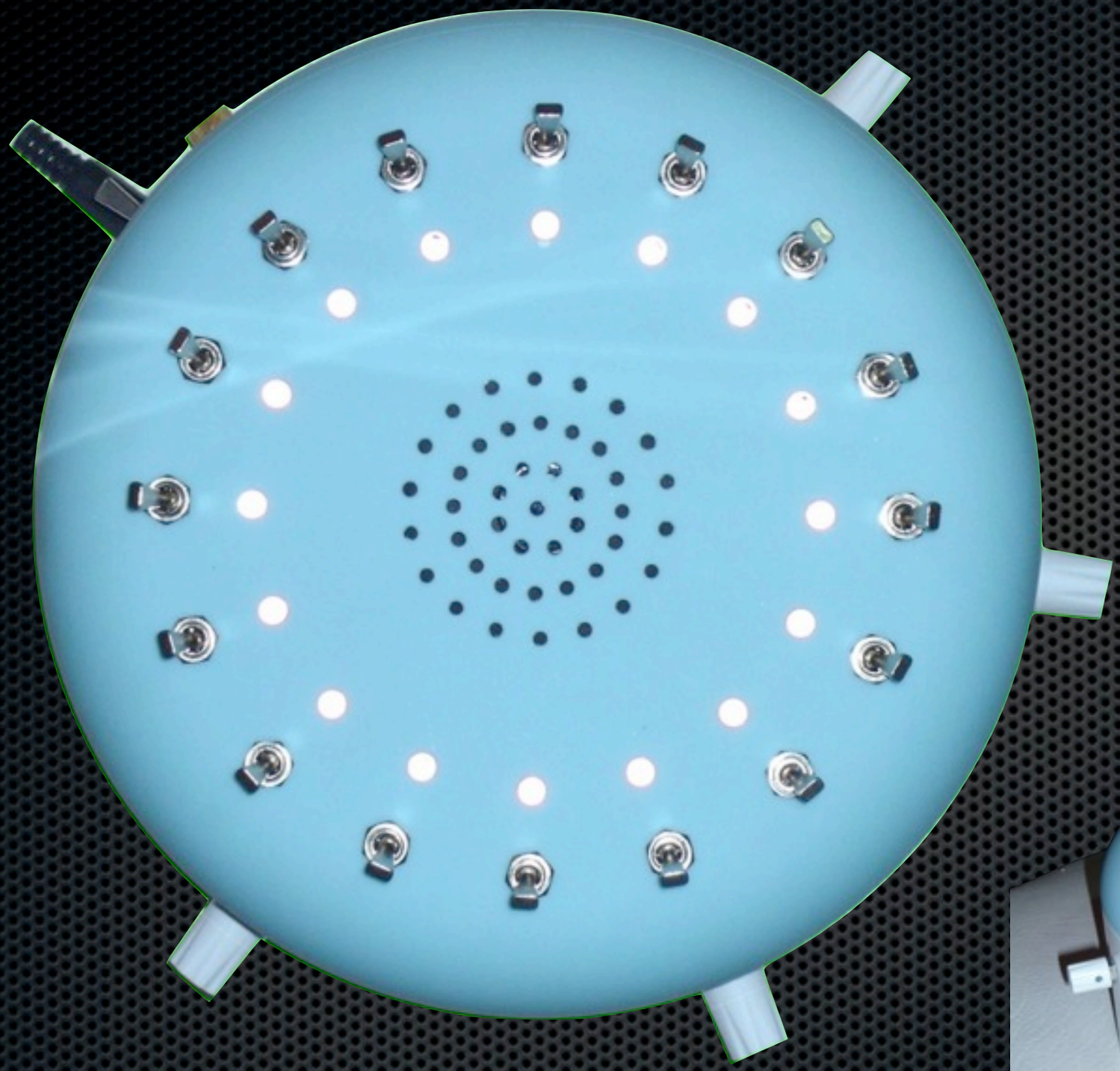
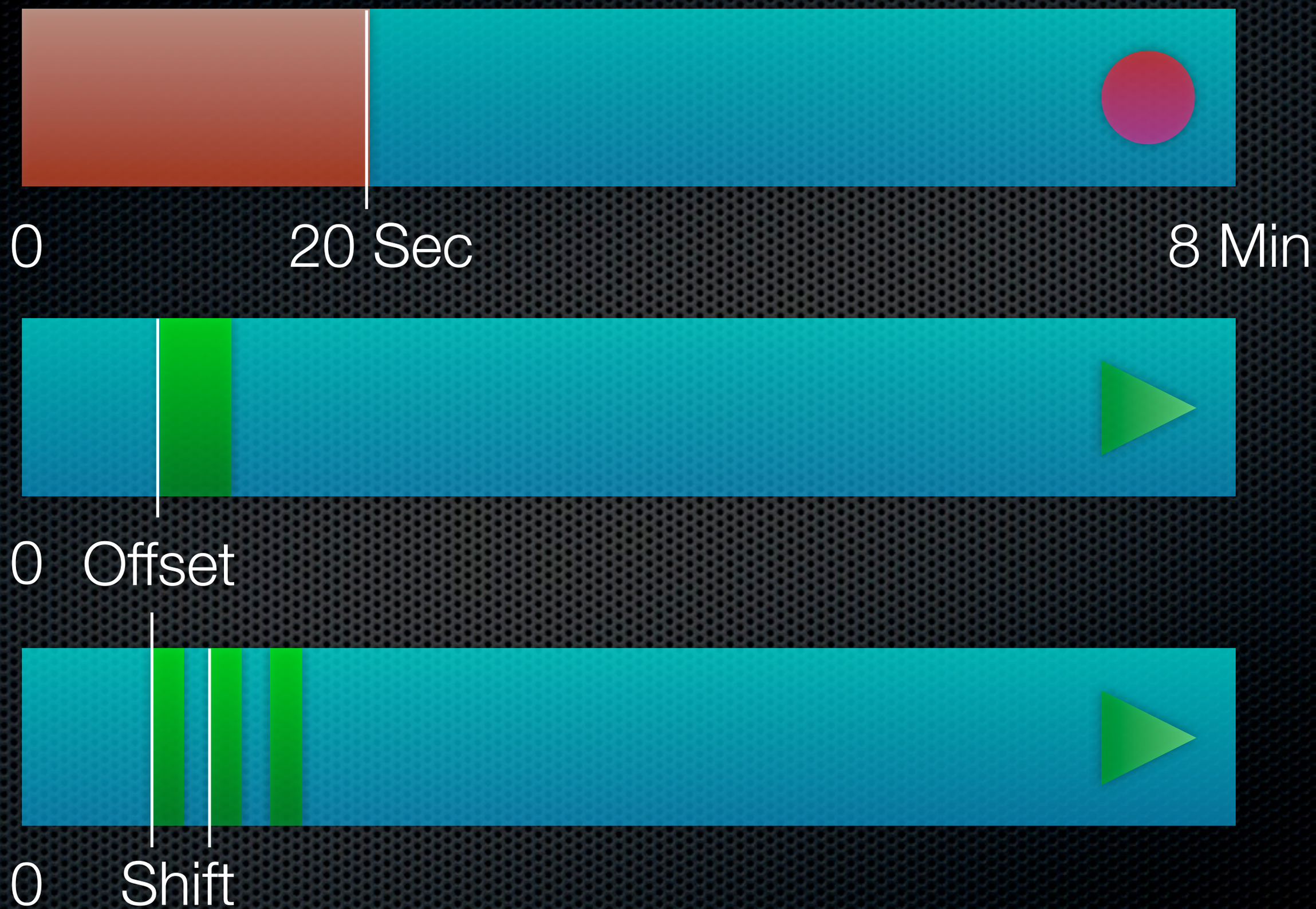
