2-8-0 LionChief® Locomotive Owner's Manual

Thank You!

Thank you for your purchase of a Lionel Steam Locomotive and Tender! Use this Owner's Manual to learn how to operate and maintain your locomotive for years of reliable operation.

FCC Statement

This device complies with Part 15 of the FCC Rules and with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Contains

Bluetooth Module Number: BM832(A)

FCC ID: X8WBM832

IC ID: 4100A-BM832

LionChief® Bluetooth®

Incorporating Bluetooth technology into Lionel model trains opens a new world, integrating the tradition of model railroading with the latest smart-device technology. With Lionel's new LionChief app, you can control full operation and sounds directly from your Bluetooth-enabled smart phone or tablet and operate multiple locomotives from the same device. LionChief is available to smartphone users and is compatible with all 2017 through current LionChief, LionChief Plus, S-Gauge, and HO Trains.

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The LionChief locomotive overview

Locomotive Overview

Your LionChief locomotive is designed to operate with commands from a universal remote (not included) or the LionChief app. You may choose to power it with the wall-pack power supply included with this ready-to-run train set, or you may choose to expand and upgrade to essentially any Lionel or Lionel-compatible AC transformer. Even DC transformers will work to power this particular locomotive!

Smoke

Your locomotive features an operating smoke unit that produces safe, clean, white smoke. Always keep a small amount of smoke fluid in the smoke unit when you are running your locomotive with the smoke unit in the On position. Slide the smoke unit switch to the Off position if you do not want to operate the locomotive with smoke or you choose not to add smoke fluid. For more information, please see page 8. Only Lionel Premium Unscented and Scented Smoke Fluids are approved for use with this product.

LionChief RC sound system

Your locomotive features a wide range of sounds to make operation even more realistic and impressive! The steam chuffing sounds are coordinated with the blasts of smoke from the smokestack, and they increase with the speed of the locomotive. You may choose to turn the chuffing sounds off by sliding the sound switch to the off position. See page 9.

Use the whistle, bell, and announcement buttons on the LionChief remote control to trigger those sounds. See page 6 for more information.

Keep in mind that the speaker is housed in the tender. Ensure that the drawbar is connected properly for good electrical contact.

Care and maintenance

A few simple precautions will help to ensure a long life for the locomotive:

- Lubricate axles, gears, and linkage regularly to avoid squeaks and wear. See page 20 for complete details.
- Avoid squeezing and bending the side rods and linkage when handling and packing the locomotive to prevent binding.

Using the LionChief Universal Remote

The LionChief Universal Remote (6-83071)

POWER INDICATOR LED

THROTTLE

ON/OFF SWITCH

BELL BUTTON /
REAR COUPLER
BUTTON

WHISTLE / HORN
/ FRONT COUPLER
BUTTON

ENGINE SELECTION

ANNOUNCEMENT /
SHIFT BUTTON
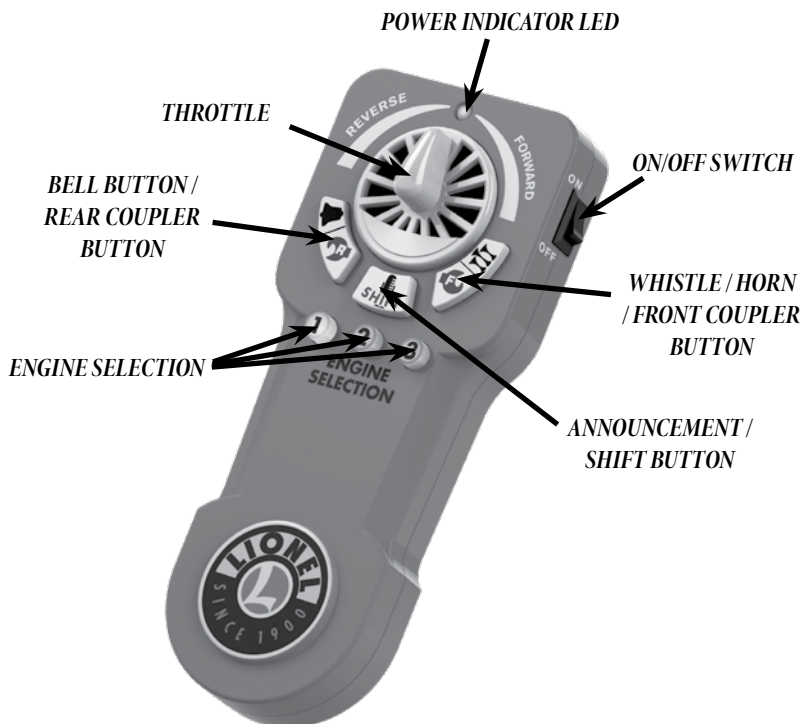
POWER INDICATOR LED
When solidly illuminated, this red LED indicates the remote is turned on. When the remote pairs with a locomotive it will visually reflect the speed on the locomotive; solidly illuminated for idle, slow to fast blink, based on the speed of the locomotive. If the LED does not illuminate when the remote is switched on, the batteries need to be replaced.

