

Elmhurst Model Railroad Club

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Layout Operation Guidelines

**Operating Rules &
Equipment Performance Standards**

Effective July 1, 2015

Operating Rules & Equipment Performance Standards

These guidelines cover layout operations and equipment performance standards. The guidelines are intended to make the club layout more enjoyable for all members to operate. They will also make viewing layout operations more enjoyable for our visitors and guests.

The club has many members, each having their own tastes in equipment appearance and each possessing their own modeling skill level. As long as the equipment PERFORMS at the expected level, the requirements for operation on the layout are met. The club doesn't intend this to be an exercise in evaluating members modeling craftsmanship.

Countless hours have been spent by the club's membership to plan build and maintain a quality layout. By following the guidelines outlined in this text, we will try to operate the layout with the same thought that went into its planning and construction.

Careful attention to every detail has been the club's philosophy throughout the layout planning and construction phases. We owe it to ourselves to approach layout operation with thought and caring, paying careful attention to the small details that make a layout truly great.

Definitions

Board of Directors

The club elected Board of Directors. The BoD manages club policies, disputes, collects dues and the other business tasks of club management.

CAB

A cab can also be called a throttle. At the EMRRC, we use Digitrax wireless throttles on the HO and N scale layouts, the HOn3 does not use radio throttles, but uses the same throttles, tethered. There are two types of operation, and you may be asked if you want a digital or analog (DC) cab.

Analog (DC)

This is standard DC operation, much like with a power pack on a smaller layout. The HO layout has five (5) mainline analog cabs available, the N-Scale has four (4), and the HOn3 has two (2). Analog cabs start their numbering at one (1).

Digital (DCC)

Digital command control provides advanced operation using NMRA DCC standard protocols. The club uses Digitrax equipment for this function. Radio throttles supported are suffixed in "R", the "D" suffixed throttles are not supported at this writing, except in "plug in" or tethered mode. There is only one DCC cab on all of the layouts, as the system communicates with locomotives by way of an address stored into the locomotive and similarly indicated on the cab. The highest numbered cab on the layout is the DCC cab (five (5) on the N-scale, or six (6) on the HO layout). The HOn3 layout's two cabs can be switched between DC and DCC. Digital addresses for member's equipment must be (decimal) 31 or higher, as the club reserves addresses 00 through 30 for analog cabs and other layout uses.

Blocks

In order to facilitate operations, real railroads establish track blocks to identify train locations and rail occupancy. In modeling, we do the same, however with one additional reason. With the scale models, the trains are operated by electricity, and these blocks define a section of track for both occupancy and electrical control. When a train is to occupy a block, the cab associated with that train must also be associated with the track block to ensure proper operation.

Dispatcher

A dispatcher controls train movement on the railroad. Our layouts are not always operating under dispatcher control, but when there is a dispatcher assigned all operators must follow the dispatcher's instructions as to movement of their train.

Key Monitor

The key monitor is a designated member, who is the layout / club manager for a given time. The Key Monitor is ultimately responsible for all club conditions and operations. He/she has the authority to allow or disallow operations or operators, grant permissions for excessive length trains, and do things to maintain a sense of order and decorum at the club. The Key Monitor may chose to dispatch the railroad, or may allow someone else to do so.

If there is a member that is operating outside of regular hours, and another member shows up and wishes to run, then the first member assumes the role of Key Monitor and the club is considered "open" for the duration of the Key Monitor's stay.

If the regularly scheduled Key Monitor does not show up for their designated time and there is already a Key Monitor operating then that Key Monitor either assumes the role of the missing Key Monitor and finishes out the regular scheduled time or all members must leave and the club is considered "closed".

Test Tracks

Equipment is not to be tested or programmed on the layout. There are two test tracks in the club. The first is adjacent to the HOn3 layout and across from the locomotive facilities on the HO layout; the second is in the Club Room. These are for use by any member (or their guest). Both test tracks support analog and digital operation, and all three gauges currently in use by the club. The DCC support is by Digitrax Zephyr units, DC support is with a standard power pack. There are laptop computers at each test track for use with Decoder Pro (JMRI) in "programming" DCC equipment. Use of the computer is at your discretion. You may use a USB "thumb drive" or "key" to store your roster information, so that it can be moved from home, to the club and used on either test track.

