



72-4279-250  
10/08



*Lionel*  
**#996 PowerMaster Bridge  
Owner's Manual**

**CAUTION—ELECTRICALLY OPERATED PRODUCT**  
NOT RECOMMENDED FOR CHILDREN UNDER FOURTEEN YEARS OF AGE.  
AS WITH ALL ELECTRIC PRODUCTS, PRECAUTIONS SHOULD BE OBSERVED  
DURING HANDLING AND USE TO PREVENT ELECTRIC SHOCK.  
**TRANSFORMER RATINGS—INPUT: 120 VAC; 60 HZ ONLY.**  
**AC OUTPUT: 9 V; 700mA**

# ***Congratulations!***

**C**ongratulations on your purchase of the Lionel #996 PowerMaster Bridge. Layouts using the Lionel PowerMaster (6-12867 and 6-24130) can transition to full CAB-2 operation with the #996 PowerMaster Bridge. The PowerMaster Bridge allows you to replace your TMCC CAB-1 with a Legacy CAB-2 to vary track voltage, change locomotive direction, adjust speed, and control sounds remotely.

## **Table of contents**

---

Operating your PowerMaster Bridge safely	3
Introduction to the PowerMaster Bridge	4
Connecting your PowerMaster Bridge to the Lionel LEGACY Control System	5
Troubleshooting Guide	6
Notes	7
Lionel Limited Warranty Policy & Service	8

## **FCC Statement**

---

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**Warning!** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Operating Frequency: 27.255 MHz

Output Field Strength: 60.1 dBuV/m @ 30m

## Operating your PowerMaster Bridge safely

---

**Warning!** When using electrical products, follow these basic safety precautions:

- Read these instructions thoroughly before using this device.
- The PowerMaster Bridge is not recommended for children under fourteen years of age.
- Parents should periodically inspect the PowerMaster Bridge for potential hazards and have them repaired by an authorized Lionel Service Center. In the event that such a condition exists, the PowerMaster Bridge should not be used until it has been properly repaired.
- The PowerMaster Bridge is intended to be used indoors. Do not use the PowerMaster Bridge if water is present. Serious or fatal injuries may result.
- Do not use the PowerMaster Bridge for anything other than its intended purpose. This unit was designed to operate with the Lionel LEGACY Control System.
- The PowerMaster Bridge was designed to operate on 120-volt, 60-Hz power. Do not connect the PowerMaster Bridge to any other source of power.
- Do not operate the PowerMaster Bridge with a damaged cord, plug, or case.
- To avoid the risk of electrical shock, do not disassemble the PowerMaster Bridge. There are no user-serviceable parts inside. If damaged, take the unit to an authorized Lionel Service Center. See page 8.
- Unplug the PowerMaster Bridge from the power source when not in use.

**Caution!** Do not operate your railroad unattended. Obstructed accessories or stalled trains may overheat, resulting in damage to your layout.

The following Lionel marks may be used throughout this instruction manual and are protected under law. All rights reserved.

*Lionel®, TrainMaster®, Odyssey®, RailSounds®, CrewTalk™, TowerCom™, DynaChuff™, StationSounds™, Pullmor®, ElectroCoupler™, Magne-Traction®, CAB-1® Remote Controller, PowerMaster®, Lionel ZW®, ZW®, PowerHouse®, TMCC®, Lionelville™, Lockon®, Wireless Tether™, LionMaster®, FatBoy™, American Flyer®, TramSounds™, PowerMax™, LEGACY™, PowerMax™ Plus, Odyssey II™, LEGACY RailSounds™*

*The name FasTrack® is used with permission from Pitsco, Inc.*

## **Introduction to the PowerMaster Bridge**

---

**T**he #996 PowerMaster Bridge provides a bridge between the LEGACY Control System transmitting at 2.4 GHz and the TrainMaster Command Control system which transmits at 27 MHz. The PowerMaster Bridge provides this bridge by accepting a serial stream of data from the LEGACY Control System and transmitting the data on 27 MHz. Using the LEGACY Control System with the PowerMaster Bridge and PowerMaster (PM-1) module(s), you are now able to use the LEGACY Control System CAB-2 remote controller to control both Command and conventional trains. Before the introduction of the PowerMaster Bridge it would have required the use of the LEGACY Control System CAB-2 remote controller and the TrainMaster Command Control CAB-1 remote controller to control your trains using a PowerMaster (PM-1) module(s). The PowerMaster Bridge only transmits 27 MHz when there is serial data supplied to be transmitted.

