

# Audio Preservation

## Why digitize audio?

Many audio collections are a hodge-podge of different recording mediums. They range from wax cylinders and wire recordings to acetate and vinyl LP or 45 rpm records, reel-to-reel tapes, and cassettes. It's hard to find equipment to play all these different formats, which makes their content inaccessible to users. Digitization standardizes the material and enables users' easy access for research and use in podcasts and museum exhibits.



## When to digitize audio recordings:

Begin by reviewing the condition of your collection. Digitize unstable media first. If, for example, cassettes have been stored in a non-climate controlled place, the condition of the cassettes has probably deteriorated. They should take priority before the content is lost permanently.



## How to plan an audio digitization project:

Start planning by reviewing the condition of your collection. Are the tapes flaking, records warped or at first glance, does everything look in decent condition? Then look at the subject content. Does the collection contain a topic that would create local interest? If so, you may be able to get funds from your community. If you have a small collection, you may want to look into collaborating with other repositories in the region to bolster efforts to get financial help for the project. Once you've done an initial assessment of the collection, you should have someone experienced with audio formats assess and prioritize your collection.

## Standards for digitization:

Digitizing analog sound (e.g., records, cassettes, etc.) involves recording it in real-time from the analog player onto a computer with audio recording software. This process requires someone familiar with audio recordings to set up the conversion station on site, or alternately, take responsibility of the audio collection for the

duration of the digitization process. The standard format for sound preservation masters is a .wav file. This is an uncompressed file, which preserves the sound as a complete replica of the analog file in binary code. This format is industry standard, but the files are large, and require a lot of hard drive space. They are also time-consuming to download if you make them accessible online. A user-friendly option is an .mp3 file, which is a compressed version of a .wav file. Create .mp3 versions as user copies but maintain the original .wav files.

## Equipment considerations:

Part of planning an audio digitization project includes evaluating the equipment needed to convert analog sound to digital. As technology evolves, equipment becomes obsolete and audio collections inaccessible. What type of equipment do you need? Does your organization possess the necessary equipment or have access to it? Do you need adapters to connect the older equipment to the computer? Finally, do you have access to the computer software needed to transfer your recordings from analog to digital format?

The easiest type of equipment to



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procure is for cassette tapes. You will need a cassette player, and a “mini” jack to connect the player into the computer. Many computers have a mini jack. If your computer does not have one, visit your local electronics store; explain to them what you want to do and they will help you. These wires are not very expensive, ranging from \$10-\$20.



If you have another format, such as reel-to-reel tapes, LP or 45-rpm records, or wire recordings, the playback equipment is harder to come by and you will need to enlist help. Renting equipment such as reel-to-reel players and other machines that use older technologies is harder because the sound industry no longer manufactures them. One can find older equipment locally by watching the classified advertisements or through online auctions. Prices depend upon the scarcity of the machine. The goal is to obtain playback equipment in good operating order.



### **Software considerations:**

Use software programs that allow for straight conversions from analog to digital recordings, such as Audacity. This type of software consists of several components that are available for downloading free from the internet. It will work on either Mac or PC platforms. You can also purchase software at your local computer store.

### **Training considerations:**

Transferring analog recordings into digital format can be somewhat intense and dull. There are no shortcuts; it is a minute-by-minute process. Conversion projects require individuals with the ability to listen to an entire recording and monitor its progress to ensure the original source has no problems. With training, volunteers can assist in these types of projects. Those unfamiliar with sound recording should have someone tutor them; however, it shouldn't take more than an hour to explain the fundamentals of sound recording.

### **Cataloging considerations:**

Once you've completed the conversion process, catalog your digital audio files in the same manner as the analog copies. The Maine Folklife Center (<https://library.umaine.edu/speccoll/our-collections/>) and Oregon State University Archives (<http://scarc.library.oregonstate.edu/index.html>) are two examples of catalogs found online.

### **Storage Considerations:**

Because CDs have a shelf life of approximately 10 years, it is best to store master sound files on a secure

hard drive. A three-terabyte hard drive can store approximately 4,700 hours of music files, and may fit additional files that are less complicated (i.e., music can consist of many layers or tracks while an oral history may only involve one track of sound). You should house master files separate from access copies. Creating a backup of your preservation masters is also a good idea.

### **Access considerations:**

Digital sharing is good for providing research access to your audio collection for those visiting in person. You can copy either .wav or .mp3 files onto a CD, USB thumb drive, cloud storage share, etc. For Internet access, upload .mp3 files, as discussed above under Standards for digitization.



### **Other considerations:**

Your collection may contain many oral history projects recorded in less than optimal conditions. Often, the recordings contain distracting noises embedded into the analog recording. Preservation standards call for recording the analog sound as-is, with no modifications. If the external noise is too distracting, you may consider making .mp3 files modified, using software like Izotope RX, which



can minimize or eliminate sounds. It is also important to consider the preservation of the original carrier of your recordings, if possible. As technology advances, new conversion or extraction methods emerge that may be able to convert and capture sounds from recordings not possible today.

### **Where do I get funds for audio preservation?**

Oregon has a variety of funding options available for sound preservation. These sources include Oregon Heritage and Oregon Museums Grants (<http://www.oregon.gov/oprd/HCD/FINASST/Pages/grants.aspx>) of the Oregon Heritage Commission, as well as grants from the Oregon Cultural Trust (<https://www.culturaltrust.org/grants/what-we-fund/>) and its county and tribal coalitions.

The following are ideas for additional sound preservation funding:

- The Institute of Museum and Library Services  
<http://www.imls.gov>
- The Grammys  
<https://grammymuseum.org/national-reach/grant-program/>
- The National Endowment for the Humanities  
<http://www.neh.gov/grants/preservation/preservation-assistance-grants-smaller-institutions>
- Members in your community are also great sources for audio preservation funding. Who in your community can you develop a strategic partnership with that would be interested in saving their history?

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