Hardlight VR Suit Assembly Instructions Written By: Lucian Copeland

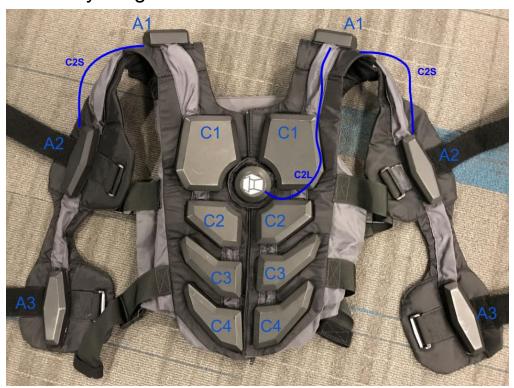
Date: June 9, 2017

## Quantities and Acronyms

The the Hardlight suit has a total of 7 cable harnesses, with 5 different designs. Names, quantities, and labeling acronyms follow below:

Name	Acronym	Quantity
Control to Driver Right	C2DR	1
Control to Driver Left	C2DL	1
Driver to Motor	C2M	2
Control to LED	C2L	1
Control to Sensor	C2S	2

# Assembly Diagram:





### Instructions:

Note: the cable assemblies in the photos may vary in appearance from the version you have but all are functionally identical.

#### **Motor Insertion:**

Every pad on the body **except for B1** contains a single motor mounted in the U-shaped motor mount. B1 does NOT contain a motor, only the Hardlight control board PCB.

#### **PCB Insertion:**

The Hardlight boards are inserted in the following pads:

- The board "Hardlight Control" is mounted in the B1 case
- The two boards "Hardlight Driver" are mounted in the B2 cases
- The board "Hardlight LED is mounted in the C5 case in the center of the chest
- The two boards "Hardlight Sensor" are mounted in the A2 cases.

Each board should only be capable of being mounted one way based on the screw configuration.

#### **Control To Motor:**

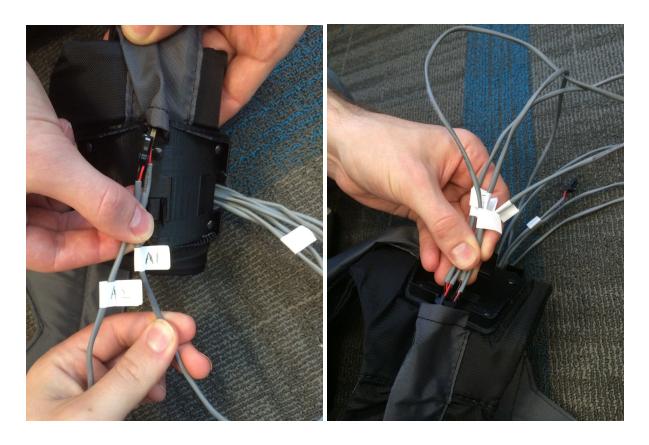
The Control to Motor assemblies are identical. Each one powers one side of the body, travelling over the shoulders from the Driver electronics boards.



Insert the large 16 pin header through the upper back tubes, starting at the shoulder:



At the shoulders, the cables separate into the Arm and Chest sections, with one terminating in the shoulder itself. Pass them through the appropriate sections based on the labels on the cables.



Pass the cables through every tube available on their way to their destination pad. Cables in the chest and arms end in the pads, and thus there will be fewer cables per tube as you proceed down the body.



#### **Control To Driver:**

Insert the Control to Driver cable assemblies in the lower back tubes as shown. They are marked Left and Right in the assembly diagram, as they are slightly different lengths.



#### Control to LED:

Pass the Control to LED cable from the Control board casing (B1) through the lower left back tube (as seen from the back), through to the upper left shoulder tube, and through the front tubes to its destination in center chest (C5).

#### **Control to Sensor:**

Pass the Control to Sensor cables from B1 up through the lower back tubes on the left and right, through the shoulder tubes, and out the shoulders to their two positions in the upper arm in the A2 cases.