PowerStation Software Package 1.0.2g - Update Instructions

16 February 2010, Cleveland, Ohio USA

Software version compatibility

Livewire Nodes: v2.5.2 or higher

Element sub-module firmware:

- Fader and Navigation Modules: 4.24
- User and Accessory Modules: 4.25
- GPIO: 4.0

New in this release

Element:

- Users can now change the source profile on an Element fader channel using PathfinderPC or PathfinderPRO.
- Added fader offset option (on Customize web page). Adds a fixed value for all faders in a system.

Engine:

- Pre-fader gain control moved to the point immediately after the MODE switch.
- Front panel – Master and Sync LEDs controlled by the integrated IO node.
- Backup power configuration.

Audio IO:

- Added NTP Slave mode. This mode allows node to use external NTP server as a time base.

Switch:

- Spanning tree protocol; configurable enable/disable and bridge priority; STP fast option for 1Gb ports in access mode.

Preparation for Update

Before updating it is highly recommended to back up PowerStation settings to your PC's hard drive. Use your web browser to navigate the PowerStation's configuration web pages:

- Backup controls for Element console show and source profiles are found in the Element Surface **Customize** page.
- Backup controls for the PowerStation Engine settings are found on the Mix Engine **System** page.

Download the file **PS_1-0-2g_upgrade.zip** from www.AxiaAudio.com/downloads/ and save it to your hard drive. When you unzip this file, you will get three separate upgrade packages for updating the separate functional blocks of your PowerStation:

- PowerStation Engine: **PS_engine_1-0-2g_upgrade.tbz2**
- PowerStation Main or AUX IO Section: **PS_io_2-6-7a-r1_upgrade.pkg**
- PowerStation Ethernet Switch: **PS_switch_1-0-9_upgrade.pkg**

Each of these updates will be installed independently as described in the following sections.

Installation of New Software

Although all the required software components are consolidated into one download pack, each of them needs to be installed separately. Here are the basic steps:

1. Open the PowerStation Control Center web page at the unit's base IP address (standard HTTP port 80).
2. Sequentially visit the **System** pages of the Mix Engine, Main and Aux IO subsystems, and the Ethernet switch. Via each of these system pages, install and apply the software update for each corresponding component.

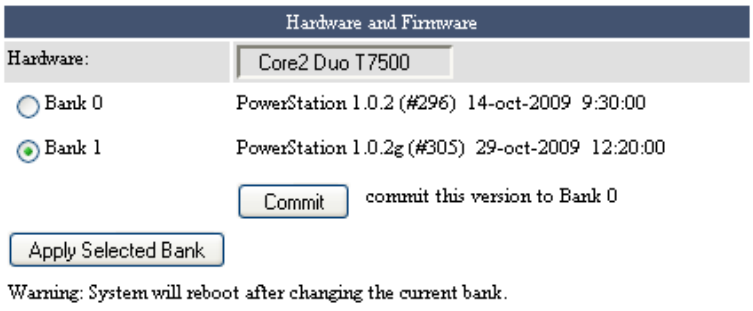
***Please Note**:* It is recommended that you always install matched software versions from one download package when updating components. These versions have been extensively tested together. Some features may not operate as expected if you mix software components from different release packages.

PowerStation Mix Engine Section

Using the Web browser of the computer on which you downloaded the update package, enter the base IP Address of the PowerStation. When the PowerStation Control Center screen appears, choose “Setup” from the Mix Engine section of the left-hand menu and enter your password if prompted.

Scroll to the bottom of the page to the Hardware and Firmware section. If Bank 1 is in use as shown in the example below, you will first have to select **Commit**. This action will move the software from Bank 1 to Bank 0 making Bank 1 “empty” and available for your new update. Once Bank 1 is free, click the **Browse** button. Navigate to the directory where you saved the update package and select the file named **PS_engine_1-0-2g_upgrade.tbz2**. Choose the “Upload” button and the new file will upload to Bank 1. When the screen refreshes, you will see **PowerStation 1.0.2g** displayed in Bank 1.

