

MicroMonsta 2

User manual

2.6



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Introduction

Overview

MicroMonsta 2 is a dual polyphonic synthesizer featuring :

- 2 x 6 voices of polyphony
- 3 oscillators, 1 multimode filter, 3 envelopes, 3 LFOs, 10 modulation slots and 2 operators per voice (lag and mult)
- 12 « analog » oscillator types + 4 FM-able oscillators for OSC1
- 12 « analog » oscillator types + 8 multisampled wavetables for OSC2 and OSC3 (FM source)
- 8 filter types with FM
- Per voice and per oscillator detuning options for analog character
- Deep modulation matrix
- Delay + reverb

MicroMonsta 2 can be used in 3 different ways :

- Monotimbral : As a 12-voice polyphonic synthesizer
- Bitimbral : As 2 different 6-voice polyphonic synthesizer (on 2 different MIDI channels)
- In combi mode, where you can stack, split or mult the 2 programs

You get 300 programs slots + 100 combi slots to save your sound creations.

The 100 combi slots also save their 2 sound programs in separate program slots (so you get $300 + 2 \times 100 = 500$ program slots in total).

New in firmware v2.1

- Deeper FM
- Filter character
- 1 additional mult operator
- Chorus and EQ per program
- Delay tempo sync
- Arp pattern (16 steps)
- MPE mode
- And lots of other small things that will be covered in this manual

New in Firmware 2.3

- Preset category filter in LOAD menu
- New SYSTEM menu with new options added :
 - Arp beat sync
 - Button hold time setting
- SYSTEM settings are now saved when loading a patch (either by LOAD menu or Yes/No buttons, NOT when receiving a PC MIDI message)
- SYSTEM settings can also be manually saved: Hold SYSTEM button when already in SYSTEM menu (this is not a change, it's always been there but undocumented)

NOTE : SYSTEM settings will be reset after the firmware update, double check them after the update.

New in Firmware 2.5

- Internal MIDI Keyboard with scales, chord inversions and chord sets

New in Firmware 2.6

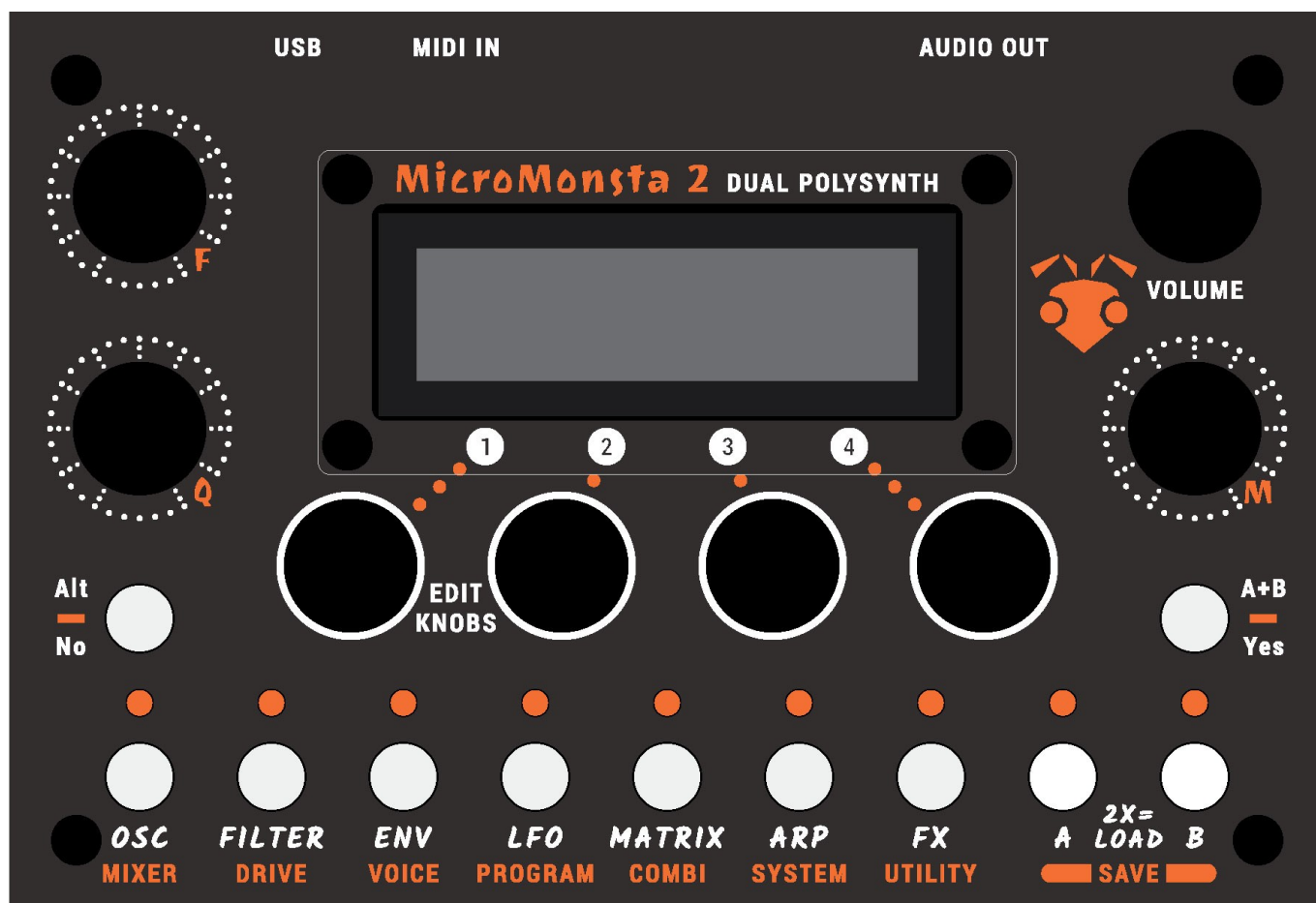
- Combi mode updated with new parameters (Pgm A and B volume, transpose, combi tempo and Pitch Bend, Modulation Wheel, Aftertouch and Sustain Pedal assignments)

Please Note :

The new combi mode does not use mix and tempo value stored in a Pgm (but its own set of parameters), so if you have some pre v2.6 combi saved in your MM2, applying the update will reset the mix and tempo values to the default values.

