

## AirWire Installation Accessories

### Split Board Kit

The Split Board Kit contains a length of very thin, very strong, flat flexcable plus instructions. It allows the G2 decoder board to be split into two parts: the radio receiver and the motor driver. No soldering is required. The flexcable is already pre-stripped and tinned for use to reconnect the two halves. Not required for Drop-In decoders.

Kit with 3 inch cable [SFX3] . . . . . \$13.95<sup>2</sup>

Kit with 6 inch cable [SFX6] . . . . . \$13.95<sup>2</sup>

### Fuse Kit

Includes in-line fuse holder with 18" wire leads, two 10A "slo-blo" fuses and hookup diagram. Provides catastrophic protection for the decoder wiring. Not required for Drop-In decoders.

Fuse Kit [FK9] . . . . . \$7.95<sup>2</sup>

### External Antenna Kit

Includes a 5 inch long antenna, attached to 9 inches of RG174 coax cable. This cable solders to the receiver board in place of the standard wire antenna. It allows for an external antenna to be placed on top of a car or locomotive for better, longer range reception.

External Antenna Kit [CA] . . . . . \$19.95<sup>1,2</sup>

### Range Extender Kit

Contains 3 feet of ultra-flexible, 2-conductor shielded cable for motor hookup plus 2 feet of tightly twisted #18AWG wire for battery hookup. Also includes additional components to minimize motor noise generation and pickup and maximize receiver range. Can also be used on the Drop-In decoder although not required for a typical installation.

Extender Kit [REK1] . . . . . \$29.95<sup>2</sup>

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# Catalog 2010



# AIRWIRE<sup>®</sup> 900

## Wireless Control For Battery Powered Garden Railroads

Designed and Manufactured By  
**CVP Products**



## About AirWire900

CVP Product's AirWire900 system is a remote control system for garden railroads that uses battery powered locomotives and wireless handheld controllers to provide efficient and hassle free operation of your favorite garden railroad locomotives.

In its simplest form, the AirWire900 system consists of a handheld controller, called a throttle, and a locomotive mounted motion-decoder powered by a modern, high-capacity battery. Each decoder equipped locomotive has a unique address, much like your house has an address, so the locomotive responds to throttle commands that have a matching address. Since there are 10,000 possible addresses, multiple trains can be controlled from a single throttle. The high-capacity Lithium batteries provide several hours of uninterrupted operation. Lithium batteries are lightweight, have high energy density and are small in size.

**Eliminate all track wiring.** Battery power means there is no complicated track wiring for power delivery. In fact, there is no track wiring since the locomotive carries its own power. Gone are the wiring nightmares of reverse loops, wyes, junctions, blocks and storage yards. There is no need to purchase expensive rail-clamps or spend hours soldering wires to rail. You'll save hundreds of hours of back-breaking labor. Changing track plans is simple – just put down track and begin running immediately.



**AirWire uses safe battery power.** There is no electrical power on the exposed track. Thus there is no need to worry about electrical or shock hazards. Battery powered locomotives means never having to worry about electrical hazards and municipal electrical codes. This is especially important when children are present. Switch to safe and reliable battery power. Newer battery technologies provide reliable and long running time for long heavy trains and hilly layouts.



**Abolish track and wheel cleaning.** Forget the endless hours of cleaning track and wheels. Your trains will run smoothly and reliably without hesitation or jerky performance. AirWire900 eliminates the need to clean the track and the locomotive wheels because the locomotive carries its own power supply. There is no need to put power on the rails thus forever eliminating the nasty chore of cleaning tracks and wheels.



## Lithium Battery Pack And Smart Charger

We searched high and low for a suitable battery along with a matching charger at an affordable price. While you are not required to use our recommended battery pack and charger, they offer the best compromise among many factors such as safety, power, size, weight, voltage, motor noise and lifetime. Besides, they are the ones we use for all of our locomotives. The battery pack and charger are available directly from CVP Products. They are shipped via FEDEX ground or UPS ground only.

### 4.4Ahr, 14.8V Lithium Battery Pack ..... \$73

This small, lightweight battery packs a lot of power into a small and lightweight package. It can power a USA-Trains SD70 for more than 2 hours.

With its built-in protection circuitry and its automatic cutoff at the end of the charge, this battery offers long life, high capacity and nearly constant output voltage over the life of the charge.

The dimensions are 68mm x 72mm x 36mm. It weighs about 12 ounces.



