

## SCALING – PART ONE

By John Meyers

Why does garden railroading have so many different scales to deal with? If you are a new-comer to garden railroading, you might be as confused as I was when I started in the hobby. I wondered why there are five different scales that all run on the same width track. Which popular manufacturers, use which scale? The smaller the scale number, the bigger the locomotive and rolling stock appears.

Bachmann and AccuCraft use 1:20.3, whereas

LGB of America uses 1:22.5;

Aristo-Craft, USA Trains and Art Knapp Trains of Canada use 1:29, and

Hartland Locomotive (HLW) uses 1:24.

MTH-RailKing and again Accucraft use 1:32.

Count them! There are 5 different scales ranging from 1:20.3 to 1:32. These two extremes represent the two main railroad systems used in America. The two systems are standard or mainline gauge which is 4'-8 1/2" between the inside rails and narrow gauge which is 3'-0" inside rails. The only thing common for all of these different scales is the track width of 45 mm or 1.77 inches.

To demonstrate that the 1:20.3 scale represents the narrow gauge train system, let's do the math. First, start with the track width of 45 mm or 1.77 inches and divide by 12 in/ft, then multiply by your scale number 20.3 ( $1.77 \text{ in} \div 12 \text{ in/ft} \times 20.3 = 3.0 \text{ feet}$ ). Secondly, to demonstrate which scale represents the standard track system of 4' – 8 1/2", do the math the same way, but this time use the 1:32 scale. ( $1.77 \text{ in} \div 12 \text{ in/ft} \times 32 = 4.72 \text{ ft} = 4' 8\frac{1}{2}"$ ). The 4'-8 1/2" is the standard width of the track used today; therefore, the 1:32 scale, according to some modelers, is the true Gauge-1 for garden railroading. This scale converts to 3/8" = 1'.

LGB uses the metric measurement based on one meter between the inside rails of the track. The scale for LGB is 1:22.5 and goes like this: ( $1.77 \text{ in} \div 12 \text{ in/ft} \times 22.5 = 3.32 \text{ ft}$ ) which converts to 1 meter in the metric system. This demonstrates that the track width of 45 mm in scale units is 1 meter.

HLW manufactures their line of G trains in 1:24 scale. This scale works out prototypically to 3'6" width between rails. Many countries in the southern hemisphere use this system. It is also popular with modelers who make scaled buildings because it is easy and convenient to work with. This scale of 1/2 in = 1 ft is also popular in the doll house hobby. Once again the calculations go like this: ( $1.77 \text{ in} \div 12 \text{ in/ft} \times 24 = 3.54 \text{ feet}$ ) which converts to 3'6" between the rails.

Aristo-Craft and USA trains both have made the scale of 1:29 popular. Aristo-Craft decided that 1:29 scale was a much closer match to the 1-3/4" (45 mm) track gauge, to produce a visibly larger model than a 1:32 scale model. This seems to be an odd scale and if you do the math it does not seem to match any standard railroad. With the G-scale models, precise scale is not as important as proportions—the size of one model relative to another. However, if you are running trains in 1:32 and 1:29 scale, structures in your towns and villages made from 3/8" scale will all look good. On the other hand, if you are running both 1:29 and 1:22.5 scale trains, structures in your layout made from 1/2" scale will look good.

In summary, there are at least 5 scales to deal with in this hobby of garden railroading, and generally most of us do not pay a great deal of attention to them when it comes time to purchase a new engine that appeals to the eye. On the other hand, there are some who are conscious of scale and want to make their garden layout prototypical to the narrow gauge era of the 1890's and want everything scaled to 1:20.3. Or they want to stay pure to Gauge 1 and make everything resemble the standard railroad era of the 1940's and 50's using 1:32 scale or 1:29 scale because it represents the modern era of the big powerful diesels pulling container cars and center beam flat cars. No matter what appeals to you, let's keep the garden trains rolling!

