

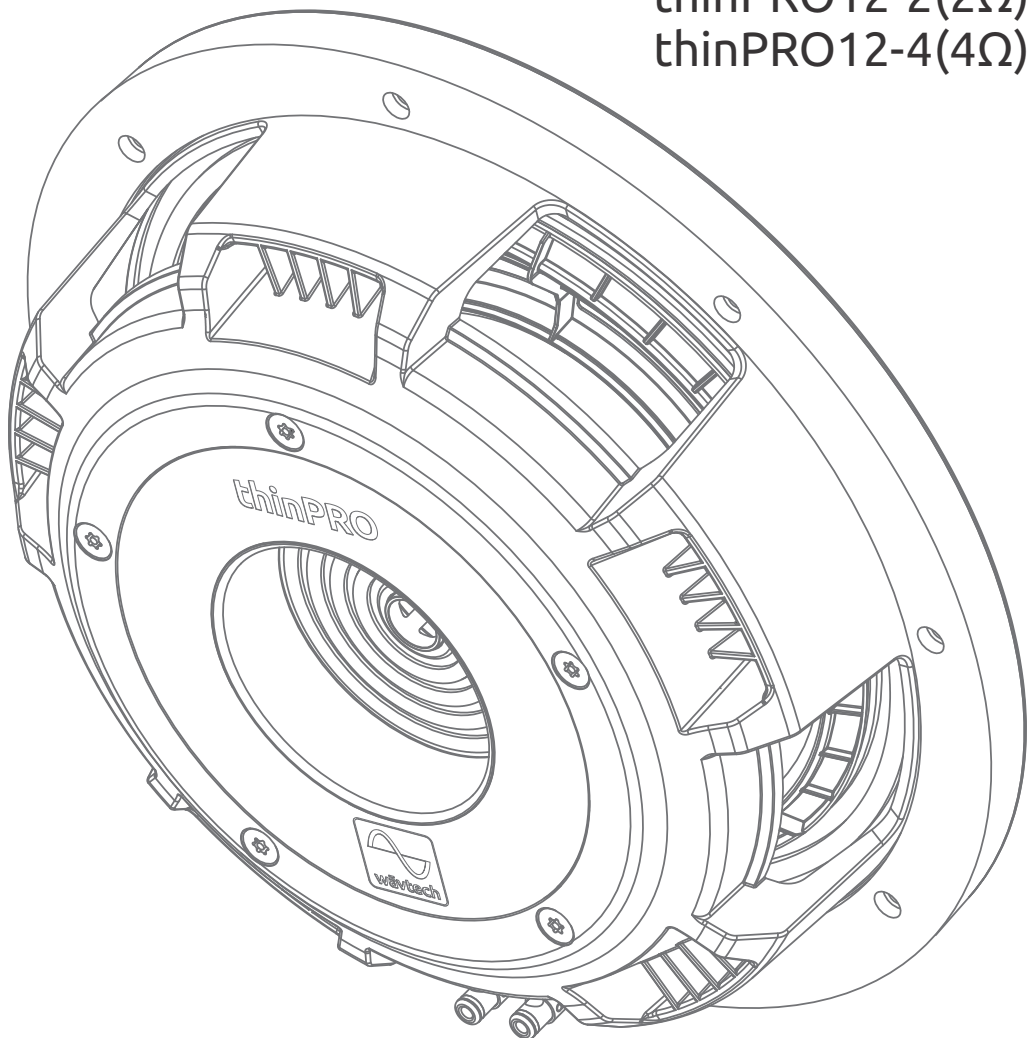
# thinPRO12

12-inch High Performance Thin Subwoofer

## Owner's Manual

thinPRO12-2(2 $\Omega$ )

thinPRO12-4(4 $\Omega$ )



[www.wavtech-usa.com](http://www.wavtech-usa.com)

# Introduction

Welcome to Wävttech, exceptional mobile audio products for audiophiles. Our products are engineered from the ground up to provide a truly remarkable listening experience with superior performance, sound quality and reliability. To maximize enjoyment of your new thinPRO12 subwoofer, please follow the recommended application guidelines and proper installation procedures. Ensure that the thinPRO12 is securely mounted in an enclosure that is firmly secured to the vehicle's structure. Always practice safe sound. Excess volume can obscure important sounds while driving, and continuous exposure to high sound pressure levels may cause permanent hearing loss.

