



## **DIAGNOSTIC IMAGING SPECIALISTS CORPORATION**



### **Instruction Manual for DISC PBA-6 Replacement Battery Kit for GE AMX-4 X-Ray Machine**

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## **INSTALLATION INSTRUCTIONS FOR DISC PBA-6 SEALED LEAD ACID BATTERY KIT FOR GE AMX-4 MOBILE X-RAY MACHINE.**

**\*\*NOTE: TO BE INSTALLED BY QUALIFIED SERVICE ENGINEER ONLY!\*\***

### **Description**

The Disc pba-6 kit consists of two battery packs, installation manual and all necessary hardware to install these battery packs in the GE AMX-4 battery mobile x-ray machines.

#### **Pack #1:**

Pack #1 is the smaller of the two packs. It consists of four 12 volt 28 aHr batteries secured to a steel battery tray. The batteries are already interconnected and they are secured to the steel battery tray with a velcro strap. Although this velcro strap holds the batteries securely to the battery tray, it can be easily undone if it becomes necessary to change a single battery from the battery pack. For added safety, there is a clear insulator plate installed on the terminal side of battery pack #1. This insulator plate ensures that the terminals from battery pack #1 cannot short against the terminals of battery pack #2 when installed in the mobile x-ray machine. The lip on battery pack's tray serves a dual purpose.

**A:** It serves as a spacer to properly distance pack #1 from pack #2.

**B:** It is also used as a handle when removing pack #1 from the battery compartment.

#### **Pack #2:**

Pack #2 is the larger of the two packs, and it consists of five 12 volt 28 Ahr batteries secured to a steel tray. The batteries are already interconnected and they are secured to the battery tray with velcro straps.

#### **Spacer Block:**

A spacer block is also provided in order to properly position battery pack #2.

#### **J1 interconnecting jumper:**

This jumper is provided in order to interconnect the two battery packs.

## INSTALLATION OF DISC PBA-6 KIT TO GE AMX-4 MOBILE

(\*\*Note: To be installed by qualified service engineer!\*\*)

1. Remove old batteries and insulator boards as per instructions in GE AMX-4 service manual section 6-1 (Battery Removal). **Note:** Once the battery removal procedure is completed, both battery Cable #2 and battery Cable #4 from AMX-4 mobile should be completely disconnected from the mobile. Make sure one end of Cable #2 is taped up. (End that was connected to circuit breaker.)

**NOTE: Discard the GE circuit board and spacer (GEMS Part# 46-321370G1). This board is not needed with the DISC kit since the batteries can be tested under load, and visually inspected by sliding Pack 2 out and placing it on the floor.**

2. Slide spacer block to the end of the AMX-4 battery compartment(see *Figure – 1*).
3. Place battery Pack #1 on the floor in front of the access hole to the AMX-4 battery compartment. As you face the access hole, make sure that you orient Pack #1 such that the terminal side of the pack is to the left. Carefully lift the far end of Pack #1 and slide it partially into the battery compartment(See *Figure – 1*).
4. Remove the transparent insulator plate from battery Pack #1. The insulator plate is just friction fit between the batteries and the edge of the steel battery tray. In order to remove it you simply have to pull up on it .

**\*\*\*CAUTION: DO NOT OVERTIGHTEN THE NUTS ON THE BATTERY TERMINALS. \*\*\***

**Fastening Torque recommended: 17.3 to 26.0 lbs.inch(20 to 30 Kg.cm)**

5. **Bat – Connection:** Before connecting, make sure that Cable #2 (-) is disconnected from the ground stud of the AMX-4 mobile and that that end of Cable #2 (-) is taped up. Connect other end of Cable #2 to Bat – terminal of battery Pack #1. (See *Figure – 5*). Cable #2 should be hooked up with a bend in the cable as is shown in *Figure – 5* .
6. **J1-A Connection:** Before connecting J1-A make sure that the J1-B end of jumper “J1” (supplied with kit) is taped up. Connect J1-A end of jumper J1 to J1-A terminal of battery pack #1(See *Figure – 5*). The lug of the jumper should be connected to the the battery terminal with the bend in the wire facing as shown in *Figure – 5*.
7. **\*\*\*IMPORTANT:** Re-install the clear insulator plate by pushing it down between the batteries and the edge of the battery tray.
8. Slide battery pack #1 into place(See *Figure – 2*).

