Audiothingies Micromonsta
User manual version 1.1.0

Overview

Specifications

The Micromonsta is an 8-voice polyphonic desktop synthesizer.

Small, powerful, great sound, usability and easy editing were key elements while designing the Micromonsta.

It features:

- 8 voices of polyphony
- 2 oscillators, 1 sub oscillator, 1 multimode filter, 3 envelopes, 3 LFOs, 6 modulation slots, 3 scalers, 1 lag operator per voice
- 12 oscillator types + 30 (multi-sampled) wavetables (15 factory featuring both evolving sweeps and totally random wavetables + 15 user for your own creations)

- 8 filter types
- Powerful detuning options (both per voice and per oscillator)
- Powerful arpeggiator with step pattern editor, slide and accent capable for 303-ish arpeggiated phrases
- Deep modulation matrix (with for example filter parameters, envelope or LFO speeds as destination)
- A chorder module allowing the generation of 4-note chords within a key/scale
- Internal FXs
- 384 preset slots to store your sound creations – including more than 200 factory presets that can be overwritten

Front panel

On the front panel you will find:

- 2 x 24 characters LCD screen – Black on white
- 6 encoders
- 9 pushbuttons with their associated LEDs

Rear panel

On the rear panel, from left to right on the above picture

- Audio outputs (use left output when using mono)
- MIDI connectors
- USB port – used only for firmware update and user wavetable update
- 9V DC input socket (Center positive polarity, 2.1mm plug, 200mA minimum)
- Power switch

Quick start

1. Connect audio outs to a mix table, turn the volume knob fully clockwise.
2. Connect a MIDI keyboard into the MIDI Input.
3. Power the Micromonsta with a 9V DC, center positive , 2.1mm plug PSU
4. Play some notes on MIDI channel 1, you should hear patch number 1 playing
5. Press Load
6. Turn encoder 6 to navigate thru the patches. Press Load again to load selected patch, press Home to cancel and return to previously loaded sound.
7. Alternatively, you can push encoder 1 & 2 to navigate and load the previous or next patch

Using the Micromonsta

The Micromonsta has been developed with easy editing in mind and we think we got it right given the synthesis complexity featured onboard. However, some parameters may need some explanations that you will find in this manual.

Navigating pages

How to navigate throughout the Micromonsta architecture?

Parameters are mapped across different sections accessed by pressing a corresponding 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 > SUB > OSC1 > OSC2 etc.

Some sections (the ones labelled in green) are accessible by simultaneously pressing Home [shift] + another button. For example [shift] + OSC will take you to the Mixer page.

Editing parameters

The LCD provides up to 6 parameters to edit.

Use encoders 1-6 to change their corresponding parameter value.

Some parameters can be reset to a default value when pushing the corresponding encoder (all bipolar parameters for example).

HOME | Main page

This is where you land when you power your Micromonsta polyphonic synthesizer

```
P038     cut res mix bpm
RandJuno   0 100  74 100
```

You get the program number and name as well as shortcuts to 4 different parameters.
You can set these parameters, per preset, in the Globals menu (2nd page)

You can navigate presets from this screen by pressing encoder buttons 1 and 2.
Quite useful in a live situation.

NOTE: When in this mode, LEDs 2 to 9 will show the activity of voices 1 to 8.

OSC | Oscillators

Oscillator 1

Oscillator 1 is the main oscillator. It also drives the sub oscillator.

```
OSC1 trs tun shp lfo1 mix
 saw  +3  +5  15  -25 121
```

- OSC1 oscillator algorithm selector
- trs patch transpose (+- 2 octaves per semitone step)
- tun oscillator fine tune
- shp oscillator shape modifier
- lfo1 lfo1 modulation amount (targets shape parameter)
- mix oscillator mix level

