iBOS®
Intelligent Battery Organizing System

Operations Manual
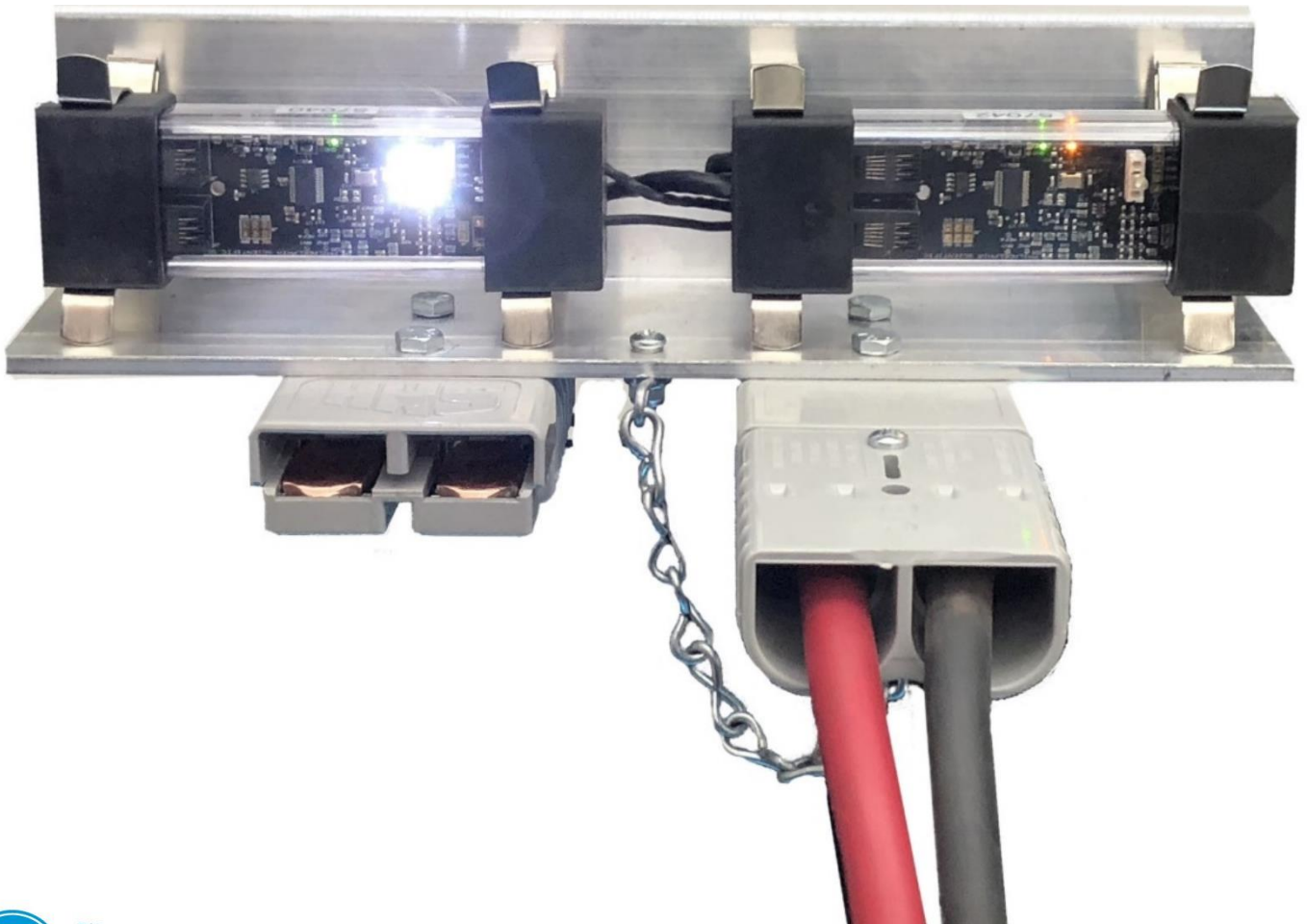## Charger-Splitter™

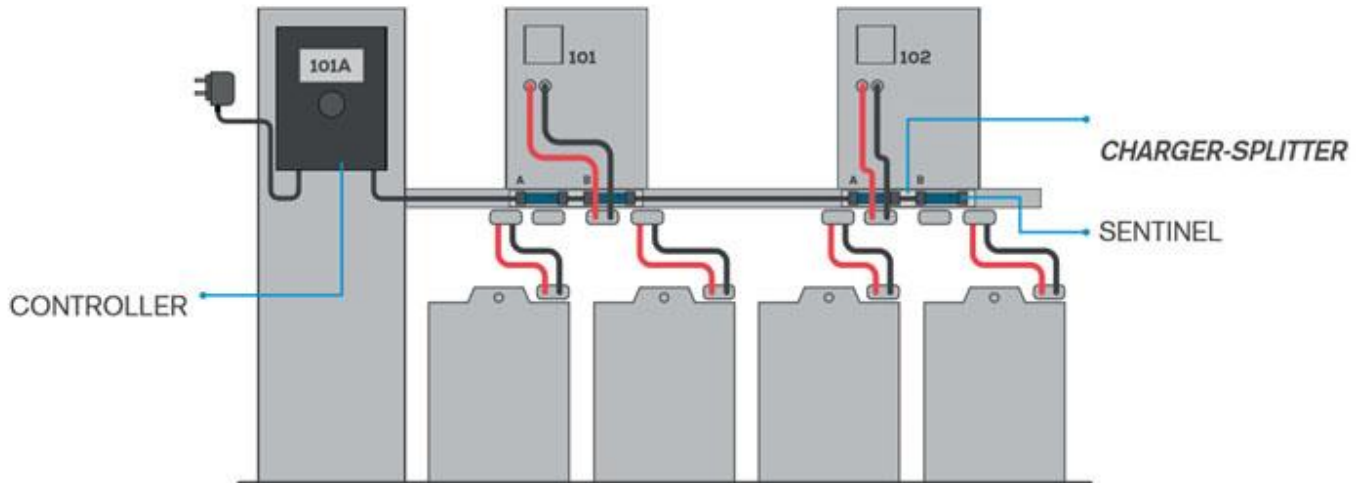**Philadelphia Scientific®**
industrial battery innovation

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1. Introduction

This manual will provide information needed to operate the Charger-Splitter™. The Charger-Splitter™ is to be used in conjunction with the iBOS® battery room management system.

1.1. System Overview

The Charger-Splitter™ add-on feature enables a site to reduce the number of chargers needed in half. With the Charger-Splitter™ add-on, two battery positions are paired to a single charger. When the first battery is fully charged, the iBOS® battery room management system will alert the operator with a white flashing LED to switch the charger to begin charging the second battery.

