Congratulations!

Congratulations on your purchase of the Lionel #213 Lift Bridge! With the help of two counterweights, the center section of track is raised between the two towers at the press of a button. Each tower features an illuminated warning light mounted at the top.

**Note!** The #213 Lift Bridge was designed for use with O gauge track only.

**Caution!** Be sure to observe the following:

- Never operate the Lift Bridge with a locomotive or rolling stock on the bridge section to avoid damaging to the accessory.
- Keep fingers and all other objects clear of the gears when the bridge is in operation.
- Be sure to install your bridge in the middle of an insulated track section. Be careful to stop your trains far enough away to avoid collisions with the counterweights or bridge.

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Installing the Lift Bridge

Your Lift Bridge was designed for use with O gauge track. As illustrated in Figure 1, join the track sections together by inserting the track section rail pins into the openings at the end of the tower section rails. For good electrical contact, pins must be completely inserted so that the track joints are tightly fitted together. Secure the Bridge to your layout by driving screws through the openings in the base before you proceed. Refer to Figure 1.

Figure 1. Track attachment
Connecting the bridge section and the counterweights

Two cables connect each counterweight to the bridge. Each cable runs over a large drive pulley. Follow these steps and refer to Figures 2 and 3 as you make the cable attachments.

1. Remove the four locking screws in the track bed. Refer to Figure 2.

Caution! Take care to avoid bending the drive shaft and the two support rods that run between the towers. Only remove the locking screws after the towers have been secured to your layout to maintain the proper alignment.

Figure 2. Locking screws
Connecting the bridge section and the counterweights (continued)

2. Attach one cable to each of the four corners of the center bridge section.
   Insert the end of the cables and the brass bead into the larger hole, then slide the wire down into the smaller hole.

3. Hold the bridge section up against the horizontal support rods that run between the towers.
   You may find it easiest to rest the bridge section on a stack of boxes or books placed between the towers.

4. Run the cables over the drive pulleys and down through the towers.

5. Place a counterweight on the track sections below each tower and connect a cable to each metal bracket.
   Insert the end of the cables and the brass bead into the larger hole in the side of the bracket, then slide the wire down into the smaller hole on top.

6. Be sure that each cable runs through the groove in the center of its pulley.

7. Install the warning light posts. Press the two tabs on the base of the lamp into the opening at the top of the tower. Note that the peg must be inserted into the small hole next to the opening.

**Note!** When the Lift Bridge is powered up, the warning lights are always illuminated. The warning lights are not expected to require replacement. Only an authorized Lionel Service Center should service the Lift Bridge.
Wiring the Lift Bridge

Your Lift Bridge operates best at 12-18 volts (AC). Power this accessory through the track power with a Lionel Lock-On (available separately, 6-62900) or with a separate accessory power supply. Refer to Figure 4.

1. Attach a wire to one of the POWER terminals and connect it to the Power/A terminal on your power supply OR to the #1 terminal on your Lock-On. Loosen the thumbscrews to expose the holes in the terminal posts. Insert the bare end of the wire into the hole and tighten the thumbscrew to secure the wire.

2. Attach another wire to the remaining POWER terminal and connect it to the Common/Ground/U terminal on your power supply OR to the #2 terminal on your Lock-On.

3. Attach the controller. Connect the grooved strand to the center CONTROLLER terminal, the middle strand to the center terminal, and the remaining outside strand to the right terminal.

4. Attach a Lionel Lock-On outside of the insulated track block.

5. Connect a wire to the single terminal on the Lift Bridge and attach it to the #1 terminal (center rail) on a Lionel Lock-On. When the Bridge is raised, power will be turned off to the insulated section (block) of track to prevent the trains from striking the counterweights.

Figure 4. Lift Bridge power and controller connections
Operating the Lift Bridge

You are now ready to operate the Lift Bridge. Only raise the center bridge section when it is empty, and be sure that the center section will clear any trains on the tower sections. Refer to Figure 5.

Caution! Keep fingers, clothing, and all other objects clear of the gears when the Bridge is in operation.

1. Check that the center section is clear.
2. Throw the lever to the RAISE position. Hold the lever in position until the bridge is raised; release the lever when the bridge is at the top.

Note! When the Bridge is raised, power will be turned off to the insulated section (block) of track to prevent the trains from striking the counterweights.

3. Throw the lever to the LOWER position. Hold the lever in position until the bridge is lowered; release the lever when the bridge is at the bottom.

Figure 5. Controller positions
Limited Warranty/Lionel Service

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

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

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

**In no event shall Lionel L.L.C. be liable for incidental or consequential damages.**

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you.

This limited warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Instructions for Obtaining Service

If service for this Lionel L.L.C. product is required, bring the item, along with your dated sales receipt and completed warranty information to the nearest Authorized Lionel Service Center.

Your nearest Lionel Service Center can be found by calling 1-800-4-Lionel, or by accessing our Website at www.lionel.com.

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

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

Please make sure you have followed all of the above instructions carefully before returning any merchandise for service. You may choose to have your product repaired by one of our Authorized Lionel Service Centers after its warranty has expired. A reasonable service fee will be charged.

**Warranty Information**

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

Name ____________________________

Address ____________________________

Place of Purchase ____________________

Date of Purchase ______________________

Product Number ______________________

Product Description ____________________