



Tucson Garden Railway Society's

Time Table

Society web site: <http://tgrs.homestead.com>
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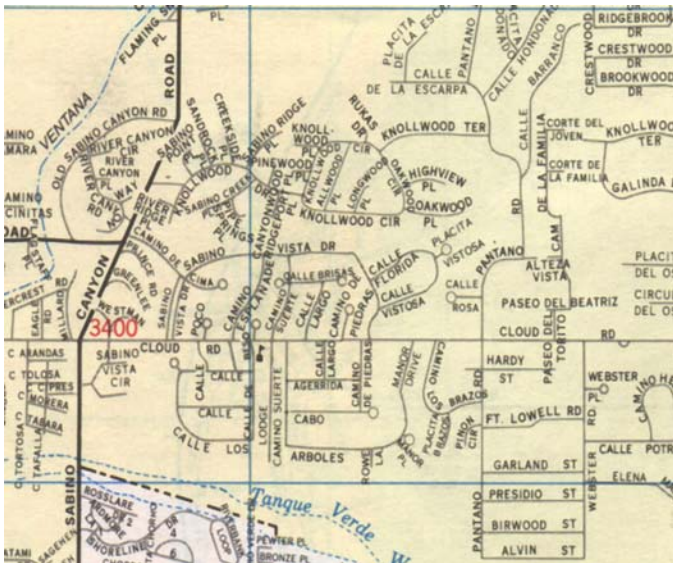
February 2004

Meeting This Month

This month's meeting will be on February 14 at 1:00 PM at the home of:

Jay & Sallie Sanders
8060 E. Paseo de Beatriz
Tucson, AZ 85750

Telephone 731-1999



Directions:

Take Grant Road east to Tanque Verde. Turn left (east) onto Tanque Verde and drive for about one half mile to Sabino Canyon Road. Turn left (north) onto Sabino Canyon and drive about 1.2 miles to E. Cloud Road and turn right (east) onto Cloud..

(Note that from the north side it is also possible to take River road all the way to Sabino Canyon. If you do this turn right (south) onto Sabino Canyon and left (east) onto Cloud. Then follow the directions below.)

Once on Cloud go about one mile to N. Paseo del Torito. It is the first road after you cross N. Pantano Road and is marked by a stone wall that says, in red, "Hacienda del Joven Estates".

Paseo del Torito ends at Cloud so you can only go left (north). In about one half mile (one long block) it intersects and you turn right (east) onto Paseo de Beatriz. The Sanders' lot extends from the corner of Paseo del Torito and Paseo de Beatriz to Cloud. They note that parking is limited and ask that you park on Cloud and Paseo de Torito as well as on Paseo de Beatriz. They also ask that you remember to **bring chairs**.

The Railroad:

Building the railroad began in March 2003, with construction of a raised bed to match the wall in the patio area. The layout is 22' by 10' and has two loops with separate track controlled power. The upper level was constructed with boulders and has a water feature that flows to the lower level. The Sanders have a dedicated drip system for the miniatures they have planted and the plants have done well through the hot summer months.

The Sanders think that there is much to be done in terms of more plants and more buildings but they have recently constructed of a mine on the upper level loop. Jay has also completed construction of a box to house the transformers and switches.

Condolences

The club offers its condolences to the family of Norm Watkins, a club member, who passed away after several months of illness.

Editor's Rant

Last month I ranted at some length about Garden Railways new product reviews. I sent a copy to Mark Horovitz, the editor. While we do not normally print "letters to the Editor", in the interest of fairness I am printing his response below:

"Hi Dick,

Thanks for your note and newsletter, which I read through. Believe it or not, I am concerned about what readers think. However, I think we will have to agree to disagree on several of the points you made. We do not write the reviews with the purpose of not giving offense to the advertisers. We write them with the reader in mind, and we try to give honest, accurate reviews. Regarding

Ken Martin's problems with USA Train's sliders, I did not report them because I did not experience them. Had Ken written to us with this problem and his solution, I would have been happy to include it in our Letters column. Best wishes,
Mark"

Home Show & Raffle Winner



The winner of the starter set raffle held at the January Home Show was Ray Bratton of Tucson. Ray, who is shown above, looks happy with his prize.

Treasurer Willis Fagg reports that gross receipts for the raffle were \$342 which resulted in a new for the club of slightly over \$124. Tickets to the open house were also sold at this show.

