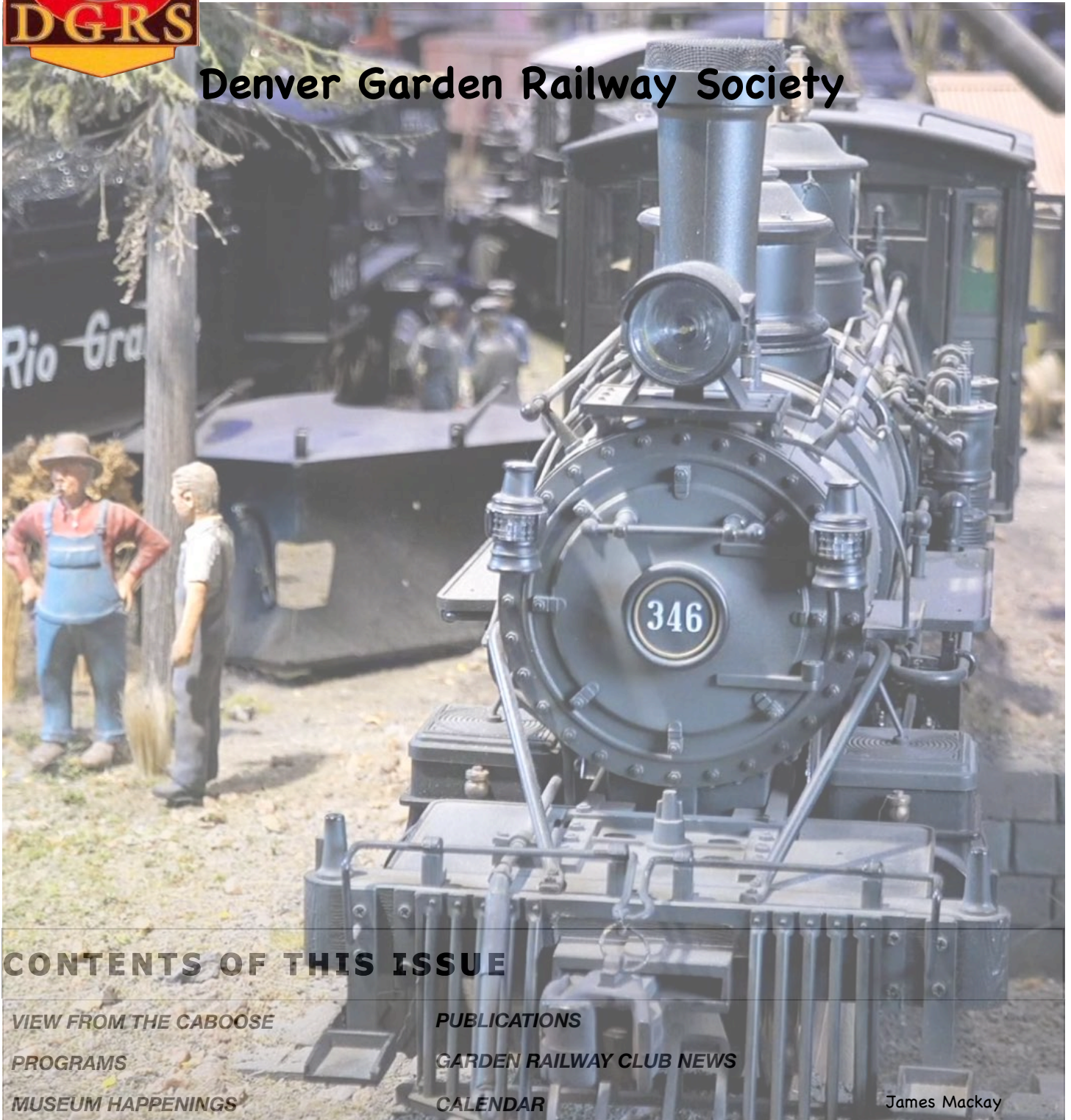




NEWSLETTER

Denver Garden Railway Society



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MEMBERS ONLY

James Mackay



View From the Caboose

HAPPY NEW YEAR!

Did you make any new year resolutions? I don't exactly have new resolutions, but I will continue to work on the one I made right after we hosted the last convention in 2022. I must reduce yard work I have created for myself. I just don't seem to have the oomph that I enjoyed in the not so distant past when I created our lovely garden. It has been rewarding, but these days I'm rewarded with back aches and leg cramps as well as beautiful flowers. So, bit by bit I am simplifying. However, what I ever did to get myself into this crazy position to be your president is not simplifying my life.

Oh, I like trains, but I like flowers more. I like garden railroads, but would never have considered building one had Craig not wanted it. I'm your president because too many of us don't think we have the ability to be leaders. I'm just willing to try new stuff, and this is definitely new stuff for me! Now I need your help. I need all of you helping!

DGRS is our club and together we can make 2024 a fun and memorable year filled with events and worthwhile activities. We are like carefree youngsters when we gather to enjoy our hobby. In fact, it's like a play date! So, let's all get out and play!

We need some volunteers to join us on the board of directors. Every committee needs help.

- Ron Keiser has found some excellent speakers and programs for our meetings the last few years, yet he would like to have some help putting together interesting and fun programs for this fall.
- Bob Finch has been our technology guy for as long as I have been involved with DGRS and he needs someone to give him a much deserved break. I know some of you enjoy spending time on the internet (I see you on Facebook). This is your opportunity to become a real technology pro and help our club shine.
- We do not have a clinic chair person and desperately need someone to organize some learning opportunities for club members. It is an honor to be asked to share your knowledge for a clinic and our members are usually most willing to do so. They need only to be asked. People learn best by doing. When you are successful restoring or building something for your layout, show us how it was done, and help others do the same. We just need a chairperson to ask and organize.
- Michele Miller, our Hospitality Chairperson keeps food and drinks at our events and she freely gives of her time and energy to our club and the Colorado Railroad Museum. If you are able to give her a hand please jump in. She will welcome all the help she can get! Willing hands are always welcome in the model railroad world!

If you have ideas or questions please talk to me or to any of our board members. All of us on the board just want to make our time together a valuable and delightful experience.

See you at the meeting on January 30th!

Cherylene Evans

On the Cover

Ron Keiser's "Cascade & Silverton" Fn3, 1:20.3 Scale layout

Ron was a conductor on the Durango & Silverton Narrow Gauge Railroad. The route was originally built by the Denver & Rio Grande Western. <https://www.durangotrain.com/history/>

The town of Cascade was actually a construction camp when the Silverton line was built in 1881.

The time period for this line is 1942, when the D&RGW was in its heyday. This was a good time frame, as it allowed him to use both lettering styles the Grande had on their equipment at the time. It also interchanged with the Rio Grande Southern back then. All of the locomotives except the Shay actually worked in Durango, either as a switcher, or on the Silverton mixed train.

His layout is in the 24' x 36' (7m x 11m) basement of a condominium in Arvada, Colorado. There are 9 locomotives, 39 structures, 135 human figures and 2 tunnels on the layout.

All of the locomotives and rolling stock have been modified by weathering.

Locomotives:

Loco #476 (Chili line Train) Accucraft 2-8-2 , a K-28 class loco

Loco #453 Accucraft K-27 2-8-2 (long freight)

Loco #375 (work train loco) a 2-8-0 C-25 class loco.

Loco #340 Accucraft 2-8-0 C-19

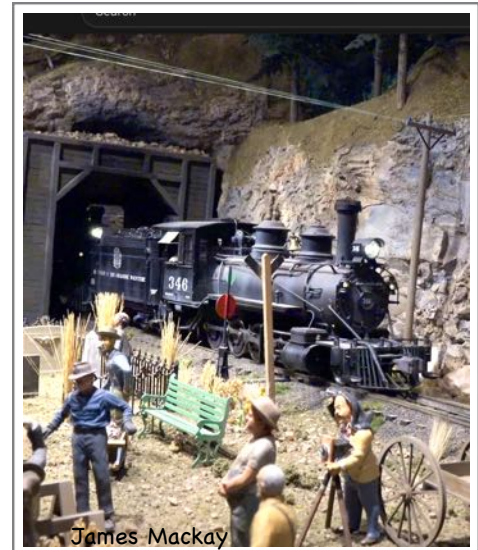
Loco #346 Bachmann Spectrum 2-8-0 C-19

Loco #40 Bachmann Spectrum Rio Grande Southern C-19

Galloping Goose #7 Accucraft Rio Grande Southern

Shay #3 Bachmann Spectrum 38 Ton Silverton Railroad

Loco #345 Bachmann Spectrum Rio Grande C-19



Watch the Video by James Mackay: <https://youtu.be/JHRvpBb4E2U>

Cameraman Notes:

I used a Sony PXW-Z150 and PXW-X70 camera as well as a DJI Osmo Pocket 2 (which was sometimes mounted to a custom flatcar.) Most of the lighting is the original track lighting on the layout. Some scenes were supplemented with LED panel lights. Audio is from a Sennheiser MKE 440 external microphone.

I spent about 24 hours at the layout capturing video and over 90 hours editing in Final Cut Pro.

James

Mackay

Mackaybike@aol.com



Garden Trains on Facebook and YouTube

Facebook has Public and Private Groups.

A Public group on FaceBook allows anyone to see who's in the group and what they post. It is visible to anyone. A Private Group allows only members to see who's in the group and what they post. Most Groups are visible and anyone can find the group. When you join Facebook, you do not have to provide any information that you do not want to share with others.

This is a **Public Group**: [GRNews on Facebook](https://www.facebook.com/groups/grnews), and you do not need a Facebook account to view.

The following are **Private Groups**, and you need a Facebook account and join the group to see what is posted.

DGRS has a Private group page (Denver Garden Railway Society). Videos of the operations and others are posted there. <https://www.facebook.com/groups/970224199655068/>

These are other Private Groups:

G Scale Trains: <https://www.facebook.com/groups/248809748503280/>

LGB Train fans: <https://www.facebook.com/groups/52647946993/>

LGB Train Sales & Trades: <https://www.facebook.com/groups/316404888778962/>

GScale.Net: <https://www.facebook.com/groups/gscale/>

G-Scale- Garden Trains: <https://www.facebook.com/groups/268889036532980/>

There are many other groups on Facebook that have similar interests.

YouTube

You do not need an account to see posts on YouTube. There are a lot of posts on YouTube that have nothing to do with our hobby.

Newsletter Contributors this Month - A Special Thank You to each

Al Blount	Doug Mayes	John Cushman	Richard Corey
Anne Loring	Eric Petty	John Hart	Roger Nicholson
Bob Finch	James Mackay	Larry Dorsey	Vivian Pershing
Bob & Paulette Poncar	Jim Desautel	Marilou Hendel	
Cherylene Evans	Jack Shelly	Michele Miller	
Don McCullogh	Joe Foss	Pete Lammer	

Programs

2024

January 30, 2024

Our regular General Meeting will be held at the Clements Community Center. James MacKay will be doing a program on the South Park Trains and Como. He has slides and a wealth of information about this group. An example is this video of the upcoming events at Como in 2024. <https://youtu.be/NJSm30d7Yv4>

February 27, 2024

Our Annual Swap Meet and Pizza night along with our regular General Meeting will be held at the Clements Community Center.

March 26

Our regular General Meeting will be held at the Clements Community Center. Michelle Kempema from the Greeley Museum will present a talk on the Greeley Museum Trains.

