



# RAILKING GG-1 ELECTRIC ENGINE OPERATING INSTRUCTIONS



Thank you for purchasing the RailKing GG-1 Electric Engine. This RailKing Electric Engine contains state-of-the-art electronics with many built-in automatic features for incredibly realistic operation. Despite these advanced features, the locomotive is easy to operate with any compatible standard AC transformer (see the compatibility chart on page 18), and is completely compatible with most other 3-rail locomotives, rolling stock, and accessories.

This locomotive is equipped with Proto-Sound 2.0 with Digital Command System (DCS). This new system will allow you to operate your locomotive in Command mode (when used with the DCS Remote Control System, sold separately) or Conventional mode. Conventional operating features are described in the following pages, while the DCS operating features are covered in the set of operating instructions that accompanies the DCS equipment. Conventional Mode operation of this locomotive is much simpler than operation of original Proto-Sound engines. For your own safety and that of your equipment, please read the instructions before you operate this engine.



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## INITIAL LUBRICATION

Although the engine was lubricated at the factory, it is important that you lubricate the chassis before operation. Lightly grease the outside idler and drive gears (marked “G” in Fig. 3 on page 10) to prevent them from squeaking. Use light household oil and follow the lubrication points marked “L” in Fig. 2 on page 9. Do not over-oil. Use only a drop or two on each pivot point.

At this point, you are ready to put your engine on the track and begin running it.

## BASIC OPERATION

**Throttle** – Throttle up the power to your track by either firmly pressing the Direction button on your transformer or remote once or quickly dropping and advancing the throttle to put the engine in forward.

### Operation Buttons

Use the operation buttons on your transformer or remote as described below.

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

**Bell** - To sound the bell, firmly press and release the Bell button. To turn the bell off, press and release the Bell button again. The bell will continue to ring from the time you turn it on until you press and release the button again to turn it off.

**Direction** – Your train is programmed to start in neutral. To put the engine into forward and then to change the direction of the train or to put it into neutral, firmly press and release the Direction button on your transformer. Just as you must stop your car between forward and reverse, this engine will not go directly from forward to reverse; it goes into neutral between directions. If the train has been moving forward, the first press of the Direction button will put the train from forward into neutral, the second press into reverse, the third press back into neutral, and the fourth back into forward. To prevent accidental high-speed start-ups, this engine is programmed to restart in neutral each time the track voltage is turned off for 10 seconds or more.

**Volume Control** – To adjust the volume of all sounds made by this engine, turn the master volume control knob located under the engine clockwise to increase the volume and counter-clockwise to decrease the volume (see Fig. 1).



Proto-Sound 2  
Volume Adjustment  
Knob

*Figure 1.* Location of the Proto-Sound 2  
Volume Adjustment Knob

## PROTO-SOUND 2.0 OPERATING INSTRUCTIONS

Because Proto-Sound 2.0 is an all-new system developed by M.T.H.'s own research and development team, it operates differently from original Proto-Sound. Most Proto-Sound 2.0 features are automatically enabled, and the reset state has been eliminated, so there is no need to program features as with original Proto-Sound. Although the new system is easier to operate than original Proto-Sound, you should read these instructions thoroughly before using Proto-Sound 2.0 features in order to prevent harm to yourself or your equipment.

### Activating Proto-Sound 2.0 Conventional Mode Features:

Proto-Sound 2.0 features are activated by sequences of Bell and Whistle button pushes described below. Please read the full descriptions of each feature before using it. To use these buttons to activate features rather than to blow the whistle or ring the bell, you should press the buttons for a shorter time (1/2 second); you may need to practice your timing to make this work smoothly.

<b>Feature to Be Activated:</b>	<b>Button Code:</b>
Passenger Station Announcements	1 Bell, 2 Whistles
Fire the Rear Coupler	1 Bell, 3 Whistles
Fire the Front Coupler	1 Bell, 4 Whistles
Speed Control On/Off	1 Whistle, 2 Bells (from Neutral only)
Lock into a Direction/Unlock	1 Whistle, 3 Bells
Reset to Factory Defaults	1 Whistle, 5 Bells (from Neutral only)

# Passenger Station Announcements (PSA):

Your engine is equipped with a sound package of passenger station announcements that you can play when you pull into a passenger station.

