

Track Magnets & Reed Switches

by Del Tapparo

A Reed Switch contains “reeds” which are closed together when in the presence of a strong magnetic field. In garden railroading, reed switches are often used to activate the sounds on a sound card. A magnet is located on the track. The reed switch, mounted on the underside of the train, is activated when it passes over the magnet. Typically, we use two reed switches, one for the whistle and one for the bell. The magnets are placed on the track, between the rails, offset to either the

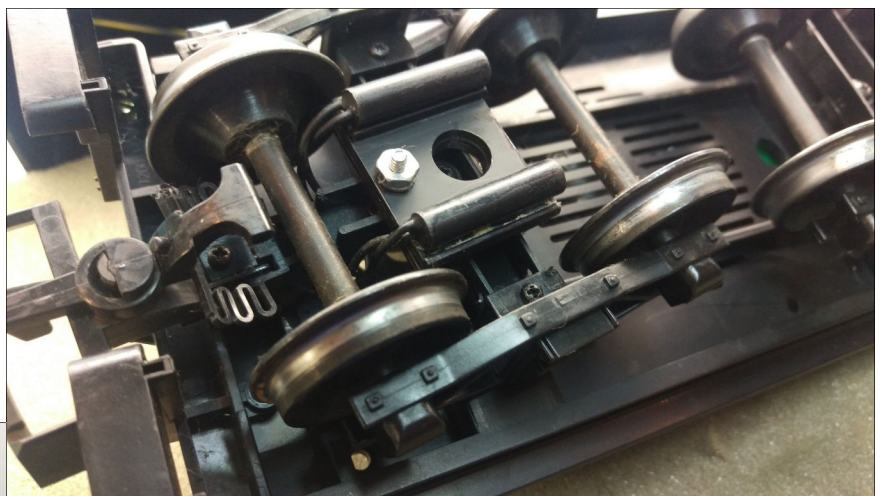
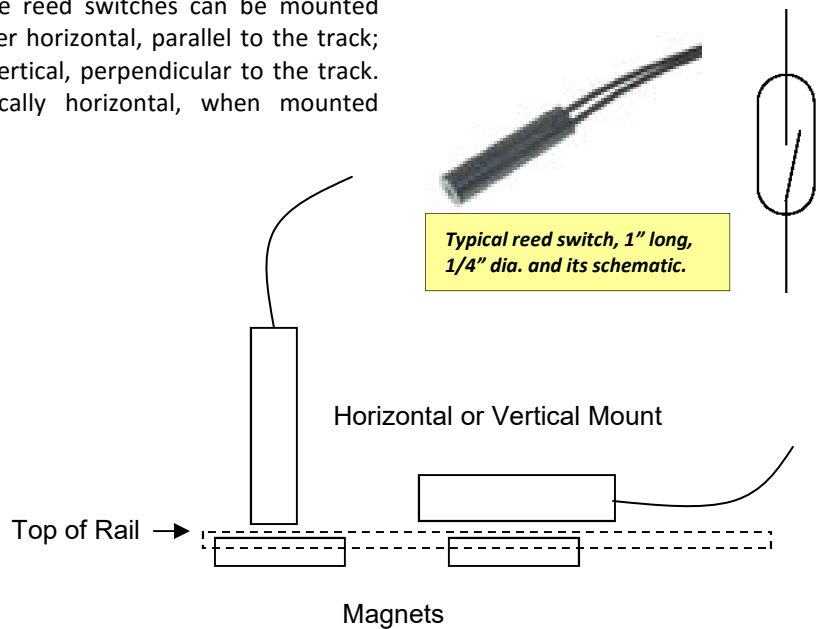
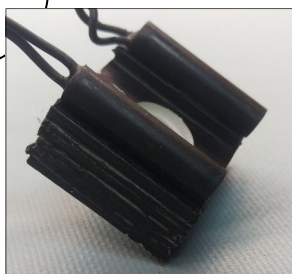
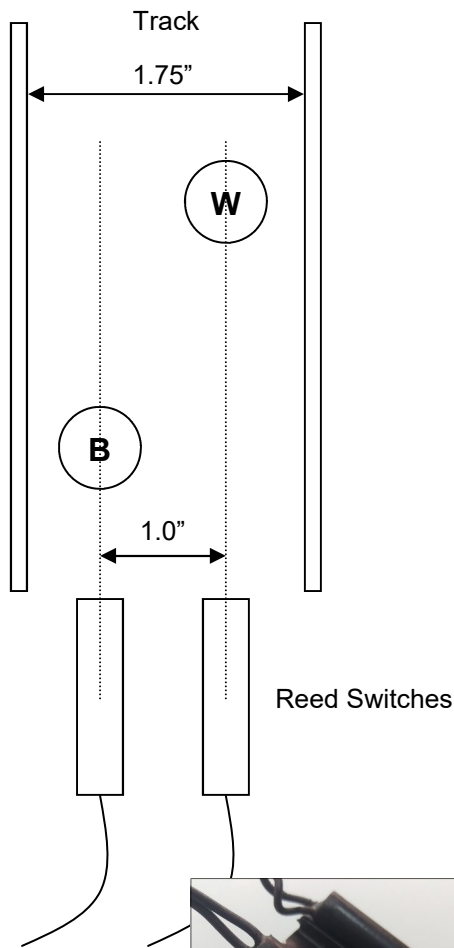
left or right side. Typically, the right side (Engineer’s side) is used for the whistle and the left side (Fireman’s side) is used for the bell.

