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FAQs

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**Generals**

How to connect balanced output (3 connectors) with the balanced input (3 connectors)?

When connecting devices with balanced inputs and outputs, you have to use a shielded cable. 2 conductor cables which connect to + and -, both ways, and connect mesh to both sides.

How to connect unbalanced output (2 connectors) with balanced input (3 connectors)?

Generally many devices convert one signal type of to another and it’s recommended to use to avoid noise. If you don’t have this type of device, it’s recommended to connect it this way:

- In the balanced output connections, don’t connect “-” to the terminal

- In the balanced inputs, if you connect unbalanced signal, connect the “+” signal, “-” signal and connect ground with the “-” connector
How to connect unbalanced stereo output to the balanced mono input, with the stereo to mono conversion?

How to install devices in a rack?

To facilitate ventilation it’s recommended you leave one slot empty inside rack above the device. It’s highly recommended with amplifiers which disperse lots of heat. In amplifiers without forced ventilation (convection ventilation) it is essential to leave one empty slot above and below the device.

What’s the maximum length for the 100V line?

The maximum cable length that can support 100V depends on different factors. Below you will find a comparison chart to help you with your installation considering that 1dB of power will be lost.
### What is and how to connect analog and digital GPs?

**WHAT IS A GPI?**

Digital GPI (General Purpose Input) is of binary type, which accepts 2 states: Active and Inactive. It can be configured to output +12V or 0V like the MIMO digital matrix switchers MIMO/MIMOSG.

Analog GPI is of continuous type, and the levels between max and min current levels also can be used. It can be applied as an example to volume control.

**How to make this connection?**

Analog GPI connected to external potentiometer

![Analog GPI connected to external potentiometer](image)

Digital GPI connected to the external contact closure (no tension).

![Digital GPI connected to external contact closure](image)

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**1. Maximum length of a 100V line with a 1 dB power loss**

<table>
<thead>
<tr>
<th>Section</th>
<th>Cable 100 W</th>
<th>200 W</th>
<th>400 W</th>
<th>500 W</th>
<th>1,000 W</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00 mm²</td>
<td>382 m</td>
<td>191 m</td>
<td>95 m</td>
<td>76 m</td>
<td>38 m</td>
</tr>
<tr>
<td>1.50 mm²</td>
<td>573 m</td>
<td>286 m</td>
<td>143 m</td>
<td>115 m</td>
<td>57 m</td>
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<tr>
<td>2.00 mm²</td>
<td>764 m</td>
<td>382 m</td>
<td>191 m</td>
<td>153 m</td>
<td>76 m</td>
</tr>
<tr>
<td>2.50 mm²</td>
<td>955 m</td>
<td>477 m</td>
<td>239 m</td>
<td>191 m</td>
<td>95 m</td>
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<tr>
<td>4.00 mm²</td>
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<td>764 m</td>
<td>382 m</td>
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<td>153 m</td>
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<td>5.00 mm²</td>
<td>1,910 m</td>
<td>955 m</td>
<td>477 m</td>
<td>382 m</td>
<td>191 m</td>
</tr>
<tr>
<td>6.00 mm²</td>
<td>2,291 m</td>
<td>1,146 m</td>
<td>573 m</td>
<td>458 m</td>
<td>229 m</td>
</tr>
</tbody>
</table>

**TAG:** CABLING, GPI  
**PRODUCTS:** ALL PRODUCTS THAT HAVE GPI PORT
What’s the maximum cable length connected to GPI port?

Maximum length can be up to 200-300m with CAT5 cable.

Can I connect a dry contact closure to 2 GPIs?

Yes, as long as the GPIs are of the same type and the same voltage (VDC). For example, it is possible with two MIMOs but not possible with one MIMO and one DUONET (for that you will have to use a double contact relay).

What’s the use of delay in an input signal?

To delay input signal in respect to another input signal. For example when you want to synchronize audio with video. To synchronize audio with video, where one has a delay caused by signal processing, you have to delay the second one.

What’s the RS-232 port for?

It can be used to connect EclerCOMM Manager software with EclerCOMM devices (DAM614, CA series, etc), and also to communicate with them using the CA-NET protocol (integration with 3rd party devices).

In EclerNet, the RS-232 port can be used to communicate with control systems (Extron, Crestron, AMX, RTI) using the TP-NET protocol.

What is CA-NET and TP-NET?

CA-NET and TP-NET are the Ecler integration control protocols for the 3rd party control systems. They are used for achieving global control of the different systems in installation.

CA-NET is a RS-232 communication protocol (manual).

TP-NET is a R-232 and UDP communication protocol (manual).
Where can I find service manuals?

Service manuals are not public, and they are reserved only to authorized technicians. Latest service manuals will always be available on our website (you have to register and log in to our portal and in menu select ‘TECH RESOURCES’.

We recommend using the Search option, and putting the product series name. For example, if you are looking for a service manual for VERSO12P, we recommend searching for ‘Verso Service Manual’.

Why do I get ‘Firmware error’ message when I try updating firmware?

Verify that the path to the firmware file does not include any special characters or non-standard characters (letters with accents, ñ, ç, ã, Ê, É, etc).

Please avoid these types of characters in file path because they are ignored by software.
EclerNet and EclerNet Manager

How do I connect to an EclerNet device using EclerNet Manager software?

Choose your network adapter which corresponds to your network connection. This selection box appears when you open EclerNet Manager or in the Edit > Preferences menu.

If you connect your EclerNet device directly to PC (point-to-point), EclerNet Manager software should automatically detect it. If you select “U” (Online and Unused Device List) in the window located in the lower-left corner in EclerNet Manager, you should see an Ecler device you are connected to.

Example with NXA
Right-click on your device and choose “Network Configuration”

Put your new IP address in “IP Address” field. It needs to be in the same network range as the IP address of your PC. See section “What IP address and Subnet Mask should be used?”
Example:

- PC (with EclerNet Manager): IP Address: 10.5.5.30 // Subnet Mask: 255.255.255.0
- Ecler device: IP Address: 10.5.5.33 // Subnet mask: 255.255.255.0

After saving changes, Ecler device will reboot and it will appear again on the list with the new IP and subnet mask.

Now you can include Ecler device in your project (drag&drop on top of Devices/All) and you can establish connection and take control of your device.

For more information see this video: https://youtu.be/CHqG6lROPeM?t=3m35s

What IP address and Subnet Mask should be used?

EclerNet devices should have a distinct IP address and subnet mask. IP address and subnet mask consist of 4 octets separated by dots, which can have different values. To simplify it’s determined these values should be:

<table>
<thead>
<tr>
<th>IP</th>
<th>0-255, 0-255, 0-255, 1-254</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subnet Mask</td>
<td>0/255, 0/255, 0/255, 0/255</td>
</tr>
</tbody>
</table>

If in your subnet mask’s octets you have 255, your devices should have the same value in these octets in their IP addresses.

If in your subnet mask’s octet you have 0, your devices can have any value between 0 and 255 in these octets in their IP addresses.

Please avoid using IP addresses which end with 0, 1 or 255. These are reserved.

You should always work with static IP addresses.

Example:

PC (running EclerNet Manager):

- IP Address: 10.5.6.30
- Subnet Mask: 255.255.0.0

Ecler device:

- IP Address: 10.5.5.33
- Subnet Mask: 255.255.0.0
Another example with more Ecler devices:

<table>
<thead>
<tr>
<th>DEVICE</th>
<th>IP ADDRESS</th>
<th>IP SUBNET MASK</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIMO88 (first floor)</td>
<td>10.5.5.10</td>
<td>255.255.255.0</td>
</tr>
<tr>
<td>MIMO88 (second floor)</td>
<td>10.5.5.11</td>
<td>255.255.255.0</td>
</tr>
<tr>
<td>MIMO88 (outdoor areas)</td>
<td>10.5.5.12</td>
<td>255.255.255.0</td>
</tr>
<tr>
<td>NZA6-180 (first floor)</td>
<td>10.5.5.20</td>
<td>255.255.255.0</td>
</tr>
<tr>
<td>NZA6-80 (second floor)</td>
<td>10.5.5.21</td>
<td>255.255.255.0</td>
</tr>
<tr>
<td>NZA4-700 (outdoor areas)</td>
<td>10.5.5.22</td>
<td>255.255.255.0</td>
</tr>
<tr>
<td>PC (running EclerNet Manager)</td>
<td>10.5.5.100</td>
<td>255.255.255.0</td>
</tr>
</tbody>
</table>

You can find more information regarding this in EclerNet Manager manual, see “IMPORTANT NOTE ABOUT ALLOCATION OF NETWORK PARAMETERS” in “Creating an EclerNet Project” section.

What is the functionality of different parameters/icons in EclerNet Manager?

In the EclerNet Manager manual you will find a definition chart for all distinct icons which appear on EclerNet devices.

Some of them can help with problem troubleshooting.

**Device disconnected.**

Color red, no intermittence: Device was manually disconnected (with option Disconnect)

Blinking red: EclerNet Manager tried to connect to the device, but this one is not available.

