



Tucson Garden Railway Society's

Time Table

Society web site: <http://tgrs.homestead.com>
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June 2003

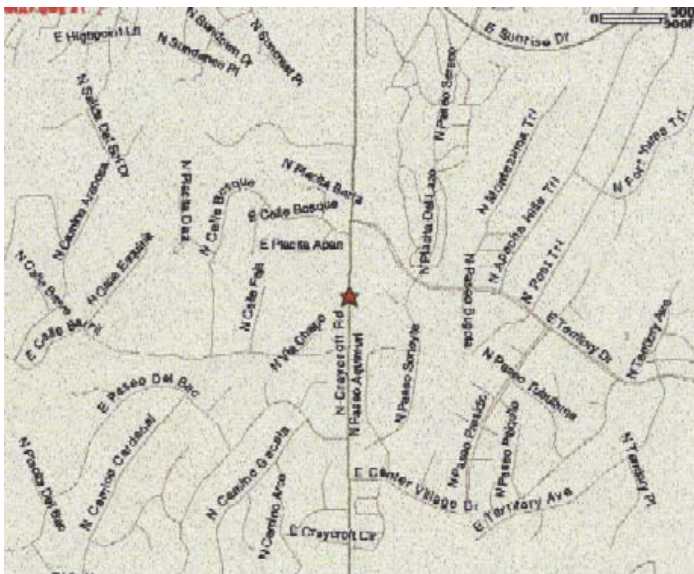
Meeting This Month

This month's meeting will be on June 21, at 10:00 AM at
Norm & Ibby Ulmer
4935 N. Craycroft Road
Tucson, AZ 85718
Phone: 520-299-9401

Directions:

The Ulmers are located about midway between River Rd. and Sunrise Dr. just north of Calle Barril. Although their address, 4935, is on Craycroft Rd., they are not located on the main part of Craycroft, but rather on a cul-de-sac which is an access road that parallels Craycroft and runs north from Calle Barril. Take Craycroft to North of River Road and South of Sunrise Highway. Turn west onto Calle Barril and immediately turn north onto the access road. As you drive up the road, you will see four houses, none of which is the Ulmers. Their driveway goes over the hill between the last two houses that you can see. There will be signs posted at the entry to the cul-de-sac.

The Ulmers have limited parking at the house, so we suggest that, unless you have a problem walking in, you park on the cul-de-sac, or car pool. Please remember to bring chairs.



The Hanging Mountain Rwy.

It started indoors in 1999 in our home office with track laid around the room above the door and windows and across the room with a tunnel through a mountain hanging from the ceiling. Thus, the name, "Hanging Mountain Railway."

We then cleared a section of our backyard and began the process of creating our garden railroad. As we are all aware, it is a never-ending process. What fun would it be if there were nothing left to do? So far we have about 320 feet of track with a tunnel, bridges and trestles and a long run which ends at a storage chest.

The era we are portraying is late 1890's. The engines are radio controlled and battery powered and are typical of the mining and logging industries of that era. There is a gold mine, a crusher mill, a saw mill and logging area, a cattle pen and barn, an engine house, coal tower, sand house, two water towers, the Canyon City station, hotel/saloon, sheriff's office, and a chapel modeled after the old chapel on Ft. Lowell Road which served the Fort when it was active. Recently added are: a blacksmith shop complete with spreading "chestnut tree," a livery stable, and the First national Bank. John Lloyd and Reese Thomas of Centerville, Ohio (Ibby's ancestors), have opened the Canyon City branch of their General Store and Post Office. The residential area is under construction. We wouldn't want the citizens of Canyon city to be homeless, would we?

Future plans include a loop to the west, to be known as the Cactus Flats Division, which will tunnel under a tall rocky mountain over which flows a water fall. The Company Sup't. has decreed that prior to starting construction on that line, a new turntable must be completed beside the engine house.

Some of the buildings are from kits, but many are scratch built from plans designed by Norm who is a retired general contractor. He's still building, just on a smaller scale. He is also in the process of scratch building a Mason Bogey engine from plans downloaded from myLargescale.com.

Editor's Rants

This is a big issue with two significant articles in addition to our regular columns. We have an article by President Nick Buchholz on using LED's instead of light bulbs. There are plenty of illustrations to help even an electrical dummy like me to understand it. We also have the second installment of Bernie Bland's scratchbuilt loco shed article.

My apologies to any who were offended by my typos in last month's news letter. I do know that shirts reads better when the r is included.

Annual Dues are due again. See paragraph on page 9.

Using LED's for Train Lighting

By Nick Buchholz

Most large-scale engines, cabooses and passenger cars have some kind of lighting built into them by the manufacturers. In general these lamps are incandescent lamps in older units and LED's in newer ones. Incandescent lamps are just like the light bulbs in your home and frequently burnout. LED's on the other hand tend to last for much longer periods. In addition LED's use less power and generate less heat. I hope in these articles to give you an idea of how to replace the incandescent lamps in your power and rolling stock with LED's.

