morphagene_mods _travelers guide _for manipulating wormholes

6	10	1
shift gestures	new options.txt keys	build, every combo

[rec] press · [rec] hold · 3 s = keep holding · › then · 12:00 = knob straight up · ◆ = options.txt only

every new feature lives on shift: hold shift and turn a knob · a plain shift tap still moves to the next splice

unofficial · mg204 only · use at your own risk (08)

yellow = hold

01 the mods

mm_01 · by briskcat

what it is	new features added to **your own copy** of the official mg204 firmware: shift gestures, a remembered input gain, sd-card updates
made by	briskcat / morphagene-mods · mit licence · an unofficial community project
not included	no make noise firmware is shared: you download mg204.wav yourself and the builder patches it on your computer
switch off	every feature has an off setting in options.txt, so one build covers every combination

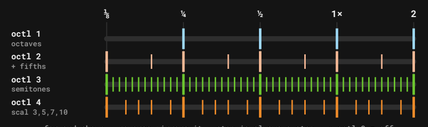
02 shift gestures

mm_02 · the new rules

[shift] + turn a knob	a **gesture**: every new feature lives here
let go of [shift]	after a gesture you stay on this splice · [shift] + [splice] / [rec] deletes are blocked for that hold
tap [shift]	no turn = next splice, as stock
pickup	the knob you turned keeps its old value until you turn it back near where it was
[shift] + turn [s.o.s.] ◆ tape	tape mode · or classic tla feedback
[shift] + turn [morph] ◆ fxsl	sample-rate reduction · or tape warble
[shift] + turn [vari-speed] ◆ octl	scale lock: octaves, fifths, semitones or your own
[shift] + turn [slide]	random gene start positions (jitter) · always on
[shift] + turn [organize] [gene-size] [slide] ◆ sldm 1	turing mode controls

__fig.01 : scale lock

◆ octl · scal



forward shown · reverse mirrors it · stop is always a step · ◆ octl 0 = off

03 tape mode

mm_03 · [shift] + turn [s.o.s.]

switch on	the first [shift] + turn [s.o.s.] after power-up · until then s.o.s. is stock
overdub a splice	**a virtual tape head** writes inside the slide / gene-size window at the vari-speed rate: backwards in reverse, paused at stop
[shift] + turn [s.o.s.]	how much of the old recording stays each pass (tape feedback) · 100% with silence changes nothing
[s.o.s.] alone	still sets what you hear
[shift] + turn [s.o.s.] ◆ tape 0	**classic tla feedback**: records input + playback, the gesture sets how much playback goes back in
morph cap ◆ mcap	while dubbing · 3 = 0.3 (default) · 0 = none · above 5 can glitch

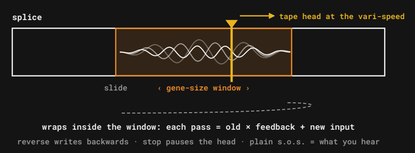
04 srr · warble · lock

mm_04

[shift] + turn [morph]	**sample-rate reduction** on the gene playback: fully left = off, right = more (down to 200 hz)
[shift] + turn [morph] ◆ fxsl 2 / 0	**2** = tape warble: wow & flutter on playback speed, up to ~1.4 semitones, lighter on cpu · **0** = off
builds up	input untouched, so with feedback it grows each pass · resets at power-up
[shift] + turn [vari-speed]	**scale lock**: snaps to in-tune steps (fig.01), stays locked after you let go
the scale ◆ octl	1 octaves · 2 + fifths · 3 semitones · 4 yours · 0 off
yours ◆ scal	**3,5,7,10** = minor pentatonic · root + octaves always in
unlock	turn ~half an octave away · slowly on semitones
[shift] + turn [slide]	**jitter**: each new gene starts at a random offset around slide · left = off, right = wider

__fig.02 : the tape head

tape mode, overdubbing



wraps inside the window: each pass = old × feedback + new input

reverse writes backwards · stop pauses the head · plain s.o.s. = what you hear

05 turing mode

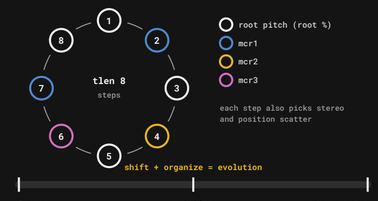
mm_05 · ◆ sldm 1

1. set **sldm 1** in options.txt, power on · gene-size ~1:00 · morph low = melody, higher = chords
2. **lock**: hold [shift], turn [organize] fully left · the pattern repeats
3. **mutate**: [shift] + turn [organize] up from the left · steps sometimes change
4. **new pattern**: [shift] + turn [organize] fully right, then back fully left

