



tvONE

CORIOmaster / CORIOmaster mini

Manual

Version 1.0.4



CORIOgrapher

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Patent Pending

CONTACT INFORMATION

If you have any questions about this Agreement, or want to contact Licensor for any reason, please direct all correspondence to:

TV ONE Limited Legal Department

Continental Approach,
Westwood Ind. Est,
Margate, Kent CT9 4JG

For **Customer Support** please contact:

tech.usa@tvone.com or tech.europe@tvone.com or refer to http://www.tvone.com/contact_info.shtml

Service

Your CORIOmaster or CORIOmaster mini comes with various modules installed. CORIOmaster mini modules are factory installed and cannot be replaced in the field by end users. CORIOmaster module replacement should only be carried out by an authorized installer.

Installation Information

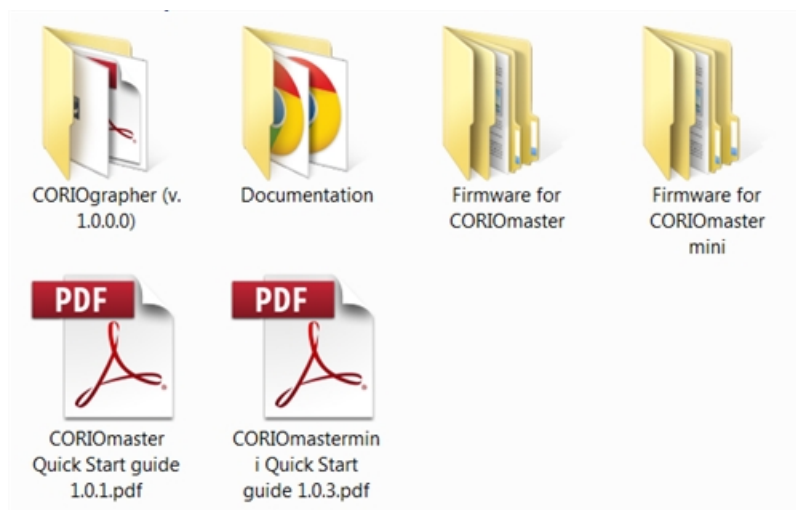
The CORIOgrapher is a state-of-the-art software application made by tvONE as an enhanced way to control the tvONE CORIOmaster products. It can be installed on a PC running Windows Vista, Windows 7 or Windows 8, and it will install Windows .NET 4.5 if you do not already have it installed. The installer requires 600MB of free disk space, and the installed software is 100MB in size.

CORIOgrapher is designed to be installed on a PC, not on a tablet or phone, as tablets and phones do not have the necessary physical connections, processing power and display size to be able to use the software.

To use the Preview feature, the destination PC must also have Windows Media Player installed (included by default with most installations of the Windows OS) and it must have been launched at least once in order to create the default file type associations. See "Troubleshooting No Preview Video" on page 184 for more information.

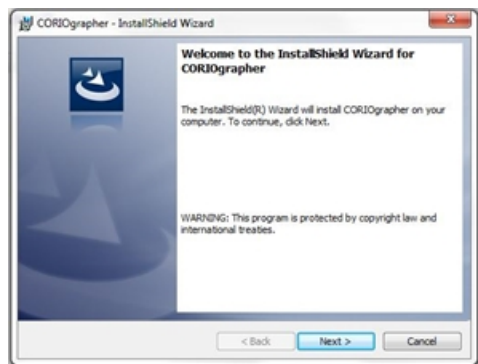
To install CORIOgrapher on your PC:

1. Insert the tvONE CORIOgrapher Install disc into your computer's optical drive. Note that the latest firmware and upgrade instructions are included, in the event that your CORIOmaster or CORIOmaster mini needs to be upgraded. The disc will show the following options:



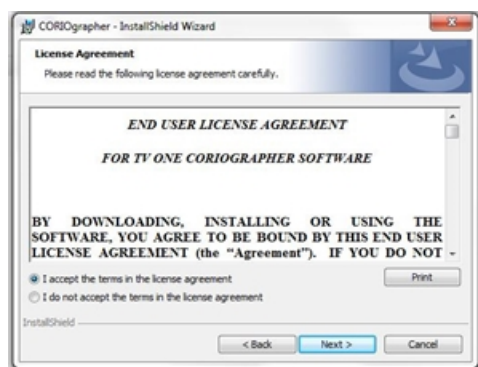
2. Open the CORIOgrapher folder which contains both the EULA and the Setup file. Double-click the Setup file to begin the installation process.

3. Agree to the InstallShield request and the first screen of the installer appears.



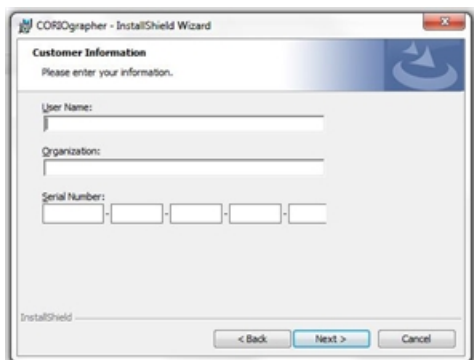
Click Next.

4. You can read or print the EULA (also available as a PDF on the install disc, in the same folder as the installer).



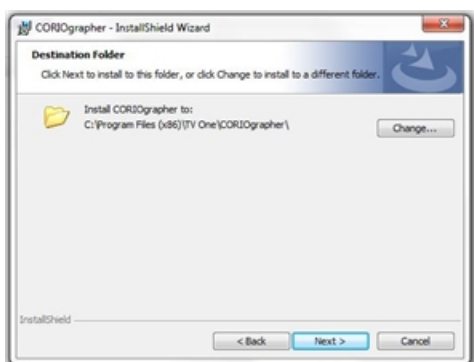
Choose to accept and click Next.

5. Enter your information and the software license key (you can find this on a sticker on the envelope the install disc came in).



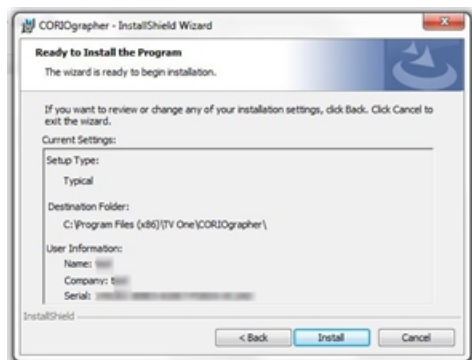
Enter the appropriate information and click Next.

6. Choose the installation location. By default, CORIOgrapher is installed in C:\Program Files (x86)\TV One\CORIOgrapher\ but you can change the location if you wish to do so.



Set the location as you wish and click Next.

7. The Summary screen reflects the choices you have made to this point. Review the information and, if you need to change anything, click the Back button to go back and alter the information.



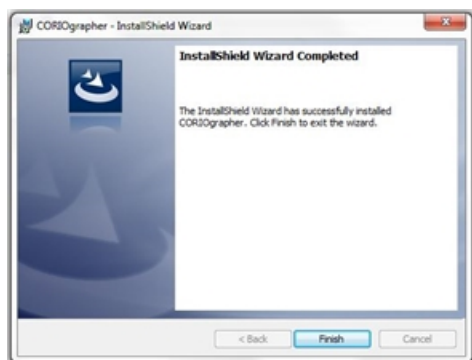
After verifying the details, click Install.

8. As the installer runs, you will see a standard install window with progress bar:



Unless you wish to cancel the installation, wait for the installation to occur.

9. When the installation is completed, the installer notifies you:



Click Finish to exit the installer.

10. Once the installer closes, the program does not automatically launch. You should be able to find and launch CORIOgrapher from your Start menu.

Connecting the PC to the CORIOmaster

The physical connection between PC and CORIOmaster is the same as with previous tvONE products. The CORIOmaster can be connected to the PC by an Ethernet network, or by a serial (RS-232) cable.

By default, a CORIOmaster running up-to-date firmware will be set to accept a DHCP-assigned IP address and will appear in CORIOgrapher to any PC on the same subnet. You can also connect using a serial cable, but as the CORIOmaster only supports one connection at a time, you cannot connect using both Ethernet and serial simultaneously.

For more information on configuring the connection, see "Configure Connection via Ethernet" on page 16 or "Configure Connection via Serial" on page 20.

Administrator Setup Information

Password Administration

The **Administrator** is the only user who can change passwords for other users. See "Changing Passwords" on page 152 for more details.

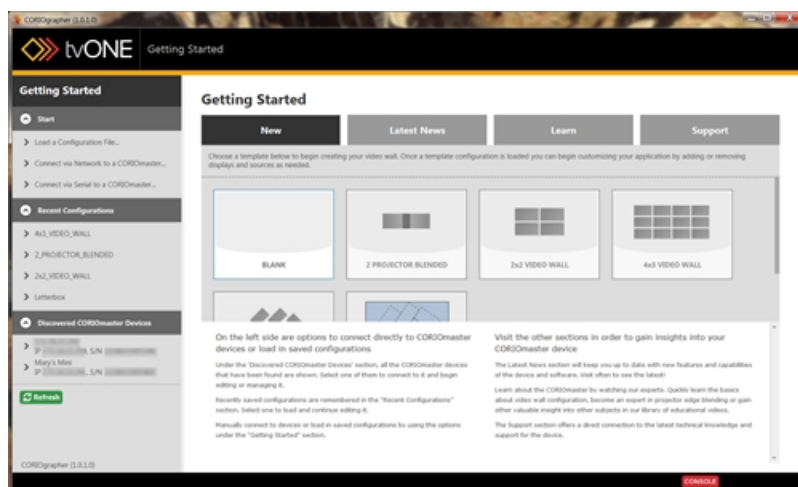
First Boot Configuration

The first time an administrator logs in to the CORIOmaster, the unit will notify you that this is the first time logging into the device. It will remind you to change the default password. (This alert will continue until you have saved settings on the device.)

For more details, you may wish to see "Users" on page 162, "Logout" on page 21, "Changing Passwords" on page 152, and "Timeout" on page 158

Getting Started

The first page you see when you launch the CORIOgrapher is a Getting Started page.



From this page, you have many options:


In the main pane, you can choose the New tab to create a new configuration, either blank or from an existing template; you can select the Latest News tab to read about what's new in the world of CORIOgrapher; you can click the Learn tab to watch some instructional videos; or you can click the Support tab to go to the tvONE support page.

Below the main pane is the ever-present Console button. If you press the Console button, you can access a command-line window that allows you to send text commands, if you know the appropriate syntax, or to review the commands that have been sent. For more information, see "Console" on page 139.

On the left-hand pane, you can see available devices and configurations. In the top section, labeled Start, you can select Load a Configuration File... which will open a window allowing you to select a locally-stored configuration. You can also connect to a CORIOmaster either via Network (Ethernet) or via Serial (RS-232). This is the option you use if you don't see your desired CORIOmaster already listed in the bottom section, under Discovered CORIOmaster Devices. The center section lists recent configurations you have loaded, as a way to quickly and easily open a configuration you have recently been working on.

Configure Connection via Ethernet

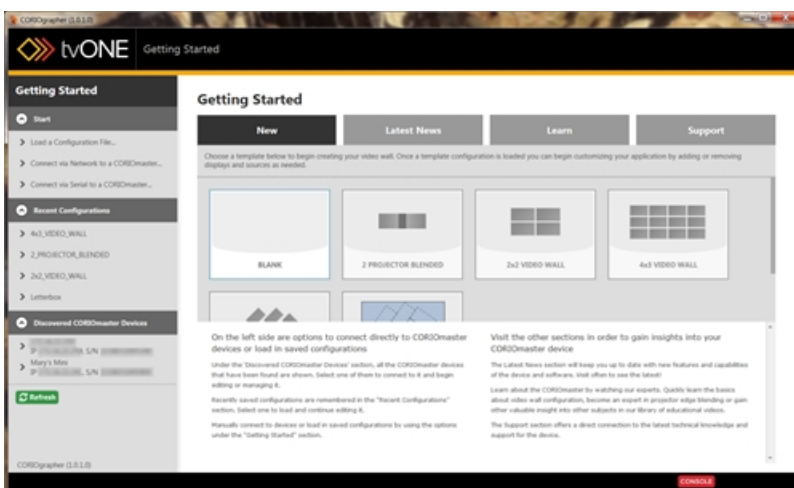
If you wish to connect to a CORIOmaster using an Ethernet connection, the process should be simple, as any CORIOmaster with up-to-date firmware (M300 or later) defaults to DHCP and should be discoverable on your network. tvONE recommends that you change any CORIOmaster device in a fixed networked installation to a static IP address.

If your network does not have a DHCP router, or if you are connecting directly to the CORIOmaster using a crossover cable, you will need to configure the IP address before you can connect. Follow the instructions under *If the device appears under Discovered CORIOmaster Devices*, below. If the device has a self-assigned IP address, you need to use the cog icon 

to configure the IP address to an address in the same range as your PC before you can log in to the CORIOmaster.

To connect via Ethernet from a DHCP-enabled network, follow these steps.

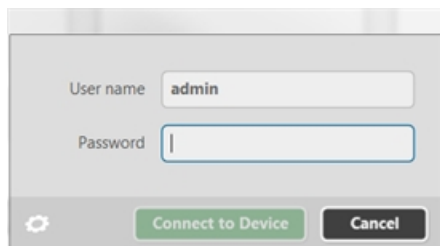
From the main screen of the CORIOgrapher, in the left-hand Getting Started toolbar, check to see if the CORIOmaster appears under Discovered CORIOmaster Devices. Proceed to the appropriate section below based on your own results.



If the device appears under Discovered CORIOmaster Devices:

1. If the device appears under the Discovered CORIOmaster Devices heading, click on the device.

2. An authentication window will pop up.



User name: admin

Password: [redacted]

Connect to Device Cancel

Enter the appropriate username and password.

3. A cog icon appears in the bottom left corner. Click this icon to configure the device without logging in first.
4. In the resulting window, enter the desired network configuration details.



Configuration: Static

IP Address: 10 . 0 . 0 . 15

Subnet Mask: 255 . 255 . 255 . 0

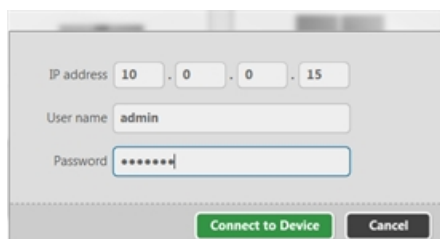
Default Gateway: 10 . 0 . 1 . 1

Save Network Configuration Cancel

5. Click the **Save Network Configuration** button. The device will automatically reboot with the new settings enabled.

If the device doesn't appear in the Discovered CORIOmaster Devices section

1. If the device doesn't appear in the Discovered CORIOmaster Devices section, choose Connect via Network to a CORIOmaster... from the Start section.
2. A window will pop up with various options.



IP Address: 10 . 0 . 0 . 15

User name: admin

Password: [redacted]

Connect to Device Cancel

Enter the appropriate IP address and log in using your username and password.

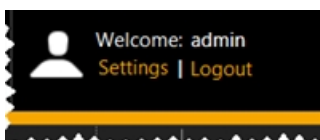
3. Click the Connect To Device button.

Once connected, if necessary, configure the CORIOmaster to the appropriate network settings:

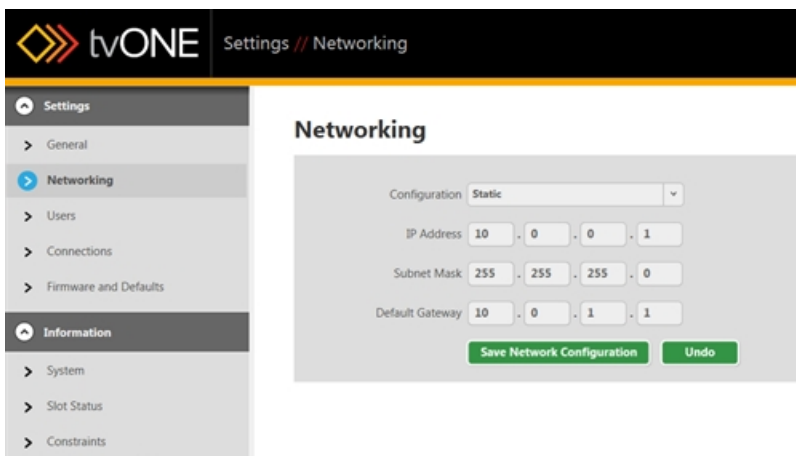
Using DHCP

If you will be using DHCP with your CORIOmaster, it should be configured automatically. To verify, follow these steps:

1. Once you are connected to the unit, click the Settings button in the top right corner.



2. In the Settings window, choose Networking from the left-hand navigation pane.
3. In the Networking pane, choose DHCP from the Configuration drop-down.



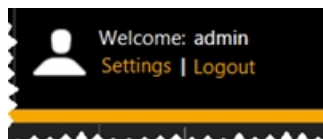
4. Enter any appropriate Subnet Mask or IP Gateway details.
5. Click the Save Network Configuration button.

You should now be able to connect to the CORIOmaster via Ethernet. You can configure the device name in the General pane of system settings in order to ensure you know what to look for when you connect via Ethernet in future.

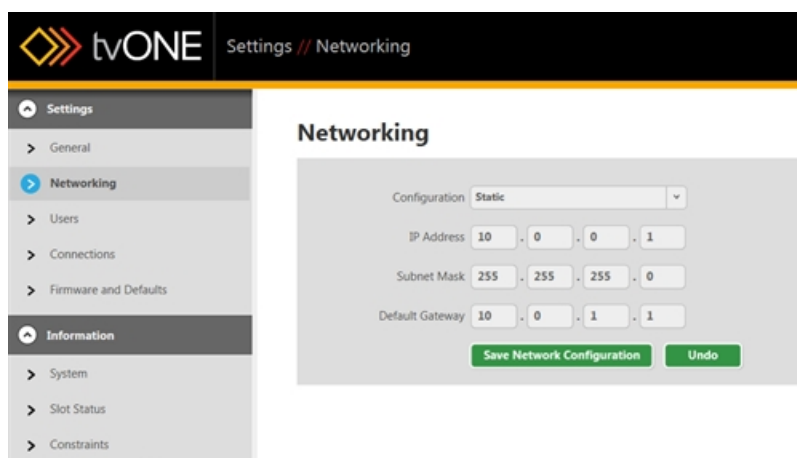
Using a Static IP

If you will be setting up a static IP address for your CORIOmaster, follow these steps:

1. Once you are connected to the unit, click the Settings button in the top right corner.



2. In the Settings window, choose Networking from the left-hand navigation pane.
3. In the Networking pane, choose Static from the Configuration drop-down.



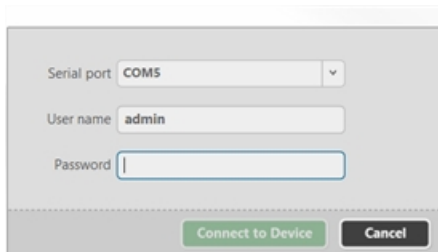
4. Enter the appropriate IP address, Subnet Mask and IP Gateway details.
5. Click the Save Network Configuration button.

You should now be able to connect to the CORIOmaster via Ethernet. You can configure any other configurable settings in this section, if you wish to do so.

Configure Connection via Serial

By default, any new CORIOmaster running firmware version M300 or later defaults to a DHCP network connection. If you wish to connect to a CORIOmaster using a serial (RS-232) connector, follow these steps.

1. From the main screen of the CORIOgrapher, in the left-hand Getting Started toolbar, choose Connect via Serial to a CORIOmaster... from the Start section.
2. A window will pop up with various options.

A screenshot of a software dialog box for configuring a serial connection. It has a light gray background. At the top, there is a label 'Serial port' followed by a dropdown menu showing 'COM5'. Below that is a label 'User name' followed by a text input field containing 'admin'. Underneath is a label 'Password' followed by an empty text input field. At the bottom of the dialog, there are two buttons: a green button labeled 'Connect to Device' and a black button labeled 'Cancel'.

Select the appropriate COM port and log in using your username and password.

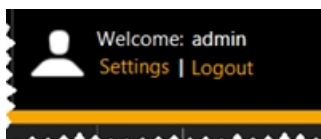
3. Click the Connect To Device button.



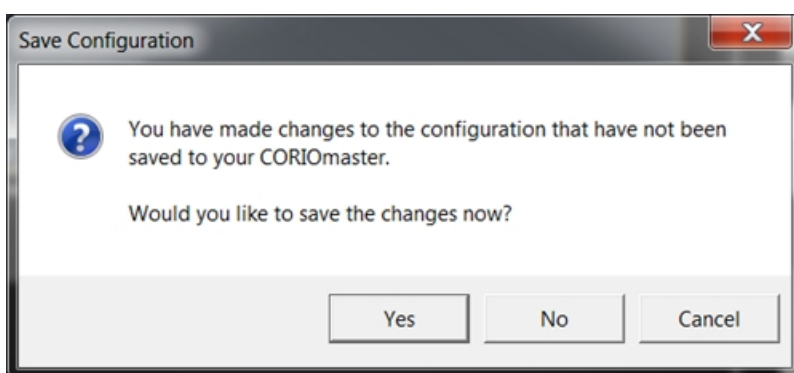
Note: CORIOgrapher uses Hardware Flow Control so please ensure that the RTC and CST lines are connected (pins 7 and 8 on the 9-way D-Type connector).

Logout

You may log out at any time. All the main screens have a button in the top right marked Logout.



When you click Logout, if you have made changes, a pop-up window offers you the chance to save the settings (Yes), discard the changes and log out (No), or cancel logout (Cancel).



If you do not actively send commands to the CORIOmaster for a certain period of time, you may be logged out due to inactivity. If this occurs, you need to log back in again if you wish to update the configuration on the CORIOmaster. (Remember that you can make changes to a configuration locally, without needing to be connected, if you wish.) If the timeout period is inconvenient, the administrator can change the length of time or disable the feature. See "Timeout" on page 158 to learn how to configure this.

For more details, you may wish to see "Administrator Setup Information" on page 14, "Users" on page 162, and "Changing Passwords" on page 152

Reconnect to a CORIOmaster

Ethernet

A CORIOmaster connected via Ethernet within the same subnet as your PC will be visible in the left-hand pane of the Getting Started window under the heading Discovered CORIOmaster Devices. (A CORIOmaster that has not yet been configured will have a red triangle next to it.) If you have previously added the CORIOmaster to a Group, it should appear under the appropriate Group heading.

If you know the IP address of the CORIOmaster you wish to connect to, you can use the Connect via Network to a CORIOmaster... option and enter the appropriate IP address.

If you cannot see the intended device, see "Troubleshooting Connection Issues" on page 182.

Serial (RS-232)

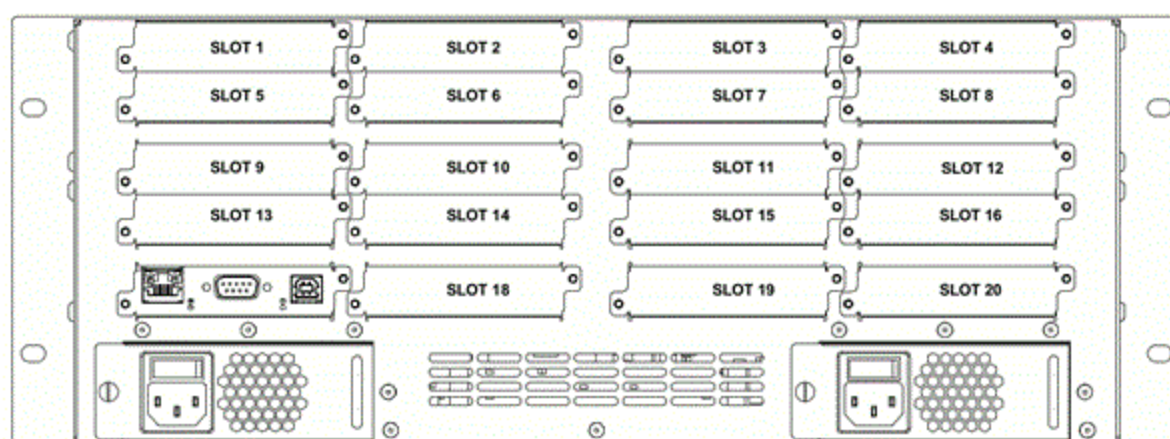
If the CORIOmaster is connected via a serial (RS-232) connector, it is discoverable through the Connect via Serial to a CORIOmaster... option under Start.

Input and Output Naming Convention

The CORIOmaster protocol uses a fixed naming convention. You can create aliases within the CORIOgrapher but it is helpful to understand the default naming convention.

The naming is defined by the position of modules within the CORIOmaster product. The figure below shows the unit as viewed from the rear. Each location in which a module can be placed is called a slot and each slot is numbered from the top left, going across then down.

The first slot is numbered 1; the last is 20. Slot 17 is a special slot holding the CPU card and slots 18,19 and 20 only work with data, not video signals.



The fixed label for slot 1 is Slots.slot1

The video modules have inputs and outputs. Most cards have two connectors per slot or per module that slides into the slot.

Inputs are addressed by in1 and in2; outputs are addressed by out1 and out2. HD-SDI input cards also have in3 and in4.

Like the slot numbering system, they are numbered from left to right facing the rear of the CORIOmax.

The fixed label for the left-most input on slot 1 is Slots.slot1.in1

The fixed label for the left-most output on slot 13 is Slots.slot13.out1

The input numbering starts from 1 and continues to the number of inputs on that card. Likewise, the output numbering starts at 1 and continues to the number of outputs on that card. So an input card in the first slot with four connectors would be slot1.in1, slot1.in2, slot1.in3, and slot1.in4, while an output in slot 14 with two connectors would be slot14.out1 and slot14.out2, labeled from left to right.

These names may also be abbreviated to the first initial, so in the examples above, the inputs could also be s1i1, s1i2, s1i3 and s1i4 while the outputs would be s14o1 and s14o2. These are the default labels in the CORIOgrapher unless you change them.

For information on renaming the slots, see "Source - Renaming Windows" on page 125 and "Display - Renaming Output Displays" on page 99.

Configurations

About Configurations	26
Creating a New Configuration	27
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About Configurations

A configuration is a collection of all the settings for a CORIOmaster unit. A configuration includes not just the inputs, outputs, video walls and presets but also CORIOmaster name, user accounts and passwords, and network settings.

Up to twenty configurations can be stored on a CORIOmaster but only one can be active at any given time. When you connect through the CORIOgrapher to a CORIOmaster, you can access all saved configurations on that unit or upload local configurations to the unit. While you are connected to the unit, you can change which configuration is active.

In the CORIOgrapher, you can create and modify configurations even when your computer is not connected to a CORIOmaster device. You can manage a configuration in the software, save it locally, and upload it to the CORIOmaster at a more convenient time. While a CORIOmaster can only save a maximum of twenty configurations, the number of locally saved configurations is limited only by the drive space on your computer.

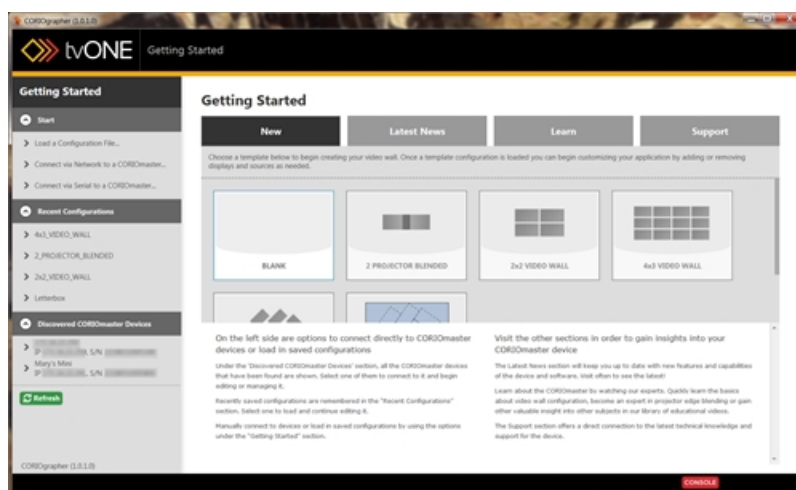
Once you have created and edited the configuration to your satisfaction, you can save it to a file or save it as a template locally, or upload it straight to a CORIOmaster. You will need to be connected to the CORIOmaster when you assign inputs and outputs, in order to make sure that the physical connections are as expected.

CAUTION: Be sure, when you set a configuration as the active configuration, that you know the administrator login information. If the administrator login details have been changed from the default and you are not aware of this, you may find yourself unable to access the unit.

Creating a New Configuration

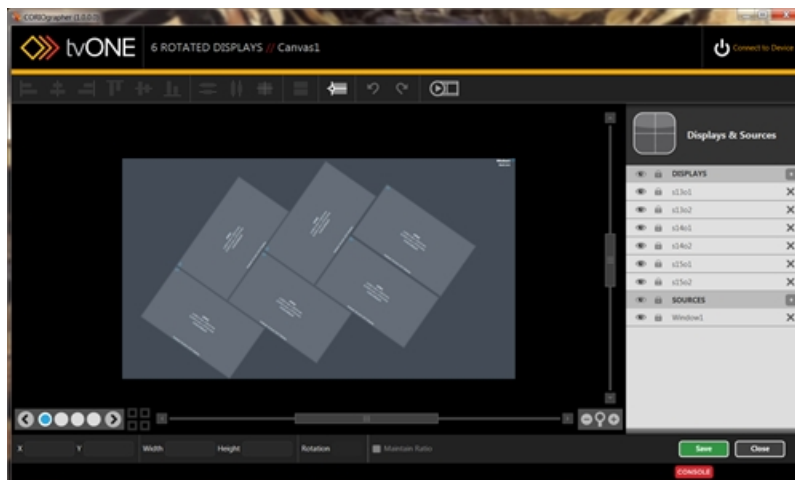
It is not necessary to have a CORIOmaster attached to your computer to create a new configuration. It is only necessary to connect to the CORIOmaster when you wish to update the configuration on the machine itself. The instructions below explain how to create a configuration in CORIOgrapher.

1. From the main screen of the CORIOgrapher, in the main Getting Started pane, choose the New tab.



2. Several templates are available to use as a starting point, including Blank, 2 Projector Blended, 2x2 Video Wall, and others.
3. Click the template that most closely matches your desired output.

4. The resulting configuration will open in the Video Wall Editor.



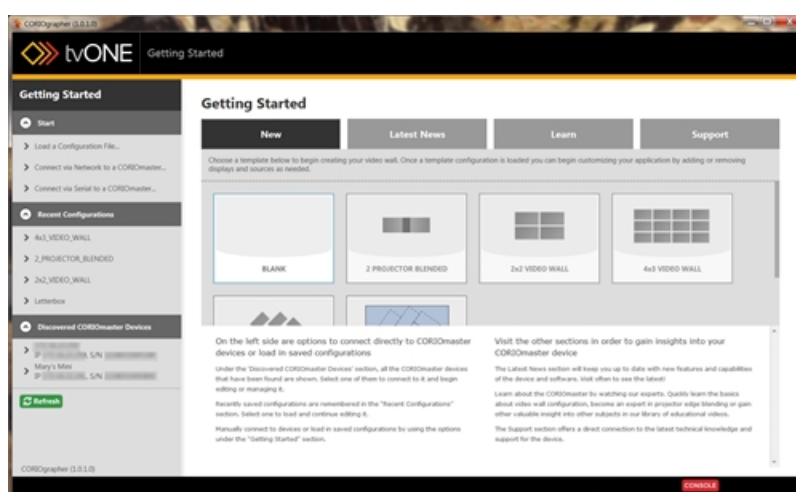
5. Edit the configuration as you wish. When you are ready to save, see "Save Configuration" on page 32 for details.

