

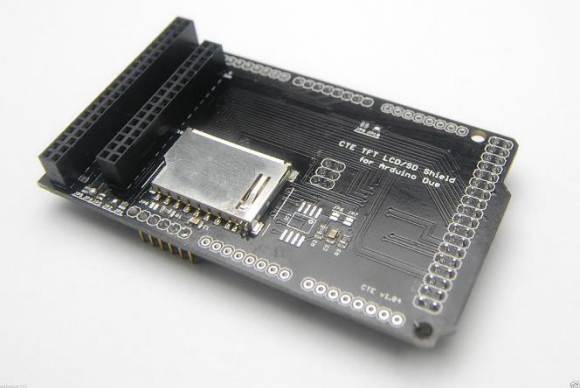
## Caveatron Bill of Materials – Base Unit

**Hardware Revision: A**


**Date: 2018-03-06**

All the parts in this list have been tested with the Caveatron and integrated into the code. For some parts, alternate options are available.

[illegible]



Item	Qty	Manufacturer	Mfr. P/N	Description	Suggested Vendor Link	Photo
Due LCD Interface Shield	1	Coldtears Electronics	N/A	TFT/SD Shield for Arduino DUE TFT LCD Module SD Card Adapter 2.8 3.2 inch Mega	<a href="#">Ebay</a>	

**Notes:** Providea electrical interface from Arduino to the Touchscreen LCD.

Laser Rangefinder  <b>OPTION 1</b>	1	Uni-T	UT390B	Laser Distance Meter	Ebay, Amazon, or other sources. Availability changes frequently.	
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**Notes:** Used for station distance measurements. This item appears to be discontinued but can still be found online from various sources. Do not confuse this with the UT390B+, which is widely available but does not have an accessible serial port, so is not useable. The UT390B+ has a bubble level in the upper left which the UT390B does not. The UT390B must be disassembled and the LCD removed to access the electronics board. An alternate rangefinder module has been integrated into the firmware that has wider availability and is easier to assemble into the enclosure, but has operational disadvantages. The UT390B remains the preferred rangefinder if you can find one.





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Item	Qty	Manufacturer	Mfr. P/N	Description	Suggested Vendor Link	Photo
Battery Pack  <b>OPTION 1</b>	1	Adafruit	354	Lithium Ion Battery Pack - 3.7V 4400mAh	<a href="#">Adafruit</a>	
<b>Notes:</b> Primary system battery.						
Battery Pack  <b>OPTION 2</b>	1	Tenergy	354	Tenergy Li-Ion 18650 3.7V 5200mAh Rechargeable Battery PCB module with Bare Leads	<a href="#">Amazon</a>	
<b>Notes:</b> Primary system battery. Higher capacity battery with identical dimensions and voltage to Option 1. Does not include connector unlike Option 1.						





Item	Qty	Manufacturer	Mfr. P/N	Description	Suggested Vendor Link	Photo
Voltage Regulator – 9V	1	Pololu	2116	9V Step-Up Voltage Regulator U3V12F9	<a href="#">Pololu</a>	
<b>Notes:</b> Power supply for Arduino Due.						
Voltage Regulator – 5V	1	Pololu	2123	Pololu 5V Step-Up/Step-Down Voltage Regulator S7V8F5	<a href="#">Pololu</a>	
<b>Notes:</b> Power supply for LIDAR Module.						
Voltage Regulator – Adjustable	1	Pololu	2118	Pololu Adjustable Step-Up/Step-Down Voltage Regulator S7V8A	<a href="#">Pololu</a>	
<b>Notes:</b> Power supply for Laser Rangefinder. Output is set to 3.0V.						


Item	Qty	Manufacturer	Mfr. P/N	Description	Suggested Vendor Link	Photo
Piezoelectric Buzzer	1	Uxcell	a140624 00ux017 3	Uxcell 5 Pcs DC 1-30V 90Db Sound Passive Electronic Buzzer Alarm Black, 30 x 6 mm	<a href="#">Amazon</a>	
<b>Notes:</b> Indicator buzzer.						
Power Switch & Charging LED	1	Adafruit	916	Rugged Metal On/Off Switch with Red LED Ring - 16mm Red On/Off	<a href="#">Adafruit</a>	
<b>Notes:</b> On/Off power switch and charge indicating ring LED. Several colors of the LED are available.						
USB Jack	1	GT Contact	GT114200 -10	Mini USB-B C2 size Plastic Panel Mount	<a href="#">USBFirewire.com</a>	
<b>Notes:</b> Mini-USB jack for data download, battery charging, and loading of software and calibration parameters.						
USB Cap	1	GT Contact	GT1C5221 22	Seal Cap	<a href="#">USBFirewire.com</a>	
<b>Notes:</b> Waterproof cap for USB jack.						










Item	Qty	Manufacturer	Mfr. P/N	Description	Suggested Vendor Link	Photo
Strap Attachment Hardware	1	122317	Hillman Group	D-Ring Hangers	<a href="#">Lowes</a>	

**Notes:** *Small D-rings for attaching neck strap.* Available from multiple sources and similar parts likely available from other vendors.

Neck Strap	1	DOROM	N/A	DOROM Universal Adjustable Slim Shoulder Sling Neck Strap for All Camera DSLR SLR	<a href="#">Amazon</a>	
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**Notes:** *Neck Strap.* This neck strap works well, but other options are available. Recommend a nylon camera strap of 52-60" in length and about 3/8" wide in the ends.

Assorted Fastener Hardware: Screws, Washers, and Nuts

**Notes:** *For assembly.* Several sizes of standard hardware required. More information in assembly instructions.

Assorted Electrical Hardware: Wire, Header Connectors, and JST Connectors.

**Notes:** *For electrical interconnections between boards.* More information in assembly instructions.

**Date: 2017-09-11**

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