April 30

Our regular General Meeting will be held at the Clements Community Center. Sean Jackson, who is one of the leaders at the Durango & Silverton railroads car shop, will do an overview of the recent projects in the car shop as well as the roundhouse.

May 28

We will find a nursery where we can meet and learn some new stuff about plants for our layouts.

June, 2024

Picnic and swap meet at the CRRM

July

Ice Cream Social at the Miller home

August

General Meeting at Larkspur, LCRR, Bob & Glenn Leise's home.

September

We are looking for ideas for the fall meetings

Ron Keiser



Byron Fenton

Byron Fenton caught this shot after all the snow we had (in 2003)

Museum Happenings

The Colorado Railroad Museum Master Calendar for 2023 made it clear that DGRS members would be busy operating trains and maintaining the garden railway.

DGRS members ran trains at the DGRS layout at the Museum, Fridays ,Saturdays, Sundays and it was not uncommon to see qualified members running trains on week days.

We also ran for museum special events throughout the year.

- The National Narrow Gauge Convention
- There were 5 SCFD Free admission Events
 - Girl Scout Day,
 - Boy Scout Day.
 - Dinosaur Express Weekend
 - Colorado Heritage Weekend
 - Raise A Reader event and the Story Book Tour.
- Colorado Power Days
- Story Time on Thursdays
- Day out With Thomas over 3 weekends.
- CRRM Neighbor's Party.
- Golden Holiday Parade.
- The Golden Holiday Parade.
- Buffalo Bill Days.
- Museum Donor Event.
- Rocky Mountain RRClub Event.

The DGRS is also operated during various school and group visits, and some times we received special requests such as running for birthdays, picnics and other gathering.

I am sure that our dance card for 2024 will be just as busy, if not more so.

We have had a record year for broken couplers on locomotives and rolling stock.

One thing that we try to do is to cut off the heavy curved uncouplers that hang down (they look like air hoses). These "air hoses" can make separating cars and locomotives challenging. Removing them does not affect their operations any way, as used on our layout. Years ago we tried the magnetic uncoupler system, but it mostly attracted a lot of iron filings.



Alan Olson

I want to thank everyone who gave me assistance out at the museum with running my train. I want to especially thank Mike Harris and Alan Olson. Without your help I could not have been able to run anything.

JOE FOSS - LIVE STEAMER

RUNNING G SCALE at the Colorado Railroad Museum

This is an invitation to all members of DGRS to take advantage of our Clubs Large G Scale layout located at the Museum at 17155 W 44th Ave on the East side of Golden. You're welcome to run club designated trains or your own trains any time the Museum is open, at no cost to you with free access to the Museum. Enter thru the Museum entrance and show them your badge. Never drive into Museum to our layout. Golf Carts are available to bring in your equipment.

To qualify for this opportunity a few requirements are needed on your part. First a visible Club Badge is to be always worn. Sign a volunteer document for the Colorado Railroad Museum. Agree to work on the Garden Layout for 8 (eight) hours per year to help maintain the garden or equipment. After I or a designated senior club member explains the use, care and operation of the equipment, as well as general information, you will be able to share with paying guests. A short test on general rules and operations will be given. NO CHILDREN UNDER the age of 10 (ten) are allowed in the Garden layout due to Insurance Requirements.

After completion of this short informational session, you will be able to run any time the CRRM is open during regular hours. We would encourage you to run on the weekends, however any day that meets your schedule would be greatly appreciated. Thank You.

Contact: Alan Olson, Cell 303-748-0957, alanno@comcast.net or Don McCullough, Cell 720-235-7365, donmcc01@msn.com

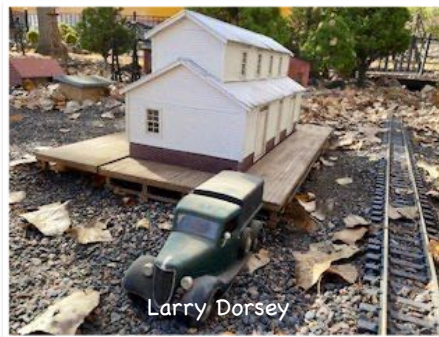
Don McCullough

Building Rejuvenating

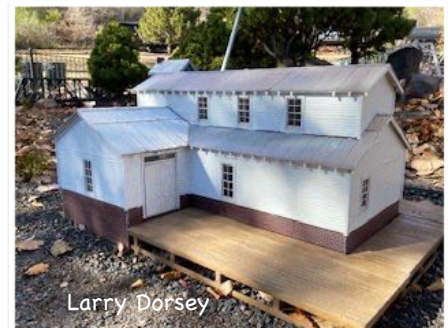
Recently, Doug Mays brought a building for me to work at rejuvenating for the DGRS layout at the Railroad Museum. So I took it home, sanded and scraped, applied sealer, glued various pieces back on and repainted it. Doug donated this intriguing structure to the museum layout and now it sits trackside awaiting business traffic.

What was the prototype for this building? Is it a freight depot? How about a creamery or flour mill? Drop by the layout and take a look. See what you conclude.

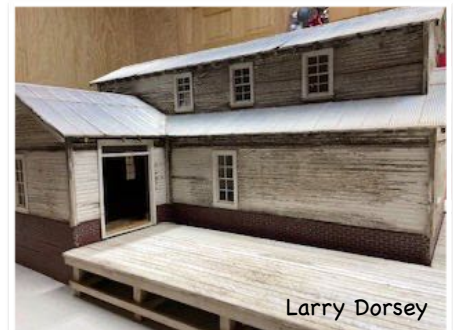
Larry Dorsey



Larry Dorsey



Larry Dorsey



Larry Dorsey



Public Model Train Auction
February 10th
 Viewing 8 am. Auction 9 am.

COLORADO TOY TRAIN FOUNDATION

American Legion Post # 161
6230 West 60th Avenue, Arvada, CO
450 lots of O, G & S gauge trains

- =51+ lots of Steam & Diesel engines, all sizes & eras including Vision Line Big Boy, AT&SF E8 AA & Frisco Meteor w/Legacy & MTH D&RGW AA PA's
- =140+ lots of freight cars and sets of all eras
- =34 lots of passenger cars and sets, all eras including a Legacy Neil Young Texas Special set
- =30 lots of track, switches and power
- =81 lots vehicles, accessories, buildings & scenery
- =53+ lots of miscellaneous items both new and used

=Included above are G gauge engines, cars & track

For **FREE Auction List & Pictures** Go to coloradotoytrain.org

Get Registered early
 Questions, contact Tony: 1-609-865-2766
 or Anthony.dower3rd@gmail.com



Pete Hendel

COMO SUPPORTERS and FRIENDS



THANK YOU
For your support this past year



YOU'RE CONTINUED SUPPORT WILL ENABLE US TO MOVE FORWARD IN AN EXCITING 2024!

2024 COMO OPEN HOUSES

Saturdays; June 15th, July 20th, September 21st & 28th

Como's Boreas Pass Railroad Day Saturday August 17th

We look forward to your visit



It is time to pay your dues for next year:

Annual dues for 2024 are \$48 for a family membership, or \$36 for an individual.

Mail your check to: Al Blount, 6038 Iris Way, Arvada, CO 80004. or bring it to the meeting.

If you want your membership card, please include a self-addressed stamped envelop with your check.

In March, you will not get the newsletter nor the email blasts unless you pay your dues for

2024

Train News

Rocky Mountain Railroad Club

This page shows interesting railroad happenings as well as breaking railroad news. Check it often as you may learn about new events and ideas for your railroad. [Rocky Mountain News and Photos](#).

Rail Pictures and Videos

Photos from all over the US. You can select the locomotive type, railroad, location, etc. <http://www.railpictures.net>

Colorado Railroads

Colorado Railroads, a site for the fans of past and present railroads serving the Centennial State. <http://www.corailroads.com/>

Abandoned Rails

Featuring thousands of miles of abandoned railroad routes in North America, illustrated with maps, pictures, and history. <https://www.abandonedrails.com/>

Hobo Brunch

The Hobo Brunch Group meets on the 2nd Saturday of every month at 8:30 a.m. Next meeting **Feb 10** at Valley Inn. Just show up, no reservations necessary!

Location: **Valley Inn,**

1997 S. Wadsworth Blvd. Lakewood

Please contact Byron & Marta Fenton with questions.



John Cushman

John Cushman has a cosy shed for storing his trains for the winter.

He does play with them though. See photo below.



John Cushman

Burr!!! Too cold to go outside. The local will be running about 24 hours behind schedule.

San Diego Garden Railway Society

Come to Sunny San Diego for the West Coast Regional Meet, August 10-15, 2024!

You and your family are encouraged to plan a summer trip to 'America's Finest City,' San Diego, California! The **San Diego Garden Railway Society** (<https://sdgardenrailway.com/>) is excited to host the **2024 West Coast Regional Meet**, August 10th (Saturday) to August 15th (Thursday).

The San Diego Garden Railway Society is creating an itinerary for the week that allows visitors to not only visit as many garden railways as they wish (self-guided, no buses) but to also take advantage of everything that San Diego has to offer. Most garden railroads will be open on two days. They will be grouped by location to make your planning easier. In addition, clinics will be offered by our members. Also, the Chula Vista Live Steamers is scheduled to be open to the public on the weekend (10th-11th) for free rides (<https://chulavistalivesteamers.com>).

West Coast Regional Meet participants will receive a guide that not only describes the garden railroads to visit but also gives a wealth of information about other San Diego attractions and places to visit that you may wish to take advantage of. Participants will receive descriptions of the various areas of San Diego to help plan and navigate the city.

Not only does San Diego offer many **fantastic garden railroads to visit**, but it also is rich in railroad-related places to visit as well as beautiful beaches and boardwalks, world-class parks and gardens and museums (<https://balboapark.org/>), including the Model Railroad Museum with many layouts in many scales (<https://www.sdmrm.org/>). For aviation buffs, don't miss the San Diego Air and Space Museum. For maritime buffs, plan to visit the USS Midway Aircraft Carrier Museum (<https://www.midway.org/>) and the Maritime Museum (<https://sdmaritime.org/>) which has one of the world's finest collections of historic ships, available for public tours.

San Diego is also home to SeaWorld, Legoland and the world-famous San Diego Zoo and the San Diego Zoo Safari Park (<https://sandiegozoowildlifealliance.org/>). And don't forget the breathtaking Birch Aquarium (<https://aquarium.ucsd.edu/>). There is truly something for everyone!

For those who love the night life, San Diego has a bustling scene. There's the historic downtown Gaslamp District with its many restaurants and bars (<https://gaslamp.org/>), the popular neighborhood of Little Italy full of its delicious restaurants and food shops (<https://www.littleitalysd.com/>), and the very popular LGBTQ+ district of Hillcrest (<https://www.sandiego.org/explore/downtown-urban/hillcrest.aspx>). If you're a fan of craft breweries, then 30th Street in the NorthPark neighborhood is your destination (<https://www.sandiego.org/explore/things-to-do/food-drink/craft-beer/30th-street-beer.aspx>).

More information will become available soon, including cost and registration information. For now, mark your calendars! Our website will be updated soon with information about it. In the meantime, if you have questions, you can go to the SDGRS website, <https://sdgardenrailway.com>, and click the "Contact" button.

We look forward to seeing you!

Sincerely,

CHUCK KLEIN, PRESIDENT, SAN DIEGO GARDEN RAILWAY SOCIETY

Tips for all New Garden Railroaders - Part 2

So that we never stop learning, we will include information from past clinics, other clubs and organizations in this section of the newsletter.

