

JOINING A WIRE TO A SECTION OF GARGRAVES TYPE TRACK

ITEMS NEEDED

Caution: Solder and Soldering Irons are HOT

- Wire Stripper - There are many kinds of them.
- Side Cutter or Wire Cutter
- Rosen Core Solder (1/16 inch or less in diameter preferred.)
- Heat pad to solder on before track is installed
- Soldering Iron or as also called Soldering Pencil
 - (I prefer to use one with a pointed tip.)
 - (I prefer a variable wattage from about 10 watts up to 40 or 50 watts.)
 - (To solder to the rail takes a minimum of about 25 watts for a good joint.)
 - (Use the higher setting when soldering to the track.)
- Small Straight Screwdriver to open the bottom of the rail.
- Sand Paper or some another way to burnish the track
 - (Burnish is to make shiny or lustrous by rubbing or scraping the metal.)



Notes **

Some people prefer always using soldering paste/flux when soldering.
Using solder paste/flux is a requirement if using solder that not rosin core.

It is best to avoid using soldering guns, but if you use one use one with as low of a wattage as possible so that the wire insulation is not melted.

Any of my procedures are written as a guide that you may adopt or not.
These procedures are all suggestive in nature and not mandatory.

Directions:

The following pages show soldering wire to Gargraves track, but the soldering methods apply to any brand of tubular track.

First Set:

Pages 2 and 3 are to solder a wire to the underside of the track before installation.

Second Set:

Pages 4 and 5 are to solder a wire to the side of the track or to the bottom flange of the track if the track is already installed on the layout.

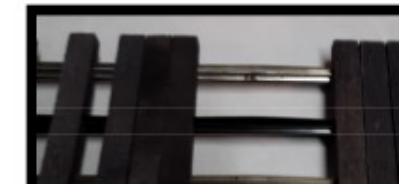
JOINING A WIRE TO UNDERSIDE OF A SECTION OF GARGRAVES TYPE TRACK

Directions: Attach a wire to underside of Gargraves track

Wire or wires should be about 1 foot in length each



1. Slide 4 track ties apart.



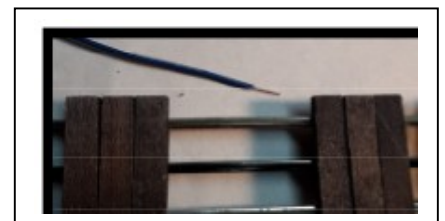
2. Strip about 1/2 inch of insulation off of wire to join to the track.
3. Tightly twist together the strands of the stripped end of the wire.



4. Burnish the bottom of the track to accept solder. Use a piece of sandpaper. (A Dremel tool is easier.)



5. Burnished metal is made shiny and now able to accept solder.
(It is hard to see here but I am doing the center rail,)

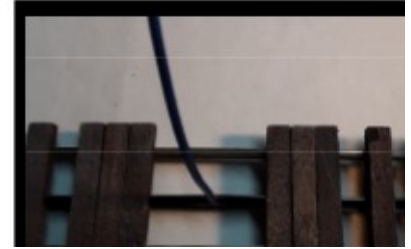


6. Take a small screwdriver and insert into the bottom of the track. This will open a gap in the joint to insert the wire.
(Wire must be placed in the center of the opening made by the screw driver.)



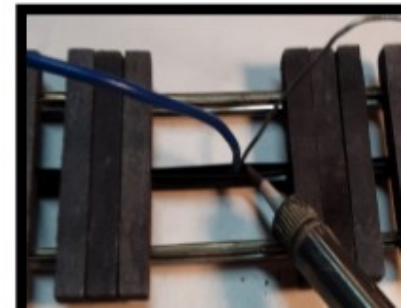
JOINING A WIRE TO UNDERSIDE OF A SECTION OF GARGRAVES TYPE TRACK

7. Stick the twisted end of the wire into the open joint and remove the screwdriver. The wire should grab and be able to stick straight up.



8. Use soldering iron with the heat level turned to high about 30 to 40 watts.

Lay the soldering iron next to the wire in the track joint.
Allow the track and the wire to heat for a few seconds.



9. Feed solder to the wire in the track joint and it should suck solder into the wire and on to the track.

10. Keep the solder in place, feeding solder until the solder attaches to the track as well as the wire.

11. After the solder has been sucked into the track joint and there is solder on the track, set aside the solder. Remove the soldering iron and replace it back in the cradle.



12. Let joint cool off a few seconds.

13. Slide the 4 track ties back into their original position.



14. Joint is completed and it looks good.
15. This piece of track is ready for installation



JOINING A WIRE TO GARGRAVES TYPE TRACK ALREADY INSTALLED

Directions: Attach a wire to already installed track

Solder a wire to a section of already installed Gargraves Track.
(Wire or wires should be about 1 foot in length each.)

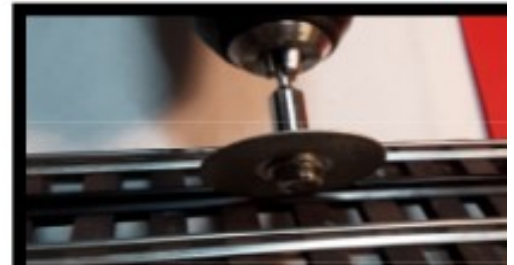
There is a word of caution when soldering to the outside rail, always solder on outer side of the rail so the wheel flanges will not hit any solder joint.



1. Strip about 1/2 inch of insulation off of wire to join to track.
2. Twist the stripped wire ends tightly.



3. Burnish the bottom flange or the side of the track to accept solder.



4. Tin the wire or wires to solder to the track.
(That is to apply solder to the wire before attaching)



5. Tin the burnished area of the track to have a 3/16 inch bubble of solder on the burnished area of the piece of track.
(That is apply solder to the piece of track before attaching.)



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JOINING A WIRE TO GARGRAVES TYPE TRACK ALREADY INSTALLED

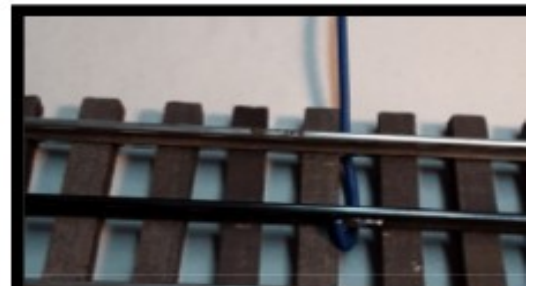
6. Hold the tinned wire to the bubble of solder on the track
7. Use soldering iron with heat level turned to high about 30 to 40 watts. Press to the wire and the bubble of solder on the track until the solder melts and sinks into the bubble on the track
8. Remove the soldering Iron and replace in cradle.



9. Hold wire in place for a few seconds until the solder cools and the wire is attached.
10. Let joint cool off a few seconds.



11. Joint is completed and it looks good.



12. Drill about a 1/8 inch to 3/16 inch hole through the layout next to the solder joint.
13. Push the wire down the hole until flush and as low as possible to hide with paint and or ballast.
(The wire must be below the top of the rail heads)
(The Common outside wires must be attached on Outside of the track so as to not derail the train.)
14. You are able too now hook up the track lead to the electrical system underneath your layout.

There are no photos
these last 3 direction