

Lenz GmbH is pleased to offer innovative NMRA DCC products with the latest technical advancements in model railroading. We are proud to have invented the technology upon which the NMRA based its DCC Standards. Our goal is to offer equipment that is easy to use, with exceptional value and performance, while providing true compatibility.

## 2007 Lenz GmbH North American Catalog

*Digital*  

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*plus*  
by Lenz®



Summer 2007

# Unleashing the Power of DCC!

## Welcome to the 2007 Lenz GmbH Digital plus Catalog

### *Your plus in DIGITAL plus*

- **Plus for the future!**

Digital plus is designed from the start with the future in mind. We will continue to offer you new capabilities in the future without requiring you to buy a new system, because our systems are designed for **updating** from the very beginning. When new capabilities are added to your Digital plus system in the future, you only need to change the software, not buy a new device.

- **Plus true compatibility!**

We produce equipment that is 100% compatible with all NMRA DCC systems so you never have to be concerned if your Digital plus equipment will work with equipment produced by other DCC manufacturers.

- **Plus conformity to the NMRA standards!**

As a responsible manufacturer, we are committed to develop products that fully conform to the NMRA DCC Standards and Recommended Practices and we are a full participant and supporter of the NMRA C&I independent testing program.



- **Plus support for the industry's leading high performance network!**

Our high performance **XpressNet** based systems provide you the ultimate in reliability and performance. Our open-network design allows you to purchase equipment from a growing number of manufacturers worldwide.

- **Plus partnerships with leading model railroading companies!**

As a leader in NMRA DCC, we partner with other leading model railroad manufacturers to develop creative applications of DCC technology. These partnerships led to the development of a fully automated crane from ROCO, the first US locomotive with an advanced DCC decoder built-in from Con-Cor, and complete DCC systems for Atlas, LGB, ROCO, and Bachmann.

- **Plus intuitive operation!**

We pride ourselves in developing feature rich systems that are easy to install and operate. We want you to be able to operate your trains effortlessly and not be confused by a complicated control system. Features provided by our systems and decoders include:

- + advanced high speed RS-485 peer to peer network supported by multiple manufacturers world wide
- + transparent 4 digit address control
- + high precision, quiet and smooth motor control
- + locomotive decoders with load compensation for exceptionally smooth and quiet, slow speed control
- + your choice of 14, 28 or 128 speed steps
- + double heading and/or advanced consist control
- + decoders that automatically convert to smoothly operate on conventional DC operated layouts
- + command station can operate 1 non-decoder equipped train
- + acceleration and braking momentum
- + controls 1024 accessory devices such as switch machines
- + powerful easy-to-use hand held controllers
- + programmable train routes
- + integrated feedback bus
- + interface for computer connection
- + supports all forms of NMRA RP-9.2.3 and operations mode programming for complete compatibility
- + operational data is stored in the command station between operating sessions, no batteries to change in our handhelds

- **Plus the industry's best Warranty and Support!**

We stand behind our products with our 10 year limited warranty for our North American customers. Our standard and gold series products have a warranty that includes free replacement in the first year, even if you accidentally improperly installed the unit. Our North America service centers are another example of the commitment we are making to provide the best possible support worldwide.

- **Equals exceptional value!**

Our total design philosophy produces high performance systems with long term value. Because we have designed this value in, you do not need to replace your system components every other year.

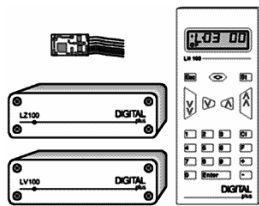
## What do you need to get started?

To get started, you will need a command station ( LZV100), a power station (LV101, or LV200), a hand held controller (LH100, or LH90) a locomotive decoder, and a model railroad transformer providing 16V AC.

All the needed Digital plus components have been assembled into easy to install sets: Set-90, Set-100 Set-LI or Set-100/10

## Decoder Compatibility:

All current production Lenz Digital plus decoders have received or are in the process of receiving NMRA Conformance Warrants and can be operated and programmed by ALL NMRA DCC systems. Our command station can operate and correctly program ALL NMRA DCC decoders. We believe that compatibility is very important, which is why we have gone the extra step of developing all new decoders to fully conform to the NMRA Standards and Recommended Practices.