This also means that Pgms stored as part of a combi can be used independently in other modes with different mix and tempo values without affecting the combi

Front panel



You get :

- 2x16 characters LCD screen, white on black
- 3 assignable pots for live edits
- 1 volume pot
- 4 edit encoders
- 9 pushbuttons with their associated LEDs
- 2 No/Yes pushbuttons

Rear Panel

On the rear panel :

- USB B port for power and USB MIDI
- 3.5mm stereo jack MIDI input (MIDI A Standard)
- 3.5mm stereo output (line out / headphones out)

Power considerations

MicroMonsta 2 is powered via its USB B port. Several options are thus available :

- It can be powered with any USB power supply capable of outputting 500mA @ 5V DC (any modern USB power supply should meet these specifications, and you probably have half a dozen of those in your drawers)
- It can be powered via a USB port on a computer
A drawback of this method is that a ground loop can be created which can cause hum in the audio output. To avoid such a ground loop :
 - Use a USB isolator between the computer and MicroMonsta 2
 - Use a stereo line level DI with ground lift switch between MicroMonsta 2 and the mixer
- It can be powered with a USB power bank for extra mobile use

Using MicroMonsta 2

Currently edited program

MicroMonsta 2 can play up to 2 sounds at the same time – loaded into Programs A and B.

Only 1 Program can be edited at a time, and it can be selected by pressing its corresponding A or B button (B button will be disabled in monotimbral mode).

Currently edited program always has its LED lit as an all time indication.

Navigating pages

Synthesis parameters are mapped across different sections accessed by pressing a button on the front panel.

When a section has several pages, you access them by successively pressing the same button several times. When you are on the last page, it returns to the first one.

For example, pressing OSC several times will make you travel the following pages: OSC1 > OSC2 > OSC3 > OSC1 > OSC2 etc.

Some sections (the ones labelled in orange) are accessed by long-pressing the corresponding button. For example long-pressing OSC will take you to the Mixer page.

Some pages can have sub-pages accessed by turning encoder 1 (all the orange labelled sections for example)

All this may seem complicated while reading, it is however quite fluent once you have the gear in front of you.

Editing parameters

Encoders

The LCD screen provides up to 4 parameters to edit at the same time.

Use encoders 1-4 to change their corresponding parameter value.

Knobs

The 3 knobs F, Q and M are factory mapped to (respectively) filter frequency, resonance and mod knob (accessible in the mod matrix).

They can be remapped either globally or per preset to any synthesis parameter.

Modes

MicroMonsta 2 can be globally set to 3 different modes that can be changed anytime in SYSTEM menu. They affect the number of available sounds MicroMonsta 2 can play at the same time and the way it responds to incoming MIDI signals

Monotimbral

In monotimbral mode, you can play 1 sound at the same time, with 12-voice polyphony. Sending a MIDI bank change / program change on MicroMonsta 2 MIDI channel will change the currently selected program.

Bitimbral

In bitimbral mode, you can play 2 sounds at the same time on 2 different MIDI channels, each sound having 6 voices polyphony.

Program A is accessed on main MIDI channel (the one set in SYSTEM menu), while Program B is accessed on main MIDI channel + 1.

By sending a MIDI bank change / program change on one of those 2 MIDI channels, you can change the preset loaded in Program A or B.

This mode is ideal when used with an external sequencer.

Combi

In combi mode, you can combine up to 2 different programs in 4 different ways

- only A : same as monotimbral mode
- stack AB : 2 sounds played at the same time on the same MIDI channel
- split AB : 2 sounds at the same time on the same MIDI channel, but the keyboard is split
- mult AB : 2 sounds at the same time on 2 different MIDI channels (same as bitimbral mode)

By sending a MIDI program change in combi mode, you load an entire combi containing the combi parameters AND both programs A and B.

In combi mode, it is not possible to change Program A or B independantly by sending a program change message.

Presets

Load a preset

To load a preset into Program A or B, **double Tap A or B button**

```
A:Farfiz@    P065  
flt=none     |orgn
```

- A category filter can be chosen with encoder 1
- Use encoders 3 and 4 to select a preset to load into program slot

Press Yes to confirm, or press No to return to the previously edited sound (this can be used as a compare function)

Save a preset

To Save Program A or B into a preset slot, **hold A or B button**

```
[S]tarDust   SAVE  
BybyePgm    P054
```

1. Selects a character to edit
2. Edit character
3. Generate a random name
4. Selects the destination preset slot

Press Yes to confirm, No to cancel the save operation

Load a combi (combi mode only)

A combi contains the combi parameters and the 2 program parameters.

To load a combi, **double Tap Yes (A+B)** Button

```
A:MadBox      LOAD
B:OffLuck     C11
```

- Use encoder 4 to select a combi to load

Press Yes to confirm, No to load the previously edited Combi

Save a combi (combi mode only)

Hold A or B button (it doesn't matter) : you first enter the naming screen :

```
A:[B]igBrute  NAM
B:MuchBug     A/B
```

1. Selects a character to edit
2. Edit character
3. Generate a random name
4. Selects Program A or B

Press Yes to enter the Save Combi menu, it displays the combi target destination, as well as the name of both programs to be overwritten :

```
A:OldName     SAVE
B:BigGamer    C22
```

- Use encoder 4 to select the destination

Press Yes to confirm, No to cancel the save operation

Quick Load

When you are in Quick Edit screen :

In Monotimbral or Bitimbral mode

Hold No to quickly Load Preset N-1

Hold Yes to quickly Load Preset N+1

The preset will be loaded into the active Program slot

In Combi mode

Hold No to quickly Load Combi N-1

Hold Yes to quickly Load Combi N+1

Internal Keyboard

Usage

To activate/deactivate, go to System Menu, page 13, and set Int MIDI KBD parameter to on (on by default)

To access keyboard and its parameter, press A+B/Yes button (press another time to leave)

To access keyboard without leaving current page (allowing editing a sound in current page), press Alt/No button (press another time to leave)

Parameters

```
KEYB scl chrd oc  
C    min  off +0
```

1. Root note
2. scl : scale (minor, harmonic, melodic, major and all its modes)
3. chrd : chord mode (off, lots of chord inversions and 8 different chord sets)
4. oc : octave shift

