The QM 69 Quadro condenser microphone

The QM 69 quadro microphone is a four-channel microphone for quadrophonic recording. It consists of two pairs of condenser microphone capsules mounted one above the other. The capsules have a cardioid polar pattern and each capsule has its own amplifier system. The upper pair of capsules can be rotated against the lower pair of capsules in both directions. This gives a directional pattern with four cardioids along the main directions of sound incidence.

This arrangement delivers a four-channel primary signal without delay time (phase) differences for quad recordings. Unlike recordings made by means of four separate microphones, this arrangement retains the original spatial sensation even when fill-in microphones are added.

Color spots in front of the four membranes on the grille of the capsule cage indicate the principal directions of sound incidence and are coded as mentioned below.

Microphone pair I is the stationary lower double capsule. Its membranes are coded yellow for front left and blue for back right (“right” and “left” as seen when facing the sound source).

Microphone pair II is the upper capsule that can be rotated. Its membranes are colored red for front right, green for back left.

Looking down on either the standing or suspended microphone, system II is to be rotated clockwise by 90 degrees.

The QM 69 is equipped with a 12-pole special connector.

QM 69 Specifications

- Acoustical operating principle: Pressure gradient transducer
- Polar pattern: 4x cardioid
- Frequency range: 40…18,000 Hz
- Sensitivity: 11 mV/Pa ± 1 dB
- Source impedance: 180 ohms
- Maximum load impedance: 1000 ohms
- S/N ratio according to DIN 45 590 (ref. level 1 Pa): 74 dB
- Equivalent noise (weighted noise level according to DIN 45 590): 20 dB
- A-weighted equivalent loudness level due to inherent noise (IEC 179): 13 dB
- Max. SPL for 0.5% THD at 1 kHz: 135 dB
- Power supply (P 48, DIN 45 590): 48 V ± 4 V, Phantom-powering
- Current consumption: 2 mA
- Required cable connector: T 3615/QC 1 or T 1635/QC 2
- Weight: 510 g
- Dimensions: 30/40 mm in diam. 285 mm long