



MA-37 Multi-pattern Vacuum Tube Condenser Microphone

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- Recording Tips
- FAQ's
- Warranty Registration
- Customer Service

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INTRODUCTION

Congratulations on your purchase of a Mojave Audio MA-37 Multi-pattern Vacuum Tube Condenser Microphone. Your MA-37 was carefully designed and constructed using only the finest materials. The MA-37 microphone is capable of delivering superb performance and, with minimal care, will do so for many years. Your MA-37 was thoroughly tested and given a 24-hour factory burn in prior to shipment.

The MA-37's capacitor capsule and electronics are adapted from mid-1950's design practice. The MA-37 utilizes a European-made EF-86 vacuum tube and a Lundahl audio output transformer wound to our specifications. 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-37 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-37.

UNPACKING AND INSPECTION

Carefully unpack your MA-37 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-37 are:

1. MA-37 microphone inside a pelican-style carrying case.
2. AC operated microphone power supply.
3. 20-foot premium microphone cable with 5-pin male and female connectors.
4. AC power cable for power supply - molded IEC business machine type with plug.
5. Rugged carrying case for all above items.

Verify that the serial number of your MA-37 matches correctly with the one on your receipt. The MA-37 serial number can be found on the silver ring found just above the base. 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-37 is a multi-pattern vacuum tube microphone and requires a dedicated power supply and 5-pin cable set for operation. These items are provided with the microphone. The capsule is a 6-micron, single-membrane gold-sputtered type. The vacuum tube head-amplifier delivers wide bandwidth and low noise operation. The MA-37 utilizes a sub-miniature vacuum tube, which necessitates the need for a dedicated power supply. The vacuum tube is premium grade EF-86 and will deliver excellent performance for many years. A specially designed, high-quality, custom wound Lundahl 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. The MA-37 includes a selectable bass cut switch.

SAFETY INSTRUCTIONS

WARNING!

To avoid electrical shock to yourself and damage to the MA-37, use proper circuit protection. MA-37s purchased in the USA are set for 120V, 60 Hz operation. MA-37s 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-37 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-37 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.

Other than the EF-86 tube, there are no user serviceable components inside the MA-37 microphone or its power supply. Always refer service to a qualified technician equipped to service this equipment. Never expose the MA-37 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-37 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 foottraffic, 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-37 please contact the factory:
info@mojaveaudio.com

OPERATION

When plugging the microphone in, the 5-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-37 was thoroughly checked and burned-in before leaving the factory. Before using it for the first time, we recommend connecting the MA-37 to its power supply and letting it warmup 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-37 is being used with phantom powered microphones in a multiple microphone setup, phantom power may be applied to the channel connected to the MA-37 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-37 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 microphone's electronics, *so always be sure to connect the microphone to the power supply with its multi-conductor cable before connecting to AC power and turning the power supply on.*

AC LINE FUSE

A spare fuse is included with your MA-37 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	FUSE TYPE
100 Volts AC	T500mA
120 Volts AC	T500mA
220 Volts AC	T250mA

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 microphone'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 5-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, smokey, or humid environments.
7. Any repairs must be performed by a qualified technician. Other than the EF-86 tube, there are no user serviceable parts in the MA-37. For tube replacement instructions, please contact us: support@mojaveaudio.com
8. Use a soft, lint free cloth to remove fingerprints and other blemishes on the microphone body. Never use chemicals, solvents, or detergents.

