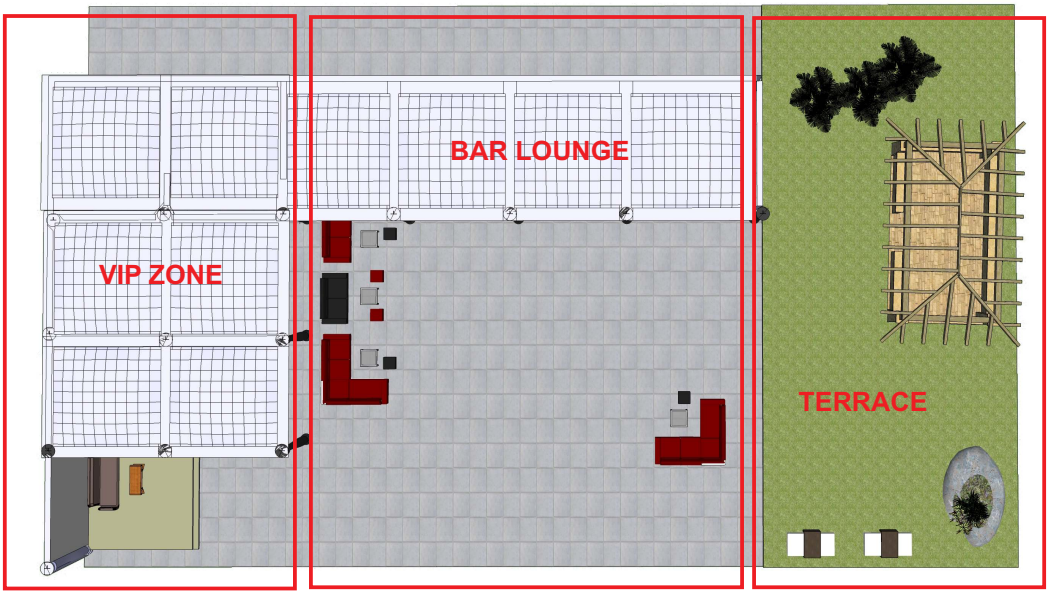
Control through OSC in 3 lighting and audio zones using LM 5 interface.

This installation consists of a pub lounge with three different environments that allows independent control of the lighting and audio in each.

The facility has 4 different audio sources (plus a priority microphone) and can set each area with the required audio source (changing the audio source at will) and the desired lighting level.

The heart of this facility is **LM 5** as OSC interface able to convert OSC commands in DMX frame to control all installed devices.
The control is performed by a specially created OSC layout for this installation and, after setting connected elements, allows an agile and intuitive operation from an iPad device.



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Installed Devices (AUDIO Section)

Multiplayer 10 WEB (x1)
Radio Streaming y media player / USB

Multiplayer 4 (x1)
CD / USB player

DCD 460 MP3 (x1)
Double player (CDA / MP3)

WD 416 (x2)
4 inputs, 16 outputs audio distributor

DCA 1 (x3)
8 inputs amplifier (2x 120W)

NEO Series
Wallmount loudspeakers

The 4 different input sources are sent to 2 audio distributors which drive at 3 **DCA 1** (one per zone).

Due to the 4 audio input sources are stereo (8 mono inputs), we use two WD 416 audio distributors, which allow control four mono signals in 4 outputs each, totaling 16 outputs. For the purpose of this facility we need 24, that is, 8 mono inputs across 3 outputs each.

