

Advanced Sound Editor

User Guide



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Introducing the Advanced Sound Editor

Introducing the Advanced Sound Editor

The Advanced Sound Editor lets you view and edit all of the parameters of your headset. Once installed on your Windows PC or laptop, you can connect the Headset/Control Unit via USB and manage the presets using the software.

Downloading the Advanced Sound Editor Software

The Advanced Sound Editor software is available as a download from our website, TurtleBeach.com

1. Navigate to the Turtle Beach Preset Community at:
turtlebeach.com/community/presets.aspx.
2. Select your headset model.
3. Download the Advanced Sound Editor.

The software is compatible with Windows 7 (32/64 bit), Vista and XP.

Installing the Software

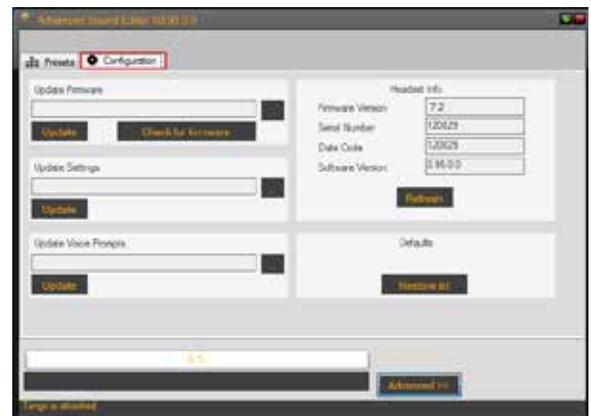
Once the file has finished downloading, navigate to its location and double click it. (Note: You must be administrator to install the tool) Before running the installation, close any programs (including anti-virus programs) that are running so they will not interfere with the installation process. Follow the prompts to complete the installation. The install may require you download the latest .Net 4 package, this process will occur automatically.

Setting up the Software

Connect your unit to a free USB port on your PC or laptop. After you've installed the Advanced Sound Editor software, double click the Advanced Sound Editor icon on your desktop to launch the software. The program can also be found at the location you chose for installation. When first launching the software, the initialization screen will pop up. Enter your registration credentials from the website to enable the tool. After completing this step, if a headset is detected, the driver installation process will begin.

CAUTION: Do not disconnect the headset during this procedure! If Windows prompts you to restart your computer because it installed a new device, choose "restart later".

After the software installs the drivers, your headset will automatically update to the latest firmware and presets. Follow the onscreen instructions and do not disconnect the unit during this process. When complete, "Headset is attached" will appear in the lower left corner of the software screen. At this point, you're ready to use the Advanced Sound Editor with your headset.



About the Presets

Advanced Sound Editor Display Modes

The Advanced Sound Editor can display in a compressed or expanded mode. The view can be selected by clicking on the “Advanced” button at the bottom of the program screen.

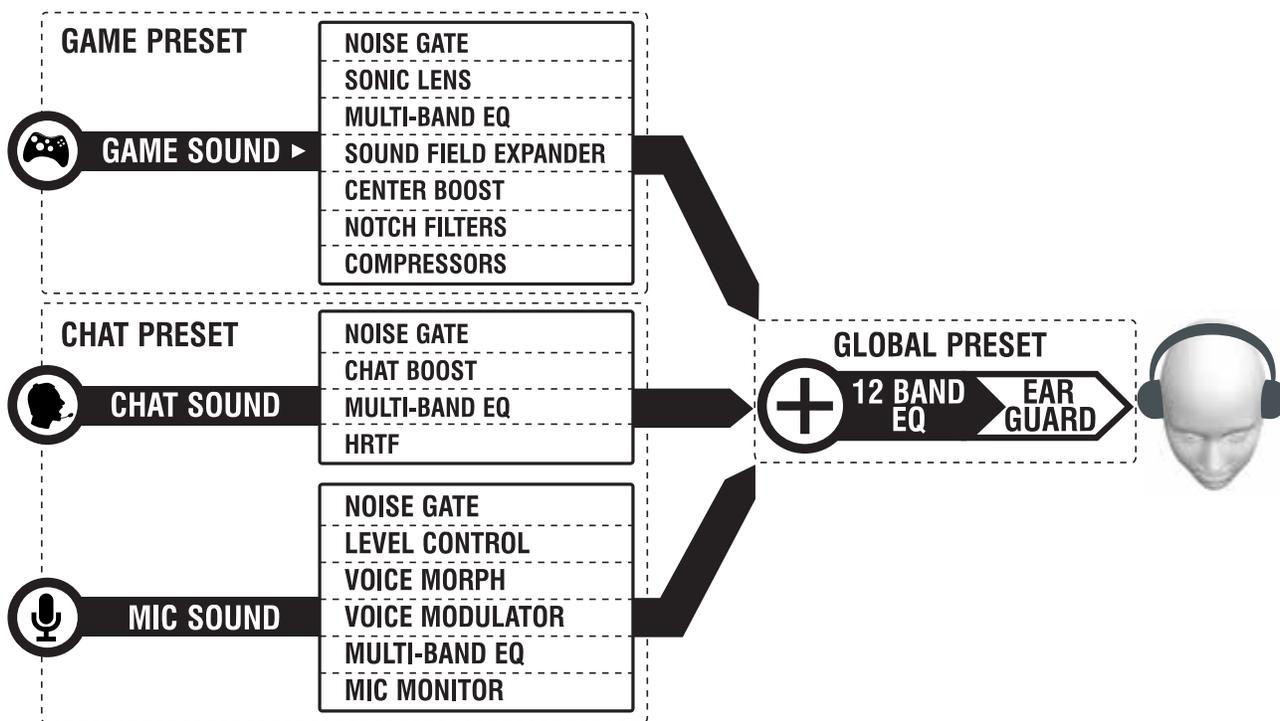
Basic Mode: In this mode only preset selection and update options are shown. All sliders and adjustable parameters are hidden.

Advanced Mode: This mode allows viewing of all adjustable parameters in the ASE. Everything available in the tool is visible.

About the Presets

Turtle Beach headsets use a Digital Signal Processor (DSP) to independently modify the game, chat and microphone audio paths in the headset. The DSP settings are saved as presets, which can be saved to the hard drive on your PC or laptop using the Advanced Sound Editor software.

The presets are grouped into three major categories: Global, Game, and Chat. Most headsets have 1 Global, 9 Game, and 9 Chat Presets. Headsets that support Speaker Mode offer a second set of 9 Game Presets for that mode (see below).