Hopefully, each month you should find something here that will be of interest to some of you, even if it was from years ago.

These tips are from Garden Railroads in 2014. The full document is at <https://www.trains.com/grw/beginners/free-downloads/50-tips-tricks-for-your-garden-railway/>. Thanks to Kalmbach Media for allowing the publication to be reproduced. The November 2023 DGRS Newsletter has the 1st 29 tips.



30

Forming tight curves in thin styrene

To bend .020" styrene into a ½"-diameter curved surface, cut a 6"-long piece of thin, metal roof flashing that is longer than the plastic stock and clamp the plastic on top of the flashing and under a ½" dowel. Apply a limited amount of heat with a micro-torch, then pull up on the flashing as the styrene becomes soft. Gradually roll both the plastic and the flashing tightly around the dowel. Hold them in place until they both cool. The styrene will hold its curvature. You can glue end caps on to permanently hold it in place.

31

Foundations for buildings

Buildings look best when sitting on good foundations. Ceramic tiles, 12" x 12" or 16" x 16", can be used as foundations under buildings. Turn them upside down and paint them black or gray (paint won't stick to the glazed side).

32

Paint holders

When weathering models, several colors are often used. Twist-off caps from soda bottles make convenient receptacles for holding small amounts of color and washes. When you are finished, just throw them away.

33

Avoid overload

It's easy and common to want to accomplish as much as you possibly can in a short span of time. However, doing too much, too fast will quickly burn you out. Weight lifters often get the most out of their workouts by lifting more repetitions with lighter weights to avoid tiring too fast. Modelers should work in a similar fashion by accomplishing smaller amounts of work over several days than trying to do everything in one or two days. This gives you time for other things and won't cause you to burn out. Remember, the hobby is supposed to be fun.

34

Keep an eye on the gas

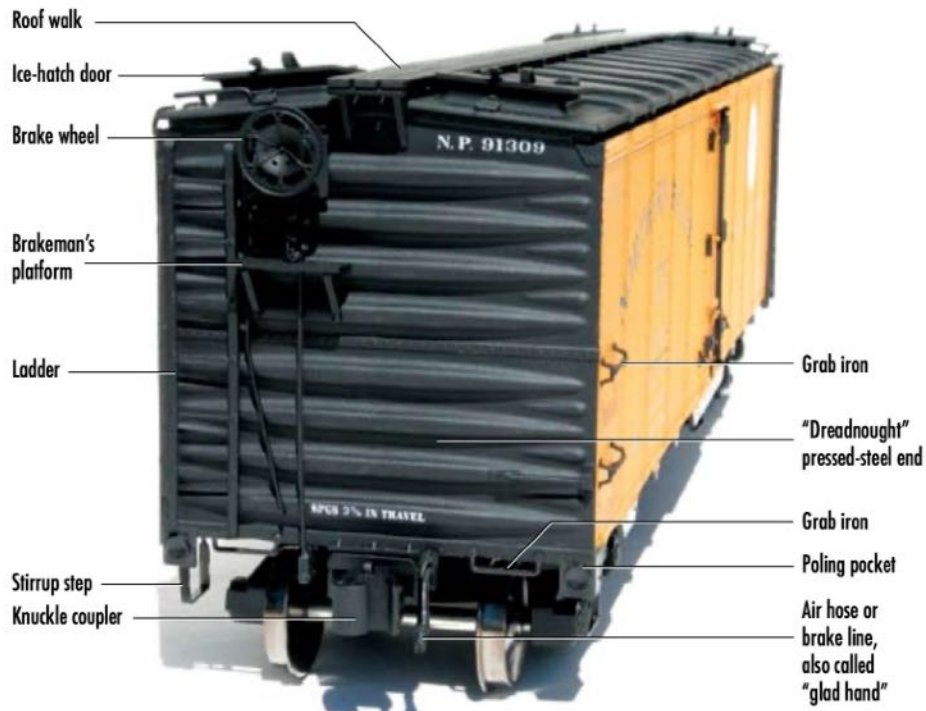
Gas-fired live steamers, especially smaller engines, may have the gas tank mounted close to the boiler. As the boiler heats up, so will the gas tank, increasing the pressure inside the tank. While this is not dangerous, it can be wasteful, as more gas will be fed to the burner. For longer runs and less waste of both fuel and water, keep an eye on the gas. You'll be able to tell by the sound that the pressure in the tank is up. Just turn it down to a more reasonable level.

35

Removing lettering from cars

Engines and rolling stock often have what is called hot-stamp printing on them. Sometimes you may want to remove the logo or road name from a car, but leave all the markings and car info. Try using lacquer thinner on a Q-tip. Put a small amount of thinner in a can (not plastic). With a wet Q-tip in one hand, rub gently until the lettering starts to come off. As it comes off, use a dry Q-tip in the other hand to lift off the unwanted paint. Take your time so you don't hurt the base paint under the letters. Be sure to *not* have any open flame nearby when doing this, and do it in a room with adequate ventilation. Also, test this method on the underside of the car first, to make sure the base coat won't be damaged.





Terminology—Refrigerator car (“reefer”) end

50
Tips & tricks
 for your garden railway

36

Minimizing root encroachment

If you want to minimize root encroachment from plants like mint, try sinking a plastic or terra-cotta pot with no bottom into the ground and grow your plant in that. This is also a good way to make use of broken pots.

plant shade-tolerant species for your local climate. The layer of fresh soil acts as a mulch to inhibit the original vegetation from growing through and, as a bonus, this approach is easy on the back, as no really hard work is involved.

37

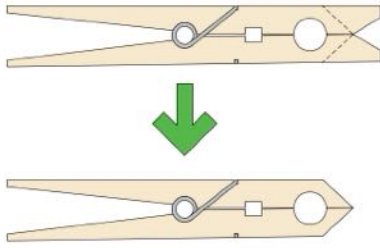
Easy shade gardening

Many garden railroads are built in heavy shade to make summer use more pleasant, but at the expense of more difficult gardening. Here’s a suggestion for preparing the soil in a heavily shaded garden with compacted soil. Leave the base soil undisturbed, then spread a 6-8” layer of fresh, well-composted soil. Then

Never rush anything you do. Always think about what you are doing before you begin so you can tackle each step with confidence. Your excitement level will rise as you complete each step of your project, but this same excitement (and anxiety) can cause you to rush your work unnecessarily, which can also lead to errors. Taking your time may add a few more days to your work, but a quality job done with patience will be more satisfying than a sloppy job done quickly.

38

Take your time



39

Small clamps

Wooden clothespins can make excellent clamps for holding small parts when soldering or painting. Jaws can be modified so that parts are easier to grasp.

40

Improving LGB's 0-4-2T

LGB's Grizzly Flats 0-4-2T is an attractive little engine, but a dismal hauler. You can dramatically improve its performance merely by adding weight. The diamond stack comes apart. Fill the cavity with lead shot and reassemble it. Likewise the bunker behind the cab. A solid metal "toolbox" can be painted black and added to the pilot. You'll be surprised at how much the tiny engine can pull.

41

Weed cloth

For inexpensive weed cloth, try using "house wrap." This is the synthetic material, called "Tyvek" or "Typar," that is used as a moisture barrier on new houses. Put the printed side face down to let the moisture through.

42

Always encourage

The biggest advantage many have found with large-scale modeling, besides the larger size of the models, is the camaraderie amongst modelers. Encouragement is freely given to one another, which is the way it should be. Ours is a hobby in which we want to promote continuous

growth, and we need to mentor less experienced people just as we have been mentored. If you see somebody making an attempt that perhaps didn't come out as well as could be hoped, don't criticize. Instead, offer suggestions on how they might improve their efforts. This is what garden railroading is all about!

43

Switches on small railroads

Even in very small garden railroads, it's good to use larger-radius switches. These allow easier movement of trains and look much more realistic. If you build your railroad so others can run on it, they will come.

44

Keeping switches cleaner

The use of concrete pavers or one of the various plastic "boards" available today under switches reduces maintenance on your railroad by helping to keep switches free of debris.

45

Protect your lungs

If you cut redwood or cedar with a power saw, be careful. Chemicals in these woods can be lung irritants. Always wear a dust mask to protect yourself.

46

A quick square for right-angle lines

When you need to draw a line at right angles to a piece of plastic or wood stock, a machinist's square is too big and clumsy, while a drafting triangle often slips before you can draw the line. You can make a simple, accurate square by taking a piece of thick styrene (2.5mm is good) and, selecting a corner of the sheet that has not been previously cut (with a 90°-angle corner), make a diagonal cut so you have a 45° x 45° x 90° triangle in styrene. Then cut a rectangular piece of the same styrene 5/16" wide by 2 1/2" long and glue it at right angles along one of the triangle edges. Now you can press the foot piece of the square tightly against the edge of the stock to be marked and have a reliable guide for a 90° line (or a 45° line, if you should need that).



STEAM LOCOMOTIVE CLASSIFICATION

There are, generally speaking, two systems of steam locomotive classification in the world today. Europeans use the UIC (Union Internationale des Chemins de Fer) system, which counts axles, while the English-speaking world uses the Whyte system, which counts wheels.

Frederick Methvan Whyte, a mechanical engineer for the New York Central Railroad, came up with his method in 1900, and we still use it today. In Whyte's system, there are usually three groups of wheels—the leading (unpowered) wheels; the driven wheels, or drivers; and the trailing (unpowered) wheels. A locomotive that has, for instance, four leading wheels, six drivers, and no trailing wheels, is known as a 4-6-0. Articulated locomotives that have more than one set of drivers, have an additional number or two, like Union Pacific's Big Boy (4-8-8-4) or the Erie Railroad's Triplex (2-8-8-8-2). Geared locomotives, such as Shays, Climaxes, and Heislors, do not fall under this system.

The letter "T" behind the number designation (2-6-2T) indicates a "tank" engine—a locomotive that carries its own water in a tank and does not have a tender.

Whyte also assigned names to the most common of the wheel arrangements, as shown in the chart.

The Whyte system of steam-locomotive classification

Columbia	2-4-2	● ● ● ●
Mogul	2-6-0	● ● ● ● ● ●
Prairie	2-6-2	● ● ● ● ● ●
Consolidation	2-8-0	● ● ● ● ● ● ● ●
Mikado	2-8-2	● ● ● ● ● ● ● ●
Berkshire	2-8-4	● ● ● ● ● ● ● ● ● ●
Decapod	2-10-0	● ● ● ● ● ● ● ● ● ●
Santa Fe	2-10-2	● ● ● ● ● ● ● ● ● ●
Texas (Selkirk in Canada)	2-10-4	● ● ● ● ● ● ● ● ● ●
American	4-4-0	● ● ● ●
Atlantic	4-4-2	● ● ● ● ● ●
Jubilee (Canada)	4-4-4	● ● ● ● ● ●
Ten-wheeler	4-6-0	● ● ● ● ● ●
Pacific	4-6-2	● ● ● ● ● ● ● ●
Hudson (Baltic outside US)	4-6-4	● ● ● ● ● ● ● ●
Mountain	4-8-2	● ● ● ● ● ● ● ●
Northern (also Niagara, Mohawk, Greenbriar)	4-8-4	● ● ● ● ● ● ● ●
Mastodon	4-10-0	● ● ● ● ● ● ● ● ● ●

50

Tips & tricks

for your garden railway

47

Natural planting

Don't be afraid to mix all sorts of groundcovers, shrubs, trees, and hedging. All things in nature vary in color, texture, and height, so feel free to plant away. You can always prune later.

