USER MANUAL

_PROPHET-5 V

ARTURIA
_The sound explorers

Special Thanks

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Special Messages

This manual covers how to use Prophet-5 V, provides a comprehensive look at its features, and details how to download and activate it. First, some important messages:

Specifications Subject to Change:

The information contained in this manual is correct at the time of printing. However, Arturia reserves the right to change or modify any of the specifications or features without notice or obligation.

IMPORTANT:

The software, when used in combination with an amplifier, headphones or speakers, may be able to produce sound levels that could cause permanent hearing loss. DO NOT operate for long periods of time at a high volume or at a level that is uncomfortable.

If you encounter any hearing loss or ringing in your ears, please consult an audiologist.

NOTICE:

Service charges incurred due to lack of knowledge relating to how a function or a feature works (when the software is operating as designed) are not covered by the manufacturer's warranty, and are therefore the owner's responsibility. Please study this manual carefully and consult your dealer before requesting additional support.

Introduction

Congratulations on your purchase of Prophet-5 V.

Excellence is placed at the heart of every Arturia product, and Prophet-5 V is no exception. Explore the presets, tweak a few controls, get lost in the features - dive as deeply as you like.

Be sure to visit the www.arturia.com website for information on all our other inspiring hardware and software instruments, effects, MIDI controllers, and more. They have become indispensable tools for many visionary artists around the globe.

Musically yours,

The Arturia team

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1. WELCOME TO PROPHET-5 V!

Thank you for your purchase of Prophet-5 V by Arturia. It is a detailed model of the legendary Prophet-5 Rev 2 synthesizer, and one of the very latest realizations of TAE®, or True Analog Modeling. Far beyond taking digital snapshots of a classic instrument's sound, TAE analyzes and recreates analog circuits of classic hardware instruments, the way these circuits interact with each other, and the exact effects of that interaction on the sound. This results in a virtual instrument that plays and "breathes" like the original hardware – as close at hand as a click of your mouse.

1.1. About the Prophet-5

The Prophet-5 has the distinction of being the first programmable polyphonic synthesizer on the market. It was manufactured by Sequential Circuits, then a garage startup that exemplified the mixture of musical and tech talent in the San Francisco Bay Area of the 1970s.

Prophet-5 synthesizer, revision 2

At the time, Sequential consisted of engineer and inventor Dave Smith, former synth clinician John Bowen, and businesswoman Barb Fairhurst. They had started out building and selling sequencers such as the analog Model 600 and digital Model 800, and a programmer for the Mini and ARP 2600 synths called the Model 700. In 1978, they debuted the Prophet-5 at the NAMM (National Association of Music Merchants) trade show.

Described as "five Minis in a box," it offered five voices of polyphony – "One for each finger on your hand" as Dave Smith once put it in an interview with *Keyboard* magazine.

Here was exactly the instrument musicians wanted and needed. It wasn't the first commercial synth to be able to claim polyphony – the Yamaha CS80 beat it to that punch by over a year, and Oberheim's multiple-SEM systems such as the Four-Voice and Eight-Voice by a bit longer. However, it was the first synth to offer full patch storage and recall of all its settings, and do so in a truly portable package that gigging keyboardists could place atop their organs and electric pianos. What's more, its undeniably big sound was irresistible, and became a staple of pop, rock, and the then-upcoming new wave movement characterized by such bands as The B52s, Blondie, The Cars, Talking Heads, and many more.

Vintage magazine ad for the Prophet-5

The Prophet-5 contained five individual voices. Each contained two VCOs and a white noise source which could be mixed into a resonant lowpass VCF. The filter had its own four-stage envelope generator. The filter could also be driven to resonance and could serve as a sound source. Following each filter was a VCA to shape the voice volume, controlled by a four-stage envelope generator as well. Supplementing the basic voices were polyphonic modulation (Poly-Mod) signal routings within each voice that allowed OSC B and the filter envelope generator to function as modulation sources applied to OSC A frequency/ pulse width, or the filter frequency. Finally, there was a single LFO and a pink noise source which could be mixed in to modulate all five voices, as adjusted by the MOD wheel.

Approximately 6,000 units of the Prophet-5 were sold from 1978 through 1984. Three versions were made. The first was hand-assembled in very small quantities, the second added patch storage on cassette tape, and the third marked a switch from Solid State Music (SSM) chips to those from Curtis. Enthusiasts maintain to this day that revision 1 and 2 sound superior. Our Prophet-5 V therefore carefully models the characteristics of a revision 2 instrument.

Dave Smith would rack up many further accomplishments, most famously as the primary designer of MIDI, the language all music hardware and software uses to communicate to this day. He designed the first commercially available software synthesizer, Seer Systems Reality, released in 1997. He developed the beloved Wavestation wavetable synth for Korg. In 2002, he formed Dave Smith Instruments and started manufacturing his own hardware visions, beginning with the Evolver desktop hybrid synth. In 2013, he was awarded a Technical Grammy for MIDI and his lifetime of achievements in music. Then in 2018, Smith regained the rights to use the Sequential name and continues to bring new analog and digital-analog hybrid synths to market – including a reissue of the Prophet-5 itself, now known as revision 4.

1.2. Arturia's Secret Ingredient: TAE®

TAE® (True Analog Emulation) is Arturia's technology for emulating the analog circuits used in vintage synthesizers. TAE's software algorithms result in spot-on emulation of analog hardware. This is why Prophet-5 V offers an unparalleled quality of sound, as do all of Arturia's virtual synthesizers.

TAE® combines major advances in the several domain of synthesis:

1.2.1. Aliasing-Free Oscillators

Standard digital synthesizers produce aliasing in high frequencies, especially when using Pulse Width Modulation (PWM) or Frequency Modulation (FM).

TAE enables the creation of oscillators that are completely free of aliasing in all contexts and behaviors such as PWM, FM, and more.
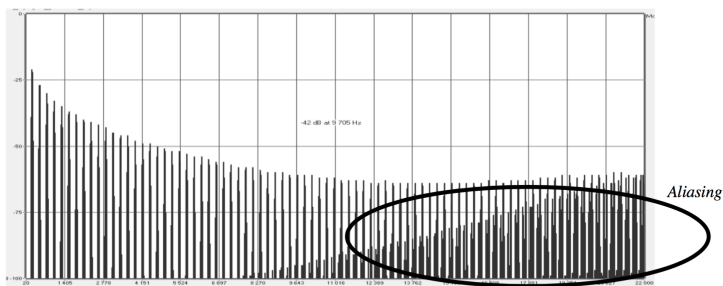
Linear frequency spectrum of a current well-known software synthesizer
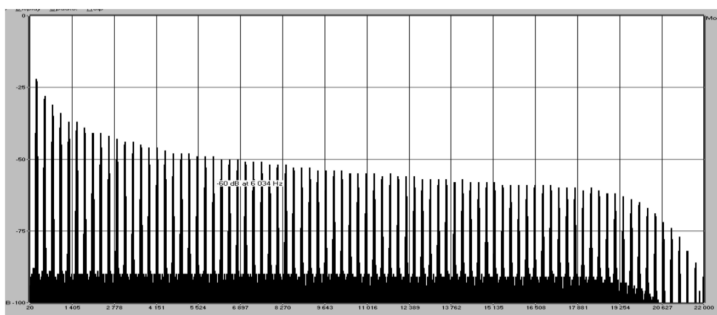
Linear frequency spectrum of an oscillator modeled with TAE®

1.2.2. A Better Reproduction of Analog Oscillator Waveforms

The waveforms produced by the oscillators in analog synthesizers are affected by the presence of a capacitor in the circuits. The discharge of such capacitors results in a slight "bend" in the original waveform (most notably for sawtooth, triangular and square waveforms). TAE® reproduces the result of this capacitor discharge in software.

Directly Below is a plot of a waveform from one of the hardware instruments that Arturia has emulated, followed by one generated by Arturia's TAE. As you can see, the waveforms are quite similar and both are equally deformed by the lowpass and highpass filtering.
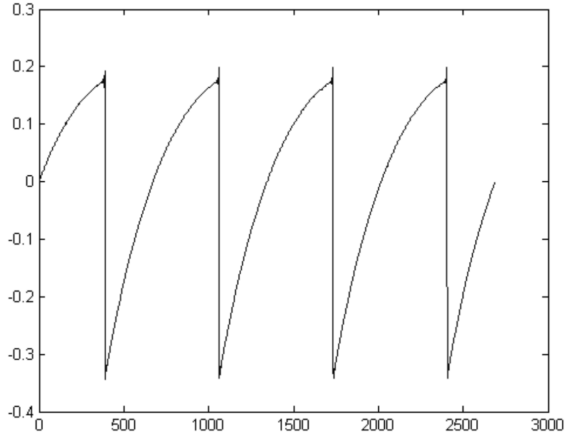
Temporal representation of the sawtooth waveform of a hardware synthesizer
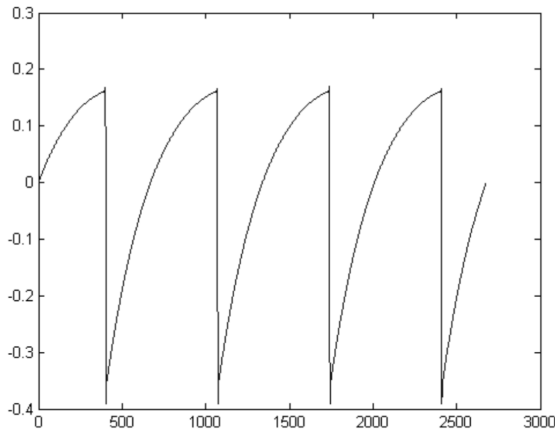
Temporal representation of a sawtooth waveform reproduced by TAE®

1.2.3. Voice Dispersion

Analog oscillators in vintage hardware were often unstable in their operation. Their waveforms differed slightly from one period to another and the starting point for each period could vary due to changes in temperature and other environmental conditions. So could the pitch and other aspects of the sound These stability "problems" were, in fact, largely responsible for the beloved "warm" sound of many synthesizers! Prophet-5 V includes adjustable *Voice Dispersion* to give you precise control over the variation in pitch, pulse width, level, cutoff, resonance, envelope times, and modulation of each individual voice.

1.3. Prophet-5 V Features

It wouldn't be an Arturia instrument if we didn't combine the best of modeled hardware with the conveniences only possible with modern software. Here is a list of Prophet-5V's main features.

- All sections of Prophet-5 main panel lovingly recreated.
- Sawtooth and square waveforms (OSC 1); addition of triangle (OSC 2).
- Up to 16 voices of polyphony.
- Unison mode with detune stacks voices for absolutely huge sounds.
- Hard oscillator sync for that classic "squawk" sound.
- Second LFO in Advanced modulations panel, assignable to two destinations.
- Advanced function generator lets you assign custom modulation shapes to two destinations.
- Searchable Preset Browser with user-creatable Playlists and bank of original Prophet-5 factory Presets!
- Chord mode plays custom chords on a single note.
- Full-featured retro arpeggiator.
- Velocity, aftertouch, modulation wheel, and keyboard tracking can be assigned to up to three destinations each.
- Three effects slots, each with a choice of 16 studio-quality effects.
- Full DAW automation of virtually all parameters.
- Tempo-sync of relevant time-based settings (e.g. LFO rates).
- Support for MPE (MIDI Polyphonic Expression).

Last but not least, the original Prophet-5 was above all a *player's* synth. We hope Prophet-5 V inspires you to play and finds a home in your musical creations!

2. ACTIVATION AND SETUP

2.1. Register and Activate

Prophet-5 V works on computers equipped with Windows 8.1 or later, and macOS 10.13 or later. You can play it in standalone mode or use it as a plug-in instrument in Audio Units, AAX, VST2, or VST3 format.

Once you install Prophet-5 V, the next step is to register the software. This is a simple process that involves a different software program, Arturia Software Center.

2.1.1. Arturia Software Center (ASC)

If you haven't installed ASC yet, please go to this webpage: Arturia Downloads & Manuals.

Look for the Arturia Software Center near the top of the page, and then download the installer version for the system you're using (Windows or macOS).

After you complete the installation instructions, proceed to do the following:

- Launch the Arturia Software Center (ASC).
- Log into your Arturia account.
- Scroll down to the 'My Products' section of ASC.
- Click on the *Activate* button next to the software you want to start using (in this case, Prophet-5 V).

It's as simple as that!

2.2. Initial Setup for Stand-Alone Use

If you would like to use Prophet-5 V in stand-alone mode, you will need to set up the software and ensure that MIDI and audio signals are flowing through it properly. You only need to do this once unless you'd make some major changes to your computer. The setup process is largely the same on both Windows and macOS computers but for the sake of clarity, we'll cover each system separately.

> ! This section only applies to readers that plan to use Prophet-5 V in stand-alone mode. If you are only going to use the software as a plug-in within a host music software, you can jump to the end of this chapter - Using Prophet-5 V in Plug-In Mode [p.12] - as your host music software will handle these things automatically.

2.2.1. Windows Users: Audio and MIDI settings

At the top left of Prophet-5 V's upper toolbar, you'll find a "hamburger" icon that opens up the main drop-down menu. This contains various setup options. Go to **Audio MIDI Settings** to set up how the audio and MIDI signals behave.
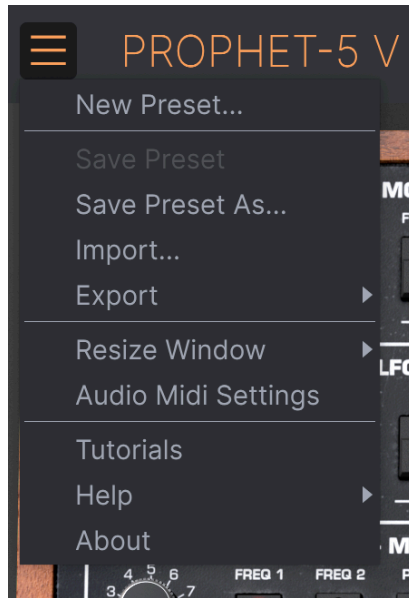
This option works in the same way on both Windows and macOS X, although the names of the devices available to you will depend on the hardware that you are using.
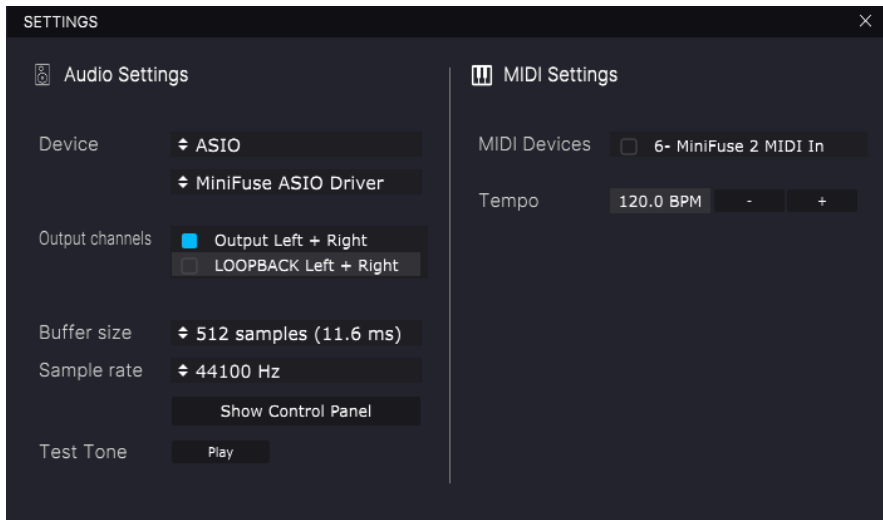
Starting from the top, you'll have the following options:

- **Device** selects which audio driver and device will handle the playback of Prophet-5 V. This can be your computer's internal driver, like Windows Audio or ASIO, or CoreAudio in Mac devices. Depending on your selection, the name of your hardware interface may appear in the field below.

- Using the second bar under **Device** lets you select the **output channels**, which means choosing which of the available outputs will be used to route your audio out. If your selected device has only two outputs, then only two options will appear here. If your device has more than two outputs, then you can select a specific pair of outputs.

- The **Buffer Size** gives you the option to choose the size of the audio buffer your computer uses to calculate sound.

> ♪ A larger buffer means a lower CPU load as the computer has fewer interruptions and longer amount of time to process commands. However, this can result in longer latency (reaction time) between pressing a key and hearing the sound it's supposed to produce, which creates a considerable problem when wanting to play an instrument smoothly. On the contrary, a smaller buffer means lower latency between pressing a key and hearing the note but a higher strain on your CPU.

