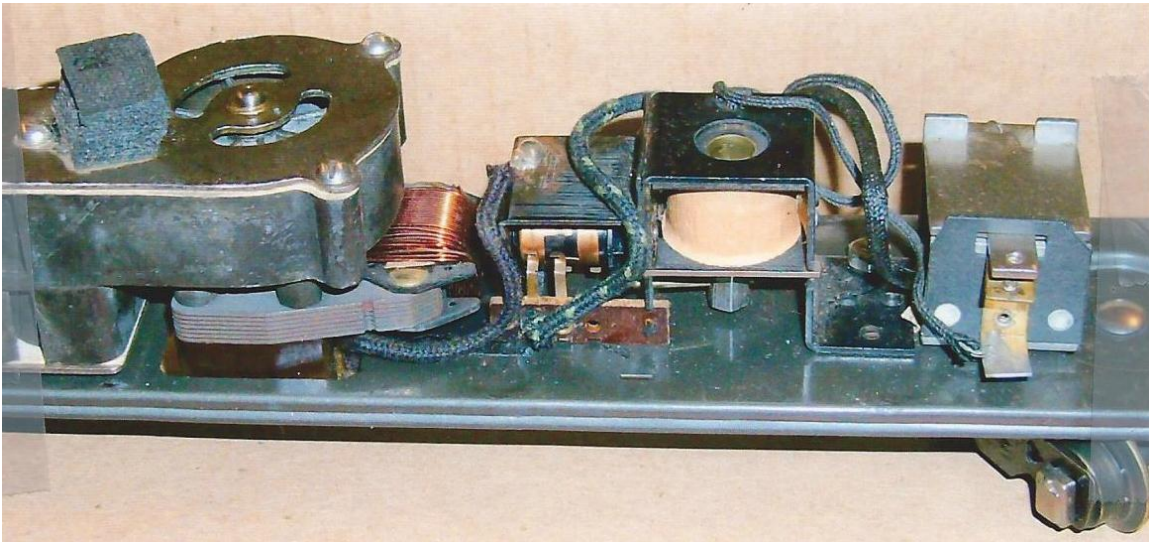


American Flyer #490 3/16-0 Whistling Express Car & Control Button Tutorial

By Ray Kruczek

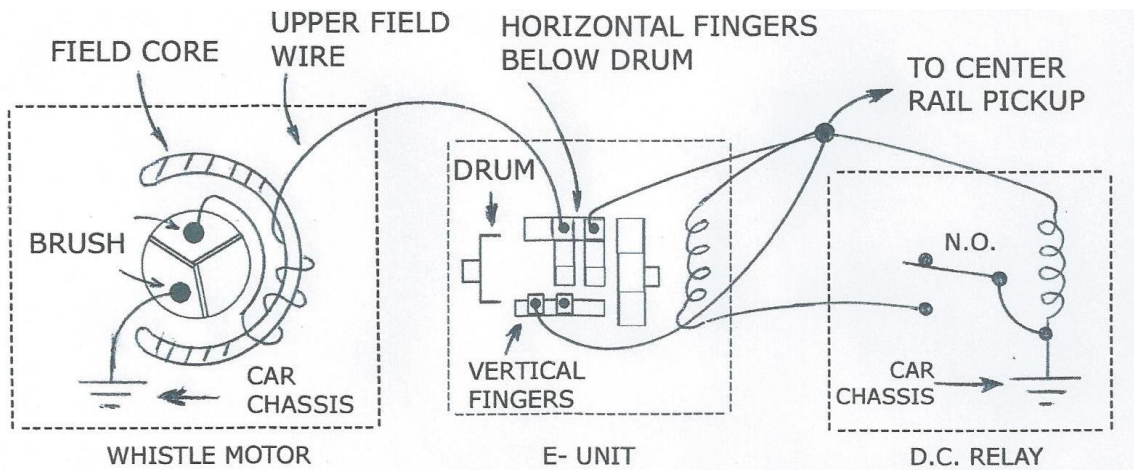
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 2. Internal hardware photo and car wiring diagram
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1. The American Flyer #490 Whistling Express Car was manufactured by A.C.Gilbert in 1940 and 1941. A gunmetal gray finish was made in both years while a blue finish version was made only in 1940. Its design is unique as a quick push of the control button turns the whistle either on or off. This feature is triggered by a short burst of DC voltage generated by the button, which actuates a DC relay in the car. The relay steps an E-Unit through an alternating on-off sequence of power to the whistle motor.
 2. The car wiring diagram below was derived from reverse engineering by the author



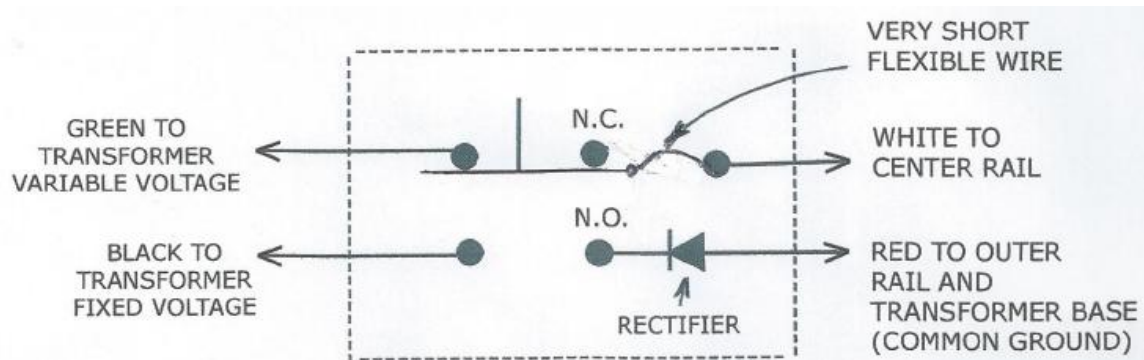
Car internal hardware

American Flyer #490 3/16-0 Whistling Express Car & Control Button Tutorial (cont)



