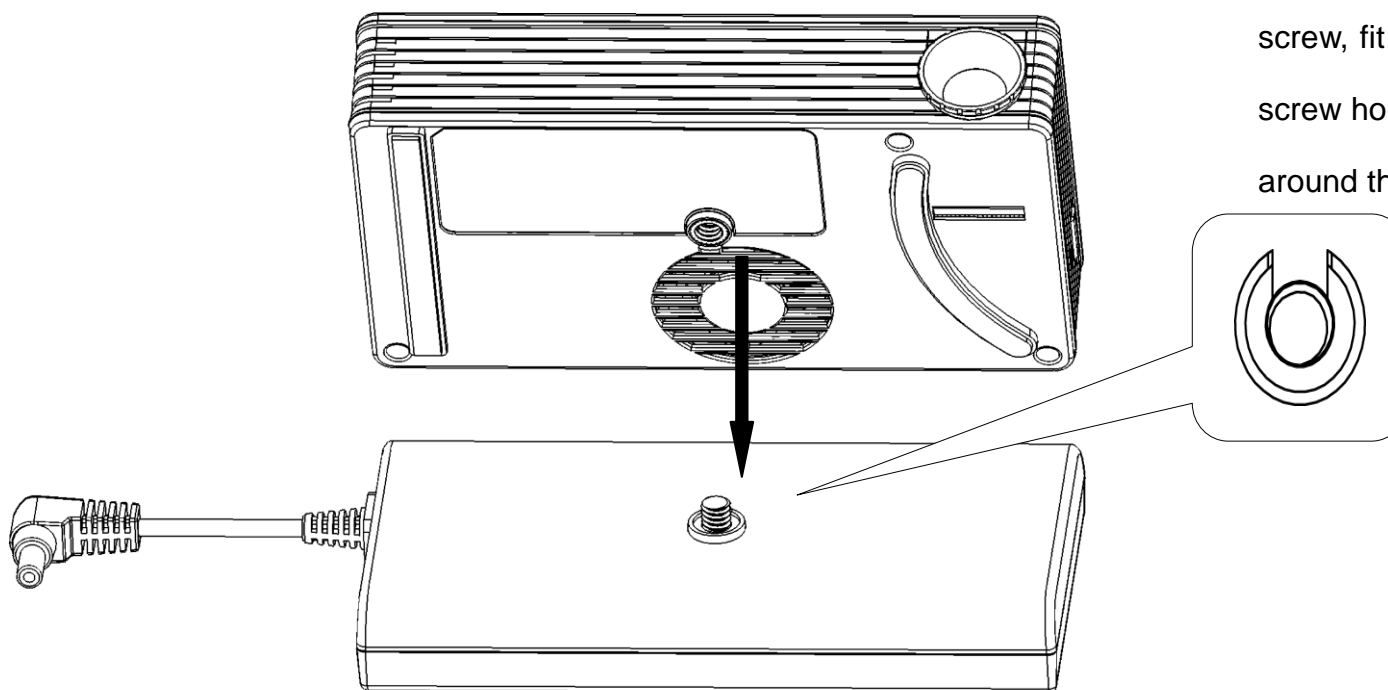
Overview



Connection

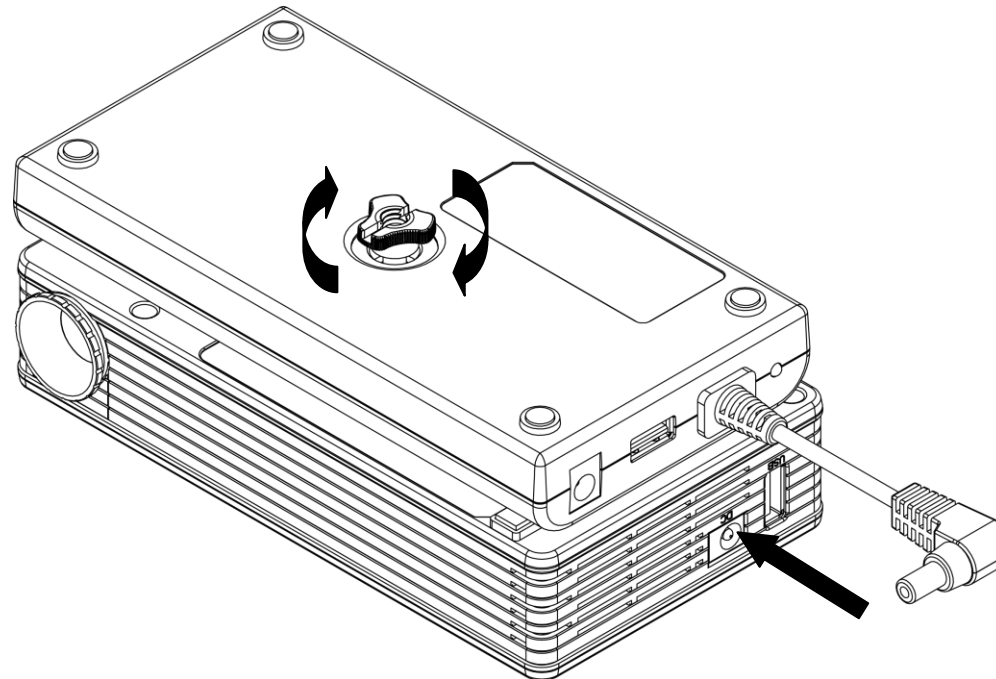
The battery is fully charged and ready to use when you receive the battery. (To extend the useful life of the Battery, before you recharge it the first time, run the Pico Projector to a complete discharge of the battery, then recharge it completely.) Follow the steps below to connect the battery to the projector.