A fast, modern computer should be easily able to operate at low sample buffer sizes (256 or 128) without audio glitches. However, if you do hear clicks, pops or other audio disruptions, try increasing the buffer size until you reach smooth playback without any glitches. The latency time is displayed in milliseconds on the right-hand side of this menu.

- The **Sample Rate** menu lets you set the sample rate at which audio is sent out of the instrument. The options listed here will depend on the capability of your audio interface hardware.

> ♪ Virtually, all audio hardware can operate at 44.1 or 48 kHz which is perfectly fine in most applications, including Prophet-5 V. Higher sample rates place greater loads on the CPU so we recommend staying at 44.1 or 48 kHz unless you have a specific requirements to work at high sample rates.

- **Test Tone** plays a simple test tone to help you troubleshoot any audio issues. You can use this feature to confirm if the instrument is routed correctly through your audio interface and whether audio is playing back to where you expect to hear it (your speakers or headphones, for example).

- Your connected MIDI devices will appear in the **MIDI Settings** area. Note that this is only displayed if MIDI devices are present on your computer. Click the check box to accept MIDI data from the device you want to use to trigger the instrument. Note that you can select more than one MIDI device if you wish to play Prophet-5 V from multiple controllers.

- **Tempo** lets you set the tempo of the Prophet-5 V sequencer. When using Prophet-5 V within a host music software as a plugin, the virtual instrument gets tempo information from your host software.

2.2.2. macOS Users: Audio and MIDI settings

The process of setting up Audio and MIDI settings in a macOS system is overwhelmingly similar to setting them up in Windows (described above), and the menu is accessed in an identical way. The only difference here in macOS is that OS X uses CoreAudio to handle audio routing, and within that, your audio device will be available in the *second* drop-down menu.

✕ SETTINGS	
Audio Settings	**MIDI Settings**
Device ⬍ CoreAudio	MIDI Devices ☐ K2700
⬍ Pro Tools Aggregate I/O	Tempo 120.0 BPM − +
Buffer size ⬍ 256 samples (5.8 ms)	
Sample rate ⬍ 44100 Hz	
Test Tone Play	
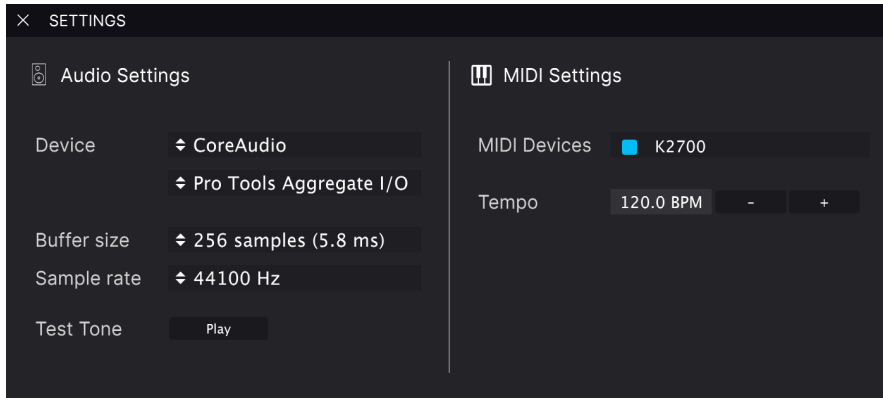
2.2.3. Using Prophet-5 V in Plug-In Mode

Prophet-5 V comes in VST, AU and AAX plug-in formats for use in all major digital audio workstation (DAW) host software, such as Cubase, Logic Pro, Pro Tools, Ableton Live, and more. You can load it as a plug-in instrument and its interface and settings will work in the same way as in stand-alone mode, with a few small differences:

- The instrument will now sync to your DAW's host tempo.
- You can automate numerous parameters using your DAW's automation system.
- You can use more than one instance of Prophet-5 V in a DAW project (in stand-alone mode you can only run one instance of Prophet-5 V).
- You can route Prophet-5 V's audio outputs more creatively inside your DAW using the DAW's own audio routing system.

Now that you've set up your software, it's time to play!

3. THE USER INTERFACE

In this chapter we'll start with an overview of the Prophet-5 V user interface. This will give you an idea of how the instrument is organized and where to find things. We'll dive deeper into the main synth panel in Chapter 5 – Main Synth Panel [p.42].

3.1. High-Level Overview

Prophet-5 V is subdivided into four sections, three of which are annotated in the image above.

1. **The Upper Toolbar** [p.14] This is where you handle administrative tasks such as saving, loading and browsing presets, editing various setup and configuration parameters, accessing the Preset Browser [p.28], and accessing other advanced features of Prophet-5 V.

2. **The Main Synth Panel:** [p.42] Here is where you will likely spend most of your time in Prophet-5 V. It contains a detailed reproduction of the Prophet-5 panel and features. We will go over this panel in the Main Synth Panel [p.42] chapter.

3. **The Lower Toolbar:** [p.18] This section provides quick access to a number of important parameters such as CPU usage, polyphony, edit history with undo/redo, and Macro controls. Its left side also shows pop-up names for any control over which you move the mouse.

4. **The Side Panel:** [p.19] Accessed by clicking the gear icon at upper right, this panel contains MIDI and MPE settings, MIDI control assignments, Macro assignments, and tutorials. (It's not shown in the image above for reasons of neatness on the page.)

3.2. The Upper Toolbar

The toolbar that runs along the top of the instrument provides access to many useful features including the Prophet-5 V menu, preset browsing, access to Prophet-5 V's Advanced mode, and important settings in the Side Panel [p.19]. This section will go over them from left to right.

3.2.1. Main Menu

Clicking the Prophet-5 V logo at the top left corner opens a pull-down menu and lets you access several important features.
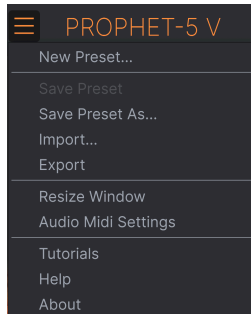
- **New Preset:** Creates a new Preset with default settings on all parameters. It is a good place to start if you would like to create a new sound from scratch.

- **Save Preset:** Overwrites the currently loaded Preset with any changes you have made. This is disabled on factory presets. To edit a factory Preset, first use the "Save Preset As" option.

- **Save Preset As:** Saves your Preset under a different name. Clicking this option reveals a window where you can name your Preset and enter information about it.
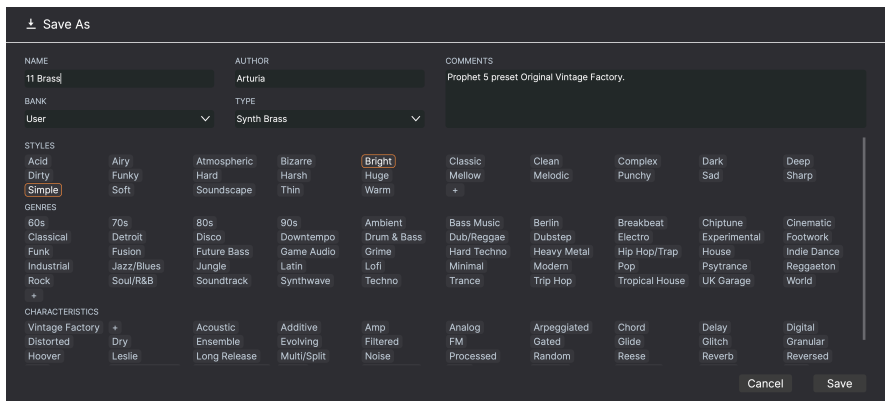
♪ You can enter the Author's name, select a Bank, and specify tags: Types, Styles, and Characteristics. This becomes very useful for later searching in the Preset Browser [p.28]. You can even enter freeform text in the Comments field, which is handy for providing a more detailed description.

- **Import:** Imports a file – either a single Preset or an entire Bank – from your computer. File names have the extension "pro5x."

- **Export:** You can export Presets in two ways: as a single Preset or as a Bank.

  ◦ <u>Export Preset</u>: Exporting a single preset is handy when for sharing a Preset with someone else. The default path to these files will appear in the "save" window, but you can create a folder at another location if you like. The saved preset can be reloaded using the *Import* menu option.
  ◦ <u>Export Bank</u>: This option can be used to export an entire bank of sounds from the instrument, which is useful for backing up or sharing Presets. Saved banks can likewise be reloaded using *Import*.

- **Resize Window:** The Prophet-5 V window can be resized from 50% to 200% of its original size without any visual artifacts. On a smaller screen such as a laptop you may wish to reduce the interface size so it doesn't dominate the display. On a larger screen or a second monitor you can increase the size to get a better view of the controls.

♪ You can also use the keyboard shortcuts Ctrl & +/- (or Cmd & +/-) to quickly adjust the window size. Note that in some DAWs, the same key commands may be used for zoom. In this case, the DAW takes priority.

- **Audio Settings (stand-alone mode only):** Here you manage the way the instrument transmits audio and receives MIDI. See Chapter 2 [p.9] for more information.

When using Prophet-5 V as a plug-in, the host software handles all of the parameters in this menu including audio and MIDI inputs and outputs, buffer size settings, and the like.

- **Tutorials:** Prophet-5 V comes with interactive, in-app tutorials that walk you through different features of the instrument. Select one of the tutorial chapters to get step-by-step descriptions of how to make the most of Prophet-5 V.

- **Help:** Provides links to the Prophet-5 User Manual and online FAQ.

- **About:** Here you can view the Prophet-5 V software version and "movie credits" of everyone involved in its development. Click the About window again (or anywhere on the interface) to close it.

3.2.2. Preset Toolbar Area

Prophet-5 V comes packed with lots of great-sounding factory Presets and we hope you'll create many more of your own. We have a Preset Browser powerful enough to deserve its own chapter [p.28]. Here, though, are the main tools needed for quickly selecting Presets.
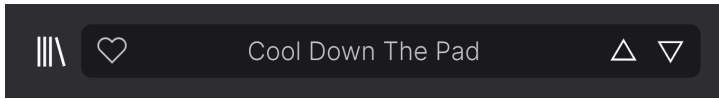
The browsing features of the Preset Toolbar include the following:

1. The ‖‖\ **Preset Browser Button** opens and closes the Preset Browser.

2. The **Preset Name** is listed next in the toolbar. Clicking on the name reveals a pull-down menu with other available presets. Click on any name to load that preset or click away from the menu to close it.
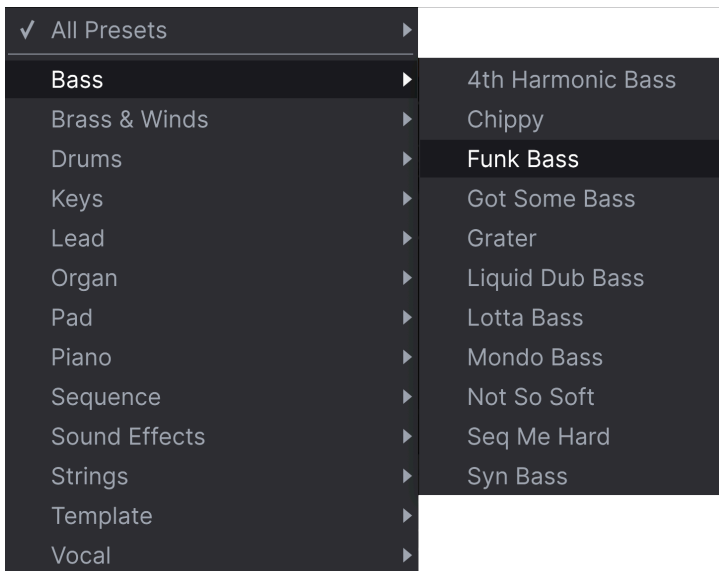
3. The **Preset Filter** drops down when you click the main Preset name field. Set to *All Types*, it covers every Preset in the current bank. Set to a different option, it limits Preset selection to sounds of a certain Type, e.g., bass as shown above.

> ♪ That's Type with a capital T because Types are a specific tag in the Preset Browser and the categories shown here correspond to them.

4. The **Arrows** select the previous or next preset in the filtered list. This is the same as clicking on the preset name and selecting the next option in the list, but does it with only one click.

3.2.3. Advanced Panel Button

Prophet-5 V faithfully emulates the original Prophet-5 hardware, but does so much more. This includes offering extended modulation sources and routings, plus three effects slots with a choice of 16 studio-grade effects for each. Access these features by clicking the **Advanced** button.
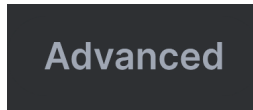
These features are covered in two upcoming chapters: Advanced Modulations [p.57] and Effects [p.69].

3.2.4. Gear Icon

At the far right of the Toolbar, a gear-shaped icon opens up a panel on the right side, containing four tabs:

- **Settings:** Includes MIDI receive channel and settings relevant to MPE (MIDI Polyphonic Expression) behavior.
- **MIDI:** Handles all assignments of hardware MIDI controls.
- **Macro**: Assignments for four Macros that control multiple parameters with a single knob twist. These knobs are available in the Lower Toolbar.
- **Tutorials:** In-app interactive tutorials, also accessed from the main menu.

More details are in the Side Panel [p.19] section below.

3.3. The Lower Toolbar

The Lower Toolbar runs along the bottom of the Prophet-5 V user interface and provides quick access to several important parameters.

3.3.1. Left Side

Filter Envelope Modulation: Defines how much the envelope modulates the VCF cutoff

The left side of the toolbar displays the parameter name of any control you adjust or even hover the mouse over, leaving plenty of room for longer names.

3.3.2. Right Side

On the right side are several more useful settings.

3.3.2.1. Polyphony
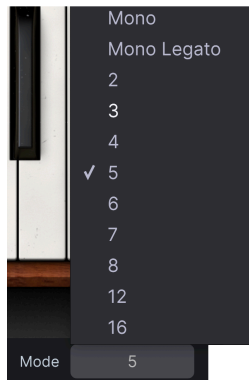
This menu sets the polyphony limit of Prophet-5 V, which can help reduce CPU usage on older machines. Note that Prophet-5 V can go up to 16 voices – far more than the original hardware.

> ♪ When Unison [p.51] is selected in the main synth panel, this menu shows numbers from 2-8. This is the number of unison voices that will be used to generate a huge sound.

3.3.2.2. Edit History

Prophet-5 V keeps track of every move you make when you're editing a Preset. This lets you explore with confidence, because you can always get back to where you came from, or just a few steps back if you prefer. It's like a trail of breadcrumbs.
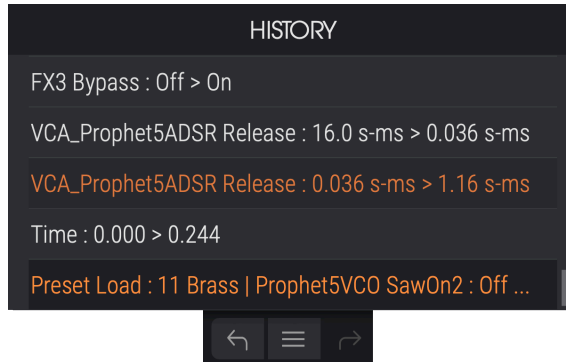
- **Undo (left arrow):** Undoes the last change in Prophet-5 V.

- **Redo (right arrow):** Redoes the last change in Prophet-5 V.

- **Undo History (center menu icon):** Displays a scrollable list of changes. Click on a change to restore the Preset to that state.

CPU Meter and Panic Button:

Displays the current CPU usage of the instrument. Clicking on the meter sends all-notes-off and all-sounds-off MIDI messages to Prophet-5 V.

3.3.2.3. Macro Knobs

These four knobs control multiple parameters with a single turn. Assigning parameters to them is covered in the Macros section of the Side Panel [p.19] section below.

3.4. The Side Panel

The gear-shaped icon at the top right of the upper toolbar opens the Side Panel, which in turn contains four useful tabs. Let's take them from left to right.

3.4.1. Settings

This tab covers Global and Preset settings. Global settings are the same for every Preset; Preset settings are saved at the Preset level.
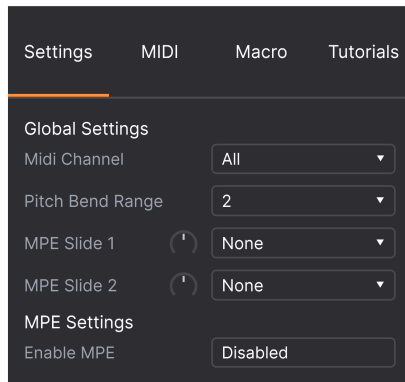
- **MIDI Channel:** Selects the MIDI channel(s) on which Prophet-5 will receive MIDI input: All (omni) or channels 1 through 16.