**Each sequence described below will play as long as it is left on, randomly generating sounds, but be sure to allow time between the button pushes described below to allow the PSAs sufficient time to run through each sequence.**

1. To cue the sound system to play the PSA, quickly but firmly press the Bell button once followed by 2 quick presses of the Whistle button while the engine is moving. As soon as you have keyed in this code, you will hear the announcement for the upcoming stop and the bell will begin to ring.
2. Press the Direction button or drop and advance the throttle once to stop the engine. This will trigger the first sequence of PSAs. The reverse unit is temporarily disabled so that the train will not move as you use the Direction button to trigger the sounds, and Proto-Sound 2.0 has disabled operator control over the Whistle and Bell buttons until the full PSA sequence is complete. You will hear (*what?*)
3. After waiting at least a few seconds for that sequence to run, press the Direction button again to trigger the second sequence of PSAs. You will hear (*what?*)
4. After at least another few seconds, press the Direction button again to trigger the third PSA sequence. You will hear (*what?*)
5. Again, after allowing at least a few seconds for that sequence to run, press the Direction button one more time to trigger the fourth and final PSA sequence. You will know it is the final sequence when you hear the “All Aboard!” call. The bell will begin to chime and within a few seconds, the engine will start and move out on its own at the current throttle setting, in the same direction it was traveling when you began the sequence. Once the bell turns off, the operator regains control of the transformer’s bell and whistle buttons and can ring the bell or blow the whistle as usual.

## Tips on Using PSAs

You can terminate PSA at anytime by turning off power to the track for 15 seconds.

You do not have to be in Forward to use PSA. At the conclusion of the full sequence, the train will pull away from the station in whatever direction you were going when you activated the feature.

You can use PSA even if you are double-heading with another engine regardless of whether the second engine is equipped with a Proto-Sound 2.0 PSA module. If the second engine is not equipped with PSAs at all, you must remember not to leave the throttle at a high voltage level once you have stopped the engine to run the PSAs. Otherwise, the engine without PSAs will begin vibrating on the track as its motors strain to move the train, since they cannot be automatically disabled during the PSA cycle. If the second engine (whether original Proto-Sound or Proto-Sound 2.0) is equipped with PSAs, you may choose to disable it when used in double-heading operations, so you will not experience competing PSA sounds. To disable PSAs in an original Proto-Sound engine, see the operating instructions for that engine.

# Proto-Coupler® Operation

This locomotive is equipped with a coil-wound Proto-Coupler for remote uncoupling action. Because the Proto-Coupler is controlled through the Proto-Sound 2.0 microprocessor, it does not require an uncoupling track section or modification to your layout to function. Use the codes listed below to fire the coupler.

## Rear Coupler:

To fire the rear coupler, quickly press the Bell button once followed immediately by three pushes of the Whistle button. The sound of the liftbar and air line depletion will play, and the knuckle will be released.

## Front Coupler:

To fire the front coupler, quickly press the Bell button once followed immediately by four pushes of the Whistle button. The sound of the liftbar and air line depletion will play, and the knuckle will be released.

## Speed Control:

M.T.H. engines equipped with Proto-Sound 2.0 have speed control capabilities that allow the engine to maintain a constant speed up and down grades and around curves, much like an automobile cruise control. You can add or drop cars on the run, and the engine will maintain the speed you set.

While the engine is programmed to start with the speed control feature activated, you can opt to turn it off. This means the engine's speed will fall as it labors up a hill and increase as it travels downward. It is also affected by the addition or releasing of cars while on the run.

To turn speed control on and off, put the engine in neutral, then press the transformer's Whistle button firmly but quickly one time then immediately press the Bell button two times. Repeat the 1 whistle, 2 bells code to return it to the other state. You will want to do this during the initial neutral upon start-up if you ever couple this engine to another engine that is not equipped with speed control to avoid damaging the motors in either engine. Each time you shut down the engine completely, it will automatically turn speed control on.

