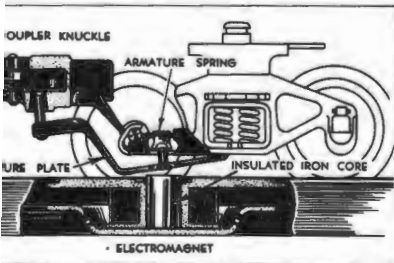


REMOTE CONTROL TRACK SETS

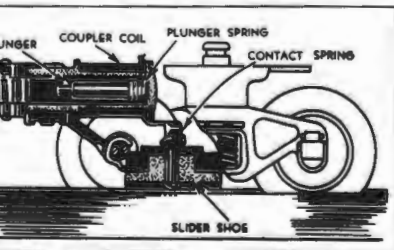
In the exception of electronic cars, which can be operated anywhere on the track, all Lionel operators and other cars equipped with electric couplers can be unloaded and uncoupled only by means of the Remote Control Track Set. Remote Control Track Sets consist of a special track section equipped with two control rails and a central electro-magnet two-button controller connected to the track section by a four-conductor cable.

The modern remote control track set for 'O' track is designated as UCS; a similar set for '027' track is designated as RCS. These remote control sets will uncouple 'electro-magnetic' and 'magnetic' couplers (See Section MIS-TRUCKS) and should be used to replace the earlier RCS and No. 1019 which have no electro-magnet and therefore cannot open the 'magnetic' trucks.



Operation of 'Magnetic' Coupler Truck

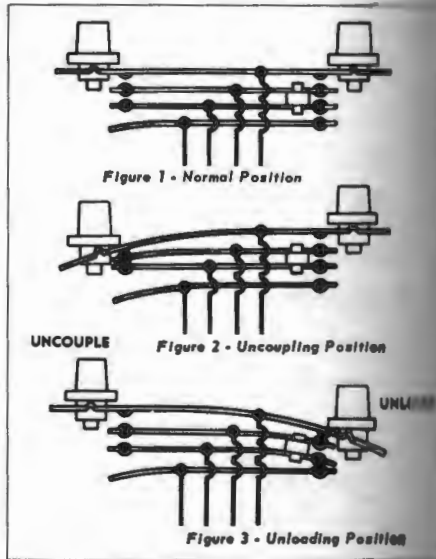
The coupler knuckle snaps open when movable armature plate on truck is attracted by the energized electromagnet.



Operation of 'Electro-Magnetic' Coupler Truck

The coupler knuckle snaps open when coupler coil is energized and truck slider shoe in contact with control rail.

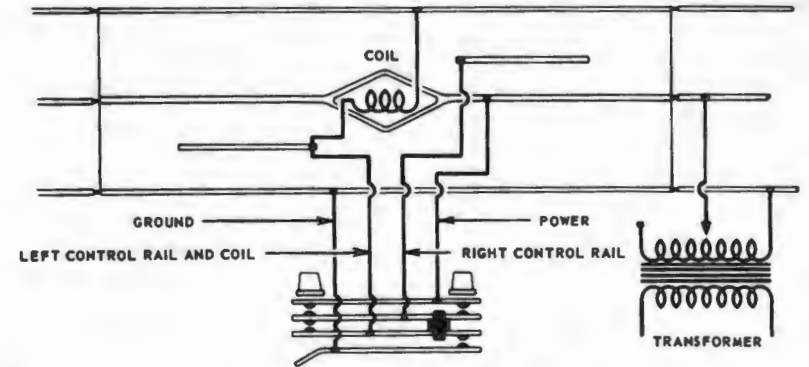
In addition to opening 'magnetic' couplers, the central electro-magnet of modern remote control sections is used to control several plunger-operated cars, such as the Searchlight Car and the Animated Box Car.



Although the various special track sections differ from each other, their controllers are identical with the exception of the treatment of cable ends. The controller is a pile-up switch consisting of four flat contact springs insulated from each other by fibre spacers. In normal position (Figure 1) the four control rails are separated. In 'Uncouple' position (Figure 2) the spring connected to the track power rail is brought into contact with the two control rails and to the central electro-magnet. In 'Unload' position (Figure 3) one of the control rails is brought into contact with the power rail while the opposite control rail is connected to ground through the outside rails.

While remote control sections can be located anywhere in the layout the best practice is to place them between two ordinary straight sections. This will facilitate coupling by aligning the trucks of adjacent cars and avoid possible interference which may occur under some circumstances between accessories located next to the remote control section and locomotives coming out of a curve. Another difficulty which may be experienced if the remote control section is located next to a curve is that the roller of a 622 direct action switcher may bridge between the center rail and one of the control rails causing the switcher to uncouple automatically.

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.

Fixed Voltage Operation

In normal usage the control rails and the electro-magnet are energized by the regular variable track voltage applied to the entire track system, but it is sometimes desirable to permit a remote control section located in an insulated siding, etc. to receive fixed voltage directly from the transformer so that an operating car stationed in the siding might be unloaded even though the rest of the siding is 'dead'.

For this installation the controller wire which runs to the center power rail (See Figures 4, 6 and 8) should be disconnected from the remote control section and connected instead to a fixed voltage post on the transformer. To prevent a short circuit the fixed voltage and the variable track voltage circuits should have a common ground. A chart listing such fixed and variable voltage combinations for various transformers is given in section PS.

Figure 5 - Diagram for Connecting Fixed Voltage to Remote Control Set No. 6019

