Lionel
Non-Powered LEGACY RailSounds
Super Bass F3 B-Unit Owner’s Manual
Congratulations!

Congratulations on your purchase of the Lionel Non-Powered LEGACY RailSounds F3 B-Unit Diesel Locomotive! On the outside, this locomotive features numerous prototypical details and expert decoration in your favorite livery. Inside the body, this locomotive is equipped with two baby FatBoy speakers housed in a newly designed acoustic suspension chamber. LEGACY Super Bass Diesel Roar brings powerful low-end sound accentuation for a super realistic effect. Here and feel the diesel roar with 15 levels of laboring. The Non-Powered LEGACY RailSounds F3 B-Unit is ready for duty on your layout.

Features of the Non-Powered LEGACY RailSounds F3 B-Unit

- LEGACY Control System equipped—able to run with the new LEGACY Control system, in the TrainMaster Command Control environment, or in the conventional environment with only a standard transformer
- LEGACY RailSounds sound system with Super Bass Diesel Roar and intelligible CrewTalk dialog and TowerCom announcements
- Electrocoupler on rear (in Command)
- Operating back-up light
- Minimum curve: O-31

Your LEGACY F3 B-Unit can be used with any locomotive from an original Post-War engine up to and including the latest Lionel Legacy models. It will beef up the motor sounds of any locomotive and can also provide Dialog (in stop condition only). Horn and Bell sounds are also available from your LEGACY F3 B-Unit. In the LEGACY environment, you can even “quill” this locomotive’s horn.

The following pages will help you choose the best operating plan for your LEGACY F3 B-Unit, depending on the type of locomotive you want to lash it to and your layout’s control mode (conventional, TMCC or Legacy).

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LEGACY Control System operations

Note! This section is a brief overview of the LEGACY Control System. For a more in depth explanation of the LEGACY Control System features, please see your LEGACY Control System Operations Manual.

LEGACY Control System operations

For operation in the LEGACY Control System environment, when coupling your non-powered LEGACY RailSounds Super Bass F3 B-Unit to a powered TMCC A-Unit with Railsounds, we recommend that you assign a unique ID number to each unit and build a lash-up as described in the LEGACY Control System manual. The powered TMCC A-Unit will be the lead unit and the non-powered LEGACY RailSounds Super Bass F3 B-Unit will be the middle, or rear, unit. In this lash-up configuration, all Railsounds features are active in the powered TMCC unit. In the non-powered LEGACY RailSounds Super Bass F3 B-Unit, the Crewtalk/Towercom and SignalSounds features of the LEGACY RailSounds are disabled and only the Super Bass Diesel Roar sound will be heard. Address your locomotives using the assigned Train ID number with the CAB-2 remote controller and move 'em out!

Future CAB-2 software upgrades will allow you to assign the sound features to a particular locomotive that you desire selecting the Crewtalk/Towercom dialog and/or Horn/Bell sounds to the selected locomotive in the lash-up. This will allow to you access all of the available Super Bass Railsounds features.
**LEGACY Control System operations**

**GET READY TO RUN**

**Note!** Couple your F3 B-unit to a powered locomotive for operation in the LEGACY Control System environment.

Get your engine running now by following the instructions in this guide. We'll power up the track, "address the engine" so it can be controlled by your CAB-2 remote and learn to use the Whistle and Bell commands.

**Power Up The Track**

Refer to PowerMaster, TPC, or ZW manual for correct method. With your engine on the track and ready to roll, power-up your track to a constant 18 volts. If a circuit breaker trips when you turn on the Lionel power supply, check the wheels of your locomotive to make sure they are all securely on the track. Check to make sure the track is free of all metals that may cause a short circuit.

**Address Your Engine**

First, you must address the engine. This "tells" your CAB-2 which locomotive you want to control. This is important when you have more than one engine on your layout.

To address an engine:
1. Press ENG
2. Press 1
3. Press Start Up. A quick press of the start-up key will trigger the diesel locomotive start-up sequence. Pressing and holding the start-up key will trigger a conversation between the Dispatcher and the Engineer prior to the diesel locomotive start-up sequence.

See reference numbers 1, 2, and 3

**Start 'Er Up**

Now it is time to start up your engine's sound system.

To start the engine's Railsounds system, press Start on the touch-screen or any action key (Whistle, Bell, Velocity Throttle, etc.).

Your engine sound system will start up and the Touch-screen Control Panel will appear.
LEGACY Control System operations

The LEGACY CAB-2 Remote Controller

Main Display
Displays real-time information about your railroad system. Displays real-time feedback of operation.

