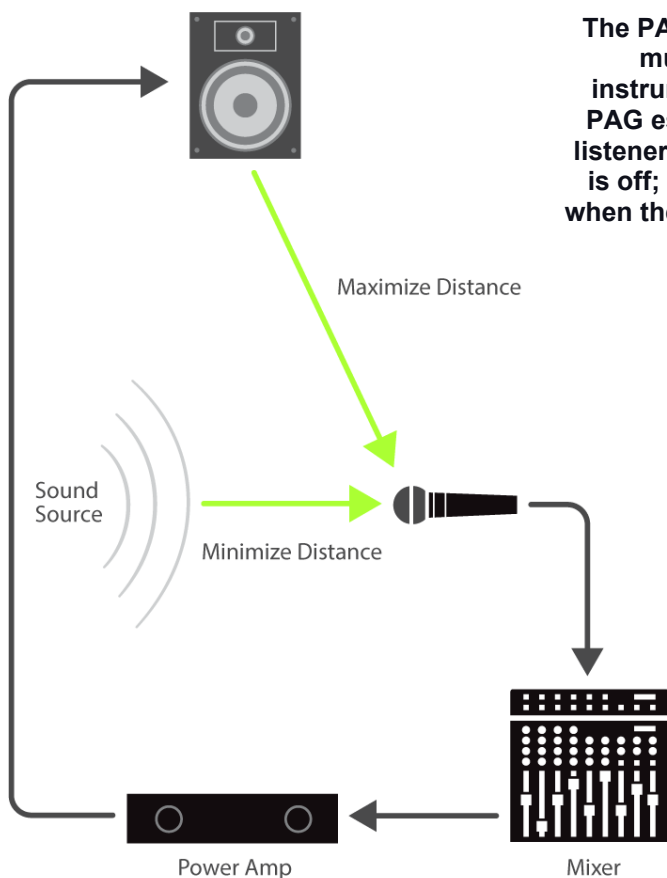


Microphone Placement / Feedback – Notes and Tips

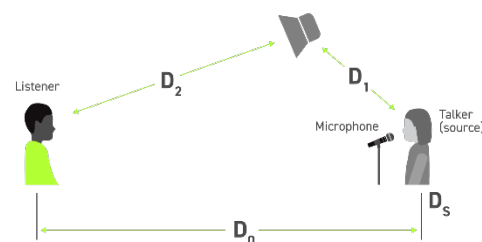
1. **Sensitivity Rating:** The sensitivity of a microphone is extremely important. A microphone should be able to supply as much level to the mixing board as possible (at least get the meter level to zero). If you find that you cannot get enough level (gain) out of a microphone – you may want to consider switching to a microphone with a higher sensitivity rating.
2. **Tip:** If you are having trouble with microphone placement it is sometimes advantageous for you to listen to the microphone through a set of headphones. Move the microphone around the source (stage area, performer positions, etc.) while listening to what the microphone is picking up.
3. **Notes:**
 - Microphones should always be as close to the source as possible. This will get you the optimum signal level from the microphone.
 - Use windscreens when using microphones outdoors.
4. **Feedback Notes:**
 - When you hear feedback the first thing you should do is turn down the Master Fader (unless you already know which microphone is the cause).
 - Turn all the mic channels down, turn the Master Fader back up, and then turn each channel up (one at a time). This will assist you with locating the microphone that is causing the feedback.
 - You may need to move the microphone to a different position.
 - Make sure that the microphone is as close to the source as possible. This very easy fix has solved many feedback issues.
 - Is the Monitor placement correct? Stage monitors that are incorrectly positioned can cause all kinds of feedback issues. See bottom of Page 52 for more details.
 - One of the biggest mistakes when feedback occurs is going straight for the EQ!
 - Use the fewest microphones possible, keep open mics to a minimum. The best-case scenario is only having “1” microphone open at a time.



Courtesy of Shure

Potential Acoustic Gain

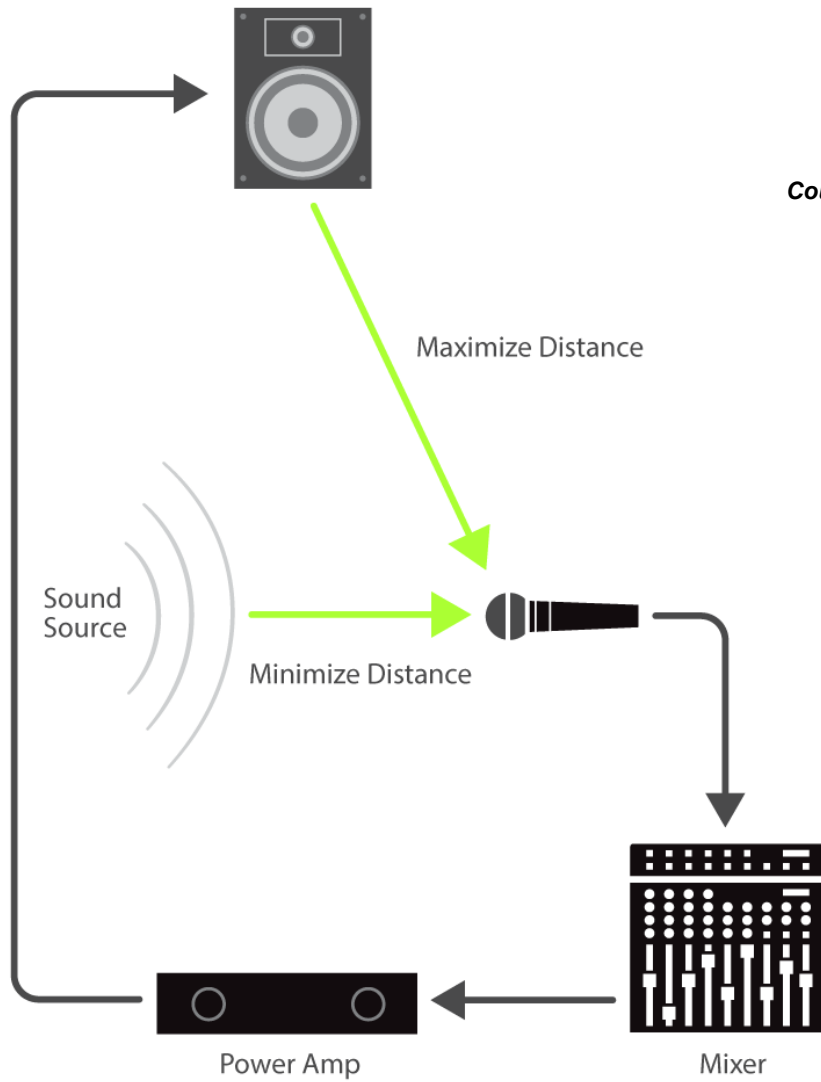
The PAG (Potential Acoustic Gain) calculation estimates how much louder a sound source (talker, singer, musical instrument) will be heard when the PA system is active. The PAG estimate is for the location of the observer/listener. The listener hears the sound source at level X when the PA system is off; the listener hears the sound source at a louder level Y when the PA system is on. The difference in decibels between X and Y is the Potential Acoustic Gain.



Courtesy of Shure

Acoustical Gain Calculations

The diagrams on this page are included to illustrate a few of the many “high tech” acoustical gain calculations used to set up sound systems – and that there is much more to setting up a sound system than just plugging microphones into a mixing board. These calculations are performed by experienced audio technicians and will not be covered in this booklet. This booklet aims to provide beginners with enough fundamentals to understand audio and sound system basics.



Courtesy of Shure

