

## broadcastfeature

# Recorders: close but still far away

Photo: Phil Coates



Kevin Augello (left) and Phil Coates use Sound Devices equipment for the recent Going North project for Dutch Channel Avro

Location and reporters' recorders have undergone dramatic technological changes over the past 15 years. **Kevin Hilton** looks at whether this has brought them closer together and where they might go in the future

ON THE FACE of it, radio reporters and location sound recordists have the same basic audio need – to record voices. After that specific requirements dictate different features and operational techniques, which led to the production of dedicated recorders. Digital

technology has played a major part in providing specialised devices in both markets. At first it reinforced the divide between film/TV drama work and reporting but in the past few years digits have closed the gap between the two, with lower cost models familiar in both camps.

Roland Systems Group is well known in the music and reporting markets. The R-4 four-channel recorder was a workhorse for many years but the new six-track (three stereo) R-26 looks set to further break down barriers.

Recordist and producer Jerry Ibbotson runs York-based audio

production company Media Mill with his wife Louise, a radio journalist. Ibbotson himself also started out as a radio reporter but has since moved more into recording sound effects for video games.

Recently he has been working on a speech-based project, recording interviews for a CD project using the R-26 and a RØDE NTG-3 shotgun mic. Among other recorders he has been using are the also newly introduced Olympus LS100 and

the Tascam HS-P82. Ibbotson says it is the better mic preamps on lower cost recorders that has been behind them “stepping up” and closing the gap on higher end units.

Ibbotson says higher end machines like the Sound Devices 7-Series deliver low noise but now lower cost recorders are coming close to that performance: “When nearly the same sound is coming out of a £350 machine, that’s been the step up. Both the Roland R-26 ▶

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Jerry Ibbotson recording the servos of a Tucano training aircraft at RAF Linton on a Marantz PMD671



## AT A GLANCE



◀ During IBC Cinedeck introduced the RX unit for mobile and OB work



▲ Sound Devices' 7 Series includes the 788T



◀ The Aeta 4MinX was shown during NAB, after two years in development

and the Olympus LS100 are really good machines.”

Film and TV production mixer John Rodda bought one of the first Zaxcom Deva II digital recorders in the UK over 10 years ago and still uses a Deva V, along with a Fusion 12. He also has a Zoom H2 and Olympus LS10 for recording atmospheres.

Sound Devices is the main offering of UK rental company Richmond Film Services, which stocks 788s and 744s, as well as the Nagra VI. Also in the

portfolio are Nagra's smaller machines – the LD, SD and ARES-M – and the Zoom H4, Tascam HSP82s, Roland R-26s and the JoeCo BlackBox multitrack USB2 recorder, which is used on a trolley in the same way DA88s were 10-15 years ago.

Company director Nigel Woodford adds that the Zoom tends to be used as a back-up but also as the main recorder for shoots using DSLR (digital single lens reflex) cameras like

the Canon 5D. The main drawback of machines like the Zoom, he adds, is their lack of robustness. “They don't tend to stand up to being knocked around,” he says.

Glenn Sanders, president of Zaxcom, says what digital did for the recorder market was “change the measure of quality”, moving on from analogue tape, as personified by Nagra, and then DAT. “The cheaper handheld digital recorders have moved up the definition of what is professional,” he comments,

“but what determines whether something is pro goes beyond the number of tracks. There are considerations like proper inputs and outputs, file types, battery life and if it can work with AE42 mics or just analogue consumer mics.”

Zaxcom's recorder range comprises the Deva, a multitrack device designed to be mounted on a trolley; the Fusion solid state mixer/recorder; and the Nomad, which was developed to be carried in a shoulder bag and features NeverClip, a dual A-D preamp system giving a dynamic range of 127dB.

There is now a wide range of devices that can record audio; not just the handheld units like those made by Zoom, Tascam and Olympus but also iPhones, iPads, iPods and other smartphones and tablets. Because of this, says Jon Tatooles, managing director of Sound Devices, people can find a product that suits their recording needs and budget. But, he stresses, this has further opened

up the need for specific recorders: “You can have a recorder with full bandwidth and low noise but everything depends on the specific application.”

While Tatooles is in no doubt there is still a need for standalone recorders like the 7 Series, with “sound people doing what they do”, Sound Devices is now also addressing the combined audio-video recorder market with its PIX range. This was established with the PIX 220 and 240; during NAB it was extended with the launch of the PIX 260, a rack-mounted, file-based 32-track recorder-player with 16 channels of SDI embedded sound and eight channels of HDMI audio.

Much of this ground was laid by another American company, Cinedeck, which established the approach with the EX on-camera touchscreen display recording unit. During IBC Cinedeck introduced the RX unit for mobile and OB work and at NAB launched the 4RU rack-mountable MX. ▶

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The single acquisition unit for sound and picture is an extension of the practice, common in television and documentary making, of recording audio directly on to the stereo tracks of the camera. With the new generation of digital media cameras film production is now moving towards laying the location sound mix straight to the camera but still recording individual tracks on a standalone recorder, making them available for later post production if necessary.

While this approach is seen as sensible, there is still resistance to the combined video-audio method. "I don't care who it is doing double systems," comments Glenn Sanders at Zaxcom, "my opinion is it is absolute nonsense. Why would anyone spend a lot of money inventing something that didn't need inventing?"

Tatooles of Sound Devices counters that the PIX was conceived from the audio perspective as much as the visual, with good sound quality and



John Rodda on the set of *The Scapegoat*

professional, flexible inputs. "We're also not talking about combining the two very distinct jobs," he adds. "We don't want the camera operator having to think about setting high pass filters or the sound mixer going into the camera to set levels. And there can't be one person doing both photography and sound."