1. Place the projector above the battery and make sure the screw on the battery is in line with the screw hole on the back of the projector.

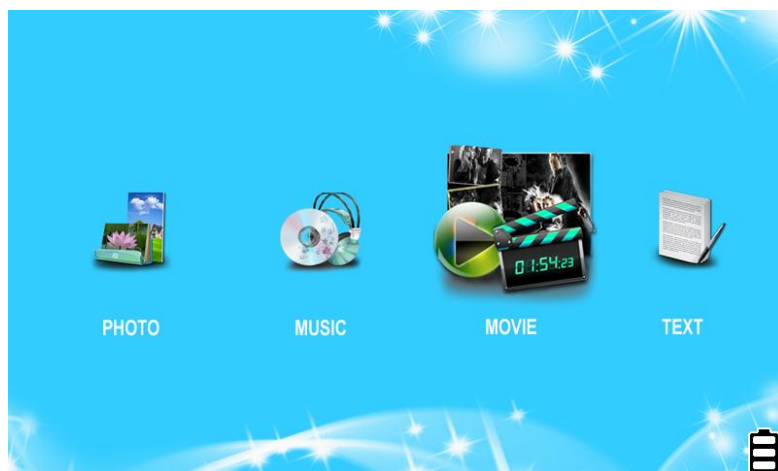


Note: To facilitate the positioning of the screw, fit the extended area of the screw hole into the gap on the ring around the screw.

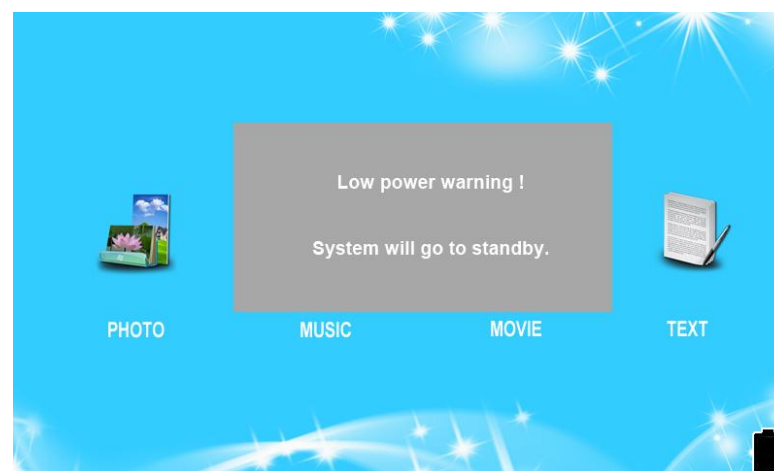
2. Hold the projector and battery together. Turn the screw clockwise and tighten it. Plug the DC plug into the DC jacket on the projector, and then you can start using the projector.



