

LAUTEN AUDIO



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OCEANUS LT-381

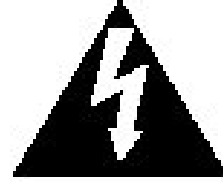
Dual-Tube FET Hybrid Extra-Large Vocal Condenser

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.**

WARNING

**FAILURE TO USE THE CORRECT VOLTAGE SETTING ON THE POWER SUPPLY WILL
DAMAGE THE MICROPHONE!**

**Prior to using your microphone please check to insure the voltage switch on the
back of the power supply is set correctly for the voltage in your country.**

For 100 to 120V set the voltage selector to 115V.

For 220 to 240V set the voltage selector to 230V.

**NEVER SUPPLY POWER TO THE MICROPHONE OR POWER SUPPLY WITH THE
COVER OFF. SERIOUS INJURY CAN OCCUR.**

A message from the founder

Congratulations and thank you for your purchase of the LT-381 Oceanus tube 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,

A handwritten signature in black ink, appearing to read 'Brian Loudenslager'. The signature is stylized with a large, looped 'B' and a long, sweeping horizontal stroke that extends to the right.

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 any part of your microphone while power is being supplied to it.

Contents

- LT-381 Oceanus microphone
- Custom shock mount with stand adapter
- LT-381 power supply
- Premium 7-Pin tube microphone cable
- Premium flight case
- Wood box
- Operating manual
- Registration card

Introduction

The LT-381 features our newly designed 31.25mm large dual-diaphragm capsule, new-old-stock scientific/military grade pentode tube input and transformerless triode tube output circuit. The LT-381 circuit topology is unique. Utilizing a pentode tube wired as a triode, with a carefully selected operation point as the input stage and a transformerless output stage, it will exhibit increased clarity and transient response of the signal and reduced noise, RFI and signal loss. Adding a triode vacuum tube in place of a transformer eliminates the harshness often associated with transformless mics and adds warmth and subtle character. The tubes are housed in an isolated aluminum tube chamber to reduce RF and efficiently dissipate the heat generated by them. The LT-381 also offers 9 selectable polar patterns between omnidirectional, cardioid and Figure-8.

This microphone is designed to be a high-performance vocal microphone that produces incredibly full and detailed recordings. It is an exquisitely crafted work-of-art, and a remarkable fusion of form and function.

Quick Start Guide/Sequence of Operation

To insure proper function of your microphone please set up the microphone using the following sequence.

1. Securely attach the microphone shock mount to a high quality microphone stand and tighten the wing nut at the shock mount elbow. ***The LT-381 is heavier than many microphones on the market and we highly recommend using a heavy duty stand.***
2. Carefully thread the LT-381 into the shock mount. To fully fasten the microphone to the shock mount, the bottom nut of the shock mount requires approximately 20 full turns.
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/microphone preamp is **turned off**.
4. Make sure you select the proper voltage on the back of the power supply for your country (i.e. 115V for U.S. and Japan, 230V for Europe).
5. Make sure the on/off switch on the power supply is in the **off** position and then connect the power cord from the power supply to a power outlet.
6. Place the power supply in a safe location where it will not be disturbed during the recording process.
7. Connect the male end of the 7-Pin tube mic cable to the "MIC IN" of the power supply.
8. Connect the female end of the 7-Pin tube mic cable to the bottom of the LT-381 microphone.
9. Securely connect the female end of a standard 3-pin XLR microphone cable to the "OUT" on the power supply and the male end to your recording interface/microphone preamp.
10. Choose your desired polar pattern selection on the front of LT-381 power supply.
11. Turn on the LT-381 power supply (a red light will illuminate). Allow the microphone to warm up for 5 to 10 minutes.
12. If you are using the microphone for vocals or voice, please use a high quality pop-filter. Any foreign materials getting onto the microphone capsule may damage it.
13. Gradually increase the input gain on your recording interface or preamp to test and achieve your desired microphone input levels.
14. Congratulations, you are ready to begin using your LT-381 microphone.

Description

The LT-381 Oceanus large-diaphragm multi-pattern condenser microphone has been thoughtfully designed with the feedback from sound engineers working in recording studios for many years. Using premium quality, reliable components, this microphone will withstand use in a recording studio for many years.

The circuit topology is unique and offers increased clarity and transient response over other microphones on the market. Though utilizing two vacuum tubes in the circuit, this microphone exhibits less than 20dB of self-noise and a maximum SPL level of 120dB allowing it to successfully record both quiet and loud sound sources. The microphone character is very detailed and revealing, more so than other microphones on the market.