9. Place battery pack #2 on the floor in front of the access hole to the amx-4 battery compartment. As you face the access hole, make sure that you orient pack #2 such that the terminal side of the pack is to your right. Carefully lift far end of pack #2 and partially slide it into the battery compartment(See *Figure – 3*).
10. **J1-B Connection:** Remove tape from J1-B end of jumper J1 and connect J1-B end of jumper J1 to “J1-B” battery terminal of battery pack #2(*Figure – 5*). The jumper should be connected to the battery terminal with the bend as shown in *Figure – 5*.
11. **Bat + Connection:** At this point, Cable #4 from amx-4 should be disconnected from main circuit breaker. Make sure that this end of cable #4 is taped up and cannot short out on anything. Route other end of cable #4 through the grommited hole in the top of the battery compartment and connect to the Bat + terminal of pack #2(see *Figure – 5*). The bend in the cable should be oriented the same as it is in *Figure – 5*.
12. Slide battery pack #2 into position(See *Figure – 4*).
13. The length of jumper “J1” (supplied with kit) is of sufficient length such that during periodic maintenance of the mobile, Pack #2 can be removed from the Battery compartment without having to disconnect jumper “J1” from the battery packs. Fold over jumper and slide in between battery pack #1 and Battery pack #2.
14. **Note: Make sure that main circuit breaker is “off ” before doing this step! \*\***  
Remove tape from other end of cable #4 and reconnect to terminal #4 of main circuit breaker in amx1 A3.
15. **Note: Make sure that main circuit breaker is “off ” before doing this step!\*\***  
Remove tape from other end of cable #2 and reconnect to battery ground stud in mobile.
16. Measure the voltage between ground stud (Bat -) and terminal #4 on circuit breaker (Bat +). The voltage should be between +110 volts and +120 volts. Typically the voltage should be approximately +115 volts with batteries that have a good charge.
17. Replace the covers as per GE instructions.

**Note: Whenever the batteries are replaced in the Amx-4, the calibration of the machine should be checked and adjusted if necessary.**

