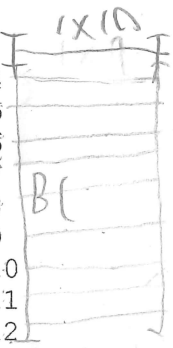


SERIAL TABLE

DB9F	BS2-IC
2	1
3	2
4	3
5	4

I/O LINE TABLE

HD	DB-15	FUNCTION
1	1	V+ IN
2	2	GND
3	3	N.C.
4	4	I/O 4
5	5	I/O 5
6	6	I/O 6
7	7	I/O 7
8	8	I/O 8
9	9	I/O 9
10	10	I/O 10
11	11	I/O 11
12	12	I/O 12
13	13	I/O 13 S/CZ
14	14	I/O 14 TX
15	15	I/O 15 RX





1-800-344-4539



**Web ID** 2266830 **Access ID** 15447 **Salesorder Number** 11042272

**Submitted** 12/26/02 11:37:08

**Your order has been submitted.**

**Shipping Address**

ANDREW SELTZMAN  
4604 HIDDENBROOK DR.  
RALEIGH, NC 27609  
USA  
Email SELTZMAN@MINDSPRING.COM  
Telephone 876-6556

**Billing Address**

TATIANA SELTZMAN  
4604 HIDDENBROOK DR.  
RALEIGH, NC 27609  
USA

**Shipping Method** United States Postal Service Priority Mail

**Payment Method** Visa

**Customer Number**

**Purchase Order**

**Name on Card** CITIBANK AADVANTAGE

**Backorder Shipping** United States Postal Service Priority Mail

**Backorder Hold Days** 30

Index	Quantity	Part Number	Description	Customer Reference	Backorder Quantity	Unit Price USD	Extended Price USD
1	2	BBA-519-A-ND	MODULE RF AMP HI-POWER BROADBAND		0	15.00000	\$30.00
2	4	ANT-916-CW-RCR-ND	ANTENNA 916MHZ RA 1/4 WHIP RPSMA		0	6.39000	\$25.56
3	5	CONREVSMA004-ND	RECEPT RPSMA FRT MNT BULKHEAD		0	3.54000	\$17.70
4	2	TXM-900-HP-II	TRANSMITTER RF 900MHZ 8-CHANNEL		0	31.29000	\$62.58
5	2	RXM-900-HP-II-ND	RECEIVER RF 900MHZ 8-CH PACK		0	46.90000	\$93.80

Fields marked unknown cannot be determined at this time.

A \$5 handling charge is added to your order if the subtotal is less than \$25.

6.5 percent sales tax is added to your order if the shipping address is in Minnesota.

**International orders** (excluding Canada) will have a \$6.00 processing fee added to your order.

All duties and taxes are the responsibility of the customer.

These commodities, technology or software will be exported from the United States in accordance with the Export Administration regulations. Diversion contrary to U.S. law prohibited.

<b>Subtotal</b>	\$229.64
<b>Handling</b>	\$0.00
<b>Shipping</b>	unknown
<b>Sales Tax</b>	\$0.00
<b>Total</b>	unknown

**Order Notes**

N/A

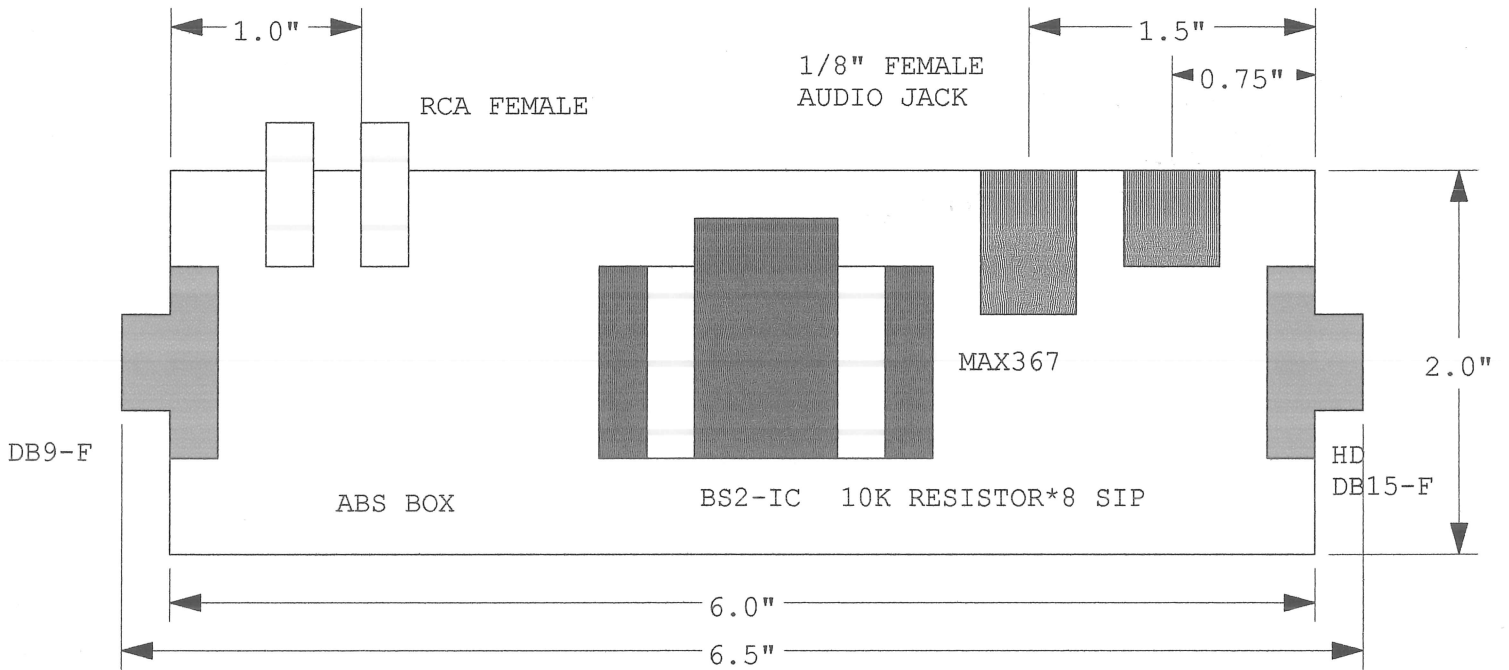
Click [here](#) to contact our Internet Ordering Department with questions or comments.