Scroll Button
Navigates through the entire list of Engines, Trains, Switches, etc.

Select Button
Performs addressing by 3-4 digit road number.

Touch Screen Key Pad
A group of touch sensitive keys with icons for each function. These keys serve many purposes and their icons change accordingly.

Train Brake Slider
This slider is used to increase or decrease the amount of Train Brake effecting the engine or train.

Train Link Button
For future use.

AUX-1/Thru Button
Press to view the Control Panel while operating. Controls switch direction.

AUX-2/Out Button
Controls switch direction.

Emergency Halt Button
Stops everything on layout, also stops recording playback.

Record Button
Used to record and playback events.

Velocity Throttle
Throttle control over engines, also used to navigate thru info/options.

Set Button
Used to set Engine address and for programming.

Info Button
Used to enter/view the info/options of selected components.

CTC Button
Turns the Remote Control ON and OFF. Used to enter the Remote and Base options. Pressing CTC while in a menu will always bring you back to main screen.

Soft Keys
These keys directly correlate to the 5 selection boxes located at the bottom of the main screen. These are also used in the info/option menus to select options.

Warning Sound Controller
Warning Bell and Variable Whistle/Horn control. Pull down to sound Whistle/Horn. Push up and release to trigger Warning Bell.

Official R.R. Speed Control Bar
Toggles the touchscreen display of R.R. preset speeds and control panel.

Multi Controller
Boost, Brake, and Direction control. Rock forward for Boost, rock backward for engine brake, and press down for direction change. Click-hold-and rock for absolute direction select.

Front & Rear Coupler Buttons
Fire couplers.

Feedback Buttons
Toggle ON/OFF the vibration feedback feature in the CAB-2 Remote.

Low, Medium, High Momentum Buttons
Used to select the desired momentum of your addressed engine/train/accessory.
Warning sounds are an important part of Lionel Railroading. Your Lionel Legacy Control System equipped engines have a real-time variable "quilling" whistle and horn, while Lionel TMCC engines do not have this feature.

11. Blow the Horn/Whistle by pulling down on the Warning Sound Controller.
12. Try pulling down the Warning Sound Controller various amounts and listen. Notice the difference in intensity of the Whistle or Horn.
13. Push the Warning Sound Controller up once and quickly release. Notice that the bell rings once.
14. Push the Warning Sound Controller up and hold it for 1.5 seconds. Notice that the Bell is sounding continuously.
15. Push the Warning Sound Controller up once. Notice that the continuous Bell stops.
16. Experiment with ringing the Bell in your own rhythm or continuously, depending on how you push the Warning Sound Controller.

See reference numbers 11, and 12

See reference numbers 13, 14, 15, and 16
Locomotive switch function overview

Switch overview

Command Reverse Unit Switch
Used to assign an ID# and reprogram the locomotive in LEGACY and Command operation when the switch is in the “PGM” position. See pages 14, 15, and 16.

LEGACY RailSounds Sound System Switch
Used to place the LEGACY RailSounds sound system in RailSounds (RS) or SignalSounds (SS) mode. When the switch is in the SS position, the horn and bell are still active. See page 22.

Figure 1. Switches and volume control knob location
TrainMaster Command Control operations

For operation in the TMCC environment, when coupling your non-powered LEGACY RailSounds Super Bass F3 B-Unit to a powered TMCC A-Unit without RailSounds, we recommend that you assign the same ID number to both units. The Crewtalk/Towercom, SignalSounds, and the Super Bass Diesel Roar are active in the non-powered LEGACY RailSounds Super Bass F3 B-Unit. It is not necessary to build a lash-up to operate in this configuration. Simply address your locomotives with the CAB-1 remote controller and move ‘em out!

When coupling your non-powered LEGACY RailSounds Super Bass F3 B-Unit to a powered TMCC unit with RailSounds, we recommend that you assign a unique ID number to each units and build a lash-up as described on page 15. The powered TMCC A-Unit will be the lead unit and the non-powered LEGACY RailSounds Super Bass F3 B-Unit will be the middle, or rear, unit. In this lash-up configuration, all RailSounds features are active in the powered TMCC A-Unit. In the non-powered LEGACY RailSounds Super Bass F3 B-Unit, the Crewtalk/Towercom and SignalSounds features of the LEGACY RailSounds are disabled and only the Super Bass Diesel Roar sound will be heard. Address your locomotives using the assigned Train ID number with the CAB-1 remote controller and move ‘em out!

