SLOMRA HO Module Standard

Introduction

The SLOMRA HO module standard combines two popular standards to allow the best of both scenery and operation. The primary purpose of this document is to provide guidelines that allow members to independently construct modules that can be joined together and operated as a layout. This standard allows for a continuous mainline loop for public display and also allows for maximum flexibility in track arrangement, module size and scenery.

The Basic Standard establishes the rules that shall apply to all modules. For interoperability, the Basic Standards are mandatory.

Recommended Practices can be employed for greater continuity, but are not mandatory. Under the Recommended Practices there are scenery and sky color recommendations.

HO Module Concept

There have been endless discussions of the two conflicting approaches in modular railroads. On the one hand, a modular layout can be built for public display and continuous running. This approach is typified by the classic NMRA module (http://www.nmra.org/standards/modules/ms_intro.html) or N-Trak module (http://www.ntrak.org/) of fixed length modules used to make an oval, and more recently, the Bend Track (http://home.alltel.net/ah50902/concept2.htm) standard for double sided modules. These modules employ sky backdrops and emphasize scenery over operation.

The other approach is a modular standard that allows free-form shapes with no attempt to close-the-loop (http://www.trainweb.org/freemoslo/). This approach connects modules of odd shapes and emphasizes operation and scenery. Since the trains can't be left to run on their own, hands-on operation is required. One popular free-form module standard we will be using is Free-Mo (http://www.free-mo.org/).

The SLOMRA HO modelers want continuous running for public shows, space for expansive scenery, and realistic operations. We want the flexibility to allow each modeler to create his or her unique concept with the absolute minimum of requirements and we want to be able to hook up with the modules of other clubs.

HO Considerations

After looking at popular HO module approaches, this module proposal combines the best of two standards, Free-mo and the NMRA Recommended Practice (RP). The way we combine these two incompatible formats is with a special Interchange Corner as shown in Figure 1. This custom corner also allows us to connect to most other HO module groups with minor adjustments or simple adapter modules.

Of course, this flexibility comes with a price. The first is that some standards of both Free-Mo and the NMRA will need to be broken. These unique characteristics are spelled out in this specification.

Second, for continuous running, at least four corners will have to be constructed. This is no different than any other modular railroad.

This specifications limits the number of mainline tracks to four. This is to cap the number of wires each module must maintain to eight. (This specification allows the modeler to choose one (Free-mo), two (Free-mo or NMRA), three (NMRA), or four (NMRA) mainlines.) For practical reasons, access (reach), transport, weight, and getting the module through doorways, we recommend the module interface be 30 inches deep. The front of the module can extend further when more surface area is desired.

A module height of 50-inch from the rail top is chosen for viewing comfort. A plus or minus 1 inch minimum adjustable foot is used to level the module. This height is the same as Free-mo but differs from the NMRA RP.

The SLOMAR HO default track height is Code 83. This is done for improved realism and differs from the NMRA RP of Code 100. Spurs can be code 70.

The optional north and south sidings are lower than the mainlines. This is done to improve realism and differs from all other standards. Allow for the change in grade when planning your siding.

For the enjoyment of all the members it is suggested that quick set-up be a prime consideration when designing your module. The goal should be to have your module up and running in 15 minutes. This is accomplished by having a minimum of loose parts and equipment. Having the module self contained with its wires, cords, power supply, and legs will make the set-up run efficiently.

SLOMRA Mandatory Standards

The Free-mo specification can be found at http://www.free-mo.org/standard and the NMRA specifications are at http://www.nmra.org/standards/modules/ms_intro.html. Interface shall be as defined by the specification you choose to use with the following exceptions.

1. Default height to the mainline railheads from the floor shall be 50 plus or minus one inch. Each leg shall include vertical adjustment of +/- 1 inch minimum to compensate for uneven floors.
2. Track shall be HO standard gauge, code 83 (0.083 inch high) rail.
3. For consistency of dimensions with your fellow modeler, all measurements shall be made from the front face of the backdrop, if applicable.
4. The standard track bus electrical connector shall be 30 Amp Anderson Powerpoles which can be purchased at http://www.powerwerx.com/product.asp?ProdID=3016&CtgID=3578. Up to eight bus wires will pass through each module.
5. Mainline minimum radius is 30 inches (36 inches is preferred) with at least 12 inches of straight track between reverse curves on mainline track.
6. DCC has been chosen as the standard throttle for all SLOMRA HO modules. Each module shall accommodate DCC.
7. The module owner shall provide AC power (socket) to the module on the left (west). As a minimum, an extension cord, longer than the module shall be provided. The male connector (plug) is always on the right (east) end.
8. The north and south optional sidings are 5 mm lower than the mainlines. This can be easily done by laying the sidings directly on the sub-roadbed without cork roadbed.

SLOMRA Recommended Practices

The front of NMRA modules should be skirted. The front and back of Free-mo modules should be skirted. The ends of the skirts will extend two inches past the module end plate to allow overlap from

the skirting on an adjacent module. The bottom edge of the skirt shall be 1 inch off the floor when the leg adjustments are set to the modules minimum height. Recommended color of the skirt is chocolate brown.

The front and back module fascia color should be chocolate brown. A semi gloss latex over a primer/sealer is recommended. Module legs may be painted to match.

The basic sky color should be a light sky blue flat latex paint and transition to a darker blue at the top of the backdrop.

All turnouts should be accessible from both sides of each module and hand throws are recommended.

