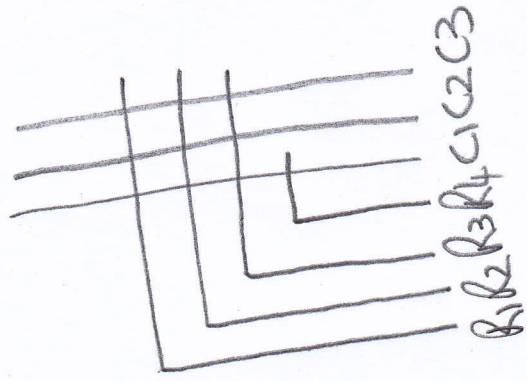


Pages:

- Main Unit Membrane Schematic (1)
- RS485 (1)
- On board flash memory (1)
- PC interface (1)
- Flash Drive Interface (2)
- LCD (1)
- Keypad (1)
- PSU (2)
- Miscellaneous (2)
- Future Expansion (1)
- SD card
- GPS

Main Unit Membrane Schematic



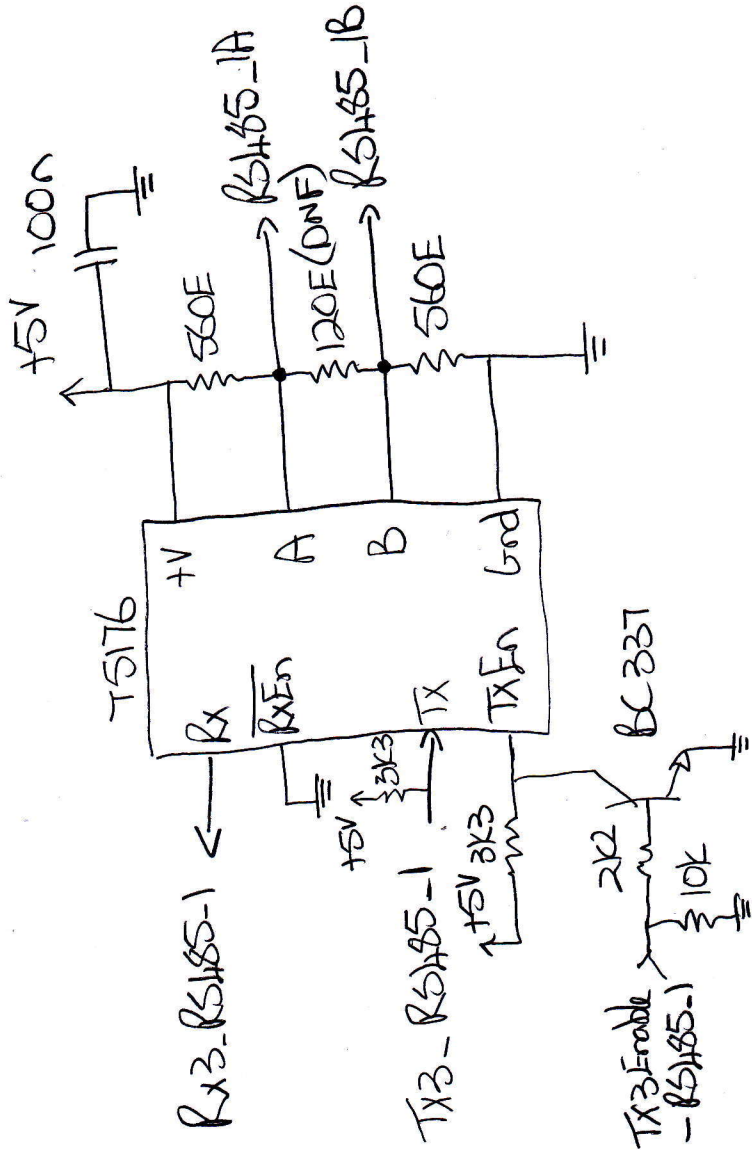
* R1 out not critical as
R2 has not been
laid out

* Key Assignment not
critical as it can be
re-mapped in the
software

* R4 does not
necessarily need to
intersect R1, it could
be R2 or R3 as
easily.