In addition to your transformer, to operate your locomotive in the Command Control environment, you need a Command Base (available separately, 6-12911) and a CAB-1 Remote Controller (available separately, 6-12868).

Your commands are sent by the CAB-1 Remote Controller to the Command Base, which then translates the command into digital code. That code is sent through the outside rails to your locomotive, which will not respond until it recognizes its unique ID#. TrainMaster Command Control gives you the power to operate multiple Command-equipped locomotives on the same track at the same time.

Operating your non-powered locomotive in the Command Control environment

**Note!** Couple your F3 B-unit to a powered locomotive for operation in the Command Control environment.

1. **Turn off track power and plug-in the Command Base.** Be sure that the Command Base is connected to the outside rail or to the Common/Ground/U terminal on your track power supply.
2. **Place your locomotive on Lionel or Lionel-compatible O-31 or larger track.**
3. **Increase track voltage to full power (no more than 19 volts AC).** On PowerMasters, slide the CMD/CONV switch to CMD. Program Track Power Controllers to Command Control operation.

**Caution!** Power your locomotive with an alternating-current (AC) transformer only. Powering your locomotive with a direct-current (DC) transformer, or in excess of 19 volts AC, may result in damage to sensitive electronic components.

4. **Press ENG and enter the ID# to address your locomotive with your CAB-1 Remote Controller.** All Lionel locomotives come factory-programmed as ID# 1. To change the ID#, see page 14.
5. **Throttle up and move ‘em out!** Your locomotive will respond to every command from your CAB-1 Remote Controller.
TrainMaster Command Control operations

CAB-1 Remote Controller commands

The CAB-1 Remote Controller commands are detailed below. The corresponding RailSounds sound system effects are in bold italic type.

Releases the rear coupler.  
**Coupler release sound.**

Activates the numeric keypad.  
**Air release sound.**

Toggles all directional lighting on and off.

Shuts down all PowerMasters on your railroad.  
Stops all TrainMaster Command Control-equipped locomotives in operation. Use **HALT** only in emergency situations.

Activates the locomotive’s horn. Release the button to discontinue the sound. **Multihorn diesel horn sound.**

Toggles the bell sound on and off. **Mechanical bell sound.**
TrainMaster Command Control operations

CAB-1 Remote Controller numeric keypad commands

When you press the AUX1 button on your CAB-1 Remote Controller, you turn the numeric keypad into ten command buttons. These commands are specific to your locomotive, and an overlay is included to help you learn these functions. After you press the AUX1 button, you will be able to press any numbered button until you address a different Command Control equipped product. The corresponding LEGACY RailSounds sound system effects are in bold italic type.

1. Stops and resets the locomotive. Resets the locomotive’s direction to forward. **Horn blows. RPM sounds return to automatic.**

2. Raises the volume of the LEGACY RailSounds sound system background sounds, such as RPM sounds and let-off sounds. The horn, bell and dialog are unaffected. The default is full volume. The volume setting is retained when track power is turned off. **Sound volume increases.**

3. When the locomotive is stopped, engineer begins radio dialog, dispatcher replies (see page 26). **CrewTalk communication.**

4. Enters manual RPM mode and increases the RailSounds sound system RPM level (see page 13). If the LEGACY RailSounds sound system is shut down (see 5 key below), AUX1, 3 activates a full LEGACY RailSounds sound system start-up while the locomotive is stopped after pressing AUX1, 5 with track power on.

5. Lowers the volume of the LEGACY RailSounds sound system background sounds, such as RPM sounds and let-off sounds. The horn, bell, and dialog are unaffected. The volume setting is retained when track power is turned off. **Sound volume decreases.**

6. Activates the LEGACY RailSounds sound system shutdown sequence when stopped.

7. Enters manual RPM mode and lowers the LEGACY RailSounds diesel motor RPM level (see page 13).

8. When the locomotive is stopped, dispatcher begins radio dialog, engineer replies (see page 26). **TowerCom announcement.**
The 3, 5, and 6 keys on your CAB-1 can perform several different functions when controlling your locomotive. These functions include:

- Starting up and shutting down the engine sounds.
- Controlling the engine RPM sounds manually ("Manual RPM Mode").

The following table summarizes the functions of these CAB-1 Remote Controller buttons for your locomotive.

