

sidbang

- *SPACE* starts/stops playing
- *ENTER* sets playhead to start
- all interaction with mouse on the buttons sliders, number dialers, dropdown lists, etc.

project

- files are stored in the bng subfolder
- export is still experimental, will print the tables to stdout

patch select

- each instrument has 16 independant patches
- the selected patch is set in the pattern editor on click

ADSRH setting

- $H > 0$ set gate release time in ticks instead of 1/16 note trigger from the sequencer
- 2nd row sets the osc-patch for each phase of the ADSR

osc-patch select

- each instrument patch has 4 independant osc-patches

osc-patch settings

osc-waveform / frequency / ticks / ratio / sound parameter

- **osc-waveform** : triangle / rect / saw / inverse saw / sinus

- **frequency** : in Hz -> maps to ticks

- **ticks** : 1 tick happens 16 times per 50 Hz frame -> maps to frequency

- **ratio** : effective for rect and triangle

sound parameter

oscillation happens between the left and right parameter

- **base-frequency** : transpose or replace input note

- **vibrato** : 0 - 100 %

- **sid-waveform** : bits 3-0

- **pulsewidth** : for the sid-rect waveform (0100)

song settings

- bpm mapped to player ticks per 1/16th note
- loop- / song-mode

pattern select

- each pattern (0-63) carries the sequence setting below
- in song-mode selected patterns are played sequentially

The screenshot shows the sidbang software interface. At the top, there's a project name 'sh4ke' and buttons for 'LOAD', 'SAVE', and 'EXPORT'. Below that is a 'Patch:' section with a row of 16 patch indicators and a table of parameters: A: 00, D: 08, S: 11, R: 00, H: 00049, and a row of four '0's. To the right is a 'waveform preview' window showing a blue waveform. Below the patch section is an 'ADSRH setting' table with parameters for 'saw', 'rct', 'rct', and 'isw' waveforms, including frequency (f), ticks (t), ratio (r), and other settings like 'rep', 'v', 'pw1', and 'pw2'. There are also 'BPM: 171.8' and '16th: 070.00' settings with a 'Loop' button. The main area is a 'Pattern:' editor with a row of 64 pattern indicators. Below that is a piano roll with three channels, each showing a sequence of notes and patches. The bottom part of the interface is a piano keyboard with a blue highlight on the C-0 key.

pattern sequence editor

- 3 channels with independant instrument per channel
- 32 patterns each for notes and patches
- gate is triggered on a set 1/16 note and released on empty 1/16 note (for instruments with $H == 0$)
- instrument patch is toggled by patch pattern, default patch is 0
- use *SHIFT* + *click* to set or clear all equal cells left from the selected cell at once

instrument note select

- the note is feed into the instrument input
- the selected note is set in the pattern editor on click

waveform preview

- displays the sid output of the instrument for 4/16 note length