**Device connected.**

Blinking green. The device is correctly connected to EclerNet Manager.
<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Device connected and synching." /></td>
<td>Device connected and synching. The device is establishing the connection to EclerNet Manager.</td>
</tr>
<tr>
<td><img src="image" alt="Device connected with warning." /></td>
<td>Device connected with warning. The device is connected, but there is a problem. If the icon is displayed in a device status area, then another icon indicates the kind of problem (invalid EclerNet protocol version, unsynched, etc.). If the icon is displayed in a channel status area, it's indicating a problem with the device (it is recommended to consult the device status area for more information).</td>
</tr>
<tr>
<td><img src="image" alt="Invalid EclerNet protocol version." /></td>
<td>Invalid EclerNet protocol version. The current version of EclerNet Manager does not allow its connection to networked devices (Version mismatch between software and firmware). Therefore no connection can be established, but it is possible to upgrade the firmware from Project Explorer Helper.</td>
</tr>
<tr>
<td><img src="image" alt="Invalid password." /></td>
<td>Invalid password. The password entered in the device is incorrect.</td>
</tr>
<tr>
<td><img src="image" alt="Device unsynched. The two icons are alternatively displayed." /></td>
<td>Device unsynched. The two icons are alternatively displayed. Hardware content (state, presets ...) does not match the device content in EclerNet Manager.</td>
</tr>
<tr>
<td><img src="image" alt="Device powered." /></td>
<td>Device powered. The device is switched on (POWER ON)</td>
</tr>
<tr>
<td><img src="image" alt="Channel protect alarm." /></td>
<td>Channel protect alarm. The electronic protection alarm is activated for the channel. It lights up for a few seconds during the boot sequence and it's normal.</td>
</tr>
<tr>
<td><img src="image" alt="Channel thermal alarm." /></td>
<td>Channel thermal alarm. The thermal protection alarm is activated for the channel.</td>
</tr>
<tr>
<td><img src="image" alt="Channel load alarm." /></td>
<td>Channel load alarm. The impedance load protection alarm is activated for the channel</td>
</tr>
<tr>
<td><img src="image" alt="Device mains voltage alarm." /></td>
<td>Device mains voltage alarm. The AC power voltage alarm is activated for the device.</td>
</tr>
<tr>
<td><img src="image" alt="Device system error." /></td>
<td>Device system error.</td>
</tr>
<tr>
<td>Alarm Type</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Device error alarm</td>
<td>Some component inside the device is malfunctioning.</td>
</tr>
<tr>
<td>Device system fault</td>
<td>Device malfunction alarm (blown fuse, protection system permanently triggered, etc.). This alarm appears along with a fault window in the device LCD.</td>
</tr>
<tr>
<td>Slave link fault</td>
<td>MASTER-SLAVE connection between two MIMO88s is not valid (physical link between the LINK BUS connector on the back panel of both MIMO88 units and crossover CAT5 cable). Possible Causes: Connection is lacking or is defective. The rear panel switch of the SLAVE unit is not on SLAVE position.</td>
</tr>
<tr>
<td>Invalid Slave version</td>
<td>Software - firmware version mismatch in the SLAVE unit of a pair of MIMO88s.</td>
</tr>
<tr>
<td>Can Bus DC Power Fail (MIMO units)</td>
<td>Can Bus DC Power Fail (MIMO units).</td>
</tr>
<tr>
<td>NXA units self-test</td>
<td>NXA units self-test has reported one or more channels having issues.</td>
</tr>
</tbody>
</table>

Note: some of these icons are device dependent, being only available for some series and/or models.

In the section "Status and alarm monitoring icon table" of the EclerNet Manager manual you will also find this information:

**How do I know if I use latest firmware on device?**

In "EclerNet Manager and related firmware LEGACY VERSIONS" document you will find a version registry log for different products which can be used in EclerNet network. It includes a chart for every EclerNet Manager version with firmware information for each EclerNet Compatible devices. Last row always references latest version, included in the EclerNet Manager ZIP file which includes software, firmware and other documents.
When you connect to device from EclerNet Manager and select “PROJECT EXPLORER” window, you can find the firmware information in the upper-right side of the window.

How do I update firmware on device using EclerNet Manager?

Upgrading firmware on devices is very simple. First you have to download “Setup EclerNet Manager” from our website.

When you unzip it, you will find latest .BIN firmware file (eg. firmware_MIMO_v1_10r3.bin – MIMO88 series firmware file)

In the following video you can see how to perform firmware upgrade.

https://youtu.be/j9V4X5s31-0

Where can I find older firmware/software versions?

We always recommend using latest firmware and software versions. But if you are looking for an older version you can find them here:

http://www.ecler.com/support/legacy-downloads/software.html
Why do I get the “The Web Server process can’t be started” error message when I open EclerNet Manager software?

This can happen when there is another service running type webserver (eg. Skype, Apache, etc) which occupies TCP port 80.

You should close the application which uses port 80.

In Windows10, open Task Manager.

Open ‘Network’ tab and if everything is configured correctly, in “Listening Ports” you should find EclerNet Manager using port 80.
If you see another application using port 80, you should close it or change the port it uses. It’s not possible to change port for EclerNet Manager Web Server.

In some cases, Windows 10 uses TCP port 80. To make this port available, open ‘Windows Features’, expand ‘Internet Information Services’ and disable ‘World Wide Web Services’.
Can I use Skype together with EclerNet Manager?

EclerNet Manager will work correctly but it won’t function as a web server for UCP panels.

EclerNet Manager’s Web Server uses port 80 as well as Skype. You will get this error message.

You will have to close Skype and reopen EclerNet Manager to use UCP panels.

Which Windows versions are compatible with EclerNet Manager?

W10, W8.1; W8; W7 Vista (SP1); XP Prof. (SP3); W2000 Prof. (SP4)

It’s not supported in Windows Server

What do I do if I forgot my project password?

Write down the code that appears when you move your cursor on top of the password box and contact your distributor.

How many devices can I connect to one project?

In EclerNet Manager project you can connect max. 253 devices.

What are the network settings in EclerNet Manager?

Default settings:
Which network communication ports and protocols does EclerNet Manager use?

<table>
<thead>
<tr>
<th>Port</th>
<th>Function</th>
<th>Protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td>2210</td>
<td>Eclernet Manager Devices</td>
<td>UDP</td>
</tr>
<tr>
<td>2211</td>
<td>Multicast address (239.129.0.0)</td>
<td>IGMP</td>
</tr>
<tr>
<td>2212</td>
<td></td>
<td>(Auto device discovery)</td>
</tr>
<tr>
<td>80</td>
<td>UCPs &amp; Web server</td>
<td>TCP</td>
</tr>
<tr>
<td>5088</td>
<td></td>
<td></td>
</tr>
<tr>
<td>65000</td>
<td>UCPs &amp; Web server</td>
<td>UDP</td>
</tr>
<tr>
<td>5800</td>
<td>TP-NET</td>
<td>UDP</td>
</tr>
</tbody>
</table>
What should I do if I see error message “Error loading project data!” when loading panels to device?

Check your network settings (gateway needs to be compatible with your network settings) for each device in EclerNet Manager network.

Confirm you are running latest version of your UCP application (UCPv2)

Confirm that all your devices (including the panel with the error message) are inside the same network range.

Can I use EclerNet Manager with Mac or Linux?

EclerNet Manager is not supported in Mac and Linux. It should work in a virtual machine but we don’t support it.

We recommend using Windows to avoid problems.
How can I configure EclerNet Manager to run in hidden mode?

One of them is to create a batch file (*.BAT) with the following command:

```
@start "EclerNet Manager" "your_path_for_eclernet\eclernet_manager.exe" "your_path_for_project_file\yourprojectfile.enp" -HIDDEN
```

Make sure you use correct path to your EclerNet Manager.exe file, eg.

```
C:\Program Files(x86)\Ecler\EclerNetManager\eclernet_manager.exe
```

And your path for project file is the correct location of your EclerNet Manager project file, eg.

```
C:\Program Files (x86)\Ecler\EclerNet Manager\Proyect01.enp
```

By adding a parameter –HIDDEN like in the example above, EclerNet Manager will start the project in the hidden mode (not available to user). But when you start EclerNet Manager it will prompt you to send your project configuration to EclerNet devices (SEND), or to receive project configuration from the devices (GET). You can include an instruction command to select it by default and skip this prompt.

To receive your project configuration (GET) the instruction command is:

```
@start "EclerNet Manager" "C:\Program Files (x86)\Ecler\EclerNetManager\eclernet_manager.exe" "c:\Proyectos\demo.enp" -GET -HIDDEN
```

To send your project configuration (SEND) the instruction command is:

```
@start "EclerNet Manager" "your_path_for_eclernet\eclernet_manager.exe" "your_path_for_project_file\yourprojectfile.enp" -SEND -HIDDEN
```

The –GET and –SEND functions work correctly if we add a parameter =HIDDEN. If it’s not the case, they will be ignored.
Once your BAT file is created, create a direct access and locate in the folder which contains direct access from the start menu. We recommend:

Press Windows key + R – opens Run window

Type: shell-startup – Start Menu\Programs\Startup folder will open, where you need to copy your BAT file.

For more information regarding EclerNet Manager running in hidden mode, please refer to EclerNet Manager manual, section “EclerNet Manager hidden mode and direct access to projects and UCPs”.

For more information on running EclerNet Manager in hidden mode you can also refer to the EclerNet Manager manual in the section "EclerNet Manager "hidden" mode and direct access to projects and UCPs".
What is the main purpose of an External Device?

An “External Device” will let you control a device that is not included in EclerNet using NetString commands. Those commands should be available in each and every one of the user manuals of the devices.

In order to correctly address these commands, you should follow the next syntax:

|protocol|address|port|text|

- **protocol**: “UDP” or “TCP”
- **address**: External Device’s own IP address
- **port**: destination port
- **text**: command to send. You can add several messages always including \r, \n
¿Can I manage VEO devices using EclerNet Manager?

Yes, but there are two categories to take into account:

- **Native Hardware** (VEO-XTI2L, VEO-XRI2L): those devices are included in the software.

- **Integrable Hardware** (VEO-SWM45, VEO-SWH44, VEO-MXH44, VEO-SWM44, VEO-XTI1C, VEOXR1C): These devices are going to be controlled using TCP/UDP commands either via LAN control or RS-232 serial connection (IP-RS232 like ETH232AD will be required in that case).

<table>
<thead>
<tr>
<th>Type</th>
<th>Connection</th>
<th>Device</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native</td>
<td>TCP, RS-232 (ETH-232AD)</td>
<td>VEO-XTI2L, VEO-XRI2L</td>
</tr>
</tbody>
</table>
¿Are there any UCP templates available for VEO devices?

Yes, there are several templates available that will help you structure your UCP and give you some examples on how to address a NetString command associated to a button.

In order start using those templates you should do as follows:

- Download [EclerNet Manager Extra UCP](#) template package
- Open an EclerNet Manager project
- Import the UCP templates required
- In case of using integrable Hardware, add an *External Device* and introduce its IP address

<table>
<thead>
<tr>
<th>Integrable</th>
<th>TCP, RS-232 (ETH-232AD)</th>
<th>VEO-SWM45, VEO-MXH44, VEO-XTI1C, VEO-XRI1C</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS-232 (ETH-232AD)</td>
<td>VEO-SWH44, VEO-SWM44</td>
<td></td>
</tr>
</tbody>
</table>
¿Can I have more than one device with the same name in EclerNet Manager?

No, each and every device should have its own and unique alias in order to choose between them when referring to its parameters. Figure 1 shows that all the devices sharing the same id will count as one when open the Select Parameter dialog window. To correctly individually address them you should identify each one differently like shown in Figure 2.
Why doesn't the green connected light appear on an External Device?

EclerNet Manager integrable devices added in a project using an "External Device" do not indicate their connection status as EclerNet Manager Native devices, so you cannot monitor whether the device is on the network or not from the software.
Can I use presets in EclerCOMM?