## **Lock into a Directional State:**

You can lock your engine into a directional state (forward, neutral, or reverse) so that it will not change directions. To do this, put the engine into the direction you want or into neutral. To lock it into forward or reverse, run it at a very slow speed (< 10 scale mph), and quickly but firmly press your remote's Whistle button once followed immediately by three presses of the Bell button. The engine will not change direction (including going into neutral) until you repeat the 1 whistle, 3 bells code to return the engine to its normal state. To lock your engine into neutral, place engine in neutral and set the track voltage to less than 10v. Then use the same 1 whistle, 3 bell code to lock and unlock your engine from neutral.

## **Reset to Factory Defaults:**

To override the settings you currently have assigned to the engine and reset it to its factory defaults, quickly press the Whistle button once, followed immediately by five quick pushes of the Bell button.

## **Automatic Sounds:**

Certain Proto-Sound 2.0 sound effects automatically play in programmed conventional mode conditions:

**Squealing Brakes** play when the engine's speed is decreased by 50% +5 scale MPH.

**Cab Chatter** plays when the engine idles in neutral.

**Engine Start-up and Shut-down** sounds play when the engine starts up and shuts down.

# MAINTENANCE

## Lubrication and Greasing Instructions

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

You should regularly lubricate the pickup rollers to prevent them from squeaking. Use light household oil and follow the lubrication points marked "L" in Fig. 2. Do not over oil. Use only a drop or two on each pivot point.

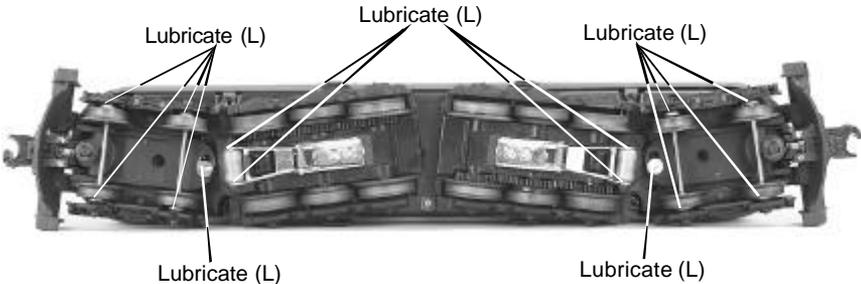


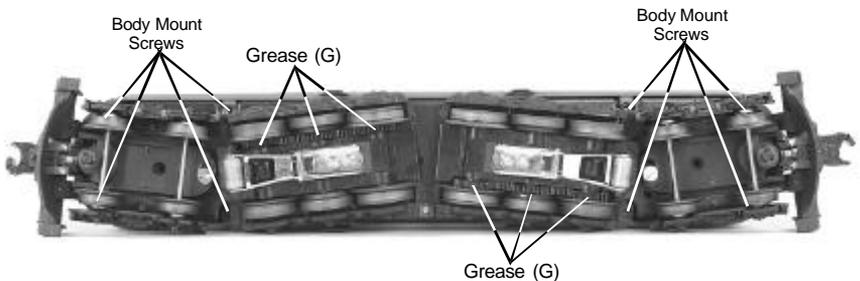
Figure 2. Lubrication Points on the Locomotive

The locomotive's internal gearing was greased at the factory and should not need additional grease until after 50 hours of operation or one year, whichever comes first. Follow the greasing instructions below. Note that in some tightly packed engines you may need to move internal components temporarily in order to access the gears.

1. Remove the screws from the chassis, as seen in Figure 3 on page 10, then lift the body away from the chassis.
2. After removing the body shell, turn your engine upside down and remove the two Phillips screws holding the pick-up roller to its truck. Lift pick-up roller and unplug the wire.
3. Remove the single flathead screw in the adjacent pilot/trailing truck.
4. Remove the single Phillips screw that was hidden by the pick-up roller before you removed it. Lift off the truck block and turn it over.
5. Remove the four Phillips screws from the truck block and pull apart.

6. Once the motor mount screw has been removed, pull the motor away from the truck block and lightly coat the motor worm gear and bronze drive gear (in the truck block) with grease.
7. Reassemble the truck and motor, being careful not to pinch any wires between the truck block and motor mount.
8. Repeat the procedure for the other motor and truck
9. Reassemble the chassis and body, being careful that the wires are not caught between the body and chassis, as this can lead to a short that may damage the electronics beyond repair.

