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› PIONEER A-Series TS-A120D4 12-inch Subwoofer User Manual

PIONEER TS-A120D4

PIONEER A-Series TS-A120D4 12-inch Subwoofer Instruction Manual

Model: TS-A120D4 | Brand: PIONEER

INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your PIONEER A-Series TS-A120D4 12-inch Subwoofer. Please read this manual thoroughly before use to ensure optimal performance and safety. The TS-A120D4 subwoofer is designed to enhance your in-car audio experience by delivering dynamic, high-impact bass.

SAFETY INFORMATION

Always observe the following safety precautions during installation and operation:

- Disconnect the vehicle's negative battery terminal before beginning any wiring to prevent electrical shorts.
- Ensure all wiring is properly insulated and secured to prevent damage from vibration or sharp edges.
- Do not install the subwoofer in locations that obstruct the driver's view or interfere with vehicle operation.
- Use appropriate gauge wiring for power and ground connections to handle the subwoofer's power requirements.
- Avoid prolonged exposure to excessively loud audio, which can cause hearing damage.
- Consult a professional installer if you are unsure about any aspect of the installation process.

WHAT'S IN THE BOX

Verify that all components are present before beginning installation:

- (1) PIONEER A-Series TS-A120D4 12-inch Component Subwoofer
- (1) Gasket
- (1) Trim ring
- (8) Mounting Screws
- Manual (English/French/Spanish)

SETUP AND INSTALLATION

Proper installation is crucial for optimal performance and longevity of your subwoofer. Follow these guidelines carefully.

Enclosure Recommendations

The TS-A120D4 subwoofer is designed for use in both sealed and ported enclosures. Choose the enclosure type that best suits your audio preferences and vehicle space.

- **Ported Enclosure:** Recommended volume of 1.5 cubic feet (42.5 L) with a port length of 6.5 inches and a 3-inch port diameter.
- **Sealed Enclosure:** Recommended volume of 1.25 cubic feet (35.4 L).

Mounting Dimensions

Ensure adequate space and proper cutout for the subwoofer installation.

- **Cutout Diameter:** 11 1/8 inches (28.26 cm)
- **Product Dimensions (Overall):** 6.5"D x 12.5"W x 12.5"H (16.5 cm D x 31.75 cm W x 31.75 cm H)
- **Mounting Depth:** 5.75 inches (146 mm)

