4.2.11 Altitude^{32} and Altitude^{16}
# Release Note

TRINNOV | HIGH•END

Introduction

Trinnov Audio, designer and manufacturer of reference audio processors for home theaters, high-end hi-fi, professional audio and commercial cinemas, is pleased to announce the release of a major software upgrade for the Altitude[32] and Altitude[16] processors.

Software version 4.2.11 adds multiple features and performance upgrades to our world-class audio-video preamplifiers. Because of Trinnov's unique software platform, owners of both Altitude models can upgrade their units through a simple software download. Regardless of the age of the Altitude, this update is available to all owners at no cost.

Certain features are available only for the Altitude[32], and others are available only for the Altitude[16].

ALTITUDE 32|16
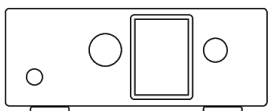
Software Update 4.2.11

- Enhanced HDMI Functions & EDID/HDR Status
- Optimizer and Active Crossovers down to 10 Hz
- AES Digital Outputs Used in Parallel
- Upmixer on DCI Inputs — Altitude[32]
- Programmable Triggers - Altitude[16]

New Features

## Save/Load Target Curve (Altitude[32] + Altitude[16])

Every system is different and the subsequent Target Curve that enables calibrators to achieve optimal results, therefore, cannot always be the same. This is why the default Target Curve in the Optimizer is set to flat, as an arbitrary starting point rather than a recommendation.

However, a different starting point can save some time since a Target Curve will almost always consist of the following:

- A certain amount of boost in the low frequency
- Some roll-off in the high-frequency
- Possibly a slight dip in the high-mids
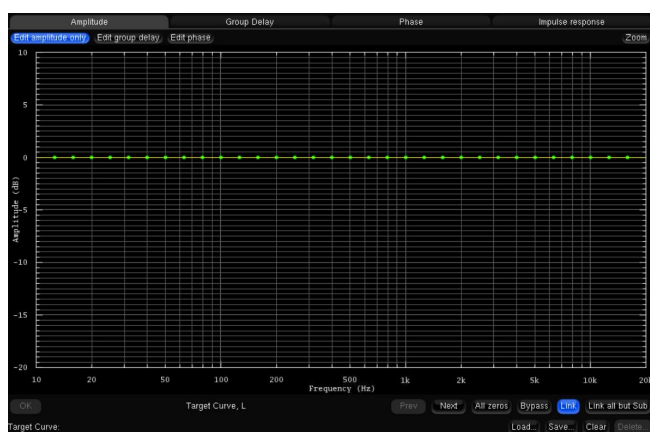
With software update 4.2.11, Altitude[32] and Altitude[16] users are now able to save their Target Curves and load them onto different presets.
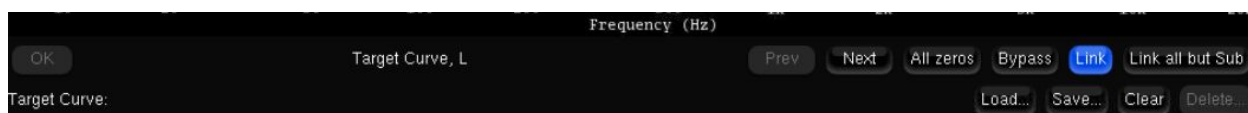
Previously, Target Curves had to be edited manually and applying the same Target Curve across multiple speakers required you to link all speaker channels for the edit to be applied across the linked speakers.