## Features:

- 750W RMS / 2250W Peak Power Handling
- 3" Mounting Depth
- 54mm Peak-to-Peak Excursion
- 20mm Linear Xmax
- Honeycomb Nomex + Glass Fiber Composite Cone
- Reinforced Structure Force Transfer Assembly
- High Excursion Double-Roll NBR Surround
- 5" 4-Layer High-Temp Voice Coil
- High-Temp Vented Polyimide Composite Former
- Dual Internal Mirrored NBR Spiders
- FEA Optimized Dual Gap Motor Structure
- Reverse Mountable Gasket/Trim Ring Design
- 8AWG 2-Way Terminals
- Vented Cast Aluminum Frame

## General Specifications

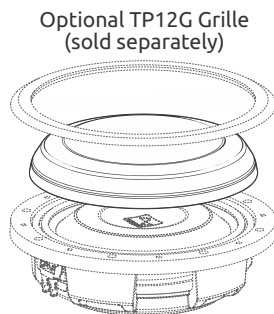
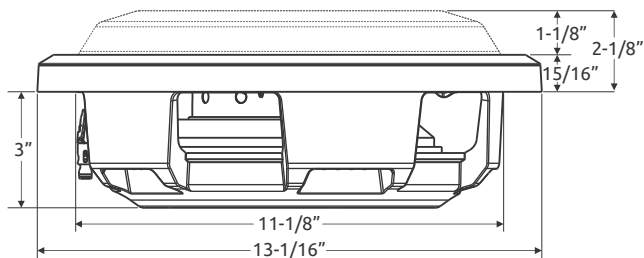
	thinPRO12-2	thinPro12-4
Nominal Size	12" (30cm)	
Nominal Impedance	2Ω	4Ω
Power Handling	750W RMS / 2250W Peak	
Recommended Power Range	250W-750W RMS	
Frequency Response	<Fs - 300Hz	<Fs - 300Hz
Voice Coil Diameter	5" (127 mm)	

## Electro-Mechanical Parameters

Fs	Free Air Resonance	25Hz	26Hz
Vas	Equivalent Stiffness	42L (1.48 ft <sup>3</sup> )	42L (1.48 ft <sup>3</sup> )
Re	Voice Coil DC Resistance	1.85Ω	3.3Ω
Le	Voice Coil Inductance	2.48mH	3.82mH
Qms	Mechanical Q	5.02	4.16
Qes	Electrical Q	0.55	0.51
Qts	Total Q	0.49	0.46
SPL	Sensitivity (1W/1m)	83dB	84dB
Sd	Cone Area	510.7 cm <sup>2</sup> (79.16in <sup>2</sup> )	
Xmax	Linear Excursion (one-way)	20 mm (0.79")	
Xmech <sub>p-p</sub>	Mechanical Excursion (peak-to-peak)	54mm (2.13")	

## Physical Specifications

Overall Diameter	with gasket	13-1/16" (331.5mm)
Mounting Depth	normal mount	3.0" (76.2mm)
Mounting Hole Diameter	normal/reverse mount	11-1/8" (282mm)
Mounting Screw Circle Diameter		11-13/16" (300mm)
Front Height	trim ring only, w/grille	15/16" (24.3mm), 2-1/8" (53.1mm)
Front Excursion Clearance	from cone, from baffle	1-1/8" (28.3mm), 2-1/16" (52.3mm)
Rear Clearance (not required)	from backplate	≥1/16" (1.5mm) recommended
Driver Displacement <sup>2</sup>	normal mount	negligible
	reverse mount	add +0.042ft <sup>3</sup> (+1.2L)



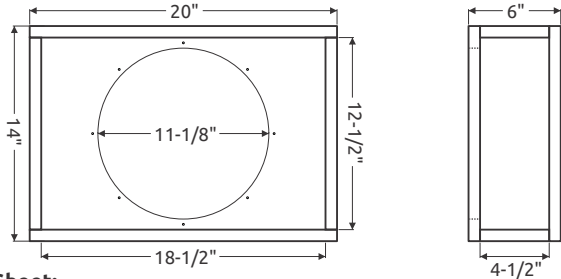
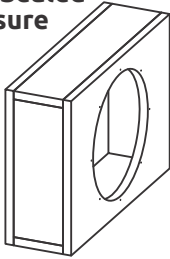
## Enclosure Information<sup>1</sup>

