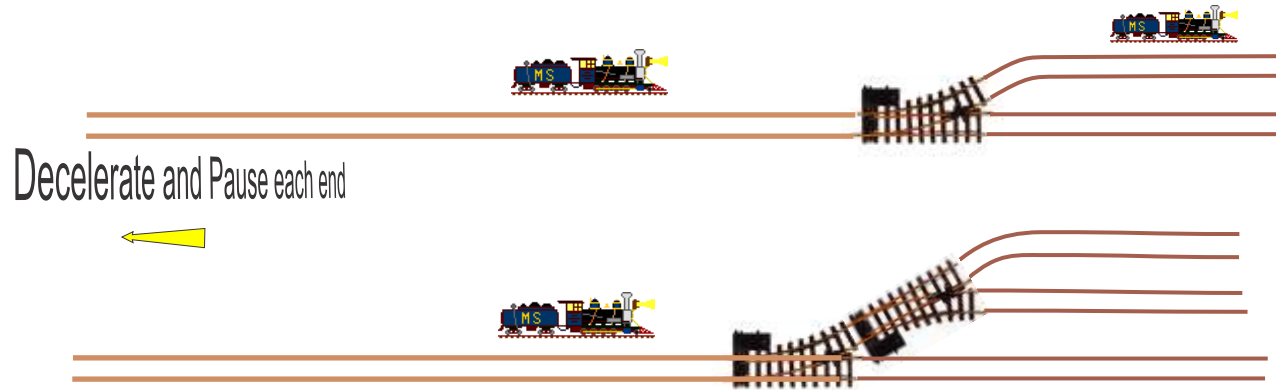


Point to Point Reversing With Sidings on One End



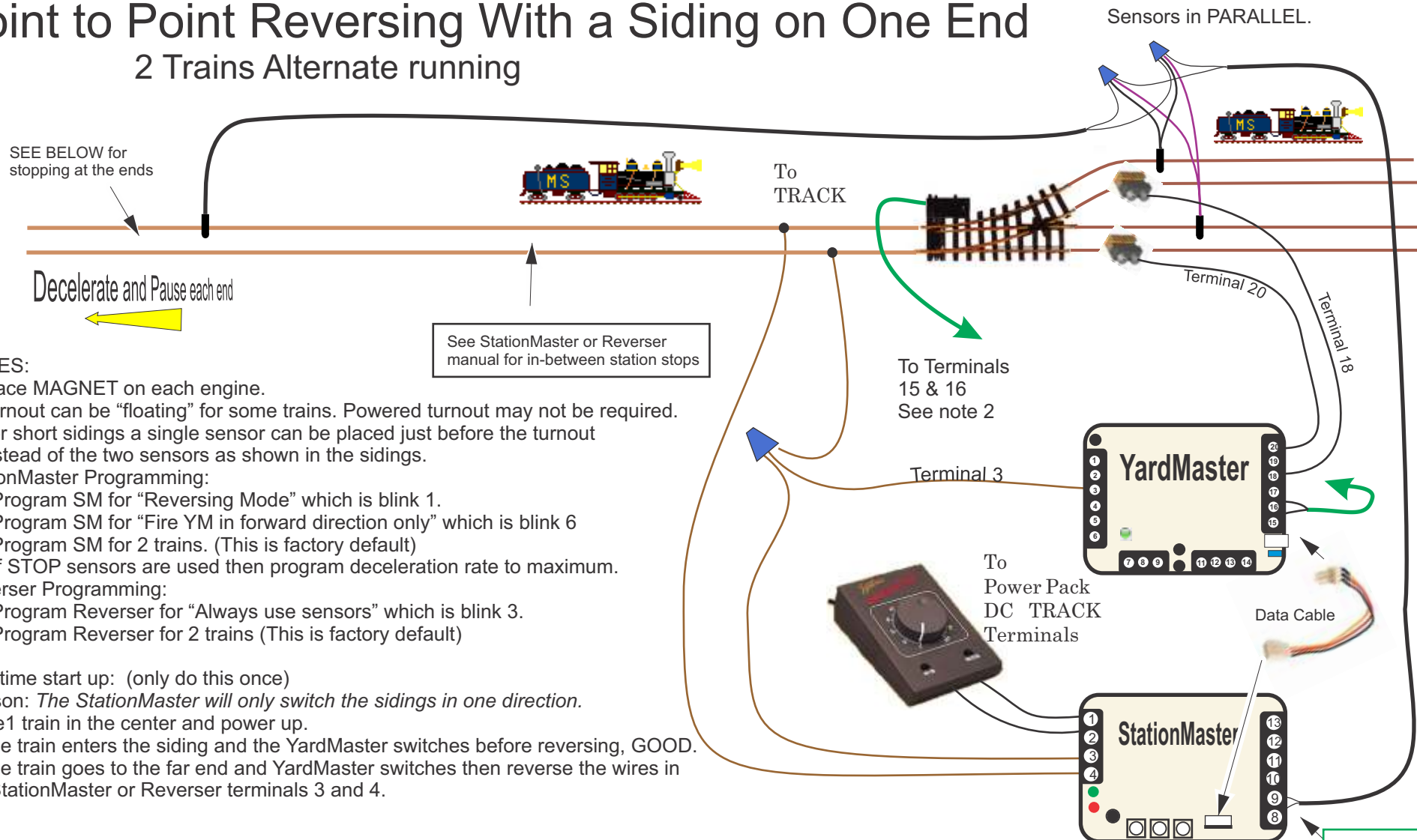
This drawing shows hookups for a 2 track and 3 track siding that can be done using either a StationMaster or StationMaster/Reverser. The differences are as follows:

