Factory Defaulting
Pathway Ethernet Products
via Physical Access

For recovery of devices that are members of a security domain for which the password is not known

Reference Guide

September 2021

Pathway®
Connectivity Solutions

C O N T E N T S

BACKGROUND

With the introduction of several cyber-security laws beginning **January 2020**, Pathway Connectivity has developed security features in the latest version of Pathscape as well as our Ethernet-equipped devices' newest firmware. These security features are designed to keep unauthorized users from taking control of your lighting network for nefarious purposes such as denial-of-service or ransomware attacks, through the Internet or locally from unsecured access points.

OVERVIEW

This security system is built around the concept of "**Domains**". To secure a network, the administrator creates a new **Security Domain** in Pathscape with a password. The admin then adds the relevant devices to the security domain. Those devices are then secured, with both data and configuration traffic being securely authenticated. A "bad actor" cannot make changes to the network without the domain password, and using that password to log into the domain in Pathscape.

When a new Security Domain is created, Pathscape provides a **Recovery Key**. This is a 25-digit alphanumeric code, similar to software installation keys you may have seen. The admin should print this Recovery Key or write it down and store it in a secure location. **It is the only way to recover the domain intact** if the domain passwords are lost or forgotten.

Of course, there is a possibility the Recovery Key is lost, or destroyed, due to physical movement of gear, or reasons such as changes in staff, etc. If the domain password as well as the recovery key are lost, the recovery of the domain intact is not possible. However, it is possible to reset the affected devices to their factory state, meaning they will once again be available to add to a **new** security domain in Pathscape. Saved Pathscape **Show Files** can restore all configuration and patches to restored devices.

Please remember that any device that is locked out due to a lost password and recovery key **cannot be restored or unlocked by Pathway**, remotely or otherwise. **By law, we cannot implement a master password or back door method to unlock any device, as this in itself is a major security vulnerability.**

> If any device is locked to a domain whose password and recovery key are unknown, that device **must** be factory defaulted in order to restore communication with the device.

PURPOSE

This guide will demonstrate how to perform the factory default/reset procedure on all applicable Ethernet-equipped Pathway products, for a situation in which the devices are locked-out and unconfigurable due to a lost Security password or Recovery Key. **Physical access to the devices is required**.

Products are listed by product family.

Any products not listed in this document do not currently support security and do not need to be in a domain to be configured by Pathscape. Refer to the appropriate products' manual for factory defaulting procedures.
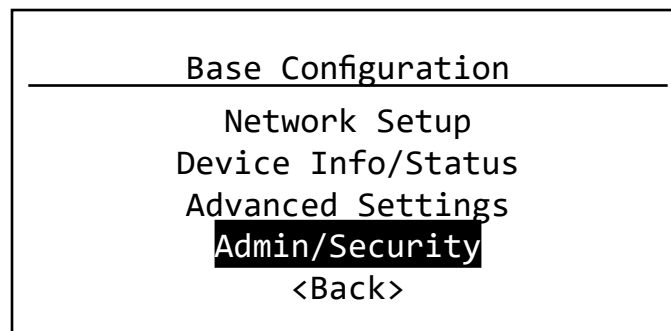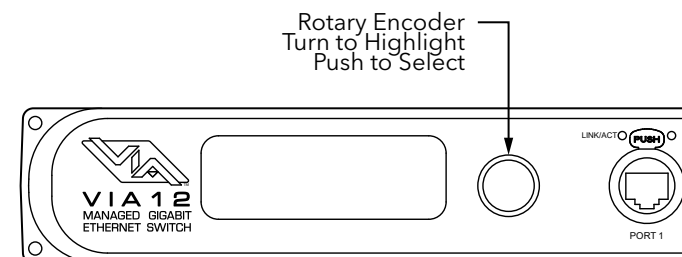
FACTORY DEFAULT PROCEDURE

Fortunately, the process for factory defaulting most Pathway products is relatively straightforward, although it does differ depending on the product family.
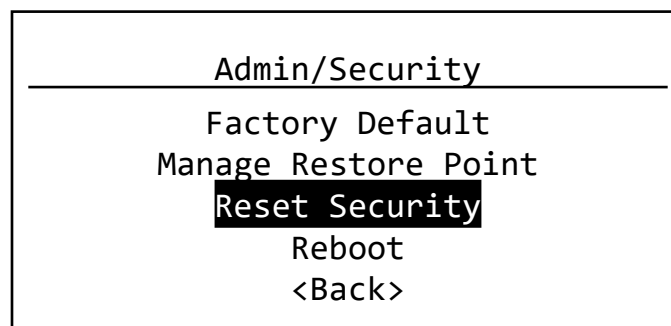
VIA ETHERNET SWITCHES

RACK-MOUNT MODELS - PWVIA RM P12 RJ45EC [xxxx]

These rackmount switches are able to perform a factory default from the front panel menu.

