Ovation Release Notes

Installation

Please consult the Installation Guide located on the Ovation Installation Media (USB Memory card) for details on the hardware and software installation procedure and Authorization Key registration process.

RAVENNA users will have to install the NET-MSC-GBEX1 PCIe Ethernet card provided by Merging Technologies. TURN YOUR COMPUTER OFF (shut down then switch the power off). Next plug the NET-MSC-GBEX1 card into one of the PCI-Express bus slots on your computer and turn the power back on. The NET-MSC-GBEX1 card will only be operational once the MassCore runtime is installed. Refer to the Ovation Installation Guide for more details.

- To install the Ovation software insert the Ovation Installation Media - the installation program should auto-start.
- To install MassCore launch the MT Security Settings, go to the MassCore page and install the MassCore RunTime (a MassCore base key is required along with MassCore 64bit and a RTX64 3.0 key). Refer to installation guide for more details.
- Warning: Make sure that the Windows 10 version you are installing onto is supported by Ovation, as often updates can break the compatibility.
  All details in the separate Ovation installation guide.

Updates

Please check our Web site **http://www.merging.com** periodically for information, patches and updates.

Ovation 9 INSTALLER INFORMATION:

Ovation 9 is compatible with the following Operating Systems
- Windows 7 Professional (64bit): MassCore/RAVENNA, Native & Native/RAVENNA ASIO
- Windows 10 Professional (64bit): MassCore/RAVENNA, Native & Native/RAVENNA ASIO

    Ovation 9 is supported under the Windows 10 updates;
    - November 2019 Update (1909) supported with Pyramix 25th Anniversary & RTX64 3.7
    - May update (1903) supported as of Pyramix v12.0.5 HotFix
      As well as the Meltdown and Spectre Windows updates.
    - Windows 10 Zombieload update is supported with MassCore/RTX64 3.6.2 and 3.7.0
    - October update (1809)
    - Spring Creator (1803)
    - Fall Creator (1709)
    - Creator (1703)
    - Anniversary (1607)

WARNING: Ovation 9 is supported on 4th Generation Intel Core Processors (4XXXK and higher) and will not launch on previous Processors generation
Recommended specification:
https://confluence.merging.com/pages/viewpage.action?pageId=24608853

Ovation 9 installation notes
- Ovation 9 runs on the new Ovation 9 keys as of the Release Candidate
- Ovation 9.0.3 release and the 9.0.4 HotFix comes with the same MassCore RTX64 v3.7.0.4983 as Ovation 9.0.3 and 8.0.5 HotFix
- The Ovation 9 installer comes only as a 64bit version (64bit OS)
- Before you perform a Windows 10 update on a system already running a MassCore version it will be important for users to remove MassCore from the MT Security MassCore tab prior to performing a system update. Details below.
  Take note that when selecting uninstall MassCore you will need to reboot your system as the uninstallation is completed during the system reboot

  Note #1: We highly recommend users to defer the Windows updates, so that it does not harm your system here for details on how to defer updates
  Windows 10 users should never update to Beta Windows version or major new updates before making sure they are supported by Merging.

  Note #2:
  Users wanting to update to Windows November 2019 update (1909) must follow the procedure here https://confluence.merging.com/pages/viewpage.action?pageId=60031028
  Users that apply Windows updates must refer to the Merging Compatible Windows updates here Once you have updated your Windows 10, follow the Ovation 9 and MassCore installation.

  Note #3: Windows 10 Update 2004 not compatible with MassCore-RTX64 3.7. Do not update

- SSK-HUD-RTX owners can have Ovation 7, 8 and 9 MassCore key stored on their dongle and go from a system to the other using their SSK-HUD-RTX
- SSK-HUD-RTX owners should be aware that the Hasp driver 7.80 is not compatible with MassCore/RTX64. Refer to the procedure here:
  https://confluence.merging.com/pages/viewpage.action?pageId=27852814
- A new Cloud Security (dongle-less) is available as of the Ovation 9
- must perform a "Save Special as v12.0" in order to open such project in v12.0
- The VB Plugins (VS3) are no longer installed along Ovation as of the version 9 they come with a standalone installer. Download and run the VB Plugin – VS3 installer after having installed Ovation.
  https://confluence.merging.com/display/PUBLICDOC/VB+Plugins+%28VS3%29+standalone+installer

Native Installation Notes:
- Ovation 9 requires new keys as of the Release Candidate.
  Warning: Users with v8 keys will not be able to run Ovation 9.
- Ovation 9 can be installed on either Windows 7– 64bit or Windows 10 – 64 bit
- It is necessary to remove the previous Ovation and Pyramix version, if there is one, from the Windows Programs and Features, and then reboot your system before installing Ovation 9

- Follow the Ovation Installation Guide for all details
  Download and run the VB Plugins–VS3 installer after having installed Ovation.
- RAVENNA ASIO v12 > is mandatory to update to firmware 3.9.4 and higher and vice-versa.
- ANEMAN installer is not included in the Ovation Installer.
  Please download and install the latest ANEMAN in order to manage and monitor your AoIP devices from http://www.merging.com/products/networked-audio/aneman

MassCore Installation Notes:

- Refer to the Ovation 9 Installation Guide for installation procedure and details on the specific BIOS settings and system configuration.
- Ovation 9 uses the same MassCore RTX64 v3.7.0.4983 as Ovation v8.0.5 HotFix
- Ovation MassCore users need a RTX64 3.0 key in order to Install and run MassCore. See with your Merging Sales Partners.
- It is necessary to remove the previous Ovation and Pyramix version, if there is one, from the Windows Programs and Features, and then reboot your system before installing Ovation.
  Take note that when selecting uninstall MassCore you will need to reboot your system as the uninstallation is completed during the system reboot
  Unless you are planning to update your Windows 10 it is recommended to first remove MassCore before performing the update. In such case follow the procedure document https://confluence.merging.com/pages/viewpage.action?pageId=60031028
- After installing Ovation 9 MassCore users might need to uninstall their previous MassCore from the MT Security setting, MassCore Tab, depending on the previous Ovation version you were running. If there is an older version present you will be warned and required to reboot before updating to the latest version.
- If your Ovation system never had a MassCore version before, users will have to install the new MassCore version from the MT Security Settings > MassCore tab.
  A valid MassCore RTX64 -3.0 key is mandatory.
- Users running MassCore 64bit will not be able to move their license to another system (or the same system after a Windows re-installation) unless first making this demand through Merging keys@merging.com Please justify the reason of your system migration or reinstallation as the RTX64 key is not meant to be frequently renewed.
  If Merging cannot follow up in a quickly enough (in case of emergency or during weekends) then please contact the Interval Zero (RTX) Sales team sales@intervalzero.com
  Note: MassCore/RTX 64bit keys are linked to the system/hardware.
  MassCore users can have their MassCore/RTX 64bit keys stored on a separate Dongle instead of having it linked to a unique system. Refer to the Merging option SSK-HUD-RTX.

