

# CONTROL & INTEGRATION SYSTEMS



WorkCAD 

BlueLine  
Digital 

Lightmouse  
Series

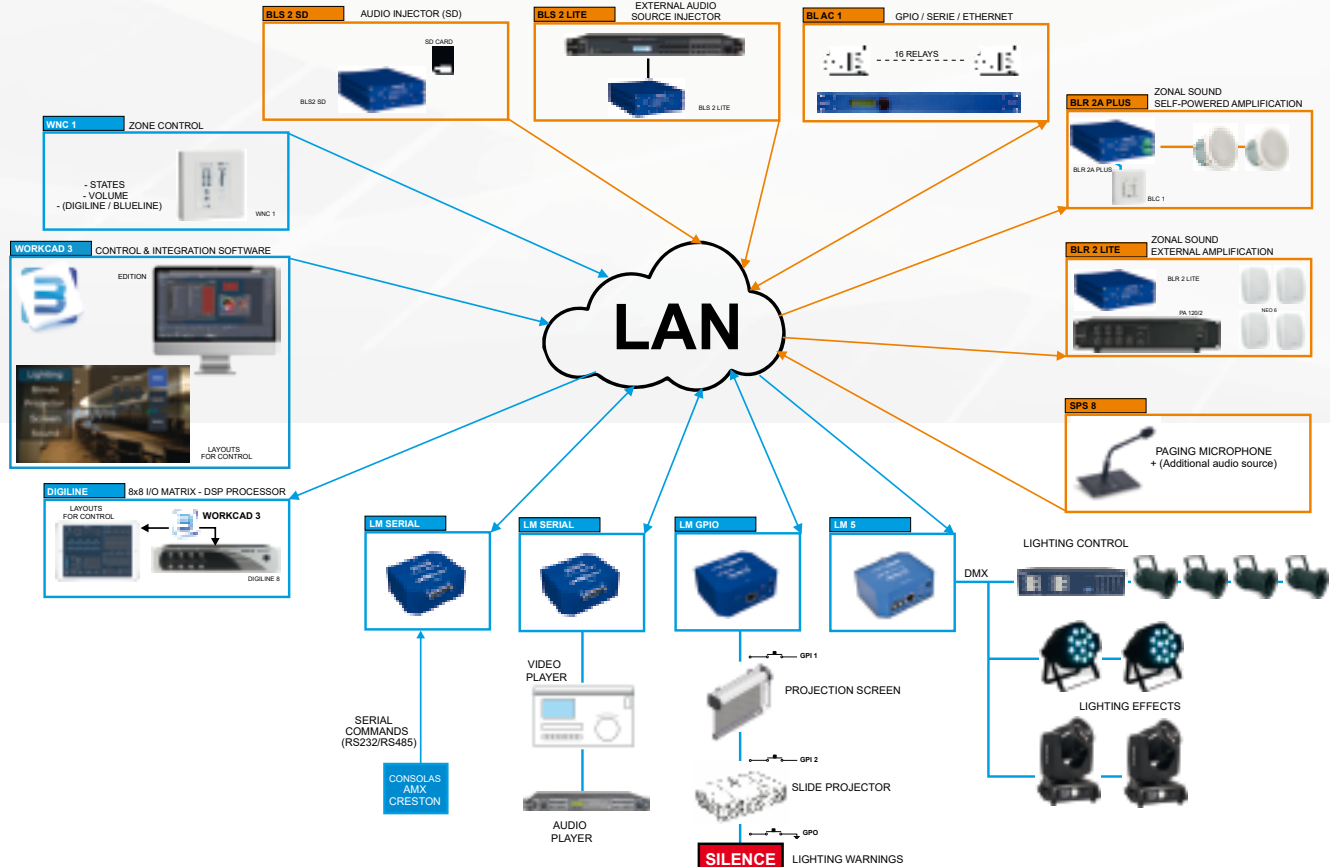
WORK 



# WORK<sup>PRO</sup> INTEGRATED AV PLATFORM

Audio over IP, Lighting control (DMX), RS232, RS485, GPIO, OSC, Ethernet....all this technologies are part of the solution proposed by the WORK PRO AV platform, a series of devices ready to be used and controlled by one solution: WORKCAD 3, a complete software AV platform that is capable to control all from one place and with any device.