48

Making signs

A good method for making signs is to print them on paper, then use a polyurethane resin (the stuff they use for car and boat repairs) to glue it to a wood or plastic base. Depending on the paper, you may have to paint the wood prior to gluing the two together, as the resin will soak into the paper, turning it translucent in some cases.

49

Securing plastic handrails

Handrails on some large-scale models are made from a slippery plastic that can't be glued. Sometimes the holes become enlarged and the rails slip out of place. One way of getting them to stay put is with a soldering iron. From the inside of the car, where it won't be seen, just touch the end of the handrail stanchion with the hot iron to flatten it a little. This will prevent it from pulling out through the side of the car.

50

Vitamin B1 for root growth

Use vitamin B1 transplanting solution at planting time, and again in fall, as a tonic for plants. VitB1 promotes root strength without forcing top growth. In the fall, conifers especially respond to it.

Choo Choo Sew

It is time to get back into the sewing mode.

We will meet the 3rd Thursday of each month...unless I have to be out of town or some other unplanned event knocks it off the calendar.

Our next meeting is:

Choo Choo Sew

**Thursday February 15th, at 8061 W. Grand Ave.
11:00AM**



Cherylene Evans

Interesting Swiss Cog Engine and Rotary Snow plow: https://www.youtube.com/watch?v=WhbEx9_XXo0



Publications

The best experience of the DGRS newsletter is to read it online or download it and read it on the computer or tablet. Articles and topics provide links to photos, videos, additional information and enhanced content that supplements the article.

If you print it and read it off-line, you will miss a lot of the content. As an example, there may be links to other web sites, documents and movies that you would not be able to access if the newsletter was printed.

Any links in this newsletter were active at the time of publishing. In some cases, the web site may have ceased operation, the material was removed or expired, and it is no longer available. We have no control over these issues, but try to make sure the links are active at publication time.

The newsletter content is for DGRS members and all Garden Railroad club members. We do not share email addresses nor telephone numbers within the general part of the newsletter. For DGRS members, there is a Members Only section that is not distributed to other organizations.

If you need to contact DGRS, the following email addresses are available:

Club President: president@denvergardenrailway.org

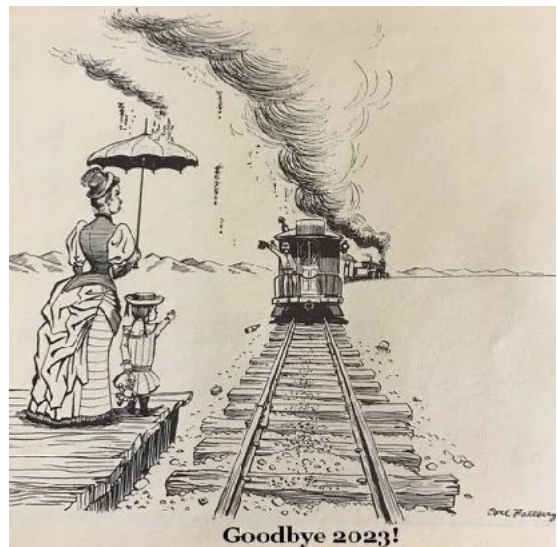
Web Site: webmaster@DenverGardenRailway.org

Newsletter: publications@denvergardenrailway.org

Volker Bauer makes a large number of 1/22, 1/25, 1/32 and 1/45 scale figures that are very realistic and detailed. <https://figurendesign.de/>



"Squirt it with oil and call me in the morning."



The Present and Future of Rail

Part One

Aviation, Motor Vehicles, & UK, France, Japan, Africa (Morocco)

Rail is the most efficient, in terms of speed and comfort and station location and processing, than air travel or motor travel up to about 700 miles per trip. Although without the total flexibility of personal automobiles, and lacking the speed of air travel in our increasingly crowded skies, high-speed rail has definitely come of age, and may have increasing acceptance in the USA.

I will make my prejudices known now: I am from Los Angeles, and most things in California are BUILT for cars, not people. The suburbs expand, the land gets hotter, the crowding of streets and highways is now a 24/7 phenomenon. I had my epiphany one morning at 6:45 am on the Santa Monica Freeway. There had to be something better than this, and that is how I ended up in Colorado back in '79.

No other form of transportation exceeds motor vehicles in terms of flexibility; however, other folks have discovered Colorado and are transforming our lives by making the automobile THE WAY of life. Had anyone every one seen the line at an in-and-out burger? Despite an era of highway building, the roads are crowded again, following the California pattern. I invented a saying to explain it: **Build it, and they will fill it!**

Yes, the use of air transportation will change in the near but mostly for things, not people. For example, Amazon is now the world's most valuable retailer (market capitalization of 1.4 billion, 2019 stats) sending over two billion packages in 2019. Amazon – closely followed by Walmart and others – is planning and developing a delivery future carried out by drones, (most of the stuff that Amazon sells weighs less than 5 pounds) right to your doorstep.

As far as passenger traffic goes, even those who love flying (fewer of us all the time) hate the soul-stealing slaughter of airports. Made ever larger to accommodate ever larger aircraft and their ever larger and more plentiful passengers, where you must arrive hours before your flight for check in and security, transportation to the gate, boarding 40 minutes before your flight, etc. I love aviation, and from an air travelers' point of view, nothing could be better than soaring around the world at supersonic speeds – long flights are killers, especially if you wish to avoid blood clots!

But the problem is not high-speed flight itself. Those problems were solved back in the 60's. The absolute sustained speed record for an aircraft was set by the SR71, (a spy plane) carrying two people. The speed was Mach 3.3, 2193 miles per hour at an altitude of 16 miles. The last run took one hour and four minutes from California to Washington D.C. – where the aircraft was retired in 1990 (we are told) in favor of satellites. Yes, some air frame makers are working (again) on a COMMERCIAL SST (supersonic transport for you and me) but the same problems – fuel consumption (huge-you want to go faster, it takes more fuel) pollution and sound (creating booms and carpets of sonic booms across the continent) have to be solved before we can actually take a flight like this across the country.

SAFETY (*see footnote 1*)-some interesting statistics. I think future generations will look back at our transportation system, in terms of safety, and conclude we were barbarians.

That brings us back to ground transportation and trains. So how is the world changing its passenger rail transportation equipment and systems? I believe it looks like the more crowded, less land-rich nations of Europe and Asia are showing the way. How are they doing? And how are **we** doing?

UNITED KINGDOM-National Rail and the chunnel

The "chunnel", and the chunnel train (it shares a tunnel with motor vehicles) runs daily between London and Paris. Having done this trip, it is startling – but not frightening – when the outside light goes out as we pass beneath the English Channel – about 25-35 minutes. But the EUROSTAR train is quiet, little vibration, roomy seats and good service. Aisles are wide enough so that service carts can actually get through without shredding your shoulders or crushing your ankles. Eurostar runs at 171 kph (106 mph) although it slows down a bit under the 67 mile long bore beneath the channel.

The journey can begin/end in two locations in the UK, and takes about two hours and many tours are offered as well. For instance, leave London at 7:55 am, arrive in Paris for lunch in the Eiffel tower, take a bus tour of Paris and cruise the Seine River, all in time to return to London via a 9:03 pm departure – all for about \$382.50 each. That is full fare: I have seen ads for London to Paris for 39£, or about \$49.00. In addition, Eurostar can take passengers to Amsterdam, Rotterdam, Cologne (great Cathedral, Cologne) or Brussels, or even the most popular destination in Europe (which is Disneyland Paris) via Eurostar.

Eurostar

But as the pitchman says, that's not all. Britain's National Rail system is no slouch either. When we visited, I wanted to see Stephenson's Rocket and other rail exhibits at the British rail museum in York: most of the trip at about 115 mph. (Great Trip!) Lots of departures, and a good seat on a high speed train will get you there in about two hours fifteen minutes for \$56.87 each way. Look at the schedules and you can easily depart London, see the museum's trains and models (including live steam!) and make it back to London in time for dinner.

Tres Grande Vitesse (very high speed Train – FRANCE)

I love TGV, one of the prides of France-and a system that has been going on far longer than many presume. Quiet and fast and the high-speed trains have a well-developed network. Important for American travelers, there is a station inside Charles De Gaulle airport, which kind of compensates for your plane's arrival there. The **SCNF (Société nationale des chemins de fer français-** France's National Railroad) began the transition from gas turbine trains to all electric back in the 70's, and TGV, centered on Paris but connecting all of Europe began in 1981. Common speeds are 186-199 mph, with the world speed record set in 2007 as 357 mph, the upper limit for a wheeled train. I found that as far back as 2010, TGV carried 114 million passengers annually.



Joe Foss

Classic Orange TGV and New Train

Boarding was quick and easy, seats are well marked and comfortable, and little tables for passengers have a cute little lamp to read by. On our trip we focused on the French countryside, but photography, even recording video was difficult – we were moving too fast. Original TGV trains were decorated in the familiar orange (demonstrating that even orange things can be beautiful, beyond the Broncos of course) but this is yielding to a very nice silver with black color scheme. Double deck trains and route expansion is underway now. There is probably no nation in Europe that is more committed to its national railway system. Also the TGV technology behind the system has become the standard for many nations – exporting it to Spain, South Korea, the US, Taiwan, and others.

Vive la France! (see footnote 2)

JAPAN Shinkansen (Japan) (Literally “new main line”; to us simply the Bullet Train)

Japan's JNR (railroad) began planning for high-speed rail as far back as the fifties and the first trains started running in 1964. They began with the series “O” but improvements have been steady and right now they are introducing the NS700. Coaches on the bullet train are typically 82 feet long, and a made up train is usually ¼ mile long. Trains run on a worldwide standard, four feet eight and ½ inches wide (although the trains themselves are somewhat wider) Most seating is 5 abreast, a bit tighter than we are used to on rail. On bullet trains, each car is powered, so weight is evenly distributed along the train, which lowers stress on the rails. Common speeds are 150-200 mph along Japan's 1,759 mile network. Trains have a capacity (remember, they are a quarter mile long!) of 1,323 passengers.



