



POWAY STATION

ALL SCALE MODEL RAILROAD CLUB

a California 501c3 Non-Profit Corporation

www.powaystation.org

MOTIVE POWER STANDARDS & RECOMMENDED PRACTICES

Poway Station All Scale Model Railroad Club (Poway Station) subscribes to all National Model Railroad Association (NMRA) Standards and Recommended Practices (RPs), including Standard S-9, Electrical, which provides guidance for proper locomotive wiring that will optimize performance in operation and interchange. Specific exceptions and additions to NMRA Standards and RPs are noted below. Unless otherwise indicated, NMRA RPs are Poway Station minimum standards. Questions on these standards should be directed to the Poway Station Standards Committee, who will make a recommendation to the Board for final action regarding any deviations from these standards.

NMRA Standards and RPs have not been reproduced here, but are available at the NMRA web page, <http://www.nmra.org/standards/>. Printed copies of the NMRA Standards and RPs will be available for review at most Poway Station club meetings.

For the purpose of this discussion in these Standards and Recommended Practices, the term "in interchange" shall mean "used with other members' equipment to constitute an operating consist."

I. Standards

- A. Locomotives to be used "in interchange" at public shows and operating sessions must be equipped with operating knuckle couplers.

An exception will be granted for a "unit consist" that will not be coupled to or used with equipment other than that provided in the original consist.

- B. Locomotives to be used in operating sessions must exhibit unique (different from all other) locomotive numbers. (No two locomotives should operate with the same road name and locomotive numbers.) The Standards Committee shall maintain a list of registered locomotive numbers at the time equipment is certified and identified (see G. below). Locomotive numbers will be registered on a first come, first served basis.
- C. Locomotives to be used in public shows and operating sessions must not have electronics that are not compatible with the operation of club throttles. (This means constant lighting, sound, or motion, for instance, must not inordinately overload, or short out, the throttles being used.)

- D. Diaphragms (on "covered wagons" - E and F units, etc.) must not interfere with the ability of the consist to negotiate the track work in the layout, so as to cause derailments.
- E. Any second adverse event (defined as a derailment or train separation - uncoupling) during the same operating session will cause the offending locomotive/consist to be removed from the layout for the remainder of the show, or until certified for operation by a member of the Standards Committee.
- F. Locomotives to be operated at a public show **MUST** contain the member's color code to show ownership. The Standards Committee will assign a member a color code at the time the first piece of equipment is certified. The presence of the color code will signify the equipment has been certified, as well as denoting ownership.
- G. Locomotives to be operated at a public show **MUST** contain the member's color code to show ownership. The member will select a color code by the time the first piece of equipment is certified. Color codes will be assigned on the basis of membership seniority. The presence of the color code will signify the equipment has been certified, as well as denoting ownership.
- H. Certification will be documented on the Certification Checklist Form 2, Locos (copy attached).

II. Recommended Practices

In addition to the Standards described above, Poway Station has adopted the following Recommended Practices. Although not mandatory, Poway Station strongly encourages the use of these practices.

- A. Wheels should be metal, with flange contours that conform to RP-25 or Finescale dimensions. Metal wheels track better (plastic wheels on non-pickup axles "pick" irregularities in the track, causing derailments), and RP-25 flanges are required to successfully negotiate the Code 83 track work. "Traction tires" (rubber inserts in driving wheels to improve pulling ability) are discouraged, for track cleaning reasons.
- B. Couplers should be metal, similar to Kadee brand. Although many newer R-T-R and kit locomotives are delivered with plastic operating knuckle couplers, we have found that the length of trains operated on club layouts develops stresses that exceed the capability of these plastic couplers. The resulting failures cause uncouplings, and possible derailments.
- C. Locomotives to be used "in interchange" should have at least minimal weathering applied, to improve the illusion that these are real trains in miniature.

An exception will be granted for a "unit consist" that will not be coupled to or used with equipment other than that provided in the original consist.

- D. Locomotives to be used "in interchange" should not exceed the AREMA¹ Plate H clearance. (No over-height or width locomotives.) Plate H accommodates double-stack cars and tri-level autoracks. The NMRA gauge currently available is the Plate C profile. Plate H is significantly higher and slightly wider, and raises the outside shoulders of the profile, resulting in a much flatter appearance across the top. A Plate H diagram is included in the Poway Station HO Module and Track Standards. Refer to the discussion of the NMRA gauge and Clearances at <http://www.nmra.org/standards/gauge.html> for more information on Plates and clearances.
- E. Locomotives to be used "in interchange" should have flywheels installed when possible, to improve interoperability and provide constant operating speeds. Gearing should be reduced to that which will provide scale speeds consistent with the prototype.

¹ American Railway Engineering Maintenance-of-Way Association; <http://www.arena.org/index.htm>