# MX-500
## User's manual



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# Safety warnings




TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). INTERNAL COMPONENTS CANNOT BE REPLACED OR REPAIRED BY THE USER. CONSULT QUALIFIED SERVICE PERSONNEL ONLY.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to cause a risk of electric shock to users.

**PRECAUTION**
Ignoring the caution message may result in minor injuries or damage to the product.

Do not expose the appliance to dripping or splashing water, do not place objects filled with liquids or naked flame sources, such as candles, on the appliance.

The working environment must be dry and completely free of dust.

To clean the equipment, use only a dry rag. For stubborn stains, disconnect the equipment from the power supply, use a rag lightly moistened with a neutral cleaning solution. Dry the equipment carefully before reconnecting it to the power supply. Do not use the equipment if liquid has penetrated inside, wait for it to dry first.

Do not cover or block ventilation openings. Install in accordance with the manufacturer's instructions.

Do not install near any heat sources such as radiators, heat registers, cookers, or other apparatus that produce heat.

Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades and a third grounding prong. The wide blade or the grounding prong provides protection for the user.

If any intervention or access to the interior is required to make any configuration, the device must be disconnected from the power supply beforehand, bearing in mind that if it has a mixed power supply (AC/DC), it must be disconnected from both sources.

If the protection fuse blows, disconnect the equipment from the power supply and replace it with a fuse of the same value. Never replace the fuse with a fuse of a higher value than the rated value.

## Description of the system




Multifunction 5x5 Digital Audio System that allows the broadcasting of announcements in multiple zones as well as the selection of audio sources.

With 5 audio inputs and 5 audio outputs, it allows the broadcasting of announcements remotely, as well as the control and management of the system through the MX-555M control panel.

Each channel can be independently linked to the MX-555M touch panel control and the MX-555S volume control, as well as the MX-501 paging desk.

It is suitable for multi-zone locations such as hotels, schools, offices, villas, flats, etc.

# MX-500. Digital matrix



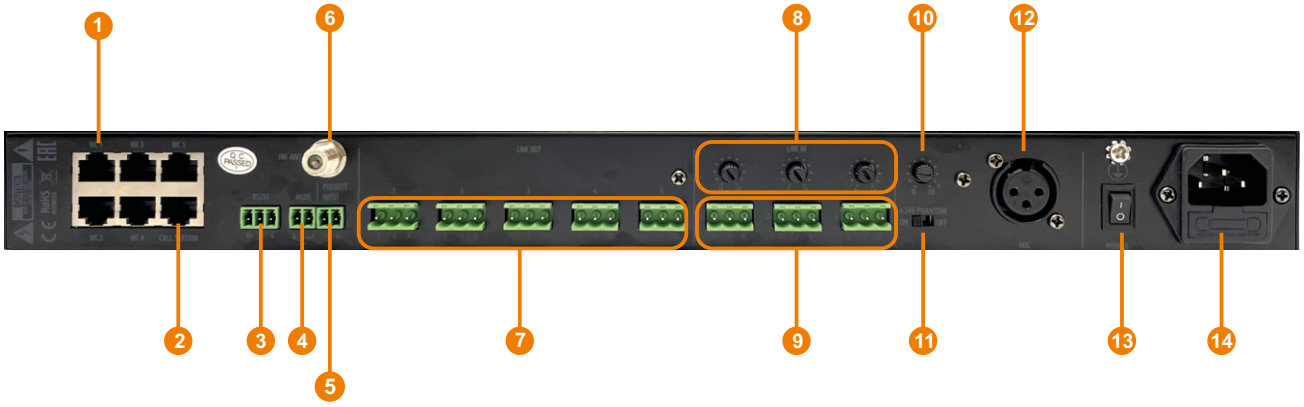
Multifunctional 5x5 Digital Audio System that allows the broadcasting of announcements in multiple zones as well as the selection of audio sources.