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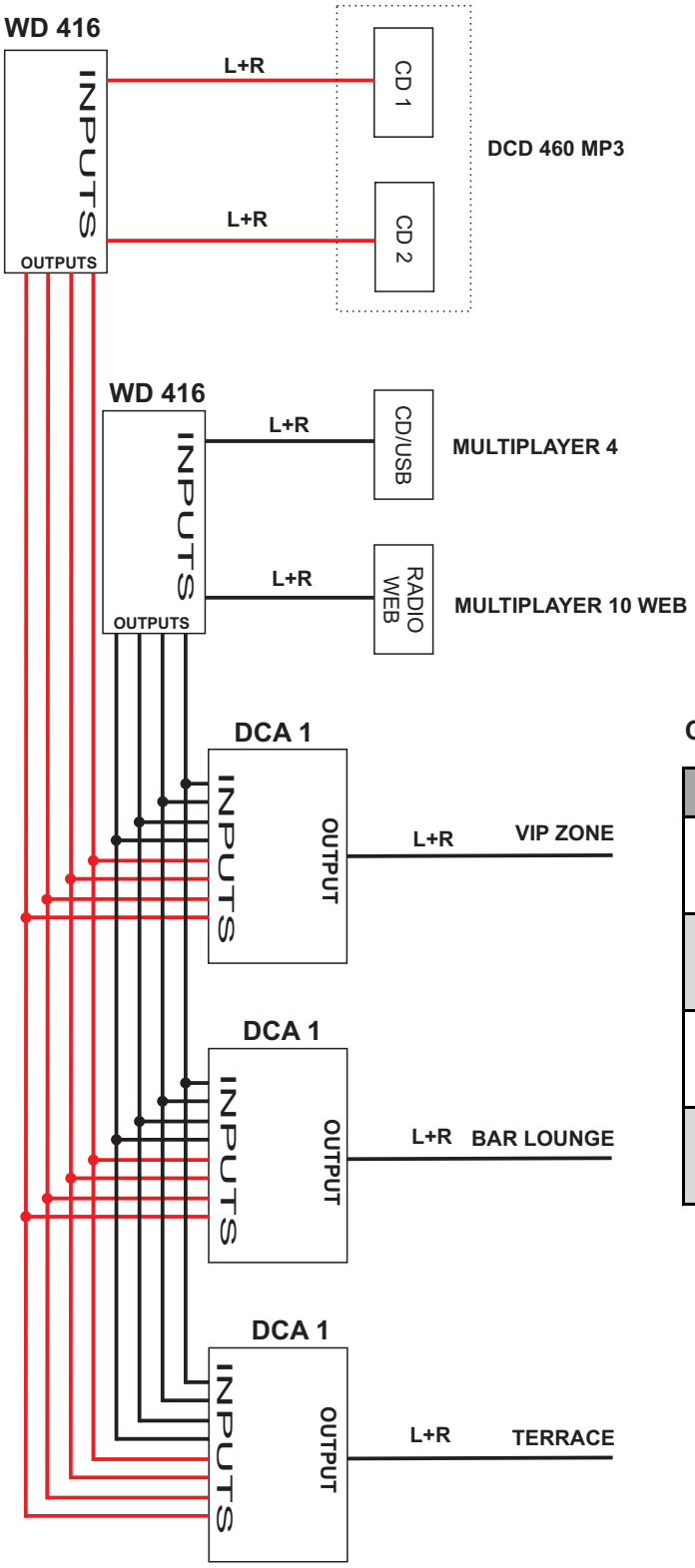
Connection (AUDIO section)



Connecting audio sources channels to the DCA 1 inputs

SOURCE	CHANNEL	DCA 1
CD 1	CHANNEL L	INPUT 1
	CHANNEL R	INPUT 5
CD 2	CHANNEL L	INPUT 2
	CHANNEL R	INPUT 6
CD/USB	CHANNEL L	INPUT 3
	CHANNEL R	INPUT 7
RADIO WEB	CHANNEL L	INPUT 4
	CHANNEL R	INPUT 8

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DCA 1 Setup

With the encoder and associated button to navigate through the menus and change settings according toi nstallation requirements.

In this case, the parameters to configure are:

PRIORITY ACTIVATION

Modify the state of the microphone priority input with the encoder connected to input 1 and is used for emergency announcements and notices.

Modifiy the state to **YES**

Modify the sactivation threshold (percentage)

INTERFACE

Because DMX frames will be used, configure each **DCA 1** in this mode and the start channel as follows:

- **DCA 1** in LOUNGE BAR in DMX channel **4**.
- **DCA 1** in VIP ZONE DMX in DMX channel **9**.
- **DCA 1** in TERRACE in DMX channel **14**.

Each **DCA 1** need two DMX channels, the first controls the output volume and the second, depending on the value, will select the input source.

PHANTOM POWER

Activate the phantom power in the priority microphone connected to input 1

SAVE

Once all the changes, select this option to save the configuration.

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Installed devices (LIGHTING section)

For lighting we have chosen LED devices working in RGB mode, obtaining the desired mix with the primary colors.

SUPERPARLED 336
36 LEDs R, G, B - 3W each one.

SUPERPARLED 336 IP
Outdoor spot. 36 LEDs R, G, B - 3W each one.

