

Digital sound recording

[Some informal advice for anyone new to it, from Derek Edwards]

If you are collecting audio recordings of talk, whether interview materials or everyday social interaction, then there's a lot to be said for going digital. Digital sound is easy to manipulate, play back, and enables you to quickly jump to the parts you want, link sound to Word files or Powerpoint for analysis and presentation, distribute and share data between colleagues or over the internet, etc.

Conventional audio tapes ('analogue' recordings) can be digitized by playing the tape into the sound card on a PC, and recording it. Windows comes with the basic recording software, but there is also a range of more sophisticated software that can be used, that permits manipulation such as easy selection of sections, noise reduction, etc.

But if you're recording new data, then it's best to record it digitally from the start.

How? There are 3 main options.

1. A portable **minidisk recorder**, available from Sony, Aiwa and others, is a bit smaller than a Walkman, and available on the high street.

Advantages of minidisk:

- high quality recordings in either stereo or mono, especially when using an external microphone (see below).
- long recording times: set to mono rather than stereo, they will record about 2½ hours of continuous talk, which is much better than having to swap or turn audio tapes over.

Disadvantages of minidisk:

- The little handheld recorders can be fiddly to use, with multi-function controls and embedded screen menus, making them prone to user errors. And some don't 'remember' the recording settings you last used (The Aiwa model I have used does remember settings). But like everything else, you get used to them.
- Although the recordings are digital, they are not stored as files that you can copy straight to your computer. You have to play them back, essentially re-recording them via your sound card in

real time. That is a time-consuming nuisance. And unless you have access to a minidisk deck with a 'digital out' connection, and a sound card with 'digital in' (most cheap ones don't have that), you'll be effectively playing the file back as analogue into your sound card and re-digitizing it. That said, the final results can still be excellent.

2. **Voice recorders** are made by the same range of consumer audio manufacturers, and were designed as digital dictation devices. As with minidisk, Sony is a major innovator here. They are even smaller than handheld minidisk recorders, very light and easy to use. I have enjoyed using a Sony CD-MS515, with a 64mb or 128mb memory stick.

Advantages of voice recorders:

- easy to use
- reliable, no moving parts (they record to a memory card such as Compact Flash or Memory Stick)
- high capacity when used with a higher capacity card (these are tumbling in price, so many hours of continuous or accumulated recordings are possible)
- The files are readily converted (using provided software) and/or copied straight to your hard disk – so there is no need to re-record. You just re-name the files on your computer.

Disadvantages of voice recorders:

- The sound quality not as good as minidisk, but has improved since their introduction and is fine for most research purposes, especially interviews and two or three-person conversations, even using the built-in microphone. They can be switched to 'high sensitivity' when recording anything other than dictation close to your mouth.
- Sound is generally mono only, and recorded in a compressed format, but again, perfectly appropriate for most research uses.

3. **Professional solid state digital recorders** are made by Marantz and others, available from specialist suppliers, and designed for professional uses such as by journalists in the field. These are much more expensive and larger than the other options, but still very portable. Like voice recorders, they record to a solid state memory card such as Compact Flash or Microdrive. My experience is based on recent use of a Marantz PMD 670, which lives up to expectations.

Advantages of professional digital recorders:

- high quality sound, with lots of options for recording quality (and therefore file sizes, compression, stereo/mono, and file format).
- decent built-in microphone, but benefits from an external mike.
- designed for serious research uses – these are not machines meant in the first instance for something such as copying your music collection or for dictation.
- easy to use – once the recording settings are defined, by you or a technician, you just press 'Record' and 'Stop'. Files can be copied straight to your computer in standard formats such as WAV or MP3, and then re-named.

Disadvantages of professional digital recorders:

- expensive – expect to pay about £750 for the recorder itself, and additional funds for a couple of memory cards and an external microphone. Not much change from £1,000. Maycom make an especially robust model for about £2,500. So if you're planning recording interviews in a war zone...
- more bulky than the others, especially if plugged into the mains – they can also run on batteries like the smaller devices, but use up more of them, more often.

A note on microphones.

For recording conversations and meetings, don't use the standard little stereo mikes that come free with consumer equipment. Stereo is not important either, for most purposes. I use a mono 'boundary' microphone (look them up on the web, and shop around). These are designed for recording talk in a room, and are generally optimized for speech. They sit on a table top or hang on a wall (not hand-held). They can make all the difference to good sound quality, often cutting out all the 'air noise' you other kinds of microphone. 'Omnidirectional' is a good choice if you're recording talk coming from several directions. They generally cost about £40 to £60, but Sony make a small cheap one that's useful. They are also battery operated, usually with a small battery that lasts thousands of hours – you just have to remember to switch it on (and off) when recording!

A very useful source of additional advice and technical information is available at this Surrey University sociology department website; the information comes from Alan Stockdale of the Education Development Center in Boston, Massachusetts: <http://www.soc.surrey.ac.uk/sru/SRU38.html>