CARING FOR YOUR MICROPHONES
in houses of worship

by Bruce Bartlett, Crown Microphone Engineering

Microphones can perform reliably year after year, even for decades. All it takes is some preventive maintenance. We'll offer some tips on this subject, and we'll also suggest ways to have your mics repaired or replaced if necessary.

PREVENTIVE MAINTENANCE

For best protection, place each mic in its supplied bag or carton after the service. Some sound people leave the mics in place (especially choir mics and gooseneck mics) and just cover them with a plastic sandwich bag to keep dust off.

Be sure to place foam windscreens on handheld vocal mics, both wired and wireless. Not only does the windscreen prevent breath pops, it keeps moisture and dust off the diaphragm.

Microphone diaphragms are too delicate and inaccessible to clean. Prevent dust buildup by covering the mics with bags and/or foam windscreens.

Foam windscreens can deteriorate over time and leave particles on mic diaphragms, especially if they are exposed to sunlight. So it's best to remove them and cover the mic with a sandwich bag. Before each service, remove the bag and replace it with the windscreen.

Keep condenser mics out of direct sunlight because high heat can damage the diaphragm.

It's a good idea to clean the XLR connectors in the mics once a year with Caig Labs DeoxIT (www.caig.com). While you're at it, clean the XLR connectors in the mic snake and the XLR floor panels. Use cotton swabs and pipe cleaners with the cleaning fluid. Tighten each connector set screw with a jeweler's screwdriver.

Most mics can be cleaned with a rag SLIGHTLY moistened with soap and water. Just be sure not to get any water into the microphone. Aim the mic downward when cleaning it. You might prefer to use a microfiber cleaning cloth such as made by Caig Labs.

Replace dirty or worn foam windscreens with new ones, available from Radio Shack or from your mic dealer.

Check wireless mics periodically to make sure they have fresh batteries and clean battery contacts. Remove batteries between services to prevent corrosion. Talk into each wireless clip-on mic while wiggling the cable gently to check for signal loss or crackles.

If you hear static or drop-outs when using a wireless mic, try placing the receiver closer to the mic, up higher, and away from metal surfaces. Be sure the receiver has a line-of-sight path to the microphone. In each receiver, angle apart any dual antennas (Figure 1).

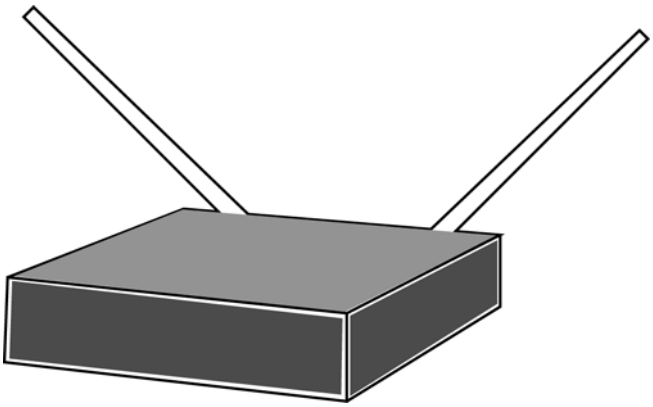

Figure 1. Angle antennas apart in a wireless receiver.

MIC SERVICE

Does a particular mic sound worse than you remember it sounding? If you have another mic of the same model, you can listen to one then the other to see if they sound different. The one that sounds bad probably needs service.

First be sure to check the EQ settings in the mic channel on your mixer. They might have been misadjusted. Keep a record of the normal EQ settings, and refer to it periodically to make sure that the EQ settings have not been changed. You might put small colored adhesive dots on the mixer surface to mark the EQ knob settings (Figure 2).

Figure 2. Marking EQ settings with adhesive dots.

If you determine that a mic needs service or replacement, return it to your mic dealer (first choice) or the mic manufacturer (second choice). Go to the Web site of the dealer, and look for something like "Return Policy" in the Support section. You might need to call a sales person to get a return authorization number before returning the microphone.

If you plan to send back a mic to its manufacturer, check their Web site under Support. Look for Service Information or something similar. There might be a listing of service centers, plus a Web page to obtain a service return authorization number. Many companies also offer replacement parts.

The microphone data sheet or carton usually contains the warranty information. If the mic has a 3-year warranty, for example, you should be able to get free service or replacement if you are returning the mic less than 3 years since its purchase.

If the estimated cost of repair is really high, you might consider buying a new microphone -- either the same model or a better one.

If a microphone is "dead" and makes no sound, try these troubleshooting tips:
1. If the mic has an on-off switch, make sure it is turned on.
2. Check that the mic is plugged in, phantom power is turned on for condenser mics, the mic channel is assigned to an output bus, the mic channel input selector is set to "mic", the mic channel gain trim is turned up high enough, and the mic's fader is turned up.
3. Replace the mic cable. If that fixed the problem, repair or replace the defective cable.

If the microphone sounds distorted,
1. Be sure the battery in a wireless mic is fresh.
2. Adjust the sensitivity pot in a wireless mic -- it might be turned up too high.
3. Check that the mic channel in the mixer is not clipping. In the mic channel, turn down the input gain trim a little at a time if the clip light is flashing when the mic is in use.

By following these suggestions you can expect your microphones to provide consistent, high-quality sound for a long time.

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