Oscillator 2

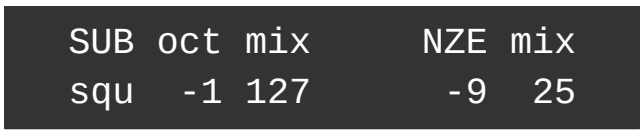
Oscillator 2 is functionally the same as oscillator 1, but its tune can be offset from -24 to 24 semitones.

```
OSC2 rng tun shp env3 mix
 sin  -7 -15 100  +10  99
```

- OSC2 oscillator algorithm selector
- rng oscillator coarse tune
- tun oscillator fine tune
- shp oscillator shape modifier
- env3 env3 modulation amount
- mix oscillator mix level

Sub / Noise

In this page, you access oscillator 1′ sub oscillator and noise parameters.



- SUB sub shape
- oct sub oscillator octave number
- mix sub oscillator mix level
- nze noise filter
- mix noise mix level

The oscillator algorithms

12 oscillators, 15 factory wavetables and 15 user wavetables are available for each of the 2 main oscillators.

mph

Morphing oscillator, when turning the shape parameter, it morphs from triangle (shape = 0), to sawtooth (shape = 42), to square (shape = 84) to pulse width.

Quite a very versatile oscillator, it can do lots of things other algorithms aren’t capable of doing.

sin

A sinus oscillator that turns into a basic FM operator with the shape control

tri

A triangle oscillator into a foldback digital distortion. Shape controls the gain.

When shape is set to 127, the oscillator will produce a triangle wave with its pitch one octave and a fifth higher.

saw

The classic sawtooth waveform.

Shape adds a second phase shifted sawtooth to the first one.When shape is set to 127, the oscillator will produce a sawtooth wave with its pitch of 1 octave higher.

squ

The classic square oscillator with PW.

Shape controls the pulse width.

ss1

This oscillator produces 3 detuned saws for that Roland-ish “supers@w” sound, but without the nasty aliasing.

Shape controls the detuning of 3 oscillators

ss2

Same as ss2, but the detuning between oscillators is unbalanced, which gives slightly different results.

Shape controls the amount of detuning.

sws

This oscillator internally has 2 oscillators, 1 master, and 1 sawtooth slave oscillator that is hard synced to the master.

The shape parameter controls the pitch of the slave oscillator.

sqs

Same as sws but with a square slave oscillator

rz1, rz2 and rz3

Those are phase distortion algorithms from the Casio CZ series.

They all simulate a filter sweep with the shape parameter.

rz1 is the saw version, rz2 the triangle, and rz3 the trapezoidal one.

w01 to w15

Factory wavetables

- w01 sawtooth with formant shift
- w02 square with formant shift
- w03 random wavetable
- w04 sine + random partials
- w05 guitar note sample with formant shift
- w06 processed sample 1
- w07 processed sample 2
- w08 processed sample 3
- w09 processed sample 4
- w10 random organ waveforms
- w11 sine + even harmonics sweep
- w12 sine + odd harmonics sweep
- w13 sine + even + odd harmonics sweep
- w14 vowels
- w15 I love synthesizers

Each wavetable contains 33 slices. The shape parameter controls the position of the reading index and will interpolate between the slices.

w16 to w30

User wavetables. By default, these wavetables produce no sound… until you fill these slots with your own wavetables :)

z01 to z30

Same as w01 to w30, but **without interpolation** between slots.
This produces rawer sounds, and is especially interesting with random wavetables or wavetables with strong differences between slots.

Oscillator tips

While both oscillators are essentially the same, they do not have the same direct shape modulation source, lfo1 for osc1 and env3 for osc2.

So if you want to do the classic pwm sound, osc1 is better suited as you can directly modulate the pulse width with lfo1, while if you want to do the classic hard sync sound, osc2 might be a wiser choice as you'll be able to control the pitch of the slave oscillator with env3.
This makes a better use of the internal architecture and can save modulation matrix slots.

About the noise filter (and all bipolar-value filters inside the Micromonsta)

Throughout the synthesis architecture, several bipolar-value filters are available (noise filter, delay filter, global filter for example).