1. The **StationMaster** can perform realistic self-adjusting deceleration using the DECEL and STOP sensors while the **Reverser** can not.
2. In-between station stops can be done with the **StationMaster** by placing a DECEL and STOP sensor next to each other so they are triggered at the same time. Two pairs are required and the train will stop between them. (See **StationMaster** manual)
3. In-between station stops can be done with the **StationMaster/Reverser** by placing a DECEL sensor at the stopping location. Two sensors are required and the train will stop between them.
4. The deceleration operation on the ends is started on the **StationMaster** by using the terminals 8 & 9 while the **Reverser** used terminals 10 & 11. This is noted in the drawings.
5. The programming is different and is noted in the drawings.

Basically, the **StationMaster** can preform a more realistic operation while the **Reverser** has a slightly easier hookup for in-between station stops.

Point to Point Reversing With a Siding on One End

2 Trains Alternate running



NOTES:

1. Place MAGNET on each engine.
2. Turnout can be "floating" for some trains. Powered turnout may not be required.
3. For short sidings a single sensor can be placed just before the turnout instead of the two sensors as shown in the sidings.

StationMaster Programming:

- * Program SM for "Reversing Mode" which is blink 1.
- * Program SM for "Fire YM in forward direction only" which is blink 6
- * Program SM for 2 trains. (This is factory default)
- * If STOP sensors are used then program deceleration rate to maximum.

Reverser Programming:

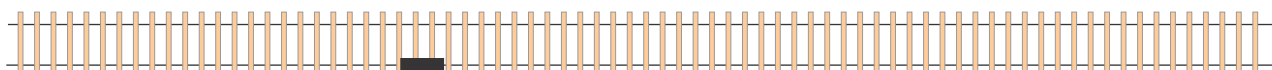
- * Program Reverser for "Always use sensors" which is blink 3.
- * Program Reverser for 2 trains (This is factory default)

First time start up: (only do this once)

Reason: *The StationMaster will only switch the sidings in one direction.*

Place 1 train in the center and power up.

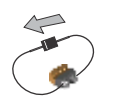
- If the train enters the siding and the YardMaster switches before reversing, GOOD.
- If the train goes to the far end and YardMaster switches then reverse the wires in the StationMaster or Reverser terminals 3 and 4.



Stopping at the Ends



1



2



3

Stopping position on the ends (3 places) can be done by any of the following:

1. Inline diode on bottom rail with band to LEFT.
2. Track isolator with 3 AMP diode attached as shown with band to LEFT.
3. STOP sensor attached to StationMaster or Reverser terminals 12 & 13. (Easiest to move stopping position and allows Self-Adjusting deceleration feature) RECOMMENDED
4. (not shown) LGB reversing track section with diode attached.

StationMaster terminals 8&9
Reverser terminals 10&11

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



RRC Parts Required:

StationMaster:	Qty 1
YardMaster:	Qty 1
Sensors:	Minimum 2, see drawings
Magnets:	One for each train
Data Cable:	Qty 1
Track Isolators:	Qty 2

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 have no polarity.

