

# ECO Spot™ Control Module – User Manual

## Version ES-CM2

### Description

The ECO Spot Control Module is an optional module that is designed to add dynamic functionality, such as dimming, blinking, fading, and motion sensing to ECO Spot gobo projectors. The integrated motion sensor (PIR Sensor) can be configured in a wide range of modes. The module connects to line power and to the projectors' LED driver control inputs.

### Functionality:

- **Static modes:** ON, DIM, OFF
- **Dynamic modes:** Fading, Strobing, Flashing
- **Sensor modes:** The motion sensor and AUX input can be programmed to switch from any static or dynamic mode to any other static or dynamic mode.

For a full list of functions, please see the Function Table (page 2).

### Supported Projectors:

All ECO Spot projectors with drivers, that have an accessible DIM+/- input, such as:

- ECO Spot PCE-Series C40/C60/B90/B150/B300PCE
- ECO Line Projectors EL 80/F80/150/F150
- ECO Spot Exterior C40E/C60E/B90E/B300E
- ECO Spot Interior C25+/B90/B150

**Note:** The DIM+/- input may be optional for some models

### Connections:

**Power:** The included power supply connects to AC (or DC) power, 110-277V, 50/60Hz.

**Control Connector:** The module connects to the DIM+/- input of select ECO Spot and ECO Lines LED drivers via pre-installed M15 connectors.

### AUX Connector:

Along with the integrated PIR motion sensor, the module has an optional input for an external auxiliary contact. This allows utilizing external motion sensors or switches instead of the internal PIR sensor: set the manual **“Trigger”** switch to **AUX Input** to enable.

### AUX Connector Wiring Table

Connector Terminals	Motion Sensor / Switch	External Control Voltage
1. V <sub>IN</sub> (0-42V)	Relay / Dry Contact	Control V-
2. V <sub>OUT</sub> (+24V)	Relay / Dry Contact	Control V+
3. GND	Sensor Power+	--
4. V <sub>OUT</sub> (+24V)	Sensor Power-	--

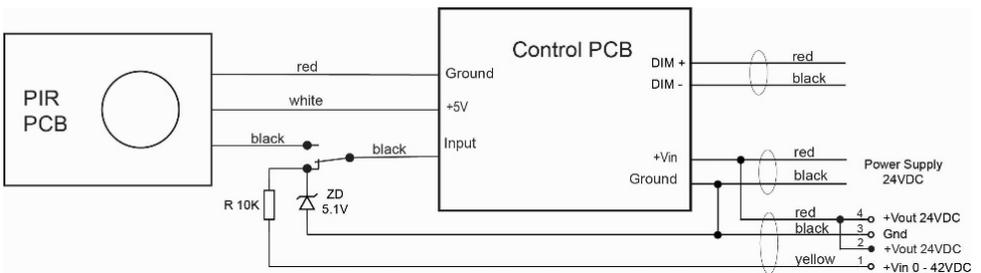
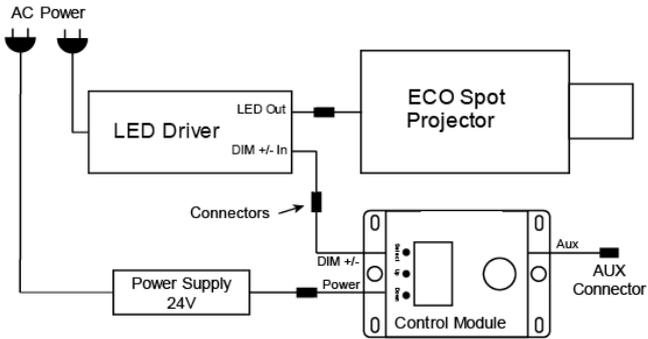
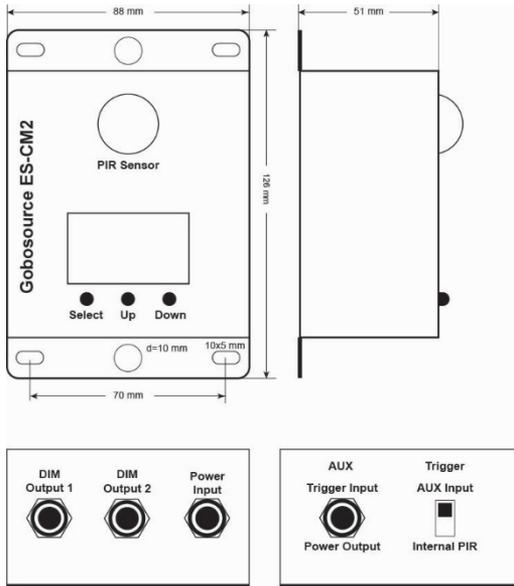
**Function Table**

The table shows the functions that can be configured from the control panel.