Preset Types

Global Preset: There is a single Global Preset on each headset that applies general tuning and level control. This affects all audio you hear on the headset.

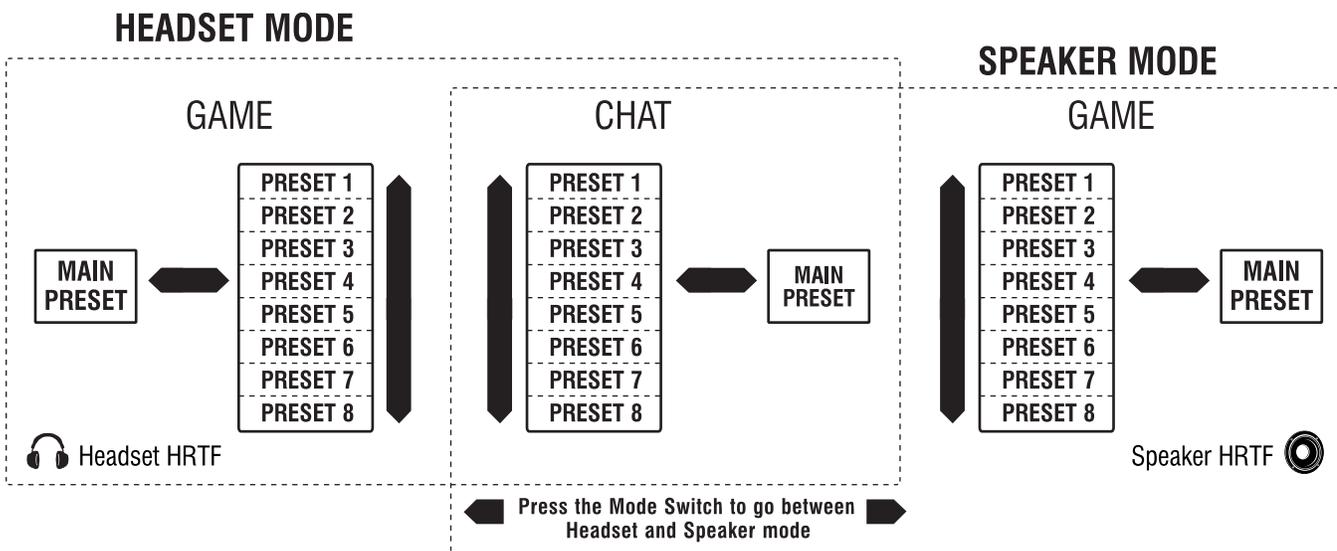
Game Preset: Game Presets control the “Game Audio” and allow for effects that specifically apply to the game path.

Headset Modes

Chat Presets: Chat Presets control the “Chat” (Other peoples voice) and “Mic” (Your voice) and apply effects only on these two audio paths.

Headset Modes

Some headsets may have an option for Speaker Mode. These headsets have a dedicated output for speakers, and when in this mode have a separate bank of Game Presets you can specifically tune for speakers. You may want to have different presets due to the different HRTF applied in this mode. You can tell if your headset is in speaker mode by the indicator on the unit itself.



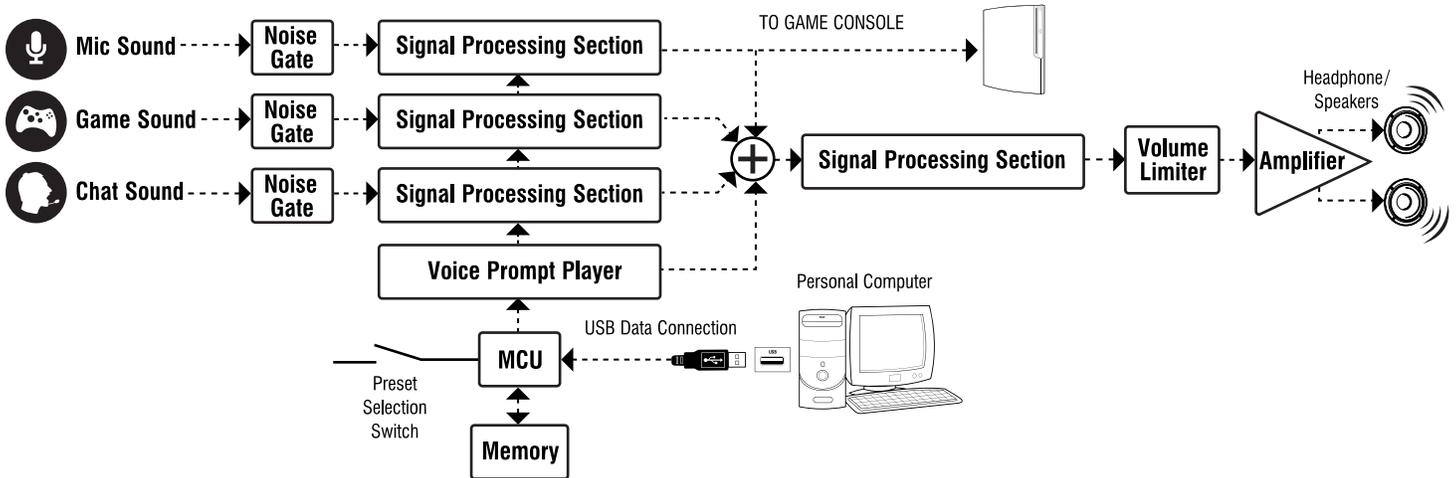
Headset Mode: Normal use case for headset, using set of 9 game presets, 9 chat presets, 1 global preset. Uses standard Surround Processing.

Speaker Mode: For use with speakers, using a different set of 9 game presets, shares chat and global with Headset Mode. Uses speaker Surround Processing.

Preset and Headset Architecture

Presets and Headset Architecture

There are three categories of presets (Global, Game, Chat) that combine to control all signal paths in the headset. The illustration below shows the DSP signal flow and other system processing.



Noise Gates

A noise gate on each input of the three primary paths (Game, Chat, Mic) allows background noise to be removed from that channel. Controlling the settings on these “Gates” allows for an experience with very little background noise. For example, on the mic channel, the noise gate threshold may be set to just above the room noise, so the microphone channel will only pass sound that is above the room noise (such as the sound of your voice speaking into the mic). On the chat channel, the noise gate may be set to just above the noise level of the Xbox controller, keeping the chat channel quiet unless voices are detected from online players.

