

# GENELEC®



The Genelec AOW312 is a three-way active loudspeaker designed for medium sized, high quality home theater applications. This system excels as side or rear channels when mounted on-wall. It also offers minimum intrusion into designed spaces while providing high sound pressure levels required when employing Genelec's large three-way systems for left, center, and right positions and HTS6 series subwoofer in rooms greater than 260 m<sup>3</sup> (9000 cu. ft.)

Designed as an active loudspeaker system, it contains multiple driver and power amplifiers, active crossover filters and protection circuitry.

The unique Directivity Control Waveguide™ (DCW™) technology developed

by Genelec provides extremely stable and accurate imaging and frequency balance even in difficult acoustic environments. Furthermore, versatile and precise crossover controls allow for accurate matching of the loudspeakers systems to different room acoustic conditions.

The AOW312 is fixed to the wall via unique mounting brackets which isolate and suspend the

cabinet vertically. The brackets also allow the cabinets to be mounted with a  $\pm 15$  degree angle offset to the wall to facilitate energy focus at desired listening locations.

All electronics are factory calibrated as a single unit eliminating the effects of component tolerances and ensuring consistent quality and long term reliability.

Low frequencies are reproduced by a 305 mm (12") bass driver with a low frequency extension down to 35 Hz. The 130 mm (5") midrange cone and 25 mm (1") HF driver are loaded into the proprietary Directivity Control Waveguide as found on the HT312 and HT315 models.

The amplifier unit contains an active crossover, the ideal method for dividing an input signal between the driver units, allow-

ing the overall response of the system to be optimized to an extent impossible with a passive system. Variable input sensitivity as well as XLR line level input connectors provide easy connection and accurate level matching to the preamplifier or surround decoder. The bass, midrange and treble amplifiers of the AOW312 produce 180 W for the low frequency driver and 120 W each for the mid-range and HF drivers.

The amplifiers are designed to operate at very low THD and IM distortion values and are capable of driving the AOW312 to peak output levels in excess of 123 dB SPL at 2 m with music material.

Like all Genelec HT models, the AOW312 incorporates special circuitry for driver overload and amplifier thermal protection, as well as an "Autostart" function for automatic switching between "Standby" and "On" power modes. A 12 V trigger or external switch or relay type remote control also provides power mode switching.

The 7U remote amplifier modules are supplied with 19" rack-mount metalwork and Neutrik Speakon connectors are provided to facilitate wiring and system connection at customer facilities.

Where high quality and high output are essential the AOW312 will bring a new level of delivery and application to the custom home theater as well as the commercial installer.

# AOW312 Data Sheet

## SYSTEM SPECIFICATIONS

	AOW312
Lower cut-off frequency, -3 dB Upper cut-off frequency, -3 dB Free field frequency response of system	≤35 Hz ≥22 kHz 37 Hz - 21 kHz (±2.5 dB)
Maximum short term sine wave acoustic output on axis in half space, averaged from 100 Hz to 3 kHz	@ 1 m ≥116 dB SPL
Maximum long term RMS acoustic output in same conditions with IEC-weighted noise (limited by driver unit protection circuit)	@ 1 m ≥107 dB SPL
Maximum peak acoustic output per pair above console with music material	@ 2 m ≥123 dB
Self generated noise level in free field @ 2 m on axis	≤15 dB (A weighted)
Harmonic distortion at 95 dB SPL at 1m on axis:	freq. ≤100 Hz <1% freq. >100 Hz <0.5%
Drivers Bass Midrange Treble	305 mm (12") cone 130 mm (5") cone 25 mm (1") metal dome
Weight Loudspeaker Amplifier	43 kg (95 lb) 8 kg (18 lb)
Loudspeaker dimensions Height Width Depth	1500 mm (59 1/16") 400 mm (15 3/4") 175 mm (6 7/8")
Amplifier dimensions Height Width Depth	310 mm (12 7/32") 483 mm (19") 106 mm (4 3/16")*
	*Note that the cable connectors require additional >100 mm (4") space behind the amplifier

## AMPLIFIER SECTION

	AOW312
Bass amplifier short term output power	180 W (4 Ohm load)
Midrange amplifier short term output power with an 8 Ohm load	120 W
Treble amplifier short term output power with an 8 Ohm load	120 W
	Long term output power is limited by driver unit protection circuitry.
Slew rate	80V/μs
Amplifier system distortion at nominal output THD SMPTE-IM CCIF-IM DIM 100	≤0.05% ≤0.05% ≤0.05% ≤0.05%
Signal to Noise ratio, referred to full output Bass Midrange Treble	≥100 dB ≥100 dB ≥100 dB
Mains voltage	100/200V or 115/230V
Voltage operating range	nominal ±10%
Power consumption Idle Full output	50 W 300 W

## CROSSOVER SECTION

	AOW312
Input connector XLR female	pin 1 gnd pin 2 + pin 3 -
Input impedance	10 kOhm
Input level for 100 dB SPL output @ 1m	variable from +6 to -6 dBu
Input level for maximum short term output	variable from +22 to +10 dBu for 116 dB SPL @ 1m
Subsonic filter	18 dB/octave below 35 Hz
Ultrasonic filter	12 dB/octave above 25 kHz
Crossover frequency Bass/Mid Mid/Treble	420 Hz 3.2 kHz
Crossover acoustical slopes	18 - 24 dB/octave
Crossover level control operating range in 1 dB steps Bass Mid Treble	from 0 to -6 dB from 0 to -6 dB from 0 to -6 dB
Bass roll-off control in 2 dB steps	from 0 to -8 dB @35 Hz
Bass tilt control in 2 dB steps	from 0 to -8 dB @80 Hz
	The 'CAL' position is with all tone controls set to 'off' and input sensitivity control to maximum.

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International enquiries:  
Genelec, Olivitie 5  
FIN-74100, Iisalmi, Finland  
Phone +358 17 83881  
Fax +358 17 812 267  
Email genelec@genelec.com

In the U.S. please contact:  
Genelec, Inc., 7 Tech Circle  
Natick, MA 01760, U.S.A.  
Phone +1 508 652 0900  
Fax +1 508 652 0909  
Email genelec.usa@genelec.com

In China please contact:  
Beijing Genelec Audio Co. Ltd.  
Jianwai SOHO, Tower 12, Room 2306  
39 East 3rd Ring Road  
Chaoyang District, Beijing 100022, China  
Phone +86 0 5869 7915  
Fax +86 10 5869 7914

In Sweden please contact:  
Genelec Sverige  
Box 5521, S-141 05 Huddinge  
Phone +46 8 449 5220  
Fax +46 8 708 7071  
Email info@genelec.com