

WIFI-DMX

STANDALONE INTERFACE

V 1.5.0



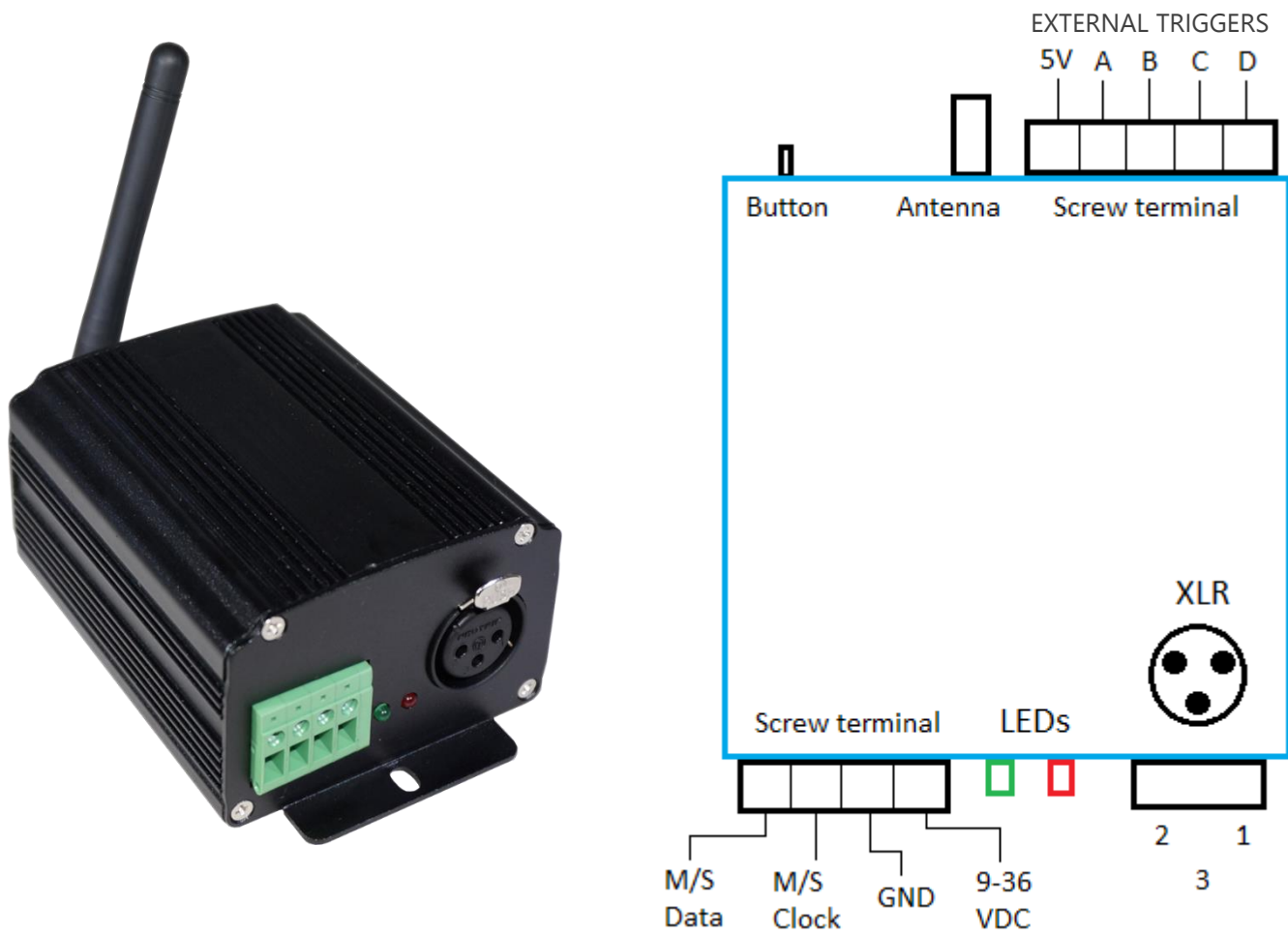
Hardware technical specifications	4
General pinout and device's connectors	5
15 external contacts wiring and connections.....	6
Front side of the interface	7
Rear side of the interface.....	8
Default Access point Mode and first connection to network.....	9
Access Point (LimitedAP) mode configuration	10
Infrastructure mode configuration.....	11
WIFI interfaces detection and network connection.....	12
Manual detection of interfaces.....	13
Connection problems	14
Configuration and connection of several interfaces	14
In infrastructure mode with a Common access point.....	14
In Access point mode	15
Interface Master/Slave connections	16
Setting of the Master/Slave interfaces.....	17
Triggers configuration with the software	18
Switch to standalone mode.....	18
External contact triggers.....	18
Time triggers with clock and calendar	19
Trigger and control with the Wi-Light application	21
Save and recover the last scene after the power cut off:	21
Scene trigger priorities.....	22
Multizone triggering	22
Default zones' scenes.....	22
Define the zones in the software	23
Interface firmware update	24
Change the IP address on Windows.....	26
Change the IP address on Mac OS X system	27
Dimensions of the interface.....	28
Front face	28
Back face	28

Bottom face 29

HARDWARE TECHNICAL SPECIFICATIONS

DMX Output Connector:	XLR 3 (XLR 5 optional)
Input/Output Connectors:	Screw terminal (4 pins + 5 pins)
Number of DMX Outputs:	512 (PC + Stand Alone)
External triggers:	x4 contacts (5V.) multiplexed to 15 contacts max (20m max cable length)
Master/Slave connection:	Yes, 3 wires for 16 connected interfaces max
DMX Speed:	1 to 45 Hz, MaB, Bk
Stand-Alone Mode:	Yes
Internal Clock (RTC):	Yes
Internal calendar:	Yes
Backups of the internal clock:	Yes, 3 weeks without power
Internal memory:	Yes (4 MB)
Memory Capacity:	4000 steps with 512 channels, 100 000 steps with 16 channels
Display of signal states:	DMX LED + WIFI LED
Power supply:	9-36V
Contact Input Voltage (stand-alone):	5 V. (25m of cable distance with the contacts)
Input Current:	60 to 175 mA
Power:	2 W
CPU's technology:	32 bits
Dimensions:	H : 48 mm, W : 70 mm, D : 127 mm (PCB: 122/60/35)
Weight:	250 g
Color:	Black
WIFI signal distance:	802.11 b/g/n Compatible
Operating Frequencies:	2.4 – 2.497 GHz
Output RF Power:	8 ± 1 dBm
WIFI signal distance	100m outdoor / 25m indoor
WIFI Keys	WEP (Numerical) / WEP (Hexa10 or Hexa26) WPA (Hexa) or (ASCII) / WPA2-Personal (Hexa) or (ASCII)
Operating temperatures:	-25 à +70 °C
Certifications:	CE, RoHS
IP rating:	IP20
Place of use:	Indoor
Storage:	Keep in a dry place
Warranty:	24 months
DMX Compatibility:	8 and 16 bit DMX fixtures
System Compatibility:	Windows XP, Vista, 7, 8, 8.1, 10, MAC OS X (10.6 and +), Linux

