

Shure Array Microphone Setup Tips for Lumens CamConect

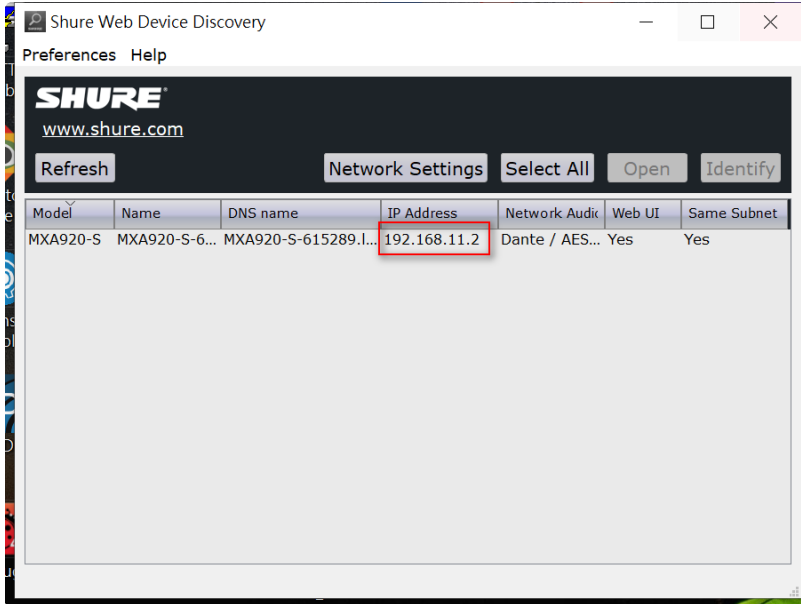
Purpose

- Help users quickly install Lumens **CamConnent Pro** and **Shure Array Microphones**.
- Especially focus on **the setting tips of Shure array microphone**.
- These setting tips are the sharing of the key steps summarized after we have installed this system many times.

Prepare

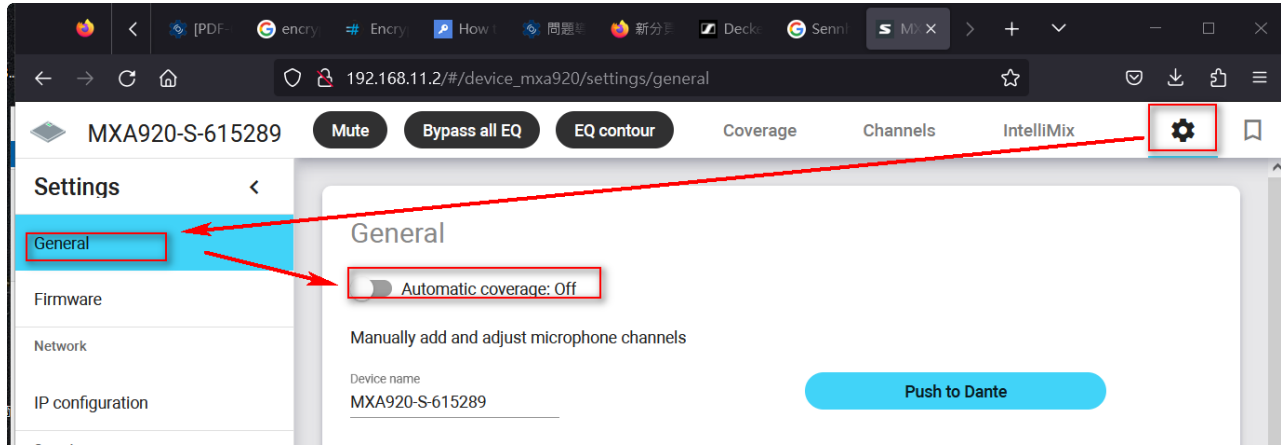
- This document uses **Shure MXA920** as an example of setting.
- Please install Shure array microphone, Lumens CamConnect processor and Lumens PTZ cameras on the same LAN (same class C network).
- For the first installation, you need to prepare a router or Switcher with DHCP server function.
- Shure MXA920 installed in the ceiling above the center of a conference table

