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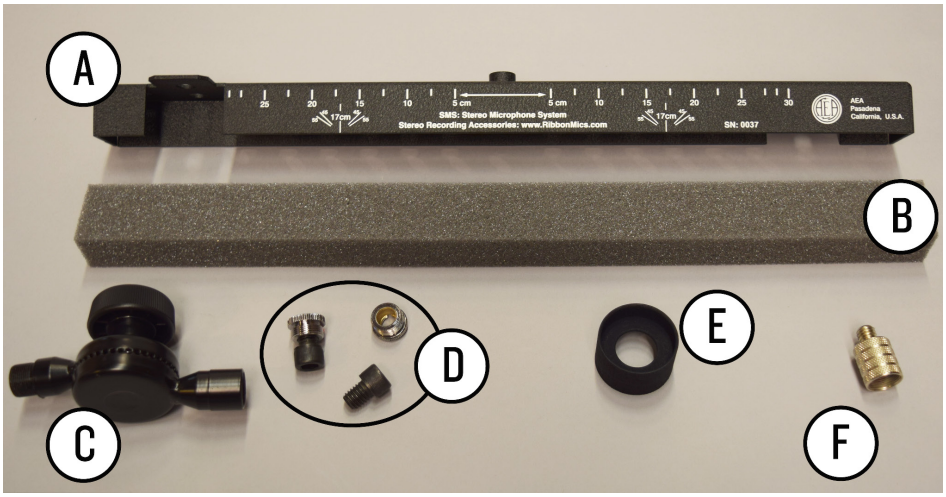
made in california

AEA SMS STEREO MICROPHONE SYSTEM

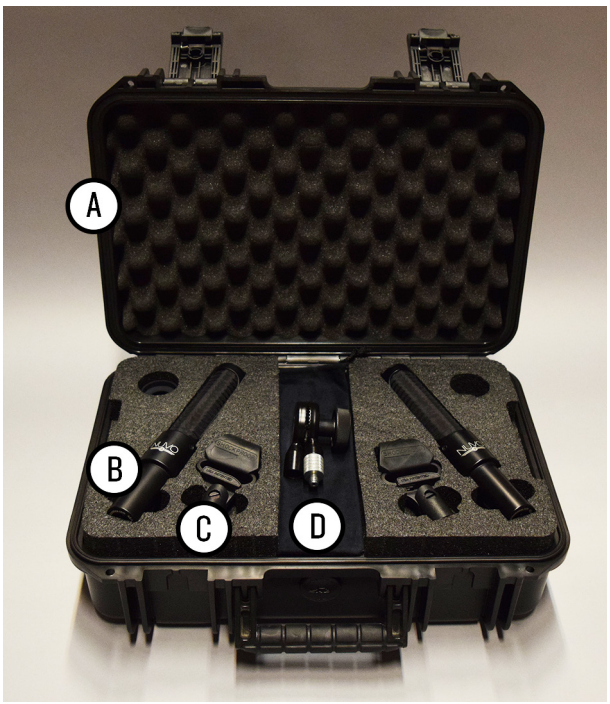
The AEA SMS bar includes the following parts:

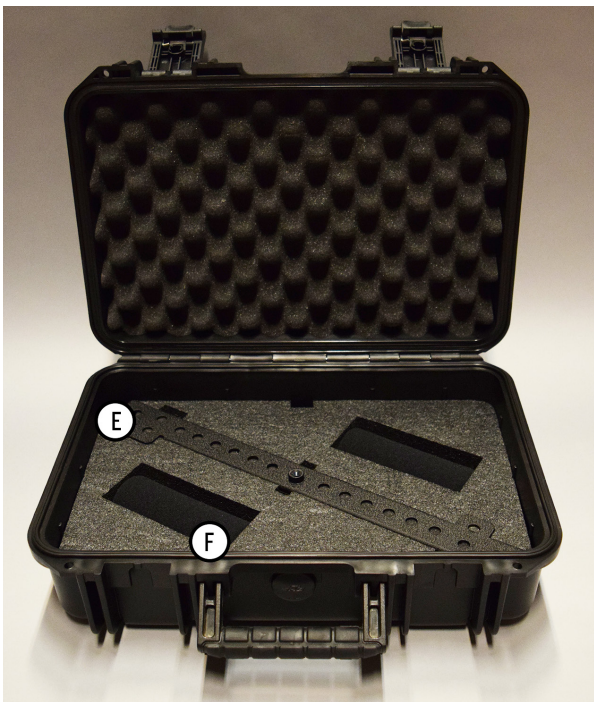
A: AES SMS stereo bar
B: Vibration damping foam insert
C: Posi-Lok adjustable angle adaptor
D: Two 3/8-16 (EU) cap screws and 3/18-16 to 5/8-27 male threaded studs
E: Blumlein coupler
F: 5/8-27 female to 3/8-16 (EU) stand adaptor