Car Wiring Diagram

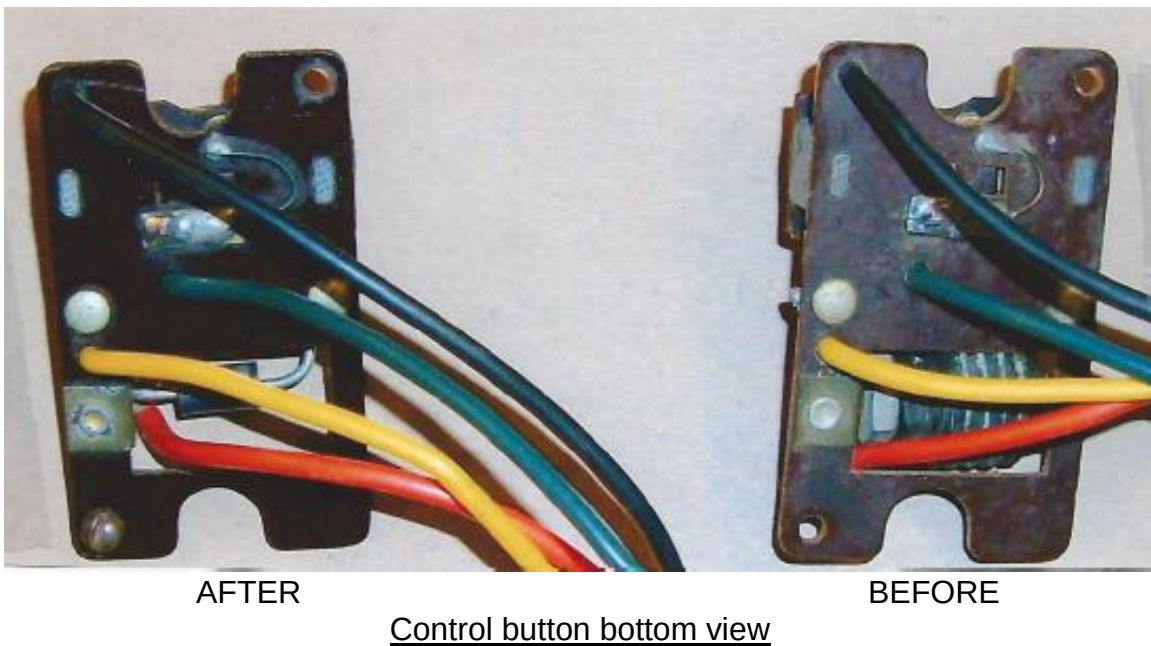
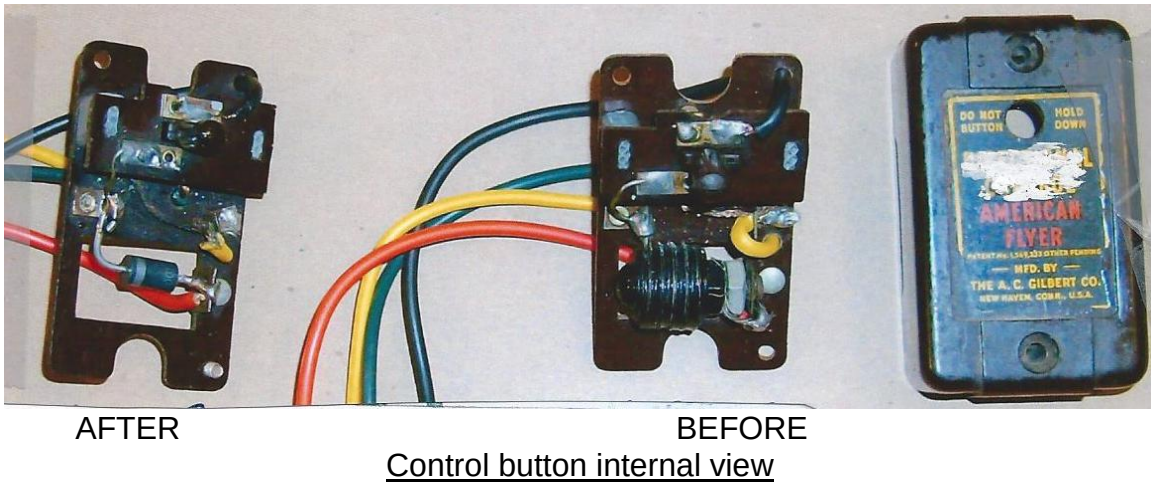
3. Control Button Wiring Diagram and Hookup Directions



Control Button

American Flyer #490 3/16-0 Whistling Express Car & Control Button Tutorial (cont)

4. It has been my experience that the selenium rectifier inside the control button often fails over time. An easy fix is to replace the rectifier with a solid-state diode. A Radio Shack epoxy 3 amp rectifier diode 1N5402 is an ideal replacement. The Radio Shack part # is 276-1143. See photos below:



5. Please feel free to contact me with questions and or comments at ray.the.k@prodigy.net.

Special thanks to Art Shifrin and Mark Lembersky for furnishing me with copies of a related original American Flyer paper.