



A black and white photograph of an AEA R44 ACE microphone. The microphone features a large, textured grille at the top, a central body with a circular AEA logo containing a lightning bolt, and a base with a small spade symbol. It is mounted on a stand against a dark background.

R44ACE

OWNER'S MANUAL

AEA R44ACE

LIMITED EDITION ACTIVE CE

Congratulations on your purchase of the AEA R44ACE limited-edition microphone and welcome to the AEA family. The ACE delivers a classic sound with a modern aesthetic. Combining components of the R44CE with the active elements of the A440, the R44ACE heralds the 20th anniversary of the legendary AEA R44.

The R44C, AEA's museum reproduction of the RCA 44BX, was first produced in 1998. To celebrate its 20 year run, we developed the active, cost-effective, and stylized R44ACE to memorialize the spirit of the R44 while making it affordable and appealing to a newer generation of ribbon mic enthusiasts. The ACE is an exciting amalgamation of 1930s technology and modern production that delivers the R44's classic sound in a new context.

The R44ACE utilizes new old stock RCA ribbon material; it boasts a full, rich tonality with generous low end and the 44's signature proximity effect. The active electronics within the R44ACE result in 12dB more output than the original R44CE, so it's highly useful when recording quiet sources and is optimized for use with any preamp.

The R44ACE is handcrafted in Pasadena, CA, U.S.A.



WARRANTY

Your R44ACE mic comes with a one-year limited warranty on parts and labor, shipping not included. Registering your product with AEA will extend the warranty to a full three years.

Register your microphone at [AEAribbonmics.com/
register-your-aea](http://AEAribbonmics.com/register-your-aea).

SUPPORT

If you should encounter any problems with your microphone or have questions regarding using your R44ACE mic in specific applications, please contact our customer support team at support@ribbonmics.com.

To talk to a live human being, call +1 (800) 798-9127, between 9:00 A.M.- 5:00 P.M. PT Monday through Friday. AEA's repair center is located at 1029 N. Allen Ave, Pasadena, CA 91104, U.S.A.

GENERAL GUIDELINES

Your microphone is a valuable and important investment. Like any piece of recording equipment or musical instrument, it requires common sense and good basic care to keep it working properly. Given simple, basic care, your new microphone will perform admirably for decades.

PHANTOM POWER

The R44ACE is a phantom-powered ribbon microphone. Although the R44ACE needs a standard 48V phantom power source to operate, it is recommended always to disengage phantom power before plugging and unplugging any ribbon microphones.

The phantom current draw for active AEA ribbon mics is 7 milliamps. IEC specifies that P48 power should be able to deliver 10 milliamps per input. Some USB and battery-powered audio interfaces do not deliver this. Please check the current values available on your unit to ensure the best performance.

MICROPHONE STORAGE

Keep the microphone covered when it is not in use. Keeping the microphone covered when it is not in use will reduce the possibility of damage that might result from a sudden gust of air coming from air-conditioning or an open door or window. Place the supplied protective bag over the microphone when it is not in use. For long term storage, place the microphone in its protective case. Minute iron particles, sometimes known as “tramp iron,” are common within our environment. AEA ribbon microphones contain powerful magnets that produce strong magnetic fields. These fields can attract any ferric metal near the microphone that, if they are small enough, can penetrate the outer screening and work their way inside the microphone. Over time, this “tramp iron” can build up

sufficiently in the magnetic gap to rub against the ribbon causing distortion, electrical shorts or tearing of the ribbon. The best prevention is to keep the microphone in its case or covered with the supplied plastic bag when it is not in use.

AIR TURBULENCE

Never expose the microphone to strong air turbulence. AEA ribbon microphones can withstand very high SPL (Sound Pressure Level) without difficulty, but can be damaged easily by a sudden, strong gust of air or high levels of very low frequency sound waves (like from a kick drum or bass cabinet). This can stretch the ribbon, causing the microphone to start sounding flabby. Sources that may produce strong blast of air, such as the bass port on an electric guitar or bass amp, a guitar being plugged (or unplugged) while the amp level is turned fully up, an on-axis kick-drum hole (particularly with a port on the head), are potentially damaging.

To avoid possible damage, follow this simple procedure when positioning the microphone called "The Hand Test": put the back of your hand where the mic will be; if you can feel the motion of air on your hand, place a pop-filter between the microphone and the source of the wind gusts or simply pull the mic further back. When recording kick drums or bass guitar cabinets, angle the microphone to make sure that no wind blasts hit the microphone directly on-axis from the front or back.

Never blow directly into any microphone to test it. Not only does this force moisture and dirt into the microphone, strong air movement also can stretch the ribbon and while it may not break, it nonetheless could significantly degrade the microphone's performance. It is also important to avoid serious air movement from stage curtains, open windows, doors, or air-conditioning systems.

MAGNETIC STRAY FIELDS

Ribbon microphones are fundamentally prone to picking up strong external magnetic fields caused by light dimmers or nearby power transformers. Guitar players will know this phenomenon from single-coil pickups. Even though much attention was paid to suppressing such sensitivity to external magnetic fields in the design of your microphone, it is still possible that you might encounter this problem. If you should pick up a hum, try rotating or moving the microphone to find a spot where the hum disappears, and try eliminating potential sources of stray magnetic fields. You can use the microphone to find where hum is originating. Rotate the mic for maximum interference and move it back and forth to sense its direction.

