What's New in VENUE | Software 8.0

for Avid® VENUE | S6L Systems

Contents

1 Introduction

Welcome to VENUE version 8.0 software for VENUE | S6L systems from Avid®.

About this VENUE Release

- VENUE 8.0 introduces support for E6LX-256, the next (3rd) generation of engine for VENUE S6L systems.
- To learn more about E6LX-256, see "E6LX-256" on page 10.
- To learn about the new features in this release, see "New Features and Enhancements" on page 21.
- VENUE 8.0 also includes fixes for previously known issues. For more information, see"VENUE Software Release Notes" on page 56.

Updating VENUE Software, Plug-Ins, and Firmware

VENUE version 8.0 software is available as a System Restore (use the VENUE 8.0 System Restore for Control Surfaces).

Do each of the following, in order:

1. Check internal cabling (see Important! E6L (2nd generation) Engine Re-cabling for Improved Performance and Expansion).
2. Install VENUE 8.0 System Restore (both the control surface and engine require System Restore).

   Be sure to back up your Show files, Presets, and other data before installing new VENUE software. After performing a System Restore on the control surface, make sure to re-install your plug-ins.

   For complete software installation instructions see the most recent edition of the *VENUE S6L Installation* guide, available for download from your Avid account.

3. AFTER installing VENUE 8.0, you must update the E6L BIOS and BMC (see "E6L BIOS and BMC Upgrade for VENUE 8.0 and Downgrade for Earlier Versions" on page 58).

Important! E6L (2nd generation) Engine Re-cabling for Improved Performance and Expansion

Before installing VENUE software version 8.0, all existing E6L-192, E6L-144, and E6L-112 (2nd and 1st generation) engines must have their internal card-to-card jumper cables reconfigured. This affects factory-installed jumper cable connections between AVB-192 cards as well as any previously installed WSG-HD Waves SoundGrid and/or MLN-192 Milan Option cards.

This process takes only a few minutes. For instructions, see "E6LX and E6L Internal Cabling" on page 46.

⚠ After recabling (if any) and installing VENUE 8.0 on E6L-192/144/112, you must also update the BIOS and BMC. For instructions, see "E6L BIOS and BMC Upgrade for VENUE 8.0 and Downgrade for Earlier Versions" on page 58.

Important Installation Note

For systems with WSG-HD Waves SoundGrid Option Card, "Important Installation Notes for VENUE 8.0" on page 56.

System Requirements and Compatibility

Avid can only assure compatibility and provide support for hardware and software it has tested and approved. For complete system requirements and a list of qualified computers, operating systems, hard drives, cables, displays, other third-party devices, and versions of Pro Tools® software, visit: www.avid.com/S6Lsupport.

Pro Tools and S6L

For complete Pro Tools compatibility, system requirements, and required optimizations for VENUE, visit: What are the System Requirements for Pro Tools with S6L?

Important!

Whenever you are recording or playing back to/from Pro Tools, do all of the following on the Pro Tools computer:

- Go to `System Preferences > Network` and disable `Wi-Fi/Airport` and `Bluetooth` (make sure `Wi-Fi` is completely Off).
- Go to `System Preferences > Sharing` and make sure `Internet Sharing` is off / disabled.

MADI-192 MADI Option Cards

If your system includes one or more MADI-192 MADI Option cards, see "Updating MADI Card Firmware" on page 57.

WSG-HD

If your system includes WSG-HD card, you must first follow the instructions in "E6LX and E6L Internal Cabling" on page 46 to install and configure internal cables as described before installing VENUE 8.0.

As of VENUE software version 7.1, Waves v14 or later is required. If your system includes an Avid WSG-HD Waves SoundGrid Option card, update the S6L system to VENUE 8.0 first, then follow the SoundGrid software update instructions provided by Waves to install v14. See also "Important Installation Notes for VENUE 8.0" on page 56.

MLN-192 Milan Option Cards

If your system includes an MLN-192 card, you must first follow the instructions in "E6LX and E6L Internal Cabling" on page 46 to install and configure internal cables as described before installing VENUE 8.0. This re-cabling is required to simplify firmware updates to the MLN-192, and to support new functionality provided in VENUE 8.0 (including new support for up to 2x MLN-192 cards).

VENUE Standalone Software

Be sure to manually uninstall any older versions of VENUE Standalone Software before installing a newer version of VENUE Standalone software (when available).

Important CTM and MTS Compatibility Information

- S6L consoles manufactured after April 2023 include new touchscreens and require VENUE software version 7.1.2 or later. These control surfaces must not be downgraded to earlier versions of VENUE software.
- VENUE 7.1.2 and later is compatible with all S6L consoles.

   Reminder: VENUE 8.0 or later is required to use E6LX-256.

- If using I/O Sharing, all systems must be running the same version of VENUE software.
- The new CTM and MTS touchscreens are not compatible with older consoles. Do not transfer or attempt to install newer touchscreens in S6L consoles manufactured prior to April 2023.

Contact VENUE Support if you need help identifying the revision of your touchscreen.

Conventions Used in This Guide

All of our guides use the following conventions to indicate touch screen gestures and key commands:

Convention	Action
Touch	Touch an element on-screen briefly and immediately release your finger. Used to activate a function or toggle a parameter value.
Swipe	Touch an area on-screen and drag left/right/up/down. Used to scroll elements, where available.
Touch, Hold, and Drag/Slide	On the external VENUE software screen, touch and hold a parameter, then slide your finger to adjust parameters on-screen, or to drag elements.
Touch-and-Hold	On the external VENUE software screen, touching and holding an element on-screen, then releasing lets you access pop-up menu options, where available.
Double-Tap	Quickly tap an on-screen element such as a name field to edit its name
Options › System	On the external VENUE software screen, touch Options, then touch the System tab to display the System page.
Shift-touch/Ctrl-touch/Alt-touch	On the external VENUE software screen, press and hold Shift (or other keyboard modifier) on the keyboard, then touch an on-screen parameter.

The names of selectable on-screen elements that contain text are displayed in a different font.

The names of physical switches on the S6L control surface are in displayed `in bold text`.

The following symbols are used to highlight important information:

💡 *User Tips are helpful hints for getting the most from your system.*

⚠️ **Important Notices include information that could affect your data or the performance of your system.**

⌨️ *Shortcuts show you useful keyboard or mouse shortcuts.*

📄 *Cross References point to related sections in this guide and other VENUE guides.*

When Using a Mouse with S6L

For the best experience, Avid recommends you use qualified external monitors with touchscreen capabilities for accessing the external VENUE software screen. When discussing on-screen selections, "touch" is used. If you are using a mouse to control the external VENUE software screen, "touch" is synonymous with "click," "touch-and-hold" is synonymous with "right-click," "double-tap" is synonymous with "double-click" and "touch, hold and slide" is synonymous with "click-and-drag."

Resources

The Avid website (www.avid.com) is your best online source for information to help you get the most out of your Avid system. The following are just a few of the services and features available.

Account Activation and Product Registration

Activate your product to access downloads in your Avid account (or create an account if you don't have one). Register your purchase online, download software, updates, documentation, and other resources.

https://www.avid.com/account

Support and Downloads

Contact Avid Customer Success (technical support); download software updates and the latest online manuals; browse the Compatibility documents for system requirements; search the online Knowledge Base or join the worldwide Avid user community on the User Conference.

https://www.avid.com/Support/index.html

For S6L system-specific support, visit:

www.avid.com/S6Lsupport

Get started learning the ins and outs of S6L using the many Avid Live Sound videos on YouTube.

Training and Education

Study on your own using courses available online, find out how you can learn in a classroom setting at an Avid-certified training center, or view a webinar. For example, check out the live sound webinars hosted by Robert Scovill:

https://www.avid.com/resources/live-sound-webinar-registration

Products and Developers

Learn about Avid products; download demo software or learn about our Development Partners and their plug-ins, applications, and hardware.

https://www.avid.com/Products/index.html

2   E6LX-256

The E6LX-256 engine provides the real-time processing engine for input and output channels, HDX DSP processing card(s) for AAX DSP plug-ins, and audio network, synchronization, and utility connections.

⚠ **While in use, the E6LX engine must be oriented horizontally, with the bottom of the engine facing downwards.**

- E6LX Engine Features
- E6LX Cards and Features
- Operational Requirements
- Cabling Requirements
- System Requirements and Compatibility
- Installation
- E6LX Front Panel
- E6LX Back Panel
- Mechanical Specifications

E6LX Engine Features

	E6LX-256
Sample rates	96 kHz
Input channels	256
Input processing (per channel)	HPF, LPF, 4-band PEQ, Exp/Gate, Comp/Limiter, Delay, 8 plug-in inserts, hardware insert
Mix buses	192 + L-R, C/Mono
Output processing (per channel)	7-band PEQ, Compressor/Limiter, Delay, 8 plug-in inserts, hardware inserts
Matrix	64 x 64
VCAs	48
Monitor buses	2 stereo, each with independent control and routing
Graphic EQs (31-band)	192 (MIx Bus) + 64 (Matrixes) + 3 Mains
Plug-in support	1 x HDX-192 DSP card, expandable to up to four HDX cards
Plug-in slots	400
Pro Tools Recording/Playback	Record/play back up to 128 audio tracks via Ethernet AVB
Two-Track USB Record/Playback	Record or playback 2-track (stereo) to/from a USB thumb drive
AVB Audio Network Cards	2, each providing etherCON (copper) or SFP (fiber optic) connections
I/O Sharing	Supports combinations of Stage 64/48/32/16 racks, up to 192 inputs total from Stage ring

	E6LX-256
Word Clock I/O	Input and Output, BNC, 75 Ohm coaxial
USB ports	4 USB 2.0 ports (2 front, 2 back), plus 1 internal USB port
Power supply	Dual redundant, internal
Rack spaces	5U

VENUE E6LX

E6LX Cards and Features

You can install the following expansion cards in E6LX engines.

HDX-192 DSP Expansion Cards

Each E6LX engine provides a single HDX DSP card in its basic configuration and supports up to a maximum of four HDX DSP Expansion Cards, for increased plug-in processing.

⚠ **E6LX requires HDX-06 or later.**

AVB-192 Network Cards

Each E6LX includes two AVB-192 Network Cards for connecting the E6LX to other components in the S6L system.

MADI-192 MADI Option Cards

The MADI-192 MADI Option Card is a high-channel-count MADI audio interface card for E6LX engines. Each MADI-192 MADI Option Card provides four MADI BNC connectors (2x coaxial in, and 2x coaxial out). Each pair of coaxial MADI inputs and outputs support up to 32 channels per I/O pair. Up to four MADI Option cards can be installed in an E6LX engine.

⚠ **At the time of this writing, the Word Clock Output connector on MADI-192 cards is not supported and should not be used.**

WSG-HD Waves SoundGrid Option Card

The WSG-HD Waves SoundGrid Option Card from Avid lets you integrate Waves SoundGrid processing directly into your VENUE | S6L mixes. Once the WSG-HD Card is installed in your E6LX engine, plug-ins hosted on the Waves SoundGrid server appear on the VENUE Plug-Ins screen inside of the Waves SoundGrid Rack plug-in (up to 8 plug-ins per instance of SoundGrid Rack). Up to two compatible Waves SoundGrid servers can be connected simultaneously for redundancy with automatic fail-over. A single WSG-HD card can be installed in any E6LX or E6L engine.

MLN-192 Milan Option Card

The MLN-192 Milan Option Card for E6LX engines provides AVB connection to 3rd-party Milan-compliant devices. The Milan format was created in conjunction with Avid, D&B, L-Acoustics, Meyer, and others as a sample accurate, plug-and-play network format.

With VENUE 8.0 and later, the channel capacity has been increased to 256 and up to two MLN-192 cards can be installed in all engines (except E6L-112, which supports a single MLN-192 card). Features and capabilities of the MLN-192 Milan Option Card for Avid VENUE | S6L systems include *Milan* and *AVB-HD* modes:

Milan Mode

- Transmits and receives 256 channels of audio over AVB-Milan at 96 kHz
- Facilitates audio signal distribution on an AVB network in multi-venue installations
- Provides connection to 3rd-party AVB devices to distribute audio over the Milan AVB network
- Allows S6L system-to-system routing (such as between front of house and monitors, or broadcast) of up to 256 channels
- When combined with S6L support for star network topologies, MLN-192 lets you create a distributed I/O model in theaters, houses of worship, and performance venues

AVB-HD Mode

MLN-192 cards can also be used for Pro Tools recording and playback, including full Virtual Soundcheck, by configuring the MLN-192 card for AVB-HD mode and connecting the card directly to an AVB-compatible Pro Tools computer. This mode is wholly distinct from Milan, and requires no additional switches or hardware other than a compatible Pro Tools system. Up to 216x216 channels are supported.

For complete Pro Tools compatibility, system requirements, and required optimizations for VENUE, visit: What are the System Requirements for Pro Tools with S6L?

Option Card Slot Guidelines

The following table lists which Option Cards can be installed into which Expansion slots on the E6LX engine:

Slot	1	2	3	4	5	6	7	8
Option Card	MADI-192	MADI-192	MADI-192	MADI-192		MLN-192	MLN-192	WSG-HD
Notes	(if only 1x MADI)	(if 2x MADI)	(if 3x MADI)	(if 4x MADI)		If 2x MLN (identity will be "MLN #1")	If 1x MLN, install in slot 7 (identity will be "MLN #1"). If 2x MLN, identity will be "MLN #2"	

EXPANSION Slots 1–8

E6LX EXPANSION slots

Operational Requirements

Temperature and Ventilation

S6L system devices should be operated away from heat sources and with adequate ventilation.

💡 *Hardware monitoring and automatic warnings are provided for temperature, power and other factors. For more information, see the S6L System Guide.*

Storage

S6L system devices should be stored and transported at temperatures not lower than 0 degrees F (–18 degrees C) and not exceeding 140 degrees F (60 degrees C).

Operation

S6L system devices should be operated at temperatures not lower than 40 degrees F (4 degrees C) and not exceeding 104 degrees F (40 degrees C).

During operation, the left and right end caps on the back of the S6L control surface, the front and back of the E6LX/E6L engine, and the fans on the back of Stage I/O units should be exposed to ambient air. Do not block the ventilation holes on any S6L system component.

Do not operate in direct sunlight or at extreme ambient temperatures.

Water and Moisture

S6L system devices should be operated away from sources of direct moisture and should be kept clear of liquids that might spill into the units. If condensation is present on the unit, leave the unit to dry in ambient air for at least one hour before powering the unit on.

Storage humidity range	5% to 95%, non-condensing
Operating humidity range	20% to 80%, non-condensing

Cleaning and Maintenance

Consider the following guidelines when cleaning your Avid equipment:

- Use a dry cloth to clean the surfaces of the S6L components. Do not apply any cleaning solutions, spray cleaners, or abrasives to the surfaces of the components.
- Use a microfiber cloth (included with the S6L control surface) to clean the touch screens. Do not apply any cleaning solutions, spray cleaners, or abrasives.

Cabling Requirements

Power Connections

Power connections on all S6L system devices are auto voltage-selecting (100 to 240V nominal, 90-260V maximal, 50–60 Hz).

Make sure your power source is correctly rated for the number of units you are connecting. A surge-protected power source (not included) is highly recommended.

Audio Network Connections

Audio network connections between S6L system components can be made using either copper or fiber-optic audio network cables. Cable types can be mixed within a system, but only one type of connection (copper or fiber) can be used per audio network connection.

⚠ For complete information on connecting S6L system components, see the VENUE S6L Installation Guide.pdf.

Copper

Shielded Cat 5e (350 MHz) or better Ethernet cable with Neutrik etherCON connectors are required, supporting a distance of up to 100 meters per connection.

Fiber-Optic

S6L systems support single-mode fiber (SMF) or multi-mode fiber (MMF) cable to make audio network connections between components, as follows:

SMF

Requires single-mode 9/125 OS1 or OS2 cables with duplex LC connectors and two qualified single-mode SFP transceivers per connection, supporting distances of up to 10 kilometers

MMF

Requires multi-mode 50/125 OM2 or better cables with duplex LC connectors and two qualified multi-mode SFP transceiver modules per connection, supporting distances of up to 500 meters.

⚠ Visit www.avid.com/S6Lsupport for a list of qualified SFP transceivers for use with S6L systems.

