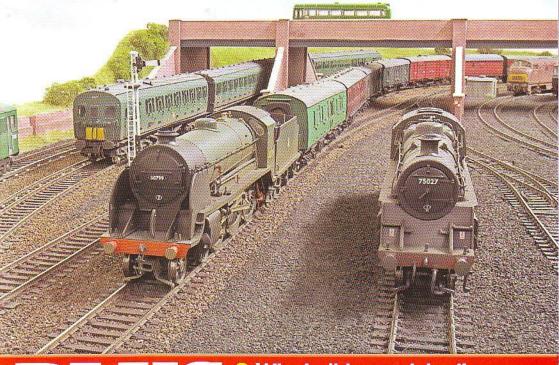
FIORNBY
magazine

Discover the potential of model railways with 15 trackplans from 6ft to 16ft for 'OO' and 'N'



Why build a model railway
Scales and gauges revealed
Frequently asked questions



### **Extend Your Track**

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From the publishers of

HORNBY magazine

### WELCOME

ODEL RAILWAY DESIGN is an all encompassing subject and with a blank sheet of paper it can be difficult to know where to start.

That, in essence, is why we have put together this book of trackplans – to give you ideas, inspiration and a way of moving forward with planning your own layout.

Each plan has been designed with set criteria in mind. This includes the size of room available to today's modeller, scaled planning of trackwork and suggestions for scenic items and other details. All of the plans within this book can be built and the majority are designed to be constructed using readily available track components. Some are more complex than others and there is one plan – for a 10ft x 10ft circular layout – which will be a great challenge too.

Here at *Hornby Magazine* we are constantly generating new layout ideas and building them too and one of the plans featured within this book is that for our large exhibition layout, Bay Street Mk II. We've also included the trackplan for our new 'N' gauge layout, Hettle, which has been designed principally to show firstly that a 6ft x 4ft baseboard can be used for a main line setting in this scale and secondly to show how much potential this small and rapidly developing scale holds.

Even if the plans here don't suit your personal space requirements each one is full of ideas and potential which can be incorporated into your own railway. More planning will be needed in terms of baseboard construction and electrics as space precludes us detailing exactly how to build each of these plans in minute detail.

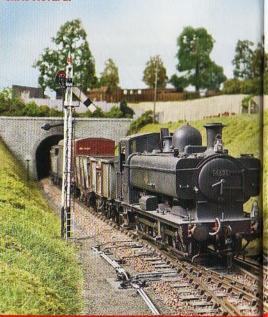
We hope you enjoy the plans we have put together for this book and that no matter what level your skills are or how much space you have that you will find a plan which inspires you to pick up your tools and start building a model railway.

Mike Wild Editor, Hornby Magazine

### THE BOX ROOM

- A 6ft x 4ft branch line for the box room in 'OO'.
- 8 A 6ft x 4ft main line in 'N' gauge.
- An 8ft x 6ft main line setting with four sided viewing.
- 12 An 8ft x 6ft terminus to fiddle yard plan for the larger box room.

'O' gauge is still a popular scale and a great deal of detail can incorporated into a layout. This is Melcombe Magna as built by Mike Baker. Chris Nevard.



### Brought to you by...

Editor Mike Wild Design Steve Diggle

Artwork Matt Chapman/Steve Diggle

Sub-Editor Andrew Roden
Publishing Director Paul Appleton
Commercial Manager David Lane
Advertising Matt Tipton

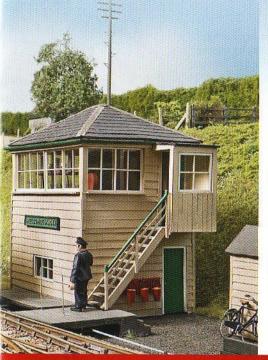
### **Editorial address**

Hornby Magazine PO Box 945 Peterborough PEI 9ER

E-mail: hornby.magazine@wildcomms.com Website: www.hornbymagazine.com

### THE SPARE ROOM

- A complex 10ft x 10ft circular plan with a totally hidden fiddle yard.
- A 10ft x 8ft conventional continuous run with great potential.
- 18 A 12ft x 8ft branch line for the post steam era.
- 20 A 12ft x 2ft shelf layout with a waterside theme.



### THE GARDEN SHED

- 22 A 16ft x 3ft shelf layout terminus with lots of operational potential.
- **24** A country through station in 12ft x 8ft.
- 26 An 8ft x 8ft 'N' gauge main line setting.

### THE GARAGE

- **28**A 15ft x 7ft 'OO' plan with more than a little Settle and Carlisle influence.
- **30** A 15ft x 7ft seaside terminus with goods and passenger operation for 'OO'.
- **32** A 16ft x 9ft multi-level layout with two double track circuits for 'OO'.
- **34** A 16ft x 8ft 'OO' shed layout with a double track main line to boot.

### APPENDIX I

36 Why build a model railway? Paul Appleton discusses why you might want a model railway.

### **APPENDIX 2**

Scales and gauges. Andrew Roden delves into the world of scales and gauges and profiles those available to today's railway modeller

### **APPENDIX 3**

11 Frequently asked questions. Mike Wild answers some of the most common model railway questions.

### **Publishing**

Published by Ian Allan Publishing
Chairman David Allan
Managing Director lain Aitken
Head of Marketing Nicola Brown

lan Allan Publishing Limited, Hersham, Surrey KT12 4RG

Registered office: Terminal House, Shepperton, Middlesex TW17 8AS, UK

### Printing

Ian Allan Printing Limited, Hersham

### © Ian Allan Publishing 2010

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### HORNBY

ISSUE NO. 40, OCTOBER 2010

magazine

# The 6ft x 4ft

BASEBOARD 6ft long and 4ft wide has become a tradition amongst starters layouts, particularly with both Bachmann and Hornby producing train sets which offer track to fit within these dimensions. A slightly larger size of 8ft x 4ft has also been popular if hard to fit in a box room.

"Both DC Another longstanding tradition, and DCC are particularly on this size of baseboard, applicable has been to build a continuous run to this plan. layout. Two circuits plus short sidings MIKE WILD are possible on this size of board in 'OO' gauge, but by looking at it from a different perspective even the humble 6ft x 4ft baseboard can be turned into a scenic model railway with operational potential.

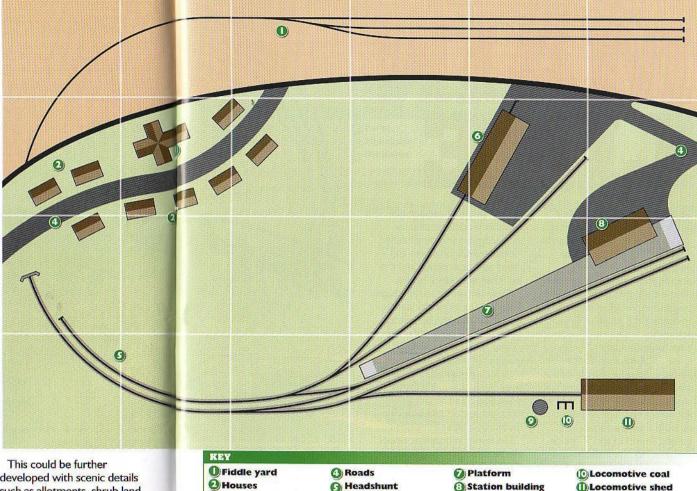
This scheme has been designed to show just that. Rather than offer another take on the continuous run theme. we looked at developing a small

branch line terminus station with a goods yard. By angling the station rather than keeping it straight along the front of the board, further scope is opened up leaving enough space for a single road engine shed and a two siding goods yard.

Admittedly points would have to be small radius, rather than the more accommodating

medium or large radius, but nonetheless it does allow for plenty of railway to be fitted into the small space available without compromising the scenic benefits of this plan.

The scope for scenic modelling is raised here, particularly with the shape of the backscene - which curves to give a slightly softer finish to the model world - meaning that a small but detailed village could be included to the left of the station together with a station approach, goods yard and hillside.



Goods shed

developed with scenic details such as allotments, shrub land or even industry.

Naturally a layout of this size won't be able to accommodate scale length main line expresses with glamorous 'Pacifics' at the head, but what it can do is replicate a traditional branch

line operation with two coach passenger trains hauled by tank engines or, as an alternative, a Diesel Multiple Unit (DMU) service. Goods can also be operated and the headshunt means that these could be operated independently of the main line if desired.

(Church

In terms of control both DC (analogue) and DCC (digital command control) are applicable. DCC control would mean less wiring as no section

switches will be required and this could also see two locomotives working at once one on the 'main' line and one in the goods yard - with a little skill with the controller.

Water tower

This plan could also be built in 'N' gauge, but in much less space. Technically it could be built in half the space - 3ft x 2ft - but 4ft x 3ft would be a better allocation and allow for greater use of space for scenery.

If you were looking to make this layout portable it could be split into two halves down the middle to create to 3ft x 4ft baseboards to bolt together. Track alignment is crucial if this is what you intend to do and the exact positions of the points will also need to be considered.

(I) Locomotive shed

If you are short of space but looking for a reasonable area to develop scenic elements this might offer the inspiration you have been looking for.

### STATISTICS

Size: 6ft x 4ft Maximum baseboard width: 4ff Track type: Flexible or set track with small radius points **Intended gauge:** '00' Minimum curve radius: 20in Maximum train length: Two coaches/four wagons plus brake van

# The 6ft x 4ft

NTIL RECENTLY 'N' gauge has been a second choice to the larger scales. Availability of rolling stock, detailing and performance have always been factors which have persuaded modellers to look towards 'OO' gauge or large scales.