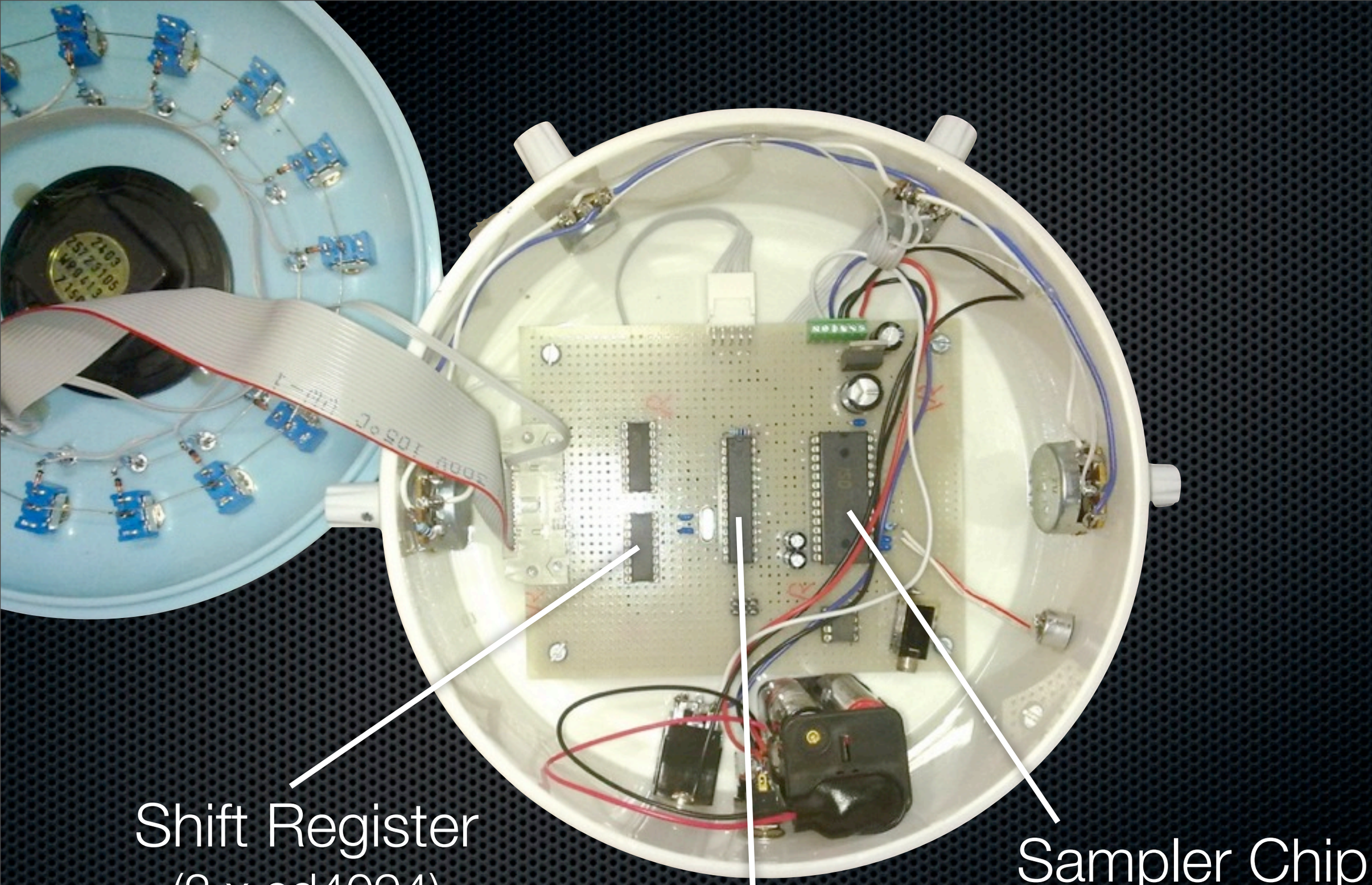