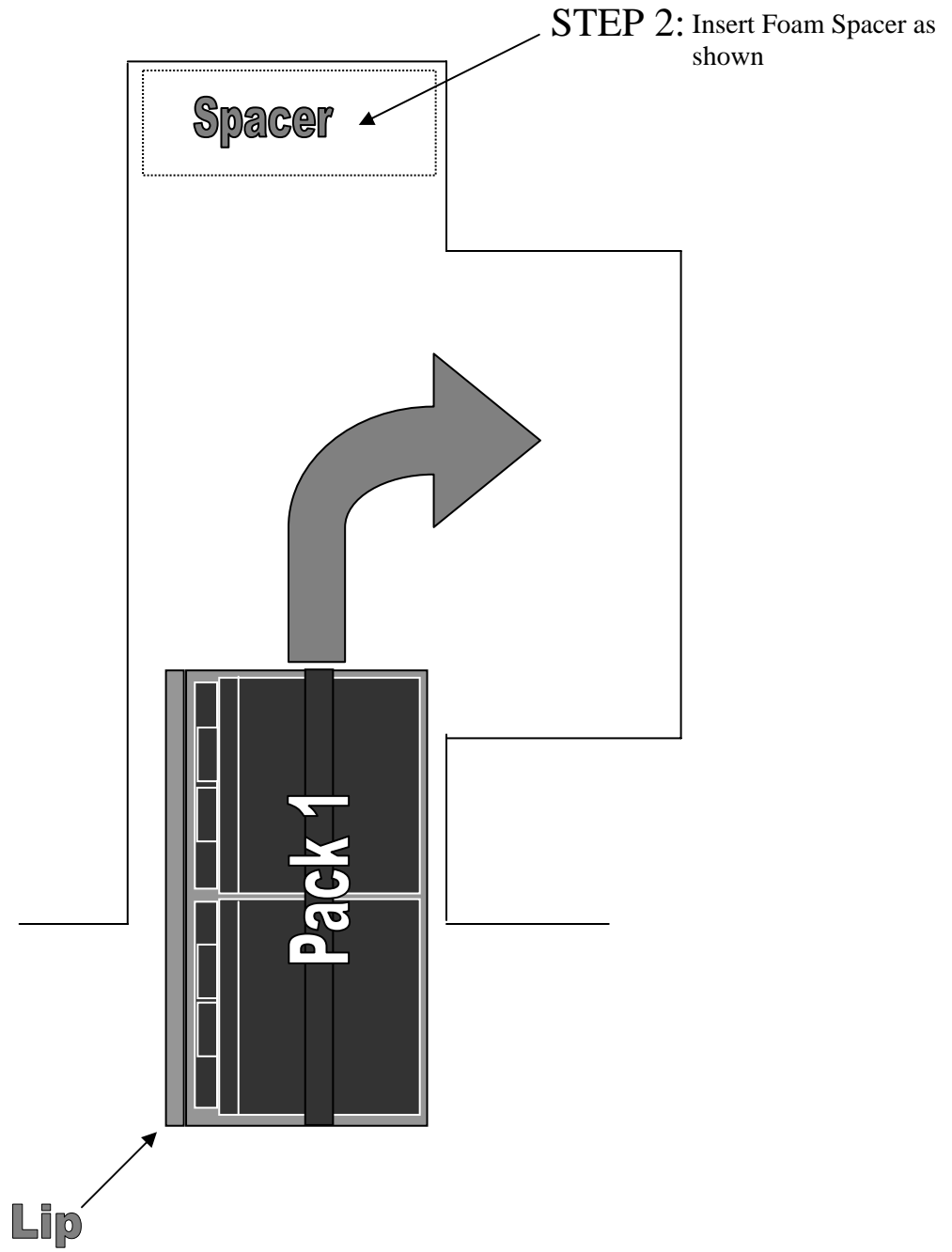


Figure 1

