



User Manual

SMS88-18G

**8x8 Seamless Scaling 4K60 HDMI 2.0
18G Matrix Switch
with
Video Wall Mode**

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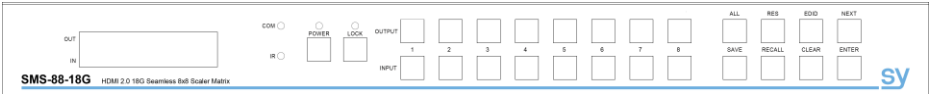
The SY-SMS88-18G is a high-performance HDMI 2.0 seamless scaling matrix switcher capable of handling HDMI signals up to 4K60 4:4:4 (18Gbps). It provides 8 HDMI inputs, 8 HDMI outputs and can be used as an 8x8 seamless matrix switcher or a video wall source that can be configured to almost any video wall layout.

Features

- Supports HDMI 2.0 up to 4K60 4:4:4 – 18Gbps
- Supports all HDCP up to version 2.2
- Seamless switching with powerful output scaling
- 16 Selectable HDMI output resolutions
- Audio embedding for each input – L+R only
- Audio de-embedding of each output – L+R only
- IR switching follows video switching
- EDID management for each input
- Controllable from front panel, RS232 or TCP/IP
- 19in 1U rack mounting

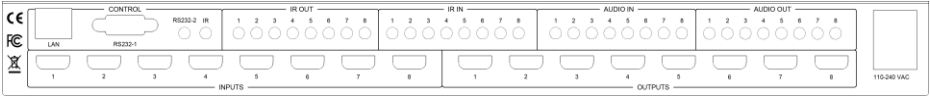
Panel Descriptions

Front Panel



Item	Description
LCD Panel	Displays the current video selections
COM	Power LED (also indicates control commands)
IR	IR sensor for IR control
POWER	Power on/off (standby) mode switch
LOCK	Front panel lock/unlock
OUTPUT	Output selection buttons 1~8
INPUT	Input selection buttons 1~8
ALL	Set all outputs to the next input selection
RES	Set the output scaler resolution
EDID	Set the EDID options for the next input selection
NEXT	Select the next available option
SAVE	Save the current matrix setting as a preset
RECALL	Set the matrix setting from a saved preset
CLEAR	Cancel the current command function
ENTER	Set the displayed option

Rear Panel



Item	Description
LAN	RJ45 control port for operation by TCP/IP
RS232-1	Main RS232 control port
RS232-2	General use RS232
IR	IR Eye input for IR controller
IR OUT 1~8	IR outputs for HDMI inputs 1 to 8
IR IN 1~8	IR inputs for HDMI outputs 1 to 8
AUDIO IN 1~8	Analogue audio inputs for HDMI inputs 1 to 8
AUDIO OUT 1~8	Analogue audio outputs for HDMI outputs 1 to 8
INPUTS 1~8	HDMI inputs 1 to 8
OUTPUTS 1~8	HDMI outputs 1 to 8
POWER INPUT	IEC connector for 100~240V AC power input

Connection Procedure

1. Connect the HDMI sources to the HDMI inputs as required
2. Connect the HDMI display devices to the HDMI outputs as required
3. If required, connect any audio inputs or outputs and IR inputs and outputs
4. If required, connect to the RS232 or LAN control ports
5. Connect the IEC port to an AC outlet

Controlling the SY-SMS88-18G

Seamless Matrix Switcher

When the SY-SMS88-18G is being used as a seamless matrix switcher, it can be controlled by any one of the following three methods:

1. Front Panel
2. RS232 Control Software
3. LAN Control WebGUI

Front Panel Control

Each of the following operations is completed only when the **ENTER** key is pressed. If the **ENTER** is not pressed or the **CLEAR** key is pressed, the switcher will return to the current settings.

Signal Routing

Use the following methods to set the signal routing for HDMI, audio and IR:

1. Press one of the numbered output buttons on the top row.
2. Press the desired input button number on the bottom row.
3. Press the ENTER button.

Note that IR and audio routing always follow the video routing selections.

To set all outputs to a single input:

1. Press the **ALL** button.
2. Press the desired input button number on the bottom row.
3. Press the **ENTER** button.

Setting the Output Resolution

Each output can be set to different resolutions:

1. Press the **RES** button.
2. Press one of the numbered output buttons to select the output being set.
3. Press **NEXT** until the desired resolution is displayed on the LCD.
4. Press the **ENTER** button.

Available output resolutions:

Number	Output Resolution Setting	Number	Output Resolution Setting
1	3840x2160p 60Hz	9	1440x1050 60Hz
2	3840x2160p 50Hz	10	1366x768 60Hz
3	3840x2160p 30Hz	11	1360x768 60Hz
4	3840x2160p 25Hz	12	1280x1024 60Hz
5	1920x1200 60Hz	13	1280x768 60Hz
6	1920x1080p 60Hz	14	1280x720p 60Hz
7	1920x1080p 50Hz	15	1280x720p 50Hz
8	1600x1200 60Hz	16	1024x768 60Hz

Setting the Input EDID

Each input can have different EDID settings to ensure that the input HDMI signal is best suited to the HDMI source:

1. Press the **EDID** button.
2. Press one of the numbered input buttons for the input being set.
3. Press **NEXT** until the desired EDID option is displayed.
4. Press the **ENTER** button.