As far as the show itself went, it was very successful. A large number of members attended at both set up and tear down which went smoothly and quickly. We were given a 20' X 60' foot space. The modular layout was limited to about 20' X 50' by power connector cord length but the remaining 20' X 10' was used by the children's layout and our sales table.

Operations consisted largely of two long diesel trains (AB units with 10 freight or 6 long passenger cars) on the outer loop and steam trains on the inner loop. Though our Sumpter Valley was at the botanical gardens and our ten wheeler was in the paint shop we still kept two steam trains running most of the show. Valiant service was rendered by our Mogul, Bob Dirkson's battery operated Mogul and Nick Buchholz's Heisler all of which ran on the inner loop.

Great American Train Show

Set up for this event will begin at 8:00 AM on Friday, February 6th at the Pima County Fairgrounds. The show itself will be on Saturday and Sunday February 7th and 8th, from 11:00 AM to 5:00 PM each day. If you haven't already signed up, contact Vice President Norm Ulmer.

SWITCH HITTING – Save those bad switches.

By Ken Martin

The following article first appeared in the Bay Area Garden Railroad Society's Trellis & Trestle and is reprinted here with the permission of both the author and that news letter.

Many brands of Gauge-1 switches are available today. Some of them, like products from Llagas Creek, Sunset Valley, California & Oregon Coast, etc., are generally of good quality, feature good operation, and are very prototypical both in track height and switch configuration. Their major drawback is that they are expensive so are not that commonly found on the average layout.

The two most commonly found switches (turnouts, if you will) are the LGB 1600 switch and the Aristocraft 1800 switch. Both these switches cost something less than half the price of the more prototypical items mentioned above, hence their popularity.

The LGB and the Aristocraft are both of reasonable quality and operation but neither one is without its problems. None of these problems are major and can easily be overcome with some simple processes.

A common design flaw found in both switches is that the grooves in the frogs are not deep enough. Some wheel flanges will ride on the bottom of the groove and make the car bounce as it goes over the frog. This is not a serious problem and may not even be noticed during operation. If it is a problem, the grooves can be deepened with the proper burr on a Dremel tool. This is time consuming and most likely not worth the effort unless the shallow grooves cause derailis.

But each of these switches has some more annoying problems that definitely affect train operation.

Let's start with the LGB switches.

One recurring problem is the switch points (the tapered part that determines the direction of the train) going dead. Power to the point is supplied through a small beryllium copper tab that is connected under the point pivot screw and contacts the underside of the point rail (the short non-moving rail that the point lines up with). This tab and the rail it contacts get dirty and no longer transmit power to the point. Longer engines may ignore this (or just hiccup) but shorter ones will stop on the switch.

Unfortunately, the construction of the LGB switch is such

that, while this copper tab can be removed and cleaned it is virtually impossible to clean the underside of the rail and to get the tab to go back into place. The permanent solution is to bypass it with a jumper.

Using a flexible piece of uninsulated stranded 24 gauge copper wire about 3" long, solder one end to the *outside* of the point (i.e., the side away from the center of the right-of-way) about $\frac{3}{4}$ " from the pivot. Be careful not to use any excess solder (or melt the ties). If there is too much solder here, the point will not be able to lay snugly against the stock rail as it must for proper operation. (A hint: remove the screw that the point pivots on so the point can be raised up to make soldering easier. Be careful with the screw. It is a special shouldered screw and is almost impossible to replace if it is lost). Now, leaving some slack in the jumper wire, solder the other end to the outside of the point rail about $1\frac{3}{4}$ " back from the pivot point. Be sure that there is enough slack in the jumper so that the point still moves freely when the job is done. Also, the wire should be soldered to the foot of the rail against the bottom of the web.

Do this procedure to both points on each switch. When it is finished, both the jumpers should be on the *outside* of the points where the wheel flanges don't run.

I have encountered this failure enough that I now put jumpers on brand new LGB switches before they are even installed in the layout.

LGB switches have flat brass strap jumpers spot-welded to the underside of the rails to carry power to wherever it is needed within the switch itself. These can be seen by inverting the switch. The small spot-welds occasionally break, allowing the strap to separate from the rail and leaving a dead section of rail.

