



Tinplate Legionnaire Electric Locomotive

OPERATOR'S MANUAL



TRADITIONAL MODEL

Compatibility

This engine will operate on any traditional Standard Gauge tubular track system, including M.T.H.'s tubular track. It is also compatible with most standard AC transformers. (See page 18 for a complete list of compatible transformers and wiring instructions.)

PLEASE READ BEFORE USE AND SAVE

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CAUTION: ELECTRICALLY OPERATED PRODUCT:

Not recommended for children under 10 years of age. M.T.H. recommends adult supervision with children ages 10 - 16. As with all electric products, precautions should be observed during handling and use to reduce the risk of electric shock.

WARNING:When using electrical products, basic safety precautions should be observed, including the following: Read this manual thoroughly before using this device.

- M.T.H. recommends that all users and persons supervising use examine the hobby transformer and other electronic equipment periodically for conditions that may result in the risk of fire, electric shock, or injury to persons, such as damage to the primary cord, plug blades, housing, output jacks or other parts. In the event such conditions exist, the train set should not be used until properly repaired.
- Do not operate your layout unattended. Obstructed accessories or stalled trains may overheat, resulting in damage to your layout.
- This train set is intended for indoor use. Do not use if water is present. Serious injury or fatality may result.
- Do not operate the hobby transformer with damaged cord, plug, switches, buttons or case.

Set Up Checklist

- Lubricate the locomotive
- Apply power to run as described in the Basic Operating Section of this manual
- Headlight bulbs and Couplers need to be installed by operator. Included, packaged separately

Lubrication

You should lubricate the engine to prevent it from squeaking. Use light household oil and follow the lubrication points marked “L” in Fig. 1. Do not over-oil. Use only a drop or two on each pivot point.

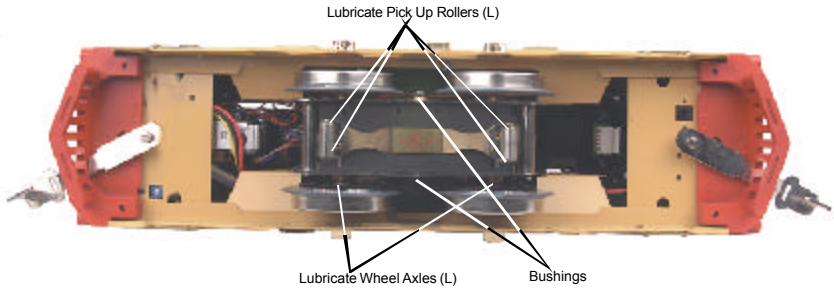


Figure 1. Lubrication Points on the Locomotive

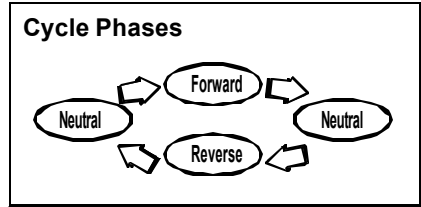
Basic Operation

The Throttle knob controls how fast your train will travel.

Turn the throttle knob up ½-way, until the engine and caboose lights shine bright.

Put the engine into motion by pressing the Direction button on your transformer once. (hold it for approximately 1 second)

If the engine does not begin to move as soon as you firmly press the Direction button, you may not have sent enough voltage to the track to make the train move. Turn the throttle up a bit higher until the train begins to move.



Maintenance

Lubricating and Greasing Instructions

The engine should be well oiled and greased in order to run properly.

Regularly lubricate all axles and linkage components and pickup rollers to prevent squeaking. Use light household oil, such as that found in M.T.H.'s maintenance kit. Do not over oil. Use only a drop or two on each pivot point.

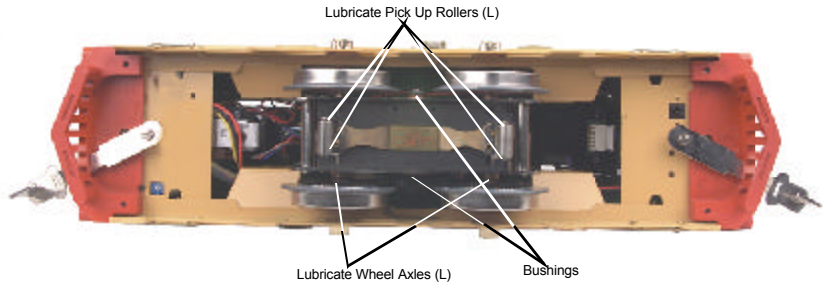


Figure 3

The locomotive's internal gearing was greased at the factory and should not need additional grease. However, it will be necessary to lubricate the idler gears located next to the drive wheels with grease every 25 hours of operation. Follow the greasing points illustrated in Figure 4.