Device Discovery



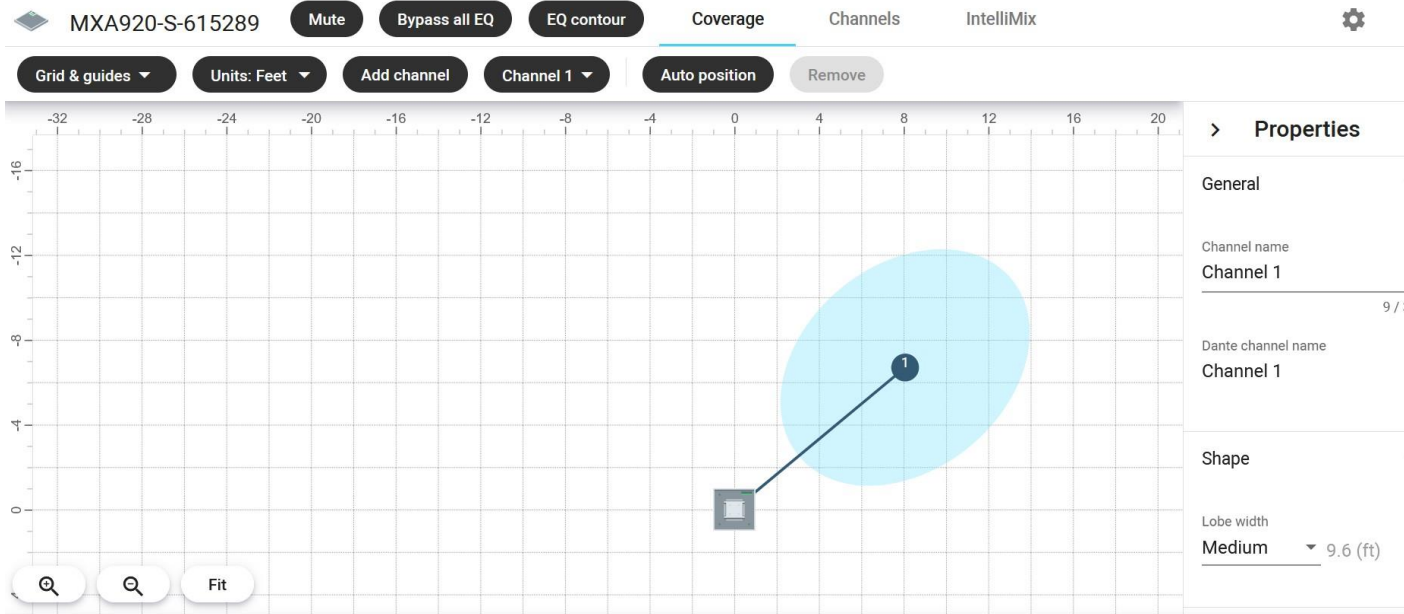
1. Download “**Shure Web Device Discovery**” software from below hyperlink.
https://www.shure.com/en-US/products/software/shure_web_device_discovery_application
2. Install and run this software.
3. You will get the IP address for the Shure ceiling microphone.
4. Open the web browser and enter the webpage of MXA920.

