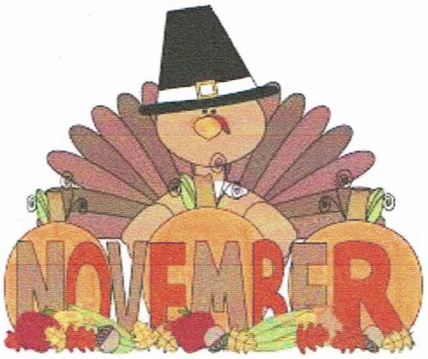
Las Vegas Garden Railway Society / Monthly Newsletter



November 2020 **Volume No. 22** **Issue No. 8**

President's Corner

Hello All.

A big thanks to Sue Jerrems for the wonderful Halloween train run. It was great to see everyone again, even with all the social distancing.
She had a great set up that included many different areas with decorations. The backyard had decorations everywhere. It was obvious she took a lot of time to set it up. Thank you again Sue for a great run.

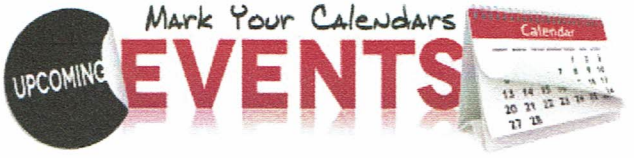
This weekend we will see Bill and Lynn Thornhill's newly built layout. This will be their first run which was delayed due to covid.

Let's have a great turnout and also be sure to RSVP so they can plan accordingly.

I look forward to seeing all of you again on Saturday.

Have a great week.

Bill



Saturday – November 7th
Bill & Lynn Thornhill - Train run

Saturday – November 21st
Bob Dack – Turkey Train run
Canceled due to Corona-virus concerns

December – Date – TBD
Jim Marsh – Train display

November Events

Bill & Lynn Thornhill's Train run

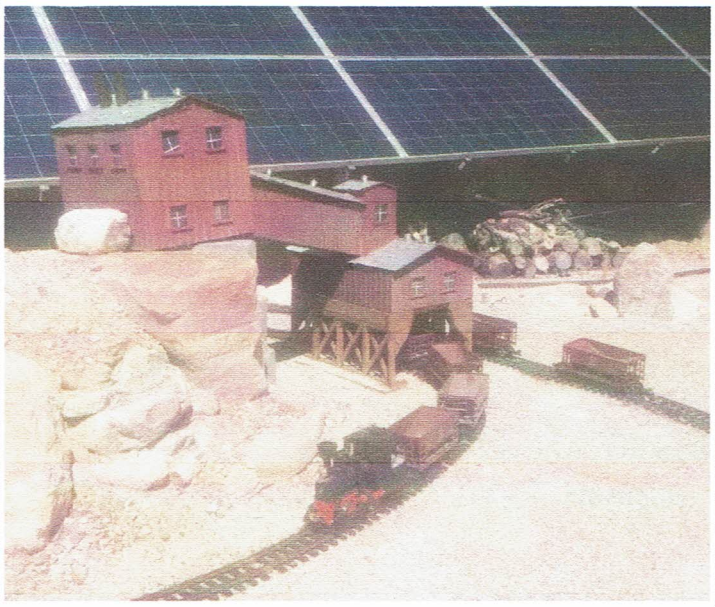
Saturday – November 7th
12:00 pm – 4:00 pm

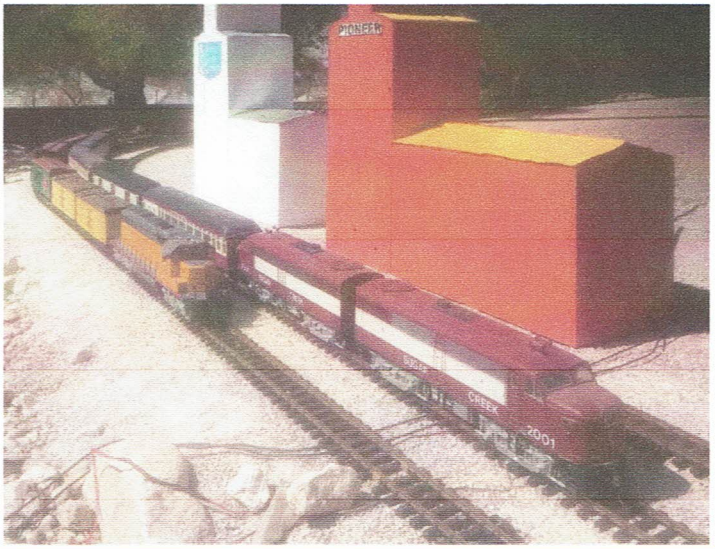
"B&L (Bill & Lynn) Railway" features 4 loops so four trains can run at one time. Bring your own trains and try our bridges, tunnels, trestle or maybe a loop or two around the ghost town. Some features include a mine (Building being a much appreciated gift from Sue Jerrems), an eight foot long (230' @ 1-29) trestle under and over, tunnel with waterfall over top, three prairie grain elevators, and staging of a train inside workshop. Switches have not been hooked up because my electrical engineer is from Canada and we are waiting for the virus to be over. There is a UTV to assist any that require to get to the bottom of the hill. Event will be from noon to 4:00pm and will do a pot luck at 3:00pm. We are so looking forward to share our very good fortunes with you fine folks.