Loading an Existing Configuration

It is not necessary to have a CORIOmaster attached to your computer to load, edit, or save an existing configuration. It is only necessary to connect to the CORIOmaster when you wish to save, update, or deploy the configuration on the machine itself. The instructions below explain how to load a configuration in the CORIOgrapher, whether the configuration is local or on the CORIOmaster.

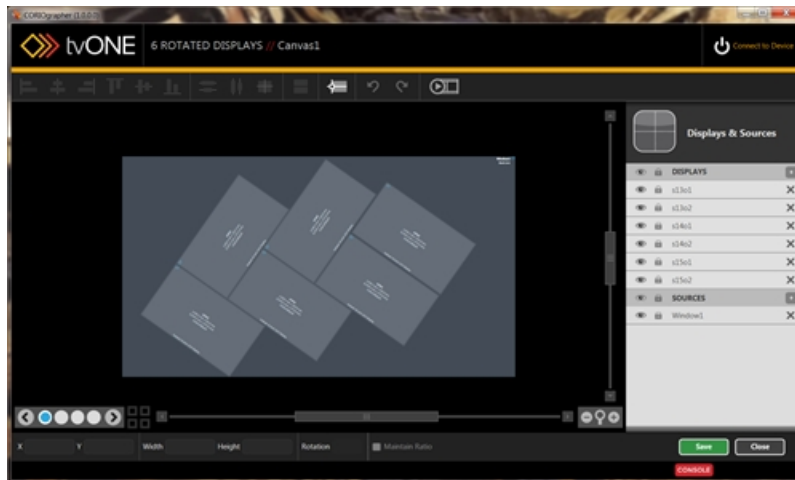
Load a Local Configuration

1. From the main screen of the CORIOgrapher, in the left-hand side pane, select the configuration from the Recent Configurations section. If the configuration does not appear in that section, choose Load A Configuration File....



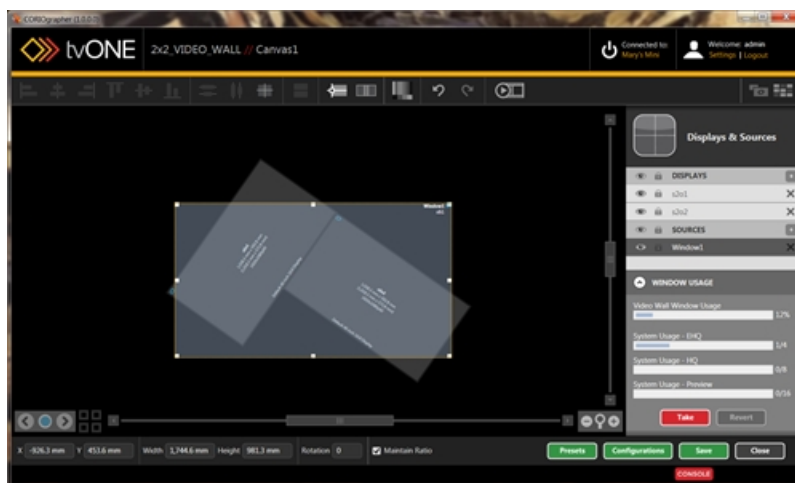
2. A Windows prompt shows local files - navigate to and select the .cmc configuration file you wish to load and click the Open button. (The default save location for configuration files is your user\My Documents\CORIOgrapher\Configurations.) The appropriate con-

figuration file will appear in the Video Wall Editor.



Load a Remote Configuration

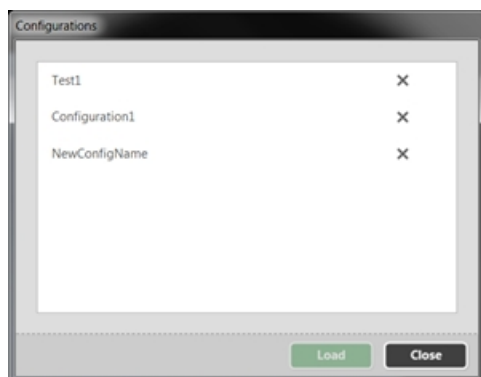
1. When you connect to the CORIOmaster as an administrator, you will be taken straight to the Video Wall Editor window, with the default configuration file loaded.



Note that there are additional green buttons for Presets and Configurations at the bottom right of the screen when you are connected to a CORIOmaster.

2. From the selection of buttons at the bottom of the screen, click the Configurations button.

3. In the pop-up window, locate the configuration you wish to load on the CORIOmaster.



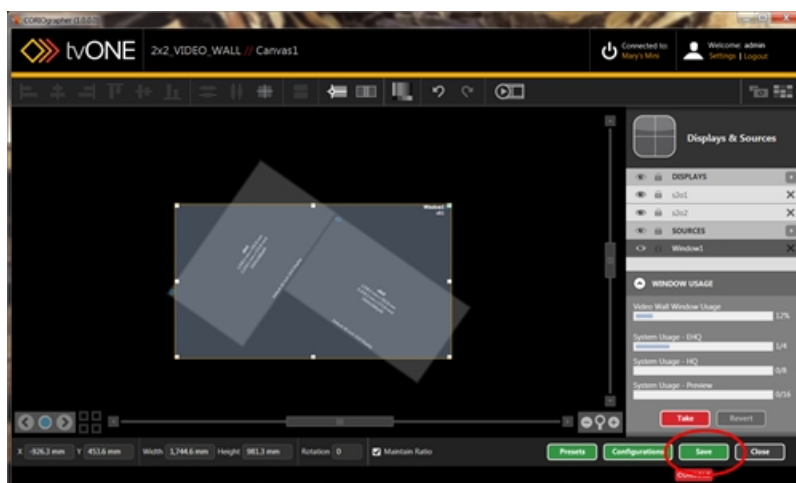
4. To load the configuration, select the appropriate row and click the Load button.
 - If you have modified the current configuration, an alert will notify you that you have made changes that have not been saved, and ask if you want to save changes to the old configuration before loading the new one. Choose Yes to save changes and continue with loading the other configuration; choose No to abandon changes and continue with loading the other configuration; and choose Cancel if you wish to return to the current configuration without loading another at this point.
5. When the new configuration has been loaded, you will see a pop-up message that says "The configuration is restored successfully. You need to reconnect to the device." Since each configuration has unique network settings, when you click OK, you will be logged out of the CORIOmaster and returned to the Getting Started page. Select the appropriate machine and reconnect to it, and the configuration you selected will be active.

CAUTION: Be sure, when you set a configuration as the active configuration, that you know the administrator login information. If the administrator login details have been changed from the default and you are not aware of this, you may find yourself unable to access the unit.

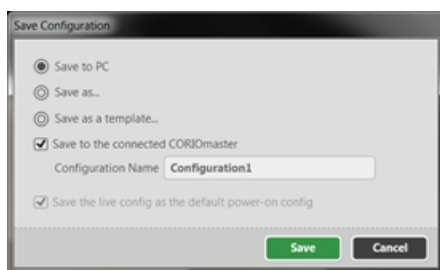
Save Configuration

It is not necessary to have a CORIOmaster attached to your computer to load, edit or save an existing configuration. It is only necessary to connect to the CORIOmaster when you wish to save/update the configuration on the machine itself. The instructions below explain how to save a configuration in the CORIOgrapher, whether the configuration is local or on the CORIOmaster.

1. This configuration being edited in the Video Wall Editor is in active memory by default - make changes as you desire, and when you are ready to do so, click the green Save button in the bottom right corner. (If you are actively connected to a CORIOmaster, there will also be two more green buttons to the left, but these are not relevant in this situation.)



2. You will be prompted to choose a location in which to save the configuration file:



- If you click Save to PC, if you haven't saved locally and given it a unique name yet, you will be prompted to choose a file name and location to save the file. (By default, it will save to your user/My Documents/CORIOgrapher/Configurations.) Configurations have a file extension of cmc. If the Configuration had previously been saved, choosing Save to PC will simply update the existing configuration of that name.

- If you click Save as..., you will be prompted to choose a file name and location to save the file (same default location as above).
 - If you click Save as a template..., additional fields will appear for Title and Description. When you click Save, you will be prompted to choose a file name and location to save the template. (By default, it will save to your user/My Documents/CORIOgrapher/Templates.) Templates have a file extension of .cmt.
3. If you are connected to a CORIOmaster when you click save, a further two options are available in addition (you will still need to save a copy locally, but you can also choose how to save it on the CORIOmaster.):
- If you check Save to the connected CORIOmaster, you will need to enter a name in the Configuration Name field. After entering a configuration name, when you click Save, you will be prompted based on your choice of the local saving options above.
 - If you uncheck Save to the connected CORIOmaster, the last option, Save the live config as the default power-on config, becomes active. If you check this one, the current configuration will become the active configuration when the CORIOmaster is booted up. When you click Save, you will be prompted based on your choice of the local saving options. (Note that this option can be checked as well as the Save to the connected CORIOmaster option, but that option must be unchecked in order to modify this one.)

Once the configuration file is saved locally to your PC, you can re-open and modify this configuration file at any time with no need to have the PC connected to a CORIOmaster until you are ready to do so. Or, if you wish to work with the file on the CORIOmaster, you can connect to the CORIOmaster and edit the configuration as saved on the unit.

Getting Started

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Displays and Sources pane


When you are editing a video wall in the Editor window, you can use the Displays & Sources pane to add your inputs and outputs. See "Adding Sources" on page 42 and "Adding Displays" on the facing page for instructions.

In addition to the editing that can be done in the video wall itself, the line in the Displays & Sources pane allows you to lock an item by clicking the lock icon (prevent it from being moved on the video wall), hide an item by clicking the eye icon (this is helpful if you want to reach the window behind it), edit its information by double-clicking the line, or delete it by clicking the X. See "Configuring Displays and Sources" on page 46 for more information.


Priority

Once your displays and windows are added to the video wall, you can move them around as needed by clicking and dragging the item up or down the list in the pane. The video wall is built out of layers, with the top display in the Displays & Sources pane being at the back; the bottom window of the Displays & Sources pane being at the front.

Visibility

If you want to work with a layer behind the top layer, you can use the eye icon on the side pane  to hide that layer while you work with the bottom layer. Each input and output has its own visibility setting so you can toggle them as needed to work in the video wall.


Lock

If you have configured an item or multiple items on your video wall and don't want to risk them moving or being changed, you can lock those items to prevent accidental modification. The lock icon is on the side pane  next to the eye icon and is unique to each input and output.

Edit

You can edit the information for a display or source by double-clicking the line for that item. This will open a window of information that you can modify as you wish.

Delete

If you decide you don't want to have a certain display or source on your video wall after all, you can delete the item by clicking the X  at the far right of the line. If you change your mind, you can add it back using the plus button to the right of the header bar that says Displays or Sources.

Adding Displays

To add your outputs - Displays - to your video wall, click the plus button next to Displays in the list.

A pop-up bar will show all available displays. To add a new one, click the Add Display button.

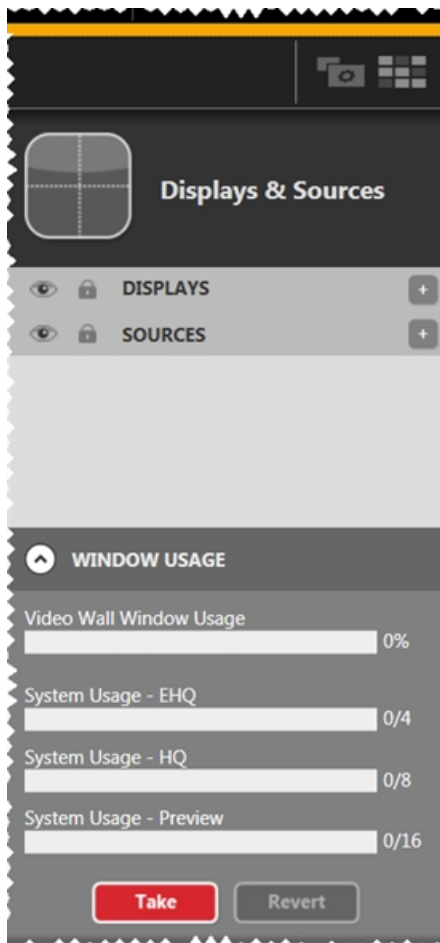
In the pop-up window, select the specific display you are using, or enter the details for your output.

When your output is specified and appears in the Displays pop-up window, simply click the appropriate Displays square and drag it onto your video wall. It will appear on the video wall, and a line for that display will appear under the Displays heading in the Displays & Sources pane.

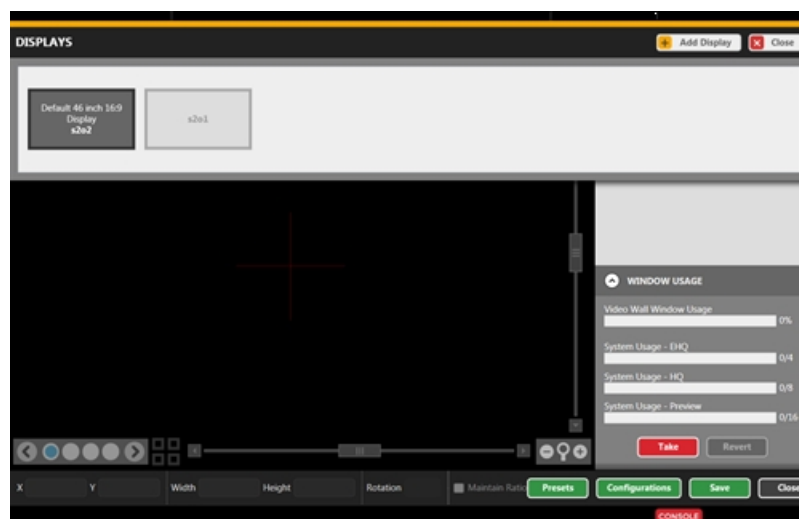
When you begin to create your canvas, you need to define the inputs and outputs that are being used. This is done in the Video Wall Editor.

To add your outputs - Displays - to your video wall:

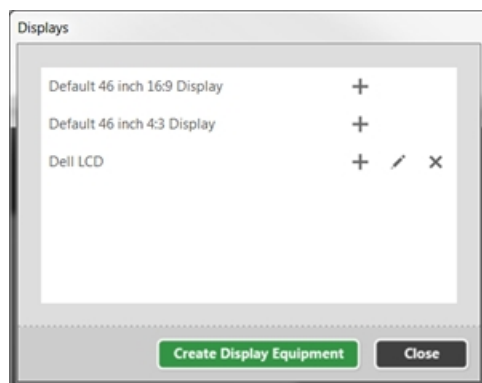
1. Click the plus button next to Displays in the Displays & Sources pane.



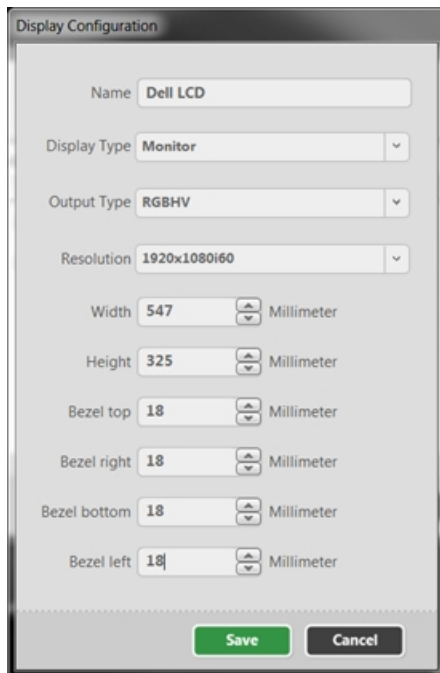
2. A pop-up bar will show all recognized output slots, if you are actively connected to a CORIOmaster.



3. If you don't want to set up output configuration data at this point, skip to the bottom of this section and you can add a default 46-inch 1920x1080p60 display, and clarify details later via the displays configuration window. However, if you want to add a specific display, or if you are not currently connected to a CORIOmaster, follow these steps:
 1. Click the Add Display button.
 2. In the pop-up window, choose whether to begin with a default 46 inch 16:9 display or a default 46 inch 4:3 display (both are modifiable, they just give you a basis from which to begin) or click the Create Display Equipment button to specify further. (Any displays you have previously defined from this PC also appear in this list.)



3. If you choose Create Display Equipment, a window pops up asking you some details about your output device. The more specific you can be here, the more tailored your experience in the video wall can be. Resolution and bezel details are particularly useful in this context.
After you have entered this information and clicked Save, you return to the window above, with the two default choices plus your newly-specified configuration. Click the plus button next to the display you wish to use.

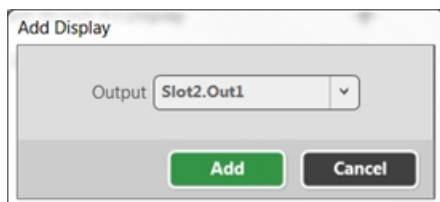


The 'Display Configuration' dialog box contains the following fields and options:

- Name: Dell LCD
- Display Type: Monitor (dropdown)
- Output Type: RGBHV (dropdown)
- Resolution: 1920x1080i60 (dropdown)
- Width: 547 (spin box) Millimeter
- Height: 325 (spin box) Millimeter
- Bezel top: 18 (spin box) Millimeter
- Bezel right: 18 (spin box) Millimeter
- Bezel bottom: 18 (spin box) Millimeter
- Bezel left: 18 (spin box) Millimeter

Buttons: Save, Cancel

4. Another pop-up window asks you to associate this display profile with one of your output slots. (If you are connected to a CORIOmaster, it checks the device to see which ports are outputs. If you are not connected to a CORIOmaster, it gives you a list of 16 slots, each with two outputs. If you specify a slot now which turns out not to be an output when you do connect to the device, you will be prompted to correct this when you connect to the device.)



The 'Add Display' dialog box contains the following field and options:

- Output: Slot2.Out1 (dropdown)

Buttons: Add, Cancel

5. When you have finished specifying display profiles, close the Displays pop-up window and return to the now-specified displays list.
4. Now that your display is specified and appears in the Displays bar (or if you don't want to specify now and simply want a default 46 inch 16:9 display to appear on the video wall), just double-click the appropriate Displays rectangle or drag it onto your video wall canvas. It will appear on the video wall with name, size and resolution details, and a line for that display appears under the Displays heading in the Displays & Sources pane.



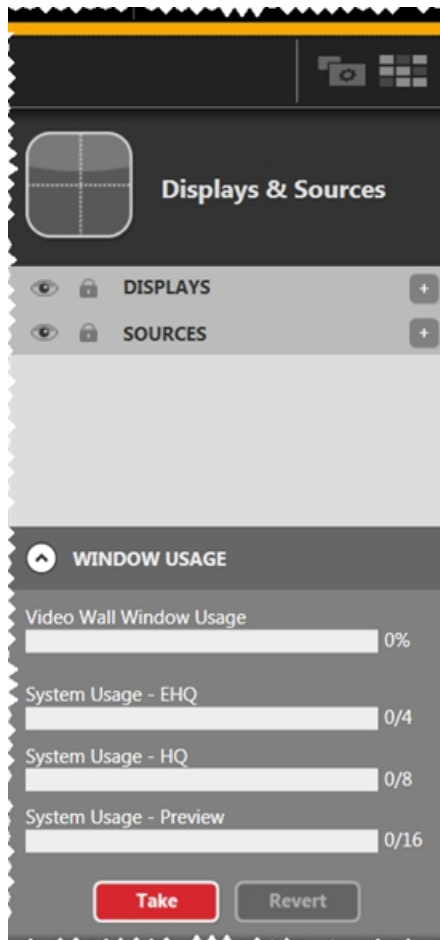
Note: The equipment file you create can be saved and shared with other configurations you edit on that PC. The file is not copied to the CORIOmaster but you can share the file to any other PCs that need access to the same equipment file, in order to avoid setting up the same devices repeatedly. The .xml data file is located in My Documents\CORIOgrapher\Equipment\Displays.

Adding Sources

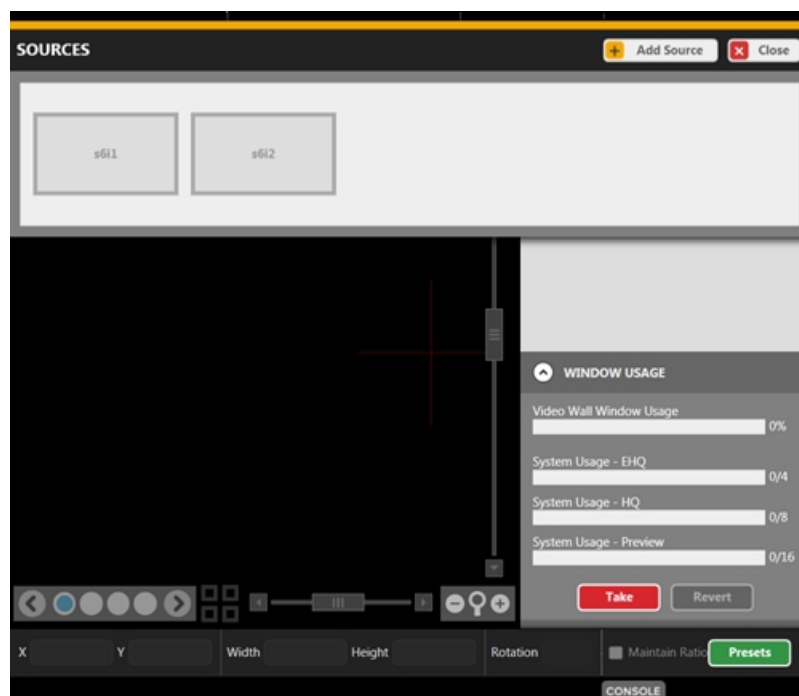
When you begin to create your Video Wall, you need to define the Sources and Displays that are being used. This is done in the Video Wall Editor.

To add your Sources to your video wall:

1. Click the plus button next to Sources in the Displays & Sources pane.

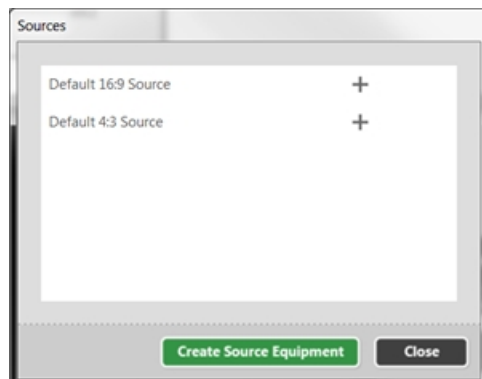


2. A pop-up bar shows all recognized Sources slots, if you are actively connected to a CORIOmaster.



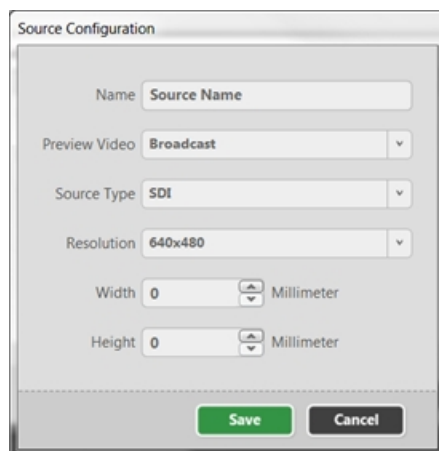
3. If you don't want to set up source configuration data at this point, skip to the bottom of this section and you can add a default 16:9 input, and clarify details later via the source configuration window. However, if you want to add a specific source, or if you are not currently connected to a CORIOmaster, follow these steps:
 1. Click the Add Source button.
 2. In the pop-up window, choose whether to begin with a default 16:9 source or a default 4:3 source (both are modifiable, they just give you a basis from which to

begin) or click the Create Source Equipment button to specify further.



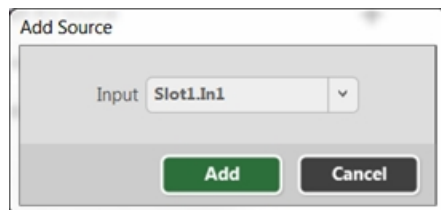
3. If you chose Create Source Equipment, a window asks you some details about your input device. The more specific you can be here, the more tailored your experience in the Video Editor can be. Source type and resolution are particularly useful in this context.

After you have entered this information and clicked Save, you return to the window above, with the two default choices plus your newly-specified configuration. Click the plus button next to the source you wish to use.

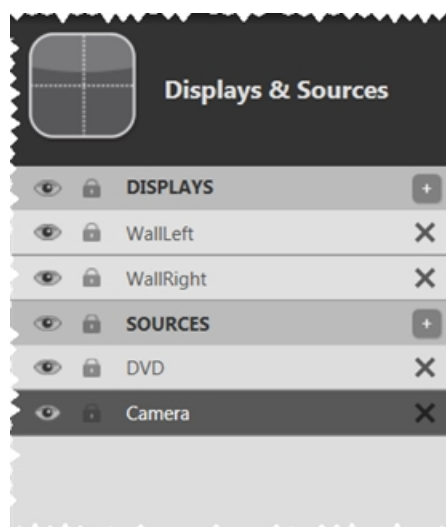


4. Another pop-up window asks you to associate this source profile with one of your input slots. (If you are connected to a CORIOmaster, it checks the device to see which ports are inputs. If you are not connected to a CORIOmaster, it gives you a list of 16 slots, each with two inputs. If you specify a slot now which turns out not to be an input when you do connect to the device, you will be prompted to correct

this when you connect to the device.)




5. When you have finished specifying source profiles, close the Sources pop-up window and return to the now-specified source list.
4. Now that your input is specified and appears in the Sources bar (or if you don't want to specify now and simply want a default source to appear on the video wall), just click the appropriate Sources rectangle and drag it onto your video wall canvas. It appears on the video wall, and a line for that source appears under the Sources heading in the Displays & Sources pane.

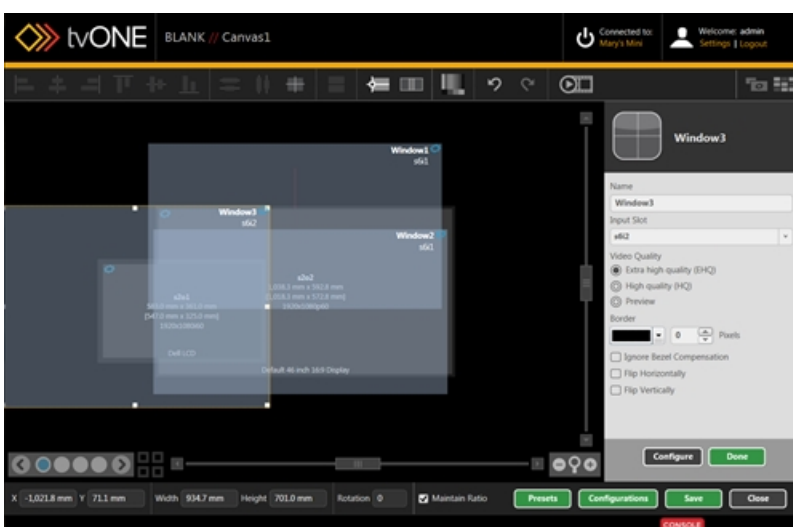


Note: The equipment file you create can be saved and shared with other configurations you edit on that PC. The file is not copied to the CORIOmaster but you can share the file to any other PCs that need access to the same equipment file, in order to avoid setting up the same devices repeatedly. The .xml data file is located in My Documents\CORIOgrapher\Equipment\Sources.

Configuring Displays and Sources

When a display or source appears in the Displays & Sources list, you can access further details about that item by:

- double-clicking the line,
- double-clicking the item in the canvas, or
- clicking on the gear  in the top corner of the item in the canvas (top left for Displays; top right for Sources).



From this right-hand pane, you can edit a source name, change the associated input slot on the CORIOmaster, configure a border of any color and any number of pixels, choose the video quality of that window, flip the image horizontally or vertically, and set the configuration to ignore any bezel compensation that is being done. Further customization can be done by clicking the Configure button at the bottom of the pane.

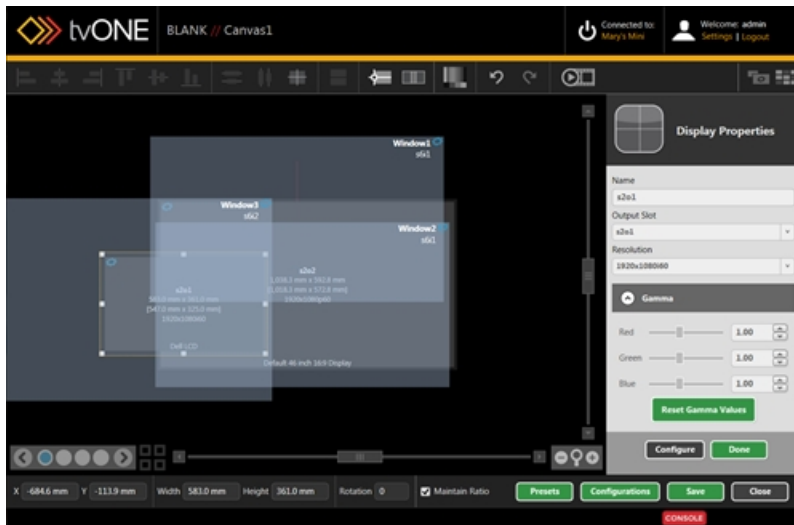
For an output, you can edit an output's name, change the associated output slot on the CORIOmaster, adjust the resolution of the output, and modify the gamma values. Further customization can be done by clicking the Configure button at the bottom of the pane.

"Configuring Sources" on page 49

"Configuring Displays" on the facing page

Configuring Displays

When you have double-clicked an output item in the Displays & Sources pane, you get a new pane from which you can make some changes.



From this pane, you can edit an output's name, change the associated output slot on the CORIO-master, adjust the resolution of the output, and modify the gamma values.

If you click the Configure button at the bottom of the pane, you can access the Display Configuration.

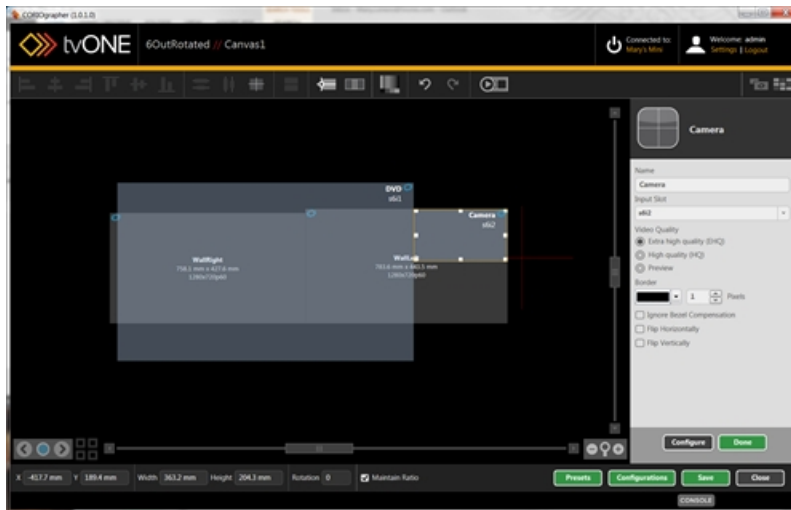
The screenshot shows the 'Display Configuration' window for 'Slot2.Out1'. The window has a dark header with the 'tvONE' logo and a 'Connect to Device' button. The main area is titled 'Display Configuration' and contains two columns of settings. The left column includes fields for Name (TopLeftLCD), Equipment (OFF), Resolution (1280x720p60), Colour Scale (Auto), HDCP Status (Active), Genlock Source (NULL), HDCP Downstream (HoldOn), Output Type (RGBHV), and Display Type (Monitor). The right column includes Bezel top (12), Bezel left (10), Bezel bottom (12), Bezel right (10), Fixed Name (Slot2.Out1), Slot Card Type (DVI, U 2-out), HDMI (Not_Found), and Genlock (Off). At the bottom, there is a 'Done' button and a 'CONSOLE' button.

