



Model Train
TECHNOLOGY

Monthly Newsletter – March 2022

Product News, Announcements and How-To Videos



Product Updates & Announcement

As a subscriber to this newsletter you

are the first to receive this information about our new products.

Hello everyone and welcome new subscribers!

Yes, I know its already April and this says the March newsletter, but we were so busy making and shipping product in March there wasn't time to write the newsletter. We still found some time to update and innovate.

We're confident that we will get the April newsletter out before the end of April. There are a few new videos on the YouTube Channel so be sure to check those out.

YouTube Channel

Convert your Manual Coil Switch controls to Digital

- Coil Detector
- Diode Board
- Terminal Board
- Dwarf Signal Controller

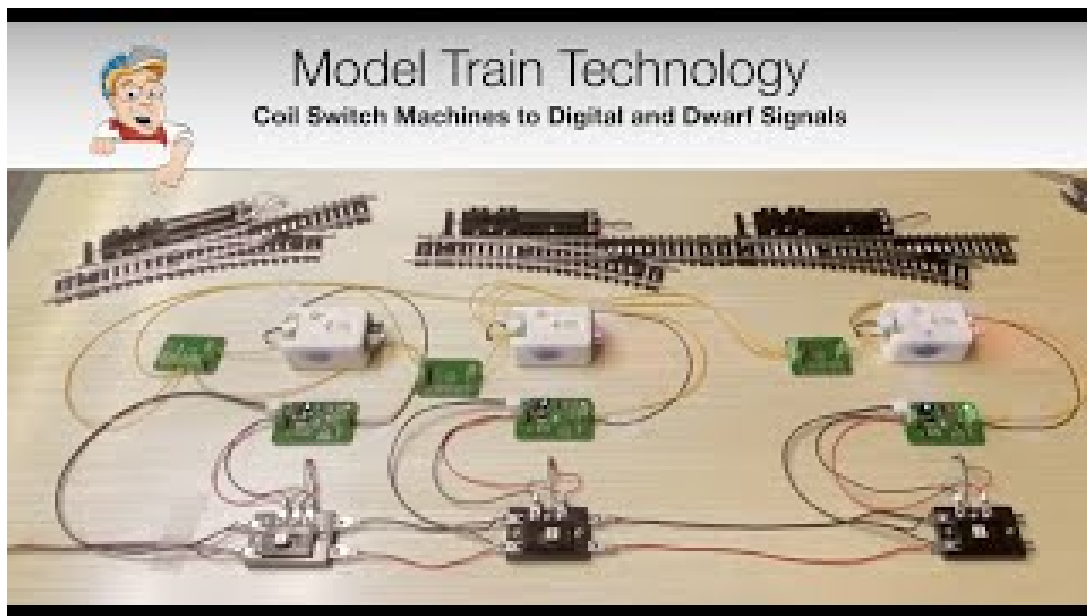
Quite a number of people have coil based turnouts with manual switches to control them. The most popular are Atlas and Kato. These are pretty reliable and easy to wire up. However, you cannot easily connect other devices or indicators either on the layout or on a panel to show what position the switch is in.

When we designed the Dwarf Signal Controller we kept this in mind so that when our Coil Detector was introduced, the two would work together simply and reliably.

This video steps through the entire process from the basic connection of the switch all the way to full interlocking. In addition to the Coil Detector we also introduced two new boards designed to make the connection of diodes Really simple. No soldering needed anywhere to make this all work! we also have a short demo using Kato switches.

([Kato Coil Detector Video](#))

Click the picture below for the full video:



Auto Ranging mode for Precision Detectors

We made one more improvement to our Precision Detectors that I really appreciate. As many of you know, you can adjust the precise range of the sensor but turning the trim potentiometer screw can be a challenge. Leaning over the layout or trying to see what you are doing when the detector is facing the other way was difficult.

THE WAY IT WORKS:

Turn the range screw all the way to zero and then put the detector back into the bracket/holder.

Next, place any rail car on the track where you want the detection to take place. To set the range without the screwdriver, simply press and hold the pushbutton for about 8 seconds. That will activate a 10 second countdown timer. After 10 seconds, the board automatically takes a set of range measurements and sets the detect zone automatically.

That's it.

If you want to adjust the range manual, simply move the screw adjustment away from zero to the setting you want.

Click the picture to view the video.

