

Maine 3 Railers Presentation

A look at operating cars and activation tracks

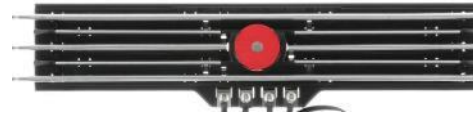
by *Jeff Jacobs*

Types covered

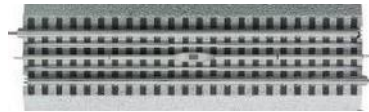
Lionel 027



Lionel O



Fastrak



K Line



MTH

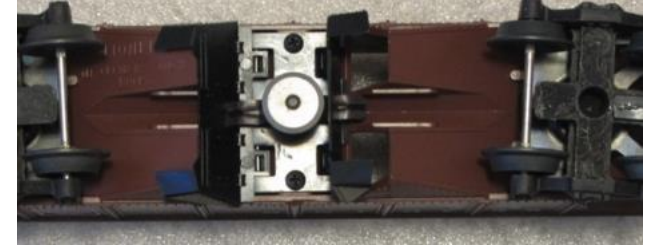


Atlas O

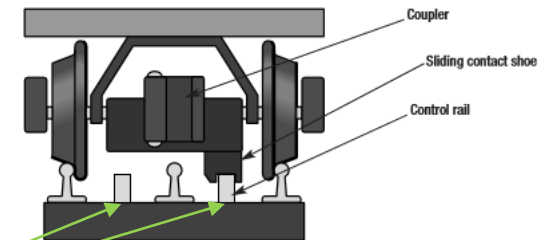


Operating cars – how they are activated

- Thumbtacks



- Shoes



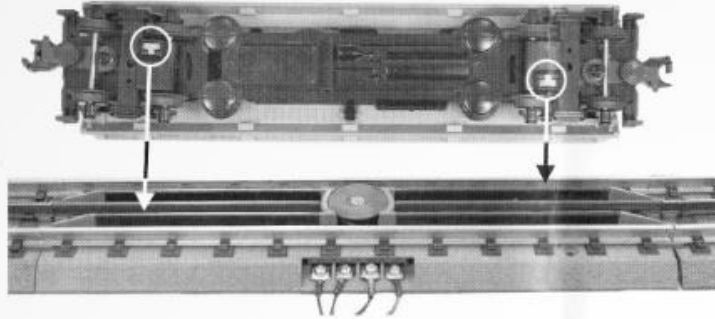
- 2 Extra rails needed

- K Line antenna



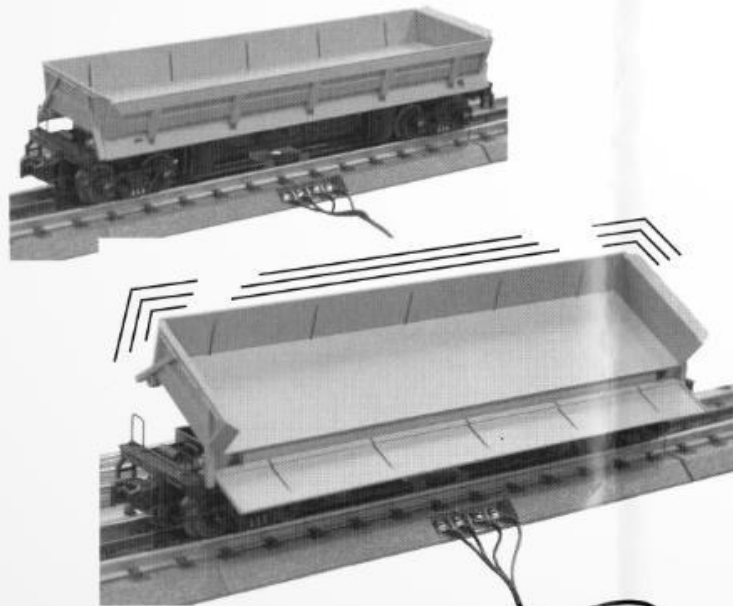
Example: MTH coal dump car

Set Up

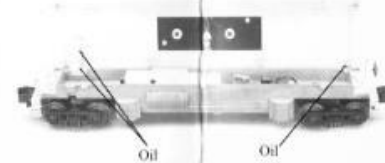


When you are ready to operate the dump car, make sure the entire car is on the Uncoupling/Unloading Track Section (UTS), so that the car's slide shoe pick-ups are in contact with the fourth and fifth rails of the UTS. The recommended voltage for the dumping action is 10-14 volts.

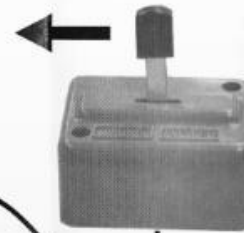
Operation



Hold the UTS switch in the "Unload" position. (Refer to your UTS instruction sheet for complete directions in its use.) The dump car will rise, empty its load, shake to ensure the entire load has been dumped, and return to its original flat position while you hold the switch in place. As soon as you release the switch from the "Unload" position, the car will cease to move.



