

SGM RVBW Network Administrator User Manual

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SGM RVBW Network Administrator



Product Information

The SGM Network Admin is an intuitive software designed for network configuration. It is available free of charge at sgmlight.com. All settings, configuration, and updates can be done through the SGM Network Admin.

Minimum PC / Laptop Requirements

In order to use the SGM Network Admin, your PC or laptop must meet the following minimum requirements:

- Operating System: Windows (version not specified)
- Internet Connection

Setting IP Address and Subnet Mask

To configure your computer and connect to a VPL (Virtual Private Network), follow these steps:

1. Go to Control Panel > Network and Internet > Network and Sharing Center > Change Adapter Settings
2. Double-click the connection you want to use
3. Click on Properties
4. Scroll down to Internet Protocol Version 4 (TCP/IPv4)
5. Select it and click on Properties
6. Set "Use the following IP address" to the desired IP address and subnet mask (default: IP address in the 2.x.x.x range and subnet mask 255.0.0.0)

On the first boot-up of the SGM Network Admin software, you need to select the correct network interface. To do this:

1. In the SGM Network Admin, go to settings
2. Select the same IP address shown in the properties window in Control Panel (e.g., 2.0.0.10)

Please note: To ensure stable operation, the SGM Network Admin should be whitelisted in the computer's firewall software.

VPL IP and MAC Address

Every VPL fixture has its own dedicated MAC address, which cannot be changed. The VPL's IP address is generated from its MAC address. Please note that the IP or MAC address can only be modified for fixtures with bootloader 4.10 or higher and firmware 5.8 or higher. Refer to the Maintenance Menu on page 8 for instructions on how to set an individual IP address for each VPL.

Product Usage Instructions

Setting up the VPL in the SGM Network Admin

To set up the VPL (Virtual Private Network) in the SGM Network Admin software, follow these steps:



Internet Protocol Version 4 (TCP/IPv4) Properties

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

☐ Obtain an IP address automatically

☒ Use the following IP address:

IP address: 2 . 0 . 0 . 10

Subnet mask: 255 . 0 . 0 . 0

Default gateway: . . .

☐ Obtain DNS server address automatically

☒ Use the following DNS server addresses:

Preferred DNS server: . . .

Alternate DNS server: . . .

☐ Validate settings upon exit

Advanced...

OK Cancel



1. Launch the SGM Network Admin software
2. Modify settings and monitor sensor values
3. Use multiple filters and display options for a fast and flexible workflow
4. Ensure VPL fixtures are updated with the latest firmware (see Updating Firmware on page 10)

Programming and Control

The VPL features 8 and 16-bit resolution RGB with several DMX modes. All VPL fixtures operate internally at 100Mb data communication.

This manual covers installation and use of the SGM Network Administrator software. A digital version is available at www.sgmlight.com, or upon request at support@sgmlight.com. © 2020 SGM Light A/S®. The information in this document is subject to change without notice. SGM and all affiliated companies disclaim liability for any injury, damage, direct or indirect loss, consequential or economic loss, or any other loss occasioned by the use of, inability to use, or reliance on the information contained in this manual. The SGM logo, the SGM name, and all other trademarks in this document pertaining to SGM services or SGM products are trademarks owned or licensed by SGM, its affiliates, and subsidiaries. English edition © 2022 SGM Light A/S®.

SGM NETWORK ADMIN SETUP

The SGM Network Admin is an intuitive software designed for network configuration, it is available free of charge at sgmlight.com. All settings, configuration, and updates are done through the SGM Network Admin.

MINIMUM PC / LAPTOP REQUIREMENTS

The following are the minimum system requirements to use the SGM Network Admin:

- Windows 10 or higher.
- Ethernet connection (10/100/1000 Mbps).

SETTING IP ADDRESS AND SUBNET MASK

In order to keep VP networks separated from other network traffic, the VP fixtures use IP addresses in the 2.x.x.x range, and Subnet mask 255.0.0.0 by de-fault. (See figure 1).

To configure your computer and connect to a VPL, go to:

1. "Control Panel" >

2. "Network and Internet" >
3. "Network and Sharing Center" >
4. "Change Adapter Settings"
5. Double click the connection you want to use
6. Press "Properties"
7. Scroll down to Internet Protocol Version 4 (TCP/IPv4)
8. Select it and click on "Properties"
9. Then set "Use the following IP address" (see figure 1).

