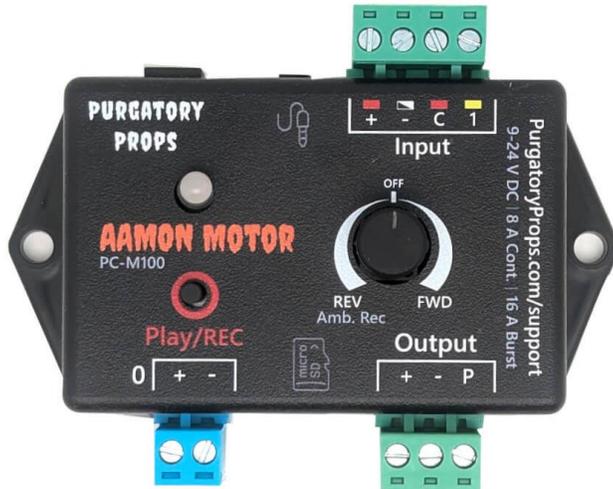# Aamon Motor (PC-M100) User Manual

PURGATORY PROPS

Product Overview

The Aamon Motor requires **9-24V DC** for power and can run continuously at 8A with bursts of 15A.

Power can be supplied using the barrel jack or the INPUT terminal block.

Recording the Animation

To record the animation:

1. Make sure the knob is **NOT** turned all the way to the left.
2. Press and hold the *Play/Rec* button until LED turns red
3. Turn the knob to the position you wish to start
4. Release the *Play/Rec* button to start recording
5. Record your motor movement into the controller using the knob
6. Press the *Play/Rec* button to stop recording

You can record 1.8 hours of animation on the Aamon Motor. The minimum is 4 seconds

Playing the Recorded Animation

To play your recorded animation press the *Play/Rec* button.
The LED will turn yellow, and the animation will play.

Recording the Ambient Animation

To record the ambient animation:

1. Turn the knob all the way to the **LEFT** (to REV)
2. Press and hold the *Play/Rec* button until the LED turns magenta
3. Turn the knob to the position you wish to start
4. Release *Play/Rec* button to start recording
5. Record your ambient motor movement into the controller using the knob
6. Press the *Play/Rec* button to stop recording

Tip: Ambient sound files on the MicroSD card will automatically play with no need to record an ambient animation.

Playing the Ambient Animation

Once recorded the Ambient Animation will automatically loop until the controller is triggered.

The LED will flash green when the Ambient Animation is playing.

Erasing Animations

If you wish to erase the recorded or ambient animation you need to record a short animation (3 seconds max). When you release the *Play/Rec* button to start recording, immediately press it again, this should erase the animations.

Factory Reset

To factory reset the controller:

1. Turn off Controller
2. Press and hold *Play/Rec*
3. Turn on controller
4. Continue holding *Play/Rec* for about 30 seconds
5. Release when LED turns blue

Factory reset is complete when the LED turns green.

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PURGATORY PROPS
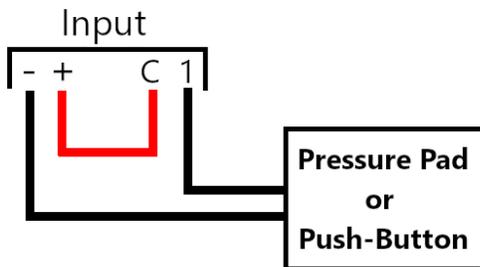
Input (Trigger) Wiring

The Aamon Motor will trigger when there is 5 – 24V DC between the C terminal and the 1 terminal. This allows you to trigger the Aamon Motor using a variety of sensors, triggers, or other solid-state electronics (Arduinos, prop controllers, etc).
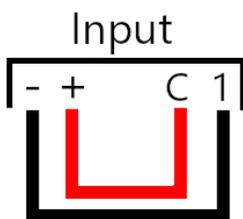

Green and Yellow wires are the same!
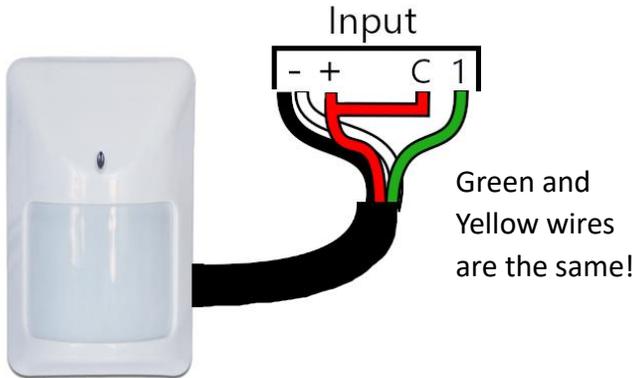
PIR Motion Sensor Wiring

