

Array Ring 32 (LN)*

Ring array with 32 channels for applications in the acoustic lab

The ring array is a 32 channel measurement system designed for applications in acoustic labs. The "LN" version can be used to measure very faint noises. Depending on the signal's spectral composition, the measurement distance should be between 0.7 and 5 meters. Longer ranges are possible for measurement frequencies above 1 kHz. The ring array is equipped with studio microphones and MicBus microphone connectors, similar to all other arrays.

The array is acoustically transparent and "looks" equally well in forward and backward direction. Thus, the array should be used in front of a sound-absorbing or sound-diffusing background to reduce disturbances.

After a special calibration, qualitative ultrasonic recordings up to 50 kHz can be performed. The design effectively minimizes partial reflections and resonance between the measured object and the array. The ring layout minimizes aliasing effects.

The system comprises an integrated USB camera.

High quality acoustic images can be acquired within seconds.

The microphones used are carefully selected (± 0.5 dB) and have an extremely linear frequency response.

They are connected to the data-recording device via the MicBus connector system.



The microphone array can be set up at the optimum angle using the included tripod. The system can be easily and instantly calibrated on location using a test sound generator (so-called "clicker").

This makes the system ideally suited for engine-related measurements in automotive applications. The system is sufficiently lightweight to facilitate pivoting above engines.

Characteristics

- Measurement distances from 0.7...5 m
- USB camera (up to 1280 x 1024), fix focus lens
- Mapping from 300 Hz...20 kHz (50 kHz)
- Dynamic range of microphones 35...130 dB, 40 Hz...20 kHz, -1 dB 24...120 dB, 30 Hz...20 kHz, $\pm 1/3$ dB (LN)*
- Selectivity of ± 0.5 dB at 1 kHz
- MicBus microphone connectors
- Diameter 75 cm, weight ca. 5 kg

Components

- Camera base 3/8"
- Tripod with bag
- Transportation case