Pharoah Syncheck II

Even inexperienced eyes are now noticing the disparity in timing between the picture and sound on TV. If you're worried about your audio and video being out of sync you should take a look at the Syncheck II. ANDY DAY pays lip service.

FOR SOME TIME it's been possible to import video into DAWs, but the accuracy of sync between audio and video is sometimes dubious. AV sync is a tricky thing to quantify anyway, mostly due to the subjective nature of lip sync. You only need to watch Sky TV for a few minutes to see just how loose sync can be. The Syncheck II is a relatively low-cost measurement tool that allows very accurate measurement and calibration of audio and video. It even measures SPLs, which is useful for setting up multichannel monitoring systems.

With more and more facilities using plasma or LCD screens for laying back audio to video masters, there's an amazing range of possible delays, especially when AES signals are being routed over long distances, say to another part of the building. Also, working on laptop-based systems for video and audio editing is more popular than ever now, due to the success of programs such as Final Cut Studio. But some formats are renowned for sync drift, especially long digitised clips. The Syncheck II is the first product I've come across that allows accurate audio and video sync measurement, so that sync problems can be solved in a more scientific way, rather than just using the human eye.

Syncheck II is a basic-looking piece of equipment: a plastic case with LEDs and a couple of toggle switches. It's certainly not going to win any design awards, and looks more like a Maplin self-assembly kit than a professional measurement tool. But its basic appearance is reflected in its affordable price (US$325) not its functionality. There are various LEDs for measurement and signal verification, plus two toggle switches and a power switch. Audio and video measurement is handled by the built-in microphone (or line input for noisy environments) and a light sensor respectively. Audio-visual sync reference material is supplied on CD and DVD, which you need to import into your DAW before you use the device.

SPL measurement with Syncheck II is easy. You select SPL with the toggle switch, and look at the 16-LED column display. There is a range from 75dB to 90dB and extra 'getting close' LEDs for when you have set a reference level. Once you've done this, setting up a basic 5.1 system is really easy, as you can measure the pink noise SPL from one speaker and push a switch, and this will become the reference level. The pink noise can then be cycled around the other channels and you set the individual levels to match this, using just four Matching LEDs. Then, with your eye on the LED display, you can set the actual SPL level by adjusting a ganged master level control that controls the L, C, R, Ls, Rs, and LFE channels simultaneously. It's quick and easy.

But how does this box measure audio-visual sync? By making use of the supplied video and audio test material. First you need to import your choice of source file into your DAW. A wide range of formats is supplied: PAL, NTSC, DV, QuickTime, MXF, and so on, at standard frame rates such as 25, 29.97, 24, and 23.98. The content of all these formats, however, is the same: a series of one-frame flashes and audio pips. Once the file is imported you just play it back,

turn up the monitoring, point the light sensor at your display, and the Syncheck II will measure the delay between the audio pips and video flashes. It really is that simple. Then you just need to move the audio until the Syncheck II indicates that everything is in sync. This will be the fixed offset you need to apply, which will usually mean delaying audio to compensate for delays in the video. The reasons for this may be either in the host computer, the video codec or the display. Delays in the host computer may be fixable, but codec and display-related delays will require audio to be delayed. I used Syncheck to measure audio-visual sync on a number of systems, so I thought it might be useful to share the results of some common setups.

First up was a plasma display. I checked our 42-inch Panasonic display to see if the offset we use for the monitoring was correct. The first stage was to output the PAL DV file to Digibeta to minimise the signal paths for the measurements. Then the Digibeta was played out to the plasma, and the audio played out via AES to the monitors. It would appear that our semi-scientific sync measurements were almost spot on; the delay measured just 5ms more.

Next up was my personal favourite: HD-CAM decks. Anyone who has had the 'pleasure' of laying back to one of these will have spent many a happy hour chasing up the source of mysterious delays and suspected sync problems, especially in machines with older firmware. I can now confirm that there is definitely a four-frame difference when laying back using 9-pin control, compared to when chasing timecode. We already knew this, but it's nice to get confirmation!

Finally, I thought it might be interesting to check out the common combination of Pro Tools with a Mojo interface. This is the new way to combine video with Pro Tools, and compared to the awful AV option of the old days, it's much simpler to use. But is it accurate? I was using a PC-based Pro Tools system with the video fed directly to a CRT, as the Intel-based Mac Pro is not yet certified with the Mojo. The results with the MXF source file were very impressive; there was a delay of about a tenth of a frame in the video. But trying PAL QuickTime was a different story; at first it seemed as though it was two frames 'off', but then it seemed to drift. There are many possible explanations as to why this is happening, and I'm still trying to find a definitive answer; the latest theory is that QuickTime is poorly supported for PC (for obvious reasons...) The sooner Digidesign hurries up and certifies the Mac Pro, the better.

At just $325, the Syncheck II is a bargain, especially for UK customers at the current pound-dollar exchange rate. However, I suspect that some facilities will need to spend quite a bit more once they discover the truth about the accuracy of their sync — or the lack of it! ■

PROS Easy to use; inexpensive; SPL measurement a bonus.

CONS A bit odd-looking; there's no UK dealer, for example, so Syncheck II is only available direct.

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