

Unassisted sound installation (how to)

Tutorium WS24

sound installation components

(SC) patch

snd interface

loudspeakers (+/- amplifiers)

sound installation components

SOFTWARE

HARDWARE

computer
(laptop/desktop/raspberry Pi)

(SC) patch

snd interface

loudspeakers (+/- amplifiers)

sound installation components

SOFTWARE		HARDWARE
<i>(scheduled powering on/off) after hardware (rasp - auto)</i>		<i>scheduled powering on/off</i>
	computer <i>(laptop/desktop/raspberry Pi)</i>	<i>(powered)</i>
<i>(scheduled, load file on startup)</i>	(SC) patch	
	snd interface	<i>(powered)</i>
	loudspeakers (+/- amplifiers)	<i>(powered)</i>

hardware side

HARDWARE
scheduled powering on/off

computer
(laptop/desktop/raspberry Pi)

(powered)

snd interface

(powered)

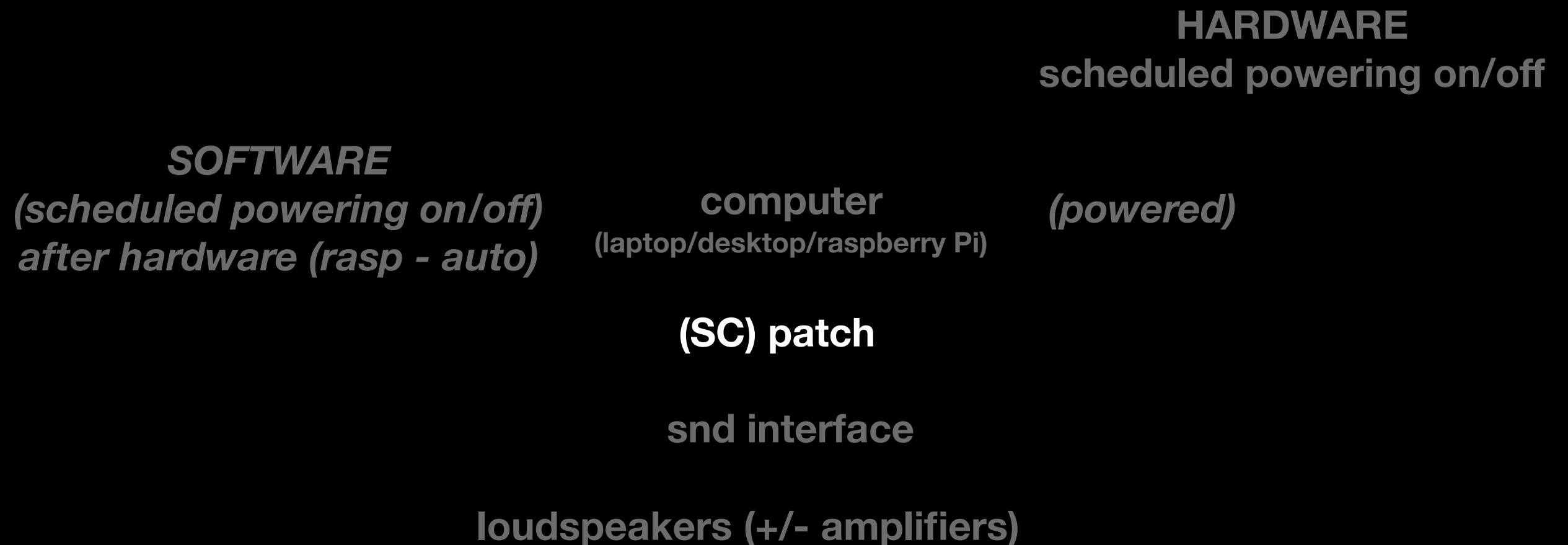
loudspeakers (+/- amplifiers)

(powered)



timer for electricity

software side



software side

SC patch

**opens by itself and immediately starts your sound
from the correct audio output device**

software side

SC patch

**opens by itself and immediately starts your sound
from the correct audio output device**

software side: startup file

SC startup file contains:

```
„/home/iem/Desktop/mycode.scd“.load; // or .openOS
```

SC patch

opens by itself and immediately starts your sound
from the correct audio output device

your code (file *mycode.scd*):

```
s.options.device = ... ;
```

```
s.reboot;
```

```
s.waitForBoot{ {SinOsc.ar([400, 404])}.play }
```

software side

SC patch

opens by itself and immediately starts your sound
from the correct audio output device

