

# PSP Wobbler

Alan Parsons Plug-in Project



## Operation Manual

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Thanks to all our customers around the world for your ideas and help in the development of new plug-ins!

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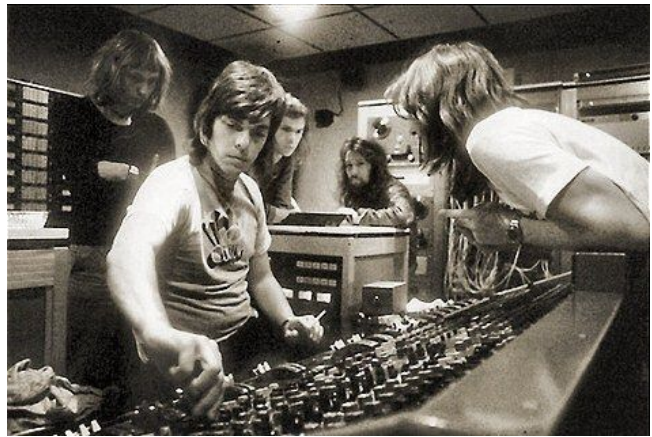
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## Introduction by Alan Parsons

It was during my early years as a recording engineer at Abbey Road Studios in London, sometime in the early 1970s, that an Abbey Road technical engineer called Keith Adkins constructed a device he called "The Frequency Translator." It featured a somewhat primitive-looking sheet metal chassis with a 240-volt power transformer, a number of valves (or "tubes" if you speak American), a power switch, and a knob sticking out on a spindle on the side of the chassis.



Keith had apparently designed it as a means to avoid acoustic feedback, or "howl-round" as it is sometimes called. A feedback "loop" is caused by a microphone picking up its own amplified signal too loudly from a nearby speaker, causing a circular motion between microphone and speaker at an ever-increasing level. The system fails to cope and responds with an unpleasant hum or screech.

It's important to note that Keith's unit shifted a signal's frequency, not its pitch. The theory was that if a microphone was exposed to a signal the same as it was first "hearing", except at a raised or lowered frequency, the feedback loop would not occur. Each of the frequency elements of a sound – both bass and treble – would be "translated" up or down by a small number of frequency units (Hertz or Cycles Per Second). I simply don't know if this application was ever proven successful with the original unit, but our own experiments have shown that shifting the overall frequency does help to limit susceptibility to feedback.

I was always ready to try out a new "box", and that opportunity arose while I was working with Pink Floyd on the recording of *The Dark Side Of The Moon*. I discovered that feeding a signal into the unit and adding its output to the original signal produced a slightly phasey result. But it was when I tried feeding the output of the unit to its own input that a magical "swishy" sound happened. The knob controlled the amount of frequency shift, and as a result the speed of the oscillation went from very slow to so fast it became a kind of buzz – unusable.

We tried the box on some female backing vocals on the song "Time". We found that varying the oscillation speed from slow to fast with the knob in real time created a very interesting and mysterious effect on the girls' voices. We transferred the effect onto a separate track on the 16-track tape, so it was ready to go for the final mix.

The PSP Wobbler recreates the properties of the Frequency Translator, but with many more controllable parameters, such as automating the depth of the effect and the oscillation speed as needed. It is a faithful modern take on that fun little box, and I hope you enjoy using it.

## Alan Parsons



Alan Parsons is a Grammy Award-winning producer, musician, and audio engineer, best known for his groundbreaking work in music production and his role as co-founder of The Alan Parsons Project.

Parsons began his career at London's legendary Abbey Road Studios at age 19. He contributed as an assistant engineer on The Beatles' final albums and gained international acclaim as the

engineer of Pink Floyd's *The Dark Side of the Moon*.

Parsons took on the role of producer with great success in the 1970s, working with artists like Pilot ("Magic"), Al Stewart ("Year of the Cat"), and Ambrosia. In 1975, he teamed up with Eric Woolfson to form The Alan Parsons Project, releasing a string of iconic albums such as *Tales of Mystery and Imagination* (1976), *I Robot* (1977), and *Eye in the Sky* (1982). Their music blended rock, orchestral arrangements, and concept-driven themes, making the Project a staple of symphonic rock.