Preset Effects

The noise gates in each channel are followed by a signal processing section with audio modifiers that are specific to the channel. The parameters within these signal-processing sections comprise a “preset”. These parameters can be edited using the Advanced Sound Editor software as described in this user guide. The specifics of these effects will be broken down in their respective sections later.

Voice Prompt Player/Tone Generator

A voice prompt or tone is triggered when certain events occur, such as pressing buttons, low battery conditions, power on, power off, and so on. The voice prompt player output is mixed with the channel outputs to create the master signal heard on the headset. You can change Voice Prompts by downloading a new voice prompt file from the Turtle Beach web site. Headsets that use tones cannot be updated to new tones.

Presets: Selection, Saving and Loading

Ear Guard™ Volume Limiter

A volume limiter precedes the headset amplifier to set the maximum level of sounds sent to the speakers. This feature is referred to as “Ear Guard” since it reduces excessive sound levels during loud sections of the game to help protect the ears. This effect is stored as part of the Global Preset.

Presets: Selection, Saving and Loading

This section is identical in Basic and Advanced modes. In Basic mode all functions will be in the “Presets” Tab, in Advanced mode these functions will be in the permanent bar on top of the program. From here, you can transfer presets between your PC and the headset.

Your headset has three types of presets (Game, Chat, Global). They are broken down separately in this section and can each be alternated independently without affecting each other.

Presets Buttons

Pressing any of the 9 presets buttons (Main & 1 – 8) will select that respective preset on the headset. This can be used instead of toggling through the presets with the buttons on the headset.

Saving/Loading a Preset to the Headset

Pressing the “Save Game/Chat/Global” button followed by pressing one of the nine preset buttons (Main or 1 – 8) will transfer the current ASE settings to the selected preset location on the headset. For example, if you wanted to upload a game preset you are currently working on to the headset preset location 4, press “Save Game”, then press the preset button labeled 4 in the Game Preset box. To load a preset that you had previously saved to your hard drive, simply select it from the drop down and then press “Save Game” followed by the slot you would like to save in.

Saving a Preset to the Hard Drive

To save a preset to the PC hard drive, press the Save button (the one with the disk symbol) just to the right of the preset name. Clicking the down arrow in any of the three Presets fields will activate a drop-down box that lists all of the presets currently saved on your PC hard drive. Saving a preset to the hard drive in this manner will add the Preset to the drop down list. It will not save it to the headset.

Deleting a Preset

To delete a preset from the hard drive (not the headset), press the delete button just to the right of the preset name (the one with the X.) The preset file will be permanently deleted from the hard drive, so before doing this, make sure you really no longer want it!

“Save Presets to File” Button

Pressing this will set a save all of the presets on your headset to a backup file on your hard drive.

“Restore Presets from Files” Button

Pressing this button restores your headset from the last backup file made using “Save Presets to File”.

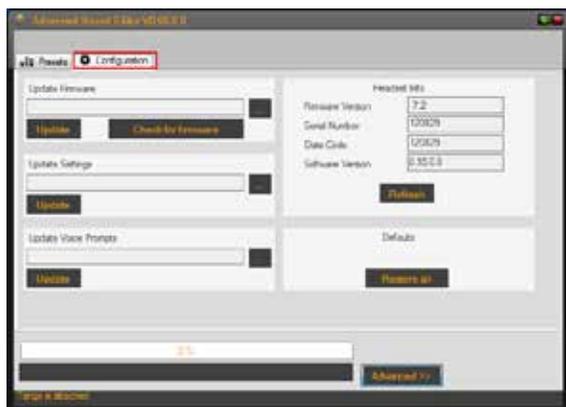
Configuration and Updates

Downloading New Presets

1. Go to TurtleBeach.com/community/presets.aspx and download some presets. Navigate to the section for your model headset. Select Community Presets to download from your peers or Turtle Beach to download from us. Save the zip file to a temporary directory on your hard drive.
2. Open the zip file and copy the xml preset file to the SavedPresets folder. This is located in: "C:\Turtle Beach\Advanced Sound Editor\Saved Presets"
3. On the Advanced Sound Editor, click on the pull-down box for the Game Presets and you should see the file name you just downloaded. Select it to change the game sound based on that preset.
4. Go back to the web site and download more Game, Chat, and Global presets. Save them all to the SavedPresets directory and you should see them appear in the drop down boxes on the Advanced Sound Editor software. Then listen to how each one changes the sound of the headset.

Configuration Tab

The Configuration Tab displays information about the headset and lets you update the firmware, voice prompts and EEPROM settings.



Updating

Update Firmware

The headset operates with internal "firmware", which is the software that makes the processor (MCU) run. At times, we'll release updates to the firmware to fix bugs or add features, so this section makes it easy to update it when it's available on our web site.

To check if a firmware update is available, click the "Check for Firmware Updates" button. The

Configuration and Updates

Advanced Sound Editor software will check the Turtle Beach web site for the latest firmware release and compare it to what's in your headset. If it's newer, it will prompt you to download and install it.

It is important that you do not turn off the headset or remove the USB cable while the firmware is being uploaded to the headset. Disrupting the data transfer can cause your headset to become inoperable.

Update Voice Prompts*

The voice prompts in the headset can be replaced with different ones that you can download from our web site. For instance, you can change from English to a foreign language, or maybe a popular game character voice. To do this, visit the preset section of our website, then navigate to the voice prompts section and download the voice style of your choice.

After you've downloaded the new voice prompts, load them into the display area by clicking on the "..." button, navigating to the location of the download, and clicking on the name. Once the voice prompt file is in the display area, click on the "Update" button to upload them into the headset.

It is important that you do not turn off the headset or remove the USB cable while the voice prompt is being uploaded to the headset. Disrupting the data transfer can cause your headset to become inoperable.

*This Updater will only be visible for headsets that use Voice Prompts.

Update Settings

The EEPROM is memory in the headset that holds special values in addition to Presets. This includes settings such as the volume level of the microphone, the volume of the voice prompts, etc.. Sometimes, we may change these values and if we do, you can update them with this section of the tool.

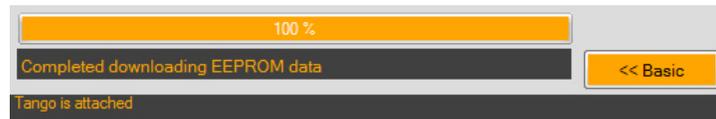
Check our web site to see if the EEPROM settings have been updated. If they have, you can download them to your PC, then click the "..." button to find the file, click on the name and it will appear in the display area. Then click the "Update" button to upload the new values into the headset.

