A Sonic Pi Workshop
For Kids

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Buffer 0

Use Buffer 0 in Sonic Pi

play 60

sleep 1

Play and wait

80	60	62	64	65	20
	67	69	71	72	
	:c4	:d4	:c5	:d5	

2a

play :c4

play :e4

play :g4

sleep 1

Play a chord (triad)

c5 e5 g5   f4 a4 c5   g4 a4 d5

2b

BUFFER 1

Use Buffer 1

---

play_chord [:c4, :e4, :g4]

sleep 1

Multiple tones at the same time a re challed chords. This way is easier than before. It's a C-chord.

c5 e5 g5   f4 a4 c5   g4 a4 d5

4a

play_chord chord(:e4, :major)

sleep 1

Major , Minor – Do you notice the difference?

:a4   :b4   :major7   :minor

3 Chords with a second distance (use e, a and b minor)

4b

BUFFER 2

Use Buffer 2

play_pattern (scale :c4, :major)

Play a a pattern (multiple tones in a sequence) – here we a play a scale

:major   **:major_pentatonic**   **:minor_pentatonic**   **:minor**

6a

---

use_bpm 120
play_pattern (scale :e4, :minor)

Use a different speed. b p m = beats per minute

50   **240**   **400**   **100**   **600**
:major   **:major_pentatonic**   **:minor_pentatonic**   **:minor**

6b

```
use_bpm 600
2.times do
    play_pattern (scale :e4, :minor)
end
```

2mal

2 times. We call this a loop.

3.times   5.times

```
live_loop :tonleiter do
    use_bpm 120
    play_pattern (scale :e4, :minor)
end
```

We call this an endless/infinite loop

Change to 480. **Press Run and listen to when it changes. Immediately?**

use_synth :saw

How about a different sound for our synthesizer?

:dsaw   **:mod_dsaw**   **:prophet**   **:piano**

:blade   **:tb303**   **:pluck**   **:dtri**

play_pattern (scale :e4, :minor)

play_pattern (scale :e4, :minor).**reverse**

And now we play the scale backwards

BUFFER 3

```
live_loop :geblubber do
  use_bpm 240
  play_pattern (scale :e4, :minor).choose
  sleep 1
end
```

Choose selects one tone randomly out of a set of tones. One a time only.

-*play* only plays one note (compare to *play_pattern* that plays many)

-*choose* selects a random one out of a set of notes

BUFFER 4

Use Buffer 4

```
live_loop :schlagzeug do
        sample :bd_haus
        sleep 1
    end
```

An endless loop that can be changed during playing

Add another sample *sn_zome* with *sleep 1*

Make the drums faster (120)

:drum_bass_hard   **:drum_snare_hard**   **:drum_tom_hi_hard**

11a

BUFFER 5

Use Buffer 5

```
live_loop :melodie do
        sample :guit_em9
        sleep 2

end
```

An electric guitar sample

Tryout and then copy the drums (buffer 4) and the melody together in to buffer 5

- Now put everything together in buffer 6
- First Buffer 5, then buffer 3 and then 2
- Run again after each copying and listen
- The copy buffer 1 and add a live_loop.
- Something isn't quite right yet. What is it?

Use Size- and Size +. To change the size of the text

```
use_bpm                use_synth :hollow                ,amp: 5
use_synth: hoover
```

More ideas

- Work on the drums

- Play around with melodies

- Effects

- What about variables and conditions?

- Samples „loop_" with sample_duration()

Experiment with your mentor

```
a = 30
if a < 100
    a = a +1
    play a
else
    a = 30
end
```

Variables and conditions

Add around a live_loop and listen. What happens here?

```
live_loop :withReverv do
   with_fx :reverb, room: 0.9 do
      play_pattern (scale :e4, :minor)
   end
end
```

That's how you can apply effects

- **fx stands for „effects". Each effect has its parameters: here the size of the room of the reverb.**

- **Try other effects (see fx in help section)**

- **Use play and choose and a speed of 300**

15a

15b

Cheat sheet

```
play 60
```

```
play :c4
```

```
sleep 1
```

```
use_bpm 600
```

```
play_chord [:c4, :e4, :g4]
```

```
play_chord chord(:e4, :major)
:major     :major_pentatonic  :minor_pentatonic :minor
```

```
play_pattern (scale :e4, :minor)
play_pattern (scale :e4, :minor).reverse
```

```
play           (scale :e4, :minor).choose
```

```
use_synth :hollow → :saw, :hoover, :piano …
```

```
2.times do
   ...
end
```

```
live_loop :meineEndlosschleife do
   ...
end
```

```
sample :bd_haus → :guit_em9 …
```

Cheat sheet

Keyboard shortcuts

ALT-R	Run		ALT-A	Mark all
ALT-S	Stop		ALT-C	Copy
			ALT-V	Insert
STRG-I	Help for the current command			

Buttons

Run ▶   Stop ■   Rec ●

Start Song	Stopp	Record

Save ♡   Load 🗁

Save song	Load song

Size ━   Size ➕   Align ↔
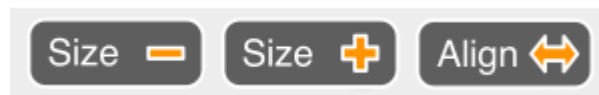
Decrease Text	Increase	Format text in a nicer way

1 Willkommen bei Sonic Pi
   1.1 Live-Coding
   1.2 Die Programmoberfläche von Sonic Pi
   1.3 Spielend lernen
2 Synths
   2.1 Eure ersten Klänge