On the first boot-up of the SGM Network Admin soft-ware, it will be necessary to select the correct net-work interface. To do this, in the SGM Network Admin, go to settings and select the same IP address shown in the properties window in Control Panel, in this ex-ample it is 2.0.0.10 (See figure 2).

PLEASE NOTE! IN ORDER TO ENSURE STABLE OPERATION, SNA SHOULD BE WHITELISTED IN THE COMPUTERS FIREWALL SOFTWARE

VPL IP AND MAC ADDRESS

Every VPL fixture has its own dedicated MAC address which cannot be changed. A VPLs' IP address is generated from its MAC address.

PLEASE NOTE! THE IP OR MAC ADDRESS CAN BE MODIFIED ONLY FOR FIXTURES WITH BOOTLOADER 4.10 OR HIGER AND FIRMWARE 5.8 OR HIGHER. PLEASE REFER TO "MAINTENANCE MENU" ON PAGE 8 FOR IN-STRUCTIONS ON HOW TO SET INDIVIDUAL IP ADDRESS FOR EACH VPL.

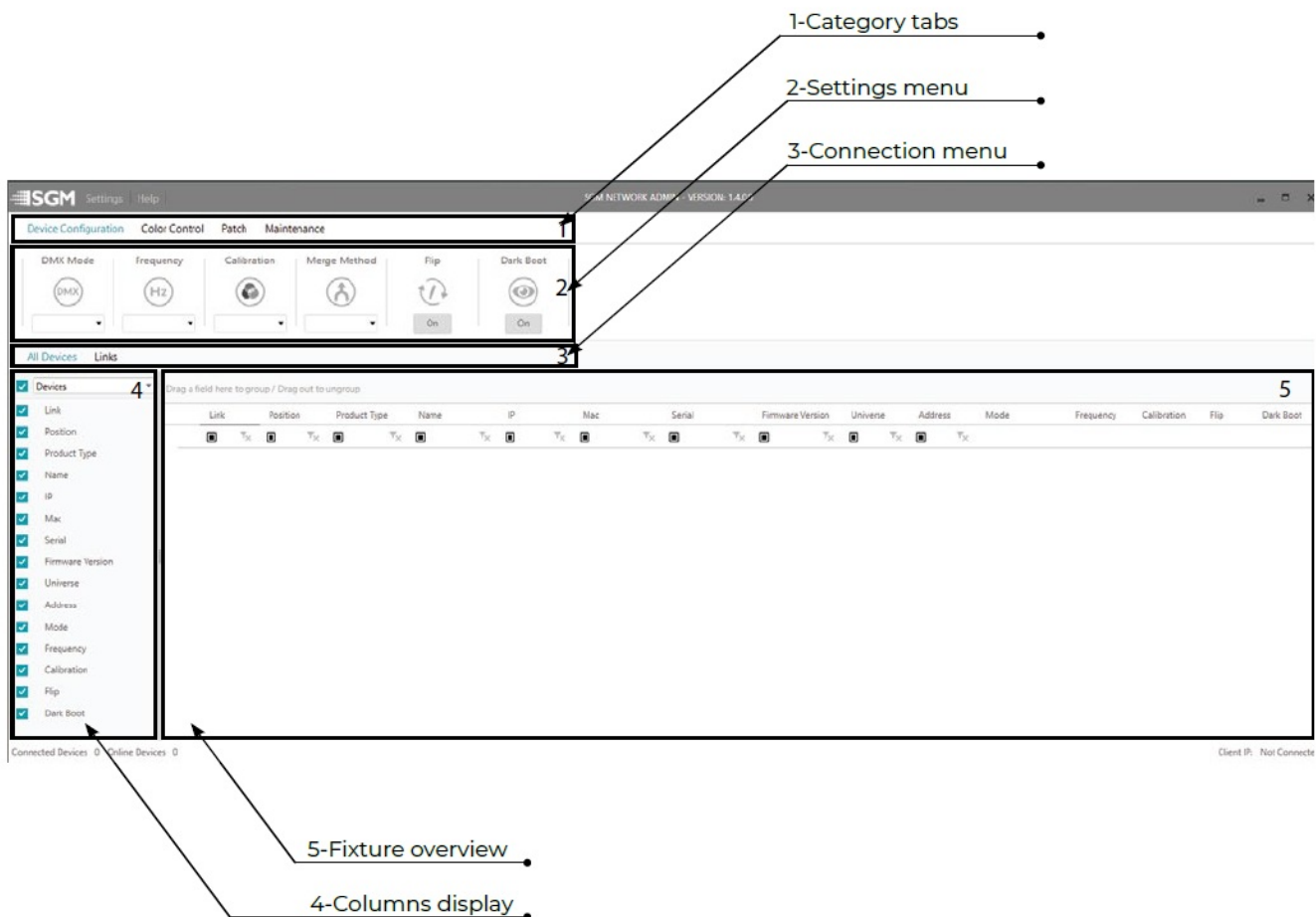
SETTING UP THE VPL IN THE SGM NETWORK ADMIN

