

## More Installation Accessories

### 2mm Polarized Connector [Set of 5 each type]

Popular, inexpensive, 2mm pitch male and female connectors. Comes in package of 5 all the same type. Select male or female. Has 6 inches of red and black wire. Female socket type fits our BAT4 plug.

5PACKFr.....Package of 5 female connectors  
5PACKMr .....Package of 5 male connectors



### Plug To Fit Drop-In Charging Jack

Fits the battery charging jack on the bottom of the Drop-In decoder. Right angle plug. 2.1mm ID, includes 72 inches of polarized wire.

DICPr ..... DC Plug with attached wire



### 0.5A Boost Module [suitable for HO locomotive motors]

Imported miniature voltage boost module. Boosts 3.7V to 12V. Accepts up to 9V input. Higher output current with higher input voltage. Maximum output current is 0.5A with 6V input. Overheat protection. No protection against short circuits. Has 0.1 inch pitch pins. LxW = 0.81 x 0.39 inches (not including pins). Requires soldering.

B05r ..... Boost Module 3.7V to 12V @0.5A



### Whip Antenna Extension Cable

A low cost solution for moving the whip antenna up to 14 inches away from the AirWire radio module used on decoders and CONVRTRs. The whip antenna snaps off the radio module and snaps onto one end of the extension cable. The other end snaps onto the radio module. No tools or soldering required.

WECr ..... Whip Extension Cable 14 inches



### USB to microUSB Charger Cable

Fits the microUSB jack found on AirWire throttles with rechargeable batteries. The 3 foot cable is bright orange.

USB2micror ..... Charger cable for microUSB



### Replacement Whip Antenna

Fits all decoders and CONVRTRs having an X part number. Has the UFL connector along with the clear plastic insulated antenna wire trimmed for the ISM 915MHz band. Black heatshrink tubing protects the junction of wire to connector. Snaps onto radio module. No tools needed.

ANTWr ..... Replacement Whip Antenna



## Price Lists and Ordering

Up To Date Price Lists Can Be Downloaded From the CVPUSA Website

Purchase From Authorized AirWire Dealers or Direct From CVP. The authorized dealer list is on the CVP website. Just click on AIRWIRE DEALERS. Many dealers offer discounts off our list prices.

You may also directly order from us via phone, email or postal service using our handy order blank. Download the order blank and fill it in. Or call us during our normal business hours to place your order or seek ordering advice.

Shipping costs are not included in the price list.

CVP Products P.O. Box 831333 Richardson, TX 75083 [www.cvpusa.com](http://www.cvpusa.com) 972-238-9966

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# AIRWIRE<sup>®</sup>

# 900

## Battery Powered Wireless DCC Control For All Scales

### We Make "Dead-Rail" Possible!

Download the latest price list  
from the [www.cvpusa.com](http://www.cvpusa.com)  
home page.



MADE IN THE USA



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Exciting New Products

Designed, Manufactured and Serviced By

## CVP Products

[www.cvpusa.com](http://www.cvpusa.com)



In this catalog you will find QR codes that will take you to specific pages on the CVPUSA website. Scan the code to go directly to the appropriate webpage for detailed info! The QR code on this page takes you to the CVPUSA home page.



To setup to use AIRWIRE with your trains, here are the 3 basic items you will need to convert your favorite locomotive into an AIRWIRE wirelessly controlled, battery powered locomotive.

**1 The AIRWIRE T6000 throttle is required.** The throttle is used to setup the locomotive's decoder to suit your particular operating requirements. The same throttle is also used to run the locomotive. It is simple to use and very rugged - a perfect match for your enthusiastic, youthful operators. No other systems are required to setup or operate your AIRWIRE equipped locomotive fleet.

**2 An AIRWIRE Decoder is needed if your locomotive doesn't have a DCC decoder already installed.** There are several styles and sizes available. Some AIRWIRE decoders are designed to fit into specific locomotives and use the locomotive's existing factory wiring. For locomotives without a specifically designed AIRWIRE decoder or DCC socket, use the generic G4 decoder with 120 Watts of power or the very small M15 microDecoder designed for HO scales.