At 2mm: Ift scale 'N' gauge is the smallest commercially available scale for British outline models, although there are smaller scales for overseas modellers or those prepared to build their own stock in 'Z' gauge (Imm: Ift) and 'T' gauge (1/2mm: Ift). Since Bachmann took over the Graham Farish 'N' gauge range and Dapol entered the British 'N' gauge market standards of detail and performance have developed rapidly to the point where models produced ready-to-run for the British market are now comparable with the highly attractive models available

in 'OO' gauge. The range of available stock is continually increasing too and particularly for the era 4/5 BR steam and diesel transition period and the era 9 current railway scene.

These factors make 'N' gauge a worthy contender for a new layout and this plan set out to show the true potential of 'N' gauge. Taking a typical 'OO' gauge train set size baseboard of 6ft x 4ft we wanted to show just how much railway, realism and operation could be condensed to fit within this comparatively restrictive space.

The layout in question, titled Hettle through its Settle and Carlisle line inspiration – it uses a combination of Hellifield and Settle for its name – is being built by the Hornby Magazine team for Hornby Magazine Yearbook No.3 to prove that a main line is possible in 6ft x 4ft.

Admittedly a narrower baseboard could have been used, but here we wanted to

show the scope for scenery and also open out the curves on the scenic section for a more realistic railway. The plan incorporates a double track main line, a branch line with a junction to the main line, a station, a goods yard, a cattle dock and a bay platform for DMU services on the branch.

At the back are eight storage

in each direction) and three for the branch. The longest of these allows for a nine coach train to be formed or alternatively a 30 wagons goods!

Throughout the plan uses medium and large radius points and relies heavily on curved large radius points for the fiddle yard design. Without these the fiddle yard roads would be much shorter limiting the total length of trains.

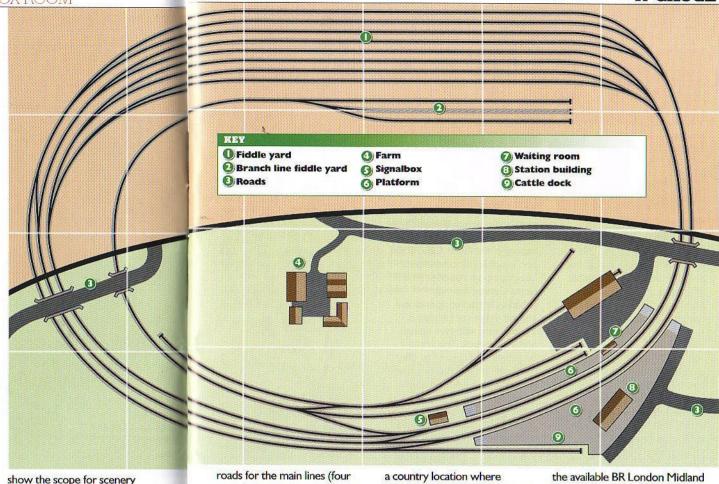
The station platforms are long enough to accommodate a five coach train on the main line and a three-car DMU in the bay platform. This reflects the nature of the station as

expresses wouldn't stop anyway, allowing the platform lengths to be reduced. Adding further to the realism is the curvature on the scenic section. Here the entire main line curves from one end to the other between the road overbridges rather than being a straight set-up. A short straight section is included in the centre where the pointwork for the goods loop, crossover and branch line connection are located, but again the use of large radius points has been possible without any compromise.

Being Settle and Carlisle based this layout makes the most of

Region locomotives and rolling stock now available through Bachmann's Graham Farish arm and Dapol. A 'Jubilee' at the head of a rake of Stanier stock in blood and custard or a rebuilt 'Royal Scot' hauling a rake of maroon BR Mk Is are just as attractive as a Stanier '8F' or BR '9F' at the head of a freight.

Scenically the layout has been kept very simple and uses just nine buildings - the village that the station serves being off scene. This allows the landscape behind the railway to be kept open with rolling hills and a farm estate all of which adds to the Settle and Carlisle flavour.



### STATISTICS

Size:	6ft x 4ft
<b>Maximum baseboard width</b>	: 4ft
Track type:	Flexible track with large and medium radius points
Intended gauge:	N N
Minimum curve radius:	10.5in
Maximum train length:	Nine coaches/30 wagons plus brake van

**OUSES** often have a small third bedroom. This ranges in size, but in many cases an area capable of housing an 8ft x 6ft layout is available. This plan has been designed to offer continuous running in 'N' gauge making the most of an 8ft x 6ft footprint.

Being 'N' gauge train lengths can be close to scale for main line operations with the potential to operate 10 coach trains and 30 wagon goods in an area which, at best, would only allow for five coach trains in 'OO'.

The station area draws inspiration from the Great Central Railway's common station layout which involved an island platform between the Up and Down main lines plus two goods loops. The goods loops are positioned either side of the platform lines in the station and offer on track storage for two trains.

To access the platform the station building is located on the

Maximum baseboard width: 2ft

STATISTICS

Track type:

Intended gauge:

**Minimum curve radius:** 

**Maximum train length:** 

Size:

road bridge across the station throat - another common feature of the Great Central and one which is still to be seen at Loughborough station on the Great Central Railway.

Adding further to operational interest in the station area is a goods yard with two sidings and a headshunt. This could be expanded if desired to offer more siding space, but we have left this area open for scenic modelling.

The goods yard primarily serves local industry and could even have their own shunting engine. Incoming goods could be left in the loop on the inner circuit with the train engine heading round to the locomotive shed on the opposite side of the plan. The shunter could then be called into action from the goods yard headshunt to move vans and open wagons for loading.

Provision of the engine shed on the opposite side of the layout to the station adds plenty of scope for operation. Fresh locomotives

8ft x 6ft

00

20m

The shed plan is based around a four-road engine shed and coaling tower together with a sand tower and water tower all of which can be combined to create a convincing shed scene. More than 20 locomotives can be accommodated in the shed area as drawn, and there is still space to include diesel fuelling roads if you wish to add more to the railway theme.

REY **Roads** 

2 Bridge

( Platform

(1) Warehouses

(A) Loading dock

The ideal period for this plan as drawn would be the steam

era, as no facilities have been provided for diesel locomotive servicing at the shed. That said, with a few alterations to the plan the period could be moved forward to cover the steam to diesel transition or, with further alterations to the shed to a pure diesel era theme.

Level crossing

**Engine shed** 

Water crane Lineside huts

Water tower

Turntable

Goods loop

Sand tower

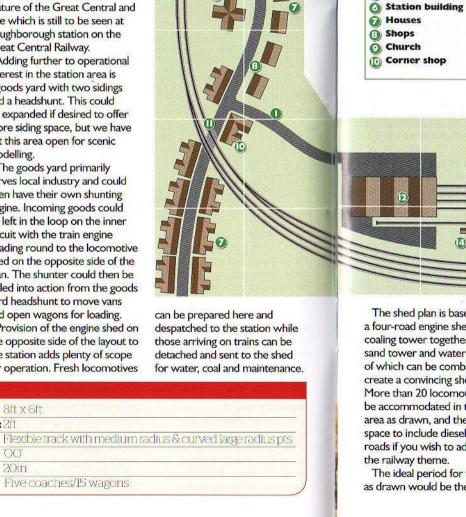
Coal tower

Choosing the period will also require careful selection of buildings and other layout furniture such as road vehicles, signals and street signs. For

example the warehouse buildings for the period up to end of the 1980s would be best modelled as brick structures whereas for a layout set in the 1990s to date would benefit from modern warehouses.

As the layout is viewable from all four sides we have aimed to break it up into sections with road bridges and crossings.

Like the majority of the plans in this book this scheme is based around flexible track.



### The 8ft x 6ft

# 

**TERMINUS** might not be the first choice for a room with only 8ft x 6ft to offer, but even this apparently compact space offers great potential for a realistic railway when the room is used to its maximum effect.

Unlike a continuous run layout, access is eased as the door opening can be accommodated into the layout plan and, for example, if your room didn't have the door

coming into the centre, a few modifications to the overall plan would allow the entrance to the room to be fitted into one of the side walls.

This plan also offers two routes to the station - a branch

line which has limited storage capacity and could even be operated as a freight only line with empty wagons running from the station to the fiddle yard and loaded trains returning, both of which would require a run round at the station before departing on the main line.

The main line's arrangement is perhaps a little unusual in that it begins effectively as a two track route, but becomes a single line before reaching the fiddle yard. Both tracks

would be signalled for bidirectional running, although the outer line would be best placed as a run round facility or stock storage line.

The station itself features three platform faces and a parcels loading bay all of which allows for plenty of shunting and locomotive movements. The station can accommodate four coach trains, but the lack of run round facilities in the two main platforms will mean

a shunt release locomotive will be required to remove the stock

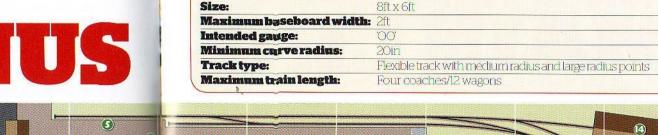
from arriving trains to This plan has been release the designed with the door opening in the centre of the train engine left hand wall, but it may be - another that other rooms have the interesting door off centre on one of the operational longer walls. In this case it feature. may be necessary to crawl underneath part of the The goods layout for access to

area.

yard features the operating a long siding adjacent to the inner platform face (which

would be fenced from the back of the platform) plus two further roads, the second of which also provides access to a brewery site with a single loading siding.

