

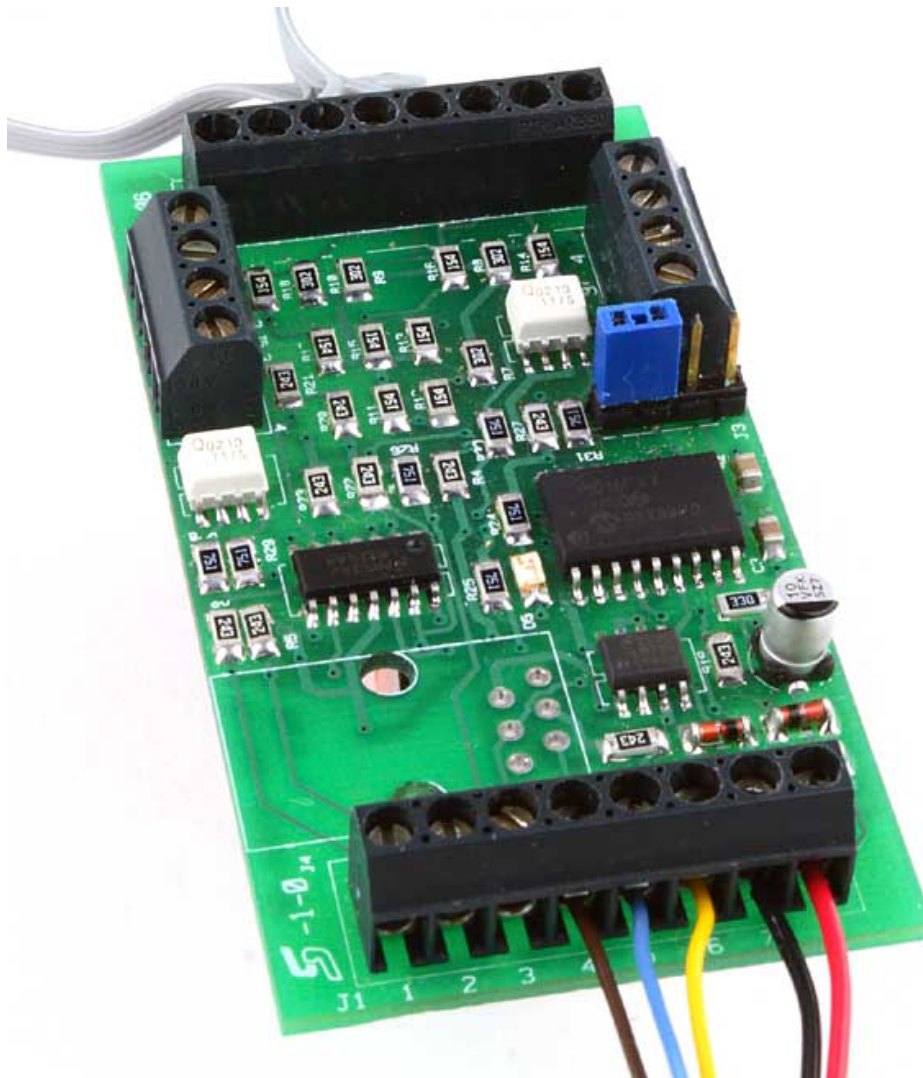
The Wabbit™ Review

by Don Fiehmann

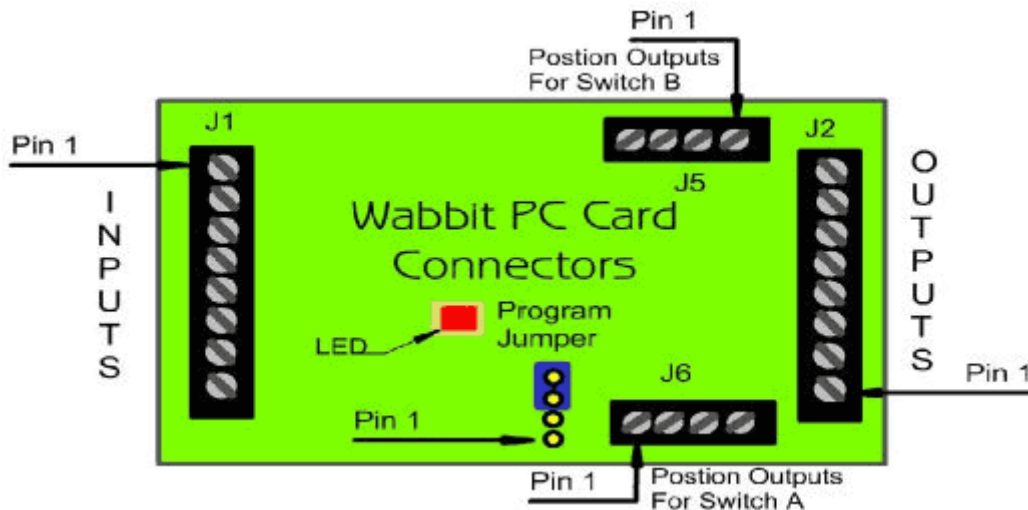
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What is a Wabbit

