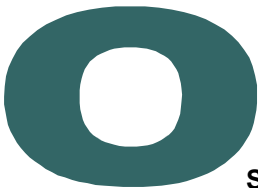


iCON



Series







O₂
Studio Condenser Microphone

Owner's Manual



cN16549

O₂

 CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK) NO USER-SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED PERSONNEL ATTENTION: POUR EVITER LES RISQUES DE CHOC ELECTRIQUE, NE PAS ENLEVER LE COUVERCLE. AUCUN ENTRETIEN DE PIECES INTERIEURES PAR L'USAGER. CONFIER L'ENTRETIEN AU PERSONNEL QUALIFIE. AVIS: POUR EVITER LES RISQUES D'INCENDIE OU D'ELECTROCUTION, N'EXPOSEZ PAS CET ARTICLE A LA PLUIE OU A L'HUMIDITE	  	<p>The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure, that may be of sufficient magnitude to electric shock to persons. Le symbole clair avec point de flèche à l'intérieur d'un triangle équilatéral est utilisé pour alerter l'utilisateur de la présence à l'intérieur du coffret de voltage dangereux non isolé d'ampleur suffisante.</p> <p>Exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance. Le point d'exclamation à l'intérieur d'un triangle équilatéral est employé pour alerter les utilisateurs de la présence d'instructions importantes pour le fonctionnement et l'entretien (service) dans le livret d'instruction accompagnant l'appareil.</p>
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Important Safety Instructions

1. Read this manual thoroughly before using this unit.
2. Keep this manual for future reference.
3. Take notice of and comply with all warnings included in the user's manual or indicated on the appliance.
4. Follow all instructions included in this manual.
5. Do not expose this unit to rain or moisture. Avoid having water or other liquids spilled on this unit.
6. When cleaning the cabinet or other parts of this appliance, use only a dry or slightly damp soft cloth.
7. Do not block any ventilation openings or interfere with the proper ventilation of this unit. Install in accordance with the manufacturer's instructions.
8. Do not use or store near any heat sources such as radiators, heat registers, stoves, or other heat-producing appliances.
9. Do not interfere with the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. These are designated for your safety. If the provided plug does not fit into your outlet, consult an electrician.
10. Protect the power cord from being walked on or otherwise damaged by items placed on or against them. Particular attention should be given to the plugs, receptacles, and the point where the cord exits the appliance.
11. To avoid the risk of electrical shock, do not touch any exposed wiring while the unit is in operation.
12. Only use attachments/accessories specified by the manufacturer.
13. Unplug this unit and all connected electrical equipment during lightning storms or when left unused a long period of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the appliance has been damaged in any way or fails to operate normally.

WARNING: To reduce the risk of fire or electric shock, do not expose this unit to rain or moisture

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Introduction

Congratulations on purchasing your ICON O2 condenser microphone. The management and employees of ICON are dedicated to producing quality equipment and are pleased that you have selected one of our many fine products. With proper care, we trust that your O2 condenser microphone will provide years of trouble-free operation.

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This manual is intended to introduce you to the features and specifications of the O2 condenser microphone you have purchased and to guide you through the proper set-up and use of this equipment. You will also find an enclosed warranty card. Please fill it out and mail it in to receive online technical support and updated information about this unit as well as other quality ICON products.

We recommend that you record your serial number in the space below for future reference.

Welcome to ICON, and thank you for becoming part of our worldwide family!

Please write your serial number here for future reference:

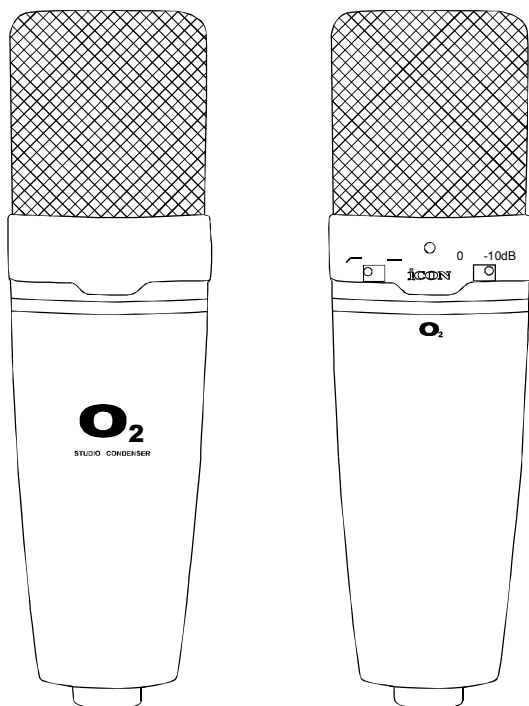
Purchased at:

Date of purchase:

What's in the package?

