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Axia® Quasar
## AoIP Mixing Console

Welcome to Quasar

Setup of a networked audio mixing console, though we have made it as easy as possible, is challenging to condense into a few pages. The following material is intended to help the busy engineer get up and running in a few minutes.

This Quickstart Guide assumes a few things:

- That the reader has some knowledge of network basics and terminology,
- That the reader is familiar with other Axia Livewire products,
- And that the reader has a network switch correctly configured for Livewire

We will take you through the basic steps to configure your new Quasar and have you up and running in no time. But before we get started, let's make sure you are familiar with the Quasar System anatomy.
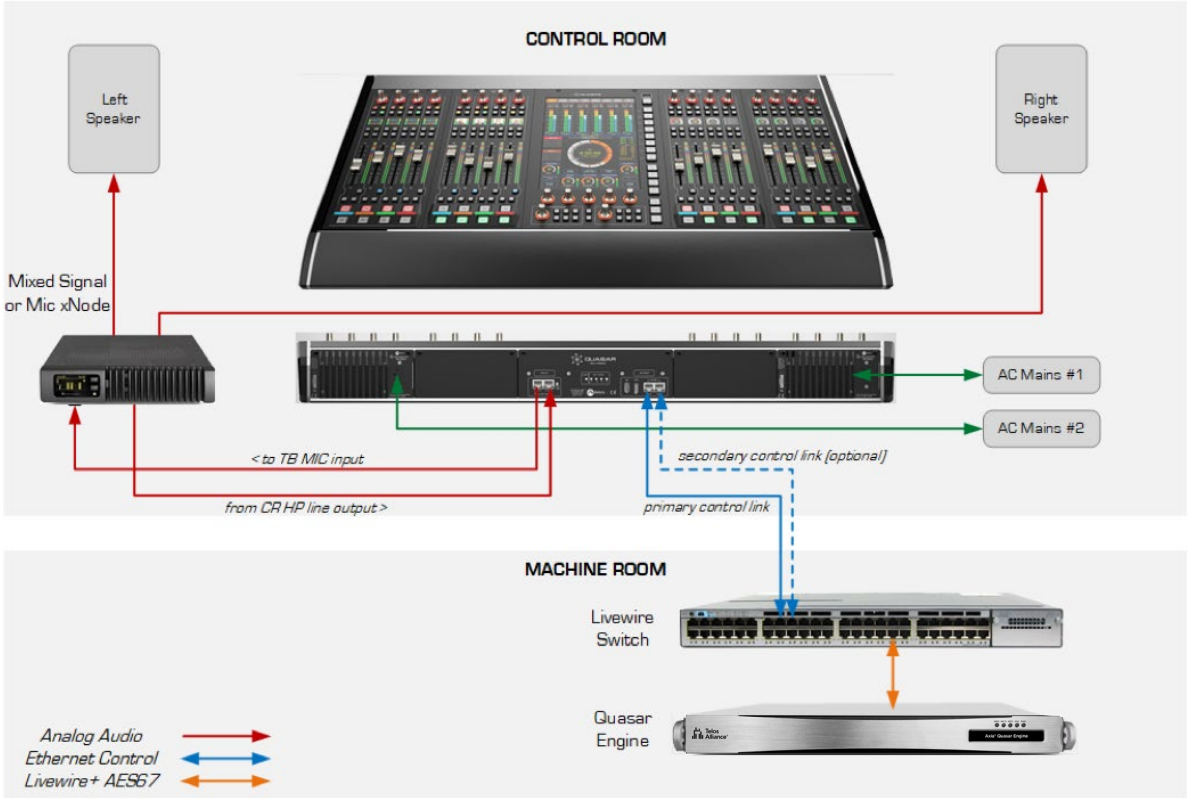
Example of simple Studio configuration.
Connection of the optional TBP-IO module is included in this drawing.

REQUIRED EQUIPMENT, CABLES, AND ACCESSORIES:

There are a few additional items required for a successful installation.
Please check the list below.

Included items:

- Quasar Control Surface
- Quasar Mains Cable(s)
- CAT5 Ethernet Cable

Items you need to supply:

- A Quasar Engine mixing engine
- Switch configured for Axia network
- PC with access to your Axia network

Then, let's check your installation type and make sure you have what you need.

Installation type:

You could be installing a Table-Top or Flush-Mount console, with single or split frame. Only the Quasar Engine can be connected to the Quasar Surface. This consists in an industrial rackmount server platform, with redundant PSU and fans, so it will have to go in a machine room. Other mixing engines such as the fanless Axia Studio Engine, or Axia Powerstation, cannot be used with Quasar.

Steps to complete in order to get audio from the console:

1. Network Switch – Configuration for Livewire
2. Quasar Surface - Physical connections
3. Quasar Surface - Network configuration
4. Quasar Surface – Modules discovery & configuration
5. Quasar Engine – Installation & network configuration
6. Checking Connection to the Quasar Engine

Initial Setup

1. Quasar Engine – Audio outputs configuration
2. Surface Layer Configuration
3. Input Source Creation and Configuration
4. Assign Sources to Input Channels
5. Program assignment & monitoring

Console Configuration

# Network Switch - Configuration for Livewire

Please do not assume that any network switch will work *out of the box,* for handling the intense traffic generated by AoIP audio streams. Multicast traffic generated by AoIP streams can "flood" the switch if not properly managed and shaped via a correct configuration of the switch ports.

A list of approved Ethernet switches is published on our website, at this link: https://www.telosalliance.com/Axia/What-Ethernet-Switches-has-Axia-Approved. In the *Configuration* section of this webpage, you will find guidelines for specific switch models.

An Axia Applications Engineer will be happy to assist you in determining the correct switch for your application – please contact us for assistance. (https://www.telosalliance.com/support-request).