About Electronics

First, a few words about circuits, circuit diagrams and wiring, in order to show you how things should be connected we will use schematic or circuit diagrams, an example is Figure 3, It consists of three parts and the wires that connect them. The parts are:

- a 9v battery - indicated by the pairs of short and long lines connected with the dashed line with the 9v next to it, a 12 volt battery would be the same except for a 12v next to the dashed line,
- a resistor – the rectangle with the 1k next to it,
- an LED – the triangle pointing to the line with the little arrows pointing to the upper right.

The lines in the diagram are the wires or leads connection the components in this simple diagram its easy to figure out where to connect wires, But in more complex diagrams this can be tricky lines may cross but there may not be a connection between the two wires they represent. To make it clear where you should solder wires together we will indicate a connection between two crossing wires with a dot at the cross like this:



As everyone knows electronics work on smoke, when you, "let the smoke out", they generally stop working. There are two sure ways to "let the smoke out". The first is to allow

more current to flow through a circuit than the part can handle. The second is to connect a polarized part backwards. Since LED's are both polarized and fairly low current devices we can easily "let the smoke out" of the LED's. Always carefully check your connections and if you have any questions please contact me and I'll try to help

About LED's

LED's or Light Emitting Diodes are semi-conductor devices designed to produce light of a certain color. Some LED's can produce different colors depending on the direction of current flow (bi-color LED's) we'll deal with simple single color LED's that you might use to replace a burned out incandescent lamp in the headlight/ backup lamp of an engine.

The LED's we want look like this:

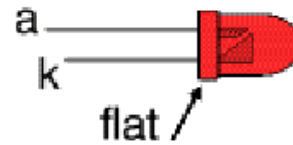


Figure 1

where the 'a' is the anode or plus lead, the 'k' is the cathode or minus lead (usually identified with a flat and the shorter lead on the package we use.) The circuit symbol for an LED looks like this.

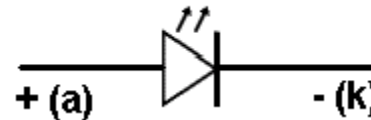
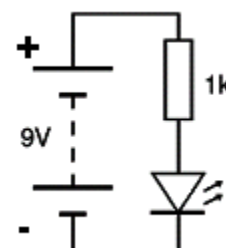


Figure 2

A circuit diagram probably will not be marked with the 'a' or + for anode and 'k' or - for cathode. If the diagram is not labeled remember the triangle points to the - or negative terminal. LED's must be connected correctly or they will not work You should connect the positive power terminal or lead to the + lead on the LED.

Never connect an LED directly to a battery or power supply! It will be destroyed almost instantly because too much current will pass through and burn it out. Most LED's must have a resistor in series to limit the current to a safe value. For quick testing purposes a 1kOhm resistor is suitable for most LED's if your supply voltage is 12V or less. Remember to connect the LED the correct way round!



2 Figure 3

Figure 3 shows a test circuit using a nine-volt battery which will tell you if your LED is working (The short line is the battery minus terminal).

LED's can be damaged by heat when soldering, but the risk is small unless you are very slow. No special precautions are needed for soldering most LED's. Practice your soldering before you do an LED. There are several good soldering tutorials on the WEB see: http://www.curcioaudio.com/sol_tut.pdf or <http://www.geocities.com/ammarini/soldar1.htm> LED's are available in red, orange, amber, yellow, green, blue and white. Blue and white LED's are much more expensive (\$3.00 vs. \$0.50) than the other colors. The most useful for headlights and backup lights on engines are the amber and, of course the expensive white. Most people think the white LED's are too bluish for engine lamps, however, Tamiya makes a yellow transparent paint that can be used to tone down the blue from the white LED's.

Calculating an LED resistor value

An LED must have a resistor connected in series to limit the current through the LED, otherwise it will burn out almost instantly. We need to calculate the value of R in the circuit diagram in Figure 4 below:

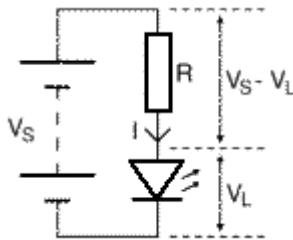


Figure 4

The resistor value, R to use is given by:

$$R = (V_S - V_L) / I \quad \text{Equation 1}$$

where:

- V_S = supply voltage
- V_L = LED voltage (usually 2V, but 4V for blue and white LED's)
- I = LED current (e.g. 20mA)

Note that the suggested values above should be verified by reviewing the spec sheet for the LED. In general these values will work if you don't have a spec sheet.

If the calculated resistor value is not available choose the nearest standard resistor value which is **greater**, so that the current will be a little less than you chose. In fact you may wish to choose a greater resistor value to reduce the current (to increase battery life for example) but this will make the LED less bright.

