RC2014 Bus Header

Address Decoding and Data Bus Transceiver
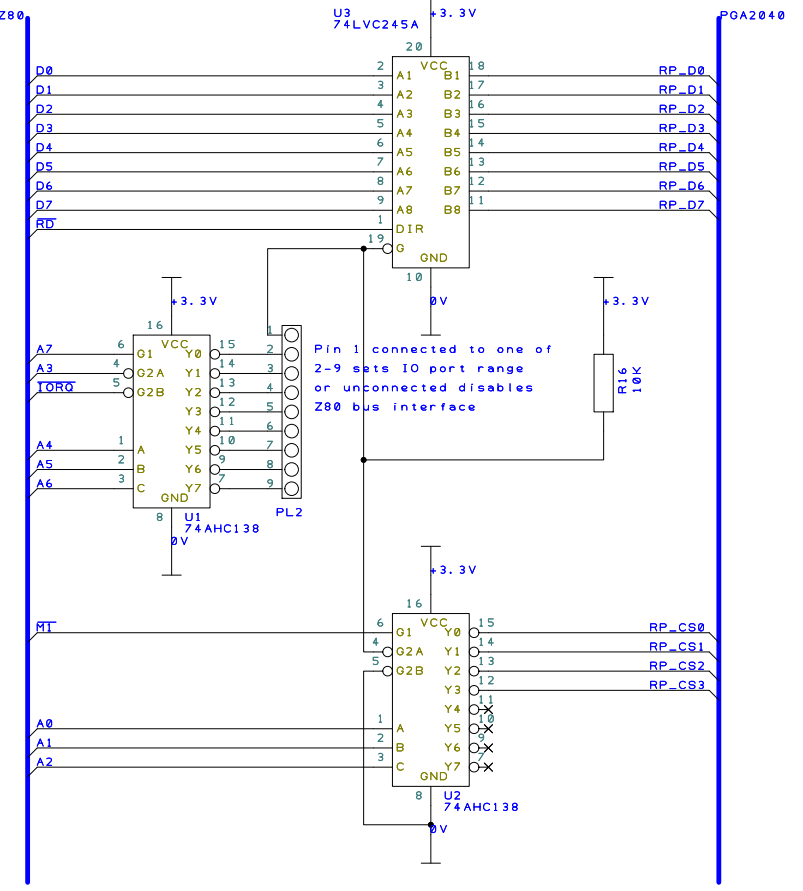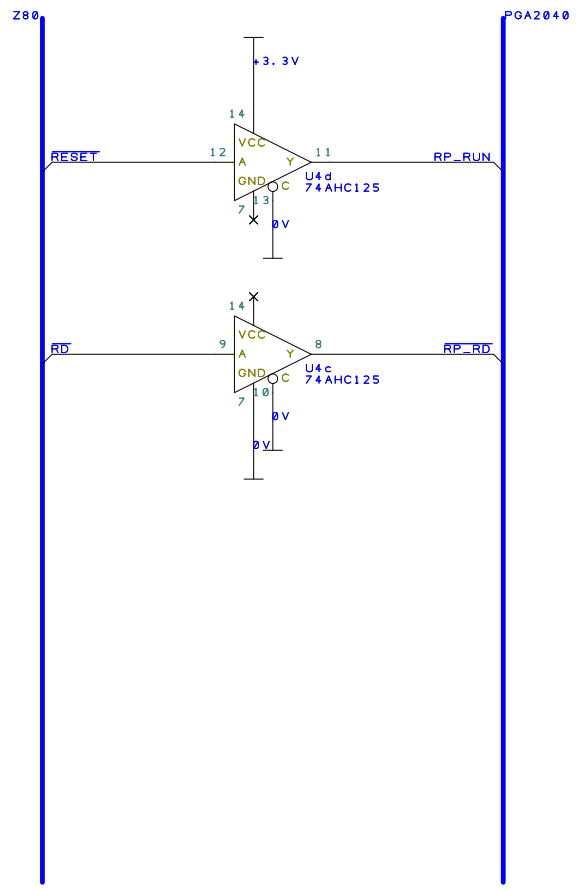
U1 lacks /M1 as input.
No matter because /RD
is high during interrupt
acknowledgement so U3
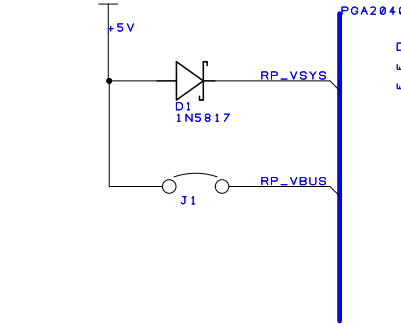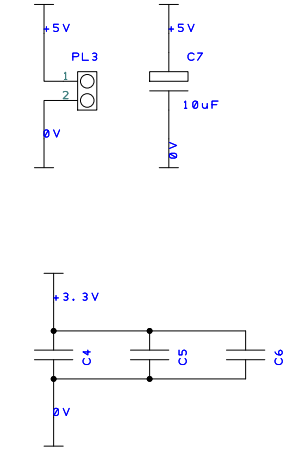outputs, needlessly, but
in the harmless direction.

