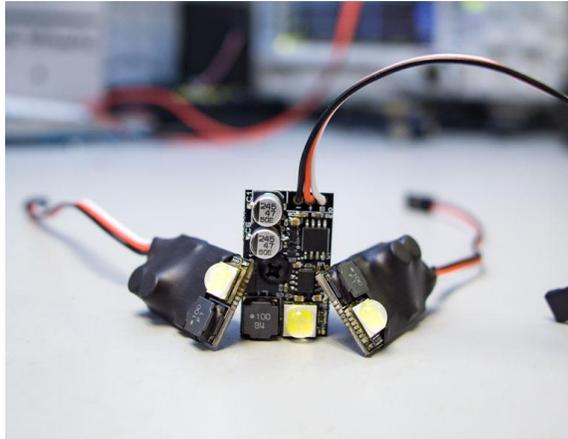


SYNCLIGHTS

by BrownieBoards



Thanks for your purchase!

Below, you will find information about the operation of your new SyncLight(s)

Power

- The product works at voltages between 10-42V (3S to 10S). The pinout of the connector is:
 - **Black** = Ground (-)
 - **Red** = Power (+) (10-42V)
 - **White** = Signal Bus (S)
- Make sure to plug the connector in the correct way, otherwise damage may occur. (Look at the silkscreen of the pattern change board for the “-”, “+”, and “S” designators).
- Servo extension wires may be used to achieve the desired length of cable.
- While the SyncLights were designed to be resilient to ESD, take care when handling.

Heat

- The board will get warm/hot to the touch if you use any mode other than “Master Strobe”, “Follow Strobe”, or “Offset Strobe” with no airflow, no heatsink, and no other form of cooling. ***The boards will not damage themselves, but ensure your mounting method can withstand the heat if you choose one of these modes.***
 - For example, if used in a room-temperature environment with zero airflow, a SyncLight running the “Always-on, Low” pattern (with or without strobes) will stabilize around 70°C without a heatsink, or 50°C with a heatsink.
- A SyncLight on the “Half-on” or “Always-on, Medium” modes will stabilize around 110°C without a heatsink, and 60°C with a heatsink (again, if used in a room-temperature environment with zero airflow)
- Adding airflow (such as from the propellers of your drone) will reduce these temperatures radically.

Usage

- After power-on, the SyncLights will take a few seconds to discover other SyncLights, elect a master, and synchronize flashes. The SyncLight that blinks first is the 'master'.
- If the 'master' SyncLight fails or is unplugged during operation, the remaining SyncLights will detect this, and after a few seconds, re-elect a master and continue blinking.
- Press the button on the 'Pattern Change Board' to cycle through patterns on **all of the attached** SyncLights (we recommend setting each pattern individually before connecting all SyncLights together):
 1. Master Strobe
 2. Follow Strobe
 3. Offset Strobe
 4. Always-on, Low
 5. Always-on, Low with Master Strobe overlaid
 6. Always-on, Low with Follow Strobe overlaid
 7. Always-on, Low with Offset Strobe overlaid
 8. Always-on, Medium
 9. Half-on, High
 10. Half-on, High Offset
- The selected blink pattern will persist through power loss.
- Hold the button on the 'Pattern Change Board' until the attached SyncLights begin blinking (approx. 3-4 seconds) to put the SyncLights in 'Off' mode until the power is cycled or the button is pressed again.
- Hold the button on the 'Pattern Change Board' until the attached SyncLights begin double-blinking (approx. 6-7 seconds) to put the SyncLights in 'Off' mode even if power is cycled. Press the button again to turn the SyncLights back on.

Mounting

- **Hot glue** – If using the "Master", "Follow", or "Offset" strobe patterns, the SyncLight will stay cool enough to allow it to be mounted using hot glue without it melting. *We cannot guarantee that a SyncLight running any other mode will not melt hot glue, if you choose to use it as a mounting method.*
- **Machine screw** – If a more robust mounting method is desired, removal of the heat shrink around the SyncLight will reveal a center hole which accommodates a screw size of #6-32.
- **Mushroom Hook Velcro**
- **Zip Ties** – If you're mounting this to an arm of a drone, a simple ziptie around the center of the SyncLight will suffice.



For additional information, including blink pattern descriptions, see our SyncLight product page:

<https://www.brownieboards.com/2017/04/14/synclight/>