

NotaBotYet ON-AIR 285

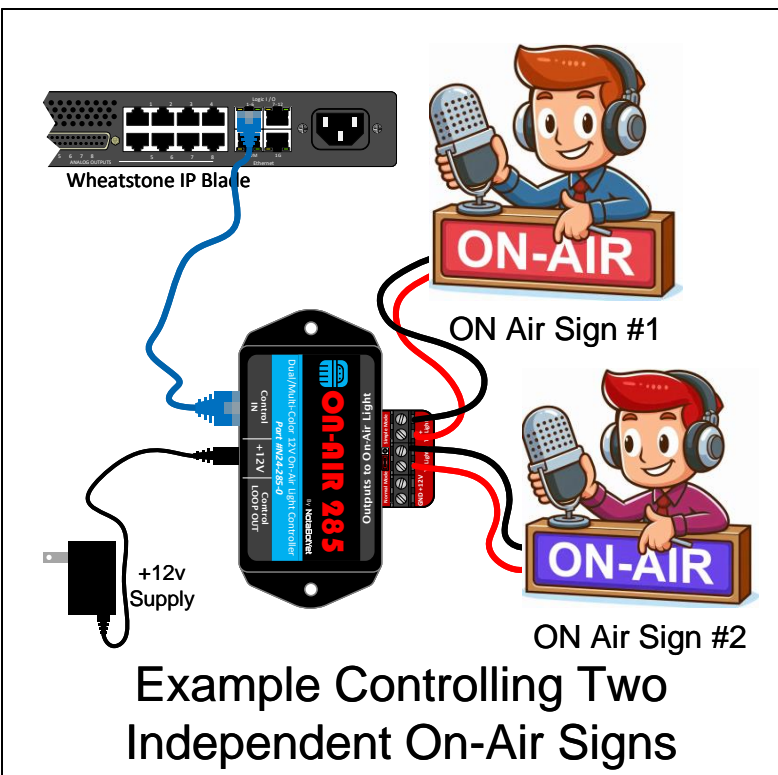
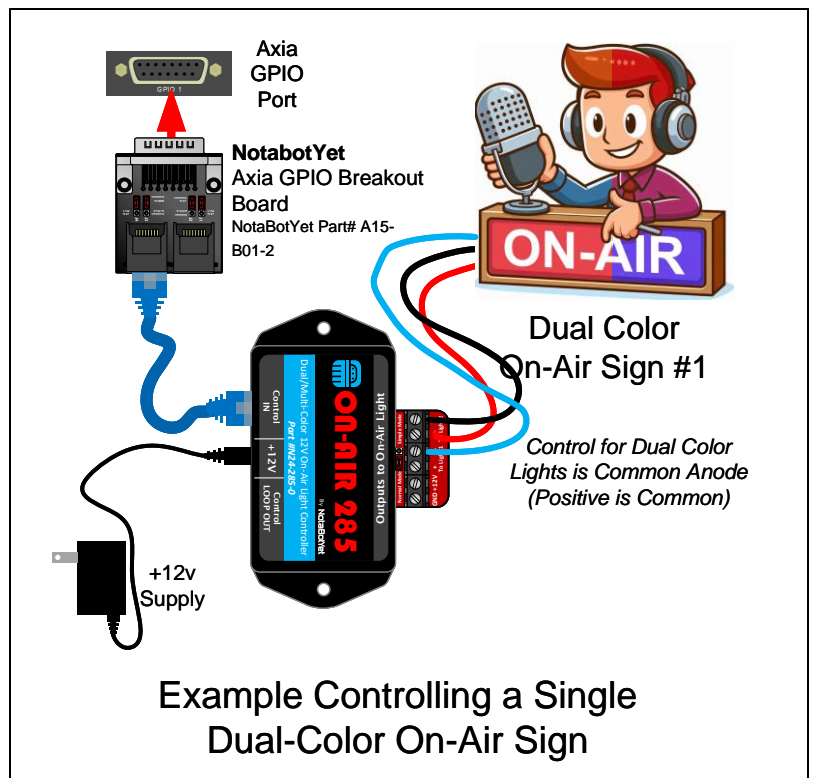
Dual/Multi-Color 12V On-Air Light Controller
for Axia GPIO and Wheatnet Logic
Part #N24-285-0



The ON-AIR 285 from NotaBotYet serves as an efficient control solution for modern low-voltage on-air lights. These lights, commonly used in studios, typically run on 12 volts and consume up to a 1 amp of current. Here are the key features of the ON-AIR 285:

- **Compatibility:** The unit interfaces seamlessly with Axia GPIO, Wheatnet Logic, or any other open collector logic or dry relay closures to ground.
- **Dual Control:** It can independently control two lights or can manage a single dual-color device (such as the Titus Labs HPL or BPL series with a second color option).
- **Flashing and Pulsing Programs:** Beyond simple “ON” and “OFF,” the ON-AIR 285 offers various flashing and pulsing patterns. These patterns can be customized based on activations across its five input control lines.
- **Customizable Scenarios:** When integrated with Axia GPIO via Pathfinder or Wheatnet Logic using their scripting engine, users can program distinct flash patterns for different on-air scenarios. For example, a steady “ON” might indicate live microphones, while a triple strobe flash could signal live network broadcasting.
- **Installer Options:** The unit provides 31 pre-programmed on and flashing patterns for installers to choose from. Additionally, if needed, a “Simple” mode can be engaged by selecting a jumper and power-cycling the device.