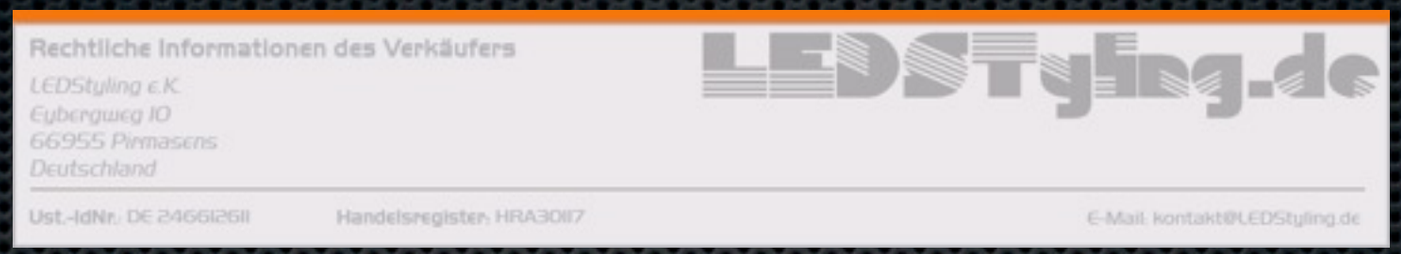
Granular Synthesizer Sequenzer