It is also a good idea to lubricate the outside truck block idler and drive gears with grease occasionally. Add grease to the points marked with “G” in Figure 3.



*Figure 3.* Greasing Points on the Locomotive and the Locations of the Body Mounting Screws.

## **Cleaning the Wheels, Tires and Track**

Periodically check the locomotive wheels and pickups for dirt and buildup, which can cause poor electrical contact and traction as well as prematurely wear out the neoprene traction tires. Wheels and tires can be cleaned using denatured alcohol (not rubbing alcohol), which can be found in home improvement stores, applied with a cotton swab.

Occasional cleaning of the track will also help to ensure good electrical contact and to prolong the life of your engine's tires. To clean the track, use a clean rag and denatured alcohol (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.

## Traction Tire Replacement Instructions

Your locomotive is equipped with two neoprene rubber traction tires on each powered truck block. While these tires are extremely durable, you may need to replace them at some point.

Replace the tires on only one end of the engine at a time.

To disassemble:

1. Remove the screws from the chassis, as seen in Figure 3 on page 10, then lift the body away from the chassis.
2. After removing the body shell, turn your engine upside down and remove the two Phillips screws holding the pick-up roller to its truck. Lift pick-up roller and unplug the wire.
3. Remove the single flathead screw in the adjacent pilot/trailing truck.
4. Remove the single Phillips screw that was hidden by the pick-up roller before you removed it. Lift off the truck block and turn it over.
5. Remove the four Phillips screws from the truck block and pull apart.

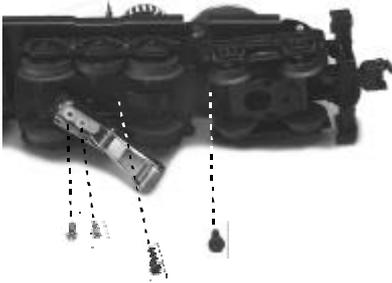


Figure 4a. Removing the pick-up, motor mount, and Flathead Pilot/Trailing Truck Screws

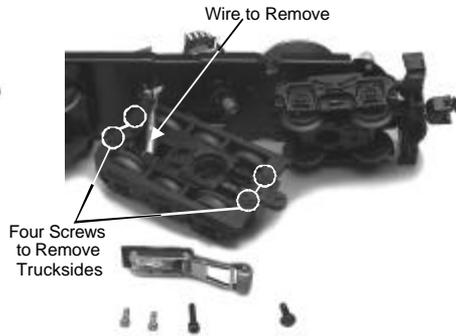


Figure 4b. Locating the wire to remove and the four truck mouting screws

To replace the tire:

1. Make sure the old tire has been completely removed from the groove in the drive wheel, using a razor blade or small flathead screwdriver to pry away any remains.
2. Slip the new tire onto the wheel. You may find it useful to use two small flathead screwdrivers to stretch the tire over the wheel.
3. If you twist the tire while stretching it over the wheel, you will need to remove and reinstall the tire. Otherwise your engine will wobble while operating.
4. Make sure the tire is fully seated inside the groove. Use a razor blade to trim away any excess tire that doesn't seat itself inside the groove properly.

Reassemble in the reverse order and replace the tires on the other end of the engine.

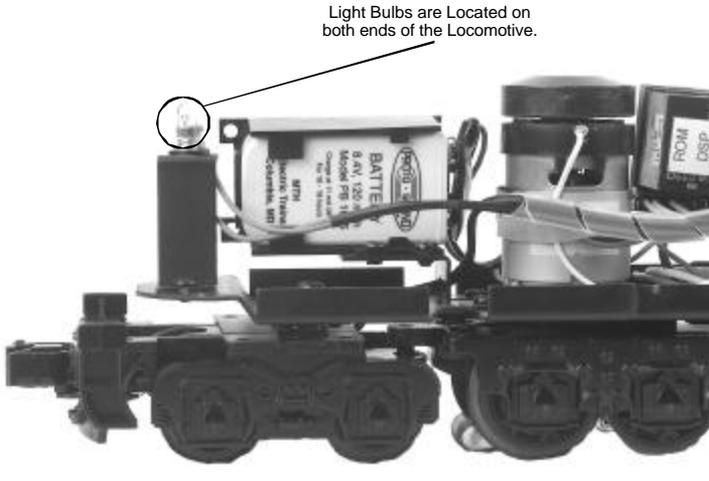
One set of replacement tires is packaged with your model. Additional tires are available directly from the M.T.H. Parts Department (phone: 410-381-2580; fax: 410-423-0009; e-mail: [parts@meth-railking.com](mailto:parts@meth-railking.com); mail: 7020 Columbia Gateway Drive, Columbia MD 21046-1532).

