North Shore & Western
Modular Club

HO Module Handbook

Preliminary Draft – Sept. 2010

North Shore & Western - HO Module Specifications

Module Size:	Straight Module – 30” x 48” (not including railings or width of backdrop)		
Height:	Floor to top of rail = 40” (Module height must be adjustable to +/- 1”)		
Clearances:	Vertical from top of rail = 3” minimum Horizontal from center of track = 1” minimum This applies to, but is not limited to, all bridges, buildings, signals, and tunnels.		
Mainlines:	Centerline of outer main track is measured 5” from front face of frame. Centerline of middle main track is measured 7” from front face of frame.		
Branch line:	Centerline of inner branch line track is measured 9” from front face of frame.		
Track designations:	Outer mainline is track #1 Middle mainline is track #2 Inner branch line is track #3	color code – Red color code – Yellow color code – Blue	(public viewing side) (operator’s side)
Track ends:	Both the main lines and the branch line must end 4-1/2” from each end of the module.		
Connecting track:	Each module is connected by a standard 9” piece of commercial straight track, Code 100, nickel silver, *Atlas Snap Track.*		
Sidings:	Must be no less than 2” from mainlines or branch line.		
Grade:	Mainline and branch line grade is 0%		
Curves:	Mainline curves – 32” minimum Industrial curves – 24” minimum		
Turnouts:	Main line must be at least Code 100, nickel silver, #6.		
Diamonds:	Commercial Code 100, nickel silver diamonds are recommended.		
Crossovers:	Must be insulated at crossover track to electrically isolate the two mainlines and the branch line.		
Track:	Mainlines and branch line track must be Code 100, nickel silver rail and ties must be .045” thick (Atlas). Hand laid track is acceptable.		
Roadbed:	Roadbed can be any material that is 3/16” thick.		
Ballast:	Modeler’s choice.		
Backdrop & Paint:	14” max. from top of rail. Color of sky - TBD		

North Shore & Western - HO Module Specifications
(Continued)

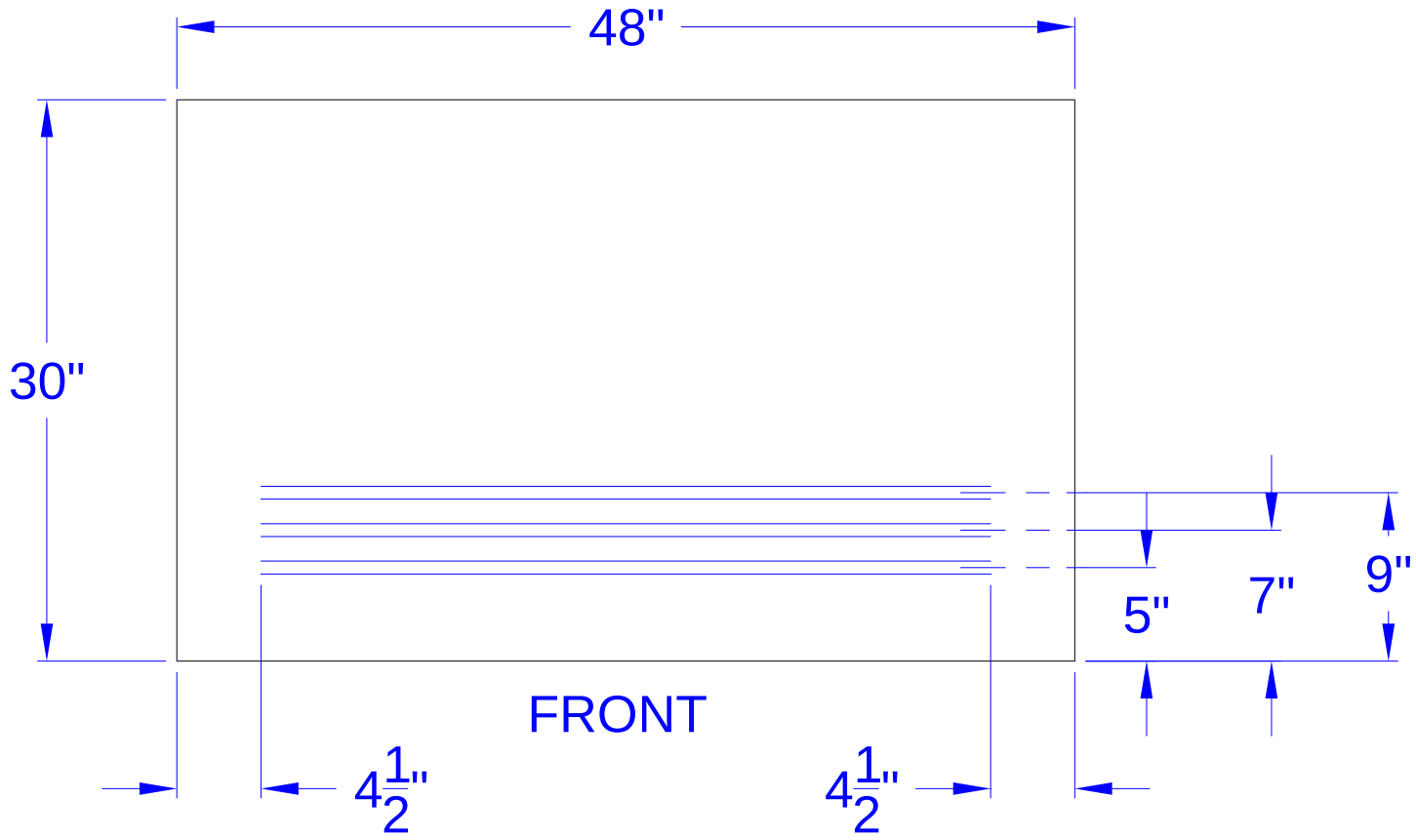
Highway Crossings:	Roadway material must be at least 1/32" below top of rail.
Uncouplers:	None allowed in mainlines or branch line.
Scenery:	Modeler's choice.
Signals:	All block signal and grade crossing flasher systems shall be independently powered and will not employ track detector circuits which need to be connected to the track current to operate. Independently operated opto-electric systems are suggested alternatives.

