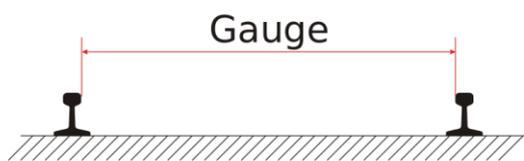


## Gauge and Scale

Designing a model railway to fit comfortably into a garden requires consideration of Gauge and Scale. Choosing a popular gauge and scale will expand the range of products available to you and the ability to operate on other people's railways.

### Gauge



Gauge is the distance between the rails.

### Scale



Scale is the proportion of the size of the model to the real thing.

Copyright©2016 Argyle Locomotive Works.



### Main Line Railways

Commuter and country trains are referred to as Main Line trains. They are for carrying a lot of people quickly over longer distances. The curves and gradients are usually slight and the gauge is normally Standard Gauge (4' 8 ½" or 1,435 mm)

### Narrow Gauge Railways

A narrow gauge railway is any gauge that is less than Standard Gauge.

Narrow gauge trains are usually slower and smaller than mainline trains. They were usually built to serve remote industries or communities that were difficult to access. They often had to negotiate difficult terrain, steep grades and tight curves. They were cheaper to build than main line tracks. The most common gauges for narrow gauge railways are:

- 2 foot (610mm)
- 2 foot 6 inches (762mm)
- 3 foot (914mm)
- 1 meter

### Garden Railways

There are 3 gauges used in Garden Railways. Some are more popular than others. Some are used to model a particular kind of railway. Each gauge lends itself to a particular scale or scales.

#### **'O' Gauge Track (32mm)**

'O' gauge is a traditional size of track that was common in the post war years for early electric and clockwork models. Nowadays it is popular for modelling of 2' narrow gauge models in 1:19 scale.

#### **'1' Gauge Track (45mm)**

This gauge is now the most popular size of track for Garden Railways as it lends itself to modelling both narrow gauge and mainline model trains. Its popularity was accelerated in the 1960's when the German manufacturer 'LGB' adopted the term 'G Scale' and used the gauge of 45mm for its models.

#### **Gauge '3' Track (63.5mm)**

Although this gauge may be new to many, its history goes back over a hundred years.

Gauge 3 is not as popular as the preceding two gauges as it requires a much larger garden and a substantially larger investment in locos, rolling stock and track



## Gauges and Scales used in Garden Railways.

### 'O' Gauge Track (32mm)

Prototype of Railway	Scale	Other names for this scale	Min Area / Radius
2' Narrow Gauge Railway	1:19*	'16mm to the foot scale', '16 mil', SM32 <a href="http://16mm.org.uk">http://16mm.org.uk</a>	Very Small 600 mm

### '1' Gauge Track (45mm)

Prototype of Railway	Scale	Other names for this scale	Min Area / Radius
2' Narrow Gauge	1:13.7	'7/8 inch to the foot' or just '7/8 Scale' <a href="http://www.7-8ths.info">http://www.7-8ths.info</a>	Small
2' 6" Narrow Gauge	1:19*	'16mm to the foot scale', '16 mil', SM45 <a href="http://16mm.org.uk">http://16mm.org.uk</a>	Small
3' Narrow Gauge	1:20.3*	USA Narrow gauge	Small
Meter Gauge	1:22.5*	'G Scale', LGB trains	Small
Standard Gauge	1:32	'Gauge 1' <a href="http://www.g1mra.com/">http://www.g1mra.com/</a>	Large / 2m

### Gauge '3' tracks (63.5mm)

Prototype of Railway	Scale	Other names for this scale	Min Area / Radius
Standard Gauge	1:22.5*	'Gauge 3' <a href="http://www.gauge3.org.uk/index.html">http://www.gauge3.org.uk/index.html</a>	Very Large / 3m

\* If models from these scales are displayed together they will appear to be of similar scale and are sometimes grouped together.

#### Below

The illustration below provides a graphic representation of the most common Gauges and Scales used in Garden Railways.

Michael Ragg



Olinda VIC 3788  
Australia



### POPULAR LIVE STEAM GARDEN RAILWAY SCALES AND GAUGES

**1:32 SCALE**

OFTEN REFERRED TO AS GAUGE 1  
PROTOTYPE:  
STANDARD GAUGE MAINLINE  
4' 8 1/2" GAUGE



←45mm→  
RUNS ON 45mm  
GAUGE TRACK

**1:22.5 SCALE**

KNOWN AS LGB OR 'G' SCALE  
PROTOTYPE:  
EUROPEAN NARROW GAUGE  
TYPICALLY METRE GAUGE



←45mm→  
RUNS ON 45mm  
GAUGE TRACK

**1:20.3 SCALE**

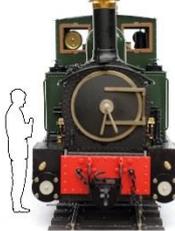
15mm = 1 FOOT SCALE  
PROTOTYPE:  
3 FOOT NARROW GAUGE  
TYPICAL USA NARROW GAUGE



←45mm→  
RUNS ON 45mm  
GAUGE TRACK

**1:19 SCALE**

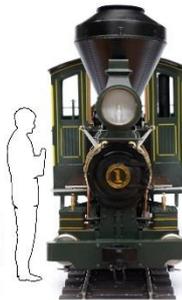
16mm = 1 FOOT SCALE  
PROTOTYPE:  
ENGLISH NARROW GAUGE  
TYPICALLY 2' 6" - 3' GAUGE



←45mm→  
RUNS ON 45mm  
GAUGE TRACK

**1:13.7 SCALE**

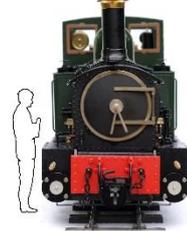
7/8 OF AN INCH = 1 FT  
PROTOTYPE:  
2 FOOT NARROW GAUGE  
TYPICALLY INDUSTRIAL RAILWAYS



←45mm→  
RUNS ON 45mm  
GAUGE TRACK

**1:19 SCALE**

16mm = 1 FOOT SCALE  
PROTOTYPE:  
ENGLISH NARROW GAUGE  
FOR 2 FOOT GAUGE



←32mm→  
RUNS ON 32mm  
GAUGE TRACK

THESE SCALES ARE SO CLOSE YOU CAN RUN THESE TOGETHER

ALL OF THESE SCALES WILL RUN ON 45mm GAUGE TRACK (OTHERWISE KNOWN AS 'GAUGE 1' OR LGB TRACK)

1:19 SCALE COMMONLY KNOWN AS 16mm TO THE FOOT OR SM32 FOR 2 FOOT GAUGE PROTOTYPES. SOME LOCOS ARE CHANGEABLE TO RUN ON 32mm AND 45mm GAUGE TRACK.

Image Courtesy of R. Malley & D. Fletcher

This illustration can be down loaded from the Argyle 'Home Page'.