"Restore All Defaults"

The "Restore All" button returns the headset back to its factory settings. Clicking this button connects to our online servers, downloads the latest files and uploads them to the headset. This includes factory presets, voice prompts, firmware and EEPROM settings so you can undo any changes you've made to the headset.

Headset Info

During the update process, the system status will be displayed at the bottom of the screen, as illustrated below.



In some cases, while the software is downloading files from the server, it may seem that it is no longer responding. If this happens, please do not shut down the software and instead allow the procedure to complete. The process may take a few minutes.

It is important that you do not turn off the headset or remove the USB cable while the files are being uploaded to the headset. Disrupting the data transfer can cause your headset to become inoperable.

Headset Info

Firmware Version

This field shows the version number of the firmware loaded into the headset. You can check our website to see if it's the latest one, or simply click the "**Check for Firmware Update**" button in the Update section.

Serial Number

This field shows the serial number of the headset, used for tracking purposes.

Date Code

This field shows an internal code used by the factory for tracking purposes.

Version

This field shows the version number of the Advanced Sound Editor software.

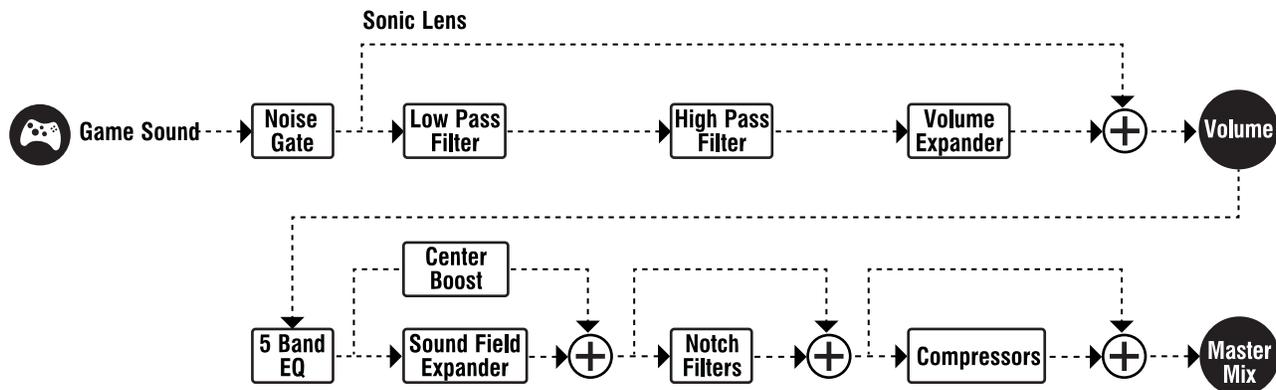
"Refresh"

Click this button to refresh all of the above data.

Presets: Game Tab

Game Presets

The following diagram illustrates the audio processing sections in the game channel:



The parameters in each processing section are represented in the Game, Notch Filter, and Compressor tabs. All changes made in these three tabs are saved in the Game Preset and affect only the Game audio.

REMEMBER: Any edits made in these tabs are not saved unless you either save your preset to headset or hard drive.

TIP: On some sliders, such as the Equalizer, you can double click to center them midway between the top and bottom position.

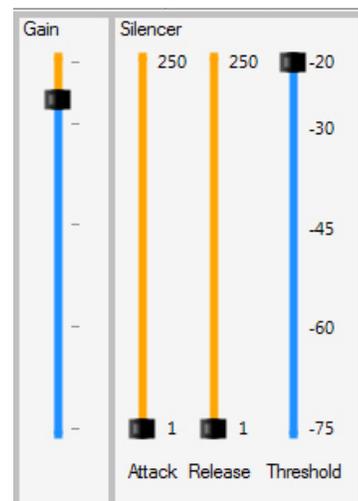
Game Tab

Gain

This slider adjusts the volume level of the audio entering on the game path. Lowering this will allow you to create headroom for effects that apply gain to the audio. Remember if you go above 0dB you could clip (It is impossible to go above 0db in the Gain)!

Silencer

The Silencer noise gate eliminates background noise from the game input. When the game level is below the threshold setting, the noise gate blocks the game sound from passing, creating total silence. This helps eliminate the background noise from the game input signal, thereby improving the signal-to-noise ratio of the game audio path. This is broken into three sliders:



Presets: Game Tab

Attack: This is how quickly the audio will be passed through after the level of the signal becomes louder than the set threshold. Measured in milliseconds.

Release: This is how quickly the audio will shut off after the level of the signal becomes quieter than the set threshold. Measured in milliseconds.

Threshold: This is the level that the audio needs to exceed for the audio to be passed through the headset. Measured in dB

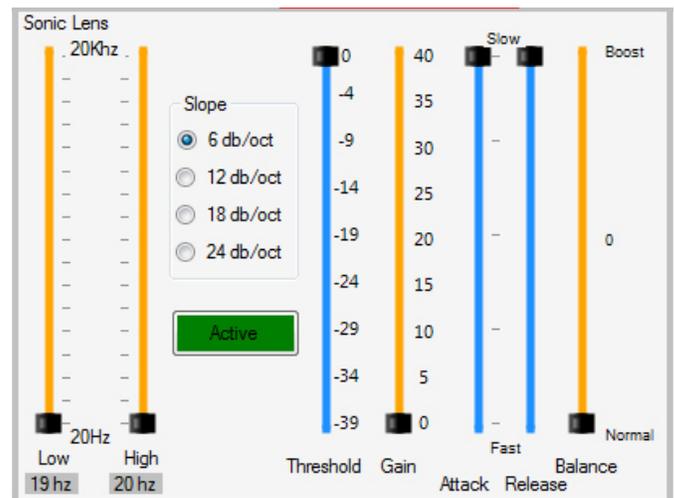
The threshold level should be set as low as possible to assure none of the soft game sounds will be cut off by the silencer. To set the optimum threshold, listen to quiet parts of the game and turn up the threshold until the sound shuts off, then lower the threshold a few dB – you do not want the sound to cut in and out.

Sonic Lens™

The Sonic Lens is a combination of a high-pass and low pass filter followed by an expander. By setting the cutoff frequencies of these filters, the expansion can be limited to affect sounds that are in a specific frequency range defined by the low and high pass filters. This allows softer sounds in the frequency range to be boosted in volume while not affecting louder sounds.