**If your locomotive already has a built-in NMRA-DCC decoder,** or you want to install a 3rd party DCC sound plus motion decoder, then you will need an AIRWIRE CONVRTR™. The CONVRTR comes in 3 different amperage ratings; 1.5A, 2.5A and 6.0A. The CONVRTR series allows any NMRA-DCC compliant decoder to be setup and operated with an AIRWIRE wireless throttle. No 3rd party DCC systems are required for any type of AIRWIRE installation.

**3 The Lithium-Ion rechargeable battery and battery charger are needed.** CVP sells two of the most popular battery sizes used for the larger scales, the BAT2 and BAT3 both rated at 14.8V. These are used in most O-scale and G-scale installations. Fortunately, AIRWIRE decoders can use just about any brand or type of battery. Battery sources for smaller scales are discussed in the back of the C15 CONVRTR User Guide.

## Considerations and Suggestions

**Changing over to battery power and AIRWIRE is not difficult.** But, there are some considerations and decisions to make. If this is your first time to use battery power, the tips below will save you a lot of time and effort. It will also insure your very first installation is a first-time success.

**Carefully Choose Your First Locomotive:** Here are two very important tips to consider when starting your first installation. Don't select the smallest locomotive in your fleet since it will provide you with the biggest challenge - finding space for the battery. Pick a locomotive that has plenty of space for the battery. It is OK to use a dummy locomotive or a trailing box car to hold the battery and the decoder.

**Invest in quality tools.** Get rid of your 100W soldering gun! Check out our tool recommendations. Scan the QR code or go to the app notes in AIRWIRE doc center.

**Read and Follow The Installation Guide.** We have found that a true genius is a person that not only reads the manual, they follow the instructions.

**Authorized AirWire Dealers** offer all of our AIRWIRE products as well as other products that work with AIRWIRE. Many dealers also offer installation services. Please contact them directly for details or to purchase AIRWIRE products.



T6000 Wireless Controller



G4 120W Decoder



C15X CONVRTR™



## Ultra-Miniature 2-Pin Plug and Socket

Military-grade connectors custom made in the USA. The pin pitch is only 50 thousandths of an inch (0.05in or 1.27mm). Each connector is sold separately.

- UMPr .....Ultra-miniature Plug with wires
- UMSr .....Ultra-miniature Socket with wires

## Drop-In ALT Lighting Pigtail

For use on all Drop-Ins that offer an ALT lighting socket.

- ALT6r.....Pigtail with plug and 24 inches of wire

## External Antenna Adapter Cable

6 inches of miniature coaxial cable with a UFL plug on one end and a REVSMA jack at the other end. The UFL plug matches the external antenna jack found on any "X" decoder or X series CONVRTR.

- UFLADAPTr ..... UFL plug to REVSMA jack

## External Dome Kit

Low profile "dome" antenna. Can be painted with non-metallic paint. The dome is attached to 9 inches of RG174 coax cable and plug.

- DCAr.....Dome Style External Antenna Kit

## Adapter Board For Aristo Locomotive's DCC/RC Socket

This plug-in adapter plugs directly into all Aristo locomotives having the DCC/RC Port (socket). It has clearly marked terminals and a self-resetting fuse to protect your battery pack. User guide included.

- Ada1r .....Fully Assembled ready to use
- Ada1kr.....Kit of parts that requires simple soldering

## Wiring Kit For GP30 Drop-In AUX Lighting Header

Includes prewired plug with 12 inches of attached red/black wire to allow easy hookup of the AUX lighting header found on the GP30 Drop-In Decoder. Easily add unique lighting effects to your USA-Trains locomotive.

- KK2r .....Wiring Kit for GP30 AUX

## Wiring Kit For Ditchlight Header on SD40 Drop-In

Includes prewired plug with 24 inches of attached 3-conductor wire to allow easy hookup of the Ditchlight header found on the SD40 Drop-In decoder. Just add your favorite white LEDs and enjoy the realism of working ditchlights.

- KK3r ..... Wiring kit for SD40 optional header

## JST 2.5mm Plug or Socket

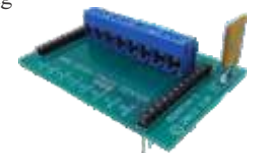
The SKT is the matching socket for the CVP battery pack plug. The PLUG is the same as found on the CVP battery pack. Each connector includes 12 inches of flexible red and black stranded wire.