**ABTO  
Committee Heads**

Activities

Glenn Sampson

Jim Kangas

Modules

Ennis Thompson

Jim Kangas

Phoenix Children's Hospital

Jerry McKenzie - 520-466-5938

Banner Desert Hospital

Bob Clark

Web Site

Mike Lewandowski  
fun2rr@msn.com

**Other Positions**

2008 Convention/Club

Correspondence

Mike Lewandowski  
conv\_secretary@msn.com

Raffles and prizes and Librarian

Glenn Sampson

Photo Archivist

Jack Slinkard

Club Interaction Facilitator

Bob Rauperstrauch

Publicity

looking for a volunteer for this position

Meeting Host Coordinator

Jim Kangas - East Side

John Meyers - West Side

Shirt, Badge, & Vest Coordinator

Jim Snyder



**Club Garments for Sale**

- Convention T-shirts.....** 5 lg - \$8.00 ea.
- 22 x lg- \$9.00 ea.
- 1 xxxlg - \$9.00 ea.
- ABTO white polo shirt.....** 1 lg - \$25.00 ea.
- denim long sleeve..... 1 sm - \$25.00 ea.
- 1 med - \$25.00 ea.
- 1 xx lg - \$25.00 ea.
- ABTO denim short sleeve.....** 1 sm - \$20.00 ea.
- 2 xx lg - \$20.00 ea.
- ABTO red vests.....** 2 xx lg - \$36.25 ea.
- 3 xxx lg \$38.00 ea.

*(remember that red vests run 1 size smaller)*

**Pleas call Jim Snyder if you are interested in any of the above garments.  
480-893-8456**



***This Train Quilt  
could be Yours!***

Tickets for the Train Quilt will be sold at all ABTO events. Sales were good at the Ontario Big Train Show as the photo and signage were featured along with the Convention Banner. It will be raffled off at the 2008 National Garden Railway Convention in Chandler. The quilt top was a joint project by members of TGRS and Arizona Big Train Operators.

Members of the two clubs made the squares which were put together by a committee representing both groups. Each square is unique and is a reflection of the different aspects of garden railroads. It was hand quilted by a group of ladies in Corning, Iowa, who are remarkable in their skill. The youngest of them is a child of 62 and several are in their 80's and 90's.



***Buy tickets for the Raffle  
\$2.00 each or  
6 for \$10.00***

***The drawing will take place at the close of the  
National Garden Railway Convention in May 2008.***

## New **ABTO** Members

Our new member this month is:

### Jim & Michelle Krohn

E-mail: jimikrohn@sbcglobal.net

Most of us know Jim from helping out on the modules and our Railfans trip. Please make Jim & Michelle feel welcome the next time you see them.

**Send any corrections/changes to the newsletter editor by email. Thanks**

## Tehachapi Plans are Being Made

Plans for the annual trek to Tehachapi Loop in CA are being made. This is one of the most famous scenes in the United States in railroading. Dates are September 27th - 29th 2007. It probably will be the same as last year using 2-3 large vehicles belonging to club members and hotel rooms will be about \$60 plus the cost of fuel. More details pending. See or call **Rich Hull** if you are interested.

Phone #s: **480-802-5308** or **602-684-1203**

E-mail: **rhull@wbhsi.net**

## SUMMARY OF UNOFFICIAL BOARD MINUTES

June 2, 2007

Board members present were: Bob, Gerry, & Roy  
Guests were: Tony Vacek, Jim Kangas, Sandy Rauperstrauch  
Rich Hull, Ennis Thompson

Minutes: no minutes from last meeting to present

Treasurer's report: Short version - approved.

Old Business:

Activities: Jim - State of tents that were damaged in wind:  
2 old ones at Dan's, 2 at Gerry's are OK  
ABTO Christmas open houses tour donations to go to Phoenix Children's Hospital only.

Modules: Ennis - Next event is Botanical Gardens

Phx. Children's Hospital: Ennis to talk to Kelly this week about funding. ABTO waiting to pay for frame for west end at hospital. Need to set budget for outgoing expenses. No expenditures over \$100

Banner Desert Hospital - Bob Clark: No ABTO involvement until further notice. Volunteer on your own.

Convention - Rich Hull: Meeting at Hotel—Bob R to attend. ABTO committee heads to meet June 20 1:30 Bob & Sandy's

Newsletter - Sandy: no issues

Raffles - No issues

New Business:

1. We will investigate the 501(C)3 status for taxes—Hull Kangas and Pfeiffer to prepare a report.
2. Rich Hull: Tehachapi Trip in the planning stages. Signup sheet at next meeting.
3. Hat & Tee shirt order to be determined.