- **Pitch-Bend Range:** Sets the amount of pitch-bend produced by the onscreen pitch wheel and any physical control mapped to it.

- **MPE Slide 1-2:** Sets depth and two destinations for MPE slide if MPE is detected (see below).
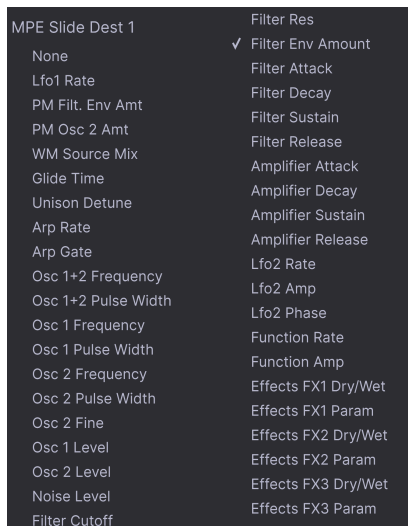
- **MPE Enable/Disable:** Allows Prophet-5 V to receive info from MPE MIDI controllers.

When MPE [p.21] is enabled, more settings appear:

MPE Settings

Enable MPE	Enabled
Zone	Lower Upper
No. Channels	8
Bend Range	7 semitones
Slide CC	74
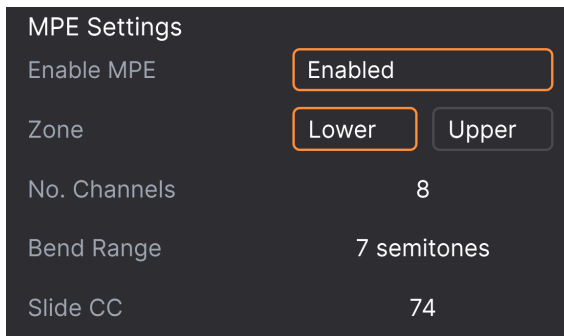
- **Zone:** Selects whether Prophet-5 V will use the upper or lower zone of the controller, if the controller allows for splits.
- **No. Channels:** Sets the maximum number of MIDI channels on which Prophet-5 V receives MPE controller information.
- **Bend Range:** Sets the range of pitch-bend produced by MPE glide (X-axis) motion.
- **Slide CC:** Sets the MIDI continuous controller number for receiving MPE slide (Y-axis) motion.

3.4.1.1. What Is MPE?

Some of the above settings will be unfamiliar to users who have not yet encountered MPE. It stands for MIDI Polyphonic Expression, and it's a way of using multiple MIDI channels to make polyphonic performance gestures such as aftertouch work. Notable MPE controllers include the Haken Continuum, ROLI Seaboard family, and Keith McMillen Instruments KBoard Pro 49.

In addition to aftertouch, controllers like this typically support a "glide" motion, which means moving a finger side to side along the key surface or a ribbon; and a "slide" motion, which refers to moving a finger up and down the Y-axis of the key. In MPE mode, Prophet-5 V maps glide to pitch-bend and slide to two assignable destinations, per the settings above.

3.4.2. MIDI Tab

This is where Prophet-5 V may be placed in MIDI Learn mode. In this mode, all MIDI-assignable parameters on the main panel are highlighted so you can map physical controls on your MIDI controller to them. A typical example might be to map an expression pedal to the Master Volume control, or a physical knob to the Cutoff knob of the Filter section.

Settings	MIDI	Macro	Tutorials

MIDI Controller — Generic MIDI Co... ▼
MIDI Config — User1* ▼

Learn

Ch	CC	Control	Min	Max
1	16	Prophet5VCO Os...	0.00	10.0
1	17	Prophet5VCO No...	0.00	10.0
1	18	Prophet5VCF En...	0.00	10.0
1	19	Prophet5VCO Os...	0.00	10.0
1	71	Prophet5VCF Res	0.00	10.0
1	72	VCF_Prophet5AD...	0.004s–	82.0s–ms
1	73	VCF_Prophet5AD...	0.001s–	35.1s–ms
1	12	Prophet5VCF Freq	6.90Hz	6214Hz
1	75	VCF_Prophet5AD...	0.005s–	80.0s–ms
1	76	Prophet5Lfo Rat...	0.015Hz	30.0Hz
1	77	Prophet5Lfo Sou...	0.00	1.00
1	79	VCF_Prophet5AD...	0.00	1.00

3.4.2.1. Assigning and Unassigning Controls

Click the **Learn** button in the MIDI tab to put Prophet-5 V into Learn mode. The controls available for assignment now appear in purple. Controls that are already assigned are red. (You can re-assign them, though.)

Click any purple control and its name will appear in the list to the right. Now, move a control or operate a switch on your MIDI controller. The corresponding control onscreen will turn red and the assigned MIDI CC number will appear in the list to the left of the parameter name.

To unassign a control onscreen, control-click or right-click it. Alternative methods of assignment are available in the MIDI Parameter Menu [p.23] described below.

3.4.2.2. Min and Max Values

The **Min** and **Max** value columns for each parameter in the list let you scale the amount by which a parameter in Prophet-5 V changes in response to a physical control movement. For example, you may wish to limit the range of a filter sweep even though you're probably going to turn the knob all the way in live performance.

Drag up or down on a value to change it. If desired, you can set the maximum lower than the minimum. This reverses the polarity of the physical controller; i.e. turning it up will turn the assigned parameter down.

In the case of switches which only have two positions (On or Off, etc.), those would normally be assigned to buttons on your controller. But it is possible to toggle those with a fader or another control if you like.

3.4.2.3. MIDI Parameter Menu

Control-clicking or right-clicking on any item in the list of assigned parameters brings up a convenient menu with the following options, which can be different for each parameter.
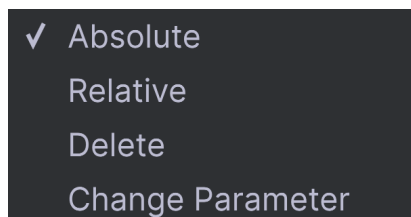
- **Absolute:** The assigned parameter in Prophet-5 V tracks the literal value your physical controller is sending out.
- **Relative:** The assigned parameter in Prophet-5 V will go up or down from its current value in response to physical controller movements. This is often useful when using endless 360-degree encoders.
- **Delete:** Removes the assignment and turns the corresponding onscreen control purple again.
- **Change Parameter:** Brings up a large sub-menu of every assignable parameter in Prophet-5 V. This lets you change the assignment of the current CC/physical control manually and is useful when you know exactly the destination you're looking for.

3.4.2.4. MIDI Controller Menu

At the top right of the MIDI tab is a drop-down menu where you can select templates for many Arturia MIDI controllers. These map physical controls to many "most reached for" parameters in Prophet-5 V. A Generic template is also provided for third-party MIDI controllers.

3.4.2.5. MIDI Config Menu

MIDI Controller Configs

Save Current Config As...
Save Current Config
Delete Current Config

Import Config
Export Current Config

Default
Empty
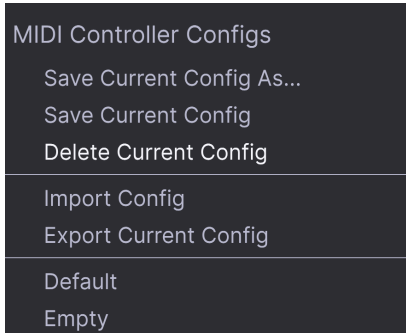
Another drop-down lets you manage different sets of MIDI maps for controlling Prophet-5 V from MIDI hardware. You can save/save as the current MIDI assignment setup, delete it, import a configuration file, or export the currently active one.

This is a quick way to set up different hardware MIDI keyboards or controllers with Prophet-5 V without having to build all the assignments from scratch each time you swap hardware.

For example, if you have multiple hardware controllers (small live keyboard, large studio keyboard, pad controller, etc.), you can create a profile for each of them just once, and then quickly load it here. This saves you from having to redo the MIDI mapping assignments from scratch each time you swap hardware.

Two options in this menu are especially powerful:

- **Default:** Gives you a starting point with pre-determined controller assignments.
- **Empty:** Removes the assignments of all controls.

3.4.2.6. Add Control
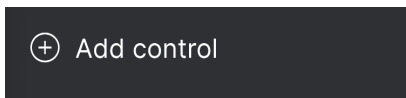
⊕ Add control

Click on the **Add Control** option at the bottom of the MIDI tab to bring up a massive pop-up of every MIDI-assignable parameter in Prophet-5 V. You can then scroll through the pop-up and click on a control name to add it to the assignment list. This is useful when you know exactly what parameter you want (e.g. something in the Advanced modulations or the effects), but don't want to hunt for it in the graphical interface.

3.4.3. Macros Tab

This tab handles assignments for the four Macro knobs at the right side of the lower toolbar. You can assign multiple parameters to each one, then MIDI Learn [p.22] the Macro itself to a physical control for powerful performance control over multiple parameters via a single knob twist.

	Settings	MIDI	Macro	Tutorials

Brightness   Timbre   Time   Movement

Learn

Destination	Min	Max
› Prophet5VCF Freq	0.00	1.00
› Prophet5VCF EnvAmt	0.00	0.928
› FX3 Param Eq Peak 3 Gain	0.00	1.00
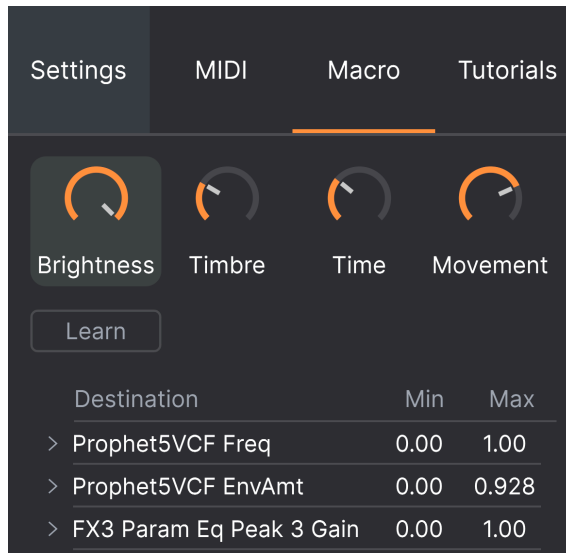
♪ Macros are saved at the Preset level.

3.4.3.1. Macro Slots

Click one of the Macro knobs to select which Macro you want to work assign parameters to. The default names are Brightness, Timbre, Time, and Movement. You may rename them by clicking in the name field, then typing. The name of the corresponding knob in the Lower Toolbar will change as well.

3.4.3.2. Creating Macros

Click the Learn button in the Macro tab and you will see that the process works much like MIDI assignments: Available destinations turn purple and ones already assigned turn red. Click on a purple control onscreen and its name will appear on the list.

To remove a parameter from the Macro, control-click or right-click its name in the list and select Delete. Parameters under Macro control have **Min** and **Max** values and may be scaled by dragging up or down directly on the number, similarly to MIDI assignments. To reverse the polarity of a parameter (i.e. it goes down when you turn the Macro knob up and vice-versa), set the minimum value higher than the maximum.

> ♪ There are no rules for what to name a Macro or which parameters to put in it. You could name a Macro after a favorite TV character and group a handful of unrelated parameters there. In practice it's probably better to keep things more descriptive.

3.4.3.3. Macro Curves

Beyond simple scaling, you can customize a curve that determines how each parameter under the Macro's control proceeds from its minimum to maximum value and back when you turn the Macro knob. Click the **>** icon next to the parameter name to open the curve window.
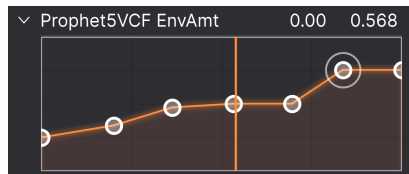
Click on the curve to add a "breakpoint," represented by a small circle. You can then drag the point and the curve segments between it and its nearest neighbors will change accordingly. Right- or control-click on a point to remove it. The first and last breakpoints cannot be removed.

> ♪ A simple diagonal line would produce a linear curve, but the potential fun here is to make things non-linear.

3.4.4. Tutorials

In this tab, which can also be opened by selecting Tutorials from the you can click on titles for the individual chapters, which in turn will take you through different areas of Prophet-5 V in steps. The parts of the panel to focus on are highlighted as you go.

> ! If you're editing a Preset, make sure to save it before opening the Tutorials because doing so will load a new Preset and overwrite your changes. The Tutorials also take over the Side Panel space when in use.

4. THE PRESET BROWSER

The Preset Browser is how you search, load, and manage sounds in Prophet-5 V. It has different views but they all access the same banks of Presets.

To access the search view, click the browser button (the icon looks a bit like books on a library shelf). To close the browser, click the X that appears in its place.

The browser has four main areas:
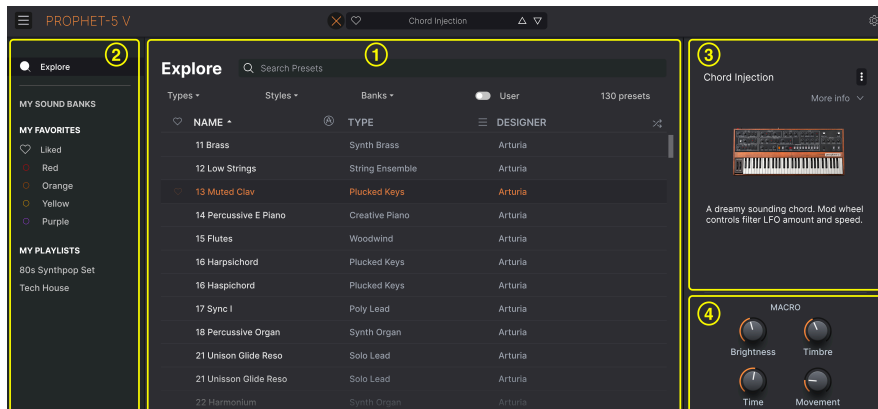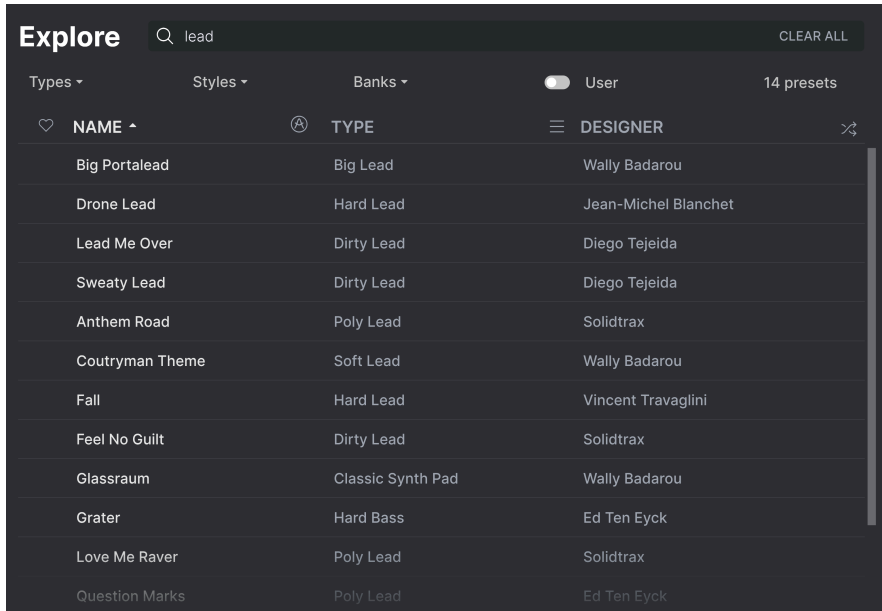
The full Preset Browser window

Number	Area	Description
1.	Search and Results [p.29]	Search Presets with text strings, and by tags for Type and Style.
2.	Sidebar [p.34]	Manage Banks and Playlists.
3.	Preset Info [p.36]	Summary of Bank and Tags, Designer name, and description info for current Preset.
4.	Macro Knobs [p.19]	Large size duplicates of Macro knobs in Lower Toolbar.

