SUMOLIGHT

SUMOSPACE

User Manual

Webpage & Configurations

July 2018

Contents

SUMOSPACE WEBPAGE & CONFIGURATIONS

SUMOSPACE WEBPAGE

The SUMOSPACE's built in web-server provides the user with additional information and grants access to advanced parameters.

The SUMOSPACE webpage is supported by Safari (iOS/MacOS), Chrome and the latest Firefox version.

The standard browser on Android devices and Internet Explorer are also supported.

NOT supported is Opera.

For older versions it is recommended to use Google Chrome on all Android devices.

Accessing the Web-Server of the SUMOSPACE

You can connect your PC to the SUMOSPACE by simply using a CAT5 cable between the computer's and the SUMOSPACE's LAN-Port and by typing in the address field of your browser: "**http:**//**sumo**"

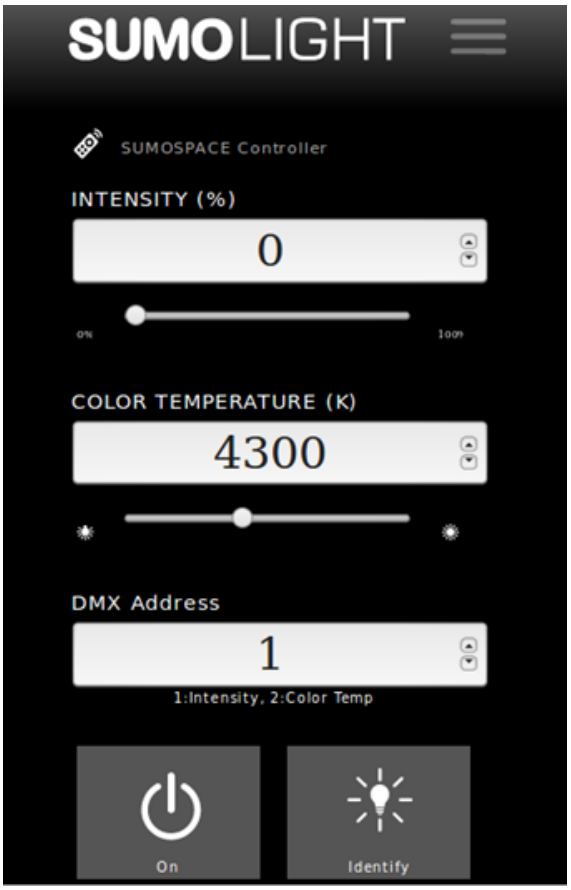
It is also possible to connect your PC or Smartphone directly to the SUMOSPACE without any other equipment wirelessly. Please follow these steps for connecting to the SUMOSPACE portal via WiFi:

Steps	How to
STEP 1: CONNECT DEVICE	Connect Phone, Tablet or PC to WLAN.
STEP 2: SELECT WiFi NETWORK	SSID: **Sumo_[all non-zero digits of the Serial Number]** Password is NOT required (unless the fixture is set to Master-Mode; see page 10 and 12 for more info).
STEP 3: OPEN SUPPORTED BROWSER	Type in the address field: **http:**//**sumo** And wait for the Webpage to be loaded. For SUMOLSPACE masters ONLY: Connect your phone/tablet /PC to SSID Sumo_master_xxx. or type the following IP Address into the browser: **192.168.110.1:9090** Use password "**sumo_master_key**". (see page 10 for more info)

The **SUMOSPACE Controller** webpage will open at start.

Go to the **Menu** to change to other pages via the **Menu Button** ☰ in the upper right corner of the webpage.

WEBPAGE SUMOSPACE Controller



These are the control elements of the webpage SUMOSPACE Controller:

Control Elements	Function
INTENSITY, Display and slider	Intensity control display. Set Light Intensity from 0 - 100% with the slider.
COLOR TEMP, Display and slider	Kelvin Color Temperature control display. Set Color Temperature from 2800 - 6500 Kelvin.
DMX CHANNEL	DMX start address control window. Set DMX channel from 1 - 511.
STANDBY BUTTON "On"	Press once to reduce INTENSITY to zero. Press it again, INTENSITY will revert to the previous level.
IDENTIFY BUTTON	While this button is active, the fixture will fade from 0-100% periodically. Same functionality as the RDM IDENTIFY