ANNOUNCEMENT / SHIFT BUTTON
Press and release the announcement button to activate the locomotive's announcements. Press and hold the Announcement button for it to function as a "shift key".

ON/OFF SWITCH
Use this switch to turn the Universal Remote on and off. We recommend you turn the remote off when not in use to conserve battery life.

Using the LionChief Universal Remote

The LionChief Universal Remote continued

WHISTLE / HORN / FRONT COUPLER BUTTON

Press the Whistle / Horn button to activate the horn / whistle. To activate the front coil coupler on the locomotive press and hold the Announcement button down and, using another finger, press and release the Whistle/Horn button to activate the front coupler. Then release the Announcement/Shift button.

BELL BUTTON / REAR COUPLER BUTTON

To turn the bell on, press the bell button one time. To turn the bell off press the button again. To activate the rear coil coupler on the locomotive press and hold the Announcement button and, using another finger, press and release the Bell button to activate the rear coupler. Then release the Announcement/Shift button.

ENGINE SELECTION

1, 2, 3

Each Engine Selection button represents a channel for controlling one LionChief, LionChief Plus, or Legacy Bluetooth locomotive. Each of these buttons may be "paired" with a different locomotive. Once paired, you can control multiple locomotives from one remote by pressing an Engine Selection button, then using the throttle, horn, bell, etc..

Note! Your remote will remember all locomotive pairings when you turn everything back on for your next operating session.

THROTTLE

Turn the throttle clockwise slowly to increase speed in the forward direction. Returning the throttle to the top dead center position will bring the locomotive to a stop. Moving the throttle counterclockwise will increase the speed of the locomotive in reverse. The Throttle also functions as the volume control for LionChief Plus locomotives. Refer to "Adjusting the   locomotive volume" section in this manual for more detailed information.

Using the LionChief Universal Remote

Adjusting the locomotive volume with the Universal Remote

To adjust the overall volume of the locomotive's sound system begin by placing the throttle in the top dead center position (so the red LED is solidly illuminated and the locomotive is stopped). Press and hold the Announcement button then turn the throttle to the left and / or right, this will increase and decrease the overall locomotive volume. Continue holding the Announcement button when turning the throttle, you can stay in this mode until the volume is at the level you desire. Once the volume level is set to the level you want release the Announcement button and return the locomotive throttle to the top dead center position again. (The new volume level will remain until you change it in the future, even after power has been cycled.) If, after running the locomotive, you decide to change the volume, simply follow the steps above to do so.

Note! If the throttle is not in the top dead center position before or after the volume adjustment process undesired operation will occur. Always start and finish the volume adjustment process with the throttle in the top dead center position!

Pairing locomotives to the Universal Remote

Your Universal Remote can connect or "pair" to one, two or three different locomotives at a time. Each "target" locomotive will be associated with one Engine Selection Button. Once you've paired with a locomotive, you can run it.

However, only "available" locomotives can be paired with the Universal Remote. "Available" means "not currently controlled by any other remote." An available locomotive will be powered up and beeping or chirping (older LionChief locomotives will play locomotive background sounds when available).

To Pair a Locomotive to Engine Selection button #1
1. Turn on power to your Universal Remote
2. Press and hold Engine Selection button #1 until it blinks rapidly. This will clear any previously stored pairing information so you can connect to the new target locomotive.
3. Release the button. It should flash slowly, indicating it is not connected to a locomotive.
4. Place the target locomotive on the track and apply track power.
5. Tap and release Engine Selection button #1. The remote will now seek and connect to the first available locomotive it finds.
6. Engine Selection button #1 should now be on (no flashing) and if the locomotive was beeping or chirping, it should now be playing engine background sounds.
7. Run the locomotive!

This locomotive pairing is now stored in your Universal Remote. The next time this engine and remote are powered on, the connection will be automatically re-established.

To Pair a Locomotive to Engine Selection buttons 2 or 3, simply follow the same steps with the other two Engine Selection Buttons.

Note! Legacy locomotives cannot be operated by the Universal Remote if they are already under the control of the App or another Universal Remote.

Using the LionChief Universal Remote

Operating locomotives with the Universal Remote

Now that you have paired locomotives with the Universal Remote its time to run trains! Operation with the Universal Remote is very similar to using the basic remote included with your locomotive. Switch between the locomotives you want to control by pressing different Engine Selection buttons.

Using the Throttle with multiple locomotives

Familiarize yourself with the Universal Remote by putting just one locomotive in motion at a time. Once you are comfortable as to which button is paired to what locomotive, try putting multiple locomotives in motion using the Universal Remote.

As soon as you press a different Engine Selection button, you can command the newly selected engine to blow its whistle, ring the bell or trigger dialog. However, throttle control does not automatically switch!

To take throttle-control of the selected engine, you have two choices: You can make the locomotive match the remote's current throttle position—or—you can change your remote's throttle position to match the engine's current speed and direction.

To immediately force the engine to match the throttle, just press that Engine Selection button a second time. The locomotive will immediately honor the current position of your throttle. This may result in an abrupt change in speed and/or direction.

