Lionel
Rocket Launcher
Owner's Manual

TRAINmaster
C·O·M·M·A·N·D

LIONEL
Plug
Expand
Play

Caution! This accessory features a launching rocket. Be sure to keep clear of the rocket when it is on the launch pad. Children should be supervised by an adult when operating this accessory.

Thank You

Thank you for your purchase of the Lionel Rocket Launcher! Featuring a lighted motorized gantry that positions the rocket on the launching pad, this accessory allows you to relive the early days of America's space program. This classic accessory has been enhanced with smoke, red flickering booster LEDs, and realistic sound effects with dialog for a more realistic launch. It also features Plug-Expand-Play control and Command Control for use with a Lionel CAB controller. Let the countdown begin!

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Rocket Launcher inventory of parts

- Base platform
- Lighted Motorized Gantry
- Rocket
- Plug-Expand-Play Controller
- Instruction Manual

Table of contents

Plug-Expand-Play

This revolutionary accessory system simplifies the setup and operation of your favorite accessories. Plug-Expand-Play accessories easily connect to your layout for power using a standardized 3-pin cable that connects directly to a Plug-Expand-Play Lock-on track section. There are separate-sale cables that allow you to expand your system to meet your needs.

TrainMaster Command Control

Devices equipped with the classic TrainMaster® Command Control system are controlled by commands from your CAB-1 or CAB-2 Remote Controller. Motion, basic sounds, and other control actions are all at your fingertips as you walk around your layout.

Wiring your accessory to a Plug-Expand-Play lock-on

Your Plug-Expand-Play accessory connects to either a Plug-Expand-Play lock-on (6-81313) or a Plug-Expand-Play power block lock-on (6-81314) with the 3-pin male connector that is attached to its base. Simply plug this connector into the lock-on and apply track power. To turn the accessory OFF, unplug the 3-pin connector from the lock-on or turn off the track power. See figure 1 for wiring.

Note! The control box is required for operation of this accessory.

Note! For Command Control, the Plug-Expand-Play ground must be connected to the command base. For example, if an auxiliary power supply was used that the command base isn't connected to, you wouldn't have command control of the Rocket Launcher.
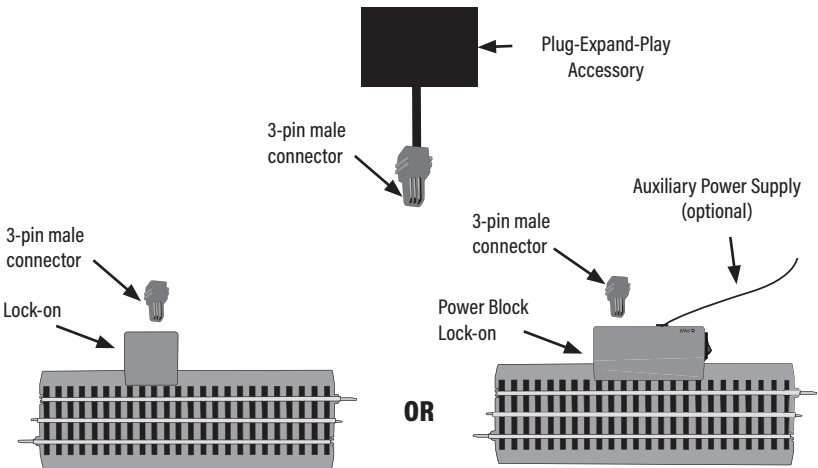

Figure 1. Plug-Expand-Play wiring

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Lionel®, FasTrack®, LEGACY®, LEGACY® Control System, Lockon®, TMCC®, CAB-1® Remote Controller, Plug-Expand-Play®

Adding smoke fluid to your Rocket Launcher

Before you operate your Rocket Launcher, be sure to add smoke fluid to the smoke unit. Never operate this accessory without smoke fluid. To add the fluid, squeeze the sides and lift up the block house as illustrated in Figure 2. Remove the small plug and add 8-10 drops of smoke fluid. Add several more drops as smoke production decreases.

