

American Flyer Remote Control Track Switches

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So what does that little button (Figure 1) on the 720 Track switch do? According to the operating instructions (Appendix A), it allows for multiple trains to operate on the same track. What does this mean electrically?

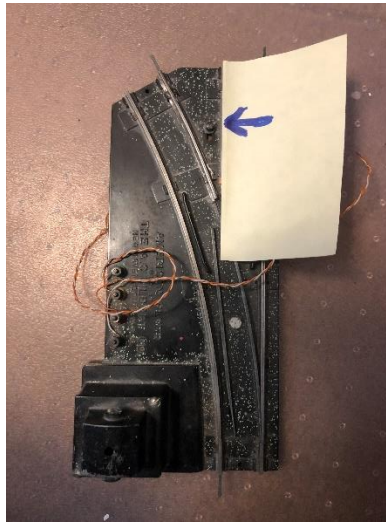


Figure 1: Location of “2 Train Oper.”- “Reg Oper.” button

Each track switch has 5 sets of conductors: the outer “long” straight and curved rails, the inner “short” straight and curved rails, and the movable “switch points” (labeled “frog” in the American Flyer parts list for the 720A). Figure 2 shows which conductors are connected together when the track switch is in the straight and curved position for both Regular Operation and 2 Train Operation. Each of the five conductors has its own color. The vertical grouping of line segments indicate which conductors are connected together. These groupings can be verified for a left-hand switch through close examination of figure 3.

In 2-Train operation, the “short” rail in the direction opposite to which the switch is set for is isolated from all rails of the track switch. (It can still receive power from the track it is connected to)

For regular operation with a left-hand switch, the “short” straight rail is always powered, but the “short” curved rail is isolated when the switch is in the “straight” position. For regular operation with a right-hand switch, the “short” curved rail is always powered, but the “short” straight rail is isolated when the switch is in the “straight” position. If a pair of left-hand and right-hand switches are configured as depicted in the operating instructions, both loops will always be powered.

The 695 Reverse Loop Relay takes advantage of the isolation of the “short” rails of the opposite direction in 2 train operation to avoid a short circuit on these rails. Fiber pins are used to isolate

the “long” rails. Power to the reverse loop is provided through a combination of the reverse loop relay applying power to the rail on the far side of the fiber pins connected to the “long” rails, and the track switch applying power to the “short” rail for the track switch direction.

