

MOHEGAN AND PEQUOT MODEL RAILROAD CLUB HO MODULE STANDARDS

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1 PREAMBLE

This standard applies to all straight modules used in HO scale Mohegan and Pequot modular layouts. This standard is subdivided into definitions, train control, bench work, track work, and electrical sections. This standard is applicable to modules upon which construction has not begun at the time that the standard is adopted. It is recommended but not required that old modules be retrofitted to this standard.

This standard is based on three fundamental principles. First, creativity in module design and construction, is encouraged. Second, mainline trackage will be designed and operated to optimize the continuous running of several trains on each mainline. Third, the design, construction and, operation of trackage other than mainline trackage is at the complete discretion of the module builder.

2 DEFINITIONS

2.1 **Module** The minimum unit into which the railroad may be disassembled.

2.2 **Module Group** The minimum unit in which the railroad may be operated. A module group may consist of 2 or more modules which cannot be operated without all the modules of the set.

2.3 **Directions** Left and right when used in this standard refer to directions on the module when viewed from the inside of the module. Inside refers to that side of the module closest to the operators.

2.4 **Main Line Trackage** The two continuous tracks required on each module.

2.5 **Non Main Line Trackage** All trackage other than mainline trackage.

2.8 **Bridge Track** 6 inch sectional tracks which are temporarily installed between two adjacent modules for the purpose of connecting permanent trackage.

3 TRAIN CONTROL

3.1 **Mainline Control** Control of trains on mainline tracks will be through the use of conventional block control using power packs supplied by the club. Modules shall be wired so that it is not possible to power one mainline with power from the other. Control of mainline track from a local power pack is permitted.

3.2 **Control of Non Mainline Track** Control of trains on non mainline tracks is at the complete discretion of the module owner.

4 **BENCH WORK**

4.1 **Connecting Modules** Module groups will be connected with C Clamps. Modules within a module group will be connected at the discretion of the owner.

4.2 **Height** The height of the roadbed will be 40" from the floor.

4.3 **Height Adjustment** Module height shall be adjustable from 39 to 41. If bolts and T nuts inserted in the ends of the legs are used for height adjustment, the bolts shall be at least 4 x 5/16 inches.

4.4 **Length** Module group lengths shall be a multiple of 4 feet. The length of each module within a group is left to the discretion of the owner.

4.5 **Width** The width of a module is left to the discretion of the owner.

4.6 **Materials** Materials shall be selected to make modules which are sufficiently flat, strong, and stable to permit trains to run without derailing or uncoupling.

4.7 **Depth** The depth of the module from the railhead to the bottom of the end framing shall be between 4 and 6 inches.

4.8 **Ends, Thickness and Obstructions** The thickness of the ends of the bench work shall not exceed 1" at the points where C clamps will be attached. The framework shall be constructed so as to allow for the easy application of the C clamp.

4.9 **Color** Bench work shall be painted a medium gray.

5 **TRACK WORK**

5.1 **Trackage** Trackage shall be code 100 nickel silver commercial flextrack. Grades and/or super elevation (banking) are not permitted.

5.2 **Track Spacing and Setbacks** There shall be two mainline tracks. Within 6 inches of the end of a module group, track shall be straight with a spacing of exactly 2 inches on center. Track spacing elsewhere on the module shall be not less than 2 inches on center. Tracks shall end between 3 1/32 and 3 1/16 inches from the end of each module group. The centerline of the outside mainline shall be set back from the front of the module at least 2 inches if a plexiglass barrier is used or 5 inches if no barrier is supplied. The outside mainline shall not be set back more that 15".

5.4 **Track Curvature** The minimum required radius of curvature is 35 inches

5.5 **Turnouts** Turnouts shall be Peco, Shinohara, or Microengineering. Other turnouts may be permitted upon request to the module standards committee.

5.6 **Turnout Size** When the diverging route in a turnout is used as mainline, turnouts shall be #6 (or Peco long) or larger.

5.7 **Insulated Rail Joiners, Use** The use of insulated rail joiners is required where electrical isolation is needed; air gaps are not permitted. Insulated rail joiners shall be used where necessary to prevent electrical short circuits. All points of intersection between the inside and outside mainline and either mainline and any local tracks shall have an insulated rail joiner on each rail.

6 ELECTRICAL

6.1 **110 Volt Service** Each module shall have 110V service consisting of a duplex receptacle mounted firmly to the bench work at the right end of the module and a three prong plug at the left end of the module. The receptacle shall be mounted 6 to 12 inches from the end of the module. The plug shall extend 2 feet beyond the end of the module. 110 V wiring shall be 16 gauge stranded (with ground) or heavier.

6.2 **Track Voltage Service** Each module shall have electrical service to transmit track voltage to the next module as well as to mainline trackage. Breaks in these conductors shall be minimized. Where broken the conductors shall be joined with a plug, e.g. section 6.3, a solder joint, or a wire nut.

6.3 **Track Voltage Service, Plugs** Plugs shall be Cinch P-302-CCT or equivalent. Sockets shall be Cinch S-302-AB

6.4 **Track Voltage Service, Wiring Size** Wiring for the transmission of power between modules shall be of at least 16 gauge. Wiring for local use within a module group shall be of at least 20 gauge.

6.5 **Track Voltage Service, Wiring Color and Connector Configuration** Female plugs shall be mounted firmly to the bench work at the right end of the module within 6 to 12 inches of the end. Male plugs will extend 2 feet beyond the left end of the module. Wire colors and connector configuration shall be as follows.

Rail	Wire Color	Connector Color	Blade Width
Outer track, outer rail	Red	Black	Wide
Outer track, inner rail	Black	Black	Narrow
Inner track, outer rail	Green	Green	Wide
Inner track, inner rail	Yellow	Green	Narrow

6.6 **Wiring Harnesses** Wiring harnesses constructed in accordance with sections 6.2 - 6.5 will be supplied by the club.

6.7 **Control Panels** Each module which is equipped with a removable control panel shall be wired such that the module may be run without the control panel.