# INTEGRATION DIAGRAM





## ABSOLUTE CONTROL PURE INTEGRATION

**WorkCAD3** is an application that runs under Windows, Android and iOS platforms and controls audio, video, lighting devices providing the flexibility and configuration options that integrators need. Its step-by-step wizard and Drag-and-Drop philosophy offer a quick and easy working environment, where no programming or scripting knowledge is required.

**WorkCAD3** offers professional control and revolutionary automation capabilities. The look and functionality of your interfaces are only limited by your imagination, WorkCAD3 is the perfect tool for all your projects.



### **Friendly and intuitive environment.**

Tell WorkCAD3 what kind of touch device you are going to use, the devices you want to control, and the actions to perform using the configuration wizards, the drag-and-drop library and preconfigured parameters.

### **Easy & Powerful.**

Use WorkCAD3 Editor to add buttons, devices, images and commands. Then, save your control interface and share it with iOS, Android and Windows devices. WorkCAD3 will control all your devices through WiFi, Ethernet, Serial Port, relay or IR.

### **Responsive.**

The control interfaces can be edited and extended in just a few minutes, at any time, allowing you to take advantage of all the features of an advanced system without incurring extra costs for installation.

### **Customizable.**

WorkCAD3 offers different graphic styles to customize the appearance of your control interface, it is also possible to create your own styles using the built-in styles editor, allowing the integrator to create a unique interface for each of your customers.



## HOW IT WORKS



### **1. Use WorkCAD3 Editor and add the necessary controls and devices to create your own control interface.**

All you need to create your interface is a computer with the WorkCAD3 App installed, tell WorkCAD3 what kind of touch device you are going to use, what type of devices and the actions you want to perform using the configuration wizards.

### **2. Share your interface with iOS, Android or Windows devices that you will use as a touch panel.**

Install the WorkCAD3 App in your control panel, and load the interface created with WorkCAD3 Editor, the software will detect the devices on the network.

### **3. Start the App to control all the devices.**

And that's all, you can start to manage your devices, control the lighting, adjust the audio level, turn on a video projector. You can create a custom interface with specific controls for each user.

# FLEXIBLE DESIGN CUSTOMIZABLE CONTROL



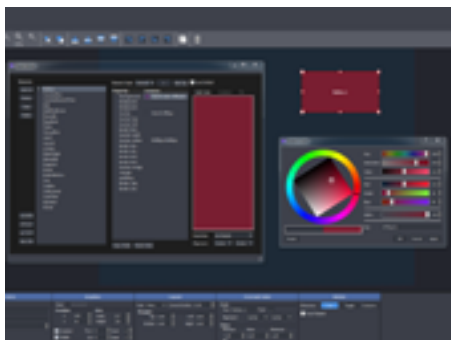
BL AC 1 Layout.



BLR2 DSP Layout.



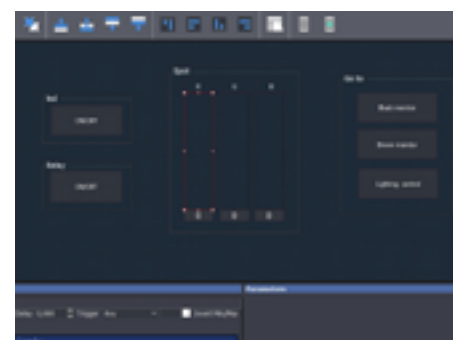
LM Gpio Layout.



Editor Styles Layout.



WPE 24 Layout.



LM Serial Layout.



## CHANGING THE RULES OF DISTRIBUTED AUDIO

BlueLine is the brand new solution that reinvents the traditional concept of distributed audio systems, making them more powerful, highly versatile, easy to set up, fast upgradable and thanks to the low wiring consumption the installation becomes cheaper.

