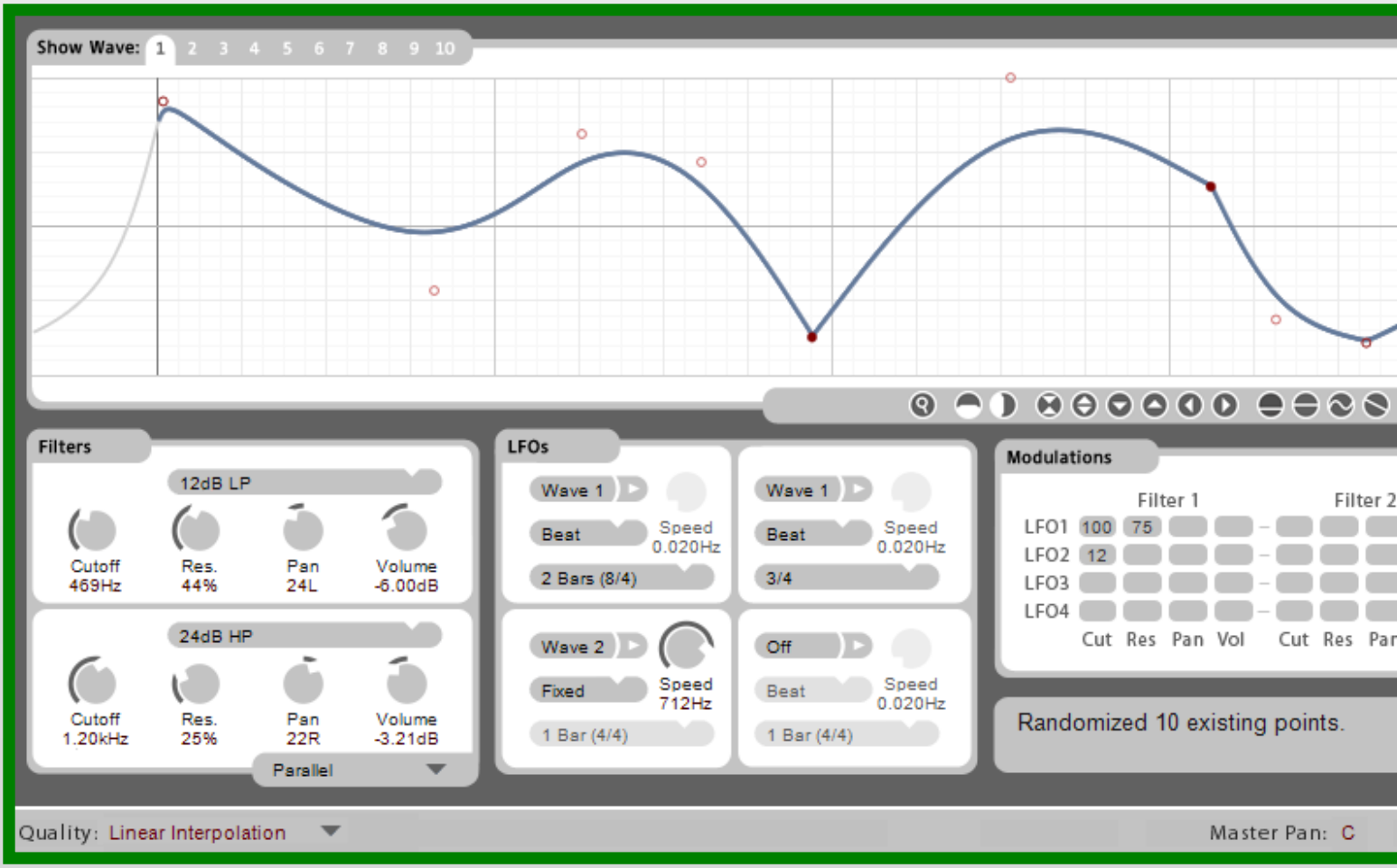
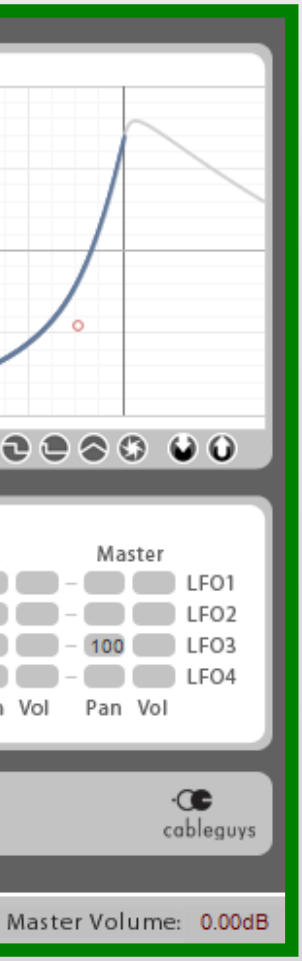
FilterShaper2