StationMaster terminals 8 and 9 or Reverser terminals 10 and 11 attach to the decel 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 12 and 13 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 (1 and 2) attach to the DC transformer. (Track output) Note the + and - polarity must be correct. If the StationMaster does not light up then reverse the track direction or swap these two wires. The DC voltage should be set for the desired speed of the train. If powered turnouts are used set the speed to about 3/4 full throttle and use the StationMaster top speed dial to slow down the trains. This gives more voltage to throw the turnout.

The YardMaster is attached to the StationMaster using the data cable.

The Track wires attach to the track as shown. The lower main line track also attaches to the YardMaster terminal 3. the YardMaster will switch this voltage between terminals 18 and 20 with go to the sidings.

YardMaster Hookup

Terminal 3 attaches to the StationMaster track output as shown.

Continued...



YardMaster wiring continued..

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

Terminals 15 and 16 attach to the turnout motor. Swap these wires if needed so the turnout aligns properly to the siding with power.

YardMaster PROGRAMMING:

None.

OPERATING

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

Background:

The StationMaster knows to ignore every other DECEL sensor since it is going back and forth. Once things are running this works very well. It may be necessary to “fake” a decel sensor by pressing button #1 if a train gets out of sequence due to a train wreck, etc.

The StationMaster will be programmed to trigger the YardMaster only when accelerating “Forward”. The track polarity must be correct to make this happen.

DEBUGGING:

Check that the StationMaster and YardMaster are communicating:

- * Press the StationMaster programming button #1 to fake out a DECEL sensor. The StationMaster should simulate a decelerate/pause/accelerate sequence every other push.

- * The YardMaster should switch after every 2nd operation.

If this does not happen:

1. verify the StationMaster programming is correct.
2. Perform a factory reset on the YardMaster and verify the alternate pushbutton is operational.



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.

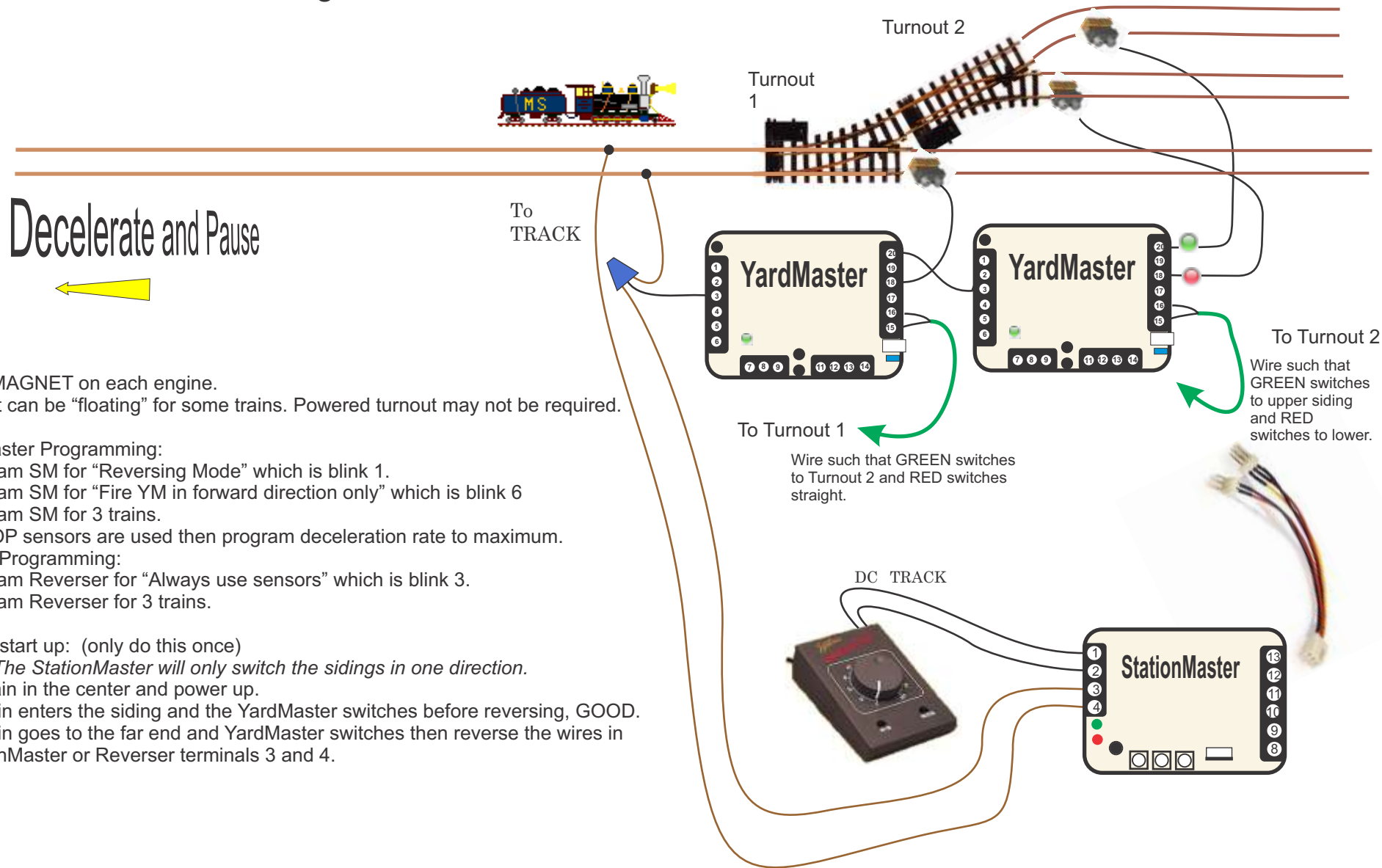
- * If the train entered the siding and switched to the other siding before accelerating then the wiring is good.
- * If the train entered the siding and did NOT switch to the other siding then swap the two TRACK wires out of the StationMaster.