| | |
|---|---|
| **Power supply** | 100-240V AC 50/60Hz |
| **Fuse** | T1A |
| **Player audio sources** | USB / Bluetooth V5.0 / Radio FM / AUX |
| **Inputs** | XLR (microphone) Phantom powered<br>3 x AUX per euroblock |
| **Sensitivity** | **Mic:** -41dBV **Line:** -12.5dBV<br>**MX-501:** 4dBV **EMG:** -10dBV |
| **Signal to Noise Ratio** | **Mic:** 65dB **Line:** 73dB |
| **Outputs** | 5 x stereo outputs (euroblock) |
| **Output Impedance** | 600 Ω |
| **THD+N** | ＜0.1%@1KHz |
| **Phantom power** | +24V DC |
| **Controls connection** | RJ45 |
| **Frequency response (+/-3dB)** | 20Hz-20kHz |
| **Audio attenuation during messages** | -30dB |
| **Dimensions** | 483×177×44mm |
| **Weight** | 1.76kg |




1. AUX input 3.5mm jack
2. Media player module

3. Output signal level
4. Active zones from desk




1. RJ45 connection for panel MX-555S (x5) and MX-500M*.
2. RJ45 connection for desk MX-501
3. RS232 interface for MX-555M
4. External mute

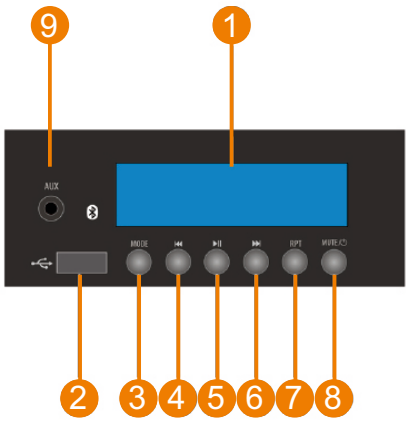
5. Priority audio input (EMG)
6. FM antenna
7. Stereo audio outputs
8. Inputs gain adjustment
9. Signal inputs

10. MIC level adjustment
11. PHANTOM 24V DC power supply selection
12. MIC input**.
13. ON / OFF switch
14. AC 100-240Hz power supply input

***If 4 or less MX-555S units are used, the control touch panel can be connected to any free RJ45, except the one for connecting the MX-501 desk.**

****When a message is broadcast from the microphone connected to the MIC input, it is broadcast to all zones, and all other outputs are muted.**

# Multimedia module




1. LCD display
2. USB input
3. USB / FM Radio / BT selection
4. Rewind / - Volume
5. Play / Pause
6. Forward / + Volume
7. Repeat*
8. MUTE / Power on/off
9. AUX input

## Music via USB input

1. Insert the USB device into the front panel input. Playback will start automatically.
2. To play or pause the audio files, press the PLAY / PAUSE key.
3. To play the next file, press FORWARD.
4. To play the previous file, press REWIND.
5. To increase the volume, press and hold the FORWARD key until the desired volume is reached.
6. To decrease the volume, press and hold the REVERSE key until the desired volume is reached.
7. Using the MUTE button, you can mute the playback. Press again to deactivate MUTE.

*You can repeat a song or a playlist using the RPT key. Select RTA (repeat all audio files), RT1 (repeat a single audio file) or RND (random repeat of audio files) mode.

## Music via Bluetooth connection

1. Press MODE until BLUETOOTH appears on the display.
2. Pair the matrix (A-2019BT_0000) with the device by entering the code 8888. PAIRED will be shown on the display when the pairing process is complete.
3. To play the audio files, press the PLAY / PAUSE button.
4. To play the next file, press FORWARD.
5. To play the previous file, press BACK.
6. To increase the volume, press and hold the ADVANCE key until the desired volume is reached.
7. To decrease the volume, press and hold the REVERSE key until the desired volume is reached.
8. Using the MUTE button, you can mute the playback.

## Radio FM

The MX-500 matrix can store up to 30 radio presets. These can be stored automatically or manually.

**Manual frequency search:**

Press MODE until FM RADIO appears on the display.
2. Press PLAY / PAUSE to select manual station search.
3. Adjust the FM frequency in 0.1MHz steps using the FORWARD / REVERSE buttons until you have the desired frequency.
4. Press RPT for two seconds to store the station.
5. Select the memory number where the station will be stored by using the FORWARD and BACKWARD buttons.
6. Save the station by pressing RPT again. The station is saved when OK appears on the display.
7. Press MUTE to exit the manual station search mode.

**Automatic frequency search:**

1. 1. Press MODE until RADIO FM appears on the display.
2. Press PLAY / PAUSE to select the automatic station search.
3. The station search will start until all 30 station presets are completed.
4. Press MUTE to exit the manual station search mode.