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Quasar Surface - Physical connections

1. **Connect** one Ethernet cable to the primary network port labeled "PORT #0"(A) on the Quasar Console Rear I/O board, **connect** the other end to a configured Gigabit Ethernet switch.
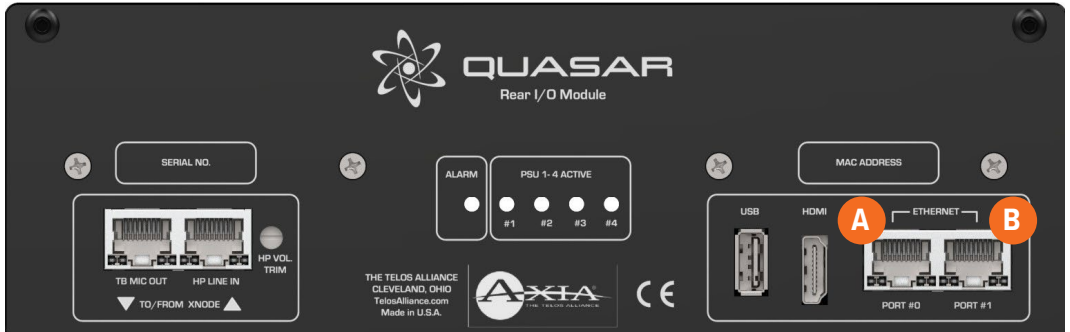
2. **Optionally**, it is also possible to use the secondary ethernet port, labeled "PORT #1" (B) to create a redundant connection link. This will require a specific configuration of the switch ports. Please refer to the Quasar Installation Guide for details about this option.

3. **Connect** an Ethernet cable to the Livewire port (F) on the Quasar Engine, and **connect** the other end to a configured Gigabit Ethernet switch.

4. **Connect** the Quasar surface Power Supply Unit (or Units, if you have more than one installed in your frame) to AC Mains (C) using the Axia Power Supply power cable (or cables) provided. If you have more than one power supply installed and choice of standard and uninterrupted mains in your studio, it is a good idea to connect each PSU to a different type of Mains supply.
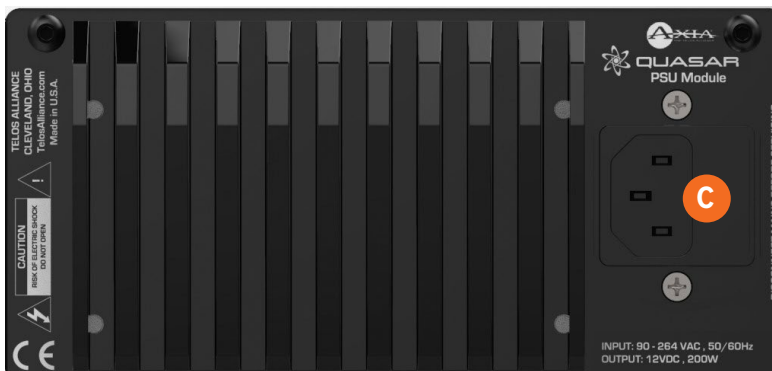
5. **Make Sure** your AC Mains are properly grounded! The Quasar (like every other professional device) is grounded through the AC Mains cables, and does not require a separate chassis ground.

6. Continue to Network Configuration with your Axia Quasar surface modules.

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Quasar Surface - Network configuration

Quasar is shipped with pre-set IP addresses on both the Surface and the Engine. Normally the default IPs are: Surface (Master) 192.168.2.10, Engine 192.168.2.100, Surface Modules 192.168.2.11-12-13...etc.

In case you need to change the default settings, or in case once the console is started up the warning message: "No Connection to Engine" should appear in the Master Touchscreen Module (MTS Module) home page, (just above the round clock) , then you will need to enter new network settings manually.

To do so, you need to access the System Setup page: push and hold for 5 seconds the Monitor Options key (labeled "MON OPT" and located between the two Control Room volume pots). Here you will need to assign an IP address to your console, as well as the Network Mask, and bind the surface to the engine. You do not need to configure a Gateway.


At the bottom of this page you can associate your Quasar Engine to the surface, by entering the Engine's IP address. Addresses can be entered directly from the touchscreen, or by using the rotary encoders below the display. A configured gateway is optional, and not required for normal console operation in a closed network.

Press the "Save and Reboot" button when done.

Once the Master Module IP address is set, you can now access the console Web UI to configure each fader module's IP address.

Quasar Surface – Modules' discovery & configuration

Using a PC connected to your studio network, **launch** a web browser and **enter** the IP address you previously assigned to the MTS into the browser's address bar. In the left column, click on *Console Discovery* menu. When prompted for authentication **enter** user name "user", and leave the password field blank
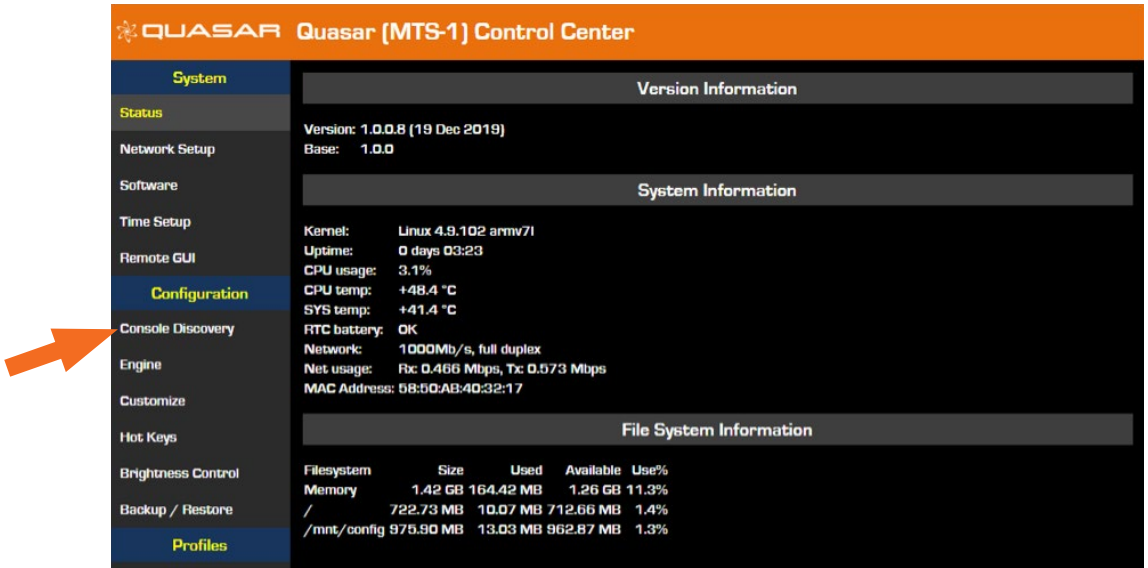
Here you will find all the Fader modules connected to the Master, listed by their MAC and IP addresses, which have been pre-assigned at the factory. Normally, (starting from the first XR Fader module) these are 192.168.2.11 and above. If the pre-assigned addresses fit your network scheme, then you can skip to the next step.
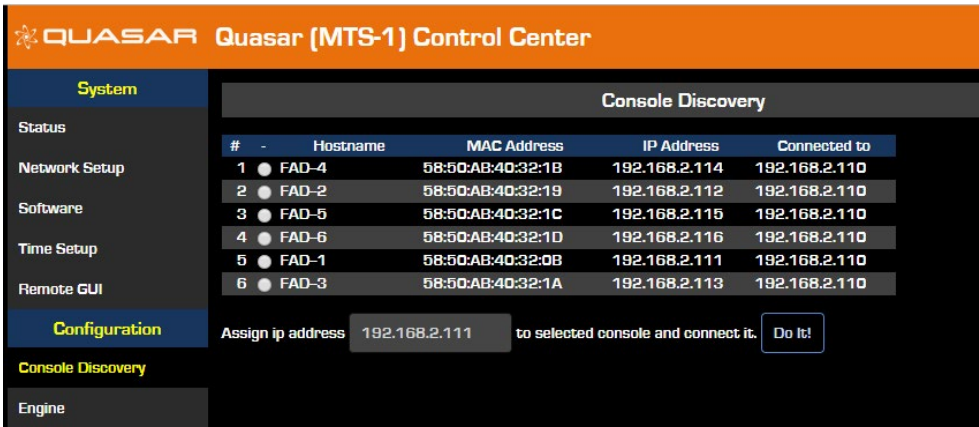
In case you need to change these addresses according to your network scheme, you can assign a new IP address to each module, by selecting it with the radio button, **entering** the desired address in the box at the bottom and **pushin**g the "Do It!" button.

