

9.5cm

USB

6.3cm

hole
1 3/4"

32mm

51mm

Power
Terminal
block

6cm

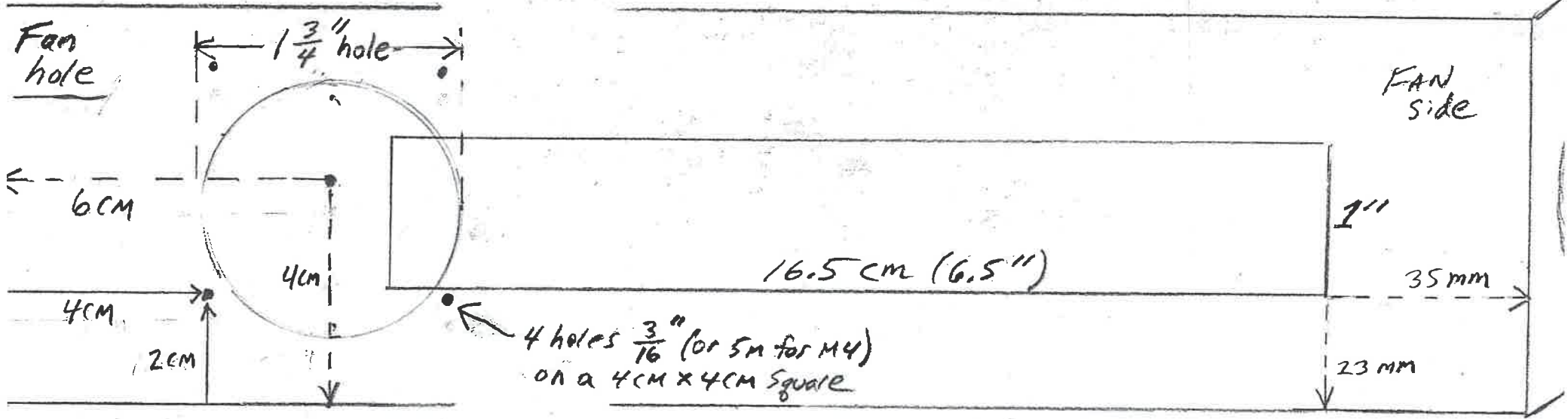
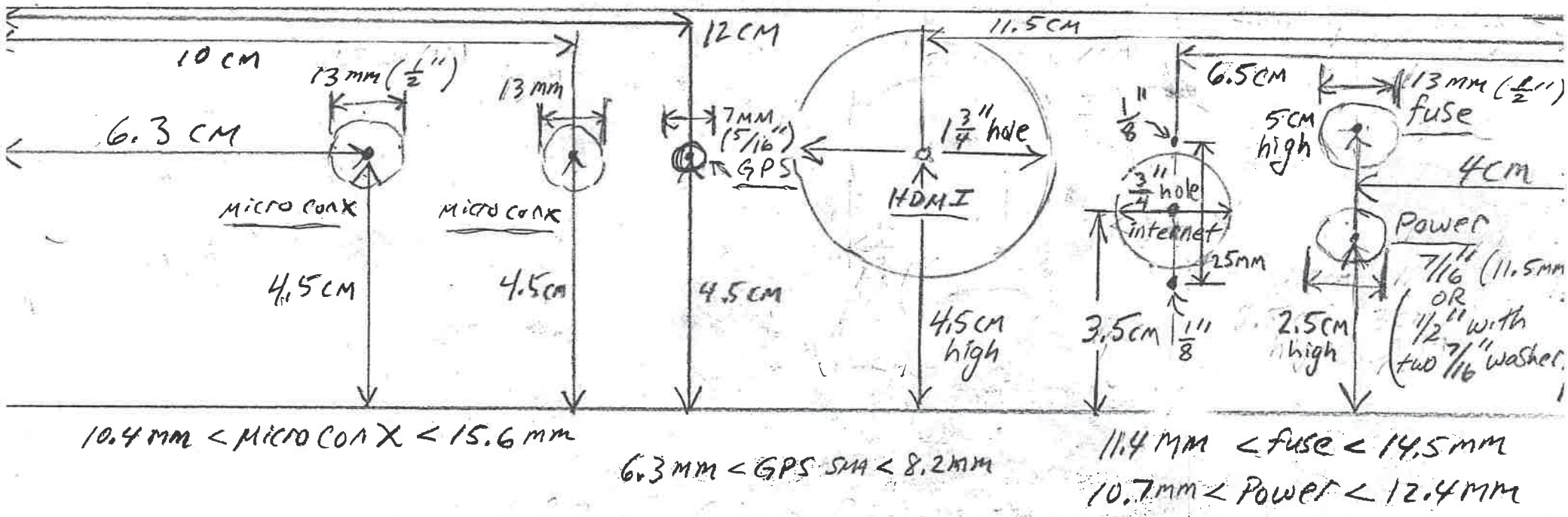
4.5cm

4 holes 1/8"
(or 3.4mm)
for M3 screws

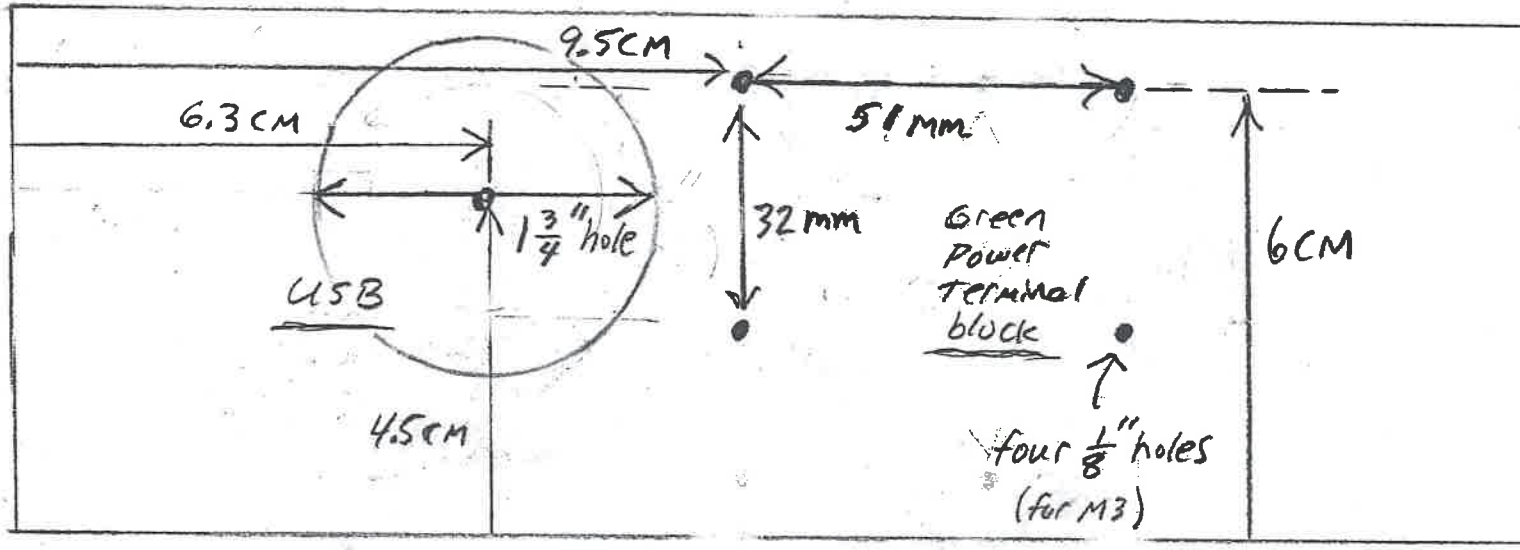
Drill bits needed: $\frac{5}{16}$ " (7mm), $\frac{1}{2}$ " (13mm), $\frac{3}{16}$ " (M4 hole), $\frac{1}{8}$ " (M3 & 4-40 holes)