In terms of scenic features the station approach is a little more complicated than some of the other plans so far by virtue of its three level nature. Leaving the fiddle yard a road crosses the railway on a bridge, followed by a canal passing underneath the railway. The



STATISTICS



third crossing is a pair of level crossings over both the main route and inner branch line.

All in all this plan ticks a lot of boxes for a model railway

by featuring large scope for railway operations, a goods yard, two routes, an engine shed and a large station in a relatively compact space.

"The station features three platform faces and a loading bay."

MIKE WILD

### The 10ft x 10ft

## 

HEN it comes to layout design it is easy to become focused on a particular style or shape. Traditions head towards terminus to fiddle yard plans and continuous run designs with a fiddle yard to the rear and a scenic section to the front.

But how about a layout with four sided viewing with a completely hidden fiddle yard? This plan offers that, but it is one of the most complex designs within this book owing to the width of the baseboards and the double crossover at the entrance to the fiddle yard.

The plan is based around a continuous double track main line which follows an almost totally circular layout.

Branching off this are two double junctions on opposite sides which provide

When introducing low level scenic sections, open frame baseboards will be needed to allow the land to drop below

provide
access to
a set of
five hidden
sidings (the
centre road
being a turnback

siding which has access to both the inner and outer circuits) through a complex double junction.

Proprietry trackwork makes this double crossover junction awkward due to the angle required to make the crossing. To use ready made crossovers the track spacing will need to be increased on both routes to accommodate Peco medium or large radius diamond crossovers. Another alternative, for those with the skills and confidence, is to build crossovers to suit the plan using copper clad sleepers and suitable rail.

The width of the baseboards at the four corners also causes a second area of potential trouble. If the layout was built in a room with walls up to the edges of the baseboards it could cause issues if derailments occurred at the furthest points from the central operating well. However, in a larger room with access to all four sides of the layout this problem would be instantly overcome.

Another alternative
would be to convert
the plan to 'N'
gauge. In this
smaller scale
an area

smaller scale
an area
7ft x 7ft
would easily
accommodate
this plan with
room to spare
allowing the
problems of reach
to be overcome

instantly.

the level of the railway. This involves more complex wood

work, but the results speak

for the themselves as a

more realistic setting can

be created. Planning

is the key.

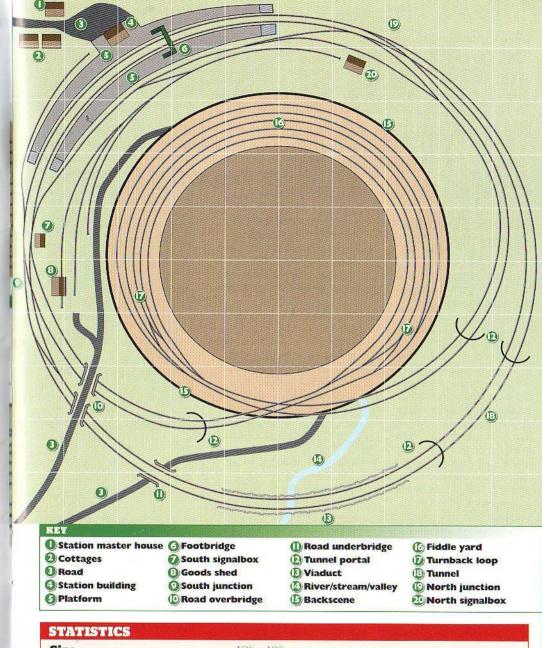
The railway elements of the plan away from the storage yard are relatively conservative consisting of a station with three through platforms, a bay and a goods yard with a headshunt. The opposite side of the scenic section features a

viaduct in our plan which also opens up the opportunity to add an additional level into the design and a distinctive railway feature.

To make the most of its four sided viewing potential the scenic area has been broken up into sections by roads and tunnels. These help to separate areas of the layout and create pockets of interest while reducing the impact of the otherwise obvious continuous circuit.

Train lengths can vary with this layout up to 10 coaches or the equivalent of 30 wagons due to the design of the fiddle yard. However, rather than just fill each road of the compact fiddle yard with a single train each line could be separated into sections each with an isolating switch to allow up to four trains to be stored on each track depending on train lengths. For example the outer tracks for each of the main lines might hold two five coach passenger trains while the inner line for each of the two tracks could hold two short trains of two coaches and a goods train of up to 15 wagons. The centre road could be used to hold DMUs or freight trains to operate between the station and the fiddle yard.

As a plan this 10ft x 10ft scheme offers great potential for operations, train length and continuous running as well as leaving room for shunting and stopping trains too.



Size:	10ft x 10ft	
Maximum baseboard width:	4ft	
Intended gauge:	'00' (or 'N' in 7ft x 7ft)	
Minimum curve radius:	20in	
Maximum train length:	10 coaches/30 wagons	

HILE a modest size spare bedroom might not seem like much space to build an interesting model railway, this 10ft x 8ft plan, again based on the size of some spare bedrooms, offers both operational flexibility, scenic interest and continuous running.

The plan is based around a traditional double track circuit. similar to that which can be created on a 6ft x 4ft trainset. style layout but with greater space for longer trains, more sidings in the goods yards and an overall more realistic feel.

There are still limitations to this area principally in train lengths and curvature. Here trains would be limited to a maximum of five or six coaches plus a locomotive or around 12-15 wagons (including a brake van). Even so this offers a reasonable representation of main line operations without needing a small warehouse in which to

construct a railway. The curves are admittedly un-natural for the real railway, but with model railway equipment these can be tightened and here we have limited the minimum curve radius to 20in, or second radius.

The plan could feasibly be built using set track pieces with some compromises, but a better method would be to build it with flexible track - sold in yard lengths - and a mixture of medium and large radius points. Most of the large radius points required for this plan are curved points for the fiddle yard which will allow greater train lengths within the 10ft length.

The scenic portion of the layout sees the station offset to the right meaning that greater space is available for the goods yard and scenic features. This plan has a mainly urban feel offering great potential for housing and industrial structures Bisecting the scenic section is a viaduct carrying a double track main line. This isn't operational,

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	1111
	des another interesting ature which could
Way W	e exchanged for a
The state of the s	ge to suit the builder's
preference	ce.
The goo	ods yard has been laid
	lude reception roads

which are accessed from the inner main line by reversing trains from within the station. A crossover between the two main lines means that freight from both directions can access the goods yard. The three reception roads

can be used to store trains and also shunt them while the short loop under the viaduct provides the ideal position for the shunting engine to run round wagons before delivering them to the large warehouse and cobbled yard. Also provided is a shorter spur alongside the reception roads which can be used to store spare brake vans and also the yard shunter when it is not in use.

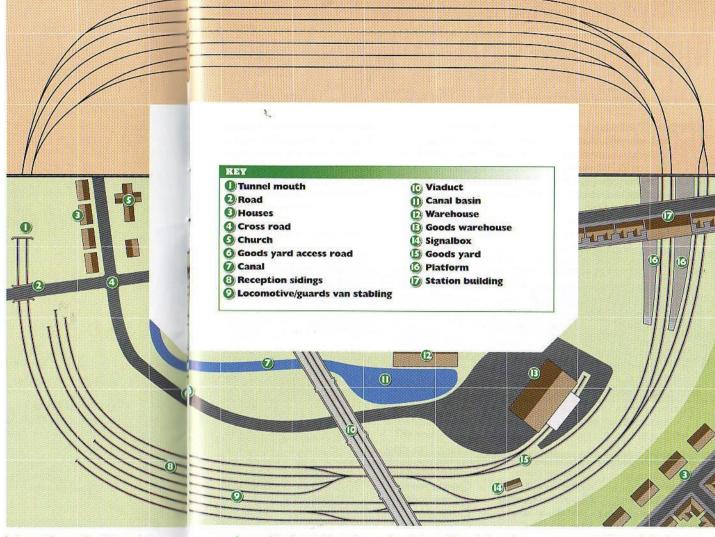
A canal also passes under

the viaduct, although it carries little traffic now thanks to the efficiency of the railway, but nevertheless offers an additional scenic feature.

The main line is simple to operate and can be operated independently of the yard meaning that trains can be left to circulate on the double circuit while another locomotive is employed in the yard for shunting. An additional third platform line features from the

outer main line and this has its own independent storage siding in the fiddle yard as well as connecting to part of the outer fiddle yard.

As drawn the plan is intended to represent the era 4/5 period featuring the changeover from steam to diesel traction and including both early and late BR crests. That said, with careful building selection and scenic changes it could just as easily be built in a later period.



### STATISTICS

Size:	10ft x 8ft
Maximum baseboard width:	2ft 6in
Intended gauge:	,000,
Minimum curve radius:	20in
Maximum train length:	Six coaches/15 wagons

### The 12ft x 8ft

## 

OMETIMES it is hard to know what to do with the space available for a model railway and this 12ft x 8ft plan is designed to fit in a large spare bedroom in the average house.

This area opens up a greater number of possibilities in terms

of track arrangement, train lengths and scenic modelling. The majority of the plans in this book are designed primarily for the steam era modeller. but that's not to say that they couldn't be adapted to suit diesel era projects. This plan however is aimed squarely at the post

1970 period and while drawing it our vision was for BR blue era diesel hauled trains and multiple units running side by side.

The idea behind the plan is to show a truncated main line which now terminates at a medium sized station which also has facilities to serve a factory

STATISTICS	
Size:	12ft x 8ft
Maximum baseboard width:	2ft 6in
Intended gauge:	00
Track type:	Flexible track with medium and large radius points
Minimum curve radius:	20in
Maximum train length:	Six coaches/15 wagons

site as well as a small oil terminal - the latter being used as both a corner filler and a source of additional operation.