These filters are all working in the same way:

- When the value is negative, it acts as a 6dB lowpass filter
- When the value is positive, it acts as a 6dB hipass filter
- When set to 0, it has no effect

Source mixer | MIXER

This is the mixer section, where you can adjust all sources volumes, as well as a VCA drive parameter, allowing adjustments to the overall patch volume (if you want to balance patches volumes, this is the parameter you need).

```
 osc1 osc2 sub rmd nze vca
  100   99  50   0   0  +6
```

You have access to the 2 oscillators mix level, as well as the Sub and noise level.
You can also set the rmd level, which is the level of the output of osc1 and osc2 thru a ring modulator.

When adjusting patch volume, always compare the patch level compared to one of the factory presets, pushing this parameter too hard (especially for polyphonic patches) may end with unwanted nasty distortion.

Filter | FILTER

This is the page where you control one of the main component of a subtractive synthesis capable synthesizer: the filter. The filter allows to remove and emphasize the frequencies generated by the oscillators.

```
FLTR cut res env2 lfo2 kbd
 LP4  50  60  +50  -15 50%
```

- FLTR Filter type
- cut cutoff frequency (in semitones)
- res resonance amount
- env2 envelope 2 modulation amount (targets cutoff)
- lfo2 lfo2 modulation amount (targets cutoff)
- kbd keyboard tracking amount (0, 25%, 50%, 75%, 100%)

Filter types

The Micromonsta filter topology allows different filter types

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

All the lowpass filters have resonance compensation = no bass frequency loss with increased resonance values.

The voice settings page | Voice

This is where you will find the settings related to the voices

```
mod uni detunin – pan -
 p2   1  32  20 lin  28
```

- mod — synth mode (polyphonic 1, polyphonic 2, mono, legato)
- uni — number of unison voices (1/2/4)
- detunin — voice detune amount
  oscillator random detune amount
- pan — pan spread algo (lin/equ)
  pan spread amount

Envelopes | ENV

The Micromonsta features 3 envelopes per voice. They all have the same parameters and their behavior is the same.

```
ENV1 atk dcy sus rel rst
 exp   0  60  95  25 off
```

- ENV1 envelope curve (fast | exponential | linear)
- atk attack time
- dcy decay time
- sus sustain level
- rel release time
- rst reset switch, when on, the envelope is reset to zero when the voice is re-triggered (off = analog mode)

Attack, decay and release times can be set from 1ms to 30s, and they are available as destinations in the modulation matrix.

The Global page | Global

Per preset global settings

Here you will find the global settings for the preset

```
  bnd gld          eq bpm
    2  25           0 125
```

- bnd pitch bend range (0 – 24 semitones)
- gld glide time
- eq global eq
- bpm patch tempo (only used if midi clock sync is off)

Home page parameter assignments

In this menu, you can set the 4 shortcuts to parameters available in the Home page.

```
encoder  en3 en4 en5 en6
assign   cut res bpm mix
```

- en3 encoder 3 assignment
- en4 encoder 4 assignment
- en5 encoder 5 assignment
- en6 encoder 6 assignment

Low frequency oscillators | LFO

The Micromonsta has 3 LFOs per voice that can optionally be synced to the patch tempo

```
LFO1 spd dly atk phs rst
 tri 1/8   0  30  45  on
```

- LFO1 waveform
- spd speed (around 0.05Hz to 78Hz – values above 127 are tempo sync values)
- dly delay time (0 to 10s – values above 127 are tempo sync values)
- atk attack time (0 to 30s)
- phs phase (0° to 315°)
- rst key-trig reset

LFO speed is available as a destination in the modulation matrix.

LFO waveforms

Different waveforms are available, they are:

- sin sinus
- tri triangle
- saw sawtooth
- squ square
- s&h sample and hold
- rnd continuously randomly moving waveform
- stp step sequence (uses the steps programmed in the step page)

The influence of the key-trig reset parameter

The LFOs behave differently whether the reset parameter is set to on or off.