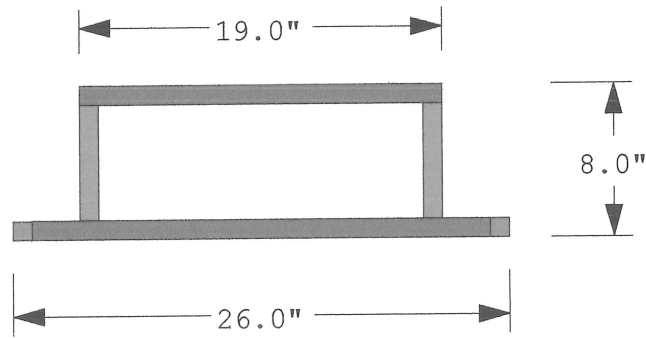
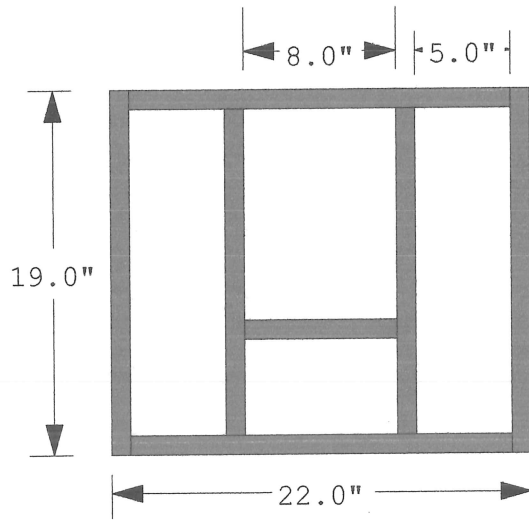
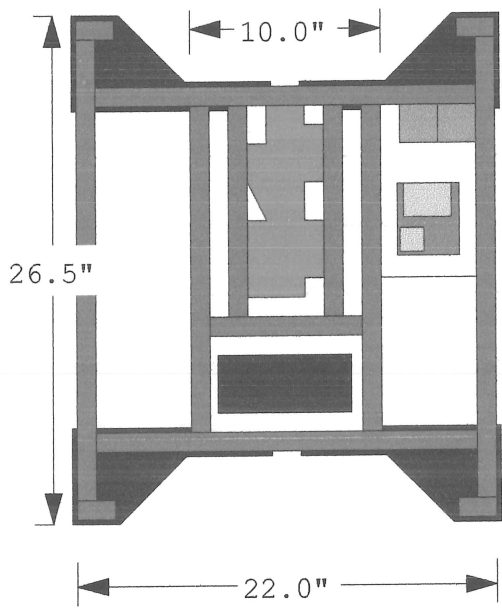
[Ordering Homepage](#) [Digi-Key Homepage](#)

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Email: [webmaster@digkey.com](mailto:webmaster@digkey.com)

5.5MM OD  
2.1MM ID  
COAX POWER





# Packing List

SALES ORDER NO: 278138 REPRINT  
 DATE: 09/21/2001 17:24  
 PAGE: 1

**Vendor:**

CAROLINA FLUID COMPONENTS  
 9309 STOCKPORT PLACE

CHARLOTTE NC 28273-

**Ship To:**

0021531  
 ANDREW SELTZMAN  
 4604 HIDDEN BROOK DRIVE

RALEIGH NC 27609-

VENDOR PO: F00130/842170

REFERENCE NO.	SHIP VIA	FREIGHT	FOB	SHIP DATE
SEE BELOW	UPS	Prepaid	COLUMBIA CITY, IN	09/21/2001

PART NUMBER DESCRIPTION	CUSTOMER P/N	BIN NUMBER	QUANTITY ORDERED	U/M	QUANTITY SHIPPED	QUANTITY B/O	TOTAL WEIGHT
3393 1/4-20 X 1/2" BHSCS, ECON T-NUT CONTAINS; (1) 3061; (1) 3382		PP999	150	EA	150		

discrepancies must be reported within 14 days.

**TOTAL WEIGHT** 3.000

**THANK YOU FOR YOUR BUSINESS!**  
**80/20 Inc.**

SD2

# Packing List

SALES ORDER NO: 273622 REPRINT  
 DATE: 08/29/2001 9:24  
 PAGE: 1

**Vendor:**

CAROLINA FLUID COMPONENTS  
 9309 STOCKPORT PLACE  
 CHARLOTTE NC 28273-

**Ship To:**

0021531  
 ANDREW SELTZMAN  
 4604 HIDDEN BROOK DRIVE  
 RALEIGH NC 27609-

VENDOR PO: F96169/842170

REFERENCE NO.	SHIP VIA	FREIGHT	FOB	SHIP DATE
SEE BELOW	UPS	Prepaid	COLUMBIA CITY, IN	08/29/2001

PART NUMBER DESCRIPTION	CUSTOMER P/N	BIN NUMBER	QUANTITY ORDERED	U/M	QUANTITY SHIPPED	QUANTITY B/O	TOTAL WEIGHT
TAG #:ANDREW SELTZMAN							
1010		A001A	552.000	IN	4		24.288
1" X 1" T-SLOTTED EXTRUSION							
	4.000 /	26.00			2		
	2.000 /	32.00			4		
	14.000 /	8.00			4		
	4.000 /	20.00			2		
	2.000 /	14.00			2		
	2.000 /	22.00			4		
	4.000 /	11.00			-		
	1.000 /	30.00			-		
	1.000 /	34.00			-		
	1.000 /	12.00			-		
7005		Z001	35	EA	35		0.000
CUT TO LENGTH 1010 1012							
4115		J002C	58	EA	58		3.480
10 S 4 HOLE INSIDE CORNER BRACKET							
<b>TOTAL WEIGHT</b>							<b>CONTINUED</b>

Any discrepancies must be reported within 14 days.

**THANK YOU FOR YOUR BUSINESS!**  
**80/20 Inc.**

SU2

# Packing List

SALES ORDER NO: 273622 REPRINT  
 DATE: 08/29/2001 9:24  
 PAGE: 2

**Vendor:** CAROLINA FLUID COMPONENTS  
 9309 STOCKPORT PLACE  
 CHARLOTTE NC 28273-

**Ship To:** 0021531  
 ANDREW SELTZMAN  
 4604 HIDDEN BROOK DRIVE  
 RALEIGH NC 27609-

VENDOR PO: F96169/842170

REFERENCE NO.	SHIP VIA	FREIGHT	FOB	SHIP DATE
SEE BELOW	UPS	Prepaid	COLUMBIA CITY, IN	08/29/2001

PART NUMBER DESCRIPTION	CUSTOMER P/N	BIN NUMBER	QUANTITY ORDERED	U/M	QUANTITY SHIPPED	QUANTITY B/O	TOTAL WEIGHT
3393 1/4-20 X 1/2" BHSCS, CONTAINS; (1) 3061; (1) 3382		PP999 ECON T-NUT	254	EA	254		

Any discrepancies must be reported within 14 days.

**TOTAL WEIGHT** 32.848

**THANK YOU FOR YOUR BUSINESS!**  
**80/20 Inc.**

SU2



# CAROLINA FLUID COMPONENTS, LLC

ISO 9002 CERTIFIED

9309 STOCKPORT PLACE  
CHARLOTTE, NC 28273  
FAX: 704-588-6115  
PHONE: 704-588-6101

INVOICE

Page: 1

- SEND PAYMENTS TO:  
Lock Box 890043  
Charlotte, NC 28289-0043
- SEND ALL OTHER  
CORRESPONDENCE TO  
ADDRESS AT TOP OF PAGE