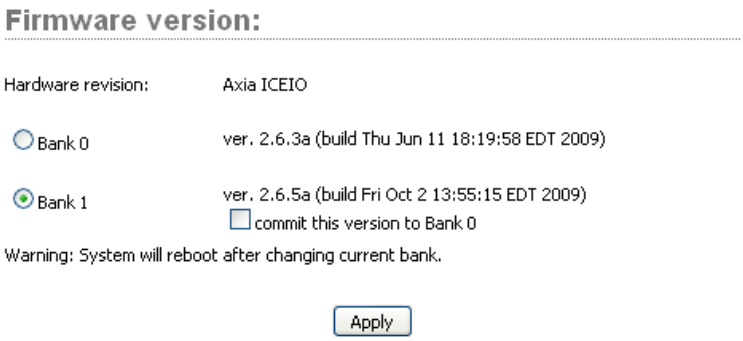
Select this update using the radio button, and click the “Apply Selected bank” button. As indicated, the system will reboot and load the 1.0.2g update. The system will take a minute or two to reboot during which audio will stop.



PowerStation MAIN and AUX IO Section

From the PowerStation Control Center screen, choose “Setup” from I/O Subsection Main (or I/O Subsection Aux) from the left-hand menu. Enter your password if prompted.

Scroll to the bottom of the page to the Firmware Version section. If Bank 1 is in use as shown in the example below, you will first have to **Commit** the current version to Bank 0. This action will move the software from Bank 1 to Bank 0 making Bank 1 "empty" and available for your new update. Once Bank 1 is free, click the **Browse** button. Navigate to the directory where you saved the update package and select the file named **PS_io_2-6-7a-r1_upgrade.pkg**. Choose the "Upload" button and the new file will upload to Bank 1. When the screen refreshes, you will see **ver 2.6.7a.r1** displayed in Bank 1.



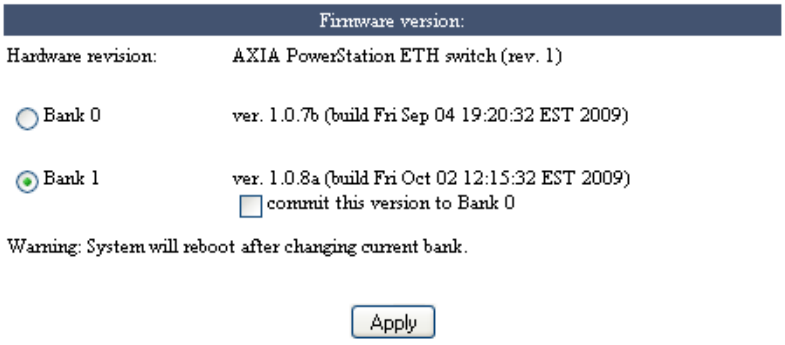
Select this update using the radio button, and click the "Apply Selected bank" button. As indicated, the system will reboot and load the 2.6.7a.r1 update. The system will take approximately 30 seconds to reboot and during which audio will stop.

Note that the update procedures for PowerStation MAIN IO and AUX IO are identical.

PowerStation Ethernet Switch Section

From the PowerStation Control Center screen, choose "Setup" from the Ethernet Switch section of the left-hand menu. Enter your password if prompted.

Scroll to the bottom of the page to the Firmware Version section. If Bank 1 is in use as shown in the example below, you will first have to **Commit** the current version to Bank 0. You will get an empty entry field below bank1, where you can browse/select a new version for upload. Click the **Browse** button and navigate to the directory where you saved the update package. Select the file named **PS_switch_1-0-9_upgrade.pkg**. Choose the "Upload" button and the new file will upload to Bank 1. You will see **ver 1.0.9** displayed in Bank 1 after the screen refreshes,.



Select this update using the radio button, and click the "Apply Selected bank" button. As indicated, the system will reboot and load the 1.0.9 update. The system will take approximately a minute to reboot and during which audio will stop.

