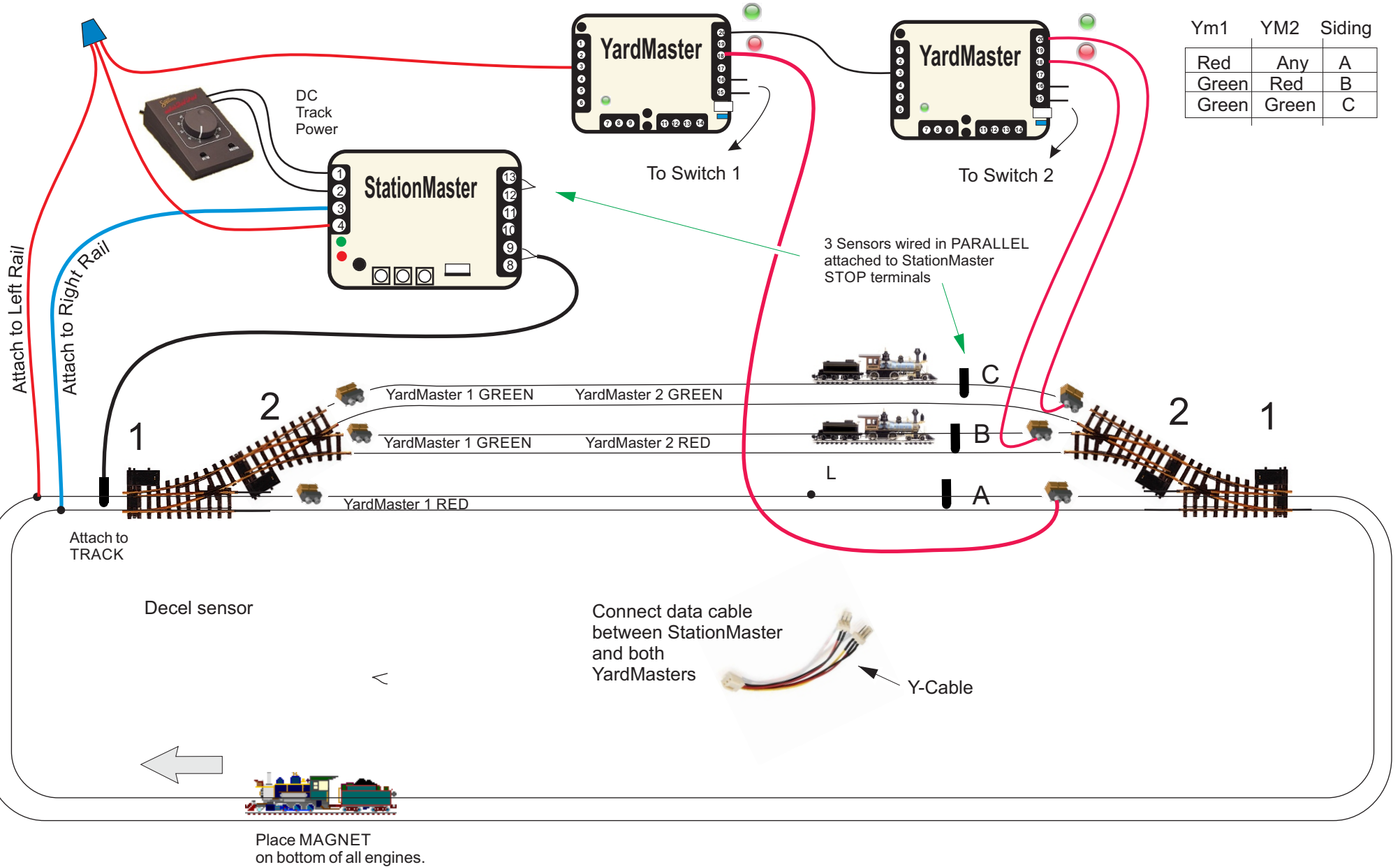


Alternating 3 train siding

See page 2 for hookup details.



Alternating 3 train siding

Parts required:

StationMaster	Qty 1
YardMaster:	Qty 2
Sensors:	Qty 4
Turnouts:	Qty 4 ... 2 are powered and 2 can be either floating or powered.
Track Isolators:	Qty 6
Magnets:	Qty 3, one per train.

Description:

The 3 Train alternating siding will alternate running 3 trains around the track with a station pause before switching.

Hookup Description:

YardMaster #1:

- Terminal #3 attaches to StationMaster terminal #4
- Terminals #15 and #16 attach to both electric switch #1s.
- Terminal #18 attaches to isolated left rail of siding C.
- Terminal #20 attaches to YardMaster 2 terminal #1

Programming: none.

