stereonoisegt

Activate a stereo noise gate on a given signal.

Syntax

\[ y = \text{noisegt}(x, \text{holdtime}, \text{ltrhold}, \text{utrhold}, \text{release}, \text{attack}, a, Fs) \]
\[ y = \text{noisegt}(z, \text{holdtime}, \text{ltrhold}, \text{utrhold}, \text{release}, \text{attack}, a, Fs) \]
\[ \text{stereonoisegt} = x + y \]

Description

- \( x \) = left channel input signal
- \( z \) = right channel input signal
- \( \text{holdtime} \) = time in seconds the sound level has to be below the threshold value before the gate is activated.
- \( \text{ltrhold} \) = threshold value for activating the gate
- \( \text{utrhold} \) = threshold value for deactivating the gate > \( \text{ltrhold} \)
- \( \text{release} \) = time in seconds before the sound level reaches zero
- \( \text{attack} \) = time in seconds before the output sound level is the same as the input level after deactivating the gate
- \( a \) = pole placement of the envelope detecting filter <1
- \( \text{Fs} \) = sampling frequency

Running the script

Simply use the wavread function to import the desired signal, firstly to the ‘x’ value and then to the ‘z’ value, this opens two channels. Apply the parameters, and run the function. Ensure to view the plot of the signal to apply the thresholds appropriately. The function will then sum the signals to produce a stereo result. Because of the gate works in either a ‘1’ (on) or ‘0’ (off) manner, if the function alters the signal, the zeros will cancel out and not disturb the final signal.

Remarks from Zolzer

The main use of a noise gate is to eliminate noise when the desired signal is not present. The noise gate attenuates only the soft signals. A particular application is found when recording a drum set. Each element of the drum set has a different decay time. When they are not manually damped, their sounds mix together and the result is no longer distinguishable. When each element is processed by a noise gate, every sound can automatically be faded out after the attack part of the sound. This results in an overall cleaner sound.