Once you have stored the radio stations, you can switch between them using the FORWARD / REVERSE buttons.

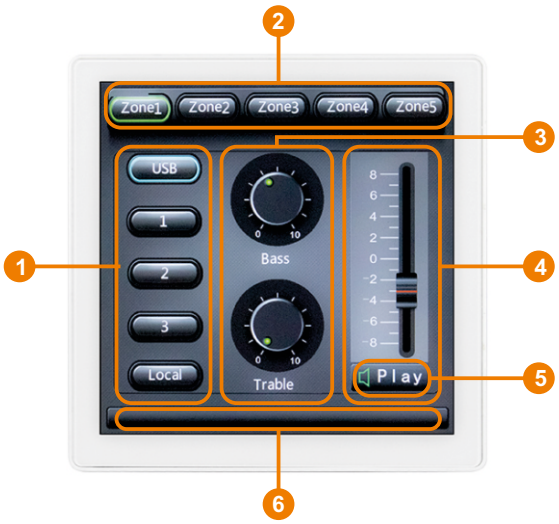
# MX-555M - Touchscreen main control panel




The MX-555M main control panel can manage the system thanks to its touch screen. It allows to select for each of the 5 sources the audio to broadcast for each zone independently.

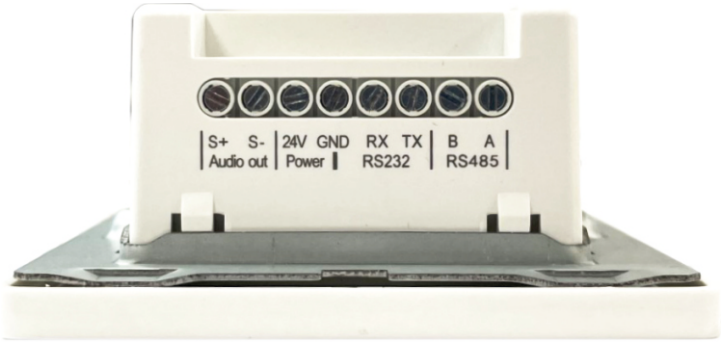
The panel also allows certain configuration settings such as: date and time setting, screen lock or password change (default: 8888).

| | |
|---|---|
| **DC power supply** | 24V dc (Supports power from MX -500 matrix) |
| **Max. cable length** | Connected to RJ45 Matrix: 500m<br>Connected to RS232 Matrix: 15m<br>Connected to RS232 with RS485 converter: 1Km |
| **Matrix connection** | RJ45 / RS232 (Euroblock) |
| **Terminals** | Power supply 24V / Ground / RS232 / RS485 (For third party control) / Audio output 1W/8 Ohms or balanced signal |
| **Functions** | Function 5 zones / 4 inputs + local. Volume and tones |
| **Mounting** | Flush mounted / Surface mounted |
| **Dimensions** | 86 x 86 x 38mm |
| **Weight** | 128gr |

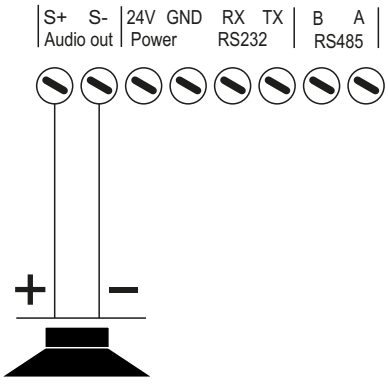



1. Selection of audio inputs
2. Zone selection. From 1 to 5 zones.
3. Treble / Bass adjustment
4. Audio level adjustment
5. Zone Play / Mute
6. Configuration

