

### Where can I obtain copies of all your instruction manuals?

You can download free copies of all Installation and Operation Manuals directly from the CVP Products website. The manuals contain complete step-by-step instructions along with a wealth of valuable tips. Our customers have rated them as the best, most informative manuals ever written about DCC. Go to our website document center and see for yourself.

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

### Will you analyze my track plan and make a recommendation?

Yes, but there may be charge for this service depending on the complexity. If you decide to accept the recommendation, then half of the charge is credited against your **EASYDCC** purchase. Please call for details.

### Where do I purchase your system?

CVP sells directly to you and passes along the savings in the form of lower pricing. You may order via phone, fax, internet or mail.

### How do you ship purchases?

We use First Class Mail, Priority Mail and International Priority Air Mail. For an additional fee, we will use FEDEX.

### What if I need help?

We offer free technical support for as long as you own your system. Our business hours are 10AM to 4PM Central Time, Monday through Friday.

### What if I need something repaired?

Accidents happen and we understand that. Should you accidentally damage something, we can usually fix it for a nominal charge. Of course, we can't determine its repairability until we see it. If you think an item needs our repair services, please call first to discuss your problem. In many cases, the repair can be as simple as pushing a few keys. If we can't fix it over the phone, we will issue a return-material-authorization (RMA). Be sure to obtain this before sending anything to CVP. Call during normal business hours to obtain an RMA. Packages received without an RMA will encounter lengthy delays or might be refused.

### How long has CVP been in business?

Keith Gutierrez founded CVP Products in 1974 and has been the owner and chief architect since then. Although he now makes extensive use of the skills and talents of many other individual contributors, he still plays a significant role in setting business goals, establishing system requirements and performing exhaustive testing on all new products.

### Do you have a money back guarantee?

Absolutely. There is a 30 day money back guarantee. If you decide not to keep the system, simply obtain an RMA and return everything to us in its original packaging. We will refund the complete purchase price, less the shipping cost.

### How do you upgrade software and do you charge for the upgrade?

If you find a critical bug, we will fix it at no charge to you. Occasional system upgrades are announced via a flyer and offered for a nominal charge. Except for the T9000E wireless throttle, software is contained in special chips that are socketed that you can change yourself. The T9000E wireless throttle must be sent back to us should there be any upgrades. You can choose to upgrade or not. Even if you do not upgrade, your equipment is not obsolete and will be fully supported for as long as practical.

### CVP Products

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[cvpusa@sbcglobal.net](mailto:cvpusa@sbcglobal.net) Office: 972-238-9966 Fax: 972-516-9527

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*All prices subject to change or correction without notice.*

# EASYDCC™

## Command Control System

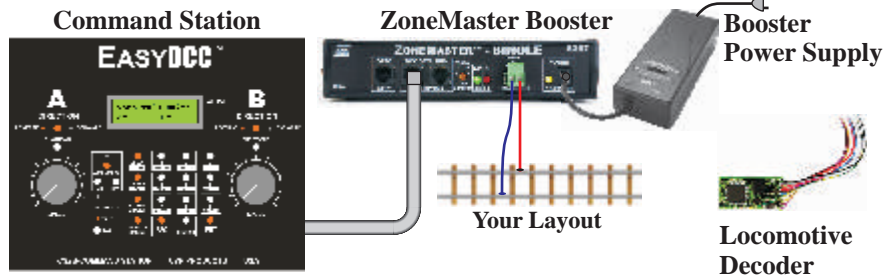


Designed and Manufactured In The USA By  
**CVP PRODUCTS**



**EASYDCC** is a full featured command control system based on the popular NMRA standard called Digital Command Control (DCC). DCC makes locomotive control simple and fun while simplifying your layout's wiring. With just a single pair of wires, your layout can accommodate many independently controlled trains and many operators. This catalog showcases the various items that make up an **EASYDCC** system including basic starter systems as well as components to expand a starter system.

Each **EASYDCC** starter system has the same basic components: the Command Station, track booster and the booster power supply. Expanded and wireless starter systems include additional components as listed on page 6. The one item not included or described in any detail is the locomotive decoder since any NMRA-compatible decoder will work. Thanks to the DCC



standard, all such decoders are compatible with **EASYDCC**. Let's take a closer look at these 3 major parts.

**The Command Station:** is the brain of your control system. The Command Station takes in commands from many sources, such as throttles, formats the commands into appropriate locomotive commands and sends out the finished information to the track boosters. The Command Station also provides a window into the status and operation of all the connected parts. It has several diagnostic modes which help pin down the cause of any odd operation issues. The Command Station automatically handles the complex and inter-dependent timing of throttle commands such that every operator is provided with excellent response to all locomotive commands issued from a throttle. More details and features are listed on page 7.