After several hours of use, you may notice a slowing of the dumping action. When this happens we recommend adding a light drop of oil to all the hinges.



CAUTION: Electrically Operated Product:

Not recommended for children under 8 years of age. M.T.H. recommends adult supervision with children ages 8 - 12. As with all electric products, precautions should be observed during handling and use to reduce the risk of electric shock.

WARNING: When using electrical products, basic safety precautions should be followed 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 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 transformer should not be used until properly repaired.

- As with all electrical appliances, this product should not be left in operation when unattended.

Voltage sources to run cars

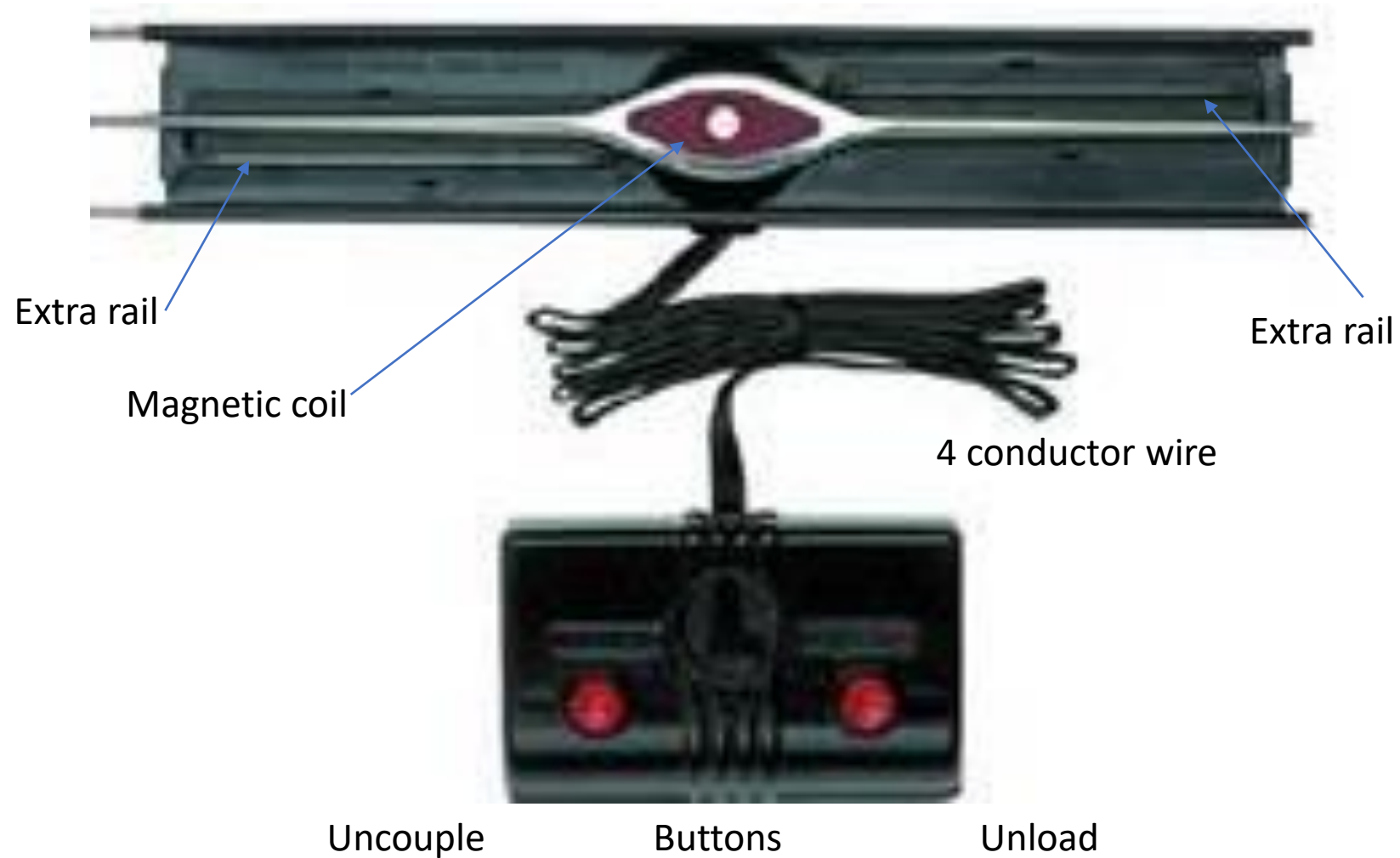
Track power



