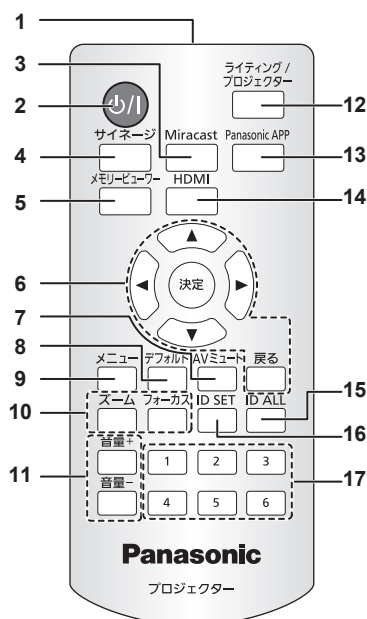


About your projector

Remote control



- 1 **Remote control signal transmitter**
- 2 **Power <Power> button**
Turns on/off the power of the projector. (☞ page 31)
- 3 **<Miracast> button**
Switches the input to Miracast. (☞ page 35)
If you press this button in lighting mode, the mode switches to projector mode and the input becomes Miracast.
- 4 **<Signage> button**
Switches the input to signage. (☞ page 35)
If you press this button in lighting mode, the mode switches to projector mode and the input becomes signage.
- 5 **<Memory Viewer> button**
Switches the input to memory viewer.
(☞ page 35)
If you press this button in lighting mode, the mode switches to projector mode and the input becomes memory viewer.
- 6 **▲▼◀▶ buttons/<ENTER>button/<Back> button**
Used to navigate through the menu screen.
They are also used to enter the security password.
- 7 **<AV Mute> button**
Used to temporarily turn off the audio and video.
(☞ page 42 of Detailed Instructions)
- 8 **<Default> button**
Resets the sub-menu settings to the factory defaults.
(☞ page 45 of Detailed Instructions)
- 9 **<Menu> button**
Displays the main menu. (☞ page 44 of Detailed Instructions)
- 10 **<Zoom> button/<Focus> button**
Displays the lens menu to adjust the projection lens.
(☞ page 36)
- 11 **<Volume +>/<Volume -> buttons**
Adjusts the audio output volume. (☞ page 42 of Detailed Instructions)
- 12 **<Lighting/Projector> button**
Switches the projection mode of the projector to lighting mode or projector mode. (☞ page 35)
- 13 **<Panasonic APP> button**
Switches the input to Panasonic APPLICATION.
(☞ page 35)
If you press this button in lighting mode, the mode switches to projector mode and the input becomes Panasonic APPLICATION.
- 14 **<HDMI> button**
Switches the input to HDMI. (☞ page 35)
If you press this button in lighting mode, the mode switches to projector mode and the input becomes HDMI.
- 15 **<ID ALL> button**
Used to simultaneously control all the projectors with one remote control in an environment in which multiple projectors are used. (☞ page 20)
- 16 **<ID SET> button**
Used to set the ID number of the remote control in an environment in which multiple projectors are used.
(☞ page 20)
- 17 **Number (<1> to <6>) buttons**
Used in an environment in which multiple projectors are used.
They are used to enter an ID number, password, etc.

Important

- Do not drop the remote control.
- Avoid contact with liquids or moisture.
- Do not attempt to disassemble or repair the remote control.
- Observe the following precautions displayed on the back of the remote control.
 1. Do not use a mixture of new and old or different types of batteries.
 2. Make sure the polarities (+ and -) are correct when inserting the batteries.

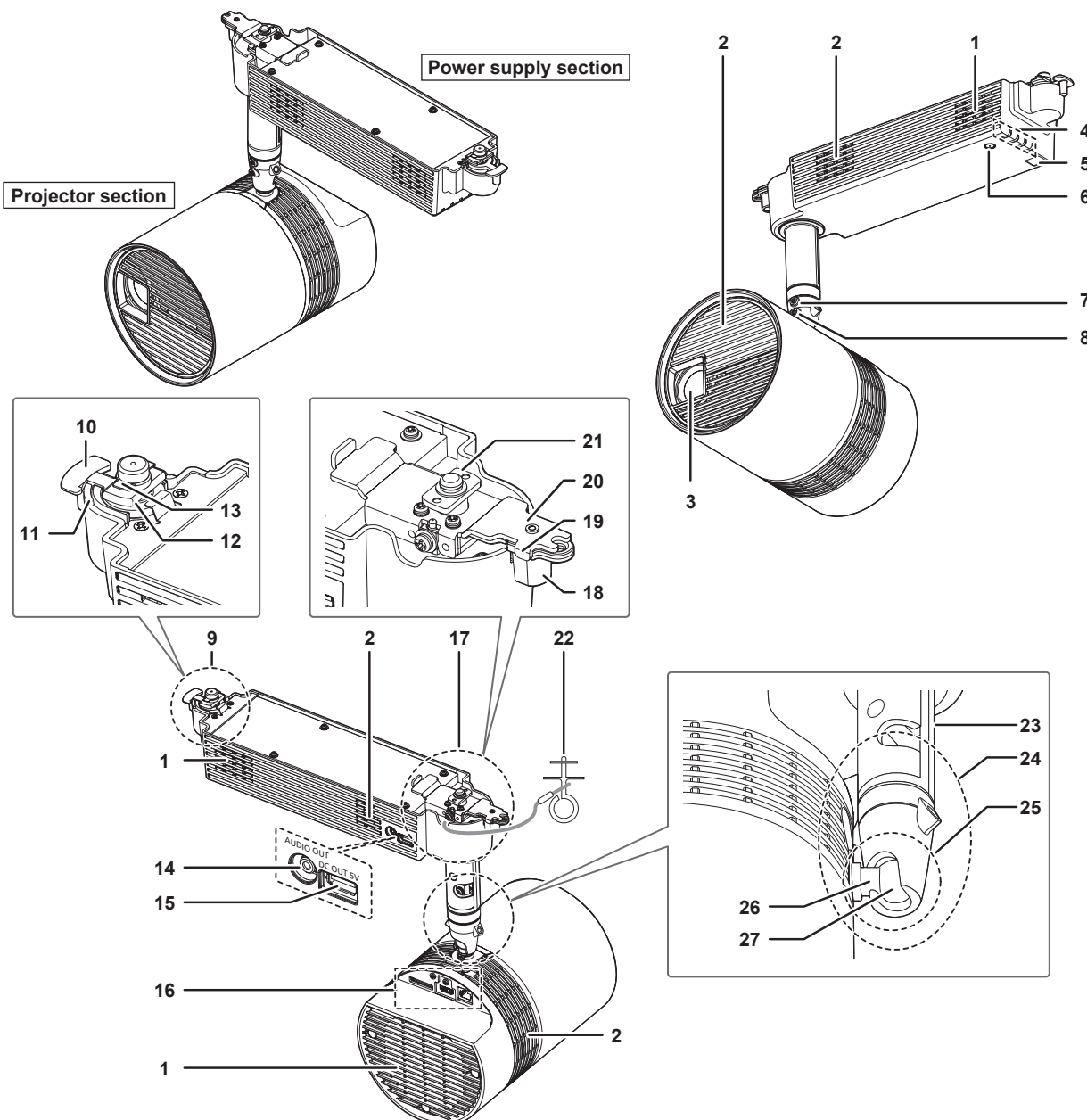
In addition, read the precautions related to batteries in "Safety Precautions."

Note

- The remote control can be used within a distance of about 7 m (22-11'5/8") if pointed directly at the remote control signal receiver located on the power supply section of the projector. The remote control can control at angles of up to $\pm 30^\circ$ vertically and horizontally, but the possible control distance may be reduced.
- If there are any obstacles between the remote control and the remote control signal receiver, the remote control may not operate properly.
- The projector can be controlled by reflecting the signal from the remote control off the projection surface. However, the effective control range may be limited by the light reflection loss or shape of the projection surface.
- If the remote control signal receiver on the power supply section of the projector directly receives strong light, such as fluorescent light, the remote control may not operate properly. Install the projector as far away as possible from light sources.