Option two will avoid the possibility of an abrupt speed change. After pressing the Engine Selection button once, manually turn your throttle knob until it matches the locomotive's current speed and direction. Once you've matched the knob position, the main red LED will begin flashing at a rate proportional to the engine's speed. From this point on, further throttle rotation will change the engine's speed and/or direction.
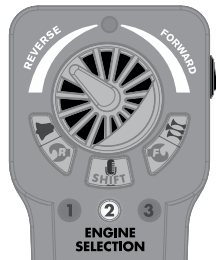
Here's an example showing the "throttle matching" option in action.
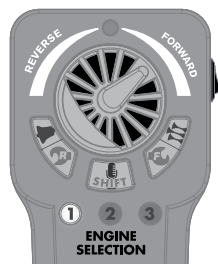
Engine #1 (above) is a diesel with throttle set for forward direction, medium speed.

Using the LionChief Universal Remote

Operating locomotives with the Universal Remote continued

Engine 2 (above) is a steamer at stop. Press Engine Selection button #2 and turn the throttle counter-clockwise through the 12 o'clock (stop) position and continue to put this loco in reverse at slow speed. Meanwhile, notice that engine #1 is still moving forward as before.
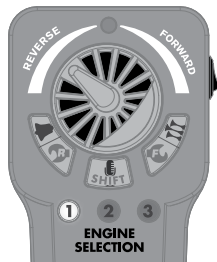
Now, switch back to engine #1, the diesel. Note that even though the throttle is in the reverse/slow speed position, the diesel continues moving forward at medium speed.
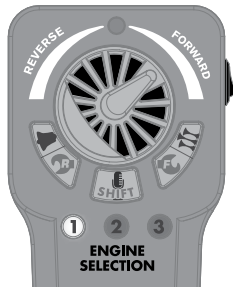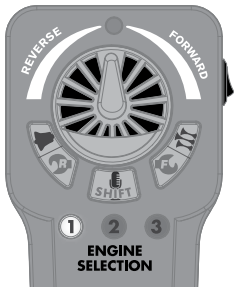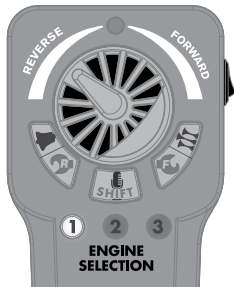
Match!

To regain speed and direction control over diesel locomotive #1, you must match the throttle position to the engine's current speed and direction. Turn the throttle clockwise. Once you've matched the throttle position, additional throttle adjustments will again cause speed and direction changes of the currently selected engine.

Operating your locomotive

Triggering announcements

Your locomotive plays a variety of announcements that are designed to match the way you play with the locomotive. You can trigger an announcement that corresponds to each part of the journey.

Once your locomotive is ready to start running,

Press the announcement button or icon (if using the LionChief app) and an intro announcement will play.

Replays again if no other actions are made for 2 minutes

When your locomotive is Stopped

Stopped Announcement 1

Stopped Announcement 2

Stopped Announcement 3

Announcement 2 & 3 will repeat

When your locomotive is Moving

Moving Announcement 1

Moving Announcement 2

Moving Announcement 3

Announcement 2 & 3 will repeat

When you have stopped moving, an additional announcement will play

Adding smoke fluid to your locomotive's smoke generator

Your locomotive is equipped with a smoke generator that produces safe, clean white smoke during operation if the smoke unit switch is in the ON position. Refer to Figure 2 on page 9 for the location of the switch.

The smoke generator requires the periodic addition of Lionel smoke fluid in order to function. A small bottle of smoke fluid is included with this set. Press down and unscrew the cap. Pierce the end of the nozzle with a pin, then add about four drops of fluid directly into the locomotive's stack. Smoke production commences momentarily. It will start faster if you run your locomotive at higher speeds. When smoke production decreases, add more fluid (about four drops). An idle locomotive will not smoke.

Note! 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.

Caution! When the smoke unit switch is in the ON position, always keep a small amount of smoke fluid in the locomotive's smoke generator; the generator's element can become damaged if operated without smoke fluid. This is particularly true if your locomotive sits in neutral for an extended period of time without smoke fluid in the generator.

Operating your train set

Silencing the steam chuffing sounds

To silence the background steam sounds, slide the CHUFF switch to the OFF position under the locomotive frame. Turn off track power for about two seconds, and then the background sound will be silenced when the track power is restored. The whistle, announcement, and bell sounds can still be triggered at any time using the remote. To restore the background sounds, simply slide the CHUFF switch to the ON position and then turn off track power for two or more seconds.