Emerging from the fiddle yard a double track main line is formed to allow prototypical operation and this runs round the end of the layout and across

a level crossing to reach the station approach. On the right is the oil terminal which has two delivery roads together with a pair of sidings for wagon storage. A long pair of loops has been included in the approach to the oil terminal to aid shunting and a dedicated shunter - maybe a Class 03 or 08 - could be based at the depot to shunt trains.

To handle an arriving oil train the train engine would draw across the crossover adjacent to the signalbox to reach the headshunt at the rear of the station. Here the train engine could be isolated allowing a shunting engine to couple to the rear of the train. This would then draw the train into the loop, run round it, then shunt the wagons into the terminal.

The station has four platform faces accompanied by a disused level crossing and a large car park for commuter services. The two central main platform lines can accommodate six vehicle trains (including the train engine) while the

two shorter bay platforms can only hold three coach trains. A short siding is also provided for carriage cleaning, but this can only handle a three coach train.

MIKE WILD

Station operations are made simpler through the provision of three crossovers - one between the platforms under the footbridge, one at the end of the platforms and one opposite the signalbox. The latter is a facing crossover - a rare feature of the real railway

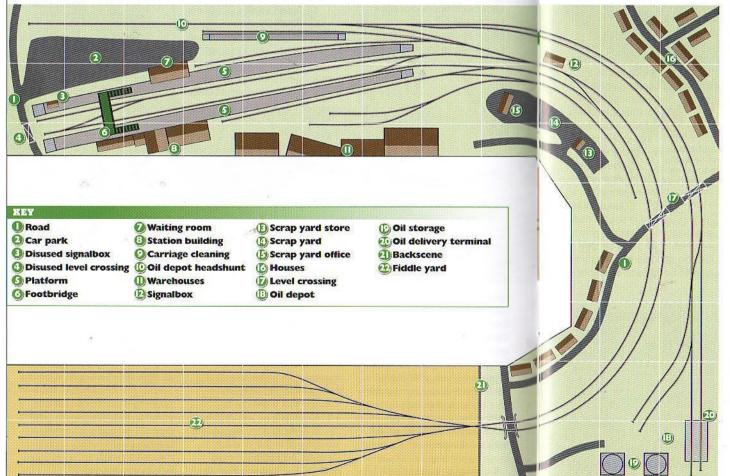
In the fiddle yard we have suggested nine lines accessed by a fan of points. However, depending on what you wish to achieve a more cost effective method of storing trains would be to build a traverser which will save greatly on both pointwork and space for trains as all of the storage lines could then be the same length. A traverser fiddle yard works on a sliding mechanism which essentially allows a table of trains to moved across the fiddle yard to align with the entrance/exit roads as required.

In terms of scenery we have suggested features which highlight the stations position

within a town. This plan is Housing and shops are suggested around aimed at the the approach to the station with a scrap yard and factory being located nearer to the station confines. All of these features could be altered or adapted to suit personal

> requirements, but in our view they offer more than a hint towards the railways location in a busy suburban town.

So, if you have a 12ft x 8ft space, beit in a spare room, a garden shed or garage this plan offers operation, reasonable train lengths and scope for scenic modelling too.



This plan

can be

MIKE WILD

### 3:3/11/15

is at a premium a shelf layout located along one wall of a room can be a good compromise between

keeping a room available for secondary uses and still being able to indulge in this housed on hobby. one wall

This plan is based around a 12ft x 2ft footprint. but could easily be shortened to

fit within a smaller room. Its main advantage is that it can be housed on one wall of a room without infringing into the centre of it. This could, for example, allow the room to double up as a guest bedroom or include features such as storage, work benches or even be part of a study.

Shelf layouts have long been popular with both home and exhibition layout

builders, partly due to their compact nature and ease of transport. In the pages of Hornby Magazine we've featured many high quality shelf layouts all ranging in size

> and design greatly. but all equally based around a similar principle. Those with more wall space can add a fiddle yard at each of the scenic section while others may choose to

> > There are several options

when it comes to fiddle

train has its own individual

cassette to load it onto

the railway or rotating

sector plates. The

choice is yours.

add a second shelf at a 90 degree angle along a second wall to accommodate a fiddle yard.

This plan is based around a conventional arrangement 1 offering a terminus to fiddle yard plan. The

terminus is located alongside a small dockside - this could be a canal or river based dock - which is also served by the railway. The majority of the goods traffic is handled by the large transfer shed close to the entrance to the fiddle yard while other traffic is transferred directly to road or sea transport for onward movement or vice versa.

The station is comparatively conservative offering just two platform faces - one with a run round loop alongside and the other as a bay

platform which also provides access to the engine shed. The yard design. Traverser fiddle engine yards are practical and save on

point work, but other options shed including cassettes where each features a single road building long enough to house a large tank engine,

Maximum baseboard width: 2ft 00 **Intended gauge: Minimum curve radius:** 20in **Maximum train length:** Three coaches/eight wagons Shelf layouts offer

12ft x 2ft (12ft x 8ft in extended form)

system to handle arriving and departing trains in the but the total fiddle yard which would be shed area can

locomotives - two on the shed road and a third on the water

The fiddle yard suggested is a traverser which allows trains to be arranged offscene and despatched to the scenic area without requiring a large amount of space for point work. A second option would be to design a cassette

accommodate three

and coal road.

STATISTICS

Size:

potentially more flexible and mean less direct handling of locomotives and rolling stock.

Train formations would be limited to three coaches plus great potential for layouts in small spaces. This is Phil Parker's Melbridge Dock built in 9ft x 2ft in 'OO' gauge.

a locomotive or eight wagons, a brakevan and a locomotive in this plan due to the length of the fiddle yard, goods yard sidings and platforms. This however is plenty for realistic trains to suit the size of the layout.

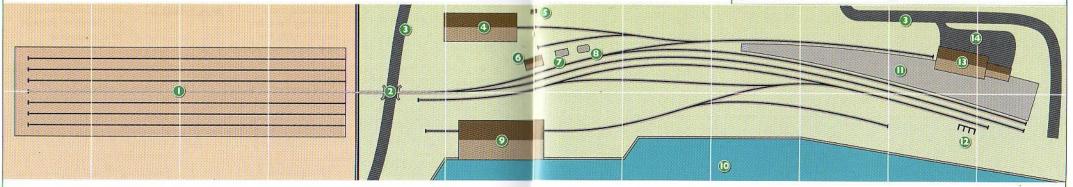
With some alterations this plan could also be extended to turn it into an 'L' shape lengthening the area between the station and fiddle yard and offering a more realistic feel to the station.

### REY

- Traverser fiddle yard
- @Road overbridge
- 8 Road
- (1) Engine shed
- (3) Lamp hut
- (3) Signalbox
- Locomotive coal

- (1) Water tower
- () Transfer shed ( Sea
- (I) Platform
- (D) Coal staithes
- (E) Station building





### The 16ft x 3ft

Southern

Region EM

operations.

MIKE WILD

## 

ERMINUS LAYOUTS offer lots of potential for the railway operator, "Ideal for

but one thing that puts some people off this type of design is the lack of potential movement. With a layout like this you can't sit back and watch the trains go by, as each

movement needs to be fully controlled from start to finish.

However, what it does offer is the possibility of realistic operation and that is what this layout is all about. It has been designed to feature a terminus station, a set of carriage sidings and a small yard which could either be used for general goods traffic or as a permanent way yard offering lots of potential for detailing.

The station can accommodate six coach trains in the platforms and there are three

platform faces to serve arriving and departing trains. This side of the operation is backed up by a set of carriage sidings which in our eyes are more akin to those seen on

When building a terminus

to fiddle yard layout it is

movements are possible.

Devising a scheme of train

movements will keep your

interest and also focus

running sessions once the

layout is complete. It

also serves as an

extra activity.

the Southern Region making this plan ideal for Electric Multiple Unit operations.

The carriage sidings feature a three road carriage shed and a single road with a maintenance platform. This is accessed via a headshunt and an additional road has also been added with a carriage washing plant allowing further movements at this relatively compact station site.

The fiddle yard suggested is a traverser design, although cassettes could be used instead to supply trains to the scenic area. Rather than use the full width of the baseboards the fiddle yard has been contained within a 2ft area to

allow the carriage shed to be included in the remaining space as important to consider what part of the scenery. However. with a cassette style fiddle yard

the space for

STATISTICS 16ft x 3ft Size: Maximum baseboard width: 3ft **Intended gauge:** 00 Minimum curve radius: 20in **Maximum train length:** Six coaches/12:15 wagons

scenery could be enlarged adjacent to the fiddle yard allowing the scope of the railway operations to be developed further.

Due to the amount of railway in this plan space for scenery is a little limited. The road suggested along the backscene descends down to ground level at the right hand end of the plan allowing access to the station forecourt. Most of the buildings around this area would be houses, most of which could be built in low relief, rather than full relief.

Another option with this plan would be to turn it into an

'L' shape by moving the fiddle yard by 90 degrees and so extending the scenic area. This would allow for

greater scenic

development and for a Southern Region Electric Multiple Units (EMUs) longer have become popular of approach to late following the release of be created to Bachmann's 4-CEP four-car the station so unit. Also coming out soon is that shunting a 2-EPB from Bachmann and a 4-VEP from Hornby. Peco movements produces components didn't rely to install realistic entirely on the cosmetic thirdrail. fiddle yard. A

> second alternative would be to turn the plan into a 'U' shape with a fiddle yard on each side and the station in

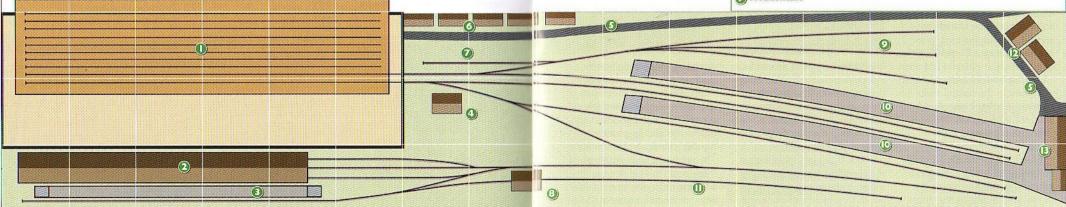
the middle.