Your Purchase Order: TATIANA SELTZMAN



ANDREW SELTZMAN  
4604 HIDDEN BROOK DR  
RALEIGH, NC 27609

ANDREW SELTZMAN  
4604 HIDDEN BROOK DR  
RALEIGH, NC 27609

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ACCOUNT NUMBER	INVOICE NUMBER	INVOICE DATE	SHIP DATE	SHIPPED VIA	SHIPPED FROM			
842170	F-00130-0	09/25/01	09/21/01	UPS	FORT WAYNE INDIANA		EI	
ORDER QUANTITY	SHIP QUANTITY	BACK-ORDERED	PART DESCRIPTION		UNIT PRICE	DISC %	NET AMOUNT	
150	150	0	80/20 3393		0.38	0.0000	57.00	
*****								
PAYMENT TERMS NET:30								
477800 09/21/01								
* PAID BY CREDIT CARD *								
* 60.98 *								
SUBJ TO OUR TERMS/CONDITIONS		SUB-TOTAL		TAX	SHIPPING & HANDLING	PLEASE REMIT THIS		TOTAL
20.00 IS OUR MINIMUM BILL		57.00		0.00	3.98			0.00

ORIGINAL INVOICE



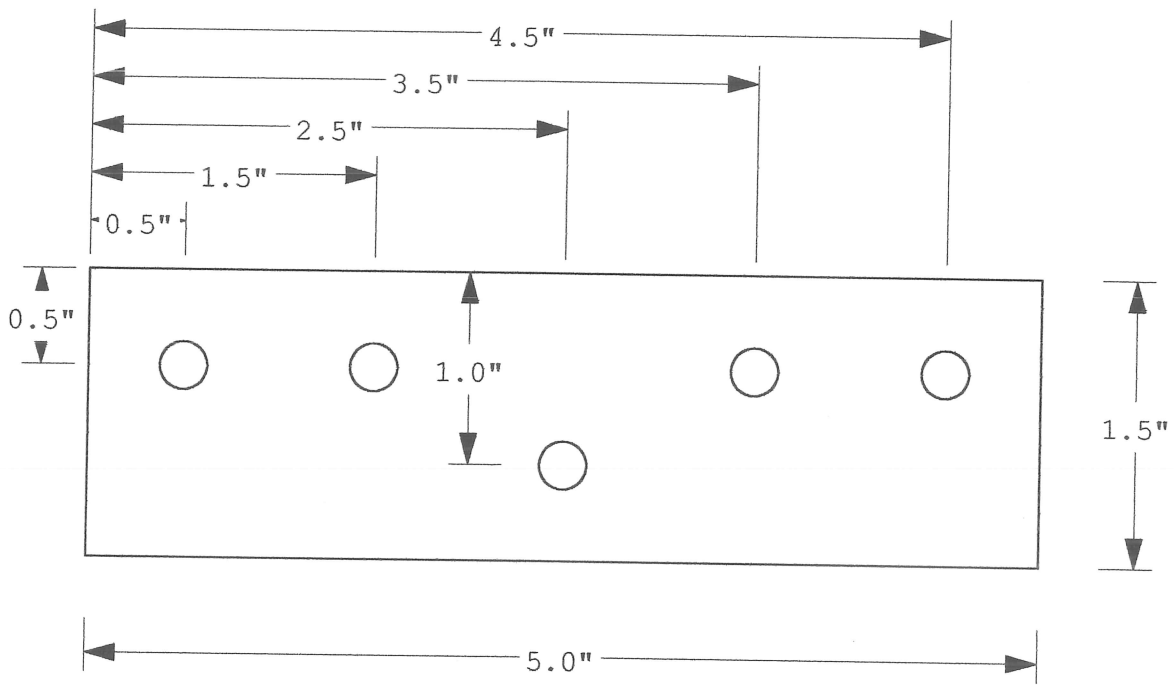


PLATE IS 1/4" THICK, HOLES ARE 1/4" DIAMETER

80/20 order 1010 A1

length(in) -	quantity -	use
26	4	with top/bot
32	2	length bot
08	14	standoffs
20	4	top/bot legnth
14	2	inside top/bot with
22	2	length top
11	4	top/bot cam support
30	1	frnt/rear angles
34	1	aux materials (future standoffs)
12	1	aux materials

#### 4115 10 series L-brackets

##### frame totals:

552 in (1010) at \$0.21/in =	\$115.92
35 cuts (7005) at \$1.85 =	\$64.75
58 (4115) L-brackets at \$3.85 =	\$223.3
254 (3393) bhscs 1/4-20x1/2in + tnut at \$0.38 =	\$96.52
150 (3393) bhscs 1/4-20x1/2in + tnut at \$0.38 =	\$57
TOTAL COST	\$557.49

##### Polycarbonate totals:

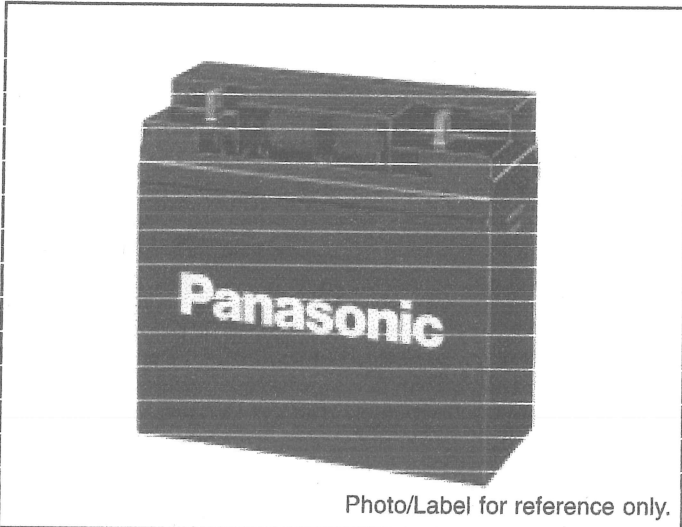
2 30"x32" panels at \$30ea =	\$60
1 20"x18" panel at \$20ea =	\$20
TOTAL COST	\$80

##### Control totals:

2 Basic Stamp 2 IC microcontrolers at \$50 ea	\$100
1 mini ssc2 at \$40=	\$40
2 victor 833 speed controlers at \$100ea	\$200
misc parts and solder	\$30
2 sealed Lead-Acid 12v, 17Ah Batteries @ \$15ea	\$30
TOTAL COST	

# SEALED LEAD ACID BATTERIES: INDIVIDUAL DATA SHEET

## LC-RD1217P/LC-RD1217AP



Photo/Label for reference only.

(a) The photo and dimensions represent LC-RD1217P

### Specifications

Nominal voltage		12V
Rated capacity (20 hour rate)		17Ah
Dimensions	Length	7.126 inches (181.0 mm)
	Width	2.992 inches (76.0 mm)
	Height	6.575 inches (167.0 mm)
	Total Height	6.575 inches (167.0 mm)
Approx. mass		14.34 lbs (6.5 kg)
Standard Terminals and Resin	UL94HB M5 Bolt and Nut	LC-RD1217P
Optional Terminals and Resin	UL94HB M5 Threaded Post	◆ LC-RD1217AP
	UL94V-0 M5 Bolt and Nut	◆ LC-VD1217P
	UL94V-0 M5 Threaded Post	◆ LC-VD1217AP

◆ Please contact Panasonic for availability on optional items. Optional items may be subject to minimum order quantities.