Note! Always turn off track power for about two seconds after you slide the switch. The background sounds will be reset according to the new switch position when the track power is switched on again.
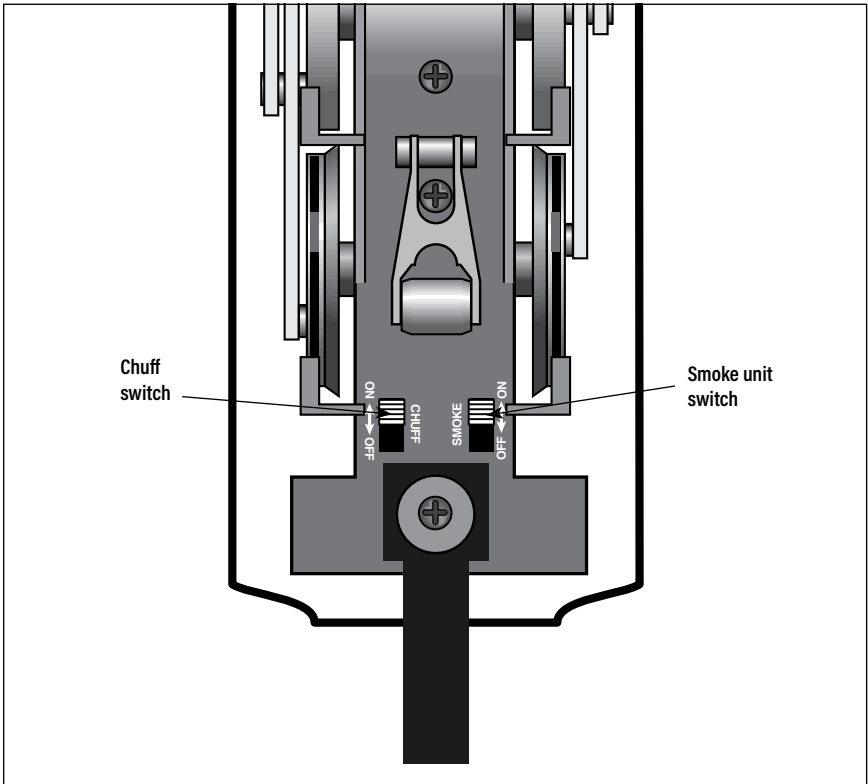
Figure 1. Switch locations

Using the LionChief App

Available for both Apple and Android small hand-held smart devices.

Connecting your Bluetooth-equipped locomotive on Apple devices

Once you have downloaded the free LionChief app and your locomotive is powered up on the track, tap the LionChief icon on your Apple smart device.

The screens below will be present and within a few seconds will automatically connect with your locomotive. Once it has connected, your Bluetooth enabled locomotive will show up in the locomotive box. You are now ready to operate your locomotive.

Note! A Legacy or LionChief Plus 2.0 Bluetooth-equipped engine will blow the horn/whistle once when it has connected to a Bluetooth device. All others will make a chirping sound until connected.

Figure 3a. LionChief app home screen prior to connecting to an engine

Figure 3b. LionChief app home screen when a locomotive is connected

What if my Bluetooth enabled engine didn't automatically connect?

Tap on the locomotive road number (1234 when no engine is connected). The engine select screen will appear as shown below. Tap on the engine you wish to connect to, and then tap on the Link button to connect. The app will automatically return to the home screen.

Link

Figure 4. Engine Select screen

Using the LionChief App

Connecting your Bluetooth-equipped locomotive on Android devices

Once you have downloaded the free LionChief APP and your locomotive is powered up on the track, tap the LionChief icon on your Android smart device.

The home screen blow will appear. Tap on the locomotive road number (1234 when no engine is connected). Once on the Engine Select screen, tap on the looking glass icon to search for available engines. Once engines appear, tap on the one you wish to connect to and tap on the link button. Finally, tap on the X button to return to the app home screen.

Note! A Legacy or LionChief Plus 2.0 Bluetooth-equipped engine will blow the horn/whistle once when it has connected to a Bluetooth device. All others will make a chirping sound until connected.

Figure 5a. App home screen prior to connecting to an engine

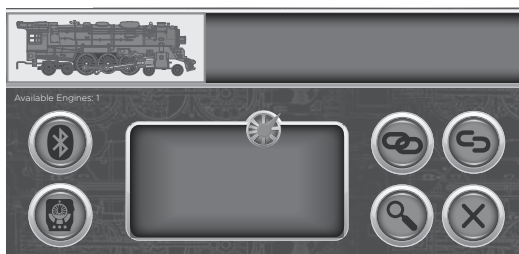Figure 5b. Engine Select screen prior to searching for an engine

Figure 5c. Engine Select screen after finding an available engine

Using the LionChief App

Running your locomotive

This is your main control panel.