Notes

When you are in LOAD page, the Keyboard shows up automatically

Keyboard mode is not available in combi mode

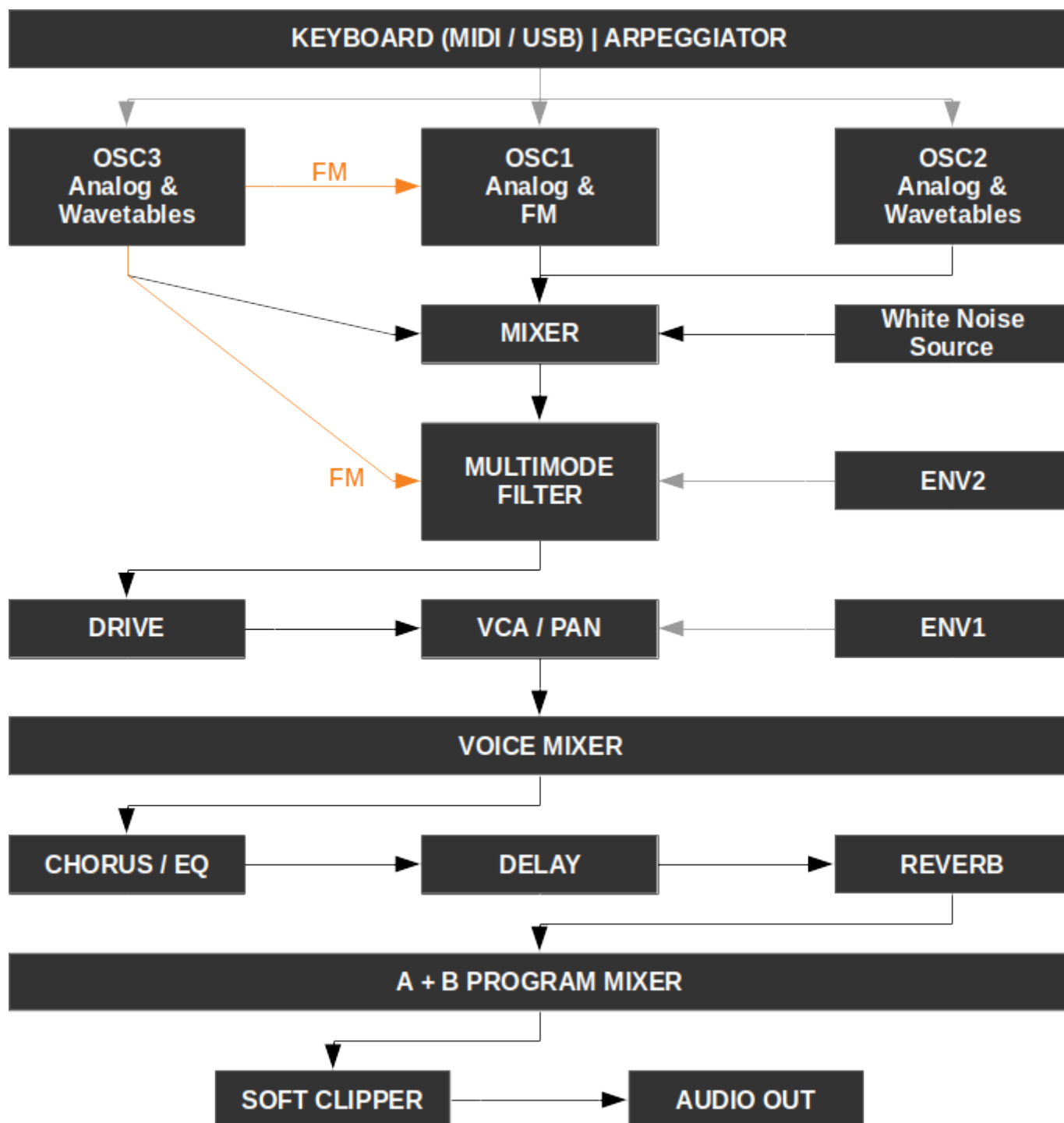
Keyboard mode has its own set of limitations, like: no hold mode, notes are shut off when changing keyboard parameters

Synthesis overview

Here is a very basic overview of the synthesis engine of MicroMonsta 2.

Not shown : all the LFOs, ENV3, the modulation matrix and all the other stuff that can really render this drawing really really complex.

As you can see, the base stuff is pretty standard subtractive synthesis.



Editing a sound

Quick edit

Quick edit menu is accessed by pressing A or B (if available).
This is the menu you are landing when powering your MicroMonsta 2.

```
P101 INIT
a1 r1 dly rev
```

Here you see the program name and number, and you have direct access to 4 shortcuts to 4 different synthesis parameters.

By default, these are set to ENV attack time, ENV1 release time, delay level and reverb level.
These assignments can be changed either at program level (see PROGRAM parameters section) or globally in SYSTEM menu (see SYSTEM parameters section).

OSC | Oscillators

MicroMonsta 2 features 3 independant oscillators per voice, they all have the same parameter set, but they cannot access the same algorithms :

```
OSC1 shp coa fin
Saw 52 +0 -5
```

1. Oscillator algorithm
2. shp : oscillator shape
3. coa : coarse tuning
4. fin : fine tuning

Available oscillators algorithms

- Sine : clean sine waveform (no shape parameter)
- SinF : fully rectified sine waveform (no shape parameter)
- SinH : half rectified sine waveform (no shape parameter)
- TrPs : Triangle to Pulse waveform
- TrSw : Triangle to Saw waveform
- TrSq : Triangle to Square waveform
- Saw : Sawtooth waveform
- Sup1 : Supersaw 1 (3 x sawtooths)
- Sup2 : Supersaw 2 – alternate version
- SwHs : Hardsync'd sawtooth
- Squr : Square to Pulse waveform
- SqHs : Hardsync'd square

FM-able algorithms (exclusive to OSC 1)

- FmSi : Sine waveform
- FmTr : Triangle waveform
- FmSw : Sawtooth waveform
- FmSq : Square waveform

