Recording Animation

If you just need the PicoVolt to keep a motor running at a constant speed, or a light at a constant brightness, then you don't need to record animation. Simply move the wheel until your motor or light is where you want it and leave it there. If you would like to record some motor animation or lighting effects that can be triggered by a sensor or constantly looped, follow the steps below. Two different scenes can be recorded, one for input 1, one for input 2.

Playing the Animation

Constantly looped, follow the steps below. Two different scenes can be recorded, one for input 1, one for input 2.

- Set the Starting Speed/Brightness
  - Once the LED starts blinking red you can set your motor's starting speed or starting brightness level. Note that if you are in one of the Park modes there will be no movement at this step.

- Start Recording
  - Let go of the button before 10 seconds passes, the LED should stop flashing and turn solid.

- Stop Recording
  - Tap the button when you're finished recording. If you'd like to try again simply go back to step 1.

- Selecting the Input 1 or 2 Scene for Playback / Recording
  - Hold the button for 10 seconds until the Status LED blinks red slowly. While still holding the button, rotate the wheel to select the Input 1 Scene (1 red blink) or Input 2 Scene (2 red blinks). Let go when the correct scene is selected. Proceed with Recording or Playing Animation above to work with the selected scene.

- Operating Modes
  - Tap this button to play your animation, hold it to start recording.

- Status LED
  - The status LED will blink different patterns to indicate the current status:
    - One or Two yellow blinks - Trigger Active. Indicates trigger input 1 or 2 became active.
    - Steady green with brief flash - Playback. Number of brief off flashes indicates the current playback scene.
    - Steady red with brief flash - Recording. Number of brief off flashes indicates the current recording scene.
    - Steady green with brief flash - Idle mode, ignoring triggers. Occurs after recording or if playback is interrupted.
    - One or Two yellow blinks - Trigger Active. Indicates trigger input 1 or 2 became active.
    - Red Blinks (3 or 4) - Motor fault or over-current error. Wait 20 seconds for it to reset.

Sizing your Power Supply

Your PicoVolt does not include a power supply as the size required will vary depending on what it's used to control.

If you are using the PicoVolt with a wiper motor, a 12V 5A power supply is generally used. Linear actuators often require 12V 10A power supplies. If it's used for lighting, add up the current (or watts) required by all the lights/LEDs and select a power supply that can handle the load.

Power can be supplied via the barrel connector or the Trigger Input terminal block, they are connected internally. If you will be drawing more than 5 amps for extended periods, power should be supplied to the terminal block rather than the barrel connector.

Maximum Output Current

The maximum output current it can hold is 7.5 amps. This limit can be exceeded for short periods, ex: 10 amps for 15 seconds, or 15 amps for about 5 seconds. This is provided the power supply can output that much current.

Conclusions and controls

| Motor Speed / Direction or Brightness Wheel | When the PicoVolt is used with a DC motor, this wheel controls the speed and direction of the Motor. When the PicoVolt is connected to DC Lights or LEDs, this wheel will control the brightness. |
| Rec. / Play Button | Tap this button to play your animation, hold it to start recording. |
| Power Connector | Your power supply should plug in here. The connector is a center-positive 2.1mm barrel connector. It's rated for a maximum current of 5 amps. |
| Trigger Inputs | If you're using triggers to control the PicoVolt, or a jumper to loop it, those will connect here. Your power supply can be connected to the +/0 of this screw-down terminal block if it's more convenient than the barrel connector or if you are exceeding 5 amps of current. |
| Motor / Light Terminal Block | The Motor or lights being controlled must connect to this screw-down terminal block. |
| Status LED | The status LED will blink different patterns to indicate the current status: |
| - Green blink every 2 sec - Idle mode. Ready to record, playback, or be triggered. |
| - Yellow blink every 2 sec - Idle mode, ignoring triggers. Occurs after recording or if playback is interrupted. |
| - Steady green with brief flash - Playback. Number of brief off flashes indicates the current playback scene. |
| - Steady red with brief flash - Recording. Number of brief off flashes indicates the current recording scene. |
| - One or Two yellow blinks - Trigger Active. Indicates trigger input 1 or 2 became active. |
| - Red Blinks (3 or 4) - Motor fault or over-current error. Wait 20 seconds for it to reset. |
**Trigger Input Wiring**

- **PIR MOTION SENSOR**
  - Use PIR sensors to detect the presence of an object.
  - The PICOVOLT’s light will blink yellow.
- **PNP OUTPUT BEAM OR PROXIMITY SENSOR**
  - Use for applications where a sensor is used to detect the presence of an object.
- **RESET BUTTON**
  - Use input mode 4 or 5 to allow an animation to play once only. Use a button on input 2 for manual reset, or jumper it so input 1 runs only once per trigger (single shot mode).

**Motor / LED Wiring**

- **STANDARD MOTOR OR PARKING MOTOR**
  - For motors or parking motors that require more than 5 amps of current under decent loads.
- **LINEAR ACTUATOR**
  - Especially good for linear actuators. Can be programmed to return it.
- **FORWARD/REVERSE SPEED CONTROL**
  - Allows you to control the speed and direction of a DC motor.
- **LED LIGHTING**
  - For controlling 12 volt LEDs or small bulbs.

**Operating Modes**

- **Output Modes**
  - Default: Use this mode to control the speed and direction of a DC motor. Center the speed wheel to stop the motor, move it left for reverse, right for forward. The farther you move the wheel the faster the motor will go.
  - Transition: Gently transitions motor speed and direction between scenes.
  - Park: Use this mode with a parking motor to always start and stop in the same position.
  - Park / Brake: Park mode with braking enabled.
  - Light Mode: For controlling 12 volt LEDs or small bulbs.

- **Input Modes**
  - Default: Both inputs are normally-open and not interruptible.
  - Input 2 Interruptible: Only input 2 is interruptible.
  - Input 1 & 2 Interruptible: Both inputs are interruptible by the other.
  - Run Once with Reset: Use this mode when you need a particular animation to play only once. Input 2 could be connected to a reset button which would reset the cycle. Input 2 could be jumpered so input 1 operates in a single-shot mode where it still runs once per trigger but does not require the reset.

**Operating Modes, Write-Protect, Factory Reset**

- **Select Output Mode**
  - Power up holding the red button to enter the output mode menu. When the green light starts blinking, let go of the button. Turn the speed wheel to change modes, tap the button to select and continue to Input Mode.

- **Select Input Mode**
  - The LED should now be blinking yellow. Select your input mode below then tap the button to save mode changes and continue with normal operation. Pull the power any time before saving to discard changes.

**Advanced Menu**

- **Toggle Write Protect**
  - Selecting this option will toggle the write-protect state. With write-protect enabled, the animation is protected from being erased or changed.
- **Factory Reset**
  - Selecting this option will reset all animation and settings to their factory defaults.