

# My Favorite Sound Tool: Earwigs

by Steven A. Morrow CAS

As production sound mixers, we use different tools in different ways, which has always been part of what I've enjoyed reading and hearing about from other mixers. I have found earwigs to be an integral part of my kit, so I keep as many on hand as possible. I've used them to help in so many situations such as cueing off-camera dialogue, allowing directors to give specific notes to actors, and allowing script supervisors to read the off-camera lines while protecting the dialogue and the ambience.

The latter is a favorite of mine. I provide the script supervisor with a microphone that goes directly to the actors' earwigs. It helps the actors stay in the scene, keeps a more natural pace to the dialogue, and saves the ambient sound for post-production. Maintaining the ambient sound also makes it easier for post-production to cut in the off-camera dialogue.

Like many of you, I have used Phonak's tried-and-true original Invisibility earwigs. When I heard that they were no longer being manufactured, I got the urge to snatch up as many as possible; they were great for me for years. I had gathered up 15 earwigs, which was plenty for some time. But, of course, technology is constantly changing and I knew that, eventually, I would need to change.

Looking at my upcoming work, I realized that being able to get parts quickly or in more quantity was going to become a problem. With them no longer manufacturing the model I'd become so attached to, I knew I had to start testing out new models. Since I'd had good luck with their previous model, I chose to try Phonak's new earwig, the Roger. [Roger™ earpiece launched in 2016 and discontinued in 2020.]





Babylon (2022)

It was discouraging. I didn't have great results at the beginning. I had barely 40 feet of range with its included antenna. So, I stuck to my old batch and babied them for a few more years. My team and I created elaborate little cases, pouches, and things to keep them as safe as possible between the moment they left and returned to our cart. My trustee batch of cradled earwigs was still going. Then the moment came—a movie was on the horizon—and to get it done comfortably, I would need a lot more earwigs.

The movie coming up was *Babylon*, a 1920's silent-era film going into sound, directed by Damien Chazelle, who I worked with on *La La Land*. Damien was clear that the film would have a ton of music playback, a ton of dancers listening to the music, and, most specifically, some would need to be dancing to different songs depending on the scene. An example of this is in the first party scene of the film where Margot Robbie's character does a wild dance;

the dancers have one song in their earwigs and she has entirely different music in hers.

Many of the scenes use music and dialogue simultaneously, which equals a lot of earwigs for me. I counted and recounted and found that I needed at least 35 earwigs! How on earth was I going to find 20 additional Invisity's that would be in good-enough shape that I could count on them? Long story short, I couldn't find them. So, I had to try to find a replacement ... again.

I contacted Phonak to see if their Roger system had improved or if they could help me find more of the older version of Invisity. I was hesitant but hopeful for version two of the Roger earwig [which was launched in 2020 and embedded the most advanced Sonova RF technology]. While the first version didn't perform as well as I had wanted, I had good luck with their previous





power of 10 dBm. In the EU, maximum allowed power is 20 dBm, as originally delivered from the Roger BaseStation.]

For *Babylon*, we had a scene at Pasadena’s Green Street Tavern, an old, dense building that cuts all our range down. Our previous earwigs wouldn’t have made the distance of the shot; having the repeater and the signal booster made it a nonissue for us. I could also add an unlimited amount of repeaters to increase the range if needed. The plusses were adding up for the new system.

My trustee Invisibility system had two volume selectors; the new system has a more extensive volume range, controllable with an optional “Touchscreen Mic” remote, making it easier for each individual to make the earwigs comfortable.

Setting up and keeping track of 35 earwigs is no small feat; thankfully, the new units last well over 24 hours on a single battery. This allowed Bryan Mendoza (sound utility) to set up all the earwigs based on the call sheet in advance without worrying the battery may die mid-

products for years and was determined to figure out a fix.

The distributor in Canada advised me that Phonak now had a repeater available with the Roger system and that I could increase the range by adding a 2.4 GHz amp to the system. The amps are widely available online, and with the correct cable, you can easily connect the base station to the amp, which turns the amp into a signal booster. Creating the signal booster in this way gets you a few hundred feet more. [Note: In the US, maximum allowed power is 30 dBm, with maximum booster







day. To keep track of each, he found individually numbered daily vitamin cases. Bryan would hand out the earwigs and have the actor, musician, or dancer hold the case up with the number showing and take a picture. If we were missing earwig “23,” he could look back on the photos to see who had it. This tracking system also helped the performers understand the item’s value and that they were responsible for its safe return. *Babylon* was as playback-heavy as expected. The film isn’t a musical, but almost every scene had a musical element during production. Films that use music during production, whether a traditional musical or films using music to help set the tone, are always so much fun to work on. As a production mixer, these films allow me to be more involved in the creative aspect of making the film with inventive technical problem-solving for creative requests.

For example, during *Babylon*’s battle scene, we had 1,000 extras, a full orchestra, and a period-film crew capturing the magic. The scene illustrates how film scenes like this were created during the silent era, with a huge orchestra playing music live for the entire crew to film. During pre-production, we had the thought of capturing the sounds of the extras and the battle scene to create the feeling of being behind the silver screen. After checking in with Damien, we gave the entire orchestra earwigs; they needed to hear the music to keep time as they







played the orchestral piece. Knowing we could achieve this, we coordinated with the post sound team to send two SFX recordists for these scenes. The SFX recordists jumped into the crowds of extras in the battle to add to the ambient options. When you watch this sequence, it sounds authentic and immersive, which was achieved in large part by being able to use my favorite tool (earwigs) creatively. Fun fact: The film's composer, Justin Hurwitz, leads the orchestra as the conductor in the movie for this scene.

After finishing up *Babylon*, we were fortunate to be a part of a few more films that used musical elements in continually more exciting ways. With everything from live singing to specific and gentle off-camera cues, my handy pack of earwigs helped my team and I create a solution for each new request. While finding a replacement for our tried-and-true favorites proved challenging, I'm grateful to have found the newer technology finally feeling like a good bet. The technical challenges and track counts have continued to increase. And while the 35 earwigs felt like more than I'd ever need again, as of this article, I now own 42! Following *Babylon*, we went on to *The Color Purple*, based on the musical *Maestro*, a music-heavy film about legendary composer Leonard Bernstein, and *Joker 2*, a fun take on a comic musical.



*Babylon* (2022)

*Babylon* is now available on Blu-ray and digital. If you've watched it, I'd love to hear your thoughts on the scenes or share more tips and tricks that I have used and love about earwigs that you may find informative.

Send a message or find me at the next Mixer's Mixer as I'd love to hear about the ways that you use earwigs in your work, too.



*Babylon* (2022)