This owner’s manual applies to the K-Line by Lionel RS-3 diesel locomotives with TrainMaster Command Control and RailSounds. Read this manual thoroughly for tips on operation and maintenance. When properly cared for your locomotive will provide many years of model railroading fun. If you have questions contact Customer Service.

CONVENTIONAL OPERATIONS:
Your locomotive is capable of operating in the conventional environment, controlled by virtually all O-gauge alternating-current (AC) transformers, at 8-18 volts. CAUTION: direct-current (DC) transformer may result in damage to sensitive electronic components.

With track power OFF, place locomotive on the track.

Power your locomotive and wait three to eight seconds as your locomotive determines whether it is in a conventional environment or a TrainMaster Command Control environment. The headlight flickers as the locomotive searches for a signal from the Command Base. When the locomotive has determined that a Command Base is not connected to the track, the flickering will stop and the headlight will remain illuminated.

You are ready for operation in the conventional environment.

In the conventional environment, your locomotive cycles through a repeating pattern of operating states: forward, neutral, reverse, neutral, forward and so on. To advance to the next operation, press the DIRECTION button on your transformer or use the throttle to briefly turn off track power so that the locomotive advances to the next operating state when power is restored.

When placing your locomotive on your layout for the first time, it will start out in neutral. Thereafter, it will start in forward after every power interruption lasting five seconds or longer.

You control your locomotive’s speed in forward or reverse, by increasing or decreasing track voltage with the transformer’s throttle. To stop the locomotive and to change directions (or to enter neutral), track voltage is turned off or interrupted.

You can lock your locomotive into a single direction, For example, get the locomotive moving in the forward direction and turn off track power. Move the PROGRAM / RUN switch, located on the underside of the locomotive, to PROGRAM and the when power is reapplied, the locomotive will operate in forward only. The locomotive can be locked in forward, neutral or reverse.

Your locomotive will “reset” to forward after any power interruption lasting five seconds or longer, regardless of the direction you set.

SMOKE:
For initial fill use 10-15 drops of smoke fluid included with your locomotive. Add fluid into the exhaust stack of your locomotive. Be sure fluid goes down the chimney tube. Add about 5 drops on subsequent refills.

When the smoke unit switch is in the ON position always keep a small amount of smoke fluid in the locomotive smoke generator; the generator’s element can become damaged if operated without fluid. If the aroma of smoke changes to slight burning smell, this is sign smoke fluid is running low.

The smoke unit ON and OFF switch is located on the under side of the chassis at the front end. Switch to the OFF position if locomotive is run with out smoke fluid or idling with track power on for long periods.

Power up your locomotive with the smoke unit switch in the ON position, and smoke production will start momentarily. Smoke production is great- est at high voltages such as when the locomotive pulls a heavy load, so to increase output add more cars to the train. When smoke production decreases, add about 5 drops of smoke fluid.
If you prefer to operate the locomotive without smoke or you do not want to add smoke fluid, slide the smoke unit switch to the OFF position.

**ELECTROCOUPLERS IN THE NON-COMMAND ENVIRONMENT:**

Your locomotive ElectroCouplers will NOT open manually or by using a Remote-Control Track section.

To add rolling stock remotely behind the locomotive in the non-Command environment, you must rely on a piece of rolling stock equipped with magnetic couplers coupled directly to your locomotive’s ElectroCoupler. The magnetic coupler on the rolling stock will then react to the magnetic field generated by a Remote-Control Track section.

**RAILSOUNDS:**

Lionel RailSounds is the most realistic model railroad sound system in the world. Your locomotive features digital samples from real-life diesel locomotives for the ultimate in realism.

- **Multiple diesel RPM levels.** The speed of your locomotive determines the level of diesel RPM sound.
- **MultiHorn.** Different horn for different speeds (idle, half throttle, three-quarters, full speed) — a RailSounds exclusive.
- **Mechanical bell.** Press BELL on your CAB-1 remote or transformer to begin the effect, press again to discontinue.
- **CrewTalk walkie-talkie and TowerCom announcements.** These are brief conversations between the train crew and the tower.
- **Reverse unit reset sound.** Power down your track, wait for 3-5 seconds, and listen for the air-release sound — that’s the locomotive telling you it’s reverse unit has just reset to forward operation.
- **Shutdown sequence.** No other model railroad sound system shuts down like RailSounds. Turn off track power, and after the air-release reset sound, you have two seconds to restart your locomotive. If you’re done with operations, RailSounds will commence with an authentic shutdown sequence about two seconds after the air-release reset occurs. **NOTE:** Battery must be installed for the shutdown sequence.

RailSounds provides your locomotive with a rich soundscape in conventional mode and even more authentic effects when operate your locomotive in the TrainMaster Command environment.

