



• NUGEN Audio

OPERATION MANUAL

# Aligner

Automatic Phase Alignment Tool



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# Introduction

Aligner is an automatic phase and polarity alignment tool, designed to speed up the daily workflow of audio engineers.

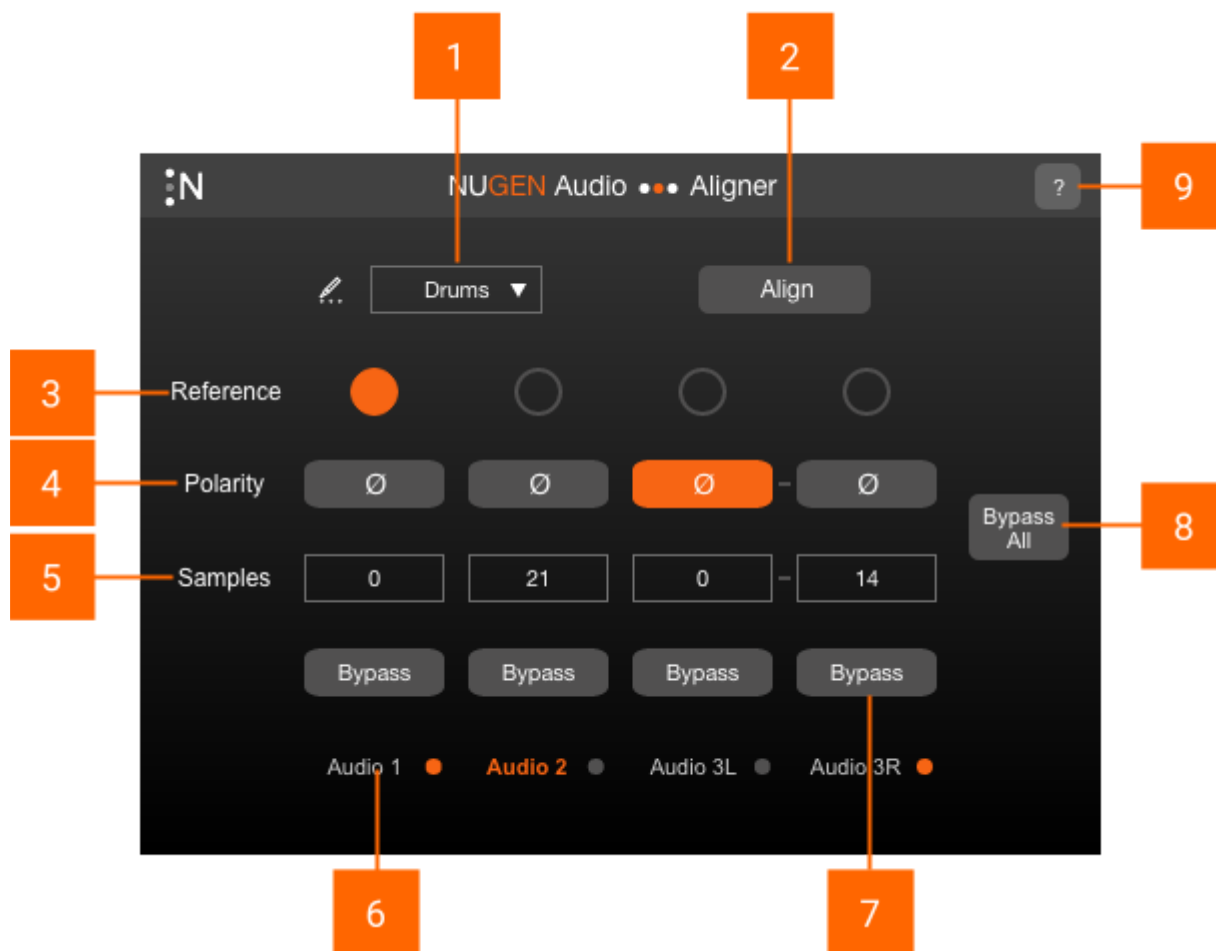
Phase issues often occur when recording a single sound source with multiple microphones. The differences in the time it takes for the sound to travel from the source to each microphone can result in elements of the audio being out-of-phase - the wave of one signal may be at its peak, while another signal's wave is at its trough. The opposing waves cancel each other out, resulting in phase cancellation. This can produce unwanted dips in the frequency spectrum, causing recordings to sound 'thin' and 'weak'.