- O2 Condenser Microphone
- Users' Manual
- Carry Case

Features



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- Golden painted 19mm capsule
- Cardioids patterns
- True 20Hz to 20KHz frequency response with pronounced presence boost
- Switch able high-pass filter and 10dB pad
- Low cut
- Very low self-noise
- Exceptional low-frequency reproduction
- High output level
- High input SPL capability
- Extremely uniform polar response
- Classic character and rugged construction
- Optional swivel mount

Operating your O2

Powering the O2

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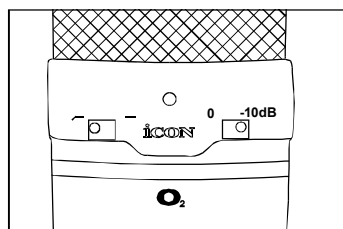
The O2 is a condenser microphone and therefore needs to be operated by connecting a phantom power supply. Phantom power is standard on most quality mixers, outboard mic-pres and hard disk recorders. If necessary an external phantom supply can also be used. The O2 receives the phantom power directly from a mic cable when connected to a mixer or other microphone input that includes a phantom supply. The power is actually sent OUT of the microphone INPUT, riding silently along with the audio signal. Most mixers have a switch to engage the phantom power so be sure to check that the phantom power is on. The O2 features an orange LED, which will illuminate when phantom power is present.

Setting up the signal level

When connecting the O2 to a mixer or recorder input, be sure that the input is of microphone level. Also be sure that the phantom power is engaged as explained at the previous section " Powering the O2 ". Most mixers and recorders of reasonable quality will offer a microphone input with mic trim (usually called Trim or Gain) control. The purpose of the mic trim control is to optimize the amount of good signal to any noise associated with the mixers electronics. A good mic pre with trim also will have a PEAK or CLIP LED. To set a good level on the mic, set the O2 up in front of the desired sound source and slowly raise the mic trim control until you see the PEAK LED light up. Then, turn the mix trim control down until the LED does not light any more. On most mixers, the ideal setting is that the trim control is turned up as much as possible without lighting the PEAK LED. If you try turning the Gain control all the way down, and the PEAK light is still lighting, try using the O2 PAD as explained in the following section.

1. Using the PAD Switch

The O2 includes a PAD switch, which you can use to lower the input sensitivity of the microphone. When the PAD switch is set at the 0dB position, the PAD is bypassed and there is no effect on the signal. When the PAD switch is set to -10dB position, the microphone's input sensitivity will be lowered by 10dB. You can use the PAD when you are miking loud sound sources with a high SPL.

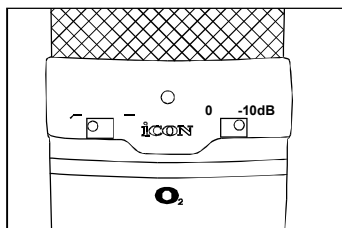


Operating your O2

2. Using the Hi-Pass Filter

The O2 offers a user selectable hi-pass, or low-cut filter which you can use to eliminate any unwanted low frequency reproduction. When the Hi-Pass filter is set to the "Flat" (indicated by the straight line) position, there is no effect on the signal. When the Hi-Pass filter is set to the "Roll-Off" position (indicated with the angled line), a 12dB per octave low-cut at 100Hz is applied to the signal. This

can be extremely useful for removing low frequency stage rumble, wind noise during outdoor use and filtering out lows from drums when used as overhead cymbal microphone on a drum kit.