### Characteristics

Capacity (note) 77°F (25°C)	20 hour rate (850mA)	17Ah	
	10 hour rate (1500mA)	15Ah	
	5 hour rate (2600mA)	13Ah	
	1 hour rate (10000mA)	10Ah	
	1.5 hour rate discharge Cut-off voltage 10.5 V	7A	
Internal resistance	Fully charged battery 77°F (25°C)	Approx. 12mΩ	
Temperature dependency of capacity (20 hour rate)	104°F (40°C)	102%	
	77°F (25°C)	100%	
	32°F (0°C)	85%	
	5°F (-15°C)	65%	
Self discharge 77°F (25°C)	Residual capacity after standing 3 months	91%	
	Residual capacity after standing 6 months	82%	
	Residual capacity after standing 12 months	64%	
Charge Method (Constant Voltage)	Cycle use (Repeating use)	Initial current	6.8 A or smaller
		Control voltage	14.5V to 14.9 V (per 12V cell 25°C)
	Trickle use	Initial current	2.55 A or smaller
		Control voltage	13.6V to 13.8V (per 12V cell 25°C)

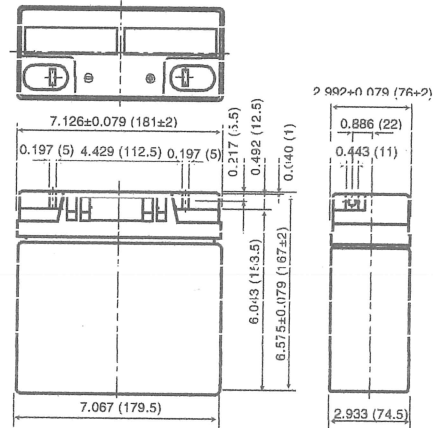
(Note) The above characteristics data are average values obtained within three charge/discharge. Cycles not the minimum values.

(Note) For cycle use of the battery, please contact us in advance.

For main and standby power supplies. Expected trickle life: Approx 3-5 years at 25°C, Approx. 10 years at 20°C.

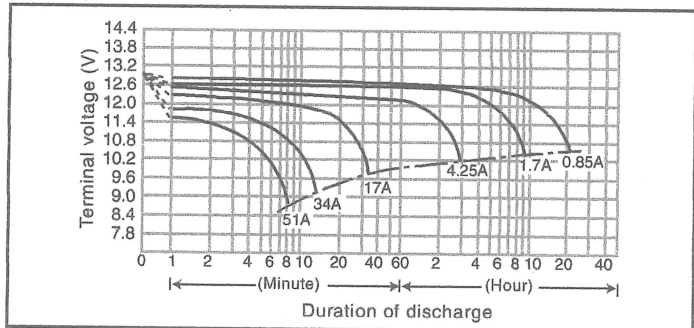
### Dimensions (mm)

Terminal type: LC-RD1217P: M5 bolt and nut  
LC-RD1217AP: M5 threaded post

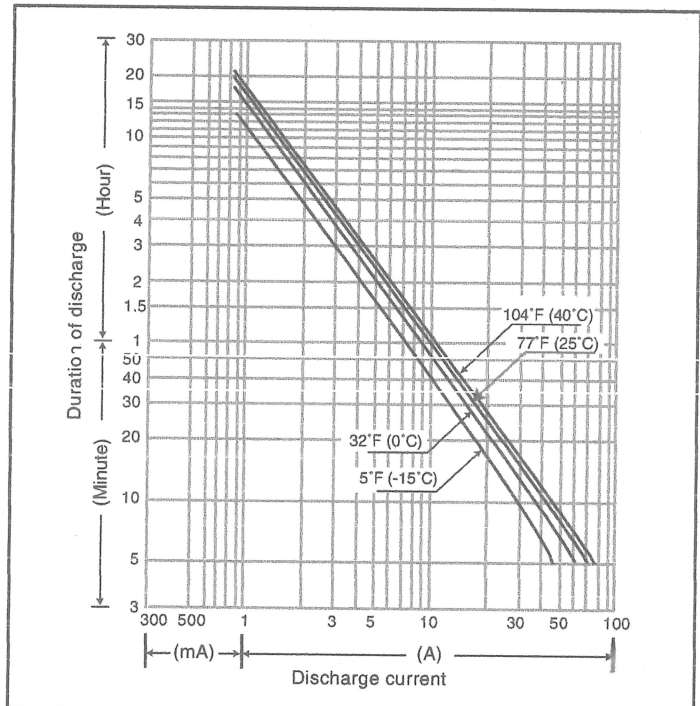


Battery case resin: Standard (UL94HB) Color is black.  
Optional (UL94V-0) Color is grey.

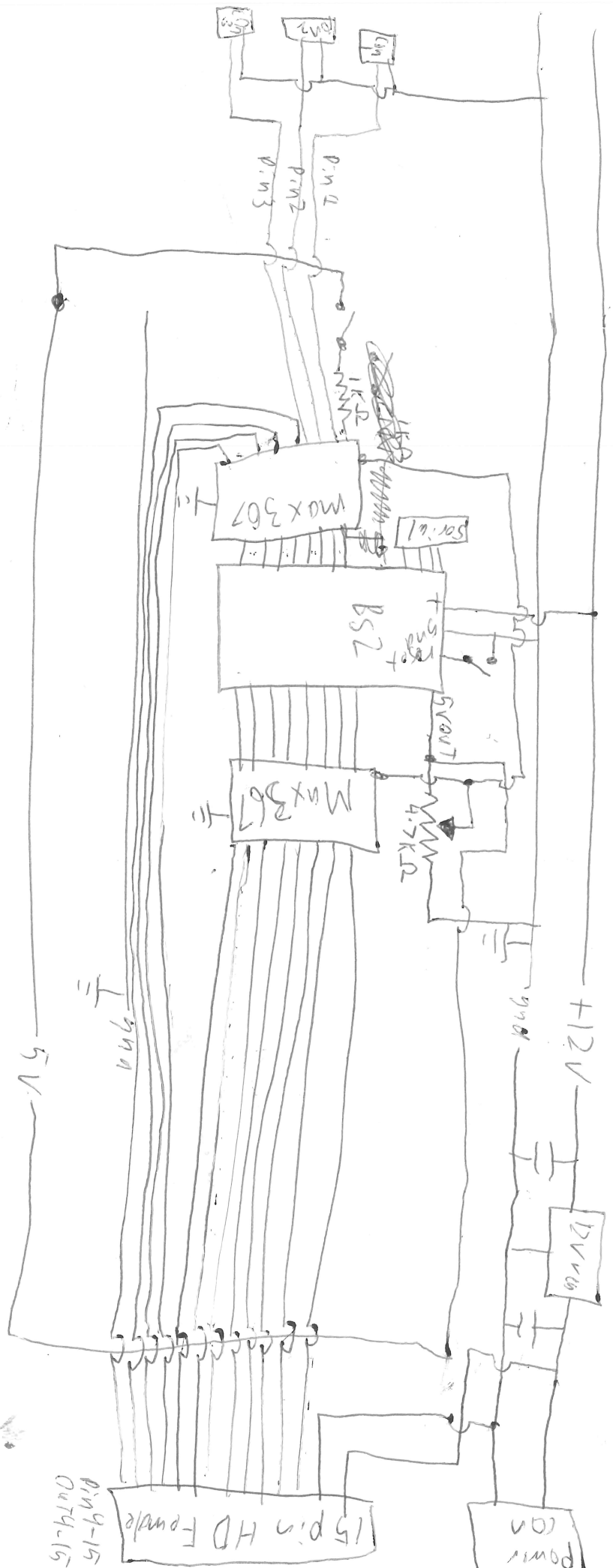
### Discharge characteristics 77°F (25°C) (Note)



