



## Getting Started

The P-10 is a synthesizer that needs no introduction. The original instrument was essentially two of the world-beating Prophet-5 programmable polysynths in one behemoth dual-manual case, plus Sequential's "Poly Sequencer" built into the bottom-manual end cheek. Altogether, this made for one of the most desirable flagship analog synthesizers ever created. It could easily be configured to play as two independent five-voice synths, a single ten-voice synth, dual-patch layered, or alternate between layers with each keystroke.

We've made every effort to capture the sweet-yet-powerful Prophet sound heard on countless eighties hits ranging from Hall & Oates, Japan, Duran Duran, Devo, Tears for Fears, Phil Collins and Genesis, Talking Heads, Pink Floyd, The Cars, Kraftwerk, Radiohead... the list goes on and on and on! Every aspect has been modeled with the utmost care, from the oscillator chips to the "rev3" Curtis filters and envelope profiles, to the unique-to-Sequential oscillator sync.

Although maintaining "the sound" was at the forefront of our mission, we've also added some thoughtful updates to modernize the user experience, including expanded 16-voice per layer polyphony, a far-more-useful (and fun) four-track sequencer, keyboard split, and a "page 2" featuring an arpeggiator and effects section with distortion, phaser, chorus/flange, delay, and reverb effects. The effects section includes an assignable independent LFO section as well as modulation of key parameters via aftertouch.

The P-10 is truly a beast of synth, and we've pulled out all the stops to deliver the best emulation yet of the legendary Prophet sound. We hope you enjoy it!

### **Technical Assistance**

Cherry Audio's unique online store and automatic updating should make operation a smooth experience, but if you run into any issues or have questions, you can discuss issues online at the Cherry Audio forums at:

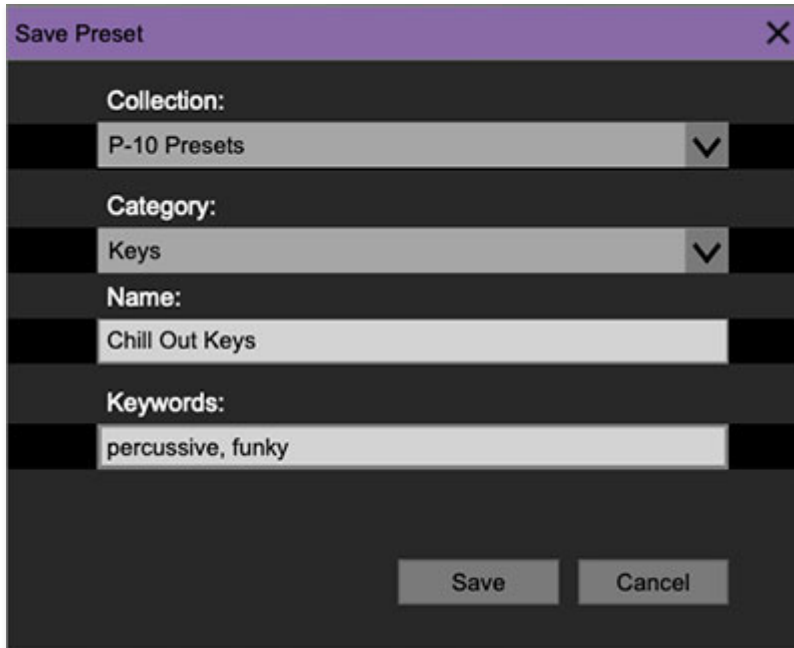
<https://forums.cherryaudio.com/viewforum.php?f=37>

... or you can communicate directly with one of our swell tech support staff at:

<https://cherryaudio.kayako.com/>

The purple strip at the top of P-10 contains all of the preset loading and saving navigation, "under-the-hood" settings, zoom and focus control, and more.

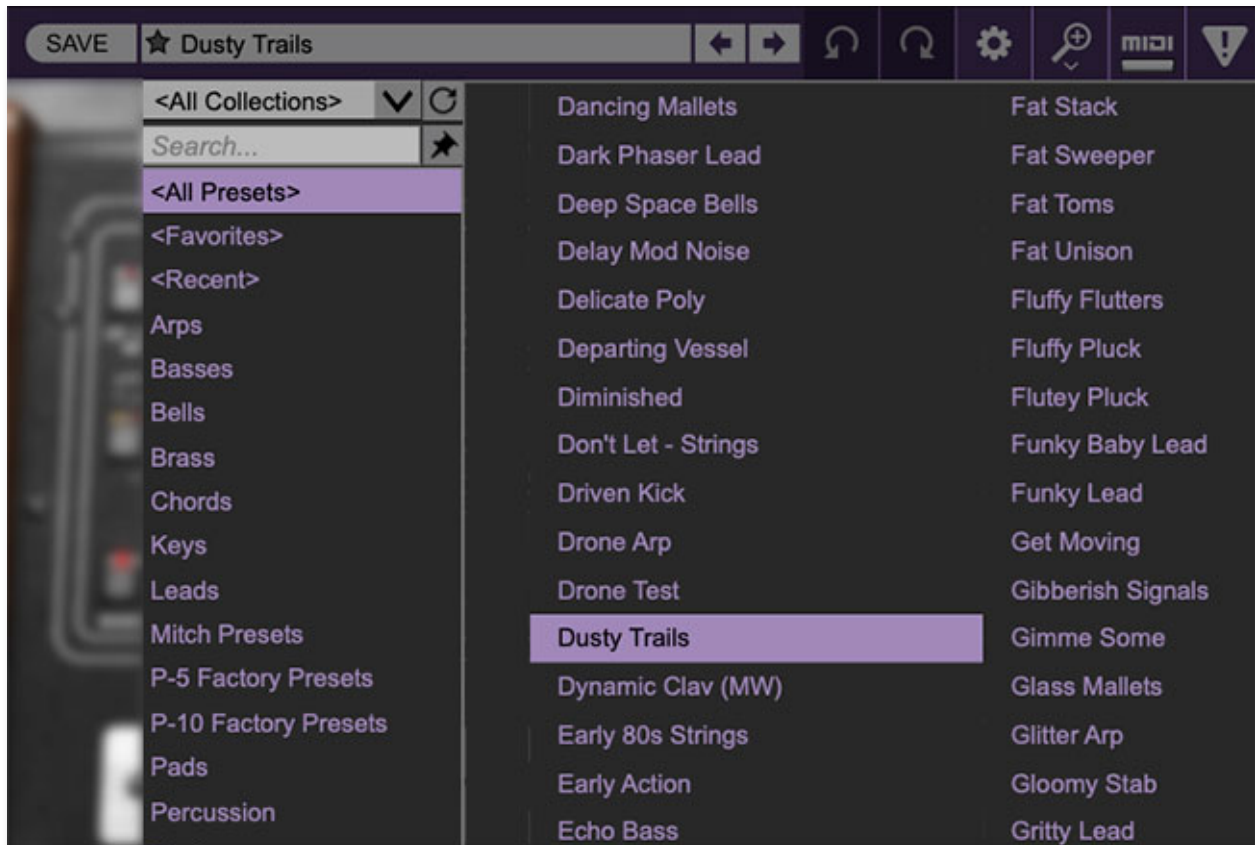
**New**- Opens a new blank patch preset. If an unsaved patch is currently open or you've modified an existing saved patch, a dialog asks if you'd like to save the patch in its current state. This greatly reduces the possibility of losing an edited unsaved patch.



**Save**- Use this to save patches. There are a couple of levels of hierarchy:

- **Collection**- This is the top level of organization, and contains entire "sets" of presets. The *P-10 Presets* are the main included collection. We also include a *User Presets Collection* for storing user presets, but you're free to create your own collections. To create a new collection, click in the *Collection* text field (where it says *User Presets* above) and type a name. User-created sounds can be freely saved to any collection; we like to "keep 'em sepa-rated" for organizational purposes.
- **Categories**- Within each *Collection* are a number of sound categories. As with collections, you're free to create as many categories as you like. To create a category, click in the *Category* text field of the *Save* dialog window and type a new category name.

- **Patch**- A patch is an individual sound. To save a patch, simply type the name in the *Name* field and click *Save*.
- **Keywords**- You can add descriptive words such as "huge," "clavinet," "noisy," etc., to patches to make them appear when terms are typed in the *Search* field. Use commas to separate multiple keywords entries.



**Browsing Patches**- Patches can be browsed by clicking the *<Select Preset>* field. To select a preset collection, click in the area that says *<All Collections>* or on the downward-facing arrow next to it.

Clicking on the left-side categories narrows down which patches are displayed.

- **<All Presets>** will show presets from all collections and categories.
- **<Recent>** displays recently used presets.
- **Refresh**- This is the circular arrow button to the right of the downward arrow; clicking this checks the Cherry Audio server for new or updated presets.

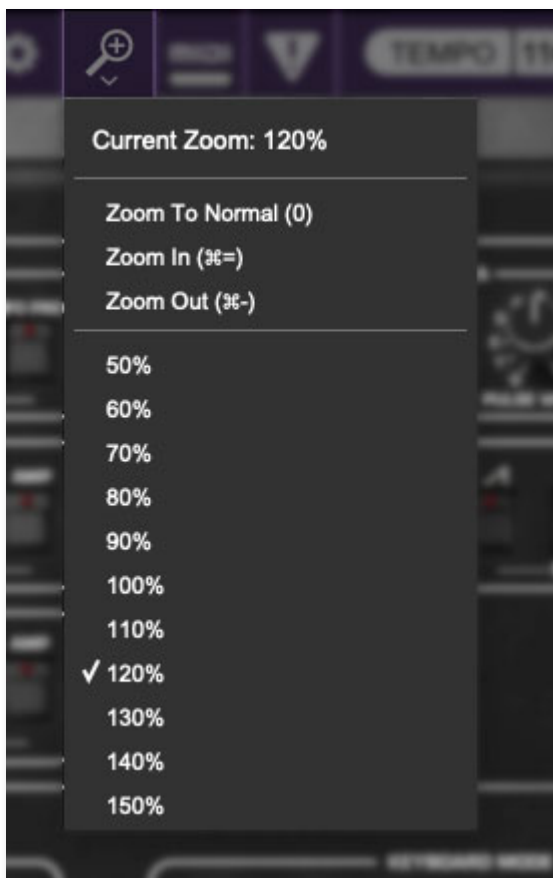


**Pin-** Clicking the pushpin icon locks the patch selection list open, allowing fast and easy browsing and auditioning of patches. Click the icon again to disable pin mode. When in pin mode, the up and down arrow keys can be used to select patches.

**Preset- Step Back/Forward Arrows-** These step to the previous or next preset. macOS [⌘+left/right arrow key] or Windows [CTRL+left/right arrow key] will navigate through presets back and forth in the currently selected collection/category.

**Undo/Redo-** These circular arrows will undo or redo the last action. It remembers many steps, so if you really loused something up, keep on (un)clickin'...

**Settings-** This is where user preferences for user interface, audio interfaces, user account, and more are configured. See the **Settings** section for full information.



## Importing Presets with drag-and-drop

Presets can be imported singly or en masse (as a single compressed ZIP file) simply by dragging and dropping from the desktop anywhere on the user interface.

If a single \*.preset file is dragged and dropped, the sound is immediately loaded and the standard Save Preset dialog appears; this lets you save the sound to the instrument's preset browser. Note that you don't have to save the sound to preset browser; if you just want to hear and play the sound, click the Cancel button in the Save Preset dialog - the sound will still be loaded.

Compressed zip files containing multiple sounds can also be drag and dropped onto the UI. This works the same as with single sounds, but instead of the Save Preset dialog, you'll see the Import Preset Collection dialog. The presets will be added as a new collection and available in the categories for which they were tagged.

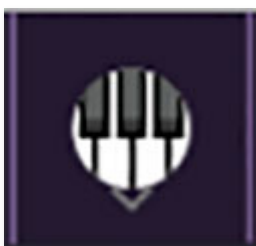
**Zoom Magnifying Glass**- Click to resize the P-10 interface window. Selecting *100%* returns the user interface to native size.

**MIDI tab**- Opens the MIDI controllers tab for configuring internal and hardware MIDI controls. See the **MIDI Controllers Setup and MIDI Tab** section for full information.

**! (MIDI Panic)**- Click to send an all-notes-off message in case of rare, "make this #\$!%ing thing shut up?!?" stuck-note incidents.

**Tempo (Standalone Version Only)**- Displays P-10's current internal tempo setting. Internal tempo affects the LFO 1 and 2, the sequencer, and echo section rates when their corresponding *Sync* buttons are enabled. The tempo setting can be changed by moving the mouse up and down anywhere in the tempo section, or by double-clicking the number and entering the desired BPM value.

***The tempo display only appears in the standalone version of P-10. VST, AU, and AAX plug-in versions receive tempo data from their host DAW app.***



**QWERTY Musical Typing Keyboard**- Opens an onscreen keyboard allowing a standard QWERTY computer keyboard to be used for playing music notes. For more information, see the **QWERTY Musical Typing Keyboard (MTK)** section.

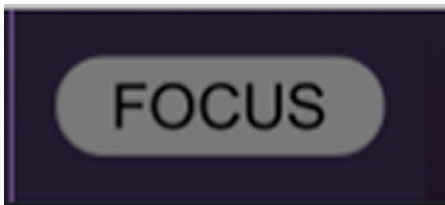


**? (Help)**- Clicking this launches your web browser and opens the help document you're already reading. Confusing circular logic at its finest.

**Cherry Audio P-10 Synthesizer logo**- Clicking this displays "about" information, and shows the version number and current registered user ID.

## Focus Button

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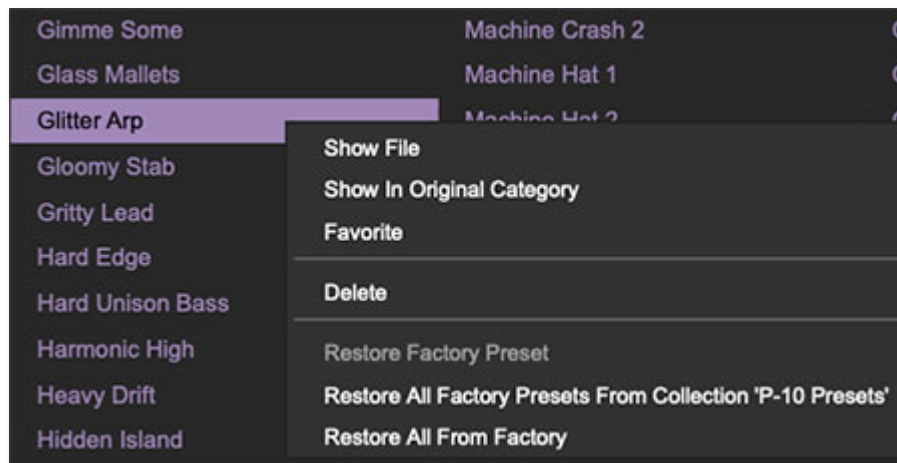
Since the original instrument is over three feet wide and your display likely isn't, it was necessary to ensmallinate lots of things (sure, that's a word). If you're using a tiny laptop, this could make things hard to see. With this in mind, the *Focus* button conveniently blows up P-10's user interface to roughly twice its normal size within the current window size. Unlike the *Zoom* "magnifying glass" function, *Focus* doesn't affect the current window size. By default, the patch panel section fills the current window, but the view can be scrolled vertically and horizontally with a mouse wheel, track pad, or Apple Mighty Mouse finger-scrolling. Or if you're the last person on earth still using a single-button mouse, scroll bars will appear at the window edges when in *Focus* mode.