General Electrical Specifications

Connectors:	All track power bus connectors shall be 2 pin "Jones" connectors. Male: Cinch p/n - P302CCT or equivalent Female: Cinch p/n – S302CCT or equivalent #1pin (wide) of connectors to be wired to the rail closest to the module front (public viewing side). Auxiliary connectors, not used for track power buses, may be any suitable connector of the modeler's choice.
Wire	All interconnecting wire from module to module shall be 18 AWG stranded minimum. This includes track power bus and Accessory AC.
Electrical isolation:	All track off the mainlines must be electrically insulated from the mainlines, powered separately, and can be built free style. Tracks #1, #2, and #3 **MUST NOT** have any common connection. **DO NOT** use "COMMON RAIL" wiring. Gaps must be used on both rails on any crossover tracks.
DCC network:	All interconnecting DCC data line from module to module shall be 6 conductor flat phone line.
Track Power:	During normal module operation sessions Track #1 shall be powered and controlled with conventional DC power supply and throttle. During normal module operation sessions Track #2 shall be powered and controlled using Digitrax DCC (Digital Command Control) with the capability of switching to a conventional DC power supply and throttle if warranted. During normal module operation sessions Track #3 and all connecting yards and sidings shall be powered and controlled using Digitrax DCC (Digital Command Control).

