

Synth Controller manual addendum for edition 'Mirage'

The Ensoniq Mirage has a quite complex structure with separate sample memory and program parameters for Upper and Lower layers, manually assignable sample memory positions, different operating systems.... The purpose of this addendum is not to explain the Mirage itself. We assume you are familiar with your Sampler and just handle the interface of the Controller and the Mirage here.

This Synth Controller edition is quite unusual because it is technically not possible to directly set parameter values over Midi in relation to the knobs turning position. Instead the Controller simulates pressing the front panel buttons over midi, exactly as you would do it manually without Controller. This works quite well after you got used to it and is much faster and more comfortable than without Controller. In case you did not see it yet – we also offer a youtube video demoing this edition. The parameters on the faceplate are accompanied by the Mirage numbers you are already used to.

As technical background the suitable excerpt from the Synth Controller's Online-FAQ:

We checked all three operating systems: OS3.2, MASOS and SOUNDPROCESS. None allows the direct changing of parameter values with midi commands.

- *The OS3.2 does not offer any interface for midi remoted parameter changes at all :-)*
- *MASOS does offer the SENDING of individual parameter changes from the Mirage but not RECEIVING them from an external controller/Computer (we tried nevertheless in the hope the documentation is incomplete, but nothing). There is only a command for receiving a complete set of PROGRAM parameters. For proper operation it would be necessary to connect Controller & Mirage in a Midi loop for transferring the complete Program from Mirage into the Controller, changing the desired para values and sending the complete Program back to the Mirage. This could work – but the MIDI IN of the Controller would be occupied by the Mirage – blocking the possibility to connect it to the Sequencer/DAW for receiving notes and let it play some music :-)*
- *SOUNDPROCESS – the alternative OS making the Mirage a 4 oscillator Synth without sampling capabilities. This OS offers the widest SysEx interface, theoretically it should have worked. According to the documentation the Mirage should display “CC” and respond to individual SysEx parameter changes after sending the “Computer Control” command (0xF0, 0x0F, 0xF7, 0x02, 0xF7) to the Mirage. But it simply does not respond. If it's only the Mirage i have here or the docuentionation is wrong or the OS was not finished 32 years ago ... no idea, it simply does not do what it should :-)*
- *Last chance: remoting of frontpanel knobs. MASOS offers a possibility for virtually pressing frontpanel knobs with midi commands, that's the way the Synth Controller*

edition goes. The Mirage will jump directly into parameter numbers by touching a knob. By the amount of turning you set the speed to increase or decrease the value. Still not perfect but much quicker than doing it by hand. For further details please check the addendum for the Mirage edition.

Technical requirements

The „buttonpress remoting“ from the Synth Controller **only works with the MASOS operating system** – this is the one you need to use for booting the Mirage. Afterwards you can load any factory or other disk and continue working. The Controller will start working right away. It is not necessary to set identical Midi channels, therefore this edition does not support any midi channel learn function for the Controller.

If you plan to sample and do not have the „Input sampling filter“ hardware expansion attached to your Mirage: set parameter [93] *InSmplFlt* to 0! Otherwise sampling will not work.

No Sequencer

As written in the **Ensoniq Mirage Advanced Samplers Guide**, MASOS needs more memory than the normal OS 3.2 and therefore needed to drop the sequencer. As a consequence the Controller does not contain any sequencer parameters.

Operation

In the Mirage edition it's a good idea having all knobs on 12 o'clock position. There is a dead zone (11 to 1) where no button-presses for value changes are sent to the Mirage.

As soon as you start moving a knob the Mirage jumps to the assigned parameter – working as well in the dead zone, but without changing the value yet. This is handy for quickly checking different parameter values because the Controller does not only select the suitable parameter – it also 'presses' the VALUE button to bring it on display.

