

# Goblin-SPST in UAFX

## Installation, Configuration and Usage

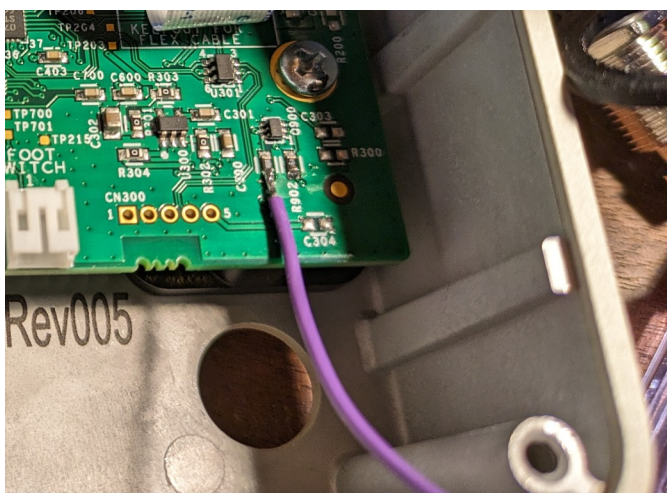
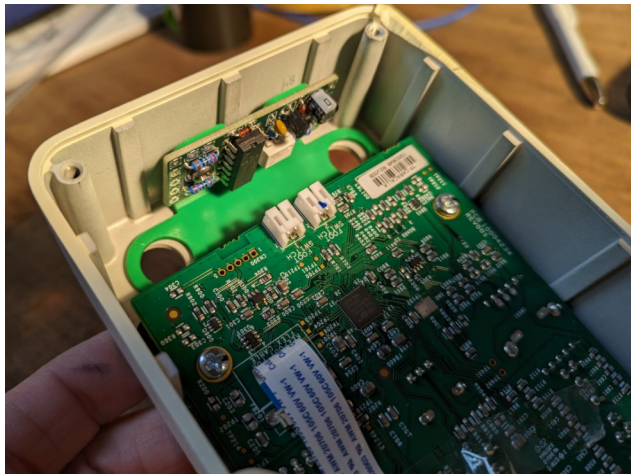
The Goblin-SPST is able to control bypass and secondary functions like tap tempo and presets of UAFX pedals and make them accessible via MIDI.

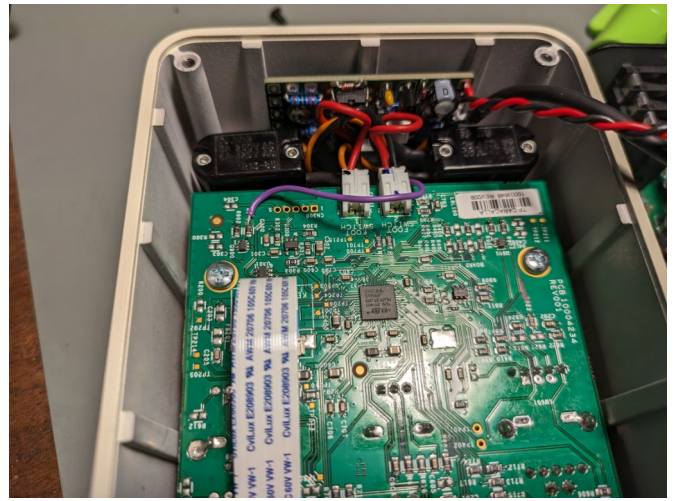
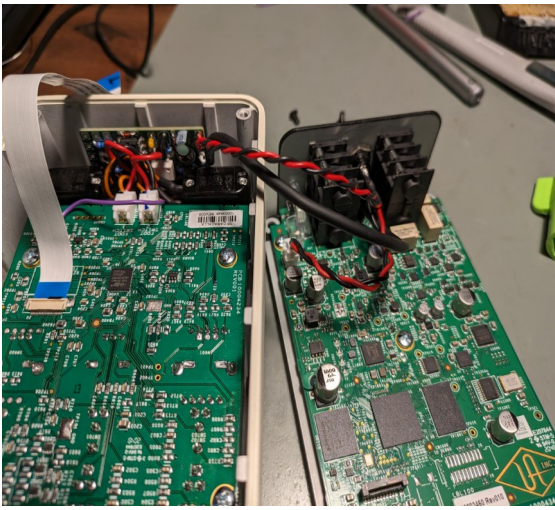
**This manual is for installation in any UAFX pedals other than Astra and Starlight. For Astra/Starlight refer to the [user manual](#).**

## Installation

Make sure you ordered the Goblin-SPST with the UAFX mounting bracket for easy installation, like the picture on the right.

