

# What all do I need for Battery Power?

## **Batteries and Charger**

You need on-board batteries to supply the power, and an external battery charger to recharge them. There are several on-line sources that will give you the best value. Our product manuals will tell you how to determine the proper size. We recommend Lithium-Ion battery packs from All-Battery.com, but you may also use Ni-Mh, Ni-Cad, drill batteries, etc. Maximum voltage input for our controls is 25VDC (with a full battery charge, actual voltage will be greater than rated).

[www.All-Battery.com](http://www.All-Battery.com)

Lithium-Ion batteries and chargers (**our preferred supplier**)

## **Power Input**

You will need a few components for the power input circuit. We can supply you with individual components for the battery on/off switch and charging jack. But we highly recommend our Battery Conversion Module which greatly simplifies installation by placing all of these components on a small circuit board with screw terminals. If you purchase the All-Battery.com Li-Ion charger, you will need our charging plug with wires to adapt it to the Battery Conversion Module charging jack. A battery connector pair between the battery pack and Battery Conversion Module is also recommended to safely disconnect the battery when needed.

## **Control System**

The control board provides the motor driver, a micro-controller, and all of the interface circuitry for lights, sound, reed switches, and radio control.

**G-Scale Graphics** offers several types of controller systems to complete your installation.

The **Simple Critter Control** (Manual hand control of speed with a knob)

The **Magnetic Critter Control** (Semi-automatic speed control. Start/Stop via hand-held magnet )

**RailBoss 4 Basic and RailBoss 4 Plus**

(2.4GHZ radio control using a hand-held 6-button transmitter and control board with built-in receiver)

Reed Switch: If you want automated station stops using the RailBoss 4 Plus, you will also need a reed switch.

## **Recommended Parts List**

G-Scale Graphics control system of your choice

Battery Conversion Module Kit (Trail car or Tender)

Reed Switch

Sound System (MyLocoSound or Phoenix)

Lithium-Ion Battery Pack (14.8V, 2200 or 4400 mah)

14.8V Lithium-Ion Battery Charger

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Note: You may also need additional connectors to route power and signals between trailing cars/tenders/locos. We have 2-wire and 4-wire locking connector cables. (2 wires for motor, another 2 for front light).

## **Installation**

Sorry. We don't do installations. Most of our customers have successfully installed our systems themselves. If this isn't for you, you may want to find a local installer to avoid having to ship your locomotive.