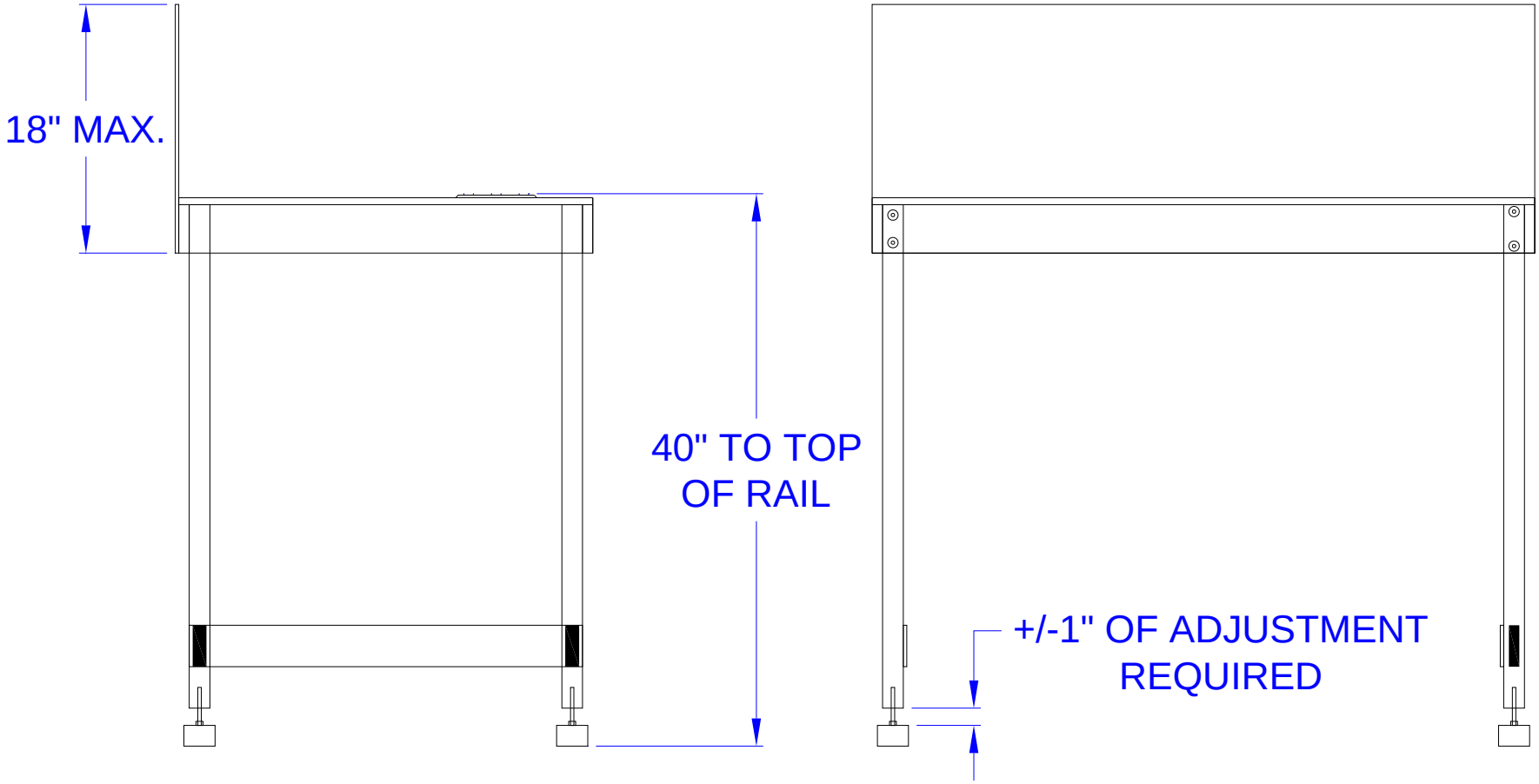
NS&W Module Standards

- Module size and track spacing



NS&W Module Standards

- Module height

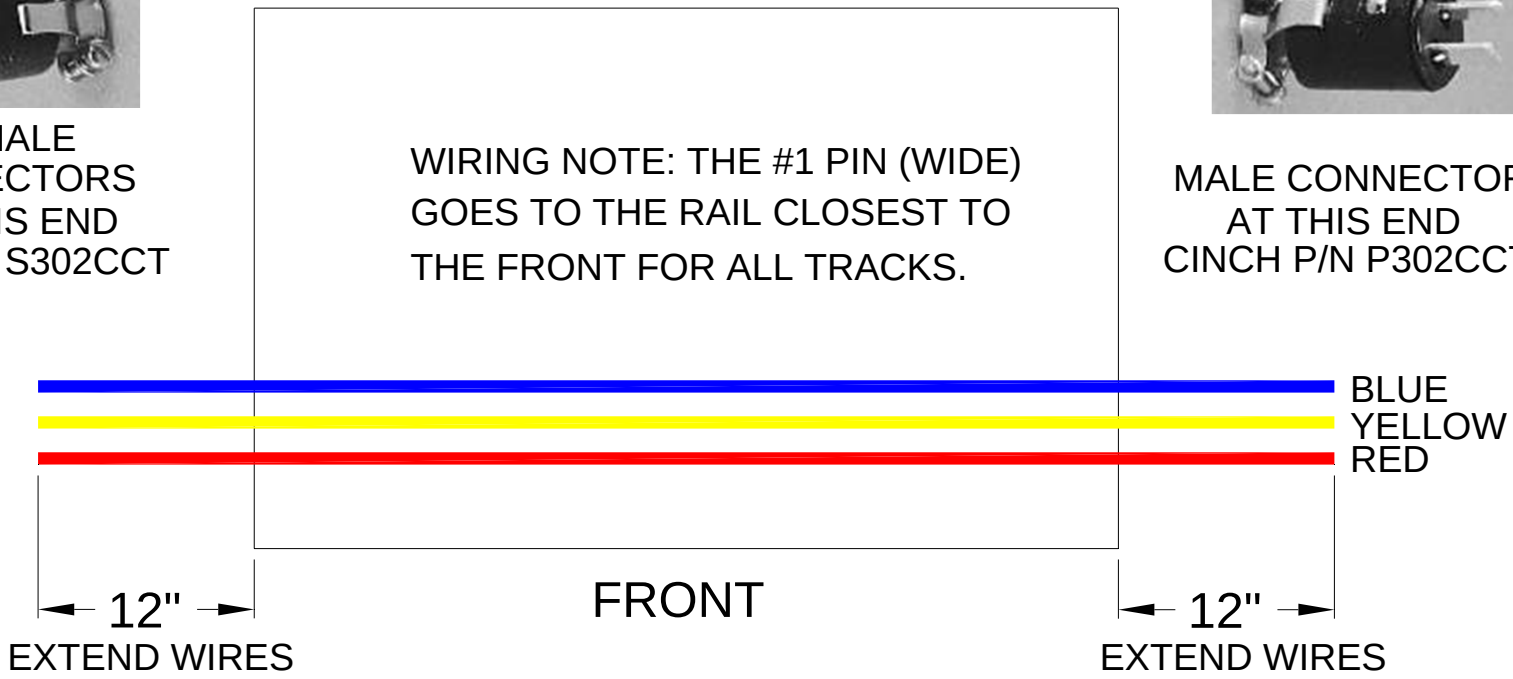


NS&W Module Standards

- Module main bus line wiring requirements

FEMALE
CONNECTORS
AT THIS END
CINCH P/N S302CCT

MALE CONNECTORS
AT THIS END
CINCH P/N P302CCT



For information regarding NS&W club membership, or module materials, prices, and detail drawings contact:

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Pack-N-Go Module System