



Tucson Garden Railway Society's

Time Table

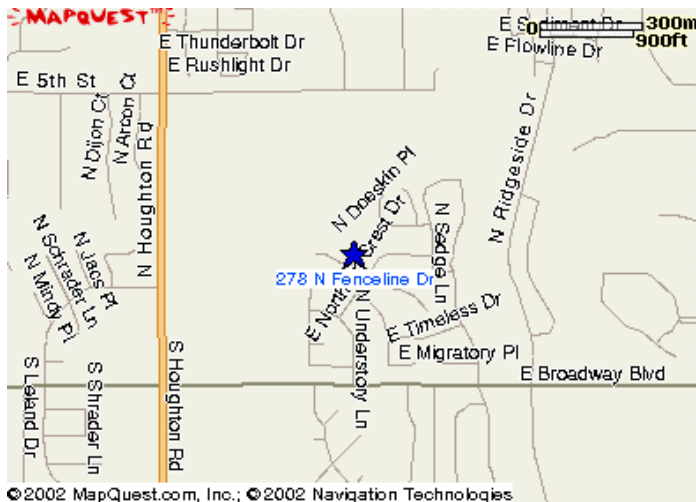
Society web site: [//tgrs.homestead.com](http://tgrs.homestead.com)
Editor e-mail: dizen@aol.com

February 2003

Meeting For Month

This month's meeting will be on February 15, at 1:00 PM at
Rick & Debbie Taylor's
278 Fenceline Drive
AZ 85748
Phone: 520-886-1134

Directions: Take Broadway east past Houghton Road. Turn left onto North Understory Lane (the first left after Houghton). Follow Understory around to the first right which is East Northern Crest Drive. Follow Northern Crest to the first left which is Fenceline Drive. The Taylor house is near the end of the cul-de-sac.



The Silverado Hills Rail Road

The SHRR began in 1998 as a 90 foot loop around a Yucca tree and back to a small Palm tree. It quickly grew to 600 feet of track spanning the rear and both side yards. The railroad has various turnout and has even squeezed track between the block wall and the pool equipment. Rick reports that he really loves the hobby and that his wife is very tolerant.

A drip watering system feed the plants which are primarily desert hardy with seasonal flowers added . Rick says he has had good results with Japanese Box Woods, Upright

Rosemary, Green Santolina. Blue Carpet Junipers, Gold Edged Euonymus, Blue Point Junipers and Dwarf Golden Arborvitae, though the Arborvitae are hard to trim and keep small.

For structures the SHRR has two 17 foot trestles, a caboose converted to a hobo's home, a scratch built saloon, scratch built shipping depot, a 3 stall engine house, a stamping mill, several bridges and a grave yard. The structures are lit from Malibu (12 volt outdoor lighting) transformers. All lights and track power is controlled from a console on the back porch.

Editor's Rants

There was no meeting in January so there are no minutes for this newsletter.

We need members to share their tips, techniques and other knowledge. Ian Shivak, Bob Dirksen and Roy Eberbach have contributed this month. When may I expect to see your contribution?

One of the things that is fun in our hobby is building something different than anyone else's railroad. Too often all of our buildings look like the ones on everyone else's railroad because they all came from the same Pola or Piko kits. Still it takes courage to start out by cutting up a perfectly good \$60 or \$90 kit, especially the first time.

In this issue you will find an article that is the perfect low cost, first time kit bashing project. The base is a \$5 bird house and all of the changes are low cost and easy to do.

In fact you might even get daring and modify the author's methods. Try a tarpaper (sandpaper) roof instead of the shingles the author made. Or make a stone foundation instead of the wood one the author used. Let your imagination run wild. At this low cost you might even make two or three for various parts of your railroad.

Try this simple project and you will have something unique to your own railroad and, in addition to the fun you will have while building it, you will be able to point it out with pride to your visitors. The big thing is to take that first step.
1 Get out there and do it.

That One Inch of Depth

By Bob Dirksen

For those of us with small layouts, buildings are a real problem. The obvious answer to this problem is fascia, or building fronts along walls and fences. Building fronts, however need some relief to be believable. Adding an inch or two in depth gives a building more reality without seriously intruding on available space. There are several ways of doing this. One might buy false fronts and add depth himself, build fronts from scratch or buy three dimensional kits and bash each kit into two buildings by using the front as one building and the rear as another. I have used all three methods.

A fourth way is to take what is available at craft stores or garage sales. The hotel/railroad station in my village is a knickknack box shaped like a house. Turned around with the windows and doors cut in, sealed, painted and detailed it makes a reasonable building. My latest project, a firehouse/Moose hall is made from a 3/8 " plywood knickknack shelf purchased at a garage sale.