Address is: 1305 Radwick Dr. Las Vegas, NV. 89110
Directions: I-15, exit Washington Ave., go East on Washington past Hollywood Blvd. Left on Radwick Dr. (4th house on the left).

Bill & Lynn Thornhill
ranching2@centurylink.net

Bill & Lynn's Train Run cont.





Bob Dack's Turkey Train Run Canceled

Dear Club Members,

After significant consideration and discussing the issue with many people, I have decided to CANCEL MY TURKEY TRAIN RUN scheduled for Saturday, November 21st. I apologize, as you can most often rely on me, but here is my reasoning:

1) Not sure what size of gathering I am allowed in my backyard and house, even with the governor's new mandate effective October 1st.

2) Not sure how easy it would be to control people wearing a mask or social distancing.

3) The people I talked to about attending either said "probably not" or "haven't decided yet".

4) Not comfortable with 50+ people going through my house to go to the bathroom, help with food, etc. Might need to sanitize it after the party when you don't know where or what the attendees have been doing regarding Covid-19 precautions.

5) Probably the most important concern is the possibility of my personal financial liability or the club's liability if one of the attendees got the virus and died (most all the attendees are of the vulnerable age). Would the family file a lawsuit against me or the club for not providing the "perfect environment" for a train run under the current laws for Covid-19. This thinking might be overly cautious, but "it is not a problem, until it becomes a problem".

As hungry as I am, along with everyone else for a train run, I just feel it is not practical to be exposed to all of the above, just for a three-hour dinner and trains gathering.

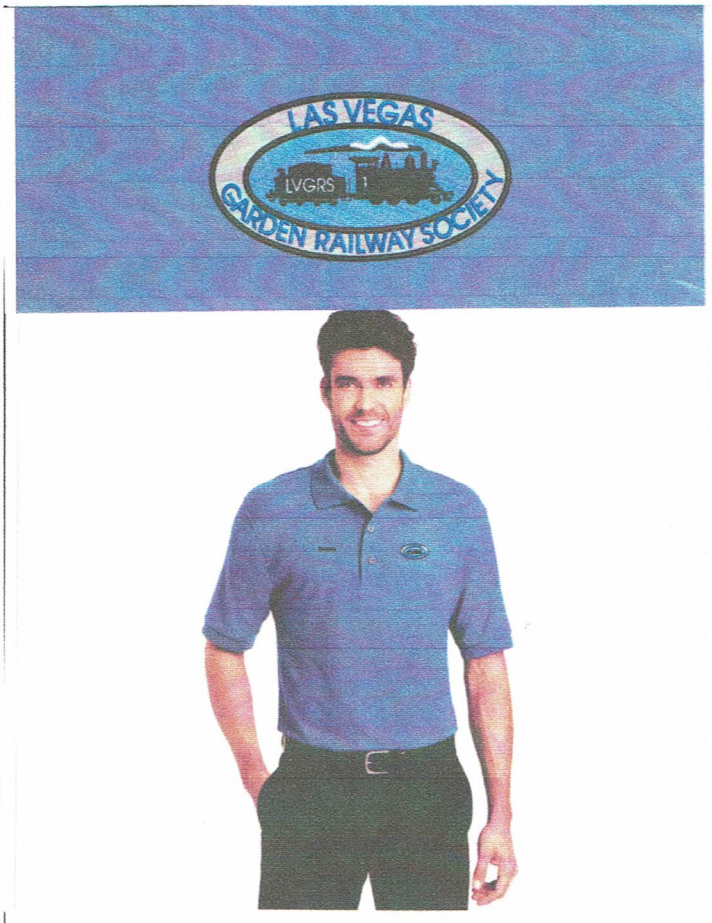
You know I still will be a strong promoter of the club and actively involved; right now is just not the right time.

Thank you for understanding.

Bob Dack

Club Polo & Tee Shirts

The Club has purchased some Ultramarine Blue Polo shirts, embroidered with the club logo.



Men's. Ladies & Youths polo shirts are $25.00 per shirt, if you would like it personalized with your name, add an additional $5.00, a total of $30.00.