2. Operating Instructions

A white light will appear on a sentinel to alert the operator when they can switch the charger. In addition to the white LED, the **To Do** button will alert the operator when it's time to switch the charger. For best results, the battery room operator should survey the sentinels for white lights at least once per hour.

✋ *The following instructions are specific to the Charger Splitter configuration. In this configuration, two batteries are paired with each charger. Refer to the iBOS® Operations Manual for details on the functionality of the To Do button in the standard configuration.*
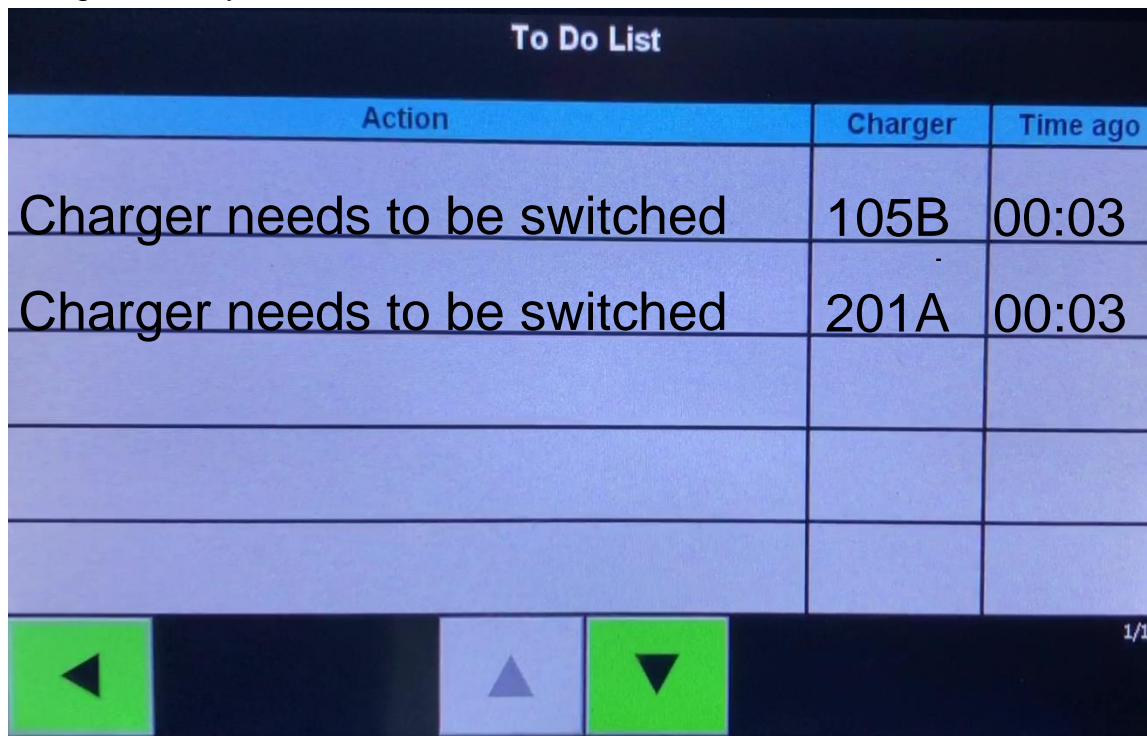
2.1. To Do Button