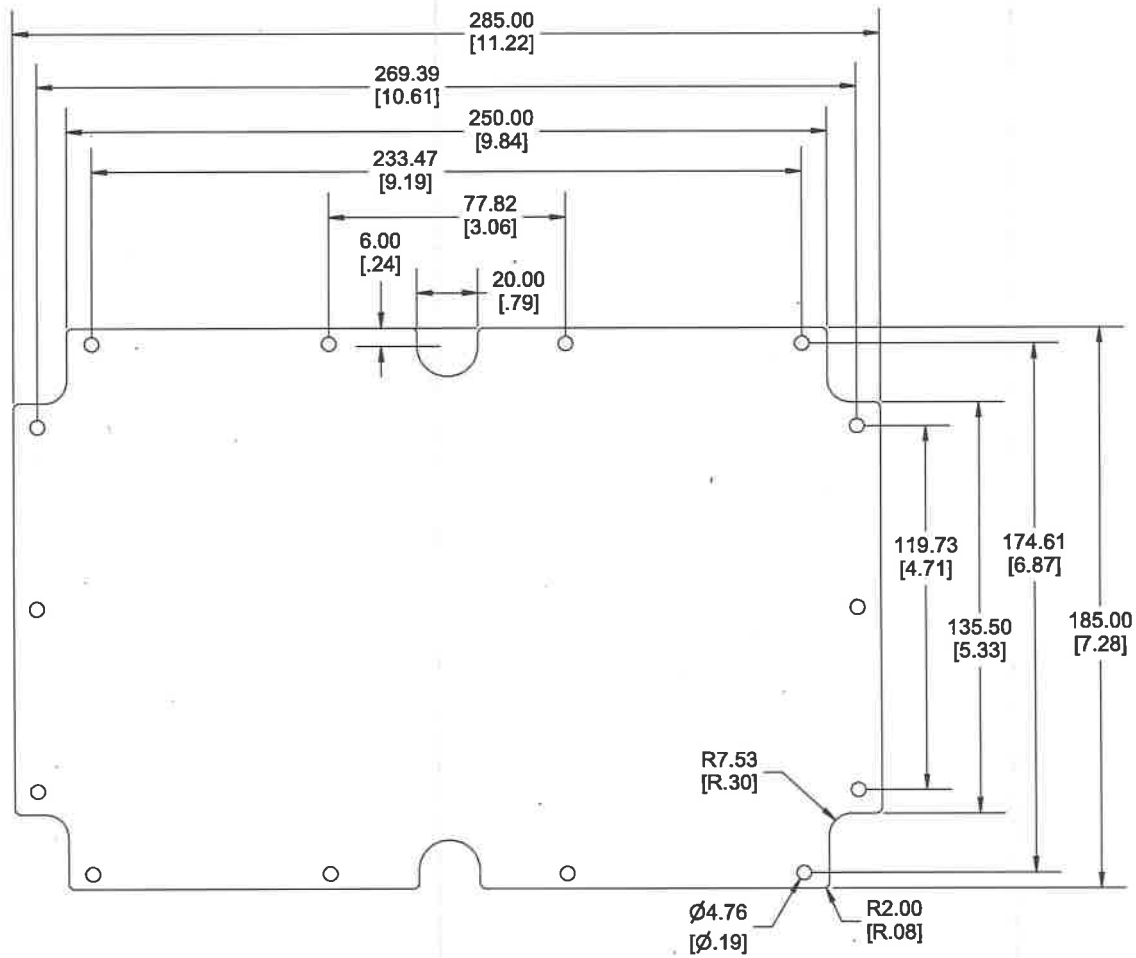
Circular hole cutting: $\frac{1}{4}$ " & $\frac{3}{4}$ " tools