Bob's firehouse/Moose lodge at the Home Show.

I started the project by covering the back and sides with thin styrene. This provides a smooth surface to glue to and slows the weathering process. The places that cuts will be made in the brick fascia for doors and windows were painted black. The pre-painted brick sheet fascia was then glued to the inner styrene layer. The big doors are made from .040 styrene scored with a knife to simulate boards and scratched with a razor saw to simulate wood

grain. The doors are then painted and glued directly to the brick fascia. The door trim (and later the window trim) is styrene treated the same way. The windows and side door made from resin cast in Jigstone molds, are then cut into the fascia and glued in place. The trim is made from Plastruct angle material. The foundation is made from Jigstones glued to the bottom and painted. Since the brick sheeting that I used comes with a brick foundation I cut that off and used it for trim over the windows and doors. The roof is a sheet of styrene painted black and sprayed with Fleckstone paint to simulate a composition roof. The door hinges are from Ozark Miniatures and the siren is a surplus engine bell painted red. The lettering is 1/4" vinyl lettering. The trim was painted with acrylic pewter gray craft paint (It matches the Plastruct and saves painting.) and the entire building was over sprayed with a matte sealer.

Adding realism to a layout is really a matter of adding life to it. We make buildings look like they are being used by the details we add. Those details give each building a distinctive look. That's the reason for the incorporation of the Moose Lodge into the building. Why Moose and not Elks? I couldn't find elk antlers.

Although I didn't put lights in this building, these buildings may be lighted just as a full dimensional building. I am already planning outside lights for over the doors.

A CABIN THAT'S NOT FOR THE BIRDS! By Tom Taggart

The following article is a reprint from the Washington, Virginia & Maryland Garden Railway Society's' newsletter [The WV&M Line](#). Words and pictures are copyrighted by Tom Taggart, the author, and this reprint appears with his very kind permission.

There is a spot in the "woods" on my Claddagh Valley Railway that seemed the perfect place for some enterprising local residents to set up a still. Needing a building for the "shiners" to store equipment and produce, I began looking for a back woods cabin. The plastic kits available at local hobby stores were too expensive for my budget and none were quite what I was looking for. So, I decided to try my hand at scratch-building a log cabin. I had plans for a "lobsterman's shanty" I found in a back issue of Garden Railways magazine that came close to what I wanted and I thought I could base my cabin on those plans. While I was looking for materials and thinking about how to go about constructing "log" walls for minimal investment, I found a birdhouse in a local Michael's store. This building already looked like a log cabin and with a little modification would look perfect next to a still. Besides at only \$4.95 I didn't think I could pass it up!

The first order of business was to remove the door and perch from the front of the building. To do this I first had to remove the top of the building and the porch roof. This was an easy enough task and gave me free access to pry off the offending door. I didn't like the looks of the wooden

chimney so I removed that as well. I also trimmed the base on the sides so it was flush with the walls.

Using the window and door patterns from the lobsterman's shanty I cut the frames and sashes from strip wood. I used CA cement to glue the small pieces of the window frames together. Everything else on the cabin is glued together with Liquid Nails. I glued clear plastic "glass" to the back of the windows and, since I did not plan to put a light in this building, painted the backs of the windows flat black. I glued the windows and door in place after I made the "gaps" between the logs deeper using a gouge from an X-acto tool set.

The stone chimney was constructed by first making a rough form from scrap Styrofoam. I had planned to glue small pieces of gravel on this form one at a time. However, my wife suggested putting the gravel in a shallow pan and, after coating the form with glue, pressing it into the gravel. This actually worked quite well and saved a lot of time. The chimney was made in two pieces that I glued together after the stones were attached. I did this because I wanted to have the chimney larger at the base where the fireplace would be. I filled the gap between the pieces with individual stones and also glued stones around the top to extend it above the Styrofoam.

I scribed the porch floor and roof to simulate planking and glued the porch roof to the edge of the main roof using the supports that came with the building. Actually I had to replace one with a piece of dowel as I broke it when I removed the roof. I added a front step and footings around the building made from scrap pieces of the base I cut off and strip wood.

To simulate weathered wood, I gave the building a coat of thinned down gray paint and painted the spaces between the logs with white to represent the chinking material. I painted the window frames prior to attaching the "glass" and gluing them in place.

Without a doubt, the most time consuming part of this project was the roof! I wanted it to have a cedar shingle look and intending to spend as little as possible for materials, I hit on the idea of cutting the shingles from craft sticks I already had and gluing them on individually. So I did...all 385 of them! I used some stain left over from a non-railroad related project to color the shingles after they were glued in place. (Note to myself: next time, don't be such a cheapskate and spring for some commercially made shingles!)