3. When the projector is powered by the battery, a battery icon will appear at the bottom right corner of the main menu. The icon will show the capacity of the battery. It will start blinking when the capacity is too low. Later, when you see the warning message below, please power the projector with the power adapter, or start charging your battery. The projector will be off in three minutes.



Battery - Full

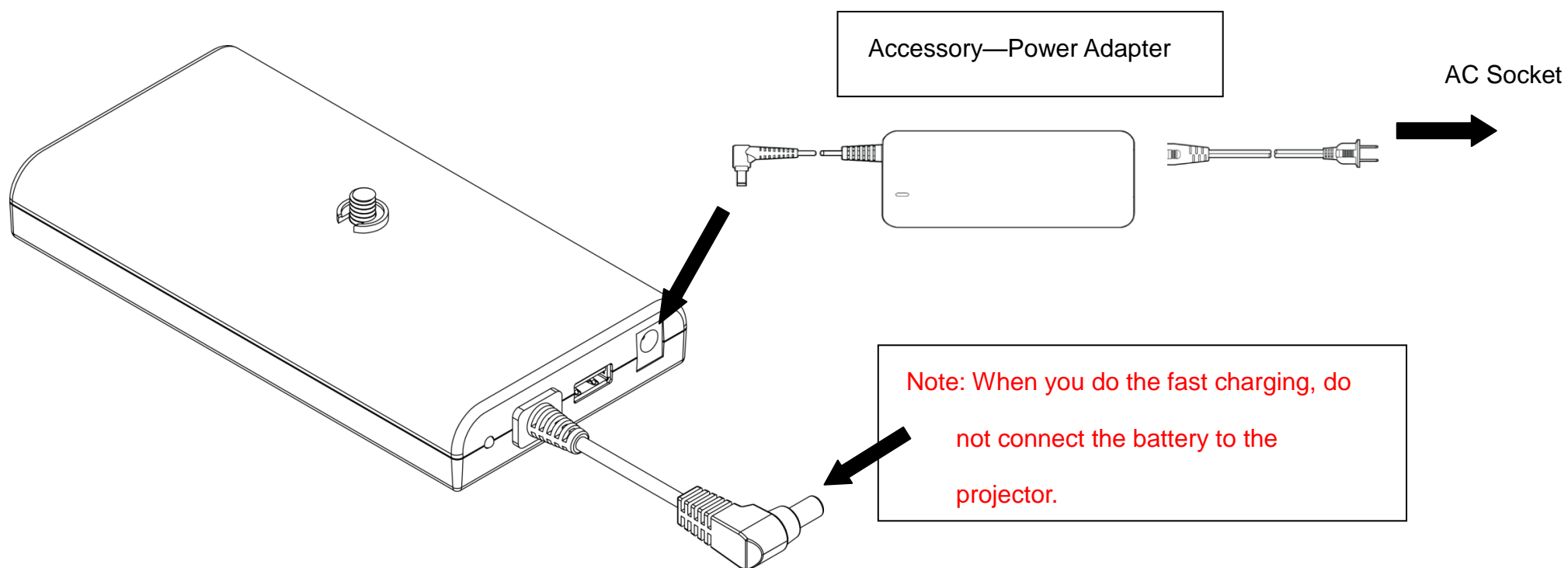


Low Capacity Warning

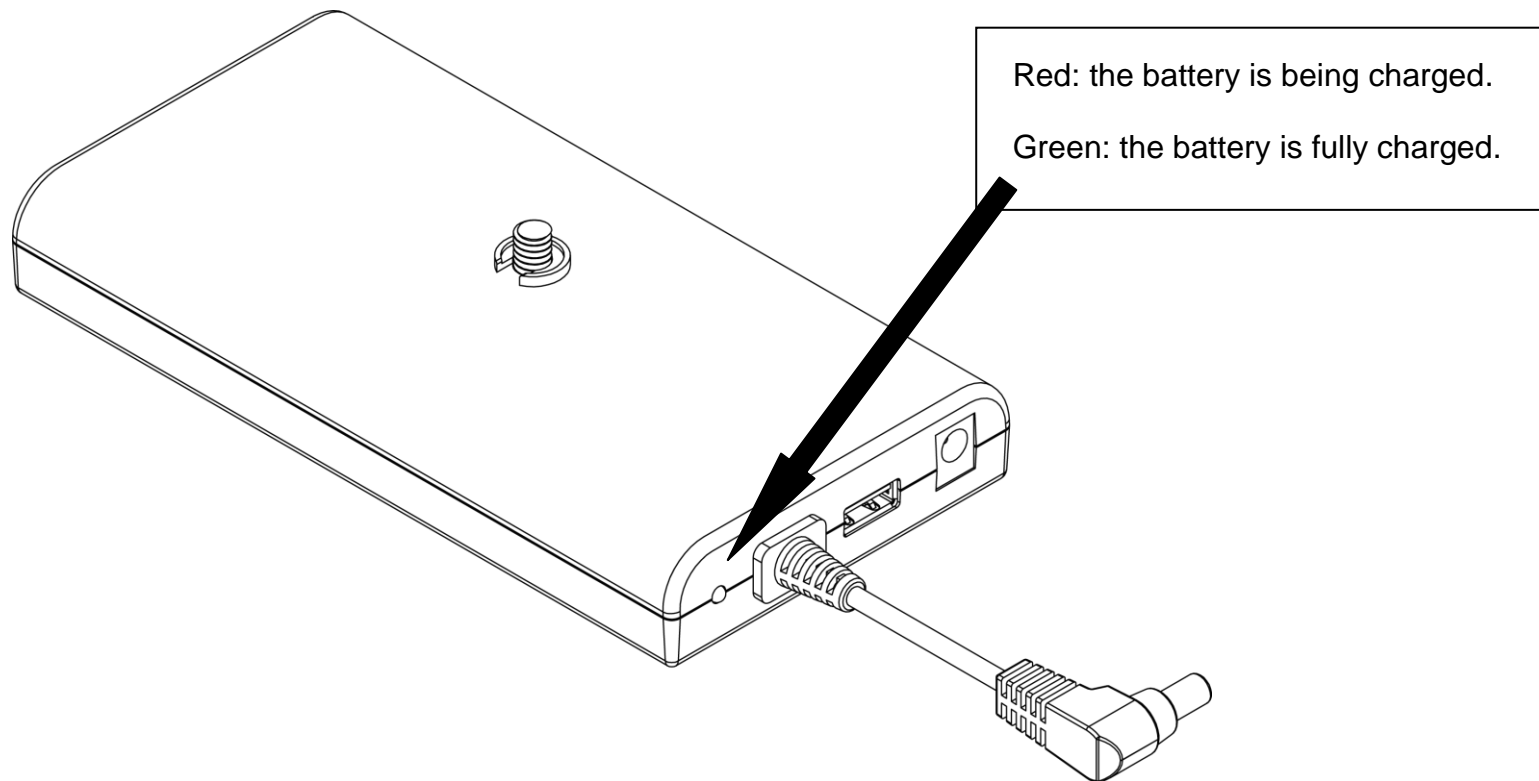
Charging the Battery

<Fast Charging>