Replacing a head lamp or backup lamp with an LED

There are several steps required to replace an existing lamp in an engine or in a piece of rolling stock. First, we have to determine how the original lamp was powered. Second, we have to choose a replacement LED and resistor.

Third, we have to wire in the new LED lamp

Determining Lamp Power

The first step in the process is to determine how the original lamp was powered. There are basically three alternatives; direct track power, track power with a voltage divider and constant voltage lighting. Any of these can be combined with circuitry that makes the lamp directional, i.e. the headlamp only lights when the engine is going forward.

To Determine which of the six possibilities your engine uses we need to perform the following measurement. (The easiest way to do this is to put the engine on roller stands. but you can also lay the engine on its side and apply power to the wheels) To do this measurement you will need a voltmeter, a transformer and an engine whose lamp will be replaced.

First, open the engine enough so you can get to the lamp wires. We need to measure voltages directly at the lamp wires. If the lamp is already burned out just connect the voltmeter across the two lamp wires like Figure 5.

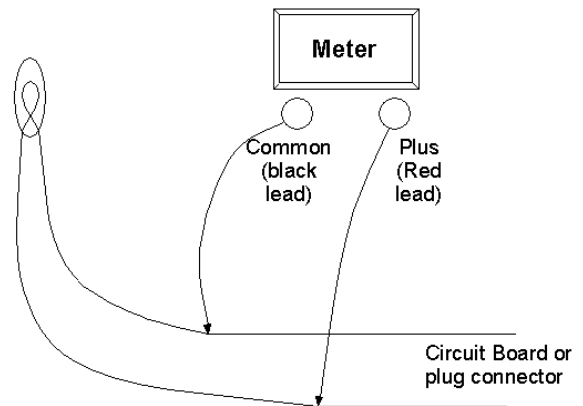


Figure 5

If the lamp is still working you will have to remove it by unsoldering or cutting the wires. Now turn the meter on and set it to measure voltage, we want to measure the voltage going to the lamp under several conditions. Make a table like this:

Controller Setting		Measured voltage	
Percent	Voltage	Forward	Reverse
10%			
25%			
50%			
75%			
100%			

Table 1

Now set the train controller to the approximate levels in the first column in forward and reverse and fill in the boxes. (Note: It would be more informative if you noted the actual voltage on the track at the percent levels given as well.) If you are getting negative voltages reverse the voltmeter leads and mark the positive lamp lead.

What does it all mean

Now, you have a set of readings how do we interpret them. First, if the forward or reverse column has voltages and the other column reads zero (or close to it), you have directional lighting. If the column with voltages has nearly the same voltages as the controller setting then you have direct track power. If the column with voltages is always a constant fraction of the voltages in the controller setting column you have track power with a voltage divider. If the column with voltages stops increasing before the 100% level is reached you have constant voltage lighting. Whatever voltage scheme is currently being used by the engine we are going to install a replacement using an LED which gives us directional, constant voltage lighting.

Engine has constant voltage directional lighting

This is the simplest case. The table you generated during testing will look something like this:

Controller Setting		Measured voltage	
Percent	Voltage	Forward	Reverse
10%	2.4	2.4	0.0
25%	6.0	5.0	0.0
50%	12.0	5.0	0.0
75%	18.0	5.0	0.0
100%	24.0	5.0	0.0

Table 2

Now, decide if you want to use a white or amber LED. Using Equation 1 plug in the values as follows:

$V_i =$ 2.0 volts for an amber LED or
4.0 volts for a white LED

$V_s =$ the measured voltage at 100% 5.0volts in this case

$I =$ the current rating of the LED, 20mA is usually safe if unknown.

For a white LED:

$$R = (5.0 - 4.0) / .020 = 50 \text{ Ohms}$$

For an amber LED:

$$R = (5.0 - 2.0) / .020 = 150 \text{ Ohms}$$

For this application a ¼ watt resistor should be enough. To connect the LED carefully solder thin (22 or 24 ga.) wires to the LED. I shorten the LED leads to about 3/8" and then solder. Be sure you remember which lead is the cathode. Use red wire on the anode and black wire on the cathode. Now find a place where the old bulb wires can be removed and replaced. If there is a plug use that, if they are soldered to a circuit board unsolder them. As a last resort you can just cut the wires and connect to them. Be sure you keep track of where the positive lead is. Now solder the resistor to the positive connection point then the red wire to the other lead of the resistor then the black wire to the negative connection point.

