L-ACOUSTICS Q-SYS PLUG-IN FOR 16-CHANNEL AMPLIFIED CONTROLLERS

technical bulletin - v.2.1

Introduction

The L-Acoustics Q-SYS plug-in for 16-channel Amplified Controllers allows integrating L-Acoustics sound reinforcement systems in projects where highly customizable user interface or monitoring solutions are required and addressed using QSC Q-SYS platform.

Supported device types: LA7.16i, LA7.16

The L-Acoustics Q-SYS plug-in version 1.8.1 is compatible with Q-SYS Designer software from minimum version 8.1.0.

Release notes (June 2024)

New features

QP-95	Support of AES67

Fixed issues

History of public releases

- February 2024 - version 1.7.2.0
  - Support of firmware 2.13
- November 2022 - version 1.7.0.0
  - Set IP address at runtime instead of through design-time property
  - Disable controls for empty outputs (no enclosure)
- August 2022 - version 1.6.0.0
  - First release

Compatibility

Device Compatibility

L-Acoustics Q-SYS plug-in version	LA7.16i Firmware versions	Drive System Release	Q-SYS Designer minimum version
1.8.1, 1.7.2	From: 2.12.0 To: 2.13.x	From: Sept. 2017	8.1.0
1.7.0, 1.6.0	From: 2.12.0 To: 2.12.x	From: Sept. 2017 To: Sept. 2023	8.1.0

Features Compatibility

Feature	Compatible Devices	Minimum Firmware version	Minimum Drive System Release	L-Acoustics Q-SYS plug-in minimum version
AES67	LA7.16i	2.13.3.11	June 2024	1.8.1

Installing the L-Acoustics Q-SYS plug-in for 16-channel Amplified Controllers

The L-Acoustics Q-SYS plug-in for 16-channel Amplified Controllers is available in the Q-SYS Asset Manager as 'L-Acoustics Amplified Controller 16 channels'.
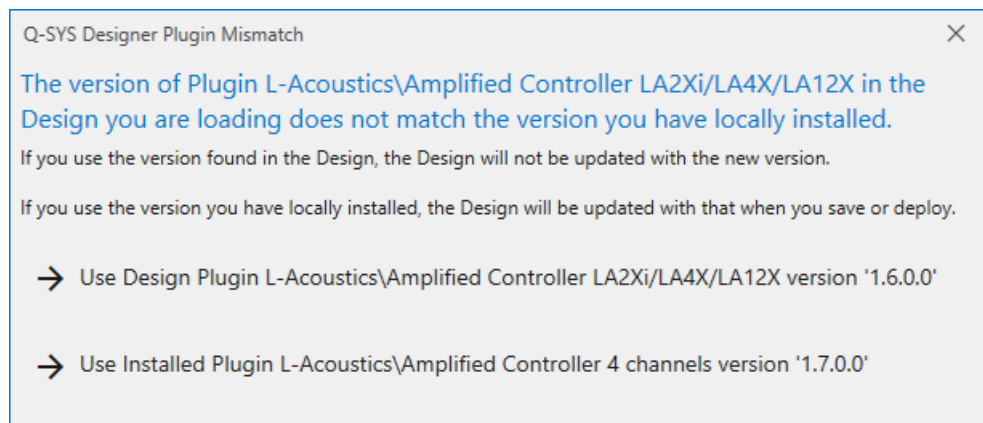
Use the Q-SYS Asset Manager **Version**, **Install**, **Update** and **Remove** functions to manage the plugin versions in the local Q-SYS Designer plugins library.

Updating existing designs

When opening an existing design created with another version of a plug-in, Q-SYS Designer asks which plug-in version to keep for this design.

It is possible to save the design with a past version of the plug-in even if the plug-in was deleted. The whole plug-in is included in the design when saving.

When asked, either click **Use Design Plugin** for the past version or click **Use Installed Plugin** for the latest version.

Q-SYS Designer Plugin Mismatch

The version of Plugin L-Acoustics\Amplified Controller LA2Xi/LA4X/LA12X in the Design you are loading does not match the version you have locally installed.

If you use the version found in the Design, the Design will not be updated with the new version.

If you use the version you have locally installed, the Design will be updated with that when you save or deploy.

→ Use Design Plugin L-Acoustics\Amplified Controller LA2Xi/LA4X/LA12X version '1.6.0.0'

→ Use Installed Plugin L-Acoustics\Amplified Controller 4 channels version '1.7.0.0'

Each new release is backward compatible with previous versions.

With the **Use Installed Plugin** option, the dialog pops up as many times as there are instances of the plug-in in the design. This is Q-SYS Designer expected behavior.

> ❗ When the **Q-SYS Designer Plugin Mismatch** dialog opens while connected to a hardware Q-SYS Core, and the option **Use Installed Plugin** is selected, the plug-ins are updated locally in Q-SYS Designer with the newest version, but it is required to trigger **Save to Core & Run** afterwards in order to also update the design running inside the Q-SYS Core. Failing to do so will result in an unpredictable behavior of the plug-ins.