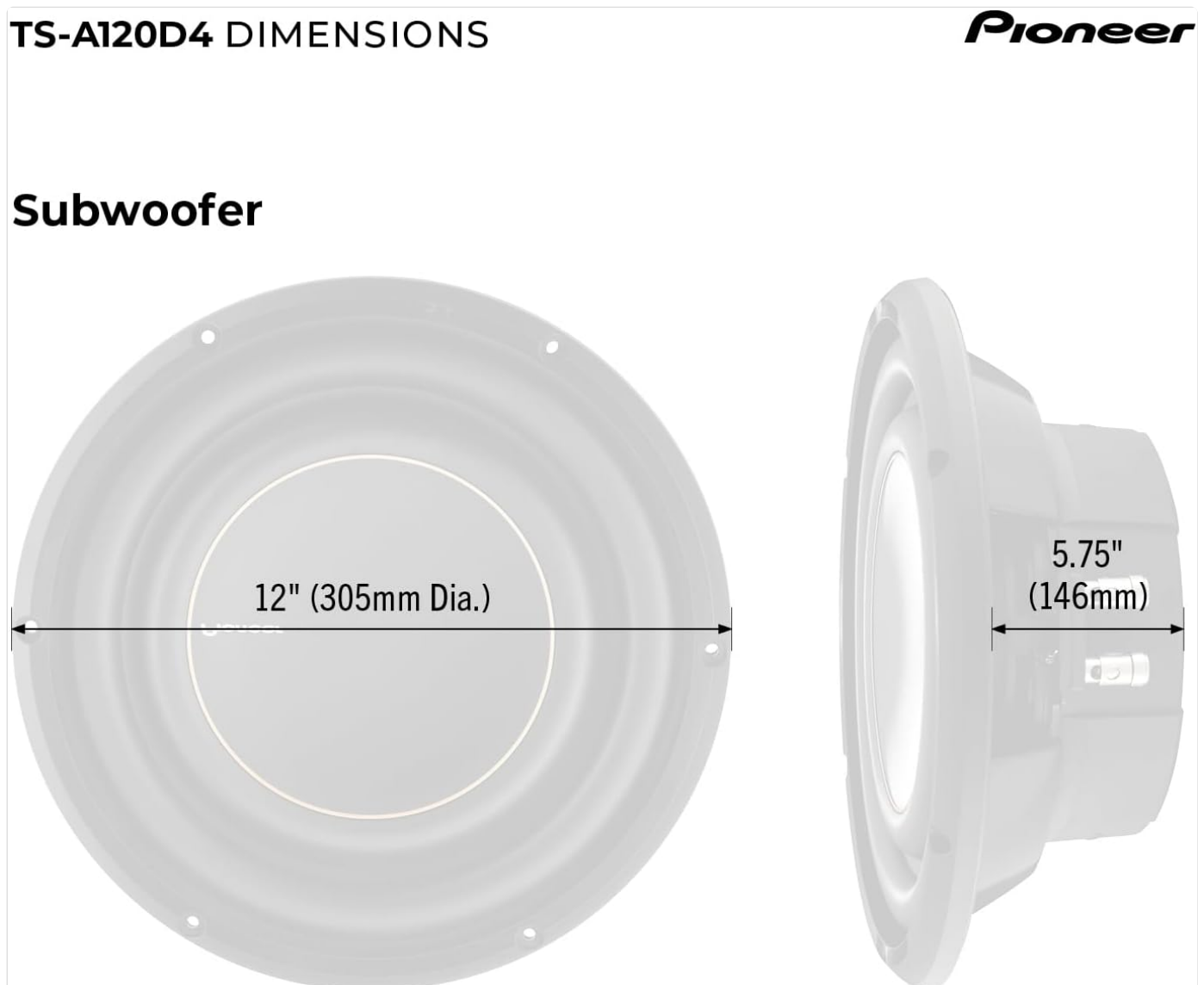
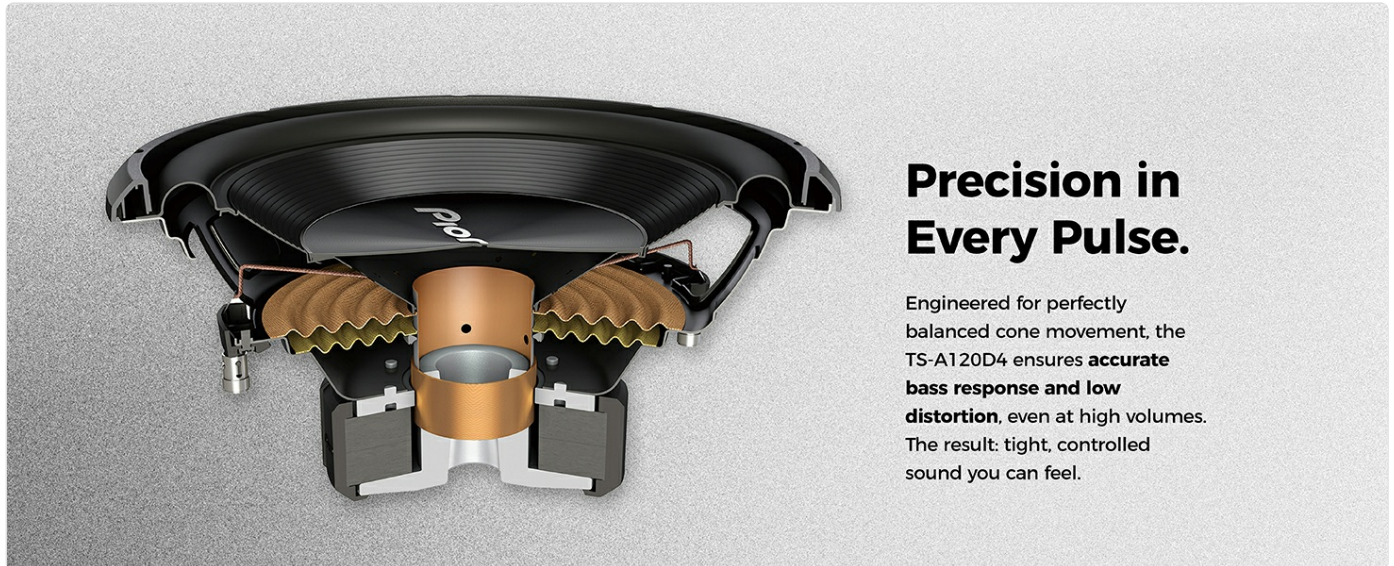


