MPS-8Z connection to an audio system with ZES-22

Installation of a network MPS-8Z microphone to audio systems with SIME software

Review: 1

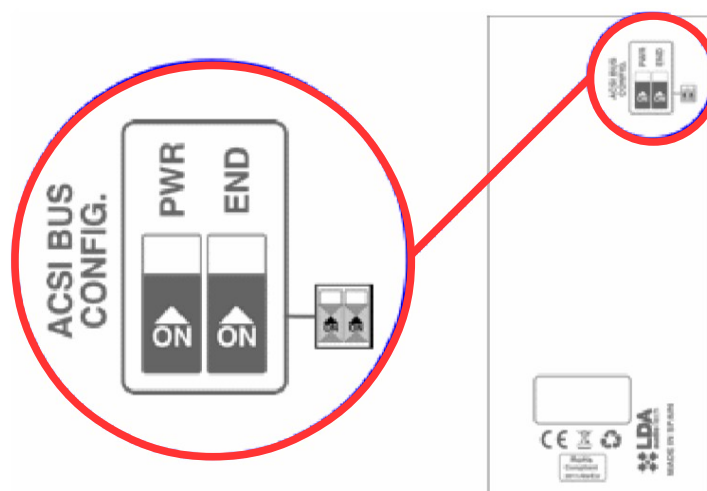**LDA** audioTech

Support Handbook

1 HOW IT WORKS

This support manual explains how to correctly connect the LDA MPS-8Z S02 microphone to the LDAZES-22 S02 digital audio matrix via the LDAZES-22ACSI S01 adapter.

1.1   Power supply

The MPS 8Z is supplied with an external power supply with a 5V female USB type A connector, which is connected via a mini-USB AB male to USB A male cable, also supplied. You can either use it to power the device, or power the device directly from the ACSI bus, via its bus connection. If this is the case, save the power supply for later use.

1.1.1   Power Source Selector

The equipment has a "PWR" selector shown in *Picture 1: MPS-8Z power switch detail* detail that allows choosing the source of the power supply between local, or supplied through the ACSI bus.

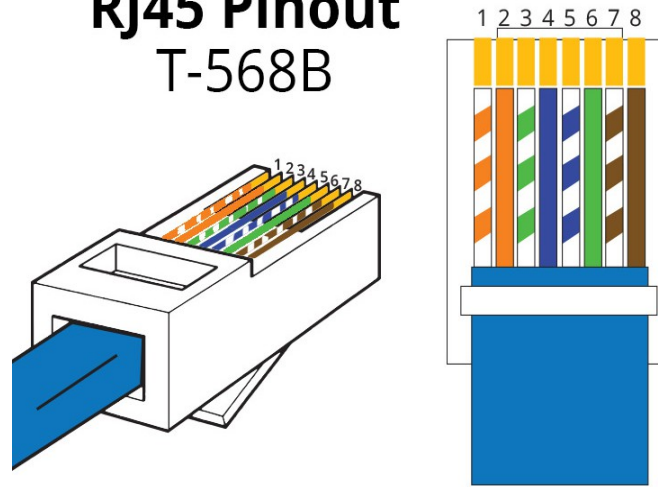*Picture 1: MPS-8Z power switch detail*

When the selector is in the OFF position, the equipment will be powered locally, by the external charger (supplied with the equipment). When the selector is in the ON position, the MPS-8Z will be powered from the ACSI bus. In this case, if the local charger is also connected, it will automatically switch to the local charger if the power supply from the ACSI bus is interrupted.

1.2   RS-485 connection

To properly make the connection between the MPS-8Z microphone and the ZES-22 matrix, a specific configuration of a UTP cable must be available; using a is category 5 or higher cable.

Starting from the connection diagram of an RJ-45 terminal (see *Picture 2: Colour chart for RJ45 type B connections*), the connection in *Table 1: Pinout of the RJ45 connector.*

RJ45 Pinout
T-568B

Picture 2: Colour chart for RJ45 type B connections

This will be the input connection to the MPS-8Z microphone (ACSI bus). From there, the cable configuration for the connection to the ZES22 is done with the following pinout:
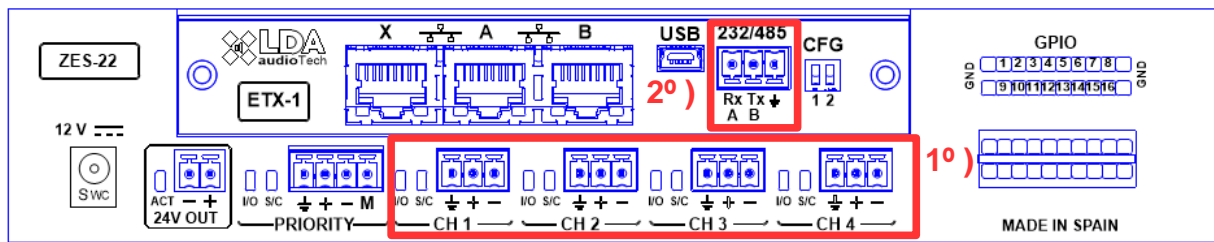
Pin	Color	Connection
1	Stripe orange	Audio +
2	Oranje	Audio -
3	Stripe Green	GND
4	Blue	RS-485 A
5	Stripe Blue	RS-485 B
6	Green	GND
7	Stripe Red	+ 24 V
8	Red	+ 24 V