System Requirements and Compatibility

Avid can only assure compatibility and provide support for hardware and software it has tested and approved. For complete system requirements and a list of qualified computers, operating systems, hard drives, and third-party devices, visit: www.avid.com/S6Lsupport

Installation

To install E6LX:

1. Make sure all devices (S6L control surface, E6LX engine, and Stage I/O unit(s)) are powered off.

2. Connect S6L control surface Network port **A** to port **B** on the E6LX **CONSOLE** card.

3. Connect port **A** on the E6LX **CONSOLE** AVB-192 card back to Network port **B** on the S6L control surface.

To connect the Stage ring:
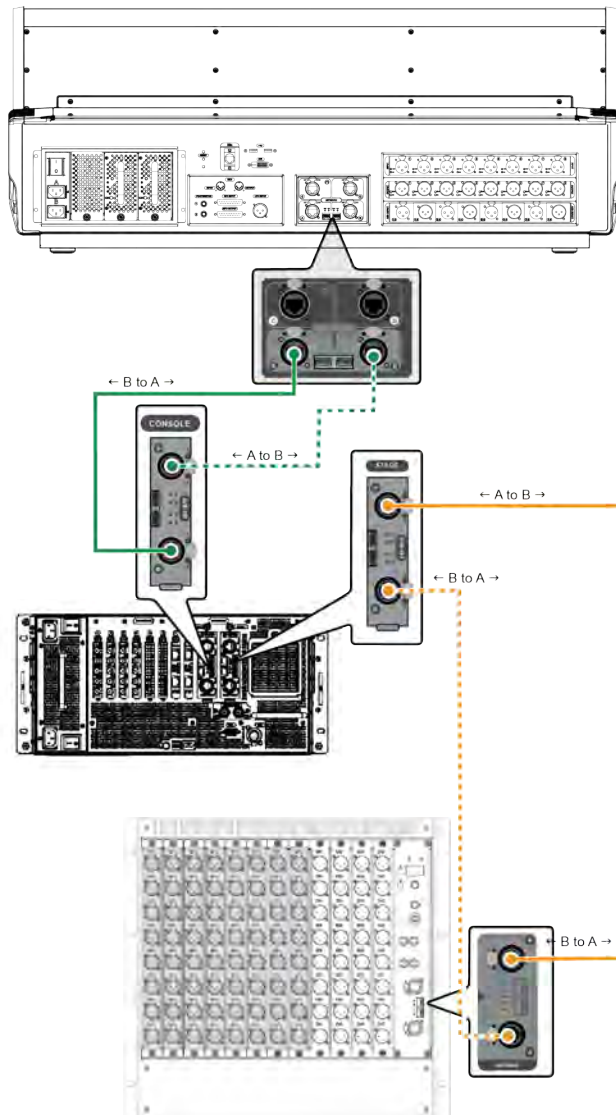
1. Make sure all devices (S6L control surface, E6LX engine, and Stage I/O unit(s)) are powered off.

2. Connect port **A** on the E6L **STAGE** AVB-192 card to port **B** on the Stage IO unit.

3. Connect Stage IO unit port **A** back to port **B** on the E6LX **STAGE** AVB-192 card.

Example S6L network connections for E6LX

E6LX Front Panel
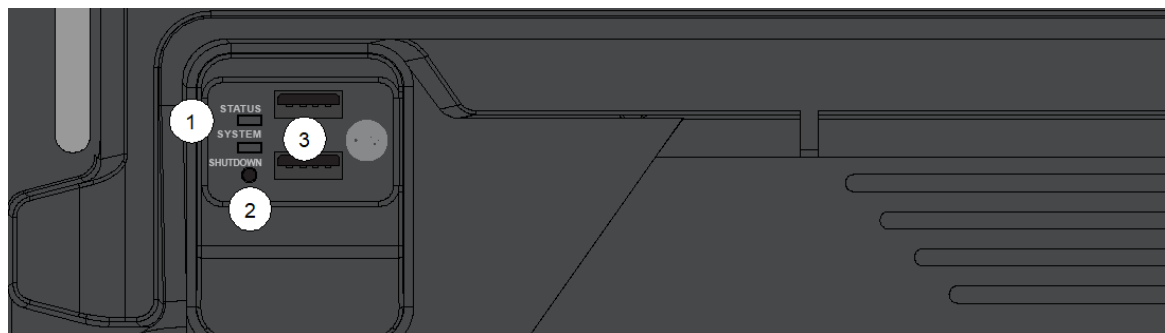
E6LX engine front panel

The front panel of the E6LX engine provides the following controls, connections and indicators:

1 - Status and System LEDs

These LEDs indicate the current status of the E6LX engine, as described in the following table.

LED	Color	State	Description
Status	Green	Solid	All clear (no hardware alerts are detected).
	Amber	Solid	One or more hardware alerts are detected. Consult the VENUE software Options › Devices page for detailed info.
	Green and Amber	Alternating	No bootable drive found.
	Off (unlit)	n/a	E6LX is powered off, or is initializing during startup.
System	Green	Solid	E6LX is fully operational, and connected to the S6L control surface
	Amber	Solid	E6LX processor has shut down; safe to power off E6LX.
		Flashing	E6LX processor has initialized and is waiting to connect to S6L Surface
	Off (unlit)	n/a	E6LX is powered off, or is initializing during startup.

2 - Shutdown (Reset)

This button shuts down the software on the E6LX engine. Only use this button to shut down the E6LX if the engine has been disconnected from an S6L control surface and cannot be shut down via the `Shut Down` button on the `Options > System` page of the external VENUE software screen, or for troubleshooting purposes.

3 - USB

Use these ports for installing system software and for troubleshooting and maintenance only.

E6LX Back Panel
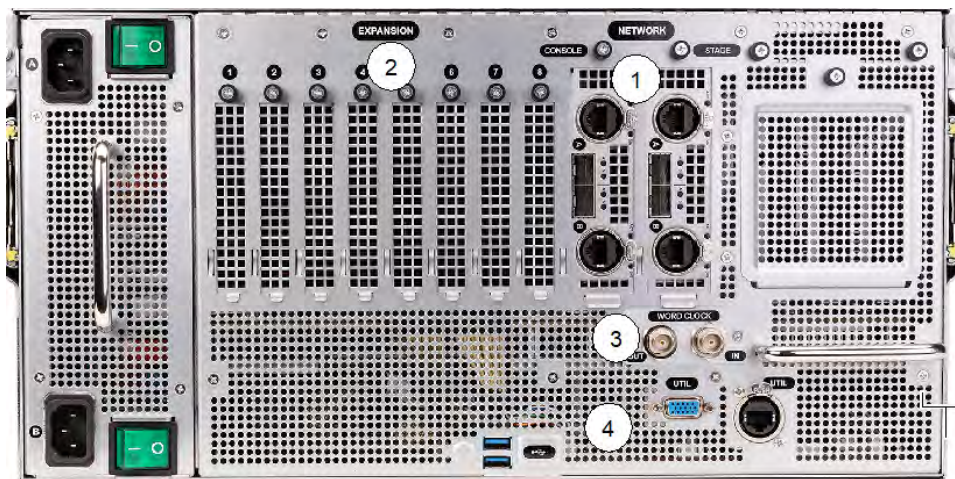
E6LX engine back panel

E6LX Engine Audio, Control, and Synchronization Connections

The E6LX engine provides the following back-panel connections:

1 - Network STAGE and CONSOLE AVB-192 Network Card Slots

These slots contain AVB-192 Network cards. Each AVB-192 card provides two AVB audio network connections (**A** and **B**) to connect the control surface to other S6L system components. Each connection provides an RJ-45 with etherCON connector for copper connections and an SFP transceiver module-compatible fiber-optic port for fiber-optic connections. Only one connection type (copper or fiber-optic) can be active for each audio network connection.

⚠️ **Never connect both copper and fiber simultaneously to the same port (A or B).**

AVB / Network Card Slots	Description
CONSOLE	The AVB-192 Network card installed in this slot connects to the S6L control surface.
STAGE	This slot contains a second AVB-192 Network card. This card connects to S6L I/O units.

📄 *For more information on audio network connections, see the VENUE S6L Installation Guide.*

2 - Expansion Card Slots

The back panel of the E6LX engine provides eight half-length PCIe slots for Option cards such as the MADI-192 MADI Option Card. At the time of this writing:

- Up to four MADI-192 MADI Option cards can be installed in slots 1–4.
- A single WSG-HD card can be installed in an E6LX. The WSG-HD card must be installed in **EXPANSION** slot 8.
- Up to two MLN-192 cards can be installed in an E6LX. MLN-192 cards must be installed in **EXPANSION** slots 7 (if only 1x MLN-192 card) and 6 (if 2x MLN-192 cards).

For information on supported Option cards, visit https://www.avid.com/products/venue-s6l-system.

3 - Word Clock In and Out (Two 75 Ohm Coaxial BNC Connectors)

These ports let you connect to the word clock ports of external digital devices to sync all digital devices in your system.

4 – Utility (One RJ-45 Port, one VGA Display Port, and two USB 2.0 Ports)

Use these ports for installing system software and for troubleshooting and maintenance only.

E6LX Engine VGA–to–HDMI Adapter

In the event that is necessary to access the E6LX Engine desktop you can use a qualified VGA–to–HDMI adapter to connect an HDMI monitor directly to the E6LX Engine.

Example: Cable Matters VGA-to-HDMI Adapter

💡 *Other adapters of comparable specifications should also work; the Cable Matters adapter has been tested and qualified by Avid.*

Before You Begin

Make sure the E6LX Engine is powered off, and that you have connected a USB keyboard and mouse to the E6LX Engine.

To use an HDMI monitor with the E6LX Engine:

1. Connect an HDMI monitor to the HDMI connector on the adapter using a standard HDMI cable.
2. Connect the VGA connector on the adapter to the VGA port on the back of the E6LX Engine.
3. Connect the USB connector on the adapter to an available USB port on the E6LX Engine.
4. While holding down F5 on the keyboard, power on the E6LX Engine.

E6LX Engine Power Connections
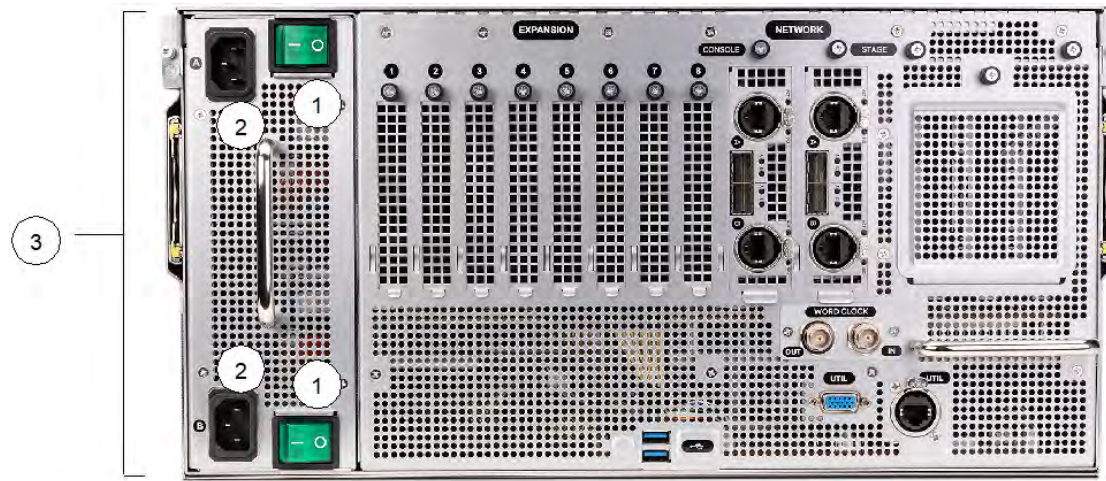
E6LX engine PSUs

E6LX provides the following power connections, switches, and indicators:

1 - Power Switch(es)

These switches power E6LX on and off, as follows:

On

Applies power to each PSU and launches system software. S6L must be connected to a powered-up E6L engine for the system software to fully launch.

Off

Powers down the corresponding control surface PSU(s). VENUE software must be shut down properly from the `Options > System` page of the external screen before turning the power switch to off (0).

⚠️ **Do not power off the E6LX engine until the Status LED is unlit and the System LED lights amber.**

2 - A and B AC Inlets

Connect either one of these inlets to an AC power source to provide power to all three PSUs. Connect each power inlet to a discrete power source for AC source redundancy.

3 - PSUs

E6LX engines provide dual redundant PSUs with automatic failover. Two PSUs are required to run the E6LX engine.

Mechanical Specifications

Parameter	Specification
Maximum Height	8.6 inches (218.7 mm)
Rack Spaces	5U
Maximum Width	19 inches (483.7 mm)
Depth with Bezel	21.2 inches (537 mm)
Depth without Bezel	19.6 inches (497 mm)
Weight	63 lbs (28.6 kg)

Dimensions
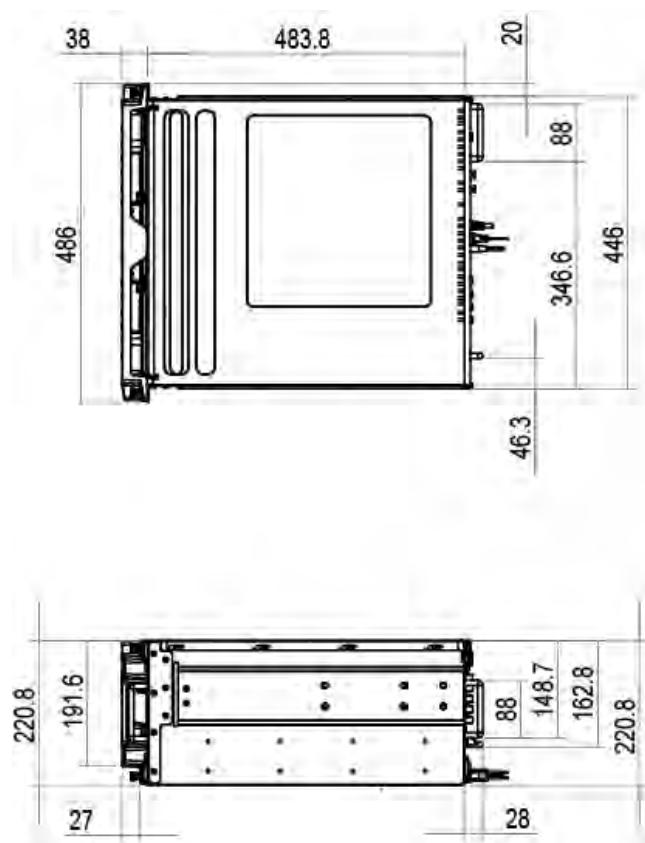
E6LX dimensions

3   New Features and Enhancements

The following new features are included in VENUE 8.0:

Mixing and Metering

- "Any Mix to Monitors" on the next page
- "Meters for VCAs and Monitor Buses" on page 23
- "AutoMix" on page 23
- "New Features for Auxes, Groups, and VCAs" on page 26
- "CKM Horizontal Mode and Overview Workflows " on page 29

Recording, Playback, and Virtual Soundcheck

- "Expanded Settings for Virtual Soundcheck in Options › System" on page 31
- "Expanded MLN-192 Card Support for AVB-HD Mode (216x216 VSC)" on page 31
- "Increased MADI Virtual SoundCheck Channels" on page 37

Events

- "Events and Smart Duplicates" on page 38

Miscellaneous

- "Options Tabs Reorganized" on page 45

Any Mix to Monitors

You can assign any Output bus to be the default Mix to Monitors bus for both Monitor busses (A and/or B). This capability is useful when mixing monitors, and in certain broadcast scenarios.

To assign a Mix to Monitors bus:

1. Go to `Options > Busses`.
2. In the `MONITOR BUS A` or `MONITOR BUS B` sections, click the `Mix to Monitors` menu and choose a desired Output bus.

Assigning an Output bus for MONITOR BUS A in the Options › Busses tab

The current Mix to Monitors setting can be stored by saving the Show file.

Additional Notes

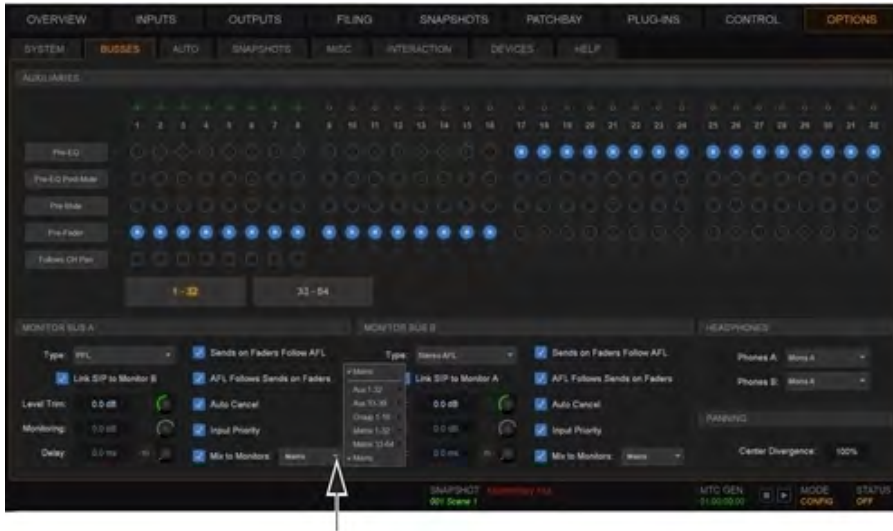If user assigns a Matrix to Mix to Monitors for a Monitor bus that has that same Monitor bus as a source, a warning dialog is shown and the Monitor bus is muted. On the MLM, automute is indicated by the Mix to Monitors button flashing red (as well as the Mute switch for either Flex fader if that fader is currently assigned to the affected Monitor bus).

Additionally if Mon A has a Mix Source that is fed by Mon B, and Mon B has a Mix Source that is fed by Mon A, the same Feedback Loop dialogue is shown, and *both* Monitor busses are muted.