Caution! Never operate this accessory without smoke fluid to avoid damage to the smoke unit.
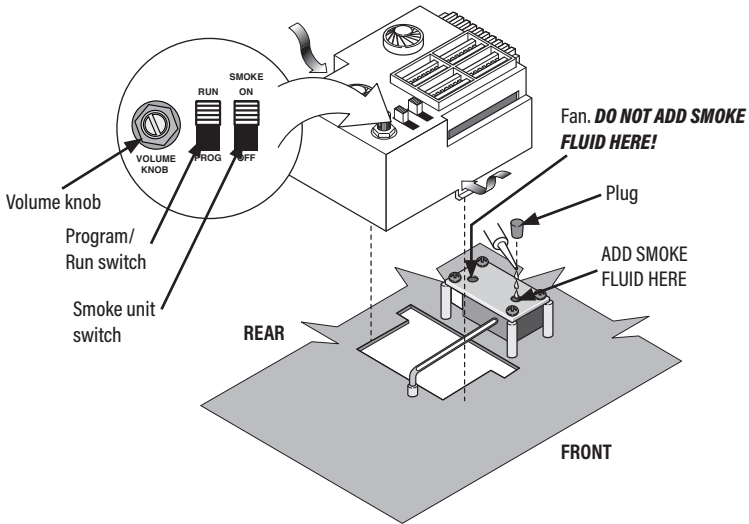

Figure 2. Smoke unit location

Connecting the Plug-Expand-Play controller to the Rocket Launcher

Set up your controller to operate the Rocket Launcher's gantry crane and begin the countdown. As illustrated in Figure 3, simply connect the Plug-Expand-Play controller with the plugs on the wires.

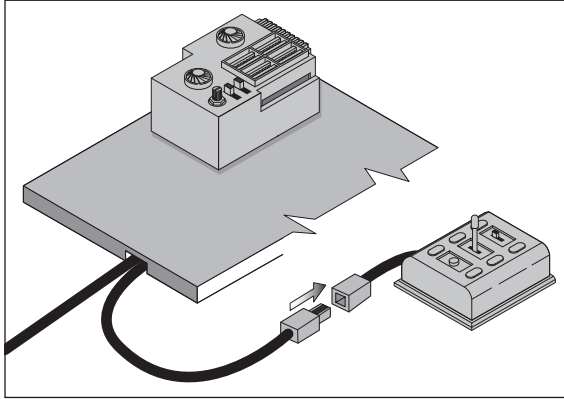**Note!** The plugs are "keyed" to fit together only one way.

Figure 3. Controller connection

Installing your Rocket Launcher

Place the Rocket Launcher on your layout. Choose a location that is approximately 16" x 10". Next, position the gantry crane on its track so that the post in the platform is inserted into the slot at the base of the gantry. Be sure that the side of the gantry with the rounded openings in the platform faces the launch pad.

Set up the derrick at the top of the gantry. Carefully raise the mast until it snaps into place. It should now be in a vertical position as illustrated in Figure 5. To lower the mast, gently bend the mast lock away from the base to pull the locking pin out, but be careful not to bend the mast lock excessively. Finally, check that the winch lines are properly threaded through the pulleys.

Note! To avoid damaging your mast, do not raise it beyond its vertical position.
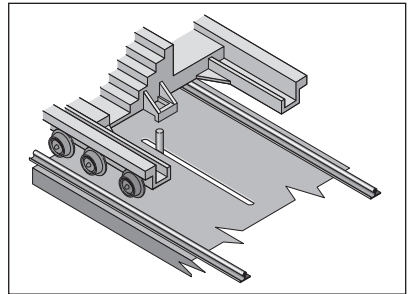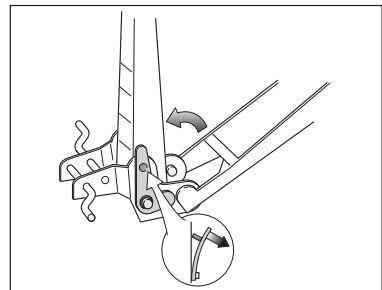

Figure 4. Gantry positioning

Figure 5. Derrick set up

Powering your Rocket Launcher

Your Rocket Launcher is designed to work with either AC or DC power.