<table>
<thead>
<tr>
<th>Key Command</th>
<th>LEGACY RailSounds sound system</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>If the LEGACY RailSounds sound system is shut down, engine sounds start up. If the LEGACY RailSounds sound system is running, engine enters manual RPM mode and revs up RPM one level with each press.</td>
</tr>
<tr>
<td>AUX1, 3</td>
<td>(same as above)</td>
</tr>
<tr>
<td>5</td>
<td>If locomotive is stopped, engineer announces &quot;shut down,&quot; engine sounds turn off.</td>
</tr>
<tr>
<td>AUX1, 5</td>
<td>(same as above)</td>
</tr>
<tr>
<td>6</td>
<td>If the locomotive is moving, engine enters manual RPM mode and revs down RPM one level with each press.</td>
</tr>
<tr>
<td>AUX1, 6</td>
<td>(same as above)</td>
</tr>
</tbody>
</table>
TrainMaster Command Control operations

Tuning your non-powered locomotive’s performance

TrainMaster Command Control allows you to fine-tune the performance of your locomotive. Use your CAB-1 Remote Controller to make these adjustments. See page 11.

Note! These settings will be lost if you assign a new ID#.

RPM RUN LEVEL

Your locomotive has eight levels of RPM sounds, corresponding to the eight run levels in a real diesel locomotive. The three ways in which you can control your locomotive’s RPM sounds are discussed below.

Automatic RPM Mode

In Automatic RPM Mode, your locomotive’s RPM run level is controlled by movements of the throttle on your CAB-1 Remote Controller. A small clockwise motion of the throttle knob will cause the RPM sounds to ramp up one run level, while a small counter-clockwise motion of the throttle knob will cause the RPM sounds to ramp down one run level.

While the locomotive is ramping between run levels, it will ignore additional throttle movements. Once the RPMs have finished ramping to the next run level, additional throttle motions will again trigger another RPM ramp. This feature will allow you to “fine-tune” your RPM run level, regardless of the locomotive’s speed, using only the throttle knob. This mode is the default setting for your locomotive on power up.

Manual RPM Mode

In Manual RPM Mode, you can set your locomotive’s RPM run level to a constant value by pressing the AUX1, 3 or AUX1, 6 key sequences on your CAB-1 Remote Controller. When your locomotive is in this mode, its RPM run level will not vary with throttle movements or with the speed of the locomotive.

To enter Manual RPM Mode, press the AUX1, 3 key sequence while the locomotive is stopped, or press either the AUX1, 3 or AUX1, 6 key sequence while the locomotive is moving. Pressing AUX1, 3 will cause your locomotive to enter Manual RPM Mode and ramp up one RPM run level; pressing AUX1, 6 will cause your locomotive to enter Manual RPM Mode and ramp down one RPM run level. You may then press the 3 or 6 key additional times to ramp your locomotive’s RPMs through all the run levels. Once you set your locomotive’s RPM run level it will remain there until you change it with the 3 or 6 keys, or until you exit Manual RPM Mode.

You may cause your locomotive to exit Manual RPM Mode in several ways: reset the locomotive with AUX1, 0 key sequence; enter the shutdown sequence with the AUX1, 5 key sequence; or turn off the track power and allow the locomotive to reset.

Speed RPM Mode

In Speed RPM Mode, your locomotive’s RPM run level is controlled only by the actual speed of the locomotive.
TrainMaster Command Control operations

Tuning your non-powered locomotive’s performance (continued)

Speed RPM Mode (continued)

To enter Speed RPM Mode, press the AUX1, BRAKE key sequence while the locomotive is stopped. A distinctive "clunk" sound will be heard. Once your locomotive is in Speed RPM Mode, the RPMs will ramp up and down through its eight run levels depending on how fast the locomotive is moving on the track. (Note that this is how your locomotive’s RPMs are controlled when it is running in Conventional Mode.)

To exit Speed RPM mode, reset the locomotive with AUX1, 0 key sequence or turn off the track power and allow the locomotive to reset.

SOUND LEVEL

Press AUX1, 1 or 4 on your CAB-1 Remote Controller to raise and lower the volume of the background locomotive sounds, such as RPMs and air release or let-offs. The horn, bell and dialog will be unaffected. Note that this setting is preserved through power down and system reset. Remember that the sounds will be silent when you power up your locomotive if the sounds were turned down previously. To set the maximum volume of both the background and foreground sounds, we recommend that you adjust your locomotive’s volume control knob (see Figure 1 on page 8 for the location).

Assigning your non-powered 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# while all other units will disregard these commands.

Note! To restore your non-powered locomotive’s functions, see page 16.

