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Pop-up arrows & Control hub

User guide

A. **Pop-up Arrow bases**

1. Device description

The bases are 3D-printed casings designed to house an axle, a strong spring, a pivoting part for the arrowhead, and a sliding latch connected to the solenoid. The arrowhead locks into place by inserting it into the pivot and rotating it a quarter turn.

Electronically, the device consists of a solenoid and a two-wire terminal. To prevent excessive bouncing when the arrow is triggered, a ball latch is installed. Its tension can be adjusted by removing the top lid with a hex key and using a flathead screwdriver to fine-tune the bouncing effect.

The pivot part is also replaceable, with three variants at different angles included for each base, marked with colored stickers for easy identification.

To replace the pivot part, first, remove the lid. Then, detach the spring from its slot in the pivot part—without removing the screw holding the spring at the other side. Slide the axle back, swap in the new pivot part, and slide the axle back into position. Finally, place the spring's head back into its slot and close the lid.

To set up the effect, connect the base to the control hub using the provided cable at the desired length. Next, insert the arrow in the pivot part and lock it with a quarter of a turn, push it down until the sliding latch locks it in place. The base is now primed and ready to be triggered.

B. Control Hub

1. Device description

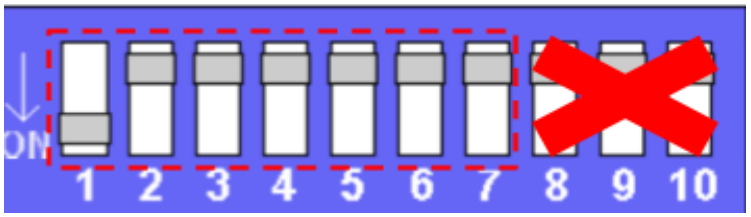
The Pop-Up Arrows Hub is designed to control the triggering of arrow bases positioned on stage. When connected via **DMX**, sending a **value above 127** on the desired arrow's channel will activate it. The device then outputs **12V (max 2A)** to the corresponding output terminals, triggering the selected arrow.

2. Address selection

The Pop-Up Arrows Hub allows you to set the DMX starting address using the DIP switches on the side of the device.

This address corresponds to the first arrow, with the remaining 11 arrows automatically assigned to the next consecutive DMX channels.

By default, the starting address is set to 1, meaning the arrows will respond to DMX channels 1 through 12. If you need to change the starting address, you must use binary logic to select the correct value. The device supports addresses from 0 to 127, with switches 8 to 10 fixed in place.



If you're unsure how to calculate the address, you can use this online tool.

When a channel is triggered, an orange LED above the corresponding terminal lights up, indicating that 12V is being sent through the wires.

3. Safety considerations

The solenoids in the bases heat up quickly—**DO NOT POWER A BASE FOR MORE THAN 5 SECONDS.** A 1-second pulse is sufficient to trigger the arrow. To prevent relay overheating in the control hub, it is **strongly advised** not to power more than 6 bases simultaneously.