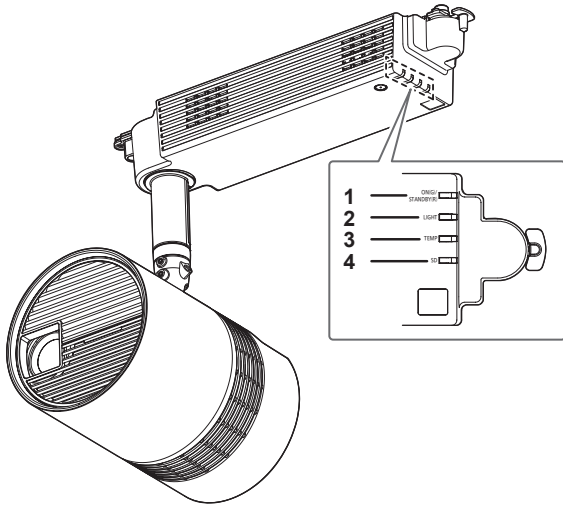
Projector body

Introduction



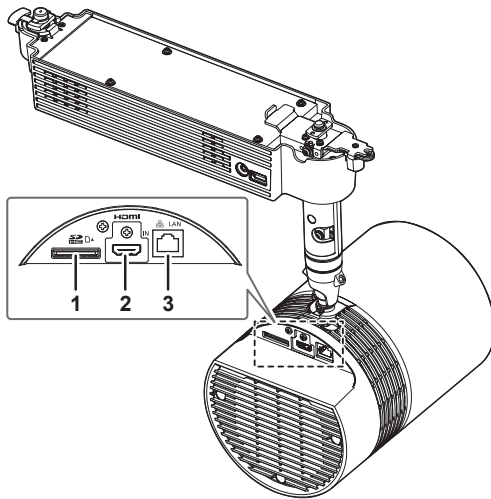
- 1 **Air intake ports**
- 2 **Air exhaust ports**
- 3 **Projection lens**
- 4 **Indicator section** (☞ page 19, page 184 of Detailed Instructions)
- 5 **Remote control signal receiver**
- 6 **Power $\langle \text{on}/\text{off} \rangle$ button**
Turns on/off the power of the projector. (☞ page 31)
- 7 **Rotation fixing screw**
Tighten this after adjusting the angle of the projector section to stop the shaft holder from rotating. (☞ page 26)
- 8 **Ball joint fixing screws**
Tighten these after adjusting the angle of the projector to fix the ball joint moving part in place. (☞ page 26)
- 9 **Duct attachment part B** (☞ page 24)
- 10 **Lever B**
- 11 **Stopper**
- 12 **Hanging plate**
- 13 **Plug**
- 14 **<AUDIO OUT> connector**
This connector is for outputting an audio signal when an audio signal is input via the <HDMI IN> connector or when a video with audio on an SD card is played. (☞ page 29)
- 15 **<DC OUT> connector**
This USB connector is for supplying power. (5 V DC, max. 900 mA)
Use this connector when power needs to be supplied to the Bluetooth® audio transmitter, etc.
- 16 **Connection section** (☞ pages 19 and 29)
- 17 **Duct attachment part A** (☞ page 24)
- 18 **Lever A**
- 19 **Stopper of lever A**
- 20 **Lever plate**
- 21 **Hanging fitting**
- 22 **Safety wire** (☞ page 25)
- 23 **Pole**
- 24 **Shaft holder**
- 25 **Ball joint moving part**
- 26 **Shaft**
- 27 **Ball joint**

■ Indicator section



- 1 **Power indicator <ON (G)/STANDBY (R)>**
Displays the status of the power supply. (☞ page 31)
- 2 **Light source indicator <LIGHT>**
Displays the status of the light source. (☞ page 184 of Detailed Instructions)
- 3 **Temperature indicator <TEMP>**
Displays the status of the internal temperature. (☞ page 184 of Detailed Instructions)
- 4 **SD card indicator <SD>**
Flashes green when the SD card is accessed.

■ Connection section



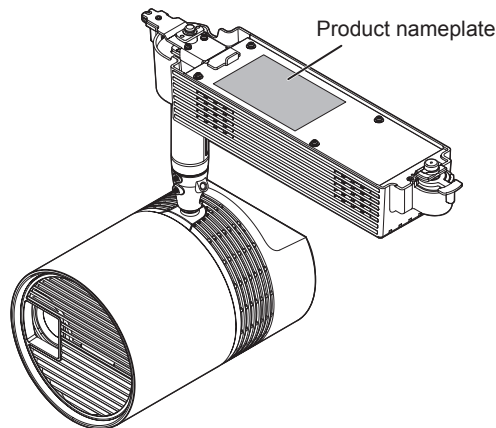
- 1 **SD card slot**
Supports SD and SDHC memory cards. (☞ page 37)
- 2 **<HDMI IN> connector**
This connector is for inputting an HDMI signal. (☞ page 29)
- 3 **<LAN> connector**
This connector is for connecting to a network. (☞ page 29)

Important

- The LAN cable directly connected to the projector must be used indoors only.
- Store SD cards and other small objects appropriately in a place where they will be out of the reach of infants and young children.

Note

- The product model number, serial number, and ratings of the projector are displayed on the product nameplate located in the position shown in the following illustration.



Using the remote control

Inserting and removing the batteries

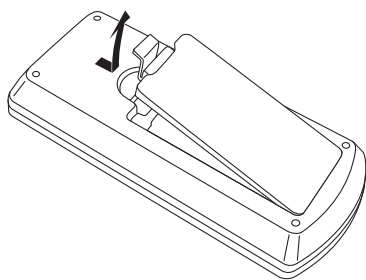


Figure 1

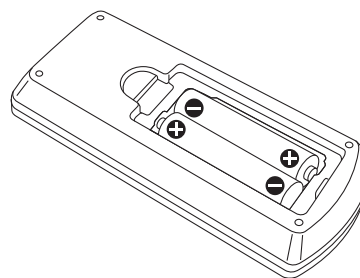


Figure 2

- 1) **Open the cover. (Figure 1)**
- 2) **Insert the batteries and close the cover (insert the \ominus end first). (Figure 2)**
 - When removing the batteries, perform the steps in reverse order.

Specifying the remote control ID numbers

When you use multiple projectors, you can control all the projectors simultaneously or each projector individually with a single remote control if you set a unique ID number on each projector.

After setting the ID number on a projector, specify the same ID number on the remote control.

The ID number of the projector is set to [ALL] by default. When using only a single projector, press the <ID ALL> button on the remote control.

Also, even if you do not know the ID of a projector, you can control the projector if you press the <ID ALL> button on the remote control.

How to set

- 1) **Press the <ID SET> button on the remote control.**
- 2) **Set the 1-digit ID number set on the projector by pressing the corresponding number (<1> to <6>) button within five seconds.**
 - If you press the <ID ALL> button, you can control a projector regardless of the ID number setting of the projector.

Important

- Since the ID number of the remote control can be specified without the projector, take care not to accidentally press the <ID SET> button on the remote control. If the <ID SET> button is pressed but no number (<1> to <6>) button is pressed within five seconds, the ID number returns to that set before the <ID SET> button was pressed.
- The ID number entered on the remote control is stored until an ID number is set again. However, it will be erased if the remote control is left with dead batteries. Set the same ID number again after replacing the batteries.

Note

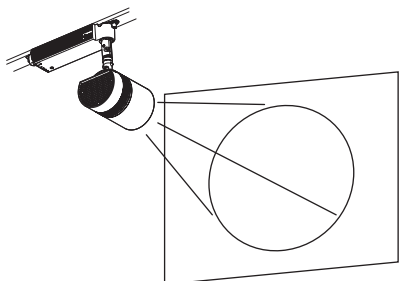
- Set the ID number on the projector in [SETUP] menu → [PROJECTOR ID].

Before installation

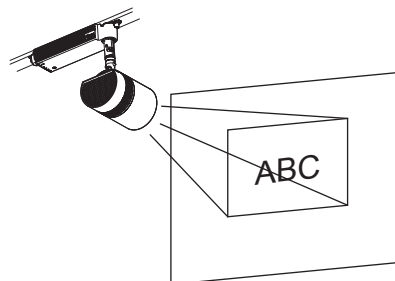
Before attaching the projector to the wiring duct, read the following description about the display methods of the projector.

Projection modes

By pressing the <Lighting/Projector> button on the remote control, you can switch the projection mode of the projector to lighting mode for using the projector like a spotlight or projector mode for projecting images. (☞ page 35)



Example of lighting mode



Example of projector mode

Installation modes

With two projection methods and two display directions, there are a total of four installation modes for using the projector in projector mode. Set [SETUP] menu → [PROJECTION METHOD] (☞ page 57 of Detailed Instructions) and [VERTICAL FLIP] (☞ page 58 of Detailed Instructions) to match the installation mode.

(☞ page 32)

When projecting forward		When projecting from rear (Using a translucent screen)	
Menu items	Settings	Menu items	Settings
[PROJECTION METHOD]	[FRONT]	[PROJECTION METHOD]	[REAR]
[VERTICAL FLIP]	[OFF]	[VERTICAL FLIP]	[OFF]

When projecting forward		When projecting from rear (Using a translucent screen)	
Menu items	Settings	Menu items	Settings
[PROJECTION METHOD]	[FRONT]	[PROJECTION METHOD]	[REAR]
[VERTICAL FLIP]	[ON]	[VERTICAL FLIP]	[ON]

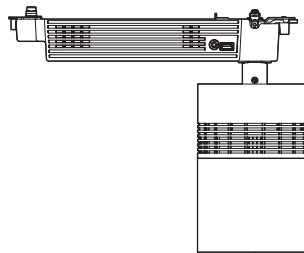
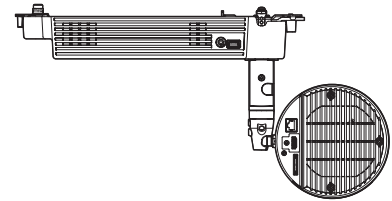
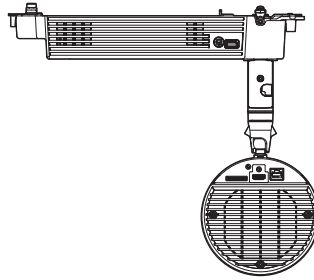
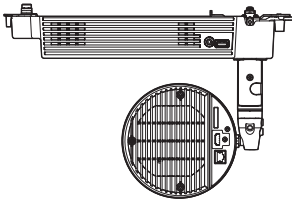
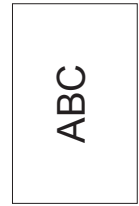
Note

- The installation mode illustrations shown above are just examples for the purpose of explanation and may differ from the conditions of actual use. Set [SETUP] menu → [PROJECTION METHOD] (☞ page 57 of Detailed Instructions) and [VERTICAL FLIP] (☞ page 58 of Detailed Instructions) to match the operating environment and direction of the projector section.