The AEA Nuvo Stereo Mic Kit each come with the following items:

A: SKB carrying case
B: Two AEA Nuvo ribbon microphones
C: Two shockmounts
D: Two cloth protective cover
E: SMS Stereo Bar
F: Two Nuvo Windscreens





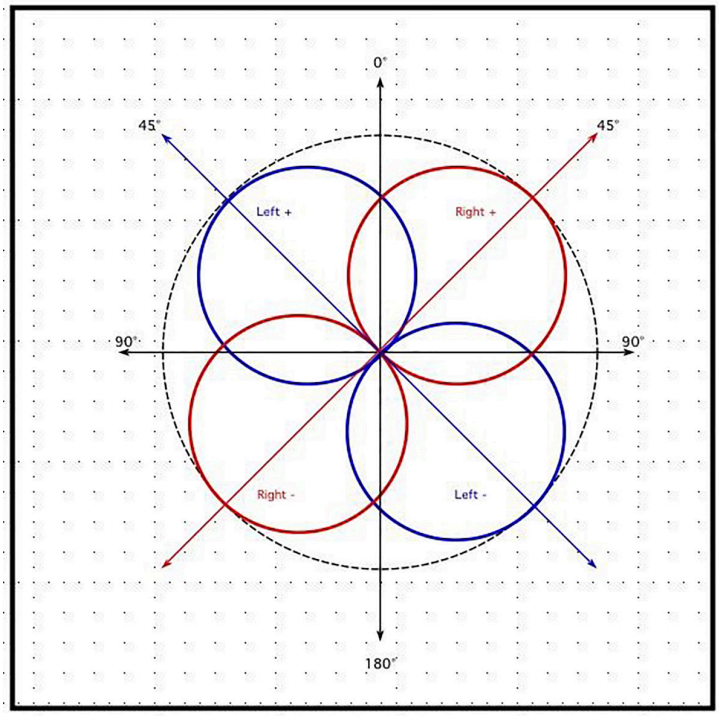
"An engineer's job is to place microphones where they sound good, and record from the moment musicians are present until the space is empty."
— Wally Heider

Grammy and Academy Award winning engineers tell Wes Dooley that proper selection and placement of the microphones is the most critical part their art. Since 1972 AEA has manufactured tools to enable reliable and repeatable microphone positioning.

Single-stand stereo arrays configured with AEA's Near-Field N22 and Far-Field N8 Big Ribbon NUVO microphones produce highly accurate recordings that are very easy to assemble using the AEA SMS stereo mic kit.

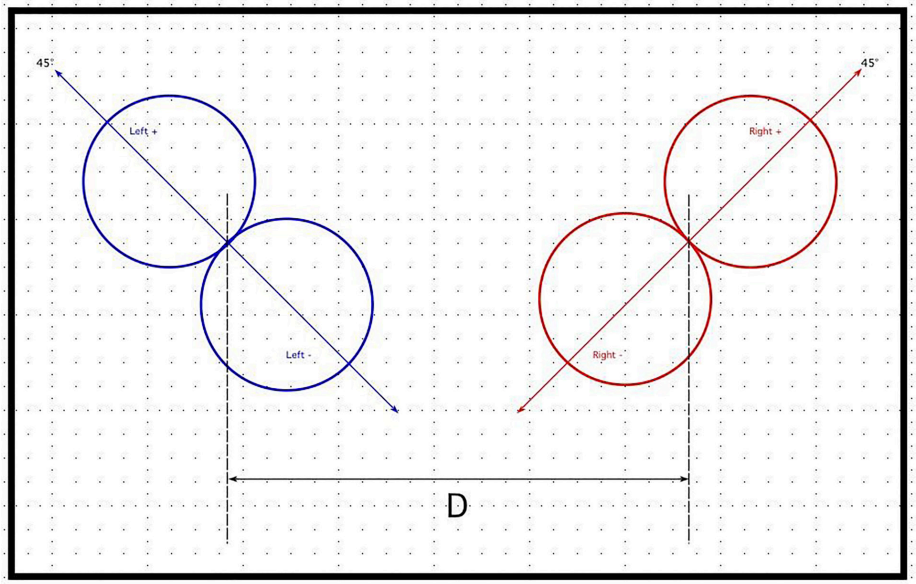
First, try recording Blumlein stereo, comprised of two coincident crossed bi-directional microphones, where the principal axis of each is co-aligned with the null axis of the other. Note that the front and back quadrants are in-phase and of equal sensitivity but of opposite absolute polarity; the two side quadrants are out-of-phase with respect to each other.