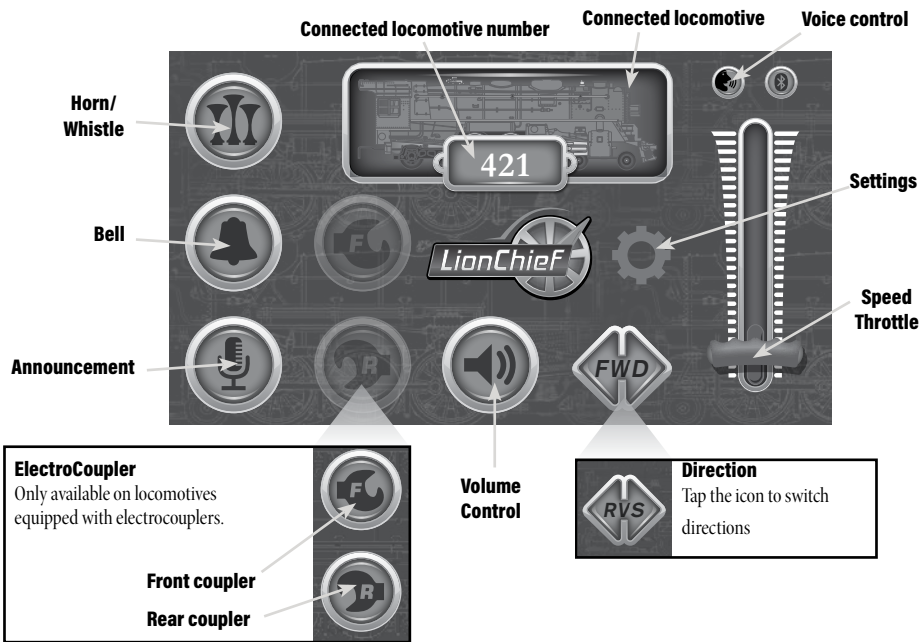**Note!**   Grayed out icons means this feature is not available on your locomotive.

Figure 6. Controlling your locomotive with the app

Using the LionChief App

Settings

On the setting screen, you will be able to establish key elements of how your locomotive will run including smoke, momentum and speed limit. These settings will reset once you are done running the locomotive and close out of your LionChief app.

Smoke On/Off
LionChief Steam, LionChief Plus and FlyerChief steam locomotives come equipped with a smoke unit. This button allows you to turn on/off your smoke unit.

Smoke On

Smoke Off

Exit Screen

Speed Limit
This setting allows you to control the max speed the locomotive can go while you are running your set on the app.

Momentum
The setting simulates the gradual acceleration and stopping of a real train.

Figure 7. Adjusting locomotive speed and smoke settings

Volume Control

Lionel Bluetooth-equipped engines come with a very impressive RailSounds sound system. This menu in the app allows you to establish the volume for individual sound elements or the overall sound level.

Note! Once these are established here, the characteristics will continue both on the app or with your remote until you choose to change them again.

Pitch
You are able to adjust the quality of sound "higher" or "lower" for both the horn/whistle and bell.

Train Sounds
Diesel revving or steam chuffing
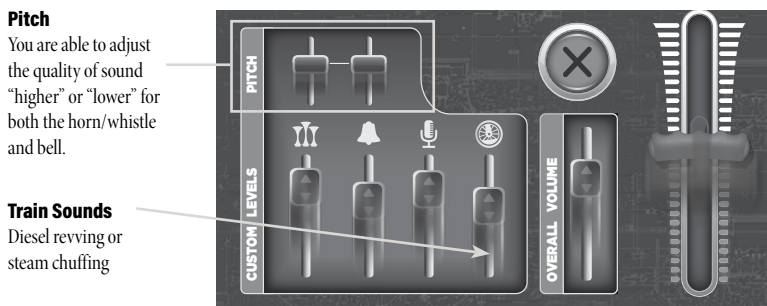
Figure 8. Adjusting locomotive individual and overall volume levels

Note! On newer Legacy models, the horn/whistle pitch slider may change the type of whistle/horn altogether!

Using the LionChief App

Switching Connection Between Multiple Bluetooth® Locomotives

Your LionChief app will display all "available" locomotives in the engine selection carousel. If you have three or more available engines, touch and scroll right to view them. Switching between available locomotives is easy, press the un-link icon to release the currently connected engine. Alternately, you can highlight the engine you would like to run and press the Link icon to connect. In both cases, if the previously selected locomotive was in motion, it will stop when disconnected.
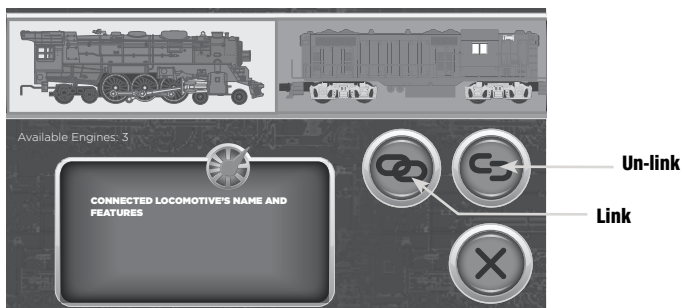
Figure 9. Switching between three locomotives

Using the LionChief App

Lionel Voice Control

The LionChief app now features voice control for Bluetooth-equipped trains! To use voice control, a Bluetooth-equipped engine must first be connected to the app. Once connected and on the app's home screen, tap on the LVC icon as shown below.

Voice control

Figure 10. LVC button location on the app's home screen

The voice command prompt will appear and indicate that it's ready for you to speak! Try saying different commands to make your engine do as you wish!

Figure 11. Lionel Voice Control prompt

The chart on the next page shows some of the basic commands that the app will recognize. While the app is capable of recognizing many more commands than what is in the chart, this will get you started by using Lionel Voice Control's basic functions.