The available output resolutions are:

Number	Input EDID Setting	Number	Input EDID Setting
1	3840x2160p 60Hz	5	1280x1024 60Hz
2	3840x2160p 30Hz	6	1920x1200 60Hz
3	1920x1080p 60Hz	7	Manual
4	1280x720p 60Hz	—	—

Saving to a Preset Memory

The current matrix routing can be store to one of up to eight preset memories:

1. Press the **SAVE** button.
2. Press one of the numbered output buttons for the preset memory to set.
3. Press the **ENTER** button.

Recalling a Preset Memory

The current matrix routing can be set from one of up to eight preset memories:

1. Press the **RECALL** button.

2. Press one of the numbered output buttons for the preset memory to recall.
3. Press the **ENTER** button.

The default state for the Manual EDID option is the same as EDID option 1, 3840x2160p 60Hz. To change the contents

Full Front Panel Lock / Unlock

The front panel control buttons can be locked to prevent accidental use or operation by unauthorised persons. Press the **LOCK** button for two seconds to lock or unlock the front panel. When the panel is locked, all buttons except the **LOCK** button will not function until the front panel is unlocked. The LOCKED/UNLOCKED state is shown on the LCD panel and by the LED above the LOCK button, which is lit when the front panel is fully LOCKED.

Input or Output ports Lock Unlock

When the unit is UNLOCKED, press and hold down the LOCK button for six seconds - The LCD panel will show the following (any exiting numbers indicates that those buttons are already locked):

Output: -----
Input: -----

Pressing any of the numbered Output or Input buttons will toggle the lock status of that button. The button will become locked when the respective button number is shown on the LCD panel. When all selection are done, press the **ENTER** button to set the new LOCK/UNLOCK states of those buttons.

Whenever a locked Output or Input button is activated, the LCD panel will show that the button is locked. In this mode, the **LOCK** LED is not lit.

To unlock those buttons, repeat the above steps to remove the button numbers from the LCD panel before pressing ENTER to accept the changes.

Power Control

The **POWER** button can be used to place the SY-SMS88-18G in to standby mode. Press and hold the power button until the POWER LED lights. Release the **POWER** to power down the unit. Press the **POWER** button again to return the unit to normal operation.

Video and Audio Routing Relation

Analogue audio embedding is only possible when the video input signal is from a DVI source. The analogue audio outputs will always use the de-embed audio of its respective HDMI output.

Video and IR Routing Relation

The IR detector and emitter must have the following wiring to ensure proper IR function:

3.5mm Jack	IR Detector (Eye)	IR Emitter
Tip	IR Signal	IR Signal
Ring	+5V	+5V
Sleeve	IR Return (Ground)	No Connection

The IR matrix routing will always follow the HDMI matrix video routing.

System Connection Example

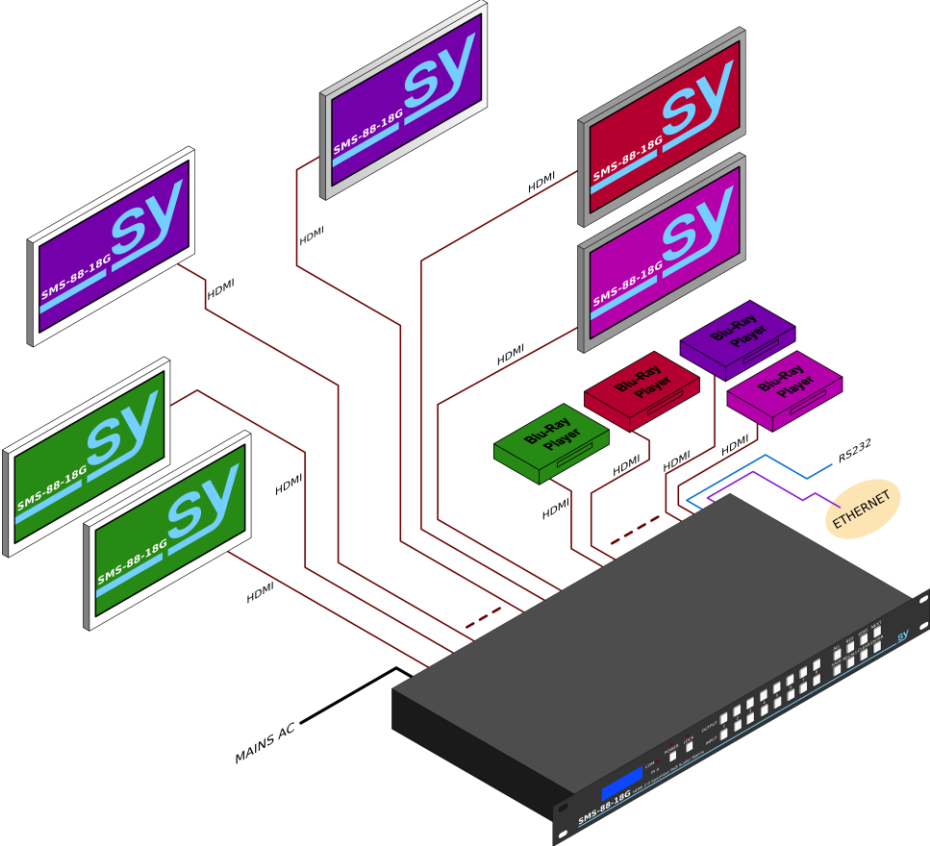


Figure 1 - SY-SMS-88-18G System Connection

RS232 Control

The SY-SMS88-18G can also be controlled using RS232 from PC software or by using RS232 commands (see separate RS232 Command Protocol document). This section will only detail controlling the unit from the RS232 software.