Ovation 9 users must refer to the Installation Guide for details
https://www.merging.com/uploads/assets/Installers/beta/JANUS_X.0_Beta2/Ovation_v9.0.1_Beta2/Ovation_9_Installation_Guide.pdf

Warning:
- Windows 7 users could see this error: " Installation of KB3033929 has failed", potentially this update is already installed, proceed with YES
- Additional Online installation notes are available here:
  https://confluence.merging.com/display/PUBLICDOC/Installation+Notes+v11

Merging Windows 10 Configuration Guide
https://confluence.merging.com/display/PUBLICDOC/Windows+10+Configuration

Note: At the Ovation launch a warning message box will be displayed if your system updates settings are not configured upon Merging's recommendations.

Merging Windows 10 November 2019 update & Configuration Guide
https://confluence.merging.com/pages/viewpage.action?pageId=60031028

Notes:
- *Anubis must be running ASIO v12.0.1 and higher with ANEMAN 1.1.7 and higher.*
- *For users with Ovation and VCube installed on the same system, it is mandatory that you upgrade to VCube 9 to run alongside Ovation 9*
- *MassCore RTX64 users upgrading their processor on a system that was running MassCore previously must follow a specific procedure, contact support@merging.com for more details.*
- *A MTCleanUp utility is available through Merging's Support for those with install problems. Please refer to the Knowledge Base https://confluence.merging.com/display/PUBLICDOC/MT+Cleanup*
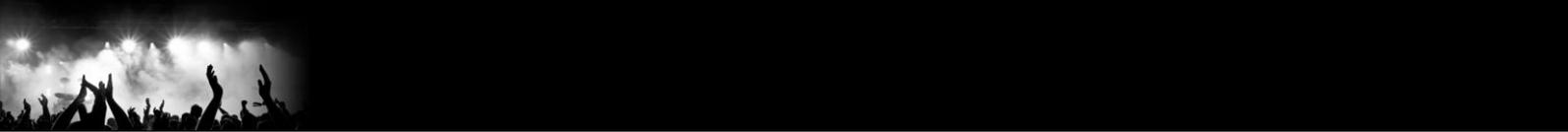
Ovation V9 New Features

New: Native Audio Engine multi-threading support.

Improved performance to the Ovation and Pyramix Native Engine now bases on a multi-threading architecture.

The native audio engine will now use multiple threads to process the plugins and the audio input/output. The number of threads that the audio engine runs on is configured by a mechanism that will decide the optimal number of threads. If, however you would like to change the Native Multi-Threading engine configuration a registry keys can be made available on demand for the duration of Ovation 9 and Pyramix 25th Anniversary beta cycle.

New QLM Cloud based security as of the beta2

A new security has been implemented for new users needing to run Pyramix, Ovation or VCube without a Merging SafeNet Dongle. This QLM Soraco based security implementation is currently at its early Beta stage. Only if you absolutely need such a solution should you contact keys@merging.com or qa@merging.com for a test key set.
Note: SafeNet keys cannot be transferred to QLM security model for a chosen release. This process can only be done for now at the Upgrade stage.

QLM activation/deactivation
https://confluence.merging.com/pages/viewpage.action?pageId=65437899

QLM SelfHelp Tool
https://confluence.merging.com/pages/viewpage.action?pageId=65437985

MTSecurity troubleshooting
https://confluence.merging.com/pages/viewpage.action?pageId=65437939

QLM FAQ
https://confluence.merging.com/pages/viewpage.action?pageId=65437961

New: OSC Support
Open Sound Control: Networking protocol for show control and musical performance

For complete details refer to the OSC Guide available here below

https://confluence.merging.com/pages/viewpage.action?pageId=63635610

Configuring OSC:

- To send OSC commands an **UDP Streamer** IP Port must be defined in the Settings > Application Settings > General > **IP Connections** and referred to in other settings like Player Units and Cue Properties

- To receive OSC commands an **UDP Receiver** IP Port must be defined in the Settings > Application Settings > General > **IP Connections** and referred to in other settings like Controller Units and Cue Properties

▪ In the Settings > Application Settings > **Player Unit settings**, a new **OSC Options** section has been added:

   o Check the **Send Cue Status messages to this port** button if you wish Cue Status related message to be sent to this Player Unit port, like Cue Fire, Cue Stop, Cue progress, etc… See the **OSC Dictionary** for details
   Note: **OSC Dictionary** the included in the Ovation Installer package.

   o Check the **Send Mixer Status messages to this port** button if you wish Mixing Console Status related message to be sent to this Player Unit port. The current position of most controls of the mixing console are sent in real-time to the port if enabled. See the **OSC Dictionary** for details

   o If the **Send Mixer Status messages to this port** button is checked, the **Remap to:** Combo box allows for choosing a remap scheme so a selection of Mixer Status messages are **remapped to another OSC Dictionary**.

      ▪ If the selection is **None**, all Mixer Status messages are sent as described in the **Ovation OSC Dictionary**.
      ▪ If the selection is **Flux::SpatRevolution**, the Fader, Solo, Mute and Panner messages are remapped to the Flux::Spat Revolution OSC Dictionary scheme. All other messages are sent following the **Ovation OSC Dictionary**.
      ▪ *Note: This allow working offline on 3D panning automation in Ovation and map the automation to some external spatializers later on when available.*

- In the Settings > Application Settings > **Controller Unit settings**, a new **OSC** section has been added:

   o Check the **Dispatch received /Server messages from this port** button if you wish messages beginning with /Server to be executed. These messages allow for remote controlling the whole Ovation application like any other supported remote control protocols like MIDI, HTTP, GPI/O, etc… Please refer to the Ovation User Manual Appendixes for details on remote control commands. Please check Ovation **OSC Dictionary** for details on the /Server messages.

   o Check the **Dispatch received /Mixer messages from this port** button if you wish messages beginning with /Mixer to be executed. This allows remote controlling the Ovation Mixing Console from any OSC controllers. Please check Ovation **OSC Dictionary** for details on the /Mixer messages.

   o Check the **Dispatch received /CueMapping messages from this port** button if you wish messages beginning with /CueMapping to be executed. This allows mapping directly OSC messages to Cues. Please check the **Cue Properties REMOTE CONTROL: IP / OSC Command** section below. Please check Ovation **OSC Dictionary** for details on the /CueMapping messages.

Sending OSC Commands:

▪ In **Cue Properties** the IP Command section has been renamed **IP / OSC Command**
▪ Select an **IP Command Output Port** that is configured as UDP Streamer (see **Configuring OSC** above)
▪ In the **Command Format** row select **OSC**
▪ In the **Fire, Pause or Stop Command** row simply type any **OSC Command**, like /rock/is/a/drug
▪ Other types of OSC Commands, like Cue Status or Mixer Status messages are automatically sent if enabled in the **Player Units settings** (see **Configuring OSC** above)
▪ **OSC Automation messages** are automatically sent when a OSC Automation Cue is triggered. See **OSC Automation** below.