The Blumlein array provides the most accurate left-to-right stereo imaging of any mic system.



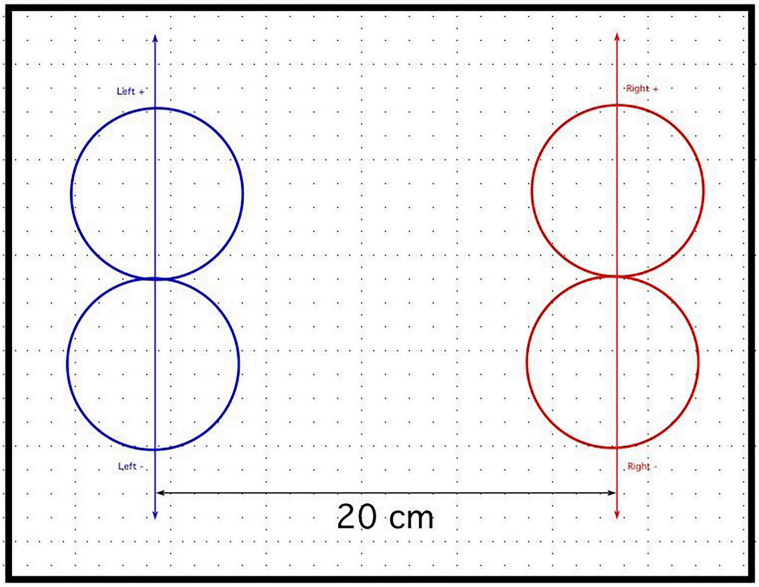
Next, try recording with a small spacing between the two microphones. A common near-coincident stereo configuration is ORTF, which uses two cardioid mics at a spacing of 17 centimeters and an angle of ± 55-degrees.

When configured using bi-directional microphones, retaining the angle of ±45-degrees and a separation of less than 25 cm, the array will preserve the accuracy of the Blumlein pair and add a sense of spaciousness and envelopment.



Another near-coincident configuration was developed by British engineer Tony Faulkner. This uses a pair of bi-directional mics, separated by 20 cm but with the two mics aimed directly forward, rather than angled outward. This is a good choice when working in a long, narrow performance space, such as a church.

Of course, you can experiment with your own variations. Just be careful not to configure or place the array such that and direct sound will enter the two mics out-of-phase.

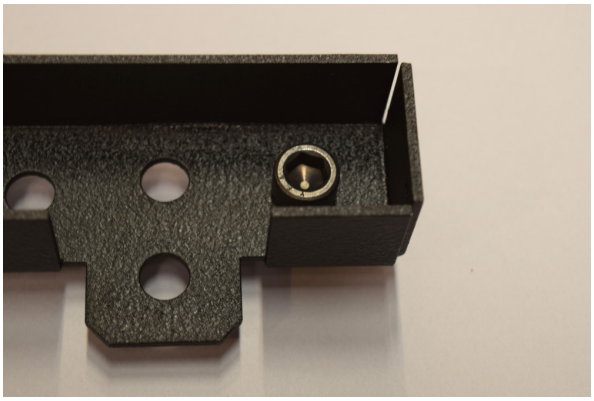


Using the AEA SMS it is quite easy to configure in a number of ways, and is laser engraved with 90-degree and 117-degree angle and center-to-center spacing markings, so it is you can take notes about your experiments and repeat them at any time.

Your stand support can be at the center or the end of the bar and can be attached either directly or by using the supplied angle adapter. Either American 5/8-27 or European 3/8-16 mic stands and stand adapters can be used.