Recommended Wiring Color:

Wire Color of Each Rail Facing Front of Module

North (Rear) Siding (Optional)—North Rail: Green
North (Rear) Siding (Optional)---South Rail: Yellow

West Bound Mainline (Mandatory)---North Rail: Blue
West Bound Mainline (Mandatory)---South Rail: Black

East Bound Mainline (Mandatory)---North Rail: White
East Bound Mainline (Mandatory)---South Rail: Red

South (Front) Siding (Optional)—North Rail: Orange
South (Front) Siding (Optional)---South Rail: Brown

Definitions

These definitions are provided to establish a common basis of understanding of the standards.

DCC: Digital Command Control

East: The direction to the right when facing any module. Trains traveling left to right are eastbound.

LocoNet Bus: The continuous six-wire bus carrying DCC information among the DigiTrax brand DCC system components such as throttles, boosters, radio receivers, etc.

Module (Basic): Unit of a portable layout that is level and of a fixed dimension

North: The direction the viewer/operator is looking when facing the module.

Section: A part of a larger Module. Used in conjunction with other sections and assembled in the same configuration to create that module. Conforms to end profile, track and electrical connections only on the ends that mate with other independent modules. Typical examples include a long yard, passing siding or turn back loop constructed of multiple sections that only mate together in one configuration.

Standard end: A location where a module will connect to other modules; also contains an external interface that must meet all mandatory standards.

South: Is always behind the viewer/operator.

West: The direction to the left when facing any module.

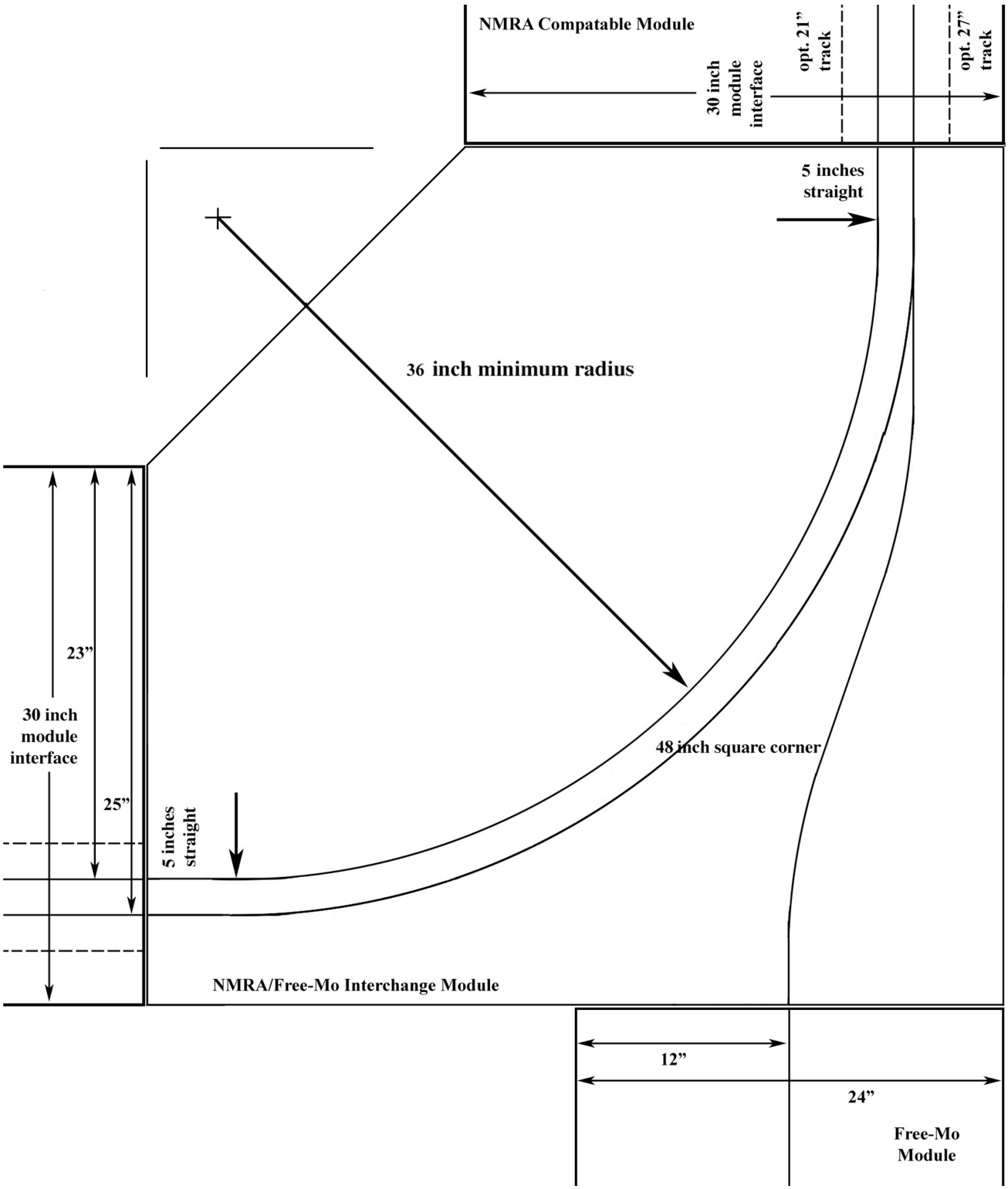

Figure 1, Diagram if the NMRA / Free-Mo Interchange Corner

Figure 2, Photo of our Unfinished NMRA / Free-Mo Interchange Corner