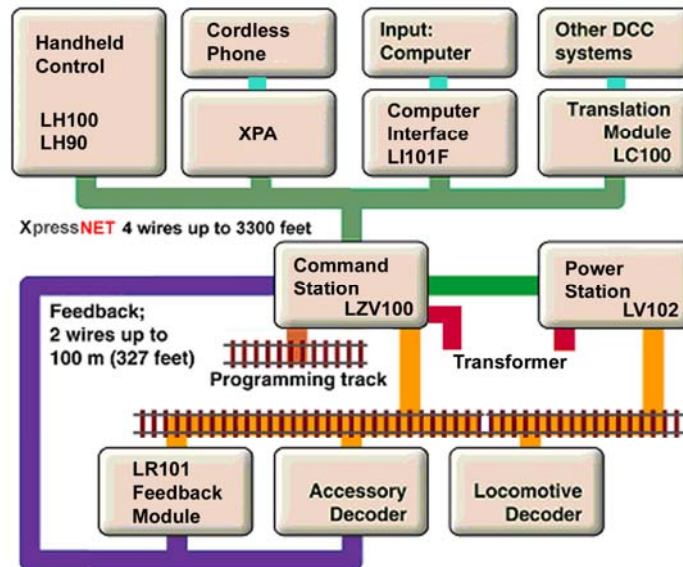
## *Basic Components of Digital plus Systems*

Digital plus is designed with a non-proprietary open architecture. Each device in this distributed architecture contains the intelligence necessary to provide support to the external device it is supporting. This distributed architecture provides exceptional performance and allows us to add new capabilities without impacting existing devices.

- **XpressNet Communication Network**

The heart of the Digital plus communication architecture is the high speed state-of-the-art network called **XpressNet**. **XpressNet** is a distributed multi-tier network based on the worldwide RS485 standard. Each device on **XpressNet** contains a dedicated microprocessor that is responsible for providing its own unique user interface capabilities. This allows any certified **XpressNet** device manufactured by any one of a number of manufacturers to be used with your Digital plus system.

**XpressNet** provides the peer to peer data exchange between each input device and from each input device to the DCC signal generator contained in the command station. The **XpressNet** network consists of a 4 wire twisted pair connection. **XpressNet** may be up to 1000m (3300 feet) long and can support up to 31 simultaneous input devices. **XpressNet** is the highest performance communication network in the DCC industry, providing the modeler with exceptional growth possibilities.



- **Power Station Interface bus**

A two or optional three wire bus that conforms to RP-9.1.2 connects the command station to as many power stations (boosters) that are needed to power the layout. The LZV100 and all Digital plus power stations are designed to follow the proposed NMRA Power Station Interface RP. All Digital plus power stations are optically isolated to allow safe connection to all forms of layout wiring including common rail wiring.

- **Layout Feedback bus**

The LZV100 provides the capability for a separate 2 wire feedback bus to provide a connecting link between command station and feedback capable modules. A separate bus was chosen to provide maximum performance even in the largest of layouts.

## Digital plus Starter Sets

**Unleash the power of DCC** with our high quality systems that offer transparent, intuitive DCC operation yet provide all the features advanced modelers want. We do this by employing the most advanced and reliable technology available. Our LZV100 based sets include a database that supports 256 locomotives and supports 9999 locomotive addresses, Advanced Consisting, access to all 14 NMRA DCC functions, 14 27 28 or 128 speed control, programming on the main, support for all forms of service mode programming, support for 1024 accessory decoders addresses, layout feedback, separate programming track outputs and much more.

**Smart Locomotive Address Allocation** -With your Digital plus set, simply select an address by entering the locomotive address and the system automatically decides the form of addressing to use to control the decoder.

**Smart Consisting** - Smart consisting allows the engineer to operate a consist from either the consist address or from any locomotive address from within the consist, allowing control of all functions with a consist.