The shirts come in sizes small to 5xl. they have youths sizes also.

You can also order Tee shirts, the cost is $20.00, $25.00 if you would like it personalized.

Please email me at: chasjell@cox.net if you wish to order any shirts, please include the following: men, ladies, youth, the size, how many, and name if you want it personalized. **Shirts will not be ordered until the payment has been received.**

Send your payment to:
Jerrie Ling
4514 Patriot Cannon St.
North Las Vegas, NV. 89031-0191

THESE 7 CHAPTERS ARE COURTESY OF

E. R. (Ross) Crain, P.Eng.

CRAIN'S RAILROAD PAGES

Page 1

GETTING STARTED IN LARGE SCALE RAILROADING

Large Scale model railroading is very popular. It is the fastest growing facet of our hobby, and in time and money spent, exceeds most of the better known smaller scales, with the exception of HO and possibly N scales. Large Scale models are also given the generic name of "G Scale", even though this is technically not correct. The scale ratios for large scales range from 1:13 to 1:32. The most common are 1:20.3, 1:22.6, 1:29, and 1:32 - see table on Page 2 for more details.

Large Scale, as the name suggests, is big - locomotives and rolling stock are roughly twice as long and therefore 8 times more volume and weight than O scale. Compared to HO, Large Scale equipment is 4 times longer and 64 times the volume and weight. That's pretty big! A typical loco is 25 to 30 inches long and weighs 5 to 10 pounds – some weigh in at 50 pounds.

Large Scale starter sets and individual components are available from several major manufacturers and from many hobby shops. Some hobby shops cater exclusively to large scale modelers. These sets are usually rugged enough to be set up outdoors (garden railroading) or indoors (model railroading). Many people start with a small set around the Christmas tree or a small setup on the grass in the summer. If the family is keen to expand, the train set can be augmented and, if outdoors, a rock garden or other scenic effects can be added.

Large scale model railways or garden railways can be built to precise scale, if desired, to represent a particular railway. Many are semi-scale and represent more generic railway activities. Others are purely whimsical with nothing but fun or fantasy in mind. My personal style of modeling is to create the

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illusion of realism, not "real" realism, even though scale, track gauge, and space limitations force me to make many compromises. Anyway, it's your railway and you can run it any way you want!

Price is somewhat proportional to quality, longevity, fidelity to detail, and intended market (children vs adults, collectors vs modelers). A good quality starter set will run between CDN$ 200 and CDN$400 (US$175 to US$350). Use your common sense when judging price vs quality think about who makes it, where are you buying it, where can it be serviced.

Don't be over-eager about a deep discount from "retail" prices. The so-called "retail" price is the Manufacturer's Suggested Retail Price (MSRP). Any shop that sells at full MSRP probably doesn't sell very much or expects you to deal (haggle) over price. Most hobby shops and mail order discount stores routinely sell at 20 to 40% less than MSRP - this is the normal "street price" for these trains. Watch for close-outs on the web sites - these may offer 50 to 70% off MSRP! Be sure to shop around.

Good luck with your large scale empire, and above all, have fun!

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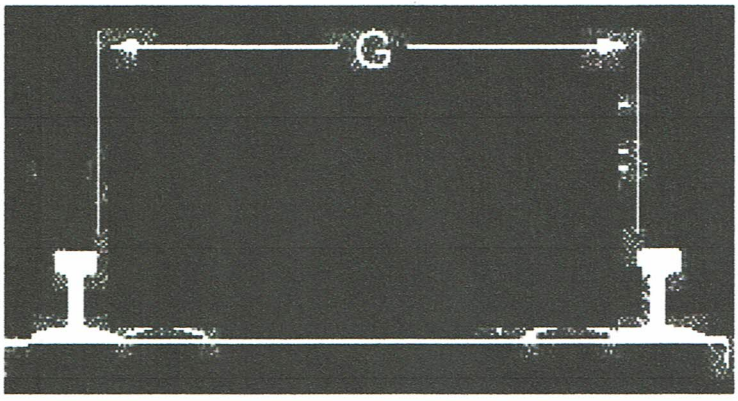
LARGE SCALE TRAINS AND TRACK

There is more to Large Scale model railroading than meets the eye. There are SEVEN different large scales, each with its own name, living under the generic umbrella of "Large Scale". Some modelers don't worry too much about the scale of their trains - as long as they are "Large". Many modelers do notice, and try not to run trains with equipment from different scales, just as HO modelers would be careful not to run an Sn3 scale boxcar in their fleet, even though it is roughly the right size.

Page 2 cont.

Confusion is also rampant because most models from the different Large Scales run on the SAME track gauge. Gauge is the distance between the inside faces of the rail heads. The usual gauge for real trains in North America is 4 feet 8-1/2 inches (standard gauge). Many other gauges have been used, such as 2 feet, 3 feet, and meter gauge - usually referred to as narrow gauge tracks.