4.1. Search and Results

Click on the Search field at the top and enter any search term. The browser will filter your search in two ways: First, by matching letters in the Preset name. Then, if your search term is close to that of a Type or Style [p.30] it will include results fitting those tags as well.

The Results list beneath shows all Presets that fit your search. Click the X icon at right to clear your search terms.

Filter by typing text in the Search field

4.2. Using Tags as a Filter

You can narrow (and sometimes expand) your search using different tags. There are two kinds of tags: *Types* and *Styles*. You can filter by one, the other, or both.

4.2.1. Types

Types are categories of instruments and musical roles: bass, leads, strings, pads, organs, and more. With a clear search bar, click the **Types** button to bring up a list of types. Notice that each type also has several sub-types:
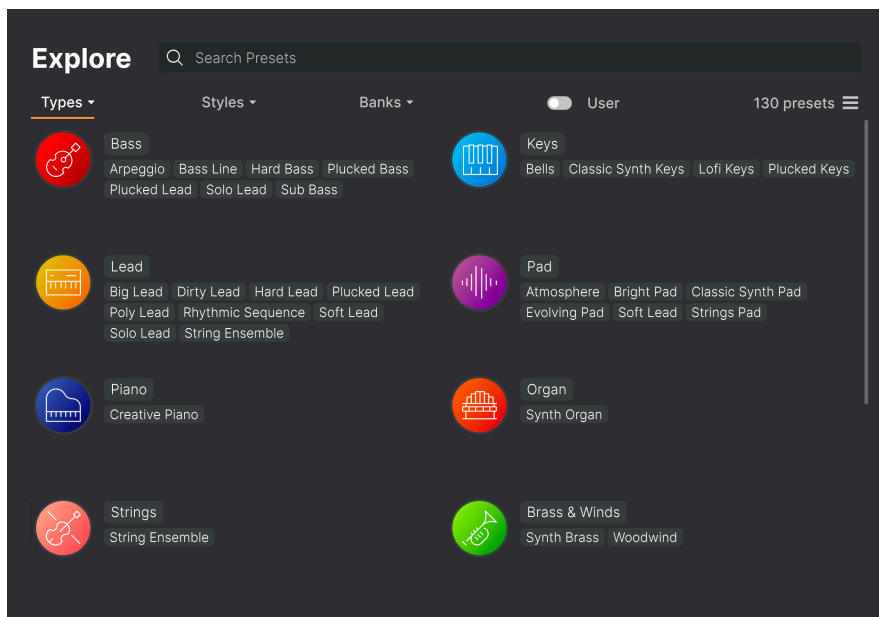
Click any one of them, and the results will show only Presets that match that tag. You can also select multiple Types using Cmd-click (macOS) or Ctrl-click (Windows). For example, if you aren't sure whether the Preset you're looking for was tagged with Keys or Pad, select both to broaden the search.

Results columns can be inverted by clicking the arrow buttons to the right of their titles (Name, Type, Designer).

4.2.2. Styles

Styles refine your search according to further musical attributes. Accessed by the **Styles** button, this area has three further subdivisions:

- *Genres*: Identifiable musical genres such as decades, Trance, Techno, Synthwave, Disco, etc.
- *Styles*: General "vibe" such as Atmospheric, Dirty, Clean, Complex, Mellow, etc.
- *Characteristics*: Sonic attributes such as Analog, Evolving, Distorted, Dry, Rise, etc.
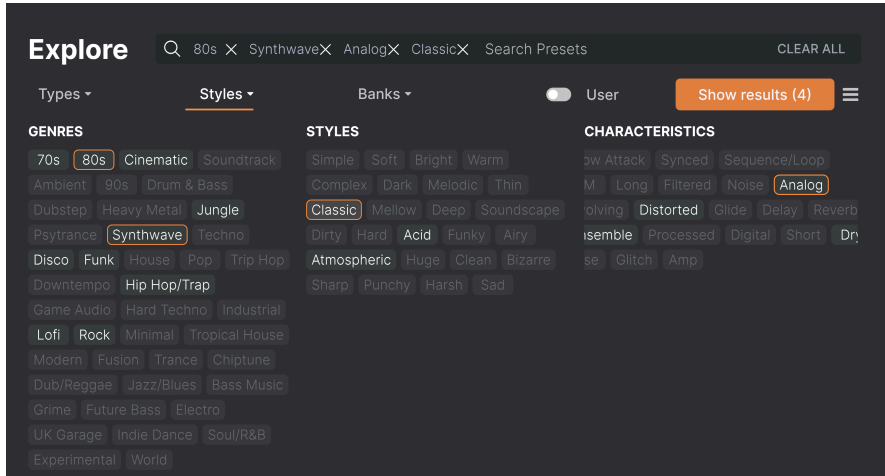
Click on any tag to select it. Click again (or right-click) on any selected tag to de-select it. Notice that when you select a tag, several other tags usually disappear. This is because the browser is narrowing your search by a process of elimination. De-select any tag to remove that criterion and widen the search without having to start all over again.

4.2.3. Banks

Next to the **Types** and **Styles** buttons is the **Banks** button, which lets you do your search (using all the methods above) within the factory bank or user banks.

4.3. Search Results window

Click the **Show Results** button if you cannot already see your list of results. Click the sort arrow to reverse the alphabetical order of any column.

4.3.1. Sorting the Preset Order

Click the **NAME** header in first column of the Results list to sort Presets in ascending or descending alphabetical order.

Click the **TYPE** header in the second column to do the same thing by Type.

Click the **Arturia logo** to the left of **TYPE** to bring factory-featured Presets to the top of the list. These will appear just under any Presets you have liked [p.33].

The third column has two header options: **DESIGNER** and **BANK**. Click the icon with three lines to choose between the two. Then click either header name as with the other two columns to switch the alphabetical order.
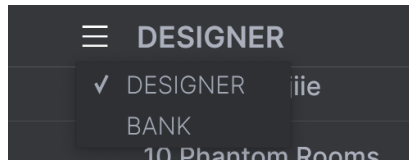
Click the ♥ to sort by liked presets.

Click the two intertwined arrows to sort presets at random.

4.3.2. Clearing Tags

Just above the Types, Styles, and Banks buttons, you will see labels for all the active tags in a search. Click the X next to any one to remove it (and thus broaden the results). Click **Clear ALL** to remove all tags.
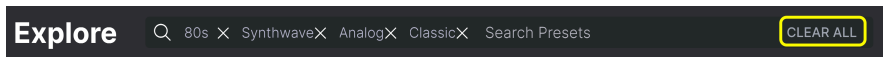
4.3.3. Liking Presets

As you explore and create Presets you can mark them as Liked by clicking the **heart** next to their names. later, click on the heart icon to put all of your favorites at the top of the Results list.
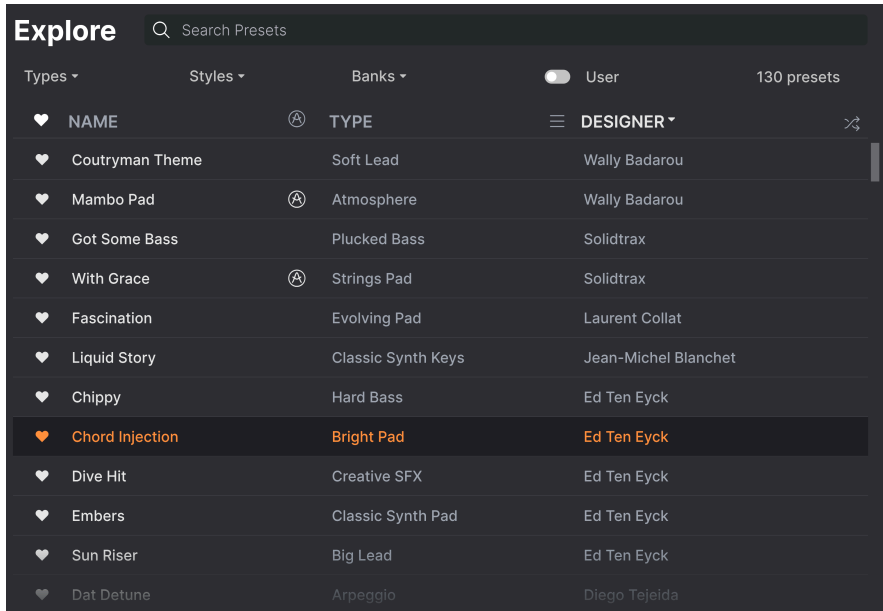
Use as many of the sorting and filtering features as you need and you will find the exact sound you want every time.

4.4. Sidebar

The leftmost section of the Preset Browser determines what is displayed in the Search and Results [p.29] section.

The topmost option is:
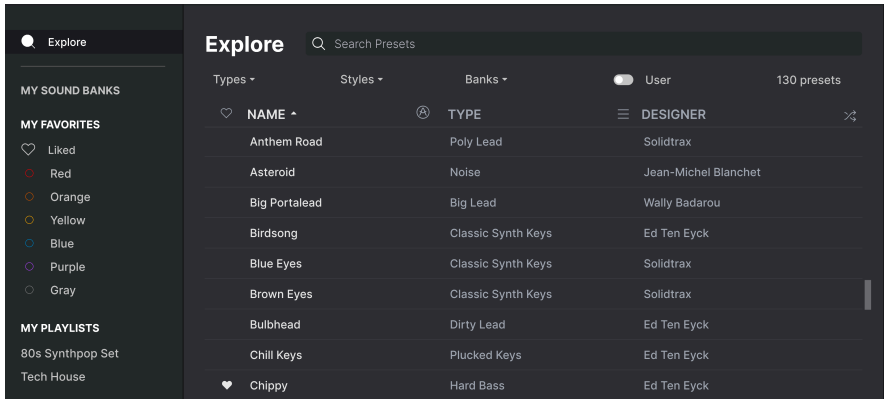
The **Explore** section is the default, letting you search the current bank of Presets loaded into Prophet-5 V as we did in the previous section.

4.4.1. My Sound Banks

Clicking **My Sound Banks** brings up a window with all of the currently available Sound Banks, starting with the Factory bank. User banks appear next to it, and can be deleted, renamed, or exported by right-clicking them.
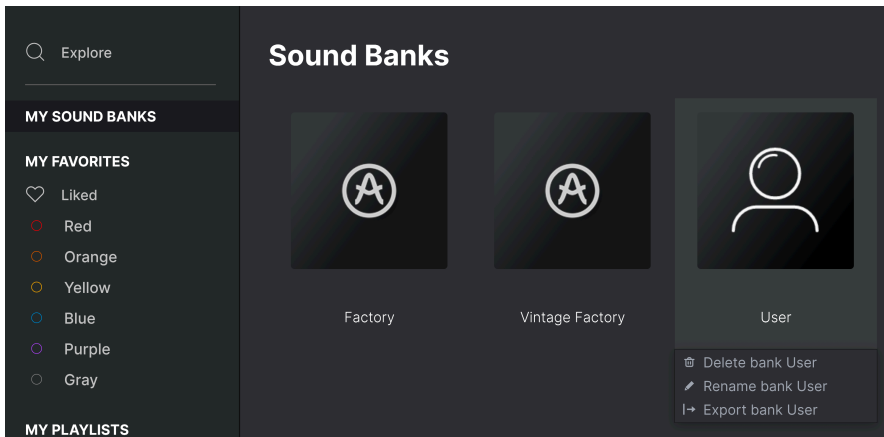
4.4.2. My Favorites

The middle part of the Sidebar has a menu called **My Favorites**, which allows you to color-code certain groups of Presets for easy access. It also includes the **Liked** group, so you can quickly find Presets you've marked with the heart icon.

To decide which colors you'd like to display, hover over **My Favorites** and click **Edit**. Then use the buttons to select which colors you'd like to see or hide, and then click **Done**.
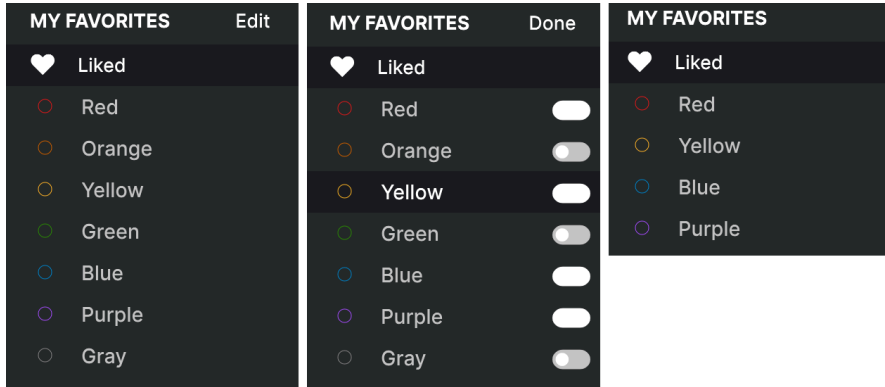
To add Presets to a particular set of Favorites, simply drag and drop them over the appropriate color. Then click on the color itself to display your grouping.

4.4.3. My Playlists

MY PLAYLISTS	+ New
80s Synthpop Set	
Prophet Margins	
Tech House	
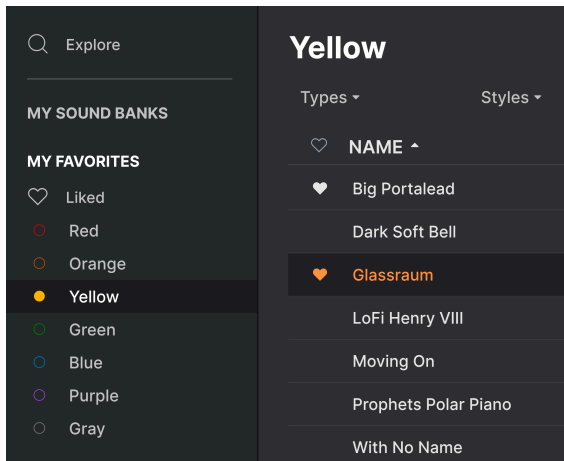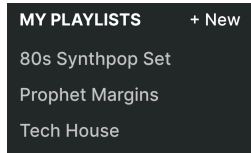
The bottom part of the sidebar displays any Playlists you have created or imported. Playlists are a very powerful management tool for set lists for gigs. Learn more about them in the below.

4.5. Preset Info Section

The right side of the browser window shows specific information about each Preset. The information for User Presets (but not Factory ones) may be changed here: Name, Type, Favorite, etc.

Big Portalead

Less info ∧

DESIGNE   Wally Badarou
TYPE   Big Lead
BANK   Factory

80s   Pop   Atmospheric   Bright   Hard
Huge

A Massive Lead sound. Mod wheel controls vibrato on VCO1 and PWM modulation on VCO2.
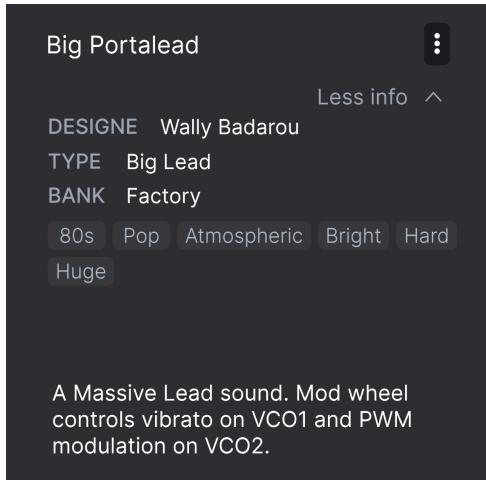
To make the desired changes, you can type in the text fields, use one of the pull-down menus to change the Bank or Type, and click the + sign to add or delete Styles.

Types and Styles changes you make here are reflected in searches. For example, if you remove the "Funky" Style tag and then save that Preset, it will not show up in future searches for Funky sounds.

Clicking on the three-dots icon at the top right pops up a menu with organizational options for the Preset.
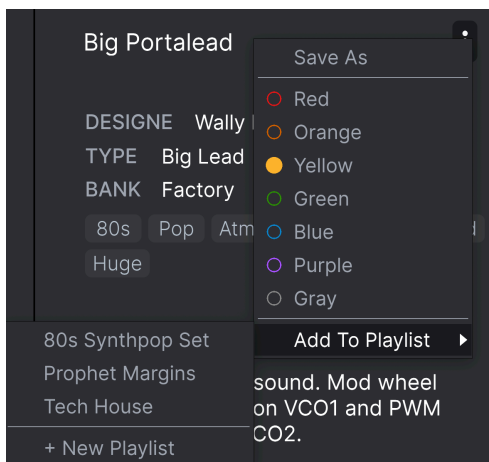
Options include **Save Preset**, **Save Preset As**, **Delete Preset**, and **Add to Playlist**, complete with an option to create a new Playlist. The lines with color icons allow you to add the Preset to a particular group of Favorites, which we'll describe below.

