

PWM ONE

Introduction

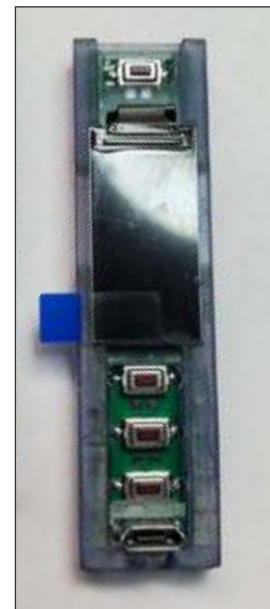
PWM.ONE is an amazing full-color variable voltage control board, and we will walk through the basic steps of installation and operation. The PWM.ONE board is completed by the use of a mosfet. The mosfet may be contained in a package called a RemoteFET which allows secured mounting. If you are a DIY builder, please refer to the following wiring instructions to complete your assembly.

If you purchased a Complete Installation Kit, you should have received the following:

- (1) PWM.ONE PCB with attached screen and holder
- (1) RemoteFET (IRLS3813TRLPBF)
- (1) 30ga Silicone Wire Pack (RETAIL ONLY)

Features

- **65k Color TFT Display**
- **Automatic Input Detection for 2s to 5s sources**
- **Fast-Lock and 5-Click Lock/Unlock**
- **Low Voltage Cut-Off (Auto & Configurable)**
- **Voltage Display of Resting, Requested, and Loaded**
- **Adjustable Increment Output Settings**
- **Adjustable Fire Safety Shutdown**
- **Customizable Screen Graphics and Fonts**
- **Firmware Updates via Micro USB (PC Only)**
- **Designed for Ease of Installation & Commonly Available Pre-milled Enclosures**

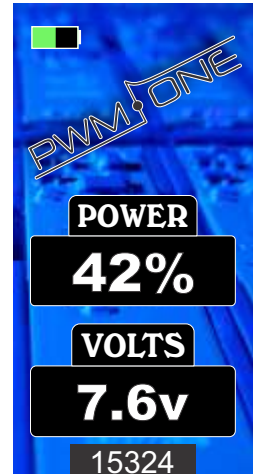


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Display

- **Top Left - Optional Battery level indicator**
- **Adjustable Output Percentage (Voltage Adjustment)**
- **Battery Voltage - Also: Loaded & Set Display Area**
- **Bottom Center - Optional counter display**
- **Customizable Position & Color of Display Data via Micro USB***
- **Customizable Background Screen via Micro USB***

*PC Only



Controls

- **Fire Button-when pressed will activate output at desired setting**
- **Top Adjust Button-Will INCREASE desired output level as displayed**
- **Middle Adjust Button-Will wake sleeping device, also a 'shift' button will lock the device when fire is pressed WHILE held.**
- **Bottom Adjust Button-Will DECREASE desired output level as displayed**

Operational Notes

- **Device will auto-lock when voltage drops below set Low Voltage value.**
- **Holding Up + Down while applying initial power to device will display current Firmware Version on boot screen.**
- **Adjusting to 100% will Activate 'Unregulated Mode'**
- **Device will auto-adjust as battery voltage decreases to hold desired output level- cannot output higher than available battery voltage.**
- **Set voltage will follow battery level and cannot exceed available battery output.**

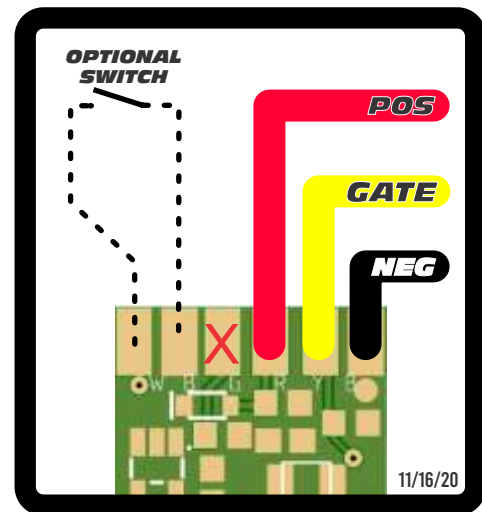
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Installation

PWM.ONE is an advanced PWM device with a resin frame that can be attached to a surface with Epoxy or CA glue. It is recommended to use 26ga-30ga wires for signal and board power connections-Power, Ground, Gate, and optional off-board switch. High current connections should be determined based on the highest realistic safe power delivery that the builder supports in the final device. "Do the math!" (16ga recommended minimum). [Connections: Refer to markings are well as position]