The gap between the magnet and the reed switch should be $1/8$ ” or less”. Try to mount the magnets just under the top of the rail, and the reed switches just above the top of the rail. (Mounting the reed switch below the top of the rail will result in it hitting the turnout rails.) The $1/2$ ” diameter magnets you find at the local hardware store will work fine.

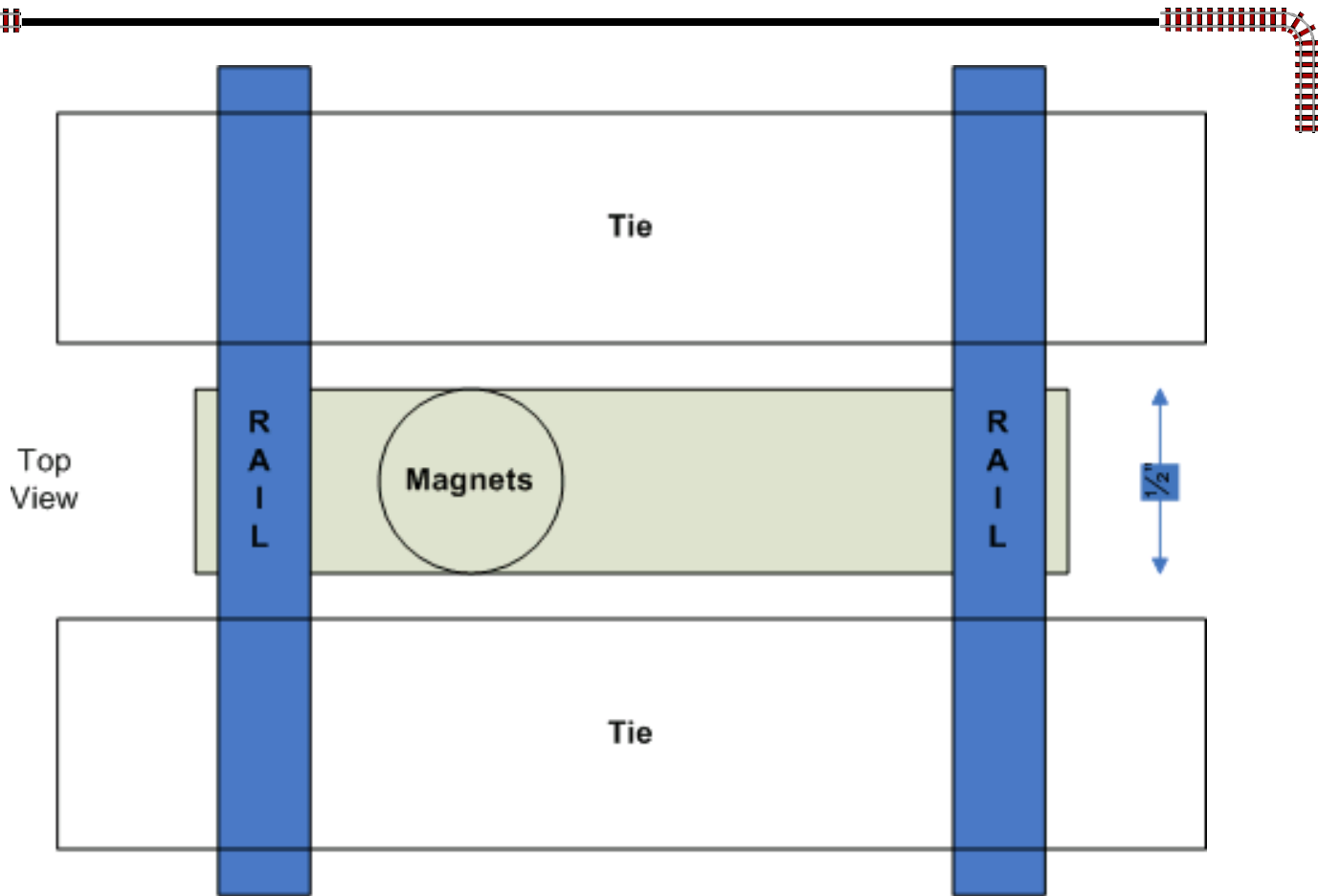
The reed switches can be mounted either horizontal, parallel to the track; or vertical, perpendicular to the track. Typically horizontal, when mounted

