

SM Pro Audio

Operating Manual - SM MC03

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www.SMProAudio.com

SAFETY INSTRUCTIONS

CAUTION: To reduce the risk of electrical shock, do not remove the cover of the microphone or power supply of this unit while plugged into the mains power.

WARNING: To reduce the risk of fire or electrical shock do not expose this appliance to rain or moisture.

DETAILED SAFETY INSTRUCTIONS:

All safety and operation instructions of this manual should be read and adhered to before operation.

Retain Instructions:

Please retain all safety and operating instructions for future reference.

Follow instructions:

All operation and user instructions should be followed.

Water, liquid and Moisture:

The appliance should not be used near water, rain or other liquids. Make sure that no liquid can leak, spill or otherwise seep into the appliance.

Ventilation:

Please place the power supply appliance so no obstacles interfere or impede the flow of air through the ventilation openings.

Heat:

The power supply should be situated away from other heat sources such as heaters, radiators, ovens, or other appliances that produce heat.

Power Source:

Make sure your power supply is the correct voltage for the country in which it will be used.

Grounding and Polarization:

Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.

Power-Cord Protection:

Power supply cords should be routed so that they are not likely to be walked on, pinched, damaged, worn, or rubbed by any other device or obstacle.

Cleaning:

The microphone and power supply should be cleaned only with a light soft cloth. Do not use any damaging or corrosive products on the unit.

Periods of inactivity:

The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

Damage Requiring Service:

The appliance should be serviced by qualified service personnel when:

- The power supply cord or the plug has been damaged; or
- Objects have fallen, or liquid has been spilled into the appliance; or
- The appliance has been exposed to rain; or
- The appliance does not appear to operate normally or exhibits a marked change in performance; or
- The appliance has been dropped, or the enclosure damaged.

Servicing:

The user should not attempt to service the appliance beyond that is described in the Operating Instructions.

All other servicing should be referred to qualified service personnel.

SM MC03 Main Features

The MC03 is a well-balanced recording microphone that provides exemplary performance under a variety of applications. It comes supplied with a power supply, shockmount, case, and two microphone cables (one is a special multi-pin cable for the power supply).

With its classic vintage look, the MC03 features the same extraordinary sound and performance of legendary vacuum tube microphones from years gone by, at a fraction of their original cost. It is only now possible to attain the superior technology of these classic microphones at a modest price available even to the home project studio.

Featuring 9 selectable polar patterns the SM MC03 is extremely versatile and suited to a whole range of applications. Powerful, warm and extremely versatile, the MC03 meets the requirements of even the most demanding digital recording and live broadcasting applications.

FOREWORD

Dear Customer,

Congratulations on purchasing the SM Pro Audio MC03 Vacuum Tube Condenser Microphone. The MC03 has been designed to be used as a standard tool for recording engineers and as such is perfect for recording studio vocals, acoustic instruments, orchestras, choirs, and many other live sound applications. With much experience in the audio industry over a long period of time, and along with valuable suggestions from our customers, our engineers have developed a product we know you will be satisfied with. We guarantee you uncompromising quality as well as excellent technical and audio properties at an extremely affordable price.

Regards,

SM ProAudio

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1. INTRODUCTION

Valve microphone....retain your warmth!

With the advent of pristine digital studio recording facilities nowadays, more and more recording engineers are wanting to retain as much warmth and roundness in their recordings as possible. One way to achieve this is to use valve or tube devices on your input stage (microphones, pre-amps, etc).

The SM MC03 is a dedicated large diaphragm, gold sputtered, tube/valve condenser microphone. Perfect for capturing recordings with the full rich sound of a valve.

2. THE DESIGN CONCEPT

2.1 High quality components and design

The philosophy behind SM ProAudio products guarantees a no-compromise circuit design and employs the best choice of components.

The MC03 components feature:

- Hand-tooled brass capsule with a 3-micron gold-sputtered mylar dual diaphragm (1 inch) for maximum sensitivity, long life, subtle sonic detail and unsurpassed tone
- Tube preamplifier circuitry with vacuum tube (a classic 12Ax series valve)
- A specially developed output transformer designed for ultra transparency and natural warm reproduction of sound
- Dedicated AC power supply with built in phantom power and balanced XLR output for connection to any mixing console
- Nine remotely selectable different polar patterns on power supply for outstanding versatility and ease of operation: omnidirectional, cardioid, figure 8, and six intermediate stages
- Sturdy shockmount

2.2 Connections

All connection points on the microphone and power supply are secured firmly to the exterior chassis housing. This ensures robust quality and confidence in performance under all conditions.

A special multi-pin microphone cable is provided for connection between the microphone and dedicated power supply.

