

MA-200 Vacuum Tube Capacitor Microphone

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- Recording Tips
- FAQ's
- Customer Service

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INTRODUCTION

Congratulations on your purchase of a Mojave Audio MA-200 Vacuum Tube Capacitor Microphone. Your MA-200 was carefully designed and constructed using only the finest materials. The MA-200 microphone is capable of delivering superb performance and, with minimal care, will do so for many years. Your MA-200 was thoroughly tested and given a 24-hour factory burn in prior to shipment.

The MA-200's capacitor capsule and electronics are adapted from mid-1950's design practice. The MA-200 utilizes a U.S. made, military-grade, low noise sub-miniature vacuum tube and a Jensen audio output transformer. By utilizing modern components, the microphone system emulates the performance of "classic" tube microphones without using esoteric, unreliable, or hard to find components.

The MA-200 is guaranteed to perform as specified and is suitable for recording even the most demanding music, provided that the microphone is used sensibly.

For optimum performance from your microphone, please read this manual thoroughly and familiarize yourself with the proper use of the MA-200.

UNPACKING AND INSPECTION

Carefully unpack your MA-200 and verify that all of the accessories included with the microphone are accounted for. Do not discard any packing materials! If anything is missing or damaged, contact your dealer or Mojave Audio immediately.

Items included with the MA-200 are:

1. MA-200 microphone inside an aluminum style carrying case.
2. AC operated microphone power supply.
3. 16-foot microphone cable with 5-pin male and female connectors.
4. MA-200 shock mount and European adapter (fitted to shock mount).
5. AC power cable for power supply - molded IEC business machine type with plug.
6. Set of instructions and warranty certificate.
7. Rugged carrying case for all above items.

Verify that the serial number of your MA-200 matches correctly with the one on your receipt. The MA-200 serial number can be found on the underside of the power supply and also on the transformer cover inside the microphone housing. When corresponding with Mojave Audio about your microphone or when service is required, we will need to know the serial number, so keep it handy.

GENERAL INFORMATION

The MA-200 is a vacuum tube microphone and requires a dedicated power supply and five-pin cable set for operation. These items are provided with the microphone, along with a specially designed shock mount assembly. The capsule is a 3-micron, gold-sputtered type, with a fixed cardioid pick-up pattern. The vacuum tube head-amplifier delivers wide bandwidth and low noise operation. The MA-200 utilizes a sub-miniature vacuum tube, which necessitates the need for a dedicated power supply. The vacuum tube is military grade 5840W new old stock and will deliver excellent performance for many years. A specially designed, high-quality Jensen® audio output transformer delivers an isolated, truly balanced output signal, minimizing the possibility of unwanted noise entering the preamplifier. As with all vacuum tube microphones, a warm-up period is advised for optimum performance; usually about ten minutes.

SAFETY INSTRUCTIONS

WARNING!

To avoid electrical shock to yourself and damage to the MA-200, use proper circuit protection. MA-200s purchased in the USA are set for 120V, 60 Hz operation. MA-200s purchased outside of the USA are set for the voltages of the country to which they are exported. This information is duly noted on the outside of the shipping box as well as on voltage selector of the power supply. The MA-200 uses a line fuse for protection. Never replace this fuse with one of a higher current rating. Use only that type which was supplied with the unit. The power supply cord that is supplied with your MA-200 is a standard “business machine” type. It is a good practice to examine the power cord regularly. Never use a cord that shows damage or that has exposed wires.

There are no user serviceable components inside the MA-200 microphone or its power supply. Always refer service to a qualified technician equipped to service this equipment. Never expose the MA-200 microphone, its power supply or cable set to water or any environment that may create an electrical hazard. In the event of a malfunction, disconnect the MA-200 immediately and determine the nature of the malfunction before attempting to use it again.

To avoid tripping over the microphone cable, make certain that the cable is not in the way of foot traffic, or suspended in an unsafe manner. Make sure that the microphone stand is secure and not likely to fall.

If you have any questions or concerns about operation of your MA-200 please contact the factory.

OPERATION

When plugging the microphone in, the five-pin XLR connectors between the microphone and the power supply should be inserted *gently* into their corresponding sockets. Rough handling, misaligned orientation, or trying to force the connections together too quickly could result in bent pins.

Operation Tip!

Your MA-200 was thoroughly checked and burned-in before leaving the factory. Before using it for the first time, we recommend connecting the MA-200 to its power supply and letting it warm up for at least thirty minutes. Moisture build-up on the capsule or on the other high-impedance components within the microphone can cause random noise or static. The thirty minute initial warm-up will drive out any residual moisture that may have collected on the internal components during shipping or storage.

Also note that if the MA-200 is being used with phantom powered microphones in a multiple microphone setup, phantom power may be applied to the channel connected to the MA-200 without ill effect, *provided that your standard 3-pin microphone cables are wired properly.*

A grounded power cord is used to connect the power supply to an electrical socket. MA-200 power supplies are shipped pre-wired for standard AC voltage in the country where the microphone is sold. If there is a need to change AC voltage (travel, sale to

another country, etc.), an external switch allows the power supply to be configured for 100, 115 or 230 volts at either 50 or 60 Hz. Make sure the fuse is the proper value - 500 mA for 100-120 Volts AC and 250 mA for 230 Volts AC.

"Hot plugging" any vacuum tube microphone can damage the mic's electronics, *so always be sure to connect the microphone to the power supply with its multi-conductor cable before turning the power supply on.*

AC LINE FUSE

A spare fuse is included with your MA-200 power supply. It is located in the fuse carrier just above the AC receptacle. To access the fuse, gently pry out the carrier with a flat bladed screwdriver. The fuse is mounted in the clip and the spare is located in a small channel behind the cover. Replace the fuse with the same type as supplied with your microphone.