YardMaster #2:

- Terminal #3 attaches to YardMaster 1 Terminal #20.
- Terminals #15 and #16 attach to both electric switch #2s.
- Terminal #18 attaches to isolated left rail of siding B.
- Terminal #20 attaches to isolated left rail of siding A.

Programming: Set for node 2 (3 blinks)

StationMaster

- Terminals 8 and 9 attach to DECEL sensor. Three separate DECEL sensors can be placed inside each of the sidings, or a single sensor placed on the main line before the first siding as shown.
- Terminals 12 and 13 attach to all 3 STOP sensors wired in parallel in the sidings.
- Terminal 3 attaches to the RIGHT rail. There should be no isolators on the right rail.
- Terminals 4 attaches to the LEFT rail of the main line, and YardMaster #1 terminal 3.

Terminals 1 and 2 attach to the transformer DC voltage. Set the transformer speed to about 12 volts. Terminal 1 is positive, 2 is negative. Attach the Y data cable between the StationMaster and both YardMasters.

Programming: Set for 3 trains; Decel rate INFINITE; Lap count as desired; Delay as desired; Accel rate as desired.



Notes:

The direction of the trains is shown in the diagram. Set the transformer direction so that the StationMaster powers up. Turn down the top speed dial on the StationMaster to set the top speed of the train.

Each train must carry a magnet to trigger the sensors.

The exit switches can be either powered and wired in parallel with the entry switches or floating with the trains pushing the points.

The LEFT rail of each siding is isolated and attached to a YardMaster.

Right rail is "ground" and is connected to all sidings without isolators.

It may be necessary to swap the wires to the electric switches as required so that the switch points are lined up to the proper siding as shown in the table on page 1.

NON-STOPPING MAIN LINE

An alternating 2 train setup can be done with the trains "lap counting" on the main line.

When programmed for multiple laps, 10 AMP StationMasters will force the turnouts to go to the main line while counting laps. The decel sensor MUST be placed on the main line before the first turnout.

5 AMP StationMasters however will also allow lap counting but will not force the turnouts to the main line. This allows 3 trains to alternate with laps. The decel sensor can be placed either before the first turnout, or in parallel in each of the sidings.



YardMaster Testing checklist

1. No trains on the track, anywhere. This assumes the wiring is close to correct and there are NO isolators on any right rail, and NO wires in YM 5 or 6..
2. YM #1 is programmed for #1 and is the first one on the main line. (factory reset)
3. YM #2 is programmed for #2 (3 blinks)
4. Power up the system with no more than 16 volts. (12 preferred for testing)
5. On YM #1, use the pushbuttons to set it to RED.
6. VERIFY turnout #1 switches to "straight". If incorrect swap wires on the turnout motor. Verify parallel turnouts also match.
7. VERIFY there IS power on siding A. If no power verify Ym1 pin 18 connects to siding A left rail, and the right rail has no isolators anywhere.
8. VERIFY NO power on sidings B and C.
9. Using pushbuttons on the YardMasters, set YM #1 to GREEN and YM #2 to RED.
10. VERIFY turnout #1 is switched to "curve". This should be correct if step 6 passed. Verify parallel turnouts also match.
11. VERIFY turnout #2 is switched to "straight". Swap wires on the turnout motor if incorrect. Verify parallel turnouts also match.
12. VERIFY there IS power on siding B. If no power verify the following:
 - YM#1 pin 20 connects to YM#2 pin 3
 - YM#2 pin 20 connects to siding C left rail.
 - YM#2 pin 18 connects to siding B left rail.
13. Using pushbuttons on the YardMasters, set YM #1 to GREEN and YM #2 to GREEN.
14. VERIFY there IS power on siding C. If not check step 12 above.
15. When all steps above are complete, proceed to StationMaster test.

StationMaster Testing Checklist

1. No trains on the track anywhere.
2. VERIFY the SM is programmed for 3 trains.
3. To simulate operations, press SM button #1 and then button #3. This will simulate the train sensors.
4. Each time buttons 1 and 3 are pressed, VERIFY both YM units blink the small blue LED. This indicates they have received a command.
5. VERIFY the YM units switch after receiving a command. Note that YM #2 will not switch when YM #1 goes to RED. Repeat this sequence a few times to synchronize the turnouts.
6. VERIFY the turnouts switch to the sidings to match the YM colors as indicated below. If the YardMaster Testing Checklist has passed these should be correct.

