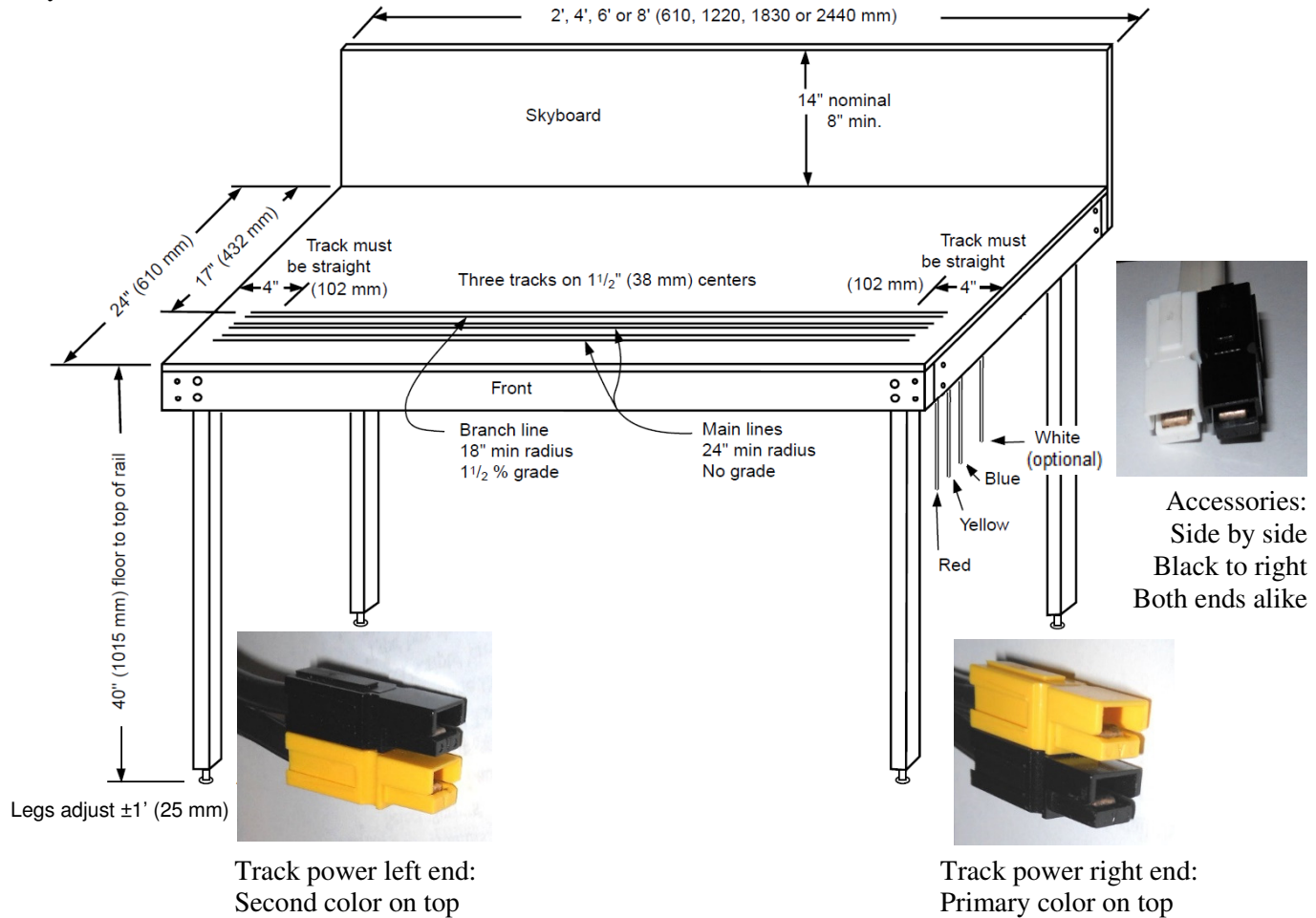


NTRAK Specifications – Short Overview

NTRAK represents a concept for building modular layouts for settings in homes, at clubs and public displays from small to very large. This concept has proven ideal for enjoying and showcasing model railroading in N scale. The standards outlined in compact form on this

sheet allow modules to be built in distant places, and yet they will fit smoothly into a common layout. This sheet is designed as a quick overview and reference. Much more information can be found at the NTRAK website <http://www.ntrak.org>.

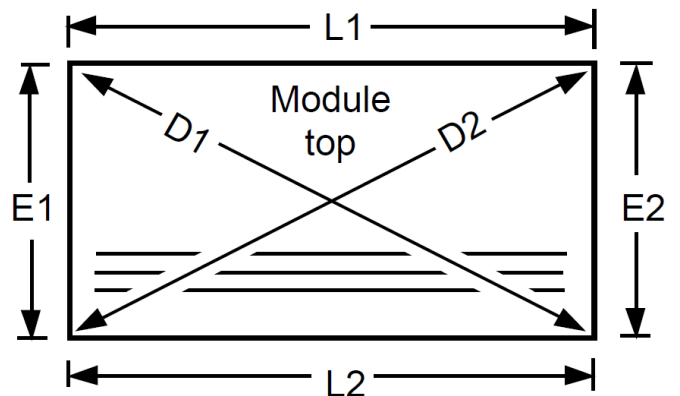
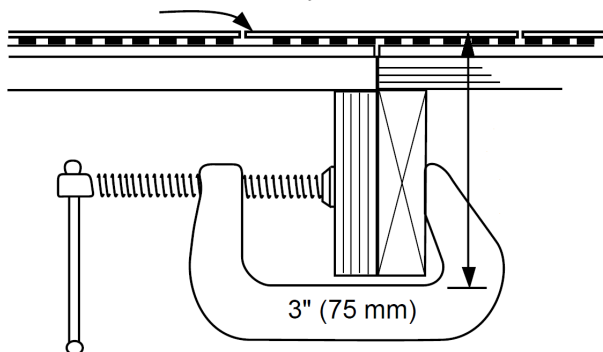
General layout of a module