To factory default a locked-out switch, turn the encoder knob to the switch main menu, which is the default menu showing the switch's name and IP address. Click in the encoder to access the main menu.

Rotary Encoder
Turn to Highlight
Push to Select

LINK/ACT○ (PUSH) ○

VIA 12
MANAGED GIGABIT
ETHERNET SWITCH

PORT 1

```
        Base Configuration
 _____

          Network Setup
        Device Info/Status
        Advanced Settings
        Admin/Security
             <Back>
```

Scroll the encoder knob until "**Admin/Security"** is highlighted, and click in the knob. Under the Admin/Security menu, scroll down to "**Reset Security**", and click in the knob. You will be asked to **Confirm** your selection.

```
          Admin/Security
 _____

         Factory Default
      Manage Restore Point
         Reset Security
             Reboot
             <Back>
```

This will reset all security settings to the same state as the device ships with from the factory, but all other settings are maintained.

You will need to choose an option from the **Security Mode** menu before continuing use, either by adding the device to a **Security Domain**, choosing **Local Configuration Only**, or by **Disabling Security**.

You may alternatively choose **Factory Default** from the menu; however this will **reset ALL device settings** to factory values. If you simply need to recover a device that has been locked out due to forgotten or lost Security Domain password(s) or Recovery Key(s) but wish to maintain other settings, use **Reset Security** instead.

LCD LOCKOUT

If the switch has **LCD Lockout** enabled, you will not be able to make changes from the front panel. To address this, a 30-second boot delay has been added. First, hard reboot the switch (unplug and re-plug the AC power source), and then within 30 seconds after the switch has booted up, perform the above action. After 30 seconds, the front panel UI will be locked out again.

DIN-MOUNT MODELS - PWVIA DIN [P16/P8] POE

The VIA DIN 16-Port and 8-Port Ethernet switches have a small hole in the front panel, through which the reset button may be pressed. The hole is next to the "PoE" label on the front panel.
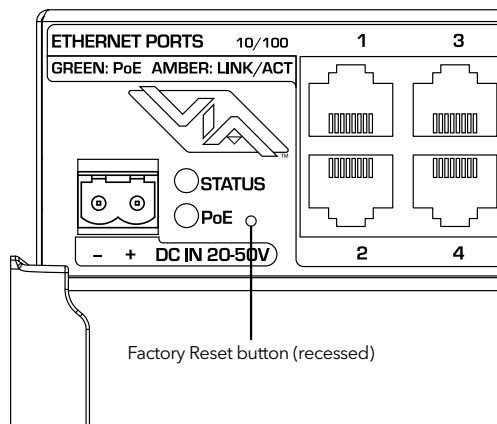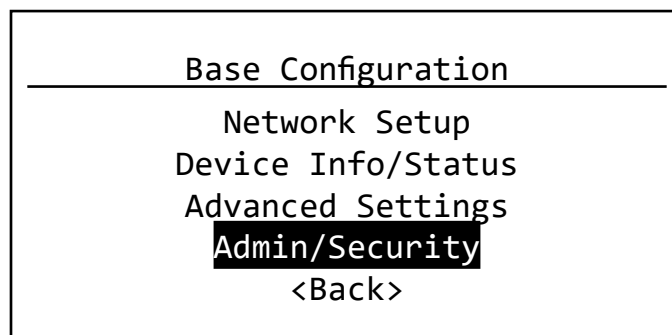
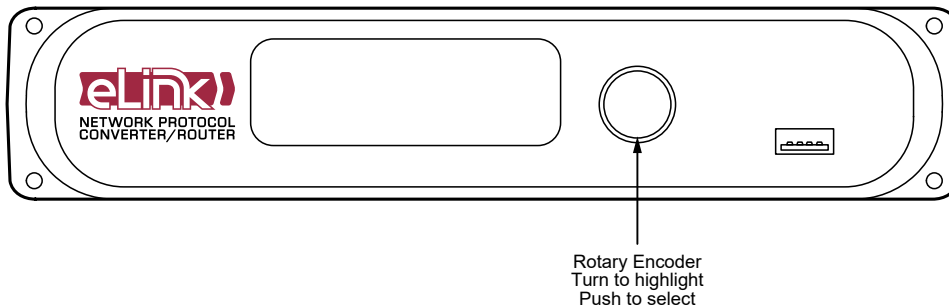

Factory Reset button (recessed)