4.5.1. Editing Info for Multiple Presets

If you'd like to move several Presets to a different bank while preparing for a performance, or enter a single comment for several Presets at the same time, it's easy to do. Simply hold command (macOS) or ctrl (Windows) and click the names of the Presets you want to change in the Results list. Then enter the comments, change the Bank or Type, etc., and save the Preset.

	Default	Ⓐ	Template	Arturia
♥	11 Brass		Synth Brass	Arturia
♥	12 Low Strings		String Ensemble	Arturia
	13 Muted Clav		Plucked Keys	Arturia
♥	14 Percussive E Piano		Creative Piano	Arturia
	15 Flutes		Woodwind	Arturia
	16 Haspichord		Plucked Keys	Arturia
♥	17 Sync I		Poly Lead	Arturia
♡	18 Percussive Organ		Synth Organ	Arturia

You can also select all following/preceding presets with shift + click.

> ♪ If you want to alter the information for a Factory Preset you must first use the *Save As* command to re-save it as a User Preset. After this the Info section will gain Edit and Delete buttons at the bottom of the window.

4.6. Preset Selection: Other Methods

Click on the Preset name in the center of the Upper Toolbar to bring up a drop-down menu. The first option in this menu is **All Types**, and it brings up a submenu of literally every Preset in the current bank.

Below this are options that correspond to the Type tags. Each of these brings up a submenu of all Presets of its Type.

If you have an active search by Type and/or Style, the up/down arrows to the right of the Preset name will step through only the results that conform to your search.
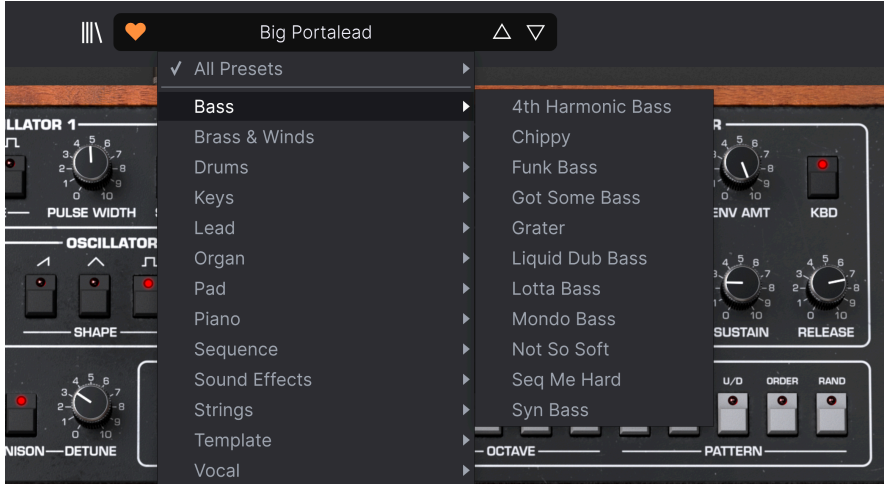
However, "All Types" in the drop-down menu always ignores those criteria. Likewise for the Type choices below the line — they always include all Presets within that Type.

4.7. Macro Knobs

These are simply larger duplicates of the Macro knobs in the Lower Toolbar. Move one and its partner moves with it.

Assigning parameters to Macros is covered in the Macro Tab [p.26] section of Chapter 3.

4.8. Playlists

Playlists are a way to collect Presets into different groups for different purposes, such as a set list for a particular performance or a batch of Presets related to a particular studio project. Within a Playlist, Presets can be reordered and grouped into Songs, a handy addition to a set list.

The **My Playlists** subheading appears under **My Favorites** in the Sidebar. However, when you first start using Prophet-5 V, you'll have no Playlists yet, and the **My Playlists** subheading won't be there yet. To make it appear, you'll have to create your first Playlist.

4.8.1. Create your first Playlist

To get started, drag any Preset to the Sidebar. The **My Playlists** heading will appear, along with a **+ New** icon. Drop the Preset onto the **+ New** icon, and you will then be given a pop-up to name your first Playlist. Once you've created one Playlist, the **My Playlists** heading will become a permanent part of the Sidebar.

4.8.2. Add a Playlist

To add a Playlist, hover your mouse over the **My Playlists** heading and click the **+ New** icon when it appears.
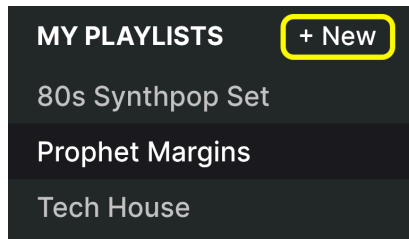
Give the Playlist a name and it will appear in the Playlists menu in the Sidebar.

Once you've created some Playlists, right-clicking on a Playlist name will pop up a set of options – you can **Rename**, **Delete**, or **Export** the Playlist to your computer, as a file with the .aplist extension.
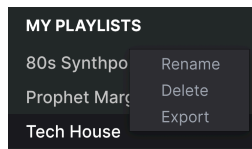
4.8.3. Add a Preset

You can use all of the options in the Explore window to locate Presets for your Playlist. When you find a desired Preset, click-drag it onto the Playlist name.
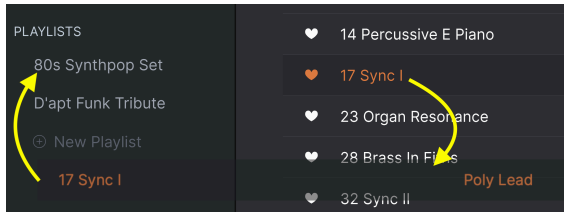
Click and drag from the Search Results list onto one of the playlists

To view the contents of a playlist, click on the playlist name.

4.8.4. Re-order the Presets

Presets may be reorganized within a Playlist. For example, to move a Preset from slot 3 to slot 4, drag and drop the Preset to the desired location.
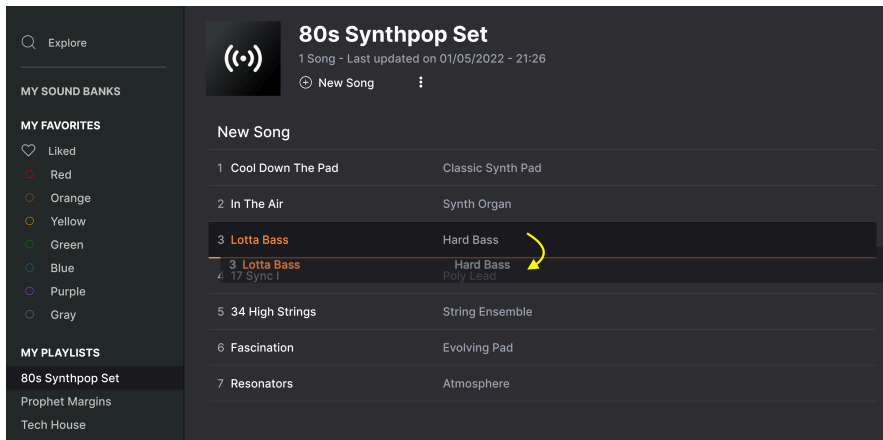
The white line indicates the final destination of the Preset you're dragging.

This will move other Presets up in the list to accommodate the new location of the Preset you just moved. A bright white line will briefly appear at the "insert point."

4.8.5. Remove a Preset

To delete a Preset from a playlist, right-click on its name to bring up a pop-up menu.
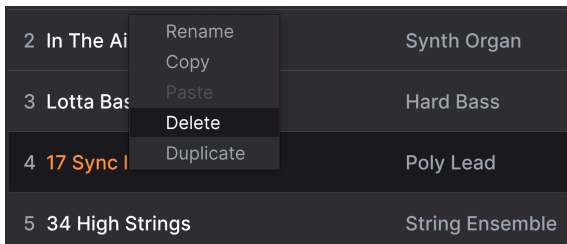
This menu also includes **Rename**, **Copy**, **Paste**, and **Duplicate** options. More management options are described below.

4.8.6. New Song and Playlist Management

The **New Song** button creates a new Song at the bottom of the Playlist. You can name it, then click and drag it to position it in the Playlist and add Presets to it in the desired order.

To access other Playlist management options, click on the three dots icon next to the **New Song** button. This brings up a pull-down menu:
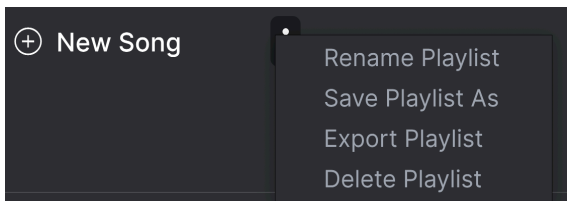
- **Rename Playlist**: Renames the current Playlist without making a copy.
- **Save Playlist As**: Creates a duplicate of the playlist with "Copy" appended to the name. You can change the name before saving.
- **Export Playlist**: Exports your Playlist to a location on your computer, with the filename extension "aplst."
- **Delete Playlist**: Deletes the current Playlist but does *not* delete any of the Presets in it.

5. MAIN SYNTH PANEL

Here is where the real fun begins: the panel that duplicates all controls and functions of the mighty Prophet-5, then adds some cool features of our own.

Like all classic analog synths, the Prophet-5 used *subtractive* synthesis as its method of creating sounds. Subtractive synthesis is the audio equivalent of sculpture: you start with one or more harmonically complex waveforms, then chisel away what you don't want using filters. That's a very simplified definition because when you bring in modulation, things get truly interesting.

This chapter will assume a basic knowledge of synthesis and tell you what all the areas of Prophet-5 V's main panel do.

Number	Area	Description
1.	Oscillator Section [p.44]	The two oscillators and mixer with noise source.
2.	Filter [p.46]	The Prophet's voltage-controlled filter, with its own envelope.
3.	Amplifier Envelope [p.47]	Volume envelope plus master volume and tuning.
4.	Modulators [p.48]	Modulation sources including the Prophet's famous POLY-MOD.
5.	Keyboard Controls [p.50]	Controls that affect how and what the keyboard plays: Glide, Unison, Hold, and Chord Mode.
6.	Arpeggiator [p.53]	The vintage-style Arpeggiator is an Arturia addition.
7.	Output Section [p.54]	Master tuning and volume controls.

5.1. Architecture

The Prophet's architecture was simple yet powerful. It was fully polyphonic, meaning that each voice passed through its own filter, and VCA as opposed to sharing a filter or output stage.

Each of its five voices featured two oscillators (thus it contained 10 oscillators in total) with sawtooth and variable pulse waves on the first and the addition of a triangle wave on the second. Oscillator 2 could double as an extra LFO, and Oscillator 1 could be hard-synced to Oscillator 2.

While LFO-based modulation was on hand, the POLY-MOD section gave the Prophet a small dose of modular-like patchability. Here, the filter envelope and/or Oscillator 2 could be mixed to modulate any of three destinations: Oscillator 1 pitch, Oscillator 1 pulse width, and the filter cutoff frequency. Enthusiasts consider POLY-MOD a cornerstone of the Prophet-5's sound.

That's a very quick tour of the signal path. We'll learn more as we proceed through the control sections.

5.2. Common Behaviors

All controls on the main panel (and elsewhere in Prophet-5 V) follow a few rules designed to make things more convenient for you, the musician.

5.2.1. Value Pop-Ups

Operate or hover the mouse on any knob, and a pop-up a.k.a. "tool tip" appears, displaying its current value.

5.2.2. Fine Adjustments

To adjust a control more slowly and therefore more precisely, hold Control or use the right mouse button while operating it.

5.2.3. Double-Click for Default

Double-clicking any parameter returns it to its default value.

5.2.4. Parameter Name Display

As mentioned in Chapter 3, operating or hovering on any control will cause its full name to appear in the left side of the Lower Toolbar [p.18].

5.3. Oscillator Section

How much can you do with two oscillators? Given how many keyboardists seek after classic Prophets, a lot!

> ♪ In both Oscillators, all waveforms can be activated simultaneously.

5.3.1. Oscillator 1

Oscillator 1 features sawtooth and square/pulse waves, the latter having variable pulse width. The controls are as follows:

- **Frequency:** Sets the oscillator pitch in semitones.
- **Saw On/Off:** Turns the sawtooth wave on or off.
- **Square On/Off:** Turns the square/pulse wave on or off.
- **Pulse Width:** Adjusts the pulse width for the square wave only.
- **Sync:** When active, the pitch and phase of Oscillator 1 is locked to that of Oscillator 2.

> ♪ Varying the pulse width of a square wave makes that wave's positive cycle asymmetrical with it's negative cycle. In visual terms, the upwards phase of the waveform becomes "fatter" or "skinnier." The musical result is subtle harmonic change, and modulating the pulse width is a great way to add a sense of motion before even touching a filter.

> ♪ Oscillator sync (not to be confused with tempo sync) was a key ingredient in getting the aggressive, squawky sounds associated with The Cars. Try the Vintage Factory bank Presets Sync I and Sync II to hear this in action.

5.3.2. Oscillator 2

Oscillator 2 adds a triangle wave (which is good for mellower sub-basses) plus the ability to function as an extra LFO.

- **Frequency:** Sets the oscillator pitch in semitones.
- **Fine:** Fine-tunes the oscillator pitch in cents.
- **Saw On/Off:** Turns the sawtooth wave on or off.
- **Triangle On/Off:** Turns the triangle wave on or off.
- **Square On/Off:** Turns the square/pulse wave on or off.
- **Pulse Width:** Adjusts the pulse width for the square wave only.
- **Lo Freq:** When active, Oscillator 2 becomes an LFO.
- **KBD:** Toggles Oscillator 2 keyboard tracking.

In normal use, you would leave **KBD** engaged unless you wanted Oscillator 2 to play a drone that's the same pitch regardless of the notes you play. Switch to LFO mode, and it should usually be disengaged. Otherwise, the result is an LFO that speeds up as you ascend the keyboard. (Who knows, you may want that!)

5.3.3. Mixer

This section simply mixes the outputs of Oscillators 1 and 2, and adds a white noise source, upstream of the Filter.

- **Osc1:** Adjusts the volume of Oscillator 1.
- **Osc2:** Adjusts the volume of Oscillator 2.
- **Noise:** Adjusts the volume of the white noise source.

5.3.3.1. What is White Noise?

It's a sound that contains all harmonics audible to the human ear. We experience it as similar to static on a radio or the rushing of the ocean. Because everything is mixed into the Filter, the Filter will affect the harmonic content of the white noise as well as the oscillator waveforms. In fact, filtering white noise, then modulating the filter cutoff, is a classic method for simulating wind and surf sounds.

5.4. Filter

The Prophet-5 employed a lowpass VCF. Its aggressive slope of 24dB-per-octave and pronounced resonance peak (if Resonance was used to any degree) invited comparisons to the Mini. The difference was that on the Prophet, you could play chords! Enthusiasts consider the Solid State Music (SSM) 2040 filter chips in revision 2 of the Prophet-5 to sound superior to the Curtis chips in revision 3 – which is why we modeled the revision 2!

A lowpass filter is like a sophisticated tone control. It reduces treble frequencies above the cutoff, optionally adding a volume peak around frequencies right at the cutoff, called resonance or Q. The controls in the top row of the Filter section are:

- **Cutoff:** Sets the frequency above which treble is filtered out.
- **Resonance:** Adjusts the level of the volume peak near the cutoff frequency.
- **Env Amt:** Adjusts the extent to which the Filter Envelope affects the cutoff.
- **KBD:** Enables or disables Keyboard Tracking.

5.4.1. Keyboard Tracking

The function of Keyboard Tracking in a filter is to gradually open up the filter (i.e. increase the Cutoff) as higher notes are played on the keyboard. This emulates the behavior of many acoustic instruments, whose harmonics increase with higher notes. Turn it off, and you'll hear that higher notes can seem unnaturally dull. Unless, of course, that's the sound you're going for.

5.4.2. Filter Envelope

Across the bottom row are controls for an envelope dedicated to modulating the Filter cutoff frequency. Think of an envelope as an extra hand on the Cutoff knob, giving some movement and personality to the signal each time you play a note.