Pin 1 connected to one of
2-9 sets IO port range
or unconnected disables
Z80 bus interface
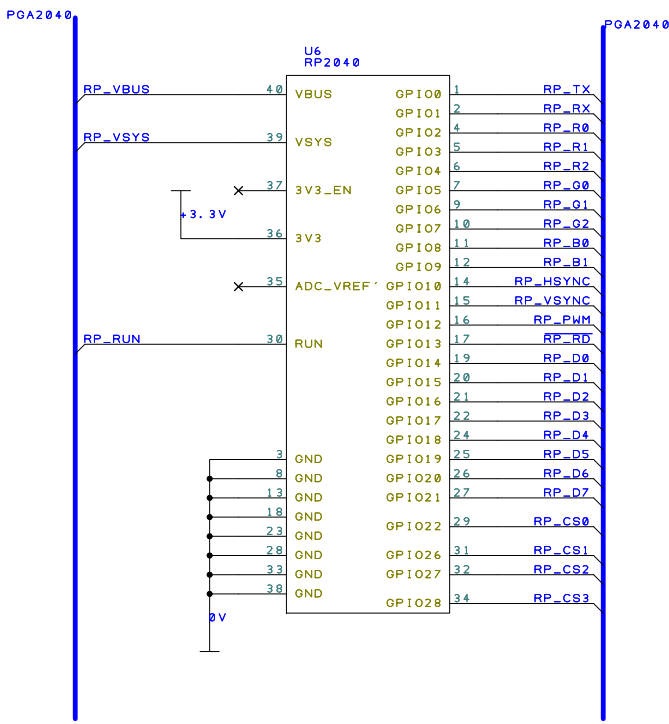
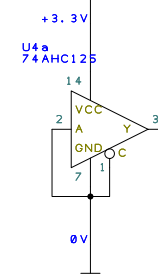U2 has /M1 as input so
/RP_CSn are only asserted
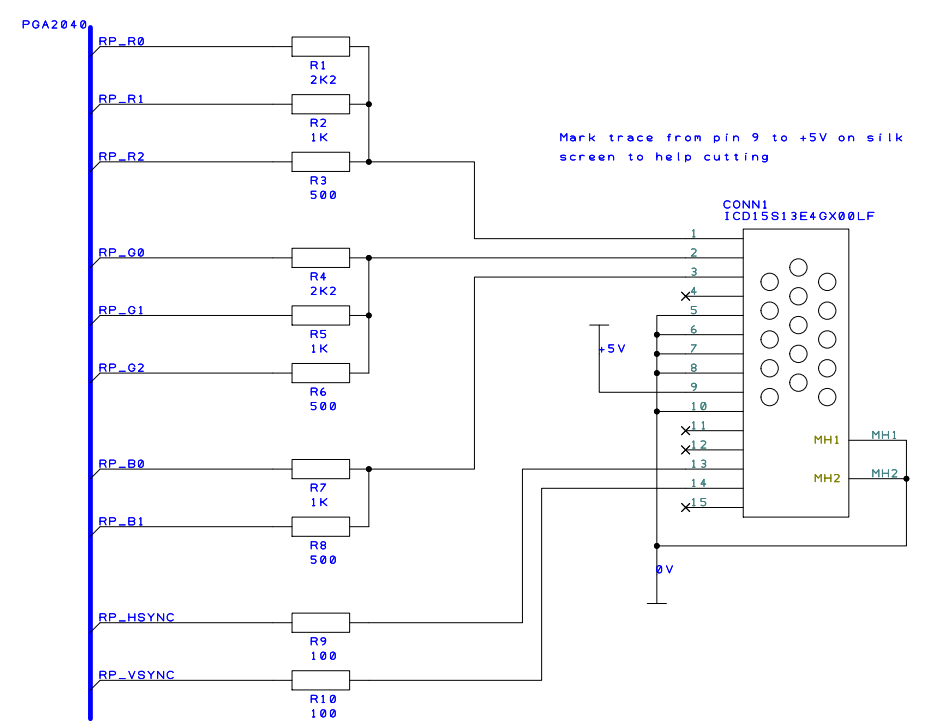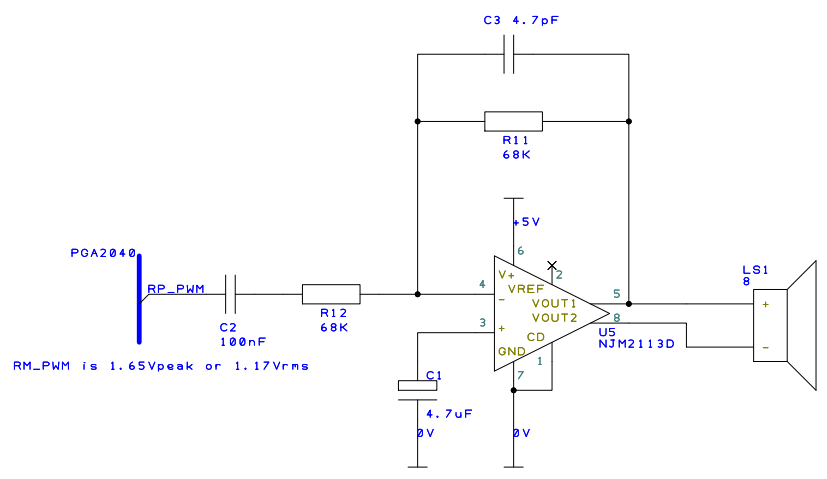appropriately.