Projection direction

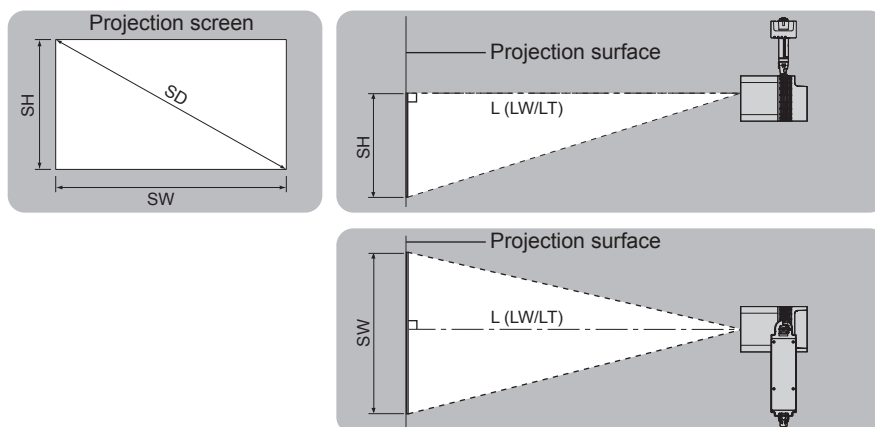
When the projector is used in projector mode, images can be represented in a variety of ways by adjusting the direction of the projector section as described in "Adjusting the projection position" (☞ page 26) in combination with configuring the settings of [SETUP] menu → [PROJECTION METHOD] (☞ page 57 of Detailed Instructions) and [VERTICAL FLIP] (☞ page 58 of Detailed Instructions). When the projector is used in lighting mode, you can also freely adjust the direction for shining light in the same way.

The following illustrations are examples when [PROJECTION METHOD] is set to [FRONT] and [VERTICAL FLIP] is set to [OFF].



Dimensional relationship

Determine the wiring duct installation and projector installation positions in reference to the following illustrations and projection distance dimensions. You can also adjust the size and position of the projection screen in accordance with the range and position of the projection surface.



L (LW/LT)*1	Projection distance (distance from projection lens surface to projection surface) (m)
SH	Image height (m)
SW	Image width (m)
SD	Screen diagonal size (m)

*1 LW: Minimum projection distance
LT: Maximum projection distance

Important

- Read "Read This First!" (page 12) before installing the projector.
- Do not use the projector and high-powered laser equipment in the same room.
The DLP chips may be damaged if a laser beam hits the lens surface.

Projection distance

The dimensions included in the following table may have a slight error.

Also, when [KEYSTONE] is used, compensation is made so that the projected image size becomes smaller than the specified screen size.

■ When screen aspect ratio is 16:10

(Unit: m)

Projection screen size			Projection distance (L)	
Diagonal (SD)	Height (SH)	Width (SW)	Minimum (LW)	Maximum (LT)
0.76 (30")	0.404	0.646	0.95	2.10
1.02 (40")	0.538	0.862	1.28	2.81
1.27 (50")	0.673	1.077	1.61	3.52
1.52 (60")	0.808	1.292	1.94	4.23
1.78 (70")	0.942	1.508	2.27	4.94
2.03 (80")	1.077	1.723	2.60	5.65
2.29 (90")	1.212	1.939	2.93	6.36
2.54 (100")	1.346	2.154	3.26	7.07
3.05 (120")	1.615	2.585	3.92	8.50
3.81 (150")	2.019	3.231	4.91	10.63
5.08 (200")	2.692	4.308	6.55	14.19

Projection distance formulas

To use a screen size not listed in this manual, check the projection screen size SD (m) and use each of the following formulas to calculate the projection distances (L).

The unit in all of the formulas is m. (Values obtained with the following calculation formulas may have a slight error.)

■ When screen aspect ratio is 16:10

Minimum projection distance (LW)	$L = 1.2976 \times SD - 0.0385$
Maximum projection distance (LT)	$L = 2.7999 \times SD - 0.0379$

Installing/removing

The following describes how to attach the projector to the wiring duct and how to set the direction of the projector section and make other adjustments.

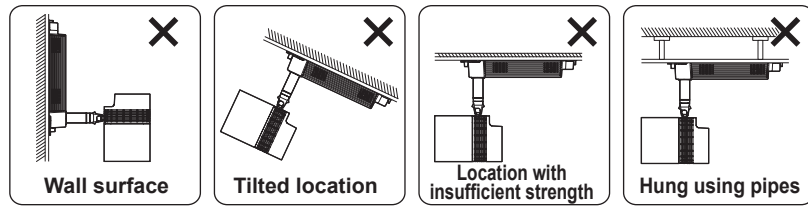
Before attaching

The wiring ducts that are compatible with installation of the projector are as follows.

Duct name	Wiring duct for 100 V
Example models	DH0211, DH0221, etc.

Important

- Ask a company specializing in installation or the dealer to mount the wiring duct to the ceiling.
- Turn off the power of the wiring duct before attaching or removing the projector.
- Attach the projector to a wiring duct that has been directly mounted to a horizontal ceiling.
Do not attach the projector to a wiring duct that has been mounted to a tilted ceiling, wall surface, or floor surface or a wiring duct that has been hung using pipes.



- Ensure that the wiring duct attachment parts are strong enough to withstand the weight (☞ page 39) of the projector.

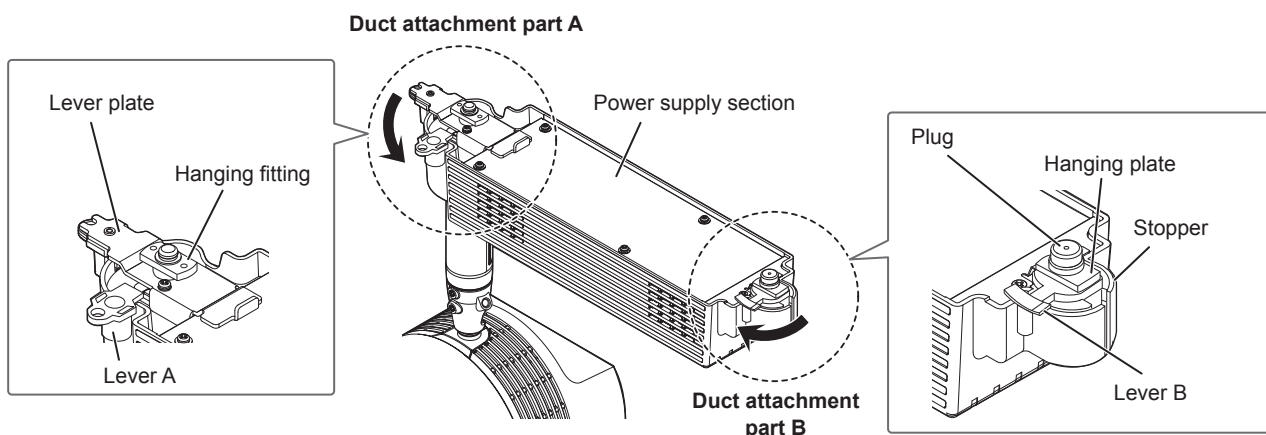
Note

- The projector (duct attachment parts A and B) cannot be attached at any position where a tapping screw is securing the wiring duct to the ceiling.
- When multiple projectors are installed beside each other, the brightness and color may differ due to individual differences even if the models are the same.
- The model numbers of wiring ducts are subject to change without prior notice.

Attaching the projector to the wiring duct

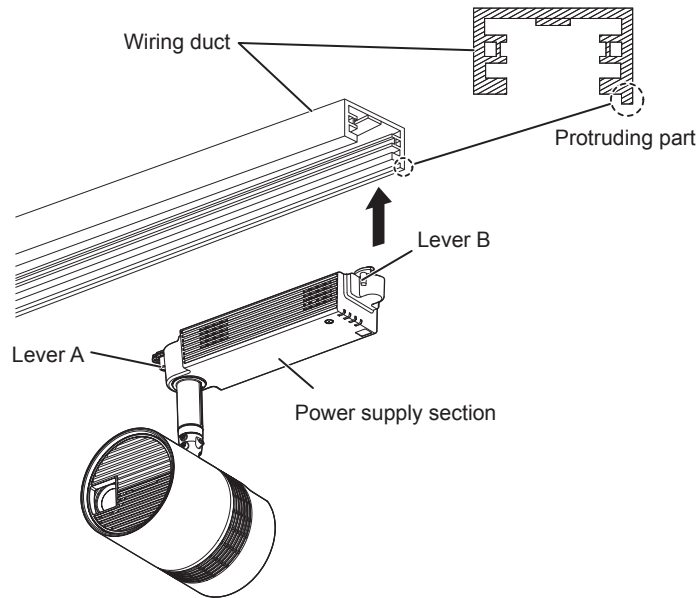
1) Set the levers to 90° in relation to the longer side of the power supply section

- Rotate the levers of both the duct attachment parts A and B in the direction of the arrows in the following figure so that they become 90° in relation to the longer side of the power supply section.



2) Align the orientation of the power supply section to that of the wiring duct.

- Position the side with levers A and B so that it is opposite the side of the wiring duct that has a protruding part.

