Hudson Steam Locomotive Owner’s Manual

Featuring Conventional RailSounds
Congratulations!

You own a tough, durable locomotive—the Lionel Hudson steam locomotive. From the crisp die-cast metal detail and the authentic decoration on the outside to the advanced technology and brute power within the boiler, your steam locomotive is ready for duty on your model railroad. Experience the superiority of today’s Lionel.

Features of the locomotive

- Conventional RailSounds sound system
- Powerful flywheel-equipped can motor
- Lionel electronic reversing unit
- Smoke generator that produces clean, safe, and realistic smoke
- Brilliant headlight
- Die-cast metal locomotive and tender
- Die-cast magnetic coupler (rear of tender)

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The following Lionel marks may be used throughout this instruction manual and are protected under law:
Lionel®, TrainMaster®, Odyssey®, RailSounds®, CrewTalk®, TowerCom®, DynaChuff®, StationSounds®, Pullmor®, ElectroCoupler®, Magne-Traction®, CAB-1 Remote Controller®, Powermaster®, Lionel ZW®, ZW®
Transformer operations

Running your locomotive with a Lionel transformer

1. **Place your locomotive on Lionel or Lionel-compatible O gauge track.**
   - With track power OFF, connect the drawbar between the locomotive and tender as illustrated in Figure 1.

   ![Figure 1. Drawbar connection](image)

2. **Add smoke fluid to the locomotive or switch the smoke generator off.**
   - See page 9 for more information.

3. **Power up your steam locomotive with your transformer.**
   - Your locomotive is designed to operate on 8-16 volts alternating current. Virtually all Lionel and Lionel-compatible alternating-current transformers are suitable.
   - **Caution!** Do not power your locomotive with direct current (DC). Damage to sensitive electronic components may occur.
   - When you first power up your track, your locomotive’s headlight will illuminate. At this point, the locomotive is in neutral. When the power is removed and again applied (by pressing the Direction button on your controller), the train will move forward. This condition holds true if the engine is being powered up for the first time or if the engine has been powered down for longer than five seconds.

4. **Move ‘em out!**
   - Get your locomotive moving. Press the DIR button on your CAB-1 remote or Lionel transformer. This advances the Lionel reverse unit to the next operating state in the repeating sequence: forward, neutral, reverse, and neutral.
   - Adjust track voltage until your locomotive moves at your desired speed. To increase speed, increase track voltage. To decrease speed, reduce voltage. To stop the locomotive, turn off track power.
   - See page 4 for information on locking your locomotive into a single operating state.
Transformer operations

Locking your locomotive into a single operational state

The reverse unit inside your Lionel locomotive is an electronic device that acts like the transmission in your car. When you apply power to the track, the locomotive moves in the direction specified by the reverse unit— or it sits in neutral, awaiting another power interruption. Power interruptions are the signal that tells the reverse unit to sequence to the next operational state.

To interrupt power and sequence the locomotive's reverse unit, press the direction control button or turn the throttle to the OFF position and then ON again. The reverse unit alternates between these states: forward, neutral, reverse, and neutral.

Also, the locomotive can be “locked” into a particular mode of operation by throwing the reverse unit switch located on the underside of the frame (see Figure 2). When the switch is thrown to the OFF position, the locomotive will be locked in the next mode of operation in the sequence. For instance, if the locomotive is moving forward, then is stopped and the switch is thrown back, the locomotive will be “locked” in neutral. If the switch is thrown to the OFF position while the locomotive is under power, the locomotive will remain in the mode it was in when the switch was thrown. The controller direction button will then have no affect on the direction of the locomotive.

Should the locomotive sit without power for a short period of time, the reverse unit will automatically reset and start in the forward direction when the transformer is turned on, regardless of the reverse unit switch position. If the switch is in the OFF position, the locomotive will start in the forward direction and be “locked” there.

Figure 2. Switch locations
Transformer operations

Using your locomotive’s magnetic coupler

The rear of your Lionel locomotive’s tender is equipped with an operating magnetic knuckle coupler, a revolutionary design first introduced by Lionel in 1945. These magnetic couplers react to the magnetic field generated by a Lionel Remote-Control Track section (available separately).

Place your locomotive’s coupler trigger disc over the central coil of a Remote-Control Track section and press UNCOUPLE on the controller. The magnetic field pulls the disc downward, and the knuckle opens.

