

GEAR

CUTTING
THE CORDWireless sound offers freedom to roam the stage,
but is it the right option for you?

Anyone who's caught a major live act in the last decade has seen and heard wireless technology in action. From stage-diving rock stars to tightly choreographed pop groups, wireless mics and instrument systems have redefined the live music experience. Long gone are the days of performers tethered to the stage with restricting cords.

But is wireless right for you? First, there's the debate about wireless vs. wired sound quality. Plus, there are other issues to consider, such as balancing bandwidths and figuring out frequency ranges. There are seemingly countless types of systems with varied price points to choose from. And with the landscape of wireless technology constantly shifting, how can

musicians and live sound engineers hope to make the most of the latest gear?

To find out, we turned to two wireless-savvy live sound pros for an insider's perspective. Front-of-house and monitor engineer Robert "VOID" Caprio has worked with numerous artists including Cee Lo Green, Eve 6, Vanessa Carlton, Cold War Kids and Ryan Star, and monitor engineer and RF coordinator Kevin Glendinning has helmed wired and wireless systems for Alicia Keys, Justin Timberlake, the Black Eyed Peas, Lenny Kravitz and others.

When do you use wireless?

VOID: I use wireless whenever the artist wants. Some, like Eve 6, are pretty much planted.

Max [Collins] sings and plays bass, so he doesn't go anywhere. It's actually one of the rare times I use a wired microphone on a lead singer. Cee Lo, on the other hand, is adamant about using wireless mics. He likes to move around a lot and wander the stage. Plus it looks better, especially on video, when you can move around and not worry about getting stuck.

GLENDINNING: Nine times out of 10, you look at a project and say, "There's no way this guy can be on a cable." The tour we're doing now with Maroon 5 is a perfect example of that. For ages, we had the whole band on cables. The staging is such now with guys running around, going up ramps and crossing bridges to other stages, that there's just no way to use cables.

Which systems do you use?

GLENDINNING: With Maroon 5, we tried a few models and ended up going with Shure's ULXD4Q digital system for the guitars. The radio on these systems is phenomenal, and they sound great. We're also using an Audio-Technica AEW-5244 system for the mics. VOID: With Cee Lo, we're using the Shure UR system exclusively, because we can use the Heil iC 35 cap on the handheld body. He likes his stage very loud, and he's really picky about his sound. The Heil capsule has a tight pattern, which allows us to get significantly higher gain before feedback. It also sounds incredible.

How does quality compare?

GLENDINNING: When you use a wireless system, the first thing you want to do is make sure it doesn't alter the tonality too much. Some systems tend to lose high end, sharpness and detail. It's the fault of their companders, which combine compression and expansion for wireless broadcasting. That's part of the technology that's tough to get around. The Shure UR4D systems that we're using don't seem to have that processing sound. I can leave the EQ flat, and there's none of that harshness. VOID: All of our wireless systems use companding, which does result in a loss of fidelity. It's a kind of a smearing of frequencies, where certain things don't stand out the way they would on a hardwired microphone.

But, by the time the signal goes through the preamps, the console, the processing and the speakers, would they ever hear the difference? Absolutely not. During a show, even I would be hard pressed to say a wired mic sounds better. The only time you can compare is before the show, and conditions then are drastically different.

How about instrument systems?

VOID: We've had really good results with



Alicia Keys

Line 6. We were out with Ryan Star, opening for David Cook, and their bass player just got one for his rig. They're all the rage, because they don't use companding. We

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—Robert 'VOID' Caprio

A/B compared it, and it sounded just like a wired system.

GLENDINNING: Guitar players are real finicky about their sound, so it's great to be on a cable. I did a couple of years with Lenny Kravitz, and he was on a cable the whole tour even though he played big stages. But when artists need wireless, it's our job to recreate their tone as accurately as possible. And with the right system—like the Shure setup we're using—it's not that hard.

How do headsets compare?

VOID: No sound tech wants to use a headset but some artists, especially when they're dancing a lot, require them. They're tricky to get quite right, both physically on the performer and in sound quality. GLENDINNING: Going with a headset is a decision that happens in the art department. It's all about the theatrics. The smaller element of the mic picks up a lot of breathing noise and just doesn't sound as good. The transmitter pack is also usually hidden in the clothing, which can cause problems. We used them with Black Eyed Peas, and in Fergie's case, her getup was made out of conductive material. That was interesting.

Any other technical issues?

GLENDINNING: Every environment is different. Distance is also a huge factor. With Maroon 5, Adam Levine's mic has to work throughout the entire stadium or arena. Sometimes, you have to get clever. I've put an omni antenna in the middle of the stage. No matter what, if you don't have good radio, it doesn't matter how good your system sounds.

VOID: With Cee Lo's group, I typically only have to worry about four channels. We're doing a show in Vegas right now, and Vegas is notorious for having really tight bandwidth. We're using eight microphones, and in Vegas that can be tricky. To me, the biggest thing is frequency coordination. I usually get in an extra hour before the show to make sure there's enough time to dial everything in properly.

Advice for going wireless?

VOID: I see people using wireless without even using proper mic technique. Make sure you learn the basics first. Also, if you're going to use wireless, be sure you're doing it for the right reason. People jump on the wireless bandwagon because they think it's cool, not because it's necessarily the right tool for the job.

What does the future hold?

GLENDINNING: The gear's getting very good these days. In the last few years, I've used systems by AKG, Lectrosonics and Audio-Technica. Everybody's really stepping up their game. VOID: You'll see a lot more wireless on instruments, perhaps even completely wireless stages. And the fidelity would remain untouched, because nothing has to get companded.

—Phil Selman



Maroon 5