**RAILSOUNDS IN A CONVENTIONAL ENVIRONMENT:**

Begin by installing a 9-volt alkaline battery to power the sound system during track power interruptions and for the locomotive shutdown sequence.

The battery clip and holder is located in the fuel tank on the underside of the locomotive. Carefully remove the fuel tank by unscrewing the screws at the four corners of the tank.

When you first apply track power, the locomotive’s RailSounds sound system produces the sounds of the diesel RPM’s idle. As the locomotive moves, diesel RPM’s increase with the locomotive’s speed.

To silence the diesel RPM sound (horn/bell are unaffected), slide the RailSounds sound system switch, located on the underside of the chassis from the RS (RailSounds) to SS (Signal Sounds) position.

Gently rotate volume control knob (located on the underside of the chassis) with a screw driver, to adjust sound output.
NOTE: Discontinue locomotive power for 10 seconds before changing the RS/SS switch position. 
NOTE: If the RailSounds sound system “drops out” during track power interruptions (during direction changes, switches, crossings, etc.), replace the battery. 
NOTE: Longer track-power interruptions (including locomotive derailments) cause RailSounds to shut down after about 7 seconds.

Use the HORN and BELL buttons on your transformer to activate these features with conventional transformers. If your transformer lacks a bell and/or horn button you’ll need to install a Lionel no. 610-5906-001 Sound Activation Button(s) (available separately).

TRAINMASTER COMMAND CONTROL (TMCC)
TrainMaster Command Control is the advanced model railroad control system from Lionel. To operate your locomotive in the Command Control environment, you need a Command Base (6-12911) and a CAB-1 Remote Controller (6-12868), both available separately.

- With track power OFF, place your locomotive on the track. 
- Make sure your Lionel Command Base is plugged-in and its communications wire is connected to the COMMON post on your transformer 
- Once positioned on the track, increase track voltage to FULL (20 volts)

Address your locomotive with CAB-1.
- Press ENG then 1 on the numeric keypad of your CAB-1 remote. This command is sent by CAB-1 to the Command Base, which then translates your commands into digital code. All Command-equipped locomotives listen to this digital communication, but they do not respond until they hear their own ID number. All TrainMaster Command-equipped locomotives come factory-programmed with an ID# of “1”. To change your locomotive ID#, see page 5.
- The digital language of TrainMaster Command Control—not track power—controls the actions of Command-equipped locomotives. Track power is like gasoline in the tank of your car—it gives you the power to go places, but it doesn’t tell you where to go or how fast to get there.
- Throttle up or press any command button on CAB-1. RailSounds starts up. Your locomotive will respond to your every command.

CAB-1 COMMANDS
Locomotive RailSounds effects in bold italic.

Press AUX1 to activate the keypad. Air release sound.

Press AUX2 to turn your locomotive’s headlight on and off.

Front Coupler Release.
Rear coupler releases.
Coupler release sounds.

Press HALT to stop all Command-equipped locomotives in operation. Use HALT only in emergency situations.

Turn the THROTTLE to the right to accelerate, left to decelerate. Speed dependent variable.

Press WSTL/HRN to activate diesel horn, release to discontinue.

Press BELL once to activate the diesel mechanical bell sound again to discontinue.

Press DIR—the locomotive decelerates to a complete stop; turn the throttle up, and the locomotive moves in the opposite direction. There is no neutral. Diesel air-release sound.

Press and hold BOOST for extra power. Release BOOST and return to the locomotive’s previous speed.

Press and hold BRAKE to slow down or stop. Release BRAKE and return to the previous speed. Squealing break sounds.
CAB-1 numeric keypad commands
When you press AUX1 on CAB-1, you turn the numeric keypad into 10 command buttons. The keypad “stays open” and gives you access to extra command features until you press any top-row button.

- **0** Stops and resets the locomotive to FORWARD. Horn blows, RPM’s return to automatic.
- **1** Raises the volume of RailSounds.
- **2** CrewTalk is the sound of walkie-talkie communication.
- **3** Starts-up RailSounds. Start-up sequence commences. RPM’s increase.
- **4** Lowers the volume of RailSounds.
- **5** Activates the RailSounds shutdown sequence. Just like the real thing, your locomotive must be idle for shutdown to occur. Press 6 repeatedly to lower RPM’s to idle. Press 5 to initiate shutdown and listen for CrewTalk.
- **6** Lowers RPM level.
- **7** TowerCom is an audible tower announcement.
- **8** Turns off the smoke generator. Air Release sounds.
- **9** Turns on the smoke generator. Press and hold (10 seconds maximum) to momentarily boost smoke output. Air release sounds.