Enclosure Information <sup>1</sup>		thinPRO12-2	thinPro12-4
Recommended Enclosure Alignments		Sealed, Ported and Bandpass	
Sealed	Recommended Range	Net Internal Volume, Qtc	
	Preferred	0.4-1.0 ft <sup>3</sup> (11-28L), 0.7-1.0	
		External Dimensions <sup>2</sup>	
		14"H x 20"W x 6"D (35.6 x 50.8 x 15.2cm)	
		Internal Dimensions	
12-1/2"H x 18-1/2"W x 4-1/2"D (31.8 x 47 x 11.4cm)			
Net Internal Volume		0.6 ft <sup>3</sup> (17L)	
F <sub>3</sub> , ripple, Qtc		39Hz, +0.5dB, 0.86	42Hz, +0.2dB, 0.8
Ported <sup>3</sup>	Recommended Range	Net Internal Volume, Fb	
	Preferred	0.8-1.5 ft <sup>3</sup> (22L-47L), 22-35Hz	
		External Dimensions <sup>2</sup>	
		18.5"H x 36"W x 6"D (47 x 91.4 x 15.2cm)	
		Internal Dimensions	
		17"H x 34-1/2"W x 4-1/2"D (43.2 x 87.6 x 10.8cm)	
		Port Opening Dimensions	
		3-3/4"H x 4-1/4"W (9.5x10.8cm)	
		Port Area <sup>4</sup>	
15.94in <sup>2</sup> (102.8cm <sup>2</sup> )			
Port Length <sup>5</sup>		39" (99cm) with one bend	
Port Displacement <sup>2</sup>		0.43ft <sup>3</sup> (12.2L), incl. 45° corner insert	
Net Internal Volume		1.0ft <sup>3</sup> (28.3L)	
F <sub>3</sub> , ripple, Fb		28Hz, +3.4dB, 31Hz	28Hz, +2.4dB, 31Hz

**Notes:** All specifications are subject to change without notice.

- 1) All enclosure information assumes no leaks with normal fill (interior walls covered with acoustic damping material).
- 2) External dimensions, driver and port displacement for net volume are based upon all 3/4" enclosure construction.
- 3) A -24dB/oct. subsonic filter set at or below the tuning frequency (Fb) is recommended to prevent over-excitation.
- 4) Minimum recommended port area is 15.9in<sup>2</sup> (103cm<sup>2</sup>), or round equivalent port diameter of 4.5" (11.4cm). More port area and/or flaring is preferred when feasible, particularly for a larger enclosure with lower tuning frequency (Fb).
- 5) Smaller enclosures may require at least one internal bend to fit, or an external port for required length. For ports with one or more bends, actual tuning (Fb) will usually be lower than predicted by typical box programs for straight port length.

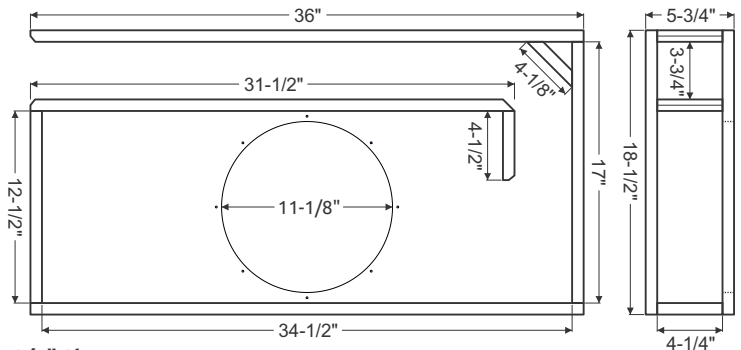
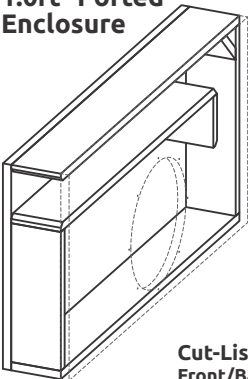
### 0.6ft<sup>3</sup> Sealed Enclosure



