

# How to make a glitch with Scope

Scope is a modular environment, you can use this modularity to setup your (recording)studio just the way you like it. You can also use it to build audio mangling contraptions. You can achieve effects often used in glitch and IDM music. In this example an Elektron Machinedrum hardware drumcomputer is processed using the Scope system. In Figure 1 you can see how the routing is done. The audio from the Machinedrum goes into a Modular III patch and the output of the modular is split and routed into three different effects. The output of the effects are connected to a 4x switch (which is a freeware device by Wolf Audio Design). For some reason it is labelled 8x-switch in Figure 2 but you can just ignore that. The output of the switch is connected to an overdrive effect. The Modular III and the 4x switch are connected to a sequencer MIDI source for real-time control.

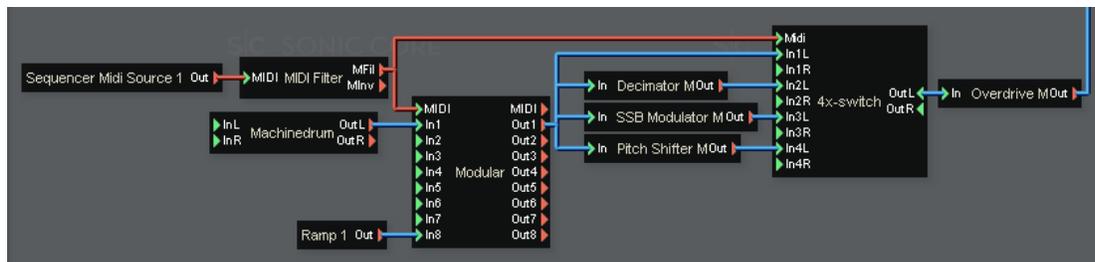


Figure 1: The routing

The Modular III patch (see Figure 2) consists of four Flexor overdrive delays which are each triggered by it's own hyper gate step sequencers. Every override delay can have a separate division which controls the length of the repeater effect. The hyper gate sequencers also trigger an envelope module so the effect from the overdrive delays are only audible if it's envelope is triggered.



Figure 2: Modular III and effects

The modular patch has several presets which are visible on the right (in Figure 2). Every preset has its own program change number which is visible in the "No" column. The presets are automated in Cubase. A MIDI transformer converts MIDI notes to program change messages so the presets can be automated using a MIDI keyboard (Figure 3).

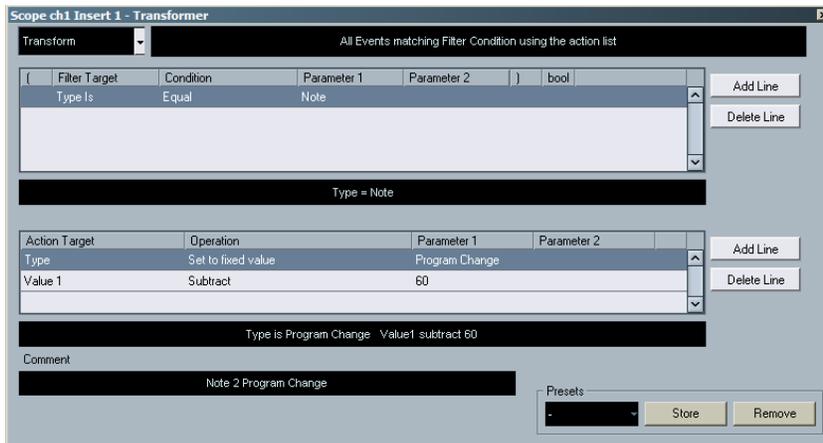


Figure 3: The Cubase MIDI Transformer

The output of the Modular III patch is processed by three effects (Decimator, Pitch Shifter and SSB Modulator). The 4x-switch device controls which effect is audible. The switch is automated by a MIDI controller. To setup MIDI control for this device just right click on the lower button and select a MIDI controller (you don't have to do this for the other three buttons). In Figure 4 you can see the Cubase key editor with the automation data for the modular preset and the switch.