## Locomotive Light Bulb Replacement

To replace the light bulb in the locomotive, follow these instructions:

Follow the cab removal instructions found in the “Lubrication and Greasing” section of this booklet. Once the body has been removed, remove and replace the bulb as shown in Fig. 5.

You may obtain replacement bulbs directly from the M.T.H. Parts Department.



*Figure 5.* Locate the Burned-Out Lightbulbs in the Locomotive. To Replace the Bulb, turn the Bulb Counter-Clockwise to remove and Install a New One by Reversing the Process

## Self-Charging Battery Back-Up

The special NiCad 7-cell 8.4v self-charging battery in this engine

improves performance at any speed. It ensures that power to the sound system will remain on during directional changes, or when traveling over dirty track or switches.

The self-charging battery system is automatically turned on or off whenever track power is turned on or off.

Track power (when applied) recharges the battery, which should last for up to five years, and the special NiCad battery is a dry battery that should not leak or cause any damage to your engine. However, even this special battery will eventually wear down and need to be replaced. When you notice that your engine sounds seem distorted or garbled at low voltages or become silent when power from the transformer is turned off, test the battery to determine whether it should be recharged or replaced.

Put the engine in neutral and leave the track voltage at 12 volts for 15 minutes

If the garbled or distorted sounds are reduced, the battery charge has run down and can be recharged. There are three options to recharge the battery. 1. Leave the engine in neutral with track voltage at 12 volts for 6-7 hours so the battery can fully recharge (if your engine has a smoke unit, be sure it is turned off). 2. Using M.T.H.'s battery charger (item #50-10005) plug the charger into the battery port located on the bottom of the tender. (see figure 8) Let it charge for 6-7 hours. 3. Remove the battery (as shown in figure 7, below) and charge it in any standard slow charge battery recharger, following the recharger's directions.

If the sounds are not improved at the end of the 15 minute test charge, the battery



*Figure 6.* Unhook the Battery Leads, Remove the Battery and Replace with a New One.

## Troubleshooting Proto-Sound® 2.0 Problems

Although Proto-Sound 2.0 has been designed and engineered for ease of use, you may have some questions during initial operation. The following table should answer most questions. If your problem cannot be resolved with this table, contact M.T.H. for assistance (telephone: 410-381-2580; fax: 410-423-0009; service@mth-railking.com, 7020 Columbia Gateway Drive, Columbia MD 21046-1532).

<b>Starting Up</b>	<b>Remedy</b>
When I first turn the power on, the engine will not begin to run. I have to turn the throttle off and then on again to get the engine to operate.	This is normal behavior. To prevent accidental high-speed start-ups, Proto-Sound 2.0 is programmed to start up in neutral anytime track power has been turned off for several seconds. See the "Basic Operation" section for more details.
<b>Horn</b>	<b>Remedy</b>
When I press the whistle button, the bell comes on instead.	Reverse the transformer leads.
I can't get the horn to blow when I press the whistle button.	You may be pressing the button too quickly. Try pressing the whistle button more slowly, taking approximately one full second to fully depress the button.
<b>Bell</b>	<b>Remedy</b>
When I press the whistle button, the bell sounds.	Reverse the transformer leads.
I can't get the bell to ring when I press the bell button.	You may be pressing the button too quickly. Try pressing the bell button more slowly, taking approximately one full second to fully depress the button.
The bell won't work on a separate bell button.	Check the wiring of the separate button.
<b>Coupler</b>	<b>Remedy</b>
When I try to fire the coupler, PSA starts.	You are waiting too long between whistle button presses.
The Proto-Coupler won't let the engine uncouple on the fly.	Try lubricating the coupler knuckle with a dry graphite lubricant. Do NOT use oil.

