



North Raleigh Model Railroad Club

Standards and Recommended Practices

Preparing to Participate in a Train Show

Standard

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Questions, comments, corrections and suggestions should be addressed to the NRMRC Standards Committee at dsd@pinhurst.net

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Introduction

This publication was authorized by the Standards Committee on May 11, 2010, and proposed to the general membership. The Club ratified it on June 2, 2010. It is updated from time-to-time.

Most Club Members participate in train shows from time-to-time, either by bringing modules, operating trains or both. This document provides information on preparing for train show participation, running trains using DCC, and other activities that are part of successful participation in a Model Train Show. The intent is for modules, locomotive and rolling stock to be clean and in top operating condition.

Any corrections or suggestions for changes or improvements should be directed to the Chairman, Standards Committee, North Raleigh Model Railroad Club.

Preparing Your Modules

Modules in a show layout need to be in top shape for the smooth running of trains and enjoyment of the show by participating Members. A few minutes spent checking over your module(s) before bring it/them to the show will permit a faster layout setup and more enjoyment of the show. Check the following and repair any problems found.

Checking Trackwork

Do a visual inspection of all the track on your module. Check for the following and repair as necessary:

- Loose rails, especially at the module ends and the movable rails in turnouts.
- All track spaced to the proper track gauge. Measure with an NMRA N-Scale Gauge or an NTRAK Gauge.
- All track wire feeders firmly and neatly soldered to the rails.
- Electrical gaps have not closed and cause a short circuit.

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Cleaning Track

Locomotives and lighted cars pick up electrical power from both the top and the inside top of the rails, so both must be clean. Track should be cleaned before bringing the module to the show. There are different approaches that can be used;

- Use a “Bright Boy” or equivalent hard eraser-type cleaning block. This works well for the top of the rails, but does not clean the inside top of the rails.
- Use a track cleaning car; several manufactures make several types of cars available, including some that will dispense a liquid track cleaner. Again this does not do a good job of cleaning the inside top of the rails.
- Clean the track manually using an old cotton sock wetted with a suitable liquid track cleaning fluid. This eases the cleaning of the inside of the rail tops.

Isopropyl alcohol is the preferred liquid cleaner. Other acceptable track cleaning fluids are Goo-Gone and 409 Detergent. Lighter fluid is very flammable and is prohibited on show layouts.

When cleaning track with any of the manual means (Bright Boy, sock) be very careful not to cause damage when cleaning around delicate track work such as turnout points.

Cleaning Turnout Points

Frequently trains do not operate smoothly through turnouts. This is due to poor contact between the point rails and the stock rails due to dirt and/or oxidation. Special care should be taken to clean the turnout point rails so they make good contact with the stock rails.

Almost all turnouts on NTRAK modules are Peco turnouts, and many, at least on NRMRC modules, are electrofrog turnouts with power-routing points. To clean Peco turnout points to improve electrical conductivity through the turnout, do the following:

- Fold a one-half inch by 4-inch slice of BLACK 320-grit wet/dry emery paper in half lengthwise.
- Place it between the stock and point rails. Hold the other point rail so the wet/dry paper is for sure going to contact both surfaces. Slowly move the paper back and forth; a few times is all that is needed.
- Repeat for the opposite stock/point rail.
- Place a drop or two of Atlas Conducta Lube & Cleaner on both stock/point rail pairs. This will improve the electrical contact of the points.

This type of problem does not exist with the Unitrack turnouts used on T-TRAK modules.

Cleaning Connectors

Good electrical connections are necessary in the track bus connections between modules in order to minimize voltage loss and ensure the good transmission of DCC packets to locomotives. **Powerpole** connectors are self-cleaning and require little attention other than to make sure they are firmly attached to the track bus wires.

Checking Wiring

Wiring can be damaged in transport or other handling of the module. Do a quick check of the wiring under the module to make sure no connections have been broken, that solder connections are good, and that the screws on any connections made with a terminal strip are tight. Fix any problems found.

Checking Scenery

Check over the scenery on the module(s) and repair any damage. Simple scenery is better than no scenery or damaged scenery.

Preparing Locomotives & Rolling Stock

Your overall enjoyment of a train show is probably directly proportional to how well your trains run on the layout. A little bit of effort up front will go a long way to ensuring your enjoyment.

Checking Locomotives

Fine running locomotives will make the difference between a good train show experience and one filled with problems. A few simple checks and tasks are all that is needed.

Cleaning Locomotive Wheels

Show participants are requested to clean the wheels on all of the locomotives that they will use on the show layout. The following procedure describes how to do it:

- Use a section of track approximately 12 – 18 inches long. Connect this track section to an appropriate power source.
- Take a sheet of single thickness kitchen-type paper towel and place it over the track section.
- Saturate the towel with cleaning fluid (see below).
- Take one locomotive and place one truck on the towel and the other on the track. Loosely hold the locomotive in place and turn on the power so the wheels turn. Continue until the wheels on that truck are clean.
- Turn the locomotive end-for-end and repeat for the other truck.