Several settings can be modified, and sensor values can be monitored through the SGM Network Admin software. The multiple filters and display options serve as a tool to achieve a fast and flexible work-flow. For maximum usability, en-sure VPL fixtures are updated with the latest firmware. Shown at "Updating Firmware" on page 10.

PROGRAMMING AND CONTROL

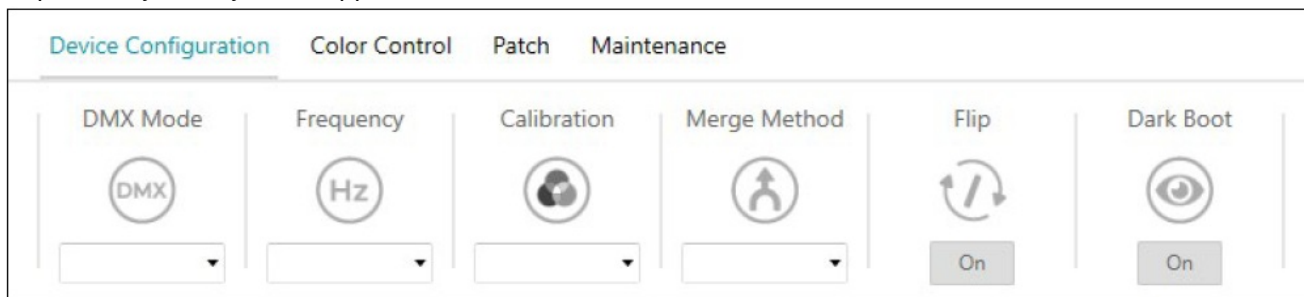
VPL features 8 and 16-bit resolution RGB with several dmx modes. All VPL fixtures operate internally at 100Mb data communication.

GENERAL OVERVIEW



DEVICE CONFIGURATION

Settings available for the connected fixtures (figure 3)are shown in the settings menu. The device configuration tabs are the fastest way to configure multiple fixtures at a time. The settings menu will remain accessible independently on any filters applied.



- **DMX Mode**– Shows the DMX modes available for the selected fixtures.
- **Frequency** – Shows the LED refresh frequency for the selected VP fixture to prevent flicker on video recordings. The recommended frequency is 1Khz, but 4Khz, 16Khz and 32Khz are also available.
- **Calibration** – Enabling calibration ensures a consistent color performance across all fixtures. By turning off the calibration a brighter output can be achieved.
- **Merge Method** – Selects priority. LTP (Latest Takes Priority) or HTP (Highest Takes Priority).
- **Flip** – Reverses the virtual orientation of the selected VPL fixture, so the pixel count will start from one side or the other.
- **Dark Boot** – When unchecked, the visible boot 4 pixel-clusters at one side will flash white upon restart.

COLOR CONTROL

Color Control sets a color for the selected VPL fixtures. This is convenient for identifying or testing a fixture in an installation. The color can be set using the RGB slider, numeric value or color picker and will display when the “Color Control” button is checked. (See figure 4)

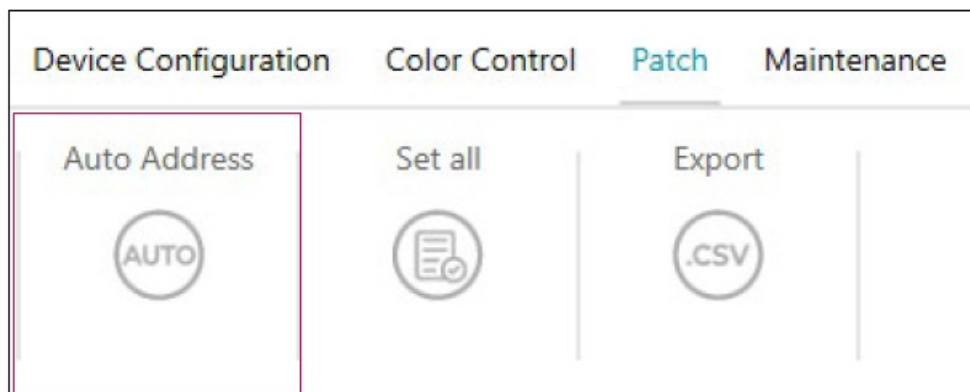


ArtNet Broadcast option sends a broadcast signal to all fixtures on the selected range of universes. The animate option will send an animated sequence to all selected ArtNet universes.

