

Tinplate O Gauge Hiawatha Set

OPERATOR'S MANUAL



Traditional Version

Compatibility

This set will operate on any traditional O-72 Gauge track system, including M.T.H.'s RealTrax[®] or ScaleTrax[™] or traditional tubular track. It is also compatible with most standard AC transformers. (See page 91 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
- Lubricate the passenger or freight cars
- Apply power to run as described in the Basic Operating Section of this manual

Lubrication

You should lubricate the engine to prevent it from squeaking. Use light household oil and follow the lubrication points marked in Figures 1 thru 4. Do not over-oil. Use only a drop or two on each pivot point.

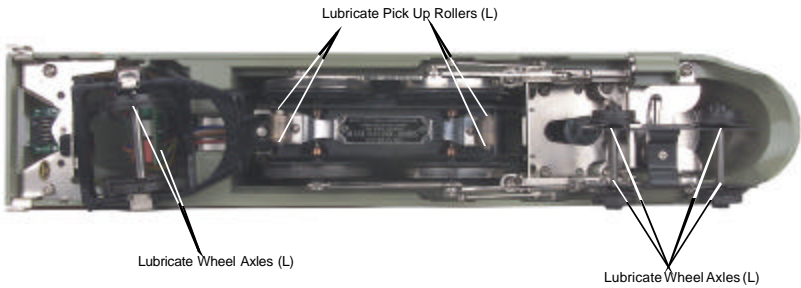


Figure 1. Lubrication Points on the Locomotive

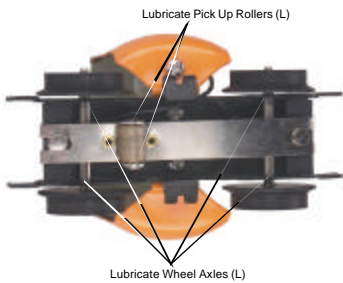
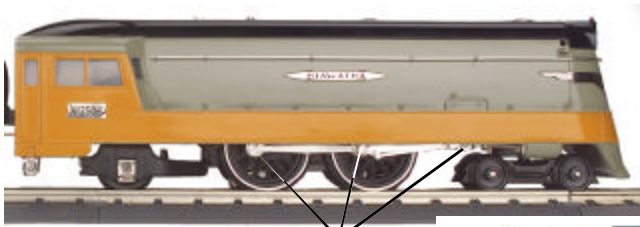


Figure 2: Lubricating Points On The Passenger Cars

Make sure you lubricate all side rods, leading and trailing trucks and drive wheel axles.



Lubricate Side Rods

Figure 3: Lubricating The Side Rods and Linkage

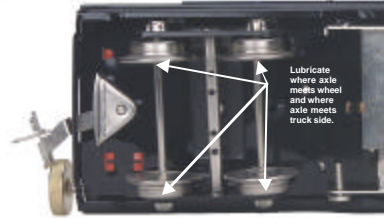


Figure 4: Lubrication Points On Freight Cars

Assembling The Passenger Cars

The passenger cars must be attached to the vestibules included in the passenger set by attaching the vestibule to each car. Because the vestibule includes the wheel set, two cars share the vestibule. It is recommended that you slide the vestibule into the end of one car, place that car and vestibule on the track and then slide the other car over the vestibule rather than trying to do the assembly off the track. Such a procedure will alleviate the risk of separation when transferring the cars onto the track.

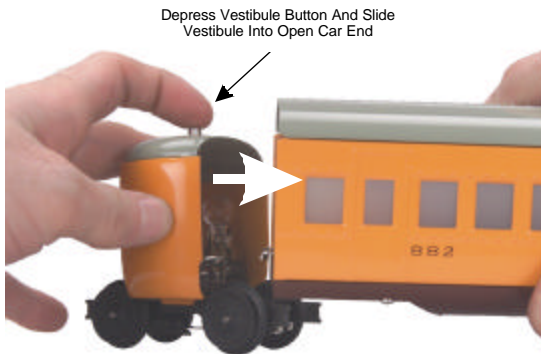


Figure 5: Attaching The Vestibules To The Passenger Car Body

Basic Operation

The Throttle knob controls how fast your train will travel.

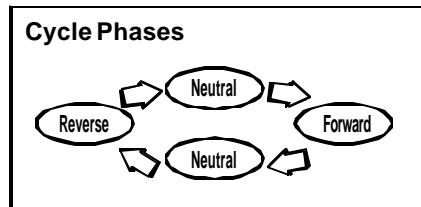
The locomotive is stopped, started and reversed by means of the reversing 'E-Unit' located inside the locomotive. The E-Unit is a three position sequence relay which cycles whenever current to the locomotive is interrupted. This can be done by operating the 'direction' control on the transformer, or by moving the transformer voltage control to the OFF position. The sequence of its operation is Forward, Neutral, Reverse, Neutral, etc. In other words, if the locomotive is in forward motion, operate the 'Direction' control once to stop it, and twice to reverse it.

If you want to operate the train in one direction only, which is necessary if you have automatic stations or Insulated blocks in your layout, you must 'lock-out' the E-Unit. Make sure the locomotive is moving in the desired direction then stop it. Now, move the E-Unit lever (located on the top of the boiler) to its OFF position or toward the left side of the locomotive. If the E-Unit is 'locked out' while it is in the Neutral position, the locomotive will not run at all. Also, because the E-Unit works partially by gravity, it will not operate properly if the locomotive is held on its side or upside down.

