

# PERFORMANCE MOBILE AUDIO

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MODEL: M<sup>2</sup>-V/T

Product: Volt/Temp Meter

# *M<sup>2</sup>-V/T*

*Owner's Manual*

## Introduction

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Thank you for purchasing a Performance Mobile Audio digital system monitor. This device is engineered to provide years of high-performance system monitoring. Please thoroughly read though the manual to familiarize yourself with this product and its operation before installation. This device is designed to be easy to install and connect to your system to monitor voltage level and display temperatures of system components of your choice (amplifiers, voice coils, charging system components such as \*voltage regulators and \*alternators). This device is built using precision components to provide long lasting accurate readings. For questions regarding setup or installation please contact Performance Mobile Audio's technical support.

\*For installation under the hood care should be taken to route wires away from direct high temperature heat sources and in a manner to reduce or eliminate direct exposure to water.

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## Design Features

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Voltage Range:	7.5 V-20 V
Voltage Resolution:	.02 V
Voltage acquisition speed:	< 2 ms
Voltage Refresh:	< 10 ms
Temperature Resolution:	.4 °F
Temp Refresh:	< 500 ms
Screen:	1.3" High Contrast OLED
Custom Splash Screen:	* 128 x 64 pixel
Display Modes:	3 user selectable modes (Primary Temperature) (Primary Real-time Voltage) (Primary Low Volt 3 second hold)
Protection:	Reverse polarity
Connections:	Screw Terminals (22-12AWG) CAT5
Power Consumption:	Standby 1mA Max 85mA
Dimensions	**Display 2.37" x 1.90" x 1.06" **Hub 3.86" x 2.10" x 0.90" **IR Sensor 0.90" x .68" .34"

\*Contact at time of purchase to specify splash screen. Files are 128x64 pixels created in monochrome format using software such as MS Paint or similar.

\*\* Does not include required space for cable connections/strain reliefs

# What's in the Box

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<u>Item:</u>	<u>Qty:</u>
Display Panel	1
IR Temp Sensor	1
Connection Hub	1
IR Sensor Cable 10'	*1
Display Cable 20'	*1



Material required for install:

- 3 Wires 22AWG to 12AWG (Power, Remote, Ground)
- 4 Screws to mount hub
- Adhesive/Bracket for IR sensor (depending on installation)
- Adhesive/Bracket for Display mount (depending on installation)

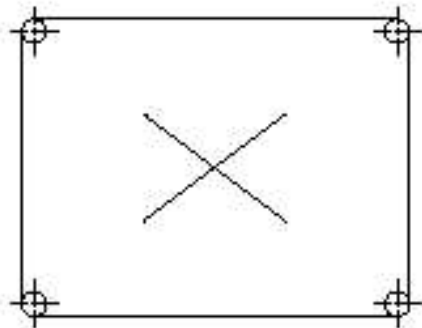
\*Cables are standard 8 conductor CAT5. If your installation requires lengths other than the provided simply purchase cables of appropriate length.

## Display Panel Cutout Template

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**IMPORTANT: PRINT TO SCALE. VERIFY PRINT BY MEASURING THE CALIBRATION LINE BEFORE PROCEEDING WITH ANY DRILLING OR CUTTING OF PANELS!!!**

1" CALIBRATION LINE



TEMPLATE

## *Installation*

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Pick a suitable place for the display panel. Use the provided template to create a cutout in the location you wish to install the display. Locate the connection hub near the amplifiers / voltage source to measure and what you intend to measure with the IR sensor. Route the CAT5 cables in such a manner to avoid pinching, pulling or excessive repetitive bending.