Figure 1: Diagram showing the dimensions of the Pioneer TS-A120D4 subwoofer, including a 12-inch diameter and 5.75-inch mounting depth.

Wiring

The TS-A120D4 features dual voice coils, allowing for flexible wiring configurations to match your amplifier's impedance requirements. Refer to your amplifier's manual for compatible impedance loads.

- **Impedance:** 2 Ohms (per voice coil)
- Ensure all connections are secure and free from corrosion.
- Use high-quality speaker wire of appropriate gauge for optimal power transfer and sound quality.



Precision in Every Pulse.

Engineered for perfectly balanced cone movement, the TS-A120D4 ensures **accurate bass response and low distortion**, even at high volumes. The result: tight, controlled sound you can feel.

Figure 2: Cutaway view of the Pioneer TS-A120D4 subwoofer, illustrating the internal components including the voice coil and magnet structure, designed for precise cone movement.

OPERATING INSTRUCTIONS

To achieve the best performance from your subwoofer, consider the following operational aspects:

Power Handling

The TS-A120D4 subwoofer is designed to handle significant power, providing deep and impactful bass.

- **Maximum Power Handling:** 1500 Watts
- **Continuous Power Handling (RMS):** 500 Watts
- Ensure your amplifier's RMS output matches the subwoofer's continuous power handling for optimal performance and to prevent damage.

77 db
SENSITIVITY

20 Hz–2.3 kHz
RESPONSE

High volume, clear sound

High sensitivity produces
clear and loud sound at lower
power without distortion.



Pioneer
A SERIES

TS-A120D4

Figure 3: Image displaying the power handling specifications for the Pioneer TS-A120D4 subwoofer, indicating 1500W maximum and 500W continuous power.

Frequency Response and Sensitivity

These characteristics define the subwoofer's sound reproduction capabilities.

- **Frequency Response:** 20 Hz to 2.3 kHz. This broad range ensures rich and immersive sound reproduction across various music genres.
- **Sensitivity:** 77 dB. A sensitivity rating of 77 dB allows the subwoofer to produce clear and loud sound even with lower power inputs, minimizing distortion at higher volumes.

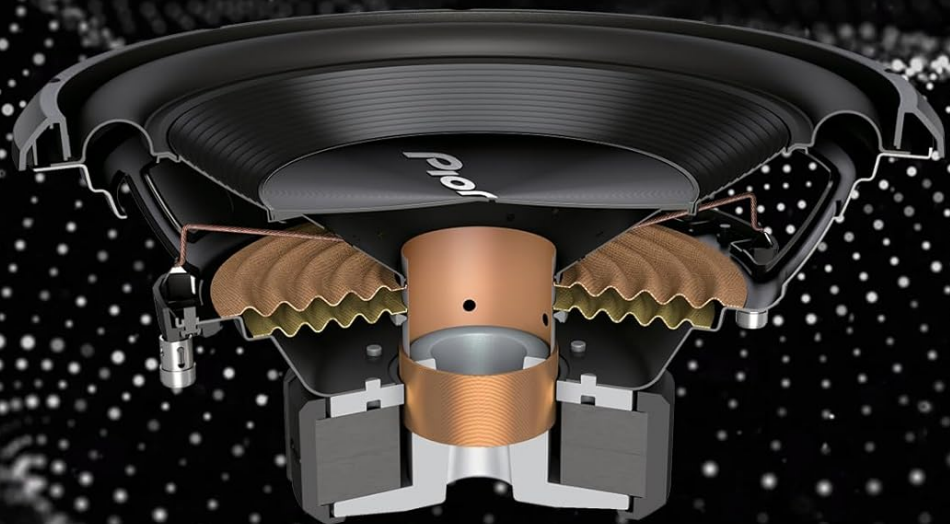
Crisp highs & deep lows

Dynamic bass that produces a broad range of audio frequencies for a rich & immersive experience.

