Selecting and connecting microphones

Most camcorders have onboard mics. Onboard mics pick up sound from everywhere, including wind, the zoom lens motor, the hum of overhead fluorescent lights, and any noises made while handling the camcorder. To capture clearer audio, you might choose an external mic. Following are descriptions of the available options.

Standard mics

To capture clean sound, you need an external mic: a specialized mic that serves narrow but useful functions. These four basic types suit most circumstances:

- Handheld
- Shotgun
- Lavaliere
- Surface-mount

Handheld mics

Handheld mics are the workhorses of the audio industry. Because they are built with internal shock mounts to reduce handling noise, these mics are best for conducting an interview, recording a speech (especially at a podium), and creating a narration.

Many handheld mics are *omnidirectional*, meaning they pick up sound from all directions. They'll pick up ambient room noise as well as close-up audio. To minimize unwanted noise, keep the mic as close to your subject as practical—usually about a foot from the speaker's mouth. Position a handheld mic at an angle of about 45 degrees to cut down on breath pops when the speaker pronounces Ps and Ts.

Shotgun mics

A shotgun mic resembles a shotgun barrel. Shotgun mics reduce ambient noise and work well for informal, impromptu interviews. Instead of shoving a handheld mic in a nervous interviewee's face, you can hold a shotgun mic farther away. The shotgun mic's unidirectional barrel (called an interference tube) narrows the focus of the audio field to about 30 degrees.

Shotgun mics don't zoom. Think of them as looking through a long tube. They narrow the "view" of the sound.

The zoom-lens equivalent in the microphone world is a parabolic dish. You've seen networks use them along the sidelines of NFL games to get those great crunching hits.

Lavaliere mics

When producing videos, you usually don't want to remind viewers that they are watching TV. Lavalieres help avoid that. Their tiny size means you can conceal them to give viewers the feeling that the speaker is talking directly to them. In particular, you should use lavaliere mics for formal, sit-down interviews. The downside is that most lavalieres require batteries, which tend to wear out at inopportune moments.

Surface-mount mics

Surface-mount mics (also called boundary mics) are commonly used to pick up several speakers at a conference table or on a theater stage. They're built to be placed on a flat surface and pick up sound waves both from the air and moving through the hard surface.

Wireless systems and mics

Wireless mics open a whole new spectrum of possibilities, enabling you to record sound from a distance. After you've used one, you'll wonder how you got along without it. Depending on the wireless system, you can hook up a standard mic—handheld, shotgun, or lavaliere—to a wireless transmitter or use a mic with a built-in transmitter.

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Recommended single-mic solution

You might find you don't have the luxury of taking a number of mics on a shoot. TV news crews often find themselves moving quickly from one spot to another and from one interviewee to another. What generally works best is a wireless shotgun mic. A shotgun mic is versatile and gives great mobility when connected to a wireless transmitter. You can get crystal-clear audio even though the mic might be far from your camcorder on a podium or in a reporter's hands in the middle of a crowd. Interviews will be more spontaneous—the mic is less obtrusive than a typical handheld mic because it can be held farther from the interviewee's face and the reporter doesn't have to take a few extra moments to plug it into the camcorder.

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