EPSON®
EXCEED YOUR VISION

EV-115 / EV-110

External Sensors Setup Guide

EV-115 / EV-110 support external sensors.

You can set the projector to perform operations when the external sensors are triggered.

- You can connect up to two external sensors.
- You can use two external sensors at the same time. You can also set projector operations by combining the signals from each sensor.
- Prepare commercially available parts, such as connectors, for the external sensors and their connections.
- As well as sensors, you can also connect other external devices such as buttons and switches.

Example: Installing a motion sensor in an entranceway to project specific content when a customer passes by.

- The port for external sensors only supports signal input.
- When you use the following functions, you cannot use the external sensors.
  - Multi-Projection
  - Synchronized Playback

Follow the steps below to connect and configure the external sensors.

1 **Install the projector** (See the Installation Guide for the mount you are using for detailed instructions on installing the projector)

2 **Connect the external sensors to the projector**

3 **Setup the projector**

4 **Prepare the content you want to project** (for instructions on how to prepare the content, see the projector's *User's Guide*)

Safety Instructions

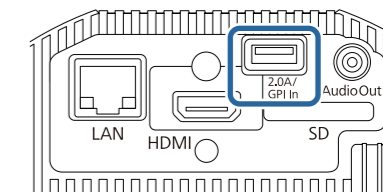| ⚠ Caution |
|---|
| Connecting external sensors is an important process for post-connection safety. To prevent accidents during connection or use, hire a professional to carry out the connection.
Incorrect connection could cause the projector or external sensors to malfunction. |
| Make sure that the external sensors are installed so that they do not exceed the maximum rating. |
| See the user's guide supplied with the external sensors for details on handling the external sensors.
Seiko Epson Corporation cannot be held liable for any accidents caused by the malfunction or misuse of external sensors. |
| When using external sensors, make sure you follow the instructions in this guide.
Seiko Epson Corporation cannot be held liable for any accidents caused by not following the instructions in this guide. |

Connecting External Sensors

Connect external sensors to the projector's DC Out (2.0A) / GPI In port (see the illustration on the right).
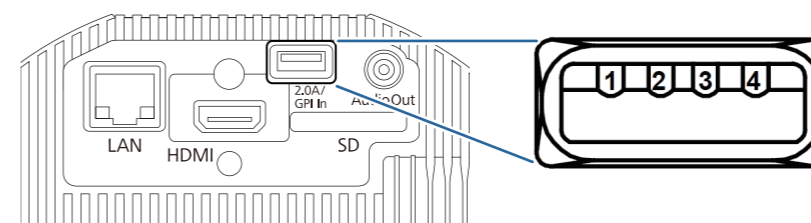
Before connecting, you need to modify the end that connects to the DC Out (2.0A) / GPI In port so that it is a USB-A shape.

DC Out (2.0A) / GPI In port specifications

When connecting an external sensor, make sure you check the user's guide supplied with the external sensor as well as the following port specifications.

Port configuration

Pin Number	Signal Name
1*	DC Out (5 V/2 A)
2	GPI-1
3	GPI-2
4	GND

* Do not apply external voltage, otherwise malfunctions may occur.

GPI-1/GPI-2 specifications

Item		Specifications
Maximum rating	DC voltage	-0.5 V to 13 V
Electrical characteristics	High input*	2.0 V or more
	Low input	0.8 V or less
	Input current (5 V during input)	1.0 to 2.0 mA
Equivalent circuit		
Operation execution timing due to signal change		300 ms after the last operation was executed

* When using a sensor with an open-drain output or an open-collector output, the input may not be High if there is a large Pull-UP resistance.

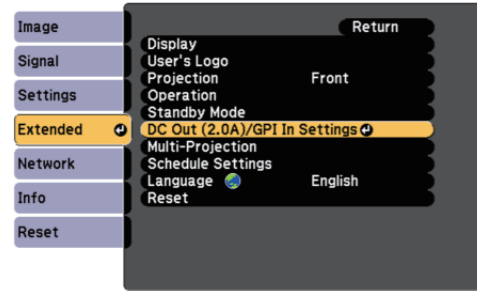## Checking the External Sensors Information

You can check the current signal information input from the connected sensors on the projector menu.

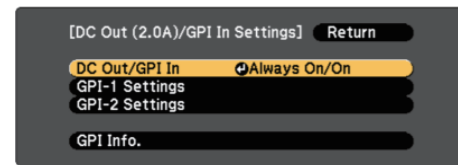Press the [Menu] button on the projector, and then select [Extended] - [DC Out (2.0A)/GPI In Settings] - [GPI Info.].

Setting Up the Projector

After connecting the sensors, set the projector operations according to your environment.