Yes, but when the project configuration is saved in a file, it only save local preset configuration, and it does not save configuration for other presets. For example, if you have 3 stored presets in one device, they have to be saved into 3 separate project configuration files.
**MIMO**

What’s the difference between MIMO88 and MIMO88SG?

Main difference is that MIMO88SG (SinGle) can’t connect with another MIMO88SG matrix switcher to create 16x16 matrix switcher. It can be done with 2x MIMO88s. Below you can find a comparison chart.

<table>
<thead>
<tr>
<th></th>
<th>MIMO88</th>
<th>MIMO88 CONFERENCE</th>
<th>MIMO88 SG</th>
<th>MIMO88 SG CONFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio Inputs</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Inputs with Freq. Shifter</td>
<td>8</td>
<td>8</td>
<td>4*</td>
<td>4*</td>
</tr>
<tr>
<td>Input Delay</td>
<td>≤ 1s</td>
<td>-</td>
<td>≤ 1s</td>
<td>-</td>
</tr>
<tr>
<td>Independent Outputs</td>
<td>8</td>
<td>4**</td>
<td>8</td>
<td>4**</td>
</tr>
<tr>
<td>Output PEQ</td>
<td>8</td>
<td>4</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Output Delay</td>
<td>≤ 1s</td>
<td>≤ 1s</td>
<td>≤ 1s</td>
<td>≤ 1s</td>
</tr>
<tr>
<td>Monitor Output</td>
<td>2 (cloned)</td>
<td>2 (cloned)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>GPI</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>GPO</td>
<td>8</td>
<td>8</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Expandable (16x16)</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Automixer</td>
<td>-</td>
<td>Yes</td>
<td>-</td>
<td>Yes</td>
</tr>
<tr>
<td>Feedback Killer</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Remote Port</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Max. Num of MPAGE16 / Ducker</td>
<td>4</td>
<td>1 (ducker)</td>
<td>3</td>
<td>1 (ducker)</td>
</tr>
<tr>
<td>Max. Num DIGITAL of REMOTES (VIRTUALS + MPAGE16 + WPTOUCH)</td>
<td>32</td>
<td>32</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>Max. Num Events</td>
<td>64</td>
<td>64</td>
<td>64</td>
<td>64</td>
</tr>
</tbody>
</table>

*Only inputs 1-4.

**MIMO88 / MIMO88SG CONFERENCE**: Outputs 5-8 can receive signal from outputs 1-4 (selectable). They can have independent level control and delay.

What’s the difference between MIMO and MIMO CONFERENCE?

MIMO CONFERENCE is a firmware version which uses the same MIMO88 hardware. It’s been specifically designed for conference applications and similar. It includes 2 exclusive functionalities: Auto-Mixer and Feedback Killer.

You can switch between MIMO and MIMO CONFERENCE and vice versa by loading specific firmware (firmware files are free of charge). There are no hardware differences, and the only difference is firmware which allows activating and deactivating some functionalities.
It can be performed on MIMO88, MIMO88SG, MIMO1212SG and for 2x MIMO88s connected together as MIMO1616.

The 2 exclusive functionalities: Auto-Mixer, useful in conference rooms, and Feedback Killer, useful in installations with acoustic feedback issues.

<table>
<thead>
<tr>
<th></th>
<th>MIMO88 CONFERENCE</th>
<th>MIMO88 SG CONFERENCE</th>
<th>MIMO88 SG CONFERENCE</th>
<th>MIMO1212SG CONFERENCE</th>
<th>MIMO1212SG CONFERENCE</th>
<th>MIMO1616 CONFERENCE (2x MIMO88)</th>
<th>MIMO1616 CONFERENCE (2x MIMO88)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio Inputs</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>12</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>Inputs with Freq Shifter</td>
<td>8</td>
<td>8</td>
<td>4*</td>
<td>4*</td>
<td>4*</td>
<td>4*</td>
<td>16</td>
</tr>
<tr>
<td>Input Delay</td>
<td>≤ 1s</td>
<td>-</td>
<td>≤ 1s</td>
<td>-</td>
<td>≤ 1s</td>
<td>-</td>
<td>≤ 1s</td>
</tr>
<tr>
<td>Independent Outputs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
<td>4**</td>
</tr>
<tr>
<td>Output PEQ</td>
<td>8</td>
<td>4</td>
<td>6</td>
<td>4</td>
<td>6</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Output Delay</td>
<td>≤ 1s</td>
<td>≤ 1s</td>
<td>≤ 1s</td>
<td>≤ 1s</td>
<td>≤ 1s</td>
<td>≤ 1s</td>
<td>≤ 1s</td>
</tr>
<tr>
<td>Monitor Output</td>
<td>2 (cloned)</td>
<td>2 (cloned)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4 (cloned)</td>
</tr>
<tr>
<td>GPI</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>12</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>GPO</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>16</td>
</tr>
<tr>
<td>Expandable (16x16)</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Automixer</td>
<td>-</td>
<td>Yes</td>
<td>-</td>
<td>Yes</td>
<td>-</td>
<td>Yes</td>
<td>-</td>
</tr>
<tr>
<td>Feedback Killer</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Remote Port</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Max. Num of MPAGE16 / Duckers</td>
<td>4</td>
<td>1 (ducker)</td>
<td>3</td>
<td>1 (ducker)</td>
<td>3</td>
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<td>4</td>
</tr>
<tr>
<td>Max. Num of DIGITAL REMOTES (VIRTUALS + MPAGE16 + WPTOUCH)</td>
<td>32</td>
<td>32</td>
<td>32</td>
<td>32</td>
<td>32</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>Max. Num Events</td>
<td>64</td>
<td>64</td>
<td>64</td>
<td>64</td>
<td>64</td>
<td>64</td>
<td>64</td>
</tr>
</tbody>
</table>

* Only inputs 1-4

**MIMO88 / MIMO88SG CONFERENCE: Outputs 5-8 can receive signal from outputs 1-4 (selectable). They can have independent level control and delay.

**MIMO1212SG CONFERENCE: Outputs 5-8 can receive signal from outputs 1-4 (selectable). They can have independent level control and delay.

** MIMO1616 CONFERENCE: Outputs 5-8 and 13-16 can receive signal from outputs 1-4 and 9-12 (selectable). They can have independent level control and delay.
What is the difference between a MIMO4040CDN and a MIMO7272DN?

The main differences are:

<table>
<thead>
<tr>
<th>MIMO4040CDN</th>
<th>MIMO7272DN</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 input / output ports</td>
<td>72 input / output ports</td>
</tr>
<tr>
<td>40x40 matrix that will be reduced depending on the number of channels used in the AEC algorithm. The flexible routing feature helps us to choose which ports to route to the matrix.</td>
<td>64x64 matrix. Flexible routing feature helps us choose which ports to route to the matrix.</td>
</tr>
<tr>
<td>Acoustic Eco Cancelling (AEC)</td>
<td>Not available.</td>
</tr>
<tr>
<td>25 Ducker modules</td>
<td>25 Pagers / Duckers modules</td>
</tr>
<tr>
<td>Automixer / Feedback Killer</td>
<td>Not available.</td>
</tr>
</tbody>
</table>
These and other differences are detailed below:

<table>
<thead>
<tr>
<th></th>
<th>MIMO4040CDN</th>
<th>MIMO7272DNN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal I/O Channels</td>
<td>40x40(^4)</td>
<td>64x64</td>
</tr>
<tr>
<td>Matrix (MTX_IN/OUT)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audio Inputs Ports</td>
<td>8 + 32DN</td>
<td>8 + 64DN</td>
</tr>
<tr>
<td>MTX_IN with Freq.Shifter</td>
<td>40(^4)</td>
<td>64</td>
</tr>
<tr>
<td>MTX_IN Input Delay</td>
<td>≤ 1s</td>
<td>≤ 1s</td>
</tr>
<tr>
<td>Audio Outputs Ports</td>
<td>8 + 32DN</td>
<td>8 + 64DN</td>
</tr>
<tr>
<td>MTX_OUT Full DSP</td>
<td>8 + 32DN(^4)</td>
<td>64</td>
</tr>
<tr>
<td>MTX_OUT Delay</td>
<td>≤ 1s</td>
<td>≤ 1s</td>
</tr>
<tr>
<td>Monitor Output</td>
<td>1x ST</td>
<td>1x ST</td>
</tr>
<tr>
<td>GPI</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>GPO</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Expandable (16x16)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Automixer Ch</td>
<td>40</td>
<td>-</td>
</tr>
<tr>
<td>Feedback Killer</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Remote Port</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Max. Num of Pagers / Duckers</td>
<td>25 (duckers)</td>
<td>25</td>
</tr>
<tr>
<td>Max. Num of REMOTES in REMOTE LIST(^3)</td>
<td>80</td>
<td>144</td>
</tr>
<tr>
<td>Max. Num of TP-NET connections</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Max. Num of Virtual Controls</td>
<td>80</td>
<td>160</td>
</tr>
<tr>
<td>Max. nº carrousels</td>
<td>40</td>
<td>80</td>
</tr>
<tr>
<td>Max items per carrusel</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Matrix Link Groups</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>Max items per Link Group</td>
<td>40</td>
<td>80</td>
</tr>
<tr>
<td>Max. Num Events</td>
<td>255</td>
<td>255</td>
</tr>
<tr>
<td>RS-232 Connector</td>
<td>DB9</td>
<td>DB9</td>
</tr>
<tr>
<td>Max. Num AEC IN Channels License</td>
<td>8</td>
<td>-</td>
</tr>
</tbody>
</table>

Which matrix has AEC?

Only the MIMO4040CDN matrix, formerly called MIMO4040DN Conference.

How many IPs does a MIMO4040CDN or a MIMO7272DNN require?

You must have at least 2 network connections with 2 different IPs. One will be for the EclerNet platform and the other for DANTE. If redundant installation is performed, then a third IP address will be required for the secondary port of DANTE.
How to connect MIMO88 Master with MIMO88 Slave to create a 16 input x 16 output matrix switcher?

Connection between Master and Slave need to have a direct connection, and not connected through network. Connection is done using a crossover CAT5 cable, connecting both MIMO88s using port LINK BUS and by setting one unit to “MASTER” and the other one to “SLAVE” using the switch on the back panel on each device.

Connection with the EclerNet is done using the “ETHERNET” port.

For EclerNet Manager to detect 16x16 matrix switcher, you have to select “MASTER” MIMO88 device and option “CONFIG” and change Mode to 16x16
What's the maximum CAT5 cable length that can be used when connecting MIMO88 Master with Slave?

