



# 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**

# Table of Contents

<b>Set Up Checklist</b> .....	3
Lubrication.....	3
<b>Basic Operation</b> .....	4
<b>Maintenance</b> .....	5
Lubricating and Greasing Instructions.....	5
Cleaning The Wheels and Track.....	6
Headlight Replacement Instructions.....	6
Transformer Compatibility and Wiring Chart.....	7
Service & Warranty Information.....	8
Limited One-Year Warranty.....	8

**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.

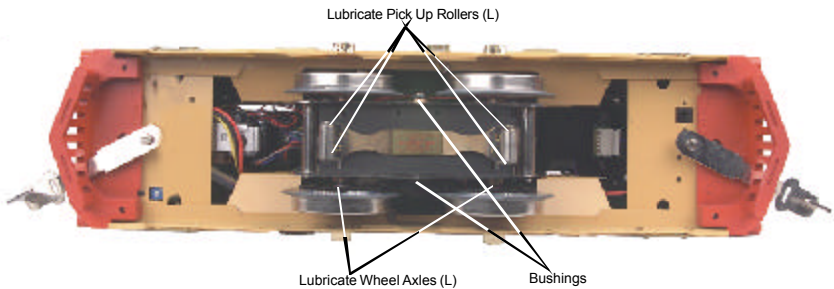
- M.T.H. recommends that all users and persons supervising use examine the hobby transformer and other electronic equipment periodically for conditions that may result in the risk of fire, electric shock, or injury to persons, such as damage to the primary cord, plug blades, housing, output jacks or 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*

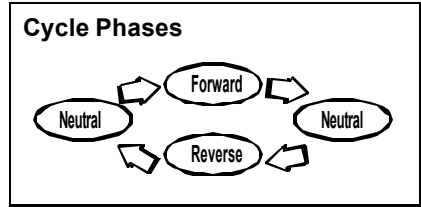
# Basic Operation

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.

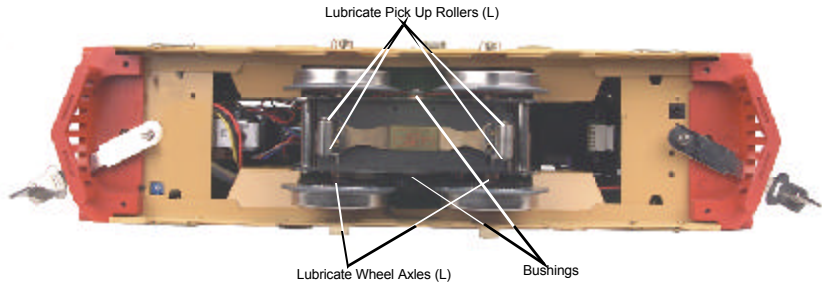


Figure 3

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.

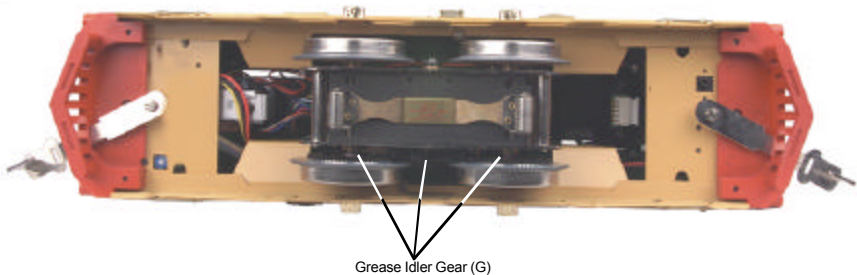


Figure 4

# 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](http://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](http://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](http://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](http://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





## 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@krb.com  
www.krb.com

### FLORIDA

DEPOT HOBBY SHOP  
LAKEWORTH  
561-585-1982  
jimmy1982@aol.com  
www.depothobbies.com

### COLONIAL PHOTO & HOBBY

ORLANDO  
407-841-1485  
trains@colonialphotoandhobby.com

### WARRICK CUSTOM HOBBIES

PLANTATION  
954-370-0708  
info@warrickcustomhobbies.com  
www.warrickcustomhobbies.com

### FRANK'S TRAINS & HOBBIES INC.

OLDSMAR  
813-855-1041  
FTH@allhobbies.com  
www.allhobbies.com

### READY TO ROLL

MIAMI  
305-688-8868  
rtrtrains@aol.com  
www.readytorolltrains.com

### ILLINOIS

BIKE & CHOO CHOO CONNECTION  
SCHAUMBURG  
847-882-7728  
trainconnection@aol.com