Tip: We recommend choosing for the Master module an IP address with the fourth octet ending with a 0 (zero), and an address with the fourth octet ending with 1,2,3,....etc for the first, second, third, Fader module in your surface and so on. This will make easier to remember each module's IP address for fast UI access.

Once all addresses have been set, please check access to each fader module by entering its IP address in your browser and by navigating each module's Web UI. You can also click the IP address directly from the list you see in the Console Discovery.

The default access credentials will be the same used for the MTS Module: user – *no password*.

Quasar Engine – Installation & configuration

1. **Install** your Quasar Engine platform in a suitable environment, like an air-conditioned machine room. Please refer to the Quasar Installation Guide for details about the engine installation.

2. **Connect** the network cable to the ETH 0 port (rightmost port, if looking at the rear panel).

3. **Connect** both mains cables to your Quasar Engine and apply power.

4. The Engine ships with the following default IP address: 192.168.2.101 – 255.255.255.0 It is possible to change the default IP by navigating the Engine's Web UI, once it is connected to the network.

5. In case the IP must be changed before the engine is connected to the network, please follow the steps below:

6. **Connect** a VGA monitor and USB keyboard to the rear panel. The Basic Setup screen will be displayed.

7. **Select** *1-LAN Settings* with the numeric keypad or up/down keys on your keyboard. Press Enter.

8. **Select** *2-Configure Network Settings*. Press Enter.

9. Type the new settings using the numeric keypad and the up/down keys on your keyboard. Press Enter.

10. The engine will prompt you with a request to reboot. **Select** OK to confirm your choice in order to reboot the engine with the new settings.
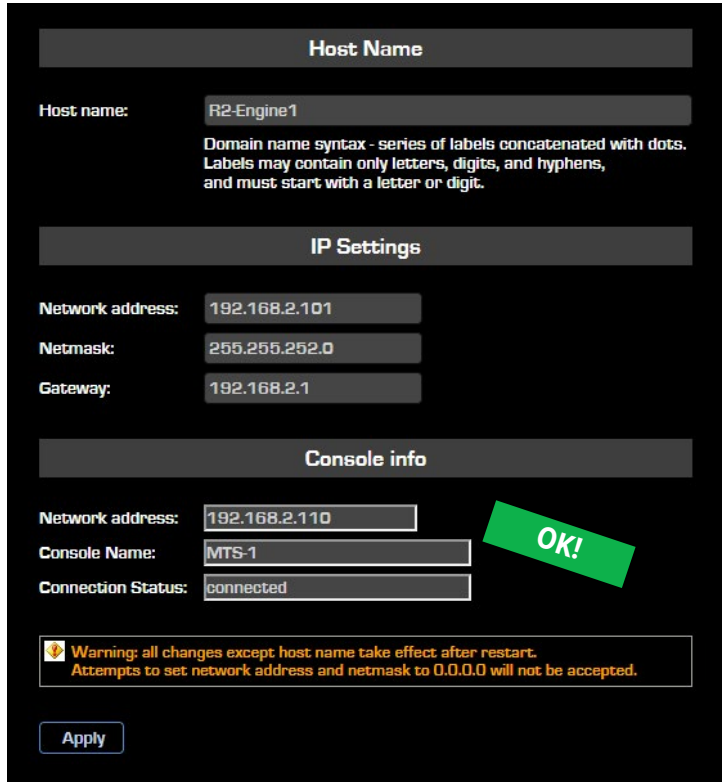

ETH 1   ETH 0
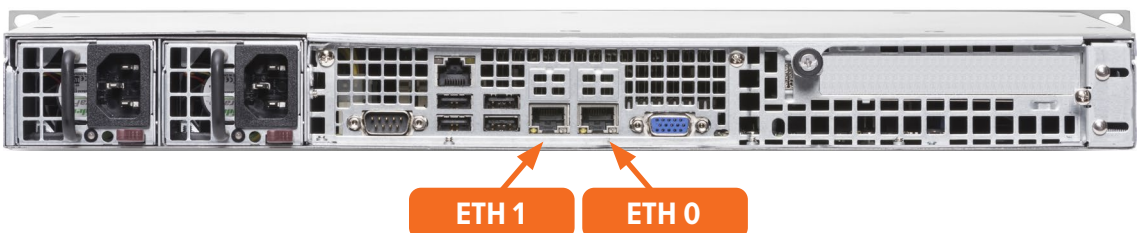
Checking connection to the Quasar Engine

Using a PC connected to your studio network, **launch** a web browser and **enter** the IP address assigned to the Engine into the browser's address bar. When prompted for authentication **enter** user name "user", and leave the password field blank.