Connection between Master and Slave needs to be direct, and not connected to network. (You can’t use switches or any other network hardware). This Ethernet connection is supported up to 100m.
What’s the maximum cable length between MIMO and digital remote control WPTOUCH or paging station MPAGE16?  

Connection in Remote ½ is a BUS CAN, and it connects to different devices using Daisy-Chain. Resistance of 120 Ohm should be applied to last device connected to the bus connector. Maximum length can get up to 1Km with CAT5 cable. Consult in manual how to make this connection. Below you will find WPTOUCH example.

![Diagram showing Daisy-Chain connection](image)

Paging stations and remote controls can be powered from the REMOTE port on the MIMO / MIMOSG devices. But with large distances or multiple devices connected, it’s recommended to use separate power supplies reinforcing power supply on the bus.

To calculate how many power supplies are needed, use our calculator:  

How many digital remote controls can be connected to Remote ½ ports?  

Up to 32 digital remote controls can be installed (total number of VIRTUALS, WPTOUCH and MPAGE16) in each MIMO. MIMO88 supports maximum four MPAGE16 paging stations (whether it’s 8x8 or 1616 matrix switcher). MIMO88SG and MIMO1212SG support four MPAGE16 paging stations.

<table>
<thead>
<tr>
<th></th>
<th>MIMO88</th>
<th>MIMO88 CONFERENCE</th>
<th>MIMO88 SG</th>
<th>MIMO88 SG CONFERENCE</th>
<th>MIMO1212SG</th>
<th>MIMO1212SG CONFERENCE</th>
<th>MIMO1616</th>
<th>MIMO1616 CONFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote Port</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Max. Num of MPAGE16</td>
<td>4</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>4</td>
<td>-</td>
</tr>
</tbody>
</table>
What’s the maximum number of events that can be programmed in MIMO88 or DUO-NET PLAYER?

Maximum number of events is 64.

How to MUTE MIMO using GPI?

Create PRESET with muted outputs: when you activate selected GPI and program event to execute the preset. If paging station is used (eg. MPAGE16), and you mute your outputs, any call will also be muted. This is why it's recommended to mute crosspoint (in in some inputs, or crosspoints).
How to connect digital control panel WPmVOL-SR / WPaVOL-SR to MIMO?

TAG: ECLERNET, CONNECTION, GPI
PRODUCTS: MIMO, WPaVOL-SR

How many GPIs are used by WPaVOL-SR when connected to MIMO or NXA?

TAG: ECLERNET, PROGRAMMING, EVENTS, PRESET, GPI
PRODUCTS: MIMO, WPaVOL-SR, NXA

2 GPIs per device are used when connected, one configured for volume control and second configured for selection which needs to be controlled, eg. Different channels which are selected for music channel or for different presets.

How to connect 24VDC to external relays for 100V attenuators?

TAG: ECLERNET, PROGRAMMING, EVENTS, GPO, CABLING
PRODUCTS: MIMO, WPaHAT

In resistant attenuators WPAHAT3 / WPAHAT6 and inductive WPAHAT100 (or equivalent in new WPa series), internal relay is included to bypass attenuator when priority signal is detected. In this configuration, even when volume is set to 0 in attenuator, priority messages will always be heard.

Ecler provides WP24-PSU power supply for this and similar installations.
This 24V power supply can power up to 60 relays (60 attenuators) for different zones. Eg.

You should create an event with the MPAGE zone and selected GPO. GPO needs to be set to mode Push, to bypass attenuators. When event is activated, el GPO will send 24VDC current to destination panels, activating their priority relay.

What sensitivity input level should be set?

You can choose between 3 sensitivity levels depending on your audio source:

- 0 dB > Line level signal, eg. In professional audio systems
- -20 dB > Non-professional audio system signal, eg. Smartphones, tablets, etc.
- -40 dB > Microphone level signal, eg. Microphones, injection boxes

You can also use preamp gain setting with +/- 10 dB margin.
How to adjust input level signal?

Using the sensitivity input gain setting with +/- 10DB, you can set your input so that the VU meter goes up to the orange level, but never up to clip level (audio cut off and saturation).

Generally, it’s recommended that input signal connected to device is of the highest possible level without saturating input converters. If the input is saturated (VU meter goes up to the red level), you should attenuate the level to obtain the best signal without saturation.

What is a Noise Gate?

Noise Gate is a processor which cuts signal that doesn’t exceed specific threshold. When applied to input signal you can attenuate or eliminate background noise captured by microphone, separating background noise from the valid audio signal:

- When input signal is below the threshold, noise port will stay closed, or specific attenuation will be applied to the signal (using the DEPTH setting, in dB)
- When input signal is above the threshold, it’s possible to attenuate it, leaving the Noise Port open. Transition to this state is determined by set time using the ATTACK parameter
- When input signal returns to below the threshold level, Noise Port will temporarily stay open, without attenuation (time set using the HOLD parameter), to finally close, returning to the attenuation level set (using the RELEASE parameter).

Available settings in MIMO:
• **ENABLE/DISABLE**: activates/deactivates Noise port (green button / grey button). When set to DISABLE, all other options won’t be available.

• **THRESHOLD**: defines signal input level, below which signal will be affected by the set attenuation DEPTH (port closed). Range for this parameter is between +18dB and -80dB.

• **DEPTH**: attenuation applied to signal when it’s below the detection threshold (Port closed). Range for this parameter is between 0dB and +80dB.

• **ATTACK**: attack time determines time between exceeding set threshold and cancelled attenuation applied to input signal (Port open). Range for this setting is between 0.1ms and 500ms.

• **HOLD**: determines time when port is still open (no attenuation) when signal drops again below the detection threshold. Range for this setting is between 10ms and 3 seconds.

• **RELEASE**: determines time it takes for port to close again after HOLD. Range for this setting is between 1ms and 1 second.

It’s fundamental to correctly set parameters: ATTACK, RELEASE, and HOLD for the Noise Gate, eg. to receive clear and intelligible audio from noisy spaces.

**What is a dynamic compressor?**

The compressor is a tool which reduces dynamic margin of signal if it’s above a specific threshold. Level differences are balanced between higher and lower intensity, resulting in lowest dynamic signal margin. Available settings:
- **ENABLE/DISABLE**: activates and deactivates the compressor (green/grey button). If it’s disabled, all other settings will not be available.
- **THRESHOLD**: compression threshold. It specifies input signal level when compression starts. Range for this parameter is between -36dB and +18dB.
- **RATIO**: Compression ratio. This parameter specifies when input signal reduces its output level. 1:1 ratio establishes that the input signal will not be affected, while the maximum value inf:1 makes the compressor function like a signal limiter, not allowing input signal exceed defined level in compression threshold.
- **GR (Gain Reduction)**: Signal compression indicated as a VU meter. Reduces decibel level between signal input and output level.
- **KNEE**: compression curve. It allows to select progressive response (SOFT) or rise (HARD) of the compressor when the signal level is close to compression threshold, especially in the set level when the compressor activates or deactivates.
- **ATTACK**: attack time. It determines elapsed time from exceeding threshold to starting the compressor. Range is between 0.1ms and 500ms.
- **RELEASE**: It determines delay time of the compressor stops when the signal level drops below the threshold level. Range is between 10ms and 1 second.
- **MAKE-UP**: Additional gain that can be applied to compressed signal between 0 and +10dB. The audible effect of the compression is a signal with lower volume intensity. MAKE-UP gain additionally allows to increment volume level signal when it’s compresses, recovering intensity.

It’s not simple to correctly configure delay time for ATTACK and RELEASE parameters. Using short delay time for attack and release can cause noticeable distortion and excessive in low frequencies. When using long delay time can make the compressor useless, causing it to activate too late, allowing signal peaks of elevated intensity without applying any compression.

**What is a Frequency Shifter?**

**TAG: ECLERNET, ECLERCOMM, PROGRAMMING**

**PRODUCTS: TODOS LOS QUE TENGAN COMPRESOR**

Frequency Shifter is a tool applied to inputs to prevent an unwanted effect of coupler or feedback.

Generally, a coupler happens at a determined frequency when there is a positive feedback between a loadspeaker and microphone. If you activate the Frequency Shifter, input signal is slightly displaced in frequency and the positive feedback disappears. This frequency change will not be noticed in non-musical applications.
What is a Feedback Killer and Feedback Suppressor?

Feedback Killer and Feedback Suppressor automatically detect frequency with feedback and it smoothes the signal, eliminating the audio section with feedback, and applying notch filters.

What’s the difference between PUSH and TOGGLE event trigger?

When you configure your action as PUSH, it will be active when event is triggered.

If you configure it as TOGGLE, each time when event is triggered, it will change action state. Example: first time when event is triggered it will open relay, next time the event is triggered it will close relay, and next time it will open again, etc.

What is a UCP (User Control Panel)?

User Control Panels are system remote control screens which control one or more devices like MIMO, NXA, DUO-NET, etc in an installation. Each panel can include one or more pages with graphical elements, text, volume controls, buttons, VU meters, LED indicators, etc.

Computer which runs EclerNet Manager, which executes EclerNet project which contains project panels, is converted into web server and UCPs can be accessed and used from remote devices which function as clients. These devices can be computers, tablets, smartphones, WPNETTOUCH screen, etc.

Also, a WPNETTOUCH screen can execute an EclerNet project and function as a web server without any computer connected to system.
Can I create UCPs which activate GPOs in MIMO88?

Yes, for example using PRESETS. You can create as many presets as required to activate GPOs.

When you recall this presets using button press on the UCP panel, GPO configuration status (active/inactive) that was stored into a preset will be loaded, without changing any other device configuration.

Create PRESET for each GPO you want to control:

Preset1:

Preset2:

etc.
How to configure MPAGE1/MPAGE1r to use with MIMO?

You can start off with these parameters (see image below), which include high-pass filter, noise gate and compressor, and configure everything accordingly:

It’s recommended to use a high-pass filter to reduce manipulation noise. Typically between 90-150Hz.

On “PAGERS/DUCKERS' tab, choose zone where you want to make announcements (see image below of outputs 1, 2, and 3).
When working with DAM614 and WPTOUCH (in analog mode) and controlling zone volume, is it normal that the zone fader doesn't represent the actual volume status?

Yes, remote control volume is linked to the zone fader which appears in EclerCOMM Manager, or you can control from the device’s front panel. Setting a max value allows this fader and front panel control, to precisely limit the maximum level when controlling from the remote control.

For example, if output fader is set to 80, and WPTOUCH is set to 100, will be limited by the fader to 80 maximum.
Can I use MPAGE4 with MIMO?