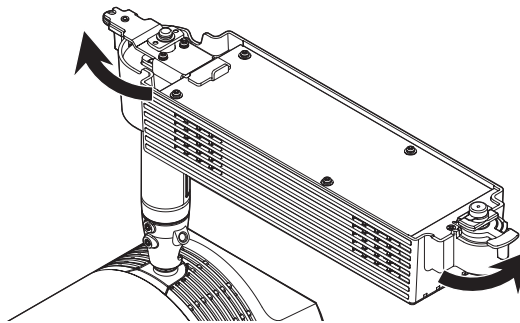


3) Attach the duct attachment parts of the power supply section to the wiring duct.

- Insert the hanging fitting of duct attachment part A and the hanging plate of duct attachment part B into the openings in the wiring duct.

4) Set lever A parallel to the wiring duct and then set lever B parallel to the wiring duct.

- Be sure to operate lever A on the side with the hanging fitting first.
- Confirm that the hanging fitting and hanging plate are inserted properly into the wiring duct.



Warning

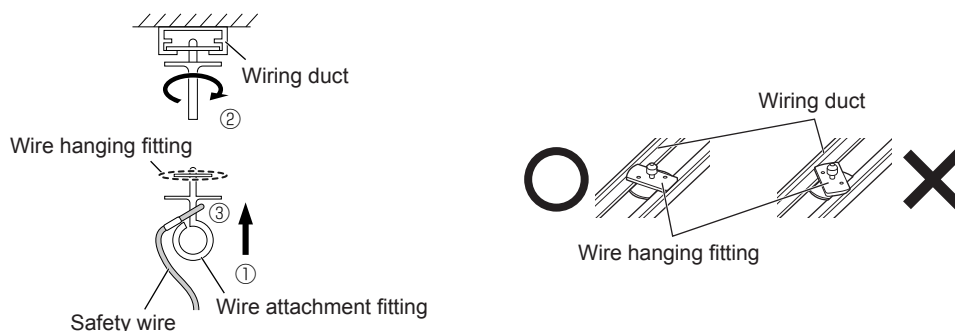


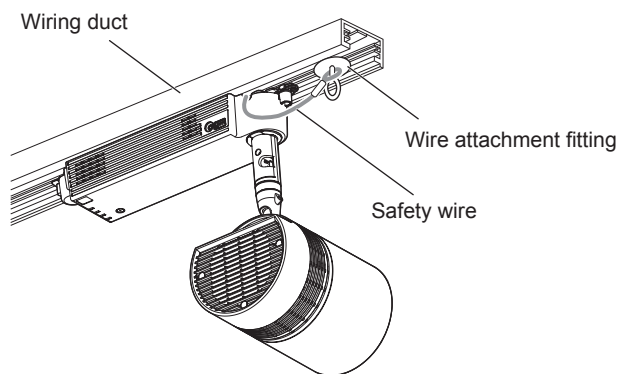
When attaching the projector to the wiring duct, rotate both levers A and B until they come into contact with the stoppers.

Incorrect installation may result in an accident due to the projector falling.

5) Attach the safety wire to the wiring duct.

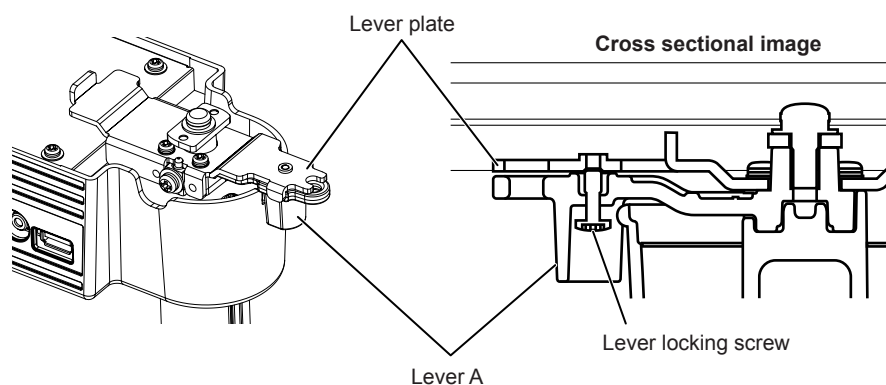
- Attach the wire attachment fitting at the end of the safety wire to the wiring duct.
 - (1) Insert the wire attachment fitting into an opening of the wiring duct.
 - (2) Rotate the wire attachment fitting clockwise while pushing it into the wiring duct. At that time, check that the wire hanging fitting is 90° in relation to the wiring duct.
 - (3) Rotate the wire attachment fitting even more to tighten it securely.





6) Tighten the lever locking screw.

- Tighten the lever locking screw of lever A with a Phillips screwdriver (6 mm diameter) to fix the lever plate.

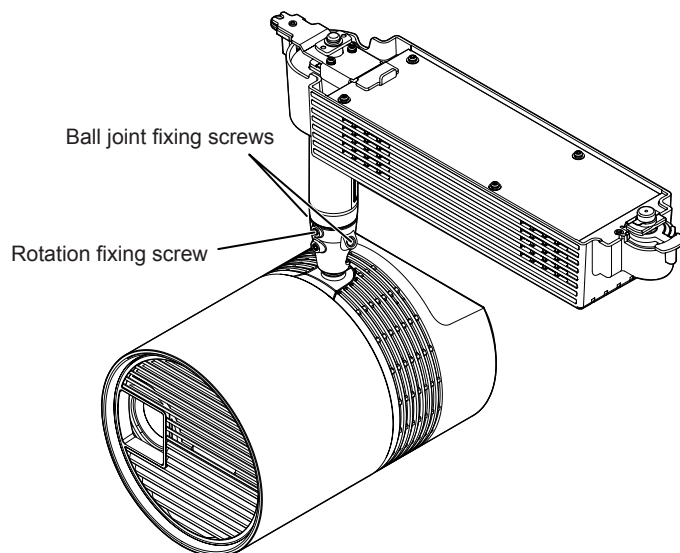


Adjusting the projection position

After attaching the projector to the wiring duct, determine the projection position by adjusting the direction of the projector section.

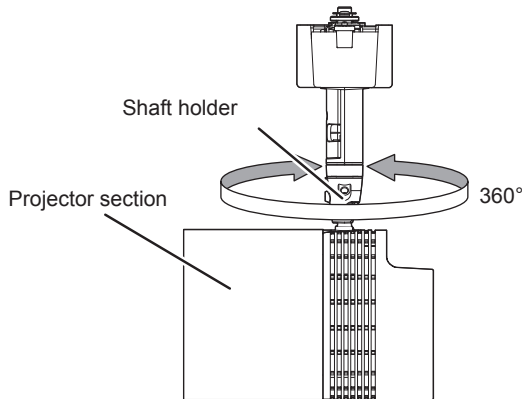
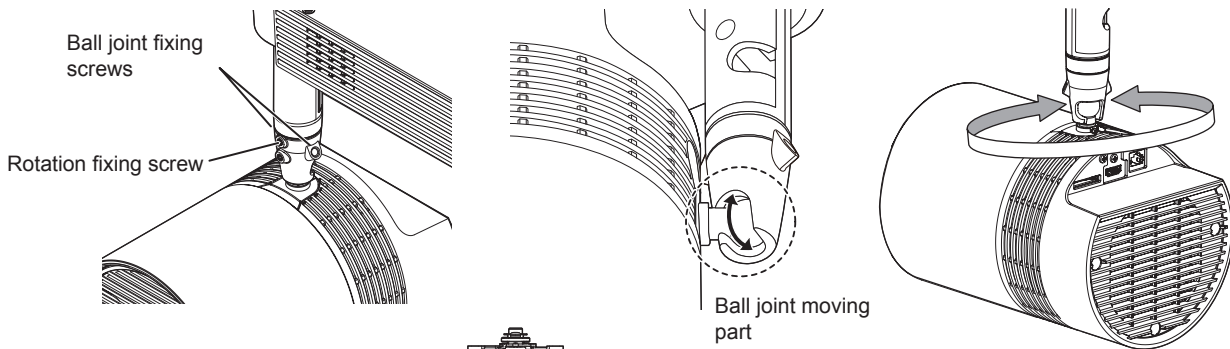
1) Loosen the fixing screws.

- Loosen the rotation fixing screw and ball joint fixing screws (2 places) with the supplied hex key (3.0 mm width across flats).



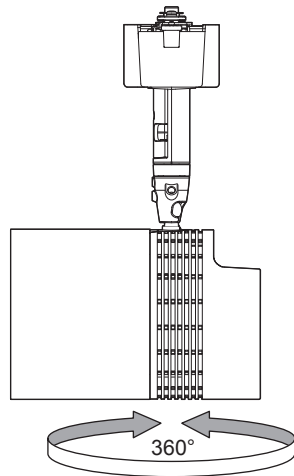
2) Adjust the direction of the projector section.

- Align the ball joint moving part to the angle at which you want the projector section to be tilted and then adjust the direction of the projector section.



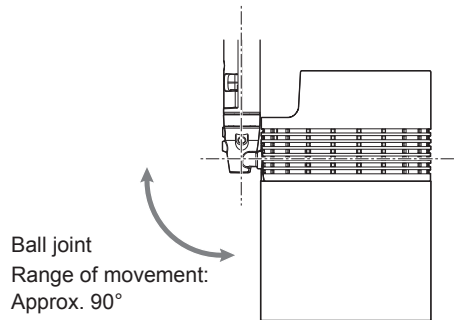
When you loosen the rotation fixing screw, the shaft holder can rotate 360°.