- Connect an RS232 port from the PC or laptop to the 9-way D connector on the rear of the matrix switcher.
- Start the RS232 software by clicking the **Matrix-PC-tool.exe** icon:



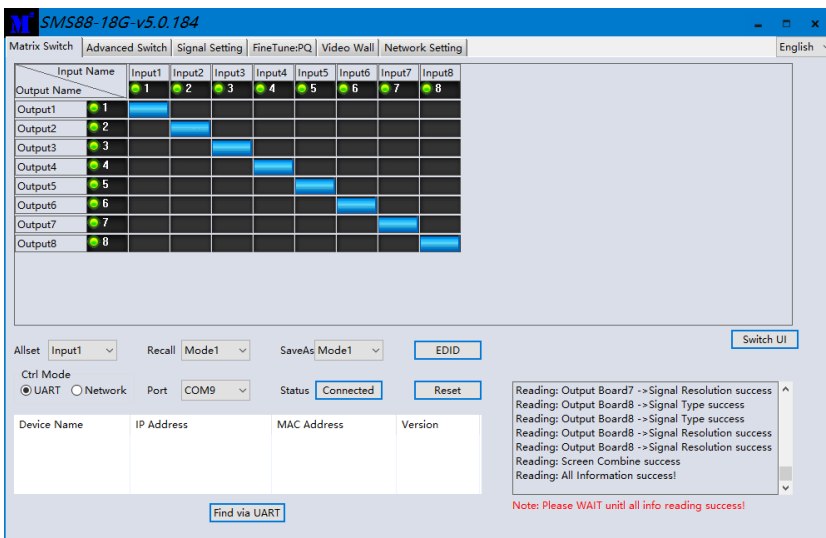
- The software will begin with a login prompt:

Account: Administrator
Password:
Buttons: Login, Cancel, Modify

The default Administrator password is **111111**. The default User is **000000**. To change either of the passwords, select **User** or **Administrator** from the **Account** list, enter the new password and click **Modify** to accept it or **Cancel** to reject the new password entry. Re-enter the new password and click **Login** to proceed to the next screen.

- Wait for the PC software to complete configuring itself.

When the PC software is ready a screen similar to the following will be displayed:



Note that the Port value may be different for each PC or laptop that the controller software is run from.

The **Ctrl Mode** control group allows the PC software to use either RS232 (**UART**) or a TCP/IP (**Network**) connection. To use a network connection, first set **UART** as the **Ctrl Mode** and then click the **Find via UART** button. When the IP address is displayed, **Network** can be selected as the control mode. When the Control mode is set to Network, the Find via UART button changes to **Search Device**. Using the **Search Device** button may require additional firewall permissions by Windows.

The green indicators show which inputs and outputs had video present when the software started up. Where there was no video present, the respective indicator is shown as grey. To refresh these indicators, click the **Connected** button twice.

Controlling the Matrix Switcher

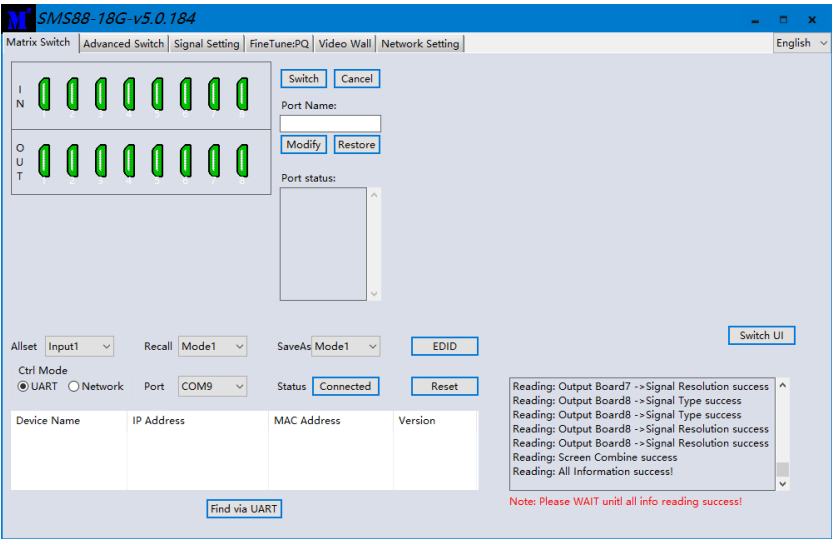
To make video selections, click anywhere within the grid region and the blue marker will change to the new selection, indicating the updated status of the HDMI matrix.

To quickly set all the outputs to a single input, select that input from the **Allset** drop-down list. The action will be performed immediately, and the upper grid region will show the new selection status.

A matrix selection can be stored to a preset memory by selecting from **Mode1** to **Mode8** from the **SaveAs** drop-down list. This action is immediate without any prompts.

A matrix selection can be recalled from a preset memory by selecting from **Mode1** to **Mode8** from the **Recall** drop-down list. This action is immediate and will be shown by changes to the video selection markers.

Clicking the **Switch UI** button will change the control interface to the following control screen:



The connectors shown in green are those that had video present when the software started up. To refresh these indicators, click the **Connected** button twice (once to Disconnect, the again to Re-Connect).