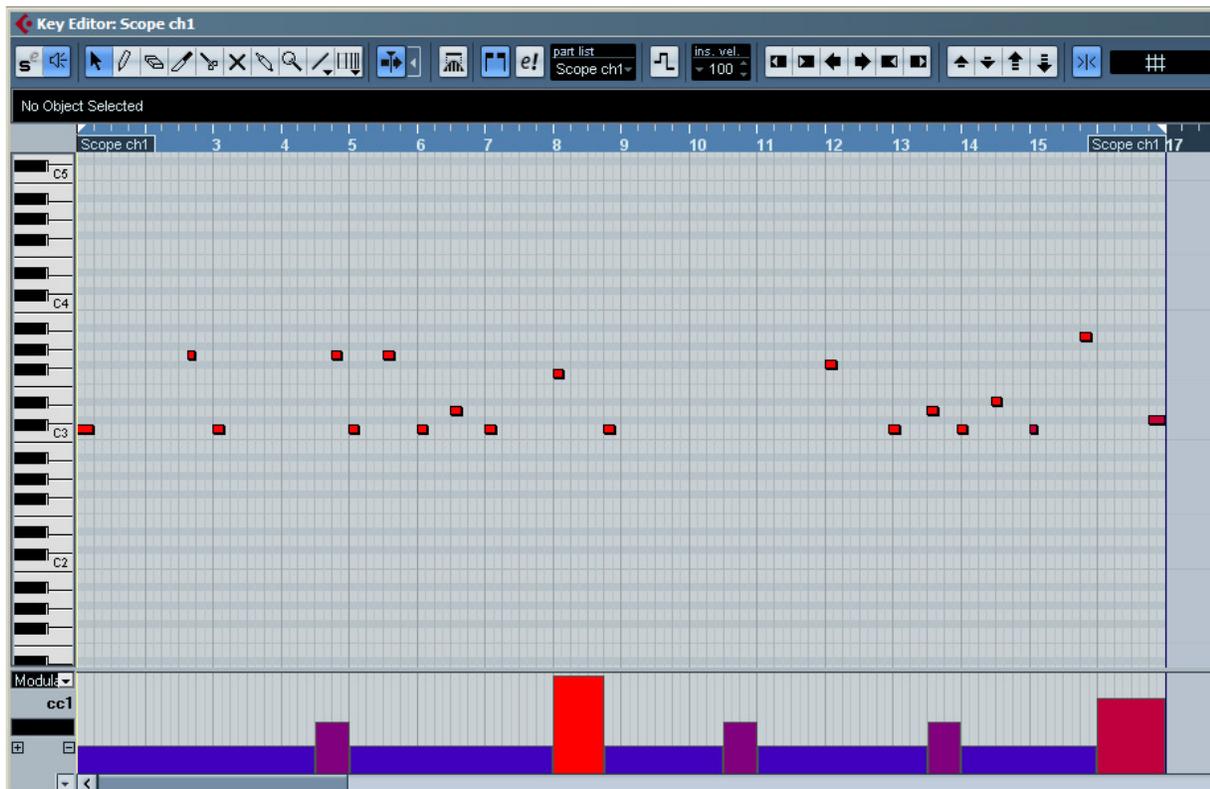


Figure 4: The Cubase Key Editor

In Figure 1 you can see that at input 8 of the Modular III there is a device connected called Ramp 1. This is a Source M device which routes an ASIO audio channel from Cubase (see Figure 5).



Figure 5: The Source M device

In Figure 6 you can see the ramp signal as a Cubase audio track. A ramp is a synchronization signal which is used by some of the Flexor sequencer modules. When you connect this signal to the ramp input of the Flexor sequencer modules their playback position is automatically synchronized to that of your DAW. It is a very low frequency audio signal and should not be treated as a regular audio signal. Do not play this sound through your speakers because it may damage them!



Figure 6: The ramp signal

In Figure 1 there is a device called Machinedrum. This is an External Effect S device which allows you to integrate external hardware into the Scope routing window. In Figure 7 you can see how the inputs and outputs of the Machinedrum are connected to the Scope hardware.



Figure 7: The External Effect S device



Figure 8: The Elektron Machinedrum

I hope you enjoyed reading this article and that you can apply some of the techniques described here in your own productions. Or (if you don't own a Scope system) that you got a better insight into the possibilities of this wonderful system.

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*The 4x-switch and 8x-switch devices are created by Wolf Audio Design and can be downloaded from [www.wolf-audio.com](http://www.wolf-audio.com)*

*The Modular III patch uses Flexor 3 modules. Flexor is created by Adern ([www.adern.com](http://www.adern.com))*

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