10-53

## SERVICE MANUAL

## NO. 1122 REMOTE CONTROL SWITCHES

No. 1122 Remote Control Switches for '027' track, first made in 1952, incorporate an automatic 'non-derailing' device which prevents a train from running into an 'open' switch and which is similar to that used in No. 022 Switches. As illustrated in the schematic diagram below, the 'ground' ends of the two switch coils are connected to two control rails. These rails are normally insulated from the rest of the electrical circuit. Whenever the wheels of a locomotive or car bridge these control rails to the grounded outside rails, the circuit of the appropriate switch coil is completed and the swivel rails of the switch are thrown into position to accommodate the approaching train.

No. 1122 Switches made in 1953 were redesigned in several details in order to improve their operation. Among the more important changes are: addition of an auxiliary rail at the switch frog, provision of a right-hand and a left-hand frog point, redesign of the frog rail, the swivel rail and swivel link assembly. In the motor, the rack has been lengthened by one tooth and the motor base changed to accomodate the greater length of the rack.

Among other changes of lesser importance is a new method of assembling the lantern lens and the elimination of two of the rivets fastening the switch bottom. The rivet holes have been retained, however, for mounting the switch to track board, if desired.

Since most of the new and old parts are interchangeable, the same part numbers have been retained, with letter X added to those 1952 parts which are not interchangeable with the 1953 parts.

To control the switches at will, each pair of 1122 switches is sold with a double No. 1122-100 controller, which is similar externally to the 1121C-60 controllers. However, whereas the 1121C controllers use a large No. 315-20 lamp (G.E. 431), 1122-100 controllers must use a low-current G.E. 53 lamp. Another important difference is that while the ground wire of 1121C-60 controllers is the center wire of the cable, the ground wire of 1122-100 controllers is the outside wire provided with a spade lug for identification. No. 1121C controllers may be used only if the the changes in them are made as outlined.

Note that while the function of No. 1122 switches is similar to that of No. 022 switches, No. 1122 switches have no provision for operating on fixed voltage but draw the operating current directly from the track. Also, while the coils in 022 switches are energized only momentarily, the coils of 1122 switches remain energized as long as the control rails remain bridged to the grounded rails.

Note: No. 1122 switches are designed to accommodate all 'O' and '027' locomotives with the exception of those equipped with the 'OM' motor such as Nos. 1664, 1665, 1684 and 1688. On this motor the gear on the inside surface of the gear wheels is so large that it will hit the top of the switch guard rail and generally derail the locomotive. The high guard rail is required to retain diesel locomotives which have relatively small wheel flanges.

## WIRING DIAGRAM OF NO. 1122 SWITCH