Rst = on

When set to on, the phase of the LFO will be set to the phase programmed with the phase parameter when the voice is trigged by a key.

If delay is applied, then it will reset to this phase value when the delay time has elapsed.

Rst = off

When set to off, the phase is never reset to any value, the LFOs are free-running, however the phase parameter now controls the phase offset between the 8 voices.

Example: if the phase is set to 90°, voice 2 and voice 1 will have their phase offset by 90°. Same for voice 3 and voice 2. Etc… So if the phase is set to 0, you now have locked free running LFOs.

Note: This phase relationship will be true unless you modulate the LFO speed in the modulation matrix. If you applied modulation and removed it, you can resync the LFOs either by:

- sending a MIDI start command
- turning the phase parameter encoder

The 8-step LFO sequence | Step

This page is slightly different from the others:

```
  >>>  +8   0 +25 +51 len
       -5 -59 +44 +53   8
```

To program a sequence:

- Use encoder 1 to select the 4 active steps to be edited (marked with >>>)
- Encoder 2 to 5 will set the 4 active step values.
- Encoder 6 sets the length of the sequence.

Remember that, to be active, one (or several) LFO(s) shape must be set to ‘stp’ for the sequence to have an effect.

And you also need to set a modulation destination amount different from 0 for this LFO in the matrix too to hear the effect of the sequence on the sound.

Randomization options

It is possible to randomize the 8 steps by pushing 1 of the 6 encoder buttons for 1 second.
Try then all, they generate various degrees of randomization.

The modulation matrix | MATRIX

This is where things can start to get real fun… The matrix contains 6 patch cords. Each patch cord allows you to modulate a parameter (a modulation destination) with a modulation source, and set the amount of modulation.

The 6 patch cords are spread on 3 pages, so that's 2 patch cords per page.

```
Patch 1     Patch 2
vel>cut +12 lfo3>res +32
```

As you can see, you have access to the modulation source, modulation destination and modulation amount, for both patches at the same time.

Modulation sources

kbd	Keyboard tracking	Cst	Constant value	Lfo1	LFO 1
vel	note velocity	rnd	random number	lfo2	LFO 2
aft	aftertouch	env1	envelope 1	flo3	LFO 3
bnd	pitch bend	env2	envelope 2		
whl	mod wheel	env3	envelope 3		

Modulation destinations

Ptc	Pitch (coarse)	XO2	Osc2 mix	A2	env2 atk time
fin	pitch (fine)	xSb	sub mix	d2	env2 decay time
tn1	osc1 tune	xRm	ringmod mix	r2	env2 release time
ft1	osc1 fine tune	xNz	noise mix	a3	env3 atk time
tn2	osc2 tune	cut	cutoff frequency	d3	env3 decay time
ft2	osc2 fine tune	res	resonance	r3	env3 release time
osc1	osc1 waveshape	a1	env1 atk time	lfo1	LFO1 speed
osc2	osc2 waveshape	d1	env1 decay time	lfo2	LFO2 speed
nze	noise color	r1	env1 release time	lfo3	LFO3 speed
xO1	osc1 mix				

Some sources are bipolar (lfo's, rnd), other unipolar (envelopes, velocity, …).

Modulation amount is bipolar, meaning you can reverse the modulation source amount by setting a negative number. On lfo's, this reverse the phase for example.

Before using the matrix

Without even using the matrix, the Micromonsta has some fixed modulation assignments:

- ENV1 is routed to the AMP VCA
- ENV2 is routed to filter cutoff
- ENV3 is routed to OSC2 shape
- LFO1 is routed to OSC1 shape
- LFO2 is routed to filter cutoff

Look at the OSC1, OSC2 and Filter page to set these modulation amount.

This means that if you want to modulate the filter cutoff by a LFO, the first best candidate is LFO2, as it is already routed to the filter cutoff, it does not “eat” a modulation slot.