power terminal block side



USB side



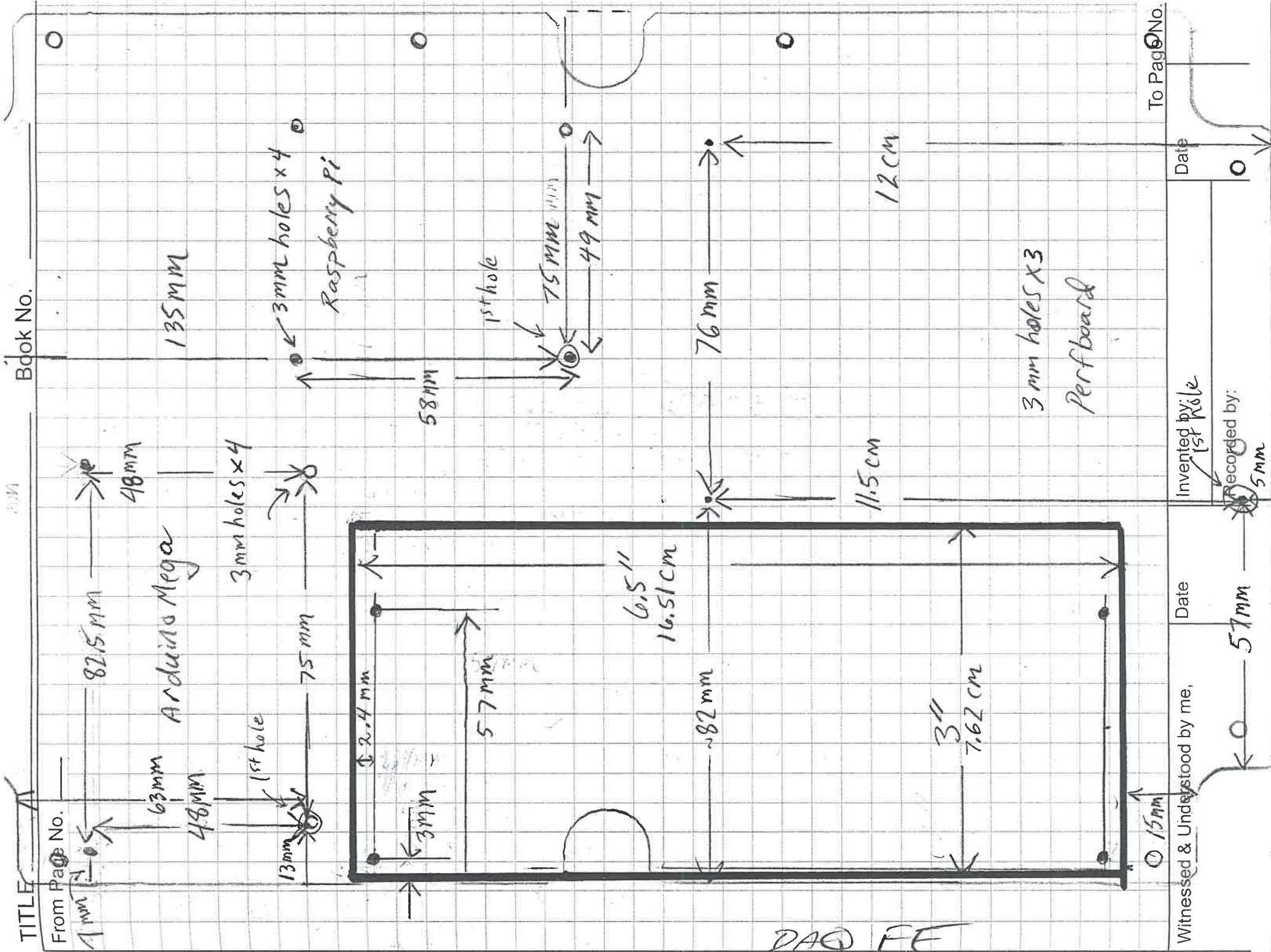


Enclosures can be Factory Modified (Milling, Drilling, Printing etc.)
 Contact Factory (modshop@hammondmfg.com) for quotes
 Solid models of this enclosure available in .stp or .x_t



**HAMMOND
 MANUFACTURING.**
1554X PANEL
www.hammondmfg.com

Dimensions:
 mm
 [inches]



DAQ FE

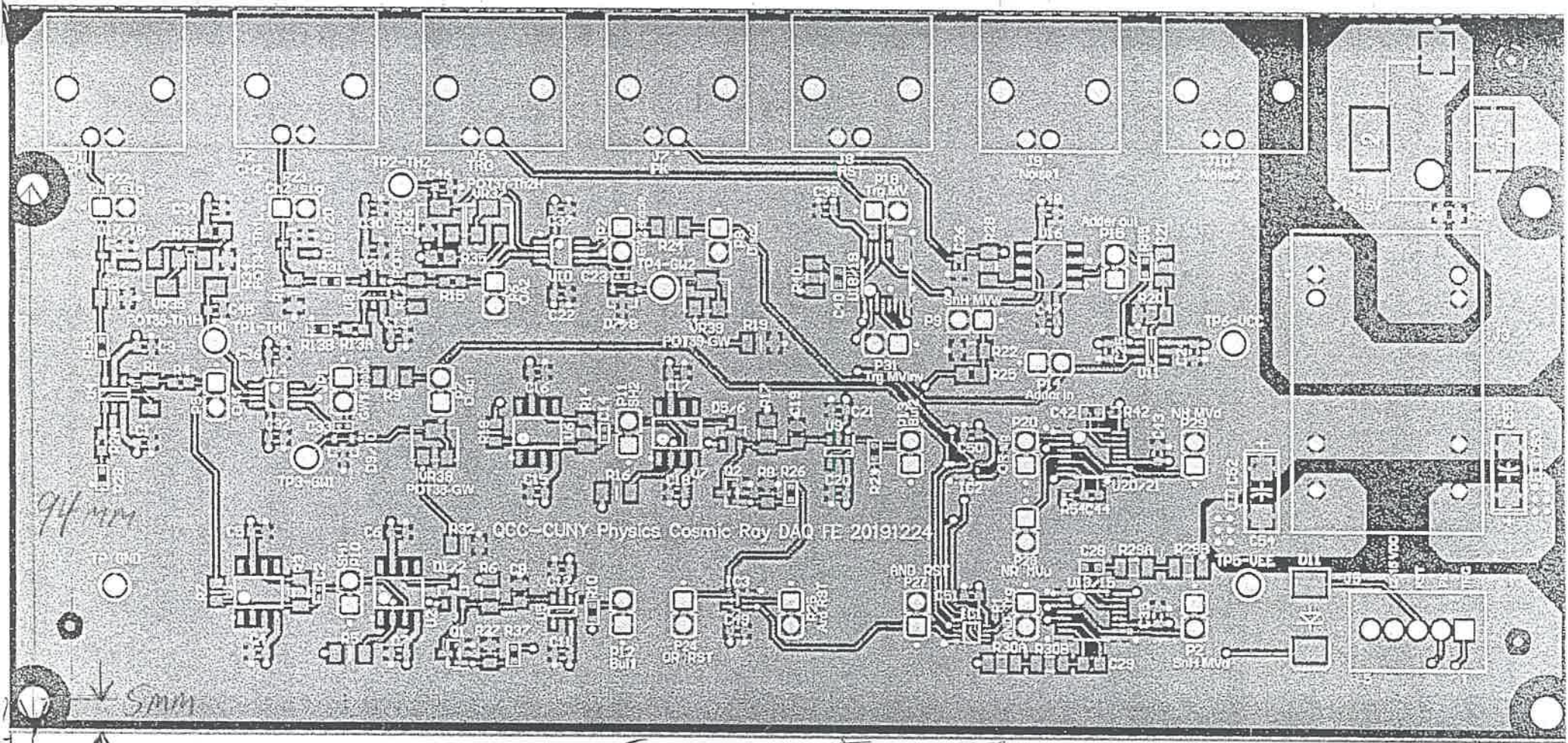
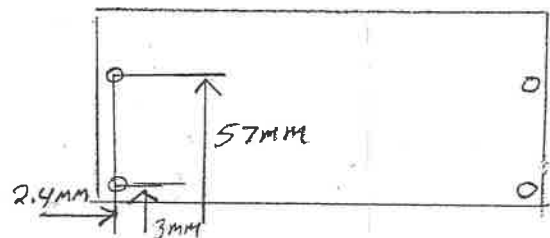
6.5" x 3"

6.5" = 16.51 cm

3" = 7.62 cm

DAQ FE

6.5"



