Genelec 1036A
Control Room Monitoring System
The Genelec 1036A is an extremely powerful monitor system, designed for large control rooms. It consists of a 430 net filter speaker enclosure and a 19" electronics rack, which contains active crossovers, three channel power amplifiers and sophisticated protection and diagnostic circuitry. The 1036A is designed for flush mounting in the control room wall, although it may be used free standing and can be used in both vertical and horizontal orientations by simply rotating the DCW unit.

PROTECTION CIRCUITRY
The Audio Processing Unit (APU), which contains the crossover, also contains diagnostic and protection circuits. These monitor the amplifier channels for each driver and will automatically reduce the monitor's input gain, to protect a driver from overload and distortion. Reducing the gain of the entire monitor, rather than just that of the overloaded channel, preserves its frequency balance. The protection circuitry also guards against DC, shorting and excessive temperature, and will take appropriate action to prevent damage. LED displays show the system's condition in detail on the APU front panel and in summarized form on the loudspeaker enclosure.

AMPLIFIERS
The treble, midrange and bass amplifiers produce 300, 600 and 2 x 1100 watts of short term power, respectively, with very low harmonic and inter-modulation distortion. The electronics have been carefully designed to ensure the highest subjective sound quality currently possible. Thermal protection is provided for the amplifiers. A standard 5 m, 10 core cable is supplied for the speaker connection. Longer lengths are available on application.
The curves above show the effect of the bass, mid and treble level controls, 15 kHz roll-off control and the bass tilt and roll-off controls on the free field response, measured at 2 m.

The high and mid frequency drivers are mounted in a DCW to match their dispersion characteristics. The DCW may be rotated for horizontal or vertical mounting.

Soffit (flush) mounting of a loudspeaker removes problems caused by diffraction effects and reflections from the wall behind it: Diffraction of sound at the loudspeaker cabinet edges degrades the transient response and directional properties, while reflections will cause interference, potentially leading to large dips in the frequency response. The use of DCW Technology reduces these effects to a large extent and the 1036A has versatile crossover controls to compensate for variations due to different speaker positioning. This allows it to be used either soffit mounted or as a free standing unit without using external equalization, although soffit mounting is recommended.
## SYSTEM SPECIFICATIONS

Lower cut-off frequency, \(-3 \text{ dB} \leq 19 \text{ Hz}\)  
Upper cut-off frequency, \(-3 \text{ dB} \geq 22 \text{ kHz}\)  
Free field frequency response of system: 21 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:  
\(\leq 131 \text{ dB SPL}\)  
Maximum long term RMS acoustic output in same conditions with IEC-weighted noise (limited by driver unit protection circuitry):  
\(\leq 126 \text{ dB SPL}\)  
Maximum peak acoustic output per pair \(\leq 2 \text{ m}\) from the engineer with music material:  
\(\leq 136 \text{ dB}\)  
Self generated noise level in free field \(\leq 20 \text{ dBA}\)  
Harmonic distortion at 100 dB SPL  
\(\leq 1\%\)  
\(\leq 0.5\%\)  
\(\leq 3\%\)  
Drivers:  
\(2 \times 460 \text{ mm (18\'' cone}}\)  
\(2 \times 120 \text{ mm (5\’\’) cone}}\)  
\(1 \times 25 \text{ mm (1\’\’) compression driver}}\)  
Weight:  
Speaker 182 kg (401 lb)  
Amplifier 71 kg (156 lb)  
Speaker dimensions (Horizontal mounting):  
Height 960 mm (37 \(\frac{3}{4}\)\’)  
Width 1180 mm (46 \(\frac{1}{2}\)\’)  
Depth 650 mm (25 \(\frac{3}{4}\)\’)  
Amplifier dimensions:  
Height 755 mm (29 \(\frac{3}{4}\)\’)  
Width 483 mm (19\’)  
Depth 370 mm (14 \(\frac{3}{4}\)\’)  
Input connector: XLR female  
Input impedance: 10 k\(\Omega\) balanced  
Input level for 110 dB SPL output \(\leq 2\) m from:  
variable from +15 to -5 dBu  
Input level for maximum short term output of 131 dB SPL \(\leq 2\) m from:  
variable from +36 to +16 dBu  
Subsonic filter below 18 Hz: 18 dB/octave  
Ultrasonic filter above 22 kHz: 12 dB/octave  
Crossover frequencies:  
Bass/Mid 400 Hz  
Mid/Treble 3.5 kHz  
Crossover acoustical slopes:  
\(>24 \text{ dB/octave}\)  
Level control operating range in 1 dB steps:  
Bass from 0 to -6 dB & MUTE  
Mid from 0 to -6 dB & MUTE  
Treble from 0 to -6 dB & MUTE  
Bass roll-off control in 2 dB steps:  
from 0 to -8 dB @ 30 Hz  
Bass tilt control operating range in 2 dB steps:  
from 0 to -8 dB @ 50 Hz  
Treble roll-off control operating range in 1 dB steps:  
from +1 to -3 dB @ 15 kHz  
The ‘CAL’ position is with all tone controls set to ‘off’ and input sensitivity control to maximum and corresponds to a maximally flat free field response.