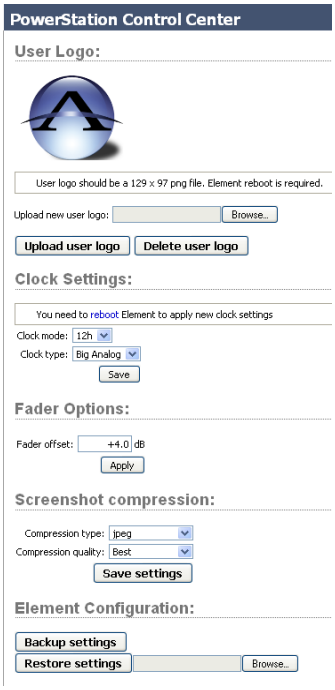
New Features

Most of the new features of this release are described in the "**Element v2.0 – Installation and Users Guide**" (Rev 1.6 – November 2009). however we will review the new features here as well so you will know what has changed.

GUI Enhancements

We have done a bit of housekeeping and moved things around. In the Element section, you will notice the following changes:

- The module and firmware updates have been combined on the Modules page and this info has been slightly redesigned. Functionality is unchanged.
- The Log Setup that was formerly found on the Customize page, is now on its own page.
- Clock configuration has moved and is now found on the Customize page.
- Save buttons have been added to the top of the Source and Show Profile screens to improve navigation.



Fader Offset

This option allows engineers to specify a global fader offset value. This permits you to "shift" the normal operating position of your faders to make your operators feel at home on their new Element console. This parameter does not change the gain structure of the system but will offset unity gain so it no longer occurs at the blue "0" reference position.

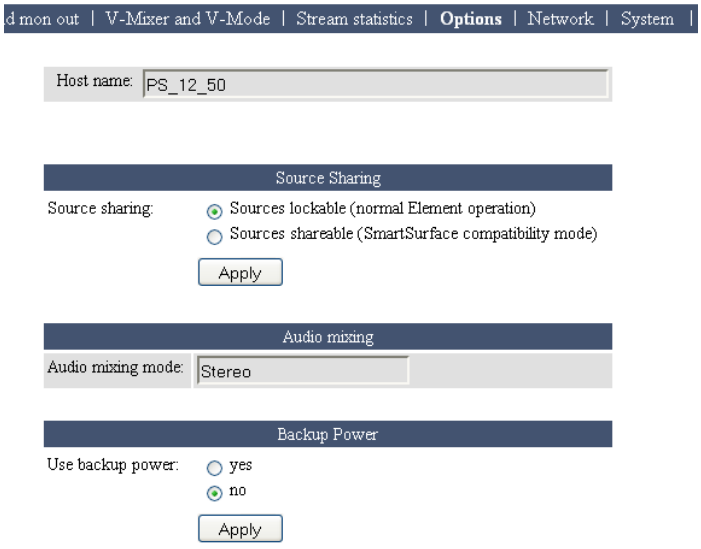
Front Panel Master and Sync LED

These indicators now properly follow the Master/Slave sync properties of the audio IO Subsystem and are controlled by the IO Subsection Livewire clock priority settings.

Backup Power Configuration

If you are using a PowerStation MAIN with a PowerStation AUX, you have redundant power supplies. Either unit will provide backup power to the other in the case of a power supply failure. The configuration of backup power has been improved with this release.

The Backup Power option is found in the Mix Engine Options section as illustrated here. The default setting is "no". If backup unit is connected while a PowerStation Main or Aux is already running, as soon as the power presence is detected on the backup input, this setting will automatically change to "yes".



There are several combinations of Normal and Fault states and the LED states are listed below:

PowerStation Main - "PSU" Indication Logic

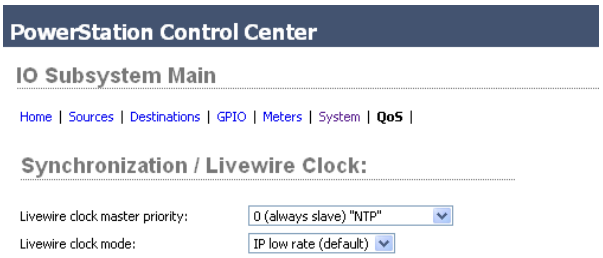
PSU Condition	LED State
Backup not used	Green
Backup used, both supplies operational	Green
Backup used, local supply operational, backup supply failed	Red
Backup used, local supply failed, backup supply operational	Red

