

latkes is a granular script, inheriting much of its code and many of its features from others that came before, including:

- > @infinitedigits' granchild and graintopia
- > @justmat's mangle
- > @cdf90's twine
- > @artfwo's glut
- > @kasperskov's grainfields



main controls

- > E1: switch screen
- > E2: select control
- > E3 or K2/K3: change control value

key features

- > one independent 30s buffer
- > eight gesture recorders
- > four semi-independent playheads
- > four scenes
- > live and recorded audio processing
- > attack decay grain envelopes

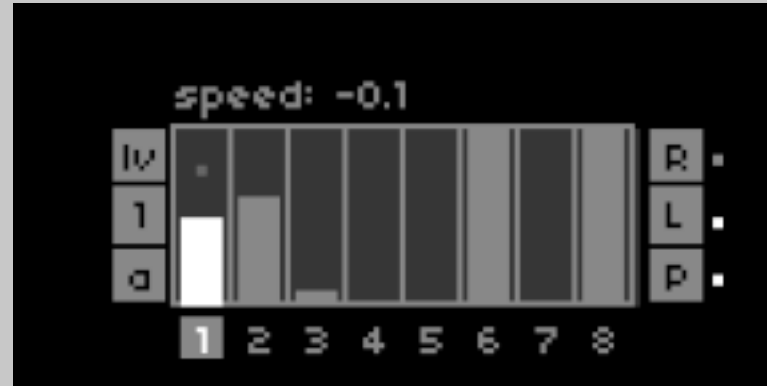


screen 1 controls

- > mode: live (lv) / recorded (rec)
- > voice (1-4) / scene (a-d)
- > buffer controls (start/length)
- > play (P)
- > flip live pre/rec levels (F)

screen 1 notes:

- > K3 activates play and flip when selected
- > flip is only visible in live mode
- > the playhead indicated is bright when playing and dark when playing is stopped
- > even when playing is “stopped” the playhead will keep moving through the buffer silently



screen 2 controls

- > mode: live (lv) / recorded (rec)
- > voice (1-4) / scene (a-d)
- > reflector value
- > reflector record (R)
- > reflector loop (L)
- > reflector play (P)

screen 2 notes:

- > K1+E3 will start recording changes to the selected reflector
- > K2/K3 will stop/start playing all reflectors
- > K1+K2/K3 will stop/start looping all reflectors
- > see the reflector section for more details on gesture recording

*reflectors utilize the reflection library created by @alanza and @dani\_derks. reflectors are gesture recorders for parameters, a bit like LFOs with a human touch.*

up to eight parameters can be configured per scene as reflectors. once selected, changes to selected parameter values can be recorded and played back, as a one-shot or in a loop.

reflectors are selected in the *voice[x]-refl config* params submenus.

```
voice1-refl conf >
voice2-refl conf >
voice3-refl conf >
voice4-refl conf >
copy reflectors >
```

copy reflector configs from one voice/scene to other voices/scens from the copy reflectors sub-menu.

```
PARAMETERS / voice1-refl conf

scene                a
play                  off
volume                off
effect send           off
```

use the scene param to configure separate reflectors for each of the four scenes.

once a reflector has been configured in the params menu, gestures (corresponding to a set of changes to a param's value) can be recorded, looped, and played from screen 2.



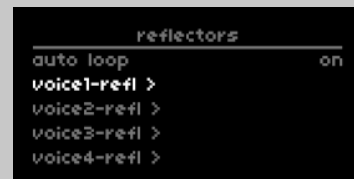
after a reflector has been recorded it starts to play automatically.

while playing a reflector recording, a dot shows how much of the recording has been played.

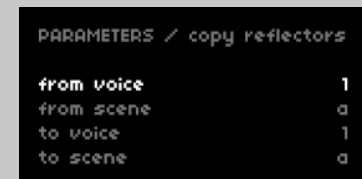
once a reflector has been configured, changes to the param it has been mapped to appear on screen 2.

screen 2 reflector controls

- > E3: start/stop recording/looping/playing
- > K1 + E3: record changes to the selected reflector
- > K2/K3: stop/start playing all reflectors
- > K1 + K2/K3: stop/start looping all reflectors