- * 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 (3 and 4 TRACK wires)

Additional notes and enhancements:

- * 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.

Point to Point Reversing With a 2 Sidings on One End 3 Trains Alternate running



NOTES:

1. Place MAGNET on each engine.
2. Turnout can be "floating" for some trains. Powered turnout may not be required.

StationMaster Programming:

- * Program SM for "Reversing Mode" which is blink 1.
- * Program SM for "Fire YM in forward direction only" which is blink 6
- * Program SM for 3 trains.
- * If STOP sensors are used then program deceleration rate to maximum.

Reverser Programming:

- * Program Reverser for "Always use sensors" which is blink 3.
- * Program Reverser for 3 trains.

First time start up: (only do this once)

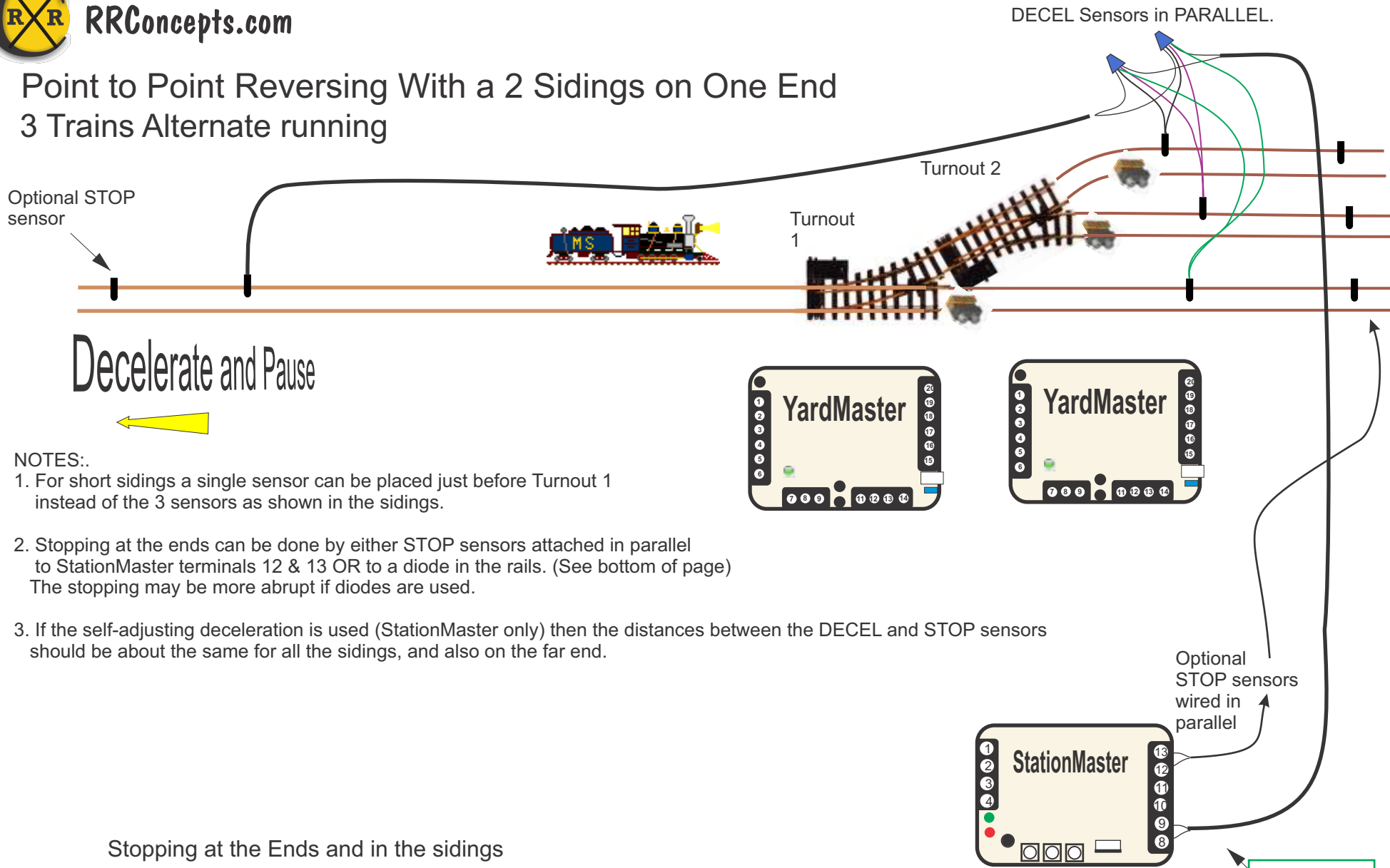
Reason: *The StationMaster will only switch the sidings in one direction.*