**Smart One-Step Programming** – With Smart One-step address programming the system sets all the required CVs for you.

**Smart Function Control** - The LZV100 supports the control of all 14 DCC locomotive functions. Using an LH100, you can easily configure any of the functions between F1-F12 to be either on/off or momentary for each individual locomotive.

**RailCom** - The LZV100 is equipped with built in **RailCom** enabling hardware so all you will need are RailCom enabled decoders (such as our Gold series) and one or more detectors (such as LRC120).

**Dynamic Locomotive Queuing** – Our command station provides unprecedented performance and are designed for precision sound control. All 31 operators can be performing sound control without any perception of latency delay, even if over 200 locomotives are being operated at the same time.

**Growth** - Upgrading through software enhancements is a hallmark of our Digital plus systems. There have been significant advances in DCC since we introduced our advanced 14 speed step 5 function system in 1993. Because we understand that more advances are yet to come, we design each of our devices with the understanding, that because technology changes our

users deserve the comfort of knowing their Digital plus system will not be obsolete any time soon. Users who purchased our systems in 1993 still enjoy the latest DCC features with their systems because of these upgrades over the years..

**True Compatibility** – We fully test our systems before we release them and participate fully in the NMRA's independent testing. All our systems have been submitted to the NMRA for formal C&I testing and have received NMRA C&I Warrants.



### **Set-100 Professional Starter Set MRSP \$349.00**

Our most advanced set produced to date. The Set-100 Starter Set comes complete with all the components you will need for a professional grade NMRA DCC system. The Set-100 comes with an LH100 Dispatcher's handheld, a LZV100 command/power station, a complete easy to read and understand manual and a discount coupon for two decoders. This set is an excellent choice for most club and home layouts.



### **Set-90 Professional Starter Set MRSP \$290.00**

The Set-90 Starter Set comes complete with all the components you will need for a professional grade NMRA DCC system. The Set-90 is identical to the Set-100 but comes with an LH90 Engineer's handheld instead of an LH100 handheld. Set-90 also includes a LZV100 command/power station, a complete easy to read and understand manual and a discount coupon for two decoders. This set is an excellent choice for most club and home layouts.





### Set-100/10 Professional Starter Set - MSRP \$499.95



The Set-100/10 Starter Set is designed for our larger scale users who need more power to run their model railroad. SET-100/10 comes with an LH100, Dispatchers handheld, a LZV100 Command Station/Power Station, one LV102 (which can be connected in parallel to the LZV100 to provide total of 10 amps), and a complete Digital plus manual. Intended for S, O and Large Scale layouts.

### Set-LI with Loco Ce® Professional Starter Set MSRP \$299.95



Lenz GmbH and KAM Industries have teamed up to provide the first truly wireless computerized DCC system. Set LI with Loco Ce® contains an LZV100 command station/power station, an LI101 high speed computer interface and the Loco Ce® software package. Requires user supplied computer and wireless PDA.

### Black Box Programmer MSRP \$59.95



Stand alone programmer. Supports all forms of programming with a high current output for sound decoders. Ideal for your work bench or as a stand alone programmer. Requires a XpressNet Handheld capable of programming (such as an LH90 or LH100) and a power supply.

## Digital plus XpressNet capable add-on Components

Our Digital plus components are compatible with all XpressNet based systems.



### Keypad Dispatcher's Throttle

Universal input device for operation of locomotives, setting of turnouts, programming of decoder and configuring systems. Easy to read LCD display for operational instructions and display of locomotive address, direction, speed step and functions. Ability to control 14 locomotive functions (F0-F12), set up momentary functions when used in conjunction with an

LZ100, plus keys for direction change, locomotive specific emergency stop and for general emergency stop and turning off track power. Control of turnouts, signals and readout of feedback information is also possible. Connection cord, approx. 1.5 m. (5 ft.), with 5-pin Din connector. Size: W 2 7/16 x H 6 1/4 x D 1 in. **MSRP \$199.95**