- **Markers can now send IP or OSC Commands**
- A field named "**Marker IP/OSC Command**" has been added in the **Cue Properties Markers section** for the Selected Marker
- Simply type an IP or OSC command line in this field and it will be **sent to the Command IP Output Port** defined in the Cue Properties > IP/OSC Command section of the **Cue containing the Marker**

Receiving OSC Commands:

- In **Cue Properties** the REMOTE CONTROL: IP Command section has been renamed **REMOTE CONTROL: IP / OSC Command**
- Select an **IP Command Input Port** that is configured as UDP Receiver (see **Configuring OSC** above)
- Make sure the IP Port above is configured to **Dispatch /CueMapping messages** in the **Controller Units settings** (see **Configuring OSC** above)
- In the **Command Format** row select **OSC**
- In the **Fire, Pause or Stop Command** row simply type any **OSC Command**, like /rock/is/a/drug. External devices sending a message to Ovation to trigger this cue will have to send the following OSC message: /CueMapping/rock/is/a/drug

- For receiving other types of OSC Commands like /Server or /Mixer messages please refer to the **Configuring OSC** section above
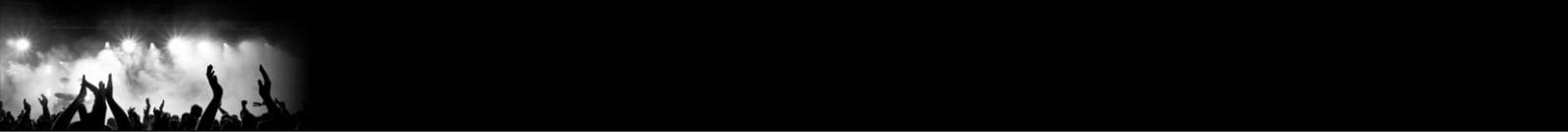

OSC Automation:

- In **Cue Properties** there is new **OSC Automation** section
- Select an **OSC Automation Output Port** that is configured as UDP Streamer (see **Configuring OSC** above). This port will be used to send any recorded OSC Automation
- Right-click on the Cue and select menu **Start Recording OSC Automation**. A blinking red dot with the OSC Automation logo will appear on the Cue.
- Now **Fire** or **Audition** that Cue. **Any OSC messages** entering on **any port** configured as **UDP Receiver** will be recorded in that Cue while the Cue is playing.
- Multiple OSC automation record passes can be performed on the same cue, one after each other. Just stop the Cue and Fire or Audition it again. The last recorded OSC Automation pass can be undone at any time using the Cue > Undo command.
- When done, right-click on the Cue and select menu **Stop Recording OSC Automation**.
- When the Cue is now Fired or Auditioned **any recorded OSC messages** are sent to the IP port selected in the **OSC Automation Output Port** row.

- The **Timing Mode** row gives to options: (Not implemented yet, currently set to Absolute)

  - o Absolute: Any recorded OSC Automation is played back with the same timing it was recorded
  - o Relative to Cue Length: Any recorded OSC Automation is played back relatively to the Cue Length. In other words the OSC automation can be stretched or squeezed in time by changing the cue length.

Cue Display:

- Cue containing OSC Commands display the IP Command logo
- Cue containing OSC Automation display the IP Command logo and a grey version of the Mixer Automation logo

Cue Menu:

- Added a new menu in the Cue menu and right-click menu:

- o Add Cue > Record Automation as New Cue
- o This function adds a new cue ready for recording Mixer automation

- Added a new menu in the Cue menu and right-click menu:
  - o Add Cue > Record OSC Automation as New Cue
  - o This function adds a new cue ready for recording OSC automation
  - o First available IP port enabled for outputting IP is selected
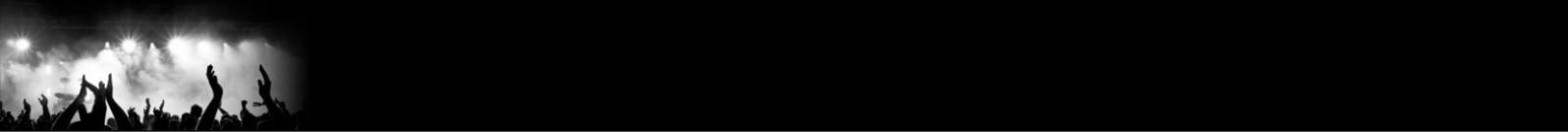
New Atmos Connect Support
Atmos Connect:

- Support for Dolby Atmos Renderer has been implemented
- Currently only supporting Dolby Atmos Mastering Suite and Production Suite.
- Version 3.4.0 is the currently recommended version.
- Original Atmos RMU is not supported for now

Atmos Connect operation:

- Right-click on the Pyramix or Ovation mixing console and go to menu Settings > Atmos Connect…
- In the Atmos Connect dialog enter the IP address of the computer running the Atmos Mastering or Production Suite
- Click the Connect button
- The log window should display a line like: 192.168.3.99:53039->192.168.3.89:4001: connected

Audio Connection:

- It is then assumed that the 128 first outputs of the Mixing Console are routed to the Renderer through any audio transport available, like:
    - Using MassCore or RAVENNA ASIO to a Hapi/Horus then through MADI to another MADI interface connected to the computer running the Renderer
    - Using a Dante card installed in the PC running Pyramix/Ovation to a Dante interface in the computer running the Renderer
    - Using MassCore or RAVENNA ASIO directly to a RAVENNA/AES67 driver running on the computer running the Renderer
    - Currently Dolby only certifies the two first solutions with a MacOS version of the Renderer.
    - Merging has successfully tested the third solution with a Windows version of the Renderer running on the new Merging Audio Device driver. Please contact us if interested in this (beta only for now) solution.

Beds and Objects mapping:

- Once connected to an Atmos Renderer the Mixing Console will regularly receive the Input Configuration currently active in the Renderer and display all the channels naming and numbering in the console output patches, both in the main mixing console UI in the Masters Output section and drop-down menu and in the Route page Masters Output section.

- Patching from Pyramix/Ovation to the Renderer is then made very easy and verbose:

- Objects busses:

    - Pyramix/Ovation Masters Outputs of Objects Busses must be patched to any Renderer Objects. They will be displayed in Green in The Renderer Room Display when actual audio comes through or when they move.
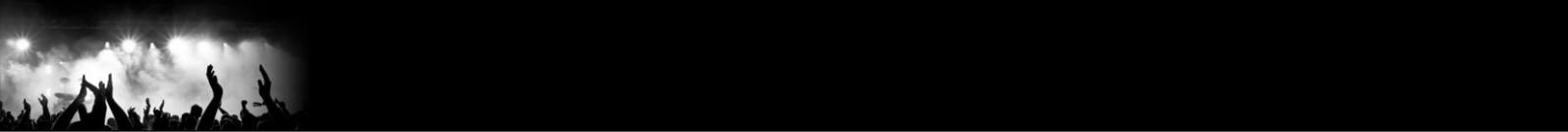
- The Pyramix/Ovation Divergence parameter is mapping to the Atmos Objects Size parameter.

