

Notes:
D1 >1A pk., >0.5A avg., >20V Vr.
Schottky with minimal Vf
L1 >0.5A cont., >1A pk., >=100nH

3V3 Power Supply

Roberts Gotlaufs

Sheet: /3V3 power/

File: power_3V3.sch

Title: Nixie Clock with IN-14 tubes and ESP8266 MCU

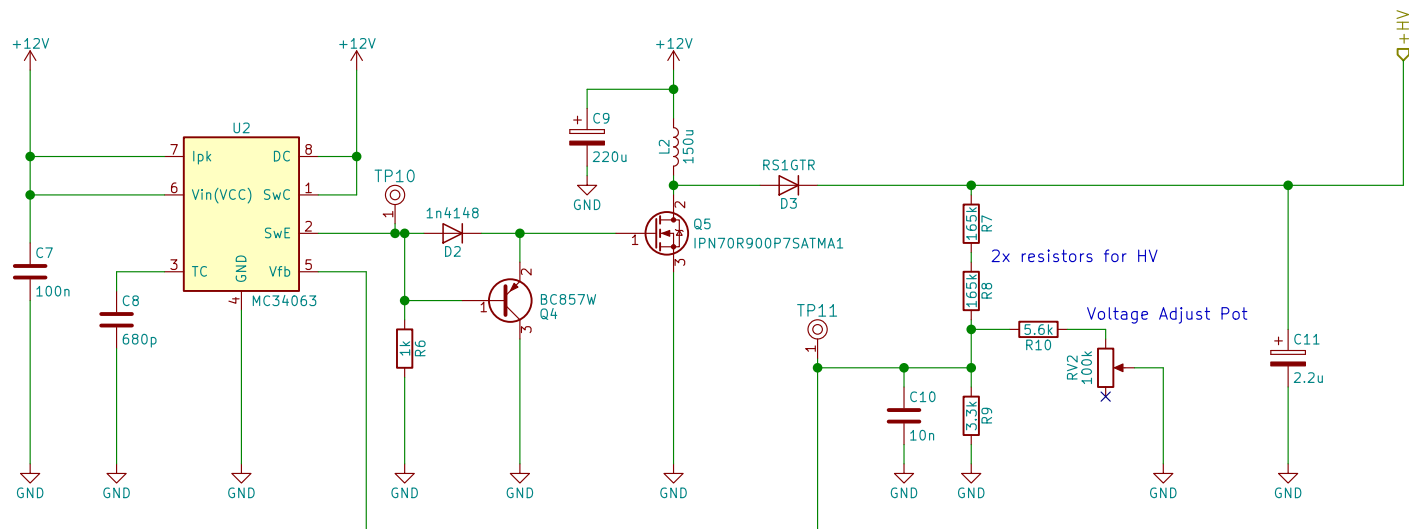
Size: A4

Date: 2017-11-02

Rev: 1.0

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Id: 2/10



Notes:
 Q4 generic signal PNP
 Q5 generic MOSFET >1.5A cont.
 D2 >300mA cont, <4ns recovery
 D3 >200V brk., <50ns recovery, >300mA cont.
 C9 <0.3R ESR, 25V
 C11 >=2.2uF, >200V
 L2 >1.5A cont.