If you like, you can use the +/- buttons on the Mirage directly to change the value. This might make sense on parameters with a low resolution like e.g. [26] *WAVESAMPLE SELECT*. For larger spans you can change values faster with the Controller itself:

Starting at around 1 o'clock the Controller presses the ON/+ button 1 times per second. As soon as the desired value is reached, you set the knob back to 12 and the value will stop changing. Now there are two faster gears:

- from 2 o'clock position, ON/+ will be pressed around 4 x per second
- from about 5 o'clock the speed is fastest. It's hard to aim for the desired value, this setting makes perfect sense in situations where you quickly want to reach a large parameter value's max or min position (e.g. Sample End or Top Key)

Accordingly values in the left half of the knob will be diminished in 3 speed grades.

Don't forget to move the knob back to 12 before heading to the next parameter. Nothing bad will happen if you forget it - but this might lead to undesired and confusing value changes if this knob will be slightly moved unnoticed or unintended later.

Selecting Lower / Upper

Changes to parameters affect only the Upper or the Lower Program/Wavesamples (except Sampling or Config parameters). Which layer is currently active is up to you, they need to be selected on the Mirage itself. **The Synth Controller simply edits the currently active Mirage-layer.**

By the way ... MASOS offers a wavesample selection shortcut (page 9 of Advances Samplers Guide):

- pressing SEQ REC followed by a number (1-8) directly selects the current UPPER wavesample
- SEQ PLAY accordingly for LOWER

Shift parameters

This edition also contains some „Shift parameters“, mainly for the envelope parameter modulations (Velo and Keytrack). Shift parameter are printed in italic letters above the knob. They will remain active as long as you keep the currently bright button pressed.

Example:

- in the red layer there is a knob for *[42] Decay*
- as long as you keep the red button pressed the knob will alter *[47] Kbd (= „Decay – Keyboard scaled“)*
- after releasing the button the knob changes *[42] Decay* as usual

Controller's color Layers

[36]CUTOFF (with [38] FILTER KBD TRACKING as Shift parameter) and [37]FILTER Q are always active, no matter which color layer you've selected.

The red Controller layer contains PROGRAM parameters. They are valid for all wavesamples in the currently selected UPPER or LOWER Mirage layer:

- LFO
- both envelopes
- the envelope parameters for Velocity/Keytracking impact can be found on their suitable position as shift-parameters
- Oscillator Mix/Detune/Monophonic switch

You will notice two '**MW**' printons, one for [32] Lfo Depth, another for [35] OSC Mix Velo. It's a reminder: setting these parameters to 0 allows to control

- LFO Depth by Modulation Wheel
- blending two different Waves (page 48 of the Mirage Musicians Manual). Parameter [28] Mix Mode must be ON for this to work. If it's ON the Oscillator 2 plays the consecutive Wavesample being in use by Oscillator 1.

The green layer holds the parameter set for the currently selected wavesample

- [26] Wavesample Select & [27] INITIAL WAVESAMPLE
- memory positions: Start/End for sample and loop. All loop-related parameters (Start, End, End Fine, Switch) are connected with a green line.
- the relative values of the currently selected wavesample (Tune, Amplitude, Filter Frequency), also connected with a line
- most important: Top Key.

The blue layer holds the Midi and keyboard settings as well as the parameters for sampling. All six sampling parameters are grouped as a block on the right side and separated by a vertical line.

The special MASOS parameter [93] *InSampFlt* controls the hardware 'Input Sampling Filter' which came with MASOS. If you do not have it attached to your Mirage this parameter must be set to 0, otherwise sampling will not work (according to page 23 of 'Advances Samplers Guide').

Not assigned parameters

The Controller does not offer access to the complex wavesample copy/manipulation commands [85] – [96] of MASOS.

The parameter [66] WAVESAMPLE ROTATE is also not assigned - it sends the Mirage to sleep for some seconds. The command rotates the current Wavesample by a specified amount of samples.

Helpful values

The TopKeys for C1 to C6

C1	1
C2	13
C3	25
C4	37
C5	49
C6	61

Memory values for 4 samples of identical size

Wavesample	Start	End
1	00	3F
2	40	7F
3	80	BF
4	C0	FF

Memory values for 8 samples of identical size

Wavesample	Start	End
1	00	1F
2	20	3F
3	40	5F
4	60	7F
5	80	9F
6	A0	BF
7	C0	DF
8	E0	FF