Automatic coverage: off



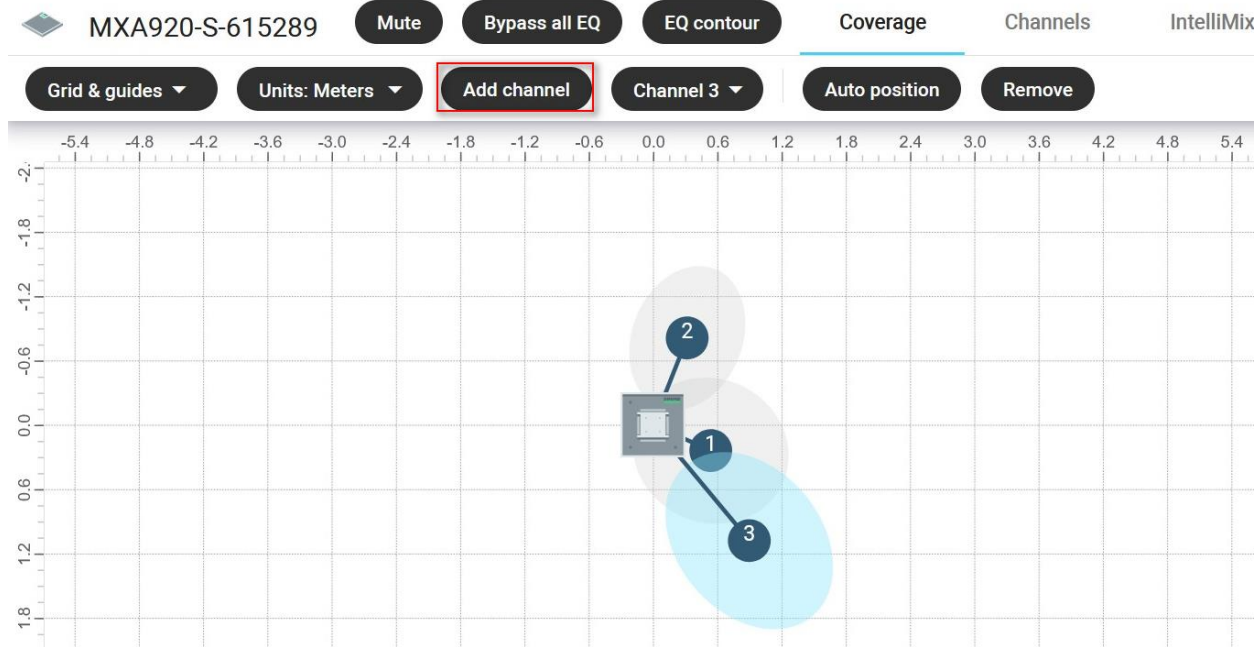
It is recommended to set “Automatic coverage” to **off**

Coverage



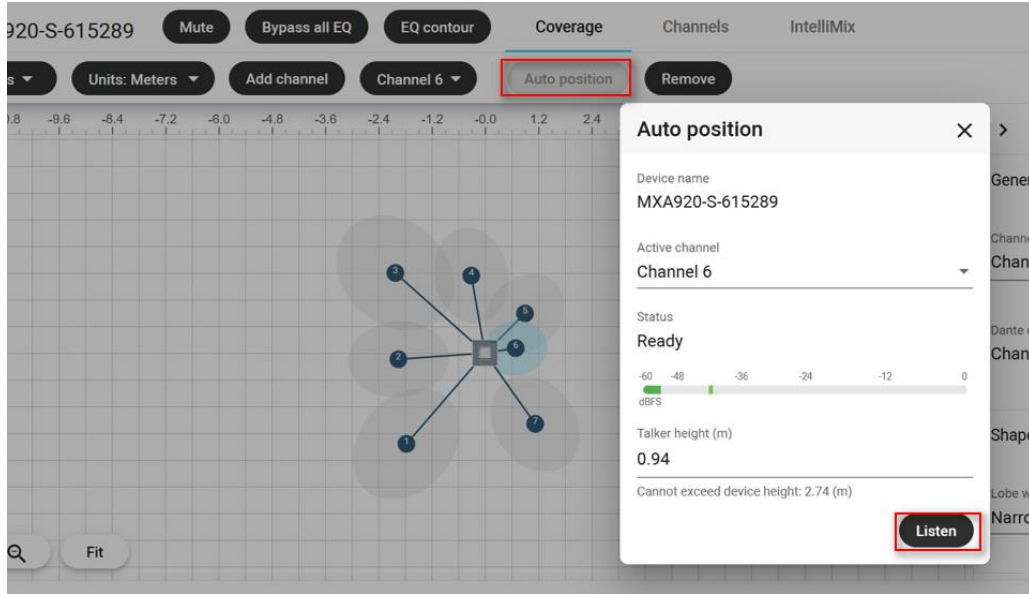
1. Go to the “**Coverage**” page.
2. If someone has set other channels before, please **remove all channels first**. Only keep channel 1.