AC Power: Use an alternating-current (50-60Hz AC) transformer for Legacy, Command Control, Bluetooth, or Conventional control. Powering your accessory in excess of 19 volts AC may result in damage to sensitive electronic components.

DC Power: Use a DC transformer for Plug-Expand-Play control only. Your accessory is **NOT** designed to operate with Command Control while using DC power. Powering your accessory in excess of 19 volts DC may result in damage to sensitive electronic components.

LEGACY controller operations

Your Rocket Launcher is compatible for operation with the Lionel LEGACY system. It will also operate on the original Lionel TrainMaster System (TMCC1) and also on the LEGACY Cab-1L / Base-1L operating system.

Your commands are sent by the Remote Controller to the Command Base, which broadcasts a radio frequency that is distributed through the outer rails of the track to your accessory. Your accessory will not respond until it recognizes its unique ID#, so you can operate multiple Command-equipped accessories on the same track at the same time.

Note! Due to technical differences, we recommend using CAB1 mode with the Cab2 controller for optimum Command Control operation. The original Cab1 and Cab1-L also work very well with this accessory.

1. **Turn off track power, and then plug in the LEGACY Base and connect it to the track.**

2. **Plug your Rocket Launcher into a Plug-Expand-Play Lock-on. If the Lock-on has a power switch, make sure it is on.**

3. **Increase track power voltage to full power (no more than 19 volts AC).** If a circuit breaker trips when you turn on the Lionel power supply, make sure the track is free of all metals that may cause a short circuit.

4. **As illustrated in Figure 6, press ENG and 1 (or your selected ENG ID#) to address the locomotive with your LEGACY CAB-2 Remote Controller.**
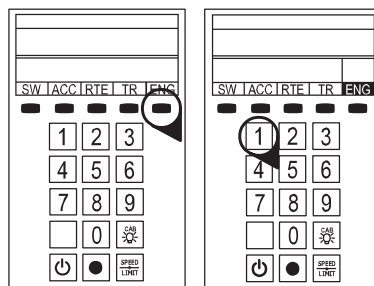

Figure 6. LEGACY engine selection

5. **After selecting the ENG ID# on the Cab 2 remote, your remote needs to be configured for TMCC or CAB1 control for the accessory.** Select the ID# of your accessory as before, then press the INFO button on the top right of your CAB-2 remote.

Figure 7. CAB-2 info button

Press the SCROLL button on the top left of the CAB-2 row until the CONTROL tab is selected. Press the button that corresponds to the TMCC or CAB1 (preferred) Mode selection on the screen.
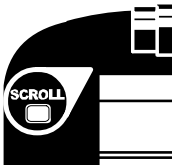

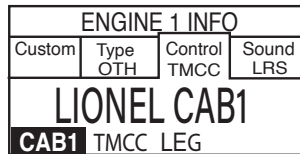Figure 8a. CAB-2 scroll button

Figure 8b. CAB-2 control screen

6. Press the SCROLL button once more to select the SOUND tab. Press the button that corresponds to RS5 to enable RailSounds 5 Mode. This will also enable the icons on the keypad for a more user-friendly experience. Congratulations! You have now configured your CAB-2 remote to run your accessory in CAB1 (preferred) or TMCC mode. Enjoy all the features your locomotive has to offer.