What you should have is something that looks like this:

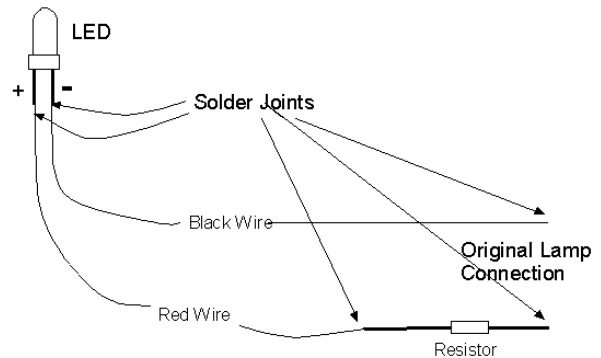


Figure 6

When everything is connected applying power to the Locomotive should result in the LED lighting up. If this doesn't happen check that you have the polarity correct i.e. plus to plus minus to minus. and that the solder joints are good. If you connect a voltmeter to the original lamp connection you should measure the same values as when you did the original test. If not talk to me and we'll see if we can fix the problem.

Next time we'll tackle the more complex problems associated with direct track power, direct track power with a voltage divider and all engines with non-directional lighting.

I THINK I KNEW THAT! #5

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.

#5-1. What books and catalogs should I have when building a Garden Railroad?

In model railroading, the Walthers Catalog which is published each September is considered to be the equivalent of the Bible. Walthers also publishes a Big Train Catalog every year or so. These will tell you what is available overall. You should have the catalogs of your favorite brands of trains. (LGB, USA, Aristocraft, etc.). Micro Mark puts out a helpful tool catalog which will help your work go smoother (1-800-225-1066). A good introduction book is called "The Large Scale Model Railroading Handbook" by Robert Schleicher. Of course, Garden Railways Magazine is tops and will keep you current on what is happening in our hobby. While most companies now have web sites, I still find the printed page to be more helpful than the flickering screen. However if you want to check out the web try gardenrailways.com or www.largescaleonline.com.

#5-2. How did you build the Video Car we saw operating on the club layout?

A year or so ago I picked up a tiny video color camera which has many uses. The unit is about one inch cubed and transmits a picture on channel 16 on a regular TV set. Cost then was about \$100.00 which was much cheaper than similar units. Then I got a Hartland Work Caboose

and painted it for the PRR. Next I built a platform with railings from spare Pico and Pola parts. This platform drops into the car and is not glued to the caboose. Two TV men from Preiser (one with camera on tripod) completed the video car. I drilled a 1/2 inch hole in the end of the car under where the platform sits and mounted the video camera on the floor of the car using a thin piece of foam to act as a spring mount. This helps to keep the picture steady. The nine volt battery which powers the camera / transmitter also fits under the platform. One battery seems to power the camera for about an hour and one half. The transmitter is strong enough to provide a picture from all over our club layout. Inside the building at the fairgrounds there is some interference, but this is also present with more expensive units. Total cost of the project was about \$160.00 Also the camera can be removed from the G Scale Car and be used in smaller scales. The video camera is available from Show Me Model Railroad Co., 810 Main St., P. O. Box 53, Grandview , MO. 64030

#5-3. Do you use Super Glue (CA type glues)?

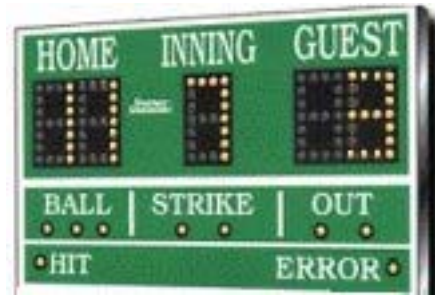
The word when using ca type glues is CAUTION. There is a place for these fast acting glues in our hobby but you can do damage to yourself and to your models. Most ca type glue will eat plastic so you do not want to get any on the surface of your work. Next, you can glue yourself to your models or your skin to your skin as the glues are very thin and run fast. Kids should not be allowed to use these glues except under strict adult supervision. There are two accessory items which you should have on hand. The first of these is FLASH BACK which is a chemical which when sprayed on the parts or figures glued together with CA will loosen the glue saving parts and skin. It must be done soon after the accident so keep FLASH BACK handy. Next there is FLASH TAC which speeds up the gluing action of ca. It is a spray that is applied to the parts after the glue has been applied. The parts or fingers will set almost immediately. Be very careful when using these products. In addition it has been my experience that these ca glues do not hold up outside as well as some other glues.

Rail Bits # 3

(A stopover at the Digital Station) by Jerry Tulino

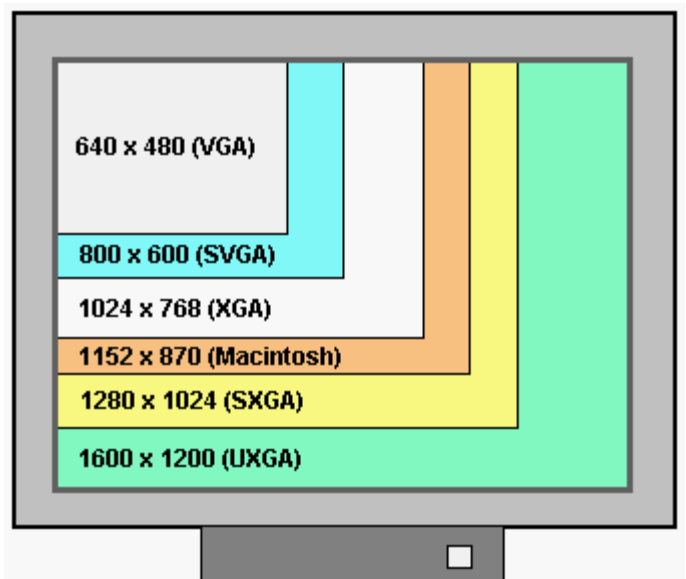
What does all this talk about "screen resolution" and "800x600" mean to me?

