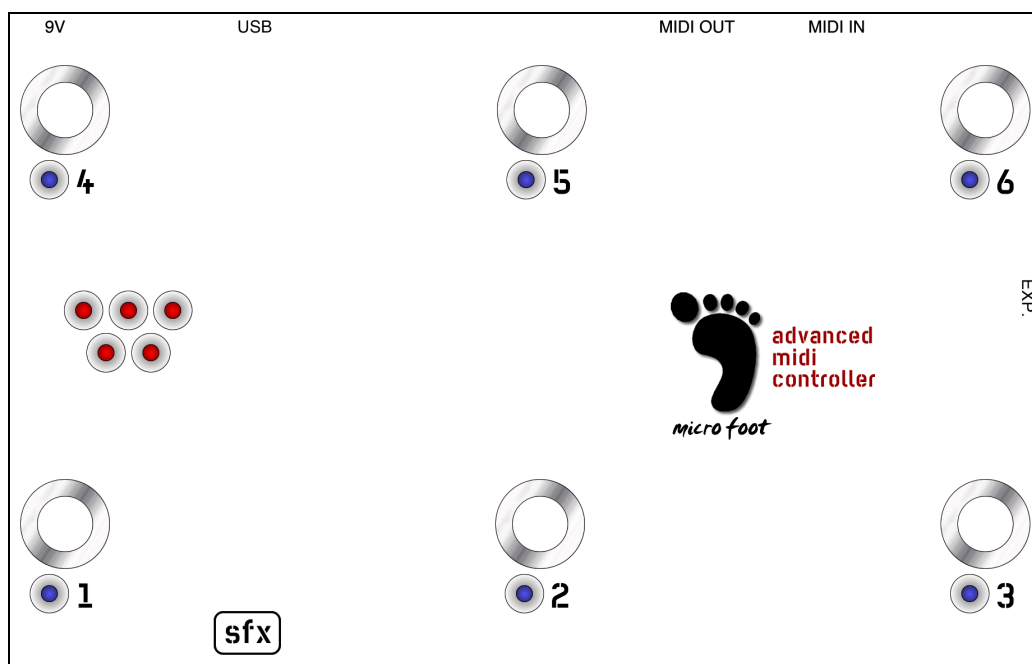


Micro-foot

User manual

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Introduction


Micro-Foot (uF) is a *MIDI foot controller* designed to be entirely programmable. Apart from the obvious constraints related to hardware and computational power of the CPU, there are no restrictions to the functionalities that can be implemented. uF can receive and send any MIDI message the developer wishes to implement.

This manual describes a set of functions implemented by the author. Some of these functionalities will work only if the uF is connected to an AdrenaLinn III (Ad3) multi effect. If another unit is connected to the uF typically it will simply not respond to the functionality. Ad3-specific functions are identified by the symbol .

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Connections

The uF allows the following connectors:

- MIDI in . It is used only if uF is connected to an AdrenaLinn III.
- MIDI out.
- 9V. DC power supply. The unit works with centre positive or centre negative polarity.
- USB. It is used only for programming the unit. It also powers the unit if the power switch is set to USB.
- EXP. External expression pedal. It is a jack connection for an external expression pedal. uF needs to be calibrated to use the expression pedal.

Switches

uF has a switch on the back to decide from where the uF gets the power supply. It can be set to external (9V connector) or USB.

On the top, uF has 6 temporary footswitches (FS1 to FS6). They are used to send program changes, MIDI notes...

FS can respond to the following events:

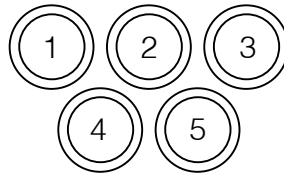
Press
Release
Hold

Leds

Every footswitch (FS1 to FS6) has a led (L1 to L6). They usually indicate the last FS that has been pressed.

On the left side of the uF there are 5 leds (status matrix). They are arranged in a configuration that allows the user to see the status of the uF even in total darkness (i.e. without a reference point).

The leds in the *status matrix* are numbered as follows:



Leds can be:

On
Off
Blinking
Fast blinking

If when turned on, uF recognise that an Ad3 init is connected, SM5 blinks rapidly for a few seconds.

MIDI channel

uF can send MIDI messages on channel 1, 2 or 3.


To change channel, turn uF with FS1 pressed for channel 1, FS2 for channel 2, FS3 for channel 3. Then uF detects the channel change request, the led corresponding to the footswitch pressed start blinking. Release when switch then the led starts blinking.

uF remember the channel choice when it is turned off.

