

# E Series

## Mobile Audio Amplifier

### Owner's Manual



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## **About the design**

The E series amplifiers are based on the latest Texas Instruments class D controllers. This amplifier topology is the foundation for some of the world's most efficient amplifiers. We took the typical Class D design, improved on it and made it suitable for car audio in all vehicles with sensitive electronics by using very high quality inductors and additional EMI filters for improved distortion, frequency response, clipping characteristics and reduced EMI compared to many (most) competitors Class D offerings.

The power supply and the output stages use multiple N-Ch MOSFETs for efficiency and robustness

Heat from the MOSFETs is transferred to an extruded aluminum heatsink via mechanical mounting. Extruded aluminum is superior to cast aluminum as a heatsink as it has higher density than a cast heatsink, which tend to be riddled with air pockets within the casting.

## Mount it

When an amplifier is mounted in a car that is going 50 MPH and crashes the amplifier might continue traveling at 50 MPH and cause destruction and/or bodily injury if proper mounting techniques are not used. Use #6 or M3 screws in each of the mounting tabs to mount this amplifier to something very secure in the vehicle. The bottom plate is also electrically grounded, so it is best to mount it to something NOT grounded to avoid ground loops.

## Power Requirements

Operating Voltage Range 10V – 16V

## Fuses

The amplifiers are shipped with the following fuse sizes. Always replace with the same rating. We have already oversized them for maximum performance. If fuse blows amplifier has serious fault or shorted speaker wire, or wrong impedance speakers connected.

<b>Model</b>	<b>Fuse arrangement</b>
E350.2	40A x 1
E400.4	25A x 2 (internal)
E660.5	35A x 2 (internal)
E700.4	
E750.1	40A x 2
E1000.1	40A x 3
E1500.1	Must Use External 150A

## DC Current Requirements

Model	4 $\Omega$ sine to clip	2 $\Omega$ sine to clip	1 $\Omega$ sine to clip
E350.2	16A	28A	N/A
E400.4	21A	34A	N/A
E660.5	30A	50A	N/A
E700.4	33A	57A	N/A
E750.1	25A	42A	68A
E1000.1	31A	57A	90A
E1500.1	45A	80A	140A

## Fault conditions and symptoms

The E-Series amplifiers have LEDs on the side panel to indicate the status of the amplifier.

Normal Condition – Green LED under on

Heatsink too hot – Red LED on. Amplifier will resume normal operation when Heatsink cools down

Short Circuit on speaker wire or speaker impedance too low – Red LED may blink or not, audio is muted and automatically resets after several seconds.

External Fuse blown or no power on B+, Green LED off, no sound.

## Specifications

	<b>E350.2</b>	<b>E400.4</b>
<b>Continuous Sine Power</b>		
4Ω	100 x 2	60 x 4
2Ω	175 x 2	100 x 4
1Ω	-----	-----
<b>Continuous Sine Bridged</b>		
4Ω	350 x 1	200 x 2
2Ω	-----	-----
1Ω	-----	-----
Crossovers 12dB/octave	LP/HP/OFF	LP/HP/OFF
Frequency Response		
20 – 20,000 Hz 4Ω	+/- 1.0dB	+/- 1.0dB
20 – 20,000 Hz 2Ω	+/- 2.0dB	+/- 2.0dB
S/N Ratio A-wt Ref:	>102dB	>102dB
THD ½ power 1kHz, 4Ω	<0.05%	<0.05%
Remote Level Control	No	No
Idle Current	< 2A	< 2A
Efficiency at CTA power 4Ω	> 90%	> 90%
Input Impedance	10kΩ	10kΩ
Dims, inches including feet	9.3 x 5.3 x 1.9	9.3 x 5.3 x 1.9
Dims, mm including feet	235 x 135 x 48	235 x 135 x 48
Weight, lbs. / kg	3.6 / 1.6	3.8 / 1.7
Power Connector	4 AWG	4 AWG
Speaker Connectors	12 AWG	12 AWG

