# MXN5-C

Microflex™ Networked Ceiling Loudspeaker

Shure networked ceiling loudspeaker user guide (MXN5W-C). Learn how to install and control this PoE-powered loudspeaker. Control it with other Shure devices in Designer.

Version: 6.8 (2024-C)

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# MXN5-C
# Microflex™ Networked Ceiling Loudspeaker

## General Description

The Shure MXN5-C Microflex Networked Ceiling Loudspeaker provides high-quality speech reproduction for A/V conferencing applications. With a low-profile design optimized for easy installation in drop ceiling configurations, the MXN5 integrates seamlessly with other Shure networked PoE-enabled audio devices using the Dante audio networking protocol.

## Features

**Loudspeaker technical elements**

- Pre-tuned frequency response optimized for voice intelligibility in A/V conferencing applications
- Low-profile, shallow-can design compatible with most drop ceiling installations
- 2-way driver system with 5.25-inch woofer
- PoE/PoE+ enabled, eliminating the need for an outboard amplifier
- Integrated Shure DSP Utilities: EQ, delay, limiter, and signal/tone generator
- 2 Dante inputs and 1 Dante output
- AES67 compatible

**Software-based configuration and control**

- Shure Designer System Configuration software for easy setup and configuration
- Shure network audio encryption

**Clean design elements**

- Aesthetic design subtly blends into drop ceiling environments
- Removable magnetic and paintable grille seamlessly covers the entire speaker
- Removable Shure logo
- UL 2043 plenum rated
- Tile bridge accessory for quick and easy mounting

# MXN5-C Loudspeaker Parts
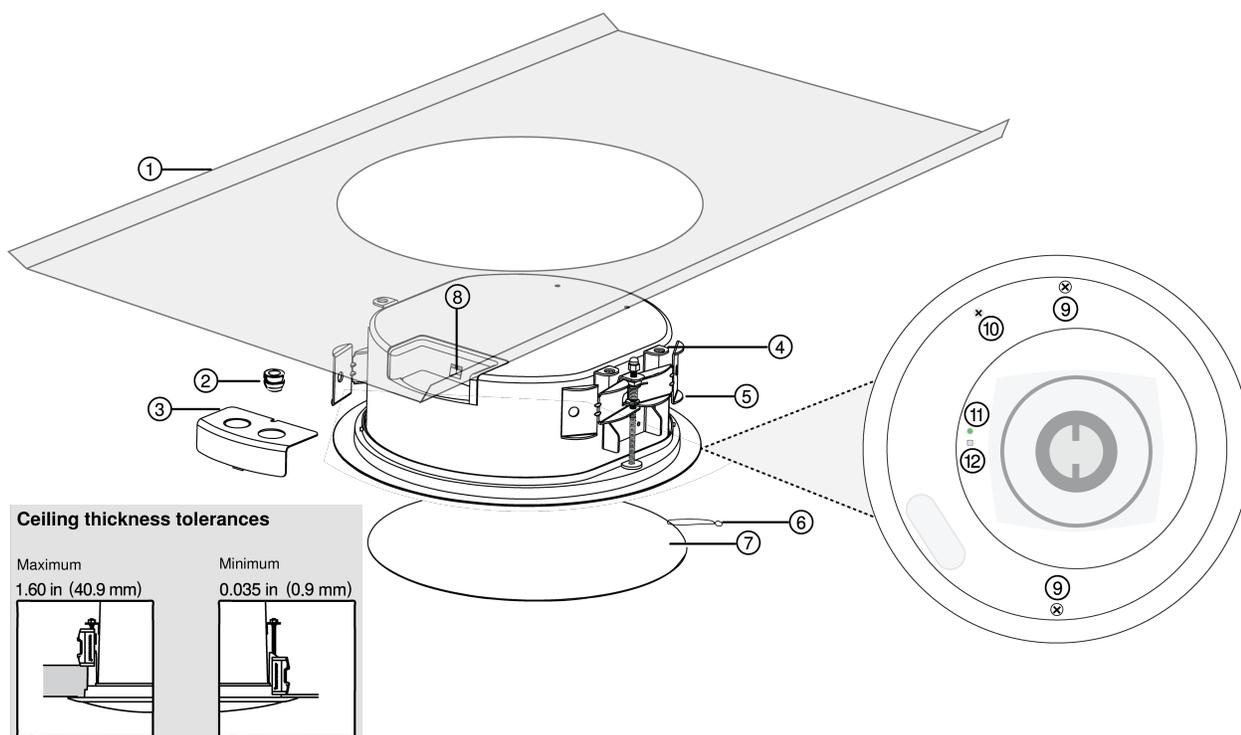
**Ceiling thickness tolerances**

| Maximum | Minimum |
|---|---|
| 1.60 in (40.9 mm) | 0.035 in (0.9 mm) |
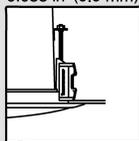
1. Tile bridge (not included)
2. Flexible conduit clamp
3. Cover plate
4. Secondary attachment point
5. Mounting arms
6. Grille safety restraint (nylon 6/6)
7. Grille
8. Network port
   - Network speed LED (amber):
     Off = 10/100 Mbps
     On = 1 Gbps
   - Network status LED (green):
     Off = No network link
     On = Network link established
     Flashing = Network link active
9. Screws for mounting arms
10. Post for grille safety restraint
11. Status LED
12. Reset button

# Status LED Behavior

| LED Behavior | Device State |
|---|---|
| **Solid green, then off** | Device powering on |

| LED Behavior | Device State |
|---|---|
| **Green flashing for 30 seconds** | Device identify |
| **After 4 seconds, green flashing** | Network reset |
| **Green flashing after 4 seconds, green solid after 8 seconds** | Full factory reset |
| **Red** | Error (Check event log for details) |
| **Solid amber** | Firmware update in progress |

# What's in the Box

- Loudspeaker
- Magnetic grille with removable Shure logo
- Flexible conduit clamp
- Cover plate

## Optional Accessories and Replacement Parts

| Tile bridge | A-MXN5-TB |
|---|---|
| **New construction bracket** | A-MXN5-NCB |
| **Magnetic grille and Shure logo** | RPMXN5-G |
| **Clamp cover conduit** | RPMXN5-C |

# Control Devices with Shure Designer Software

To control this device's settings, use Shure Designer software. Designer enables integrators and system planners to design audio coverage for installations using MXA microphones and other Shure networked devices.

**To access your device in Designer:**

1. Download and install Designer on a computer connected to the same network as your device.
2. Open Designer, and check that you're connected to the correct network in `File` > `Designer preferences`.
3. Click Online devices. A list of online devices appears.
4. To identify devices, select a device and click ID in the Properties menu. Double-click the device to open the settings.

From here, you can add devices to designs or online rooms and route audio to other Shure devices. Learn more at shure.com/designer.

You can also access device settings using Shure Web Device Discovery.