After parting ways with Woolfson, Parsons embarked on a solo career, releasing albums like *Try Anything Once* (1994) and *The Time Machine* (1999), and created the Alan Parsons Live Project, a band performing his music to sold-out audiences around the world. His 2004 album *A Valid Path* explored electronica and featured collaborations with David Gilmour and The Crystal Method. Parsons' work also extended to video production, including the educational video series *The Art & Science of Sound Recording*, where he shared his expertise with aspiring audio professionals.

Parsons earned his first Grammy in 2019 for the *Eye in the Sky* surround mix and released *The Secret*, an album inspired by his passion for magic. In the 2020s, he continues to innovate – producing albums, touring, and collaborating with artists across genres – and remains a respected figure in both music and sound engineering.

## PSP Wobbler

PSP Wobbler is a modulation effect plug-in inspired by and designed in partnership with Alan Parsons. It's designed to be as simple as possible to use, yet as versatile as possible, to create a family of modulation effects originally heard on hit albums mixed by Alan Parsons.

PSP Wobbler creates modulation with *frequency shifting* – a non-harmonic process that comes from changing an audio signal by a given frequency, or Rate as we call it in this plug-in. Note that frequency shifting is very different than the more familiar pitch shifting, which changes all of the frequencies of a sound while preserving their harmonic relationships.

The modulation effect occurs when the frequency-shifted (wet) signal is mixed with the unprocessed (dry) one. The complex phase differences between the wet and dry signals create a unique and unusual effect – one that offers a “feel” somewhat like a rotary speaker, phaser, and flanger all at once. We refer to this resulting effect as a Wobble.



In addition to the “wobbling” algorithm, PSP Wobbler adds a number of extra features that turn it into an all-in-one modulation shaping tool. Drive and Age add elements of “vintage” character into the effect, while Drift and Spread provide extra liveliness and other “mojo” to the sound. This total control is completed with options to set up and automate the Rate to be manipulated manually, as a function of musical Note values, or in Sync with a song’s tempo.

## Main Controls



Please note that any control can be reset to its default value by double-clicking on it, and shift-clicking allows you to set parameter values finely as long as the Shift key is held down.

**PSP Wobbler logo** – Click on the plug-in's name to reveal the About box. Click anywhere within the About box window to get back to the plug-in view.

**Drive** – Controls the amount of saturation in the plug-in. Depending on the Aging mode (see below) the Drive and saturation may affect either the Wet (processed) signal or both Dry and Wet when Aging mode is set to Full. The default value is 0dB (the middle position).

**Age** – Sets the character of the saturation, from smooth (turned down) to sharp (turned up), and simultaneously changes the bandwidth from a wide range (turned down) to a narrow range (turned up). As with the Age control, this can be applied to Wet or both Dry and Wet, depending on the Aging mode. The range is 0 to 100; the default value is 0.



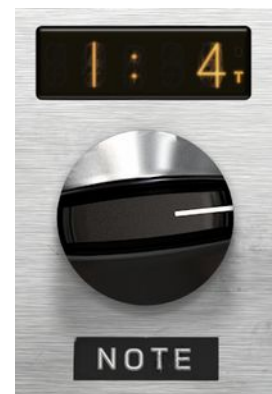
**Rate** – When selected by the Mode switch (see below), Rate mode sets the modulation rate directly by turning the knob. It ranges from -25 to +25Hz, and allows for a smooth change in the modulation rate. The display above the knob shows the precise value. Click on the display to enter the value manually. The default value is 0.0 Hz – no frequency shift.

Double-click on the Rate knob to request a phase reset to 0.

**Note** – When selected by the Mode switch, Note mode sets the modulation rate according to a tempo-controlled note time division selector that can be set anywhere from  $\pm 1/64$  note up to  $\pm 8$  whole notes, including dotted notes and triplets. The default value is 0, i.e. no frequency shift. Click on the display to pop up a menu of all available time division values.

In Note mode, the plug-in calculates the modulation rate based on this setting and the song's tempo setting when playback starts. The calculated rate follows tempo changes.

Double-click on the Rate knob to request a phase reset to 0.





