CLARION FC357

FET CONDENSER MICROPHONE

OPERATING MANUAL

WARNING!

WARNING: *Only authorized Lauten Audio technicians should perform disassembly and maintenance on any part of this microphone. Disassembling and modifying any part of this microphone may void its warranty.* ***NEVER DISASSEMBLE THE MICROPHONE WHEN POWER IS BEING SUPPLIED.***

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Warranty

This product has a **3 year limited warranty** from the date of sale from an authorized Lauten Audio dealer or distributor.

Items limited to 90-days coverage include shock mount bands, cases, boxes, cables, and vacuum tubes.

A copy of your original sales receipt may be requested to verify the original purchase date. ***Please keep your receipt***. To register your microphone, please visit LautenAudio.com for the most up-to-date registration method.

Serial Number: _____

Date of purchase: _____

Dealer Name: _____

A message from the founder

Congratulations and thank you for your purchase of the FC-357 Clarion FET condenser microphone. Your microphone was designed and built with pride by Lauten Audio. We are dedicated to providing recordists throughout the world with authentic, high quality, great sounding microphones.

Please enjoy your new microphone and know it was created with thoughtful engineering and a great deal of pride.

Sincerely,

Brian Loudenslager

Founder

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Safety/Contents/Introduction

Safety

Please make sure the equipment your microphone will be connected to meets or exceeds the safety regulations in force in your country and is utilizing a ground lead.

Never disassemble your microphone while power is being supplied to it.

Contents

- FC-357 microphone
- Shock mount with stand adapter
- Wood box
- Operating manual

Introduction

The FC-357 is a solid-state FET multi-pattern large diaphragm condenser microphone. This microphone is for recordists looking for a unique and modern FET sound. It offers a full and rich low and mid-range as well as smooth and unique high mid and high frequencies.

This microphone has class-A electronics and a 28.25mm dual-diaphragm capsule capable of omnidirectional, cardioid and figure-8 polar patterns. The microphone also features a -10dB pad and +10 gain switches.

The FC-357 is built with extreme attention to detail. From the individually hand-tuned capsule to the premium high-resolution electronics, this microphone is a high-quality precision instrument for professional audio recording.

Quick Start Guide/Sequence of Operation

1. Securely attach the microphone shock mount to a high-quality microphone stand and tighten the wing nut at the shock mount elbow.
2. Carefully thread the FC-357 into the shock mount.
   Tip: *Rotating the microphone in the opposite direction of the bottom nut will assist with threading it into the shock mount.*
3. Make sure the phantom power and gain on your recording interface are **turned off** before connecting the microphone.
4. Securely connect the female end of a high-quality standard 3-pin XLR microphone cable to the bottom of the FC-357 microphone and the male end to your recording interface or microphone preamp.
5. Choose your desired pad and polar pattern selections on each side of the FC-357 microphone.
6. Turn on the +48 volt phantom power on the recording interface channel you have connected the microphone to and allow the microphone to warm up for several minutes.
7. If you are using the microphone for vocals or voice, please ensure you use a high-quality pop-filter.
8. Gradually increase the input gain on your recording interface or preamp to test and achieve your desired microphone input levels.
9. Congratulations, you are ready to begin using your FC-357 microphone.

Description

This large-diaphragm condenser microphone has been thoughtfully designed with the feedback from sound engineers working in recording studios for many years. The microphone character was designed to offer a full and rich low and mid-range, as well as smooth and unique high mid and high frequencies. Using premium quality, reliable components, this microphone will withstand use in a recording studio for many years.

The electronic circuitry of the microphone exhibits less than 15dB of self-noise and a maximum SPL level of 130dB (-10dB pad engaged) allowing it to record both quiet and loud sound sources. The 28.25mm diaphragms are made of an ultra-thin plastic material with a layer of gold on one side. The body helps prevent RF interference allowing you to successfully use the microphone near transmitter stations and wireless microphones or other communications equipment.

The FC-357 features one switch on each side of the microphone just below the microphone grill. These switches allow you to adjust the microphone polar patterns and output gain (see Figures 1 and 2 below).