# Use Designer's Auto Route

Designer's auto route speeds up the process of connecting systems with 1 audio processor and at least 1 microphone. Auto route also creates mute control routes in rooms with MXA network mute buttons. When you select Auto route, you can direct Designer to:

- Create audio routes and mute control routes
- Adjust audio settings
- Turn on mute synchronization
- Enable LED logic control for applicable devices

The settings are optimized for your particular combination of devices. You can adjust settings further, but auto route gives you a good starting point. Auto route works with any device in Designer.

**To use auto route:**

1. Place all relevant devices in a design.
2. Select Auto route. Designer optimizes microphone and DSP settings for your equipment combination.

   If you remove or add devices, select Auto route again.

   **Note:** The auto route process clears any manual routes you may have made in your design.

After auto routing a room, check and adjust settings to fit your needs. You may need to:

- Delete unnecessary routes.
- Check levels and adjust gain.
- Check that AEC reference signals are correctly routed and received in a test call.
- Fine-tune DSP blocks.
- Adjust your processor's matrix mixer routes.

If you want to auto route an online room, turn on online room editing in `File` > `Designer preferences`.

**Note:** Changes to an online room may cause audio to briefly drop out.

Refer to Designer's Troubleshooting section for help with routing.

# Install the Ceiling Loudspeaker

Before installing, confirm that the ceiling safely supports the weight of the loudspeaker.

- **Ceiling tile installations:** Use A-MXN5-TB (step 1A)
- **Unfinished ceilings:** Use A-MXN5-NCB (step 1B)

**To install, you will need:**

- MXN5-C loudspeaker kit
- Utility knife or other tool to cut hole in ceiling*
- Shielded Cat5e (or better) Ethernet cable*
- Screwdriver or drill*
- Braided metal cable or other high-strength wire for secondary attachment point*
- **Tile ceiling:** A-MXN5-TB tile bridge*
- **Unfinished ceiling:** A-MXN5-NCB new construction bracket*

* Not included

## Step 1A: Install A-MXN5-TB for Tile Ceilings

1. Use the loudspeaker packaging or the tile bridge to mark a cutout in the tile.
2. Cut a 10.5 in. (266 mm) hole in the tile with the cutting tool.
3. Reinstall the ceiling tile with the tile bridge on top of the tile.



4. Follow the steps to connect the loudspeaker.

## Step 1B: Install A-MXN5-NCB for Unfinished Ceilings

1. In an unfinished ceiling, nail or screw the new construction bracket to the ceiling joists. Install the Cat5e cable above the ceiling joists. Complete any finish work required on the ceiling.

   The new construction bracket helps distribute the weight of the loudspeaker in the ceiling.

2. Use the loudspeaker packaging to mark a cutout in the ceiling material.
3. Cut a 10.5 in. (266 mm) hole in the ceiling material.
4. Follow the steps to connect the loudspeaker.

## Step 2: Connect the Loudspeaker

1. Attach the Cat5e cable to the loudspeaker. If conduit is required, run the Cat5e cable through conduit and attach to the loudspeaker.
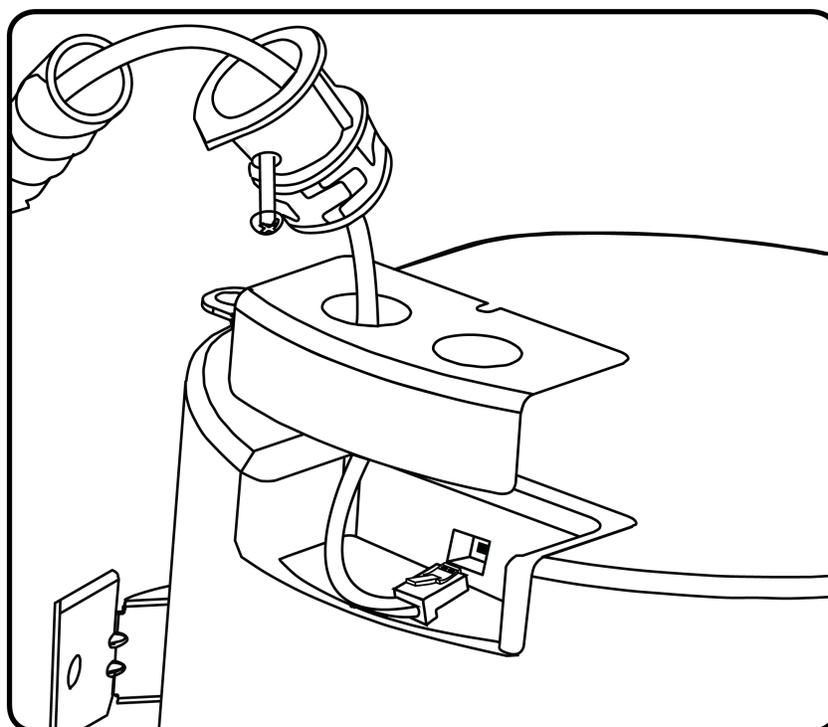
2. Attach the cover plate with the screwdriver. If using conduit, push the conduit connector into the knockout.
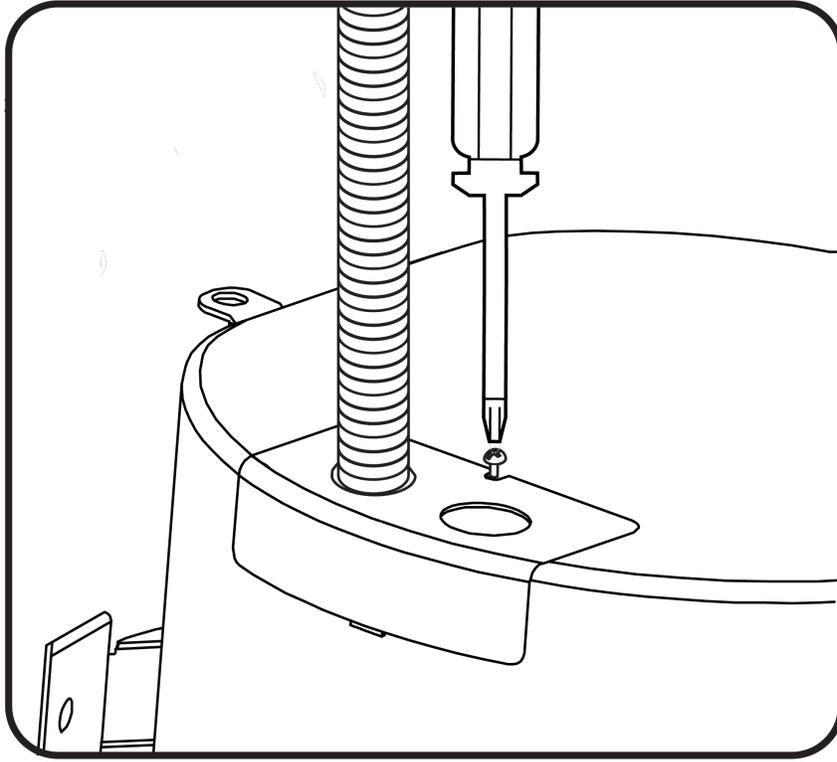