Since you cannot change the physical size of your screen, in order to display more information on it, you have to change the size of the characters displayed. The best way to describe the relationship between "screen resolution" and the visual impact that changing it has, is to consider a scoreboard.



By analyzing the number "3" in this picture, we can see that it takes a maximum of 4 lights horizontally and 7 lights vertically to form any single character/number. We could express the "resolution" of any single number on this scoreboard as "4x7". We could also say that it requires 28 lights to draw a number. Now, suppose there were 8 lights horizontally and 14 vertically in the same size area. The new resolution could be expressed as "8x14" or 112 lights.. We could now draw 4 numbers (which still only require 28 lights to be drawn) in this space, but each number would be physically only 1/4 of the size it was before. As you increase the resolution (number of lights) you, therefore reduce the size of the character/number you display in that space. A computer monitor functions the same way. It requires a certain number of lights (called "pixels" in computer terms) to draw each character. If you increase the number of pixels on a screen you can display more information but each character will be physically smaller that it was before. The term "800x600" means that there are 800 pixels horizontally and 600 vertically.

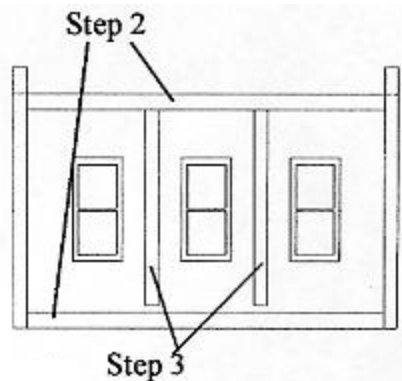
This picture graphically shows the difference in the amount of information that can be displayed on the different "standard" screen resolutions. For example, if your monitor resolution is "800x600" (SVGA), the amount of information that can be contained in the area labeled SVGA will fill your entire screen. If your screen is set at "1280x1024" (SXGA), the same information that filled the SVGA area will require only 1/4 of the space on the screen set to the SXGA size.



Here's another graphic representation of resolution...

800x600	800x600	4 screens of 800x600 can display the same amount of information as 1 screen of 1600x1200
800x600	800x600	

Next month's article will discuss changing your screen resolution.



Freelance Locomotive Shed

EDITOR'S NOTES:

All of the prior month's warnings about language differences, measurements in mm and only roughly translated, and the need to resize for most locomotives apply. So does the warning that once you try this and find out how easy it is and how much fun you can have, scratchbuilding may become addictive.

Freelance Locomotive Shed

By Bernie Bland

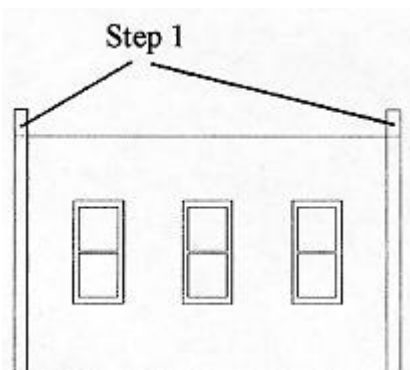
The following three part article first appeared in Garden Rails the magazine of the LGB G Scale Model Railway Club of Australia and is reprinted here with the permission of both the author and the magazine

Part 2 Assembly

Sides

Step 1

Cut 4 12mm (15/32") square sections of material at 195mm (7 11/16") long and fix these to the ends of the side walls. Keep the bottoms and front edges flush and let the extra extend over the top.



Step 2

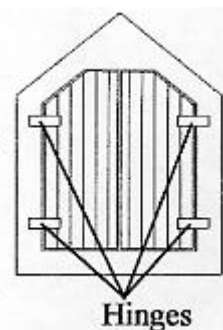
Cut 4 pieces to fit in between these for the top and bottom edges of the side walls. Use 12mm (15/32") panel pins and PVA glue (this is where the werrington cross-pien hammer is handy, as the cross-pien is used to start the panel pin as it slides between the finger and thumb). Clean off the surplus PVA glue with a damp rag.

Step 3

Set out the position of intermediate supports that go in the centre between the windows, measure the distance between the two horizontal stiffeners subtract the thickness of the plywood floor and cut these intermediate supports at this measurement. Fix these into position keeping the top tight against the top horizontal stiffener.