In either situation, the following additional indicators are displayed:

- Options Busses `Monitor Level` knob greys out, and the value is displayed in red.
- On the MTS, the `MONS` value is displayed in red.

⚠️ **Note that the system cannot warn or prevent the creation of some complex configurations that could result in a feedback loop.**

Delay Compensation Notes

If Monitor A or B are assigned as Sources into a Matrix, the Matrix will not be delay compensated to time align the Source of Monitor A/B and Monitor A/B itself in that same Matrix.

Solo and Mute EXT GUI Highlight

Because it is now possible to solo Mains, new indication of Solo and Mute state has been added to the external screen.

- When any channel or bus is soloed, its strip flashes yellow.
- When any channel or bus is muted, its strip flashes red.

Meters for VCAs and Monitor Buses

Monitor busses and VCAs provide post-fader metering for visual level checking. VCA metering shows the loudest member of the VCA, is always post-fader, and follows the current Peak/RMS setting.

AutoMix

You can have VENUE AutoMix all channels routed to a Group, with adjustable, global Attack and Release parameters for the AutoMix. AutoMix uses special post-fader meters as send level weights and provides a total attenuation level on that mix so that the resulting mix level does not depend on a number of active source signals.

AutoMix On/Off can be stored and recalled in Snapshots and is available for Group-specific Recall Safe. AutoMix On/Off, Attack and Release can be controlled using Events. Individual Group Automix On/Off is stored into Snapshots and Show Files.

Automix in action (CTM shown)

Using AutoMix

Automix can be turned on or off from CKMs, and from the Outputs page for each Group from the external screen.

To toggle AutoMix on or off from CKMs:

1. Bank to the desired Group, then press Select to select one or more Groups.
2. On the associated CKM, press the **INPUT** Channel Control Function switch. Or, touch the Input touch zone for the desired channel on the associated CTM in Meters or Channel view.

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3. Press the `AutoMix` knob (row 3, column 8) to toggle AutoMix on or off for the selected channel(s).

AutoMix controls on CKM

To toggle AutoMix on or off from the external screen:

1. Navigate the external screen to the `Outputs` page and select a Group.

2. Tap (or click) the **AutoMix** button, located below the Members section.

AutoMix button in the Outputs page (shown enabled)

In Meters view on CKM and MTS, a green box shows current on/off status for AutoMix.
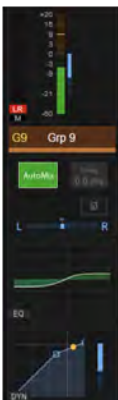
AutoMix indication on CTM/MTS Meters view

AutoMix Attack and Release

Global AutoMix Attack and Release settings can be adjusted in the `OPTIONS > AUTO` page.

💡 *Beginning in VENUE 8.0, the ADC tab has been renamed AUTO and provides controls for AutoMix and ADC.*

Rotate the encoder, or type in a value.

Parameter	Range	Default
Attack	1ms–250ms	15ms
Release	10dB/s–1000dB/s	50dB/s

💡 *AutoMix Attack and Release are available as Triggers and Actions in Events. See "Events and AutoMix" below.*

Snapshots and AutoMix

AutoMix On/off can be stored and recalled in Snapshots, and is available for Group-specific Recall Safe.

AutoMix is included under the `BUS` scope in Snapshots.
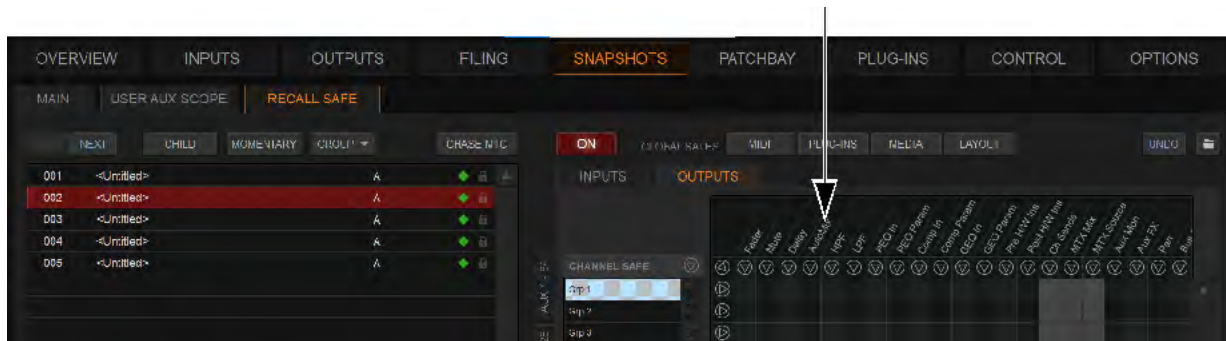
AutoMix in Recall Safe grid

Events and AutoMix

AutoMix on/off, AutoMix Attack, and AutoMix Release are available as Event triggers and actions.

To add an Event Trigger or Action for AutoMix on/off:

1. In `CONTROL > EVENTS`, create a new Event (see the *S6L System Guide* for more information).

2. To add an AutoMix trigger, click the Trigger `ADD` menu and choose `Any Group`, or a specific `Group`. Or, to add an AutoMix action, click the Action `ADD` menu and choose `Any Group`, or a specific `Group`.

3. Double-tap the new trigger to enter Event edit mode.

4. From the switch properties menu, select **Input > AutoMix**.
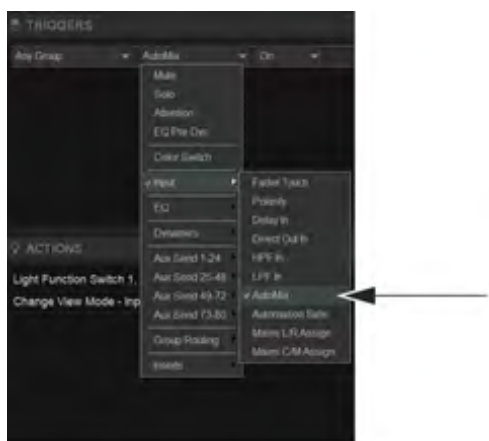
AutoMix on/off in Event Trigger properties sub-menu

To create an Event that uses AutoMix Attack or Release as a trigger or as an action:

1. In **CONTROL > EVENTS**, create a new Event (see the *S6L System Guide* for more information).

2. From the Trigger or Action **ADD** menu, select **Options > AutoMix**.

3. Edit the trigger or action properties as desired.

New Features for Auxes, Groups, and VCAs

Several new features make it easier to work with Auxes, Groups, and VCAs.

- Set All Members Pre/Post for Auxes
- Send Levels Shown in Members List
- Copy Color to Members
- Expanded Groups View
- Additional Mix Bus Configuration Choices

Set All Members Pre/Post for Auxes

You can quickly set all Aux member sends to Pre- or Post- from the Outputs screen for the desired Aux master.

To toggle Aux sends between Pre- and Post-fader:

1. Navigate the external screen to the Outputs screen, and attention the desired Aux master.

2. Select the pop-up menu at the top of the Members list (gear icon), and choose the desired command:

   ▶ To affect only the channels that are currently assigned to the Aux (as shown in the `Members` list), choose `Set All Members Pre`, or `Set All Members Post`.

   ▶ To affect all channels, regardless of whether or not they are assigned to the Aux, choose `Set All Possible Members Pre`, or `Set All Possible Members Post`.
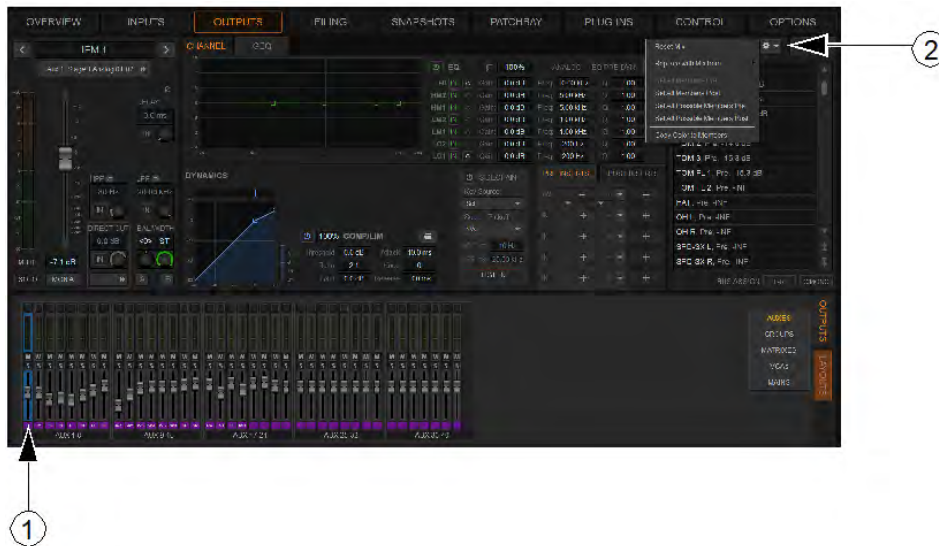
Managing pre/post status

All member Aux sends are set to the chosen Pre- or Post-fader setting, regardless of their previous setting.

Send Levels Shown in Members List

The Members list for Auxes displays level for each member channel.
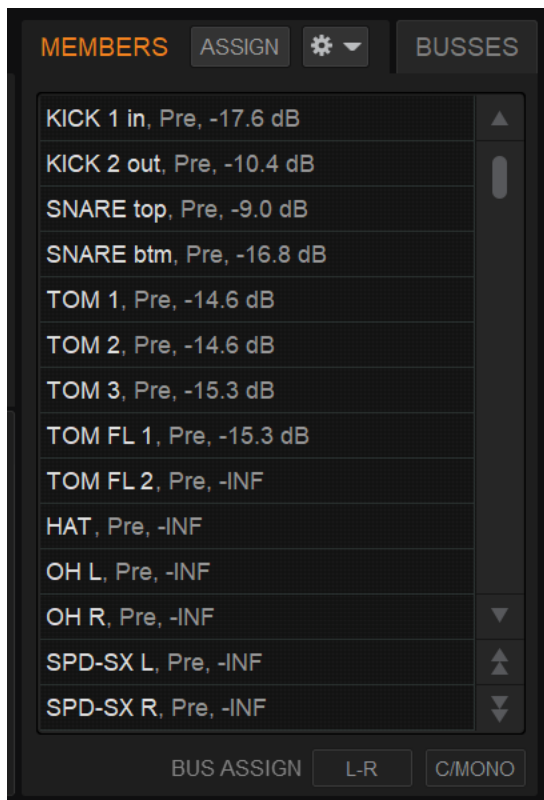
Level indication in the Members list

Copy Color to Members

The pop-up menu above the Members list provides the option Copy Color to Members. When selected, the color assigned to the currently selected output or bus is applied to all its member channels.

Expanded Groups View

Expanded view for Groups lets you see and make assignments to Group buses.

To see Expanded Groups view:

1. Select a channel, then navigate to the `Inputs` or `Outputs` page.
2. Do the following:
   ▶ Inputs page: At the far right in the `BUS ASSIGN` section, click the Expand icon.
   ▶ Outputs page: If necessary, click to display `BUSSES` (not `MEMBERS`), then click the Expand icon at the far right of the `BUS ASSIGN` section.

Expand Groups icon in the Inputs page (shown at left) and the Outputs page (shown at right)

Expanded Groups view is shown. To close Expanded Groups view, click the Collapse icon at the upper right.

Expanded Groups view

Additional Mix Bus Configuration Choices

You can configure the system to any combination of Auxes and Groups. Use the Group Busses menu in the `MIX BUS CONFIGURATION` secction of the `Options > System` screen to select the desired number of Groups, which then automatically configures the maximum number of available Auxes.

CKM Horizontal Mode and Overview Workflows

CKMs provide an "overview" functionality for the `Mix` switches to make it faster to navigate and select members, sends, and groups.

Horizontal Mode

When at least one channel is selected on the associated CFM, each of the three CKM `Mix` switches provide the following:

- Pressing a `Mix` switch once displays the same elements as in previous versions of VENUE software.
- Pressing that same `Mix` switch a second time displays "overview mode" that presents relevant banks or "chapters" of channels on two or three encoders. For example, in a configuration with 128 Auxes, instead of having to use the Left and Right arrow switches to bank sequentially to the next or previous set of 32 Auxes, you can press the encoder for the desired bank, such as Auxes 97–128.
- The Left and Right arrow switches next to each `Mix` switch let you page through the list of associated members, sends, or groups. Arrow switches are lit if there are previous or next members, sends, or groups available.
- Each `Mix` switch remembers the last selected bank.

The list of members, sends, or groups contains the following items:

Members

(White) Shows members of the selected channel (if the channel supports members). If the channel can have members, but currently has none, one empty Members page is shown and the upper left CKM OLED displays `No Members`.

Sends

(Purple) Shows Aux Sends of the selected channel (if the channel supports Aux Sends, and any number of Auxes are part of the current bus configuration).

Groups

(Amber) Shows Group assignments of the selected channel (if the channel supports Group assignment and any number of Groups are part of the current bus configuration). Unlike previous versions of VENUE software, Group assignments never share any page with Aux Sends.

Overview

While any `Mix` switch is selected, pressing that `Mix` switch a second time enters Overview mode for that selected `Mix`. (Overview mode can also be accessed by pressing and holding a `Mix` button for 2 or more seconds.

In Overview mode, CKM OLEDs display available pages, letting you quickly navigate to any page by touching the appropriate encoder. The `Mix` N button flashes with the color of the page shown before entering Overview.

- Members are shown on top 2 (or more) rows of OLEDs.
- Sends are shown on the 3rd row of OLEDs.
- Groups are shown on the 4th row of OLEDs.

Each OLED displays the name of its page, such as `Members 1-32`, `Aux Sends 33-64`, or `Group Assigns 1-16`. Other OLEDs are empty and their encoders are unlit. For Matrix strips, members are named Sources, such as `Sources 1-32`. The OLED is shown inverted for the currently selected page. Touching an encoder associated with a page jumps to that page and exits Overview. The Left and Right switches light when there are previous or next pages available.

To exit Overview, do any of the following:

▶ Press Mix N again (exits Overview mode but leaves Mix N selected).

▶ Change to a different mode.

▶ Select a different channel.

Fixed Layouts

When there are less than three pages of members, sends, or groups, Mix 1 navigates directly to the first page, Mix 2 to the second, and Mix 3 to the third. If there are fewer than three pages, unused Mix switch(es) are unlit.

The selected page is remembered per channel type (such as Input, Aux, Groups, Matrix, Mains, and VCA). The selected page is also stored and loaded in the Show file. The selected page cannot be recalled if the number of pages for any sends or groups changes (the next closest page is instead displayed).

Defaults for Non-Fixed layouts:

Defaults are applied when no previous persisted data is available.

- If the strip type has all 3 types (Members, Sends, and Groups), then Mix 1 corresponds to the first Members page, Mix 2 corresponds to the first Sends page, and Mix 3 corresponds to the first Groups page.

- If the strip has only one type (either Members or Sends or Groups), then Mix 1-3 correspond to the first three pages of this type. If the current engine/bus configuration does not allow having all three pages, then the last page will be displayed.

- If the strip has two types (Members and Sends/Groups, or Sends and Groups), then the first two pages correspond to the first type, and the third page corresponds to the second type. If the first type cannot have more than one page in the current engine/bus configuration, but the second type can, then defaults are one page for the first type and two pages for the second type.

Pressing `Default` (on the control surface or computer keyboard) + `Mix` N resets that Mix N to the default page. If this Mix N was not selected before, it gets selected. If this Mix N was selected, then defaulting does not enter Overview. If this Mix N is in Overview, Overview mode is exited.

Vertical Mode (No Channel Selected)

New behavior for `Mix` 1-3:

- `Mix` 1 is associated with all Members pages. Number of these pages is the max possible number of members (which is for VCAs). Color of this button is the same as for Members in horizontal CKM mode.

- `Mix` 2 is associated with all Aux Sends pages. Number of these pages is according to the actual number of Aux sends available (taking stereo strips into account). Color of this button is the same as for Aux Sends in horizontal CKM mode.

- `Mix` 3 is associated with all Group assigns pages. Number of these pages is according to the actual number of Group assigns available (taking stereo strips into account). Color of this button is the same as for Groups in horizontal CKM mode.

If there cannot be any Members/Sends/Groups for a particular strip, the top OLED of each appropriate page displays `No members`, `No sends`, or `No groups`. (For example, Inputs channels cannot have Members, while Matrixes cannot have Aux sends or Group assignments.) Page selection (across all 8 modes) is stored in the Show file, per CKM.