3. Attach cable to the loudspeaker's secondary attachment point and to an attachment point in the ceiling. This cable provides additional mounting security.
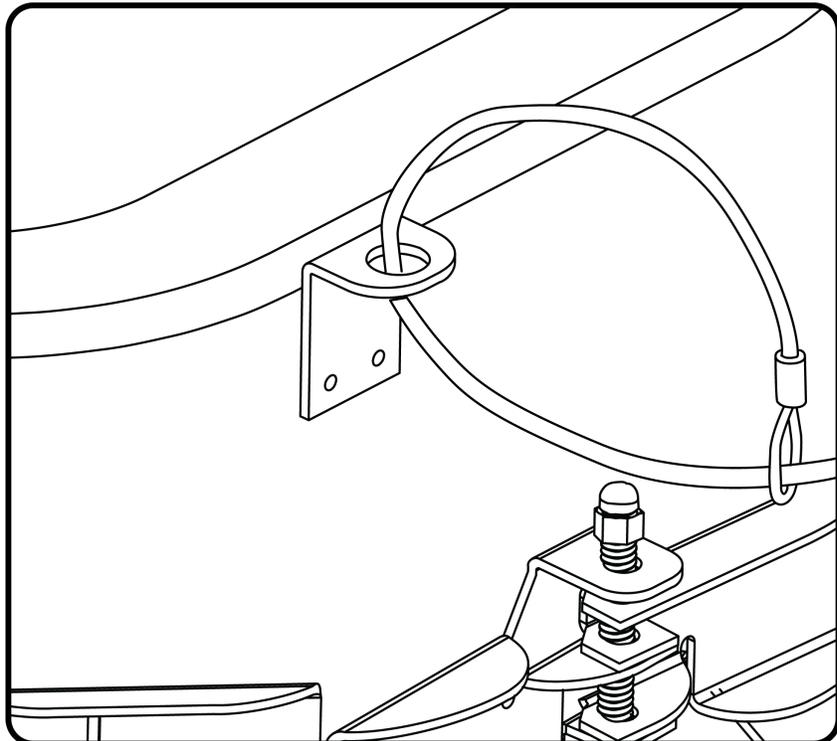
4. Place the loudspeaker in the mounting hole. Tighten the screw on each side of the loudspeaker until each mounting arm fully expands to the secure the loudspeaker. Do not over-tighten the screws.
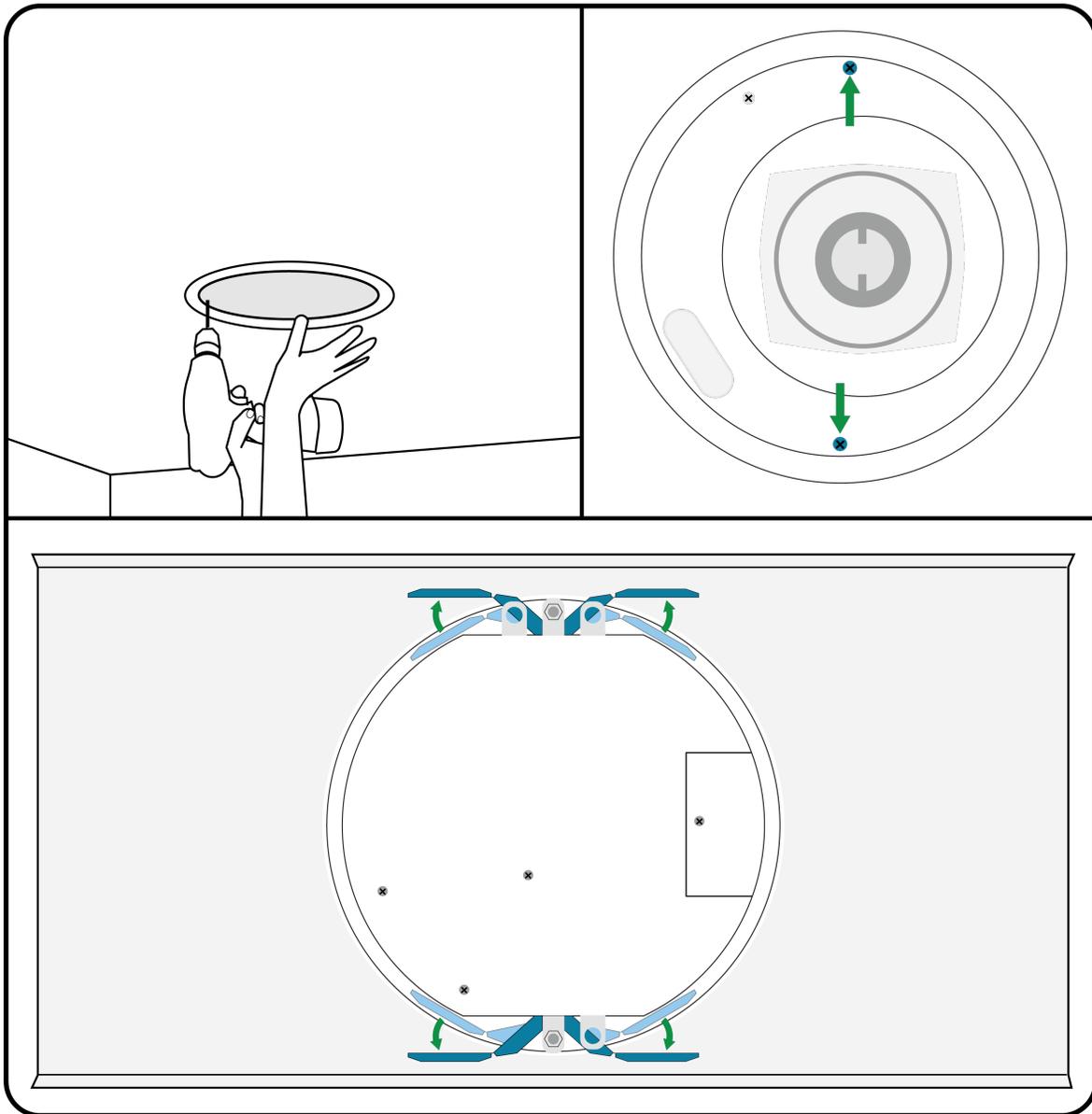
5. Slide to attach the grille safety restraint to the post on the loudspeaker. Do not unscrew the screw to attach the restraint.
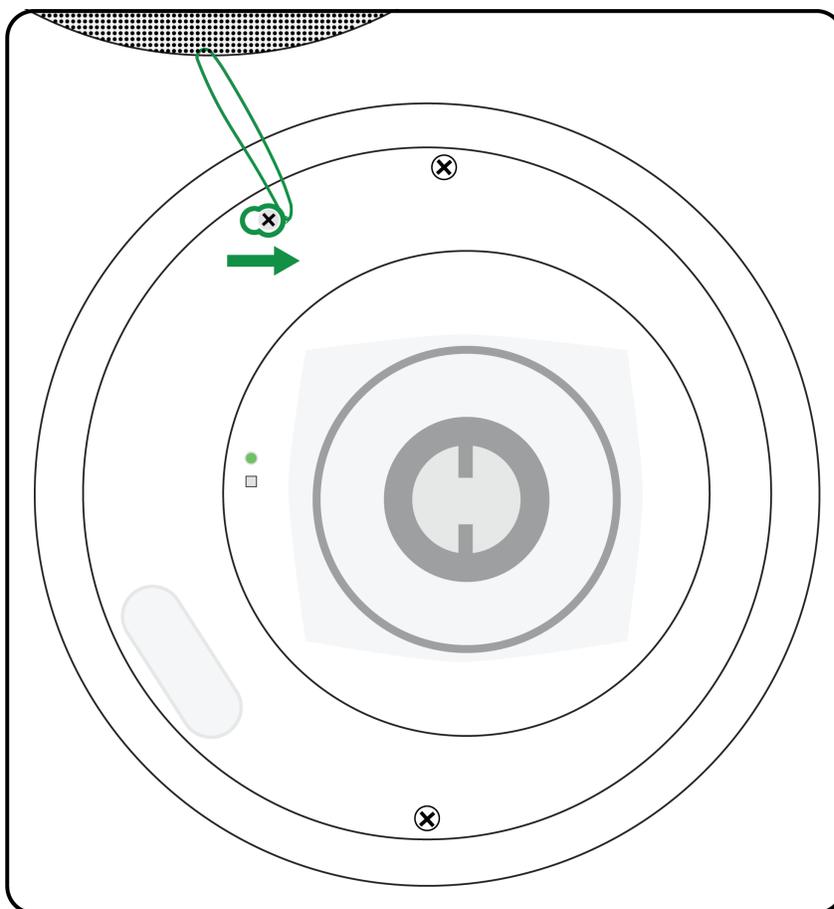
6. Attach the magnetic grille to the loudspeaker. The Shure logo is magnetic, so you can reposition or remove it if necessary.

