



Model Railroading Education Series –

Track Tips

Presented by:

NMRA NCR 3 Rivers Division



Trackwork Roles

- Good trackwork is **the** most important part of successful model railroad operation.
- Track is the **guideway** for the wheels AND the **path** for the electricity.
- The two roles conflict, especially at turnouts.

Trackwork Materials

Track is generally made of four materials.
Avoid first three because they corrode (rust)
and interfere with electrical path.

1. Brass – gold-colored metal.
2. Zinc-coated steel – dull whitish gray color.
3. Steel – rust color sooner or later.
- ✓ 4. Nickel silver – color of five cent piece.
It does corrode but its oxide is conductive.

Trackwork Pieces

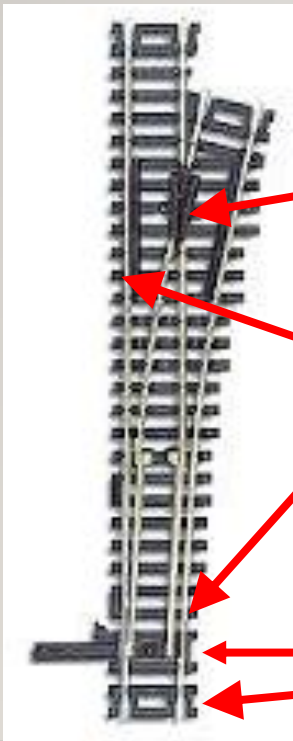
- Sectional Track – rigid sections, precut to fixed lengths, different radii for curves.
- Flexible Track – generally 36 inch length, bendable to fit track path.
- For HO scale, most locomotives require at least 18 inch radius on curves to stay on the track. (9 inches for N scale.)

Trackwork Connections

- Track pieces are connected with rail joiners which must be tight to provide mechanical alignment and electrical connectivity.
- Make sure rail ends are at the same height with no separation gap – both fully inside rail joiner; not above or below.
- Do not bend flex track to tighter radius to get it to fit – train will find the tight spot and jump off the track!

Trackwork Routes at Turnouts

- Turnout – Model railroad term for a track switch; was adopted to avoid confusion with switches for electrical circuits.



Through route: the straight track through the turnout (usually).

Diverging route: the curved track.

Frog: the place where the two rails cross;
the place where the electrical “magic” (isolation) is needed.

Guard rails: inside (plastic) rail pieces to guide the wheels
through the frog.

Points: the ends of the movable closure rails that control which
way the train will go.

Throw bar: an elongated tie that moves the points.

Stock rails: the non-moving outer rails.

Trackwork Support

- Prototype track sits on a roadbed, which provides elevation for drainage and support for the wooden (concrete) ties that maintain track gauge.
- The rock ballast forms an interlocking structure that holds the ties.
- Roadbed and rock ballast is a good scenic feature for a model railroad, especially the visual effect of elevation.

Roadbed

- There are many roadbed materials available. Discuss this topic with your local hobby shops and fellow modelers and observe many examples before making your choice.
- Vertical track grades (hills and valleys) are not suggested for a beginning layout. There are easy techniques for keeping the track level and making the surrounding scenery go up and down.

Track Tips

Questions? Ask us.

National Model Railroad Association

North Central Region

3 Rivers Division

<http://div3.ncr-nmra.org/>