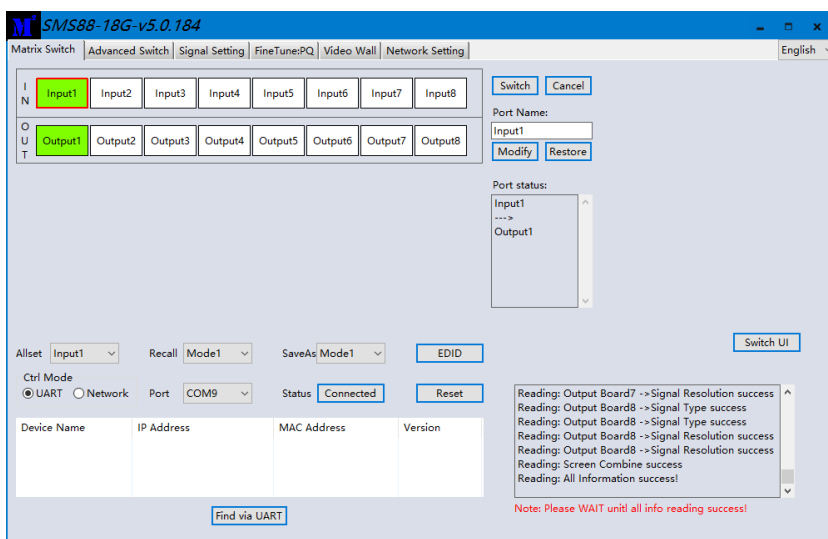
Making video selections

1. Click one of the input connectors.
2. Click one or more of the output connectors.
3. Click **Switch** to confirm the selection, or **Cancel** to remove the selections.

Clicking on any of the input connectors will highlight some of the Output connectors to show which outputs that input is routed to.

The Port Name box allows the naming of the inputs and outputs, which will then be used in the **Port status** window as, for example, If the **Port name** is changed to **BluRay**, then **Port status** window will display **Input1(BluRay)**. Click the **Modify** set the new name, or **Restore** to cancel the name update. Note the Restore button does not clear any changes made previously.

Clicking the **Switch UI** button again will change the control interface to the following control screen:



The top row (IN) will only highlight the input number that was clicked. The boxes in the bottom row (OUT) are highlighted in green to indicate each output that the selected input is routed to.

Making video selections

1. Click one of the input boxes.
2. Click one or more of the output boxes.
3. Click **Switch** to confirm the selection, or **Cancel** to remove the selections.

Clicking on any of the input connectors will highlight some of the Output connectors to show which outputs that input is routed to. If there are no highlighted outputs, then that input is not currently selected to any output.

The Port Name box allows naming of the inputs and outputs, which will then be used in the **Port status** window as, for example, If the **Port name** is changed to **BluRay**, then **Port status** window will display **Input1(BluRay)**. Click **Modify** to set the new name, or **Restore** to cancel the name update.

Note: the Restore button does not remove any modified changes made previously.
Clicking the **Switch UI** button will revert the control interface to the first control screen.

EDID Management

Click the EDID button from any of the three Control panels to open the EDID panel:

To use this panel, do one of the following options first:

- **Read EDID from an Output** – Select the output to read from in the top row of selection buttons and then click **Read**.
- **Load an EDID File from disk** – Click **Open** and select the EDID binary file from the File Browse window that opens.

Either of the above options will fill the lower panel with the binary EDID data from the display at the selected output or from the chosen EDID file.

To set an input to the loaded EDID data:

1. Select an input number to accept the EDID data.
2. Click the **Write** button.

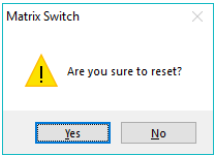
The EDID data is stored to the **EDID Manual** option of that input. Use the front panel to set that input to **EDID Manual** to make updated the EDID active.

To save the EDID data to a disk file after reading from any output:

1. Click the **Save** button and a file browse window will open.
2. Select the location and enter a filename to save the EDID data to and click the **Save** button. Be sure to include the .bin extension when entering the filename as it will not be added automatically when clicking the **Save** button.

Reset to Factory Defaults

The **Reset** button should be used with caution as clicking **Yes** to the following warning message will reset the SY-SMS88-18G matrix switcher back to its factory defaults.

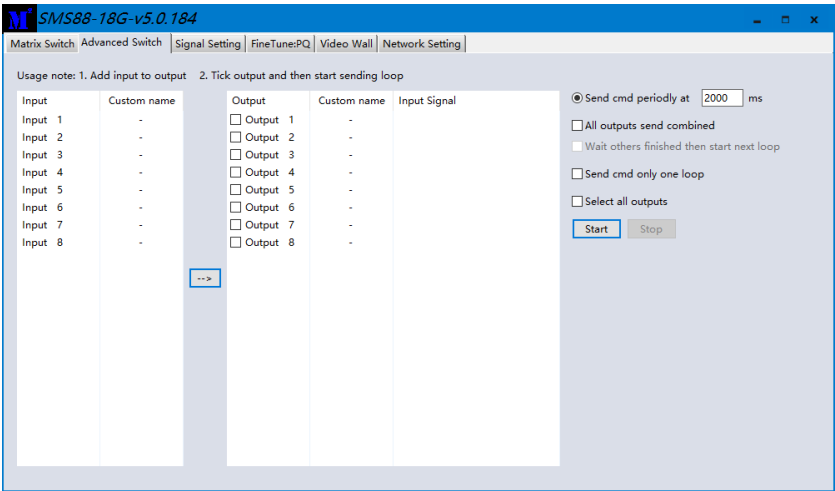


The following items will be affected:

- All named inputs and outputs will lose their names.
- All outputs will be set to 4K2K@30Hz.
- Any video wall configurations will be deleted.
- All preset memories will be cleared to the default setting.