**The ZoneMaster Booster and Booster Power Supply:** provides power to the track for all of the locomotives equipped with NMRA-DCC compatible decoders. In addition, ZoneMaster boosters provide a reservoir of power for the high current sound decoders. All sound decoders have a huge inrush or surge current requirement when power is applied. The ZoneMaster coupled with the recommend booster power supply can supply up to 30 Amps of surge current without tripping the electronic circuit breaker. More details are shown on pages 8 and 9.

**The Built-in Command Station Throttles:** Unlike other systems that force you to purchase extra throttles, you'll be delighted to discover that the **EASYDCC** command station includes **TWO** built-in and independent throttles.

**Expansion Options:** your layout will grow and expand so **EASYDCC** is ready to expand when you are. For example, choose from 3 types of remote throttles; or perhaps add extra boosters, or maybe some remote turnout controllers. When ever you are ready to expand, simply plug in the new items and enjoy. It could not be any easier.

**Pricing/Quantities:** Prices based on latest price list. Prices are subject to change without notice and some quantities may be limited.

**Placing Orders:** Phone, fax, email and mail orders are accepted. General questions or inquiries should not be included with mail orders.

**Payment:** Cash, check, money order and VISA/Mastercard are accepted. All payments are to be made in USA dollars. Payment must accompany your order. Sorry, no CODs or purchase orders (POs). No Canadian personal checks or Canadian Postal Money Orders. All checks, including international checks, must be drawn on a USA bank.

**Credit Cards:** Be sure to include card type, card number, expiration date, name as shown on card and any other numbers shown on face of card. Also include the CV# shown on the back of the credit card.

**Sales Tax:** Texas residents must add 8.25% sales tax.

**Delivery:** Shipments are made via First Class Mail, Priority First Class and International Priority Air Mail. No UPS. No CODs. FEDEX service is available on credit card orders for an extra charge.

**Returned Items:** . All 30 day return items must be 100% complete, original packaging, including all warranty cards, manuals, cables, accessories, components and original labels to be accepted. Incomplete returns will result in a delay of your refund, and possibly a restocking fee. Beyond 30 days, all returned items are subject to 15% restocking charge.

**Do not send items to us for repair or refund without first obtaining authorization.** In many cases, problems are easily solved via phone or email without the need or expense to return items to us. **If we authorize** and request you to return an item, be sure to mark the "Return Material Authorization" (RMA) number on the outside of the box. You are responsible for all shipping charges.

**Refunds:** Allow up to 15 business days for all refunds to be processed. For faster service, refunds by check are recommended. Please note that your financial institution may take up to 30 days from the date we issue your credit to post it to your account.

**Backorders:** You may cancel a backorder at any time. If paying by check, a full refund will be sent. If paying by credit card, orders are not billed until shipment occurs.

**Warranties:** All equipment is warranted for 90 days from date of delivery. CVP will use commercially reasonable efforts to ship a replacement part within ten (10) working days after receipt of the RMA request. Actual delivery times may vary depending on customer location. After the 90 day warranty period, standard repair rates apply. Depending on the problem, CVP reserves the right to repair or replace.

**Warranty Exclusions:** This warranty does not cover any problems which result from improper installation, modifications, battery polarity reversal, improper operation, leaking batteries, excessive battery voltages, excessive motor current draw, connections to 3rd party circuit boards, abuse, accidents, or acts of God such as excessive heat, floods, damage caused by exposure to moisture and rain, lightning, earthquakes, volcanic events, tidal waves or hurricanes.

**Contacting CVP:** Normal business telephone hours are 10AM to 4PM Central Time, Monday thru Friday. If you call and connect to voicemail, don't just hang up. Please leave a message and a return phone number. We will return your call as soon as practical.

By popular request, CVP developed this wireless receiver designed to plug directly into the Lenz system control bus. With this receiver, both the RF1300 and the T9000E throttle will work with the Lenz system to provide all the benefits of CVP's advanced wireless throttles.

**Supports Up To 8 Wireless Throttles**

Each throttle uses its own frequency providing fast response to function key presses. Since each throttle has a dedicated frequency, response time is optimized and there is never any interference from other throttles. This mode is perfect for a modest size layout where no more than 8 throttles will be used simultaneously.

**Easy Setup**

All setup switches are readily available on the front panel. You can select from the different options or change them at any time without opening the chassis.