Urs Gaudenz




0
20 Sec
8 Min
0
Offset
0
Shift


Shift Register
(2 x cd4094)
uP
(ATmega168)
Sampler Chip
(ISD4004)



radiooperator599

Preis 25 Stück: 3,99 EUR

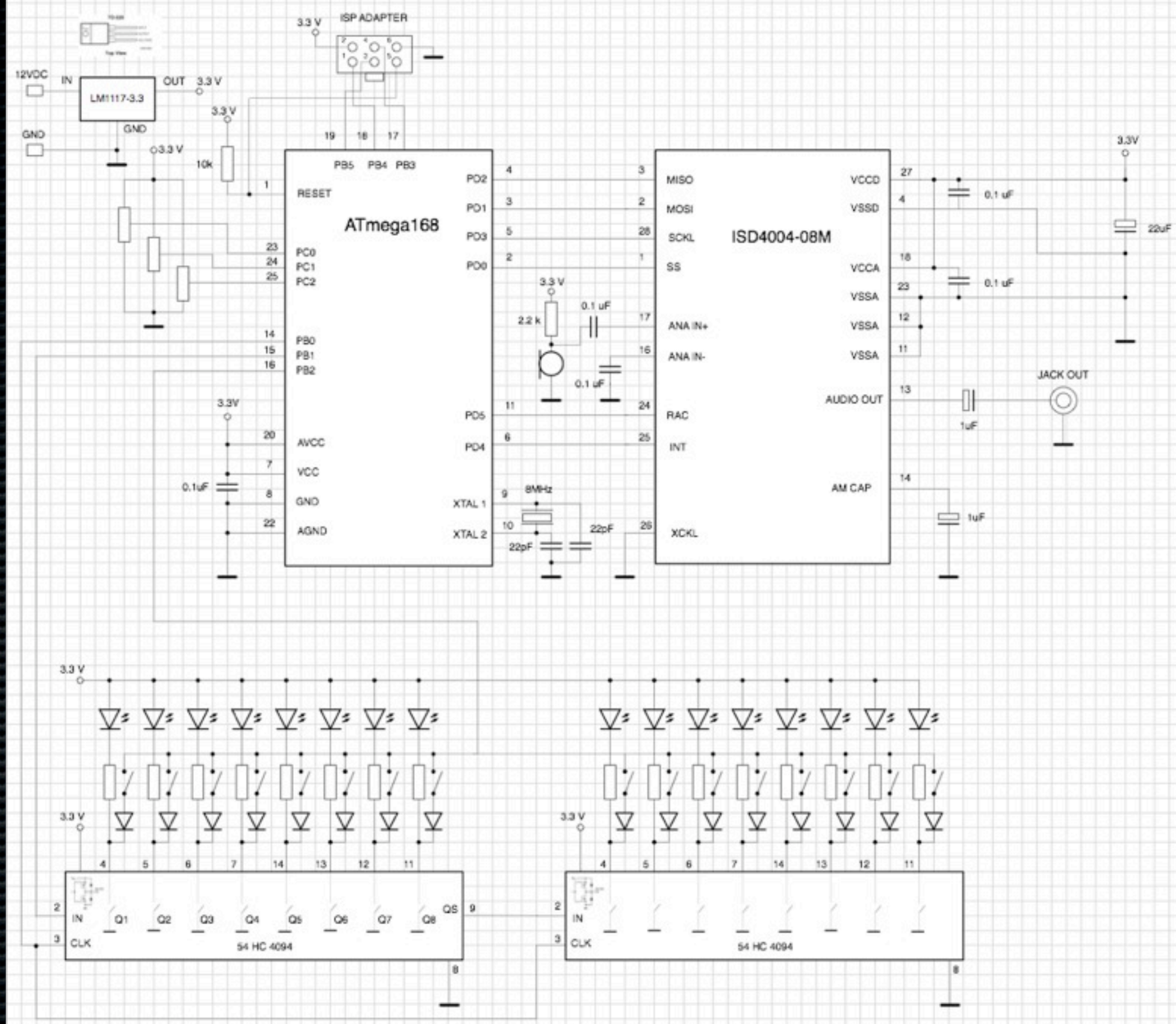
Das Musikding

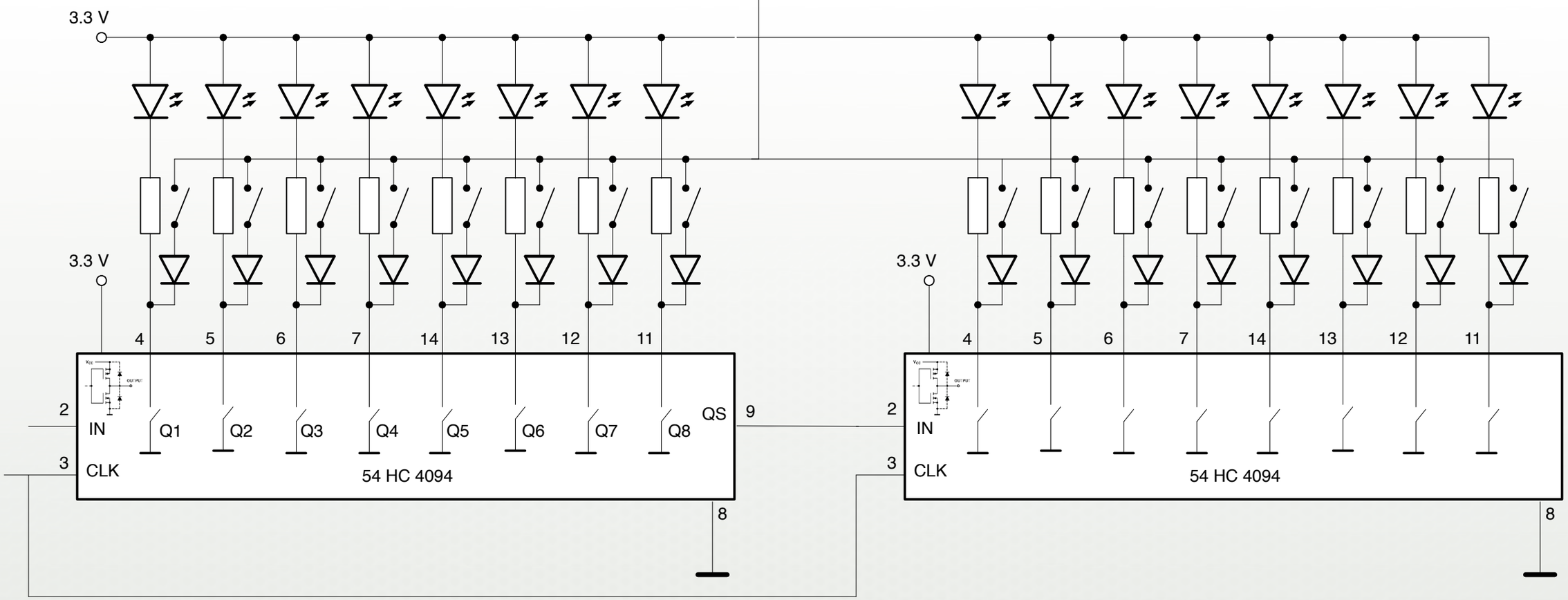
http://www.musikding.de