Total Movement Control

by Tomislav Zlatić

Automating stuff in modern DAW's is an amazing and fun experience, NOT! Adding proper movement to various elements of a mix certainly adds more interest to a track, but it also adds more gray hair to the poor producer's head, because, more often than not, some serious fiddling with little dots on a computer screen is needed to get the job done right. Of course, one can always choose the fun way and simply record an automation sequence using knobs on a MIDI controller, but such affair won't necessarily come out with satisfactory results. In fact, every time I choose this method, it actually ends up with me re-tweaking the recorded performance countless times in search for a perfect automation sequence. The more complex those automation curves become, the more I wish my plugins had the power to automate themselves. Well, maybe some day we will have such intelligent plugins at our disposal, but for now let's check out FilterShaper2, an advanced filter effect with unique





modulation capabilities which seem to make the automation process less stressful and more fun.

First impressions, whistles and bangs

Once FilterShaper2 is loaded, the first two things that attract attention are its clean and sleek design, and of course a big waveform editor, which takes the whole upper half of the screen. This modulation envelope editor is the most unique feature of FS2, making it stand out when compared to other filter plugins with built-in LFO's, so let's take a look at it first. The editor workflow is based around using a desired number of breakpoints to define the shape of a waveform, which is a concept similar to the one usually found in vector graphics editing software. Up to 20 of these breakpoints can be applied to a single waveform, allowing anything from creation of the most simple shapes, to high-detail envelope tweaking. Modifying the shape of a waveform is quite a simple process, as all the action that takes place inside the editor.Adding, deleting, and modifying the type of a breakpoint, is achieved by clicking or dragging the breakpoints around the screen using the mouse. Left-clicking on empty space inserts a new breakpoint, while right-clicking an existing breakpoint will toggle the amount of curvature it adds to a waveform. This way, we can define whether the specified breakpoint will create a sharp saw-like curve, a soft sinewave-like curve, or a third type of curve which is somewhere in between the two already mentioned. There are ten memory slots available for storing different waveforms. A quick toolbar located in the lower-right corner of the editor offers useful functions such as reversing or expanding the existing waveform, generating basic waveforms like sines, or squares for example, and also taking a snapshot of the current waveform for later use. Sadly, there is no quick undo function available in the waveform toolbar, which is quite a surprise considering the large number of other available features. In some cases though, changes made inside the editor can be undone using the host's undo feature, but not all hosts support this. Thus, a built-in undo function would be a nice addition to the feature list of some future version of FilterShaper.

The movement machine

Once a waveform is ready for use, it can be linked to one or more different LFO's. There are four LFO slots available in total, each with individual waveform, speed and synchronization settings. If set to operate in free-running mode, an LFO can be pushed from 0,020 Hz up to 5,24 kHz, while the synchronization ratio ranges from 1/128th notes, all the way to 32 bars. The LFO engine always stays in sync with the host, even if we skip a part of the song or modify the song's sample rate. There is no option to retrigger an LFO using midi notes, although the desired effect can be achieved using a bit of in-host automation. Still, a key-retrigger option would be a nice addition to speed things up, especially when using FilterShaper2 to create complex wobble-style basslines often found in genres such as dubstep and DnB.

FilterShaper2

Proper party needs proper sound

All these in-depth envelope shaping and modulation possibilities would be rather pointless if it turns out that FilterShaper2 can't offer filters of high enough quality to rival their stand-alone counterparts. But thankfully, the built-in filters sound great, and they don't disappoint even when subjected to serious abuse by multiple LFO's. FilterShaper2 offers 10 filter types, all of which are the standard LP, HP, BP and NP filters with varying slope settings. There are two filter slots available, both offering standard cutoff, resonance and volume controls, with an interesting addition of a pan control knob. A dropdown menu positioned below the two filter slots allows us to choose if the selected filters work in serial or parallel mode. When parallel mode is engaged, the filters will be automatically panned to the opposite sides of the stereo image, resulting in an instant perception of extreme width being added to the processed sound. This, of course, can be changed if the user wants to use the parallel mode for different purposes, but the described instant stereo effect is indeed a nice touch. The serial mode on the other hand, arranges the filters in a serial chain. This way, the filter selected in the second slot will be receiving the signal that has already been processed by the filter in slot number one. This can be useful for various creative purposes, but can also come in handy if we wish to clean up the low frequency rumble from a signal, by applying a HP after it leaves the first filter.