94mm

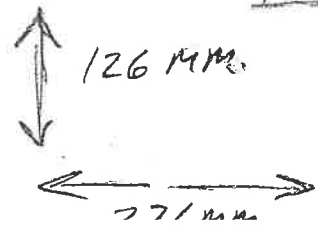
5mm

4mm

$$\frac{5}{126} \times 7.62 \text{ cm} = 0.30 \text{ cm}$$

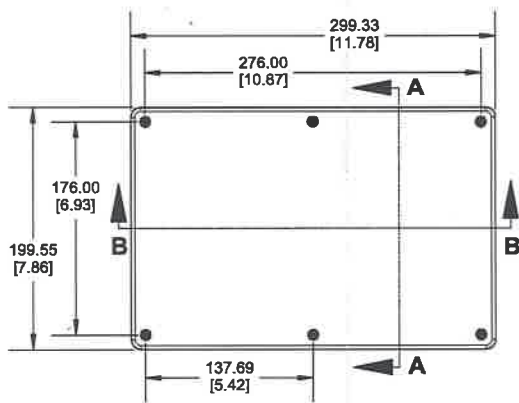
$$\frac{4}{271} \times 16.51 \text{ cm} = 0.24 \text{ cm}$$

$$\frac{94}{126} \times 7.62 \text{ cm} = 5.68 \text{ cm}$$

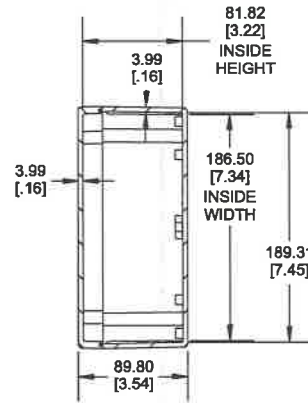


Photocopy PCB size 126mm x 271mm

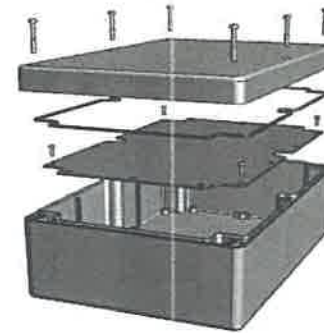
4mm



TOP VIEW

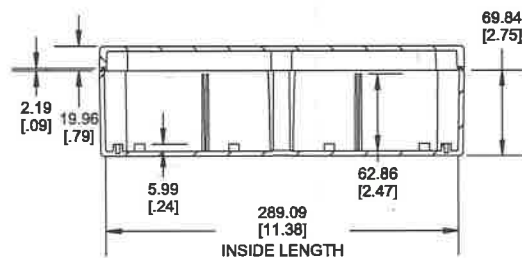


SECTION A-A
END VIEW

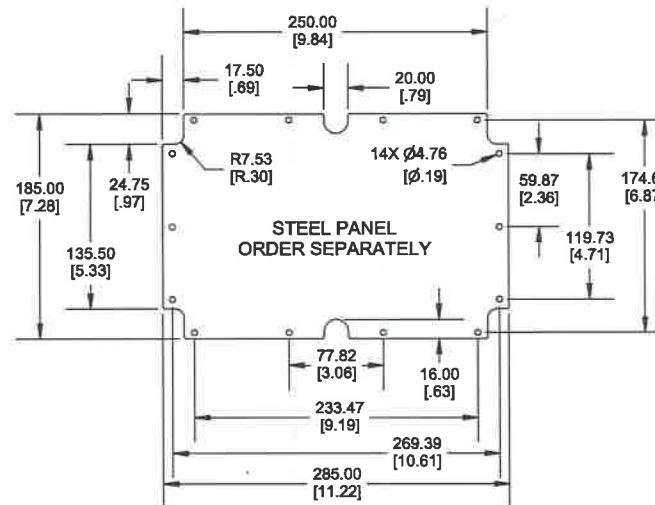


POLYCARBONATE
VERSION ONLY
 US LISTED
 FILE #E65324
 TYPE 4,4X,6,6P

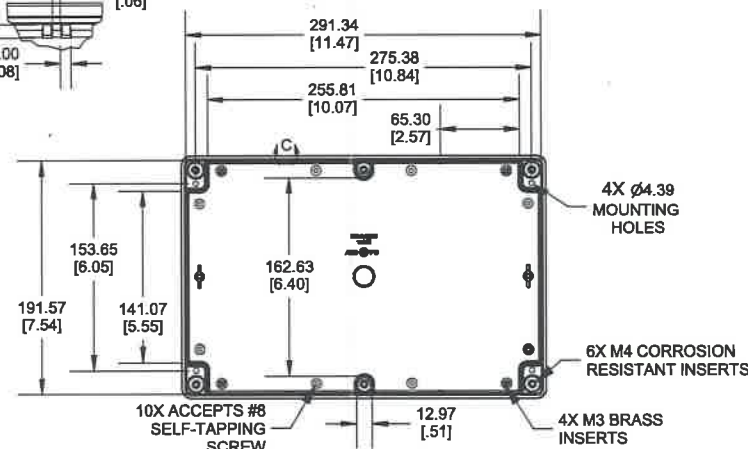
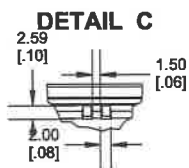
Enclosures can be Factory Modified (Milling, Drilling, Printing etc.)
 Contact Factory (modshop@hammfg.com) for quotes
 Solid models of this enclosure available in .stp or .x_t
 (Part number and text placement/orientation on our products are subject to change,
 we do not recommend using them as a locating reference for modification purposes)



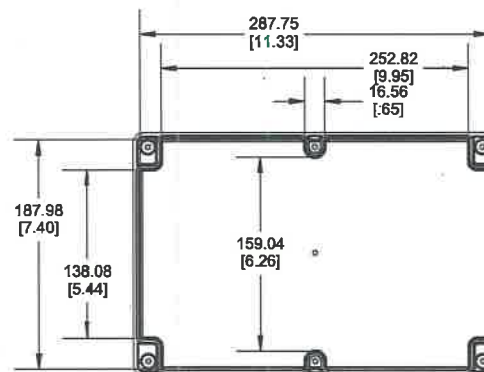
SECTION B-B
SIDE VIEW



STEEL PANEL
ORDER SEPARATELY



INSIDE BOX



INSIDE LID

Dimensions:
mm
[inches]

