

PHASEYQ

User Guide



1 Introduction

Since the dawn of audio recording, engineers have been nudging phase around to make mixes lock together. Traditional EQs have sought to minimise or completely eliminate the impact of phase shift as a side effect of moving gain, but leave the user with limited control over that relationship. PhaseyQ makes phase the point, and lets you see and control it. Heresy, you may cry. But it works, and it works real good.

2 Installation

2.1 System requirements

	macOS	Windows
System	macOS 12 or later	Windows 10 or later, 64-bit
Processor	Apple Silicon or Intel	Any 64-bit
Formats	VST3, AU	VST3
Host	Any VST3 or AU host	Any VST3 host

2.2 Installing

Download PhaseyQ for your platform from nyx-dsp.com. There's no installer. Unzip and copy the plugin into the folder for its format.

Format	Copy to
VST3, Windows	C:\Program Files\Common Files\VST3
VST3, macOS	/Library/Audio/Plug-Ins/VST3
AU, macOS	/Library/Audio/Plug-Ins/Components

Restart your DAW, or rescan its plugins, and PhaseyQ will appear under NYX-DSP.

2.3 Activation

PhaseyQ is free. There's no license key and nothing to activate.

3 Quick start

1. Put PhaseyQ on one half of a correlated pair: the bass amp against its DI, say, or the bottom snare mic against the top.
2. Play the two together and listen for where they thin out or fight.
3. Drag a band node to that region. Gain moves phase with it, 10° for every dB.
4. Press **Ø** on the band to send the phase the other way while the tone stays put.
5. Adjust frequency and Q until the pair locks together, then match level with **Output**.

4 How it works

PhaseyQ is a phase EQ: a seven-band parametric where every band pushes phase along with gain.

Under the hood it's running a single convolution with one FIR kernel, synthesised from the graph each time you move a control. This is essentially the same machinery a linear-phase EQ uses, but applied in a radically different fashion.

On a single source, a static phase bell is subtle, particularly in isolation. What you might hear is a slight softening or tightening around the band, only subtly perceptible in the context of a mix.

The design comes alive on correlated pairs: bass DI against bass amp, top and bottom snare mics, a parallel chain against its dry, a doubled guitar against its partner. Two versions of the same signal comb-filter against each other, and where the comb notches fall is set entirely by their relative phase. PhaseyQ lets you steer that per frequency region and take complete control of the balance between them.

Fix a specific cancellation, flip regions of the frequency spectrum and trade tone for alignment, shift regions to create space in a mix, and so much more.

10° of phase per dB of gain. The EQ's ± 18 dB range maps exactly onto $\pm 180^\circ$. The phase bell has the same centre, shape and Q as the magnitude bell, so on the graph the two curves are copies of one another, until you invert a band and they separate.

Pre-ring is an inherent sonic cost of this design. A filter that is not minimum phase spreads energy around the impulse, so steep cuts and slopes get a small smear ahead of the transient. Every linear-phase EQ has this; PhaseyQ is in the same family.

5 Controls



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Seven bands sit across the panel in a fixed order: a high-pass filter, five parametric peak bands, and a low-pass filter. Everything is set either from the graph or from the column beneath it, and the two stay in sync.

5.1 Graph

Dual-axis display

— Magnitude, in dB on the left axis - - - Phase, in degrees on the right axis

The two axes are pinned together at 18 dB to 180°, so both curves share the midline and a band that is doing 10°/dB draws them on top of each other.

±18 dB / ±180° is the window the graph draws, not a ceiling on what the EQ can do. A single band can't exceed it, but overlapping bands sum, and an HPF/LPF slope keeps rolling off well past the bottom edge. When a curve would run outside the window it pins against that edge rather than disappearing; the processing behind it keeps going.

Band nodes

Each active band has a node on the curve. Click a node to select that band. Drag to adjust frequency and gain; use the mouse wheel to adjust Q.

Pre / post

Behind the response curves is a spectrum analyser. **Pre** reads the signal entering the plugin, **Post** reads it on the way out.

5.2 Bands 1 to 5

Five parametric peak bands, each with the same column of controls.

dB (gain)

Up to ± 18 dB, and therefore $\pm 180^\circ$ of phase movement at the centre of the band. Drag the knob or double-click the readout to set a value.

Hz (frequency)

Sets the centre frequency of the band.

Below about 40 Hz, extreme Q settings hit a natural speed limit for phase shift. To keep the plugin operating in real time, PhaseyQ caps the phase lead at these ultra-low frequencies. Your EQ magnitude curve remains 100% accurate, but the phase shift will flatten out slightly at the extreme low end.

Q

Sets how wide the band is.

Ø (invert)

Inverts that band's phase contribution and leaves its tone completely alone. A +18 dB boost that was +180° becomes -180°; the magnitude curve does not move at all.

On / off

Click the lamp to enable or disable the band.

5.3 HPF and LPF

The outer two columns are a high-pass and a low-pass filter, 12 dB/octave, bookending the five peak bands.

HPF and LPF

HPF runs 20 Hz to 1 kHz, LPF runs 1 kHz to 20 kHz. Q controls resonance at the corner in the usual way.

Unlike the peak bands, these keep their *natural* phase response. They are the one part of PhaseyQ that behaves like an ordinary filter.

However, inverting here does something different and more interesting: it swaps the filter for its **maximum-phase mirror**. Identical slope, opposite rotation.

5.4 Output

Output

± 12 dB of trim after the EQ.

5.5 Panel

Light / dark

Switches the panel between light and dark finishes.

Manual

Congratulations! You've found the manual.