### Smart Charger for 14.8V Lithium Packs ..... \$25

The charger works off any household line voltage from 90 to 240V 50/60Hz. The line cord is included. It features a 1.5A constant charging current for faster charging. It can charge a 4.4Ahr battery pack in less than 3 hours. The built in microprocessor will automatically cut off power when the battery is fully charged. Indicator lights show red when charging and green with the battery is fully charged. Included with the charger are a pair of spare fuses along with the appropriate connectors.



**Higher amp-hour capacity batteries may be used although as capacity goes up, so does the price, the size, the weight and the need for a specialized charger. If these factors are less important than battery life, by all means use the higher capacity batteries. Be sure to obtain a matching charger and for best operation, stay with the 14.8V rating.**



# The Linker And The Activator

Remote control of turnouts and many types of accessories is accomplished with the combination of an AirWire Linker and an AirWire Activator. Together, they link throttle commands to items such as switch machines, lights, pumps or just about any other type of device found on a typical garden railroad.

**Linker - AWLK** ..... *New Lower Price* **\$149<sup>1,2,3,4</sup>**  
**DCPS120 Power Supply** ..... **\$55<sup>2,3</sup>**



Only a single Linker is needed to control and supply power to as many as 25 Activators. The Linker is a radio receiver that scans all 8 original AirWire frequencies, formats the received information, combines it with power and sends the signal over a pair of wires that are shared by all Activators. An optional battery or power supply provides safe, low voltages making the Linker safe for outdoor use. To cover longer distances, use multiple Linkers. The Linker is protected against accidental short circuits, overheating and overloads. Set up is quick and simple and requires not programming.

**Activator - AWACTION** ..... **\$119<sup>2,3</sup>**  
**Activator - without enclosure** ..... **\$99<sup>2,3</sup>**



The Activator is a complete accessory decoder capable of controlling four independent accessories such as switch machines. It can also control lights, signals, stationary motors, pumps and relays. Just about any kind of DC device can be controlled by the Activator. It is also compatible with all types of switch machine motors including air-actuated machines. Momentary pulse, or continuous activation can be selected. The outputs are protected against overheating and overloads. It is easy to setup without a lot of complicated programming. Two small rotary dials select the addresses for the 4 independent outputs and these can be changed at any time. The Activator is available in a rugged enclosure with pluggable terminal strips or without an enclosure.

1-Available in North/South American, Canada and Japan only  
 3-Prices subject to change without notice

2-MSRP excluding shipping and handling  
 4- Battery or Power Supply not included

**Locomotive wheel sets will last longer.** Another issue with track power is the rapid pitting of both wheels and track sliders caused by intermittent electrical contact. Pitted wheels and sliders will pickup dirt much more quickly resulting in poor locomotive performance. If this occurs, the only solution is to replace them; assuming they are available.



**Multiple independently controlled trains are easy and fun.** Watching one train go around and around becomes boring after a short time. AirWire900 allows multiple trains to share the same track without a complicated track powering scheme. Each train can be under independent control and multiple operators can use the same track.



Add a couple of passing sidings to allow two trains to meet and pass each other. Add some industrial areas with their own sidings and enjoy the fun task of delivering and picking up boxcars. Add a passenger train or two and soon you'll have your own miniature transportation empire that is as much fun to watch as it is to operate.

**Adding AirWire to your railroad is easy.** With the addition of our new Drop-In series of locomotive decoders, installation is fast, simple and trouble-free. Use the recommended battery and smart charger for hours of enjoyment between charges. The handheld throttle is comfortable, convenient, and easy to use. If you want sound effects, any brand of DCC sound decoder can be used with any AirWire decoder and controlled directly from throttle.



**Activate turnouts and other stationary accessories.** In addition to locomotives, the handheld throttle can also control turnouts, lamps, pumps and other stationary accessories using our Linker and Activator. All accessories can be controlled or activated from any of the AirWire handheld throttles.

This catalog lists all of the various AirWire components available as of the date on the cover. For more information please visit the website. You are invited to also download the various manuals and application notes for each of the products from our website.

**Don't accept poor imitations of AirWire900 equipment. Demand only the original AirWire System from CVP Products. You will not be disappointed and, naturally, we guarantee it.**

AirWire is Only Available In North and South America, Canada, Japan  
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# Wireless Throttles

The wireless throttle is a comfortable handheld controller used to control and program your AirWire900 equipped locomotives. Two different versions are available each having the same basic capabilities. Both will control accessories and turnouts and both will serve as a decoder programmer. But the most obvious difference is the display found on the T9000. Also the T9000 can access the 8 additional frequencies available with the new Drop-In decoders. Choose the most appropriate throttle that matches your requirements.

