



Genelec 1030A
Bi-amplified Monitoring System

Data sheet



1030A Bi-amplified Active Monitoring System



APPLICATIONS

Near Field Monitoring

Broadcast Monitoring

Surround Sound Monitoring

TV Control Rooms

Mobile Vans

Video Post Production

Project / Home Studios

Digital Workstations

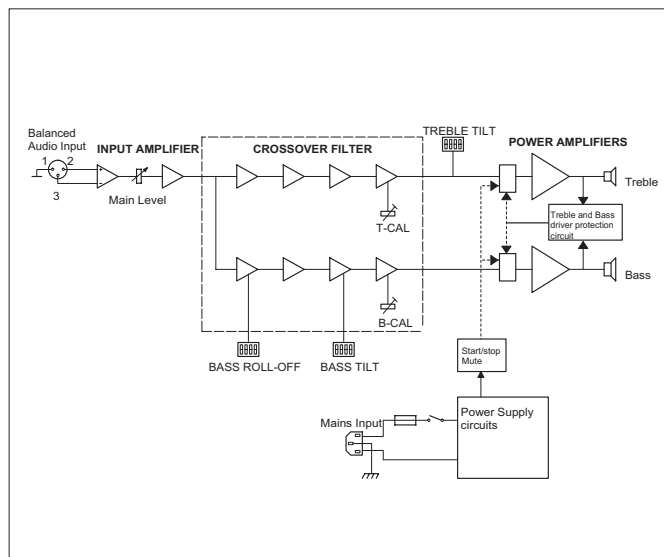
SYSTEM

The Genelec 1030A is a very compact bi-amplified active monitor system, which has performance comparable to much larger systems. The vented speaker enclosure has an amplifier unit set into the back. This unit contains an active electronic crossover, overload protection circuitry and two power amplifiers: one for each driver. The system's excellent dispersion and precise imaging together with its compact size make it ideal for near field monitoring, broadcast and TV control rooms, mobile vans, home studios and travelling engineers. Genelec's unique Directivity Control Waveguide (DCW) technology is used to provide excellent stereo imaging and frequency balance, even in difficult acoustic environments and the versatile crossover controls allow further matching of the system to its surroundings. A

pair of 1030As can produce peak acoustic levels of over 115 dB SPL at 1m. The speakers may be used in vertical or horizontal orientation.

INTEGRATED CONSTRUCTION

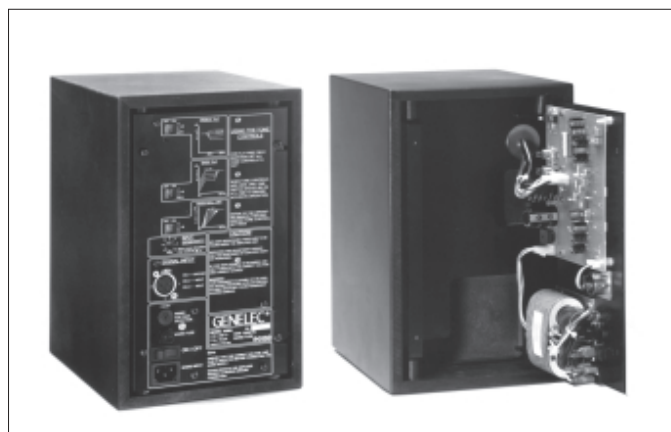
Because the amplifiers are built into the speaker enclosure, the only connections required are the mains supply and the line level input signal, making the 1030A very easy to set up and use. The integrated design allows the amplifiers and the drivers to be calibrated as a single unit, thus eliminating the effects of component tolerances and ensuring consistent quality. The MDF cabinet has rounded corners and a hard-wearing painted outer surface and this simple, rugged construction and the pivoting anti-vibration amplifier mounting make maintenance very easy and straightforward.



Block diagram, showing active crossover filters, power amplifiers and driver units.

AMPLIFIERS

The bass and treble amplifiers produce 80 W and 50 W of short term power respectively, with very low THD and IM distortion values, and are designed to ensure the highest subjective sound quality currently possible. The amplifier unit also contains circuitry that detects levels above the drivers' safe limits and prevents any damage, making the system immune to overloads and spurious signals which digital equipment and synthesizers often produce.