For example, to boost the sound of a grenade pin being pulled, it is better to boost higher frequency sounds by adjusting the low and high pass filters. The Sonic Lens is also useful for boosting quiet sounds like footsteps without also boosting the level of louder sounds like explosions

A mixer stage at the output of the Expander output allows the adjustment of the pre and post expander signal so that the unprocessed game sound can be balanced with the processed game sound.



Low: This is the cutoff frequency for the low pass filter. Frequencies above the cutoff will not pass through. Measured in Hz.

High: This is the cutoff frequency for the high pass filter. Frequencies below the cutoff will not pass through. Measured in Hz.

Slope: These buttons set the filter roll-off from -6dB/Octave to -24 dB/Octave. The -6dB slope will filter less aggressively than will the -24 dB/oct slope. Measured in dB/Oct.

Presets: Game Tab

Active/ Pass Thru Button: When **Active** is enabled, the high and low pass filters are activated. When Pass Thru is enabled, the filters are disabled.

Threshold: Sounds below the threshold setting will be boosted by up to the amount of gain set by the gain slider. Sounds above the threshold will not be affected. Measured in dB

Gain: The gain setting determines how much the sounds below the threshold will be boosted. Measured in dB.

Balance: Sets the Cross-mix between the Sonic Lens output and the Bypassed output. When set to Normal (bottom), the game sound will be unaffected by the Sonic Lens – you will only hear the bypassed audio. When set to Boost (top), the game sound is fully processed by the Sonic Lens. When set to the middle, a mix of 50/50 normal and Sonic Lens game sound will be heard.

Volume:

This slider adjusts the volume level of the audio. Lowering this will allow you to create headroom for effects that apply gain to the audio. Remember if you go above 0dB you could clip!

Dolby on/off Button

When using some of the effects on the game path, the quality of Dolby processing may be compromised. In these cases, you can instruct the game preset to turn off Dolby processing by clicking on the Dolby button and shutting it off. If Dolby is turned off in a preset it will automatically disable HRTF when selecting that preset.

Multi-Band Equalizer

The multi-band equalizer lets you change the tone of the game sound. The sliders will boost or cut the designated frequencies by +/-12dB. The frequencies for each slider are:

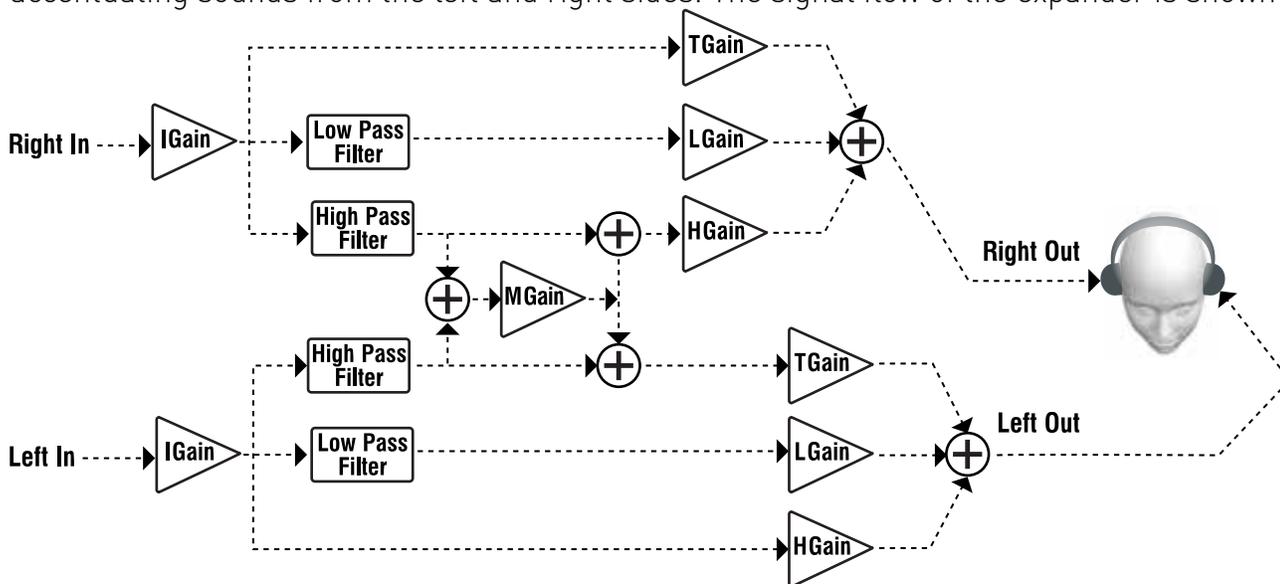
- 100: 100Hz shelving filter
- 250: Provides a resonant boost or cut at 250Hz.
- 1000: Provides a resonant boost or cut at 1kHz
- 4000: Provides a resonant boost or cut at 4kHz
- 8000: 8kHz shelving filter

The Low and High shelving filters provide an easy to use bass and treble boost or cut.

Presets: Game Tab

Sound Field Expander

The sound field expander can be used for widening a stereo sound field, boosting center sounds and accentuating sounds from the left and right sides. The signal flow of the expander is shown below.



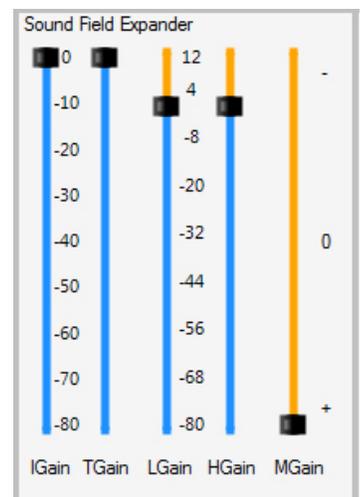
The left and right channels are processed independently and split into four paths.

IGain: This sets the overall gain into the Sound Field Expander and should be set to a level that does not produce distortion, yet achieves adequate signal gain.

Tgain: Controls the level of the “T” path. The “Through” path (T) is the direct unmodified sound. This gain setting determines the amount of unprocessed signal that is mixed into the final output. When combined with the H Gain and M Gain signals, various expander effects are achieved.

Lgain: Controls the level of the “L” Path. The “Low Pass Filter” path (L) filters out frequencies above 200Hz. When the Lgain is set low, the bass is cut and when it is set high the bass is boosted. The result is similar to a “sub-woofer” effect. . The L Gain setting will control the level of bass in the final sound and will not affect the directional effects.

Hgain: Controls the level of the “H” Path. The “High Pass Filter” path (H) filters out frequencies below 200Hz. The expander is most effective on high frequency signals, so this gain setting is critical to get the most effective expander effect.



