### 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 connector found on the XFGx radio receivers and the ALR900Gx receiver.

The larger connector allows use of optional ISM band antennas found at Mouser Electronics.

UFLADAPTr ..... UFL plug to REVSMA jack

### Whip Antenna Extension Cable

A low cost solution for moving the whip antenna up to 14 inches away from the EasyDCC XFGx receiver or the Lenz ALR900Gx receiver.

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 Replacement

Fits the microUSB jack found on all wireless throttles featuring rechargeable batteries. The 3 foot cable is bright orange. USB2micror......Charger cable for microUSB

#### Replacement 3.7V USB Battery Charger

The USB charger is rated at 1 amp. This is the same charger we ship with all wireless throttle combos.

CHARGER3r ...... 1Amp USB Charger

#### **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

#### 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



CVP Products P.O. Box 831333 Richardson, TX 75083 www.cvpusa.com info@cvpusa.com 972-238-9966 EASYDCC, ZoneMaster, ZoneShare, T5000E, T1300E are trademarks of CVP Products ©1997-2022 All Rights Reserved Products and prices all subject to change without notice. **EASYDCC** Track-Powered Command Control System Robust, Stable, Reliable

Performance Without Compromise With The Very Popular Wireless "OPS" Throttle

Interested In Wireless Battery Operation? AIRWIRE900<sup>®</sup> Is For You!







MADE IN THE USA

Designed and Manufactured In The USA By CVP PRODUCTS

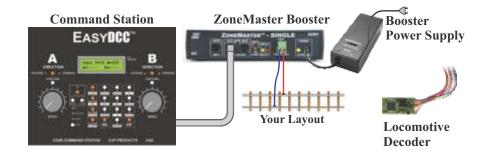


# About EASYDCC



**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 components.



**The Command Station:** is the brain of your control system. The Command Station takes in commands from 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 components. It has several diagnostic modes which can 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 <u>*TWO*</u> 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 wireless or plug-in throttles; or perhaps add extra boosters. When ever you are ready to expand, simply plug in the new items and enjoy. It could not be any easier.

# **Plug-In Throttle**

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.

One XR1300 Plug-In throttle comes with the Extended Starter System.

XR1300..... Plug-In Throttle Complete





# **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 <u>Assembled</u> Fascia Plate is ready to install and comes with two twist-on plugs. No soldering is required. **One EDFA comes with the Extended Starter System.** 

The <u>Kit</u> 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.

EDFA Fascia Plate Assembled
EDFK Fascia Plate Kit
EDFP Metal Face Plate Alone

### Coax Plugs and Jacks

RGPLUG ...... Twist-On Coax Connector (plug) RGJACK ...... (PCB mount) JACK



# **Throttle Bus Extender**



This little circuit board drives the coax cable throttle bus. It is designed to mount under the layout near 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 10plug-in walkaround throttles are to be used.

An Extender and trasformer are included in the Extended Starter System.

EDXA	Extender, Fully Assembled
12VNT	12VAC-1A Transformer

# Wireless Receiver For Lenz DCC Systems

The ALR900 wireless receiver plugs directly into the Lenz system control bus and allows CVP's popular wireless throttles to work with your Lenz system. There are two types of receivers, G1 or G2. G1 is the abbreviation for "Group 1." G1 supports frequencies 0 to 7 and G2 supports frequencies from 8 to 15. Each ALR900 can support up to 8 wireless throttles.



### Use Two Receivers for More Wireless Throttles

Each throttle uses its own private frequency providing fast response to function key presses. Since each throttle

uses its own dedicated frequency, there is never any interference from other throttles.

#### Easy Connection To Lenz System

The ALR900 plugs right into the Lenz system's control bus without any changes. Power also comes from the control bus. All setup switches are readily available on the front panel.

#### 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.

ALR900G1 ..... Group 1 Lenz Wireless Receiver RF00 to RF07

ALR900G2 ..... Group 2 Lenz Wireless Receiver RF08 to RF15

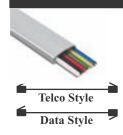
# **Command Station Serial Port Adapter**



This custom-wired adapter converts the Command Station's modular computer port jack to a standard serial DB9 connector.

The adapter comes with a 7 foot modular data cable. Custom lengths up to 15 feet are available for an extra charge.

DB9RJ ......\$25



# **Custom Modular Cables**

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 a charge for the two connectors. Specify the cable length in feet and the type of cable to be built - DATA OR TELCO.