WEBPAGE Menu

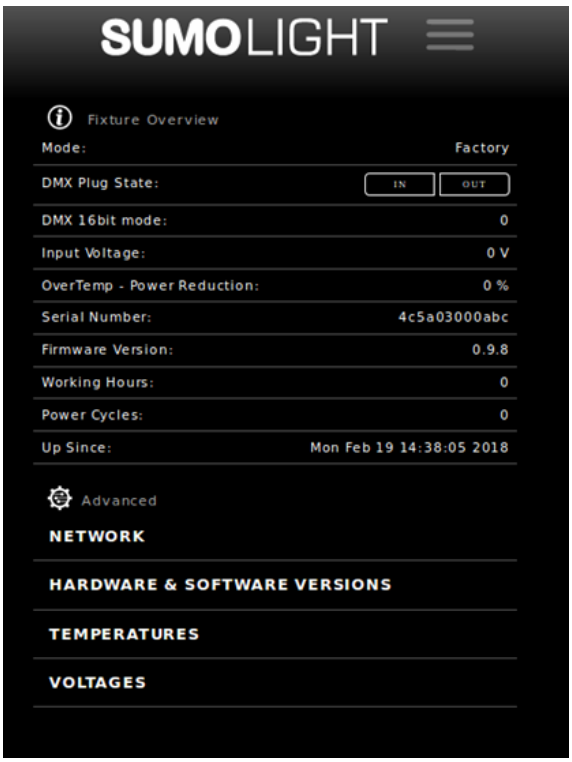
Access the **Menu** to change to other pages via the **Menu Button** ☰ in the upper right corner of the webpage.

Control Elements	Function
Menu Button ☰	Display/hide **Menu**
SUMOSPACE Controller	Open **SUMOSPACE Controller** webpage
Configuration/Network	Open **Configuration Network** webpage.
Fixture Overview	Opens **Fixture Overview** webpage with readouts of important parameters (read only)
STANDBY BUTTON ⏻	Press once to reduce **INTENSITY** to zero.
RESET BUTTON, Default Settings	Switches between the fixtures Factory Default Settings and the User Settings. Status Indicator, see SUMOSPACE Quickstart Guide.
IDENTIFY BUTTON	While this button is active, the fixture will fade from 0-100% periodically. Same functionality as the **RDM IDENTIFY**.

WEBPAGE Fixture Overview

The **Fixture Overview** page displays readouts of the important parameters of the fixture like the operating temperature and voltage or the hard and software version numbers used.

All parameters on this page are read only and can't be edited.



Display Elements	Function
Mode	Factory / User
DMX Plug State	IN OUT, plugged sockets will have white color
DMX 16bit mode	0 / 1 (OFF/ON)
Input Voltage	normal range 385 - 410 V
OverTemp - Power Reduction	0-100% , normally 0 %, if >0%, please reduce intensity
Serial Number	4c5a0x000xxx
Firmware Version	0.9.7 or higher
Working Hours	only full hours are counted
Power Cycles	the number of times the fixture has been powered on
Up Since	the date the light was first up for the first time

Advanced - NETWORK

Display Elements	Function
IP Address	current IP, default IP is 192.168.111.1
Broadcast Address	ends with .255, default is 192.168.111.255
Subnet Mask	default is 255.255.255.0
MAC Address	the device's unique MAC Address
WiFi Mode	ap (acces point) or sla (slave)

Advanced - HARDWARE & SOFTWARE VERSIONS

The following parameters contain important information for service. If possible, provide us with this in the case of a malfunction.

Display Elements	Function
Display Hardware Version	>= 3
Display Software Version	>=30
DMX Hardware Version	>= 3
DMX Software Version	>=30
Buck Hardware Version	>= 3
Buck Software Version	>=26
Router Software Version	>= 0.9.7 (most important)

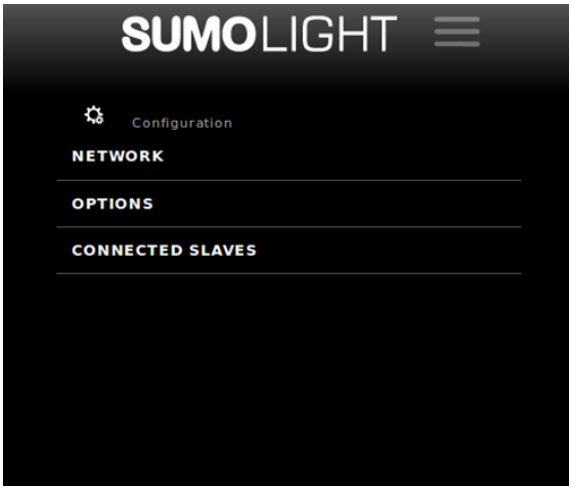
Advanced - TEMPERATURES

If the LED board exceed temperatures higher than 85°C the fixture will reduce the light output intensity. This will be indicated by the Power reduction factor in %. It is recommended that the Intensity remains at a lower percentage in order for the fixture to cool down.