### LH90 Knob based Engineer's Throttle New Version 3.5

The LH90 is designed for full operation and programming of locomotives and accessories. The LH90 comes with a sensitive potentiometer, address selection for 4 digit addresses, selectable 14, 27, 28, or 128 speed, Controls F0-F12 functions, F1-F12 can be configured momentary, improved locomotive acquisition control, menu shortcuts, center off toggle switch for direction and

braking control and a easy to read LED display. **MSRP \$99.95**

### NEW ! LH90 Knob based Engineer's Throttle

**Update Version 3.5-** \$10 includes S&H. Contact Lenz Agency for details. (Canadian updates \$20.00).



### XPA –XpressNet Phone Adaptor

The XPA turns any cordless phone into a full featured **XpressNet** handheld. Features include locomotive address selection for the complete range of addresses

supported, speed control, support for 9 functions, and turnout control. Supports all cordless phones that generate standard DMTF tones. Macro capability and range depends on the capabilities of the phone chosen. Up to 30 XPA devices can be connected to an **XpressNet** system. **MRSP \$62.95**



### Computer Interface LI101F

High speed connection of your Digital plus system to a computer. All functions of the system are available to computer programs through an RS232 interface to your computer and a 4 wire connection to **XpressNet**. Data transfer rate can be

set from 19.2 K Bits/second to 115.2 K bits/second, 9 pin SUB D jack, connecting cable included. Enclosed CD includes several demo programs<sup>1</sup>. Size: W 3 1/2 x H 1 x D 1 3/4 in. **MSRP \$99.95**



### LI-USB Computer Interface

All system functions can be controlled via the PC. Operating req. Windows© 2000 or Windows © XP. Packaged with cables for XpressNET and PC connections. Supplied Software: Tool for setting **XpressNet**

address, Throttle Control Panel, CV editor, contained additional information and data protocol. Control Panel, CV editor, and CD containing additional information and data protocol<sup>1</sup>. Size: W 3 1/2 x H 1 x D 1 3/4 in. **MSRP \$154.95**

<sup>1</sup> Interface licensed under KAM Industries Technology License Agreement

## Digital plus Power Stations



### Power station LV102

The Digital plus LV101 Power Station is the power station of choice for most **Digital plus** users. Features include a 5 amp DCC power station with user selectable DCC track voltage, RailCom conditioner, settings of between 11 and 22 volts in ½ volt increments, a fault detection LED to assist the user in troubleshooting problems, and power station common to assist in supporting all forms of track wiring including common rail and 2 rail (direct home) wiring.. Any number of power station/transformer combinations can be connected to the command stations power station interface bus, each of these combinations then supplies its own power district. Provides both short and overload protection, plug in screw terminals, metal housing, and opto-isolation for maximum safety. Size: W 4 3/4 x H 2 1/4 x D 4 3/4". **MSRP \$154.95**



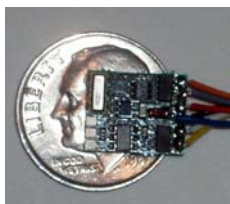
### Magna-Force Transformer

High Performance model railroading DCC power supply suitable for our systems. Input: 120VAC, Output 15 VAC, 5 Amps. Sealed case, on/off switch Use to power the LZV100 or LV102. Manufactured by DCC Specialties, Inc. **MSRP \$49.95**



### Crest DC Switching Power Supply

13 amps at 23 volts, 15 amps at 18 volts or 20 amps at 13.8 volts. Use with multiple LV102s to provide more track current. Manufactured by a Polk's Modelcraft Hobbies, Inc. Includes an automatic circuit breaker, internal cooling fan, ammeter, ultra clean signal. **MSRP \$170**



## ***Redefining Model Railroad Control through Innovative Technology***

Lenz GmbH continues to strive to enhance the enjoyment of model railroad operations through research into new technology for model railroad control. Our research into model railroad control has led to the development of three new revolutionary technologies for NMRA DCC.



**RailCom**-NMRA DCC bi-directional communication allowing decoders to transmit real data such as address and current actual speed



**Asymmetrical DCC** – Provides a simple method to send location specific commands to a decoder, such as to stop in a siding or in front of a red signal.



**Uninterruptible Signal Processing** is a new patent pending technology for receiving the DCC signal even when the locomotive is on dirty track.

We offer three decoder lines with different feature sets.