CMOD6..... Modular Cable per foot

CMOD6 ..... Plug set per custom cut cable

CMOD7T.....7 foot modular <u>TELCO</u> cable with plugs

CMOD7D .....7 foot modular <u>DATA</u> cable with plugs

# **Ultra-Miniature Connectors**

Military-grade connectors custom made in the USA. The gold plated pins and the rugged teflon insulated wire are ideal for interconnecting cars and locomotives. The pin pitch is only 50 thousandths of an inch (0.05in or 1.27mm). Each connector is sold separately.



**Optimized For Wireless Control** 

The most popular component of an **EASYDCC** system is the T2600E 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.

**Precision Wireless Control:** Precision wireless control capable of flawless locomotive control is the goal; and CVP Products, with more than 40 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.

**Simple and Easy Operation:** your operators must be able to pick up the wireless throttle and instinctively know how to operate their train. Selecting locomotives or accessory decoders, changing the speed or direction and controlling locomotive functions should never take an elaborate set of instructions.

**Fast Response: EASYDCC** is optimized to provided fast response time when many throttles and locomotives are active. Up to 16 wireless throttles may be used simultaneously without interference with each other because each has its own dedicated frequency. No sharing is required.

**Use Multiple Wireless Receivers:** The link between your wireless throttle and the Command Station is the XF-Series Wireless Receiver. For large layouts featuring group operation you can add additional wireless receivers to insure drop-out-free operation. There is no limit to the number of wireless receivers used.

**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 EASY**DCC**.

# **EASYDCC** Features

Control accessories from all throttles Yes
Includes <u>2</u> Built-in Throttles Yes
External Plug-In Throttles Yes
Wireless Throttles Yes
External Throttle Capacity
Loco Capacity
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
Programs all available CVs Yes
Free, built-in RS232 computer port Yes
Accessory Decoder route control Yes
Back-lit Display Yes
Wireless throttle with backlit display Yes
Viewing Angle/Contrast Control Yes
ZoneMaster Booster Capacity 8 Amps
ZoneMaster Booster Surge Capacity 30 Amps
Auto-reversing boosters Yes
Manufactured and Serviced in USA Yes

### The #1 Choice Of Serious Layout Owners!

CVP Products was established in 1974 and we've been designing model railroad electronics ever since. We have been here both before and after the adoption of the NMRA-DCC standard. We know all the pros and cons of most DCC equipment. We design, manufacture, test and repair right here in Texas. Come see why we are considered one of the leaders in model railroad DCC control.

### Download the latest price list from the CVP website. <u>www.cvpusa.com</u> Look for the green box; upper right.



UMPr..... Plug and pigtail wire UMSr..... Socket and pigtail wire

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# **EASYDCC** Starter Systems

# **EASYDCC** Basic Starter System

- 1 CS2B Command Station
- 1 Modular Cable 7 foot
- 1 DCPS120 Universal Power Supply

1 CS2B 12VAC Transformer 1 ZoneMaster-Single Booster

1 Operation and Installation Manual

### BSS ...... Basic Starter System With 12VAC USA Transformer

### BSS-nt...... Basic Starter System Without 12VAC USA Transformer

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

# **EASYDCC** Plug-In Throttle Extended Starter System

- 1 CS2B Command Station
- 2 Modular Cables 7 foot
- 1 DCPS120 Universal Power Supply
- 1 Extender 12VAC 20VA transformer
- 1 Fascia Plate Assembly

1 Throttle-bus Extender

1 CS2B 12VAC Transformer

1 ZoneMaster-Single Booster

- 1 XR1300 Plug-in Throttle
  - 1 Operation and Installation Manual

### ESS ..... Extended Starter System With 12VAC USA Transformers

### ESS-nt..... Extended Starter System Without 12VAC Transformers

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

# **EASYDCC** Wireless Throttle Starter System

- 1 CS2B Command Station
- 2 CS2B 12VAC Transformers
- 2 Modular Telco Cables 7 foot
- 1 DCPS120 Universal Power Supply
- 1 T2600E Wireless Throttle

- 1 ZoneMaster-Single Booster
- 1 XFG1 Wireless Receiver
- 4 Operation and Installation Manuals

### WSS..... Wireless Starter System

We are sorry but CVP's Wireless equipment is licensed only for North/South American and Japan. It is not licensed for sale to Europe, or Pacific Rim countries. This is due to the frequencies used. The ISM band of frequencies overlaps some cell phone frequencies and can cause interference.

# Starter System Upgrade Option And Ordering Consideration

**Upgrade Option:** The ZoneMaster-Single may be upgraded to a ZoneMaster-Dual for the difference in price.

Request For Quotation: For large orders, or consolidated orders, send us your list and request a quotation. It doesn't cost anything and the savings could be substantial.