## Connecting to Power

This device requires Power over Ethernet Plus (PoE+) or PoE to power it.

Use one of the following to provide PoE+ or PoE:

- Network switch with PoE+ or PoE
- PoE+ or PoE injector device

The PoE/PoE+ source must also be a gigabit device.

## Painting the Grille

You can paint the loudspeaker's grille to match the surroundings. For best results:

- Use a professional painting house.
- Only paint the grille after removing it from the loudspeaker.
- Remove the magnetic Shure logo before painting.

# Reset Button

To access the reset button, remove the grille.
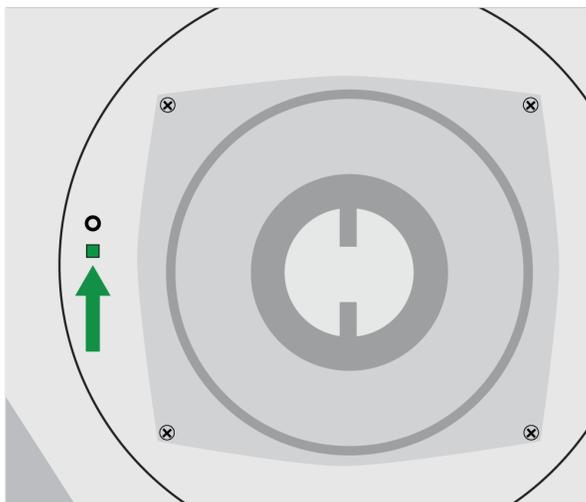


There are 2 hardware reset options:

**Network reset (press button for 4-8 seconds)**

Resets all Shure control and audio network IP settings to factory defaults. Power LED flashes green.

**Full factory reset (press button for longer than 8 seconds)**

Resets all network and Designer settings to the factory defaults. Power LED flashes green, then solid green after 8 seconds.

# Loudspeaker Dante Channels

The loudspeaker has 2 Dante input channels and 1 Dante output channel.

## Dante Input Channels

The 2 Dante input channels are summed and sent to the loudspeaker's output. These input channels are useful if you need to send a far-end signal and program audio to the loudspeaker.

## Dante Output Channel

The Dante output is useful if you need to send the loudspeaker's signal to another loudspeaker or to an AEC reference channel. There are 2 processing options for the Dante output signal:

**Pre-DSP**

Sends a pre-DSP signal to the Dante output (DSP is still applied to loudspeaker output). Use this option to send the signal to another loudspeaker. This option prevents DSP blocks from stacking on top of each other.

**Post-DSP**

Sends a post-DSP signal to the Dante output. Use this option to send the loudspeaker's signal to an AEC reference channel.

# Route Signals to the Loudspeaker

To route audio to the loudspeakers, use Shure Designer software or Dante Controller software.

1. In Designer, create a room that has all loudspeakers and any other devices.
   ◦ Shure's P300 or ANI processors are easy ways to manage Dante signals from many sources.
2. Select Auto route. Designer optimizes routing and device settings for your equipment combination. If you remove or add devices, select Auto route again.
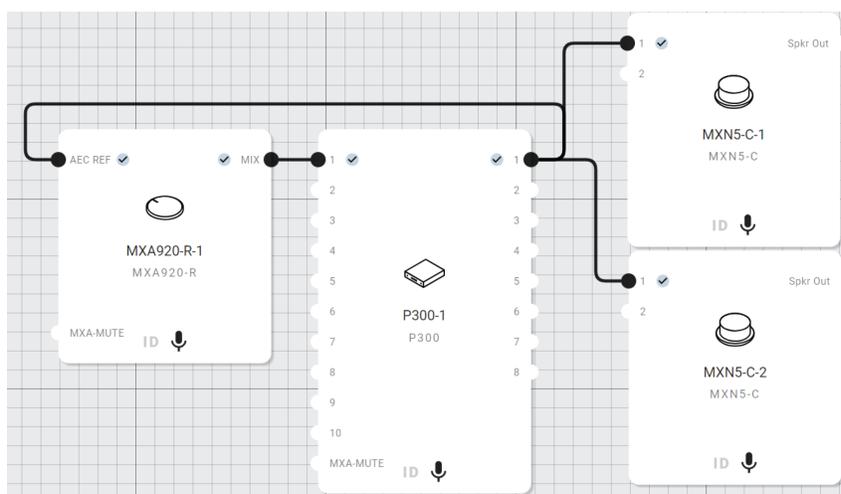


You can also manually create audio routes to loudspeakers in Designer.

## Manually Create Audio Routes to Loudspeakers

Use Shure Designer or Dante Controller to manually send audio to Shure loudspeakers. There 2 ways do this, and each method depends on what device is sending audio to the loudspeakers. Designer's auto route process automatically chooses the correct method for your devices.

### Option 1: Route Audio to Each Loudspeaker Individually

**Use this method when:**

- Signal comes from device with Brooklyn II chip, such as a P300 **or**
- Signal comes from device with Ultimo chip transmitting in multicast

Learn more about Dante flows in our FAQs or from Audinate.

