Microflex® Advance™ MXA710 Linear Array Microphone

Use this guide to help successfully deploy the Shure MXA910 linear array microphone.
The steps provided in this guide have been configured using the Shure Designer System Configuration Software.

Step 1: Select Installation Type

MXA710-2FT and MXA710-4FT microphones install easily in tables, on walls, or on ceilings. When you first add an array to your design in the Shure Designer software, indicate how you will be installing the device (see fig. 1). Choosing the correct installation type will provide the correct view and lobe adjustment options.

How are you installing the MXA710?

Select an install method for your device. This will change the configuration to the recommended default lobe settings.

- ⦿ Wall horizontal
- ◯ Wall vertical
- ◯ Ceiling
- ◯ Table

Cancel   Add device

Fig. 1 Choosing the correct installation type will provide the correct view and lobe adjustment options.

Step 2: Set Coverage

When using Shure Designer, you can import and scale a floor image of the room for a visual representation.
The array is shown on a grid comprised of 2 ft × 2 ft tiles.

Use the grid to confirm you have placed the microphone lobe in the correct location.

Choosing the correct lobe width: Each lobe will progressively get wider as the distance gets further from the array. Selecting the width based on coverage area will provide optimal audio.

The solid line in each lobe shows where pickup is the strongest. The lobe's edge is -6dB down from the solid line. The recommended distance of the MXA710-2FT is 2 to 16 feet while for the MXA710-4FT it's 4 to 20 feet.

To change coverage, click on a lobe and drag it to the desired location. You can change the width in the properties on the right (see fig. 2).
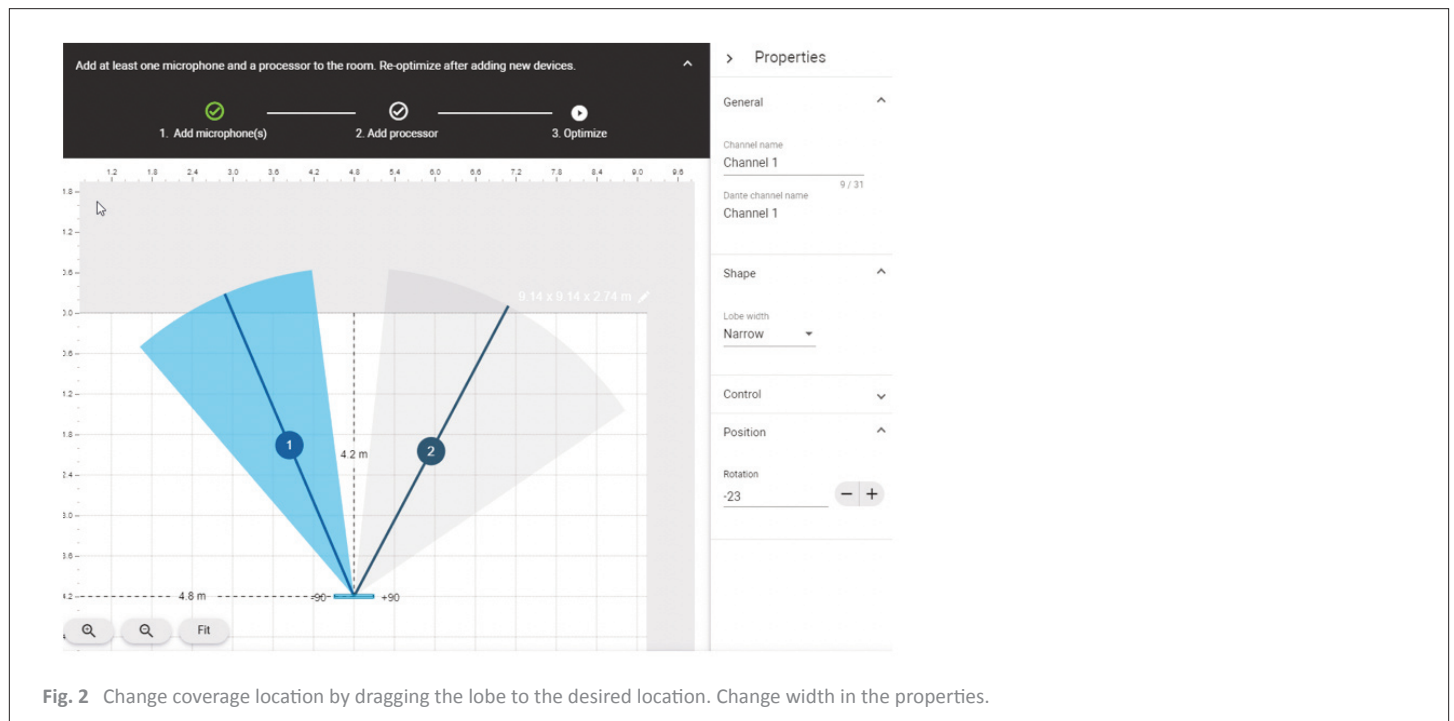