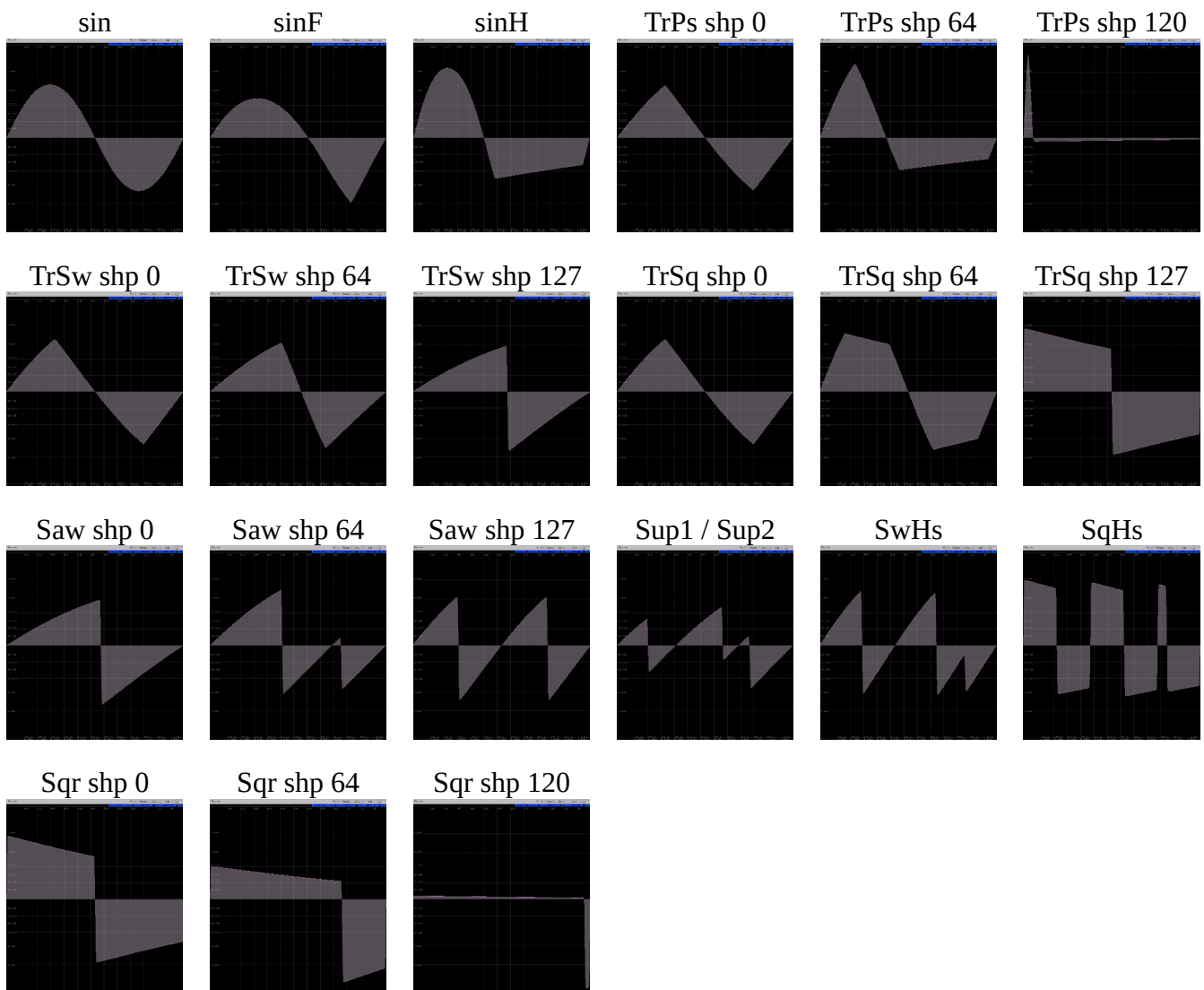
For all these waveforms, the shape (shp) parameter controls the amount of FM from OSC3.

Wavetables (exclusive to OSC2 and OSC3)

8 wavetables, each containing 64 slices, are available to OSC2 and OSC3, they are labelled Wt01 to Wt08.

For all these wavetables, the shape (shp) parameter controls the position of the virtual scanning head within the wavetable (in other words, it controls the slice playing).

Main waveforms graphical representation



MIXER

The traditional source mixer menu, allowing to balance each oscillator and the white noise source level. The output of the mixer is sent to the filter.

```
MIX1 mx2 mx3 nze
84 65 0 25
```

1. Oscillator 1 volume
2. Oscillator 2 volume
3. Oscillator 3 volume
4. White noise volume

FILTER

MicroMonsta 2 has 1 multimode filter per voice, its parameters are spread on 2 different pages :

```
FLTR cut res env  
LP2 100 32 +12
```

1. Filter type
2. Filter cutoff frequency
3. Filter resonance
4. Filter envelope 2 amount

```
FLTR      kbd fm3  
mean      34  15
```

1. Filter character (soft, mild, hard, mean)
Affects resonance. Original MicroMonsta had only soft mode. Default for MicroMonsta 2 : mean
2. N/A
3. Keyboard tracking (0 - 100)
4. Filter FM amount (from OSC3)

Filter types

8 filter types are available :

- LP1, LP2, LP3, LP4 : 1, 2, 3, 4-pole lowpass filter
- HP2 : 2-pole hipass filter
- BP2 : 2-pole bandpass filter
- Not : Notch filter
- Pha : Phaser filter

The lowpass filters do not lose bass frequencies when the resonance is increased (full resonance compensation).

DRIVE

The drive parameter is applied at the voice level, and is very useful to add dirt to the sound.

The mix parameter is applied post-fx (think of it as a master volume for the selected program). It is particularly useful to balance the output level of the program. Be carefull as setting it too high can produce unwanted distortion on the output.

```
DRV      drv mix
          32  +3
```

1. N/A
2. N/A
3. drv : Drive level
4. mix : Program output level

ENV | Envelope

3 envelopes are available per voice, ENV1 directly controls the VCA, ENV2 controls the filter frequency and ENV3 is free.