MAX
1500 W

CONT.
500 W

POWER HANDLING



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TS-A120D4

Figure 4: Visual representation of the Pioneer TS-A120D4 subwoofer's sensitivity (77 dB) and frequency response (20 Hz - 2.3 kHz), highlighting its ability to produce high volume and clear sound.

MAINTENANCE

To ensure the longevity and continued performance of your PIONEER TS-A120D4 subwoofer, follow these simple maintenance tips:

- **Cleaning:** Use a soft, dry cloth to wipe down the subwoofer cone and surround. Avoid using harsh chemicals or abrasive cleaners, which can damage the material.
- **Inspection:** Periodically check the speaker cone and surround for any signs of damage, tears, or deterioration. Ensure all mounting screws are tight.
- **Environment:** While the subwoofer is designed for car use, it is not water-resistant. Protect it from direct exposure to water or excessive moisture.
- **Ventilation:** Ensure the subwoofer enclosure has adequate ventilation, especially if it's in a confined space, to prevent overheating of the voice coil.

TROUBLESHOOTING

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

Problem	Possible Cause	Solution
No Sound from Subwoofer	<ul style="list-style-type: none">Loose or disconnected wiringAmplifier not powered onIncorrect amplifier settingsDamaged subwoofer voice coil	<ul style="list-style-type: none">Check all power, ground, and signal cables.Verify amplifier power and remote turn-on connection.Adjust gain, crossover, and phase settings on the amplifier.Test subwoofer with a different amplifier or replace if damaged.
Distorted or Unclear Bass	<ul style="list-style-type: none">Amplifier gain set too highIncorrect crossover frequencySubwoofer over-powered or under-poweredLoose mounting or enclosure issues	<ul style="list-style-type: none">Reduce amplifier gain.Adjust low-pass filter (LPF) on amplifier to appropriate frequency (e.g., 80-120 Hz).Ensure amplifier RMS output matches subwoofer RMS handling.Check subwoofer mounting for tightness and inspect enclosure for air leaks.
Subwoofer Overheating	<ul style="list-style-type: none">Excessive power inputInadequate enclosure ventilationImproper impedance match	<ul style="list-style-type: none">Reduce amplifier gain or ensure RMS power is within limits.Ensure enclosure has proper airflow.Verify wiring configuration matches amplifier's stable impedance.

SPECIFICATIONS

Model Name	TS-A120D4
Speaker Type	Subwoofer
Subwoofer Diameter	12 Inches
Mounting Type	Flush Mount
Material	Butyl Rubber (Surround)
Maximum Power Handling	1500 Watts
Continuous Power Handling (RMS)	500 Watts
Impedance	2 Ohms (Dual Voice Coil)
Frequency Response	20 Hz - 2.3 kHz
Sensitivity	77 dB
Signal-to-Noise Ratio	127 dB
Cutout Diameter	11 1/8 inches (28.26 cm)
Mounting Depth	5.75 inches (146 mm)
Product Dimensions (D x W x H)	6.5" x 12.5" x 12.5" (16.5 cm x 31.75 cm x 31.75 cm)
Item Weight	10.3 Pounds (4.67 kg)
Recommended Uses	Car / Truck Audio Systems
Water Resistance Level	Not Water Resistant

WARRANTY INFORMATION

This PIONEER product is covered by a limited warranty. For specific details regarding warranty coverage, duration, and claims process, please refer to the warranty card included with your product or visit the official PIONEER website. Keep your purchase receipt as proof of purchase for any warranty claims.

SUPPORT

For further assistance, technical support, or inquiries regarding your PIONEER TS-A120D4 subwoofer, please contact PIONEER customer service or visit their official support website. You can find contact information and FAQs on the PIONEER website: www.pioneerelectronics.com/PUSA/Support