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Lionel
180-Watt PowerHouse
Power Supply
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: 120VAC; 60HZ. AC OUTPUT: 18 V; 180 VA.

Thank You!

Thank you for your purchase of the Lionel 180-Watt PowerHouse Power Supply! The PowerHouse Power Supply generates a brawny 180 watts (ten amps) of alternating current. Designed for use with the TMCC PowerMaster, LEGACY PowerMaster, the Track Power Controllers, ZW controllers, or the Direct Lockon, this power supply features an ON/OFF switch and a circuit breaker for safe operation.

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Lionel®, Powerhouse®, Powermaster®, Track Power Controller®, TMCC®, LEGACY®, FasTrack®, TPC®, Lionel ZW®, ZW®, Lockon®

Operating your PowerHouse Power Supply safely

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

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

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

- If the circuit breaker trips, turn the PowerHouse Power Supply OFF, wait 5 seconds, then turn the power ON and resume operation. Resetting the circuit breaker during operation may cause the train to surge forward.
- Unplug the PowerHouse Power Supply from the power source when not in use.

Powering the TMCC PowerMaster

As illustrated in Figure 1, connect the plug from the PowerHouse Power Supply to the corresponding receptacle on the PowerMaster unit. Note that the plug and the receptacle are keyed to fit only one way.

Plug in your PowerHouse Power Supply to a standard wall outlet and switch on the PowerHouse Power Supply. The PowerMaster's green power-on indicator illuminates to indicate that it is receiving power. If the indicator does not illuminate, check the connection and be sure that the PowerHouse Power Supply is plugged in. Refer to the PowerMaster Owner's Manual for additional information.

Note! Be sure to throw the PowerMaster's power switch to 180 if the PowerMaster is equipped with the switch.

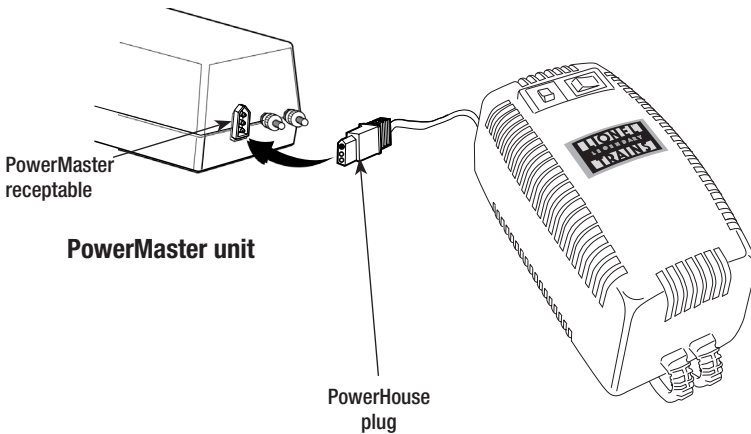


Figure 1. PowerMaster connection

Powering the Track Power Controller

The PowerHouse Power Supply connections are made on the back panel of the Track Power Controller (TPC) unit. These terminals are labeled HOT and NEUT under POWER IN. Your PowerHouse Power Supply will power both the TPC unit and the track to which the TPC is connected. Keep in mind that you may power the TPC unit with two PowerHouse Power Supplies. Be sure to use two of the same type of PowerHouse Power Supplies (e.g., two 180-watt units).

Note! Do not modify or remove the plug on the PowerHouse output cord. The plug contains a safety device that controls the PowerHouse output. Removing or modifying the plug will disable the output of the PowerHouse.

Powering the Track Power Controller (continued)

Note! The PowerHouse has a safety switch built into the output plug. The connector on the TMCC TPC Adapter cable must have contact pins installed in all three positions to activate this switch and enable the PowerHouse output. A spare contact pin has been included to be installed in the empty position of the TMCC TPC Adapter connector.

Wiring the TPC unit with a single PowerHouse Power Supply

Note! To wire the TPC unit with a single PowerHouse, you will need to use the cables with the two adapters from the TMCC TPC Cable Set (available separately, 6-14194).

1. Push the supplied pin into the empty hole in the connector housing as shown until it snaps in.
2. Plug the power output cable on the PowerHouse Power Supply into the adapter on the TMCC TPC Cable.
3. Attach the black wire to the HOTT terminal on the TPC unit, located under the POWER IN label.
4. Attach the white wire to the NEUT terminal on the TPC unit.