Using the LionChief App

Lionel Voice Control continued

For this feature...	Say these words...
Throttle	
Stop	Stop, Emergency Stop
Slow Speed	Slow Speed, Low Speed, Low Throttle
Medium Speed	Medium Speed, Medium Throttle
Fast Speed	High Speed, Fast Speed, Highball, Full Throttle
Direction change + Slow Speed	Go Forward, Move Forward
Direction change + Slow Speed	Go Backward, Back Up
Increase Speed	Speed Up, Increase Speed, Go Faster, Accelerate
Decrease Speed	Slow Down, Decrease Speed, Go Slower, Decelerate
Direction	
Forward	Forward, Forward Direction
Reverse	Reverse, Reverse Direction, Backwards
Toggle	Direction, Change Direction, Other Way, Switch Direction
Volume	
Mute	Mute, Volume Off, Quiet
Low Volume	Low Volume, Volume Low, Minimum Volume
Medium Volume	Medium Volume, Volume Medium, Medium Sound
High Volume	High Volume, Max Volume, Full Volume
Dialog	Dialog, Speech, Speak, Talk, Crew Talk
Coupler	
Front Coupler	Front Coupler, Front Connector
Rear Coupler	Rear Coupler, Rear Connector
Bell	
Bell On	Bell On
Bell Off	Bell Off
Horn/Whistle	Horn, Whistle, Blow Horn, Blow Whistle
Smoke	
Smoke On	Smoke On
Smoke Off	Smoke Off, No Smoke
Other	
Disconnect	Disconnect
Help	Help

Table 1. Lionel Voice Control basic command functions

Note!   If you are trying to figure out more commands to use with Lionel Voice Control, say "help" to the app and an in-app dialog box will appear showing additional available commands.

Using the LionChief App

Voice Streaming and Recording (VSR)

The LionChief app now features voice streaming and recording for new Ready-to-Run engines equipped with Bluetooth Low Energy 5.0! This feature allows you to stream your voice in real-time to your locomotive's speaker or record your voice and stream it to your locomotive's speaker when you choose! This allows you to customize your train's announcements!

When connected to a VSR-equipped locomotive, tap on the volume menu icon as shown in the figure below.

Figure 12. Press button for "Volume Menu" on the APP's home screen.

Once in the Volume Menu, press the "Live" button to enter the VSR Menu as shown in the figure below. Only locomotives equipped with the VSR feature will have the "Live" button available.
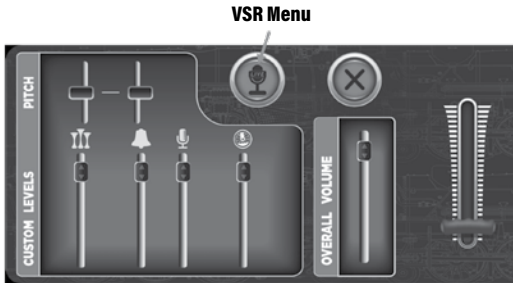

Figure 13: VSR Menu button accessible in the Volume Menu.

When you access the VSR Menu for the first time, the screen will appear as shown below.

Figure 14: VSR Menu appearance when you access it for the first time.

Using the LionChief App

VSR Live

To stream your voice in real-time from the APP to the engine, the VSR Live button is used.
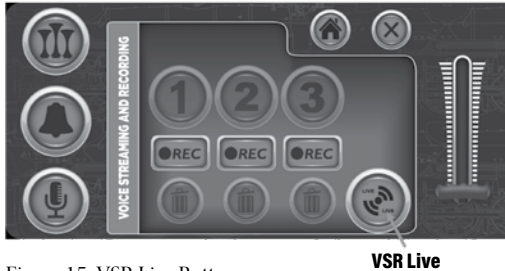
Figure 15: VSR Live Button

Holding the VSR Live button down streams your voice. When you release the button, the audio will immediately stop streaming. While VSR Live is streaming, the button will turn blue.

Note! During Live voice streaming, other buttons on the VSR Menu screen are disabled except for the engine throttle slider.

Note! During Live voice streaming, you will notice a delay of approximately half a second from when you speak to when the audio plays from the locomotive. This is normal as it takes the LionChief APP some time to process the audio data and send the data across the Bluetooth stream.

Using the LionChief App

VSR Recording

The voice streaming and recording feature allows for up to three recordings to be saved and played back at any time. On the VSR Menu screen, you can see buttons 1, 2, and 3. These are the buttons pressed to play those three recordings. When you first enter the VSR Menu, only the "REC" and "folder" buttons are available to tap on for the three recording channels. This is because there are no recordings saved yet.

To create a saved recording of your voice, tap on the "REC" button below the #1 button. The "REC" button will turn blue, and a 60 second timer will begin.

Figure 16. While recording, the REC button will turn blue and a 60 second timer will count down.

Speak clearly into your smart device's microphone. When you wish to stop recording, tap on the "REC" button again. The recording will stop, and the "REC" button will turn back to orange. If the 60 second timer ends before you end the recording, the recording will end automatically.

Figure 17. Channel 1 now has a recording saved.

The button for channel #1 will now be available, as is the "trash" button. Simply tap on the #1 button to play the saved recording to the engine's speaker.

You can record additional announcements in the #2 and #3 channels using the same procedure outlined above.

Note! During Live voice streaming, other buttons on the VSR Menu screen are disabled except for the engine throttle slider.