1. Connect the battery to the power adapter, and then plug it to the AC socket.

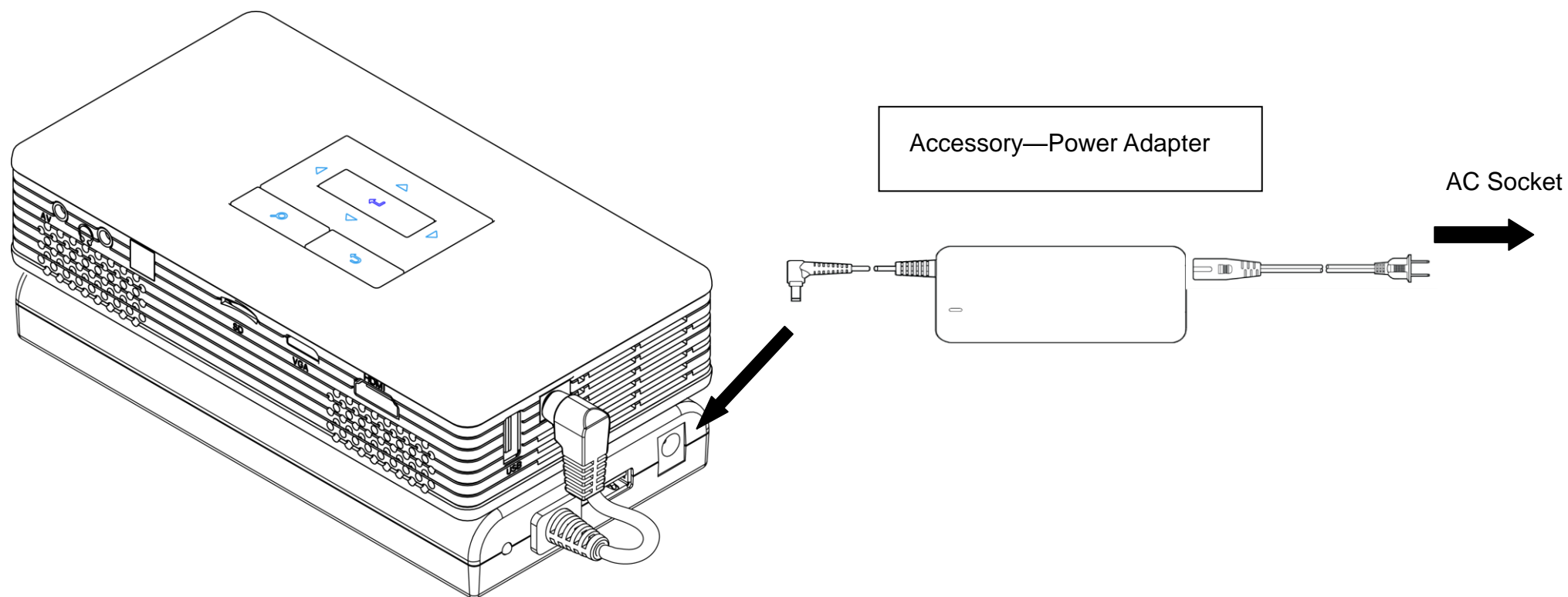


2. The indicator will turn red when the battery is being charged. It will take about 4 hours to finish the fast charging. The indicator will turn green when the battery is fully charged.



<Slow Charging>

You can also charge the battery when the battery is connected to the projector. You can use the projector while the battery is being charged. It will take about 8 hours to finish slow charging. The indicator will be green when the battery is fully charged.



Statements:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Caution: Modification not expressly approved by this company could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the radio or television off and on, the user is encouraged to try to correct interference by one or more of the following measures:

- . Reorient or relocate the receiving antenna.
- . Increase the separation between the equipment and receiver.
- . Connect the equipment into an outlet on another circuit.
- . Consult the dealer or an experienced radio/TV technician for help.