Hudson Jr. Steam Locomotive Owner’s Manual

SignalSounds/Conventional RailSounds
Congratulations!

You purchased a tough, durable legendary locomotive—the Lionel Hudson Jr. steam locomotive. From the crisp die-cast detail and the authentic decoration 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 found on both locomotives

- Powerful flywheel equipped can motor
- Die-cast cab
- SignalSounds horn and bell
- Lionel electronic reversing unit
- Die-cast magnetic coupler (rear of tender)
- Smoke generator that produces clean, safe, and realistic smoke
- Brilliant headlight

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Transformer operations

Running your steam locomotive with a Lionel transformer

1. Place your steam locomotive on Lionel or Lionel-compatible O gauge track.

2. Add smoke fluid to the engine 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.
   - 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 headlights will illuminate. At this point, the locomotive is in neutral. When your train is first powered up, the default state will be neutral and the default direction is forward. This means whenever you power up your engine the engine will remain in neutral, and when the power is removed and again applied, 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 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 sequences the Lionel 103-1 reverse unit to the next operating state. The 103-1 unit alternates between three states: forward, neutral, and reverse.
   - 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, cut track power.
   - See page 5 for information on locking your locomotive in a single operating state
Transformer operations

Installing the Lionel sound activation button

To operate the bell and whistle sounds when operating your steam locomotive with conventional transformers, you’ll need to install the Lionel no. 610-5906-001 sound activation button (available separately). Connect the button(s) as shown below.

For AC transformers with a horn/whistle button

![Diagram showing wire connections for horn/whistle button]

- Black wire: Attach to ground terminal
- Red wire: Attach to power terminal
- Customer’s wire: To your transformer

Lionel no. 610-5906-001 sound activation button for activating the bell

Note!
All track power must feed through “Sound Activation Button”
Do not bypass button

For AC transformers lacking a horn/whistle button

![Diagram showing wire connections for bell button]

- Black wire: Attach to ground terminal
- Red wire: Attach to power terminal

Lionel no. 610-5906-001 sound activation button for bell

Lionel no. 610-5906-001 sound activation button for whistle

Note!
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 Signalsounds.
Transformer operations

Your locomotive’s 103-1 Reverse unit

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 ON again. The reverse unit alternates between three states: forward, neutral, and reverse.

Also, the locomotive can be “locked” into a certain mode of operation by throwing the switch located on the underside of the frame (see illustration above). 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 back while the locomotive is under power, the locomotive will remain in the mode it was in when the switch was thrown. The controller direction control will then have no affect on the direction of the locomotive.

Additionally, this reverse unit has a “power-up reset” feature, which means that 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 or “powered up,” regardless of the locking switch position. If the locking switch is in the Off position, the locomotive will start in the forward direction and be “locked” there.

Pressing the whistle button on your controller will produce a realistic whistle sound from the tender. If the whistle fails to operate, remove the wires from the lockon and reinsert each one into the opposite clip to reverse polarity.

If your controller doesn’t have a whistle button, you may use the Lionel Sound Activation Button #10-5906-001, available separately.
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.

Lionel 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 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.

Experiencing the range of your locomotive’s SignalSounds system

With SignalSounds, you experience the sounds of real railroading like never before. Simply put, it delivers realistic, and authentic sounds to your model railroad. Turn the volume set screw clockwise or counter clockwise to adjust sound output. (located on the bottom/side of the tender frame in the middle.)

- **Steam Whistle.** Press whistle to produce an authentic steam whistle blast.
- **Mechanical bell.** Press BELL on your CAB-1 or transformer to begin the effect; again to discontinue.

Tire-Traction™

Your locomotive is equipped with Tire-Traction. This means that two of the drive wheels are fitted with rubber traction tires to enhance tractive effort so your locomotive can pull many cars at once.

Lionel locomotives with Tire-Traction grip the track, enabling them to pull heavy loads at higher speeds.

