

1. The harness as described below is from the **National Capital Trackers Wiring Harness** drawing package. This drawing package shall be maintained by the corporation. The appended drawing package is hereby incorporated by reference.
2. Bus wiring on the module shall be 12 gauge and wire colors as follows:
 - Pin 1. White, Outside Track.
 - Pin 2. Blue, Middle Track.
 - Pin 3. Red, Inside Track.
 - Pin 4. Orange, Continuity, connects to nothing.
 - Pin 5. Black, Common, dedicated to Pin 1 Outside Track.
 - Pin 6. Gray, Common, dedicated to Pin 2 Middle Track.
 - Pin 7. Brown, Common, dedicated to Pin 3 Inside Track.
 - Pin 8. Green, Legacy/TMCC Reference, connects to nothing.
3. Each main line track on the module should be connected to the buss around the middle of the module using track feed pigtailed.
4. Each track must be electrically isolated from the other.
5. Bus wire termination shall be at a terminal strip.
6. Any siding must have its own power source and shall not pull power from the harness or the track. All 3 rails of the siding must be insulated from the mainline.
7. No accessory including lights shall be powered from the track or the harness.
8. Gargraves and other track systems where the outside rails are not electrically connected should have ground feeds to both outside rails.
9. Turnouts (and crossovers) that interrupt the rails must have power and ground feeds on all legs of the turnout. Do not depend on power being fed to a turnout leg from an adjacent module.
10. If there is a crossover between mains present all three rails must be insulated.
11. Track drops for connections from the bus wiring to each track shall be 14 gauge. Drop wire colors must match the wire color for each track listed in section 2. Each track drop shall have a wire for its center rail power and its outer rail commons; both outer rails are connected together. The drops shall be fluxed and soldered to the underside or bottom edge of track. At the solder connection to the center rail, rail blackening shall be removed (suggest using Dremel with burring tool or grinding stone, a wire wheel is often insufficient) to ensure good solder joint.
12. Electrical plugs for module to module electrical connections shall be:
 - Female Plug:
The individual PowerPoles 1327 series arranged as follows into a 1470G3 Snap-in Receptacle.
The individual PowerPoles are installed tongue up.

1	2	3	4
5	6	7	8

The female plug shall be on the right as viewed from inside layout looking toward public.
Remember "the female is always right".

Male Plug:

The individual PowerPoles 1327 series arranged as follows into a 1460G3 Pak Shell Housing with latch. The individual PowerPoles are installed tongue down.

4	3	2	1
8	7	6	5

13. The Corporation shall be the source for the harness. All members must purchase the harness from the club. The club shall maintain a supply of harnesses available for purchase. The cost of the harness may vary over time based on the cost of components or other factors, and is to be set by the board of directors on an annual basis, at the beginning of each calendar year, beginning in 2015. The Corporation shall ensure that the harnesses available for sale meet the specifications of the **National Capital Trackers Wiring Harness** drawing package.
14. This standard replaces and supersedes any and all electrical wiring standards referenced on any NCT web page or NCT documentation. This standard EXPRESSLY replaces and supersedes any and all references to electrical and wiring standards in the **TINPLATE TRACKERS MANUAL** as used for the purposes of NCT.
15. Changes to this standard are strictly governed by the bylaws of NCT.