Using a plastic-coated paperclip or similar **non-metallic** small tool, insert it through the hole in the panel. Press and hold down the button for a **full 5 seconds. This will perform a full factory default.**
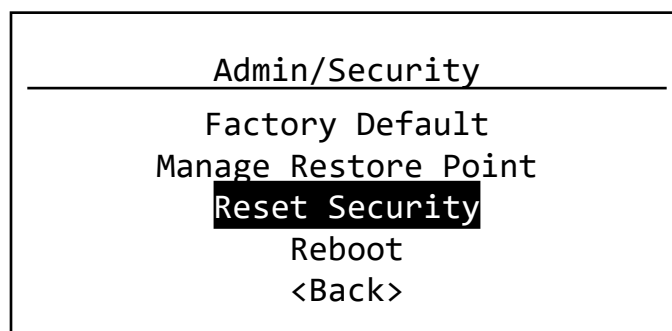
eLINK LIGHTING PROTOCOL ROUTER

RACK-MOUNT MODEL - PWELINK RM P2 [xxxx]

On the eLink Lighting Protocol Router, you are able to perform a factory default from the front panel menu.

To factory default a locked-out eLink, turn the encoder knob to the switch main menu, which is the default menu showing the device's name and IP address. Click in the encoder to access the main menu.

Rotary Encoder
Turn to highlight
Push to select

```
          Base Configuration
_____

             Network Setup
           Device Info/Status
           Advanced Settings
            Admin/Security
                <Back>
```

Scroll the encoder knob until "**Admin/Security"** is highlighted, and click in the knob. Under the Admin/Security menu, scroll down to "**Reset Security**", and click in the knob. You will be asked to **Confirm** your selection.

```
            Admin/Security
_____

            Factory Default
         Manage Restore Point
            Reset Security
                Reboot
                <Back>
```

This will reset all security settings to the same state as the device ships with from the factory, but all other settings are maintained.

You will need to re-add the device to a **Security Domain** before resuming use of the eLink device.

You may alternatively choose **Factory Default** from the menu; however this will **reset ALL device settings** to factory values. If you simply need to recover a device that has been locked out due to forgotten or lost Security Domain password(s) or Recovery Key(s) but wish to maintain other settings, use **Reset Security** instead.

LCD LOCKOUT

If the device has **LCD Lockout** enabled, you will not be able to make changes from the front panel. To address this, a 30-second boot delay has been added. First, hard reboot the device (unplug and re-plug the power source; if powered via PoE you may power cycle the PoE port the eLink is connected to), and then within 30 seconds after the device has booted up, perform the above action. After 30 seconds, the front panel UI will be locked out again.
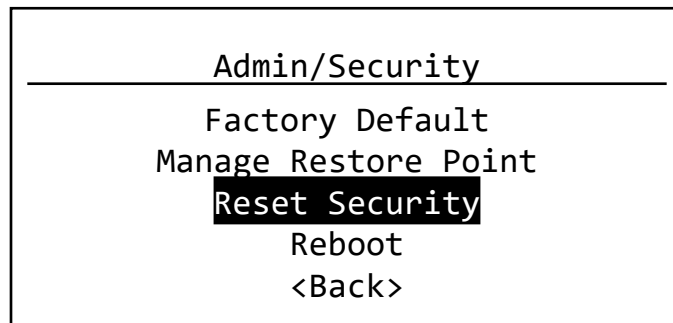
PATHPORT GATEWAYS

RACK-MOUNT MODELS - PWPP RM [P8/P4] [xxxx]

These rack-mount gateways are able to perform a factory default from the front panel menu.

To factory default a locked-out gateway, turn the encoder knob to the switch main menu, which is the default menu showing the gateway's name and IP address. Click in the encoder to access the main menu.
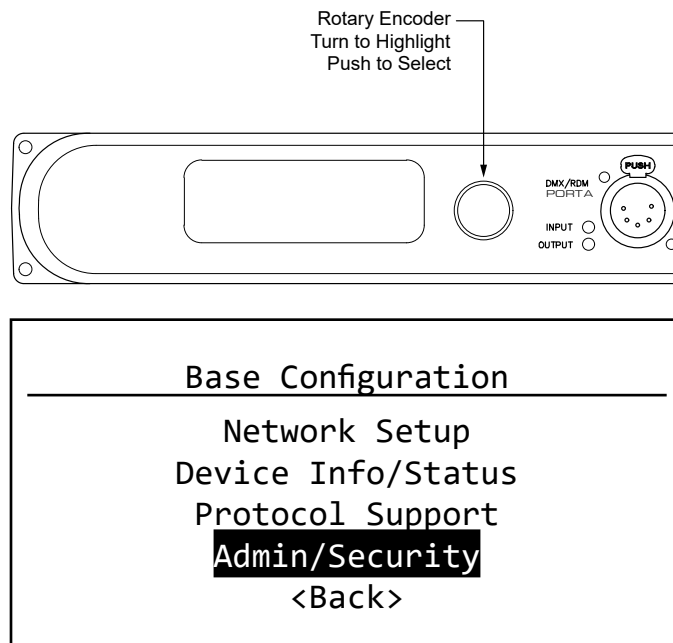
Scroll the encoder knob until "**Admin/Security**" is highlighted, and click in the knob. Under the Admin/Security menu, scroll down to "**Reset Security**", and click in the knob. You will be asked to **Confirm** your selection.

