

## Stage Floor Mic-EC

### DESCRIPTION

The Bartlett **Stage Floor Mic-EC** (Extra Clarity) is a supercardioid boundary mic designed for use on a theater stage to pick up actors in drama or musicals. It also works great to capture percussive dancing (tap, clogging).

Miniature capsule technology prevents phase cancellations due to sound reflections off the stage floor or table top. This results in a wide, smooth frequency response free of comb filtering, so speech sounds clear and natural.

With its thick steel housing and robust construction, the Stage Floor Mic-EC can withstand heavy footsteps. All electronics are inside the housing. A 6-foot, permanently attached, rugged cable exits the side of the mic.

The supercardioid polar pattern of the Stage Floor Mic-EC helps gain-before-feedback and rejects sounds behind the mic, such as a pit orchestra.

### FEATURES

- **Wide, smooth frequency response provides natural speech reproduction**
- **High-frequency rise makes speech clearer**
- **Tight pickup pattern reduces feedback and isolates the mic from the pit orchestra**
- **Picks up sound while rejecting floor vibrations**
- **High sensitivity and low-impedance balanced output provide a strong, hum-free signal**
- **Low profile rugged housing**
- **Permanently attached 6-foot cable with XLR connector prevents connector breakage at the mic**
- **Made in USA, 3-year warranty, 21-day money-back guarantee**

### SPECIFICATIONS

**Type:** Supercardioid condenser boundary microphone.

**Transducer:** Electret condenser.

**Frequency response:** 80 Hz to 18 kHz with sound source 30° above the boundary plane (with low-frequency boost applied in your mixer). See Figure 1.

**Polar pattern:** Supercardioid in the horizontal plane; half-supercardioid in the vertical plane. See Figure 2.

**Impedance:** 200 ohms. Recommended load impedance >1000 ohms.

**Sensitivity:** 28 mV/Pa (-31 dBV/Pa). 1 Pa = 94 dB SPL.

**Equivalent noise level (self noise):** 21 dBA (0 dB = .0002 dyne/cm<sup>2</sup>).

**Signal-to-noise ratio:** 73 dB at 94 dB SPL.

**Maximum SPL:** 130 dB SPL produces 3% THD. The mic will not audibly distort in normal use.

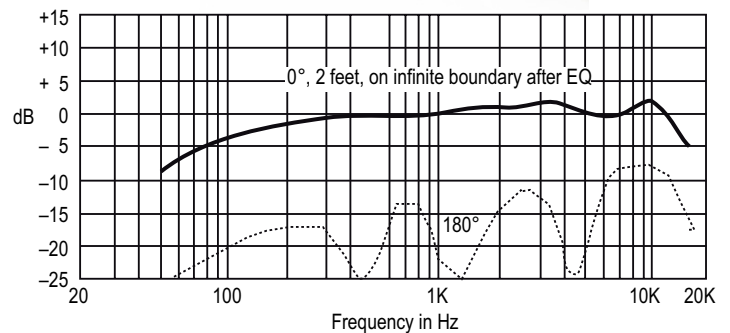
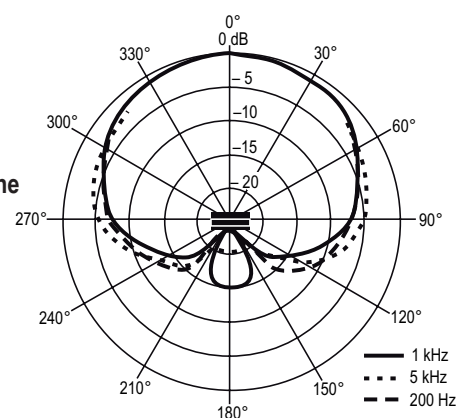


Figure 1. Frequency response (after boosting 100 Hz in your mixer)

Figure 2. Horizontal plane polar pattern



**Cable:** Permanently attached, 6-foot, black 2-conductor shielded cable with XLR-type 3-pin connector.

**Operating voltage:** 12–48V phantom power.

**Current draw:** 6 mA.

**Materials:** Steel housing.

**Finish:** Black.

**Net weight:** 10.9 oz (0.31 kg).

**Dimensions:** 5.1" long x 3" wide x 0.92" high (13 cm long x 7.6 cm wide x 2.3 cm high).

### Bartlett Audio

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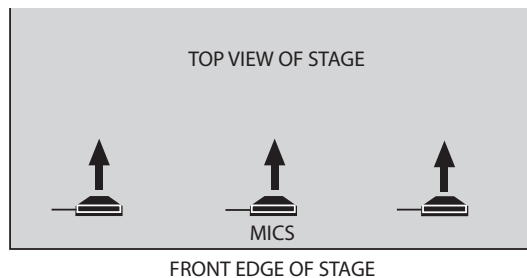
email: info@bartlettaudio.com  
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## OPERATION AND PLACEMENT

1. Plug the mic's XLR connector into a mic cable connected to a mixer mic input that supplies phantom power. Or plug the XLR connector into a phantom power supply, then connect the phantom supply output to a mixer mic input.
2. Turn on phantom power before use.
3. Place the mics as shown below. The FRONT of the mic is indicated by an arrow on the bottom of the mic. Place the mics as close to the actors as possible where the mics won't get stepped on. Point out the microphones to the custodian so that the microphones are not mopped (they are not waterproof).