ZoneMaster Distribution Amplifier

The **DISTYAMP**, short for Distribution-Amplifier, is perfect if your layout is large or irregularly shaped. Your Command Station has a single, modular jack Booster Driver output suitable for up to 5 ZoneMaster boosters and 200 feet of modular cable. The modular cable simply daisy chains from one booster to the next. But what if your ZoneMaster boosters are to the right AND the left of the Command Station? Or what if you plan for more than 5 ZoneMaster boosters? If either of these situations are similar to your layout design, then the DISTYAMP offers a simple solution.

The DISTYAMP features 4 independent modular cable ZoneMaster drivers and jacks. Each of the 4 drivers has the same capability as the Command Station's one ZoneMaster driver. All integrated circuits are mounted in their own sockets - just in case. Additional protection is provided to reduce the chances of driver damage should electrical storms frequent your area. Three mounting holes and the small circuit board make it easy to mount under the lavout.

The DISTYAMP comes with its own universal power supply having an output voltage of +5VDC at 1.5 amps. The power supply plugs into any AC line from 95 to 240VAC input making it suitable for worldwide use.



### DSAMP..... DISTYAMP and 5V DC Power Supply

# **4 Output Accessory Decoder**

The new AD4 has 4 independent outputs that may be used to control and drive devices such as switch machines, lights and other stationary devices.

Changing one of the setup jumpers configures the AD4 to drive 8 separate on-off outputs such as lamps or LEDs. Control can be from the command station, a plug-in or wireless throttle or from local push buttons.

The AD4 is ideal for tortoise or other low current switch machines. It also works with Kato and LGB style machines using just two wires. The outputs are each rated at up to 1Amp peak throwing current and 0.6 Amp continuous. Outputs can be set to be pulsed or continuous on or a combination of the two.



To simplify wiring, the AD4 plugs into the optional 22/44 pin edge connector. Wiring is done to the edge connector. If you don't want the edge connector, wiring can be done using the holes in the fingers of the connector. The new AD4 retains the same edge connector pin assignment as our classic AD4MC for easy upgrading and replacement.

AD4Accessory Decoder with 4 independent outputs	
44EDGE Edge Connector that fits the AD4 - has two rows of 22 pin	ns

# **ZoneShare**

# **Command Station - CS2B**



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. No power supply is required. Power comes from the ZoneMaster.

Built-In Autoreverse. Output-A 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.

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.

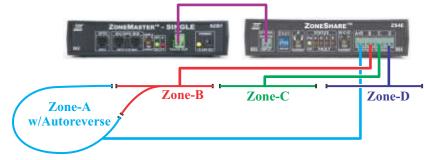


ZoneShare without case

The ZoneShare without a case uses a regular terminal strip for connecting wires.

ZS ..... ZoneShare with custom case ZSX..... ZoneShare board only, no case

### **Typical ZoneShare Hookup To ZoneMaster Single**

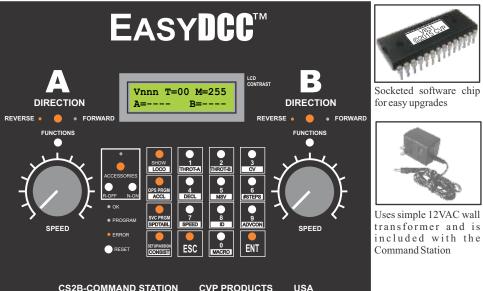


Wiring Considerations: If you decide that a ZoneShare is right for your layout, be sure to always feed all blocks from a ZoneShare. This will insure trains can cross from one ZoneShare block into the next ZoneShare block without hesitation. Use the ZoneMaster to feed the ZoneShare. Do not use the ZoneMaster to also feed an active block.

Reversing Loops and Sections: Do not place to reversing loops or sections back to back or within each other (nested). The autoreverse feature may not work correctly. Always insure that a reversing block or loop connects only to a non-reversing block.

Electronic reversers are not 100% reliable so the best suggestion is to eliminate reversing loops and sections. Use autoreversing blocks should only be used as a last resort.

The **EASYDCC** Command Station is the brain of your system. **Only one is needed per layout**. Many DCC users have switched from other DCC systems to enjoy the advantages of our user friendly architecture. Another reason for the upgrade is to enjoy the benefits of wireless throttles. Please give us a call if you are considering switching. We'll help you sort through what to keep and what to change.



**CS2B-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 NMRA-DCC accessory decoder

- ✤ 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

CS2B Alone ..... Command Station with latest software and User Guide Each starter system includes the CS2B Command Station.

# ZoneMaster Boosters & Power Supply

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. All **EASYDCC** Starter Systems 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 booster programming needed; select from the various options with simple switches.