This new feature effectively replaces the manual edit and behaves the same way. In other words, the Target Curve is independent of speaker layouts and will be loaded/applied to whatever speakers are linked in the Target Curve menu when loading the Target Curve file.
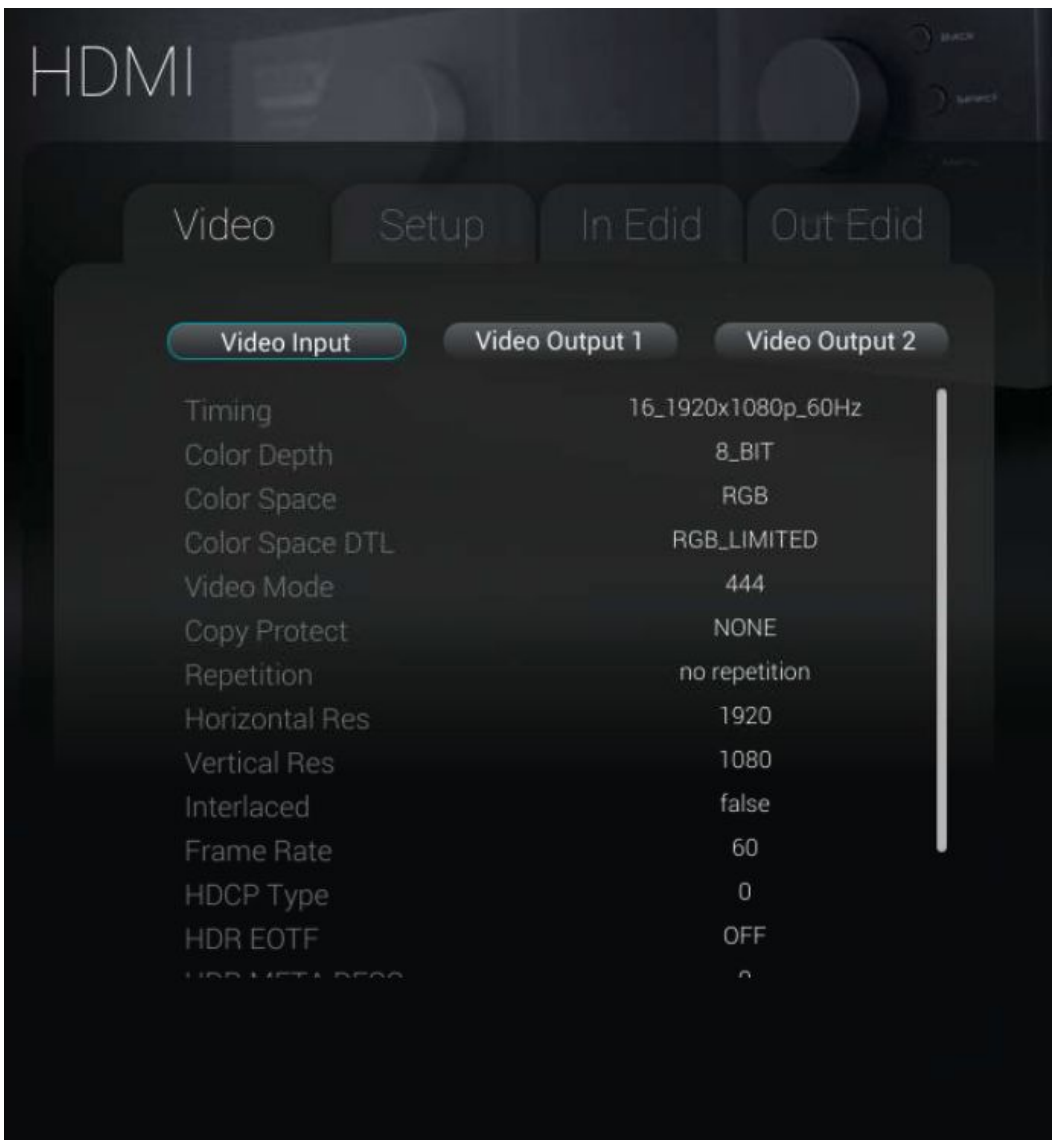
# Enhanced HDMI interface (HDMI 2.0 board only)
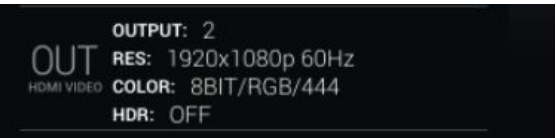
From the Home Page, click on the "Out" section of the right-hand-side section to access the HDMI menu.

This new software version provides extended HDMI information:

- Video information from current input and output ports
- EDID information from connected displays and internal board
- HDR information

