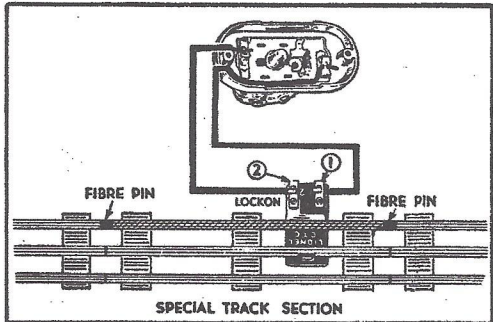


Using Insulated Control Rails

Another method of operating track-side signals automatically is by connecting the "ground" side of the signal circuit to an insulated outside rail, as illustrated in the following pages. Then, as the train reaches the insulated rail, its wheels bridge over to the opposite outside rail, which is grounded, and complete the electrical circuit causing the signal to operate.

If you use "Super-O" track, one such special track section No. 48 is furnished with each outfit. Curved special sections No. 49 are available from your dealer.

If you use "0" or "027" track you can make your own special control sections by insulating one of the outside rails as illustrated on page 15.

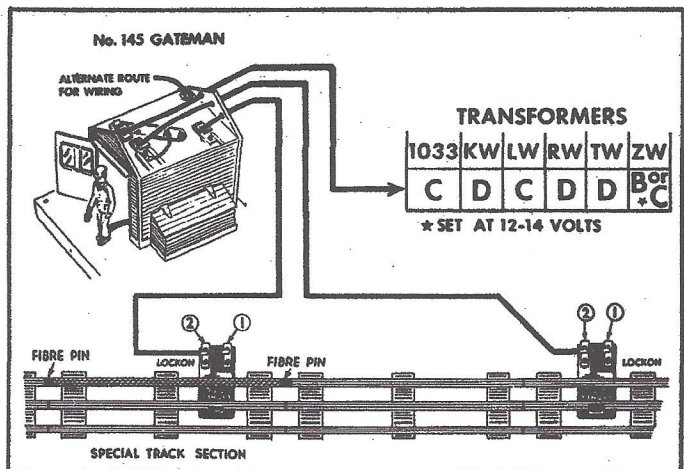


Left: No. 252 Crossing Gate Operated by an Insulated Track Section. No. 140 Banjo Signal, No. 353 Control Signal and No. 155 Ringing Signal Can Be Operated in the Same Way.

Right Bottom: Insulated Track Section Used for Automatic Control of Switches.

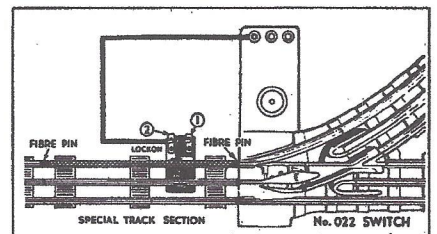
Right Top: No. 145 Gateman Operated by Insulated Track Section.

The method used for controlling No. 145 Gateman can be used as well for No. 151 Semaphore and No. 445 Switch Tower. In the case of No. 151 Semaphore the center post is connected to the transformer, the outside post which lights the lamp is connected to No. 2 clip of the lockon outside the insulated track and the post operating the semaphore arm to No. 2 clip of the lockon on the insulated track.

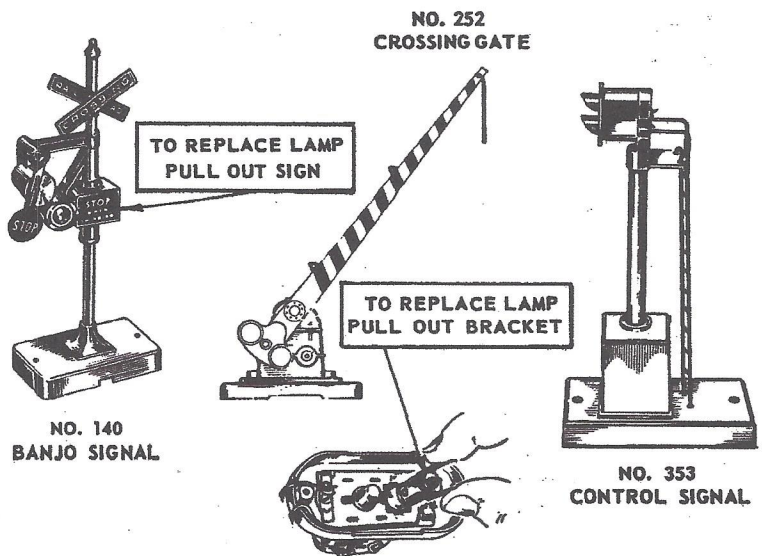
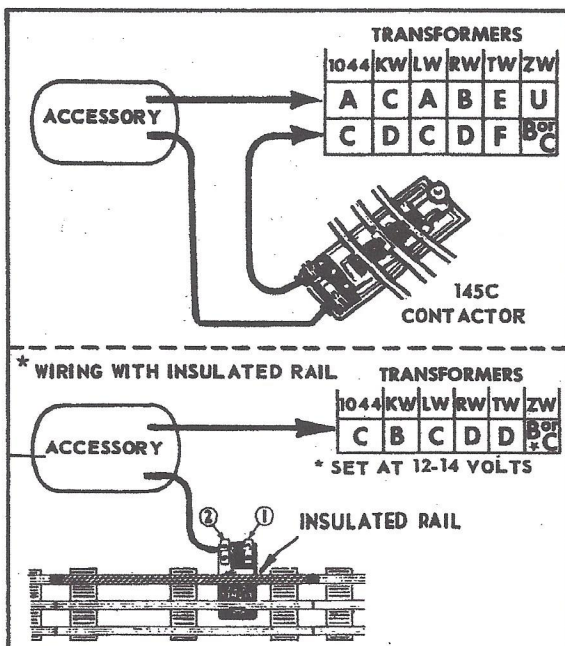


To operate the Switch Tower its No. 2 clip is connected to the transformer, No. 3 clip to lockon outside the insulated track and No. 1 clip to the lockon on the insulated track.

Although No. 022 Switch is illustrated Other Automatic Switches Such As No. 1122 and No. 112 Can Be Controlled in The Same Way.



Of course, if you wish the train to operate several of these accessories simultaneously all of them can be connected to the same insulated track section.



Operation of Automatic Accessories

The two crossing signals and the crossing gate illustrated above are all connected in the same way. In most temporary layouts the installation using a 145C contactor, which is furnished with these accessories, is easiest to make. The 145C contactor is installed under the track and adjusted as explained on page 8. As the train passes over the contactor the signal or the crossing gate goes into action and continues to operate until the train has passed.

In permanent layouts where the track is fastened down to

a board or platform it is frequently desirable to control these accessories by means of insulated track rails which can be made from regular "0" and "027" track sections as shown on page 18 or by using No. 48 Insulated Track Sections supplied with "Super-O" outfits. Insulated rail method requires no adjustment, but care must be taken to connect the transformer to the track as shown on pages 2 and 3.

If desired, two or more accessories can be connected to the same 145C contactor or to the same insulated rail so that they operate simultaneously as the train passes by.