# Audio-Technica BP4029 Stereo Shotgun Microphone v.1

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## Overview

The Audio-Technica BP4029 (which replaced the AT835ST[1]) is a stereo shotgun microphone that produces a center-focused stereo image. It contains two independent condenser elements: a "Mid" element with a line-cardioid pick-up pattern and a "Side" element with a figure-eight pick-up pattern. The frequency response and overall sound quality is quite good. As with most professional condenser microphone without a built-in power module, phantom power is required.

## Stereo modes

The microphone can be used in one of three modes: **MS mode** provides independent Mid and Side signals from the two independent microphone capsules. This allows the Mid-Side balance to be adjusted as desired with a mixer in the field or later in post-production. The microphone also has two internally-matrixed modes providing traditional "left-right" stereo: **LR-W mode** (wide) has a wider pick-up pattern with increased ambient pickup while **LR-N mode** (narrow) has a narrower pick-up pattern for less ambient pickup.

## Configuration switches

The microphone has a switchable low-frequency roll-off filter (-12dB/octave @ 80Hz)[2] and a switch for selecting the mode (M-S, LR-W, or LR-N). Choose M-S when you want to use the middle capsule for mono recording or plan to create the stereo in post.


## Connector and adapter cables

On the back of the microphone you'll find an XLR-5M output connector. This is different from most microphones, which have a standard XLR-3M connector. The extra pins are needed to carry the second audio signal.

When referring to professional audio connectors, the "XLR" designates the type of connector, the number following "XLR" designates the number of conductors, and the F and M designate whether the connector has sockets or pins, respectively.

The microphone kit includes a 24" adapter cable (XLR-5F to two standard XLR-3M connectors) that lets you connect to separate XLR-3F connectors on a camera, audio recorder, or mixer.

An XLR-5F to XLR-5M extension cable is also available if you want to use the microphone on a boom or with a pistol grip away from the camera, mixer, or reorder. In addition, a short XLR-5F to XLR-3M cable is available to adapt the microphone for use as a standard, mono short-shotgun microphone.

## Mounting options

The microphone is very sensitive to handling noise and should be mounted on good shock mount, a pistol grip, a boom with a shock mount attached, or camera mount with a shock mount. Using on a stock camera microphone mount or a microphone