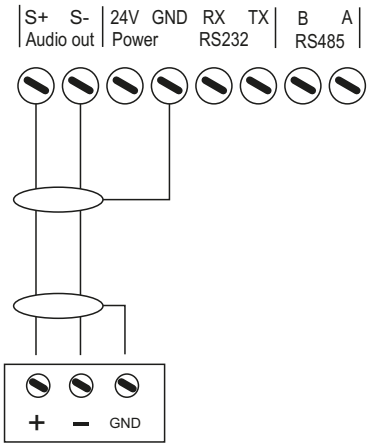
## Audio output connection




### 1W/8Ω




### Balanced signal

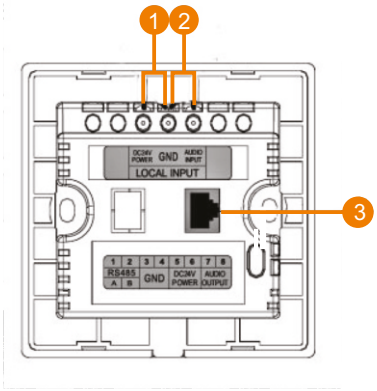


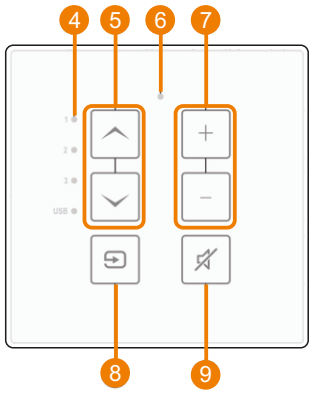
# MX-555S - Zone Touch Panel




The MX-555S control panel allows you to manage the audio of the zone in which the panel is associated. It allows you to manage the volume, select the audio source, as well as mute or send a local audio signal to the speakers in the zone.

| | |
|---|---|
| **DC power supply** | 24V dc (Supports power supply from MX -500 matrix) |
| **Max. cable length** | 500m |
| **Connection** | RJ45 |
| **Terminals** | 24V power supply / Local AUX input |
| **Controls** | Audio Sources 1 -4 (USB), local, mute, Volume -/+ |
| **Mounting** | Flush mounted / Surface mounted |
| **Dimensions** | 86 x 86 x 38mm |
| **Weight** | 128gr |




1. 24V DC input
2. Asymmetrical local audio input
3. RJ45 input

4. Channel indicator
5. Channel selection
6. Busy" indicator

7. Volume adjustment
8. Local input selection
9. Mute

## Asymmetrical local audio input connection

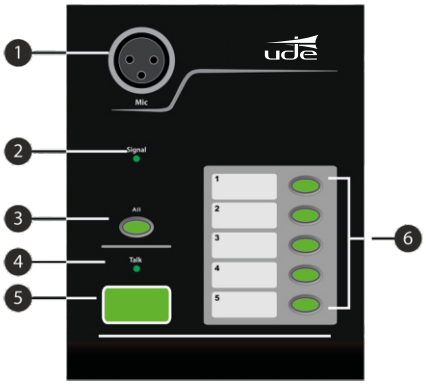


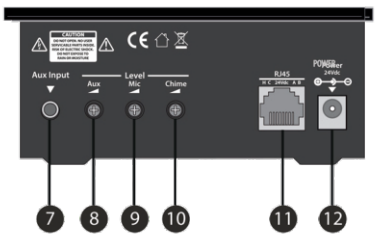
# MX-501 - 5-zone digital paging desk



The MX-501 digital paging desk allows messages and alerts to be broadcast to all zones either generally or individually.

| | |
|---|---|
| **Power supply** | 24V DC, 500Ma. (Supports power supply from MX-500 matrix. ) |
| **Max. cable length** | 500m |
| **Capsule** | Electret condenser |
| **Polar diagram** | Cardioid |
| **Frequency response ( -3dB)** | 150Hz-22KHz |
| **Input level** | MIC: -46dBv AUX: -10dBv |
| **Input impedances** | MIC: 600 Ohms AUX: 50k Ohms |
| **Output level** | 10dBv |
| **Balanced output impedance** | 600 Ohms |
| **S/N Ratio** | -60dB |
| **Interface** | RS485 |
| **Zone assignment** | 5 zones (individually or all zones) |
| **Dimensions** | 460 x 140 x 115mm |
| **Weight** | 670gr |




1. Microphone connector
2. LED signal indicator
3. All zones" button
4. Talk" LED indicator
5. Push button "Speak".
6. Zone selection

7. AUX input
8. AUX input volume adjustment
9. Microphone volume adjustment
10. Chime volume adjustment
11. RJ45 connector to MX-500 matrix
12. 24V DC input

# Broadcasting messages from MX-501 desk

### Broadcasting messages to a zone or multiple zones

To broadcast voice messages to one or more zones using the MX-501 desk, follow the procedure below:

1. Select the zone to which you want to broadcast the message using the push buttons on the right side of the desk.
2. Press the TALK key to activate the microphone. The LED indicator will illuminate green and the chime will sound.
3. Speak the desired message.
4. Press TALK again to end the message and deactivate the microphone.

