AUTOMATIC OPERATING ACCESSORIES
6-12709, 6-12714, 6-2117, 6-2154,
6-2162, 6-2163

INSTALLATION AND OPERATING
INSTRUCTIONS

No. 6-2117    No. 6-2163
AUTOMATIC BLOCK TARGET SIGNAL

The Automatic Single Block Signal uses a No. 153C Contactor which is activated by the
weight of the train passing over it.

INSTALLING THE 153C CONTACTOR

Slide the contactor beneath the track so that one of the track ties rests
firmly upon the top pressure plate. (See Figure A). If your layout is
fastened to a board or platform, loosen several sections of track on either
side of the contactor. The track must be able to bend under the weight
of the train. For the same reason, the contactor may not work properly
when placed next to a track switch.

WIRING

Have an adult strip one quarter inch of insulation from both ends of allour wires included with your accessory if they have not already been
stripped. Connect one end of each of the wires to a terminal on the
Block Signal, then connect the other ends to the contactor and trans-
former, as shown in the illustration. To connect the wire to the
contactor terminal clips, press down the springy upper half of the
metal loop until the lower half projects through the slot, insert the
bare wire end into the loop, and release the upper part of the clip.
Spring tension will hold the wire tight.
ADJUSTING THE CONTACITOR

After all the connections are made and transformer is on, the contactor must be adjusted so that the Block Signal operates properly. Stop the train several sections away from the contactor so that it does not press on the contactor plate. Turn the adjustment nut either up or down until the red light goes on. Then back up the adjustment nut just enough to cause the red light to go out and the green light to go on instead. When properly adjusted, the contactor will respond to a light finger pressure on the track and the red light will stay on as long as any part of the train is passing over the contactor plate. If the action of the two lights is reversed, interchange the connection to the outside posts.

LAMP REPLACEMENT

To remove lamp, spread the two pins running along the side of the lamp housing, remove the cover, and pull the bulb straight out. Do not twist the bulb. Replacement bulbs are 19-301 (R) red, and 19-302 (G) green available at authorized Lionel Service Stations.

No. 6-2154 OPERATING HIGHWAY FLASHER

The No. 2154 Highway Flasher can be placed at any grade crossing in your model railroad to give warning when a train is approaching the crossing. Attach the 154C contactor to any section of straight track as shown in Figure A. Press down spring lever. Slide contactor under the rail so that clip 'A' grips the flange of the outside rail. Snap spring clip 'B' over center rail by pressing upward. Then release spring lever so that the contact plate lies flat on top of the outside rail.

INSTALLING THE 154C CONTACCTOR

Have an adult strip one quarter inch of insulation from both ends of the three wires included with your accessory if they have not already been stripped. Connect the wires to the terminals No. 1, 2 and 3 on the Highway Flasher. Then connect the other end of each wire to its corresponding numbered terminal on the No. 154C contactor (See wiring diagram). To connect the wire to the contactor terminal clips, press down the springy upper half of the metal loop until the lower part projects through the slot, insert the bare wire end into the loop, and release the upper part of the clip. Spring tension will hold the wire tight (See illustration). When the track power is on the two lights of the signal will flash alternately as the train wheels cross the contactor. Make sure all connections are clean and tight. Keep the contact surfaces free of rust, oil and dirt.

The underneath surface of the contact plate that lies flat on top of the outside rail must be insulated from the outside rail. If one of the flasher lights remains on after the train passes, the protective insulation may be worn. If this should occur, simply put a single layer of thin cellophane or masking tape on the underneath surface of the contact plate.
INSTALLING THE 153C CONTACTOR

Refer to and repeat procedures from Automatic Block Target Signal.

ADJUSTING THE CONTACTOR

Refer to and repeat procedures from Automatic Block Target Signal.

WIRING

Have an adult strip one quarter inch of insulation from both ends of the two wires included in your accessory, if they have not already been stripped. Connect the wire to the accessory, contactor and transformer, as shown below. To connect the wire to the terminal clips, press down the springy upper half of the metal loop until the lower part projects through the slot, insert the bare wire end into the loop, and release the upper part of the clip. Spring tension will hold the wire tight.
LAMP REPLACEMENT

6-2154 OPERATING HIGHWAY FLASHER
To remove a burned out lamp, press the bulb in and twist to the left, then pull the bulb straight out. Replace with No. 53-301 (R) red lamp available at authorized Lionel Service Stations.
The 6-2154 Operating Highway Flasher DOES NOT OPERATE with trains that have PLASTIC WHEELS.

6-2162 AUTOMATIC GATE AND SIGNAL
To remove a red signal lamp from the 6-2162 Automatic Gate and Flasher, pull it straight out. Do not twist the bulb. Replace with 19-301(R) red lamp available at authorized Lionel Service Stations.

6-12709 BANJO SIGNAL
To remove a lamp from the 6-12709 Banjo Signal, pull the sign from the front of the signal, and snap the bulb from the back of the signal. Replace with 53-301 (R) red lamp available at authorized Lionel Service Stations.

6-12714 AUTOMATIC CROSSING GATE
To remove the lamp from the base of the 6-12714 Crossing Gate, invert the Gate, squeeze the two metal clips together and withdraw the entire assembly, then twist the bulb and pull straight out from the assembly. Replace the bulb with 363-300 bayonet base lamp available at authorized Lionel Service Stations.

LIONEL SERVICE

If service is required within the warranty period, bring the item to the nearest authorized Lionel Trains · Service Center along with the warranty card.
If you prefer to send it back to the factory, you must first write to Lionel Trains, Consumer Service Department, P.O. Box 748, Mt. Clemens, Michigan 48043, stating what the item is, when it was purchased and what seems to be the problem. You will be sent a return authorization and a label to assure your merchandise will be properly handled upon receipt.

CAUTION: Make sure the item is packed so as to prevent damage to the merchandise. The shipment must be prepaid and we recommend that it be insured.
Please make sure you have followed the instructions carefully before returning any merchandise for service.
This warranty gives you special legal rights and you may have others that vary from State to State.