- If the Object Bus is disabled in the Pyramix/Ovation UI, then the objects in this bus are removed from the Atmos Renderer and the objects are rendered internally in the Pyramix/Ovation beds.

- Note: This support is equivalent as what can be seen in other workstations.

- **Beds busses (Pyramix/Ovation General Mixing Busses):**

  - Pyramix/Ovation Masters Outputs of any General Mixing Busses (except Objects Busses) can be patched to any Renderer Beds. In this case no indication is visible in the Renderer, only the actual audio signal will be displayed in the Renderer channel input display.

  - Pyramix/Ovation Masters Outputs of any General Mixing Busses (except Objects Busses) can be patched to any Renderer Objects. In this case the Renderer Object is used as a Virtual Speaker, is made visible in blue in the Renderer Room Display and is positioned in the space at the static and predefined position for that speaker depending on its Channel Typing.

  - Note: Wide Left and Wide Right speakers can be patched as Virtual Speakers Objects only. They have no equivalent in any Atmos Beds and must be mapped as objects.

  - Note 2: Any Top Speakers must be patched as Virtual Speakers Objects too. Although the "official" 7.1.2 Atmos Bed contains two Top channels, these channels are Surround only Top Speakers, meaning that any Top/Front or Top/Rear signal can't be differentiated and will be rendered fully from Front to Rear. For this reason, the only way to properly differentiate Top/Front, Top/Side and Top/Rear speakers is to map them as Virtual Speakers Objects using Atmos Connect.

  - Note 3: Other Speakers that have an "official" channel in the Renderer Beds (L, R, C, Ls, Rs, Sl, Sr) can be mapped either as Beds Channels or as Virtual Speakers Objects. The final result may differ from the actual rendering of the Atmos Mastering/Production Suite and the final render in Theatres or Home. This is subject to experimentation.

  - Note 4: LFE must always be mapped to a Beds channel.

New Atmos Speaker Sets:

In order to properly support recently released Dolby Atmos for Music speaker sets (9.1, 9.1.2, 9.1.4, 9.1.6) Merging had to reorganize the list of speakers channel types.

- Wide Left and Wide Right have been added to the list
- Surround Left Center and Surround Right Center have been suppressed from the list
- Dolby Atmos 9.1, 9.1.2, 9.1.4, 9.1.6 speaker sets are now properly supported
- Auro 7.1.4, Auro 13.1 and THM 12.2 speaker sets have been slightly modified, however are still supported
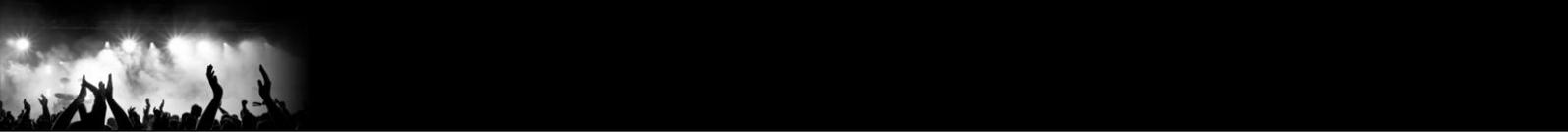
New MIDI and IP Command dialogs

REMOTE CONTROL: General MIDI Command

MIDI Command Input Port Click in the field to drop-down a list of available ports.
Fire Command Click in the field to reveal the down arrow.
Pause Command Click in the field to reveal the down arrow.
Stop Command Click in the field to reveal the down arrow.
For each of the commands clicking on the down arrow offers the choice of **<None>, <Clear last incoming messages>** or a list of the last 10 commands received on the specified port to select the required one. None removes the existing mapping and Clear last incoming messages clears the command list.
Note: Before attempting remote control of Cues in this way check the **Controller Settings**
in **Settings > Application Settings > Controller Units > MIDI**.
In order for direct MIDI Command mapping to work for the given physical or logical MIDI port the option **Enable**
direct Cue mapping of MIDI messages from the selected Virtual MIDI Port in the **General Midi (GM)** section
must be checked. Commands coming from the given physical or logical MIDI Port will be seen in the **MIDI Command**
dialog (down arrow) as coming from the selected **Virtual MIDI Port** at the top of the MIDI settings page.
This enables the physical MIDI port to be changed easily without having to redo the entire mapping).
Note: A useful possibility is to be able to map **Note On** to the **Fire** Command and **Note Off** to the **Stop** Command to emulate the Hot Keys **Press Play**/**Release Stop** mode.
The MIDI learn command below was removed.

REMOTE CONTROL : IP Command

IP Command Input Port Click in the field to drop-down a list of available ports.
**Command Format** Click in the field to drop-down the choice of **Hexa**decimal, **ASCII** or **OSC**.
Fire Command Click in the field to reveal the down arrow.
Pause Command Click in the field to reveal the down arrow.
Stop Command Click in the field to reveal the down arrow.
For each of the commands clicking on down arrow offers the choice of **< None>, <Clear last incoming messages>** or a list of the last 10 commands received on the specified port to select the required one. None removes the existing mapping and Clear last incoming messages clears the command list.
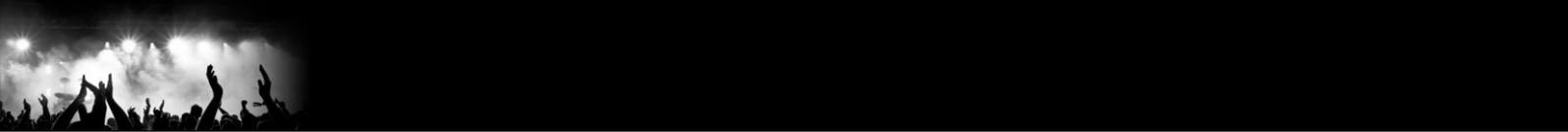
Note: Before attempting remote control of Cues in this way check the **Controller Settings**
in **Settings > Application Settings > Controller Units > IP**.
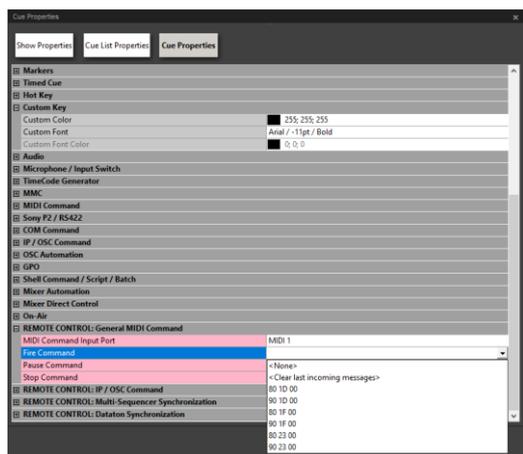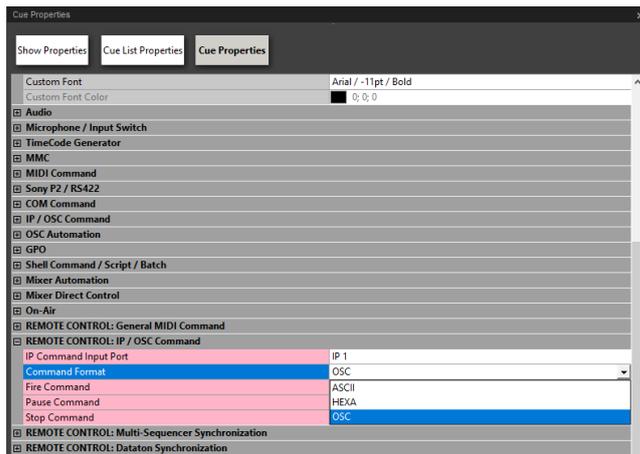
General MIDI command   IP Command