One operating technique favored by Lionel railroaders is the “moving uncouple.” Press the UNCOUPLE button as the locomotive passes over a Remote-Control Track section. The magnetic field will open the coupler; the consist remains behind as the locomotive moves on. But be careful— the speed of a newly uncoupled and moving locomotive can increase dramatically.

Figure 3. Magnetic coupler operation
RailSounds operations

Installing a Lionel Sound Activation Button

To operate the bell and whistle sounds when operating your locomotive with conventional transformers, you’ll need to install a Lionel no. 610-5906-001 Sound Activation Button (available separately).

Connect the button(s) as shown below.

Note! All track power must feed through the Sound Activation Button. Do not bypass the button.

For AC transformers with a horn/whistle button

For AC transformers lacking a horn/whistle button

The no. 610-5906-001 button works with any Lionel AC transformer except no. 6-4690 Type MW. Transformers made by other manufacturers may not be compatible with RailSounds.
With Conventional RailSounds, you experience the sounds of real railroading like never before. Simply put, it’s the most sophisticated, authentic model railroad sound system in the world.

Be sure to install a 9-volt alkaline battery in the tender as illustrated in Figure 4. This ensures interruption-free operation of the RailSounds sound system.

Begin by removing the tender body to access the battery clip. Remove the three tender body mounting screws and lift the body shell away. Refer to Figure 4 for the location of these screws. Snap the battery into the harness, then lower the battery into the holder. Finish the battery installation by replacing the tender body and attaching with the three screws.
Conventional RailSounds operations

Features of your locomotive’s RailSounds sound system

**Whistle.** Press the WHISTLE button on your controller and your locomotive’s whistle will sound as long as the button is pressed.

**Authentic bell.** Press the BELL button on your controller to start ringing the bell; press the button again to discontinue the ringing. Even the final “hit” is muted—just like the real thing!

**Train brakes.** Quickly slow down from a medium speed, and you will hear authentic braking sounds.

**Wheel flange squeal.** Depending on your track layout, you may hear the brake sounds to simulate the sound of wheel flanges against the rails when you enter a curve.

**Shutdown sequence.** When you turn off track power, you will hear an air release sound. You have two seconds to power up your locomotive. If you don’t, RailSounds will commence with an authentic steam locomotive shutdown sequence.

**Note!** A 9-volt alkaline battery must be installed for your locomotive to play the shutdown sequence.

**Variable chuff rate.** The speed of your locomotive determines the rate of steam chuffing.

**TowerCom announcements.** TowerCom features several “Stand by” and “Clear for departure” messages from the dispatcher with responses from the engineer. Each time TowerCom is triggered, a random message will be played.

  When the train is stopped, a short whistle blast triggers the first message. If the train has been stopped for less than 15 seconds, a “Stand by” message is played. If the train has been stopped for more than 15 seconds, a “Clear for departure” message will play. The 15-second interval is marked by the first time a CrewTalk message plays automatically after the locomotive has stopped.

**CrewTalk communications.** These “call” and “response” radio messages occur automatically after the train has stopped. You will hear them at random intervals, ranging from thirty seconds to three minutes.

Notes on Conventional RailSounds

- The volume control knob is located on the underside of the tender. Refer to Figure 4. Turn the volume set screw clockwise or counter-clockwise to adjust the volume.
- Listen for incidental locomotive sounds during RailSounds operation. They’re automatic and, of course, authentic.
- The 9-volt alkaline battery you installed ensures continuous steam locomotive sounds. (Use alkaline batteries only.)
- Longer track-power interruptions (including locomotive derailments) cause RailSounds to shut down after about 7 seconds.
Maintaining your locomotive

Adding fluid to your locomotive’s sw

Your locomotive is equipped with a smoke generator that produces safe, clean, white smoke during operation.

The smoke generator requires the periodic addition of Lionel smoke fluid in order to function. Pierce the tube end with a pin, then add four to eight drops of fluid directly into the locomotive’s stack. Smoke production will commence momentarily, faster if you run your locomotive at speed. When smoke production wanes, add more fluid (four to eight drops).

Replacing your locomotive’s lamp

Your locomotive’s headlight is illuminated by one lamp. During the course of normal operation, the lamp may require replacement.

Carefully remove the three cab screws (see page 10 for their locations). Set the engine on its side and carefully pull the front of the frame away from the cab. Be careful you do not bend the drawbar that connects the engine to the tender. The replacement lamp (600-2314-300) is available from your Authorized Lionel Service Center or Lionel Service. See the Lionel Service section on page 12 for more information. Remove the expired lamp by unscrewing it and install the replacement lamp. Reinstall the cab and the three screws taking care not to pinch any wires during reassembly.

