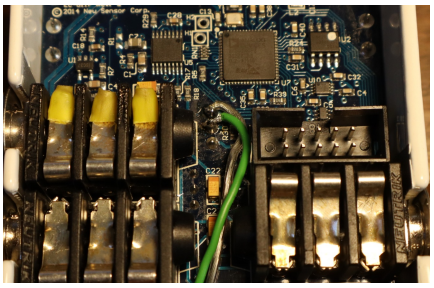
Goblin-EXP in Pitch Fork
Installation, Configuration and Usage

The Goblin-EXP is able to control bypass, mode switch and pitch of the EHX Pitch Fork and therefore make them accessible via MIDI.

Installation

For installation refer to the detailed step by step guide at https://oscillatordevices.com/goblin-exp-and-ehx-pitch-fork/

The installation there follows the instructions for the regular Goblin-EXP with the exception of the Dual Switch (or Mode switch). The Goblin-EXP was specially designed with the EHX Pitch Fork in mind and therefore supports the three way *Dual switch* in addition to bypass and EXP. The *Dual switch* is connected to port 2. Port 2 has to be configured as *TRS Normally Open*.



Dual Switch and EXP Socket in a EHX Pitch Fork

The Mode Switch has three pins, of which the one pointing to the power supply socket is connected to *SW2* (grey in the picture) and the middle one to *RLY2* (green in the picture). The third pin remains free.

The switch contacts of the expression port needs to be lifted, so the Pitch Fork thinks an expression pedal is plugged in. This can be done with heat shrink (like in the picture) or with a dummy plug (available in the shop).

Attention: The ***Goblin-EXP*** is delivered in the configuration for the EHX Pitch Fork. In all other roles for port 2, *SW2* has +5V, which can damage the Pitch Fork.

Configuration

If you ordered a Goblin-EXP in standard configuration, you won't need any further configuration. If not, here are the configuration commands to set a Goblin-EXP up for use with the EHX Pitch Fork.
Not that these commands have to be sent in groups of four, without sending anything else in between:

Bypass on Port 1, dual switch on Port 2 and expression on Port 3.
Port 1: role switch: **CC 27 02, CC 09 18, CC 09 52, CC 09 01**
Port 1 inverted LED: **CC 28 00, CC 09 18, CC 09 52, CC 09 01**
Port 1: LED threshold 2.35V: **CC 29 47, CC 09 18, CC 09 52, CC 09 04**
Port 2: role TRS Normally Open: **CC 47 04, CC 09 18, CC 09 52, CC 09 02**
Port 3: intial state of potentiometer to toe: **CC 59 01, CC 09 18, CC 09 52, CC 09 03**

Usage

Bypass

CC	#	Function
10	00	Turn off (with Latch mode activated)
	01	Turn on (with Latch mode activated)
	02	Toggle (with Latch mode activated)
	03	Hold (with Latch mode deactivated)
	04	Release (with Latch mode deactivated)

Expression (Pitch)

For expression to work properly, the latch mode has to be deactivated.

CC	#	Function
50	0...127	Unity (0) to full shift (127)
51	0...127	Full shift (0) to unity (127)
52	0...127	Unity (0) to half shift (127) with full resolution
53	0...127	Half shift (0) to full shift (127) with full resolution

Mode Switch

For the mode switch control to work properly, leave the actual switch in the middle position

CC	#	Function
30	00	Dual (Shift up and down)
	01	Shift up
	05	Shift down

Semitones w/ shift at 1 octave

(The actual values may vary depending on tolerances of the potentiometer)

CC	#	Function
52	0	0 semitones
52	21	1 semitones
52	42	2 semitones
52	63	3 semitones
52	83	4 semitones
52	104	5 semitones
52	125	6 semitones
53	18	7 semitones
53	39	8 semitones
53	59	9 semitones
53	77	10 semitones
53	96	11 semitones
53	117	12 semitones (From 117 to 127)

MIDI Channel

The ***Goblin***'s MIDI channel is selectable. To change the MIDI channel, proceed as follows

1. Disconnect the device from the power supply
2. Press the bypass button and restore the power supply while it is pressed. The device starts to flash its LED after the startup delay has elapsed.
3. Press the button according to the number of the desired channel (e.g. twice for channel 2). The ***Goblin*** acknowledges this by emitting short flashing impulses according to the number of the channel.
4. Once the desired channel is set, press the button and hold it down until the ***Goblin*** switches off completely.
5. Disconnect supply voltage. The next time the ***Goblin*** is started, it reacts to the selected MIDI channel.

To put the *Goblin* in omni mode (i.e. it responds to every channel) skip step 3.