Joe Foss

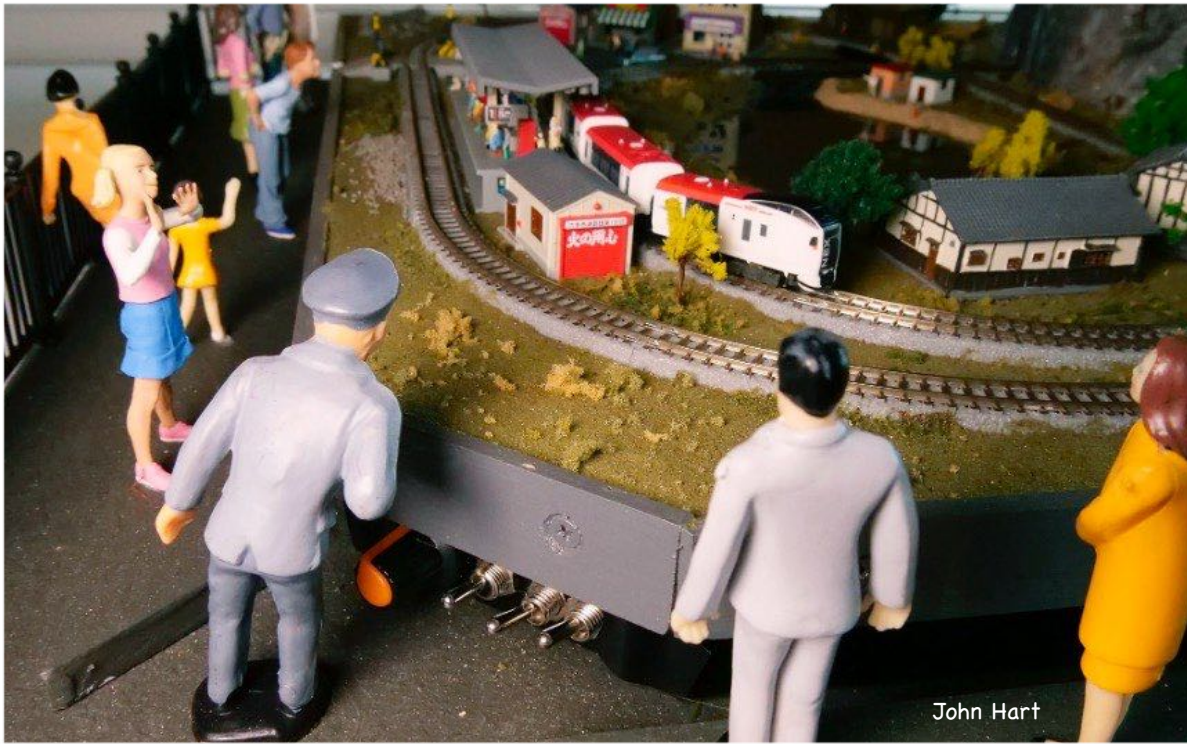
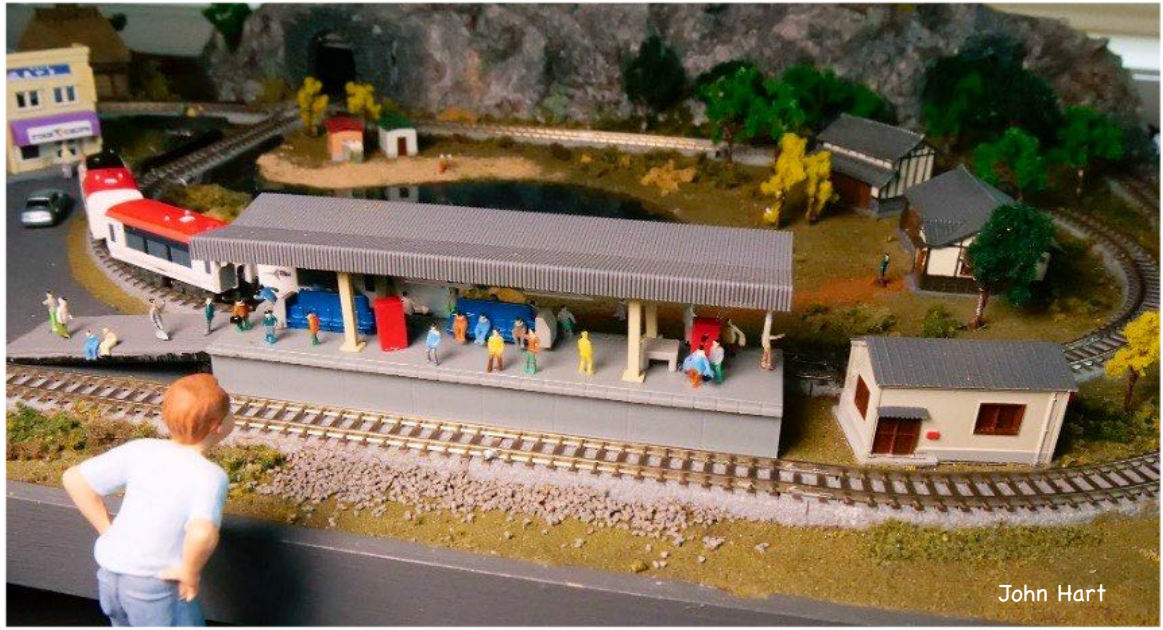
LITTLE PEOPLE / BIG PEOPLE

A “Z”-Scale Layout Imbedded In a “G”-Scale RR

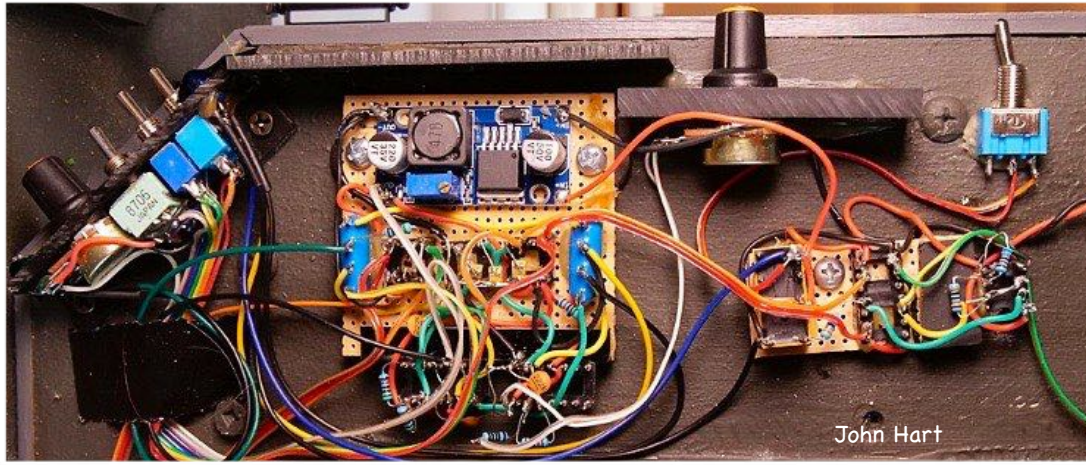
As human visitors to the Skyline and Scree Garden RR look down at the Hilltop Pub, they hear an announcer welcoming patrons (via a DCC controlled recordable sound chip and amplifier located in the building) to come out and see the pub's own model railroad.

To cram as much action as I could think of into my garden layout, I decided to include an 18" x 24" ultra miniature (Z-scale) operating double-loop, for my G-scale figures to watch and enjoy. This was all the real-estate I had, so the run is quite simple. But it gave me a chance to do some actual modeling with plaster scenery, micro figures and autos, an epoxy lake, etc., for the first time since my Lionel days over 35 years ago.

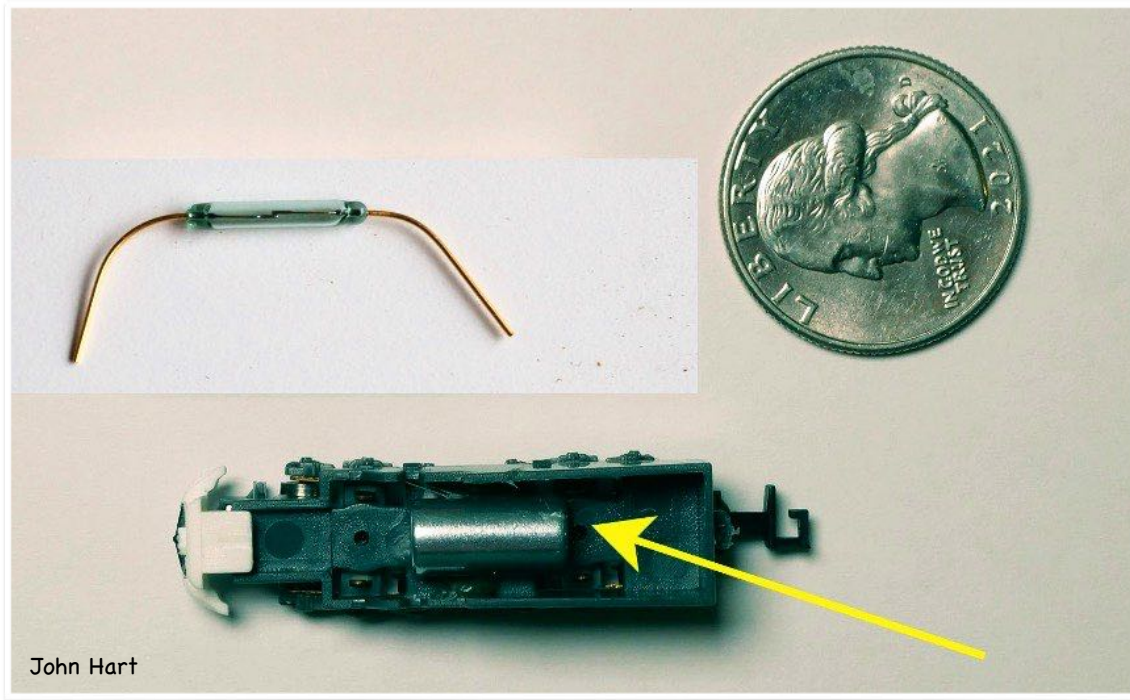




I did fancy the little layout up a bit by adding some analog electronics (NE555 timers and the like) in order to cause the train to stop at the station (left side and/or right side), or to just cruise on through. The above image shows the controls to switch this feature on and off, and to adjust the randomness factor (% of stops/loop) with the orange potentiometer. A second timer sets the duty-cycle of the entire miniature layout (giving it a rest while patrons drink up the brews brought up to the Hilltop pub by the LGB Ballenberg cog-wheel steam locomotive pulling bottle-loaded beer-cars up to the pub). The next page shows the underside of the layout:



The station-stopping was orchestrated by putting a tiny magnet (yellow arrow below) in the trailing Rakuhan passenger car, which actuates a reed relay set under a bush next to the track.



Spacing of the reed switch turned out to be critical. Too close to the track meant that the force of the magnet on the metal inside the switch was enough to pull the entire train off the track. Too far away equals no switch closure at all, so no stops at the station. Fortunately there was a sweet spot (determined by trial and error, of course).

Good fun for the human visitors, and for the pub patrons! Kind of fragile, though it did withstand some modest winds, being low to the ground, and sheltered from the usual westerlies at our house by its own mountain range. The micro layout must be taken in though, after each running of the Skyline and Scree.

John Hart

Renovating a Tired, Old Locomotive

Have you ever seen an old car sitting somewhere and wondered what it would be like to own it, renovate it, and then drive it around town? I have. So when I saw an old Aristocraft U-25 for sale at a recent Convention, my thoughts went to buying and renovating it. I ran it on a test track, and saw that while the front motor worked, the rear motor did not, so the locomotive didn't move. Most reasonable people would walk away believing it is "too much effort." I probably should have done that, but my heart was overruling my brain, and I ended up buying the tired, old locomotive. Afterwards, I thought to myself, 'you are crazy.' As it turned out, my heart was right to buy the tired locomotive, and I received a great deal of satisfaction bringing that tired, old locomotive back to life. Here is the story of that renovation.

After the locomotive arrived at my shop, it sat there waiting its turn to be worked on. When its turn arrived, I was anxious to remove the housing to see what was inside. Would it be good, or not so good? I was surprised at what I saw. Other than the two motors attached to the chassis, the only thing inside was wiring that resembled a bowl of spaghetti. Wires were everywhere. Some wires were bare, some cut, and some just well-worn. After getting over the surprise, I wondered if the rear motor was not working due to a wiring problem. (More on that later.) As I surveyed the inside of the locomotive, I realized that the motors needed work, the couplers needed to be replaced, the lights did not work, the sound system needed replacing, and one post used to attach the housing to the chassis was broke. I also wanted to install a Train Engineer Revolution (radio wave DCC) and convert to battery power rather than track power.