The high-performance magnets used in AEA microphones are incredibly strong, and a significant amount of stray magnetic field lines surround the microphone. Avoid placing the microphone in close proximity to hard drives, credit cards, analog tape, or any other magnetically sensitive items to prevent any data loss.

MICROPHONE POSITIONING

Always use a sturdy microphone stand with R44 series microphones. Weighing around 8lbs, mounting R44 series microphones on a strong, robust microphone stand with a heavy base (or tripod) is essential. Large studio-booms with an appropriate counter-weight are recommended to prevent your R44 from tipping-over and crashing, causing injury to itself, a musician, or a valuable musical instrument.

The integrated cushion mount was designed to keep structure-borne noise transmitted through the microphone stand and the cable away from the low-tuned ribbon transducer. For the shock mount to function as intended, it is important to position the microphone with the cushion mount vertical and rotating the microphone within the yoke. This requires the use of a swivel

mount or posi-lock when using a boom arm for positioning the microphone in a vertical configuration. Having the cushion mount reaching out horizontally on a boom will cause inferior vibration isolation and can also distort the cushion mount as time goes by.

APPLICATIONS ADVICE

We actively encourage users to visit AEribbonmics.com to access our comprehensive collection of in-depth articles and tutorials featuring R44 series microphones, along with a library of audio and video demonstrations of the R44 in action.

SPECIFICATIONS

Operating Principle:

Pressure gradient transducer

Directional Pattern:

Bidirectional

Frequency Range:

<20 Hz to >20 kHz

Maximum SPL:

141 dB SPL (1% third harmonic > 1 kHz)

Sensitivity:

-36.8 dBV (at 1 kHz, no load)

Output Impedance:

92 Ω broadband

Recommended Load Impedance:

1.0 kΩ or greater

Phantom Power:

P48 phantom power, 7 mA

Polarity:

Pin 2 high for positive pressure at the front of the microphone.

Polar Response

Horizontal:

Native bidirectional, figure-of-8 pattern
Up to 90 dB rejection at right angles to the front/back axis.

Vertical:

Level changes with angle of incidence, but frequency response is consistent.

Transducer Element Material:

Pure aluminum corrugated ribbon

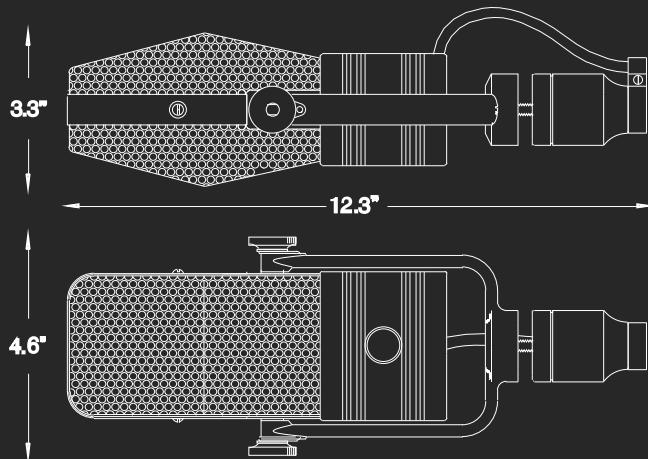
Thickness:

1.8 μm

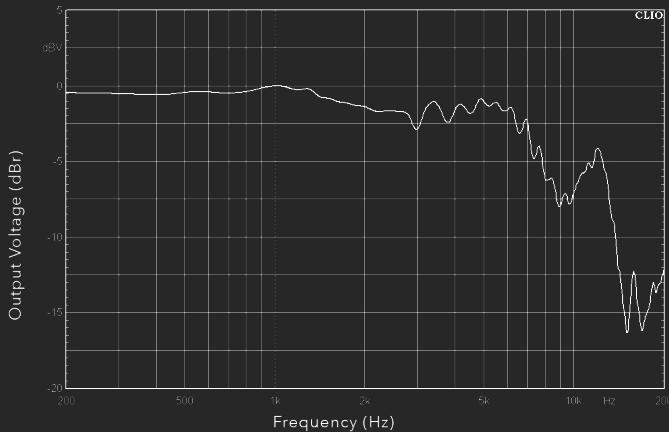
Width: 0.185 in (4.7 mm)
Length: 2.35 in (59.7 mm)

Microphone Dimensions

Height: 12.3 in (31.2 cm)
Width: 4.6 in (11.6 cm)
Depth: 3.3 in (8.3 cm)
Weight: 7lb 9 oz (3.5 kg)
Shipping Weight: 13lb (5.89 kg)
Connector: XLR-3M



FREQUENCY RESPONSE



Data below 200 Hz omitted due to measuring room restrictions.

0 dBr is equivalent to 14.4 mV/Pa at 1kHz. Normalized to 0 dBr at 1kHz.