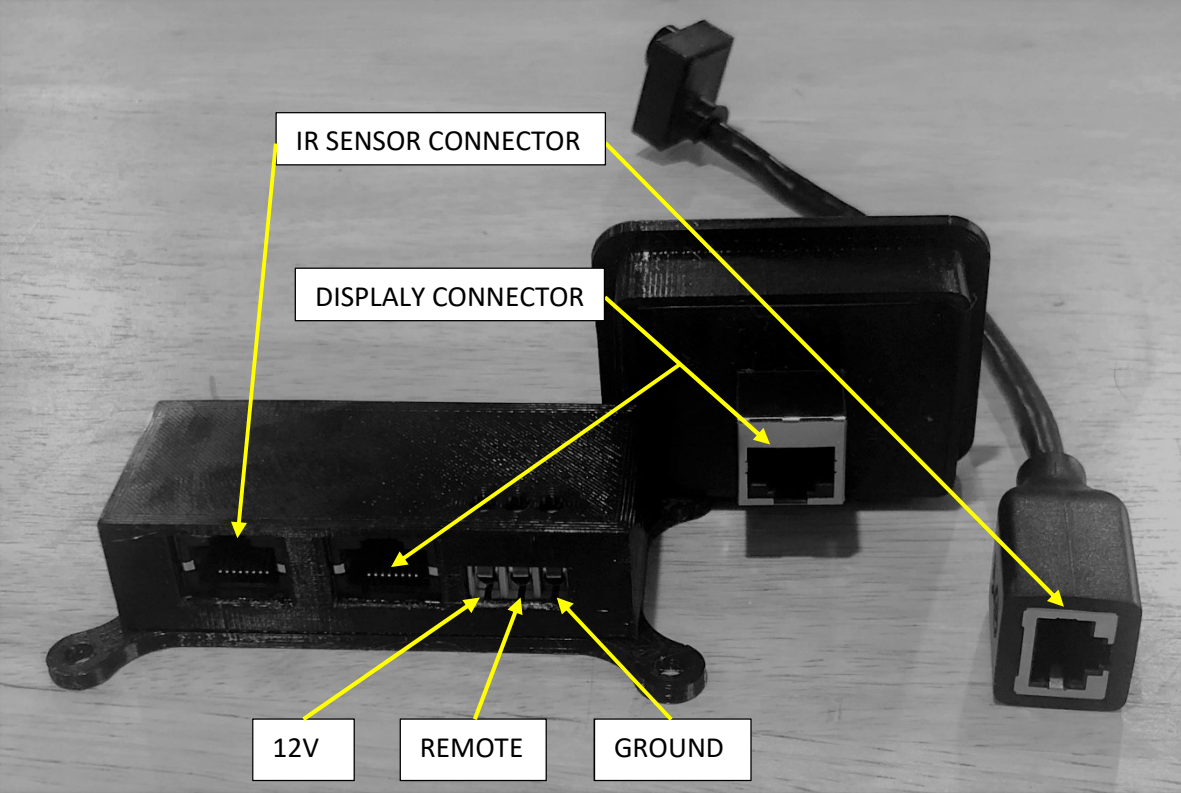
For most reliable amplifier supply voltage readings connect the hubs 12V power and ground as near the amplifiers power terminals as possible. The remote wire can be connected to any switched 12V source (dedicated switch, remote power to amps, etc...)

Mounting the IR sensor to a subwoofer basket may require an additional bracket to for optimal aiming of the sensors view of the speakers voice coil. Typical installation of the sensor will be under the spider landing pointed to the gap for the best visibility of the subwoofers voice coil.  
\*\*Note – Not all subwoofer baskets are designed in a fashion that the sensor can be utilized to view the coil.



# Connection Diagram

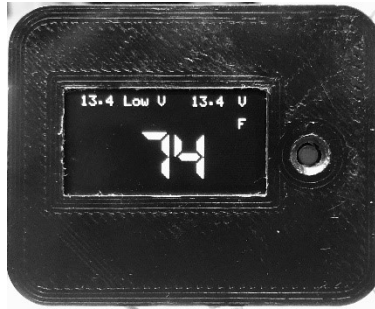
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## Operation

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On initial power up the unit will default to the user display setting 1.



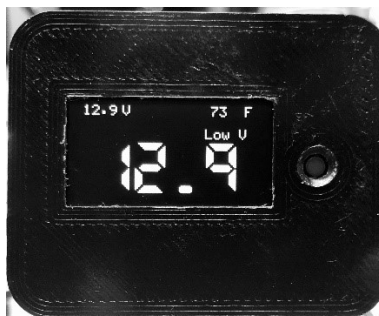
This display setting features a lowest sag detection self-resetting after 3 seconds, the real-time voltage display, and lastly a larger numerals indicating the temperature the IR sensor is reporting.

User display setting 2.



This display setting features a lowest sag detection self-resetting after 3 seconds, temperature reported by the IR sensor, and lastly the larger numerals indicating the current real-time voltage.

User display setting 3.



This display setting features the real-time voltage, temperature reported by the IR sensor, and lastly the larger numerals indicating the lowest sag detection that is self-resetting on a 3 second time interval.