High Voltage Power Supply

Roberts Gotlaufs

Sheet: /HV power/

File: power_HV.sch

Title: Nixie Clock with IN-14 tubes and ESP8266 MCU

Size: A4

Date: 2017-11-02

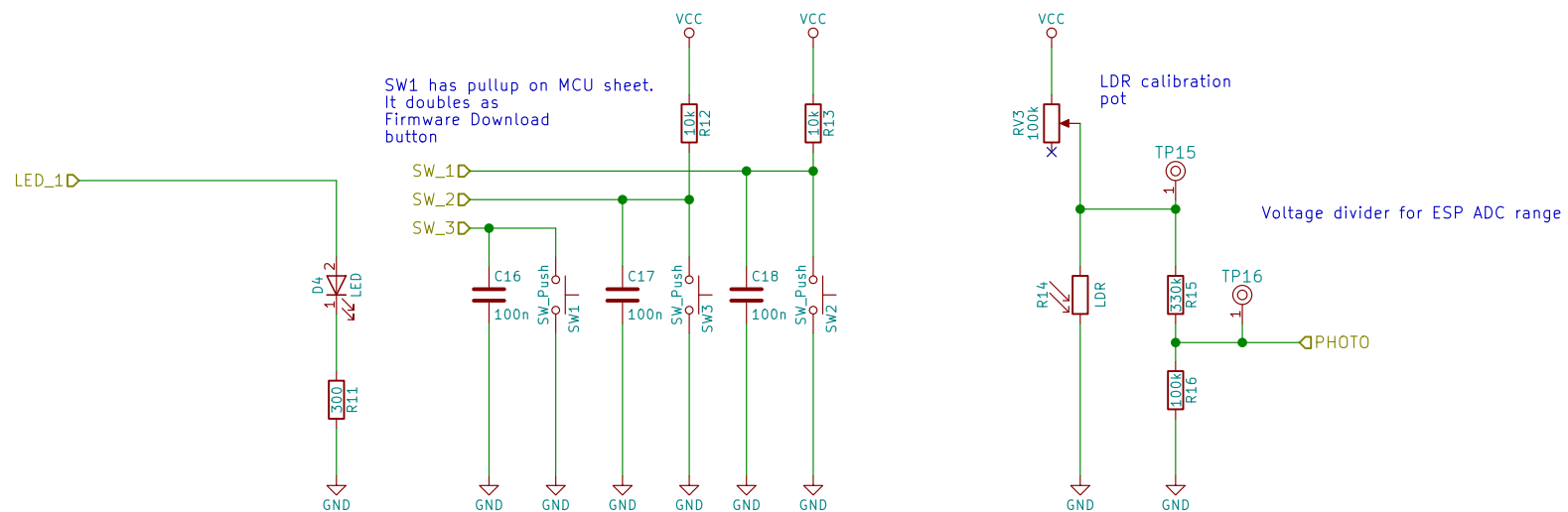
Rev: 1.0

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Id: 4/10



User I/O and Light Detector