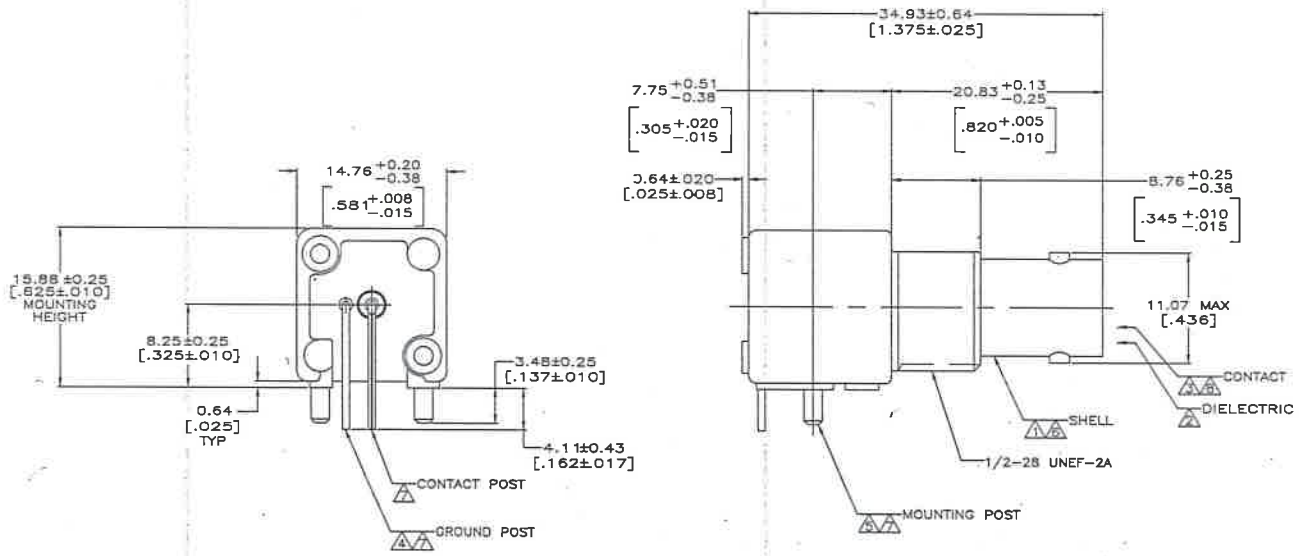
NOTE

Purchased assembly includes box, lid, 6 cover screws, and preformed silicone gasket.
 General Purpose ABS version is not UL approved. (Matl UL94 - HB)
 Polycarbonate version is UL 508A approved. (Matl UL94 - 5VA @ 3mm)

Recommended Cover screw torque – 8-9 lbf-in (90-100 cN-m)

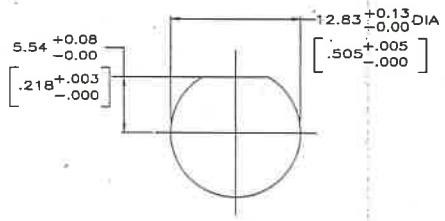
1554X	
1554X Regular Enclosure	
General Purpose ABS RAL-7035	1554XGY
Polycarbonate RAL-7035	1554X2GY
1554X Clear / Smoke Lid Enclosure	
Polycarbonate Box / Clear Polycarbonate Lid	1554X2GYCL
Polycarbonate Box / Smoke Polycarbonate Lid	1554X2GYSL
ACCESSORIES	
Steel Inner Panels	1554XPL
Steel Panel / P.C. Board Screw [M3-0.5 x 8mm Plated] (Pkg 100)	1591MM100
Steel Panel / P.C. Board Self Tapping Screw [#8 X 5/16" (6.4mm)]	SC554-100
Stainless Steel Cover Screws [M4-0.7 X 25mm] (Pkg 50)	SC583-50
Silicone Pre-formed Gasket Black (Pkg 2)	1554XGASKET

 **HAMMOND
MANUFACTURING**
1554X
 www.hammondmfg.com

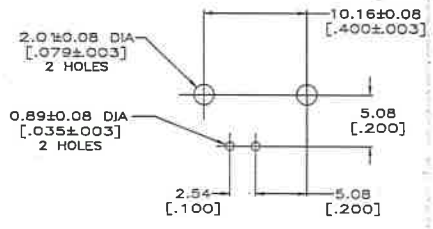


- ▲ ZINC PER QQ-Z-363.
- ▲ POLYMETHYLPENTENE PER ASTM D 1238.
- ▲ PHOSPHOR BRONZE PER QQ-B-750.
- ▲ BRASS PER ASTM B 453.
- ▲ BRASS PER ASTM B 16.
- ▲ NICKEL PLATE PER QQ-N-290, 3.81µm [.000150] MINIMUM THICK.
- ▲ TIN PLATE PER ASTM B 545, 3.81µm [.000150] MINIMUM THICK.
- ▲ GOLD PLATE PER ASTM B 488, 0.76µm [.000030] MINIMUM THICK.
- 9. SEE INSTRUCTION SHEET 408-2769.

panel hole 12.83 mm (.505")
 ↓
 male BNC connector MAX 0.571"