Activating Features

Throttle To increase or decrease track voltage, and therefore train speed, turn the throttle control knob. Turning clockwise will increase voltage and speed, while turning counterclockwise will decrease voltage and speed. The engine will maintain the speed you set after you release the throttle until you turn it again to change the voltage and speed.

Horn/Whistle - To sound the whistle, firmly press the Horn/Whistle button. The whistle will sound for as long as you continue to depress the button. It will stop when you release the button.



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.



Grease Idler Gears (G)

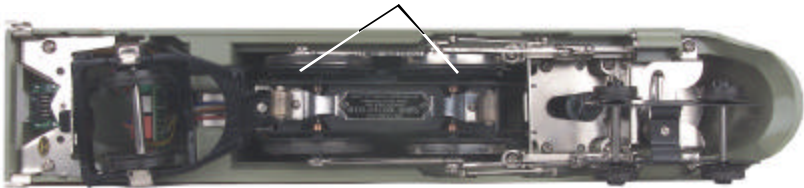


Figure 6: Body Removal Screw Locations

The locomotive utilizes a direct drive motor that should not need direct lubrication. However, it will be necessary to lubricate the idler gears located on the inside of the drive wheels as seen in Figure 6 with grease.

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.



Headlight Replacement Instructions

The locomotive's headlight is housed inside the boiler and can be accessed from beneath the boiler. Once accessed, the headlight is easy to remove and replace when it burns out. Replacement bulbs are available directly from the M.T.H. Parts Department.

To access the bulb, remove the six screws connecting the leading truck mounting frame and the drive train linkage to the body as seen in Figure 7. Once the screws are removed, the leading truck can be removed by pulling it away from the body as seen in Figure 8. After the leading truck has been removed, unscrew the remaining four screws connecting the headlight housing bracket to the body. Remove the bracket and unscrew the headlight bulb from the topside of the bracket.

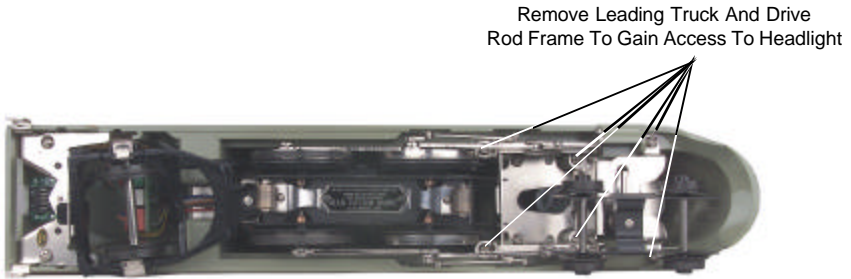


Figure 7: Accessing The Locomotive Headlight



Figure 8: Lift Truck Away From Body To Reveal Headlight

Passenger Car Interior Bulb Replacement Instructions

The passenger car interior lights are located in two places. Lights can be found under the car body roof or in the vestibules connecting the cars together. Once accessed, the lights are easy to remove and replace when burned out. Replacement bulbs are available directly from the M.T.H. Parts Department.

To access the car body bulbs, remove the two screws attaching the car body roof to the car body as seen in Figure 9. Once the screws are removed, lift the roof away from the car body to expose the bulb. To remove the bulb, simply unscrew.

The vestibule bulbs are easily visible when the vestibules are separated from the car body.

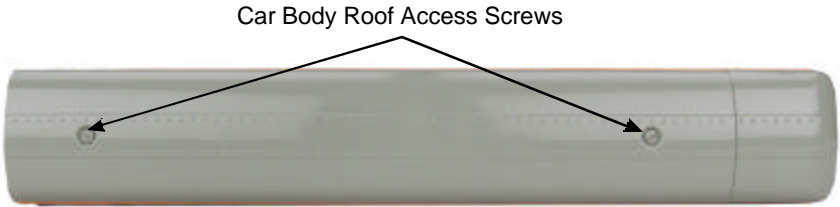


Figure 9: Removing the roof to access the car body interior lights.

Bulb Location Under Car Body Roof



Figure 10

Vestibule Light Location



Figure 11

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 that many of the operational commands described in these instructions require a bell button, so if your transformer does not have its own bell button, you should consider adding one to get the full benefit of the system. In addition, 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. Otherwise, contact M.T.H. (at e-mail: service@mth-railking.com; 7020 Columbia Gateway Drive, Columbia, MD 21046; 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.*

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 light bulbs, pick-up rollers 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., call 410-381-2580, fax 410-423-0009, or e-mail the Service Department at service@mth-railking.com 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, Maryland 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
 ME SA
 480-833-9486
sales@arizonatraindepot.com
www.arizonatraindepot.com/

CALIFORNIA

DOLLHOUSE, 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
adrian@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@krrb.com
www.krrb.com

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www.depotohobbies.com

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www.allhobbies.com

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www.readytorolltrains.com

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trainconnection@aol.com

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 219-838-9999
yorktrains@aol.com

SAMUELSON'S TRAIN SHOP
 VALPARAISO
 219-462-2708

LOUISIANA

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

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

MARYLAND

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

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HAGERSTOWN
 240-420-4930

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 FREDERICK
 301-694-7395

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 410-549-6061
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