[Signature]
2013/2/14

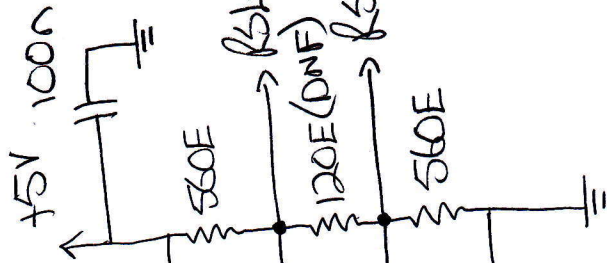
RS485-1



Rx3 - RS485-1

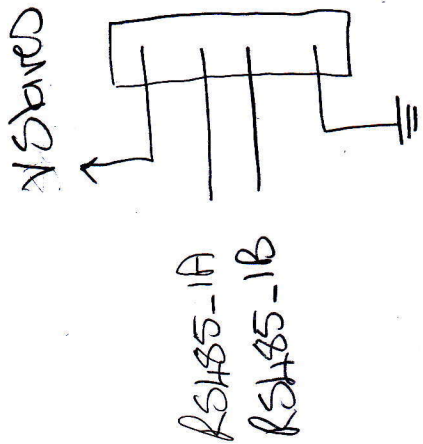
Tx3 - RS485-1

Tx3Enable - RS485-1



RS485-1A

RS485-1B

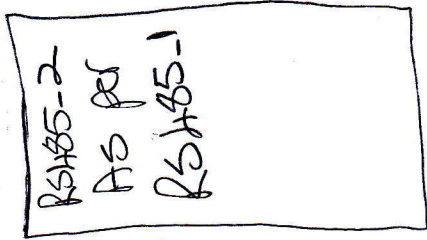


RS485-1A

RS485-1B

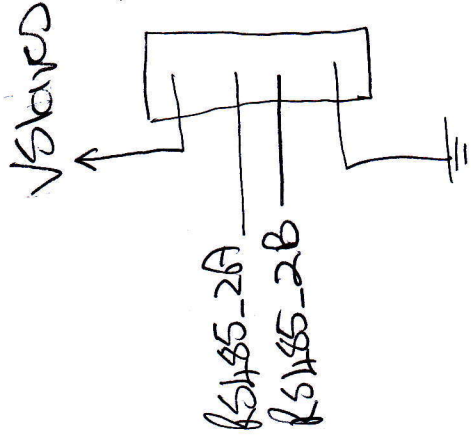
Handwritten signature

RS485-2



Rx4 - RS485-2
Tx4 - RS485-2
Tx4Enable - RS485-2

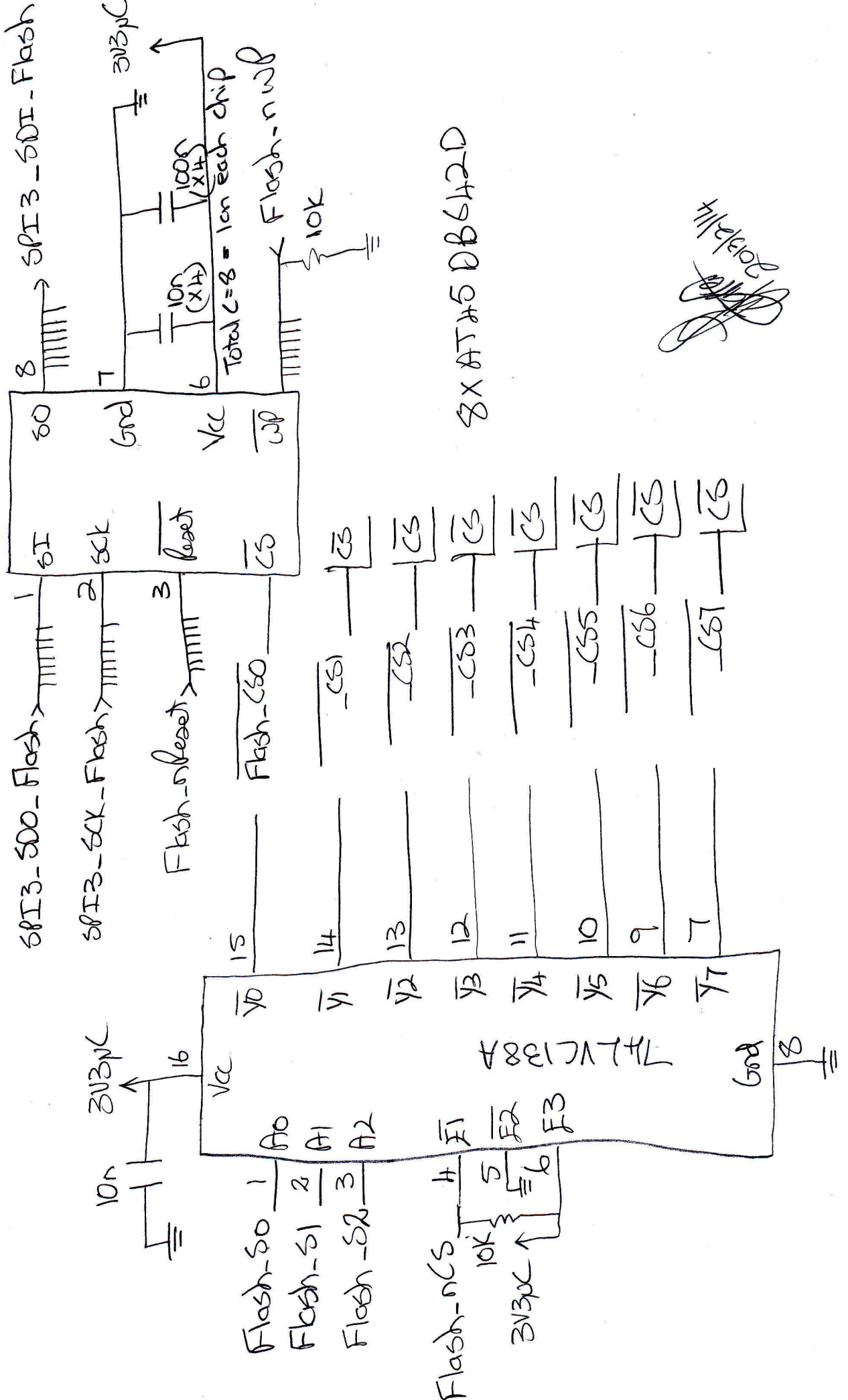
RS485-2A
RS485-2B



RS485-2A

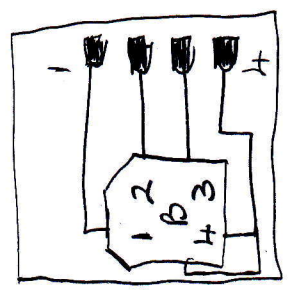
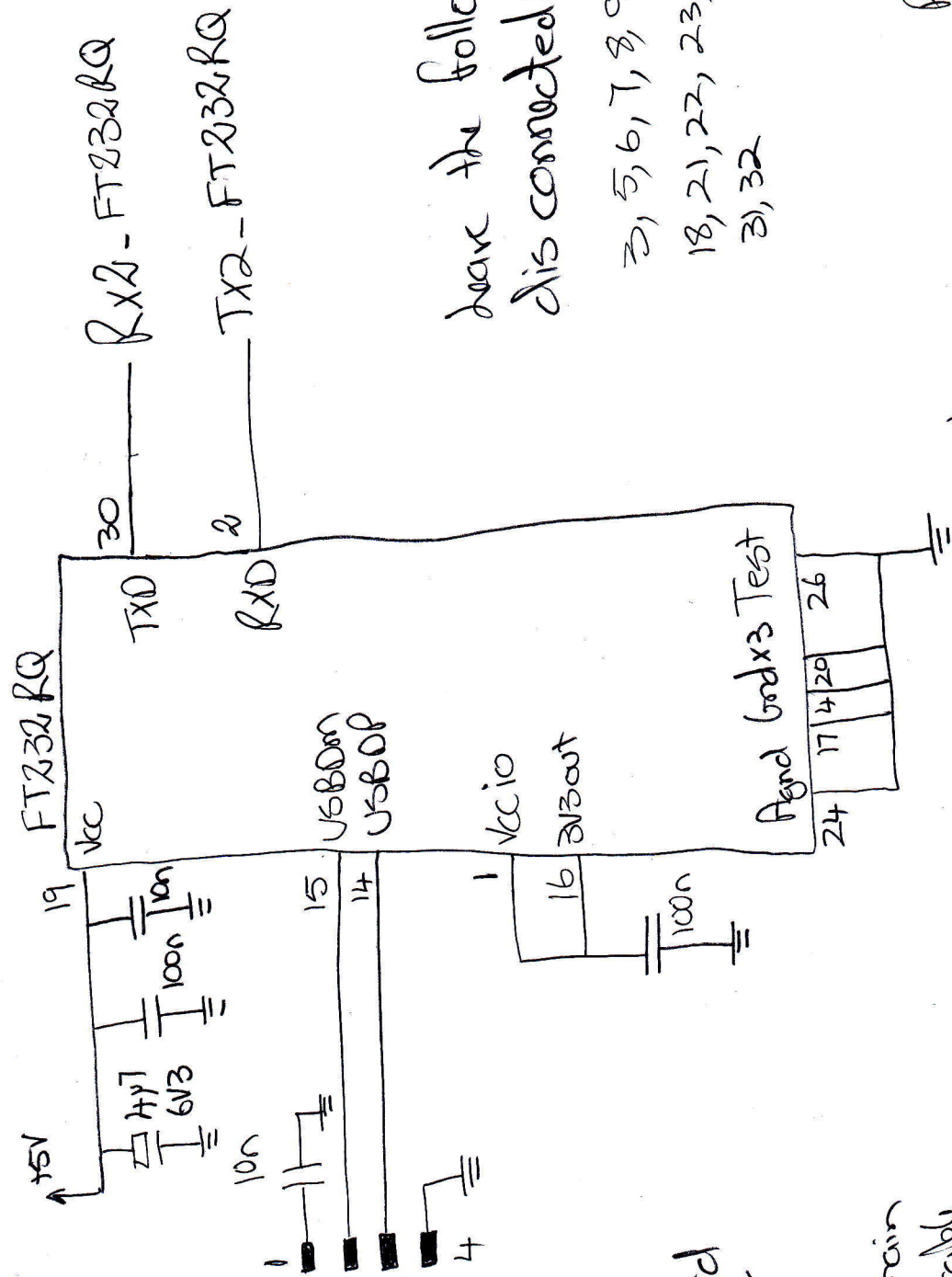
RS485-2B

On board FLASH memory



Handwritten signature and date: 11/10/2008