Configuring a Blumlein stereo mic array

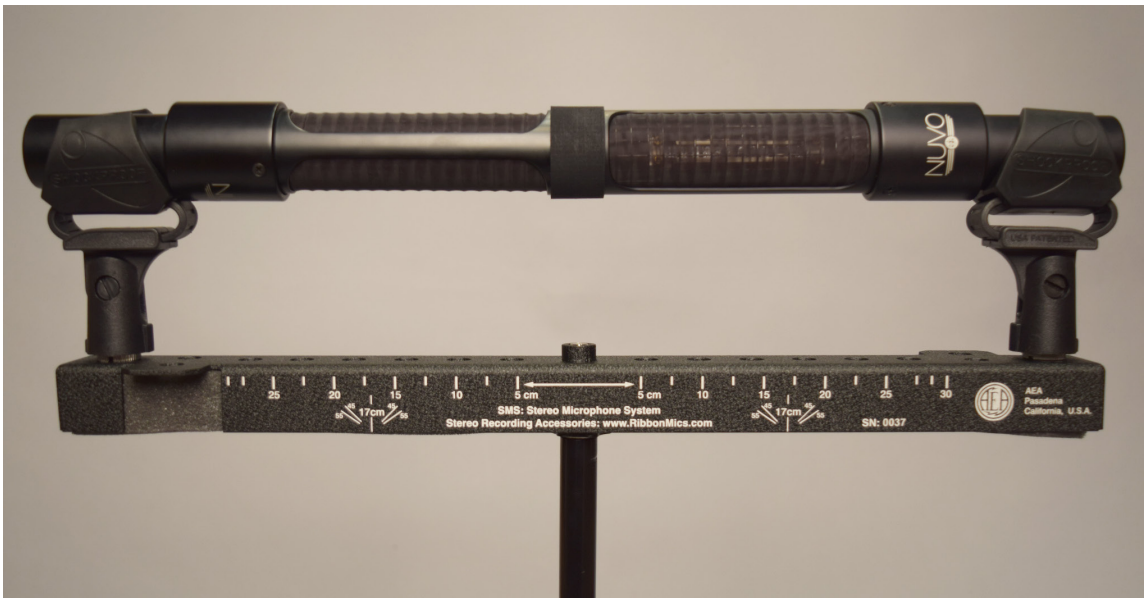
I) Insert one of the 3/8-16 cap screws through one of the end holes from the inside of the SMS and fasten a 3/18-16 to 5/8-27 threaded stud to the opposite (top) side.



2) Repeat with the other stud at the other end of the SMS. Then attach one shockmount to each of these mic studs, align them so that the microphones will be parallel to the bar, and tighten all parts so that they won't move out of position.

Next, insert the vibration damping foam into the back channel of the SMS.

3) Insert one microphone into each of the shockmounts and use the Blumlein coupler to hold them together. Rotate one 45-degrees to the right of center and the other 45-degrees to left of center.



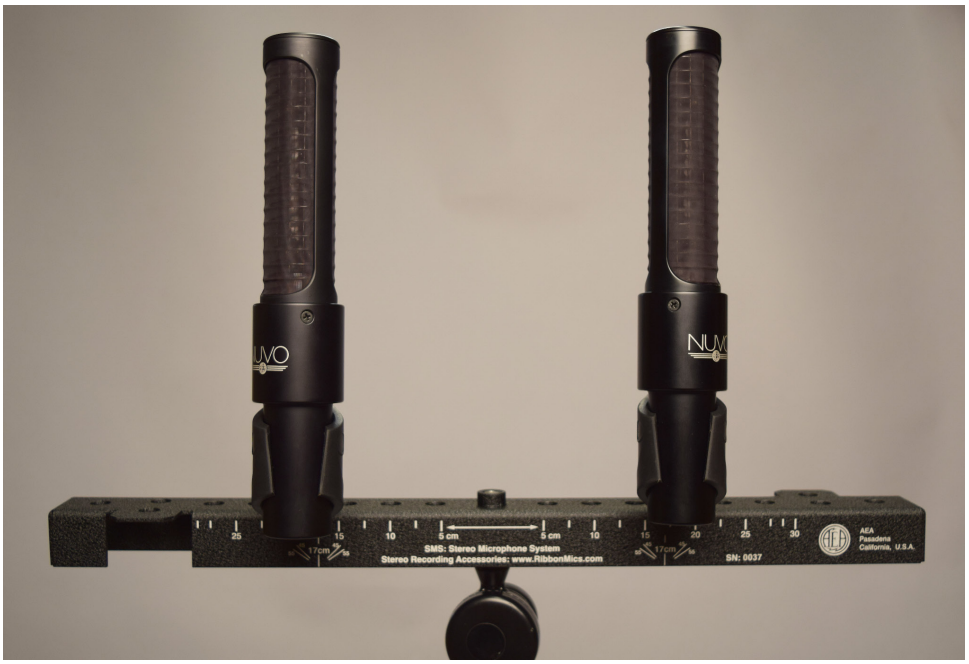
4) Now, attach the array to your mic stand, using the 5/8-27 female to 3/8-16 (EU) stand adaptor. If needed, use the Posi-Lok adjustable angle adaptor to allow adjusting the angle of the entire array.