Place 1 train in the center and power up.

- If the train enters the siding and the YardMaster switches before reversing, GOOD.
- If the train goes to the far end and YardMaster switches then reverse the wires in the StationMaster or Reverser terminals 3 and 4.

Sensor Wiring

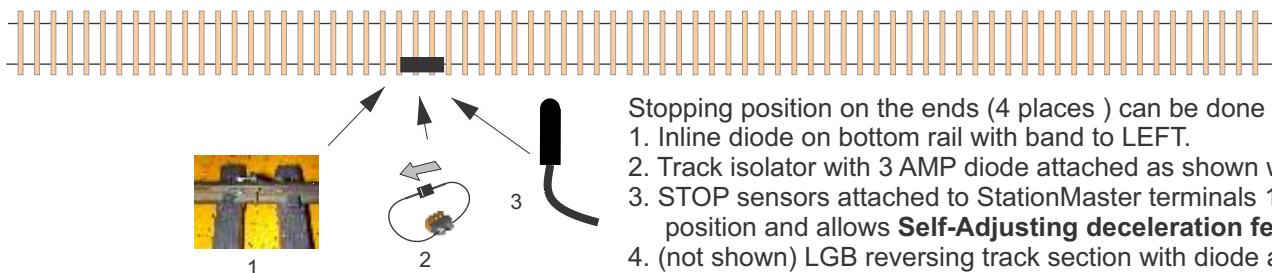
Point to Point Reversing With a 2 Sidings on One End 3 Trains Alternate running



NOTES:

1. For short sidings a single sensor can be placed just before Turnout 1 instead of the 3 sensors as shown in the sidings.
2. Stopping at the ends can be done by either STOP sensors attached in parallel to StationMaster terminals 12 & 13 OR to a diode in the rails. (See bottom of page) The stopping may be more abrupt if diodes are used.
3. If the self-adjusting deceleration is used (StationMaster only) then the distances between the DECEL and STOP sensors should be about the same for all the sidings, and also on the far end.

Stopping at the Ends and in the sidings



Stopping position on the ends (4 places) can be done by any of the following:

1. Inline diode on bottom rail with band to LEFT.
2. Track isolator with 3 AMP diode attached as shown with band to LEFT.
3. STOP sensors attached to StationMaster terminals 12 & 13. (Easiest to move stopping position and allows **Self-Adjusting deceleration feature**) RECOMMENDED
4. (not shown) LGB reversing track section with diode attached.

StationMaster terminals 8&9 Reverser terminals 10&11