## T9000 Premium Throttle ..... \$219<sup>1,2</sup>

With its elegant design, featuring a classic speed control knob and 80 plus hours of operation without changing batteries, the T9000 wireless throttle puts precision control in the palm of your hand. It is easy to use and a cinch to learn. It is the wireless throttle that has made AirWire900 the number-one control system for new and existing garden railroads. It serves as both a standard throttle plus it can easily and quickly program all DCC decoders.

- Very long range wireless throttle
- 8+8 selectable frequencies (original 8 plus 8 more)
- Large display works in bright sunlight
- 13 independent function controls for all DCC decoders
- Built-in decoder programmer for quick setup
- Build and/or modify mult-unit consists
- Large memory stores all locomotives and their settings
- 80 hour battery life

## RF1300 Budget Throttle ..... \$159<sup>1,2</sup>

Although this throttle doesn't have a display, it still packs a complete throttle and a DCC decoder programming capability into a small and compact space. Locomotive selection is easy using just a couple of key strokes. It features the same long range capability and uses conventional LED indicators.

- Very long range wireless throttle
- Eight selectable frequencies
- Precision control for your locomotives
- Big single-turn speed control knob
- 13 independent function controls for all DCC decoders
- Built-in decoder programmer for quick setup
- 40 hour battery life



T9000



RF1300

# AirWire® DROP-INS™

Continued from page 8

**A/B Unit connectors are included** - For you F3 locomotive fans, you'll appreciate the addition of a B-unit version of the F3A Drop-In decoder. Simply install the F3B decoder and attach the B-unit to the A-unit with the supplied 2-conductor cable. It has all the capabilities of the F3A Drop-In decoder and each decoder can be independently fine tuned for desired performance and precise speed matching.

**Master/Slave connectors for all Drop-In decoders included** - We liked the A/B concept so much that we added the capability to all of the Drop-In decoders. This allows the lead locomotive to receive control signals and pass them on to a trailing locomotive. Since there isn't a need for an additional radio receiver in the trailing locomotive, you'll save a few dollars.

**Locomotive disassembly instructions are provided** - Installation is simple, convenient and hassle-free using our detailed step-by-step illustrated instructions. Many first timers tell us that disassembly is the hardest part because they don't know where to begin. Don't worry because our illustrated instructions show you exactly where to begin, where every screw is located and how to gently separate the shell from the chassis.

**Charging jack, switches and battery fuse are built-in** - You'll be delighted to discover we've already installed all the switches and fuse and charging jack and that they fit the existing cutouts on the locomotive.

**Use the recommended Lithium battery pack and smart charger** - We spent a lot of time researching a good quality battery pack and matching smart charger. Using the recommended battery and smart charger ensures long life, fast recharging and reliable operation. These are available directly from CVP Products and are described elsewhere in this catalog.

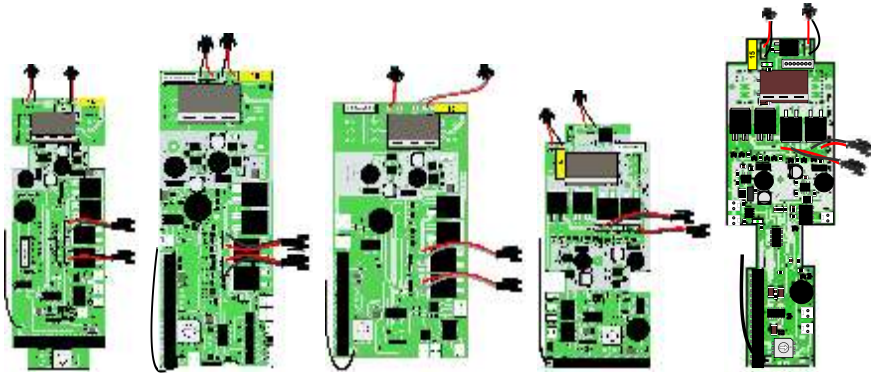
**16 frequencies are standard** - In addition to the 8 original frequencies, the Drop-Ins include 8 more frequencies usable with the T9000 throttle. If using an RF1300 throttle, it will be limited to the original 8 frequencies.