Reading Point	Display Voltage Range
INPUT	380 - 410 V
LED	190 - 350 V
BUCK	2900 - 3500 mV
DMX	2900 - 3500 mV
Display	2900-3500 mV

WEBPAGE Configuration Network

This page provides important parameters for user interface, network and DMX control.
Click on a heading and a list of changeable parameters will show up.



NETWORK

The WiFi routers that the fixture connects to can be edited here. Also local routers can be added. As a default there are two predefined routers in the list. The "Sumo_master" and the "ShineBox-Kit".
When connected to a router, several fixtures can be controlled at the same time via an ARTNET/sACN App that is broadcasting to the router.

Network protocols

The fixture supports DMX over LAN/WLAN Networks in sACN (E.1.31) and ARTNET protocols. Currently RDM over ARTNET is not supported.

Use the following setup in your controller:

SACN / E-1.31 : mode unicast, universe 1
Artnet: mode broadcast, address 255.255.255.255, universe 1

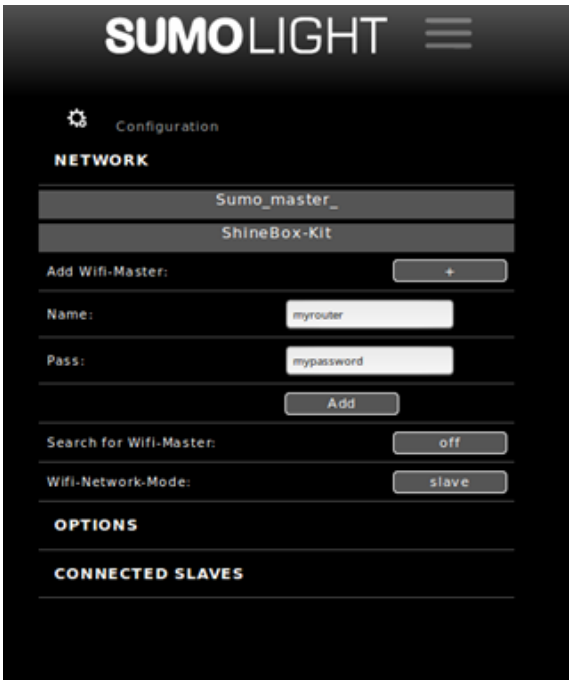
Working with a SUMOSPACE Master/Router

A SUMOSPACE in Master Mode is way to control multiple SUMOSPACEs without the need of additional hardware except a smartphone. A standard network router is also suitable to control multiple fixtures with the use of DMX. WLAN- and Ethernet-LAN networks are both supported. If you prefer Ethernet-LAN, connect the fixture to the router through its RJ-45- WAN Port. In this case, the fixture acts as a network-switch and the WAN Port is fed through the LAN Port. This gives the possibility to daisy chain multiple fixtures. Make sure that the router's IP ends with .1, .2 or .254.

However, using multiple fixtures on WLAN, the router must be added to the list of WiFi Masters. The WiFi Masters list is stored permanently, and this action is only needed to be performed once.
Supported router by default are ShineBox® by Lighticians Inc and a SUMOSPACE in Master Mode.

If you work with a SUMOSPACE as master it is not necessary to add it to the list of masters to search for.

