GENELEC® 1024B MONITORING SYSTEM

• recording studios
• large broadcasting, drama and music studios
• post-production
• cutting rooms

DESCRIPTION

The GENELEC® 1024B is a three-way system with three integrated power amplifiers and an active crossover network. This standard reference monitor is designed for large broadcasting, recording and music studios.

The low frequency system utilizes a 385 mm driver in a 110 litre vented box. Together with the active filter stage the system response has 6th order Butterworth characteristics extending to 32 Hz (~3 dB).

Midrange frequencies are reproduced with a 80 mm soft dome unit. The crossover frequencies are located at 380 Hz and 3.8 kHz. The treble driver is a 28 mm soft dome loaded with a short horn. To protect the drivers from excessive power an electronic overload protection is incorporated in the midrange and treble amplifiers.

The crossover network consists of a balanced input stage with volume control and three bandpass filters. The combined slope and phase characteristics of the filter and the respective drivers are aligned to feed all drivers acoustically in the same phase and equal delay over their crossover frequencies.

In order to change system's overall sound balance in different acoustic conditions five tone control switches are provided. Levels in bass, midrange and treble channels are adjustable in 1 dB steps down from the calibrated settings. The bass channel has in addition 'TILT' and 'ROLL-OFF' switches which affect only in the low bass range. Maintenance of the 1024 B is easy because of its simple mechanical construction. A diagnostic connector is provided for rapid checking of all essential operating voltages. A short form operating and servicing guide is printed on the amplifier's rear panel.
SYSTEM
SPECIFICATIONS

Lower cut-off frequency, -3 dB \(32\, \text{Hz}\)
Upper cut-off frequency, -3 dB \(20\, \text{kHz}\)
Passband response tolerance, free field \(\pm 3\, \text{dB}\)
Maximum continuous sine wave acoustic output @ 1 m on axis in free field, \(\geq 114\, \text{dB}\)
Maximum peak acoustic output per pair behind a console, 2 m from the engineer \(\geq 125\, \text{dB}\)
-2 dBu will produce 114 dB SPL in free field @ 1 m on axis with the controls at "CAL" position.
Self generated noise level in free field @ 1 m on axis \(\leq 10\, \text{dB} \, (A)\)
Harmonic distortion at 100 dB SPL @ 1 m on axis
\(f \leq 200\, \text{Hz}\) \(\leq 3\, \%\)
\(f > 200\, \text{Hz}\) \(\leq 1\, \%\)
Horizontal treble radiation loss at 30 deg off axis
\(f = 10\, \text{kHz}\) \(\leq 3\, \text{dB}\)
\(f = 15\, \text{kHz}\) \(\leq 4\, \text{dB}\)
Drivers:
Bass \(385\, \text{mm cone}\)
Mid \(80\, \text{mm dome}\)
Treble \(28\, \text{mm dome}\)

Dimensions:
Weight \(68\, \text{kg}\)

AMPLIFIER
SECTION

Input connector XLR female
Input impedance \(10\, \text{k}\Omega \, \text{balanced}\)
Input level for maximum output, continuously variable \(-2\ldots+18\, \text{dBu}\)
Subsonic attenuation \(12\, \text{dB} \, @ \, 15\, \text{Hz}\)
Ultrasone attenuation \(3\, \text{dB} \, @ \, 30\, \text{kHz}\)
Crossover frequency, bass / midrange \(400\, \text{Hz}\)
midrange / treble \(3.8\, \text{kHz}\)
Tone control operation range, 1 dB steps
bass \(-6\, \ldots\, 0\, \text{dB}\)
middle \(-6\, \ldots\, 0\, \text{dB}\)
treble \(-6\, \ldots\, 0\, \text{dB}\)
Bass roll-off filter, 2 positions
\(-4\, \ldots\, 0\, \text{dB} \, @ \, 35\, \text{Hz}\)
Bass tilt control, 4 steps,
2 dB / step \(-6\, \ldots\, 0\, \text{dB} \, @ \, 150\, \text{Hz}\)

The system acoustical axis:

\(O\)
\(\leq 1\, \text{m}\)

590 mm

GENELEC

TEHTAANTIE 17     SF-74100 IISALMI
Tel Int. +358 77 13131 Telex 4452 audio sf
Telefax Int. +358 77 12267

All data subject to change without prior notice.