BlueLine change the way to work with the traditional 100/70V system installation with an advanced state of the recent Audio Over IP Technology, bringing Digital audio transmission and quality to each zone directly and all of this designed based on simplicity and efficiency.

Other advantages over the traditional audio distribution systems is the ability to add more sources without any additional cable on the zones or the possibility of upgrade zones with just one cat5 cable.

But the real power of the system is, its control capabilities because it runs perfectly with the integrated AV platform WORKCAD3 and can be controlled together with other technologies like lights, projectors, curtains and many other devices, thanks to its total integration with WORKCAD 3 AV platform.

## **BLR2**

BLR2 is a one stereo channel unbalanced audio and 2 outputs receiver. It builds-in 2 TTL inputs and 2 outputs for general purposes. Due to its modular features it can be placed anywhere of the installation. For that, it has different fixing elements. It can be powered either through PoE or with an external 12/24 V DC power supply.

- One stereo channel IP receiver.
- Automatic detection of MP3 encoding and PCM.
- 2 GPI (TTL 3V) and 2 GPO ports (Open Collector).
- Remote control port with channel selection, signal level.
- Output sensitivity -1.15 dBu (680mVrms).
- WEB server and OSC control.
- PoE power supply.



## **BLR2A PLUS**

BLR2 A PLUS is a one stereo channel unbalanced audio and 2 amplified outputs receiver. It builds-in 2 TTL inputs and 2 outputs for general purposes. Due to its modular features it can be placed anywhere of the installation. For that, it has different fixing elements . It can be powered either through PoE or with an external 12/24 V DC power supply.

- One stereo channel IP receiver.
- Automatic detection of MP3 encoding and PCM.
- 2 analog outputs.
- Output sensitivity -1.15 dBu (680mVrms).
- 2 GPI (TTL 3V) and 2 GPO ports (Open Collector).
- Remote control port with channel selection, signal level.
- 2 amplified outputs: 2x5W (PoE) and 2x15W (external power supply).
- Minimum load 4 Ohm.
- PoE power supply.



## **BLR2 DSP**

BLR2 is a one stereo channel unbalanced audio and 2 outputs receiver, that incorporates two balanced inputs with mixer. Inside a DSP allows to equalize the audio signal in 8 bands, configure the crossover, limiter or modify the delay.

Thanks to its modular features it can be located anywhere easily. For this it has different fixing elements. It can be powered either through PoE or its 12 / 24V DC auxiliary input.

- One stereo channel IP receiver.
- Automatic detection of MP3 encoding and PCM.
- 2 balanced analog outputs.
- Maximum output level +8 dBu.
- Xover, compressor and delay (up to 8.4ms).
- Parametric equalization of 8 bands.
- WEB server and OSC control.
- PoE power supply.



## **BLR2 LITE**

BLR2 Lite is a one stereo channel unbalanced audio receiver. Due to its modular features it can be placed anywhere of the installation. For that, it has different fixing elements. It can be powered either through PoE or with an external 12/24 V DC power supply.

- One stereo channel IP receiver.
- PCM & MP3 automatic decoding.
- 10/100 Ethernet.
- Remote control port for channel selection, signal level.
- 2 Analog outputs.
- Output sensitivity -1.15 dBu (680mVrms).
- Web Server and OSC Control.
- PoE power supply.



## **BL DI**

BL DI is a gateway of conversion between DANTE protocol and the BlueLine Digital protocol, expanding the installation and the possibilities of it.

- BlueLine-Dante bidirectional gate.
- 2 Channels.
- Selectable source assignment.
- Reset button.
- Web Server and OSC Control.
- 10/100 Ethernet.
- PoE power supply.



## **BLS2 DSP**

BLS2 DSP is a one stereo channel audio sender, that incorporates two balanced inputs with mixer. Inside a DSP allows to equalize audio signal in 8 bands, configure the croover, limiter or modify delay.