- JST-SKTr.....Socket with 12 inches of wire
- JST-PLUGr.....Plug with 12 inches of wire

## 1.27mm Polarized Connector Set

Very small and inexpensive connector. Perfect for use in small scales. One each male and matching female connector. Has 3 inches of red and black wire that are pre-stripped and tinned.

- CON127r..... DC Plug with attached wire



# Lithium-Ion Rechargeable Batteries And Chargers

# Wireless Controllers

## 14.8V 6.8Ah Battery Pack\*

Rated at 6.8A continuous discharge with a 14A peak discharge, the BAT2 pack is ideal for the high current dual motors found in the USA-Trains diesels. It can power a USA-Trains SD70 for more than 3 hours. The battery is fully protected with an 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.



BAT2

The dimensions are 2.9 x 2.8 x 1.5 inches. It weighs about 16 ounces and comes with a pre-mounted connector to match CVP's Plug-In and the USA-Trains Drop-In decoders.

## 14.8V 3.4Ah Battery Pack - "The Brick"\*

Rated at 4.9A continuous discharge with a 6A peak discharge, this small pack is ideal for locomotives with limited space. It easily fits the USA-Trains NW2 switcher, the S4 switcher and Bachmann's C19 steam engine. The battery is fully protected with an automatic cutoff at the end of the charge.



BAT3

This battery offers long life, high capacity and nearly constant output voltage over the life of the charge. The dimensions are 2.75 x 1.46 x 1.46 inches. It weighs about 8 ounces and comes with a pre-mounted connector to match the CVP's Plug-In and USA-Trains Drop-In decoders.



| Part#       | Description                                       |
|-------------|---|
| BAT2r ..... | 14.8V @ 6.8Ahr Protected Lithium-Ion Battery Pack |
| BAT3r ..... | 14.8V @ 3.4Ahr Protected Lithium-Ion Battery Pack |

## Smart Lithium-Ion Battery Chargers

The Smart Lithium-Ion chargers work off any household line voltage from 90 to 240V 50/60Hz. Indicator lights show red when charging and green when the battery is fully charged. A line cord is included. They are designed to apply the correct type of charging current based on the charge status of the battery. It is OK to leave Li-Ion chargers plugged in all the time.

**CHARGER1** (not shown) is rated at 1.5A charging current. It has a fixed 14.8V output to charge only 14.8V batteries.

**CHARGER2** (shown below) is rated at 1.0A charging current. It is designed to charge 3.7V, 7.4V, 11.1V or 14.8V Lithium batteries. It will automatically detect and set itself for the proper battery voltage.



| Part#         | Description                          |
|---------------|--------------------------------------|
| CHARGER1r.... | 14.8V @1.5A Charger                  |
| CHARGER2r.... | Auto Select 3.7V - 14.8V @1A Charger |

\*Sorry but Li-Ion Batteries cannot be sent outside of the USA

## 3.7V @2Ah BAT4

The BAT4 is used in the T6000 and the T2300 wireless controllers.

We have found that it also makes a great building block for smaller scale battery packs. Connect 3 in series for 11.1V which is perfect for HO scale. Or use a boost module to raise the voltage to 12 volts.

The cell measures 2.4 x 1.5 x 0.3 inches and weights about one-half ounce. It comes with a 2mm plug which matches to CVP's 2mm socket.

Use the CHARGER2 to recharge the battery.



2mm Plug

| Part#        | Description          |
|--------------|----------------------|
| BAT4r .....  | 3.7V 2Ah Li-Ion Cell |
| 5PAKFr ..... | Matching socket      |

## T6000 Decoder Programmer and Operator Throttle

The new T6000 Wireless Controller is a full featured AirWire throttle suitable for decoder programming and operation. It has a long-lasting, rechargeable, Li-Ion battery. It has a rugged and sunlight readable display. It has the popular single-turn speed control and a dedicated direction key. Uses a standard microUSB charging cable and charger.

### Built-In Decoder Programmer

The T6000 will always be your first AirWire Controller. It is used to setup and program all AirWire decoders or any 3rd party DCC decoders used with AirWire.

### Sleek Comfortable Case

The classic tall skinny case has been specially designed for hours of operation. It fits the smaller hands of younger operators whether they be right or left handed. The case measures 1 inch thick, 6 inches tall and 2 inches wide.

