

**Potomac Division - Mid-Eastern Region
National Model Railroad Association**

✱ POTOMAC ✱

MODULE CREW



Southern Maryland, DC, Northern Virginia

Tips for Enjoyable Operations

Introduction: This document provides information useful to members of the Potomac Module Crew aimed at maximizing the enjoyment of both members and the viewing public at train shows and other events where we set up a layout. The tips and guidance reflect experience over many years applying module standards, lessons learned, and common sense to our layout operations.

The following sections address activities done by our members before shows, during set up of layouts, operating practices, and teardown/pack-out.

1. **Pre-Show Preparation:**

- a. The most fundamental preparation begins with module construction that satisfies the requirements of our Module Specifications. The complete specifications are available on our website. The key parameters are:
 - i. Railhead height 40 inches above the floor with legs capable of adjusting +/- 1 inch for variances in the floor.
 - ii. Module ends are squared to fit smoothly against adjacent modules.
 - iii. HO scale Code 100 should be used.
 - iv. Mainline track securely in place with 5-inch and 7-inch track centerlines setback from the module front. Fixed track should end 4-1/2 inches from the end of the module, not the end of the roadbed.

(NOTE: This distance is important to accommodate use of standard 9-inch track pieces to span between and connect modules. Variations from this parameter complicate layout set up, increase set up times, and create opportunities for derailments).
 - v. Roadbeds should be flat so span tracks are level when connecting modules. This eliminates humps that can lead to train disconnections or derailments.
 - vi. Power bus lines are equipped with properly color-coded Anderson power poles. These connectors are available from our PMC stock, there is no need for members to provide their own connectors.
 - vii. Hook-and-loop (i.e., “Velcro”) tape affixed at the proper height for attaching skirting on the front of the module. Skirting is available for purchase from PMC stock that is made to blend in across the layout.
- b. We do not require scenery to be complete for inclusion of a module in a show. However, the following IS expected:
 - i. Installed scenery is in good condition. Breakage or damage should be repaired at home in advance of the next show.
 - ii. Partially complete scenery should be regularly improved toward completion over time.

- iii. As modelling skills improve, module owners should include improvements or enhancements with the goal of providing an attractive scene for the public to admire. The intent is to see the module's scenery improve over time. Having a module with track only is good for a show or two to ensure it works properly in the layout before adding scenery, but steady improvement after that should be the goal.
- c. Prepare a personal pack-up list so members show up at set up with the necessary items. At a minimum, this list should include:
- i. Modules included in the planned layout with their legs.
 - ii. Sky/background boards.
 - iii. Skirting to hang from the front of modules.
 - iv. Clamps to attach modules to adjacent modules.
(**NOTE:** If the frame of your modules varies from the module standard 1"x3" basic design to accommodate scenery design or unique module construction needs, YOU must provide clamps that are sized to make connections with adjacent standard modules. Creativity is encouraged, but clamping non-standard module frames is the responsibility of the module owner.)
 - v. 9-inch span tracks. These should be the standard non-flexible tracks to provide smooth operation. Use of flex-track is discouraged. If your module design requires some special features to work with your design, YOU must provide span tracks for both ends of the module that will properly match up with other standard modules.
 - vi. Hand tools needed for set up.
 - vii. Rail joiners. This is a consumable item that each module owner should have on hand.
 - viii. Spare batteries for throttles – yes, they can run down in the middle of a show; please do not depend on the foresight of others to have spares available for your use.
 - ix. Trains that you want to run at the show.
2. **Show Set Up:** Our layout should be fully functioning and ready for public viewing no later than 15 minutes before public entry. This provides time for members to set up trains and have them running when the event starts.
- a. Arrive early in the designated set up time window. If you cannot arrive within the first hour, notify the show coordinator of your expected time of arrival so set up can proceed with other parts of the layout.
 - b. Look for ways to help others who have large amounts of material to move. Set up is not the best time to talk about latest finds on the internet; please help everyone stay focused on prioritizing set up actions.