SD70 Drop-In Decoder .....	\$159
SD70 Drop-In Decoder slave unit .....	\$145
F3 Drop-In Decoder .....	\$159
F3 Drop-In Decoder slave unit .....	\$145
GP38-2 Drop-In Decoder .....	\$159
GP38-2 Drop-In Decoder slave unit .....	\$145
GP30 Drop-In Decoder .....	\$159
GP30 Drop-In Decoder slave unit .....	\$145
GP7/9 Drop-In Decoder .....	\$159
GP7/9 Drop-In Decoder slave unit .....	\$145

1-Available in North/South America, Canada and Japan 2-MSRP excluding shipping

# AirWire® DROP-INS™

The first 5 Drop-In Decoders designed specifically for USA-Trains locomotives.  
 These decoders are not shown actual size and some wiring harnesses are not shown.



GP7/9    SD70MAC    F3A/B    GP38-2    GP30

Developed in conjunction with USA-Trains, and Phoenix Sound Systems, CVP Products has released the initial set of new AirWire decoders designed specifically for USA-Trains locomotives.

**Fits a specific USA-Trains chassis** - We've carefully designed each Drop-In to exactly fit the inner dimensions of a specific locomotive chassis. Each Drop-In decoder uses the exact same number and type of connectors, plugs and sockets to match the locomotive's internal motor, lights and smoke generator wiring.

**Built-in socket for Phoenix P8 Sound Decoder** - Also built into each Drop-In decoder is a socket for simple connection to the new Phoenix BigSound P8 sound module. Using the supplied cable, simply plug the P8 into the Drop-In decoder socket and enjoy premium sound effects from one of the leaders in large scale sound.

**All of the G2 decoder features and much, much more** - The AirWire Drop-In decoders have all of the features of the G2 decoder and more. The supersonic motor drive provides smooth, silent and powerful drive to the motors. Built-in cruise control maintains constant speed up and down your railroad and special slow speed algorithms enable the locomotive to crawl at a tie a minute. Easy to adjust speed curves allow for precise speed matching of different types of locomotives. In short, the Drop-In is a rugged and dependable decoder perfect for heavy duty outdoor railroads.

**More lighting options and effects available** - The Drop-In decoders expand your options for locomotive lighting. In addition to complete remote control of the factory standard lights, we have also included lighting effects such as mars lights, gyra lights, dome flashers, strobes and rotary beacons. Although they might not be applicable to the locomotive, they are present should you wish to hook them up separately.

**Smoke generator driver includes safety timeout** - There is no need to worry about your smoke generators. Once activated from the throttle, they automatically shut off after about 4 minutes.

*continued on page 9*



## The G2™ Decoder 2nd Generation Motion Decoder

Each locomotive to be controlled by an AirWire throttle must have an AirWire decoder. The decoder serves as both a radio receiver and a powerful motor driver.

There are two different types of AirWire Decoders, the G2 described on this page and the new AirWire Drop-In Decoder series starting on page 7.

The G2 decoder is a versatile decoder and features a small size suitable for many brands of locomotives. It also has easy to use terminal blocks plus an enormous power capacity of 120 Watts suitable for all large scale locomotives. Numerous automatic safety features protect sensitive and delicate locomotives and accessories. The decoder's tiny 3-inch antenna can be hidden almost anywhere.

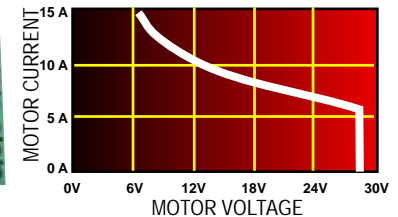
### G2 Motion Decoder . . . . . \$149

- Eight frequencies compatible with either type of AirWire Throttle
- Up to 10 Amps of continuous motor drive power without a heatsink
- 20 Amp momentary surge rating for motor outputs
- Smooth, silent, supersonic motor drive
- Two modes of constant-speed cruise control
- Overload and overheat protected motor drivers
- 10 unique customization parameters for motor drive
- Fully protected 3 Amp auxiliary DCC output driver
- Supports up to 28 volt battery power
- Works with all types of battery packs, lead-acid, Lithium, Nickle-metal
- Four unique directional headlight options
- Two independent re-mappable function outputs
- Fully protected function outputs rated 1 Amp
- Compatible with all brands DCC sound decoders
- Easy to use screw terminal strips
- 3 inch Internal or Optional External Antenna
- Easily split board with pre-installed sockets for use with optional split-kit
- Includes 30' of shielded cable for motor connections