### Big Locomotive Memory

The T6000 can hold up to 16 locomotive numbers in its large memory. It can store up to 3 different multi-unit consists with up to 4 locomotives.

### 28 Function Keys

Activate all of your favorite decoder functions. There are 28 function keys just a keystroke away.

| Part#         | Description                             |
|---------------|---|
| T6000AWCr.... | T6000 with charger and charging cable   |
| T6000AWXr.... | T6000 without charger or charging cable |



## T2300 Operator Throttle

### Designed For Operation Only - Does Not Program Decoders

The OPS throttle cannot program decoders so you will need at least one T6000 throttle to setup and program your decoders. But, once programmed, the T2300 OPS throttle can take it from there.

### Simple Operation and Superb Features

The T2300 is simple and easy to use. The rugged design is perfect for youngsters and guests. A conventional single turn speed control offers smooth yet precise control of your locomotive's speed and is rugged enough to withstand constant use and abuse from your young and young-at-heart operators.

### Handy SWAP Key

Switching back and forth between two different locomotives is simple. Just push the swap key to change back to the previous locomotive number. Each locomotive can be on different frequencies too.

### 20 Function Keys

Activate all of your favorite decoder functions. There are 20 function keys just a keystroke away. Plus, a new feature allows simultaneous control of your locomotive and all 20 function keys while controlling turnouts and accessories.

| Part#         | Description                             |
|---------------|---|
| T2300AWCr.... | T2300 with charger and charging cable   |
| T2300AWXr.... | T2300 without charger or charging cable |



## AirWire Decoders And CONVRTRs

Because AIRWIRE is based on the NMRA-DCC standard, you have a variety of decoder options from which to choose for controlling your locomotive. You may also use other manufacturer's DCC decoders.

**All AIRWIRE Decoders** include the radio receiver, the motor driver as well as the locomotive light drivers. For sound effects, there is a DCC booster output to drive DCC compliant sound modules and decoders. Some AIRWIRE decoders are designed to drop into specific brands and locomotive models. If we don't have a specific model for your locomotive, the generic G4X decoder is for you.

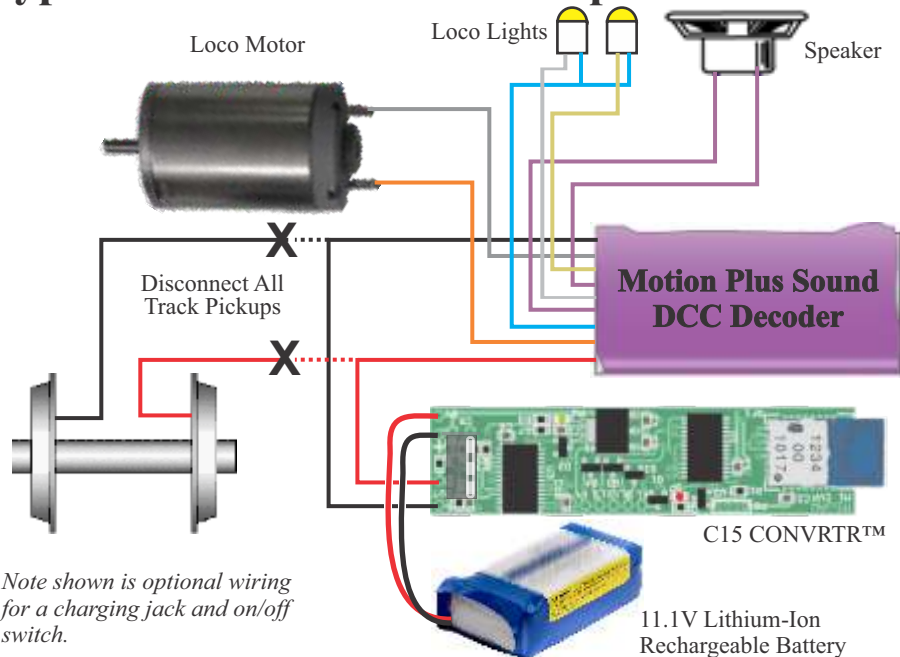
**AIRWIRE CONVRTRs** include the radio receiver and a DCC booster output. The CONVRTR allows any NMRA-DCC compliant decoder to be programmed and operated by an AIRWIRE throttle. Select the CONVRTR based on the amperage rating of the DCC decoder. The most popular combination is an AIRWIRE CONVRTR connected to a Soundtraxx, TCS or Loksound decoder. The attached DCC decoder provides the sound effects, motor drive and lighting control.