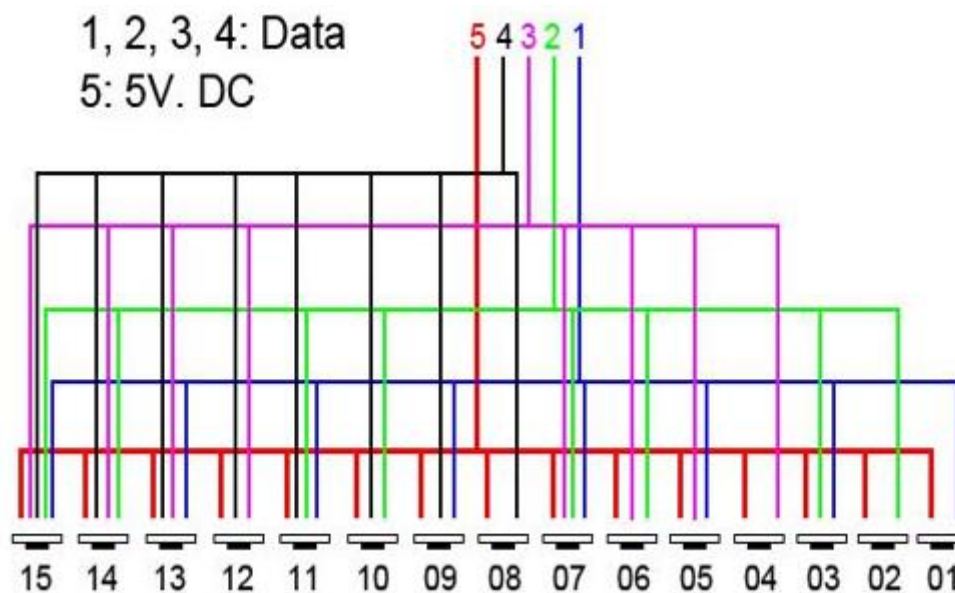
GENERAL PINOUT AND DEVICE'S CONNECTORS



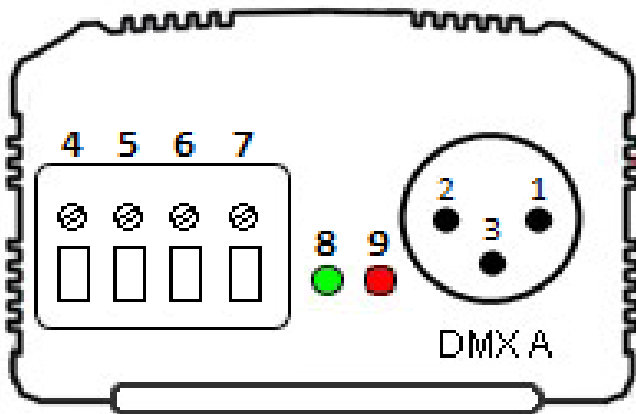
Warning: An overloaded environment with WIFI and wireless wave from multiple devices can disturb the proper functioning, the connection and the communication of the interface.

15 EXTERNAL CONTACTS WIRING AND CONNECTIONS

The 4 external contacts are located on screw terminal. You can use the 4 contacts to basically trigger 4 scenes. To have more triggers you must use a multiplexed system to get a maximum of 15 contacts as following:



FRONT SIDE OF THE INTERFACE



3 Pins XLR DMX Connector:

May be setup as input or output.

1: Ground (XLR DMX)

2: Data - (XLR DMX)

3: Data + (XLR DMX)

External screw Connector:

4: Master/Slave Data

5: Master/Slave Clock

6: Ground

7: External input power 9-36 V (mandatory)

Signal LEDs:

8: WIFI Signal (Green)

9: DMX Signal (Red)

WIFI LED Operation (green):

ON: The interface is powered and is working. ON after blinking, then the WIFI connection is established. (Access point created or connection to another access point)

OFF: The interface is not powered or there is a problem. After blinking, the connection failed.

Blink quickly: The interface is connecting to a network or the interface is restarting (via Reset button).

Blink slowly: Change of WIFI channel, the number of flashes indicates the channel (1 to 13) or the interface is communicating with the software (flash continuously)

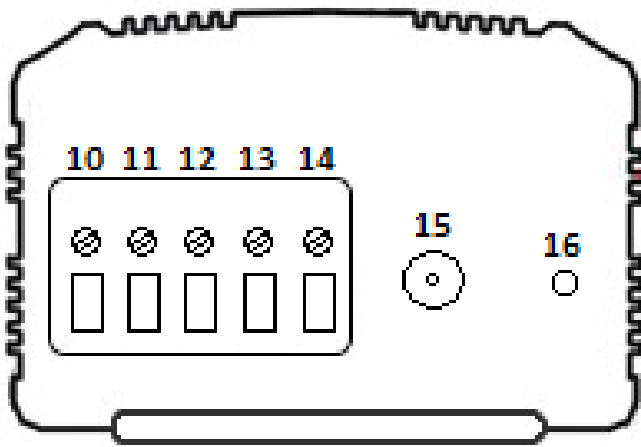
DMX LED Operation (red):

OFF: No DMX signal on the line.

ON: DMX Signal active and sent to DMX line.

Blinking: DMX Signal speed is slower.