Presets: Game Tab

Mgain: Controls whether to expand or contract the sound field. When positioned in the center, the M Gain slider does nothing, so the H Gain is a stereo signal. When positioned at the bottom, the M Gain slider adds the left and right channels together and routes them to the H Gain slider. So the H Gain controls a mono signal that is the sum of left and right signals.

When positioned at the top, the M Gain slider subtracts the left and right channels and routes them to the H Gain slider. So any signals that are panned to the center (i.e. same level on left and right sides) are canceled.

The H Gain, M Gain and T Gain sliders work together to provide the Sound Field effects. For example, with the H Gain and T Gain both turned up, if the M Gain is also turned up, it will remove the center channel signals and the stereo field will widen.

When using the Sound Field Expander, the Dolby effect should be turned off so that it doesn't affect the stereo separation of the game sound.

Center Boost

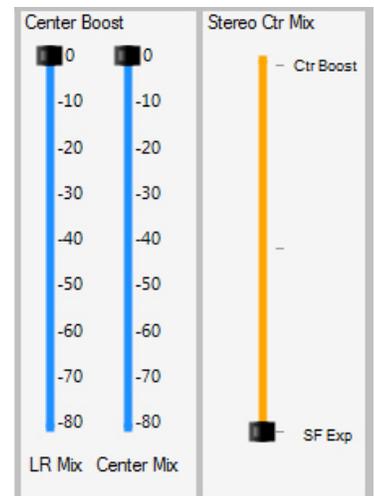
The "Center Boost" block allows you to boost the center audio without losing the detail in the left and right channels.

LRMix: This sets the level of the standard left/right audio mix in the headset.

Center Mix: This sets the level of the audio that is common between left/right in the headset. Increasing this boosts anything that is common between left/right in the audio, boosting the center of the sound field.

Stereo Ctr Mix

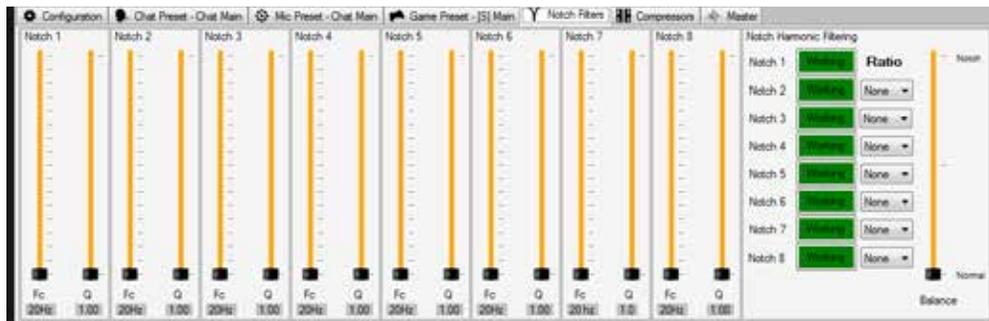
This is a Cross-Mix of Center boost and Sound Field Expander. At the bottom of this slider you will hear only the audio that has passed through the Sound Field Expander, at the top you will hear only the audio that has passed through the Center Boost. In the middle you will hear a mix of 50% audio from each.



Presets: Notch Filter Tab

Notch Filters

Although the notch filters are on their own tab, they are part of the Game Preset. Notch filters will allow you to take a specific frequency in the audio and completely remove it. For example you could remove the ringing effect of a flash-bang or a particular frequency of a bird chirping. Eight filters are available to use, they all operate the same way and independently from each other.



Fc: This allows you to select the center frequency you want to notch. It is measured in Hz.

Q: This allows you to select the Q of the filter. The higher this is set the more narrow and aggressive the filter is. A low Q might knock out an entire frequency range, but a high Q will allow you to pinpoint with your filter and only remove the noise you want while not affecting other audio.

Notch Harmonic Filtering: You can use these to quickly notch harmonics for a frequency you have already selected.

Working/Not Working: This will allow you to quickly enabled/disable a notch to verify it is working as intended.

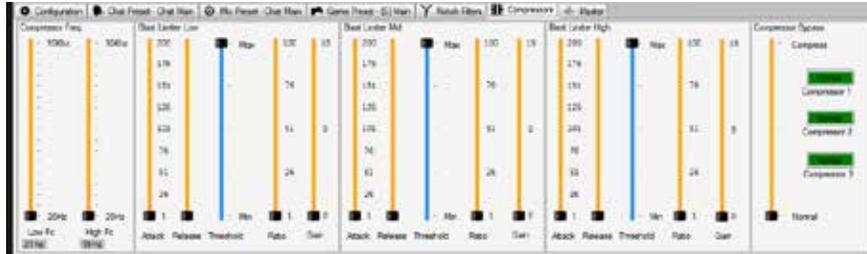
Ratio: This will allow you to set a harmonic (Based on the frequency selected by Notch 1). Quickly calculating the harmonic you want to set a particular filter. For example if your Notch 1 is set to Fc of 250hz, selecting a rating of 4 for notch 2 will set it to 1kHz Fc.

Balance: This is a Cross-Mix of Notch Filtered Audio and Bypassed Audio. At the bottom of this slider you will only hear Bypassed Audio, at the top you will hear only the notched audio. In the middle you will hear a mix of 50% audio from each.

Presets: Compressor Tab

Compressors

Although the compressor block is on its own tab, it is part of the Game Preset. The compressors in this block will allow you to dynamically adjust the levels of different frequency ranges while leaving others unaffected.



Low Fc/High Fc: Sets a low and high frequency cutoff. This allows you to choose high/low crossover points and splits the frequency spectrum into three distinct sections. The next three blocks are the controls for compression of the three ranges created by your high/low frequency selection.

Attack: Delay before compression kicks in once audio crosses above threshold.

Release: Delay before compression ceases once audio crosses below threshold.

Threshold: Set the maximum level of the audio before compression kicks in.

Ratio: Select how aggressively audio is compressed above your threshold. 0% will result in no compression while 100% will result in a hard limit at your threshold.

Gain control: Set a flat gain for the frequency range.

Next there are three controls that will allow you to mute or bypass the three compressors. This allows you to listen to each compressor independently to ensure it is having the intended effect.

Compressor Bypass: This allows you to cross-mix compressed and bypassed audio. At the bottom on the slider you will only hear bypassed audio, while at the top you will only hear the audio that is flowing through your compressor block.