Typically, the best way to prevent phase cancellation is to work carefully on microphone placement. For various reasons this is not always an option, and phase issues are left to be fixed in the editing and mixing stages, which can be a frustrating task to do manually.

Aligner solves this problem and allows the user to perfectly align their multi-tracked audio in seconds, by detecting phase issues in the recording and automatically adjusting the time and polarity alignment of the multi-tracked audio.

## Interface

The Aligner GUI is designed to be simple and easy to understand for the user. It consists of a group selection drop-down menu, a row of controls for each track that has been added to the group, and an “Align” button that triggers the automatic alignment process. Every track in a group can be controlled via one instance of the Aligner plug-in.



- 1 **Group selector.** Select which group the active track should be assigned to. The selected group can be renamed by clicking on the pencil icon.
- 2 **Align.** This button triggers the automatic alignment process. Audio must be playing for Aligner to calculate the correct adjustments.
- 3 **Reference track selector.** Select which track you want the other tracks to be aligned to.

- 4 **Polarity inversion.** Inverts the polarity of the track. This is adjusted automatically after clicking the Align button, but can also be adjusted manually by the user.
- 5 **Sample delay.** Adjusts the number of samples the track is delayed by. This is adjusted automatically after clicking the Align button, but can also be adjusted manually by the user.
- 6 **Track name.** Mirrors the track name in the DAW. Orange text shows which instance of the plug-in is open. If Aligner is inserted on a stereo track, the left and right channels will have their own set of controls, and 'L' and 'R' will be affixed to the track names respectively. An 'Audio In' indicator is displayed to the right of each track name - this is orange when audio is present, and grey when there is no audio.
- 7 **Track bypass.** Bypass the polarity and sample delay parameters for the individual track.
- 8 **Bypass all.** Bypass the polarity and sample delay parameters for every track in the group.
- 9 **?** Opens the 'About' page, with access to credits and the product manual (if installed).

# Applications

## Fixing phase and polarity issues of a multi-tracked recording

Aligner can be used to fix phase and polarity issues that often occur when using more than one microphone to record a sound source. For example, a guitar amp that was recorded using multiple mics in different positions may have phase issues when the channels are blended together. Or a drum kit might sound 'thin' due to phase cancellation between the various mics. Aligner can fix these phase issues by listening to the audio and automatically aligning the signals.

For best results, the audio played during the automatic alignment process should come from a single source - i.e. a recording of a single guitar, or a single drum hit.

## Creative uses

Aligner isn't limited to corrective applications. Intentional phase cancellation can alter the tonal quality of a recording in ways that can't be done with a conventional EQ. Likewise, increasing the delay between close and far mics can emphasise the ambience of a recording.

## Reporting a Problem.

If you encounter a problem with any of NUGEN Audio's products, please let us know, to help us improve them.

You can email the NUGEN Audio support team at [support@nugenaudio.com](mailto:support@nugenaudio.com).

To make it easier for use to resolve the issue you are seeing:

- Please give a clear explanation of the problem, including any steps required to reproduce it if appropriate.
- Please state how frequently you've experienced the problem.
- Please supply details of the system you are using, in particular:
  - The operating system (Windows/Mac OS) and version.
  - Host application and version.
  - CPU speed and RAM available.

Please be patient with any problems you may experience, particularly with products at a beta stage of release. At NUGEN Audio we take problems with our software seriously, and will endeavour to correct them as quickly as possible.

# Version History

1.0.0 Initial release



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