Ends

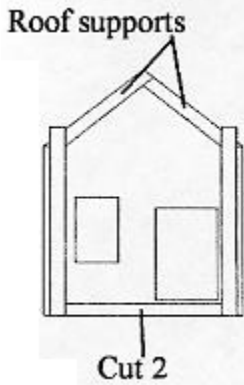
Lay the engine door end down flat and check that the doors fit evenly with about 1mm (1/32") gap on the sides and top and about 2mm (3/32") gap between them. The doors may need sanding to ensure these clearances. When you are happy with the fit of the doors, fix the hinges (I used 7mm (9/32") Brass Escutcheon Pins and clinched (bent) them over on the inside). Put the hinge in position, 20mm (25/32") up from the bottom of the door and 10mm (13/32") down from the top corner and drill suitable size fixing holes using the holes in the hinges as a guide.



At this stage it is recommended that you sand, prime and paint the inside, as it is a lot easier than when it is together.

Fix the ends to the side walls, cut off the tops of the side wall supports to suit the angle of the end walls and fit the remaining stiffeners: -

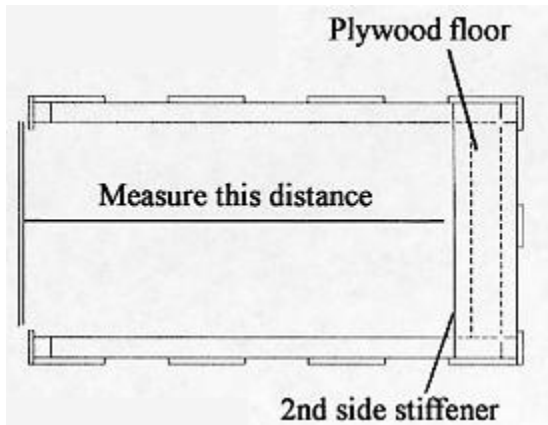
Single door end - measure the distance between the side stiffeners and cut two at this measurement. One is fixed to the end wall and one will be fixed to the floor.



Roof supports - cut a 45° angle on a piece of 12mm (15/32") stiffener and butt this up against the side wall support and while keeping the top edges flush mark the inside edge with a sharp pencil. Turn the piece around so that it butts into the other side wall and mark it for length using the pencil mark that you have just done. Cut this side to length, fix into position and then cut and fix the other side. Do the same for the other end. Sand all the external corners so that they are flush (use some filling material if necessary).

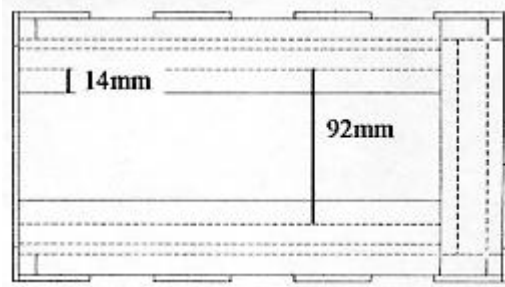
Floor

Measure the inside width of the shed at the single door end and cut a piece of 45mm (1 25/32") wide and at this length. Two corners will have to have a 12mm (15/32") x 12mm (15/32") checkout in them so that they fit around the corner stiffeners. Fix this piece into position and then fix the 2nd stiffener between the two bottom stiffeners, flush with the front edge. If all your measurements were accurate when you cut out the wall this piece of floor should finish flush with the level with the bottom of the door opening. If it's lower fill in the gap with fibreglass or use a flat file to remove the excess ply.



Measure the distance from the front stiffener to the inside ply face at the front of the shed and cut two 12mm (15/32") x 12mm (15/32") supports at this measurement. Find the centre of the front stiffener and then mark 46mm (1 13/16") each side of the centre point, this marks the front edge of the side floor supports (this suits the length of LGB sleepers). Fix the side supports in place with the front edge in line with this mark and keeping them parallel to the side walls. Cut two strips of ply for the side floors, wide

enough to butt into the side walls and overhang the floor support by 14mm (9/16") and long enough so that it fits between the back floor and the inside of the ply at the front of the shed. These should slide under the middle side wall stiffeners and finish flush with the top of the plywood at the front of the shed.



Roof

Cut one piece of ply 127mm (5") x 390mm (15 11/32") and another piece the same length but the thickness of the ply narrower. Measure the distance between the two end walls and cut a stiffener 1mm (1/32") less than this. Mark the center of this stiffener and the centre of the narrower roof member and fix the stiffener to the roof member with this centre marks in line. Keep the edge of the stiffener flush with the edge of the roof ply. The other roof member can now be fixed to the stiffener keeping the ends and top edge flush.