Component description

Drag the plugin from **Schematic Elements** to the design.

Clicking the Component block in the design displays its **Properties**.
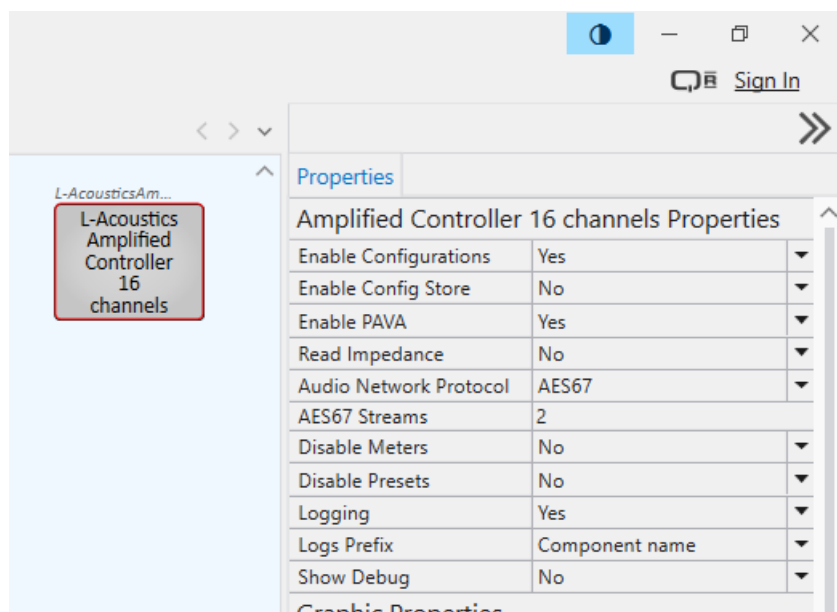
Enable Configurations	enable the possibility to recall configurations (preset and group parameters) stored inside the amplified controller. Refer to amplified controller owner's manual for more information about preset and group parameters.

> ❗ Never recall configurations when LA Network Manager is connected to the device, or setting conflicts will occur. The configuration recall function is designed to substitute for LA Network Manager supervision. Therefore LA Network Manager must not be used when recalling configurations, or must be set to offline mode or disconnected.

Enable Config Store	enable the possibility to store the current amplified controller state (preset and group parameters) as a new configuration (available only when **Enable Configurations** equals Yes)

> ❗ Use configuration **Store** buttons after loading the appropriate / corresponding LA Network Manager session to the amplified controller

Enable PA/VA	enable/disable a section dedicated to Public Address & Voice Alarm applications (also called "evac") to configure permanent monitoring of the amplified controller general state and inputs, and periodic loudspeaker silent monitoring, as required

> ❗ PA/VA parameters are always pushed from the component to the physical unit at connection initialization to enforce the conditions determined for PA/VA monitoring, even after amplified controller firmware updates or when the unit is replaced by a spare unit.

Audio Network Protocol	select the Audio Network Protocol used by the amplified controller ("Milan-AVB" or "AES67").
	Refer to L-Acoustics' Practical Guide 'Using L-Acoustics with Q-SYS & AES67' for how to use AES67. This document is available from the downloads page of LA7.16i on L-Acoustics website.
AES67 Streams	adjust the number of AES67 streams that the L-Acoustics Q-SYS plug-in shall control (available only when **Audio Network Protocol** equals "AES67")
Read Impedance	enable the output impedance readout for each speaker section when Speaker Monitoring is enabled (available only when **Enable PA/VA** equals Yes)
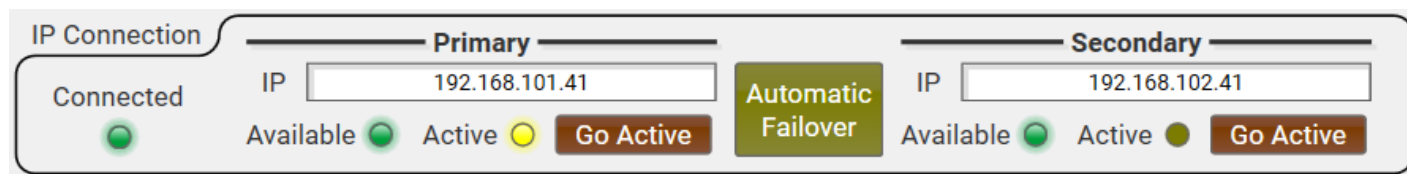
Disable Meters	unsubscribe from / subscribe to meters notifications from the device
	Disabling meters may save control processing power on the Q-SYS core.
Disable Presets	allow/inhibit preset layout control
Logging	enable or disable writing status messages to system logs.
Control Pins	expand to edit which control pins should be displayed on the component, as necessary
	The **Control Pins** tree is dynamically updated according to the device properties.

User Interface description

Double-click the component to open the user interface. The list of pages depends on the component's properties.