REAR SIDE OF THE INTERFACE



External Connector:

- 10: External Trigger D
- 11: External Trigger C
- 12: External Trigger B
- 13: External Trigger A
- 14: External trigger voltage 5V

Antenna:

- 15: WIFI Antenna connector

External Button:

- 16: WIFI channel and Reset Button

Reset button operation:

Simple push: change WIFI channel (13 possible channels).

Continuous push (5s.): (until fast blinking of green LED), reset of the interface to its original manufacturer setting.

External triggers operation:

Connect the pins to 5V following these combinations: 01 = A ; 02 = B ; 03 = AB ; 04 = C ; 05 = AC ; 06 = BC ; 07 = ABC ; 08 = D ; 09 = AD ; 10 = BD ; 11 = ABD ; 12 = CD ; 13 = ACD ; 14 = BCD ; 15 = ABCD. The interface gives 4 contacts (01, 02, 04, 08) you have to use a de-multiplexing interface in order to go from 4 to 15 possible combinations. (25m of cable distance with the contacts).

DEFAULT ACCESS POINT MODE AND FIRST CONNECTION TO NETWORK

At the first use, the interface creates by default an access point or LimitedAP WIFI network and it is automatically connected.

When it works properly, the WIFI-DMX interface appears in the WIFI network list of your computer. A click on the icon of WIFI networks gives the complete list of available networks.

Default LimitedAP network features:

Default **network name**: **W-DMX FXXXX**

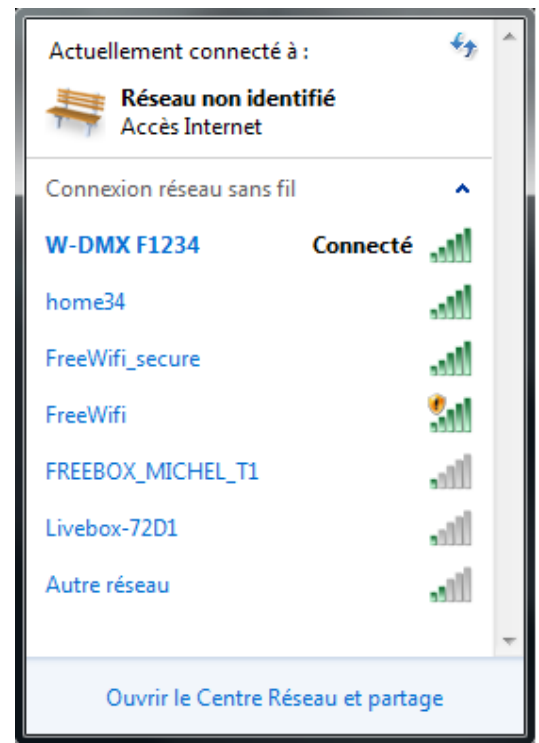
(FXXXX : Interface's 5-digit serial number)

Default IP address: **192.168.0.111**

Subnet **mask**: **255.255.255.0**

Default WEP **password**: **1234567890**

The user has to connect the computer to the network via the network utility, he must set the password. You have to wait a few seconds or up to 1 minute to establish the complete connection.



ACCESS POINT (LIMITEDAP) MODE CONFIGURATION

With the software, you can change settings of the the Access Point (LimitedAP) network (network name and password).

Open **Tools/Options** menu and choose **Device**.

Interfaces which are connected and detected appear automatically on the interfaces list.

On **Device** window, select **Access Point**, modify the available fields and **Apply** to take and save the new Ad-Hoc settings of the WIFI to DMX interface.



The interface's IP address in Access Pint (LimitedAP) mode is always set to 192.168.0.111.

The password is numerical and required to contain 10 characters (digits and/or letters from A to F).

INFRASTRUCTURE MODE CONFIGURATION

Infrastructure mode allows to be connected to another WIFI access point, such as a router or a modem. To be connected to an access point, you need to configure the WIFI interface with the network parameters of this access point.

With the software, you can modify the parameters of the infrastructure mode (network name, password, DHCP, IP address, type of Key).

Open the **Tools/Options** menu and choose **Device**.

Interfaces connected and detected appear in the **Device** list.

In the **Device** window, select **Access Point**, modify the available fields and **Apply** to take and save the new WIFI network settings of the WIFI to DMX interface. Then your interface will restart the network with the new parameters and a new connection will be necessary.

Available fields are:

- Network name « **Router** » of the access point.
- Password « **Pwd** » of the access point (if necessary).
- Password type (WPA or WEP) of the access point. If there is a WEP password, you need to indicate the key index « **Key** ».
- « **DHCP** » (Automatic Assignment of IP Addresses), if the access point uses DHCP, you need to keep the DHCP box checked, else, you need to uncheck this box and fill in the next fields IP, Mask and Gateway.
- « **IP** », IP address of the Wifi to DMX Interface.
- « **Mask** », Subnet mask.
- « **Gateway** », default gateway, usually the IP address of your access point. (not necessary)

You have to search and confirm the access point parameters to correctly configure the WIFI interface.



The password key (WAP or WEP) must be chosen correctly or you won't be able to get the communication with the WIFI interface working and you will have to reset the interface to recover the original manufacturer setting. To know the type of password key, in the list of available network, right click to the connected network and choose Properties.

The computer (connected with the WIFI interfaces) must be configured using the same settings as the infrastructure mode (with a different IP address than the connected WIFI interfaces). To properly configure the computer, (if necessary) you can follow the chapter « Change the IP address on Windows system». Uppercase and lowercase letters are managed for the password and network name.

WIFI INTERFACES DETECTION AND NETWORK CONNECTION

In Access Point (LimitedAP) mode, the computer needs to be connected to the network created by the interface. It needs a dynamic IP address (DHCP).

In infrastructure mode, the computer and the WIFI interface need to be connected to the same access point.

You need to well configure the network interface of the computer according to the communication mode:

If your access point uses the DHCP, don't forget to change the computer network parameters and be sure the option « Obtain an IP address automatically » is checked (cf. « **Change the IP address on Windows** »).

It is possible to choose the computer network interface used for the communication with the **Network** options, from the **Tools/Options** menu of the software.



Start the DMX software to detect and open automatically each interface connected to the network.

The WIFI interfaces list is displayed on the splash picture when start-up the software, on the Help menu and on the **Device** window in the **Tools/Options** menu.