Turn the ball joint moving part to the angle at which you want the projector section to be tilted.



When you loosen the ball joint fixing screws (2 places), the ball joint can move freely.

This allows you to rotate the projector section 360° or tilt the projector section 90° with the ball joint moving part.



3) Tighten the screws.

- While supporting the projector section, securely tighten the rotation fixing screw and ball joint fixing screws (2 places) with the supplied hex key (3.0 mm width across flats).

Important

- The projector section and power supply section are connected by a cable, etc. Do not rotate and change the tilt of the projector section more than necessary.

Note

- After making rough adjustments, finely adjust the projection position while actually projecting images.
- The rotation fixing screw and ball joint fixing screws are locking screws with hexagon socket heads (M6). Be careful because they will come all the way out of the projector if they are loosened too much.

Removing the projector from the wiring duct

1) Remove the safety wire from the wiring duct.

- Remove the wire attachment fitting from the wiring duct by performing the procedure in step 5) of “Attaching the projector to the wiring duct” in the reverse order.

2) Rotate lever B so that it becomes 90° in relation to the wiring duct and then rotate lever A so that it becomes 90° in relation to the wiring duct.

- Rotate the levers of both the duct attachment parts A and B in the direction of the arrows in the following figure so that they become 90° in relation to the wiring duct.
- Be sure to operate lever A on the side with the hanging fitting last.



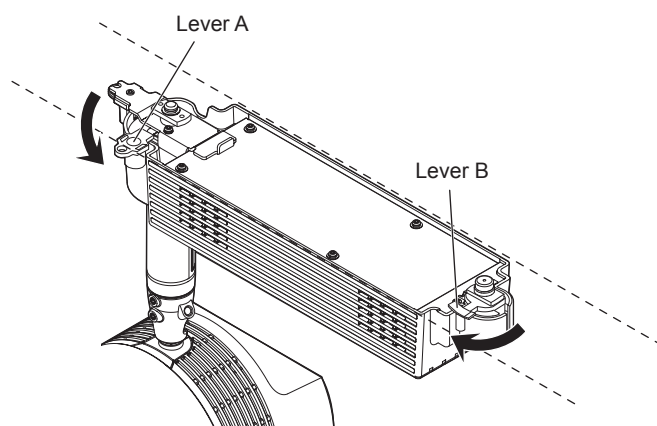
Warning



When removing the projector from the wiring duct, support it with a hand.
When removing the projector from the wiring duct, release lever B first.
 Failing to do so may cause the projector to fall, resulting in damage to or deformation of the projector, or a serious accident or injury.

Note

- If you operate the levers without supporting the projector, the projector will fall from the wiring duct. Remove the projector from the wiring duct while supporting the projector with a hand.
- Rotating the lever of duct attachment part B so that it becomes 90° in relation to the wiring duct enables you to disconnect the connection between the power supply of the wiring duct and the projector.



3) Remove the projector from the wiring duct.

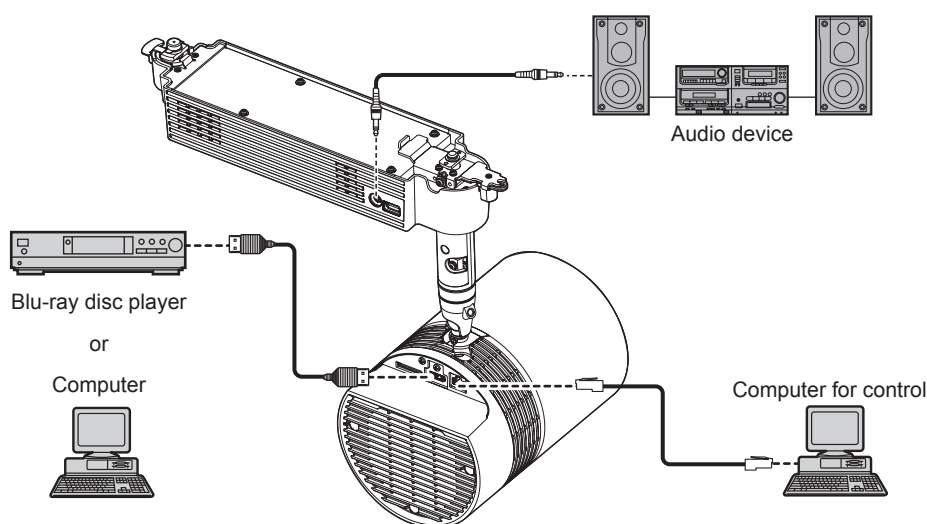
- Check that the hanging fitting of the duct attachment part A and hanging plate of duct attachment part B are removed from the wiring duct and then remove the projector from the wiring duct.

Connecting

Before connecting

- Before connecting external devices to the projector, carefully read the operating instructions for the external devices.
- Turn off the power of all devices before connecting cables.
- Take note of the following points before connecting the cables. Failure to do so may result in a malfunction.
 - When connecting a cable to the projector or a device connected to the projector, touch any nearby metal object to eliminate static electricity from your body before performing the work.
 - Do not use an unnecessarily long cable to connect to the projector or connect to a device connected to the projector. The longer the cable, the more it is susceptible to noise. If you use a cable that is wound, it will be even more susceptible to noise because it will act like an antenna.
 - When connecting a cable, insert the connector into the connection terminal of the device to be connected while keeping it straight so that the GND is connected first.
- Acquire any connection cable necessary to connect an external device to the system that is either not supplied with the device or not available as an option.
- Depending on the model or graphics card, some computers cannot be used connected with the projector.
- Use a cable compensator when connecting devices to the projector using long cables. Otherwise images may not display properly.
- Only HDMI signals can be input to the projector. For details on the video signals that the projector can project, refer to “List of Compatible Signals” (👁 page 198 of Detailed Instructions).

Example of connecting external devices



Important

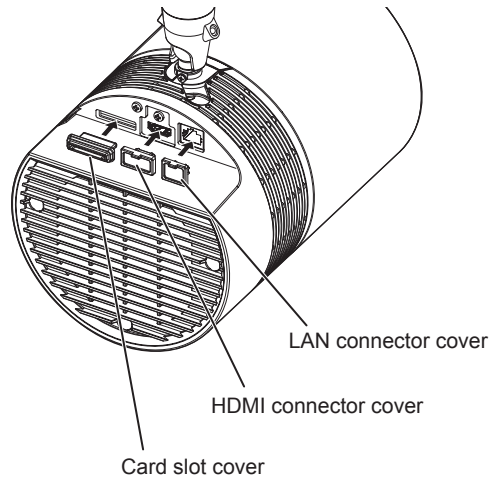
- When connecting the projector to a computer and other external devices, use the power cord supplied with each device and commercially available shielded cables.

Note

- For an HDMI cable, use an HDMI High Speed cable that conforms to the HDMI standards. Using a cable that does not conform to the HDMI standards may result in incorrect operation such as images being interrupted or not being displayed.
- The <HDMI IN> connector of the projector can be connected to an external device with a DVI-D connector by using an HDMI/DVI conversion cable, but incorrect operation such as images not being projected may occur with some external devices.
- The projector does not support VIERA Link (HDMI).
- To operate the projector using a computer with a resume function (last memory), you may need to reset the resume function.

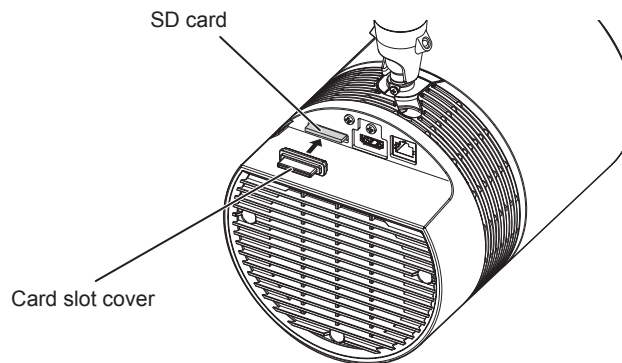
Attaching covers to the connectors

To prevent, for example, dust entering through the connection section, we recommend attaching the supplied connector covers to the <HDMI IN> and <LAN> connectors when cables are not connected and attaching the supplied card slot cover to the SD card slot. Carefully confirm the shapes of the covers and openings before attaching the covers.



Note

- The card slot cover can even be attached while an SD card is inserted. The orientation for attaching the card slot cover differs depending on whether or not an SD card is inserted in the slot as shown below. Carefully confirm the state of the SD card slot and orientation of the card slot cover before attaching the cover.

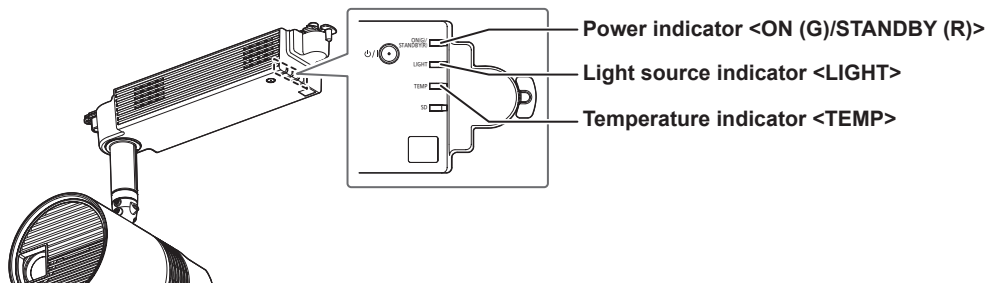


- When attaching a cover, do not use excessive force pushing it into the hole. The connector or cover may become damaged. Also, be careful when attaching the card slot cover while an SD card is inserted because the SD card may be ejected if the cover is pushed in too far.

