

Dance Mix

Creative Filtering for Remixers

Wow Your Friends

By Francis Preve



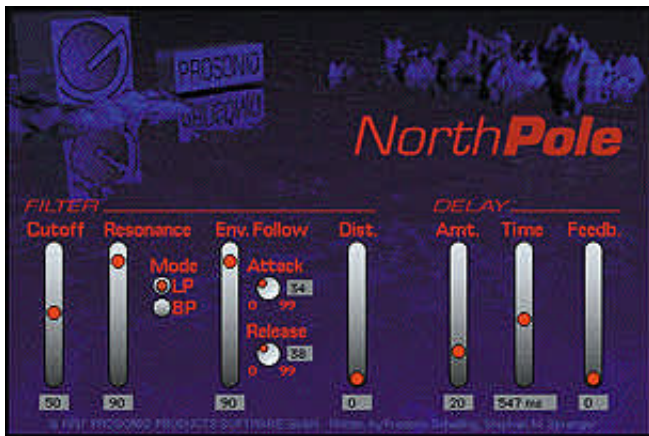
AUDIO EXAMPLES

lpf-sweep.mp3 - [MP3](#)

hpf-sweep.mp3 - [MP3](#)

Lately, I've been inundated with questions about several effects that are popular in modern electronica. The interesting thing about these queries is that the answer is almost invariably: Use a filter! Filters have been a mainstay in synthesizer programming since its inception. Most of those boingy, spring-loaded patches and boww-boww basses are the result of lowpass resonant filters applied to a variety of waveforms and samples. Those unfamiliar with the specifics of filtering may want to check out Jim Aikin's comprehensive tutorials in the August and Fall '99 issues of Keyboard.

With the advent of filter plug-ins for today's audio/MIDI sequencing applications, remixers have the tools to apply classic synth programming techniques to vocals, recorded instruments, or even entire tracks. This approach allows for some wild tricks, ranging from making a track sound like it's coming from outside the club and slowly entering the acoustic space to the classic "radio" vocals in recent tracks from Madonna and Christina Aguilera. Good stuff.



Northpole is a freeware filter plug-in for VST-compatible sequencers that features resonant low-pass and band-pass options along with envelope following, distortion, and echo. Check it out at www.prosoniq.com.

Another way to achieve these effects -- without plug-ins -- is by exploring the filtering options available within your sampler, or purchasing dedicated hardware like Korg's Kaoss Pad, Boss's EF-303, or Electrix's Filter Factory and Filter Queen. There are also synths with audio inputs (such as Roland's JP-8080 or the Analogue Solutions Sorcerer) that allow external audio to be filtered. All are terrific tools and well worth the money if you plan to apply these effects directly to instruments, tape tracks, or in a live setting. It's also worth noting that Yamaha's classic (and ubiquitous) SPX1000 includes integrated resonant filters -- but these are buried deep in the processor's submenu structure. Time to crack open those manuals, kids.

Lowpass

One effect in particular has become so popular lately that it's bordering on cliché. This effect consists of a track -- or even an entire mix -- starting out muffled and slowly transforming into full-bandwidth audio. I've heard this sound described as an "underwater" effect, an EQ sweep, or "that neighbor's stereo through the wall trick." It's really a low-pass filter applied to a track or set of samples. The secret to making this effect work dynamically is to slowly raise or lower the cutoff frequency -- usually via MIDI automation -- to gradually make the sound brighter or darker. Increasing the resonance on the filter adds an overtone that follows the filter sweep, providing a more electronic, synthesized sound.

Another nifty lowpass filter trick can be accomplished by applying an envelope follower to the filter cutoff frequency. What an envelope follower does is increase or decrease the cutoff frequency of the filter depending on the volume of the signal. This approach can be used to recreate classic wah-wah effects on clean guitar parts or add a slick, synthy effect to drum or music loops. Prosoniq's freeware Northpole VST plug-in (see screenshot) includes an envelope follower in addition to its resonant lowpass filter, making it especially useful for this type of sound.

Highpass

Highpass filtering produces an entirely different set of effects that are also useful for remixing. Because they eliminate the low frequencies from a signal, these filters are terrific for emulating the sound of a tinny radio speaker or telephone. Gradually lowering the cutoff frequency returns low frequencies to the signal, giving the effect of a track morphing from thin to phat. Try this on a complete mix, either during the intro, during a breakdown, or on a fade out. It's quite dramatic when done right.

Multi Filtering

A more advanced -- and very handy -- approach to filtering audio consists of applying different types of filters to music and drum loops within a mix. For instance, mixing two drum loops that contain competing kick drum patterns can muddy the groove. By isolating the drum loop with the offending kick pattern and applying a highpass filter to it, you can effectively delete most of the kick while retaining the hi-hats and snare. Conversely, if a loop has shrill or awkward snare hits and cymbal crashes, these can be minimized with a lowpass filter, keeping the lows intact. I use this approach all the time on breakbeat tracks, though it sometimes requires a little effort to get the resulting blend just right. As always, use your hips as well as your ears to find the perfect combination. (Tip of the Month: Arboretum provides freeware versions of their hyper-useful Hyperprism lowpass and highpass plug-ins on their website, www.arboretum.com.)

The above techniques should provide a solid starting point for you to begin your own experiments. Be sure to check out the advanced plug-in offerings from companies like GRM Tools and Fxpansion, as several of their products go beyond the basics of high- and lowpass filtering into more exotic realms like comb filters (terrific

for phase and flange type effects) and bandpass filtering (another useful tool for wah-wah type effects). The secret to blazing new trails is taking chances, and filters are a wonderful way to get expressive results from even the most mundane performances.

*Media technologist **FRANCIS PREVE** has remixed electonica acts Orbital, Utah Saints, and Beborn Beton. Get the facts at www.fap7.com.*

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