

# WIRING HARNESS CONVERSION GUIDE

For LiTime 48V Lithium Battery Conversion.

### Harness A

- 1. 2G Red Wire:
  - 1. Remove out off Anderson connector plug. This wire will not be needed any longer.
- 2. 2G Green Wire:
  - 1. Add Anderson Terminal End to one side of wire which will be used to go into the Anderson Plug (+) side.
  - 2. Swap the other end 1/4" Copper Terminal with a 5/16" Terminal for connecting to battery (+).
  - 3. 2G Black Wire:
    - 1. On Copper Terminal end of wire, trim wire 4".
    - 2. Replace 1/4" Copper Terminal with 5/16" Copper Terminal
  - 4. **RECOMMENDED**: Insert wire assembly into 30" wire loom sheath to keep harness together.

#### Harness B

1. Remove all 4 wires out of the existing harness assembly. There will be 2 new harness assemblies created from Harness B.

### Harness B.1

- 1. 2G Red Wire:
  - Wire coming from Anderson connector Plug to Main Fuse, this needs to be lengthen by 4" to be able to run with the Physics Box where it will need to be placed. (see photos below for reference.)
  - 2. **RECOMMENDED**: Insert wire assembly into 14" wire loom sheath to keep harness together.

### Harness B.2

1. The 2G Red and Blue wires do not need any modifications. It is recommended that you will Insert wire assembly into 12" wire loom sheath to keep harness together.

### **REFERENCE PHOTOS**



HARNESS B.1

HARNESS B.2





**BATTERY SUPPORT CONVERSION GUIDE** 

For LiTime 48V Lithium Battery Conversion.

# **EXISTING BATTERY / SIDE SUPPORT BAR**



# **UPDATED BATTERY / SIDE SUPPORT BAR**



### **STEPS FOR CONVERSION**

- 1. Cut off inner L bracket that is welded onto support.
- 2. Shift bracket over so that the inside to inside faces of the L brackets reach 230mm (23cm).
- 3. Re-weld bracket onto the support bar.



Starting material: 1/8" thick, 1" wide, 48" long aluminum flat bar. Sources: Home Depot; Lowes

Tools needed: Vice, rubber mallet, tape measure, Sharpie, hacksaw, drill, 1/4" drill bit, disc sander

Drawing:



#### Procedure:

- 1. Bend #1: Measure 0.75" from end of bar and mark straight line with a sharpie marker. Place bar in vice with marked line at the top of the vice and close vice firmly. With one hand, hold the end of the bar that is sticking out of the vice and with the other, tap the bar with a rubber mallet a few inches from the top of the vice and continue tapping until the bar is bent just past 90 degrees.
- 2. Bend #2: Measure 8.5" from inside of bend #1, mark a straight line and bend the bar in the vice in the same manner as bend #1.
- 3. Bend #3: Measure 21.5" from the inside of bend #2 and make the bend in the vice.
- 4. Bend #4: Measure 8.5" from the inside of bend #3 and make the bend in the vice.
- 5. Measure 0.75" from the inside of bend #4, mark a straight line, and cut off excess stock from the bracket.
- 6. Use disc sander to round the edges of the 0.75" sections.
- 7. Create bolt holes:
  - a. On the front and rear bar of the left side pod, drill a 0.25" hole (vertically) at the mid-point of the battery.
  - b. On the battery bracket, drill a 0.25" hole in the center of both of the 0.75" sections
- 8. Wrap entire bracket with electrical tape to electrically insulate.
- 9. Use M6 x 1.5" cap head bolts with lock washer to install battery bracket and contain the battery to the sidepod.



### **BATTERY BRACKET FABRICATION GUIDE**

For LiTime 48V Lithium Battery Mounting





Fully Assembled Battery Bracket