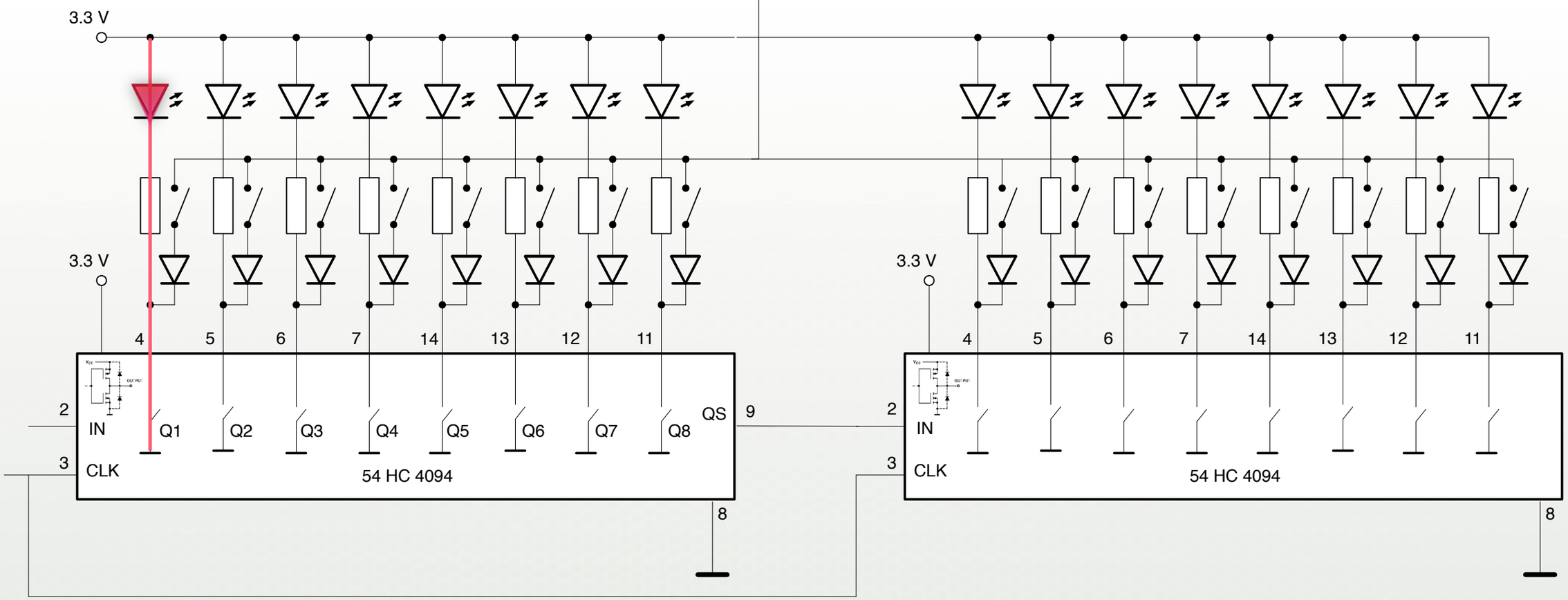
Tchibo

GRANULAR SYNTHESIZER SEQUENZER - ISD4004 SAMPLER

2009, Urs Gauderz gaudi.ch




3.3 V
3.3 V
4
5
6
7
14
13
12
11
2
IN
3
CLK
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
QS
9
54 HC 4094
8
3.3 V
4
5
6
7
14
13
12
11
2
IN
3
CLK
54 HC 4094
8