All 3 envelopes are assignabled in the modulation matrix.

```
ADSR3 ENV3
      42  64  32  32
```

They all have the same parameters :

1. Envelope attack time (1ms – 30s)
2. Envelope decay time (1ms – 30s)
3. Envelope sustain level
4. Envelope release time (1ms – 30s)

LFO | Low frequency oscillator

3 LFOs are available per voice.

They can be assigned in the modulation matrix.

```
LF01 wav spd mod  
sin 48 vce
```

They all have the same parameter set :

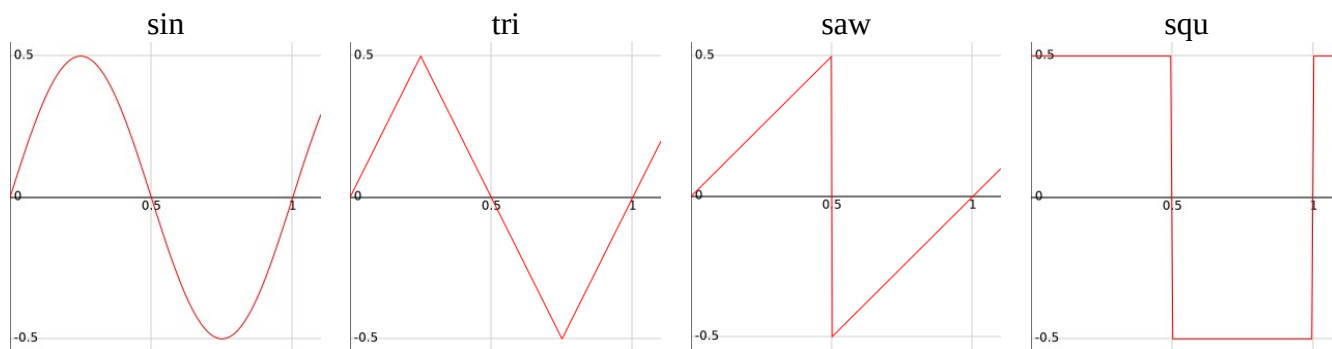
1. N/A
2. wav : LFO waveform
3. spd : LFO speed
LFO can be synchronized to the tempo by setting its speed above 127 (different synchorized values are available)
If you need a speed that is not reachable with the parameter, use the matrix to offset LFO speed
4. mod : LFO mode (see below)

Bipolar LFO waveforms

They start from 0, go up first, then down, oscillating between -0.5 and 0.5 and return to 0 at the end of their cycle.

They are best used to modulate a parameter around its current value.

Their polarity can be reversed in the matrix by setting a negative modulation amount.

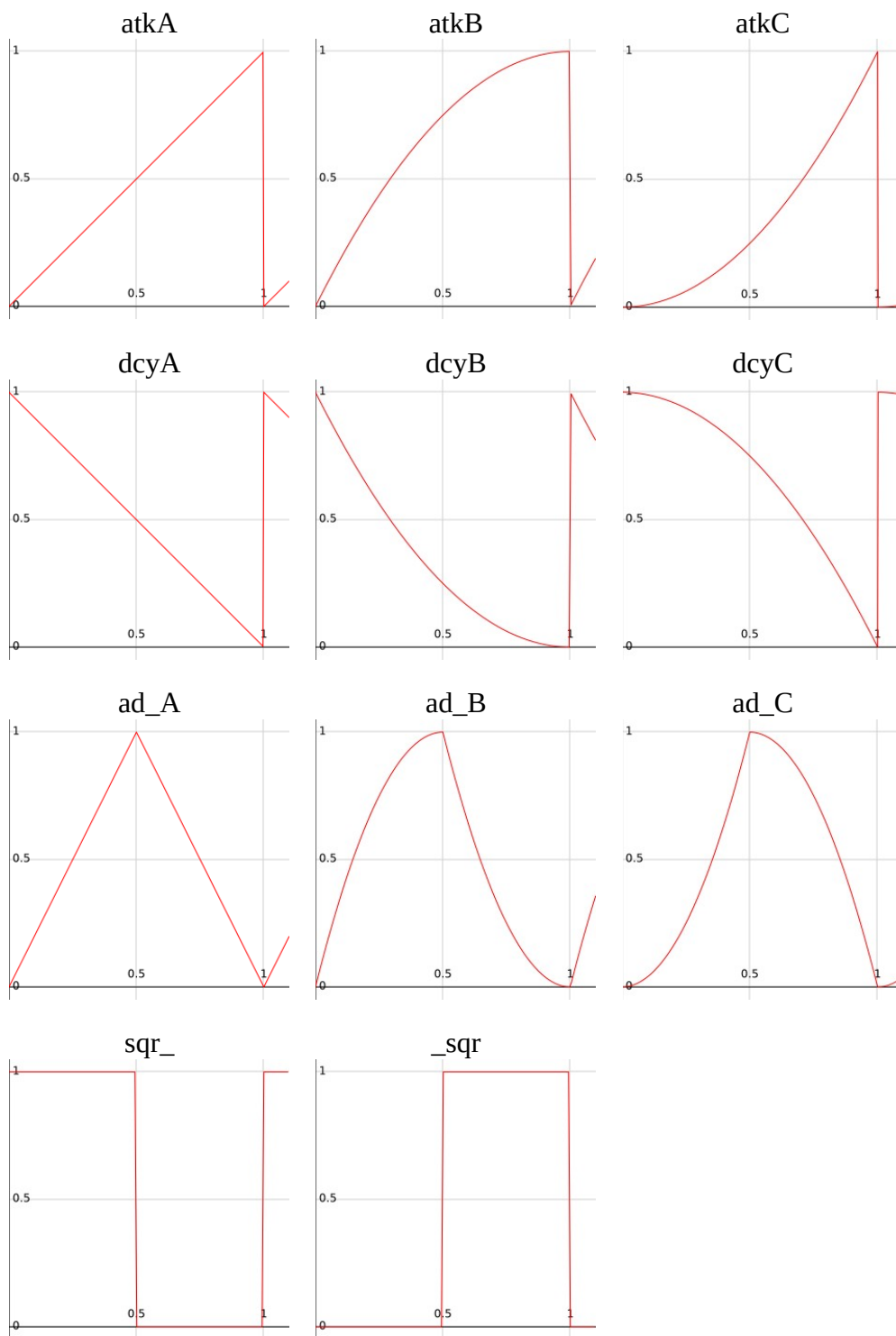


Not shown :

- s&h : sample & hold, a new value is calculated at each cycle
- rnd : like s&h, but continuously random waveform

Unipolar LFO waveforms

These oscillate between 0 and 1



Not shown :

- s&h : sample & hold, a new value is calculated at each cycle, between 0 and 1
- rnd : like s&h, but continuously random waveform

LFO modes

- vce : per voice mode, the LFO is restarted at each key press
- one : same as vce, but the LFO stops after one cycle
- key : global mode (1 LFO for all voices within the program), the LFO is restarted at each key press
- fre : same as key, but free-running

MATRIX | Modulation matrix + Operators (lag + mult)

Pressing the MATRIX button will alternate between the Mod matrix and the Lag operator view

Modulation matrix

The modulation matrix allows you to apply a modulation source (an envelope or a LFO for example) to a selection of synthesis parameters.

