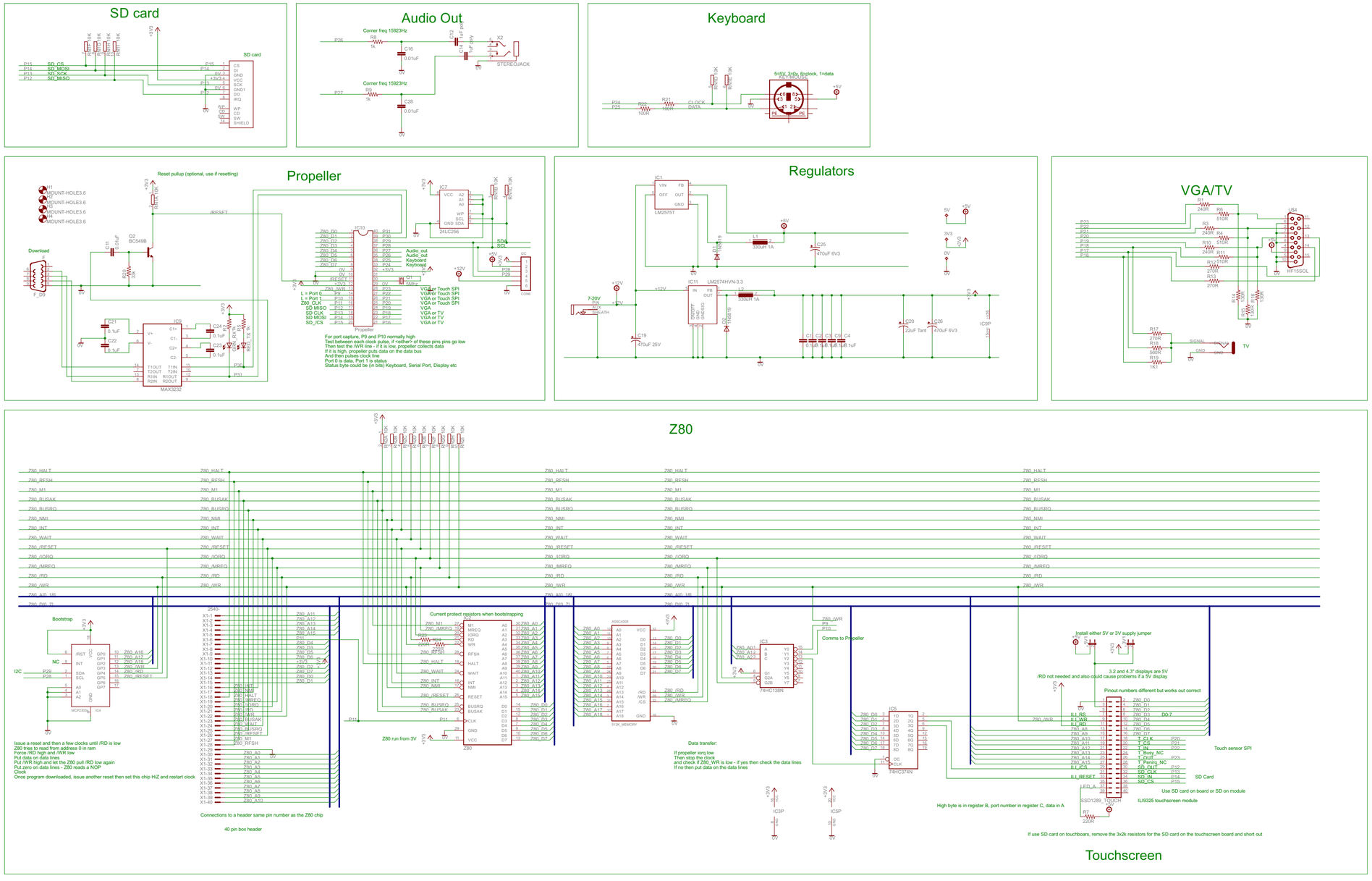
SD card
Audio Out
Keyboard
Propeller
Regulators
VGA/TV
Z80
Touchscreen
Reset pullup (optional, use if resetting)
Download
Audio_out
Audio_out
Keyboard
Keyboard
VGA or Touch SPI
VGA or Touch SPI
VGA or Touch SPI
VGA or Touch SPI
VGA
VGA or TV
VGA or TV
VGA or TV
For port capture, P9 and P10 normally high
Test between each clock pulse, if <either> of these pins pins go low
Then test the /WR line - if it is low, propeller collects data
If it is high, propeller puts data on the data bus
And then pulses clock line
Port 0 is data, Port 1 is status
Status byte could be (in bits): Keyboard, Serial Port, Display etc
Bootstrap
Issue a reset and then a few clocks until /RD is low
Z80 tries to read from address 0 in ram
Force /RD high and /WR low
Put data on data lines
Put /WR high and let the Z80 pull /RD low again
Put zero on data lines - Z80 reads a NOP
Clock
Once program downloaded, issue another reset then set this chip HiZ and restart clock
Connections to a header same pin number as the Z80 chip
40 pin box header
Current protect resistors when bootstrapping
Z80 run from 3V
Data transfer:
If propeller iorq low
Then stop the clock
and check if Z80_WR is low - if yes then check the data lines
If no then put data on the data lines
Comms to Propeller
Install either 5V or 3V supply jumper
3.2 and 4.3" displays are 5V
/RD not needed and also could cause problems if a 5V display
Pinout numbers different but works out correct
Touch sensor SPI
SD Card
Use SD card on board or SD on module
ILI9325 touchscreen module
High byte is in register B, port number in register C, data in A
If use SD card on touchboars, remove the 3x2k resistors for the SD card on the touchscreen board and short out