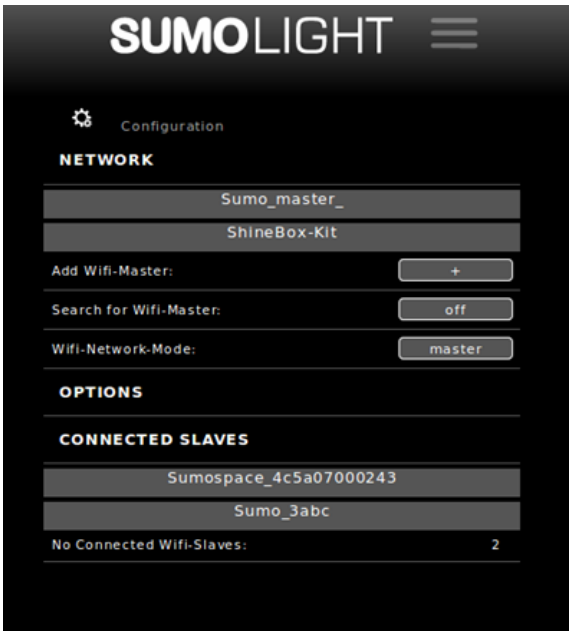
Master Function



If **WiFi-Network-Mode** "**master**" is selected, the fixtures IP-address will change to 192.168.110.1 and its SSID will change to Sumo_master_xxxx and requires a password (sumo_master_key). Please power down the fixture and switch it on again. After complete boot up the mode LED on the display will turn red. The SUMOSPACEs which are in slave mode with enabled parameter "Search For Wifi Master" will connect to this master and receive via DHCP an IP-address in the range of 192.168.110.100-255. Their displays will show this IP for a short time when they connect to the master.

The connected slaves will be shown in a list on the webpage of the master.

Connected slaves



The entries in the list function as link-buttons that will open the webpages of the connected slaves in new browser tabs. All parameters of the slave fixtures can be accessed by connecting solely to the master via Wifi. Most of all you will be able to set the DMX start address of each fixture.

Connect your phone to the master and use your Artnet/sACN app to control all Sumospaces. All you have to do is the following:

Steps	How to
STEP 1:	Set only one Sumospace to the master mode. (the master must have firmware version 0.9.7 or newer)
STEP 2:	Activate “Search for Wifi-Master” on all other Sumospaces. (The slaves must have firmware version > 0.9.1)
STEP 3:	Connect your phone/tablet/pc to SSID Sumo_master_xxx. Use password “sumo_master_key”.
STEP 4:	Use webpages or Artnet/sACN app to control all Sumospaces.

Connect Slaves to SUMOSPACE Master/Router

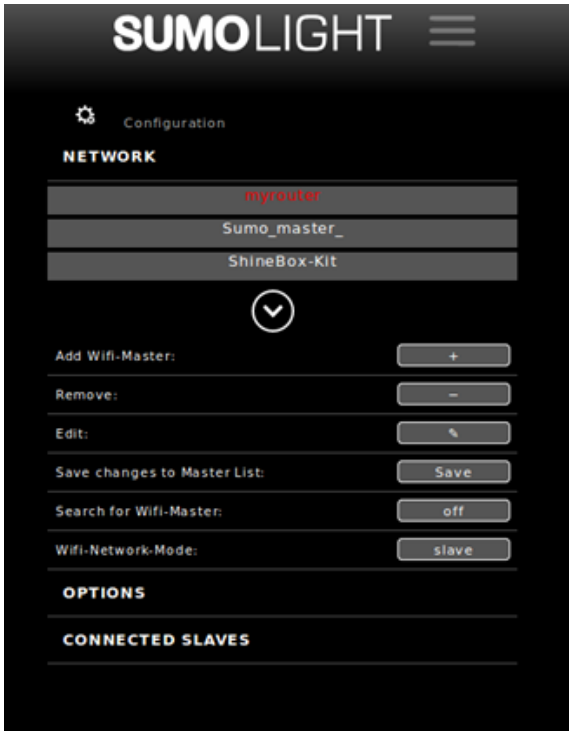
Steps	How to
STEP 1: Connect to slave Webserver	Connect Smartphone/PC to all slave devices one by one. (See page 3)
STEP 2: Configure Slaves	Set **Search for Wifi-Master** to the **ON** position. If you connect to a SUMOSPACE master, you can find a link to the slave's webpage on the master's network webpage. If using another router, a network sniffer tool is necessary to obtain the IP address of a slave and access its webpage. Access to the webpage, via the new IP address. Access to the webpage-server via 192.168.111.1 will no longer be available. Use a network sniffer to find out the fixture's IP. Connect to the with the full browser IP Address and add the Port **:9090** to the end of the IP address.

Reverting Connection

If you want to access a SUMOSPACE slave under the predefined IP address 192.168.111.1:9090 or its http address **http://sumo** deactivate the **Search for WiFi-Master**.

Steps	How to
STEP 1:	Deselect **Search for WiFi-Master** or reset to Factory Default 5+ seconds. Webpage access via IP 192.168.111.1:9090 will be restored. The list of wireless routers will not be affected by the reset.
STEP 2:	Connect to the Web-Server of the SUMOSPACE, see page 3.

Adding a WiFi Router



Steps	How to
STEP 1: ADD NEW MASTER	Add a Name and Password then press **OK** followed by **Submit**. New WiFi Masters will be stored permanently. Change the priority of the connection by sorting the list with the down and up arrow buttons. The top entry in the list will be searched first.
STEP 2: CONNECT TO ROUTER	Set **Search for Wifi-Master** to the **ON** position. Standard to the connection network and to the webpage-server via 192.168.111.1 will no longer be available.