* Pressing and holding TALK for the duration of the message will deactivate the entry and exit chime.

### Broadcasting messages to all zones

Using the ALL button, you can broadcast voice messages to all zones in the system. There are three modes:

**Pressing and holding ALL during the entire message broadcast.**

1. Press and hold ALL to select all until the TALK indicator lights green.
2. The microphone will be activated when the chime is finished.
3. Speak.
4. Once the message is finished, you can release ALL.

**Pressing ALL**

1. Press ALL to select all zones.
2. Press TALK.
3. After the input chime is played, the microphone will be activated.
4. Broadcast the message.
5. Press TALK again to deactivate the microphone and broadcast the output chime.

**No Chime**

1. Press ALL to select all zones
2. Press and hold TALK.
3. Broadcast the message.
4. Release the ALL button after the message is delivered to turn the microphone off.

**If you connect a signal to the AUX input, selecting one, several or all the zones and pressing the TALK button, it will take priority over the rest of the inputs. When you press it again, the previous audio will be resumed.**

# Chime configuration

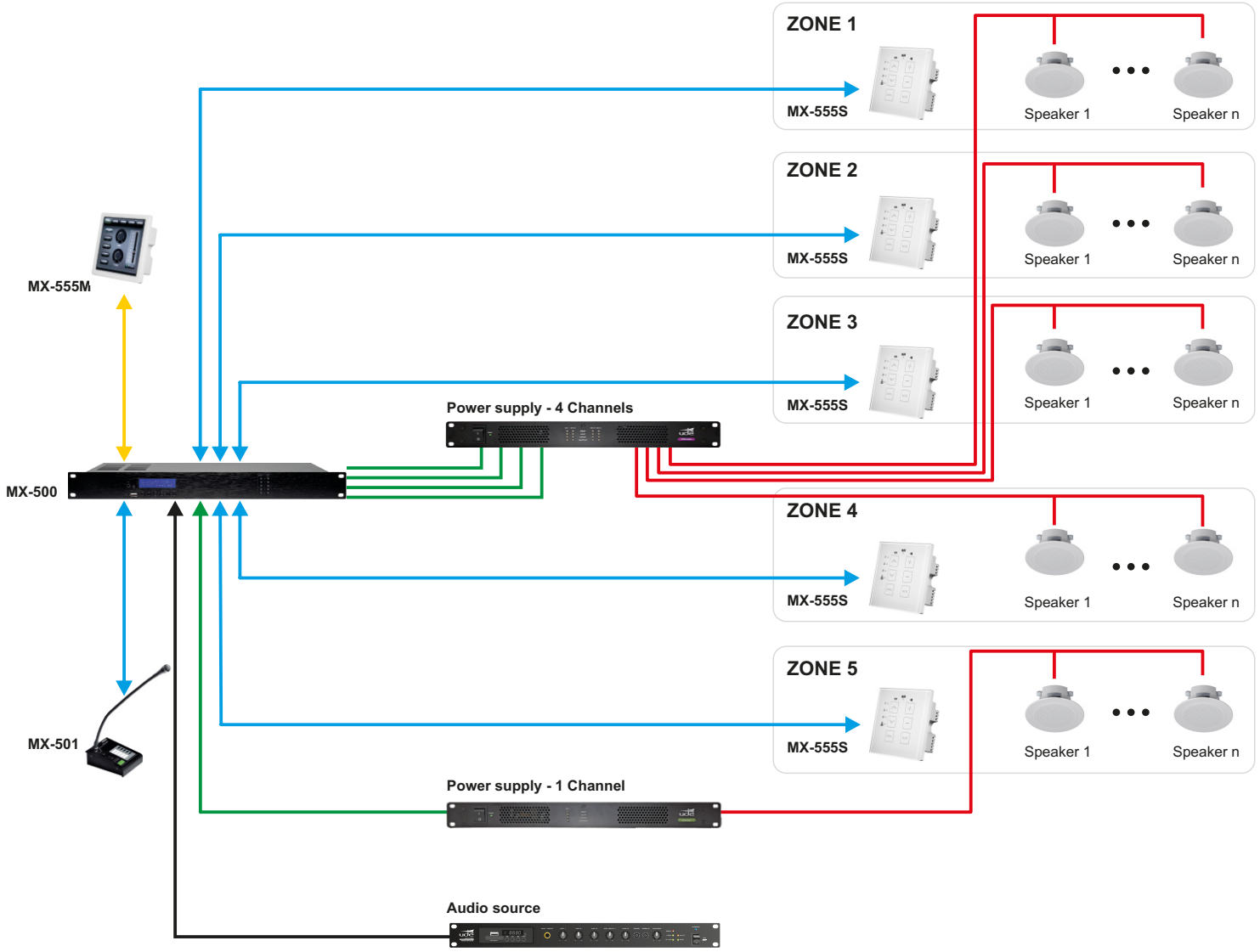
The MX-501 digital paging desk allows for different chime types. The configuration can be changed using the DIPswitch located on the bottom of the desk.