3. INSTALLATION

Your SM ProAudio SM MC03 was carefully packed in the factory and the packaging was designed to protect the unit from rough handling. Nevertheless, we recommend that you carefully examine the packaging and its contents for any signs of physical damage, which may have occurred in transit.

+ If the unit is damaged, please do not return it to us, but notify your dealer and the shipping company immediately, otherwise claims for damage or replacement may not be granted.

Shipping claims must be made by the consignee.

Your SM MC03 comes bundled with:

- SM MC03 large diaphragm valve/tube condenser microphone.
- Lockable flight case to provide maximum protection for your microphone
- Dedicated power supply.
- 7 pin cable to connect to your SM MC03 to the dedicated power supply.
- Elastic suspension shock-mount to prevent transmission of vibrations through the microphone stand.
- Spare suspension elastic for shockmount assembly.

3.1 Mounting the microphone into the shockmount and boom stand

The use of the Shock Mount will reduce the risk of floor-borne vibrations being picked up when critical recordings are being made.

You will notice that there is a small threaded hole on an adjustable mounting clip fixed to the side of the shockmount assembly. This is where you can connect to any standard boom stand. Screw the shockmount to the boom stand firmly.

Place the base of the microphone into the shockmounts' bottom centre hole, and screw in a clockwise direction to secure. You will see that by screwing the threaded locking nut of the cable to the threaded base of the microphone, the microphone is now seated firmly in its mount.

3.2 Power supply

The SM MC03 has a professional external power supply. On one side of the power supply there is the microphone cable connectors and polar pattern selector switch. On the other side of the power supply is the power switch and mains power cable connector slot.

3.3 Connecting the required cables

- Connect the microphone to the power supply

Using the included special 7 pin microphone cable, connect one end of the cable to the base of the MC03 microphone, and the other to the connector labelled “MIC IN” on the front of the dedicated power supply unit.

- Connect the powersupply microphone output to your mixer or recording device of choice

Using a standard microphone cable, connect one end of the cable to the connector labelled “OUT” on the front of the dedicated power supply unit, and the other to the input connector of your mixer or other recording device.

We strongly suggest you use a high quality cable. The cable should be as short as it can be practically be in your situation. Long cables may adversely affect sound quality.

- Connect the Mains Lead from the Power Supply socket to your mains power.

Connect one end of the included power cable to the rear of the dedicated power supply to the connector labelled either “110V” or “220V” (depending on which country you purchased the MC03 in), and the other to your mains power source.

4. APPLICATION GUIDE

4.1 Powering up the SM MC03

It is very simple to power up the microphone. Make sure your power supply is connected to the mains power of the correct voltage for your unit. Then simply activate the power switch on the dedicated power supply.

Your microphone You should allow several minutes for the MC03 to 'warm up' and stabilize before you begin recording. All valve microphones must go through this stage, as the tube requires this for correct operation.

4.2 Selecting a polar pattern for use

There are 9 Polar Patterns available on the MC03. These can be selected from the rotary switch on the dedicated Power Supply. Select the preferred Polar Pattern (commonly Cardioid for regular vocal recording). Experiment with the microphone, listen to the various patterns and decide what suits your current application best.

We suggest you use a 'pop-stopper' wind screen when recording vocals; this will help reduce high-level plosives.

5. STORAGE & CARE

5.1 Cleaning your microphone

The MC03 should be kept in clean dry environment. Try to avoid temperature extremes. If the housing of the microphone becomes soiled for any reason, you can clean it with a soft textured cloth moistened in isopropyl alcohol.

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

5.2 Replacing the tube of your microphone

The tube used in the MC03 has been hand selected for low noise, and burned in to provide years of service. However, as with all “tube” technology products, over time your tube may fail and need replacing. The tube used in the MC03 is a very popular type (12AX7) and is used in a variety of music and recording related products. You should be able to obtain from your local music retail outlet when required to do so.

To gain access to the tube, first disconnect the microphone from its power supply. Remove the microphone from the shock mount and unscrew the base of the mic near the cable connector in an anti-clockwise direction. This is a section of the base about 1cm in thickness.

You can then carefully remove the remaining tubular shaft to expose the inner workings and tube of the microphone.