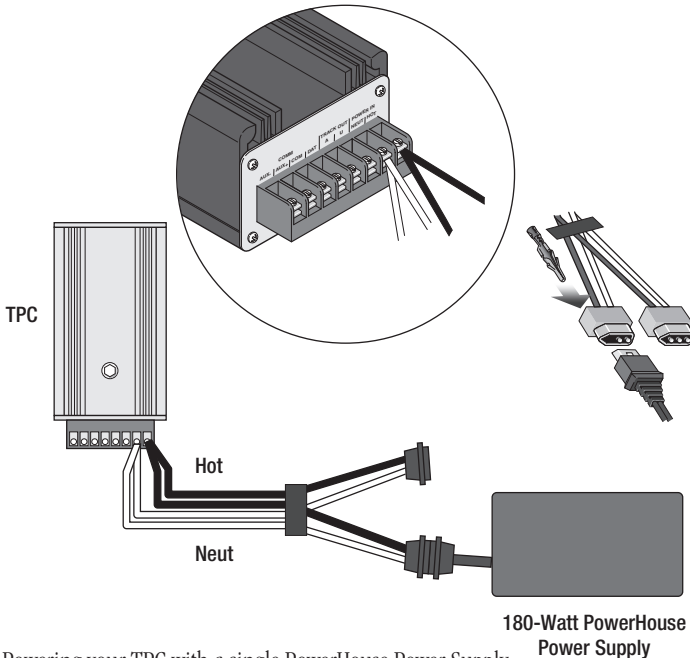


Figure 2. Powering your TPC with a single PowerHouse Power Supply

Powering the Track Power Controller (continued)

Wiring the TPC unit with two PowerHouse Power Supplies

Note! To wire the TPC unit with two PowerHouses, you will need to use the cable with two adapters from the TMCC TPC Cable Set (available separately, 6-14194).

1. Push the supplied pin into the empty hole in the connector housing as shown until it snaps in.
2. Plug the power output cables on the PowerHouse Power Supplies into the adapters on the TMCC TPC Cable.
3. Attach the black wire to the HOT terminal on the TPC unit, located under the POWER IN label.
4. Attach the white wire to the NEUT terminal on the TPC unit.

Note! Wire similar PowerHouse Power Supplies only. Do not wire a 135-Watt PowerHouse with a 180-Watt PowerHouse.

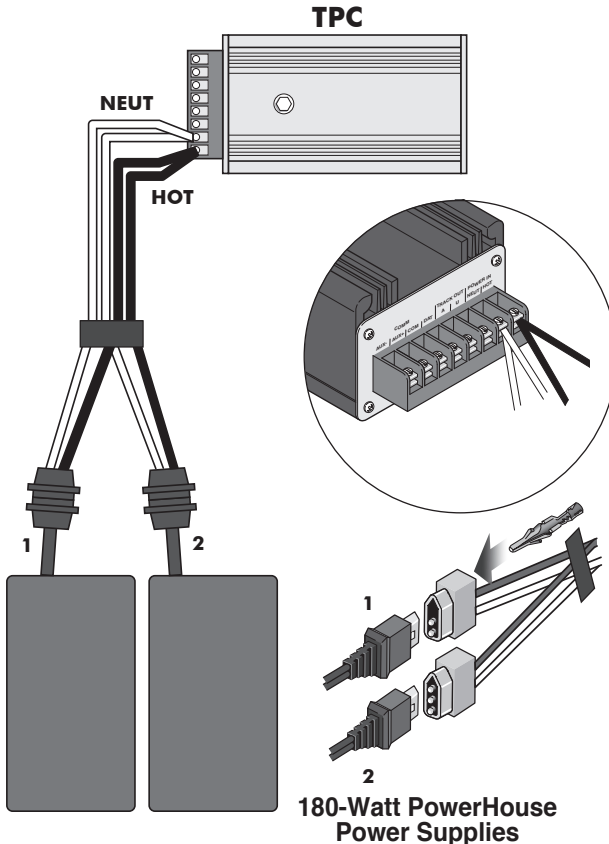


Figure 3. Powering your TPC with two PowerHouse Power Supplies

Powering the ZW-C Transformer

You may also use the PowerHouse Power Supply with your modern ZW-C Transformer. Remove a jumper and connect the PowerHouse Power Supply as illustrated in Figure 4. Refer to the ZW-C Transformer's Owner's Manual for additional information.