Large Scale and garden railroaders mostly use 45 mm gauge track, usually called Gauge 1 or #1 Gauge, and sometimes (incorrectly) called G Gauge track. Gauge 1 represents different gauges in each of the popular modeling scales, as listed in the table below (based on proposed NMRA standards):

SCALE NAME	M	D	F	G or II	H	A	#1 OR I
ALTERNATE NAME	7/8"	3/4"	3/5"	17/32"	1/2"	2/5"	3/8"
SCALE RATIO 1:	13.5	16	20.3	22.6	24	29	32
INCHES/FOOT	0.889	0.750	0.591	0.531	0.500	0.414	0.375
MILLIMETERS/FOOT	22.6	19.1	15.0	13.5	12.7	10.5	9.5
TRACK GAUGE 45mm=	23.9	28.3	36.0	40.0	42.5	51.4	56.7"
REPRESENTING	24.0	30.0	36.0	36.0	36.0	56.5	56.5"
ERROR	0.3%	5.8%	0.0%	-10%	-15%	9.0%	-0.2%

Gauge 1 track is 10 to 15% too wide to represent 3 foot narrow gauge in G and H scales, but it is used anyway, because "close enough is good enough". The correct scale to use 45 mm track for 3 foot gauge is 1:20.3 (F Scale). Gauge 1 is 9% too narrow for standard gauge in A scale, but this scale is widely used to represent modern era standard gauge trains. Gauge 1 track is just right for 3 foot gauge in F scale, or for meter gauge in G scale, or for standard gauge in #1 scale. This track is pretty versatile!

If you love to watch trains run, then scale, gauge, and realism won't matter much. If you want realism,

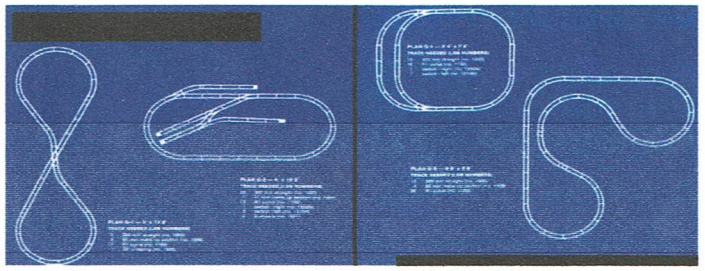
Page 2 cont.

some compromise, such as track gauge, is probably acceptable. For real accuracy, you will also have to do a bit of research to verify that the car style, paint job, and dimensions are a reasonable representation of the era, locale, and road you are modeling. Or you might do a bit of kit-bashing, detailing, or repainting to achieve your goal.

The geometry of sectional track needs a bit of explanation. Recall that a full circle is 360 degrees (onec around a clock face is 360 degrees). Curved sections of tracK are sold with 12 sections per full circle for the 4 foot diameter, making each section a 30 degree arc of the 360 degree circle. The larger diameter sections come with 16 sections to a circle, giving 22.5 degree arcs of that 360 degree circle. To make a model railway, that completes a circuit in your backyard, you need at least enough sections to make up 360 degrees. If your track plan has reverse curves, you will need more sections to get the loop to close -- 1 extra for each verse section. You can mix and match different diameters as long as the net result is 360 degrees of arc.

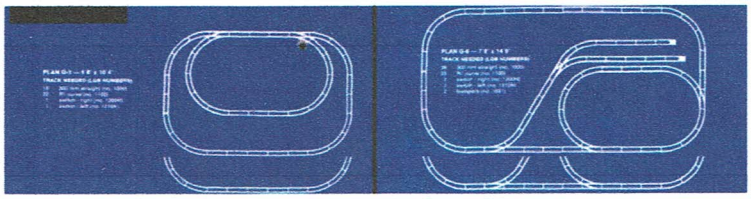
There are 1, 2, and 4 foot straight track sections, left and right hand turnouts (switches), and 30 and 90 degree crossings to extend your layout beyond the basic circle.

Planning an indoor or outdoor large scale railway is determined by balancing several factors: available space, terrain,, and cost are limiting factors, simplicity versus complexity of operation are personal choices as are fidelity to realism or just plain fun. Below are some track layouts designed mostly for continuous operation, whiles ome include limited switching possibilities.