Roberts Gotlaufs

Sheet: /User I/O/

File: gpio.sch

Title: Nixie Clock with IN-14 tubes and ESP8266 MCU

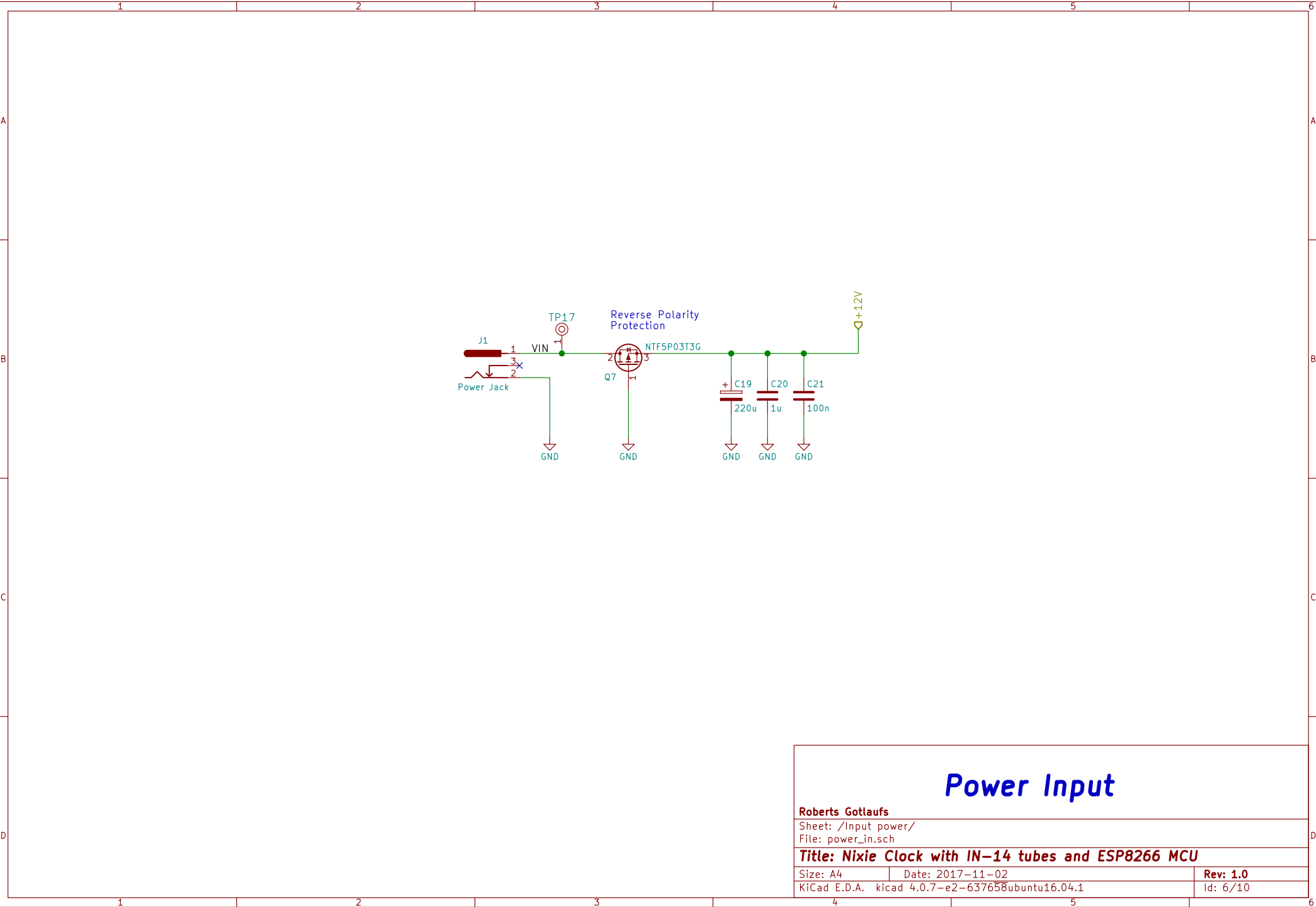
Size: A4

Date: 2017-11-02

Rev: 1.0

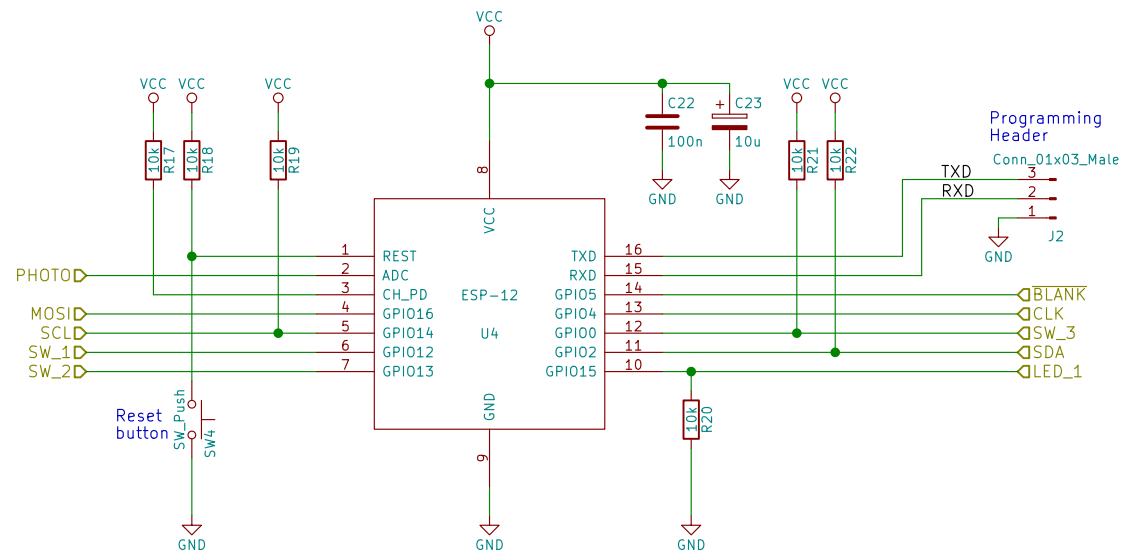
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Power Input