This will reset all security settings to the same state as the device ships with from the factory, but all other settings are maintained.

You will need to choose an option from the **Security Mode** menu before continuing use, either by adding the device to a **Security Domain**, choosing **Local Configuration Only**, or by **Disabling Security**.

You may alternatively choose **Factory Default** from the menu; however this will **reset ALL device settings** to factory values. If you simply need to recover a device that has been locked out due to forgotten or lost Security Domain password(s) or Recovery Key(s) but wish to maintain other settings, use **Reset Security** instead.

LCD LOCKOUT

If the gateway has **LCD Lockout** enabled, you will not be able to make changes from the front panel. To address this, a 30-second boot delay has been added. First, hard reboot the gateway (unplug and re-plug the AC power source), and then within 30 seconds after the gateway has booted up, perform the above action. After 30 seconds, the front panel UI will be locked out again.

WALL-MOUNT 2-PORT MODEL - PWPP WM P2 [xxxx]

To reset a Wall-Mount 2-Port Pathport Gateway, press and hold the LCD backlight button for **5 seconds. This must be done within 30 seconds of the device booting up.**

This will perform a full factory default.

TRUSS-MOUNT & DESKTOP 1-PORT MODELS - PWPP [TM/DT] P1 [xxxx]

The Desktop/Truss-mount 1-Port Gateways' hardware is identical to the Wall-mount model, but housed in a metal enclosure with external power and Ethernet ports.

Unscrew the four screws on the front of the device, and pull the faceplate out to gain access to the circuit boards.

The remainder of the procedure is identical to the **WALL-MOUNT 1-PORT MODEL** method shown previously.

WALL-MOUNT 1-PORT MODEL - PWPP WM P1 [xxxx]

Manually factory-defaulting the Wall-Mount 1-Port Gateway takes a little more work, but is still very straightforward.

Remove the device from the enclosure, in order to gain access to the exposed circuit boards at the rear. Keep the device powered on.

In the top-right corner (if looking from the rear of the device), there is a set of pins (5x2) for hard patching the DMX Universe. The silkscreen on the edge of the board denotes "**UNIVERSE**", the numbers "**1, 2, 3, 4**" for Universes 1-4 and "**NET**".

The small black jumper is by default in the "**NET**" position. Remove the jumper from this position, rotate it 90° and place it across the pins for Universe 2 and 3, toward the inside of the device.
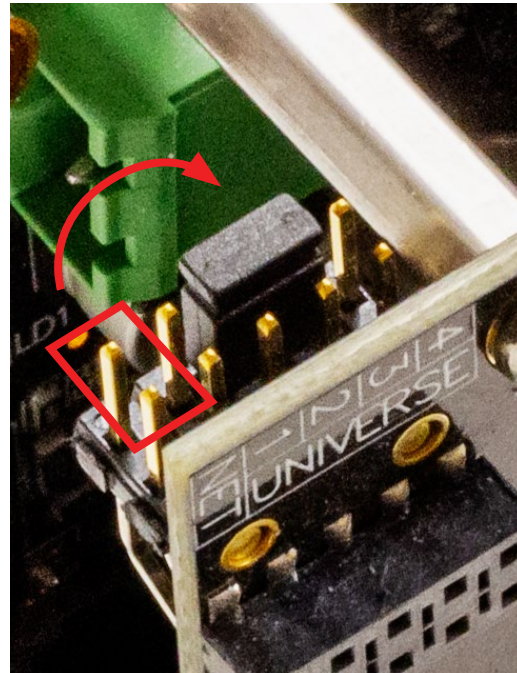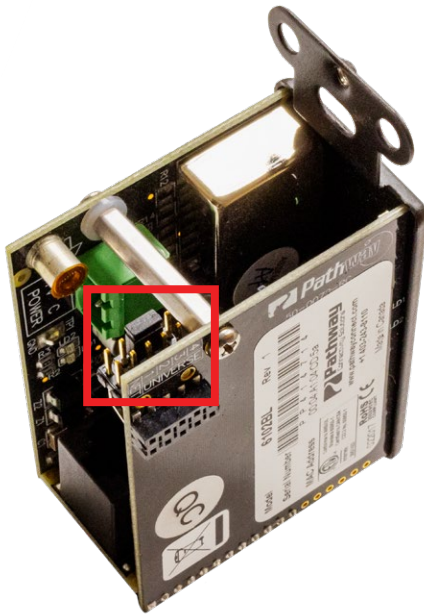

