

WHAT DEVICE TO USE

Technology today enables us to easily record oral history interviews. It is up to you as to the device you want to use to record the interview. These include:-

- Professional digital handheld recorders
- Apps for Smartphones and devices
- Traditional cassette audio tapes

Professional digital handheld recorders

Professional handheld devices are the best option and a good investment if you are serious about doing oral history recordings.

Apps for Smartphones and Devices

There are many downloadable voice recording Apps for personal devices (iPad, iPhone, androids etc.) Although these may seem a simple option, problems can occur when trying to transfer a recording from a smartphone, which isn't always easy. It is essential that a recording is able to be downloaded (preferably as a WAV file) in order to edit audio to be made available on social sound platforms, such as SoundCloud.

Smartphones already have built-in capability for recording, but the microphones in smartphones are small and weak and don't record in stereo. You can turn your smartphone into a professional recorder, by buying a plugin microphone. There are a few different types, but the highly recommended Zoom brand has their own. This would be a cheaper and more portable option than buying a separate digital recorder. It will give you professional quality recordings, providing a better and more sensitive microphone than what the standard smartphone comes with. The downside is you are limited with the battery life and data storage capacity of the smartphone, both of which are generally more limited than dedicated handheld digital recorders.

There are many free smartphone apps for voice recording:

- Voice Memos – iOS phones already come with this built-in, it is basic but does ok
- Audio Memos – has more functions and control than above
- Recorder – has good reviews online, it is worth trying
- Voice Record Pro

Traditional cassette audio tapes

Some may choose to use older style cassette tapes, which is fine, however it is important to be mindful that cassette tapes are more difficult to digitise - the UON's Cultural Collections can digitise cassette and analogue tapes, however is more complex process. Some people may already have oral histories on cassette tapes that they have done in the past, in which case Cultural Collections may be able to assist in digitising, particularly if interviews are found to contribute to the cultural, intellectual and social life of the Hunter Region.

The device used by UONCC to digitise audio cassette tapes is Digitech Cassette USB/SD Encoding Music Box. The Digitech unit allows cassette tapes to be digitised directly to a computer as .wav files ('loseless' format, or master file). From the original master, a mp3 file ("lossy" format that goes up on soundcloud) is generated.



Digitech Cassette USB/SD Encoding Music Box

Although audio recording is the focus here, audio-visual (or video recording) has many advantages over oral recording. Video recording someone shows their facial expression and body language, and maps, photographs and other visual sources can be filmed to further describe the subject of the interview. Other visual sources can be included in the editing process.

What are the differences between Mp3 and WAV files?

WAV format is an older format but has many advantages when it comes to applications, most importantly it can record fairly accurately maintaining audio quality, it is also a very simple format to edit. The downside is that size of a WAV file making it difficult to upload to devices and social sound platforms. Mp3 format on the other hand is a more contemporary format, is a small size format and therefore able to digitally shared and quite large 'libraries' of files can be located and used on personal devices. When digitally recording oral histories it is best to record using WAV format and convert to Mp3 for easy uploading to sound platforms.

More professional devices are recommended, these can digitally record and provide WAV files for editing and reformatting (to Mp3). There are numerous portable digital devices available, Oral History NSW suggests "A good guide to selecting equipment is to buy the best you can afford, rather than the cheapest, for quality recordings of lasting integrity."

About Digital Handheld Recorders

A variety of these can be found online. TASCAM and Zoom are both recommended brands. You could easily pay \$500 for a top of the line recorder; however we will show you some more affordable options that will still give you great quality recordings.