MANUAL DETECTION OF INTERFACES

When several network interface are in use on your computer, it's possible to manually select the network interface to detect interfaces. To do this, open the software, click on **Tools** and then click on **Options**.

Go to the **Network** tab in the device section you can select the network interface on which you want to detect Wi-Fi interfaces.



Confirm the different windows by clicking OK and restart the software to launch the detection.

Using this option could solve some connection problems when the interface is not found by the software.

CONNECTION PROBLEMS

In case of connection issues, you need to check the network parameters of your computer and work on the good computer network card (WIFI) and disconnect and reconnect the WIFI to DMX interface.

If it doesn't solve the problem, it's also possible that the WIFI environment is disturbed or saturated, you have to press briefly the button on the rear side of the interface to change the WIFI channel or press the button during 5 seconds to restore the interface with its default parameters.

Check antenna fixation and do the test again near the interface to avoid all signal losses due to long distance running.

Check well the key WPA or WEP of your infrastructure network.

CONFIGURATION AND CONNECTION OF SEVERAL INTERFACES

IN INFRASTRUCTURE MODE WITH A COMMON ACCESS POINT

With several interfaces and a common access point, you need to configure each interface in infrastructure mode, with the same parameters than the access point (router) and with different IP addresses (All in DHCP).

In this configuration, all interfaces and computer connect to the same access point network. Then, the software can detect automatically all interfaces connected to this network.

IN ACCESS POINT MODE

In this mode, you have to configure only one interface in Access Point mode then all the others in infrastructure mode using the same parameters of the Access Point interface. With the software, configure the first interface in Access Point mode with your personal parameters (network name and password).

For the other interfaces (in infrastructure), check the box «Infrastructure».

Enter the same name and password than the Access Point interface (Type : WEP, Key : 1).

You can use the DHCP option for all interfaces.

If you do not select the DHCP option:

Define an IP address for each interface in infrastructure mode (base on this IP address 192.168.0.XXX).

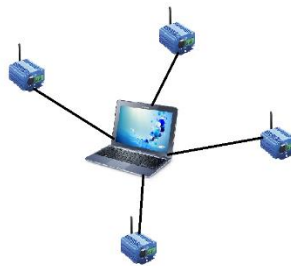
Set Subnet mask to 255.255.255.0.

Set default gateway to 192.168.0.1.

Once all interfaces are in infrastructure mode and connected to the Access Point network, connect your computer to that same interface Access Point network and choose a different IP address than connected interfaces.

Then, you can launch the software to communicate with devices.

Data is exchanged directly between the computer and each interface, so there have to be present within range of the computer.



The advantage of this configuration is that it's not necessary to use an additional external module such as router or modem.



Warning: LimitedAP Mode isn't reliable to manage several interfaces.

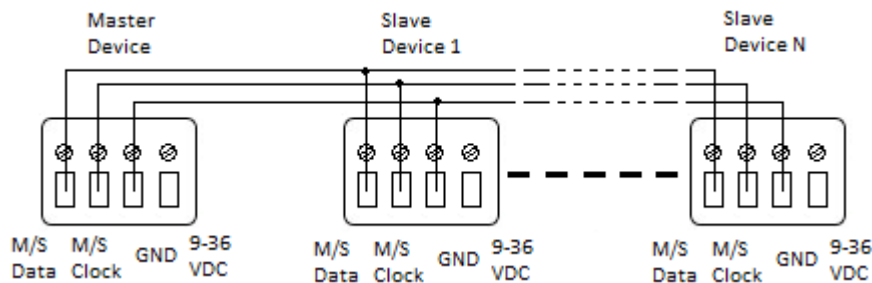
INTERFACE MASTER/SLAVE CONNECTIONS

When multiple interfaces are connected with USB, the standalone mode allows to set them as Master/Slave. This mode allows to synchronise many interfaces and mutualize their standalone spaces combining the universes. (up to 32 standalone universes)

A single interface can be define as master, others are automatically set to slaves. Triggers operated on the master interface are passed on slaves. However slaves are not synchronized on play time and keep individual control. Consequently slaves can trig and play different scenes. The master acts like a general remote imposing triggering to the slaves.



To use interfaces as Master/Slave, you have to connect the interfaces each other's with the screw front side connector of the interface. You need to connect together the pins M/S Data, M/S CLK and GND, as following



When multiple interfaces are connected with USB, the standalone mode allows to set them as Master/Slave. This mode allows to synchronize many interfaces and mutualize their standalone spaces combining the universes. (Up to 32 standalone universes)



The Stand Alone mode allows to choose 1 interface and to define this interface as Master from the interface list, it is possible to choose only one to be the Master, all the other one will be configured as slave by default. The interfaces are always ordered by serial number ascending order.

- **MODE MASTER/SLAVE « Default »**

A single interface can be define as master (lower serial number by default), others ones are automatically set to slaves. The master device play the current scene and synchronize the slave ones. The master forces the slave interfaces to play the same scene and the same step at the same time. The slave interfaces are forced to follow the master timings and triggers and they cannot act, play or trigger a scene independently. Master can trigger on and trigger off scenes of the slave interfaces.

- **MODE MASTER/SLAVE « Desynchronized»**

An interface can be define as master, others are automatically set to slaves. All Triggers On or Off operated on the master interface are effective to slave ones. However slave interfaces are not synchronized with master's timing and keep individual controls. Consequently slaves can trigger and play different scenes at any time and not synchronized with the master ones. The master acts like a general remote imposing triggering to the slaves with total priority. Master can trigger ON and trigger OFF scenes of the slave interface.

- **MODE MASTER/SLAVE « LTP »**

LTP means Latest Takes Priority. All interfaces are defined as slaves. Interfaces are not synchronized with timing and can trigger and play different scenes by itself. However triggers from an interface are passed to the others connected interfaces automatically and slave interfaces are forced to trigger the same scene. Here each interface acts like a general remote imposing triggering to the other slaves without synchronization.

- **THE «NO RELEASE» Option**

This option is only available with LTP or DESYNCHRONIZED modes. Only triggers ON from the master interface are executed and effective. All triggers OFF are ignored and slaves interfaces keep playing their current scene. Each Slave interface can choose to release or not its scene depend on the option is activated or not.