Expanded Settings for Virtual Soundcheck in Options › System

In the `Options > System` tab, the settings for System Inputs, Pro Tools Mode, and Recording and Virtual Soundcheck have been updated for new capabilities and a more intuitive layout.
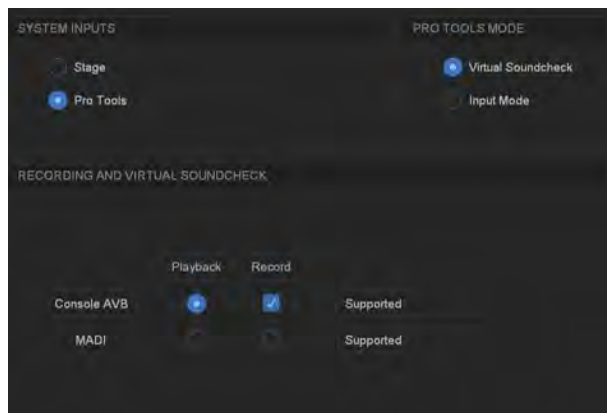
System Inputs, Pro Tools Mode, and Recording and Virtual Soundcheck settings in Options › System

- "Expanded MLN-192 Card Support for AVB-HD Mode (216x216 VSC)" below
- "Increased MADI Virtual SoundCheck Channels" on page 37

Expanded MLN-192 Card Support for AVB-HD Mode (216x216 VSC)

(Support for up to 2x MLN-192 Cards, and AVB-HD Mode for Virtual Soundcheck)

Beginning with VENUE 8.0, all engines (except E6L-112) support up to two MLN-192 cards.

MLN-192 cards also support Pro Tools recording and playback by using the card in *AVB-HD* mode. AVB-HD mode supports up to 216 in/216 out for recording and playback. When MLN-192 is correctly installed, connected internally, and connected to an AVB-compatible Pro Tools workstation, no additional connections are required for full Virtual Soundcheck with VENUE Link functionality with compatible Pro Tools systems (utilizing one MLN-192 card, only).

When two MLN-192 cards are installed, one can be configured for Milan mode (to connect to a Milan network), and the other for AVB-HD mode. Or you could configure both for AVB-HD mode for redundant recording, however only one MLN-192 card supports Virtual Soundcheck.

💡 *Prior to VENUE 8.0, a single MLN-192 card was supported in all engines and no internal jumper cable connection was required (an external jumper connection was only required for firmware updates to the MLN-192 card). Beginning with VENUE 8.0, all MLN-192 cards must be internally jumpered to support fimware updates (required) and AVB-HD mode. See "E6LX and E6L Internal Cabling" on page 46.*

AVB-HD Mode for Virtual Soundcheck

For complete Pro Tools compatibility, system requirements, and required optimizations for VENUE, visit:
What are the System Requirements for Pro Tools with S6L?

Configure MLN-192 for AVB-HD Mode

To configure MLN-192 for AVB-HD mode:

1. Make sure you have already installed VENUE 8.0 or later and installed at least one MLN-192 card into the E6LX or E6L engine.
2. Enable Config mode, then go to `Options > Devices` and select the (first) MLN-192 card.

3. In the `INFORMATION` section at the far left, click `SETTINGS`, and then from the card's `Mode` selector, choose `AVB-HD`.
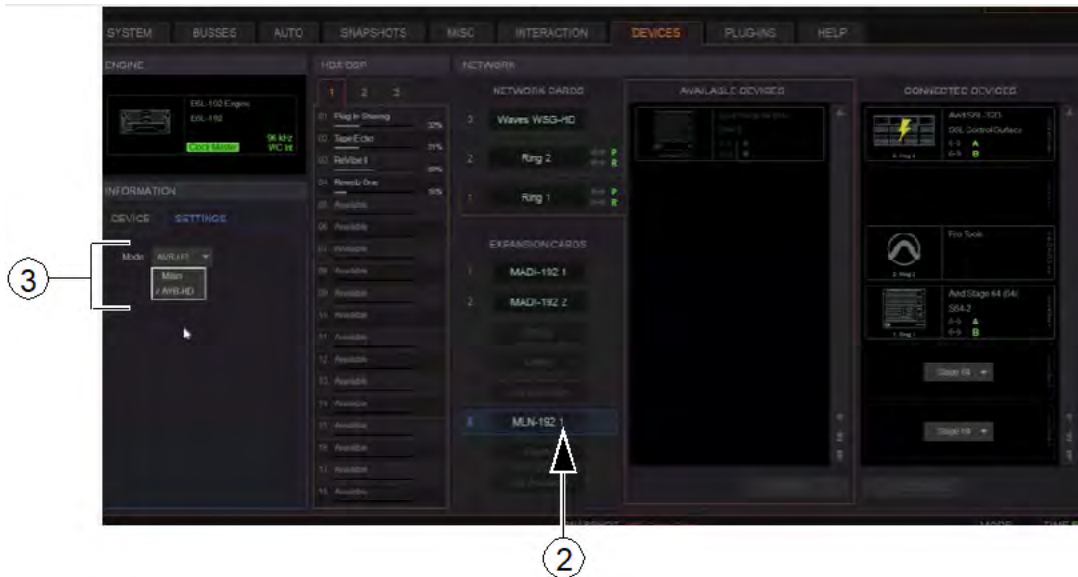
Configuring MLN-192 for AVB-HD mode

4. After changing modes, a dialog appears to let you perform a required restart of the engine. Choose `CONFIRM` to change modes and restart the engine, or choose `CANCEL` to cancel changes.

5. Go to `Options > System`, click `EDIT`, then choose `Use MLN-192 1 card` as the recording destination and/or playback source.
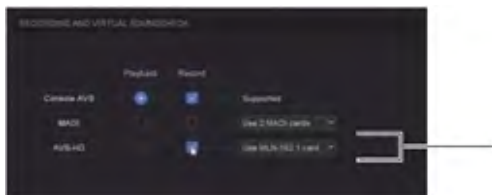
Enabling MLN-192 for recording

6. Click `APPLY` to apply the settings.

Connect MLN-192 to Pro Tools

▶ Connect an Ethernet cable from either external port on the MLN-192 card to an available Ethernet port on the Pro Tools computer.
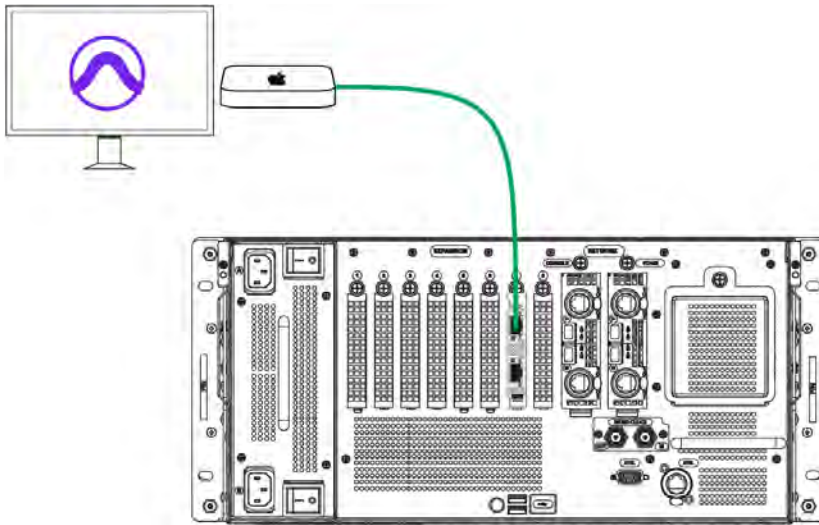
If 2x MLN-192 cards are installed (all engines except E6L-112): To connect two Pro Tools computers for redundant AVB-HD recording, connect an Ethernet cable from each MLN-192 card to an available Ethernet port on each Pro Tools computer. Do not connect both external MLN-192 ports to different computers.
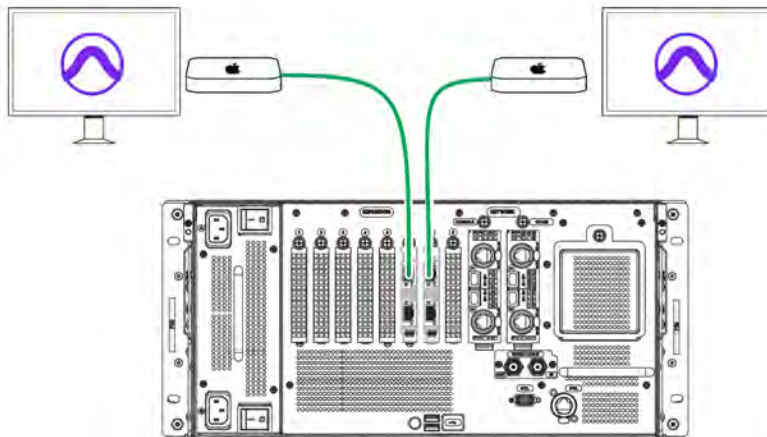
When S6L systems are configured for I/O Sharing, up to two Pro Tools computers, total, can be connected.

When each engine has an MLN-192 card installed:

You can connect one Pro Tools computer to an external port on each MLN-192 card.

When one computer is connected to each separate MLN-192 card, either computer can record or play back up to 216 channels.

When combining MLN-192 AVB-HD mode with Pro Tools AVB mode:

– Connect either external Ethernet port on the MLN-192 card to one Pro Tools system.

– Connect Network port C on the other system's S6L control surface to the other Pro Tools system.

⚠️ **A direct connection is required. Network equipment such as routers, hubs, and switches are not supported for S6L network connections to Pro Tools..**

If your computer only has Thunderbolt ports:

▶ Thunderbolt 2 Use a Thunderbolt-to-Gigabit Ethernet adapter.

▶ Thunderbolt 3 (USB-C) Two adapters are required at the time of this writing, a USB-C to Thunderbolt 2 adapter, and a Thunderbolt (2)-to-Gigabit Ethernet adapter. (Be aware that not all USB-C to Ethernet adapters are AVB-compatible.)

Mac Optimizations

Important! Do all the following to optimize your Mac(s) for AVB recording and playback:

1. Turn off Internet Sharing (System Preferences › Sharing)

2. Disable Wi-Fi, Airport, and Bluetooth (System Preferences › Network)

3. Turn off Energy Saving

4. Disable Notification Center (System Preferences › Notifications)

Make sure you have already installed Pro Tools software on an AVB-compatible Mac and confirmed that it is operating correctly (for the latest compatibility information, see What Are the System Requirements for Pro Tools with S6L?).

For a complete list of optimizations for your Pro Tools computer, visit: Pro Tools Computer Optimization

Configure the Pro Tools Computer

Important! Make sure you have performed all the Mac optimizations described on the previous page.

To enable AVB on the Pro Tools computer:

1. If multiple S6L systems are connected for I/O Sharing, disconnect the Ethernet cable between the two E6LX/E6L engines until after you have enabled AVB on the Pro Tools computer(s). For additional recommendations, see the VENUE S6L Live Recording Guide.

2. Make sure your S6L system and Pro Tools computer are powered on.

3. On the Pro Tools computer, go to Applications › Utilities and launch Audio MIDI Setup.

4. In Audio MIDI Setup, click the Window menu and choose Show Network Device Browser. Each MLN-192 connection appears in the Device list as "AVB-HD xxxx." When two MLN-192 cards are installed in E6LX (all) and E6L-192/144, the card in EXPANSION slot 6 = MLN #1, slot 7 = MLN #2.

5. Click to enable the desired AVB-HD connection.
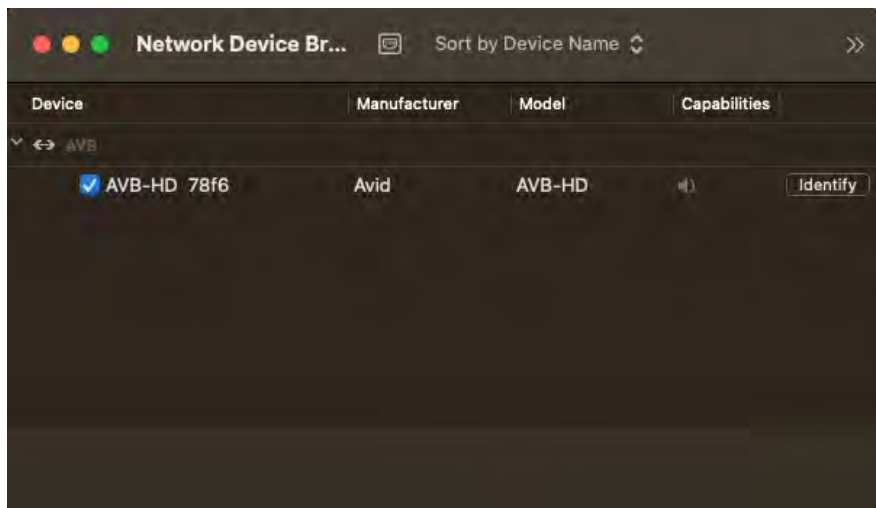
Enabled AVB-HD

(Optional) If using multiple MLN-192 cards in AVB-HD mode, give each a custom name by doing the following:

    a. From the Audio MIDI Setup Network Device Browser Devices list, select the AVB-HD entity so it is highlighted.

    b. Press Enter, enter a name, then press Enter again to save the name. (On laptops without a dedicated Enter key, press fn+Return.)
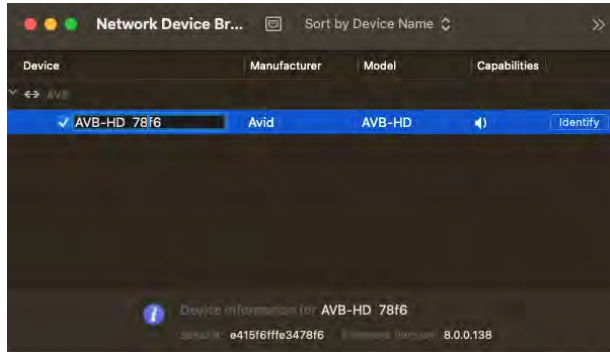
Entering a custom name

Note: If you are connecting two Pro Tools computers to a single S6L system, the first computer to connect to that system in AMS will be able to record only. The second computer to connect to that system in AMS will be able to record (redundant) and be the AVB-HD Input Source when performing a Virtual Soundcheck.

6. Repeat for any other Pro Tools computers you plan to use.

7. Proceed to"Configure AVB-HD " below.

💡 *After you have enabled AVB and configured Audio MIDI Setup as described above you will not need to repeat these steps in the future if using the same VENUE system and the same computer(s). You will only need to repeat the above steps if connecting a different VENUE system or computer(s).*

Configure AVB-HD

You can specify the channel count for AVB-HD between 128- and 216-channels at 96 kHz using Audio MIDI Setup on your Mac.

To configure AVB for up to 216 channels:

1. On your AVB-compatible Mac, launch Audio MIDI Setup and open the Network Devices Browser (Command 3).

2. Make sure there is a check next to the AVB-HD; if not, click to enable it.

3. Open the Audio Devices window (Window › Show Audio Devices) and do the following:

a. Select the AVB-HD entity in the column at the far left.

b. Right-click the selected AVB-HD and choose Configure Device.

AMS Audio Devices › Configure device

4. In the AVB Audio Entity Configuration window, click the Current Configuration selector and choose the desired channel configuration (such as `216x216 96 kHz`).
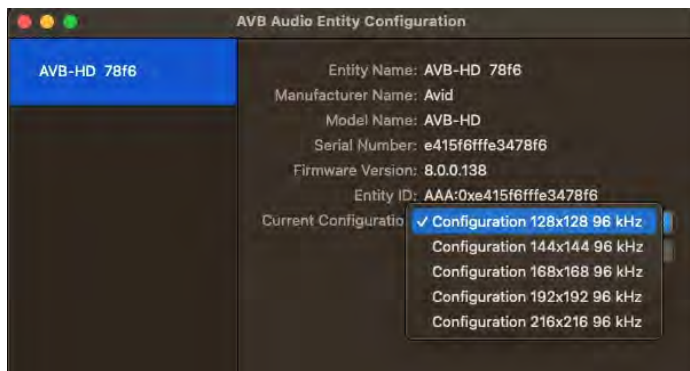
Current Configuration selector in AVB Audio Entity window

5. Close the AVB Audio Entity Configuration window.

6. Close AMS.

7. Proceed to .

Configure Pro Tools for AVB-HD

Configure the Pro Tools Playback Engine

After you have enabled and configured AVB, configure the Pro Tools Playback Engine dialog and then confirm S6L-to-Pro Tools communication.

To configure Pro Tools:

1. Launch Pro Tools, and if the Dashboard appears click Cancel.

2. Choose Setup › Playback Engine to open the Playback Engine dialog.

3. From the Playback Engine selector, choose AVB-HD.

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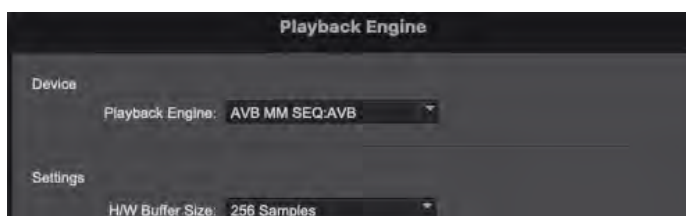
AVB-HD selected as the Pro Tools Playback Engine

The default name is ‹AVB-HD › unless you entered a custom name for it in the Audio MIDI Setup › Network Devices browser.

💡 *For best performance, use the highest available buffer size (for example, in Setup › Playback Engine, choose 2048 (for 96 kHz projects) from the H/W Buffer Size pop-up).*

4. Click OK.

Confirm Communication

To confirm S6L-to-Pro Tools communication:

1. On the external VENUE software screen, go to the Options › Devices page.

2. In the CONNECTED DEVICES column, an icon representing the Pro Tools computer is shown to indicate that the connection to Pro Tools is active.