Overall, the ON-AIR 285 streamlines control and enhances flexibility for managing on-air lights in broadcast environments.



Inputs:

The board accepts input via a standard RJ-45 connector. The pinouts of this connector match those on our NotaBotYet Axia GPIO Breakout Board (Part #A15-B01-2) or the RJ-45 connectors on any Wheatnet Logic port. If your facility doesn't use Axia or Wheatnet, any relay or open collector device that triggers inputs by grounding can work with this board—just match the input pinouts. Additionally, manipulating the combination of the 5 available input control bits allows for up to 31 pre-programmed on-air flashing patterns or steady presets using one or both outputs (refer to Table 1 on Page 2).

Outputs:

The device's outputs are accessible via a 6-position screw terminal strip, each labeled for its function:

- “GND” and “+12V” terminals connect directly to the 12-volt power supply. These are provided for convenience.
- The Positive and Negative terminals provide power to the user's on-air light device. The +12 Volts on this connector is common across all positive terminals and is always active. The device controls on-air lights by switching the ground to the light (Common-Anode Style).

Simple Mode for On-Air 285 Devices

Sometimes, the device controlling the On-Air 285 lacks the capability to manipulate the input control bits for different flash patterns. For instance, an Axia GPIO port without the use of Pathfinder can only switch one bit. In such cases, you can engage Simple Mode by moving the jumper located behind the output terminal. Here's how it works:

- Move the jumper to the "Simple Mode" position.
- Power cycle the device.
- A different program runs on the device in Simple Mode.
- In this mode, the device ignores all inputs except for "Control In 1." Like other inputs, "Control In 1" requires a closure to ground to activate.
- Once "Control In 1" is activated, both outputs become active.



Figure 1: Simple Mode Jumper Location

Simple Mode is particularly useful when flash patterns, alternating colors, and other features are not needed. To switch back to "Normal Mode," move the jumper back to the left (when reading the PCB text right side up) and perform a power cycle to properly enable the unit.

In1	In2	In3	In4	In5	Binary Value	Out 1	Out 2
Open	Open	Open	Open	Open	0	Off	Off
GND	Open	Open	Open	Open	1	Steady On	Off
Open	GND	Open	Open	Open	2	Off	Steady On
GND	GND	Open	Open	Open	3	Both Outputs Steady Full On	
Open	Open	GND	Open	Open	4	Both Flashing	
GND	Open	GND	Open	Open	5	Flashing	Off
Open	GND	GND	Open	Open	6	Off	Flashing
GND	GND	GND	Open	Open	7	Alternating Strobe	
Open	Open	Open	GND	Open	8	Alternating Flash	
GND	Open	Open	GND	Open	9	Triple Flash	Off
Open	GND	Open	GND	Open	10	Off	Triple Flash
GND	GND	Open	GND	Open	11	Alternating Triple Flash	
Open	Open	GND	GND	Open	12	Both Triple Flash	
GND	Open	GND	GND	Open	13	Crazy Flash	Off
Open	GND	GND	GND	Open	14	Off	Crazy Flash
GND	GND	GND	GND	Open	15	Mixed Crazy Flash	
Open	Open	Open	Open	GND	16	Color Changing (Cross-Fade between outputs)	
GND	Open	Open	Open	GND	17	Pulse	Off
Open	GND	Open	Open	GND	18	Off	Pulse
GND	GND	Open	Open	GND	19	Alternating Pulse	
Open	Open	GND	Open	GND	20	Both Pulse	
GND	Open	GND	Open	GND	21	Double Pulse	Off
Open	GND	GND	Open	GND	22	Off	Double Pulse
GND	GND	GND	Open	GND	23	Alternating Double Pulse	
Open	Open	Open	GND	GND	24	Both Double Pulse	
GND	Open	Open	GND	GND	25	Heartbeat	Off
Open	GND	Open	GND	GND	26	Off	Heartbeat
GND	GND	Open	GND	GND	27	Both Heartbeat	
Open	Open	GND	GND	GND	28	Both Blink	
GND	Open	GND	GND	GND	29	Blink	Off
Open	GND	GND	GND	GND	30	Off	Blink
GND	GND	GND	GND	GND	31	Alternating SOS	

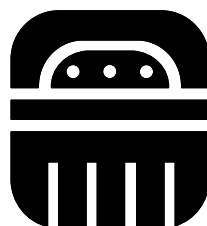
Table 1. Light Mode based on inputs.

RJ45 Control IN Pinout:	
Pin Number / EIA/TIA 568B	
Wire Color	
(Ground to Activate)	
1 GND	Org/W
2 Control In 1	Org
3 Control In 2	Grn/W
4 Control In 3	Blu
5 Control In 4	Blu/W
6 Control in 5	Grn
7 No Connection	Brn/W
8 No Connection	Brn

(LOOP OUT Connector is Parallel with Input Connector)

Output Pinout	
(TB Strip):	
1 GND	
2 +12B (In or Out)	
3 GND to On-Air Light 1	
4 +12V to On-Air Light 1	
5 GND to On-Air Light 2	
6 +12V to On-Air Light 2	

(+12V is Common across all outputs)



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