3.3 V
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54 HC 4094
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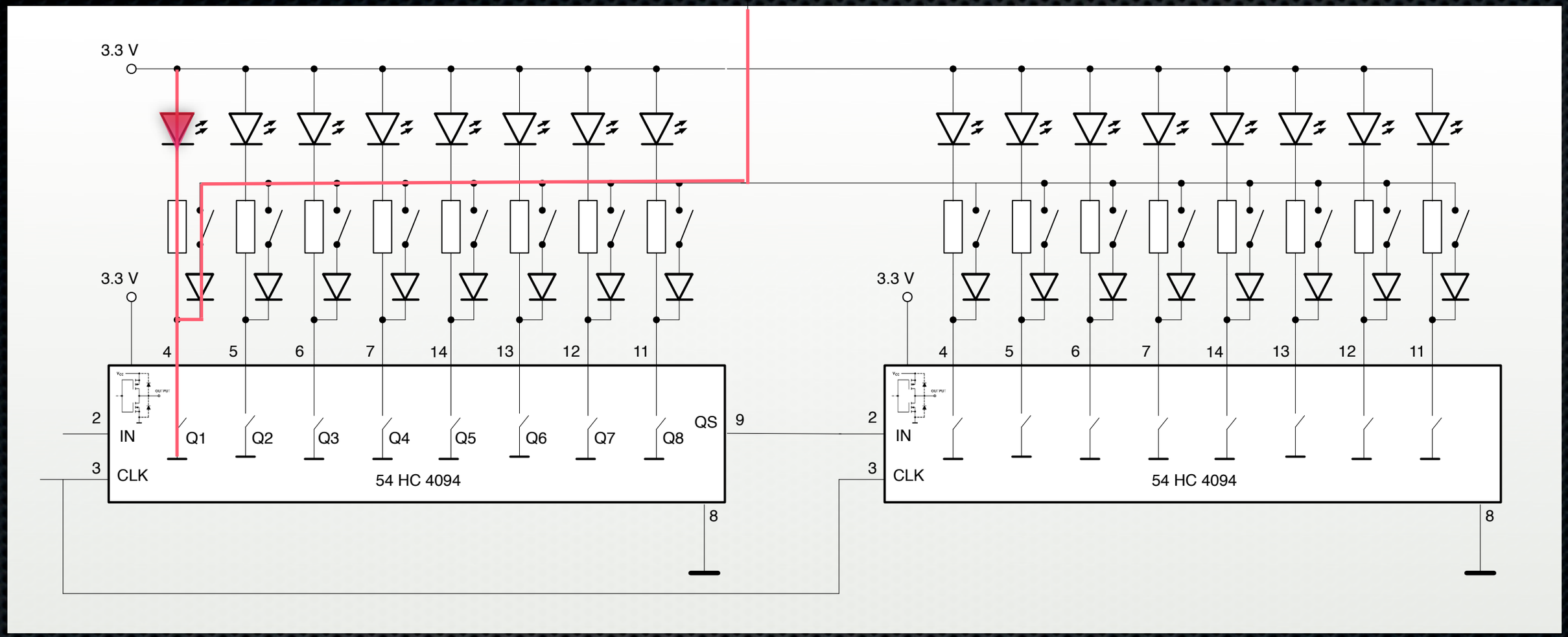
3.3 V
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54 HC 4094
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3.3 V
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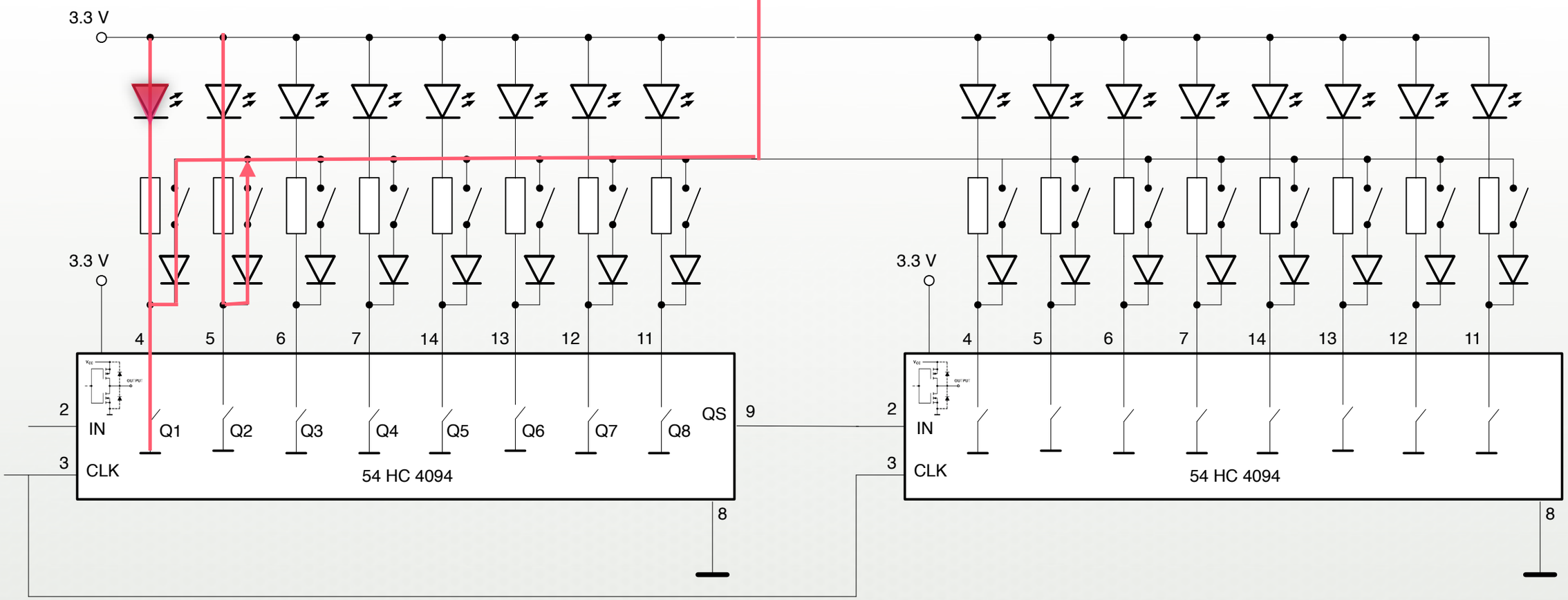