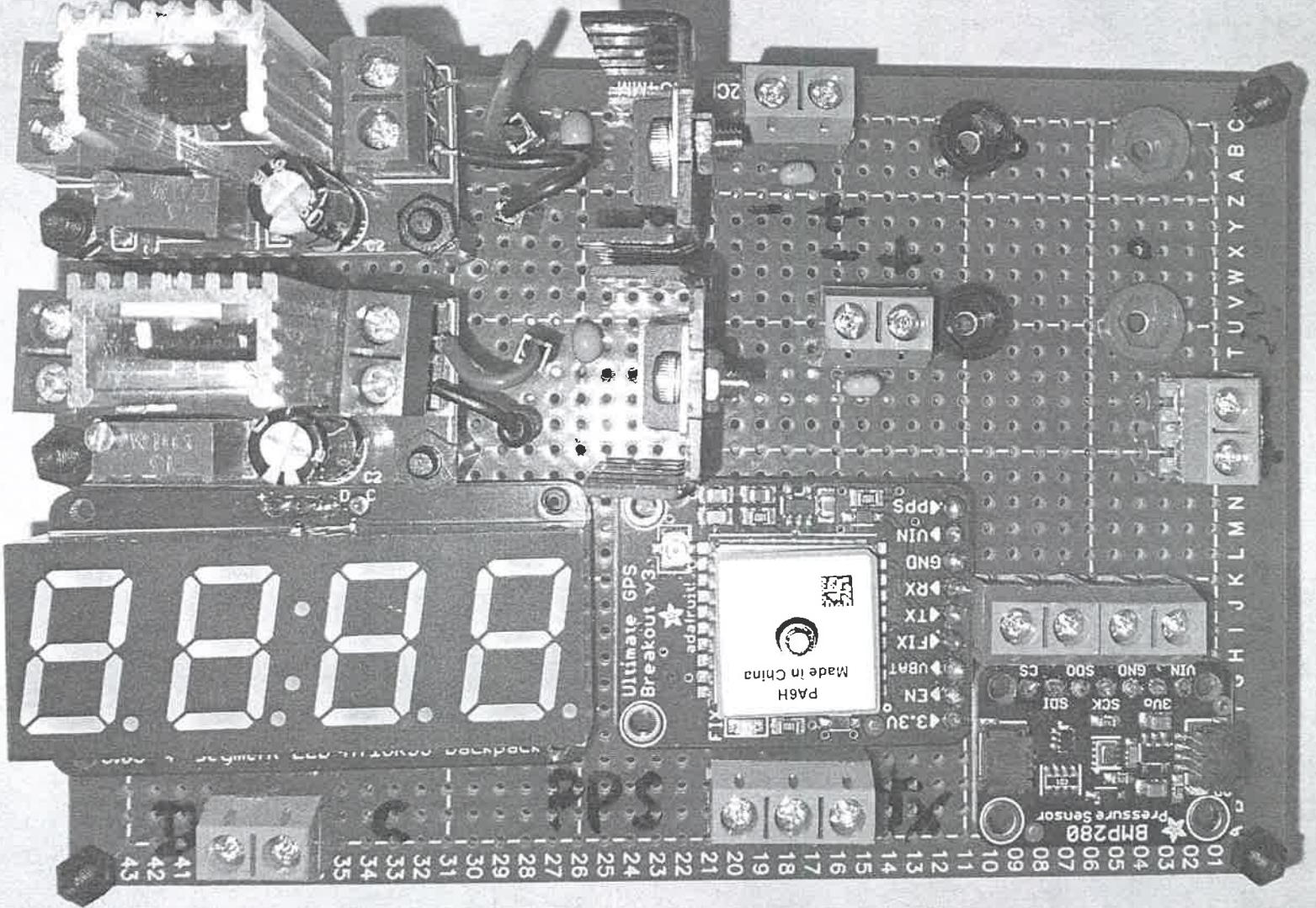
RECOMMENDED PANEL CUTOUT



PCB CONFIGURATION

5227677-1
 PART NUMBER

THIS DRAWING IS A CONTROLLED DOCUMENT.		REVISED PER 522-11-000533	DATE 11/16/11	BY RJK/HMP
DESIGNED BY	DESIGNED DATE	DESIGNED BY	DESIGNED DATE	DESIGNED BY
100-12075	100-12075	100-12075	100-12075	100-12075
FILE	DATE	REVISED BY	REVISED DATE	REVISED BY
A1	00779	5227677		
CUSTOMER DRAWING		SCALE 4:1	SHEET 1	TOTAL 1



PA6H
Made in China

Ultimate v3
Breakout
SD9 breakout

BMP280
Pressure Sensor

4-digit 7-segment display showing 00.00

01
02
03
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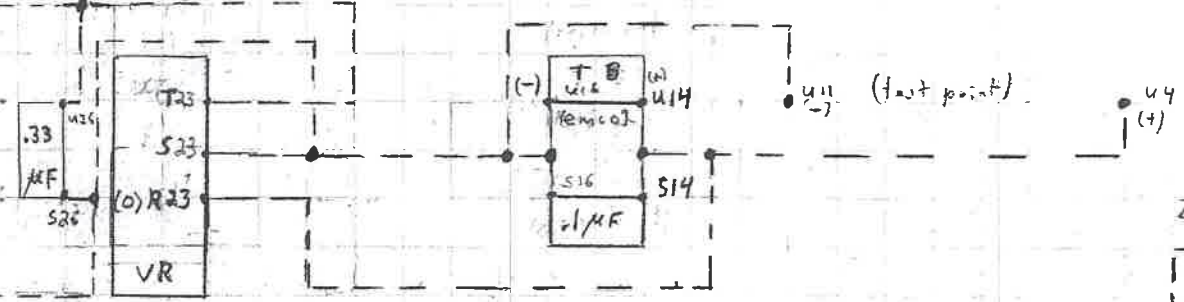
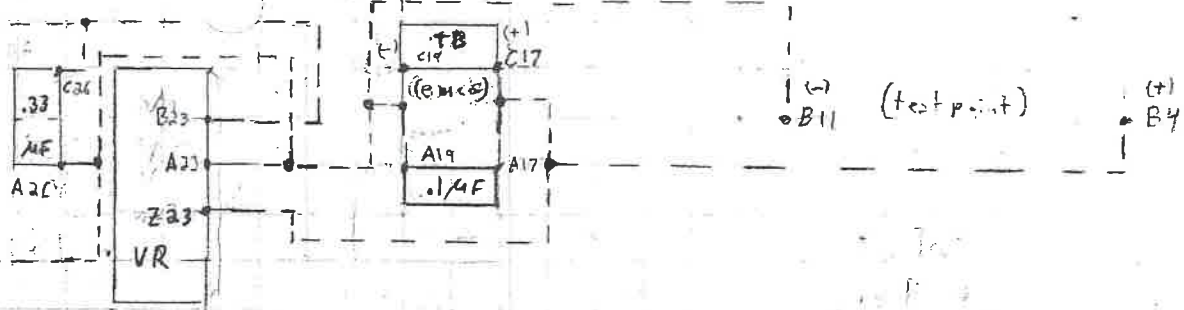
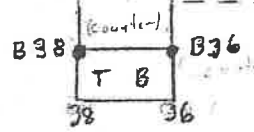
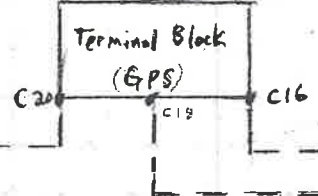
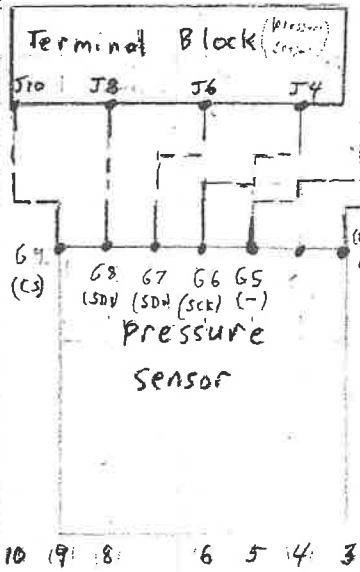
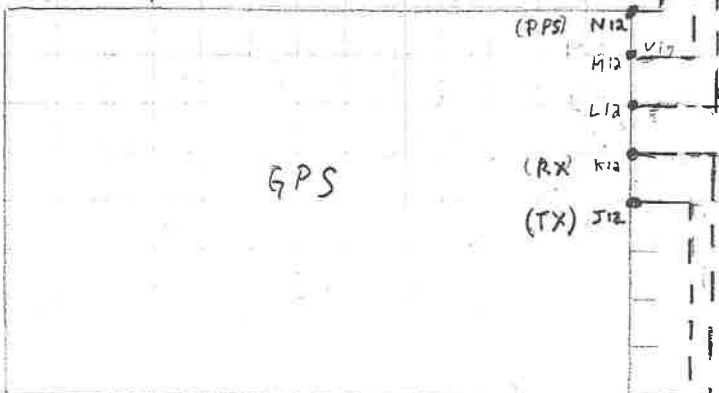
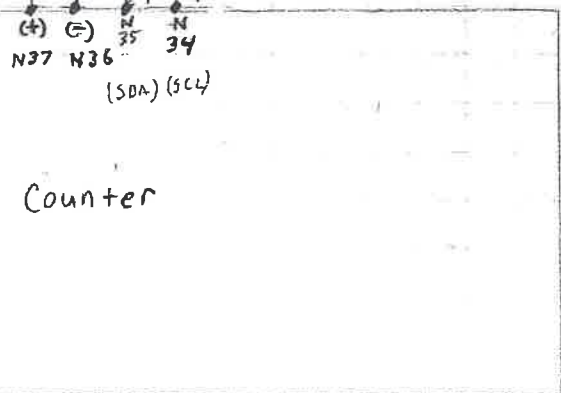
Current Layout 06/17
 (does not include any wiring)