Digital plus by Lenz decoders are designed to provide exceptionally smooth and quiet operation of your model railroad locomotive. All Digital plus locomotive decoders are also built to **fully** conform to the NMRA Standards and Recommended Practices. This ensures free use of our locomotive decoders with all systems worldwide that also conform to the NMRA standards.

**Entry Line:** includes our LE 1014 and 1835:

**Standard-Line:** Back EMF motor control with expanded features with our industry leading goof proof warranty.

**Silver Series:** Advanced silent Back EMF with short protection, Asymmetrical DCC, and an advanced feature set.

**Gold Series:** The most advanced decoders in the industry with USP, RailCom, SUSI Interface (HO and larger), advanced silent Back EMF, short protection and the industry leading goof proof warranty. Combined with a Power-1 module locomotives with Gold decoders provide the ultimate in precision motor control.

All of our decoders' features contain the following advanced features:

- NMRA Conformance Warrants (or submitted for testing)
- tested for 100% packet reception
- operation with either 14, 27, 28, or 128 speed steps
- operations mode programming
- individually configurable to match the needs of the locomotive that the decoder is installed in, includes address, minimum starting voltage, acceleration and braking momentum as well as many other settings
- support for 4 digit addressing and advanced consisting programmable locomotive front end
- headlight dimming using an extra function
- 4 function output decoders have 2 functions that can be mapped to any F1-F8 input.
- Digital plus decoders can also be operated on conventional DC layouts

Additional special lighting effects and function mapping are available on selected decoder models. Decoders with special lighting effects include: Mars light, GYROLIGHT, Single and dual strobe plus a separate dimming. Additional special effects on select 4 function decoders include blinking and ditch light control.

## Current Production *Digital plus by Lenz*<sup>®</sup> NMRA DCC Decoders

### Gold Series Decoders



Provide the ultimate in precision model railroad control.



#### Gold Mini-W Locomotive decoder

Silent, Back EMF decoder with Asymmetrical DCC, USP and RailCom technology built in; 2 functions, adjustable stopping control, switching speed, 0.5A continuous, 0.8 amp peak motor current. Size: L 0.43" x W 0.35" x H 0.11" **MSRP \$54.95**



#### Gold Mini-D Locomotive decoder

Same as Gold Mini-W but with NMRA small plug (NEM 651) Size: L 0.43" x W 0.35" x H 0.13" **MSRP \$54.95**



#### Gold JST Locomotive decoder

Super smooth Silent, Back EMF decoder with Asymmetrical DCC, USP\* RailCom and SUSI technology, adjustable stopping control, low speed switching gear, 4 functions, .10A continuous, 1.8 amp peak motor current. Size: L 0.91" x W 0.66" x H 0.2" **MSRP \$36.95**



#### Gold JST –MP Locomotive decoder

Identical to the Gold JST, but includes a LY012 88 mm decoder harness with an NMRA medium plug. **MSRP \$39.95**



#### Gold JST –W Locomotive decoder

Identical to the Gold-JST, but includes a LY011 200 mm JST wire harness **MSRP \$39.95**

**Power 1:** On-board power for USP decoders. This optional unit provides power when there is an interruption in track power. For USP equipped decoders only. **MSRP \$49.95**



### Gold Super Pack

Gold-JST, with both LY011 and LY012 harnesses and pre-wired Power-1. **\$94.50**



### Gold Maxi Locomotive decoder

Super smooth Silent Back EMF decoder with Asymmetrical DCC, USP and RailCom technology built in; 8 function outputs, auxiliary Stopping and push pull using read switch, 3 amp continuous, 5 amp peak motor current. **MSRP \$79.95**

**Power 3:** On-board power for Gold MAXI USP decoders. This optional unit provides power when there is an interruption in track power. For USP equipped decoders only. **MSRP \$49.95**



### Silver Series Decoders

Silver series decoders are Gold series decoder without a SUSI sound module interface, USP or RailCom support.