Turning the projector on/off

Power indicator

This indicator shows the power status. Check the status of the power indicator <ON (G)/STANDBY (R)> before operating the projector. When the light source indicator <LIGHT> and the temperature indicator <TEMP> are on or flashing, a problem may have occurred inside the projector. Check the status of the indicators before turning on the power, and take the appropriate steps. (☞ page 184 of Detailed Instructions)



Indicator status		Projector status
Off		The power of the wiring duct is off.
Red	Lit	The power is off (standby mode). [STANDBY MODE] in [SETUP] menu → [ECO MANAGEMENT] is set to [ECO]. Projection will start when the power <⏻/> button is pressed. • The projector may not operate when the temperature indicator <TEMP> is flashing. (☞ page 184 of Detailed Instructions)
	Flashing ^{*1}	The power is off (standby mode). [STANDBY MODE] in [SETUP] menu → [ECO MANAGEMENT] is set to [NETWORK]. Projection will start when the power <⏻/> button is pressed. • The projector may not operate when the temperature indicator <TEMP> is flashing. (☞ page 184 of Detailed Instructions)
	Flashing ^{*2}	The power is off (standby mode). [STANDBY MODE] in [SETUP] menu → [ECO MANAGEMENT] is set to [NORMAL]. Projection will start when the power <⏻/> button is pressed. • The projector may not operate when the temperature indicator <TEMP> is flashing. (☞ page 184 of Detailed Instructions)
Green	Lit	Projecting.

*1 The flashing sequence is on for 2.75 seconds → off for 0.25 seconds → on for 0.75 seconds → off for 0.25 seconds.

*2 The flashing sequence is on for 2.75 seconds → off for 0.25 seconds.

Note

- The projector consumes power even in standby mode (when the power indicator <ON (G)/STANDBY (R)> is lit or flashing in red). For the power consumption, refer to "Power consumption" (☞ page 39).
- The power indicator <ON (G)/STANDBY (R)> flashes in green when a remote control signal is received.
- The power indicator <ON (G)/STANDBY (R)> flashes in green slowly when the projector is in AV mute mode.
- The power indicator <ON (G)/STANDBY (R)> flashes in orange when Panasonic's image transfer application software is used to perform a connection check from a computer (including an iPad, iPhone, iPod touch, or Android device) to the projector.

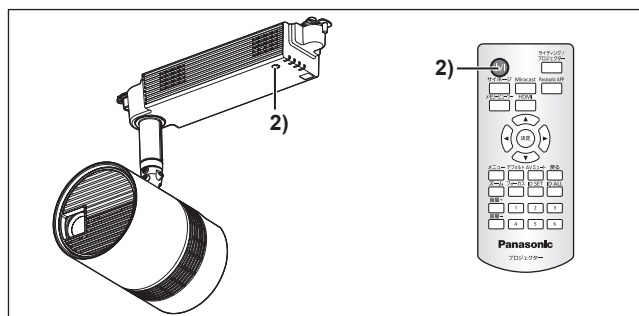
Turning on the projector

1) Turn on the power of the wiring duct.

- The power indicator <ON (G)/STANDBY (R)> lights in red, and the projector enters the standby mode.

2) Press the power <⏻/> button.

- The power indicator <ON (G)/STANDBY (R)> lights in green and projection starts after a short while.



Important

- When turning on the projector, pay attention to the people around the projector so that light from the light source does not suddenly shine into their eyes.

Note

- The INITIAL SETTING screen is displayed when the projector is turned on for the first time after purchase as well as when [ALL USER DATA] in [SETUP] menu → [INITIALIZE] is executed. Refer to “If the INITIAL SETTING screen is displayed” (👁️ page 32).
- When you press the power <⏻/> button on the remote control to turn on the projector, the signal from the remote control can be reflected off the projection surface, but the effective control range may be limited by the light reflection loss or shape of the projection surface. If that happens, point the remote control at the remote control signal receiver located on the power supply section of the projector.
- When [SETUP] menu → [ECO MANAGEMENT] → [STANDBY MODE] is set to [ECO] or [NETWORK], it may take longer for projection to start after the power is turned on compared with when [NORMAL] is set.
- When the power is turned on or the input signal is switched, you may hear a high-frequency driving sound. This is not a malfunction.
- When [SETUP] menu → [INITIAL STARTUP] is set to [LAST MEMORY] and projection was stopped by turning off the power of the wiring duct the last time the projector was used, the power indicator <ON (G)/STANDBY (R)> will light in green and projection will start after a short while the next time the power of the wiring duct is turned on.

If the INITIAL SETTING screen is displayed

The INITIAL SETTING screen is displayed when the projector is turned on for the first time after purchase as well as when [ALL USER DATA] in [SETUP] menu → [INITIALIZE] is executed. Set the initial settings in accordance with the conditions of use.

At other times, you can change the settings by menu operation.

Focus adjustment

Adjust the focus to display the menu screen clearly.

The zoom may also need to be adjusted depending on the conditions.

For details, refer to “Adjusting the appearance of images” (👁️ page 36).

- 1) Use the ▲▼◀▶ buttons on the remote control to adjust the focus.



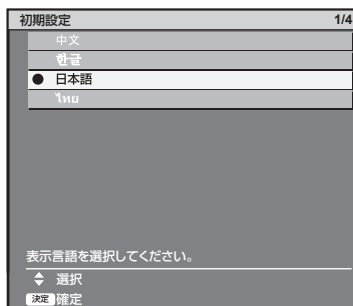
- 2) Press the <Menu> button on the remote control and then set the following initial settings.

Initial setup (display language)

Select the language for display on the screen.

After the initial setup is finished, you can change the language in the [DISPLAY LANGUAGE] menu item.

- 1) Use the ▲▼ buttons on the remote control to select the display language.



- 2) Press the <ENTER> button on the remote control.

Initial setup (installation settings)

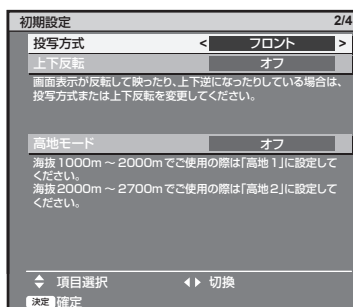
Set [PROJECTION METHOD] and [VERTICAL FLIP] to match the installation mode. For details, refer to “Installation modes” (👁️ page 21).

Set [HIGH ALTITUDE MODE] to [HIGH1] when the projector will be used at an altitude that is 1,000 m (3280') or more above sea level but less than 2,000 m (6561') above sea level, and set [HIGH ALTITUDE MODE] to [HIGH2] when the projector will be used at an altitude that is 2,000 m (6561') or more above sea level but less than 2,700 m (8858') above sea level.

After the initial setup is finished, you can change the setting of each item from the [SETUP] menu.

- 1) Use the ▲▼ buttons on the remote control to select an item.

2) Use the ◀▶ buttons on the remote control to change the setting.

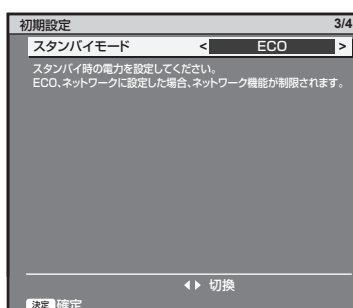


3) Press the <ENTER> button on the remote control and then set the next initial setting.

Initial setup (standby mode)

Set the operation mode for during standby. The factory default setting is [ECO] for reducing the amount of power consumed during standby. If you will use the network function during standby, set this to [NORMAL]. If you wish to reduce the amount of power consumed during standby and turn on the power via a wired LAN, set this to [NETWORK]. After the initial setup is finished, you can change the setting in [SETUP] menu → [ECO MANAGEMENT] → [STANDBY MODE].

1) Use the ◀▶ buttons on the remote control to change the setting.



2) Press the <ENTER> button on the remote control and then set the next initial setting.

Note

- The INITIAL SETTING screen above is when the projector is turned on for the first time after purchase. When [ALL USER DATA] in [SETUP] menu → [INITIALIZE] is executed, the [STANDBY MODE] setting before execution is displayed.

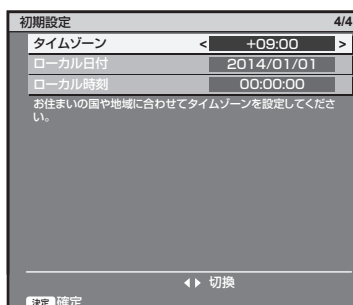
Initial setup (time zone)

Set [TIME ZONE] according to the country or region of use.

After the initial setup is finished, you can change the setting in [SETUP] menu → [DATE AND TIME].

The current settings are displayed in [LOCAL DATE] and [LOCAL TIME]. After the initial setup is finished, you can change the settings in [SETUP] menu → [DATE AND TIME] if necessary.

1) Use the ◀▶ buttons on the remote control to change the setting.



2) Press the <ENTER> button on the remote control and then set the next initial setting.