In addition, the HDMI menu includes a "Setup" section to allow you to set any of the HDMI inputs to HDMI 1.4 or HDMI 2.0 compatibility modes.
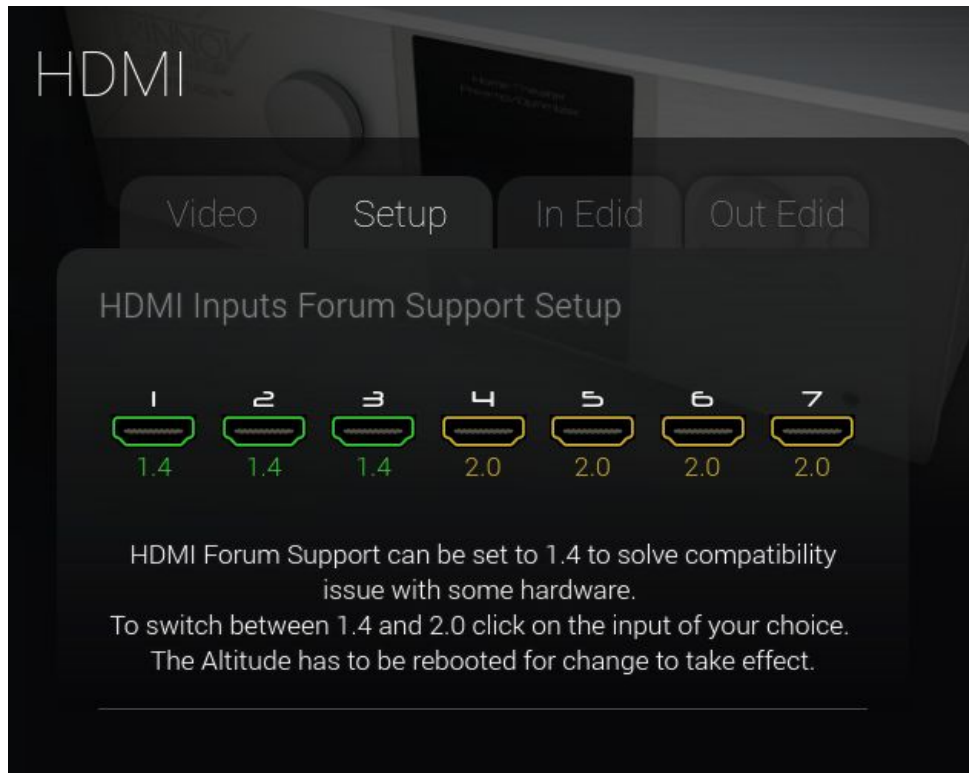
Setting an input to HDMI 1.4 compatibility mode is intended to help with some older sources that do not correctly recognize HDMI 2.0 hardware, and to improve reliability with hardware that does not support high-speed bandwidth (over 300MHz).

Despite this limitation, HDMI 1.4 inputs can still pass HDCP 2.2 content and HDR signals and any other feature of the other inputs. Said otherwise, as long as you are using a signal that is under the 300MHz/10 Gbps limit, they are identical to the HDMI 2.0 inputs.

Note that switching from HDMI compatibility mode requires a reboot of the processor to take effect.

Programmable Triggers (Altitude[16] only)

Adds a programming panel in the user interface for trigger outputs number 2, 3, 4.
This new menu is accessible through the "Manage" button located in the "Source properties" panel.
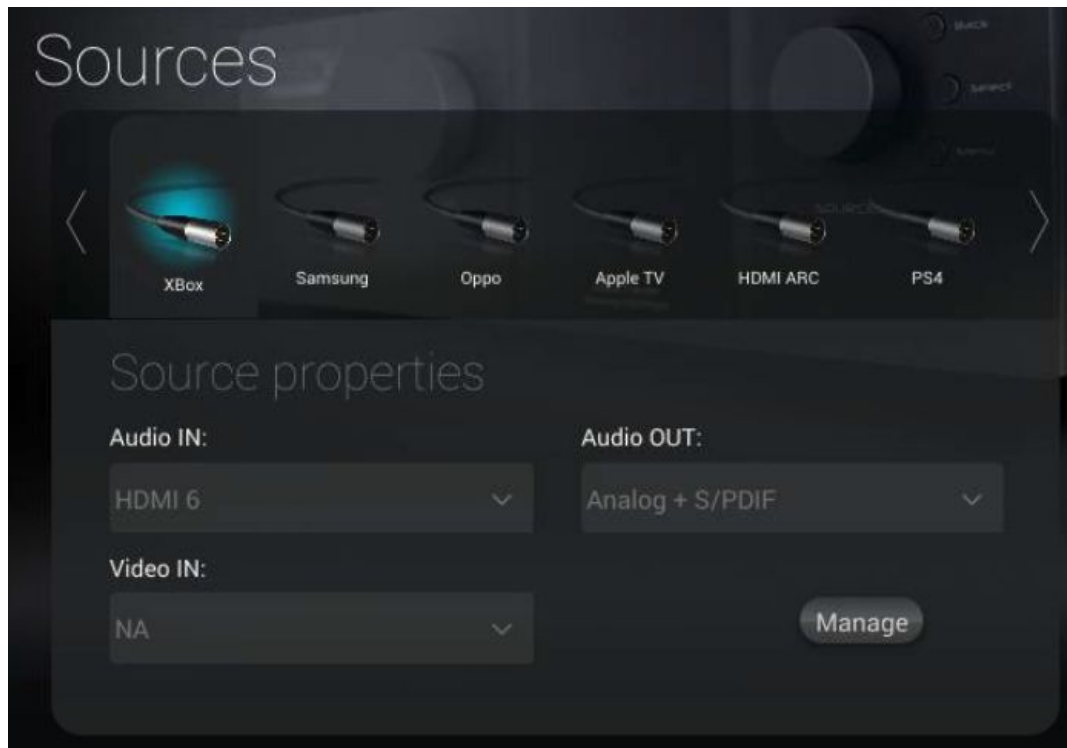
For each input source of the Altitude[16], you can select whether the trigger outputs are set to On, Off or kept in their current state.

