

ALBERTA FREE-MO 2018

15TH ANNUAL MEET – 1000 FOOT CHALLENGE

AUGUST 15-19, BIG VALLEY, ALBERTA

PROUDLY PRESENTED BY



Participant Guidelines

This layout strives to showcase Free-mo in the best possible way, by featuring a layout that:

- Is a great example of Free-mo objectives and philosophy
- Complies fully with Free-mo technical standards
- Provides the participants with an enjoyable experience
- Includes trains that are realistic in appearance and consist for the period they represent

Event Information

Venue: Big Valley Agriplex, Big Valley, AB

Event Dates: 2016 August 15 through 19

Operator Fees:

Full Operator: \$50.00 for the whole meet. Fees will be collected on Thursday morning during setup. Anyone who wants to be a full operator without a module has to be onsite by 10:00 am on Thursday, pay their fee, and participate in the setup along with all the module owners. Everyone participating will be assigned to a setup crew.

Guest Operator: \$20.00, a limit of 3 consecutive hours, one session only, between 09:00 – 15:00 Saturday or Sunday. First come first served, and we may limit the number of guests on the setup at any one time to ensure access for full operators.

Free-mo Layout Information

Layout Sponsor:	Calgary Free-mo
Run Chief:	Jim Ironside
Assistant Run Chief:	Mike Walker
Registrar:	Lorraine Adams
Layout Planner:	Doug Soeder
Setup Chief:	Doug Soeder
Email:	Alberta.Free-mo@shaw.ca
Layout Space:	185 x 85 feet – Hockey Arena floor
Rail Height and Skirting:	For this meet the rail height will be 42", skirting is optional

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Meet Timetable

This Timetable outlines the Setup, Operation, and other events of this meet.

Setup Timetable

This Setup timetable must be honoured by ALL Module Owners and Full Participants without modules, to ensure punctual set-up of the layout. Module owners are expected to participate in the complete event. Module owners must be present to set up their own modules, and are expected to assist setting up other modules. Module drop-offs or loans are to be avoided unless absolutely necessary. If someone else is bringing your module, please ensure that they have everything required to set it up and are familiar with what might be required to do so. Full participants without modules are required to participate in the full setup, and will be assigned to a setup crew.

Module Arrivals

Arrival deadline for Module Owners, Modules and Full Participants is Thursday, Aug. 16, at 10:00 am.

When sending in your Request To Participate, please indicate when you expect to arrive. Layout planning will take the arrival times into consideration, with the desire to be able to start with modules next to the Core Subdivision early Thursday morning. As you arrive, please announce your arrival at the Registration Table, which will be near the loading door entrance on the East Side (back) of the building. You will be directed when to unload and where to put your modules.

Setup Crews

Everyone will be assigned to a setup crew. The crew positions are listed below. If you have a preference, please state so on the registration form and specify if you will act as a Chief. Each team will consist of the following:

1. Sub Division Chief

- supervises the setup of a subdivision, ensuring the modules follow the layout plan and that the work to get everything done is progressing.
- one or two 'Gophers' on this crew will take direction from the Sub Division Chief to assist with obtaining parts as required, and general help.

2. Levelling Chief

- responsible for final positioning of the modules and the proper alignment of the track and installation of fitter rails.
- minimum 4 crew members on this team, 2 will be assigned to fitter rail installation.

3. Electrical Chief

- ensures the placement of boosters, and all electrical and communication connections to the modules are in accordance with the electrical setup plan.
- confirms that all booster districts, accessory bus districts, throttlenet districts, and auto-reverse districts are properly isolated from each other.
- minimum 2 crew members on this team.

4. Signal Chief

- if there are signals that are intended to be operational in a subdivision, this Chief will ensure that the signalling is connected correctly.
- assistants may be required. – must have a signalled or detected module to be the Chief or an assistant.

Fitter Rails

It is intended that Calgary Free-mo will provide all fitter rails. To speed setup, every module will have insulated fitters on one end; thus you must ensure that your end-of-module ties are sufficiently undercut on both ends to

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accept an Atlas insulated rail joiner on both ends. This applies only to the Free-mo ends of multi-section modules. You are responsible for any internal connections between module sections. Each Subdivision Setup Crew will be provided with a fitter rail measurement jig and a supply of rails and joiners. In case we run out, please have your own fitter rails available.

Signalled Sections

Calgary Free-mo will have a signalled section as the Core section of the layout. We use Signalogic System equipment which is compatible with MSS V1. If your module has this capability, and you can be there for Wednesday Pre-Setup, please indicate so on your registration form and we will try to include you in this section. Any groups that have a signalled section that they wish to provide as a unit to the setup, please advise Doug Soeder directly using the Alberta.Free-mo@shaw.ca email address, so that we can come to an agreement on the order and orientations of the modules provided that would be suitable for both the signalling operations and the overall layout plan.