Size - 1.6 x 4.3 inches

### Available G2 Drive Power

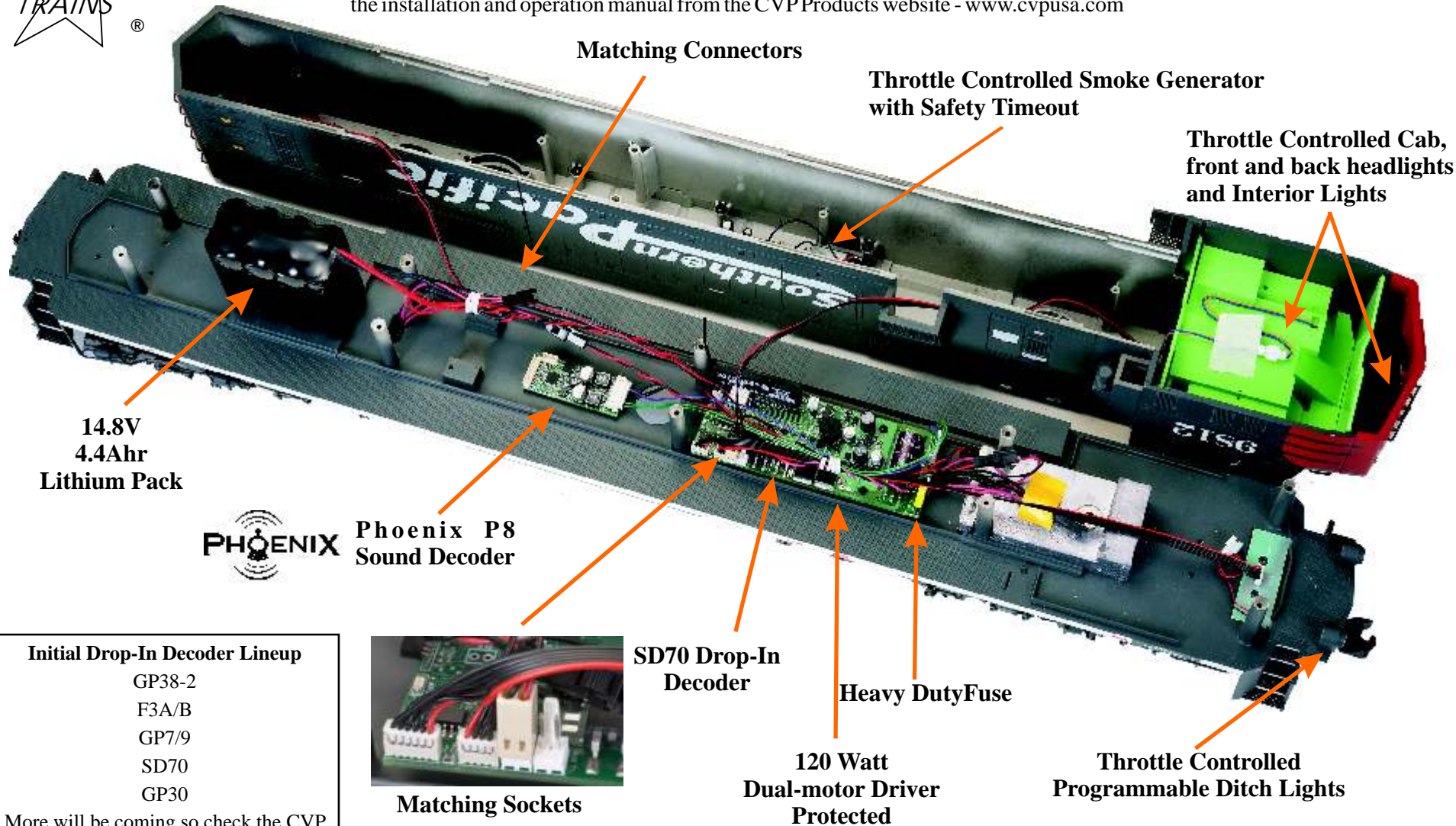


# AirWire® DROP-INS™

## Ready-To-Go AirWire Decoders Designed Specifically for USA-Trains



Shown is a USA-Trains SD70 with the Drop-In installed and wired to our recommended Lithium battery pack. The SD70 Drop-In designed to precisely fit the USA-Trains SD70 locomotive and uses all of the original factory wiring. Only a few of the many features and capabilities are shown. For a complete listing of features for this decoder, or any other of our decoders, download the installation and operation manual from the CVP Products website - [www.cvpusa.com](http://www.cvpusa.com)



- Initial Drop-In Decoder Lineup**
- GP38-2
  - F3A/B
  - GP7/9
  - SD70
  - GP30
- More will be coming so check the CVP website for the latest updates.



Matching Sockets

SD70MAC Drop-In along with Phoenix P8