   ▶ When only one Pro Tools computer is connected, it appears in the CONNECTED column.

   ▶ When two Pro Tools computers are connected, only the computer that connected to the E6LX/E6L last in AMS appears. This Pro Tools computer can perform recording and will be the Pro Tools source for Virtual Soundcheck playback (the first computer to connect to the E6L in AMS can only record).
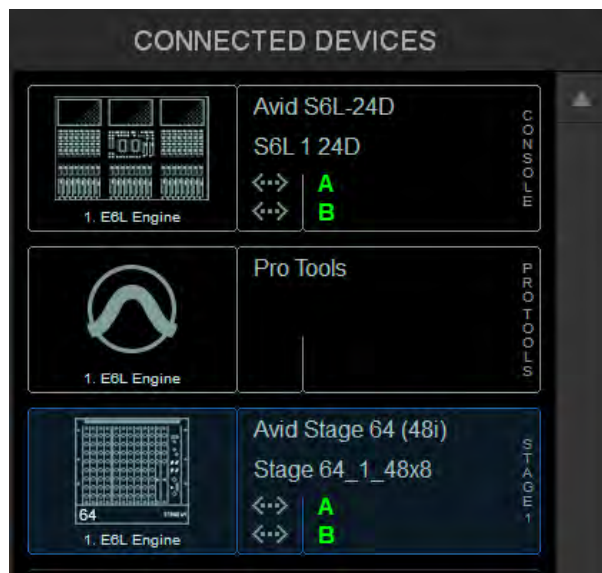
Pro Tools listed in CONNECTED DEVICES

3. You are now ready to record and playback to and from Pro Tools. For more information, see the VENUE S6L Live Recording Guide.

Increased MADI Virtual SoundCheck Channels

The maximum number of channels supported by MADI Virtual SoundCheck (VSC) has been increased. Maximum channel count varies based on the number of MADI-192 MADI Option Cards installed in the engine.

# of MADI-192 Cards	Maximum MADI VSC Channels
1	64
2	128

# of MADI-192 Cards	Maximum MADI VSC Channels
3	192
4	256

Connect MADI-192 cards to Pro Tools | MTRX Dual MADI I/O Cards, or to Pro Tools | HD MADI interfaces. For Virtual Soundcheck capability, a separate Ethernet connection is required between the S6L system and Pro Tools workstation for VENUE Link.

For complete Pro Tools compatibility, system requirements, and required optimizations for VENUE, visit: **What are the System Requirements for Pro Tools with S6L?**

Reminder

E6L-112 supports a maximum of 2x MADI-192 MADI Option Cards, for a maximum of up to 128 MADI channels.

Configuring MADI VSC Channel Count

The `Options > System` page provides a selector that lets you designate the number of cards for MADI Virtual Soundcheck. Each MADI-192 card provides up to 64 channels, up to a maximum of 4 MADI cards for 256 channels (E6LX, E6L-192, and E6L-144 only). E6L-112 supports a maximum of 2 MADI-192 cards.
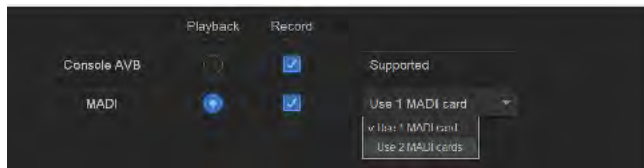
Configuring the number of MADI cards to use for playback and recording in Options › System

Show File Support

When loading older Show files that had a maximum MADI Virtual Soundcheck channel count of 128, the Show file loads as 128.

Events and Smart Duplicates

VENUE 8.0 and later include new features for Events, including an increase to the number of triggers and actions that can be included in an Event, and the addition of Smart Duplicate.

Up to 128 Triggers and Actions per Event

The maximum number of triggers and actions within each Event has been increased to 128.

Smart Duplicate

Smart Duplicate lets you quickly create multiple, similar events, triggers, or actions that automatically increment all trigger and action parameters, or either of two specific parameters only, as available. (The `DUPLICATE` button remains available to copy whole events, triggers, or actions, without incrementing any parameters.)

Examples:

Here is an example Event with simple triggers and actions, shown before and after using Smart Duplicate.

1. Event selected

Triggers and Actions

TRIGGERS

"IEM 1" (Aux 1) Mute, On

ACTIONS

"IEM 1" (Aux 1)   Mute   Off   Latch   0.0 sec
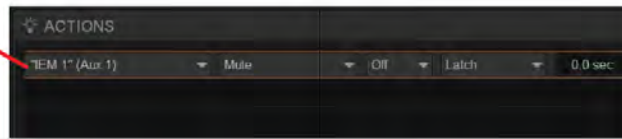
2. Smart Duplicate chosen

Ready
Ready   DUPLICATE
Smart Duplicate (Shift)
Smart Duplicate preferring a second parameter (Ctrl)
Smart Duplicate preferring a third parameter (Shift+Ctrl)
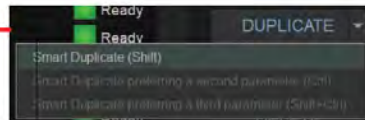
3. Duplicated Event

Trigger and Action parameters (Aux channel) incremented

TRIGGERS

"IEM 2" (Aux 2) Mute, On

ACTIONS

Set "IEM 2" (Aux 2) Mute, Off, Latch   Wait   0.0 sec

| 010 | Never Mute_Auxes | Ready |
| 011 | ?Never Mute_Auxes | Ready |
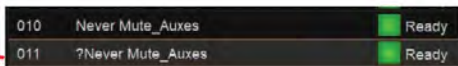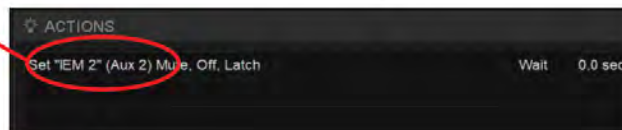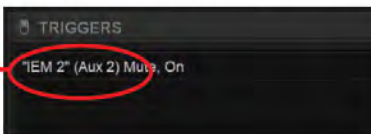
Event Name duplicated

Here is an example Event with multiple parameters in its triggers and actions, shown before and after using one of the other Smart Duplicate options to only increment one of these additional parameters.

1. Event selected

Triggers and Actions
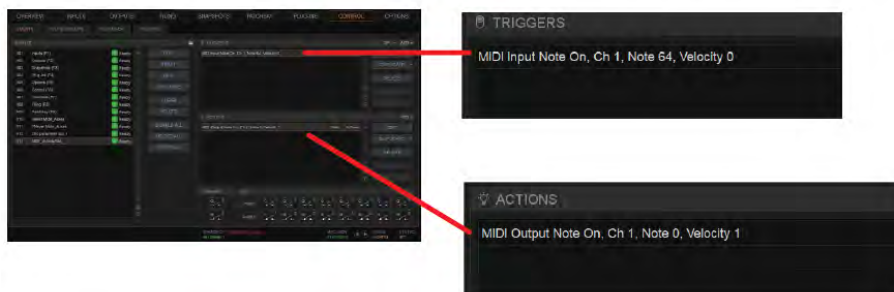
2. Smart Duplicate "third parameter" chosen
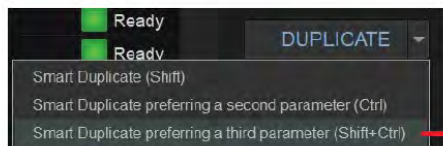
3. Duplicated Event

Trigger and Action "3rd" parameters (Note #) incremented only
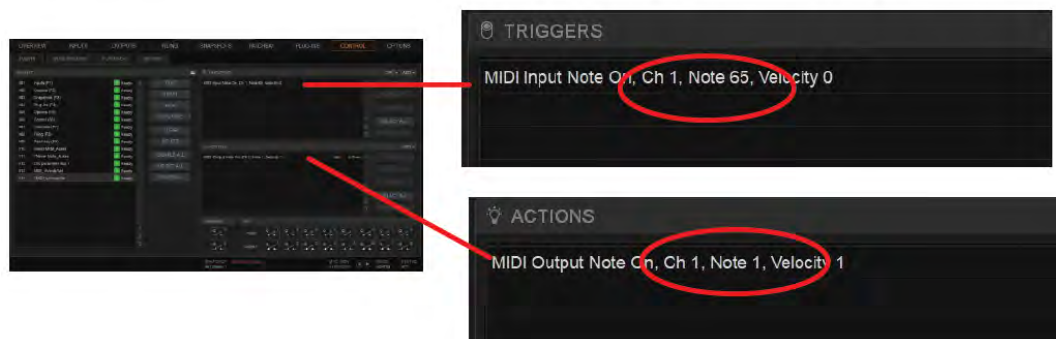
Note that "2nd" and "3rd" parameters may not mean 2nd or 3rd from the left in the display of trigger or action properties. 2nd and 3rd parameters are not available with all triggers or actions.

Using Smart Duplicate

To duplicate events, triggers, or actions using Smart Duplicate:

1. Navigate the external screen to `CONTROL > EVENTS`.

2. Click to select the desired event, trigger, or action. Selecting an event and using its DUPLICATE menu duplicates all triggers and actions in the event. Selecting a trigger or action and using the trigger or action DUPLICATE menus duplicates that trigger or action, only.

3. Click the arrow to the right of the event, trigger, or action `DUPLICATE` button to show the Smart Duplicate menu.

4. Choose one of the following, as available:

   ▶ `Smart Duplicate (Shift)`

   ▶ `Smart Duplicate for a second parameter (Ctrl)`

   ▶ `Smart Duplicate for third parameter (Shift+Ctrl)`

5. Or hold down the key shown in parenthesis and click `DUPLICATE`. For example, to do a `Smart Duplicate for a second parameter`, hold Ctrl and click `DUPLICATE`. You can also use the modifier keys on the console (Shift = **Multi-Select**, Ctrl = **Fine**).

Each menu item is only enabled if the appropriate action is available for at least one of the selected triggers or actions. Otherwise the menu item is shown disabled.

Multiple triggers and actions can be selected and batch duplicated. If multiple triggers and/or actions are selected, each newly created trigger and action sequence is incremented until it becomes unique from the original, as well as from new triggers and actions already created as part of this duplicate operation.

For example, if duplicating the following selected triggers in a list:

- `Function Switch 1, Pressed`
- `Function Switch 2, Pressed`
- `Function Switch 3, Pressed`

The newly created triggers will be:

- Function Switch 4, Pressed (from the original "Function Switch 1, Pressed" - first it was duplicated, then incremented becoming a "Function Switch 2, Pressed", but since such trigger already exists, incrementing continues and the "Function Switch 4, Pressed" trigger is created.
- Function Switch 5, Pressed (from the original "Function Switch 2, Pressed", while "Function Switch 3, Pressed" already exists and "Function Switch 4, Pressed" was already created in the previous step).
- Function Switch 6, Pressed (from the original "Function Switch 3, Pressed").

Another example: If the following items are duplicated:

- Function Switch 1, Pressed
- Config Mode Active
- Ch 1 Mute, On

Smart Duplication will create:

- Function Switch 2, Pressed
- Config Mode Active
- Ch 2 Mute, On

📄   *A trigger such as Config Mode cannot be Smart Duplicated because it does not have any parameters to increment..*

"2nd" and "3rd" Parameters

Smart Duplicate can be performed for the first parameter (named just "Smart Duplicate"), for the second (named "Smart Duplicate for a second parameter") and for the third (named "Smart Duplicate for a third parameter").

- The first parameter is the one most commonly expected to be incremented.
- The second parameter is the second common parameter to be incremented (if any).
- The third parameter is the least common parameter to be incremented (if any).

For example, in the "Ch 1, Aux 1, On" trigger, the channel number is the first parameter, while the Aux number is the second. No third parameter is available for this trigger. Some triggers and actions do not have any parameters for incrementing.

Incrementing Parameters in Triggers

Trigger	1st parameter	2nd parameter	3rd parameter
Channel Assignment	VCA strip number	N/A	N/A
Chase Time Code	N/A	N/A	N/A
Config Mode / Show Mode	N/A	N/A	N/A
Continuous Control	Strip number	Control (within a group of similar controls)	N/A
Snapshot Edit Mode	N/A	N/A	N/A
Flip To Faders	N/A	N/A	N/A
Footswitch	Footswitch number	N/A	N/A
Function switch	Function switch number	N/A	N/A
Gate	Strip number	N/A	N/A
Global Continuous Control (under Options)	Control (within a group of similar controls)	N/A	N/A
Global Switch Control (under Options)	Control (within a group of similar controls)	N/A	N/A
GPI	GPIO input number	N/A	N/A
Input Mode	N/A	N/A	N/A
Meter	Strip number	N/A	N/A
MIDI	Note/Control/Program/Pressure/LSB Value/Target Device ID	Velocity/Value/MSB Value, or (only if nothing from these are applicable) Channel number (if applicable)	Channel number (if applicable, unless it's a 2nd parameter)
Multi-Assign	Strip number	N/A	N/A
Plug-Ins Ready	N/A	N/A	N/A
Preview	N/A	N/A	N/A
Any snapshot recalled	N/A	N/A	N/A
Recall Snapshot	N/A (no user cases are seen)	N/A	N/A
Next/Previous Snapshot	N/A	N/A	N/A
Snapshot Update Mode	N/A	N/A	N/A
Solo/AFL	N/A	N/A	N/A
Solo In Place A/B	N/A	N/A	N/A

Spill Strip	Strip number	N/A	N/A
System Startup	N/A	N/A	N/A
Switch Control	Strip number	Control (within a group of similar controls)	N/A
Talkback	N/A	N/A	N/A
Time	N/A	N/A	N/A
Time Code	N/A	N/A	N/A
VCA assignment	Strip number	N/A	N/A

Incrementing Parameters in Actions

Action	1st parameter	2nd parameter	3rd parameter
Absolute/Relative Edit Mode	N/A	N/A	N/A
Banking	Bank number	N/A	N/A
Big Meters	Strip number	N/A	N/A
Bottom Row Flip to Faders	N/A	N/A	N/A
Bypass Plug-in	Plug-in row within rack (column)	N/A	N/A
Cancel	N/A	N/A	N/A
Clear Solos	N/A	N/A	N/A
Continuous Control	Strip number	Control (within a group of similar controls)	N/A
Control on Fader	Strip number	Control (within a group of similar controls)	N/A
Copy Selected Channel	N/A	N/A	N/A
Cue on Mains Fader	N/A	N/A	N/A
Disable Bank Safe	N/A	N/A	N/A
Disable Event	Event number	N/A	N/A
Fader Banking Mode	N/A	N/A	N/A
Flash Lightbar	N/A	N/A	N/A
Function Switch	Function switch number	N/A	N/A
GEQ On Faders	GEQ bank	N/A	N/A
Global Continuous Control	Strip number	Control (within a group of similar controls)	N/A
Global Switch Control	Strip number	Control (within a group of similar controls)	N/A
GPIO Output	GPIO output number	N/A	N/A
Load Layout	Layout number	N/A	N/A
MIDI	Note/Control/Program/Pressure/LSB	Velocity/Value/MSB	Channel

	Value/Target Device ID	Value, or (only if nothing from these are applicable) Channel number (if applicable)	number (if applicable, unless it's a 2nd parameter)
Multi-Assign	Strip number	N/A	N/A
Mute All Stage Outputs	N/A	N/A	N/A
Mute Group	Mute group number	N/A	N/A
Nudging	N/A	N/A	N/A
Paste to Selected Channel	N/A	N/A	N/A
Preview Mode	N/A	N/A	N/A
Recall Next/Previous Snapshot	N/A	N/A	N/A
Recall Selected Snapshot	N/A	N/A	N/A
Recall Snapshot	N/A	N/A	N/A
Select Snapshot	N/A	N/A	N/A
Sends On Faders	Strip number	N/A	N/A
Snapshot Update Mode	N/A	N/A	N/A
Spill Strip	Strip number	N/A	N/A
Store Snapshot	N/A	N/A	N/A
Store to Selected Snapshot	N/A	N/A	N/A
Switch control	Strip number	Control (within a group of similar controls)	N/A
Talkback	N/A	N/A	N/A
Tap Tempo	N/A	N/A	N/A
Target Next/Previous Strip	N/A	N/A	N/A
Toggle Input Safe Mode	N/A	N/A	N/A
Top Row Flip to Faders	N/A	N/A	N/A
USB Play Track	Track number	N/A	N/A

Smart Duplication of Whole Event(s)

When applied to a selected event, Smart Duplication always duplicates all triggers and all actions, even if they cannot be incremented.

- If Smart duplication by the second parameter is chosen, the triggers and actions have second parameter incremented if possible. If not possible, the first parameter is incremented.

- If Smart duplication by the third parameter is chosen, the triggers and actions have third parameter incremented if possible. If not possible, the first parameter is incremented.

- The new event(s) are named similarly to original events, but with the "?" added in front of the name: "?My Event".