There are 10 modulation matrix slots per program.

```
M01 Src:lfo1*whl  
Dst:ptch Amt: +8
```

In mod matrix view, the encoders control the following parameters :

1. Mod matrix slot selection (1 to 10)
2. Mod matrix destination
3. Mod matrix source
4. Mod matrix amount

NOTE : Mod matrix amount is a bipolar value (-99 to +99) and its behavior is not linear (by design). It allows subtle modulations in lower values, so if you want a drastic change, do not be afraid to push the value:)

Lag operator

Lag operator allows you to « slow » a modulation source, and use the result as a modulation source in the modulation matrix.

For example, « Lagging » a square LFO will round its edges for a less abrupt changes between states.

```
OP1 Src:lfo1*vel  
Lag Amt: 25
```

In Lag operator view, you control :

1. OP selector
2. N/A
3. Lag source
4. Lag level

Mult operator

Mult operator multiplies 2 modulation sources and allows you to use the result as a modulation source in the matrix.

```
OP2    A:lfo1*aft  
Mult1  B:mod knob
```

Controls are :

1. OP selector
2. N/A
3. A mod source
4. B mod source

Modulation sources

Off	No source selected	env1*vel	Env1 * velocity	lfo2*aft	LFO2 * aftertouch
Note	Note number	env2	Envelope 2	lfo2*whl	LFO2 * mod wheel
note+bnd	Note + pitch bend	env2*vel	Env2 * velocity	lfo2*knb	LFO2 * mod knob
velocity	Note velocity	env3	Envelope 3	lfo2*en2	LFO2 * Envelope 2
Aftertch	Aftertouch	env3*vel	Env3 * velocity	lfo3	LFO3
modwheel	Modulation wheel	lfo1	LFO1	lfo3*vel	LFO3 * velocity
mod knob	Mod knob	lfo1*vel	LFO1 * velocity	lfo3*aft	LFO3 * aftertouch
pitchbnd	Pitch bend lever	lfo1*aft	LFO1 * aftertouch	lfo3*whl	LFO3 * mod wheel
random1	Random number	lfo1*whl	LFO1 * mod. Wheel	lfo3*knb	LFO3 * mod knob
rnd1*mod	Rnd number * mod wheel	lfo1*knb	LFO1 * mod. Knob	lfo3*env3	LFO3 * Envelope 3
random2	Random number	lfo1*en1	LFO1 * Envelope 1	lag	Lag OP output
rnd2*knb	Rnd number * mod knob	lfo2	LFO2	mult1	Mult1 OP output
env1	Envelope 1	lfo2*vel	LFO2 * velocity	mult2	Mult2 OP output
				offset	Offset

Modulation destinations

Off	No destination selected	Cuto	Filter frequency	Dcy2	ENV2 Decay time
Ptch	All OSCS pitch	Reso	Filter resonance	Dcy3	ENV3 Decay time
Tun1	OSC1 pitch	f.fm	Filter FM level	Dcys	All ENV Decay time
Tun2	OSC2 pitch	Driv	Voice Drive	Rel1	ENV1 Release time
Tun3	OSC3 pitch	Glid	Glide rate	Rel2	ENV2 Release time
Shp1	OSC1 shape	Vca	VCA level (reduce only)	Rel3	ENV3 Release time
Shp2	OSC2 shape	Pan	Voice pan level	Rels	All ENV Release time
Shp3	OSC3 shape	Atk1	ENV1 Attack time	Lfo1	LFO1 speed
Mix1	OSC1 level	Atk2	ENV2 Attack time	Lfo2	LFO2 speed
Mix2	OSC2 level	Atk3	ENV3 Attack time	Lfo3	LFO3 speed
Mix3	OSC3 level	Atks	All ENV Attack time	Lfos	ALL LFO speeds
Xnze	White noise level	Dcy1	ENV1 Decay time		

ARP | Arpeggiator

The arpeggiator will turn any chord you play into a repetitive sequence of notes.

Its parameters are spread in 3 pages :

```
ARPG gte oct spd
up 88 1 /16
```

- 1. Arpeggiator style (up, triplet up, down, triplet down, up & down, random, as played)
- 2. Gate length
- 3. Octave spread
- 4. Speed (clock sync)

```
ARPG latch
off off
```

- 1. Arp on/off
- 2. N/A
- 3. N/A
- 4. Latch on/off

Arp pattern

Firmware 2.0 introduces a new ARP pattern screen allowing you to program more complex arp patterns.

```
v PTN L=16
aaaaaaaaaaaaaaaa
```

- 1. Selects the step to edit
- 2. Edits the currently selected step
- 3. N/A
- 4. Pattern length

The second line displays 16 characters that represent the 16 steps of the pattern. A step can be :

a	Arp generated note	o	Rest	_	Tie
<	Lowest pitch – 1 octave	1 to 6	Specific Chord Note	>	Highest pitch + 1 octave
#	Chord				

FX | Effects

MicroMonsta 2 has eq + chorus + delay + reverb available – **per program A and B.**

IFX parameters

```
IFX  cho    eq  
      off    +0
```

1. N/A
2. Chorus type (1, 2, 1+2)
Modeled after a well known 80's vintage japanese synth
3. N/A
4. EQ frequency control (negative values : lowpass filter, positive : hipass filter)

Delay parameters

```
DLAY tim fbk lvl  
mod2  49  52  98
```

1. Delay mode (clean, lpf1, lpf2, mod1, mod2)
Lpf models have a lowpass filter in their feedback path
Mod1 and mod2 are (true) modulated delays
2. Delay time
Delay time can be synchronized to the tempo by setting its speed above 127 (different synchorized values are available)
3. Delay feedback
4. Delay send level

Reverb parameters

```
REVB dcy mod lvl  
      78  42  86
```

1. N/A
2. Reverb decay time
3. Reverb modulation amount
4. Reverb send level

VOICE | Voice parameters

MicroMonsta 2 features an extensive list of parameters affecting the voice behavior of each program. They are spread into 7 pages, in this mode, you select the active page with Encoder 1.