Fig. 2 Change coverage location by dragging the lobe to the desired location. Change width in the properties.

If you need to change the installation type, select the array and in the properties on the right click on Change installation. To add or remove a lobe/channel, click the appropriate button at the top of the screen (see fig. 3).

Fig. 3 From the coverage configuration screen, you have options to change coverage, installation type, and more.
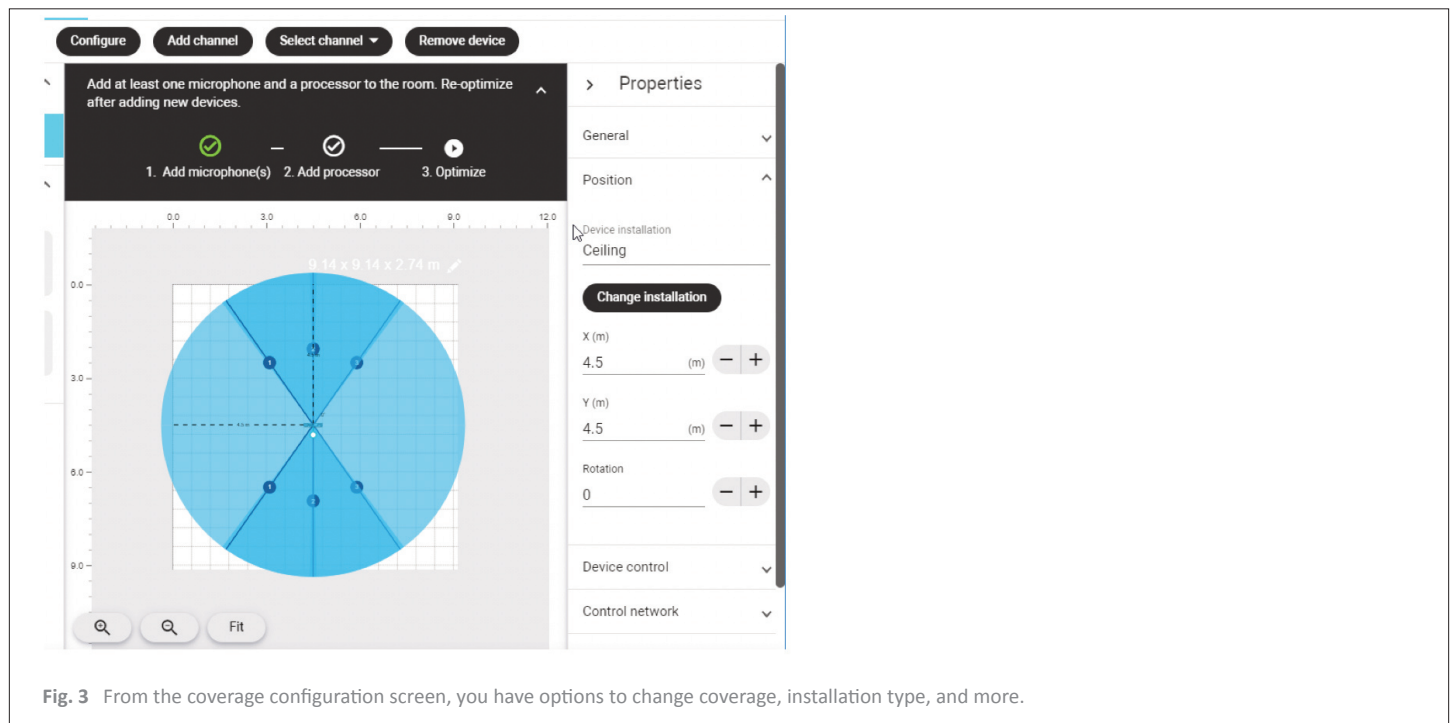
When using an array installed on a wall vertically, open "Side view" to aim your lobes. This will allow you to tilt lobes based on the physical height of the array (see fig. 4).