Wednesday, August 15

12:00 – Pre-Setup

Arena preparation will be conducted before any modules are brought in. Modules may start arriving at any time. **Calgary Free-mo modules in the signalled section (the Core Subdivision) must be on site by 15:00**, and will be positioned, levelled, connected, and operational before this phase of the setup is considered complete.

Thursday, August 16

08:00 – Full Setup

All modules will be expected to be on site by 10:00. The setup will be divided into districts, with each district having a Leveling Chief and crew, an Electrical Chief and crew, and a couple of 'gophers' to assist in locating any supplies or people needed to help troubleshoot problems. We encourage those with modules adjacent to the Core Section to arrive Wednesday night, so that we can start assembling early Thursday. Module owners will be expected to be in the building when their module is being attached to the layout so that if any issues with their module arise, they can be solved in a timely matter. We will try to put you in the crew that is assigned to the area that contains your module. Refrain from putting any rolling stock or locomotives on the layout during setup. Some people will be authorized to run test trains in a district as the setup progresses. If you are planning on attaching skirting to your module, do not do so until the Run Chief has declared the layout ready to use.

14:00 (approximately) – Operating Rules Review

As everyone should be on site at this time, we will take a break to go over the operating rules for this setup.

17:00 (approximately)

Calgary Free-mo sponsored barbeque. See notes under the Ancillary Events section below.

Operating Timetable

There are 3 types of operation, Controlled Operation, Free Running and Long Trains Running.

A. Controlled Operation – Operators are expected to check in with the Duty Run Chief. We will have Tower Operators (volunteers are required, likely 1 or 1 ½ hour shifts) at various points in the layout, especially junctions and yards, to ensure a smooth flow of traffic on the layout. If an abundance of people are running, those that have been on the layout the longest will be asked to take a break. Train lengths will be limited to approximately 16 feet (about 20 - 50' cars plus power)

B. Free Running – no supervised control of the layout. Those people who are operating are expected to cooperate with each other, and to keep the layout moving. Train length up to about 30 feet would be acceptable.

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C. Long Trains Running – Basically the same as Free Running, but with no limit to train length. If there are still many people operating at the start of the scheduled times for this, please be courteous and refrain from putting your extra-long trains on the layout for up to an hour.

Thursday, August 16

After Setup Completed – Free Running

Free running will be available after the layout has been declared operational by the Run Chief.

21:00 (or up to +1 hour): Long Trains Running – if there is a lot of traffic on the layout at 21:00, please wait until the traffic dwindles or 22:00 to operate long trains.

Friday, August 16

09:00-18:00 – Controlled Operation

18:00 – Free Running

21:00 (or up to +1 hour): Long Trains Running – if there is a lot of traffic on the layout at 21:00, please wait until the traffic dwindles or 22:00 to operate long trains.

Saturday, August 17

08:00-18:00 – Controlled Operation – Guest operators may be operating during this time

18:00 – Free Running

21:00 (or up to +1 hour): Long Trains Running – if there is a lot of traffic on the layout at 21:00, please wait until the traffic dwindles or 22:00 to operate long trains.

Sunday, August 17

08:00-17:00 – Controlled Operation – Guest operators may be operating during this time

17:00 – Tear-down – as all of us have to travel, it is expected that everyone help until everyone is loaded up. Those who intend to 'drive-all-night' will be forgiven for departing early.

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Ancillary Events

Thursday, August 15

17:00 (approximately) – Calgary Free-mo sponsored barbeque.

Calgary Free-mo will be sponsoring a barbeque, with hamburgers, smokies, condiments and salads. If you have dietary considerations, please advise us on your Registration form, and we will try to accommodate your needs.

Saturday, August 16

18:30 (approximately) – Pot Luck Barbeque -bring your own meat

We provide the barbeque, you provide your own meat and refreshments, and one dish to contribute to the pot luck. Please inform us what you are supplying (e.g.: salad, side dish, dessert, with specifics) so that we can try to balance the types of food that are being supplied.

Potential Operating Session

If there is interest in having an operating session, and someone volunteers to be the OP Session Chief, an operating session could be held on Saturday evening. Please indicate on the registration form if you would like to participate, and also if you would be the Op Session Chief or Op Session Setup Assistant who will help organise the operating session. Participants in the operating session will be expected to contribute equipment which may be used by other session participants. If this goes ahead, we will require additional information ahead of the setup, which the Op Session Chief will request from you.

Operations

Duty Run Chiefs – open to all full participants

We need some volunteers to be the Duty Run Chiefs during the controlled operating times during the day Friday, Saturday and Sunday. Responsibilities will be to ensure the layout is operating correctly and troubleshoot any issues that may arise. You would also be responsible supervising the Tower Operators and number of trains running in accordance with the operating plan that will be developed when the layout has been designed. A duty time of 3 hours is likely, depending on the number of people who volunteer. Anyone who intends to run evening or overnight that could also assume this responsibility is welcome to volunteer.