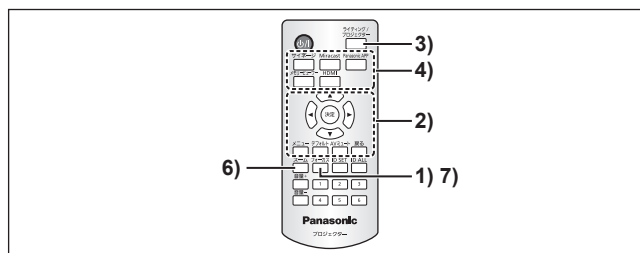
- Confirm the settings to complete the initial setup.

Note

- If you press the <Back> button in the INITIAL SETTING screen, the previous screen is redisplayed.

Making adjustments and selections

It is recommended to adjust the focus after projection has been performed for at least 30 minutes.

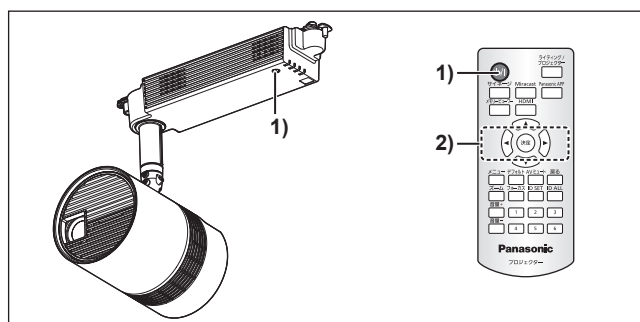


- 1) Press the <Focus> button on the remote control to roughly adjust the focus. (☞ page 36)
- 2) Change the settings of [SETUP] menu → [PROJECTION METHOD] (☞ page 57 of Detailed Instructions) and [VERTICAL FLIP] (☞ page 58 of Detailed Instructions) to match the installation mode.
 - For details on menu operation, refer to “Navigating through the menu screen” (☞ page 44 of Detailed Instructions).
- 3) Press the <Lighting/Projector> button on the remote control to switch the projection mode of the projector to lighting mode or projector mode. (☞ page 35)
- 4) When using projector mode, press the <HDMI>, <Memory Viewer>, <Miracast>, <Panasonic APP>, or <Signage> button to select the input for projection. (☞ page 35)
- 5) Adjust the projection position by adjusting the direction of the projector section. (☞ page 26)
- 6) Press the <Zoom> button on the remote control to adjust the projection size. (☞ page 36)
- 7) Press the <Focus> button on the remote control again to adjust the focus.

Note

- The INITIAL SETTING screen is displayed when the projector is turned on for the first time after purchase as well as when [ALL USER DATA] in [SETUP] menu → [INITIALIZE] is executed. Refer to “If the INITIAL SETTING screen is displayed” (☞ page 32)

Turning off the projector



- 1) Press the power <⏻/|> button.
 - The [POWER OFF(STANDBY)] confirmation screen appears.
- 2) Use the ◀▶ buttons on the remote control to select [OK] and then press the <ENTER> button. (Or press the power <⏻/|> button again.)
 - Projection ends.
- 3) Wait several seconds for the power indicator <ON (G)/STANDBY (R)> to light in red.
- 4) If necessary, turn off the power of the wiring duct.

Note

- Even if the power has been turned off by pressing the power <⏻/|> button, the projector will consume power when the power of the wiring duct is on. Setting [SETUP] menu → [STANDBY MODE] to [ECO] will enable power consumption to be reduced during standby.
- Projection can be stopped by turning off the power of the wiring duct but any settings and adjustments made immediately before the power was turned off may not be reflected.
- Do not turn off the power of the wiring duct or remove the SD card while the SD card indicator <SD> is flashing. The projector may become no longer able to operate properly or the data in the SD card may become corrupted.
- When [SETUP] menu → [ECO MANAGEMENT] → [STANDBY MODE] is set to [NORMAL], the cooling fan may also rotate during standby.

Projecting

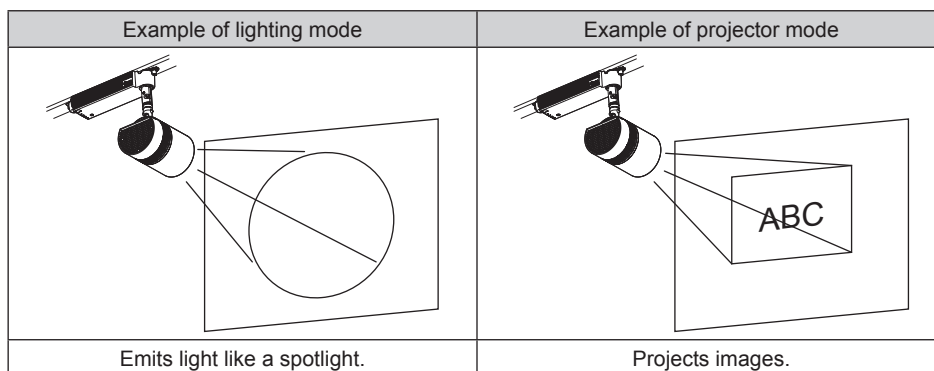
Check the external device connections (☞ page 29), turn on the power of the wiring duct, and then turn on the projector to start projection (☞ page 31). Select the projection mode and input for projection, and adjust the appearance of the projected images.

Selecting the projection mode

Switch the projection mode.

1) Press the <Lighting/Projector> button on the remote control.

- Each press of the button toggles between the lighting mode and projector mode.



Note

- Images cannot be projected in lighting mode.
- When you switch the mode to projection mode, it may take several seconds for switching to complete. When switching will take a while to complete, "Please wait..." appears on the projection screen.

Selecting the input (when in projector mode)

Switch the input for projection.

1) Select the input by pressing the <HDMI>, <Memory Viewer>, <Miracast>, <Panasonic APP>, or <Signage> button on the remote control.

- The images of the selected input are projected.

Remote control button	Input	Application
<HDMI>	HDMI	Displays the images input from an external device via the <HDMI IN> connector.
<Memory Viewer>	Memory Viewer	Displays the still images or video on an SD card using the Memory Viewer function. (☞ page 84 of Detailed Instructions)
<Miracast>	Miracast	Displays the images transmitted wirelessly from a Miracast compatible device. (☞ page 114 of Detailed Instructions)
<Panasonic APP>	Panasonic APPLICATION	Displays the images transmitted from a computer (including an iPad, iPhone, iPod touch, or Android device) using Panasonic's image transfer application software.
<Signage>	Signage	Displays the still images or video files on an SD card played in accordance with the schedule and slideshow settings registered in the content manager. (☞ page 115 of Detailed Instructions)

Note

- An audio signal is output from the <AUDIO OUT> connector when the selected input contains an audio signal.
- When you switch the input to other than the HDMI input, it may take several seconds for switching to complete. When switching will take a while to complete, "Please wait..." appears on the projection screen.

Adjusting the appearance of images

Adjust the focus and zoom.

1) Press the <Focus> or <Zoom> button on the remote control.

- Pressing the <Focus> button: Adjusts the focus.
- Pressing the <Zoom> button: Adjusts the zoom.

2) Select the corresponding adjustment item and then use ▲▼◀▶ to adjust the item.

Note

- When the projection position needs to be adjusted, do so following the procedure described in “Adjusting the projection position” (🔍 page 26).
- Holding down the ▲▼◀▶ buttons for at least approximately 1 second increases the speed of the operation.
- It is recommended to adjust the focus after projection has been performed for at least 30 minutes.
- Only the [FOCUS] menu item is displayed in yellow so that it can be identified by color (even if the text cannot be read because it is out of focus).

Using an SD card

The SD card slot of the projector supports SD and SDHC memory cards.

Precautions on use

Observe the following.

- Do not disassemble or modify an SD card.
- Do not subject an SD card to a strong impact, bend or drop an SD card, allow an SD card to get wet, etc.
- Do not touch the metal contacts with a hand or metal object.
- Do not remove the affixed label or affix a new label or sticker.
- Do not place an SD card in a location that will become hot (inside a closed car, location subject to direct sunlight, etc.).
- Do not place an SD card in a very humid and dusty location.
- Do not place an SD card in a location subject to large temperature variations. Condensation may occur.
- Do not place an SD card in a location where static electricity and electromagnetic waves are generated.
- Store an SD card appropriately in a location where it will be out of the reach of infants and young children.

Protecting data

- When you will not use the SD card, set the write protect switch to "LOCK" to prevent important data from being accidentally deleted. Unlock the SD card with the write protection switch before, for example, saving or editing files.



- When writing text in the memo space of the label, use a felt-tip pen (oil based). Do not use a pencil or ballpoint pen. The card may be scratched or the data may be damaged.
- Manage the data in the SD card at your own responsibility. We recommend backing up important data to a disk or other media.
- Please note that Panasonic accepts no liability whatsoever for the loss of recorded data or other trouble, either direct or indirect.
- When disposing of an SD card, we recommend physically destroying it with a hammer or other tool.

Cards that can be used with the projector

SD memory cards (2 GB)

(Including miniSD memory cards and microSD memory cards)

SDHC memory cards (4, 8, 16, and 32 GB)

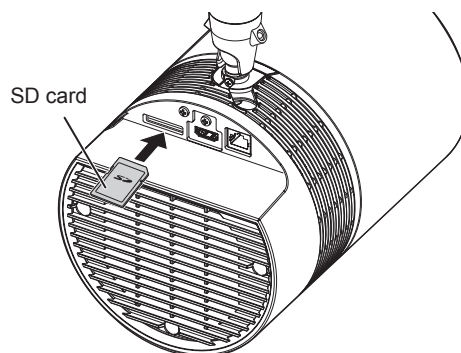
(Including miniSDHC memory cards and microSDHC memory cards)

Note

- Commercially available SD cards are supported.
- SD cards formatted in a format other than FAT16 or FAT32 cannot be used.