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Auto Range Setting Mode - Precision Detector



Reverse Direction Signaling using Latching

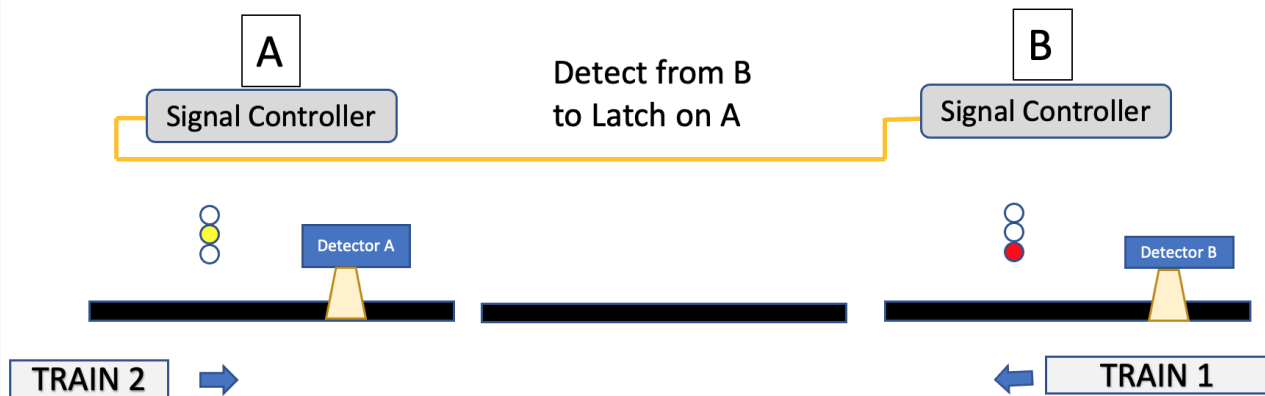
This is a new capability that will be included in all Signal Controllers (except Dwarfs) from version 24 onward. A customer (please let me know who you are) asked if a block signal ahead and facing in the opposite direction could turn yellow when a train trips the detector.

Yes. Here is how it works:

Any Signal Controller Latch (middle terminal) that receives a SIGNAL from a Detector that is NOT already tripped will turn Yellow. If a subsequent DETECT is received by that Signal Controller the light will turn red.

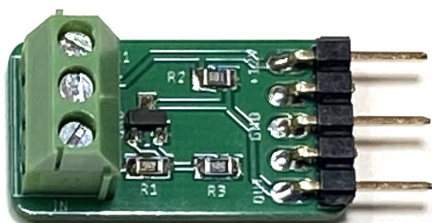
Thus, a train that is approaching another on the same track or a siding would get a Yellow indication on the Block Signal facing them BEFORE that train (or the first train) trips the Signal Controller.

As soon as the condition is cleared, the Signal will return to green.

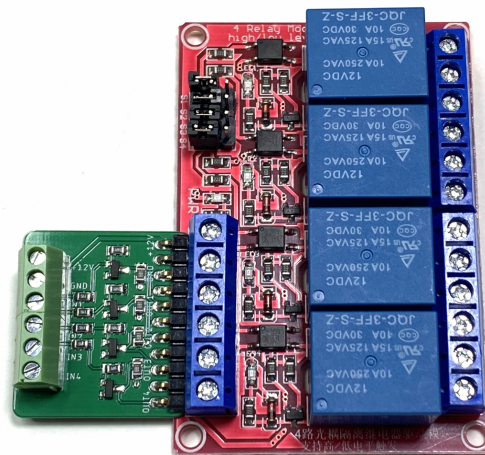


Train #1 traveling West trips detector B for Signal Controller B. As normal, the block signal changes to RED as shown. Train#2 is approaching Block A but has not tripped its detector. HOWEVER, Signal Control B, via reverse latching, causes Signal Controller A to show a yellow condition. It will stay yellow while Detector B is active OR Train 2 trips Detector A – at which point it will cause Signal A to change to red.