PATCH/ADDRESSING

Auto address

- The auto addressing function (figure 5), is a tool that allows the user to automatically set DMX universes and addresses for multiple fixtures in a simple and fast way. This function is especially useful when working with a large amount of fixtures at a time.



- Select the range of fixtures to be addressed by selecting the first VPL in the range, then scroll down to the last VPL to be addressed. Hold down the Shift key and click on the last VPL in the range. This will select the entire range of VPLs to be to auto addressed.
- On the top left corner of the menu, click on Auto Address. In the newly opened window, there are 2 options to choose from (fig.6):
 - Compressed – groups as many VPLs as can fit within 1 DMX universe without splitting DMX profiles.
 - Universe per fixture – allows to stack a single VPL per universe regardless of the fixture’s DMX footprint.
- The range of VPLs is shown at the bottom of the window. To address the VPLs, sort them by Link and Position. To do that, first click on Link then click and hold the Ctrl key, then click Position in the table header. This will sort the VPLs in ascending order based on the Link number and their physical position in the Link. Choose the Universe Offset and Address Offset of the first VPL then click Apply. All the VPLs will be patched sequentially .

Auto Address

Please select the compression type below

☒ Compressed - Compress as many fixtures as possible into each universe
 ☐ Universe per fixture - Assign 1 universe per fixture

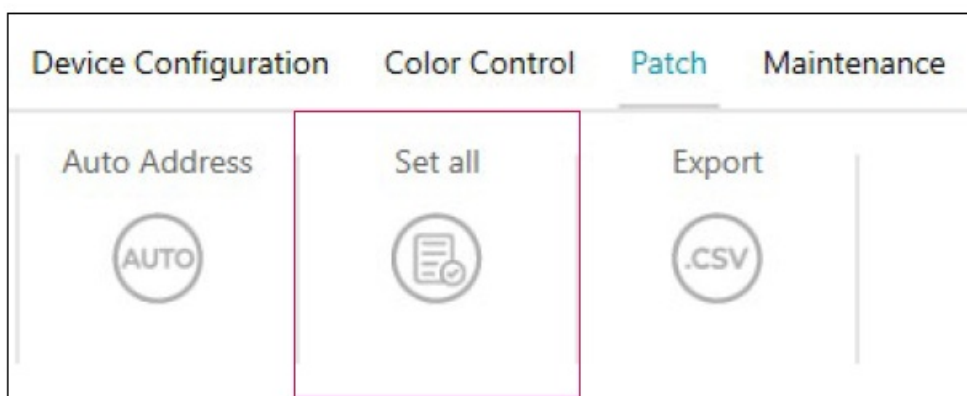
Universe Offset
 Address Offset

Apply

Link	Position	Name	IP	Universe	Address
1	1	SGM VPL1220-20	2.1.45.124	0	1
1	2	SGM VPL1220-20	2.97.17.28	0	193

Set All

The Set All function (Fig. 7) is a tool that allows the user to set an identical DMX Universe and Address for multiple VPLs at the same time.



- Select the range of fixtures to be addressed by selecting the first VPL in the range, then scroll down to the last VPL to be selected. By holding down the Shift key, click on the last VPL in the range. This will select the entire range of VPLs to be addressed.
- In the top left corner of the menu click on Set All. The newly opened window displays the range of VPLs selected. Set the Universe and Address which the VPLs should be addressed to and click Apply. All VPLs will have the same DMX Universe and Address.