No, MPAGE4 is not compatible with MIMO digital matrixes even if you only want to control 4 zones. The protocol it uses is only compatible with DAM614 and CA200z.

How to connect MPAGE4 with DAM614?

Using CAT5 cable connected directly between the two devices. Connection between DAM614 and MPAGE is point-to-point, not through network. That’s why you can’t use switches and any other network device.

What’s the maximum connection length for MPAGE4?

Maximum connection length between REMOTE port of the receiver to MPAGE4 cones can be up to 200m with CAT5e or CAT6 cable. It always depends on the quality of the cable and its connectors.
**MPAGE16**

**How to connect multiple MPAGE16 to MIMO?**

It’s possible to connect multiple MPAGE16 (maximum of 4 in MIMO, and 3 in MIMO SG) from the REMOTE ports on MIMO to each MPAGE16 using a daisy-chain connection (connected as a chain). Last MPAGE16 in a daisy-chain connection needs to have a resistance of 120 Ohm connected between data terminals. See image below and confirm your balanced microphone audio signal cables of each station (+ and -, ground is shared between bus and power supply), should connect directly to MIMO input, without daisy-chain connection.

![Diagram](attachment:diagram.png)

Power supply for each paging stations or remotes is applied through REMOTE port, but in longer distances or with multiple devices; additional power supply should be implemented.

To calculate how many power supplies are required, use our calculator.
How to configure MIMO / MIMO SG audio input with MPAGE16?

Audio input on the matrix can’t have any active crosspoint with any output. This will be done automatically when paging destination zones from the main console.

You can use default microphone settings, but it’s recommended to adjust them for your installation.

It’s recommended to use high-pass filter to reduce manipulation noise. Typically between 90 and 150Hz.
How many MPAGE16 paging stations can be connected to REMOTE port?

Maximum of 4 MPAGE16 paging stations can be connected to MIMO88 and 3 connected to MIMO88SG and MIMO1212SG. Also, keep in mind up to 32 remote controls in total can be programmed, including MPAGE16, WPTOUCH and/or virtuals using the MIMO system (8x8 and 16x16). For example, it’s possible to have 30x WPTOUCH and maximum of 2 MPAGE16.

It’s a total limit of devices connected to Remote 1, Remote2 or to both of them.

Keep in mind distance limitations supported by bus, microphone signal and power supply for remote controls.

What’s the maximum connection length for MPAGE16 to MIMO / MIMO SG?

Connection on the Remote ½ port is BUS CAN, where all devices can be connected using daisy-chain mode. Maximum length from the REMOTE port to last device can be up to 800m with CAT5 cable.

Powering all paging stations and remote controls can be done using REMOTE port, but in longer distances or with high number of devices connected, an additional power supply should be implemented.

To calculate how many power supplies are required, use our calculator.


In MPAGE paging stations the limitation is caused by the microphone signal, balanced or analog (see manual), which is connected between MPAGE16 paging station and input on MIMO.)
How to connect and configure WPTOUCH control in analog mode?

Configuration mode is defined by the connection type to device. Example 1, DAM614 and MIMO54, with RJ45 connector and REMOTE ports.

Usually Ethernet cables are T568B, but not always! Make sure you use correct cable before connecting to WPTOUCH.

Example 2, For amplifiers and processors with analog GPI, with Euroblock connector in REMOTE ports.

Info: https://es.wikipedia.org/wiki/10BASE-T
How to connect multiple WPTOUCH to MIMO / MIMO SG?

Connecting multiple WPTOUCH controllers (32 max.) is possible by making a daisy-chain connection between REMOTE port on MIMO. Resistance of 120 Ohm should be applied to last device connected to the bus connector.

Power supply for each paging stations or remotes is applied through REMOTE port, but in longer distances or with multiple devices; additional power supply should be implemented.

To calculate how many power supplies are required, use our calculator.

WPmSCREEN

How to install WPmSCREEN?

Ecler provides a WPmSCRMKIT, which is an additional accessory for installing WPmSCREEN in 4U rack. In chapter 3 of the manual, you will find all necessary information for installing and connecting this device.

WPmSCREEN can be wall-mounted, used in box (type SIMON 51020103-039 or similar), or in standard installation support (type VESA75). In product packaging, 4 screws for VESA75 installation are included, and 6 screws for box installation (type SIMON 51020103-039 or similar).

If the installation is done in a wall or desk, 4 screws with 4mm diameter should be used (not included).

What’s the maximum connection length between WPmSCREEN and power supply?

It depends on cable, 50m if you use 2x 0.5\textsuperscript{mm\textsuperscript{2}} cable and 100m if you use 2x 1\textsuperscript{mm\textsuperscript{2}} cable.

How many WPmSCREEN / WPNETTOUCH can be connected to EclerNet network?

There is no specific limit for WPmSCREEN / WPNETTOUCH, but the maximum number of EclerNet devices connected to the same system is 253. WPmSCREEN / WPNETTOUCH, MIMO88, DUO-NET PLAYER are all EclerNet devices. For example, if you have 2 MIMO devices, you can connect up to 251 WPmSCREEN.

How to configure WPmSCREEN / WPNETTOUCH to EclerNet system?

WPmSCREEN can function as a Master device, working as a webserver, storing and serving UCP panels (User Control Panel) to other devices (WPmSCREENs, WPNETTOUCHs, smartphones, tablets, PCs, etc) connected to network. Each WPmSCREEN / WPNETTOUCH panel can be configured to display correct panel (when started, or after a period of inactivity). Same UCP panel can be displayed on different devices.

Remember to disable ‘Enable UCP Server’ option in WPmSCREENs / WPNETTOUCH screens which are not used as Master.
Can WPmSCREEN / WPNETTOUCH be set as UCP server?

Yes, it can run EcleNet project and load UCP panels which contain a project.

Can WPmSCREEN / WPNETTOUCH replace a PC with EclerNet loaded in an installation?

Yes, it can run EclerNet project and load UCP panels, with exception it can’t trigger events “Launch File” and send emails.

Can I use different WPmSCREEN / WPNETTOUCH devices simultaneously on the same network as UCP clients?

Yes, each WPmSCREEN / WPNETTOUCH can be set to function with different roles:

- Client for another WPmSCREEN / WPNETTOUCH
- Client for itself (WPmSCREEN / WPNETTOUCH functions as a webserver and client for its UCPs)
- Client for the PC running EclerNet Manager.

Can I connect more than one UCP webserver to the same network?

Yes, you can connect more than one device running different EclerNet projects (can coexist on the same network, but keep in mind):

- Only PC or WPmSCREEN / WPNETTOUCH can control an EclerNet hardware device (MIMO, NXA, etc), but each hardware device can’t be controlled by more than 1 PC, WPmSCREEN or WPNETTOUCH simultaneously.
Projects running on PC, or WPmSCREEN / WPNETTOUCH can’t include the same EclerNet devices (with the same IP address, etc) which are used in other projects.

Can I define which UCP panels can be configured from each WPmSCREEN / WPNETTOUCH?

Yes, each project can have many panels and you can decide which panels are visible and accessible from each client WPmSCREEN / WPNETTOUCH.

You can define which panel will be displayed on WPmSCREEN / WPNETTOUCH when device starts-up, reinitializes after power loss, etc. (default start-up panel), or after timeout period.

Additionally, user accounts with passwords can be created, requiring user to provide password using on-screen keyboard on WPmSCREEN / WPNETTOUCH.

Can WPmSCREEN / WPNETTOUCH coexist with 3rd party UCP client devices on the same network?

Yes, you can use Android, iOS or Windows as UCP clients where WPmSCREEN / WPNETTOUCH function as clients and/or webservers.

What does ‘V’ signify when displayed in the upper part of the WPmSCREEN / WPNETTOUCH?

When the ‘V’ icon appears in the upper part of the main WPmSCREEN screen, it indicates an incompatible version in project. It is recommended to verify all devices, that the firmware version is compatible with the project.

In EclerNet Manager, select Help and in the User Manual you will find a document showing compatible firmware and software versions.

Why the project doesn’t work from WPmSCREEN / WPNETTOUCH but it works from PC?

It can be caused by incorrect firmware version. Upgrade firmware on all EclerNet devices to latest version, send a blank project to WPmSCREEN / WPNETTOUCH which functions as a UCP server, and again send your main project to the device.
WPNETTOUCH

How to install WPNETTOUCH?

WPNETTOUCH is compatible with standard VESA75 type brackets. A wall bracket for surface mounting is included in the package, wall mounting is not possible.

What is the maximum length that a WPNETTOUCH can be connected to its power supply?

Depending on the cable used, 50m if you use a 2x 0.5mm² cable and 100m if you use a 2x 1mm² cable.

Remember that, alternatively, you can power WPNETTOUCH via PoE.

How many WPNETTOUCH can I connect to an EclerNet network?

There is no specific limit for WPNETTOUCH, but the maximum number of EclerNet devices connected to the same system is 253. WPmSCREEN / WPNETTOUCH, MIMO88, DUO-NET PLAYER are all EclerNet devices. For example, if you have 2 MIMO devices, you can connect up to 251 WPNETTOUCH.

How to configure more than one WPNETTOUCH in an EclerNet system?

In an EclerNet system, only one device can act as a UCP Server unit: this device will run the EclerNet project and perform the webserver function, serving UCP (User Control Panel) panels. If this function is performed by a WPNETTOUCH for itself and for the rest of the UCP clients (WPmSCREENs, WPNETTOUCHs, smartphones, tablets, PCs, etc.) in the network. You can choose in each WPNETTOUCH which panels it should show and even which of them will be the default panel (at startup and after a time of inactivity). You can also display the same panel on different screens without problems.
Remember to disable the Enable UCP Server function on non-Master devices to avoid errors.

Can WPNETTOUCH be set as UCP server?

Yes, it can run EclerNet project and load UCP panels which contain a project. Also MIMO4040CDN, MIMO7272DN or a PC with EclerNet Manager open in "Deploy" mode.

Can WPNETTOUCH replace a PC with EclerNet loaded in an installation?

Yes, it can run EclerNet project and load UCP panels, with exception it can’t trigger events “Launch File” and send emails.

Can I use different WPNETTOUCH units on the same network simultaneously as UCP clients?

Yes, each WPNETTOUCH unit can have different client roles:

- Client of another WPNETTOUCH
- Client of itself (a WPNETTOUCH acts as server and client of its own UCPs)
- Client of a computer with EclerNet Manager running.

Can I connect more than one UCP webserver to the same network?