## Specifications

	<b>E660.5</b>	<b>E700.4</b>
<b>Continuous Sine Power</b>		
4Ω	55 x 4 + 190 x 1	100 x4
2Ω	90 x 4 + 300 x 1	175 x 4
1Ω	-----	-----
<b>Continuous Sine Bridged</b>		
4Ω high frequency channels 2Ω sub channel	180 x 2 + 300 x 1	350 X 2
2Ω	-----	-----
1Ω	-----	-----
Crossovers 12dB/octave	BP/LP/HP/OFF	LP/HP/OFF
Frequency Response		
20 – 20,000 Hz 4Ω	+/- 1.0dB	+/- 1.0dB
20 – 20,000 Hz 2Ω	+/- 2.0dB	+/- 2.0dB
S/N Ratio A-wt Ref:	>102dB	>102dB
THD ½ power 1kHz, 4Ω	<0.05%	<0.05%
Remote Level Control	Yes	Yes
Idle Current	< 2A	< 2A
Efficiency at CTA power 4Ω	> 90%	> 90%
Input Impedance	10kΩ	10kΩ
Dims, inches including feet	13.7 x 5.3 x 1.9	16 x 5.3 x 1.9
Dims, mm including feet	347 x 135 x 48	407 x 135 x 48
Weight, lbs. / kg	5.7 / 2.6	7.1 / 3.2
Power Connector	4 AWG	4 AWG
Speaker Connectors	12 AWG	12 AWG

## Specifications

	<b>E750.1</b>	<b>E1000.1</b>	<b>E1500.1</b>
<b>Continuous Sine Power</b>			
4Ω	300 x 1	400 x 1	525 x 1
2Ω	500 x 1	700 x 1	950 x 1
1Ω	750 x 1	1000 x 1	1500 x 1
Low Pass Filter 4 <sup>th</sup> order	50 -250 Hz	50 -250 Hz	50 -250 Hz
Infrasonic Filter 2 <sup>nd</sup> order	10 – 50 Hz	10 – 50 Hz	10 – 50 Hz
Frequency Response			
10 - 250 Hz 4Ω			
10 - 250 Hz 2Ω			
S/N Ratio A-wt Ref:	>100dB	>100dB	>100dB
THD ½ power 50Hz, 4Ω	<0.05%	<0.05%	<0.05%
Remote Level Control	Yes	Yes	Yes
Idle Current	< 2A	< 2A	< 2A
Efficiency at CTA power 4Ω	> 90%	> 90%	> 90%
Input Impedance	10kΩ	10kΩ	10kΩ
Dims, inches including feet	12.1 x 5.3 x 1.9	12.9 x 5.3 x 1.9	16 x 5.3 x 1.9
Dims, mm including feet	307 x 135 x 48	327 x 135 x 48	407 x 135 x 48
Weight, lbs. / kg	5.1 / 2.3	5.5 / 2.5	7.3 / 3.3
Power Connector	4 AWG	4 AWG	2 AWG
Speaker Connectors	12 AWG	12 AWG	12 AWG

### **Limited Warranty**

D'Amore Engineering warrants this product to be free of defects in materials and workmanship for a period of one year.

This warranty is not transferrable and applies only to the original purchaser from an authorized D'Amore Engineering dealer. Should service be necessary under this warranty for any reason due to manufacturing defect or malfunction, D'Amore Engineering will (at its discretion) repair or replace the defective product with new or remanufactured product at no charge.

Damage caused by the following is not covered under warranty: accident, misuse, abuse, product modification or neglect, unauthorized repair attempts, misrepresentations by the seller. This warranty does not cover incidental or consequential damages. Cosmetic damage due to accident or normal wear and tear is not covered under warranty.

**Warranty is void if the product's serial number has been removed or defaced.**

Any applicable implied warranties are limited in duration to the period of one year beginning with the date of the original purchase. No warranties shall apply to this product thereafter. Some states do not allow limitations on implied warranties; therefore, these exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

### **If you need service:**

All warranty returns should be sent to D'Amore Engineering accompanied by proof of purchase (a copy of the original sales receipt). Warranty expiration on products returned without proof of purchase will be determined from the manufacturing date code. Non-defective items received will be returned COD. Customer is responsible for shipping charges and insurance in sending the product to D'Amore Engineering. Shipping damage on returns is not covered under warranty.

**To obtain service worldwide please e-mail D'Amore Engineering  
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Info@DAmoreEngineering.com**

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