Note that any programmed IP settings are not affected by the **Reset** command.

Advanced Switch Tab



The Advanced Switch tab will repeatedly send a batch of matrix selection commands at the interval specified in the value box after **Send cmd periodically at** text.

1. Select one or more outputs.
2. Select one input.
3. Use the arrow button (--) to assign that input to the selected output or outputs.
4. When all required selections have been made, click the Start button to run the commands.

The available options are:

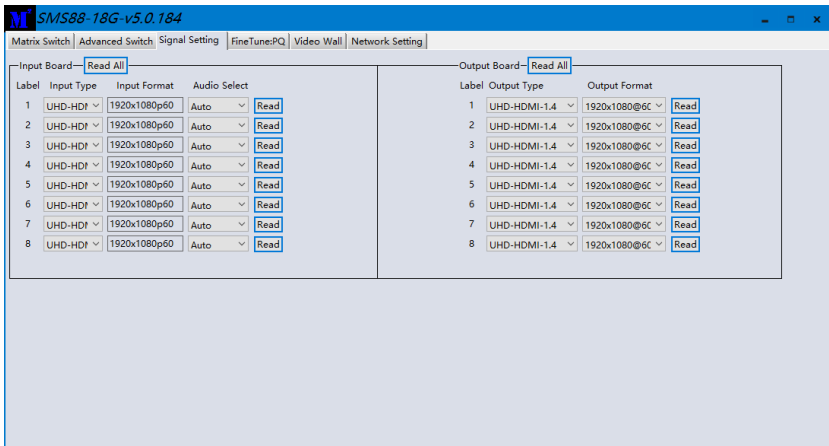
- **All outputs send combined** – Include all outputs that have the same input number as a single command.
- **Wait others finished the start next loop** – Wait for all commands in the previous pass

to complete before sending the next batch of commands.

- **Send cmd only one loop** – Only send a single batch of commands.
- **Select all outputs** – Selects all outputs when checked. Unselects all outputs when unchecked.
- **Start** – Begin the command cycles.
- **Stop** – Stop the command cycles.

Signal Setting Tab

The **Signal Settings** tab reports the connected signal states along with the input EDID setting and the output Resolution setting.



Input Board

The **Input Board** is for information only as none of the settings can be changed, but each or all of them can be read at any time by clicking on the respective **Read** or **Read All** button.

Output Board

The **Output Board** allows the setting of the output signal type and the output resolution.

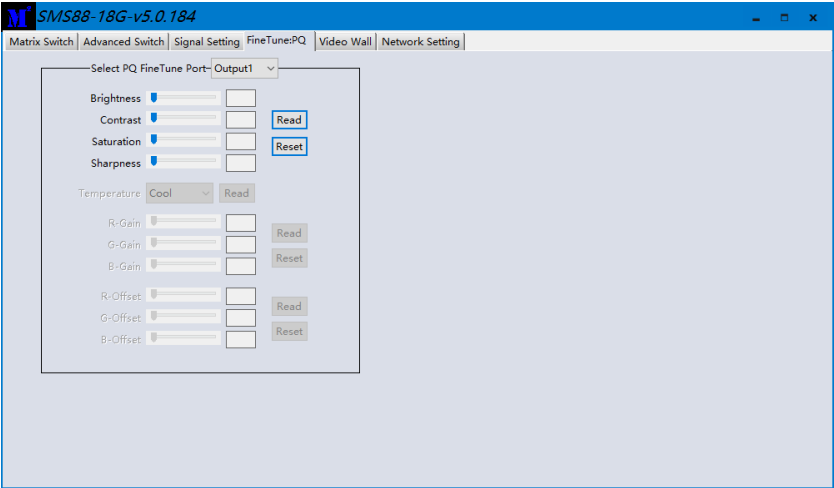
The **Output Type** column allows each output to be set to one of the following options:

- **UHD-HDMI** – Sets the respective output signal to HDMI with HDCP pass-through.
- **UHD-DVI** – Set the respective output signal to DVI, with no audio output.
- **UHD-HDMI-1.4** – Sets respective the output signal to HDMI with HDCP 1.4 compliance.
- **UHD-HDMI-2.2** – Sets respective the output signal to HDMI with HDCP 2.2 compliance.

The Output Format column allows the setting of the resolution for each output. The available resolutions are the same as those given in **Setting the Output Resolution** given on page 6.