TRIGGERS CONFIGURATION WITH THE SOFTWARE

The Stand Alone mode of the software enables to configure and personalize all the triggers.
The information will be directly saved in the DMX interface memory with the memory writing function.

SWITCH TO STANDALONE MODE

When the device isn't connected to the software, it enters in Stand Alone mode after five (5) seconds. If the device has just been powered, the Stand Alone mode is active right after the success or failure of the connection (5 s. after).

EXTERNAL CONTACT TRIGGERS

The Stand Alone mode offers up to 15 external possible triggers.

By selecting a scene in the list, it's possible to choose the external contact number (from 01 to 15) to trigger the scene.
By default, the interface gives 4 external contacts (01, 02, 04, 08). To obtain 15 external contacts, you have to use a de-multiplexing interface in order to go from 4 to 15 possible combinations.

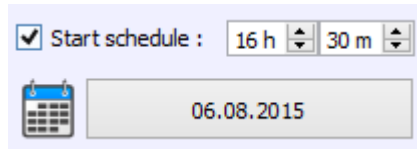


TIME TRIGGERS WITH CLOCK AND CALENDAR

The Stand Alone mode has an internal clock and a calendar. It's possible to assign a time trigger on every scene of the list. By selecting a scene on the list, it's possible to choose the start and end dates and hours and days of the week. You can thus create a lot of scenarios.

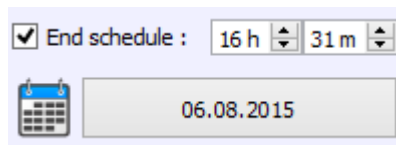
CASE 1: Programming a unique trigger:

- **Start schedule:**



The scene is triggered a single time at the given date and time.

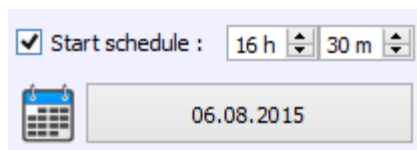
- **End schedule:**



The scene is stopped at the given date and time.

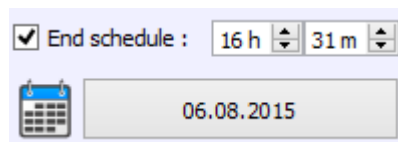
CASE 2: Programming a repeating trigger:

- **Start schedule:**



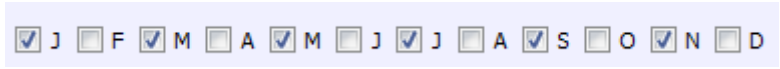
Date from which-one the scene will be playable according to the programmed triggers

- **End schedule:**



Date after witch-one triggers will be ignored. With no End date, triggers are permanent

- **List of the months of the year**



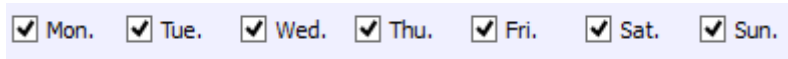
The 12 check boxes represents the 12 months of the year (J) January to (D) December. The triggers will be performed on the activated months. Next, a daily hours range must be defined.

- **Start and Stop days**



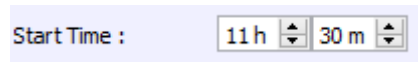
With a monthly repetition, you can choose the starting and stopping days for each chosen month. In this example triggers can happen between the 1st and the 15th of each chosen month.

- **List of the days of the week**



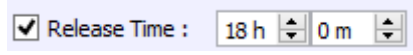
The 7 check boxes represents the 7 days in a week. The triggers will be performed on the activated days only. Next, a time range must be defined.

- **Start time**



The starting time is the time when the scene will be triggered for each chosen day. Of course chosen months, start and end schedule days are included.

- **Release time**



The release time is the time when the scene will stop for each chosen day. Of course chosen months, start and end schedule days are included. The release time is not mandatory, if it's not defined, the scene will keep playing until another trigger event happens. (Like the triggering of another scene for example).

NOTE: For a daily repetition, if the the starting time is later than the release time then the triggering will stopped the next day, even if the next day has not been selected.

TRIGGER AND CONTROL WITH THE WI-LIGHT APPLICATION

The Wi-Light application can receive the list of scene saved in the WIFI-DMX interface Stand Alone memory. It can also trigger a scene from the list, change the speed, the dimmer, the RGBW colors and the DMX channels values.

The online Wi-Light application is available on itune and Google play and works for Android and iOS systems.

You must connect your phone or tablet to the access point (Wifi interface Access Point network or Wifi router infrastructure network) with the correct parameters and previously setup the WIFI-DMX interface in o the right communication mode (Access Point or Infrastructure) to communicate together.

In Access Mode and Infrastructure, the application search the device automatically (If devices and interfaces are in DHCP).



Warning: An overloaded environment with WIFI and wireless wave from multiple devices can disturb the proper functioning, the connection and the communication of the interface.

SAVE AND RECOVER THE LAST SCENE AFTER THE POWER CUT OFF

Scenes with a start schedule and a stop schedule are set on a defined time space and can be memorized. The interface save the last scene played before the power cut off and recover it when the power is restored. The scene must mandatory include a start schedule and a stop schedule activate this option.

