

# Nugen Audio VISLM-H & VISLM-C

Loudness metering to current standards in a plug-in entices **ROB JAMES**.



The debate about loudness metering in broadcast has been going on for at least 30 years and finally resulted in an EBU Recommendation (R128) based on ITU-R BS.1770, which is now being accepted widely by European broadcasters. In the US the ATSC has adopted A/85 loudness measurement also based on ITU-R BS.1770. As you might guess, loudness metering is a lot more complex than quasi peak and uses a 'K-weighting' curve. ('Quasi', because of the rise-time specs of common so-called 'peak' meters.) The EBU added complications by introducing three further measurements — Programme Loudness, True-Peak Level and Loudness Range — and there are several other region-specific loudness standards just to complicate matters still further. The EBU also introduced a Target Level, -23LUFS (-8 rel gate — Loudness Units Full Scale with a -8dB gate to take account of silences, etc.) and that is a figure we will hear a lot about in the future. A +/-1LU tolerance is allowed.

Changing the emphasis from peak monitoring to loudness in delivery requirements and live broadcast adds a number of potentially onerous tasks and costs to the sound department's already busy schedules. Just for starters, we will require new metering and logging equipment. A good number of such devices are appearing and most are not exactly low in price. So, a plug-in that addresses loudness monitoring issues at reasonable cost is most welcome.

In fact, Nugen has introduced two versions of its plug-in, the UK£281 (+VAT) VisLM-H (history) and the £187 (+VAT) VisLM-C (compact). Both offer the same measurements but the VisLM-H adds a Loudness History graph and data logging.

Both versions come in 2.0 and 5.1 formats. Some plug-in hosts may not accept a 5.1 plug-in in a stereo channel, hence the 2.0 iterations.

There are versions for VST, AU, AudioSuite and RTAS. Installation is straightforward and the license key is locked to the machine. Nugen allows you to have two copies, e.g. one on a desktop and one on a laptop, and, if you want to move the plug-in to a new machine, you can uninstall.

Automation and other host application specific controls are part of the plug-in wrapper. The VisLM interface is divided into two main areas, the Main display and Loudness History. The Main display has three pages accessed via Loudness, True-Peak and Options buttons at the bottom.

When the Main display is in Loudness mode there is a LUFS bargraph on the left that displays the momentary (M) value with an M max value at the top. To the immediate right there is a Peak indicator. The LED lights and the text goes red when a peak is detected. The label remains red until cancelled by a click or a reset. Below this a label indicates the current Mode (EBU, ITU-R BS1770, Custom, etc.) Three boxes display the Short term (S) and Integrated (I) loudness values and the Loudness Range (LRA) value.

Momentary and Short-term are intended for immediate levelling and mixing while Integrated Loudness is for analysing entire programmes or sections.

The X button resets the integrated loudness and LRA measurements. Play starts or continues integrated loudness and LRA measurement while the pause button pauses integration measurement. The Int button toggles the loudness integration functions on/off. The Gate LED lights when the gate is active — i.e. the loudness level has fallen below the defined threshold. Gate is only available in EBU mode. Switching to True-Peak displays six bargraphs on the right (in a 5.1 iteration) and the highest peak values are held until the meter is clicked to cancel. The channel order is defined by the current 5.1 routing mode. Channel routing order is important because the individual channel types' contributions to loudness are weighted differently. Routing is changed by clicking on the label in the 5.1 Routing box to the left of the bargraphs. The mouse cursor changes to an up/down arrow and moving up or down runs through a choice of DTS — L R Ls Rs C LFE, ITU — L R C LFE Ls Rs, and Film — L C R Ls Rs LFE. A Peak indicator LED works in the same way as the Loudness Peak LED with a numeric indication of momentary loudness maximum.

The options page enables different presets to be selected and allows you to set individual parameters to suit the circumstances. Here, various appearance aspects can also be set including Splits, which are used to set areas of different colour in the History graph, and Alerts when a short-term value falls outside defined levels for a specific period of time.

If you have the VisLM-H version the Loudness History panel is to the left of the Main display. This presents a graphical view of short-term loudness over time. It is always active, regardless of the Main display controls.

Underneath the graph six buttons indicate parameters and access options. On the left, the first is zoom level and this is set by clicking on it and dragging up or down with values available from 10s to 24h. Clicking Mark adds a vertical mark at significant points and Clear removes all markers. System, when lit, changes the time-scale from DAW transport elapsed to computer System time, in which case the graph scrolls continuously. A Variance envelope on the graph indicates the loudness variation over time and is a sub-value of LRA. Export opens the data export pane, which is exported in a CSV format.

It's a shame that the True-Peak and Loudness displays are mutually exclusive. If the screen real-estate is available I find it useful to have both displayed at the same time. Since you get both

versions if you buy VisLM-H the workaround is to use one instance of each with the C version switched to True-Peak.

VisLM does everything required for effective loudness measurement and does it well. Loudness metering makes the world of broadcast sound more complex, but it's in a good cause. For DAW users VisLM is a cost-effective way of addressing the measurement issues. Congratulations are due to Nugen for its thorough approach. ■

## PROS

Cost effective; thoroughly researched; relatively simple with enough tweaks for experts.

## CONS

Would be nice to have True-Peak and loudness together; otherwise, not a lot.

## Contact

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