OPTIONS

Caution: Any changes made to these parameters are stored in the fixture's flash memory permanently. In the unlikely case a problem occurs, set back to the factory default values. (See Page 5)

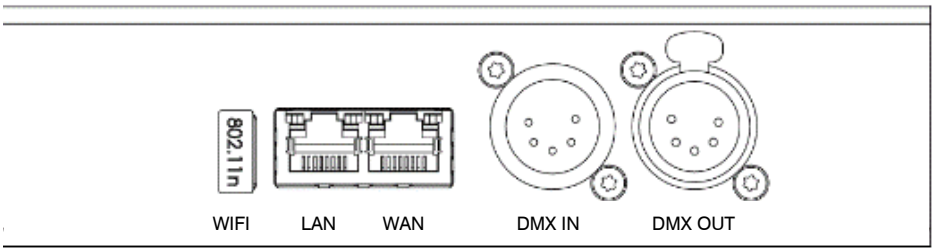
Parameters	Settings
DMX in 1 > 0	Default: **ON** If you work with a DMX Controller's mechanical faders you should leave this option in the ON setting. An incoming 1 will be treated as 0. This prevents flickering if the fader is faulty. This is not mandatory for digital DMX controllers.
SUMOSPACE Controller	Default: **ON** In the ON mode the light will control other SUMOSPACEs with custom RDM - commands over DMX, when only the DMX output is plugged in. This function is supported from firmware version 0.9.1 and upwards. If deactivated the ARTNET/sACN to DMX gateway function will switch to OFF mode.
Auto-Mute-Display	Default: **ON** Switch this off, if you want the display to be on permanently. In ON position, the display will switch off after 60 sec. of last button usage.
DMX 16Bit (4 Channels)	Default: **OFF** Instead of 2 channels in the default off position the fixture has a footprint of 4 channels in on position: DMX address: Intensity MSB DMX add+1: Intensity LSB DMX addr+2: Color Temp MSB DMX addr+3: Color Temp LSB.

SUMOSPACE CONFIGURATIONS

Please note that the fixture requires a two-minute pre load before connecting to a network after the initial boot-up. If a Router is being used, this will need to be switched on first. The SUMOSPACE supports both WiFi and LAN networks.

For small setups, WiFi is most comfortable. We recommend LAN for larger setups.

The WAN Port is located next to the USB port. If connected to a DHCP-Router, the WAN is fed through to the LAN Port. In this configuration the fixture functions as a switch.



SUMOSPACE Control Panel

While being connected to a DHCP-Router the fixture will listen to ARTNET/sACN only in this subnet and the internal Webpage will not be available under IP 192.168.111.1:9090.

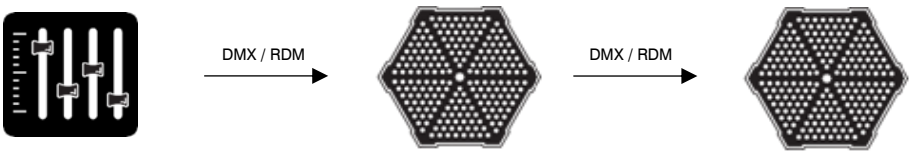
LAN Configurations

Working with an Ethernet DHCP-Router can allow multiple SUMOSPACEs to connect via the WAN Port in a star configuration or by daisy chain. The WAN Port and the LAN Port connect to the next fixture's WAN Port. A combination of star and daisy chain configuration is also possible. The DMX output is available to daisy chain more fixture including non SUMOLIGHT devices.

No router available: Access the Web-Server, see page 3.