Presets: Chat Tab

Chat Presets

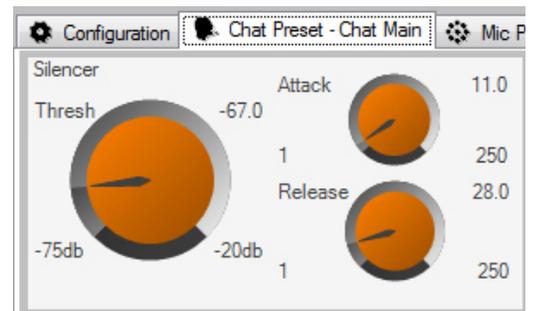
The following diagram illustrates the audio processing sections in the chat and mic channels, these are controlled by the Chat Presets.

Chat Tab



Silencer

The Silencer noise gate eliminates background noise from the chat input. When the chat level is below the threshold setting, the noise gate blocks the chat audio from passing, creating total silence. This helps eliminate the background noise from the chat input signal, thereby improving the signal-to-noise ratio of the audio path. This is broken into three sliders:



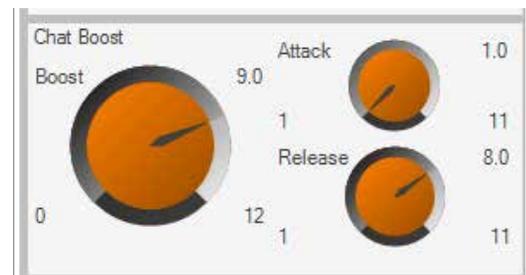
Attack: This is how quickly the audio will be passed through after the level of the signal becomes louder than the set threshold. Measured in milliseconds.

Release: This is how quickly the audio will shut off after the level of the signal becomes quieter than the set threshold. Measured in milliseconds.

Threshold: This is the level that the audio needs to exceed for the audio to be passed through to the headset. Measured in dB.

Chat Boost™

The Chat Boost stage is a dynamics processor that maintains the chat signal at a specified level in relation to the game level. As the game sound gets louder, the chat gain is increased to keep the chat voices above the game sound.



Attack: The attack time adds a lag to the gain boost so the gain does not jump erratically in response to fast transient envelope changes. With a fast attack, the gain will jump to the higher level every time a loud game sound occurs. Adding some attack will keep the chat boost off unless the game sound is consistently loud. A setting of 3 – 4 seconds is typical. Measured in seconds.

Presets: Chat Tab

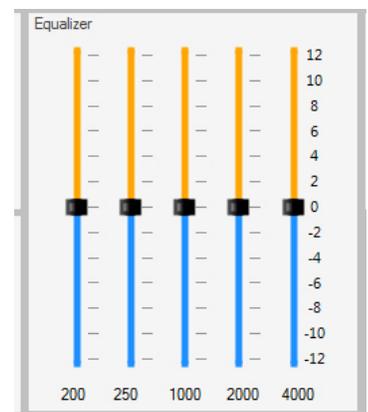
Release: The release time determines how long the gain boost will remain after the game sound returns to a normal level. A typical setting is 9 seconds, meaning that if the game returns to normal sound for longer than 9 seconds, the chat gain will return to 0dB. Measured in seconds.

Boost: Sets the amount of chat boost and ranges from 0dB (no boost) to 12dB (about a 4 times boost).

Equalizer

The equalizer modifies the tone of the chat signal. The sliders will boost or cut the designated frequencies by +/-12dB. The frequencies for each slider are:

- 100: 100Hz shelving filter
- 250: Provides a resonant boost or cut at 250Hz.
- 1000: Provides a resonant boost or cut at 1kHz
- 4000: Provides a resonant boost or cut at 4kHz
- 8000: 8kHz shelving filter



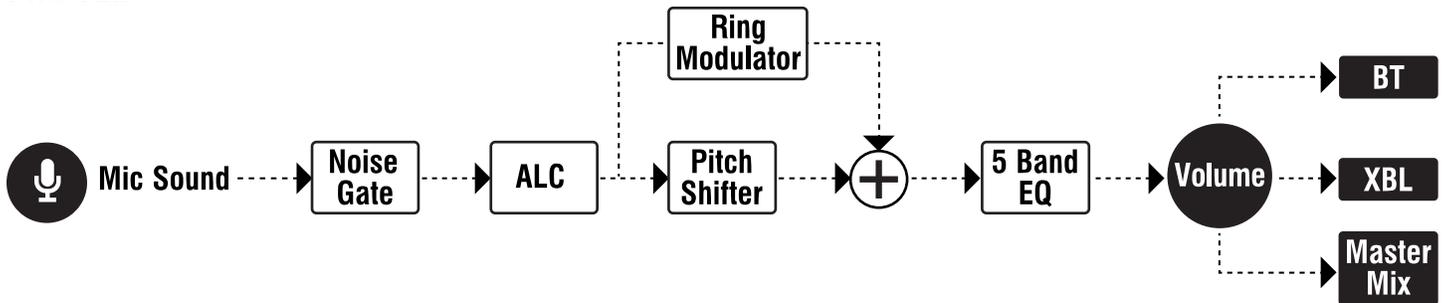
Chat HRTF

Chat HRTF allows you to pull the chat audio 'outside' your head, widening the soundstage. Enabling this will give audio you hear from others a more 3D effect. By adjusting the angle you can tweak the balance of the chat between your left and right ears.



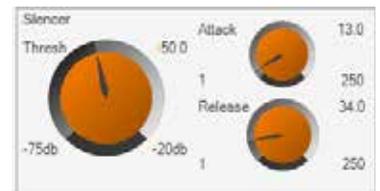
Presets: Mic Tab

Mic Tab



Silencer: The Silencer noise gate eliminates background noise from being picked up by the mic.

Attack: This is how quickly the audio will be passed through after the level of the signal becomes louder than the set threshold. Measured in milliseconds.



Release: This is how quickly the audio will shut off after the level of the signal becomes quieter than the set threshold. Measured in milliseconds.

Threshold: This is the level that the audio needs to exceed for the audio to be passed through the headset. Measured in dB.

To set the noise gate threshold, listen to the mic and turn up the threshold until you no longer hear the room noise. Then speak into the mic at a comfortable level and make sure the noise gate turns on, passing your voice. If it seems that you have to speak too loudly, turn down the threshold a bit so that you can eliminate room noise while still using a comfortable speaking tone.

Voice Morph

Pitch Shift

This slider lets you change the pitch of your voice either up or down. Moving the slider higher will make your voice sound higher-pitched, while moving it lower will make it sound deeper. Double click the slider to make it jump to the middle, where the pitch is not shifted.

