



## Layout Operations Standards

### Fun Run

A *Fun Run* is an assembled CVL layout whose purpose is for all members of the CVL, and their invited guests, to run their rolling stock and other equipment on the layout in a "fun and informal" manner. Such runs may or may not incorporate "work in progress" modules, "trouble shooting" sessions, testing of new or different control activities, let individuals test and/or run new or special equipment, incorporate building projects, include special interest activities, etc.

In general, a Fun Run is a CVL activity to encourage member participation and Model Railroading activities in an informal setting.

### Show Run

A *Show Run* is an assembled CVL layout whose purpose is to present the modules and equipment of the CVL members in a formal setting. Show Runs are designed for general public viewing of the layout. CVL often asks for and receives a fee for setting up a Show Run. A Show Run incorporates only finished and tested modules in the layout.

Active Members are encouraged to run the layout. Inactive Members and/or guests and/or the general public are not asked to participate in a Show Run. Only Active Members are encouraged to display and/or run their rolling stock and other equipment that has been checked-in, documented, and approved to the CVL standards. The rolling stock and/or other equipment of Inactive Members, guests, or the general public is not invited to be displayed or run during a Show Run.

### CVL Member Participation

Setting up the CVL modules for a run of any sort is one of the major activities of the CVL. The setting up, operation, and disassembly of the layout is basic to a successful run and requires the teamwork of all who participate. Every participant should, to the best of their ability, help with the set-up and/or disassembly of the layout of he/she expects to participate in the operation of the



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layout. It is expected that every participant will operate and respect the layout, all rolling stock, and all equipment as if it were their own.

### Operation, Direction, and Control of a CVL Run

All design, coordination, setup, operation, theme, schedule, equipment, assignment, and take-down decisions are made by the Run Coordinator. The Run Coordinator is an Active Member of the CVL. The Run Coordinator is encouraged to have at least one or more Assistant Coordinators to help in these tasks.

In the event that there is a disagreement in any aspect of a CVL Run by any participant of the Run, the appropriate course of action is to first approach the Run Coordinator with the problem. The decision of the Run Coordinator will prevail the majority of the time. If the Run Coordinator so chooses, one or more other Active Members, and/or a member of the Steering Committee may be asked for advice. If the resulting outcome is still in dispute, then an Active Member (and only an Active Member) may present a written grievance to a member of the Steering Committee. Then, and only then, may a decision by a Steering Committee member override a decision of the Run Coordinator.

### Definitions

- A. **Coordinator:** During any organized public show or fun run, this person is in charge of the overall operation, with emphasis on handling scheduling of activities, personal needs, security of the layout, public relations, and everything else necessary to help the members have fun running their trains.
- B. **Dispatcher:** During any organized public show or fun run, this person is totally in control of, and responsible for operation of trains in the layout.
- C. **Tower Operators** Persons assigned to specific areas of the layout, to supervise mainline operations in that area. A Tower Operator may have throttles and Mainline trackage to operate



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(Engineer), or may have a special area, like the wye, or a branchline to keep running smoothly. The Coordinator designates and numbers Tower locations as required.

- D. **Engineers:** Persons in charge of throttles which control movement of trains on main line tracks. Throttles may control an entire main line or smaller portions called blocks.
- E. **Yardmasters/Local Operators:** Persons in charge of operation of yards or local areas, other than main line tracks. During operation, these folks would be referred to by the name of the area they are operating, such as "Fresno Yardmaster" or "Petaluma Operator."
- F. **Monitors:** Persons designated by the Coordinator to patrol inside and/or outside the layout during public shows. They talk to the public and protect the layout.
- G. **Sponsors:** Persons responsible for supervising, teaching, assisting, and/or disciplining members under 16 years of age.

## Crew Duties and Responsibilities

- A. The Dispatcher is responsible for the safe movement of trains and all yard operations. Anyone may be designated as Dispatcher, as long as the Show or Fun Run participants feel he or she is qualified.
- B. The Dispatcher has the final word on the makeup of trains, and controls the movements to and from yards or roundhouses. He or she may delegate train makeup decisions to designated persons.
- C. The Dispatcher must check with Tower Operators and get their agreement if he or she wants to run more than one train per two blocks on a continuing basis.
- D. Tower Operators must strictly adhere to instructions received from the Dispatcher.
- E. Tower Operators must watch for any trains entering the area they control, since they will not receive verbal notification.