New: Mixer Automation:

- **Mixing Console Automation** can now be directly recorded into Ovation
- Right-click on a Cue and select the menu **Start Recording Automation**
- Now **Fire** or **Audition** that Cue. **Any Mixing Console movements/changes** will be recorded in that Cue while the Cue is playing.
- Multiple Automation record passes can be performed on the same cue, one after each other. Just stop the Cue and Fire or Audition it again. The last recorded Automation pass can be undone at any time using the Cue > Undo command.
- When done, right-click on the Cue and select menu **Stop Recording Automation**.

- **Mixing Console Automation** can still be recorded and edited in **Pyramix** and sent to **Ovation** using the File > **Publish to Ovation** command

Improvements

Mixer:

Bus Sends
- Mixing console General Aux/Group Busses Send Gain now allowed to go up to +12dB.
- When send value is above 0 dB both the dB text indicator and slider turns to light red.

Bus Trims
- Mixing console General All Busses Trim Gain now allowed to go up to +20dB.
- When trim value is above 0 dB the dB text indicator turns to light red.
- Double click on any trim value reset to Mute if clicked on left side, or 0dB if clicked on right side

Room: Import / Export a Custom sources x, y, z coordinates and gain.
Once one creates a custom bus, it is now possible to *Save Room* and *Load Room* into another bus from the same project without re-creating it all. You can also export/import it into/from another PMX or Ovation session.
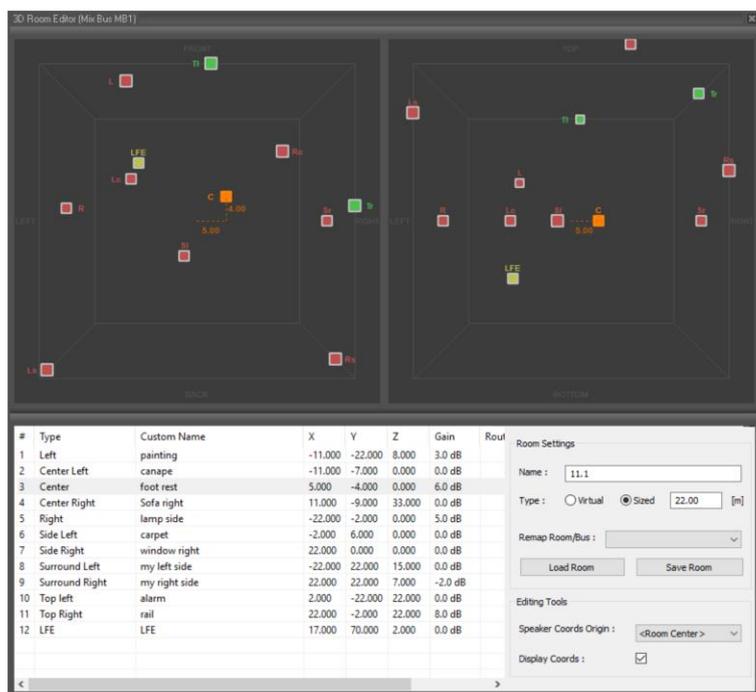
Meter Bridge
New Peak Overload setting.
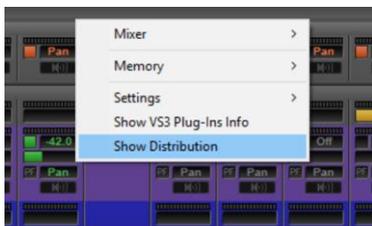The permanent overload peak can be reset by pressing the P key (as in the Mixer).
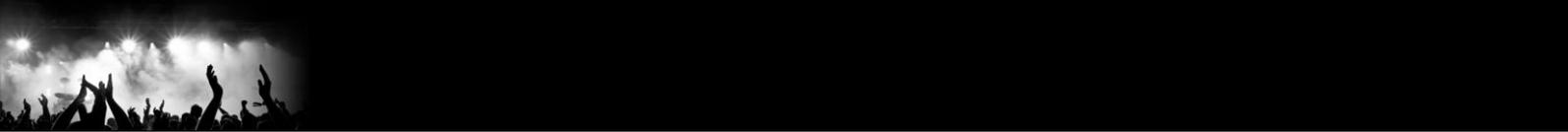
New. Dialog window for Plugins and distribution information

This Distribution dialog is available in order for the user to understand the current load and distribution of the Plugins in use. In case of overload, one can now easily identify from where the overload might be coming from.

This dialog is accessible from Mouse+Right Click on the Mixer and selecting *"Show Distribution"*

The Distribution Dialog will show:
- The Cores Available
- The Strips and Auxes
- VS3 FX
- VST FX
- The Assignation of the core
- The CPU load
- And the Buses (Tab)

New. Dialog window for Plugins and distribution information

This Distribution dialog is available in order for the user to understand the current load and distribution of the Plugins in use. In case of overload, one can now easily identify from where the overload might be coming from.