Fig. 4 For arrays mounted vertically, the Side view will let you aim and tilt lobes based on the physical height of the array.
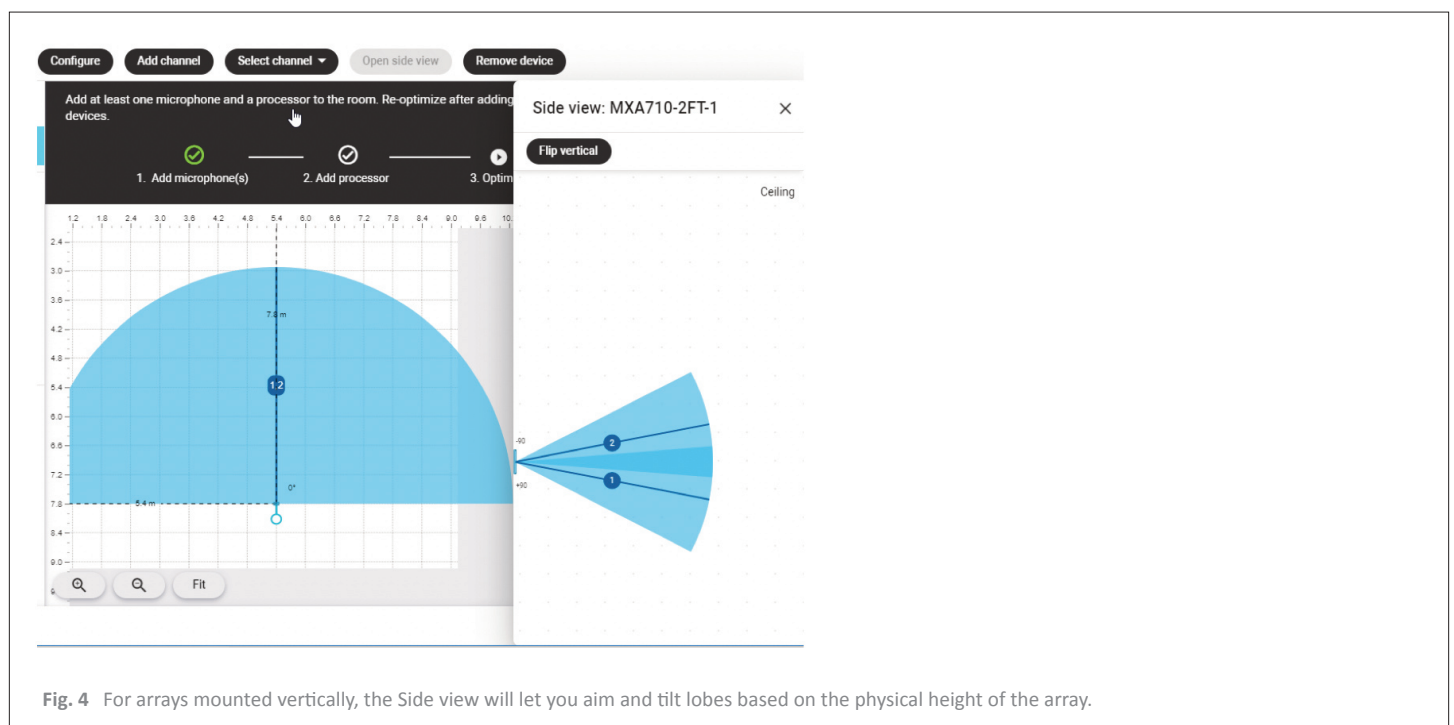
Step 3: Audio Adjustments

Achieving quality audio with the MXA710 requires that the gain structure be set correctly. On the channels window of the MXA710 you can increase or decrease the gain as needed per channel.

Not all channels will have the same gain adjustment; you will need more gain as you get further from the array. When setting the gain, it is important to note that the channel meters are in dBFS, decibel full scale. This indicates that 0 is the clipping point, and unity is around -20dBFS (see fig. 5).

Enable the EQ Contour if desired. Enabling this will apply a low shelf at 300Hz at -6dB.