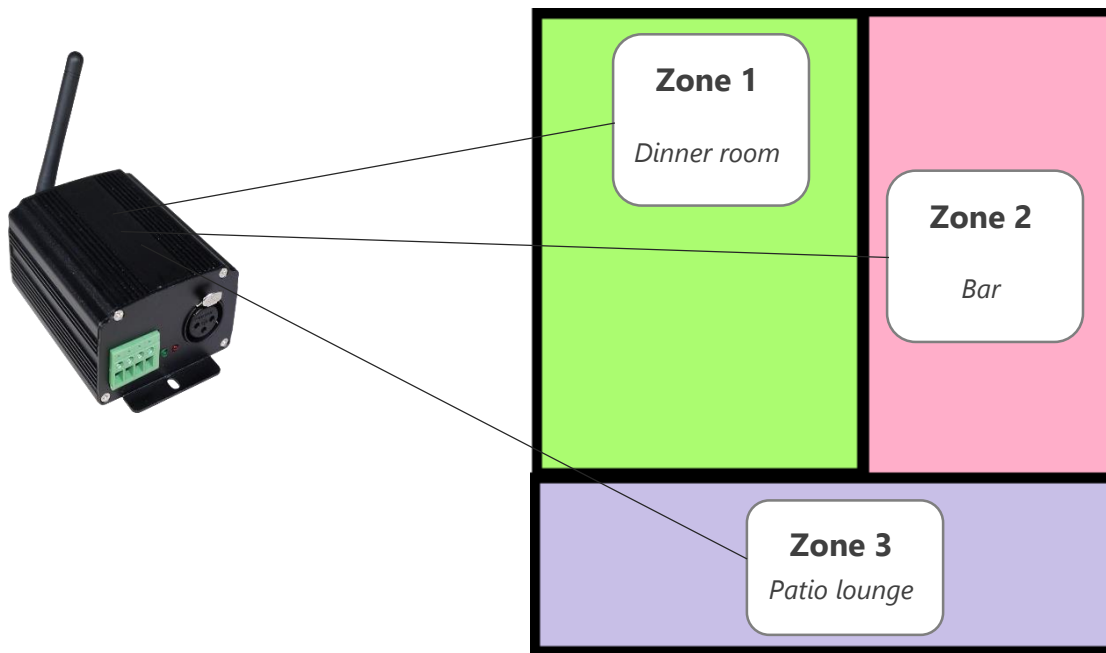
SCENE TRIGGER PRIORITIES

When several scenes have the same time trigger (date + hour + minute), only the first scene in the list will be triggered. The rest will be ignored


MULTIZONE TRIGGERING

The WIFI interface offer 3 standalone zones which are working independently. It allows to trigger and play several scenes simultaneously. As well you can assign zones to different places or rooms in the building that you want to illuminate.

You can control lighting in an individual way in 3 different spaces thanks to the 3 standalone zones as show in the following example:



DEFAULT ZONES' SCENES

Default start scene #1 : 

Default start scene #2 :

Default start scene #3 :

There is 3 default scenes to define in the software, one for each zone. The interface will play those 3 scenes when it turns on in standalone mode

DEFINE THE ZONES IN THE SOFTWARE

Software scene editor

When a WIFI device is connected, the software let you create 2 or 3 zones by clicking the "+" to add tab zones

Name	Cross fade time	Loops	Jump	Duration
Scene 1	00m 00s 000	2 Loops	Next	00m 03s 720
Scene 3	00m 00s 000	4 Loops	Next	00m 07s 560
Scene 4	00m 00s 000	1 Loops	Next	00m 01s 440
Scene 5	00m 00s 000	1 Loops	Next	00m 09s 800
Scene 6	00m 00s 000	5 Loops	Next	00m 49s 800
Scene 7	00m 00s 000	Always loop	Stop	00m 10s 000

Create your scenes in one of the 3 zones, scenes will belong to their specific zone and they will be registered as well in the stand alone memory.

Software standalone window Zone (Area) column

Scenes to load in memory					
	Name	Duration	Properties	Triggers	Area
/	Scene 8	00m 01s 800	00:00:000 #oo	<input type="checkbox"/>	#1
8	Scene 9	00m 01s 800	00:00:000 #oo	<input type="checkbox"/>	#1
9	Scene 10	00m 01s 800	00:00:000 #oo	<input type="checkbox"/>	#1
10	Scene 11	00m 01s 800	00:00:000 #oo	<input type="checkbox"/>	#1
11	Scene 12	00m 01s 800	00:00:000 #oo	<input type="checkbox"/>	#1
12	Scene 2-1	00m 01s 000	00:00:000 #oo	<input type="checkbox"/>	#2
13	Scene 2-2	00m 01s 000	00:00:000 #oo	<input type="checkbox"/>	#2
14	Scene 2-3	00m 01s 000	00:00:000 #oo	<input type="checkbox"/>	#2
15	Scene 3-1	00m 01s 000	00:00:000 #oo	<input type="checkbox"/>	#3
16	Scene 3-2	00m 01s 000	00:00:000 #oo	<input type="checkbox"/>	#3
17	Scene 3-3	00m 01s 000	00:00:000 #oo	<input type="checkbox"/>	#3

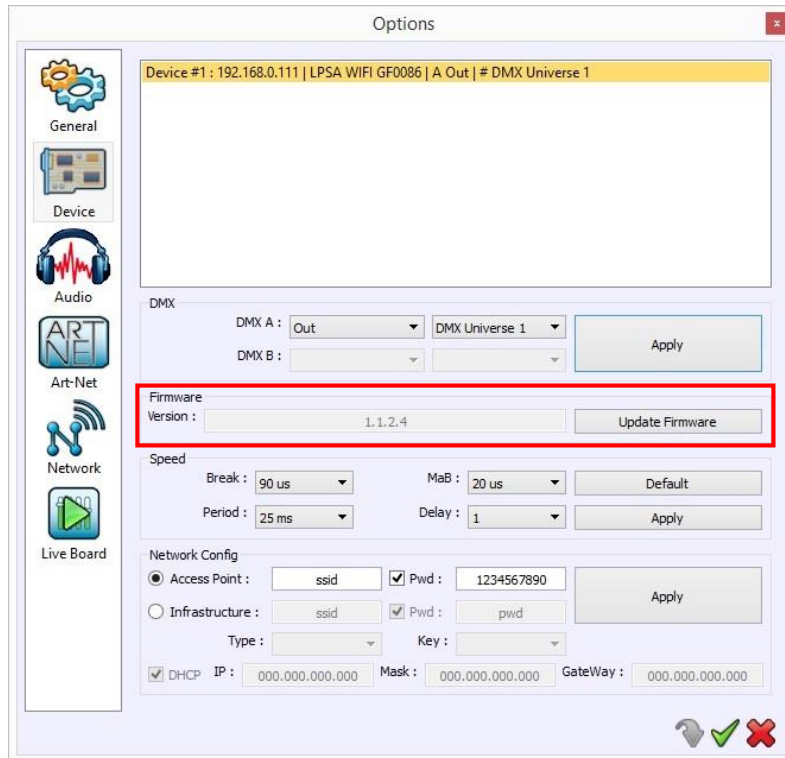
INTERFACE FIRMWARE UPDATE

You can update interfaces firmware with the software.