Tuning Your Locomotive’s Performance

**SOUND**
Adjust the volume of RailSounds to your desired level. You can set the master volume control by turning the knob located on the underside of the locomotive’s chassis clockwise (louder) or counter-clockwise (softer).

For quick remote-control of volume below the master setting—like muting—use the CAB-1 numeric keypad’s volume control. Press AUX1 and #4 on the keypad to lower overall RailSounds output, #1 to raise it. The remote set volume will return to the maximum level each time the locomotive is powered up.

**MOMENTUM**
Simulate the labored performance of a locomotive pulling a heavy load with momentum. Press L, M, or H (located under CAB-1’s removable panel) for light, medium or heavy momentum. The locomotive remembers the setting until you change it. For delayed response, use H. For quick response, choose L.

**BOOSTING AND BRAKING**
The BRAKE and BOOST buttons give you incremental control of your locomotive’s speed while you press and hold these buttons, allowing you to make small, gradual adjustments around curves and over grades. It’s a realistic method for handling stops and starts. Listen for the squeal of your locomotive’s brakes when you use the BRAKE button. The locomotive will resume its initial speed when the buttons are released. Any movement of the throttle will call the locomotive to remain at its current speed.

**MINIMUM SPEED — STALL VOLTAGE**
Make your locomotive feel more responsive by setting a “stall” voltage.
- Get your locomotive moving, then press SET; the locomotive will stop. The headlight will flash, indicating it’s in the SET mode.
- Turn the throttle to get the locomotive moving at your desired minimum speed.
- Press SET again; the locomotive will stop.
- The next time you throttle up, your locomotive will start at the speed you set. To clear this setting, press SET twice, holding the button for one second each time.
- These settings will be lost when you assign a new locomotive ID#.

**MAXIMUM SPEED — HIGH VOLTAGE SETTING**
Set your locomotive’s maximum speed to prevent derailing as a result of excessive speed.
- Press ENG and entering the ID#.
- Press SET on the CAB-1 Remote Controller. The headlight will flash.
- Get your locomotive moving at your desired maximum speed.
- Press BOOST.

The maximum speed has been set. To clear this setting, press SET and then BOOST, holding each button for one second.
Assigning Your Locomotive a New ID#
As your roster of TrainMaster Command Control-equipped locomotives grows, you will want to give each unit a unique ID#. The locomotive will respond to commands associated with its ID#; all other units will disregard these commands.

While all locomotives are shipped with ID #1 you can choose any number from 1 to 99 that has not been assigned to another locomotive. We recommend using a part of your locomotive’s cab number.

- Connect the Command Base and plug it in.
- Slide the PROGRAM/RUN switch on your locomotive to PROGRAM.
- Place the locomotive on the track and power up.
- Press ENG and the new ID#
- Press SET. The locomotive’s horn will sound, or the headlights will flash if the RailSounds sound system is off to signal that the programming has been made.
- Slide the PROGRAM/RUN switch on your locomotive to RUN

The locomotive’s ID# has been set. Be sure to record the new ID# for your reference.

Reprogramming Your Locomotive to Restore Features
Due to the inevitable derailments, static and the nature of electricity, it is possible that your locomotive could someday lose its setup program. The symptoms of this condition would be unresponsiveness in Command mode. This can be easily remedied by “reprogramming” using the following steps below.

- Connect the Command Base and plug it in.
- Slide the PROGRAM/RUN switch on your locomotive to PROGRAM.
- Place the locomotive on the track and power up.
- Press ENG and the ID# on keypad. Press SET
- Press AUX1, then press the number 8 to return to factory settings.
- Turn off power to the track and wait ten seconds.
- Remove your locomotive from the track Slide the PROGRAM/RUN switch on your locomotive to RUN.
- Place the locomotive back on the track and power up.
- Press ENG and enter the ID#, then operate your locomotive as normal.
MAINTENANCE

Lubricating Your Locomotive

Help your K-Line by Lionel locomotive lead a long and productive life by maintaining it properly. To keep your locomotive lubricated, we recommend that you purchase a Lionel Lubrication and Maintenance Kit (6-62927), available from your authorized Lionel dealer. Remove accumulated dirt and dust before lubricating, and always lubricate any locomotive emerging from prolonged storage.

There are two basic rules to keep in mind when you are lubricating your locomotive:
- Use only a small amount of lubrication.
- Avoid getting grease or oil on your locomotive’s roller pick-ups, wheels or the track.

Traction Tires

Your powered locomotive is equipped with four traction tires (Lionel Part#620-1314-206). These rubber tires increase the tractive effort of your locomotive, allowing it to pull more cars at once. During the course of normal operations, the traction tires may become worn out. Because you must remove the trucks and the side frames to access the wheels, we recommend that you have the traction tires replaced by your authorized Lionel Service Center.