The operation of the PowerMaster Bridge also allows you to control the voltage on a section of track by using a PowerMaster (PM-1) module. Refer to the PowerMaster Owner's Manual for further operating information.

## Connecting your PowerMaster Bridge to the Lionel Legacy Control System

The “Y” cord that comes with your Lionel Legacy Control System makes it possible to use the PowerMaster Bridge with the Legacy Control System. Follow the steps below and refer to figure 1 to connect the PowerMaster Bridge to the Legacy Control System.

**Note!** The PowerMaster does not require any re-wiring to operate with the PowerMaster Bridge.

1. Use the “Y” cable that comes with your Lionel Legacy Control System to connect the PowerMaster Bridge to the Legacy Command Base/Charger.

**Note!** Do not connect a Command Base-1 and a PowerMaster Bridge to the Base or a conflict will occur on the 27 MHz frequency band.

2. Plug the wallpack power cable into the PowerMaster Bridge.
3. Plug the wallpack into a standard wall outlet. The green light on the top of the PowerMaster Bridge will illuminate.

You are now able to vary track voltage, change locomotive direction, adjust speed, and control sounds with your CAB-2 remote controller. The red communication light on the top of the PowerMaster Bridge will flicker when receiving data commands from the Legacy System when connected to the “Y” cord as shown in figure 1.

**Note!** Do not use the PowerMaster Bridge wallpack to power any other device.

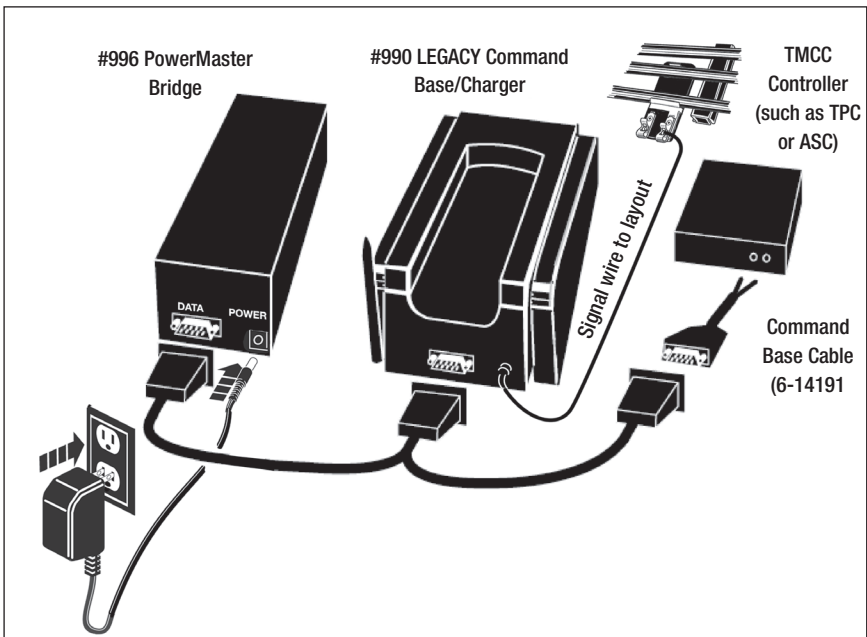


Figure 1. Connecting your PowerMaster Bridge

## **Troubleshooting Guide**

---

### **My PowerMaster Bridge comm. light flickers but does not control my PowerMaster with my CAB2 controller?**

- Make sure that the track address is not assigned to a lash-up.
- Make sure that your PowerMaster's track address is the same as the desired address being used.

### **My PowerMaster Bridge power light does not light up?**

- Check and see if the power jack is fully inserted into the PowerMaster Bridge.
- Make Sure that the Transformer is plugged fully into the outlet socket.
- If using a power strip make sure that the power strip is turned on or the circuit breaker does not need resetting.

### **My PowerMaster Bridge power light is on but the comm. light does not flicker?**

- Make sure that the Y cord is fully inserted into the Legacy base and the PowerMaster Bridge.
- Make sure that the Legacy Command Base/Charger is plugged in and power is on.
- Make sure you are using the Cab 2 controller and not the Cab -1 controller.