**High Current Capacity:** The ZoneMaster series offers up to 8 amps of output current. This is continuous output making the boosters suitable for O scale locomotives. You can select the Single Zone to provide the full 8 amps or you can select the Dual-Zone which allows two independent zones to share the 8 amp capacity.

**30 Amp Surge Capacity - A New Requirement:** Locomotives with sound decoders cause a huge current surge on a booster when power is first applied or after the booster recovers from a fault. 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 especially if the locomotives are concentrated in staging tracks or a large yard.

**Single Zone Booster:** The SZB7 booster features a full 8 amps of output power. There is plenty of power to run lots of trains without any hesitation or loss of power. The 30 Amp surge insures there is plenty of power for staging yards holding many sound-equipped locomotives. The outputs is protected against short circuits, overloads and overheating. Requires the DCPS120 power supply or the equivalent. *The SZB7 is included in the starter systems.* 

**Dual-Zone Booster with Autoreverse:** The Dual-Zone Booster, DZB7, features two independent zones. One zone can have an Autoreverse capability enabled. The total power remains at 8 Amps. The two outputs are set for about 4Amp trip current. The Autoreverse output trip level is adjustable.



SZB7..... Single Zone Booster





DZB7..... Dual Zone Booster

The DZB7 outputs are 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. Requires the DCPS120 power supply or the equivalent.

**The DCPS120 Universal Power Supply is required** for each ZoneMaster Booster. The power supply provides the power for the ZoneMaster. It is rated at 120 Watts. There are 7 selectable output voltages from 12 volts to 22 volts. It also has a USB jack that can be used to charge wireless throttles.



The 120 Watt output provides a huge reserve of current to satisfy the surge current requirements of the booster. Surge current is rated at 30A.

The DCPS120 will work with any common household AC line voltage from

One DCPS120 is included in all of the starter systems.

100 to 240 Volts, making it suitable for any country in the world.

# Wireless Controller

**Our most popular throttle we ever released,** the new T2600E OPS wireless throttle, is designed for your operators. The companion T2400E is for Lenz Systems and EasyDCC v4xx Systems. Many of the user changeable options of the T2600E are protected behind a hidden menu. This prevents operators from accidentally changing critical settings such as frequency or ID number during normal use. Only a special key sequence allows you to gain access to these settings.

The big bright graphics display keeps all the important information on the screen. Loco number, ID number, frequency number and battery status are all visible. The OPS throttle has a single turn potentiometer speed control for smooth control plus a dedicated direction key.

### One T2600EC is included with the WSS.

RELEVE CONTROL ITE

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- · Built-in rechargeable battery lasts more than 50 hours
- NEW

- · Dedicated direction key
- · Backlit Graphics Display (backlight can be turned off)
- · Supports Group-1 and Group-2 frequencies

Rugged single-turn speed control

- Precision internal antenna
- · Fixed transmit power level set for maximum allowable
- · Fixed auto off timer
- · Rugged USB Jack for better reliablity
- · 13 DCC functions Function 0 to Function 12
- Handy locomotive swap key
- · Selectable 14, 32 or 128 speed steps
- Slim, comfortable case  $(1 \times 2 \times 6 \text{ inches})$
- $\cdot$   $\,$  Uses any USB charger rated at 5V and 1 Amp  $\,$

T2600EC .... EasyDCC v6xx with cable and charger

T2600EX .... EasyDCC v6xx alone, no cable or charger

T2400EC .... Lenz and EasyDCC v4xx inc cable and charger

T2400EX .... Lenz and EasyDCC v4xx alone, no cable or charger

### **XF-Series Wireless Receiver**

The wireless receiver provides the link between your wireless throttles and the **EASYDCC** command station. An XFG1 frequency is included with the Wireless Starter System.

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The XFG1 receiver can handle up to 8 independent throttles each on their own frequency. For another 8 independent throttles on 8 more frequencies, add the XFG2 receiver. The Installation and Operation manual has additional considerations when more than 8 throttles are to be used.

For large layouts, multiple receivers can be used to provide overlapping and redundant coverage insuring no reception issues. And since each throttle has its own frequency, you are assured of jam-resistant, stable and reliable wireless throttle operation.

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. Comes with 12vnt transformer and 7 foot telco cable. For longer distances, use the TBUS Extender (EDXA page 11). *The XFG1 is included with the WSS.* 

XFG1 ...... Group 1 Wireless Receiver RF00 - RF07 for ID1 to ID8 XFG2 ...... Group 2 Wireless Receiver - RF08 - RF15 for ID9 to ID16

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