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TRI-CITY MODEL RAILROADERS
EQUIPMENT STANDARDS
(Approved October 2, 2000; Revised October 26, 2009)

The following standards are set down as the governing guidelines for all equipment to be operated on the Tri-City Model Railroaders (TCMR) model railroad layouts.

GENERAL RULES

1. All equipment must be realistically, solidly and properly constructed, visible loads are realistic for the era and in good operating condition. All equipment to be operated on the TCMR layouts shall conform to National Model Railroad Association (NMRA) standards and the TCMR requirements contained within this document.
2. Special equipment that does not meet standards as set forth in these guidelines, nor NMRA standards, shall be allowed to operate on the TCMR layout only at the discretion of one of the following operating committee members:
 - a) LOCOMOTIVE FOREMAN
 - b) ROLLING STOCK FOREMAN
 - c) OPERATIONS COMMITTEE CHAIRMAN
 - d) CLUB PRESIDENT

Under no circumstances will plastic wheelsets be allowed on the TCMR layouts. The discretion of the Club President is final.

3. All cars and locomotives will be free of electrical short circuits through the couplers and trucks, so they will interchange with other equipment operating on the layout.
4. All motive power operating on the modules will be programmed to a different number from one that is currently in use or wait until that power is finished running and either removed from the layout or placed in a yard track that has the DCC power shut off.
5. All equipment to be operated on the layout shall be checked for non compliance and defects using the TCMR test stand (a.k.a. "the monster") by the owner. Members of the Operating Committee may verify equipment at their discretion, and equipment not meeting standards will be removed from the layout.
6. All equipment which does not operate properly and is suspected of causing operating problems will be removed immediately and inspected. A second incident with the equipment will cause its removal from the operating portion of the layout. All bad ordered equipment shall be rechecked on the test stand before going back into operation on the layout.
7. All equipment to be operated on the layout shall have all generally accepted railroad safety equipment.
8. All cars must conform to NMRA standards with weight equal to 1 ounce plus 1/2 ounce per inch of body length. This standard may vary plus or minus 1 ounce.
9. All equipment must be free rolling, have non-magnetic wheel sets with metal wheels, and the trucks must pivot freely on the car.

10. All equipment shall have, as a minimum, reporting marks and visible numbers on both sides. These must be legible.
11. TCMR layouts shall be either HO standard or HO narrow gauge unless otherwise approved by the membership.
12. All freight trains shall have either a caboose, red flag or Flashing Rear End Device (FRED) at its end.
13. All loads shall be permanently affixed to the car (Exception: when cars are used in an empty vs. loaded operational sequence [such as for a mine or lumber mill] then removable loads will be permitted).

COUPLERS

1. The standard coupler shall be the Kadee delayed-action series. All couplers shall be self-centering, the knuckle shall work freely, and uncouple over a standard Kadee magnet.
2. The Kadee #205 or #206 coupler gauge will be used for determining coupler and trip pin height, within a tolerance of 0.010 inches.
3. All equipment which operates on the standard gauge section of the layout shall be equipped with the standard, scale-type HO gauge coupler. Narrow gauge equipment will have the HO_{n3} Kadee couplers. A limited number of Kadee compatible non-Kadee couplers may be approved to be on the layout for temporary, evaluation purposes at the discretion of the Rolling Stock and/or Locomotive Foreman.
4. All couplers that have a plastic "finger spring" to close the knuckle, Accumate couplers and non-Kadee style couplers are strictly prohibited on TCMR layouts during operation sessions. Other types of couplers are allowed provided that they do not disrupt display operations and function properly. However, it is strongly recommended that Kadee couplers be used.

LOCOMOTIVE (Motive Power)

1. All motive power/locomotives will be equipped with NMRA compatible DCC decoders.
2. Four-digit addressing will be standard. Decoder address will be the locomotive number with exceptions per the approval of the Locomotive Foreman. In the event of duplicate locomotive numbers, the one registered first with the Locomotive Foreman will have priority.
3. At a minimum, the starting voltage (CV 2) will be adjusted such that the locomotive "creeps" at the first 28 speed step. CV 29 will be configured for 4-digit addressing and Analog "off".
4. Kadee couplers shall be provided on both front and rear of freight diesels, yard switchers, and way freight locomotives. Couplers are acceptable on the rear only (but preferably on both ends) for through freight and passenger locomotives.
5. All locomotives will be equipped with an operating headlight which lights in the direction of travel unless the locomotive was never equipped with a rear headlight. Function "0" will be used for the front headlight. Function "1" is preferred for the rear light, with Function "4" as the alternate. Function "7" is

preferred for headlight dimming (Exception: If motive power came from the model manufacturer with DCC or DCC with Sound and there was no operating rear headlight, then a working rear headlight will not be required).

OTHER ELECTRICAL EQUIPMENT

Any electrical equipment not covered by the other standards and installed or used either in rolling stock, locomotives or scenery must be concealed and look realistic.