**Easy Connection To Lenz System**

The ALR900 plugs right into the Lenz system's control bus without any changes. This handy feature is helpful while determining the ALR900's location having the best overall reception - perfect for clubs and modular layouts.

**Use With Lenz Tethered Throttles - Or Not!**

The ALR900 may be used alone or right along with your existing Lenz plug-in throttles without any changes. For new installations, you may choose to use only wireless throttles and enjoy the freedom of no throttle bus wiring.

**Lenz Wireless Receiver ALR900 . . . . . \$99**



**Custom Modular Cables, Coax Jacks, Plugs**



Six-conductor modular cable is used to make all connections between the Command Station and the ZoneMaster boosters. Bulk modular cable is sold by the foot plus \$3 for the plug set. Specify the length and feet and type of cable to be built - DATA OR TELCO.

- Modular Cable MOD6TELCO . . . . . \$0.35 per foot**
- Modular Cable MOD6DATA . . . . . \$0.35 per foot**
- Modular Plugset . . . . . \$3.00 per cable**
- 7 foot modular telco cable with plugs . . . . . \$3.50**
- 7 foot modular data cable with plugs . . . . . \$3.50**



The throttle bus cable is nothing more than inexpensive TV "RG59-coax" cable and connects all the fascia plates to the Extender. The "twist-on" connectors simply screws on to the ends of the coax and no soldering or special tools are needed. Coax cable is readily available at stores such as Radio Shack. Be sure to obtain copper braided coax since it works much better with the twist-on plugs.

- Twist-On Plug PLUG . . . . . \$0.80 each**
- F-Jack (PCB mount) JACK . . . . . \$0.50 each**

One of the more popular components of an **EASYDCC** system is the wireless throttle. Wireless throttles have no cord nor do they need to be plugged in to use a locomotive. Just key in the locomotive number and you are ready to roll. The wireless receiver provides the link between your wireless throttles and the Command Station.

**Optimized For Wireless Control:** Precision wireless control capable of flawless locomotive control is the goal; and CVP Products, with more than 30 years of command control design experience, has met and exceeded that goal with the **EASYDCC** wireless throttle option. There are several attributes that describe the required performance levels for a wireless system.

**Wireless Throttle Control Must Be Simple:** your operators must be able to pick up the throttle and instinctively know how to operate their train. Changing the speed or direction and controlling locomotive functions should never take an elaborate set of instructions.

**Wireless Throttle Control Must Have Fast Response:** **EASYDCC** is optimized to provided fast response time when many throttles and locomotives are active.

**Wireless Throttle Control Must Be Stable:** layout operations lasting for many hours is the norm for many customers using **EASYDCC**. The system software has been tested and optimized for a variety of heavy duty conditions and environments.

**CVP Products was established in 1974 and we've been designing model railroad electronics ever since. We offer experienced, dedicated technical support and are often called upon to help out other manufacturers. Everything is designed, built and tested in the USA which provides you with the assurance and peace-of-mind that we can service and support our products with a minimum of fuss.**



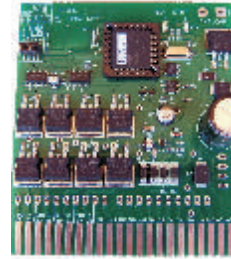
**A Full-Featured DCC System:** When selecting a DCC system, always look beyond the hype and compare hard facts. The list below highlights some of the key specifications and requirements for a DCC system. Use it as a checklist when comparing other systems with EASYDCC.

<u>System Feature</u>	<u>EASYDCC</u>
Locomotive address range . . . . .	1-9999
Tethered Throttle address Range . . . . .	1-9999
Wireless Throttle loco address range. . . . .	1-9999
Accessory Address Range . . . . .	1-2048
Control accessories from Command Station . . . . .	Yes
Command Station Includes <b>2</b> Built-in Throttles . . . . .	Yes
External Throttle Types . . . . .	Plug-In, Fixed, Wireless
External Throttle Capacity. . . . .	31
Loco Capacity . . . . .	255
Built-in Programming Track . . . . .	Yes
Supports All Programming Modes . . . . .	Yes
Supports Standard Consisting . . . . .	Yes
Supports Advanced Consisting . . . . .	Yes
Mainline programming . . . . .	Yes
Supports 14, 28, 128 speed steps. . . . .	Yes
Socketed software for easy upgrades . . . . .	Yes
Programs all available CVs. . . . .	Yes
Free, built-in RS232 computer port. . . . .	Yes
Accessory Decoder route control . . . . .	Yes
Back-lit Display on Command Station . . . . .	Yes
Viewing Angle/Contrast Control . . . . .	Yes
ZoneMaster Booster Capacity . . . . .	7 Amps
ZoneMaster Booster Surge Capacity. . . . .	30 Amps
ZoneMaster Booster Power Supply Included . . . . .	Yes
Auto-reversing boosters. . . . .	Yes
Manufactured and Serviced in USA . . . . .	Yes