CONSOLE commands

software side

switching the computer on

1. it will start by itself after being provided with the power,
2. autologin
3. autoopen SC (then run Startup file and your installation)

software side

SC patch

opens by itself and immediately starts your sound
from the correct audio output device

CONSOLE commands

platform

Mac
(os 10-12.7.6)

raspberry Pi
(Pi 4; iemberry with Linux)

computer

- 1) processing power**
- 2) outlets**
- 3) drivers**
- 4) debugging**

platform

Mac
(os 10-12.7.6)

raspberry Pi
(Pi 4; iemberry with Linux)

computer

SC patch

opens by itself and immediately starts your sound
from the correct audio output device

CONSOLE commands

raspberry

raspberry Pi
(Pi 4; iemberry with Linux)

computer

SC patch

opens by itself and immediately starts your sound
from the correct audio output device

CONSOLE* commands:

scide
sclang

**don't forget to check
the qJack settings before*

raspberry

switching the iemberry on

1. it will start by itself after being provided with the power,
2. autologin
3. **autoopen SC**

raspberry

**Script for switching the SC on
after reboot:
(startup file will run automatically)**

```
cat >~/autostart.sh <<EOF
#!/bin/bash
export PATH=/usr/local/bin:$PATH
export DISPLAY=:0.0
sleep 10 # can be lower (5) for rpi3
scide
EOF
```

[https://github.com/
supercollider/
supercollider/blob/
develop/
README_RASPBERRY
PI.md](https://github.com/supercollider/supercollider/blob/develop/README_RASPBERRY_PI.md)

raspberry

**Script for switching the SC on
after reboot:
(*startup file will run automatically*)**

```
chmod +x ~/autostart.sh
```

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supercollider/
supercollider/blob/
develop/
README_RASPBERRY
PI.md](https://github.com/supercollider/supercollider/blob/develop/README_RASPBERRY_PI.md)

raspberry

**Script for switching the SC on
after reboot:
(startup file will run automatically)**

crontab -e

```
iem@iemberry02:~$ crontab -e
no crontab for iem - using an empty one

Select an editor. To change later, run 'select-editor'.
 1. /bin/nano      c.... easiest
 2. /usr/bin/vim.basic
 3. /usr/bin/vim.tiny
 4. /usr/bin/emacs
 5. /usr/bin/code
 6. /bin/ed
Choose 1-6 [1]:
```

[https://github.com/
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PI.md](https://github.com/supercollider/supercollider/blob/develop/README_RASPBERRY_PI.md)

raspberry

**Script for switching the SC on
after reboot:
(*startup file will run automatically*)**

add this line at the end:

```
@reboot cd /home/iem && ./autostart.sh
```

[https://github.com/
supercollider/
supercollider/blob/
develop/
README_RASPBERRY
PI.md](https://github.com/supercollider/supercollider/blob/develop/README_RASPBERRY_PI.md)

raspberry

switching the iemberry on

1. it will start by itself after being provided with the power,
2. autologin
3. autoopen SC