Acquire / Dispatch Cabs

Analog or DC cabs are numbered from 1-5 on the HO layout, from 1-4 on the N-Scale layout and 1 or 2 on the HOn3 layout. Digitrax throttles are used for cab control, and the address on the throttle will match the cab number (i.e. 0001 will be cab 1, 0002 will be cab 2, etc.) When you sign out a cab from the key monitor, he will take your \$5 deposit and assign you a throttle (cab). First ensure that the number of the cab is dialed in on the front of the throttle (if you're not sure, ask the key monitor for help). Simply plug in the short tether into one of the appropriate ports on the layout, and you should get a green light on the throttle. If you do not please see the key monitor. Once you have the green light, your cab/throttle is ready for use. When you have completed running, turn your throttle off, place it in neutral, then press and hold DISP (button on the throttle) and plug back into one of the appropriate ports on the layout, then release the DISP button while still plugged in. You should get a red light. This is called "dispatching" your cab, and helps keep the system free from clutter.

DCC cab/throttles work just like the above DC cabs, since they really are the same throttles. Instead of dialing in a cab number, you will dial in your locomotive address. When you are finished running, turn your throttle to off (full counter-clockwise), set the direction switch to neutral, and dispatch from the system as above. Before turning the throttle into the key monitor, turn the address dials to zero.

Regardless of which throttle you are using, only the key monitor is to insert or remove batteries. Also, please DO NOT put the throttles in your pocket as many throttles have been damaged in this way. Club throttles are not to leave club premises.

Guidelines

Key Monitor

Throughout the Guidelines we refer to the Key Monitor. This is the person who is typically in charge. On busy nights there may be an actual assigned dispatcher. Please check with the Key Monitor as to which operating rules are in effect for the evening. The dispatcher has authority over all layout operations. Other issues are handled by the Key Monitor.

Operation

Members are required to sign in with the Key Monitor when they arrive at the club if they want to run a train. This will help if there is a wait for cabs. Cabs are issued on a first come, first served basis. Only one train per member is allowed on the layout at a time. During open house operations, only members who are proficient in layout operations will be allowed to operate trains on the layout.

Location Names

Members should become familiar with the layout by the names of the stations, interlocking plants and landmarks. Operation on the layout is typically governed by these location names. Train direction is also governed by an east/west orientation. Please become familiar with the proper direction on the layout at different points as the layout folds over itself in places. This will make operation easier for you and the members you are operating with. The yards on the HO layout are currently named by the type of operation or location of them, they are as follows: Set-up yards (first yards in the layout room), main yard (large yard next to passenger station) and the lower yard (yard below the main yard).

Cab Assignments

It is the responsibility of the Key Monitor to check cabs in and out. All club members with access to the mainline cabs that are not 'on-duty' must see the Key Monitor in charge to check out a cab. The procedure for cab assignment is outlined below.

1. Members signing out a cab must leave a \$5.00 cash deposit for the cab with the dispatcher in charge.
2. Cabs must stay in the club layout area at all times.

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3. Operators must sign the operator's log with their time of departure when they leave the set-up yard. This will be used to monitor how long an operator has been using a mainline cab. **A one (1) hour limit per cab will be in effect if there is a waiting list for mainline cabs.**
4. Cabs must be returned to the key monitor in charge upon arrival in the setup yard. No swapping will be allowed. This will help ensure that cabs are assigned on a first come, first served basis.
5. Please be careful with the cabs. They are very sensitive electronic devices. Do not put them in your pocket or lay them face down. This could accidentally press a button, resulting in unexpected train behavior.
6. **For the N scale layout:** if you are going to be using a club owned throttle follow the same steps as above. On the sign-up sheet check the box for the N scale layout. Then fill out the sign-up sheet that is in the N scale room listing all DCC address that you will be using, or just check that you are using standard DC.