You might want to supplement the stage-floor mics with headworn wireless mics on the main actors.

**Figure 3. Typical mic placement on a stage**



### Suggested mic placements based on stage width:

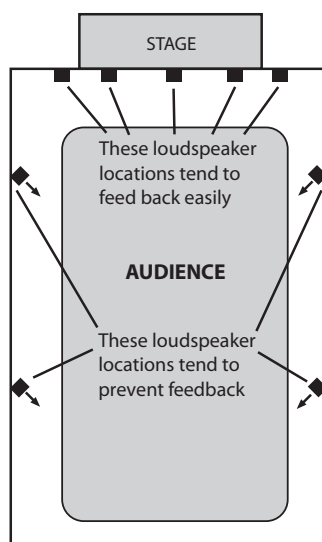
- 20' stage: 1 mic center stage.
- 24'-30' stage: 2 mics 15 feet apart.
- 35'-40' stage: 3 mics 15 feet apart.
- 45'-50' stage: 3 mics 17 feet apart.

**Using your mixer's EQ, turn up 100 Hz by 8 to 10 dB. That is, turn up the bass until voices sound natural.** Applying EQ in the mixer results in less noise than having EQ in the mic.

## TO PREVENT FEEDBACK

- **IMPORTANT:** Place the loudspeakers close to the audience and far from the microphones. You might buy or rent 2 or 4 small portable PA speakers and place them on the side walls (Figure 4). These loudspeaker placements are effective in reducing feedback. Of course, your existing loudspeaker layout might work fine. *Continued...*

**Figure 4.**



- Have a sound person turn the mic faders up or down on the mixer to follow the action on stage. Ideally only one mic is on at a time. The more mics that are turned up, the more feedback.
- Do not use compression. It reduces the gain of loud sounds, and you might need that extra volume.
- Train the actors to project so the mics have something to pick up.
- Optional but very helpful: Use a graphic equalizer connected between your mixer output and the system's power amplifier input. Follow this procedure:
  1. Set the mixer master faders to design center (about 3/4 up).
  2. Set the mixer channel faders all the way down.
  3. Set all the equalizer sliders to "flat" (at 0 dB).
  4. Gradually turn up the mic faders until the sound system starts to ring.
  5. Find the frequency that is feeding back and turn down the corresponding EQ slider until feedback stops.
  6. Repeat steps 4 and 5 until the mic faders are about 6 dB higher than when you started. Make sure the system is not ringing.
- Do not place the mic on a foam pad. That muffles the sound.
- If the stage is carpeted, place the mic on a thin hard panel such as 1/8" thick masonite, 18 inches square. That will prevent muffled sound.

## ARCHITECT'S AND ENGINEER'S SPECIFICATIONS

The microphone shall be the Bartlett model Stage Floor Mic-EC or equivalent. The microphone shall be a half-supercardioid, electret condenser, boundary type. Its microphone capsule shall be small enough so that acoustic phase cancellations due to surface reflections occur above the audible band of frequencies. The microphone shall have a smooth frequency response from 80 Hz to 18 kHz (after boosting low frequencies on your mixer) and a uniform off-axis response attenuated at least 15 dB at 1 kHz at 165° off axis. A 6-foot (1.8 meter) 2-conductor shielded cable with an XLR connector shall be permanently attached to the microphone. The microphone shall have a nominal sensitivity of 28 mV/Pa, maximum SPL of 130 dB SPL at 3% THD, and nominal self-noise of 21 dBA. The Bartlett model Stage Floor Mic-EC is specified.

## WARRANTY

Bartlett professional microphones are guaranteed not to malfunction (except in cases of abuse) for a period of three years from the date of first purchase. Mic cables and paint finish are excluded from this warranty.

## SERVICE

If the microphone does not operate correctly, first check its cable and other connected cables. Repair or replace them if necessary. Make sure that phantom power is turned on and that the microphone's fader is up in the mixer. Turn up 100 Hz by 8 to 10 dB in your mixer's EQ section.

If the microphone still fails to operate, obtain a return authorization number from us by emailing [info@bartlettaudio.com](mailto:info@bartlettaudio.com). Then return the mic and its cable in its original packaging to Bartlett Audio. Please include proof of purchase and a note about the problem. For tech support email [info@bartlettaudio.com](mailto:info@bartlettaudio.com).

If the microphone's specifications change, any changes will appear in the latest data sheet available online at [www.bartlettaudio.com](http://www.bartlettaudio.com).