**When finished adjusting parameters, move the cursor to a position that determines the operation mode (as shown in the 1<sup>st</sup> column). Desired functions will not work if the cursor is not positioned to select the appropriate setting.**

Cursor Position	Mode	Display/Range	Function		
Cursor Positions for Preset Mode Only	<b>Preset Mode</b> Set the dynamic default function	PRO 01-03	01: Fade IN/OUT 02: Strobe 03: Blink		
	<b>Mode Speed</b> Set the speed of the dynamic default function	SPD 01-10	01: slowest speed 10: fastest speed		
Cursor Positions for PIR/AUX Contact Modes Only	<b>Passive IR/AUX Operation Mode</b> Select the functionality when the sensor and AUX input are enabled	IRM 01-11	<b>Sensor/Contact Status</b>		
			#	not triggered	triggered
			01	OFF	ON
			02	OFF	Preset Mode
			03	OFF	FADE to ON
			04	ON	OFF
			05	ON	Preset Mode
			06	ON	FADE to OFF
			07	DIM	ON
			08	DIM	Preset Mode
			09	DIM	OFF
	10	Preset Mode	ON		
	11	Preset Mode	OFF		
	<b>N/A</b>	IRF 01-10	N/A, this setting is ignored		
<b>PIR/AUX ON Time</b>	IRD 03-60	Time that the relay stays triggered in seconds			
<b>PIR/AUX ON/OFF</b>	IR ON/OFF	PIR Sensor & AUX Contact enable/disable <b>NOTE:</b> OFF <u>forces</u> "not triggered" state			
Cursor Position for DIM Only	<b>DIM Level</b>	LUM 0-255	0: OFF – 255: Brightest <b>NOTE:</b> Only applies to modes 7, 8 & 9		
<b>N/A</b>	<b>Backlight ON Time</b>	BLK 03-30	Set the display backlight timeout between 3 and 30 seconds		

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## Functionality

### Control Panel Menu:

- **Cycle** through the functions with the **UP** and **DOWN** buttons.
- **Select** a value with the **SELECT** button.
- Change the value with the **UP** or **DOWN** button. The value is applied immediately.
- Press **SELECT** again to go back.

### Setting the Operation Mode:

**Once all parameters are set, move the cursor to a position that determines the operation mode, as shown in the 1<sup>st</sup> column of the Function Table.**

## Selecting Function Modes:

Constant Fade, Strobe, or Blink Function w/o Trigger Input:

- from the Menu, set "**IR**" to "**OFF**"
- Place the cursor in the "**PRO**" position

Triggered Fade, Strobe, Blink, On/Off Function:

- from the Menu, set "**IR**" to "**ON**"
- Set the Trigger selector switch to either "**Internal PIR**" or "**AUX Input**"
- Place the cursor in the "**IRM**" position

Dim Mode Only:

- Place the cursor in the "**LUM**" position

If the PIR sensor or AUX contact is triggered, the module enters the status selected in "**Sensor/Contact Status - triggered**" in the Function Table. Once the contact is opened, the module will keep the status for the time specified in "**Sensor ON Time**" and then fall back to the "**Sensor/Contact Status - untriggered**" status.

## Specifications

<b>Input Voltage:</b>	Power supply (included): 100-240V, 277V, 47-63Hz, 10W DC in: 24V, 60mA
<b>AUX Supply Power:</b>	24VDC, 0.5A (power supply for external sensors)
<b>AUX Trigger Input:</b>	Potential free switch or 0-42VDC
<b>Motion Sensor:</b>	Passive infrared (PIR) sensor, approx. range: 24ft, 45deg lens angle. (Use external motion sensor for mission critical applications.)

*Specifications may change at any time, not liable for errors or omissions.*