



MM-590

Condenser and Dynamic Microphone

Innovative Interchangeable Condenser and Dynamic Microphone



MM-590 Condenser and Dynamic Microphone

Microphone Types

The microphone is one of the audio equipment that picks up sound and converts into an electric signal. The most common microphone types today are dynamic and condenser. Dynamic employs magnetic principle with voice coil attached to a diaphragm and vibrates and generates the electrical signal. Condenser employs electrically-charged diaphragm principle with ultra-thin diaphragm vibrates and converted into electrical signal.

Main Differences between Dynamic and Condenser Microphones

Transient Response

Transient response is a microphone's ability to respond to rapidly changing sound waves. It is an important factor in determining sound quality. The amount of time it takes for this to happen depends on the weight of the diaphragm material. The response time is slower for the heavier diaphragm in dynamic microphone with softer sound quality but stronger punch in loudness.

Conversely, due to its lighter and thinner condenser diaphragm and without the heavier voice coil attached, condensers offer the widest frequency response, best transient response, and much higher sensitivity and provide a smoother, more natural sound, particularly at high frequencies.

Handling Noise

Handling noise increases noise level from microphone output signal and deteriorates natural sound reproduction.

Dynamic microphone has heavy microphone capsule weight, not ideal for soft shock-mount suspension design thus, increased in handling noise. Condenser microphone has no heavy magnet, ideal for soft shock-mount suspension design and reduces handling noise.

Phantom Power

Dynamic microphones do not require phantom power to produce electric signals. Condenser microphones require external power, battery or phantom power, for their internal electronics.

Main Features of MIPRO's Dynamic and Condenser Microphones

MIPRO MM-59 microphone is equipped with an interchangeable MU-59 microphone capsule. Rugged, multi anti-pop grill protects against impact. Superb directionality and feedback suppression. Wide dynamic range and low distortion character. Ideal for stage.

MIPRO MM-90 microphone is equipped with an interchangeable MU-90 microphone capsule. Supercardioid directionality limits feedback. Sustains high SPL without distortion. Superior sound quality ideal for stage as well as percussion and brass instruments with detailed transparency.

MIPRO MM-590 is World's First Dynamic and Condenser Microphone

MM-590 accepts either dynamic or condenser microphone capsule. Optimized for both vocals and speech in live or fixed-installation applications.

MM-590 can be connected to any mixer or amplifier, with or without phantom power.

MM-590 Condenser and Dynamic Microphone

MM-590 Operating Instructions

Dynamic Microphone

Inserted the MU-59 dynamic microphone capsule. Connect the microphone cable to a mixer or amplifier. External powers like phantom power or battery are not required. The using method is the same as a MIPRO MM-59 dynamic microphone. Switch one-level up (Phantom Power line indicator) or two-level up (Battery line indicator) both will have signal output. If a battery is inserted and microphone is switched two-level up (Battery line indicator) it will perform normally, however, the battery life will be slowly drained.



Condenser Microphone

Inserted the MU-90 condenser microphone capsule. Connect the microphone cable to a mixer or amplifier. The using method is the same as a MIPRO MM-90 condenser microphone. External powers like phantom power or battery are required. Switch one-level up (Phantom Power line indicator) or two-level up (Battery line indicator) both will have signal output.

If mixer doesn't have a phantom power, simply insert a battery and switch two-level up (Battery line indicator) for signal output. The operating characteristics are the same as using phantom voltage. Additionally, if a battery is inserted, connected to mixer with phantom power and switch two-level up (Battery line indicator) it will have normal operation, however, the battery life will be slowly drained.



Additional Features

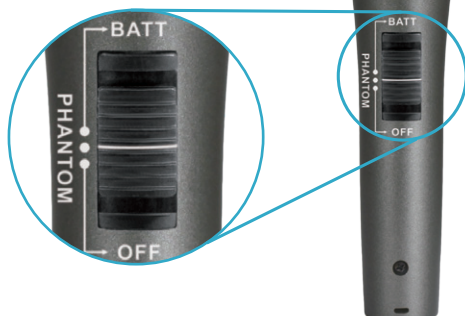
- MM-590 accepts MIPRO interchangeable dynamic or condenser microphone capsule.
- No annoying "pop" noise when switched on.
- Performance is not affected from high frequency signal interference.

MM-590 Key Features and Specifications

MU-59 Dynamic Mic Capsule

Sensitivity: $-48 \text{ dBV} \pm 1 \text{ dB V / Pa}$ ($0 \text{ dB}=1 \text{ V}$ open circuit voltage) | **Frequency Response:** 50 Hz~18 kHz | **Maximum SPL:** 149 dB | **Dynamic Range:** 130 dB | **Output Impedance:** $600 \Omega \pm 30\%$ | **Dimension:** 51 \varnothing × 204 mm | **Approx. Weight:** 336 g

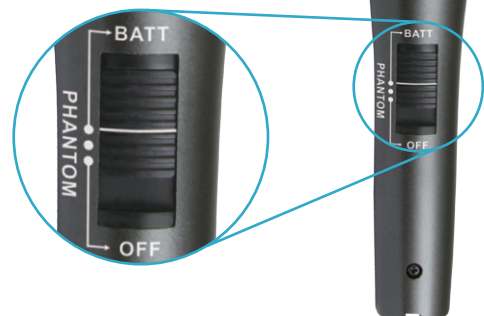
- ⊙ Connect the microphone to the microphone input of the mixer: the mixer phantom voltage at "ON", and switch the power switch of the MM-590 to the first stage.



MU-90 Condenser Mic Capsule

Sensitivity: $-46 \text{ dBV} \pm 1 \text{ dB V / Pa}$ ($0 \text{ dB}=1 \text{ V}$ open circuit voltage) | **Self Noise:** $< 19 \text{ dB SPL (A)}$ | **S/N:** $> 75 \text{ dB}$ @ 94 dB SPL (1Pa) | **Maximum Input SPL:** 149 dB | **Dynamic Range:** 130 dB | **Output Impedance:** 600Ω | **Phantom Supply:** 12~52 V DC | **Dimension:** 51 \varnothing × 200 mm | **Approx. Weight:** 324 g

- ⊙ Connect the microphone to the input without phantom power: Insert a single AA battery into MM-590, and switch the power switch to the second stage.






MIPRO[®]
MICROPHONE PROFESSIONALS

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