As the wheels become clean the paper towel will blacken. From time-to-time move the towel slightly so the wheels roll on a clean

section. Be sure to keep the towel saturated by rewetting it from time-to-time.

Suitable cleaning fluids are Goo-Gone, 409 Detergent or Isopropyl Alcohol. The use of lighter fluid will not be permitted at the show.

Check Locomotive Operation

Once the wheels are clean test operate each of your locomotives using a test track with the appropriate power supply. Listen carefully when the loco is running for signs of noise that may mean the loco needs lubricating. Lubricate the gears, bearings and axles as necessary with the appropriate lubricant.

With lubrication complete check for anything which affects the smooth running of the locomotive, and repair as necessary.

Programming of DCC Decoders in Locomotives

Since the Club is 100% DCC all locomotives must be equipped with a DCC mobile decoder. Each decoder must be individually programmed for the specific locomotive. As a minimum the decoder address must be re-programmed from the default 03 usually to the locomotive's road number.

All such programming should be done **before** bringing the locomotive to a train show. While a programming track is usually available at Train Show layouts, it is intended to fix any issues with the decoder programming, not to do complete programming of the locomotive's decoder.

Check Locomotive Cosmetics

As well as good-running locomotives, the locomotives used on show layouts should not have obvious cosmetic flaws. This includes damaged bodies, misaligned bodies, badly damaged paint (not to be confused with legitimate weathering effects), and missing parts. Fix it or don't bring it to the show.

Rolling Stock

Just as for locomotives proper running rolling stock enhances running trains at shows. As well as clean wheels proper coupler adjustment is also important.

Cleaning Rolling Stock Wheels

All show participants are requested to clean the wheels on all of the rolling stock that they will use on the show layout. The following procedure describes how to do it:

- Use a section of track approximately 12 - 18 inches long.
- Take a sheet of single thickness kitchen-type paper towel and place it over the track section.
- Saturate the towel with cleaning fluid (see below).
- Take one car at a time and roll it with left and right pressure to clean the flanges about 3 to 4 times. Check the

wheels. If not clean repeat until clean. Do not press down too hard or the axles can be damaged.

As the wheels become clean the paper towel will blacken. From time-to-time move the towel slightly so the wheels roll on a clean section. Be sure to keep the towel saturated by rewetting it from time-to-time.

Suitable cleaning fluids are Goo-Gone, 409 Detergent or Isopropyl Alcohol. The use of lighter fluid will not be permitted at the show.

Check Coupler Operation & Trip Pin Height

Each item of rolling stock should have the couplers checked for correct height, both the coupler and the trip-pin (If equipped), and operation. Do the following:

- The height of Micro-Trains or equivalent (Accumate, Bachmann, McHenry, Kato) couplers must conform to the Micro-Trains #1055 Coupler Height Gage.
- The trip pins of Micro-Trains or equivalent couplers must be adjusted to 0.020 inches above the rail head so the trip pin does not snag on turnout rails or crossings. 0.020 inches is the thickness of the Micro-Trains Trip Pin Gage #1156 or the NMRA N Scale standards gage.

Inspect the trip pin with the trucks mounted to the car pulling slightly, with the Coupler Gauge, to put some pressure on the knuckles. This action should show if the coupler tends to ride up or down. Fix any problems.

Trip pins should be adjusted by bending and never pushed or pulled through the coupler knuckle. The pin should fit snugly in the coupler knuckle so that it cannot drop. The trip pin should be flush with the top of the coupler.

Cosmetic Flaws

Rolling stock used on show layouts should not have obvious cosmetic flaws. This includes damaged bodies, misaligned bodies, badly damaged paint (not to be confused with legitimate weathering effects), and missing parts. Fix it or don't bring it to the show.

Operations

The third part of what you need to run your trains successfully and enjoyably on a show layout is the throttle used to control the train. Most Members now use Digital Command Control (DCC) radio throttles, and Members use a smartphone with the JMRI WiThrottle feature.

Digitrax Wireless Throttles

Be sure to have a fresh battery for each of your Digitrax radio throttles at the start of each show. If your throttles are duplex throttles (DT402D, UT4D) you are strongly advised to purchase

Powerex rechargeable batteries, Model MHR9V, Part No. MH-R9VI 9.6V 230mAh Imedion Rechargeable NiMH Battery. These can be purchased online or at Batteries Plus. These batteries will last much longer than alkaline batteries under the heavy power drain of the duplex throttles.

Rechargeable batteries should be charged **before** bringing them to a train show. The availability of 120VAC for the charger is not guaranteed, or if available may not be continuous.

Members may wish to review the operation of their throttle by referring to the appropriate Throttle Summary Instruction on the NRMRC web site. These are PDF files which can be printed out and brought to a show for reference.

References

- Module Standards and Recommended Practices, NRMRC
 - Recommended Practices for NTRAK Module Wiring, NRMRC/NTRAK
 - Equipment Standards & Procedures, NRMRC.
 - Locomotives for Use at Train Shows, NRMRC
 - Show Operating Procedures, NRMRC.
 - Building a Winning Module, Bob Gatland, Long Island NTRAK.
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