Thanks to its modular features can be located anywhere in the facility. For this it has different fixing elements. It can be powered either through PoE or its 12 / 24V DC auxiliary input.

- One stereo channel IP streamer.
- Two balanced inputs with mixer.
- Maximum input level + 8dBu.
- Xover, compressor and delay (up to 8.4ms).
- Parametric equalization of 8 bands.
- WEB server and OSC control.
- PoE power supply.



## **BLS2 SD**

BLS2 SD is a one stereo channel unbalanced audio sender .

It builds in a SD slot for audio files that can be triggered via OSC commands .

Due to its modular features it can be placed anywhere of the installation.

For that, it has different fixing elements. It can be powered either through PoE or with an external 12/ 24 V DC power supply.

- One stereo channel IP streamer.
- SD player, controllable remotely.
- Selectable encoding (MP3 or PCM).
- 10/100 Ethernet.
- Two analog inputs.
- Input sensitivity 0.7 dBu (840 mVrms).
- WEB Server & OSC Control.
- PoE power supply.



## **BLS2 LITE**

BLS2 Lite is a one stereo channel unbalanced audio sender. Due to its modular features it can be placed anywhere of the installation. For that, it has different fixing elements . It can be powered either through PoE or with an external 12/24 V DC power supply.

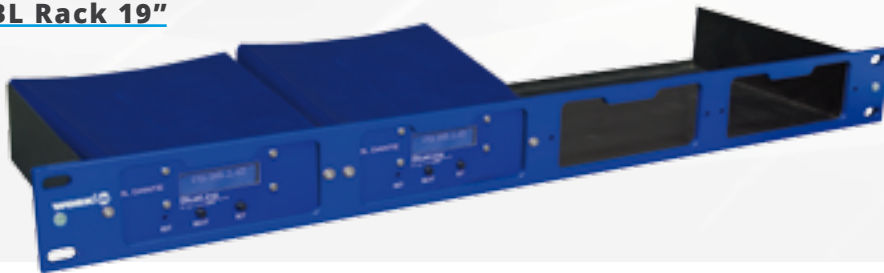
- One stereo channel ethernet streamer.
- PCM & MP3 encoder.
- 10/100 Ethernet.
- WEB Server & OSC Control.
- Reset button.
- 2 Analog inputs.
- Input sensitivity 0.7 dBu (840mVrms).
- PoE power supply.



## **BL accessories**

Accessories for BlueLine MK II series devices.

### **BL Rack 19"**



Rack 19" 1 HU for the BlueLine series.  
With the possibility of housing up to 4 devices.

### **BL Wings**



Wings to fix  
the device on  
surfaces.



Wings mounted on a  
BlueLine MKII device.

### **BL Rail**



Fixing rail for BlueLine  
MK II devices.

## **BL AC1**

BL AC 1 is the evolution of its predecessor LM GPIO but totally renovated and extended to offer features and solutions that enlarge and give more versatility thanks to its three control channels, 2xRS485, 2xRS232 and 2xEthernet.

Its 19" rack dimensions allows to get installed easily and fast.

In addition to its 16 GPI optocoupled and its 6 open collector outputs for IR control, the BL AC 1 can be controlled through WorkCAD 3 and the OSC protocol, providing more compatibility and control.



Front panel.



Rear panel.

## **Features**

- 8 NO relays 5A/230V with manual control
- 8 NC-NO relay contacts 1A/30V
- 16 GPI Optocoupled (activated by closing the contact)  
galvanically isolated
- 2 RS232 Full-Duplex isolated ports
- 2 RS485 Half-Duplex isolated ports
- 6 Open Collector outputs for IR control
- 2 Ethernet ports (10/100)
- WorkCAD 3 and OSC support

## **SPS 8**

### Paging Station

The new SPS 8 (Smart Paging Station) is the result of the hardware evolution of BlueLine Digital, creating a multifunction device capable of working as a paging micro as well as an audio server thanks to its RCA analogue stereo input with which the device turns it into digital and sends it to the network, thus any BLR receiver can tune in this channel.