To replace the traction tires, simply unscrew the drive rod nut from the wheel and slip off the old traction tire and remove it from under the drive rod. Place the new one on the wheel in the reverse of this step and tighten the drive rod nut back up. You’re ready to pull that long freight back to the yard.
Operating your SignalSounds™ / Conventional RailSounds™

Experiencing the SignalSounds/Conventional RailSounds system

With SignalSounds and 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.

The following is available in both SignalSound and Conventional RailSound versions

- **MultiWhistle™.** Different whistles every time—a RailSounds exclusive.
- **Authentic bell.** Press BELL on your CAB-1 or transformer to begin the effect, again to discontinue. Even the final “hit” is muted like the real thing.

The following is only available in Conventional RailSound versions

- **Variable chuff rate.** Your Locomotive’s speed determines the steam chuff rate.
- **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 steam locomotive shutdown sequence about two seconds after the air-release reset occurs. Turn to page 8 for additional sounds available with Conventional RailSounds.

**NOTE:** Battery must be installed for shutdown sequence. See below.

- **Enhanced TowerCom.** Receive and respond to messages from the yard master.
- **Automatic Crewtalk.** Listen to random call and response messages.
- **Train Brakes.** Authentic brake sounds during quick stops.
- **Wheel Flange.** Squeal. Authentic wheel flange squeal when passing through tight curves.
Operating your Conventional RailSounds™

**Enhanced TowerCom™**
Enhanced “TowerCom” is a two part message involving a “stand-by” or “clear for departure” announcement from the dispatcher followed by an acknowledgement from the engineer. There are several messages and each time TowerCom is triggered, a random call/response will be played.

The TowerCom™ message, selected randomly for play-back, is triggered by a short horn blast only when the train is stopped. A long horn blast will not trigger the effect, and it is disabled when the engine is in motion.

If the trigger (i.e., short horn blast) occurs within 15 seconds of the train stopping, a “stand by” message is played; if the trigger occurs more than 15 seconds after the train has stopped, a “clear for departure” message is played. The 15-second interval is marked by the first instance of crewtalk after the engine stops.

**Automatic CrewTalk™**
There are “call” messages and “response” messages that are selected randomly for playback. The crewtalk messages are triggered at random intervals, from 30 seconds to 3 minutes, only when the train is stopped.

**Train Brakes**
For the ultimate in realism, the sound of squealing train brakes can be played during heavy stops. The engine must be moving at a medium speed then slowed quickly to trigger the sounds. With practice, you will be able to control the sound at any time.

**Wheel Flange Squeal**
The brake sounds may also be used to simulate the sound of wheel flange squeal when traveling through tight curves. Depending on your track layout, this sound may occasionally play when entering a curve. You may also trigger this sound by quickly moving the power supply control knob toward off, then quickly moving it back to its original setting. Do not move it completely to off or the engine’s E-unit will shift to neutral.

**Notes on Railsounds**
- The volume control is located on the side of the tender frame in the middle. 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. (Note: 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 smoke generator

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).

If you prefer to have a smoke free locomotive, there is a switch located on the bottom of the engine under the cab (see page 11 for location). Move the switch to off 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

Replacing your steam locomotive's lamps

Your steam 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 11 for location). 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 draw bar that connects the engine to the tender. The 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 replace it with a fresh bulb. Reinstall the cab and the three screws taking care to not pinch any wires during reassembly.

Check to be sure the smoke stack is aligned with the smoke generator.
Help your Lionel steam locomotive lead a long and productive life on your railroad by maintaining it properly. We recommend 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 each 10 hours of operation.

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 and should run smoothly for many years to come. If you have any difficulty in the operation of your engine see the Warranty and service section at the end of the instruction sheet for more information.
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 contacting our website @ www.Lionel.com

If you prefer to send it back to Lionel L.L.C. for factory repair, you must first call 810-949-4100 or FAX 810-949-5429 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 assure 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 products 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.

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 ____________________