# Upmix content on the DCI input (Altitude[32] only)

Upmixing content on the DCI input is now possible for input "Channels" configurations (Sources Config page) up to 8 channels.

New screensaver management (Altitude[32] + Altitude[16])

Software 4.2.11 introduces improved management of the front panel screen.

In order to extend the life of the front panel screen, it will now, after 30 seconds of inactivity, go darker than before. (Some pixels may appear to be unlit in this mode, this is expected.)

When the "front panel light" feature is disabled the screen will be turned to full black directly without fading. While in this mode a volume change will only wake-up the screen for 2 seconds, but if you navigate through the front panel menu the screen will remain visible for another 24 seconds (approx.) before turning black again. This is the preferred mode to extend the front panel lifetime.
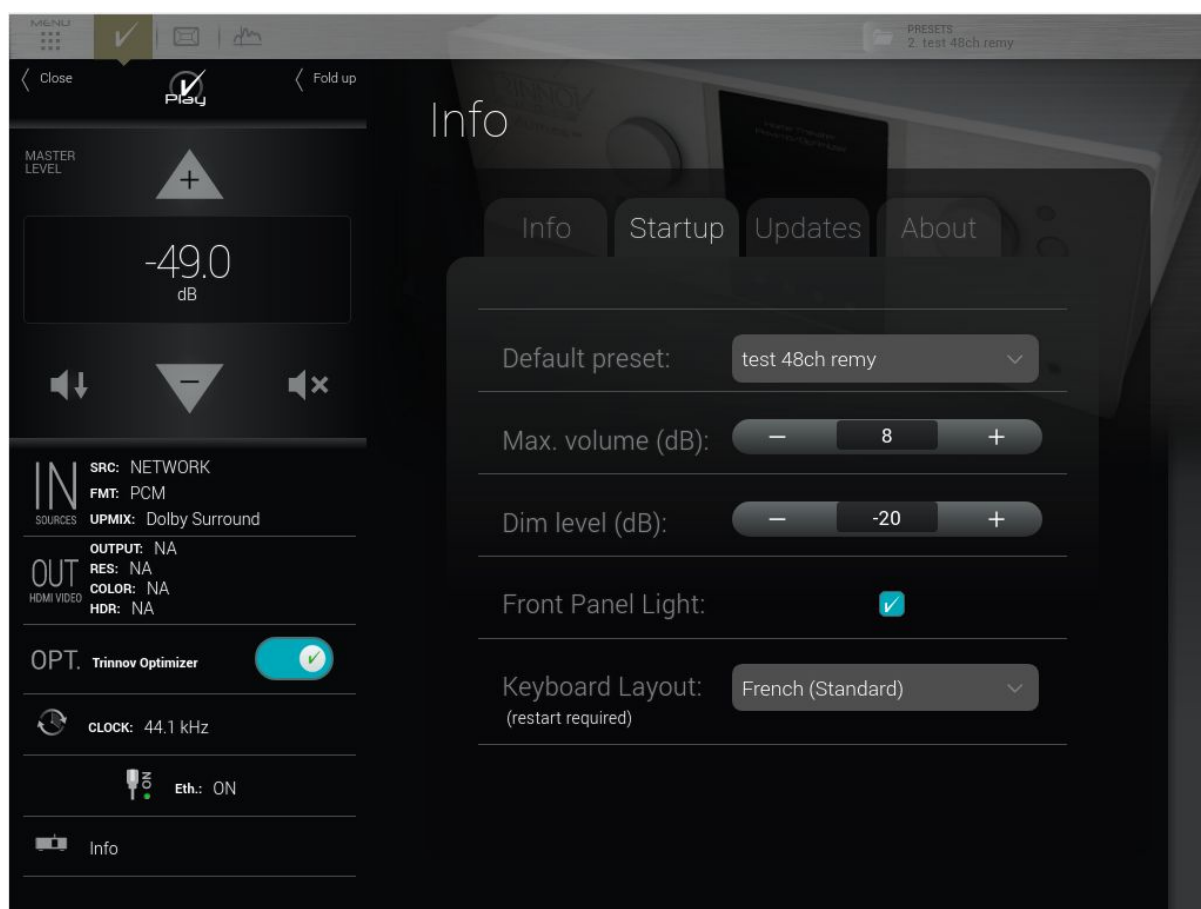
Keyboard layout (Altitude^{32} + Altitude^{16})

