

HT324A and HT324AC

Data Sheet

Genelec HT324A and HT324AC Three-Way Active Loudspeakers

GENELEC®



Genelec HT324A and HT324AC are three-way active loudspeakers designed for large sized high quality Home Theater systems.

Designed as active systems, they consist of a large loudspeaker enclosure with multiple drivers and a standard 7 units 19" equipment rack which contains active crossover filters, three channel power amplifiers and driver protection circuitry. The dedicated center channel version HT324AC offers a slim solution and a perfect match to the HT324A, where space is insufficient for the standard enclosure.

Such active system design allows the amplifiers and the drivers to be calibrated as a single unit in the factory. This eliminates the effects of component tolerances and ensures consistent quality and long term reliability.

These systems excel when flush-mounted into a solid wall structure. The unique Directivity Control Waveguide™ (DCW™) Technology developed by Genelec provides extremely stable and accurate imaging even in difficult and large acoustic environments. It also results in

perfect phase and delay uniformity at the crossover frequency together with a very smooth frequency balance that provides outstanding soundstage definition. Furthermore, versatile and precise crossover controls allow for accurate matching of the loudspeaker systems to different room acoustic conditions.

On both systems the low frequencies are reproduced by two long throw 305 mm (12") bass drivers featuring a -3dB point at 32 Hz. Both models also share the same midrange and high frequency driver layout consisting of a Genelec proprietary 130 mm (5") midrange cone driver and a 25 mm (1") metal dome HF driver loaded by the proprietary Directivity Control Waveguide™. All drivers are magnetically shielded.

The amplifier unit contains an active crossover. This is the ideal method for dividing the input signal between the driver units, allowing the overall response of the system to be optimized to an extent impossible with a passive system. Variable input sensitivity and XLR line level input connector provide easy connection and accurate level matching to the preamplifier

or decoder. The bass, midrange and treble amplifiers of both HT324A and HT324AC systems produce 2 x 400 W, 350 W and 120 W of short term power. The amplifiers are designed to operate at very low THD and IM distortion values and are capable of driving a stereo system to peak output levels in excess of 125 dB SPL at 2 m (HT324A and HT324AC). The electronics have been carefully designed to ensure the highest subjective sound quality currently possible.

The amplification unit incorporates special circuitry for driver overload and amplifier thermal protection. The power mode which switches the unit between "Standby" and "On" mode can be changed with a 12 V trigger voltage. An LED indicator on the DCW™ plate displays the system status. A standard 10 m cable is supplied for the loudspeaker connection. Longer lengths are available upon special order.

Contact your local Genelec dealer for an audition and see Genelec's Home Theater website www.genelec-ht.com for more information on Genelec's Home Theater loudspeaker line.

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SYSTEM SPECIFICATIONS

	HT324A	HT324AC
Lower cut-off frequency, -3 dB Upper cut-off frequency, -3 dB Free field frequency response of system	≤ 32 Hz ≥ 20 kHz 33 Hz - 20 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 ≥ 123 dB SPL	
Maximum long term RMS acoustic output in same conditions with IEC-weighted noise (limited by driver unit protection circuit)	@ 1 m ≥ 118 dB SPL	
Maximum peak acoustic output per pair @ 2 m with music material	≥ 125 dB	
Self generated noise level in free field @ 2 m on axis	≤ 15 dB (A weighted)	
Harmonic distortion at 95 dB SPL at 1 m on axis:	Freq: 50...200 Hz 200...10 kHz	< 1% < 0.5
Drivers Bass Midrange Treble All drivers are magnetically shielded	Bass 2 x 305 mm (12") Mid 1 x 130 mm (5") Mid 1 x 130 mm (5")	
Weight Loudspeaker Amplifier	73 kg (161 lb) 30 kg (66 lb)	84 kg (185 lb) 30 kg (66 lb)
Loudspeaker dimensions Height Width Depth	700 mm (27 9/16") 890 mm (35") 383 mm (15 1/16") *	489 mm (19 1/8") 1210 mm (47 5/8") 412 mm (16 1/4")
Amplifier dimensions Height Width Depth	310 mm (12 3/16") 483 mm (19") 250 mm (9 13/16") *	310 mm (12 3/16") 483 mm (19") 250 mm (9 13/16") *
	* Note that the cable connectors require additional 100 mm (4") of space behind both the amplifier and the loudspeaker cabinet.	

AMPLIFIER SECTION

	HT324A	HT324AC
Bass amplifier short term output power with an 8 Ohm load	2 x 400 W	
Midrange amplifier short term output power with an 8 Ohm load	350 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	80 V/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	70 W 1000 W	
Remote control	Remote controlled Standby/On switching by 12 V trigger	

CROSSOVER SECTION

	HT324A	HT324AC
Input connector XLR female	pin 1 gnd pin 2 + pin 3 -	
Input impedance	10 kOhm balanced	
Input level for 100 dB SPL output @ 1m	variable from +6 to -6 dBu	
Input level for maximum short term output of 126 dB SPL @ 1 m	variable from +32 to +20 dBu	
Subsonic filter below 27 Hz	18 dB/octave	
Ultrasonic filter above 22 kHz	12 dB/octave	
Crossover frequency Bass/Mid Mid/Treble	400 Hz 3.2 kHz	
Crossover acoustical slopes	>24 dB/octave	
Crossover level control operating range in 1 dB steps Bass Mid Treble	from 0 to -6 dB & MUTE from 0 to -6 dB & MUTE from 0 to -6 dB & MUTE	
Bass roll-off control in 2 dB steps	from 0 to -8 dB @ 32 Hz	
Bass tilt control in 2 dB steps	from 0 to -8 dB @ 50 Hz	
	The 'CAL' position is with all tone controls set to 'off' and input sensitivity control to maximum and corresponds to maximally flat free field response..	