- **Attack:** Adjusts the time it takes for the cutoff to reach the value set on the Cutoff knob.
- **Decay:** Adjusts the time it takes for the cutoff to change from the peak attack level to the Sustain level.
- **Sustain:** Sets the level at which the filter sustains after the Decay phase, which is for as long as a note is held.
- **Release:** Adjusts the time it takes for the cutoff to fall from the Sustain level to zero once a note is released.

5.5. Amplifier Envelope

Volume (also called amplitude) can also be manipulated by an "extra hand." In the analog world, this is done with an envelope generator modulating a VCA, or voltage-controlled amplifier.

- **Attack:** Adjusts the time it takes for the volume to reach the maximum value (in other words, the upper limit determined by the Master Volume Knob).
- **Decay:** Adjusts the time it takes for the volume to change from maximum to the Sustain level.
- **Sustain:** Sets the level at which the volume sustains after the Decay phase, which is for as long as a note is held.
- **Release:** Adjusts the time it takes for the volume to fall from the Sustain level to zero once a note is released.

♪ Our ears and brains identify sounds by the initial phase of their volume envelopes more than any other factor. For example, increasing the attack time on a simulated piano sound usually causes listeners to identify it as a violin or cello.

5.6. Modulators

The Prophet-5 aimed to pinpoint the modulation sources and routings musicians would find most useful, building them into a portable "slab" synth that did not require patch cables.

Let's go over the sections from top to bottom.

5.6.1. POLY MOD

As mentioned earlier, this modulation section is now considered to be a hallmark of the Prophet's design and essential to its sound.

The concept was that you could mix two sources (the Filter envelope and/or Oscillator 2) into up to three destinations. Modulation depth from the sources was controlled with the knobs; the switches toggled destinations connected or not.

- **Filter Env:** Controls depth of Filter Envelope as mod source.
- **Osc 2:** Controls depth of Oscillator 2 as mod source.
- **Freq 1:** Toggles Oscillator 1 pitch as a destination.
- **PW 1:** Toggles Oscillator 1 pulse width as a destination.
- **Filter:** Toggles Filter Cutoff as a destination.

As long as a destination was selected, POLY-MOD was always on, that is, it didn't require the player to raise the modulation wheel or another control.

Note that modulating the Filter Cutoff with its own envelope seems redundant, as you can do this right in the filter section. However, you could now use that envelope on two other destinations, as well as modulate the Filter Cutoff with Oscillator 2. This made it especially useful that Oscillator 2 had an LFO mode.

♪ Modulate Oscillator 1's pitch using Oscillator 2 *not* in LFO mode, and you're essentially performing a rudimentary type of FM synthesis.

5.6.2. LFO

The Prophet-5's LFO worked in conjunction with the Wheel Mod section, providing a repeating modulation source for destinations assigned there. It's a pretty simple affair.

- **Sync:** Determines whether the LFO free-runs in Hertz or is synced to master tempo.
- **Rate:** Sets the LFO rate. If Sync is active, this is a rhythmic division (or multiple) of the master tempo.
- **Shape:** Three options for the LFO waveform: Sawtooth, Triangle, and Square.

5.6.2.1. LFO Sync Options

Clicking the Sync button above displays a pop-up with the following options:
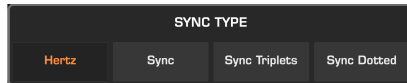
Hertz is the free-running option, whereas the other three offer straight, triplet, and dotted rhythmic feels. A similar menu will appear, often as a drop-down under a knob, for many other time-based parameters in Prophet-5V i.e. LFO rates in the Advanced Modulations, delay times in the Effects, and so on.

5.6.3. Wheel Mod

The Wheel-Mod section routes a mix of the LFO and a noise source to up to five destinations at once. As its name implies, the depth of any modulation is determined by the modulation wheel, i.e. you must raise the wheel in order to hear an effect on the source.

- **Src Mix:** Sets the proportion of LFO and noise in the modulation source signal.
- **Destination:** Buttons toggle connection of five destinations: Oscillator 1 and 2 pitch, Oscillator 1 and 2 pulse width, and Filter Cutoff.

Multiple destinations can be active at once.

> ♪ A Hardware Link button on the Keyboard Tab [p.66] of the Advanced Panel lets you override the onscreen modulation wheel with the one on your MIDI controller.

> ♪ For simple vibrato, the Source Mix knob would normally be all the way in the LFO position. Modulating pitch and/or filter frequency using noise, however, is great for producing a buzzing "swarm" quality.

5.7. Keyboard Controls

Though these two control areas are not adjacent on the panel, we've grouped them in the same section because they both affect *how* the keyboard plays notes as well as *what* notes it plays.

5.7.1. Glide

Also called portamento, Glide means that when you play a note, then play another, the pitch will transition through the notes in between, almost like an invisible hand on a very precise pitch ribbon controller.

- **Glide:** Sets the Glide time between notes.
- **Legato:** When active, Glide only occurs on legato playing.

Note that Glide time is relative to note interval: at a given setting, the pitch will take longer to arrive at a destination note that's farther away from the previous note played.

> ♪ *Legato* roughly means playing a new note without fully releasing the previous one. Setting Glide to Legato helps you play expressively when you don't want Glide all of the time. If you want to hear a note come in crisply with no pitch travel, just make sure all prior notes are fully released, then play it.

5.7.2. Unison

Unison mode, a feature of many classic analog synths, "stacks" the voices into a potentially huge monophonic sound.

- **Unison:** Engages and disengages Unison mode.
- **Detune:** Introduces and adjusts a tuning spread between the Unison voices.

When Unison is active the Polyphony [p.18] menu in the lower toolbar changes, showing unison voice options from 2-8. This is the number of voices used to create a huge sound.

> ♪ A little bit of Unison Detune can add a lot of fatness to the sound; more of it can create a swarming or downright woozy character.

5.7.3. Hold

The Hold button, when active, functions as a sort of feet-free sustain pedal. Any notes played, whether by your fingers or as patterns from the Arpeggiator [p.53] are sustained.

5.7.3.1. Hold Modes

Hold has two modes when the Arpeggiator [p.53] is on, accessed from a menu in the lower toolbar.
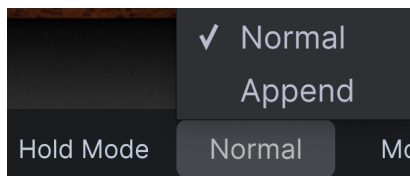
Normal Mode is quite useful for sound design, as you can adjust settings without needing to keep notes held or your foot on a sustain pedal. Also, it will not turn Arpeggiator patterns into mush where every note is sustained; it will just let the patterns keep playing.

Append Mode allows you to keep adding new notes to the pattern by playing, effectively turning the arpeggiator into a sequencer.

5.7.4. Chord Mode

Prophet-5 V has the ability to play a chord when you press a single key. Press the **Chord** button to engage this mode. The key played is always treated as the root note of the chord. *Which* chord is played is described next.

5.7.5. Chord Select

Press the **Select** button to display the following menu:
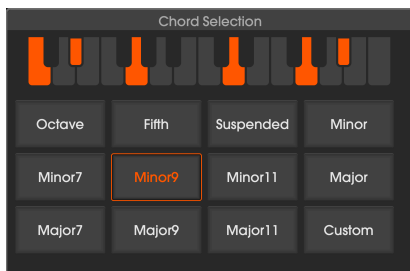
Here, you can choose from 11 common chord types, or select *Custom*, then click notes on the small keyboard at the top to build your chord. Prophet-5 V can voice chords over a range of two octaves. To exit the selection window, click outside of it on the Prophet-5 V interface.

5.8. Arpeggiator

This location was where the patch memory buttons were located on a hardware Prophet. Since we have Presets [p.28] for that, we devoted this space to a fun, retro-style Arpeggiator. It will turn any group of notes you hold into a rolling, repeating pattern.

- **On:** Turns the Arpeggiator on or off.
- **Sync:** Determines whether the Arpeggiator free-runs in Hertz or is synced to master tempo.
- **Rate:** Sets the Arpeggiator rate. If Sync is active, this is a rhythmic division (or multiple) of the master tempo.
- **Repeat:** Displays the number of note repeats set; click to bring up the Arpeggiator Settings Menu [p.54].
- **Octave:** Sets the number of octaves the Arpeggiator pattern spans.
- **Pattern:** Sets the type of Arpeggiator pattern: Up, Down, Up/Down, Order-as-Played, or Random.

Gate time is controlled in the Arpeggiator Settings menu (see below).

5.8.1. Arpeggiator Sync Options
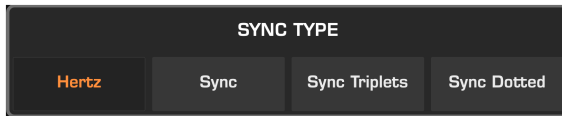
Like the LFO, the Arpeggiator offers free-running and sync-to-tempo modes including triplet and dotted rhythmic feels. Pressing **Sync** displays the above menu.

♪ When Prophet-5 V is used as a plug-in the master tempo to which the Arpeggiator syncs is determined by your DAW. When in stand-alone mode, it's found in the Main Menu [p.14] under *Audio MIDI Settings*.

5.8.2. Arpeggiator Settings

Clicking on the LED display above "Repeat" brings up a menu that allows you to set gate time and note repeats:
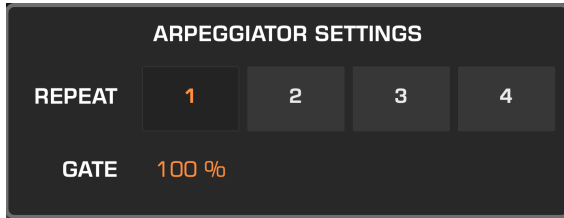
- **Repeat:** Sets the number of times a note is repeated on a *single step* of the Arpeggiator pattern.
- **Gate:** Drag to adjust the gate time or "window" of note length per step/note.

> ℹ ! Reducing the Gate time makes arpeggiated notes sound more abrupt. With Gate time at 100% and Repeat at 2, 3, or 4, you may not hear any note repeats but the number of notes played on a given step still increases. This makes the Arpeggiator sound like it has slowed down. Reduce Gate time to correct this problem.

> ℹ ♪ Try this: Set Note Repeats to 2, Gate Time at about 50%, Octave to 1, and Pattern to Up/Down. Now hold a note and the notes a fifth and octave above it. This recreates the left-hand part of the repeating pattern on The Who's song "Baba O'Riley."

5.9. Output Section

This simple control pair governs the output of Prophet-5 V.
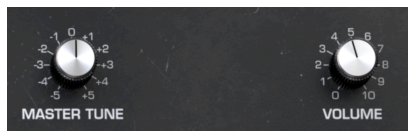
- **Master Tune:** Fine-tunes the output of Prophet-5 V in Hz.
- **Master Volume:** Controls the final output volume of Prophet-5 V.

> ℹ ♪ Master Volume can be less of a boring control than you might think. You can tweak it to avoid clipping in a mix, for example, without having to back out to the mix window of your DAW to change the fader – which you may want to leave where it is for other reasons.

5.10. The Virtual Keyboard

Like many Arturia instruments, Prophet-5V features a virtual keyboard for when you need to work with the synth without a controller handy. Its keys also mirror notes played by your fingers (on a controller) or DAW.

Click lower on the keys to produce increased MIDI velocities – though you may not hear any effect unless the Preset has mapped Velocity to a destination in the Keyboard [p.68] panel.

You can also play using your computer keyboard. The letter keys in the rows beginning with Q and A functioning as black and white keys, respectively. Z and X shift the octave down and up.

5.10.1. Pitch and Modulation Wheels

The onscreen pitch-bend and modulation wheels should respond to the corresponding controls on your MIDI controller. They are not MIDI-mappable, but instead default to pitch-bend and modulation.

> ! If the modulation wheel onscreen does nothing when you move the wheel (or other control) on your controller, check to see if that control is sending MIDI CC 1. Pitch-bend is a "hardwired" affair that does not use a CC, so it should always work.

> ♪ A Hardware Link button on the Keyboard Tab [p.66] of the Advanced Panel overrides the onscreen modulation wheel with the wheel (or other type of control) on your MIDI controller. This lets you set more precise scaling curves and other behaviors than would be possible with the onscreen wheel.

5.11. Voice Dispersion

The variation inherent in analog circuits is what gave vintage synths much of their character and – apologies for the overused term – "warmth." Too much variation was undesirable, but Voice Dispersion offers a sophisticated way to add just the right amount of analog character. It goes way beyond simple detuning. The controls are hidden under a "hatch" above the second octave of the virtual keyboard. Click the hatch to reveal them.

Voice Dispersion sets the variation between aspects of each polyphonic synth voice, corresponding to the condition of a hardware unit. There are three preset levels plus a Custom setting.

- **Preset Buttons:** Clicking a button selects a progressively higher level of variance.

    - **1:** Factory.
    - **2:** Aged.
    - **3:** Out of Calibration
    - **Custom:** Lets you set up a custom condition using the trim pots to the right.
    - **Pitch:** Sets the amount pitch detuning between the voices.
    - **PW:** Sets the level of pulse width variation between voices when Oscillator square waves are active.
    - **Cutoff:** Controls the variance in the Filter Frequency between voices.
    - **Reso:** Controls the variance in the Filter Resonance between voices.
    - **Env:** Adds differences in envelope behavior between voices.
    - **Mod:** Adds differences in modulation depth between voices.

6. ADVANCED MODULATIONS

One of the major ways Prophet-5V expands the capabilities of the original is with modulation sources and routings that didn't exist in the hardware. These reside in the Advanced panel, accessed by clicking the **Advanced** button at the top right of the Upper Toolbar. A new area of Prophet-5V will open up. Next, click the **Modulations** tab.

6.1. Modulations Tab

The Modulations tab displays two extra modulation sources along with their controls. These are a highly controllable LFO (**LFO2**) and a little thing we like to call a Function [p.61], which is what might happen if a mad scientist crossed an LFO and an envelope after consuming too many energy drinks.

First though, notice the tab itself and the **On/Off** button located there:
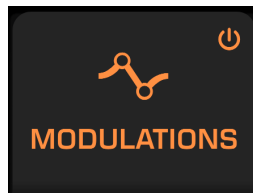
This button enables or bypasses both LFO2 and the Function without removing their routings or otherwise losing their settings.

6.1.1. LFO 2

Compared to the LFO [p.49] on the main synth panel, or to using Oscillator 2 as one, the LFO presented here is far more flexible.

6.1.1.1. LFO 2 Rate and Modes

The **Rate** knob sets LFO 2's speed, supplemented by the usual tempo sync options:

LFO2 RATE TYPE

| Hertz | Sync | Sync Triplets | Sync Dotted |
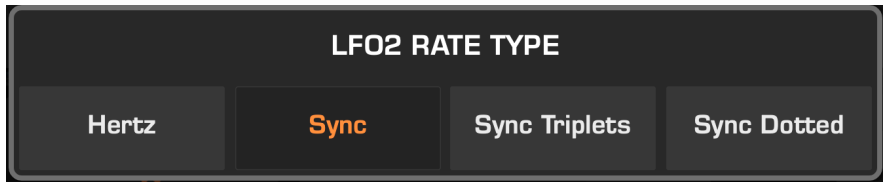
The **Amplitude** knob adjusts the magnitude of the LFO's output – modulation depth by another name.

The strip of buttons across the top choose from a number of modes that determine LFO 2's behavior.

→ ENV   ↻ LFO   LFO RETRIG   ⩔ UNIPOLAR   ≋ POLYPHONIC

Those on the left are radio buttons, i.e. mutually exclusive selections:

• **Env:** LFO 2 plays through once when a note is played, like an envelope.
• **LFO:** LFO 2 cycles through repeatedly in the expected manner.
• **Env Retrig:** Like LFO mode, but LFO 2 begins at the start of its waveform phase every time a new note is played.

On the right, we have:

• **Unipolar:** When active, LFO 2 only sends positive values to its destinations.
• **Polyphonic:** When active, modulation of each note played starts at the beginning of the LFO's waveform phase. When inactive, notes "join in" on the LFO at its current position in the cycle.

> ℹ ! Polyphonic behavior is only available in **Env** and **LFO Retrig** modes.

6.1.1.2. LFO 2 Waveforms and Phase

LFO 2 offers a selection of seven waveforms:

Left to right, these are triangle, sine, sawtooth, ramp (upwards saw), square, sample-and-hold, and smooth sample-and-hold.