Options Tabs Reorganized

The sub-tabs in the Options page have been reorganized for clarity. The previously available ADC tab has been renamed AUTO and provides settings for both "AutoMix" on page 23 and Automatic Delay Compensation (ADC).
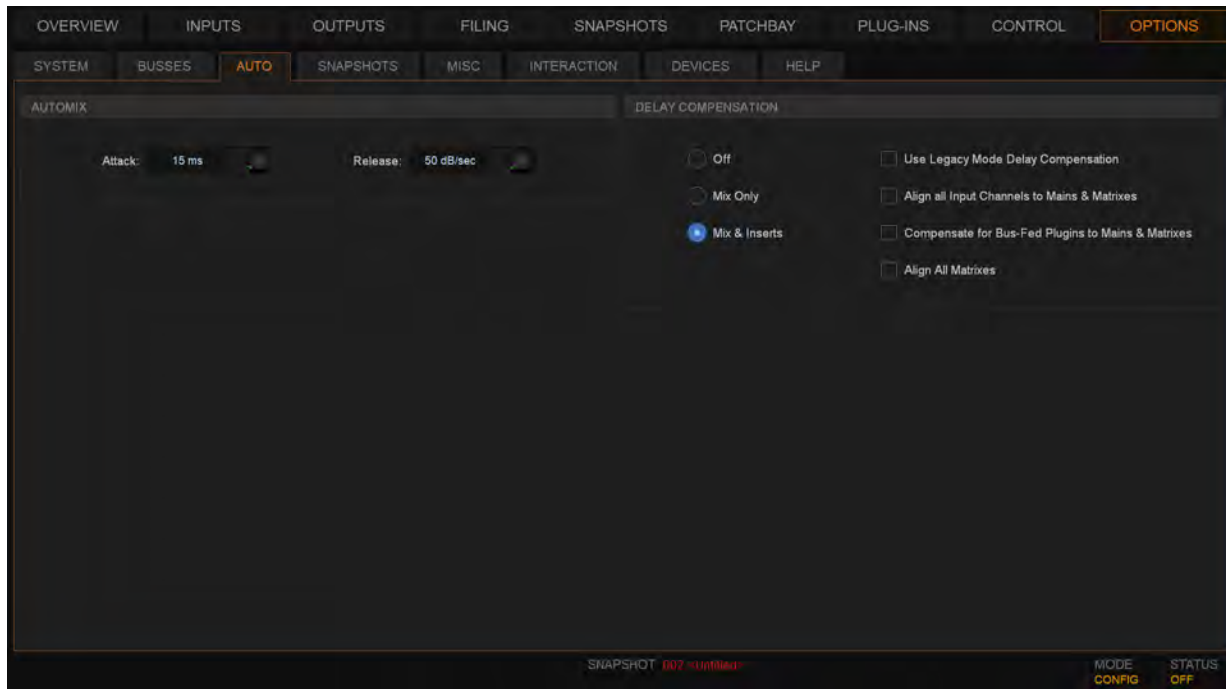
OPTIONS › AUTO

4 E6LX and E6L Internal Cabling

Before installing VENUE software version 8.0 or later for the first time, all existing E6L (2nd and 1st generation) engines must have their internal card-to-card jumper cables reconnected. This affects jumper cable connections to factory-installed AVB-192 cards as well as any previously installed WSG-HD Waves SoundGrid and/or MLN-192 Milan Option cards.

This process takes only a few minutes.

Even if your E6L engine does not have a WSG-HD or MLN-192 Option card, re-cabling is required to support VENUE 8.0.

Overview

The jumper cable connecting the two AVB-192 Network cards to each other needs to be checked and, if necessary, connected to the ports specified in this document.

If any WSG-HD or MLN-192 cards are present, the jumper cables to/from those cards must also be re-connected to the ports specified later in this document.

In addition to allowing the improved performance provided in VENUE 8.0, these new connection rules support the ability to install a 2nd MLN-192 card in E6L-192 and E6L-144 engines (E6L-112 engines continue to support only a single MLN-192 card). The required internal cabling to MLN-192 cards also lets you update MLN-192 firmware without having to make external connections as was required previously.

For E6LX (3rd generation) engines, please take a few minutes to check the internal cabling and, if necessary, re-connect cables as specified in this document.

VENUE software can detect if any cables are incorrectly connected and will show an alert dialog notifying you that cables must be reconnected.

Slot and Jumper Cable Guidelines for Options cards in E6LX Engines

The following diagrams show where Option cards can be installed, and how they must be connected internally using jumper cables.

Card ports are numbered as follows:
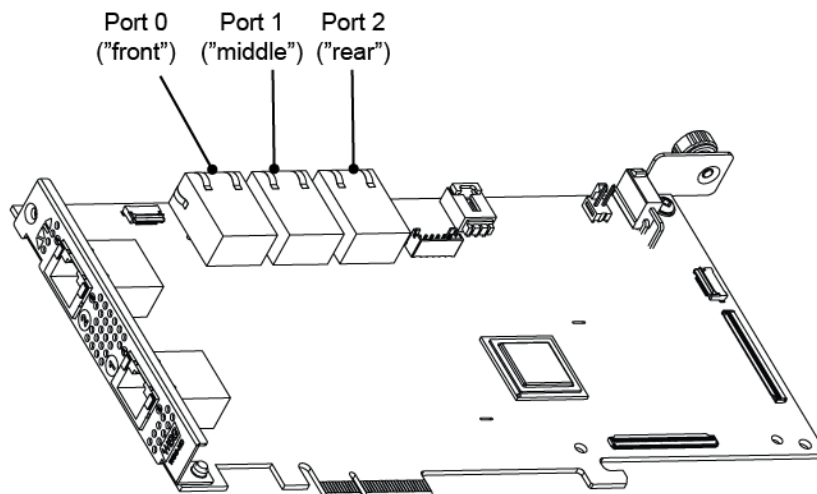
Port numbers

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Slot and cabling requirements vary depending on the type and number of Option cards being installed.

1x WSG-HD

Slot: EXPANSION 8

with WSG-HD	EXPANSION								CONSOLE	STAGE	
WAVES	1	2	3	4	5	6	7	8			
								2	2	2	Rear
								1	1	1	Mid
								0	0	0	Front
								WSG-HD			

Slot and internal jumper cable connections for 1x WSG-HD in an E6LX-256

1x MLN_192

Slot:EXPANSION 7

with 1x MLN-192	EXPANSION								CONSOLE	STAGE	
	1	2	3	4	5	6	7	8			
							2		2	2	Rear
							1		1	1	Mid
							0		0	0	Front
							MLN-192 #1				

Slot and internal jumper cable connections for 1x MLN-192 in an E6LX-256

2x MLN-192

Slots: EXPANSION 6 and 7

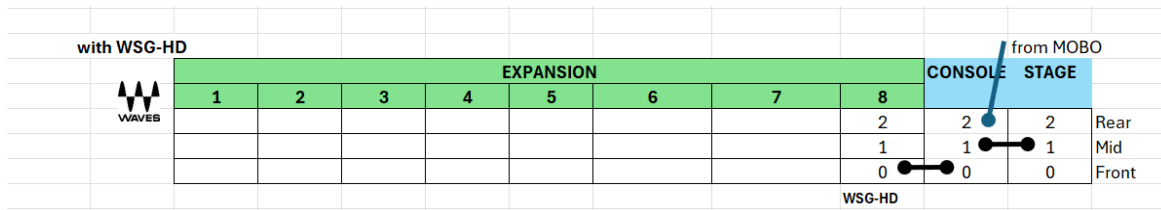| with 2x MLN-192	EXPANSION								CONSOLE	STAGE	
	1	2	3	4	5	6	7	8			
						2	2		2	2	Rear
						1	1		1	1	Mid
						0	0		0	0	Front
						MLN-192 #1	MLN-192 #2				
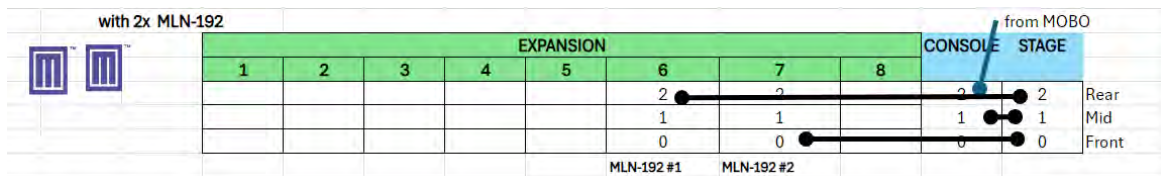
Slot and internal jumper cable connections for 2x MLN-192 in an E6LX-256

1x MLN-192 and 1x WSG-HD

Slots: EXPANSION 7 and 8

with 1x MLN-192 AND WSG-HD	EXPANSION								CONSOLE	STAGE	
	1	2	3	4	5	6	7	8			
							2	2	2	2	Rear
							1	1	1	1	Mid
							0	0	0	0	Front
							MLN-192 #1	WSG-HD			
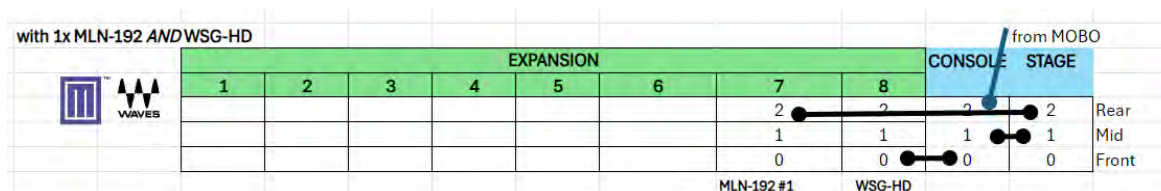
Slot and internal jumper cable connections for 1x WSG-HD and 1x MLN-192 in an E6LX-256

2x MLN-192 and 1x WSG_HD

Slots: EXPANSION 6, 7, and 8
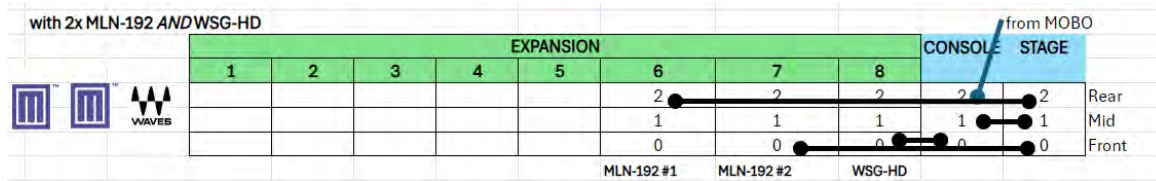
Slot and internal jumper cable connections for 1x WSG-HD and 2x MLN-192 in an E6LX-256

Slot and Jumper Cable Guidelines for Option Cards in E6L Engines

The following diagrams show where Option cards can be installed, and how they must be connected internally using jumper cables:

- "E6L-192 and E6L-144 Slot and Jumper Cable Guidelines" below
- "E6L-112 Slot and Jumper Cable Guidelines" on page 51

Card ports are numbered as follows:
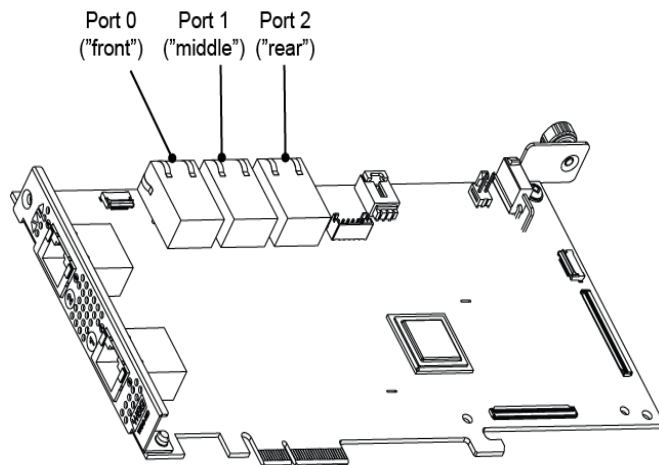
Port numbers

If you are unfamiliar with how to access cards and internal jumper cables, see "Removing the E6L Engine Core" on page 53.

E6L-192 and E6L-144 Slot and Jumper Cable Guidelines

Slot and cabling requirements vary depending on the type and number of Option cards being installed.

- "1x WSG-HD" below
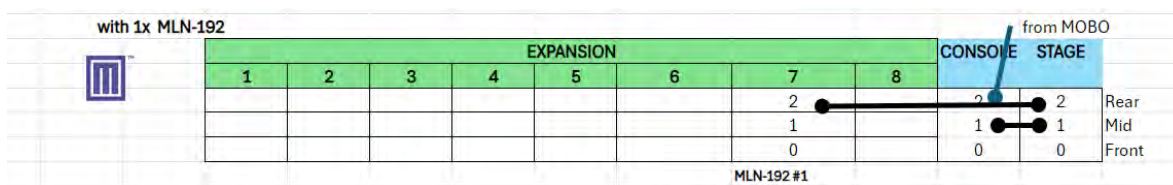- "1x MLN-192" on the next page
- "2x MLN-192" on the next page
- "1x WSG-HD and 1x MLN-192" on the next page
- "1x WSG-HD and 2x MLN-192" on page 50

1x WSG-HD

Slot: EXPANSION slot 6

with 1x WSG-HD			Rear	Middle	Front		
NETWORK	3						
NETWORK	2		2	1	0		
MASTER	1		2	1	0		MOBO
	6		2	1	0	WSG-HD	
	7						1-5 n/a (MADI only)
EXPANSION	8						

Slot and internal jumper cable connections for 1x WSG-HD in an E6L-192/144

1x MLN-192

Slot: EXPANSION slot 6

with 1x MLN-192			Rear	Middle	Front		
NETWORK	3						
NETWORK	2		2	1	0		
MASTER	1		2	1	0		MOBO
	6		2	1	0	MLN #1	
	7						1-5 n/a (MADI only)
EXPANSION	8						

Slot and internal jumper cable connections for 1x MLN-192 in an E6L-192/144

2x MLN-192

Slots: EXPANSION slots 6 and 7 (Reminder: 2x MLN-192 cards requires VENUE 8.0 or later.)

with 2x MLN-192			Rear	Middle	Front		
NETWORK	3						
NETWORK	2		2	1	0		
MASTER	1		2	1	0		MOBO
	6		2	1	0	MLN #1	
	7		2	1	0	MLN #2	1-5 n/a (MADI only)
EXPANSION	8						

Slot and internal jumper cable connections for 2x MLN-192 cards in an E6L-192/144

1x WSG-HD and 1x MLN-192

When installing 1x WSG-HD and 1x MLN-192 in an E6L-192 or E6L-144, two slot positions are allowed to support existing (pre-VENUE 8.0) configurations in which the WSG-HD card was only supported in EXPANSION slot 6. Beginning with VENUE 8.0 the WSG-HD card can be installed in either EXPANSION slot 6 or NETWORK slot 3. Which slot you choose will depend on whether or not any MLN-192 card(s) are installed. Regardless of which slot scheme you choose, make sure to follow the jumper cable connections shown below.

Faceplate for NETWORK Slots or EXPANSION Slots

NETWORK slots require the double-wide faceplate on the option card. If you want to install an option card in NETWORK slot 3, the card must have the wider faceplate installed (a double-wide faceplate was included with your option card but if you need to order one, contact VENUE support).
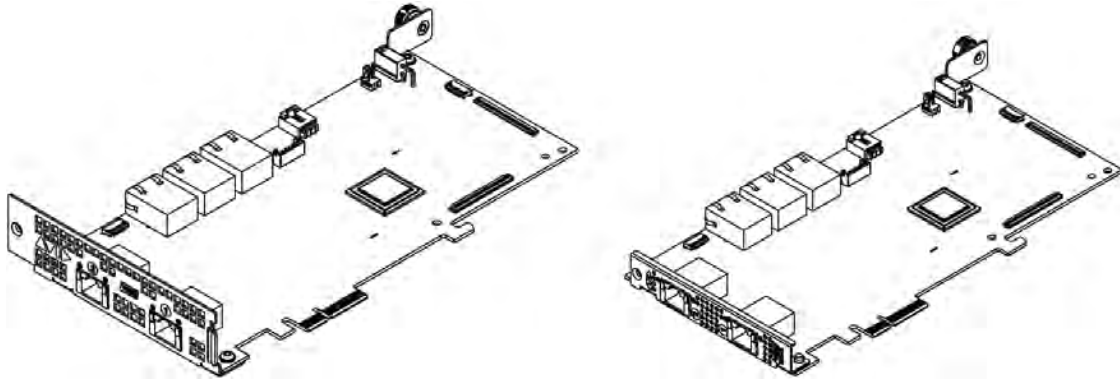
Option card with NETWORK slot-compatible (double-wide) faceplate (shown at left) and EXPANSION slot-compatible faceplate (shown at right)

WSG-HD in EXPANSION Slot 6, MLN-192 in EXPANSION Slot 7

with 1x MLN-192 AND WSG-HD			Rear	Middle	Front			
	NETWORK	3						
	NETWORK	2	2	1	0			
	MASTER	1	2	1	0		MOBO	
		6	2	1	0	WSG-HD		
		7	2	1	0	MLN #1	1-5 n/a	
	EXPANSION	8					(MADI only)	

Slot and internal jumper cable connections for 1x WSG-HD in EXPANSION slot 6 and 1x MLN-192 card in EXPANSION slot 7 in an E6L-192/144

WSG-HD in NETWORK Slot 3, MLN-192 in EXPANSION Slot 6

This configuration leaves EXPANSION slot 7 available to add a second MLN-192 card. (NETWORK slots require the double-wide faceplate on the option card.)

with 1x MLN-192 AND WSG-HD			Rear	Middle	Front			
	NETWORK	3	2	1	0	WSG-HD		
	NETWORK	2	2	1	0			
	MASTER	1	2	1	0		MOBO	
		6	2	1	0	MLN #1		
		7					1-5 n/a	
	EXPANSION	8					(MADI only)	

Slot and internal jumper cable connections for 1x WSG-HD in NETWORK slot 3 and 1x MLN-192 card in EXPANSION slot 6 in an E6L-192/144

1x WSG-HD and 2x MLN-192

Slots: WSG-HD in NETWORK slot 3, MLN-192 cards in EXPANSION slots 6 and 7. (NETWORK slots require the double-wide faceplate on the option card.)

with 2x MLN-192 *AND* WSG-HD				Rear		Middle	Front				
♦♦♦ WAVES	NETWORK	3	2	●	1		0	WSG-HD			
	NETWORK	2	2	●	1	● ●	0				
Ⓜ	MASTER	1	2	●	1	● ●	0	●		MOBO	
		6	2	●	1	●	0	MLN #1			
Ⓜ		7	2	●	1		0	MLN #2	1-5 n/a (MADI only)		
	EXPANSION	8									

Slot and internal jumper cable connections for 1x WSG-HD in NETWORK slot 3 and 2x MLN-192 cards in EXPANSION slots 6 and 7 in an E6L-192/144

E6L-112 Slot and Jumper Cable Guidelines

E6L-112 engines support a maximum of two Option cards. In addition:

- Only 1x MLN-192 card is supported in E6L-112.
- The maximum of 2x Option cards include MADI-192 MADI Option cards, if any.