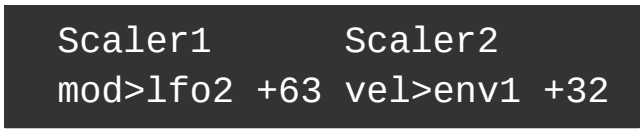
Some more are available in the Voice and Global pages (glide, pitch bend, detune).

Scalers & Lag | Scaler

Scalers allow you to scale the amount of a modulation source (for example scaling ENV1 with note velocity will change the volume of the note according to its velocity).

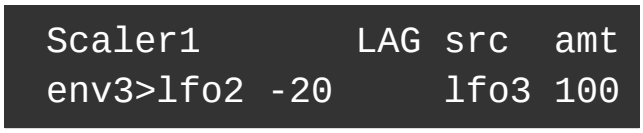
The lag operator will lowpass filter a modulation source. It can be used to smooth a source, for example a square LFO.

Scalers 1&2



You have access to scalers source, destination and amount, like the modulation matrix page.

Scaler 3 & Lag



Here you can set scaler 3 source, destination and amount, as well as the lag source and amount.

About the scaler amount

To better understand what the scaler is doing, let’s take an example: say you scale LFO2 with modulation wheel and LFO2 is routed to filter cutoff with a value of +40 in the filter page.

If you set the scaler amount to max (+63):
When modulation is set to max, LFO2 will change the filter cutoff, the maximum amount being set in Filter page, that is +40
When modulation wheel is set to 0, LFO2 will have no effect on filter cutoff

Now, what does happen if you set the scaler amount to 50% (+32)
When modulation is set to max, LFO2 will change the filter cutoff, the maximum amount being set in Filter page, that is +40
But when modulation wheel is set to 0, LFO2 WILL still have an effect on Filter cutoff, the more the scaler amount, the less the effect, here at 50% of +40, which is +20.

In fact, the scaler amount allows you to set a minimum value for the scaler destination when the source is set to its minimum value. Sounds scary? Try them by yourself, they’re easier than you may think and they’re the **ideal way to add velocity or aftertouch expression to your patche**s.

TIP: when the scaler amount is set to a negative value, the effect of the modulation source is reversed.

The pattern arpeggiator | ARP

On top of its powerful synthesis capabilities, the Micromonsta is equipped with quite a powerful arpeggiator engine, capable from classic to more esoteric polyphonic arpeggios.

The arp page

The first page is the classic side of the arpeggio

```
ARPG stl gat oct spd lat
 off  up  64   2 1/8 off
```

- ARPG arp on/off
- stl arp style (up, triplet up, down, triplet down, up & down, random, as played)
- gate gate time
- oct octave spread (0 to 3)
- spd arp speed
- lat keyboard latch (when arp is off, this turns on “drone” mode)

The arp pattern sequence edit page

This is where you can add spice to your arpeggio sequence.
You access this page from the arp page by pressing a 2nd time on the ARP button.

```
[<1c1]c1<c1c1<c1c8  len
-/&_&-_&x_&_&x_&Xx   16
```

This page can be quite intimidating, this is by far the most complex page of the whole synth, but it’s quite powerful once you get into it.

In this page, encoder 1 allows you to select a block of 4 steps to edit.
Encoder 2 to 5 allow you to edit those 4 steps.
Encoder 6 allow you to set the length of the sequence.

The 1st line

The first line is where you actually enters notes or events.

Here are the possible events:

- a arp note
- < lowest keyboard note minus 1 octave
- 1 to 8 a specific note within the chord you play (low to high)
- > highest keyboard note plus 1 octave (transposed with the arp octave setting)
- c chord (played on the keyboard or generated by the chorder)

The 2nd line

The 2nd line allows you to edit rhythm and accent. Essentially, it controls the note velocity and gate time.