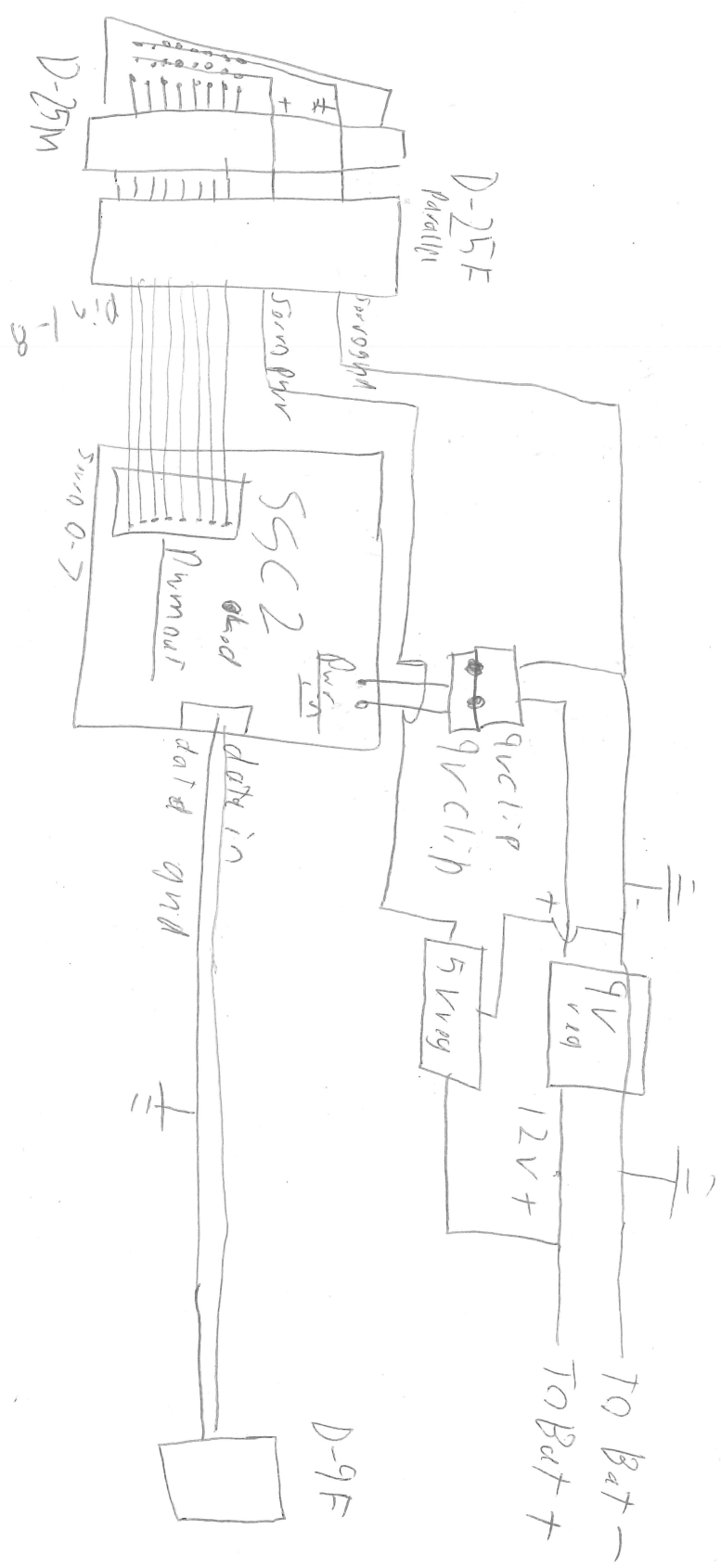
### Duration of discharge vs. Discharge current (Note)



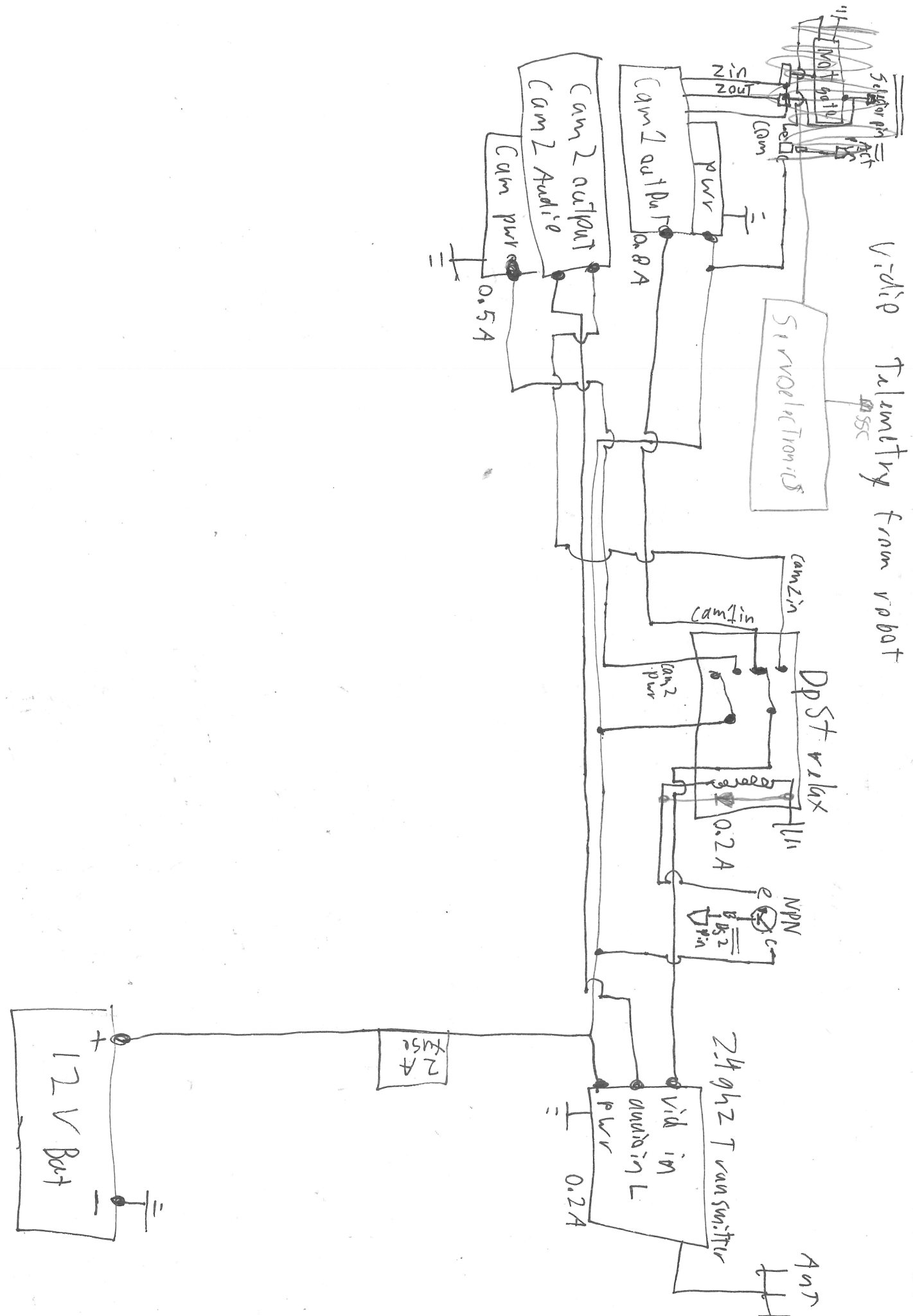
# Electronics (Processor)