To sum up, the new Smart Paging Station SPS 8 is a device that allows, at the same time:

- to send warning messages through streaming to different zones previously selected (Paging).
- to act as an audio server thanks to its RCA analogue inputs. The device can be streaming input audio and, simultaneously, send messages recorded by the micro connected to the front XLR input.

SPS 8 is a unique device since this is the first paging micro and audio server available on the market. Thanks to its function as an audio server, it is not necessary anymore to use a device that works as a server, such as BLM or BLS, for a simple installation. It is enough to install a SPS 8 device along with the BLR receivers required (as much as paging zones). For instance, a small company with 6 different meeting rooms or offices can have ambient sound and paging service with one SPS 8, six BLR 2 A and one PoE switch, without the requirement of additional amplifiers or power supplies.

The new SPS 8 station is also a PoE device, thus this can be powered through the same Ethernet cable. This provide users with a tidy console because the microphone signal, analogue audio information, power supply and signal data travel via just one Ethernet cable.

## **Features**

- Paging microphone for 8 zones.
- 4 PRESET buttons that can be configurable by the user.
- CLR button to delete a selection.
- AUX button to enable input signal from auxiliar line.
- Alarm input (NA contact through euroblock) configurable by the user.
- RJ45 input for communication and PoE supply.
- Auxiliar input for supply through euroblock connector.



Front panel.



Rear panel.



### **DM 115**

Gooseneck microphone

Elements: Dynamic Capsule.  
Polar Pattern: Unidirectional.  
Sensitivity: -52 +/- 3dB/Pa(0dB=1V/Pa a 1kHz).  
Frequency Response: 50 Hz - 5 kHz.  
Output Impedance: 500 ohm +/-30%.  
Output Connection: Integral 3-pin XLRM.



## ENABLE AREAS MAXIMIZE IDEAS

LIGHTMOUSE Series incorporates 2 new devices to extend the field of control based on Ethernet protocol and execution of commands and actions with open and close contacts (GPIO).

These 2 new devices allow integration in a previous installation, taking advantage of the same housing, complementing and enhancing the possibilities of control of multitude of elements when using for the configuration and programming of functions, the same software WorkCAD that in other elements, including the series BlueLine and Digiline.

LM Serial incorporates a bi-directional RS 232 port for sending / receiving serial commands from third party applications and another port that can be used as RS 232, RS 485 or DMX. In addition, the device can be handled remotely with OSC commands, thus, integration with a facility that is using , for example, LM 5, is total, allowing to concentrate control commands in a single point. Also, it incorporates 4 GPIO for the execution of commands, either when closing the contact or when receiving them externally.

LM GPIO is a device dedicated exclusively to control by GPIO, incorporates 10 contacts fully programmable both in purpose (input or output) and functionality. Like LM Serial, this device can be remotely controlled by OSC protocol.

## **LM GPIO**

Thanks to LM GPIO users can send GPIO signal (input and output) through an Ethernet network and activate contacts (GPO) as well as receive signal from other devices (GPI). Nevertheless, what makes LM GPIO different of other similar products on the market is its compatibility with OSC, which allows to remotely control other applications compatible with this open protocol, like OSCillation app. Also because of its compatibility with OSC, it is really easy to integrate it with other WORK PRO products, such as BlueLine Digital System, Digiline Series and, of course, LM 5. LM GPIO offers a good connectivity with up to 10 inputs-outputs configurable by users.



## **LM SERIAL**

LM Serial is an important step forward in the integration of many devices available on the market which are controlled via serial port (RS 232, RS 485), because with this products it is possible to control third-party devices through Ethernet. In addition, it is possible to control the devices remotely through OSC, with applications compatible with this open protocol, such as OSCillation, by WORK PRO. Also because of its compatibility with OSC, it is really easy to integrate it with other WORK PRO products, such as BlueLine Digital System, Digiline Series and, of course, LM 5.