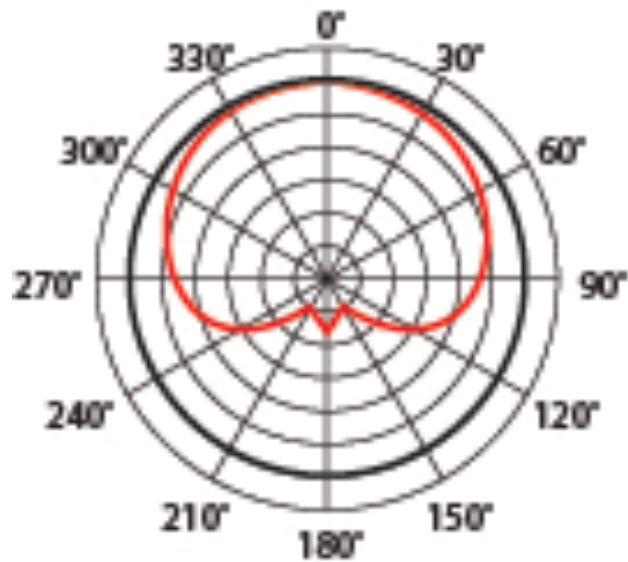
TECHNICAL SPECIFICATIONS

TRANSDUCER TYPE:	Externally polarized, pressure gradient capacitor, single membrane
DIAPHRAGM:	1-inch diameter, gold sputtered
DIAPHRAGM THICKNESS:	6-micron
POLAR PATTERN:	Choice of cardioid or omni; via mechanical shutter
FREQUENCY RESPONSE:	30 to 18,000 Hz. ± 3 dB ("M" setting)
SENSITIVITY:	-46 dBv referred to 1 volt per pa.
MAXIMUM SPL:	
DISTORTION:	Not to exceed .5 percent at 134 dB
SELF NOISE:	Better than 18 dB
BASS CUT:	M flat, V1 -6dB at 50 Hz., V2 -6dB at 100 Hz.
IMPEDANCE: higher	170 ohms, floating. Recommended load 1500 ohms or higher
DIMENSIONS AND WEIGHT:	Microphone – 6"x2" 1lb. Power Supply – 9.5"x7.25"x4.5" 5.5lb, Case – 18.5"x13.5"x7" 16lbs.
POWER REQUIREMENTS:	115 or 230 VAC, 50 or 60 hertz; 5 watts. 6 volts DC at 200 mA. 140 volts DC at 1.5 mA. from dedicated power supply

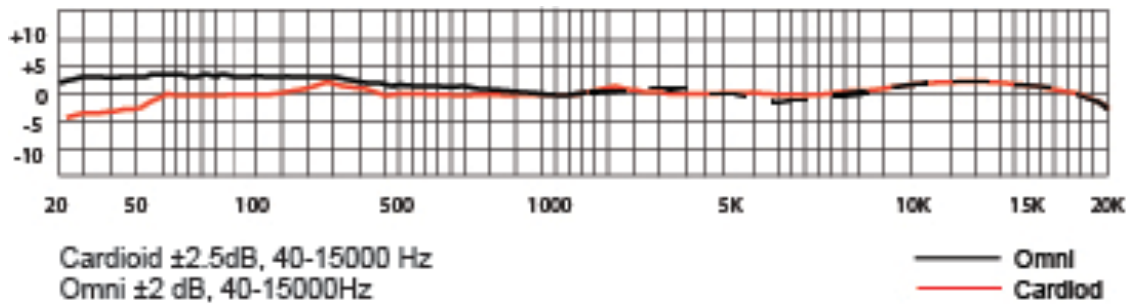
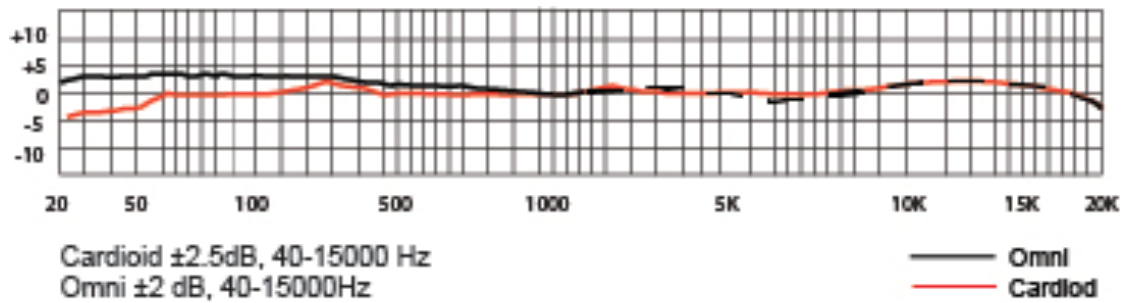
POLAR RESPONSE

Type: Multi-pattern

POLAR PATTERN



FREQUENCY RESPONSE



POLAR PATTERN SELECTOR



The MA-37 features a unique mechanical approach, developed by RCA in the 1930s and adapted by Sony, to achieving a choice between cardioid and omnidirectional polar patterns – an adjustable tuned acoustic chamber. To change the pattern selection from cardioid (C) to omni (O), insert a small flat-head screwdriver into the slot and rotate clockwise approximately 90 degrees. It is perfectly acceptable to stop anywhere between C and O in order to achieve a hyper-cardioid polar pattern.

BASS CUT SWITCH

The bass cut switch, also known as a hi-pass filter, is located on the power supply, offering three options: at (M), 100Hz (V1) and 200Hz (V2). As the MA-37 has an extended low frequency response, the bass cut is useful in cleaning up the bottom end. V1 is useful for instruments such as acoustic guitar. V2 is useful for instruments such as a tambourine or shaker. Either V1 or V2 can be useful for recording vocals, depending on the voice and desired result.

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 support@mojaveaudio.com. 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_____

1118 Chestnut St. Unit 104 • Burbank, CA 91506 • tel. 818.847.0222

www.mojaveaudio.com

support@mojaveaudio.com