

Recording and Editing Sound

If you're interested in producing sound for radio, you'll need to know the basics of both A) gathering sounds, and B) editing them together into a story. This document will cover some of the equipment you can use to gather sound, and the basic, free sound editor Audacity, which is available in all our labs here in the department.

Let's start with the audio equipment you'll need to capture high quality sound for your project.



If you have the luxury of a quiet space to record a podcast or interview, having the USB-connected "Samson C01U USB Mic" is great. It can capture sound and input it directly to the computer with a USB cable. Keep in mind you will need a computer for this microphone-- it does not plug in via an audio cable to a digital audio recorder. From here, depending on your program you'll use to record your sound on the computer, you'll need to make sure you select the right microphone input (USB device). In Audacity, it's in the top left corner.



For a simpler, plug-and-play (at the cost of some vocal clarity) solution, the Logitech USB Desktop Mic will make recording a breeze, if directly into a computer in a quiet room. Similar to the Samson, you will only be able to use the microphone in controlled environments and if you go out into the field, you'll need a different, portable solution.

So let's talk about portable solutions. If you'll be recording in multiple locations (even in a studio with a computer being one of them), you may want to use the same equipment on every set. You would want, in particular, to use the same equipment for every interview if you can, because then you will have the same loudness and sound quality for every interview.

We will start with sound recorders. Our higher end Sound recorders are:



The Tascam is a sound recorder with two adjustable microphones built in to the top of the device. They can be rotated out or face inwards, either focusing sound capture on a single subject, or separating left/right audio channels for general field recording. For external microphones, it only takes microphones with an XLR jack (Large, three-pronged port). It can handle a maximum of two microphones with XLR, and no stereo mini audio jacks. For general recording, if the microphone is set up to “pre-record” you will see audio levels the first time you hit the Record button, but it won’t be recording yet! This allows you to make sure your microphones are working and are close/loud enough, or to check for wind noise. Always do a sound check before you jump into an interview! When you’ve got your microphones the way you want, and the audio levels look good on the screen, hit record again and record a few seconds of audio, then hit square to stop. The recorder then can be plugged in to a computer with a USB cable, or you can take the SD card and put it in a card reader.



The Edirol Digital Recorder is a smaller, mid-range audio recorder. Earlier versions in our inventory say Edirol on the device, and later the brand was changed to Roland when they bought the company. Both devices are very similar, so are lumped together here. The Edirol does also have two internal microphones on top of the device, but they don't move or rotate. They can be used alone by just turning on the device and pressing record (again, beware of pre-record! Flashing red is pre-record, solid red is recording). The Edirol lack XLR capabilities, but it does take a stereo-mini microphone on the side under "MIC." If you have a microphone that has an XLR jack, make sure to also check out an XLR-to-mini adapter. Ask a checkout worker if you want to know more about whether your recorder and microphone can work together.

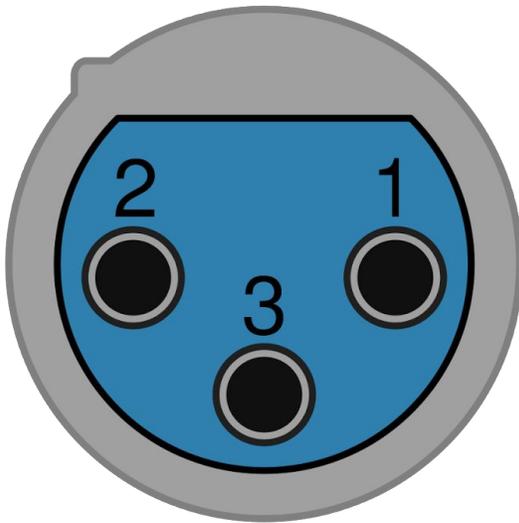


And finally, the Zoom H4n Digital Recorder, which is also my favorite. Like both previous recorders, this device has two microphones built in on the top of the device. They are very sensitive! If you hold this recorder in your hand while using the built-in microphones, you may even hear the device creaking. I recommend setting the device down on a table, and softening that with a fabric layer in case your subject hits the table with their hands. The Zoom H4n can take XLR (2), stereo mini (1), or 1/4" stereo (2) inputs of microphones. It can also record from two XLR, and both internal microphones on top, for four-channel recording. This is memory and battery intensive, but allows for specifically mic'ing two subjects while also recording the room in stereo. Like the previous devices, know your pre-recording and recording lights (flashing vs solid).

Once you've chosen a portable device, you'll probably also want the appropriate microphone.

We have a wide array of lavalier microphones that are small microphones you can clip on to the interview subject. Lavalier microphones are omni microphones, meaning they capture sound in a sphere closest to the subject. If your microphone can afford to be visible, the lavalier is still discreet, and captures very good sound, even with some background noise. Without covering every single lavalier model we have, there are two kinds of microphones you'll encounter: those with XLR cables, and those with stereo-mini cables. Use the reservation web page to see a picture of the microphones and know which kind of cord you'll be dealing with and make sure it's compatible with our portable recorders.

Female



Male



XLR Cord Diagram, courtesy of Wikipedia.



A Stereo Mini Audio Jack, courtesy of Wikipedia.

We also have wireless lavalier microphones, listed under the “Wireless Lavalier” section of the checkout website. These use an extra step-- getting sound from the lavalier through a pair of radio frequency packs. The pack that you plug the microphone into has “mic/line” on the top by the audio plugin. The pack where your audio comes out and you plug into your digital recorder has “af out” written by the plugin. Once those are set up, you can turn the packs on (make sure they have fresh batteries!) and check to see if the sound is being transferred through the two packs.

Lastly, our checkout system also has a shotgun microphone section. Shotgun microphones are long, barreled microphones that have a specific direction in which they direct sound, so they can be pointed towards an interviewee, and away from other distracting sounds. As such, they are also called directional microphones. But be careful! Reflective surfaces that are behind your subject can reflect sounds back into a directional microphone. Try to avoid large, reflective rooms in particular.