Once the jumper is placed in this position, the gateway **will be factory defaulted immediately.** There is no need to wait 5 seconds. Place the black jumper back in the "**NET**" position (or whatever position it was originally in, if hard-patching Universes), and put the device back in the enclosure.
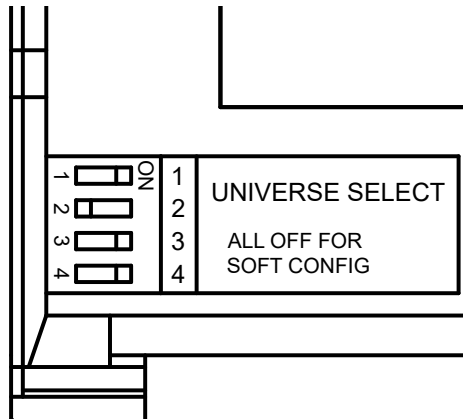
DIN-MOUNT 1-PORT MODEL - PWPP DIN P1

The factory default procedure for the DIN-mount 1-Port Gateway involves the hard-patch Universe jumpers, similar to the process for the Wall-mount or Desktop/Truss-mount 1-Port models.

On the front of the PWPP DIN P1, there is a **red 4-position DIP Switch**, used for hard-patching the DMX Universe. Keep the gateway powered on.
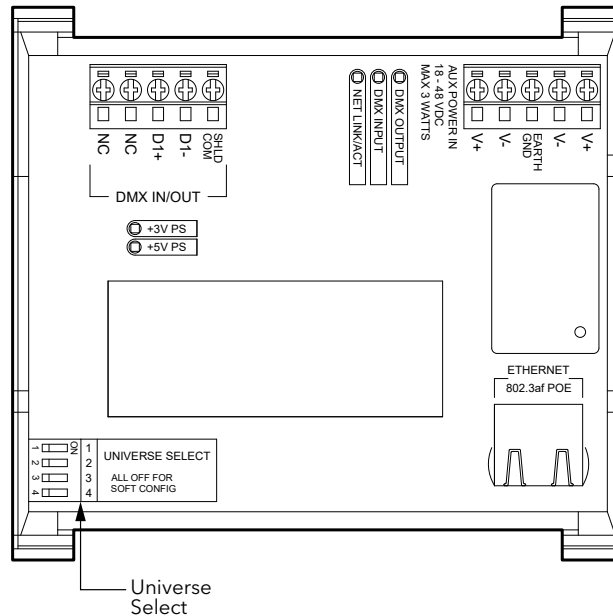

Universe
Select

To reset the gateway, set the switches for Universes **1, 3** and **4** to the **"ON"** position (to the right).

This will immediately reset the gateway to the factory defaults. You can then put the DIP switches back to their previous setting.