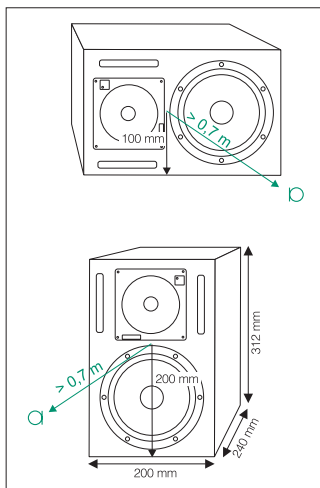
The two channel amplifier is housed in the speaker cabinet



Horizontal mounting



Vertical mounting



The reference axis lies between bass and treble drivers.

CROSSOVER FILTERS

The amplifier unit contains an active crossover, a feature more commonly used in large and expensive control room monitors. This is the ideal method for dividing the input signal between the driver units, and allows the overall response of the system to be optimized to an extent impossible with a passive system.

To maintain uniform frequency balance in differing acoustic environments, three special calibrated controls are included in the active crossover network: treble and bass 'tilt' and bass 'roll-off' switches, which make adjustments in 2 dB steps. The system input is a balanced XLR, with adjustable sensitivity, to allow easy signal matching with the mixing console output.

DRIVERS

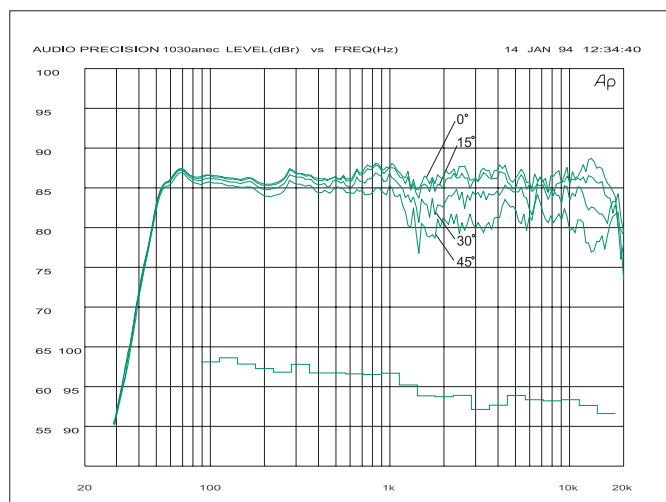
A 19 mm ($\frac{3}{4}$ ") metal dome driver, loaded by a proprietary DCW, is used to reproduce the high frequencies.

The bass driver is a high efficiency 170 mm ($6\frac{1}{2}$ ") polymer composite cone driver in a 6.5 liter vented cabinet. The -3 dB frequency is 52 Hz and the low frequency response extends down to 47 Hz. (-6dB)

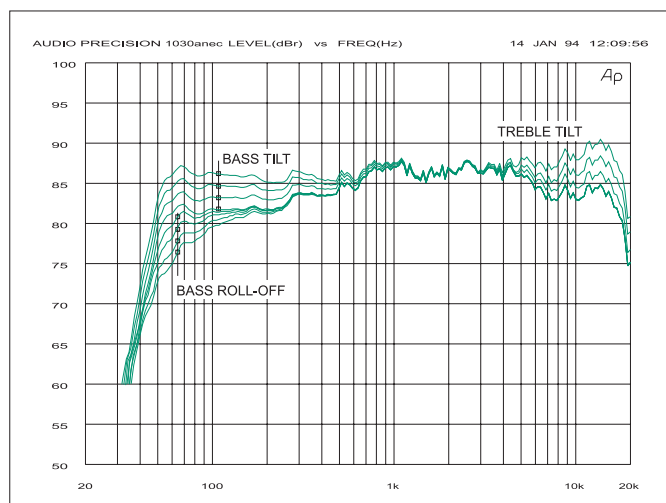
Both drivers are magnetically shielded for applications such as video post production, where stray magnetic fields must be minimized.



Calibrated 'Tilt' switch. MUTE disconnects the channel for testing.



The upper curve group shows the horizontal directivity characteristics of 1030A measured at 1 m. The lower curve is the $\frac{1}{3}$ octave band power response.



The curves show the effect of the 'bass tilt', 'treble tilt' and 'bass roll-off' controls on the free field response.

DCW TECHNOLOGY

The revolutionary Directivity Control Waveguide (DCW) technology is a means of greatly improving the performance of a direct radiating multi-way loudspeaker under normal listening conditions. One of the basic aims is to match the performance of the drivers in terms of both frequency response and directivity. This results in a smoother overall frequency response on and off axis. In addition, the improved directivity control causes more direct sound and less reflected sound to be received at the listening position. This provides improved stereo imaging and ensures the system is less sensitive to differing control room acoustics than any conventional direct radiator design. The DCW Technology improves the drive unit sensitivity by +2 to +6 dB (depending on the particular application), thus increasing the available system maximum sound pressure level.