Once you have set your gain, you will need to adjust PEQ (parametric equalizer). Choose a channel and click on the **PEQ** button (fig. 5). Adjust the EQ as required for the channel.
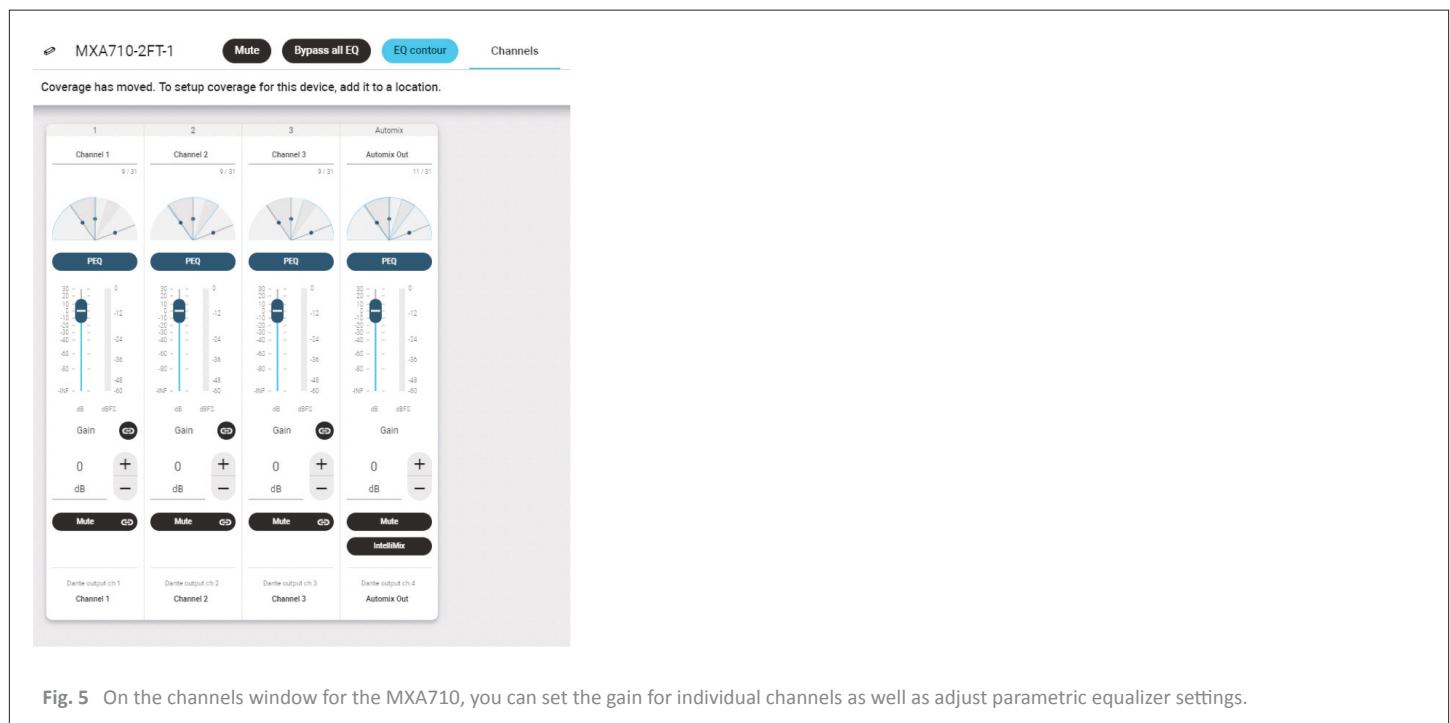

Fig. 5 On the channels window for the MXA710, you can set the gain for individual channels as well as adjust parametric equalizer settings.

There are four filters available, all turned off by default. You'll need to turn on each filter you want active.

