Audio Engineering Associates

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Stereo Microphone Positioner Bars User's Guide

The AEA Stereo Microphone Positioner (SMP) was designed specifically as a device for mounting a stereo pair of Coles 4038 ribbon microphones, but the bar will support microphones for virtually any manufacturer — even the heavy large diaphragm condensers that ordinarily will not fit on a conventional stereo bar.

The SMP consists of a sturdy one-inch wide hard-anodized aluminum bar and three microphone sliders. The bar is available in three sizes, 17-inches 1 meter and 1.25 meters, and is engraved across its length in 2.5-cm increments. With zero at the center, these markings designate the distance between the sliders, with special markings to indicate the 17-cm spacing unique to the ORTF stereo system. The sliders are marked around the circumference at 0°, ±30°, ±45°, and ±55°. These represent included angles of 60°, 90°, and 110° respectively between the microphones, and may be used to facilitate exact and repeatable positioning of any conventional stereo perspective. Each slider is fitted with two thumbscrews to secure it onto the bar. Extra-wide locking rings are provided for each slider, and one female threaded coupler is included to allow the SMP to be mounted on a microphone stand or boom. For more complex microphone arrays, additional sliders may be ordered separately (AEA part no. SMP-S). Use of the SMP horizontally provides an easy platform for creating any of the common near-coincident stereo pickup configurations with microphones of almost any size, shape, or pickup pattern. Using smaller, axial-address microphones, intensity or coincident stereo configurations can be achieved as well.

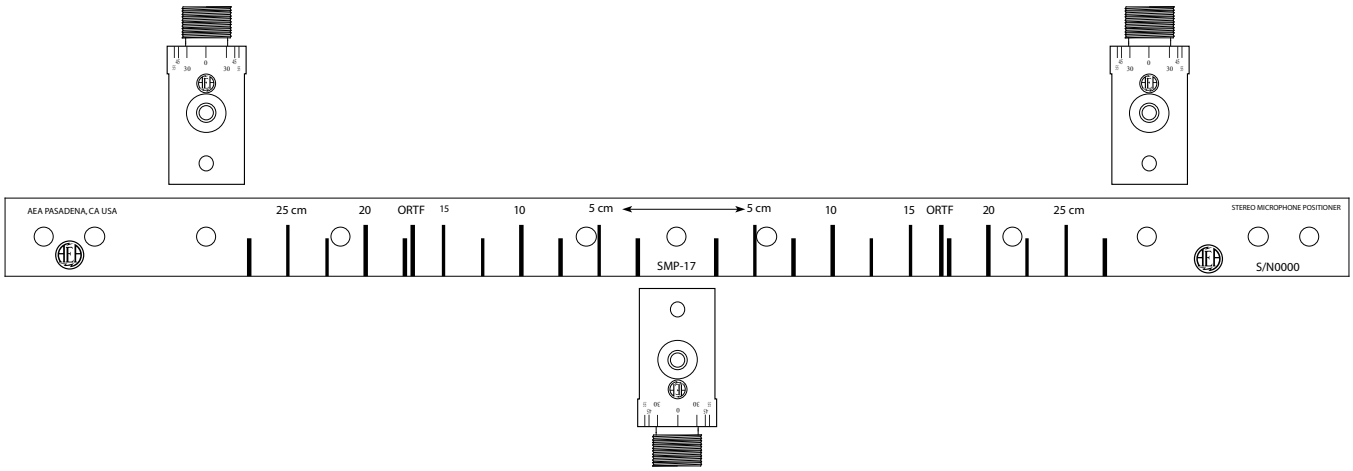

Figure 1.
Displays the SMP-17 bar and the configuration of three sliders appropriate for a horizontal array. The center slider is used to mount the bar and the outer sliders are used to mount the microphones. (Symmetrical, balanced arrays are recommended.)

Place one slider in the center of the bar, with the threaded end facing downward, install the female threaded coupler, and mount the SMP on your mic stand. The other two sliders should be installed, one on either side of the bar, with the threads facing upwards. (Placing the mics above the bar will minimize acoustical reflections from the stand and bar; however, if you prefer, the mics may be positioned below the bar.) Once mounted on the sliders, the distance between the two microphones may be adjusted for any desired stereo perspective, and read directly from the markings on the bar. Next, the included angle between the axes of pickup may be adjusted by rotating the microphones on the sliders, using the markings as a reference.

