

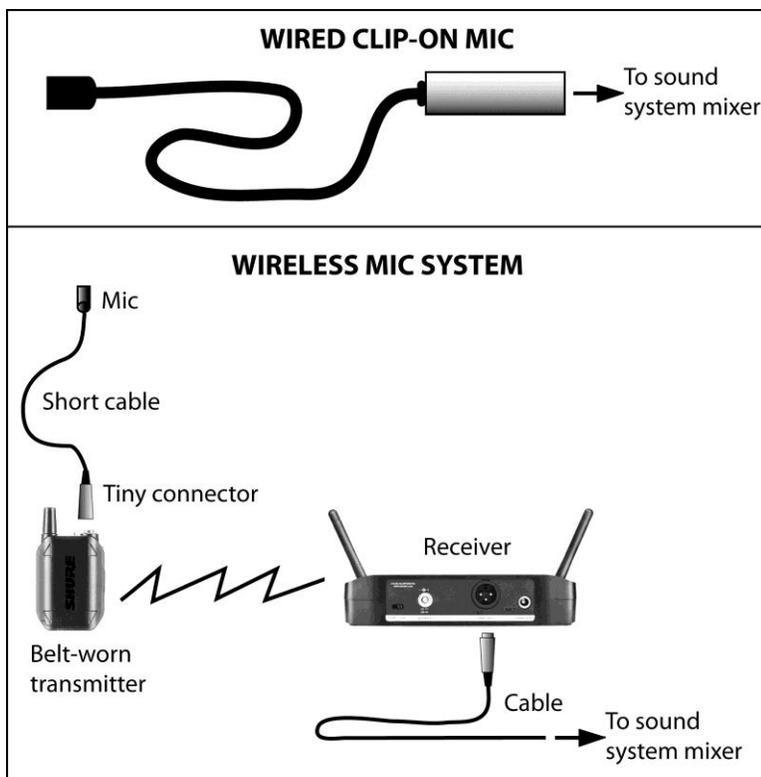
## WIRED VS. WIRELESS MICS: MAKING THE RIGHT CHOICE

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Which system is right for your musical group: wired or wireless mics? It can be a tough decision because each system has several pro's and cons. I'll provide some background information to help you decide which is best for your application.

Please see the diagram below. A wireless microphone system has three parts:

1. A microphone (which plugs into the transmitter)
2. A belt-worn transmitter (with fresh batteries)
3. A receiver



Each musician needs his or her own wireless system, each set to a different channel. A single receiver cannot pick up more than one transmitter. So if you have 4 wireless musicians, you would have 4 mics, 4 belt-worn transmitters, and 4 receivers. Those 4 receivers connect to a venue's sound system. The receivers can be placed on-stage in the wings, or back at the house mixer.

Wired and wireless mics sound the same if the transmitter/receiver is high quality.

### **Wired microphone advantages:**

- More reliable -- less equipment to fail. No other equipment is needed.
- Much lower cost.
- Omits the size and weight of carrying multiple transmitters/receivers on the road.
- Faster setup time at sound checks. Wireless systems require some time to make sure all the receivers are set to a different channel, and to make sure there is no interference from local TV and radio stations, or other wireless systems in the venue.
- No batteries to replace before each show.
- No chance of a transmitter being turned off accidentally.
- No chance of "dropouts" or "interference". A dropout is a brief loss of sound. Interference is a short burst of static that sometimes happens with wireless systems. (However, the better wireless systems seldom have those problems).

### **Wireless microphone advantages:**

- Allows freedom of movement on stage - dancing, etc. -- without worrying about tripping on cables.
- Prevents the clutter of several mic cables on stage.
- The musicians can take their instruments and transmitters off-stage without unplugging their mics or detaching their mics from their instruments.

Wireless mics are not really necessary if the musicians don't move around. But they might want wireless setups anyway, because then there are no mic cables lying on the stage floor. (However, our instrument mics have thin, strong cables which are nearly invisible when viewed from the audience.)

Suppose you have a small orchestra of 12 musicians. If they sit in a semicircle, all their mic cables could run to the center of the semicircle on the floor, where they plug into the venue's mic "snake". That's a metal box with several mic connectors, supplied by the venue's sound technician. If the mic cables are too short to reach to a common snake, the venue's sound tech would plug extra mic cables into the microphones' cables to extend them. Or you could carry extra mic cables with you on the road.

### **Sound-Check Considerations**

If the musicians have **wired** clip-on mics:

After the sound check, they should leave their mics plugged in, and leave their instruments on stage.

Why? Suppose the musicians are off-stage before the concert, carrying their instruments with clip-on mics attached. When the concert starts, it looks awkward if they walk on stage and then plug their mics into the snake (which sits on the stage floor). Also, a musician could plug into the wrong input.

If leaving the instruments on-stage after the sound check is not acceptable, then **wireless** systems make sense. The musicians can take their instruments and belt-worn transmitters off-stage after the sound

check, then simply walk on stage and start playing when the show starts. Of course, they need to turn on their transmitters before they go on-stage.

Here's another option if the musicians have **wired** clip-on mics:

When they go off-stage after the sound check, they remove the mics from their instruments and leave the mics on-stage, plugged into the sound system. When the musicians walk on-stage, they attach the mics to their instruments. This could be done before the curtains open, or could be done during an introduction. The sound tech should mute (turn off) the mics on the venue's mixer until everyone is ready to play.

I hope this explains the various choices involved. I recommend wired mics if the musicians are willing to attach/detach their mics, or are willing to leave their instruments on-stage after a sound check. Otherwise, I recommend wireless mics, especially if the musicians are moving around on-stage as they play.

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*Bruce Bartlett is a recording engineer audio journalist, and microphone engineer ([www.bartlettaudio.com](http://www.bartlettaudio.com)). His latest books are "Practical Recording Techniques 6th edition" and "Recording Music On Location 2nd edition".*