If you're using a Shure P300 or other devices with high unicast Dante flow limits, route a signal to each loudspeaker individually using Designer or Dante Controller.

**Audio out**

**P300**

**Far-end signal**

**AEC reference in**
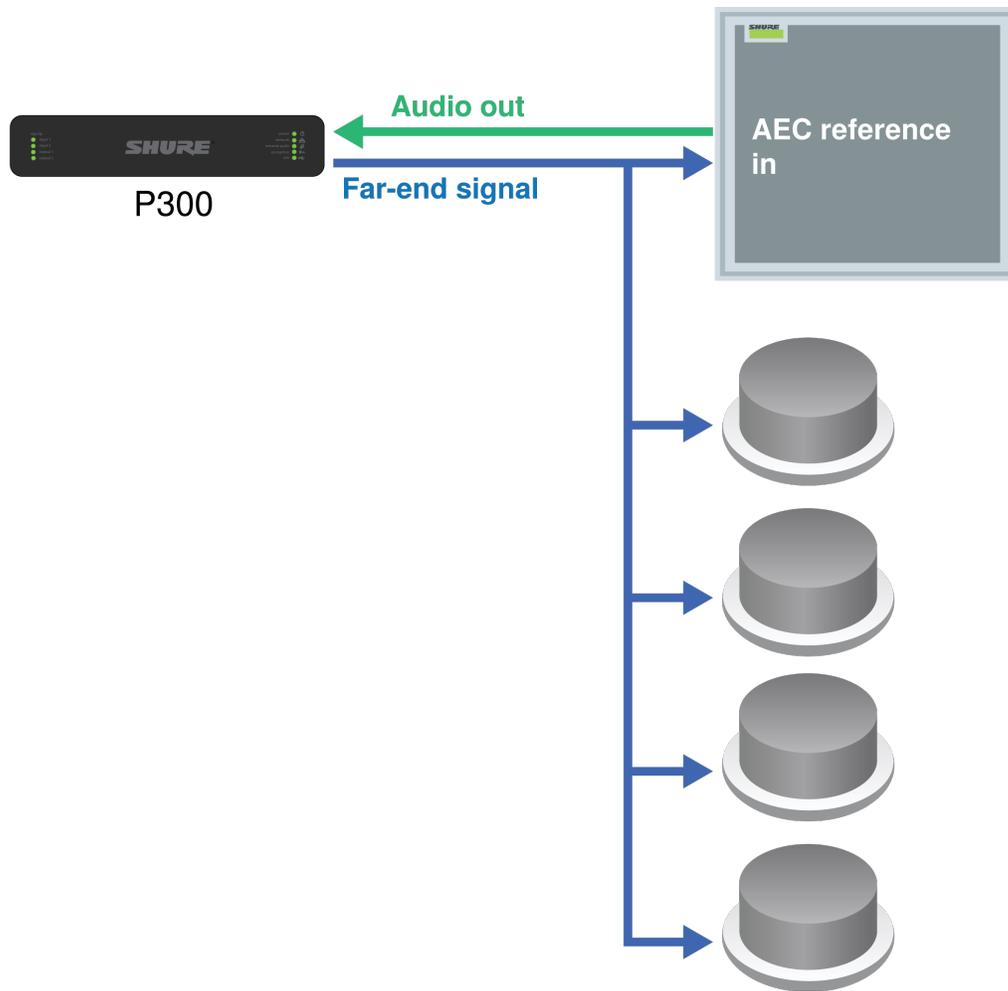
## Option 2: Route Audio from Loudspeaker to Loudspeaker

**Use this method when:**

- Signal comes from device with Ultimo chip transmitting in unicast, such as Shure ANI

Learn more about Dante flows in our FAQs or from Audinate.

If you encounter unicast Dante flow limits, route from one loudspeaker to another using the Dante output channel.



**Far-end signal**

ANIUSB-MATRIX

**Automix out**

**AEC reference in**
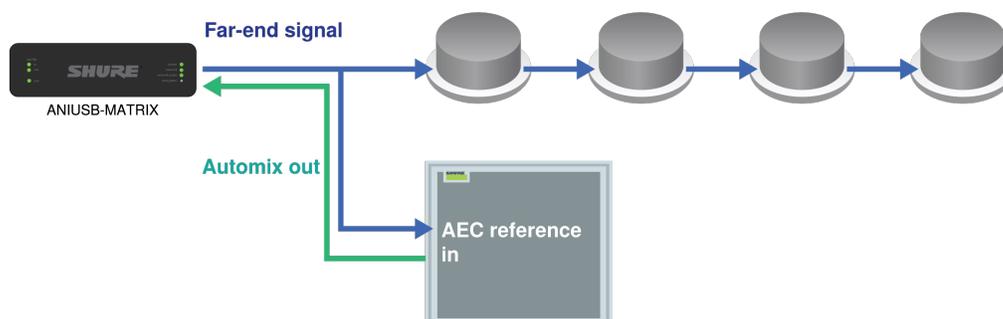
1. In Designer, put all of the loudspeakers and other devices you want to route to in the same room.

2. Route the signal to the first loudspeaker.
3. Open the first loudspeaker's configuration window in Designer.
4. Choose Pre-DSP in the Dante output signal menu. This prevents DSP blocks from stacking on top of each other in the signal chain.
5. Use Designer or Dante Controller to route the signal from the first loudspeaker to the next one. Repeat this process for each additional loudspeaker.

# Set Device Height and Listener Height

To accurately display loudspeaker coverage, set the device height and listener height in Designer.

1. Add the loudspeaker to a room and go to `[Your room]` > `Coverage`.
2. Select the pencil icon in the corner to edit the room height, width, and length. Devices can't be set higher than the room height.
3. Select the loudspeaker and go to `Properties` > `Position` to adjust:
   ◦ X/Y position in location grid
   ◦ Device height
   ◦ Listener height
4. Set the device height and listener height for accurate coverage information. The 3 rings represent −3, −6, and −9 dB at 1 kHz. The rings move as you adjust device height and listener height to show loudspeaker coverage.
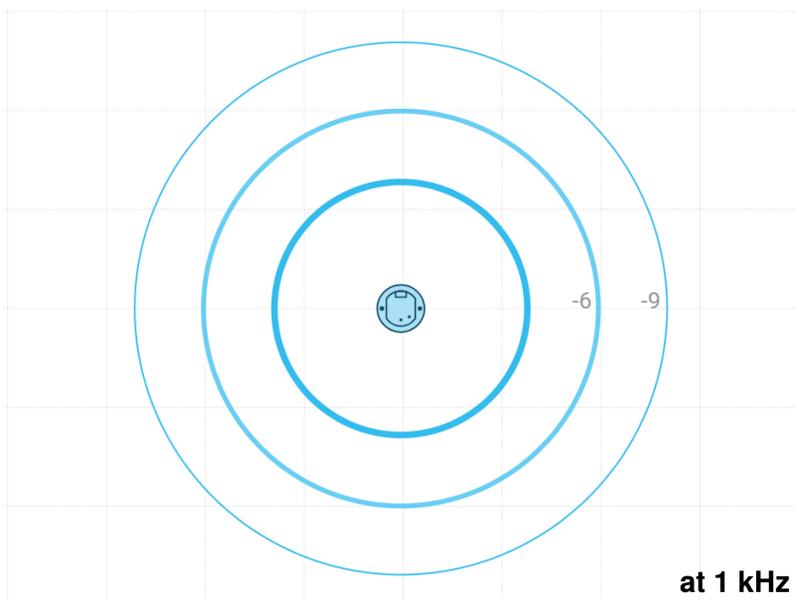


EASE files are available at shure.com.