### Silver Mini-W Locomotive decoder

Silent, Back EMF decoder with Asymmetrical DCC; 2 functions, adjustable stopping control, switching speed, 0.5A continuous, 0.8 amp peak motor current. Size: L 0.43" x W 0.35" x H 0.11" **\$38.95**



### Silver MP Locomotive decoder

Super smooth Silent, Back EMF decoder with Asymmetrical DCC technology, adjustable stopping control, low speed switching gear, 4 functions, .1.0A continuous, 1.8 amp peak motor current. Size: L 0.91" x W 0.66" x H 0.12 **MSRP \$31.95**



### Silver Direct Locomotive decoder

Same as Silver MP but with MP built into decoder. Size: L 0.70" x W 0.57" x H 0.18 **March 2007**



### Silver 21 Locomotive decoder

Same as Silver MP 21 pin connection

Size: L 0.80" x W 0.60" x H 0.17 **MSRP \$32.95**

## New Standard Line Decoders



### Standard-MP

Silent back emf motor drive, 3

function outputs (A B and C) with special lighting effects and a host of configurable CVs. The Standard line decoders do not come with Asymmetrical DCC, Bi-Directional DCC, USP nor have a SUSI sound interface. 1 Amp continuous, 1 Amp maximum, 1 Amp hard continuous stall. **MSRP \$29.95**

## NEW! Locomotive decoder LF101XF

New Advanced 6 function only decoder for all scales  
Function mapping, support for polarity sensitive sensitive lighting and special lighting effects. 0.2 A/output .4 amp total. . L 0.85" x W 0.47" x H 0.12" **MSRP: \$22.95**

## Entry Level Decoders



### Locomotive decoder LE1014MP

Four function ultra-thin advanced DCC decoder with Drive-Select motor control with NMRA medium 8 pin plug. The LE1014 has advanced lighting effects on four function outputs. Provides 1A continuous motor current. Size: L 1.3" x W 0.63" x H 0.14" **MSRP: \$22.95**



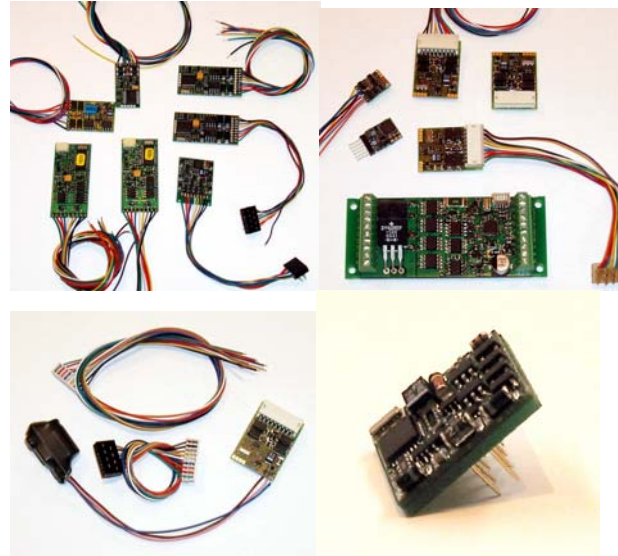
### Locomotive decoder LE1835WH

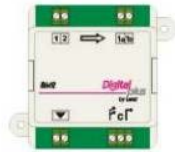
High Frequency silent drive Back EMF load compensation decoder with SUSI sound interface. Maximum continuous current load of motor output is 1.8A. Includes low gear and precision braking control. **MSRP \$37.95**



### Locomotive decoder LE1835MP

Identical to the LE1835, but includes an NMRA medium plug. **MSRP \$37.95**





## Digital plus block modules and accessory decoders

- **RailCom Address Display LRC120 MSRP: \$60.00**

Using the LRC120 address display, you always know which locomotive is on the tracks. As soon as a RailCom equipped locomotive, which is fitted with a GOLD decoder or the transmitting module LRC100, enters a monitored track section, you can read the locomotive's address on the display.

- **Asymmetrical DCC Detector BM1 MSRP: \$11.95**

The BM1 has been designed for simplest and therefore most cost-effective solutions for stopping at a signal.

- **Asymmetrical DCC Detector BM2 MSRP: \$44.95**

Controlled by an external signal both stop and restricted speed control can be achieved. Push pull and multi unit trains can also be successfully operated.