Let's double-check the connection to the Surface from the Quasar Engine Web UI, by going to the *Network* menu.

In *Console info,* make sure that the Network Address field shows the IP address of your Quasar Master Touchscreen module, and the Connection Status is "connected".

Now please double-check that the warning message above the clock on the MTS Home page is disappeared.

Host Name

Host name:	R2-Engine1

Domain name syntax - series of labels concatenated with dots. Labels may contain only letters, digits, and hyphens, and must start with a letter or digit.

IP Settings

Network address:	192.168.2.101
Netmask:	255.255.252.0
Gateway:	192.168.2.1

Console info

Network address:	192.168.2.110
Console Name:	MTS-1
Connection Status:	connected

OK!

⚠ Warning: all changes except host name take effect after restart. Attempts to set network address and netmask to 0.0.0.0 will not be accepted.

Apply

The Quasar Surface is now recognized by the network and linked to the Quasar Engine. **Now you can proceed with configuring your System.**

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Quasar Engine - Audio outputs configuration

1. Using a PC connected to your studio network, go to the Engine Web UI home page

2. In the left column, **select** *Program and Monitor outputs*.

3. **Enter** the channel numbers you planned for the Quasar Engine (Livewire Sources) outputs.

4. **Enable** the streams you need to be active on the Engine

5. **Click** the "Apply" button..

Tip: We recommend choosing a Channel ID which has the first 2 or 3 digits corresponding to the last octet of the Engine IP address.

In this example, the engine has IP address 192.168.2.101

This will make easier to spot the right Engine channels when browsing a large network.
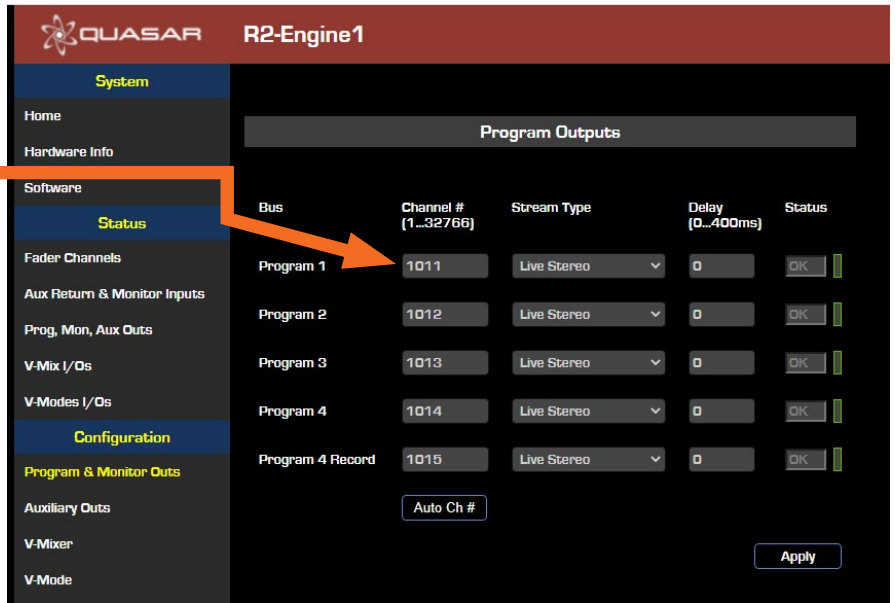
Don't forget to assign the CR Monitor and CR Headphones streams to the Destinations (outputs) of the xNode you connected to your speakers and HP Amp. Or you will hear no Sound!
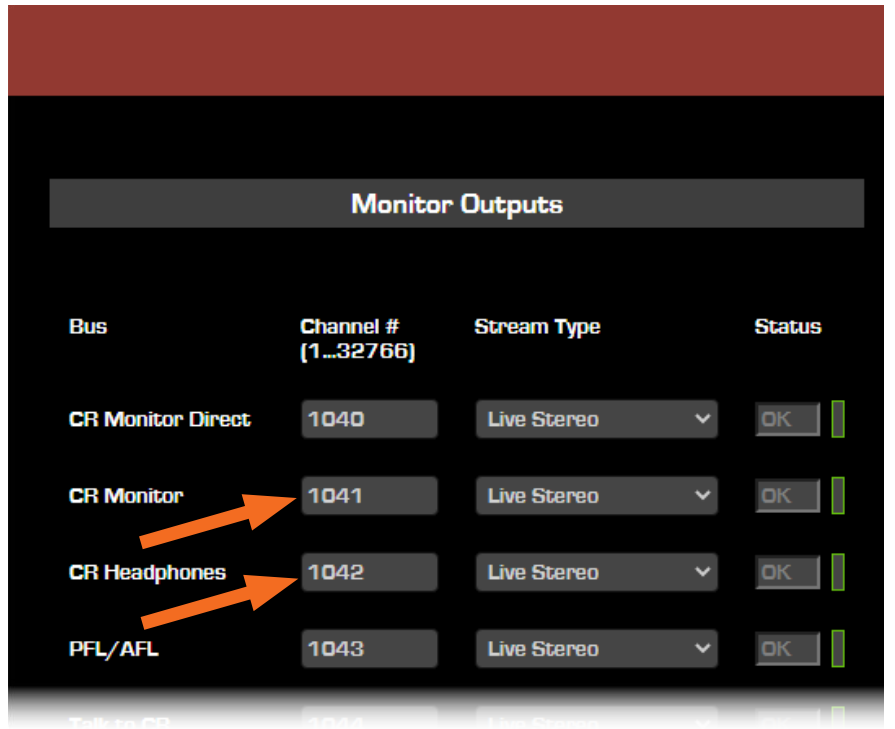
Surface Layer Configuration

Layers are useful when you need to access a number of DSP input channels on your engine which is larger than the number of faders (or phisical channel strips) available on your Quasar surface.

Since any fader on any module could access any input channel on the Quasar Engine, you will need to assign four input channel to each of the 4 layers available, on every Fader Module.