Tailor your filters by choosing the type of filter, and adjusting the settings as needed (see fig. 6).
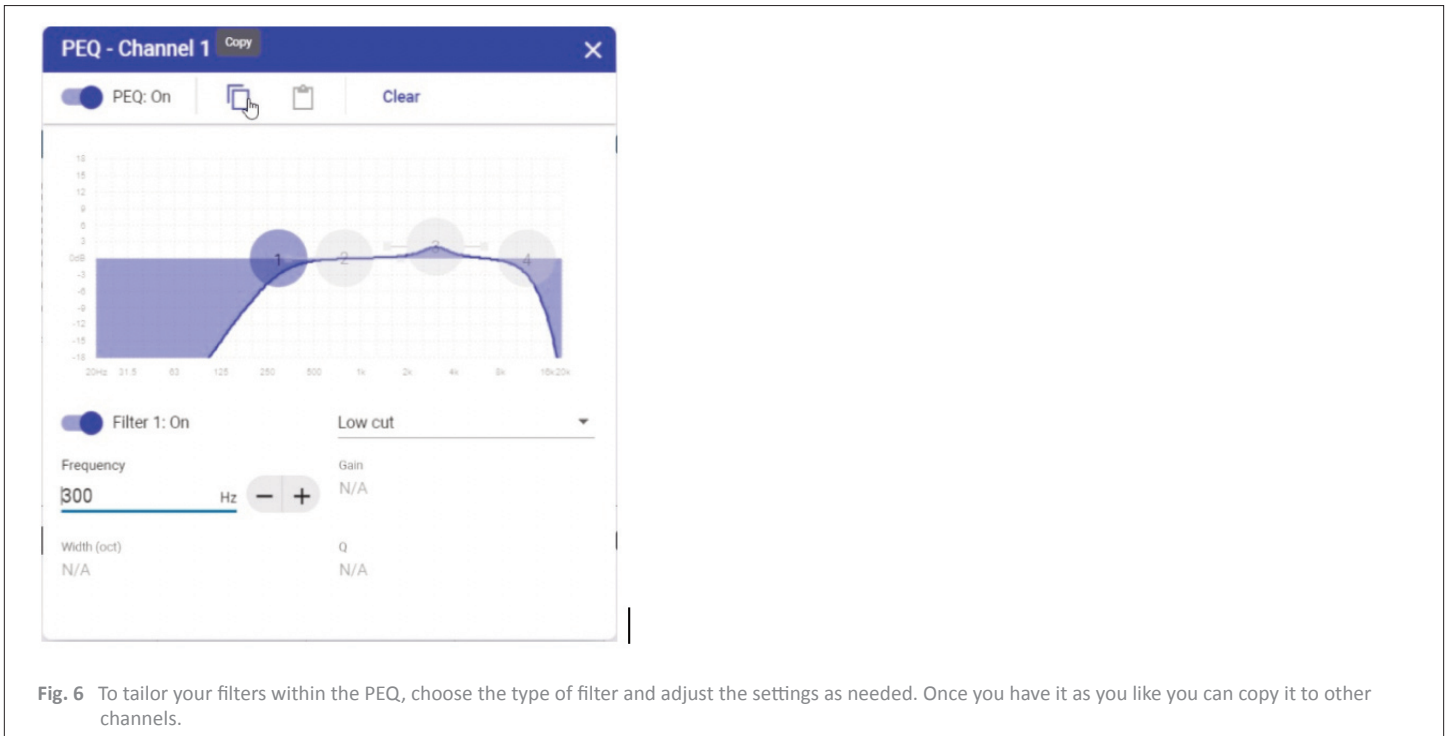

Fig. 6 To tailor your filters within the PEQ, choose the type of filter and adjust the settings as needed. Once you have it as you like you can copy it to other channels.

Tip: Once you have an EQ that you like, you can copy and paste it to other channels. Simply click the copy button at the top of the PEQ window, then open the next channels PEQ and click the Paste clipboard (see fig. 6).

Step 5: IntelliMix

You can configure a mix output in the IntelliMix window. To assign the channels you want to include in the mix, click **Send to Mix.** For each channel, apply **Automatic Gain Control (AGC), Priority,** or **Always On** as needed.

On the Automix Out channel strip, you can enable or disable the Acoustic Echo Cancellation (AEC) and adjust the Non-Linear Processing (NLP).

Use the lowest setting possible for the NLP, as this will remove low-level late audio reflections as found in acoustically challenged rooms.

Use the lowest level noise reduction (NR) possible as it removes persistent noise such as HVAC.

If desired adjust PEQ, compression, and delay. Also, don't forget to route a reference to the microphone if using the onboard AEC.