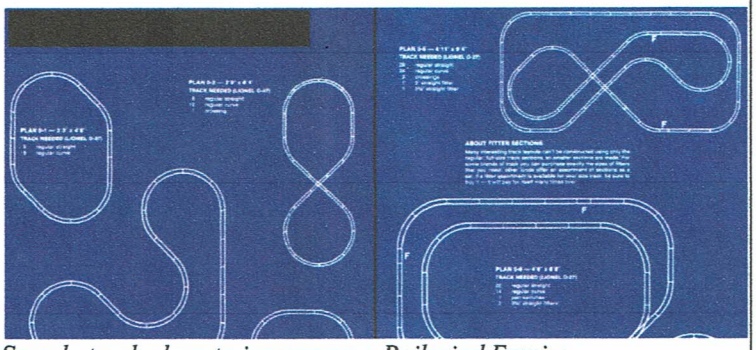


Sample track plans to inspire your Railroad Empire

Page 2 cont.



Sample track plans to inspure your Railroiad Empire



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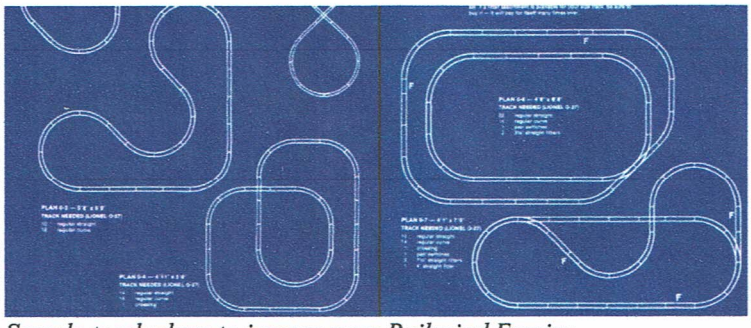

Sample track plans to inspure your Railroiad Empire

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HOW BIG IS THAT BOXCAR?

The different scales available under the generic Large Scale umbrella lead to some interesting marketing strategies by model manufacturers. Mold making is expensive, so large scale manufacturers sometimes compromise a bit and use the same mold of a model to represent different cars or locomotives in different scales. For example, a generic wood sided boxcar or caboose model may be used to represent a 30 foot car in F, G, or H scale, or it might represent a 40 foot car in A or #1 scale. The dimensions and details won't be perfect for any of these scales, but again "close enough is good enough" for many modelers.

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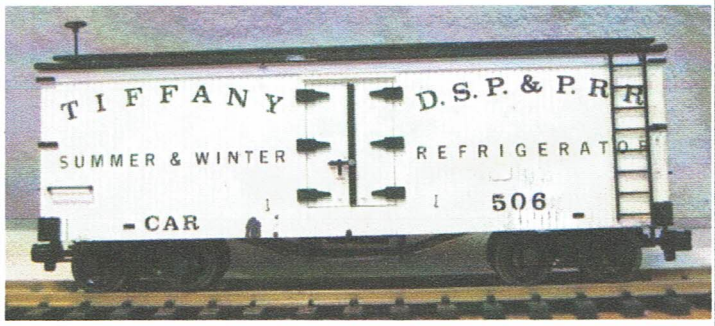

To do justice to the industry, some models are made to one of the specific scales and are very faithful reproductions of a specific car or engine. These are often dubbed fine scale models even if track gauge and wheel dimensions are a little off. However, there is nothing to stop you from using a beautiful 1:20.3 fine-scale narrow gauge Mogul locomotive as a 1:32 scale standard gauge locomotive. It will still look gorgeous!

Here are some typical model dimensions:

SCALE NAME	Model	M	D	F	G or II	H	A	#1 or I
SCALE RATIO	Length	1:13.5	16	20.3	22.6	24	29	32
LGB BOX CAR	380 mm=	16.8	19.9	25.3	28.2	29.9	36.2	39.9 ft
USA BOX CAR	380 mm=	16.8	19.9	25.3	28.2	29.9	36.2	39.9 ft
ARISTO BOXCAR	430 mm=	19.0	22.6	28.6	31.9	33.9	40.9	45.1 ft
LGB FLAT CAR	380 mm=	16.8	19.9	25.3	28.2	29.9	36.2	39.9 ft
USA FLAT CAR	450 mm=	19.9	23.6	30.0	33.4	35.4	42.8	47.2 ft
LGB PASSENGER	480 mm=	21.3	25.2	32.0	35.6	37.8	45.7	50.4 ft
LGB DIESEL	630 mm=	27.9	33.1	42.0	46.7	49.6	59.9	66.1 ft
LGB MOGUL/TNDR	665 mm=	29.5	34.9	44.3	49.3	52.4	63.3	69.8 ft

An LGB freight car represents a 28 foot car in G Scale and a 40 foot car in #1 Scale - same mold - just the paint job is different.

It's not likely that you would want to use a G Scale freight or passenger car in M or D scales. It just wouldn't look right. But you might want to use a locomotive mechanism with a new superstructure appropriate for the larger scale. The table above gives the dimensions anyway, just to be thorough.

