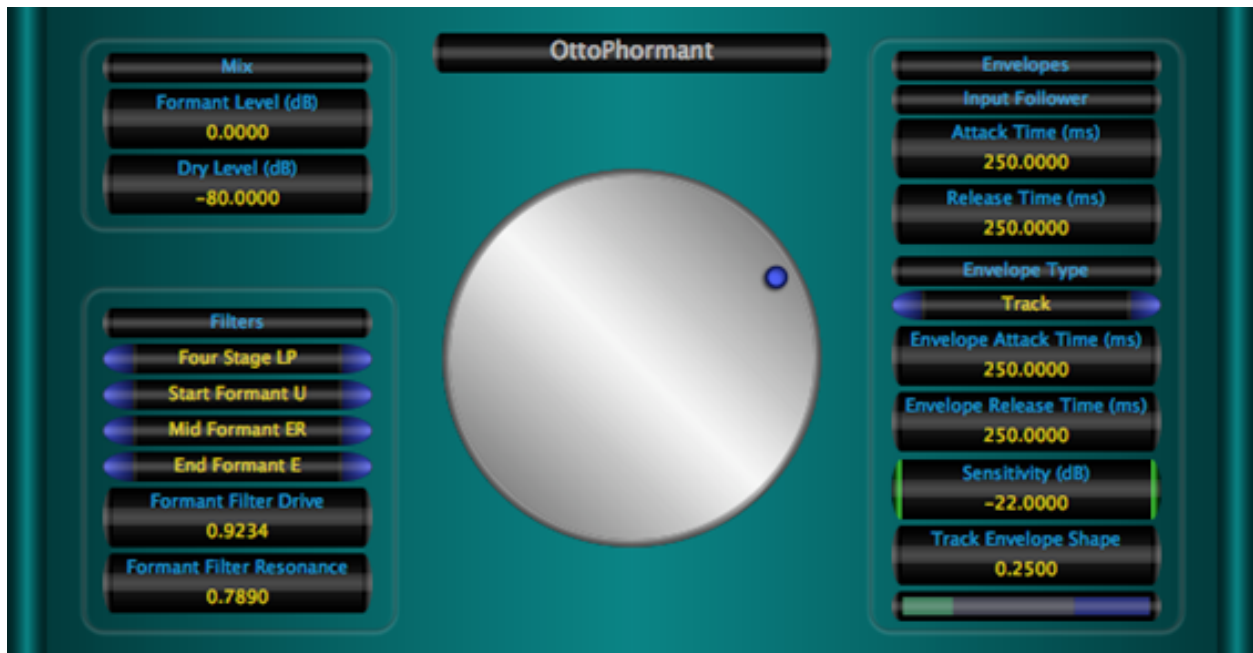


Music Unfolding OttoPhormant Audio Unit User Guide



Requirements:

OS X 10.4 or higher is required. OttoPhormant requires an Audio Unit (AU) capable host. A host that supports Cocoa user interfaces (UI) for AU's is needed. Please check OttoPhormant's operation in your host of choice for suitability before purchasing.

Installation:

OttoPhormant can be installed in any of the standard Audio Unit component locations. These are commonly /Library/Audio/Plug-Ins/Components and ~/Library/Audio/Plug-Ins/Components (where "~" stands for the user's home directory). Drag OttoPhormant.component into the Components directory and relaunch your AU host software. The included presets also need to be installed into one of the standard locations (/Library/Audio/Presets/MusicUnfolding/OttoPhormant and ~/Library/Audio/Presets/MusicUnfolding/OttoPhormant). If you already have a MusicUnfolding directory in your "Presets" directory, then drag the OttoPhormant directory into this location. If not, drag the MusicUnfolding directory that contains the OttoPhormant presets directory into the "Presets" directory.

Introduction:

First, a quick introduction to the editing controls for OttoPhormant. All controls are set using the same knob. Click the desired control readout to select and then move the knob to control. The active (selected) control is indicated by the green end caps. The knob works with a circular control motion. The closer to the center you are dragging the knob, the rougher the increments. Moving farther out makes the increments finer. You can even click the surface of the knob and drag out of the surface of the knob and then move in a circular motion if you want finer control. To set a parameter to an exact value, double click the parameter readout. This brings up a text box where the parameter value can be set exactly. Double-clicking the knob sets the selected parameter to its default value. The knob will act with a linear, logarithmic, or power response depending on the parameter that is selected.