**Don't Forget Easy, Economical Upgrades:** We have designed EASYDCC for easy upgrades. This allows you to benefit from advances in technology as well as growth in your locomotive fleet. No changes are required to layout wiring, track wiring, decoders or boosters to make the upgrade. The upgrade consists of replacement software for your Command Station and throttles, in easy-to-plug-in chips.



AD4MC



AD4HC

Accessory decoders are used to control and drive layout devices such as switch machines, lights and other stationary devices. Any device, equipped with an accessory decoder, can be activated and controlled from any throttle and/or, the command station.

In addition to commands coming from throttles, the AD4 can be activated with simple push buttons. Either a single toggle switch or a pair of push buttons can be used.

Power for the Accessory Decoders comes from either the track power or an external DC power supply. A dedicated booster is recommended so that turnouts can be thrown even if the main track power is shut down due to a derailment.

Configuration of all the decoder features are done via the Command Station's programming track or with "OPS" mode mainline programming. A simple jumper interlock prevents accidental reprogramming from either the mainline or the programming track.

Programmable output can be set to flash, pulse or continuous on. The outputs can be connected to via a terminal strip, edge-card socket or direct soldering.

There are two different decoders from which to choose. Your choice is based on the type of load connected to the decoder. Otherwise, the two decoders have the same capabilities.

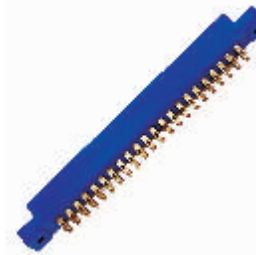
**The AD4MC** is designed for tortoise or other low current switch machines. It also works with Kato and LGB style machines that use two wires. It is rated up to 1Amp peak throwing current. It can also use an external DC power supply.

**Medium Current Accessory Decoder AD4MC . . . . . \$35** each qty = 1 to 5  
 . . . . . **\$30** each qty = 6 or more

**The AD4HC** is designed for high current twin-coil solenoid type switch machines. It has a built in high capacity capacitive discharge (CD) circuit. It can also be used to control high current lamps and other loads. An external source of 16 to 24 VAC for the .capacitive discharge (CD) circuit is required.

**High Current Accessory Decoder AD4HC . . . . . \$41** each qty = 1 to 5  
 . . . . . **\$35** each qty = 6 or more

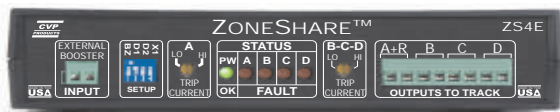
## AD4 Edge Connector



This connector is called a 22/44-Pin Edge Connector since it has a total of 44 connections. The AD4 slips into the connector to allow easy connection to all of the AD4's functions.

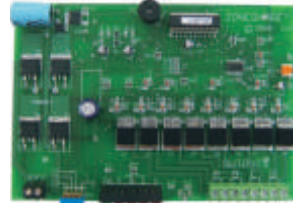
The connector features easy-to-use gold plated card fingers for reliable connections. The terminals are gold plated for easy soldering. The connector can be mounted on home-made or commercially available racks. Instructions for making a rack are in the EASYDCC Installation and Operation Manual.

**Edge Connector 22/44EDGE . . . . . \$7** each qty = 1 to 5  
 . . . . . **\$6** each qty = 6 or more



ZoneShare mounted in custom case

ZoneShare without case



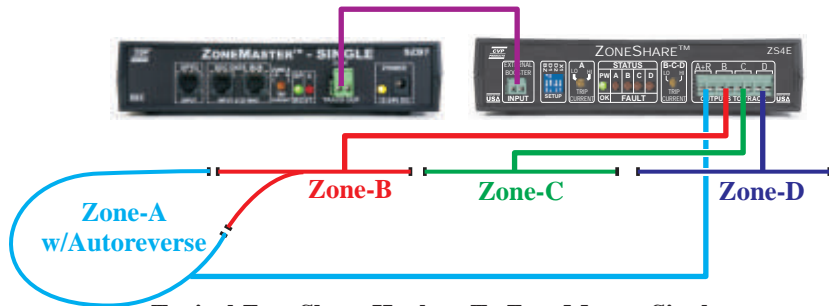
ZoneShare splits any ZoneMaster output into four independent and protected track driver outputs. Each output has its own protection and electronic circuit breaker. Any fault on one output will not affect the remaining outputs. Output-A also features a built-in autoreverse function and has its own sensitivity adjustment. If you don't need autoreverse, then it becomes just another independent output. No power supply is required. Power comes from the ZoneMaster.