PC interface



↑ separate PCB with pins & Type B standard USB connector (Vertical)

- Connected to main PCB with a cable with female connectors on both sides.

have the following pins dis connected:

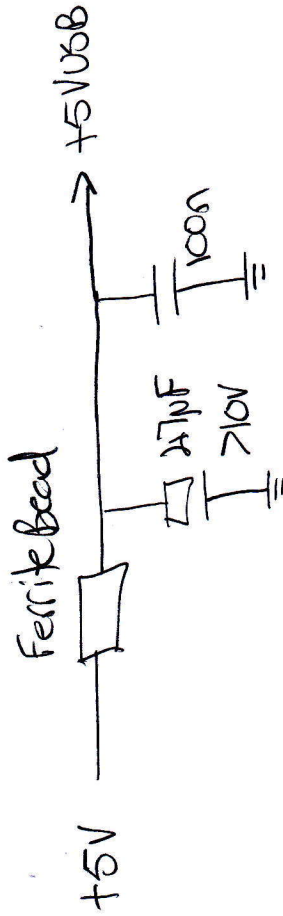
- 3, 5, 6, 7, 8, 9, 10, 11, 12, 13,
- 18, 21, 22, 23, 25, 27, 28, 29,
- 31, 32

Please note:

RL & RL have different pin numbers these are for RL.

~~11/12/2022~~

Flash Drive Interface (2 of 2)



$\frac{13}{16}$ $\frac{12}{11}$ $\frac{11}{17}$ $\frac{130}{140}$ $\frac{5x100n}{}$ mounted as close as possible to relevant pins
 $\frac{124}{127}$ $\frac{129}{}$

