



## A Sonic Pi Workshop For Kids

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1a

# Buffer 0

Use Buffer 0 in Sonic Pi

1b

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
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2b

# BUFFER 1

Use Buffer 1

---

3a

---

---

3b

play\_chord [:c4, :e4, :g4]  
sleep 1

Multiple tones at the same time are called 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?

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:a4      :b4      :major7      :minor

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

4b

# BUFFER 2

Use Buffer 2

---

5a

---

---

5b

# 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

2mal

2.times do

play\_pattern (scale :e4, :minor)

end

2 times. We call this a loop.

3.times

5.times

7a

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?

7b

use\_synth :saw

How about a different sound for our synthesizer?

---

:dsaw

:mod\_dsaw

:prophet

:piano

:blade

:tb303

8a

---

play\_pattern (scale :e4, :minor)

play\_pattern (scale :e4, :minor).reverse

And now we play the scale backwards

---

8b



# BUFFER 3

9a

```
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

9b

# BUFFER 4

Use Buffer 4

---

10a

---

```
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

---

12a

---

---

12b

```
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

13a

- 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
```

13b

## More ideas

- Work on the drums
- Play around with melodies
- Effects
- What about variables and conditions?

Experimentiere

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14a

---

```

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?

14b

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

That's how you can apply effects

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- **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

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# Cheat sheet

play 60

sleep 1

play :c4 ← a scale = c,d,e,f,g,a,b,c

play\_chord [:c4, :e4, :g4]

play\_chord chord(:e4, :major) → major, minor...

play\_pattern (scale :e4, :minor) → .reverse

play (scale :e4, :minor).choose

use\_bpm 600

use\_synth :hollow → saw, hoover, piano

```
live_loop :myEndlessLoop do
  ...
end
```

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

sample :bd\_haus → :guit\_em9 ...

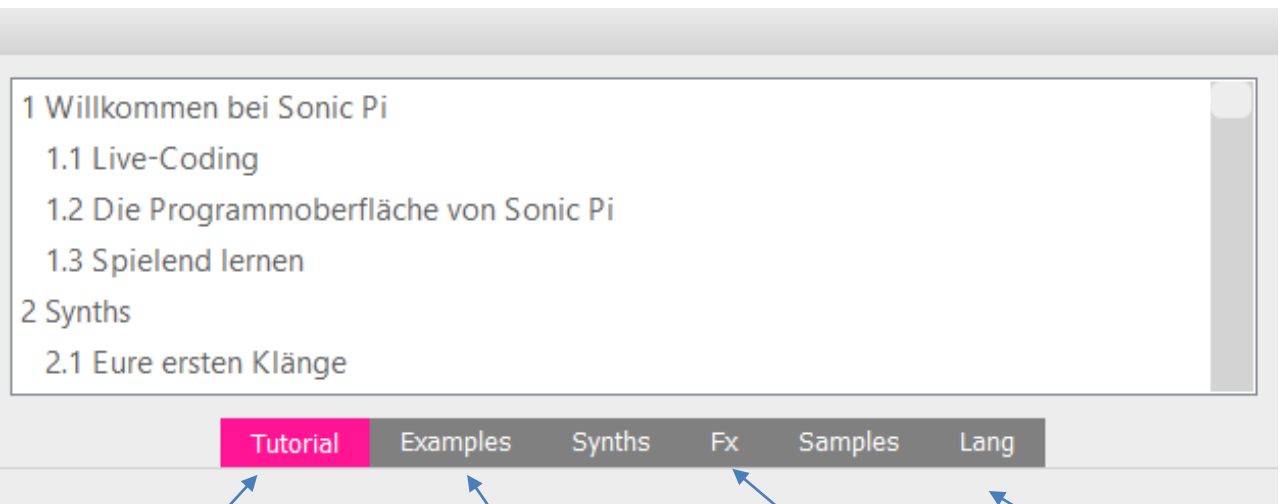
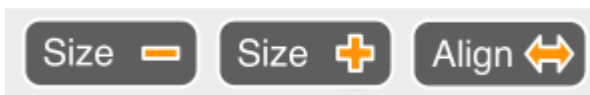


# Cheat sheet

## Keyboard shortcuts

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

## Buttons



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			
mod_pulse	mod_saw		mod_sine	mod_tri	
noise	piano	pnoise	pretty_bell	prophet	pulse
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