Selection of possible Configurations

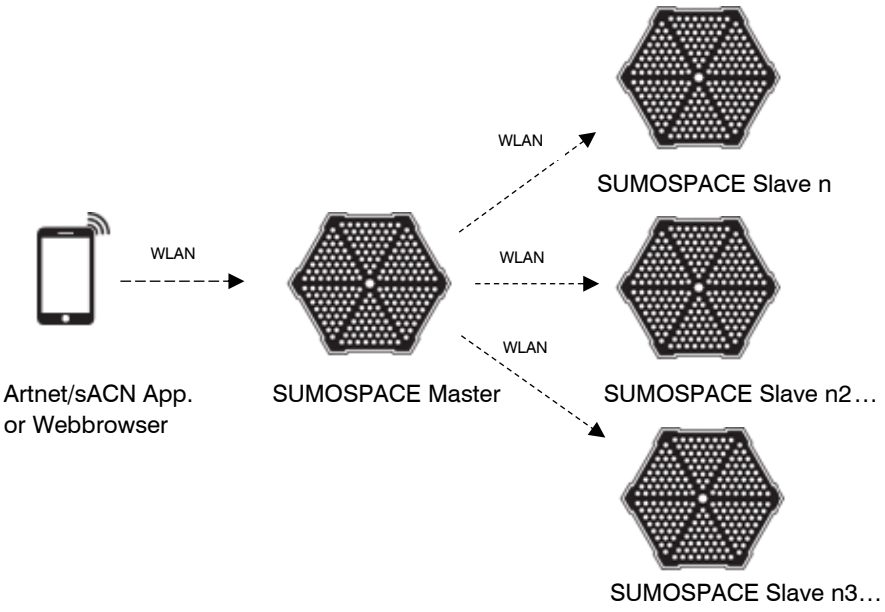
DMX & RDM Controller



DMX or RDM Controller SUMOSPACE n SUMOSPACE n2…

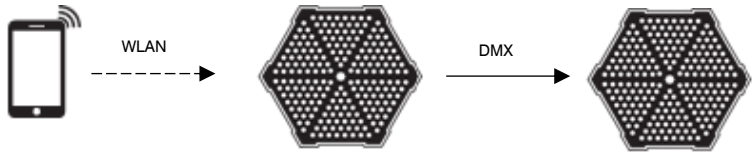
Steps	How to
STEP 1: SETUP ALL N DEVICES	MIX WITH OTHER BRANDS/MODELS Daisy chain devices via DMX, adjust the DMX start address via the display or RDM

Wireless Master | Wireless Slave



Steps	How to
STEP 1: Set SUMOSPACE to Network Master	Connect wirelessly to device Access Point. Look for the serial number on sticker, search for SSID: Sumo_ -serial-number_without_zeros. Open web page in browser **http://sumo.** Go to network page, set **Wifi network Mode** to **Master**.
STEP 2: Set Search for WiFi Master on all SUMOSPACE slaves	Connect wirelessly to all slaves one by one. Look for the serial number on sticker, search for SSID: Sumo_ -serial-numberwithoutzeros. Open web page in browser **http://sumo** Go to network page, activate Search for WiFi Master
STEP 3: WAIT FOR CONNECTION	
STEP 4: Connect Phone or PC to Master	See page 10 for more info.
STEP 5: CONTROL ALL N DEVICES INDIVIDUALLY	Use Artnet, sACN App or webbrowser to control all devices individually.

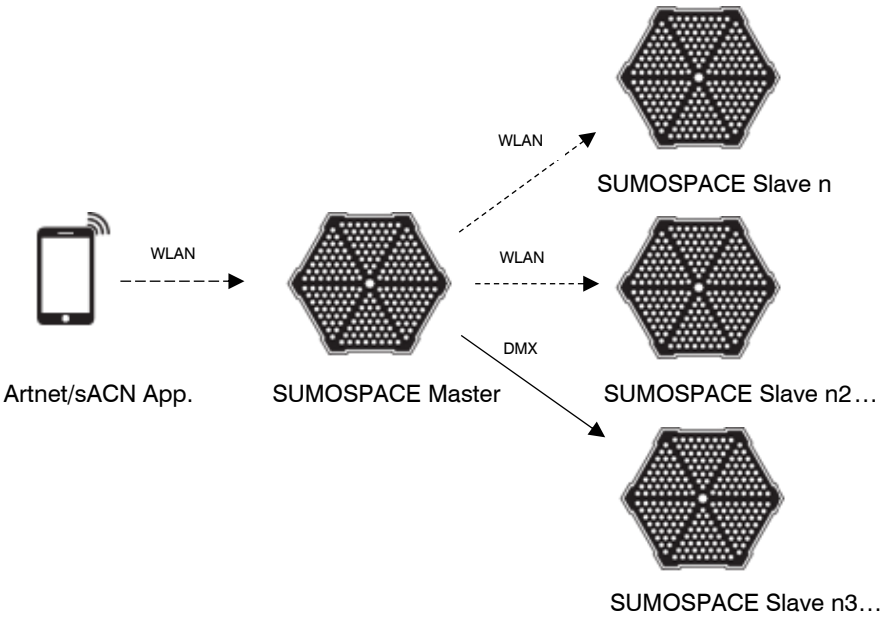
Wireless Slave | sACN Slave with DMX Gateway