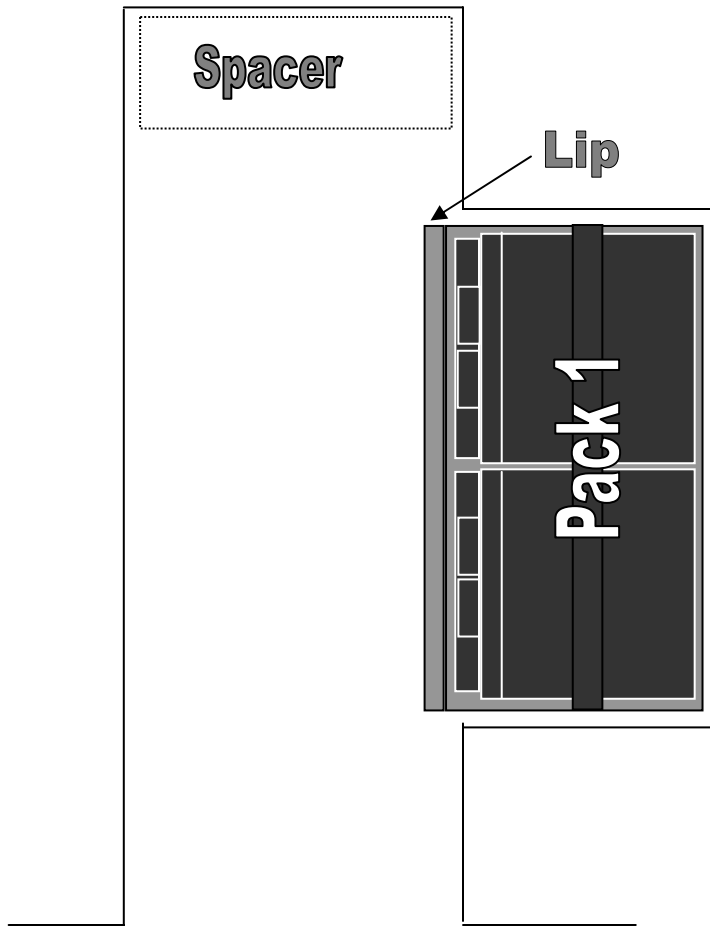
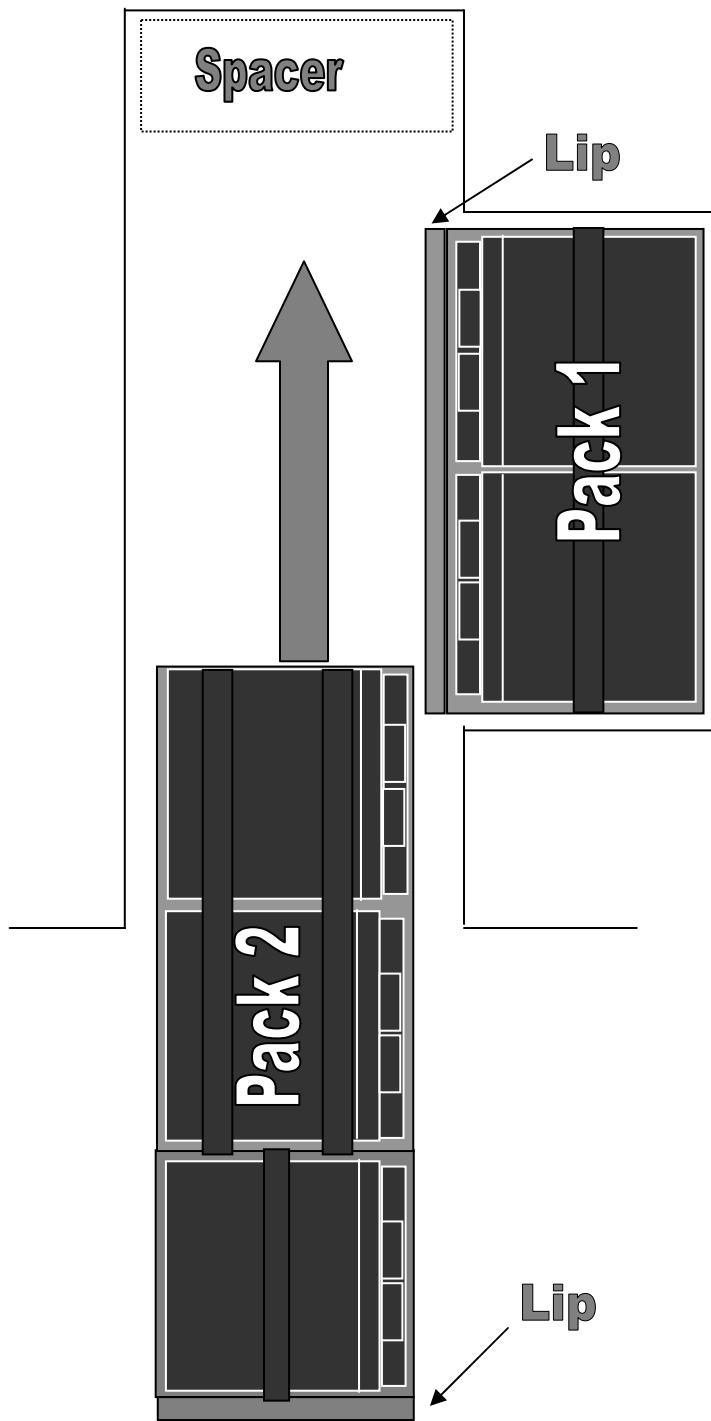