# DSP Settings

## Parametric Equalizer (PEQ)

Maximize the loudspeaker's audio quality by adjusting the frequency response with the parametric equalizer (PEQ).

**Common equalizer applications:**

- Improve speech intelligibility
- Reduce room irregularities
- Tune system for even and consistent coverage

# 4-Band Equalizers
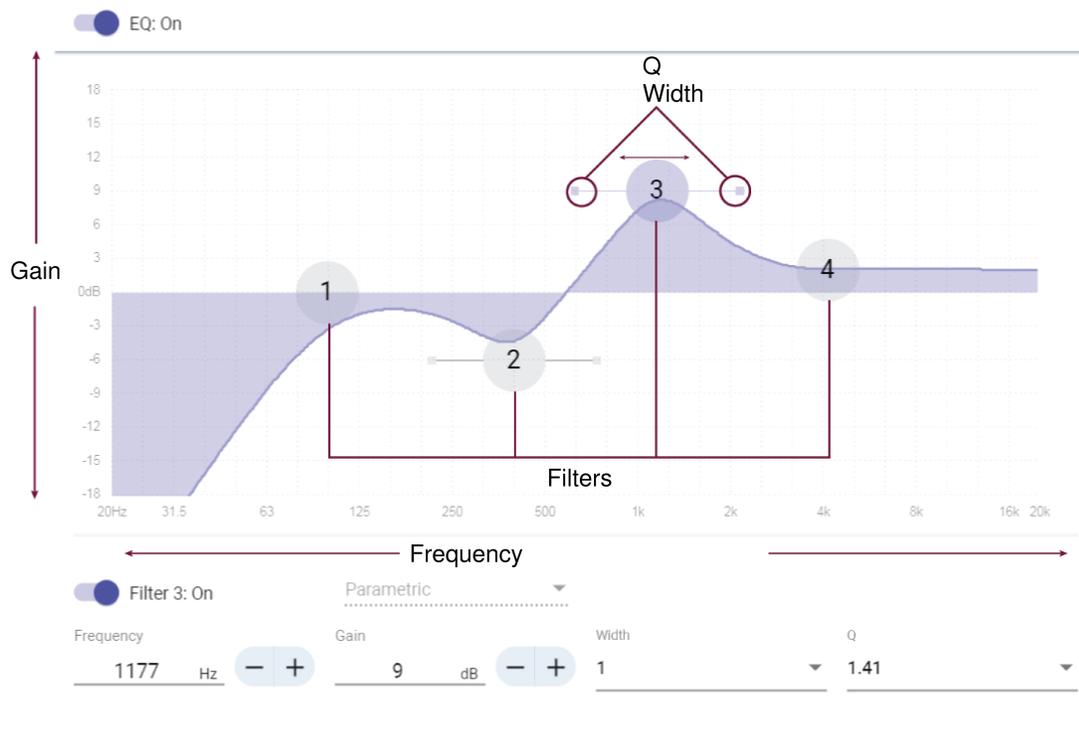


## Filter Types:

**Parametric:** Attenuates or boosts the signal within a customizable frequency range.

**Low Cut:** Rolls off the audio signal below the selected frequency.

**Low Shelf:** Attenuates or boosts the audio signal below the selected frequency.

**High Cut:** Rolls off the audio signal above the selected frequency.

**High Shelf:** Attenuates or boosts the audio signal above the selected frequency.

## Frequency

Select the center frequency of the filter to cut/boost..

## Gain

Adjusts the level for a specific filter (+/- 18 dB).

## Q

Adjusts the range of frequencies affected by the filter. As this value increases, the bandwidth decreases.

**Width**

Adjusts the range of frequencies affected by the filter. The value is represented in octaves.

*Note: The Q and width parameters affect the equalization curve in the same way. The only difference is the way the values are represented.*

## Delay

If you're installing loudspeakers in a large area, you may need to time-align some speakers using delay. This ensures that the signal arrives to all parts of the room at the same time for even coverage.

MXN5-C delay range: 0-160 ms

## Limiter

Use the limiter to prevent output signals from clipping or distorting. To use, enter a dBFS value for the threshold. With the limiter enabled, the output signals will not exceed the threshold.

**Note:** This loudspeaker also has an internal safety limiter to protect the hardware. This limiter only turns on if the output signals reach the loudspeaker's maximum sound pressure level (SPL).

## Signal Generator

The signal generator plays 4 different signals to help you tune your system and balance sound levels. Dante inputs get bypassed when you use the signal generator. The signal generator is pre-EQ, so you can apply EQ to the signal.

Gain adjustment at 0 dB is referenced to 76  dB SPL at 1 meter.

**Pink noise**

Equal energy per octave. Use to check levels and to verify coverage in multi-speaker installations.

**White noise**

Equal energy at each frequency. Use to check levels and to verify coverage in multi-speaker installations.

**Sine wave**

Plays a tone at the selected frequency. Use to check levels, assess comb filtering effects, and identify possible standing waves.

**Sweep**

Plays a tone at every frequency that the loudspeaker can reproduce, starting from the lowest frequency and sweeping up to the highest. Use to identify possible mounting deficiencies, such as rattling or buzzing.

# Muting the Loudspeaker

The loudspeaker has multiple mute points for different scenarios:

1. **Dante Input Mute:** Mutes the selected Dante input channel.
2. **Device Mute:** Mutes the speaker output and the Dante output channel.
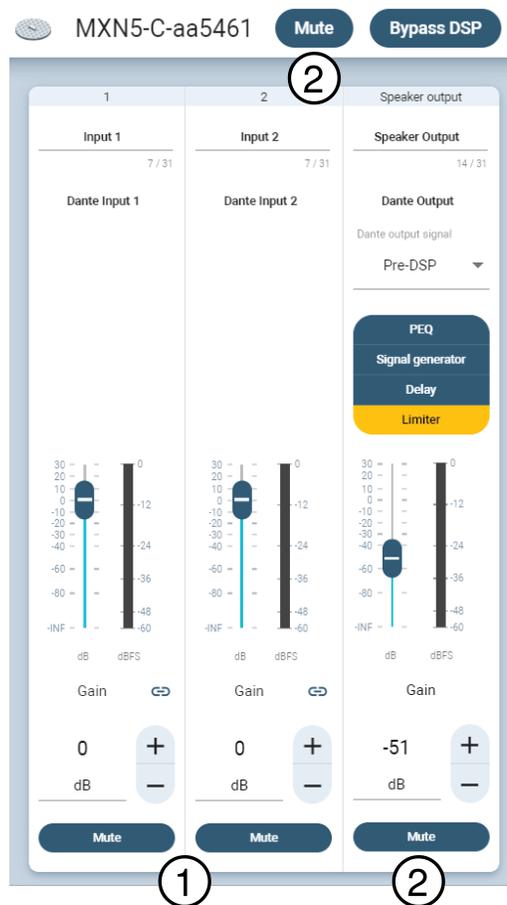
# Encryption

Audio is encrypted with the Advanced Encryption Standard (AES-256), as specified by the US Government National Institute of Standards and Technology (NIST) publication FIPS-197.

