

ABA Engineering Academy Continuing Educational Series: Creating Quality Audio Production

The overwhelming majority of broadcasters have moved away from analog tape production and are now working with computer-based recording systems. This means we need to get audio from the air-based soundwave world into the virtual, one's-and-zero's-based digital world. For this, we use an audio interface.

An audio interface is a device that accepts analog microphone and line-level signals, converts them to digital for storage and processing in a computer, and can also do the opposite: accept digital audio signals from the computer and convert them back to analog signals to drive studio monitors, headphones, and analog processing gear.

The big advantage of using an audio interface is to by pass the computers audio I/O system. While the computer works well for skype and gaming, it doesn't have the quality needed for broadcast operations.

There are many considerations when choosing an audio interface. Let's take a look at some of the most significant.

1. Your needs

"Which audio interface should I buy," is a question we often hear. The answer to that question is "What do you want to do with it?" Most often in a broadcast environment you are creating commercials, station imagers or laying down a voice over for news or special events. Consider how many signals you need to get into the *interface at the same time*. Although interface units can have many inputs, in broadcast production normally one or two inputs will be all you will need. If your production facility will also be used to record musical groups, then you might need more inputs.

2. Portable or fixed location

Most audio interface units can be powered from the USB port on a computer. This makes it convenient for on-location or work on the road situations. Multiple input units will normally require external power.

3. Connection format

Will you hook the interface to your computer via USB, FireWire, Thunderbolt, or a proprietary connection? Some "hybrid" interfaces support more than one protocol, but this first step will narrow your search considerably.

3. Sound quality

Really, sound quality is #3 on the list? This is because these days, even the least expensive audio interface is capable of delivering great sound quality when used properly. Although there may be some differences in the audio quality and tonality offered by various manufacturers. Read the specifications and references, plus if possible test the unit out before purchasing.

5. Price

Price is always a consideration. But normally by the time you work through the list above, you'll have narrowed the field to a short list of audio interfaces that will fit the bill. At this point, you can choose the one that fits your budget. Some people prefer to start with price as the first consideration, but in my experience, you're better off to start with the end in mind (meeting your needs) and let price be the tie-breaker at the end.

Additional considerations:

In addition to the audio interface itself, the type of microphone you will be using, and the room acoustics will affect the quality of the final product. These items along with proper gain staging and microphone techniques are very important.

Our thanks to Mitch Gallagher, [Sweetwater](#) Editorial Director for information in this article. Read all the articles from Sweetwater [here](#)