

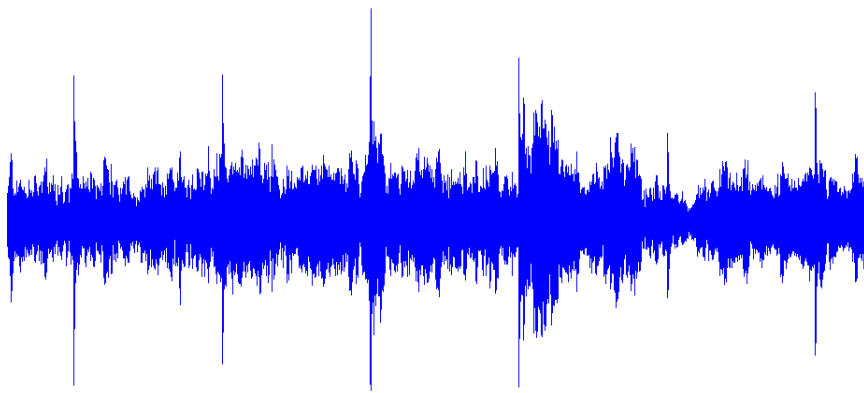
# Microvolt

Monthly newsletter of the Utah Amateur Radio Club

## September 2025



## Audio



In the amateur world, people say, *If you can't hear 'em, you can't work 'em*, meaning that it's difficult to make a radio contact with another operator if you don't hear that other station very well. In spite of physical impairment, such as blindness, speech, wheelchair, and even autism, today's ham can still enjoy the craft. But with few exceptions, being able to hear still seems to be a necessary sense in our circle. **Audio** is sound, yet its quality, loudness, and accompanying noise, are among the important considerations that determine whether we're able to make that distant contact.

|                       |    |
|-----------------------|----|
| Cover story           | 2  |
| Editorial             | 3  |
| Letters to the editor | 4  |
| Club news             | 5  |
| For your information  | 6  |
| Spotlight on BlahZ    | 7  |
| Tech corner           | 8  |
| Strays                | 12 |

## Cover – Audio

Attention to audio in amateur radio is important because our goal is *successful communication*. However, a focus on audio does not necessarily imply high fidelity or high quality; often, just well enough for you to understand each other is sufficient. Your priority in audio improvement, therefore, should be for *clarity and intelligibility rather than quality*.

Just as important as the *sound you hear* is the *sound that others hear from you*, so audio concerns are often two-way considerations. The ability to complete that successful contact is admirable in itself, but your willingness to help other operators hear you better demonstrates respect for them, and contributes to a more pleasant experience in both directions.

You can purchase audio equipment that can enhance, clarify, even boost your audio beyond your natural ability to speak. Yet, there are simple things you can do to help improve your audio without the need for special equipment:

- Locate your microphone hole or input screen and talk close to it
- Use proper microphone technique, such as talking across your mic instead of “puffing” into it
- Speak up
- Quit fidgeting or bouncing your leg while you’re talking
- Remove surrounding environmental noise, such as pets, children, music, the TV, and others
- Request a signal report or feedback from others (can be subjective, so get a second opinion too) or the [WebSDR](#) if that’s appropriate

Still, don’t underestimate the value of a good microphone. It doesn’t need to be expensive to produce a high-quality sound. Also, depending on your transceiver and microphone, you can sometimes adjust your microphone gain so that your ALC is within a reasonable range, to avoid distortion. Also, disable the VOX and COMP (speech processor/compression) unless you’re certain you know how to use them to your advantage.

Once upon a time audio pioneers such as [Harvey Fletcher](#) deeply investigated audio and provided a wealth of information that we continue to use today. One of the findings most applicable to amateur radio was how our ears process sound, and how SSB



([single sideband](#)) can be modified to adjust how well the human ear can understand the demodulated speech.

Today, many of us recognize the value in reducing the power presentation of lower-pitched sounds ([de-emphasis](#)) and increasing that of the higher-pitched sounds ([pre-emphasis](#)). For example, operators such as many women and kids who tend to have higher-pitched voices than men, tend to be heard better through pileups than men. You can watch [an interesting video](#) on this very topic by a long-time broadcast engineer who is also a ham.

Keep in mind that, while FM 2-meter repeaters typically afford us plenty of audio space, on SSB HF all our audio must fit within about 3.0 kHz of bandwidth. Some amateur radio gear manufacturers claim they can produce a high-fidelity signal for transmission, but even they are subject to the same bandwidth limitations. It’s kind of like trying to push a live chicken through a one-inch pipe and expecting a live chicken to emerge through the other end. As a result, the listener at the distant rig might hear some audio quality improvement, but not likely as much as some audio equipment sellers would have you believe.

One more thing to keep in mind. Unless your transmission is urgent, once others report that your audio sounds rough, is noisy, or your signal is not holding the repeater, disregarding those reports and continuing to transmit is often a little inconsiderate and shows disrespect for other operators. It’s better to correct the poor transmission or sign off until you reach a better location.

*Microvolt editorial staff*