The software need to recognize the interface on startup and normally communicates with it.

Then go to **Tools => Options** to open Options window.

In the **Device** tab, the list of detected devices appears. You need to select the device you want to update in that list.

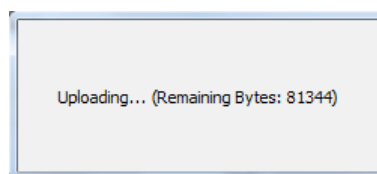


Look at the Firmware part, if the interface is not updated, the "Update Firmware" button will be available.

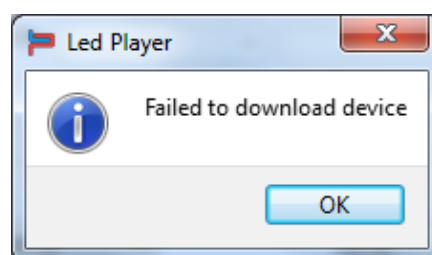
If the interface already have the latest firmware version, then the update is inactive.

If your interface is already up to date, then the update option won't be active.

Click on the update button to launch the update (5 to 10 minutes needed).



If the update fails, an error message appears.



In this case, close the software and disconnect / reconnect the interface.

A new LimitedAP network is now visible in the WIFI networks list of your computer:

Network **Name: WIFI-DMX**

WEP **Password: 1234567890**

You must connect to it and then restart the software.

The software will detect a device that does not respond, but it's still possible to re-start an update via the **Tools/Options** menu as explained above.



After a successful update, you must disconnect / reconnect the device. It will automatically connect in the same network than before the update.

Note:

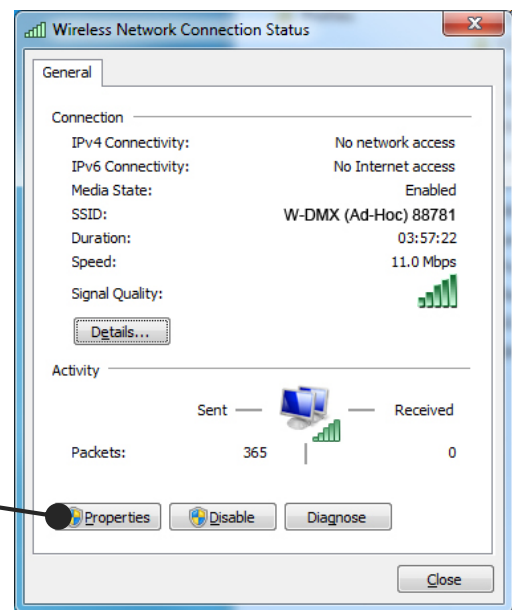
After the update of an interface from a 1.0.0.7 or before version to a 1.1.0.8 or later version, it is necessary to disconnect / reconnect the card, and to do a reset in the case the interface was connected to an ad-hoc network. In the latter case, the interface switch to the access point mode. Change the IP address on Windows system

CHANGE THE IP ADDRESS ON WINDOWS

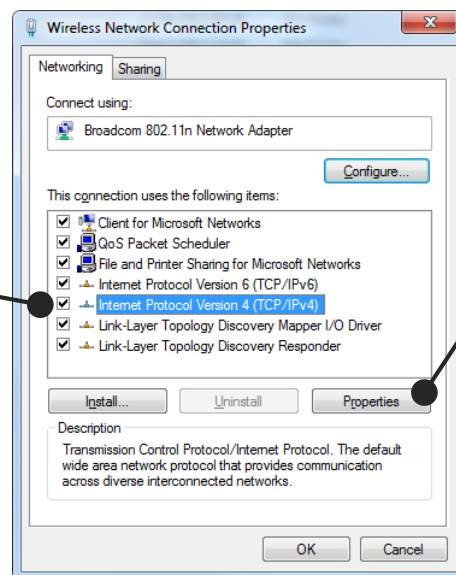
Click on the icon which displays all the available WIFI networks.

Right click on the network where you connected (W-DMX (Ad-Hoc) FXXXX)

Then click on Status to show options about the current wireless network.

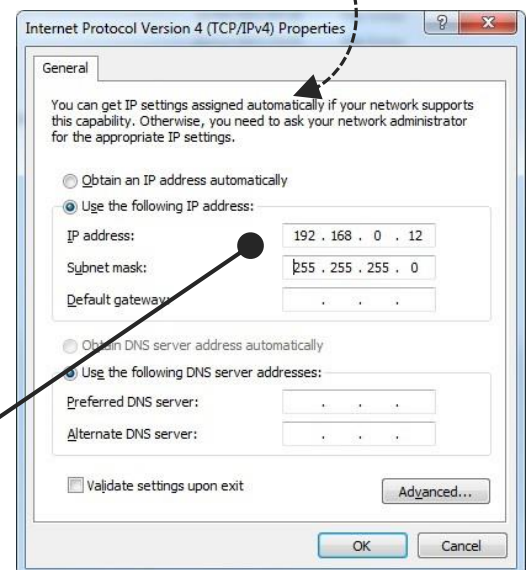


1: Go in Properties



2: Click on Internet Protocol Version 4 (TCP/IPv4)

3: Click on Properties and check Use the following IP address:

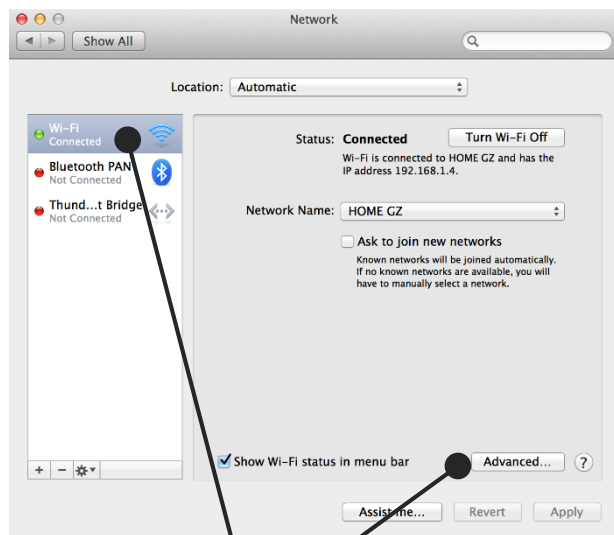
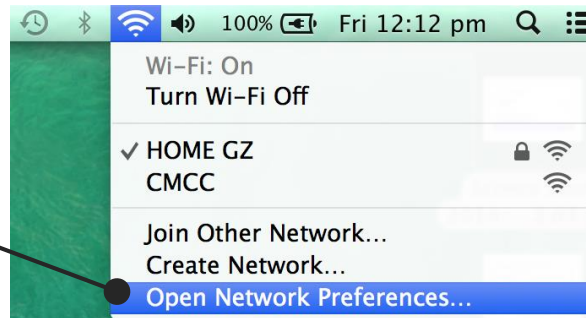