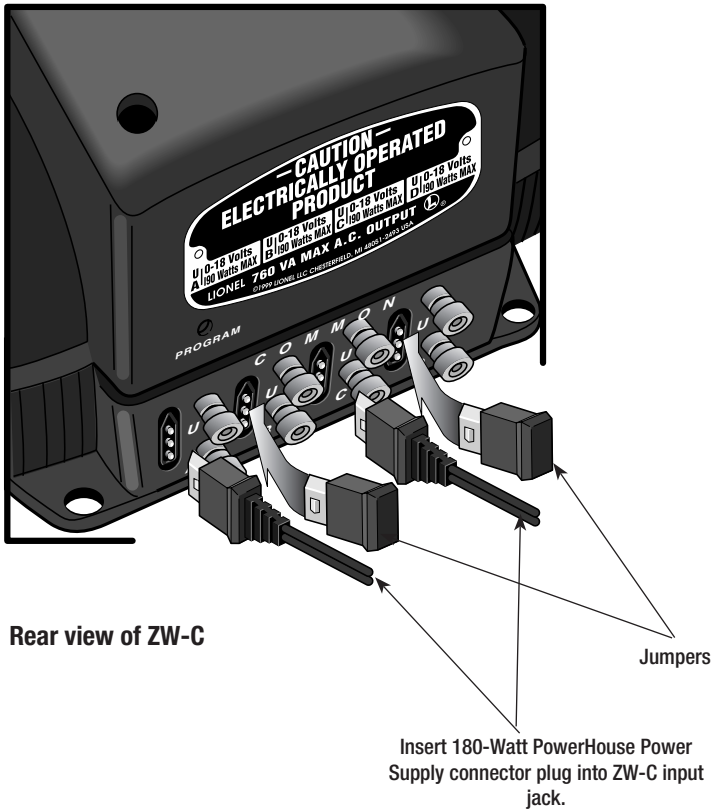


Figure 4. Powering the ZW-C Transformer with the PowerHouse Power Supply

Installing your TMCC Direct Lockon

The PowerHouse Power Supply and Command Base connections are found inside of the structure. Follow these steps and refer to Figure 5 on page 9 as you make these connections.

- 1. Remove the four screws from the bottom of the Lockon structure.**
- 2. Remove the base and lift the structure off the circuit board.**
- 3. Insert the PowerHouse Power Supply plug into the receptacle on the circuit board.**
- 4. Attach the Command Base wire or Legacy Base wire to the spring clip terminal.**

Press down on the top of the terminal clip so that a metal loop is formed. Slide the bare end of the wire into the exposed loop. Release pressure on the terminal clip, allowing the crimped metal to pinch the end of the wire in the metal loop. Give a little tug on the wire to be sure that the connection is secure.

- 5. Use the switch to select the type of PowerHouse Power Supply that you are using.**

Slide the switch to 135 for the 135-Watt PowerHouse Power Supply; slide the switch to 180 for the 180-Watt PowerHouse Power Supply.

- 6. Route the PowerHouse Power Supply cord and the Command Base or Legacy Base wire through the slot as illustrated in Figure 5.**

- 7. Connect the Lockon to the track, then reinstall the structure on the base.**

- For FasTrack layouts, connect your Direct Lockon to a FasTrack Terminal Section (available separately, 6-12016). Attach the spade-shaped connectors to the terminals under the FasTrack Terminal Section. The red wire is connected to the center terminal (rail). The black wire is connected to the outside terminal (rail).
- For traditional tubular track layouts a Lionel Universal Lockon (6-24213) must be used to connect power to the track. Use two wires (not included) to connect the Universal Lockon to your TMCC Direct Lockon. The center rail connects to the terminal labeled A and the outside rail connects to the terminal labeled U.