Given the condition of the wiring, the first steps would be to remove all the wiring, test both motors, install the Revolution and go from there. It was pretty cathartic cutting out all those old wires, cleaning up the chassis, and seeing the inside ready to be rebuilt. It was like a clean slate. Next would be replacing the couplers, lights, and sound system. The final steps would be repairing the broken post to attach the housing to the chassis, and then run the wires to add the option to use battery-power in addition to track power to operate the locomotive.

Testing the Motors: After removing the motors, cleaning them, and reinstalling them, the next step was to connect them to a 'controller' to see if they worked. I was totally surprised when each motor was connected to the Revolution receiver and power was applied, that both motors ran! Not only did they run, they were smooth and consistent. What a relief! Turns out, the rear motor did not run due to a problem with the wiring within that mass of wires that resembled a bowl of spaghetti. Next, the Revolution receiver was glued to the chassis, and the chassis with motors and Revolution attached was placed on the test track. What a joy to see that bare chassis with only the motors attached roll forward and backward along the test track. It seemed probable that this tired old locomotive might really have a new life.

Replacing the Couplers: Both front and rear couplers were broken, so replacing both was the next order of business. After using Kadee replacement couplers manufactured specifically for the Aristo U-25, the locomotive was placed on the test track again and coupled with a box car parked nearby. It was another joy to see that bare chassis outfitted with only motors and new couplers, pull the box car up and down the test track.

Replacing the Lights: Given the durability and long-life of LED lights, with each locomotive I renovate, I replace the lights with LEDs. All the lights (headlights, ditch lights, and cab lights) were replaced with LEDs purchased from Evan Designs in Ft Collins. Their products are easy-to-use, and I've had good luck with them. It took about two hours to disassemble the cab to gain access to the headlamp and cab lights, install the new lights, run the wires, and complete the testing of the new lights.

Replacing the Sound System: While the Revolution comes with its own sound, the old speaker needed to be replaced. New wires were installed and the speaker was connected, and the Aristo beamed as it shouted out the new diesel sound with the Revolution and new speaker.

Repairing the Broken Post: On this model of Artiscraft U-25s, the rear housing was attached to the chassis in four places – two in the rear, one in the middle, and one in front near the cab. Given only four places to attach, losing one (especially the front one) leaves the section of the housing near the cab loose and insecure. The three photos below show the broken piece, the post to which it should be attached, and the repaired piece.



Adding the Option for Battery Power:

Within our railway, we have six locomotives that are a combined track power and battery power. This gives us options to run either on battery or track power depending on

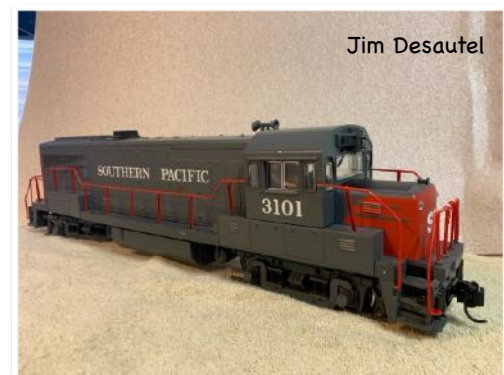
the situation. The type of power we choose to use is controlled by a double-pole, double-throw switch accessible (but hidden) on the locomotive. Below is a photo of the switch installed on one of our U-25 locomotives. Of course, when wanting to use battery power, the battery must be accessible, so the battery is located in the car directly behind the locomotive.

To install the capability to use battery power, a quick connect 2-pin connector must be installed at the rear of the locomotive (like the one in the photo on the right) and connected to the double-pole, double-throw switch like the one shown above on the left. Also connected to the switch are the wires coming from the track through the trucks that feed power to the Revolution receiver. Adding the option to use battery power to operate locomotives is a topic that will be covered in a separate article to be written in the near future.



With the capability to use battery power complete, along with repairing the post to attach the housing to the chassis, a new speaker for sound, new lights, a new Revolution receiver for radio wave DCC, and new wiring for the motors, the renovation is complete. The last task is to assemble the pieces, run tests to ensure all systems are working, and begin to enjoy running the renovated locomotive.

I feel lucky that in this case my heart overruled my brain, and I invested in this tired, old locomotive. With a number of hours of loving effort, this Aristocraft U-25 was given a new life. It now joins the other six U-25s in our collection that form the backbone of the freight haulers on our railway. It felt very satisfying giving new life to this locomotive, and we will see what the future holds for even more renovations. And each time I watch the locomotive pull a train on our railway, I get a great feeling of pride that my efforts were successful. A photo of this proud new locomotive is shown on the right.



Jim Desautel

Finally Getting My Garden Rail Road Going

After years of talks with the landlord (my wife), I finely got the land I had my eye on an old garden area. I started work on laying out the where the track was going to go.

I laid out 10 foot curves so I can run my big diesels. I dug out the rail bed 3 to 5 inches deep about 6 inches wide. I hauled in over 3000 pounds of gravel for the road base which was the highlight of all the work (if you believe that I have some swamp land for sale). In the old garden area I ran the roadbed on one side on the side of the fence. This was



Richard Corey



Richard Corey

done because the landlord (i.e. wife) wanted to keep her chive bed. I made custom brackets to support the road bed off the fence and picked up some redwood boards cheap at Home Depot.



Richard Corey

While I was putting in the road base, I buried wire in the gravel for track power. I made the choice to run track power for now. I used waterproof connectors for the feeder wires and have feeder wires about every four feet. I learned from my HO layout it's better to have more feeders than you need.

Several years ago I was given about 200 feet of stainless steel rail so that is what I'm using. It's a lot of work building a railroad and this summer was fun with all the rain we got. But I love the end result. I took photos from the start and to where it's at now. I been running trains for about 8 weeks now. I see where I

need some more work on the road bed in places it looks like a roller coaster, so I've worked on that issue. I wanted to see how much track I've installed so I got a track odometer from G-scalegraphics, and so far I have 153 feet, with plans to ask the landlord(i.e wife)for more land. Freight trains run great but I've had some problems with my passenger cars, so I've gone over the track where they have issues and I've fixed most of them. But with winter knocking on the door it's time to move inside to my HO layout. I've got a few projects for the garden railroad I'll be working on also. First one will be making a brush cleaner for getting leaves off the track. I don't have a name yet for the railroad, but I've been rolling names around in my head, but nothing stands out.

I would like to thank my wife for her support for my model train hobby over the years. And thanks to everyone for advice and encouragement on building my railroad.

Richard Corey



Richard Corey



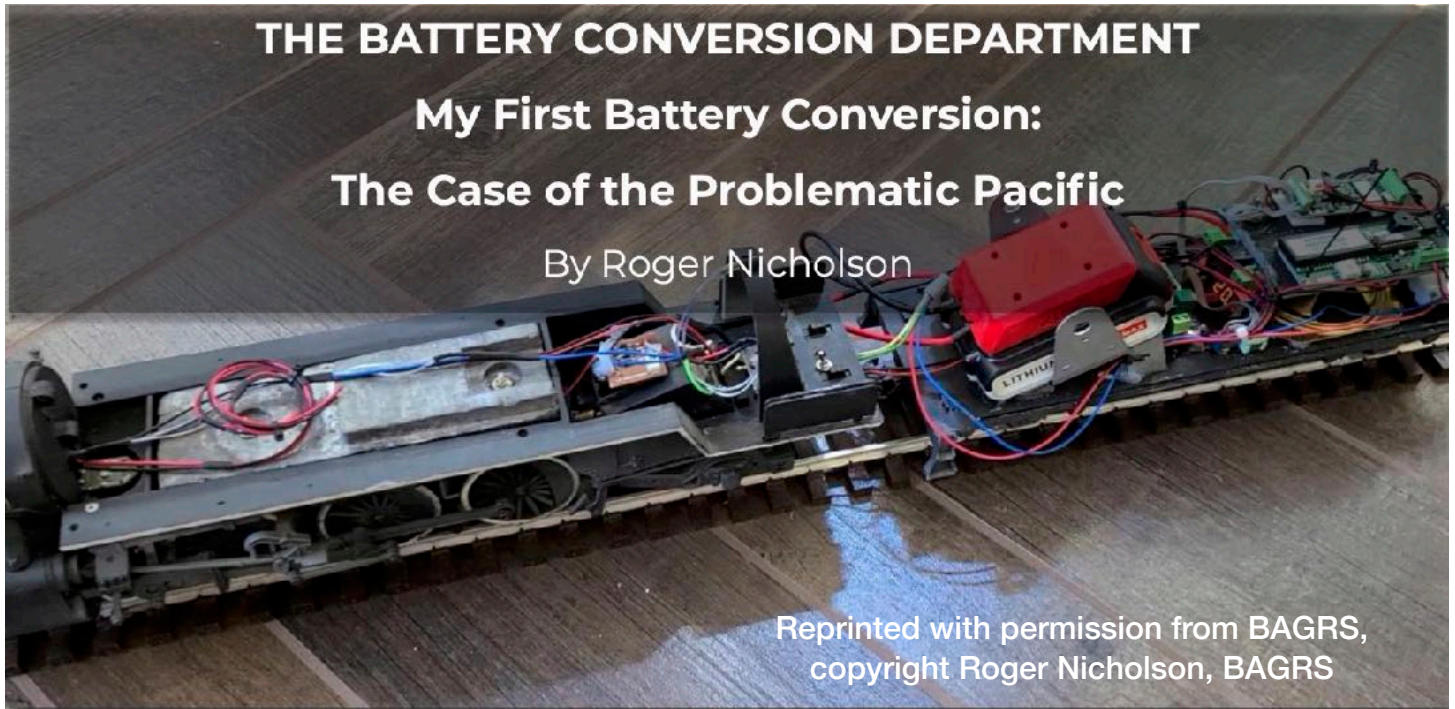
Richard Corey

THE BATTERY CONVERSION DEPARTMENT

My First Battery Conversion:

The Case of the Problematic Pacific

By Roger Nicholson



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The old Aristocrat Pacific sat on the track high above my head and stubbornly refused to budge. The track was stainless steel, but the wheels on the Pacific were definitely NOT. I continued to increase power, and the Pacific just sat there, mocking me. I raised the voltage a bit more. Suddenly, it shot forward like a bullet. This is *not optimal* when the locomotive is on a track 7 feet off the ground. I brought it down, cleaned the wheels, and tried again. *Nothing* I did improved the situation.

This was one of my favorite locomotives. I had purchased it off eBay for a reasonable price. It looked like it had been well used for years. While it appeared far from new, it ran well and had a Phoenix sound card in it. At the time, I really wanted that sound card.

Now, the loco didn't want to run well at all. It had gradually reached the point where I had to give it a little nudge in order to get it moving each time. This is really annoying, but workable if the track is on the ground where you can access it. It is totally unworkable when the track is overhead garage storage and you have to climb up a ladder to reach it.



I considered my options, and there weren't many of them. It isn't like you can just buy a new set of Aristocraft drivers. The motor was just fine—I just couldn't get power to it in a reliable manner. Could I replat the wheels? Was my favorite locomotive going to become a "shelf queen?" There was one more possibility—one that I hadn't really given serious thought to until now: I could convert it to run off a battery. I knew nothing about converting to battery power, so this was going to be a learning experience for me.

To be honest, I wasn't really excited about battery power. You see, I had already acquired two battery-powered LGB Moguls that came as part of a big collection I bought. They also came with two rather ancient AirWire transmitters, both of which actually worked at the time, before I learned what happens if you don't remove the batteries from them after each use.