MBAR 1831
18 LEDs R, G, B - 3W each one.

MINIDIM RGB
LED RGB Driver. 6A max.

LED LINE 10
15 LEDs R, G, B strip.

In the area **LOUNGE BAR** area, we use **LED LINE** for bar and **SUPERPARLED 336** in 3-channel RGB mode. These devices with the DMX start channel sets to 1.

In the **VIP ZONE** area, we use **MBAR 1831** and **SUPERPARLED 336** configured in 3-channel RGB mode. These devices with the DMX start channel sets to 6.

In the **TERRACE** area,we use **SUPERPARLED 336 IP** that allows outdoor use and configured in 3-channel RGB mode. These devices with the DMX start channel sets to 11.

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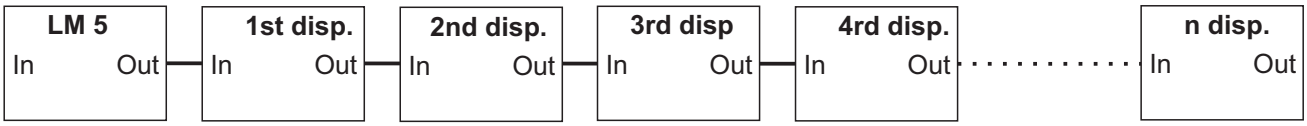
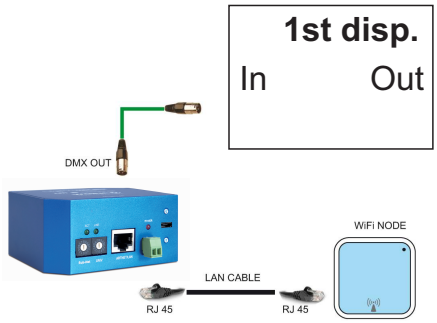
LM 5 (Connection and configuration)

The heart of the system is provided by the **LM 5**, an Ethernet interface DMX recorder and player, ArtNet node and OSC server.
Thus, **LM 5** read OSC commands from an iPad device, transforming them into DMX frames that will control all DMX devices connected.

DMX connection of all the devices is performed in chain, starting from its own **LM 5** and linking its output with the input of the first device and this output with the input of the second device and sucesivelly.

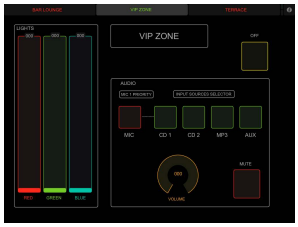


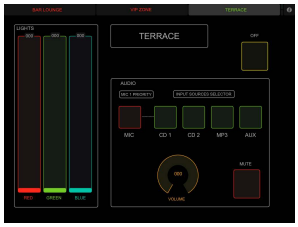
To receive OSC commands, **LM 5** needs to connect to a network WiFi via an access point. This network is where, subsequently, we join our control device.



Control through OSC in 3 lighting and audio zones using LM 5 interface.

Layout 3X_AUDIO-RGB (Description I)

