

Photodiode

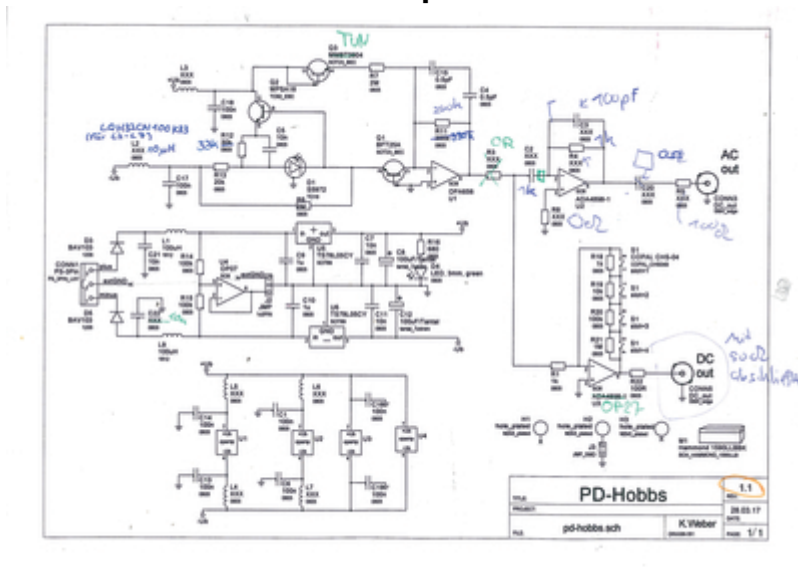
- Typ: Hamamatsu S5971

- Datasheet:

s5971_etc_kpin1025e.pdf

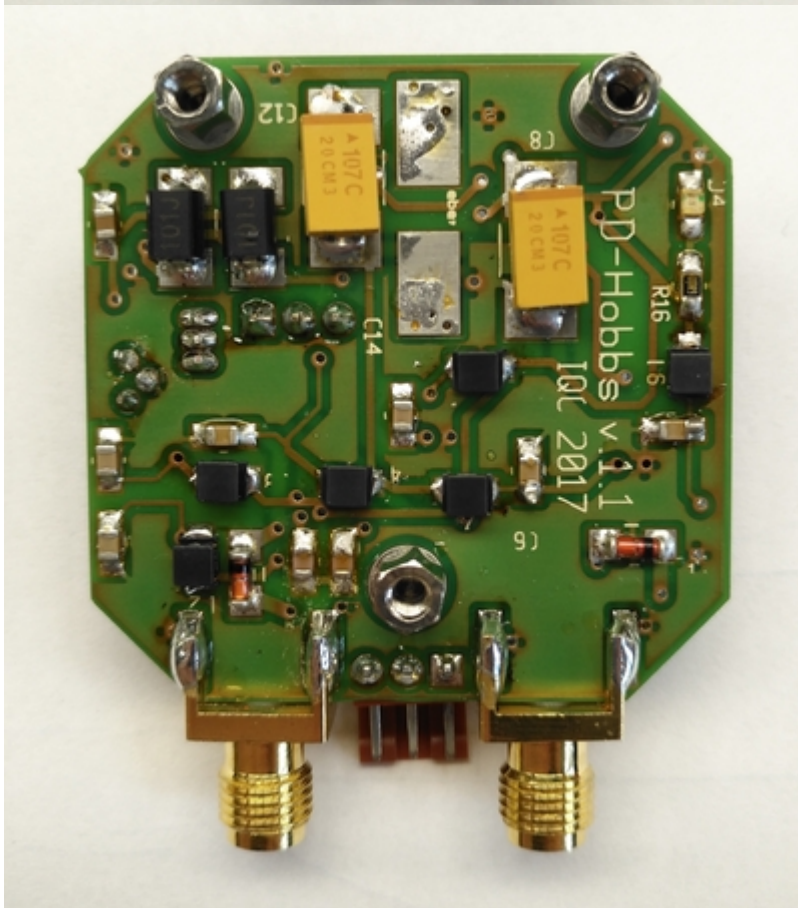
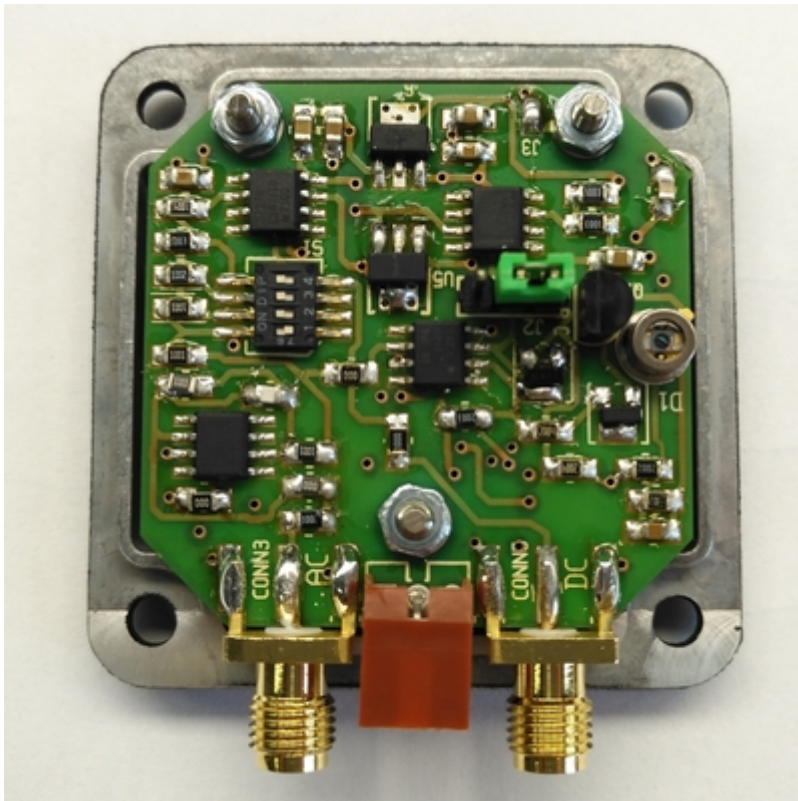
- limited by 1 MHz by Weber-PD
- idea: Thorlabs tubus system

