

Tinplate 1134 Steam Locomotive

OPERATOR'S MANUAL



Traditional Version

Compatibility

This set will operate on any traditional 42" diameter STD. Gauge track system, including M.T.H.'s traditional tubular track. It is also compatible with most standard AC transformers. (See page 7 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

Lubrication

You should lubricate the engine to prevent it from squeaking. Use light household oil and follow the lubrication points marked in Figures 1 and 2. Do not over-oil. Use only a drop or two on each pivot point. Make sure you lubricate all side rods, leading and trailing trucks and drive wheel axles.

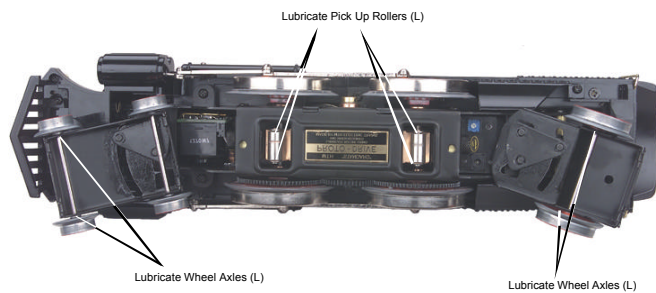


Figure 1. Lubrication Points on the Locomotive

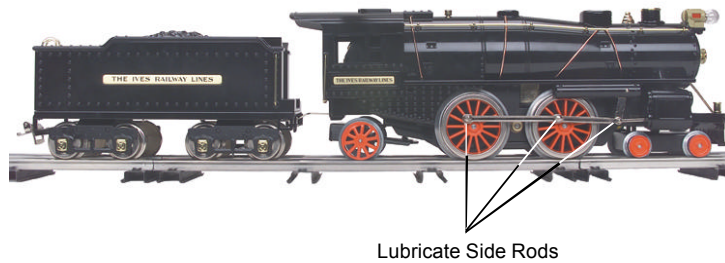


Figure 2: Lubricating The Side Rods and Linkage

Basic Operation

The Throttle knob controls how fast your train will travel.

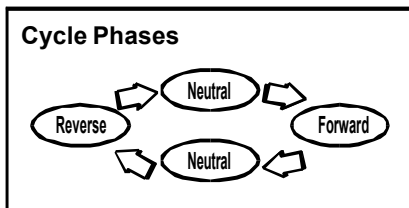
The locomotive is stopped, started and reversed by means of the reversing 'E-Unit' located inside the locomotive. The E-Unit is a three position sequence relay which cycles whenever current to the locomotive is interrupted. This can be done by operating the 'direction' control on the transformer, or 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)

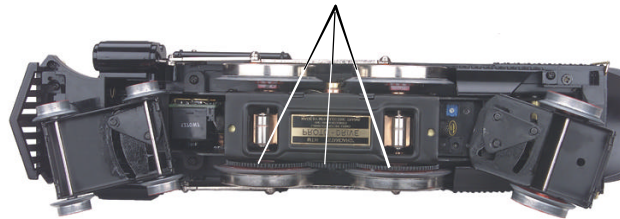


Figure 3: Idler Gear Grease Points

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 controlled by a constant voltage circuit in the engine. The headlight is easy to remove and replace when it burns out. The bulb screws into a bracket affixed to the above of the boiler. Replacement bulbs are available directly from the M.T.H. Parts Department.

Gently unscrew the bulbs from the socket on the mounting bracket and replace the bulb.

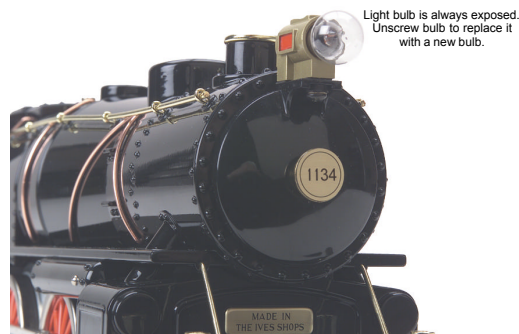


Figure 4: Accessing The Locomotive Headlight

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

When you suspect an item is defective, please check the operator's manual for standard operation and trouble-shooting techniques that may correct the problem. Additional information may be found on the M.T.H. Website. Should you still require service, follow the instructions below to obtain warranty service.