Setting	Value
Name	TopLeftLCD
Equipment	OFF
Resolution	1280x720p60
Colour Scale	Auto
HDCP Status	Active
Genlock Source	NULL
HDCP Downstream	HoldOn
Output Type	RGBHV
Display Type	Monitor
Bezel top	12
Bezel left	10
Bezel bottom	12
Bezel right	10
Fixed Name	Slot2.Out1
Slot Card Type	DVI, U 2-out
HDMI	Not_Found
Genlock	Off

From the Display Configuration window, you can again "Display - Renaming Output Displays" on page 99 or resolution, but you can also specify Equipment, change the Color Scale, identify a "Genlock" on page 65 Source, enable "HDCP" on page 66, identify the output type, set the display type, "Display - Defining Bezel" on page 93, and view other settings.

Configuring Sources

When you have double-clicked an input item in the Displays & Sources pane, you get a new pane from which you can make some changes.



For an input, you can "Source - Renaming Windows" on page 125, "Source - Changing Input Slot" on page 108 on the CORIOmaster, "Source - Adjust Video Quality" on page 133 of the window, "Source - Adjusting a Window Border" on page 104 to the input, "Source - Ignore Bezel Compensation" on page 123 compensation, "Source - Flip Horizontally" on page 119 or "Source - Flip Vertically" on page 121.

"Source - Cropping inputs" on page 113

If you click the Configure button at the bottom of the pane, you can access the Source Configuration.

The screenshot shows the 'Source Configuration' window for 'Slot6.In1'. The interface includes a top bar with the 'tvONE' logo, the title 'Source Configuration / Slot6.In1', and user information 'Connected to Mary's Mini' and 'Welcome admin'. The main configuration area contains the following settings:

- Name:
- Equipment:
- Source Type:
- H Phase:
- Colour Scale:
- Brightness:
- Contrast:
- Source Loss Color:
- HDCP Enabled: ☒
- HDCP:
- Preview Video:
- Top input crop:
- Left input crop:
- Bottom input crop:
- Right input crop:
- Status:
- Feed Name:
- Slot Card Type:
- Resolution:
- EOD Filename:

A 'Done' button is located at the bottom right of the configuration area.

From the Source Configuration window, you can again "Source - Renaming Windows" on page 125, "Source - Specify Equipment" on page 129, and configure settings for this source such as source type, "Source - Color Scale" on page 111, adjust brightness and contrast, define a source loss color, enable or disable "HDCP" on page 66 settings, select a preview window, "Source - Cropping inputs" on page 113, and view other settings.

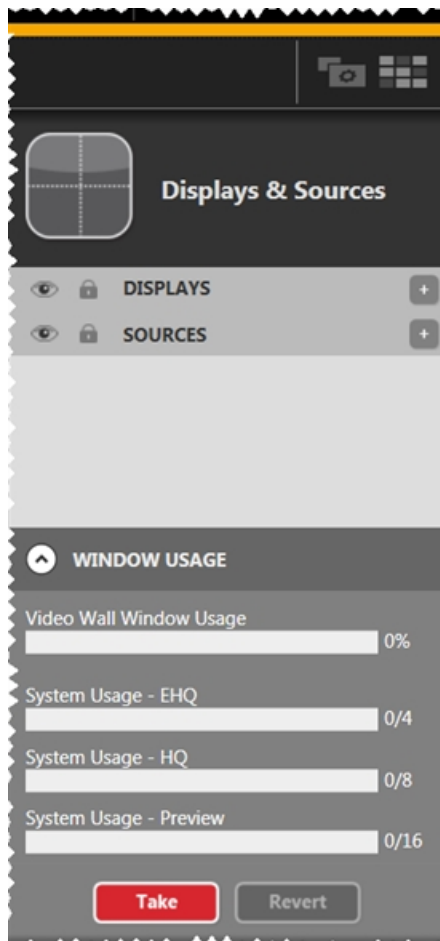
Creating Display Equipment Profiles

If you have certain equipment that you use regularly, you can set each display up as a piece of equipment, which is essentially a saved "template" of common details for that display - display type, output type, physical size and bezel size. You can store the profile for each piece of equipment, so when you create new configurations, you don't have to set up all the same details over and over. If you have one projector that you tend to use frequently and three types of display on your video wall, you can set each one up as an item of equipment, and when you build your video wall you simply select the appropriate piece of equipment to avoid having to configure the details each time you set up a new configuration.

The equipment file is kept on your PC, not on the CORIOmaster, but you can transfer the file to another PC if you want to use it in more than one location. The file is saved to your user-`\Documents\CORIOgrapher\Equipment\Displays` and the filename is the display's name in CORIOgrapher, with the extension `.xml`.

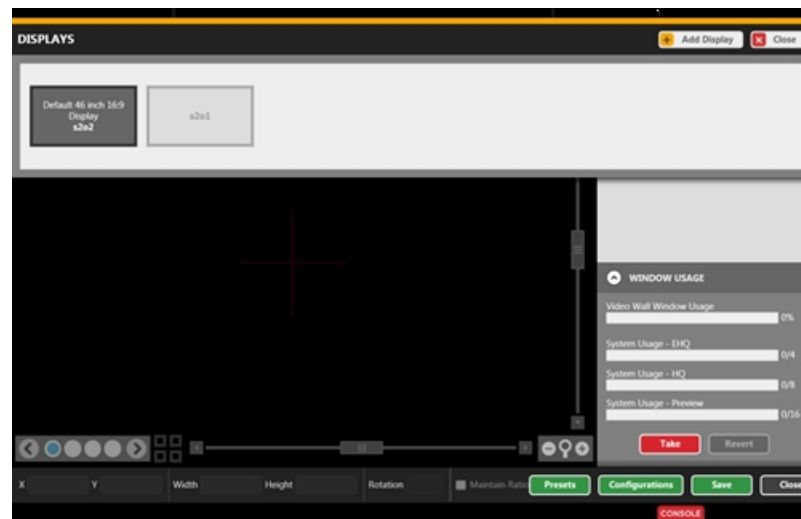
To create a display equipment profile:

1. Click the plus button next to Displays in the Displays & Sources pane.

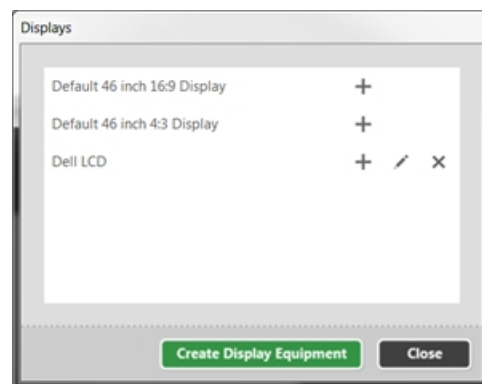


2. A pop-up bar will show all recognized unassigned output slots, if you are actively connected to a CORIOmaster. If you are not actively connected or if all display slots are

already assigned, nothing will appear in the Displays pane.

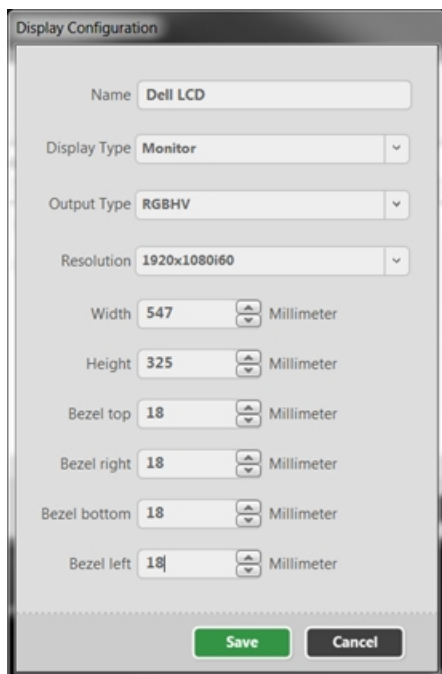


3. Click the Add Display button to open a pop-up window.



In this pop-up window, click the Create Display Equipment button.

4. A window pops up asking you to enter details about your output device. The more specific you can be here, the fewer details you will need to enter in the Configuration window each time you use the equipment.



The screenshot shows a 'Display Configuration' dialog box with the following fields and values:

- Name: Dell LCD
- Display Type: Monitor
- Output Type: RGBHV
- Resolution: 1920x1080i60
- Width: 547 Millimeter
- Height: 325 Millimeter
- Bezel top: 18 Millimeter
- Bezel right: 18 Millimeter
- Bezel bottom: 18 Millimeter
- Bezel left: 18 Millimeter

At the bottom of the dialog are two buttons: 'Save' (green) and 'Cancel' (grey).

After you have entered this information, click Save to return to the Displays window. It shows the default choices plus your newly-specified configuration.

5. If you want to create another Equipment profile, click the Create Display Equipment button again, and enter the information for the second piece of display equipment. Repeat these steps as many times as you need until your equipment details are saved.
6. When you have finished creating display profiles, close the Displays pop-up window if you do not wish to create a display in your video wall right now. (If you do, follow the steps in "Adding Displays" on page 37).

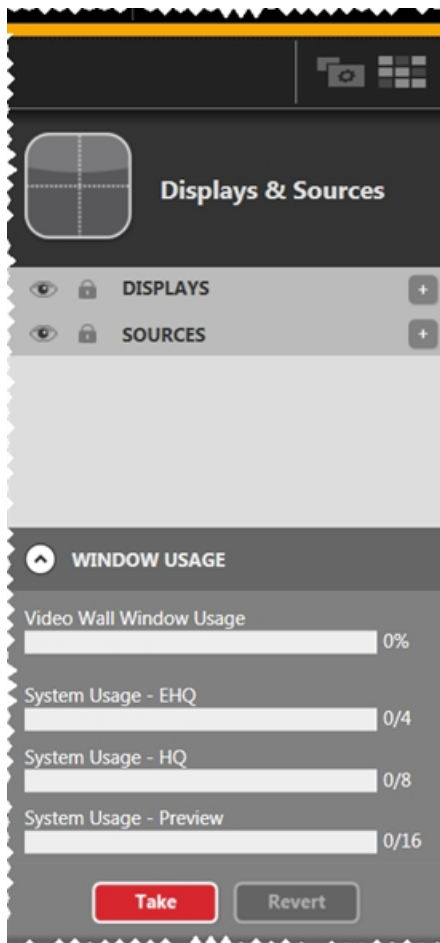
Creating Source Equipment Profiles

If you have certain equipment that you use regularly, you can set each source up as a piece of equipment, which is essentially a saved "template" of common details for that input - preferred preview video type, source type, input resolution, and physical size. You can store the profile for each piece of equipment, so when you create new configurations, you don't have to set up all the same details over and over. If you have one projector that you tend to use frequently and three types of display on your video wall, you can set each one up as an item of equipment, and when you build your video wall you simply select the appropriate piece of equipment to avoid having to configure the details each time you set up a new configuration.

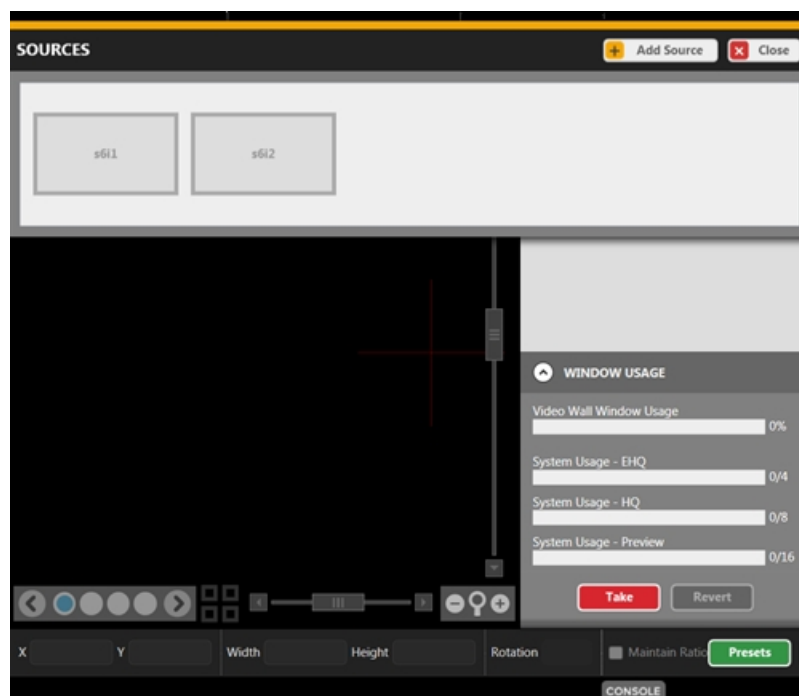
The equipment file is kept on your PC, not on the CORIOmaster, but you can transfer the file to another PC if you want to use it in more than one location. The file is saved to your user-`\Documents\CORIOgrapher\Equipment\Sources` and the filename is the source's name in CORIOgrapher, with the extension `.xml`.

To create a source equipment profile:

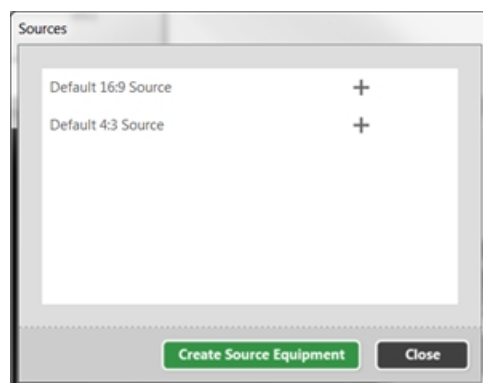
1. Click the plus button next to Sources in the Displays & Sources pane.



2. A pop-up bar will show all recognized input slots, if you are actively connected to a CORIOmaster.



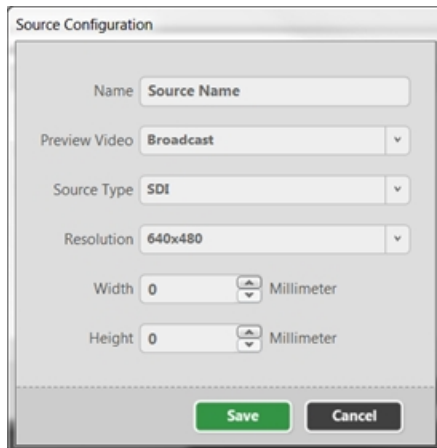
3. Click the Add Source button to open a pop-up window.



In this pop-up window, click the Create Source Equipment button.

4. A window pops up asking you to enter details about your input device. The more specific you can be here, the fewer details you will need to enter in the Configuration window

each time you use the equipment.

A screenshot of a 'Source Configuration' dialog box. It contains several input fields and dropdown menus. The 'Name' field is labeled 'Source Name'. The 'Preview Video' dropdown is set to 'Broadcast'. The 'Source Type' dropdown is set to 'SDI'. The 'Resolution' dropdown is set to '640x480'. There are two rows for physical dimensions: 'Width' and 'Height', each with a numeric input field set to '0' and a 'Millimeter' label with a small unit icon. At the bottom, there are two buttons: a green 'Save' button and a grey 'Cancel' button.

After you have entered this information, click Save to return to the Sources window. It shows the default choices plus your newly-specified configuration.

5. If you want to create another Equipment profile, click the Create Source Equipment button again, and enter the information for the second piece of source equipment. Repeat these steps as many times as you need until your equipment details are saved.
6. When you have finished creating source profiles, close the Sources pop-up window if you do not wish to create a window in your video wall right now. (If you do, follow the steps in "Adding Displays" on page 37).

Displays and Sources pane


When you are editing a video wall in the Editor window, you can use the Displays & Sources pane to add your inputs and outputs. See "Adding Sources" on page 42 and "Adding Displays" on page 37 for instructions.

In addition to the editing that can be done in the video wall itself, the line in the Displays & Sources pane allows you to lock an item by clicking the lock icon (prevent it from being moved on the video wall), hide an item by clicking the eye icon (this is helpful if you want to reach the window behind it), edit its information by double-clicking the line, or delete it by clicking the X. See "Configuring Displays and Sources" on page 46 for more information.


Priority

Once your displays and windows are added to the video wall, you can move them around as needed by clicking and dragging the item up or down the list in the pane. The video wall is built out of layers, with the top display in the Displays & Sources pane being at the back; the bottom window of the Displays & Sources pane being at the front.

Visibility

If you want to work with a layer behind the top layer, you can use the eye icon on the side pane  to hide that layer while you work with the bottom layer. Each input and output has its own visibility setting so you can toggle them as needed to work in the video wall.


Lock

If you have configured an item or multiple items on your video wall and don't want to risk them moving or being changed, you can lock those items to prevent accidental modification. The lock icon is on the side pane  next to the eye icon and is unique to each input and output.

Edit

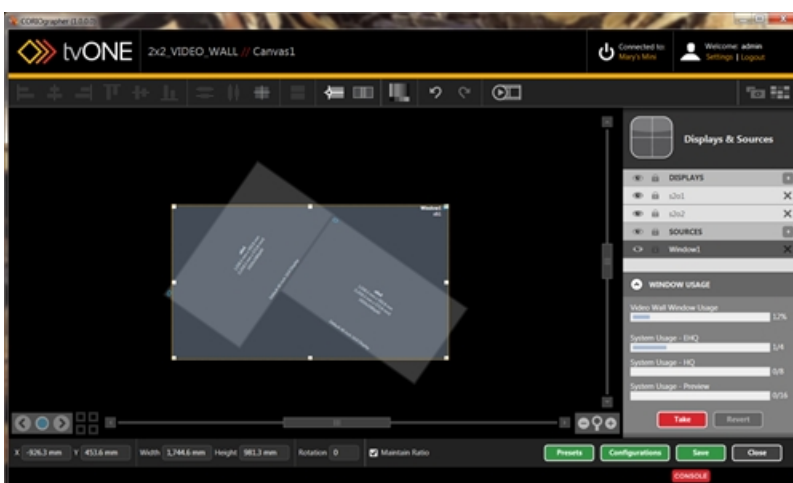
You can edit the information for a display or source by double-clicking the line for that item. This will open a window of information that you can modify as you wish.

Delete

If you decide you don't want to have a certain display or source on your video wall after all, you can delete the item by clicking the X  at the far right of the line. If you change your mind, you can add it back using the plus button to the right of the header bar that says Displays or Sources.


Working in the Video Wall

The video wall, in the Editor window, is the main black area where you can move and adjust your windows and displays to build a virtual representation of your physical video wall.



For information on adding windows and outputs to the video wall and using the visibility and locking features, see the instructions on using the "Displays and Sources pane" on the previous page

In addition to being able to hide layers and lock layers, the video wall itself has extensive functionality. You can drag-and-drop all input and output layers to your preferred location, and if you prefer to use grid co-ordinates, you can use the X and Y fields in the bottom left to define a screen position for the selected item. The width and height are also modifiable from the controls at the bottom of the window.

The Video Wall canvas itself can be navigated by using the elevator bars at the bottom and right of the canvas to move around. The magnifying glass icon  will automatically fit to zoom, while

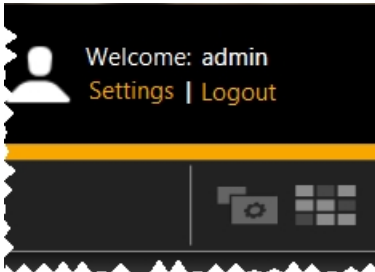
the plus and minus on each side will zoom in and out. You can also zoom using the control button along with scrolling the mouse wheel.

Video Wall

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Video Wall - Editor / Dashboard Buttons

If you are logged in as an Administrator or Power User, at the far right of the button bar, you can see two buttons that allow you to toggle between the Video Wall Editor and the Dashboard.



The leftmost button takes you to the Video Wall Editor, where you can arrange your inputs and outputs into the desired configuration.

Once a canvas is saved as you like it, click the rightmost button to go to the Dashboard to be able to choose between your saved canvases, choose presets, and redefine source inputs as needed. The Dashboard allows you to switch presets in a live environment, and change window inputs on-the-fly.

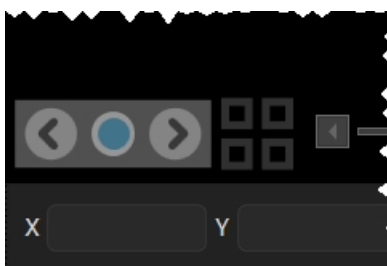
Moving between Video Walls

When you are working in the Editor with video walls, a CORIOmaster mini only has one video wall (canvas) per configuration, but a CORIOmaster has four video walls. You can swap between them in the Editor or from the Video Wall Overview page.

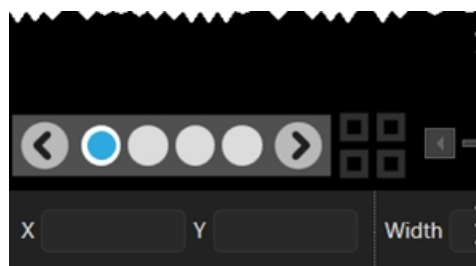
To move between video walls:


- In the Editor, at the bottom left of the page (above the X and Y coordinates), there are four dots between two arrows.

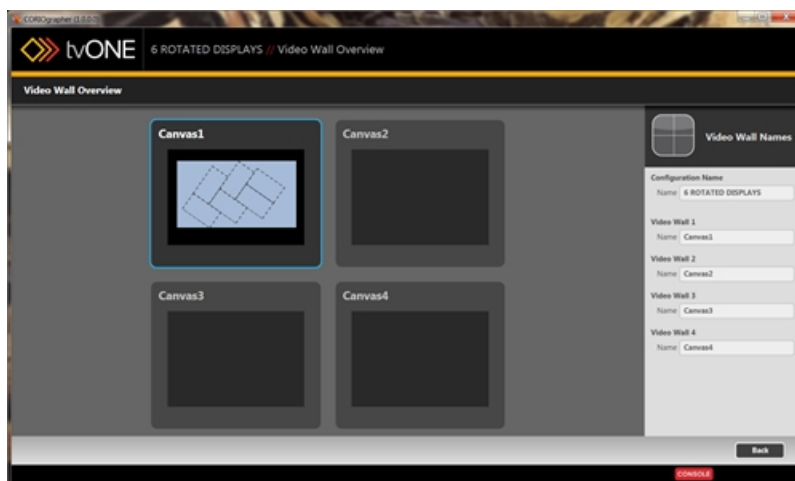
CORIOmaster mini



CORIOmaster



- The four squares on the right are the Video Wall Overview button . If you click the the Video Wall Overview button, the Video Wall Overview page will open. You can see a preview of the canvases (video walls) available in this configuration. Click one of the canvas previews to go to the Editor with that video wall loaded, or edit the name of the canvas here.

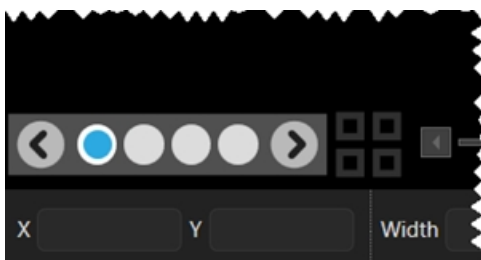


Renaming Video Wall

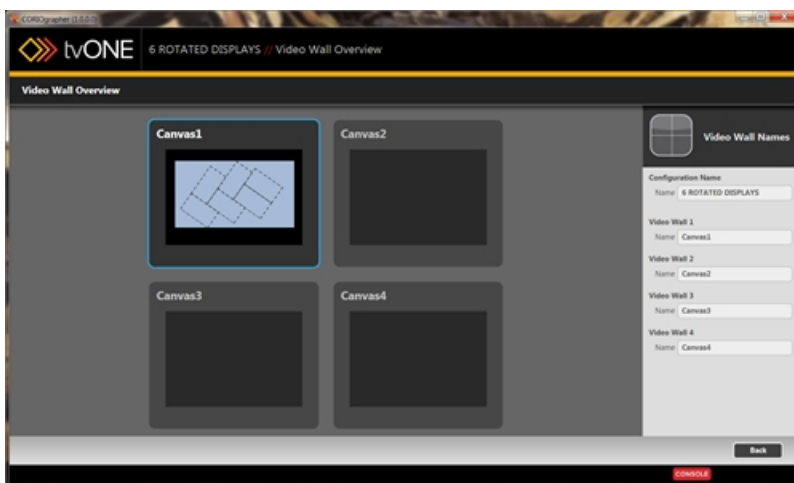
When you are working in the Editor with video walls, in addition to renaming sources and displays, you can rename the entire video wall to a more memorable name.

To rename your video wall:

1. In the Editor, at the bottom left of the page (above the X and Y coordinates), click the Video Wall Overview button.



2. In the Video Wall Overview page, you will see the canvases (video walls) available in this configuration. (For a CORIOmaster, four canvases are available; a CORIOmaster mini has one canvas.)



3. In the right-hand pane, you can change the Configuration Name or the video wall name. Type your desired name into the appropriate field. The name must be a maximum of 19 characters, start with a letter, not contain any spaces, and be alphanumeric (underscore is also allowed).
4. Press Return or Enter to save the new name.

Genlock

For each output, you can configure Genlock, on the "Slot Status" on page 154 page. You can also configure a Genlock for a specific output by going to the Configure settings for that output. See "Display - Configure Genlock" on page 89 for more information.

The screenshot shows the tvONE Settings // System page. On the left is a sidebar with a 'Settings' section containing 'General', 'Networking', 'Users', 'Connections', and 'Firmware and Defaults'. Below it is an 'Information' section with 'System', 'Slot Status' (highlighted with a blue arrow), and 'Constraints'. The main content area is divided into two sections: 'Input Slots' and 'Output Slots'.

Input Slots

Slot	Name	Status	Card Type	HDMI	HDCP	Measured Resolution	Type
Slot6.In1	s6i1	INVALID	DVI_U 2-in	Not_Found	Off		DVI (HDMI)
Slot6.In2	s6i2	INVALID	DVI_U 2-in	Not_Found	Off		DVI (HDMI)

Output Slots

Slot	Name	Status	Card Type	HDMI	HDCP Active	Genlock	Genlock Source
Slot2.Out1	s2o1	UNKNOWN	DVI_U 2-out	Not_Found	Off	Off	s6i1
Slot2.Out2	s2o2	UNKNOWN	DVI_U 2-out	Not_Found	Off	Off	NULL

The Genlock Source is blank by default (set to Null). To start Genlock, select the appropriate input from the drop-down list under Genlock Source. Repeat this for all outputs that you wish to Genlock.

What is Genlock?

Each output will normally free run at the chosen output resolution. In many situations, though, you may want to have these outputs co-timed (such as when each output is a part of a video wall). Genlock permits the timing of an output to be locked to match an input of the same resolution.

HDCP

The Universal DVI (DVI-U) inputs and outputs on a CORIOmaster are fully compliant with HDCP. This can, however, cause serious operational issues.

HDCP settings can be adjusted in the configuration page for each input or output.

On each DVI Input you have a checkbox to enable HDCP communications with the source. tvONE strongly recommend that you disable HDCP when you are connecting to a computer that has HDCP capability but will not be playing out protected material. Otherwise the channel will become encrypted and limit system functionality. For instructions on configuring HDCP for a source, see "Source - Enable HDCP" on page 117

On Outputs you can configure the HDCP Downstream setting to HoldOn, KeepOff, or FollowSources. KeepOff disables HDCP key transfer and is recommended for non-compliant sinks. HoldOn is used for compliant monitors and projectors. FollowSources turns HDCP on or off depending on the settings of the input. For instructions on configuring HDCP Downstream for a display, see "Display - Configure HDCP" on page 91.



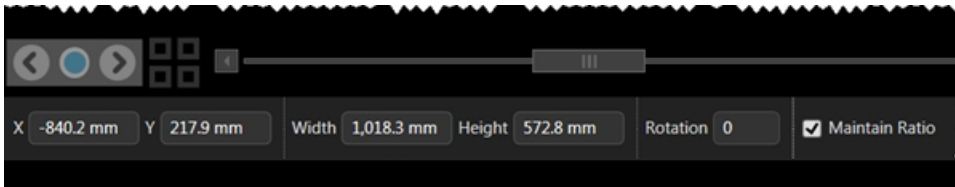
Note: For correct operation with an HDCP source, ALL outputs connected to that source must be HDCP Compliant. In the case of the CORIOmaster, if one or more windows used on a video wall comes from an HDCP-encrypted source then all outputs linked to the video wall must be HDCP compliant. If not, then no output image will occur.

Video Wall Navigation

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Video Wall- Editing Object Location

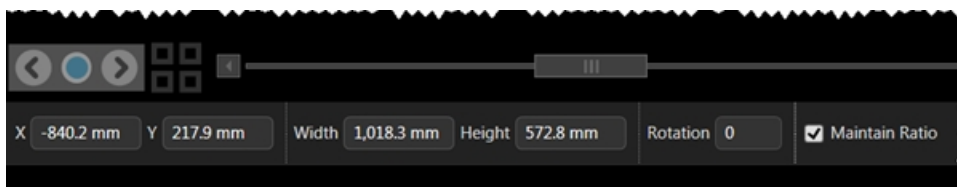
When you select an input or output in the video wall by clicking on it, some text fields below the video wall will auto-populate the window or display's saved settings. Size, rotation, and location on the video wall can be edited here.



There are three ways to adjust the location of a selected item on the video wall. You can physically move the window by dragging with the left mouse button to the desired location, or for fine tuning, you can select the window and adjust its location using the arrow keys on the keyboard or you can enter the X and Y coordinates for the top left corner of the window. The center of the video wall is 0, 0; the X axis runs horizontally and the Y axis runs vertically with positive values going up and right of the center.

Video Wall - Editing Object Rotation

When you select an input or output in the video wall by clicking on it, some text fields below the video wall will auto-populate the window or display's saved settings. Size, rotation, and location on the video wall can be edited here.

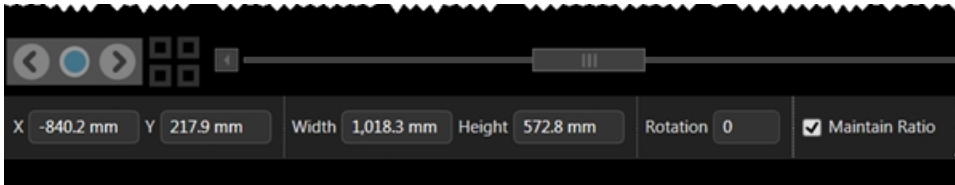


There are two ways to adjust the rotation of a selected item on the video wall. You can physically rotate the window with the mouse by control-clicking the bottom right corner and dragging the window to the proper angle, or you can enter the rotation value, in degrees, in the Rotation field below the video wall.

The default, not rotated, is 0; rotated right is 90 (or -270); rotated left is 270 (or -90). The field accepts values from -359 to 359.

Video Wall - Editing Object Size

When you select an input or output in the video wall by clicking on it, some text fields below the video wall will auto-populate the window or display's saved settings. Size, rotation, and location on the video wall can be edited here.

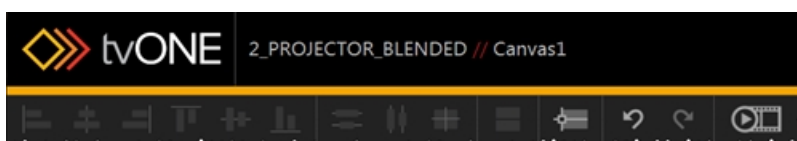


The system uses the width and height specified when you configured the equipment. This is the horizontal width and height, in canvas grid points, that the display or window is expected to fill. You can re-size a selected input or output by clicking and dragging a corner of the window or display, or you can type specific values into the width and height text fields. Note the check box for Maintain Ratio - if you wish to keep the aspect ratio consistent, leave this box checked. If you wish to widen or narrow the object, uncheck the box.

If you wish to crop an input to remove the edge, see "Source - Cropping inputs" on page 113.

Video Wall - Preview Mode

To help you construct canvases a number of extra support buttons have been added to the top of the video wall.