Shingles - The shingles were made out of manila folder cardboard with the profile set out using Microsoft excel and then printed out on a bubble jet printer. The settings for excel are: -

Column width	8.43
Row height	42
Border	Sides double lines Top and bottom single lines

Set out every second row with these settings and about 6 pages need to be printed to give enough shingles. Cut these strips so that there is a row of shingles and a blank row above it. The slot between each shingle was cut using two stanley knife blades superglued together and the top cut separately.

Prime the roof material and when the paint is dry start by gluing a blank row at the bottom of the roof and over lap this with a row of shingles and a blank row combined. Continue to over lap the blank row with a row of shingles until you reach the top (about 9 rows) off setting each row by half the width of a shingle. Either PVA glue or a glue stick are suitable adhesives, but clean of the excess as you go. Repeat for the other side and the cap the roof off with either plastic corner mould or folded cardboard. Paint this well with thinned paint so that it soaks into the cardboard and finish with the colour of your choice.

Next issue we will add the finishing touches to the exterior wall and trim the plywood that is under the engine shed doors so that trains can enter.

Minutes of May Meeting

By Peggy Martin

Meeting was called to order at 10:10 on May 17, 2003, by President Nick Buchholz. Thanks to Glenn and Janet Mitchell for hosting the meeting, sharing their wonderful layout, and beautiful views!

Minutes from the last meeting, that were in the newsletter, were approved.

Treasurer Report: by Norm Ulmer (Willis is on vacation)

Balance of \$2,847.42. Twenty-four members took advantage of the Garden Railway mag. offer.

Made \$1470.00 at the State Fair, less cost of train (\$105 approx)

We need to purchase train for Home Show in June. (American)

Next Board Meeting, Monday, May 19th, will discuss budget.

Newsletter: Apologies for spelling errors in last month's newsletter. ☺ Dick also shared a birdhouse that he made into a log cabin, and pointed out Gary Martin's impressive scratchbuilt five stall engine house.

Vice President: Norm mentioned that the State Fair had a great turn out, many compliments. It was suggested that we send a letter to County Fair Committee, thanking them for their efforts, etc. Norm will take care of this.

June 13, 14, 15th Home Show. Sign up sheet was passed around. Set up on June 11 at 1:00 and June 12 at 9:00 AM. If you sign up please show up at that time.

Toy Train Operators Show: June 7th At Roadway, I-10 and Grant. Small children's display. Request was made for set up and to run, four people raised their hand.

Sacramento Convention: who is going, tell Norm, so we can share rides, etc. (Possible River Boat dinner trip)

On Sundays at 10:30, Channel 6, good program on trains called "Tracks Ahead" (Real trains, garden railways, etc.)

Membership: (Ibby) If you have a fairly new e-mail please let Ibby know. Check the roster to see if your e-mail is current so she can update.

Old Business

Future Permanent Layout Committee: met with Dave Tiffenbach after this meeting.

Education Committee: Phyllis Dirkson and Janet Mitchell will work on this but need a few more volunteers. If interested contact Phyllis or Janet.

New ventures: Roy Eberbach needs people on this committee: Possible Mall Show, Garden RR tour for public.

If you want a shirt, hat, stickers, contact Joe Stoesser.

New Business

Board Meeting at Nick's on Monday 7:00 (May 19th) To be discussed:

Review by-laws

Discuss future budget

Everyone and anyone is welcome

Chris Lawson passed away, Memorial set for May 18th, if interested in attending the services, talk to Gary Martin after meeting. Tom Geisel passed away, services this afternoon.

Dave Tiffenbach has the name of a gentleman who wants to sell lots of Lionel stuff, if interested talk to Dave.

2008 Convention possible for Phoenix, they have been in contact with Gary Martin. (They want our support as well as day trips during the convention) Florida is considering also putting in for the convention in 2008. Alan Lathrem felt that the Florida choice would be better due to the fact that there has not been a national convention in the East for many years.

Phoenix has suggested a Roundabout in November, still in planning stages.

Meeting was adjourned at 10:40

Garden Railways Renewals

Many of the club members took advantage of Garden Railways 20th anniversary offer to renew subscriptions at a special rate. Treasurer Willis Fagg reports the funds were sent and have been received by them. He believes that your August mailing label should reflect the new length of your subscription and asks you to check the label. If you have paid and it does not reflect the lengthened subscription please let Willis know.

Bylaws Changes Proposed

Your Board of Directors has approved a number of changes to the club's by laws proposed by the sub committee. The details of these proposed bylaw changes were mailed to you separately and will be reviewed and discussed at the June meeting. We will vote on these changes at the August meeting.

Board of Director's Meeting

By Ellen Stoesser

May 19, 2003

Pres. Nick Buchholz presided over the TGRS Board meeting, which was held at his house with all officers and members-at-large attending except Bob Hoffman.

Minutes of the March 7, 2003 meeting were read and approved with one date change.