As drawn though this plan would only occupy one side of a garden shed or garage leaving the rest of the building free for the other parts of life such as garden tools, bikes and other hobbies. It would also allow a modelling bench to be included in the same room, which would be handy for those who like to add extra details and build their own rolling stock.

The terminus to fiddle yard design is a useful option to the railway modeller and one which holds great potential when a room is required for other purposes beyond railway modelling.

- 1 Traverser fiddle yard
- @Carriage/EMU shed
- (E) Maintenance platform
- (1) Signalbox
- (A) Road
- O Low relief houses/shops
- **Meadshunt**

- (1) Carriage washing plant
- (i) Goods yard
- ( Platforms
- (II) Carriage shed headshunt
- ( Shops
- (E) Station building



# 

HIS PLAN is based around a country station setup and set within a 12ft x 8ft footprint. This is suitable for a modest spare room in the majority of houses or, with adaptation, in a single garage where the layout could be lengthened to 16ft. The plan is designed for 'OO' gauge and makes the most of the potential for scenery by employing 3ft wide baseboards.

The idea behind this plan is to create a showcase to operate a modest collection of rolling stock. The layout consists of a three-platform station which will accommodate a four-coach stopping train. The fiddle yard can handle longer trains - a maximum of seven coaches plus a locomotive in the longest loop. The bay platform, accessed from the outer main line, has several possibilities. It could be used as a parcels bay or as a cattle dock with the addition of suitable facilities. Alternatively it could be an additional passenger platform and the start for a branch line service, possibly formed by a push-pull set or a Diesel Multiple Unit (DMU).

Looking from the operator's viewpoint in the central well, a goods yard has been placed in front of the station. This arrangement means that shunting can become more involved and by installing a third controller to operate the goods yard and goods loop trains can be left circulating the main

independently. With DCC control this could all be handled from one handset – two trains could be set running on the main lines while a third locomotive is controlled in the yard.

Goods trains can also reverse at the station as a double slip allows trains to arrive in the goods loop in an anti-clockwise

clockwise via the double slip. Alternatively goods trains can also arrive clockwise and be propelled into the goods loop ultimately offering greater flexibility for train movements.

In terms of scenery there are many options. The 3ft wide baseboards for the scenic section allow depth to be created and

from the operator's well, as the main line is furthest away meaning that the scenery can lead into the railway.

At the left-hand side I've included a tunnel immediately followed by a road bridge to act as a scenic break. This road also leads into the goods yard and village area and by being

a good scenic break. Further along the layout are open fields and rolling countryside, with a farm in the foreground ahead of the railway. To change the perspective of the railway I have also included a level crossing which will add a different scenic feature. On the other hand you could also build open frame baseboards for the area to take the road underneath the railway.

At the back of the layout is a fiddle yard - an area used to hold trains off the scenic area which represents the rest of the world. To maintain a large operating well the baseboards here have are 18in wide which will easily accommodate six tracks and still leave space for additional locomotives and carriages to be kept on the baseboards but not on the track. The arrangement also includes a double slip at the left-hand end which allows trains using the goods loop to access one of two roads in the fiddle yard as well as trains on the main line retaining access to all lines.

The right-hand end of the fiddle yard is a little crammed. A mixture of large radius and curved points will provide access to the sidings, but they will need to be laid carefully to avoid over-tightening the curves into the loops.

	Hill side Road Cottages Railway cottages Church Station forecourt Station building Waiting room Footbridge Platform	Water column  Signals  Loading dock  Goods shed  Coal store  Headshunt  Farmhouse  Barn/out building  Level crossing  Hill side	A CHARLES OF THE PARTY OF THE P
line while the yard is shunted	direction, shunt and depart	this will look particularly good raised above the railway it o	ffers

### STATISTICS Size: 12ft x 8ft Maximum baseboard width: 3ft Intended gauge: 00 Minimum curve radius: 20in **Maximum train length:** Seven coaches/15 wagons

# 

HEN thinking of a complex layout plan with lots of track, 'OO' gauge isn't always practical in the home environment where space is often at a premium. By turning to 'N' gauge though a new world of possibilities opens up and that is where we start with this 8ft x 8ft trackplan designed to suit a garden shed.

The plan makes maximum use of the space available by offering a pair of independent double track circuits which are linked together at the station approach by crossovers. A large station is suggested on one side with five platform faces featuring four through lines

and a bay platform and alongside this is a parcels depot with two further lines.

A series

'00' gauge owing to it being of complex half the size and with the recent improvements pointwork in rolling stock 'N' on the station gauge is worth approach also allows access to the locomotive depot from all lines where there is a four road shed, a turntable, coaling and water facilities as well as a diesel fuelling point making this plan, as drawn, ideal for the changeover between steam and diesel

traction. However, by simply changing the facilities at the engine shed and removing the coaling stage this plan could also be developed as a pure diesel era layout.

On the third side of the layout there is a goods yard which is again designed to suit the BR steam/diesel transition. This consists of two reception roads, a headshunt to allow independent shunting of the yard without interfering with main line operations and coal and general goods facilities. Again the goods yard could have its purpose changed for a diesel

> era layout, perhaps being the base for an engineer's yard offering

If you have your heart set

on a busy main line, but only

a modest space available, then

'N' gauge could be the way

forward. Much more railway

can be fitted into an area than

plenty of space for wagon storage and possibly a stock pile of ballast.

At the rear of the layout is a large fiddle yard which features two sets

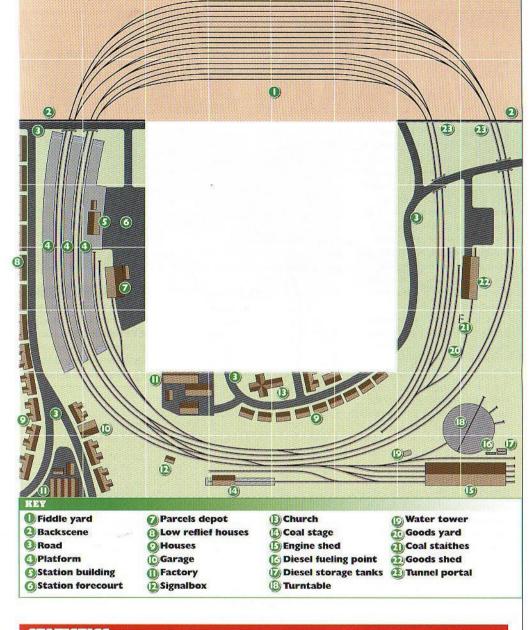
of independent storage loops for the pair of double track circuits. In total there are 16 tracks across the 2ft width of the rear baseboard allowing a large range of trains to be stored. By introducing

isolated sections into each storage road up to four short trains could be held in some of the loops allowing much more variety to be available to the operator. By leaving one road free in each direction trains could also change between the inner and outer circuits using the crossovers at the station approach.

The longest sidings in the plan would be able to accommodate 30 wagon or 10 coach trains allowing realistic long goods and express formations to be created without any compromise. This adds to the experience of 'N' gauge as very few home layouts in 'OO' gauge are able to accommodate such long scale length trains which are normally the preserve of exhibition layouts.

Beyond the railway the scenery suggested revolves around a large town - giving the large station a purpose – which opens up plenty of opportunities for street scene modelling and building construction. We have suggested a potential street arrangement, building types and more, but these could all be adapted to personal taste.

So, if you've been wondering how to squeeze a complex main line into an 8ft square space, this 'N' gauge plan could be just the ticket.



### STATISTICS Size: 8ft x 8ft Maximum baseboard width: 2ft **Intended gauge:** N. Minimum curve radius: 10in **Maximum train length:** 10 coaches/30 wagons

## The 15ft x 7ft

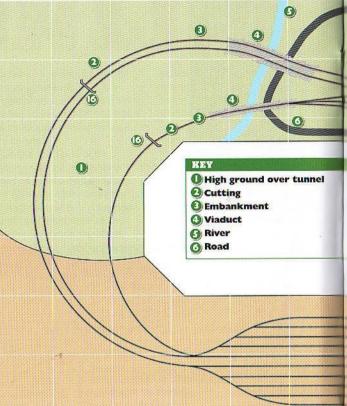
# 

HE SETTLE and
Carlisle line through
the Northern fells
has been a constant
source of inspiration for model
railways for decades. Even
now new layouts based on this
famous scenic railway journey
continue to emerge onto the
exhibition circuit. Highlights
amongst these must include
Peter Kirmond's fabulous Blea
Moor which cleverly features a
realistic gradient.

This plan, while based on the Settle and Carlisle theme, isn't designed from a real station. It does however give the impression of the route and the trackplan leaves plenty of space for the rolling hills of the countryside which surrounds the railway as well as a reasonable level of operation for the builder.

The plan consists of a double track main line which emerges from a long tunnel on the left hand side before crossing a river and road via a five arch viaduct. Adjacent to this is a second single line viaduct bringing a branch line into the station. As drawn this branch rejoins the main lines in the fiddle yard, but it could equally have its own hidden storage sidings.