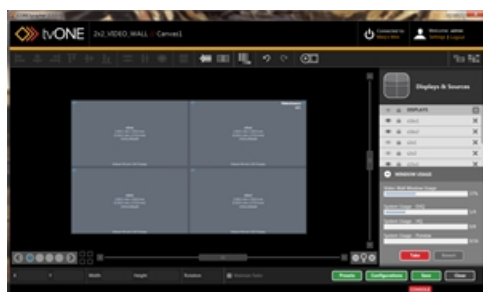


The Preview Mode button, the furthest right of the video wall button pane, is primarily intended as an offline tool, which allows you to see your inputs in the designated locations and verify the configuration you've just built.

When you click the Preview button, the Source windows show a sample video feed, selected in the Source Configuration ("Source - Set Preview Video" on page 127). The Preview button takes into account any changes such as stretching, clipping, or flipping that may have been done to the video signal, although any borders will not appear on the video wall as they are not reflected on the video wall and only appear on the physical display.

While you are in Preview mode, it is not possible to move objects on the video wall. You can toggle between Editor mode and Preview mode, in order to verify changes you make in Editor mode, but while you are in Preview mode, there are no other functions (other than the Console button) available. To return to other functions, click the Preview button again to cancel Preview mode.

Editor mode:

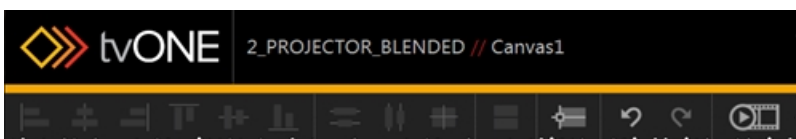


Preview mode:



Video Wall Aids - Vertical Alignment

To help you construct canvases a number of extra support buttons have been added to the top of the video wall.



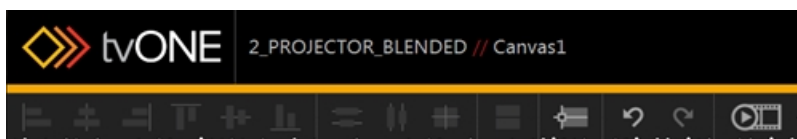
To top-align two or more items vertically, use the fourth (Align Top) button. To use the button, first select the item you want the others to line up with. Then hold down the Control key and select any other items that you wish to align with the first. When all items are selected, release the Control key and click the Align Top button. Each item will retain its previous horizontal position but change vertical alignment so the top edges are aligned.

To middle-align two or more items vertically, use the fifth (Align Middle) button. To use the button, first select the item you want the others to line up with. Then hold down the Control key and select any other items that you wish to align with the first. When all items are selected, release the Control key and click the Align Middle button. Each item will retain its previous horizontal position but change vertical alignment so the middle points of each item are aligned to a single middle line.

To bottom-align two or more items vertically, use the sixth (Align Bottom) button. To use the button, first select the item you want the others to line up with. Then hold down the Control key and select any other items that you wish to align with the first. When all items are selected, release the Control key and click the Align Bottom button. Each item will retain its previous horizontal position but change vertical alignment so the bottom edges are aligned.

Video Wall Aids - Horizontal Alignment

To help you construct canvases a number of extra support buttons have been added to the top of the video wall.



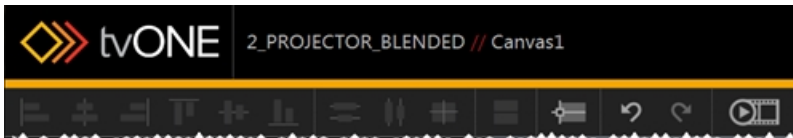
To left-align two or more items horizontally, use the first (Align Left) button. To use the button, first select the item you want the others to line up with. Then hold down the Control key and select any other items that you wish to align with the first. When all items are selected, release the Control key and click the left-align button. Each item will retain its previous vertical position but change horizontal alignment so the left sides are aligned.

To center-align two or more items horizontally, use the second (Align Center) button. To use the button, first select the item you want the others to line up with. Then hold down the Control key and select any other items that you wish to align with the first. When all items are selected, release the Control key and click the center-align button. Each item will retain its previous vertical position but change horizontal alignment so the center points of each item are aligned to a single center line.

To right-align two or more items horizontally, use the third (Align Right) button. To use the button, first select the item you want the others to line up with. Then hold down the Control key and select any other items that you wish to align with the first. When all items are selected, release the Control key and click the right-align button. Each item will retain its previous vertical position but change horizontal alignment so the right sides are aligned.

Video Wall Aids - Vertical Distribution

To help you construct canvases a number of extra support buttons have been added to the top of the video wall.

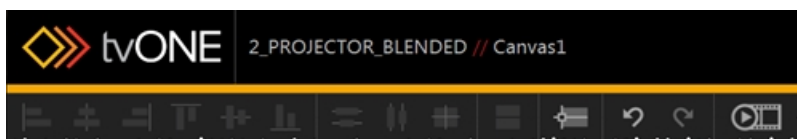


The distribution buttons are provided to create equal spacing between two or more objects of the same size. If you want three windows where the height difference between the top of the first and second is the same as the height difference between the top of the second and third, you would use the Distribute Vertically button.

To top-distribute two or more equal-sized items vertically, use the seventh (Distribute Vertically) button. To use the button, hold down the Control key and select the three items that you wish to distribute. The distribute button will move the middle item to be exactly halfway between the top item and the bottom item, so make sure the item you want highest is in the correct position, and the one you want lowest is in the correct position. When all items are selected, release the Control key and click the Distribute Vertically button. The top and bottom items will stay put and the middle item will retain its previous horizontal position but change vertical alignment so it is exactly halfway between the top item and the bottom item.

Video Wall Aids - Horizontal Distribution

To help you construct canvases a number of extra support buttons have been added to the top of the video wall.

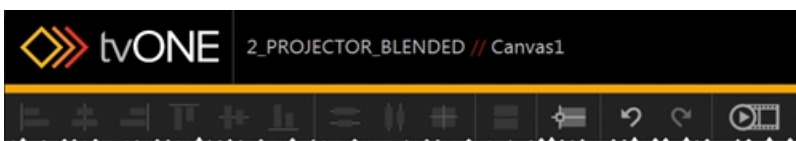


The distribution buttons are provided to create equal spacing between three objects of the same size. If you want three windows where the horizontal distance between the first and second is the same as the horizontal distance between the the second and third, you would use the Distribute Horizontally button.

To distribute three equal-sized items horizontally, use the eighth (Distribute Horizontally) button. To use the button, hold down the Control key and select the three items that you wish to distribute. The distribute button will move the center item to be exactly halfway between the left-most item and the right-most item, so make sure the item you want left-most is in the correct position, and the one you want right-most is in the correct position. When all items are selected, release the Control key and click the Distribute Horizontally button. The left-most and right-most items will stay put and the center item will retain its previous vertical position but change horizontal alignment so it is exactly halfway between the left-most item and the right-most item.

Video Wall Aids - Move Object to Center

To help you construct canvases a number of extra support buttons have been added to the top of the video wall.



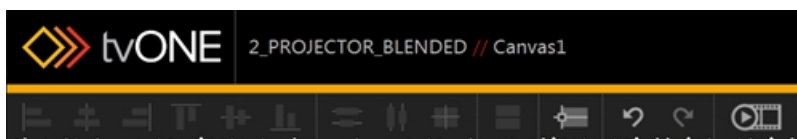
The ninth button, Move objects to center, moves any selected windows to the exact center of the canvas. It calculates the center point of the window (both horizontally and vertically) and puts the center point at the center of the canvas.

To use the button, select the item that you wish to center. If you wish to center multiple items, hold down the Control button in order to select multiple items (or use the Center button repeatedly for each window - the result is the same). After selecting the item or items, click the Center button and the item or items will relocate to the center of the canvas, under the red cross-hairs.

If you have moved multiple items, be aware that the lowest item in the list on the right is on top; the items higher in the list are layered behind.

Video Wall Aids - Resize Objects

To help you construct canvases a number of extra support buttons have been added to the top of the video wall.

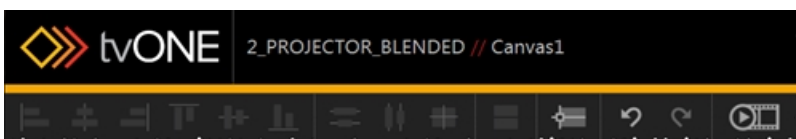


The resize button is provided to easily copy dimensions from one object to others. The resulting objects may not be the same size in actual (inches/millimeters) measurement, but this is to take a bezel into account.

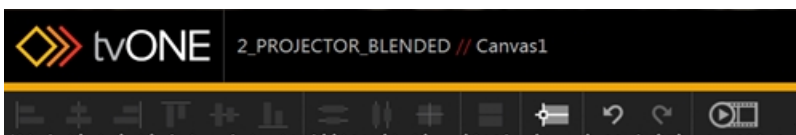
To resize objects, use the tenth (Resize) button. To use the button, hold down the Control key and select the item that you wish others to match. Then select the other item(s) that you wish to match the size of the first. When all items are selected, release the Control key and click the Resize button. The subsequent items will adjust dimensions to match the first, while retaining the same center point on the canvas.

Video Wall Aids - Snap to Objects

To help you construct canvases a number of extra support buttons have been added to the top of the video wall.



The eleventh button, Snap to Objects, works differently from the other buttons. If you toggle the Snap to Objects button on, you will see it highlighted brighter than the surrounding buttons. If this feature is enabled, then the items will automatically snap to the edges of other objects, to simplify the process of alignment. The image above shows the Snap to Objects button gray and disabled; the image below shows the button bright and enabled.

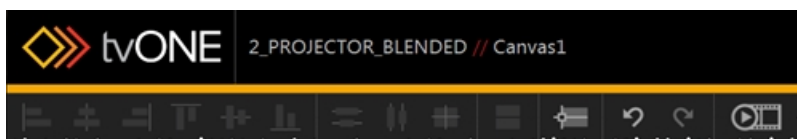


To use the button, simply click the Snap to Objects button so that it is brighter than the surrounding buttons. While the feature is enabled and you move an object on the Video Wall, when it approaches the edge of another object, it will gravitate towards that edge in an attempt to align. (This will not work if you are moving a group of objects.)

If you don't like this feature and wish to do your alignment manually, be sure the Snap to Objects button is disabled. You may find that you want to disable this feature as you are fine-tuning the placement of your windows and displays. In manual mode (with Snap to Objects disabled), you can use the arrow keys to nudge windows and displays around the canvas.

Video Wall Aids - Undo and Redo

To help you construct canvases a number of extra support buttons have been added to the top of the video wall.



The undo and redo buttons work the same as they do in any program. As is standard, you can use Control-Z and Control-Y as keyboard versions of these buttons.

The Undo button (or Control-Z) will step backwards through changes you've made, until it reaches the last saved state. If there are no changes available to undo, the arrow will be dark gray, indicating unavailability.

The Redo button (or Control-Y) will step forwards again through changes you've made, if you've used the Undo button too many times and want to redo the changes. If you use the Undo button to step back and then make a new change, the Redo feature will no longer be available and will be dark gray.

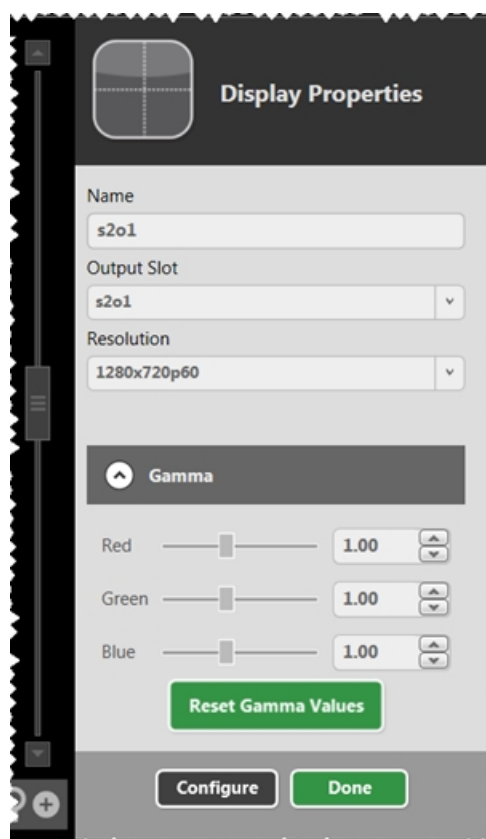
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Display - Adjusting Color Scale

When you have added displays to your video wall, you may find that you want to configure the color scale for an individual display. (Color scale can be adjusted on each input as well - for instructions, see "Source - Color Scale" on page 111.) To configure outputs for color scale, follow these steps:

1. In the video wall, double-click the window for the output you would like to modify, or double-click the line for that output in the Displays & Sources pane.
2. On the right-hand pane, you will see some basic information about the window. You can rename the window, change output slot, or adjust resolution. If you are connected to a CORIOmaster, you can also set gamma values. There is also a Configure button to access further settings - click the Configure button.



3. On the Display Configuration page that appears, there are a variety of customization options.

tvONE Display Configuration // Slot2.Out1 Connect to Device

Display Configuration

Name: <input type="text" value="TopLeftLCD"/>	Bezel top: <input type="text" value="12"/> 0 -44.35 Millimeter
Equipment: <input type="text" value="Off"/>	Bezel left: <input type="text" value="10"/> 0 -78.36 Millimeter
Resolution: <input type="text" value="1280x720p60"/>	Bezel bottom: <input type="text" value="12"/> 0 -44.35 Millimeter
Colour Scale: <input type="text" value="Auto"/>	Bezel right: <input type="text" value="10"/> 0 -78.36 Millimeter
HDCP Status: <input type="text" value="Active"/>	Fixed Name: <input type="text" value="Slot2.Out1"/>
Genlock Source: <input type="text" value="NULL"/>	Slot Card Type: <input type="text" value="DVI_U 2-out"/>
HDCP Downstream: <input type="text" value="HoldOn"/>	HDMI: <input type="text" value="Not_Found"/>
Output Type: <input type="text" value="RGBHV"/>	Genlock: <input type="text" value="Off"/>
Display Type: <input type="text" value="Monitor"/>	

Done

CONSOLE

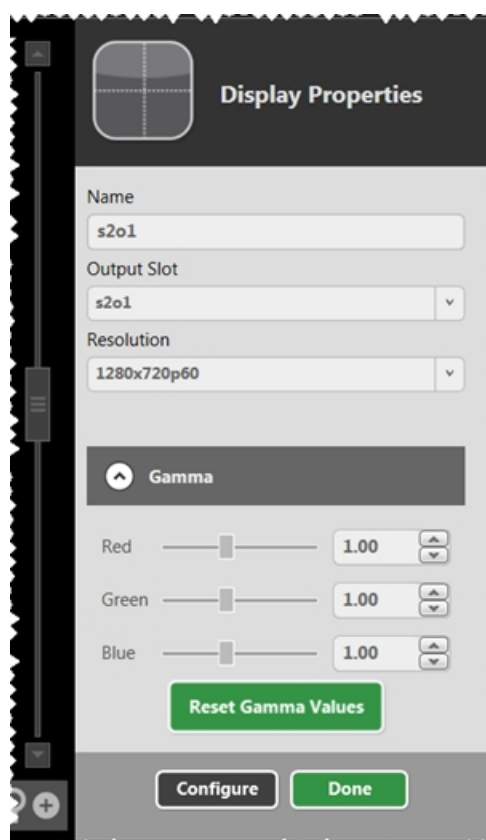
To configure the color scale, choose your preferred option from the drop-down menu next to the words Colour Scale. Choices include Auto (which auto-senses as best it can), Black, YUV, RGB, YUV_601, or YUV_709.

- Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

Display - Changing Gamma Values

When you have added outputs to your video wall, you may find that you want to change the luminance (gamma settings) for a given output. To do this, follow these steps:

1. In the video wall, double-click the window for the output you would like to modify, or double-click the line for that output in the Displays & Sources pane.
2. On the right-hand pane, you will see some basic information about the window. You can rename the window, change output slot, or adjust resolution. If you are connected to a CORIOmaster, you can also set gamma values.



3. To modify the gamma, be sure you are connected to the CORIOmaster as gamma cannot be set if you are not actively connected. If the option is minimized, it looks like this:



In that case, click the "V" button to expand the Gamma settings.

4. In the Gamma settings area, there are three sliders with accompanying text boxes and arrows; one each for red, green, and blue. Adjust each slider as you wish. Drag the slider for large changes and use the arrows to nudge for minor changes, or if you have a specific numerical value in mind, type it into the text box. Each scale defaults to a value of 1.00, with a functional range of 0.30 to 2.00.
5. If you have changed the values and wish to reset all gamma values to 1.00, press the green Reset Gamma Values button, which will return all three settings to the default 1.00.
6. Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

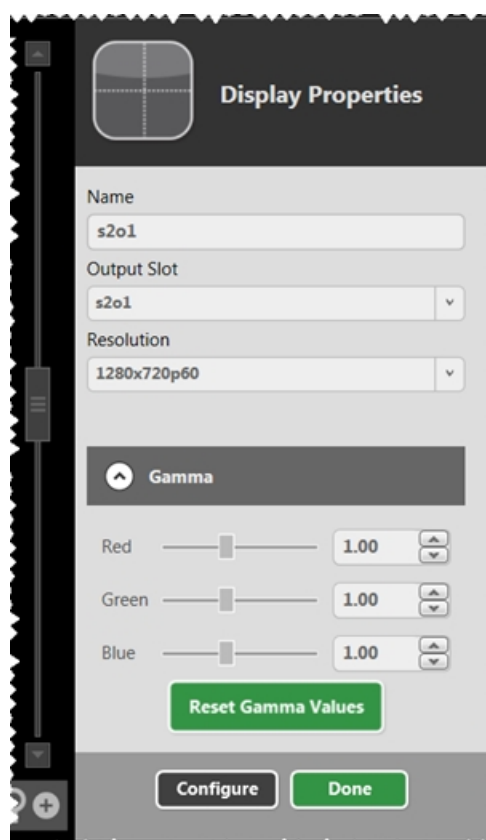


Caution: Note that if you subsequently change the Equipment in the Display Configuration page, the Gamma values will reset to default. tvONE recommends that you configure the gamma values last, after you have made all other configurations to the display.

Display - Changing Output Slot

When you have added outputs to your video wall, you may find that you want to change the slot that is assigned to a given output. To do this, follow these steps:

1. In the video wall, double-click the window for the output you would like to modify, or double-click the line for that output in the Displays & Sources pane.
2. On the right-hand pane, you will see some basic information about the window. You can rename the window, change output slot, or adjust resolution. If you are connected to a CORIOmaster, you can also set gamma values.



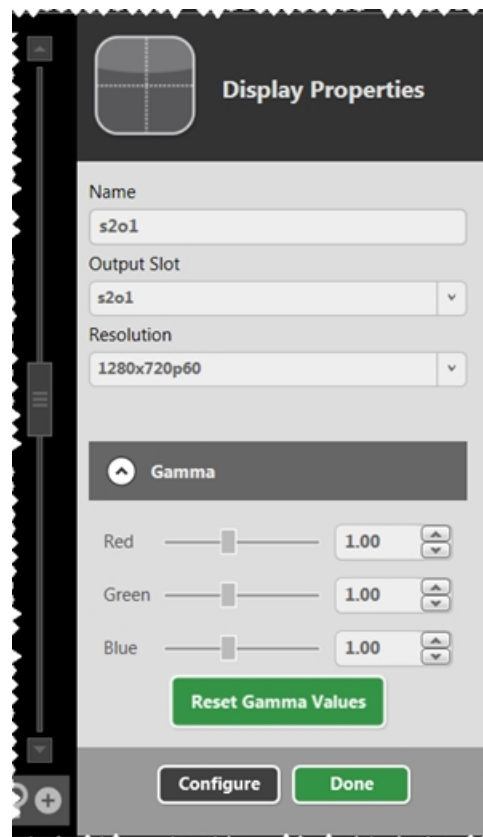
3. To change the output slot, choose the appropriate slot from the drop-down list under Output Slot. If your CORIOgrapher is actively connected to a CORIOmaster, the list will show any unassigned outputs available.
4. Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

Display - Changing Resolution

When you have added outputs to your video wall, you may find that you want to change the resolution of a given output. There are various ways to do this, depending on where you are in the application:

From Video Wall

1. In the video wall, double-click the window for the output you would like to modify, or double-click the line for that output in the Displays & Sources pane.
2. On the right-hand pane, you will see some basic information about the window. You can rename the window, change output slot, or adjust resolution. If you are connected to a CORIOmaster, you can also set gamma values.



3. To change the resolution, choose the appropriate line from the drop-down list under Resolution.
4. Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

From Display Configuration page

1. On the Display Configuration page that appears when you click Configure in the Displays & Sources pane, there are a variety of customization options.

Display Configuration

Name: Bezel top: 0 -44.35 Millimeter

Equipment: Bezel left: 0 -78.36 Millimeter

Resolution: Bezel bottom: 0 -44.35 Millimeter

Colour Scale: Bezel right: 0 -78.36 Millimeter

HDCP Status: Fixed Name:

Genlock Source: Slot Card Type:

HDCP Downstream: HDMI:

Output Type: Genlock:

Display Type:

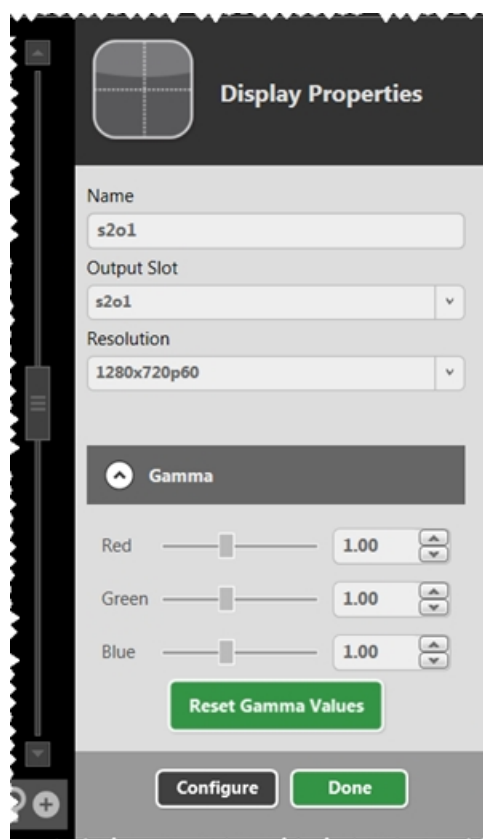
In the first column, choose the appropriate line from the drop-down list under Resolution.

2. Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

Display - Configure Genlock

When you have added displays to your video wall, you may find that you want to configure Genlock for an individual display. (To configure Genlock for all displays at once, you can set it up via the "Genlock" on page 65 page in Settings.) To configure Genlock for one display, follow these steps:

1. In the video wall, double-click the window for the output you would like to modify, or double-click the line for that output in the Displays & Sources pane.
2. On the right-hand pane, you will see some basic information about the window. You can rename the window, change output slot, or adjust resolution. If you are connected to a CORIOmaster, you can also set gamma values. There is also a Configure button to access further settings - click the Configure button.



3. On the Display Configuration page that appears, there are a variety of customization options.

tvONE Display Configuration // Slot2.Out1 Connect to Device

Display Configuration

Name: <input type="text" value="TopLeftLCD"/>	Bezel top: <input type="text" value="12"/> 0 -44.35 Millimeter
Equipment: <input type="text" value="Off"/>	Bezel left: <input type="text" value="10"/> 0 -78.36 Millimeter
Resolution: <input type="text" value="1280x720p60"/>	Bezel bottom: <input type="text" value="12"/> 0 -44.35 Millimeter
Colour Scale: <input type="text" value="Auto"/>	Bezel right: <input type="text" value="10"/> 0 -78.36 Millimeter
HDCP Status: <input type="text" value="Active"/>	Fixed Name: <input type="text" value="Slot2.Out1"/>
Genlock Source: <input type="text" value="NULL"/>	Slot Card Type: <input type="text" value="DVI_U 2-out"/>
HDCP Downstream: <input type="text" value="HoldOn"/>	HDMI: <input type="text" value="Not_Found"/>
Output Type: <input type="text" value="RGBHV"/>	Genlock: <input type="text" value="Off"/>
Display Type: <input type="text" value="Monitor"/>	

Done

CONSOLE

To set up a Genlock source, go to the Genlock Source drop-down menu. By default, it is set to NULL but if you click the menu, you can select a configured input.

- Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

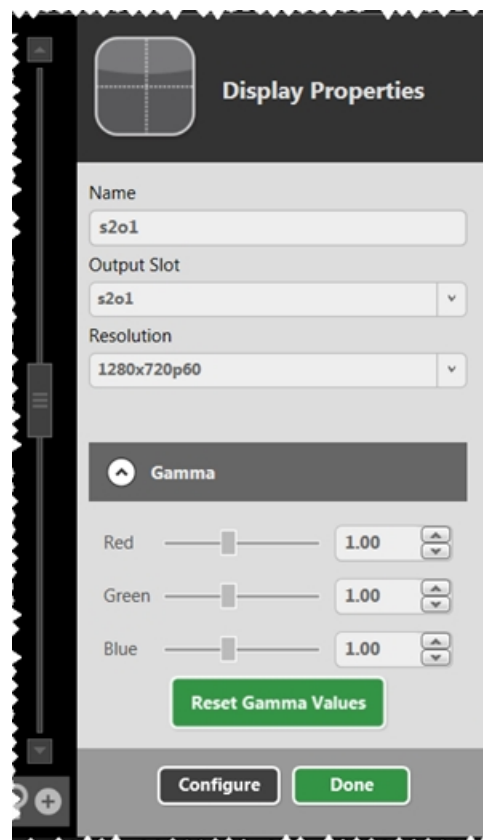
What is Genlock?

Each output will normally free run at the chosen output resolution. In many situations, though, you may want to have these outputs co-timed (such as when each output is a part of a video wall). Genlock permits the timing of an output to be locked to match an input of the same resolution.

Display - Configure HDCP

When you have added displays to your video wall, you may find that you need to configure HDCP (for general information on HDCP, see "HDCP" on page 66). To do this, follow these steps:

1. In the video wall, double-click the window for the output you would like to modify, or double-click the line for that output in the Displays & Sources pane.
2. On the right-hand pane, you will see some basic information about the window. You can rename the window, change output slot, or adjust resolution. If you are connected to a CORIOmaster, you can also set gamma values. There is also a Configure button to access further settings - click the Configure button.



3. On the Display Configuration page that appears, there are a variety of customization options.

Display Configuration

Name: TopLeftLCD

Equipment: Off

Resolution: 1280x720p60

Colour Scale: Auto

HDCP Status: Active

Genlock Source: NULL

HDCP Downstream: HoldOn

Output Type: RGBHV

Display Type: Monitor

Bezel top: 12 (0 - 44.35 Millimeter)

Bezel left: 10 (0 - 78.36 Millimeter)

Bezel bottom: 12 (0 - 44.35 Millimeter)

Bezel right: 10 (0 - 78.36 Millimeter)

Fixed Name: Slot2.Out1

Slot Card Type: DVI_U 2-out

HDMI: Not_Found

Genlock: Off

Done

CONSOLE

To configure the HDCP Downstream settings, select the drop-down menu next to HDCP Downstream in the first column. You can set it to HoldOn, KeepOff, or FollowSources. KeepOff disables HDCP key transfer and is recommended for non-compliant sinks. HoldOn is used for compliant monitors and projectors. FollowSources turns HDCP on or off depending on the settings of the input.

- Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

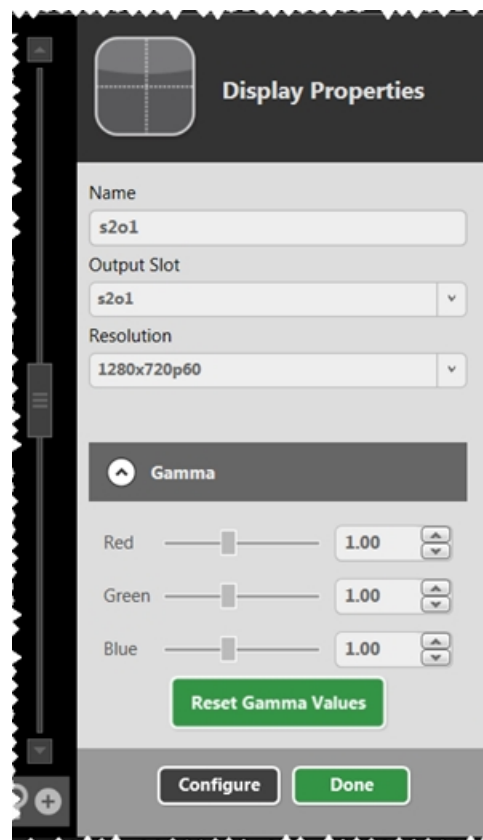


Note: For correct operation with an HDCP source, ALL outputs connected to that source must be HDCP Compliant. In the case of the CORIOmaster, if one or more windows used on a video wall comes from an HDCP-encrypted source then all outputs linked to the video wall must be HDCP compliant. If not, then no output image will occur.

Display - Defining Bezel

When you have added displays to your video wall, you may find that you want to account for a bezel. To do this, follow these steps:

1. In the video wall, double-click the window for the output you would like to modify, or double-click the line for that output in the Displays & Sources pane.
2. On the right-hand pane, you will see some basic information about the window. You can rename the window, change output slot, or adjust resolution. If you are connected to a CORIOmaster, you can also set gamma values. There is also a Configure button to access further settings - click the Configure button.



3. On the Display Configuration page that appears, there are a variety of customization options.

tvONE Display Configuration // Slot2.Out1 Connect to Device

Display Configuration

Name: <input type="text" value="TopLeftLCD"/>	Bezel top: <input type="text" value="12"/> 0 -44.35 Millimeter
Equipment: <input type="text" value="Off"/>	Bezel left: <input type="text" value="10"/> 0 -78.36 Millimeter
Resolution: <input type="text" value="1280x720p60"/>	Bezel bottom: <input type="text" value="12"/> 0 -44.35 Millimeter
Colour Scale: <input type="text" value="Auto"/>	Bezel right: <input type="text" value="10"/> 0 -78.36 Millimeter
HDCP Status: <input type="text" value="Active"/>	Fixed Name: <input type="text" value="Slot2.Out1"/>
Genlock Source: <input type="text" value="NULL"/>	Slot Card Type: <input type="text" value="DVI_U 2-out"/>
HDCP Downstream: <input type="text" value="HoldOn"/>	HDMI: <input type="text" value="Not_Found"/>
Output Type: <input type="text" value="RGBHV"/>	Genlock: <input type="text" value="Off"/>
Display Type: <input type="text" value="Monitor"/>	

Done

CONSOLE

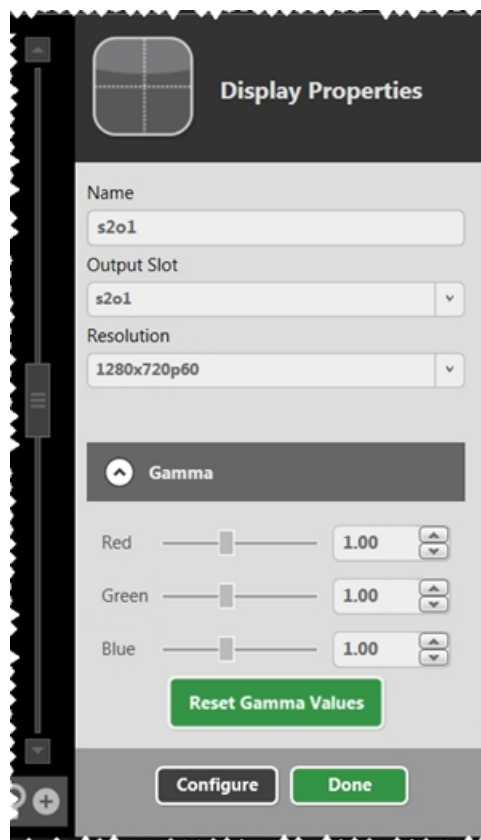
To account for a bezel, adjust the Bezel top, Bezel left, Bezel bottom and Bezel right boxes up or down to indicate the size of the bezel in millimeters or inches. The number to the right shows the minimum and maximum bezel sizes possible (these sizes are a factor of the screen size - larger displays can have larger bezels).

- Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

Display - Defining Display Type

When you have added displays to your video wall, you may find that you want to define the type of display it is. To do this, follow these steps:

1. In the video wall, double-click the window for the output you would like to modify, or double-click the line for that output in the Displays & Sources pane.
2. On the right-hand pane, you will see some basic information about the window. You can rename the window, change output slot, or adjust resolution. If you are connected to a CORIOmaster, you can also set gamma values. There is also a Configure button to access further settings - click the Configure button.



3. On the Display Configuration page that appears, there are a variety of customization options.

Display Configuration

Name: <input type="text" value="TopLeftLCD"/>	Bezel top: <input type="text" value="12"/> -44.35 Millimeter
Equipment: <input type="text" value="Off"/>	Bezel left: <input type="text" value="10"/> -78.36 Millimeter
Resolution: <input type="text" value="1280x720p60"/>	Bezel bottom: <input type="text" value="12"/> -44.35 Millimeter
Colour Scale: <input type="text" value="Auto"/>	Bezel right: <input type="text" value="10"/> -78.36 Millimeter
HDCP Status: <input type="text" value="Active"/>	Fixed Name: <input type="text" value="Slot2.Out1"/>
Genlock Source: <input type="text" value="NULL"/>	Slot Card Type: <input type="text" value="DVI_U 2-out"/>
HDCP Downstream: <input type="text" value="HoldOn"/>	HDMI: <input type="text" value="Not_Found"/>
Output Type: <input type="text" value="RGBHV"/>	Genlock: <input type="text" value="Off"/>
Display Type: <input type="text" value="Monitor"/>	

Done

CONSOLE

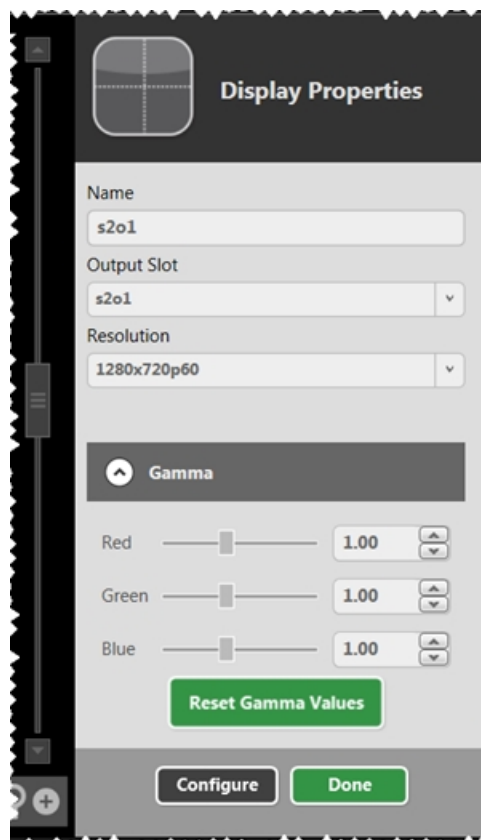
In the first column, the last item is a drop-down list labeled Display Type. If you click the drop-down menu, it shows a list of types of displays, such as Monitor, Projector, and None (if you wish to specify that the output is not used). If you had previously configured the display from the Equipment list, it may be pre-configured, but you may want to verify or configure it manually.

- Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

Display - Defining Output Type

When you have added displays to your video wall, you may find that you want to define the type of output connector it uses. To do this, follow these steps:

1. In the video wall, double-click the window for the output you would like to modify, or double-click the line for that output in the Displays & Sources pane.
2. On the right-hand pane, you will see some basic information about the window. You can rename the window, change output slot, or adjust resolution. If you are connected to a CORIOmaster, you can also set gamma values. There is also a Configure button to access further settings - click the Configure button.



3. On the Display Configuration page that appears, there are a variety of customization options.

Display Configuration

Name: TopLeftLCD	Bezel top: 12	0 -44.35 Millimeter
Equipment: Off	Bezel left: 10	0 -78.36 Millimeter
Resolution: 1280x720p60	Bezel bottom: 12	0 -44.35 Millimeter
Colour Scale: Auto	Bezel right: 10	0 -78.36 Millimeter
HDCP Status: Active	Fixed Name: Slot2.Out1	
Genlock Source: NULL	Slot Card Type: DVI_U 2-out	
HDCP Downstream: HoldOn	HDMI: Not_Found	
Output Type: RGBHV	Genlock: Off	
Display Type: Monitor		

Done

CONSOLE

In the first column, one of the last items is a drop-down list labeled Output Type. If you click the drop-down menu, it shows a list of types of outputs that may be used, such as RGBHV, RGBS, RGsB, and YCbCr/YPbPr. If you had previously configured the display from the Equipment list, it may be pre-configured, but you may want to verify or configure it manually.

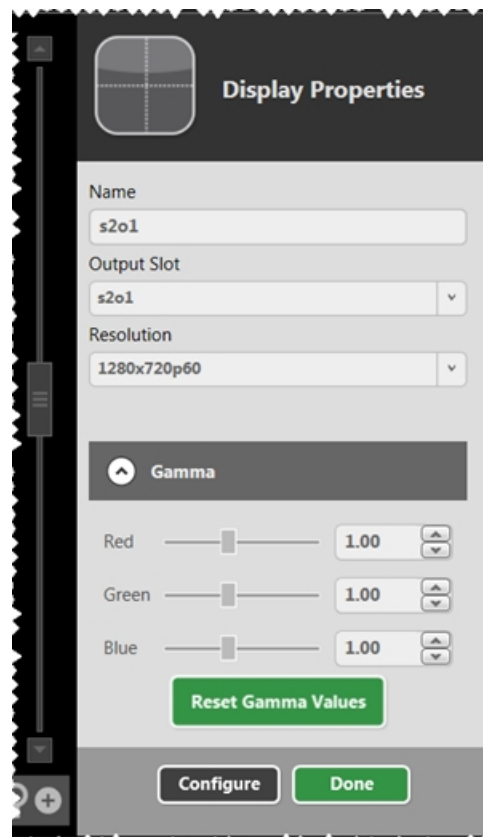
- Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

Display - Renaming Output Displays

When you have added outputs to your video wall, you may find that you want to give an output a name that is meaningful to you. There are various ways to do this, depending on where you are in the application:

From Video Wall

1. In the video wall, double-click the window for the output you would like to modify, or double-click the line for that output in the Displays & Sources pane.
2. On the right-hand pane, you will see some basic information about the window. You can rename the window, change output slot, or adjust resolution. If you are connected to a CORIOmaster, you can also set gamma values.



3. To rename the output, click into the Name field and type a new name. The name can be up to 19 alphanumeric characters (no spaces).
4. Press Return or Enter to commit the change.

- Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

From Display Configuration page

- On the Display Configuration page that appears when you click Configure in the Displays & Sources pane, there are a variety of customization options.

The screenshot shows the 'Display Configuration' page for 'Slot2.Out1'. The interface includes a header with the 'tvONE' logo and a 'Connect to Device' button. The main content area is divided into two columns of settings. The left column contains: Name (TopLeftLCD), Equipment (Off), Resolution (1280x720p60), Colour Scale (Auto), HDCP Status (Active), Genlock Source (NULL), HDCP Downstream (HoldOn), Output Type (RGBHV), and Display Type (Monitor). The right column contains: Bezel top (12), Bezel left (10), Bezel bottom (12), Bezel right (10), Fixed Name (Slot2.Out1), Slot Card Type (DVI_U 2-out), HDMI (Not_Found), and Genlock (Off). A 'Done' button is located at the bottom right of the configuration area.

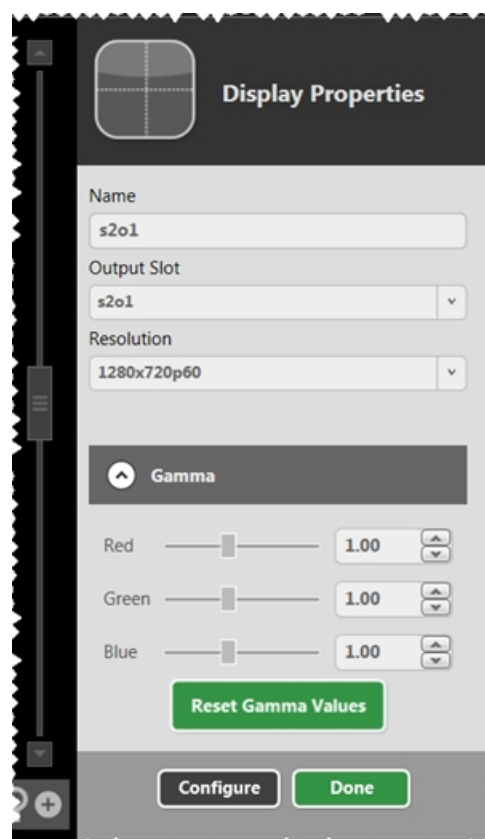
In the first column, click into the Name field and type a new name. The name can be up to 19 alphanumeric characters (no spaces).

- Press Return or Enter to commit the change.
- Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

Display - Specify Equipment

When you have added displays to your video wall, you may find that you want to allocate or re-allocate the equipment you previously defined. (To learn how to create Equipment profiles, see "Creating Display Equipment Profiles" on page 51.) To allocate or re-allocate a pre-defined piece of equipment to a display, follow these steps:

1. In the video wall, double-click the window for the output you would like to modify, or double-click the line for that output in the Displays & Sources pane.
2. On the right-hand pane, you see some basic information about the window. You can rename the window, change output slot, or adjust resolution. If you are connected to a CORIOmaster, you can also set gamma values. There is also a Configure button to access further settings - click the Configure button.



3. On the Display Configuration page that appears, there are a variety of customization options.

Display Configuration

Name:

Equipment:

Resolution:

Colour Scale:

HDCP Status:

Genlock Source:

HDCP Downstream:

Output Type:

Display Type:

Bezel top: 0 -44.35 Millimeter

Bezel left: 0 -78.36 Millimeter

Bezel bottom: 0 -44.35 Millimeter

Bezel right: 0 -78.36 Millimeter

Fixed Name:

Slot Card Type:

HDMI:

Genlock:

To allocate a given piece of equipment to this display, choose your preferred option from the drop-down menu next to the word Equipment. Choices include any unallocated equipment you have defined plus the default equipment settings. Once you choose the item you want, any settings that were specified in that equipment file (such as bezel or output type) are auto-populated on this Display Configuration page for your convenience.

- Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.



Note: Note that any changes you make to the equipment configuration here - changing the resolution, for example - will NOT be saved to the equipment file and will be a local change only. If you want to change the default values for the equipment, modify the Display Equipment file itself. For instructions, see "Creating Display Equipment Profiles" on page 51.

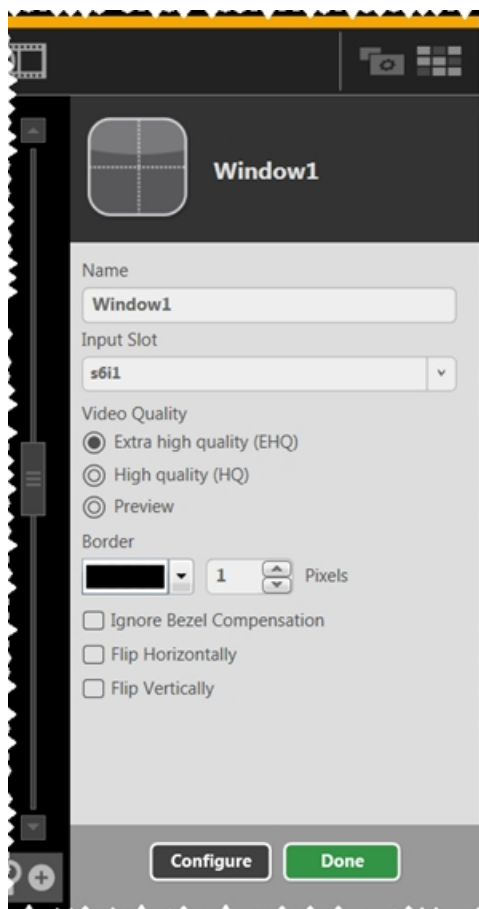
Source Configuration

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Source - Adjusting a Window Border

When you have added inputs to your video wall, you may find that you want to add a border to a given window, of any desired thickness or color. To do this, follow these steps:

1. In the video wall, double-click the window in the video wall or double-click the window name in the Displays & Sources pane.
2. On the right-hand pane, you will see some basic information about the window. You can rename the window, change input slot, add a border, ignore the system's compensation for a display bezel, or flip the image horizontally and/or vertically. If you are connected to a CORIOmaster, you can also set video quality.



3. To add a border, select the color from the drop-down list or click Advanced for more options. (The default border color is black.) In the box to the right of the color-picker, type

in the number of pixels you would like the border to be or use the arrows to increase or decrease the number. (All sides have equal border; default border size is one pixel.)

4. Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

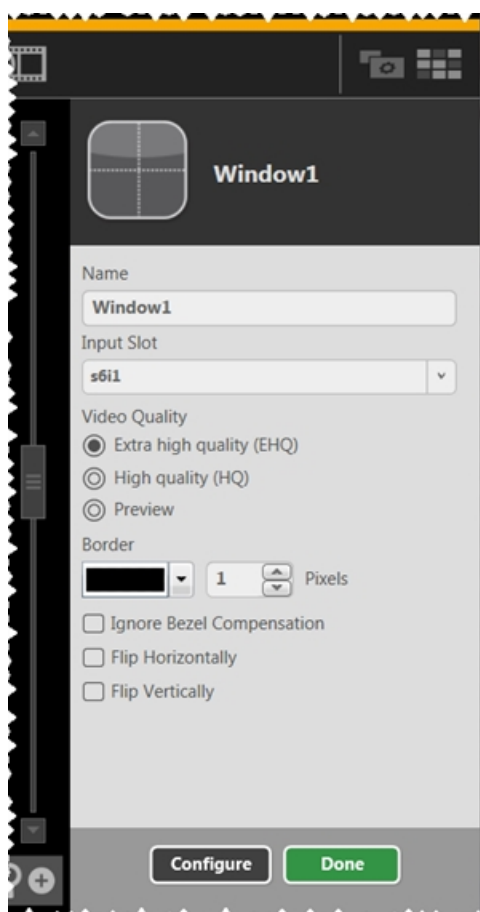


Note: It is recommended that if you are using the rotation feature on a window, maintain at least a one-pixel border in order to maintain optimal video quality.

Source - Adjusting Brightness and Contrast

When you have added inputs to your video wall, you may find that you want to adjust the brightness and contrast on an input. To do this, follow these steps:

1. In the video wall, double-click the window in the video wall or double-click the window name in the Displays & Sources pane.
2. On the right-hand pane, you will see some basic information about the window. You can rename the window, change input slot, add a border, ignore the system's compensation for a display bezel, or flip the image horizontally and/or vertically. If you are connected to a CORIOmaster, you can also set video quality. There is also a Configure button to access further settings - click the Configure button.



3. On the Source Configuration page that appears, there are a variety of customization options.

The screenshot shows the 'Source Configuration' window for 'Slot6.In1'. The interface is divided into two main columns. The left column contains settings for the source, including Name (v61), Equipment (Default USB Source), Source Type (DVI (HDMI)), H Phase, Colour Scale (Auto), Brightness (0), Contrast (100), Source Loss Color (Blue), HDCP Enabled (checked), and HDCP (Off). The right column contains settings for the video input, including Preview Video (Broadcast), Top input crop (0), Left input crop (0), Bottom input crop (0), Right input crop (0), Status (INVALID), Fixed Name (Slot6.In1), Slot Card Type (DVI-D 2-in), Resolution, and EDID Filename (v61.edid). A 'Done' button is located at the bottom right of the configuration area.

In the first column are two text fields labeled Brightness and Contrast. Each has arrows to increment up or down on the right. Adjust the brightness and contrast for your source as you wish.

The default value for brightness is 0 and the available range is -30 to 30. For contrast, the default value is 100 and the available range is 30 to 130.

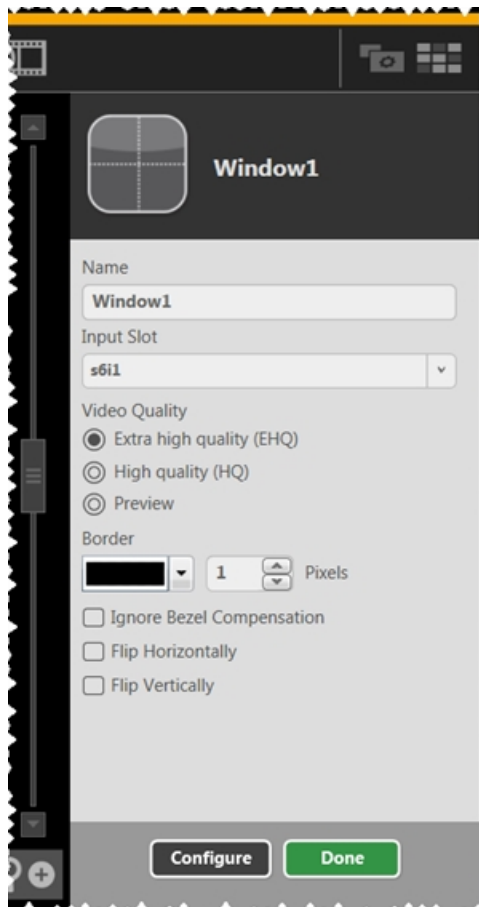
4. Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

Source - Changing Input Slot

When you have added inputs to your video wall, you may find that you want to change the slot that is assigned to a given input. To do this, there are various methods. Follow your choice of these steps:

From Displays & Sources pane

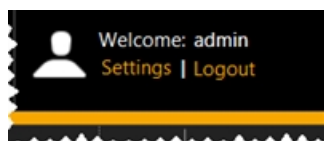
1. In the video wall, double-click the window in the video wall or double-click the window name in the Displays & Sources pane.
2. On the right-hand pane, you will see some basic information about the window. You can rename the window, change input slot, add a border, ignore the system's compensation for a display bezel, or flip the image horizontally and/or vertically. If you are connected to a CORIOmaster, you can also set video quality.



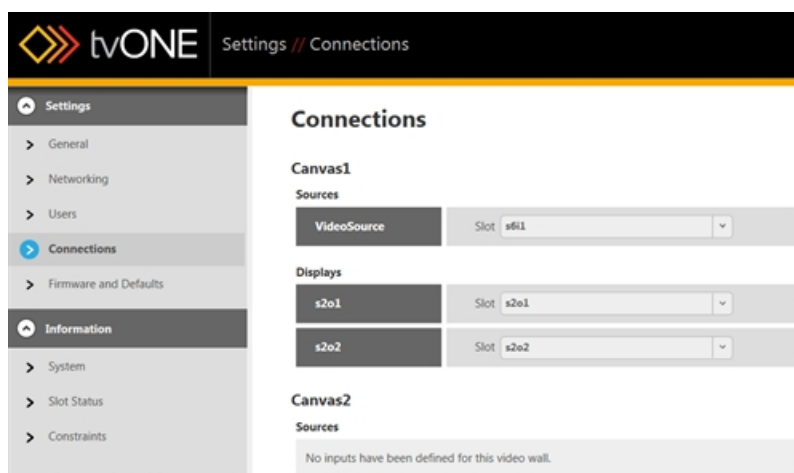
3. To change the input source for this window, choose the appropriate input from the drop-down list under Input Slot.
4. Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

From Connections in Settings

1. While connected to a CORIOmaster, click the Settings button in the top right corner.



2. Choose the Connections option under Settings on the left.

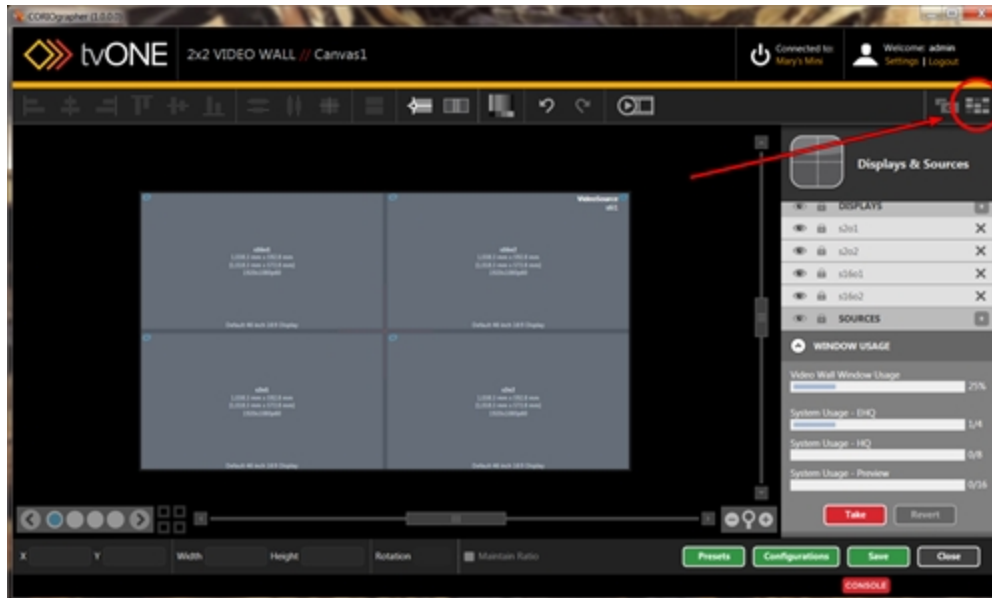


In the right-hand pane, you see each video wall that you have defined. Under each video wall, your Sources and Displays are listed. (Any given source or display is only available in one video wall.) To the right of each source or display is the slot and connector number for the associated input or output.

3. To change which input or output is associated with a given source or display, click on the drop-down menu and choose the appropriate slot. The drop-down list will automatically populate with the relevant options. For additional information on how the slots are labelled, see "Input and Output Naming Convention" on page 23.
4. Click the Save button at the bottom of the list of Canvases to save this information.

From Window Source in Dashboard

1. While connected to a CORIOmaster, click the Dashboard icon in the top right corner of the video wall.



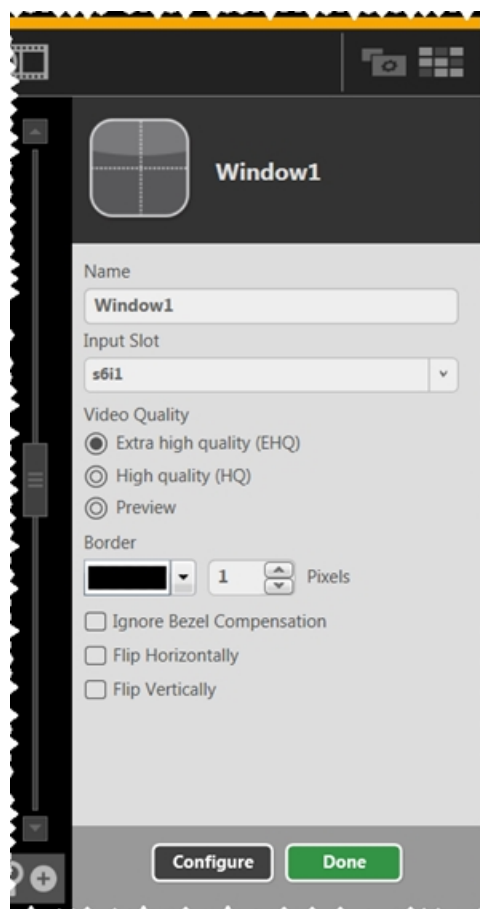
2. In the Dashboard window, you can switch between source inputs for a given window, on-the-fly. Next to each window, all available inputs are shown as buttons. The currently-used input is shown in blue; an available input is shown in gray. If you are in Synchronized mode (see "Immediate vs Synchronized" on page 170 for an explanation of the difference between the two modes), you can select a new input but it will not become the active input until you click Take. Until you click Take, the queued input button is black.



Source - Color Scale

When you have added inputs to your video wall, you may find that you want to change the color scale on an individual input. (Color scale can be adjusted on each output as well - for instructions, see "Display - Adjusting Color Scale" on page 82.) To configure inputs for color scale, follow these steps:

1. In the video wall, double-click the window in the video wall or double-click the window name in the Displays & Sources pane.
2. On the right-hand pane, you will see some basic information about the window. You can rename the window, change input slot, add a border, ignore the system's compensation for a display bezel, or flip the image horizontally and/or vertically. If you are connected to a CORIOmaster, you can also set video quality. There is also a Configure button to access further settings - click the Configure button.



3. On the Source Configuration page that appears, there are a variety of customization options.

The screenshot shows the 'Source Configuration' page for 'Slot6.In1' in the tvONE interface. The page is divided into two main columns. The left column contains settings for the source, including Name (slot1), Equipment (Default 1080 Source), Source Type (DVI (HDMI)), H Phase, Colour Scale (Auto), Brightness (0), Contrast (100), Source Loss Color (Blue), HDCP Enabled (checked), and HDCP (Off). The right column contains settings for the video output, including Preview Video (Broadcast), Top input crop (0), Left input crop (0), Bottom input crop (0), Right input crop (0), Status (INVALID), Feed Name (Slot6.In1), Slot Card Type (DVI, 31 2-in), Resolution, and EDID Filename (slot1.edid). A 'Done' button is located at the bottom right of the configuration area.

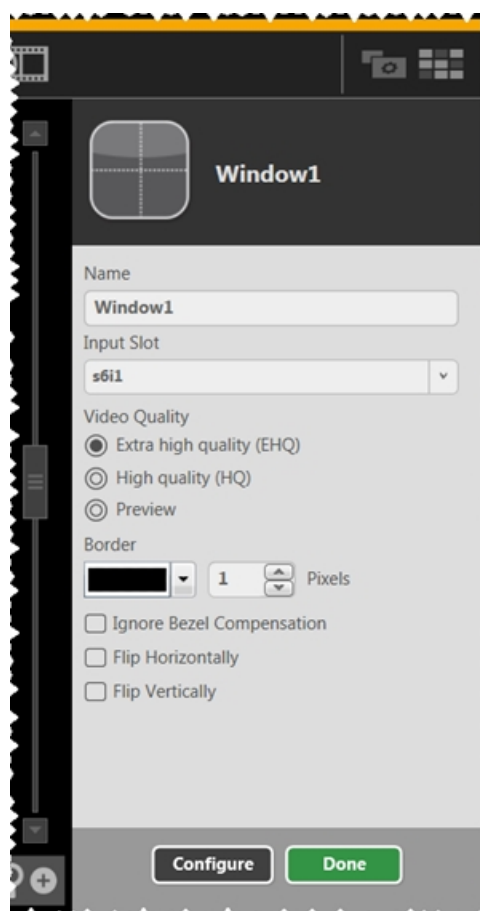
In the first column, a drop-down list labeled Colour Scale allows you to select your preferred setting. Choices include Auto (the default), Black, YUV, RGB, YUV_601 and YUV_709.

4. Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

Source - Cropping inputs

When you are adding inputs to your video wall, you may find that a video source does not have good images at the edges. To help this, the inputs can be lightly cropped to remove the edge pixels and lines. To do this, follow these steps:

1. In the video wall, double-click the window in the video wall or double-click the window name in the Displays& Sources pane.
2. On the right-hand pane, you will see some basic information about the window. You can rename the window, change input slot, add a border, ignore the system's compensation for a display bezel, or flip the image horizontally and/or vertically. If you are connected to a CORIOmaster, you can also set video quality. There is also a Configure button to access further settings - click the Configure button.



- On the Source Configuration page that appears, there are a variety of customization options.

The screenshot shows the 'Source Configuration' window for 'Slot6.In1'. It features a top navigation bar with the 'tvONE' logo and user information. The main area contains two columns of settings. The left column includes fields for Name, Equipment, Source Type, H Phase, Colour Scale, Brightness, Contrast, Source Loss Color, HDCP Enabled, and HDCP. The right column includes a Preview Video dropdown, four input crop fields (Top, Left, Bottom, Right), a Status field, a Feed Name field, a Slot Card Type dropdown, a Resolution field, and an EDID Filename field. A 'Done' button is located at the bottom right of the configuration area.

In the second column, you can set the input crop individually for each of the four sides. Type the number of pixels you would like cropped from each side, or use the arrow buttons to increase and decrease the number.

- Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

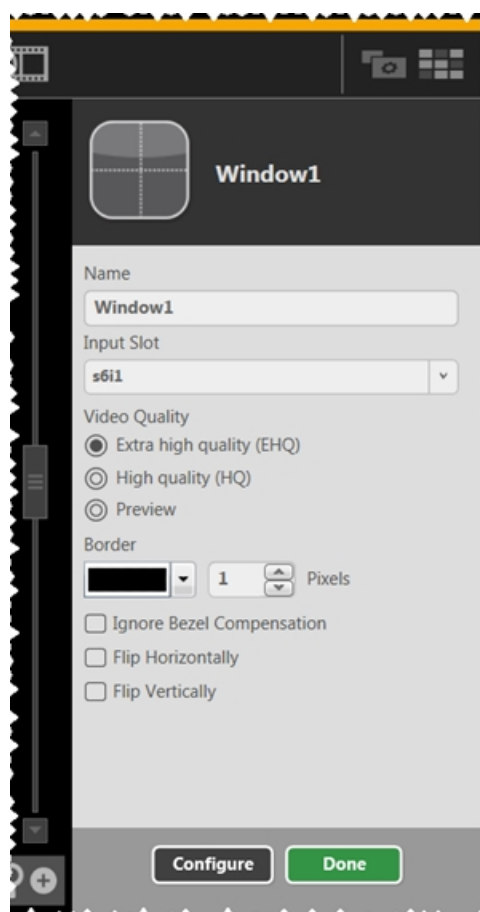


Note: The cropping of this input will be applied to all outputs using this window - so if you have multiple windows using this source, they will all show the same number of pixels cropped.

Source - Defining Source Loss Color

When you have added inputs to your video wall, you may find that you want to define the color displayed on the screen if you lose an input source. To do this, follow these steps:

1. In the video wall, double-click the window in the video wall or double-click the window name in the Displays& Sources pane.
2. On the right-hand pane, you will see some basic information about the window. You can rename the window, change input slot, add a border, ignore the system's compensation for a display bezel, or flip the image horizontally and/or vertically. If you are connected to a CORIOmaster, you can also set video quality. There is also a Configure button to access further settings - click the Configure button.



3. On the Source Configuration page that appears, there are a variety of customization options.

The screenshot displays the 'Source Configuration' window for 'Slot6.In1' in the tvONE interface. The window is divided into two main columns. The left column contains settings for the video source, including Name (slot1), Equipment (Default SD Source), Source Type (DVI (HDMI)), H Phase, Colour Scale (Auto), Brightness (0), Contrast (100), Source Loss Color (Blue), HDCP Enabled (checked), and HDCP (Off). The right column contains settings for the video input, including Preview Video (Broadcast), Top input crop (0), Left input crop (0), Bottom input crop (0), Right input crop (0), Status (INVALID), Fixed Name (Slot6.In1), Slot Card Type (DVI-D 2-in), Resolution, and EDID Filename (slot1.edid). A 'Done' button is located at the bottom right of the configuration area.