Roberts Gotlaufs		
Sheet: /Input power/		
File: power_in.sch		
Title: Nixie Clock with IN-14 tubes and ESP8266 MCU		
Size: A4	Date: 2017-11-02	Rev: 1.0
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ESP8266 boot setting:

Boot from Flash:
 GPIO0 = High
 GPIO2 = High
 GPIO15 = Low
 Download Firmware:
 GPIO0 = Low
 GPIO2 = High
 GPIO15 = Low

ESP8266 MCU

Roberts Gotlaufs

Sheet: /MCU ESP-12/

File: esp12.sch

Title: Nixie Clock with IN-14 tubes and ESP8266 MCU

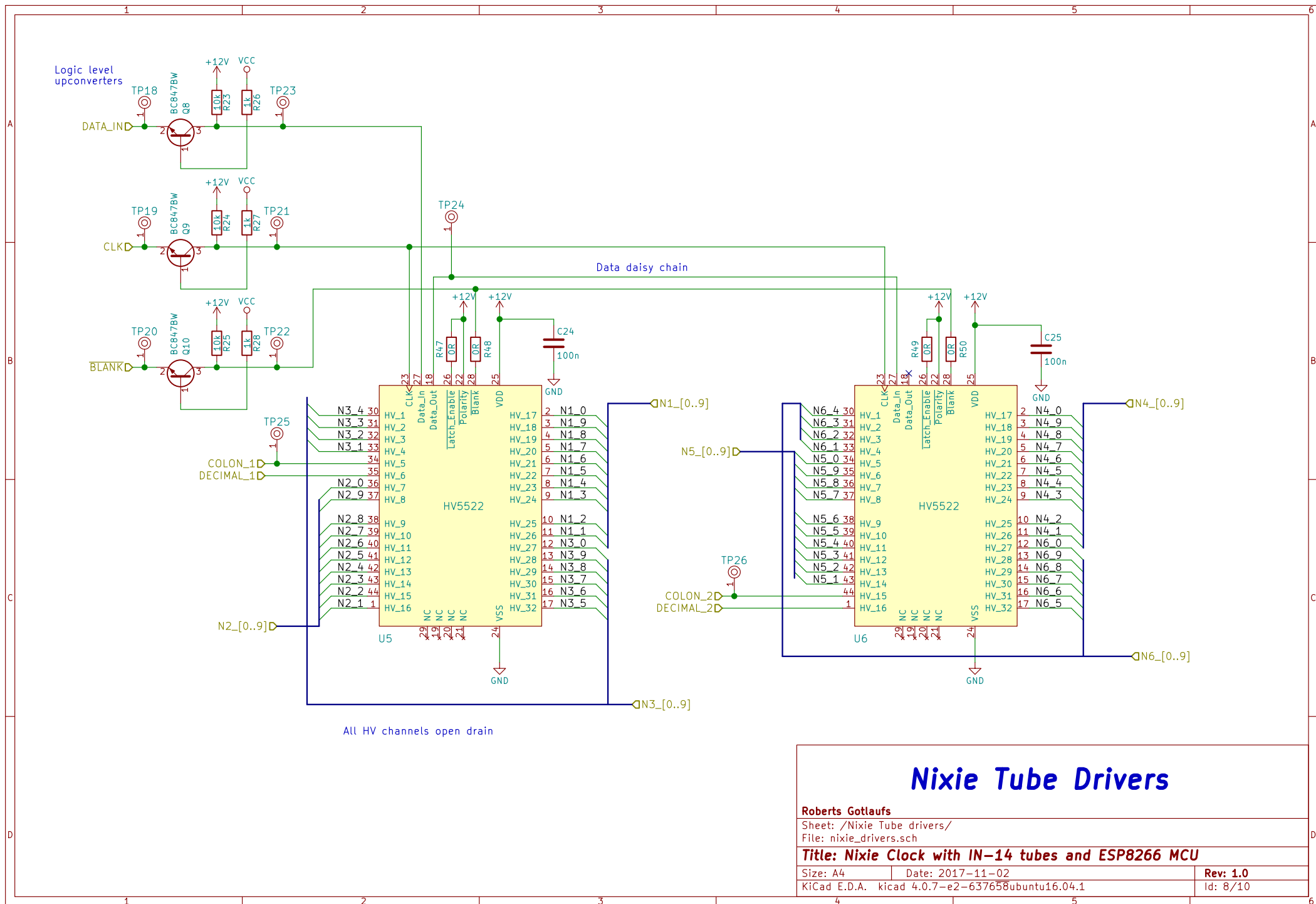
Size: A4

Date: 2017-11-02

Rev: 1.0

KiCad E.D.A. kicad 4.0.7-e2-637658ubuntu16.04.1

Id: 7/10



Nixie Tube Drivers

Roberts Gotlaufs

Sheet: /Nixie Tube drivers/

File: nixie_drivers.sch

Title: Nixie Clock with IN-14 tubes and ESP8266 MCU

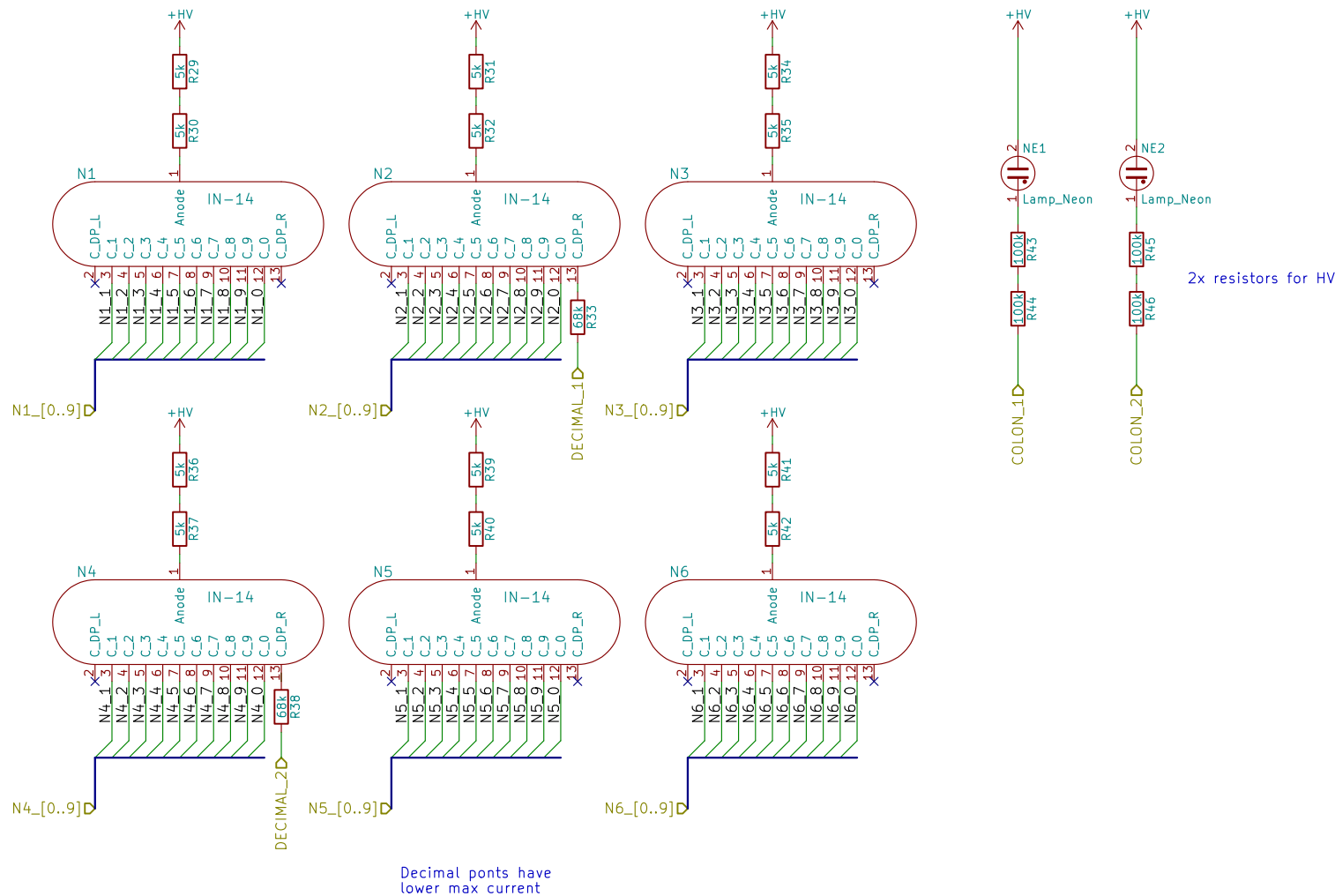
Size: A4

Date: 2017-11-02

Rev: 1.0

KiCad E.D.A. kicad 4.0.7-e2-637658ubuntu16.04.1

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Nixie Tubes and Neon Lamps