DIN-MOUNT 4-PORT MODEL - PWPP DIN P4

The PWPP DIN P4 Gateway has a Factory Default button directly on the board, near the DC power input.
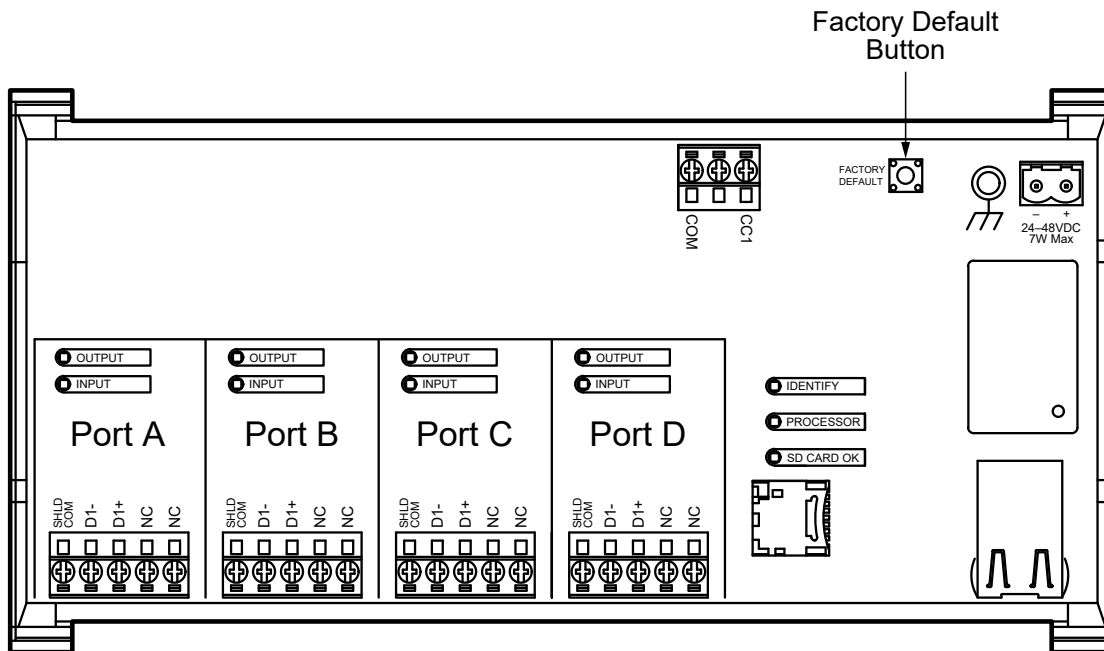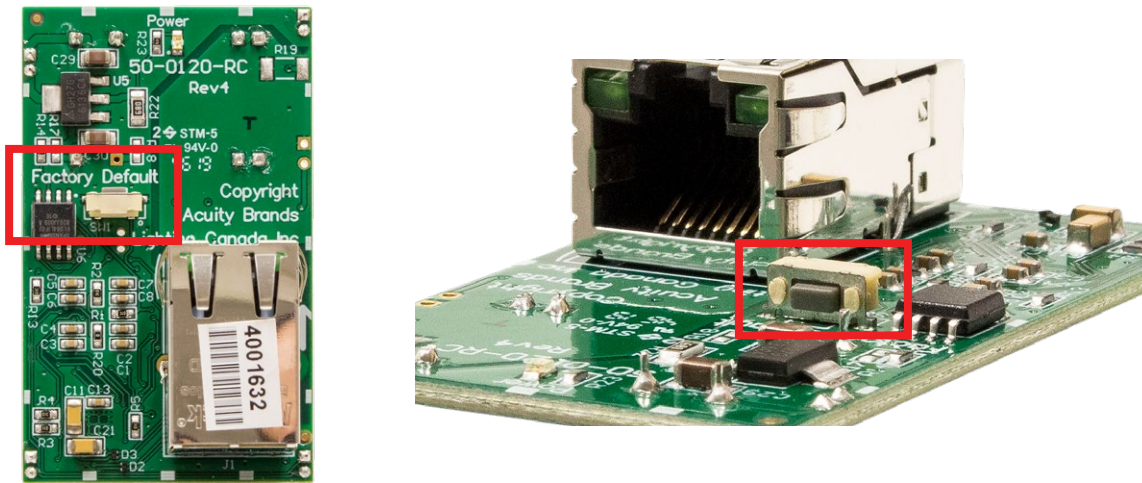

To factory default the gateway, press and hold the button for 5 seconds. **This will perform a full factory default.**

CONTROLLERS

VIGNETTE / NSB WALL STATIONS - PWWSI [VPOE/V485/NPOE/N485]

These two products are built around the same hardware, so the same process applies to both.
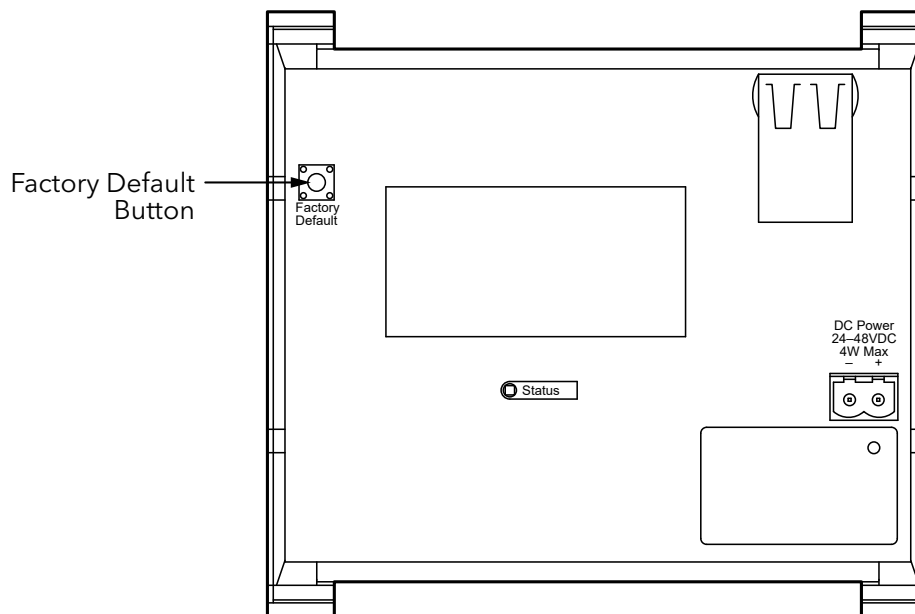
On the rear of Master Inserts, there is a small Factory Default button.

To factory default the device, press and hold this button for a **5 full seconds. This will perform a full factory default.** Use a **non-metallic** small tool to avoid shorting out any electrical contacts or transmitting an electrostatic discharge to the board.