Many Large Scale freight cars and locomotives are very generic and are painted for many

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different railways, even if that railway never used that kind of locomotive or railcar. Some models have been reshaped by shortening (so they will go around the sharper curves) or by changing proportions for more pleasing eye-appeal. Some models represent equipment that never existed anywhere. Choose your rolling stock carefully to please your own eye and you will be a happy railroader.

All four of these models are 28 foot 3-foot narrow gauge boxcars. At the rear is a 1:22.5 "G" Scale model. It can be used in 1:20 and 1:24 scales and no one would notice the fact that the car was not exactly 28 feet long. The Gorre and Daphetid car represents a 1:64 "S" Scale version. In front of that is a 1:87 HO Scale version and a 1:160 "N" scale car. If the G Scale car was painted for a Standard Gauge railroad, it would represent a 36 foot old-time boxcar in 1:32 "1" Scale. The G&D boxcar is actually a 36 foot HO standard gauge car, "standing-in" as an S Scale narrow gauge car for this photo.

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WHO MAKES LARGE SCALE MODEL TRAINS?

Leymann Gross Bahn (LGB) started the modern revival of large scale trains in 1968. LGB makes G scale European and American narrow gauge models, as well as cars and locomotives for American standard gauge trains (close to A or #1 scale). LGB was out of business for a few years, but the entire line was purchased by Marklin and some new products are back on the shelves. Marklin had its own line of large scale trains.

Recently, Accucraft has brought out a number of 1:20.3 and 1:32 scale fine-scale locomotives and rolling stock.

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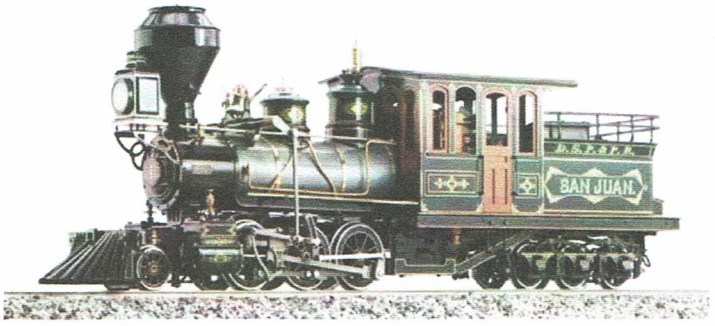
Aristocraft was the originator of 1:29 scale, hence the name A scale for this size. Most Aristo models are modern era 40 and 50 foot standard gauge equipment. Some are painted for narrow gauge lines where appropriate. Aristo also manufactured the Delton Classics line, which represents 3 foot narrow gauge in F, G, or H scales. Aristocraft closed its doors in Dec 2014 but there is lots for sale in the aftermarket (eBay).



USA Trains paints the same mold of old-time freight cars for standard gauge A or #1 scale, 3 foot narrow gauge F, G, or H scales, and 2 foot narrow gauge M scale. They also make 1:29 scale diesels and modern era freight cars that could not be considered for F, G, or H scale narrow gauge, unless your sense of whimsy allows this sort of mix and match in the same train.

Bachmann offers steam era freight and passenger equipment lettered for both standard gauge and narrow gauge roads. The same rules apply - the models are #1 or A scale when painted for standard gauge and F, G, or H scale when painted for narrow gauge roads. Bachmann also makes a line of F (1:20.3) scale locomotives and freight cars with high quality detail correct for 3 foot gauge on 45 mm track.

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Piko has entered the G Scale market to compete directly with Marklin/LGB.

Hartland (HLW) and Roundhouse/Model Die Casting (MDC) also offer rolling stock for both standard and narrow gauge. Numerous other manufacturers offer a plethora of models in many scales, eras, and degrees of fineness of detail. Accucraft, Berlyn, Russ Simpson, Hartford, and others are in the fine scale category, making highly detailed 1:20.3 scale models of old time narrow gauge rolling stock. MTH , RailKing, and Lionel make suitable stock in a variety of large scales.

Corporate mergers, takeovers, and bankruptcies have affected the availability of new products, but much is available in near-new condition via the internet. Pola, Piko, Aristocraft, Bachmann, and a few others make railway structures, commercial buildings, and houses. By watching ads in the modeling magazines (Garden Railroading or Finescale Railroader), you will find a number of plastic or wooden structures, bridges and accessories suitable for indoor or outdoor railways.

All of the above offer people and animals, as well as Preiser, Schneiders, Just Plain Folk, Elita Modelle, Jones, and Noch. Watch the dollar stores for great bargains in "no-name" brand figures. Vehicles are also needed to add realism. Ertl, Liberty, SpecCast, and Revell offer lower priced models at 1:16 to 1:34 scale. A few of these models are advertised as 1:25 scale when in fact they are 1:34 or smaller – watch the driver's cab – if you can't visualize a scale person sitting there, the model is probably too small. More expensive models in 1:18, 1:24, and 1:32 scales can be had from Franklin or Danbury Mint.