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Understanding Polar Patterns

The most important characteristic of any microphone is its directionality or pick up pattern. There are three basic categories of pick up patterns: Omni, bi and uni-directional. Omni mics pick up sound from all directions, bi-directional (Figure 8) mics pick up the sound directly in front and back of the microphone while rejecting the sound on the left and right sides, and uni-directional (Cardioid) mics pick up the sound in front of the microphone.

While omni and bi-directional microphones are very useful for a variety of applications, the majority of micing situations in recording and live sound require uni-directional or cardioid microphones. The uni-directional nature allows for better separation of instruments in the studio and more control over feedback in live sound reinforcement. The O2 condenser's pick up pattern is hyper-cardioid which offers even more side-to-side rejection.

When positioned correctly the hyper-cardioid pick up pattern allows you to pick up more of the sound you want and less of the sound you don't want.

Operating your O2

Microphone Placement

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In order to maximize the sound quality, you must pay careful attention to the placement of your O2 and how it is positioned for the instrument or vocalist that you are miking. All microphones, especially uni-directional or cardioid microphones, exhibit a phenomenon known as the "proximity effect". Very simply put, proximity effect is a resulting change in the frequency response of a microphone based on the position of the mic capsule relative to the sound source. Specifically, when you point a cardioid mic directly at the sound source (on-axis) you will get the best frequency response, however, when you start pointing the microphone slightly away (off axis) you will notice the low frequency dropping off and the microphone will start to sound thinner.

For most vocal applications you'll want to position the microphone directly in front of the artist. The same may be true for miking instruments. However, you can make some pretty amazing equalization adjustments by slightly changing the angle of the capsule to the sound source. This can be a very useful technique in capturing the optimum sound of drum set, acoustic guitar, piano or other instruments in a live room or sound stage. Experimentation and experience are the best teachers in getting good sounds, so plug in!

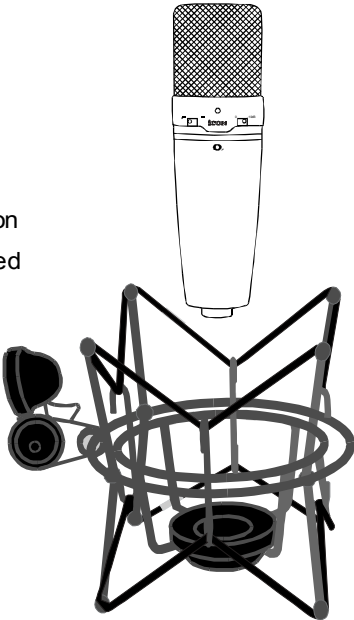
P-Popping

P-Popping is that annoying pop that you can get when the microphone diaphragm gets a blast of air from a vocalist pronouncing words with the letter "P" included. There are a few ways to deal with the problem including using an external pop filter. Some famous engineers have relied on an old nylon stocking over a bent clothes hanger, which actually works very well. For a cleaner solution, try ICON PF-01 pop filter. You can also try placing the microphone slightly off axis (on a slight angle) from the vocalist. This can often solve the problem without using an external pop filter.

Operating your O2

Mounting the O2

- 1. Place the microphone carefully into the SM-01 shock mount bracket and position the microphone straight into the threaded collar.
- 2. Tighten the SM-01 threaded collar nearly all the way.



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Specification

Acoustical Element.....	Back condenser capsule
Directional pattern.....	Hyper-cardioid
Frequency range	40Hz-18KHz
Sensitivity.....	-33dBV/Pa
Rated Impedance	200 Ohms
Min Load Impedance	1000 Ohms
SPL.....	136dB
S/N Ratio.....	78dB
Power Supply Voltage.....	36-52V
Weight.....	0.6
Dimensions.....	64mm(dia) x 210mm(L)

Services

If your O2 needs servicing, follow these instructions.

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1. Ensure the problem is not related to operation error or external system devices.
2. Pack the unit in its original packaging including end card and box. This is very important. If you have lost the packaging, please make sure you have packed the unit properly. ICON is not responsible for any damage that occurs due to non-factory packing.
3. Contact your Icon dealer or if none is available, contact the nearest ICON distributor or regional office to obtain a return authorization. If applicable, shipping instructions will be provided by the dealer or from ICON.

Refer to www.icon-global.com for a complete list of current Icon distribution polcations.

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