Add channel



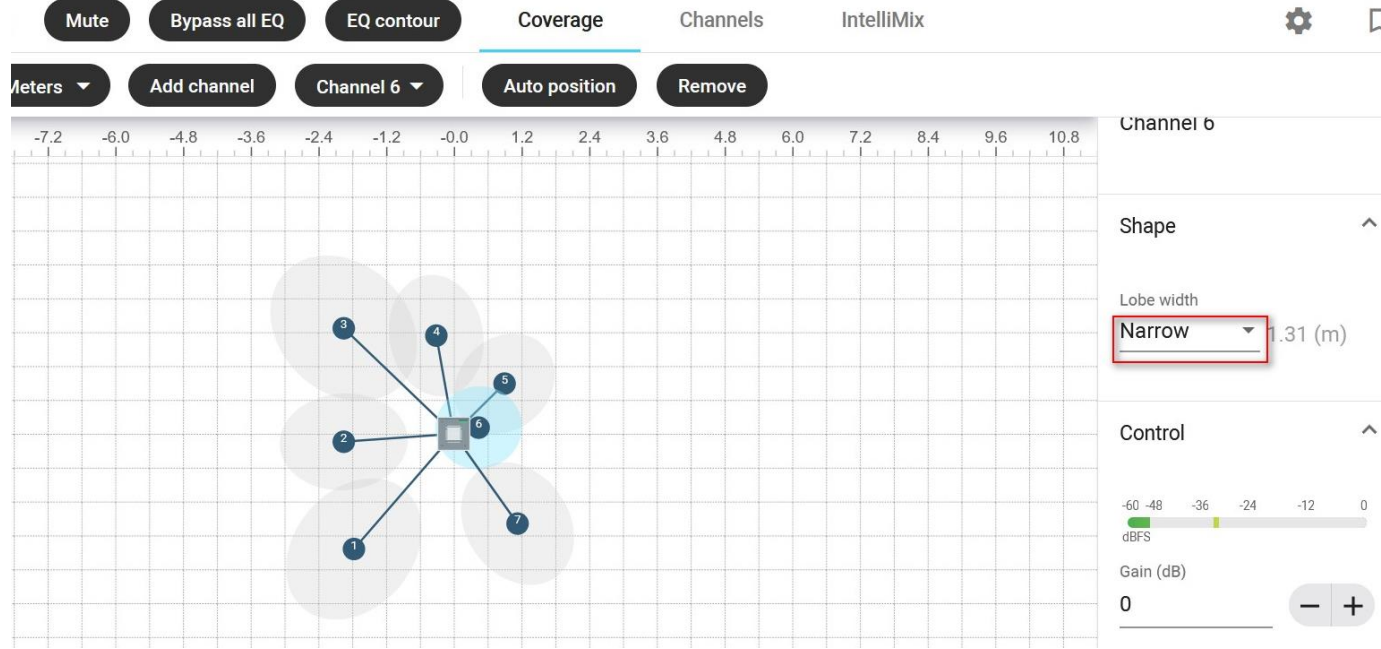
Manually add the channel

Auto position



1. Need to find someone to speak at this seat position in the conference room
2. Select channel N, then press “**Auto positon**” button.
3. Press “**Listen**” button in Auto position windows.
4. Then the position of channel N will be found automatically.

Lobe width for the channel



Set the **lobe width** of each channel as “**Narrow**” or “**Medium**”.
This will reduce the area covered by each lobe and increase the accuracy of voice tracking.