Connecting RELAYS to the Precision Detector



SINGE RELAY ADAPTER

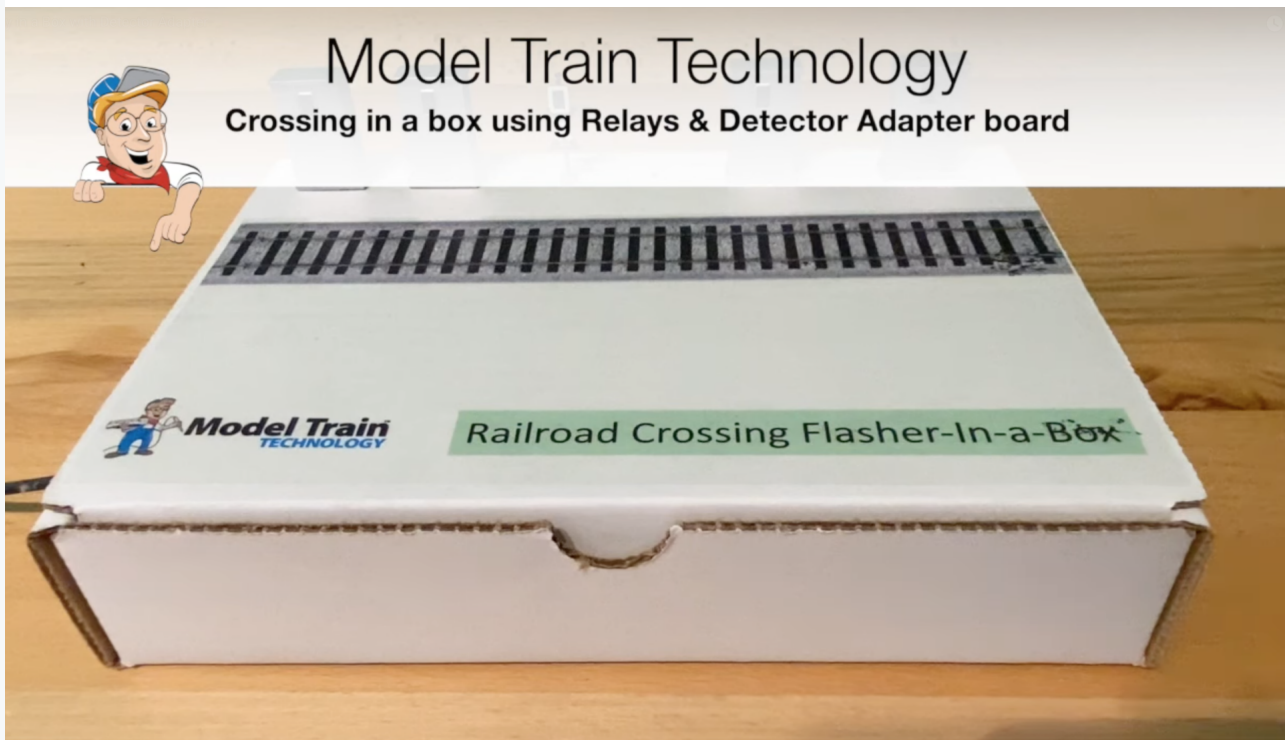


**QUAD RELAY ADAPTER WT
RELAY**

We began selling Relays that can be triggered by the Precision Detector last year and we included a few diodes and resistors to make the Signal from the Detector align with the relay input. Unfortunately that wasn't as reliable as we expected. We have just introduced a Relay Adapter that makes this foolproof. 12VDC from the Power

Module or your out 12VDC powers the Precision Detector and the Relay VIA the Relay Adapter. The Signal wire connects to the Relay Adapter. (also no more soldering needed)

Below is a video of Crossing Flashing in a Box that uses a quad really to reverse the polarity of a unique European flasher.



[Click here to see an O SCALE Crossing Flasher in a box with SOUND.](#)

Dwarf SIZE update

Based on Customer Feedback and some more engineering and design work we have re-sized all the dwarfs to be smaller and therefore more prototypical in size. However, you can use ANY size you want for any scale you have!

Here are the heights above the base:

N = 10.5mm; base 2.65mm

HO = 14.3mm; base 3.10mm

S = 20.4mm; base 3.90mm

O = 26.5mm; base 5.00 mm

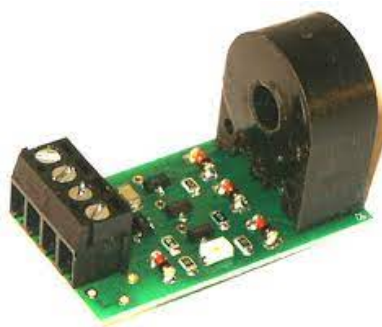
There is some variation due to material shrinkage and the manufacturing process.

FIBER PIN Update

Creating our 2-Core pins was a breakthrough. You can insert two fibers into one pin. This is most commonly used with the Dwarf Controllers/Signals. They are made via 3D printing and the material (resin) we use for this has to remain flexible so the tongues can compress on the fiber. That makes getting precise diameters for the variable fiber cables very difficult since the material cures over time and typically shrinks.

We have refined the manufacturing process to narrow the tolerances so we think they will grab better. If you have existing pins and the fiber is slipping out of the pin, we recommend Gem Tack or other clear white glue. Just put a small portion on the fiber and slide it in and let it dry. It is not permanent but has enough holding power to keep the cable in place.

Can I use my NCE BD20 Track Current Detector to trigger your Signal Controllers?



Yes, you can!

Until next time, best regards and stay safe and healthy,

Jim

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