Smoke Unit

Always keep smoke fluid in your locomotive smoke generator when the smoke unit switch is in the ON position. If you prefer to operate the locomotive without smoke or you do not want to add smoke fluid, slide the smoke unit switch to the OFF position.

The generator’s element can become damaged if operated without fluid. If the aroma of smoke changes to slight burning smell, this is sign smoke fluid is running low. Using Smoke Boost with depleted fluid can damage the generator’s element.

Directional Lighting

During the course of normal operations you may find it necessary to replace the directional lighting bulb in your locomotive. If this occurs you will need Lionel Part# 818-5015-009, available at any authorized Lionel Service Station.

Periodically apply lubricant to the truck drive gears. Turn over the engine to locate these behind the truck side frames. The wheel hubs should be lubricated occasionally with light machine oil. Remove any access oil or grease, especially if it has come in contact with the traction surfaces of the wheels. DO NOT OVER LUBRICATE.
Lionel Limited Warranty Policy & Service

This Lionel product, including all mechanical and electrical components, moving parts, motors and structural components, with the exception of LIGHT BULBS & LED’s are warranted to the original owner-purchaser for a period of one year from the original date of purchase against original defects in materials or workmanship when purchased through a Lionel Authorized Retailer®.

This warranty does NOT cover the following: Normal wear and tear, Light bulbs or LED’s, Defects appearing in the course of commercial use, or Damage resulting from abuse/misuse of the product.

Transfer of this product by the original owner-purchaser to another person voids this warranty in its entirety. Modification of this product in any way, visually mechanically or electronically, voids the warranty in its entirety.

Any warranted product which is defective in original materials or workmanship and is delivered by the original owner-purchaser (this warranty is non-transferrable) to Lionel LLC or any Lionel Authorized Service Station MUST be accompanied by the original receipt for purchase (or copy) from an Lionel Authorized Retailer®, will at the discretion of Lionel LLC, be repaired or replaced, without charge for parts or labor. In the event the defective product cannot be repaired, and a suitable replacement is not available, Lionel will offer to replace the product with a comparable model (determined by Lionel LLC), if available. In the event a comparable model is not available the customer will be refunded the original purchase price (requires proof of purchase from the Lionel Authorized Retailer® it was originally purchased). Any products on which warranty service is sought must be sent freight or postage prepaid (Lionel will refuse any package when postage is due).

Transportation and shipping charges are not covered as part of this warranty.

NOTE: Products that require service that do not have a receipt from an LIONEL AUTHORIZED RETAILER® will be required to pay for all parts required to repair the product (labor will not incur a charge) providing the product is not older than 5 years from date of manufacture and is within 1 year from date of purchase. A copy of the original sales receipt is required.

In no event shall Lionel LLC be held liable for incidental or consequential damages.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you.

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

Instructions for Obtaining Service

If service for this Lionel LLC product is required; bring the item, along with your DATED sales receipt and completed warranty information (at the bottom of this page) to the nearest Lionel Authorized Service Station. Your nearest Lionel Service Station can be found by calling 1-800-4-LIONEL, or by accessing the website at www.lionel.com.

If you prefer to send your Lionel product directly to Lionel, for repair you must FIRST call 586-949-4100 extension 9105 or FAX Lionel at 586-949-5429 or write to Customer Service, 50625 Richard W. Blvd, Chesterfield, MI 48051-2493. Please have the 6-digit Lionel product number, the date of original purchase, the dealer where the item was purchased and what seems to be the problem. You will receive a Verbal return authorization (RA) number to ensure your merchandise will be properly tracked and handled upon receipt at Lionel LLC.

Once you have your Return Authorization (RA) number, make sure the item is packed in its original Styrofoam inner container which is placed inside the original outer display box (this will help prevent damage during shipping and handling). This shipment MUST be prepaid and we recommend that it be insured with the carrier of your choice.

Please make sure you have followed all of the above instructions carefully before returning any merchandise for service. You may choose to have your product repaired by one of Lionel LLC’s Authorized Service Stations after its warranty has expired. A reasonable service fee should be expected once the product warranty has expired.

Warranty Information

Please complete the information below and keep it, along with your DATED ORIGINAL SALES RECEIPT. You MUST present this form AND your DATED SALES RECEIPT when requesting warranty service.

*A complete listing of Lionel Authorized retailers can be found by calling 1-800-4-LIONEL or by visiting our website at www.lionel.com.

Products that are more than 5 years old, from date of manufacture, are not applicable for warranty coverage, even if they have never been sold prior to this date. (Under no circumstance shall any components or labor be provided free of charge.)

Name ________________________________

Address ________________________________

Place of Purchase ________________________________

Date of Purchase ________________________________

Product Number ________________________________

Product Description ________________________________

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