PowerStation Aux - "PSU" Indication Logic

PSU Condition	LED State
Backup not used	Yellow
Backup used, both supplies operational	Green
Backup used, local supply operational, backup supply failed	Yellow
Backup used, local supply failed, backup supply operational	Red

NTP Slave Mode

This new mode allows the Audio IO section to use an external NTP server as a time base. Such configuration allows operation without sample rate conversion between nodes and other systems which use Standard audio streams, such as *FhG ContentServer for DAB/DMB.*

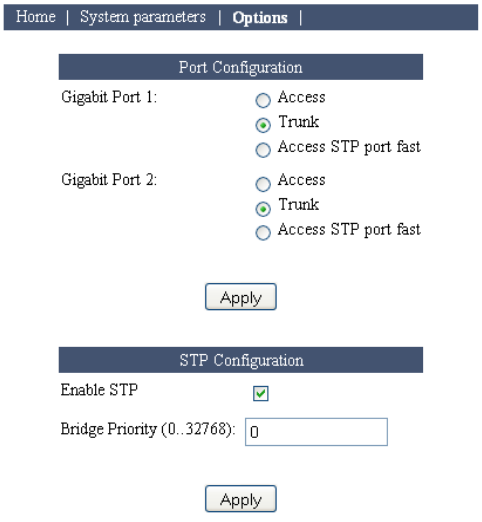


The clock mode is activated by using a new “Livewire clock master priority: 0 (always slave) NTP" option on the IO Subsystem QoS configuration page.

Ethernet Switch Enhancements

IGMP Querying clarifications:

- The PowerStation Ethernet switch functions as the IGMP querier if necessary.
- It will automatically stop querying upon detecting another source of queries with a lower IP address, such as another PowerStation or a core switch.
- The PS switch will forward incoming query messages from another source, compatible with both hierarchical and loop configurations.



Port Configuration: Allows you to select from one of three different modes for the two gigabit ports on the switch. Options are:

- **Access** - normally used for connections to other Livewire devices
- **Trunk** - used for the connections to a core Ethernet switch or other PowerStations.
- **Access STP port fast** - may optionally be used when you connect up to four PowerStations in a ring configuration. By selecting this mode, the normal STP logic is reversed. The port is allowed to start sending packets immediately, and loop discovery is done in parallel. With this option there is a risk of short-term flooding so use with extreme caution and under the advice of Axia Tech Support or your network administrator.

Spanning Tree Protocol is now configurable. You may disable or enable STP as well as specify a bridge priority. Bridge priority is a parameter that is used to determine the preferred route when STP is enabled. The default value of "0" should be used unless instructed otherwise by Axia Tech Support.

Release Notes: Main modifications since initial release 1.0.0d

Functional improvements:

- Element: Added the ability to change source profile on fader channel from Pathfinder
- Element: Added fader offset option (on Customize web page). This feature adds a fixed value for all faders in a system
- 2-Fader+Monitor Module users may now exit from Test Mode by pressing '0' on numeric keypad
- Engine: Pre-fader gain control moved to the point immediately after the MODE switch
- Engine: Front panel – Master and Sync LEDs are now controlled by the integrated IO node
- Engine: Backup power configuration enhancements
- Audio IO: Added NTP Slave mode. This mode allows node to use external NTP server as a time base
- Switch: Spanning tree protocol; configurable enable/disable and bridge priority; STP fast option for 1Gb ports in access mode

Bug fixes:

- Control Center: Component devices can now be accessed when a password is present
- Element: routing protocol commands now work as expected
- Element: Monitor 2 is now selectable on the accessory HP panel
- Engine: IP settings may now be reset to factory defaults
- Audio IO: Phase relationship of analog outs is now correct
- Audio IO: Fixed "fast clock" subscription in STL Slave mode.
- Switch: Fixed IGMP querying logic
- Switch: Fixed VLAN/priority tag handling on Gbit ports
- Switch: Added Telnet access