

# Bremerton Northern Model Railroad

NTRAK Group

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First Revision - July 2018

# Bremerton Northern Model Railroad

## NTRAK Group

### Introduction

The BNMR NTRAK group is composed of N scale modelers within the Bremerton Northern Model Railroad, Inc. club (BNMR). It is organized and functions to provide an opportunity for N Scale modelers to pursue their interest in model railroading by use of the NTRAK module system. The club is located in Kitsap County, Washington on the West side of Puget Sound.

NTRAK (est. in 1974) is an international association of model railroaders that created a set of standards that anyone may use to build N scale modules. These modules can be joined together to form portable layouts of virtually any size.

The BNMR is a 100% member club of the National Model Railroad Association (NMRA), Pacific Northwest Region's 4<sup>th</sup> Division. Participation in the BNMR NTRAK group requires membership in both the BNMR and the NMRA. BNMR NTRAK group members have all rights and responsibilities of membership in the BNMR club.

The BNMR NTRAK group faithfully adheres to the national NTRAK standards.

BNMR NTRAK has established local Standards, Recommended Practices (later), and Policies (later) that provide additional guidance for areas not addressed by the parent standards. Faithful adherence to the Standards, Recommended Practices, and Policies is expected of all BNMR NTRAK group participants.

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### STANDARDS

#### OVERVIEW

The National NTRAK standards apply to all modules built for use by the BNMR NTRAK Group. Slight variations, as stated here in, are allowed if module operability or compatibility with other modules is not affected. If a conflict is found between the National NTRAK standards and this document, the former has priority. The BNMR NTRAK Standards are subject to review and modification as necessary based on revisions to the National NTRAK standards and lessons learned during use.

#### MODULE CONSTRUCTION

All modules must be inspected and certified, using the Inspection & Certification Check List, before being used in a public show layout.

All module fascia sides that are visible once installed in a layout setup will be painted a color in accordance with the PAINT SCHEDULE section. No bare wood or foam will be visible at public shows. Painting the underside of modules a white color aids the vision when working on the module and helps to prevent the wood from absorbing moisture. The module top surface will be painted a color in accordance with the PAINT SCHEDULE section. This is to simulate a soil surface and prevent unpainted foam or wood from showing through scenery material.

The use of folding legs, using the construction methods similar to those defined in the reference book "How to Build a NTRAK Module," is mandatory for modules owned by BNMR NTRAK, where practical, and highly recommended for modules owned by individuals.

In order to accommodate current-era rolling stock, such as double-stack cars, the NTRAK recommended clearance height is modified as follows. Minimum clearance height measurement above the railhead is 23.3' which scales to 1.75" (1¾") or 44.5 mm. This deviation is allowed since it doesn't affect module appearance or compatibility with other modules.

Tunnels are prohibited unless access to the hidden tracks is available by removing the tunnel or from the rear or bottom of the module.

Skyboards are to follow NTRAK manual requirements, with 14" being the preferred height above the module basic top surface. Skyboards will be painted on all sides and edges a color as defined in the PAINT SCHEDULE section. Variations in color are allowed when 'scenery' is painted on the skyboard face. The painted scene must reflect the module scenery in form and coloring.

The length of the skyboard shall be approximately 1/8" less than the length of the module on which it is mounted and centered on the length of the module so that there is approximately 1/16 inch of clearance on each module end. This is to prevent any alignment problem with the skyboard on the adjacent modules.

The front, top edge and side edges of all skyboards must be kept in good repair. Chips, gouges, dents, etc. must be smoothed and filled and painted.

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### STANDARDS

Up to 6" may be added to either or both the front and rear of modules to make room for scenery or track plans. If extra width is added at the rear, the skyboard must come forward at each endplate side to match the standard position and align with the adjacent modules per example in the NTRAK manual. Diorama dividers are not allowed.

#### SCENERY

A minimum of paint and ground cover, in accordance with Recommended Practice (later), is required on all modules installed in a layout setup at public shows.

Roads will not be placed such that they end at the module endplate, but shall be placed to end on the sides of the module.

#### TRACK

All track will be Atlas code 80 flex track. Peco code 80 switches 'Long Radius' #8 will be used for cross-over turnouts between the two main lines and the main lines and the branch line.

Branch line turnouts to sidings and the alternate branch line may be Peco turnouts of any size.

The first part of any track at either end of a module shall be a full-section or half-section of Atlas sectional track. The rails in these tracks hold their position better than flextrack, thus ensuring a better fit and more securing of the connecting track.

The construction of the mountain division track and/or alternate branch track, as defined in the National NTRAK manual, is optional.

Builders of 6' or 8' modules shall include a set of crossover tracks (either hand) between the mainline tracks, and between the inner mainline track and the branch line, if they fit within the track plan. Insulated gaps are needed in both rails of any crossover tracks.

#### ELECTRICAL

All modules will have DCC wiring (track power busses and loconet) and components installed so as to be compatible with other NTRAK modules IAW the BNMR NTRAK DCC Manual. The Aux AC or DC supply buss is not required.

