XSIDFX · FILTER

SID Filter

The filter of the SID chip, the Commodore 64's voice, as an effect.

A 12 dB/oct state-variable filter with low, band and high-pass outputs that switch on together, its cutoff an 11-bit register and its resonance in 16 steps, as on the chip. The 6581 is the first, dirty chip; the 8580 the later, clean one.

Getting started

1. Choose the chip and the outputs, set Cutoff and Resonance; Envelope moves the cutoff with the playing.

The main screen



SID Filter, the main screen.

Controls

Chip	6581 (bent cutoff curve, soft resonance, dirt) or 8580 (straight, clean, ringing).
Filter	LP, BP, HP; LP and HP together make a notch; none leaves the filter open.
Cutoff	The register, $000 to $7FF, with its frequency.
Resonance	0 to 15.
Envelope	How far the input's level moves the cutoff, up or down.

Drive	How hard the filter is pushed.
Mix	Filtered against dry.

Settings

The gear in the header opens the settings panel; it covers the lower panel until the gear is clicked again.

Register steps	The cutoff moves only in whole register steps, as a chip sweep does.
Envelope	Fast or Slow.



SID Filter, the settings panel.

What the screen shows

The filter's response where the cutoff is now (and dashed where the knob is, if the envelope moved it).



8580, notch.

Tips

- Type a register into the DAW as $400 or 1024.

Technical notes

- 2x oversampling; 4 samples of latency, reported.

Common to every plugin of the pack

The header
Every window opens with the same header. On the left a dot-matrix display shows the main reading large and the details under it; text that does not fit scrolls. Next to it a hint with a coloured dot says what the plugin is doing or what to do next. On the right: Undo and Redo arrows (up to 100 steps of everything done in the window), the Bypass button, and the gear, which opens the plugin's settings panel when it has one.

Bypass
With Bypass lit, the plugin lets the sound through untouched. It is the same switch as your DAW's own bypass for the plugin, so either can be used and automated. The input is held back by exactly the plugin's latency, so the timing stays right, and switching fades over 10 ms, so it never clicks. Bypass is not part of Undo.

Input and Output
Most plugins have a column on the right with a pair of VU meters for the input and the output, each with its own gain knob (plus or minus 24 dB). Analog shows the classic VU scale, dBFS the digital one. A click on a meter opens a large view of it. The CLIP lamp lights when a sample reaches 0 dBFS.

Knobs
Drag a knob up or down to turn it. Knobs that go both ways, or that have a natural middle, catch briefly at their centre. A double-click returns a knob to its default.

About and the demo
A click on the xsidfx logo in the footer opens About. In the demo version the plugin's name ends in (demo), its settings are not saved with your project, and About opens each time the window does.