Encryption is not supported with third-party devices.

**Important:** For encryption to work:

- Devices must be online and support encryption.
- Encryption must be turned on for all devices in the room.
- You must disable AES67 in Dante Controller. AES67 and AES-256 can't be used at the same time.

To turn on encryption:

In an online room, select ⚙ > Audio encryption > Turn on encryption. You can auto generate a key or enter one manually.

To re-key or turn off encryption:

In an online room, select ⚙ > Audio encryption and enter any passwords.

# Set Up the 802.1X Protocol for a Device

Select Shure devices support the IEEE 802.1X port access protocol for network authentication.

**Important:** To use the 802.1X security protocol with Shure devices, set the network switch to multiple host authentication. You must also make accommodations to allow the audio network interface to connect to the network. The audio network interface doesn't support the 802.1X protocol.

Setting up 802.1X is a two-part process.

**To set up 802.1X, you will need:**

- Details about your authentication server's EAP method
- Any required credentials or certificates for that method, for example:
    - MD5 and PWD
        1. User ID and passphrase
    - TLS and PEAP
        1. User ID and passphrase
        2. Certificate (with certificate types) in the .PEM format
- Any passwords to access the devices if they are password locked

## Step 1: Configure Settings on Test Network

1. Connect the device to your test network and discover it using Designer.
2. Initialize the device if necessary. Open the device and go to `Settings` > `Network` > `802.1X`.
3. Choose your EAP method from the menu.
4. Enter any required credentials and load any necessary certificates.
5. Press Save to save the 802.1X settings to the device.
6. Enable 802.1X and select Reboot later.

## Step 2: Connect to a Credentialed Network

1. Connect your device to the credentialed network.
2. Ensure that Designer is connected to the credentialed network.
3. Go to `Settings` > `Network` > `802.1X` and enable 802.1X. Reboot the device for the 802.1X settings to take effect.
4. If the device doesn't appear in Designer after the reboot, reconnect to the test network and check all 802.1X settings for the selected EAP method.

# Turn Off or Clear 802.1X Settings

You can turn off 802.1X settings temporarily, or clear them from the device. Open the device and go to `Settings` > `Network` > `802.1X`

- **Disable**: Click the 802.1X switch to turn off 802.1X settings. Click the switch again to enable 802.1X.
- **Clear**: Click Clear 802.1X settings to remove 802.1X settings from the device.

**Note:** Resetting to factory default clears all 802.1X settings.

# Change 802.1X Settings

You may need to change a device's 802.1X settings if the enterprise's 802.1X settings are changing. The best way to do this is to change the 802.1X settings on the devices, and then make changes to the authentication server.

**To change device settings:**

1. While still connected to the credentialed network, find the device in Designer and go to `Settings` > `Network` > `802.1X`.
2. Make changes and click Save.
3. Make any changes to the authentication server.
4. Reboot your devices. The devices should connect to the credentialed network with the updated 802.1X settings.

## Troubleshooting 802.1X Setup Issues

If the device doesn't appear in Designer on the credentialed network, there's a problem with the device's 802.1X settings. To troubleshoot, take the device off the credentialed network and connect it to the test network. You can make any necessary changes to the 802.1X settings, and then reconnect to the credentialed network.

If you attempt to enable 802.1X on a device, but the authentication fails, you will see this notification:
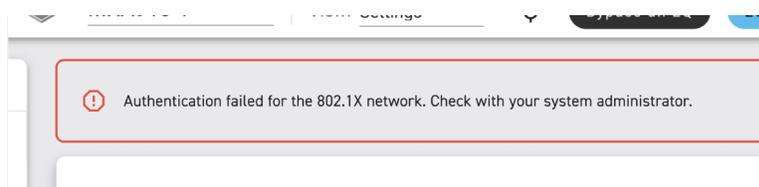


If this occurs, check with your system administrator.

# AES67

AES67 is a networked audio standard that enables communication between hardware components which use different IP audio technologies. This Shure device supports AES67 for increased compatibility within networked systems for live sound, integrated installations, and broadcast applications.

The following information is critical when transmitting or receiving AES67 signals:

* Update Dante Controller software to the newest available version to ensure the AES67 configuration tab appears.
* Before turning encryption on or off, you must disable AES67 in Dante Controller.
* AES67 cannot operate when the transmit and receive devices both support Dante.

| Shure Device Supports: | Device 2 Supports: | AES67 Compatibility |
|---|---|---|
| **Dante and AES67** | Dante and AES67 | No. Must use Dante. |
| **Dante and AES67** | AES67 without Dante. Any other audio networking protocol is acceptable. | Yes |

Separate Dante and AES67 flows can operate simultaneously. The total number of flows is determined by the maximum flow limit of the device.

## Sending Audio from a Shure Device

All AES67 configuration is managed in Dante Controller software. For more information, refer to the Dante Controller user guide.

1. Open the Shure transmitting device in Dante Controller.
2. Enable AES67.

3. Reboot the Shure device.
4. Create AES67 flows according to the instructions in the Dante Controller user guide.

# Receiving Audio from a Device Using a Different Audio Network Protocol

**Third-party devices:** When the hardware supports SAP, flows are identified in the routing software that the device uses. Otherwise, to receive an AES67 flow, the AES67 session ID and IP address are required.

**Shure devices:** The transmitting device must support SAP. In Dante Controller, a transmit device (appears as an IP address) can be routed like any other Dante device.

# Switch and Cable Recommendations for Dante Networking

Switches and cables determine how well your audio network performs. Use high-quality switches and cables to make your audio network more reliable.

**Network switches should have:**

- Gigabit ports. 10/100 switches may work on small networks, but gigabit switches perform better.
- Power over Ethernet (PoE) or PoE+ ports for any devices that require power
- Management features to provide information about port speed, error counters, and bandwidth used
- Ability to switch off Energy Efficient Ethernet (EEE). EEE (also known as "Green Ethernet") may cause audio dropouts and problems with clock synchronization.
- Diffserv (DSCP) Quality of Service (QoS) with strict priority and 4 queues

**Ethernet cables should be:**

- Cat5e or better
- Shielded

For more information, see our FAQ about switches to avoid.