Table 1: Pinout of the RJ45 connector

These connections must be made using three-way Euro Block type connectors, differentiating between the RS-485 port and the audio input.
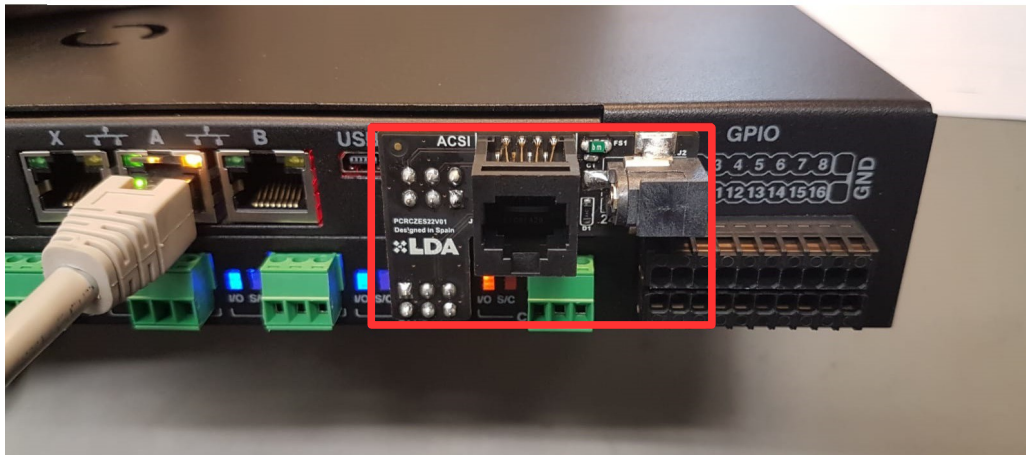
Following the indications in the *Picture 3: ZES-22 Audio Matrix Connections*, these connectors are marked as 1st: audio input/output channels and 2nd: RS-485. In addition, for correct configuration, the audio input must be made to channel 3.

Picture 3: ZES-22 Audio Matrix Connections

This functionality is supplemented by the **LDA ZES-22 ACSI S01** adapter. As shown in *Picture 4: LDA ZES-2 ACSI S01 Adapter*, the RJ-45 connector allows direct connection to the MPS-8Z microphone input, as well as powering it; via the local power supply of the adapter itself.
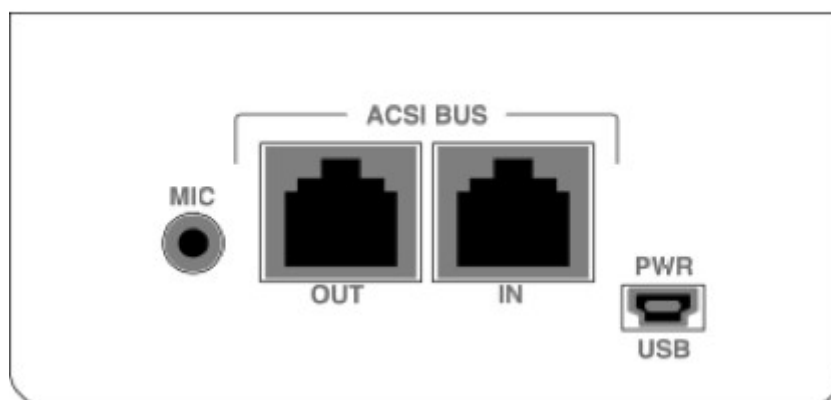

Picture 4: LDA ZES-2 ACSI S01 Adapter

1.3 Connection to multiple MPS-8Z

The microphone has two connections for distributed elements in public address systems. It consists of a line-level audio input plus control signals, for connection of up to 8 devices in "daisy chain" bus mode, where each device is connected to the next. Both connections are identical and interconnected. This connection must be made from the output of one microphone to the input of the next (in *Picture 5: Detail of MPS-8Z microphone connections*, the OUT and IN connectors respectively of ACSI BUS).

The connection of the adapter to the microphone is made by means of an ethernet cable, standard T568B. The maximum connection distance for the entire bus is 1000m (3280ft), with up to 8 MPS-8Z devices connected to the ZES-22.

Picture 5: Detail of MPS-8Z microphone connections

The ACSI bus does not provide remote power to the microphones if the adapter does not have it, so each MPS-8Z microphone must have its own local source.

For the different functionalities and microphone configurations, please refer to the user manual available on the LDA Support Website.

2 REQUIREMENTS

For the correct operation of the system, the following requirements must be met:

- ZES-22 with firmware version 1.0.5 or higher

- To allow audio input to channel 3 of the ZES-22 matrix, it must be configured as 3 inputs and one output (3x1) or four inputs (4x0). This configuration can be set using the ZES-22 Setup software.

- ZES-22 Setup with version 4.1 or higher.