This microphone allows you to select 9 different polar patterns. The 31.25mm diaphragms are made of an ultra-thin plastic material with a layer of gold on one side. The body has a unique construction to efficiently dissipate heat generated by the vacuum tubes and to help prevent RF interference allowing you to successfully use the microphone near transmitter stations, wireless microphones or other communications equipment.

Polar Pattern Selector

The polar pattern selector (refer to Figure. 1) is located on the front of the power supply. The selectable polar patterns are omnidirectional to cardioid to figure-8 with three positions in between each. The ability to select different polar patterns allows this microphone to be used in many recording situations.

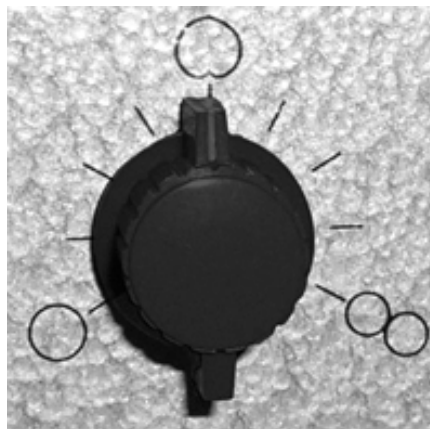


Figure 1 Polar Pattern

Power Requirements

The LT-381 microphone requires power from the included LT-381 power supply. Phantom power **should not** be supplied to this microphone. This microphone will not work properly with any other power supply. Please make sure you select the proper power supply voltage (Figure 2) for your country (i.e. 115V for U.S. and Japan, 230V for Europe) located on the back of the LT-381 power supply. Failure to select the proper voltage is dangerous and will damage the microphone.

Do not connect this microphone to any power source other than the included power supply. Using +48V phantom power or any other power supply may damage this

Voltage Selector

Check to see if the proper voltage is selected on the back of the power supply. If not, using a Philips head screw driver carefully remove the plastic safety cover over the voltage switch and select your correct voltage. Reattach the safety cover when complete.