3.3 V
3.3 V
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Q3
Q4
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Q6
Q7
Q8
QS
9
54 HC 4094
8
3.3 V
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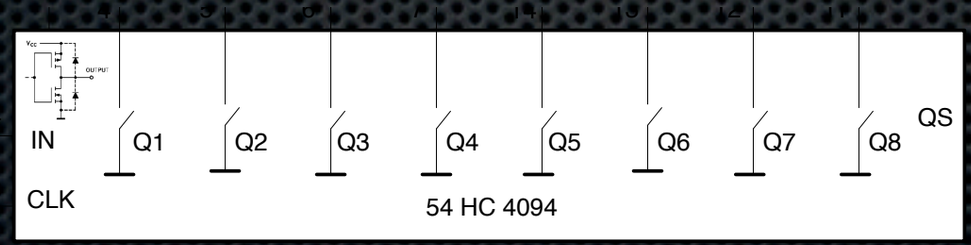
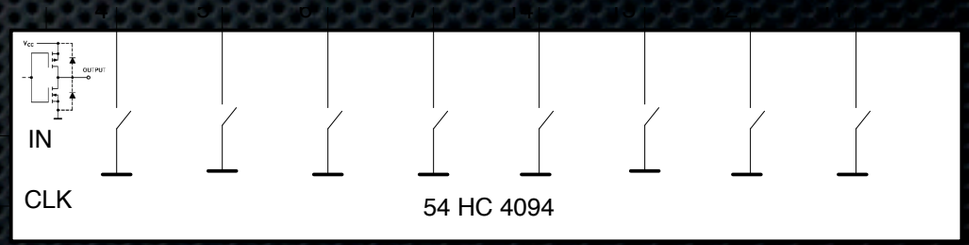
IN
3
CLK
54 HC 4094
8