7. **Press the Start Up key on your LEGACY CAB-2 Remote, shown in Figure 9. Then, let the countdown begin!** Your rocket launcher's sound will start up, and the accessory-specific touch screen buttons will populate the remote. For more information on operating your accessory with the LEGACY system, please refer to the LEGACY section of this manual. Additional information is also found in the LEGACY System Manual, available online at **www.lionel.com**.
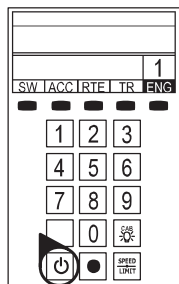

Figure 9. LEGACY start-up

TrainMaster Command Control (TMCC/Command Control) operations

For operation in the TrainMaster Command Control environment, you need a TrainMaster Command Base (6-12911) and a CAB-1 Remote Controller (6-12868). Refer to your TMCC System Manual for complete information.

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

1. **Turn off track power, and then plug in the Command Base and connect it to the track.**

2. **Plug your Rocket Launcher into a Plug-Expand-Play Lock-on. If the lock-on has a power switch, make sure it is on.**

3. **Increase track voltage to full power (no more than 19 volts AC).** If a circuit breaker trips when you turn on the Lionel power supply, check to make sure the track is free of all metals that may cause a short circuit.

4. **Press ENG and the programmed ID to address your Rocket Launcher with your CAB-1 Remote Controller.**

5. **Let the countdown begin!**

Assigning your Rocket Launcher a new ID#

For operation in the Command Control environment, you will want to give your Rocket Launcher a unique ID#. Your accessory will respond to commands associated with its ID# while all other accessories will disregard these commands. ***This procedure is not necessary for Plug-Expand-Play operation.***

1. **Slide the program run switch on the smoke generator cover to the PROG position. See Figure 2 on page 4.**
2. **Plug the launcher into a Plug-Expand-Play lock-on.**
3. **Connect the Command Base and plug it in.**
4. **Power up the track.**
5. **Press ENG on the CAB-1 or CAB-2 remote.**
6. **Enter the unique ID#. Choose any number from 1 to 98 that has not been assigned to another locomotive or accessory (ENG).**

   Note! All Command Control enabled locomotives respond to ENG 99. We recommend that you reserve ID# 99 as a "universal" ID#.

7. **Press SET. The launcher will emit a beep sound.**
8. **Slide the program run switch back to the RUN position.**

   The Rocket Launcher's ID# has been set. Be sure to record the new ID# for your reference.

Operating the Rocket Launcher

All systems are "Go" for launch! Complete these final preparations, then start the countdown.

Caution! To prevent damage to the smoke unit, do not operate the Rocket Launcher without smoke fluid or turn the smoke unit OFF.

1. Suspend the rocket from the crane's magnet and press the launching mechanism down until it locks as illustrated in Figure 10.

2. Maneuver the gantry toward the rocket platform using the GANTRY lever on the PEP controller or by using the red throttle knob on the CAB1 / CAB1-L or CAB2 controllers. Key 3 and Key 6 of the CAB controllers also control forward / reverse gantry movement.
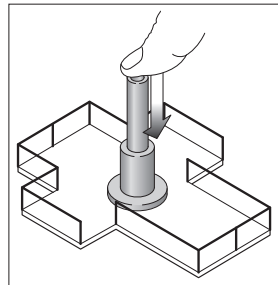

Figure 10. Arming launcher

3. Once the rocket is in position, stop the gantry movement by releasing the lever (PEP control) or by using the red knob, reset (Key 0) or the DIR change button (CAB controllers). Or simply wait for the limit switch to stop movement.

4. Turn the cranks to lower the rocket onto the launch pad, then move the gantry back. To identify the cranks, refer to Figure 12.

> **Note!** If the gantry is at the forward limit switch when a launch is begun, it will automatically be retracted to the rear limit switch location.

Crank 1 will raise and lower the magnet.

Crank 2 will raise and lower the boom.

5. Start the countdown by pressing the Launch button on the PEP controller, or by pressing and holding Aux1 for more than 3 seconds on the CAB1, CAB1-L or CAB2 controllers.