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RESOURCES FOR LARGE SCALE RAILROADERS

There are many ways to learn about Large Scale model railroading. Books, magazines, videos, and

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internet sites offer more information than a single human can absorb. Here are the best sources of information I have found. Use your favorite search engine using the names given below -- the links change more often than I care to keep up with.

1. Magazines, Books, and Videos
Garden Railways
Model Railroader
Finescale Railroader
Narrow Gauge and Shortline Gazette

2. Manufacturers/Catalogs
LGB / Marklin
USA Trains
Bachmann
Hartland
Hartford / Ozark Miniatures
Accucraft

3. Discount Hobby Shops
Train World
Ultimate Trains
Charles Ro Supply
eBay searches may find reasonable prices - watch the shipping costs.

4. Internet Portals, Classifieds, Discussion, Links
Forums and portals come and go. Search on "Large Scale Model Railways" or "G Scale"

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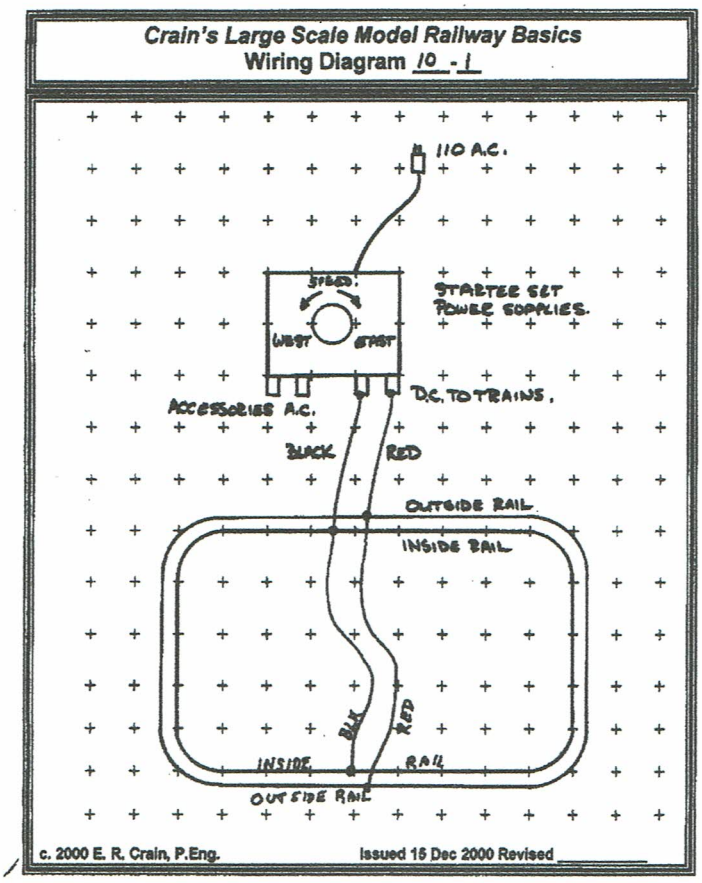
GETTING POWER TO YOUR LARGE SCALE TRAIN

Most model trains run on direct current (DC) just like the lights and radio in your car. These trains use the two running rails to carry the power to and from the train. Some O Scale trains, like Lionel,

MTH, and American Flyer, use alternating current (AC) to drive the motors. These trains use a three rail track with the two outer rails acting as a single wire and the center rail carrying the return circuit. All large scale trains run on direct current. Some very cheap trains will run on AC or DC.



Power needed to run the train is delivered to the rails by a power supply especially designed for this purpose. For safety, be sure it is UL or CSA approved. Do not get water on or in the unit and do not stand on damp or wet ground while using it. If used outdoors, it must be kept in a safe, dry location and it must be plugged into a ground-fault-protected wall plug.

An analog power supply contains electronic circuits that convert household AC power to the lower voltage DC required by the trains. Train speed is controlled by a knob or slider that is moved to adjust

Page 6 cont.

the voltage applied to the rails. Train direction is controlled by a switch that reverses the polarity of the DC to the rails. There may be other features, such as momentum effects, amp and/or voltmeters, or indicator lamps. Read the owners manual to learn how to use these features. You need well filtered DC from your power supply.

Large scale engines do not need pulsed power or ripple DC, which can seriously damage motors and sound systems.

In contrast to analog power supplies, Digital Command Control (DCC) uses a fixed voltage (analog) power supply and sends digital commands to decoders in each locomotive to control speed and direction.