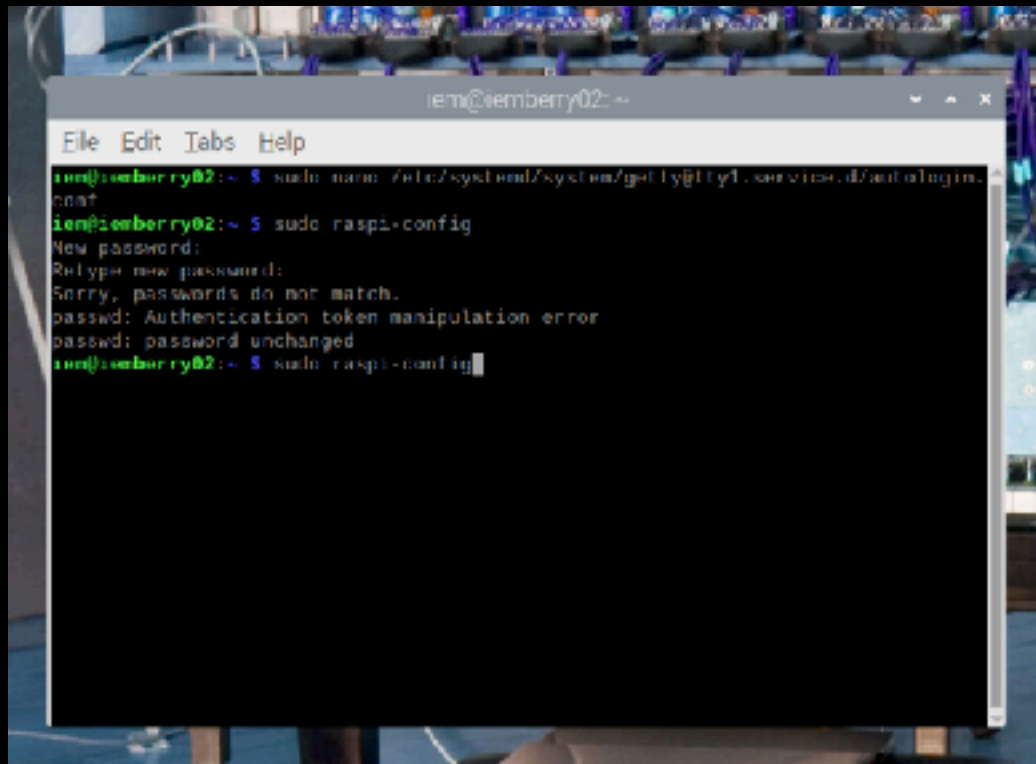
raspberry

switching the iemberry on

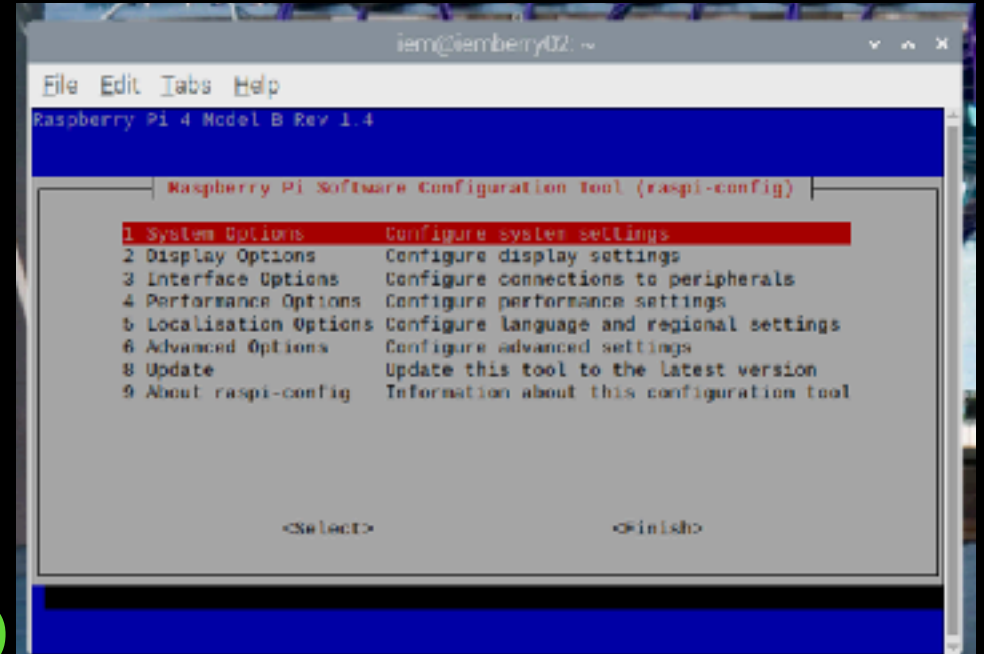
1. it will start by itself after being provided with the power,
2. **autologin**
3. **autoopen SC**