First, e-mail, write, call or fax a M.T.H. Authorized Service Center (ASC) in your area to obtain Repair Authorization. You can find the list of ASCs on the M.T.H. Website, www.mth-railking.com. Authorized Service Centers are required to make warranty repairs on items sold *only* from that store; all other repairs may-- or may not be done at the store's own discretion. If you did not purchase the item directly from the ASC, you will need to select a National Authorized Service Center (NASC). These centers are compensated by M.T.H. to perform warranty service for any customer whose repair qualifies for warranty service. A list of NASC retailers can be located on the M.T.H. Website or by calling 1-888-640-3700. Should the warranty no longer apply, you may choose either an ASC or NASC retailer to service your M.T.H. Product. A reasonable service fee will be charged.

CAUTION: Make sure the product is packed in its original factory packaging including its foam and plastic wrapping material to prevent damage to the merchandise. There is no need to return the entire set if only one of the components is in need of repair *unless otherwise instructed by the Service Center. 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 (if required by the service center, 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 for your Return Authorization.*

Please make sure you have followed the instructions carefully before returning any merchandise for service. Authorized M.T.H. Service Centers are independently owned and operated and are not agents or representatives of M.T.H. Electric Trains. M.T.H. assumes no responsibility, financial or otherwise, for material left in their possession, or work done, by privately owned M.T.H. Authorized Service Centers.

If you need assistance at any time email MTH Service at service@mth-railking.com, or call 410 381-2580.

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 M.T.H. Authorized Service Center (ASC) or M.T.H. National Authorized Service Center (NASC) 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 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. Specific questions regarding the warranty may be forwarded to M.T.H. directly.