<b>Cab Chatter</b>	<b>Remedy</b>
Sometimes the Cab Chatter sounds don't play.	Cab Chatter plays only in neutral.
<b>Lock-out</b>	<b>Remedy</b>
I can't get the engine to run after I power up the transformer. It sits still with the engine sounds running.	The engine is locked into the neutral position. Follow the procedure in the "Lock into a Direction" section.
The engine won't lock into forward, neutral, or reverse.	Engine speed must be below 10 scale mph (approx. 10 volts or less in conventional mode).
<b>Volume</b>	<b>Remedy</b>
The sounds seem distorted, especially when the whistle or bell is activated.	Proto-Sound 2.0 volume is set too high. Turn the volume control knob on the bottom of the chassis counter-clockwise to reduce the volume.
<b>Battery</b>	<b>Remedy</b>
The engine will not leave the initial neutral setting	Check to be sure the battery is installed and fully charged. See the "Self-Charging Battery Back-Up" section.
I get no sounds when the engine shifts between directions.	The battery may be dead or need to be charged. See the "Self-Charging Battery Back-Up" section.
After I turn off my transformer, my engine continues to make sounds before quitting.	Proto-Sound 2.0 is designed to continue to sound for a few seconds after power to the track has been shut off.
<b>PSA</b>	<b>Remedy</b>
The PSA sounds occasionally repeat themselves.	Proto-Sound 2.0 has a built-in random number generator that randomly selects each sound clip to play. Because there are a limited number of sound clips available in each PSA sequence, it is probable that some of these sound clips will be repeated from time to time.

PSA	Remedy
Once in PSA, the engine doesn't go into reverse.	So that PSA effects can be as realistic as possible, Proto-Sound 2.0 disables the reversing unit whenever PSA is enabled. This way the engine remains still at its stop as the operator cycles through the PSA sequences.
When the PSA enters its last sequence the bell automatically comes on.	PSA is programmed to start ringing the bell at that point. After approximately 12 rings of the bell, it will automatically turn off.
When PSA is enabled, pressing the whistle and bell buttons has no effect.	Because PSA must control various effects in each sequence, Proto-Sound 2.0 takes control of these sound effects until you exit PSA.
I push the direction button but the next sound clip in the sequence does not play or the engine does not come out of PSA after fourth press of the direction button.	Each PSA clip must play for approx. 30 seconds before PSA will advance to the next step in the PSA cycle. Wait at least 30 seconds in each PSA sound clip before pressing the direction button.

## Compatibility

This engine will operate on any traditional O-31 or larger O Gauge track system, including M.T.H.'s RealTrax® or ScaleTrax™ or traditional tubular track. It is also compatible with virtually most standard AC transformers. (See page 17 for a complete list of compatible transformers and wiring instructions.)

## Transformer Compatibility and Wiring Chart

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.

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

## **Additional Features Accessible with the DCS Remote Control System:**

While conventional mode operation of a Proto-Sound 2.0 engine yields wonderfully realistic sound and several train control features, command mode operation allows the user to access a world of command functions never before accessible to O Gauge railroaders. With the addition of the DCS Remote Control System (including a DCS remote handheld and Track Interface Unit) users gain many advanced features, including:

- **DCS Proto-Speed Control**-Establishes desired locomotive speed in scale miles per hour increments via a thumbwheel control and allows operator to set maximum speed and acceleration/deceleration rates.
- **Locomotive Lighting Control**-Independently controls locomotive headlights, marker and interior lights, and ditch lights.
- **Emergency Stop**-Single button push deactivates all layout operation.
- **One Touch Global Mute/UnMute**-Single button mutes or unmutes all DCS-controlled locomotives' user-defined actions, including sound, lights, and smoke.
- **Proto-Dispatch Operation**-Public Address-like feature allows users to speak through locomotive speaker during operation.
- **Proto-Cast**-Allows users to play audio recordings through locomotive speaker during operation.
- **Proto-Doppler Sound Effects Set Up**-Users can configure locomotive for Doppler Operation, including setting distance points for Doppler start, repeat, and stop modes.
- **Independent Volume Control of Engine Sounds, Bell, Horn & Whistle** for each Locomotive.
- **Control up to 50 different DCS-equipped locomotives at one time** with multiple TIUs.
- **Proto-Effects™ Set Up**-User can select individual Proto-Effects™ operations to be active or inactive, including cab chatter, train wreck sounds, coupler sounds, and wheel clickety-clack sounds.

