Useful but confusing information on scale and gauge [1]

The tables printed here will, we hope, answer what is perhaps the most often-asked question we hear: What are the differences between the scales and gauges?

Over the years, all of these scales and gauges have evolved, and some (which we have not listed) have died out. Granted, it is confusing, and we have attempted to print the correct information here in the most understandable form possible.

It may take some study to learn it all. If you don't feel like taking the time, just use the information below as a reference.

PROPORTIONS OF A MODEL TO ITS PROTOTYPE

Scale name	Proportion	Written scale
1½" scale [2]	1:8	1.5" or 1½"=1'0"
⅞" scale	1:13.7	.875" or ⅞" = 1'0"
16mm scale	1:19 (approx)	16mm =1'0"
15mm scale	1:20.3	15mm =1'0" [11]
G scale	1:22.5	.533"=1'0"
½" scale	1:24	.500" or ½"=1'0"
——	1:29	.414" = 1'0"
1 scale	1:32	.375" or ⅜" or 10mm=1'0"
0 scale	1:48	.25" or ¼" or 7mm=1'0" [9]

TRACK GAUGES commonly used in the garden

Gauge 3	2½" or 64mm
Gauge 1 [4]	1¾" or 45mm [3]
(No name)	1½" [10]
Gauge 0	1¼" or 32mm

TRACK GAUGES as they relate to the different scales

Scale	Actual gauge	Represented gauge	Scaled gauge
1:8	Ga. 1	15"	14"
1:13.7	Ga. 1	2' narrow	2'0"
1:19 [5]	Ga. 0	2' narrow	2'0"
1:20.3	Ga. 3	Standard [6]	4'2¾"
	Ga. 1 [7]	3' narrow	3'0"
	Ga. 0	2' narrow	2'1"
1:22.5	Ga. 3	Standard	4'8¼"
	Ga. 1	3' narrow	3'3⅓"
	Ga. 0	2' narrow	2'4⅛"
1:24	Ga. 3	Standard	5'0"
	Ga. 1	3' narrow	3'6"
	Ga. 0	2' narrow	2'6"
1:29	Ga. 1	Standard	4'3⅓"
1:32	Ga. 1	Standard	4'8"
	Ga. 0	3' narrow	3'4"

PLANNING DIMENSIONS for 1:22.5-scale (and related) trains on ga. 1 track

Minimum track radius:	2'0" [8]
Minimum track spacing, measured from track centerlines:	7.5" (allow more on curves)
Clearance from center of track to structures	
Straight track:	2⅞"
Curved track:	3¾"
Minimum height for tunnels:	8"

FOOTNOTES

1. Scale is simply the proportion of the model to the full-size item, and gauge is nothing more than the distance between the rails. The terms are sometimes incorrectly used interchangeably.

2. 1½" scale is commonly used for larger, ride-on trains. However, there are some modelers who are using this scale on gauge 1 track to represent 15" gauge railways such as those designed by Sir Arthur Heywood in Britain. We've not listed the larger gauges in this scale because they fall outside the scope of this magazine.

3. There is a slight discrepancy between the metric measurements and the imperial. Today, gauge 1 is considered to be 45mm.

4. Gauge 1 is commonly—and incorrectly—called "G gauge" by some manufacturers, dealers, and hobbyists. This is an unfortunate misnomer that merely adds to the confusion. Large-scale trains run on gauge 1 track, as thay have for over 100 years.

5. 1:19, or 16mm, scale evolved from gauge 0 (32mm) track. The idea was to choose an existing gauge and design models of 2' gauge trains around it, which is why this scale works out quite well. However, modeling to other gauges in this scale is almost nonexistent, so only gauge 0 has been included here.

6. Standard gauge on full-size railroads is 4'8½". Anything less is considered narrow gauge. Anything more is considered wide or broad gauge.

7. There was a gauge 2 (2"), which was quite popular in the early part of the century, but has long since died.

8. While 2' radius is commonly used, trains tend to look much better going around wider curves. A rule of thumb is to use the widest radius your space will allow. Six to ten feet is not unusual.

9. There is a slight discrepancy between the metric measurements and the imperial.

10. The correct gauge for accurate modeling of 3' gauge trains in ½" scale. Little is available commercially in this gauge.

11. The correct scale for accurate modeling of 3' gauge trains on gauge-1 track.

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