DAQ
Perfboard

(0001) LM317(+) B28 (+)
 3/29/18,
 4/3/18
 LM317(-) Y28 (-)

LM 317
Drill
Holes

(LM317 +) T28 (+)
 (LM317 -) Q28 (-)



E
B
A
Z
Y
O
W
V
U
T
S
R
Q
P
O
N
M
L
K
J
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D
C
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A

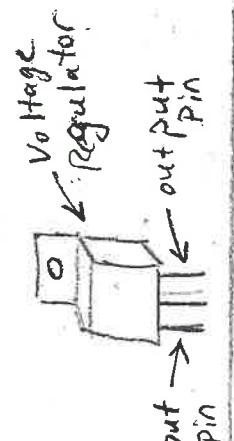
28 26 25 23 19 16

45 42 40 38 36 33 30 25 20 15 12 10 9 8 6 5 4 3 2

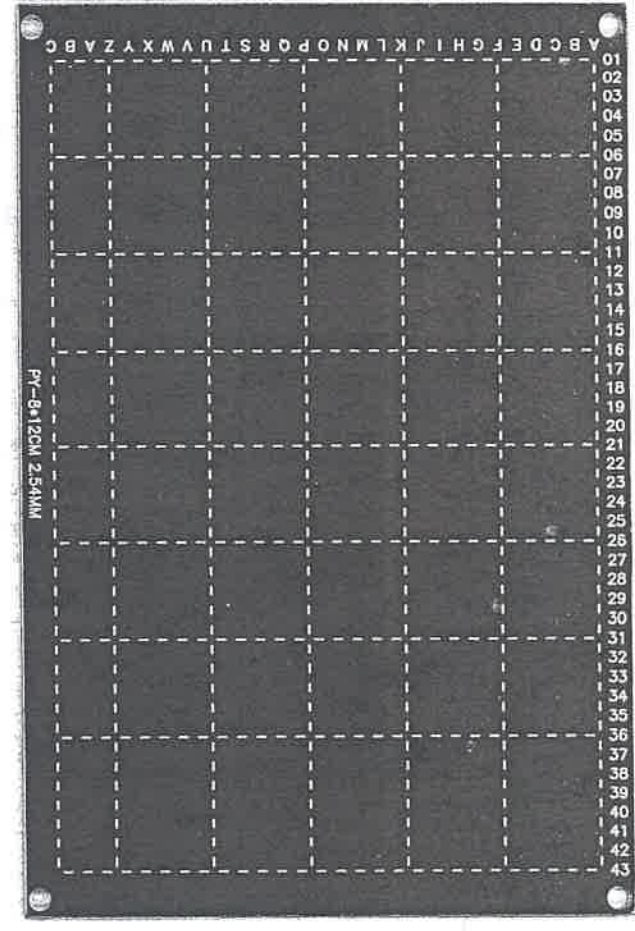
1 Drill four 5mm holes for test points at 11B2 4B2 11U 4U
 Black Red Black Red
 2 Drill four 2.5mm holes for LM317S:
 43X 31X 43P 31P

3 Solder four 4cm wires to board: Red: 28B2 & 28T Black 28Y & 28Q
 4 Capacitors #334 0.33µF 26C2 26A2 #104 0.1µF 19A2 17A2
 5 Capacitors 0.33µF 26U 26S 0.1µF 16S 14S