The **To Do** button will turn red when the system requires operator attention. Tap the **To Do** Button to access the **To Do List**.

2.1.1. Switching the Charger

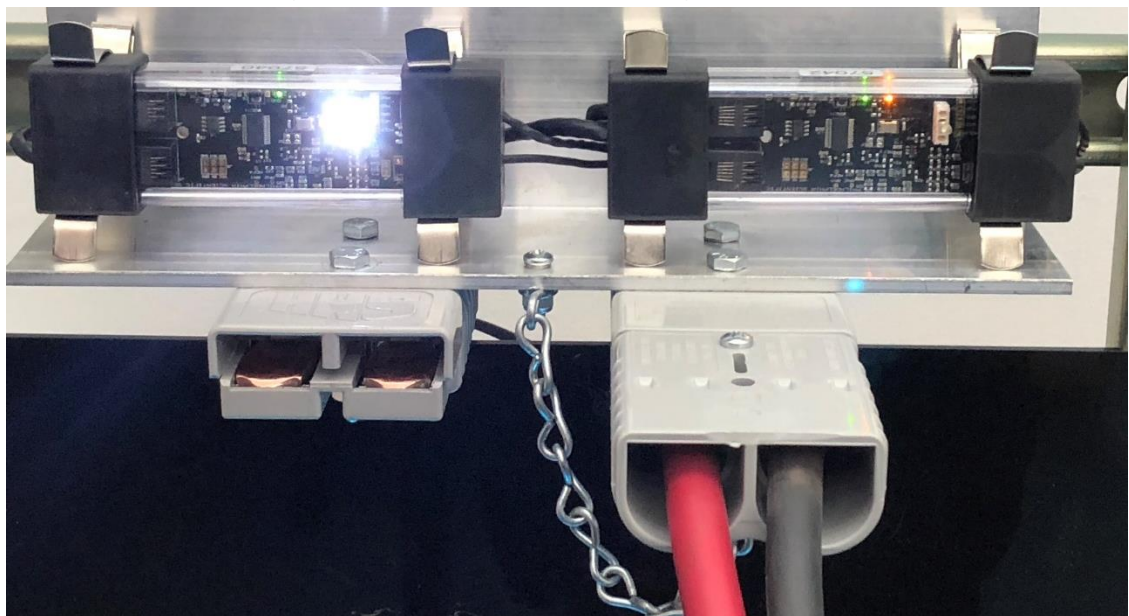1. While in the **To Do List** screen, check the Charger column to identify which charger is ready to switch.