This dialog is accessible from Mouse+Right Click on the Pyramix Mixer and selecting *"Show Distribution"*
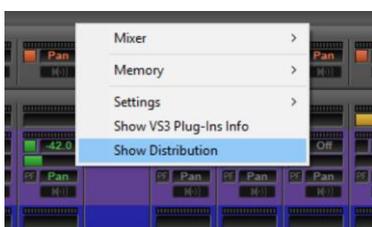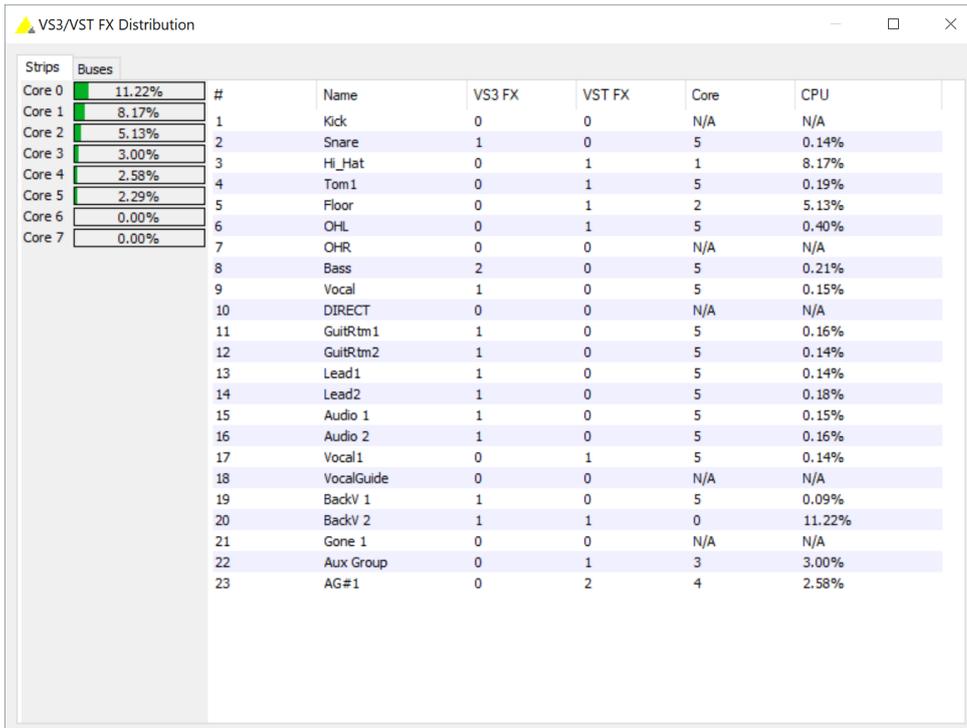
The Distribution Dialog will show:
- The Cores Available
- The Strips and Auxes
- VS3 FX
- VST FX
- The Assignation of the core
- The CPU load.
- And the Buses (Tab)

Plugin Engine Notice:
The plugins engine Core distribution is done automatically for optimal performance. The total Core load of the Strips plugins will be processed first, followed by the total Core load of the Bus plugins. The engine is sequentially performing those two processing tasks. Meaning that a high Core load on the Strips plugins side is not summed with a high Core load on the Bus plugins side.

Changing a designated Core load to another one is not possible (unless modifying the Mixer configuration) and in no way would it change the total sum of processing passed to the engine for the chosen plugins.

About the Plugins Distribution Core Reading:
We measure the time duration of the plugin itself. Time to process Audio Frame / Duration of the plugin itself * 100 = Load for a single plugin. We then compute the multiple plugins (on a chosen Strip or Bus by example) and we calculate the summation of those.
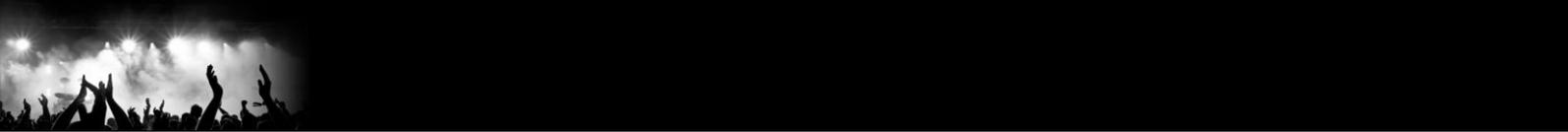
RAVENNA ASIO Driver v13

New version of the ASIO driver, supporting latest changes and ST-2022-7

Merging Audio Device (MAD) 1.0

This new ASIO RAVENNA/AES67 device supports Multi ASIO Clients and integrates WDM Support. With this new Device Driver multiple applications running ASIO can be launched in parallel on a same system, sharing the same sampling rate and at the same time multiple applications running WDM can be launched in parallel and have their own sampling rate automatically converted to the ASIO sampling rate. This allows monitoring the Windows system sound   and any application (such as Spotify, YouTube, PC Sounds files,…) along with any ASIO   applications.

Refer to the online MAD documentation for all details.
https://confluence.merging.com/display/DSI/MAD+Docs

- Two different modes supported
  - General mode (Pro usage for Anubis, Hapi and Horus)
  - NADAC mode (HiFi usage for NADAC users)
- Multi-Client ASIO and thus hosts supported
- Bridge channels support between ASIO clients
- WDM Support
- Bridge channels support for WDM and Host.
  Note: One sampling rate at a time supported for ASIO (The default host one). WDM supports SRC.

MAD Infrastructure Pack (PSO-MAD-INF) required for:
- Virtual Machine Support
- ST2022-7 Support
- NMOS Support

ANEMAN 1.2.3:

ANEMAN v1.2.3 Release Notes:
- New. Dante SAP Beta plugin available in Plugins Manager downloads
- New. ZMAN: 2022-7 support
- New (beta). Static services (bypassing discovery)
- New (beta). Custom multicast address range support
- Improvement. Streams management
- Improvement. Merging Devices discover and undiscover time
- Improvement. Support for 4K display resolution
- Fixed issue with devices being ejected
- Fixed. Long timeout with some devices not appearing as Merging Devices
- Reliability improvements

Important: The ANEMAN comes as a separate installer.
Please download and install the latest ANEMAN in order to manage and monitor your AoIP devices from https://www.merging.com/products/aneman

Warning: RAVENNA Easy Connect is not supporting MERGING+ANUBIS, it is recommended to use ANEMAN to manage your Anubis AoIP network connections
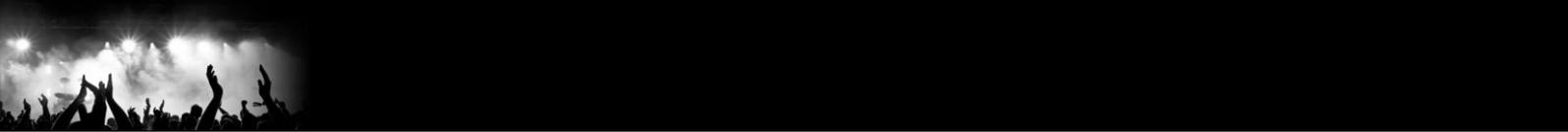
Fixed Bugs in Ovation v9.0.5 HotFix:
- OV90-9 Fixed: Open and Import media dialog is hidden for .mp4;.m4a;.aac;.wma
- Fixed. Aux Busses are now safe when an Object Bus is enabled
- Fixed: Ovation rehearsal function loop issue