Yes, you can connect more than one device running different EclerNet projects (can coexist on the same network, but keep in mind):

- Only PC or WPmSCREEN / WPNETTOUCH can control an EclerNet hardware device (MIMO, NXA, etc), but each hardware device can’t be controlled by more than 1 PC, WPmSCREEN or WPNETTOUCH simultaneously.
Can I define which UCP panels can be configured from each WPNETTOUCH unit?

Yes, each project can have many panels and you can decide which panels are visible and accessible from each client WPNETTOUCH.

You can define which panel will be displayed on WPNETTOUCH when device starts-up, reinitializes after power loss, etc. (default start-up panel), or after timeout period.

Additionally, user accounts with passwords can be created, requiring user to provide password using on-screen keyboard on WPNETTOUCH.

Can WPNETTOUCH coexist with 3rd party UCP client devices on the same network?

Yes, you can use Android ©, iOS or Windows © devices as UCP clients in an installation where WPNETTOUCH units act as clients and/or servers. They will then be able to use the panels served.

What does ‘V’ signify when displayed in the upper part of the WPNETTOUCH?

When the ‘V’ icon appears in the upper part of the main WPNETTOUCH screen, it indicates an incompatible version in project. It is recommended to verify all devices, that the firmware version is compatible with the project.

In EclerNet Manager, select Help and in the User Manual you will find a document showing compatible firmware and software versions.

Alternatively, in the file "EclerNet manager and related firmware LEGACY VERSIONS" (see here) you will find a historical record of updates of the different products that can be in an ECLERNET network. It includes a table describing, for each EclerNet Manager version released, which are the firmware versions for EclerNet devices compatible with it. The last row of this table is always the current version list, included in the ZIP file that you will have downloaded and that includes software, firmware and other documents (Setup EclerNet Manager (vx.xrxx)), available at the following Link:

Why the project doesn’t work from WPNETTOUCH but it works from PC?

It can be caused by incorrect firmware version. Upgrade firmware on all EclerNet devices to latest version, send a blank project to WPNETTOUCH which functions as a UCP server, and again send your main project to the device.
Inputs on NXA device are designed to work with Line-in signal, but not with microphone signal because the signal is weak. Microphone signal should pass through preamplifier or mixing table (see available products) before they are connected to NXA devices.
**ePLAYER1**

**What's the main password for ePLAYER1?**

For point-to-point connection through ePLAYER1’s wifi, default password is “0123456789”. It also appears on the bottom label.

To access ePLAYER1’s configuration page:

- Username: root
- Password: ecler

For more details please consult [ePLAYER1 manual](#) where you can find more detailed information.

Tutorial video for connecting to ePLAYER1 to network is available on your YouTube channel: [https://youtu.be/W02aNRxT-vM](https://youtu.be/W02aNRxT-vM)

**What audio formats can be used in ePLAYER1?**

ePLAYER1 supports mp3, ogg, WAV, FLAC, AIFF.

**Why ePLAYER1 doesn’t play audio streaming?**

It’s important to check your internet connection and confirm if the audio streaming address link is correct. A streaming link, eg. [http://www.my_radio.com](http://www.my_radio.com) is not a correct audio streaming, but main webpage address. It can contain a streaming service with its proper URL, which is different from the previous example.

Correct audio stream link should be similar to examples below:

- [http://www.my_favourite_radio.mp3](http://www.my_favourite_radio.mp3)
- [http://111.111.11.1:8080](http://111.111.11.1:8080)
- [http://listen.radio/rock.m3u](http://listen.radio/rock.m3u)

Check our document “Ecler ePLAYER1 and DUO-NET PLAYER How to identify Internet radio url streams”
Can ePLAYER1 play audio files from the local network?

Yes, but not directly. ePLAYER1 can’t play audio files stored on local network, but it can play audio files using DLNA if the webserver has a DLNA multimedia application installed (eg. Plex Media Player).

Can ePLAYER1 reproduce streaming from the music platforms like Spotify?

No, ePLAYER1 can’t access user accounts on these platforms. But it’s possible to receive music content using AirPlayer (Spotify Connect).

NOTE: Spotify does not work with DLNA.

Can I configure ePLAYER1 to have internet access using proxy server?

To implement it it’s necessary to configure your Proxy/VPN server in your gateway (router/switch). Each device connected to this node will access internet through proxy/VPN.
**DUO-NET PLAYER**

How to make sure clock in DUO-NET PLAYER is always set correctly?

Every quartz clock, as the one included in DUO-NET PLAYER, has a minor advance or delay. To make sure it’s set precisely it’s important to connect DUO-NET to network with internet access and activate: NTP Server, introducing NTP server information.

![DUO-NET Device Configuration](image)

How to program calendar messages?

This information can be found in EclerNet manual, section “Calendar-based events (TIME SCHEDULER)”.

⚠️ It’s important to set correctly date and time in your EclerNet device. By default, date and time are not configured.
It’s recommended to activate “NTP Synchronization” (requires internet connection), and set device to correct Time zone where it is installed. This will guarantee device is set correctly (option enabled in DUO-NET PLAYER).

Configuration examples for Time Scheduler events:

Example 1

Event will stay active every day (REPEAT – interval 1 day) for 20 seconds at 9:00, without Saturday and Sunday. Without activating repeat times, and End Date, this event will always trigger.

球星 HOLD option is used when acting on the “PRIORITY MEDIA PLAYBACK” and where Trigger Mode is configured as HOLD. Message will play as long as set in Hold option in Time Scheduler.
When “PRIORITY MEDIA PLAYBACK” is configured in Trigger Mode as PULSE with Hold Time 10 seconds, the message will play for 10 seconds.

When using “TRANSPORT CONTROL” or “PROGRAM MEDIA PLAYBACK” message will play until it finishes.

🌟 ATTENTION: If the programming is done on 31/5/2017 (Wednesday) at 12:00, this event will never be active and therefore will never repeat. Keep in mind, when you program your device offline,
and the next day upload it to device, it’s possible your event activation time has passed, and it won’t activate again.

**Example 2**

Event will stay active for 5 seconds and will repeat 4 times every 1 hour, at 9AM, 10AM, 11AM, and 12PM. After executing 4 times, this event will no longer repeat because it finished its execution.

火花 ATTENTION: If the programming is done on 31/5/2017 (Wednesday) at 12:00, this event will never be active and therefore will never repeat. Keep in mind, when you program your device offline, and the next day upload it to device, it’s possible your event activation time has passed, and it won’t activate again.

**Conclusion**

If event needs to trigger 4 times, and be active every day (except Saturday and Sunday), it’s recommended to create 4 events (each one programmed with correct trigger time) to repeat every day. Follow example 1 for creating 4 events.

**Can background music and audio messages be played from the same source (USB, SD) using DUO-NET PLAYER?**

TAG: ECLERNET, PROGRAMMING, EVENTS

PRODUCTS: DUO-NET

Yes, using the priority modules. For more information please check our [EclerNet Manager manual](#), see section “DUO-NET PRIORITY 1 and PRIORITY 2 modules section”.
How many events can be created in DUO-NET PLAYER?

Max. 64 events. By default there are 20 pre-configured events for front panel buttons and remote control (these events can be edited or deleted).

When preset is stored in DUO-NET PLAYER, does it also store device's status?

No, preset doesn’t store device’s status. It’s necessary to create an event executing required transport control when DUO-NET recalls particular preset.

In previous example when PRESET 02 is recalled, it executes EVENT 021 which stops PLAYER A.

What DNS should be used in DUO-NET PLAYER?

DUO-NET uses Google’s public DNS addresses: 8.8.8.8 and 8.8.4.4

These DNS addresses cannot be changed.

Can DUO-NET PLAYER be configured to have internet access through proxy server?

To implement it, it’s required to configure a Proxy/VPN server in your gateway (router/switch). From now on, each device connected to the same node will have internet access through the same Proxy/VPN.
How to make the Priority Media Playback module repeat its playback while GPI is active?

Priority modules were not designed for repeat function.

It’s recommended to create 2 events which use Program Media Playback option:

- **GPI enable** – executes PLAY function in Program Media Playback module

  ![Image 0.1: In the example, when GPI1 is enabled, Player A starts playing Playlist 02](image-url)

- **GPI disable** – executes STOP when GPI is disabled
Player (A or B) which executes this function needs to have a Repeat Mode function in Loop or Repeat so it won’t stop after playlist playback (see image below).

Why DUO-NET plays audio file but there is no audio output?

If volume levels are set properly, make sure if there are audio files with 3 second duration, crossfade enabled and Repeat Mode also enabled, you won’t be able to hear any audio coming out.

Fade-out starts a few seconds before audio finishes, and fade-in starts a few seconds before playing next audio file. Infinite loop is created causing issue with audio playback.

To resolve this problem, crossfades need to be disabled.
Can 2 DN44BOBs with the exact same names be connected to one Dante network?

It’s not recommended because Dante Controller application connects with Dante devices using their names, causing conflict in Dante Controller. EclerNet Manager uses IP addresses, and if they are distinct then it will function correctly.

Where can I find more information about DANTE?

Dante is an Audinate protocol which integrates various professional audio manufacturers.
DANTE is an *Audinate*© protocol that is integrated by many professional audio manufacturers.

You can consult the latest and most relevant information in the "Support" section of the Audinate© website.

Although it is essential, if you are going to work with Dante, that you get certified at: www.audinate.com/certify. It's free of charge!

**How many IPs does a DN44BOB require?**

A DN44BOB requires a static IP, shared for EclerNet and Dante platforms connection.
WP22DN

Why can't EclerNet Manager find a WP22DN device?

WP22DN is a DANTE interface that is not part of the EclerNet platform. Its settings are physical in the unit and the parameters corresponding to the network and DANTE subscriptions are made from DANTE CONTROLLER.
PAGENETDN

How many IPs does a PAGENETDN require?

PAGENETDN requires two IP addresses, one for communication with DANTE and one for communication with EclerNet. The connection is made via a CAT5e cable to the network.
Can eMOTUS5PBT password be changed?

No, configuring Bluetooth module is not available. But Android devices (smartphone, tablet) allow renaming paired Bluetooth devices and allow separating devices with the same name. This is stored in Android memory and doesn’t change Bluetooth module in eMOTUS5BT.

This option is not available in iOS devices.
Can eSAS-BT password be changed?

No, configuring Bluetooth module is not available. But Android devices (smartphone, tablet) allow renaming paired Bluetooth devices and allow separating devices with the same name. This is stored in Android memory and doesn’t change Bluetooth module in eMOTUS5BT.

This option is not available in iOS devices.
Why when sending command to device using CA-NET or TP-NET protocol, I’m receiving an error message or device is not responding?