A fairly quick and easy (and permanent) fix is, with the switch inverted, to drill through the strap at the weld point and into the rail with #50 drill. Do not drill too deep because the foot of the rail is not very thick. Now, moving the strap aside very slightly, thread the hole with the 2-56 tap. The exercise here is to see how few 2-56 taps you can break. (This is something like golf where a low score is better!) With a little care, one tap will last for the whole operation. Be sure to lubricate the tap. Enlarge the hole in the strap slightly so a 2-56 screw will clear. Put the whole thing together with the screw through the strap and threaded into the rail. An application of white lithium grease (this is a conductive grease that is available in a tube or spray can at any hardware store) might be good here. Tighten the screw as tight as possible without stripping it.

It may be possible to solder the errant jumper straps back onto the rails, but I think getting the work hot enough in a space confined by plastic ties would be a Herculean task.

Note: If you are looking for an inexpensive source of 2-56 screws, that is the size used in Aristocraft rail and switches.

With all this done, the switch should give a long lifetime of trouble free operation.

The Aristocraft switches suffer from similar problems but require different fixes.

The jumper wires under an Aristocraft switch, which serve the same purpose as the straps under the LGB switches, are just exactly that – wires with brass terminal ends that are attached to the rails with 2-56 screws. These screws are not always sufficiently tightened at the factory and can loosen and/or corrode over time and will lose contact with the rail. To avoid future problems with these switches, perform this procedure when they are brand new, right out of the box:

Set the switch down bottom-side-up. Remove the plastic cover plate on the underside of the frog. Check all the various jumper wires to be sure none are pinched. (If a pinched wire is found, replace it completely.) Loosen each jumper wire terminal slightly (or take it completely loose, if you like). Using white lithium grease, work the grease under the terminal between the terminal and the rail. Retighten the screw as tight as possible without stripping it. Put a small dollop of grease over the screw head and terminal. This will protect the screw, terminal, and rail from corrosion. Replace the cover plate.

Another problem is that the point pivot screws sometimes unscrew themselves and let the point flop around. Again, right out of the box and with the switch still bottom-side-up, lubricate the bushing between the screw head and the point. White lithium grease will work here, too. Tighten this screw as tight as possible.

With all this being done, the switch should be trouble free for a long period of time.

Since the Aristocraft switches are somewhat less expensive than the LGB switches and (in my personal opinion) give a little better operation due to the wider curve, there is some compensation for the time spent doing this 15 minutes or so of extra work on them.

There is one other thing that occurs with the Aristocraft switches. If a train should derail on the switch and cause a short, any of the jumper wires can be burned out. This is not a problem with the LGB switches because the jumper straps are much sturdier than the wires on the Aristocraft product but, I believe, this is when the welds come loose. The saving grace is that the wires on the Aristocraft are very easy to replace, so simple, in fact, that I won't even go into it here except to recommend that, if they are burned, they be replaced with a larger gauge wire. The stock wires appear to be about 26 or 28 gauge. Replacement with 20, 22, or 24 gauge wire would help avoid future problems.

Even the less expensive switches cost too much to be just discarded when there is a problem. Repairs that will save the switch are not that difficult.

I THINK I KNEW THAT! #13

BY ROY EBERBACH

This column presents my ideas and is not intended as the only way or the right way of doing things. This is what works for me. If you have different ideas that work for you send them along and I will share them with the club.

#13-1. Last month you wrote about details, where do you find them?

I answered this question about a year ago. The plain truth is everywhere. Always be on the lookout for items which will work on your railway. Christmas time is a great time to be searching for detail items. Lemax makes lots of stuff for their Christmas villages which will work for us. Department 56 stuff is also good but more expensive. The last two years we have attended the Tucson Miniatures Show in October. There is a wealth of 1/2 inch material at the shows but it is on the pricey side. Lately, 22nd Street Ace has been stocking a good supply of G scale people made by Just Plain Folks. The earlier ones were a bit on the crude side but the newer creations are made of a finer quality material in China and look much better. The search never ends. Just keep your eyes open and your check book handy.

#13-2. INDUSTRIAL FENCE REVISITED.

