



PROFESSIONAL series AE22

The art of designing a good nearfield monitor is to stay out of the way of the music. The monitor marks the point at which recorded music becomes real. It also often marks the point at which many musically significant distortions occur. Staying out of the way of the music means applying the best engineering practice to make sure, as far as the laws of physics allow, that any distortions are innocuous and that the music, not the monitor, is heard.

We never imagined we'd want to write this about an Acoustic Energy product but we'll have succeeded in our aims with the AE22 if it is taken for granted. Because the mark of a good nearfield monitor, apart from staying out of the way of the music, is that it sits there, session after session, consistently doing its job without anybody really noticing.

Innovation ■ Performance ■ Quality ■ Value

Hear Things As They Are Meant To Be

As much as the AE22 marks a return to roots for Acoustic Energy, it also marks a return to some fundamental engineering principles for nearfield monitors. In a market increasingly populated by monitors that deploy sophisticated digital electronics to provide peripheral functions, the AE22 deploys high value electronic and acoustic engineering to reproduce music more accurately and consistently in the studio environment. The AE22 is designed from the ground up to excel in the parameters that influence how accurately it presents what recording engineers need to hear, and how well it stays out of the way of the music.

Delay, Compression, Distortion

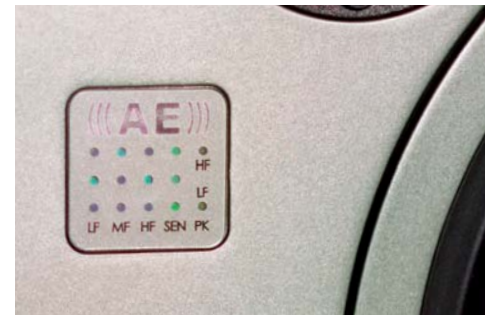
Nearfield monitor specifications are traditionally all about low frequency extension and a flat axial frequency response. The AE22 is different. It has a frequency response specifically tailored to suit studio environments, applications and working practices, and low frequency extension limited by what can be accurately reproduced by a speaker of its size. It is far better to reproduce bass accurately down to 70Hz than inaccurately down to 40Hz. A typical contemporary monitor of similar size to the AE22 is likely to display a low frequency time delay of 20mS or more. The AE22's low frequency time delay is 4mS. So if the kick drum sounds soft and the bass guitar's lost its punch you can trust the monitor.

Every recording engineer knows how compression can affect the sound of a mix or an instrument. Not many however perhaps realize that audible compression mechanisms are present in all moving-coil speakers. And the smaller the speaker and the wider its bandwidth, the more significant compression is likely to become. By using closed box bass loading and a bass/mid driver with a 50mm voice-coil thermally bonded to an aluminium cone, the AE22's thermal compression is reduced to insignificance, and it is immune from reflex port compression. So that eq you're applying will work whatever the listening level.

Like compression, there's a creative side to distortion - ask any guitarist. But creativity with distortion should be for the artist, not the monitor. And again, as with compression, as a speaker is required to reproduce a wider bandwidth its distortion levels will increase. Through heavy-weight engineering techniques usually unheard of at the price, such as an under-hung bass/mid driver voice-coil, the AE22 is designed to minimize distortion. So if you hear too much fuzz you can be sure it's thanks to the guitarist.

Passive, Active

The AE22 is available in both passive and active versions. The passive AE22 is designed for mounting on a metre-bridge or relatively close to a rear wall and driven by high quality power amplifiers of at least 50 Watts per Channel. The active AE22 incorporates power amplifiers of 100 Watts and 60 Watts for the bass/mid driver and tweeter respectively. It also includes some eq pre-sets to provide adjustment of tonal balance and low frequency bandwidth.



Specifications	AE22 Passive	AE22 Active
Type	2-way, closed-box loaded	2-way, closed-box loaded
LF/MF Driver	200mm pressed alloy cone Underhung, 50mm dia voice-coil	200mm pressed alloy cone Underhung, 50mm dia voice-coil
HF Driver	25mm Ring Radiator. Neodymium magnet	25mm Ring Radiator. Neodymium magnet
Filter Network	3rd order Bessel at 2.0kHz	3rd order Bessel at 2.0kHz
Frequency Response	60Hz to 40kHz ±3dB	60Hz to 40kHz ±3dB
Power Handling	200W peak programme	N/A
Nominal Impedance	8 Ohms	N/A
Sensitivity	87dB for 1 Watt at 1 metre	N/A
Input Sensitivity	N/A	0.9V ±3dB
Input Impedance	N/A	>10kΩ
LF Amplifier	N/A	100 Watts RMS
HF Amplifier	N/A	60 Watts RMS
LF Adjustment	N/A	+3dB @ 40Hz Q = 1, -3dB @ 70Hz Q = 1,
MF Adjustment	N/A	±2dB @ 400Hz Q = 0.5
HF Adjustment	N/A	±1.5dB 2kHz to 40kHz

Dimensions & Weight	AE22 Passive	AE22 Active
Dimensions(H x W x D)	250 x 350 x 300mm	250 x 350 x 330mm
Weight (single, unpacked)	1.0kg	1.5kg

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