Battery Box

For Cordless Starter Power
Installation Instructions

1. Attach the steel mounting brackets to your starter. For Sullivan starter models S600, S601, and S603 remove the acorn nuts on either end of the starter, slip the steel brackets over the exposed studs and replace the acorn nuts.The switch and back cover can be adjusted for right or left hand operation. For the Sullivan S598 first cut the steel brackets along the word "Sullivan". Then Attach the brackets using #8 screws and nuts (not included). For the Sullivan S651 Double Handle Starter strap the Battery Box to the side of the starter with nylon ties or hose clamps, the metal brackets are not used.

For other brands of starters, either drill holes to match the starter holes or cut and bend the brackets and use nylon ties or clamps around the starter. The brackets have a fairly wide adjustment range with a variety of hole patterns and can easily be modified as needed. You can order additional brackets from Sullivan, Part Number S980811640C.

2. Connect the top of the Battery Box to the mounting brackets by removing the bottom cover and using the provided #8 x 3/8" screws and hex nuts, see Figure 2 below. The Sullivan Logo and charger door should be on the back end of the starter. Position the Battery Box as desired.

3. Install the desired battery pack into battery compartment, cutting the provided foam padding to provide support, additional foam can be purchased from Sullivan. Install female spade connectors on the battery pack leads and connect to the control board, following Figure 1 below. **Do not reverse or short battery pack leads.**

4. Cut the starter power cord to approximately 7-1/2 inches, and attach female spade connectors. Route starter power cord into Battery Box through provided hole and connect to the control board. For Sullivan starters, the ribbed side should go to positive for normal (CCW) starting. Reverse leads for opposite rotation.

5. Be sure to charge the batteries, according to battery manufacturers instructions, before operating the starter.

Programming
    When the battery is first plugged into the control board there will be a 1 second flash of all LEDs, followed by the 2 red LEDs lighting up to show no battery type has been selected. To select the battery type you are using, hold the grey button down for 2 seconds to enter programming mode, unit will flash 5 times to confirm programming mode. Enter battery code, based on the chart below, Ex. press the grey button once for a LiPo battery or press the button 5 times for a LA battery. Wait approximately 2 seconds then the Battery Box will flash back the code entered for confirmation. If configured incorrectly simply hold the button down for 2 seconds to re-enter programming mode and repeat steps above. The Battery Box can be reprogrammed at any time.

Charging
    Open the side door to access charging jack. A charge adapter may be created using the provided spade connectors and your original battery connector. Attach a balancing connector as required.

Operation
    To check the state of charge, after programming, press the button for less than 1 second. When starting engines always wear protection for your hands and eyes. Follow all battery manufacturer instructions.

Battery Code and Cell Compatibility Chart

1. LiPo - 4S, 5S, 6S, 7S, and 8S
2. LiFePO4 - 4S, 5S, 6S, 7S, and 8S
3. NiMH - 10S, 12S, 16S, 20S, and 24S
4. NiCad - 10S, 12S, 16S, 20S, and 24S
5. LA - 6S (12V) and 12S (24V)

⚠**WARNING**
- Always use eye protection
- Do not short, overheat, or allow internal parts to get wet.
- Only use the battery manufacturers approved charger
- Follow battery manufacturers safety instructions to avoid fire, personal injury, and damage to property

Due to the flat discharge curve of LiPo and LiFePO4 batteries state of charge will be approximate

Have a question?
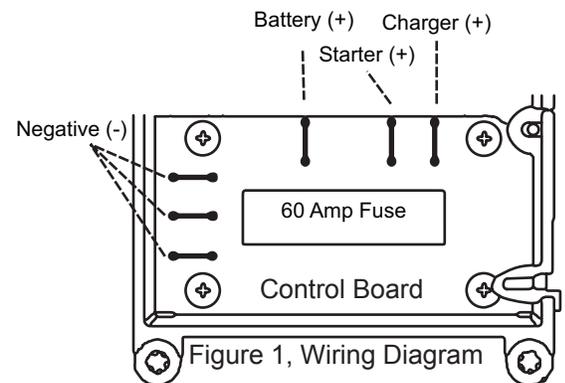Email: Tech@sullivanproducts.com
Phone: 410.732.3500

Battery (+)   Charger (+)
Starter (+)
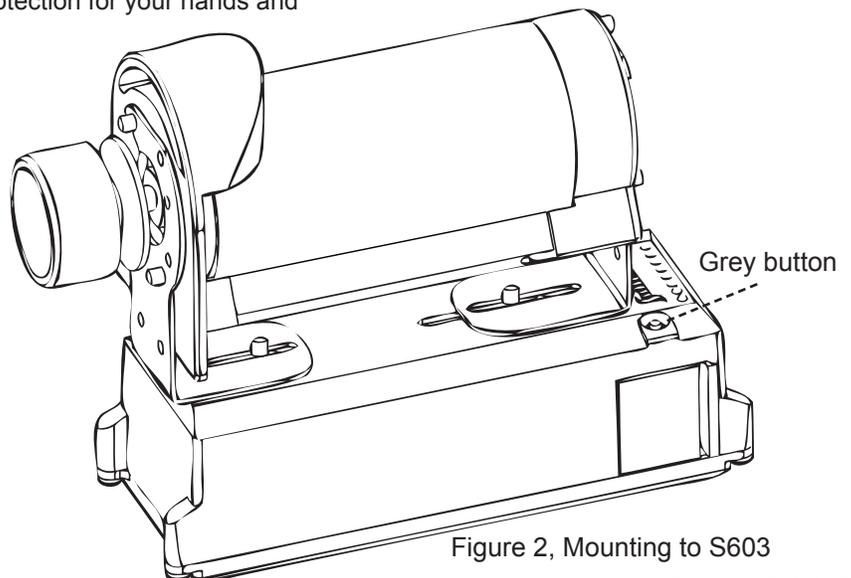Negative (-)
60 Amp Fuse
Control Board
Figure 1, Wiring Diagram

Grey button

Figure 2, Mounting to S603