In an earlier column I talked about the Peco industrial fence kit saying that the plastic fence fabric does not last very long in our Tucson climate. Mary Ann and I have been testing other materials that look good with the kit and which seem to last longer. So far early tests show that the wire edged silver ribbon sold at craft stores around the holidays is a good substitute for the plastic fabric which comes in the kit. This ribbon comes in a 4 inch width which is just right for the kit. Some of the other materials we tested did no better than the original plastic supplied by Peco. We will have to do more testing (through the summer) to see how well it does over the hot months. With the new Peco Refinery kits out, there will be more demand for this fence than before.

#13-3. HORIZON HOBBY DISTRIBUTOR BUYS ATHEARN, INC.

The first week in January it was announced that Athearn, one of the largest makers of HO and N scale trains, was taken over by Horizon Hobby of Illinois. This is just another step in the consolidation of the manufacturing and distribution arms of our hobby. While this news does not impact us immediately as customers of G Scale trains, it will down the road, lead to higher prices, less selection of product and less competition across the board in model railroading. Like it or not we (all scales) are in this hobby together. As an example, several years ago Faller, a German small scale firm, took over Pola, a German firm which makes many of our G scale buildings. Many of the

fine accessories that we enjoy in G scale come from HO and vice versa. This is especially true in the area of electronics. While there is little we can do to stop this

trend, it is good to keep abreast of developments in our hobby, so that we can plan ahead and support the firms that support us.

Traction Tires and Weight

By George Schreyer, www.girr.org

The following article first appeared in the San Diego Garden Railway News and is reprinted here with the permission of both the author and that news letter.

Traction tires are rubber or plastic bands set into grooves on one or more driving wheels. They work by sticking to the track better than a bare metal wheel. Many locos are supplied with traction tires on one or more driving wheels. Traction tires do work in increasing traction.

Traction tires are inexpensive to produce and don't add to the loco's weight. Manufacturers don't like to add weight because weights cost money to install and the more weight that they add, the more that they have to pay to ship the loco.



This bottom view of the LGB 20211 "Stainz" clearly shows the plastic traction tire fitted on the left rear wheel (upper left in photo). All other wheels are bare metal for conductivity of track power. (Mark Edwards photo)

In my humble opinion, traction tires aren't worth the powder it would take to blow them up. For track powered locos, they virtually prevent that wheel from contacting the

track and contributing to power pickup. The tires tend to wear quickly and sometimes they rot off the wheel. Rubber tires are especially prone to degradation due to exposure to ozone so that in smoggy environments they fall apart quickly.

In every case but one, I've replaced the wheels that came with traction tires with wheels that don't have them. I've recorded decreases in traction but also noticed improvements in power pickup. See my Tractive Effort Tips page for the data on the GP9 and the Aristo Doodlebug. Only my Aristo Rogers still has tires because Aristo doesn't provide replacement rear drivers without them. The Rogers sits in my basement in the mountains and isn't exposed to smog so that the tires have held up fairly well. On the Aristo Doodlebug, the tires literally fell off in less than a month. The plastic tires used by LGB seem to tolerate wear and smog better than rubber tires.

Due to the problems that traction tires cause, changing out existing regular wheels for ones with traction tires doesn't seem to be a good plan to increase traction beyond the box stock condition.

The other popular method is to add weight. I've done this on several locos with good results. Only an Aristo Pacific has suffered consequences. In trying to make it pull five heavyweights on my 1.6% grades, I overweighted it and nearly toasted the motor. It got so hot that I couldn't touch it and the internal windings turned brown from the heat. With a little more stress, it would have burned out. I removed some of the added weight and limit it's load to four heavyweights. The motor still runs hot, but not hot enough to damage itself.

If you want to add weight to a loco, you need to determine how much weight to add. Use too much and you put the loco at risk. Use too little and you don't get the desired improvement in performance.

The easiest way to test for weight is to get a bunch of 1, 2 and 4 oz lead fishing weights and put them in a zip-lock sandwich bag. Drape the bag(s) over the loco body in a position such that the added weight is evenly carried by the driving wheels and test it. It is easy to add and subtract weight until you determine the correct amount. If the loco slows down noticeably but continues to pull, this is an indication that you've used too much weight. When a loco slows under load, it starts to draw a lot more current and the motors will run very hot. You might not notice the impact of the heat until the motor melts itself from its mounts or burns up. If you have a current meter, place it in series with a track lead and watch the current as you add weight. If you notice more than a 20 or 25% increase in loaded current, you might want to stop there.