1. Using a PC connected to your studio network, **launch** a web browser and **enter** the IP address assigned to the first (leftmost) fader module into the browser's address bar. When prompted for authentication **enter** user name "user", and leave the password field blank.

2. In the left column, in the Module Manager section of the menu, **select** *Layer Setup*

3. Enter the number of the Engine input channel you want to assign to each physical fader, for each of the four Layers
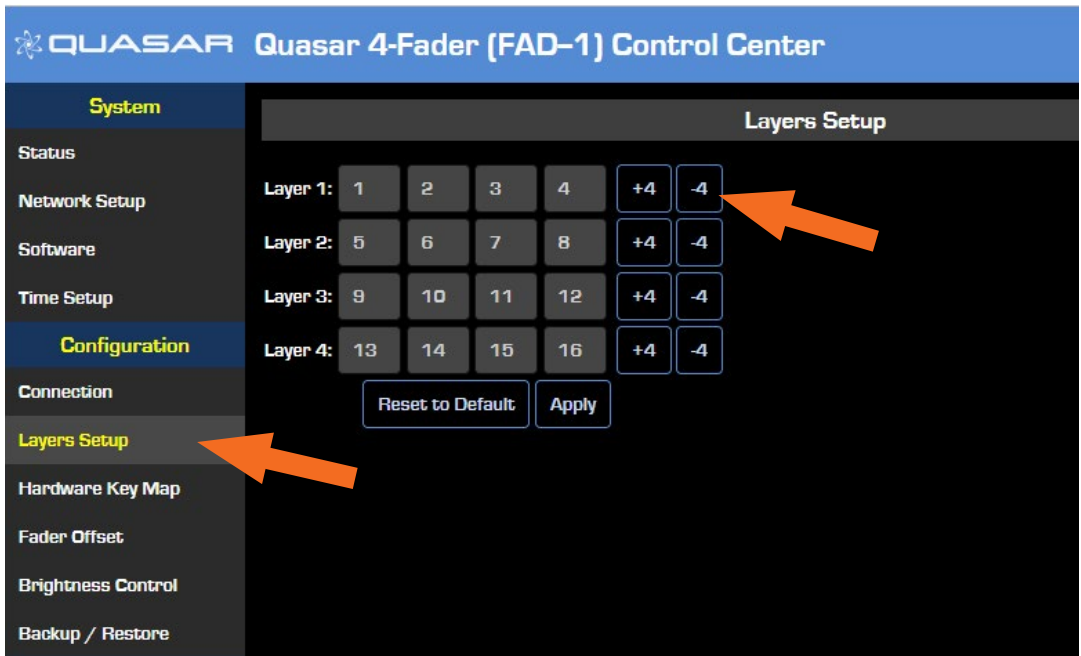
The table shown in the picture above shows which of the 64 input channels available in the Quasar Engine, will be loaded on the four channel strips each time the LAYER 1, 2, 3, 4 buttons will be pushed on the Master Module.

All fader modules default to the channel assignement displayed above. In order to quickly increment or decrement channels, in banks of four, just click on the "+4" or "-4" buttons.

In case you don't need to use Layers, just make sure that layers are disabled.

You can disable Layers by navigating the Master Module Web UI and selecting the *Customize* menu. This will switch off the Layer buttons on the Master module.
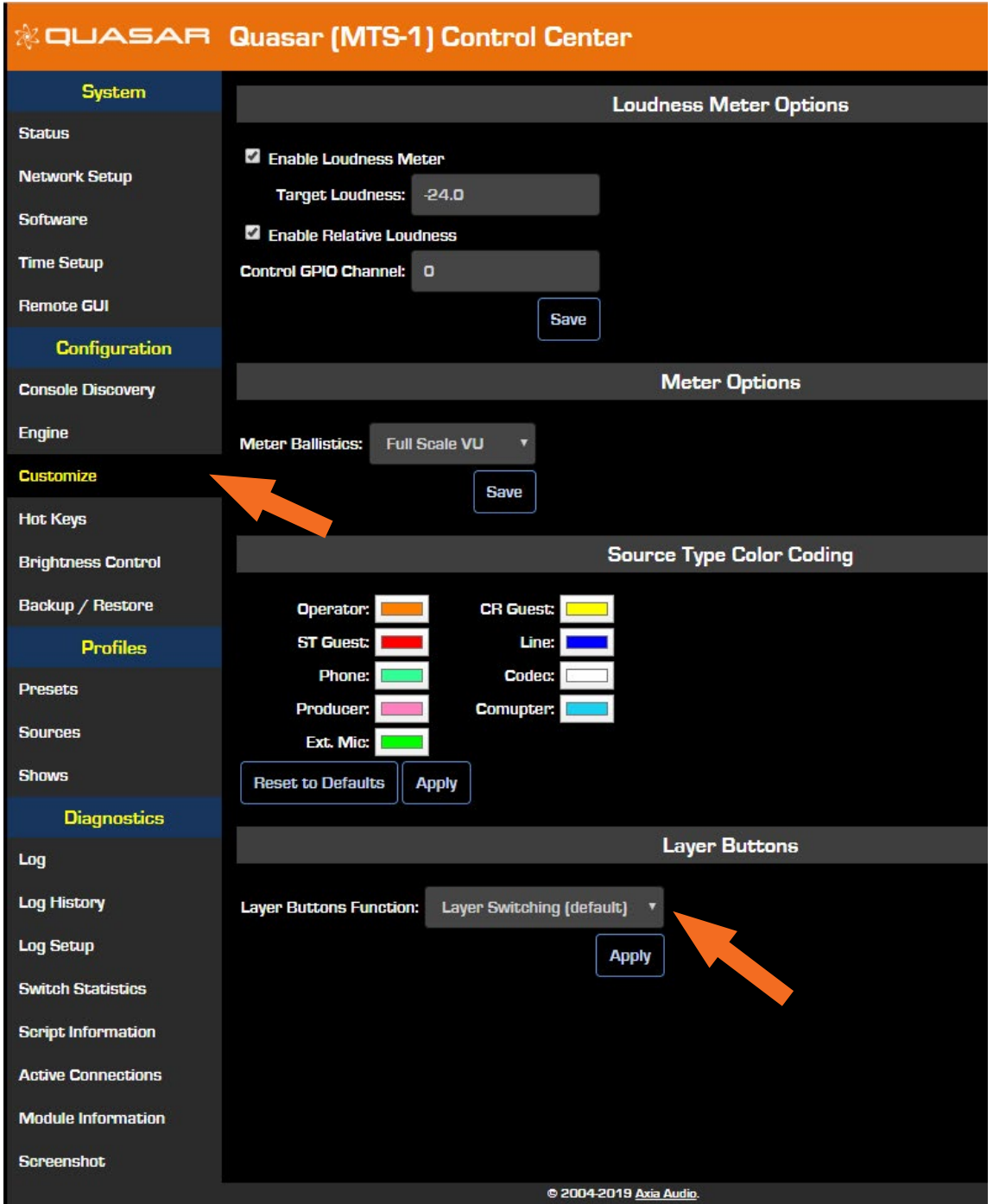
Input Source creation and configuration