VIGNETTE CLOCK - PWGW DIN CLK

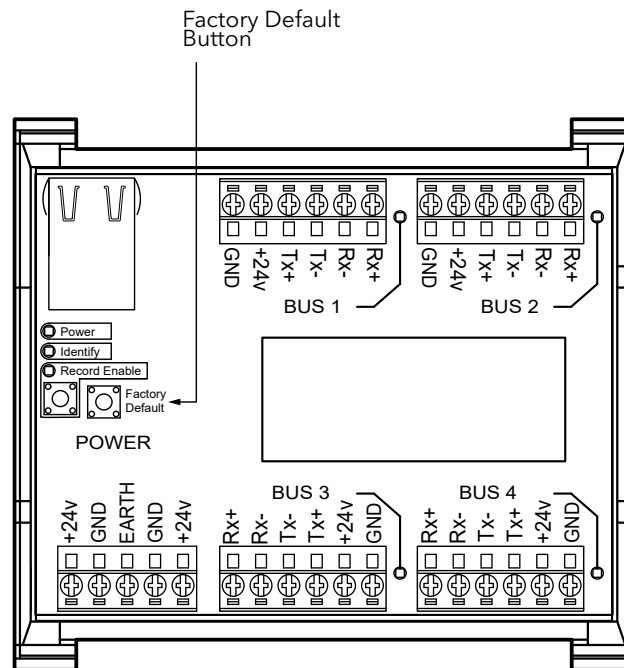Vignette Clock has a Factory Default button on the left-hand side of the board.

To factory default the device, press and hold this button for a **5 full seconds. This will perform a full factory default.**

VIGNETTE ARCHITECTURAL GATEWAY - PWGW DIN V[xxxx]

The Vignette 485 Architectural Gateways have a Factory Default button on the left-hand side of the board, next to the Record Enable button.
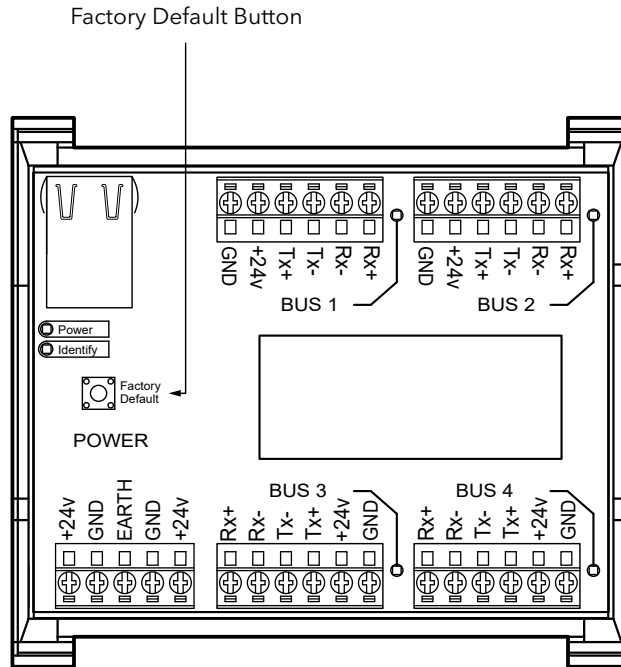

To factory default the device, press and hold this button for a **5 full seconds. This will perform a full factory default.**

NOTE: This will factory default the entire Vignette Gateway**, including any DMX Gateway sidecars connected.** There is no way to factory default a specific sidecar only. **The entire gateway must be reset.**

NSB ARCHITECTURAL GATEWAY - PWGW DIN N[xxxx]

The NSB 485 Architectural Gateways have a Factory Default button on the left-hand side of the board, near the Power and Identify LEDs.

Factory Default Button

To factory default the device, press and hold this button for a **5 full seconds. This will perform a full factory default.**