When sending commands using TP-NET protocol, it’s required to include a line feed (LF). This is specified in TP-NET and CA-NET protocol. Line feed is 0A in hexadecimal. In the following example we can see hexadecimal command and its equivalent in ASCII.

Different format for hexadecimal can be used depending on software used.

<table>
<thead>
<tr>
<th>Transmit</th>
</tr>
</thead>
<tbody>
<tr>
<td>00 53 59 53 54 45 4d 20 43 4e 44 4e 45 43 54 0a</td>
</tr>
</tbody>
</table>

Pero según el programa o software que usemos el carácter final de línea puede variar. Por ejemplo en el software Hercules es “[LF]”, o en IO Ninja es “.”, pero siempre debe corresponder en hexadecimal con “0a”.

TP-NET
How can I work in bridge mode with eLPA2-650, eLPA2-950 and eLPA2-1400 amplifiers?

In bridge mode you must connect the + terminal of the speaker of channel 1, terminal + and the terminal - of the speaker to channel 2, terminal -. Additionally, in channel 1 you should connect terminal – (black) with channel 2, terminal + (red) with short cable minimum 1.5mm² (shown as blue in image below). This is explained in the manual.

Remember that when in Bridge mode, you can only work with impedances of 8 Ohm or higher.
eMIMO1616

Can signal from 2 input sources be sent to 1 output?
No, eMIMO1616 is not a mixer matrix switcher. It will route only one input signal to one output. It will only mix different signals when balanced signal is used (inputs of 4 or 8) and when using Pagers/Duckers modules one signal is mixed with another selected for specific output.

Can the same zone be controlled from different applications and/or devices?
Yes, if it’s configured to do so. There is no problem with controlling the same parameter using different devices (pilot Panel in app, internet browser, wall digital remote control eMCONTROL1 or eMIMO1616’s front panel).

Can I connect to eMIMO1616 via WiFi connection using mobile device?
Yes, but keep in mind eMIMO1616 does not have an integrated WiFi interface. Nonetheless, you can connect to eMIMO1616 using Ethernet cable from a WiFi access point, and use any device to access this network.

Can users control input levels and other parameters?
No, users can control output volume level for output zone, input selection, and output zone equalization if it’s configured this way. Other parameters can only be modified by eMIMO1616 Administrator using embedded setup web page.

Can I simultaneously control multiple output levels?
Yes, as an Administrator, and only when using embedded setup web page, and selecting specific output zones for simultaneous control (press & hold green button for channel selection for a few seconds) and changing level using fader. Different control methods available for users (pilot panel app, front panel, eMCONTROL1) do not include this functionality.

Can I use software and program eMIMO1616 configuration without having hardware?
Yes, you can connect to our virtual eMIMO1616. You can find eMIMO1616 software (Ecler eMIMO1616 Demo) or through this link: http://www.ecler.com/eMIMO1616demo
**HUB1408 / HUB1616**

**Can signal from 2 input sources be sent to 1 output?**

No, HUB is not a mixer matrix switcher. It will route only one input signal to one output. It will only mix different signals when balanced signal is used (inputs of 4 or 8) and when using Pagers/Duckers modules one signal is mixed with another selected for specific output.

**Can the same zone be controlled from different applications and/or devices?**

Yes, if it’s configured to do so. There is no problem with controlling the same parameter using different devices (pilot Panel in app, internet browser, wall digital remote control eMCONTROL1 or HUB’s front panel).

**Can I connect to HUB via Wifi connection using mobile device?**

Yes, but keep in mind HUB does not have an integrated WiFi interface. Nonetheless, you can connect to HUB using Ethernet cable from a WiFi access point, and use any device to access this network.

**Can users control input levels and other parameters?**

No, users can control output volume level for output zone, input selection, and output zone equalization if it’s configured this way. Other parameters can only be modified by HUB Administrator using embedded setup web page.

**Can I simultaneously control multiple output levels?**

Yes, as an Administrator, and only when using embedded setup web page, and selecting specific output zones for simultaneous control (press & hold green button for channel selection for a few seconds) and changing level using fader. Different control methods available for users (pilot panel app, front panel, or eMCONTROL1) do not include this functionality.

**Can I control different outputs with one remote?**

No, an eMCONTROL1 remote can only control one zone selection, volume and EQ. You will only control more than one output when it is a specific output such as stereo.

From the HUB front panel or from Pilot mobile app you will be able to control the General Volume which will affect the selected outputs.
Can I use software and program HUB configuration without having hardware?

Yes, you can connect to our virtual HUB. You can find HUB software (Ecler HUB Demo) or through this link: https://www.ecler.com/hubseriesdemo/
Is Aux output (AUX/REC) for mixer-amplifiers eHMA60, eHMA120 and eHMA240 be controlled using output potentiometer (OUTPUT CONTROL) VOL?

Yes, by varying level of amplified outputs, output line level (AUX/REC) will be similarly varied. This allows to connect auxiliary amplifiers to this output to feed loudspeaker zones with power requirements greater than those of eHMA.
**WPa**

Which flush-mounted box can I use for WPa remotes?

The WPa (except WPaH-AT40 and WPaH-AT100) are designed for mounting in universal flush-mounted box.

For example:

- [LEGRAND 080041](#) (flush-mounted box for hollow partition walls)
- [LEGRAND 080141](#) (masonry flush mounting boxes)
WPNET4KV / WPNET8K / WPNETEX

Which flush-mounted box can I use for WPNET4KV / WPNET8K / WPNETEX remotes?

The WPNET series are designed for mounting in universal flush-mounted box.

For example:

- **LEGRAND 080041** (flush-mounted box for hollow partition walls)
- **LEGRAND 080141** (masonry flush mounting boxes)
**WiSPEAK**

**Why there are audio drops in one or more speakers?**

Ensure the speaker is powered on and the STR LED is permanently ON (not blinking) and the WIS LED is permanently OFF. If the WIS LED is blinking, there are coverage problems. It will be necessary to relocate the speaker trying to avoid obstacles as much as possible.

Check the quality LED colour using the APP. All the speakers have to be in green. If the LED is most of the time showing another colour it will be necessary to relocate the speaker trying to avoid obstacles as much as possible.

**Why there is no audio at all or there are drops in all the speakers?**

Check that the transmitter is powered ON and the WIS LED of the transmitter is permanently ON.

If the STR LEDs of all the speakers are blinking, this means that there are problems with the WiS network.

- Ensure that all the recommended distances are respected.
- Ensure that there are not two transmitters in the same coverage radius
- Ensure that there are no new wireless devices in the surroundings that can create RF contamination.

**Why the system is not working correctly and the WiS LED blinks once every three seconds after a discover?**

This means that the discover process has not been completed. This is called a partial discover and it will be necessary to repeat the discover process until the WIS LED stays permanently ON.

Ensure that all the previous discovered speakers are ON and in STREAMING MODE (WIS LED permanently ON). If not, it will be necessary to relocate the speaker trying to avoid obstacles as much as possible.

If the problem persist and all the speakers are in the recommended coverage area, unpair all the speakers and perform a discover operation again.

**Why the WiS LED is off?**

Restart the transmitter.
**Why a speaker appears as disconnected?**

Ensure that the speaker is powered ON.

Ensure that the STR LED is permanently ON (not blinking) and the WIS LED is permanently OFF. If not, it will mean that there are coverage problems, and it will be necessary to relocate the speaker trying to avoid obstacles as much as possible.

**Why some speakers are not paired?**

Repeat the discover process again and check that all the speakers has been successfully paired.

If the problem persists, unpair all the speakers and perform another discover operation.

**WARNING**, if a speaker has not been paired after a discover operation it could mean that this speaker has coverage problems. It could be necessary to relocate the speaker trying to avoid obstacles as much as possible.

**Why speaker quality LED in WiSpeak grip app is orange or red almost all the time?**

The recommended speaker quality colour is green. If it is not green, it could mean that there are coverage problems.

**How many simultaneous Bluetooth control connections can exist, between a device running WiSpeak grip app and a CORE Master unit (transmitter)?**

Just one.

**How many devices can be connected to send audio through Bluetooth at the same time?**

Just one.
Why I cannot find the bluetooth device (CORE-XX) after scanning Bluetooth devices?

Ensure there is nobody connected to the CORE-XX. This can be checked selecting the Bluetooth input in the CORE device. If the blue LED is not blinking, there is some device connected to the Bluetooth Core device. It is necessary to disconnect this device in order to establish a new connection.

Why I cannot connect to the CORE-XX Bluetooth? My device shows an error message.

Ensure there is nobody connected to the CORE-XX. This can be checked selecting the Bluetooth input in the CORE device. If the blue LED is not blinking, there is some device connected to the Bluetooth Core device. It is necessary to disconnect this device in order to establish a new connection.

It is possible that a previous Bluetooth pairing has expired. In order to redo this pairing, it is necessary to unpair and delete the CORE-XX from the settings of your device. Then, a scan is required and finally pair again with the CORE-XX with the corresponding PIN number.

Why Bluetooth audio is not working?

Ensure that the Bluetooth input is selected in the CORE-XX.

Ensure you are connected to the corresponding CORE-XX. This can be checked selecting the Bluetooth input in the CORE device. If the blue LED is blinking, there is no device connected to the CORE-XX to send audio.

Why there are audio drops when using the Bluetooth audio source?

Try to get closer to the CORE device and check if the problem persists.
Why I cannot connect to WiSPEAK grip app (iOS)?

Ensure there is no other user running the APP and then login in the LE_CORE-XX device.

Remove the LE_CORE-XX device from the APP discovered master device list and repeat the “discover master device” process.

Why I cannot connect to WiSPEAK grip app (Android)?

Ensure there is no other user running using the APP and then login in the CORE device.

Remove the CORE-XX device from the APP discovered master device list and repeat the “discover master device” process.

Remove / Unpair the CORE-XX device from the Android Bluetooth settings of your device. Scan and pair again the CORE-XX device and repeat the “discover master device” process.
¿How does Auto Switching feature work in VEO-SWM45?

- **Last Connected**: when a source is connected to any given input, VEO-SWM45 automatically routes this input to the HDMI OUT output. When a source is unplugged, the device will switch to the next active input with more priority (being HDMI 1 the most significant and VGA the less one) regardless of the order in which they were previously connected.

- **First Connected**: if a source is connected to any input it will be automatically routed to the HDMI OUT output. No further switching will be done once another source is plugged into any other input available.

