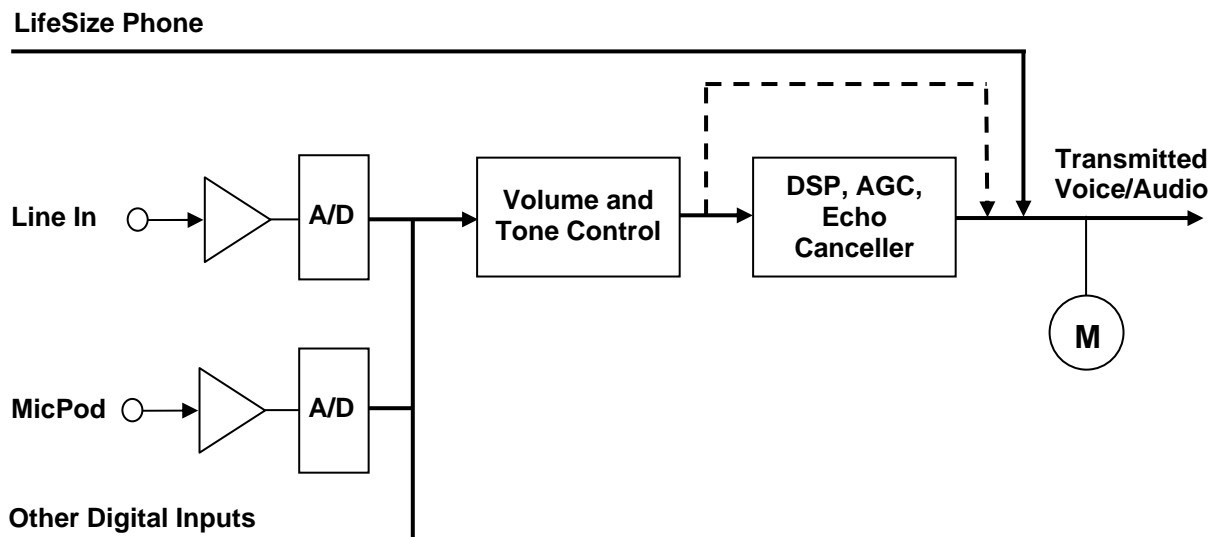


Configuring LifeSize Audio Meters

LifeSize systems using software v4.1.1 and later feature bar graph meters that accurately represent transmit audio levels. In addition to indicating when an audio channel is active, these meters also provide system installers and integrators an accurate, easy to use tool for setting the input audio gains.

Location of the Meter in the Audio Path

Schematically, the meter follows the digital signal processing, Automatic Gain Control (AGC), and volume and tone controls on the transmitted voice path. This is depicted in the following illustration.



The audio meters are represented by the circled "M." The dotted line illustrates the audio path when the AEC (Acoustic Echo Canceller) is disabled. This mode is useful for setting up system gains but should never be used during calls unless the installation includes audio inputs with external AEC.

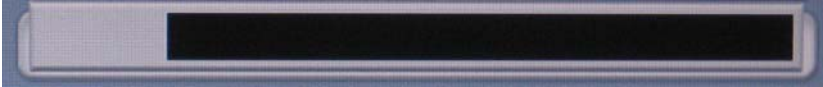
If the LifeSize Phone is the active microphone, the voice stream bypasses all processing in the LifeSize system, including the volume and tone controls, and is fed directly into the transmitted voice path. Therefore, while you can monitor the LifeSize Phone's transmit level, you cannot adjust it.

Reading the Audio Meter

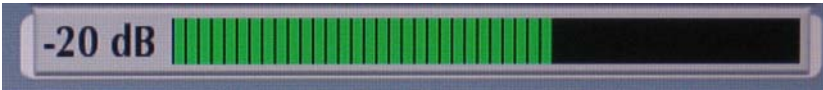
The audio meter displays the level of the transmitted voice. The meter is calibrated in decibels (dB) RMS below digital full scale (DFS). The meter is accurate to ± 1 dB.

- A level of 0 dB is the maximum.
- Levels below -50 dB are not displayed, and indicate a very quiet or inactive input.
- Typical levels during a call peak around -28 to -22 dB DFS. The AEC and AGC attempt to keep the RMS transmit level below -20 dB DFS.

Meter Showing Very Quiet or Inactive Input (Below -50 dB)



Meter Showing -20 dB DFS Level (Last Green Bar)



Meter Showing -10 dB DFS Level (Last Yellow Bar)



Meter Showing 0 dB DFS Level (Maximum Possible Level; First Red Bar is -9 dB)



Meter Showing Typical Transmit Voice Level in a Call

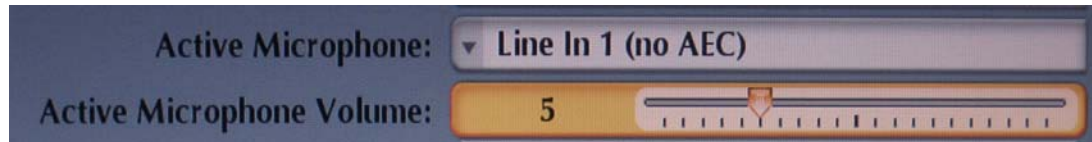


Setting Gains When Line In is the Active Microphone

The LifeSize meter is useful for setting the line in gain when an external mixer or amplified microphone is used as the active microphone. A call does not have to be active for the meter to display an input level.

The following example uses **Line In 1**, but the procedure is the same for **Line In**, **Line In 1** or **Line In 2**.

1. Navigate to **Administrator Preferences : Audio**, and select *Line in 1 (no AEC)* as the **Active Microphone**.



2. Position someone approximately one meter from the microphone, facing it, speaking at a normal volume.
3. Adjust the **Active Microphone** volume and/or the external mixer output level until the dB display peaks in the -28 to -22 dB range. LifeSize recommends you adjust the external mixer volume so that you achieve peak levels in the -28 to -22 dB range of the audio meter with the **Active Microphone** volume control no less than 5 or greater than 15.
4. If the microphone or mixer you use employs an echo canceller, no further adjustments are necessary. Otherwise, select *Line In 1* as the **Active Microphone**. This turns on the LifeSize system's echo canceller, noise reduction, and automatic gain control functions. If you do not use an echo canceller, you may experience severe echo effects.
5. After the adjustment, check that the peak levels when speaking normally one meter from the microphone are in the -28 to -22 dB range. The AGC attempts to keep the transmit level below -20 dB, which is the green range of the bar graph.

Using the Meter to Set the Gain for the LifeSize MicPod

LifeSize recommends a volume setting of 5 to 8 for most LifeSize MicPod applications. Use the meters to visually verify that the transmit level peaks in the desired -28 to -22 dB range.

Using the Meter to Set the Gain for LifeSize Focus

LifeSize recommends a volume setting of 5 to 10 for most LifeSize Focus applications. Use the meters to visually verify that the transmit level peaks in the desired -28 to -22 dB range.