Check to be sure the smoke stack is aligned with the smoke generator.

If you prefer smoke-free locomotive operation, there is a switch located on the bottom of the engine under the cab (see page 4 for its location). Move the switch to the OFF position and your locomotive will stop smoking.

When the smoke unit is on **always** keep a small amount of smoke fluid in the locomotive’s smoke generator; the generator’s element can become damaged if operated without fluid. Smoke production is greater at higher voltages and when the locomotive is pulling a heavy load or long consist.
Maintaining your locomotive

Lubricating your steam locomotive

Help your Lionel steam locomotive lead a long and productive life on your railroad by maintaining it properly. We recommend that you purchase a Lionel Lubrication and Maintenance Kit (no. 6-62927), available from your Lionel dealer. Two basic rules to keep in mind: never over-lubricate (a small amount will do), and avoid getting grease or oil on the steam locomotive’s wheels, contact rollers, or your track.

You’ll know your steam locomotive requires lubrication when visual inspection reveals dryness on the parts indicated in the illustration. Remove accumulated dirt and dust before lubricating, and always lubricate any locomotive emerging from prolonged storage. Also, lightly lubricate the steam locomotive’s side rods after every 10 hours of operation.

Figure 6. Lubrication points
Maintaining your locomotive

Lubricating your steam locomotive (continued)

Do not lubricate your locomotive’s electric motor. It has been pretested and all the necessary moving parts have been sufficiently lubricated for life at the factory. If you have any difficulty in the operation of your engine, see the Lionel Service section for more information.

Replacing your locomotive’s Traction Tires

Two of the drive wheels are fitted with rubber Traction Tires to enhance tractive effort, allowing your locomotive to pull many cars at once.

To replace the Traction Tires, simply unscrew the drive rod nut from the wheel and slip off the old Traction Tire. Remove it from under the drive rod. Place the new one on the wheel and retighten the drive rod nut. You’re ready to pull that long freight back to the yard.
Limited Warranty/Lionel Service

This Lionel product, including all mechanical and electrical components, moving parts, motors and structural components, except for light bulbs, is warranted to the original consumer-purchaser, for one year against original defects in materials or workmanship when purchased through an authorized Lionel merchant.

This warranty does NOT cover normal wear and tear, light bulbs, defects appearing in the course of commercial use, or damage resulting from abuse or misuse of the product by the purchaser. Transfer of this product by the original consumer-purchaser to another person voids this warranty. Modification of this product voids this warranty.

Any warranted product which is defective in original materials or workmanship and is delivered by the original consumer-purchaser to Lionel L.L.C. or an authorized Lionel L.L.C. Service Center, together with proof of original purchase will, at the option of Lionel L.L.C., be repaired or replaced, without charge for parts or labor. In the event the defective product cannot be repaired, and a replacement is not available, a refund of the original purchase price will be granted. Any products on which warranty service is sought must be sent freight or postage prepaid, as transportation and shipping charges are not covered by the warranty.

In no event shall Lionel L.L.C. be 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 limited 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 L.L.C. product is required, bring the item, along with your dated sales receipt and completed warranty information to the nearest Authorized Lionel Service Center. Your nearest Lionel Service Center can be found by calling 1-800-4-Lionel, or by accessing our Website at www.lionel.com.

If you prefer to send your product back to Lionel L.L.C. for repair in Michigan, you must first call 586-949-4100 or FAX 586-949-5429, or write to Customer Service, P.O. Box 748, New Baltimore, MI 48047-0748, stating what the item is, when it was purchased and what seems to be the problem. You will be sent a return authorization letter and label to ensure your merchandise will be properly handled upon receipt.

Once you have received your return authorization and label, make sure that the item is packed to prevent damage during shipping and handling. We suggest that you use the product’s original packaging. This shipment must be prepaid and we recommend that it be insured.

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 our Authorized Lionel Service Centers after its warranty has expired. A reasonable service fee will be charged.

Warranty Information

Please complete the information below and keep it, along with your dated sales receipt. You must present this and your dated sales receipt when requesting warranty service.

Name ____________________________
Address ____________________________
Place of Purchase ____________________
Date of Purchase ______________________
Product Number ______________________
Product Description ____________________