Using *Focus* mode couldn't be easier - just click the *Focus* button the top menu bar. To return to standard view, click *Reset*. **There's also a superfast key shortcut** - on Mac, hold the ⌘ [COMMAND] key and click the mouse; in

Windows, hold the [OPTION] key and click the mouse. Focus can be reset with the same key shortcuts.

## Preset List Right-Click Functions

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**Show File**- This displays the selected preset in the Mac or Windows folder containing it. This is useful for backing up or sending a preset file to another user.

**Show In Original Category**- Selects the preset within its category, i.e. the category will highlight in the left preset menu. The *Show In Original Category* command only displays if the preset was selected within the *<All Presets>*, *<Favorites>*, or *<Recent>* categories.

**Favorites**- Favorited presets will show in when the *<Favorites>* category is selected. A star will display next to the preset name. Right-click on the preset and reselect *Favorite* to un-favorite it.

**Delete**- Deletes the selected preset.

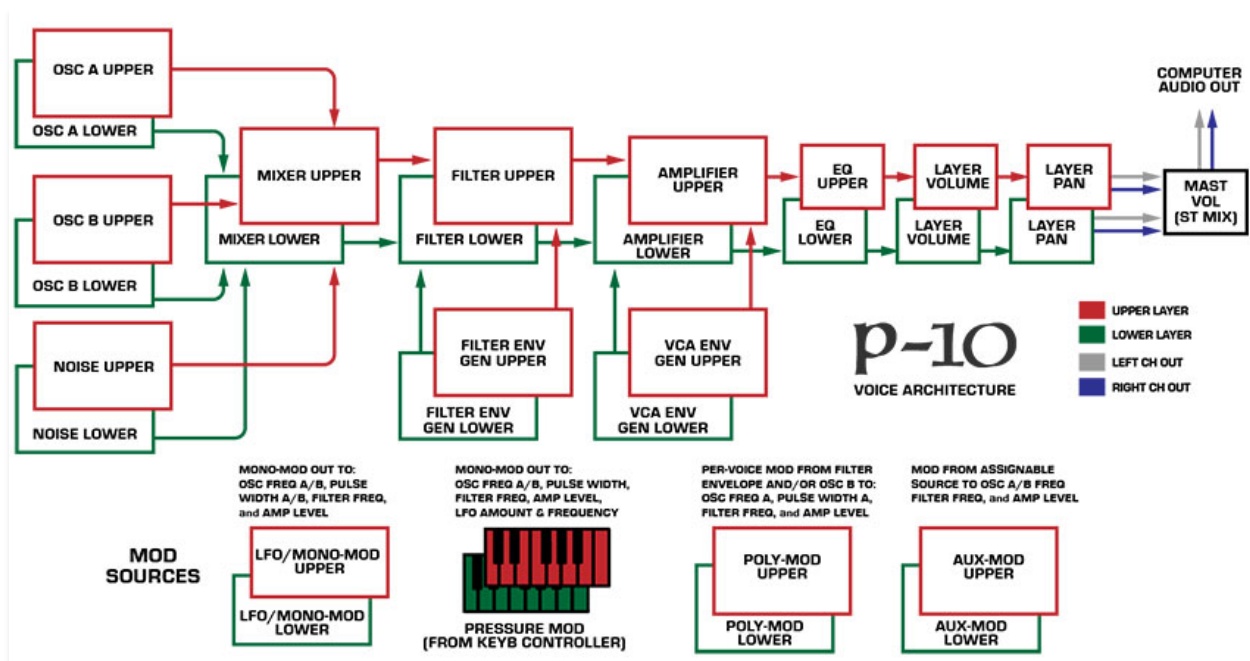
**Restore Factory Preset**- If one of the factory (i.e. not user) patches is edited and saved, selecting this command restores the patch to its unaltered "factory" setting. This menu will be grayed-out for user bank patches.

**Restore All Factory Presets From 'P-10 Presets'**- If any patches from the "factory"P-10 bank are edited and saved, selecting this command restores *all* of them to their unaltered factory setting.

**Restore All From Factory**- If any patches from the factory banks are edited and saved, selecting this command restores *all* of them to their unaltered factory setting. At the time of writing, the P-10 bank mentioned above is the only factory bank, so this function and the *Restore All Factory Presets From 'P-10 Presets'* above have the same effect.



**Show File**- This displays the selected preset in the Mac or Windows folder containing it. This is useful for backing up or sending a preset file to another user.



P-10's voice layout is almost identical to the original Prophet-5 synth, which itself is very similar to a Minimoog - it's a very easy to understand layout. In this section, we'll outline the basic voicing and then explain details in the following individual chapters.

The signal path begins in the center of the instrument with Oscillators A and B. The oscillators are then routed to the Mixer section for individual level control. The mixer also has a white noise source with a level control.

Following the source mixer, the signal is routed to a 24 dB/oct voltage-controlled filter (VCF), which has its own dedicated ADSR envelope generator. From the VCF, the signal travels to the voltage-controlled amplifier (VCA) for amplitude shaping via its own ADSR envelope generator.

From the VCAs, the signal is routed through a three-band equalizer and to the *Layer Pan* and *Layer Volume* controls above the EQ section. From there, the signal goes to the effects section.

Before we get to the Effects/Arpeggio page, we'll take a detour and discuss P-10's modulation capabilities. Most of the modulation functions are contained in the left side of the Program section. Here's how they work:

- **LFO Section-** The low-frequency oscillator operates at frequencies below the human hearing range and can be routed in variable amounts to affect both oscillator frequencies, both oscillators' pulse-wave width, filter cutoff, and VCA amplitude using the controls in the Mono-Mod section.
- **Pressure-Mod Section-** "Pressure" refers to what's commonly known as aftertouch, that is, applying modulation via further pressure after the

initial key strike. Note that P-10 supports poly aftertouch (you'll need one of them newfangled MIDI/USB controllers that supports poly AT).

Aftertouch can be routed to both oscillator frequencies, oscillator pulse width, filter cutoff, and VCA amplitude, LFO amount and frequency. The original Prophet-10 did not support aftertouch, but we cribbed this feature from the later Prophet T-8. (Where the "T" literally stood for "touch.")

- **Poly-Mod Section-** This can be a little tricky to wrap your head around, but the basic idea is that it allows independent modulation of voices via either the filter envelope or Oscillator B (as opposed to a single LFO that mods everything at the same time). We'll fully explain this in the *Poly-Mod* user guide section.
- **Aux-Mod Section-** This one's way over on the right side of the panel, but it's intended to function like the Pedal Mod section of the original (with the added advantage that you can use *any* MIDI hardware control you like, not just a pedal). It can be routed to affect both oscillator frequencies, filter cutoff, VCA amplitude, or the amount of Mono-Mod (i.e. LFO).

Now let's get back to our audio path, following the *Layer Volume* and *Layer Pan* controls. If you're following along on the instrument, now would be a good time to click the *Effects/Arpeggio* button in the Panel View section next to the big, garish P-10 logo.

Up to the *Layer Volume* control the signal is still mono; the *Layer Pan* knob effectively stereoizes the sound by panning it to a static position in the stereo field. In this way, the signal gets routed to the effects in stereo. Although the Distortion and Phaser effects behave as mono effects, they're actually in stereo under the hood in order to maintain the stereo positioning as defined by the *Layer Pan* control. The signal then gets routed serially (i.e. one-after-the-other, like your guitarist's ever-malfunctioning pedal board) through the Distortion, Phaser, Chorus/Flanger, Delay, and Reverb. Note that the Chorus/Flanger, Delay, and Reverb effects are all stereo.

Following the Reverb, the signal is routed through the Master Volume (the silver-top volume control on the main page), through the Limiter and out to TV land, er... your mixer.

## P-10 Layers

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Ok, pretty simple so far. **Now double it...**the original instrument was essentially two entire Prophet-5 five-voice synthesizers in one (real heavy)

box. with dual layers that can operate in a few different modes. P-10 faithfully recreates its four modes as follows:

- **Normal**- Operates as two single-layer polysynths with up to 16 voices each. The top manual and Upper MIDI channel play the Upper layer; the bottom manual and Lower MIDI channel play the Lower layer.
- **Single**- Operates as a standard single-layer polysynth with up to 32 voices. Both manuals and their respective MIDI input channels play the Upper layer.
- **Double**- The Upper and Lower layer are stacked; that is, both the Upper and Lower layer play simultaneously from either manual via the Upper or Lower MIDI channel - like "Omni" mode, for you MIDI historians.
- **Alternate**- Layer playback alternates betwixt the Upper and Lower layers with each keystroke from either manual via the Upper or Lower MIDI channel. We're not sure why you'd want to do this, but hey, it's there, because technology.

Cherry P-10 adds an additional mode, heretofore not seen on the original instrument:

- **Split**- The keyboard is split at a user-defined point with the Lower layer sounding below the split point, and the Upper layer sounding above the split point. Layers respond the same from either manual and the Lower or Upper MIDI channel.

## Effects Routing

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P-10 contains two completely independent Distortion, Phaser, Chorus/Flanger, Delay, and Reverb effects chains, allowing completely independent effects for each layer (FX Mode *Dual* setting). Alternatively, setting FX Mode to *Global* routes both layers through the same set of effects. Please see the **Effects** section for more information.

## Sequencer

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P-10's onboard four-track sequencer can easily be assigned to play the Upper, Lower, or both layers. Lots more info about this can be found in the **Sequencer** section.

**In the following sub-chapters, we'll go over the main sound generation components of a layer.**

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P-10 includes two oscillators, based on the original instrument's Curtis Electromusic Specialties 3340 oscillator chips. Along with their filter, VCA, and envelope chips, the compact size of the CEM integrated circuits were perhaps the most significant factor in creating the (relatively) compact and reliable five-voice Prophet-5 synthesizer, and were equally important in the creation of the Prophet-10. And unlike some other famous vintage analog synths, the raw waveforms produced by the 3340 oscillator chips were quite accurate, and P-10 reproduces them precisely. Just like the original, P-10 includes two oscillators with the following controls:

### **Oscillator A**

**Frequency-** Sets the coarse pitch range in half-step intervals, over a four-octave range.

**Shape-** Selects the oscillator waveform, including ramp or variable-width pulse. Either or both can be selected.

**Pulse Width-** Sets the width or "duty-cycle" of the pulse wave, from a perfect square to a very narrow pulse.

**Sync-** This causes Oscillator A to force reset its cycle at the beginning of Oscillator B's cycle. Using the Poly-Mod section to sweep Oscillator A's pitch via the filter envelope results in the "tearing harmonics" sound, famously used in The Cars classic, "Let's Go" (and No Doubt's "Just A Girl," in case you weren't born yet in 1978).

### **Oscillator B**

**Frequency-** Sets the coarse pitch range in half-step intervals, over a four-octave range.

**Fine-** Sets fine-tuning of Oscillator B pitch with range of 1 semitone.

**Shape-** Selects the oscillator waveform, including ramp, triangle, or variable-width pulse. Waveforms may be selected in any combination.

**Pulse Width**- Sets the width or "duty-cycle" of the pulse wave, from a perfect square to a very narrow pulse.

**Lo**- Sets the Oscillator B pitch (mostly) below audible range. This is intended to be used in conjunction with the Poly-Mod section and allows Oscillator B to be used as a low-frequency oscillator mod source.

In case you're wondering why you'd want to sacrifice a perfectly good audio oscillator when there's already a dedicated LFO... we'll fully explain this in the **Poly-Mod** section.

**Keyboard**- Turning this off disconnects the keyboard control voltage from Oscillator B. This means pitch remains the same regardless of keys played on the keyboard. This can be useful for single-pitch drones, but it's really intended for the situation described above where Oscillator B is being used as an LFO via Poly-Mod. In this situation, disabling keyboard control keeps the mod rate constant and prevents modulation from increasing in speed as higher notes are played.



P-10 includes a simple mixer for combining and adjusting pre-filter oscillator and noise levels.

**Osc A**- Sets the level of Oscillator A.

**Osc B**- Sets the level of Oscillator B.

**Noise**- Sets the level of white noise. If you're not familiar with white noise, technically speaking, it's a random signal in which all frequencies across the frequency spectrum are represented equally. In use, it's a "hiss" sound that's useful for non-pitched percussive sounds, wind, explosions, etc.



The original instrument made use of CEM3320 filter chips. These were very common in the heyday of polyphonic analog and hybrid synths. The original instrument contained twenty of these, running in a 24 dB/oct lowpass configuration and greatly contributed to the rich Prophet sound.

## How Lowpass and Highpass Filters work

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A lowpass filter allows frequencies *below* the cutoff frequency setting to pass through, but blocks frequencies *above* the cutoff frequency. If the cutoff frequency is all the way up, that means all audio signal pass; as the knob setting is lower, high frequencies are filtered.

Conversely, a highpass filter operates in exactly the opposite fashion - frequencies *above* the cutoff frequency setting pass through, and frequencies *below* the cutoff frequency are blocked.

## Controls

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**Cutoff**- Sets the frequency where frequency attenuation begins, i.e. which frequencies are allowed to pass.

**Resonance**- Resonance emphasizes sound energy at and around the current cutoff frequency by adding feedback from the filter's output back to its input. At lower settings, this can be used to create mild resonances such as those heard in acoustic instruments. At extreme settings, it can be used as a sine



wave generator, but be careful as high resonance settings can result in loud, screaming, dog-spooking (and speaker blowing) occurrences.

**Envelope Amount-** The *Envelope* control applies modulation from the Filter Envelope below to the cutoff frequency. This allows familiar auto filter sweeps. When raising the *Envelope* control, you'll generally want to lower the *Cutoff* control, as these control signals sum together (right now).

**Keyboard-** This causes the cutoff frequency to increase as ascending notes are played on a keyboard. The idea behind this is that the *Keyboard* control applies a rising CV to the cutoff frequency in order to maintain the brightness of notes as higher pitches are played (because actual note frequencies rise as higher pitches are played).

- **Half-** The original only included an on/off Keyboard switch - this routed the entire keyboard voltage to the filter cutoff, meaning that the filter frequency tracked the keyboard exactly. We've added a *Half* setting, which causes the cutoff to gain brightness, well, half as much as higher keys are played.
- **Full-** Filter cutoff frequency tracks the keyboard at rate of 1V/octave, just like the original instrument with the *Keyboard* button enabled.

**Mode-** Though none of the original Prophet instruments included a multimode filter, along the development path, we discovered that adding a highpass filter mode really expanded P-10's tonal possibilities, particularly in stacked, dual-layer patches, so we added it.

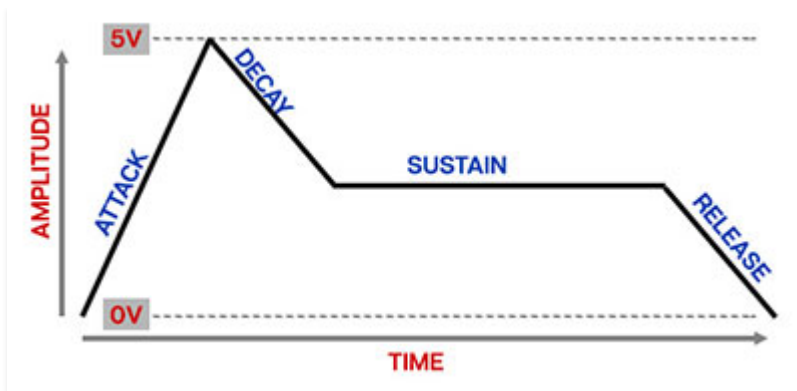
- **LP-** 24/dB per octave lowpass filter, voiced to emulate the original Curtis 3320 filter chips.
- **HP-** 24/dB per octave highpass filter - also voice like the Curtis chips, which *could* be configured to run in highpass mode, but this was never implemented in the original instruments.