**Choosing whether to use a CONVRTR or a standard AIRWIRE Decoder**, depends on the locomotive requirements, and your preferences. For high current garden railroad locomotives, the Drop-In decoder or the G4X decoder provide up to 10 Amps of motor drive current and support rechargeable batteries up to 22 volts. The highest amperage DCC decoder from other manufacturers is only 5 amps and many are not rated for higher battery voltages. You must check the DCC decoder specifications to insure the ratings are not exceeded.

**Smaller scale locomotives** often come with pre-installed DCC decoders. These are the easiest locomotives to convert to AIRWIRE. Simply remove the track pickups and connect the DCC decoder track inputs to an AIRWIRE CONVRTR. Find space for the battery and you are done.

The hookup diagram shows an AIRWIRE C15 CONVRTR connected to a DCC sound decoder with an 11.1V battery for the power source. For most HO locomotives, a 1.0A DCC decoder paired with the C15 CONVRTR makes an ideal combination.

### Typical CONVRTR™ Hookup For HO Scale



Note shown is optional wiring for a charging jack and on/off switch.

## TURNOUT & ACCESSORY CONTROL

## LINKER and ACTIVATOR



Remote control of turnouts and many types of accessories is easily accomplished with the combination of a single AIRWIRE Linker and one or more AIRWIRE Activators. Together, the Linker and Activator allow your wireless throttle to control items such as switch machines, lights, pumps, relays, solenoids or just about any other type of device found on a typical garden railroad.

### The Linker

A basic setup consists of a Linker, which is the radio receiver, plus a power supply (battery or adapter) and the Activator which controls the turnouts or accessories. Each Activator can control 4 independent turnouts or accessories.

The Linker scans all AIRWIRE frequencies and combines the received activation commands with DC power and sends the combined signal to the companion Activators using a single pair of wires. The Linker can use either a 14.8V battery or a 15VDC power supply like the DCPS120 power supply.

All setup and option selection is done with the front panel switches. The 4 switches allow for selecting the scanned frequencies or to lock out certain frequencies.

All wire connections to the Linker are through plug-in terminal blocks. All wires can be connected or disconnected at one time by simply plugging or unplugging. Multiple Linkers can be used on a large railroad where there is a large distance between clusters of turnouts. Only a single Linker is needed to control and supply power to as many as 25 Activators.

### The Activator

The Activator uses a single pair of wires, that connects it back to the Linker's DCC output. Multiple Activators can share the Linker's output. No power supply is needed. Power for the Activator comes directly from the Linker. All Activators share the same pair of wires and power source coming from the Linker.

The Activator can control four independent accessories such as switch machines. It can also control lights, signals, stationary motors, pumps and relays. The Activator is compatible with all types of switch machine motors including air-actuated machines. It can also control power relays and solenoids.

The Activator can be purchased in a custom plastic case with removable plug blocks. It is also available without the case and standard screw terminal strips.

| Part#    | Description   |
|----------|---|
| LNKRr    | AirWire Linker                                      |
| ACTr     | AirWire Activator - with case                       |
| ACTXr    | AirWire Activator - circuit board only, no case     |
| DCPS120r | 120W DC Power Supply with selectable output voltage |



The CONVRTR™ series of products, allows any NMRA-DCC compliant decoder to become an AIRWIRE compatible decoder. Take advantage of the pre-installed NMRA-DCC decoders found in a wide range of locomotives. With the simple addition of a CONVRTR and a battery, the locomotive becomes an AIRWIRE locomotive.



All of the attached decoder's features and functions are controlled directly from an AIRWIRE throttle. There are absolutely no changes to the decoder. A bonus feature is that the T6000 AIRWIRE throttle is used to setup and program the DCC decoder. There is no need to purchase any other DCC equipment.