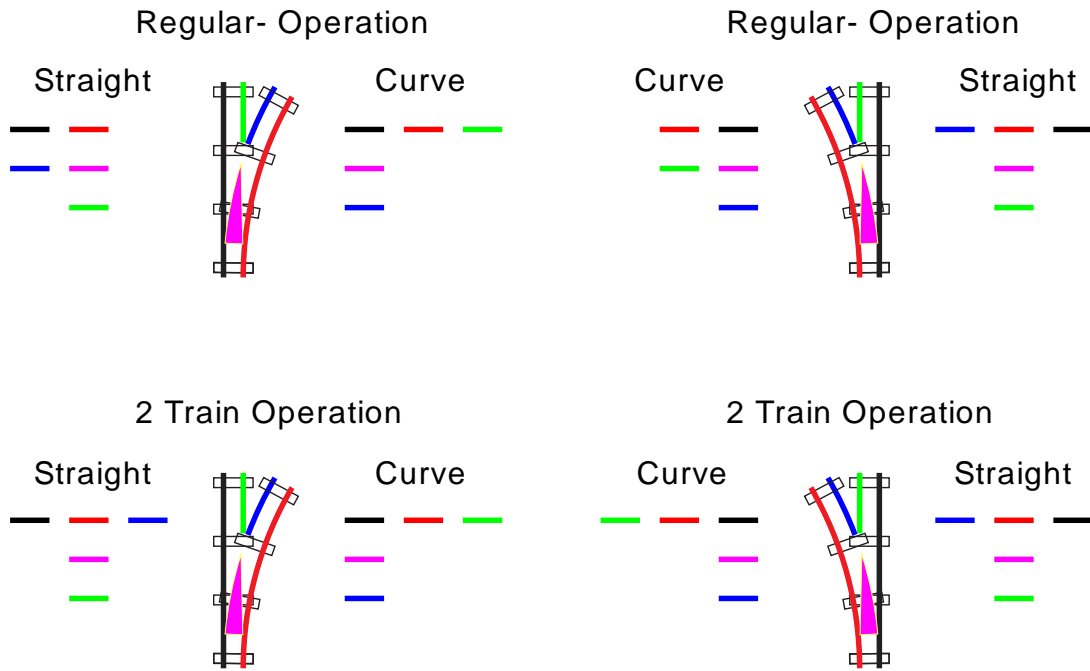


Figure 2: Electrical Connections for 720A Track Switch

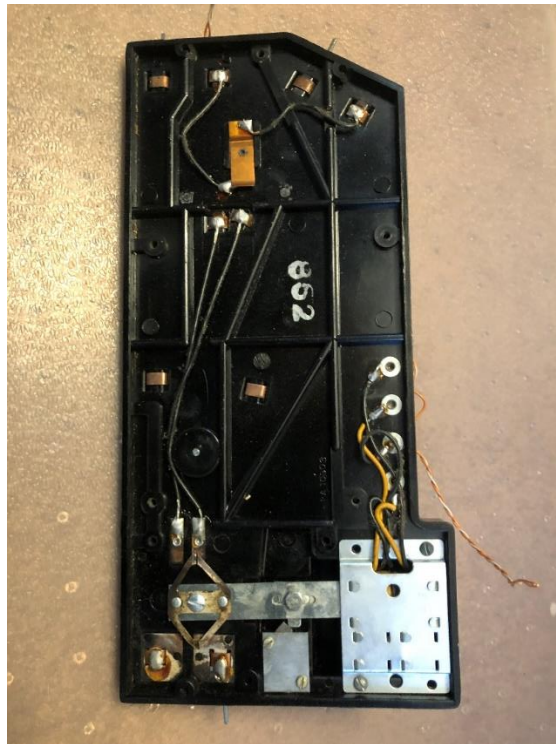
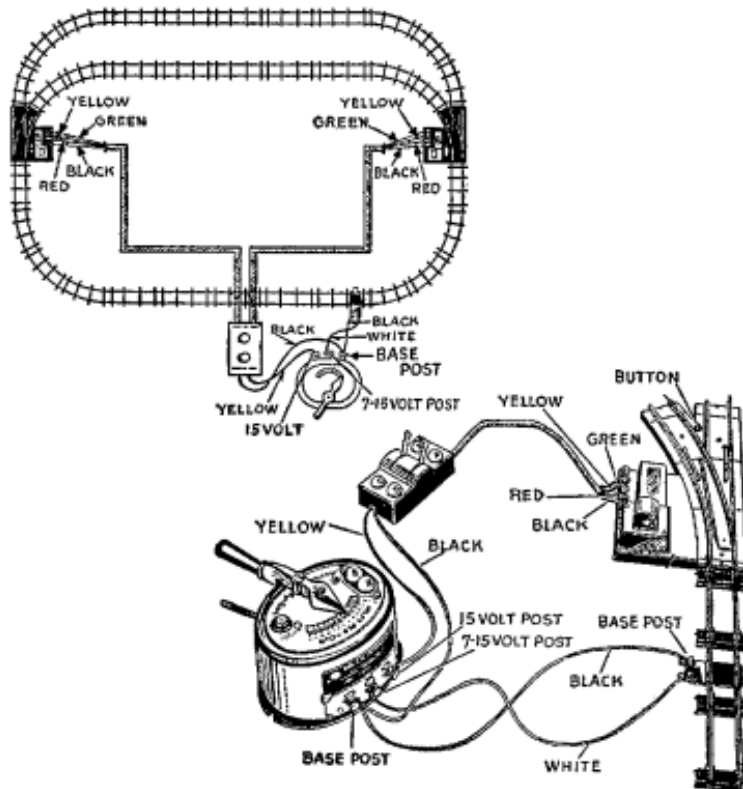


Figure 3: Bottom view of track switch with cover removed

Appendix A: Operating Instructions



OPERATING INSTRUCTIONS FOR NO. 720A — 3/16" SCALE REMOTE CONTROL TRACK SWITCHES



First set the switches in your layout and hook up the wires as shown in the diagram. The track terminal may be attached anywhere in the SINGLE line of track between the two switches.

These new AMERICAN FLYER switches are really two kinds of switches in one, that is, they can be used in the conventional manner or by simply moving a button, two or more trains can be operated at the same time without the use of special control buttons or block signals.

To use the switches in the regular manner, move the button toward the lights as far as it will go.

To operate two or more trains on the same layout at the same time, move the button away from the lights. With the button in this position trains will operate only on the loop the switch is set for. If the switch is set for the inside loop, any train which happens to be on the outside loop will stop. When the switch is reset for the outside loop, the train in this loop will start and the train in the inside loop will stop.

When the switches are used for two train operation they MUST be operated in pairs, that is, they must both be set for the same loop, except in the case of spur lines where the end of the track is not connected to any part of the layout.

Use the Control Box levers to throw the switch frogs.

To change lamp bulb, remove the two screws on lamp housing and replace lamp with a 3½ G-18 Volt lamp.

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