## BULLETIN BOARD

Gerry, you don't have to go to California to sell your trains!  
You can sell them here!

### Banner Desert Hospital Meeting

Because of the construction at Banner Desert and lack of support, ABTO will not be helping at the hospital until further notice. Anyone who wants to work may do so on their own, but must have the orientation class, the TB test and blood work done, sign in and out with a badge, and wear the \$14.00 volunteer shirt. Bob Clark, Don Halver, Dick Melling, and Al Wendler have done all of the above.

## What's Cooking !

### Yummy Potatoes

- 1 11oz can of Cream of Chicken Soup
- 1 1/2 cups shredded cheddar cheese
- 1 cup sour cream
- 6 medium potatoes peeled and sliced

Heat soup & 1 cup of cheese, in sauce pan.  
Add sour cream—mix.

Place potatoes in a casserole dish.  
Pour soup mixture over potatoes.  
Top with remaining cheese.

Bake at 350 degrees for 1 hour.

## About The Newsletter

Believe it or not, the year is winding down. Soon it will be time for the annual Christmas party!

With the absence of one of our key players at the last module event, let 's all stop and be thankful for our trains, friends and family and remember how fragile life can be. Don 't hurry along without a kind word to those around you as we play trains. Our health is a most precious gift. Some of us have grandchildren in need of our prayers. Others are battling personal ups and downs with parents. Our knees give out, elbows cave in, backs on the fritz - it comes with time.

As time flies by with our busy schedules, slow down and share a kind thought or a kind word for someone in need. It does make a difference.

Sandy - Newsletter Editor, braup@cox.net



### 2008 NGRC Calendar

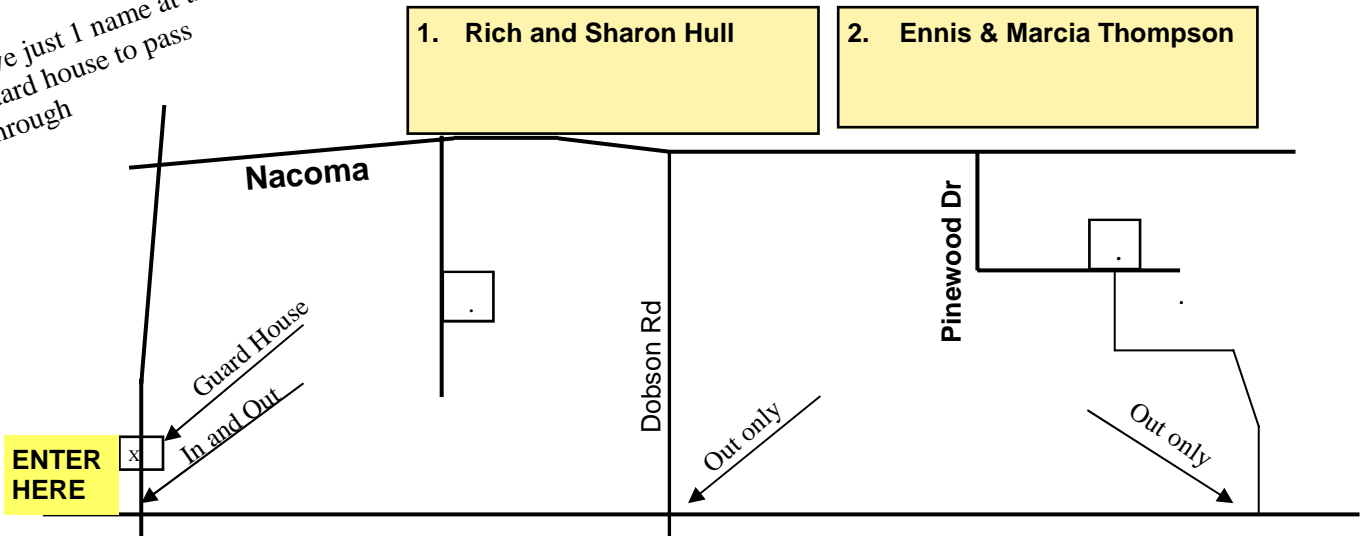
*Committee chairs, mark your calendar!*

- June 20 1:30pm Meeting for Committee heads  
Bob & Sandy's  
248 W Calle de Caballos
- July 27-30 Las Vegas Convention
- Sept 22 10:00am Convention Quarterly Meeting  
San Marcos Resort

Great progress is being made by all committees and the count down is on toward meeting all goals for 2008. We have a booth to promote our '08 convention at The Las Vegas Convention and it will be the time to gather more registrations. See Bob Rauperstrauch for booth signup schedule if you are interested in volunteering some time to promote the convention.