Audio and picture on film and TV shoots have long been connected by timecode synchronisation, which was pioneered in this field by Nagra.

The Swiss company has sustained in the location recording market, making the transition from analogue 1/4-inch tape to digital through a succession of models, culminating in today's Nagra VI. It has also produced handheld digital devices, including the SD and the now discontinued ARES.

Another change for the company came in January when Nagra Audio was moved from the parent Kudelski Group into a new company called Audio Technology Switzerland. This is

still controlled by the Kudelski family but the intention is to give it "a more focused framework" for audio development.

During February Sennheiser announced it had taken on exclusive UK distribution for the Nagra range. Alan March, business development specialist with Sennheiser UK, observes that the Nagra IV continues to be the "flagship" for location work, with ENG catered for by the smaller recorders. He adds that the ARES will be replaced at some point but what the machine will be and whether or not it will be in the Zoom/Tascam price bracket is still under wraps.

Sonosax is another Swiss company active in the market. This year it has introduced firmware version 4.2 for the SX-ST integrated recorder and is set to move into two new buildings south of Lausanne near the banks of Lake Geneva.

Over the border in France, Aaton has built up a domestic clientele for its Cantar machine, which is often used in conjunction

with the company's film and digital file cinematography cameras. At IBC 2011, Aaton announced that it will be replacing the DVD RAM drive on the Cantar that has been used for backing up files with a CompactFlash reader and writer.

The Cantar does not have a high profile outside of its home market but a new French location mixer will probably have to look more internationally. The Aeta 4MinX was shown during NAB after two years in development. With four mic/line inputs, two stereo line inputs, two stereo line outputs and two auxiliary outputs, two AES3/AES42 inputs, three AES3 outputs and a DSP-based mixer with flexible routing, the unit is aimed at music recording and radio reporting as well as location sync sound for TV production.

In the UK the 4MinX is distributed by Aspen Media, which also handles Aeta's Scoopy+ recorder-editor-codec. Aspen MD, Chris Collings, says a large batch of these units has

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## THE FORMAT OF CHOICE

Location recorders cannot work in isolation and these days wireless microphones are to be found on set as much as cabled boom mics. Hire companies are seeing demand for all three format types, analogue, digital and hybrid.

A hybrid system that is making inroads in the European film and TV production market is Lectrosonics. Jim Bakker, who handles sales for the brand in EMEA, says that by using a compander technique and having an analogue component in the transmission chain guarantees quality.

Sound recordist John Rodda is a user of Audio Limited systems but recognises that

Lectrosonics is now "doing well" in the market. He comments that bandwidth continues to be a problem for digital wireless systems, which work by removing a proportion of audio data. "Analogue radio mics sound more natural," he observes.

UK hire company Visual Impact South supplies TV productions and offers Sennheiser and Wisycom wireless mics. The company's audio hire manager, Ian Coles, explains he selected this combination because the Wisycom, a hybrid, is able to integrate with Sennheiser transmitters.

been sold to the BBC for use around news and the regions but he admits it has been a "slow burner" because it is a new market for the distributor.

Radio has been through as many technological trends as location work with recorders. From portable 1/4-inch machines, notably the Uher, reporters have used analogue compact cassette and then MiniDisc, which in turn have been replaced by solid state and CompactFlash recorders of various types, shapes and sizes.

In TV electronic newsgathering (ENG) and radio documentary

recording, editing and live contribution. These include CoveritLive, iJournalist Pro and Tieline's Report-IT Live. The latter comes in versions for iPhone and Android, and as well as a codec for live contributions the app offers recording capability and the ability to FTP 20kHz quality files back to the studio.

The system that is finding particular favour in radio is LUCI LIVE from Dutch software developer Technica Del Arte. Designed to turn computers, smartphones (iPhone, Android) or tablets (iPad, iPod, Android) into a mini radio broadcast studio, LUCI LIVE stores



**"[The combined audio-video system] is nonsense. Why spend money inventing something that didn't need inventing?"**

Glenn Sanders, Zaxcom

production there is still demand for the modern digital equivalent of the Uher. Australian composer and recordist Daniel Blinkhorn works on a range of projects, including documentaries and docu-dramas for radio. His main kit centres round a Sound Devices 702T recorder, with a 302 mixer, and microphones including DPA 2006As, Earthworks QTC40s, Rode NT4 and Sennheiser MKH 8060 and MKH30. "It's a very basic set-up," he concedes, "and I'm a firm believer in a somewhat Spartan approach to systems given portability and durability is very important for the type of work I do."

## TRADITIONAL MARKETS

There is still demand for machines that look like traditional recorders, such as the Marantz PMD620, AEQ PAW-120 and the Zoom range, or microphones, including the HHB FlashMic and the Yellowtec iXm SD card recorder. The Flashmic, designed in association with Sennheiser, was the pioneering all-in-one microphone-recorder unit and has been used at Radio France, NDR in Germany, Norway's NRK, TV2 in Denmark and by the BBC. It has now been discontinued and HHB reports there is no stock left.

Increasingly journalists today are using smartphones running specialised apps for

audio clips and allows a reporter to link pre-recorded material for live play-out to air using an in-built mobile IP codec.

BBC Radio 5 Live journalist Nick Garnett used LUCI LIVE to great effect during last summer's riots in the UK. While reporting on disturbances in Salford, he was able to carry on broadcasting after his radio car was burned out. "I probably use it for about 90% of what I do these days," he adds.

LUCI LIVE has recording capability but there are other apps being used for this by broadcasters, including VeriCorder's Voddio. Garnett says this gives three tracks of audio with no latency at broadcast quality, although his old friend and colleague, Jerry Ibbotson, points out there is a difference between something being broadcast quality and something being broadcastable.

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