raspberry

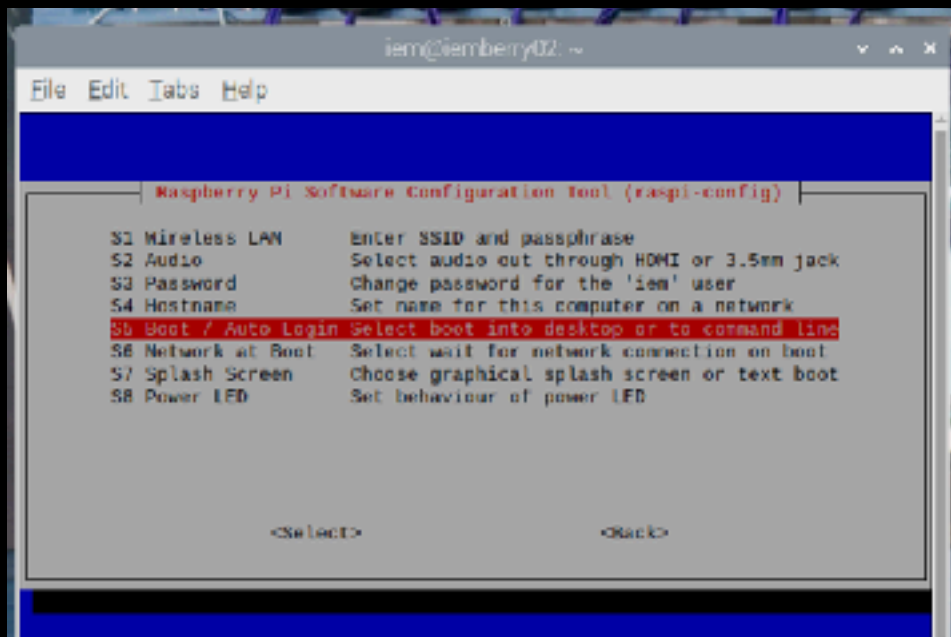
autologin



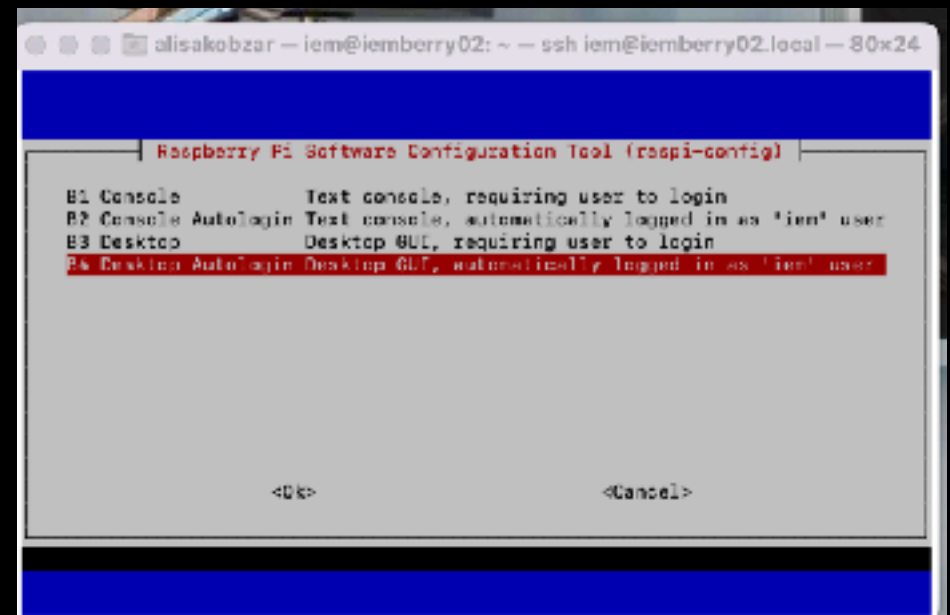
1



2



3



4

raspberry

Script for switching the raspberrry pi
off

crontab -e

raspberry

**Script for switching the raspberry pi
off at certain absolute time (before
powering down)**

add this line at the end (minutes, hours, day of month, month, day of week):

```
05 14 * * * sudo shutdown -h now
```

mac

Mac
(os 10-12.7.6)

computer

SC patch

opens by itself and immediately starts your sound
from the correct audio output device

mac

setup a Mac for sound installation

1. *Setup a new user*
2. *Auto-login the new user*
3. *Auto power up*
4. *run SC*

