YAMAHA

YST-SW216

Advanced YST II, Front-Firing Active Subwoofer

NEW PRODUCT BULLETIN

Sets the standard for subwoofers in this class with high dynamic power and low-noise performance thanks to Advanced YST II, a Linear Port, front-firing design and other sophisticated features.

Advanced YST

- Advanced YST II (Yamaha Active Servo Technology II)
- Front-firing active subwoofer
- Linear Port for minimizing extraneous noise
- 25cm (10") long-stroke cone driver with magnetic shielding
- High 100W dynamic power
- 25–180Hz low frequency response
- Selectable high-cut filter

YST-SW216 Main Specifications

Dynamic Power	100 W
Output Power (5 ohms, 100Hz, 10% THD)	50 W
Frequency Response	25–180 Hz
Driver	25cm (10") long-stroke cone
Dimensions (W x H x D)	340 x 340 x 385 mm 13-3/8" x 13-3/8" x 15-3/16"
Weight	11.2 kg; 28.7 lbs.

d-cinema Yamaha takes cinema digital

"d-cinema" is the slogan of Yamaha A/V products and technology, reflecting our focus on digital technology and our leadership in creating and refining digital home theatre.

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The Subwoofer: a Vital Part of Your System

DVDs and digital music sources hold a huge amount of audio data, including a considerable amount in the low frequency range. Multi-channel sound formats dedicate an entire channel to the low frequencies (the ".1" in 5.1-channel sound), used to deliver the bass in music and explosions, thunder and other low frequency sound effects in movies. Ordinary speakers are not large and robust enough to handle these frequencies, especially for long periods. This is where the subwoofer comes in. By outputting bass sounds with high power and low distortion, it ensures that you are not missing anything, and it also makes the overall sound richer and properly balanced. A subwoofer is thus a vital part of any home theatre or even music-focused system.

Advanced YST II for Awesome Deep Bass

Yamaha's newly developed Advanced YST II (Yamaha Active Servo Technology II) combines negative-impedance and constant-current principles to drive the speaker cone with even tighter control than previously. Using Advanced Negative Impedance Converter (ANIC) circuits, this system dynamically optimizes effective speaker impedance to maintain excellent linearity. This means more stable and accurate low range response, not to mention higher sound pressure levels, for more natural and energetic bass reproduction.

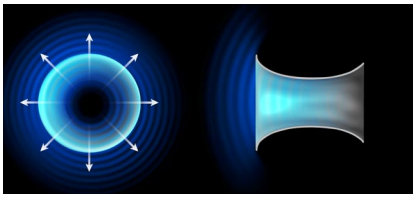
Front-Firing Active Design

The subwoofer features a high performance front-firing, active design. It provides power and detailed, accurate reproduction in a compact unit. Good bass is more than just pounding — it's important for the full sonic enjoyment of games, music and especially movies.

Linear Port

The Linear Port provides smooth bass response during playback and minimizing extraneous noise.

Effect of New "Half Pipe" Port



Advanced YST II produces rich bass sound, and the addition of a Linear Port reduces extraneous noise for even higher quality.

Large (25cm; 10") Long-Stroke Cone Driver with Magnetic Shielding

The powerful, long-stroke cone driver is exceptionally large (25cm; 10") for this class of subwoofer. Magnetic shielding means there is no distortion-causing interference when the speaker is placed near a TV or other monitor.

100W Dynamic Power

Capable of handling 100W of dynamic power, this subwoofer ensures that you hear all bass sounds, even the loudest short bursts, with fast attack and total clarity.

Other Notable Features

- 25–180Hz low frequency response
- Selectable high-cut filter
- High-density MDF cabinet

Advanced YST Brings You Super Bass.

The effectiveness of Advanced YST (Yamaha Active Servo Technology) is based upon two principles: the Helmholtz Resonator and negative-impedance drive. Active Servo Processing speakers reproduce the bass frequencies through an "air woofer," which is a port or opening in the speaker cabinet. This port is used instead of, and performs the functions of, a conventional woofer. Low amplitude signals inside the cabinet can, due to the Helmholtz Resonance principle, be output from this port as high amplitude waves if the design is such that the size of the port and the volume of the cabinet are in a certain proportion. In addition, the wave amplitudes inside the cabinet must be precise and of sufficient power, in order to overcome the "load" presented by the air within the cabinet.

This is accomplished by employing an amplifier that is capable of supplying special signals. If the electrical resistance of the voice coil could be reduced to zero, the movement of the speaker unit would become linear with respect to signal voltage. To achieve this, a special negative-impedance output drive amplifier is used, so the impedances cancel out and become zero.

By employing negative-impedance drive circuits, the amplifier is able to generate precise, low-amplitude low frequency waves with superior damping characteristics. These waves are then radiated from the cabinet opening as high amplitude signals. This amplifier/speaker combination is capable of reproducing an extremely wide range of frequencies with excellent sound quality and low distortion.

The Advanced YST takes this concept a stop further by adopting Advanced Negative Impedance Converter (ANIC) circuits. These circuits allow the converter to dynamically vary in order to select the optimum values for speaker impedance variation. With these new circuits, Advanced Yamaha Active Servo Technology provides more stable performance and higher sound pressure levels than the former system, resulting in more natural and energetic bass reproduction.