TECHNOLOGY UPDATE REPORT 31.12.12

TASCAM DR-40 HANDHELD 4-TRACK RECORDER
Reviewed by Trish Levido

This report compares the Tascam DR-40 recorder with the Zoom H4n, the digital recorder currently recommended by Oral History NSW. The Tascam DR-40 appears to be modelled on the Zoom H4n and has some additional worthwhile features.

1. An excellent feature of the DR-40 is its ability to record two tracks simultaneously – one at the volume input level set and a second track which is automatically set at a lower input volume level which gives you the option of using this if you find, after recording, that there has been some 'clipping' or 'popping' or other distortion sections during your recording. In addition to this, there is the option to set the peak reduction to achieve the ideal recording level.

2. It meets the recommendations of Oral History NSW – namely:
   2 x external XLR inputs for external condenser microphones; offers phantom power for external XLR condenser microphones and records up to 24bit/96kHz WAV

3. Both recorders offer independent input control for the two external mics.

4. Both can be used as a soundcard for recording off your computer – e.g. when recording SKYPE conversations.

5. An added feature of the Tascam DR-40 is its peak reduction feature which automatically sets the ideal recording level.

6. Can be powered up through USB on your computer or any AC, USB bus power pack* or 3 x AA batteries.

   *A disadvantage is that the TASCAM DR-40 does not come with an AC power cord. In order to have AC power you would need to purchase an option AC adaptor which has a mini-USB connection in one end and an AC plug on the other. (You may already have a connector with this facility, (check there is sufficient power) as it is used on some phones, tablets, etc.). There is an adaptor – such as model no. MP3455 is available from Jaycar Electronics for $15.

7. It can use standard alkaline or rechargeable Ni-MH batteries. A menu item should be set to indicate the type of battery in order for the main display to indicate accurate battery life information. Battery life will vary based on the kind of recording being done. Good alkaline

batteries should last close to 16 hours when doing basic stereo .wav recordings using the internal mics. However, using external microphones will also lessen battery life.

8. Another downside of DR-40 is that it has a plastic case, whilst H4n has a robust rubberised casing. However, the H4n is slightly heavier than the DR-40.

Summary: If cost is a major consideration then the DR-40 is the cheapest. In addition, the recording input levels for the DR-40 can be set at a lower level than the Zoom H4n for the same volume, giving you more space for increasing to an even higher input level. This could make the trouble of sourcing and purchasing the AC/USB mini-adapter worthwhile. NB: The recent update to the DR-40 offers independent control of inputs from external microphones, (the same as the Zoom H4n). If you decide to purchase the Tascam DR-40 do ensure that your model has this feature.

Trish Levido

For more information on the Tascam DR-40, here is a report from 'Ask Doug' developed by digital media expert and oral historian, Doug Boyd from the Centre of Oral History, at University of Kentucky Library' **http://ohda.matrix.msu.edu/askdoug/**

Tascam DR-40

I mostly really like this recorder. It has the flexibility of recording dual mono, stereo or multi track (up to 4 channels); it has decent mic preamps for the money. The idea that I can get a recorder with XLR inputs and a limiter for under US$200 is very exciting (for me at least). I found the internal microphones were ok for recording one-on-one interviews but this recorder was fantastic for recording an interview with two interviewees. I would use two external mics recording the interviewees and turn the internal condenser mics on myself.

It is exceptionally easy to set up and to operate. I found it much easier to operate (especially for beginners) than the Zoom H2N. I would definitely use this recorder for supplying entry-level student projects.

For a good '**YOU TUBE'** video comparing the Zoom H4n and the Tascam DR-40, Google **"Tascam DR-40 vs Zoom H4n what's right for you?"** This video has been made by DSLR Film N00B and is worthwhile because it shows a comparison of the sound quality from both recorders when using internal microphones.   "I own both…….. Both units are a good buy. If you don't need the extra features (most people don't), then the DR-40 is the better deal of the two. (Pretty sure I say that in the video.) When I travel and need an audio interface for my laptop I grab the H4n, when I need XLR inputs and a longer battery life I grab the DR-40. When it comes to recording audio, both units do a great job for the price"

The recorder can be powered by USB bus power from most computers (some computers do not provide enough current to run phantom power while on USB bus power) or an optional AC power supply is available that transforms 110 volts AC from the wall into USB power. When you plug-in a USB cable, a dialog box appears on the main display asking if you'd like battery, in order for the main display to indicate accurate battery life information. Battery life will vary based on the kind of recording being done. Good alkaline batteries should last close to 16 hours when doing basic stereo WAV recordings using the internal mics. Recording as MP3 will use more

battery power, as will high bit-depth recording, shortening battery life by a few hours. Using the recorder's internal phantom power will drain the batteries more quickly, depending on the microphone.

Without an AC cord, power is provided by three AA batteries. It can use standard alkaline batteries or rechargeable Ni-MH. The menu item should be set to indicate the type of battery in order for the main display to indicate accurate battery life information. Battery life will vary based on the kind of recording being done. Good alkaline batteries should last close to 16 hours when doing basic stereo wav recordings using the internal microphones. Recording as MP3 will use more battery power, as will high-bit depth recording, shortening the battery life by a few hours. Using the recorder's internal phantom power will drain the batteries more quickly, depending on the microphone.

The following criticisms have been recorded:

- it's unacceptably noisy with <u>dynamic</u> mics for recording quiet sources, such as interviews;
- too many of the controls are buried in menus;
- the input gain is on an up/down rocker switch rather than a dial;
- the headphone jack is a fragile mini;
- the built-in mics are very wind-sensitive;
- and no wind screen is provided.

So, after getting excited about this cheaper field recorder, which at first glance appears to offer all that the Zoom H4n offers, plus more, it has however, have some disadvantages. It will be up to the individual to decide which is best for them.

Below are the specifications for the TASCAM DR-40:

- Handheld 4-track Portable Recorder
- Built-in condenser microphones, adjustable to XY or AB position
- XLR / 1/4" mic/line input with phantom power
- Record the built-in microphones with the XLR mic or line input for a four-track recording
- Dual recording mode captures a safety track at a lower level to avoid distortion
- Overdub mode allows recording along with a previous take
- Peak reduction automatically sets the ideal recording level
- 15-hour battery life from three AA batteries
- Up to 96kHz/24-bit WAV/BWF or MP3 recording resolution
- 2-second pre-recording buffer
- Variable speed playback from 50-150% speed without changing the pitch
- Adjustable limiter and low cut filter (40 / 80 / 120 Hz)
- Built-in speaker and chromatic tuner
- 1/8" headphone/line output
- Playback EQ and level align
- Stereo Reverb effect
- Tripod mounting hole
- SD/SDHC card slot supports up to 32GB media (2GB card included)
- Locking Neutrik Combi jacks
- USB 2.0 jack and cable for transferring recordings to computer
- Powered by three AA batteries, AC adapter (optional PS-P515U), external battery pack (optional BP-6AA), or USB bus power