Electrical Duty Chiefs – open to all full participants

If you have experience at troubleshooting the electrical gremlins that may occur, we would like your help so that we have someone assigned to handle any issues during the Controlled Operations period. You may have nothing to do, but need to be available in the building for your shift. 2 hour shifts are likely for this.

Tower Operators – open to all full participants

During the Controlled Operation times, Tower operators will be assigned at critical bottlenecks like single track sections and junctions to ensure the smooth movement of traffic for all operators. Volunteers are required, and will likely serve 1 to 1.5 hours shifts. There will be at least 2 junctions that will require Tower Operators, and with 27 hours of Controlled Operation, 1 hour shifts would give 54 time slots. There may be more than 2 junctions, or a long single track section with passing sidings, that might also require 27 slots for Tower Operators. It is hoped that everyone will take one or more of these shifts.

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Operating Procedures

1. During Controlled Operations, operators will be allowed on the layout on a first come, first serve basis, and will be given a minimum 2 hour running time.
2. The number of operators that can run at a time will be determined by the final setup. Once the maximum number is reached, a waiting list will be maintained, and any operators that have had a two hour session will be asked to run to a yard and remove their train. They can immediately place their name on the waiting list if they wish.
3. Any rules governing train operations will be customized to the layout design and be presented at the setup.
4. Evening and Overnight running permits long trains and it will be up to all operators that are running to co-operate with each other to allow anyone that wants to run during this time period to do so.

At all times, you may run trains by

- Watching ahead for other trains
- Operating at reasonable speeds
- Running only one train at a time
- Verbally coordinating with other Operators to handle meets with other trains
- Use the provided "Pink Cadillac" Operating Permission cards through single track sections and junctions when not being controlled by Tower Operators
- Re-aligning turnouts to the mainline after your train has passed
- Avoiding talking to others or taking photos/videos that block railroad operations

General Guidelines

All Operators must be vigilant regarding the layout, locomotives, rolling stock, and other property. The Duty Run Chief (wearing the hi-vis-vest) will be the principle enforcer – report problems to this person.

- Keep eyes and ears open for inappropriate behaviour, and act as needed to protect modules, trains, and other property
- Remove trains and throttles from the layout when you are not scheduled to operate, otherwise, other Operators have permission to move your train
- Break up consists and dispatch locomotives when pulling them off the layout
- Avoid placing excessive numbers of locomotives and rolling stock on the layout, causing congestion
- Clean your module's rails with an abrasive block and/or isopropyl alcohol at least daily
- Do not clean another owner's module without first obtaining permission to do so
- Keep your locomotive wheels clean
- If you identify a locomotive or car to be "bad ordered," attempt to locate the owner to advise him/her of the problem. If it is your equipment, remove the offending piece from the train, so as not to cause any extensive delays.
- Trains should be limited to a reasonable overall length, to fit within a passing siding
- Trains must be set out and removed from the layout to a staging table. These will be at locations where setup may occur. While operating, put your boxes or containers under the tables so that the surface of the tables can be used by those setting up or removing trains.
- Respect property owned by others
- Report any accidental damage to the module owner, train owner, and/or Duty Run Chief
- **AND ABOVE ALL, HAVE FUN!**

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Module Compliance

Module owners are invited to submit their module(s) for inclusion in this setup. Participating modules must be compliant with Free-mo standards, and indicated that they are branch line standard if they are not mainline standard. Modules must be main line track and electrically complete. Non-mainline track that is not in service needs to be so indicated on the module (blocked by a push pin would serve). All top surfaces must be covered so that nothing can fall through the module. Branch line standard modules may or may not be used in the setup, depending on whether or not we have a junction available to create a branch line. In the unlikely event that we actually run out of space, some modules may not be utilized. We will try to use every qualifying modules that is submitted. Please understand that layout plans may continue to change until shortly before the setup date, due to unforeseen events.

The layout height will be 42 inches for this event.

The owner of a module must be on hand when the time arrives to set his/her module into the layout, so that any parts necessary to installation of the module can be delivered to the setup crew if they are not set out beforehand. He/she is also obligated to assist in the overall layout setup and its tear-down.

If your module is not already in the Calgary Free-mo module database, the Layout Planner will request the following information from you:

- Length and width (tolerance of 1/16")
- Angles of endplates (tolerance of 1/10 degree)
- Locations of all tracks crossing the endplates (tolerance 1/16")
- A scale drawing (CADRail preferred, .dxf file, or paper and pencil)

The following information should also be provided if applicable:

- If module has a UR91, UR92 or LNRP on it, please indicate so
- If module has signals or detection, this should be indicated, and the type of signalling/detection system in use identified
- If you can provide a booster (with power supply), please indicate which model.