### INDIANA

Y. O. R. K. TRAINS  
MUNSTER  
219-838-9999  
yorktrains@aol.com

### SAMUELSON'S TRAIN SHOP

VALPARAISO  
219-462-2708

### LOUISIANA

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

### MAINE

WHEELS, WINGS & THINGS  
LUDLOW  
207-532-6277  
irc44@javanet.com

### MARYLAND

ENGINE HOUSE HOBBIES  
GAITHERSBURG  
301-590-0816  
luciecerise@aol.com

### J & B TRAINS

HAGERSTOWN  
240-420-4930

### HOBBYTOWN U S A

FREDERICK  
301-694-7395

### PURKEY'S TOY TRAINS

SYKESVILLE  
410-549-6061  
wiley@oldmainline.com

### THE TRAIN ROOM

HAGERSTOWN  
301-745-6681

### MASSACHUSETTS

NORTHEAST TRAINS  
PEABODY  
978-532-1615  
www.netrains.com

### MICHIGAN

BRASSEUR ELECTRIC TRAINS INC.  
SAGINAW  
517-793-4753  
bob@traindoctor.com  
www.traindoctor.com

**MISSOURI**

SWITCH STAND  
 SAINT LOUIS  
 314-781-4458  
 r41877@earthlink.com

MARK TWAIN HOBBY CENTER  
 ST. CHARLES  
 636-946-2816  
 webmaster@hobby1.com  
 www.hobby1.com

**NEW HAMPSHIRE**

TREASURED TOYS  
 SALEM  
 603-898-7224  
 ttoys@treasured-toys.com  
 www.treasured-toys.com

RAILROAD SPECIALTIES  
 HUDSON  
 603-882-5566  
 crew@electric-trains.com  
 www.electric-trains.com

**NEW JERSEY**

TRAINS & THINGS  
 TRENTON  
 609-883-8790  
 trainsanthings@aol.com

GRAND CENTRAL STATION  
 KEARNY  
 201-955-6200  
 228gene@gateway.com

HOBBYMASTERS, INC  
 RED BANK  
 732-842-6020  
 hobbymasters@hobbymasters.com

HOLLY BEACH TRAIN DEPOT  
 WILDWOOD  
 609-522-2379  
 larry@pro-usa.net

COAST TRAINS AND COLLECTIBLES  
 WALL  
 732-556-9005  
 coasttrain@aol.com  
 www.coasttrains.com

J & B TRAINS, INC.  
 MAPLESHADE  
 856-414-0092  
 BASE1130@aol.com

HOBBY SHOP  
 MATAWAN  
 732-583-0505  
 hobbyshopnj.com

ATLANTIC RAILS  
 HAMMONTON  
 609-567-8490  
 bobcap@pics.com  
 www.atlanticrails.com

COUNTRY AND STUFF  
 ANDOVER  
 973-786-7086  
 stuff@crystal.palace.net

RIDGEFIELD HOBBY  
 RIDGEFIELD  
 201-943-2636

COLUMBUS TRAIN STATION  
 COLUMBUS  
 609-518-1800

**NEW YORK**

AURORA RAILS & HOBBIES  
 EAST AURORA  
 716-652-5718  
 rk82141@aol.com

AMERICANA STORE  
 TIVOLI  
 845-757-4246  
 mthdepot@valstar.net

NASSAU HOBBY CENTER, INC.  
 FREEPORT  
 516-378-9594  
 Charlienassau@aol.com

KROSSHARDWARE  
 WEST BABYLON  
 631-669-3069  
 t989@aol.com

CITY DEPOT, INC.  
 NEW HAMPTON  
 845-374-3010  
 citydepot@frontier.net  
 www.citydepot.com

**NORTHCAROLINA**  
 DRYBRIDGE STATION  
 MOUNT AIRY  
 336-786-9811  
 mikek@drybridgestation.com  
 www.drybridgestation.com

THE FREIGHTYARD  
 SMITHFIELD  
 919-934-6229  
 disbissette@aol.com

TRAINSLTD.  
 CHARLOTTE  
 704-566-9070  
 modelrns@bellsouth.net  
 www.trainsltd.com

THE ROUNDHOUSE & BACKSHOP  
 CARY  
 919-465-0810

**OHIO**

DIXIE UNION STATION  
 MASON  
 513-459-0460  
 rockylane@core.net  
 www.dixieunionstation.com

RICK'S TOY TRAINS  
 TOLEDO  
 419-478-0171

T & K HOBBY SHOP  
 BRIDGEPORT  
 740-633-6607  
 salea@tkhobbies.com  
 www.tkhobbies.com

TRAINS-N- THINGS  
 CANTON  
 330-499-1666  
 trains@sssnet.com

PARMA HOBBY  
 CLEVELAND  
 216-741-6440  
 info@parmahobby.com

GLEN'S TRAIN SHOP  
 AKRON  
 330-253-6527

E & S TRAINS  
 AKRON  
 330-745-0785

GRAND PACIFIC JUNCTION  
 OLMSTEAD FALLS  
 440-235-4777  
 gpmirr@juno.com  
 HUDSON TOY, TRAIN & HOBBY  
 HUDSON  
 330-653-2997  
 ejpickens@aol.com