Set All

Set the universe and address of all selected fixtures to

Universe
 Address

Apply

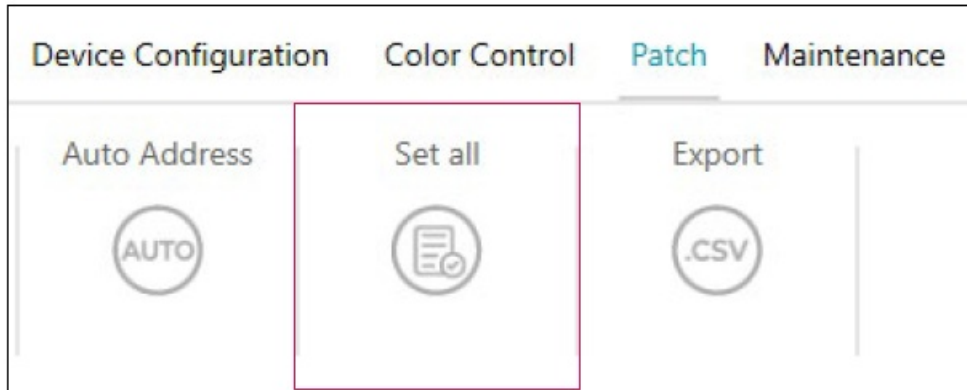
Link	Position	Name	IP	Universe	Address
1	1	SGM VPL1220-20	2.1.45.124	0	1
1	2	SGM VPL1220-20	2.97.17.28	0	193

Export

- The Export function exports a .CSV file containing all the data for the VPLs (fig.9).
- Select the range of VPLs to be included in the .CSV file or press Ctrl+A to select all the VPLs connected to the

SGM Network Admin.

- In the top left corner click the Export button. In the newly opened window give the export file a name and save it to a local drive.



MAINTENANCE MENU

PLEASE NOTE! THE FOLLOWING ADDRESSING FUNCTIONALITY IS IMPLEMENTED IN FIRMWARE 5.8 ONWARDS. The maintenance menu gives access to 4 functions (fig.10):

- Rescan – the SNA performs a scan of the system and populates the Fixture Overview window with the discovered VPLs
- Reboot – forces all selected VPLs into a reboot procedure.
- Update – this function allows all selected VPLs to go through a firmware update procedure. It is recommended to keep VPLs updated to the latest firmware version available.
- Set IP – To change the IP address of a fixture, double click the IP Address field of the selected fixture in the Fixture Overview and input the address that you want it to have. When you press the Enter key, the IP Address field will color red. This indicates that an IP address change is pending. Repeat this process for every fixture that needs a different IP address. If you want to undo any pending changes, simply select the fixtures you need and right click. This will give you the option to undo the IP changes on the selected fixtures. Once you are done, press the Set IP address button in the Maintenance tab to confirm the changes.

PLEASE NOTE! IF THE IP ADDRESS IS SET OUTSIDE OF THE RANGE OF THE NETWORK ADAPTER, A WARNING MESSAGE WILL BE DISPLAYED STATING THAT THE SELECTED FIXTURES MIGHT BECOME UNRESPONSIVE.

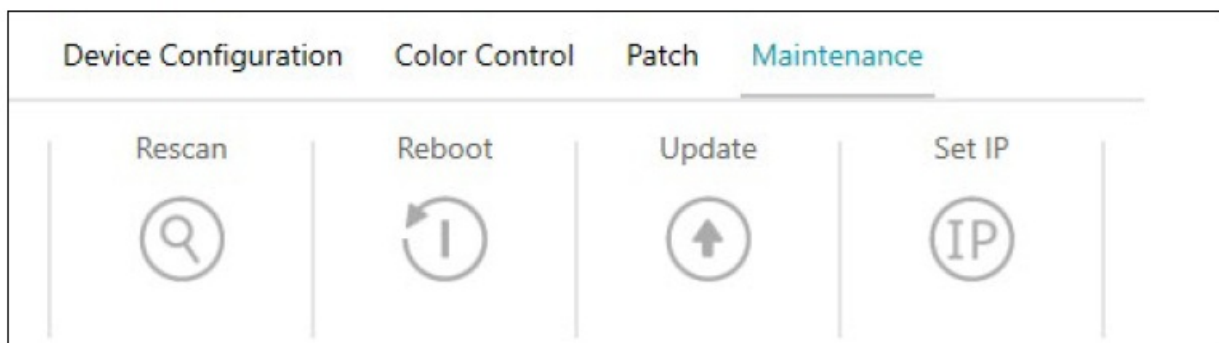


Figure 10: Maintenance tab

Figure 10: Maintenance tab

CONNECTION MENU

This menu shows the fixture overview and switches between showing all connected devices or all connected physical cable links (see figure 11). This is convenient for large installations, especially with fixture groups on different locations.