The controls also support click-and-drag directly on the surface of the readout. Clicking-and-dragging in a vertical direction changes the parameter values. Dragging in a horizontal manner causes the value to change ten times slower. The control behavior (linear, log or power) is the same as it is while using the knob for parameter control. In addition, hovering the mouse over the control and using the scroll wheel also changes the control value. If you have a mouse with an horizontal scroll wheel motion, scrolling horizontally changes the parameter value with 10 times finer control.

The colors of the parameter displays can be changed in the preferences/registration panel. To bring up the panel, click on the name tag/badge for the AU. Select the colors of your choice and then to see the new colors in effect, you must close and reopen the AU. The preference is applied in all hosts for a given user. Note that these color preferences apply to all of the Twister series AUs. Setting your color preference in one will apply this preference to all of the Twister AU's.

OttoPhormant is an auto/touch wah formant filter with MIDI control. The formant wah can be controlled by a MIDI controller such as a MIDI expression pedal using parameter mapping in an appropriate host. This control can also be manipulated using parameter automation in appropriate AU hosts by automating the "MIDI Control" parameter on OttoPhormant.

The Sections:

Mix: The mix section has two settings for the Formant Level and the Dry Level. The settings are in dB. When using the bandpass based filters, it is usually desirable to have dry signal mixed with the signal from the formant filters. When using the "LP" filters, setting the dry level to -80 will turn off the dry signal.

Input Follower: Now let's tackle the hard one. Actually the controls are easy. But, you are going to have to set these to match your playing style. The Attack and Release times set how fast the input follower responds to the changes in the dynamics of your playing. When in the "Sweep" modes, the Sensitivity sets the level in dB of the trigger threshold of the touch envelope. The Sensitivity level shows up as the dark blue region on the level meter. The input follower level is in green. When the two overlap, the touch wah is triggering. The sweep envelope will repeat for as long as the input follower level is above the sensitivity. You can use this to set up a second oscillator behavior that follows the envelope settings. The "Envelope Attack Time" and "Envelope Release Time" set the length of time in milliseconds for the envelope to sweep from it's base to the final value. When in "Track" mode, the "Sensitivity" sets the input amplitude that will cause the filter to reach the "End Formant". The "Track Envelope Shape" parameter adjusts how fast the envelope tracking puts the filter cutoff into the upper portion of the frequency sweep. In "Track" mode, you want the green portion of the level just touching the blue when you play your hardest.

Envelopes: The envelope section sets the envelope for the touch wah filter setting. There are four modes. "None" simply turns the touch envelope section off. "Sweep Up" and "Sweep Down" set the envelope to trigger and do a timed sweep. "Track" follows the input signal volume. "MIDI" sets the envelope to follow an input signal from a MIDI controller. OttoPhormant will automatically connect to any MIDI controller and responds to MIDI controller 11 (The expression control). Also, OttoPhormant will make itself available as a MIDI virtual destination under the name "OttoPhormant Audio Unit."

Filters: OttoPhormant has a collection of three filters per channel that are pre-configured to match with a set of vowel formants. The filters are driven and can be either 1, 2, 3, or 4 stage. Higher number of stages will cause a steeper resonance peak and roll-off. In addition, each stage adds more drive. The formants are either "LP" or "BP." "BP" stands for band pass filters and all three filters will be bandpass type filters. "LP" corresponds to a filter configuration where the filter with the lowest frequency is a lowpass filter and the upper two filters are bandpass filters. In general, when using the "BP" settings, you will want to mix in an even balance of dry signal. When using the "LP" setting, it is usually the case that you will want the dry signal set to -80 dB. (This actually will take the dry signal completely out.)

The filters have three formant settings, "Start," "Mid," and "End." As the envelope moves from the smallest to the largest values, the filters sweep from "Start", through "Mid", and stop at "End."

Hints:

In the track mode, set the sensitivity so that the green level just touches the blue portion of the level meter when you play your hardest.

When in "Sweep" mode, you want to set the sensitivity so that the green level overlaps the blue region for the length of time that you want the sweep to repeat. If you set the sensitivity to just overlap when you hit the dynamic level that you want to trigger a sweep, then you can get good control over when the sweeps are triggered. Setting the sensitivity to -80 dB will cause the filters to sweep up and down through the formants like a triangular LFO.

The "Track Envelope Shape" parameter is only active when you are using one of the track modes. Testing has shown that a value of 0.25 is a good starting point. Adjust to taste from there.