

Gladen RS-X-12

Gladen RS-X-12 High Performance 12" Subwoofer User Manual

Model: RS-X-12 | Brand: Gladen

INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your Gladen RS-X-12 High Performance 12" Subwoofer. Please read this manual thoroughly before use to ensure optimal performance and longevity of your product. Proper installation and care are crucial for the best audio experience and to prevent damage.



Image: Front view of the Gladen RS-X-12 High Performance 12 inch Subwoofer, showcasing its black cone, red stitching, and robust construction.

PRODUCT FEATURES

The Gladen RS-X-12 Subwoofer is engineered for high-performance audio reproduction, featuring robust components designed for durability and sound quality.

- **Vented Die-Cast Basket:** Provides structural rigidity and aids in cooling the voice coil.
- **Black Nomex Spider:** Ensures precise cone control and durability under high excursion.
- **Paper Cone:** Offers an optimal balance of stiffness and low mass for accurate sound reproduction.
- **PP-Dust Cap:** Protects the voice coil assembly from dust and debris.
- **12" (30 cm) Diameter:** Standard size for powerful bass output.
- **750/500 Watt Power Handling:** Capable of handling significant power for dynamic bass.
- **4 Ohm Impedance:** Compatible with a wide range of car audio amplifiers.
- **2.5" Voice Coil:** Designed for high power handling and thermal stability.
- **Coil Former:** Constructed from Aluminum for efficient heat dissipation.
- **Surround:** Made of durable Foam for optimal cone movement.

SETUP AND INSTALLATION

Proper installation is critical for the performance and longevity of your subwoofer. Consult a professional installer if you are unsure about any steps.

Physical Dimensions

- **External Diameter:** 317 mm / 12.48 inch
- **Installation Diameter:** 284 mm / 11.18 inch
- **Installation Depth:** 148 mm / 5.82 inch
- **Magnet Diameter:** 185 mm / 7.28 inch

Recommended Enclosure Volumes

For optimal performance, the RS-X-12 subwoofer is designed to operate within specific enclosure volumes:

- **Vented Box:** 48 liters (approximately 1.7 cubic feet)
- **Sealed Box:** 32 liters (approximately 1.1 cubic feet)

Ensure the enclosure is constructed from sturdy material and is airtight (for sealed boxes) or properly ported (for vented boxes) according to design specifications.

Wiring

Connect the subwoofer to your amplifier using appropriate gauge speaker wire. Ensure correct polarity (+ to + and - to -) to prevent phase issues and ensure proper sound reproduction. Refer to your amplifier's manual for specific wiring configurations and impedance matching.

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Speaker Specifications

Power	Pe	500 / 750 RMS/Nom
DC resistance	Rdc	3,71 Ω
Nominal impedance	ZN	4 Ω
Resonance frequency	fs	31,40 Hz
Voice coil diameter		3 inch
Xmax	+-	14 mm

Mechanical Q factor	Qms	4,92
Electrical Q factor	Qes	0,49
Total Q factor	Qts	0,45

Moving mass	Mms	149,97 g
Effective piston area	Sd	514 cm ²
Mechanical resistance	Rms	6,54 Kg/s
Compliance	Cms	0,17 mm/N
Force factor	BL	14,37 Tm
Equivalent air volume	Vas	63,57 dm ³

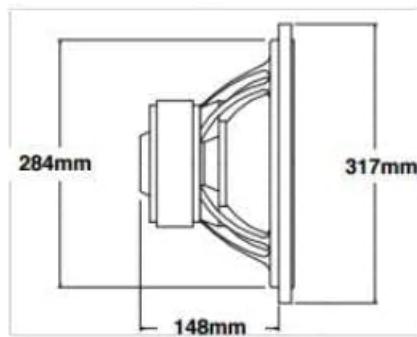
SPL 2,83V/1m 94,2 dB

Cone: Paper Spider: Nomex
Surround: Foam Coil former: Aluminum
Basket: Aluminum Dust cap: PP



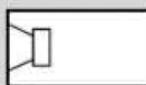
Diameter

External diameter	317 mm / 12,48 inch
Installation diameter	284 mm / 11,18 inch
Installation depth	148 mm / 5,82 inch
Magnet diameter	185 mm / 7,28 inch



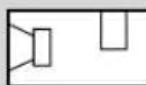
Recommended Boxes (including Ports and Drivers)

Sealed Box



V: 27 l
F: 49 Hz

Vented Box



V: 45 l
F: 43 Hz
d: 100 / 3,94 mm / inch
l: 23 / 7,87 mm / inch

GLADEN Europe GmbH, Bertha-Benz-Str.9, 72141 Walddorf-Häslach / Germany

Image: Technical diagram showing the Gladen RS-X-12 subwoofer's dimensions, detailed speaker specifications, and recommended sealed and vented box volumes.

OPERATING INSTRUCTIONS

Once installed, follow these guidelines for optimal operation:

- Break-in Period:** Allow a break-in period of approximately 10-20 hours of moderate listening before operating the subwoofer at high volumes. This allows the suspension components to loosen up and perform optimally.
- Gain Setting:** Set the amplifier gain correctly to match the output of your head unit. Incorrect gain

settings can lead to distortion and potential damage to the subwoofer. Avoid setting the gain too high.

- Crossover Settings:** Use the low-pass filter on your amplifier or head unit to send only low frequencies to the subwoofer. A typical crossover point for a 12-inch subwoofer is between 60 Hz and 100 Hz.
- Volume Control:** Always increase volume gradually. If you hear any distortion, reduce the volume immediately.
- Power Handling:** While the subwoofer has a high power rating, continuous operation at maximum power can lead to overheating. Monitor for signs of stress or excessive heat.