The station features two main line platform faces each capable of accommodating a five coach train plus a bay platform with a run round loop for the branch. Also included is a goods loop with access to the goods yard via a headshunt. This latter features offers a little extra in



the operation stakes, as this layout is essentially a tail chaser which allows a number of trains to be arranged in the fiddle yard and run through the scenic section to replicate the varied passenger and goods trains which would have worked on the S&C in the days of steam.

Even though this plan is intended to represent the BR steam era, changing to replicate an earlier or later period would be very straightforward. Simple

changes such as removal of the goods yard facilities (or leaving them overgrown) would allow the time period to be brought forward where as to turn the clock back to the prenationalisation period would only require the road vehicles to be changed.

Even with 15ft x 7ft to play with the plan only allows for condensed train formation to be operated. The maximum train length for the fiddle yard is seven

coaches – the equivalent of an 18-20 wagon goods – which doesn't match the true trains of the S&C which often loaded to 10 coaches or more, but equally gives a good representation.

STATISTICS

Intended gauge:

Minimum curve radius: Maximum train length:

Maximum baseboard width: 2ft 6in

Size:

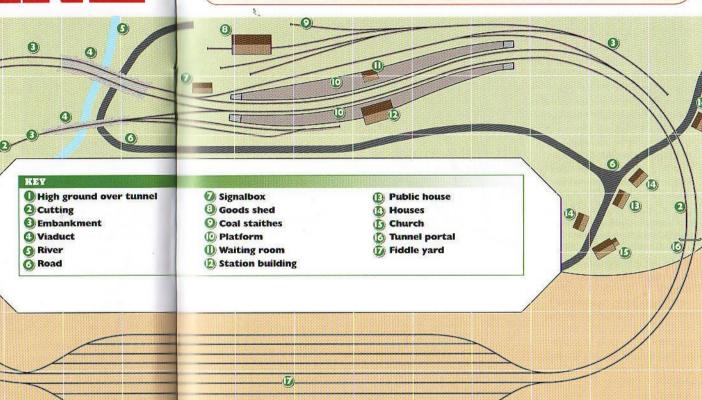
Rather than clutter the scenery with buildings, in this plan we have aimed to leave it open for countryside to match the profile and terrain of the S&C which includes rising and falling roads to follow the land contours and a sparse population of buildings

 the villages which the station serves being assumed to be a little way from the station as they often were.

Within the same I 5ft x 7ft area much more track could be compacted in, but there is something to be said for leaving areas free for scenery to allow a layout to breath, and that is exactly what this plan does. Some may prefer to remove the branch line to simplify the plan further and there is also

the possibility of extending some of the fiddle yard sidings by using curved points. The points suggested by this plan are medium radius in the fiddle yard and a mixture of large and medium radius on the scenic section.

Building this layout would offer just as much pleasure as operating it and once built it would allow a couple of hours to be spent happily watching the trains go by.



15ft x 7ft

Seven coaches/18-20 wagons

00

### The 15ft x 7ft

### 

LARGE SPACE can mean one of two things to a modeller – more room for railway or more room for scenery! This I 5ft long plan offers, perhaps, less track than some might expect in the area available, but equally a feeling of space around the railway.

The plan is intended for either a single garage or a large 16ft x 8ft garden shed, leaving a little room for manoeuvre. It could also be located in a loft if desired and if more space was available it could be lengthened or widened to increase the running line to the terminus or even be developed into a through station.

It is intended to represent a seaside terminus located on the outskirts of town rather than the centre. The town starts by the railway and spreads towards the coast along the road which parallels the line for the last part of its journey.

The concept is fairly simple consisting of an out and back double track main line with a large fiddle yard at one end and a six platform for station at the other. Also included is a secondary branch which is assumed to be a coastal route which, on leaving the station, heads back out to sea and runs along the cliff tops while the main double track line heads inland.

No region is specified with this project, but it would perhaps be best suited to either an Eastern or Southern location – although it could be equally well modelled with either Midland or Western Region rolling stock. In terms of time frame it is firmly rooted in the steam especially with its goods facilities, rail served dairy and compact locomotive shed.

The arrangement of the locomotive shed is a little unusual and would require bi-directional signalling of the outer main line for locomotives to reach the shed for servicing

and maintenance after arrival with a passenger or goods train. An important part of this layout will be a station pilot to move coaching stock between platforms ready for the next departure.

The station is laid out to accept arrivals from the main line in the two upper most lines, while departures would be from a choice of five lines. Branch line arrivals would be sent to the lower part of the station and

would be most likely to use the lowest platform on the plan. Alongside this platform is a loop which doubles as a goods loop and run round facility. A double slip is provided at its entrance/exit which allows access to the goods shed and dairy as well as the main line and branch.

A dairy has been suggested as an additional source of goods traffic alongside the more conventional box van and open wagon traffic likely to be delivered to the main goods yard. Additional traffic flows might include steel traffic for local factories and return completed goods in box yans.

15ft x 7ft

Five coaches/12-15 wagons

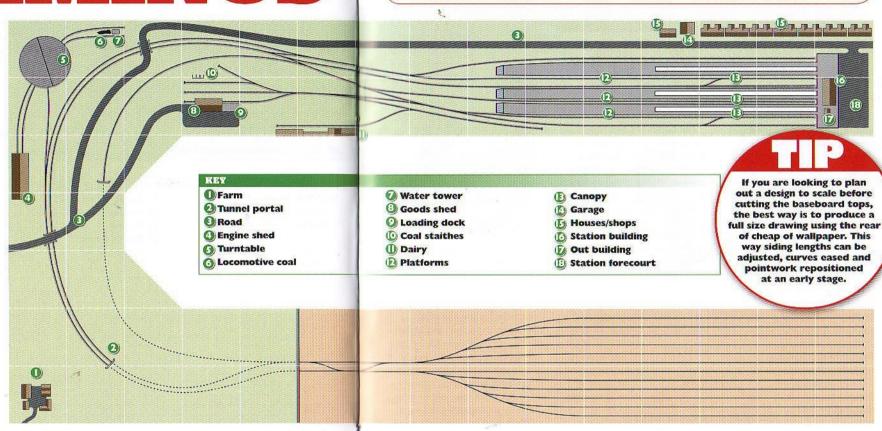
00

20in

As a plan this design offers much scope for the operator in terms of train movements. There is lots of shunting to be undertaken both for passenger and goods trains alike and there is also the possibility of using one of the platform lines for stock storage so that arriving

trains can be strengthened or shortened – in fact the goods loop could have this as its third purpose.

If realistic operation is what you are looking for this plan offers it in bulk loads and with appropriate signalling and the added complication of a single trailing junction to reach the station (limiting which lines can accept arriving trains) there will always be a movement to undertake.



STATISTICS

Intended gauge: Minimum curve radius:

**Maximum train length:** 

Maximum baseboard width: 2ft

Size:

# U) [4] [4]

MIKE WILD

**ULTI-LEVEL** plans can bring a completely different dimension to a model railway, but for several reasons they have never been particularly common on the exhibition circuit. Those that have been built with multiple levels -Derek Briars' Owen Street and the Alsager Model Railway Club's Hassell Harbour Bridge both spring to mind - have been highly successful and popular not least because it allows "This plan a greater range of operation within offers great the same space as a

potential for This plan is the builder designed to do just that - offer more operation in a 16ft x 9ft space. The overall size of this plan is a little awkward for a single garage or spare bedroom, but it could be accommodated in

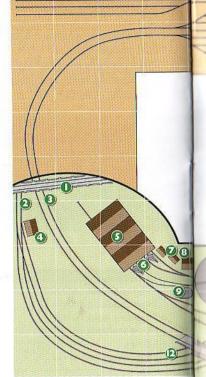
single level layout.

a purpose built garden shed or converted loft space.

The basics are two independently operated double track main lines - one on a low level and one on a higher level which we have suggested to be 6in above the low level. The height has been chosen as it allows space to reach into the lower fiddle yard at the rear and secondly so that the link line between the lower and higher levels can climb without the gradient being too

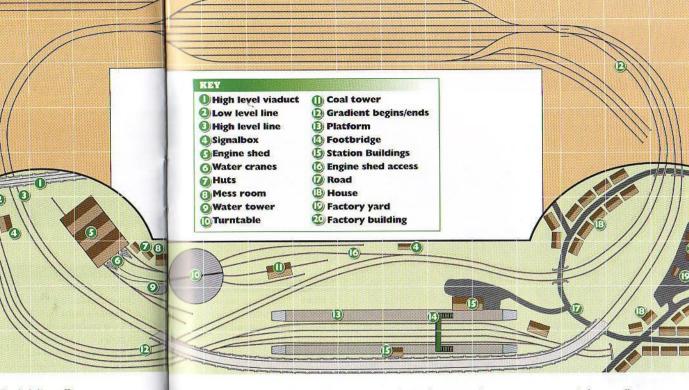
steep. Here we have suggested a rise of 1/2in in every Ift. This is the steepest we would suggest as locomotives will begin to struggle on anything steeper. In the ideal world a

gradient no steeper than 1/4in in every Ift would be better, but the space available in this plan precludes it.



The link line offers great potential for movements between the upper and higher levels, particularly with the pair of double slips within the upper fiddle yard which allows trains from both inner and outer lines to be crossed over either when arriving or departing the yard.

Working from the right hand end of the scenic section, the inner double track line begins its descent immediately after passing through the backscene and curves down past the



locomotive shed (which could be exchanged for a goods yard or industrial setting) before passing underneath the upper level lines on its final approach to the low level line. It meets the low level route opposite a signalbox just before entering the low level fiddle yard.

