



# NADY CM SERIES

## USER GUIDE

### CM 90 Studio Condenser Microphones

Congratulations on purchasing the Nady CM 90 classic small-diaphragm condenser microphone. This superior microphone is perfect for recording and stage reinforcement of acoustic guitar, drum overheads, hi-hats, snares, piano and horns. Powerful and versatile, the CM 90 meets the stringent requirements of even the most demanding digital recording and live sound applications



This manual covers the operation of the CM 90 and the optional phantom power supply SMPS-1. To take full advantage of the superb features of this microphone, and to enjoy long and trouble-free use, please read this user's guide carefully.

#### UNPACKING, INSPECTION, STORAGE AND TRANSPORT

Your CM 90 microphone was carefully packed at the factory, and the shipping carton was designed to protect the unit during shipping. Please retain this container in the highly unlikely event that you ever need to return your microphone for servicing. The optional SMCC-1 plastic or the SMCC-2 aluminum carrying case are highly recommended for convenient and safe transport or permanent storage. The larger SMCC-2 has roomy compartments for several microphones and all available accessories, including the SMPS-1 phantom power supply, plus XLR cables.

#### STANDARD ITEMS SUPPLIED

- CM90 microphone
- Microphone clip
- Foam windscreen (FW-1/90)
- Leatherette pouch
- Instruction manual
- Warranty card

#### OPTIONAL ACCESSORIES

- 48V phantom power supply (SMPS-1)
- Aluminum carrying case (SMCC-2)

#### FEATURES

The CM 90 is a classic small diaphragm (0.79", 20mm) condenser mic. It offers transformerless output and true condenser design (element constantly biased by the pre-amp) for exceptionally low self noise and increased dynamic range, enhanced low and high end response with improved linearity across the frequency range and maximum SPL capacity.

The capsule is hand tooled from brass and features a 3-micron gold-evaporated-on-Mylar diaphragm for maximum sensitivity, long life, detail and tone. The CM 90 uses a carefully selected Field Effect Transistor (FET), specially chosen for its low distortion and superior signal-to-noise ratio.

*(Note: For optimum performance, it is best to let the microphone warm up for 5 to 10 minutes)*

The CM 90 is manufactured with the finest materials and features a machined housing with advanced internal shock mount construction for the highest structural integrity and rugged reliability. It requires 48V phantom power to operate, typically supplied by the microphone pre-amplifier or mixing console. The optional Nady SMPS-1 phantom power supply can also be used.

## WARNING

The capsule is the heart of the condenser microphone. If it become dirty or wet, the sound will be degraded. Never spray any liquid on the microphone head. Always use a foam windscreen if you talk or sing close to the microphone grill screen.

## USING THE FOAM WINDSCREEN

The CM 90 is supplied with a foam windscreen (FW-1/90). This windscreen fits over the grill portion of the microphone and is designed primarily to decrease bass rumble (from wind noise pickup) during outdoor live or recording use. It is also useful in keeping mouth spray out of the microphone head. The FW-1 or other windscreen should be used whenever someone is close miked to both protect the microphone and to also eliminate "popping" sounds from percussive breath sounds.

(Note: Be aware that the foam windscreen will slightly attenuate the high frequency response of the microphone.)

## CONNECTING THE CM 90

The CM 90 can be used in live sound reinforcement and broadcasting and in studio or live recording. It must be powered by 48V phantom power (such as supplied by the optional Nady SMPS-1 phantom power supply or a mixing console with phantom powering), and amplified by a microphone pre-amp (such as built into a mixer, or a stand-alone unit).

(Note: Make sure to set the pre-amp to the proper gain level—too much gain may distort subsequent amplifiers and too little may result in a noisy signal)

The CM 90 can be connected to your mixer or phantom power supply using a standard balanced 3-pin XLR microphone cable. Before connecting to a mixer directly, turn the channel to which you're connecting to its lowest gain setting. If you are using the Nady SMPS-1 Phantom Power Supply, connect in the following order:

1. Connect the CM 90 to the SMPS-1
2. Connect the SMPS-1 Signal Output to your mixer
3. Connect the SMPS-1 to the AC power supply (115—230VAC)
4. Turn on the SMPS-1 Power ON/OFF switch  
Slowly turn up the channel gain in your mixer to the desired level

## SERVICE

**(U.S.)** Should your Nady microphone require service, please contact the Nady Service Department via phone at (510) 652- 2411 or e-mail at [service@nady.com](mailto:service@nady.com). **(INTERNATIONAL)** For service, please contact the Nady distributor in your country through the dealer from whom you purchased this product.

Date of purchase \_\_\_\_\_

Dealer's Name \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

*Do not attempt to service this unit yourself as it will void your warranty*

## CM 90 SPECIFICATIONS

|   |  |                                   |   |
|---|--|-----------------------------------|---|
| <b>Type:</b>  | True condenser pressure-gradient microphone with 0.79 inch(20mm) diaphragm and FET | <b>IEC 268-4(A weighted):</b>     | 19dB-A                                      |
| <b>Polar pattern:</b>                                   | Cardioid   | <b>S/N ratio re 1Pa:</b>          | 75dB  |
| <b>Open circuit sensitivity:</b>                        | 1.4mV/Pa=37dBV (0dBV=1V/Pa)  | <b>Current consumption:</b>       | <3mA  |
| <b>Frequency range:</b>                                 | 40 to 16000Hz  | <b>Ambient temperature range:</b> | 14°F to 140°F (-10°C to +60°C)              |
| <b>Rated output impedance:</b>                          | < 200 Ohms   | <b>Relative humidity range:</b>   | 90% (68°F, 20°C), 85% (140°F, 60°C)         |
| <b>Recommend load Impedance:</b>                        | ≥1000 Ohms   | <b>Connector:</b>                 | 3-pin XLR (gold plated)                     |
| <b>Max. SPL (1% THD @ 1000Hz):</b>                      | 131dB  | <b>Phasing:</b>                   | Positive voltage on pin 2 relative to pin 3 |
| <b>Equivalent noise level to DIN 45405(CCIR 468-2):</b> | 28DB   | <b>Mic cable:</b>                 | 3-pin XLR standard cable (not supplied)     |
| <b>Max. SPL (1% THD @ 1000Hz):</b>                      | 131dB  | <b>Size:</b>                      | Diameter: 0.9" (22mm), Length: 5.1" (130mm) |
| <b>Power requirement:</b>                               | +48VDC phantom power   | <b>Net weight:</b>                | 5oz (130g)                                  |
| <b>Equivalent noise level to DIN 45405(CCIR 468-2):</b> | 28DB   |                                   |   |

*Specifications and design subject to change for improvement purposes*