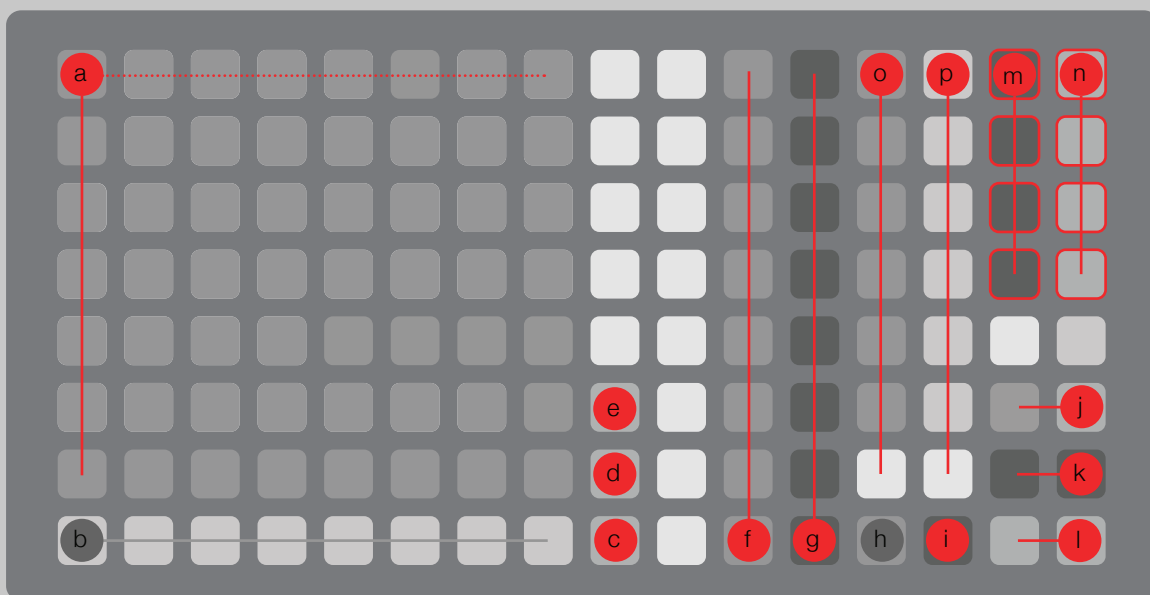


reflectors can also be set to record/loop/play from the *voice[x]-refl* param sub-menus



copy reflector configs from one voice/scene to other voices/scens from the *copy reflectors* sub-menu

- > all grid keys update params for the active voice and scene – with the exception of the keys to switch voice/scene (p/q)
- > see the next page for details about grid key combinations for updating multiple voices/scenes



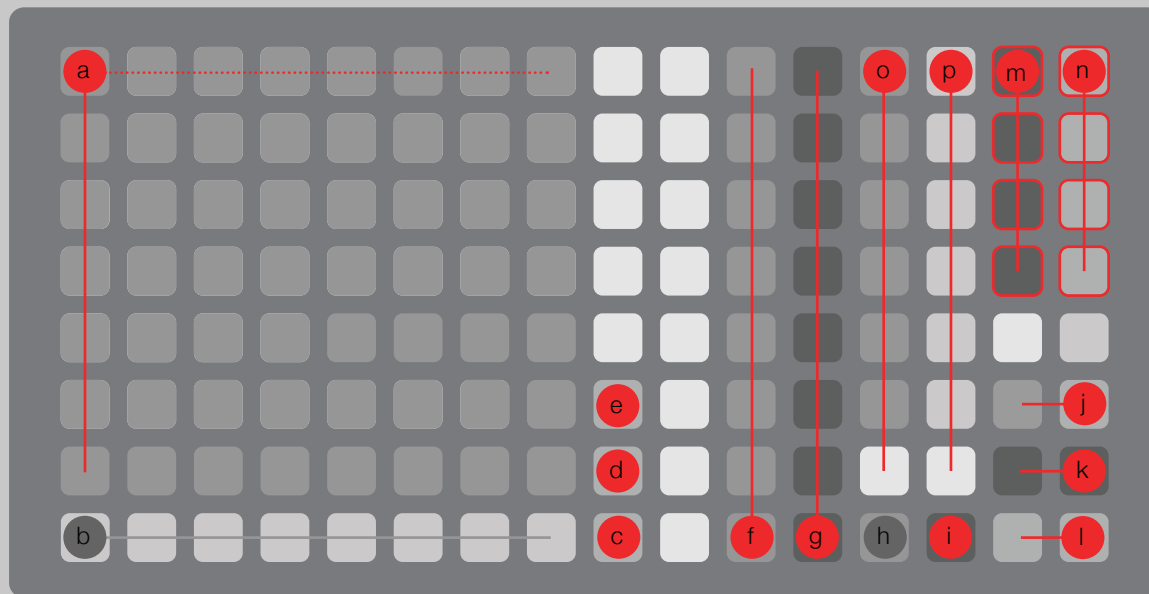
- m voice
- n scene
- o live recording level
- p live prerecording level
- j select mode (live/rec)
- k play active voice (on/off)
- l switch screen

