

Compliance with loudness specification is now a mandated reality in many regions of the world. Although use of hardware processors at the output of a playout centre seems an easy solution, this has been proven time and time again to be only a short term fix, leading to client dissatisfaction with the level of processing that is applied to the audio. The quality of your output will be improved by moving the compliance processing upstream

Historically, loudness compliance has been handled by a hardware-based processor on the output of master control. This approach inherently modifies the creative mix and is now proving to be unacceptable, especially as the file-based content may have already been corrected without altering the creative mix. An important consideration for system design is to ensure that the hardware-based processor is limited in use to handle live content only; previously corrected file-based content needs to be delivered or transmitted without further correction

Whilst mainstream operations will be based around PCM and Dolby E, it is important to look for an application that will support a variety of audio codecs or has the ability to scale to support them.

Reports should be detailed yet concise, easy to understand PDF and XML reports that can be conveniently emailed to clients of chief engineers to explain what is happening.

When the application is processing multiple files that have been posted from any number of sources (see control systems) it is essential to be able to monitor the status of all files that are being processed and have been processed. As a software application processes many Files faster than real-time, a detailed and accurate report with graphical information is a must-have, as it will allow verification and accountability.

The application should be controllable to allow a single-user, multiple-user, watch folder and API based operation. It should have good integration to currently available MAM systems, and work with other tools such as Telestream Vantage, Aspera Orchestrator, Tedial, SDVI Rally, Embrace Pulse-IT.

HARDWARE OR SOFTWARE

TONES, SILENCE, SEGMENTS

It is important that the solution you choose recognises and deals with the presence of tone, silence, where the media starts and the duration of the media that needs to be measured.

AUDIO CODECS

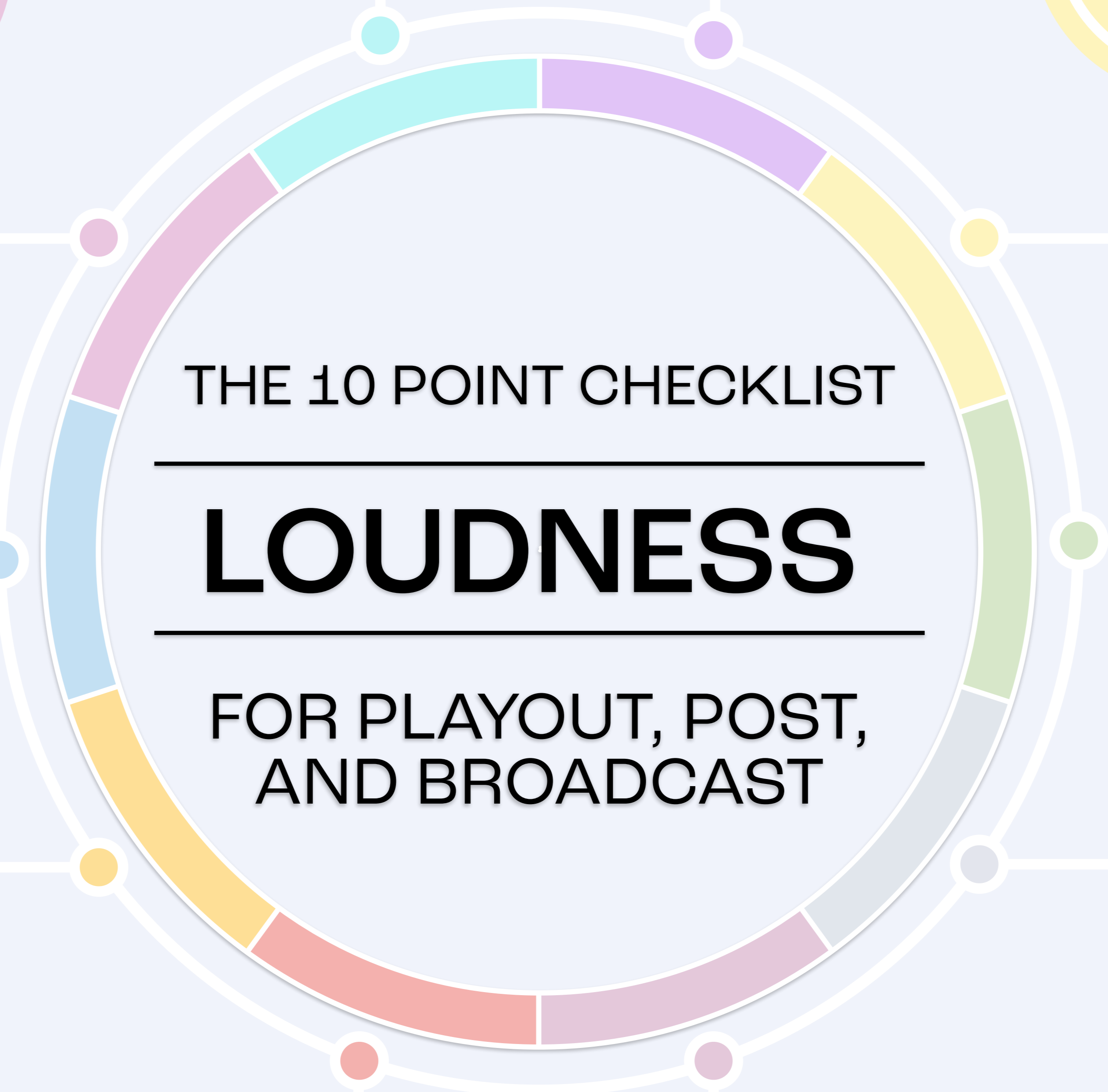
FILE TYPE

Look for a solution that accepts professional media files such as MXF, QT/MOV, LXF, GXF, WAV, AIFF and more. You will need support for SD, HD, 4K and UHD.

REPORTS

CHANNELS

Be sure that the loudness solution you're looking at Handles anywhere from 2 to 64 channels. While Many applications are for 4, 8 or 16 channels, you may need more. And look for the ability to create measurements and corrections for multiple channel layouts; for example 4 stereo, stereo and 5.1. 5.1 and stereo, etc.



STATUS MONITORING

ALGORITHMS

A key element of loudness compliance is to have an algorithm that maintains the creative mix. The ability to correct program loudness and true-peak should minimally affect the creative mix, as should the ability to correct short, momentary, or peak meter based correction Note: Software-based algorithms are better able to do this. Hardware-based algorithms and some software-based algorithms that attempt to measure and correct the loudness In a single pass will inherently change the creative mix.

CONTROL

SCALABILITY

Your Loudness solution ideally should be scalable, enable automated operation, and have the ability to correct multiple files at a time.