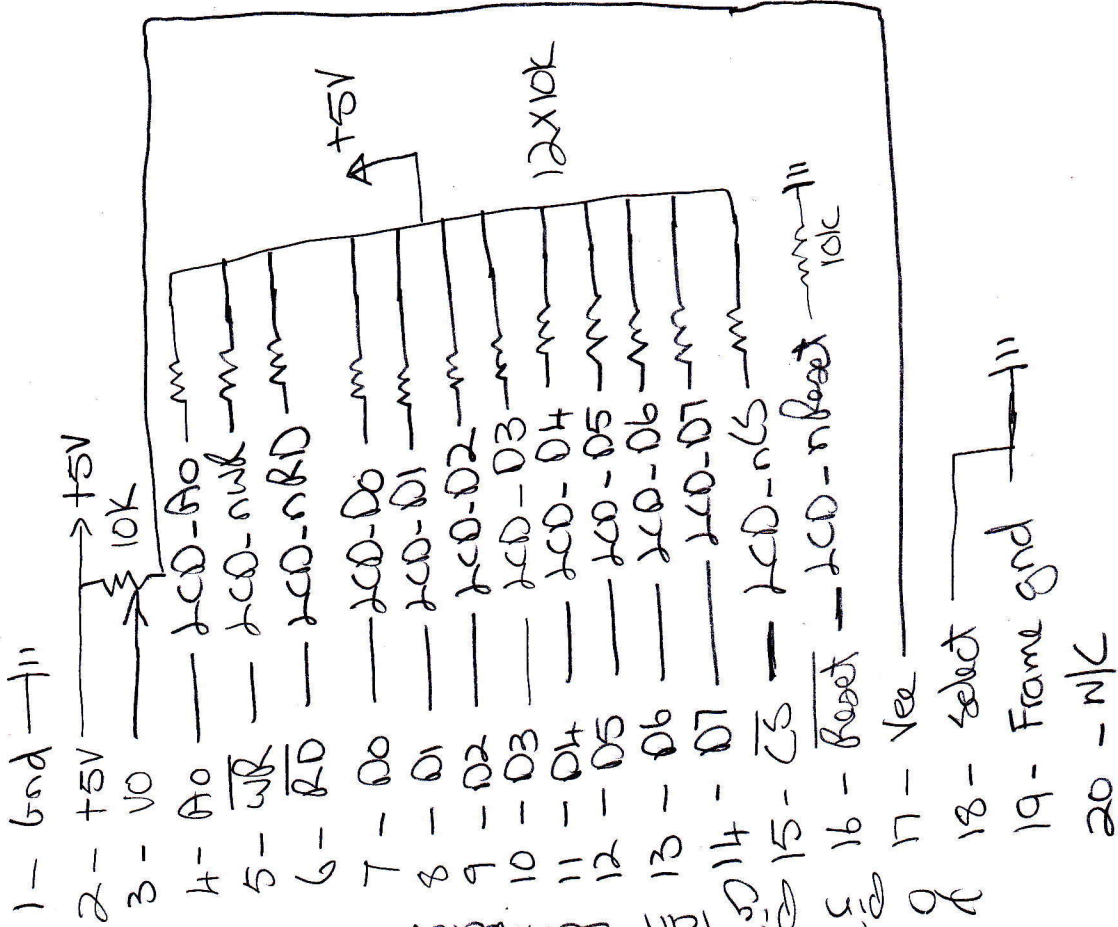
All power tracking as thick as possible

VNC12 Flash programming interface

- VNC12-RST
- VNC12-D1
- VNC12-D0
- VNC12-D3
- VNC12-D2
- VNC12-Prog
- 3V3USB
- Gnd


 1/1/2014

LCD

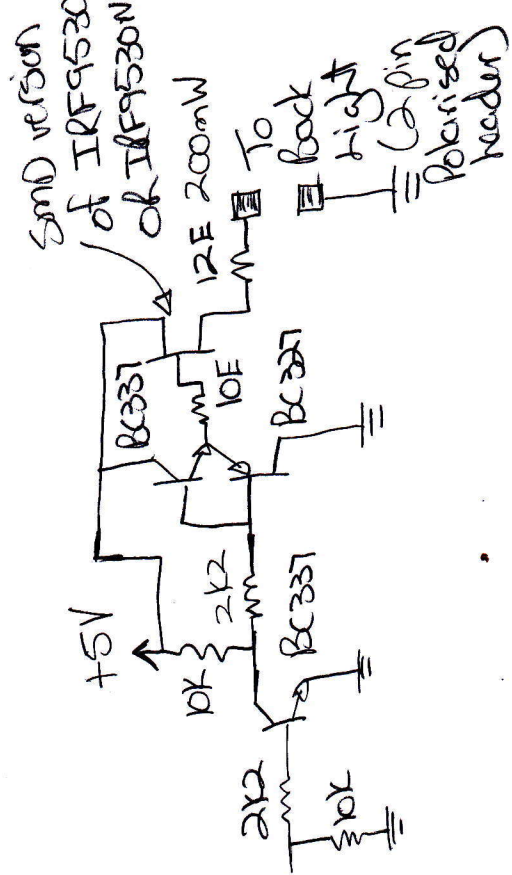


tail connector for W6320240B0-TFHV2#180

LCD-Spare1
LCD-Spare2

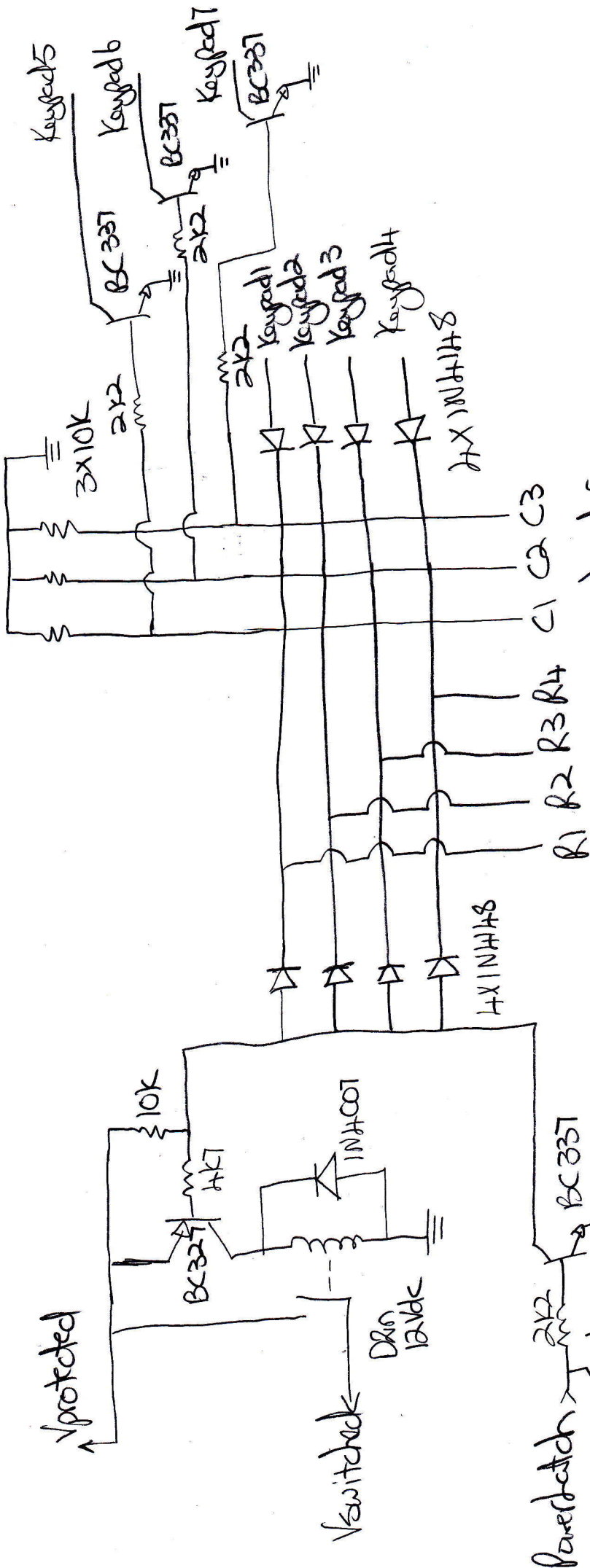
Please route these 2 signals to LCD area, the idea is that if we need to change LCDs, we only re-work the LCD area and not the whole PCB, because it is quite complicated.