1. Slide the Command reverse unit switch on your locomotive to the PGM position.
2. Place the non-powered locomotive on the track.
3. Connect the Command Base and plug it in.
4. Power up the track.
5. Press ENG.
6. Enter the unique ID#. Choose any number from 1 to 99 that has not been assigned to another locomotive (ENG). We recommend using a part of your locomotive’s cab number.
7. Press SET. The non-powered locomotive’s horn will sound if the RailSounds sound system is on.
8. Slide the Command reverse unit switch back to the RUN position.

The non-powered locomotive’s ID# has been set. Be sure to record the new ID# for your reference.
TrainMaster Command Control operations

Building a lash-up

TrainMaster Command Control allows you to couple your Command Control-equipped locomotives together, forming a multiple unit lash-up. Just like with the real railroads, lash-ups allow you to pull longer trains and climb steeper grades. You will find that the lighting operates prototypically—the lead unit’s headlight and interior lights are illuminated when the train is in forward, and the rear unit’s headlight and interior lights are on when the train is in reverse. For more information, refer to your TrainMaster Command Control manual.

To build a lash-up, assign a unique engine (ENG) ID# to each unit. Arrange the units on the track and couple them together. The Command reverse unit switch must be set to RUN. See Figure 1 on page 8.

**Note!** If you press a wrong button, start over with that particular unit. The assignment isn’t saved until you press SET.

**Note!** The CrewTalk/TowerCom and SignalSounds features of RailSounds are disabled on locomotives that are programmed as middle or rear units in a lash-up. Only the diesel locomotive sounds are active.

Start with the lead (front) unit

1. Press TR and enter your lash-up ID# (1-9) on your CAB-1 Remote Controller. No other lash-up or track should share this ID#.
2. Enter the unique ID# of the lead unit.
3. Press F.
4. Press SET on the CAB-1 Remote Controller.

Add the middle units, one at a time

1. Press TR and enter the lash-up ID# (1-9) on your CAB-1 Remote Controller.
2. Enter the unique ID# of the middle unit.
3. Press the DIRECTION button if the unit is facing rearward.
4. Press SET on the CAB-1 Remote Controller.
5. Repeat these steps for any additional middle units.

Complete the lash-up by adding the rear unit

1. Press TR and enter the lash-up ID# (1-9) on your CAB-1 Remote Controller.
2. Enter the unique ID# of the rear unit.
3. Press R.
4. Press the DIRECTION button if the unit is facing rearward.
5. Press SET on the CAB-1 Remote Controller.

You are now ready to operate your locomotive as a lash-up. Simply press TR and enter the lash-up ID#, then use your CAB-1 Remote Controller to operate your locomotives. To operate an individual unit within the lash-up, press ENG and enter the ID# for that particular unit.
If your non-powered locomotive is unresponsive to your commands in the TrainMaster Command Control environment, we recommend that you follow this procedure to reset your locomotive.

1. Slide the Command reverse unit switch to the PGM position.
2. Plug in and connect your Command Base.
3. Place your non-powered locomotive on the track, then power up the track.
4. Press ENG and enter the locomotive’s ID#.
5. Press SET.
6. Press ENG and enter the locomotive’s ID# again.
8. Enter 2 for this particular locomotive.
9. Turn off track power and wait ten seconds.
10. Slide the Command reverse unit switch back to the RUN position.

At this point, your non-powered locomotive has been reset. Restore power to the track and operate the locomotive as usual. Be sure to use the ID# entered in Step 4.
In conventional mode operation, simply couple your LEGACY F3 B-Unit to a powered A-Unit locomotive and apply AC voltage to your track.

In conventional mode, your LEGACY F3 B-Unit will ramp its run levels up and down based on speed, or when in neutral, by track voltage. The BELL and HORN buttons on your transformer will work as expected. Note that the LEGACY F3 B-unit LEGACY Quilling Horn is only available under CAB-2 control. Dialog can be triggered by a short horn blast while the engine is stopped.

If there are other RailSounds engines on the same track section, horn, bell and dialog may sound simultaneously from multiple engines. To prevent this, turn down the volume controls on any engines you wish to silence.

For more about operating your LEGACY F3 B-Unit in the LEGACY environment, see pages 4-7 of this manual.

We recommend that you operate your non-powered LEGACY RailSounds Super Bass F3 B-Unit in the Legacy Control environment to access all of the LEGACY RailSounds features.
Conventional transformer operations

Operating your non-powered locomotive in the conventional environment

Your non-powered locomotive is capable of operating in the conventional environment with nothing more than a standard Lionel alternating-current (AC) transformer.

