

LIONEL ELECTRIC TRAINS

MODEL RAILROAD ACCESSORIES

LIONEL CORPORATION TINPLATE

No. 80 Automatic Semaphore Item No. 11-90031

Setup:

First, you will need to create a special insulated section of track. This special insulated section will require three sections of track, four fiber pins and approximately four square inches of an insulating material.

1. Lay the sections of track down as shown at right.
2. At locations marked with an "X", replace the normal steel track pins with fiber pins.
3. At the locations marked with an "O", insulate the rail from the tie beneath it. Carefully bend the tie tabs up—freeing the rail.

Affix the insulating material to the Rail at the appropriate locations. Set the rail back in place, taking care not to cut into the insulating material when bending the tie tabs back down into their original position.

Connection:

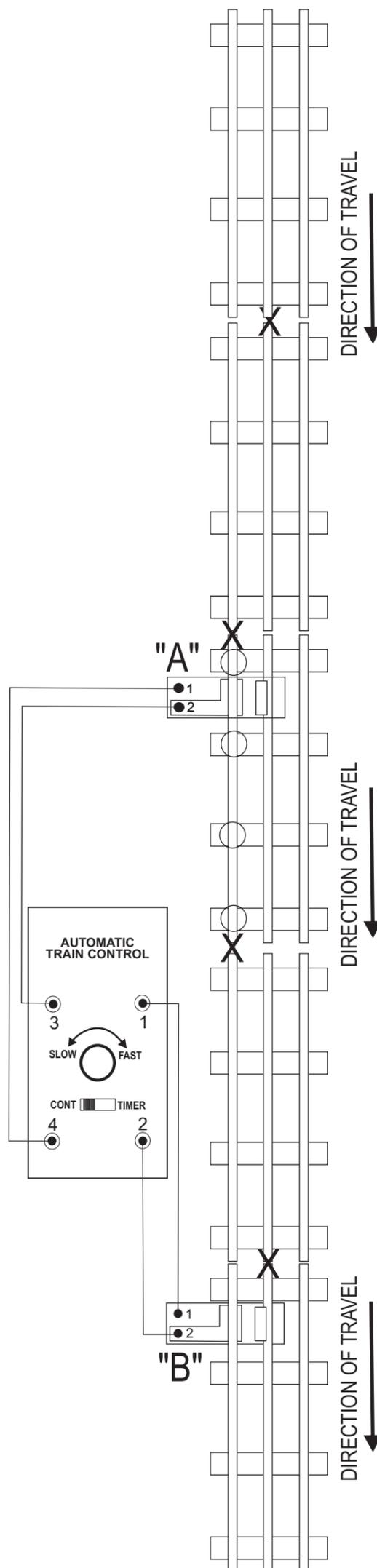
The second step is to affix the lock-ons, connect the wires of your No. 80 to the proper terminals of the two lock-ons and lock out the direction feature of your train's "E-unit".

1. Affix one lock-on (marked "A") to the insulated rail section so that the outside rail terminal connects under the insulated section directly after the fiber pin as shown.
2. Affix the other lock-on (marked "B") outside the three section insulated track piece.
3. Connect wire #1 to terminal #1 of lock-on "B" and wire #2 to terminal #2 of lock-on "B",
4. Connect wire #3 to terminal #2 of lock-on "A" and wire #4 to terminal #1 of lock-on "A".
5. Lock out your train's "E-Unit" in the desired direction of travel.

Operation:

Now, you are ready to operate the No. 80 Automatic Semaphore.

1. "TIMER" mode: This mode of operation will stop the train each time it enters the insulated section. When the train is outside the insulated section, the light will be illuminated and the arm will be lowered. When the train crosses into the insulated section, the train will stop. After a short while, the semaphore arm will rise and the train will move again. When the train exits the insulated section, the arm will drop again. Use the "SLOW-FAST" knob to adjust the amount of time the train waits in the insulated section.
2. "CONT" mode: This is the continuous mode. The train will not stop in the insulated section in this mode of operation.



CAUTION: Electrically Operated Product:

Recommended for Ages 14 and up. Not recommended for children under 14 years of age without adult supervision. As with all electric products, precautions should be observed during handling and use to prevent electric shock.

WARNING: When using electrical products, basic safety precautions should be observed, including the following: Read this manual thoroughly before using this device.

- M.T.H. recommends that all users and persons supervising use examine the hobby transformer and other electronic equipment periodically for conditions that may result in the risk of fire, electric shock, or injury to persons, such as damage to the primary cord, plug blades, housing, output jacks or other parts. In the event such conditions exist, the train set should not be used until properly repaired.
- Do not operate your layout unattended. Obstructed accessories or stalled trains may overheat, resulting in damage to your layout.
- This train set is intended for indoor use. Do not use if water is present. Serious injury or fatality may result.
- Do not operate the hobby transformer with damaged cord, plug, switches, buttons or case.

To obtain Warranty Service, please visit our website www.lionelcorporation.com