**Cut-List for 3/4" Sheet:**

**Front/Back:** (2) 20" x 14", **Top/Bottom:** (2) 20" x 4-1/2", **Sides:** (2) 12-1/2" x 4-1/2"

### 1.0ft<sup>3</sup> Ported Enclosure

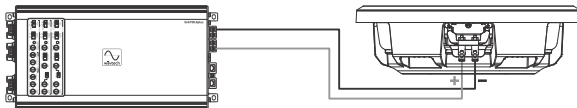


**Cut-List for 3/4" Sheet:**

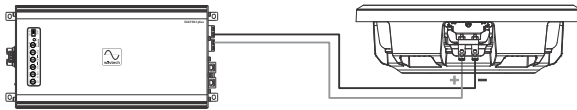
**Front/Back:** (2) 36" x 18-1/2" • **Top/Bottom:** (1) 36" x 4-1/4" w/45° chamfer and (1) 36" x 4-1/4" • **Sides:** (1) 12-1/2" x 4-1/4" and (1) 17" x 4-1/4" • **Port Shelf:** (1) 31-1/2" x 4-1/4" w/45° chamfer and 45° miter and (1) 4-1/2" x 4-1/4" w/45° chamfer • **Port Corner:** (1) 4-1/8" x 4-1/4" w/45° miters

# Amplifier Connection Examples

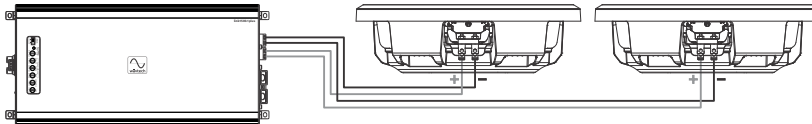
Bridged 4Ω Load (Single Sub)



2Ω Mono Load (Single Sub)



2Ω Mono Load (Dual Subs)



## Recommended Wävttech Amplifiers

Model	Channels	Min. Impedance	thinPRO12-2			thinPro12-4	
			Single Sub (2Ω)	Dual Subs		Single Sub (4Ω)	Dual Subs
				Series (4Ω)	Parallel (1Ω)		
link500.1mini	Mono	2Ω	500W	-	-	300W	250W each
link750.1plus	Mono	2Ω or 1Ω	750W	-	375W each	450W	375W each
link1000.1mini	Mono	2Ω	1000W*	300W each	-	600W	500W each
link1500.1plus	Mono	2Ω or 1Ω	-	450W each	750W each	900W*	750W each
link500.4mini	4ch	4Ω BTL	-	-	-	250W	-
link700.4plus	4ch	4Ω BTL	-	-	-	350W	-
link1000.5plus	5ch	2Ω	500W	-	-	300W	250W each

### Notes:

- Applications with a "-" means the power would be insufficient or too much, or total load is below minimum impedance.
- Applications with a "\*" means the power exceeds warranty rating, but may be done reliably under certain conditions.

## Warranty & Service Care

Wävttech warrants this product to be free from defects in material and workmanship for a period of one (1) year when purchased from an authorized Wävttech retailer within the United States. This warranty will be extended to a period of two (2) years when the installation is performed by an authorized Wävttech retailer. A valid sales receipt is required to verify eligibility of purchase and installation.

This warranty is valid only to the original purchaser and is not transferrable to subsequent parties. This warranty is void if the product serial number has been altered or removed. Any applicable implied warranties are limited in duration to a period of express warranty as provided herein beginning with the date of the original purchase at retail, and no warranties, whether expressed or implied, 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. You may also have other rights which vary from state to state.

If your product needs service, you should contact Wävttech Customer Service to receive a Return Authorization (RA) Number. Any product received without an RA number will be returned to sender. Once your product is received and inspected by customer service, Wävttech at its sole discretion, will repair or replace it with a new or remanufactured product at no charge. Damage caused by the following is not covered under warranty: accident, abuse, failure to follow instructions, misuse, modification, neglect, unauthorized repair or water damage. This warranty does not cover incidental or consequential damages. This warranty does not cover the cost of removing or reinstalling the product. Cosmetic damage and normal wear are not covered under warranty.

### For Service within the United States:

Wävttech Customer Service: (480) 454-7017  
Monday – Friday, 8:30am to 5:00pm MST

### Important Notice for International Customers:

For products purchased outside the United States of America or its Territories, please contact your local distributor concerning specific procedures for your country's warranty policy. International purchases are not covered by Wävttech, LLC.

**Wävttech®**

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