Handwritten signature



LCD - Backlight

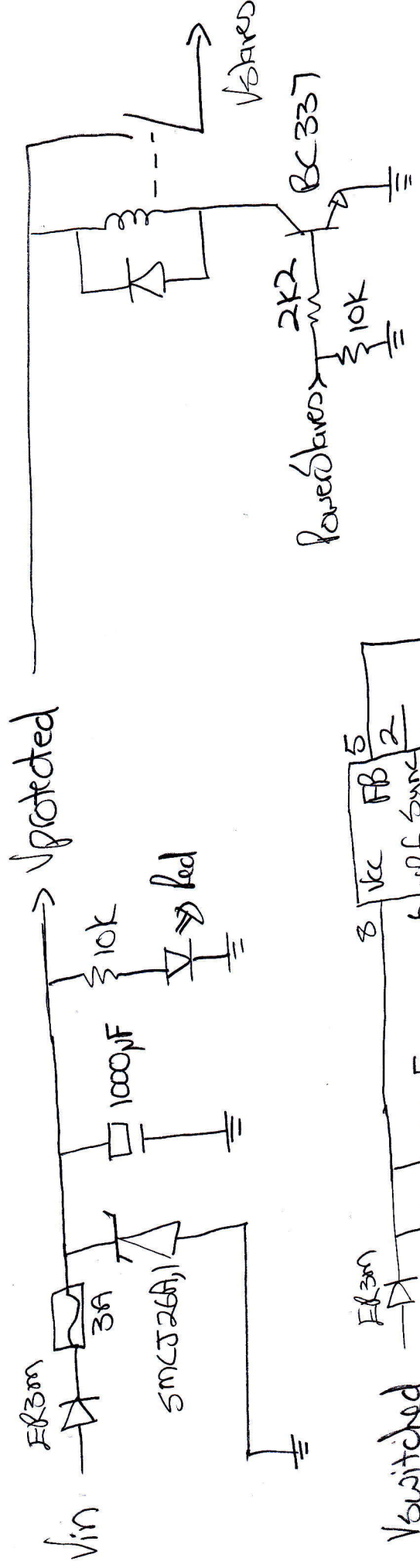
Keypad



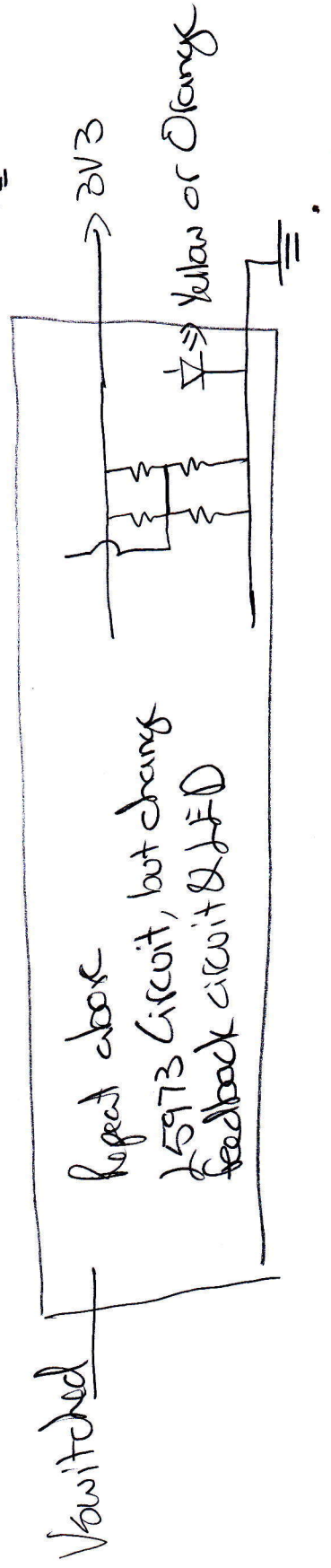
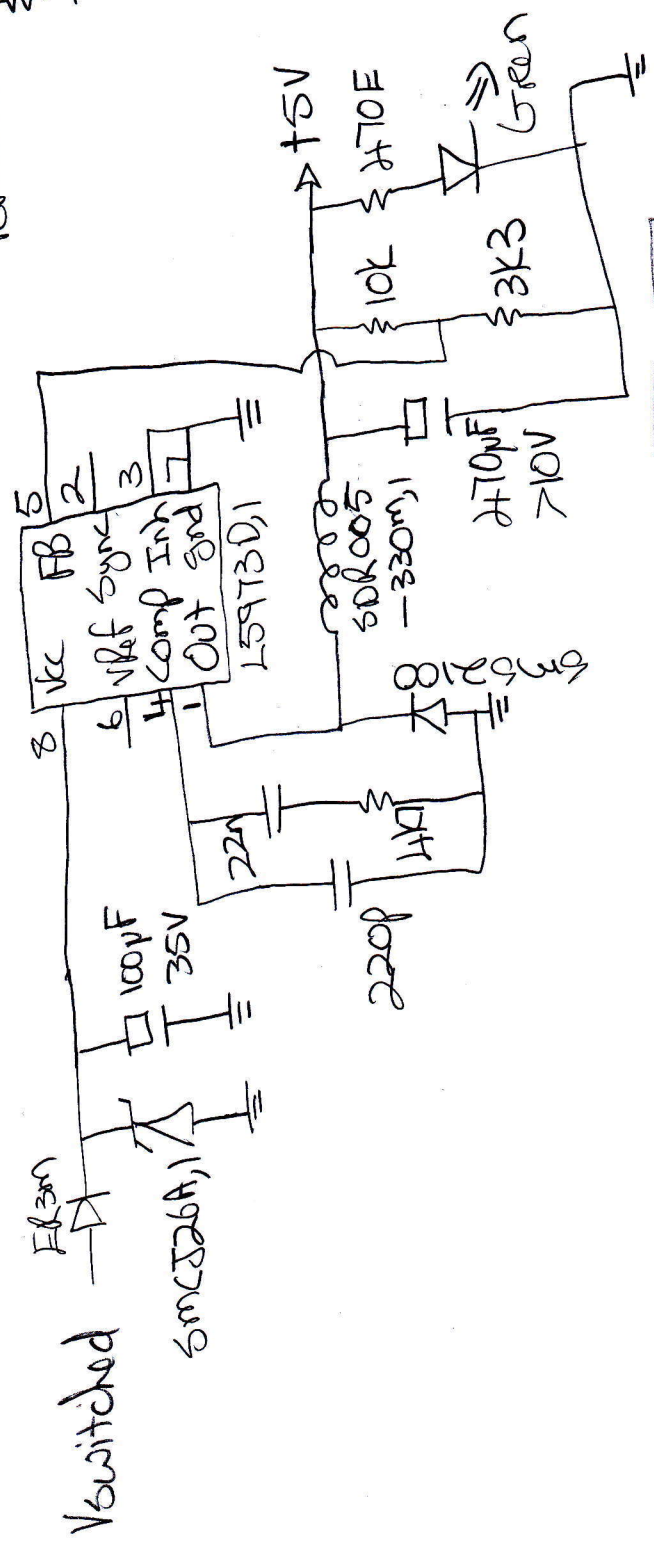
* T pin, 2.5mm decoder,
pin out to be advised.