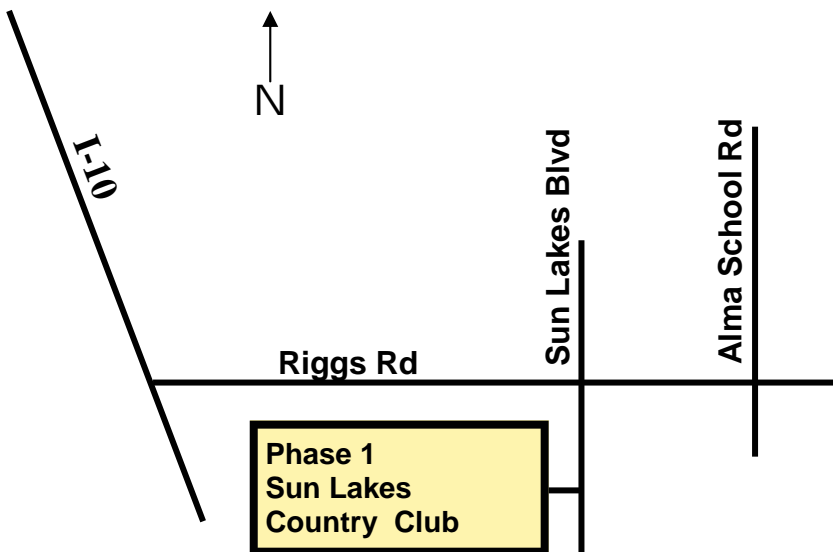
### Round Robin layout tours to follow the ABTO General meeting. See two layouts in the Sun Lakes area!

Give just 1 name at the guard house to pass through



### ABTO General Meeting

**Phase 1**  
**Sun Lakes Country Club**  
25601 S. Sun Lakes Blvd.  
Sun Lakes, Arizona 85248  
480-895-9270



**Saturday - June 16th**  
**8:30am**  
**Pancake Breakfast to be provided**  
Bring a breakfast casserole or something similar.  
Short demo featured after the short meeting by John Meyers.

**Round Robin Visit to two layouts starting about 10:00am.**

# Arizona Big Train

## ABTO OBJECTIVES

Membership in Arizona Big Train Operators is open to anyone with an interest in gardening and creating, constructing, and operating large scale model railways. At our meetings, items of mutual interest associated with the hobby are discussed and demonstrated.

Our members represent a wide variety of interests ranging from gardening, collecting trains, and model building, to operating trains in the garden railroad environment.

Meetings are typically held at member's homes, where they have the opportunity to showcase their railway creations.

**Meetings are usually held on the 3rd Saturday of the month.**

## ABTO MEMBERSHIP INFORMATION

Membership fee is \$35 per family, per year, and entitles you to one vote per family membership.

Membership entitles you to attend all meetings and events and receive the monthly ABTO newsletters and one name badge. Additional badges may be purchased for \$7.00 each.

## ABTO BOARD MEETING INFORMATION

**Board meetings are usually held on the first Saturday of the month.**

Board meetings are open to members who are current on their dues and have an item for the agenda. **If you plan to attend, call a board member to confirm location, time and date.**

## ABTO NEWS CONTRIBUTIONS

Members are encouraged to contribute articles, letters, illustrations or photographs related to garden railroading to include in the newsletter. Items may be used at a later date.

ABTO Members who have hobby related items for sale or trade may submit an advertisement for publication at no charge using four lines; Name, Item, Phone # and Email.

**Submissions must be in to the editor by the 1st Saturday of the month by US Mail or Email using WORD.**



ABTO Newsletter Editor  
Sandy Rauperstrauch

To:

**ABTO General Meeting June 16  
Phase I Sun Lakes Club House**