In preparing your module for possible participation in this layout, please focus particularly on the following criteria. While this is a long list, every one of these criteria has been a source of problems in previous setups.

We encourage you to use the following as a checklist as you prepare for this meet.

- **Module body**
 - Endplates are smooth, flat, and square to the rail ends in all dimensions
 - Legs provide stand-alone stability (except for Mini-mos and Signal-mos)
 - Legs are adjustable to allow floor-to-railhead height of 41 to 43 inches
 - Skirting is optional, but desirable
- **Track**
 - Track conforms to Free-mo specifications and operates reliably for all railroad equipment types
 - Track does not dip or rise up at the module ends

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- Track does not twist relative to the end plate at the module ends
- Rail is firmly secured at the module ends
- Adequate room is provided under the rails and above the ties for both metal and insulated rail joiners**
- There are no troublesome track dips or rises within the module
- All segments of the track, including turnouts, are powered by feeders from the track bus
- All track passes inspection with the NMRA Mark IV gauge
- Rails aligned perfectly at all butt joints within the module
- Rail heads are clean of paint and accumulated dirt
- **Electrical**
 - Electrical wiring and electronics conform to Free-mo specifications, and are all in good working order. The recent change of Free-mo Standards requires the use of Anderson Power Poles for interconnecting track and accessory busses. The additional DCC Common buss must also be on every module.
 - Turnout controls and Loconet throttle panels are located on both sides of the module
 - Connectors for Loconet are located at each module end
 - Connectors for track power and accessory power are located at each module end
 - All cables have been tested for continuity
- **Scenery (preferred but not required)**
 - Scenery is plausible, believable, and realistic
 - Scenery is complete with ground cover, foliage, and details
 - Scenery covers all plywood, foam, plaster, etc.
 - Scenery and all details adjacent to and between the rails is below rail height
 - If scenery is incomplete, the top of the module must be covered so that nothing can fall off the tracks and through the module.
- **Each module must be accompanied by**
 - 2 clamps for mating to the adjacent module
 - Tools (as required) to adjust leg height
 - Fitter Rails and Joiners: will be provided by Calgary Free-mo. Please ensure that the rail ends will allow the easy attachment of Atlas metal and insulated rail joiners. We will be putting insulated joiners between every module. The internal connection of multi-piece modules is the owner's responsibility.
 - Loconet jumper cable (24" long), or pigtail with coupler
 - Track Bus and Accessory Bus connectors
 - Modules with two track busses must supply a 2-to-1 converter for one end to be used if required.

DCC System Requirements

The Host group will provide the Digitrax command station to operate the layout. The Host group will provide two radio towers, each consisting of a UR91 Simplex Radio receiver and a UR92 Duplex Radio receiver. Additional boosters (with power supply) to power booster districts and radio receivers will be welcomed (and required, can never have too much power) to improve operation. All UR92 receivers must have the latest software updates installed, and will be reset to the same Network ID as the host UR92. We will have a computer and the firmware files on hand if you have not upgraded these items.

Each operator must provide his/her own Digitrax throttle. There will be no spare throttles available.

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- Operators must be expected to know how to use their throttles without assistance.
- It is possible that wireless operation will be unreliable or unavailable due to interference. Operators should be prepared to use their throttles plugged in to Loconet.

Train Equipment Requirements

Reliable locomotives and rolling stock will minimise derailments, break-aparts, and other mishaps. Equipment causing problems will be removed from the layout and identified as “bad order” equipment.

- **It is recommended that you mark your equipment for easy identification**
- **Any road name is acceptable**
- **Any era is acceptable**
- **Inspect and test all equipment**
 - Metal wheels only – plastic wheels will not be allowed on the layout
 - Wheels are in gauge (HO Standard gauge)
 - Wheels are clean and free of track treatments
 - Axels spin freely in the trucks
 - RP-25 wheel profile – 0.110 or 0.088 treads
 - Trucks rotate freely
 - Trucks rock side-to-side and front-to-back in a three-point mounting
 - Metal KADEE couplers are strongly recommended
 - Couplers adjusted to proper height
 - Couplers are properly centered and spring-back to centre position
 - Coupler trip pin adjusted to proper height, or removed
 - Cars are weighted in compliance with NMRA standards
- **Locomotive specifics**
 - DCC only – no analogue locomotive will be allowed on the layout
 - Analogue Conversion must be disabled
 - Address set to 4 digits – no locomotive using 03 as its address
 - All DCC programming to be done prior to the event
 - Sound volume to be set at a moderate level
 - A separate programming track may be available, but not guaranteed
- **Prototypical train consists are required**
 - No steam locomotive pulling a container train
 - No strings of old rolling stock pulled by a modern diesel
 - A caboose should be at the end of a prototypical train, and the road name should match the pulling locomotive