IntelliMix

MXA920-S-615289 Mute Bypass all EQ EQ contour Coverage Channels IntelliMix

Bypass IntelliMix Revert to defaults

Gain	AGC	Solo	Priority	Always on	Mute
10 dB	AGC	Solo	Priority	Always on	Mute
0 dB	AGC	Solo	Priority	Always on	Mute
0 dB	AGC	Solo	Priority	Always on	Mute
0 dB	AGC	Solo	Priority	Always on	Mute
0 dB	AGC	Solo	Priority	Always on	Mute
0 dB	AGC	Solo	Priority	Always on	Mute
0 dB	AGC	Solo	Priority	Always on	Mute
-22 dB	AEC	Solo	Priority	Always on	Mute
	NR				
	PEQ				
	Comp				
	Delay				

Properties

Settings

Automix mode

Gating

Please go to the “IntelliMix” page.
There are also some settings here that will affect the tracking results of CamConentc.

Priority

The screenshot displays the Shure MXA920-S-615289 IntelliMix interface. At the top, the device name 'MXA920-S-615289' is shown along with control buttons for 'Mute', 'Bypass all EQ', and 'EQ contour'. The 'IntelliMix' tab is active. Below this, there are buttons for 'Bypass IntelliMix' and 'Revert to defaults'. The main interface features eight channel strips. The first channel strip (Channel 1) has its 'Gain' set to 10 dB. The 'Priority' button for Channel 1 is highlighted in blue, indicating it is enabled. Other buttons for Channel 1 include AGC, Solo, Always on, and Mute. The 'Properties' panel on the right shows a diagram of the microphone array with Channel 1 highlighted. The 'Settings' panel below it shows 'Automix mode' and 'Gating' options. The Shure logo is visible at the bottom right of the interface.

- If we enable “**Priority**” on channel 1. This means that when both channel 1 and channel 2 are talking, the signal of Channel 1 will be sent first
- For example, in a meeting. The main speaker is in the position of Channel 1. Channel 1 can be set with higher priority.

Always On

The screenshot shows the Shure MXA920-S-615289 software interface. At the top, there are tabs for 'Mute', 'Bypass all EQ', 'EQ contour', 'Coverage', 'Channels', and 'IntelliMix'. Below these are buttons for 'Bypass IntelliMix' and 'Revert to defaults'. The main area displays eight channel strips. Each strip has a gain control (10 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, -22 dB), an AGC button, a Solo button, a Priority button, an 'Always on' button (highlighted in blue for the first channel), and a Mute button. A 'Properties' panel on the right shows a network diagram and settings for Automix mode, currently set to Gating.

SHURE

- If we enable “**Always on**” on channel 1.
- This means that Shure MXA920 will continue to send channel 1 is active.
- For example, in a meeting. The main speaker is in the position of Channel 1. Channel 1 can be set with higher priority.

Send to mix

The image displays a digital audio workstation (DAW) interface with seven channels and an Automix Out section. Each channel (Channel 1 through Channel 7) and the Automix Out section have a 'Send to mix' button. Channel 3's 'Send to mix' button is currently active (blue), while Channel 7's 'Send to mix' button is inactive (grey) and highlighted with a red box. Below each 'Send to mix' button is a gain control with a slider and a '+'/'-' button. At the bottom of each channel are buttons for AGC, Solo, Priority, Always on, and Mute. The Automix Out section has buttons for AEC, NR, PEQ, Comp, Delay, and Mute.

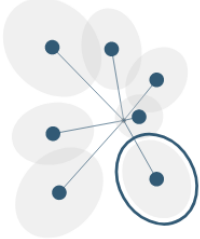
- If a certain channel has a fixed noise that keeps interfering, you can turn off its **"Send to mix"**, and the voice trigger signal will not be sent from this channel.

Leave Last Mic On

The screenshot shows the IntelliMix software interface. On the left, there are controls for 'channel 7', including a 'Send to mix' button and a 'Gain' slider set to -22 dB. Below these are buttons for AGC, Solo, Priority, Always on, and Mute. On the right, there is a 'Settings' panel with a 'Leave last mic on' checkbox checked and highlighted by a red box. The 'Off attenuation (dB)' is set to -15, and the 'Hold time (ms)' is set to 400. Other settings visible include 'Automix mode' set to 'Gating', 'Automix gain meter' checked, and 'Maximum open channels' set to 8.