MAINS VOLTAGE

100 Volts AC
120 Volts AC
220 Volts AC

FUSE TYPE

T500mAL
T500mAL
T250mAL

In the rare event that you experience fuse failure, identify the cause of the failure before using the microphone again! The most common cause for a fuse to fail would be a damaged microphone cable or a broken or bent pin on a connector. The next most likely cause for fuse failure is operation of the power supply on incorrect voltage.

CARE OF YOUR MICROPHONE

Your microphone is a delicate precision instrument and it should be treated as such. Here are some commonsense rules to keep your microphone healthy.

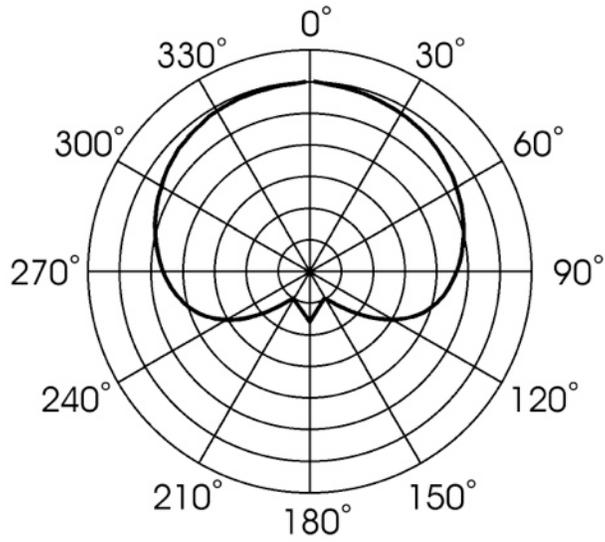
1. Be careful in your setup so that the microphone and/or power supply never falls to the floor. *Never* suspend the microphone by its cable, and be sure to position the cable so that it cannot be tripped over. Falls to the floor have been the ruin of many a microphone.
2. NEVER hot-plug the microphone (i.e. plug the microphone into an energized power supply), as the resulting voltage surges can damage the mic's or following preamplifier's electronics.
3. Keep the microphone, cable and power supply in a safe place, such as its carrying case or a microphone locker, when not in use.
4. When plugging in the five-pin cable between the microphone and power supply, orient the plug correctly and plug the connectors in *gently*. Rough handling or hurry-up plug-ins can result in bent or broken pins.
5. Never connect the power supply to an AC power outlet that has different voltage than what the power supply is set for.
6. Do not expose the microphone to dusty, smoky or humid environments.
7. Any repairs must be performed by a qualified technician. There are no user serviceable parts in the MA-200.
8. Use a soft, lint free cloth to remove fingerprints and other blemishes on the microphone body. Never use chemicals, solvents or detergents.

TECHNICAL SPECIFICATIONS

SENSITIVITY:	-37dB. re 1v/pa \pm 1.5dB
DISTORTION:	head amp only, <1% @117dB SPL, <3% @ 125dB SPL
SELF NOISE:	14dB nominal, not to exceed 16dB (A weighted)
OUTPUT CLIPPING LEVEL:	132dB @ 20 Hz 135dB @ 32 Hz 136dB @ 100 Hz 136dB @ 1 kHz 136dB @ 10 kHz
IMPEDANCE:	200 ohms, transformer balanced
VACUUM TUBE:	5840 - pentode tube, wired for triode operation
DIMENSIONS AND WEIGHT:	Carrying case with microphone, power supply, shock mount and cables: 13 lbs. Microphone: 7 5/8 X 2, 1 lb.
SHIPPING WEIGHT:	13.5 lbs.
POWER REQUIREMENTS:	100, 115 or 220-240 volts AC at 50 or 60 Hz. Power consumption approximately 10 watts.
TRANSDUCER TYPE:	Externally polarized pressure gradient capacitor Diaphragm: 1-inch diameter, gold sputtered Diaphragm thickness: 3-micron

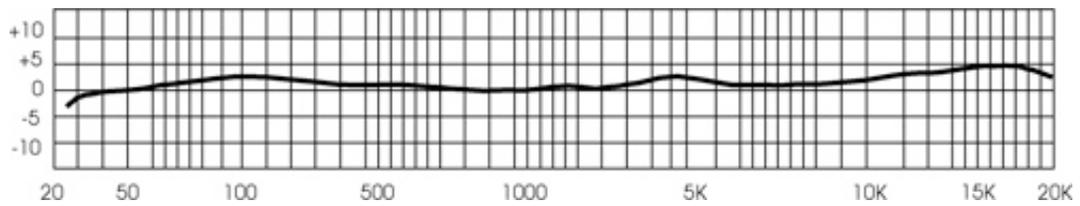
POLAR RESPONSE

Type: Cardioid



FREQUENCY RESPONSE

20Hz – 20kHz, ± 2.5 dB



WARRANTY

Your Mojave Audio product is warranted to the original owner for a period of two years. Mojave Audio guarantees this product to be free from electrical and mechanical defects and will repair or replace defective components, or replace the microphone at Mojave Audio's option. Should service be required for your Mojave Audio product, please contact the manufacturer. Excellent service will also be provided for products beyond the warranty period at a modest cost for parts and labor.

Please visit mojaveaudio.com for the latest updates and technical information.

MODEL NUMBER _____

SERIAL NUMBER _____

DATE OF PURCHASE _____

PURCHASED FROM _____