The final step was to add some details and "weathering" to give the cabin character and spray the whole building with a couple of coats of matte clear Krylon paint to protect it from the weather. The shotgun next to the door (to discourage revenueurs), washtub, and apple-barrel also came from Michael's.



Birdhouse before modification to log cabin, front.



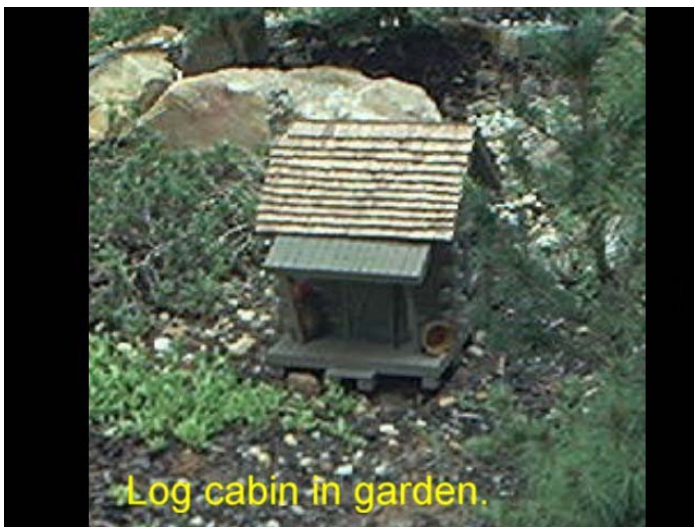
Birdhouse after modification to log cabin.



Birdhouse prior to modification to log cabin, rear.



Birdhouse after modification to log cabin, rear.



Log cabin in garden.

I really enjoyed converting this birdhouse into a useable structure for my garden. In fact, before I completed this cabin, I had purchased a couple more birdhouses that I intend to convert into a school and a church. It was fairly easy, inexpensive, and a whole lot of fun. Try it sometime.

Wiring for your Garden Railroad

By Ian Shivack

1. Wire Size

One of the questions asked by newcomers to model railroading is what size wire to use to power their railroad. I recently read an article in Railroad Model Craftsman by Don Fiehmman which talks about this issue. Don was talking about using DCC (Digital Command Control) on indoor layouts but his comments apply equally well to our outdoor railroads. In fact, because our outdoor railroads are so much larger than most indoor layouts correct selection of wire size becomes even more important.

Wire sizes get larger as the gauge number gets smaller. Thus 18 gauge wire is much smaller than 10 gauge wire. If you select too small sized wire (too large a gauge wire) you will get voltage drops to your track. This will cause

your locomotives to slow down and may cause other problems if you have accessories driven from track power.

Having said that there is no absolute answer to the question. It depends on how large your layout is, how many power feeds you are going to run, how strong your power supply (often called a transformer) is, what kind of locomotives you run, how heavy your trains are and how steep are your grades. Small power supplies such as those found in starter sets often are limited to around one amp of power and often produce only 12 to 18 volts. If you are running only one engine on a very small layout this may be satisfactory. For most outdoor layouts, however, you will want a power supply with several amps of power and voltage output of up to 20 to 24 volts. You can always reduce voltage to run trains more slowly but if you can't get enough voltage to the track you may be disappointed in your railroad's performance.

The following table shows how many feet it takes for a feeder wire (the wire from the power supply to the track) to drop one volt with various sizes of wire and different power demands. The numbers may not match your need exactly but you can interpolate. When in doubt go with the heavier feeder or with more feeders. After all you want to only have to do this wiring once. As you can see the smaller the wire size the less feet it takes to loose voltage. Similarly the more amps your train requires the less distance you can go without needing additional power feeds to the track to avoid losing voltage.

Wire Gauge	Feet for 1 Volt Drop		
	2.5 amps	5.0 amps	10 amps
10	200	100	50
11(a)	160	80	40
12	125	63	31
13(b)	100	50	25
14	80	40	20
15(c)	60	30	15
16	50	25	12.5
18	30	15	7.5

- (a) two 14 gauge wires in parallel
- (b) two 16 gauge wires in parallel
- (c) two 18 gauge wires in parallel

Thus if your railroad was a loop 100 feet long and you wanted to run two feeders to opposite sides of the loop, you would have no more than a 1 volt loss if you use 16 gauge wire for trains drawing 5 amps or less. That is because no point on your 100 foot loop would be more than 25 feet from a feeder. If you were running heavier (10 amp) trains you could get the same result from running two sets of 16 gauge wire in parallel (the equivalent of single set of 13 gauge wires).