1x WSG-HD

Slot: NETWORK slot 3

with WSG-HD			Ports (L to R)				
			2	1	0		
♦♦♦ WAVES	NETWORK	3	2 ●	1	0	WSG-HD	
	NETWORK	2	2 ●	1 ●	0		
	MASTER	1	2	1 ●	0 ●		
		6					
		7					
	EXPANSION	8					

Slot and internal jumper cable connections for 1x WSG-HD in NETWORK slot 3 an E6L-112

1x MLN-192

Slot: NETWORK slot 3.

with 1x MLN-192 (in NETWORK slot 3)			Ports (L to R)				
			2	1	0		
Ⓜ	NETWORK	3	2	1	● 0	MLN #1	
	NETWORK	2	2	1 ●	● 0		
	MASTER	1	2	1 ●	0 ●		
		6					
		7					
	EXPANSION	8					

Slot and internal jumper cable connections for 1x MLN-192 in NETWORK slot 3 an E6L-112

1x WSG-HD and 1x MLN-192

Slots: NETWORK slot 3 (WSG-HD) and EXPANSION slot 1 (MLN-192)

with 1x WSG-HD and MLN-192 (in NETWORK slot 3 and Exp. slot 1)			Ports (L to R)										
♦♦♦ WAVES	NETWORK	3	2 ●	1	0	WSG-HD							
	NETWORK	2	2 ●	1 ●	0								
Ⓜ	MASTER	1	2	1 ●	0	●	MOBO						
		6						0	1	2	MLN #1	1	EXPANSION
		7										2	
		8										3	
												4	
	EXPANSION											5	

Slot and internal jumper cable connections for 1x MLN-192 in NETWORK slot 3 an E6L-112

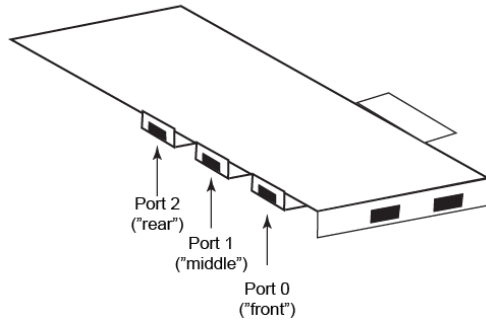Slot and internal jumper cable connections for 1x WSG-HD in NETWORK slot 3 and 1x MLN-192 in EXPANSION slot 1 in an E6L-112
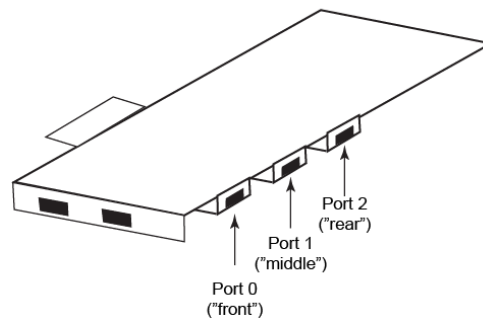
📄 *In the table above, the card port numbers are oriented as they appear when the cards are installed on either side of the core for the E6L-112.*

E6L EXPANSION Slots and Ports Orientation

To make required jumper cable connections to an MLN-192 in EXPANSION slot 1:

1. Remove the two AVB-192 cards. (See the MLN-192 Installation Guide for instructions.)

2. Use a longer (+/- 50cm) cable with suitable flexibility and with a very short "jacket" and low profile on the connection angle (such as the L-Comm Super-Slim). This type of cable is required in order to avoid obstructing the engine side panel when reinstalling the engine core

3. Use a Phillips screwdriver to remove the screw securing the lowest HDX expansion card slot cover plate and remove the cover plate. The jumper cable will be routed through this space.
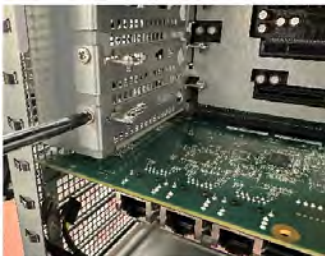
Removing the slot cover over the lowest HDX expansion slot

4. Connect one end to port 0 on the MLN-192 card.

5. Route the other end of the jumper cable through the opening from the HDX faceplate you removed earlier and feed it through to the other side of the core where the AVB-192 cards were located.

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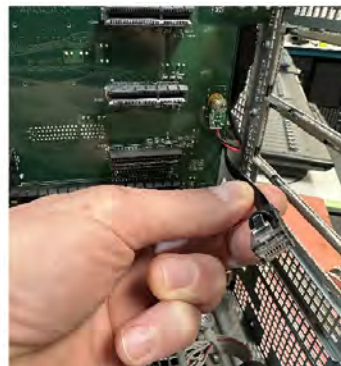
Routing the jumper cable through the HDX slot opening (shown at left) and to the AVB-192 slots (shown at right)

6. Re-install the AVB-192 cards into the MASTER and NETWORK 2 slots. Be careful to route the MLN-192 jumper cable below the lowest (MASTER) AVB-192 card (so it does not lay between the two AVB-192 cards).

7. Connect the other end to port 0 on the NETWORK 2 AVB card.

Example cable routing and connection to an MLN-192 card in EXPANSION slot 1 of an E6L-112 (shown at left) and important clearance for the side panel (shown at right)

Removing the E6L Engine Core

Option cards are installed in the E6L engine core, which slides out of the E6L chassis.

To remove the E6L engine core

1. Put on your anti-static wrist band and configure it according to its instructions.

2. Shut down your system, and disconnect any cables connected to your E6L engine.

3. Place your E6L on a table or other flat surface that provides enough room for the E6L engine core to be removed comfortably. Make sure your surface is clear of any debris.

> 💡 *If your E6L engine is installed in a rack and there is enough room inside the rack to access the inside of the core, instead of completely removing the core you can slide it out until it catches, and then proceed with installation.*

4. On the back of the E6L, loosen the four thumbscrews that secure the core to the engine chassis.
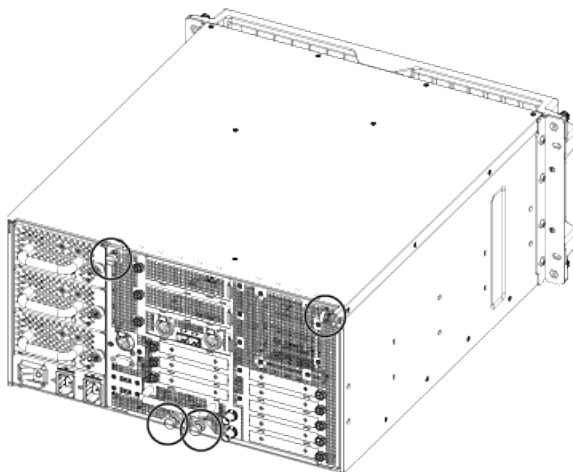
Four thumbscrews on the back of the E6L

5. Simultaneously pull the two bottom thumbscrews outward so the latches they are attached to are fully extended, as shown below.
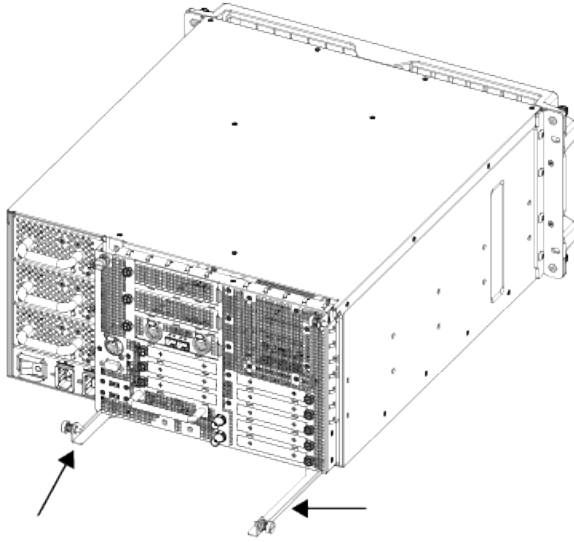
Latches fully extended

6. Using the handle, slowly slide the core partially out, locate the interior catch on the right side of the tray, and press it to release the core from the chassis.
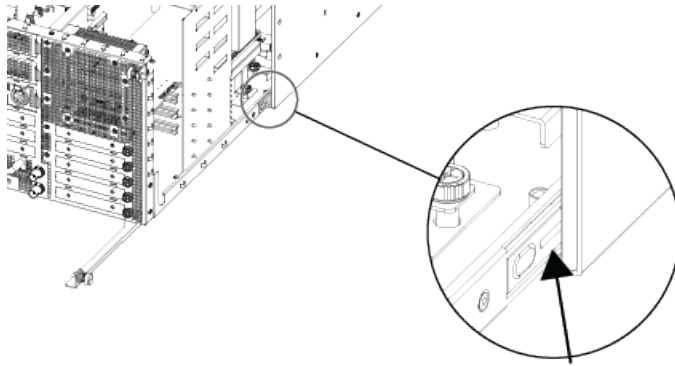
Location of the interior catch

7. Slowly slide the core out of the E6L chassis completely, and place it on your work surface.

⚠ **The core will not slide out of the E6L chassis until the latches are fully extended and the catch has been released.**

5   S6L Signal Flow Diagrams

The following diagrams illustrate input and output signal flow for systems running VENUE software version 8.0 and later.

- Input
- Output

Input
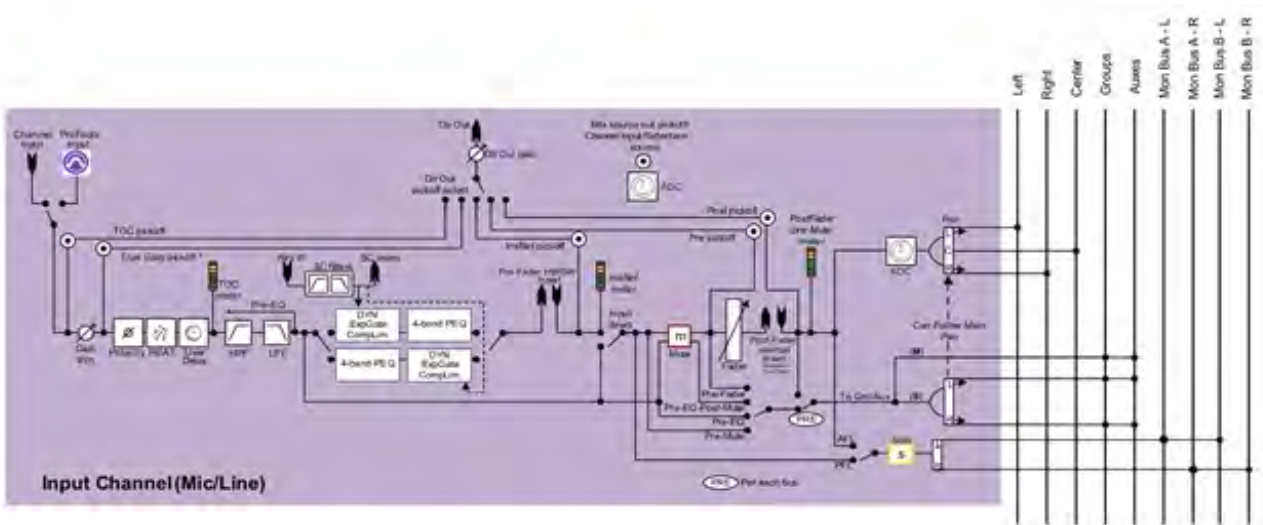
S6L Input Signal Flow diagram for VENUE 8.0 and later

* True Gain pickoff is system-specific when I/O sharing

Output

S6L Output Signal Flow diagrams for VENUE 8.0 and later

6   VENUE Software Release Notes

For a list of all fixed and known issues in the current version of VENUE software, see VENUE S6L Release Notes.

For complete System Restore and software installation instructions see the *VENUE S6L Installation Guide.*

⚠ **Mute or power down any speakers or headphones before installing VENUE software. After VENUE software is installed and all firmware updates are complete, power cycle each device in your system, including any computers you are using for recording or playing back AVB audio with your S6L system.**

💡 *Backup all console data before installing new VENUE software.*

💡 *Make sure to re-install any 3rd party plug-ins after installing new VENUE software.For best performance, make sure you are running the latest plug-in versions on your system.*

Important Installation Notes for VENUE 8.0

External Screen Required for Software Installation

Before performing a System Restore or Software Update be sure to connect your external screen to the S6L control surface. It is possible for the system to become stuck in an infinite restart loop after performing a System Restore or Software Update if there is no external screen connected. If your system is unresponsive, connect the external screen and run the Touch Wizard, or perform the System Restore (or Software Update, if available) again.

Important! E6L (2nd generation) Engine Re-cabling for Improved Performance and Expansion

Before installing VENUE software version 8.0, all existing E6L-192, E6L-144, and E6L-112 (2nd and 1st generation) engines must have their internal card-to-card jumper cables reconfigured. This affects factory-installed jumper cable connections between AVB-192 cards as well as any previously installed WSG-HD Waves SoundGrid and/or MLN-192 Milan Option cards. This process takes only a few minutes. For instructions, see "E6LX and E6L Internal Cabling" on page 46.

⚠ **After installing VENUE 8.0 on E6L-192/144/112, you must also update the BIOS and BMC. An alert dialog appears after the engine restarts stating BIOS/BMC Update Required. For more information, see "E6L BIOS and BMC Upgrade for VENUE 8.0 and Downgrade for Earlier Versions" on page 58.**

SBC Motherboard and CTMs

VENUE 7.1 introduced support for a new Portwell motherboard in the S6L Control Surface. Portwell-based control surfaces and CTMs (Channel Touch Modules) require VENUE 7.1 or later.

Waves

For systems with WSG-HD Waves SoundGrid Option Card, be aware of the following:

- Waves V14 (or later) is required with VENUE 7.1 and later. (Waves no longer supports Waves V10 with VENUE 7.1 or earlier.)
- "Restore Image Not Valid" or FreeDOS Boot Screen

If, during the System Restore procedure, an error message appears stating that the USB image is invalid or a FreeDOS boot screen appears, see the list of Known Issues at VENUE S6L Release Notes.

⚠️ If your S6L Control Surface was manufactured after September 2022 it cannot be downgraded to a version of software lower than VENUE 7.1. The Portwell CTMs also require VENUE 7.1 and cannot be installed in another S6L Control Surface running a lower version (they will not work and will prompt for 7.1 upgrade).

Updating MADI Card Firmware

If at anytime on startup you encounter the message that the firmware needs to be updated, use this procedure to update the firmware on the MADI card(s).

To use "Remote" mode to update MADI-192 MADI Option Card firmware:

1. Make sure you have a USB keyboard and mouse connected to your S6L control surface.
2. Update your system to VENUE 8.0 or later.
3. When prompted about MADI firmware version mismatch, press and hold Control + Shift and type SUPPORT to enter Support mode.
4. Press Control + Shift + E.
5. Navigate to the E6L desktop and locate the Update MADI Firmware icon. Double-click to launch it and follow the on-screen instructions.
6. After MADI firmware is complete, power cycle the E6LX/E6L engine as prompted.
7. Close the Remote Desktop session to the E6LX/E6L engine.
8. Restart your system.

