10 things you need to know about...

Loudness

1 Loudness is the sound level people 'hear'

Loudness refers to the perceived strength of a piece of audio (music, speech, sound effects ...). The loudness depends on the level, frequency, content and the duration of the audio, amongst other things.

2 Viewers and listeners complain about loudness jumps

Viewers watching television programmes often get annoyed when the audio loudness jumps at every commercial break or when they change channels. Television advertisements are unfortunately infamous for their high compression and loud presentation.

3 Current peak audio meters do not reflect loudness

Audio metering in broadcasting today is based typically on peak programme meters (PPMs). Improving audio metering by replacing the PPM with the loudness meter is a step closer to the best measurement tool: the human ear.

4 Dynamic range has decreased dramatically because of the "loudness war"

Peak metering has encouraged powerful dynamic range processing to make one broadcast element louder than the competition. The competition responds by becoming louder and dynamic range is reduced as everything comes to sit just below the point of distortion. This processing leads to listener fatigue in the audience and reduces audio quality overall. By introducing loudness normalisation, we believe we can counteract this problem.

5 Audio dynamics is a creative tool – honestly!

Dynamic range compression should only be used for artistic reasons (e.g. conquering too much level variation in a voice or giving 'punch' to a musical instrument). Using compression just to 'be the loudest' takes the life out of the programme. By moving to loudness metering and normalisation, audio production can look forward to using dynamics as a creative tool once again.

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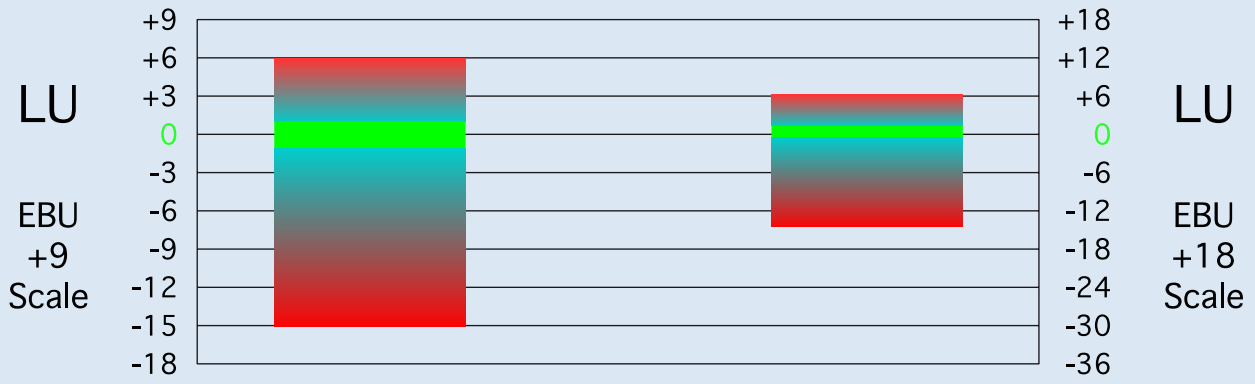

6 Peace can be brought to the loudness war by changing the reference

Loudness wars between broadcasters or programmes should be abolished. The audience doesn't like them. Competition should be on content and sound quality.

7 Loudness normalisation provides the solution

Everyone recognises the problem and accepts that the current situation must change. The solution is to change the metering paradigm and mix to a common loudness level.

8 EBU PLOUD lends a hand

The EBU PLOUD Group (with over 240 participants including creative and technical experts) has published its Recommendation - R128 – on target loudness, and a specification for loudness meters. It also has created practical guidelines for use by everyone involved with broadcast audio. R128 is based entirely on open standards and aims to harmonise the way we produce and measure audio internationally.

9 Improving an existing standard: ITU-R BS.1770-1

The ITU-R BS.1770-1 recommendation provides the basis for the EBU's Recommendation R128. The EBU's development was needed to accommodate the needs of programme makers, with particular regard to the complete mix (rather than just the dialogue) and the loudness range of the programme. The meter manufacturers in the PLOUD Group have agreed to implement an 'EBU mode' of the ITU recommendation to make sure their meters' readings will be aligned.

10 A transparent path from Production To Delivery

R128 establishes a predictable and well-defined loudness level for news, sports, advertisements, drama, music, promotions, film etc. throughout the broadcast chain and thereby helps professionals to create robust specifications for ingest, production, play-out and distribution to a multitude of platforms.

The PLOUD Group is part of the EBU Expert Community on Audio (ECA).
For more information, visit: http://tech.ebu.ch/loudness

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European Broadcasting Union
L'Ancienne-Route 17A, CH-1218 Grand-Saconnex, Geneva, Switzerland
tech@ebu.ch, Tel.: +41 22 717 21 11, Fax: +41 22 747 40 00
tech.ebu.ch