Fine Tune:PQ

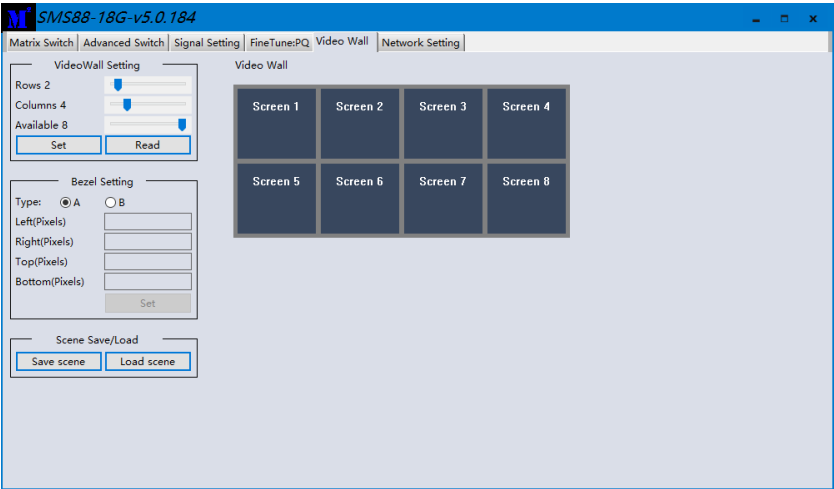
The **Fine Tune – PQ** tab allows adjustment of each of the output signals.



Adjust the Brightness, Contrast, Saturation and Sharpness sliders to the selected output to adjust the image quality of that output. Use the **Read** button to obtain the current values and the **Reset** button to restore the factory default values.

TV Wall

The TV Wall tab is used to configure a group of outputs to function as a video wall.



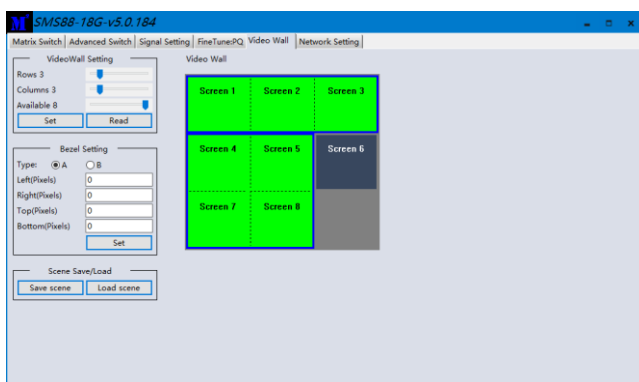
1. Use the Video Wall Setting controls to change how the displays are arranged on the Video Wall tab:
 - a. Adjust the Rows and Columns sliders to change the displayed screen

arrangement to permit proper Drag-and-Select of the desired screens for the video wall.

- b. Change the Available slider to set how many outputs will be used for the Video Wall.
 - c. Click the **Set** button to change the Screen configuration on the Video Wall tab.
2. Use the left mouse button to drag-select the screens that will be set for video wall mode. The selected screens will be shown as bright blue.
3. Use the right mouse button to open a menu.
4. Select **Screen Stitching** from the menu to program the video wall mode. The selected screens will now be shown as bright green.
5. To change the displayed image: either use the methods detailed in the section **Controlling the Matrix Switcher** starting on page 10, or right-click to open the pop-up menu and select the desired input from the **Input Select** menu option.

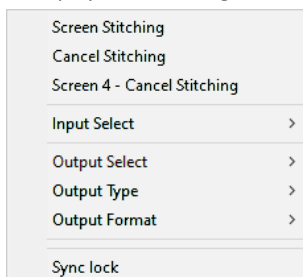
Repeating steps 2 to 5 above with a different set of outputs allows the creation of a second video wall. However, changing the **Rows**, **Columns** and **Available** sliders will automatically delete the current video wall set up when the **Set** button is clicked.


The following example shows a more unusual video wall set-up of two video walls with 1x3 and 2x2 configurations:



Video Wall Context Menu

Right clicking on any of the screen icons will display the following context menu:



Screen Stitching	This option connects the selected screens into a video wall configuration.
Cancel Stitching	Return the Video Wall configuration to normal outputs.
Screen x – Cancel Stitching	<p>Removes the single screen x from the video wall to allow the displaying another full frame image within the video wall configuration, as shown in this example:</p>  <p>Video Wall display with bezel compensation and different full frame image on display 3</p>
Input Select	Use the sub-menu to select the input to display on the video wall or the secondary input image shown in the above example.
Output Select	This option is only available for any screen that is not assigned to a video wall mode.
Output Type	This option is only available for any screen that is not assigned to a video wall mode. It allows setting of the selected screen output mode as described in the Output Board section on page 14.
Output Format	This option is only available for any screen that is not assigned to a video wall mode. It allows setting of the output resolution for the selected screen output.
Sync Lock	This option is only available for Video Wall set ups. It is used to turn the Sync Lock mode to reduce image edge tearing between the video wall screens.

Bezel Setting

The Bezel Setting section allows the entry of values to compensate for the display bezel thickness. These values may be entered either as pixels (Type A) or as millimetres (Type B).

Type A Bezel Settings

The image size will be adjusted to allow for the number of pixels entered in each of the entry boxes. Click the **Set** button view the effect of the new values.

Type B Bezel Settings

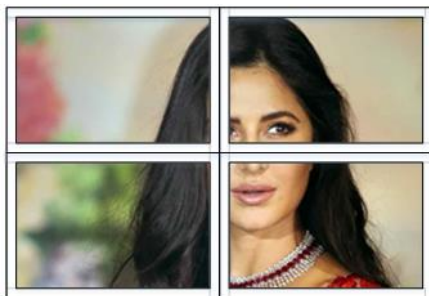
The image size will be adjusted to allow for the Inner and Outer display dimensions as entered in each of the entry boxes. Click the **Set** button view the effect of the new values.

