



## BOSE INTRODUCES FIRST-OF-ITS-KIND PANARAY<sup>®</sup> SOUND SYSTEM FOR THE 2016 CADILLAC CT6

### Most Advanced Automotive Sound System Ever from Bose

March 26, 2015 -- Thirty-five years ago, Bose and Cadillac defined premium automotive audio, forever changing how people listen to music in a vehicle. And today, Bose introduces its most advanced and highest-performing automotive sound system since then -- the Bose<sup>®</sup> Panaray<sup>®</sup> system, designed exclusively for Cadillac's CT6 sedan.

The 2016 CT6 is a first in its segment, combining the prestige and technology of a range-topping vehicle with the dynamics and efficiency of a smaller one. Its Panaray system marks the global debut offering of Bose Automotive's new line of "Advanced Technology Series" sound systems, and integrates technologies and design elements from Bose home entertainment and professional audio products to deliver unprecedented performance in a car.

"We asked Bose to create something truly special for this new vehicle: a sound system unbounded by limits, providing an audio experience that hasn't been matched in any other luxury automobile," said Travis Hester, Cadillac CT6 executive chief engineer. "Cadillac CT6 customers will be elated by what they hear and feel when they switch on the Bose Panaray system."

The Bose<sup>®</sup> Panaray<sup>®</sup> system reproduces music with more clarity, precision, and deep bass than any other system preceding it. It combines advanced, proprietary Bose digital signal processing with 34 speakers -- nearly all measuring less than 4 inches (100mm) in diameter -- strategically positioned throughout the Cadillac CT6 cabin.

"There are no short-cuts to this kind of performance," said Marc Mansell, vice president, Bose Automotive Systems Division. "The Bose Panaray system uses a bold design architecture, and it was made possible by continuous, relentless research. That's how we established the category with Cadillac over three decades ago. We were obsessed with performance then, and we still are."

#### **First Automotive Application of Bose Home & Pro Speaker Designs**

Bose automotive engineers drew inspiration from Bose sound systems designed for the home, public spaces, and some of the world's most famous live music venues.

Bose professional products use articulated arrays -- a series of small speakers set in alternating directions -- to produce sound at a wider angle, creating a broader and more consistent sound stage for the audience. This design is applied for the first time in an automotive system with the dual tweeters located in the A-pillars and rear doors of the CT6.

Bose engineers then integrated line arrays, also used in Bose professional systems and home entertainment systems. These clusters of small speakers point in the same direction -- focusing sound directly on the listener instead of relying on reflective surfaces. Line arrays are located in the CT6 center instrument panel (IP) and rear-center console.

The center IP array includes a cluster of three 2-inch (50mm) speakers housed in a first-of-its-kind motorized centerfill enclosure that rises out of the dashboard when the Panaray<sup>®</sup> system is activated for remarkably precise music reproduction up-front, complemented by a 4-inch (100mm) speaker in each corner of the IP. The rear-center array includes a pair of 2-inch (50mm) speakers for optimal sound imaging in back.

#### **Powerful New Bass Box Designs to Minimize Vibration**

The Bose<sup>®</sup> Panaray system delivers powerful bass performance without distortion, rattle, or unwanted vibration inside the CT6 cabin, even at the highest volume settings.

Several compact high-excursion woofers -- the same kind found in Bose home entertainment systems -- were combined with a new bass box design that produces the low-note output of a much larger enclosure.

Two Bose PowerProfile™ Low Frequency Enclosures, custom-engineered exclusively for the Cadillac CT6, are built into the floor under the driver and front passenger seats. Bose PowerProfile enclosures measure just over 3.5 inches (9.25 cm) high, and contain four 2.75-inch (70mm) speakers mounted side-by-side and back-to-back to maximize the distribution of low frequencies without shaking and buzzing.

Additional Panaray system bass sources include 4-inch (100mm) speakers in each front and rear door -- housed in ported enclosures -- and an upgraded 10-inch high-power Nd® woofer mounted on the CT6 rear shelf between a pair of 2.5-inch (60mm) rear-fill speakers.

“The bass performance of the Panaray® system is more than heard -- it’s felt,” Mansell said. “But true to Bose, it’s not exaggerated or boosted. It’s as real as it gets.”

### **Advanced Digital Signal Processing and Software**

The Bose® Panaray system is driven by a new amplifier platform with nearly twice the processing power of previous Bose offerings. New proprietary technologies running on the amplifier include:

- Bose Centerpoint® 3 technology, upgraded for the Panaray system, featuring 12 channels of stereo-to-surround digital signal processing -- twice that of the previous version. Centerpoint 3 signal processing uses a proprietary Bose algorithm to analyze the stereo signal and convert it into multiple channels, enabling greater detail when reproducing music from nearly any source.
- Bose Advanced Staging Technology, bringing listeners closer to the feeling of a front-row concert by replicating the acoustic separation between instruments and vocals.
- Improved Bose TrueSpace® signal processing, which works with each pair of Bose UltraNearfield™ headrest speakers built into the driver and passenger seats.
- Enhanced Bose SurroundStage® technology, delivering a balanced, 360-degree sound field for each passenger position in the CT6, while compensating for off-center seating.

The CT6 includes three levels of Bose sound, with the Panaray system available in higher-tier packages. A 10-speaker Bose Centerpoint surround sound system and an 8-speaker Bose system is also available. Option packages and pricing will be available from Cadillac closer to vehicle launch.

### **About Bose Automotive Systems**

In the early 1980s, Bose engineers created the world’s first factory-installed premium sound systems for General Motors luxury automobiles. Unlike conventional or aftermarket automotive systems, Bose® systems were designed and tuned for a specific vehicle -- and changed the industry.

Since then, Bose has developed proprietary speaker designs, advanced amplification and signal processing technologies, exclusive analysis and design tools, and technology for managing engine and powertrain sounds inside vehicles -- all based on a heritage of research and engineering.

Today, Bose automotive sound systems are recognized globally as the industry benchmark for performance and customer satisfaction. For more information, visit [Bose.com/auto](http://Bose.com/auto).

### **About Bose Corporation**

Bose Corporation was founded in 1964 by Dr. Amar G. Bose, then a professor of electrical engineering at the Massachusetts Institute of Technology. Today, the company is driven by its founding principles, investing in long-term research with one fundamental goal: to develop new technologies with real customer benefits. Bose innovations have spanned decades and industries, creating and transforming categories in audio and beyond. Bose products for the home, in the car, on the go, and in public spaces have become iconic.

From the company’s home entertainment systems and Wave® music systems, to high-quality audio and noise cancelling headphones, digital music systems, Bluetooth® speakers, and professional solutions, Bose has changed the way people listen to music.

Bose Corporation is privately held. The company’s spirit of invention, passion for excellence, and commitment to extraordinary customer experiences can be found around the world -- everywhere Bose does business.

The Bluetooth® word mark is a registered trademark owned by Bluetooth SIG, Inc. and any use of such mark by Bose Corporation is under license.