- **Leave Last Mic On**
Keeps the most recently used microphone channel active.
The purpose of this feature is to keep natural room sound in the signal so that meeting participants on the far end know the audio signal has not been interrupted.
- **Off Attenuation**
Sets the level of signal reduction when a channel is not active
- **Hold Time**
Sets the duration for which the channel remains open after the level drops below the gate threshold

Gating Sensitivity



Settings ^

Automix mode
Gating v

Automix gain meter

Maximum open channels
8 v

Leave last mic on

Off attenuation (dB)
-15 - +

Hold time (ms)
400 - +

Gating sensitivity
1 5 9
Low High

- **Gating Sensitivity**

Changes the threshold of the level at which the gate is opened
Generally set between 2~5.

You can start testing from 2.

Find the most appropriate effect for your meeting space.

The higher the number, the more sensitive the trigger of Voice will be, and the chance of Camera switch will be relatively increased.

This parameter will affect the sensitivity of voice tracking, and can also avoid some low-volume interference.

Voice activation

MXA920-S-615289 Mute Bypass all EQ EQ contour Coverage Channels IntelliMix

Bypass IntelliMix Revert to defaults

1 2 3 4 5 6 7 Automix

Channel 1 Channel 2 Channel 3 Channel 4 Channel 5 Channel 6 Channel 7 Automix Out

Send to mix Send to mix Send to mix Send to mix Send to mix Send to mix Send to mix

● On ● On ● On ● On ● On ● On ● On

Gain Gain Gain Gain Gain Gain Gain

0 + 0 + 0 + 0 + 0 + 0 + 0 + 0 +

dB dB dB dB dB dB dB dB

AGC AGC AGC AGC AGC AGC AGC AEC NR PEQ Comp Delay

Solo Solo Solo Solo Solo Solo Solo

Priority Priority Priority Priority Priority Priority Priority

Always on Always on Always on Always on Always on Always on Always on

Mute Mute Mute Mute Mute Mute Mute Mute

Properties

Settings

Automix mode

Gating

Automix gain meter

Maximum open channels

8

Leave last mic on

Off attenuation (dB)

-15 - +

- On the IntelliMix page, you can test whether the correct channel is activated when someone speaks on different channels

CamConnect Pro Setting

The screenshot displays the CamConnect Processor web interface. At the top, it shows the device name 'CamConnect Processor 192.168.11.15' and a 'Setting Mode' toggle. Below this, there are sections for 'Supported Devices & Settings', 'Advanced', and 'Device & Camera Mapping'. The 'Supported Devices & Settings' section has a 'Devices' dropdown menu with 'Shure MXA920' selected. The 'Advanced' section contains various time and position settings. The 'Device & Camera Mapping' section features a table with columns for 'Array No.', 'Camera', and 'Preset No.', where each row is mapped to a specific camera and preset. At the bottom, the 'Camera Control & Status' section shows a table of camera connections and their operational status.

Array No.	Camera	Preset No.
1	VC-A71PN(192.168.11.17)	8
2	VC-A71PN(192.168.11.17)	4
3	VC-A71PN(192.168.11.17)	3
4	VC-TR40(192.168.11.11)	2
5	VC-A71PN(192.168.11.17)	3
6	VC-A71PN(192.168.11.17)	8
7	VC-A71PN(192.168.11.17)	7
8	VC-A71PN(192.168.11.17)	6

Camera	IP / USB	Control Status	Operation
VC-TR40	192.168.11.11	Disconnected	PTZ Control AI Setting
VC-A71PN	192.168.11.17	Disconnected	PTZ Control AI Setting
VC-A51PN	192.168.11.18	Connect	PTZ Control AI Setting
VC-A51PN	192.168.11.19	Connect	PTZ Control AI Setting
VC-R30	192.168.11.20	Connect	PTZ Control AI Setting
VC-A51PN	192.168.11.28	Connect	PTZ Control AI Setting

- 1. Select the device as “Shure MXA920”
- 2. Mapping the “**Array No.**” to the Shure “**Lobe channel number**”.
- 3. Lumens will continue to provide videos of CamConnect Pro settings. So, other settings will not be repeated in this document.

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