## Filter Envelope

The Filter Envelope is a dedicated envelope generator for control of cutoff frequency, via the *Envelope Amount* knob.

## How An ADSR Envelope Generator Works

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When P-10 sees a gate voltage from a note, the envelope generator outputs a dynamically changing voltage, according to the settings of its four stages. The attack stage defines how long it takes for the output voltage to rise from zero to full scale. Once the attack stage reaches its max amount, it moves to the decay phase, which defines how long it takes to fall from full scale to the setting of the sustain phase. Unlike the attack, decay, and release phases, which define times, sustain simply sets the held voltage level following the attack and decay phases - this equates to the envelope output level while holding down a key. Finally, the release slider defines the length of time it takes for the voltage to fall back to zero when the gate input voltage is removed, i.e. when the key is released.



## Controls

**Attack**- Defines the length of time for cutoff frequency voltage to rise from zero to full scale when a key is played.

**Decay**- Defines the length of time for cutoff frequency voltage to fall from the attack stage peak to sustain stage setting.

**Sustain**- Sets the cutoff frequency voltage level following attack and decay phases while a note is held.

**Release**- Defines the length of time for cutoff frequency voltage to fall from sustain level to zero when a key is released.

**Velocity**- Defines how much the envelope affects the filter cutoff frequency via keyboard velocity. When set to zero, keyboard velocity has no effect on

cutoff frequency; all the way up results in maximum control range.

# Amplifier

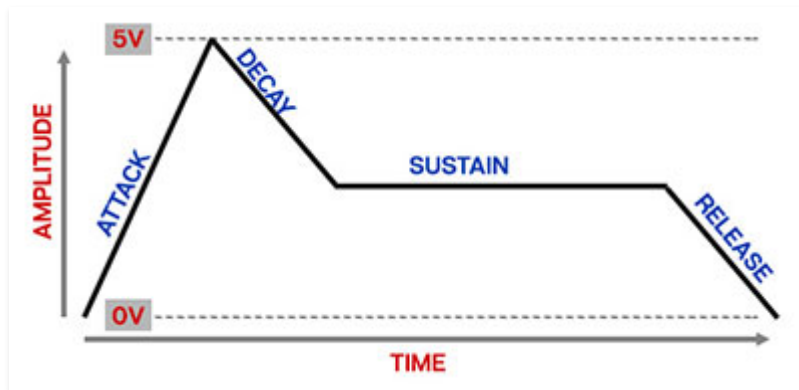
The Amplifier Envelope section consists of a standard attack, decay, sustain, release-style (ADSR) envelope generator controlling voltage-controlled amplifiers (VCA's) for each voice.

A simple analogy would be to think of the voltage controlled amplifier (VCA) as a faucet that gets adjusted by an incoming control voltage from an envelope generator, low-frequency oscillator, or other modulation source that controls the volume of each individual note.

P-10's under-the-hood VCA section doesn't have any dedicated controls per se, but it has a dedicated envelope generator for shaping amplitude curves.

## How An ADSR Envelope Generator Works

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When P-10 sees a gate voltage from a note, the envelope generator outputs a dynamically changing voltage, according to the settings of its four stages. The attack stage defines how long it takes for the output voltage to rise from zero to full scale. Once the attack stage reaches its max amount, it moves to the decay phase, which defines how long it takes to fall from full scale to the setting of the sustain phase. Unlike the attack, decay, and release phases, which define times, sustain simply sets the held voltage level following the attack and decay phases - this equates to the envelope output level while holding down a key. Finally, the release slider defines the the length of time it takes for the voltage to fall back to zero when the gate input voltage is removed, i.e. when the key is released.

## Controls

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**Attack**- Defines the length of time for amplitude to rise from zero to full scale when a key is played.

**Decay**- Defines the length of time for amplitude to fall from the attack stage peak to sustain stage setting.

**Sustain**- Sets the amplitude level following attack and decay phases while a note is held.

**Release**- Defines the length of time for amplitude to fall from sustain level to zero when a key is released.

**Velocity**- Defines how much the envelope affects note amplitude via keyboard velocity. When set to zero, keyboard velocity has no effect on cutoff frequency; all the way up results in maximum control range.



**Release switch**- This is actually located at the top right of the UI. It essentially enables or disables the *Release* envelope phase; the off position is equivalent to setting the *Release* knob at zero. This may seem somewhat useless, but **when the *Release* button is disabled and a release pedal is used with a USB/MIDI controller, the release pedal momentarily enables the release stage when the button is down.** This how the original instrument works (as well as the Minimoog this idea was cribbed from). Compared to conventional synth release pedals, the disadvantage of this arrangement is that you can't use the pedal to sustain a note indefinitely. The plus side is that it allows the length of pedal release to be

set using the envelope *Release* knob. If you need to sustain a note or notes indefinitely, that's what the *Drone* button below is for...

**Drone**- This control is also way over on the right side of the UI. The *Drone* button notes played to ring indefinitely. Essentially, the *Attack*, *Decay*, and *Sustain* phases work normally, but the release phase stays "on" indefinitely at the current *Sustain* level setting. Note that *Drone* is limited by the current *Number of Voices* setting, and priority is given to the most recently played notes (with that in mind, lower *Number of Voices* settings are useful if you don't want notes to pile up).



The Equalization section is a simple-but-useful "master" EQ in the voice signal path that functions independently for each layer. Its controls are as follows:

**Low**- Shelving EQ with +/- 15dB and corner frequency of 200 Hz.

**Mid**- Peaking EQ with +/- 15dB and center frequency of 500 Hz.

**High**- Shelving EQ with +/- 15dB and corner frequency of 3000 Hz.

Pressure Mod, more commonly known as "aftertouch," is a feature we cribbed from the later flagship-model Prophet T8. This allows modulation to be controlled via additional key pressure *after* a key is initially struck. Note that P-10 automatically responds to mono (i.e. global for all keys) and poly (individual controller data for each note) aftertouch control data dependent on the type of incoming control data. (Anyone remember those TV commercials for Control Data Institute? Our age is showing...)



**Amount-** Sets the amount of aftertouch modulation routed to the destination buttons to the right. Turning the knob to the right from center applies positive mod; turning the knob to the left from center applies negative mod.

**Destination-** These toggle buttons determine how aftertouch mod is routed. They can be used singly or in any combination. Destinations are as follows:

- **Freq A-** Aftertouch Oscillator A pitch.
- **Freq B-** Aftertouch Oscillator B pitch.
- **PW-** Aftertouch modulates *Pulse Width* controls for both oscillators.
- **Filter-** Aftertouch modulates filter *Cutoff* frequency control.
- **Amp-** Aftertouch modulates overall amplitude.
- **LFO Amount-** Aftertouch modulates overall LFO depth.
- **LFO Freq-** Aftertouch modulates LFO *Frequency* control.



As mentioned in the voice architecture overview, Poly-Mod can be a little tricky to wrap your head around. The conceptual difference between "standard" LFO mod and poly mod is that with LFO mod, a single LFO mod source gets routed to all selected mod destinations, whereas Poly-Mod makes use of each individual voice's filter envelope and/or Oscillator B to modulate parameters within the same voice. This results in each voice having its own modulation path. Depending on how it's used, this can have very different sonic results than with basic LFO modulation.



**Source Amount-** These knobs determine the level of polyphonic modulation. They can be used singly or in any combination.

- **Filter Envelope-** Sets the amount of modulation from the filter envelope. Depending on amount and destination settings, this is capable of a lot of sounds; perhaps the most familiar is the legendary "Cars Sync" swept sync patch. This can be created by turning up *Filter Envelope*, setting Destination to *Freq A* and enabling the Oscillator A *Sync* button.
- **Oscillator B-** Sets the amount of modulation from Oscillator B, effectively turning Oscillator B into a powerful low-frequency (or audio-range) oscillator.

A couple of things to keep in mind: if you'd like to use Oscillator B for typical low-frequency oscillator duties, make sure to enable the *Lo Freq* button; this shifts Oscillator B's overall frequency range below audible range. If the *Lo Freq* button is off, the result will be "audio-range" modulation. This can be used for all manner of clangorous beating, bell and "FM" type sounds (or insane lasers when combined with Filter Envelope mod).

You'll also notice that the mod frequency rises as higher notes are played on the keyboard; disabling the Oscillator B *Keyboard* button will disconnect the keyboard control voltage resulting in a constant frequency. Conversely, you can leave the *Keyboard* switch on if you'd like mod speed to increase as ascending keyboard notes are played.

**Finally, you'll most likely want to set *Osc B* level to zero in the Mixer section when Oscillator B is used for poly modulation.**

**Destination-** These toggle buttons determine how aftertouch mod is routed. They can be used singly or in any combination. Destinations are as follows:

- **Freq A-** Poly-Mod modulates Oscillator A pitch.
- **PW A-** Poly-Mod modulates Oscillator A *Pulse Width* control.
- **Filter-** Poly-Mod modulates filter *Cutoff* frequency control.
- **Amp-** Poly-Mod modulates overall amplitude.

LFO is short for "Low Frequency Oscillator." LFO's are used for cycling modulation and operate below audible hearing range. The LFO can be routed to the oscillators for pitch modulation (aka vibrato) or pulse-width modulation of the pulse wave, filter cutoff for "wah wah" effects, or the amp section for tremolo effects.

In this chapter, we'll cover both the LFO and Mono-Mod sections because they work in conjunction.

## LFO

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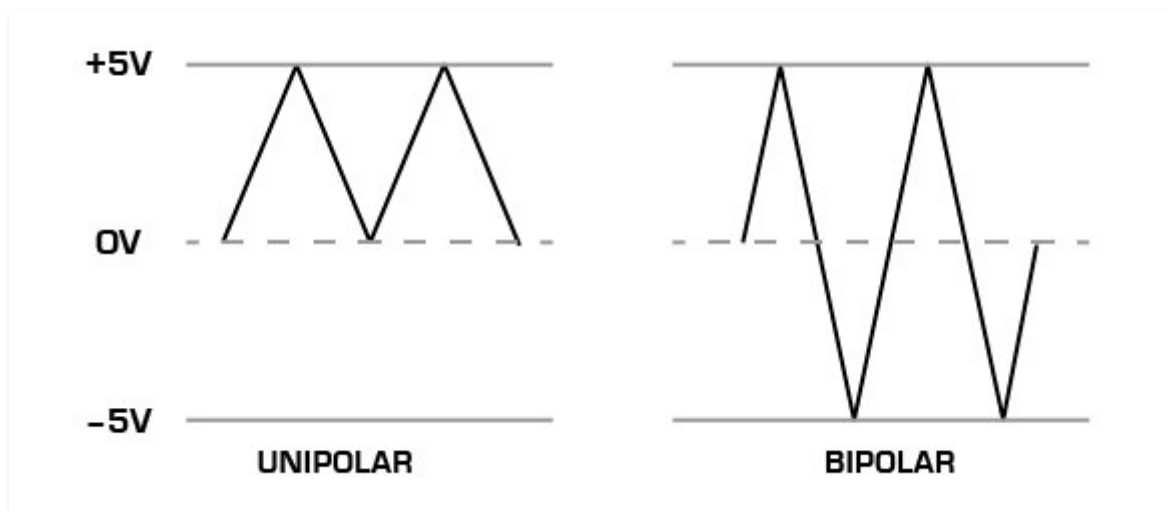
**Up-Low Mix**- This is a unique feature of the original instrument that mixes the LFO outputs of the Upper and Lower layers. The main intention of this isn't necessarily obvious: if you'd like to apply the *same* modulation to both the Upper and Lower layers, set the LFO controls as desired on one layer, then enable *Up-Low Mix* and disable all mod waveforms on the other layer. This effectively allows one layer's LFO to affect both layers. (Make sure to set the *LFO Amount* knob and destination buttons in the Mono-Mod section the same for both layers.)

Up-Low mix can also be used to create unique LFO mod waveshapes by combining waveforms and differing mod frequencies from each LFO. This works particularly well when *Sync* is enabled, because the LFO's will move together in logical subdivisions for unusual but congruent mod waveshapes.

**Sync**- When the *Sync* switch is enabled, LFO frequency will lock to host tempo when using P-10 within DAW software, or to the current tempo in the top menu bar when using the standalone version. The Frequency knob will snap from 8 beats up to 1/64th note triplets.

**Frequency**- The *Frequency* knob sets LFO speed , from 0.05 to 31.5 Hz (with *Sync* switch off). The LED beside the *Rate* knob flashes at the current modulation rate, and visually indicates the curve of the current mod waveform.

**Shape**- Sets the LFO mod waveform. The waveforms include unipolar sawtooth and ramp, bipolar triangle, unipolar square, and bipolar random. In case you're not clear on the difference between unipolar and bipolar waveforms, let's clarify. For this sake of these examples, we'll assume that *LFO Amount* (i.e. depth) is set to max.



Unipolar waves cycle between 0 and 5V. If we were applying this to pitch, this means the pitch would begin at nominal level (same as no modulation) at the start of the mod cycle, then go up to max mod setting, then return to nominal pitch.

Bipolar waves cycle between -5V and 5V. If we were applying this to pitch, this means the pitch would begin at the max negative mod amount at the start of the mod cycle (pitch would be lower than nominal amount), then go up to max mod setting, then to max negative again, and so forth.

Here's why P-10 (and most analog synths) choose unipolar vs. bipolar for different mod wave types:

- In the case of triangle or sine waves, bipolar is preferred, because these are most frequently used for pitch modulation, i.e. vibrato. In this

situation, it's desirable to have the pitch go up and down "around" the base pitch, because the ear tends to hear the overall frequency of a vibratoed sound as the center frequency. If we used a positive unipolar wave, the pitch of the note would sound sharp (because its pitch center would lie halfway between 0V and 5V at about +2.5V).

- When using square wave mod, unipolar is generally preferred, again because of how it affects pitches when modding oscillators. This is because the "bottom note" remains constant (and the same as the note with no mod applied), while the "top note" interval gets larger as more mod is applied. This makes it easy to set up a modulation between the base pitch and fixed interval (such as a major 2nd, minor 3rd, major 3rd, fifth, etc.). Conversely, a square wave with bipolar mod makes setting a musical interval difficult, because as the mod amount is increased, the lower note gets lower and the higher note gets higher - making for something of a "moving target."
- P-10's saw and ramp waves are unipolar, which has the same "always beginning at base pitch" effect. It's not as important here, since saw and ramp wave mod is usually used more as an effect, but it is usually preferable if mod is applied to filter cutoff, because it most likely will mean less dialing in of the cutoff frequency to compensate for the modulation.

### **LFO Amount and the Mod Wheel - Important, please read this**

On the original Prophet-5, mod amount was controlled strictly by the mod wheel (just like a Minimoog), so there was no way to save the mod amount when patches were stored. This was a real bummer, because every time a new patch that used LFO mod was selected, you'd have to set the mod wheel to the appropriate position - whiiiiich kind of defeated the purpose of the Prophet-5's then super-innovative digital patch storage. Sequential Circuits acknowledged this shortcoming when they created the Prophet-10 by adding an *LFO Amount* knob in the Mono-Mod section. This allowed users to store an initial mod amount, however **it's important to understand that the mod wheel and Mono-Mod LFO Amount knob work additively, and Cherry Audio P-10 stores the setting of the mod wheel with patches, so be aware if one or the other (or both) is turned up.**

**Wheel-** Enables and disables mod wheel controller data. When disabled, LFO depth is solely controlled by the *LFO Amount* knob.

**LFO Amount-** Sets the initial amount of LFO modulation routed to the destination buttons to its right.

**Key Reset-** Resets the LFO modulation cycle when a new key is pressed (but no other keys are currently held). This is particularly useful when the Sync button is enabled, and allows rhythmically synced modulation. It's most useful with the saw, square, and random waves.