When creating a coincident stereo array with two axial-address microphones, a vertical offset is desirable so that they may be positioned with their capsules one directly above the other. To accomplish this, a riser may be installed on one of the sliders if there is insufficient thread depth in the microphones' stand adaptors to achieve the offset directly. To create the riser, use an Atlas AD-4B male coupler with an AD-5B chrome female coupler. If you prefer, you may order a female coupler in black finish to match the SMP (AEA part no. SMP-C).

Vertical orientation is similarly easy to accomplish, and enables even very large side address microphones to be configured into coincident stereo arrays, such as XY, Mid/Side (M/S) or Blumlein (crossed figure-of-eights). Simply install one of the sliders on either end of the bar; as before, the female coupler may be used to mount the SMP on a stand or boom arm. The other two sliders should be set ata spacing which will allow the two microphones to be positioned head-to-head as closely together as is possible, but without actually touching each other. Once the microphones are mounted on the bar, simply rotate them in their mounts to achieve the appropriate angle between their axes of pickup.

For added safety when the SMP is used vertically, we suggest that the lower microphone slider always be positioned such that the thumbscrew may be secured through one of the mounting holes.

When using Coles 4038 ribbon microphones, one microphone slider should be located at the third hole in from one end of the bar, and the other slider at the second hole in from the opposite end. When used with AEA's 4038-SA custom mounting adaptors, this will position these mics so that they do not interfere with each other.

If you regularly use a particular pair of microphones with the SMP, you might consider drilling your own special positioning holes (5/16"diameter) to provide an even more secure and repeatable mounting.

Often it is necessary to fly the microphones above an audience to minimize the visual intrusion during live performances. To hang the SMP array horizontally, a single support line should be connected to the center hole of the bar; this will suspend the array. Monofilament guy lines maybe tied to the outer holes to prevent rotation or to breast the array if needed. The microphone sliders should be oriented so that the microphones hang downward from the bar.

To hang the SMP as a vertical array, the uppermost hole should be used for the support line. The bottom hole should be used for guying or breasting lines. Tilting the entire assembly downward slightly will lessen the tendency of the array to rotate. To increase stability when using some large or heavy microphones, a conventional stereo bar (such as those available from Atlas, KM, AKG, and others) may be attached to the third slider and mounted at the bottom of the SMP to provide a cross-brace for attaching guylines.

It is important to note that when flying microphones on the SMP, a strong cable should bear the weight of the entire array. The microphone cables should n e v e r be used other than as the breast or support lines. Remember, also, to securely fasten the support cable to the SMP.

Other Products by Audio Engineering Associates:

AEA Stereo Template

Less expensive stereo bar designed for mounting Coles in ORTF and Blumlein configurations.

The AEA TRP Ribbon Preamp

A ribbon preamp designed for ribbon mics with ultra quiet circuitry boasting 83dB of clean gain, and no phantom power.

AEA Ribbon Microphones

R84 - Studio Ribbon Mic
R88 - Stereo Ribbon Mic
R92 - Studio Ribbon Mic specifically designed for close micing and guitar

RCA Working Reproduction Microphones and replacement parts

AEA R44C Microphone - Museum Quality Reproduction
Our tribute to the classic RCA 44B using New Old Stock ribbon material
AEA 44CX Microphone
6db more output for critical digital recordings
AEA 44CNE Microphone
Based on RCA LTD production - the same sound but easier to build

Modular Studio Microphone Stands and Booms

Coles Microphones

Since 1983 we have imported and serviced the Coles 4038 studio ribbon microphone and the 4104B, “lip” mic for voice-over work in high noise environments. We sell and service the mics and stock replacement parts.

CB Electronics

In North America we also represent CB Electronics, a leading worldwide supplier of machine control equipment to the sound-for-picture industry. Their products specialize in professional control of and translation between bi-phase, 9-pin serial and time code machines. Their SR line provides low cost multiple machine remote controls for RS-422, Sony, and Tascam DA88 proto col machines.

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