> **Note!** Press and hold the Launch button on the Plug-Expand-Play control box to shutdown launcher. Press & hold while shutdown to start in T-Minus 15 Mode (short launch).

Figure 11. Plug-Expand-Play control box

Crank 2
Raises and lowers the boom

Crank 1
Raises and lowers the magnet

Figure 12. Derrick cranks

Press the Launch button (PEP controller) if you wish to abort the launch during the launch sequence. The red triangular button or the Key 0 (Reset) can be used to abort a launch if using one of the CAB remotes.

> **Caution!** Keep clear of the rocket during launch to avoid injury.

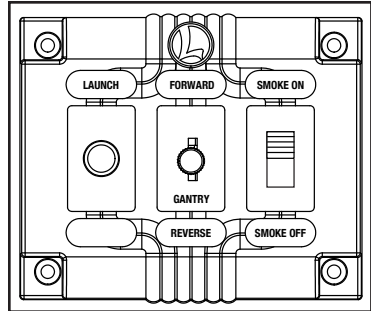**6.** Get ready for another launch! Repeat the steps above.
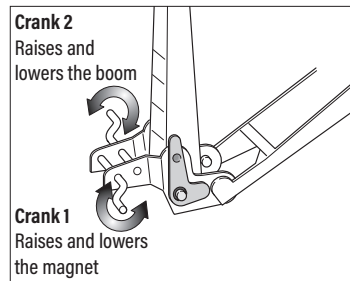
LEGACY controller operations

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
Do not use - keep in upper position while operating the rocket launcher.

AUX-1
Hold for > 3 seconds to start full (long) launch sequence. To shorten to a Medium launch sequence, press the Rear Coupler button after holding Aux 1.

Emergency Halt Button
Aborts active launch. Also stops gantry, if moving.

AUX-2
Toggles all lights on/off, except lights that are wired to track power.

Velocity Throttle
Throttle control over gantry. Turn clockwise for forward movement; counter-clockwise for reverse. Also used to navigate through info/options.

Set Button
Used to set launcher address.

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

CTC Button
Press and hold to turn your remote on and off. Tap this button to enter the remote and base options. Tap it again to return to the main screen.

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

Warning Sound Controller
Pull down to sound warning siren. Push up and release to trigger warning klaxon.

Multi Controller (For Legacy mode)
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 selection.
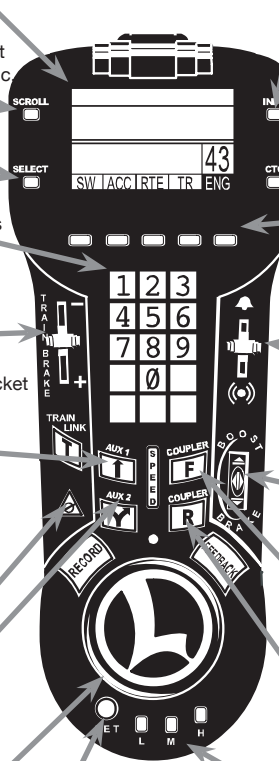
Front Coupler Button
Immediately launches the rocket.

Rear Coupler Button
Starts launch sequence at T-minus 15.

Low, Medium, High Momentum Buttons
Used to select the desired momentum of your addressed engine/train/accessory. *Use only the L setting for the rocket launcher*

LEGACY controller 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, available online at www.lionelsupport.com.

The Velocity Throttle

The Velocity Throttle (the red rotary knob on the bottom of your Lionel remote) is used to start gantry movement. Use it by simply turning it clockwise (forward) or counter-clockwise (reverse).

The Multi-Controller

Direction

The direction of your gantry toggles between forward and reverse at the touch of the Multi-Controller. Press the center of the Multi-Controller once, and your gantry will change directions and the engine will stop until you throttle up again in the new direction.

Note! The Direction Control is mainly used in Legacy mode because it does not support using the throttle knob in counter-clockwise mode for reverse.