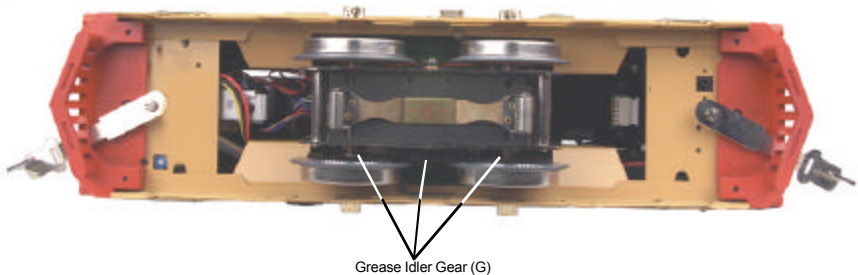


Figure 4

Cleaning The Wheels and Track

Periodically check the locomotive wheels and pickups for dirt and buildup, which can cause poor electrical contact and traction. Wheels can be cleaned using denatured (not rubbing) alcohol applied with a cotton swab.

To clean the track, use RailKing Track Cleaning Fluid and a clean rag or denatured (not rubbing) alcohol. Unplug the transformer and wipe the rails of the track, turning the rag frequently to ensure that you are using clean cloth on the rails. Thereafter, keep an eye on the track and clean it when it gets dirty to ensure good electrical contact and to lengthen the life of the tires.



Headlight Replacement Instructions

The locomotive's headlights are controlled by a constant voltage circuit in the engine. The headlight is easy to remove and replace when it burns out. The bulb(s) simply unscrew from their sockets. Replacement bulbs are available directly from the M.T.H. Parts Department.



Transformer Compatibility and Wiring Chart

Proto-Sound 2.0 is designed to work with most standard AC transformers. The chart below lists the many compatible transformers. Note the chart details how the terminals on these transformers should be attached to your layout.

Transformer Model	Center Rail	Outside Rail	Min/Max. Voltage	Power Rating	Transformer Type
MTH Z-500	Red Terminal	Black Terminal	0-18v	50-Watt	Electronic
MTH Z-750	Red Terminal	Black Terminal	0-21v	75-Watt	Electronic
MTH Z-4000	Red Terminal	Black Terminal	0-22v	390-Watt	Electronic
Lionel 1032	U	A	5-16v	90-Watt	Standard
Lionel 1032M	U	A	5-16v	90-Watt	Standard
Lionel 1033	U	A	5-16v	90-Watt	Standard
Lionel 1043	U	A	5-16v	90-Watt	Standard
Lionel 1043M	U	A	5-16v	90-Watt	Standard
Lionel 1044	U	A	5-16v	90-Watt	Standard
Lionel 1053	U	A	8-17v	60-Watt	Standard
Lionel 1063	U	A	8-17v	60-Watt	Standard
All-Trol	Left Terminal	Right Terminal	0-24v	300-Watt	Electronic
Dallee Hostler	Left Terminal	Right Terminal			Electronic
Lionel LW	A	U	8-18v	75-Watt	Standard
Lionel KW	A or B	U	6-20v	190-Watt	Standard
Lionel MW	Outside Track Terminal	Inside Track Terminal	5-16v	50V.A.	Electronic
Lionel RS-1	Red Terminal	Black Terminal	0-18v	50V.A.	Electronic
Lionel RW	U	A	9-19v	110-Watt	Standard
Lionel SW	U	A	Unknown	130-Watt	Standard
Lionel TW	U	A	8-18v	175-Watt	Standard
Lionel ZW	A,B,C or D	U	8-20v	275-Watt	Standard
Lionel Post-War Celebration Series ZW	A,B,C or D	Common	0-20v	135/190 Watt	Electronic

* Conventional Mode Only

Service & Warranty Information

How to Get Service Under the Terms of the Limited One-Year Warranty

For warranty repair, follow the instructions below to obtain warranty service.