Modes of operation


uF has several modes of operation:

Patch change. uF send a program change every time a FS is pressed.

Stomp mode . Single sections of the Ad3 can be turned on/off.

Notes. uF sends a MIDI note on when a FS is pressed, a note-off when the FS is released.

Calibration. Used to calibrate the expression pedal.

Tuner . Ad3 is in tuner mode.

Patch mode

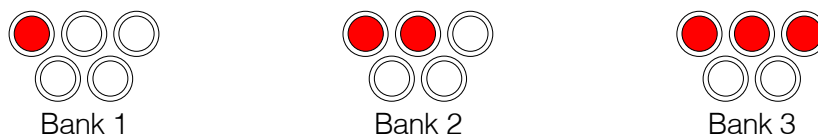
uF sends a *program change (PC)* every time a footswitch is *released*.

Banks

uF manages 3 banks of patches. For every bank there is a range of 6 possible *active patches* and a *home patch*:

Bank	Home patch	Patches
1	0	1 to 6
2	10	10 to 16
3	20	20 to 26

uF shows the active bank using the *status matrix*:



To change bank keep pressed FS1, FS2 or FS3. Every time the bank changes, uF sends a PC to the *home patch* corresponding to the new bank.

Program/patch change

In patch mode, for every FS, uF sends the program change associated to the bank.

When a patch is selected, it becomes the “active patch”. The footswitch leds show the active patch.

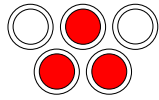
For example, if in bank 2 you press FS4, uF sends PC14, L4 is turned on and patch 14 becomes the active patch.

If uF has a patch defined as active (in our example 14, footswitch 4) you can do two things:

- Press the FS associated to the active patch. uF sends the PC for the home patch associated to the current bank. In our example, 10. All the footswitch leds are turned off.
- Press another footswitch. uF will send a PC corresponding to the FS pressed and the new patch becomes the active patch. The footswitch leds show the new active patch.

Stomp mode

In patch mode, if FS4 is hold for a few seconds, the unit switches in “Stomp mode”. To indicate the uF is now in stomp mode, L1 to L6 blink fast for a second and the status matrix shows:



In stomp mode every FS controls a section of the AD3 and L1 to L6 show if the section is active:

FS1/L1	mod fx
FS2/L2	reverb
FS3/L3	amp
FS4/L4	delay
FS6/L6	boost

When uF switches to stomp mode, it load from the Ad3 the current status of the various sections showing what, for the current patch, is active.

To switch back to patch mode, keep pressed FS4 to return to the previous patch or hold FS1 to FS3 to change bank.

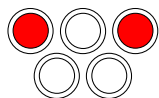
When the uF switches back to patch mode, L1 to L6 blink fast and a program change is sent back to Ad3 to restore the previous Ad3 status.

To work correctly, Ad3 needs to be set up with CC64 to control the *amp boost*.

Notes mode

To switch to note mode, turn on the uF with FS5 pressed.

To confirm that uF switched to notes mode, L1 to L3 blink fast, L4 to L6 blink fast then the status matrix shows:



In note mode, every time a FS is pressed, uF sends a note on with velocity 127. Every time the FS is released, uF sends a note on with velocity 0.

FS	Press	Release
1	Key 1, velocity 127	Key 1, velocity 0
2	Key 2, velocity 127	Key 2, velocity 0
3	Key 3, velocity 127	Key 3, velocity 0
4	Key 4, velocity 127	Key 4, velocity 0
5	Key 5, velocity 127	Key 5, velocity 0
6	Key 6, velocity 127	Key 6, velocity 0

To switch back to patch mode, turn on the unit with FS5 pressed.

Calibration

When an expression pedal is connected the uF, every time the pedal is moved, uF sends a control change 11 (CC11) message.

In order to associate correctly a CC value with every position of the pedal, uF needs to be calibrated.

To calibrate follow this procedure:

1. Turn on the uF keeping pressed FS4.
2. SM2 blink, FS1 blinks fast, FS2 blinks fast
3. Move the pedal down (i.e. max)
4. Press FS1
5. Move the pedal up (i.e. min)
6. Press FS2
7. Turn off the unit

uF remembers the calibration values. It is not necessary to recalibrate if the pedal is disconnected and reconnected later. However, it might be necessary re-calibrate if a different pedal is connected to the uF.

Tuner

In patch mode, keep pressed FS6. uF sends a tuner on request to Ad3 and L6 blinks. To switch the tuner off, press F6.

To work correctly, Ad3 needs to be set up with CC83 to control the tuner.