1 Turn on the projector.

2 Press the [Menu] button on the remote control, and then select [Extended] - [DC Out (2.0A)/GPI In Settings].
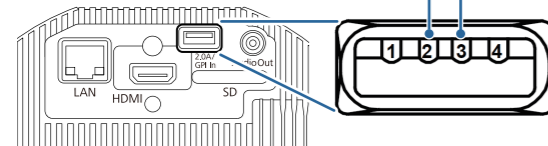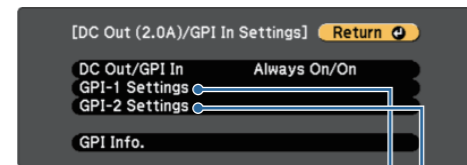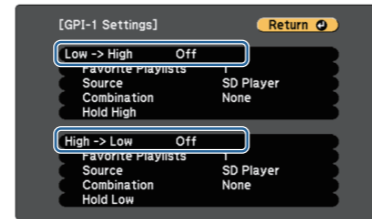

3 Set [DC Out/GPI In] to [Always On/On].

When this is set to [On While Project/Off], the external sensor is disabled.

4 Select [GPI-1 Settings] or [GPI-2 Settings].

- [GPI-1 Settings]: Sets the operation triggered by the sensor connected to pin No.2.
- [GPI-2 Settings]: Sets the operation triggered by the sensor connected to pin No.3.

5 Set the operation according to the signal input for the external sensor.

- [Low -> High]: Sets the operation performed when a High level signal is input.
- [High -> Low]: Sets the operation performed when a Low level signal is input.

Item	Description
Power On Power Off	Turns the projector on or off.
Execute A/V Mute Release A/V Mute	Executes or releases A/V Mute. The content continues to play while A/V Mute is enabled.
Start Playlist	Plays the playlist set in [Favorite Playlists].
Stop Playlist	Stops the current playlist. You cannot set the specific playlist number to stop.
Source Select	Switches the image source.
Light Source Mode: Normal Light Source Mode: Quiet	Switches the Light Source Mode setting.

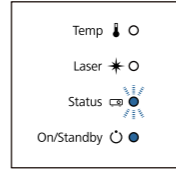**6** Set more detailed operations.

Item	Description
Favorite Playlists	Set the playlist you want to play when [Low -> High]/[High -> Low] are set to [Start Playlist]. Select the number of the numeric button on the remote control that is assigned to Favorite Playlists.
Source	Set the source you want to switch to when [Low -> High]/[High -> Low] are set to [Source Select].
Combination	When two external sensors are connected, you can set the status of the other external sensor as the condition for executing an operation. For example, if [Combination] in [GPI-1 Settings] is set to [GPI-2 Low], the operation set in [GPI-1 Settings] is executed when the GPI-2 signal becomes Low.
Hold High Hold Low	When the signal is continuously input from the external sensor for the specified time (mm:ss), the projector performs the operation selected in the [Low -> High]/[High -> Low] setting. You can select from 0 seconds to 30 minutes.

7 When you have finished making settings, press the [Menu] button to finish.

Solving Problems

Try the following solutions if you are having trouble connecting or configuring the external sensors.

Status	Remedy
The set operation is not executed even when a signal is input from an external sensor.	• Check the status of the projector. In the following situations, all signal input from the external sensor is disabled. 　• When the menu screen is displayed 　• When switching sources 　• When the projector's indicator is in one of the following conditions: 　　Warming up, shutting down, or cooling down 　• On/Standby: On 　• Status: Flashing Input the signal again when the projector becomes ready to receive the signal from the external sensors. • When you connect one external sensor, make sure you select [None] in the [GPI-1 Settings]/[GPI-2 Settings] - [Combination]. The [Combination] setting works as intended when you connect two external sensors. • Depending on the operation you have set, it may take some time to execute.
Content starts playing from the middle.	Check the content of [GPI-1 Settings]/[GPI-2 Settings]. If you set a combination of [Start Playlist] and [Execute A/V Mute], the content may not be played correctly. Select [Stop Playlist] instead of [Execute A/V Mute].
The set playlist does not play.	Check the settings for [GPI-1 Settings]/[GPI-2 Settings] - [Favorite Playlists]. Set the number of the numeric button on the remote control that is assigned to the playlist you want to play. You can check the assigned number using the application you created the playlist, such as Epson Web Control or Epson Projector Content Manager.
The operation is delayed or is performed in advance.	• Adjust the [GPI-1 Settings]/[GPI-2 Settings]. 　• When the operation is delayed: Set 0 seconds for the [Hold High] or [Hold Low] settings. 　• When the operation is performed in advance: Increase the time for the [Hold High] or [Hold Low] settings. • If the external sensors have a function to hold the signals, check the sensors' settings.
You cannot adjust the time for holding signals precisely using the external sensors' functions, such as the adjustment dial.	We recommend that you use the [Hold High]/[Hold Low] settings on the projector. Follow the steps below to make settings. **1** Use the functions for the external sensor to minimize the amount of time it holds the signal. **2** Set the time to hold the external sensor's signal in [Hold High] or [Hold Low] in [GPI-1 Settings]/[GPI-2 Settings]. The operation is performed when the signal is continuously input for the total time of **1** and **2**.