5) Finally, insert the cables into the microphones and tie them securely to the fixture, allowing a slack-loop to complete the isolation from mechanical noise coming up the mic stand.

Configuring a near-coincident stereo mic array

6) Use the guides along the side of the SMS to space and angle the microphones on the bar. Most of the time, this can be mounted to the stand using the center hole. To do this, you will need to cut the vibration damping foam to accommodate the stand stud. The Posi-Lok swivel adaptor also can be helpful in achieving proper orientation of the array.

The spacing and angle of the two microphones is highly subjective. Experiment with both to determine what sounds best for any given situation. In general, however, to minimize possible phasing problems, the angle of the two microphones should not exceed ±45-degrees.



NUVO WINDSCREENS

The Windtech Nuvo windscreens in this kit are a real game changer and can provide a significant reduction of breath noise with the N8 on close-up vocals. For live performances on festival stages and other challenging situations combining them with the N22 near-field ribbons produce astounding results. AEA's N22 Big Ribbons deliver our signature sub 20 Hz Big Ribbon bass when used close-up. Even when "naked" the N22 has the most wind protection we can design into a world class music microphone. But with the Nuvo windscreens, their wind resistance goes far beyond anything we imagined a big ribbon could do.

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AEA NUVO Big Ribbons™ N22 near-field vs. the N8 far-field.

The natural directional pattern for a ribbon microphone is a figure-eight. All ribbons natively have proximity effect, e.g. the bass response increases as it gets closer to the sound source. At some distance from the sound source, the bass and treble balance well. We designed the N22's balance for close-up and the N8's for far away from the sound source. Although the physical profile is the same, their music recording performance is quite different on the near to far microphone placement continuum.

We accomplished this acoustically, not electrically. Both microphones use the same Big Ribbon™ from the R44 series with its subsonic 16.5 Hz tuning. What is quite different between the N22 and the N8 is the motor structure that supports, surrounds and protects the ribbon from wind, infra-sonics and breath blasts. These two mics were developed for AEA's 50th year celebration and define the practical limits for this architecture.

The silver N22 near-field NUVO is highly protected and when close-up has a natural sounding bass to treble balance. Its combination of excellent sound and ribbon protection is unrivaled. With the optional windscreen it is amazing and survives and thrives in a wide range of working environments. It is bass shy for more distant sources, which is helpful in avoiding bleed in the studio or feedback from stage monitors.

The black N8 far-field NUVO is a minimalist design. As with our other minimalist design, the stereo R88, we interposed as little as possible between the sound source and the ribbon. These mics have substantial proximity effect so, for a natural bass to treble balance, sound sources should be feet rather than inches away. It can be used close up when more bass is desired, high-pass EQ is used, or with the windscreen.

As with the AEA mono R84 and stereo R88, the NUVOs' outsides look similar and their ribbons and transformer/electronics are the same. However each microphone's internal parts and assembly are quite different. Using the same internal parts would be convenient, but would limit performance. Our motto: "As simple as we can make it, as complex as it needs to be." These designs should work well for 80+ years, as have the RCA ribbons we've been servicing for 40 years.

For more than half a century, AEA has been using, servicing, selling, and since 1998 manufacturing Big Ribbon tm microphones. The NUVOs celebrate what we've learned about the art and science of ribbon microphones. We hope you enjoy using them as much as we've enjoyed hearing your recordings.