Setup Yards

1. Set up your equipment only after the key monitor has given you permission to do so. No unattended equipment may be stored in the yard. Please use the lower yard for storing of equipment when it is not possible to completely remove the equipment from the layout. The yard is not to be used for the testing/repair of equipment, use the test tracks.
2. Please limit your train size to the three (3) longest tracks in the set up yard. Please let the key monitor know if you would like to exceed this limit **before** setting up your train. **Note: This limit is strictly enforced during open house hours.**
3. Trains coming into the yard have priority over trains leaving the yard. Departing trains must use yard power to place their train on the departure lead. Operators must normalize all yard turnouts and power switches upon arrival or departure. This is the only place on the layout that equipment should be set-up or taken down. Upon arrival in the yard, all trains must be promptly removed from the layout.

Train Length

On visitor's days (open house), freight trains are limited to a length equal to the 3 longest tracks in the set-up yard. Another way to tell your train length is by the flags that are on the back wall in blocks 19 & 20. If your whole train fits between these two flags, then your train is of legal length. This restriction is mandatory. At all other times,

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train lengths greater than the standard outlined above must be approved by the key monitor prior to setting a train up in the set-up yard. Train length must not impede the operation of the layout as determined by the dispatcher.

For the N scale layout: The maximum length of a freight train for normal operation is equal to the longest two tracks in the set-up yard and that includes our motive power. To exceed this you must first get permission from the N scale room monitor or the Key monitor if there is no room monitor.

Train Speed

Excessive train speed is unacceptable. No train shall exceed the prototypical speed for that particular type of train. The maximum layout speed shall be a scale 60 miles per hour. Note that this is the maximum, not the norm. If you observe a speed limit violation, try to resolve the infraction by yourself. If this proves to be unsuccessful, seek the assistance of the key monitor in charge. The key monitor should issue a first warning to the operator in violation of the speed limit guideline. If a second warning is required, the operator must pull his train into the set up yard and remove his/her equipment from the layout. Any conflict will be handled by the Board of Directors.

Signals

Currently the mainline does not have operating signals. We plan to have operating signals installed in the near term to aid layout operations. Even though we have 'dummy' signals mounted around the layout, you should operate like the layout is actually signaled. You must use the signals as stopping and clearance points, as directed by the dispatcher. Generally the signals are placed at block boundaries and interlocking clearance points. There may be a few additional signals installed for "decorative" purposes but those are few.

Entering / Leaving the Mainline

Trains entering the yard areas have priority over trains awaiting departure. All operators must be sure that they have clearance onto or off of the mainline before they throw switches and take track power. If no dispatcher is present check with other operators to be sure that you have clearance onto or off of the mainline. In double track operations, stay to the right if at all possible unless another operational pattern is in effect. You **must** reset turnouts for normal operation once your train has cleared the yard.

Mainline Operation

The electrical control of blocks on the HO layout is a priority system. When CAB 1 is on and CAB 3 energizes the block without first clearing it, cab 1 will still control the block. You must clear the block by bridging the clear posts before selecting your cab. The clear posts are the top posts for the track you are on. You must select/check your blocks before you enter them. **Before taking control of the next block verify that the preceding train has fully cleared the block before you take control.** When entering sidings, stations, yards or crossing over between main tracks your must return the turnouts to normal operation once your train has cleared.

Spacing between Trains

Each operator should attempt to leave at least a one block 'cushion' between the front of their train and the back of the train in front of them.

Single Track Operation

All operators must be sure that they have clearance onto single track sections of the layout before entering. Access onto single track sections must be granted by the dispatcher. If no dispatcher is present, check with other operators to be sure that you have clearance onto single track sections. Before entering single track at blocks 5,6 and 7 there are operating signals that can also be used as an aid for entering single track but you should still check to make sure there are no conflicting movements.

Switching & Local Trains

1. Switching on visitors days must be limited to designated switching areas that do not interfere with mainline operations. (I.E. valley Jct, Slate Quarry, and Shelbina at the grain plant). Local cabs must be used for switching where possible. Access into and out of designated switching areas must be granted by the dispatcher/other operators. If no dispatcher is present be sure to check with other operators to be sure that you have clearance onto or off of the mainline.
2. Operators performing switching operations must be sure to restore all toggles and turnouts for mainline operation after they have entered into or departed from a switching area.
3. Switching operations by a given operator will be stopped if that operator fails to adhere to the switching guidelines.