Transformer accy terminals

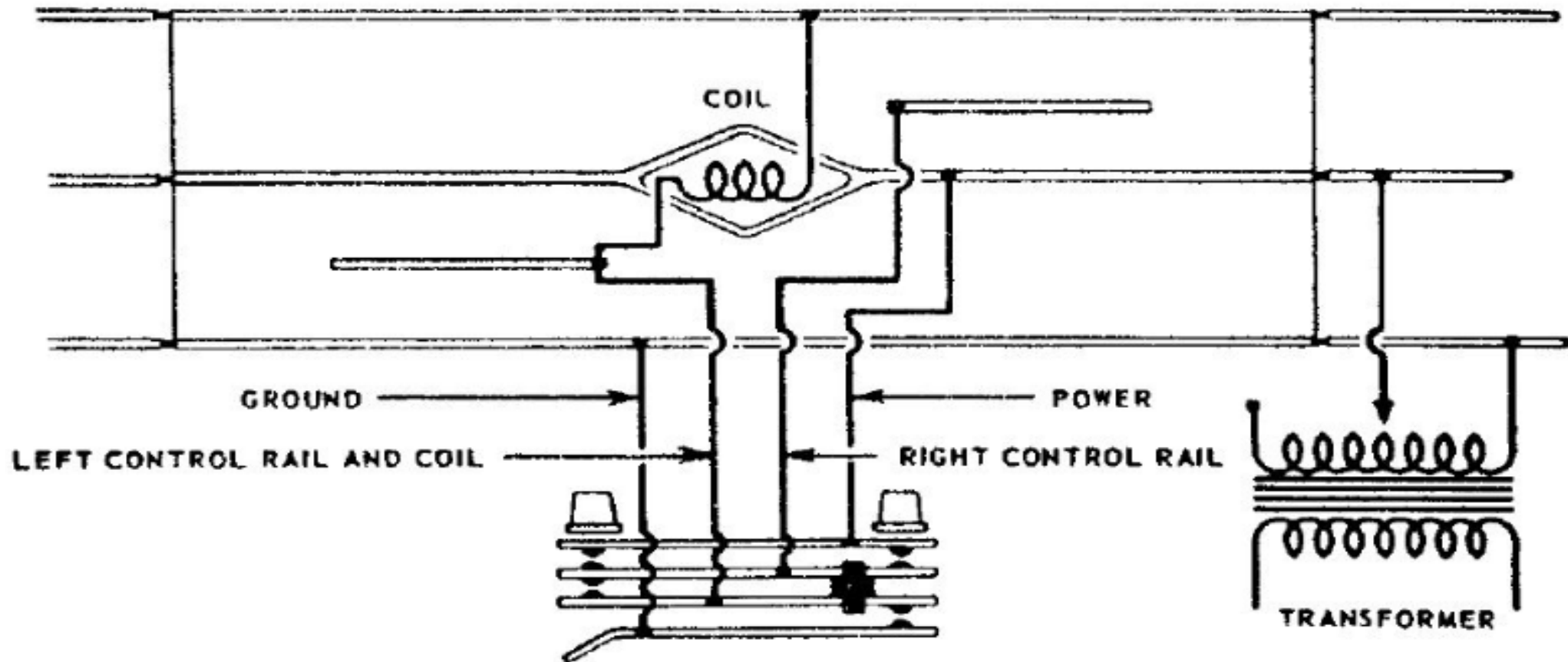


Lionel O27 uncoupler & operating track



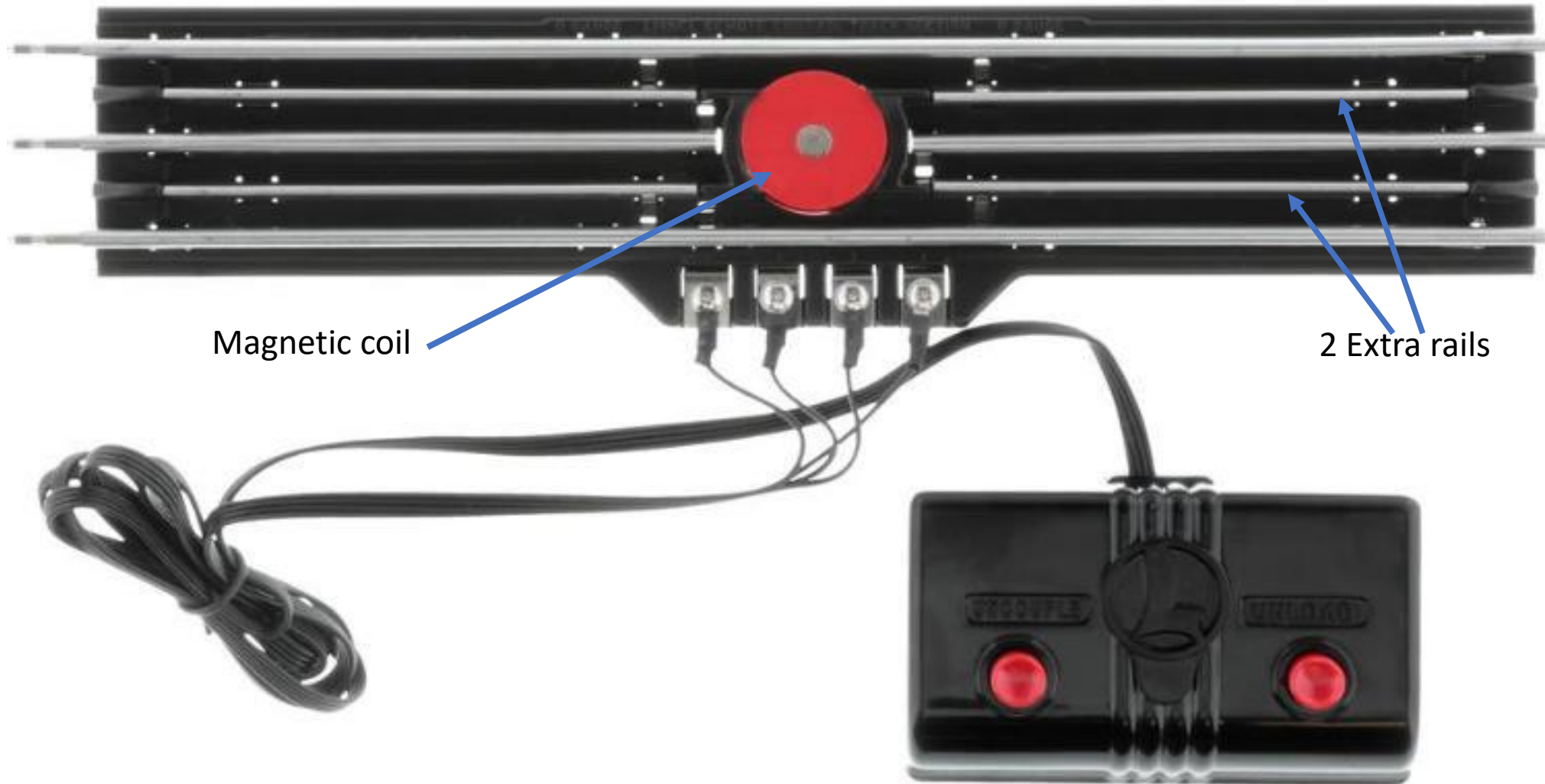
Lionel wiring 027

Figure 4 - Schematic Wiring Diagram of Remote Control Set No. 6019



Note that for fixed voltage connection illustrated below the fourth conductor which normally leads to the power rail of the remote control section is connected directly to the transformer.