Bezel Compensation

The following images demonstrate the effect of not having bezel compensation and what a correctly configured bezel compensation settings should produce:



No Bezel Compensation



Correct Bezel Compensation

Scene Save/Load

The Save Scene and Load Scene buttons allow a video wall configuration to be saved or recalled at any time. Up to seven configurations, each with their own name can be saved or recalled. When saving, each Scene can optionally be given a name to identify that video wall scene setup.

Network Setting Tab

The Network Setting tab allows configuration of the network parameters.

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Matrix Switch | Advanced Switch | Signal Setting | FineTune:PQ | Video Wall | **Network Setting**

Search List (Click device to load configuration)

Device Name	IP Address	MAC Address	Version

Search Device | Open Website | Find via UART

Basic config

UPNP Port: Device Name:
 HTTP Port: MAC Address:
 Device ID: IP Type:
 Device ID Type: Static IP:
 User Name: Subnet Mask:
 Password: Gateway:

Save Config

Select config port

☐ Port 0 ☐ Port 1 ☐ Port 2

Baud Rate:
 Parity/Data Bit/Stop Bit:
 Stream Control:
 Device Port:
 PC Port:
 PC IP/Domain:
 Work Mode:
 TCP Server connect.co:
 TCP Server style:
 ModbusTCP:
 Package time(ms):
 Package Length(Byte):
☐ Sync BaudRate(RFC2217 similar)

Save Config

The **Search Device** button also requires a network connection to complete. The **Find via UART** button only requires an RS232 connection.

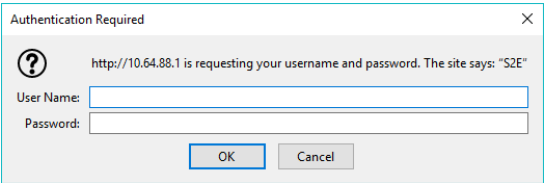
Click either **Search Device** or the **Find via UART** button to obtain the current network parameters of the SY-SMS88-18G unit.

Use this form to make any required changes to make the matrix switcher become visible on the network it is connected to and click **Save Config** button to program the changes.

The **Open Website** button will open the built-in WebGUI form in the default web browser.

Using the Built-In WebGUI

The built-in WebGUI interface provides only basic control of the matrix switcher and access to the network settings. The following will be displayed when the web interface is access each time:

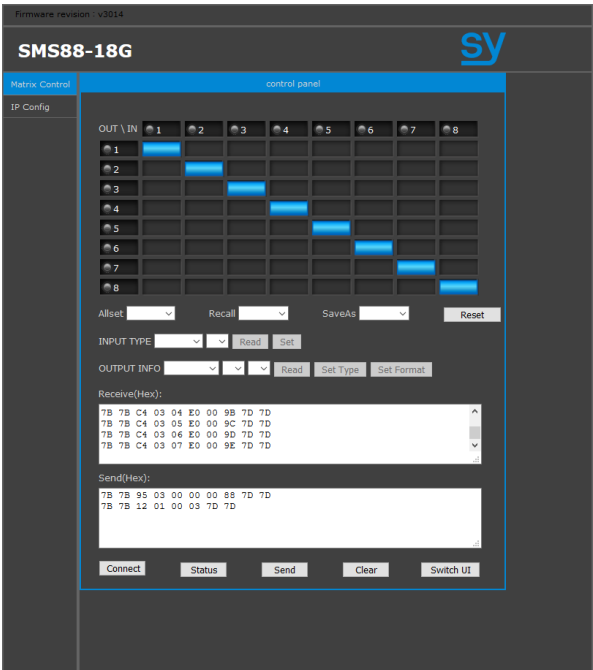


The default User Name is: **admin**

The default Password is: **admin**

Controlling the Switcher

After entering the **User Name** and **Password** a screen similar to the following will be displayed:



The **Matrix Control** panel is used to control the signal routing of the matrix switcher.

The **Allset** control will set all outputs to the selected input number from the list.

The **INPUT TYPE** section is for information only as there are no configurable settings available.

The **OUTPUT TYPE** section will set the setting for the output selected in the first list to the values selected in each of the remaining selection boxes. Click the **Set Type** button to set the output type or click the **Set Format** to set the output resolution.

The **Reset** button will, after accepting the next confirmation box, reset the SMS88-18G back to factory defaults.

The **Connect** button is used to obtain a full update from the matrix switcher. The **Status** button only retrieves a short status update from the matrix switcher.

The **Send** button will send any command entered into the **Send(Hex)** box to the matrix switcher.

The **Clear** button will remove the contents of both the Receive and Send boxes.

The Switch UI toggles between the above interface and this one, shown below:

The screenshot shows the 'control panel' of the SMS88-18G device. It features a sidebar with 'Matrix Control' and 'IP Config' tabs. The main area contains controls for 8 input and output channels, each with a dropdown menu. Below these are buttons for 'Allset', 'Recall', 'SaveAs', and 'Reset'. There are also 'INPUT TYPE' and 'OUTPUT INFO' dropdowns with 'Read' and 'Set' buttons. Two hex input fields are present: 'Receive(Hex):' and 'Send(Hex):'. The 'Receive(Hex):' field contains a list of hex values: 2A 2B 2D 2D 44 2D 2D 2D 55 30 30 30 55 30 31 30 31 55 30 32 30 32 55 30 33 30 33 55 30 34 30 34 55 30 35 30 35 55 30 36 30 36 55 30 37 30 37 2D 2D 23 7B 7B 11 08 00 01 02 03 04 05 06 07 25 7D 7D. The 'Send(Hex):' field contains: 7B 7B 95 03 00 00 88 7D 7D and 7B 7B 12 01 00 03 7D 7D. At the bottom are buttons for 'Connect', 'Status', 'Send', 'Clear', and 'Switch UI'.

