

HT320BC

Data Sheet

Genelec HT320BC
Three-Way Active Loudspeaker

GENELEC®



The Genelec HT320BC is a three-way active loudspeaker designed for medium sized high quality Home Theater systems.

The HT320BC is a dedicated, magnetically shielded center channel version of the matching HT315B, offering a 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 3U RAM5 amplifier unit containing power amplifiers, active crossover filters and protection circuitry. Neutrik Speakon connectors are provided to facilitate wiring and system connection at customer facilities. 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 HT320BC model shares the same midrange and high frequency driver layout with the HT315B, 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 accu-

rate level matching to the preamplifier or decoder. The RAM5 amplifier unit of the HT312BC has a 400 W amplifier for the low frequency driver and 120 W amplifiers each for midrange and treble drivers. 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 123 dB SPL at 2 m with music material.

The RAM5 amplifier 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. 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.

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

	HT320BC
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 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) 15 kg (33 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*	133 mm (5 1/4") (3 U) 483 mm (19") 380 mm (15")*
	* Note that the cable connectors require additional 100 mm (4") of space behind the loudspeaker cabinet and the amplifier.

AMPLIFIER SECTION

	HT320BC
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

	HT320BC
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.