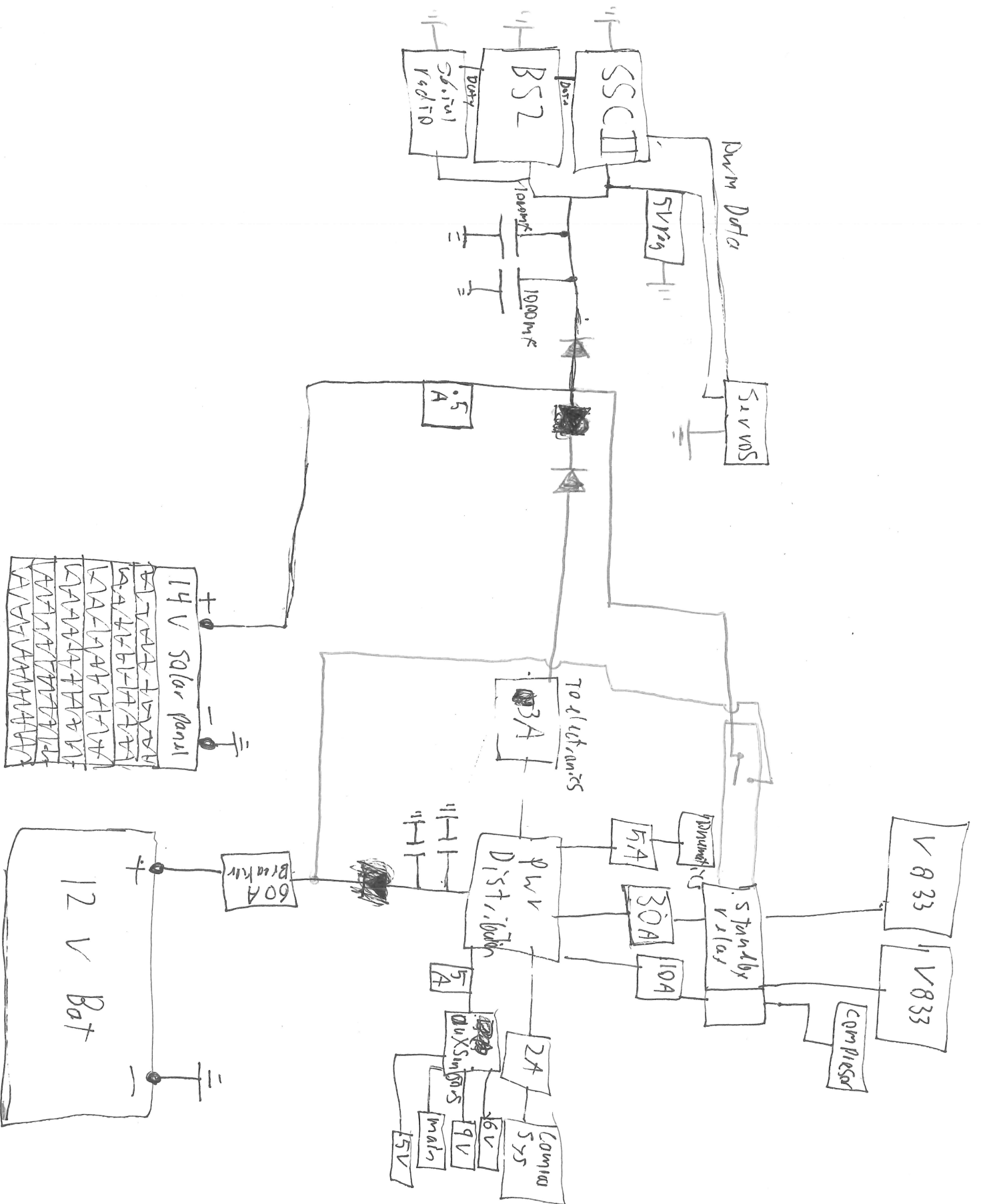
# Electronics (SSC2)

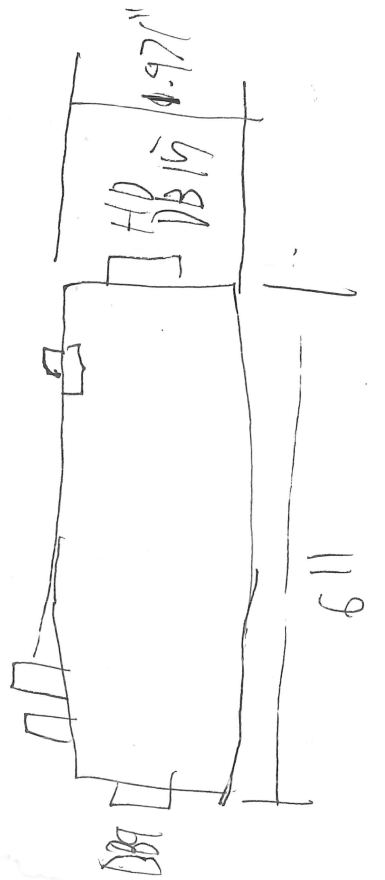
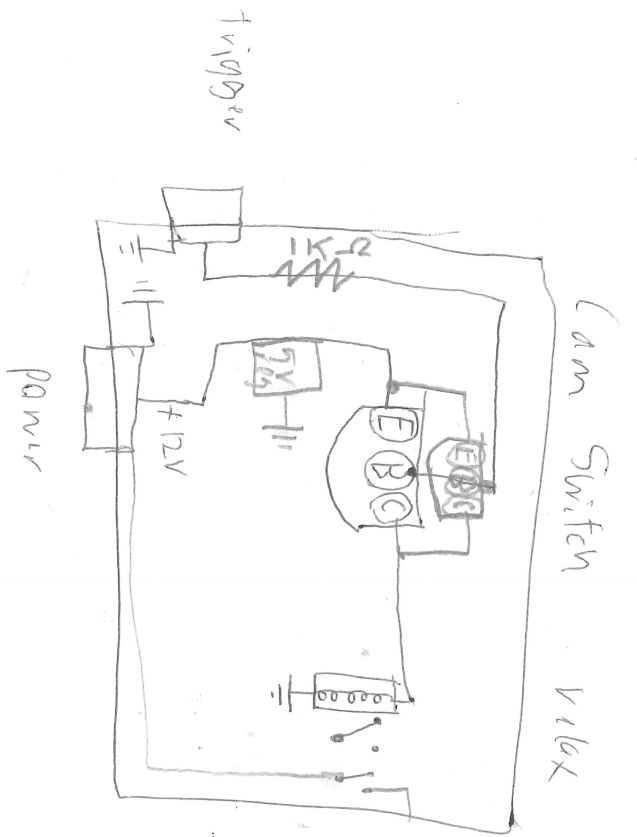