The main low and high level circuits both remain at consistent heights throughout the layout - the only gradient being on the link line between the two. Also worth noting is that the locomotive shed would be on a third level between the height of the low and high level lines, adding yet another dimension to the layouts appearance.

As a plan this layout is more focused on continuous running than shunting, there being

no goods yard suggested in this version. However, there would be plenty of opportunity for light engine movements to and from the locomotive shed and this could include swapping

**Gradients are a complex** 

project involving a

locomotives in the low level station using the platform loops.

With with a single line laid on top analogue to test varying gradients control with different rolling stock up to five before moving onto a full controllers could be wired into the layout -

rising gradient. two for the upper level and two for the lower level plus one for the locomotive shed. These will require

rotary switches to allow any controller to control any part of the layout - this would avoid having to stop trains enroute from the upper to lower levels (and vice versa) via the link line.

Alternatively Digital Command Control would come into its own with this plan, but subject. The ideal gradient specifications is I/4in per Ift for '00' gauge. One way to trial gradients is for power to use lengths of strip wood districts would have to be considered to avoid potential pitfalls.

> This plan offers great potential for the baseboard builder, scenic modeller and train operator alike, but it certainly isn't for the absolute beginner!

### STATISTICS

16ft x 9ft Size: Maximum baseboard width: 2ft 6in **Intended gauge:** 00 Minimum curve radius: 20in Maximum train length: Seven coaches/18 wagons

### The 16ft x 8ft

OCOMOTIVE sheds can be a great addition to a model railway and many modellers choose to build layouts with this as the main focus, but such a facility can also be designed into a continuous run layout.

Many will recognise this plan as that for Hornby Magazine's Bay Street Shed Mk II. This layout was built over an eight month period to make its debut at the Bristol Model Railway Exhibition in May 2009. Since then it has attended seven further shows and it will be heading to Wycrail in High Wycombe on November 6, Southampton Model Railway Exhibition in January 2011 and Nottingham East Midlands Model Railway Exhibition in March 2011.

The layout features a four road locomotive shed coupled to a turntable, coaling stage and diesel fuelling point. The plan for the shed can accommodate 26 locomotives through the use of isolating sections and it can also handle incoming supplies of coal for the coaling tower, diesel fuel and its own break down train.

Beyond the shed it features a double track main line with a double junction half way along the scenic frontage. This allows

Maximum train length:

trains to take two different routes to access the fiddle yard which has 13 through roads and

louble junction half way along he scenic frontage. This allows	two dead end sidings. These latter sidings are used to store
STATISTICS	
Size:	16ft x 8ft
Maximum baseboard w	idth: 2ft 6in
Intended gauge:	00
Minimum curve radius:	20in

Eight coaches/25 wagons

multiple units and short trains to operate on the double track branch. The centre road in the fiddle yard has access to both the inner and outer main lines and this is used as a turn back siding to return trains to the double track branch.

KEY

Unusually this plan doesn't include a station, although it does have a suggestion of one at the scenic break on the left hand side. The space which would

otherwise be allocated to a station has been used to develop

the shed area. Scenically there is only limited space available beyond the railway, but at the right hand end there is enough space to indicate a town including terraced houses and a factory. A road network has also been generated which helps to separate areas of the layout and this also includes a bridge over

seven tracks at the entrance to the locomotive shed.

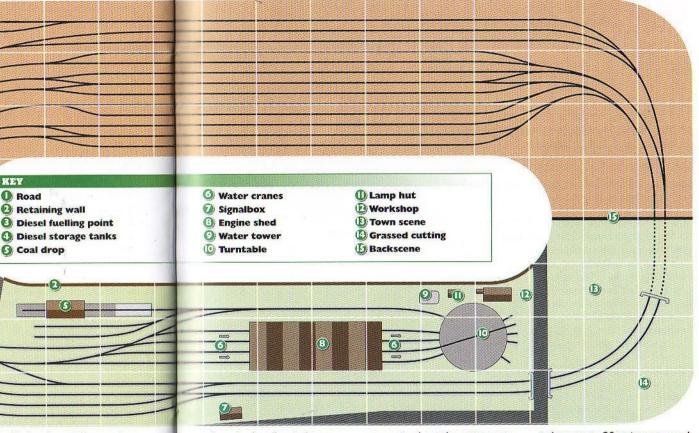
In terms of operation this plan offers plenty of scope. Main line express trains can be formed of up to eight coaches, although most would be restricted to six, and goods trains can load up to 25 wagons in certain fiddle yard roads. In the fiddle yard two trains can be arranged in each track through isolating sections and this means that it is possible

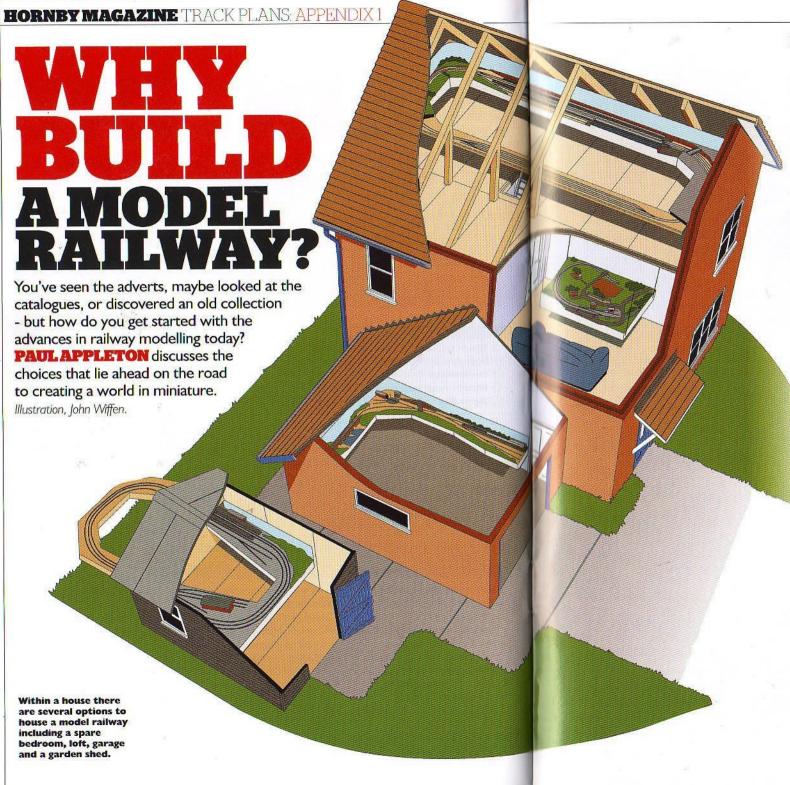
to have up to 20 trains prepared in the off-scene storage yard.

The locomotive shed adds greatly to the operational side of the plan and has its own separate controller.

It might not be to everyone's taste through the lack of a station, but this plan more than makes up for this through its ability to display a large collection of locomotives in the engine shed and on trains.







ODEL RAILWAYS are a wonderful pastime. Backed by years of nostalgia and childhood memories, they can be very rewarding, but it's not always easy to know where to start. You might have rediscovered a box of old Tri-ang Hornby bits in the loft, or you might have been inspired by a visit to a local model railway exhibition. Perhaps you've always been interested in the hobby, but never had the time or known where to begin, or maybe you have a Hornby or Bachmann train set and want to move to the next stage.

### Why build a model railway?

So, why do you want to build a layout? Perhaps you just want to see lots of trains running. Maybe it's a nostalgia thing, recreating childhood memories, or you're considering going as far as recreating a real railway location. Perhaps scenery is your passion and you will enjoy seeing trains run through some 'real' countryside. Or maybe it's the operational side of things – lots of sidings and shunting, or junction stations with branch lines.

Remember not to get carried away too soon. A balance is needed between operational interest and practicality. The simplest of layouts is a portable end-to-end type. Typically this has a station at one end and a fiddle yard at the other where trains are stored at the other end. These are popular with those who like to exhibit at public events, because they are easy to transport and showcase their prized locomotives and carriages, but for a home-based layout, the operator can soon get bored by the operational limitations.

Tail chasers, layouts that go round in a continuous loop and sometimes double-track main lines, provide more entertainment value and usually have a large fiddle yard so that trains can be changed after one circuit to add realism to the operation. This is the most popular format for the home layout, but equally you don't have to build an extensive layout - you can just go for a continuous circuit.

Once you get beyond these two basic arrangements things start to get complicated; separate branch lines, junction stations, busy termini, split level lines, return loops and so forth. Don't worry if some of these terms don't mean much at this stage, they will be explained later, but suffice to say they would be a little ambitious for an absolute beginner.

### Location, location, location...

So let's think about it. What space do you have available? If you do want a substantial 'OO' layout you may have to consider options outside of the home. But first, let's look inside the home, for undoubtedly this is the best place for a model railway

due to the consistency of temperature and ease of access.

A spare bedroom is perfect. Options here include having a railway running round the outside wall, either all the way round in a continuous run or in part, such as an 'L' shape or end-to-end. Building a railway around the edge of the room can make it multi-functional too, so you can share the space with another's hobby too. 'N' gauge will allow the use of one side of the room, even

for a continuous run, allowing easier access to the room and a clear operating area. If the room is big enough, you might consider a layout built in the middle of the room so you can get around it easily.

If you haven't got a spare room then don't worry, there are ingenious ways of concealing a railway in the guest room, or any other room for that matter. For example, you can have one that lowers down from the ceiling using pulleys or you can have one which folds up against the wall on hinges. A portable layout can be designed to fold away or split into sections and be stored in a cupboard or under the bed when not in use. The permutations are only limited by your imagination.