- **Asymmetrical DCC Detector BM3 MSRP: \$54.95**

Full block occupancy detection and Asymmetrical DCC built into a single unit. Can control an external signal system.

- **Occupancy detector LB101 MSRP: \$19.95**

For providing information on track occupancy in combination with feedback module LR101, is installed between LR101 and the track block to be watched, 2 independent detectors on one circuit board, Maximum current load 3A, All connectors designed as screw terminals, Size: W 2 3/8 x H 1/2 x 1 5/8 in.

- **Accessory decoder LS100 MSRP: \$79.00**

Accessory decoder for connecting 4 turnouts or signals with twin coil relays, Power supply may be either from a separate transformer or from the track power, Maximum current load of a single output is 0.75A continuous, peak 3A for maximum 1 sec., Maximum total current load (as the sum of all outputs in use) 3.0A

continuous. Connection to the feedback bus of command station LZ100, allowing feedback of the actual turnout position. Motorized turnouts are connected using adapter LA010.

Size: W 3 1/2 x H 1 x D 3 5/16 in.

- **Adapter LA010 MSRP: \$14.00**

For connecting motor driven turnouts or EPL drives to accessory decoders LS100/LS110.

- **Accessory decoder LS150 MSRP: \$49.95**

Controls up to 6 turnouts with twin coil or slow motion switch machines. Does not include connection to the feedback bus.

- **Feedback unit LR101 MSRP: \$52.00**

“Information gatherer” on the layout, sends the status of all feedback points to the command station. For determining the status of track occupancy detectors or other feedback positions on the Model railroad, 16 inputs, polling takes place via the feedback bus of command station LZ100. Feedback status can be displayed on hand held controller LH100, tower cab LW100 or the computer interface LI100. Size: W 3 1/2 x H 1 x D 3 5/16 in.

- **Voltage Monitor LB050 MSRP: \$23.50**

The voltage detector LB050 monitors the voltage of the tracks of your model railroad. It detects whether the tracks are free of voltage or not. This information is analyzed by the feedback module LR101, sending the information back to the LZ100. The feedback encoder LR101 not only evaluates information from LB100s (occupancy detectors), but also information from one or more voltage monitors LB050s. If the LR101 determines, via its connection to an LB050, that voltage to the track is lost, it “freezes” the last feedback status. The careful combination of LR101s and LB050s prevents a loss of power or a short circuit from causing erroneous free feedback to be sent to the command station.



## ***Locomotives and Additional Digital plus Components:***

The following additional products are built to further enhance your enjoyment of Digital plus.

- **V36-413 Diesel Locomotive MSRP: \$179.00**

Our model of the **V36.4** is built to a scale of 1:87 (HO Scale). The locomotive is designed to operate on both conventional two-rail DC layouts and on **NMRA DCC** digitally controlled layouts. Both operating modes offer back-emf load-sensitive regulation, front and rear couplers operated by remote control, and constant lighting.

- **V36-418 Diesel Locomotive MSRP: \$179.00**

The diesel is the same as above but has a cab with cupola.

- **BR66 Steam Locomotive MSRP: \$290.00**

Our model of the **BR66** is built to a scale of 1:87 (HO Scale). The locomotive is designed to operate on both conventional two-rail DC layouts and on **NMRA DCC** digitally controlled layouts. Both operating modes offer back-emf load-sensitive regulation, bell, whistle, RailCom, USP, and constant lighting on all lamps. Available in 2 numbers 66 002 and 66 001.<sup>2</sup>

- **Reverse loop module LK100 MSRP: \$57.00**

This module provides a simple way to travel through reverse loops in digital operation. Automatic changing of polarity when passing the isolation gaps of the loop, Travel through loop -without stopping or changing direction, regardless of the direction the loop is traversed, Adjustable sensitivity depending on current needs of the layout, Maximum current load 5 Amps.

Size: W 3 1/2 x H 1 x D 3 5/16 in.