Inserting an SD card

- 1) Hold the SD card with top facing up and firmly insert it into the SD card slot properly from the end with the chamfered corner.



Important

- When using a miniSD memory card or microSD memory card, be sure to place the card in a dedicated miniSD memory card adapter or microSD memory card adapter and insert and remove the card together with the adapter.
- Take care that the adapter does not remain in the SD card slot when you remove the card.
- Do not insert anything other than an SD card (metal, foreign object, etc.) into the SD card slot.

- Avoid inserting and removing an SD card repeatedly within a short period of time. After inserting an SD card, wait at least 5 seconds before removing it. Likewise, after removing an SD card, wait at least 5 seconds before inserting it again. You need to wait a certain amount of time to enable the projector to recognize the insertion or removal of the SD card.

Removing an SD card

- 1) Check that the SD card indicator <SD> is not flashing.
- 2) Gently press the center of the SD card.
- 3) When the SD card pops out slightly, pull it all the way out.
 - Please note that using force to pull out a card from the inserted state will cause a malfunction.

Important

- Do not do any of the following while the projector is accessing an SD card (the SD card indicator <SD> is flashing).
 - Remove the SD card
 - Turn off the power of the wiring duct
 - Apply vibration or an impact
- Do not insert and remove the SSD card within a short period of time. After inserting an SD card, wait at least 5 seconds before removing it. Likewise, after removing an SD card, wait at least 5 seconds before inserting it again. You need to wait approximately 5 seconds to enable the projector to recognize the insertion or removal of the SD card.

Specifications

The specifications of the projector are as follows.

Model No.		NTN91000W / NTN91000B
Power supply		100 V AC, 50/60 Hz
Power consumption		125 W (1.4 A) When [STANDBY MODE] is set to [ECO]: 0.3 W When [STANDBY MODE] is set to [NETWORK]: 6 W When [STANDBY MODE] is set to [NORMAL]: 15 W (When fan is stopped)
DLP chip	Size	0.45 inch (aspect ratio 16:10)
	Display system	DLP chip x1, DLP type
	Number of pixels	1,039,680 pixels (Equivalent to WXGA)
Lens	Electronic zoom	1.5 to 3.3:1
	Electronic focus	F = 2.0 to 2.7 f = 15.2 mm to 32.7 mm
Light source		Laser diode
Light output* ¹		1,000 lm (ANSI)
Contrast ratio* ¹		1,000:1
Projection screen size		30 to 200-inch
Screen aspect ratio		16:10
Projection method		[FRONT]/[REAR] (Vertical flip display can be turned on or off in [VERTICAL FLIP])
Applicable scanning frequency* ²	HDMI signals	525p (480p), 625p (576p), 750 (720)/60p, 750 (720)/50p, 1125 (1080)/60p, 1125 (1080)/50p
		VGA60, SVGA56, SVGA60, XGA60, SXGA60, 1280×720/50, 1280×720/60, 1280×768/50, 1280×768/60, 1280×800/50, 1280×800/60, 1600×900/50, 1600×900/60
Connections	<HDMI IN> connector	1 system, HDMI 19-pin, HDCP compatible Audio signal: Linear PCM (Sampling frequencies: 48 kHz, 44.1 kHz, and 32 kHz)
	<AUDIO OUT> connector	1 system, M3 stereo mini jack (monitor output, with stereo support) 0 V [rms] to 2.0 V [rms] (variable), output impedance 2.2 kΩ or lower
	<LAN> connector	1 system, RJ-45, for network connection, PLink compatible, 10Base-T/100Base-TX
	<DC OUT> connector	USB connector (Type A) x1, for supplying power (5 V DC, max. 900 mA)
Wireless LAN	Compliant standards	IEEE802.11b/g/n, IEEE802.11a/n (W52/W53/W56) (wireless LAN standard protocols)
	Wireless channels used	IEEE802.11b/g/n: Channels 1 to 13 IEEE802.11a/n: Channel 36/40/44/48 (W52) Channel 52/56/60/64 (W53) Channel 100/104/108/112/116/120/124/128/132/136/140 (W56)
	Communication distance	Approx. 30 m (98'5") (Differs depending on operating environment)
Card slot		SD card slot* ³ x1 (SDHC memory cards supported)
Outer case		Molded plastic
Case color		NTN91000W: White, NTN91000B: Black
Weight		Approx. 3.0 kg* ⁴
Noise level* ¹		When [LIGHT POWER] is set to [NORMAL]: 36 dB When [LIGHT POWER] is set to [ECO]: 30 dB
Operating environment conditions	Temperature* ⁵	5 °C to 35 °C (41 °F to 95 °F)
	Humidity	10% to 80% (no condensation)
Remote control	Power supply	3 V DC (AAA manganese or alkaline battery x2)
	Operating range	Within 7 m (275-5/8") (when operated directly in front of signal receiver)
	Weight	63 g (including batteries)
	Dimensions	Width: 44 mm (1-3/4"), Height: 105 mm (4-1/8"), Depth: 20.5 mm (3/4")

Specifications

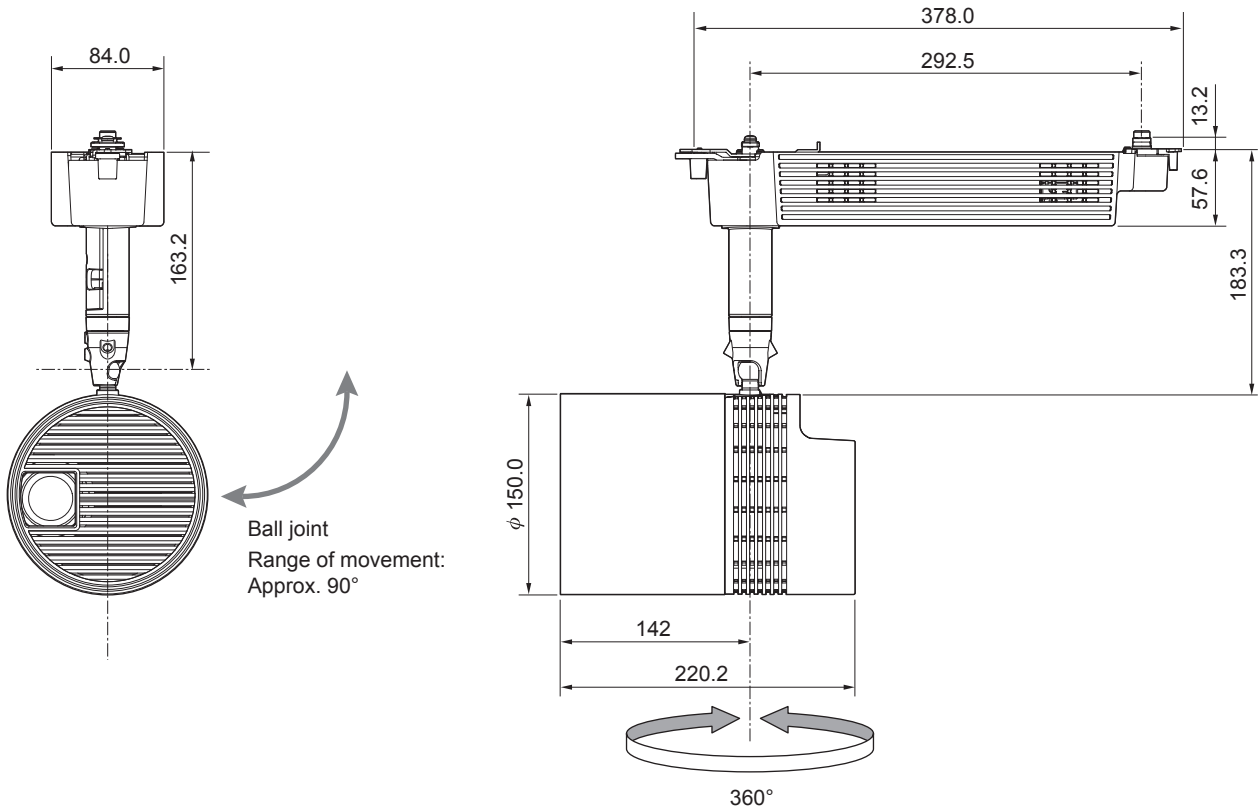
- *1 The indicated value is the average value for this product at the time of shipment and is included in accordance with "JIS X 6911:2003 Information to be included in specification sheets -- Data projector." The measurement methods and measurement conditions are based on Attachment 2.
- *2 For details on the video signals that the projector can project, refer to "List of Compatible Signals" (page 198 of Detailed Instructions).
- *3 Operation has been verified with Panasonic SD memory cards up to 2 GB and SDHC memory cards up to 32 GB.
- *4 This is the average value. The weight may vary for each product.
- *5 When the projector is used at an altitude that is 1,000 m (3,280') or more above sea level but less than 2,700 m (8,858') above sea level, the operating environment temperature will be 5 °C to 30 °C (41 °F to 86 °F).

Note

- The model numbers of accessories and options are subject to change without notice.
- This projector is designed for use in Japan only and cannot be used in any other country.

External Dimensions

Unit: mm



* Dimensions may differ for each product.