# Vidip Telemetry from robot

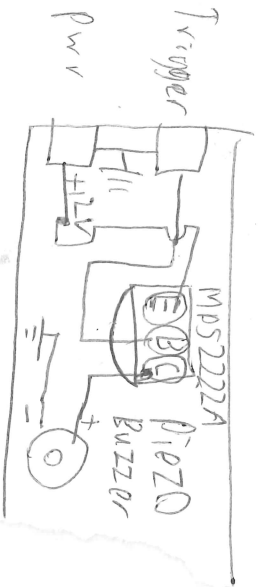


# Power Systems

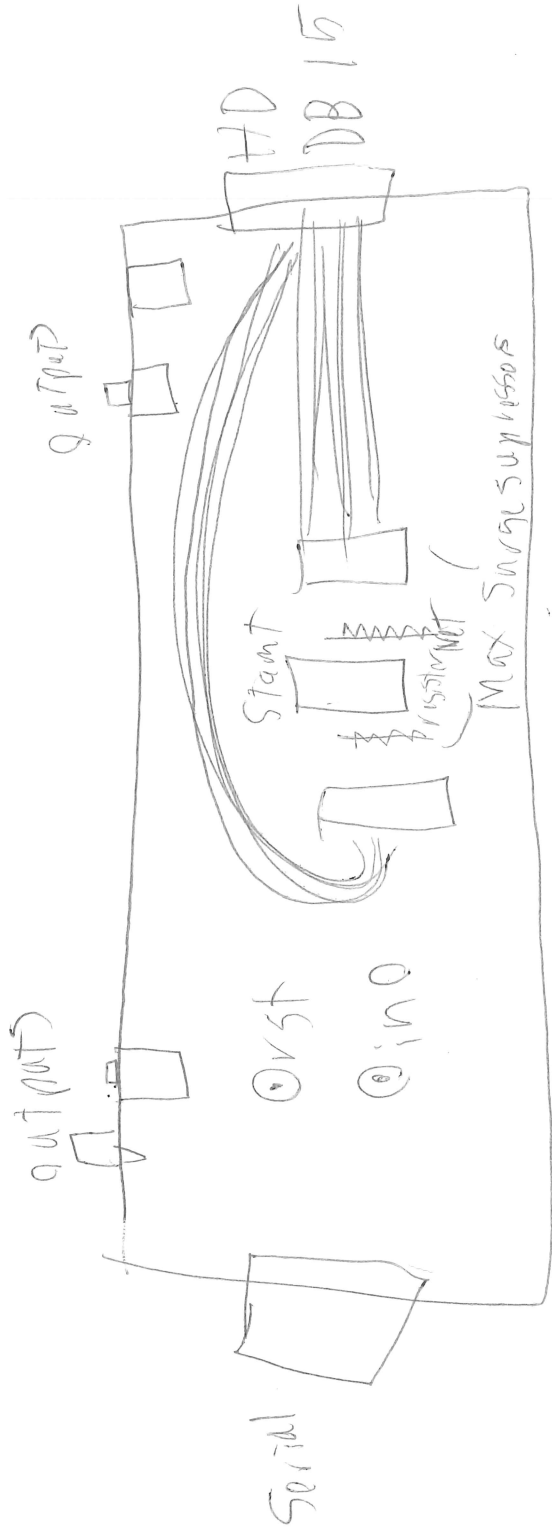


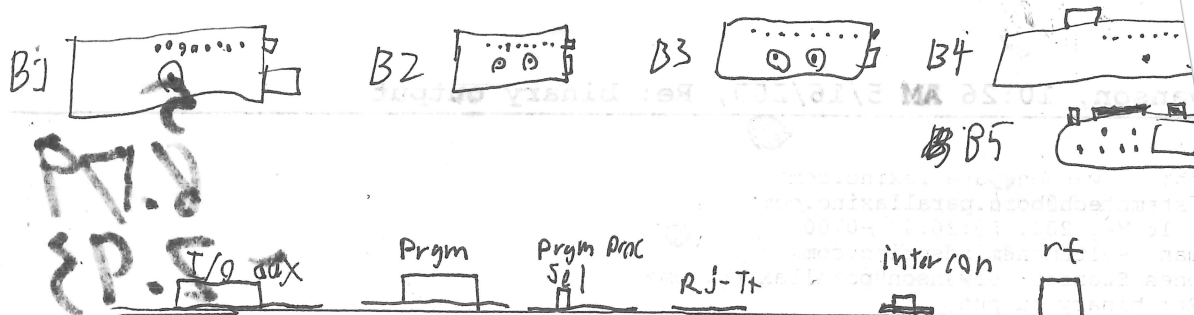


Horn

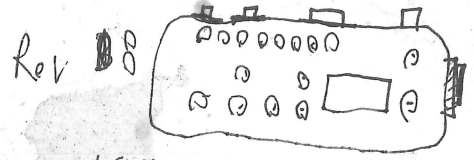
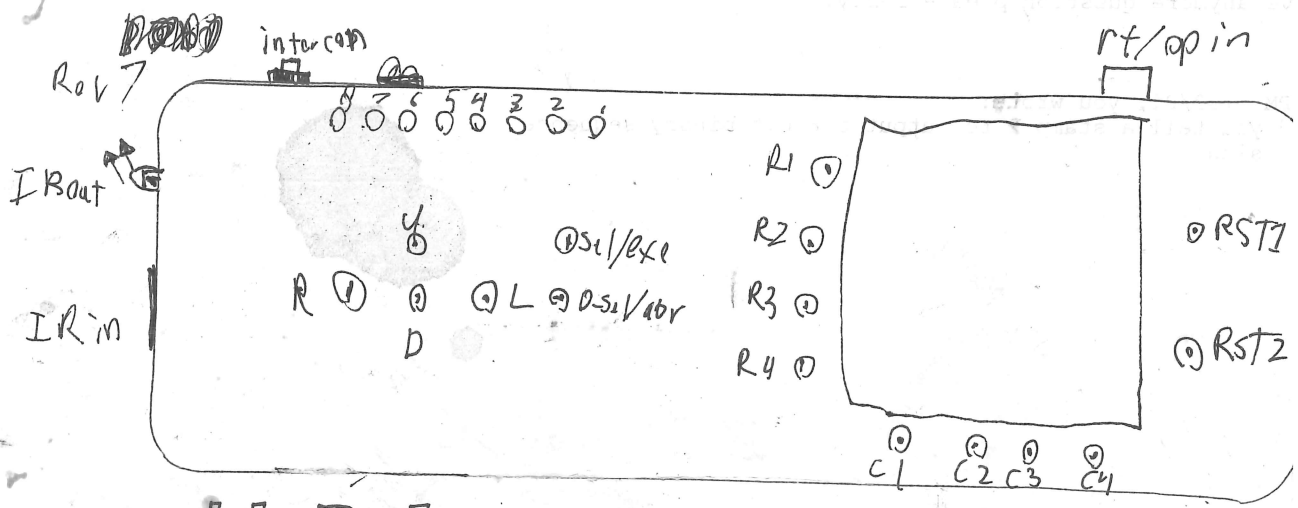
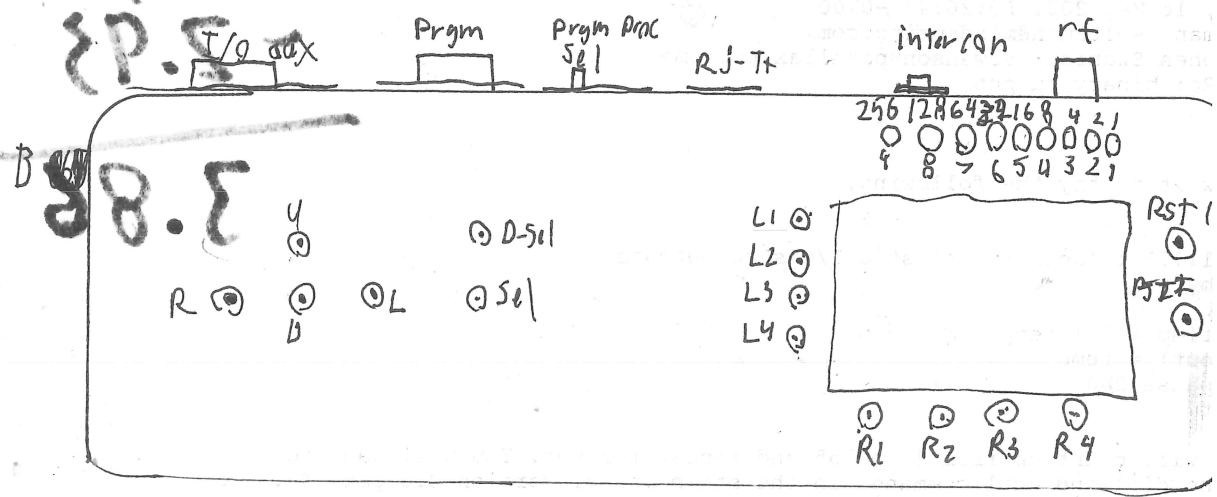