Morph

This slider sets the balance between your normal voice and pitch shifted voice. Moving the slider down passes more of your normal voice and moving it up adds the pitch shift you've selected. If you place it in the middle, you'll get a 50/50 balance between normal and pitch shifted voice.

Presets: Mic Tab

Ring Modulator

This slider lets you choose a frequency to modulate your voice with. This will give it a robotic sound. Try different positions for unique sounding voice effects.

Modulate

This slider sets the balance between your normal voice and modulated voice. Moving the slider down passes more of your normal voice and moving it up adds the modulated sound you've selected. If you place it in the middle, you'll get a 50/50 balance between normal and modulated voice.

Ring/Morph Cross-Mix

This slider sets the balance between your morphed voice and modulated voice. Moving the slider down passes more of your morphed voice and moving it up adds the modulated sound you've selected. If you place it in the middle, you'll get a 50/50 balance between morph and modulated voice.

Multi-Band Equalizer

The band equalizer lets you change the tone settings of the voice signal. The sliders will boost or cut the designated frequencies by +/-12dB at the following frequencies.

250: Provides a resonant boost or cut at 250Hz.

500: Provides a resonant boost or cut at 500Hz

1000: Provides a resonant boost or cut at 1kHz

2000: 2kHz shelving filter

Mic Volume

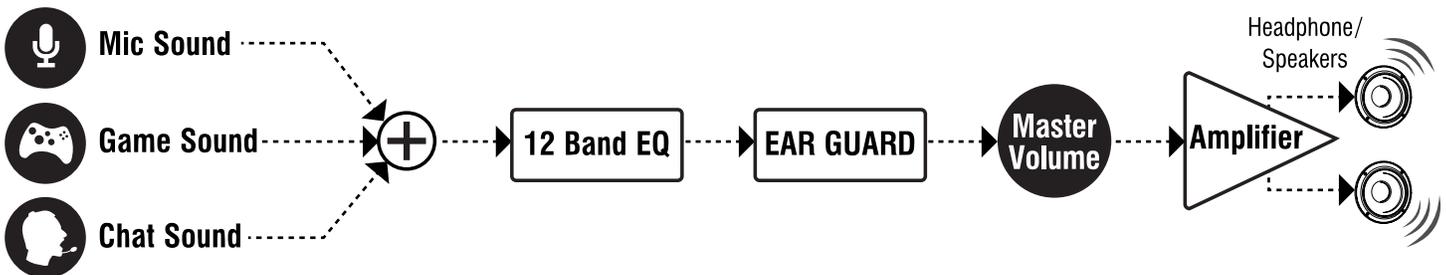
These sliders allow you to set the Mic volume on your unit. BT lets you set your USB/Bluetooth Mic level, while XBL lets you set your Xbox Live controller mic level.

Presets: Master Tab

Global Preset

Master Tab

The global preset will allow you to set the final mix and tonal balance of the headset. It also includes the Ear Guard that will prevent the headset volume from exceeding a level that would hurt your ears.



Final Mix

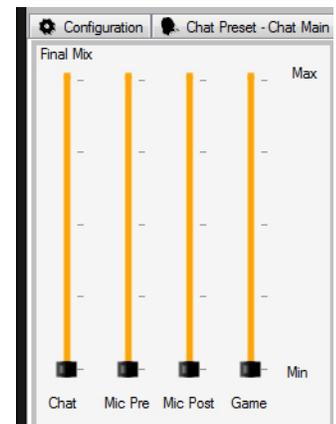
This allows you to set the final mix of each path that you will hear in the headset.

Chat: How loud you hear other people speak. *

Mic Pre: Level of the Mic Monitor you hear without any voice effects applied.

Mic Post: Level of the Mic Monitor you hear with voice effects applied. *

Game: How loud you hear the game sound.*



*Note that this is overwritten by the hardware volume control on the headset, so this is only used for testing when you are making changes with the ASE.

Presets: Master Tab

12 Band Equalizer

The band equalizer lets you change the overall tonal balance of the headset. The sliders will boost or cut the designated frequencies by +/- 12dB at the following frequencies.

20: 20Hz shelving filter

27.5: Provides a resonant boost or cut at 27.5Hz.

55: Provides a resonant boost or cut at 55Hz.

110: Provides a resonant boost or cut at 110Hz.

220: Provides a resonant boost or cut at 220Hz.

440: Provides a resonant boost or cut at 440Hz.

880: Provides a resonant boost or cut at 880Hz.

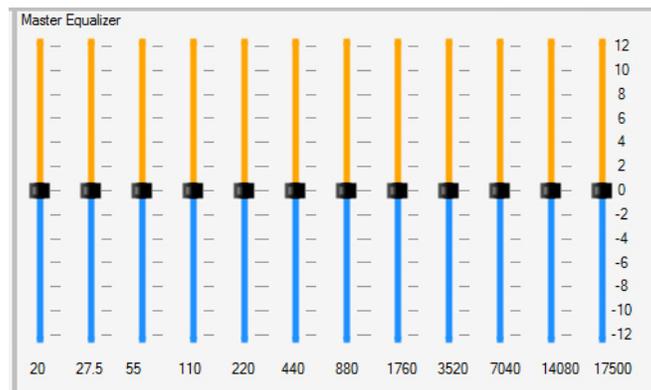
1760: Provides a resonant boost or cut at 1.76kHz.

3520: Provides a resonant boost or cut at 3.52kHz.

7040: Provides a resonant boost or cut at 7.0kHz.

14080: Provides a resonant boost or cut at 14.08kHz.

17500: 17.5kHz shelving filter



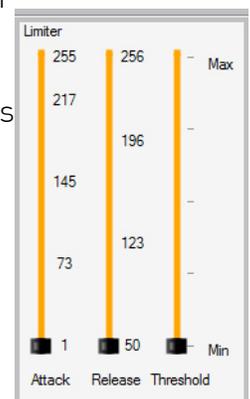
Ear Guard™

This lets you limit the level of the overall sound to help protect your ears from sudden boosts in volume.

Attack: This is how fast the Ear Guard kicks in when the audio level goes above the threshold.

Release: This is how fast the Ear Guard disengages when the audio level goes below the threshold.

Threshold: Setting this all the way up will let all of the sound come through, no matter how loud it is. Moving it down sets a ceiling above which the sound won't increase. To limit the sound of gun shots and blasts, turn this down to about 75% or less.



Advanced Sound Editor - Users Guide Revision 1.0

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