The two Moguls had Nickel-Metal Hydride (NiMH) battery packs installed in their tenders. They worked fine, but after spending hours charging the battery, I had to run the locomotive right away. If I let it sit after being charged, the batteries would be dead a week later (the batteries were quite old). This was tedious and prevented me from running them whenever I felt like it. I eventually gave up and stopped running them at all.



I decided that Lithium-Ion batteries were the way to go. They were smaller than the NiMH batteries, and they had a higher charge density. Basically, it is a smaller battery pack with more power. But, even better, they would not "self-discharge" if I let them sit for a long time. My Li-Ion cordless drill can sit for weeks without discharging—why not my locomotive?

I started thinking about what I had available for this as inexpensive as possible. I already had an extra, very old, AirWire receiver that I could use. It was a Model AW9D10SS—one of the really old ones where you could split the board into two sections to fit into tight spaces. It also carried the warning not to apply more than 18 volts to the battery terminal, or BAD things would happen. My battery would need to be limited to less than 18V. I could simply purchase a Li-Ion battery pack to install in my locomotive, but, they are expensive and I wasn't ready for that type of financial commitment yet.

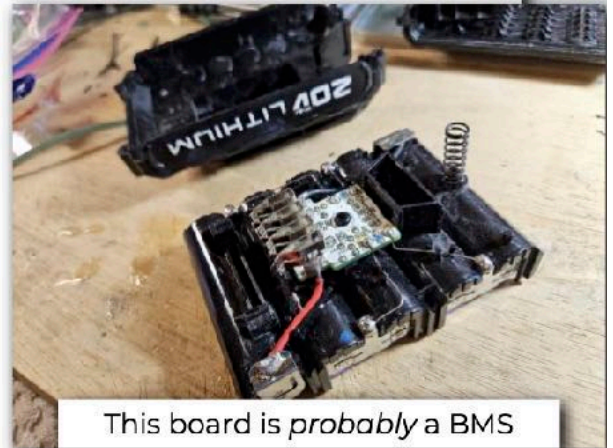
I noticed my cordless drills with their 20 Volt Li-Ion battery packs—perhaps I could use one of *those* to power my recalcitrant Pacific; however, the voltage was too high for my ancient AirWire board.

I decided that I needed to become familiar with the characteristics of Li-Ion batteries. After doing some research, I learned that Li-Ion cells output 3.7 volts (and can reach around 4 volts when first charged). I learned that the cells should *never* be overcharged, or run completely down. Running them down will permanently damage them, and overcharging them can result in...fire. Yes, fire isn't the exclusive domain of the live steamers any longer.

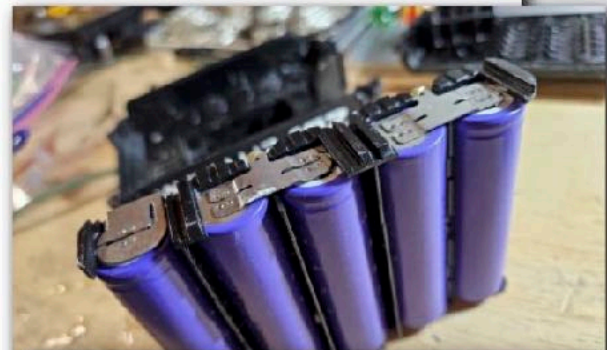
Overcharging wasn't a problem as long as I used the battery chargers that came with my cordless drills. For undervoltage protection, I observed that the cordless drill battery seemed to have a mechanism for protecting itself from this. When my drill battery ran down, the drill did not run slower—it simply *stopped*. Even when “run down,” the drill battery still had voltage on it. I learned that standard Li-Ion battery packs incorporate a **Battery Management System**, referred to as a **BMS**, that manages charging and discharging of the individual cells in the battery pack. The BMS is connected to each electrical node in the battery pack, and manages the charge and discharge of each cell. The question I had was whether or not the discharge protection resided in the drill battery pack, or in the drill itself. It could also be different for various brands of drills.

By the way, an “18-volt” and a “20-volt” Li-Ion drill battery would both have to have 5 cells in them because 4 cells could only bring you up to about 15 volts. Five Li-Ion cells in series is $3.7V \times 5 = 18.5V$, but the pack charges up to over 20V when first charged. So, the difference between an “18V” pack and a “20V” drill battery pack is likely marketing.

I decided not to take any chances and added a low voltage cutoff board to the circuit that I would build. I also added a voltage reducer to bring the 20-volt battery pack voltage down to 15 volts to protect the AirWire board. I am aware that *adding these extra circuits wastes power*, but I was playing it safe this first time around. I just wanted to see if I could get everything to work, and I could make things more efficient later.

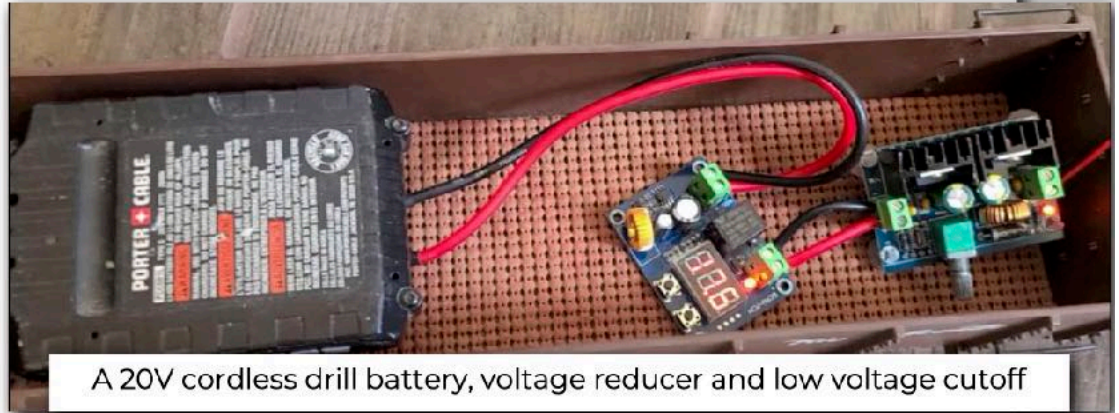


This board is *probably* a BMS



Five 18650 Li-Ion cells in series is 18.5 Volts

I hooked everything up and dumped it in a hopper. Then, I connected it to my Mogul's external battery connector. I fired up the



A 20V cordless drill battery, voltage reducer and low voltage cutoff

AirWire controller...and it worked! The Mogul was perfectly happy running off the cordless drill battery, and I was perfectly happy there was no fire or smoke.

With a successful test under my belt, I now had to stuff everything into the Pacific. The tender already had a speaker and a Phoenix sound card installed (Remember, that's why I bought the thing!). Now I had to fit the low-voltage cutoff board, the voltage reducer board, the AirWire board, a fuse, switches AND a cordless drill battery into the tender. I also had to disconnect the track power contacts in both the tender and the locomotive, because you do NOT want to have the battery send power into the track. I also had to route the motor wires, the headlight wires and the cab light wires through a connector from the locomotive to the tender. Fortunately, those old Aristocraft Pacifics have very little in the way of electronics to remove. Isolating the wires was pretty easy. I also took the opportunity to convert all of the lights to LEDs.