mac

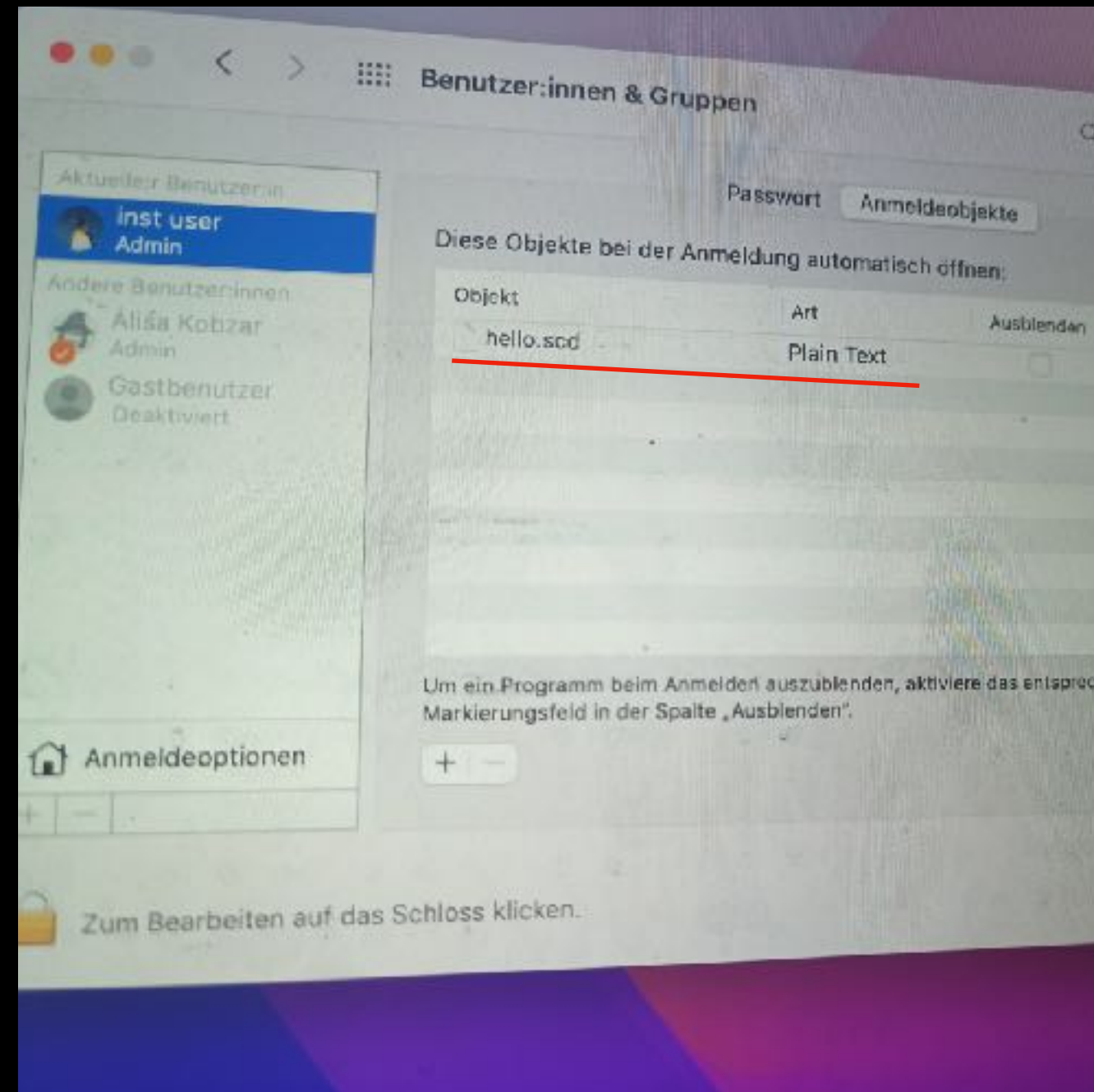
1. Create/setup a new user

- *In OS Preferences, create a new user (Standard, no password)*
- *enter/log in this user. (don't connect it to your AppleID)*
- *(optional) delete all Apps from the Dock apart from Finder, SuperCollider, Preferences*
- *(optional) In Finder -> Preferences choose to display your home directory*
- *(optional) display the SuperCollider's extensions folder in the side panel*