If the loco has regular plain bushings for its load bearing axles, you might want to limit the added weight to just a pound or so. More and you'll start to wear the bearings.

Make sure that you pay special attention to the bearing lubrication.

Once the optimal amount of weight is determined, you'll need to open up the loco and to install it. Try to get the weight balanced above the driving wheels if you can. On a diesel, an even better location is the fuel tank. This will bridge the weight between the trucks and keep it low. The weights can be glued down with your favorite structural adhesive.

Another good source of weight is a load of batteries used in a battery powered radio control conversion. You don't get much say on how much weight you will add though. If you want the weight to do any good at all, you have to add it inside the loco, above the drivers. If you add them to the tender or a following car, you make more weight for the loco to haul and reduce it's performance.

Useful Web Site

Bob Dirkson reports that there is a web site that provides all sorts of scale "stuff" like table cloths, movie posters and newspapers in scale that you can print out and use in your buildings. The site is:

<http://www.printmini.com/printables/ph.shtml>

Now you see it.....

In the October 2003 issue of Garden Railways there was an advertisement for a Noah's Concrete Creations here in Tucson. The ad spoke of railroad designs, scratch built buildings, trestles and bridges. A new supplier here in Tucson would be pretty exciting stuff, so I tried to reach them by telephone. No answer.

With the holidays over I recently drove down to the address in the ad. The building is empty and appears to be abandoned. Oh well, I guess it was too good to be true. If we want concrete buildings we are just going to have to heed Janet Mitchell's advice at the workshop and Dottie Fagg's article in the January issue and build them ourselves.

TTOM Swap Meet

The club set up the children's layout at the Toy Train Operators Museum's swap meet on January 17th. A large number of club members dropped by during the day and after a couple of quiet hours at the start the layout was crowded with kids running the little 0-4-0 LGB Stainz with it's two gondolas with circus cages and the Roadrunner and Coyote push car.

There was no raffle at the swap meet but club members manned a table and energetically sold tickets to the open house. A total of 28 tickets were sold at the six hour event, and many posters advertising the round about were handed out.

For Sale

Don Halver of the Phoenix club, Arizona Big Train Operators, has a USA Trains Northern Pacific North Coast Limited passenger set for sale. The set consists of an A and B F-3 unit and five corrugated aluminum passenger cars (Coach, Diner, Sleeper, Vistadome and Observation).

Don says the list price was \$2,100 and he bought it from San Val for \$1,350. He is asking \$1,295 and says the set has only been run once on the ABTO layout. Contact Don at Gscaledon@aol.com or 602-506-4267 (work) or 480-786-4138 if interested.

New Member

TGRS extends a warm welcome to Richard Creamer our latest new member.

The Tucson Garden Railway Society is a non-profit corporation incorporated in Pima County, Arizona. Society members are interested in all areas of garden and modular large scale railroading. We welcome new members and hope you will consider joining. Members help each other build layouts and learn about railroading and modeling.

The TGRS dues are \$30.00 per year and are due on June 30th of each year. For new members dues are pro-rated at \$2.50 per month remaining in the year until June 30th plus a \$15.00 initiation fee, the first year. Additional name badges cost \$1.00 for each badge after the first.

If you are interested in the TGRS please contact one of the officers at the phone number listed in the Calendar section below. If you wish to join immediately, send a check and your name, address and telephone number and the names for any additional badges to:

Ibby Ulmer
4935 N. Craycroft Road
Tucson, AZ 85718

Calendar of Events

Feb 6	Set Up for Great American Train Show, Pima County Fairgrounds
Feb 7-8	Great American Train Show (GATS)
Feb 10	BOD meeting at Nick Buchholz's home, 7:00 PM
Feb 14	Regular meeting at Sallie and Jay Sander's home 1:00 PM
Mar 20	Regular meeting at Barbara and Bill Dillon's home 1:00 PM
April 15-25	Pima County Fair at fairgrounds
May	Regular meeting at Herb & Terry Hoffman's - Date and time TBD
June	Open
July	No meeting
August	Denver Convention

TGRS Officers and Board of Directors

President:.....Nick Buchholz.... 520-744-4932
V-President:..... Norm Ulmer.....520-299-9401
Secretary:.....Ellen Stoesser.....520-577-1210
Treasurer:.....Willis Fagg.....520-760-0147
Editor:.....Dick Izen..... 520-498-4634

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