

# MMATS

*Professional Audio*



## D600.I

### Owner's Guide

MMATS Professional Audio  
867 West 13<sup>th</sup> Court  
Riviera Beach, Fl. 33404  
<http://www.mmatsproaudio.com>

# CLASS D TECHNOLOGY

MMATS Professional Audio is the industry leader in ultra-efficient Class D audio technology for 12 volt audio.

Your D600.1 amplifier is engineered using the best technology we have at MMATS.

Surface mount technology  
Large geometry power MOSFETs  
Leading edge pulse width modulation design

D600.1 amplifiers are the perfect match for producing bass from large speakers in an automotive environment. Since most of the acoustic energy needed to produce full range audio is in the bass frequencies, it makes sense to dedicate your system's most powerful amplifiers to this task. Also, an automobile has a limited amount of energy available in its charging system to produce these power hungry bass frequencies. Therefore, an efficient amplifier that doesn't waste energy as heat would be desirable.

Class D amplifiers are *switching amps*. Instead of producing power continuously like a traditional Class A or AB amplifier, a Class D amplifier switches on and off thousands of times a second and doesn't waste energy (as heat) by being *on* when not needed.

## Comparison of technologies at full power:

**Class AB 500W amp at 50% efficiency will draw 1000W off the charging system.**

**1000W / 12.5V = 80 Amp draw**

**MMATS Class D 500W amp at 72% efficiency will draw 694W off the charging system.**

**694W / 12.5V = 56 Amp draw**

***1000W - 694W = 306W wasted as heat that should be driving your speakers!***

# SPECIFICATIONS

## RMS Power at 13.8V

**350W into 2 ohms with less than .1% THD+N**

**600W into 1 ohm with less than .1% THD+N**

**THD+N @ rated power: 0.05%**

**Frequency Response: <10 to 225Hz**

**Bass Boost: Variable 12db @ 45Hz**

**Lowpass Filter: Variable 12db, 70 to 200Hz**

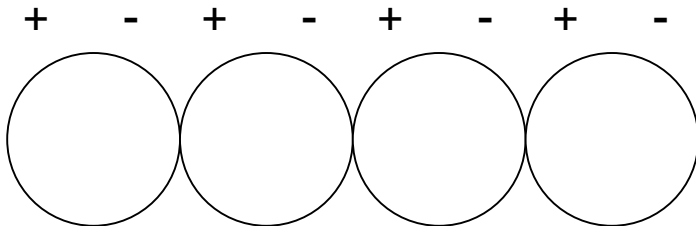
**Dimensions (LxWxH): 8" x 9.25" x 2.25"**

# WARRANTY

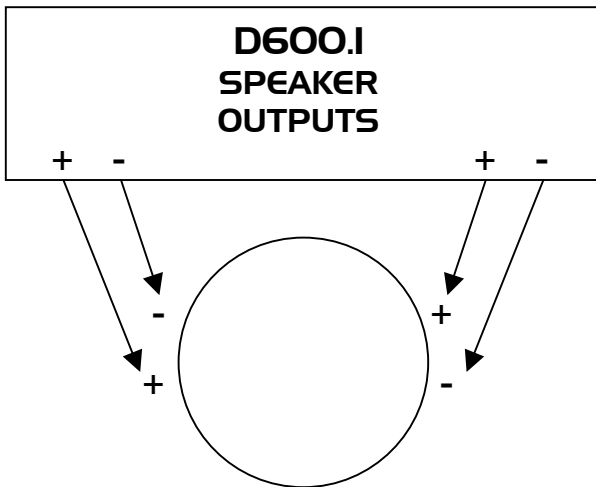
3 years from date of manufacture when installed by an authorized MMATS Professional Audio dealer. Proof of purchase required.  
Non-transferable

**\*\*Manufacturers warranty is void on product purchased over the internet.**

# SUGGESTED HOOKUP



HOOKUP INTO FOUR 4 OHM WOOFERS



HOOKUP INTO TWO DUAL VOICE COIL  
(4 OHMS PER COIL) WOOFER

# FEATURES

- Ultra- Efficient Class D Audio Output Stage
- Regulated Pulse-Width-Modulated Power Supply
- High Capacity Heat Sink
- Adjustable 12db Low Pass Filter
- Adjustable 45Hz Bass Boost
- Low Level and Speaker Level Inputs
- 1% Surface Mount Components
- Computer Optimized Transformer
- Large Geometry Power MOSFETs
- Overload and Thermal Protection

# CONTROLS AND CONNECTORS

1. **Positive Power Terminal** - This is the power feed from the positive (+) terminal of the car's battery. Use 8 gauge cable and good quality terminals when routing this connection. Tighten the connections well to prevent power loss due bad contact. Route the power cable away from the RCA and speaker cables
2. **Fuses** - Replace these fuses with only with the same type and value. **These fuses only protect the amplifier. An additional inline fuse should be added at the battery to protect against a short in the main power cable to the amplifier.**
3. **Ground Terminal** - For optimum performance, an 8 gauge cable and good quality connectors should attach the this terminal to the battery's negative (-) terminal.
4. **Remote Terminal** - The amplifier will turn on when 12 volts is applied to this terminal. This 12 volt signal is usually taken from the Power Antenna or Remote wire coming from the source unit.

# CONTROLS AND CONNECTORS CONTINUED

5. **Speaker Terminals** - Connect to speakers using at least 14 gauge speaker wire. Note that there are two Sp+ and SP- terminals that are internally wired in parallel to the + and - output of the class D stage. These are provided for easier connection of multiple speakers and should not be confused with the traditional Left and Right stereo hookup of traditional amplifiers. Running too low of a speaker impedance will cause the amplifier to go into a fault condition.
6. **45Hz Bass Boost** – This control will add up to 12db of boost at 45Hz to give the music more 'kick'. Be careful! This added boost could run your speakers into clipping when listening to bass intensive music.
7. **Lowpass Filter** – Butterworth 12db slope. This control sets the 3db down point of your amplifier. Higher frequencies beyond this setting are not heard from your speakers.
8. **Gain** – 20db of signal gain is available. This allows input levels between 150mV and 2 volts for full output.
9. **Inputs** – Two RCA jacks are provided. Their signals are added together inside the amplifier and the bass information is extracted. Since they are summed together, it does not matter which one is 'Left' or 'Right'.
10. **High level inputs** – These are provided for use with head units that do not have RCA outputs. Attach the appropriate speaker outputs from the head unit to the terminals provided.

# PANEL LAYOUT