Figure 10: Connection menu tab

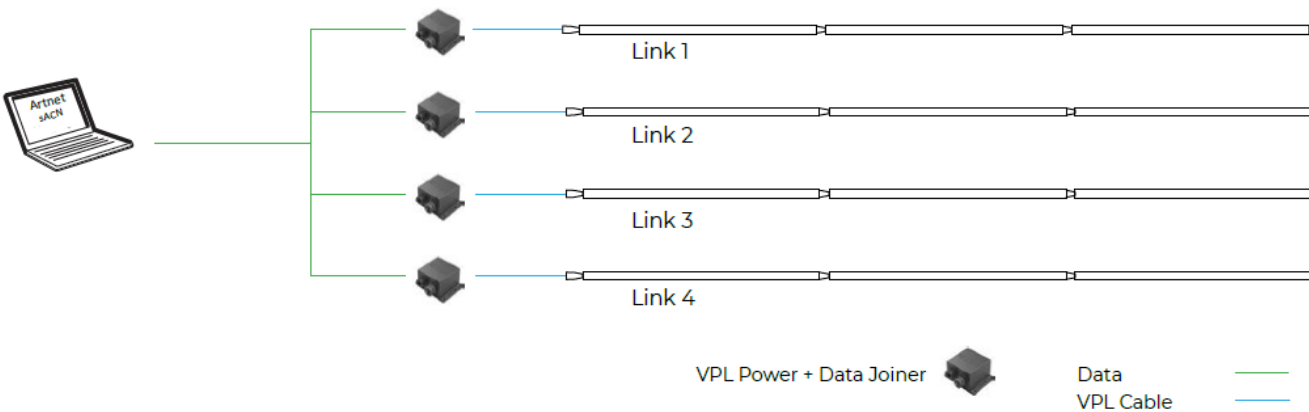


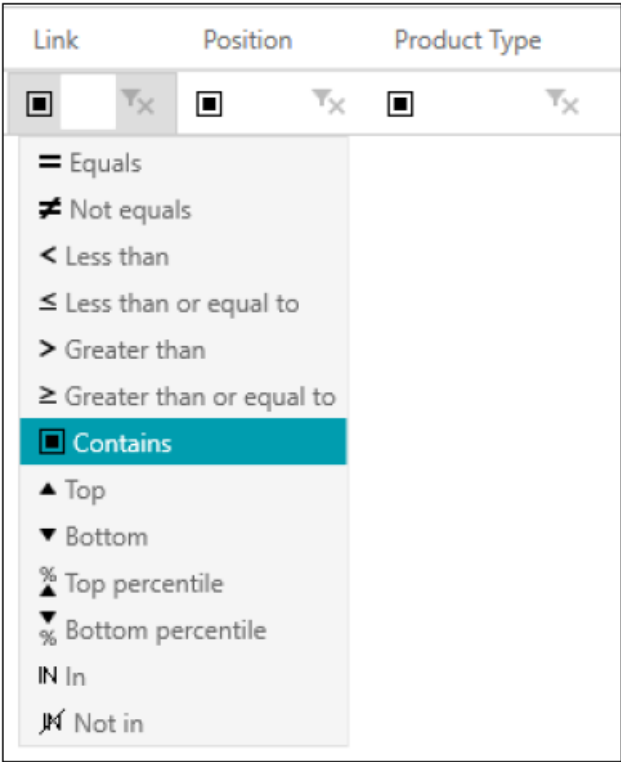
Figure 11: Schematic representation of connection menu

Connected fixtures are discovered when the SNA is launched. Link numbers are assigned at launch and VPL position numbers are sequentially assigned. For labeling purposes, the “Name” field allows each unit to receive a unique name.

COLUMN DISPLAY

Toggles the display of the adjacent data in the fixture overview. This menu organizes and simplifies the fixture over-view.

FIXTURE OVERVIEW



This box displays all the connected fixtures and their configura-tions. The order of display can be arranged by pressing the label and a number of parameters will appear (figure 12). Fixtures can be orderd in a multiple ways such as alphabetically and also can be filtered with search criteria. When one fixture is selected, it is possible to

change settings similar to those in the “Device Con-figuration” tab.

GROUPING FIXTURES

To sort fixtures into groups, drag and drop a fixture or a category name of a column to the group area (see figure 13). In figure 14, the fixture has been grouped according to DMX mode and the fixtures have been organized into four; one with 184 fixtures and three groups have one fixture in each. This is convenient for troubleshooting.