11/03/2014

P2U (1 of 2)

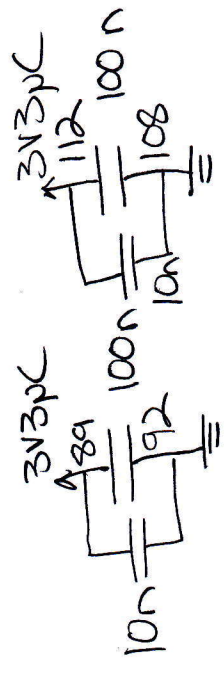
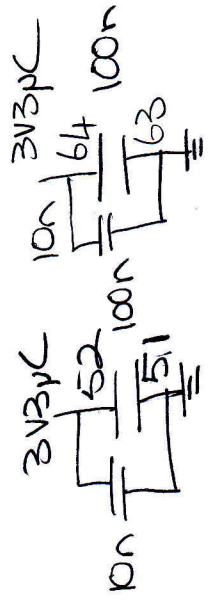
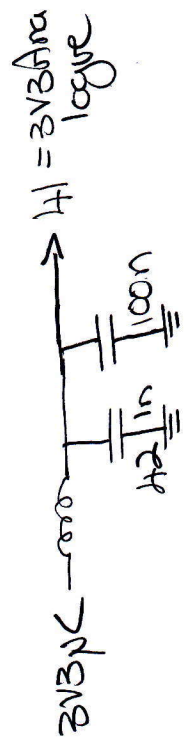
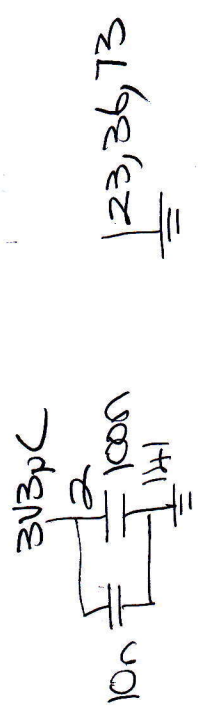
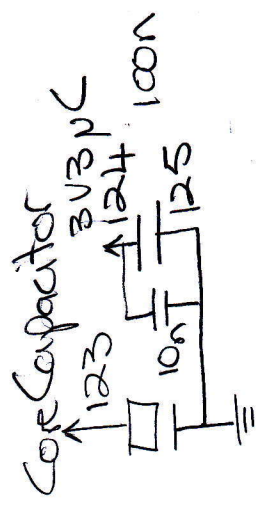
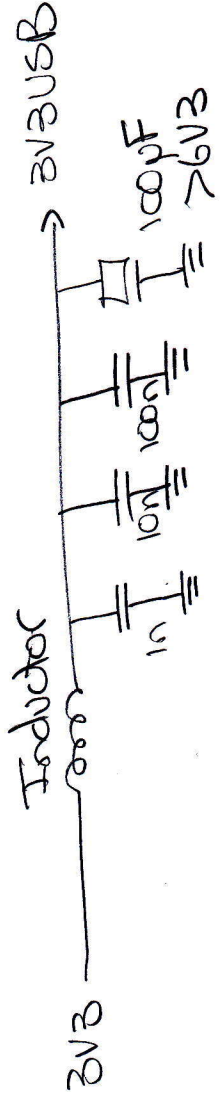
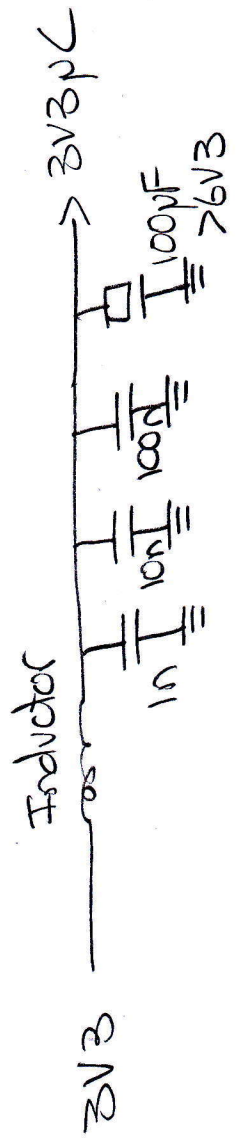