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<sup>2</sup> Distributed under license for US Reissue Patent Number RE38,660



### **Digital plus Supplies:**

- **LA152 XpressNet Panel Connector MSRP \$22.95**  
Faceplate with 2 Din plugs and 1- phone jack for easy XpressNet installations. Includes 8 foot cable with 6 pin RJ phone plugs
- **XD Cable MSRP \$5.00**  
6 ft cable with 5 pin din on one end for connecting the first LA152 adaptor to an LZV10 or LZ100.
- **XP-5 XpressNet Din sockets MSRP \$6.00**  
Sockets used to connect Digital plus input devices to the XpressNet. Package contains five 5-pin Din connectors for XpressNet installation.
- **XpressNet Tee Adapter MSRP \$2.50.**  
6 pin Tee adapter for easy installation of XpressNet network branches.
- **LY011-5 Decoder Harness MSRP \$12.00**  
Designed for all decoders that support the 9-pin industry standard decoder socket. Install one decoder harness in each locomotive, allowing sharing of decoders. Package includes five 200mm harnesses.
- **LY012-5 Decoder Harness with NMRA Plug MSRP \$25.00**  
Designed for all decoders that support the 9-pin industry standard decoder socket. Each harness includes an NMRA medium 8-pin plug. Package includes five 88mm long harnesses.
- **LY006 Coil Cable with DIN plug MSRP \$12.50**  
4 pin coil cable with phone plug on one end and male 5-din plug on the other end.
- **LY007 Coil Cable with phone plug MSRP \$7.50**  
6 pin coil cable with phone plugs on each end.

**Additional Lenz Information:**

All operation manuals for the Digital plus system and components plus lots of additional information is available on our WWW site at [www.lenz.com](http://www.lenz.com)

**Where to find our products?**

You can get Digital plus in many fine model train stores worldwide. In North America you can obtain Digital plus equipment at virtually any Hobby Shop. Hobby shops can obtain equipment either directly through the Lenz Agency or through Walthers. Your dealer not currently a Digital plus dealer? Contact us with their name and address and we will send them a dealer packet. A listing of North American dealers who stock our product can be found on the Lenz web site.

**How to obtain upgrades?**

Digital plus equipment is designed to be upgraded.

- LH100 – Version 3 release 240401
- LH90 – Version 32
- LI101F - Version 1 release 2
- LZ100, LZV100 – Version 3.5

Should you have an older version of any system component contact your local Lenz GmbH dealer for upgrade information.

### North American Warranty

Lenz GmbH does everything it can do to ensure that its products are free from defects and will operate for the life of your model railroad equipment. From time to time even the best-engineered products fail either due to a faulty part or from accidental mistakes in installation. To protect your investment in Digital Plus products, Lenz GmbH offers a very aggressive 10 year Limited Warranty. Standard-line, Silver-Series and Gold-Series products offer a "goof proof" replacement policy during the first year of ownership. We believe it is important to fully stand behind our products and while you will likely never need the protection afforded by this warranty even the best of us sometimes make mistakes and this is just another example of the support we try to provide our customers.

This warranty is not valid if the user has altered, intentionally misused the Digital plus product, or removed the product's protection, for example the heat shrink from decoders and other devices. In this case a service charge will be applied for all repairs or replacements. Should the user desire to alter a Digital plus product, they should contact Lenz GmbH for prior authorization.

**IMPORTANT NOTICE**

*A return Authorization Number is required  
for all warranty returns. Call FIRST!*

For more details please contact your dealer or authorized Lenz GmbH warranty center.

### Support

Our staff at both our factory in Germany and our service center, located at our North America Agency, is there to provide you both support and service. Purchasing an advanced control system is an investment on your part and providing multiple high quality service centers with trained staff assures you of support should you ever run into unexpected difficulty. This worldwide commitment to service is just one more way we try to protect your hobby dollar investment. For product purchased from outside North America, contact and support is provided by your dealer or our distributors and may include a service charge.



### More questions?

Check out our WWW site: <http://www.lenz.com>  
or feel free to write, call, fax, or email us:



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Note: Information contained in this catalog is accurate to the best of our knowledge at the time it was produced. Prices, capabilities, and availability are subject to change. All information is given without warranty.

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