The success of the DCC Specialties' Hare Stationary Decoder's special features for the Tortoise™ has inspired a follow on product called the Wabbit. The Wabbit is a Dual version of the Hare on a single board. Instead of the plugin connector as used with the Hare, the Wabbit uses screw type wire connectors. This has reduced the costs and allowed the Wabbit to have two complete sets of independent controls to operate two DC, Stall Motor type switch motors. This makes the price of the Wabbit competitive with other stationary decoders but with unequalled performance.



Wabbit's Circuit Board



The advantage of the Wabbit is the ability to not only have DCC control, but also many other automatic features. One of the attention getting features exclusive with the Hare and Wabbit is Auto Throw. This feature can automatically line up a turnout that is thrown the wrong way thereby avoiding a short circuit and/or derailment.

The Wabbit also has outputs to drive indicators, signals or to feedback switch position to the Command Station or to a computer. Some of the other programmable features are setting a position on power up, or having it stay at the same position it was in when power was turned off. Each half can be programmed separately with the program jumper. Below is the complete list of the Wabbit's features.

Wabbit Features

Auto Throw™: Automatically throws points when a train is approaching against the points!

Auto ThrowTimer™: Provides for timing the auto throw function to prevent two trains from colliding.

Smart Route™: Each section sets up to 32 routes by simple address programming in addition to the primary address.

Dispatcher Over-Ride™: Allows the Dispatcher to lock out all other switch commands.

Locked Route Control™: Provides for only one route direction response for either a Throw or Clear command.

Lock-Block™ Blocks the Wabbit's operation if a train is occupying a turnout route by using a block occupancy detector.

Switch Speed Control™: Allows you to control the Tortoise motor speed of either side A or B.

Smart Default Ops™: Upon Power-up, the Wabbit returns to either last thrown position or a programmed default.

Operate Switch Signals or Panel LED Indicators.

Toggle Switch: Allows toggle switch manual control of the points.

System Reset: A single CV command sets all Addresses and CVs to original factory values.

Direct Current Ops: The two sections of the Wabbit will operate on DC using Manual Push Button Control Option.

Semaphore Operations: Allows the use of a Tortoise for triggered control of a signal head or crossing gate.

Automates Reverse Loop Turnouts. Using Auto Throw feature.

The Wabbit can be a simple installation just to operate the Tortoise and then wired and programmed later to add some of the special features as needed.