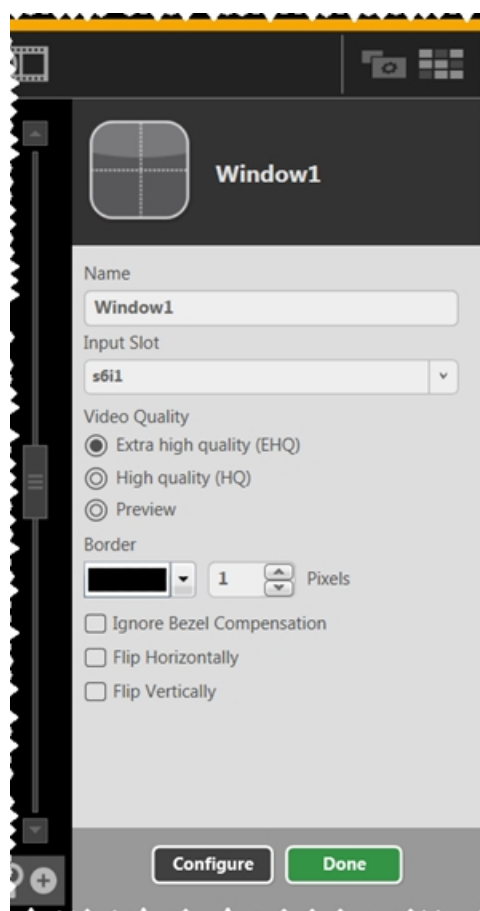
In the first column is a drop-down list labeled Source Loss Color. The default value is blue, but it can be adjusted to black, red, green, yellow, blue, magenta, cyan, or white.

4. Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

Source - Enable HDCP

When you are adding inputs to your video wall, you may find that you need to disable HDCP (for general information on HDCP and reasons why you may need to disable it, see "HDCP" on page 66). To do this, follow these steps:

1. In the video wall, double-click the window in the video wall or double-click the window name in the Displays& Sources pane.
2. On the right-hand pane, you will see some basic information about the window. You can rename the window, change input slot, add a border, ignore the system's compensation for a display bezel, or flip the image horizontally and/or vertically. If you are connected to a CORIOmaster, you can also set video quality. There is also a Configure button to access further settings - click the Configure button.



3. On the Source Configuration page that appears, there are a variety of customization options.

The screenshot shows the 'Source Configuration' page for 'Slot6.In1' in the CORIOmaster interface. The page has a dark header with the 'tvONE' logo and a user status bar indicating 'Connected to Mary's Mini' and 'Welcome admin'. The main content area is titled 'Source Configuration' and contains two columns of settings. The left column includes fields for Name (slot1), Equipment (Default 1080 Source), Source Type (DVI (HDMI)), H Phase, Colour Scale (Auto), Brightness (0), Contrast (100), Source Loss Color (Blue), and HDCP Enabled (checked). The right column includes a Preview Video dropdown (Broadcast), input crop fields (Top, Left, Bottom, Right), Status (INVALID), Fixed Name (Slot6.In1), Slot Card Type (DVI-D 24in), Resolution, and EDID Filename (slot1.edid). A 'Done' button is at the bottom right, and a 'CONSOLE' button is at the bottom center.

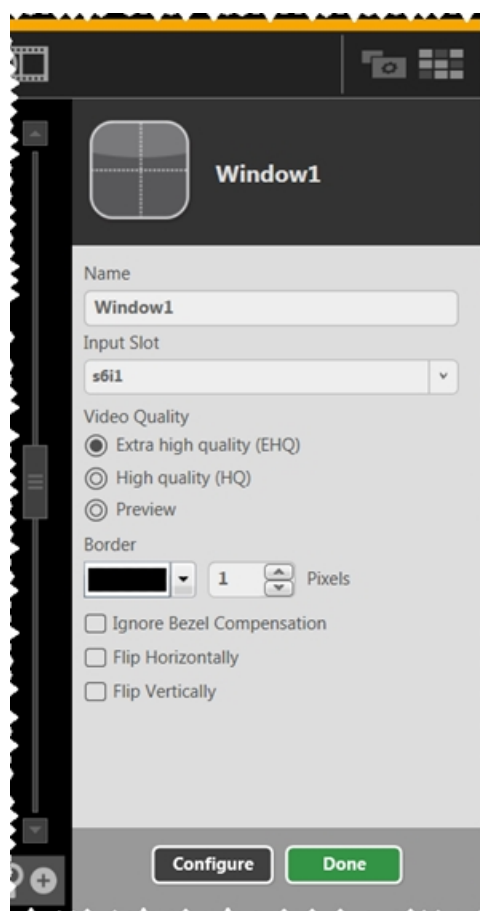
In the first column, you can check or uncheck the box labeled HDCP Enabled. Below that is a read-only field that tells you the current status of HDCP on that source.

4. Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

Source - Flip Horizontally

When you have added inputs to your video wall, you may find that you want to horizontally flip the source image. This works with both still images and video, and causes the left side pixels to appear in the corresponding spot on the right and vice versa, without changing their position vertically. To do this, follow these steps:

1. In the video wall, double-click the window in the video wall or double-click the window name in the Displays & Sources pane.
2. On the right-hand pane, you will see some basic information about the window. You can rename the window, change input slot, add a border, ignore the system's compensation for a display bezel, or flip the image horizontally and/or vertically. If you are connected to a CORIOmaster, you can also set video quality.



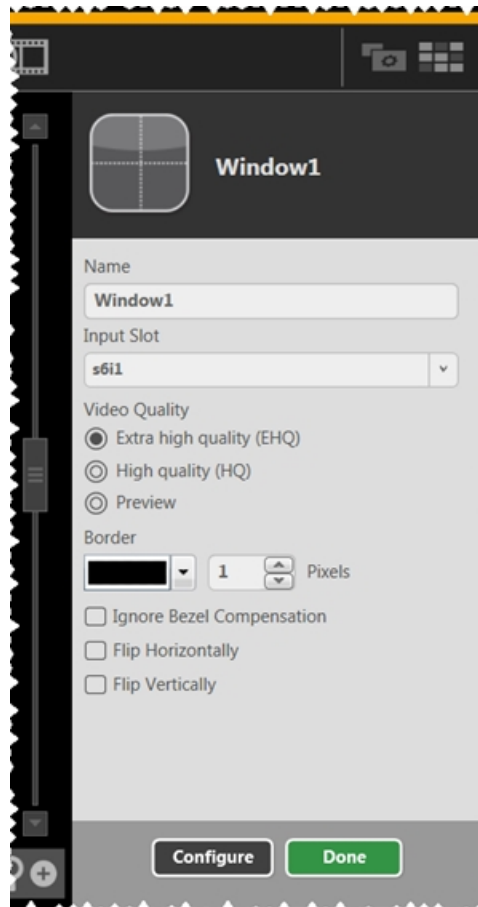
3. To flip the image horizontally, check the Flip Horizontally checkbox.

4. Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

Source - Flip Vertically

When you have added inputs to your video wall, you may find that you want to vertically flip the source image. This works with both still images and video, and causes the top pixels to appear in the corresponding spot on the bottom and vice versa, without changing their position horizontally. To do this, follow these steps:

1. In the video wall, double-click the window in the video wall or double-click the window name in the Displays & Sources pane.
2. On the right-hand pane, you will see some basic information about the window. You can rename the window, change input slot, add a border, ignore the system's compensation for a display bezel, or flip the image horizontally and/or vertically. If you are connected to a CORIOmaster, you can also set video quality.



3. To flip the image vertically, check the Flip Vertically checkbox.

4. Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

Source - Ignore Bezel Compensation

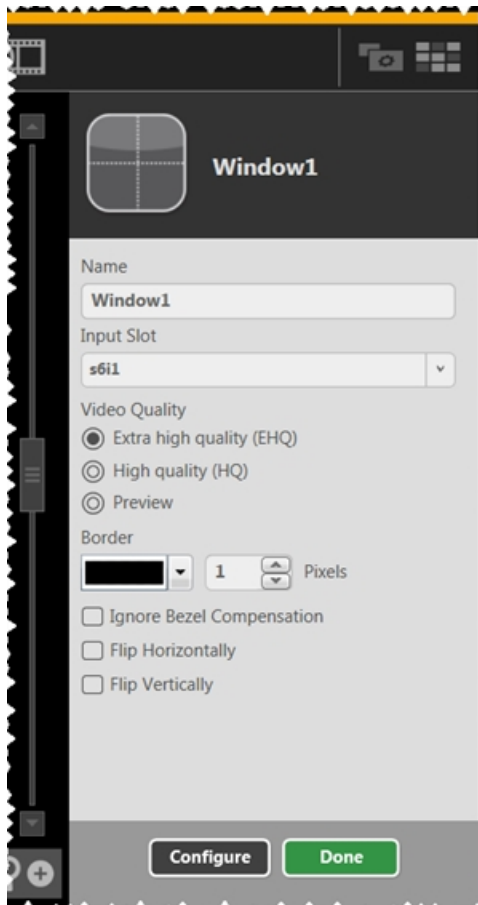
When you have added inputs to your video wall, you may find that you want to ignore the bezel compensation.

If you have multiple displays adjacent to each other, you normally tell the CORIOgrapher what size the bezel is on each display and the CORIOgrapher then adjusts the output image so that the appropriate number of pixels are not shown, in order to maintain the effect of one large display. If you wish to ignore the bezel, the system puts the next row of pixels on the next display, even though it isn't spatially adjacent, which avoids losing any rows but creates a jagged effect, which may result in a loss of quality in extreme cases.

To configure the system to ignore the bezel, follow these steps:

1. In the video wall, double-click the window in the video wall or double-click the window name in the Displays& Sources pane.
2. On the right-hand pane, you will see some basic information about the window. You can rename the window, change input slot, add a border, ignore the system's compensation for a display bezel, or flip the image horizontally and/or vertically. If you are connected to

a CORIOmaster, you can also set video quality.



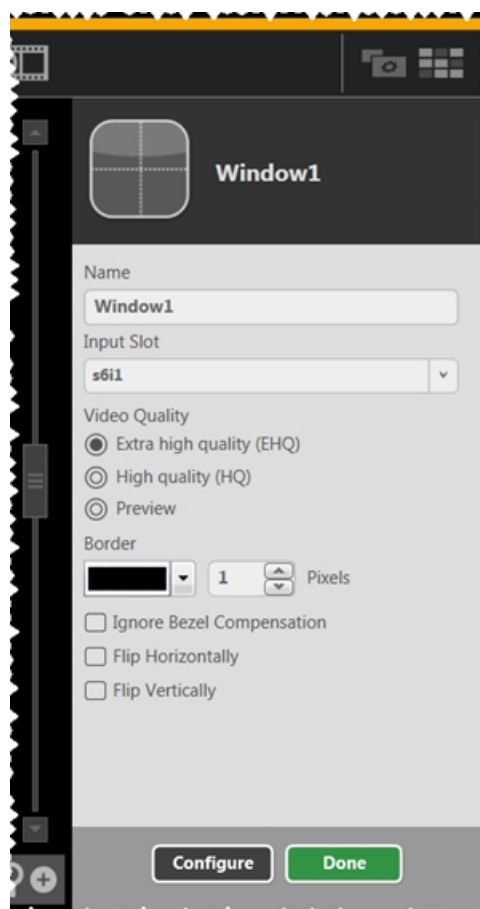
3. To Ignore Bezel Compensation, place a check mark in the appropriate box.
4. Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

Source - Renaming Windows

When you have added inputs to your video wall, you may find that you want to give each source window a name that is meaningful to you. There are a couple of ways to do this, depending on where you are in the application:

From Video Wall

1. In the video wall, double-click the window in the video wall or double-click the window name in the Displays & Sources pane.
2. On the right-hand pane, you will see some basic information about the window. You can rename the window, change input slot, add a border, ignore the system's compensation for a display bezel, or flip the image horizontally and/or vertically. If you are connected to a CORIOmaster, you can also set video quality.



3. To rename the window, click into the Name field and type a new name. The name can be up to 19 alphanumeric characters (no spaces).
4. Press Return or Enter to commit the change.
5. Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

From Source Configuration page

1. On the Source Configuration page that appears when you click Configure in the Displays & Sources pane, there are a variety of customization options.

The screenshot shows the 'Source Configuration' page for 'Slot6.In1'. The interface includes a header with the 'tvONE' logo and a user status bar indicating 'Connected to: Harry's Home' and 'Welcome: admin' with links for 'Settings' and 'Logout'. The main configuration area is divided into two columns. The left column contains fields for Name (v61), Equipment (Default USB Source), Source Type (DVI (HDMI)), H Phase, Colour Scale (Auto), Brightness (0), Contrast (100), Source Loss Color (Blue), HDCP Enabled (checked), and HDCP (Off). The right column contains a Preview Video dropdown (Broadcast), input crop fields (Top, Left, Bottom, Right), Status (INVALID), Field Name (Slot6.In1), Slot Card Type (DVI-D 2-in), Resolution, and EDID Filename (v61.edid). A green 'Done' button is located at the bottom right of the configuration area.

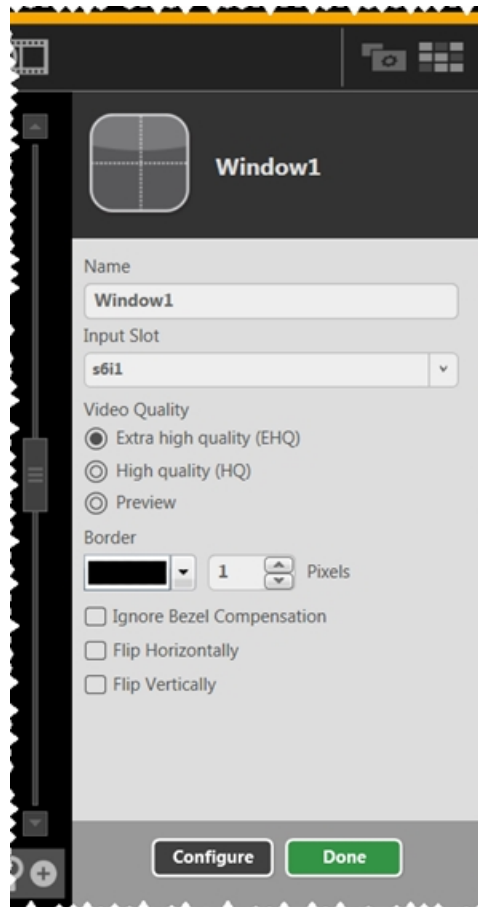
In the first column, click into the Name field and type a new name. The name can be up to 19 alphanumeric characters (no spaces).

2. Press Return or Enter to commit the change.
3. Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

Source - Set Preview Video

When you have added inputs to your video wall, you may find that you want to configure which of several sample videos will show when you use the Preview feature in the video wall. To do this, follow these steps:

1. In the video wall, double-click the window in the video wall or double-click the window name in the Displays& Sources pane.
2. On the right-hand pane, you will see some basic information about the window. You can rename the window, change input slot, add a border, ignore the system's compensation for a display bezel, or flip the image horizontally and/or vertically. If you are connected to a CORIOmaster, you can also set video quality. There is also a Configure button to access further settings - click the Configure button.



3. On the Source Configuration page that appears, there are a variety of customization options.

The screenshot shows the 'Source Configuration' page for 'Slot6.In1' in the CORIOmaster software. The page has a dark header with the 'tvONE' logo and a user status bar indicating 'Connected to Mary's Mini' and 'Welcome admin'. The main content area is titled 'Source Configuration' and contains two columns of settings. The left column includes fields for Name (slot1), Equipment (Default 1080 Source), Source Type (DVI (HDMI)), H Phase, Colour Scale (Auto), Brightness (0), Contrast (100), Source Loss Color (Blue), HDCP Enabled (checked), and HDCP (Off). The right column includes a Preview Video dropdown (set to Broadcast), input crop sliders for Top, Left, Bottom, and Right (all at 0), a Status field (INVALID), a Feed Name (Slot6.In1), a Slot Card Type (DVI-D 24 in), a Resolution field, and an EDID Filename (slot1.edid). A 'Done' button is at the bottom right, and a 'CONSOLE' button is at the bottom center.

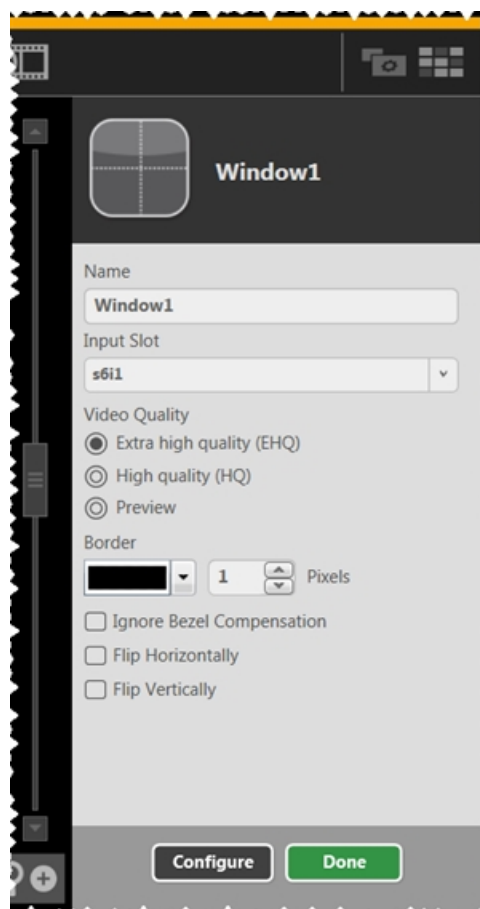
In the second column, the option Preview Video gives a drop-down list of options - Broadcast, House of Worship, Live Event, Medical, or Sports. These don't have to be your own specific uses, but the video shown when you use "Video Wall - Preview Mode" on page 71 will be topical to the item selected here.

4. Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

Source - Specify Equipment

When you are adding Sources and Displays to your video wall, you may find that you have got an input in your video wall that you want to associate with a piece of equipment you have already defined from that PC (see "Creating Source Equipment Profiles" on page 55). To do this, follow these steps:

1. In the video wall, double-click the window in the video wall or double-click the window name in the Displays& Sources pane.
2. On the right-hand pane, you will see some basic information about the window. You can rename the window, change input slot, add a border, ignore the system's compensation for a display bezel, or flip the image horizontally and/or vertically. If you are connected to a CORIOmaster, you can also set video quality. There is also a Configure button to access further settings - click the Configure button.



3. On the Source Configuration page that appears, there are a variety of customization options.

The screenshot shows the 'Source Configuration' page for 'Slot6.In1' in the tvONE interface. The page is divided into two main columns. The left column contains settings for the source, including Name (slot1), Equipment (Default 1080 Source), Source Type (DVI (HDMI)), H Phase, Colour Scale (Auto), Brightness (0), Contrast (100), Source Loss Color (Blue), HDCP Enabled (checked), and HDCP (Off). The right column contains input crop settings (Top, Left, Bottom, Right), Status (INVALID), Feed Name (Slot6.In1), Slot Card Type (DVI, 31 2-in), Resolution, and ESD Filename (slot1.m3u). A 'Done' button is located at the bottom right of the configuration area.

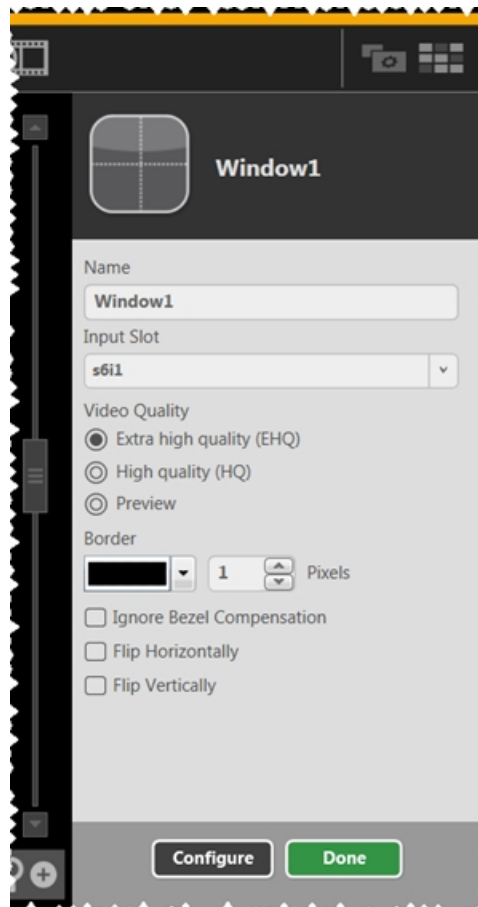
In the first column, the second item is a drop-down list labeled Equipment. If you click the drop-down menu, it shows all available equipment that you have defined, and the option Off if you don't want anything associated with this input. If you had previously configured a certain input from this PC, you should be able to see it and select it in this drop-down list. (If you can't see the equipment here, you may need to set it up from this machine - go to "Creating Source Equipment Profiles" on page 55 for instructions.)

4. Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

Source - Verify Configuration Details

When you have added inputs to your video wall, you may find that you want to check on some read-only data such as the status of a window, the fixed name, the slot card type, the detected resolution, or the EDID filename. These fields cannot be modified, but the information may be of use to you. To find this information, follow these steps:

1. In the video wall, double-click the window in the video wall or double-click the window name in the Displays & Sources pane.
2. On the right-hand pane, you will see some basic information about the window. You can rename the window, change input slot, add a border, ignore the system's compensation for a display bezel, or flip the image horizontally and/or vertically. If you are connected to a CORIOmaster, you can also set video quality. There is also a Configure button to access further settings - click the Configure button.



- On the Source Configuration page that appears, there are a variety of customization options.

The screenshot shows the 'Source Configuration' window for 'Slot6.In1'. The interface is divided into two main columns. The left column contains settings for the source: Name (slot6), Equipment (Default 1080 Source), Source Type (DVI (HDMI)), H Phase, Colour Scale (Auto), Brightness (0), Contrast (100), Source Loss Color (Blue), HDCP Enabled (checked), and HDCP (Off). The right column contains input crop settings (Top, Left, Bottom, Right input crop, all set to 0), Status (INVALID), Fixed Name (Slot6.In1), Slot Card Type (DVI-D 24 in), Resolution (1920x1080), and EDID Filename (slot6.edid). A 'Done' button is located at the bottom right of the configuration area.

At the end of the second column, grayed out to indicate that they are not editable, are several pieces of information you may find useful.

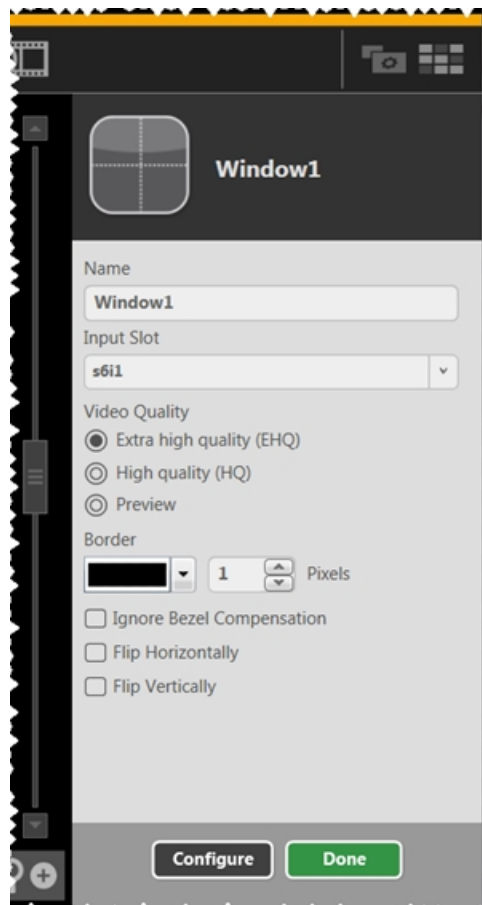
- Status shows the availability of the input source. OK indicates a valid input source; INVALID indicates no source or an invalid source.
 - Fixed Name shows the inbuilt name for the source - you may rename the source but this indicates which slot the window is attached to and which input on that card.
 - Slot Card Type tells you what type of card is in the slot, by defining the connector and how many are on the card.
 - Resolution indicates the native resolution the system has negotiated with the source.
 - EDID Filename gives the name of the EDID file associated with that given input connector.
- Click the Done button to exit the Source Configuration window and return to the Video Wall.

Source - Adjust Video Quality

When you have added inputs to your video wall, you may find that you want to adjust the video quality of a window, particularly as the number of very high quality windows is limited. To do this, follow these steps:

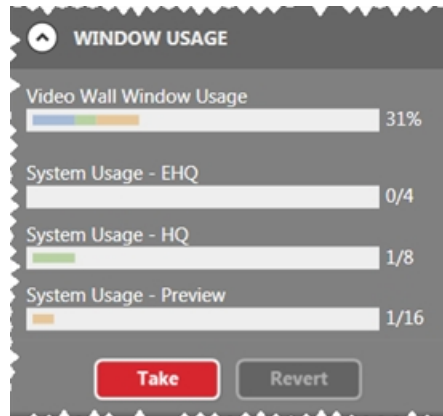
1. Make sure that you are connected to a CORIOmaster as you edit the configuration. The video quality cannot be set unless the system knows what resources it has available, so this is a feature that cannot be configured offline.
2. In the video wall, double-click the window in the video wall or double-click the window name in the Displays& Sources pane.
3. On the right-hand pane, you will see some basic information about the window. You can rename the window, change input slot, add a border, ignore the system's compensation for a display bezel, or flip the image horizontally and/or vertically. If you are connected to

a CORIOmaster, you can also set video quality.



4. To change the image quality, choose the appropriate radio button from the three available: EHQ (Extra High Quality), HQ (High Quality), and Preview. Be aware that if you leave the default window name, the window number may change, and the order of windows will shift, depending on the video quality selected for each window.
5. Click the Done button to keep your data, and be sure to click Save to keep your configuration up to date.

6. Check the Window Usage meter below the Displays & Sources to make sure you are comfortable with the way you are budgeting your video quality usage.



Note: In the video wall, you can tell the quality of a window by its shading. An extra high quality window has a bluish tinge; a high quality window has a greenish tinge, and a preview window has a yellowish tinge.

Settings

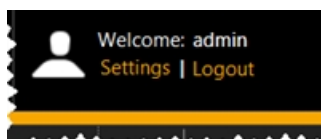
Connections	138
Console	139
Constraints	140
Firmware and Defaults - Current Firmware	142
Firmware and Defaults - Reset to Factory Defaults	143
Firmware and Defaults - Update Firmware	144
General - Default Units	146
General - Device Name	147
General - Log Size	148
General - Window Configuration	149
Networking	151
Changing Passwords	152
Slot Status	154
System	157
Timeout	158
Updating Firmware of Existing Units	160
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Connections

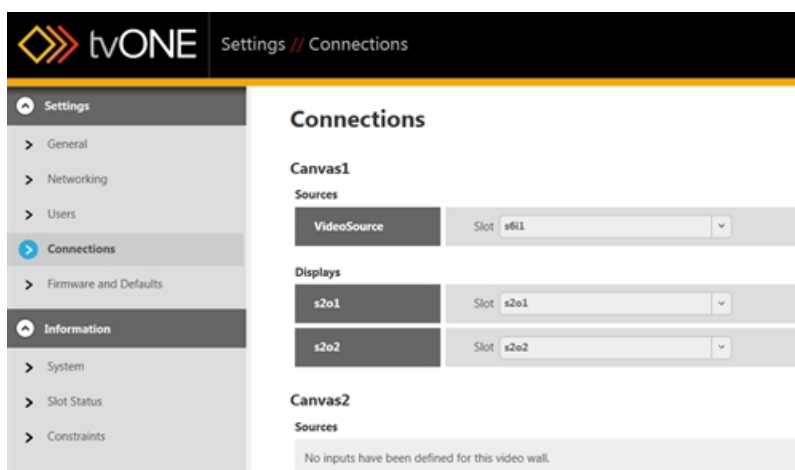
From the Settings window, you can make various changes to the CORIOmaster, including defining the source and display inputs and outputs.

The Connections pane of Settings gives an overview of all configured sources and displays and indicates which input or output they are assigned to.

1. While connected to a CORIOmaster, click the Settings button in the top right corner.



2. Choose the Connections option under Settings on the left.

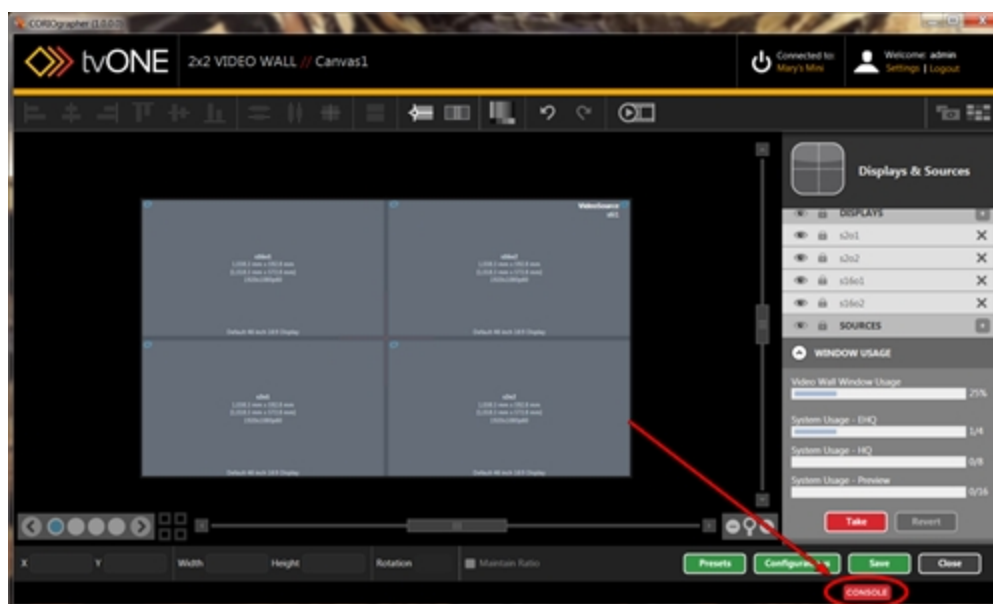


In the right-hand pane, you see each video wall that you have defined. Under each video wall, your Sources and Displays are listed. (Any given source or display is only available in one video wall.) To the right of each source or display is the slot and connector number for the associated input or output.

3. To change which input or output is associated with a given source or display, click on the drop-down menu and choose the appropriate slot. The drop-down list will automatically populate with the relevant options. For additional information on how the slots are labelled, see "Input and Output Naming Convention" on page 23.
4. Click the Save button at the bottom of the list of Canvases to save this information.

Console

Under normal use, you do not need to worry about the Console button at the bottom of the CORIOgrapher window. If there has been an error, the console button will turn red.



However, if a communication fault should occur, you can refer to the Console data to investigate what may be causing a problem.

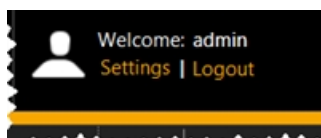
The Console screen lists all the commands sent to the unit and information returned. Each line of commands sent to the CORIOmaster is prefixed by a greater-than sign ">". Each line of responses received from the CORIOmaster is prefixed by a less-than sign "<". After the direction indicator, a date/time stamp is used at the start of each line to help establish when commands are sent. The most recent command is shown at the bottom.

You can also send individual commands from the command line at the bottom. The data is stored - by default, the maximum 10,000 lines are saved, but you can set this to a smaller number in the General tab of Settings (see "General - Log Size" on page 148 for more information) if you wish to do so. You can export the data into a .txt file by clicking the Export to File button and choosing a location. This may be helpful in the event of an issue where a log report can be saved immediately after the symptom occurs and the text file sent to tvONE for review by a support agent. A complete log from startup can also be used to duplicate actions on other CORIOmaster units.