M.A.  
P.S.

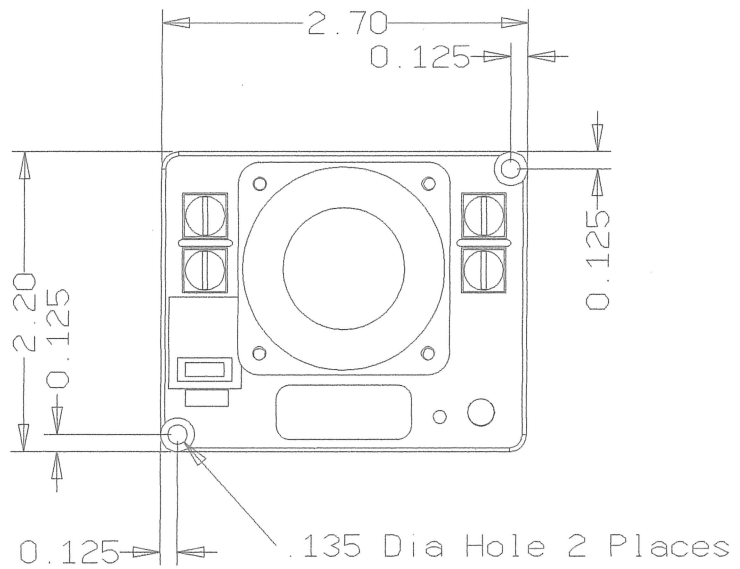
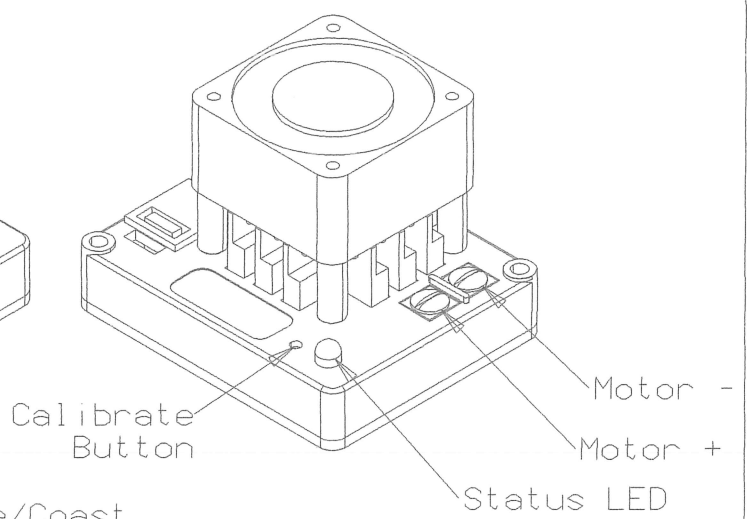
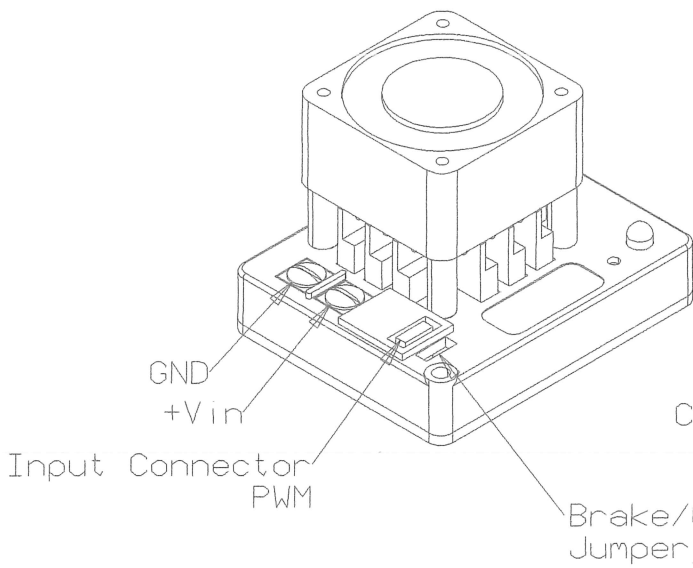


- 16 Total
- 8: Bin I/O
  - 2: k.p.d interface
  - 2: A/D conv
  - 2: DISP
  - 2: I/R Trans

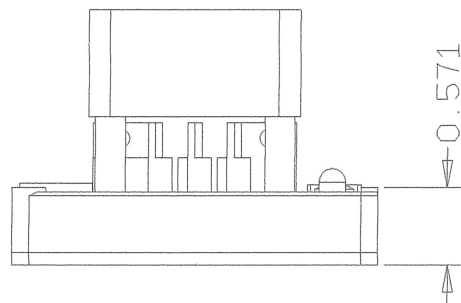
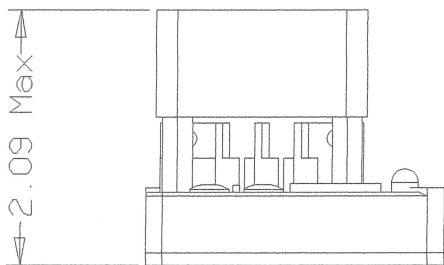
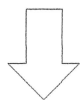
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- 8: Bin I/O
  - 4: T/X Snd
  - 10: R/X rec
  - 12: T-J-
  - 14: 2: Aux SW.
  - 15: NC

- B6
- 16 Total
- 8: Main I/O
  - 2: k.p.d interface
  - ~~2: k.p.d interface~~
  - Screen/Output: I/R/XCVR

2 aux sw



Airflow  
5 CFM



# Innovation First, Inc.

DATE: 01 Jan 01

PAGE 1 OF

DWG V883 INSTALL

REV NC

TITLE VICTOR 883 INSTALLATION INFO