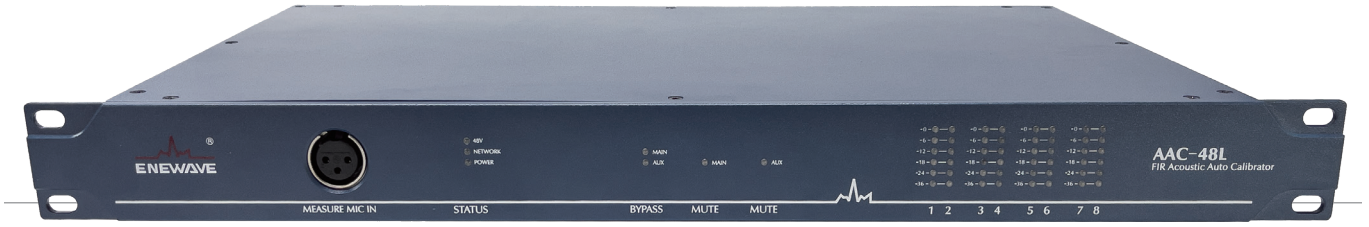
SPECIFICATIONS **AAC-48L**



Description

The first space acoustics automatic calibrator combines space acoustics and electroacoustic systems. It can optimize your acoustic environment, calibrate the frequency response of the audio system and the acoustic space, and perfectly display sound details to create an ideal acoustic space for you. Using FPGA-based high-order real-time FIR acoustic phase calibration system, breaking the digital audio algorithm technology and delay through the restraint of delay, the essence of sound is perfectly reproduced through the three-dimensional standards of sampling accuracy, sampling frequency, and phase accuracy.

AAC aims to improve the clarity of the sound image and restore the transparency of the sound, thereby optimizing your acoustic environment. The system provides a variety of interfaces, exquisite design, it is simple to use, and can meet the needs of small to large-scale sound field measurement and calibration requirements for various listening environments such as conference rooms, lecture halls, theaters, auditoriums, and large-scale live performances, to achieve more transparent and high-resolution of high-frequency performance and more clean & powerful bass.

• AAC has up to 4*4096 order FIR filter function, realizes the phase and frequency control of the full frequency band of 12Hz~20KHz, and has powerful calibration capabilities.;

• With automatic calibration of the acoustic spatial frequency response, after the equipment sends out the test signal, the unprocessed frequency response curve can be picked up and reflected in the software, and the equipment is automatically calibrated. After completion, you can see from the software interface that the completed frequency response curve is very smooth, the comparison before and after optimization is obvious, and the optimization effect is significant.

• The equipment has an automatic phase calibration function. After the equipment is automatically calibrated, you can see the comparison of the front and back phases through the acoustic measurement software (such as Smaart software).

The calibration function has obvious phase optimization;

• The device has an automatic loudness optimization and enhancement function. After the device is automatically calibrated, you can compare the loudness before and after the calibration function is turned on or off from the sense of hearing. Turning on the calibration function can significantly improve the loudness optimization.

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Application

The traditional acoustic space problem-solving method is quite complicated, the engineers of system engineering need to use different measurement and processing tools to solve different problems.

For example, the placement of multiple subwoofers in the room, through multiple measurements, adjust place the position, set different delay time, so that the sub-woofers can be played sound in the same phase.

At the same time, the time relationship between the subwoofers and the full-range frequency loudspeakers must be taken into consideration. Such a complicated setting often cares about one and loses the other, unable to get a relatively correct result.

At the same time, the room and loudspeakers need to take into account not only the bass, but also the room standing wave that occurs in the mid-low frequency range, the crossover phase distortion in the mid-range, and the early reflection of high frequencies in the room, which makes the system engineer physically and mentally exhausted. The unique algorithm of the AAC system only needs to perform microphone measurements on one point in the room or multiple points in a large space, and the time for each measurement point only needs three seconds, which has a great tolerance for noise in the space. Then the algorithm will take more than ten seconds to find the phase problem in the system, and automatically send the processing parameters of the problem to the FPGA. In this series of processes, no human intervention is required, just put on the measurement microphone and press the AAC software measurement button.

The system engineer can finally get a calibrated standard acoustic space in 10 seconds. In this space, there is no lack of bass caused by the sound cancellation of multiple subwoofers, no low-frequency resonance, and no annoying feedback whistling. If you have your own ideal frequency response curve, you can even design the overall style of music frequency response through AAC's frequency response curve design.

Features

- Multi-device synchronization
- High dynamic output
- Built-in detection microphone input interface
- Support multi-point measurement to calculate the average value
- Free design of acoustic space frequency response
- Automatic phase calibration
- Compatible with two sets of AAC processor parallel connecting dual-channel high-order FIR filtering at the same time
- Able to display on the computer software about the frequency response, impulse, phase curve after measurement in the acoustic space.
- Reflection elimination processing tool that does not change the sound quality of the original speaker
- Time processing tool that can gather energy for direct sound
- Flexible matrix output options
- Each output has sampling rate grade accurate delay and amplitude control function

Applications

- Concert Hall
- Theater/Theater
- Live sound reinforcement/ Roadshow
- Music Bar/Club
- Function Room
- Meeting room
- Lecture Hall

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Specification

Analog input	4 x XLR (left and right channel) + 24 dBu max
Analog output	4 x XLR (left and right channels); Two of the channels can be assigned as Aux channel + 24dBu max
Digital input	1 x AES/EBU@75 Ohms
Word clock input	1x Input@75Ohms 3Vpp on BNC32-192kHz
Word clock output	1x Output@75Ohms 3Vpp on BNC32-192kHz
A/D converter	Dynamic range 120dB THD+N：-107dB
D/A converter	Dynamic range 120dB THD+N：-110dB
Total system delay	0.25ms

Size & drawing

Unit：mm