Lionel O operating track

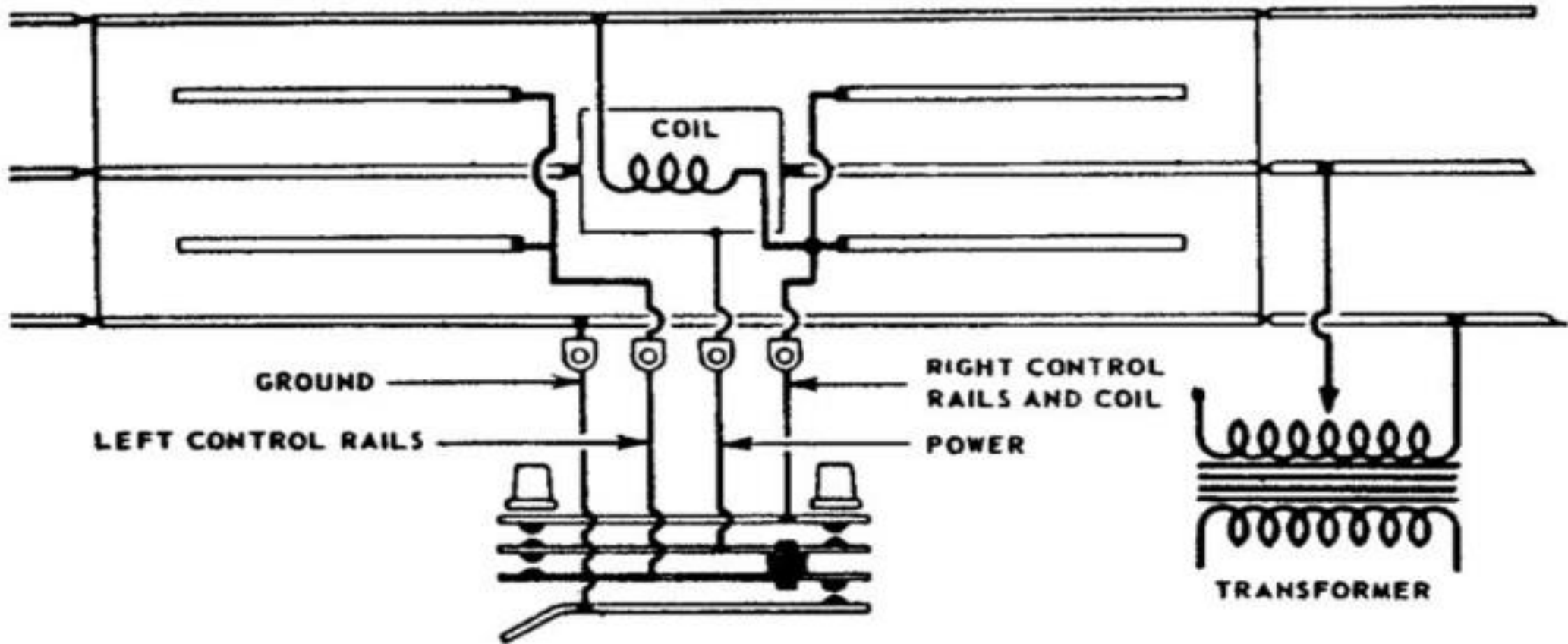


Magnetic coil

2 Extra rails

Lionel O wiring

Figure 6 - Schematic Wiring Diagram of Remote Control Set Type UCS



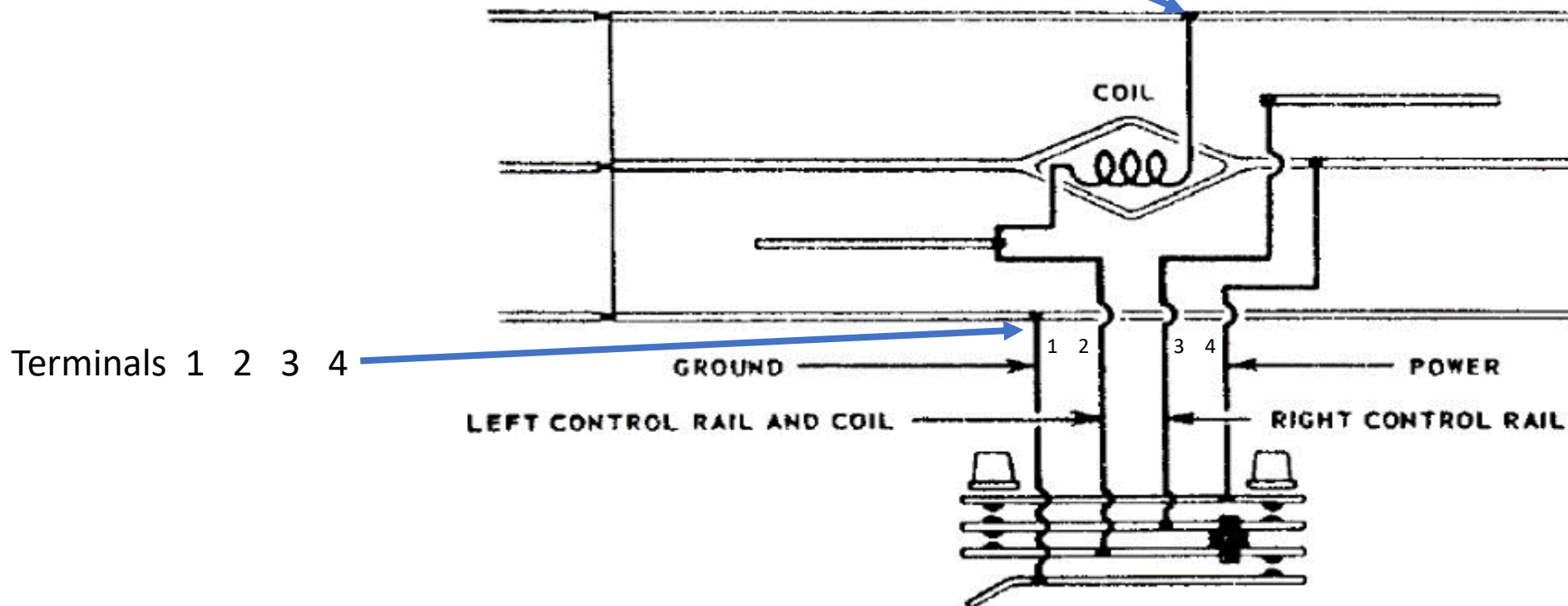
Note that in Type UCS Remote Control Set the third instead of the fourth conductor is connected to the power rail of the remote control track section. This is done for mechanical reasons and has no electrical significance except for alternate fixed voltage operation.