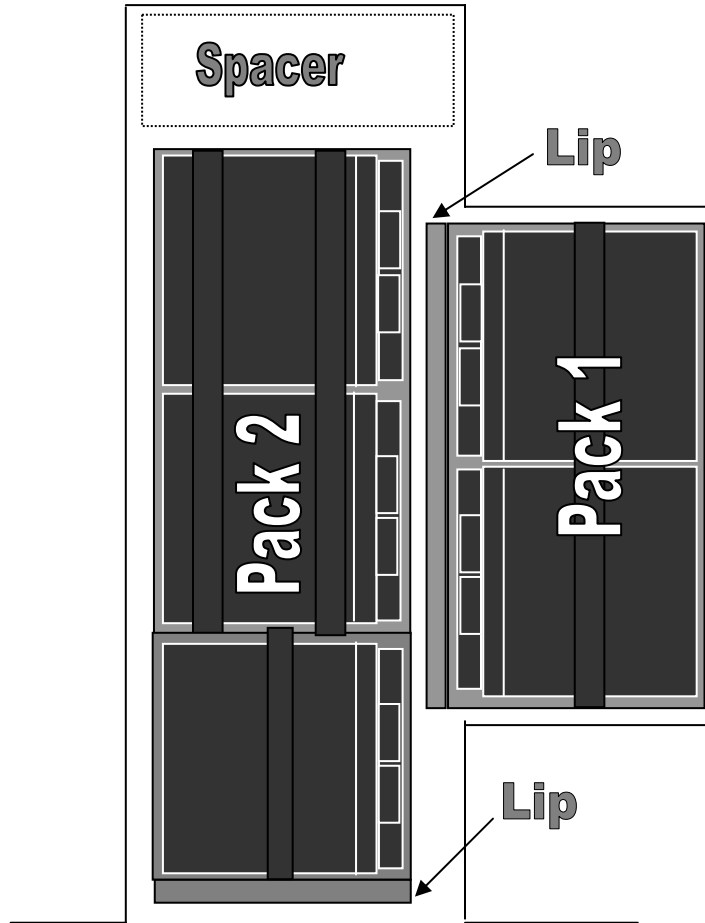