**Sync** – When selected by the Mode switch, Sync mode controls the modulation rate based on musical note time divisions, but in this mode the modulation phase will sync with the song's position in real time. As with Note mode, the sync time division can be set anywhere from  $\pm 1/64$  note up to  $\pm 8$  whole notes, including dotted notes and triplets. The default value is 0. Click on the display to pop up a menu of all available time division values.

Double-click on the Rate knob to request a phase reset to 0.

Glide and Drift controls are disabled in the Sync mode.

**Pulse** – This flashing red bulb indicates the rate and phase of the modulation. This is especially useful when using Note or Sync mode, to make sure that tempo changes are affecting (or not affecting) the sound in the desired manner.

**I/O switch** – This turns the plug-in's processing on or off. The effect is bypassed when set to 0.

**Feedback** – Sets the amount of feedback in the frequency shifter's audio path. The higher the Feedback setting, the more resonant and obvious the results, even when the Rate is set to 0, or the Wobble (see below) is set higher or lower than its maximum position. The considerable feedback you may hear at high Feedback settings may be tamed by high Drive and Age settings or Lo and High range filters (see below). The setting ranges from 0 to 100, and the default setting is 50 (middle position).

**Wobble** – Controls the amount of the wobble effect by controlling the Wet/Dry mix at the input. Turning Wobble all the way down (a setting of 0) corresponds to hearing only the Dry signal, which is still affected by Dry and Age whenever the Aging is set to Full. The middle (default) position of 50 corresponds to an equal mix of Dry and Wet signals. This position results in the strongest wobbling effect. Turning the knob all the way up (a setting of 100) will send only the frequency-shifted (Wet) signal to the output.

Note that on the full Wet setting, you won't hear any wobble effect unless the Feedback is set above 0.

**Output** – Sets the output level of the plug-in.

## Additional Controls



**Aging** – Affects the Drive and Age processing. The Wet setting applies the saturation and the filtering to the frequency shifted (Wet) signal only. The Full setting applies saturation and filtering to both the Dry and Wet signals, so they are heard even when the plug-in is only passing the Dry signal (Wobble turned all the way down).

**Drift** – Sets the amount of thermal and voltage drift in the frequency shifting algorithm, introducing frequency fluctuations. It works in Rate and Note modes, but not in Sync mode. Note that even when the frequency shift is set to 0, the Drift control still works, producing fluctuations in frequency around that 0 value.

**Glide** – Sets the time it takes to change between Rate or Note values after a manual adjustment (Rate) or a song tempo change (Note). Glide has no effect in Sync mode. Watch

the Pulse bulb to observe the starting and ending rates.

**Mode** – Selects the modulation mode. Rate mode sets the plug-in into the direct control of the modulation set in Hertz. Note mode sets the plug-in to follow a time division based on the initial tempo of the song – in this mode, the Drift and Glide controls still affect the sound. Sync mode sets the algorithm to musical note values that track changes to song tempo. In this mode, the Drift and Glide controls are deactivated. The label under the Rate knob changes to show the current mode.

**Phase** – Adjusts the phase of the modulation. The middle (default) position is a neutral 0 degrees. The phase can be adjusted over a full range of  $\pm 180$  degrees.

**Spread** – Controls the stereo phase spread between two channels, when PSP Wobbler is set up for stereo output in your DAW. The range is  $\pm 180$  degrees, with 0 as the default setting.

When PSP Wobbler is set for stereo output, setting Spread over  $\pm 90$  will turn the label and numerical display red. This serves as a warning that the plug-in is introducing extreme levels of phase decorrelation that will impact mono compatibility of the applied effect. While very large Spread values may sound exciting in stereo, there is a good chance that if the track is ever summed to mono, the left and right wobbles will cancel each other out and diminish or entirely remove the effect. Use these settings with caution, and always verify mono compatibility as you go!

When PSP Wobbler is set up for mono output, the stereo Spread control is deactivated.

**Range** – Sets the range of frequencies affected by PSP Wobbler. This feature is useful for narrowing the wobbling effect to a specific bandwidth, reducing high-pitched whistling or low-frequency rumble caused by the effect, or helping the wobble sit better in the mix. By removing extreme high frequencies, it helps to preserve the natural sound of ride, crash or cymbals, while cutting extreme low frequencies helps maintain tightness of kick drum and bass, all while retaining the wobbling effect across the midrange.