MAINTENANCE

Regular maintenance helps ensure the longevity and performance of your subwoofer.

- Cleaning:** Use a soft, dry cloth to gently wipe down the cone and surround. Avoid using harsh chemicals or excessive moisture.
- Inspection:** Periodically check the speaker terminals for secure connections and inspect the cone and surround for any signs of damage or wear.
- Environment:** Ensure the subwoofer is installed in a location free from excessive moisture, direct sunlight, and extreme temperatures.
- Ventilation:** If installed in an enclosure, ensure adequate ventilation around the amplifier to prevent overheating.

TROUBLESHOOTING

If you encounter issues with your subwoofer, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No Sound	No power to amplifier; loose wiring; amplifier in protect mode; incorrect input signal.	Check amplifier power, fuses, and ground connections. Verify all speaker and RCA cables are securely connected. Reset amplifier if in protect mode. Ensure head unit is sending an audio signal.
Distorted Sound	Amplifier gain too high; incorrect crossover settings; damaged subwoofer.	Reduce amplifier gain. Adjust crossover frequency. Inspect subwoofer cone and surround for physical damage.
Weak Bass	Incorrect phase; insufficient power; improper enclosure.	Check subwoofer phase setting (0 or 180 degrees). Ensure amplifier is providing adequate power. Verify enclosure volume and construction.
Overheating	Amplifier gain too high; inadequate ventilation; continuous high power usage.	Reduce amplifier gain. Ensure amplifier has proper airflow. Avoid prolonged operation at maximum volume.

SPECIFICATIONS

Detailed technical specifications for the Gladen RS-X-12 Subwoofer:

Specification	Value
Model Name	RS-X-12
Speaker Type	Subwoofer, Surround Sound
Subwoofer Diameter	12 Inches (30 cm)
Power (RMS/Max)	500W / 750W (RMS)
Speaker Maximum Output Power	1500 Watts (Peak)
Nominal Impedance	4 Ohms
DC Resistance (Re)	3.71 Ohms
Resonance Frequency (Fs)	31.40 Hz
Voice Coil Diameter	2.5 inches
Xmax	14 mm
Moving Mass (Mms)	149.97 g
Effective Piston Area (Sd)	514 cm ²
Mechanical Resistance (Rms)	6.54 Kg/s
Compliance (Cms)	0.17 mm/N
Force Factor (BL)	14.37
Equivalent Air Volume (Vas)	63.57 dm ³
Product Dimensions	14"D x 9"W x 14"H
Item Weight	18 Pounds
Mounting Type	Flush Mount
Is Waterproof	FALSE
Included Components	RS-X-12 Subwoofer

WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your purchase or visit the official Gladen website. Keep your proof of purchase for any warranty claims.

Manufacturer: Gladen

For further assistance, you may contact Gladen customer service through their official channels.

Related Documents

	<p>Gladden GENERIC 22 Tweeter - Technical Specifications and Safety Information Comprehensive details on the Gladden GENERIC 22 tweeter, including technical specifications, safety guidelines, and compatibility information for car audio systems.</p>
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Documents - Gladen – RS-X-12

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[\[pdf\] Specifications](#)

Speaker Specifications

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Nominal impedance	ZN 4 Ω
Resonance frequency	fs 31,40 HZ
Voice coil diameter	3 inch
Xmax	14 mm

Mechanical Q factor: Qms 4,92
Electrical Q factor: Qes 0,49
Total Q factor: Qts 0,45

Moving mass: Mms 149,97 g
Effective piston area: Sd 514 cm²
Mechanical resistance: Rms 6,64 kg/s
Compliance: Cms 0,17 mm/N
Force factor: Bl 14,27 Tm
Equivalent air volume: Vas 65,57 dm³

SP1,238/1m: 94,2 dB
Cone: Paper
Surround: Foam
Base: Aluminum

Sealed Box: F1-127, F1-40-HZ
Vented Box: F1-40-HZ
d: 180,234 mm / 7,100 in
L: 234,000 mm / 9,208 in

Diameter
External diameter: 317 mm / 12,46 inch
Installation diameter: 294 mm / 11,58 inch
Installation depth: 140 mm / 5,52 inch
Magnet diameter: 185 mm / 7,28 inch

Recommended Boxes (including Ports and Drivers)

Sealed Box: F1-127, F1-40-HZ
Vented Box: F1-40-HZ
d: 180,234 mm / 7,100 in
L: 234,000 mm / 9,208 in

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[\[pdf\] Specifications](#)

RS X12 X 12 Speaker Specifications Power Pe 500 750 RMS Nom DC resistance Rdc 3 71 Ω Nominal impedance ZN 4 Resonance frequency fs 31 40 HZ Voice coil diameter inch Xmax 14 mm Mechanical Q factor Qms 92 Electrical Qes 0 49 Total Qts 45 Moving mass Mms 149 97 g Effective piston area Sd 514 cm² Rms 6 54 Kg s Compliance Cms 17 N Force BL 20160502122656 rgsound it prodotti atch |||

RS-X 12 Speaker Specifications Power DC resistance Nominal impedance Resonance frequency Voice coil diameter Xmax Pe 500 / 750 RMS/Nom Rdc 3,71 ZN 4 fs 31,40 HZ 3 inch - 14 mm Mechanical Q factor Electrical Q factor Total Q factor Qms 4,92 Qes 0,49 Qts 0,45 Moving mass Effective pisto...

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