> ♪ In technical terms, sample-and-hold is a process in which a circuit takes a snapshot of a changing analog signal, freezes it for a period of time, then repeats the process. In synthesis terms, it creates a waveform with constantly changing pulse width and amplitude. In musical terms, it's used for that pseudo-random burbling effect that suggests a computer from a 1970s sci-fi movie is thinking very, very hard.

Dragging on the **Phase** field changes the starting position of LFO 2's cycle. You can also click on the field (and other numerical fields in the Advanced Panel) to enter a number directly.

To take one example, a sine wave LFO with phase set to 180 degrees looks like this:
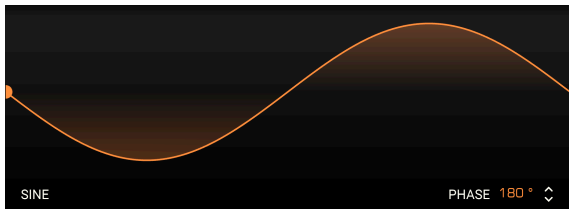
In other words, it begins by diving into the negative part of its cycle, where a wave zero degress out of phase would begin by going "up." This is especially relevant when using LFO 2 in Retrigger and Polyphonic modes, as you can determine exactly where every triggered modulation will begin and which direction it will go.

6.1.1.3. Assigning LFO 2

You can assign LFO 2 to two destinations at once, with different amounts (depths) for each, in this area:

Click on a Destination field to bring up an extensive menu of eligible destinations:

LFO2 DESTINATION 1					
Global	**Oscillators**	**Filters**	**Envelopes**	**Modulations**	**Effects**
None	Osc 1+2 Frequency	Filter Cutoff	Filter Attack	Lfo2 Rate	Jun Chorus 1 D/W
Lfo1 Rate	Osc 1+2 PW	Filter Res	Filter Decay	Lfo2 Amp	Jun Chorus 1 Depth
PM Filter Env Amt	Osc 1 Frequency	Filter Env Amount	Filter Sustain	Lfo2 Phase	Reverb 2 D/W
PM Osc 2 Amt	Osc 1 PW		Filter Release	Function Rate	Reverb 2 Decay
WM Source Mix	Osc 2 Frequency		Amplifier Attack	Function Amp	FX 3 D/W
Glide Time	Osc 2 PW		Amplifier Decay		FX 3 Param
Unison Detune	Osc 2 Fine		Amplifier Sustain		
Arp Rate	Osc 1 Level		Amplifier Release		
Arp Gate	Osc 2 Level				
	Noise Level				

Note that destinations in the *Effects* column depend on which Effects [p.69] are in use. In the above example, only generic parameters are shown for FX 3 because no effect is assigned to its slot in the Effects panel.

The **Amount** knobs to the right of each Destination field control the depth and are bipolar, so it is possible to set negative amounts. They work by multiplying the Amplitude parameter by a number between -1.00 and 1.00.

> ℹ️ ! Be aware that when LFO 2 is in Unipolar mode, a fully negative Amount setting can cause the value of the Destination parameter to dip to nothing.

6.1.2. The Function

The Function generator can be thought of as a highly flexible envelope-meets-LFO. The concept is that you can create any kind of modulation shape you can imagine, then use it to "place a hand" on any two parameter(s) you like by assigning destinations.

6.1.2.1. Function Presets

Before we create our own functions, click on the Presets field to see the factory selections and get an idea of just how many shapes a function can take. Scroll through the four pages of presets (24 presets in total) using the arrows to either side.

6.1.2.2. Breakpoints

Now it's time to start editing and creating your own functions. Functions are shaped by two factors: *breakpoints* (those little white circles), and the curves (line segments) between them. The X axis represents time and the Y axis represents the amplitude of the modulation signal.
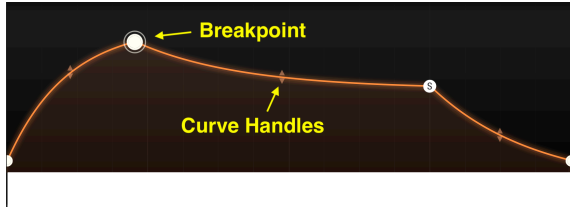
Click anywhere on the visualizer to add a point. Click again to add another. You can add up to 16 points to the Function.

To delete a point, right-click or control-click it.

> ℹ️ ! The first and final points cannot be deleted or moved horizontally. They may be moved vertically.

> ℹ️ ♪ The breakpoint marked with an "S" indicates the nominal sustain level of the Function if used in Envelope mode. Double-click on any point to assign it as the sustain point.

6.1.2.3. Moving a Breakpoint

To change the location of a point within a Function, click its circle and drag it. You can move it up or down to adjust its level. Drag it to the left or right to change its time within the Function.

Alternately, you can drag on the following fields to select and move breakpoints along one axis without affecting the other:

- **Point:** Select individual points on the visualizer.
- **Level:** Moves the selected point along the Y axis.
- **Time:** Moves the selected point along the X axis.

6.1.2.4. Changing a Curve

Notice that between any two points, in the middle of the lines that connect them, are up/down arrows. Grab one of these "handles" and gradually move it all the way up or down. The line will warp until it reaches its extreme, at which time it will become completely squared off. The steeper the slope, the faster the change!

6.1.2.5. Drawing Tools

Click on **Draw Mode** to bring up the list of drawing . These can speed up your Function creation by letting you draw repeating shapes via click-dragging inside the visualizer.
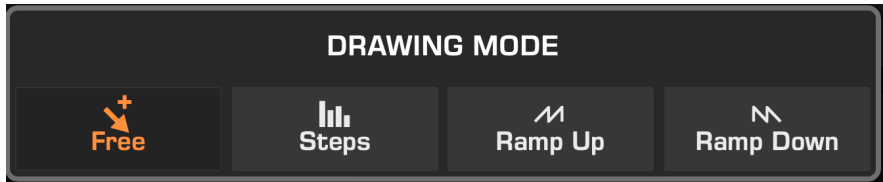
- **Draw:** - Creates a single point.
- **Steps:** - Creates a repeating square wave-like pattern.
- **Ramp Up:** - Creates a rising sawtooth pattern.
- **Ramp Down:** - Creates a falling sawtooth pattern.

For example, here is one result of dragging using the Steps tool:
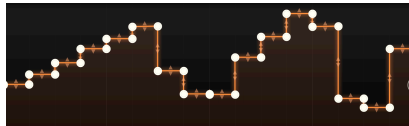
You must position the mouse in the visualizer so that your cursor becomes a pencil icon, then drag.

To "flatten" all or part of pattern and remove its breakpoints, right-click (or control-click) and drag.

6.1.2.6. Function Rate, Amplitude, and Modes

These work much like their counterparts in LFO 2 [p.57]. The **Rate** knob sets the Function speed, subject to the now-familiar tempo sync options:

FUNCTION RATE TYPE			
Hertz	Sync	Sync Triplets	Sync Dotted
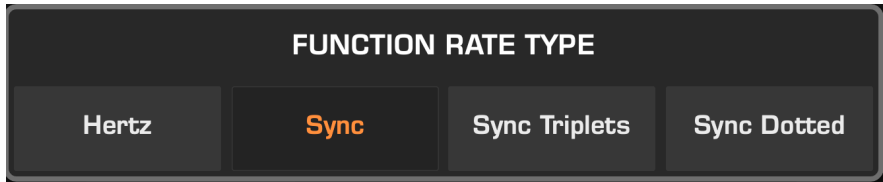
Amplitude controls the level of the Function's overall modulation output.

Modes work similarly as well, governing how the Function interprets triggers.

FUNCTION → ENV ↻ LFO LFO RETRIG ⩘ UNIPOLAR ≋ POLYPHONIC
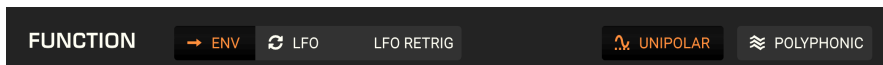
Again, the three buttons on the left are mutually exclusive.

- **Env:** The Function plays through once when a note is played, like an envelope.
- **LFO:** The Function cycles through repeatedly in the expected manner.
- **Env Retrig:** Like LFO mode, but the Function begins at the start of its waveform phase every time a new note is played.
- **Unipolar:** When active, the Function only sends positive values to its destinations.
- **Polyphonic:** When active, modulation of each note played starts at the beginning of the Function's phase. When inactive, notes "join in" on the Function wherever it may be in its cycle.

> ℹ **!** Polyphonic behavior is only available in **Env** and **LFO Retrig** modes.

6.1.2.7. Assigning the Function

As with LFO 2, you can assign the Function to two destinations at once, with different amounts (depths) for each:

Click on a Destination field to bring up the Destination menu:

FUNCTION DESTINATION 1					
Global	Oscillators	Filters	Envelopes	Modulations	Effects
None	Osc 1+2 Frequency	Filter Cutoff	Filter Attack	Lfo2 Rate	Jun Chorus 1 D/W
Lfo1 Rate	Osc 1+2 PW	Filter Res	Filter Decay	Lfo2 Amp	Jun Chorus 1 Depth
PM Filter Env Amt	Osc 1 Frequency	Filter Env Amount	Filter Sustain	Lfo2 Phase	Reverb 2 D/W
PM Osc 2 Amt	Osc 1 PW		Filter Release	Function Rate	Reverb 2 Decay
WM Source Mix	Osc 2 Frequency		Amplifier Attack	Function Amp	FX 3 D/W
Glide Time	Osc 2 PW		Amplifier Decay		FX 3 Param
Unison Detune	Osc 2 Fine		Amplifier Sustain		
Arp Rate	Osc 1 Level		Amplifier Release		
Arp Gate	Osc 2 Level				
	Noise Level				

Again, destinations in the *Effects* column depend on which are in use. In the above example, only generic parameters are shown for FX 3 because no effect is assigned to its slot in the Effects panel.

The **Amount** knobs to the right of each Destination field control the depth and are bipolar.

6.2. Keyboard Tab

The Vintage Prophet sensed neither velocity nor aftertouch. In Prophet-5 V, the Keyboard Tab lets you map each of Velocity, Aftertouch, the Modulation Wheel, and Keyboard Tracking to up to three destinations each. The goal is, as always, expressive playing that's highly customizable.

As with the Modulations Tab, the On/Off button to the left activates or bypasses all four sources at once, without losing the assignments or settings within them.
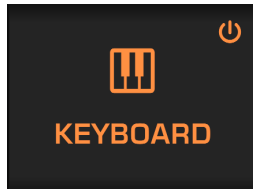
In each pane, you can create a custom response curve for the source. The sources behave identically with respect to this process and assignment to destinations, so we'll take Velocity as our main example and then explain the other sources' relevant differences in their sections.

6.2.1. Velocity

This pane assigns MIDI velocity to its chosen destination(s).
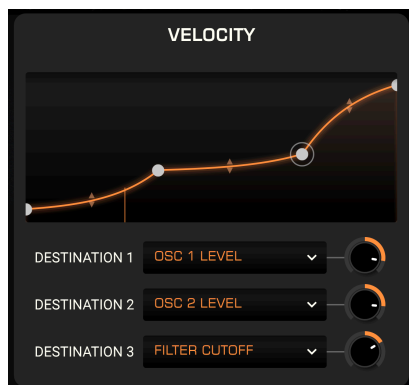
If you read about the Function [p.61], this will be familiar territory. Click anywhere on the curve display to add a breakpoint, then drag on the "handles" in the middle of the line to adjust its curve between two points.

The rules are simpler than with the function, as you can add a maximum of two breakpoints to the beginning and ending points that are always there.

Notice also the vertical line in the display. This is a real-time indicator of the last MIDI velocity received.

6.2.2. Aftertouch

Aftertouch works much the same as Velocity, only it deals with, well, aftertouch.

If MPE is enabled in the side panel settings [p.19] and an MPE-capable controller is connected, aftertouch will be interpreted polyphonically.

6.2.3. Modulation Wheel
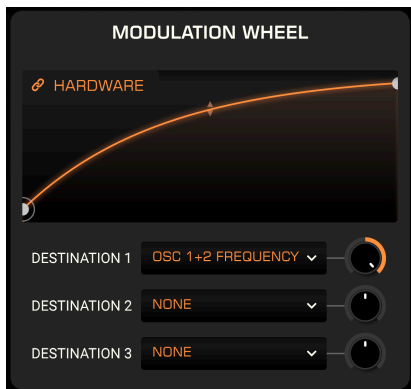
Notice the **Hardware** link button at upper left. This overrides the onscreen wheel in Prophet-5 V. You can then scale and offset the curve here and it will work with the hardware wheel (or other type of control) on your MIDI controller. This makes the Wheel Mod [p.49] section of the main panel much more useful and expressive.

6.2.4. Keyboard

This pane deals with Keyboard Tracking, in other words, the pitch information in each MIDI note-on message received. Keyboard Tracking is commonly part of a synth's filter section and is present there in Prophet-5 V. Here, however, you can greatly expand its potential via custom curves and destinations.

6.2.5. Assigning Destinations

Assignment works identically in all four panes. Click on any Destination field to display the Destination menu.

VELOCITY DESTINATION 1					
Global	**Oscillators**	**Filters**	**Envelopes**	**Modulations**	**Effects**
None	Osc 1+2 Frequency	Filter Cutoff	Filter Attack	Lfo2 Rate	Jun Chorus 1 D/W
Lfo1 Rate	Osc 1+2 PW	Filter Res	Filter Decay	Lfo2 Amp	Jun Chorus 1 Depth
PM Filter Env Amt	Osc 1 Frequency	Filter Env Amount	Filter Sustain	Lfo2 Phase	Reverb 2 D/W
PM Osc 2 Amt	Osc 1 PW		Filter Release	Function Rate	Reverb 2 Decay
WM Source Mix	Osc 2 Frequency		Amplifier Attack	Function Amp	FX 3 D/W
Glide Time	Osc 2 PW		Amplifier Decay		FX 3 Param
Unison Detune	Osc 2 Fine		Amplifier Sustain		
Arp Rate	Osc 1 Level		Amplifier Release		
Arp Gate	Osc 2 Level				
	Noise Level				

Then, click on a destination to select it. As with LFO 2 and the Function, destinations in the Effects column change based on which effects are in use.

7. EFFECTS

Prophet-5V features a comprehensive selection of effects. If the Advanced Panel is not already open, click the **Advanced** button in the top right of the upper toolbar to open it, then click the **Effects** tab to display this area:

You can use up to three effects at once, in serial or parallel routing, with a choice of the same 16 effects per slot. The above image shows a fully populated effects complement.

7.1. Effects Routing

This has two options: parallel and serial.In *Parallel* mode, each effect is fed separately by the upstream signal of Prophet-5 V, and in turn feeds its main output separately.
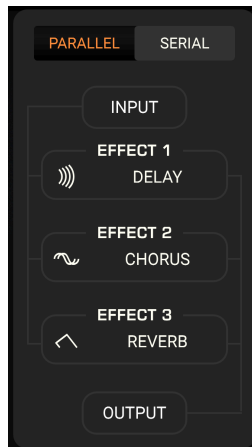
This means that, for the most part, you can adjust one effect without it having a direct, um, *effect* on the other (though this will of course change the overall sound).

In *Serial* mode, the synth feeds slot 1, which then feeds slot 2, which then feeds slot 3.
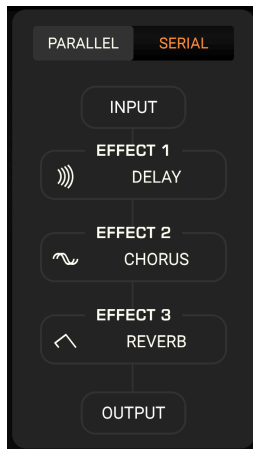
This means that each effect builds on the previous one. So, for example, putting distortion before chorus gives a different result than putting chorus before distortion.

! Be careful with serial routing, as gain from one effect to the next can build up, resulting in overloads.

7.2. Common Effects Controls

Let's first have a look at the controls all effects have in common.

7.2.1. Main On/Off Button
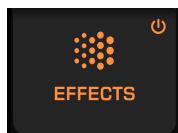
Located in the Effects tab itself, this switches all effects on or off simultaneously, without removing your effects from their slots or losing their settings.

7.2.2. Bypass Buttons
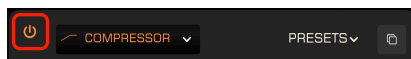
Furthermore, each slot has its own on/off button in its upper right corner. This is useful for bypassing the effect without removing it or losing your settings.