**Lo** – Sets the lower limit of the effect, and ranges from 10 Hz (the default) to 4000 Hz.

**Hi** – Sets the upper limit of the effect, and ranges from 50 Hz to 20000 Hz (the default).

## Preset Handling & View Options

We have provided PSP Wobbler with a selection of factory presets. These presets can be used as a starting point for further adjustments, or for quick “drop-ins” on certain tracks.

You can access the PSP Wobbler presets from the PSPaudioware standard PRESET BAR at the top of the plug-in interface.



## Preset Browser

PSP Wobbler features a comprehensive new preset management and browser system. To access the preset browser, you click the preset name window at the top of the plug-in (which displays 'Default' when the plug-in loads).



The new preset management bar has three main categories which can be accessed with the tabs at the top of the preset browser: **Application**, **Designer**, and **My presets**.

**Application** - shows all factory built-in presets grouping by application.

< *Factory presets are built into the plugin and cannot be directly edited!  
You can adjust them and save separately as user presets.* >

**Designer** - shows all factory built-in presets grouped by patch designer.

**My presets** - shows only user presets.

This view shows all of the presets you have created and saved, or downloaded and added to your custom presets for PSP Wobbler.

To add categories to the preset list, you can create new subfolders in the preset directory.

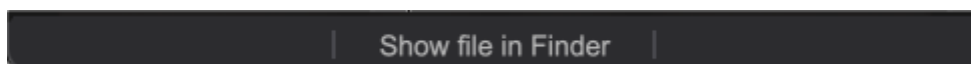
For Windows users, this is located at:

**C:\Users\Username\Documents\PSPaudioware.com\User Presets\PSP Wobbler**

For Mac users, this is located at:

**~/Documents/PSPaudioware.com/User Presets/PSP Wobbler**

< *You can always check the exact path by clicking on the "Show file in Finder" tab  
at the bottom of the preset browser window.* >



To select a preset, click a preset name in the right window. When clicked, the preset will be applied so that you can audition it. To confirm the preset choice, you can click the preset name once more to load it.

Each preset has its own picture. You can click on it to open the patch designer's website.

## Copy / Paste

A dark rectangular button with the text 'Copy' and 'Paste' in white, separated by a small gap.

The **Copy/Paste** feature lets you quickly transfer settings between instances of the plug-in.

To use this feature, you can click **Copy** at the top of the plugin below the preset browser window. Then, open a new instance of the plug-in on another track (or on the same track) and click **Paste** to paste the settings to the new instance of the plug-in.

This feature can be particularly useful for processing similar instruments or sounds, when only a few minor tweaks to the starting settings are needed for each specific track.

## A/B System

A dark rectangular button with the text 'A / B' and 'A → B' in white, separated by a small gap.

The **A/B system** is for quickly checking and auditioning changes to the plug-in settings.

The **A/B Button** at the top of the interface below the preset browser window allows you to A/B between the current and previous setting of the plug-in. This can be used to audition changes made to your mix, or to audition between two presets.

The **A>B Button** quickly copies the settings of the **A** setting to the **B** setting. This allows you to save your place, so you can apply further tweaks and audition them with the **A/B Button**.

## Undo / Redo

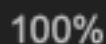


The **Undo/Redo** feature of the plugin lets you quickly navigate between setting changes.

To use this feature, use the undo/redo buttons (CCW and CW arrows, respectively) located below the preset browser window.

These buttons will undo changes to the current plug-in settings, or allow you to undo a preset change depending on the last action in the plug-in.

## 100% GUI resizing

A dark rectangular button with the text '100%' in white.