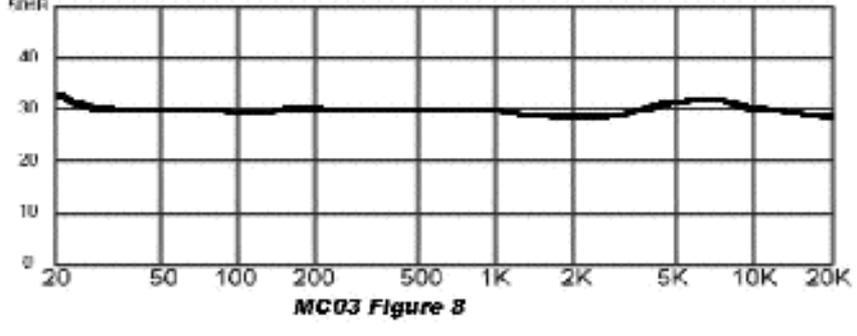
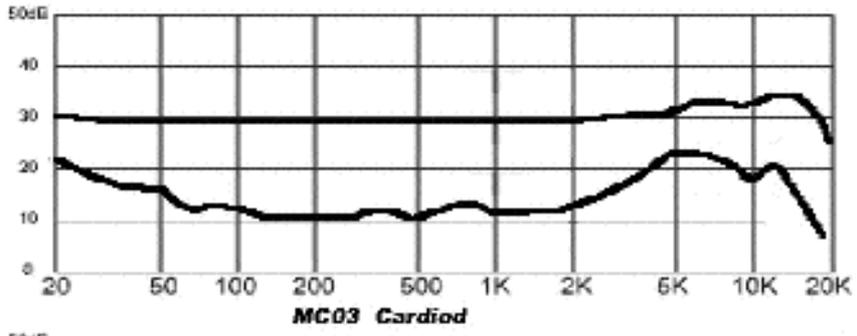
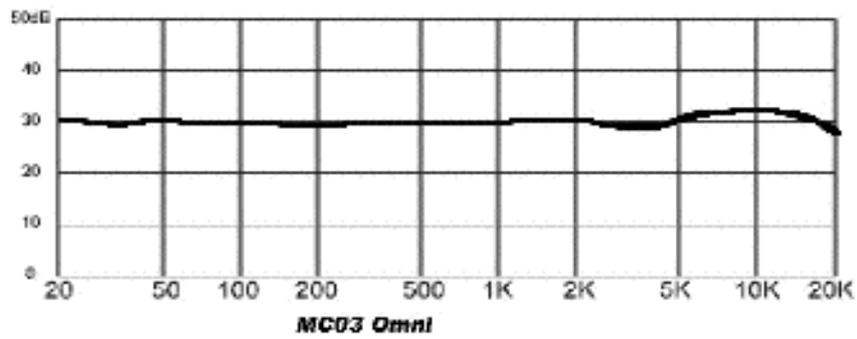
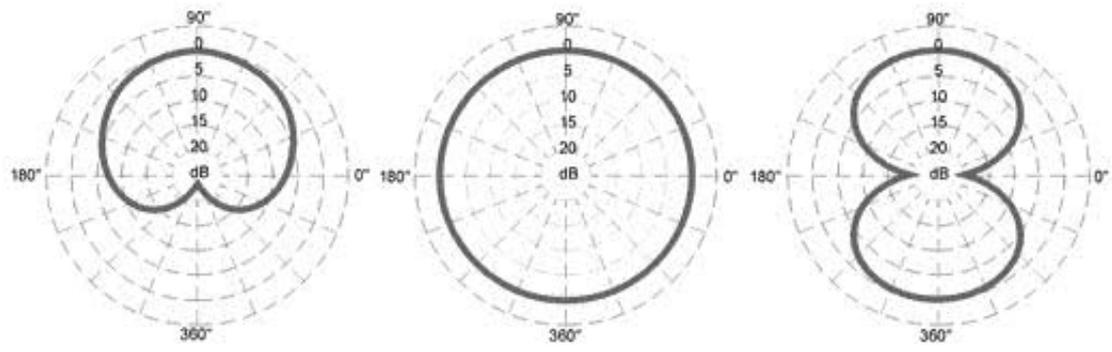
Remove the tube through the side opening in the microphone chassis. Hold the tube with a finger and thumb on either side of the tube, holding onto the rubber protector ring. Wiggle gently to remove.

When replacing your new tube try not to touch the actual valve. Oils can be transferred by fingers which can reduce the operating life and performance of your tube. Be sure to handle as much as possible without physically touching with your fingers. If your new tube does not have a rubber protector ring, please use the one provided surrounding your old tube.

Make sure that the replacement tube is seated firmly in the socket. Replace the body by sliding it over the chassis. Screw on the 1cm base, and replace the microphone in the shock mount.