This interface provides all the same control functions as the previous interface.

The two boxes for **Receive** and **Send** provide visual indication of the control commands being sent via the LAN connection.

IP Config Tab

The screenshot shows the 'IP Config' tab of the SMS88-18G device. It features a sidebar with 'Matrix Control' and 'IP Config' tabs. The main area contains a 'parameter' section with a dropdown for 'IP type: Static IP'. Below this are input fields for 'Static IP:', 'Submask:', 'Gateway:', and 'Dns Server:'. Each field has a dropdown menu and a numeric input field. The 'Static IP:' field has values 10, 64, 0, 88. The 'Submask:' field has values 255, 0, 0, 0. The 'Gateway:' field has values 10, 64, 0, 1. The 'Dns Server:' field has values 10, 64, 0, 1. At the bottom are buttons for 'Save' and 'Cancel'.

The IP Config tab is used to change the IP settings of the matrix switcher. Enter any necessary changes and click **Save** to program the switcher to the new settings, or **Cancel** to reject the changes.

Specifications

Video

Input HDMI formats supported	All HDMI resolutions to 4096x2160p 60Hz 4:4:4 Examples: 4096x2160p 24/25/30/50/60Hz 3840x2160p 24/25/30/50/60Hz 1080p 24/25/30/50/60Hz 1080i 50/60Hz 1920x1200 60/65/75Hz 1680x1050 60/75Hz 1600x1200 60/65/70/75Hz 1600x1024 60/75Hz 1600x900 60/75Hz 1440x900 60/75Hz 1400x1050 60/75Hz 1366x768 60Hz 1360x768 60Hz 1280x1024 60/72/75/85Hz 1280x960 60/75/85Hz 1280x800 60/75Hz 1280x768p 50/60/75Hz 1280x720p 25/30/50/60/75Hz 1024x768p 60/70/75/85Hz 800x600p 60/72/75/85Hz 720x576p 60Hz 640x480p 60/65/85Hz
Output Scaled HDMI Video (Scaled for each output)	3840x2160p 60Hz 3840x2160p 50Hz 3840x2160p 30Hz 3840x2160p 25Hz 1920x1200p 60Hz 1920x1080p 60Hz 1920x1080p 50Hz 1600x1200 60Hz 1400x1050 60Hz 1366x768 60Hz 1360x768 60Hz 1280x1024 60Hz 1280x768 60Hz 1280x720p 60Hz 1280x720p 50Hz 1024x768p 60Hz
HDMI Version	HDMI 2.0
HDMI Bandwidth	18Gbps
HDCP Version	HDCP 1.4 and HDCP 2.2

Audio

Audio Input	L+R 3.5mm Stereo Jack. 20Hz – 20kHz, 1.5Vrms max.
Audio Output	L+R 3.5mm Stereo Jack. 20Hz – 20kHz, 1.5Vrms max.

Control and Power

Control Ports	RS232, IR or LAN
RS232 Settings	57600, 8 bits, no parity, 1 stop bit
Power Supply	110~240V AC
Power Consumption	100W max.

Environmental

Operating Temperature	0 to +40°C (+32 to +104°F)
Operating Humidity	10 to 50 % RH (non-condensing)
Weight	5kg

Physical

Dimensions (WxHxD)	430 x 44 x 300 mm (19in 1U rack mounting)
Case Material	Steel chassis

Package Contents

Item	Qty
SY-SMS88-18G unit	1
SY-SMS88-18G User Manual	1
Rack mounting brackets	2 (already fitted)
AC Power cord (IEC 60320 C13)	1

Safety Instructions

To ensure reliable operation of this product as well as protecting the safety of any person using or handling this device while powered, please observe the following instructions.

1. This product is powered directly from a mains outlet. **DO NOT** open this product as doing so will increase the risk of electrical shock.
2. Do not operate either of this product outside the specified temperature and humidity range given in the above specifications.
3. Ensure there is adequate ventilation to allow this product to operate efficiently.
4. Repair of the equipment should only be carried out by qualified professionals as these products contain sensitive devices that may be damaged by any mistreatment.
5. Only use this product in a dry environment. Do not allow any liquids or harmful chemicals to come into contact with these products.
6. Due to the weight and physical size of some of these matrix switchers, correct Manual Handling and Lifting procedures should be observed at all times while handling these products in order to minimise the risk of injury.

After Sales Service

1. Should you experience any problems while using this product, firstly refer to the Troubleshooting section in this manual before contacting SY Technical Support.
2. When calling SY Technical Support, the following information should be provided:
 - Product name and model number
 - Product serial number
 - Details of the fault and any conditions under which the fault occurs.
3. This product has a two year standard warranty, beginning from the date of purchase as stated on the sales invoice. Online registration of this product is required to activate the full three year extended warranty. For full details please refer to our Terms and Conditions.
4. SY Product warranty is automatically void under any of the following conditions:
 - The product is already outside of its warranty period
 - Damage to the product due to incorrect usage or storage
 - Damage caused by unauthorised repairs
 - Damage caused by mistreatment of the product
5. Please direct any questions or problems you may have to your local dealer before contacting SY Electronics.

NOTES