First, e-mail, write, call or fax an Authorized M.T.H. Service Center in your area or M.T.H. Electric Trains to obtain Repair Authorization. You can find the list of Authorized Service Centers on the M.T.H. website, www.mth-railking.com. Authorized Service Centers are required only to make warranty repairs on items sold from that store; all other repairs may or may not be done at the store's own discretion. Otherwise, contact M.T.H. (fill out the Service Contact form in the Service Section of www.mth-railking.com; send US mail to the address listed below; tel: 410-381-2580; fax: 410-423-0009), stating when the item was purchased and describing the problem. If you contact M.T.H., you will be given a return authorization number to assure that your merchandise will be properly handled upon its receipt.

CAUTION: Make sure the product is packed in its original factory packaging including its foam and plastic wrapping material so as to prevent damage to the merchandise. The shipment must be prepaid and we recommend that it be insured. *A cover letter including your name, address, daytime phone number, e-mail address (if available), Return Authorization number, a copy of your sales receipt and a full description of the problem must be included to facilitate the repairs. Please include the description regardless of whether you discussed the problem with a service technician when contacting the Service Center or M.T.H. for your Return Authorization.*

Please make sure you have followed the instructions carefully before returning any merchandise for service.

Limited One-Year Warranty

All M.T.H. products purchased from an Authorized M.T.H. Train Merchant are covered by this warranty

See our website at www.mth-railking.com or call 1-888-640-3700 to identify an Authorized M.T.H. Train Merchant near you

M.T.H. products are warranted for one year from the date of purchase against defects in material or workmanship, excluding wear items such as light bulbs, pick-up rollers, batteries, smoke unit wicks, and traction tires. We will repair or replace (at our option) the defective part without charge for the parts or labor, if the item is returned to an Authorized M.T.H. Service Center or M.T.H. Electric Trains within one year of the original date of purchase. This warranty does not cover damages caused by improper care, handling, or use. Transportation costs incurred by the customer are not covered under this warranty.

Items sent for repair must be accompanied by a return authorization number, a description of the problem, and **a copy of the original sales receipt from an Authorized M.T.H. Train Merchant**, which gives the date of purchase. If you are sending the item to M.T.H., fill out the Service Contact form in the Service Section of www.mth-railking.com; send US mail to the address listed below; call 410-381-2580, or fax 410-423-0009 to obtain a return authorization number. If you are sending this product to an Authorized Service Center, contact that Center for their return authorization.

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

Service Department
M.T.H. Electric Trains
7020 Columbia Gateway Drive
Columbia MD 21046-1532



7020 Columbia Gateway Dr. - Columbia, MD 21046
Information: 410-381-2580 Fax: 410-381-6122
www.mth-railking.com

PARTICIPATING RETAILER LIST

ALABAMA

SOUTHERLAND STATION
 HUNTSVILLE
 256-533-4720
railway@bellsouth.net

ARIZONA

ARIZONA TRAIN DEPOT
 MESA
 480-833-9486
sales@arizonatraindepot.com
www.arizonatraindepot.com/

CALIFORNIA

DOLLHOUSES, TRAINS & MORE
 NOVATO
 415-883-0388
kbecker@cmc.net

TIN PLATE JUNCTION

OAKLAND
 510-444-4780
TOYTRAINS@email.msn.com

COLORADO

MIZELL TRAINS Inc
 WESTMINSTER
 303-429-4811
mizelltrains@cs.com
www.mizelltrains.com

CONNECTICUT

SHELTON RAILROAD SYSTEMS
 SHELTON
 203-924-8761
adriani@clearlight.com
 NEW ENGLAND HOBBY SUPPLY
 MANCHESTER
 860-646-0610
bobbell@nehobby.com

DELAWARE

K R R B MODEL TRAINS INC.
 NEWARK
 302-292-2779
info@krbb.com
www.krbb.com

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DEPOT HOBBY SHOP
 LAKEWORTH
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jimmy1982@aol.com
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trainconnection@aol.com

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SAMUELSON'S TRAIN SHOP

VALPARAISO
 219-462-2708

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AMERICA'S TRAIN YARD
 BATON ROUGE
 225-926-5592

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irc44@javanet.com

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 301-590-0816
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 240-420-4930

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 410-549-6061
wiley@oldmainline.com

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 978-532-1615
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 BASE1130@aol.com

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 hobbyshopnj.com

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 www.atlanticrails.com

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 stuff@crystal.palace.net

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 201-943-2636

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 609-518-1800

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