Operating scheme:

Uncouple (left button down) 4 to 3 & 3 to 2 (coil and left shoe bar go HOT) while right shoe bar also goes HOT

Unload: (right button down) 1 to 2 makes left shoe bar ground while 3 to 4 makes right shoe bar HOT (coil is shunted)

One wire of the coil is always grounded to outer rail



How the buttons & switches work

Uncouple

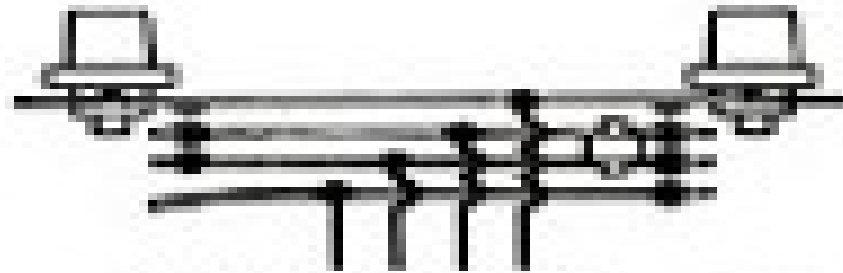


Figure 2 - Manual Position

UNLOAD



UNCOUPLE

Figure 2 - Uncoupling Position

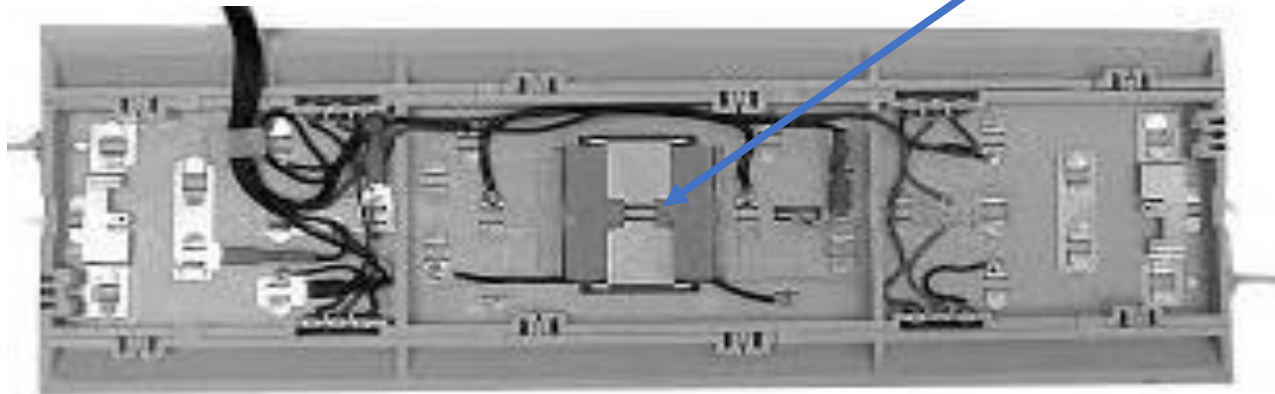


Fastrak



2 extra rails

Magnetic coil



K Line remote activation – no special track

Push remote power button

Select letter code

Select car number code

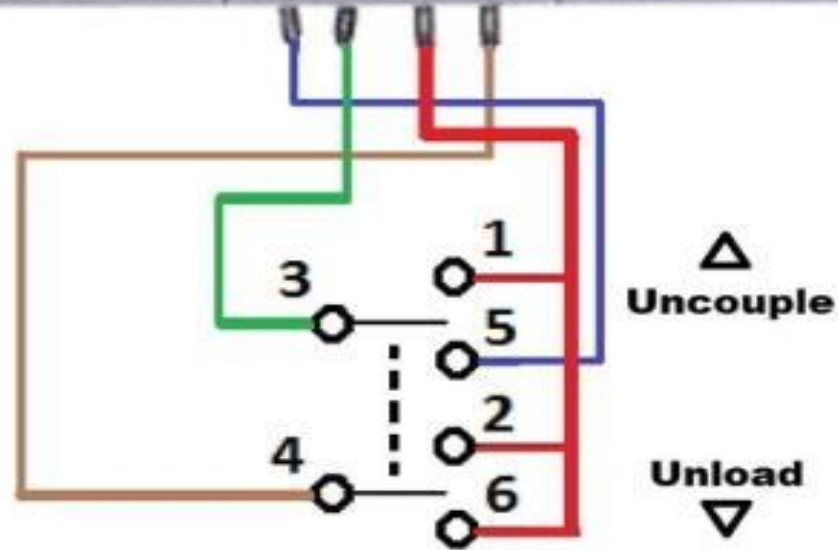
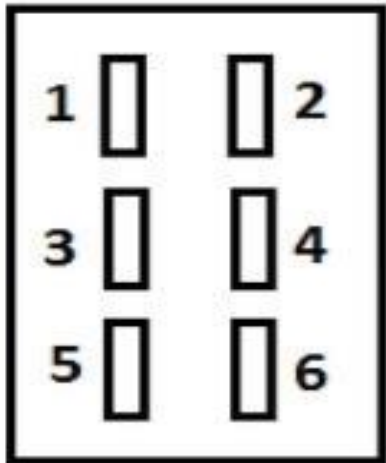
Car operates