Use the HORN and BELL buttons on your transformer to activate these features. If your transformer is not equipped with these controls, separate buttons are available (610-5906-001). Please refer to page 23 of this manual.

Note! Couple your F3 B-unit to a powered locomotive for operation in the Conventional environment.

1. Place your locomotive on Lionel or Lionel-compatible O-31 or larger track.
2. Power your locomotive at 12-18 volts with your alternating current (AC) transformer.

Caution! Power your locomotive with an alternating-current (AC) transformer only. Powering your locomotive with a direct-current (DC) transformer, or in excess of 19 volts AC, may result in damage to sensitive electronic components. 60 HZ AC is required. Do not power with 50 HZ AC.

3. Wait three to eight seconds as your locomotive determines whether it is in a conventional environment or a TrainMaster Command Control environment.
When the locomotive has determined that a TrainMaster Command Base is not connected to the track, the locomotive’s headlight will illuminate and the LEGACY RailSounds sound system will start. You are ready for operation in the conventional environment.

4. Move ‘em out!
Press the DIRECTION button on your transformer to sequence your powered locomotive through the repeating pattern of operations: forward, neutral, reverse, neutral, and so on. You may also briefly turn off track power to advance the locomotive to the next operating state. Adjust the throttle until your locomotive moves at your desired speed.

Note! 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.

Note! We recommend that you operate your powered LEGACY diesel locomotive with The Odyssey II Speed Control System turned on. You may choose to operate your powered locomotive without speed control by placing the Odyssey II Speed Control System switch to the “NO ODY” position.

Use the HORN and BELL buttons on your transformer to activate those features. Refer to page 23 if your transformer is not equipped with those buttons. Adjust the volume using the volume control knob located on the underside of the non-powered locomotive. Refer to Figure 1 on page 8.
Conventional transformer operations

Uncoupling your non-powered locomotive in the conventional environment

Your non-powered locomotive features an ElectroCoupler on the rear that is released by remote control at any point around your layout in the TrainMaster Command Control environment.

In the conventional environment, the ElectroCoupler will not open manually or by using a Remote-Control Track section. To couple your locomotive in the conventional environment, you must rely on a piece of rolling stock equipped with a magnetic coupler. Simply release the magnetic coupler and couple the rolling stock to the locomotive, even if the ElectroCoupler is closed.

Keep in mind that you may still make use of Lionel Remote-Control Track sections (6-65530 for O gauge; 6-12746 and 6-65149 for O-27 gauge; and 6-12020 and 6-12054 for FasTrack layouts) with the magnetic couplers on the rolling stock. Place the trigger disc on the magnetic coupler over the central coil on the Remote-Control Track section, then press UNCOUPLE on the track section’s controller. As illustrated in Figure 2, the magnetic field pulls the disc downward, releasing the coupler.

Figure 2. Magnetic coupler operation
LEGACY RailSounds sound system operations

**Note!** Couple your non-powered locomotive to a powered locomotive to experience all of the features of the LEGACY RailSounds sound system.

Your non-powered locomotive is equipped with the Lionel LEGACY RailSounds sound system, the most realistic model railroad sound system in the world. The LEGACY RailSounds sound system brings the sounds of the railroad to your layout through high quality sound recordings of real locomotives.

When you operate your locomotive in the conventional environment, you get the realistic sounds of the diesel motor, which automatically revs up as the speed of the locomotive increases. You can sound the locomotive’s horn or activate the ringing of the mechanical bell. CrewTalk dialog and TowerCom announcements are triggered with the horn button on your controller. When you are through with operations and power down the track, your locomotive’s LEGACY RailSounds sound system starts a realistic shutdown sequence (a nine-volt alkaline battery is required, see Figure 3 on page 21).

When you operate your locomotive in the TrainMaster Command Control environment, you get full control of the LEGACY RailSounds sound system. In addition to the horn and bell sounds, the locomotive’s RPM sounds automatically rev up, and you can also set a particular RPM level using your CAB-1 Remote Controller. In the Command Control environment, the release of the ElectroCouplers is accompanied by a coupler release sound. Use the BRAKE button, and listen for the sound of squealing brakes. You can also trigger CrewTalk dialog and TowerCom announcements, which simulate the interaction between the locomotive crew and the dispatcher. Whenever you choose to shutdown your locomotive, the realistic shutdown sequence commences. A nine-volt alkaline battery is required for the shutdown sequence, if track power is turned off. Refer to Figure 3 on page 21.