**Four individual fault indicators.** Each output has its own fault indicator and unique alarm buzzer. A short or overload will light the indicator and sound the buzzer making it simple and quick to pinpoint which zone has a problem.

**The fault buzzer can be turned off.** The front panel switches allow the buzzer to be turned on or off - whichever you wish. It can be changed at any time.

**Economy model for under-layout mounting.** Cost conscious users can get ZoneShare without the case. It is a circuit board only, assembled and tested, ready to mount under the layout. Mounting holes make it easy to mount under the layout.

ZoneShare with case ZS .....	\$179.95	each qty = 1 to 3
.....	\$125.30	each qty = 4 or more
ZoneShare without case ZSX .....	\$129.95	each qty = 1 to 3
.....	\$103.96	each qty = 4 or more



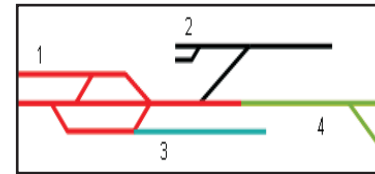
Typical ZoneShare Hookup To ZoneMaster Single

## ZoneMaster Power Supply

**DCPS120 Power Supply:** This is the companion power supply used to power all of the ZoneMaster Boosters. It is one of the few power supplies that is available with a Universal AC Input. The DCPS120 will work with any common household AC line voltage from 100 to 240 Volts, making it suitable for any country in the world. The 120 Watt output provides a huge reserve of current to satisfy the surge current requirements of the booster.



**ZoneMaster Power Supply DCPS120.** .... \$55



Our award winning product line makes Command Control easy to install and simple to learn. You do not need a background in electronics or computers to enjoy the benefits of **EASYDCC**. However, if Command Control is new for you, we will start at the beginning and review some important decision points which will influence some of your basic choices.

### What Type Of Layout Do You Have?

All of the **EASYDCC** Starter Systems will work for any layout or scale. How you use your layout and your available budget governs the selection of additional items to expand your system beyond the basic starter system capabilities.

### How Many Operators On Your Layout?

**New Layout Owner or Single User:** If you use your layout or operate alone, then you need only one throttle to run a train. Of course you can use more than one throttle for multiple trains but here is where Command Control excels. If you simply run the trains in loops, you can use one throttle to start a train and then assign the throttle to another train. If this is your style of operation, our Basic Starter System is perfect for you. This basic system is designed for small, first time layout owners with plans for later expansion.

**Multiple Users and Plug-In Throttles:** If you need more than two throttles or enjoy your layout with a group of operators, then consider our Expanded Starter System. The Expanded System allows the use of tethered, walk-around throttles. Plug-In throttles include walk-around memory, so they can be unplugged and moved while the train continues to run.

**Multiple Users and Wireless Throttles:** This is the ultimate in walk-around freedom. Forget about cords. The Wireless Starter Systems adds the freedom of true walk-around control without any cords. Choose from two different throttles. The wireless throttles use advanced radio technology that easily penetrates common obstructions.

*Note: wireless and plug-in throttles may be used at the same time.*

### How Many Track Boosters Do You Need?

Surprisingly, it is not the amount or length of track that determines the number of boosters. It is the quantity of locomotives occupying and operating on the track, *at the same time*, that determines the number and type of boosters required. Although a single booster can drive your entire layout, a derailment will shut down the entire layout. It is much better to use additional boosters each driving their own "center of operation" such as a town or yard. You can start with one booster and when your budget permits, add more boosters.

### Where To Start? We Recommend A Starter System.

We have created three different Basic Starter System's packages shown on the next page. Each system is complete except for the locomotive decoders.

**Basic Starter System:** includes the Command Station which has two built in throttles, the high power, 7-Amp track booster and the matching booster power supply.

**Extended Starter System:** adds the throttle bus extender, transformer and an XR1300 plug-in throttle to the basic starter system. This is a perfect starting point if you are planning to use the plug-in style throttles. Don't forget to take advantage of quantity discounts for extra throttles.