## Mono-Mod

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The Mono-Mod section determines how the LFO control signals are routed.

**Source Mix-** Determines the Mono-Mod section source, allowing selection between the LFO or noise source, or a mix thereof.

**Destination-** These toggle buttons determine how Mono-Mod is routed. They can be used singly or in any combination. Destinations are as follows:

- **Freq A/B-** LFO modulates the pitch of Oscillator A, Oscillator B, or both.
- **PW A/B-** LFO modulates the width (aka, duty-cycle, see **Oscillator A and B** section for more info) of the pulse wave of Oscillator A, Oscillator B, or both. Pulse-Width Mod (PWM) has no effect on the ramp and triangle waveforms. PWM is the key to creating the famous glistening Prophet string sounds!
- **Filter-** LFO modulates filter cutoff frequency.
- **Amp-** LFO modulates overall amplitude, aka, volume. This mod destination wasn't available on the original instrument (but our lead sound programmer, who we'll call "James," will be happy because this lets him create fabulous electric piano patches).

Following are some extra per-layer Program section controls that don't easily fall into a category. These next few are smack in the middle of the panel:



**Glide switch and Glide Rate knob-** The *Glide Rate* knob causes notes to slide smoothly from one pitch to the next. Higher settings result in a slower change of pitch. The *Glide* switch enables or disables glide; it's handy if you'd like to quickly enable or disable glide for one of the layers only.

**Number of Voices-** Sets the maximum number of notes that can be played polyphonically from 2 to 16 max. Note that this is per layer, so the max polyphony for the entire layer is really 32 notes. (We should've called it the "Prophet-32")

**Unison/Unison Detune-** Unison stacks multiple voices according to the current *No. of Voices* setting. The *Unison* switch is used in conjunction with the *Unison Detune* knob which spreads out the tuning of the oscillators for fat sounds. The keyboard will only play monophonically (i.e., one note at a time) when the *Unison* switch is engaged.

The poly modes are last-note priority. When the max number of notes is reached, the oldest note will be stolen. With any modern computer, you should be able to leave these at 16, but we've provided lower settings to save processor cycles in case you're still holding on to that Pentium II machine (let us know how things are going on other planets on *Stargate SG-1*).

**Mono Retrigger-** On the original instrument, when sett to mono mode (aka *Unison*), envelope retriggering was legato only; that is, the envelopes would only retrigger once all keys were released. We've added a Mono Retrigger button which allows the envelopes to retrigger any time a new note is played, regardless of currently held notes; this is useful for "faster," punchier leads and bass lines.

If you're not clear on this mono retriggering business, a good analogy is playing individual notes on a guitar: legato is similar to picking one time and moving your finger up and down the string; retrigger is like picking every single note individually.

The following per-layer controls are found in the upper-right corner:



**Layer Pan-** Sets pre-effects left/right panning for each layer.

Note that this can be potentially confusing when effects are applied. The Distortion and Phaser effects are mono, so their stereo position moves with the *Layer Pan* control as you'd expect. However, because the Chorus/Flanger, Delay, and Reverb effects are stereo effects intended to stereoize mono signals, **only the dry signal moves with the *Layer Pan* control**; the Chorus/Flanger, Delay, and Reverb stereo images remain (relatively) the same. This may seem counterintuitive, but you generally don't want a giant, lush stereo reverb getting squished down to tiny one-channel mono.

**Layer Volume-** Sets overall volume for each layer. This is useful setting for balancing the overall levels of layers.

**Layer Tune-** Allows detuning of each layer by up to a semitone up or down.



P-10 features two completely independent layers, but only has a single set of Program (sound editing) controls. The Panel View section lets you select which layer is currently affected by the Program controls, as well as selecting the additional *Effects/Arpeggio* page.

## Panel View Controls

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**Lower/Upper-** Selects whether the onscreen controls display current settings for the Upper or Lower layer. Note that onscreen button LEDs are red when displaying Upper layer settings, and green when showing Lower layer settings.

**Solo Layer-** Solos the current layer. This can really be helpful while editing multi-layer patches. Because it's only intended to be used temporarily, its LED flashes when engaged as an annoying reminder. Also be aware that the *Solo Layer* button is disabled in *Normal* and *Single* Keyboard Modes (because two sounds can't simultaneously be heard in these modes).

**Effects/Arpeggio-** This switches the main parameter view to, you guessed it, P-10's onboard effects and arpeggiator section. For more information on these (get ready for more obvious), please see the [Effects](#) and [Arpeggio](#) chapters.

## Important Stuff You Should Know

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A couple of details that will make this lower and upper business easier to understand, complete with bold text, so you know we mean business.

- **Switching between *Lower* and *Upper* parameter display has no effect whatsoever on sound**, it just alternates which layer's knob and button settings are currently displayed.
- **The Lower button is disabled in *Single Keyboard Mode*** because all 32 voices play the same sound regardless of which manual or input MIDI channels are received.

- ***Single* Keyboard Mode** always uses the **Upper layer** only. When ***Single*** mode is selected, the ***Lower*** and ***Solo Layer*** buttons and panel text are disabled and dimmed. The **Sequencer** section **Assign *Lower*** button is also dimmed. (Because the sequencer will not be able to "play" the **Lower layer**, resulting in no sound, confusion, woe, KVR Audio tirades, etc. etc.)
- **Upper and Lower layer sounds** always save as one single sound patch.
- **All controls** contained in the **Program** frame (see where it says ***Program*** at the top?) are independent for each layer. **All controls** outside of the **Program** frame are global, except for the ***MIDI channel*** and ***Transpose*** buttons next to the top keyboard (but there are two sets of those, so duh).
- **Remember**, red LEDs = **Upper layer**, green LEDs = **Lower layer**, blue LEDs = **cheesy 90s car stereo**.



This section sets keyboard assignment and triggering behavior. The modes are as follows:

- **Normal**- Operates as two single-layer polysynths with up to 16 voices each. The top manual and Upper MIDI channel play the Upper layer; the bottom manual and Lower MIDI channel play the Lower layer.
- **Single**- Operates as a standard single-layer polysynth with up to 32 voices. Both manuals and their respective MIDI input channels play the Upper layer.

Note that when *Single* mode is selected, the Panel View *Lower* and *Solo Layer* buttons and panel text are disabled and dimmed. The Sequencer section Assign *Lower* button is also dimmed. (Because the sequencer will not be able to "play" the Lower layer.)

- **Double**- The Upper and Lower layer are stacked; that is, both the Upper and Lower layer play simultaneously from either manual via the Upper or Lower MIDI channel - like "Omni" mode, for you MIDI historians.
- **Alternate**- Layer playback alternates between the Upper and Lower layers with each keystroke from either manual via the Upper or Lower MIDI channel. We're not sure why you'd want to do this, but hey, it's there, because technology.

Cherry P-10 adds an additional mode, not available on the original instrument:

- **Split/Set**- The keyboard is split at a user-defined point with the Lower layer sounding below the split point, and the Upper layer sounding above the split point. Layers respond the same from either manual and the Lower or Upper MIDI channel.

To select the split point, choose Split mode by clicking the *Split/Set* button once, then click it again. The button LED begins flashing. Now either play the desired split point key on a MIDI/USB controller, or on a key of the onscreen keyboard. The button stops flashing and the split point is

displayed in the number display. To change the split point, click the *Split/Set* point button again and repeat.

When *Split* mode is enabled, the split point may also be set by clicking on the LED display and selecting a MIDI note number from the popup list.



P-10 includes five simultaneous effects: Distortion, Phaser, Chorus/Flanger, Delay, and Reverb. These can be used in any combination, and can be affect the entire instrument globally or can run as separate chains for each layer (wasn't "Separate Chains" a Journey record? Melissa Manchester?).

P-10 also includes some nifty effects modulation capabilities including an independent LFO and Mono-Mod routing section for key effects parameters, plus an independent Pressure-Mod section for controlling key effects parameters.



**Enable**- Enables or disables all effects for both the Upper and Lower layers.

**Mode**- Allows selection of either a common or individual set of Distortion, Phaser, Chorus/Flanger, Delay, and Reverb effects for P-10's Upper and Lower layers.

- **Global**- Both the Upper and Lower layer are run through a common set of effects. This is useful when you'd like the same effects settings for both layers when creating stacked *Double* or *Split* patches.
- **Dual**- Upper and Lower layers are each run through independent effects sections. If you're using an older computer, be aware that this is more CPU intensive.

**The Limiter effect is always global for the both Upper and Lower layers.**



**On-** Click to enable Distortion.

**Drive-** Overall amount of distortion.

**Tone-** Sets the brightness of tone.

**Level-** Overall volume; this doesn't affect the amount of distortion.

Increasing drive will cause an overall volume increase, *Level/* can used to balance things out.



**On-** Click to enable Phaser.

**Stages-** P-10's phaser includes up to 10 all-pass filter stages. As a general rule, more stages = lush phase, but there are plenty of interesting tones to be had using the lower stage settings. In case you're wondering how we arrived at 10 stages, this is similar to the vintage MXR Phase 100.

**Rate-** Sets the phaser's internal LFO speed from 0.01 to 10 Hz. The LED flashes at the current internal LFO rate.

**Resonance-** Increasing the amount of *Res* intensifies the phasing effect. This is sometimes referred as "feedback" in other phaser units.





We've included a thick and warm flange/chorus effect. Flanging and Chorus are closely related - the general difference being that flangers use a shorter time range and some amount of feedback (this intensifies the "jet-flyby" whoosh), whereas choruses utilize a slightly longer delay time, and no feedback.

**On-** Click to enable Chorus/Flanger.

### Type-

- **Flange-** Flanger mode is enabled.
- **Chorus-** Chorus mode is enabled. **Note that the *Delay* and *Resonance* knobs and panel text are disabled and dimmed when in Chorus mode.** (Chorusing functions best at a fixed delay time, and generally does not use any feedback, i.e. resonance.)

**Rate-** Sets the Chorus/Flanger's internal LFO speed from 0.01 to 8 Hz. The LED flashes at the current internal LFO speed.

**Depth-** Sets effect depth, i.e. the amount of modulation.

**Delay-** Sets the amount of delay time when in flange mode, from 1-13ms. This is disabled in chorus mode.

**Res-** Sets the amount of internal feedback when in Flange mode. Higher values result in a more intense flange sound.

**FX Modulator-** Sets the amount of sweep mod from the FX Modulator section in the top left corner. To disable the Flange/Chorus's dedicated LFO, set the *Depth* control to zero. This lets you use the FX Modulator only for mod.

**Mix-** Sets the ratio of clean to effected sound. Flanging and chorusing is usually optimal at a 50/50 setting, but we've added the *Mix* control by popular demand to allow more subtle (or warble-riffic) tones.



P-10's Delay includes digital, tape, and ping-pong.

**On-** Click to enable Delay.

### **Type buttons-**

- **Digital-** A pristine-sounding digital delay.
- **Tape-** Reproduces the effect of a vintage "space echo" tape delay.
- **Ping Pong-** Repeats alternate between audio channels.

**Sync-** The *Sync* button locks the delay time to master tempo. When engaged, the *Time* knob snaps to note values ranging from 1/64th note triplet to 8 beats. *Sync* mode locks to the tempo in the top toolbar when using the P-10 standalone version or the current project tempo when the plug-in version is used in a DAW.

**Time-** Sets delay time, from 1 to 2000 ms. If the *Sync* button is enabled, time settings snap to synchronized note values.

**Damp-** Attenuates high-frequencies as the knob amount is increased. Not only does this create more natural sounding decays, it also reduces the "stacking" effect that occurs with high feedback levels.

**Feedback-** Routes the output to the input for additional repeats. Be careful at high settings as this can result in runaway feedback madness.

**Spread-** Alters the left and right channel delay times creating a stereoizing effect. Greater amounts of spread increase the delay time differential and thus the stereo separation.

**Mix-** Sets the ratio of clean to effected sound.



**On-** Click to enable Reverb.

### **Type buttons-**

- **Spring-** Recreates mechanical spring-reverb effect often seen (and kicked) in vintage guitar amps.
- **Plate-** A medium-to-large studio plate-style algorithm.
- **Room-** Recreates a vintage algorithmic-style medium room verb.
- **Hall-** A large, hall-style reverb.
- **Galactic-** Cherry Audio's exclusive, giant, spacey reverb.

**Decay-** Sets the length of reverb release time/size of room.

**HP-** A highpass filter affecting wet reverb signal only. Low frequencies are increasingly attenuated as the knob setting is increased.

**LP-** A lowpass filter affecting wet reverb signal only High frequencies are increasingly attenuated as the knob setting is decreased.

**Mix-** Sets the ratio of clean to effected sound.

The FX-LFO and FX Mono-Mod sections work exactly like the similar sections on the main UI page, but instead of the LFO modulating synthesis parameters, they're set up to modulate key effects parameters.

**To be 100% clear: the FX-LFO and FX-Mono Mod sections function totally independently of the LFO and Mono Mod sections on the main synth parameters page.**

## FX-LFO

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**Up-Low Mix-** This is a unique feature of the original instrument that mixes the LFO outputs of the Upper and Lower layers. The main intention of this isn't necessarily obvious: if you'd like to apply the *same* modulation to both the Upper and Lower layer effects mod, set the LFO controls as desired on one layer, then enable *Up-Low Mix* and disable all mod waveforms on the *other* layer. This effectively allows one layer's LFO to affect both layers. (Make sure to set the *LFO Amount* knob and destination buttons in the FX Mono-Mod section the same for both layers.)

*Up-Low Mix* can also be used to create unique LFO mod waveshapes by combining waveforms and differing mod frequencies from each LFO. This works particularly well when *Sync* is enabled, because the LFO's will move together in logical subdivisions for unusual but congruent mod waveshapes.

**Sync-** When the *Sync* switch is enabled, LFO frequency will lock to host tempo when using P-10 within DAW software, or to the current tempo in the top menu bar when using the standalone version. The Frequency knob will snap from 8 beats up to 1/64th note triplets.

**Frequency-** The *Frequency* knob sets LFO speed , from 0.05 to 31.5 Hz (with *Sync* switch off). The LED beside the *Rate* knob flashes at the current modulation rate, and visually indicates the curve of the current mod waveform.

**Shape-** Sets the LFO mod waveform. The waveforms include unipolar sawtooth and ramp, bipolar triangle, unipolar square, and bipolar random. For a full explanation of unipolar vs. bipolar waves, please see the **LFO and Mono-Mod** chapter.

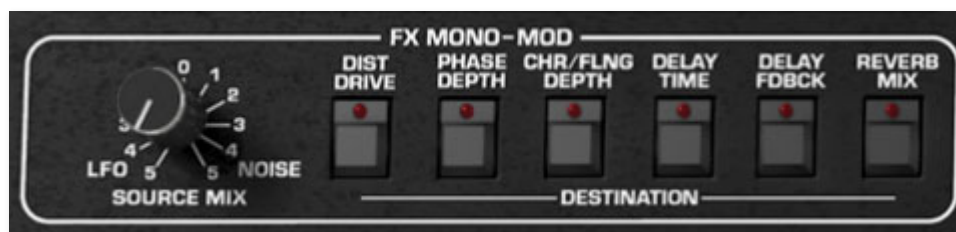
**Wheel-** Enables and disables mod wheel controller data. When disabled, LFO depth is solely controlled by the *LFO Amount* knob. When the the *Wheel* button is enabled, the mod wheel and LFO Amount knob signals combine to control LFO depth additively.

**LFO Amount-** Sets the initial amount of LFO modulation routed to the FX Mono -Mod section destination buttons.

**Key Reset-** Resets the LFO modulation cycle when a new key is pressed (but no other keys are currently held). This is particularly useful when the *Sync* button is enabled, and allows rhythmically synced modulation. It's most useful with the saw, square, and random waves.