Gain/Pad Selector

On the left side of the microphone is the gain and pad selector (refer to Figure 1). This microphone is unique to other microphones on the market in that it allows you to increase and decrease the output gain by 10dB. This feature is extremely useful when using inferior preamplifiers such as those built into many consumer grade recording interfaces or when recording very quiet sound sources. This +10dB gain switch allows you to get more of the microphone character and rely less on the gain from a preamp. There is also a -10dB pad selection that allows you to reduce the output of the microphone when recording very loud sound sources, or if you want to have more of the preamp character in your recording. The 0dB setting is the default level.

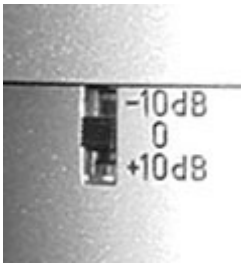


Fig. 1 Gain/Pad Selector

Polar Pattern Selector

The polar pattern selector (refer to Figure 2) is located on the right side of the microphone. The selectable polar patterns are omnidirectional (top), cardioid (center) and figure-8 (bottom). The ability to select different polar patterns allows this microphone to be used in many recording situations.


Fig. 2 Polar Pattern Selector

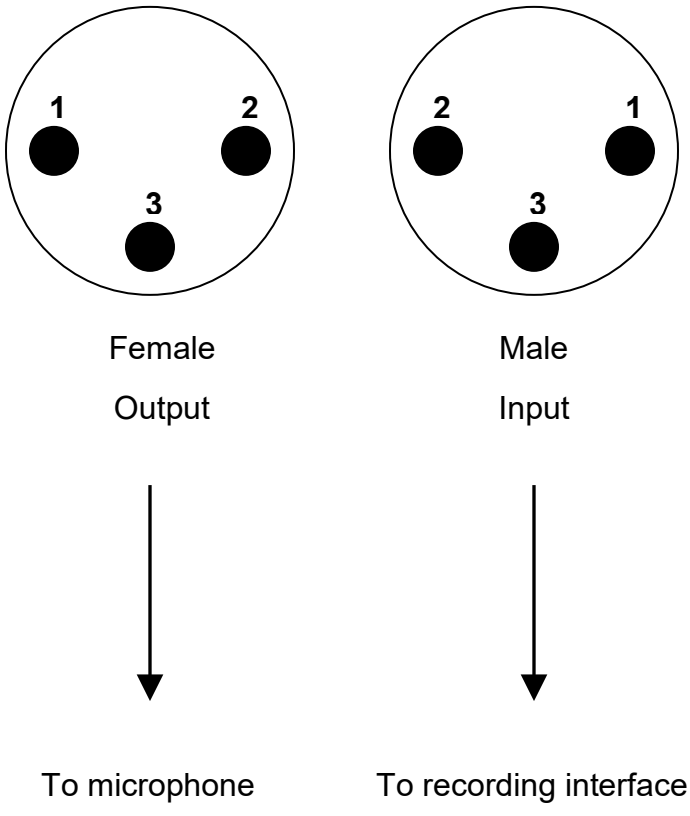
Power Requirements

The FC-357 microphone requires +48V phantom power. Phantom power can be found as a built-in feature on most modern recording interfaces and microphone preamplifiers, or you may use an external +48V phantom power supply.

> **Do not connect this microphone to any power source other than +48v phantom power. Using +48V phantom power is the only way to ensure safe and reliable operation.**

Connections

Always use a high-quality 3-pin XLR microphone cable with your microphone. Connect the female end of the XLR cable to the microphone and the male end of the XLR cable to your recording interface.



Recommended Uses

The FC-357 is designed to offer you sonically smooth and rich recordings. We recommend using the FC-357 for micing solo voices and instruments and also for distance micing as overheads or room mics. The FC-357 may also be used to mic various other sources including but not limited to those listed below.

We recommend the FC-357 for the following recording applications.