LM Serial provides a wide range of possibilities with two bi-directional full duplex RS232 serial ports and/or RS485 serial port. Besides, it allows to configure the baud rate for each port independently, which makes possible to connect it with more than one device with different transmission speed.



## LM 5

LM 5 is not only dedicated to lighting control. It is possible to manage audio, lighting and video at the same time and for several zones of an installation. The overall installation can be controlled with a smartphone, a tablet or a computer. It is very intuitive so everyone can use it without any technical knowledge. Thanks to the OSC open protocol, it is suitable for mobile devices (iOS and Android) and PC&MAC computers: LM-5 turns your smartphone/tablet/computer into an intuitive console for audio and lighting purposes.

LM 5 goes much further and includes an internal memory to store 99 cues (with independent speed and fade time) and 24 cue lists, with up to 512 DMX channels. It is also a fully compatible ArtNet node (Ethernet to DMX interface) and it can be controlled by OSC server to create DMX data. LM 5 is without a doubt the most intuitive tool to manage audio and lighting control in commercial installations, bars, small clubs and events.



LM 5  
programming  
tutorial



LM 5  
execute mode  
tutorial



## **WPE 24 & WPE 44**

The new WPE Series offers the digital processing of the audio signal in a compact and reduced size, maximizing the versatility of any installation thanks to its compatibility with WorkCAD 3 and OSC. Its internal DSP allows the equalization of the signal in 8 bands, configure the compression setting delay up to 8.6 ms.

Thanks to its internal electronic, the servo-balanced outputs of the WPE 24 and WPE 44 are able to adapt the output signal according to the installation, between balanced or unbalanced automatically.

These new DSP processor are available in two different configurations according to the number of inputs (WPE 24, 2 inputs) (WPE 44, 4 inputs).



### **Features**

- Audio processor.
- 2 Balanced inputs.
- Max input level +8dBu.
- 4 Servobalanced outputs.
- Max output level +8 dBu.
- Xover in every output.
- 8 Band full parametric EQ every output.
- Compressor Limiter & Delay (up tp 8.6 ms).
- WebServer and OSC Control.
- WorkCAD 3 compatible.



### **Features**

- Audio processor.
- 4 Balanced inputs.
- Max input level +8dBu.
- 4 Servobalanced outputs.
- Max output level +8 dBu.
- Xover in every output.
- 8 Band full parametric EQ every output.
- Compressor Limiter & Delay (up tp 8.6 ms).
- WebServer and OSC Control.
- WorkCAD 3 compatible.

# EASY CONTROL FAST MANAGEMENT

The WNC1, BLC1 and WAC7 wall controllers offer fast, easy and intuitive control, providing an extraordinary use over the installation. These devices are linked to the desired receiver using WorkCAD3, thus controlling input sources and volumes, as well as the ability to create presets with different configurations between outputs and inputs.



## **WAC 7**

- Wall-mount Ethernet controller.
- Compatible with WorkCAD Designer.
- 7" full color touch screen.
- 1024 x 600 screen resolution.



## **WNC 1**

- Wall-mount Ethernet controller.
- Compatible with WorkCAD Designer.
- Intuitive control of audio of a determined output.
- Possibility to control output volume.
- Select output source.



## **BLC 1**

- Wall-mount controller.
- Connection to any receiver through Cat5 cables (Not Ethernet).
- Possibility to control volume and to select output source.
- Auxiliary input for local source connection.