**0 = OFF**
**1 = ON**

| DIP CODE | MODE |
|---|---|
| | **Chime in / Chime out** |
| **0 0 0** | NC / NC |
| **1 0 0** | Ascending 4 / Descending 4 |
| **0 1 0** | Ascending 4 (slow) / Descending 4 (slow) |
| **1 1 0** | Ascending 4 / NC |
| **0 0 1** | Ascending 4 (slow) / NC |
| **1 0 1** | Dong / NCDingdong / NC |
| **0 1 1** | Ascending 3 / NC |
| **1 1 1** | |

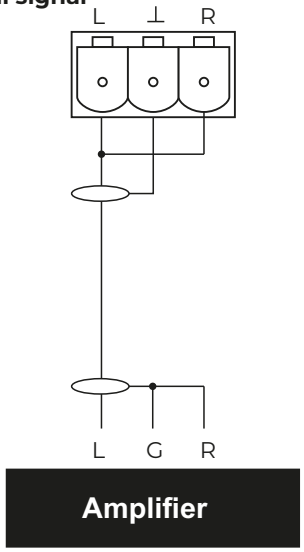
## System connection diagram



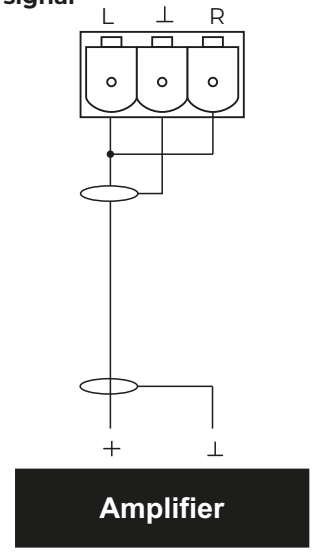
## MX-500 connection to amplifiers



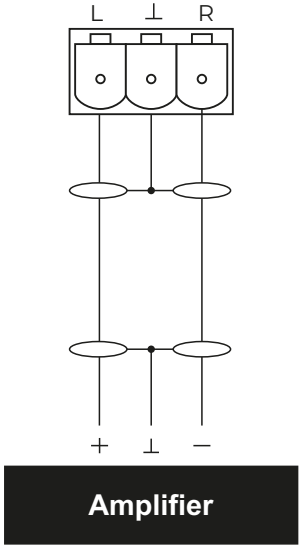
**Symmetrical signal**




**Asymmetric signal**



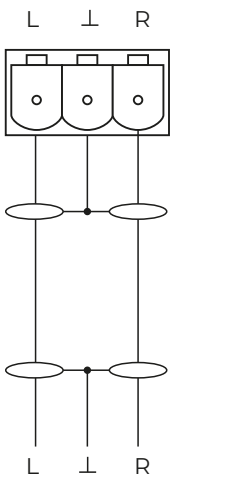

**Stereo signal**



## MX-500 connection to music sources

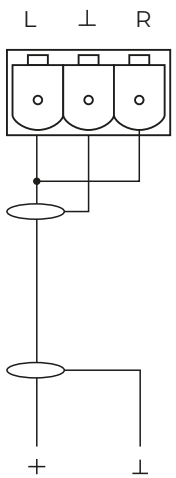


**Stereo signal**



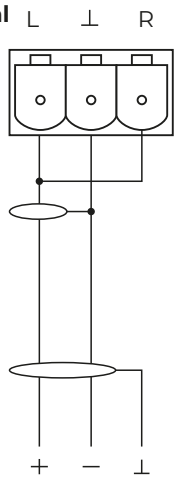

**Stereo music source**

**Asymmetric signal**




**assymetrical music source**

**Symmetrical signal**

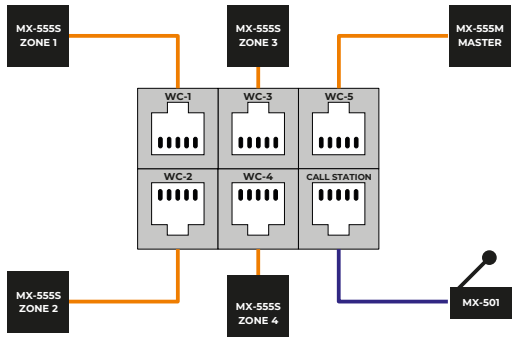