All 120 VAC wiring will be used in accordance with the National NTRAK standards documentation (and local fire code if applicable). Refer to the NTRAK Manual.

Each module will be equipped with loconet wiring and connectors IAW the BNMR NTRAK DCC Manual. Refer to the BNMR NTRAK DCC Manual for details of universal throttle panel use and installation

Velcro straps or similar restraints shall be used for securing pigtails and connectors during transport and storage. Use insulated staples or other form of hardware to provide strain relief and to secure wiring to the module frame. No wiring shall extend below the module frame.

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### STANDARDS

All modules will use Anderson Power Pole connectors for the DCC track power busses. Power Pole connector colors and installation practices will be IAW the NTRAK manual. Refer to the BNMR NTRAK DCC Manual for Power Pole details.

#### PAINT SCHEDULE

Module top surface: Light brown, 'Fudge Truffle', formula 101-11.5, 111-1Y8, 113-1Y27.5, 116-25.5

Fascias: Black, flat or satin finish

Skyboards: Valspar 'Crystalline #5002-9' or equivalent, flat or satin finish

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## MODULE INSPECTION & CERTIFICATION CHECKLIST

Owners Name: \_\_\_\_\_ Inspection Date \_\_\_\_\_

Module Name: \_\_\_\_\_

Module dimensions: \_\_\_\_\_ inches long by \_\_\_\_\_ inches wide

Module Inspected by: \_\_\_\_\_

Inspection Results for show use (circle):            Approved            Rejected

#	SAT	UNSAT	ITEM TO CHECK
			<b>ELECTRICAL STANDARDS</b>
			<u><b>Wiring:</b></u>
1			DCC bus: wires uncut from endplate to endplate
2			DCC bus:                    12 gauge stranded wire
3			Track feeders:            22 gauge stranded wire
4			Track feeders 1' in from each end & every 2' for modules over 4'
5			Minimum 2 feeders per track section - soldered joints or not
			<u><b>Module interface:</b></u>
6			Power Pole connectors properly installed
7			Power Pole connectors properly color coded
8			Correct number of bus lines (Red, Yellow, Blue, Green)
9			Correct Length for DCC & Loconet pig tails at endplate (~12")
			<u><b>Soldering:</b></u>
10			Solder points solid
11			All points that need to be soldered are soldered
			<u><b>DCC Wire Conductivity</b></u>
			Test Across:
12			Track to feeder, (min resistance, each rail to its bus wire)
13			Tracks to tracks, (no shorts)
14			Across track joints for conductivity, (min. resistance)
15			Across track insulated joints, (no shorts)
16			Each bus end 1 to same bus end 2 at Power Poles, (min. resistance)
17			Each bus to all other buses, (no shorts)
18			All aspects of turnouts, (no shorts)
			<u><b>Loconet wiring:</b></u>
19			RJ12 Plugs on either end with 1 Female to Female interface.
20			UTP(s) installed and Loconet cables connected, if used
			<b>MECHANICAL STANDARDS</b>
21			Legs sturdy and securely mounted
			<u><b>Height:</b></u>
22			40" from floor to top of rail.
23			Foot adjustability (2" total: 1" up and 1" down)
			Skyboard Height (14" above module basic top surface, nominal)
24			<u><b>Depth</b></u>
25			24" to 36" (front or rear bump outs: 6" max each)
26			Rear bump outs have required side sky boards

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## MODULE INSPECTION & CERTIFICATION CHECKLIST

#	SAT	UNSAT	ITEM TO CHECK
			<b>MODELING STANDARDS</b>
			<b><u>Track work:</u></b>
			Check track min. curve radius:
27			Red = 24"
28			Yellow = 24"
29			Blue = 18"
30			Green (mountain line) = 12"
31			#6 turnouts off main
32			Check min. distance between tracks = 1.5" (red, yellow, & blue)
			<b><u>Proper track placements from module standard rear edge:</u></b>
33			Red = 20"
34			Yellow = 18.5"
35			Blue = 17"
			Mountain line service:
36			Track at ends of module = 4"
37			Track railhead height above module top must be 3.125"
			<b><u>Scenery:</u></b>
38			Hills must be rounded down at interfacing edges
39			No diorama dividers allowed
40			Fascia & skyboard must be painted IAW local color standards
41			Skirt must be flat black
42			Module must have basic scenery
43			No pink or blue foam nor plywood visible
			<b><u>Operational Check:</u></b>
44			Connect DCC to module and energize track power (no short circuit)
45			UTP LEDs on (if UTP installed)
46			Run loco on all tracks
47			Loco runs across switches properly
48			Connect LocoNet (no trouble lights on LNRP)
49			Check LocoNet wiring with LT-1 tester at each jack and plug
50			Operate loco with handheld throttle from all UTPs, if applicable

Comments/Remarks/Problems:

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Bremerton Northern Model Railroad  
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MODULE INSPECTION & CERTIFICATION CHECKLIST  
Module Sketch