[shift] + turn [gene-size]	genes per step: 1 · 2 · 3 · 4 · 6 · 8 · 12 · 16
[shift] + turn [slide]	spread: start jitter, repeated by each step when locked
loop length ◆ tlen	1–16 steps (default 8)
root chance ◆ root	% of steps that play the root pitch · 100 = no pitch changes
pitches	from the stock chord ratios mcr1–mcr3 · no LED feedback

__fig.04 : the turing loop

◆ sldm 1



06 input gain

mm_06 · now remembered

[rec] + tap [shift]	steps through the four gain levels, as stock
saved	about 3 s after your last tap, restored at power-up · never while recording
gain ◆ ingn	0–3 · 0 = stock starting level

11 in the background

mm_11 · nothing to do

splice fix	an overdub stays inside the selected splice · built in, not tested on its own
faster flash	flash prefetch on: 10–17% more cpu headroom, so high morph glitches less

07 install

mm_07 · free

you need	the official **mg204.wav** from make noise · a phone or computer and a cable into [in] left · the sd card

build

in your browser, nothing uploaded

1. download mg204.wav from the make noise firmware page
2. open the web builder, choose mg204.wav, download the update wav and mgmod.bin

first install

by audio, like an official update

1. remove the sd card · player into [in] left at about 80% volume
2. power on holding [rec] · only the splice window lights green · let go
3. play the update wav · windows flash while it loads, all lights flash when done
4. calibrate vari-speed as make noise says: power on holding [splice], turn it fully both ways, press [splice], power-cycle

later updates

from the card, a few seconds

1. copy **mgmod.bin** to the card root, exactly that name · power on, no buttons
2. it worked if the file is now called mgmod.ok

back to stock

always works

1. install the official mg204.wav by audio, the same way · the bootloader is never touched

! use at your own risk

mm_08 · read first

unofficial	a community project: not made, endorsed or supported by make noise · don't ask them for help with it
no warranty	mit licence, provided "as is" · you are changing the firmware in your module
before you start	copy your sd card (reels + options.txt) somewhere safe
mg204 only	the builder refuses any other firmware file
don't share builds	the files you make contain make noise's firmware · share the project link instead
cpu	high morph + short genes can glitch (so can stock) · try warble, or a lower mcap
cv on a gesture knob	can count as a turn while shift is held: a shift tap may not change splice
power loss	during an options.txt rewrite can reset your settings to default

__fig.03 : front panel

what each part does with the mods

[01] __rec : hold at power-on = update
[02] __vari-speed : shift = octave lock
[03] __splice : green = bootloader
[04] __s.o.s. : shift = tape feedback
[05] __organize : shift = turing evolution
[06] __gene-size : shift = genes per step
[07] __in : left = audio update
[08] __clk : as stock
[09] __play : as stock
[10] __microsd : mgmod.bin · options.txt

[12] __shift : hold + turn = gesture
[13] __out : as stock
[14] __morph : shift = srr / warble
[15] __slide : shift = jitter / spread
[16] __windows : flash while loading
[17] __reel : as stock
[18] __eosg : as stock
[19] __cv out : as stock
[20] __cv ins : cv on a gesture knob can fake a turn
[21] __splice window : lit = waiting for audio
[22] __gate ins : as stock



_where things hide

10 · mm_10

options.txt

mods section, added at first power-up

- **tape** 1 tape mode · 0 classic tla feedback
- **fxsl** 1 srr · 2 warble · 0 off
- **octl** 1 oct · 2 +5ths · 3 semis · 4 scal · 0 off
- **scal** your scale, e.g. 3,5,7,10
- **mcap** morph cap while dubbing · 3 = 0.3 · 0 none
- **sldm** 1 turing mode · 0 off
- **tlen** turing steps 1–16 · 8
- **root** turing root chance % · 50
- **ingn** input gain 0–3, saved for you
- **cpul** 1 = cpu log, troubleshooting only

edit, save, power on · keep the first line · or use the web builder

on the card

- **mgmod.bin** drop it in the root to update
- **mgmod.ok** what it becomes once installed
- **cpulog.txt** only with cpul 1

credits

- **mods** briskcat and the morphagene-mods contributors · mit
- **update format** émilie gillet's stm-audio-bootloader
- **inspired by** octabam, for the elektron octatrack
- **morphagene** make noise · not endorsed by them

09 if something's off

mm_09

wav won't load	nudge the volume, turn off player effects / eq, keep it awake, try again
no sd update	do the audio install first · file at the card root, named exactly mgmod.bin
acting strange	go back to stock with mg204.wav, then rebuild