V01 – Voice mode

```
V01    mode uni
VOIC  Modern  1
```

1. Voice page selector
2. N/A
3. Voice mode (Modern, Vintage, Mono, Legato).
NOTE :Modern will re-affect a new voice each time you send a note, while vintage will try to reassign the same voice if that note has already been affected before
4. Voice unison count (1, 2, 3, 6)

V02 – Pan spread and glide

```
V02  pansprd gld
VOIC dif  24  0
```

1. Voice page selector
2. Pan spread mode (dif, bal)
*When unison is disabled, dif(fused) will spread the voices in the stereo field, each one having a different pan position, while bal(anced) will send them either on the left or on the right.
When unison is enabled, dif will pan each voice in the unison differently and will make the final stereo image different for each polyphonic note, while bal will try to center the stereo image of each note (but each voice of the unison has its own pan position).*
3. Pan spread amount
When set to 0, all voices are pan to center position. Increasing this amount will shift each voice according to the pan spread mode.
4. Glide (portamento) level

V03 - Detune

V03	vce	osc
DETUNING	24	24

1. Voice page selector
2. N/A
3. Voice detune value (all voices detuned differently)
4. Oscillator detune value (randomly generated for each oscillator at each keypress)

V04 – Pitch Bend

V04	dwn	up
PTCHBEND	-12	2

1. Voice page selector
2. N/A
3. Pitch bend value for negative pitch bend amount
4. Pitch bend value for positive pitch bend amount

V05 – Velocity Sensitivity

V05	vca	flt
VEL SENS	24	0

1. Voice page selector
2. N/A
3. Velocity sensitivity of VCA (scales ENV1)
4. Velocity sensitivity of Filter cutoff envelope amount

V06 – Envelope Reset

V06	env1	2	3
RTZ	off	off	on

1. Voice page selector
2. Envelope 1 reset to zero
When ON, this will force envelope 1 to restart from 0 when the voice is retriggered, even if it is still decaying. Setting this to ON can create audio clicks. Default value is OFF
3. Envelope 2 reset to zero
4. Envelope 3 reset to zero

V07 – Oscillator Phase Reset

V07	Phase Reset
OSC	off

1. Voice page selector
2. N/A
3. N/A
4. Oscillator phase reset
When ON, forces the oscillator phase to reset to 0 when the voice is triggered. Particularly useful for FM sounds and when you want each note to have a regular and consistent attack sound. Default value is OFF.

PROGRAM | Program parameters

Here you will find Program related parameters spread onto several pages :

P01 – Category, master volume and tempo

```
P01  cat mix bpm  
      strg +3 123
```

1. Program page selector
2. Program category (bass, lead, pad, key, orgn, strg, brss, perc, dron, noiz, sfx, arp, misc, usr1, usr2, usr3)
3. Program volume (you can find a shortcut of this parameter in DRIVE menu too)
4. Program tempo

P02 – Pots assignments

```
P02  F  Q  M  
Pots SYS SYS SYS
```

1. Program page selector
2. F knob assignment
3. Q knob assignment
4. M knob assignment

P03 to P04 – Encoders assignments

```
P03 Encoder1  2  
ENCS          SYS SYS
```

1. Program page selector
2. N/A
3. Encoder 1 assignment
4. Encoder 2 assignment

P04	Encoder3	4
ENCS	SYS	SYS

1. Program page selector
2. N/A
3. Encoder 3 assignment
4. Encoder 4 assignment

NB : in both pots and encoders assignments screens, SYS means that the pot/encoder is assigned to the parameter set globally in system menu.

This allows some programs to have a custom set of assignments while the others share the global settings.

COMBI | Combi parameters

C01 - Combi page

This menu is available only if Combi mode is activated in SYSTEM menu

C01	mode	spl
CMBI	splitAB	C 4

- 1. Combi page selector
- 2. N/A
- 3. Combi mode (only A, stack AB, split AB, mult AB)
- 4. Split point (split AB mode only)

C02 - Mixer

C02	A	B
MIXER	+0	+0

- 1. Combi page selector
- 2. N/A
- 3. Program A Master Volume
- 4. Program B Master Volume

C03 - Transpose

Available in Split and Stack modes only
Allows to transpose both programs independently

C03	OCT	A	B
TRANPOSE	-1	+1	

- 1. Combi page selector
- 2. N/A
- 3. Program A Octave Transpose
- 4. Program B Octave Transpose

C04 - Tempo

C04	bpm
TEMPO	125

- 1. Combi page selector
- 2. N/A
- 3. N/A
- 4. Combi tempo

C05 to C08 - Controller assignments

Available in Split and Stack modes only

C05	PITCH	BEND
ASSIGN		A+B

- 1. Combi page selector
- 2. N/A
- 3. N/A
- 4. Controller assignable

Pitch Bend, Modulation wheel, Aftertouch and Sustain Pedal messages can be independently sent to :

- Program A and B
- Program A
- Program B

SYSTEM | System parameters

System menu is spread across several pages selected by encoder 1.