Boost & Brake

Boost and brake are not needed for CAB1 or TMCC modes, but they do function in Legacy mode. Brake will stop the gantry if it is moving and boost will move it in whatever direction it is currently set for. The gantry will stop when you release the boost control.

The Train Brake Slider

The Train Brake slider should be kept in the upper-most position (disengaged, closest to the '-' end) while using the rocket launcher.
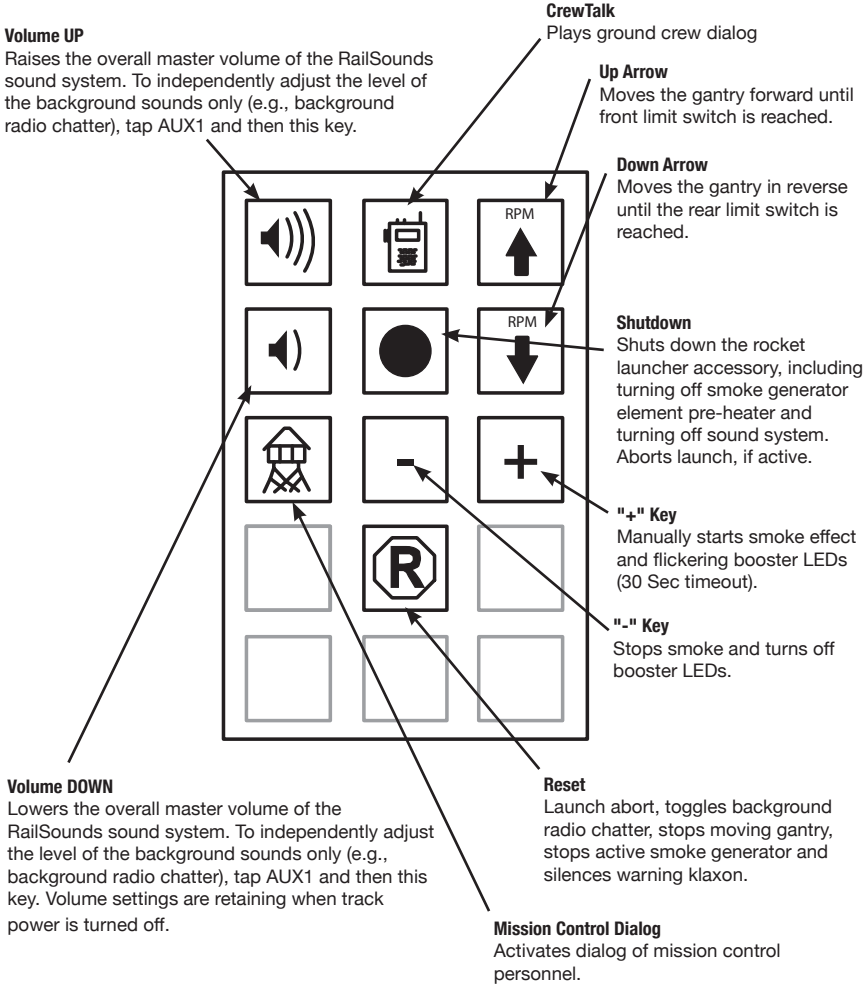
TRAIN BRAKE INDICATOR

Warning Sound Controller

Sliding the Warning Sound Controller up to the Bell position will toggle the klaxon sound on or off. Silding it to the horn position will trigger a warning siren.

LEGACY controller operations

RailSounds sound system

CrewTalk
Plays ground crew dialog

Volume UP
Raises the overall master volume of the RailSounds sound system. To independently adjust the level of the background sounds only (e.g., background radio chatter), tap AUX1 and then this key.

Up Arrow
Moves the gantry forward until front limit switch is reached.

Down Arrow
Moves the gantry in reverse until the rear limit switch is reached.