You'll use your Web browser to create your first audio source in just a few fast steps:

1. Browse the Quasar MTS module Web UI. In the left column under *Profiles* **select** *Sources*

2. **Click** the button labeled "Create New Source Profile"

3. On the Source Profile screen, **select** *Source Type* from the drop down list (A).

4. **Enter** the name of the source in the *Source Nam*e field (B).

5. **Click** the browse button to the right of the *Primary Source* field (C) and **select** the desired source from the list.

6. **Click** *Ok*.

7. **Repeat** this operation to create more sources. These will then appear in the Channel Input > Sources menu of your Quasar.
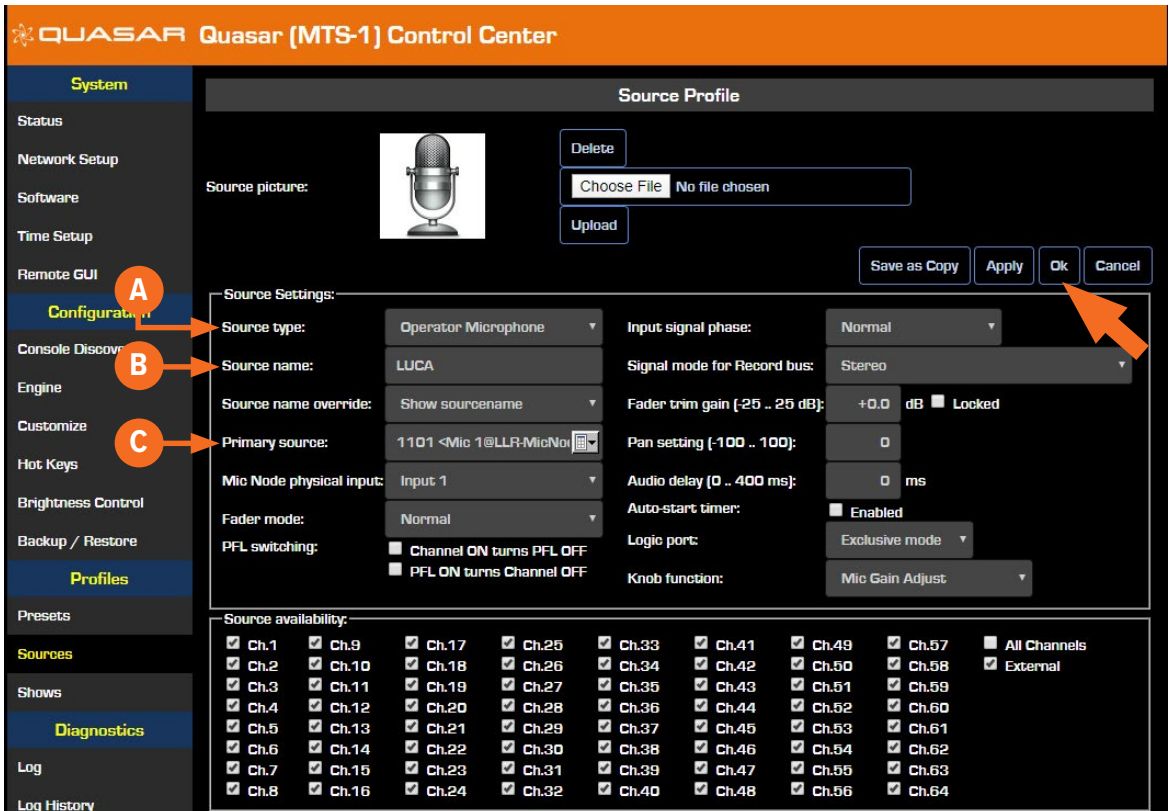
For more detailed information on how to create and configure all your Network sources, please refer to the Quasar User manual.

Assign Sources to Input Channels

Once all the required Sources are created, you need to assign them to the input channels of your Quasar Engine, and save this configuration in what we call "Show Profile".

You can do so in two ways:

1. Assigning Sources directly from the console, and capturing your configuration into a Show
2. Creating a Show Profile from the Web UI and assigning sources to your channels from within this page

From The Console:

Push the top encoder of the channel strip you want to load with a source, and select the Source tab in the Master Touchscreen module.

Here you will be presented with a list of all the sources that have been configured on your console, and are active onto the network, and you will be able to select one by scrolling the touchscreen and pushing the *Load Source* button to the right..

Note:

Inactive sources – those generated by devices which are disconnected from the network, or switched off – will not be detected by the Quasar and therefore will not show up on the above list.