Modules are joined by setting two "C" clamps and inserting a 5" connecting track.

To obtain a square module, make the lengths L1 and L2 equal, the end depths E1 and E2 equal, and the diagonals D1 and D2 equal.

Remove ties from track ends as needed to allow rail joiners (Atlas, Peco) to slide fully on.



The clearance from the clamp to the top of the rail is typically 4 1/2".

Module table

Length:	multiple of 2' (610 mm)
Depth:	2' (610 mm)
Skyboard:	min. 8", nominal 14"

The most common length is 4'. Optionally, 6" depth can be added at the front and/or rear. Each module should have its own legs. Bridge and other special modules may be used with the approval of the layout coordinator. The module owner shall provide two "C" clamps per module, size at least 3".

Tracks

Three tracks are obligatory for all modules and are considered "community property". Placement of the track centers, measured from the rear of a 2' deep module, is at

20.0" (508 mm) front main, "red",
18.5" (470 mm) inner main, "yellow",
17.0" (432 mm) branch line, "blue".

Track positions are defined at the ends of a module or module set. The first 4" from the end (edge) must be straight. Internally to a module (set), the minimum track separation is 1.25". A number of optional tracks have been defined, see the table below. The minimum distance from the front edge of the module to the center of the first track is 2".

Recommended track material is Atlas Code 80 flex track, Peco Code 55 flex track, or Kato Unitrack. Modules are connected with 5" Atlas Snap track sections (nominally 4.91") or Peco Code 55 flex track cut to the

same size. Community property tracks must be compatible with large wheel flanges and must accept the standard connecting track. The module owner shall provide connecting track sections as needed.

Crossovers between the three community tracks are suggested for long (6' and up) modules; turnout sizes of #6 or larger are recommended. Among other options, uncoupling ramps have to be electrical, and tunnels have to be easily accessible for track cleaning and rerailing of rolling stock.

Wiring

Track power and optional accessory power shall pass through underneath the module in 12 AWG stranded copper zip wire, extending 12" beyond either end of the module. Feeder wires for tracks and accessories can be attached with suitcase connectors (3M 567, brown) or by soldering them to the bus wires. Connections between modules use Anderson Powerpole 30 A rated connectors. The community tracks and a number of established optional tracks have unique color codes assigned. The color codes are applied to the connectors by selecting proper colored shells or by wrapping them in colored tape (no black tape, other second colors are applied as thin stripes). For track power, the primary color shall mark the wire feeding the front rail of the track.

Do not use common rail wiring. There should be no connection between any of the rails of the three community tracks. Crossovers need to have insulating gaps in both rails.

<i>Track/Line</i>	<i>Color code</i>	<i>Position</i>	<i>Min Radius</i>	<i>Height</i>	<i>%Grade</i>	<i>Powerpole Plugs</i>	
Front Main	Red	20.0	24	40	0	Red	Black
Inner Main	Yellow	18.5	24	40	0	Yellow	Black
Branch	Blue	17.0	18	40	1.5	Blue	Black
Branch Option	Blue/Yellow	10.0	18	40	1.5	Blue	Yellow
Mountain Division	Green	4.0	12	43 1/8	3	Green	Black
Set-up Track	Green/Yellow	-1.5	18	40	0	Green	Yellow
Front Passing	Orange	21.5	24	40	0	Orange	Black
Nn3 Front Track	Red/Green	22.0	no std.	38	no std.	Red	Green
Nn3 Center Track	Yellow/Green	15.5	no std.	40	no std.	Yellow	Green
Nn3 Rear Track	Blue/Green	6.0	no std.	40	no std.	Blue	Green
Ncat Front Track	no std.	15.0	10	40	no std.	Special Plugs	
Ncat Rear Track	no std.	2.0	10	40	no std.	Special Plugs	
Booster output	Purple	n/a	n/a	n/a	n/a	Purple	Black
DC Supply 12 V	White	no track connection, white on pos. 12 V				White	Black
AC Supply 15 V	Brown	no track connection				Brown	Black

Notes: 1. Heights are given above floor level. 2. Positions are measured from the rear of a 2' deep module. The set-up track thus is mounted behind the module, usually hidden by the skyboard. 3. To help protect against confusion with the Nn3 Center track, connectors for the setup track should always be wrapped green with a narrow yellow strip over the middle. 4. For details on Nn3, NCat, see separate documentation.