RENDERER
Built-in for Dolby Atmos and negates need for external renderer

LOUDNESS MODULE
The Netflix module makes use of dialogue-gated loudness measurement

EXCLUSIVE!
Modules such as the Leg(m) meter are exclusive to Nuendo

SUPERVISION
Allows up to nine visualisation modules in a single instance

BEDS
Channels assigned to beds are marked for ease of identification

OBJECTS
Assigning project tracks to Atmos objects is a quick and easy task

INTELLIGIBILITY
This meter uses AI to recognise and evaluate speech

DELAY
The new MultiTap Delay plugin supports up to 7.1 surround

ADM
The ADM Authoring for Dolby Atmos panel assists with configuration

EXPORT
Nuendo can export a finished ADM file with just a few clicks

INSERT POINTS
Three insert points allow you to further process the delay sound

COMPUTER **MUSIC** PERFORMANCE *Award*

Steinberg
Nuendo 11 £859 PC MAC

The latest iteration of Steinberg's premium DAW promises a more potent toolset than ever before, but can it tempt the Pros away from Tools?

> When Nuendo was first released back in 2000, Steinberg worked hard to differentiate their new platform from their long-established Cubase, and they did this by positioning their new DAW to take on Pro Tools' then-dominance of the post production market. Over the years since, Nuendo's toolset has expanded to cater for those working with games development, VR content creation, and advanced sound design, and has constantly honed its capabilities in the TV and film post-production sphere. By including all of Cubase Pro's features, it's not half bad at audio recording and music making too!

All of the new features found in Cubase Pro 11 are also to be found in this latest Nuendo release. Check out our review in **cm**291 for the complete low-down, but in brief we're talking: improvements to the Key and Score editors; a new multi-channel sidechain engine; improved ARA2 support; important new plugins, and updates to some existing ones; graphical

tweaks; the inclusion of SpectraLayers One, a cut-down version of Steinberg's spectral editing system; improved Sampler tracks; export queuing; and much more. As you would expect, Nuendo 11 also boasts a bunch of updates that are all its own.

Atmospheric
Nuendo 11's biggest headline-grabber is that it now has a built-in Dolby Atmos renderer. For those who don't know, Dolby Atmos is a multi-channel surround sound technology that includes height channels alongside the regular front-back/left-right channels. It also solves the problems associated with trying to produce a surround sound mix that will remain convincing (or as convincing as possible) irrespective of the surround configuration and speaker layout used for playback.

Nuendo has been able to work with external Dolby Atmos renderers – hardware and software

– for a while, and still can, but the new built-in renderer brings the entire Dolby Atmos production pipeline under one roof, along with attendant workflow improvements. For example, tracks in your project can be added to the Atmos configuration with just a click or two, and will bring with them any panning automation that you have set up on the source track. Also, creating a finished multichannel ADM wav file involves just a click-or-two.

If there's any downside it's that the internal Dolby Atmos renderer doesn't support all main mix output configurations (2.0, 5.1, 5.1.4, 7.1 and 7.1.4 are supported). This is fine when setting up for a new project, but can be tricky if you wish to convert an existing project created using an unsupported configuration.

What did you say?
The new Supervision plugin provides you with a comprehensive metering solution that can show

> "Nuendo 11 contains almost everything you need, right there in one package"

The ADM Authoring for Dolby Atmos panel

you up to nine visualisations within a single, resizable, plugin instance. The different visualisations are provided for you as modules, and cover level and loudness metering, spectral readouts, phase meters, surround meters and waveform displays. Three of the modules are exclusive to Nuendo 11, the first of which being a simple Leq(m) readout, which displays a cumulative average volume level for the buss that it will be measuring.

Next up is the Intelligibility Meter. This uses AI-based speech recognition technology, developed by Fraunhofer IDMT, to calculate, in real time, the effort a listener needs to expend in order to understand the dialogue within a mix. The result is displayed as a moving marker on a bar graph divided into 13 segments. A score of 1-3 is considered unintelligible, 4-7 is "problematic", and 8 or over is intelligible. The system currently recognises English and German speech, and can adapt its analysis to cater for the hearing impaired, as well as for situations where a voiceover overlays another dialogue track.

Changes in the production landscape are reflected in the dedicated Loudness (Netflix) module. As the name might suggest, this variation on a standard loudness meter has its reference levels pre-configured in order to match Netflix's published specifications. Also in keeping with those specifications, if more than 15% of the audio range contains dialogue, the module switches from a program-gated to a dialogue-gated loudness measurement – in other words, loudness is only measured during passages of dialogue.

More that's new for Nuendo
Nuendo 11 gets the same new plugins as its stablemate – Imager, Squasher and Frequency 2 – as well as the new MultiTap Delay that supports up-to 7.1 surround sound. The processor's up to eight signal taps can be freely positioned within the surround sound field. The

Intelligibility meter is a handy tool that gives your lyrical passages a "come again?" score

What's so special about Dolby Atmos?

In a normal surround sound mix, sound sources are positioned by using a surround panner to feed differing amounts of the source signal to each speaker in the monitoring system. When satisfied with the balance, the engineer will export the results to a set of discrete audio files, one for each channel of the targeted surround configuration. This effectively "burns in" the relative balance between each surround channel, and so, to accurately reproduce the intended surround sound field, a playback system should match exactly the speaker configuration and placement used during mixing. Even the mix studio's room dimensions and properties would be duplicated for 100% accuracy.

In a Dolby Atmos system, however, sound sources are routed to any of up to 128 channels, or "objects". These objects can be positioned and animated in three dimensions, with that positional information stored as metadata alongside the audio data. On playback, the Dolby Atmos decoder uses that positional data to calculate how to distribute each object's signal among the playback system's speakers, no matter how many speakers are being used. Configured correctly, it can also mitigate for differences in speaker positions and room dimensions.

plugin also has some additional built-in processors for colouring and morphing the sound, and these can be inserted into the feedback bus, the delay taps bus, and the main output bus.

Nuendo's royalty-free content library has received a 7GB boost in the form of the Game Sound-FX and Pro Sound Effects libraries. And if these don't satisfy your need for SFX, Nuendo now integrates closely with the Soundly app, making it easy to browse their vast online library, and import content directly into Nuendo's timeline. There are also 150 new effect plugin presets for use in post-production projects. These brilliantly-designed presets combine Nuendo's built-in plugins to create realistic emulations of loudspeakers, room and environment ambiences; there's also a set of presets for simulating robotic voices.

If your only interest is music making then perhaps Nuendo's feature set will be overkill. But if you have any interest in, or involvement with, audio post-production, video game or VR production, or sound effect creation, then Nuendo 11 contains almost everything you need, right there in one package. And, unlike its main competitor, you don't have to pay a monthly subscription in order to use it! cm

Alternatively
Steinberg Cubase Pro 11
cm291 » 10/10 » £499
With many of the tools found in Nuendo, Cubase may be all the DAW you need

Avid Pro Tools | Ultimate
cm195 » 9/10 » £669/year
Track counts and surround options to rival Nuendo's

Verdict
For All-in-one Dolby Atmos workflow
Includes all Cubase Pro 11 updates
Comprehensive metering and visualisations with Supervision
Access Soundly library directly from Nuendo

Against Expensive
Tricky converting existing Atmos projects for internal renderer

For film, TV, games or VR, Nuendo 11 delivers all you need

9/10