

# PHOENIX GOLD®



## ***SUBWOOFER MANUAL***

***Models: Ti310d2, Ti310d4, Ti312d2, Ti312d4***

### ***Features***

- 40mm of Peak to Peak Excursion
- 2.5" Ultra High Temp Copper Wound Voice Coil
- Radial Backplate Venting System
- Easy Connect Single Location Speaker Terminal
- Long Throw Dual Spider Suspension
- High Excursion CAE/CAD Motor Design
- Woven Tinsel Leads
- Black Anodized Aluminum Former
- One Piece Injection Polypropylene Dustcap
- High Roll Butyl Rubber Double Stitched Surround
- Optimized for Sealed or Vented Enclosures
- Rigid Powder Coated Anti-Resonant Castbasket
- Quick Disconnect Series/Parallel Wires Included

## BUILDING AN ENCLOSURE

Phoenix Gold subwoofers are overbuilt in virtually every way conceivable. It is important that the subwoofer's enclosure is built to these same exacting standards. The enclosure must be constructed of at least .75 inch MDF for 10 and 12 inch subwoofers or .625 inch MDF for 8 inch subwoofers. Screws or air staples are excellent construction fasteners when used with a strong bonding "yellow" wood working glue that can fill joint gaps. Be sure that the enclosure's panels are airtight at all joining seams. Lining the walls with a polyester matting 1 to 3 inches thick is sufficient.

Your PG dealer has extensive knowledge, tools and the experience needed for the design and construction necessary for your subwoofer application. We also recommend you consult with your dealer for specific technical assistance related to your installation.

The charts provided should be used as a reference when building an enclosure for your subwoofer. The charts contain several enclosure types. The Sound Quality enclosure provides deeper, tighter, and more musical output to truly reproduce the original source material. The SPL enclosure fits the "basshead's" need for maximum output while sacrificing some sound quality. The normal enclosure is a balance between SPL and SQ.

## SEALED ENCLOSURE RECOMMENDATIONS

<b>SEALED VOLUME(cu.ft.)</b>	<b>Ti310d2 Ti310d4</b>	<b>Ti312d2 Ti312d4</b>
SPL	0.4	0.75
Normal	0.6	1.1
SQ	0.8	1.5

**SPL** = More overall output and compact enclosure size, but sacrifices some low bass and smooth overall output

**Normal** = **Recommended for most listeners.** Excellent blend of low bass, accurate and strong overall output

**SQ** = Smooth and exceptional low bass output, but larger enclosure size and sacrifices some overall output

Additional Notes:

- For vented enclosures a subsonic filter set at 30Hz to 40Hz is highly recommended.
- Sealed enclosure volumes INCLUDE THE DISPLACEMENT of the subwoofer.
- Vented enclosure volumes INCLUDE THE DISPLACEMENT of the subwoofer. But DO NOT include displacement of the vent.
- In many cases, a 4 inch round vent/port can be used instead of a rectangle/slot vent. This can reduce the vent length and simplify the enclosure construction. However, in some rare cases at high power a small amount of port noise maybe audible. The provided slot/rectangle ports will provide maximum performance and the most predictable results. Contact technical support for additional enclosure options.

**VENTED ENCLOSURE RECOMMENDATIONS**

<b>VENTED - SPL</b>	<i>Ti310d2 Ti310d4</i>	<i>Ti312d2 Ti312d4</i>
Volume(cu.ft.)	1.25	1.75
Vent Opening(in.)	2 x 10	2 x 12
Vent Length(in.)	24.5	23.5
Tuning Freq	40Hz	38Hz

  

<b>VENTED - Normal</b>	<i>Ti310d2 Ti310d4</i>	<i>Ti312d2 Ti312d4</i>
Volume(cu.ft.)	1.5	1.75
Vent Opening(in.)	2 x 10	2 x 12
Vent Length (in.)	25.5	28
Tuning Freq	36Hz	35Hz

  