Board Connections

W	Switch input(Open side) of momentary switch
B	Board Ground (may be used for one side of momentary switch) – 2 Locations Available
G	NO CONNECTION (DO NOT CONNECT)
R	Board Positive (Battery Positive-Voltage will also be measured on this connection)
Y	Board Ground (may also be used as the closed side of off-board momentary switch)



RemotefET

Left Leg (Yellow Wire)	MOSFET Gate Connection (To Board 'Y')
Right Leg (Black Wires)	MOSFET Source Connection (To Board 'B'(Thin) & Battery Neg(Thick))

Positive Connections

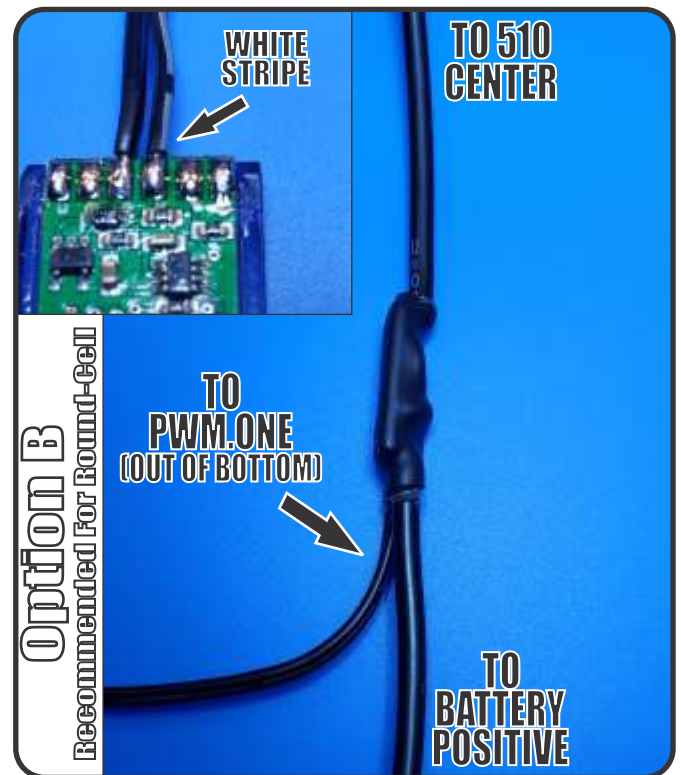
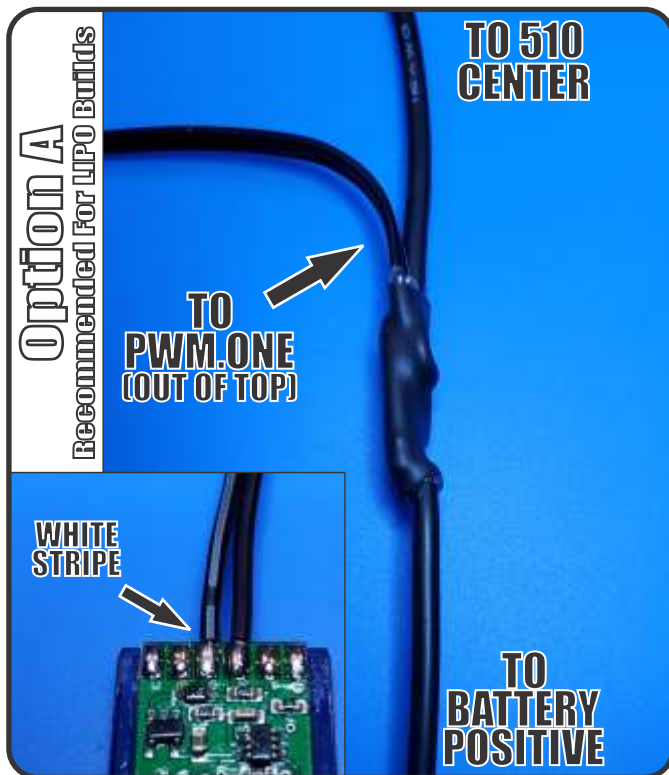
Battery Positive connects directly to your positive output(510 center) using heavy gauge wires rated to carry the current. Additionally, a battery positive connection needs to be supplied to the PWM.ONE [R] terminal to power the PWM.ONE board.



