



PROGRESS AUDIO

PhasePhix

PHASE ALIGNMENT TOOL

USER MANUAL

for version 1.0

WHAT IS PhasePhix?

This VST utility allows you to control the phase difference two signals, allowing you to correct phase problems that can arise from recording instruments using 2 microphones, or recording a guitar using a DI feed and a mic, for example.

If the two signals are out of phase, some frequencies cancel out and others add up, causing changes to the tone of the recorded instrument. PhasePhix allows you to get a fuller, more accurate sound.

FEATURES

- Independent phase-shift control for left and right audio channels.
- Shifts all frequencies by the same amount, therefore preserving the phase relations within the signal. This gives better results than a simple time-shift can achieve.
- 'Auto detect' feature to analyse your sound and find a setting that minimises the phase difference between the 2 channels.
- Meter displaying the current phase difference of the audio
- Balance and gain controls.

SYSTEM REQUIREMENTS

- VST2.0 compatible host software
- 1GHz or faster processor recommended

INSTALLATION

Open the installation ZIP file, and copy its contents to your host's plug-in folder, usually called VstPlugin. Then re-start your host application so that PhasePhix will be recognised and loaded. Installation is now complete.

INSERTING PhasePhix INTO A PROJECT

PhasePhix should be used as an 'Insert' effect in your sequencer to process and audio track.

In most cases you will use it to process a stereo track, allowing you to align the phase of the two channels.

You may instead choose to insert PhasePhix into a mono track, in order to alter its phase in relation to other tracks you have in your arrangement. In this case, make sure the 'Mono' button is selected in the user interface, as this ensures the plug-in will treat the mono sound in the correct way. Please note that the 'Auto detect' feature will not work when used on a mono track.

Note: because of the way PhasePhix processes sound, it introduces a latency into a track. Therefore, you may find it is not suitable for use in real-time on a live source. However, if your host has plug-in latency compensation then you can use PhasePhix on pre-recorded audio with no latency. Therefore, it is ideal for use while mixing.

THE USER INTERFACE



- 1) Coarse setting of phase shift for the left audio channel
- 2) Display of the current shift (in degrees)
- 3) Fine tuning of phase shift
- 4) Same controls as 1), 2) & 3), but for the right channel
- 5) Toggle switch to enable/disable the processing of phase. Useful for comparing the processed signal with the original one in order to see if the sound is being improved
- 6) 'Auto detect' button. Click while sound is playing in order to automatically calibrate the plug-in to minimise the phase error.
- 7) Reset phase shift to zero for both channels
- 8) Switch on to apply the same phase shift to both left and right channels. This must be turned on when working on a 'mono' track
- 9) Phase difference meter, lower = better
- 10) Enable/disable balance control
- 11) Gain control to alter overall volume
- 12) Control pan position of a stereo sound
- 13) Reset balance to zero (centred)
- 14) Auto detect balance setting that gives equal volume on left and right channels
- 15) Open the 'About' box, giving info on the version and registration info.

CALIBRATING USING 'AUTO DETECT'

PhasePhix can attempt to automatically detect the best settings in order to reduce the phase difference between the left and right channels. Make sure that audio is playing in your sequencer, then click on the 'Auto detect' button. A small amount of audio will be buffered and analysed, then you will see that new settings have been automatically chosen.

It is sometimes the case that the section of audio that is analysed is not representative of the sound as a whole, and this leads to PhasePhix not detecting the right settings. It is recommended that you try using 'Auto detect' on several sections of the audio to find the best possible settings.

Use the 'phase error' meter to see the effect of the new settings, but more importantly use your ears to judge the quality of the results.

MANUALLY CALIBRATING PHASE

In cases where 'Auto detect' is not giving satisfactory results, you may manually choose phase settings. PhasePhix gives you independent control over the phase of the left and right channels.

Use the main shift control to get close to the sound you are trying to achieve, and if necessary make fine adjustments using the 'trim' control to further improve the sound.

It is useful to keep switching off the phase processing now and again to compare your results with the original sound. This lets you judge the quality of the results you are getting.

USING THE PHASE METER

The phase meter gives you visual feedback of the phase error in your audio. Use this to detect if serious phase problems exist in your sound, or to judge if your settings are improving the phase alignment of the signals.

Please note that unless the left and right channel signals are identical, then you will always have some phase difference. Therefore, do not expect to be able to create a zero phase error. Instead, aim to simply minimise the average phase difference.