## FX Mono-Mod

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The FX Mono-Mod section determines how FX LFO control signals are routed.

**Source Mix-** Determines the Mono-Mod section source, allowing selection between the LFO or noise source, or a mix thereof. This a dubiously useful "copied from Minimoog" feature - you'll most likely leave this set fully counterclockwise to the *LFO* position.

**Destination**- These toggle buttons determine how LFO mod is routed. They can be used singly or in any combination. Destinations are as follows:

- **Dist Drive**- LFO modulates the Distortion effect *Drive* amount control.
- **Phase Depth**- LFO modulates the Phaser effect *Depth* control.
- **Chr/Fing Depth**- LFO modulates the Chorus/Flanger *Depth* control.
- **Delay Time**- LFO modulates the Delay effect *Time* control.
- **Delay Fdbck**- LFO modulates the Delay effect *Feedback* control.
- **Reverb Mix**- LFO modulates the Reverb effect *Mix* control.

### **Using FX-LFO To Modulate the Chorus/Flanger and Phaser**

Since the Chorus/Flanger and the Phaser have their own "built-in" low-frequency oscillator modulation with dedicated *Rate* and *Depth* controls, this is designed so that the more powerful FX-LFO can be substituted for the basic inbuilt LFO's. This is really simple to do - just set the Chorus/Flanger or Phaser *Depth* controls to zero. When *Phase Depth* or *Fing/Chor Depth* destinations are selected in FX Mono-Mod and LFO Amount knob is increased, the FX-LFO will act as the only mod source. Not only does this allow mod via the FX-LFO's extended selection of waveshapes, it also allows mod to be synced with DAW projects and as well as the LFO on the synth parameters page.

Alternatively, internal Chorus/Flanger or Phaser mod may be combined with FX Mono-Mod for unique mod shapes.

FX-Pressure Mod works just like the Pressure Mod section on the main synth parameters page, but instead of modulating synthesis parameters, it uses aftertouch data to modulate key effects parameters. (We'll refer to "pressure mod" as aftertouch, as that's the accepted terminology these days.)

Unlike the Pressure Mod section on the main page, FX Pressure-Mod is strictly mono, even if you're using a controller with poly aftertouch. Unlike the per-voice synthesis parameters modded by Pressure Mod (for example, each synth voice has its own filter cutoff frequency that can be individually controlled), the effects don't have multiples of each parameter, thus aftertouch must be monophonic. If you're using a controller that's transmits poly AT, the controller signals will be averaged to determine the control value.

**Just to be 100% clear, the FX-Pressure Mod section functions totally independently of the Pressure Mod section on the main synth parameters page.**



**Amount-** Sets the initial amount of aftertouch modulation routed to the destination buttons to the right. Turning the knob to the right from center applies positive mod; turning the knob to the left from center applies negative mod.

**Destination-** These toggle buttons determine how aftertouch mod is routed. They can be used singly or in any combination. Destinations are as follows:

- **Dist Drive-** Aftertouch modulates the Distortion effect *Drive* amount control.
- **Phase Depth-** Aftertouch modulates the Phaser effect *Depth* control.
- **Chr/Flng Depth-** Aftertouch modulates the Chorus/Flanger *Depth* control.
- **Delay Time-** Aftertouch modulates the Delay effect *Time* control.
- **Delay Fdbck-** Aftertouch modulates the Delay effect *Feedback* control.
- **Reverb Mix-** Aftertouch modulates the Reverb effect *Mix* control.

- **FX LFO Freq**- Aftertouch modulates the rate of the FX-LFO.





An arpeggiator is essentially a step sequencer that plays each note of a chord individually in an ascending or descending pattern across one or more octaves.

**Like all other controls in the Program section, P-10 includes an independent arpeggiator for each layer.**

**On-** Enables and disables the arpeggiator.

**Pattern-** Defines the order in which the notes of the chord are played. The modes are as follows:

- **Up-** Plays the notes in order from lowest to highest.
- **Down-** Plays the notes in order from highest to lowest.
- **Up/Down-** Plays notes from lowest to highest then back to lowest again.
- **Random-** Plays held notes in random order.

**Sync-** Engaging the *Sync* button locks arpeggio timing to master tempo. When engaged, the *Frequency* knob snaps to note values ranging from 1/64th note triplet to 8 beats. *Sync* mode locks to the tempo in the top toolbar when using the P-10 standalone version or the current project tempo when the plug-in version is used in a DAW.

**Frequency-** Sets the pattern speed playback speed from 0.25 to 30 Hz. The LED flashes to indicate the current speed.

**Range-** Selects how many octaves the pattern will play before repeating.

**Hold-** When engaged, arpeggios continue to run without having to continuously hold down keys. This allows you to play a series of chords without the arpeggiator stopping as keys are released. Be aware that it will not stop until you disengage the button again. Mapping this to a sustain pedal or button on a MIDI controller can be useful for conveniently toggling arpeggio playback on and off.

In this section, we'll cover all controls to the left of the top keyboard manual.

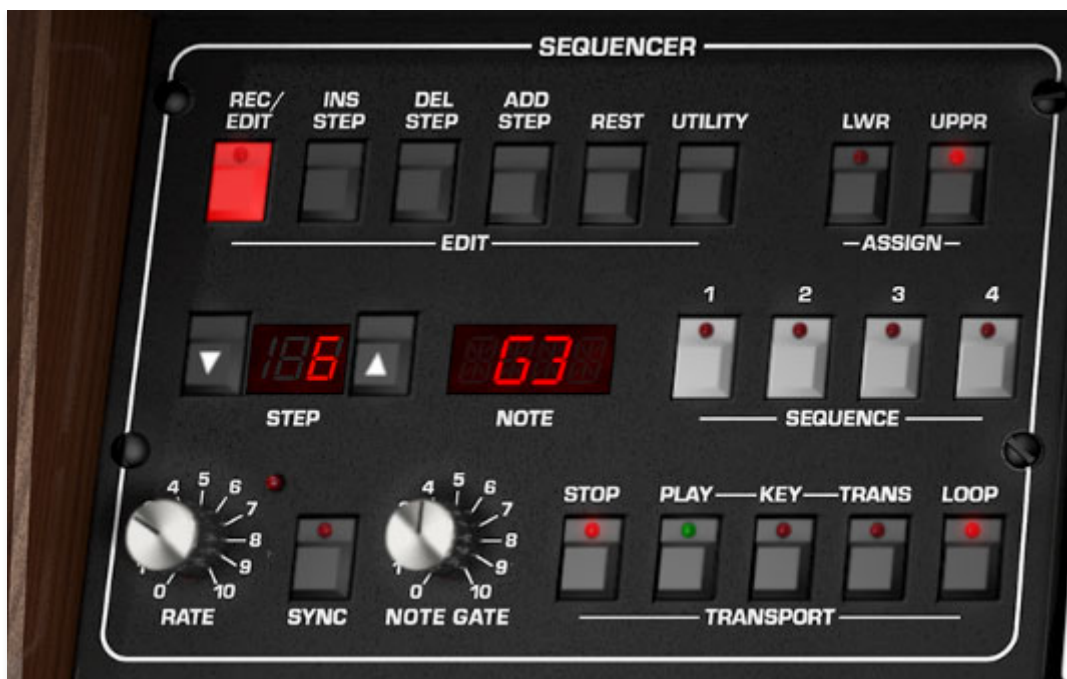


**Pitch wheel and Bend Depth-** The pitch wheel is used to bend the pitch of notes (super duh, we know) up or down. It's hard-wired to the MIDI pitch wheel controller data. The *Bend Depth* knob sets the bend range in semitones from 0-12 steps.

**Mod wheel-** Sets the amount of LFO modulation applied. It's important to understand that the mod wheel works additively with the LFO Amount knob when the *Wheel* button is enabled in the Mono-Mod section. (This is explained in detail in the *LFO Amount and the Mod Wheel - Important, please read this* section of the **LFO and Mono-Mod** chapter.)

**Upper and Lower MIDI Channel-** These set the incoming MIDI channel for each layer, allowing layers to be played independently.

**Upper and Lower Transpose-** These toggle buttons transpose the Upper and Lower layers by an octave up or down. You could accomplish the same thing using the Oscillator *Frequency* knobs, but these are intended as quick performance controls.



The original Prophet-10 included a six-sequence polyphonic sequencer that worked much like a polyphonic tape recorder for notes. It was also marketed as a standalone device for use with other instruments. Though it was innovative at the time, it was somewhat fussy to use. More importantly, its intended functionality is a severely limited version of what modern DAW software can do with ease.

With that in mind, rather than attempting to duplicate its wart-and-all operation, we went a different direction and "borrowed" the very nifty and fun four-track step sequencer seen previously in our Elka-X virtual instrument. We think you'll find this sequencer far more useful, as it is far better suited for making nifty sound patches with built-in note patterns, while leaving the chord- and composition-related heavy lifting to your DAW.

## Step Sequencer Structure

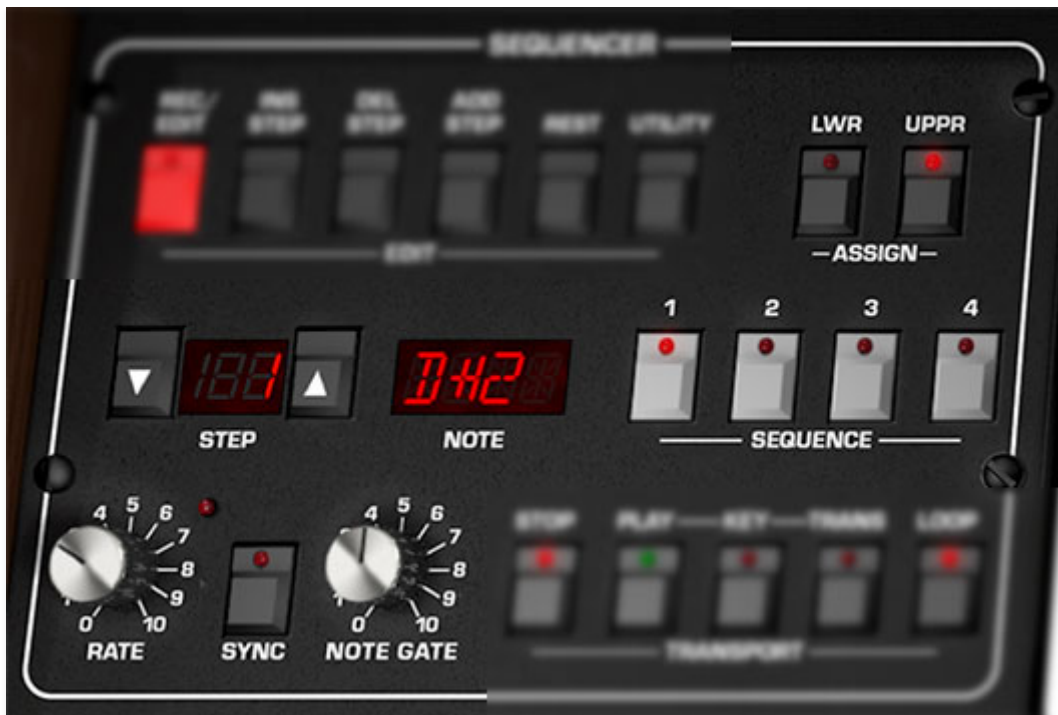
The Step Sequencer consists of four individual monophonic sequences, each with a user-definable length of up to 128 steps. Sequence playback can be assigned either to the Lower or Upper layer.

Each stored P-10 patch contains its own four sequences which are stored with the patch.

## Controls

### Main Sequence Controls

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**Step down/up buttons and display-** Each click of these buttons increments the current sequence step down or up respectively. Hold the buttons down to move quickly through multiple steps.

**Note display-** This display indicates the MIDI note of the current step. To change the note, click the *Rec/Edit* button and play a new note on a MIDI/USB controller, or click the display and choose a note from the popup menu.

We had to do a little fancy footwork for the # sign in the 14-segment LED numeric display - that's the H-like character in the image above (our obsessive designers couldn't bear the thought of using a plain 'ol font in that display).

**Rate-** Sets the sequence playback speed from 0.25-30 Hz. The LED flashes to indicate the current rate.

**Sync-** Engaging the *Sync* button locks the sequencer timing to master tempo. When engaged, the *Rate* knob snaps to note values ranging from 1/64th note triplet to 8 beats. *Sync* mode locks to the tempo in the top toolbar when using the P-10 standalone version or the current project tempo when the plug-in version is used in a DAW.

**Note Gate-** Globally sets the length of sequencer notes. A setting of 50% equals half the length of a step. Note that the *Gate* setting directly interacts with filter and amplifier decay and release settings, so you may need to fine-tune these for desired results.

## Assign

---

**Lower/Upper-** Chooses whether the sequencer controls the Upper or Lower layer. Note that the sequencer will "take over" keyboard control of the selected layer, but still responds to keyboard gate on/off and transposition (see *Transport Key* and *Transpose* controls below).

Remember that the Upper and Lower layers can easily be reversed using the *Utility* button *Swap Upper and Lower Layers* command.

Note that Assign Lower mode is disabled and dimmed when Keyboard Mode is set to Single

## Sequence

---

**Sequence 1/2/3/4-** These serve double duty:

In playback mode (*Rec/Edit* off), these toggle the four sequences on and off. The four sequences can be enabled individually, or in any simultaneous combination.

When *Rec/Edit* mode is enabled, these select which sequence is currently being recorded to or edited. **Only one *Sequence Enable* button can be active when in *Rec/Edit* mode.** When starting with all sequences blank (i.e., a blank patch), *Sequence Enable* button 1 will be active when the *Rec/Edit* is pressed. At all other times, P-10 defaults to the most recently recorded to or edited sequence number.

## Transport Controls

---



**Stop-** Stops sequencer playback.

**Play-** Starts sequencer playback.

**Key-** Enables sequencer playback only when a key on the keyboard is played. When *Key* is pressed, the *Play* button illuminates and the sequencer is "armed," that is, it waits to start playing until a key on the keyboard is played. Sequence playback stops when all keys are released.

**Transpose**- When enabled, all sequences will transpose according to keys played on the keyboard. The "home" transposition (i.e., non-transposed) is always be C1. The range can be "fine-tuned" by using the sequencer *Utility* button *Sequence #>Transpose Up/Transpose Down* commands. The semitone transpose commands (-1/+1) are especially useful for dialing in sensible sequence note locations when playing split patches with a sequence on one hand and chords/melodies on the other.

**Loop**- When toggled, sequences automatically loop back to their first step for continuous play. Disabling *Loop* is useful if you'd like to use the sequencer for "one-shot" sequences - particularly for firing off rapid one-time note passages.

## Sequence Edit Controls

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Besides the *Record/Edit* button itself, the following buttons are only active when record mode is engaged.

**Record/Edit**- Toggles the record/edit mode on or off for the currently selected sequence.

**Insert Step**- Adds a sequence step before the currently selected step number and shifts all following steps forward; the new step will contain rest (indicated by a dash in the *Note* display).

**Delete Step**- Removes the currently selected step number and shifts all existing following steps back.

**Add Step**- Adds a sequence step following the very last step in the current sequence.

**Rest**- Makes the current sequence step rest, i.e. no note sounds. The *Note* display will show a dash ( - ) for the current step. To revert the a rest step back to a standard note, simply enter a note while on the step while in *Record/Edit* mode.