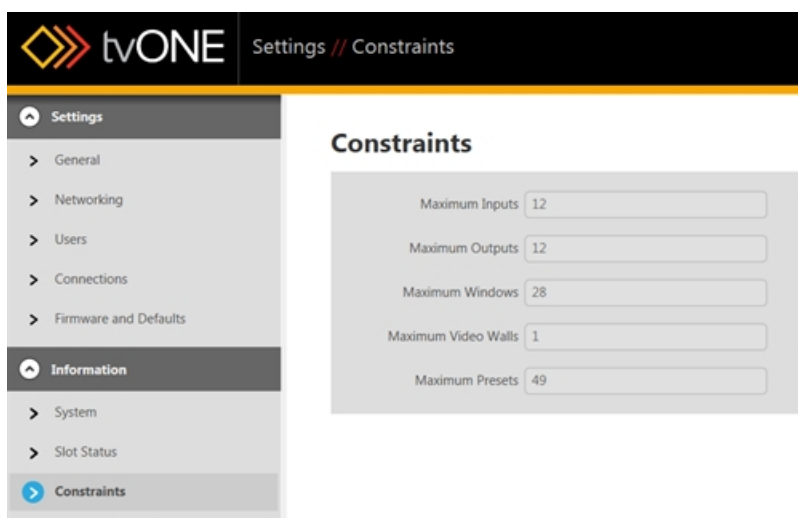
Constraints

From the Settings window, you can make various changes to the CORIOmaster, and you can gather some system information.

1. While connected to a CORIOmaster, click the Settings button in the top right corner.



2. Choose the Constraints option under Information on the left. In the right-hand pane, you see several lines of information about the system's capabilities.



- On the top line is the maximum number of inputs available on the CORIOmaster you are currently connected to.
- The second line lists the maximum number of outputs available on the CORIOmaster you are currently connected to. (Note that the sum of maximum inputs and maximum outputs is more than the number of slots on the machine - if you run the maximum number of either inputs or outputs, the number of the other is limited by available slots.)
- The third line lists the maximum number of windows available on the CORIOmaster you are currently connected to. This number is constrained by processing power and only lists the maximum number of low-quality windows - higher quality windows will limit the total number available.
- The fourth line lists the maximum number of video walls on the CORIOmaster you are currently connected to.

- The fifth line lists the maximum number of presets available on the CORIOmaster you are currently connected to.

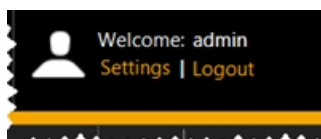
Each of these fields is read-only.

Firmware and Defaults - Current Firmware

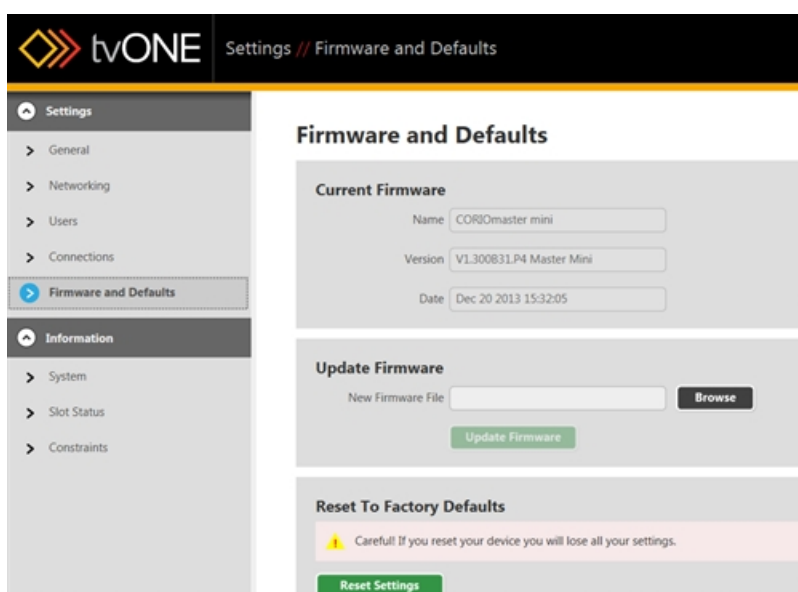
From the Settings window, you can make various changes to the CORIOmaster, including checking the firmware version, updating the firmware, and resetting the unit to factory default settings.

To check the status of the current firmware:

1. While connected to a CORIOmaster, click the Settings button in the top right corner.



2. Choose the Firmware and Defaults option under Settings on the left.



In the right-hand pane, the top section shows information about your current firmware - the name, version details, and the build date of the software.

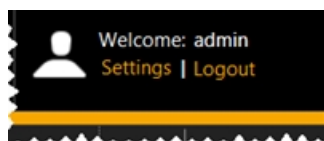
This data is read-only and cannot be modified.

Firmware and Defaults - Reset to Factory Defaults

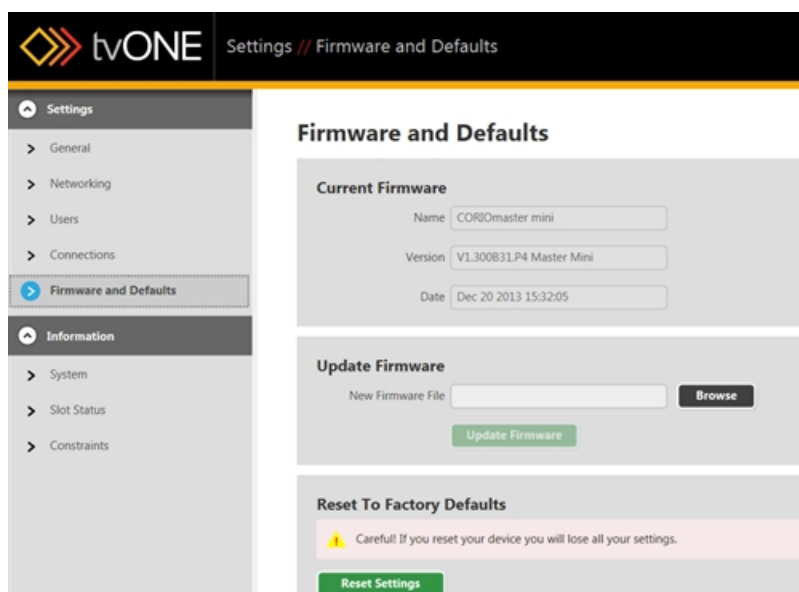
From the Settings window, you can make various changes to the CORIOmaster, including checking the firmware version, updating the firmware, and resetting the unit to factory default settings.

To restore the CORIOmaster to original default settings:

1. While connected to a CORIOmaster, click the Settings button in the top right corner.



2. Choose the Firmware and Defaults option under Settings on the left.



In the right-hand pane, the bottom section (Reset to Factory Defaults) allows you to reset the device to its original settings. If you do this, all configuration data you have made and saved will be lost. Be sure to back up any configurations you wish to retain onto your local PC as the CORIOmaster will be completely erased and returned to out-of-box settings. If you are comfortable proceeding, click the Reset Settings button.

3. A pop-up window will ask you to confirm your choice. If you click yes, the settings on the CORIOmaster will be wiped and returned to default and the CORIOgrapher software will restart.

Firmware and Defaults - Update Firmware

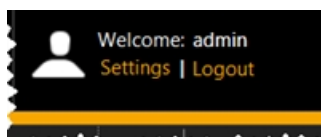
From the Settings window, you can make various changes to the CORIOmaster, including checking the firmware version, updating the firmware, and resetting the unit to factory default settings.



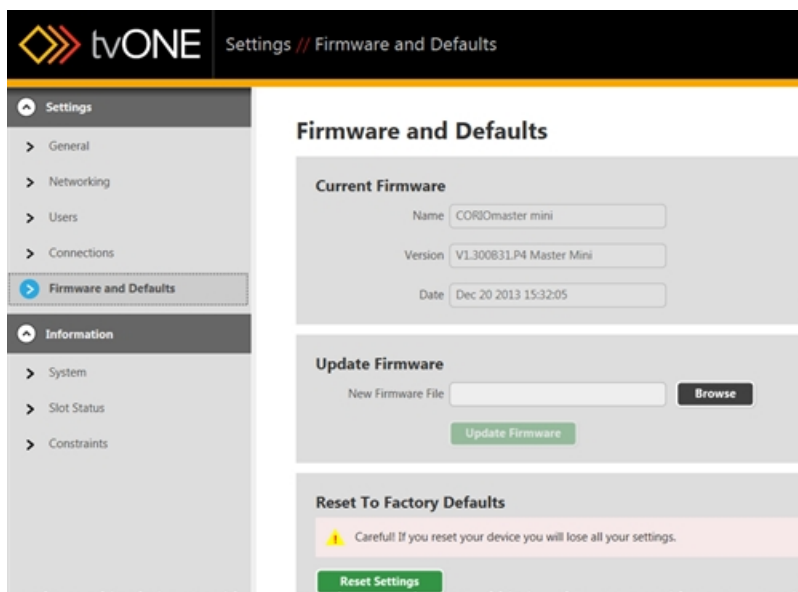
Caution: Keep in mind that when you update the firmware, the current running configuration on the CORIOmaster will be deleted. All previous saved configurations should still be available, but for best practice, be sure to save the configurations locally as a backup.

To update the firmware:

1. While connected to a CORIOmaster, click the Settings button in the top right corner.



2. Choose the Firmware and Defaults option under Settings on the left.



In the right-hand pane, the top section shows the current firmware version. The second section is labeled Update Firmware. Click the Browse button to navigate to the new .DAT firmware file stored locally or type the path into the text box.

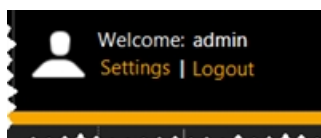
3. Select the appropriate .DAT file and the path will populate in the New Firmware File text box.

4. Click the Update Firmware button to begin the firmware update. The CORIOmaster transfers the .DAT file to its internal memory. Once the file is transferred, you will be logged out of the CORIOmaster and returned to the Getting Started screen. If you are in the same subnet and usually see the unit in Device Discovery, it should appear there again, with a square-bracketed prefix to notify you what stage of the upgrade is in progress. Initially, it says "[Unpacking Update]", then it moves to "[Applying Update]". After the update is applied, the unit restarts, and then appears in Device Discovery as available for connection. You are not able to log in to the device until it has completed the update.
5. After the firmware update and subsequent unit restart, be sure to check and, if necessary, copy your backed-up configurations back to the CORIOmaster. For instructions, see "Loading an Existing Configuration" on page 29.

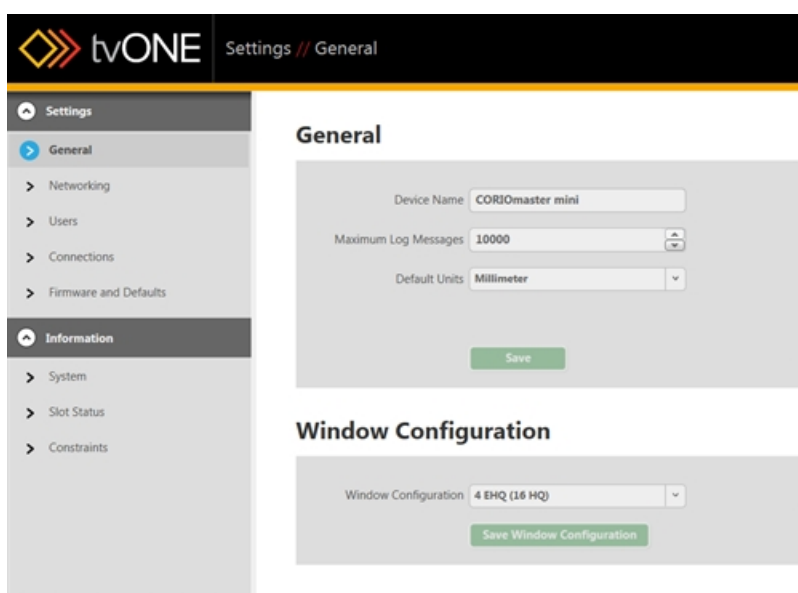
General - Default Units

From the Settings window, you can make various changes to the CORIOmaster, including changing the default units.

1. While connected to a CORIOmaster, click the Settings button in the top right corner.



2. Choose the General option under Settings on the left.



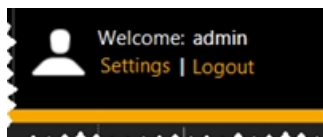
In the right-hand pane, you see various options that allow you to rename the device, change the size of the log, set default units and set window configuration.

3. In the third line, Default Units, choose your preferred units (inches or millimeters) from the drop-down menu. Unless you choose millimeters, the default value is inches. The units you choose determine how the system measures displays, bezels and video wall size.
4. Click the Save button to save this information.

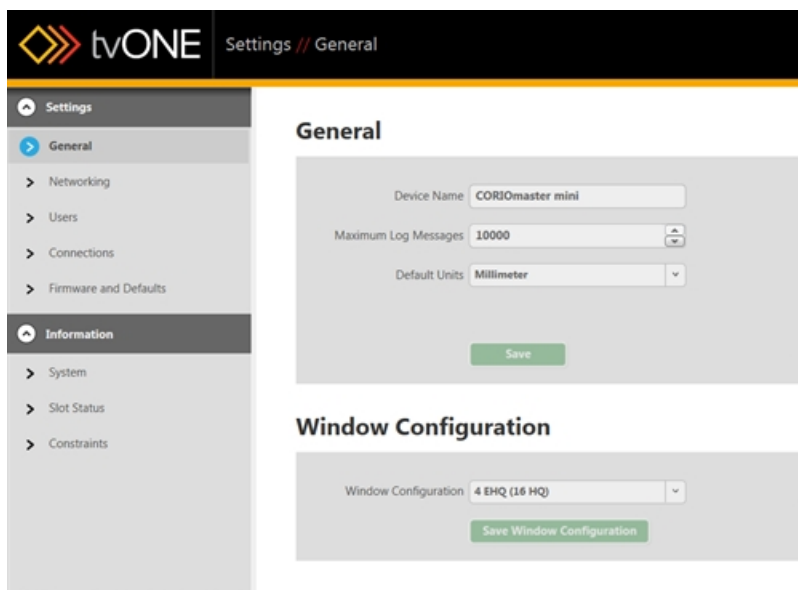
General - Device Name

From the Settings window, you can make various changes to the CORIOmaster, including renaming the device. This is the name that is displayed in Device Discovery on the Getting Started page.

1. While connected to a CORIOmaster, click the Settings button in the top right corner.



2. Choose the General option under Settings on the left.



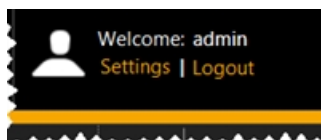
In the right-hand pane, you will see various options that allow you to rename the device, change the size of the log, set default units and set window configuration.

3. In the top line, Device Name, type your preferred name into the text box. The device name can be a maximum of 32 characters including letters, numbers, punctuation and spaces.
4. Click the Save button to save this information.

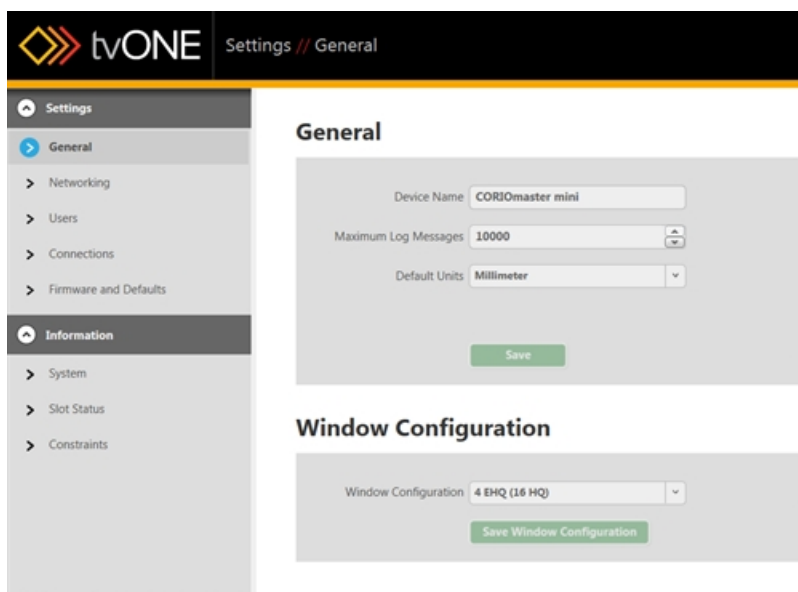
General - Log Size

From the Settings window, you can make various changes to the CORIOmaster, including adjusting the number of cached log messages from the "Console" on page 139. By default, no log is actively saved, but . If you choose to export a log from the Console, you can set the size of the file that is cached awaiting export. Once the maximum length log is cached, new lines are still added, and the oldest lines are purged.

1. While connected to a CORIOmaster, click the Settings button in the top right corner.



2. Choose the General option under Settings on the left.



In the right-hand pane, you will see various options that allow you to rename the device, change the size of the log, set default units and set window configuration.

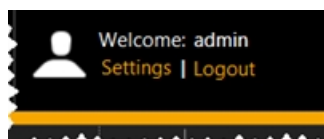
3. In the second line, Maximum Log Messages, type your preferred log size into the text box or use the arrows to increase or decrease the number in the box. The maximum log size is 10,000 message lines.
4. Click the Save button to save this information.
5. If you wish to export a log, click the Console button to open the console window and select the Export to File button.

General - Window Configuration

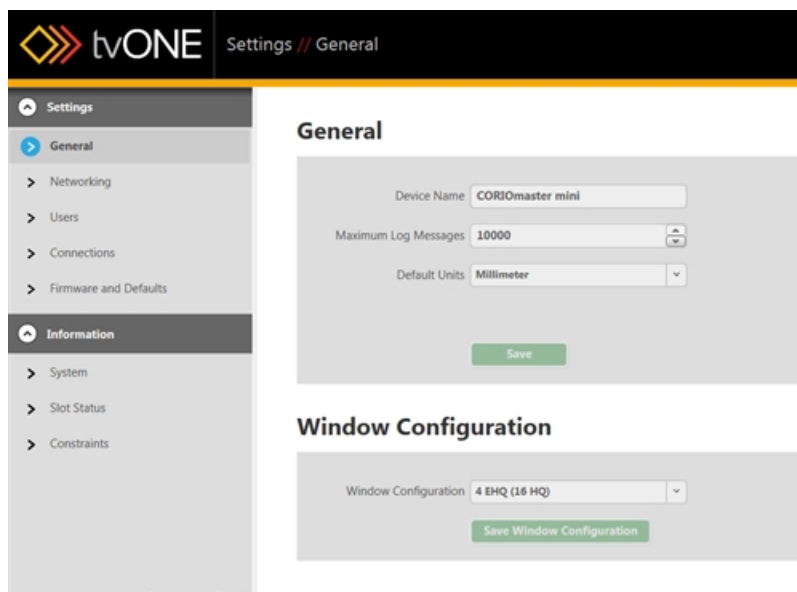
Each CORIOmaster or CORIOmaster mini has certain physical limitations, based on configuration of unit, regarding how much processing power is available. As you might expect, a very high quality window requires far more processing power than a low-quality window.

As such, there are some choices you can make regarding how you want the resources divided. You can choose to have fewer windows but each of them being higher quality, as you might want if you're doing one big picture on a video wall. On the other hand, you could have many lower quality windows, such as if you're doing a video wall with a different video on each screen. We provide you with three options, representing both ends of this scale and the centre, and let you choose how to allocate your resources. To do so:

1. While connected to a CORIOmaster, click the Settings button in the top right corner.



2. Choose the General option under Settings on the left.



In the right-hand pane, you will see various options that allow you to rename the device, change the size of the log, set default units and set window configuration.

3. In the bottom line, Window Configuration, choose your preferred configuration from the drop-down menu. The software will identify what your CORIOmaster is capable of and

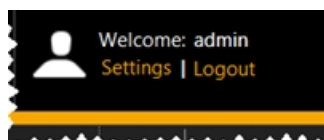
present you with three relevant options that allow you to maximize high-quality windows, maximize number of lower-quality windows, or an option in between.

4. Click the Save Window Configuration button to save this information. Be aware that the CORIOmaster will restart after you save these settings.

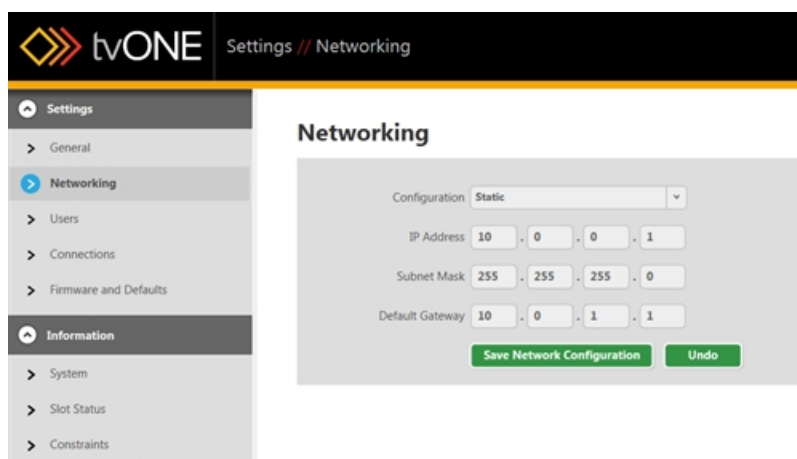
Networking

From the Settings window, you can make various changes to the CORIOmaster, including adjusting the network settings.

1. While connected to a CORIOmaster, click the Settings button in the top right corner.



2. Choose the Networking option under Settings on the left.



In the right-hand pane, you see various options that allow you to choose a static or dynamic IP address as well as configure subnet mask and gateway details.

3. On the top line, Configuration, choose from the drop-down whether you will be using a Static IP address or if the address will be configured by DHCP. (If you choose DHCP, neither IP Address nor Subnet Mask will be configurable.)
4. If you chose Static:
 1. In the second field, enter the appropriate IP Address - one text field per octet.
 2. In the third field, enter the appropriate Subnet Mask - one text field per octet.
 3. In the fourth field, enter the appropriate Default Gateway - one text field per octet.
5. Click the Save Network Configuration button to save this information.
6. Due to the constraints of networking settings, in order to make the new settings active, the CORIOmaster will need to restart.

For more detail on configuring this setting, see "Configure Connection via Ethernet" on page 16 and "Configure Connection via Serial" on page 20.

Changing Passwords

Of the three types of account (Administrator, Power User, and Basic User), only Administrators can change passwords for other users. Any user can set or change their own password, but only Administrators have the ability to make changes to other users' accounts.

When a user creates a password, the password is stored securely on the device, and is not displayed over the API. Only the administrator can reset a basic or power user's password.

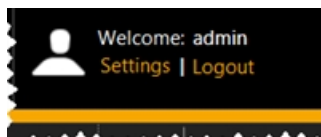
Passwords must be between 6 and 32 characters and any combination of alphabetic, numeric and punctuation characters.

Administrator Tools

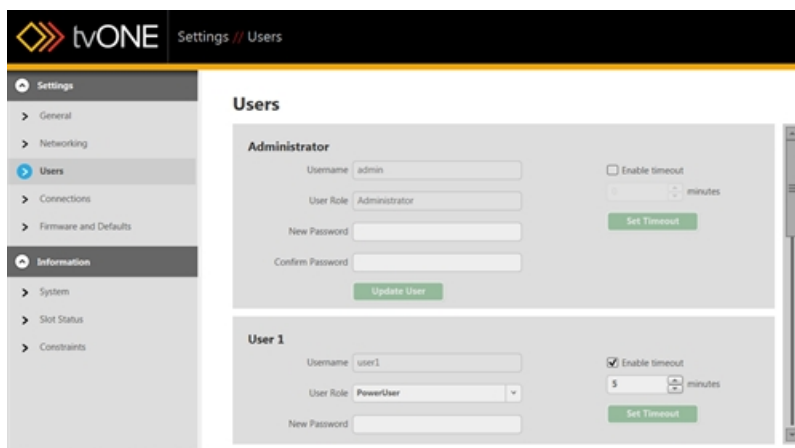
The first time an administrator logs in to the CORIOmaster, the unit will notify you that this is the first boot for the device. It will remind you to change the default password. (This alert will continue until you have saved settings to the device or restored a saved configuration to the CORIOmaster.)

To change other users' passwords, follow these steps:

1. While connected to a CORIOmaster, click the Settings button in the top right corner.



2. Choose the Users option under Settings on the left.



In the right-hand pane, you will see various options that allow you to change username, password and "Timeout" on page 158 details for individual users.

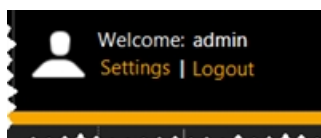
3. Find the user whose password you wish to change. In the fields below that user's user-name, type the new password in the New Password field, retype the same text in the Confirm Password field, and click the Update User button.

For more details, you may wish to see "Administrator Setup Information" on page 14, "Logout" on page 21, "Users" on page 162, and "Timeout" on page 158

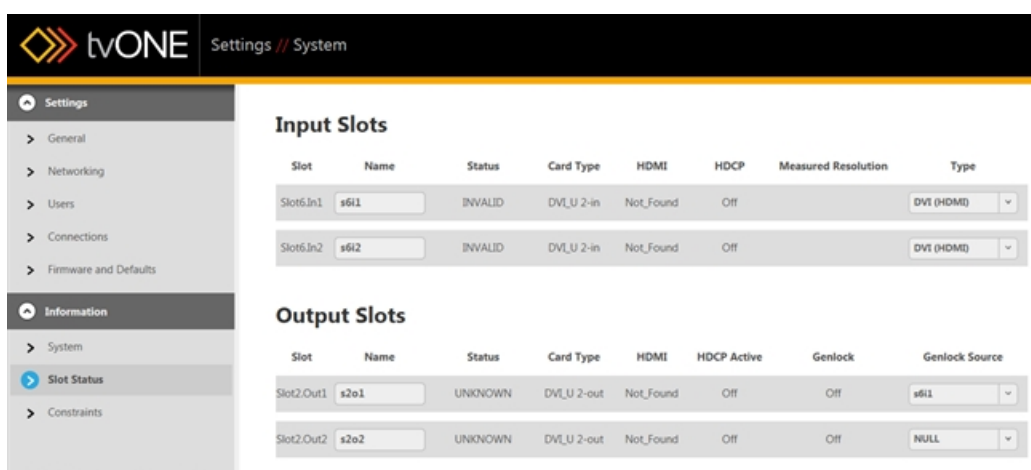
Slot Status

From the Settings window, you can make various changes to the CORIOmaster, and you can gather some system information.

1. While connected to a CORIOmaster, click the Settings button in the top right corner.



2. Choose the Slot Status option under Information on the left.



In the right-hand pane, you see a table of information on the Input slots and another table of information on the Output slots:

- The Input Slot table lists the identified input cards and slots on your CORIOmaster and gives some details about each slot:

Title	Value	Information
Slot	Read-only	As identified by the system - see "Input and Output Naming Convention" on page 23 for details

Name	Editable	Customizable input name - by default, the abbreviation for the slot and input numbers, but you can rename this to be something more memorable such as "Camera1" or "BluRay". The name can be up to 19 alphanumeric characters with no spaces. This name is also modifiable in the Video Wall (see "Source - Renaming Windows" on page 125).
Status	Read-only	Input status - this will return INVALID if there is no source or an invalid source. If it returns OK, you have a valid input source attached to the port.
Card Type	Read-only	This field returns the card type as detected by the system.
HDMI	Read-only	Returns Found or Not_Found, depending on the detected HDMI status.
HDCP	Read-only	Returns Off if HDCP is not enabled, and On if HDCP is enabled. This option is not available for SDI input cards.
Measured Resolution	Read-only	Returns the resolution of the input as detected by the system.
Type	Drop-down	You can choose the input type from a drop-down menu offering a variety of inputs such as DVI (HDMI), RGBHV, RGB, CV (Composite), and others.

- The Output Slot table lists the identified output cards and slots on your CORIO-master and gives some details about each slot:

Title	Value	Information
Slot	Read-only	As identified by the system - see "Input and Output Naming Convention" on page 23 for details
Name	Editable	Customizable output name - by default, the abbreviation for the slot and output numbers, but you can rename this to be something more memorable such as "Projector" or "Display1". The name can be up to 19 alphanumeric characters with no spaces. This name is also modifiable in the Video Wall (see "Display - Renaming Output Displays" on page 99).
Status	Read-only	Output status - this will return INVALID or UNKNOWN if the system can't assess the output properly. If it returns OK, you have a valid output attached to the port.

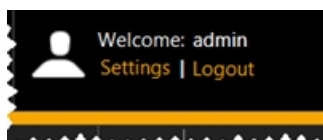
Card Type	Read-only	This field returns the card type as detected by the system.
HDMI	Read-only	Returns Found or Not_Found, depending on the detected HDMI status.
HDCP Active	Read-only	Returns Off if HDCP is not enabled, and On if HDCP is enabled.
Genlock	Read-only	Tells you whether Genlock is off or on. Related to the next column, Genlock Source. (If source is NULL, Genlock will by definition be Off.)
Genlock Source	Drop-down	You can choose the input slot you would like to Genlock to this output. See "Genlock" on page 65 for an explanation of this feature.

Any modifiable settings on the Slot Status page are updated live, as you exit the field, so there is no Save button.

System

From the Settings window, you can make various changes to the CORIOmaster, and you can gather some system information.

1. While connected to a CORIOmaster, click the Settings button in the top right corner.



2. Choose the System option under Information on the left. In the right-hand pane, you see several lines of information about the system:
 - On the top line is the model name of the CORIOmaster you are currently connected to.
 - The second line lists the model number of the CORIOmaster you are currently connected to.
 - The third line lists the serial number of the CORIOmaster you are currently connected to.
 - The fourth line gives the application version number of this CORIOgrapher software.

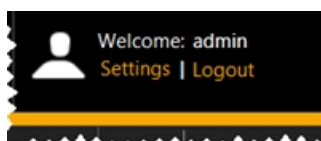
Each of these fields is read-only.

Timeout

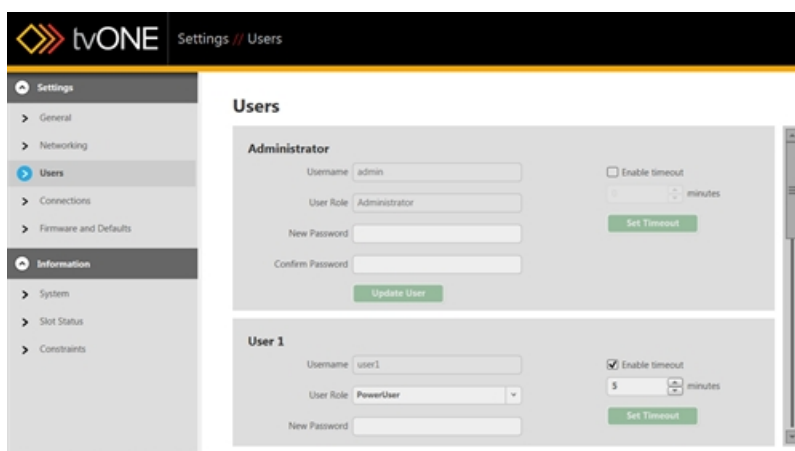
By default, any connection to a CORIOmaster will need to stay active or it will be disconnected after five minutes. This will not affect active connections that have at least one command go to the unit in a five-minute window.

If you wish to stay connected while idle for more than five minutes, an administrator will need to change the settings on a per-user basis.

1. While connected to a CORIOmaster, click the Settings button in the top right corner.



2. Choose the Users option under Settings on the left.



In the right-hand pane, you see various options that allow you to change username, password and timeout details for individual users.

3. Find the user whose timeout period you wish to change. To the right of that user's username, uncheck the Enable timeout field if you wish the user to be able to stay logged in indefinitely.
4. If you wish to keep the timeout option enabled but adjust the timeout period, type the appropriate number of minutes into the field (or use the arrows to adjust the existing number up or down).
5. Click the Set Timeout button to save your changes. If you are making changes to the account you are currently logged in from, you will need to log out and log in again for the settings to take effect. (If the unit times out before you log out, the changes will be lost and you will need to configure the change again.)