# Lionel Limited Warranty Policy & Service

**T**his Lionel product, including all mechanical and electrical components, moving parts, motors and structural components, with the exception of LIGHT BULBS & LED's are warranted to the original owner-purchaser for a period of **one year from the original date of purchase** against original defects in materials or workmanship when purchased through a **Lionel Authorized Retailer\***.

This warranty does **NOT** cover the following: Normal wear and tear, Light bulbs or LED's, Defects appearing in the course of commercial use, or Damage resulting from abuse/misuse of the product.

Transfer of this product by the original owner-purchaser to another person voids this warranty in its entirety. Modification of this product in any way; visually mechanically or electronically, voids the warranty in its entirety.

Any warranted product which is defective in original materials or workmanship and is delivered by the *original owner-purchaser* (this warranty is non-transferrable) to Lionel LLC or any Lionel Authorized Service Station **MUST** be accompanied by the original receipt for purchase (or copy) from an **Lionel Authorized Retailer\***, will at the discretion of Lionel LLC, be repaired or replaced, without charge for parts or labor. In the event the defective product cannot be repaired, and a suitable replacement is not available, Lionel will offer to replace the product with a comparable model (**determined by Lionel LLC**), if available. In the event a comparable model is not available the customer will be refunded the original purchase price (requires proof of purchase from the **Lionel Authorized Retailer\*** it was originally purchased). Any products on which warranty service is sought must be sent freight or postage prepaid (Lionel will refuse any package when postage is due). **Transportation and shipping charges are not covered as part of this warranty.**

**NOTE: Products that require service that do not have a receipt from an LIONEL AUTHORIZED RETAILER\* will be required to pay for all parts required to repair the product (labor will not incur a charge) providing the product is not older than 5 years from date of manufacture and is within 1 year from date of purchase. A copy of the original sales receipt is required.**

***In no event shall Lionel LLC be held liable for incidental or consequential damages.***

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you.

This warranty gives you specific legal rights and you may have other rights which vary from state to state.

## Instructions for Obtaining Service

If service for this Lionel LLC product is required; bring the item, along with your DATED sales receipt and completed warranty information (at the bottom of this page) to the nearest Lionel Authorized Service Station. Your nearest Lionel Service Station can be found by calling 1-800-4-LIONEL or by accessing the website at [www.lionel.com](http://www.lionel.com).

If you prefer to send your Lionel product directly to Lionel, for repair you must **FIRST** call 586-949-4100 extension 9105 or FAX Lionel at 586-949-5429 or write to Customer Service, 50625 Richard W. Blvd, Chesterfield, MI 48051-2493. Please have the 6-digit Lionel product number, the date of original purchase, the dealer where the item was purchased and what seems to be the problem. You will receive a Verbal return authorization (RA) number to ensure your merchandise will be properly tracked and handled upon receipt at Lionel LLC.

Once you have your Return Authorization (RA) number, make sure the item is packed in its original Styrofoam inner container which is placed inside the original outer display box (this will help prevent damage during shipping and handling). This shipment **MUST** be prepaid and we recommend that it be insured with the carrier of your choice.

Please make sure you have followed all of the above instructions carefully before returning any merchandise for service. You may choose to have your product repaired by one of Lionel LLC's Authorized Service Stations after its warranty has expired. A reasonable service fee should be expected once the product warranty has expired.

## Warranty Information

Please complete the information below and keep it, along with your **DATED ORIGINAL SALES RECEIPT**. You **MUST** present this form **AND** your **DATED SALES RECEIPT** when requesting warranty service.

\*A complete listing of Lionel Authorized retailers can be found by calling 1-800-4-LIONEL or by visiting our website at [www.lionel.com](http://www.lionel.com).

*Products that are more than 5 years old, from date of manufacture, are not applicable for warranty coverage, even if they have never been sold prior to this date. (Under no circumstance shall any components or labor be provided free of charge.)*

Name \_\_\_\_\_

Address \_\_\_\_\_

Place of Purchase \_\_\_\_\_

Date of Purchase \_\_\_\_\_

Product Number \_\_\_\_\_

Product Description \_\_\_\_\_