To manually update MADI-192 MADI Option Card firmware:

1. Shut down your system, and power off all components.
2. Connect a VGA monitor and USB keyboard and mouse to your E6L engine.

   💡 *Beginning with VENUE 7.2 you can use a qualified VGA–to–HDMI adapter (such as Cable Matters VGA-to-HDMI Adapter) to connect an HDMI monitor directly to the E6L Engine.*

3. Power on your E6LX/E6L engine, and repeatedly press F5 on the keyboard while the engine starts up.
4. Close the window that appears on screen to show the Desktop.
5. Double-click the `Update MADI Firmware` icon on the Desktop.
6. Follow the on-screen instructions to update the firmware on your MADI-192 MADI Option Cards.
7. After MADI firmware is complete, shut down the E6L engine when prompted.
8. After shutting the E6L engine down, do the following:
   a. Disconnect power from the E6LX/E6L and wait at least 30 seconds.
   b. Make sure to disconnect the VGA monitor, mouse, and keyboard.
9. Power your system back on.

E6L BIOS and BMC Upgrade for VENUE 8.0 and Downgrade for Earlier Versions

Upgrade

Any E6L-192, E6L-144, or E6L-112 system that has been updated to VENUE 8.0 or later from VENUE software version 7.2.4 or earlier must update the E6L Engine BIOS and BMC to BIOS60 and BMC90 *after* installing VENUE 8.x (the BIOS updater updates both BIOS and BMC).

DO NOT update the BIOS/BMC if either of the following are true:

- If your system includes an E6LX (3rd generation) engine.

  ⚠️ **Do NOT install BIOS60 or BMC90 on any E6LX Engine, doing so could damage the unit.**

- If you are performing a System Restore or Software Update on a system that is already running VENUE software version 8.0 or later, and VENUE does not prompt you to update the BIOS/BMC *after* installing VENUE 8.0 or later.

Downgrade

If a system running VENUE 8.0 or later needs to be downgraded to VENUE 7.2.4 or earlier, the downgrade option must be run to downgrade the BIOS/BMC *before* downgrading the VENUE software using the earlier version System Restore.

⚠️ **VENUE 8.0 must boot successfully at least once after downgrading the BIOS. This is an essential step before downgrading the VENUE software version.**

Updating the BIOS/BMC involves the following steps:

- Collecting the "Required Components" below
- "Creating the BIOS/BMC Update Key" below
- "Updating the BIOS and BMC on E6L" on the next page

Required Components

Before you begin, make sure you have all the following required components:

- USB key (the installer will replace all contents on the USB key, if any)
- VGA display and VGA cable
- USB keyboard (connect to USB ports on the front panel of the E6L Engine)
- Windows computer for creating a bootable USB key
- E6L_BIOS_Update (included in the System Restore or VENUE_Update_8.x.x.zip downloaded from your Avid Account)

After collecting all the required components, proceed to "Creating the BIOS/BMC Update Key" below.

Creating the BIOS/BMC Update Key

To create the BIOS/BMC Update Key:

1. Make sure you have the `E6L_BIOS_Update` (included in the Restore and Update.zip files).
2. Insert a USB key drive into an available USB port on your Windows computer. (Reminder: All contents of this drive will be erased as part of the BIOS/BMC key preparation.) To avoid confusion, make sure no other USB drives are plugged in.
3. Navigate to the "Additional Files" folder within the downloaded System Restore folder.

4. Launch Rufus 2.9.

5. In Rufus, do the following:

    a. Choose the USB drive from the `Device` pop-up menu.

    b. Under `Partition scheme and target system type`, choose `MBR partition scheme for BIOS or UEFI`.

    c. Make sure `Create a bootable disk using` is checked and `FreeDOS` option is chosen on the right.

    d. Click `Start,` then click `OK`.
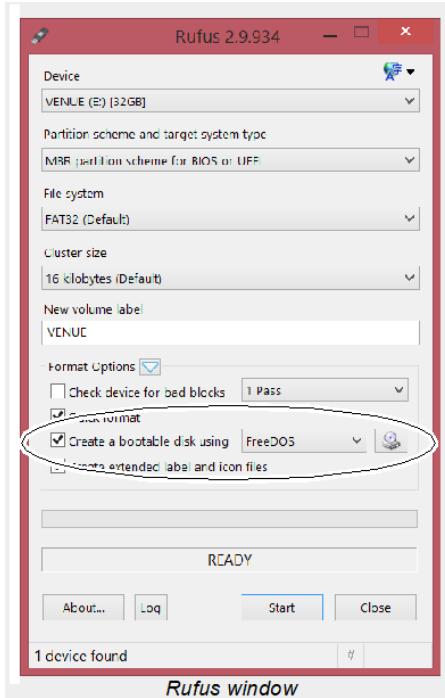
Rufus window

6. Rufus begins to format the USB drive and progress is indicated on-screen.

    💡 *If the Autoplay window appears during formatting, close it.*

7. Wait until formatting is completed (indicated by `Done` at the bottom of the Rufus window).

8. Close Rufus.

9. Copy all files from the `Files` folder under `E6L BIOS Update` directly into the root of the USB drive. Overwrite any files if prompted (such as `AUTOEXEC.BAT` and/or `CONFIG.SYS`).

10. Eject (safely remove) USB drive and disconnect it from Windows PC. USB drive is ready.

Updating the BIOS and BMC on E6L

To update the BIOS/BMC on the E6L:

1. Make sure VENUE 8.0 or later is already installed on the system.

2. Make sure your E6L is connected to a reliable power source to ensure an uninterrupted update (do not power on the E6L yet).

3. Connect a VGA display to the E6L Engine **VGA** Port.

4. Connect a keyboard to the front panel E6L Engine **USB** ports.

5. Insert the bootable BIOS USB drive into an available USB port on the back panel of the E6L.

6. Power on the E6L Engine and hold F10 during bootup until you see the BIOS message on the VGA display (release F10 when the BIOS message appears).

7. Using the up and down arrow keys, select option 1: `Updating from VENUE 7.x or earlier to 8.0+, for all E6L engines.`

8. Press Enter.

9. Wait at least 60 seconds, as prompted.

10. You will be asked to confirm that you are running the update on a supported device. Type "Y" if running on an E6L-192, E6L-144, or E6L-112.

11. When prompted, type "Y" again to confirm that the engine is connected to a reliable power source.

12. Wait for the update process to complete (approximately five minutes).

⚠ **Do not press any keys unless prompted to do so on-screen.**

13. When prompted, disconnect the USB drive and power down the engine.

14. Wait at least 30 seconds, then power the engine back on. The engine will be restarted several times and come back online fully after approximately 6 minutes.

Downgrading BIOS and BMC from VENUE 8.0 to VENUE 7.2.4 or Earlier

To downgrade an E6L from VENUE 8.0 or later to VENUE 7.2.4 or earlier:

1. Make sure VENUE 8.0 or later is installed on the engine.

⚠ **Do not downgrade VENUE software before the BIOS/BMC are downgraded.**

2. Make sure your E6L is connected to a reliable power source to ensure an uninterrupted update process (do not power on the E6L yet).

3. If you have not already done so, follow the instructions in "Creating the BIOS/BMC Update Key" on page 58.

4. Connect a VGA display to the E6L Engine `VGA` Port.

5. Connect a keyboard to the front panel E6L Engine `USB` ports.

6. Insert the bootable BIOS USB drive into an available USB port on the back panel of the E6L.

7. Power on the E6L Engine and hold F10 during bootup until you see the BIOS message on the VGA display (release F10 when the BIOS message appears).

8. Choose the appropriate option:

    ▶ Press 2 to downgrade an E6L-192 or E6L-144 (only) from VENUE 8.0 or later to VENUE 7.2.4 or earlier.

    ▶ Press 3 to downgrade an E6L-112 (only) from VENUE 8.0 or later to VENUE 7.2.4 or earlier.

9. Wait at least 60 seconds, as prompted.

10. When prompted, type Y to confirm you are running the update on a supported system.

11. When prompted, type Y to confirm VENUE 8.0 or later is installed.

⚠ **Reminder: VENUE 8.0 must boot successfully at least once after downgrading.**

12. When prompted, type Y to confirm that the engine is connected to a reliable power source.

13. Wait for the downgrade process to complete.

14. When prompted, disconnect the USB drive and power down the engine.

15. Wait at least 30 seconds, then power the engine back on. The engine should come back online after

approximately 6 minutes.

16. Perform a successful boot to VENUE 8.0. Ignore any BIOS/BMC version warnings.

17. Perform a complete System Restore for the desired downgrade target version (such as 7.2.4 or lower).

"Incorrect System Software. The System Software Does Not Match the Current Hardware Configuration"

Workaround if You Downgraded in the Wrong Order

When upgrading or downgrading, VENUE 8.0 or later must be installed on the system before updating or downgrading the BIOS and BMC.

⚠️ **VENUE 8.0 must boot successfully at least once after downgrading. This is an essential step before downgrading a software.**

If you mistakenly downgraded VENUE software to 7.2.4 or earlier *before* downgrading BIOS and BMC, you will see an `Incorrect System Software` alert when booting to the desktop with F5 and VGA. If you try to boot from a restore key, you will see an `Unrecognized VENUE system` error.

If you encounter this error please contact VENUE support.

Safety Compliance

This equipment has been tested to comply with safety certifications in accordance with: UL 62368-1:2014, CAN/CSA 62368-1-14 and IEC/BS/EN 62368-1:2014 (2nd Edition), A11:2017.

Avid Technology Inc., has been authorized to apply the appropriate NRTL mark on its compliant equipment.

Power Safety Input Rating

- S6L16: AC~100-240V, 50-60Hz, 4.0A per inlet
- S6L24(all): AC~100-240V, 50-60Hz, 4.0A per inlet
- S6L32: AC~100-240V, 50-60Hz, 5.0A per inlet
- S6L48: AC~100-240V, 50-60Hz, 5.0A per inlet
- E6L(all): AC~100V-240V, 50/60Hz, 4.8–2.1A per inlet
- E6LX (all): AC ~100V-240V, 50/60Hz, 4.0–2.0A per inlet
- Local 16: AC~100-240V, 50-60Hz, 0.6A per inlet
- Stage 16: AC~100-240V, 50-60Hz, 0.6A
- Stage 32: AC~100-240V, 50-60Hz, 3.65A per inlet
- Stage 48: AC~100-240V, 50-60Hz, 3.65A per inlet
- Stage 64: AC~100-240V, 50-60Hz, 3.65A per inlet

Warning

Important Safety Instructions for E6L

1. User should make sure that all the thumb screws are secured by a tool.
2. The E6L system can hold the following cards:
   - 2x AVB Cards (E6L, all)
   - 2x AVB Cards (E6LX, all)
   - 4x HDX Cards
   - 4x MADI-192 MADI Option Cards
   - 8x DIMMs of RAM
3. User should not install any additional cards.

Consignes de sécurité importantes pour E6L

1. L'utilisateur doit s'assurer que toutes les vis à oreilles sont fixées par un outil.

2. Le système E6L peut contenir les cartes suivantes:

   − 2x AVB Cards

   − 2x AVB Cards (E6LX, all)

   − 4x HDX Cards

   − 4x MADI-192 MADI Option Cards

   − 8x DIMMs of RAM

3. L'utilisateur ne doit pas installer de cartes supplémentaires.

Important Safety Instructions

1. Read these instructions.

2. Keep these instructions.

3. Heed all warnings.

4. Follow all instructions.

5. Do not use this equipment near water.

6. Clean only with dry cloth.

7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8. Do not install near any heat sources such as radiators, heat registers, stoves, or other equipment (including amplifiers) that produce heat.

9. Protect power cords from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the equipment.

10. Only use attachments / accessories specified by the manufacturer.

11. For products that are not rack-mountable: Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the equipment. When a cart is used, use caution when moving the cart / equipment combination to avoid injury from tip-over.

12. Unplug this equipment during lightning storms or when unused for long periods of time.

13. Handlebar function for non-transport use.

14. The equipment intended for installation should be placed in Restricted Access Location.

15. Refer all servicing to qualified service personnel. Servicing is required when the equipment has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the equipment, the equipment has been exposed to rain or moisture, does not operate normally, or has been dropped. Service personnel must make sure all the thumb screws are secured by a tool during installation or after repair.

16. For products that are a Mains powered device:

    The equipment shall not be exposed to dripping or splashing and no objects filled with liquids (such as vases) shall be placed on the equipment.

⚠️ **WARNING!** To reduce the risk of fire or electric shock, do not expose this equipment to rain or moisture.

Attention! Pour réduire les risques d'incendie ou d'électrocution, n'exposez pas cet équipement à la pluie ou à l'humidité.

Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

17. For products containing a lithium battery:

⚠️ **WARNING!** Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type. Dispose of used batteries according to the instructions.

Attention! Risque d'explosion si la batterie n'est pas remplacée correctement. Remplacez uniquement par un type identique ou équivalent. Jetez les piles usagées conformément aux instructions.

18. For products with a power switch:

It should remain accessible after installation.

19. The equipment shall be used at a maximum ambient temperature of 40° C and maximum altitude of 2000m.

20. This unit may not ship with a power supply cord set. A qualified person must provide for use with this unit, an appropriate, approved power supply cord set which is in compliance with the end use country requirements and has a minimum cross-sectional area of 1.0mm^2.

21. For products with more than one power cord:

⚠️ **WARNING!** This unit has more than one power supply cord. Disconnect two power supply cords before servicing to avoid electrical shock.

Attention! Cet appareil comporte plus d'un cordon d'alimentation. Afin de prévenir les chocs électriques, débrancher les deux cordons d'alimentation avant de faire le dépannage.

22. For products with an operator-accessible fuse:

Caution: For continued protection against risk of fire, replace only with same type and rating of fuse.

Attention: Pour ne pas compromettre la protection contre les risques d'incendie, remplacer par un fusible de même type et de même caractéristiques nominales.

23. For products with Fiber optics:

⚠️ **WARNING!** Fiber optic equipment can emit laser or infrared light that can injure your eyes. Never look into an optical fiber or connector port. Always assume that fiber optic cables are connected to a light source.

CLASS 1 LASER PRODUCT
LASERSCHUTZKLASSE 1 PRODUKT
TO EN 60825

Attention! Les équipements à fibre optique peuvent émettre une lumière laser ou infrarouge qui peut blesser vos yeux. Ne regardez jamais dans une fibre optique ou un port de connecteur. Supposez toujours que les câbles à fibre optique sont connectés à une source lumineuse.

24. Rack-Mount Safety Instructions

   a. Elevated Operating Ambient - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment might be greater than room ambient. Therefore, consider installing the equipment in an environment compatible with the maximum ambient temperature (Tma) specified by the manufacturer.

b. Reduced Air Flow - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised. Stage 48 airflow is from the front of the chassis enclosure to the rear. Make allowances for cooling air to be available to the front panel surface and no restrictions at the rear.

c. Mechanical Loading - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

d. Circuit Overloading - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

e. Reliable Earthing - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (for example, use of power strips).

Environmental Compliance

Disposal of Waste Equipment by Users in the European Union
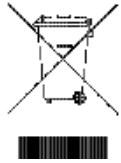
This symbol on the product or its packaging indicates that this product must not be disposed of with other waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city recycling office or the dealer from whom you purchased the product.

Proposition 65 Warning

 WARNING! This product can expose you to chemicals including Pb and Pb compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to https://www.p65warnings.ca.gov/.

Perchlorate Notice

This product may contain a lithium coin battery. The State of California requires the following disclosure statement: "Perchlorate Material – special handling may apply, See https://dtsc.ca.gov/perchlorate/."

Recycling Notice

EMC (Electromagnetic Compliance)

Avid declares that this product complies with the following standards regulating emissions and immunity:

- FCC Part 15 Class B
- ICES-003 Class B
- BS/EN, EN 55032 Class B
- AS/NZS CISPR 32 Class B
- CISPR32 Class B
- BS/EN, EN 61000-3-2
- BS/EN, EN 61000-3-3
- BS/EN, EN 55035

FCC Compliance for United States

Communication Statement

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or locate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Any modifications to the unit, unless expressly approved by Avid, could void the user's authority to operate the equipment.

Cables

Connections to Avid hardware must be made with shielded cables with metallic RFI/EMI connector hoods in order to maintain compliance with FCC Rules and Regulations.

Any modifications to the unit, unless expressly approved by Avid, could void the user's authority to operate the equipment.

Australian Compliance

Canada ICES-003 Compliance

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le material brouilleur du Canada.

Korea Class B EMC Compliance

이 기기는 가정용(B급) 전자파적합기기로서 주 로 가정에서 사용하는 것을 목적으로 하며, 모 든 지역에서 사용할 수 있습니다.

United Kingdom Compliance

(EMC, Safety, and RoHS)

UK CA

Avid Tech. EU LTD
20 Station Road
Gerrards Cross
England SL9 8EL

CE Compliance

(EMC, Safety and RoHS)

CE.

Avid is authorized to apply the CE (Conformite Europenne) mark on this compliant equipment thereby declaring conformity to EMC Directive 2014/30/EU, Low Voltage Directive 2014/35/EU and RoHS Directive 2011/65/EC Amended (EU) 2015/863.