ISD4004 Data-Sheet

Instructions	OpCodes		Descriptions
	Address (16 bits) <A0 – A15>	Control bits (8 bits) XXX C0 C1 C2 C3 C4	
POWERUP	<XXX……XXX>	XXX 0 0 1 0 0	Power-Up: Device will be ready for an operation after T_{PUD}.
SETPLAY	<A0 – A15>	XXX 0 0 1 1 1	Initiates playback from address <A0-A15>.
PLAY	<XXX……XXX>	XXX 0 1 1 1 1	Playback from the current address (until EOM or OVF).
SETREC	<A0 – A15>	XXX 0 0 1 0 1	Initiates a record operation from address <A0-A15>.
REC	<XXX……XXX>	XXX 0 1 1 0 1	Records from current address until OVF is reached or Stop command is sent.
SETMC	<A0 – A15>	XXX 1 0 1 1 1	Initiates Message Cueing (MC) from address <A0-A15>.
MC [1]	<XXX……XXX>	XXX 1 1 1 1 1	Performs a Message Cueing from current location. Proceeds to the end of message (EOM) or enters OVF condition if no more messages are present.
STOP	<XXX……XXX>	XXX 0 1 1 X 0	Stops the current operation.
STOPPWRDN	<XXX……XXX>	XXX X 1 0 X 0	Stops the current operation and enters into standby (power-down) mode.
RINT [2]	<XXX……XXX>	XXX 0 1 1 X 0	Read Interrupt status bits: Overflow and EOM.





#define / #include

void write_pattern(uint16_t c)
Write pattern to LEDs

uint16_t read_pattern(void)
Read Switches

main
RECORD
LOOP

void senden_command_8(uint8_t c)
Send 8 bit Command to Sampler

uint16_t senden_command(uint8_t c, uint16_t a)
Send 16 bit Command to Sampler

Copy & Paste
Try & Error

AVRISP mkII -
In-System Programmer

avr-gcc (GCC) 4.3.0
Compiler

open source

avrdude
Up-/Downloader