In the Properties panel on the right, select the Automix mode. Gating is recommended for conferencing applications with a maximum open channel count of two or three. The gating sensitivity can be adjusted to keep the microphone channels from opening from sounds like paper shuffling or pencil tapping. A lower sensitivity requires more audio to open the gate whereas higher sensitivity will require less audio and opens the gate earlier (see fig. 7).
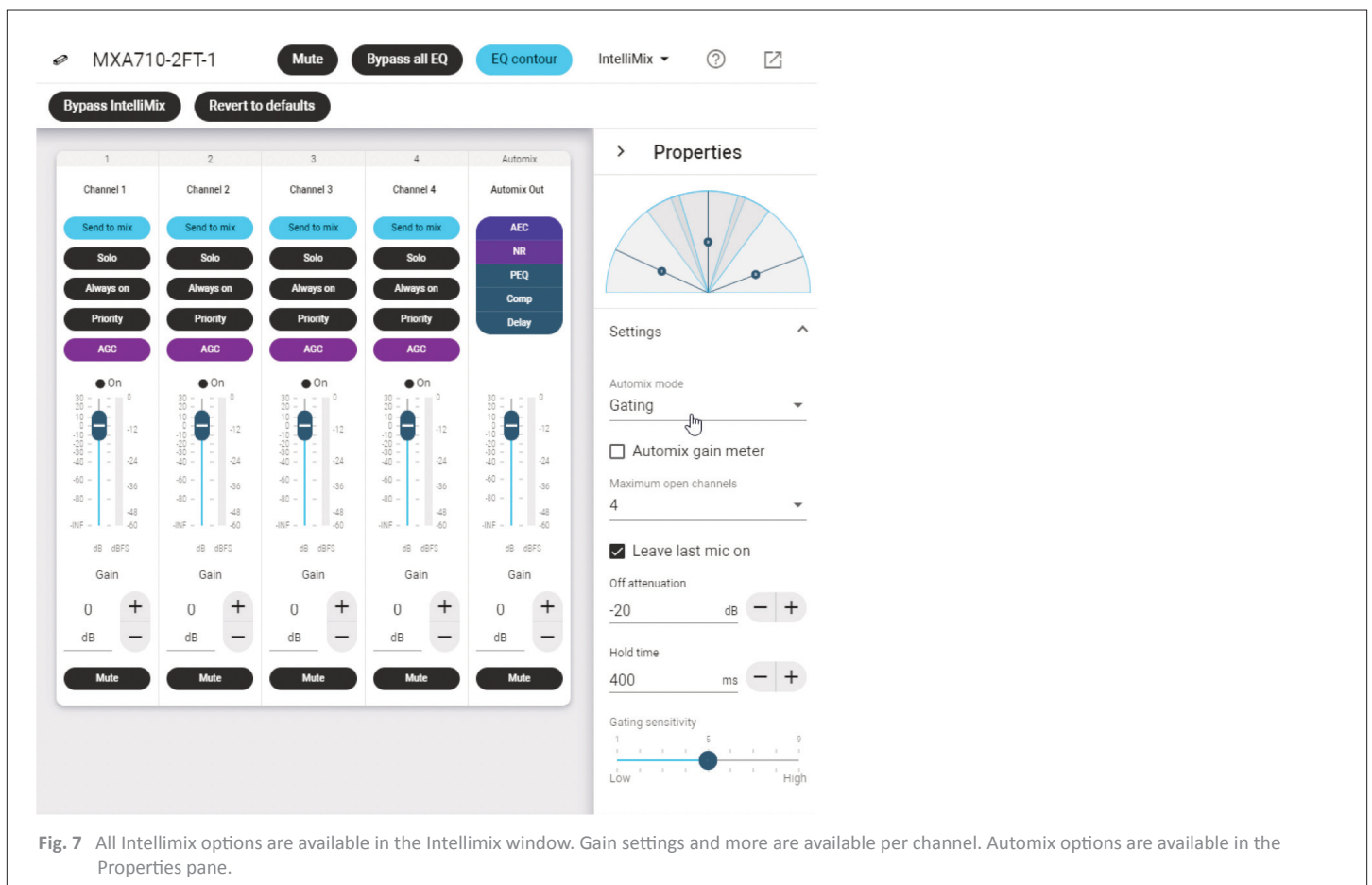

Fig. 7 All Intellimix options are available in the Intellimix window. Gain settings and more are available per channel. Automix options are available in the Properties pane.

If you have any questions about the information in this document, contact support@sfm.ca or visit our Technical Support Portal.
For additional online training certification courses, be sure to visit the Shure Audio Institute and get started today!