Shutdown
Shuts down the rocket launcher accessory, including turning off smoke generator element pre-heater and turning off sound system. Aborts launch, if active.

"+" Key
Manually starts smoke effect and flickering booster LEDs (30 Sec timeout).

"-" Key
Stops smoke and turns off booster LEDs.

Volume DOWN
Lowers the overall master volume of the RailSounds sound system. To independently adjust the level of the background sounds only (e.g., background radio chatter), tap AUX1 and then this key. Volume settings are retaining when track power is turned off.

Reset
Launch abort, toggles background radio chatter, stops moving gantry, stops active smoke generator and silences warning klaxon.

Mission Control Dialog
Activates dialog of mission control personnel.

When adjusting the overall volume, you'll hear a single klaxon sound that gets louder or softer with each volume adjustment. When the volume is at maximum, additional button presses have no effect and won't play the klaxon. When adjusting the background sounds (**AUX1**, then a volume key) you'll hear the volume change without a single klaxon hit.

Note! Volume can also be controlled via the volume control knob mounted on the smoke generator housing.

TrainMaster Command Control operations

CAB-1/CAB-1L Remote Controller commands

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

COUPLER F — Immediately launches the rocket.

COUPLER R — Activates the Short (T-Minus 15) launch sequence.

AUX 1 — Short press (CAB-1 only) - Activates numeric keypad.

Long press > 3 seconds - Activates Long launch sequence.

AUX 2 — Toggles all lights on/off, except lights that are wired to track power.

(Red knob) — Clockwise - moves gantry forward (closer to launch pad)

Counter-clockwise - moves gantry backwards (away from launch pad).

WSTL / HRN — Activates the warning siren.

BELL — Toggles the klaxon sound on and off.

DIR — Stops the gantry, if it was moving

BOOST — Not used.

BRAKE — Not used.

(HALT) — Aborts launch, if active. Stops gantry, if moving.

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. After you press the **AUX1** button, you will be able to press any numbered button until you address a different product.

Note! The Cab1-L does not require Aux1 to enable the numeric keys.

0 — Reset (aborts launch, stops gantry movement, toggles background chatter). Wakes the Rocket Launcher from a shutdown state.

TrainMaster Command Control operations

CAB-1 Remote Controller numeric keypad commands continued

1 Raises the overall master volume of the sound system. To independently adjust the level of the radio chatter, tap **AUX1** and then this key.

When adjusting the overall volume, you'll hear a single klaxon hit that gets louder or softer with each volume adjustment. When the volume is at maximum, additional button presses have no effect and won't play the klaxon. When adjusting the background sounds (**AUX1**, then a volume key) you'll hear the volume change without a single klaxon hit.

2 Activates ground crew dialog.

3 Moves gantry forward until limit switch is reached.

4 Lowers the overall master volume of the LEGACY RailSounds sound system. To independently adjust the level of the background sounds only (e.g., background radio chatter), tap **AUX1** and then this key. Volume settings are retaining when track power is turned off.

5 Shuts down the rocket launcher. Smoke and sound system are deactivated. Aborts launch, if active.

6 Moves gantry backward until limit switch is reached.

7 Activates Mission Control (Concord) dialog.

8 Turns the smoke unit off.

9 Turns the smoke unit and booster flicker LEDs on if the smoke unit switches are in the ON position. Be sure to add smoke fluid before turning on the smoke unit to prevent damage to your rocket launcher.

Note! **AUX1, 8** and **9** function only if the launcher's smoke unit switches are in the ON position.

Replacing the LEDs

Your accessory is illuminated by several LEDs that are expected to last for the life of the accessory. The LEDs are not user serviceable. If service is required, we recommend that you have your accessory serviced at a Lionel Factory Trained Authorized Service Station or Lionel Service.

Note! The moving gantry features spotlight LEDs that are powered via the gantry's two rails. Use caution to not short these rails together to avoid damage to the LEDs and/or the accessory's electronics.

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.)