How To Prolong The Life of Your Gear

Microphones, Headphones, In-Ears and More...

presented by

SHURE and PERFORMER
THE MUSICIAN'S RESOURCE MAGAZINE

MICROPHONES

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1. UNTARNISHED CONNECTIONS

Always make sure your mic's contacts and connection points are clean. If you have dirty XLR pins, it may negatively impact the quality of your connection and audio signal.

2. KEEPING IT CLEAN

The good news is that most dynamic vocal microphones have grilles that are easily removable (in most cases, they simply unscrew). Your grille will get gross over time, but cleaning it with water and a mild detergent, and letting it dry overnight will remove most gross food particles, lipstick, and whatever other gunk that's been accumulating.

3. A STICKY SITUATION

Sometimes you may end up using gaffer's tape on your mic. What you want to try to avoid, however, is excessive leftover tape residue on handheld mics, since that residue can become a contributing factor when it comes to unwanted handling noise.

IN-EAR MONITORS

image courtesy of Shure

1. YOU MAKE A CUTE COUPLE

Coupling occurs when your IEM (in-ear-monitor) and ear canal get a nice, tight seal during proper use. Not only does a proper coupling of your monitor and ear canal ensure outside noise is reduced, but it also enhances bass and audio quality.

2. TWO AT A TIME

You may want that "We Are The World" aesthetic and choose to use only on in-ear at a time, but let's be honest: you look silly and the whole point of IEM's is to increase sound isolation and block out stage noise. Plus, with only one in place, you end up cranking the volume to unsafe levels. Not smart.

3. INTO THE FRAY

It should go without saying, but we've seen far too many frayed wires and cords coming off IEM's that perhaps it *does* need to be said: frayed cables are only asking for trouble, and will lead to potential audio problems, noise, or dead monitors in the middle of an important gig. Replace them ASAP.

HEADPHONES

1. THEY CALL ME BABY DRIVER...

With prolonged exposure to ridiculous volume levels, you may be damaging your headphone's delicate drivers. If you're hearing a lot of breakup and distortion at normal listening volumes, it might be time to turn things down a tad.

2. TIME TO DETACH

If your headphones come with detachable cables, remove them when the headphones are not in use and store them either in the carrying case that came with your set, or neatly next to the headphones. This can help decrease tangles, cord crimping and fraying over time as opposed to sloppily (and repetitively) winding the cable around the cups or headband when the session's over.

3. DRY AS A BONE

Moisture is the enemy of most microphones, amplifiers and headphones. Try to avoid moisture entering any exposed portion of your headphones if possible. This may be hard to do with sweat, so we recommend keeping cotton rounds from the makeup aisle inside your carrying case. A quick wipe-down after a long mixing session can help extend the life of your favorite cans.

image courtesy of Shure

BONUS!

PERFORMER'S GUIDE TO MICROPHONE SELECTION

Many microphones have been talked about as if they have this mystical ability to enhance performances, as if they can transform a crappy guitar into a handcrafted masterpiece or a mediocre vocalist into a diva. Is this true? Should you plunk down a few grand on a vintage mic? Or will a less-expensive model do the trick? It's true that the characteristics of some microphones make them sound better on some instruments and voices than others. We'll try to explain why and what you should look for – so microphone detectives read on...

CONDENSER vs. DYNAMIC

A **dynamic microphone** uses a moving coil to create current that gets amplified; think of it like a speaker working in reverse. The venerable Shure SM57 and 58 are good examples. They are generally more rugged than their condenser counterparts. Because of the mass of the moving coil, dynamics tend to have poor transient response and on average are less sensitive than condensers.

Condenser mics on the other hand use a thin plastic film coated with gold or nickel, giving them very little mass – yes, you guessed it, making them more sensitive. Condensers also require phantom power to work, generally supplied by the preamp through one of the legs of the XLR cable. This sensitivity is a good thing when using them to capture the nuances of a soft vocal or acoustic guitar performance but can make them more prone to breakage if dropped or by putting a sensitive condenser mic inside a kick drum where the sound pressure levels can easily break the capsule. The size of the capsule (generally ranging from 3/8" to 1") also has an effect on the characteristics and expense of the microphone.

RIBBON MICS

A ribbon mic is a dynamic mic that uses a thin metal ribbon clamped between two magnetic poles instead of a moving coil, so it responds to the moving air's velocity rather than its pressure. Because it rejects signals from the sides, its Figure 8 pattern is excellent for setting up in a Blumlein stereo pattern. Ribbon mics have been known to provide a smoother, more detailed recording than moving coil dynamic mics but are less commonly used due to their more fragile nature.

DIRECTIONALITY, PADS & ROLL-OFF

Most often when you think about recording an instrument or voice, you think about just wanting to capture the sound straight on, especially when on-stage noise and the bleed from other instruments in close proximity is undesirable. For these applications, cardioid or hyper-cardioid patterned mics are what you want. Their heart shaped pickup pattern means that most of the sound hitting them from the sides and back will be rejected. But what if you want to record five singers in a room? In this case a microphone with an omni-directional pattern would be great. Or what if you have two singers facing each other? A large diaphragm condenser mic that offers a selection switch so that you can choose between Cardioid, Omni & Figure-8 Patterns might suit your needs. Some models even offer a Pad switch to lower the sensitivity of the mic for high volume situations.

Why would you want to roll off low frequencies? Let's say you're recording a female vocalist who is tapping her foot; by rolling off the low frequencies you can help lower the chances of recording foot thumps without losing any of her performance, as she isn't likely to put out frequencies below 80Hz. On the other hand, if you were recording a kick drum you wouldn't need the roll-off, but you might want the Pad switch on -10dB because of the high output of the drum.

USB

Plug and play, baby! These mics have their place – especially for dedicated uses like recording audio books or podcasts direct to your laptop or DAW. They eliminate the need for an interface box, external power supply and an XLR cable by putting the preamp in the mic itself. If you just need a basic mic to record clear demos in your bedroom, this could be the perfect streamlined solution.

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