- b select a reflector
- c play reflector (on/off)
- d loop reflector (on/off)
- e record reflector (on/off)

- volume f
- effect send g

- h density phase sync 1-shot:  
synchronise voices to the position of the active voice/scene
- i sync playhead of active voice/scene with the recording playhead

*press multiple voice or scene grid keys followed by another grid key  
will apply the change too all selected voices or scenes.*



- a** set reflector/param value
- c** play reflector (on/off)
- d** loop reflector (on/off)
- e** record reflector (on/off)

- volume **f**
- effect send **g**

- i** sync playhead of active voice/scene with the recording playhead

- m** voice
- n** scene
- o** live recording level
- p** live prerecording level
- j** select mode (live/rec)
- k** play active voice (on/off)
- l** switch screen

grid keys without multipress:

- b** reflection selector
- h** reflection selector

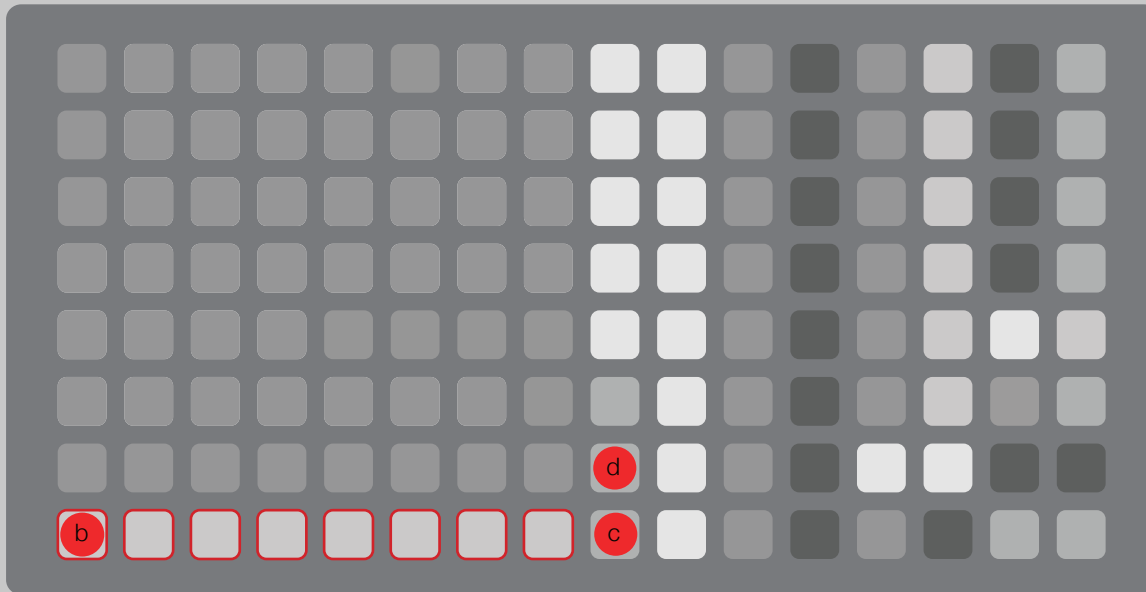
latkes

grid

multipress

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*press multiple reflection selector keys followed by play reflector or loop reflector keys to start/stop multiple reflectors at the same time.*