- c. If you do not have a module to set up or are done with setting up your module, please offer to help others who have work remaining.
 - d. Every module does NOT need to have a 40-inch railhead height. We can set the height with a designated “baseline” module and then work to level the other modules with the base. This will accommodate variation in the levelness of the floor.
 - e. Standard 9-inch span tracks should be used. Please avoid using tailored sections of flex track as much as possible. Span tracks should lay flat; if there is a hump, check that the modules are properly aligned and adjust them as needed. If the hump is in the roadbed, contact the module owner BEFORE doing any work on the module (e.g., scraping roadbed level for the span track or making any adjustment to rails). Ensure rail joiners are installed properly.
 - f. If your module tracks are a little short of the 4-1/2-inch space to the edge of your module, consider purchasing an expandable span track to provide a proper fit -- [WalthersTrack](#) Part # 948-10091 - [Nickel Silver DCC-Friendly Expandable Track -- Code 100](#)
 - g. Clean the track on your module to remove oxidation or other residue from the railheads. Dirty track leads to balky locomotive performance.
 - h. Other ways to help with set up:
 - i. Assist with laying the main power cord, DCC electronics set up, and running the Loconet cables.
 - ii. One or two persons to quickly clean the tracks across the entire layout.
 - iii. A quality assurance team to inspect tracks for problems and double-check correct installation of rail joiners and span tracks.
3. **Operating During Shows:** Everything should be focused on smooth operation of our trains. This makes it more fun for us and, as important, it makes it more enjoyable for the viewing public. We want to demonstrate trains running, not experience problems that can frustrate us and cause others to lose interest in our hobby. A few guidelines:
- a. Trains running on the mainlines have the right of way. Trains waiting on sidings should wait for the mainline to be clear. Train operators are responsible for resetting turnouts after clearing a turnout.
 - b. Set up and removing trains from the layout should occur on sidings, not the mainline.
 - c. When entering or exiting a mainline, notify others on that track of your intention. Other operators can then adjust their train’s speed appropriately.
 - d. Parking trains on a siding is permissible for short periods of time, such as restroom breaks. Trains should be parked as far ahead on the siding as

possible; this allows others to potentially pull into a long siding, too, if necessary. Request permission to park your train from the owner of the modules that you will occupy.

- e. When the bridge module is included in the layout, do not set up or park a train on the bridge.
 - f. Trains that will not be run for significant periods of time (such as going to lunch or while shopping/viewing other layouts at shows) should be removed from the layout. This will free up space for others to operate trains.
 - g. Run trains at a reasonable speed. “Go with the flow.” Running at high or very low speeds only increases the chances for an incident and frustrates others.
 - h. Unintended uncoupling and derailments frustrate everyone. Notify the operator of the train behind your train when these issues occur. QA inspection of the track at the end of set up should eliminate most issues.
 - i. If you have a car that continues to derail (and others do not have a recurring problem in the same location), please remove the offending car and correct problems before running it again. If there is a recurring uncoupling issue with a particular car, flip it around on the train. If the problem still occurs, remove the car from your train and correct problems with your coupler before running it again.
 - j. *A note on long trains* (defined here as trains longer than 8-feet – two modules – in length): We all like to see long trains running, but:
 - i. The higher number of cars also creates more opportunities for car-related problems such as uncoupling and derailments. See the previous note on problematic cars. Operators need to be alert for such issues and quickly take corrective action.
 - ii. Long trains, by definition, take up a lot of trackage on the layout. Before setting up a long train, consideration should be given to the overall size of the layout and how many others may also be operating trains at the same time. Is there enough space available for others to run at the same time? Will the train be able to operate at a speed similar to other running trains?
4. **Post-Show Teardown and Pack-out:** We all like to get home as quickly as possible after a show. Unless a member has a time-sensitive or pressing need to leave, everyone is encouraged to stay and help with post-show actions. Packing out can be as strenuous as packing in. Some venues require stowing tables and chairs, resetting lighting, etc. The more people who can help, the quicker all of us get home.