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- F. Tower Operators must promptly notify the Dispatcher of any unsafe operating conditions, or of any problems with any trains within their control. They must also notify the Dispatcher of any or potential public hazards observed on any portion of the layout.
- G. Engineers must observe the speed of trains within their control. They must also make any adjustments in throttle setting necessary to maintain proper distance between the train in the block and preceding or following trains.
- H. Engineers must not stop trains in their blocks with the rear portion of the trains extending into another block, except in an emergency, in which case the engineer stopping a train must ensure that the engineer in the block affected is aware of the stopped train.
- I. Yardmasters/Local Operators must obey all instructions from the Dispatcher or Tower Operators regarding the use of main line tracks on their modules. Under no circumstances will a Yardmaster or Local Operator take control of a block or throw a turnout on any portion of any mainline track without the knowledge and permission of the Tower Operator in charge of that block.
- J. All crew members shall verify, during a show run, that the last car of all running trains is either a caboose, a passenger tail car or a car with a flashing rear end device (FRED). [This item added 3/1/06]

## CVL Radio Operations

- A. Remember that the best radio is the silent, available radio.
- B. Radios are only to be used to train operations, emergency situations, and layout security.
- C. Only the Coordinator, Dispatcher, Tower Operators, Yardmasters, and Local Area Operators should use the radio at any organized run, except that the Coordinator may designate Monitors to use radios for security purposes.
- D. Radios are not to be used for general conversation, or to convey information about routine movement of trains to or from any given block; that is to be left to visual control, or hand signals, as needed.



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- E. Phrases such as "Shut down mains," etc., must not be used when problems occur in a particular block. The precise problem must be conveyed to the Dispatcher, who will instruct the Tower Operators in how to respond to the situation. This will ensure smooth, controlled response, not a panicked shutdown of the complete layout.
- F. Proper format is to first state whom you are calling, then state who you are. Once you have gotten an acknowledgment that the person you are calling is ready to receive your message, state it briefly.

Example:

"Dispatch, this is Fresno Yardmaster."

*"Go ahead, Fresno."*

"I request permission to cross the inside main at Fresno."

*"You are cleared to cross the main after the SP 5680 freight passes Fresno."*

- G. Individuals own their own radios, but that does not authorize anyone to use their radios at will at any organized run. Discipline in the operation of radios is necessary, or else their usefulness is lost. Proper operation of radios adds to the enjoyment of all concerned and to the realism of our railroad.

## CVL Hand Signals

We use hand signals to assist in the smooth starting, stopping, and switching of our trains. They are also vital in keeping the radio channels free of unnecessary traffic.

The hand signals must be made big enough for the engineer who is operating the train to see clearly. If you are four feet away from the person at the throttles, small hand motions are fine. If you are 40 feet away, whole arm motions will be needed, particularly in a busy public show environment.

**Forward:** Up and down motion. The forward direction is the normal direction of travel for the mainline you are working on or from.



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**Reverse:** Circular motion, with the circle facing the engineer so that it is clear that a circular motion is being made. The direction of rotation does not matter.

**Stop:** Horizontal back and forth motion, using one or both hands.

**Coupling:** The hands approach each other, matching the distance between the couplers that are approaching each other. The hands clasp to indicate a couple.

**Slow:** To indicate that a movement should be done slowly, one hand is moved in the usual pattern for the desired movement, and the other hand is help spread out flat and stationary above the hand that is making the motion.

Do not be afraid to raise your hands up high to make the signals. The engineer must see them clearly to move correctly. Try to get eye contact to ensure that the engineer is ready to act on the signal given.

These suggestions reflect the most common practices on the CVL, and following them will improve our efficiency and reduce confusion.

