

CASCADE MICROPHONES

FAT HEAD II Active/Passive Ribbon Microphone

Meticulously Designed And Assembled In The USA



Manual And User Guide

Welcome To The FAT HEAD II Active/Passive Ribbon Microphone

Cascade Microphones is pleased to offer the first Active/Passive Ribbon Microphone to the pro audio market. This microphone is truly capable of offering a wide variety of uses by employing sophisticated modern technology with the best of old school workmanship. Cascade's patent pending Active/Passive switching allows the user to choose the best method for getting their desired result in the recording process. The Active electronics utilizes a world class amplifying circuit that provides up to 25db of gain with very low noise. The end result is an Active Ribbon that is very open sounding, with plenty of gain. The sound is still very natural and completely phase coherent. For users that also desire a Passive Ribbon we have included an internal switch that will allow users that option by simply flicking a switch. In Passive Mode the microphone becomes essentially a FAT HEAD II with a Lundahl LL2913 transformer. This combination has received rave reviews over the years, and has found it itself equally at home in large recording studios as well as home studios all over the world. This manual is intended to provide you with basic instructions as well as tips and care so that you may get the most out of your new Cascade FAT HEAD II Active/Passive microphone.

Your Microphone Includes The Following Accessories:

- Aluminum case
- Heavy duty premium schockmount
- Padded storage bag
- Drawcord cloth storage pouch (very handy when leaving your microphone on a mic stand)
- Microfiber cleaning cloth

We have many resources and information on our website at:
www.cascademicrophones.com

General Information About Ribbon Microphones

For those of you new to ribbon microphones welcome and to those of you that have used ribbon microphones in the past or present just think of this as a reminder.

- Ribbon microphones are known for their very natural sound and gentle compression that they add to the audio signal. They are especially useful in today's world of digital recording by providing a nice smooth top end. We do not employ any electronics that change the frequency response of our ribbons, we have believed that the more natural the sound the better the result.
- Cascade ribbons can handle up to 135db of sound pressure, but air pressure (wind) is the enemy of all ribbon microphones. It is highly recommended that you use an approved Pop Filter (such as the Cascade PF-1) when recording Vocals, Horns, or any other source that produces air movement. It is also highly recommended that you take extreme caution if you plan on recording bass guitar or kick drums. **A burst of air can stretch your ribbon** leading to diminished performance and the need to re-ribbon your microphone.
- Your microphone is a figure eight pattern and will give you many recording options not found in most dynamic and condenser mics. Please visit www.cascademicrophones.com for complete information.
- Your ribbon microphone is sensitive and should always be used in the provided shockmount for the best result.
- Use your microphone on a suitable microphone stand and be sure not to drop it or let your microphone hit any hard surfaces.
- We have provided a cover for your microphone when leaving it on a stand, this helps keep dust from the ribbon element.

General Operating Instructions

It is very important the read and understand the instructions for operating this microphone. Failure to follow the instructions in this manual could lead to damage of your audio equipment and/or your microphone.

Here A Few Basic Concepts Of Your New Active/Passive Microphone.

- **When operating this microphone in Active mode you will need to employ 48 volt phantom power.** This is usually a switch that can be found on most mixers or recording devices.
- When the microphone is in Active mode you will receive about 25db of increased gain. Please take care when plugging your microphone into your recording device or mixer that the input and output gain knobs/faders are down.
- You are able to switch this microphone into a Passive mode that allows it to function as a traditional ribbon microphone. Although Cascade Ribbon Microphones are phantom power safe it is still a good idea to turn your phantom power off when using this as a Passive ribbon microphone.
- Caution should be used when using a microphone patch bay. Do not hot swap through a patch bay. Unplug your microphone then patch then plug your microphone back in. It is also best not to “hot swap” this microphone with phantom power on, please turn off your phantom power whenever you plugging this microphone into a mic cord.
- Use caution when switching between Active and Passive modes. If for some reason you are not sure if your microphone is working properly it always best to check what mode your microphone is in and be sure to have your mixer/recording device set-up properly to work with the selected mode. Do not apply phantom power to this microphone with your input gain up or your headphones on. Always take your headphones off your ears if you are applying phantom power or adjusting your gain settings.

Operating Instructions In Active Mode

Your microphone is shipped to you in Active mode, and will require 48 volt phantom power.

Our Active/Passive Ribbon microphone features an ultra low noise high gain output section that will give you years of use and enjoyment. In Active mode you will enjoy the benefits of ribbon microphones as well as increased options for recording.