	<p>Zoom H1 Handy Recorder \$100 – 150</p> <p>Portable and fits in your palm, while still having great recording quality. XY microphones for recording in stereo. Takes one AA battery, which allows for 10 hours of operation. Different packages have different accessories. The one we bought was cheaper and came with 2GB mini SD card and no USB cord included.</p>
	<p>TASCAM DR-05 \$150 – 200</p> <p>This is one of the more affordable of the professional recorders. Takes 2 AA batteries which will run the recorder for 17.5 hours, but it can also run off of USB power. Includes Peak Reduction which automatically sets the volume level for recording by listening to the input and adjusting to the best level. It also allows playback at a slower pace, which will help for transcribing. It comes with a 4GB microSD card, but you can additionally purchase one with greater storage capacity.</p>
<p>8GB</p> 	<p>8GB Digital Voice Recorder (GH-609) \$16 – 30</p> <p>One of the cheapest voice recorders you can get. With these as far as sound quality goes, you get what you pay for. The quality of this would only slightly better to that of a built in smartphone microphone. This is capable of recording in stereo with two separate microphones. The storage capacity of 8GB will give you 7,680 minutes of recording at 128kps. It has an in-built battery which will last up to 20 hours. It doesn't have a tripod attachment.</p>

	It only records in .mp3. This is a very small recorder, with a tiny screen.
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Recording FAQ

How do I know what quality to record at?

Use the chart below, think about what you are using it for. For archival purpose we use at least CD Quality (.wav files 44.1/16) Remember, the higher the quality, the larger the file.

	<p>Zoom iQ6 Stereo Mic Adapter for iPhone \$120 – 150</p> <p>Only works with iPhone 5 or newer. There are similar microphones available for other phones. Comes with app.</p>
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	Audio Quality	Example	Bit Rate	Sample Rate	Bit-depth
.mp3	Worst	Streaming Online	64 kbps		
.mp3	Bad	Original iTunes	128 kbps		
.mp3	Ok	New iTunes	256 kbps		
.mp3	Not too Bad	Highest Quality mp3	320 kbps		
.wav	Standard	CD Quality	1411 kbps	44.1 kHz	16 bit
.wav	High Def	DVD or HD Quality	4608 kbps	96 kHz	24 bit
.wav	High Def	DVD or HD Quality	9216 kbps	192 kHz	24 bit

What type of SD Card do I need?

If you are recording at CD quality, an 8GB card will give you approximately 12.5 hours of recording time. See chart below for comparisons.

SD cards also come with speed ratings, shown within a circle on the front of the card. For audio recording purposes, pick one with a 4 (good), 6 (better), or 10(best) rating.

REC Format	Micro SD/SDHC Card Capacity					
	2GB	4GB	8GB	16GB	32GB	
MP3	128kbps	34hrs43min	69hrs26min	138hrs53min	277hrs46min	555hrs33min
	256kbps	17hrs21min	34hrs43min	69hrs26min	138hrs53min	277hrs46min
	320kbps	13hrs53min	27hrs46min	55hrs33min	111hrs06min	222hrs12min
WAV	16bit / 44.1kHz	3hrs08min	6hrs17min	12hrs35min	25hrs11min	50hrs23min
	24bit / 48kHz	1hrs55min	3hrs51min	7hrs42min	15hrs25min	30hrs51min
	24bit / 96kHz	57min	1hrs55min	3hrs51min	7hrs42min	15hrs25min

Above table courtesy of Zoom from <https://www.zoom-na.com/products/field-video-recording/field-recording/zoom-h1-handy-recorder>

Setting up to record

Location is everything! You want a place that:

- Both you and interviewee feel comfortable and can be seated
- As noise-free as possible, no hum of fans, aircons, or traffic
- A place where you won't be disrupted by other people
- Has an area for you to set the recorder
 - Use a tripod if possible, set between you both at equal distance
 - If using a hard surface to put recorder on put down a cloth to reduce feedback from echo

Do a test run to make sure you can hear both voices on the recording, play it back and listen through headphones.

Transferring files to the computer

This can be done by USB cable or through the SD cards. Check whether your computer has an in-built SD card reader, if not, make sure your digital recorder comes with a USB cable. Many USB devices have cables that are cross-compatible, you might already have one at home that fits your recorder. If not, you can get them for under \$5. You can also buy SD card readers to plug into USB ports.