**symmetrical music source**

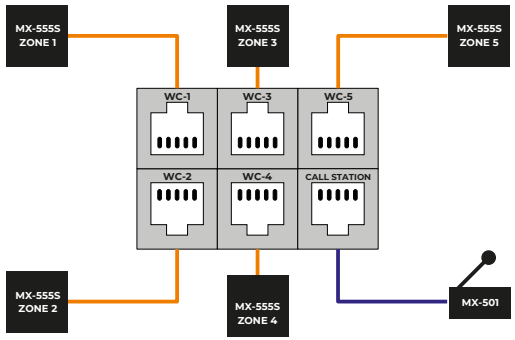
# MX-500 connection to MX-501 paging desk and control panels

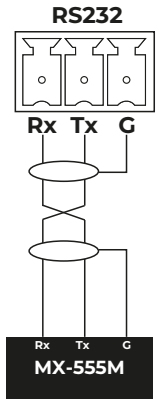


### 1 to 4 MX-555S panel units

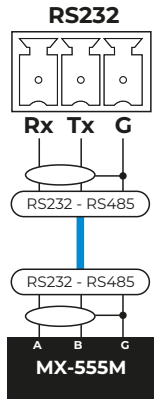



### 5 units MX-555S panel




15m MAX.




1000m MAX.

Use RS232 for distances less than 15m.

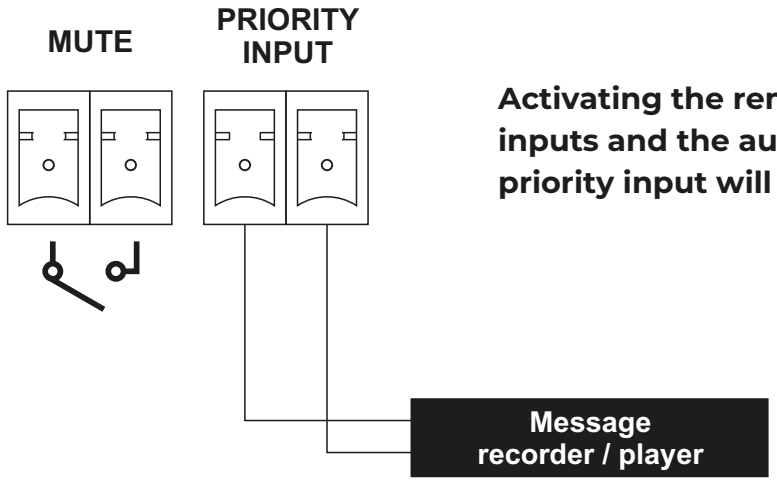
For distances up to 1000m use RS232 to RJ45 converters.

For serial port connections, the MX-500M must be powered by the power supply unit supplied.

| Wiring | |
|---|---|
| | UTP Cat6 (max 500m) |
| | UTP Cat6. Maximum 500 (for distances greater than 100m use external 24V DC power supply). |
| | Twisted pair shielded cable 2 x 0.20 mm². for longer distances use RS232-RS485 converters |

## Priority Input Connection (EMC)






**Activating the remote control will mute all inputs and the audio signal connected to the priority input will be broadcast to all zones.**