

IP Speaker Ambient Noise Compensation Feature

The Ambient Noise Compensation feature in all Algo IP speakers allows the endpoint to automatically adjust volume level to adapt to the current noise level in their respective location. The volume will be adjusted automatically via the speaker's microphone. The ambient noise level will be averaged over a period of 5 seconds prior to a call or multicast. In environments where several speakers are deployed, each speaker will self-adjust to be appropriately loud enough for the ambient noise level where the speaker is located (e.g. hallways in a school).

Note that the noise compensation will not re-adjust the volume while the device is active.

To configure the Ambient Noise Compensation, log into the web interface and navigate to the 'Basic Settings' -> 'Features' tab. Set the Page and/or Ring Volumes to an appropriate level for the quietest typical environment and enable the 'Ambient Noise Compensation' feature, as illustrated in the screenshot below.

The screenshot shows the 'Features' configuration page in the Algo web interface. The 'Inbound Ring Settings' section has 'Ring/Alert Volume' set to 4. The 'Inbound Page Settings' section has 'Page Speaker Volume' set to 4. In the 'Audio Processing' section, 'Ambient Noise Compensation' is set to 'Enabled' and 'Automatic Gain Control (AGC)' is also set to 'Enabled'. A 'Save' button is visible in the bottom right corner.

The following equation is used to determine the appropriate volume level:

$$\text{Compensated Volume Level} = \text{Page/Ring Volume Level} + \text{Ambient Level}$$

*Note: the "Ambient Level" is calculated as the Measured Volume Level minus a Reference Volume Level of 66dB.

It is recommended to set the Page/Ring Volume levels to the lowest level that sounds acceptable in the current environment, so that there is more headroom available for the level to increase as the ambient increases. If the Page/Ring Volume levels are set to 10, then they will retain this same loudness at all ambient levels, as they are already at the maximum available power. A volume level of '4' is recommended as a typical starting point.