Corresponding code must be
Programmed on switches under car

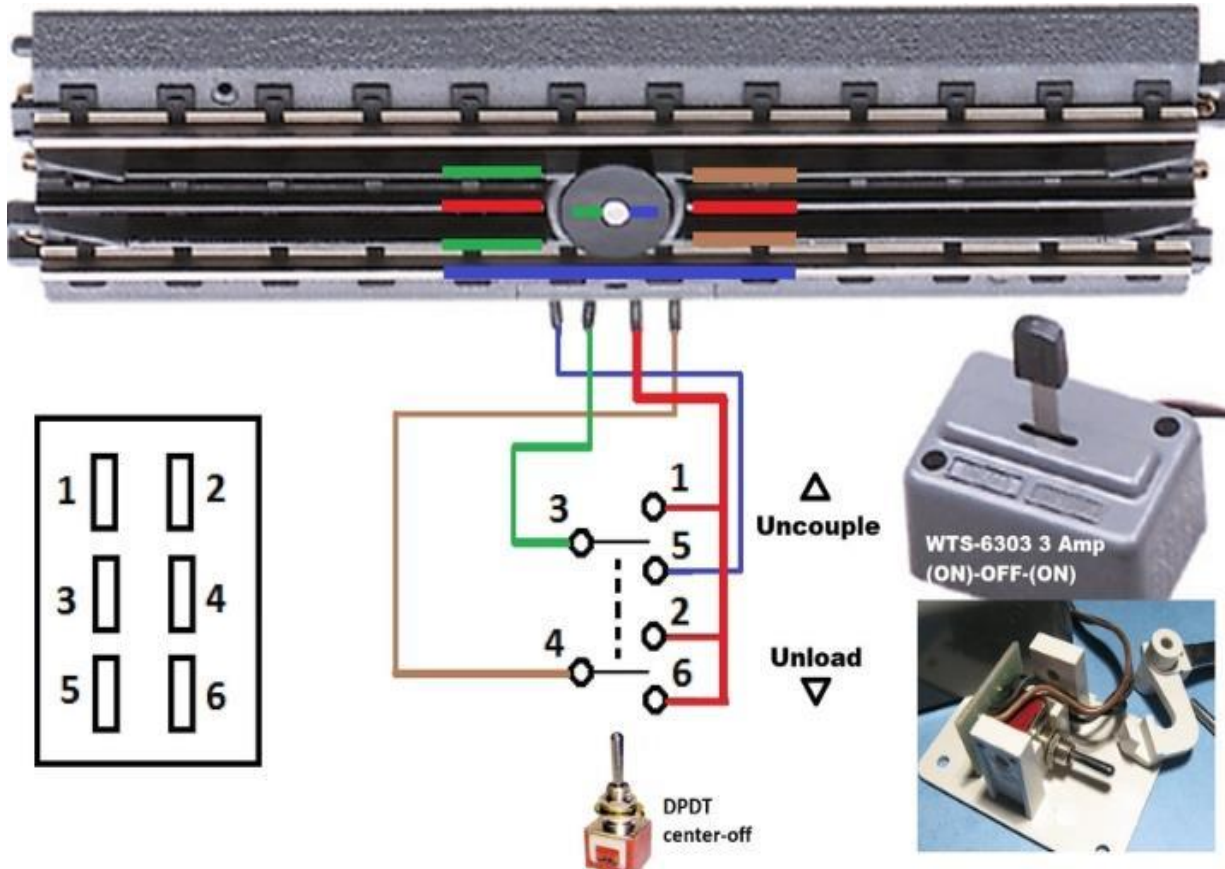
Track must have power on



MTH activation track



MTH operating track scheme



Terminals layout and functions:

Outer rail = ground (blue) Left shoe bars (green)

Center rail = HOT (red) Right shoe bars (brown)

Uncouple sw pole 3 to sw pole 1 makes green

HOT (coil and left shoe bar) while sw pole 4

to 2 makes right shoe bar HOT

Blue wire of coil always connected to (blue) ground

Unload: sw pole 3 to sw pole 5 makes left shoe bar

ground while sw pole 4 to sw pole 6 makes right

shoe bar HOT (coil is shunted)