Artnet/sACN App. SUMOSPACE slave SUMOSPACE n…

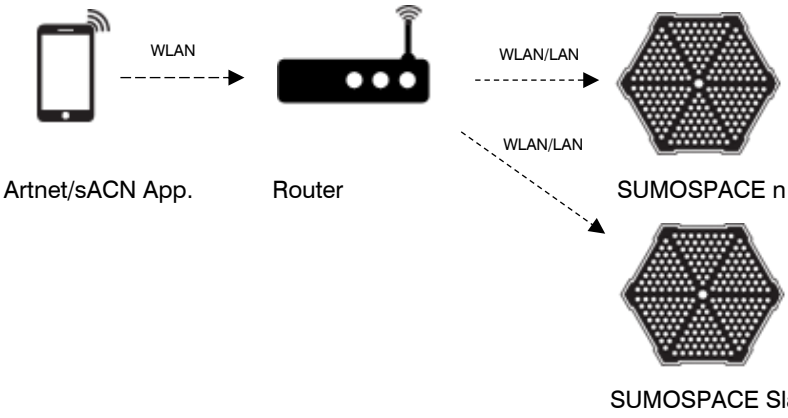
Steps	How to
STEP 1: SETUP ALL N DEVICES	MIX WITH OTHER BRANDS/MODELS POSSIBLE Daisy chain devices via DMX, the first must be a SUMOSPACE, adjust DMX start addresses
STEP 2: CONNECT WIRELESSLY TO DEVICE 1'S ACCESS POINT	Look for the serial number on sticker, search for SSID: Sumospace_4c5a -serial-number
STEP 3: CONTROL ALL N DEVICES INDIVIDUALLY	Use Artnet or sACN App to control all devices individually. Artnet broadcast address: 255.255.255.255

Wireless Master | Wireless Slave with DMX-Gateway



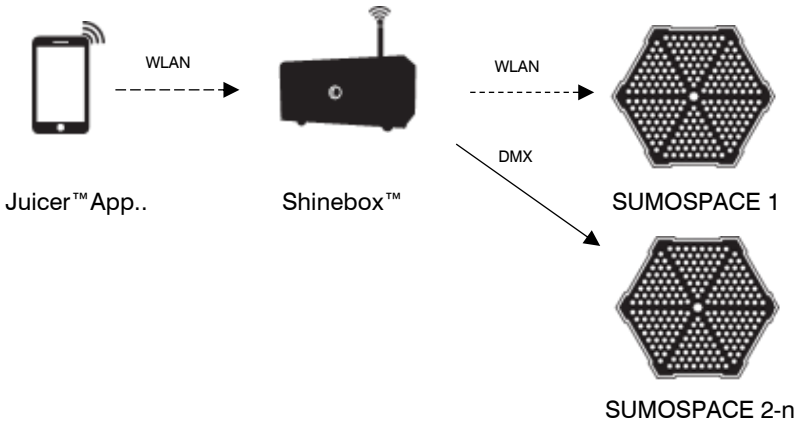
Steps	How to
STEP 1: Set SUMOSPACE to Network Master	Connect wirelessly to device Access Point. Look for the serial number on sticker, search for SSID: Sumo_ -serial-number_without_zeros. Open web page in browser **http://sumo.** Go to network page, set **Wifi network Mode** to **Master**.
STEP 2: Set Search for WiFi Master on all SUMOSPACE slaves	Connect wirelessly to all slaves one by one. Look for the serial number on sticker, search for SSID: Sumo_ -serial-numberwithoutzeros. Open web page in browser **http://sumo** Go to network page, activate Search for WiFi Master
STEP 3: WAIT FOR CONNECTION	
STEP 4: Connect Phone or PC to Master	See page 10 for more info.
STEP 5: CONTROL ALL N DEVICES INDIVIDUALLY	Use Artnet or sACN App to control all devices individually.

