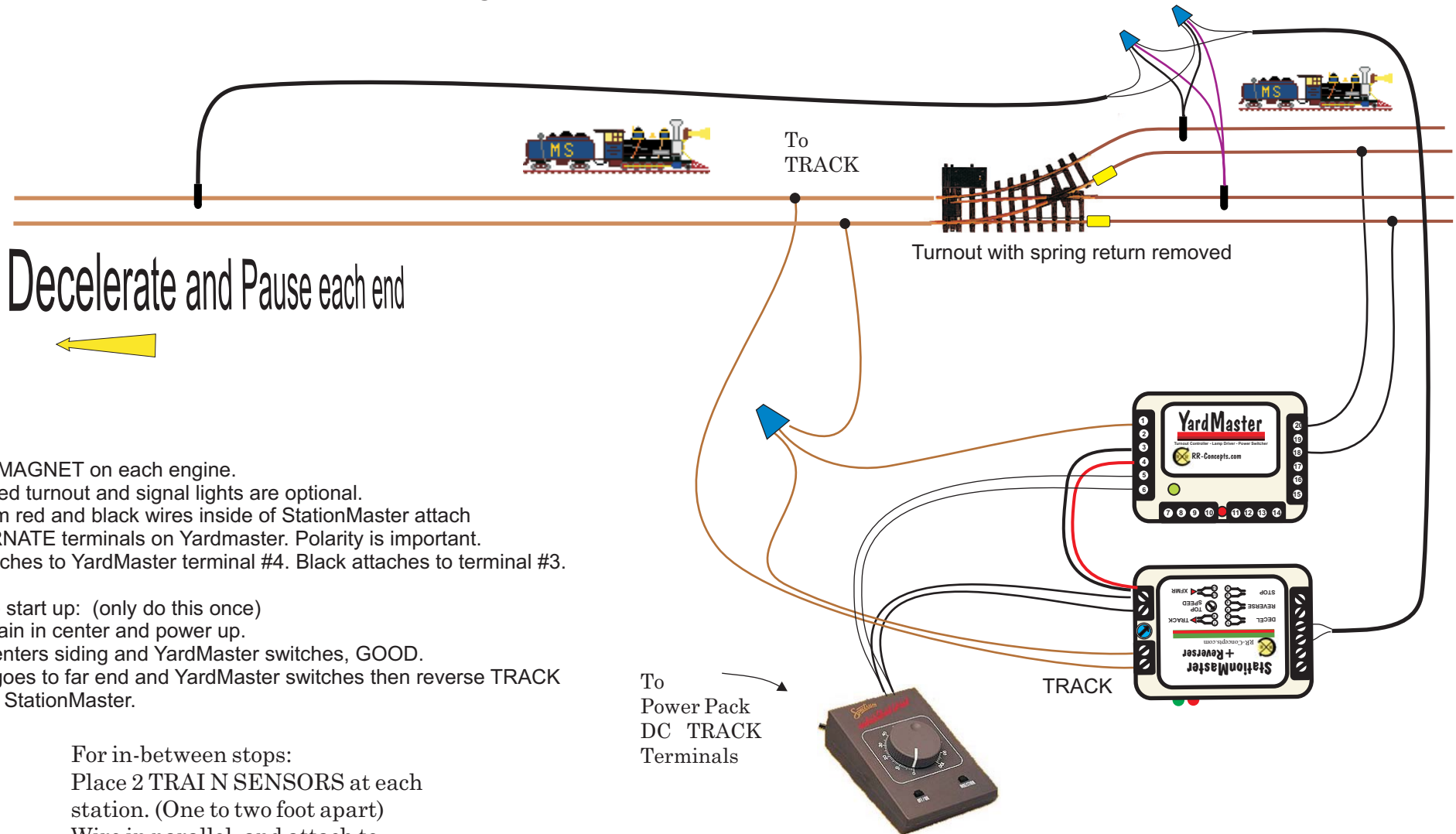


2 Trains: Point to Point Reversing With a Siding on One End

Trains Alternate running

Sensors in PARALLEL.



NOTES:

1. Place MAGNET on each engine.
2. Powered turnout and signal lights are optional.
3. Custom red and black wires inside of StationMaster attach to ALTERNATE terminals on Yardmaster. Polarity is important. RED attaches to YardMaster terminal #4. Black attaches to terminal #3.

First time start up: (only do this once)

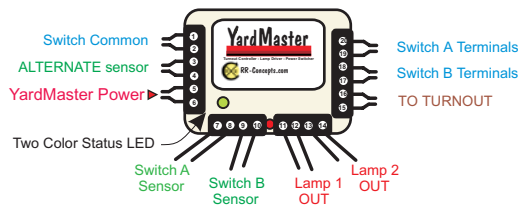
Place 1 train in center and power up.

- If train enters siding and YardMaster switches, GOOD.
- If train goes to far end and YardMaster switches then reverse TRACK wires on StationMaster.