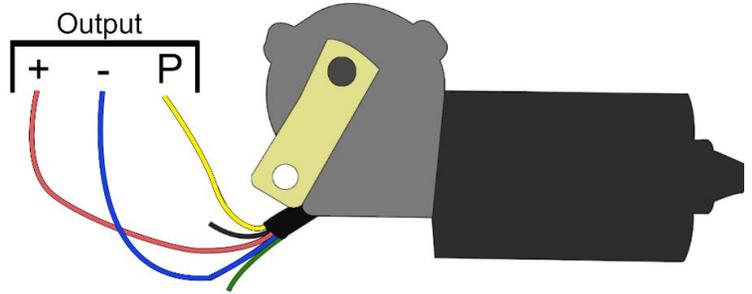**Diffused/Reflective Beam Sensor Wiring**

Switch Wiring

Looped Input Wiring

Output Wiring

We suggest using the blue wire (fast wire) from your wiper motor. This will give the largest speed range from your motor. You can use the green (slow) wire, it will just have a slower top speed.

Wiper Motor (Half or Full Range Knob)
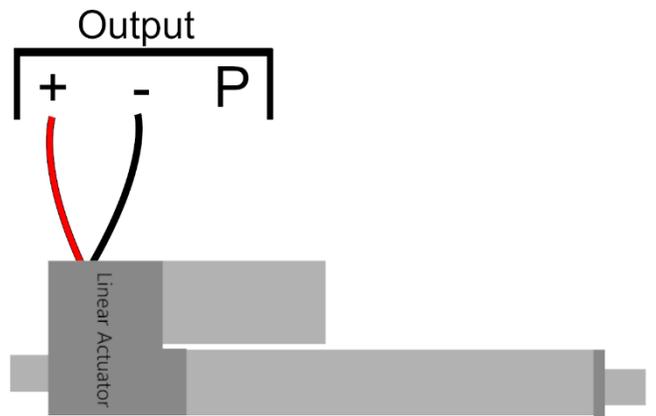
Linear Actuator (Half Range Knob)
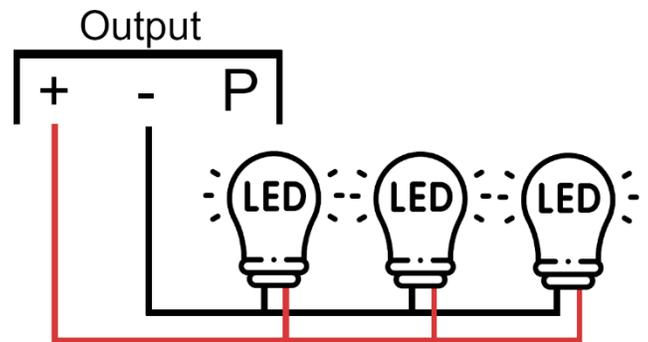
Dimmable 12V LEDs (Full Range Knob)

Connect as many as you want, just do not exceed the controller current limit of 8A!
Total current = sum of individual LED currents

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Controller Configuration

To enter the primary configuration menu:

1. Turn off controller
2. Press and hold *Play/Rec*
3. Turn on the controller
4. Continue holding *Play/Rec*
5. When LED flashes RED, let go of *Play/Rec*

The LED should now be flashing in a pattern and color (number of flashes followed by a pause). Turn the knob to change the pattern, this selects different settings.

# of Flashes	Configuration
1 Red	Toggle Write Protect
2 Red	Toggle MP3 Mix Mode
3 Red	Toggle Trigger After Ambient
4 Red	Toggle Inverted Input
5 Red	Toggle Input No Loop
1 Cyan	Toggle Ambient Resume
2 Cyan	Toggle Knob Mode (between full range and half range [default])
3 Cyan	Toggle Motor Parking
4 Cyan	Enter Delay Submenu (see separate section)
5 Cyan	Enter Output 0 Submenu (see separate section)

Once you have the LED flashing in the pattern you wish to select, allow it to flash a few times to make sure that it is in the setting you desire. If the pattern changes between two different patterns, slightly adjust the knob and watch the flashes again.