**Utility**- This opens a popup menu with useful "housekeeping" commands. The first group of commands is repeated for all for sequences:

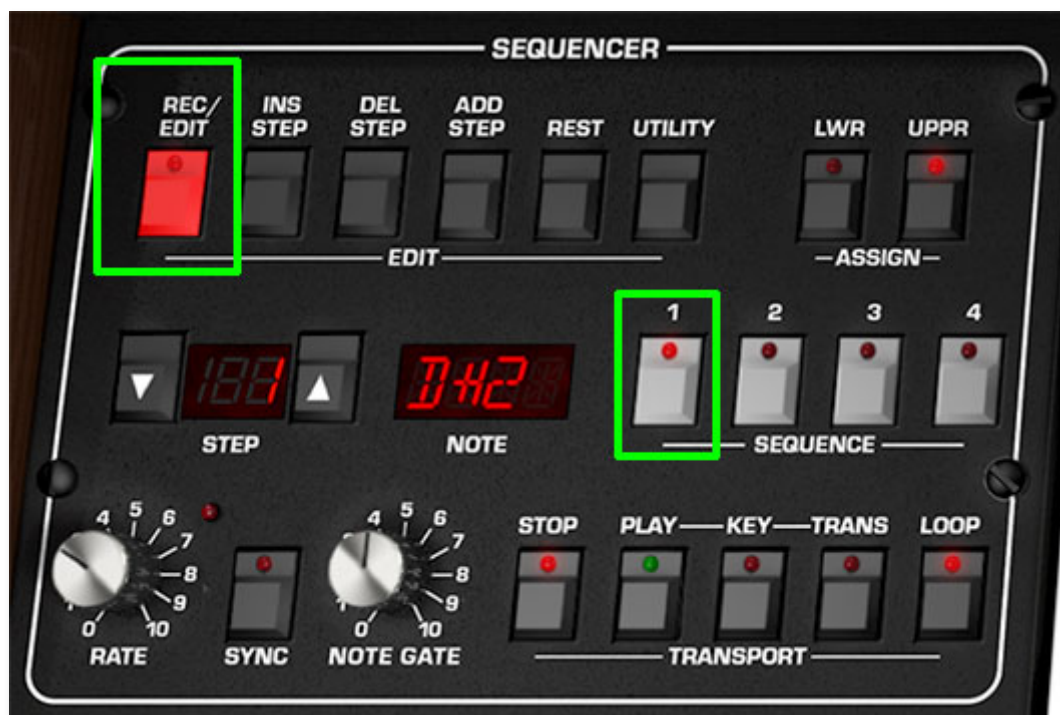
- **Sequence 1/2/3/4 commands-**

- **Transpose Up-** Transposes the current sequence up by a semitone or an octave
- **Transpose Down-** Transposes the current sequence down by a semitone or an octave
- **Copy To-** Makes a copy of the selected sequence number to the remaining sequence location of your choice.
- **Move To-** Moves the currently selected sequence number to the remaining sequence location of your choice and erases the sequence from the original location.
- **Clear Sequence-** Erases the current sequence and initializes the current sequence. P-10 opens an, "Are You Sure?," dialog box to prevent accidental erasure.
- **Clear All Sequences-** Erases all four sequences. P-10 opens an, "Are You Sure?," dialog box to prevent erasing by accident.
- **Import/Export-** This enables sequences to be copied between P-10 patches.
  - **Copy Sequencer Data to Memory-** This temporarily copies all four sequences to P-10's internal memory in order to allow pasting sequence data to a different patch.
  - **Paste Sequencer Data-** This pastes all four sequences from the source patch. All four sequences in the destination patch will be overwritten.
  - **Paste Only Sequences with Note Data-** This pastes only sequences containing note data. The destination location will be overwritten. If the source sequence location does not contain note data, it will not overwrite the destination sequence location. This lets you combine sequences from patch with sequences in the current patch. The Utility *Move To* and *Transpose Up/Down* commands are particularly useful here.

Here's how to copy sequencer data between two P-10 patches:

With the source patch selected, click *Utility>Clipboard>Copy Sequencer Data To Memory*. Now select the destination patch (make sure the source patch is saved before leaving it) and click the *Utility* button. Sequencer data can then be pasted in using the *Paste Sequencer Data* or *Paste Only Sequences with Note Data* commands.

# Creating Sequences



**Enable Recording and Select Sequence-** Click the *Rec/Edit* button, then select the Sequence # 1, 2, 3, or 4 button. The selected Sequence button LED will flash.

**Entering Notes-** When in *Rec/Edit* mode, individual sequence notes can be entered using a MIDI/USB controller, P-10's onscreen keyboard, or the onscreen QWERTY musical typing keyboard (enable the *MTK* using the keyboard icon in the top purple menu strip). The step # will automatically advance when a note is played. Notes on a step can also be manually selected by clicking in the digital *Note* display and selecting a MIDI note from the popup menu. To add a rest to the current step, click the *Rest* button at the bottom. Rest steps are represented by a dash in the *Note* display.

When *Rec/Edit* is clicked, a new sequence will have single step. A new step will be added with each played note or rest - in this way, you won't have to separately add a step for every new note, and you won't need to define the sequence length prior to creating a sequence.

## Editing Sequences

Editing notes couldn't be easier. Enable *Record/Edit* mode, and move to the desired step using the *Step* up/down buttons. Play a new note on a MIDI/USB controller, or click directly on the LED *Note* display window and choose a new



MIDI note number from the popup list, or hit the *Rest* button if a rest step is desired.

The sequence currently being recorded or edited can quickly be changed by selecting a different *Seq Enable* number - it's not necessary to exit *Rec/Edit* mode.



These are parameters that affect both the Upper and Lower voice layers. They're a bit scattered around the panel (just like the original!), so bear with us.

**Voice Assignment indicator LEDs**- These display which and how many Upper and Lower voices are being triggered under the hood in real-time. They also make a fun visual effect when when the arpeggiator is used.

**Balance**- This acts as a fader between the Upper and Lower layer. On the original instrument, it was intended as something of performance control to quickly alter layer balance. The silver knob, indicated a non-stored parameter on the original, but remember that all silver knob parameters store with patches on Cherry P-10. It's still pretty handy when assigned to hardware control from a USB/MIDI controller knob/fader/rheostat/MIDI boat tiller/etc.

**Utility**- The Utility button allow P-10 layers to be moved back and forth, independently initialized, and more. They also let you import layers from other P-10 patches.

Note that a number of utility menu options don't apply in *Single* mode, because there aren't multiple layers; in this case, inactive menus will be disabled.

If you accidentally mess anything up with the utility commands, you can always undo with [ALT-Z] (Windows) or [⌘Z] (Mac), or by clicking the counterclockwise undo arrow in the top menu strip.

- **Swap Upper and Lower Layers**- Reverses the locations of the upper and lower layer.
- **Copy Layers**- Duplicates one layer to the other.
- **Reset Layer**- Initializes all settings of the selected layer only.
- **Copy Effects**- Duplicates the settings of all effects from one layer to the other; this is only relevant if FX Mode is set to *Dual Layer* on the Effects/Arpeggio page. If FX Mode is currently set to *Global*, the *Copy Effects* menu options will be grayed out.

- **Import/Export-** The Import/Export command allows layers to be moved between sound presets. Data from the source preset isn't affected.

The process is simple - select the appropriate *Copy <Upper or Lower> Layer to Memory* sub-menu to copy the data into P-10's memory, then choose the destination preset, click the *Utility* button and select the appropriate *Paste to <Upper or Lower> Layer* submenu.

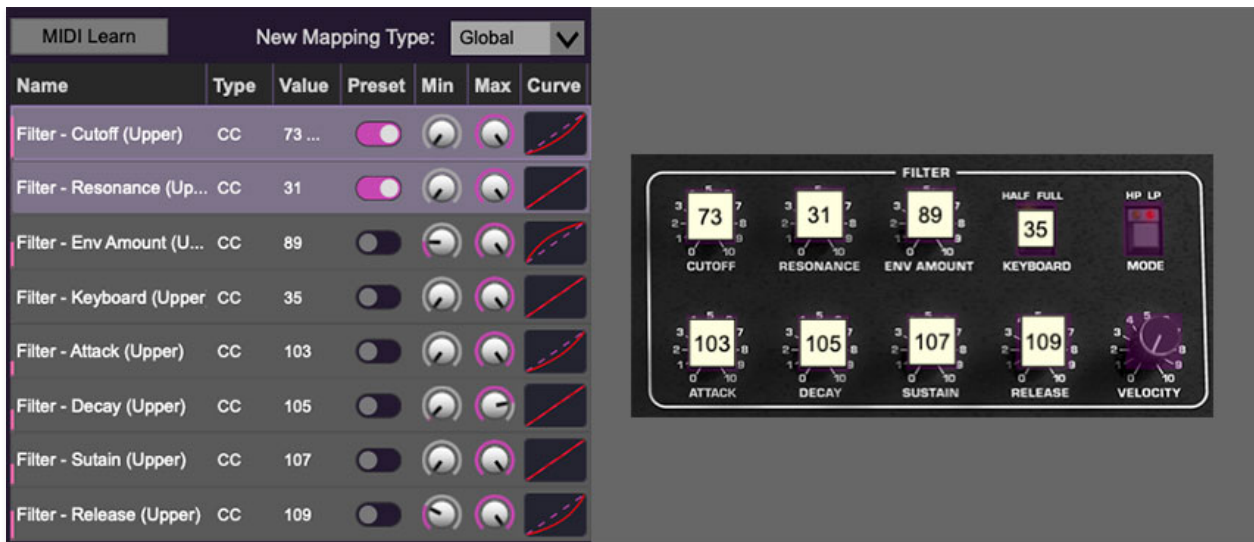
**Master Tune-** Sets the overall tuning for the entire instrument up or down one semitone. Use this to accommodate the goon in your band that insists on using that horrific Magnus air-blower organ.

**Drift-** Applies a random amount of independent tuning drift to the synth oscillators and filter frequencies for a more authentic analog character. We recommend always leaving it turned up a bit - Prophets certainly could be a little loose in the tuning department.

**A-440-** A tuning reference that generates a perfectly in-tune A note at 440 Hz. This was far more useful in the original instrument as its oscillators had a tendency to drift all over the place. Since P-10 is a modern computer-based instrument, tuning drift isn't an issue, but we included the *A-440* switch for authenticity. WEHHHHHHHHH.

**Master Volume and LED output meter-** Controls the overall instrument volume. Try to keep the meters out of the red or you may experience ugly digital clipping.

**Limit-** This is a switch that applies a transparent limiting effect to help prevent overloading and clipping.

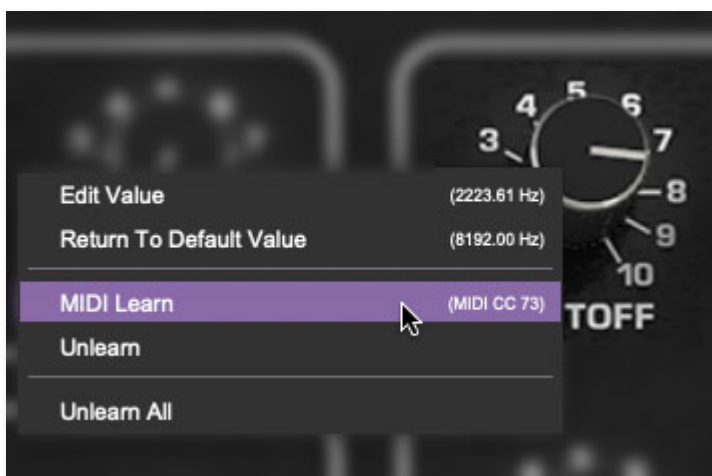


Assigning internal and external hardware controls adds a whole new dimension of control and musicality to patches, and it's really easy to do. The MIDI Tab is where all controller assignments can be viewed and tweaked. First we'll show how to assign an external hardware controller to a P-10 control, then we'll go over all parameters in the MIDI Tab.

## Basic External Hardware Control Assignment

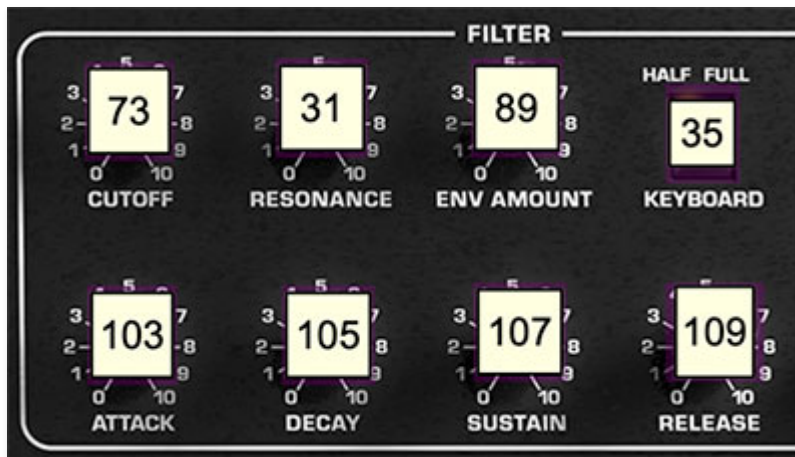
This is the quick, "I just want to assign a hardware control right now!," section. We recommend reading this entire section to best take advantage of P-10's MIDI control assignments.

In this example, we'll assign a hardware slider control to the Filter *Cutoff* knob.



Begin by right-clicking on the *Cutoff* knob in the Filter section and selecting *MIDI Learn*. A transparent purple overlay appears over the knob indicating that it's in learn mode. Now move the desired hardware control device. The purple overlay disappears and the hardware control will move the onscreen knob. If you change your mind (or accidentally select the wrong control), learn mode can be cancelled by right-clicking and selecting *Stop Learning*.

This is the basic procedure for assigning hardware controllers to almost any P-10 control.



When in MIDI learn mode, any previously assigned controller numbers will show in squares. These indicate the MIDI continuous controller number of the assigned hardware control (these are also displayed in the *MIDI* library tab at left).

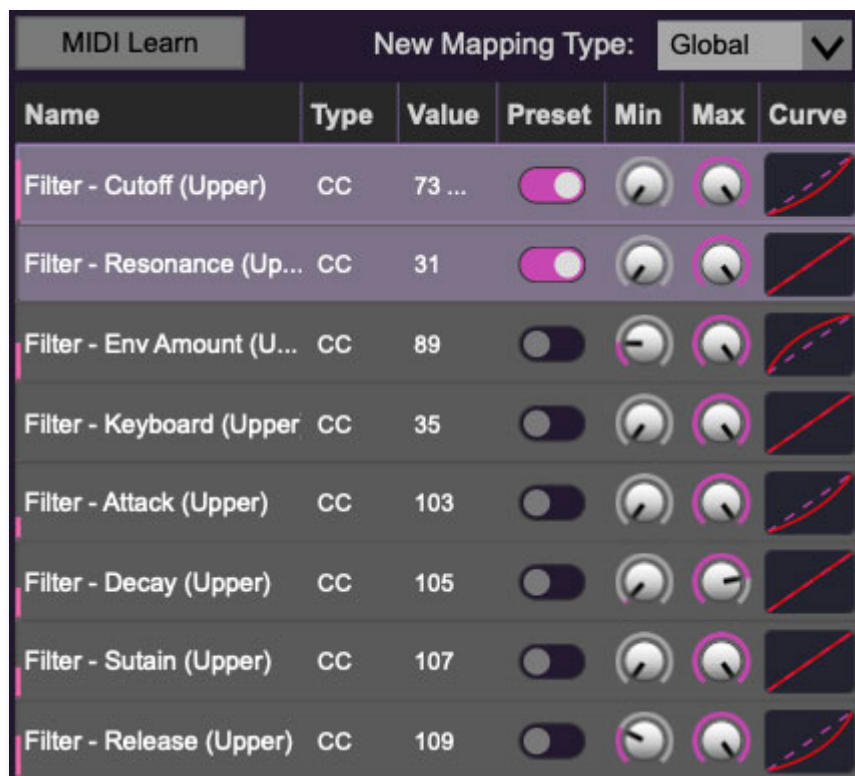
Once a MIDI controller has been assigned, in addition to real-time control of a P-10 parameter, you'll also be able to record and play back controller data from a DAW.