For in-between stops:

Place 2 TRAIN SENSORS at each station. (One to two foot apart)
Wire in parallel, and attach to DECEL terminals.

YardMaster Reference



YardMaster LED Indicator:
GREEN: Upper track has power.
RED: Lower track has power.



2 Trains: Point to Point Reversing With a Siding on One End.

RRC Parts Required:

StationMaster/Reverserr:	Qty 1	
YardMaster:	Qty 1	Programmed as Node 1 (2 Blinks)
Sensors:	Qty 3	
Magnets:	Qty 2	



RR-Concepts.com

Description

The Point to Point Reversing Siding will allow 2 trains to alternate running back and forth using realistic accelerations and decelerations. After a time delay the trains will alternate.

StationMaster Hookup:

* Sensors (6 position terminal strip) have no polarity.

Terminals 3 and 4 and attach to the decel/reverse sensor as shown. All sensors are wired in parallel and there is no polarity. The train will decelerate after crossing over one of these sensors.

Terminals 5 and 6 are the optional STOP sensor inputs which are not connected in this drawing. If desired these can be added to stop the train while decelerating. Wire these in parallel if used.

Note that the STOP sensor is only active while decelerating. (passing over STOP before DECEL will have no affect)

The XFMR terminals (7 and 8) attach to the DC transformer. (Track output) Note the + and - wires must be correct. If the StationMaster does not light up then reverse the track direction of swap these two wires. The DC voltage should be set for the desired speed of the train.

The pigtail wires to the YardMaster are attached as shown. Red wire attaches to YardMaster 4, black or brown wire attaches to YardMaster 3.

The Track wires attach to the track as shown. the upper track also attaches to the YardMaster terminal 1. the YardMaster will switch this voltage between terminals 18 and 20 .

StationMaster PROGRAMMING:

Set Programming Features for all RED Green blinks. (Factory default)

Set Train Count to 2 blinks.

Set time delay as desired.

Set accel and decel as desired.

YardMasterHookup

Terminal 1 attaches to the StationMaster track output as shown.

Terminals 3 and 4 attach to the StationMaster pigtail wires as shown. If these are not correct the YardMaster will not fire.

Terminals 5 and 6 attach to the same DC track power that feeds the StationMaster. There is no polarity.

Continued...

2 Trains: Point to Point Reversing With a Siding on One End.

YardMaster wiring continued..

Terminals 7 thru 14 are unused. A signal light can be added if desired. (See YardMaster manual)

Terminals 15 and 16 are unused however the turnout can be powered if desired. Attach these to the turnout with the wire polarity matching the YardMaster switching. (Yardmaster GREEN should switch to the upper track, RED is the lower track)

YardMaster PROGRAMMING:

Set YardMaster Node ID to **2 Blinks**.

VERY IMPORTANT NOTE!

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 YardMaster can also use the same DC track power as the StationMaster as well as AC "Accessories" power.

TESTING

Once the wiring is correct this system will run reliably with the units remembering where the trains are when power is removed.

A little background:

The Reverser knows to ignore every other DECEL sensor since it is going back and forth. Once things are running this works very well.

The Reverser also has logic to trigger the YardMaster only when accelerating "Forward". This is how the siding only on one end works. We need to wire the polarity of the track to make this happen.

1. Check that the StationMaster and YardMaster are communicating.

* With a magnet fake out a DECEL sensor. The StationMaster should simulate a decelerate/pause/accelerate sequence.

* The YardMaster should switch after every 2nd operation.

If this does not happen then verify the following:

The Polarity of the signal wires are correct (red and black pigtail wires out of StationMaster)

The StationMaster is programmed for 2 trains

The YardMaster is programmed for Node: 1 blink.



2 Trains: Point to Point Reversing With a Siding on One End.

Set up Testing Continued...

Once communication is verified, place one small engine in the center section.

Power on. The engine will accelerate until it hits a DECEL sensor and then stop.

- * If the train entered the siding and switched to the other siding before accelerating then the wiring is good.
- * If the train entered the siding and did NOT switch to the other siding then swap the two TRACK wires out of the StationMaster.

- * If the train has traveled to the extreme end and the YardMaster did NOT fire after reversing then the wiring is good.
- * If the train has traveled to the extreme end and the YardMaster fired after reversing then swap the two wires out of the StationMaster (TRACK wires)

Additional notes and enhancements:

- * Additional (in-between) station stops can be added by placing 2 DECEL sensors about 12 inches apart. (SM terminals 1 and 2)
- * The two DECEL sensors (one in each of the sidings) can be replaced with a single sensor located before the switch. The deceleration must be long enough for the entire train to be clear of the turnout before the train stops.
- * A signal light or signal bridge can be wired to the YardMaster if desired. See the YardMaster manual for info
- * The turnout can be powered by the YardMaster if desired.