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Expansion Module Installation

The PWM.ONE Expansion Module is used to sense current being used during the operation of your PWM.ONE device. In order for it to function properly, it **MUST** be installed in the correct position within your circuit and connected to the PWM.ONE board appropriately. Since this module also provides the power to the PWM.ONE board, it replaces the 'Board Positive' [R] connection shown on the main Board Connections section, as well as replaces your high current positive wire.



Except for replacing the 'Board Positive' [R] connection, the remainder of the main installation connections stay the same. Please keep the wires being connected to the PWM.ONE board the same length and try to limit heat while soldering as this could cause issue inside the module.

*note: The reasoning for selecting 'Option A' for Lipo builds, allows more "slack" on the module connections to the board and should prevent end users from tugging on the connections. Most if not all stresses from battery changes should be limited to the high current (heavy gauge) wiring only.

PWM ONE Manager

PWM.ONE Manager is a Windows application that is used to configure, customize, and update your PWM.ONE device. Once installed, you can connect your device and start the application to make changes or update your device. From time to time, additional functionality or options may become available which this application will be needed.

You can also change the appearance on the display and customize the look and operation of your device. For the initial connection as well as firmware updates, your computer must be connected to the internet. After the initial connection, settings and customizations can be made without an active internet connection.



The left section of this version allows for settings adjustment as well as changes to the images and fonts shown on the device. The device is automatically read when started/connected and if connected to the internet will be checked for firmware updates that may be available. 'Write' is used to write the changes made in the 'CONFIGURATION' section along with images or fonts that are changed. Currently, fonts and images are not read from the device and whatever is displayed in the application will be written to the device. 'Read' can be used to verify that settings were accepted by the device after writing.

The right section is used to change the placement and colors of data displayed on the operating screen. Currently Power and Voltage are available for movement and color changes.

PWM.ONE Manager is partially self-updating, based on the PWM.ONE board connected. If an update to the PWM.ONE Manager application is available, it will be downloaded and available for use when the corresponding board is connected. New features will be added regularly until the application is fully matured to cover every aspect of operation and customization available. If you have suggestions or requests, please feel free to email those to: support@pwm.one and it may be added!



Limited Warranty

1-Year Limited Warranty

Snortin Boar Manufacturing warrants this product to the original retail consumer purchaser, to be free from defects in material or workmanship for a period of one (1) year following the date of purchase, when used in normal, intended, non-commercial use, according to the instructions and published technical specifications. This warranty coverage terminates if a covered consumer sells or transfers the device. This limited warranty does not cover failures due to abuse, accidental damage or when repairs have been made or attempted by anyone other than those authorized to do so. Only the PWM.ONE main pcb/board is covered by this warranty. This Limited Warranty does not cover problems or damages resulting from any of the following: wear and tear; modification, abuse, accident, disassembly/assembly, misapplication, or unauthorized repair; improper operation not in accordance with instructions/specifications, broken, cracked, or otherwise damaged display or mount/frame; any other cause which does not relate to defect in materials or workmanship. This Limited Warranty excludes coverage for any product not purchased from a Snortin Boar Manufacturing/PWM.ONE authorized reseller. A defective product meeting warranty conditions set forth, during the warranty period, may be repaired or replaced by Snortin Boar Manufacturing at our expense. Any repaired or replaced device will be covered by the remainder of the original warranty period only without extension. All covered device(s) must be returned for evaluation and have an RMA number written clearly on the outside of the package along with a letter detailing the problems and copy of original proof of purchase. No COD packages will be accepted. No package will be accepted without a RMA number written on the outside of the box. RMA numbers are only valid for 30 days from the date of issue. You may be required to pay shipping and handling charges, as well as any applicable tariffs, duties, taxes, or other fees. Snortin Boar Manufacturing may, at its discretion (1) repair the Product using new or equivalent-to-new refurbished parts in good working condition, or (2) replace the Product.

Snortin Boar Manufacturing will not be responsible for any indirect, incidental, special, punitive, or consequential damages related to the Product. Some states, including New Jersey, do not allow the exclusion or limitation of incidental or consequential damages, so this limitation or exclusion may not apply to you. This Limited Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

To obtain an Return Authorization Number, please contact us via email. Provide details of the problem as well as original purchase information. If further information is required, you will receive a reply requesting additional information. A Return Authorization Number and shipping address will be sent via email.

Please include "RMA" in the subject line of your email.

RMA email address: support@pwm.com

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