As a practical matter though, if you were running all that gauge 16 wire, you would probably connect to your loop at four equal points along the loop which would mean that your trains would never be more than 12.5 feet from a feeder. That would limit your voltage loss to no more than

one volt even if your trains drew 10 amps of power. Using more small size wire may be less costly than fewer feeders of larger wire size.

Of course all of the above assumes that you have tight connections at your rail joints and that you are running on clean track. If not you will experience additional voltage drops.

2 Type of Wire

For outdoor railroads always use stranded – not solid-wire. Solid wire, the type used in most home applications, will break if flexed more than a few times. You should either buy tinned wire or should tin the ends to make solder connections easier. While you can solder heavy gauge wire directly to your track it requires considerable heat and is difficult to do without melting the plastic ties. Use thinner wire as jumpers to connect your long feeder cables to the track. The jumpers are short enough that they won't cause a voltage drop problem.

3. Blocks

Although you can wire your layout as one block to keep things simple, there are advantages to splitting the layout into multiple sections or blocks. First you can isolate any electrical problems to the block in which it occurs. Secondly you can operate multiple trains on the same loop using block control (to be further explained in a later article if readers wish). You can also get higher current availability by having different power supplies for each block. Trains in each block will draw current only from the power supply connected to that block, leaving trains in other blocks to be powered from other power supplies.

I Think I Knew That # 1

By Roy W. Eberbach

The column presents my ideas and is not intended to be the only 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.

#1-1 What kind of glue do you use outside on your railroad?

I have found that to glue plastics to plastics "Quick Grab Cement" works well. It can be used in the regular way or as a contact cement. It is available from the Lathrems, San Val or selected local stores. For gluing plastics to other materials or different materials to each other, "Elmers Latex Caulk" holds well. It is slow drying but remains flexible outside. CA or super glues are quick to dry but do not seem to hold up well for me.

#1-2 Where do you get all the detail material you use on the railroad?

One mistake that model railroaders of all scales make, is that they assume that the Hobby shop has what they will need. I shop a number of stores frequently. In the last two months I have found detail material such as people, animals, freight, vehicles, junk, etc. in the following types of stores. I shop at craft stores (Michael's), toy stores (KB

Toys), big box stores (K-Mart), home remodeling stores (Lowes), hardware stores (Ace), miniature shops (such as doll house supply stores), drug stores (Osco) and dollar stores. I also visit antique and collectable stores but you must know the prices before buying at these places.

#1-3 How do you know what items are the right size for your railroad?

I have always felt that if it looks right to the owner of the railroad then it is just fine. I have found, over the years, that the eye can be fooled by context. An item that looks good in the store can be too big or small on the railroad. I carry "Scale Cards" for each of the three scales I model in. These clear plastic wallet size cards have an outline of a man and woman printed on them along with a scale rule and other things to help you keep things in perspective. I got my cards at a NMRA convention but I know that they are available for mail order through their ad in Garden Railways.

Home Show Raffle Winner

The newspaper reported estimated attendance of 30,000 at the Home Show, so we showed our modular layout to many people. The raffle winner was Roy Scheidel of Sahuarita, shown below with his prize.



Willis Fagg, the TGRS Treasurer, reports that the raffle raised over \$422 for the club after deducting for the cost of the prize. There were 657 tickets sold for a total revenue of \$582.

Royal Gorge War

The following came from Bob Dirksen.

Much has been made of the Royal Gorge War between the Santa Fe (AT&SF) and Rio Grande (D&RGW) railroads. Despite the pictures of fortresses and armed employees, the "war" was fought largely in the courts; and only one person was injured by a gun. John B. Norwood recounts that incident in his book Rio Grande Memories.

"The only bloodshed caused by a firearm was when a Santa Fe soldier was caught with his pants down by a Rio Grande soldier. When the Rio Grande soldier found his wife entertaining the enemy, the Santa Fe man jumped out of bed, grabbed his clothes and jumped out the window. His pistol fell out of its holster, and the butt of the gun hit the floor and fired. The old single action Colts were apt to do this, and the heavy slug tore through the rump of the adulterer."

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 model 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:

Jan Lathrem,
1750 West Tangerine Rd.
Tucson, AZ 85737

Calendar of Events

Feb - March	Running at Tucson Botanic Garden
Feb 15	Meeting at Rick & Debbie Taylor's home – 1:00 PM
March 15	Meeting at Jim & Madelyn Cook's home – 1:00 PM
April 11-27	Setup and running at Pima County Fair
April	Meeting and open house at Gary & Peg Martin's home
May	Meeting at Glen & Janet Mitchell's home
June 5-8	Big Train Show on the Queen Mary in Long Beach, CA
June	Meeting at Norm & Ibbey Ulmer's home
July 9-13	National Garden Railway Convention at the Doubletree Hotel in Sacramento, CA

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