Installing your TMCC Direct Lockon (continued)

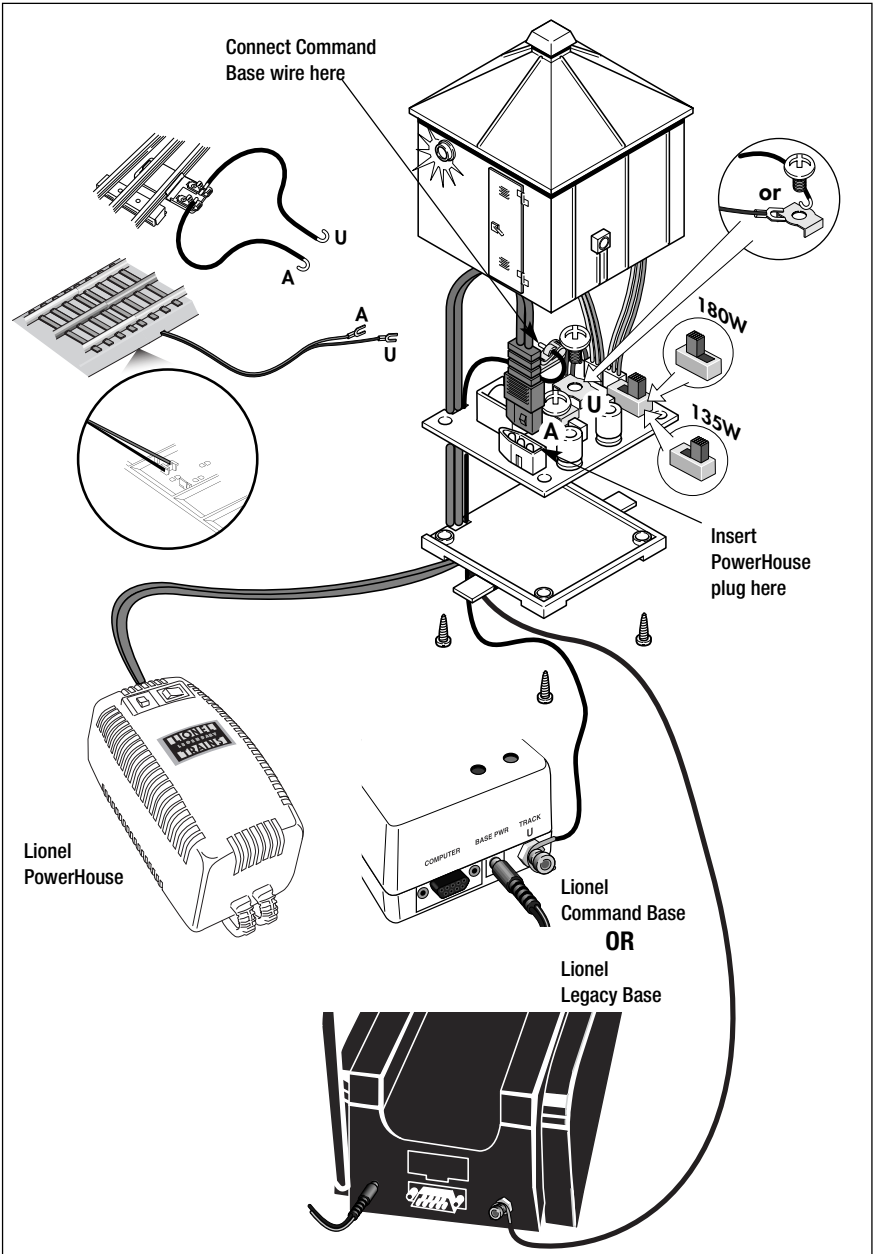


Figure 5. Direct Lockon connections and switch location

Resolving short circuits

Derailments, metal objects on the track, and improper wiring may cause a short circuit. Short circuits will trip the circuit breaker on the PowerHouse Power Supply. If the circuit breaker is tripped, turn the PowerHouse Power Supply OFF and then correct the short circuit. After the short circuit has been corrected, wait 5 seconds and turn the PowerHouse Power Supply ON.

Caution! Do not attempt to operate the PowerHouse Power Supply until the short circuit has been removed.

Lionel Limited Warranty Policy & Service

This Lionel product, including all mechanical and electrical components, moving parts, motors and structural components, with the exception of **LIGHT BULBS, LED's & TRACTION TIRES** 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
- 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-transferable) to Lionel LLC or any Lionel Authorized Service Station **MUST** be accompanied by the original receipt for purchase (or copy) from an **Authorized Lionel 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 **Authorized Lionel 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 3 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.

If you prefer to send your Lionel product directly to Lionel, for repair you must FIRST call 1-800-4LIONEL (1-800-454-6635) or write to Lionel Customer Service, 6000 Victory Lane, Concord, NC 28027. 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 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.

Products that are more than 3 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 _____



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