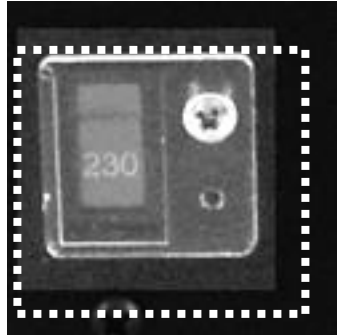


Figure 2 Voltage switch and safety cover

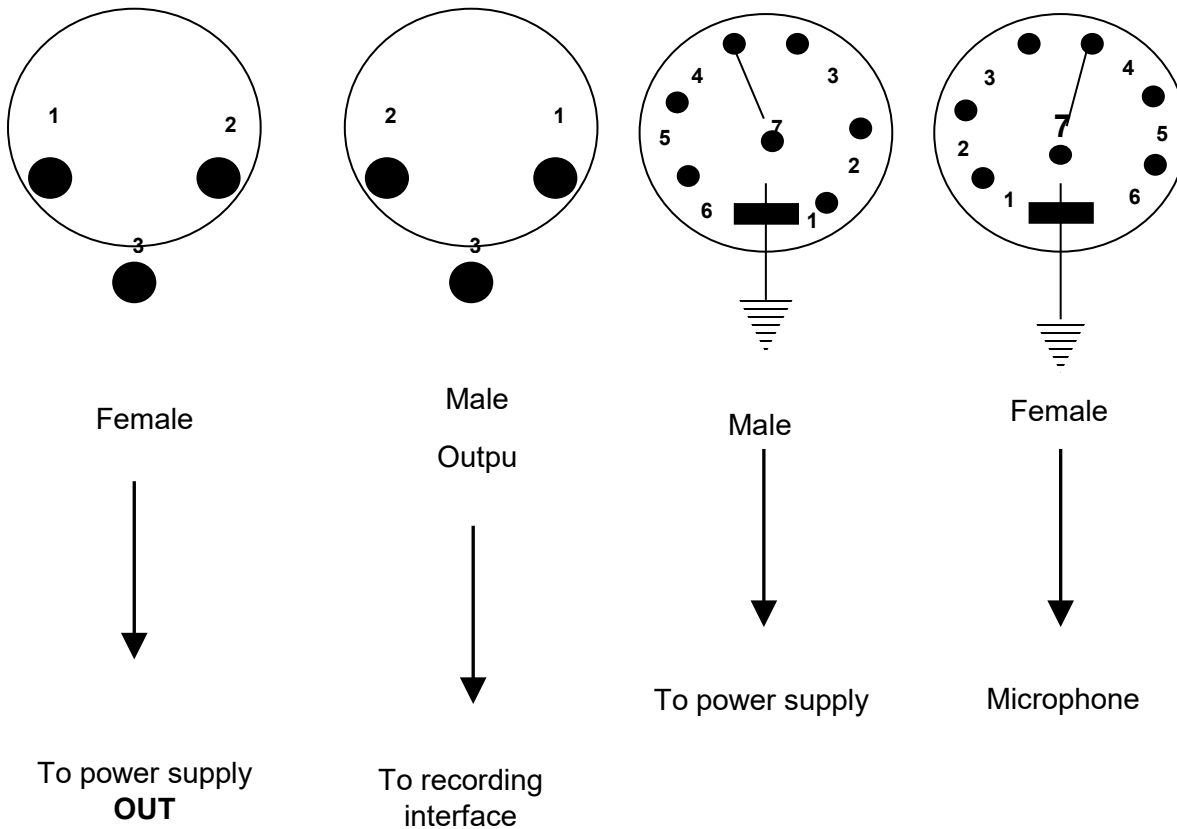
Connections

This microphone requires two connections, one from the microphone to the power supply “**MIC IN**,” and one from the power supply “**OUT**” to your recording interface or preamplifier. Always use a high quality 3-pin XLR microphone cable from the power supply “**OUT**” to your recording interface or preamplifier. Connect the female end of the supplied 7-Pin XLR cable to the bottom of the microphone and the male end of the 7-Pin XLR cable to the “**MIC IN**” on the power supply. Connect the female end of a 3-Pin XLR cable to the “**OUT**” on the power supply and the male end to your recording interface or preamplifier.

Connector pin-outs

3-Pin XLR Cable

7-Pin XLR Cable



Recommended Uses

The LT-381 Oceanus is designed to offer you very full and detailed vocal recordings. We recommend using the LT-381 for mic'ing vocals and also for distance mic'ing as overheads or room mics. The LT-381 may also be used to mic various other sources including but not limited to those listed below.

We recommend the LT-381 for the following recording applications.

Sound Source
Lead/Solo Vocals
Backing Vocals/Choirs
Speech & Voice-over
Acoustic Guitar
Room mic & Overheads
Piano (Grand & Upright)
Bass Drum
Toms
Snare Drum
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: 4 to 12 inches. Pattern: Cardioid, use pop screen or foam windscreen.
Dual Vocals	Distance from source: 4 to 12 inches. Pattern: Figure-8. Rotate microphone in shock mount so that the front and back are facing to the left and right of microphone stand. One vocalist should sing into back and other into front. Always use a pop screen for each vocalist.
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 4 to 12 inches. Pattern: cardioid, use pop screen. 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 4 to 24 inches depending on the musician's stance. Use cardioid or omni polar pattern.
Cello, Upright Bass	Position microphone about 10 to 18 inches from and facing one of the "f" holes. Use cardioid or omni polar pattern.
Acoustic Guitar	Single micing: Place mic 4 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 4 to 12 inches between the end of the body and sound hole aiming at the sound hole with the second mic 1 to 3 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 4 to 10 inches from lowest key and slightly to the side to reduce key noise. Use cardioid polar pattern.
Saxophones	Place the microphone 10 to 30 inches away aiming at the middle of the instrument. Use cardioid polar pattern.
Trumpet	Place mic 8 to 15 inches in front of the instrument. Rotate microphone slightly off axis. 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 3 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 4 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 1 to 8 inches from center of speaker cone. Rotate mic slightly off-axis. Use cardioid polar pattern.
Drum Overheads	Place two mics in AB or XY configuration 1.5 to 6 feet above drummers head. Use cardioid or omni polar patterns.
Tom Toms	In cardioid polar pattern, 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.
Floor Tom	In cardioid polar pattern, place mic 1 to 3 inches away from the top rim and angle mic slightly toward drum head.
Bass Drum	In cardioid polar pattern, place mic 12 to 36 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.
Snare Drum	In cardioid polar pattern, place mic 1 to 3 inches away from the top rim and angle mic slightly toward drum head. Use cardioid polar pattern.

Care and Cleaning

THERE ARE NO SERVICABLE PARTS INSIDE THE MICROPHONE OR POWER SUPPLY.