# IP Ports and Protocols

## Shure Control

| Port | TCP/UDP | Protocol | Description | Factory Default |
|------|---------|----------|-------------|-----------------|
| **21** | TCP | FTP | Required for firmware updates (otherwise closed) | Closed |
| **22** | TCP | SSH | Secure Shell Interface | Closed |
| **23** | TCP | Telnet | Not supported | Closed |
| **53** | UDP | DNS | Domain Name System | Closed |
| **67** | UDP | DHCP | Dynamic Host Configuration Protocol | Open |
| **68** | UDP | DHCP | Dynamic Host Configuration Protocol | Open |
| **80*** | TCP | HTTP | Required to launch embedded web server | Open |
| **443** | TCP | HTTPS | Not supported | Closed |

| Port | TCP/UDP | Protocol | Description | Factory Default |
|------|---------|----------|-------------|-----------------|
| **2202** | TCP | ASCII | Required for 3rd party control strings | Open |
| **5353** | UDP | mDNS$^\dagger$ | Required for device discovery | Open |
| **5568** | UDP | SDT (multicast)$^\dagger$ | Required for inter-device communication | Open |
| **57383** | UDP | SDT (unicast) | Required for inter-device communication | Open |
| **8023** | TCP | Telnet | Debug console interface | Closed |
| **8180** | TCP | HTML | Required for web application (legacy firmware only) | Open |
| **8427** | UDP | SLP (multicast)$^\dagger$ | Required for inter-device communication | Open |
| **64000** | TCP | Telnet | Required for Shure firmware update | Open |

*These ports must be open on the PC or control system to access the device through a firewall.

$^\dagger$These protocols require multicast. Ensure multicast has been correctly configured for your network.

See Audinate's website for information about ports and protocols used by Dante audio.

# Dante Flows for Shure Devices

Dante flows get created any time you route audio from one Dante device to another. One Dante flow can contain up to 4 audio channels. For example: sending all 5 available channels from an MXA310 to another device uses 2 Dante flows, because 1 flow can contain up to 4 channels.

Every Dante device has a specific number of transmit flows and receive flows. The number of flows is determined by Dante platform capabilities.

## Dante Flows for Shure Devices

| Dante Platform | Shure Devices Using Platform | Transmit Flow Limit | Receive Flow Limit |
|----------------|------------------------------|---------------------|--------------------|
| **Brooklyn II** | ULX-D, SCM820, MXWAPT, MXWANI, P300, MXCWAPT | 32 | 32 |
| **Brooklyn II (without SRAM)** | MXA920, MXA910, MXA902, MXA710, AD4, AD600, APXD2 | 16 | 16 |
| **IP Core** | MXA920-V3, MXA902-V3, MXA901 | 32 | 32 |
| **Ultimo/UltimoX** | MXA310, ANI4IN, ANI4OUT, ANIUSB-MATRIX, ANI22, MXN5-C | 2 | 2 |
| **DEP** | ANIUSB-MATRIX-V3 | 2 | 2 |
| **DAL** | IntelliMix Room | 16 | 16 |

Learn more about Dante flows in our FAQs or from Audinate.

# Using Command Strings

This device receives logic commands over the network. Many parameters controlled through Designer can be controlled using a third-party control system, using the appropriate command string.

**Common applications:**

- Mute
- LED color and behavior
- Loading presets
- Adjusting levels

A complete list of command strings is available at:

pubs.shure.com/command-strings/MXN5-C.

# Specifications

## Connector Type

RJ45

## Power Requirements

Power over Ethernet (PoE) Class 0 or PoE Plus Class 4

## Power Consumption

| Power over Ethernet (PoE) | 12 W maximum (11 W typical) |
|---|---|
| PoE Plus | 24 W maximum (23 W typical) |

## Weight

6.5 lbs (2.95 kg)

## Product Dimensions

12 x 12 x 4 in. (304.8 x 304.8 x 101.6 mm) H x W x D

## Control Software

Shure Designer

## Plenum Rating

UL 2043 (Suitable for Air Handling Spaces)

## Operating Temperature Range

−6.7°C (20°F) to 40°C (104°F)

## Storage Temperature Range

−29°C (-20°F) to 74°C (165°F)

### Frequency Response (–3 dB)

120 Hz to 20 kHz

### Maximum Output Level

*At 1 meter*

| Power over Ethernet (PoE) | 92 dB SPL |
|---|---|
| PoE Plus | 98 dB SPL |

### Coverage Angle

*Average of 1 octave band centered on 4 kHz*

94°

### Digital Signal Processing

Delay, Limiter, Signal Generator, Equalizer (4-band Parametric)

### Latency

*Not including Dante latency*

1.5 ms

## EASE Files Available Online

EASE files are available for this device at shure.com.

# IMPORTANT SAFETY INSTRUCTIONS

1. READ these instructions.
2. KEEP these instructions.
3. HEED all warnings.
4. FOLLOW all instructions.
5. DO NOT use this apparatus near water.
6. CLEAN ONLY with dry cloth.
7. DO NOT block any ventilation openings. Allow sufficient distances for adequate ventilation and install in accordance with the manufacturer's instructions.
8. DO NOT install near any heat sources such as open flames, radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat. Do not place any open flame sources on the product.
9. DO NOT defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wider blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. PROTECT the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. ONLY USE attachments/accessories specified by the manufacturer.
12. USE only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13. UNPLUG this apparatus during lightning storms or when unused for long periods of time.
14. REFER all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. DO NOT expose the apparatus to dripping and splashing. DO NOT put objects filled with liquids, such as vases, on the apparatus.
16. The MAINS plug or an appliance coupler shall remain readily operable.
17. The airborne noise of the Apparatus does not exceed 70dB (A).
18. Apparatus with CLASS I construction shall be connected to a MAINS socket outlet with a protective earthing connection.
19. To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
20. Do not attempt to modify this product. Doing so could result in personal injury and/or product failure.
21. Operate this product within its specified operating temperature range.

|  | This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit. |
|---|---|
|  | This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit. |

# Important Product Information

The equipment is intended to be used in professional audio applications.

**Note:** This device is not intended to be connected directly to a public internet network.

Changes or modifications not expressly approved by Shure Incorporated could void your authority to operate this equipment.

CAN ICES-003 (B)/NMB-003(B)

This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Please follow your regional recycling scheme for batteries, packaging, and electronic waste.

Dante® is a registered trademark of Audinate Pty Ltd.

# Information to the user

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instruction manual, may cause interference with radio and television reception.

**Notice:** The FCC regulations provide that changes or modifications not expressly approved by Shure Incorporated could void your authority to operate this equipment.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruc-

tions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

The CE Declaration of Conformity can be obtained from: www.shure.com/europe/compliance

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Global Compliance
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This product meets the Essential Requirements of all relevant European directives and is eligible for CE marking.

The CE Declaration of Conformity can be obtained from Shure Incorporated or any of its European representatives. For contact information please visit www.shure.com