Fixed Bugs in Ovation v9.0.4 HotFix:
- PMX125-84: Fixed. Mixer: Naming/Labelling of Object Buses was inverted
- PMX125-106: Fixed. ATMOS: Create a preference that prevents panner to go below 0 (positive only values)
- PMX125-111: Fixed. Random issue in the Realtime Multi-threading engine
- RAV-1311: Fixed. Warning message when installing Ravenna ASIO over MAD
- RAV-1324: Fixed. MIDIPre control is limited to 10 devices
- Fixed. RAVENNA ASIO v13.0.4> Excluded security from installer
- Fixed. RAVENNA ASIO long discovery timeout at sampling rate change
- Fixed. Mixer. Removed configured page limitation Cannot use more than 96 output channels
- Fixed. Atmos issue with object multi-channels.
- Fixed. Marian card exposed weakness in Pyramix host ASIO implementation
- Fixed. MIDIPre control is limited to 10 devices

Fixed Bugs in Ovation v9 release (post RC1):
- OV90-7: Fixed. Crash when opening several shows
- RAV-1270: Fixed. MAD ASIO can stop working when some ASIO host requests SR change.
- PMX125-66: Fixed. Fabfilter VST/VST3 issue with surround formats in Mixer
- PMX125-80: Ovation in cases was failing to re-attach to ASIO
- PMX125-89 & PMX125-90: Audio Engine Distribution dialog improvement
- Fixed. Ovation crash at start up and potential High CPU readings
- Fixed. MassCore load issue.

Fixed Bugs in Ovation v9 RC1:

- New keys required as of the RC1 with new packs & options for Pyramix 25th / Ovation 9
- PMX125-59: Fixed. Mixer: Show distribution Aux Groups & VCA plugin identification wrong
- PMX125-65: Fixed. Mixer: Not possible to reset the Dual Pan with a modifier.

Fixed Bugs in Ovation v9 beta2:

- Fixed. Potential crash in Automation record
- New. Atmos workflow enhancement

Fixed Bugs in Ovation v9 beta1:

- New: Native Multi-thread Support
- New: Atmos speaker sets
- New. OSC Support
- Improved: SRC engine, better performance and less glitches
- Improved: Media Handlers, better performance (such as DSD)
- Improved: MassCore VST: optimize threads distribution
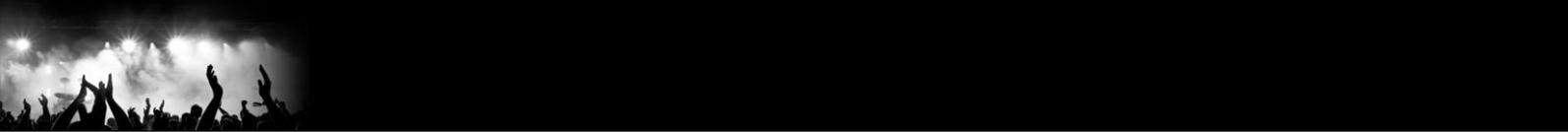
- Improved: Video Playback performance
- Installer: Removed the custom choice due to incompatibility issues
- OV71-59: Fixed. Ovation: The IP command learn function windows should be non-modal
- PMX110-112: Fixed. Crash when naming strip/bus with special characters
- PMX111-35: Fixed. "Peak Hold" function at Meter Bridge window similar to the Mixer Peak Hold behavior.
- PMX120-119: Fixed. VST Routing UI corrupted at times.
- PMX120-137: Fixed. Pyramix video reverse playback not working without stop
- PMX120-340: Fixed. Mixer: Crash on rebuild if configure page is open and adding Tracks /strips form timeline. Warning message, recommending users to exit configure page.
- RAV-1021: Fixed. Switching between Pyramix projects when Horus/Hapi/Anubis is Sample Rate Master of MassCore could make Pyramix crash
- RAV-1048: Fixed. Sink's auto-map doesn't work

Fixed Bugs in Ovation v8.0.6 HotFix (to be released):

- PMX120-172: Fixed. Hang or crash with Avid S3 when recalling the mixer memory states that include VST's
- RAV-1021: Fixed. Switching between Pyramix projects when Horus/Hapi/Anubis is Sample Rate Master of MassCore can make Pyramix crash
- Fixed. Fixed display issue in the panning window for Ambisonic decoders: the rotations controls were displayed even in Decoder Only mode, and the target speakers were not displayed when decoding Ambisonic

Technical Notes & Known Issues

Merging online knowledge database for updates on the known issues
https://confluence.merging.com/display/PUBLICDOC/Known+Issues

General

- Ovation v9 runs on new v9 keys as of the Release Candidate version
- WARNING: Ovation 9 is supported on 4th Generation Intel Core Processors (4XXXK and higher) and will not launch on previous Processors generation
  Recommended specification:
  https://confluence.merging.com/pages/viewpage.action?pageId=24608853
- Note for Ovation keyboard users :
  Windows 10 October 2018 Update (1809) and above require ChangeMe version 5.25.8.
  Previous versions will not work along those Win10 updates.
  Follow the installation instruction on our knowledge base to update :
  https://confluence.merging.com/display/PUBLICDOC/Pyramix+ADR+and+Ovation+keyboard+install+guide
- The VB Plugins (VS3) are no longer installed along Ovation as of the version 9 they come with a standalone installer. Download and run the VB Plugin – VS3 installer after having installed Ovation.
  https://confluence.merging.com/display/PUBLICDOC/VB+Plugins+%28VS3%29+standalone+installer
- New. Ovation Native Multi-Treading Support

MassCore
- MassCore not supported on Core2Duo. Minimum requirement is a QuadCore.
- MassCore is supported under Windows 7 (64bit) and Windows 10 (64bit)
- Ovation v9 and Ovation 8.0 run on MassCore (RTX64 -3.7.0)

Technical Notes:
- MassCore not supported on Core2Duo since Ovation v4. Minimum requirement is a QuadCore.
- MassCore is supported under Windows 7 (64bit) and Windows 10 (64bit) with Ovation v8
- Ovation system recommendations. Details here: http://www.merging.com/pages/pcconfig
- Ovation 9 requires new keys as of the Release Candidate. Merging also has redone the Packs and Options. *Warning: Users with v8 keys will not be able to run Ovation as of version 9 RC1.*
- MassCore 64bit: Activation key is linked to the system and not the dongle) and can only be activated once on a dedicated system. This only applies to 64bit. If you need to re-install MassCore/RTX64 bit on another system using the same key this will not be possible if the key has already been used. For such RTX64 Activation Key Replacement the demand can be made at keys@merging.com or in case of weekend emergency through the Interval Zero Support team IntervalZero Support site This means that if you already have install MassCore 64bit on system and want to move it to another system you must contact interval zero and RTX64 so that they re-issue the key.
- In order to run MassCore 64bit users will need to have both the RTX64bit Activation key and the MassCore 64-bit key.
- MassCore Ultra Low latency mode can generate noise if used on some configuration (not optimal/Turnkey recommended). In such case we rather recommend to use the AES67 mode or the Extra Low latency mode.
- Merging does not recommend the use Disk models: Green and Eco series.
- Merging recommend users with External USB disk to have those disks configured to "Better Performance" under Windows disk properties, profiling option.
- The Network must be Layer 3 compliant and must be a Gigabit network
- Merging has certified the Network Switch for use with Horus/Hapi – Ravenna find details and configuration file here: http://www.merging.com/products/horus/downloads
- RAVENNA user should avoid connecting multiple Horus to any a router/Network not certified by Merging. Refer to the Merging RAVENNA Network Guide for all details on the certified RAVENNA switch and configuration.
  https://confluence.merging.com/display/PUBLICDOC/Network+Switches+for+RAVENNA+-+AES67
  http://www.merging.com/products/horus/downloads
- Only RAVENNA devices can be connected to the Merging PCIe Ethernet Controller Card NET-MSC-GBEX1. Avoid mixing up non-RAVENNA device on this network, like Controllers such as Tango/Isis/Euphonix or other network devices. The same will apply if you are connected to a Merging certified switch for RAVENNA use