To select a menu option, press the *Play/Rec* button for a brief second while the LED is flashing.

If the option you select is to enter a separate Submenu, the LED will begin flashing in a new color. See that Submenu section for more information.

Delay Configuration Submenu

In the delay configuration Submenu, the LED will be flashing yellow-green in a pattern.

# of Flashes	Configuration
1 Yellow	Record Pre Delay
2 Yellow	Record Post Delay
3 Yellow	Clear Pre and Post Delays

Select the mode in the same manner as the primary configuration.

Delay recording begins immediately upon releasing the play/record button. Wait the desired amount of time and press Play/Rec to end recording of the pre/post delays.

Output 0 Configuration Submenu

In the output 0 configuration Submenu, the LED will be flashing magenta in a pattern.

The Output 0 configuration Submenu allows you to change the behavior of Output 0 when the controller is activated.

# of Flashes	Configuration
1 Magenta	Toggle Inverted Output 0
2 Magenta	Output 0 Default Mode (steady on)
3 Magenta	Output 0 Start Mode
4 Magenta	Output 0 End Mode
5 Magenta	Output 0 Start + End Mode
6 Magenta	Output 0 Strobe Mode

Select the mode in the same manner as the primary configuration.

NOTE: All configuration modes listed above are described on pages 4 and 5.

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Write Protect Mode

The write protect mode prevents recording a new animation or making any changes to the controller configuration.

When in Write Protect Mode, the LED will be purple instead of green when waiting for a trigger.

Ambient Resume

Ambient Resume mode makes the controller resume in the same spot in the ambient animation it was at when it was interrupted by a trigger. This will resume the sound and the outputs when the recorded animation is done playing.

Tip: Ambient Resume is best paired with parking the motor after your animation has finished.

No Loop Mode

When the controller is in No Loop the controller will not continue to trigger if the input is still set. Once the input has been triggered, the trigger must be cleared before it will trigger again.

Pre & Post Delays

The pre delay is a recorded amount of time that happens when the controller is triggered.

The post delay happens after the recorded animation, once the post delay has finished the controller will go back to standby mode or play the ambient animation.

Tip: During testing, press the Play/Rec button to skip the delay you have set.

Motor Parking

Parking your motor causes it to end in the same position every time. When you place the Aamon Motor in park mode, after the animation has ended it will return the motor to the park position at the same speed and direction that you finished the animation.

If you have ambient animation, the motor will return to park before playing the ambient animation.

If you have ambient sounds but no ambient animation, then the sounds will play while the motor returns to park.

Trigger After Ambient

Trigger After Ambient Mode allows you to use the Ambient animation as a timer for your controller. Once the Ambient animation has finished playing it will automatically trigger the Trigger animation.

MP3 Mix Mode

MP3 Mix Mode changes how the controller plays sound files. Instead of playing a single sound file during the Ambient or Trigger animation, the controller will play all of them consecutively allowing you to chain together different sounds into one long sound.

Knob Mode (Full Range or Half Range)

Default mode is half range, this is ideal for / wiper motors and linear actuators. Turning the knob one direction will spin the motor clockwise, and the other direction counterclockwise. Use full range mode (left = off, right = full on) for LEDs.

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Output 0 Behaviors

Output 0 can control standard 9-24V devices. Output 0 can also be used to trigger other controllers.

Output 0 can operate in five different modes.

Default Mode
The output is on for the entire length of the animation.

Start Mode
The output is on for 1 second at the beginning of the animation.

End Mode
The output is on for 1 second after the animation.

Start and End Mode
The output is on for 1 second at the beginning of the animation, and for 1 second after the animation.

Strobe Mode
The output will strobe instead of being steady.

Output 0 can be set to inverted. When inverted, the output will be on until the animation is played. During playback it will turn off instead of on, depending on the mode it is in.

Output 0 has no function during the ambient animation.

SD Card Structure

The included MicroSD card comes with the basic folder structure needed for the Aamon Motor.

The **AMB** folder contains MP3 files that play during the ambient animation.

The **IN1** folder contains MP3 files that play during the recorded trigger animation.

Tip: Inserting a blank SD card into an Aamon Motor will automatically create these folders!