DAVIS ELECTRONICS  
 MILFORD  
 513-831-6425  
 davistrains@fuse.net  
 www.davistrains.com

SANDY'S HOBBY'S & COLLECTIBLES  
 ELYRIA  
 440-365-9999  
 sandyshobb@aol.com

ERIE RAILWAY DEPOT  
 TROY  
 937-440-9972  
 orville@gte.net

CLEARVIEW TRAIN & HOBBY  
 LORAIN  
 440-277-4488  
 klogar@erienet.net  
 www.clearviewtrainandhobby.com

**PENNSYLVANIA**

FAIRCHANCE PHARMACY  
 FAIRCHANCE  
 724-564-7817  
 mthdealer@aol.com  
 www.hhs.net/fairchance

THE STATION  
NEW CUMBERLAND  
717-774-7096  
station@paonline.com  
BUSSINGER TRAINS  
AMBLER  
215-628-2366  
choochoos@icdc.com  
www.icdc.com/~btrains

CHARLEROI SWEEPER CENTER  
CHARLEROI  
724-483-3397

AMERICAN HOBBY CENTER  
ALQUIPPA  
724-378-3930  
american@cubed.com

CRANBERRY HOBBY DEPOT  
CRANBERRY TWP  
724-776-3640  
JAdams6113@aol.com

ALLENTOWN TOY TRAIN SERVICE  
ALLENTOWN  
610-821-0740

ON THE RIGHT TRACK  
ALTOONA  
814-942-4345

JIM'S TRAIN SHOP  
HOMER CITY  
724-479-2026  
sudsy@stargate.net

YE OLDE TRAIN & CHRISTMAS  
SHOPPE  
BOYERTOWN  
610-369-0755  
www.yeoldetrain.com

TOBY TYLER'S HOBBY CENTER  
PITTSBURGH  
412-653-5030  
tobytyler111@cs.com

BUSTLETON TRAIN SHOP  
PHILADELPHIA  
215-698-7266

CHESTNUT TOYBOX  
PHILADELPHIA  
215-545-0455  
chestnuttoy@earthlink.net

THE CABOOSE  
LEHIGHTON  
570-386-5352  
www.thecaboosehobbies.com  
victen@ptd.net

**SOUTH CAROLINA**  
EMERALD TRAIN & HOBBY  
GREENWOOD  
864-223-2247

**TENNESSEE**  
MODEL RAILROAD & HOBBY SHOP  
MEMPHIS  
901-384-6500  
mrhs99@earthlink.net  
www.modelrailroadandhobby.com

**TEXAS**  
HOBBY TIME  
AMARILLO  
806.352.9660  
don.l.harris.@hobby-time.com

**VIRGINIA**  
TRAIN DEPOT  
MANASSAS  
703-335-2216

NORGE STATION  
WIL LIAMSBURG  
757-564-7623  
norgetrains@cs.com

NUTBUSH EXPRESS  
VICTORIA  
804-696-1902  
thenutbushexp@meckcom.net

TOY TRAIN CENTER  
RICHMOND  
804-288-4475

T S G HOBBIES  
WARRENTON  
540-347-9212  
tripi@mnsinc.com  
www.mnsinc.com/tripi/tsg.htm

CHESTERFIELD HOBBIES  
MIDLOTHIAN  
804-379-9091  
chsthobb@erols.com  
www.chesterfieldhobbies.com

DAVIS HOBBY SUPPLIES  
PORTSMOUTH  
757-397-1983  
ralph@davishobby.com  
www.davishobby.com

LOCUST GROVE TRAINS  
LOCUST GROVE  
540-854-8955  
lgrains@aol.com  
www.locustgrovetrains.com

**WEST VIRGINIA**  
PATRICK'S TRAINS  
WHEELING  
304-232-0714  
trains@patstrains.com  
www.patstrains.com

**WISCONSIN**  
SOMMERFELD'S TRAINS  
BUTLER  
262-783-7797  
questions@sommerfelds.com  
www.sommerfelds.com

G B T V & TRAINS  
GREEN BAY  
920-496-9697  
rrtycoon@netnet.net

GRAMPA'S TRAIN SHOP  
RICE LAKE  
715-234-2996  
grampastrainshop@yahoo.com

THE TRAIN STORE  
WAUKESHA  
262-650-6675

HOBBY OUTLET  
FOND DU LAC  
920-924-3770  
hobby\_outlet@hotmail.com

**CANADA**  
**ONTARIO**  
CREDIT VALLEY RAILWAY COMPANY  
STREETSVILLE  
905-826-1306  
CVRCO@globalserve.net  
www.cvrco.com

TOY TRAIN WORKSHOP  
CUMBERLAND  
613-833-3125  
info@toytrainworkshop.com  
www.toytrainworkshop.com

THE TRAIN ROOM  
FERGUS  
519-787-3280