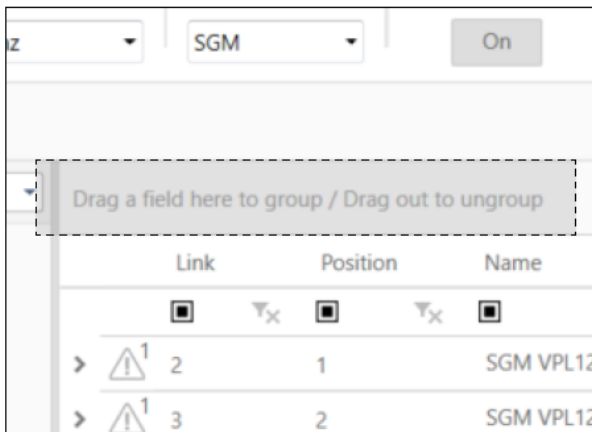


Figure 13: Drag selected fixtures to this point to create a group.

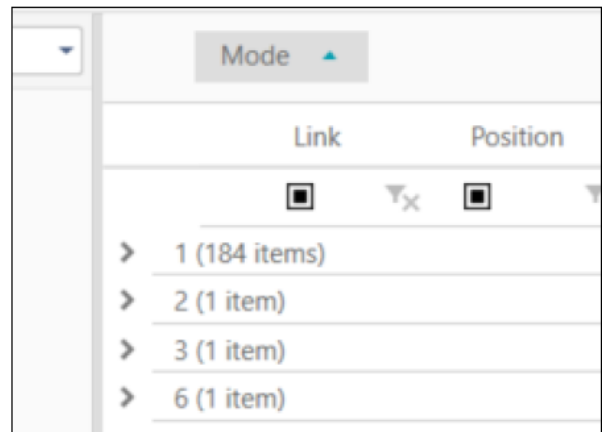


Figure 14: Fixtures grouped according to DMX mode

SENSOR

Expanding the arrow on the left side displays the fixtures sensors and its values (see figure 15). The values shown may vary between products and the specific installation location..

1	2	SGM VPL	2.1.2.153	00:22:95:01:02:99
Sensor Name	Value	Min	Max	
Main Temp	28,75	23,23	52,94	
LED Temp	26,14	22,18	45,43	
V LED	13,49	13,38	13,60	
FPS	2,00	0,00	4,00	

Figure 15: Example of sensor menu expanded from a SGM VPL 1220-20.

UPDATING FIRMWARE

To update firmware, select the fixtures and press update in the “Maintenance Menu” on page 8. When the update has begun (See figure 16), do not close the window until the updating process is successfully completed (See figure 17). It is recommended not to update all fixtures at once, but in smaller batches. The latest firmware will always be included with the software when downloading SGM Network Admin from: www.sgmlight.com. It is possible to upload a differ-ent firmware through the settings menu (See figure 18).

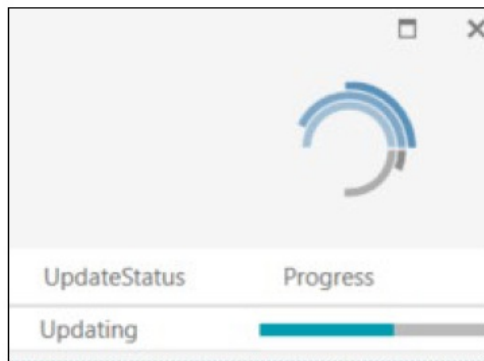


Figure 16: Firmware is being uploaded

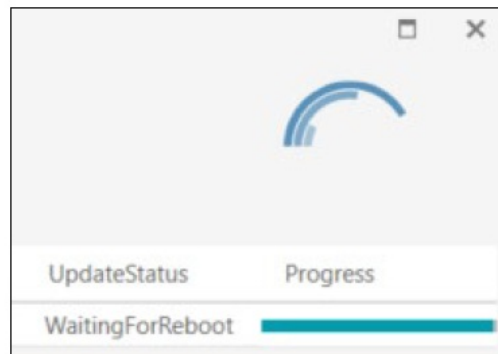


Figure 17: After the upload, the fixture will reboot automatically. Do not turn off power

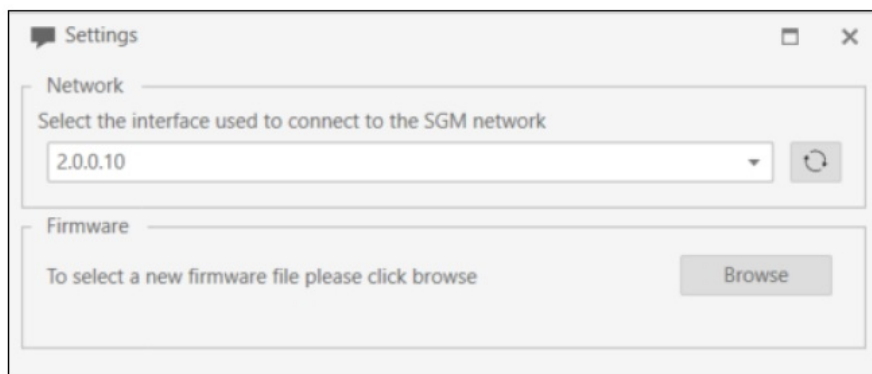


Figure 18: Settings menu for custom firmware upload.