Roberts Gotlaufs

Sheet: /Nixie Tubes/

File: nixie_tubes.sch

Title: Nixie Clock with IN-14 tubes and ESP8266 MCU

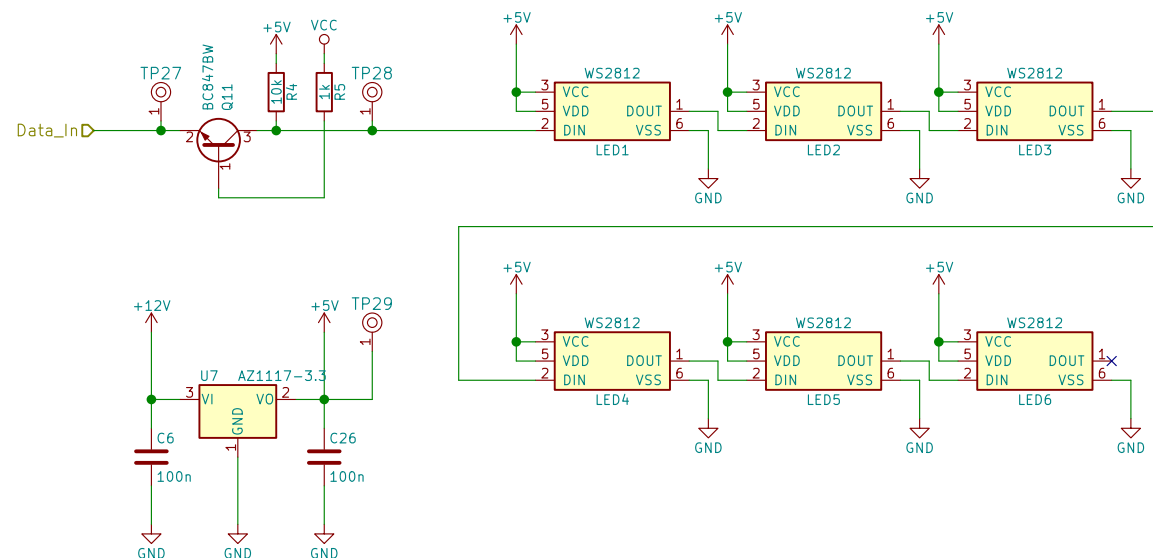
Size: A4

Date: 2017-11-02

Rev: 1.0

KiCad E.D.A. kicad 4.0.7-e2-637658ubuntu16.04.1

Id: 9/10



Programmable RGB LEDs

Roberts Gotlaufs

Sheet: /Programmable LEDs/

File: ws2812.sch

Title: Nixie Clock with IN-14 tubes and ESP8266 MCU

Size: A4

Date: 2017-11-02

Rev: 1.0

KiCad E.D.A. kicad 4.0.7-e2-637658ubuntu16.04.1

Id: 10/10