**Wireless Starter System:** adds the wireless receiver, its transformer, extra modular cable and an RF1300 wireless throttle. Wireless operation removes all the cords and offers the most freedom and flexibility. Don't forget to take advantage of quantity discounts for extra throttles.

Finally, you may add boosters, throttles or other accessories to your basic starter system at any time. There is no need to remove or replace existing equipment since everything is designed for easy expansion.

## EASYDCC Basic Starter System

- |                                  |                                     |
|----------------------------------|-------------------------------------|
| 1 CS2B Command Station           | 1 CS2B 12VAC Transformer            |
| 1 Modular Cable - 7 foot         | 1 ZoneMaster-Single Booster         |
| 1 DCPS120 Universal Power Supply | 1 Operation and Installation Manual |

**Basic Starter System BSS** ..... \$279

For international orders, the 12VAC transformer is not suitable for 220/240VAC primary power. Order the BSS5-nt which deletes the 12VAC transformer.

**Basic Starter System BSS-nt** ..... \$275

## EASYDCC Plug-In Throttle Extended Starter System

- |                                   |                                     |
|-----------------------------------|-------------------------------------|
| 1 CS2B Command Station            | 1 CS2B 12VAC Transformer            |
| 2 Modular Cables - 7 foot         | 1 ZoneMaster-Single Booster         |
| 1 DCPS120 Universal Power Supply  | 1 Throttle-bus Extender             |
| 1 Extender 12VAC 20VA transformer | 1 XR1300 Plug-in Throttle           |
| 1 Fascia Plate Assembly           | 1 Operation and Installation Manual |

**Extended Starter System ESS** ..... \$429

For international orders, the 12VAC transformer is not suitable for 220/240VAC primary power. Order the ESS-nt which deletes the two 12VAC transformers.

**Extended Starter System ESS-nt** ..... \$417

## EASYDCC Wireless Throttle Starter System

- |                                   |                                     |
|-----------------------------------|-------------------------------------|
| 1 CS2B Command Station            | 2 CS2B 12VAC Transformers           |
| 2 Modular Cables - 7 foot         | 1 ZoneMaster-Single Booster         |
| 1 DCPS120 Universal Power Supply  | 1 RX900 Wireless Basestation        |
| 1 RF1300 Budget Wireless Throttle | 1 Operation and Installation Manual |

**Wireless Starter System WSS** ..... \$529

*Wireless equipment is licensed for North/South American and Japan. It is not licensed for sale to Europe, or Pacific Rim countries.*

**Upgrade Options:** The ZoneMaster-Single may be upgraded to a ZoneMaster-Dual for the difference in price. The RF1300 may be upgraded to a T9000E wireless throttle for the difference in throttle price.

**Consider Quantity Discounts:** Several of the EASYDCC components offer quantity discounts. For example, if you need 3 more ZoneMaster boosters, they can be purchased at the quantity 4 discount when you purchase your starter system.

The XR-1300 plug-in throttle is our most economical throttle available. It's rugged two-conductor phone-plug means it can handle many years of abuse without a complaint. Controlling a locomotive is simple: plug in the throttle, key in the locomotive number and you're ready to roll.

The throttle plugs into the CVP fascia plate socket described below with a coiled cord that stretches to 20 feet. When you are out of range, simply unplug the throttle and move to another fascia plate. The train will continue to run as you move between sockets.

The throttle does not require any batteries. It is lightweight and comfortable even during long operating sessions.

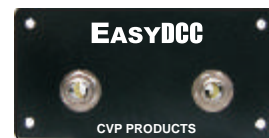
Quantity discounts start when you buy two or more throttles. And the quantity discount can be applied if you order another XR1300 throttle when you purchase your Extended Starter System.

**Plug-in Throttle XR1300-4** ..... \$89.00 each  
**2 or more XR1300 throttles** ..... \$79.95 each



## Plug-In Throttle Fascia Plates

The fascia plate kit provides two side-by-side sockets in which to plug in your walk-around throttles. Interconnecting the fascia plates is done with inexpensive, readily available coax cable and twist-on plugs. No special tools needed. The Assembled Fascia Plate is ready to install and comes with two twist-on plugs. No soldering is required.



The Kit Fascia Plate includes a pre-punched and painted metal face plate, circuit board, two F-type jacks, two headphone sockets and two twist-on coaxial cable plugs. Assembly and soldering takes about 5 minutes. The metal faceplate is also available separately.