~~4/1/2012~~



Repeat above
L5973 circuit, but change
feedback circuit & LED

PSU (2 of 2)



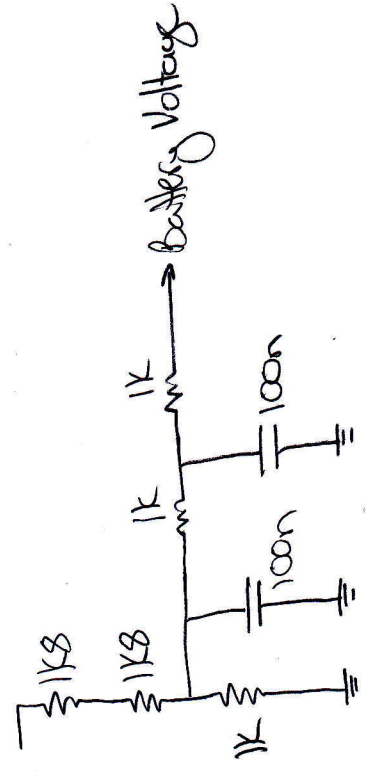
* keep power tracking as thick as possible

* mount these caps as close as possible to the relevant pins on the micro

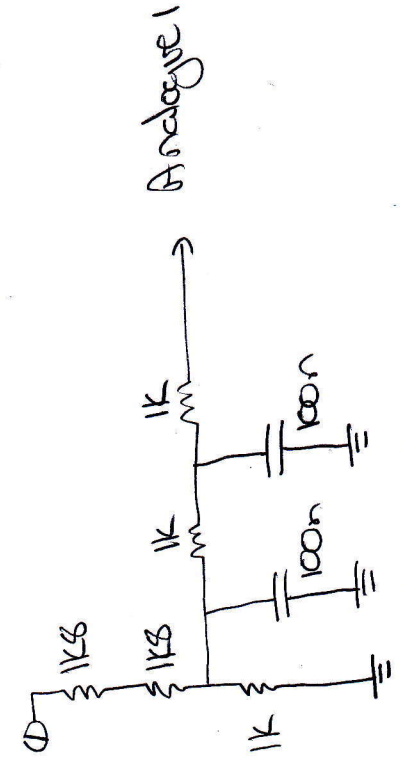
1/14/14
 [Signature]

Miscellaneous (1 of 2)

Switched



A1

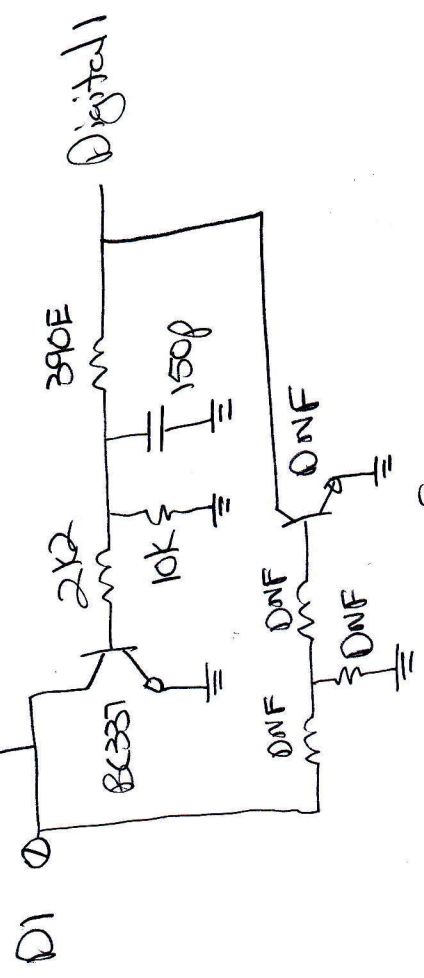


Repeat for:



Analog2

D1F

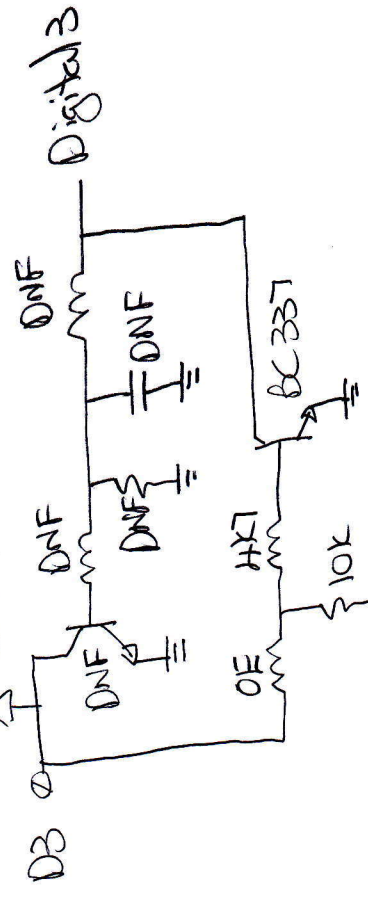


Repeat for:

Digital2



D3F



Repeat for:

Digital4

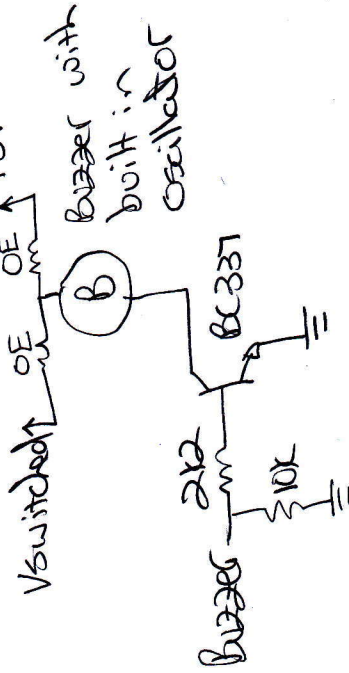


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Miscellaneous (2 of 2)