Here are the possible events:

Event	Velocity	Gate time
x	Input note	Arp setting
X	127	Arp setting
_	Input note	Whole step
/	127	Whole step
& (previous step extension)	N/A	Extends the previous gate time step in the pattern by a whole step
O (rest)	N/A	N/A

Tip 1: if you don’t want to bother with that and only use the arp like a classic arp, set length to 1, and 1st step note to to “a” and rhythm to “x” and you’re done.

Tip 2: if you set the voice mode to m2 (legato mode), a step set to ”_” or “/” will slide to the next step if it is different from a rest and if glide is different than 0. Great for 303-ish mono sequences.

Tip 3: your patch MUST be velocity sensitive (by matrix or scaler patching) if you want to take advantage of the full velocity events.

Let’s get random!

In the spirit of a very well known bassline synthesizer, we have added some randomization capability that are triggered by long pressing one of the 6 encoder buttons:

- Encoder button 1 will reset arp notes to default
- Encoder button 2 will generate a monophonic sequence
- Encoder button 3&4 will generate a polyphonic sequence
- Encoder button 5 will reset the rhythm steps to default value
- Encoder button 6 will randomize the rhythm steps

All you have to do is long-press some encoder buttons until you find something you like.

A special use case: the Drone mode

When arp is off and the latch parameter is set to on, the drone mode is activated.

In this mode, notes will have infinite sustain, and will be “killed” only by other incoming notes, allowing long and infinite textures without any special tricks.

Its behavior is the same as the latch parameter when the arp is active, it “records” notes as long as 1 of them is held down, allowing chords to be played indefinitely.

The chorder | Chord

The chorder can generate up to 4-note chords within a key/scale, that is to say it can generate 3 notes in addition to the note you play.

```
CHRD key scl iv1 iv2 iv3
  on  D  min  +3  +5  +7
```

- CHRD on/off switch
- key base key for chord generation
- scl scale (major, minor, harmonic minor)
- iv1 1st note interval (from minus 1 octave to plus 2 octaves)
- iv2 2nd note interval
- iv3 3rd note interval

Effects | FX

The effect section contains different algorithm, each with its own set of parameters.
You can use 1 effect at the same time, chosen from the following algorithms.

stw

Stereoizer effect: adds subtle stereo depth to the sound – the original and much appreciated pre-v1.0 effect!
Plus, we have added a hicut filter for more flexibility.

```
   FX              cut mix
  stw               30  64
```

- cut eq cutoff
- mix effect mix level

p/p

The famous ping pong delay, this one with balance control and low pass filter

```
   FX tim fbk bal cut mix
  p/p  60  85  25  12  90
```

- tim delay time
- fbk feedback amount
- bal balance (-64: first ping on left channel | 63: first ping on right channel | 0: ping center (no ping pong effect))
- cut eq cutoff frequency
- mix mix level

dly

Stereo delay effect with a filter in the feedback path

```
   FX tim fbk     cut mix
  Lpf  60  85      25  90
```

- tim delay time
- fbk feedback amount
- cut eq cutoff frequency
- mix delay mix level

mod

Stereo modulated delay.

A LFO is modulating the delay time, adding a subtle – or not – pitch shift / chorus-y effect to the delay line.

```
   FX tim fbk spd dpt mix
  Mod  60  85  25  90  90
```

- tim delay time
- fbk feedback amount
- spd lfo speed
- dpt lfo amount
- mix delay mix level

chf

Stereo chorus/flanger effect with positive or negative feedback path.
Basically, this is a short delay line modulated by a LFO.
You get a flanger sound with smaller delay time values and high feedback amount.

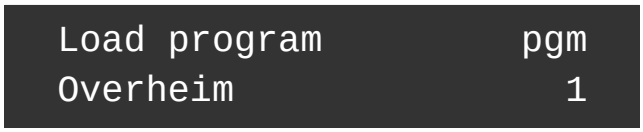
```
   FX tim fbk spd dpt d/w
  chf  30  60  25  55  64
```

- tim delay time
- fbk feedback amount
- spd lfo speed
- dpt lfo amount
- mix chorus mix level

Loading / saving a patch

Load menu | LOAD

Press Load if you want to load a pre-programmed patch from your Micromonsta's memory.