Using the LionChief App

VSR Recording continued

Figure 18. Recordings saved in all 3 channels.

The "trash" button under each channel can be used to clear the saved recording from that channel. When tapped, you will get a prompt asking if you are sure if you want to delete that recording. Note that once deleted, a recording cannot be recovered. You will need to rerecord the announcement.

VSR Volume Level

In the Volume Menu, the volume of VSR is controlled by the "overall volume" slider, which also changes the volume level of all other sounds on the engine. If you wish to lower the volume of VSR but still have control of the volume levels of other sounds such as the whistle and bell, use the individual dialog volume slider as shown in the figure below. This will change the volume level of VSR as well as the dialog that comes with the train.

Dialog Volume Slider   **Master Volume Slider**
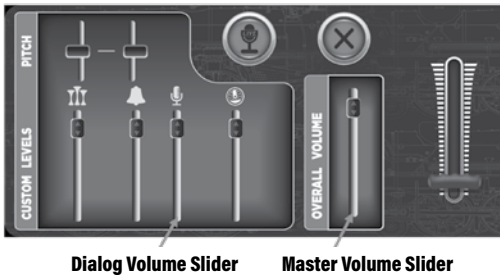
Figure 19. VSR volume level sliders in the Volume Menu

Note! When recording your own voice, the volume of the recording is impacted by the distance from your mouth to the smart device's microphone. For clear, loud announcements, it is recommended to place the microphone approximately six inches from your mouth while you speak. The volume level will be reduced at further distances. This can also be observed when using the live voice streaming feature.

Using the LionChief App

Troubleshooting

- If the locomotive does not appear in the app's "engine selection carousel," try turning the track power off, wait 5 seconds and turn it back on.

- If the locomotive powers up and starts playing its background sound instead of chirping, there is another remote connecting to the locomotive. Since the locomotive can only be controlled by one remote at a time, locate and turn off the other remote that is connecting to the engine. .

- If a universal remote is present and powered on, make sure one of its 3 channels is not connecting to your locomotive before the app is able to connect.

- Verify that the locomotive works as expected with its provided remote or with the Lionel Universal remote.

Maintaining and servicing your set

Lubricating your locomotive

Help your 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 (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 locomotive's wheels, contact rollers, or your track.

You'll know your locomotive requires lubrication when visual inspection reveals dryness on the parts indicated in Figure 20 and also on the tender's axles. Remove accumulated dirt and dust before lubricating, and always lubricate any locomotive emerging from prolonged storage.
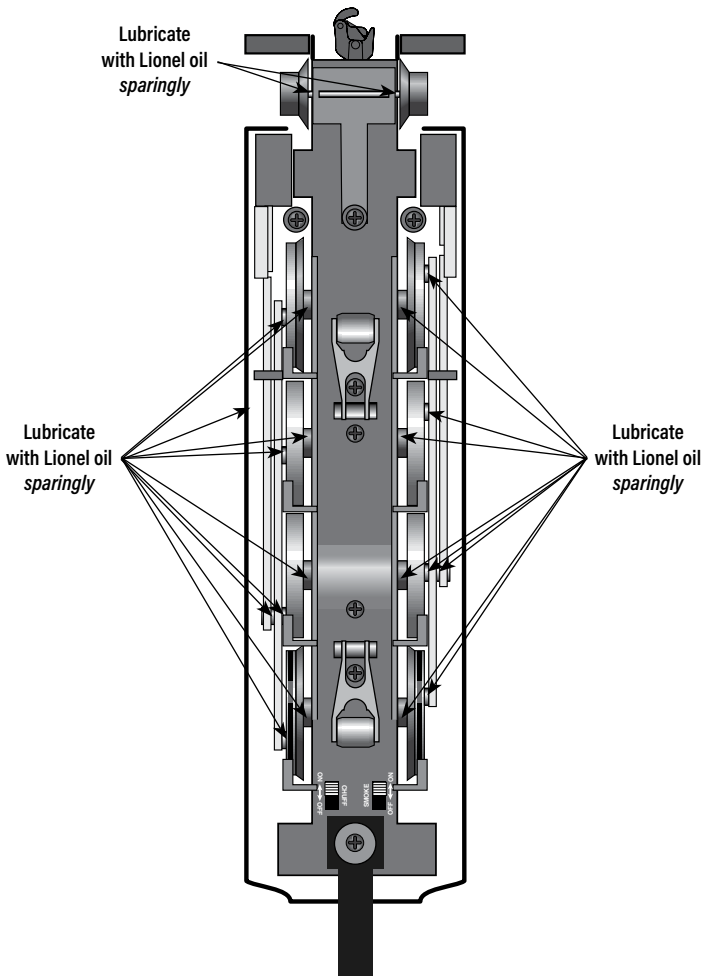

**Lubricate
with Lionel oil
*sparingly***

**Lubricate
with Lionel oil
*sparingly***

**Lubricate
with Lionel oil
*sparingly***

Figure 20. Lubrication points

Maintaining and servicing your locomotive

Replacing your locomotive's traction tire

One of the locomotive's drive wheels is fitted with a rubber traction tire to enhance tractive effort, allowing your locomotive to pull many cars at once.

