

# Scale and gauge<sup>1</sup>



WILLIAM ZUBACK

## Proportions of a model to its prototype

Scale name	Proportion	Written scale
1½" scale <sup>2</sup>	1:8	1½" = 1'0"
¾" scale	1:13.7	¾" = 1'0"
16mm scale	1:19 (approx.)	16mm = 1'0"
15mm scale	1:20.3	15mm = 1'0" <sup>10</sup>
LGB (G scale)	1:22.5	.533" = 1'0"
½" scale	1:24	½" = 1'0"
—	1:29	.414" = 1'0"
1 scale	1:32	¾" or 10mm = 1'0" <sup>8</sup>
0 scale (USA)	1:48	¼" or 7mm = 1'0" <sup>8</sup>

## Track gauges commonly used in the garden

Gauge 3	2½" or 64mm <sup>8</sup>
Gauge 1 <sup>4</sup>	1¾" or 45mm <sup>3</sup>
(No name)	1½" <sup>9</sup>
Gauge 0	1¼" or 32mm <sup>8</sup>

Confusion about scale and gauge continues to plague our hobby, so we felt that it was again time to try to set the record straight. The tables printed here will answer what is perhaps the most-often asked question *Garden Railways* hears: What are the differences between the scales and gauges? Over the years, all these scales and gauges have evolved, and some (which we have not listed) have died out. Granted, it is confusing, but 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. ▸

## Track gauges as they relate to the different scales

Scale	Actual gauge	Represented gauge	Scaled gauge
1:8	Ga. 1	15" narrow	14"
1:13.7	Ga. 1	2' narrow	2'0"
1:19 <sup>5</sup>	Ga. 0	2' narrow	2'0"
1:20.3	Ga. 3	Standard <sup>6</sup>	4'2¾"
	Ga. 1 <sup>7</sup>	3' narrow	3'0"
	Ga. 0	2' narrow	2'1"
1:22.5	Ga. 3	Standard	4'8¼"
	Ga. 1	3' narrow	3'3½"
	Ga. 0	2' narrow	2'4½"
1:24	Ga. 3	Standard	5'0"
	Ga. 1	3' narrow	3'6"
	Ga. 0	2' narrow	2'6"
1:29	Ga. 1	Standard	4'3½"
1:32	Ga. 1	Standard	4'8"
	Ga. 0	3' narrow	3'4"

## Footnotes

- Scale is simply the proportion of the model to the full-size item, while gauge is no more than the distance between the rails measured from the inside edge. The terms are sometimes incorrectly used interchangeably.
- 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, ride-on gauges in this scale because they fall outside the scope of *Garden Railways* magazine.
- There is a slight discrepancy between the metric measurements and the imperial. Today, gauge 1 is considered to be 45mm.
- Gauge 1 is commonly—and incorrectly—called "G gauge" by some manufacturers and dealers. This is an unfortunate misnomer that merely adds to the confusion. G-scale trains run on gauge-1 track.
- 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 for other gauges in this scale is almost nonexistent, so only gauge 0 has been included here.
- Standard gauge on full-size railroads is 4'8½". Anything less is considered narrow gauge. Anything more is considered wide or broad gauge.
- There was a gauge 2 (2"), which was quite popular in the early part of the century, but has long since died.
- There is a slight discrepancy between the metric measurements and the imperial.
- The correct gauge for accurate modeling of 3'-gauge trains in ½" scale. Little is commercially available in this gauge.
- The correct scale for accurate modeling of 3'-gauge trains on gauge-1 track.