



Applications

• Audio Recording • Broadcast Control Rooms • Pre Production & Composing Studios • Drama Studios • TV Control Rooms • Post Production • Mastering Suites

System

The Genelec 1038CF is a compact three-way active monitoring loudspeaker including drivers, multiple power amplifiers and active crossovers.

The Directivity Control Waveguide™ (DCW™) Technology developed by Genelec provides excellent stereo imaging and frequency balance even in difficult acoustic environments. Versatile crossover controls allow for precise matching of the loudspeaker system to different acoustic conditions. The system can be used in both vertical and horizontal orientations by simply rotating the DCW unit.

The Genelec 1038CF is very easy to use as only mains power and a balanced input signal are needed. The performance is optimized because the loudspeaker and amplifiers are built as a single integrated, matched and calibrated package. The rugged amplifier unit is mounted into the enclosure with vibration isolators which also act as quick release hinges making maintenance operations very easy and straightforward. The loudspeaker

cabinet is constructed of painted MDF, which is heavily braced to eliminate structural resonances.

Drivers

The low frequencies are reproduced by two 210 mm (8") bass drivers. The low frequency (-3 dB) cutoff point is 55 Hz and the high frequency response extends up to 20 kHz (-3 dB).

The midrange and high frequency driver layout features a proprietary 130 mm (5") direct radiating cone for the MF and a 25 mm (1") metal dome for the HF loaded by proprietary Directivity Control Waveguide.

All drivers are magnetically shielded.

Crossover filters

The active crossover network consists of three parallel bandpass filters. The crossover frequencies are 420 Hz and 3.2 kHz. Bass, midrange and treble level controls with 1 dB steps are included in the crossover to obtain uniform frequency balance in different acoustic conditions. The Bass Tilt and Roll-off controls both have four 2 dB steps to allow refined

low frequency response tailoring. The crossover network is driven by an active balanced input stage, fed by a 3 pin XLR connector. Variable input sensitivity allows for accurate level matching to console output section.

Amplifiers

The bass, midrange and treble amplifiers on the 1038CF produce 180 W, 120 W and 120 W of short term power. The amplifiers are designed to operate at very low THD and IM distortion values and incorporate special circuitry for driver overload protection and amplifier thermal protection.

Mounting options

The Genelec 1038CF has an M10x30 thread on both sides of the enclosure and one M10x30 thread above the amplifier on the back of the enclosure. These can be used for securing the loudspeaker in its place. There is also an adapter for a 35 mm tube type loudspeaker stand at the bottom of the enclosure.

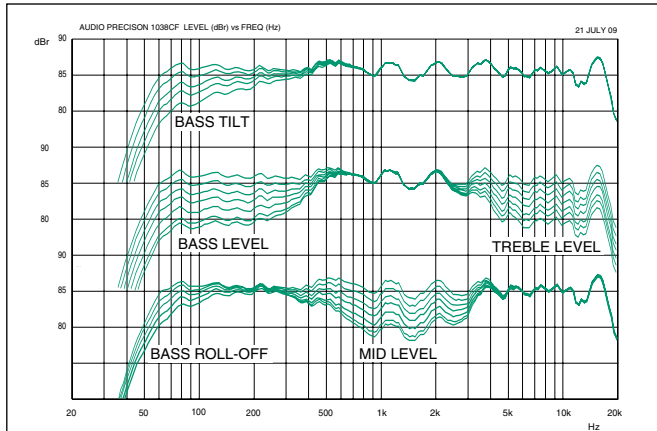


Figure 1: The curves above show the effect of the 'bass', 'mid' and 'treble' level controls, and the 'bass tilt' and 'bass roll-off' controls on the free field response of the 1038CF, measured at 2 m.

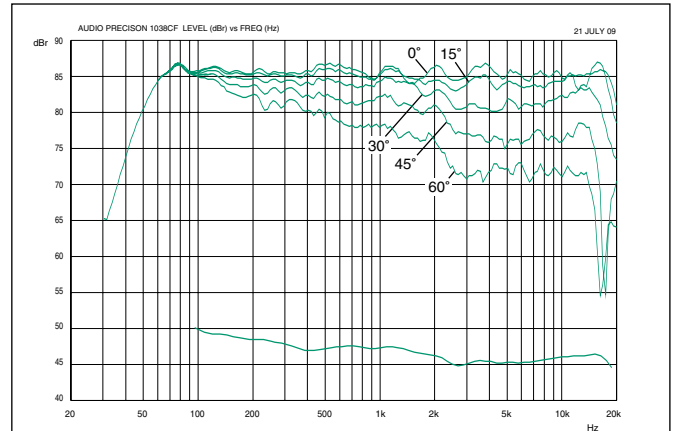


Figure 2: The upper curve group shows the horizontal directivity characteristics of the 1038CF in its vertical configuration measured at 2 m. The lower curve is a 1/6 octave power response measurement, derived from 144 individual directivity measurements.

SYSTEM SPECIFICATIONS

	1038CF
Lower cut-off frequency, -3 dB	≤ 55 Hz
Upper cut-off frequency, -3 dB	≥ 20 kHz
Free field frequency response	57 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 ≥ 117 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 with music material	@ 2 m ≥ 124 dB
Self generated noise level in half space at 1 m on axis (A-weighted)	≤ 15 dB
Harmonic distortion at 90 dB SPL at 1 m on axis Freq: 60...100 Hz > 100 Hz	< 1 % < 0.5 %
Drivers Bass Midrange Treble	2 x 210 mm (8") cone 125 mm (5") cone 25 mm (1") metal dome All drivers are magnetically shielded
Weight	39 kg (87 lb)
Dimensions Height Width Depth	610 mm (24") 470 mm (18 7/8") 235 mm (9 1/4")

AMPLIFIER SECTION

	1038CF
Bass amplifier short term output power Midrange amplifier short term output power Treble amplifier short term output power	180 W at 4 Ohm load 120 W at 8 Ohm load 120 W at 8 Ohm load
Long term output power is limited by driver unit protection circuitry	
Slew rate	80 V/us
Amplifier system THD at nominal output	< 0.08 %
Signal to Noise ratio, referred to full output Bass Midrange Treble	≥ 100 dB ≥ 100 dB ≥ 100 dB
Mains voltage Mains voltage operating range	100/200 or 115/230 V ± 10 %
Power consumption (average) Idle Full output	50 VA 300 VA

CROSSOVER SECTION

	1038CF
Signal input connector XLR female, balanced 10 kOhm	pin 1 gnd, pin 2 +, pin 3 -
Input level for 100 dB SPL output at 1 m	Adjustable from +6 to -6 dBu
Crossover frequency Bass/Mid Mid/Treble	420 Hz 3.0 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 @ 55 Hz
Bass Tilt control in 2 dB steps	from 0 to -8 dB & MUTE @ 80 Hz
	The 'CAL' position is with all tone controls set to 'off' and input sensitivity control to maximum.