Sound Source
Lead/Solo Vocals
Backing Vocals/Choirs
Speech & Voice-over
Piano (Grand & Upright)
Bass Drum
Toms
Snare Drum
Acoustic Guitar
Electric Guitar
Electric Bass
Violin
Cello
Organ
Trumpet
Trombone
French Horn
Tuba
Saxophone
Flute
Clarinet
Harmonica
Cymbals
Bongos

Placement and Techniques

Below are general tips for microphone placement; the recording environment plays a significant role in the success of any technique. We suggest experimenting extensively.

Lead/Solo Vocals	Distance from source: 6 to 12 inches. Pattern: Cardioid, use pop screen or foam windscreen.
Choirs	Two mics in stereo and one spot mic for each soprano, alto, tenor and bass sections, or one set of spaced mics in stereo.
Backing Vocals	Individual micing: distance from source should be 6 to 12 inches. Pattern: Cardioid, use pop screen or foam windscreen. Group micing: use cardioid or omni and place vocalists in semi-circle in front of microphone.
Violin & Viola	Position the microphone to the "f" holes from a height of 6 to 10 inches depending on the musician's stance. Use cardioid or omni polar pattern. For increased presence use +10dB gain.
Cello, Upright Bass	Position microphone about 12 to 18 inches from and facing one of the "f" holes. Use cardioid or omni polar pattern. For increased presence use +10dB gain.
Acoustic Guitar	Single micing: Place mic 6 to 12 inches from the guitar between the sound hole and where the neck meets the body. Use cardioid polar pattern. Stereo micing: Place one mic 6 to 12 inches between the end of the body and sound hole aiming at the sound hole with the second mic 1 to 2 feet from the bridge. Use cardioid polar pattern.
Flute	Single micing: Place mic to one side of flutist and align mic with flutist's mouth. Use cardioid or omni polar pattern. Stereo micing: Place mic to one side of flutist and align mic with flutist's mouth. Place a second mic aiming at the side of the instrument. Use cardioid or omni polar pattern.
Clarinet	Place one microphone 5 to 10 inches from lowest key and slightly to the side to reduce key noise. Use cardioid polar pattern.
Saxophones	Place the microphone 12 to 30 inches away aiming at the middle of the instrument. Use cardioid polar pattern.
Trumpet	Place mic 10 to 15 inches in front of the instrument. Rotate microphone slightly off axis. Use -10dB pad and foam windscreen to increase SPL handling and reduce blowing noise. Use cardioid polar pattern.
Grand Piano	Technique 1: Place an XY, MS, or ORTF pair at the middle of the strings from a height of 4 to 8 feet. Technique 2: Place two mics 6 to 18 inches above the strings. One mic should be placed above treble strings and another above the bass strings.
Upright Piano	Open lid and place two mics 6 to 18 inches above the strings. One mic should be placed above treble strings and another above the bass strings. For increased or decreased hammer character place mics closer or further away.
Electric Guitar or Bass	Position mic 2 to 8 inches from center of speaker cone. Rotate mic slightly off-axis. Use -10dB pad and cardioid polar pattern.
Drum Overheads	Place two mics in AB or XY configuration 2 to 6 feet above drummers head. Use cardioid or omni polar patterns.
Tom Toms	Use one mic for each tom or two toms. Align mic 1 to 3 inches away from the top rim and angle mic slightly toward drum head. Use -10dB pad.
Floor Tom	Place mic 1 to 3 inches away from the top rim and angle mic slightly toward drum head. Use -10dB pad.
Bass Drum	Place mic 6 to 24 inches from front of bass drum aiming directly at it or the cut-out hole if it has one. Remove front head if you feel necessary. Use -10dB pad.
Snare Drum	Place mic 1 to 3 inches away from the top rim and angle mic slightly toward drum head. Use -10dB pad and cardioid polar pattern.

Care and Cleaning

THERE ARE NO SERVICABLE PARTS INSIDE THE MICROPHONE

Only authorized Lauten Audio technicians should perform disassembly and maintenance on

This microphone is a precise and delicate instrument. Do not drop or allow the microphone to collide with other objects as this may damage the internal components.