# SCHOOL INSTALLATION

## CONTROL METHODS

### 1. WNC 1

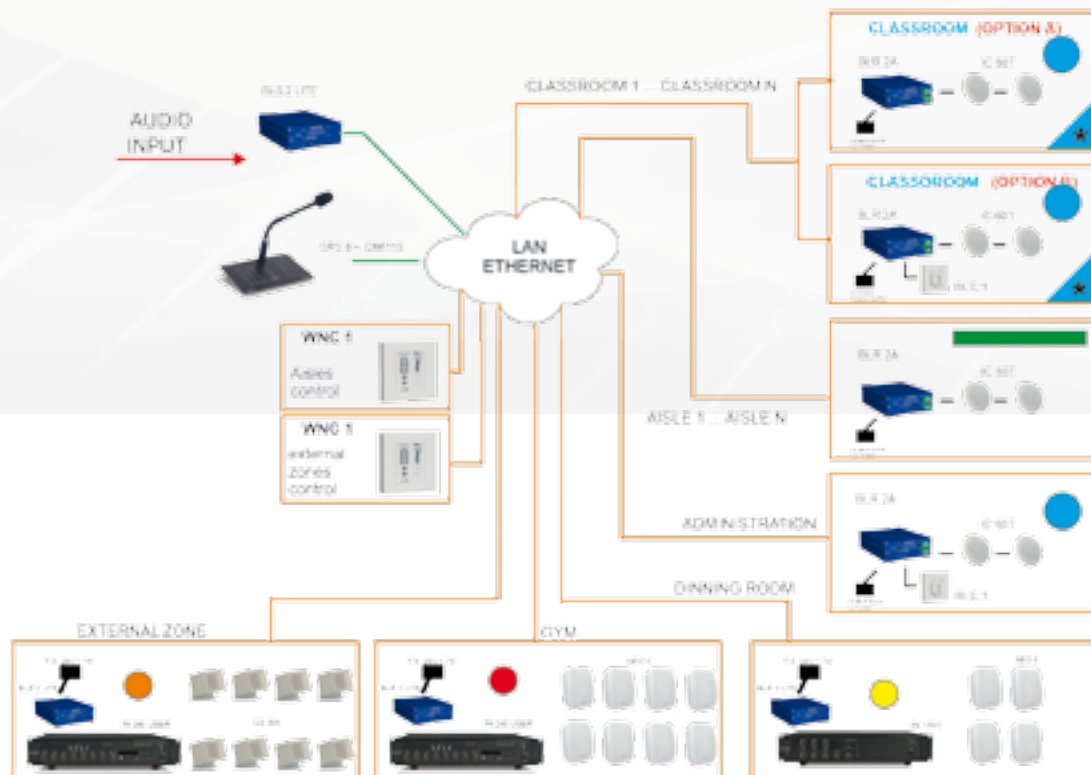
Wall-mount controller  
with direct LAN connection



### 3. WORKCAD 3



It is possible to create  
a custom layout, in order  
to control each zone.

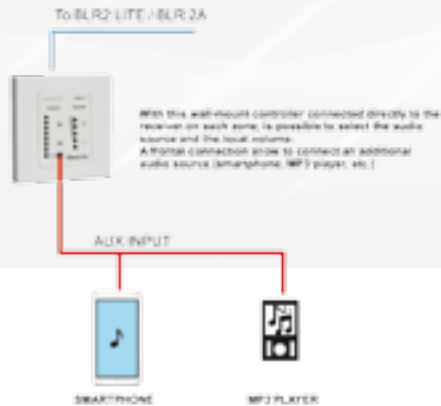


The classrooms have 2 options depending on the use of each one. Option A has no local control. The music volume or warnings come from the central control. Option B has local control which allows that the teacher can choose the audio source, to control the volume or, even, to connect an auxiliary audio source through the front connector.

# HOUSE INSTALLATION

## CONTROL METHODS

### 1. BLC 1



### 2. WORKCAD 3



# THE **WORK<sup>PRO</sup>** W AV PLATFORM

## CONTROL



BL AC1



LM 5



LM Serial



LM Gpio

## AUDIO OVER IP



BLR2



BLR2 A PLUS



BLR2 DSP



BLR2 LITE



BL DI



BLS2 DSP



BLS2 SD



BLS2 LITE

## CONTROLLERS



WAC 7



WNC 1



WNC 1



WorkCAD 3

## DSP



WPE 24



WPE 44

# DO YOU WANT TO KNOW MORE?

Use the QR code reader of your smartphone or tablet to find out a collection of amazing WorkCAD3 tutorials.



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