

BOSE® 5.1 SURROUND SOUND SYSTEM FOR PORSCHE MACAN



14 HIGH-PERFORMANCE SPEAKERS

- 1 One 8-cm neodymium mid-range speaker in the instrument panel.
- 2 Two 1.9-cm neodymium tweeters in the instrument panel.
- 3 Two 10-cm neodymium mid-range speakers in the front doors.
- 4 Two 22-cm Nd® woofers in the front doors.
- 5 Two 1.9-cm neodymium tweeters in the rear doors.
- 6 Two 16.5-cm neodymium low-mid-range speakers in the rear doors.
- 7 Two 8-cm neodymium mid-range speakers in the D-pillars.
- 8 One 20-cm neodymium woofer in a 13-litre custom-engineered bass enclosure below the cargo area.

SYSTEM ELECTRONICS

- 9 Digital amplifier in the left side panel of the boot with Bose Digital Signal Processing:
 - 9 channels of customised equalisation
 - AudioPilot® 2 Noise Compensation Technology
 - Centerpoint® 2 signal processing circuitry
 - SurroundStage® signal processing circuitry
 - 5.1 processing
- AudioPilot® 2 microphone mounted inside the cabin to monitor interior noise level.

Each part of the Bose sound system has been carefully engineered to work with the others for better performance. Replacing the factory-installed Porsche Communication Management (PCM) or CD-/DVD-Radio (CDR Plus) or any other sound system component can significantly reduce system performance.

BOSE
Better sound through research

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SYSTEM HIGHLIGHTS

BOSE SYSTEM DESIGN PHILOSOPHY

Every vehicle model is different, and each has its own unique acoustic signature. Whether it's a hatchback, a convertible or an SUV, the shape and materials of the cabin interior affect the sound quality differently. And just as every vehicle model is different, so too is each Bose sound system.

The Bose approach is based on the philosophy that superior sound quality is designed in from the start. 50 years of Bose research and experience have produced a deep understanding of acoustics, and how they can enhance – or detract from – the music.

- Every Bose sound system is as unique as the vehicle for which it's created
- Superior sound quality is designed into a vehicle from the start
- This system is customised specifically for the acoustics of the vehicle cabin

ND® WOOFER

The Bose proprietary Nd® woofer uses a neodymium iron boron magnet, which has 10 times the magnetic energy density of a conventional ferrite speaker magnet, allowing it to be much smaller, but just as powerful. The magnet and voice coil are placed inside the front of the speaker cone instead of protruding from behind it. This unconventional placement results in a remarkably slim profile – less than 60 mm thick. This allows the Nd® woofer to add depth and impact to the music while fitting unobtrusively into tight spaces.

- Proprietary Bose woofer design
- Powerful sound in a slim, lightweight speaker
- Uses a powerful, lightweight neodymium magnet
- Innovative design results in a remarkably slim profile
- Can be used in narrow spaces where an ordinary woofer might not fit

BASS MANAGEMENT

Bass management uses a proprietary algorithm, customised specifically for the acoustics of the vehicle cabin, which helps deliver music with more of the power and emotion of a live performance.

BOSE DIGITAL SIGNAL PROCESSING

To raise system performance to an even higher standard, Bose engineers developed a digital sound system for the vehicle. Proprietary Bose digital signal processing and multiple channels of custom equalisation help tune the sound specifically for the vehicle. Music sounds full and detailed, speech sounds natural, and the system can approach live performance levels without sounding distorted.

- Multiple channels of customer digital equalisation
- Music sounds full and detailed, speech sounds
- The system can approach live performance levels without sounding distorted

AUDIOPILOT® 2 NOISE COMPENSATION TECHNOLOGY

This patented Bose innovation helps preserve the high level of performance in a Bose premium sound system. AudioPilot® 2 technology constantly monitors and adjusts the music to compensate for the effects of unwanted outside sound and vehicle speed. It reacts to sustained noise sources but not intermittent ones, such as speed bumps. A microphone built into the cabin continuously monitors the overall sound level inside the vehicle. Plus, enhanced DSP algorithms allow faster and more effective compensation for unusual situations, such as driving on a very rough road or at high speeds. It all happens automatically, so there is much less need to adjust the audio controls to preserve the listening experience.

CENTERPOINT® 2 SURROUND TECHNOLOGY

Centerpoint® 2 surround technology enables listeners to enjoy a surround sound experience from almost any stereo source, including stereo CDs, MP3 devices, and satellite radio. It has been specifically engineered to meet the unique demands of reproducing surround sound in a vehicle. For example, Centerpoint® 2 technology can analyse the stereo signal and convert it to multiple channels allowing greater precision when reproducing the sound. In addition, this proprietary Bose technology uses an enhanced algorithm to simultaneously create a wider, more spacious sound field and allow listeners to hear each instrument as if it were positioned on stage at a live performance.

SURROUNDSTAGE® SIGNAL PROCESSING CIRCUITRY

In a home cinema setup, listeners generally arrange the speakers around the perimeter of the room. To get balanced sound, they sit right in the middle. But in a car, all the seats are off-centre, making it more challenging to deliver balanced surround sound to each listener. SurroundStage® circuitry delivers a balanced 360-degree sound field to each seat. This helps compensate for off-centre vehicle seating, so no matter where listeners sit they feel as though they are in the middle of the music. As a result, all listeners in the vehicle can enjoy high-quality, balanced surround sound, whether they are seated left or right, front or back.

DIGITAL 5.1 PROCESSING

This technology unlocks the full benefit of digital, 5.1-channel recordings for an experience previously reserved for cinemas and home cinemas.

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