*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 ANY PART WHEN POWER IS BEING SUPPLIED.***

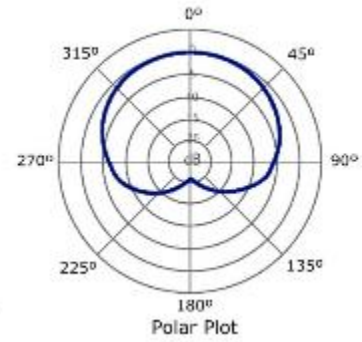
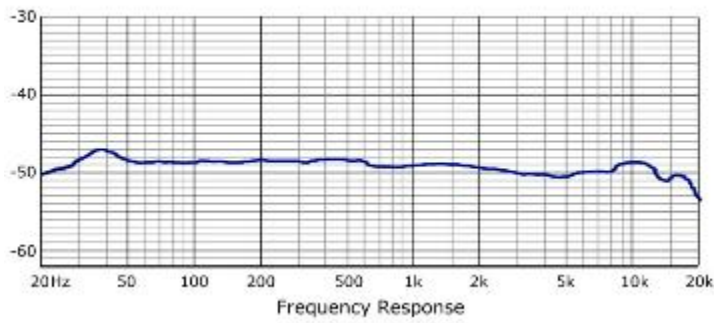
This microphone is a precise and delicate instrument. Do not drop or allow the microphone to collide with other objects as this may damage the internal components.

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 microphones grill or microphone.

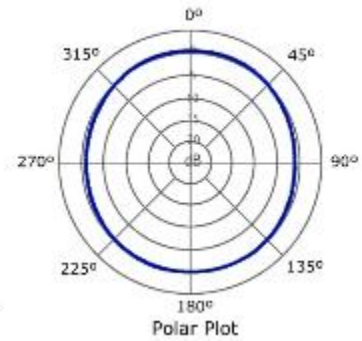
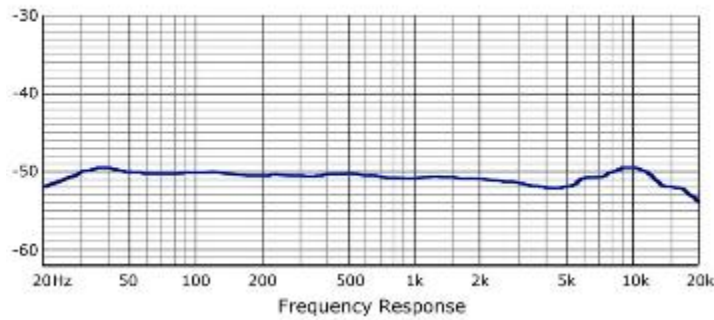
Technical Specifications

Type:	31.25mm dual large diaphragm pressure gradient transducer microphone.
Polar Patterns:	Variable 9-step Omnidirectional to Cardioid to Figure-8
Circuit:	Vacuum tube pentode input and transformless triode vacuum tube output
Frequency Range:	20Hz-20KHz
Dynamic Range:	100dB minimum
Impedance:	< 200 ohms
Max. SPL:	0.5%THD@1000Hz: 120dB
Self-noise level:	< 20dB(A)
Sensitivity:	16mV/Pa OR -36±2dB 0dB=1V/Pa 1000Hz
Connector:	7-Pin XLR & 3-Pin standard XLR
Power Requirement:	Custom power supply

Frequency Response and Polar Pattern Plots



Cardioid



Omnidirectional

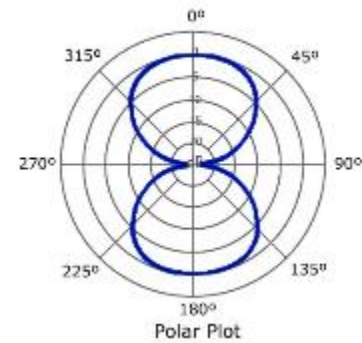
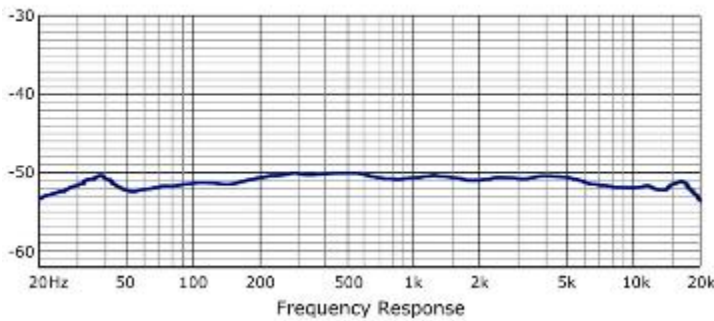


Figure-8

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