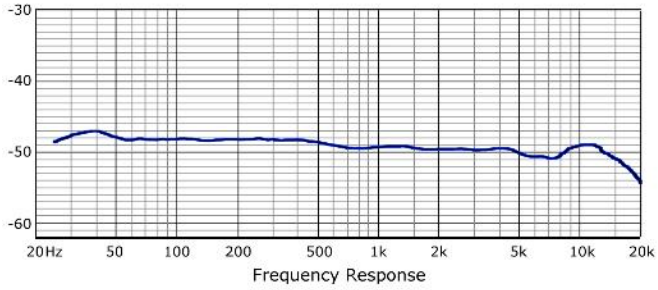
The metal surfaces of the microphone can be cleaned with mild mineral spirits or alcohol on a lightly dampened very soft cloth. Be very careful not to get any moisture inside the microphone grill or microphone.

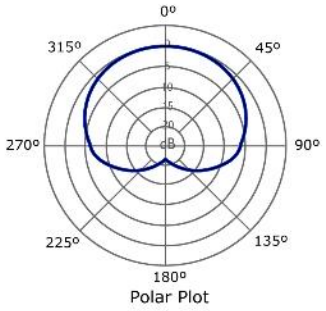
Technical Specifications

Type:	28.25mm dual large diaphragm pressure gradient transducer microphone.
Polar Patterns:	Omnidirectional, Cardioid and Figure-8 selectable.
Circuit:	Low-noise solid-state FET
Frequency Range:	25Hz-20KHz
Dynamic Range:	120dB minimum
Impedance:	< 200 ohms
Max. SPL:	0.5%THD@1000Hz: 130dB
Self-noise Level:	< 15dB(A)
Sensitivity:	16mV/Pa OR -36±2dB 0dB=1V/Pa 1000Hz
Special Features:	-10 dB attenuation and +10dB gain switch
Connector:	3-Pin standard XLR
Power Requirement:	+48V phantom power

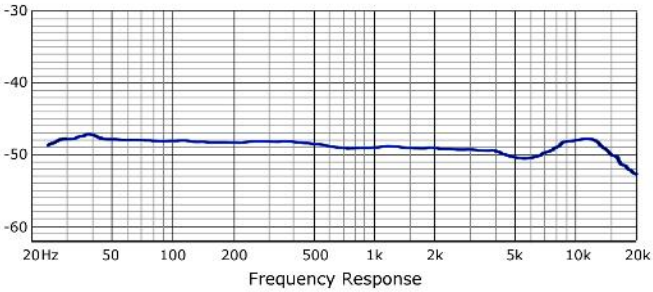
Frequency Response and Polar Pattern Plots

Cardioid





Omnidirectional



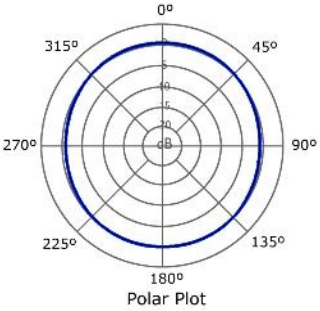
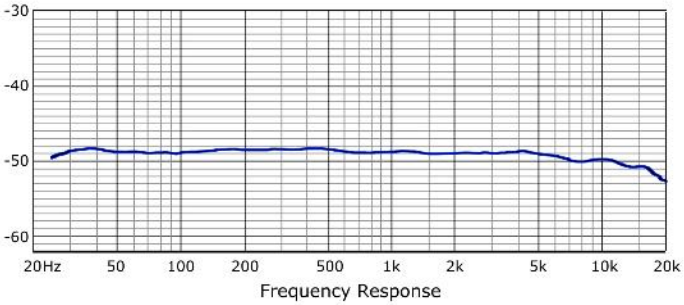
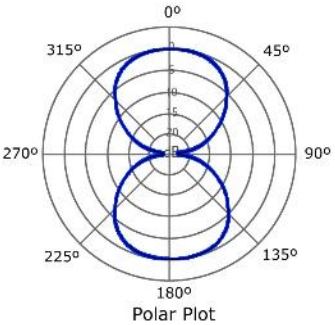


Figure-8





Lauten Audio

1817 Houret Ct. Milpitas, CA 95035

Phone: 877-721-7018

Webpage: www.lautenaudio.com

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