Figure 2

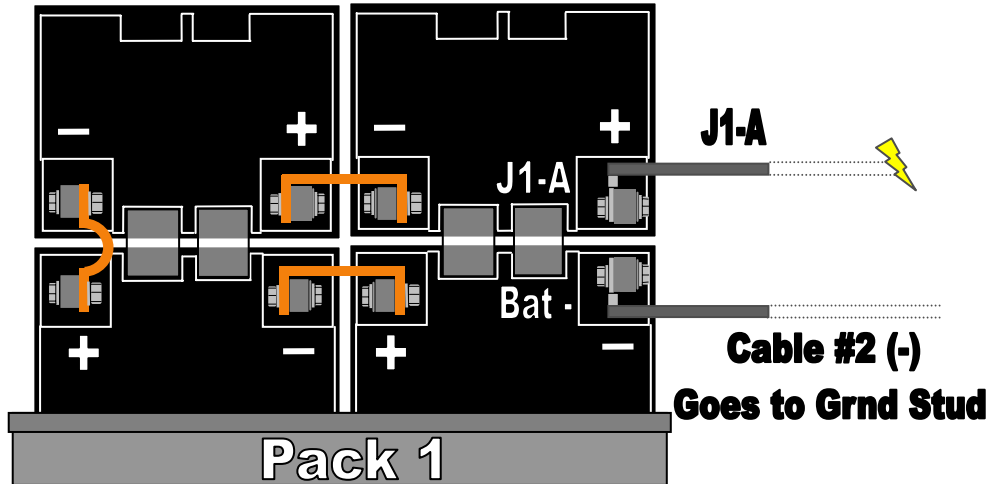


***Figure3***

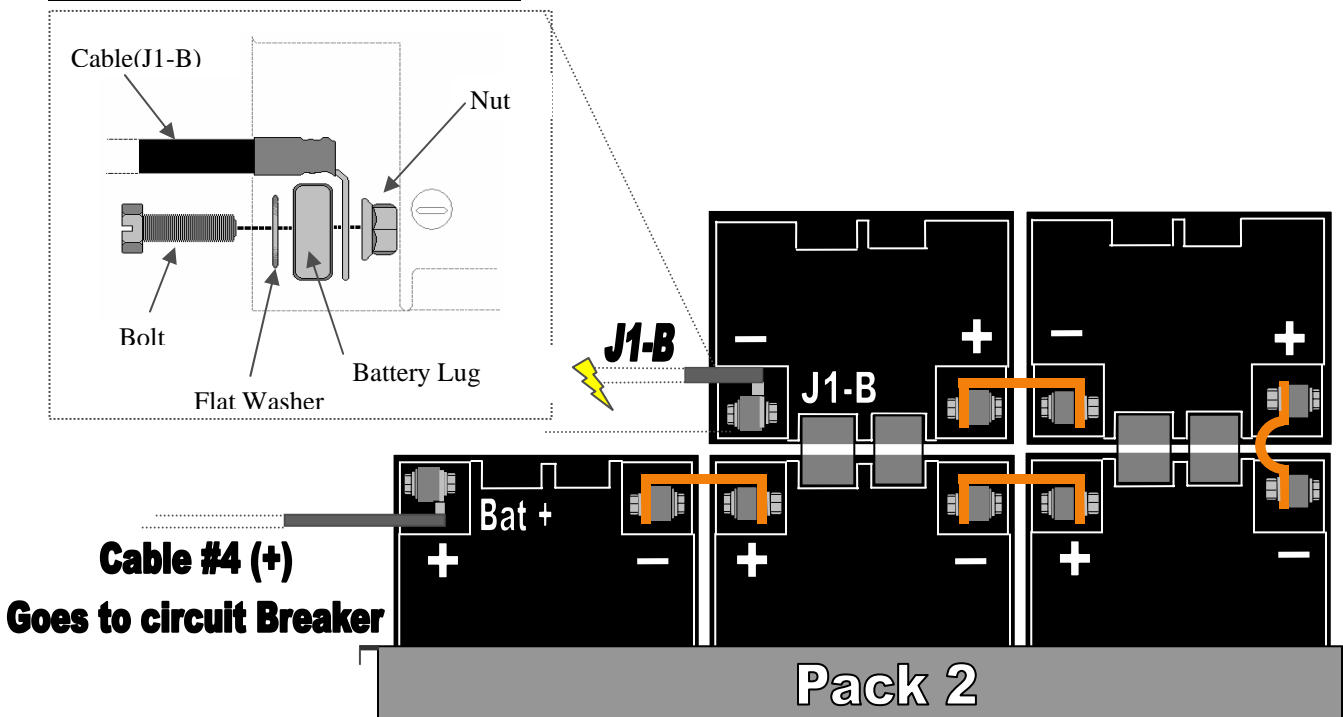


***Figure 4***

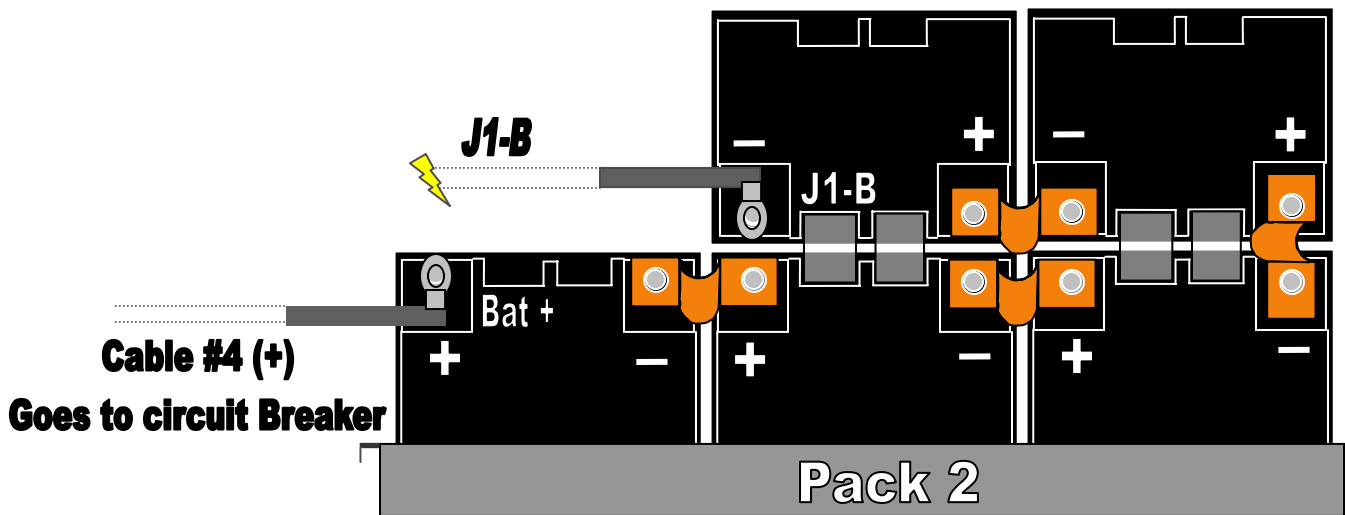
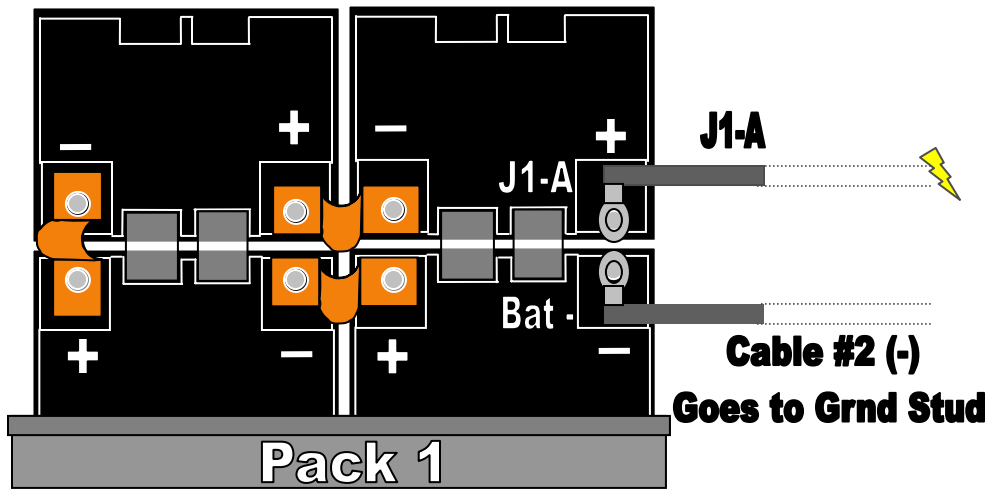
**NOTE:** There are 2 different Styles of batteries. The one below has the lug type of battery posts, whereas the one on the next page has the terminal style posts.



**Blow-up view of Cable Connection**



***Figure 5 (Lug Type)***



*Figure 5 (Terminal Style)*