## Subject: Debugging a SBC v2 Rev. 005i
Posted by moritzp on Sun, 23 Jan 2022 13:53:11 GMT

Hi all,

I have put together a SBC v2, revision 005i. Currently I have populated it to a match a near minimal build, meaning I have the UART driver MAX232 in place.

Here are some issues, I am currently facing:
(1) The speaker is constantly on. That worries me and I do not know why.
(2) TX (pin 7, T2OUT) on the MAX232 reads -5V5, whereas from the UART I read +5V2 on pin 10 (SOUT_TTL = T2IN)
(3) I am not able to get any serial connection, I am using a Delock FTDI Dongle with a serial extension cable followed by jumper cables for RX, TX and GND. On the PC (Ubuntu) lsusb identifies the dongle and I get a /dev/ttyUSB0 which I then connect to with 'screen /dev/ttyUSB0 9600'

When I press reset I can see voltage drops and or changes on some lines like WR, Reset, etc. But unfortunately (due to global circumstances) I currently do not have access to an oscilloscope and my DSO138 it rather a learning device (euphemism for toy) than a proper device.

What I did so far:
- before populating any ICs I checked for voltage and shorts
- checked all logic chips with a TL688II+ device,
- checked all solder joins
- checked the caps for polarity
- tried various config settings for serial connection
- I added a pull-up resistor for U26 between pins 12 and 14 (CPU clock logic) as mentioned in the errata for rev 004v.

Any ideas? Comments? Tricks? Everything will be highly appreciated! Thank you in advance.

Have a nice day!
Moritz

## File Attachments
1) SBCv2-5i-Back.jpg, downloaded 171 times
2) SBCv2-5i-Serial-Detail.jpg, downloaded 183 times
3) SBCv2-5i-Front.jpg, downloaded 182 times