- **Priority**: an automatic switching will only be done if the source is connected to HDMI 1 input. No other routing will be done for any other input even if HDMI 1 hasn’t got any active source plugged in. When the input is unplugged, HDMI OUT output will be automatically routed to the most significant input following the established priority (HDMI 1>HDMI 2>HDMI 3>Display Port>VGA).
¿Can I embed an external audio in a video input in VEO-SW45?

Yes, audio signals connected to EXT inputs in VEO-SWM45 can be embedded to any of the video inputs available. Also, audio from the currently selected video input can be extracted on the OUT analogue audio output as well.
**Extenders**

¿Which is the main difference between VEO-XPS15 and VEO-WXT44E, VEO-XTT44 / VEO-XRT44, VEO-XPT24, VEO-XPT44 extender devices?

In one hand, VEO-XPS15 adapts network twisted pair cable structure to the one proposed by the HDMI specification. In order to correctly manage the signal transport, it’s important to follow the EQ modes present in the next table:

<table>
<thead>
<tr>
<th>EQ Setting</th>
<th>Recomendado</th>
<th>Posición Interruptor DIP</th>
<th>Longitud Cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 1</td>
<td>&gt;15 m</td>
<td>2 - 3</td>
<td>15 m - 30 m</td>
</tr>
<tr>
<td>4 - 5</td>
<td>30 m - 40 m</td>
<td>6 - 7</td>
<td>40 m - 50 m</td>
</tr>
</tbody>
</table>

On the other hand, VEO-WXT44E, VEO-XTT44 / VEO-XRT44, VEO-XPT24 y VEO-XPT44 are based on the HDBaseT transport standard with we can extend video, audio, Ethernet, control / USB data and power over the same twisted pair network wire.
**Video over IP**

¿Which settings are important to take into account when configuring a layer 2 switch that manages an ethernet network that includes VEO video over IP devices?

In order to extend a video and audio transmission without any transport issues, we recommend turning on the following settings on a layer 2 switch acting as a central node of an ethernet network including VEO video over IP devices:

- **IGMP Snooping** (Internet Group Management Protocol)
- **Jumbo Frame**
- **1Gbps**

You can get further information on how to configure the switches specially verified by Ecler in the following help guides:

- **DSG-1210**
- **SG-300**

We also encourage you to review the webinar on how to first configure this range of devices.

¿Which latency are we going to be getting when using VEO video over IP devices (VEO-XTI1C / VEOXRI1C ; VEO-XTI2L / VEOXRI2L)?

<table>
<thead>
<tr>
<th>Device</th>
<th>Latency</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEO-XTI1C</td>
<td>300 ms - 500 ms</td>
</tr>
</tbody>
</table>
| VEO-XRI1C      | Average delay appropriate for almost every case
|                | Not suited for those scenarios where the transmitter and the receiver are placed relatively near and audio is outputted locally in each display device (for example a sports bar or a small conference room) |
| VEO-XTI2L      | > 30 ms                                      |
| VEO-XRI2L      | Optimized to reduce encoding and decoding latency to almost zero |
|                | 2 frames of delay (30 ms@60Hz)               |
¿Can encoding and decoding latency introduced in a transmission using VEO video over IP devices (VEO-XTI1C / VEOXRI1C / VEO-XTI2L / VEOXRI2L) affect to video and audio synchronicity?

No, latency is given by the encoding and decoding process in the transmitter and the receiver. Audio both from an external source or from the same HDMI input travels embedded in the video stream so synchronicity is not going to be altered in any sort.

¿What difference can we find between the video transport standards in the VEO video over IP devices (VEO-XTI1C / VEO-XRI1C / VEO-XTI2L / VEO-XRI2L)?

<table>
<thead>
<tr>
<th>Codec</th>
<th>Bandwith</th>
<th>Max Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEO - XTI1C</td>
<td>H.264</td>
<td>15 mbps</td>
</tr>
<tr>
<td>VEO - XRI1C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEO - XTI2L</td>
<td>Ecler (RTP)</td>
<td>&lt; 300 mbps</td>
</tr>
<tr>
<td>VEO - XRI2L</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**VEO-XTI1C**

¿Can I decode a video transmission coming from a VEO-XTI1C using a pc with a video playback software installed?

Yes, VEO-XTI1C is capable of encoding an H.264 video stream playable from any compliant video reproduction utility like for example VLC. You can get further information in the VEO-XTI1C [user manual](#).

¿VEO-XTI1C downscaling feature supports a 4K / UHD video signal?

No, VEO-XTI1C cannot downscale from a 4K / UHD video signal. The downscaling feature will always be possible whenever the source is FULL HD and will let you choose between outputting an HD (720p) or an SD (480p) video stream.
¿Will the optic fiber and the RJ45 link included in the VEO-XTI2L / VEO-XRI2L be able to work at the same time, providing network connection from both ends?

No, both network links are going to be working one at a time. The connection provided will be active in just one of the links leaving the unused one as a backup for any signal loss that may happen.

¿If we are using the fiber optic link included in VEO-XTI2L / VEOXRI2L, will still be possible to get PoE powering?

No, the optic fiber link won't be able to power a device through the twisted pair wire using PoE technology as it is not supported by the standard.

¿Which is the maximum number of screens that can take part in a videowall composition using VEO-XTI2L / VEO-XRI2L?

The total amount of screens cannot exceed 64 units. Also, when in videowall mode, you can add the up until 253 VEO-XTI2L transmitters, the same as in a unicast set up.
What is the difference between PassThrough and Auto Detect (per EDID) functionalities when configuring the video output scaler in VEO-XTI2L / VEO-XRI2L?

**Pass-Through**: The scaler is not active. VEO-XRI2L receiver outputs the video stream coming from the VEO-XTI2L transmitter as is.

**Auto Detect (per EDID)**: VEO-XRI2L will output a video stream up or downscaled according to the maximum compatible resolution negotiated by the source and display when first connected.

How does Timeout feature work on VEO-XRI2L for a smart video signal loss management when connected on a screen?

“Turn off screen on video host” parameter will affect on how this feature works:
• **Not active**: if this parameter is not checked, the figure introduced on “Timeout for Detecting Video Lost” dialog (Figure 3) will define the time between the instant that the video loss is detected and that the VEO-XRI2L stand-by splash screen appears (Figure 4).

![Figure 3](image)

• **Active**: if this box is checked, the span specified in the “Timeout for Detecting Video Lost” dialog will work as in the alternate scenario but this now, instead of showing the VEO-XRI2L stand-by splash screen, the “no video signal detected” message available in every display will appear, letting the system shut down the screen automatically.

If “Never Timeout” parameter is selected instead of an actual time, the last video active frame will be shown when a video loss signal is produced until the transmission is detected again or the VEO-XTI2L transmitter is reset (Figure 5).

![Figure 4](image)
¿How does the USB peripherals extension modes work in VEO-XTI2L / VEO-XRI2L?

There are three different operation modes:

- **Auto select mode**: automatically selects the mode of operation suited for either a unicast or a Multicast.

- **Active on link**: when an active USB device, like for example a pc mouse or keyboard, every action of any of those peripherals will be immediately shown in the screen without any priority in a best effort type of scenario.

- **Active per request**: in this mode, the first peripheral to begin action is the one that will retain control. If another device starts action while there’s another one in control, this second device will have to wait until the first one stops.
¿How does VEO-XTI2L / VEO-XRI2L audio extension work when plugging an external sound source?

When “Line in” input in VEO-XTI2L transmitter is selected using the “Audio” button, the audio signal coming from the external sound source plugged will be embedded on the HDMI video stream overwriting the existing audio flow. If “Line out” or “SPDIF out” is selected using the “Audio” button on the VEO-XRI2L receiver, audio extraction will be available in either of this two audio outputs. The audio will remain embedded on the HDMI video stream as well.

¿How should I configure VEO-XTI2L / VEO-XRI2L for a point to multipoint or multipoint to multipoint kind of scenario?

In that case, both the transmitters and the receivers should be working in multicast. Unicast will only be fitted for a point to point solution.
**VEO-SWM44**

**¿What is the VEOCast functionality implemented in VEO-SWM44?**

VEOCast is a multiplatform wireless technology protocol compatible with iOS, Android, Windows and OSX systems allowing for two devices to detect and connect to each other. Once connected, their displays can be mirrored without requiring additional applications. This is useful for example when duplicating the content of a mobile phone or laptop to an external display or a projector screen.

**¿Which kind of data can be transmitted using the USB-C connector in VEO-SWM44?**

USB-C can transport audio, video y control data. The recommended connection protocol in VEO-SWM44 is Thunderbolt 3.

**¿Can I control and extend a USB device connected to VEO-SWM44?**

Yes, the selected video wired input (HDMI 1, HDMI 2, USB-C) will be able to manage up until two different USB peripherals plugged to the 3.0 USB type A ports labeled as “Device 1” y “Device 2”. When using HDMI1 and HDMI 2 inputs, the computers that want to control this USB devices will also have to be plugged in the “Host 1” y “Host 2” 3.0 USB type B ports in order to control them. USB-C input doesn’t need any additional connection.
¿Can I manage a USB device connected to VEO-SWM44 when Wireless VEOCast input is selected?

No, VEOCast input won’t be able to access any USB peripherals.

¿Can I browse the internet while wirelessly connected to VEOCast?

Yes but first you should connect VEO-SWM44 to a WiFi network with access to the internet as explained on the user manual.

¿If my device is connected to the same network as VEO-SWM44 will I be able to share my screen using VEOCast?

Yes, here’s the two modes of operation in this scenario:

- **Connect the source device to the VEO-SWM44 own WiFi**: in this scenario, a device connected in this way will only be able to share its screen wirelessly to VEO-SWM44 but in any case browsing the internet will be possible (Figure 6).
• **Connect the source device and VEO-SWM44 to the same network:** in this scenario, if both the source device and VEO-SWM44 are connected to the same network, the source device will be able to share content with VEO-SWM44 wirelessly and browse the internet in case that this network has access to it (Figure 7).

**How can I hide VEO-SWM44’s own WiFi?**

“Broadcast” mode available in the WEB GUI will let you hide the VEO-SWM44 own WiFi. When this mode is activated, in order to access VEO-SWM44 WiFi and its WEB GUI, you should proceed manually.
¿VEO-AXS4 / VEO-AXS4P will definitely take audio and video apart when extracting the signal?

No, VEO-AXS4 or VEO-AXS4P will provide audio information both on the audio outputs and in the video stream coming out from HDMI OUT output.

¿Can I use all the audio outputs available in VEO-AXS4 y VEO-AXS4P at the same time?

No, analogue and digital outputs won’t be able to output sound at the same time.