The treble driver is mounted in a DCW to match its dispersion characteristics to those of the bass driver. The DCW may be rotated for horizontal or vertical mounting.

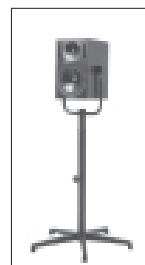
Options



Opt-09
Grille
Order Code
1030-409



Opt-04
Wall Mount
Order Code
1030-404-V
1030-404-H



Opt-05
Floor stand
Order Code
1030-405-V
1030-405-H

GENELEC®

ACTIVE MONITORING

1030A SYSTEM SPECIFICATIONS

Lower cut-off frequency, -3 dB: ≤ 52 Hz
Upper cut-off frequency, -3 dB: ≥ 20 kHz

Free field frequency response
of system: 55 Hz - 18 kHz (± 2.5 dB)

Maximum short term sine wave acoustic
output on axis in half space, averaged from
100 Hz to 3 kHz:

@ 1m ≥ 105 dB SPL
@ 0.5m ≥ 111 dB SPL

Maximum long term RMS acoustic output in
same conditions with IEC weighted noise
(limited by driver unit protection circuit):

@ 1m ≥ 99 dB SPL
@ 0.5m ≥ 105 dB SPL

Maximum peak acoustic output per pair on
top of console, @ 1 m from the engineer
with music material:
 ≥ 115 dB

Self generated noise level in free field @ 1m
on axis: ≤ 10 dBA

Harmonic distortion at 90 dB SPL @ 1m on
axis:

Freq: 60...150 Hz $< 3\%$
 > 150 Hz $< 0.5\%$

Drivers: Bass 170 mm ($6\frac{1}{2}$ ") cone
Treble 19 mm ($\frac{3}{4}$ ") metal dome
Both drivers are magnetically
shielded.

Weight: 7,6 kg (17 lb)

Dimensions: Height 312 mm ($12\frac{1}{4}$ ")
Width 200 mm ($7\frac{7}{8}$ ")
Depth 240 mm ($9\frac{1}{2}$ ")

AMPLIFIER SECTION

Bass amplifier output power with an 4 Ohm
load:

80 W

Treble amplifier output power with an 8 Ohm
load:

50 W

Long term output power is limited by driver
unit protection circuitry.

Amplifier system distortion at
nominal output:

THD $\leq 0.08\%$
SMPTE-IM $\leq 0.08\%$
CCIF-IM $\leq 0.08\%$
DIM 100 $\leq 0.08\%$

Signal to Noise ratio, referred to full output:

Bass ≥ 95 dB
Treble ≥ 95 dB

Mains voltage: 100/200 or 115/230 V

Voltage operating range at

230V setting: 207 - 253 V ($\pm 10\%$)

115V setting: 104 - 126 V ($\pm 10\%$)

Power consumption:

Idle 20 VA
Full output 100 VA

CROSSOVER SECTION

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 sine
wave output of 105 dB SPL @ 1m:
variable from +11 to -1 dBu

Subsonic filter below 50 Hz :
18 dB/octave

Ultrasonic filter above 25 kHz:
12 dB/octave

Crossover frequency, Bass/Treble: 3.5 kHz

Crossover acoustical slopes:
24 - 32 dB/octave

Treble tilt control operating range in 2 dB
steps: from +2 to -4 dB & MUTE

Bass roll-off control operating range in 2 dB
steps: from 0 to -8 dB @ 50 Hz

Bass tilt control operating range in 2 dB
steps: from 0 to -6 dB @ 100 Hz
& MUTE

The 'CAL' position is with all tone controls
set to 'off' and the input sensitivity control to
maximum (fully clockwise).

GENELEC®

Genelec Oy, Olvitie 5
FIN - 74100 IISALMI, FINLAND
Phone: +358 - 17 - 813311
Telefax: +358 - 17 - 812267
E-mail: genelec@genelec.com
Web: <http://www.genelec.com>

Genelec Inc, 7 Tech Circle
Natick, MA 01760, USA
Phone: +1 - 508/652-0900
Fax: +1 - 508/652-0909
Email: genelec@compuserve.com



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