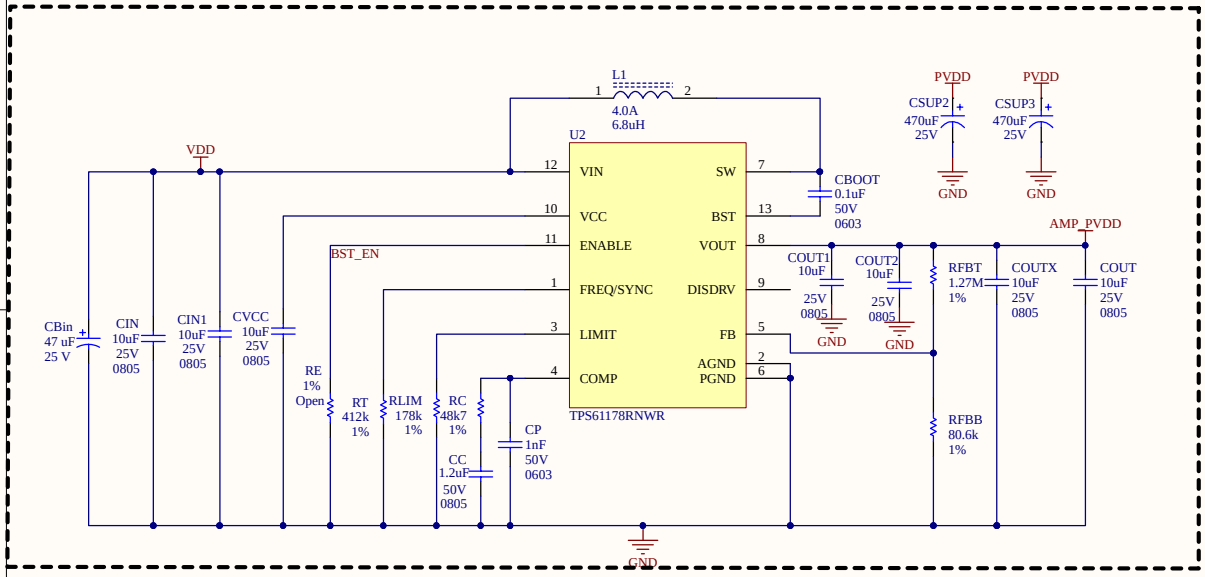
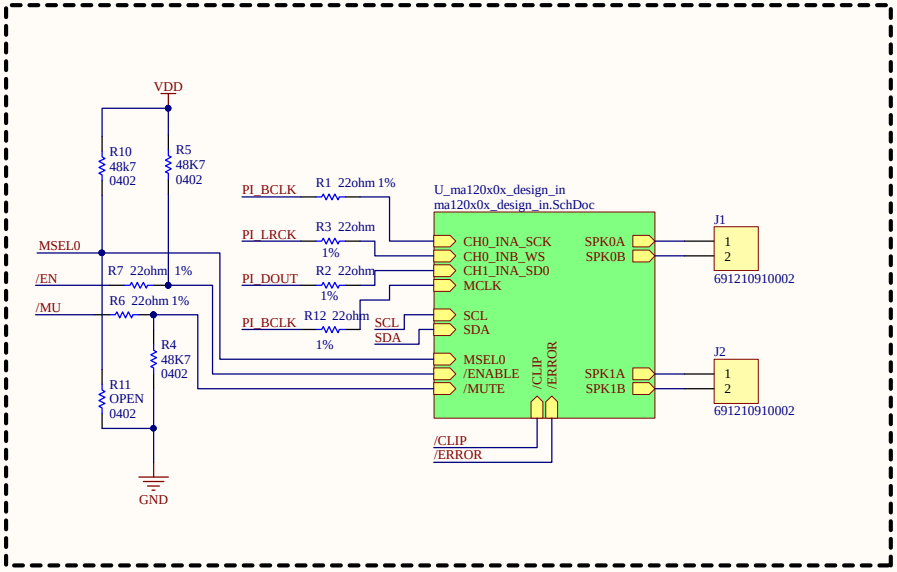
Author:	Rien Oortgiesen
Date:	16-11-2017
Version:	1.0.zero
Description:	This schematic contains the design-in of a pi HAT. It is intended to have a normal form factor a small form factor variant to fascilitate pi 3 and pi zero respectively. This design specifically aims the pi zero. Small form factor PCB deisgn is key. The board will be able to communicate through i2c with the pi by using the Merus Audio Linux Device Driver that is developed for this purpose.

Design notes:

- The booster has been designed primarely by using TI webBench together with consulting the datsheet to sanity check component values.

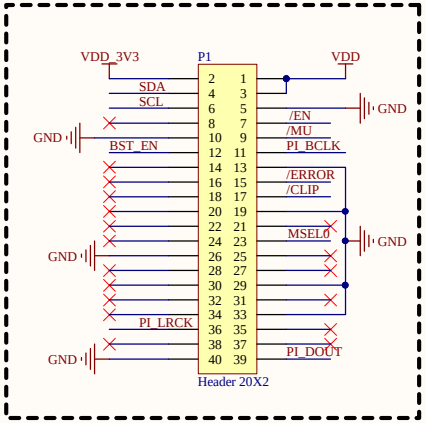
- Input VDD can range from 4.5 to 5.5 with max 2A; boosting up to 20V with a max. current of 500mA.





Design notes:

- Pull-up and pull-down for enable and mute to bypass software control
- See more details design notes on amp inside sub-schematic



Design notes:

- VDD = 5V; It will be supplied either by USB from the raspberry pi or from the PiJuice battery HAT; either case the max. current will be roughly 2A.

- pi Zero has 1.8k internal pull-up on the i2c bus; RnD tests have proven this to be sufficient when driving one device.

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