For more details, you may wish to see "Administrator Setup Information" on page 14, "Logout" on page 21, "Changing Passwords" on page 152, and "Users" on page 162

Updating Firmware of Existing Units

If your CORIOmaster did not ship with firmware version [shipping FW] or later, you will need to update the firmware before the unit can be seen by the CORIOgrapher software.

Backing Up Settings

To back up your existing settings to internal memory:

1. Connect via RS-232 or Ethernet using the control UI or HyperTerminal.
2. In the command line, type `System.BackupToSDCard()`
The unit returns `!Done system.backuptosdcard` which indicates that the command has been accepted but not yet completed. The system then displays feedback showing data backing up to the internal memory.
When the backup is complete, the display shows `Backup:Complete`.

Updating Firmware

The CORIOmaster has been designed to update both software and firmware even more easily once the unit is updated to use the CORIOgrapher. To get the CORIOmaster to that point, one more update is required. After powering up the unit and logging in using the RS-232 port, the new firmware is uploaded from a PC connected via the unit's rear USB connector, as follows:

Connecting a PC to the CORIOmax and Transferring Files

1. Connect a PC to the CORIOmaster unit via the unit's rear USB port. If this is the first time the PC has been connected, the PC may request drivers for the Serial Emulator. If drivers are not available, cancel the driver installation.
The PC locates an external drive called TVONE, which is the internal SD card on the CORIOmax.
2. In order to update the firmware, you need to drop two files into the root directory of this drive.
 - a) The first file is a PLSBOOT file which is a 12-character long file that defines which of the firmware files to load. (The PLSBOOT file can also be directly edited on the drive if necessary.)
 - b) The second is the firmware file, which contains all the sub-files required to load the system. There can be any number of firmware files in the directory; the PLSBOOT file will tell the system which to use during startup. The name of the firmware file varies depending on the model of the unit and version of firmware. The CORIOmaster firmware files are named `Mxxx_M00.dat` (where Mxxx is the version number of the firmware).
3. Verify that you have copied both the new firmware file and PLSBOOT file into the root directory of the TVONE drive.

Running the Firmware Update

1. After transferring the new firmware and PLSBOOT files, eject the TVONE drive, disconnect the USB cable and return to the RS-232 control.
2. From the command line, type `Coriomax.software_update()`
The reply shows that the PLSBOOT has been found and that it is loading the `Mxxx_`

XXX.dat file. The process checks the file for integrity and starts erasing the flash files, deleting and replacing the contents. When the process is complete, a message appears stating Update successful followed by an automatic system reboot.

If the update fails at any stage, a command prompt appears: TVONE>

If this happens, start the update process again at Connecting a PC to the CORIOmaster and Transferring Files above.

Restoring Backed-Up Settings

To restore your settings from backed-up memory:

1. Connect via RS-232 or Ethernet using the control UI or HyperTerminal, as in the first step of Backing Up Settings.
2. In the command line, type `System.RestoreBackup()`
The unit returns `!Done system.restorebackup` which indicates that the command has been accepted but not yet completed. The unit then displays feedback showing data restoring from the internal memory.
When the restore is complete, the display shows `Restore:Complete`
3. Reboot the unit to initiate the restored settings.

Users

The CORIOgrapher has multiple user roles in order to streamline privileges.

Administrators can do everything including resetting passwords.

Power Users can use the dashboard, switch between presets, manage video source associations, and use the video wall editor.

Basic Users can use the dashboard, switch between presets, and manage video source associations.

Guest users have very limited access and no password.

When a user creates a password, the password is stored securely on the device, and is not displayed during transmission over the API. Only the administrator can reset another user's password. See "Changing Passwords" on page 152 for details.

For more details, you may wish to see "Administrator Setup Information" on page 14, "Logout" on page 21, "Changing Passwords" on page 152, and "Timeout" on page 158

Canvases

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Moving between Video Walls	165

About Canvases

Depending on the type of CORIOmaster you are using, you may have up to four canvases within your configuration. A CORIOmaster mini only has one canvas per configuration; a CORIOmaster has four canvases per configuration. You can see your canvas selection in the bottom left corner of the video wall.

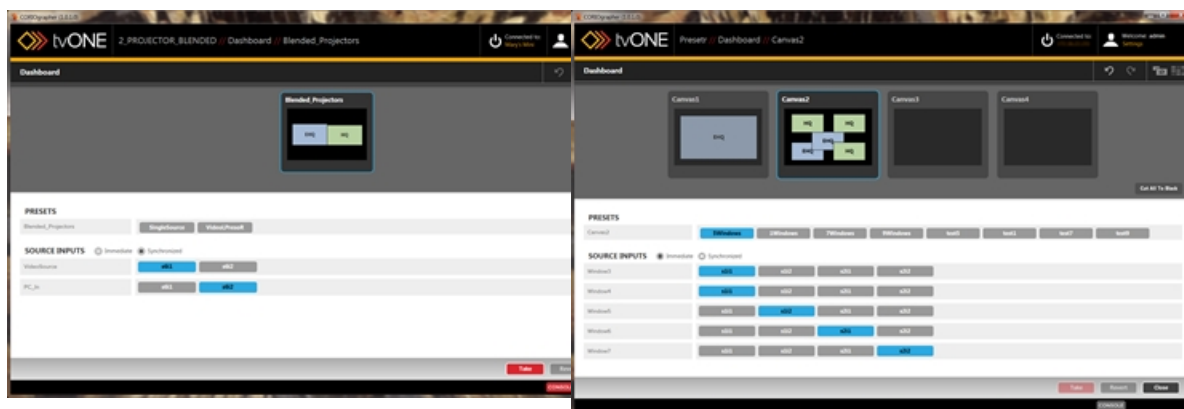


Each canvas is a video wall, with configurable inputs and outputs. You can save multiple Presets on each canvas.

When you go to the Dashboard, each canvas is available as a separate entity, with its own presets per canvas. You can change presets and inputs on-the-fly in a live environment on a per-canvas basis.

CORIOmaster mini

CORIOmaster



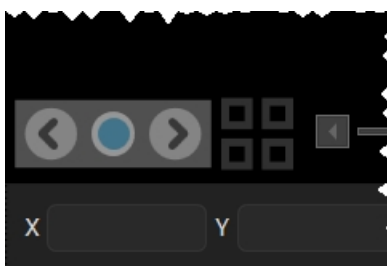
Moving between Video Walls

When you are working in the Editor with video walls, a CORIOmaster mini only has one video wall (canvas) per configuration, but a CORIOmaster has four video walls. You can swap between them in the Editor or from the Video Wall Overview page.

To move between video walls:


- In the Editor, at the bottom left of the page (above the X and Y coordinates), there are four dots between two arrows.

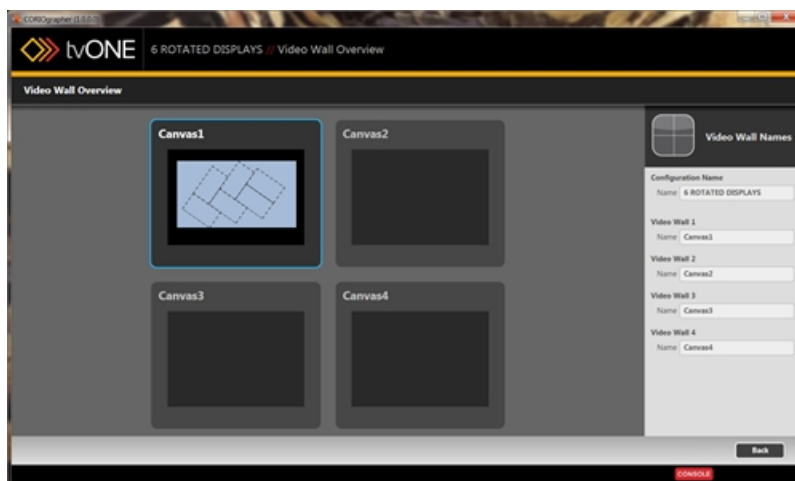
CORIOmaster mini



CORIOmaster



- The four squares on the right are the Video Wall Overview button . If you click the the Video Wall Overview button, the Video Wall Overview page will open. You can see a preview of the canvases (video walls) available in this configuration. Click one of the canvas previews to go to the Editor with that video wall loaded, or edit the name of the canvas here.



Dashboard

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About the Dashboard

When you have configured several video wall canvases that you will want to use, you want to be able to use them in real time, and potentially switch between them rapidly.

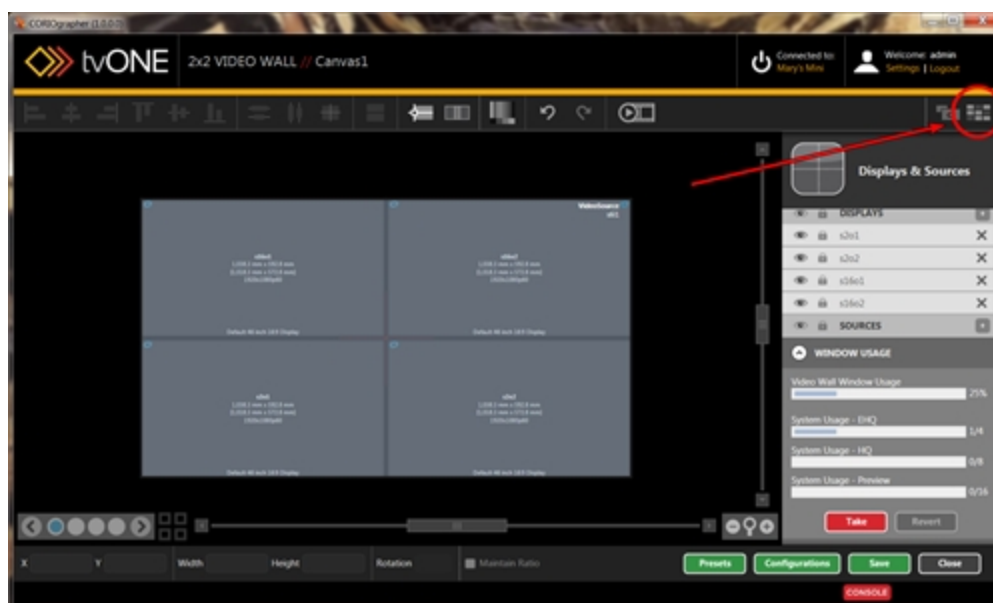
The dashboard, available to all users except guest users, allows you to use your video wall canvases and presets in a live setting. From the dashboard, you can choose which of up to four video wall canvases you want to use, and the presets that are associated with these canvases.

Within each canvas, you can store multiple presets (up to 49 total). From the Dashboard, you can see each preset as a button, and all the video source inputs associated with that canvas. You can cut to black, or swap on the fly between them.

Getting to the Dashboard

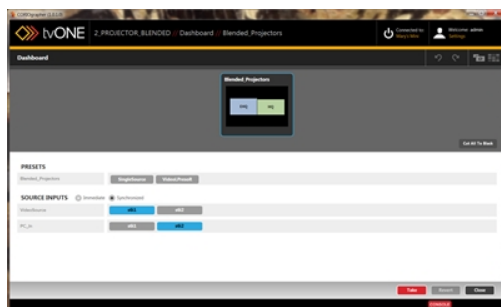
The Dashboard, where the configured canvases can be enabled, is available to administrators, power users, and basic users. In the case of a basic user, the Dashboard is the default view after connecting to a CORIOmaster.

For administrators and power users, the default view after connecting to a CORIOmaster is the Video Wall Editor. For these users, the Dashboard can be accessed via the button in the toolbar:

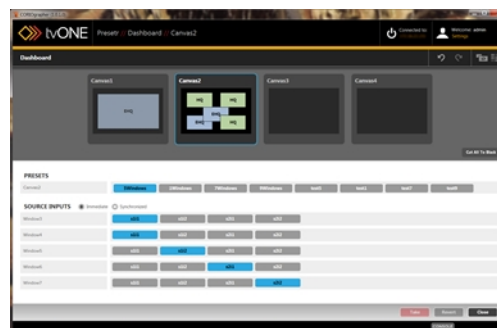


After using the Dashboard button from the Video Wall Editor, or after logging in if you are not an administrator or power user, you get the Dashboard. On a CORIOmaster, this will consist of four canvases; on a CORIOmaster mini, this will be one canvas:

CORIOmaster mini



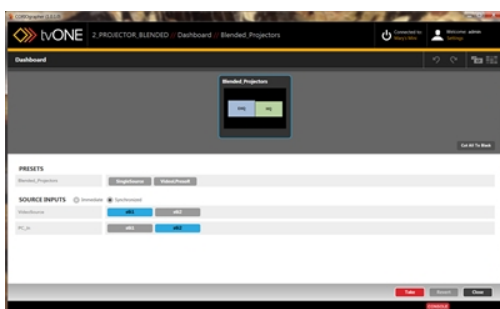
CORIOmaster



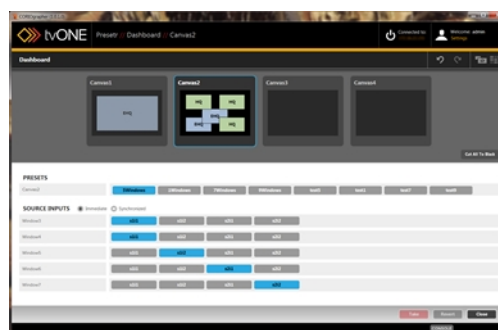
Immediate vs Synchronized

There are two modes in which the Dashboard functions - Immediate and Synchronized.

CORIOmaster mini



CORIOmaster



In Immediate mode, any action you take is committed individually by the CORIOgrapher software. Each step is live as soon as it has been committed. This mode requires that the software be actively connected to a CORIOmaster system.

In Synchronized mode, actions are only committed when you initiate a "Take". You can queue up a number of changes and commit them all at once by making multiple changes before pressing Take. The software only has to be connected to the CORIOmaster when the Take button is pressed - any previous configuration changes can be made while disconnected from the unit, if you wish to do so. (The CORIOmaster will accept any commands, but if the system assesses that the incoming commands will cause degraded performance, it will warn you of this with an alert message.)

Button Color	Example	Meaning
Gray		Option that is not currently selected
Blue		The currently live selection
Black		SYNCHRONIZED ONLY - the queued - but not yet live - option (Turns blue after you click Take button)

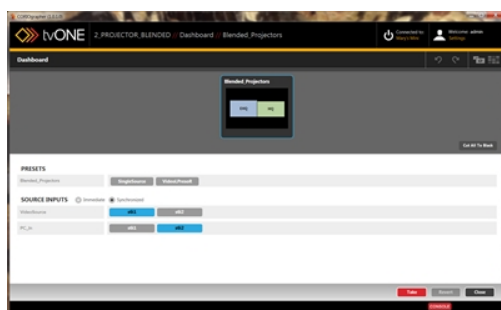
Switching Presets in the Dashboard

When you are in the Dashboard, you can change between your various configured settings on-the-fly, in a live environment.

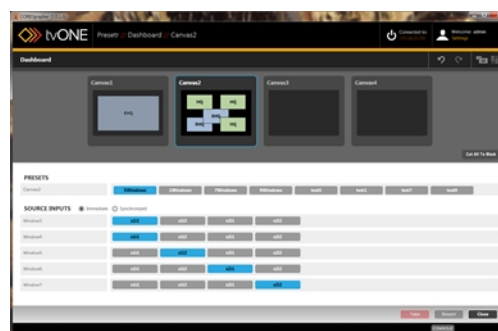
The simplest swaps that can be done are to change the inputs from one source to another.

If you want to actively change the arrangement of your windows on the fly, you need to have saved each arrangement as a preset within that canvas (video wall). When you are in the Dashboard in your live environment, you can swap between canvases, if applicable, and within each canvas, you can swap between presets.

CORIOmaster mini

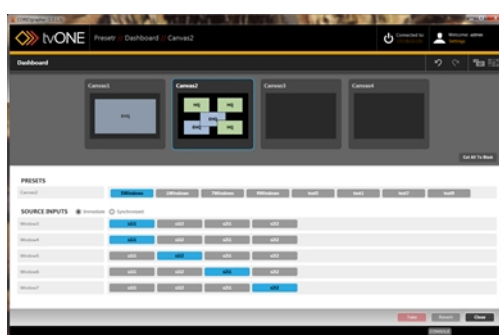


CORIOmaster



If you are in Immediate mode, any different preset you choose will instantly be displayed through the CORIOmaster on your displays. If you are in Synchronized mode, you can choose the new preset and modify input sources, then click the Take button to enable the modifications and display your changes through the CORIOmaster on your displays.

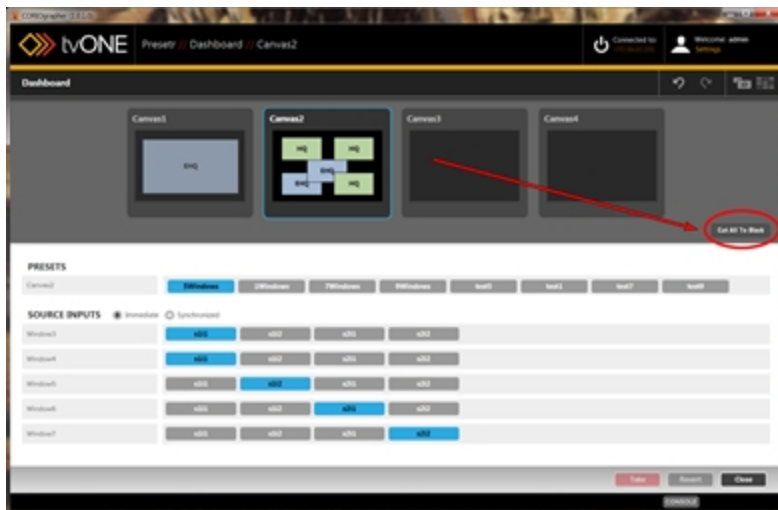
CORIOmaster



Cut All to Black

When you are in the Dashboard, you can change between your various configured settings on-the-fly, in a live environment.

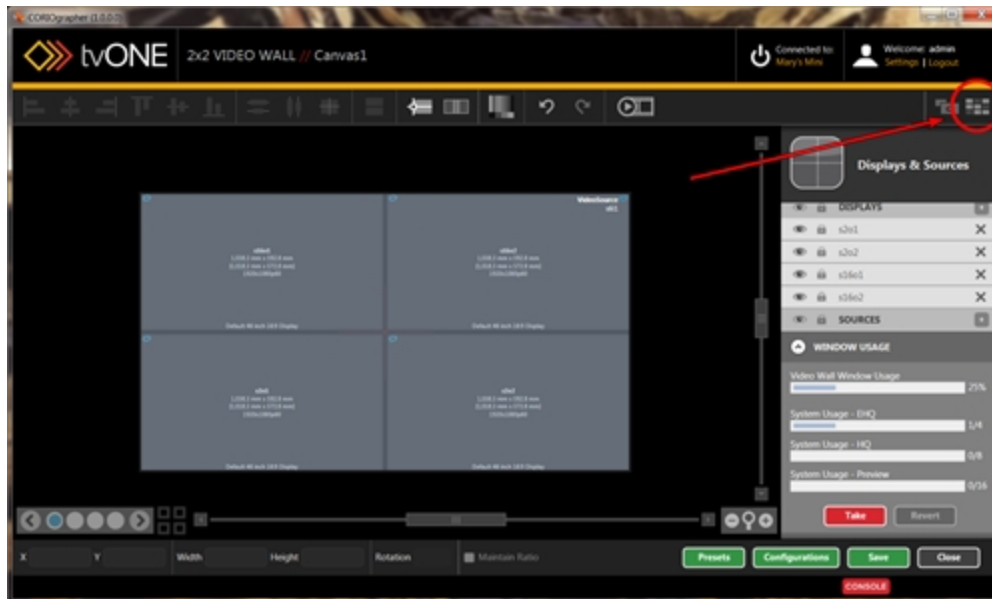
In addition to changing inputs and swapping between presets, there is a button, labeled "Cut All To Black", that allows you to simultaneously cut all inputs.



When you have cut all to black, if you choose to cut video in again, you simply change your Dashboard settings by selecting the new preset and/or input choices you want, and click Take, if you are in Synchronized mode.

Change Source Inputs On-The-Fly

1. While connected to a CORIOmaster, click the Dashboard icon in the top right corner of the video wall.



2. In the Dashboard window, you can switch between source inputs for a given window, on-the-fly. Next to each window, all available inputs are shown as buttons. The currently-used input is shown in blue; an available input is shown in gray. If you are in Synchronized mode (see "Immediate vs Synchronized" on page 170 for an explanation of the difference between the two modes), you can select a new input but it will not become the active input until you click Take. Until you click Take, the queued input button is black. In Immediate mode, there is no black button as there are no queued changes; all changes are immediate.



Presets

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About Presets

What is a Preset?

A preset, at its simplest, is a saved video wall. Configure a video wall with the physical arrangement of displays that you wish, and set up the first arrangement of windows - you can then save this as a Preset. Rearrange the windows and save again as another Preset. When you have multiple Presets saved, you can access them from the Dashboard and flip between Presets on-the-fly in your live environment.

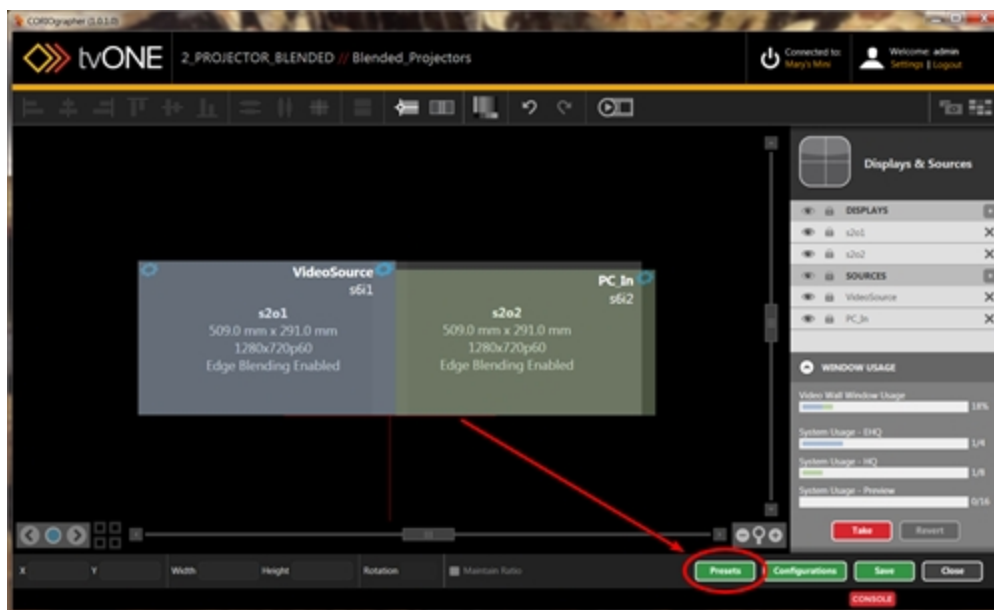
Why would I use Presets?



Presets are useful if, for example, you want to do a presentation and swap between several pre-configured arrangements of windows on your displays. In this example, your first preset may be a single large camera input shown across all displays, then your second preset may be a split-screen between a presentation slide and the original camera image. You can configure all the different window arrangements beforehand, save them as Presets, then use the Dashboard to swap between the saved Presets in real time.

Edit Preset

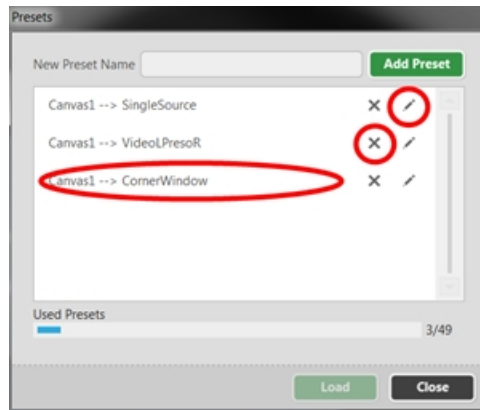
If you want to modify an existing Preset, follow these steps.

1. Open the relevant Configuration on the CORIOmaster.
2. In the bottom right corner of the video wall, select the Presets button.



3. In the pop-up window, choose the appropriate Preset from the list.
 - If you only wish to modify the name of the preset, use the pencil icon  to edit the name in the window, then click Close to close the window.
 - If you wish to delete the preset, use the X icon  to remove the line of the preset you want to delete, then click Close to close the window.

- If you wish to modify any other aspect, select the line for the Preset and click Load to open it in the video wall.



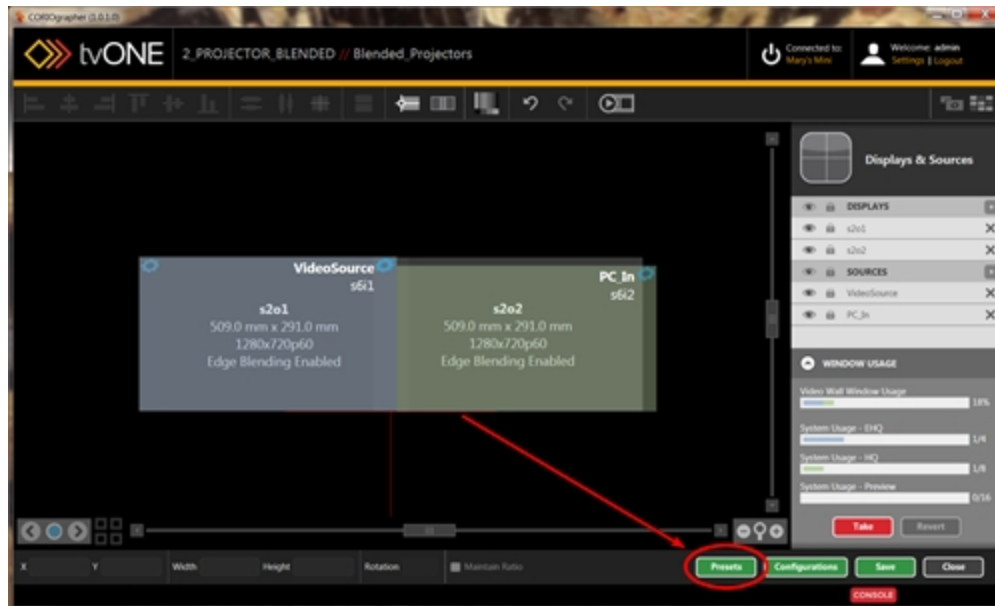
4. Once the preset has opened in the video wall, make edits as you wish and be sure to click the Save button to commit changes.

Save Preset

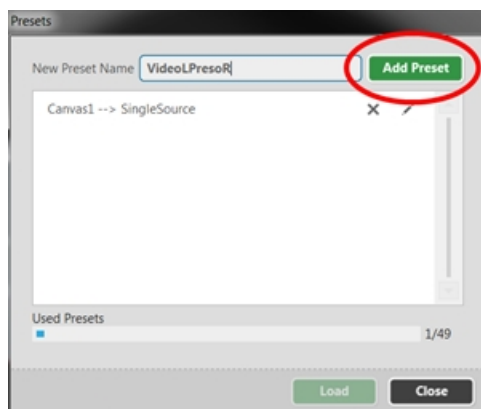
When you have a video wall set up just as you want it, you can save the entire thing as a preset.

To save as a preset:

1. Click the Presets button in the bottom right corner of the Editor.



2. In the pop-up window, type the name for this preset and click the Add Preset button.



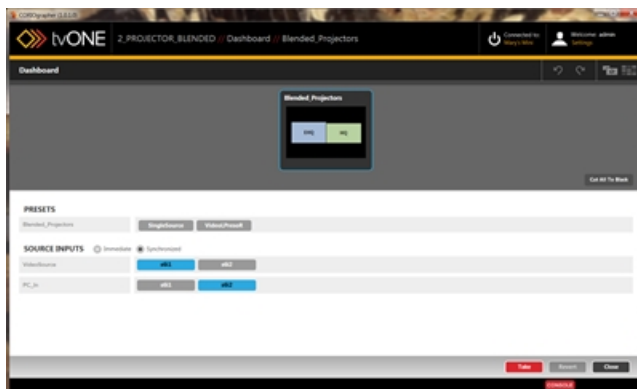
3. The preset will appear in the list of presets in the window, and the number of Used Pre-

sets will increase by one, out of your maximum of 49.

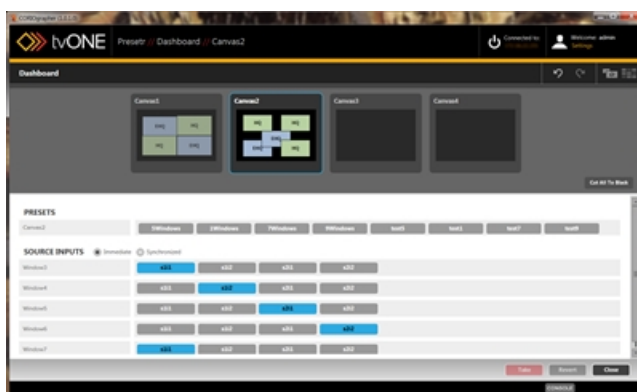
4. Click the Close button to return to the Video Wall Editor window.

Now that the preset has been saved, when you go to the Dashboard, you will see that preset appear, along with any others, as a button in the Presets section.

CORIOmaster Mini (one canvas)



CORIOmaster (four canvases)



Note: A preset cannot be saved if the displays and sources have not been appropriately allocated. If you are trying to save a preset and it does not appear in the list when you click the Add button, try using the Save button in the video wall. If connections are not appropriately allocated, an alert message appears saying "Not all of your inputs and outputs are correctly connected to physical slots on the CORIOmaster. Would you like to assign the connections now?". Once you resolve these issues, you should be able to save the preset successfully.

Troubleshooting

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Troubleshooting Connection Issues

If your CORIOmaster has been configured but is not appearing in the Connect to a Device pane, either under a Group or the Discovered CORIOmaster Devices heading, follow the steps here to troubleshoot the connection. Test the connection again after each step to see if the issue has been resolved.

1. Ensure that the CORIOmaster is turned on and the LED on the front panel of the machine is green.
2. Physically turn the CORIOmaster off and on again, wait till the front panel LED is green again.
3. Click the Refresh button at the bottom of the pane, to ensure that all available devices are discovered.
4. If connecting via Ethernet, verify the physical connection between the CORIOmaster and the network (and between the PC and the network).
If connecting via serial cable, verify the physical connection between the CORIOmaster and the PC.
5. Verify that the CORIOmaster is running firmware version [shipping FW] or later. If it is not, you will need to [UPGRADE THE FIRMWARE](#) (link to topic).
6. If the device still fails to appear, connect to the CORIOmaster using a serial cable and click the Connect via Serial to a CORIOmaster... option in the Connect to a Device pane. Follow the steps for initial configuration as described in "[Configure Connection via Serial](#)" on page 20

Troubleshooting License Issues

Your license key is located on a sticker on the outside of the CORIOgrapher installation disc's protective sleeve. The key is a 25-digit hexadecimal code broken into five groups of five digits.

If you have any problems with your license code not being accepted by the CORIOgrapher software, please contact [tvONE Support](#) with your invoice number and they can assist you in resolving the issue.

Troubleshooting No Preview Video

If you are in the Video Wall editor and the Preview windows do not show the video as expected:

1. Check the PC that CORIOgrapher is installed on to ensure that Windows Media Player has been installed. If it has not been installed, install it free from the [Microsoft Windows web-site](#).
2. Launch the Windows Media Player - until the first time Windows Media Player is launched, the file types are not correctly associated and the Preview function will not work.

These steps should resolve any issues with Preview not showing the video as expected. If the issue persists, proceed with more general troubleshooting including using Windows Task Manager to check resource utilization and the Event Log to check for errors.