Here are some tips for getting the most out of your ribbon mic in Active Mode:

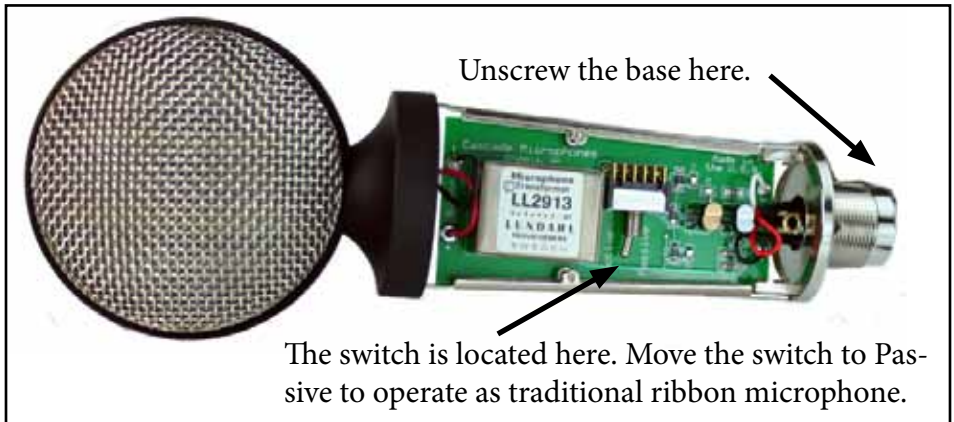
- The output of your microphone in Active mode will be very similar to a normal condenser microphone. This will allow you to operate your gain stage in a normal manner without having to rely on the preamp as much as you normally do with many ribbon microphones.
- With its increased output you will be able to place the microphone in its ideal location when recording acoustic instruments without having to be concerned about gain.
- You will not have to worry about phantom power being applied and damaging the ribbon.
- The ultra quiet circuit and proximity effect make this microphone ideal for capturing vocals without any harshness. The perfect impedance output will allow you to capture all of the high frequencies without any distortion.
- Other suggested uses for the microphone in Active mode include: Acoustic Guitar, Drum Overheads, String Sections, Choirs, Horn Sections, and many more. As always feel free to experiment.
- The FAT HEAD II Active/Passive is very phase coherent making it an ideal microphone for recording ensembles of any type in stereo.

Switching The Microphone To Passive Mode

The design of this microphone started out as an Active FAT HEAD II ribbon. While we were designing it we tested the Active Circuit with various gain stages in order to make this microphone as useful for as many applications as possible. It became apparent to accomplish this we should incorporate a switch that would allow the choice of using this microphone as standard ribbon microphone (Passive Mode) as well as an Active ribbon.

To switch the microphone to Passive Mode please follow these steps:

- Turn down the gains on you mixer and/or recorder. Turn off the phantom power on your mixer. Unplug the microphone from your source.
- Unscrew the base of the microphone and slide the body off the microphone.
- The switch is located on the circuit board as shown below. Locate the switch and move it to passive mode.



- Reassemble the microphone, keep the phantom power off on the mixer and plug it back in. You will notice now that you will have less gain and the microphone will respond as a normal ribbon microphone. The Lundahl transformer will still be in the circuit.

Operating In Passive Mode

- Although your FAT HEAD II Active/Passive is phantom power safe we still recommend that you leave phantom power off when operating the microphone in passive mode.
- In Passive Mode you will need to increase the gain quite a bit on your preamp to get the same output signal that you had with the microphone in Active Mode.
- Passive Mode works very well in situations where you would want the sound of our ribbon microphone without the addition of the active circuit. The best applications for this would be; electric guitars, single horns, drum overheads, or any situation where you are finding that the Active Mode is providing output at a higher level then is ideal for you.

Switching Back To Active Mode

Please read the following section and make sure to follow these steps when switching your microphone back to Active Mode. Failure to follow these steps could lead to damage to your microphone and audio equipment.

- Turn down the input and output of your mixer and/or recording device.
- Unplug the microphone from your audio source.
- Unscrew the base of the microphone and remove the body.
- Put the internal switch to the Active position and reassemble the microphone.
- Once again check that the input and output stages are turned down on your recording device and/or mixer and plug the microphone back in.
- Turn on the phantom power and slowly bring the gain up to the desired level. You will need much less gain then in the passive mode.



Specifications In Active Mode

Frequency Response: 60HZ to 15,000Hz +/- 3db

Maximum SPL: 135 SPL

Polar Pattern: Figure 8

Sensitivity: -39dBV +/- 2 dB (0 dB=1V/Pa)

Power Requirements: 48 Volt Phantom Power

Specifications In Passive Mode

Frequency Response: 60HZ to 13,000Hz +/- 3db

Maximum SPL: 135 SPL

Polar Pattern: Figure 8

Sensitivity: -56 db +/- 2 dB (0 dB=1V/Pa)

Warranty Information

Cascade Microphones warrants all products against defects in materials and workmanship for a period of (5) five years from the date of original consumer purchase. The original ribbon or capsule elements carry a (1) one year warranty from the date of purchase and offer a one time replacement during the warranty period if they fail within the first year. Cascade Microphones will either repair or replace the product at no charge. Buyer is responsible for return shipping charges if past the initial first 30 days of purchase. Please visit www.cascademicrophones.com for details.

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