

Poor-quality audio is often reason enough for viewers to change channel, yet cheap-sounding soundtracks are commonly caused by basic production errors that could have been avoided.

Tight budgets and a lack of training are often to blame for the mistakes, which can cause longer post times, increase costs and compromise creativity, when in most cases they would not have occurred if just a little more attention had been paid.

With the fidelity of TV sets sharpening and the demand for 5.1 surround sound increasing, producers can't afford to ignore the impact of bad audio on a viewer's experience.

Poor mic placement

A documentary about the nomadic tribes of Africa, shot on location in Kenya, proved a challenge for the audio skills of Out Post Sound.

In one instance, a microphone was placed on the ground while an important interview took place, but the dialogue proved virtually unusable in its original form since the mic had picked up the sounds of footfall as people moved around the space. Another scene, which took place in the bush, was marred by the continuous sound of insects – at times drowning out the dialogue.

What appear to be innocuous incidents on location can lead to serious consequences in post if the audio is not granted due attention.

"These weren't interviews that could be re-recorded so we had to pull a few tricks out of the bag to minimise the impact of the bad recording," says Out Post managing director Rob Speight. "We used a lot of dynamic noise reduction, compression, gating and EQ."

These are various software tools that analyse and compare the audio tracks, and highlight, isolate, remove or enhance discrete audio elements.

"It's always a compromise at this stage," says Speight. "It's not always possible to isolate a problem if that problem is in the same frequency range as your dialogue. We can use some form of dynamic noise reduction but you have to be careful as the process can introduce digital artefacts if used too aggressively."

According to Speight, sometimes the producer has to make a choice in these situations: either to use dialogue with occasional artefacts or have background noise running through the whole scene. Speight asserts that while neither option is ideal,

Sound with vision

Fixing poor-quality audio in post can be a difficult and costly business. So what can be done to reduce the problem before it gets to that stage? Adrian Pennington asks the experts



Sound guys: Hackenbacker's Oliver Bierly and Alexander Fielding

background music can sometimes be used to mask a problem.

Speight says he managed to clean up the majority of problems on the Kenya shoot, leaving the client happy. "You can't beat good-quality original audio. A 'fix it in post' mentality is not the right approach," he says.

According to James Feltham, re-recording mixer at Hackenbacker, budgetary constraints can mean that drama producers are not always able to give sound recordists what they ask for.

For example, Feltham says that a recordist may ask for two boom ops or an extra assistant. Not only can two booms deliver much better sound quality, but without this extra coverage, a production is more reliant on radio mics, over which a recordist has less control. However, these are luxuries that are being squeezed out of some production budgets.

Another symptom of budget tightening is a failure to involve an audio house early on so potential issues can be nipped in the bud.

Producers tend to negotiate with several facilities to secure the best deal, but this often means that a post

house does not know if it has the job until half way through filming.

"Getting an audio specialist involved in pre-production allows us a chance to visit the set, sit in on initial sound meetings and work out the best way to film locations," says Feltham. "We're not here to interfere or give negative feedback but to give simple suggestions that can make a big difference."

Reduced budgets have also forced drama producers to seek inferior locations such as warehouses or industrial space, rather than dedicated sound stages. Feltham warns that the tactical position of mics can be more difficult in such locations and there can be traffic interference.

"Creatively it is more limiting. For example, you may want to fool the audience into making a location sound claustrophobic but, if shot in an echoey warehouse, it will just sound echoey, so you either have to use ADR [Automatic Dialogue Replacement] or just live with it.

"Not only does ADR increase time and cost, but you are of necessity replacing the original live performance, which is rarely ideal."

The most common problem with the audio on studio-based light entertainment shows is 'clipping', caused when the signal is set at too high a volume for the machine to record properly. This creates extreme distortion, which is notoriously hard to get rid of in post.

"If the audio track is of speech, then you could ADR. But more often than not you need to re-record the scene, which clearly has cost implications and will never be as good as the original recording," says Ross Millership, dubbing mixer at Envy.

Another bugbear is general location noise, such as the sound of air-conditioning units. "We handled a relatively large show recently that unfortunately had studio background noise that was really loud. It took quite an effort to clean it up," he says.

Such shortcomings are usually the result of location choice – the studio may not be of the highest calibre – or because the budget hasn't run to booking a sound recordist for every day of the shoot.

"Perhaps the recordist has come in for the first two days but is considered a luxury for the rest of the week,"

Millership suggests. "I believe location sound people are often pressured into making checks and set-ups in far less time than they need to do a solid job."

Layering noise and digital restoration are the key tools used to fix this in post. "You are adding layers of clean noise to mask the dirty tracks but you have to use your judgement because every piece of processing you put the original track through is destructively changing it," he says.

Improving quality

According to Tony Greenwood, head of sound at Sumners, most problems with the audio in self-shot programming stem from the quality of the recording equipment.

Sumners was brought in to post-produce a documentary series about setting up new businesses around the world, shot by multiple self-shooter crews. In a pre-production sound meeting, he persuaded the producers to upgrade their audio gear.

"They had cheap microphones, no mixers and no accessories," he says. "Simply having a professional, high-quality mic immediately makes a massive difference – you start to lose

SOUND RECORDING TOP TIPS



- Professional mics are terminated in XLR connectors, which contain three cables to make a balanced connection. If one of these is disconnected, or the cable is broken, it can cause all sorts of problems. By listening to the audio as it's recorded, this will be picked up.
- Get professional equipment. Cheap kit will sound cheap.
- Ideally, assign a sound recordist to monitor sound and record to a separate recording device rather than to camera. This gives more recording flexibility – including the option of using multiple mics.
- Learn from the past. Those who have had a bad experience with audio should be less likely to make the same mistake twice.
- A consistent, if unwanted, tone is easier to isolate and remove than an inconsistent, arrhythmical one.

'Simply having a professional, high-quality mic makes a massive difference'

Tony Greenwood, Sumners

that cheap, scratchy sound. Likewise, there's no point shooting outside without a decent mic protector like a Rycote Windshield. Neither of these cost the earth but they immediately minimise cheap-sounding audio."

Another issue, related to lack of training and budget, is that a mic might be placed too far away from the subject or the boom is wielded by a researcher with limited recording experience.

"You can easily get very wide 'roomy' sound, or you can't hear what's being said and no one is watching the audio levels on the camera," says Greenwood. "People may be visually aware and can see what's wrong with a picture, but it takes more training to listen to audio and realise something isn't right."

There are software tools that can fix such errors in post. Greenwood favours Izotope, which helps reduce distortion, but says no amount of processing will entirely remove "clicks, cracks, pops, wind and other artefacts" from tracks that haven't been properly monitored, and post can become more of a "damage-limitation exercise".