Both folders require audio files to be named as follows: ###.mp3 starting at 000.mp3 and going through 254.mp3

If you skip a number, the controller will not continue past the number skipped and will loop back to 000.mp3

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Cloning

Cloning is the process of making an exact copy of one Aamon Motor on another Aamon Motor. This process makes it easy to create dozens of the same animation, without needing to record the animation on each controller. To clone your controller, first set the configuration and animations.

Cloning requires a MicroSD card, and the target controller must NOT be in Write Protect mode.

Once you are ready to clone, follow this process:
1. Turn off the controller
2. Press and Hold *Play/Rec*
3. Turn on the controller
4. When the LED turns blue let go of *Play/Rec*
5. The LED should begin flashing white
6. Wait a few seconds
7. Press *Play/Rec* when the LED is flashing (hold it for a second if needed)
8. You will get a blue light

You will get a colorful light show on the LED, this is the controller writing the configuration and animations to the MicroSD card. When the LED turns green the process has been completed.

Now, create copies of ALL the files on the MicroSD card or save the entire folder structure (sound files and all) to a computer for later duplication.

When you put a MicroSD card with the cloned files in another Aamon Motor (not in Write Protect Mode) it will AUTOMATICALLY load the saved configuration and animations when powered on. It will then remove the save files from the MicroSD Card (so they MUST be saved somewhere else).

You have now cloned an Aamon Motor.

Firmware Update

When updating the firmware follow these steps:

1. Turn off controller
2. Place firmware update file (`PC-M100.BIN`) on the MicroSD card
3. Put MicroSD card back into controller
4. Turn on controller (the LED will be off for a few seconds while the firmware updates)
5. Four blue flashes indicate firmware was updated

If you do not receive four blue flashes, turn off the controller and try powering it back on again. If you do not receive the four blue flashes after five attempts, it is possible that you are trying to update to the same firmware version.

Identifying Firmware Version

To check your firmware version, delete the `version.txt` file on the MicroSD card, and turn back on the controller. Doing this will regenerate the `version.txt` file with the details of your controller.

The `version.txt` file will be regenerated after a firmware update.

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Troubleshooting

For more information, visit our Help & Support Center at `purgatoryprops.com/support`

Can Not Record Animation

If the LED turns off instead of red when you hold the *Play/Rec* button, then your controller is in Write Protect Mode. Please reference the **Write Protect Mode** section to learn more.

LED Is White When Turning On

If the LED turns white when turning on the controller, and will not trigger, then the controller is in warm-up mode. This mode is to prevent false triggers from PIR sensors when first turning on. The controller will be ready to play once the PIR has warmed up, or once 1 minute has passed.

Controller Does Not Trigger

When the controller is powered on confirm there is an animation recorded by pressing the *Play/Rec* button. The LED should turn yellow, and the animation will play.

If there is an animation recorded, but the LED does not turn yellow when the Input is triggered verify that the input wiring is correct.

To test the input circuitry, follow the wiring diagram for Looped Input (see Input (*Trigger) Wiring* section). This should trigger the animation. If it does not, please contact us.

No Audio?

Follow these steps if you have no audio:

1. Turn the controller off and back on after putting in a MicroSD card (or have the controller off when inserting)

2. Make sure your file is a MP3 file, if not it needs to be converted to MP3 (using a program like Audacity or a free online website)

LED Color Guide

This table is a quick shortcut guide to the status LED.

Color	Meaning
White	Warm-Up Mode
Green	Standby
Green (flashing)	Ambient Playback
Purple	Standby, Write Protected
Purple (flashing)	Ambient Playback in Write Protected Mode
Yellow (flashing)	Playback
Blue	Saving/Memory Operation **(DO NOT TURN OFF)**
Red (Solid)	Ready-to-Record (holding *Play/Rec* button)
Red (Steady Flashing)	Recording Trigger Animation
Magenta (Solid)	Ready to Record Ambient (holding *Play/Rec* button)
Magenta (Steady Flashing)	Recording Ambient Animation
Red (Pattern Flashing)	Error Code (see next section)

LED Error Codes

When the LED flashes red a number of times, then is off for 3 seconds before flashing the same pattern again this means the controller has an error condition.

Flash Count	Error
3 or 5	Controller damaged
4	No Audio Files (when applicable)
7	No SD Card (when an SD card is required)

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This table details when a specific functionality was added to the controller (either hardware or software). If you are wondering why your controller doesn't have a specific feature, then it's probably because you bought it before the date listed below.

Date	Hardware Revision	Firmware Version	Functionality
February 2025	A	1	Initial PC-M100 release