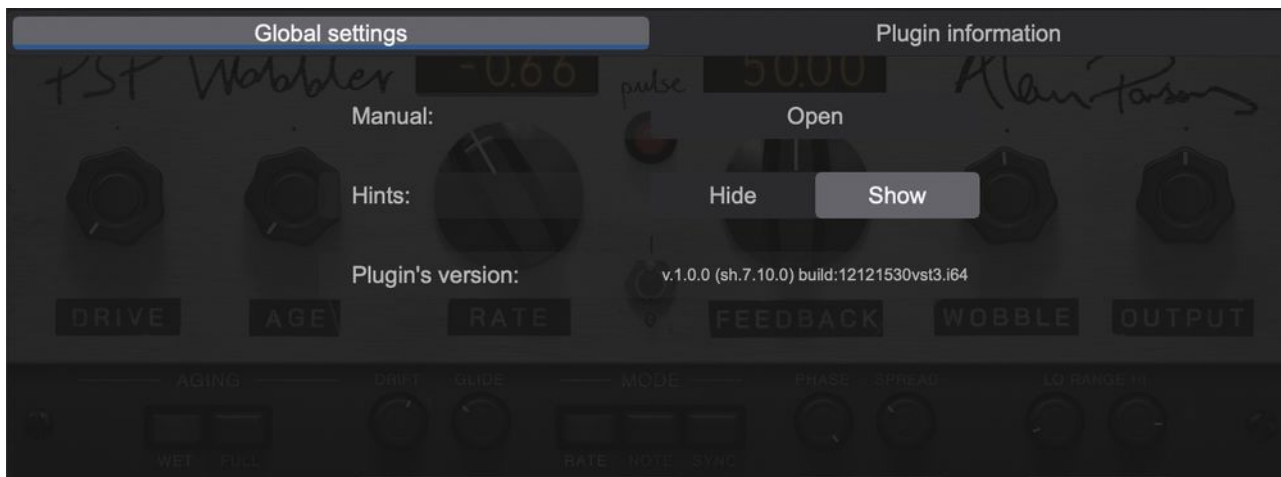
PSP Wobbler's window size is easily changed to suit your needs. To change the GUI zoom factor, simply hover your mouse over the zoom percentage number and scroll up or down with your mouse wheel or a two-finger touch on your touchpad.

Double-click the size number to reset the window to the default size of 100%. You can also resize the window simply by dragging its right bottom corner. For quick and precise size adjustments, single-click on the size number to pop up a menu of commonly-used sizes.

## CONFIG section



When clicking the three parallel lines icon in the top right corner will open the **CONFIG** menu. Here, you can open the manual, check the current plug-in version number, and choose to hide or show mouse-over hints. Click anywhere in the window to exit.



## Specifications

- Double precision floating point computations.
- 32 and 64 bit floating point audio streams supported.
- Supports project sample rates up to 384 kHz.
- Uses an internal sample rate of 44.1 kHz for source material with sample rates of 44.1, 88.2, 176.4, or 352.8 kHz.
- Uses an internal sample rate of 48 kHz for source material with sample rates of 48, 96, 192, or 384 kHz.

## Licensing / System Requirements

In order to run PSP Wobbler, you need to install the free [iLok License Manager](#) application, but you don't need a hardware iLok key ("dongle"). By default we provide 3 licenses which can be activated in 3 separate locations, each of which can be either a computer or an iLok dongle (2nd generation or above). You can move these licenses at any time using PACE's iLok License Manager software.

### Windows

#### VST

- Windows 7 – Windows 11
- 64-bit VST3 compatible application

#### VST3

- Windows 7 – Windows 11
- 64-bit VST3 compatible application

#### AAX

- Windows 7 – Windows 11
- 64-bit Pro Tools

#### All DAWs

- Up to date iLok License Manager application installed (iLok key not required)

### macOS Intel or macOS AppleSilicon

#### AudioUnit

- macOS 10.14 – macOS 15 Sequoia
- 64-bit AudioUnit compatible host application

#### VST

- macOS 10.14 – macOS 15 Sequoia
- 64-bit VST3 compatible application

#### VST3

- macOS 10.14 – macOS 15 Sequoia
- 64-bit VST3 compatible host application

#### AAX

- macOS 10.14 – macOS 15 Sequoia
- 64-bit Pro Tools

#### All DAWs

- Up to date iLok License Manager application installed (iLok key not required)



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If you have any questions about any of our plug-ins, please visit our website:

[www.PSPaudioware.com](http://www.PSPaudioware.com)

Where you can find the latest product information, free software updates, online support forum and answers to the most frequently asked questions.

Problems with the installation, activation or authorization?  
Please watch our [troubleshooting video tutorials](#) on our YouTube channel.

You can also contact us by e-mail: [support@PSPaudioware.com](mailto:support@PSPaudioware.com).  
We will gladly answer all of your questions. As a rule we respond within 24 hours.

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