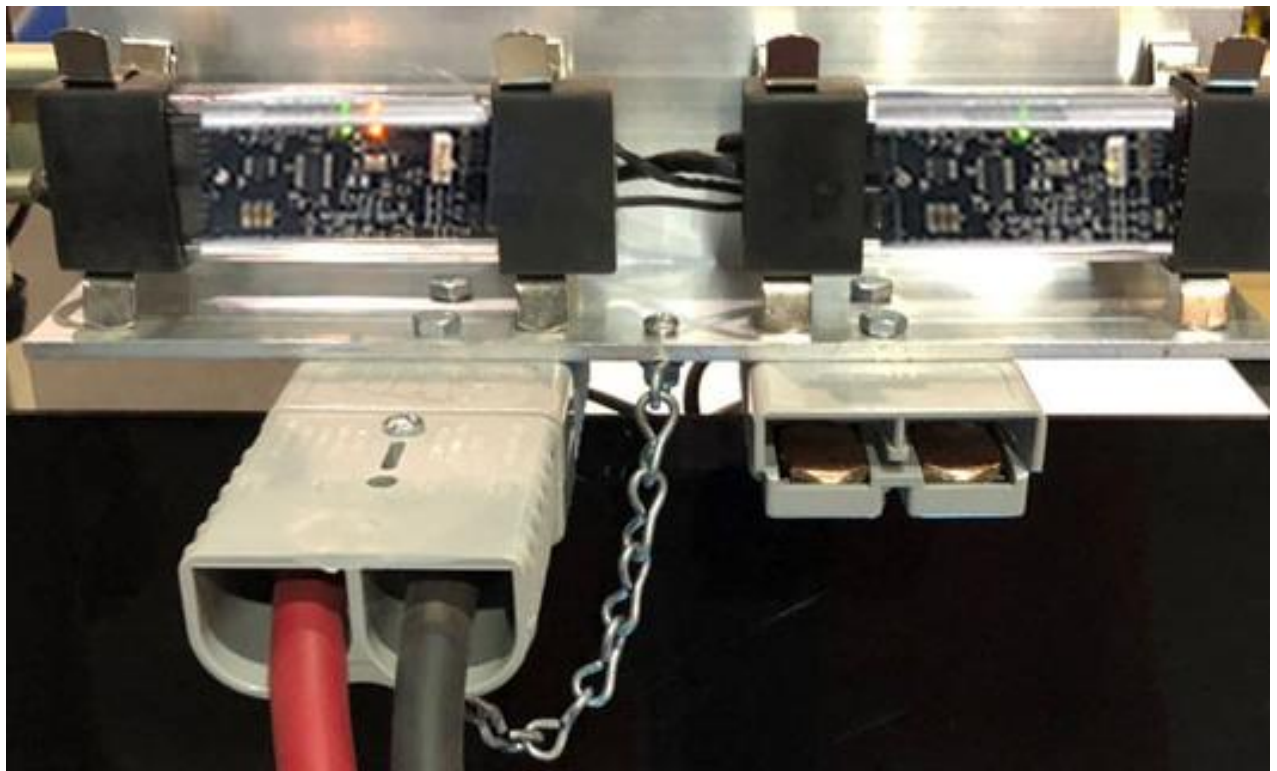⚠️ *Always ensure the charger is powered off before disconnecting the cable.*

2. Disconnect the charger connector from the charged battery.

Note: *The Amber light indicates that the battery is connected to the battery extension cable.*

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3. Wait five seconds so the charger can register the battery disconnect.

4. Connect the charger cable to the paired battery position.

2.1.2. **Quarantine Status**

If a battery doesn't complete a full charge in a 24-hour timeframe, the system will place it in "Quarantine". This is a diagnostic tool to uncover possible issues with batteries or chargers. Batteries can enter "Quarantine" status in the Charger-Splitter configuration if they are connected to battery cable extensions and have not completed a full charge in 24 hours. If the battery is not cleared from "Quarantine" within 3 days, the system will return it to the queue.

👉 *Please note that if chargers are not switched, the batteries can enter "Quarantine" status. This is typically the case in facilities that are shut down for 1-2 days if the chargers were not switched prior to closing.*

1. Tap the **To Do** button to access the **To Do** List.

To Do List		
Action	Charger	Time ago
Charger is in quarantine	103B	00:02

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⚠ *Always ensure the charger is powered off before disconnecting the cable.*

2. If a Quarantined battery is not connected to a charger, disconnect the battery from the battery cable extension and reconnect to the same cable.
3. If a Quarantined battery *is* connected to a charger, follow the troubleshooting steps listed in iBOS® Operations Manual.

3. Troubleshooting

Use the following chart to help identify solutions to the most common issues.

Issue	Possible Solution
No White Light	• The **white** LED on a **Sentinel™** flashes to alert the operator to disconnect a charger from a battery and plug it into a paired battery. If both batteries are charged, no white light will be on. • Check the **Sentinel™ Outputs** screen to ensure that the **Output Relay** is set to "Switch". • Use the ◄ ► buttons to scroll through the options under **Output Relay**. • Select the **"Switch"** option.
Power and Data Connection Issues	**Green LED – Communication status** • Off – No power to the Sentinel™. • Solid – Sentinel™ is communicating properly with Controller. • Flashing – Sentinel™ is not communicating properly with the Controller. **Amber LED – Charging status** • Off – No battery connected. • Solid – Battery is connected. • Solid – No battery connected. Check the charger for a voltage leak to the DC cables. **Blue LED – Termination status** • Off – Battery is not at the top of the queue. • Bright with Momentary Flashing – This is the correct battery to pick next.

White Light is on for a long time	• During normal operation, the white light will go off after connection and charge start.
	  ○ **If the charger is still charging, leave it connected.**
	  ○ Troubleshoot charger if there is a charger fault.

4. Contact Information

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