Tutorial   Examples   Synths   Fx   Samples   Lang
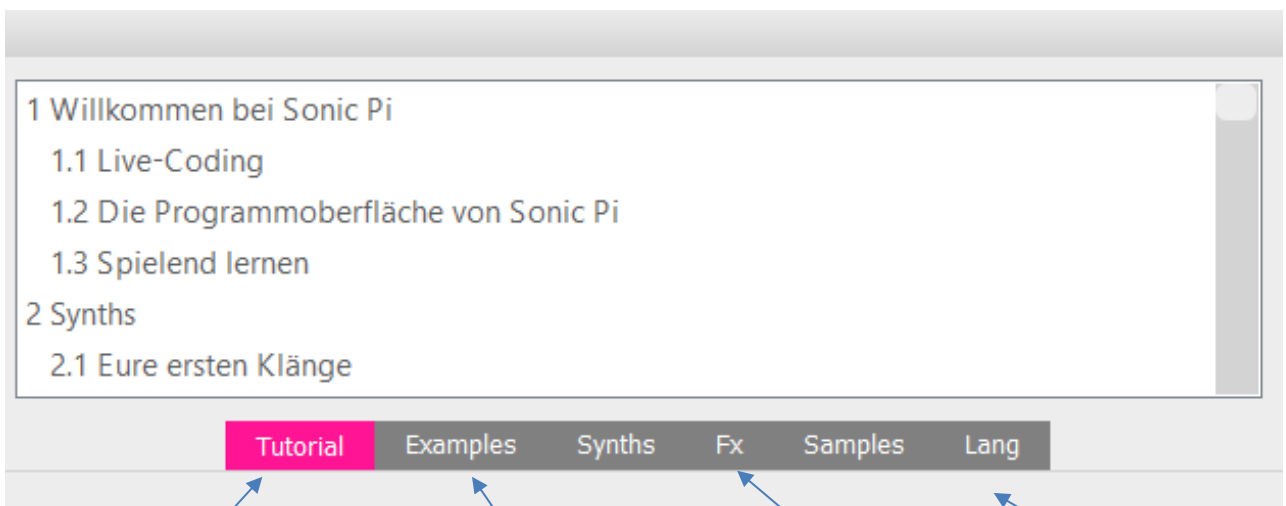
Manual for at home   Cool examples   Effects   All commands

Cheat sheet

use_synth

Tutorial	Examples	**Synths**	Fx	Samples	Lang

:beep	:blade	:bnoise	:cnoise	:dark_ambience		
:dpulse	:dsaw	:dull_bell	:fm	:gnoise	:growl	
:hollow	:hoover					
:mod_beep	:mod_dsaw	:mod_fm	:chiplead	:chipbass	:chipnoise	
:mod_pulse	:mod_saw		:mod_sine	:mod_tri	:pule	
:noise	:piano	:pnoise	:pretty_bell	:prophet	:dtri	:pluck
:saw	:sine	:square	:subpulse	:tb303	:tri	:zawa

samples

Tutorial	Examples	Synths	Fx	**Samples**	Lang

:elec_triangle
:elec_snare
:elec_lo_snare
:elec_hi_snare
:elec_mid_snare
:elec_cymbal
:elec_soft_kick
:elec_filt_snare
:elec_fuzz_tom
:elec_chime
:elec_bong
:elec_twang
:elec_wood
:elec_pop
:elec_beep
:elec_blip
:elec_blip2
:elec_ping
:elec_bell
:elec_flip
:elec_tick
:elec_hollow_kick
:elec_twip
:elec_plip
:elec_blup

:misc_burp
:perc_bell
:perc_snap
:perc_snap2

:guit_harmonics
:guit_e_fifths
:guit_e_slide
:guit_em9

:bd_ada
:bd_pure
:bd_808
:bd_zum
:bd_gas
:bd_sone
:bd_haus
:bd_zome
:bd_boom
:bd_klub
:bd_fat
:bd_tek

:bass_hit_c
:bass_hard_c
:bass_thick_c
:bass_drop_c
:bass_woodsy_c
:bass_voxy_c
:bass_voxy_hit_c
:bass_dnb_f

:ambi_soft_buzz
:ambi_swoosh
:ambi_drone
:ambi_glass_hum
:ambi_glass_rub
:ambi_haunted_hum
:ambi_piano
:ambi_lunar_land
:ambi_dark_woosh
:ambi_choir

:ambi_soft_buzz
:ambi_swoosh
:ambi_drone
:ambi_glass_hum
:ambi_glass_rub
:ambi_haunted_hum
:ambi_piano
:ambi_lunar_land
:ambi_dark_woosh
:ambi_choir

:drum_heavy_kick
:drum_tom_mid_soft
:drum_tom_mid_hard
:drum_tom_lo_soft
:drum_tom_lo_hard
:drum_tom_hi_soft
:drum_tom_hi_hard
:drum_splash_soft
:drum_splash_hard
:drum_snare_soft
:drum_snare_hard
:drum_cymbal_soft
:drum_cymbal_hard
:drum_cymbal_open
:drum_cymbal_closed
:drum_cymbal_pedal
:drum_bass_soft
:drum_bass_hard
:sn_dub
:sn_dolf
:sn_zome

:loop_industrial
:loop_compus
:loop_amen
:loop_amen_full
:loop_garzul
:loop_mika
:loop_breakbeat

:drum_cowbell
:drum_roll
:misc_cros
:misc_cineboom
:perc_swash
:perc_till
:loop_safari
:loop_tabla