Connecting the pieces

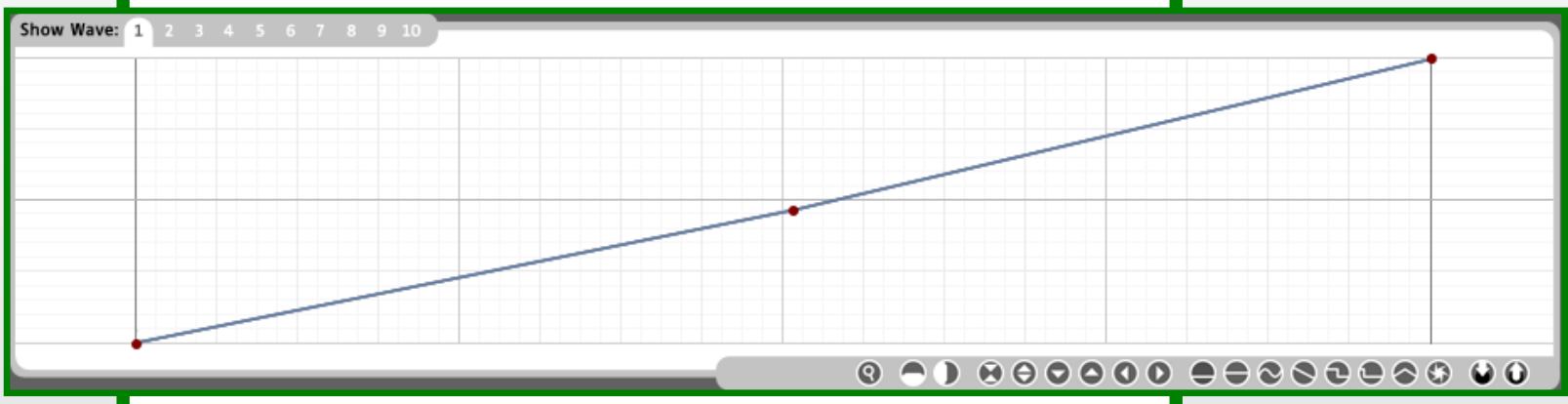
So, now that we have all the basic modules covered, it's time to see how they work together. All the connections are managed inside the modulation patchbay located in the lower right corner of the GUI. The way in which this patchbay is designed can only be described as "simplicity at its finest," since there are no unnecessary buttons and knobs present, nor anything that could detract and cause confusion. To activate a connection, all we have to do is to select the appropriate source/target slot and enter the desired modulation percentage. We can use up to ten modulation targets in total, including each filter's cutoff, resonance, volume and pan settings, and also the global volume and pan. All of these can be modulated at the same time, even by using multiple LFO's for the same target. Finally, to take things even further, every component of FilterShaper2 can be automated in the traditional way, which means that we can use MIDI automation to control all of the knobs, LFO settings, and even movement of a waveform's breakpoints!

Final thoughts

The plugin is stable, it did not crash during this test, and the CPU load is really low – around 5% on a modest processor such as the Intel Atom. It takes some time to load on slower machines though, but nothing to be concerned about. FilterShaper2's vast modulation capabilities and user-friendly workflow, make it a great tool for adding movement to static sounds, but it can also be used as a glitch effect, capable of completely mangling the audio on the input.
FilterShaper2 is priced at €49, and a generous nag-free demo allows you to completely test the plugin before purchase. Also worth mentioning are FilterShaper's two younger brothers, VolumeShaper2 which offers the same functionality minus the filters, and PanCake, which is a free plugin that can be used to modulate panning. All three plugins are available for purchase at the official Cableguys website.

A quick test

Here is a simple and quick example of FilterShaper2 workflow. Let's imagine that we've just started working on a new track. We have a powerful pad sound playing in one channel, and a standard *four on the floor* type loop going on in the other. Now, let's insert one instance of FilterShaper2 in the pad channel. Draw a simple ramp waveform as shown in the image below, add a 12 dB LP filter and connect it to LFO1. Here comes the fun part.



In LFO1 settings, choose Wave1 and set the beat synchronization to 16 bars. This results in an instant evolving pad type sound, perfect for 16 bar buildups. That was pretty neat and quick, right? Note that this setup can be saved as a preset and loaded up every time a quick buildup is needed. Now set LFO1 sync to 1/4 notes. The evolving atmospheric drone instantly transforms into a classic sidechain-style pumping sound. When compared to classic sidechain compression setups, using FilterShaper2 to achieve this "ducking" effect allows more control over the sound, as the envelope is not controlled by the kick, but completely customizable instead. Finally, let's really test these filters out. Set LFO1 sync 1/128 notes and lower the cutoff frequency if needed.

This makes the pad sound like an unusual saw waveform. Notice how, even though the filter is pushed to it limits, it doesn't add strange artifacts to the sound, and still sounds liquid. This new sound can now be bounced, and loaded into a sampler for further tweaking.