

#### What is it?

Resample changes the sound's sample rate or the sample size without changing the way it sounds.

#### How to use it

Resample from the menu will bring up a dialog box with the following three parameters, Resample, Sample Rate and Sample Size. The default parameters show the current sample rate and size.

When the Resample check box is selected, the sound will be modified so it sounds the same when the sample rate or size is changed.

The Rate field can have a range of .0001 to 65535.9999 Hertz.

The Rate popup menu has the choice of all the standard sample rates. The sound input devices available sample rates are highlighted in the list. If you get sample rate warnings when trying to record, it's because the sound document's sample rate is not one of those highlighted in the list. You will need to Resample to one of the highlighted sample rates in order to record sounds.

The Size popup menu has the choice of 8 bit or 16 bit samples. The sound input devices available sample sizes are highlighted in the list.

#### Notes

Going to a lower sample rate will decrease the quality and size of the sound. If there is a lot of noise after resampling, it's probably because of the high frequencies in the sound. A sound can only have frequencies that are less than half the sample rate, any frequencies higher than half the sample rate will cause noise, this is called Nyquist's theorem. To fix this, use the Low Pass Filter to eliminate or lesson the frequencies that are to high before Resampling.

Going to a higher sample rate will increase the quality and size of the sound. It will usually eliminate the noise caused by recording at a low sample rate, but it will not eliminate noise caused by Nyquist's theorem.

Resampling a sound permanently changes it (once it's saved), even if it's resampled back to the original sample rate.