## The MIDI Tab

This is command central for all MIDI controller assignments. Here you'll be able to see information about all currently assigned controllers and adjust control ranges.



To view or hide the MIDI Tab, click the *MIDI* button in the top toolbar.



**MIDI Learn button-** This is almost exactly the same as enabling MIDI learn mode by right-clicking a control. Click the *MIDI Learn* button to enter learn mode (all controls turn purple). Unlike right-clicking on specific knobs, where P-10 automatically exits controller assignment mode, clicking the *MIDI Learn* knob "stays on" to enable assignment of multiple hardware controls. This is handy for quickly assigning a bunch of knobs, sliders, or the buttons of a grid-style controller.

To assign multiple controls, click *MIDI Learn*, click an on-screen control, move the desired hardware knob or slider, continue clicking and assigning on-screen controllers until all desired controls are assigned, then click *Stop Learning* to exit learn mode.

Remember that a single hardware knob/slider/button isn't limited to controlling just one parameter - a single hardware controller can simultaneously operate as many controls as you'd like. Combined with the MIDI Tab's controller range and inversion controls explained below, this can be a very powerful and customizable way to control parameters.

**New Mapping Type-** This popup menu selects whether newly assigned MIDI mappings will be global (affects all sounds and doesn't change when different presets are selected) or saved with individual presets.

## MIDI Tab Columns

**Name-** Displays the name of the parameter being controlled.

**Type-** There are five possible types of controller automation in P-10:

- **Note-** Notes played on a MIDI keyboard controller, expressed as C-1 to G9
- **CC (MIDI Continuous Controller)-** The standard 128 MIDI controller numbers as defined in the MIDI spec. More specifically, these are the controllers transmitted by hardware knob and slider controls. MIDI CC's can be used to control parameters in real-time or recorded and played back within DAW software.
- **MMC (MIDI Machine Control)-** The MIDI control protocol for tape machine-style transport controls. Back in the dark ages, this was used to control wonky old Tascam and Fostex reel-to-reel monsters, but it's useful if your MIDI controller has tape-style transport control buttons.
- **Pressure-** Most modern keyboard controllers transmit controller data when keys are pressed and released as they're held down. The vast majority of keyboard controllers with aftertouch transmit "mono" aftertouch only; in other words, aftertouch data is the sum of all keys to one single data stream. Note that P-10 only responds to mono aftertouch.
- **Key-** This allows keys of the computer QWERTY keyboard to act as button controls for P-10's onscreen controls.

**Value-** Displays the specific automation controller. In the case of a *Note* this would show a MIDI note number (C-1 to G9, for a MIDI CC, this would be the MIDI CC controller number, etc. Clicking on the value opens a pop-up menu where all values are displayed and can be selected.

**Preset-** This slider works in conjunction with the *New Mapping Type* popup control. In the left position (gray background), the MIDI mapping is global (affects all sounds and doesn't change when different presets are selected), in the right position (lavender background), the MIDI mapping is saved with, and only affects the current sound preset.

The *Preset* switch is super nifty, because it means that MIDI mappings can easily be changed to global or per-preset status at any time.

**Min-** Sets a limit on the lowest value any automation control can set a mapped controller to. This actually recalibrates the range of the automation controller to the remaining parameter range.

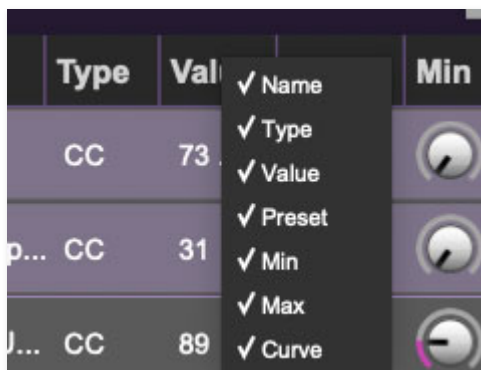
**Max**- Sets a limit on the highest value any automation control can set a mapped controller to. This actually recalibrates the range of the automation controller to the remaining parameter range.

**Curve**- These allow the customization of how incoming MIDI CC controls affect the movement of P-10's onscreen controls, ranging from exponential to linear to logarithmic curves.

**Super Cool Min-Max Tricks**- Not only can parameter ranges be limited via the *Min* and *Max* knobs, mapped control destinations can be completely inverted by setting the *Min* knob all the way up and the *Max* knob all the way down (or anywhere in between).

Limiting and inverting parameter ranges with the *Min/Max* controls is particularly useful when multiplexing a single hardware control to operate multiple parameters. Because *Min/Max*, range inversion and *Curve* settings can be separately set for each onscreen control, the customization options are super flexible.

## MIDI Tab Column Configuration Right-Click Menu



Right-clicking anywhere in the top row (*Name*, *Type*, *Value*, etc.) displays the column configuration menu. Checking/unchecking these allows hiding and display of each column. This has no effect on assignments.

## MIDI Tab Parameters Right-Click



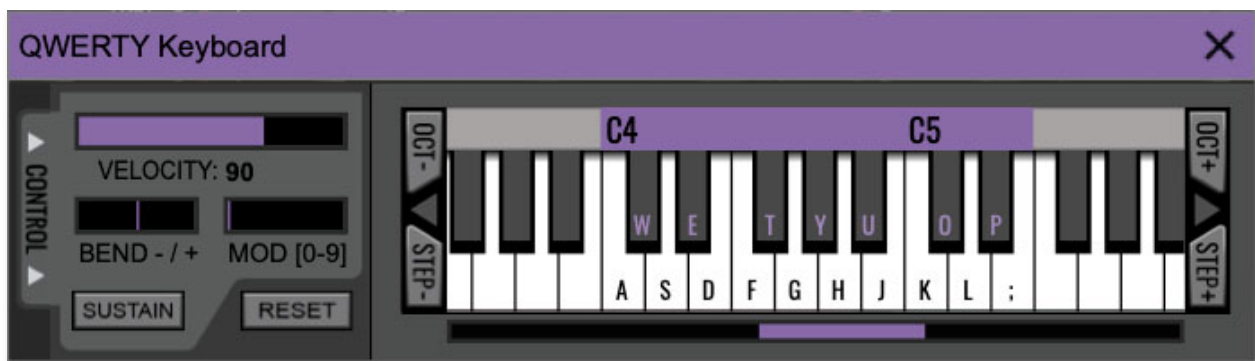
Name	Type	Value
Filter - (	MIDI Learn (MIDI CC 31)	...
Filter - Resonance (Up...	CC	31

Right-clicking on an assigned parameter opens the menu above.

**MIDI Learn**- This is used to change the controller assigned to a particular parameter.

**Unlearn**- Deletes the selected automation parameter.

**Unlearn All**- Deletes all controller assignments for the patch. P-10 will display a warning dialog prior to deletion in order to thwart potential unlearn-related disasters.



If you don't have a MIDI keyboard attached to your computer, the onscreen keyboard can be used to play notes, but clicking on pictures of keys gets old pretty quick, and it's impossible to play chords that way.

The better solution in lieu of a standard MIDI/USB keyboard controller is what we call the QWERTY Musical Typing Keyboard, or "MTK" for short. This allows your computer's keyboard to be used as a polyphonic controller, and also enables a few other tricks.

Following is a list of MTK keyboard modifiers and functions:



**Opening and Closing the MTK** - click the the circular keyboard icon in the top toolbar. To close the MTK, click the keyboard icon in the top toolbar, or click the X in the top right corner.

**Play Notes**- To trigger notes, simply press the corresponding computer keyboard key or mouse click the onscreen keys.

**Adjust Currently Visible MTK Range**- Slide the purple scroll bar horizontally to adjust the currently visible keyboard range.

**Adjust Overall Visible Keyboard Range**- Clicking and dragging the right edge of the MTK window allows the overall size of the window to be adjusted. This lets you view more or less of the onscreen keyboard. Note that the MTK window's borders cannot exceed the overall outside dimensions of the P-10 window.

**Shift Range Up/Down Octave**- Click the *Oct-* and *Oct+* buttons at the top left and right of the onscreen MTK. The current range is displayed above the

keyboard.

**Shift Range Up/Down Semitone-** Click the *Step-* and *Step+* buttons at the bottom left and right of the onscreen MTK. The current range is displayed above the keyboard.

**Hide/View Controllers-** Clicking *Control* at the far left hides and displays velocity, bender, mod, and sustain control parameters. Hiding the control view makes more space available for the keyboard.

**Set Note Velocity-** Move the purple *Velocity* bar to adjust the output velocity of notes.

**Pitch Bend-** To pitch a note or notes, press the + or - computer keyboard keys while playing a note. Bend depth is determined by the *Bend Depth* knob to the left of the keyboard.. Notes can also be pitchbent by clicking the mouse in the *Bend* area.

**Mod Wheel-** To add mod wheel modulation, press the number keys from 0-9 (above the character keys) while playing a note. The modulation amount will vary from none (0) to full modulation (9). Note that modulation will "stick" at the selected number; to disable modulation, click the 0 key. Mod can also be engaged by clicking the mouse in the mod bar area.

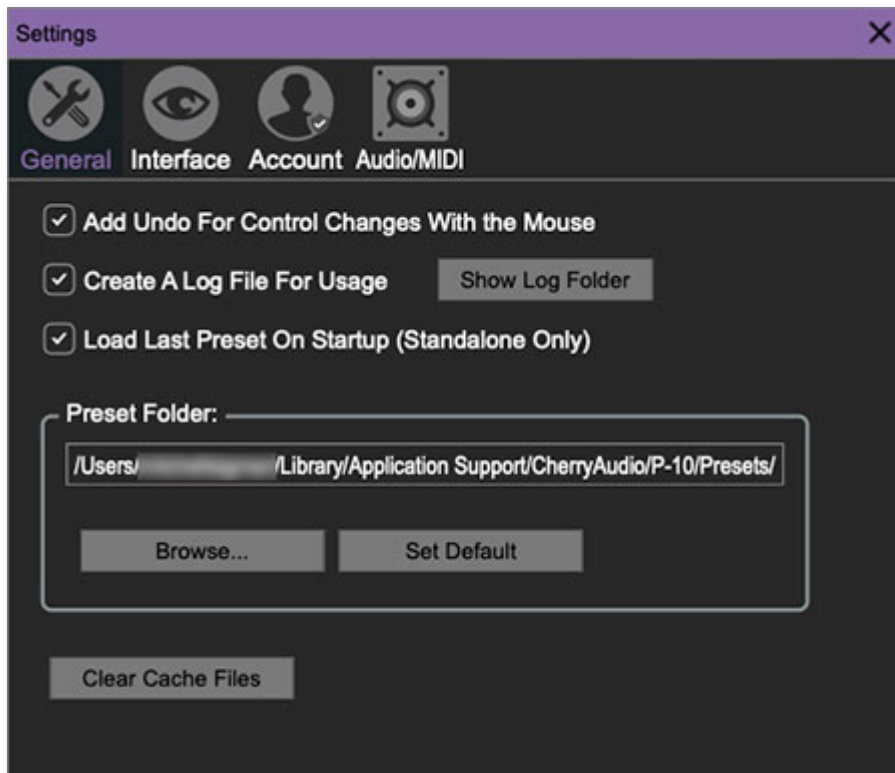
**Sustain-** The *Sustain* button mimics the functionality of a standard sustain pedal. Click the [TAB] key to engage sustain, or [SHIFT]+[TAB] to lock it. The *Sustain* button can also be engaged by mouse clicking it.

**Reset-** Initializes all MTK parameters including keyboard range and control parameters.



Clicking the settings gear icon opens a window with multiple tabs for configuring various "under-the-hood" settings. These are mostly set-and-forget kind of parameters - all the stuff you'll want to tweak is on the front panel, as it should be!

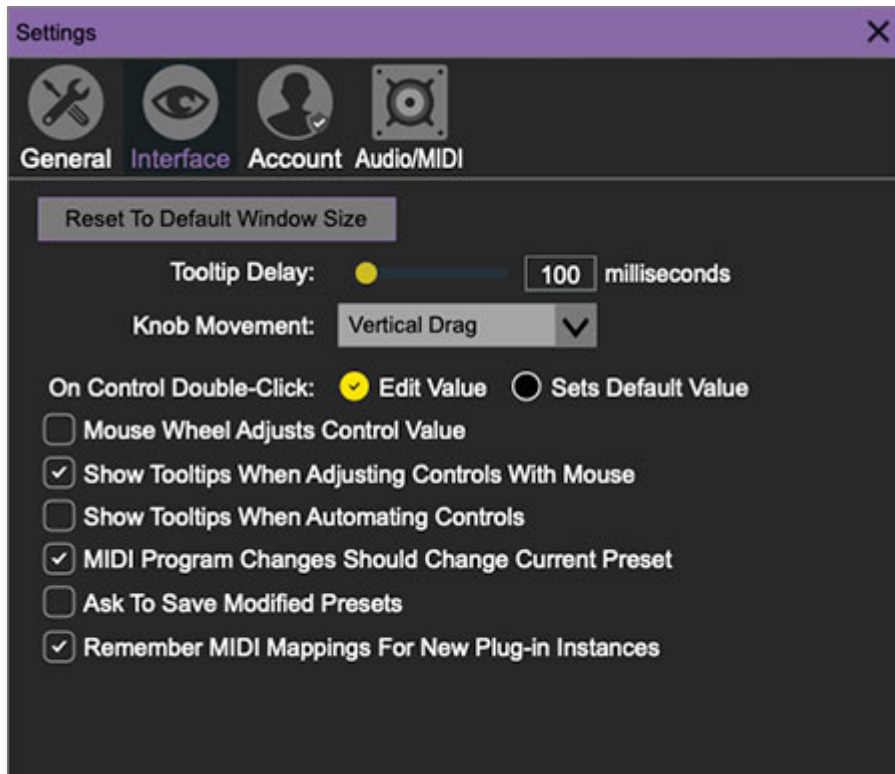
## General



- **Add Undo For Control Changes With the Mouse**- Enabling this allows undo of knob/slider/button adjustments. You'll want this on if you want the ability to undo all aspects of patch editing and programming.
- **Create A Log File For Usage**- This creates a text doc of all of P-10's internal and routines during use. It is mainly intended for our tech staff should you experience any issues. Clicking *Show Log Folder* opens the folder containing P-10 log file docs.
- **Load Last Preset On Startup (Standalone Only)**- Automatically loads the last preset used when P-10 standalone version is started.
- **Preset Folder**- Displays the current location of P-10's sound presets. This can be changed by clicking and typing in the field.

- **Browse...** - Displays the current location of preset folder in the file manager.
- **Set Default**- Sets the current displayed *Preset Folder* path as the default location
- **Clear Cache Files**- Deletes all log files, temporary sounds, and the image cache.

## Interface



Allows customization of P-10's user interface settings.