Stopping / Parking Trains on the Mainline

Parking trains on the mainline will not be allowed. If at all possible, trains should be parked in the hidden storage yard. If the key monitor feels that a parked/stopped train is hindering operation, the key monitor will request that you remove the train from the layout. Trains may be stored in the arrival / departure yards or the classification yards in Springfield yard for short periods of time such as to use restroom or get a snack. You may not park your train in the setup yards. If you are unavailable the train will be moved / removed from the layout by the key monitor in charge.

Main Freight Yard

The freight yard is for switching and yard type operations. It is not meant for the storing of equipment. The top track (closest track **to retaining wall**) is to be left open for run-through operation from the set-up yard, access to the engine and caboose tracks. Check with the key monitor before tying this track up for an extended period of time. In the bowl area of the yard, the top two tracks (closest to the mainline) should also be left open if at all possible as these are for trains arriving and departing from the yard.

Main Passenger Station

Freight trains are not to be stored in the passenger station. Passenger trains are also not to be stored in the passenger station for an extended period of time; use the lower yard for this purpose. Passenger trains are not to be set-up in the passenger station. Please use the set-up yards and run the train into the station.

Lower Yard

Cabs must be relinquished when a train is placed in the lower yard. No equipment may be left in the yard without permission of the key monitor. Track one (1) must be kept open for run through operation. The lower yard is the only location where trains may be left overnight.

Local Stations

Local stations around the layout are mainly in the small towns. These stations are intended for passenger trains to use when running during proto sessions. During normal operations, you may make stops at these stations but you must inform the key monitor you are doing so. You are then allowing the dispatcher to anticipate delays by your train. The dispatcher then can route trains according to your schedule. During busy

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operational nights you may not be allowed to make these stops because of the amount of time required and delay to following trains.

Layout Damage - Normal Wear & Tear

Damage to the layout through normal operation must be reported to the key monitor. Like all mechanical devices, the layout requires routine maintenance. Normal wear and tear on the layout is expected and must be fixed on an ongoing basis. Notifying key monitors about any layout failures in a timely manner will help keep the layout in top operating condition.

Layout Damage - Accidental

If an operator accidentally damages something on the layout during NORMAL operation (e.g. broken ground throw, broken toggle switch, or snagging a piece of scenery with your shirt sleeve), the damage must be reported to the key monitor. Remember, everyone makes mistakes and accidents do happen. We just need to know about the damage so that proper repairs can be made. There is no reason to hide accidental damage.

Damage to Member's (or Guests) Equipment

1. No member may handle, use, or touch anyone else's equipment without the permission of the owner. An "emergency situation" is the **ONLY** exception to this rule.
2. Damage to a member's (or guests) equipment due to an operator's failure to follow operational guidelines is a serious matter. Incidents that involve damage to a member's or guest's personal property will be handled on a case by case basis by the board of directors.
3. Finally, any member that steals club property or a member's (or guest's) personal property will have their membership terminated immediately. The club will also seek to prosecute the offender to the fullest extent of the law.

Equipment Operating Condition

All equipment must be in good operating condition. A piece of equipment must be removed from the layout after it has failed for the third time. It may not be returned to the layout until necessary repairs have been made. Also smoke generator units are not to be used on the layout. They are only allowed to be tested on the clubs two test tracks, otherwise they need to be off. If they are left on the smoke leaves a film on the rails that impedes proper operation on the layout.

Open House Operation

Hours

Currently the club's open house hours are on Fridays from 7-10pm and Sundays from 1-4pm. During these hours rules relating to open house operations apply.

Member Requirements

All members must wear name badges during these hours. Members should conduct themselves in a professional manner. Please treat visitors courteously and answer any questions they may have or direct them to someone who can. Please do not engage in any activities that may distract visitor attention from the layout or layout operations. **Only members who are proficient in layout operations will be allowed to run during these hours.** If you are having problems operating on the layout during these hours you may be asked by the dispatcher to pull your train into the yard and wait until open house is over.

Equipment

Equipment must be decorated and in proper working order. Any problems encountered during operation may result in the equipment being removed from the layout immediately.

Aisles

Members should stay out of the main layout area during open house unless they are assisting in the operation of the layout. With visitors and operators in the aisles it makes walk-around operation challenging enough. Please use the club room for non-layout-operation activities.

Please try not to block the aisles around the layout. This layout is walk-around operation. Keeping the aisles clear will make things easier on operators that need to walk with their trains.