S01 to S12 - SYSTEM menu pages

- S01 : Mode (monotimbral | bitimbral | combi)
- S02 : MIDI Channel (1 to 15 + MPE)
- S03 : Clock Sync (internal | midi | usb)
- S04 : Arp BeatSync (off | on)
- S05 : MPE Bend Range (0 to 96)
- S06 : Audio out (Stereo (A+B) | Mono A:L B:R)
- S07 : Master Tune (432 to 445 Hz)
- S08 : LCD Contrast
- S09 : BUT HoldTime (200| 300 | 400| 500 ms)
Hold time needed to enter orange menus
- S10 : Global assignments of F, Q & M pots
Remaps all 3 pots globally to selected parameters
- S11 : Default assignments for encoders 1 and 2
When Preset assignments are set to SYS (see PROGRAM menu), these default ones will be used.
- S12 : Default assignments for encoders 3 and 4

UTILITY

A word about utilities : do not perform these actions in a live set, as some of them will cut the audio while performing the task.

For tasks involving SYSEX files, use a SYSEX manager software to store / send the files to / from your computer - we recommend SYSEX Manager on Mac OS and Bome Send SX on PC.

U01 - Dump currently edited program

```
U01 Dump current
UTIL          Pgm?
```

Hold Yes to send the active program to the USB port as SYSEX.

U02 - Dump several programs

```
2/3      Dump P010
UTIL      To P025
```

Use encoder 3 and 4 to select the programs you want to dump.

Hold Yes to confirm and send the SYSEX files to your computer.

U03 - Receive several programs

```
3/3      Store Pgms
UTIL      To P010
```

Use encoder 4 to select the program where you want to store your programs. This will be auto-incremented if you send more than one program.

Hold Yes to confirm, then send the SYSEX files from your computer to MicroMonsta 2.

Control Change support

CC	TARGET	CC	TARGET	CC	TARGET	CC	TARGET
0	BANK SELECT MSB	32	BANK SELECT LSB	64	SUSTAIN PEDAL	96	
1	MODULATION WHEEL	33	VOICE DETUNE	65		97	
2		34	OSC DETUNE	66		98	
3		35	PAN SPREAD	67		99	
4		36	VCA ENV VELO SENS	68		100	
5	VOICE GLIDE	37	FLT ENV VELO SENS	69		101	
6		38		70	MOD KNOB	102	
7	Volume (Not saved)	39	OSC1 SHAPE	71	FILTER RESONANCE	103	
8		40	OSC1 TUNE	72	ENV1 RELEASE	104	
9		41	OSC1 FINE TUNE	73	ENV1 ATTACK	105	
10		42	OSC2 SHAPE	74	FILTER CUTOFF	106	
11		43	OSC2 TUNE	75	ENV1 DECAY	107	
12		44	OSC2 FINE TUNE	76	LFO1 SPEED	108	
13		45	OSC3 SHAPE	77	LFO2 SPEED	109	
14		46	OSC3 TUNE	78	LFO3 SPEED	110	
15		47	OSC3 FINE TUNE	79	ENV1 SUSTAIN	111	
16		48	OSC1 LEVEL	80	ENV2 ATTACK	112	
17		49	OSC2 LEVEL	81	ENV2 DECAY	113	
18		50	OSC3 LEVEL	82	ENV2 SUSTAIN	114	
19		51	NOISE LEVEL	83	ENV2 RELEASE	115	
20		52	MOD MTX LEVEL 1	84	ENV3 ATTACK	116	
21		53	MOD MTX LEVEL 2	85	ENV3 DECAY	117	
22		54	MOD MTX LEVEL 3	86	ENV3 SUSTAIN	118	
23		55	MOD MTX LEVEL 4	87	ENV3 RELEASE	119	
24		56	MOD MTX LEVEL 5	88	FILTER ENVELOPE	120	ALL SOUND OFF
25	EQ	57	MOD MTX LEVEL 6	89	FILTER TRACKING	121	
26	DELAY TIME	58	MOD MTX LEVEL 7	90	FILTER FM	122	
27	DELAY FEEDBACK	59	MOD MTX LEVEL 8	91	VOICE DRIVE	123	ALL NOTES OFF
28	DELAY LEVEL	60	MOD MTX LEVEL 9	92		124	
29	REVERB DECAY	61	MOD MTX LEVEL 10	93		125	
30	REVERB MOD	62	LAG LEVEL 1	94		126	
31	REVERB LEVEL	63		95		127	

NRPN support

Full NRPN control is available, documentation will be released separately when ready.

Microtuning

Micromonsta 2 can be retuned globally by sending a Bulk Tuning Dump via MIDI.

Bulk Tuning Dump format

A bulk tuning dump has the following format:

F0 7E <device ID> 08 01 tt <tuning name> [xx yy zz] ... chksum F7, where:

- <device ID> is 0x00 or 0x7F (all devices)
- tt is tuning program number (not used, set to 0x00)
- <tuning name> is 16 ASCII characters (not used, set it to “NotUsedButNeeded” for example)
- [xx yy zz] is the frequency data for one note (repeated 128 times)
- chksum is the calculated checksum (not used)

Limitations

Bulk Tuning Dumps are global, all the patches will be affected.

They are not stored in Micromonsta 2 memory, this means that each time you power it off, it will lose your custom tuning, and you will need to send it again for the working session.

MPE

MPE stands for Multidimensional polyphonic Expression.

This protocol is using 1 MIDI channel for common messages (like sending CC to control a synth parameter) and multiple MIDI channels for voice messages (usually 1 channel per voice), enabling the use of per voice pitch bend, aftertouch and other messages.

MPE compatible controllers are made by Roger Linn (the Linnstrument), Roli (Seaboard Block/Rise) and others...

When set to MPE mode (see System settings page 3), the Micromonsta will need a controller set to the following settings for best use:

	Monotimbral mode	Bitimbral Mode Pgm A	Bitimbral Mode Pgm B
Common channel	1	1	16
Notes MIDI channels	2 to 16	2 to 8	9 to 15
X-Axis	Your controller needs to match MicroMonsta 2's pitch bend range setting		
Y-Axis	CC74 (hardwired to filter cutoff) or CC1 (modulation wheel)		
Z-Axis	Aftertouch		

Factory reset

To Factory reset your MicroMonsta 2, hold these 3 buttons at startup : A, B and Yes.

Specifications

Audio

Audio output : 3.5mm stereo jack, line and headphone compatible

Max output level : 8dBu

Dynamic range : 100dB

MIDI

MIDI input : 3.5mm stereo jack connector, MIDI standard A

Power

USB B connector

Current consumption : 250mA (max)

General

Dimensions : 158mm x 108mm x 40mm