7.2.3. Effect Selection Menu

This menu lets you select from the 16 types for each slot, which are shown here!
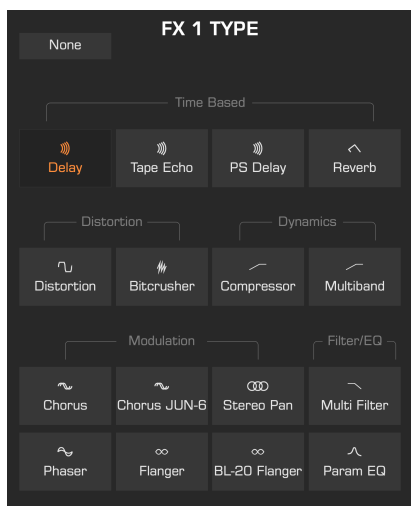
7.2.4. Effect Presets

A handful of presets are included with each effect. You can also "Save As" your own.

DEFAULT ⌄

Reverb Presets
Default
Cathedral
Echoes
Hall
Room
Slap
Save
Save As
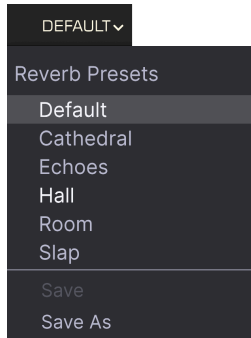
These are "presets within the Preset," meaning the choice is then saved with the overall Preset for the sound.

7.2.5. Effect Copy

Copy to FX 2
Copy to FX 3

You can copy the effect in any slot to one of the other two.

7.2.6. Dry/Wet Slider

Every effect except the Parametric EQ, Multiband, and Stereo Pan has a vertical slider at its right side to control the mix of processed and unprocessed signal.

DRY / WET
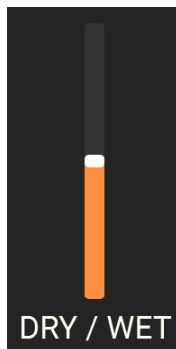
Note that the signal is only "dry" relative to that effect – it may be being processed by others.

7.3. Individual Effects Controls

The three effect slots in Prophet-5 V each have a number of parameters.

We encourage you to explore these for yourself, but here follows a list of tables of their individual parameters.

7.3.1. Reverb

The built-in reverb lets you set your synth sound in a studio-grade acoustic space without loading a separate plug-in.

Control	Description
Size	Changes the size of the virtual room.
Predelay	Adjusts the delay before early reverb reflections occur.
Decay	Adjusts the time it takes for the reverb tails to die out.
Damping	Reduces the high frequencies of the reverberated signal.
Stereo Width	Adds stereo width to the reverberated signal.
Input HP	Filters low frequencies out of the input signal (not the processed signal).
Input LP	Filters high frequencies out of the input signal (not the processed signal).

7.3.2. Delay

The Delay is tempo-syncable and includes a stereo ping-pong panning mode.

Control	Description
Time	Sets the delay time.
Time Type	Drop-down offers tempo-syncing options. When synced, delay time is a division of host tempo.
Fine	Adds a fine-tuning offset to the delay time, in milliseconds.
Feedback	Sets the amount of delayed signal fed back into the effect for re-processing.
Ping-Pong	Activates ping-pong mode.
Stereo Width	Gradually changes the delay from mono to stereo output.
HP Freq	Filters low frequencies out of the delayed signal only.
LP Freq	Filters high frequencies out of the delayed signal only.

Note: You can drag vertically on the graphic visualizer to adjust feedback and horizontally to adjust time.

7.3.3. Tape Echo

Replicating classic tape echo effects, this effect can also be synced to tempo.

Control	Description
Time	Sets the delay time.
Time Type	Drop-down offers tempo-syncing options. When synced, delay time is a division of host tempo.
Fine	Adds a fine-tuning offset to the delay time, in milliseconds.
Input Vol.	Sets the input gain. High settings may cause distortion.
Intensity	Sets the amount of delayed signal fed back into the effect for re-processing.
Ping-Pong	Activates a stereo ping-pong panning mode.
Width	Adds offset to the delay time between left and right channels.

Note: You can drag vertically on the graphic visualizer to adjust intensity and horizontally to adjust time.

7.3.4. Pitch-Shift Delay
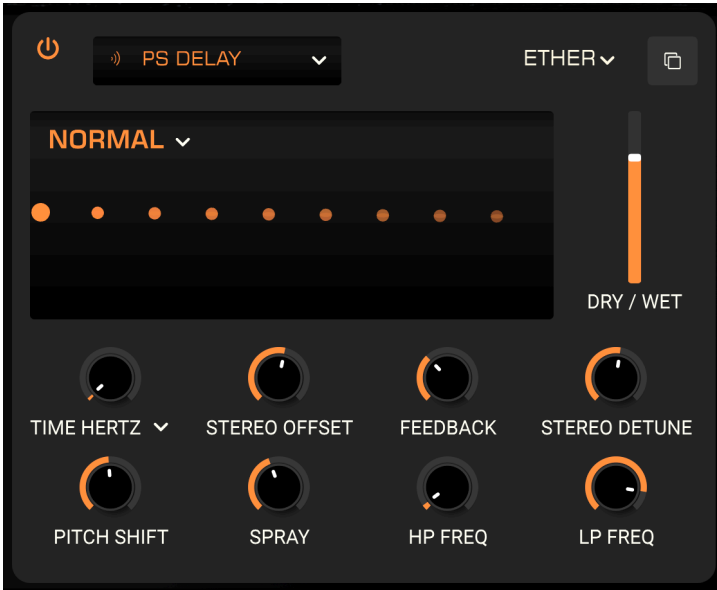
This tempo-syncable delay can also shift the pitch of the delay taps.

Control	Description
Mode	Drop down selects normal, octave-up, or octave-down modes.
Time	Sets the delay time.
Time Type	Drop-down offers tempo-syncing options. When synced, delay time is a division of host tempo.
Stereo Offset	Introduces a delay time offset between left and right channels.
Feedback	Sets the amount of delayed signal fed back into the effect for re-processing.
Stereo Detune	Introduces tuning variation between left and right channels.
Pitch	Adjusts the amount of pitch-shifting in semitones.
Spray	Adds randomness to the timing of the delay taps.
HP Freq	Filters low frequencies out of the delayed signal only.
LP Freq	Filters high frequencies out of the delayed signal only.

Note: You can drag vertically on the graphic visualizer to adjust feedback and horizontally to adjust time.

7.3.5. Chorus

This is simply a full-featured chorus to thicken up the sound.

Control	Description
Rate	Sets the rate of the chorus LFO.
Depth	Sets the depth of the chorus effect.
Delay	Adds a time offset between the incoming signal and its chorused copies.
Feedback	Sets the amount of chorused signal fed back into the effect for re-processing.
Wave Select	Switches chorus LFO between sine and square waves.
Mono/Stereo	Switches between stereo and mono modes.
Voices	Sets the number of detuned voices used to create the chorus: 1, 2, or 3.

7.3.6. Chorus JUN-6

The famously fat chorus of a certain series of six-voice polysynths is one of the things that makes them sought after today. Now, you can apply it to the sound of the Prophet!

Control	Description
Rate	Adjusts the speed of the chorus.
Rate Time	Selects whether the rate or synced as a division of host tempo.
Depth	Changes the amount of the chorus effect.
Phase	Adds a phase offset between the dry and chorused signals.

7.3.7. Flanger

The flanger is the classic "jet engine" effect that can be heard on many rock and electronic music recordings.

Control	Description
Rate	Sets the rate of the flanger LFO.
Rate Type	Drop-down offers tempo-syncing options. When synced, flanger LFO rate is a division of host tempo.
Delay	Adjusts the length of the inherent delay, which changes the harmonic content.
Depth	Sets the depth of the flangers effect.
Feedback	Sets the amount of effected signal fed back into the effect for re-processing.
+/-	Icon on visualizer toggles between additive and subtractive character for feedback loop.
Wave Select	Icon on visualizer selects sine or triangle wave for flanger character.
Mono/ Stereo	Switches between stereo and mono modes.
HP Freq	Filters low frequencies out of the flanged signal only.
LP Freq	Filters high frequencies out of the flanged signal only.

7.3.8. Phaser

The signature "whoosh" of analog string machines and yacht-rock electric pianos came from shifting the phase of a signal, recombining it with the unaffected sound, then modulating the result on a sweep through the frequency spectrum. This resulted in a comb filtering effect.

Control	Description
Rate	Controls the speed of the phaser effect.
Rate Type	Sets whether the phaser free-runs in Hz or is synced to tempo.
Frequency	Changes the harmonic center of the phaser effect.
Feedback	Controls the amount of processed signal fed back into the phaser, which adds resonance.
LFO Amount	Determines the depth of the modulation effect.
LFO Wave	Drop-down in visualizer selects one of six waveforms for the LFO.
N Poles	Adds pairs of allpass filters. The more poles used, the narrower their bandwidths and therefore the more intense the effect will be.
Stereo	Gradually changes the phaser from mono to stereo output.

Note: Drag vertically on the visualizer to change the feedback and horizontally to change the frequency.

7.3.9. Compressor

A classic compressor with variable ratio, threshold, and makeup gain.

Control	Description
Threshold	Sets the level at which gain reduction starts to occur.
Output Gain	Sets the output level of the compressor.
Makeup	Automates the output level to provide "makeup gain" that compensates for the compression.
Attack	Adjusts how quickly or slowly the compressor "grabs on" to the sound when the threshold is reached.
Release	Adjusts how quickly or slowly the compressor "lets go" of the sound when the level dips below the threshold.
Ratio	Sets the amount of compression applied once the threshold is reached.

7.3.10. Multiband

The multi-band compressor in Prophet-5 V lets you apply different amounts of compression and expansion to up to three adjustable frequency bands. You can also turn up to two of the bands on or off.

Control	Description
Threshold	Drag on the top or bottom of edge of a band in the visualizer to change the level at which gain reduction or expansion starts to occur.
Ratio	Drag *inside* a band in the visualizer to change the amount of compression/expansion.
Low On/Off	Enables or disables the low band.
High On/Off	Enables or disables the high band.
Low-Mid Crossover	Drag to adjust the crossover frequency between low and mid bands.
Mid-High Crossover	Drag to change the crossover frequency between mid and high bands.
Out Low	Sets the overall output level of the low band.
Out Mid	Sets the overall output level of the mid band.
Out High	Sets the overall output level of the high band.
Input	Adjusts the input gain for all three bands.
Attack	Adjusts how quickly or slowly the compressor "grabs on" to the sound when the threshold is reached.
Release	Adjusts how quickly or slowly the compressor "lets go" of the sound once the level dips below the threshold.

Control	Description
Above/ Below	Drop-down decides whether effect functions as a compressor *and* expander (Above & Below) or just a compressor (Above Only).
Output	Sets the overall output level after compression/expansion.
Amount	Sets the overall amount of compression by acting like a dry/wet slider.

7.3.11. Bitcrusher

This creates lo-fi effects by reducing the bit depth of the signal and/or downsampling it, i.e. resampling it at a lower rate. Want Prophet-V 5 to sound like an '80s sampler or videogame janitor? Crush it!

Control	Description
Bit Depth	Changes the bit depth.
Downsampling	Adjusts the sample rate.

Note: You can also drag vertically on the visualizer to adjust the sample rate and horizontally to change the downsampling. |

7.3.12. Multi-Filter

This synthesizer-style filter features highpass, bandpass, lowpass, and two comb modes: feedback and feedforward.

Control	Description
Frequency	Determines the cutoff or center frequency of the filter.
Resonance	Adjusts a level peak located at the filter frequency.
Slope	Sets the filter curve at 12, 24, or 36dB per octave.
Mode (drop-down)	Selects the filter mode. Comb filters do not have slopes.

7.3.13. Param EQ

An equalizer (EQ) cuts or boosts frequencies. A parametric EQ lets you adjust the range affected by its frequency bands (the bandwidth or Q) as well as the center frequencies of the bands themselves.

Control	Description
Band Select	Selects a frequency band.
Frequency	Adjusts the center frequency of the selected band.
Gain	Sets the cut or boost amount of the selected band.
Q	Adjusts the width of the selected band around the center frequency.
Scale	Adjusts the overall amount of EQ applied, functioning like the dry/wet slider.

The circles in the visualizer may be dragged around, which adjusts the frequency and the gain of the selected band at the same time. You can also select a particular EQ band by clicking on its tab below the visualizer.

7.3.14. Stereo Pan

This moves the signal from right to left in the stereo picture, using a simple LFO. It can move slightly or widely, and has a few cool tricks up its sleeve.

Control	Description
Rate	Sets the rate of the panning effect.
Rate Type	Selects whether the panning free-runs in Hz or is synced to master tempo.
Mono Bass	When active, frequencies below a certain cutoff are not panned.
Cutoff	Sets the cutoff frequency for use when Mono Bass is active.
Natural/Linear	In Natural mode, you hear a balance of the unpanned and panned signal. In Linear mode, you hear the panned signal only.
Amount	Adjusts the width of panning from the center.

7.3.15. Distortion

Going far beyond traditional fuzz-box distortion, the one in Prophet-5 V offers 15 algorithms including soft and hard clipping, tape saturation, and all manner of non-traditional waveform mangling. Try them all!

Control	Description
Drive	Equivalent to "pre gain" on an amp or distortion pedal, this sets amount of distortion applied.
Output Gain	Sets the output level of the effect.
Auto	Activates automatic control of the Output parameter to avoid downstream clipping.
Type	Drop-down chooses from 13 different distortion algorithms.
Filter On/Off	Enables or bypasses a built-in filter.
Cutoff	Sets the cutoff or center frequency of the filter.
Resonance	Adjusts a level peak located at the filter frequency.
Filter Mode	Sets the filter to low-, band-, or highpass.
Pre/Post	Decides whether the filter applies before or after the distorted sound.
Dark	Applies an extra 12dB-per-octave lowpass filter at the distortion output.

7.3.16. BL-20 Flanger

This effect emulates the sound of the Bel BF-2O, a rare flanger from the 197Os. This was accomplished by delaying the signal, then modulating it with an LFO, then combining it with the original signal.

Control	Description
Rate	Sets the rate of the LFO that modulates the delayed signal.
Rate Time	Drop-down selects whether the rate is in absolute Hz or syncs to master tempo.
Depth	Adjusts the depth of the LFO that modulates the delayed signal.
Delay	Adjusts the audible depth of the flanger effect.
Feedback	Sets the amount of processed signal feeding back into the flanger.
Wide	Provides a wider stereo image by inverting the phase of the LFO modulating the right channel
Mono Input	Optimizes the flanger for a mono input signal.

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The acquisition of an upgrade or update does not in itself follow a right to use the software.

The right for support on a previous or inferior version of the software expires upon the installation of an upgrade or update.

8. Limited Warranty Arturia warrants that the disks on which the software is provided on is free from defects in materials and workmanship under normal use for a period of thirty (30) days from the date of purchase. Your receipt serves as evidence of the date of your purchase. Any implied warranties on the software are limited to thirty (30) days from the date of purchase. Some states do not allow limitations on duration of an implied warranty, so the above limitation may not apply to you. All programs and accompanying materials are provided 'as is' without warranty of any kind. The complete risk as to the quality and performance of the programs is with you. Should the program prove defective, you assume the entire cost of all necessary servicing, repair or correction.

9. Remedies Arturia's entire liability and your exclusive remedy shall be at Arturia's option either: (a) return of the purchase price, or (b) replacement of the disk that does not meet the Limited Warranty and which is returned to Arturia with a copy of your receipt. This limited Warranty becomes void if failure of the software has resulted from an accident, abuse, modification, or misapplication. Any replacement software will be warranted for the remainder of the original warranty period or thirty (30) days, or whichever option is longer.

10. No Other Warranties The above warranties are in lieu of all other warranties, expressed or implied, including but not limited to the implied warranties of the commercial value and fitness for a particular purpose. No oral or written information or advice given by Arturia, its dealers, distributors, agents or employees shall create a warranty or in any way increase the scope of this limited warranty.

11. No Liability for Consequential Damages Neither Arturia nor anyone else involved in the creation, production, or delivery of this product shall be liable for any direct, indirect, consequential, or incidental damages arising from the use of or inability to use this product (including without limitation, damages for loss of business profits, business interruption, loss of business information and the like) even if Arturia was previously advised of the possibility of such damages. Some states do not allow limitations on the length of an implied warranty or the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.