

# Audio Downsampling

For hydrophone [audio](#) data products only (MP3, FLAC, WAV formats)

**Data Product Options**  
Downsample Audio ☒ None (Original Sample Rate) ☐ 48000 Hz ☐ 16000 Hz ☐ 8000 Hz ☐ 4000 Hz ☐ 2000 Hz ☐ 512 Hz ☐ 256 Hz

Users can specify a target sample frequency for the requested audio data products or the default None option leaves the products unchanged. Users can select from a fixed list of sample frequencies (radio buttons) or specify their sample frequency in the custom input text field, all units are in Hz. When an option other than "None" is selected, the audio data products are downsampled according to standard practice with an anti-aliasing filter (specifically, [ffmpeg](#)'s "ar" option with a 32 point FIR Kaiser window having a roll-off of -6 dB at 0.97 of the target sample frequency, additional documentation [here](#) and [here](#)). If the target sample frequency is the same or greater than the sample frequency in the source file, the user is notified via the search status and no upsampling or resampling takes place. When files are downsampled, it is done on-the-fly. For long search requests, this may take some time and is significantly slower than the "None" option when the requested audio format is archived and available directly. If the requested audio format is not archived and has to be generated from the source format, then downsampling will make the searches return quicker, have smaller file sizes and be quicker to download. See the note at the top of the Audio data product page about what formats are archived. For MP3 formats, downsampling is only applicable at specific rates, which are unknown until an attempt is made to downsample. If downsampling doesn't work, the applicable sample rates will be shown in the search status in the Data Search cart. An example set of MP3 applicable sample rates are: 8000 11025 12000 16000 22050 24000 32000 44100 48000, in Hz.

## None (Original Sample Rate)

This option will cause the search to return the data with its original sampling rate.

*This is the default option.*

**Oceans 3.0 API filter:** `dpo_audioDownsample=-1`

48000 Hz, 16000 Hz, 8000 Hz, 4000 Hz, 2000 Hz, 512 Hz, 256 Hz

These options will cause the search to return the data at the lowered sampling rate specified. Downsampled files have a modified file name, with the sampling rate added at the end of the file name (ex. '-48000Hz').

**Oceans 3.0 API filter:** `dpo_audioDownsample=48000`

**Oceans 3.0 API filter:** `dpo_audioDownsample=16000`

**Oceans 3.0 API filter:** `dpo_audioDownsample=8000`

**Oceans 3.0 API filter:** `dpo_audioDownsample=4000`

**Oceans 3.0 API filter:** `dpo_audioDownsample=2000`

**Oceans 3.0 API filter:** `dpo_audioDownsample=512`

**Oceans 3.0 API filter:** `dpo_audioDownsample=256`

## Custom

This option will cause the search to return the data at a unique sampling rate specified by the user. Any integer value between 1 and 256000 Hz can be used as input. Including units or any non-numeric characters in this input is not allowed (the red text pops up and the search can't be submitted).

**Oceans 3.0 API filter:** `dpo_audioDownsample=lowerBnd:1, upperBnd:256000`

File-name mode field

Downsampled files have a modified file name, with the custom sampling rate added at the end of the file name (ex. '-1234Hz').