The keyboard layout can now be selected by the user in the Info/Startup tab.
Changing the keyboard layout requires a reboot of the processor to take effect.

Enhancements

Optimizer low frequency improvements (Altitude^{32} + Altitude^{16})

Graph display extended to 10Hz

The Optimizer is already performing the measurement and correction down to 10Hz and below. With this new software release, the Target Curve, Excursion Curve, and Graphs now extend to 10Hz. No change is required unless calibrators want to further fine-tune the response below 20Hz.
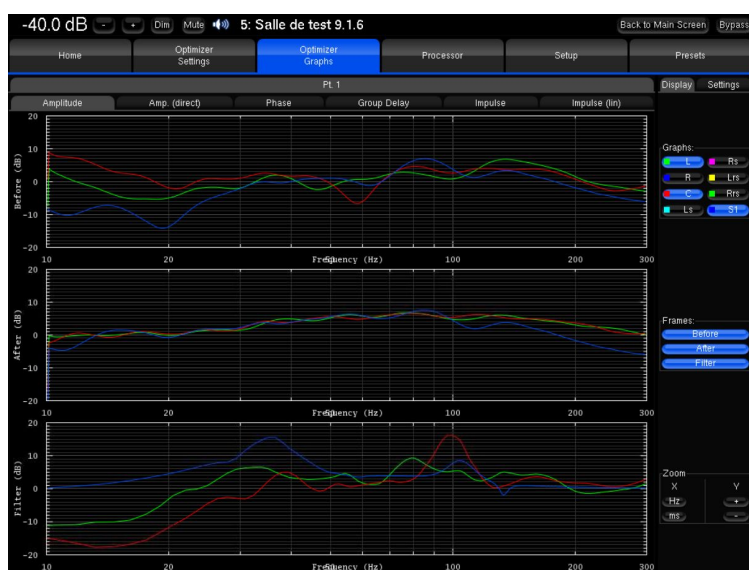
The minimal frequency displayed in the Active Crossovers Graphs is now also 10Hz.
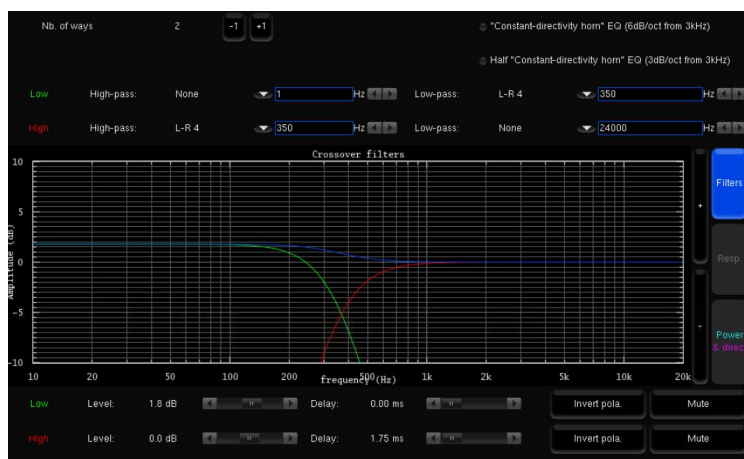
FIR / IIR individual correction resolution

The Optimizer uses a combination of FIR and IIR filters to achieve the best possible result in terms of time and frequency corrections.