Turn encoder 6 to quickly navigate and load thru the patches.

Press LOAD again to load the patch into the edit buffer.
Press HOME to cancel

Tip: Loading a sound and then canceling the load action can be used as a compare function

Tip: From any other page than the Load page, pressing Load for 1 second will load the default patch, this can be useful if you want to program a sound from scratch.

Save menu | Save

In this menu you can save your edited patch to the Micromonsta's memory.

Turn encoder 6 to select the memory destination.
Use encoders 1 and 2 to edit the patch name.

Press LOAD to confirm the save action.
Press HOME to cancel.

System settings | System

System settings (page 1)

These settings are saved globally and will affect the behavior of the synth for all patches

```
  mid  in clk out  ui enc
    1 din int thr  16   3
```

- mid — Receiving MIDI channel (1 to 16 | MPE)
  When set to MPE, this enables MPE mode
- in — MIDI data input (5-pin DIN | USB)
- clk — MIDI clock sync (internal | external)
- out — MIDI out mode (thru | cc | arp | polychain master | polychain slave)
- ui — “popup” helper window hold time (0 to disable)
- enc — encoder acceleration

Note that to save the settings permanently, you have to enter tools menu and press encoder 5 – see next section.

System settings (page 2)

```
  tun        tools (push)
  440         syx sav upd
```

- tun — Master tuning frequency (432 to 445 Hz)
- syx — Push encoder 4 to send patch sysex (5-pin DIN only, if midi out mode is set to cc)
- sav — Push encoder 5 to save system settings
- upd — Push encoder 6 (1s) to put the Micromonsta in update or wavetable upload mode

MPE support

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 1), the Micromonsta will need a controller set to the following settings for best use:

- Common messages MIDI channel: 1
- Per Note MIDI channels: 2 to 16
- Pitch bend range: +- 48 semitones
- Slide CC: CC1, relative unipolar (mod wheel) or CC74, relative bipolar (filter cutoff)

Microtuning support

Micromonsta 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
- 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 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

Polychain support

2 Micromonsta’s can be polychained to act as a 16-voice polyphonic synthesizer.

The master device MIDI out mode must be set to polychain master.
The slave device MIDI out mode must be set to polychain slave.

The slave device needs to be connected directly to the master device’s MIDI output.

Both devices need to be connected to a mixer.

When setup in this way, the master device will control the slave device, by sending all parameter data when loading a preset or when editing a sound.

MIDI control

All the Micromonsta parameters are mapped to either 1 CC or NRPN number.

The list can be downloaded from www.audiothingies.com

Cheat codes available at startup

Some hidden functions are available when powering the Micromonsta while pressing some buttons for 2 seconds:

Factory Reset

Hold Shift + System at power up until the factory reset menu appears.

Performing a factory reset will erase all presets/settings with the provided factory ones, so don’t forget to save your custom patches before doing this.

Batch SYSEX MIDI send

Hold Shift + Save at power up until the Send Sysex menu appears.

Select the start and end preset indexes with encoders 3 and 4, and press LOAD button to send all these patches as SYSEX messages thru the MIDI out port sequentially.

For example, if you set the start index to 10, and the end index to 12, presets 10, 11 and 12 SYSEX messages will be sent sequentially.

You will need a software to record these SYSEX messages, such as MIDIOX on PC or SYSEX Librarian on Mac.

Batch SYSEX MIDI receive

Hold LOAD at power up until the Receive SYSEX menu appears.

Select the first preset index you’d like to restore and Press LOAD.
The Micromonsta will then be in wait for SYSEX mode.

Send the SYSEX messages sequentially from your computer to the MIDI input port of Micromonsta. They will be saved sequentially from the index you previously selected.

For example, if you select index 100, and then you send 3 presets, they will be stored at addresses 100, 101 and 102.

Once completed, press HOME.

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