Operating your locomotive with the LEGACY Control system provides you control of all the features mentioned above as well as access to the new quilling horn and single hit bell sounds.
LEGACY RailSounds sound system operations

Installing the battery

While the LEGACY RailSounds sound system is powered through the track, we recommend that you install a nine-volt alkaline battery to prevent the sound system from shutting down during track power interruptions (for example, at a switch or a dirty section of track). Follow these steps and refer to Figure 3 as you install the battery.

**Note!** If the LEGACY RailSounds sound system turns off during interruptions in track power, you may need to replace the battery.

1. Remove the body screws from the front and rear of the body, then lift the body off the frame.
2. Remove the protective cover from the battery harness.
3. Snap the battery harness onto the nine-volt alkaline battery’s terminal.
4. Slide the battery into the battery holder.
5. Replace the body, securing it with the two body screws. Be sure that no wires are pinched between the body and the frame.

**Note!** To prevent damage to the body, do not overtighten the body screws.

![Figure 3. Battery installation](image-url)
**LEGACY RailSounds sound system operations**

**Using the LEGACY RailSounds sound system in the conventional environment**

**Note!** Couple your F3 B-unit to a powered locomotive for operation in the conventional environment.

When you first power up your non-powered locomotive, you will hear the sounds of the locomotive at rest. As the locomotive set moves, the RPM sounds automatically increase with the locomotive’s speed. In the conventional environment, the horn and bell sounds are activated by your transformer controls.

To silence the motor sounds, slide the LEGACY RailSounds sound system switch located on the underside of the locomotive to the SS position (see Figure 1 on page 8 for the location of this switch) before you power up the locomotive or after the locomotive has been powered down for a minimum of ten seconds. The horn and bell sounds will still be active. To adjust the volume, use the volume control knob located on the underside of the locomotive. Refer to Figure 1 on page 8.

**Note!** When the LEGACY RailSounds sounds system switch is in the SS position, the CrewTalk dialog and TowerCom announcements are inactive.

**Note!** For proper operation of the LEGACY RailSounds sound system during track power interruptions and for the locomotive shutdown sequence, you must install a nine-volt alkaline battery. Refer to Figure 3 on page 21.

In the conventional environment, you will experience several features of the LEGACY RailSounds sound system.

- **Eight levels of diesel motor RPM.** The level of diesel motor RPM automatically varies with your throttle adjustments.
- **MultiHorn.** A different horn sound at different speeds—a LEGACY RailSounds sound system exclusive.
- **Mechanical bell.** Press BELL on your transformer to begin the effect, then press BELL a second time to discontinue the effect.
- **CrewTalk dialog and TowerCom announcements.** CrewTalk dialog is triggered by your transformer’s HORN button. See page 24.
- **Reverse unit reset sound.** Power down your track, wait three seconds, and listen for the air-release sound—that’s the locomotive telling you that its Lionel Command reverse unit has reset to forward. Because the track is powered down, a nine-volt alkaline battery is required for this feature. Refer to Figure 3 on page 21.
- **Shutdown sequence.** When you turn off track power, you have two seconds to power up again after you hear the reverse unit reset sound. If you do not restore power, you will hear the realistic diesel shutdown sequence. Because track power is off, a nine-volt battery is required for this sequence to function. Refer to Figure 3 on page 21.
**LEGACY RailSounds sound system operations**

**Installing a Lionel Sound Activation Button for conventional operation**

If your transformer lacks **HORN** and **BELL** buttons, you will need to install Lionel no. 610-5906-001 Sound Activation Buttons (available separately) to activate the locomotive’s horn and bell sounds.

Connect the buttons as shown below. Be sure that all track power passes through the Sound Activation Button(s).

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**For AC transformers lacking a bell button**

![Diagram of Lionel no. 610-5906-001 Sound Activation Button for activating the bell]

**For AC transformers lacking bell and horn/whistle buttons**

![Diagram of Lionel no. 610-5906-001 Sound Activation Button for activating the horn and bell]
LEGACY RailSounds sound system operations

Activating the CrewTalk dialog and TowerCom announcements in the conventional environment

In the conventional environment, CrewTalk dialog and TowerCom announcements are triggered by short horn blasts and vary with the state of the locomotive.