- **Direction Control Set Up**-User can set initial individual start-up direction (start in forward or reverse) for double-heading operations.
- **Locomotive Consist Set-up**-User can determine locomotive values for consist make-ups, allowing multiple locomotives belonging to a consist to operate together.
- **Query Locomotive Information**-User can query locomotive programming to learn locomotive address and engine data information, including scale miles traveled.
- **User Can Query, Set and Operate Track and Accessory Interface Units for Programming Digital Command Operations** for up to 250 Accessories and 250 Individual Switches.
- **User Can Script, Record and Playback Train Routes.**

Operating instructions for all DCS Command features will accompany the DCS remote control equipment.

## **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 followed 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 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 transformer should not be used until properly repaired.
- As with all electrical appliances, this product should not be left in operation when unattended.



# AUTHORIZED SERVICE CENTER

7020 Columbia Gateway Dr. - Columbia, MD 21046

Information: 410-381-2580 Fax: 410-381-6122

www.mth-railking.com

## PARTICIPATING N.A.S.C. RETAILER LIST

### CANADA

TOY TRAIN WORKSHOP  
CUMBERLAND  
513-833-8331

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

OPERATING INSTRUCTIONS



## PARTICIPATING A.S.C. RETAILER LIST

### CANADA

TOY TRAIN WORKSHOP  
CUMBERLAND  
613-833-8331

THE TRAIN ROOM  
ERGUS  
519-787-3280

CREDIT VALLEY RAILWAY  
COMPANY  
STREETSVILLE  
905-826-1306

B H TRAINS  
TERREBONNE  
450-492-0317

### ALABAMA

SOUTHERLAND STATION  
HUNTSVILLE  
256-533-4720

LIL' BOBBY'S HOBBIES  
MONTGOMERY  
334-277-1715

### ARIZONA

ARIZONA TRAIN DEPOT  
MESA  
480-833-9486

### CALIFORNIA

CENTRAL COAST TRAINS  
ATASCADERO  
805-466-1391

TRAIN SHACK  
BURBANK  
818-842-3330

ROUNDHOUSE  
NORTH HOLLYWOOD  
818-769-0403

DOLLHOUSES TRAINS & MORE  
NOVATO  
415-883-0388

TIN PLATE JUNCTION  
OAKLAND  
510-444-4780

RON'S WORLD  
SAN CLEMENTE  
949-361-5596

TRUCKS & TRAINS HOBBIES  
SANTA ROSA  
707-537-6586

### COLORADO

CUSTOM RAILWAY SUPPLY  
COLORADO SPRINGS  
719-634-4616

CABOOSE HOBBIES  
DENVER  
303-777-6766

MIZELL TRAINS  
WESTMINSTER  
303-429-4811

### CONNECTICUT

NEW ENGLAND HOBBY  
SUPPLY  
MANCHESTER  
860-646-0610

### FLORIDA

HOLLYWOOD STATION  
HOLLYWOOD  
954-921-2700

DEPOT HOBBY SHOP  
LAKE WORTH  
561-585-1982

READY TO ROLL  
MIAMI  
305-688-8868

FRANK'S TRAINS & HOBBIES  
OLDSMAR  
813-855-1041

COLONIAL PHOTO & HOBBY  
ORLANDO  
407-841-1485

WARRICK CUSTOM HOBBIES  
PLANTATION  
954-370-0708

ROUNDHOUSE SOUTH  
PORT ORANGE  
386-304-7002

### ILLINOIS

BIKE & CHOO CHOO  