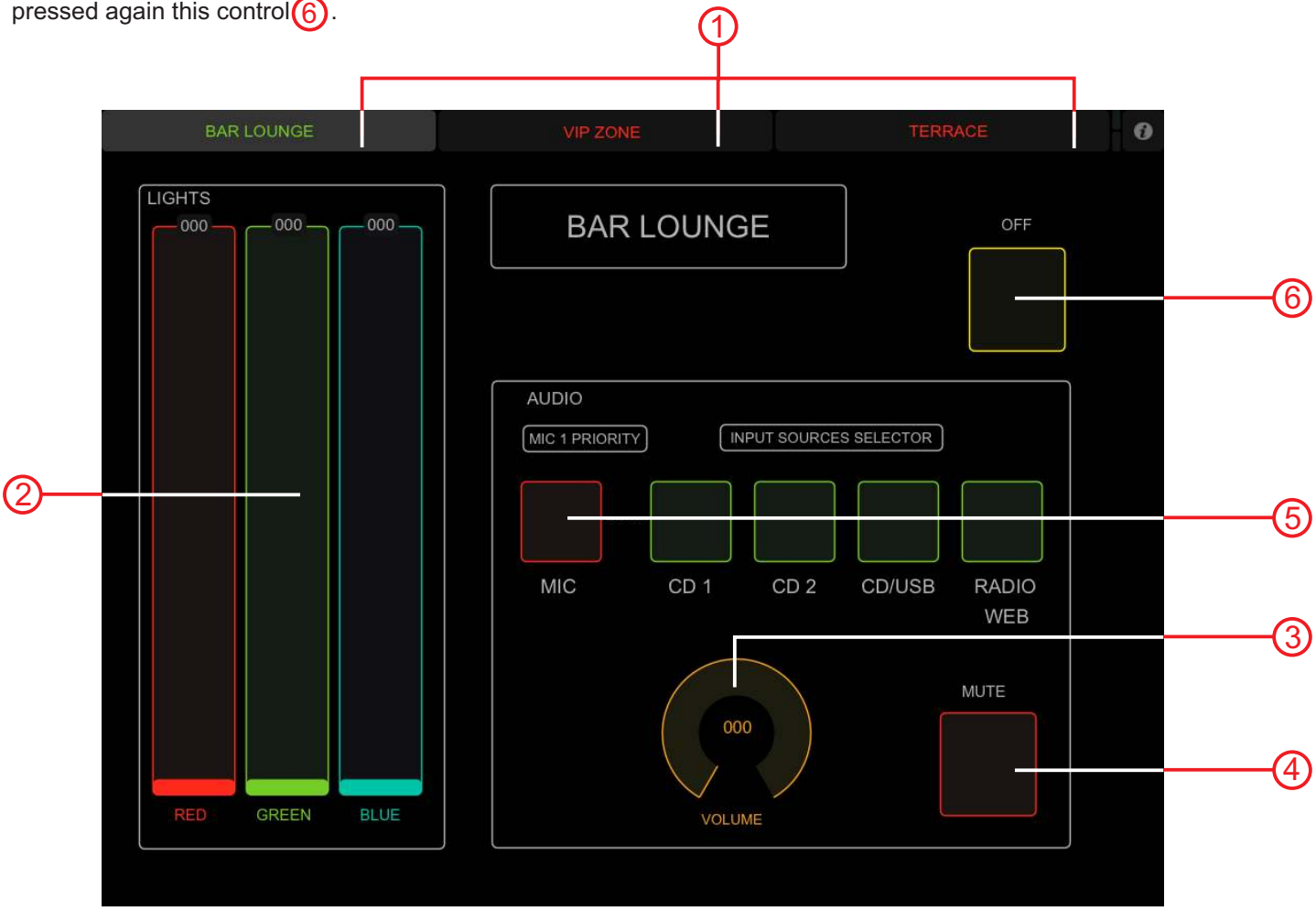




This layout has 3 tabs at the top to select the area to be controlled (1).
Each area shows the two control systems: Lighting with a single fader to adjust the R, G and B (2)

The Audio section with adjustable volume control with a rotary knob (3), a MUTE button to disable the audio output (4) and a series of buttons to select the input source applied to the area (5).

In addition, each area features an OFF button that leads to 0 all DMX values. This state remains until pressed again this control (6).



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Layout 3X_AUDIO-RGB (Description II)

The DMX channels and theur function are showed in next table

ZONE	DMX CHANNEL	FUNCTION
BAR LOUNGE	1	Red color (R)
	2	Green color (G)
	3	Blue color (B)
	4	Volume control
	5	Input audio source
VIP ZONE	6	Red color (R)
	7	Green color (G)
	8	Blue color (B)
	9	Volume control
	10	Input audio source
TERRACE	11	Red color (R)
	12	Green color (G)
	13	Blue color (B)
	14	Volume control
	15	Input audio source

Moving the fader corresponding to each color, the resulting mixture is modified and hence the hue of output. The value of each R, G, B is showed in the upper side of the corresponding fader (between 0 and 255 as maximum value).

The audio output level is set with the rotary knob, also shows its numerical value.

The selection buttons allow you to assign audio sources to the area in question, bearing in mind that the first entry (CD 1) also enables priority microphone input (marked with red button). This microphone will make a talkover on the other inputs when exceeding the threshold value previously set in each **DCA 1**. Thus, the microphone can be used for announcements, advertisements or emergencies.

The MUTE button leads to 0 the audio output of the area in question. This state remains until we return to acting on the volume control.

The OFF button disables all DMX channels, remaining in this state until a new press after which are restored all DMX values before enabling this function.

This button present in each zone, is the only one that has an effect on all areas at once. The remaining functions remains with the assigned value until it is changed implicitly, even if you change area set.