underneath the truck of your rolling stock, and sometimes vertical when going through the floor of rolling stock.

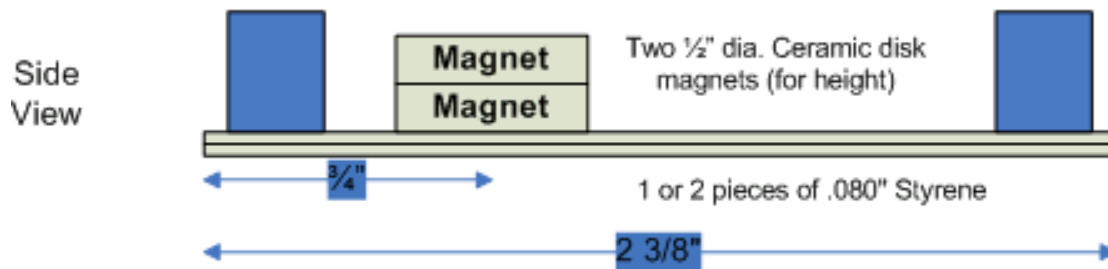
You can also use reed switches with magnets mounted on the backs of wheels or glued to an axle to synchronize the chuff of a sound board with the wheel motion. Four magnets will produce 4 chuffs per revolution. However, to avoid the chuff just turning into a blur at running speed, you may want to use just 2 magnets to keep the distinctive chuffs, especially on smaller tender wheels.



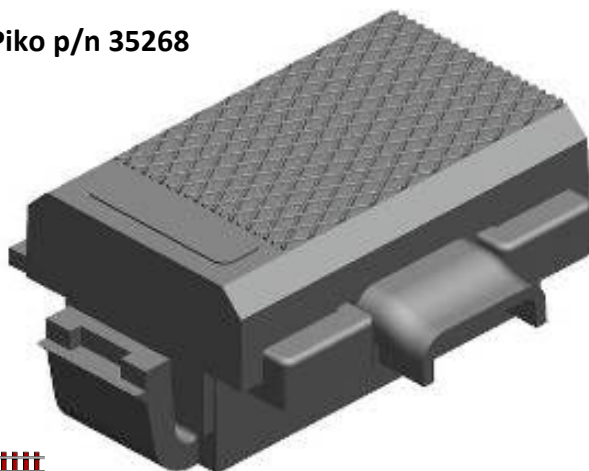
Bell and Whistle reed switches mounted under the truck of a tender. A bracket was made to mount the reed switches under the truck to achieve proper alignment over the track magnets, while still leaving access to the bolster screw. Laminate sheets of styrene or ABS plastic to achieve the desired thickness to get the reed switch just above the top of the rail.



You can make a simple track magnet assembly using magnets from the local hardware store and a piece of styrene. These can be easily moved to the desired location or swapped from left to right. Slip it under the rails and in between ties.



Piko p/n 35268



Piko makes a nice magnet that snaps in between the rails. The magnet is off to one side, so it can be turned around for left or right side operation.