6. SPECIFICATIONS

Microphone type:	True pressure gradient condenser microphone with 1 in (25 mm) diameter dual diaphragms and vacuum tube preamplifier
Vacuum tube:	12AX series widely available valves
Frequency range:	20 to 20,000 Hz
Capsule capacitance:	50 pF
Polar pattern:	Omnidirectional, cardioid, figure 8, and six intermediate stages (silent switching)
Open circuit sensitivity @1KHz:	-36dBV +/-2dBV (0dBV=1V/Pa) for all patterns
Rated output impedance:	Low, 200 Ohms (nominal)
Recommended load impedance:	1000 Ohms
Max. SPL (0.5% THD @1000Hz):	130 dB
Equivalent noise level (A weighted):	18 dB-A
S/N ratio re 1Pa:	74dB
Dynamic range (max SPL to A-weighted noise level):	116 dB
Ambient temperature range:	14°F to 140°F (-10 °C to +60 °C)
Connector:	7-pin XLR (gold plated)
Dimensions: Diameter:	2.36 in (60 mm), length: 7.1 in (180 mm)
Net weight:	29 oz (800 g)
Power requirement:	Dedicated SM Pro MC03 powering unit required to power valve, no additional phantom power needed.
Power Supply Dimensions and Weight:	2" X 5.5" X 7" (51 X 140 X 178 mm), 3.25 lbs (1.46 Kg)



7. WARRANTY

1 WARRANTY CARD

To be protected by this warranty, the buyer must complete and return the enclosed warranty card (signed/stamped by retail dealer) within 14 days of the date of purchase to SM ProAudio (see address below 3). Failure to return the card in due time (date as per postmark) will void any extended warranty claims.

2 WARRANTY

1. SM ProAudio warrants the mechanical and electronic components of this product to be free of defects in material and workmanship for a period of one (1) year from the original date of purchase, in accordance with the warranty regulations described below. If any defects occur within the specified warranty period that are not caused by normal wear or inappropriate use, SM ProAudio shall, at its sole discretion, either repair or replace the product.

2. If the warranty claim proves to be justified, the product will be returned freight prepaid by SM ProAudio within Australia. Outside of Australia, the product will be returned at the buyer's expense.

3. Warranty claims other than those indicated above are expressly excluded.

3 RETURN AUTHORIZATION NUMBER

1. To obtain warranty service, the buyer must call SM ProAudio during normal business hours BEFORE returning the product (Tel.: +61 3 9555 8081). All inquiries must be accompanied by a description of the problem. SM ProAudio will then issue a return authorization number.

2. The product must be returned in its original shipping carton, together with the return authorization number, to the following address:

SM Pro Audio
Service Department
W25, 26-28 Roberna St
Moorabbin
Melbourne, Victoria
Australia 3189

4 WARRANTY REGULATIONS

1. Warranty services will be furnished only if the product is accompanied by an original retail dealer's invoice. Any product deemed eligible for repair or replacement by SM ProAudio under the terms of this warranty will be repaired or replaced within 30 days of receipt of the product at SM ProAudio.

2. If the product needs to be modified or adapted in order to comply with applicable technical or safety standards on a national or local level, in any country which is not the country for which the product was originally developed and manufactured, this modification/adaptation shall not be considered a defect in materials or workmanship.

The warranty does not cover any such modification/adaptation, irrespective of whether it was carried out properly or not. Under the terms of this warranty, SM ProAudio shall not be held responsible for any cost resulting from such a modification/adaptation.

3. Free inspections, maintenance/repair work and replacement of parts are expressly excluded from this warranty, in particular if caused by inappropriate use. Likewise, the warranty does not cover defects of expendable parts caused by normal wear of the product. Expendable parts are typically pots, potentiometers, switches and similar components.

4. Damages/defects caused by the following conditions are not covered by this warranty:

- Misuse, neglect or failure to operate the unit in compliance with the instructions given in the user or service manuals.
- Connection or operation of the unit in any way that does not comply with the technical or safety regulations applicable in the country where the product is used.
- Damages/defects that are caused by any other condition beyond the control of SM ProAudio.

5. Any repair carried out by unauthorized personnel will void the warranty.

6. Products which do not meet the terms of this warranty will be repaired exclusively at the buyer's expense. SM ProAudio will inform the buyer of any such circumstance. If the buyer fails to submit a written repair order within 4 weeks after notification, SM ProAudio will return the unit C.O.D. with a separate invoice for freight and packing. Such cost will also be invoiced separately when the buyer has sent in a written repair order.

5 WARRANTY TRANSFERABILITY

This warranty is extended exclusively to the original buyer (customer of retail dealer) and is not transferable to anyone who may subsequently purchase this product. No other person (retail dealer, etc.) shall be entitled to give any warranty promise on behalf of SM ProAudio.

6 CLAIM FOR DAMAGES

Failure of SM ProAudio to provide proper warranty service shall not entitle the buyer to claim (consequential) damages. In no event shall the liability of SM ProAudio exceed the invoiced value of the product.

7 OTHER WARRANTY RIGHTS

This warranty does not exclude or limit the buyer's statutory rights provided by national law, in particular, any such rights against the seller that arise from a legally effective purchase contract.

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