Level Shifting

Power

D1 allows safe RP2040 firmware update
while installed in unpowered RC2014 backplane
without USB powering whole computer.
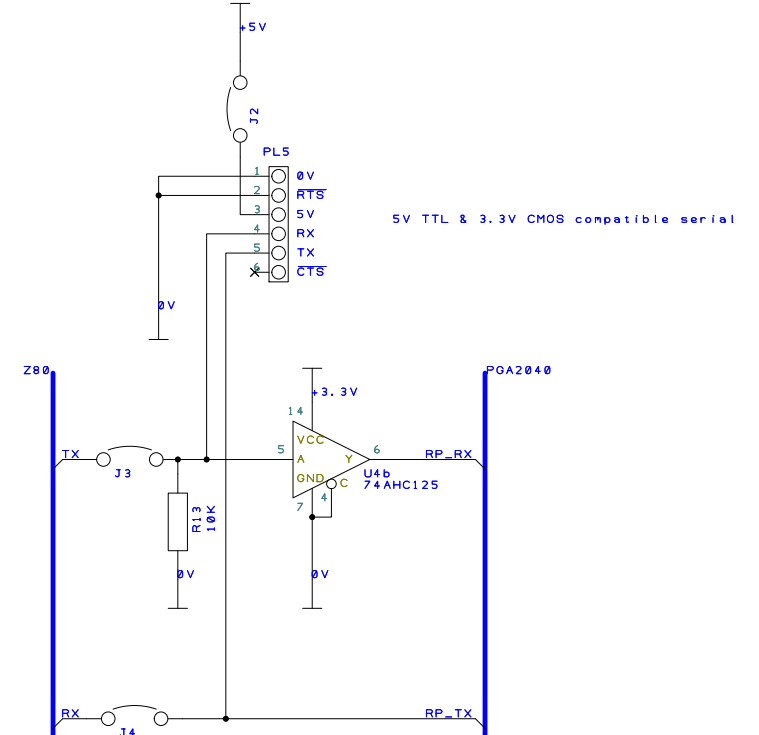
Microcontroller Board

Video Output

Mark trace from pin 9 to +5V on silk
screen to help cutting

Audio Output

RP_PWM is 1.65Vpeak or 1.17Vrms

Inverting amplifier & 1-pole low pass filter.
Maximum gain of 100% drives 8 ohm speaker at approx 200mW.
Low pass filter drops gain to about 96% at 20kHz.
NJM2113 differential outputs avoid output decoupling capacitor.

Serial

5V TTL & 3.3V CMOS compatible serial