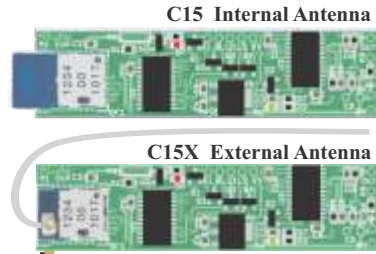
Each CONVRTR (Converter) is an ultraminiature radio receiver plus a DCC booster. The 3 different amperage ratings, cover all scales. The DCC decoder amperage rating must be no higher than the CONVRTR rating.

Download the user guides and see how easy it is to install and use an AirWire CONVRTR.

## C15 - 1.5 Amp Rating

The C15 is rated at 1.5A continuous and 5A peak. Maximum input voltage is 18 volts. Unlimited surge current. The circuit board measures only 2.4 inches long and 0.6 inches wide. The X version has an antenna jack for use with the included 3-inch long whip antenna.

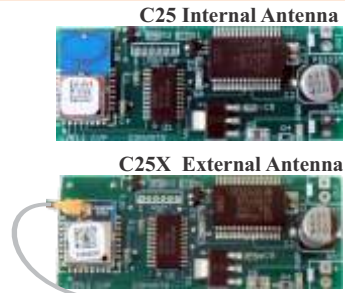
| Part#           | Description                   |
|-----------------|-------------------------------|
| C15r . . . . .  | 1.5A CONVRTR Internal Antenna |
| C15Xr . . . . . | 1.5A CONVRTR External Antenna |



## C25 - 2.5 Amp Rating

The C25 is rated at 2.5A maximum continuous current and 2.6A peak surge current. Maximum input voltage is 18 volts. The circuit board measures 2 inches long and 0.9 inches wide. The X version has an antenna jack for use with the included 3-inch long whip antenna.

| Part#           | Description                        |
|-----------------|------------------------------------|
| C25r . . . . .  | 2.5A CONVRTR with Internal Antenna |
| C25Xr . . . . . | 2.6A CONVRTR with External Antenna |



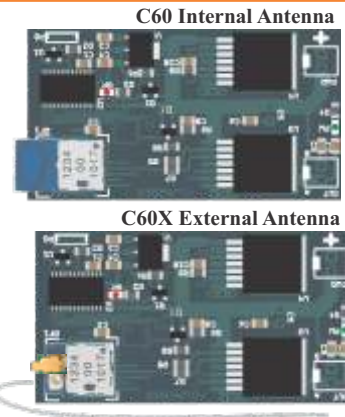
## C60 - 6 Amp Rating

The C60 is our most powerful CONVRTR. The maximum continuous current rating is 6 Amps. It has a surge current rating of a whopping 55 Amps. The circuit board measures only 2.2 inches long and 1.2 inches wide.

All connections are made to the miniature screw terminal strips (not shown in the pictures).

The maximum input voltage is 24 volts.

| Part#           | Description                        |
|-----------------|------------------------------------|
| C60r . . . . .  | 6.0A CONVRTR with Internal Antenna |
| C60Xr . . . . . | 6.0A CONVRTR with External Antenna |



A higher current rated CONVRTR can always be used with a lower current rated DCC decoder.

## High Power Decoder with 120Watt Motor Drive

The G4X decoder is a complete, self-contained radio receiver and motion decoder that offers both small size and big power. It is the 4th generation of our popular motion decoder series and features many novel and often requested features.

The heart of the G4X decoder is a new motor driver circuit suitable for locomotives having multiple motors. In addition to its 120 Watt power rating, it has robust protection to the motor driver. It is suitable for all large scale locomotives. Heavy duty terminal blocks makes wiring easy.

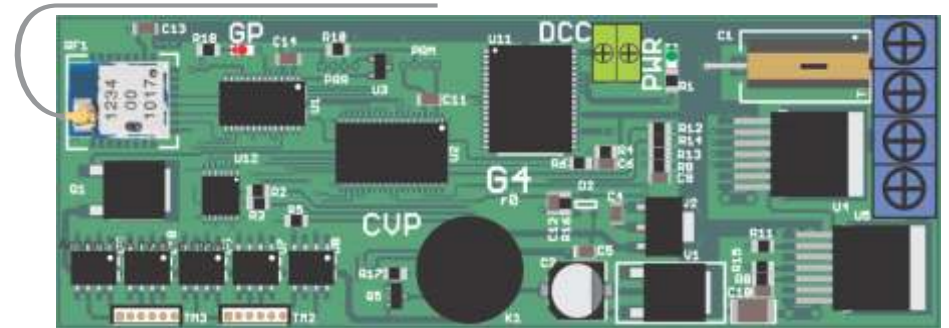
Also built in is a 2.5amp DCC booster that provides power and command signals for NMRA-DCC compatible sound modules. The DCC output also works with other types of NMRA-DCC decoders such as multi-function decoders. A pair of screw terminals [labeled DCC] makes hookup simple.

