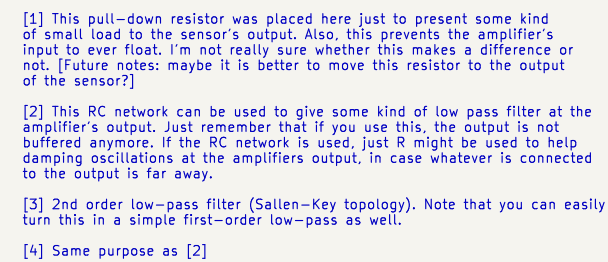
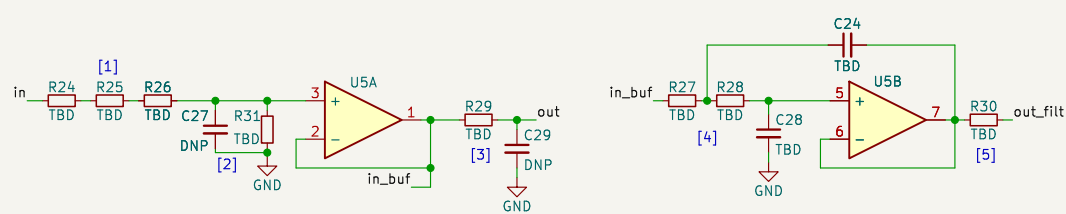


```
graph LR;
    Inputs -->|in| InPort[in];
    OutPort[out] --> Outputs;
    OutPort_filt[out_filt] --> Outputs;
```

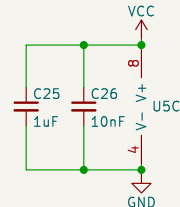


```
graph LR;
    Inputs -->|in| InPort[in];
    OutPort[out] --> Outputs;
    OutPort_filt[out_filt] --> Outputs;
```



Inputs  
in  $\triangleleft$  in

Outputs  
out  $\triangleleft$  out  
out\_filt  $\triangleleft$  out\_filt



[1] Several resistors were placed in series in order to allow higher voltages to be measured.

[2] This capacitor is for testing purposes. Ideally we would not need it, and we filter the signal afterwards anyways.

[3] This RC network can be used to give some kind of low pass filter at the amplifier's output. Just remember that if you use this, the output is not buffered anymore. If the RC network is used, just R might be used to help damping oscillations at the amplifiers output, in case whatever is connected to the output is far away.

[4] 2nd order low-pass filter (Sallen-Key topology). Note that you can easily turn this in a simple first-order low-pass as well.

[5] Same purpose as [3]

Sheet: /Voltage measurements/Vio voltage conditioning/  
File: volt\_cond.kicad\_sch

**Title:**

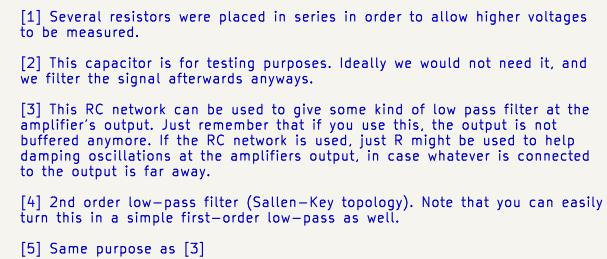
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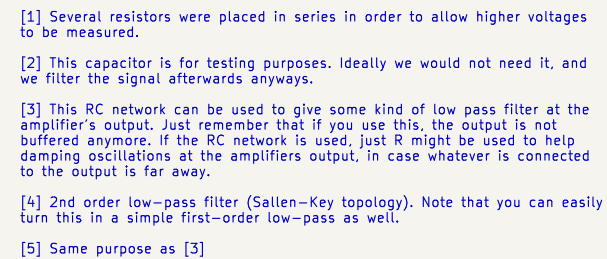
**Rev:**

Id: 7/11

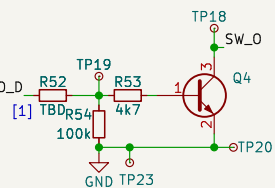
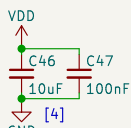
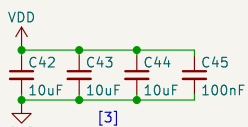


Sheet: /Voltage measurements/Vdc voltage conditioning/ File: volt_cond.kicad_sch		
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Sheet: /Voltage measurements/Vc voltage conditioning/ File: volt_cond.kicad_sch		
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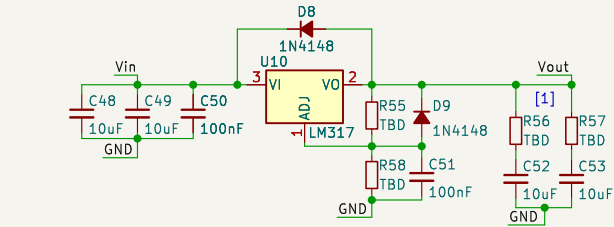


## Outputs

```
SW_C —▷ SW_C
SW_L —▷ SW_L
SW_0 —▷ SW_0
```

[4] This is the driver of the load switch. Since this switch is not intended for periodic high-frequency switching as the SW\_C switch, we don't need so much current to turn it on. Thus, it can be slower and the charge capacitors can be smaller.

[1] We're placing these resistors because of bad past experience with linear regulators, when using ceramic capacitors at the output. Turns out that, if the ESR of the output capacitor is too low, the output might oscillate around the regulated value. This is not a big problem when using electrolytic capacitors, because of their comparatively higher ESR. Anyways, theses resistors should be small, something like 1R or even smaller. However, they might make difference.



Inputs  
Vin — Vin  
GND — GND

Outputs  
Vout — Vout

Sheet: /LM317/  
File: lm317\_fixed.kicad\_sch

**Title:**

Size: A4

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**Rev:**

Id: 11/11