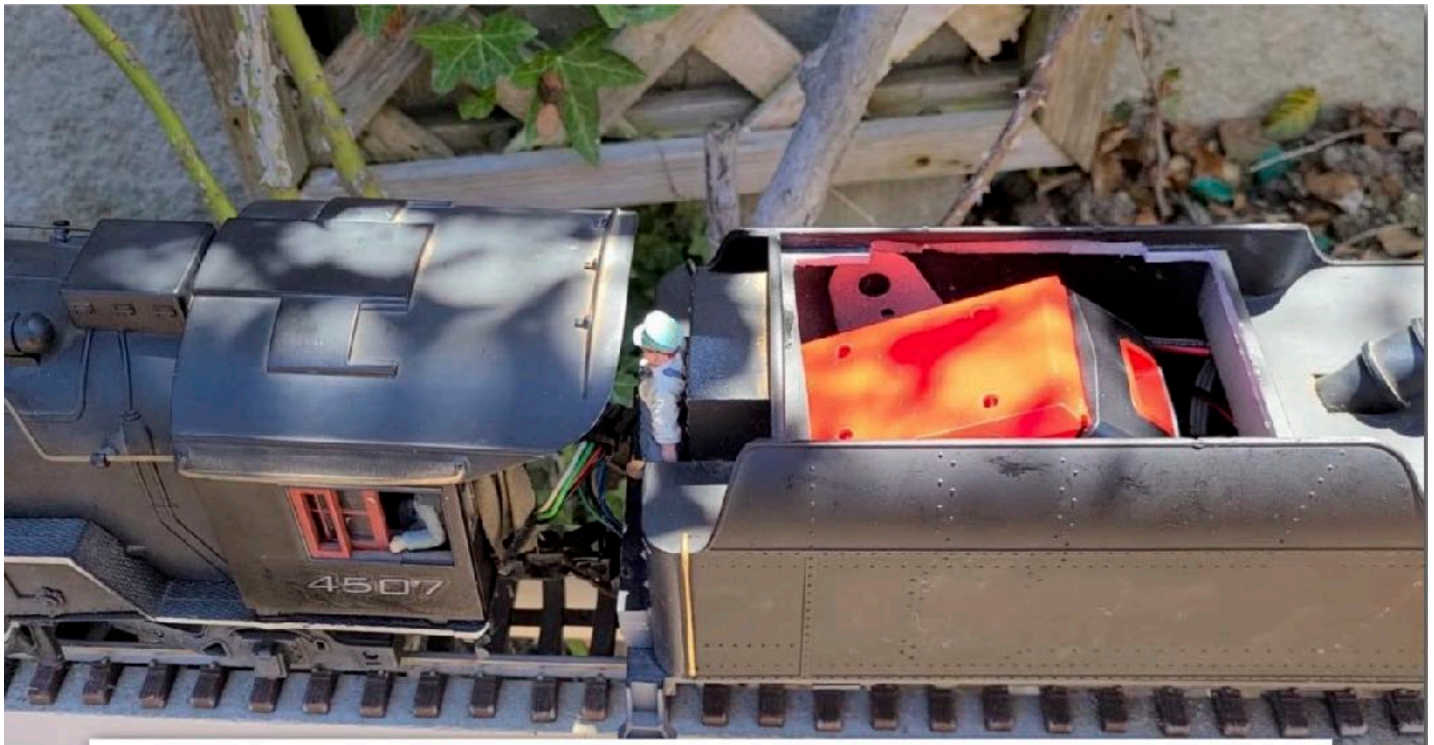


Honestly...it runs better than it looks

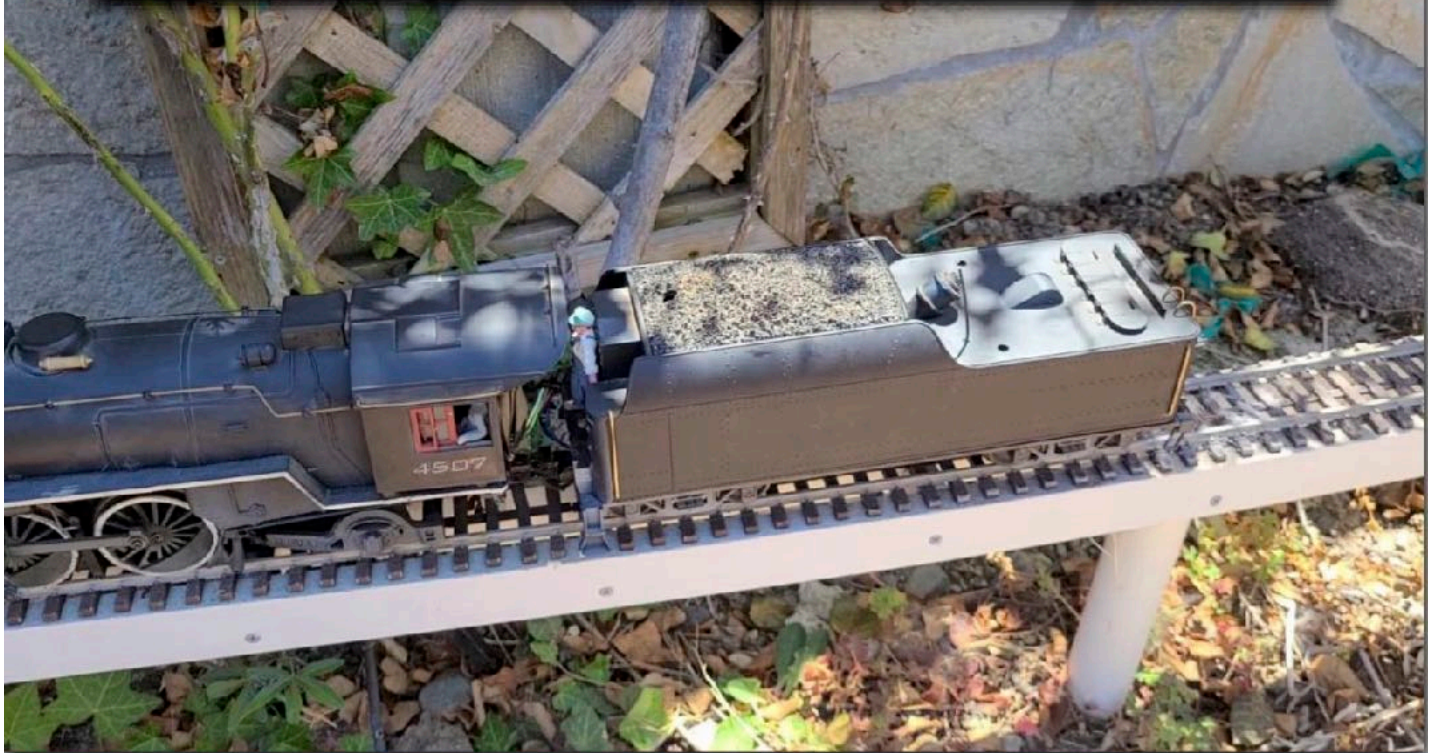
I relocated the existing Phoenix sound board and connected up the AirWire receiver. The final result may not be my prettiest work, but it is fully functional. I am able to control the direction,

speed, the headlight and reverse light, and the cab light. Later, I added a small four-function DCC decoder between the AirWire board and the Phoenix sound board to allow me to control the whistle and the bell using the AirWire transmitter.

Yes, that's right: My geriatric Pacific *now has all the "bells and whistles."*



Now, I just needed to hide everything and make it look presentable. I was able to reinstall the tender shell, with an opening under the coal load, which was just able to accommodate sliding in the power drill battery. I modified a metal 4x4 post support to hold the battery at an angle so it could be easily removed. The battery fits right into the tender. With the coal load in place, you can't even tell it is there, except for the AirWire antenna wire sticking out, which, in retrospect, probably wasn't necessary.



I switched everything on and ran my first test. It was as if this locomotive had gained new life. Without hesitations or stalls, it ran smoothly for the first time in a long time. It could even climb my helix pulling cars without any trouble. When I was ready to run the locomotive, I simply had to flip a couple of switches and we were ready to roll.

I do not claim to be a battery expert. I've learned a lot since this first conversion. Could I make this one more efficient? Yes, without a doubt. I could probably eliminate the (likely redundant) low-voltage cutoff, and I could eliminate the voltage reducer by either using a lower voltage tool battery, or by using a newer AirWire receiver. But, I'm happy with the result for now, and this locomotive has performed quite well during several open houses. When the battery runs down, I just grab a new one from the garage and put the old one on the charger. Once I realized the benefits of running battery-powered locomotives, I decided that I wasn't ever going back to track power. (And, I could use all that aluminum track I bought at the swap meet!)

This would turn out to be the one and only time I would ever use a cordless drill battery in a locomotive. While I used Li-Ion cordless drill batteries in a couple of battery cars that I built, I decided that my next locomotive battery conversion would be a bit more traditional. This first effort gave me enough confidence to move to the next level. ■



If you would like to see this cordless drill battery-powered locomotive in action, check out the YouTube videos here: [How I move my G-Scale Garden Railroad Trains to their Storage Area in the Garage](https://www.youtube.com/watch?v=OKvqbQ3w-Q4) and [Garden Railroad Battery Conversion of G-Scale Aristocraft Pacific using Power Drill Battery](https://www.youtube.com/watch?v=eG_tBMG_D_M)

<https://www.youtube.com/watch?v=OKvqbQ3w-Q4> & https://www.youtube.com/watch?v=eG_tBMG_D_M

The World of 7 ½ Trains

LCRR Visits Train Mountain -- Again

Introduction

During the week of July 17 – 21, 2023, the crew of the Larkspur Consolidated Railroad (LCRR) visited another 'ride-on' railway called Train Mountain. Attendees from the LCRR included Bob & Glen, Kirk & Pam, Dale & Sharon, Pete & Marilou, Jim & Cindy, and Randy. Train Mountain is located in southeastern Oregon, near the town of Chiloquin, and is known as the largest miniature railroad in the world. The railroad has over 36 miles of track of 7½" gauge track on 2,205 acres of pine forest spanning 2 miles by 4 miles. While the LCRR crew is quite proud of their nearly 1 mile of track in Larkspur, it is quite small compared to the 36 miles at Train Mountain.

While this was our second trip to Train Mountain, it had been 4 years since our last visit. In the interim, a wildfire had spread through part of the layout, and we could see many burned areas around Chiloquin. But it appeared the residents were rebuilding and nature was bringing back the trees and foliage.

Arrival

It was a 2-day drive to get to Train Mountain, and while we all drove independently, we kept tabs of each other along the way to ensure no one had any troubles. Despite driving separately, we all arrived within a couple of hours of each other late on Sunday afternoon. As we arrived at the house we rented, we unloaded all the food and things needed for the week of riding trains. The house had five bedrooms plus a 'carriage house' converted to a bedroom. The house was an old 'fishing lodge,' once visited by the Jimmy Carter's. Then we rested for the remainder of the evening before heading to bed to get a good night's sleep for the busy day we expected for Day 1.

Day 1

We awoke early on Day 1, ate breakfast, and headed to Train Mountain to begin our grand experience. Upon arrival, we checked-in at the main office, completed the necessary paperwork, and watched the safety video that everyone running trains at Train Mountain must watch. The video informed us of the safety procedures we were to follow, as well as the safety equipment we were required to carry with us. Then we went to the unloading area to unload our trains and equipment. We took four engines and six riding cars that would accommodate the entire LCRR crew. Unloading the trains and equipment took about 2 hours, and then we were ready to ride. Our ride began before lunch, and we spent about an hour riding around the older section of the layout, and then headed toward the newer section. The newer section is not as well developed as the older section (to be covered in another article), but we stopped at a place along the layout called "Crane" and ate our picnic lunch. (See photos). After lunch we continued our ride through most of the newer section, and then headed back toward the Central Station and the Crisp Yard where we park our trains overnight. It was a very hot afternoon in July, and we were thankful to park the trains and head to the much cooler home we rented. Our ride that day took about 4 hours.



Jim Desautel



Jim Desautel

Day 2

We started our ride on Day 2 a little earlier to try and avoid some of the afternoon heat. The temperature was very comfortable when we began our ride. We left the Crisp Yard and headed toward the newer section to try a experience more routes we did not follow on Day 1. Along the way we stopped to help another railroader who was having problems with his train. It didn't take too long and the LCRR crew had him back on his way.



The tunnels you see in the photos actually go under the county road that runs alongside the layout. In order to expand the layout into the newer section, the tunnels had to be built to keep railroaders and automobiles from having a conflict with each other.

Below are some photos of us stopping for two of our breaks and to get something cool to drink.



After experiencing even more of the newer section, we were getting pretty warm, so we headed back to Central Station and the Crisp Yard to park our trains for the afternoon and evening. Then we headed back to the house to cool down, rest, and play some games.

In the next article, we will describe our two rides at night, and the article after that will describe the outstanding track work at Train Mountain.

Jim Desautel

Garden Railway Club News

This section is an opportunity for our members to learn from the efforts, tips, techniques, and news of other garden railway clubs. Please Click on each club name below or go the following link to access all the clubs:

<https://www.denvergardenrailway.org/index.php/links-to-other-clubs/>

[Northern Colorado Garden Railroaders](#)



**Northern Colorado
Garden Railroaders**

[***Mile High Garden Railway Society***](#)

THE GARDEN WHISTLE

[New Zealand Large Scale Newsletter](#)

[Bay Area Garden Railway Society](#)



[Puget Sound Garden Railway Society](#)



[Rose City Garden Railway Society](#)



[North Texas Garden Railroad Club](#)



[Gold Coast Garden Railway Society](#)



[Northern Ohio Garden Railway Society](#)



[Garden Railroading News \(GR News\)](#)

digital magazine

[Central California Coast Garden Railroad Society](#)



2024 DGRS Calendar

DATE	EVENT	DETAILS
Jan 18, Thursday	Choo Choo Sew Everyone is invited and will be welcome.	Contact Cherylene Evans for time and details: 8061 W Grand Ave, Littleton CO 80123
Jan 30, Tuesday	General Meeting. Our regular General Meeting will be held at the Clements Community Center. James Mackay will talk on the South Park Restoration program	7:00 PM, Clements Community Center 1580 Yarrow St., Lakewood, CO 80214
Feb 6, Tuesday	DGRS Board Meeting	
Feb 10, Sat	Hobo Brunch; Members get together and swap stories at breakfast.	8:30 am at the Valley Inn, 1997 S Wadsworth Blvd, Lakewood, CO
Feb 15, Thursday	Choo Choo Sew Everyone is invited and will be welcome.	Contact Cherylene Evans for time and details: 8061 W Grand Ave, Littleton CO 80123
Feb 27, Tuesday	General Meeting. Our Annual Swap Meet and Pizza night along with our regular General Meeting will be held at the Clements Community Center.	7:00 PM, Clements Community Center 1580 Yarrow St., Lakewood, CO 80214
Mar 5, Tuesday	DGRS Board Meeting	
Mar 9, Sat	Hobo Brunch; Members get together and swap stories at breakfast.	8:30 am at the Valley Inn, 1997 S Wadsworth Blvd, Lakewood, CO
Mar 21, Thursday	Choo Choo Sew Everyone is invited and will be welcome.	Contact Cherylene Evans for time and details: 8061 W Grand Ave, Littleton CO 80123
Mar 26, Tuesday	General Meeting. Our regular General Meeting will be held at the Clements Community Center. Michelle Kempema from the Greeley Museum will present a program on the trains at the Greeley Museum.	7:00 PM, Clements Community Center 1580 Yarrow St., Lakewood, CO 80214
April 2, Tuesday	DGRS Board Meeting	