The G4X offers many lighting and special effects outputs. It includes 6 programmable light driver outputs in addition to the standard front and rear headlight outputs. The G4X also includes front and rear drivers for the Phoenix brand of remote couplers.

Connections to the lights, smoke generators and couplers are made with two separate pluggable wire harnesses. The sockets have logical groupings of the light outputs. A double-ended wiring harnesses *is included* with the G4X. It is cut into two pieces to make two separate harnesses.



- > G4X is Small, only 1.4in x 4.0in
- > Frequency Is Set From Throttle
- > 17 Independent Radio Frequencies
- > Easy Speed Matching
- > Smooth, Quiet, Precision Motor Drive
- > 120W Motor Driver Fully Protected
- > Cruise Control
- > Ditch/Safety Lights Driver
- > High Power Smoke Generator Driver
- > 16 Special Lighting Effects
- > Built-in Drivers for Phoenix Solenoid Couplers
- > Two 6-conductor Miniature Sockets for all Lighting
- > Works with all NMRA-DCC Sound Decoders
- > Printed, Comprehensive User's Guide included



- |                          |                             |
|--------------------------|-----------------------------|
| TM2-1 Front Headlight    | TM2-4 Ditchlight (left)     |
| TM2-2 Rear Headlight     | TM2-5 ELITE #1              |
| TM2-3 Ditchlight (right) | TM2-6 ELITE #2              |
| TM3-1 ELITE #3           | TM3-4 Rear Coupler          |
| TM3-2 ELITE #4           | TM3-5 Smoke                 |
| TM3-3 Front Coupler      | TM3-6 Coupler Voltage [VDR] |

| Part#     | Description   |
|-----------|---|
| G4Xr..... | Decoder with External Antenna, Wiring Harness and Terminal Blocks |
| G4Hr..... | Replacement TM2 and TM3 Harness [makes two cables]                |



# DECODERS K27/C19 PLUG-IN™

The new Plug-In Series AirWire decoders are designed to fit the DCC/RC socket found in the **Bachmann K27 and C19** steam locomotives. The Plug-In decoder plugs directly into the existing socket. No rewiring of the locomotive is necessary. Included on the decoder are sockets to plug in the optional Phoenix P8 sound module and two of the optional Phoenix remote couplers. **Does not fit in other Bachmann locomotives with the DCC/RC socket.**



- ▶ Plug-in simplicity - Uses Factory DCC Socket
- ▶ Drivers For optional Phoenix Couplers
- ▶ Socket for Phoenix P8 Sound Module
- ▶ Control All P8 Sound Functions
- ▶ Built-in Battery Charging Jack
- ▶ Remotely Select 17 Radio Frequencies
- ▶ 120 Watt Protected Motor Drive
- ▶ 3A Smoke Driver

| Part#     | Description     |
|-----------|-----------------|
| K27r..... | Plug-In Decoder |



# DECODERS DROP-INS™

The **USA-Trains Drop-In Decoders** are designed for specific locomotives made by USA-Trains. The locomotive **must** have its original factory wiring for a Drop-In to work correctly. Each Drop-In comes with a full color Installation Guide as well as a detailed User Guide.

Although designed to use Phoenix P8 sound modules, an optional XDRIVE board can be used to allow any NMRA-DCC decoder to be used with a Drop-In.