- Don't connect a 100MB Ethernet device if the switch is not multicast; otherwise the flow control will reduce drastically the bandwidth.
- A RAVENNA ASIO driver is available for Horus/Hapi users that wish to use their notebook GbE Network RJ-45 system socket. Refer to http://www.merging.com/products/horus/downloads

Known issues:
- RAVENNA Easy Connect is not supporting MERGING+ANUBIS, it is recommended to use ANEMAN to manage our AoIP network connections
- Listing of Ovation supported remote controller here
- Horus/Hapi Ravenna: Switching from MADI Standard (56) to MADI Extended (64) can generate small glitch, avoid doing so during realtime operations
- Merging recommends the use of ANEMAN in order to manage all RAVENNA I/O connections, please refer to the ANEMAN User Manual installed along with Pyramix for more details.
- Non-certified Ravenna configurations might not capable of sustaining 384 I/O @ 1FS (44.1/48 kHz). If you experience noise similar to static reduce the Ravenna I/O count enabled in ANEMAN
- Merging recommends that Ravenna users disable the Windows Firewall, as it can partially block some of the Ravenna I/O connections
- Peaks might show up under Pyramix Core section if you power OFF or disconnect the Horus/Hapi. Recommendation: A valid connection an online Horus is always required if the Horus/Hapi is PTP Master. Reset peaks by Mouse Clicking on the Core section.
- Avoid changing a network address on your system or disconnecting Ethernet ports on your system when MassCore Ravenna is running
  Refer to the Easy Connect troubleshooting for more information
  https://confluence.merging.com/display/PUBLICDOC/RAVENNA+EasyConnect+Troubleshooting
- Cannot use the ISIS since running Ravenna with the Merging PCIe Ethernet Controller Card NET-MSC-GBEX1
  Recommendation: Refer to the ISIS support document below
  http://download.merging.com/beta/SupportTools/Docs/ISIS_Vista_or_7_dedicated_lan.pdf

Connections:
In order to create RAVENNA I/O connections please refer to the ANEMAN guide or the RAVENNA Easy Connect guide (installed along with Ovation)

Recalling RAVENNA Connections for a setup
Despite not yet having a complete recall of IO Connections it is possible on certain setups to recall the Presets store in the device (Horus, Hapi, Anubis) that holds one end of the RAVENNA connections and at the same time recall the ANEMAN save connections that holds the other connections end.
Warning: It is strongly advised that before recalling connection that users clear the existing connections.

Windows Firewall:
The Windows Firewall can block communication between MassCore and Horus. We recommend users to disable the Public Network Firewall
Procedure:
1. Go in Windows Control Panel > Windows Firewall.
2. Click on "Turn Windows Firewall on or off"
3. Go to the Public Network section and select "Turn Off Windows Firewall"

Windows UAC:
User should disabled the Windows User Account Control
Procedure:
1. Go in Windows Control Panel\All Control Panel Items\User Accounts
2. Open the Change User Account Setting
3. And set it to never notify

Disable Antivirus:
Some Antivirus as Avast or Sophos have been known to block the Horus discovery and RAVENNA I/O Connections. Merging also recommends that any Antivirus software is properly configured to not interfere with the DAW. See this page for further details:
https://confluence.merging.com/display/PUBLICDOC/Antivirus+and+Merging+Technologies+Softwares

Ovation Native Recommendations:

- Windows 7 and Windows 10 - 64bit supported with Pyramix, Ovation and RAVENNA ASIO v13.
- Please refer to our Windows configuration guides to optimize system performance.
- Administrator rights are required to configure VS3 Control Panel and the RAVENNA ASIO panel.
- The Merging RAVENNA ASIO Frame Mode size can be configured to AES67 (6, 12, 48) of RAVENNA mode (64), verify your network and devices configuration.
- The Merging RAVENNA ASIO driver can be set to buffer size multiples of 48 (AES67) or 64 samples (RAVENNA), adjust the buffer size to your system in order to get the best performance
- Configure your Antivirus and Merging Technologies Softwares or turn it off
- Configure your Windows Firewall Windows Firewall Troubleshooting or turn it off for Public Networks
- Put Windows UAC (User Account Control) to the lowest level (disabled).
- Disable the WIFI (disable the Wireless adaptor not only the WIFI connection)
- Disable Bluetooth if active (under Windows Device Manager)
- Set Windows Automatic-Update to "notify me" or don't let Windows check for Updates while running critical real-time operations on Windows 7.
  Set the updates to restart outside active hours on Windows 10.
- Avoid active internet connection while running Pyramix
- Avoid connecting audio interfaces to USB or Firewire hubs, plug it directly into your computer.
- We recommend to activate HyperThreading if allowed by your CPU.
- Power management features must be configured to get a stable system.
- In Windows Control Panel > Power Options, make sure you select the "High Performance" power plan (or "Ultimate Performance" on Windows 10 Spring Creator 1803 and October update 1809)(very common that Powerful laptop are at times in energy saving mode, create a High Performance power plan).
- Avoid using battery power, rather have you power cable connected
- Make sure all unnecessary programs are closed. They can tie up useful resources.
- Turn off any software utilities that run in the background, such as Windows Messenger, calendars, and disk maintenance programs.
- Laptops usually have small graphical resources, Merging recommends you pay extra caution when using the Fixed Cursor option.
- Verify the performance of your Native system.
  On Windows 7 by running the DPC Latency checker: http://www.thesycon.de/eng/latency_check.shtml
  On Windows 10, DPC latencies can be monitored with Latency Mon http://www.resplendence.com/download/LatencyMon.exe
- Laptop users should set their ASIO interface to Topmost Priority in VS3 Control Panel.

Refer to the online documentation for more details
https://confluence.merging.com/display/PUBLICDOC/Native+recommendations