To replace the traction tire, simply unscrew the drive rod nut from the wheel using a 3/16" nut driver. Refer to Figure 21. Remove the old traction tire from under the drive rod and slip on the replacement. Replace the spacer, retighten the drive rod nut, and you're ready to pull that long freight back to the yard.

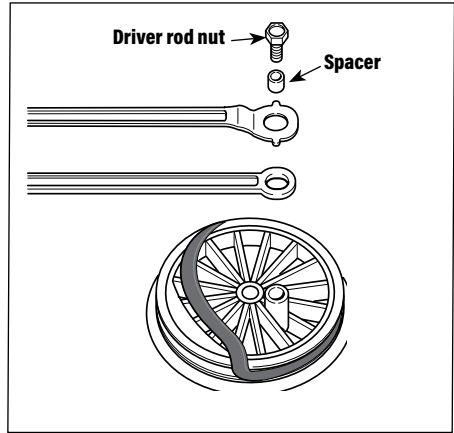Figure 21. Traction tire replacement

Replacing your locomotive's headlamp

Your locomotive is equipped with an LED style headlight for longer life. Please contact your nearest Lionel Service Center or Lionel Service if this need replacing.

FCC Statement

FCC Statement

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.

Notes: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipement off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Parents! **The adaptor should be periodically examined for the conditions that may result in the risk of fire, electric shock, or injury to persons and that, in an event such conditions , the adaptor should not be used until properly repaired.**

LionChief Troubleshooting

Problem: The sounds are all different levels from using the LionChief app but now I don't have access to the app to change them back!.

Resolution:

Do a factory reset to the engine. Contact Lionel Service for assistance.

Problem: I do not hear any sounds from the locomotive.

Resolution:

The drawbar, which connects your locomotive to its tender, serves two purposes. It connects the locomotive and tender together and it serves as a four-conductor tether responsible for transferring the speaker leads from the electronics inside the locomotive to the speaker inside the tender. Ensure the male side of the drawbar (locomotive side) is fully and properly inserted into the female side of the drawbar (tender side) and that the tops of each side of the drawbar are even with one another.

Make sure the sound on/off switch is positioned to the "on" setting and power is being applied to the track. If the switch is set to the "off" position, only the horn/whistle and bell will be heard when the commands are sent to the locomotive from the remote.

Problem: The locomotive does not smoke.

Resolution:

Ensure the smoke on/off switch is in the "on" position. The locomotive must be moving for smoke to be seen ejecting from the stack. The locomotive will not smoke when sitting at idle. Ensure you have added 4-5 drops of Lionel Liquid Smoke Fluid. It should only take 5-10 seconds for smoke to vaporize and begin being ejected from the stack once the train begins to move. If you do not plan to use the smoke feature on this locomotive be sure the smoke on/off switch is placed in the "off" position, so no damage occurs to the smoke generator.

Problem: The Universal LionChief Remote will not control the locomotive.

Resolution:

Ensure you have installed three new Alkaline AAA batteries into the Universal LionChief remote and the on/off switch is set to the "on" position. Also, if you have been running your locomotive with our LionChief app, make sure to un-link the engine.

The red LED at the top of the remote should be on steady when the speed dial is in the top dead center position.

The LED will begin to blink when the throttle knob is turned in either direction, slowly to quickly, mimicking the speed you set for the locomotive. The sounds in the locomotive should be on when you attempting to make the train go. If your locomotive will not move, you will need to contact a local Factory Trained Authorized Lionel Service Station or Lionel Customer Service for further assistance.

Lionel Limited Warranty Policy & Service

This Lionel product, including all mechanical and electrical components, moving parts, motors and structural components, with the exception of **TRACTION TIRES** 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

• Defects appearing in the course of commercial use

• Damage resulting from abuse/misuse of the product

• Damage resulting from consumer or unauthorized attempted repair or modification

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 **MUST** be accompanied by the original receipt for purchase (or copy) from an **Authorized Lionel 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 **Authorized Lionel Retailer*** it was originally purchased). Any products on which warranty service is sought must be sent with prior Return Authorization # from Lionel freight or postage prepaid (Lionel will refuse any package when postage is due). Lionel is not responsible for any unauthorized contents of the package or shipping packaging or materials or any package sent with-out prior authorization. **Transportation and shipping charges are not covered as part of this warranty for international shipments.**

NOTE: Products that require service that do not have a receipt will not be serviced by Lionel. Any product sent to Lionel under a Return Authorization and not accompanied by a receipt; the return shipping costs will be the responsibility of the customer.

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 you must FIRST call 1-800-4LIONEL (1-800-454-6635), Email Talktous@lionel.com, or write to Lionel Customer Service, 6301 Performance Drive, Concord, NC 28027. Please have the Lionel product number and original receipt showing the date, location of original purchase, and description of problem. You will receive a 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 well packed to protect during shipping. (The original packaging was designed to protect product during transit).

Please make sure you have followed all of the above instructions carefully before returning any merchandise for service.

Warranty Information

Products that are more than 3 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.)