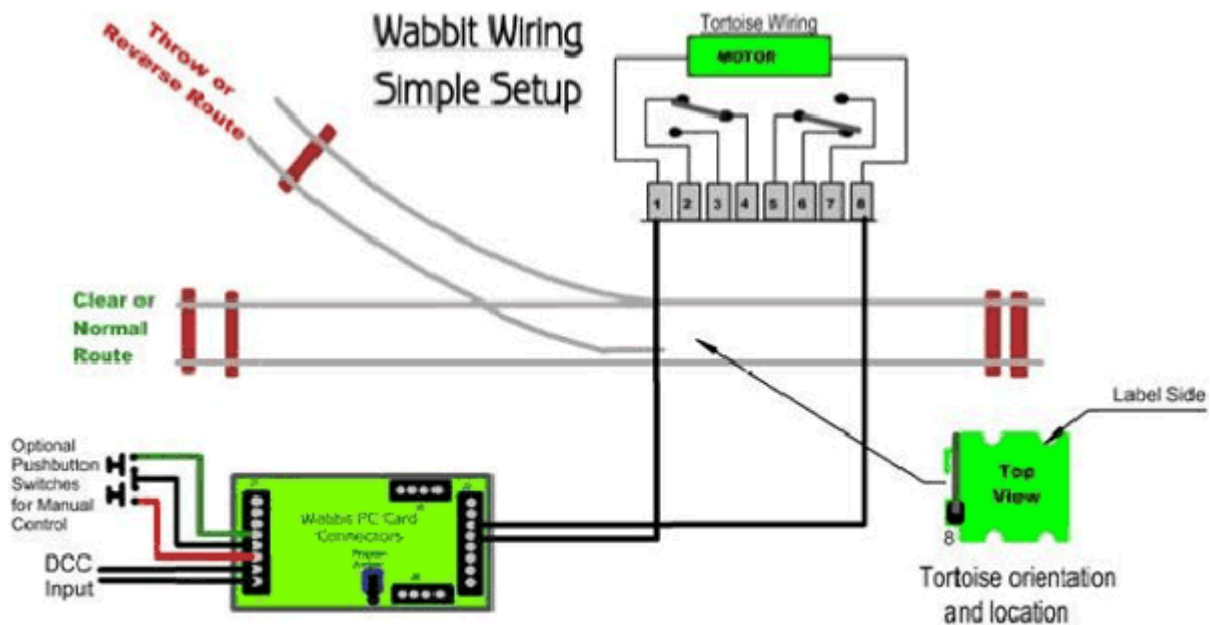
Testing the Wabbit

I got one of the first available Wabbits to check out. There were two turnouts on my layout that were near each other and each leading to a siding off of the dual track main line. These were good candidates for my test. I obtained two connectors for both Tortoises (Tony's part number TTE-TORT-CONN).

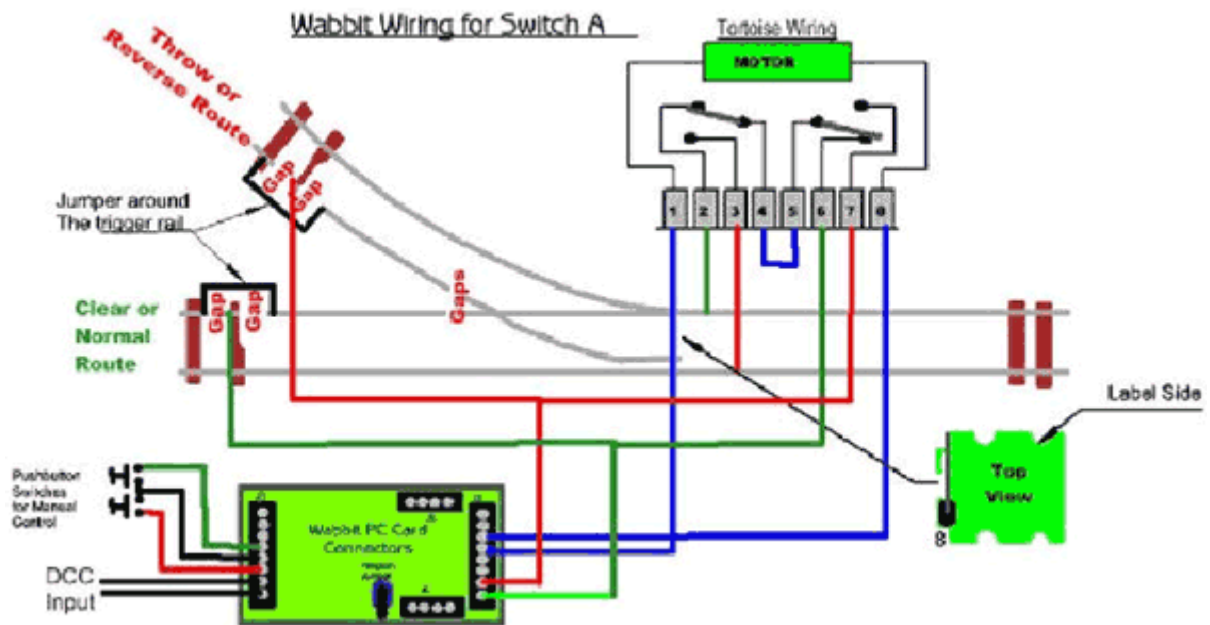
This allowed me to easily connect to the Tortoises to program the Wabbit. With the program jumper you can select with half of the Wabbit to program and not affect the other half. The Wabbit can be wired with a simple setup with only control of the Tortoise. Pushbuttons or a toggle switch are optional.

I set both half up to have the Auto Throw feature by connecting to a short trigger section of track (see diagram). The two Tortoises are both a one end of a east end of a siding. One the other end the Tortoises are controlled by Hares. This is an active pair of sidings and it is easy to forget to line the switches. The Auto Throw does it for you.

A number of times I was backing a long freight watching the engine and not the rear of the train. The switch at the rear of the train got lined before I had a derailment.



Simple Wiring for the Wabbit



Wiring for Auto Throw Feature

Using Other Features

One of the features is the Auto Throw Timer. This lets you setup a switch so it will change its position back to the original position after a programmed time. This can be handy on a spur that should be left lined for the main line. This might prevent your through passenger train from ending up going into a short spur train by mistake.



Bench test setup.

One of the other things that can be done with the Wabbit is to control a semaphore. The trigger rails can be setup to have the Tortoise drive a semaphore. The first trigger rail would set the signal for red and the second return to green.

The increase use of computers for layout control requires feed back of the position of the turnout to the computer. Even though the computer has sent a command to a turnout and should know its position, Auto Throw may have changed it. This is where the position outputs from the Wabbit become very useful.