6 Voltage Regulator: 23B2 23A2 23Z
 7 Voltage Regulator 23T 23S 23R

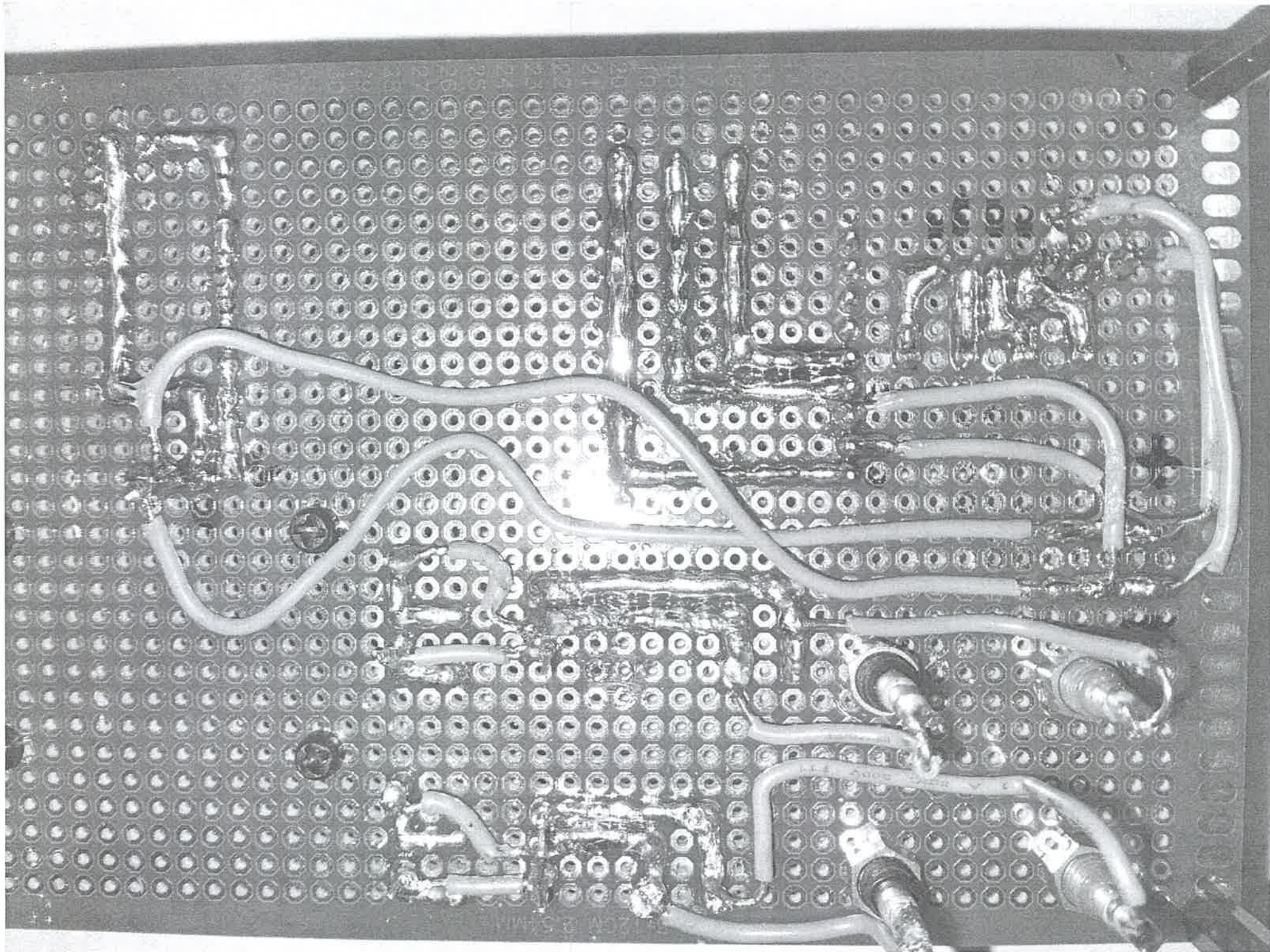


8 Terminal blocks for Voltage Regulators 17C2 19C2
 9 Terminal block for Voltage Regulator 14U 16U
 10 LCD Counter 34N 36N 37N Terminal block 36B1 38B1
 11 GPS 12F to 12N Terminal block 16C1 18C1 20C1
 12 Temp-pressure sensor 3G to 9G Terminal block 4J 6J 8J 10J
 13 Terminal block for 5V power 2P 2R



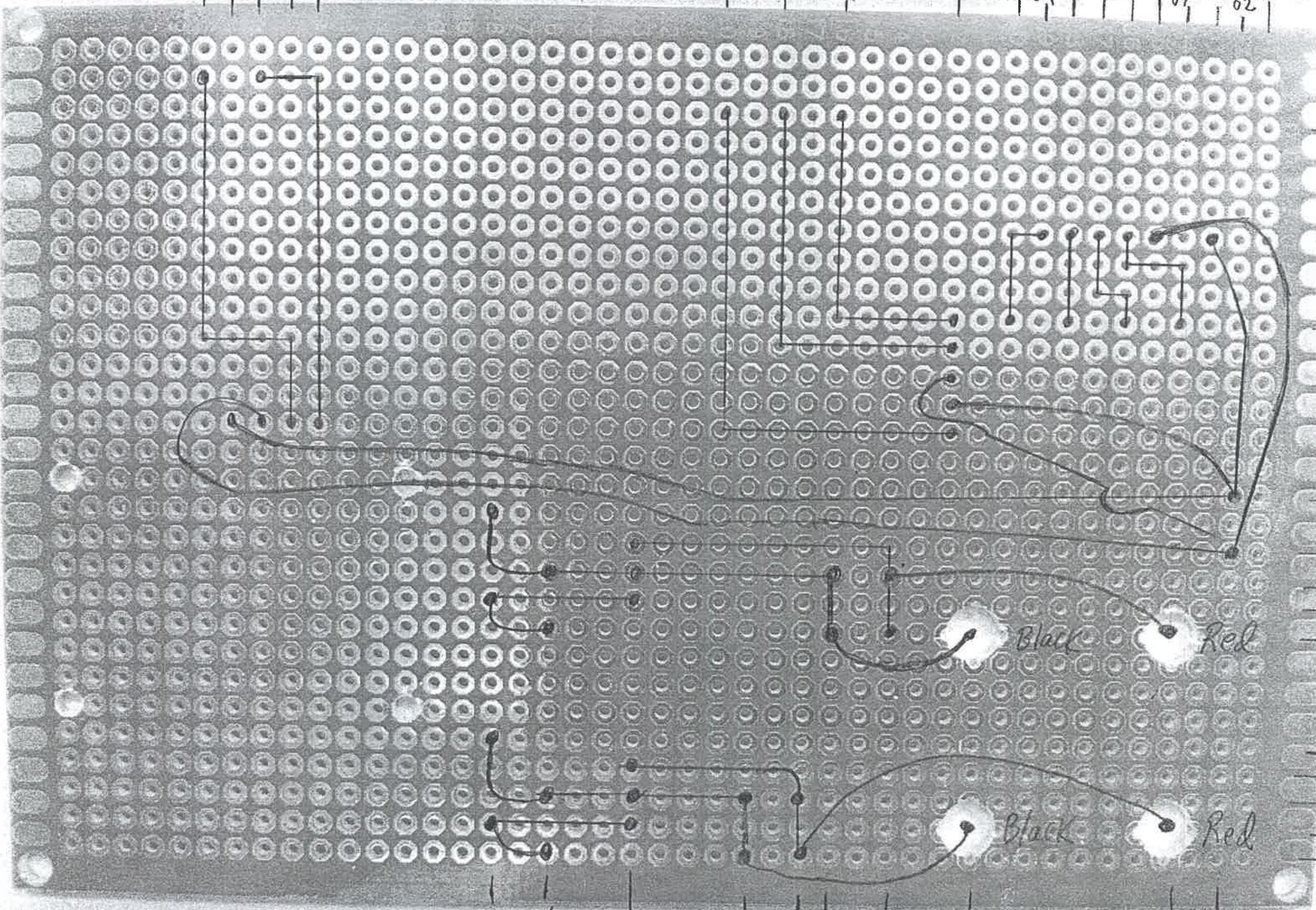
Hole spacing 2.54mm
 8cm

← A2 B2 C2
 ← A1 B1 C1
 12 cm



38 37 36 35 34

20 18 16 12 10 09 08 07 06 05 04 03 02 01



28 26

23

19

17

16

14

11

04

02

Black

Red

Black

Red

DAQ perfboard solder connections

38B₁ - 35N
36B₁ - 34N
36N - 02R
37N - 02P
20C₁ - 12N
18C₁ - 12K
16C₁ - 12J
12L - 02R
12M - 02P
9G - 10J
8G - 8J
7G - 6J
6G - 4J
5G - 2R
3G - 2P

28Q - 26S - 23S - 16S - 16U - 11U
23R - 14S - 14U - 4U
28T - 23T - 26U
28Y - 26A₂ - 23A₂ - 19A₂ - 19C₂ - 11B₂
23Z - 17A₂ - 17C₂ - 4B₂
28B₂ - 23B₂ - 26C₂

Standoff sizes

Raspberry Pi 4CM

DAQ Perfboard 2CM

Arduino 1CM

LM317 5 1CM

DAQ FE 1CM

Diode connects V_{out} to V_{in} (1N4001) - prevents C_2 from discharging through LM317

Resistor connects output pin of LM317 to 3rd pin on the pot
OK if 180 Ω to 240 Ω \rightarrow put 200 Ω resistor in parallel - gives a $R_{eq} = 140\Omega$