Willis Fagg reported a current balance of \$2487.42 in the club checking account. Roy Eberbach asked "what the money was being spent on?". Willis explained about

three large expenditures the club had, rolling stock- \$1,904.54, modules- \$1,797.75, and storage- \$943.50. Willis also would like a note in the newsletter, or at the next meeting, to make sure members subscription renewal start with the August issue of garden Railways. Willis also presented the proposed 2003-2004 budget, which was approved by the board.

Newsletter: Dick Izen stated there was no need for the two extra copies of the newsletter as they would be gotten off the web. The 2002-2003 budget summary will be in the newsletter.

Events: Norm Ulmer reported on June 7, there will be a Toy Train Operators Swap Meet at the Rodeway Inn with 4/5 people needed to set up the Children's Layout. There was a sign up sheet passed around for the Home Show with set-up on June 11&12, with the actual show running June 13, 14, and 15.

Work Days: Nick reported there were still minor things to do. Joe Stoesser will go to Ace Hardware and purchase 4 new end switches. The club has been invited up to Phoenix for a round-a-bout in November. There will be more information at the August meeting.

By-laws Changes: Changes to the by-laws were presented to the board and after some minor word changes they were accepted by the board. The proposed by-laws will be mailed to the club members in a separate mailing in May to be discussed at the June meeting. A vote will be taken in August with a revised copy being mailed if needed.

Garden Railway Tour: Roy Eberbach
No decision was made on when it would be held, it was also suggested we collect food for the Community Food Bank. There are several free publications that might run an ad for us. The committee will report back on this and the Mall Tour.

Other Business: PA system. Buying a PA system versus a bull horn was discussed. It was decided to wait for Jerry Wilson's recommendation on this. The pros and cons of the phone tree were discussed. Better transformers for the Children's Layout, which limit speed and control reverse, are needed. Willis will check catalogs and it will be checked out at the TTOS Meet. This was tabled until more research.

Nick would like to get a LGB Mogul mechanism (\$113.00) and glue James on top. He would need to figure how to make the eyes move.

We will be getting a test version of a temporary tattoo for kids, maybe it should say, I drove the TGRS train.

Willis was wondering should we build small train layouts for handicapped persons.

Botanical Garden Update: Nick felt, with all the positive feedback, TBG will ask us to be there for Christmas again. These are three other ideas for the club and TGRS,
1. Build layout and it is theirs to run and maintain

2. Combined operation with costs being split
3. Buy land and we would put our own layout there

Budget for Fiscal 2003-4

The Board of Directors reviewed and adopted the following budget for the next fiscal year which was prepared by Treasurer Willis Fagg.

Budget	
Fiscal Year 2003-2004	
REVENUE	
Dues	\$2,763
Badges	\$0
Shirts	\$1,200
Bus trip	\$0
Raffles	\$2,250
Pre-Paid	\$0
Group Equip. Sales	\$600
GAT Prize	\$380
Donations	\$0
GR Mag Revenue	\$0
Misc.	\$0
Total Revenue	\$7,193
Expenses	
News letter	\$780
Membership	\$100
Modules	\$1,000
Prizes	\$540
Hats & Shirts	\$1,200
TBG	\$200
Storage	\$540
Insurance	\$325
Group Equip. Purchase	\$600
Round About	\$0
Misc.	\$350
Trailer	\$150
Tools	\$100
Meeting Fees	\$0
GR Mag Payment	\$0
Rolling Stock	\$500
Reserve (for new trailer, etc.)	\$808
Total Expenses	\$7,193

Annual Dues are due in June

The clubs fiscal year ends at the end of June and next year's dues should be paid this month. Willis will be accepting your payments at the June meeting (Make checks payable to TGRS) or you can send your dues to Willis at:
Willis Fagg
12440 East Ave. de la Vista Verde
Tucson AZ 85749

Raffle Winner



Don Clark, of Tucson, won the raffle at the County Fair.

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:

Ibby Ulmer
4935 N. Craycroft Road
Tucson, AZ 85718

Calendar of Events

June 5-8	Big Train Show on the Queen Mary in Long Beach, CA
June 7	Toy Train Operators' Swap Meet – Set up kid's display at Rodeway Inn 6:30 AM
June 11-12	Setup at TCC for Home Show – 1:00 PM on the 11 th , 9:00 AM on the 12 th
June 13-15	American Home Show at TCC
June 21	Meeting at Norm & Ibby Ulmer's home – 10:00 AM
July 9-13	National Garden Railway Convention at the Doubletree Hotel in Sacramento, CA
August 16	Meeting at George & Kathy Fitzner's home 10:00 AM
Sept 20	Meeting at Jay & Sallie Sanders' home 1:00 PM
Oct 25	Meeting at Neal & Winnie Mosely's home 1:00 PM
Nov 15	Meeting at Ken & Mary Karrels' home 1:00 PM
Dec	Meeting and Holiday lunch at Roy & Mary Ann Eberbach's home

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

Tucson Garden Railway Society
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