4: IP address **192.168.0.XXX**
Choose XXX between 2 and 255 (except 111)
Subnet mask: **255.255.255.0**.
Default gateway is optional
Validate changes and close the windows

Connection with software can be established only if the WIFI network is available, the computer connected to the network and with a correct IP address.

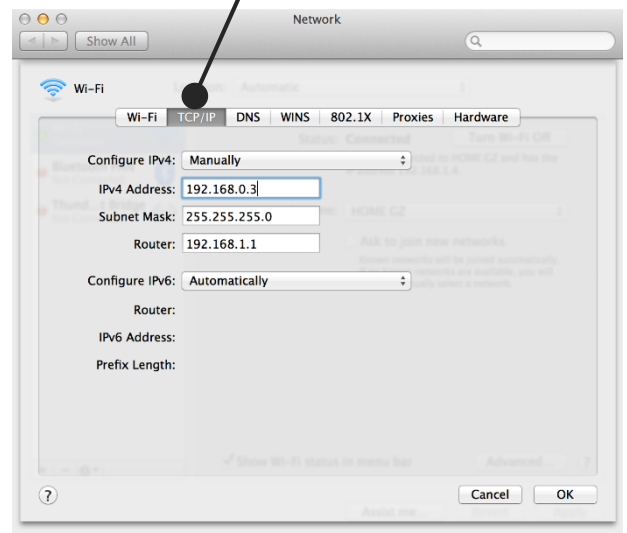
CHANGE THE IP ADDRESS ON MAC OS X SYSTEM

1 Click on the icon which displays the available WIFI networks and *Open Network Preferences*



2 Select the current network where you are connected (W-DMX (Ad-Hoc) FXXXX) and click on *Advanced*

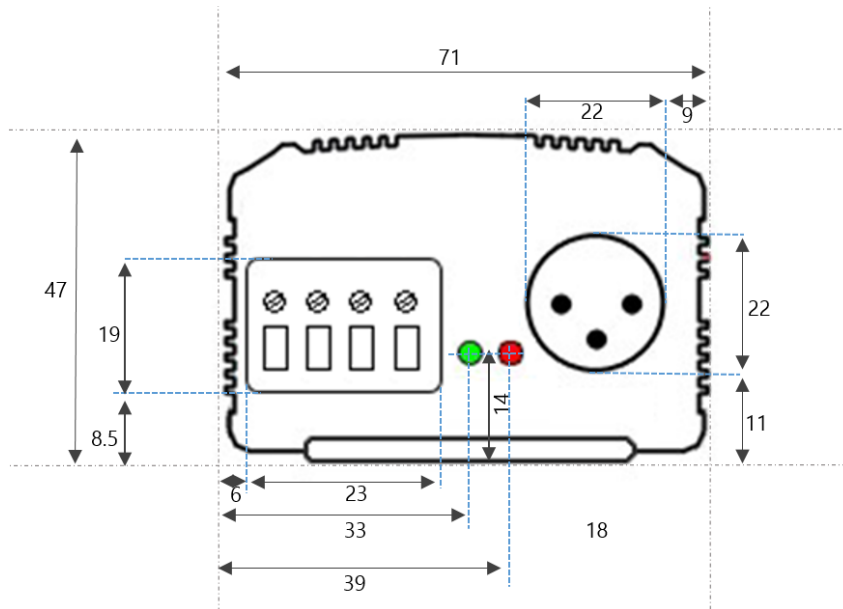
3 Go on *TCP/IP* tab and choose *Configure IPv4 Manually*
Choose IP address **192.168.0.XXX** with XXX between 2 and 255 (except 111)
Put the Subnet mask **255.255.255.0**.
Default gateway is optional
Validate changes and close the windows



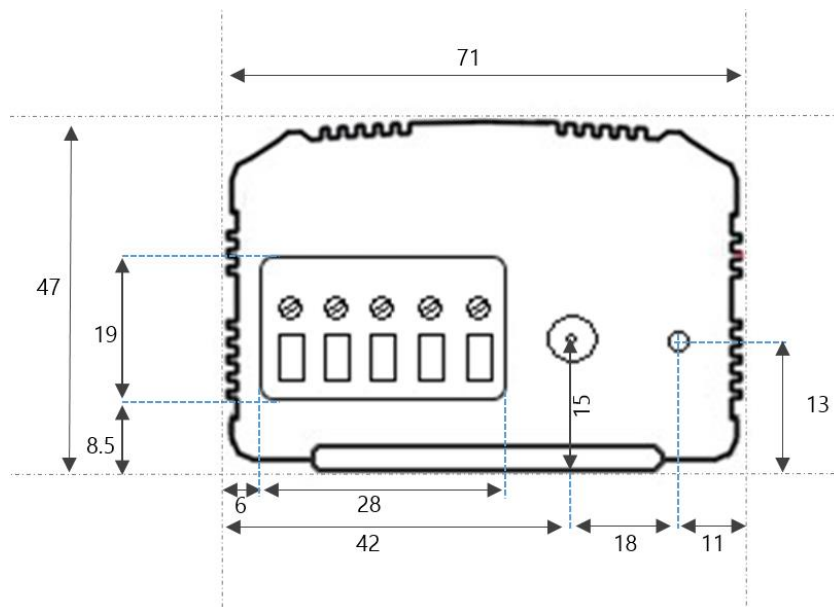
DIMENSIONS OF THE INTERFACE

The metric system is used. Unit is mm.

FRONT FACE



BACK FACE



BOTTOM FACE