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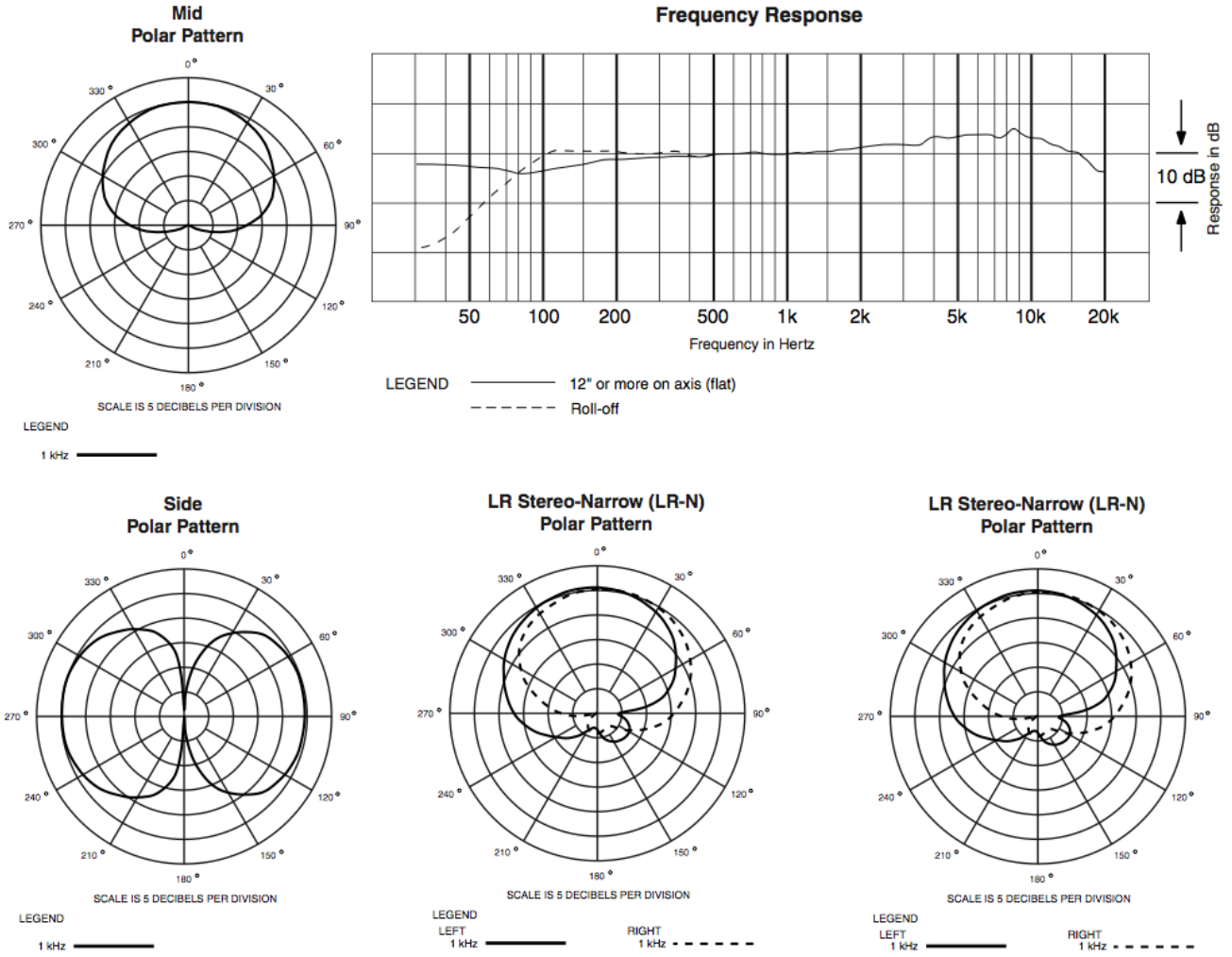
[1] The only differences between the older AT835ST and the newer BP4029 are the color (the AT835ST is grey and the BP4029 is black) and the BP4029 is manufactured with lead-free solder in order to comply with RoHS guidelines.

[2] Ty Ford writes, "One very noticeable difference between these AT mics and others I have used is in the design of the LF rolloff filters. The flat frequency response of the shorter AT835ST begins a LF rolloff at about 500HZ and gently slopes down -3dB at 70Hz and remains there down to 30Hz. Engaging the LF rolloff switch actually increases the LF response between 100Hz and 500Hz. Below 100Hz it then drops off more steeply at 12dB/octave. This means you get more mid bass and less low bass with the LF filter engaged." from "AT835ST AT815ST Are Now BP4029 and BP4027," *Ty Ford Audio and Video,* June 27, 2012, http://tyfordaudiovideo.blogspot.com/2012/06/at835st-at815st-stereo-shotgun-mics.html




mount without a shock mount will not yield good results.

## Placement considerations

Proper placement is critical, since the microphone is quite directional and off-axis sounds exhibit some coloration. For the best results it is critical that the microphone be aimed precisely at the source, regardless of whether you're in the narrow or wide matrixed modes.

## Usage recommendations

The BP4029 is a versatile microphone that is easily used as an on-camera microphone (with the proper mount) on a boom, or on a pistol grip.

The microphone is an excellent choice for recording sound effects and ambience in stereo. Remember to position the mic with the appropriate "UP" orientation to maintain the correct stereo field.

The microphone may be used as a mono dialog mic on a boom by configuring the mic to **MS mode** and using only the mid capsule (channel 1). When connecting to a mono wired boom pole or using mono cables, you'll need to use an XLR-5F to XLR-3M adapter cable (this passes pins 1,2,3 while ignoring pins 4,5 on the XLR-5F connector).

Shotguns are a good choice when it is desirable to focus on a specific sound source and where isolation from unwanted sounds or noise is needed and you can't get as close as you'd like with a cardioid or hypercardioid microphone. Shotguns are not so great for recording in small reverberant spaces since as off-axis sounds exhibit quite a bit of coloration, in these situations a cardioid or hypercardioid would be a better choice. With careful placement and critical monitoring, you'll be able to record in a wide range of situations with this microphone. If you find yourself in a revenant space, consider the use of sound blankets to tame some of the surface reflections.