This is the scematic for the photodiode:



Some things have to be noted:

- if GND should be connected to the case, the soldering points J3 next to one of the screws have to be soldered together
- the position of the jumper "J2" depends on the power supply. If an external GND exists, then it should be positioned on pin 1 and 2 (like seen in the picture below)
- For the coils L2 - L7 the type "LYH32CN100K33" with 10 μ H and max. 80 mA has to be used
- instead of the optical coupler "ADA4898-1" the "OP27" is used at the position U3
- instead of the transistor "MMBT3904" the transistor "NC847C" is used at the position Q3
- The resistor R3 was positioned wrong in advance, so a 0 Ω resistor has to be placed there.
- The optical couplers are limited by non-linear behavior over 3 V
 - For the optical coupler "ADA4898-1" at U2 following resistors and capacitors have to be placed:
C2: 1 k Ω , C3: 100 pF, R4: 1 k Ω , R8: 0 Ω , C20: 0 Ω , R5: 100 Ω
 - For the optical coupler "OPA656" at U1 the resistor R11 has to be changed to 200 k Ω
 - For the optical coupler "OP27" at U3 only slot 1 at the dipswitch has to be turned on. During the setup of the photodiode, this dipswitch was changed, as the capacity of the incoming light was lower than expected before. So now slot 2 is turned on instead of 1, so that the amplification factor is 10 instead of 1.
- a 50 Ω resistor has to be placed at the DC output, in order to measure a signal at the AC output





From:

<https://iqwiki.iqo.uni-hannover.de/> - IQwiki

Permanent link:

<https://iqwiki.iqo.uni-hannover.de/doku.php?id=groups:mg:photodiode&rev=1494506998>

Last update: **2017/05/11 12:49**