## Bad Order Procedure

CVL Rolling Stock Standards are intended to ensure that equipment operating on club layouts will perform adequately during prototypical train movements. The equipment check-in procedure provides an initial assessment of each piece of rolling stock AND the methods the member used to bring that rolling stock up to standard; this Bad Order procedure will help point out what equipment or members are having trouble with rolling stock standards past the initial check in.

These procedures should not detract from the fun of running trains. In implementing these procedures, members should temper rigid enforcement of rolling stock standards with consideration for the operational requirements of the layout coordinator and the individual preferences of our fellow modelers.



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Over time, the log itself will point out where problems are concentrated, whether an individual's equipment, or with certain types of failures among everyone's equipment, so these problems can be fixed.

1. For each layout, the Coordinator shall designate a safe location for the Bad Order box and log. The Coordinator may delegate these tasks to an assistant. The log uses the attached form; blank forms are kept in the CVL paperwork file.
2. Normally, equipment would only be removed from the layout by request of the coordinator or dispatcher. (Owners should inform the Dispatcher when they are pulling any of their own equipment.)
3. When a malfunction interferes with operation, the member observing this should try to determine the cause; the Bad Order procedure is to be used when the problem is caused by rolling stock. (In the case of a track work or electrical problem, inform the Run Coordinator.)
4. If you are the problem finder, tag the offending equipment with a white string tag; check the Bad Order Log for the next number in the sequence and write it on the tag along with a short description of the problem. The Bad Order Log will be on a clipboard or holder by the Bad Order Box; check with the Show or Run Coordinator if the log or box is not to be found.
5. Place the tagged piece of equipment in the Bad Order Box.
6. Fill in the full entry on the log for that order number. (Fill in ALL the columns up to FIX ONLY.) If the cause of the problem is unknown, at least indicate the observed symptoms.
7. Put your initials in the "fix only" box if:
  - a. The cause of the problem is due to wear and tear, or damage from an accident. This means the equipment only needs fixing for that problem, and does not have to be re-checked in.
  - b. The cause is unknown, and the equipment appears to be fine after a quick inspection.
8. When owners pick up their bad ordered equipment, they should read the log to see what happened. If they do not understand the problem description, they should go to the problem finder for more information.



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9. The owner repairs the problem, and also goes over the equipment to ensure it still meets standards. The number tag should be kept on or with the equipment until sign-off.
10. If the "fix only" box was initialed, the owner signs the Bad Order Log on the "sign-off" box for that order, and returns that piece of equipment to service.
11. If the "fix only" box was not initialed, the owner must get the unit checked in again as if it were new, and the person passing the equipment signs the "sign-off" box for that order.
12. A volunteer "Bad Order Coordinator" will survey the log and report at the monthly meeting on outstanding orders, equipment that was returned to the layout without being repaired, and any trends showing up in the log.

### Throttle Operation

The standard CVL throttle is designed around a voltage regulator. The output of this throttle provides a "clean" DC voltage regardless of the current draw. This type of throttle is better for locomotives with can motors such as Kato or Atlas. The throttle is self-limiting and will shut itself down under conditions such as electrical shorts. The throttle will come back on when it has cooled down.

### Speed Control

Rotate the knob to control the locomotive speed. Full counter-clockwise is the minimum speed setting. At this setting there is still a 1.3 volt output from the throttle. Locomotives such as Kato or Atlas will creep at minimum speed. The directional control must be in the "center off" (see below) position when the locomotive is to be stopped. The position of the speed control is usually expressed in terms of clock position. For example, when the line on the throttle knob is straight up, the throttle is said to be set to "twelve o' clock." The speed control might need adjusting as different makes of locomotives travel through the block in order to keep the trains running at a constant speed.



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## Directional Control

This toggle switch controls the direction that locomotives will travel. The switch has a "center off" position to disconnect the throttle power to the track. Except in an emergency, only move this switch when the train is stationary.

## Light Indicator

The intensity of this light indicates the output current of the throttle. It is an aid to troubleshooting as in the case when the track is shorted and the light dims.

## Heatsink

This dispenses the heat of the throttle's voltage regulator. It can become quite warm when running locomotives at low speed or when the throttle is shorted out.