mac

2. Auto-login the new user

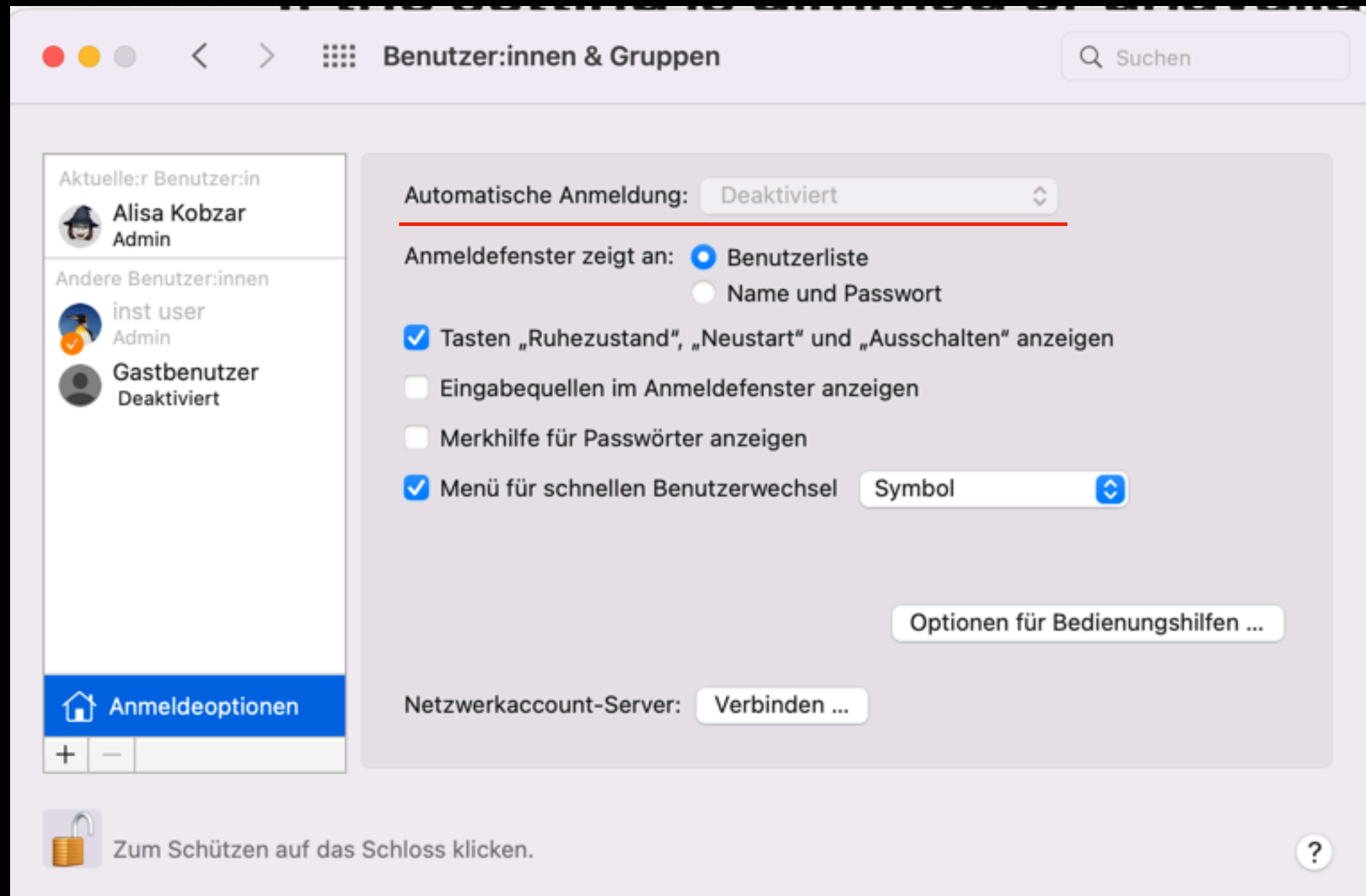
- make a „hello.scd“ file in SuperCollider with the necessary processes listed.
- in SuperCollider Preferences go to the Startup file, and put the „(path to hello.scd)“.load into the Startup file.
- In the OS Preferences -> your new User-> log in items -> add the „hello.scd“ file