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



PARTICIPATING N.A.S.C. RETAILER LIST

CANADA

TOY TRAIN WORKSHOP
CUMBERLAND
613-833-8331

THE TRAIN ROOM
FERGUS
519-787-3280

CALIFORNIA

TIN PLATE JUNCTION
OAKLAND
510-444-4780

COLORADO

MIZELL TRAINS INC
WESTMINSTER
303-429-4811

CONNECTICUT

NEW ENGLAND HOBBY
SUPPLY
MANCHESTER
860-646-0610

FLORIDA

ROUNDHOUSE SOUTH
PORT ORANGE
386-304-7002

MARYLAND

PLAZA HOBBY
CUMBERLAND
301-729-6424

ENGINE HOUSE HOBBIES

GAITHERSBURG
301-590-0816

CATOCTIN MOUNTAIN TRAINS
& HOBBIES
THURMONT
301-694-8331

MICHIGAN

MICHIGAN MODEL TRAIN
CENTER
PINCKNEY
734-426-1651

BRASSEUR ELECTRIC TRAINS
INC.
SAGINAW
989-793-4753

NEW HAMPSHIRE

TREASURED TOYS
SALEM
603-898-7224

NEW YORK

AURORA RAILS & HOBBIES
EAST AURORA
716-652-5718

OHIO

DAVIS ELECTRONICS
MILFORD
513-831-6425

RICK'S TOY TRAINS
TOLEDO
419-478-0171

PENNSYLVANIA

BUSSINGER TRAINS
AMBLER
215-628-2366

FAIRCHANCE PHARMACY
FAIRCHANCE
724-564-7817

TOBY TYLER'S HOBBY
CENTER
PITTSBURGH
412-653-5030

VIRGINIA

LOCUST GROVE TRAINS
LOCUST GROVE
540-854-8955

DAVIS HOBBY SUPPLIES
PORTSMOUTH
757-397-1983

T S G HOBBIES
WARRENTON
540-347-9212

WISCONSIN

SOMMERFELD'S TRAINS
BUTLER
262-783-7797

GRAMPA'S TRAIN SHOP
RICE LAKE
715-234-2996



PARTICIPATING A.S.C. RETAILER LIST

CANADA	DOLLHOUSES TRAINS & MORE	FRANK'S TRAINS & HOBBIES
TOY TRAIN WORKSHOP	NOVATO	OLDSMAR
CUMBERLAND	415-883-0388	813-855-1041
613-833-8331	TIN PLATE JUNCTION	COLONIAL PHOTO & HOBBY
THE TRAIN ROOM	OAKLAND	ORLANDO
ERGUS	510-444-4780	407-841-1485
519-787-3280	RON'S WORLD	WARRICK CUSTOM HOBBIES
CREDIT VALLEY RAILWAY	SAN CLEMENTE	PLANTATION
COMPANY	949-361-5596	954-370-0708
STREETSVILLE	TRUCKS & TRAINS HOBBIES	ROUNDHOUSE SOUTH
905-826-1306	SANTA ROSA	PORT ORANGE
B H TRAINS	707-537-6586	386-304-7002
TERREBONNE	COLORADO	ILLINOIS
450-492-0317	CUSTOM RAILWAY SUPPLY	BIKE & CHOO CHOO
ALABAMA	COLORADO SPRINGS	CONNECTION
SOUTHERLAND STATION	719-634-4616	SCHAUMBURG
HUNTSVILLE	CABOOSE HOBBIES	847-882-7728
256-533-4720	DENVER	INDIANA
LIL' BOBBY'S HOBBIES	303-777-6766	Y. O. R. K. TRAINS
MONTGOMERY	MIZELL TRAINS	MUNSTER
334-277-1715	WESTMINSTER	219-838-9999
ARIZONA	303-429-4811	SAMUELSON'S TRAIN SHOP
ARIZONA TRAIN DEPOT	CONNECTICUT	VALPARAISO
MESA	NEW ENGLAND HOBBY	219-462-2708
480-833-9486	SUPPLY	IOWA
CALIFORNIA	MANCHESTER	CABOOSE STOP HOBBIES
CENTRAL COAST TRAINS	860-646-0610	CEDAR FALLS
ATASCADERO	FLORIDA	800-642-7012
805-466-1391	HOLLYWOOD STATION	KENTUCKY
TRAIN SHACK	HOLLYWOOD	L&N TRAINS & THINGS
BURBANK	954-921-2700	LOUISVILLE
818-842-3330	DEPOT HOBBY SHOP	502-897-9005
ROUNDHOUSE	LAKE WORTH	LOUISIANA
NORTH HOLLYWOOD	561-585-1982	AMERICA'S TRAIN YARD
818-769-0403	READY TO ROLL	BATON ROUGE
	MIAMI	225-926-5592
	305-688-8868	