<b>VENTED - SQ</b>	<i>Ti310d2 Ti310d4</i>	<i>Ti312d2 Ti312d4</i>
Volume(cu.ft.)	2.0	2.0
Vent Opening(in.)	2 x 10	2 x 12
Vent Length(in.)	24	29
Tuning Freq	32Hz	32Hz

**POWER HANDLING RECOMMENDATIONS**



- MINIMUM POWER RANGE:**  
Sub will perform correctly but not to its full potential.
- OPTIMAL POWER RANGE:**  
Sub will perform to its full potential with maximum reliability.
- DANGEROUS POWER RANGE:**  
Damage will occur during any extended period of playing time.

- 400w to 600w RMS is the optimal power range for any Ti3 subwoofer. In a sealed or vented enclosure, the woofer will play to its full potential with very high reliability.
- Powering a Ti3 woofer with more than 600w RMS will create excess heat in the motor and voice coil with minimal additional output.
- Contrary to popular car audio myths, subwoofers do not need as much power as you think. A well engineered subwoofer such as the Ti3, that has the proper balance of efficiency, compliance and excursion **will reach extremely loud levels with much less power than most users would expect.** Practice safe sound.

## SPECIFICATIONS

<b>T/S Parameters:</b>	<b>Ti310d2</b>	<b>Ti310d4</b>	<b>Ti312d2</b>	<b>Ti312d4</b>
Re (Dcr)	0.8	1.95	0.8	1.95
FS (Hz)	30.5	33.3	28.5	32.7
Sd (SqM)	.033	.033	.051	.051
BL (TM)	9.3	14.1	10.7	13.2
Qms	5.65	5.17	5.96	5.89
Qes	.454	.55	.47	.62
Qts	.42	.5	.43	.56
Vas (liters)	14.4	13.1	40.6	38.2
Cms (uM/N)	102.73	93.25	109.61	103.03
Mms (gms)	249.26	215.19	297.03	230.27
SPL	90dB	90dB	90dB	90dB
Impedance	Dual 2	Dual 4	Dual 2	Dual 4

\*Specifications subject to change

<b>Specifications:</b>	<b>Ti310d2 Ti310d4</b>	<b>Ti312d2 Ti312d4</b>
Optimal RMS Power Range	400 to 600 watts	400 to 600 watts
RMS Power Handling	600 watts	600 watts
Xmax (Peak to Peak)	40mm	40mm
Mounting Diameter**	9.25in - 235mm	10.86in - 276mm
Mounting Depth	6.22in - 158mm	6.88in - 175mm
Overall Mounting Diameter	10.66in - 271mm	12.63in - 321mm

\*\*Install Tip: Remove the rubber mounting gasket from the subwoofer and use it as a mounting hole template.

# PHOENIX GOLD

Phoenix Gold  
 A Division of AAMP of America™  
 15500 Lightwave Drive  
 Clearwater, Florida 33760  
 P: 866-788-4237  
 info@phoenixgold.com  
 www.phoenixgold.com  
 © 2015 AAMP of Florida, Inc

Designed and Engineered in the USA

### LIMITED WARRANTY

Phoenix Gold warrants this product to be free of defects in materials and workmanship for a period of one (1) year from the original date of purchase. This warranty is not transferable and applies only to the original purchaser from an authorized Phoenix Gold dealer in the United States of America only. Should service be necessary under this warranty for any reason due to manufacturing defect or malfunction, Phoenix Gold 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, failure to follow installation instructions, unauthorized repair attempts, misrepresentations by the seller. This warranty does not cover incidental or consequential damages and does not cover the cost of removing or reinstalling the unit(s). Cosmetic damage due to accident or normal wear and tear is not covered under warranty.

### INTERNATIONAL WARRANTIES:

Products purchased outside the United States of America are covered only by that country's Authorized Phoenix Gold reseller and not by Phoenix Gold. Consumers needing service or warranty information for these products must contact that country's reseller for information.