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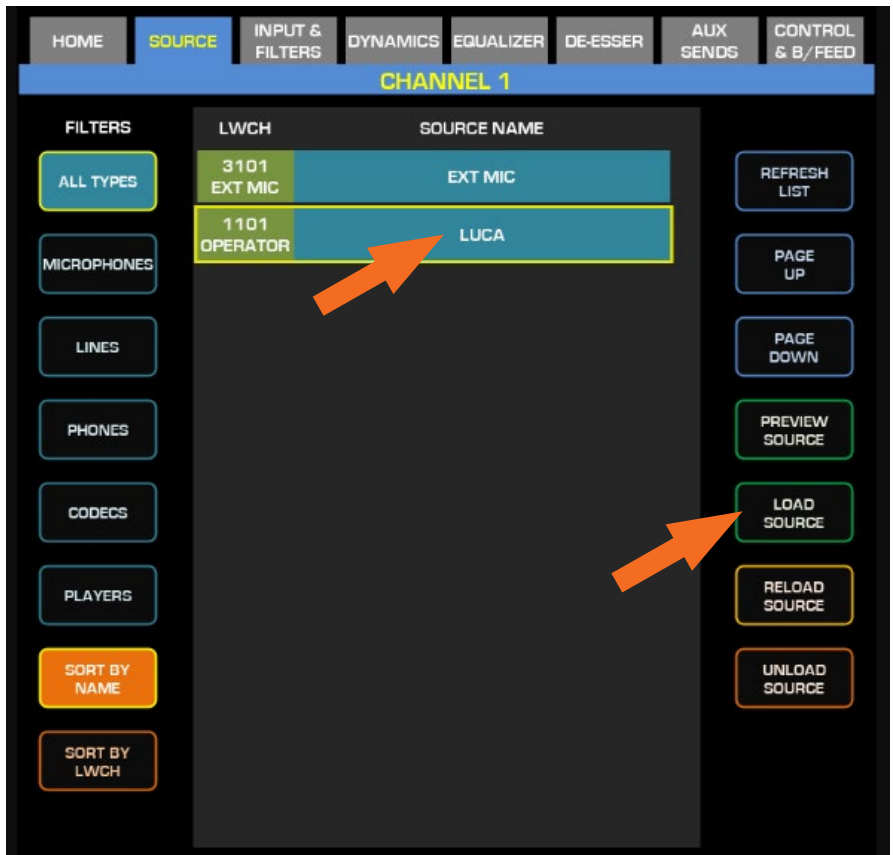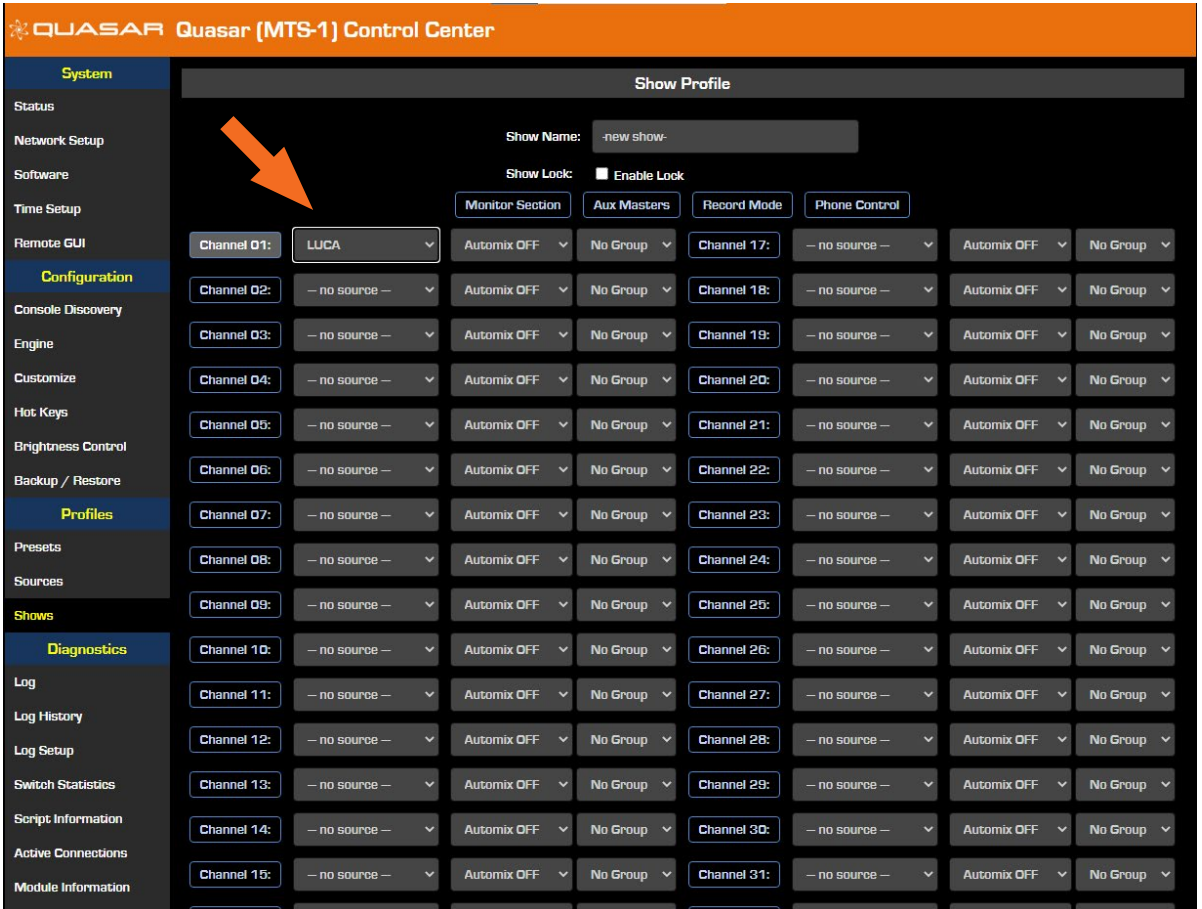
From the Web UI:

From your PC, navigate the "Shows" main page, and create a New Show Profile
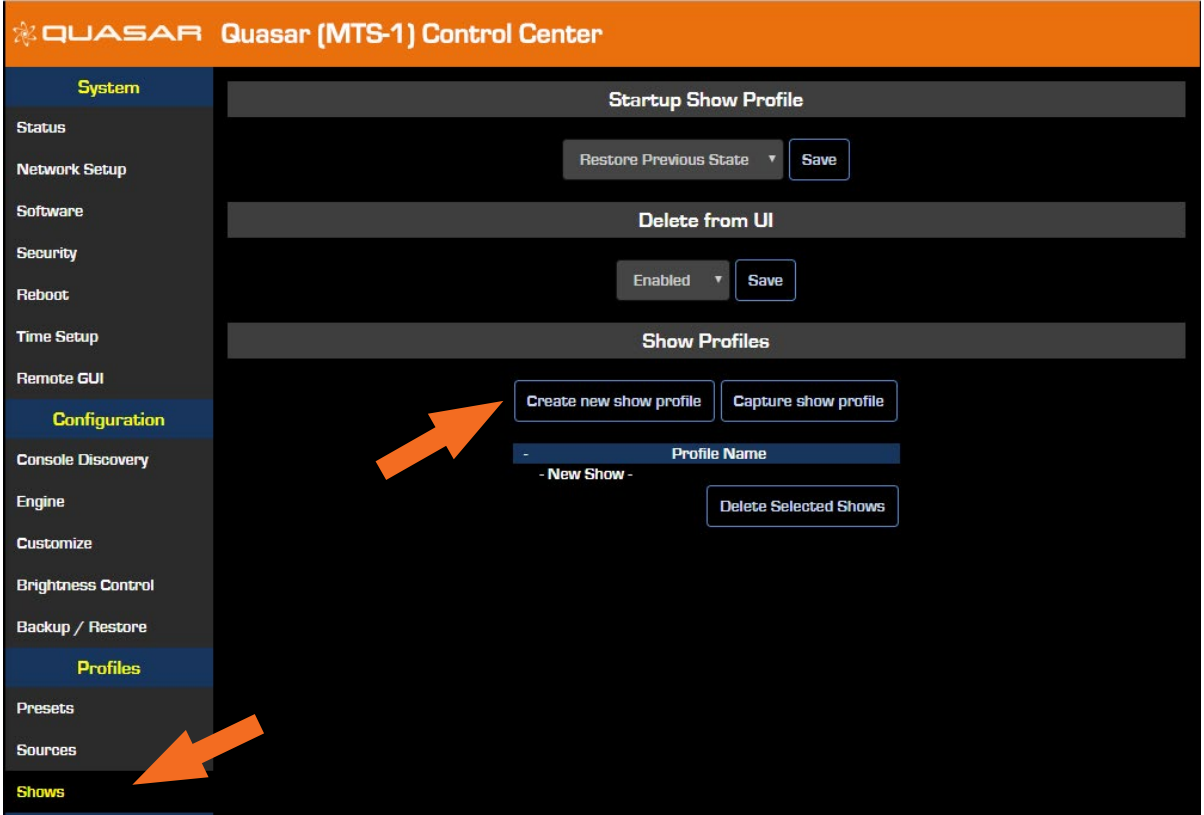
After clicking on "Create new show profile" button, a dialog will appear, to let you type in the new profile name, and confirm. Then the following page will appear, and here you will be able to assign sources to each of the input channels, by picking them up from the drop-down menu.

Program assignment & monitoring

Press the Program 1 key on the fader strip; it will illuminate to show you've assigned that fader to PGM-1. Press the ON key at the bottom of the fader strip and move the fader up.

Congratulations: you've got audio! The meters on your display should be active, as shown below.
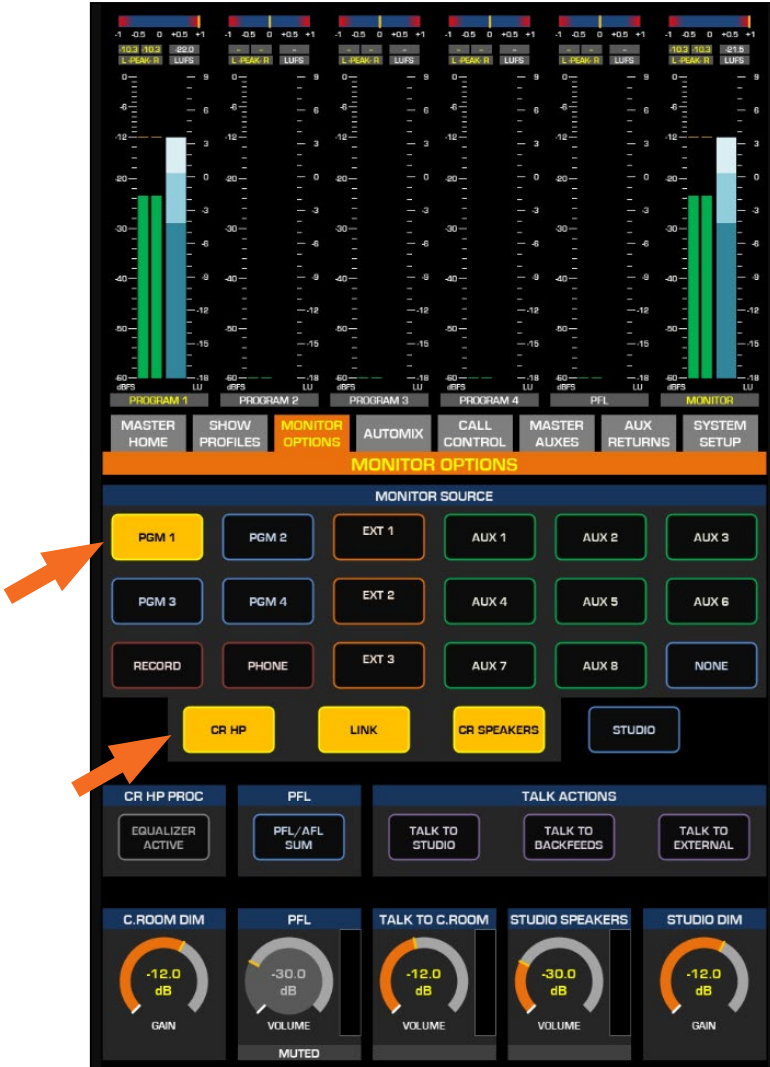
To hear the audio, make sure you have selected Program 1 as source to your CR Headphones or Speakers, using the controls on your Monitor module, and that the volume is at an appropriate level (the level meters onscreen will show the relative volume you've set). Also, make sure the xNode feeding your speaker has been configured to the CR Monitor source channel number.

Your setup is complete!

That's it! You're ready to Rock with Quasar!!! Now, sit back and enjoy some music. Try exploring the intuitive UI of the Quasar channel strip… And have fun!

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INFORMATION ABOUT YOUR NEW PRODUCT

IMPORTANT!

Telos Alliance strongly suggests that you use an Uninterruptible Power Supply (UPS) with power line filtering to prevent damage to the unit during electrical storms and power surges. Please note that damage due to lightning is not covered under the product Warranty (refer to your User Manual for warranty information).

For more information on lightning protection please visit our website:
http://blogs.telosalliance.com/tech/surge-suppression-pointers

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