CONNECTION  
SCHAUMBURG  
847-882-7728

### INDIANA

Y. O. R. K. TRAINS  
MUNSTER  
219-838-9999

SAMUELSON'S TRAIN SHOP  
VALPARAISO  
219-462-2708

### IOWA

CABOOSE STOP HOBBIES  
CEDAR FALLS  
800-642-7012

### KENTUCKY

L&N TRAINS & THINGS  
LOUISVILLE  
502-897-9005

### LOUISIANA

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

**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  
978-532-1615

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

GRAND PACIFIC JUNCTION  
OLMSTEAD FALLS  
440-235-4777

RICK'S TOY TRAINS  
TOLEDO  
419-478-0171

ERIE RAILWAY DEPOT  
TROY  
937-440-9972

**PENNSYLVANIA**  
AMERICAN HOBBY CENTER  
ALIQUIPPA  
724-378-3930

ALLENTOWN TOY TRAIN  
SERVICE  
ALLENTOWN  
610-821-0740

ON THE RIGHT TRACK  
ALTOONA  
814-942-4345

BUSSINGER TRAINS  
AMBLER  
215-628-2366

JIM'S HOBBY SERVICE  
BERWICK  
570-759-2695

YE OLDE TRAIN & CHRISTMAS  
SHOPPE  
BOYERTOWN  
610-369-0755

NICHOLAS SMITH  
BROOMALL  
610-353-8585

CHARLEROI SWEEPER  
CENTER  
CHARLEROI  
724-483-3397

CRANBERRY HOBBY DEPOT  
CRANBERRY TWP  
724-776-3640

FAIRCHANCE PHARMACY  
FAIRCHANCE  
724-564-7817

TOY TRAIN STATION  
FEASTERVILLE TREV  
215-322-5182

THE CABOOSE  
LEHIGHTON  
570-386-5352

HOBBY CITY  
MC MURRAY  
724-942-2557

THE STATION  
NEW CUMBERLAND  
717-774-7096

FRYER'S STORE  
ORWIGSBURG  
570-366-2258

CHESTNUT TOYBOX  
PHILADELPHIA  
215-545-0455

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

WILCOX GREENHOUSE &  
NURSERY  
TITUSVILLE  
814-827-3823

EASTERN DEPOT  
TROY  
570-297-1975

J&J RAILROAD CROSSING  
TURTLE CREEK  
412-824-6009

TRAINS R FUN  
LEESBURG  
703-779-8600

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

**TENNESSEE**  
MODEL RAILROAD & HOBBY  
SHOP  
MEMPHIS  
901-384-6500

**TEXAS**  
HOBBY TIME  
AMARILLO  
806.352.9660

RIVERVIEW TRAINS  
ANGLETON  
979-848-3895

GREAT TRAINS & HOBBIES  
LONGVIEW  
903-757-2720

**VIRGINIA**  
LEESBURG HOBBIES  
LEESBURG  
703-779-8600

LOCUST GROVE TRAINS  
LOCUST GROVE  
540-854-8955

TRAIN DEPOT  
MANASSAS  
703-335-2216

CHESTERFIELD HOBBIES  
MIDLOTHIAN  
804-379-9091

DAVIS HOBBY SUPPLIES  
PORTSMOUTH  
757-397-1983

TOY TRAIN CENTER  
RICHMOND  
804-288-4475

NUTBUSH EXPRESS  
VICTORIA  
434-696-1902

T S G HOBBIES  
WARRENTON  
540-347-9212

NORGE STATION  
WILLIAMSBURG  
757-564-7623

**WASHINGTON**  
EASTSIDE TRAINS  
KIRKLAND  
425-828-4098

**WEST VIRGINIA**  
PATRICK'S TRAINS  
WHEELING  
304-232-0714

**WISCONSIN**  
WOODCRAFTERS SHOP  
BURLINGTON  
262-763-5239

SOMMERFELD'S TRAINS  
BUTLER  
262-783-7797

HOBBY OUTLET  
FOND DU LAC  
920-924-3770

G B T V & TRAINS  
GREEN BAY  
920-496-9697

GRAMPA'S TRAIN SHOP  
RICELAKE  
715-234-2996

THE TRAIN STORE  
WAUKESHA  
262-650-6675

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