Each power supply will have a built-in circuit breaker. Some reset automatically after being tripped, others require a manual reset. If the circuit breaker trips, you have some bad track wiring, a derailed train, faulty wiring inside a locomotive or car, or some water where it should not be. Be sure to solve the problem before you reset the circuit breaker.

Wires between your power supply and your track should be heavy gauge (22 gauge minimum, 18 gauge is better) and firmly attached to the rails by screws or solder. Run additional wires and connect to the track every 20 feet or so. Outdoor wiring must be weatherproof and protected from damage by feet and lawnmowers.

Most power supplies also have low voltage (12 to 18 volts) AC terminals to run lights and other accessories. Do not connect these terminals to the track - you will burn out the motors in the engines.

Do not connect the AC terminals of one power supply to the AC of any other power supply - you could get 110 volts across the accessory instead of 18 - SNAP - CRACKLE - POP - WOW!!! ALWAYS turn off or pull the plug on a power supply before connecting wires.

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HOW BIG A POWER SUPPLY DO I NEED?

A starter set power pack usually provides a maximum of 0.5 to 1.0 amps at a maximum of 18 volts. The current capacity (0.5 amps) determines how many "things" you can turn on at once. The voltage determines how fast or how bright those "things" will be. Each "thing" - a locomotive motor, head and side lights, smoke unit, sound system, rolling stock lights, street lights, building lights, operating accessory - draws current (amps) and adds to the amp rating you need on your power pack. Lights or accessories connected to the AC terminals of your power pack also count. If you have two or more speed controllers on the same power pack, the sum of all "things" connected to both controllers determines the amp rating you need.
Approximate amperage draws from large scale "things"

1. Starter set loco (eg Stainz, Porter), short train - 0.1 to 0.2 amps
2. Starter set loco with long train - 0.2 to 0.4 amps
3. Larger single motor loco (eg Mogul, 10-Wheeler, Consolidation), short train - 0.2 to 0.5 amps
4. Larger single motor loco with long train - 0.4 to 1.2 amps
5. Two motor loco (eg diesel, Shay, Mallet) with short train - 0.4 to 0.8 amps
6. Two motor loco with long train - 0.8 to 1.5 amps
7. For each light bulb on the train - add 0.05 amps (10 bulbs = 0.5 amp)
8. For each smoke unit - add 0.1 amp
9. For each sound system - add 0.1 to 0.2 amp (some draw as much as 1.2 amps!!!)
10. For railways with grades, add 20% to each motor for each 1% of grade

Example 1: Double headed Moguls, short train, sound, smoke, headlights, level track
Amps = 2 x (0.5 + 0.2 + 0.1 + 0.1) = 1.8.
A starter set power supply won't even budge this train - the circuit breaker pops immediately. A low cost 2 amp power pack will do but might run hot. A 5 amp supply is safer.

Page 7 cont.

Example 2: A-B-A Diesel, 2 motors and 3 lights in A units, sound in B unit, 4 smoke units, 5 passenger cars with 4 bulbs each
Amps = 2 x 0.8 + 2 x 3 x 0.05 + 0.2 + 4 x 0.1 + 5 x 4 x 0.05 = 3.5.
A 5 amp power supply will do fine, but you couldn't run a second large train on the same system. The best power supplies are rated at 10 or 15 amps, but will usually only deliver 8 or 12 amps, even on a short circuit.
Some supplies are rated by their VA (Volt - Amp) or their wattage capacity. The amp rating is found by dividing the VA or watts rating by the maximum output voltage. For example, a power supply with a 70 VA rating is equivalent to 70/18 or roughly 3.5 amps.
NOTE: a 70 VA power supply will NOT supply 7 amps at 10 volts or 14 amps at 5 volts - the rating is its MAXIMUM, and at 10 volts it will probably put out even less amps than it will at 18 volts. They are purposely designed this way to prevent them from being used as arc welders!

Most large scale locomotives run at rational speeds with 10 to 12 volts on the rails on level track. Engines with a heavy train may stall on grades unless track voltage is raised a bit - 14 to 16 volts might be needed. Trains with lots of lights, multiple locomotives, or DCC decoders will also need a little more voltage.
Because of internal losses and aging, you should deduct 10 to 20% from any published rating to determine if you have a big enough power supply. Components inside power supplies can burn out or change value with age, placing high voltage spikes on the track. This can burn out sound systems and even locomotive motors. Pull the plug and get the power supply serviced if there are any problems!
Some newer large scale power supplies put out 24 to 30 volts. Cheaper locomotives (some have motors rated at 12 volts max) may not survive these high voltages.

Keep the power supply dry and out of the weather. Water can cause short circuits, component failure, and may electrocute you, your children, or your dog!!!

MORE CHAPTERS NEXT MONTH!

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