**b** reflection selector

**c** play reflector (on/off)

**d** loop reflector (on/off)

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grid

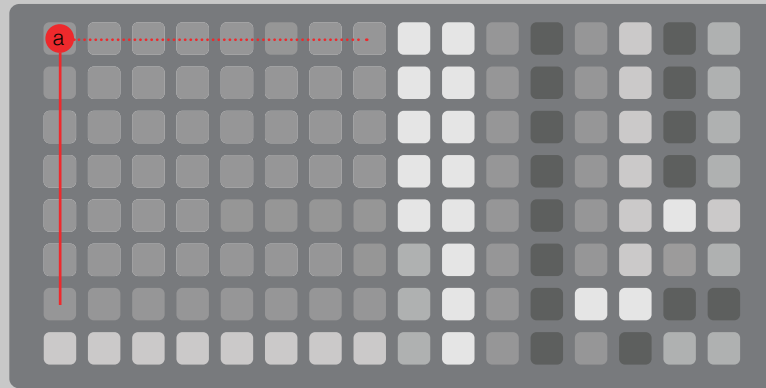
multipress

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*custom values for parameters mapped to reflection keys can be set in the `gridoverrides.lua` file located in the `lib` folder.*

```
grid_overrides = {}

-- pitch override
grid_overrides.pitch = {}
grid_overrides.pitch['1pitch1'] = {7,5,3,0,-3,-5,-7}
grid_overrides.pitch['1pitch2'] = {7,5,3,0,-3,-5,-7}
grid_overrides.pitch['1pitch3'] = {7,5,3,0,-3,-5,-7}
grid_overrides.pitch['1pitch4'] = {7,5,3,0,-3,-5,-7}
grid_overrides.pitch['2pitch1'] = {7,5,3,0,-3,-5,-7}
grid_overrides.pitch['2pitch2'] = {7,5,3,0,-3,-5,-7}
```



grid override format:

```
grid_overrides.[id] = {}
grid_overrides.[id][voice + id + scene] = { values }
grid_overrides.[id][voice + id + scene] = { values }
etc...
```

notes:

- > separate sets of values can be defined for each voice/scene
- > a list of param names can be generated by executing the following command in the maiden repl: `tab.print(reflectors_param_list)`



#### PARAMETERS / midi cc channels

|                          |   |
|--------------------------|---|
| voice1 scene1 cc channel | 1 |
| voice1 scene2 cc channel | 2 |
| voice1 scene3 cc channel | 3 |
| voice1 scene4 cc channel | 4 |

#### PARAMETERS / midi control excl

|                      |     |
|----------------------|-----|
| exclusion cc channel | 1   |
| control1 exclusion   | off |
| control2 exclusion   | off |
| control3 exclusion   | off |

with a 16n, you can set individual cc channels for each voice/scene. when a new voice/scene is activated, the script sends a SysEx message to the 16n to reconfigure it to the appropriate cc channel.

if you want one or more 16n slider's cc channels to stay the same when the active voice/scene is changed, use the controls in the *midi control exclusions* submenu.

| PARAMETERS / echo   |     |
|---------------------|-----|
| echo on             | on  |
| global effect send  | 1.0 |
| echo scene          | a   |
| %echo output volume | 0.5 |

as with the mangle and granchild scripts, latkes includes the greyhole echo effect.

**important note:** the effect uses quite a bit of memory and may not work well in all situations. using the effect with the size param set high in particular may cause issues.

|                    |     |
|--------------------|-----|
| send lag           | 0.1 |
| send lag curve     | 0.0 |
| rec/play head sync |     |
| speed              | 0.0 |
| speed lag          | 0.1 |
| speed lag curve    | 0.0 |

sync the playhead of active voice/scene with the recording playhead.

notes:

- > each voice has its own recording playhead
- > triggering the sync will set the playhead's speed to 1.0

|                |           |
|----------------|-----------|
| seek           | 0.0       |
| size           | 1.0       |
| size lag       | 0.1       |
| size lag curve | 0.0       |
| density        | 4.0 /beat |
| density lag    | 0.1       |

many of the params have a lag and lag curve param, which changes the time it takes to transition to a new param value when the tparam is changed..

|                      |          |
|----------------------|----------|
| live pre level       | 0.0      |
| swap live/pre levels |          |
| live source          | external |
| per scene params     |          |
| play                 | on       |
| volume               | 1.0      |

voices 2-4 allow the live source to be switched from external to one of the outputs of a prior voice.

in addition, voice 4 can use the output of the echo effect as its input.

|                          |          |
|--------------------------|----------|
| density lag curve        | 0.0      |
| density beat div         | 1.0      |
| density phase sync 1shot |          |
| density phase sync       | off      |
| pitch                    | 0.0 note |
| pitch lag                | 0.1      |

density phase refers to the length of time between grain emissions (i.e.when the voice generates new grains).

the density phase sync 1-shot trigger synchronises voices to the position of the active voice/scene one time.

turn on the density phase sync param to synchronise voices at the start of each phase of the active voice/scene .