- ▶ Uses Original Factory Wiring
- ▶ Sockets for Optional Phoenix Couplers
- ▶ Socket for Phoenix P8 Sound Module
- ▶ Built-in Battery Charging Jack
- ▶ Power Switches For Sound and Decoder
- ▶ 17 Independent Radio Frequencies
- ▶ Remote Frequency Setting
- ▶ More Light Driver Outputs
- ▶ Ditch Light/Safety Light Drivers
- ▶ 120 Watt Protected Motor Drive
- ▶ Cruise Control
- ▶ Easily Fine Tune Motor Performance
- ▶ Independent Control Of All Lighting
- ▶ 3A Smoke Driver With Shutoff Timer
- ▶ Control of All P8 Sound Functions
- ▶ Battery Connector For CVP Batteries
- ▶ Works With All AirWire Throttles
- ▶ Separate Installation and User Guide

| Part#            | Description                                    |
|------------------|--|
| F3r . . . . .    | Drop-In Decoder for USA-Trains F3A/B and F7A/B |
| GP7-9r . . . . . | Drop-In Decoder For USA-Trains GP7 or GP9      |
| GP30r . . . . .  | Drop-In Decoder for USA-Trains GP30            |
| GP38r . . . . .  | Drop-In Decoder for USA-Trains GP38-2          |
| NW2r . . . . .   | Drop-In Decoder for USA-Trains NW2             |
| PABr . . . . .   | Drop-In Decoder for USA-Trains PA/PB           |
| S4r . . . . .    | Drop-In Decoder for USA-Trains S4              |
| SD40r . . . . .  | Drop-In Decoder for USA-Trains SD40-2          |
| SD70r . . . . .  | Drop-In Decoder for USA-Trains SD70MAC         |

If your USA-Trains locomotive is not listed, use the G4X decoder or a CONVRTR plus a 3rd party DCC decoder.



# DECODERS microDecoder™

## AIRWIRE Motion Decoders Small Enough For HO scale!

From the acknowledged experts in wireless, battery powered model railroading, comes a new series of AIRWIRE decoders small enough for HO scale.

Using onboard batteries makes railroading fun again. Imagine no layout wiring, no reverse loop nightmares, and no track or wheel cleaning. Best of all, a stuttering or constantly stalling locomotive will run smoothly since it no longer relies on its poor pickups and wheels for power.

More importantly, there is no need to purchase additional DCC programming equipment because our most popular T5000 AirWire throttle is also a complete, self-contained DCC programmer. Use the T5000 to easily select and setup all of the decoder's options and fine tune its operation.

### M15 - 1.5Amp microDecoder

- ▶ Radio Receiver and DCC Motion Decoder
- ▶ 1.5A Continuous, 5A Peak
- ▶ Protected Against Overloads & Overheating
- ▶ 17 User Selectable Frequencies
- ▶ 9999 Addresses per Frequency
- ▶ Front & Rear Headlight + 2 Aux LED drivers
- ▶ Lighting Effects and Headlight Direction Modes
- ▶ 10V to 18V Battery Range
- ▶ Precision Motor Drive With Cruise Control
- ▶ Select Either Internal Or External Antenna

### M15 Internal Antenna



Actual Size! 0.6 x 2.4 x 0.25 inches

### M15X External Whip Antenna



### Part# Description

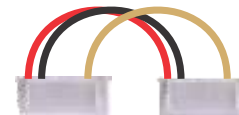
|            |  |
|------------|--|
| M15r . . . | 1.5A microMotion Decoder with Internal Antenna |
| M15Xr . .  | 1.5A microMotion Decoder with External Antenna |



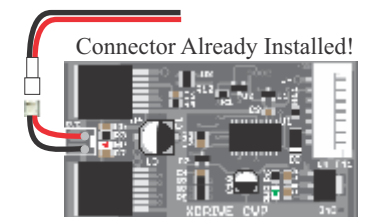
# DECODERS xDRIVE™

The Drop-Ins are designed to use the Phoenix P8 sound module. However, with the addition of the new XDRIVE board, you can now use a different vendor's sound decoder. Any NMRA-DCC compliant sound decoder can be used although Soundtraxx and TCS are recommended. The XDRIVE comes complete with the required plug-in harness. Included is a plug/socket to connect to the sound decoder.

If your Drop-In is a USA-Trains S4 switch engine, be sure to get the XDRIVES4 version. It includes a different connection harness.



Drop-In To XDRIVE Harness Included



### Part# Description

|               |  |
|---------------|--|
| XDRIVEr . . . | Optional Drop-In External DCC Decoder Driver with Standard Harness |
| XDRIVESr . .  | Optional Drop-In External DCC Decoder Driver with S4 Harness       |