mac

2. Auto- login the new user

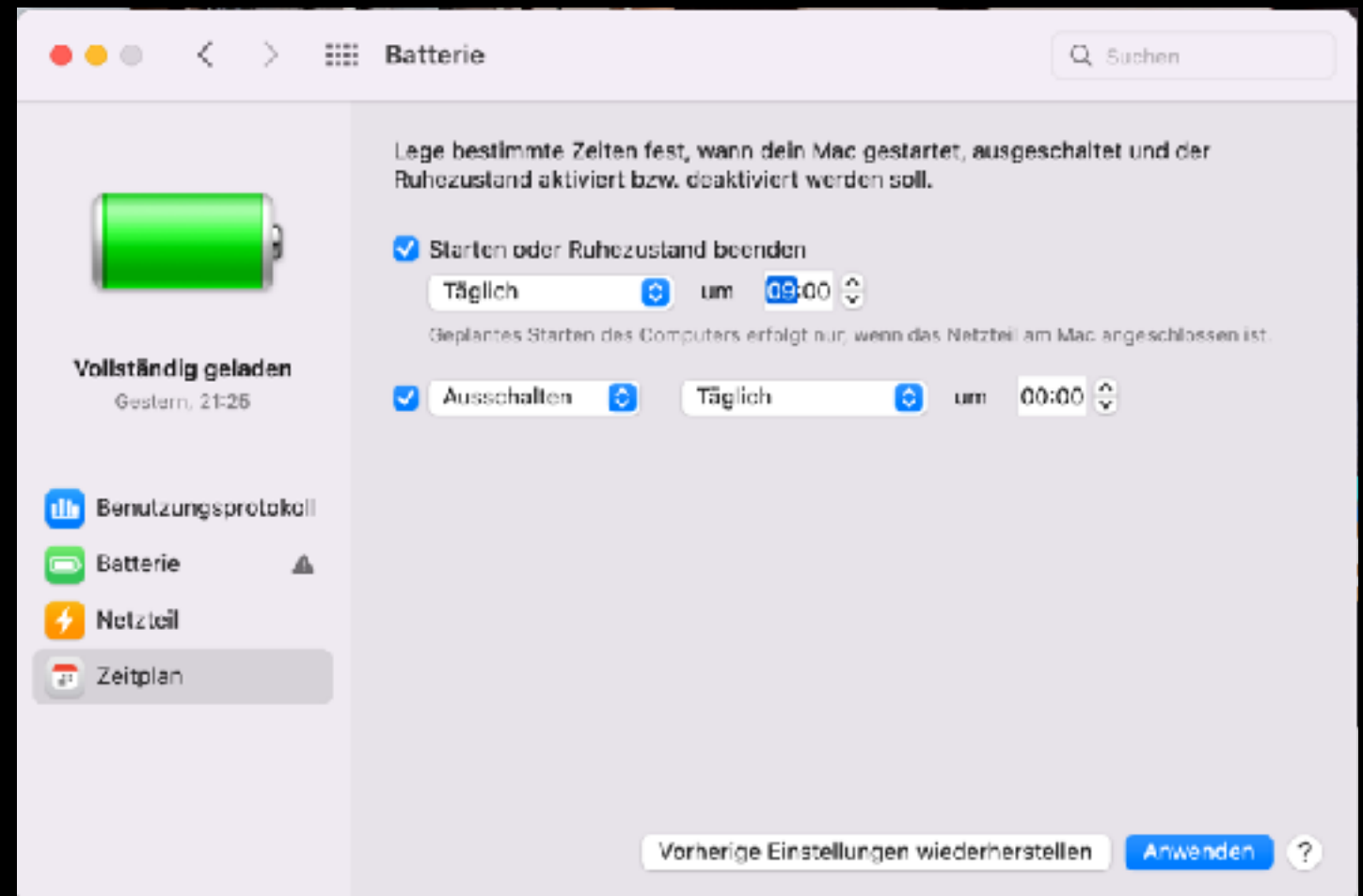
*activate
the auto
login*



mac

3. Auto power up

– in OS preferences-> Energy saving/Battery -> timeplan-> setup the time for powering up/ shutting down.





GET 
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safety



- secure plugs and sockets
- hide the hardware
- hide the cables (cable/rubber cover duct/ramp)
- ensure that hardware can always stay in place
- check the collisions (doors vs cables)
- general fire/water security measures

safety

**initial check/testing phase
(noise bursts)**

build in the routines with waiting times between the check and piece

instructions

1. how does it work
2. how to restart
3. emergency switch off, switch on after emergency
4. how to change the general volume/amplitude
5. your contacts
6. contacts of the responsible person

instructions