1. Remove the black bottom plate by unscrewing the four screws and carefully removing the plate. There are two main PCBs inside the pedal. One is screwed to the bottom plate and one is screwed to the housing. They are connected with a flat ribbon cable. Be very careful to not damage it.
2. Remove the flat ribbon cable from the PCB on the bottom plate because the connector is more sturdy and easy to open on this side.
3. Remove the foot switches, so it looks like in the picture on the top right.
4. Drilling of the MIDI input socket: A small MINI TRS sockets fits between the power and the USB socket, like in the picture. Better to remove the PCB and the DC socket for that.
5. Wiring of power: Attach the power cables directly to the DC socket. Be very careful to not reverse polarity.
6. Wiring of the switches: Desolder the wire from the active side of the switch. That means, the side that is +3.3V. With this particular pedal it was the black wires, but better not to trust wire colors. Solder this wire to RLY1 and RLY2 of the Goblin. (RLY1 for bypass, RLY2 for Second Footswitch)
7. Solder a wire to SW1 and SW2 of the Goblin and connect the other side to the now free pin of the switch.
8. Solder a wire to LED1 and solder the other side to R900 like in the picture below. If the second footswitch is used for anything else than tap tempo or the ramp function of the Galaxy 74, connect LED2 to R904 and LED3 to R906 similar to R900.
9. Wiring of MIDI: For wiring according to MIDI TRS Type A, connect Tip to ISIG, Ring to IREF, Sleeve is unconnected.





## Configuration

If you ordered a Goblin-SPST in Standard UAFX configuration, you won't need any configuration. If not, here are the configuration commands to set a Goblin-SPST up for use with a UAFX pedals.

Not that these commands have to be sent in groups of four, without sending anything else in between.

We use port 1 and port 2 with role switch.

**CC 27 02, CC 09 18, CC 09 52, CC 09 01**

**CC 47 02, CC 09 18, CC 09 52, CC 09 02**

The LEDs measure with 3.1V when on and 3.5V when off. That's a threshold of 3.3V

**CC 29 66, CC 09 18, CC 09 52, CC 09 04**

**CC 49 66, CC 09 18, CC 09 52, CC 09 05**

That also means that the LED polarity is inverted, so we have to configure "low active"

**CC 28 00, CC 09 18, CC 09 52, CC 09 01**

**CC 48 00, CC 09 18, CC 09 52, CC 09 02**

# Usage

## Bypass

CC	#	Function
10	00	Turn Off
	01	Turn On
	02	Toggle
	03	Hold (Corresponds to a pressed and held switch)
	04	Release (Release held switch)

## Second Footswitch

CC	#	Function
30	00	Turn Off
	01	Turn On
	02	Toggle
	03	Hold (Corresponds to a pressed and held switch)
	04	Release (Release held switch)

## Second Footswitch as Tap Tempo

CC	#	Function	#	Function
30	02	Tap Tempo manually	17	Toggle to the beat of the MIDI clock in whole notes
	10	Toggle to the beat of the MIDI clock in 1/4 notes	18	Toggle to the beat of the MIDI clock every 2nd whole note
	11	Toggle to the beat of the MIDI clock in 1/8 notes	19	Toggle to the beat of the MIDI clock every 3rd whole note
	12	Toggle to the beat of the MIDI clock in triplet notes	20	Toggle to the beat of the MIDI clock every 4th whole note
	13	Toggle to the beat of the MIDI clock in 1/16 notes	21	Toggle to the beat of the MIDI clock every 5th whole note
	14	Toggle to the beat of the MIDI clock in dotted 1/8 notes	22	Toggle to the beat of the MIDI clock every 6th whole note
	15	Toggle to the beat of the MIDI clock in 1/32 notes	23	Toggle to the beat of the MIDI clock every 7th whole note
	16	Toggle to the beat of the MIDI clock in 1/2 notes	24	Toggle to the beat of the MIDI clock every 8th whole note

Sometimes Tap Tempo being sent constantly, leads to strange behaviour. In this case there is the possibility to only give a limited number of impulses. Enough for the effect to take over the beat. With these commands, an automatic MIDI clock detection is carried out. If the MIDI clock changes by more than approx. 1%, the pulses are sent again.

CC	#	Function	#	Function
31	0-19	1-20 times toggle to the beat of the MIDI clock in 1/4 notes	100-104	1-5 times toggle to the beat of MIDI clock 1/2 notes
	20-39	1-20 times toggle to the beat of the MIDI clock in 1/8 notes	105-109	1-5 times toggle to the beat of the MIDI clock every whole n.
	40-59	1-20 times toggle to the beat of the MIDI clock in triplet notes	110-114	1-5 times toggle to the beat of MIDI clock every 2nd whole n.
	60-79	1-20 times toggle to the beat of the MIDI clock in 1/16 notes	115-119	1-5 times toggle to the beat of MIDI clock every 4th whole n.
	80-99	1-20 times toggle to the beat of the MIDI clock in dot. 1/8th n.	120-124	1-5 times toggle to the beat of MIDI clock every 8th whole n.

## 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 ON button of the Astra, Starlight or Golden 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.