**Fascia Plate Assembled EDFA** ..... \$15 each  
 ..... \$13.20 each qty = 2 or more  
**Fascia Plate Kit EDFK** ..... \$12 each  
 ..... \$10.56 each qty = 2 or more

## Throttle Bus Extender

This little circuit board drives your throttle bus and is called an "Extender." It is designed to mount under the layout near the Command Station. The Basic Extended Starter System includes this board, its transformer and a modular cable to connect back to the Command Station.

There is no limit to the number of extenders that may be used. More Extenders can be added to the Command Station to connect additional wireless receivers or if more than 10 plug-in walk-around throttles are to be used.

**Extender, Fully Assembled EDXA** ..... \$49  
**12VAC-2A Transformer for Extender 12VT** ..... \$10





Both of our award winning **EASYDCC** wireless throttles have numerous features that have made them some of the most popular throttles ever released to the model railroad hobby. All 13 of the NMRA-DCC functions are supported making these throttles your best choice for sound equipped locomotives. Unlike other throttles, there is no need to plug in the throttle to acquire a locomotive. Just key in the number and drive away.

Both throttles have the same small size, balanced feel and easy to understand controls. And the big, speed-control knob makes precise speed control simple and intuitive. The design allows for convenient one handed operation - for both right and left handed operators. The sleek, balanced case makes the throttle very comfortable during long operating sessions.

Experience up to 80 hours of continuous operation from a set of AAA alkaline batteries. Rechargeable batteries may also be used.

Excellent range and coverage is provide with the use of a high performance antenna. Combined with one or more wireless receivers, the **EASYDCC** wireless throttles will be the envy of all your friends.



RF1300 T9000E

- RF1300 Budget Throttle ..... \$159
- T9000E Professional Throttle ..... \$219

Can Also Be Used With Lenz Systems - See Page 14

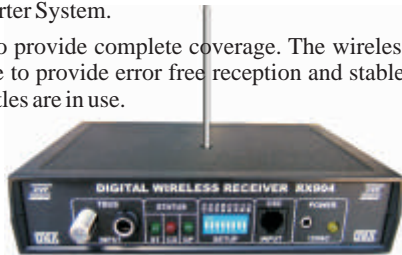
## Wireless-Throttle Receiver

The wireless receiver provides the link between your wireless throttles and the **EASYDCC** command station. One receiver can handle up to 8 independent throttles if all 8 frequencies are used. Up to 16 wireless throttles can be used split between two groups of 8. The Installation and Operation manual has additional considerations when more than 8 throttles are to be used.

One Group-1 receiver is included in the Wireless Starter System.

For large layouts, multiple receivers can be used to provide complete coverage. The wireless receiver uses sophisticated error detection software to provide error free reception and stable, reliable operation when as many as 16 wireless throttles are in use.

Multiple receivers allow obstructions, long distances and other reception problems to be easily conquered. If you find an area with poor reception, simply plug in another receiver and connect it to the throttle bus.



- Wireless Receiver - Group 1 RX904G1 ..... \$99
- Wireless Receiver - Group 2 RX904G2 ..... \$99

The **EASYDCC** Command Station is the brain of your system. Thanks to the powerful, modular architecture **only one is needed per layout**. Upgrades and enhancements are simple - just plug in a new chip. Many DCC users have switched from other DCC systems and upgraded to the **EASYDCC** Command Station and throttle system to enjoy the advantages of the superior design, ease of upgrading, easier operation and better throttles. Please give us a call if you are considering switching. We'll help you sort through what to keep and what to change.



Socketed software chip for easy upgrades



Uses simple 12VAC wall transformer and is included with the Command Station

### Simple Setup And Operation

- ❖ Big, bright LCD display
- ❖ Color coded, large, tactile keys
- ❖ Clearly labeled key legends
- ❖ Simple, logical command sequences
- ❖ Two built in throttles
- ❖ Memory backup battery for all settings

### Built-in Helpful Diagnostics

- ❖ Shows running tally on system capacity
- ❖ Display always shows software version
- ❖ Monitor locomotive's speed and direction
- ❖ Displays decoder's function status
- ❖ Monitor any throttle at any time
- ❖ Allows use of 14, 28 or 128 speed steps

### Simple Accessory Decoder Control

- ❖ Multiple route controls
- ❖ Up to 32 turnouts per route
- ❖ Use any brand of accessory decoders
- ❖ 2048 unique accessory decoder addresses

- ❖ Activate routes from any throttle or the Command Station

### Supports Mainline Programming

- ❖ Reprogram decoders while operating
- ❖ Change any CV value, including address
- ❖ Watch the change take effect while loco is running
- ❖ Supports mainline programming of the accessory decoders