Previously, calibrators had access to the "Resolution of the Energy Response" parameters in the Optimizer Main Setting tab.

This parameter affected both the resolution of FIR and IIR filters across the bandwidth (default 1/3rd octave).

With software version 4.2.11, calibrators now benefit from a dedicated parameter to define the resolution of the energy response for the IIR filter, independently from the FIR filter.

As a result, IIR optimization (below 150Hz by default) can further improve bass response without affecting the FIR behavior.
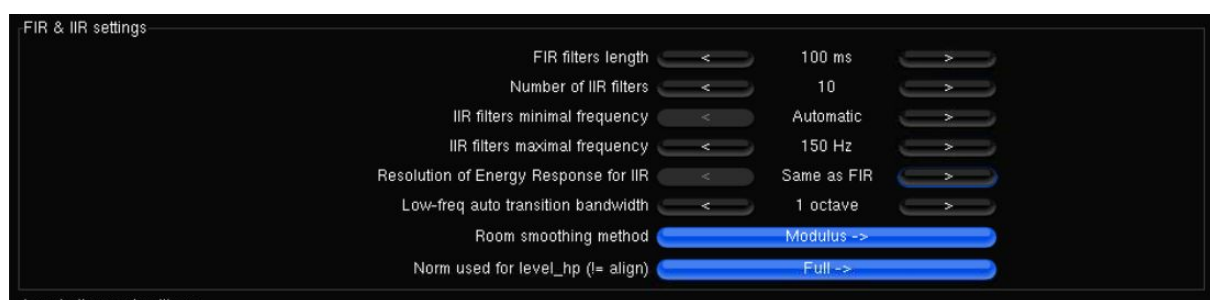
Default "Resolution of Energy Response for IIR" is 1/3rd octave and can be increased up to 1/24th octave if more resolution is required to correct the energy response in the low frequencies.

This setting is available in the Advanced Settings of the Optimizer in the FIR & IIR settings section.

Active Crossovers delay (Altitude^{32} + Altitude^{16})

In some instances, the maximum delay available in our active crossovers was not sufficient to correctly align the different drivers, or when used to time-align multiple subwoofers or speaker arrays.

The maximum delay of the active crossovers is now set to 50ms.

Software performance Optimization (Altitude^{32} + Altitude^{16})

Software performance optimization targeting better hardware resources usage:

- Data bandwidth efficiency improvement.
- Matrix computation revised for a less demanding CPU load with the same result.
- Task scheduler optimized to enhance audio stream reliability.

Graphical User Interface

- The list of available templates in the layout configurator now shows only configurations that the unit is able to handle according to its number of output connectors.
- The Bass Management interface now presents the exact options for the Bass Management mode currently engaged.

AES Outputs (Altitude^{32})

Units with at least 24 channels now have a new output connector option that enables the AES outputs in parallel with the analog outputs. AES outputs 1 to 8 and 17 to 24 are made active, allowing 16 AES outputs to be used in addition to all the analog outputs.

Bug fixes

HDMI 2.0 Interface (Altitude^{32} + Altitude^{16} with HDMI 2.0 board)

- Fixes displayed output port number
- Fixes displayed resolution

DCI Input (Altitude^{32} only)

- Routing of the DCI input corrected by introducing the new "channels" field in the Source Config menu.

UPnP/DLNA (Altitude^{32} + Altitude^{16})

- Upmixing now works on the Network input if the input channels "LR" are selected in the Source Config "Channels" field.

Crossovers (Altitude^{32} + Altitude^{16})

- Fixed a rare bug where crossover routing wasn't correctly loaded.

FPGA (units with Universal Buffer board only)

- Fixes a compatibility issue where some HDMI sources provoked crackling sounds in surround speakers.

System (Altitude^{32} + Altitude^{16})

- Improved start-up loading sequence.
- To avoid decoding errors, the buffer size has been set to 1024 and is no longer editable.

Graphical User Interface (Altitude^{16} + Altitude^{32})

- Improves the reliability of the 3D view loading
- Fixes occasional incorrect volume display when DIM is engaged.

Screen Saver (Altitude^{16} + Altitude^{32})

- Fixes the front panel not going into sleep mode