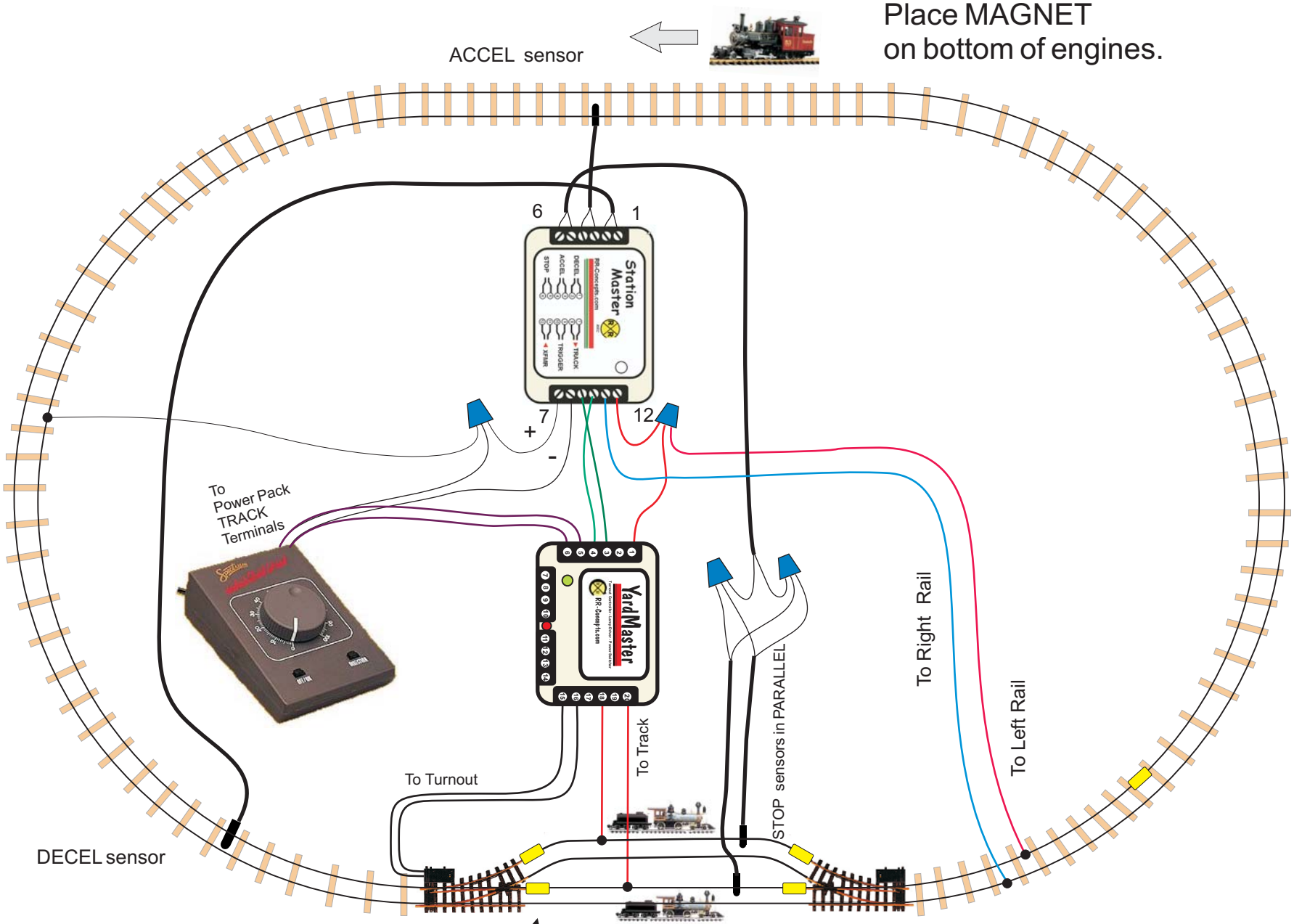
Alternate 3 Trains at a Siding with Decel/Accel Realism.



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* Stopping distance between 2 and 10 feet.
* Program time delay to MAXIMUM
* One train will always be in a siding.
* 2nd turnout may be powered if desired.
* Signal light can be added if desired.

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parts Required:

StationMaster:	Qty 1	Programmed for 2 trains, Fire YardMaster after stopping (blink 2 = GREEN)
YardMaster:	Qty 1	Programmed for Node ID:1 (2 BLINKS)
Turnouts:	Qty 2.	1 is powered and the second can be either floating or powered.
Track Isolators:	Qty 3	
Magnets:	Qty 3	

Description

The Alternating 3 train at a siding will allow 3 trains to run around the layout. Two of them will always be in the siding, while the third train will be traveling. As the traveling train passes over an ACCEL sensor one of the waiting trains will accelerate and exit the siding. The traveling train will then enter the empty siding, decelerate, and then fire the turnout to the other leg of the siding. The released train from before will then become the traveling train and this process is repeated where all three trains will take their turn.

NOTE:
This hookup requires the main line track section to be long enough for a train to enter a siding, decelerate, and then stop before the traveling train reaches the GO sensor. **If the GO sensor is triggered before the train in the siding stops then the alternating will not occur.** Instead the train in the siding will accelerate and exit since it was told another train is quickly approaching. This may either require a significant length of track or the deceleration must be very quick.

Hookup Description:

StationMaster:

Terminals 1 and 2 are the DECEL sensor inputs and attach to the DECEL sensor as shown. For faster decelerations shorter than 2 feet move this sensor into the siding. An additional sensor wired in parallel should be placed in the other leg of the sensor. Please reference the STOP sensor for wiring DECEL sensors in parallel.

Terminals 3 and 4 are the ACCEL sensor inputs and attach to the ACCELsensor as shown. The location of this sensor should be placed such that the train in the siding has stopped before this sensor is triggered. Either increase the deceleration rate or move this sensor far enough away.

Terminals 5 and 6 are the STOP sensor. Attach these to the STOP sensors in parallel as shown. The STOP sensor is only active while decelerating.

Terminal 7 attaches to input power, positive.
Terminal 8 attaches to negative power. This is the common line thruout
Terminal 9 attaches to YardMaster Terminal 3.
Terminal 10 attaches to YardMaster Terminal 4. The polarity of 3 and 4 must be correct for communications to occur.
Terminal 12 attaches to YardMaster Terminal 1 and also to the exit block of track. Note that this exiting block of track is optional and only provides a length of track for the acceleration. If the acceleration can be done in the sidings then this section is not necessary.

StationMaster Programming:
Program train count to 2 trains
Program Blink 2 = GREEN for firing YardMaster after deceleration.
Program time delay to maximum. The train will then wait for the GO sensor to continue.
Program acceleration and deceleration as desired. The self-adjust deceleration is not recommend for this hookup.

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Hookup Description:

YardMaster

Terminal 1 attaches to StationMaster Terminal 12 this is the line that will switch between terminals 18 and 20.

Terminal 3 attaches to StationMaster Terminal 9.

Terminal 4 attaches to StationMaster Terminal 10.

Terminals 5 and 6 are input power to the YardMaster. There is no polarity.

Terminals 15 and 16 attach to the turnout. Wire these such that when the YardMaster puts power on the upper siding then the turnout is aligned to the upper siding.

Terminals 18 and 20 attach to the left rail of the sidings.

YardMaster Programming:

Program for Node ID=1 **(2 blinks)**

VERY IMPORTANT!

The StationMaster AND YardMaster MUST obtain power from the same power supply. (transformer) If different power sources are used then serious damage WILL occur.
Note that the YardMasters can also use the same DC track power as the StationMaster if desired instead of AC “Accessories” power.