COGNITO² LIGHTING CONTROL CONSOLE - PWCOG DT

To recover a Cognito² console, we must load a blank show file. To do this, reboot the console, either by unplugging power, or (if possible), from the main menu. Boot up the Cognito by pressing the power button, and press and hold the **shift key** in the bottom-left corner of the console.
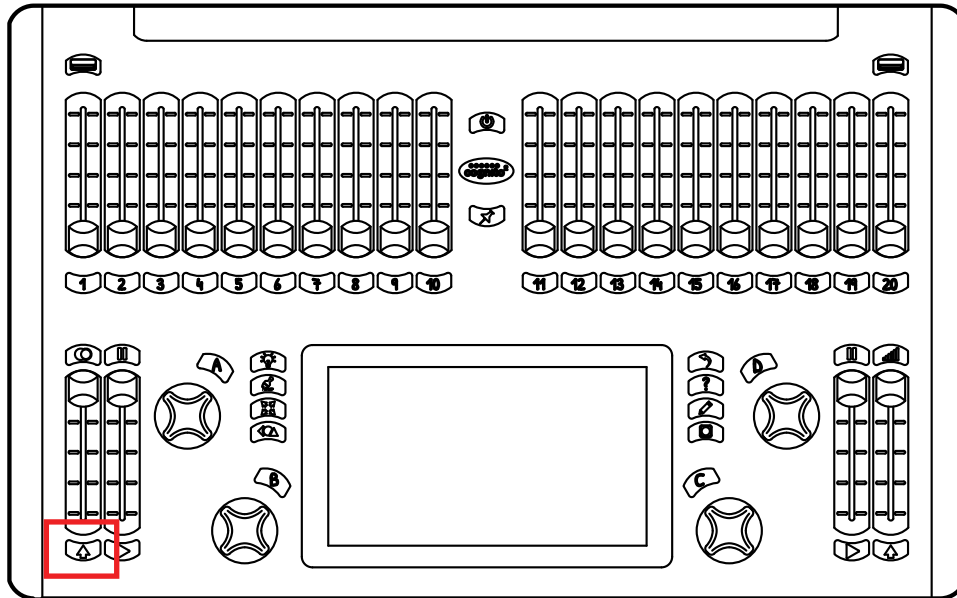
Continue holding the shift key until the Cognito² is finished booting. A new, blank show file should be loaded, without any passwords enabled.

You may also reset and reload the Cognito² firmware by pressing the reset button through the hole in the "**i**" of the Cognito² logo on the back panel.
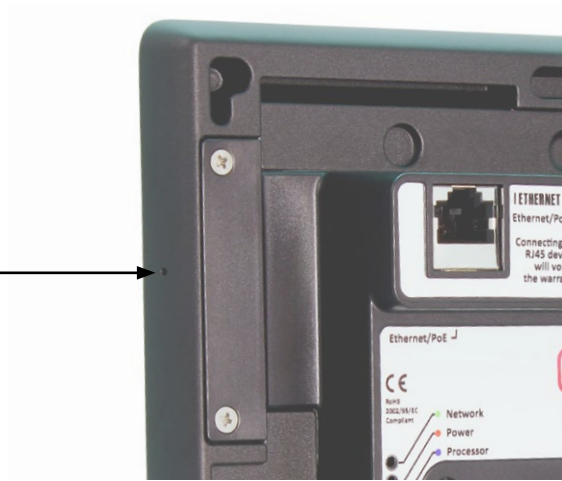

Reset Button
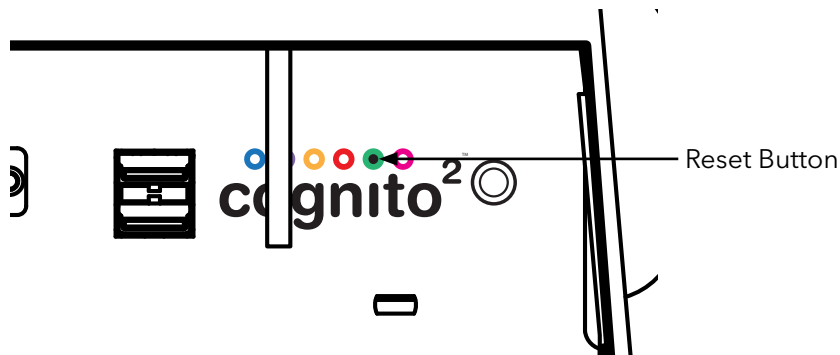
Insert a USB drive loaded with Cognito² firmware into one of the available USB ports, and then shut down the Cognito². Using a plastic-coated paperclip or similar **non-metallic** small tool, insert it through the hole in the panel. Press and hold down the button while booting up the console with the power button. Keep the reset button pushed until the Cognito shows you the "**System Recsue**" screen.

You may then touch the "**Choose a File**" button in the bottom-left corner to load the firmware file from the USB drive. After the installation of the firmware, the console should be recovered and in a factory-default state.

CHOREO WALL-MOUNT ARCHITECTURAL CONTROLLER - PWCHOREO WM

To recover a Choreo Wall-mount controller, use the reset button through the right-hand edge of the metal bezel.

Reset Button ————————————————————▶

Like the Cognito[2], insert a USB drive loaded with Choreo firmware into the USB port on the rear of the device. Using a plastic-coated paperclip or similar **non-metallic** small tool, insert it through the hole in the bezel. Press and hold down the button while powering up the Choreo. Keep the reset button pushed until the Choreo shows you the "**System Recsue**" screen.

You may then touch the "**Choose a File**" button in the bottom-left corner to load the firmware file from the USB drive. After the installation of the firmware, the console should be recovered and in a factory-default state.

ADDITIONAL INFORMATION

For additional information or product support, please contact us at +1 866 617 3074.