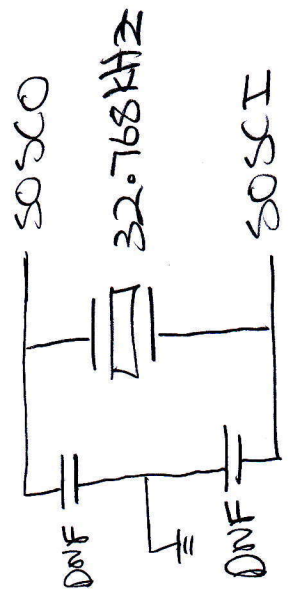
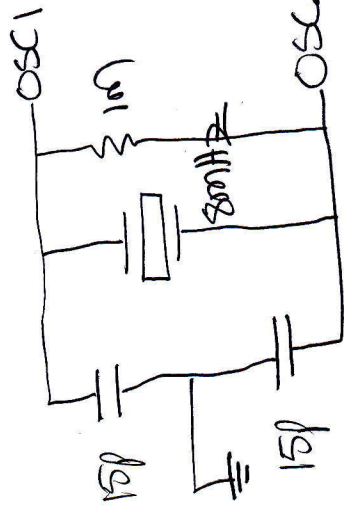
ICD = 6pin SIL (2,54mm)

- 1 MCLR — ICD-nMCLR
- 2 2V3PNC } 10K
- 3 GND — ICD-RGD
- 4 RGD — ICD-RGD
- 5 RGC — ICD-RGC
- 6 NK DNF OE ↑ +5V

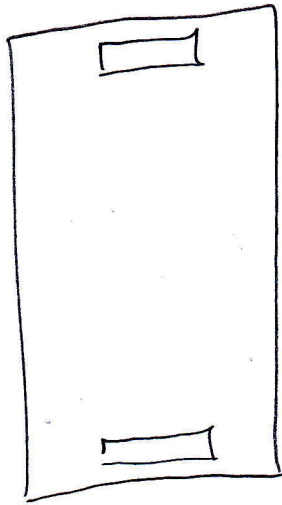


replace

* same side of PCB as device
 * trace track length = 12mm
 * GND guard ring required



Future Expansion



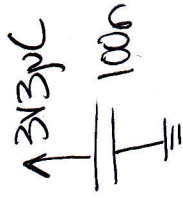
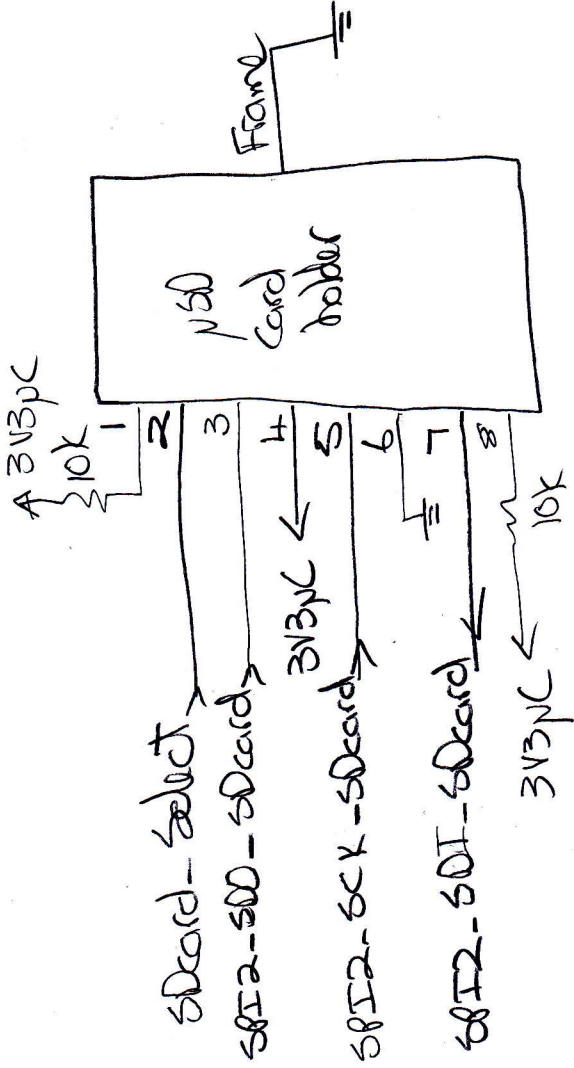
• split the signals provided Future - over 2 dual row headers, one on each side of the PCB, to facilitate stacking.

• remember BFE7 & BCL1 go to both the expansion port and the GPs module.

• bring in multiple instances of Vprotected, Vswitched, tsv, zvb and Gnd on both of these connectors.

17/04/2000
[Signature]

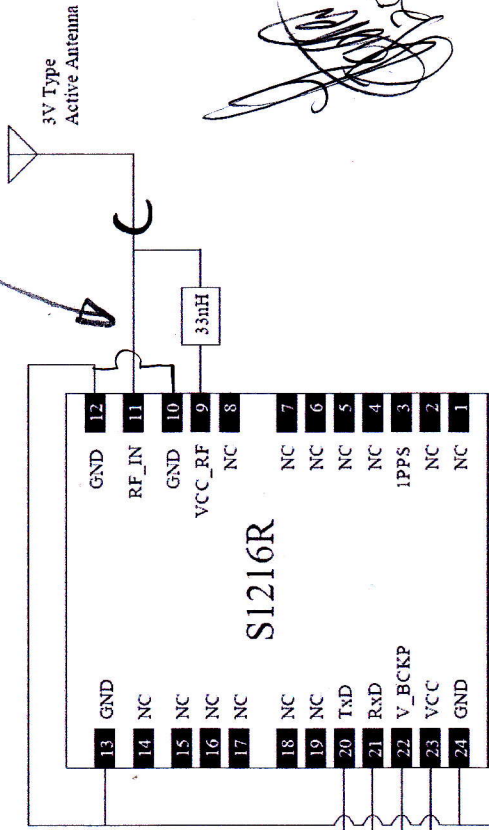
SD Card



12/24/2012
[Signature]

Keep
under
cand

12/10/2017
[Signature]



RX1-GPS
TX1-GPS
OE