MAINE

WHEELS, WINGS & THINGS
LUDLOW
207-532-6277

MARYLAND

PLAZA HOBBY
CUMBERLAND
301-729-6424

HOBBYTOWN U S A
FREDERICK
301-694-7395

ENGINE HOUSE HOBBIES
GAITHERSBURG
301-590-0816

J & B TRAINS
HAGERSTOWN
240-420-4930

THE TRAIN ROOM
HAGERSTOWN
301-745-6681

PURKEY'S TOY TRAINS
SYKESVILLE
410-549-6061

CATOCTIN MOUNTAIN TRAINS
& HOBBIES
THURMONT
301-694-8331

MASSACHUSETTS

NORTHEAST TRAINS
PEABODY
978-332-1615

EAST BAY HOBBIES
SEEKONK
508-336-5573

MICHIGAN

MICHIGAN MODEL TRAIN
CENTER
PINCKNEY
734-426-1651

BRASSEUR ELECTRIC TRAINS
INC.
SAGINAW
989-793-4753

MISSOURI

SWITCH STAND
SAINT LOUIS
314-781-4458

MARK TWAIN HOBBY CENTER
ST. LOUIS
636-946-2816

NEVADA

RENO RAILS
RENO
775-337-6669

NEW HAMPSHIRE

RAILROAD SPECIALTIES
NASHUA
603-801-0801

TREASURED TOYS

SALEM
603-898-7224

NEW JERSEY

COUNTRY AND STUFF
ANDOVER
973-786-7086

COLUMBUS TRAIN STATION
COLUMBUS
609-518-1800

ATLANTIC RAILS
HAMMONTON
609-567-8490

GRAND CENTRAL STATION
KEARNY
201-955-6200

J & B TRAINS, INC.
MAPLE SHADE
856-414-0092

HOBBY SHOP
MATAWAN
732-583-0505

HOBBYMASTERS, INC
RED BANK
732-842-6020

RIDGEFIELD HOBBY
RIDGEFIELD
201-943-2636

TOM'S MODEL TRAINS
SCOTCH PLAINS
908-322-6122

TRAINS & THINGS
TRENTON
609-883-8790

COAST TRAINS AND
COLLECTIBLES
WALL
732-556-9005

HOLLY BEACH TRAIN DEPOT
WILDWOOD
609-522-2379

NEW YORK

AURORA RAILS & HOBBIES
EAST AURORA
716-652-5718

NASSAU HOBBY CENTER, INC.
FREEPORT
516-378-9594

HOBBY WORLD
MONTICELLO
845-794-8770

CITY DEPOT, INC.
NEW HAMPTON
845-374-3010

SCAG'S ELECTRIC TRAINS
STATEN ISLAND
718-727-7373

AMERICANA STORE

TIVOLI
845-757-4246

KROSS HARDWARE
WEST BABYLON
631-669-3069

NORTH CAROLINA

THE ROUNDHOUSE &
BACKSHOP
CARY
919-465-0810

TRAINS LTD.
CHARLOTTE
704-566-9070

DRY BRIDGE STATION
MOUNT AIRY
336-786-9811

THE FREIGHT YARD
SMITHFIELD
919-934-6229

TRAIN LOFT
WINSTON-SALEM
336-760-9817

OHIO

GLEN'S TRAIN SHOP
AKRON
330-253-6527

E & S TRAINS
AKRON
330-745-0785

T & K HOBBY SHOP
BRIDGEPORT
740-633-6607

PARMA HOBBY
CLEVELAND
216-741-6440

SANDY'S HOBBY'S &
COLLECTIBLES
ELYRIA
440-365-9999

HUDSON TOY, TRAIN &
HOBBY
HUDSON
330-653-2997

CLEARVIEW TRAIN & HOBBY
LORAIN
440-277-4488

DIXIE UNION STATION
MASON
513-459-0460

DAVIS ELECTRONICS
MILFORD
513-831-6425

TRAINS-N- THINGS NORTH CANTON 330-499-1666	THE STATION NEWCUMBERLAND 717-774-7096	CHESTERFIELD HOBBIES MIDLOTHIAN 804-379-9091
GRAND PACIFIC JUNCTION OLMSTEAD FALLS 440-235-4777	FRYER'S STORE ORWIGSBURG 570-366-2258	DAVIS HOBBY SUPPLIES PORTSMOUTH 757-397-1983
RICK'S TOY TRAINS TOLEDO 419-478-0171	CHESTNUT TOYBOX PHILADELPHIA 215-545-0455	TOY TRAIN CENTER RICHMOND 804-288-4475
ERIE RAILWAY DEPOT TROY 937-440-9972	TOBY TYLER'S HOBBY CENTER PITTSBURGH 412-653-5030	NUTBUSH EXPRESS VICTORIA 434-696-1902
<u>PENNSYLVANIA</u> AMERICAN HOBBY CENTER ALIQUIPPA 724-378-3930	WILCOX GREENHOUSE & NURSERY TITUSVILLE 814-827-3823	T S G HOBBIES WARRENTON 540-347-9212
ALLENTOWN TOY TRAIN SERVICE ALLENTOWN 610-821-0740	EASTERN DEPOT TROY 570-297-1975	NORGE STATION WILLIAMSBURG 757-564-7623
ON THE RIGHT TRACK ALTOONA 814-942-4345	J&J RAILROAD CROSSING TURTLE CREEK 412-824-6009	<u>WASHINGTON</u> EASTSIDE TRAINS KIRKLAND 425-828-4098
BUSSINGER TRAINS AMBLER 215-628-2366	TRAINS R FUN FRAZER 610-644-4585	<u>WEST VIRGINIA</u> PATRICK'S TRAINS WHEELING 304-232-0714
JIM'S HOBBY SERVICE BERWICK 570-759-2695	<u>SOUTH CAROLINA</u> EMERALD TRAIN & HOBBY GREENWOOD 864-223-2247	<u>WISCONSIN</u> WOODCRAFTERS SHOP BURLINGTON 262-763-5239
YE OLDE TRAIN & CHRISTMAS SHOPPE BOYERTOWN 610-369-0755	<u>TENNESSEE</u> MODEL RAILROAD & HOBBY SHOP MEMPHIS 901-384-6500	SOMMERFELD'S TRAINS BUTLER 262-783-7797
NICHOLAS SMITH BROOMALL 610-353-8585	<u>TEXAS</u> HOBBY TIME AMARILLO 806.352.9660	HOBBY OUTLET FOND DU LAC 920-924-3770
CHARLEROI SWEEPER CENTER CHARLEROI 724-483-3397	RIVERVIEW TRAINS ANGLETON 979-848-3895	G B T V & TRAINS GREEN BAY 920-496-9697
CRANBERRY HOBBY DEPOT CRANBERRY TWP 724-776-3640	GREAT TRAINS & HOBBIES LONGVIEW 903-757-2720	GRAMPA'S TRAIN SHOP RICE LAKE 715-234-2996
FAIRCHANCE PHARMACY FAIRCHANCE 724-564-7817	<u>VIRGINIA</u> LEESBURG HOBBIES LEESBURG 703-779-8600	THE TRAIN STORE WAUKESHA 262-650-6675
TOY TRAIN STATION FEASTERVILLE TREV 215-322-5182	LOCUST GROVE TRAINS LOCUST GROVE 540-854-8955	
THE CABOOSE LEHIGHTON 570-386-5352	TRAINDEPOT MANASSAS 703-335-2216	
HOBBY CITY MC MURRAY 724-942-2557		