

# MPA

Multi-Port Safe Parallel Adapter

## User Guide for JST XH Version

12AWG high-strand, flexible silicon jacket to support up to 40A charge/discharge



JST XH "output" balance port to charger's balance jack. Cables available to support: Revolectrix PowerLab 6, PowerLab 8, Cellpro 10XP, and other JST XH-compatible brands.

Glass Epoxy (3 oz. copper) Power PCB; standoff-mounted to keep the heat off the Balance PCB

"Mains" output, Safety Banana Plugs support up to 40A charge/discharge

Polyfuse with thermal indicator protects TX/RX or 1s LiPos

Connect TX NiCd/NiMH

Connect RX NiCd/NiMH

Connect two 1s in Parallel (indoor fliers)

JST XH "input" balance port for daisy-chaining multiple MPA's

Rugged ABS Plastic Tray

Glass Epoxy Balance Connector PCB

9 Discrete Polyfuses (per port) with thermal indicators protect every cell/wire in every parallel-connected pack; each port supporting 2s-8s LiPo Packs

6 independent balance ports support one each (2s-8s) of same cell-count LiPo battery packs safely connected for parallel charging



\*Deans Ultra-to-EC3 adapters will be available

Dimensions: 7.92" x 4.19" x 1.56" (not including cables)

### INTRODUCTION:

Thank you for purchasing the MPA (Multi-Port Safe Parallel Adapter) for XH equipped battery packs – This version of the MPA is configured for JST XH balance plugs and wiring. If you are interfacing the MPA to Revolectrix Cellpro PowerLab Battery Workstations or the Cellpro 10XP charger, you will need to change the default wiring mode from FMA WIRING to XH WIRING. Please consult the user guide for your product for information on selecting the XH WIRING MODE. Unlike standard Revolectrix adapters which convert XH wired batteries to the original Cellpro (FMA) convention, the MPA is a native XH compatible adapter. Furthermore, unlike standard Revolectrix adapters, the MPA does not support balance-wire-only charging.

## GUIDELINES FOR SAFE OPERATION:

**WARNING: Failure to follow the guidelines provided below could result in fire and/or damage to your battery packs.**

- **All packs connected in parallel MUST have the same cell count or damage will occur to your battery packs! If not corrected immediately, fire could result!**
- Li packs connected in parallel to the 6 available ports may have different capacities. Sum of all capacities = 1C.
- Connect ONE pack ONLY to each adapter port when charging Li batteries.
- Connect only one NiCd or NiMH battery pack to **either** the TX **or** RX charge port; never both.
- Never charge NiCd or NiMH batteries in parallel!
- Never connect Li and NiMH battery packs to the MPA at the same time.
- When balance-charging multi-cell Li batteries on ports 1-6, attach the “balance” interconnect cable (purchased separately) between the MPA and the charger.
- When charging any Li batteries, always connect the red and black Safety Banana Jack leads, observing proper polarity! Note: the MPA does not support balance-wire-only charging. Note: If your charger does not support Safety Banana Plugs, check below for instructions for modifying them so they will plug into standard banana jacks.
- Just like the original Revolectrix Safe Parallel Adapters, the MPA is equipped with self-resetting fuses which protect every cell/balance wire of every pack connected. These are covered by the special thermal indicators. **IMPORTANT:** Prior to March, 2012, the “normal” or “cold” color of the indicators was RED. After March, 2012, the “normal” or “cold” color of the indicators was changed to BLACK. If there is ever a problem with the batteries you connect to the MPA such as reverse polarity or a shorted cell, the thermal indicators will change color over the device which is protecting the cell(s) causing the problem. If you ever see the indicators change colors, immediately disconnect the batteries and locate the source of the problem. The indicators will automatically return to normal color when the bad pack is removed and they cool down. After repeated use, the indicators may remain tinted slightly. This is normal.
- Each port’s power connector is also protected by dual 40A fuses in each positive/negative lead. Never exceed 40A maximum charge rate or you will blow the fuses.

## MODIFYING SAFETY BANANA PLUGS:

As received, the MPA’s main pack leads are equipped with Safety Banana plugs. These will plug directly into PowerLab series battery workstations. However, to use these cables with the Cellpro 10XP and other chargers, you may need to either replace these connectors with standard banana plugs or 4mm “bullet” connectors, or modify the Safety Banana Plugs as shown below. Follow the steps below to modify both the red and black Safety Banana Plugs.



Using a utility knife, carefully cut the protective tube from around the banana plug as shown and remove.



Using small pliers, remove the rubber tip from the banana plug as shown.



This is what the plug should look like when you are done.