IP Connection frame
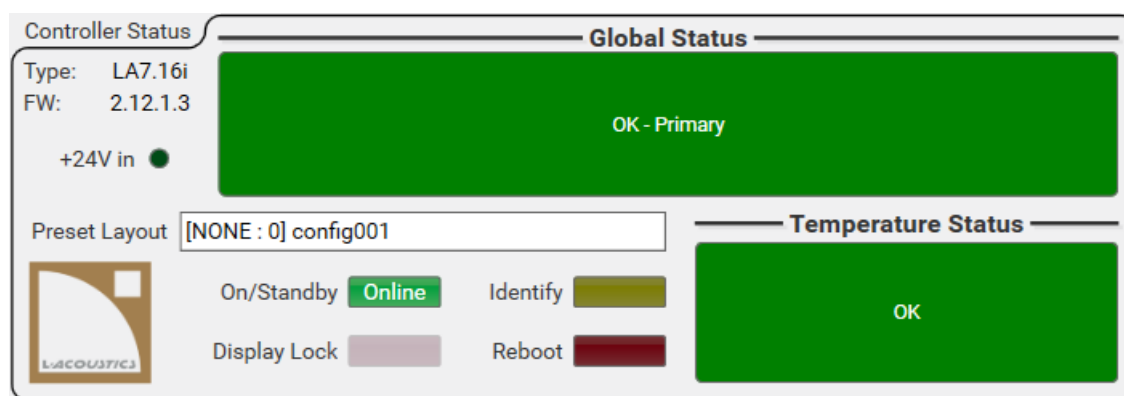
- IP: Enter the primary IP address (and secondary IP address when applicable) of the device.
- Connected: the plugin is currently connected to the device.
- Available: the device is responding on primary and/or secondary IP addresses and IP connection is possible.
- Active: the plug-in is targetting primary or secondary IP address for socket connection.
- Go Active: manually failover to primary/secondary IP address.
- Automatic Failover: the plug-in automatically fails over to the alternative IP address (if available) when active connection is lost.

Controller Status frame

This frame exposes the main status and controls of the amplified controller: IP address (primary and secondary when applicable), firmware version, device global status (summary of general health and PA/VA status when applicable), socket connection, +24VDC presence (if applicable) and output modules temperature ; preset layout selection, power mode (Online/Standby), front panel display lock, identify (front panel blink), reboot.

Preset Layouts

With 16-channel amplified controllers, a new preset architecture has been developed, introducing the concepts of **enclosure set** and **preset layout**. A preset layout contains one or several enclosure sets (for instance: K2, KARA, X12, KS21, etc.), each enclosure set uses a preset (K2_70, KARA II_FI, X12_MO, KS21_60, etc.). For more information on these concepts, refer to the LA Network Manager Help (References > LA7.16i key concepts).

The **Preset Layout** control of the plug-in displays the list of user and factory preset layouts present inside the connected device, and allows to load one of them.

GPIO

This section displays the current GPIO configuration and status, and also allows to manually change the GPO state when it is configured as a manual output relay.

The setup of the GPIO is done from LA Network Manager.

AES67

Refer to L-Acoustics' Practical Guide 'Using L-Acoustics with Q-SYS & AES67' for how to use the AES67 page. This document is available from the downloads page of LA7.16i on L-Acoustics website.

Input Settings frame

This tab exposes all the input settings controls, including:
- Global input status
- Detailed input status (AES/EBU, AVB input streams, media clock status)
- Source and mapping selection for each DSP input
- Fallback setup, status and control
- Input meters

Output Settings frame

This frame gives access to output gain, mute, and shows limit, clip, and protect states.

If meters are enabled, the section also displays output level meters.

Mute behavior:
- Master Mute (toggle):
  - PUSH: mute the unmuted outputs
  - RELEASE: unmute outputs that were previously muted by the Master Mute button (same behavior as LA Network Manager Master Mute button). Outputs that were muted before the Master Mute button was pushed remain muted after the Master Mute button is released.
- Mute All (toggle):
  - PUSH: mute all outputs
  - RELEASE: unmute all outputs
  - This button automatically turns ON when all outputs are muted.
- Unmute all (trigger): unmute all outputs

Configurations frame

This frame gives access to the list of configurations available in the unit. When the appropriate properties are enabled, the **Store** and **Recall** buttons are used to respectively save to or load from a configuration slot. Use the top text box to type a name for the target configuration before storing.

> Never recall configurations when LA Network Manager is connected to the device, or setting conflicts will occur. The configuration recall function is designed to substitute for LA Network Manager supervision. Therefore LA Network Manager must not be used when recalling configurations, or must be set to offline mode or disconnected.

❗ Use configuration **Store** buttons after loading the appropriate / corresponding LA Network Manager session to the amplified controller.

PA/VA System Monitoring frame

If enabled, this frame gives access to the parameters that must be monitored for installation projects that require PA/VA live system check. Definition of the parameters is installation-specific and must be calibrated by a qualified L-Acoustics Application Engineer or a qualified delegate using dedicated tools.

ℹ️ **The component must be connected to the amplified controller at calibration time.**

This ensures the component is notified of the defined parameters, and is able to push them again during normal operation at connection initialization.

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