



Exhibitor Opinion: Bad noise and how to avoid it



Chris Exelby: "Loudness is a complex issue that affects viewer experience"

As the debate about loudness control escalates Chris Exelby, general manager TSL Products, says technology will prevail

Equipped with the latest developments in consumer surround sound viewers are increasingly aware of the quality of the delivered broadcast feed and ever more intolerant of poorly produced content. A recent issue has been perceived variations in loudness that cause many users to reach for the remote control. Each time the remote is grabbed to alter the volume, the viewer experience is affected. Loudness is a complex issue, based as it is on human perception of sound levels and the volume of speech content relative to accompanying effects and music.

As the debate about loudness control escalates, the traditional use of peak programme level measurement as the sole form of reference (apart from a pair of expert ears) is being questioned. A number of different loudness measurement 'standards' are being debated, with ITU BS.1770 currently leading the pack.

TSL, a well-established provider of audio monitoring products, recognises the need to address loudness measurement in an intuitive and user-friendly manner. As a systems integrator, the company has been able to work closely with customers to produce bespoke solutions.

Early incarnations of TSL audio monitoring units (AMUs) were all custom-built to fulfil specific requirements, and the subsequent range of standard products was based on an amalgamation of the common features from these custom products. In addition to these now well-established standard products, TSL continues to support requests for bespoke variations.

As video technology has moved on, so audio has cautiously followed. From digital audio in the form of AES has grown embedded audio; however, many early design forays into embedding and de-embedding interfaces within the video stream were troublesome and the challenge to carry audio within a video signal proved problematic.

However, as manufacturers began to market successful products which gradually gained acceptance amongst broadcasters, TSL launched their first AMUs capable of taking a video signal and displaying the level of decoded audio contained within.

As technology has evolved, TSL has pioneered effective solutions. As a Dolby E partner producing the flagship AMU2-8HD Dolby (and now the only range of AMU products capable of de-embedding audio from a 1080P 50/60 3GHz HD video signal) TSL leads the way. In anticipation of the industry's next step, TSL is once again producing advanced solutions which embrace the challenge of multichannel discrete and Dolby E encoded audio within an HD environment.

TSL's next generation of audio monitoring equipment aims to simplify monitoring of peak and loudness levels. User-friendly loudness measurement will help content producers guarantee that their work is not rejected by customers. QC, ingest and MCR engineers will be able to ensure that the station output does not contravene local regulations and potentially lead to financial penalties.