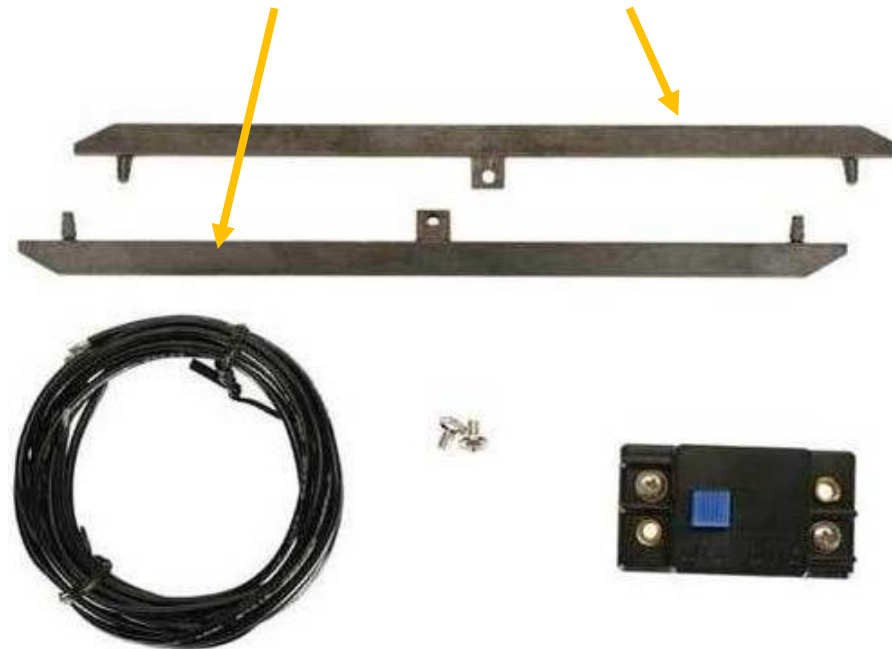
Atlas uses separate devices

1 3/4" uncoupler is inserted in layout



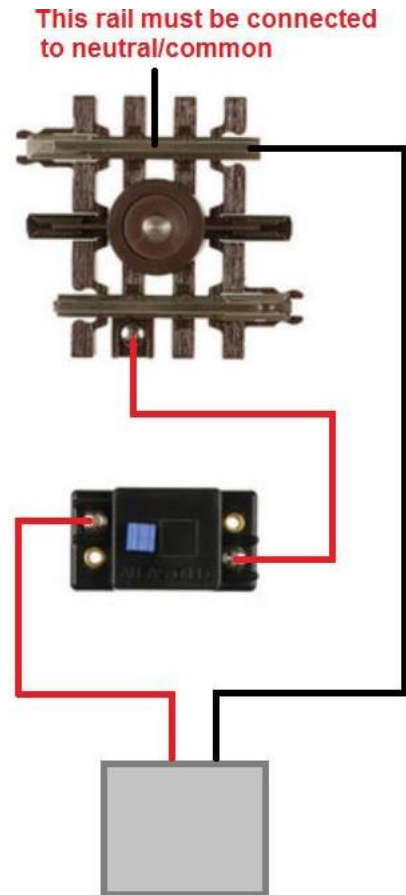
Magnetic Coil

2 extra rails get inserted into 10" pc of track

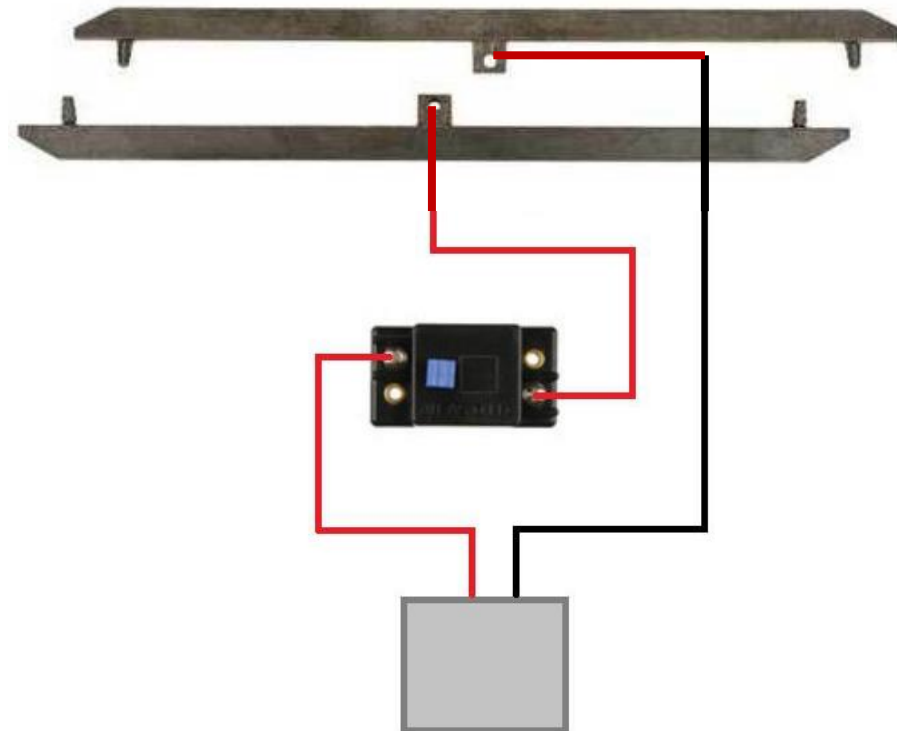


Atlas wiring

The *Uncoupler* Track



The *Unload* or operate rails



Command control of operating cars

Replace 2 button controller w/SC2 or Accy controller



Use a Cab 1 or Cab 2 to trigger the controller boxes

Problems & fixes

Centering cars on track

Brittle 4 conductor wire – Lionel
some soldering
keep order of wires same

Cleaning leaf switch points

Jammed mechanism – K Line

Wires to car shoes