Wireless Slave with any Router



Steps	How to
STEP 1: SETUP ALL DEVICES	MIX WITH OTHER BRANDS/MODELS POSSIBLE VIA ETHERNET LAN CAT CABLES Use star configuration (with switches) or daisy chain devices, connect to WAN port of SUMOSPACE, daisy chain via first LAN- Port (Ethernet port II) Adjust DMX addresses via display
STEP 2: SETUP ALL OR A SUBGROUP AS WIRELESS SLAVES	Connect wirelessly to device Access Point. Look for the serial number on sticker, search for SSID: Sumospace_4c5a -serial-number. Open web page in browser 192.168.111.1:9090
STEP 3: CONNECT PHONE/ TABLET/PC TO ROUTER	Search for SSID of router connect via WiFi
STEP 4: CONTROL ALL N DEVICES INDIVIDUALLY	Use Artnet or sACN App to control all devices individually Use Artnet broadcast address: 255.255.255.255

Wireless Slave | SHINEBOX™ by Lighticians Inc



Steps	How to
STEP 1: CONNECT TO ROUTER	Connect wirelessly to device Access Point. Look for the serial WIFI number on sticker, search for SSID: Sumospace_4c5a -serialnumber. Open web page in browser 192.168.111.1:9090 Go to network page, activate Search for WiFi-Master
STEP 2: WAIT FOR CONNECTION	
STEP 3: CONTROL ALL N DEVICES INDIVIDUALLY	Use Juicer App to control all devices individually. Refer to read Juicer App Manual

DMX AND RDM IMPLEMENTATION

DMX Implementation

The SUMOSPACE has two different DMX profiles. They can be selected by either RDM or option DMX 16bit (4 channels) on webpage “configuration network/options”

Personality 1- 8bit dimming (default)

Footprint: 2 channels.

Channel 1: DMX 0-255 is linearly mapped to intensity 0-100%
Intensity is similar to the human perception. The output measured in lux or lumen will rise exponentially with the linearly changed intensity.

Channel 2: DMX 0-255 is linearly mapped to color temperature range of 2800 K to 6500 K

Personality 2- 16bit dimming

Footprint: 4 channels.

Channel 1: DMX MSB of intensity range 0-65535

Channel 2: DMX LSB of intensity range 0-65535
Intensity is similar to the human perception. The output measured in lux or lumen will rise exponentially with the linearly changed intensity.

Channel 3: DMX MSB of color temp range 0-65535

Channel 4: DMX LSB of color temp range 0-65535
0-65535 is linearly mapped to color temperature range of 2800 K to 6500 K

All SUMOSPACEs in the DMX-universe will have identical values for intensity and color-temperature. This feature is helpful, if you have combined several SUMOSPACEs to one big light source, e.g. when using the SUMOLIGHT Super-Mount.

Remote Device Management (RDM) Implementation

The SUMOSPACE is conform to the RDM ANSI-standard E1.20. The following RDM commands are supported:

1. DISCOVERY_COMMAND and DISCOVERY_ COMMAND_RESPONSE PIDs:
DISC_UNIQUE_BRANCH DISC_MUTE DISC_UN_MUTE

2. GET_COMMAND and GET_COMMAND_ RESPONSE PIDs:
DMX_START_ADDRESS DMX_PERSONALITY
DEVICE_INFO SUPPORTED_PARAMETERS
SLOT_INFO SLOT_DESCRIPTION
DEFAULT_SLOT_VALUE IDENTIFY_DEVICE
MANUFACTURER_LABEL
DEVICE_LABEL DEVICE_MODEL_DESCRIPTION
DMX_PERSONALITY_DESCRIPTION
SOFTWARE_VERSION_LABEL
STATUS_MESSAGES LAMP_HOURS
DEVICE_HOURS (returns the same value as LAMP_HOURS)
DEVICE_POWER_CYCLES
SENSOR_VALUE 0x00 : LED BOARD TEMPERATURE
0x01 : CONTROL BOARD TEMPERATURE
0x02 : CONTROL BOARD IN VOLTAGE Normal range 380- 410 V
0x03 : CONTROL BOARD OUT VOLTAGE Normal range 200- 380 V
0x04 : CONTROL BOARD CHIP VOLTAGE Normal range 2900 - 3500 mV
0x05 : POWER REDUCTION 0-100 %

3. SET_COMMAND and SET_COMMAND_ RESPONSE PIDs:
DMX_START_ADDRESS
DEVICE_LABEL
IDENTIFY_DEVICE

The following command is used exclusively to control other devices from SUMOLIGHT.
Manufacturer Specific Command (only supported if the controller addresses ALL_ DEVICES_ID using SUMOLIGHT Manufacturer UID 0x4c5a as prefix):

SUMO_INTENSITY_COLORTEMP_16BIT 0x8000
RDM_PD_INDEX + 0x01 : Intensity 16 bit
RDM_PD_INDEX + 0x03 : Color Temperature 16 bit

SUMOLIGHT GMBH
BERLIN
TEL +49 30 3389 2987 INFO@SUMOLIGHT.COM
MADE IN GERMANY | SUMOLIGHT.COM