



## **What you need to know before choosing the right microphone for your project**

When it needs to be heard, PUI Audio microphones help to capture clean sound in ways that make your projects effective, whether you are capturing voice or using microphones for audio detection in other ways.

When deciding on a microphone as a component of your engineering project, you have some key decisions to make for what microphone is right for your needs.

### **Sensitivity**

The sensitivity of your microphone will determine how well it picks up on the sound around it. If you are looking to capture voice, you may not need as highly sensitive a microphone as if you were looking to capture and detect specific sounds among ambient noise, for example. A voice would be spoken directly into the microphone, so the microphone wouldn't need to be as sensitive to pick it up. However, if you were a researcher attempting to capture the sounds of a specific bird in an area of wilderness, you will probably need a microphone that can zero in and pick up that specific sound.

### **Directivity**

When thinking about the directivity of your microphone, you need to consider where the noise is in relation to the microphone components of your project.

- Uni- A traditional unidirectional microphone will pick up sound from one primary direction, generally in front of the microphone.
- Bi- A bi-directional microphone will pick up sound in two directions, but it isn't as black and white as thinking of a microphone as if it has an x and y axis. Instead, the

microphone picks up sound in a more circular or spherical shape around the microphone, so a bi-directional microphone will get you pretty close to picking up sounds in all directions and cover the majority of space around the microphone.

- Omni- An omni directional microphone will cover all of the gaps missed in a bi-directional microphone. The sound is collected in all directions and will cover most areas of any of the microphone directivity types.

### **Special Features**

When considering your microphone type, you also need to consider what special features you may need to execute your project to your specifications.

PUI's line of HD microphones are making a major impact across industries by picking up sound in a crisp and clear way that rivals the sound quality of larger, more expensive, and more robust units. From a small package, the sound quality captured in our high-definition microphones is amazing audio engineers across the industry.

### **Water resistance and high-temp options:**

Where will the microphone need to be placed?

If your microphone will need to withstand the elements, consider looking at PUI Audio's high-temperature microphones or water-resistant microphone options. Our components are quality tested to withstand the additional strains of these types of elements without compromising audio quality and collection.