

HT320AC

Data Sheet
Genelec HT320AC
Three-Way Active Loudspeaker

GENELEC®



The Genelec HT320AC is a three-way active loudspeaker designed for medium sized high quality Home Theater systems.

The HT320AC is a dedicated, magnetically shielded center channel version of the matching HT315A, offering a slim and compact solution where space is insufficient for the standard enclosure. Designed as an active loudspeaker system, it contains a loudspeaker cabinet with multiple drivers and a separate 19" rack mount chassis containing power amplifiers, active crossover filters and protection circuitry. There is also a 10 meter loudspeaker cable to allow convenient placement of the amplifier unit. The loudspeaker performs best when flush-mounted into a solid wall structure.

The unique Directivity Control Waveguide™ (DCW™) Technology developed by Genelec provides extremely stable and accurate imaging and frequency balance even in difficult acoustic environments. It also results in perfect phase and delay uniformity at the crossover frequency. Furthermore, versatile and precise crossover controls allow for accurate matching of

the loudspeaker system to different room acoustic conditions.

Every amplifier is calibrated individually with its designated loudspeaker unit before packing. This eliminates the effects of component tolerances and ensures consistent quality and long term reliability.

The low frequencies are reproduced by two long throw 250 mm (10") bass drivers featuring a -3 dB point at 33 Hz. The HT320AC model shares the same midrange and high frequency driver layout with the HT315A, 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 to minimize stray magnetic field and interference.

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 the HT320A produce 400 W, 120 W and 120 W respectively 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 124 dB SPL at 2 m with music material.

The amplification units incorporate special circuitry for driver overload and amplifier thermal protection, as well as an "Autostart" function for automatic switching between "Standby" and "On" power modes. The power mode can also be changed with a 12 V trigger voltage or external switch or relay type remote control. An LED indicator on the DCW™ plate displays the system status. "Autostart" and "Remote control" functions can be enabled or disabled as required by using the switches on the amplifier panel.

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

	HT320AC
Lower cut-off frequency, -3 dB Upper cut-off frequency, -3 dB Free field frequency response of system	≤33 Hz ≥20 kHz 35 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 ≥120 dB SPL
Maximum long term RMS acoustic output in same conditions with IEC-weighted noise (limited by driver unit protection circuit)	@ 1 m ≥116 dB SPL
Maximum peak acoustic output per pair above console with music material	@ 2 m ≥124 dB
Self generated noise level in free field @ 2 m on axis	≤ 15 dBA
Harmonic distortion at 95 dB SPL at 1m on axis:	freq. 50...100 Hz <1% freq. >100 Hz <0.5%
Drivers Bass Midrange Treble All drivers are magnetically shielded	2 x 250 mm (10") cone 130 mm (5") cone 25 mm (1") metal dome
Weight Loudspeaker Amplifier	60 kg (130 lb) 14 kg (31 lb)
Loudspeaker dimensions Height Width Depth*	350 mm (13 3/8") 950 mm (37 3/8") 453 mm (17 7/8")
Amplifier dimensions Height Width Depth*	530 mm (20 7/8") 480 mm (18 7/8") 113 mm (4 7/16")
	* Note that the cable connectors require additional 100 mm (4") of space behind the loudspeaker cabinet and the amplifier.

AMPLIFIER SECTION

	HT320AC
Bass amplifier short term output power	400 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	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	60 W 500 W
Autostart	Signal sensing Standby/On switching
Remote control	Remote controlled Standby/On switching by 12 V trigger or external switch

CROSSOVER SECTION

	HT320AC
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 +26 to +14 dBu for 120 dB SPL @ 1m
Subsonic filter	18 dB/octave below 33 Hz
Ultrasonic filter	12 dB/octave above 25 kHz
Crossover frequency Bass/Mid Mid/Treble	410 Hz 3 kHz
Crossover acoustical slopes	24 - 32 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 @ 33 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.