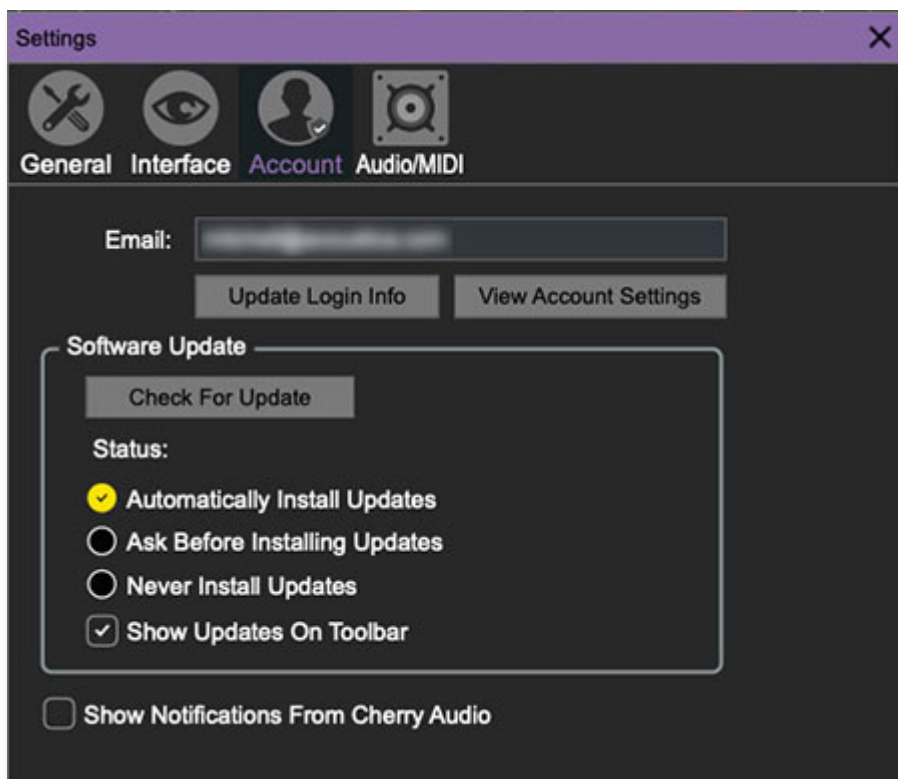
- **Reset To Default Window Size**- Resets the P-10 workspace to default size. Use this to reset the window size if the window somehow becomes too large for your display and can't be resized (pretty sure we fixed that bug a while back though!).
- **Tooltip Delay**- Tooltips are those informative bits of text that pop up when hovering over a control (go ahead and try it, we'll wait...). The *Tooltip Delay* setting defines how long you must hover before the tooltip pops up.
- **Knob Movement**- Defines how mouse movements relate to turning onscreen knobs. It defaults to *Vertical Drag*, but can be changed to

*Horizontal Drag*, or *Rotary Drag* if you're one those folks that cut their teeth on the *Steinberg Model E VST* back in 2000.

- **On Control Double-Click-** Defines what happens when the mouse is double-clicked on a control. If *Edit Value* is selected, an exact number can be entered by typing the number and hitting [ENTER] or [RETURN]. If *Sets Default Value* is selected, double-clicking a control resets it to its default value.
- **Mouse Wheel Adjusts Control Value-** Enabling this lets you adjust knob, slider, and switch values by moving the mouse wheel. This works great with a standard mouse wheel, but you'll want to disable it if you're using an Apple Magic Mouse (which will move the control AND scroll the window).
- **Show Control Tooltips When Adjusting Controls With Mouse-** Displays parameter tooltips/values when the mouse is hovered over a control or as a control is moved with mouse clicked.
- **Show Tooltips When Automating Controls-** Displays parameter tooltips/values next to controls any time a control is changed, i.e. if a control is moved via an assigned MIDI controller or a *Perform* panel knob, etc.
- **MIDI Program Changes Should Change Current Preset-** Allows MIDI program change messages to change P-10 patches.
- **Ask To Save Modified Presets-** This opens a dialog window asking if you'd like to save changes if a patch has been edited and a new patch is selected. If you're the type that likes to click through presets and tweak a control here and there, it can be annoying to have a window pop-up asking if you'd like to save every time you switch presets - if you're that person, keep this off.
- **Remember MIDI Mappings For New Plug-in Instances-** When enabled, P-10 remembers all global MIDI Tab controller settings.

## Account

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Settings for your personal login information and account.

- **Email**- Displays the email address of the current login.
- **Update Login Info**- No, this isn't a place for news and tour dates for yacht rock superstar, Kenny Loggins. Clicking this opens the same email and password login screen you'll see when initially launching P-10.
- **View Account Settings**- This opens your personal account page on the Cherry Audio Store website containing information about modules purchased and more.

### Software Update

- We often fix bugs and make improvements; below are options defining how P-10 handles updates.
- **Check For Update**- Click this to see if an updated version of P-10 available.

### Status-

- **Automatically Install Updates**- Updates are automatically downloaded and installed.
- **Ask Before Installing Updates**- By default, P-10 automatically downloads new versions of modules when available. Checking this box defeats automatic updates and will ask if you'd like to install updates

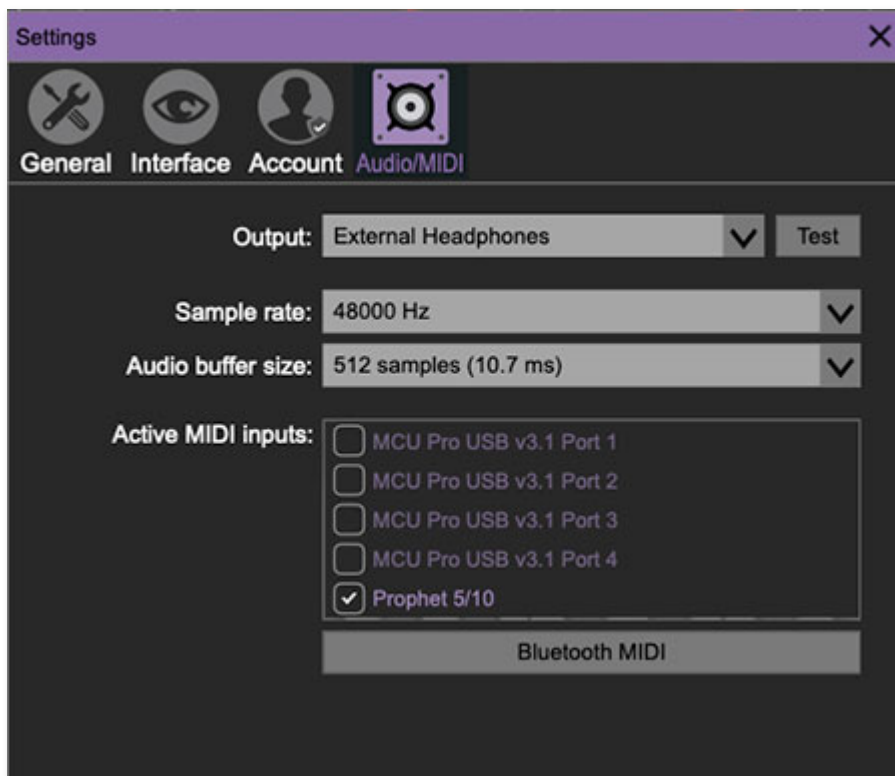
when they become available.

We'll never make changes that can potentially "break" existing patches but we recommend enabling *Ask Before Installing Updates* if you're using P-10 for live performances or other "mission critical" situations.

- **Never Install Updates**- P-10 never automatically installs updates.
- **Show Updates On Toolbar**- Checking this will display an icon in the toolbar next to the logo letting you know there's an update available.

**Show Notifications From Cherry Audio**- We occasionally will fire off in-app advertisements; disabling this checkbox will hide them. We hate repetitive, annoying ads as much as you, so we won't use this feature too often. When we do, it'll be for something super cool (like a killer sale), so we recommend leaving it on.

## Audio/MIDI



Not to be confused with [audiomidi.com](http://audiomidi.com), where I used to work, these are settings for audio and MIDI hardware input and output.

**This tab is only visible in the standalone version of P-10.**

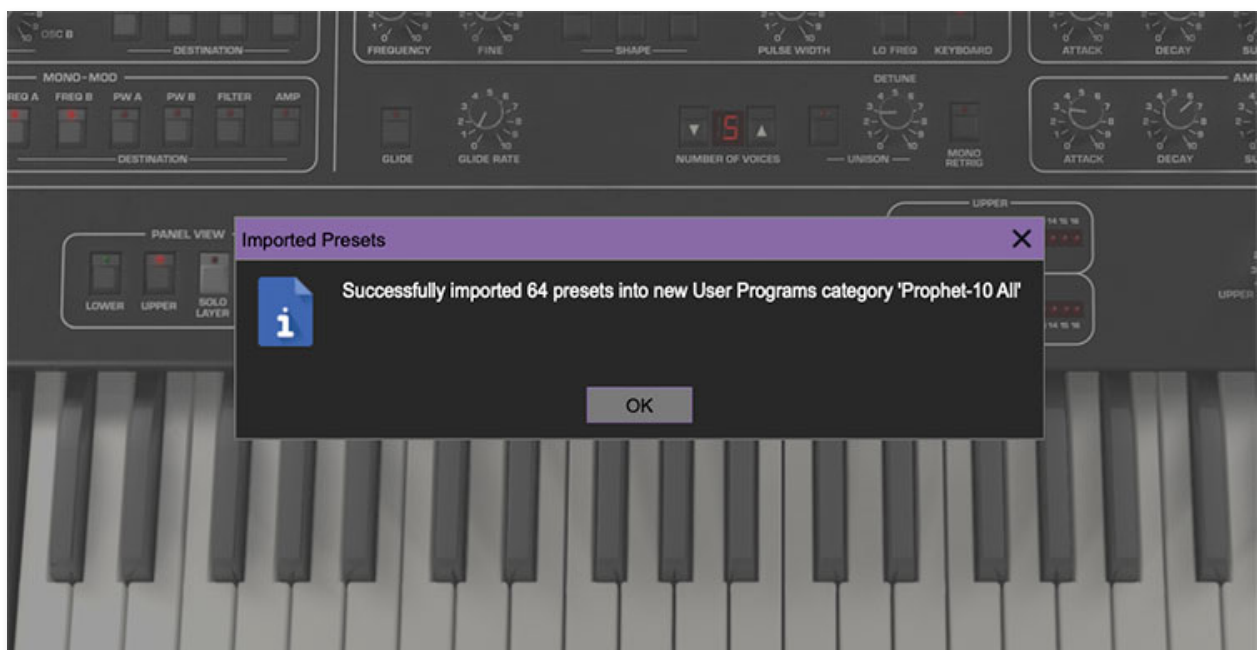
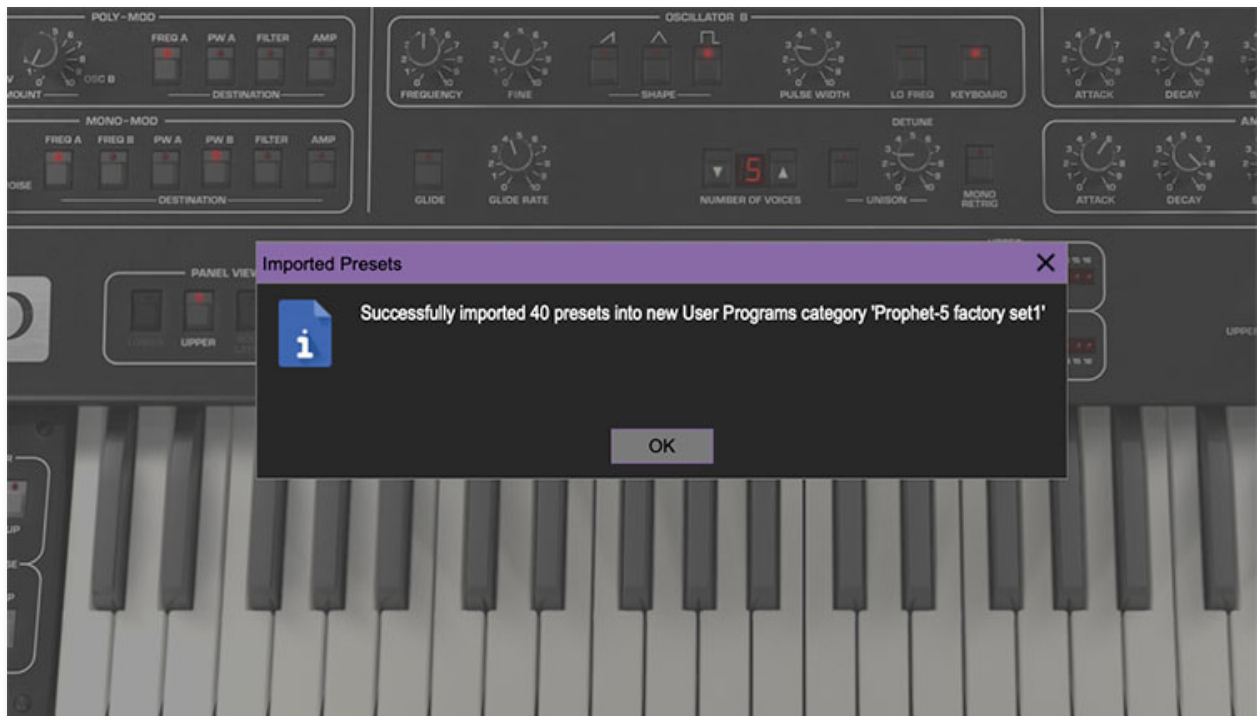


- **Output-** Use this drop-down menu to choose a physical audio output source. This defaults to *Built-In Line Output*, i.e. your computer's onboard system audio, but you'll get better fidelity with an external professional audio interface. The biggest audible difference is usually reduced background noise or hum, but external audio hardware also offers greater flexibility in terms of number of inputs and outputs and built-in mic or low-level instruments pres (i.e. electric guitars). The *Test* button will produce a sine wave when clicked; this will help with troubleshooting, aka, "WHY THE HECK ISN'T THIS MAKING ANY NOISE?!?"
- **Sample Rate-** This sets P-10's global sample rate. Lower sample rates offer better performance, but if you have a fast computer, high sample rates may offer slightly improved fidelity.
- **Audio Buffer Size-** As with any digital audio app, this defines performance vs. note latency, and will largely depend upon computer CPU speed. A professional external audio interface will almost always exhibit better performance than "built-in" system audio. Lower settings will result in less latency (in the form of faster response to notes played), but will increase the chances of audio gapping or crackling noise.
- **Active MIDI Inputs-** Enable MIDI input sources, i.e. MIDI/USB keyboards, pad controls, MIDI knob/fader control surfaces, etc. Check boxes to enable one or more devices. **If a MIDI/USB controller isn't working in standalone mode, make sure the appropriate box is checked here.** (We put this this piece of info *way* in the back of the manual, to make it extra challenging to figure out why things aren't working.)

Original Prophet-5 and Prophet-10 patch bank data in sysex format can easily be imported directly into P-10 via drag-and-drop. These must be in "Syntech" .syx format.

## IMPORTING SOUND BANKS AND INDIVIDUAL PATCHES USING A COMPUTER

To import an entire sound bank, simply drag and drop the bank anywhere over the P-10 UI.



If the bank is valid, you'll see a confirmation window and new category containing the banks is created in the presets browser.

## **IMPORTING INDIVIDUAL PATCHES FROM A PROPHET-5 OR PROPHET-10**

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This is admittedly a little dicier. Original Prophet-5's and Prophet-10's had a bug in their factory MIDI kit code that caused them to transmit "malformed" sysex. This means that transmitting a single patch to P-10 will not work, however there's a developer named Tauntek that has created updated OS's for the Prophet 5 and 10 that fix this glitch (these OS's also add some cool features). We haven't installed these in any of our Prophet-5's or 10's, but the ROM chips are available at the links below if this interests you:

**<http://www.tauntek.com/Prophet5.htm>**

**<http://www.tauntek.com/Prophet10.htm>**