### Outstanding System Features

- ❖ Compatible with ALL NMRA-DCC decoders
- ❖ Up to 9999 unique decoder addresses
- ❖ Supports 31 plug-in and wireless throttles simultaneously
- ❖ **Free**, built-in RS232 serial computer port
- ❖ Mounts either horizontally or vertically
- ❖ Rugged steel plate with baked finish and easy to read legend



# ZoneMaster Boosters



The ZoneMaster family of track boosters provide the power to drive your trains. They offer many exciting and easy to use capabilities as standard features. The Basic Starter Systems all come with the ZoneMaster Single Booster and the DCPS120 matching power supply. Together they provide unsurpassed power capacity suitable for the high current surges of sound decoders. There is absolutely no programming needed; select from the various options with simple switches.

The ZoneMaster boosters will provide up to 30 Amps of surge current capacity. If your layout has lots of sound equipped locomotives, you will need this level of surge capacity to reliably operate these locomotives without tripping the short circuit protection.

**Single Zone Booster:** The SZB7 booster features a full 7 amps of output power. There is plenty of power to run lots of trains without any hesitation or loss of power. The SZB7 comes standard in each Basic Starter System.

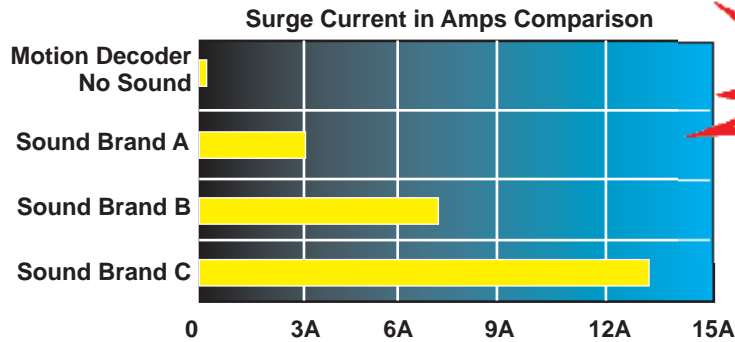
**Single Zone with AutoReverse:** The SZB7-AR features a full 7 amps of output power plus a built-in autoreverse capability. This booster has more than enough power for your large yards, big industries or busy staging tracks. The autoreverse trip level is adjustable

**Dual-Zone Booster with AutoReverse:** Imagine having a booster that has multiple and independent outputs, or zones, built-in. No need to add expensive external devices to create two independent and protected outputs. The Dual-Zone Booster, DZB7, has this feature already built in so there is no need to hassle with wiring, complicated setup procedures or installation instructions. You may also use one of the DZB7's outputs as an autoreversing booster. Nothing extra is needed and the full surge current capacity is retained.

Each of the two outputs is protected against short circuits, overloads and overheating. If a derailment occurs, the affected zone shuts down without affecting the other zones. This is the perfect solution for both small and large layouts. The built-in fault indicators show which zone has been tripped.

**Mix and Match ZoneMaster Boosters:** Large layouts will need a mix of single and dualzone boosters. The two types of boosters can be used at the same time.

**Surge Capacity - A New Measurement:** Sound equipped locomotives cause a huge current surge on a booster when power is first applied or after the booster recovers from a fault. The graph shows the surge current measurements from several brands of commonly used sound decoders. A non-sound decoder is included as a reference. Note that these are single locomotives and that the locomotive is not running - it is simply sitting there. If there is more than one locomotive, the total surge current will be higher than shown.



A ZoneMaster booster requires the matching DCPS120 power supply to achieve the specified ratings. See page 12 for ordering details. One DCPS120 power supply is included in each Starter System.



ZoneMaster Single..... SZB7..... \$79.95



ZoneMaster Single with AutoReverse..... SZB7-AR..... \$89.95



ZoneMaster Dual with AutoReverse..... DZB7..... \$149.95

	SZB7	SZB7-R	DZB7
Single Unit Price Each	\$79.95	\$89.95	\$149.95
Price Each - Quantities of 4 or More	\$63.99	\$71.46	\$104.97
Number of Independent Zones	1	1	2
Auto Reverse	NO	YES	YES
User Adjustable Trip Current	YES	YES	YES
Number of Auto-Reverse Zones	0	1	1
Maximum Continuous Current	7 Amps		
Maximum Allowable Surge Current	30 Amps		
Each Zone With Circuit Breaker	YES		
DCC Signal Indicator	YES		
Independent Thermal Protection	YES		
Reverse Polarity Protection	YES		
Opto Isolation	YES		