PLEASE NOTE! IT IS RECOMMENDED TO UPDATE FIRMWARE IN SMALL BATCHES TO LIMIT NETWORK TRAFFIC. IF ISSUES ARE ENCOUNTERED, REDUCE FIXTURE BATCH SIZE.

UNSUPPORTED FIRMWARE VERSIONS

Early firmware versions (prior to version 5.x) are not fully supported by the SGM Network Admin. Fixtures with unsupported firmware will only display Name, IP and Mac address (see figure 19). First download the current firmware or SGM Network Admin at: www.sgmlight.com or contact support at support@sgmlight.com, and follow the steps in "Updating Firmware" on page 10.

drag a field here to group / Drag out to ungroup												
Link	Position	Name	IP	Mac	Serial	Universe	Address	Mode	Frequency	Calibration	Flip	Dark Boot
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	SGM VPL	2.1.3.209	00:22:95:01:03:D1							<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	1	SGM VPL1220-20	2.155.144.193	00:22:95:98:96:C1	VPL-1220 SERIAL	2	0	Mode 8 Bit	1KHz	SGM	<input type="checkbox"/>	<input type="checkbox"/>

Figure 19: The first row shows a SGM VPL 1220-20 fixture connected with an unsupported firmware version, while the second row shows a SGM VPL 1220-20 fixture running a supported firmware version.

PHYSICAL MANAGEMENT AND DOCUMENTATION

When installing larger installations it is highly recommended to give every fixture a unique name and document the physical positions of the fixtures along with their corresponding universe and DMX channel.

REPLACING A FIXTURE

Before replacing a fixture, record its exact location, name, DMX universe, DMX mode, and DMX starting address (See physical Management on page 8). This will be needed when installing the replacement fixture. After replacing the fixture in the installation, rename and re-address via the SGM Network Admin. The new fixture will show the model description in the field "Name", until modified by the user.

TROUBLESHOOTING

PROBLEM	POTENTIAL CAUSE(S)	REMEDIES
The SGM Network Admin does not display the connected fixtures	No power to the fixture.	Confirm that: the mains power is switched on, the cables are plugged in, and the power connector is inserted and turned to its locked position.
	No data to the fixture.	Confirm that: the mains power is switched on, the cables are plugged in, and the power connector is inserted and turned to its locked position.
	A firewall is blocking the connection.	Consult your IT department for instructions to disable or bypass your firewall.
	The fixtures' firmware is 5.4 or older and therefore not supported by the SGM Network Admin tool.	Update the firmware on the fixtures.
The fixtures are behaving unpredictable and have random flickers.	Conflicting IP addresses causing malfunctions.	Make sure to implement an external switcher or data processor with a virtual LAN.
	The VP fixtures are receiving giga-bit data.	Configure Artnet client, switcher or processor to send 100Mb data.
Fixtures show as connected devices but not as online devices	The IP Address is outside of the range of the computer's network adapter.	<p>It is possible to perform a complete factory default to reset the IP address back to its default address (in the 2.X.X.X range). To do this, open the Settings from the top bar and press the Enable Factory Default button.</p> <p>Then navigate to the Maintenance tab and there you will find a Factory Default button.</p> <p>PLEASE NOTE! This feature will reset all the connected fixtures to their factory defaults. So all connected fixtures will have all the specific DMX Universe, Address, Name, reset.</p>

The most common issues are caused by outdated software and missing data/power connection. However, some set-ups might experience issues with overlapped IP addresses, which is why it is highly recommended to use a dedicated network.

SUPPORT HOTLINE


SGM offers 24/7 technical support.

Worldwide: +45 3840 3840

US: +1 407-242-6217

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Product Version 1.4 | Revision A | Released 2023-01-11

Documents / Resources

	<p>SGM RVBW Network Administrator [pdf] User Manual RVBW Network Administrator, Network Administrator, Administrator</p>
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References

- [SGM Light - Leading industry lighting technology](#)