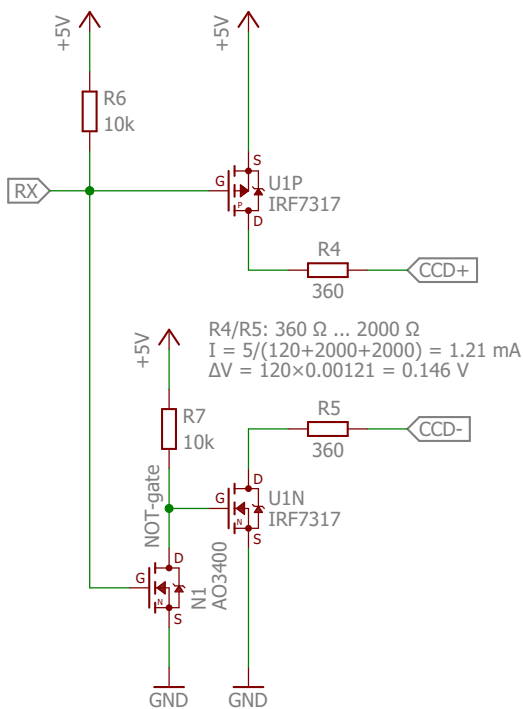


# CCD-bus transmitter



$$R4/R5: 360 \Omega \dots 2000 \Omega$$

$$I = 5 / (120 + 2000 + 2000) = 1.21 \text{ mA}$$

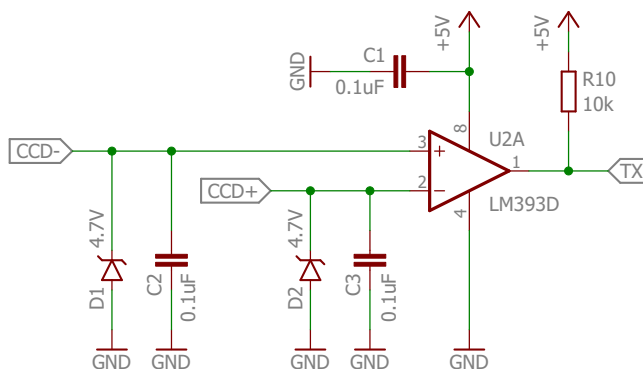
$$\Delta V = 120 \times 0.00121 = 0.146 \text{ V}$$

RX	CCD+	CCD-	$\Delta V$
Z/1	2.488V	2.512V	-0.024V
0	2.860V	2.140V	+0.720V
0	2.573V	2.427V	+0.146V

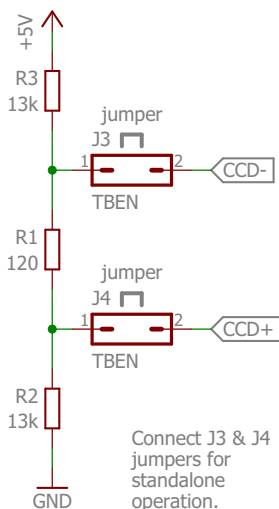
R4/R5=360  
R4/R5=2000

RX:  
Z=INPUT/HIGH-Z  
1=5V  
0=GND

# CCD-bus receiver

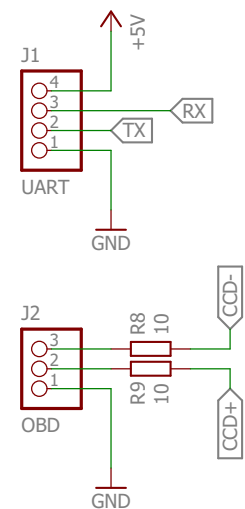


# CCD-bus termination and bias



Connect J3 & J4 jumpers for standalone operation.

# Connectors



# Changelog:

V1.00: original

V1.01:  
- mounting holes removed,  
- board size reduced.

V1.02:  
- copper trace width reduced to 0.6 mm,  
- D1 and D2 Zener-diode values increased to 4.7V;  
previous lower value (3.3V) may interfere with the CCD-bus  
wake-up signal (3.5V minimum).

V1.03:  
- copper trace width reduced to 0.5 mm,  
- CCD-bus termination and bias separated completely  
with 2 jumpers.



open hardware

# CCD-bus Transceiver

CCDBusTransceiver\_V103

2020. 07. 15. 12:47

László Dániel

Sheet: 1/1

A4

Rev: V1.03