- If the locomotive has been stopped for less than 15 seconds, a short horn blast triggers a “please standby” dialog.
- If the locomotive has been stopped for longer than 15 seconds, a short horn blast triggers a “cleared outbound” dialog.
LEGACY RailSounds sound system operations

Using the LEGACY RailSounds sound system in the TrainMaster Command Control environment

**Note!** Couple your F3 B-unit to a powered locomotive for operation in the Command Control environment.

To access the LEGACY RailSounds sound system features listed below, you must operate your non-powered locomotive in the TrainMaster Command Control environment. The CAB-1 Remote Controller/Command Base is required to activate these features. Refer to pages 9-16 to learn how the LEGACY RailSounds sound system is integrated into TrainMaster Command Control operations.

**Note!** For proper operation of the LEGACY RailSounds sound system during track power interruptions and for the locomotive shutdown sequence, you must install a nine-volt alkaline battery. Refer to Figure 3 on page 21.

In the TrainMaster Command Control environment, you will experience the features of the LEGACY RailSounds sound system listed below.

- **Eight levels of diesel motor RPM.** Your CAB-1 Remote Controller throttle automatically determines the level of the diesel motor RPM. You may also set the RPM sounds to a particular level manually using your CAB-1 Remote Controller.

- **MultiHorn.** A different horn sound at different speeds—a LEGACY RailSounds sound system exclusive.

- **Mechanical bell.** Press BELL on your CAB-1 Remote Controller to begin the effect, then press BELL a second time to discontinue the effect.

- **Squealing brakes.** Press the BRAKE button and listen for the squealing of the locomotive’s brakes as the locomotive slows down.

- **Coupler release sounds.** Use your CAB-1 Remote Controller to release an ElectroCoupler, and you get the sounds of the coupler opening.

- **CrewTalk dialog and TowerCom announcements.** Use your CAB-1 Remote Controller to trigger conversations between the dispatcher and locomotive engineer. You’ll hear “hold for clearance,” “cleared for departure,” and many other exchanges. See page 26.

- **Shutdown sequence.** When you turn off track power, you have two seconds to power up again after you hear the reverse unit reset sound. If you do not restore power, you will hear the realistic diesel shutdown sequence. Because track power is off, a nine-volt alkaline battery is required for this sequence to function. Refer to Figure 3 on page 21. You may also trigger the shutdown sequence without powering down the track using the **AUX1, 5** command when the locomotive is stopped and the diesel RPM sounds are at their lowest level.
LEGACY RailSounds sound system operations

Activating the CrewTalk dialog and TowerCom announcements in the Command Control environment

With the LEGACY RailSounds sound system, CrewTalk dialog and TowerCom announcements feature a variety of brief radio conversations between the engineer and dispatcher. All dialog is intelligible, and each comment is followed by at least one automatic response.

CrewTalk dialog is an engineer-initiated radio conversation with the dispatcher. TowerCom announcements are a dispatcher-initiated radio conversation with the engineer. Be sure to listen for the different combinations of words and phrases that comprise these exchanges.

Refer to Table 1 below for the dialog commands. The dialog in the table provides examples of the conversations you can trigger. The actual phrasing will vary.

Note! The CrewTalk dialog and TowerCom announcements occur only when the locomotive is stopped.

<table>
<thead>
<tr>
<th>Locomotive</th>
<th>Commands</th>
<th>Example dialog</th>
</tr>
</thead>
</table>
| Stopped    | AUX1, 2  | Crew: Can we go?  
             |           | Tower: No, please standby |
|            | AUX1, 7  | Tower: Stand by for clearance.  
             |           | Crew: Roger. |
|            | 2        | Crew: Can we go?  
             |           | Tower: Roger, you are clear. |
|            | 7        | Tower: You are clear for departure.  
             |           | Crew: Roger, we are clear. |
|            | AUX1, 5  | Crew: Signing off!  
             |           | Shutdown sequence |

Table 1. CAB-1 Remote Controller dialog commands
Replacing your non-powered B-unit's lamp

Your non-powered F3 B-unit is illuminated by one lamp, Lionel part no. 610-4584-300. During the course of normal operations, you may find that this lamp requires replacement. Replacement lamps are available at your authorized Lionel Service Center or from Lionel Service in Chesterfield, Michigan.

1. Remove the body screws from the front and rear of the body, then lift the body off the frame.
2. Gently pull the expired lamp straight up and out of the socket. Refer to Figure 6.
3. Press the prongs of the replacement lamp into the socket. Be sure that the connection is tight.
4. Replace the body, securing it with the two body screws. Be sure that no wires are pinched between the body and the frame.

**Note!** To prevent damage to the body, do not overtighten the body screws.

Lionel part no. 610-4584-300

Figure 6. Lamp replacement
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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