Next best after the house itself is perhaps the garage, but beware of drafts, the damp, and creepy-crawlies. The best bet is to empty it and line it with timber and replace up and over doors with something more conventional that will keep drafts at bay. A good electrical supply will also be required, as well as good lighting and you may need to consider resurfacing the concrete floor. But converted garages do give a good deal of space. They can also be used even when the garage is still required for the family car, using the aforementioned fold down or hoist-from-ceiling methods.

Given the right kind of building, the loft can make a superb model railway room. More modern homes have a criss-cross system of trusses and beams and aren't practical for conversion. But older buildings and especially bungalows have good open spaces that can be utilised. Lofts are draughty and need to be in order to keep air circulating and avoid damp.

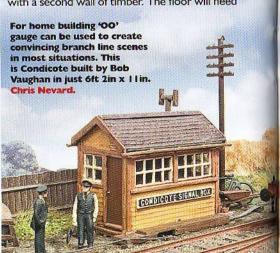


'N' gauge opens up a world of potential for the home modeller, especially with the recent high quality releases from Bachmann and Dapol. This is Claydon by Dave Westwood which measures just 4ft x 2ft and started out as a simple test track. Mike Wild.

They are also prone to extreme temperature changes from winter to summer. Velux windows and heating systems can get round this to some extent, but it can still be extremely uncomfortable in the height of the summer and trackwork can suffer due to expansion in extreme conditions.

Another disadvantage of using the loft is the cost involved in converting, not to mention clambering up and down to it. You will need a professional electrician to add a power supply and good lighting.

If none of the locations discussed so far are appropriate then we are really talking about moving into the garden. A purpose-built shed is an option. A substantial shed of 12ft x 8ft would allow for a decent layout in either 'N' or 'OO'. As well as the initial cost of the structure and building it yourself, or paying someone else to build it, you will also need to insulate it and line it with a second wall of timber. The floor will need





extra insulation to stop the cold and damp from coming through and the roof will need to be thoroughly waterproofed and lined. An electrical supply will also need to be laid from the house by a qualified electrician.

The main disadvantage though, apart from venturing out in wet weather, is security. A garden shed will always be vulnerable to burglary however many locks and bolts you attach to the door.

Other than the shed, there is the garden, but this is a very different sort of proposition. Buildings and structures need to be weatherproof or portable and intricate trackwork isn't suitable. Outdoor layouts in 'OO' are great for watching scale length trains go by, but there are operational limitations of a very different kind and winter running is almost impossible, although I have seen 'G' Scale layouts operating in the snow!

### No space? Join a club...

For most beginners there is an option amongst this lot, but if none of these are for you, there is another possibility - join a local model railway club or team up with a friend.

Most clubs have at least one layout in the principal scales under construction or operational. You can gain useful tips from fellow members and learn new skills on club nights. You will be able to run your own locomotives and rolling stock during club running sessions and perhaps at exhibitions when the club layout is invited to attend.

So there are no excuses, whether you dust off those old Tri-ang Hornby models from the loft or are about to start out afresh, hopefully the options discussed here will inspire you to get started.



### GAUGINGTHE RIGHTSCALE

Choosing the best scale to model in can be a tricky decision. **ANDREW RODEN** explains the popular scales and how well supported they are.

F ALL THE OUESTIONS facing someone about to start railway modelling, perhaps the most fundamental is that of which scale to choose. There is a bewildering array of possibilities and reasons to choose, or not choose, any one.

It's worth clarifying scales and gauges briefly. Many modelling magazines, Hornby Magazine included, use them interchangeably when talking about models. For the most part, this makes no difference as when something already built is being discussed, there's little scope for confusion. However, when we're talking about the range of different scales, it can make a huge difference. 'Scale' is the ratio of the model to real life, usually expressed in millimetres to the foot or as a proportion. 'Gauge' is the distance between the rails, and can be independent of the scale. Standard Gauge is 4ft 81/2in in the real

world, and many scales reflect this. However, not all model standard gauge accurately, and when it comes to modelling narrow gauge railways, such as those in Wales. a completely different track gauge is used instead. For our purposes, titles such as 'N' or 'OO' scales refer to the popular names for those combinations of scale and gauge.

There's no right or wrongs in railway modelling, so if you're still deciding which scale to model in, here's our guide to the various scales and gauges.

this scale and in the most recent (also known as 3mm) releases competing with the fine Scale: 3mm: Ift Gauge: 12mm

Triang in the 1960s under the 'TT' (or 'table top') banner, 'TT' has long been viewed as an ideal compromise between the small size of 'N' and the more detailed, but larger 'OO' models. Despite its seeming advantages, it remains a minority scale with few if any ready-to-run models for the British market, although European prototypes are available in 3mm scale. For British outline layouts kits are available of a fair range of prototypes, and there is healthy

THE

**Notes:** First popularised by

support in the shape of the

Above: The main scales are 'N', 'OO' and 'O' gauge. These locomotives show a scaled comparison between the three. John Wiffen. Right: Narrow gauge modelling has

Watkins, shows just how charming the scale can be. This layout featured in HM25. Chris Nevard. 3mm Society, but considerable

a charm all of its own. This 'OO-9'

layout, Tan-y-Bwich built by Angus

skills in kit building and scratch building will be needed to make the most of 'TT'.

HO'

Scale: 3.5mm: Ift Gauge: 16.5mm

Notes: The first popular miniature scale, 'HO' is by far the world's most popular, and is exactly half the scale of 'O'. A huge amount of track and scenic products is available from a massive number of manufacturers, but very few British models have been produced, thanks to the dominance of 'OO' and the limited possibilities of operating British models alongside their continental counterparts.

However, if you are looking to model America or any part of Europe there can be no better choice especially considering the range of products available.

'00'

Scale: 4mm: Ift Gauge: 16.5mm

Notes: The most popular British scale, 'OO' started out as a compromise before the Second World War as it wasn't felt possible to motorise British outline models in 3.5mm: Ift 'HO' scale due to the smaller size of British prototypes. The result is that the track gauge - exactly the same as 'HO' - is incorrect, and looks it. Nonetheless, there are ready-to-run models and kits of

Scale: 1.38mm: Ift Gauge: 6.5mm

Notes: The smallest massproduced scale, 'Z' offers the potential to build truly tiny layouts crammed with detail. For British modellers it is something of an irrelevance as few UK-outline models have been produced, but if space is at an absolute minimum, continental models are available, although at a price.

Scale: 2mm: Ift Gauge: 9mm

Notes: After many years as the poor relation to larger scale models recent releases in 'N' are finally showing the potential of

detail of the latest 'OO' models. There is a wide and growing range of British models, mainly produced by Bachmann under the Graham Farish banner, and Dapol. For the European and American modeller there is a broad range of rolling stock, buildings and accessories to choose from for 'N'.

A comprehensive range of track and scenic products is available including ready-made buildings from Bachmann's Scenecraft and Hornby's Lyddle End range, and the small size of the models means a miniature main line is a genuine possibility even in comparatively small rooms.

many prototypes – locomotives, carriages, and wagons – and excellent support from the manufacturers. Accurate models of real locations can take a huge amount of space, but most homes have the space for a decent 'OO' scale layout.

### SEN!

Scale: 4mm: Ift Gauge: 18mm

Notes: 'EM' uses 'OO' models re-gauged to a more accurate track gauge of 18mm, and the track work looks far better than the extra 1.5mm in gauge might initially suggest. Rewheeling carriages and wagons is fairly easy, but locomotives, particularly steam, can be daunting. However, for those with the time and patience, a good layout is perfectly possible. Flexible track can be bought, but points and other trackwork will need to be built from scratch. Support is provided by the EM Gauge Society.

### '0'

Scale: 7mm: Ift Gauge: 32mm

**Notes:** The first railway models available to the masses,

the heyday of 'O' was arguably between the wars, when there was little alternative. Since then the scale has waned in popularity, despite the presence and detail of current models. Space and affordability are the two main deterring factors for many, though some excellent 'O' scale models have been built in very small spaces. Many find building kits and scenery easier in 'O' because of the larger scale, and there is a good range of track and kits available, as well as some ready-to-run models including more recently those from Helian and a handful of specialist builders. Live steam models provide a chance to drive real engines, and the scale is particularly suited for gardens. The Gauge O Guild has over 5,500 members.

### 'Gauge I'

Scale: 10mm: Ift Gauge: 45mm

Notes: Another large scale, 'Gauge I' is about the largest practical for most. At this end of the spectrum, models are really big and heavy, and with price tags to match. Battery and electric power supplies are all used, but for many 'Gauge I' modellers, the possibility of running real steam is a major attraction. Many locomotives are powered by gas or liquid fuel, but some burn coal. If you have the space and money, a 'Gauge I' layout is as close to a I 2in: If t prototype in the back garden as you'll ever get!

### **Narrow Gauges**

There are lots of narrow gauge railways around the world and in Britain and by using a smaller track gauge than the standard gauge equivalent in a given scale, narrow gauge layouts are fairly straightforward to build, and often have a lot of character that main line railways could never match. Many choose to invent their own railways rather than follow a prototype, giving full vent to a modeller's creativity. Here is a brief round-up of some of the possibilities.

### 'N-6.5'

Scale: 2mm: Ift Gauge: 6.5mm ('Z' gauge) Notes: Using 'Z' track with 'N' scale models, 'N-6.5' offers a scale gauge of 3ft 3ins between the rails – roughly equivalent to metre gauge in real terms. At this size, modelling the Isle of Man railways wouldn't be an unreasonable compromise and nor would the 3ft gauge

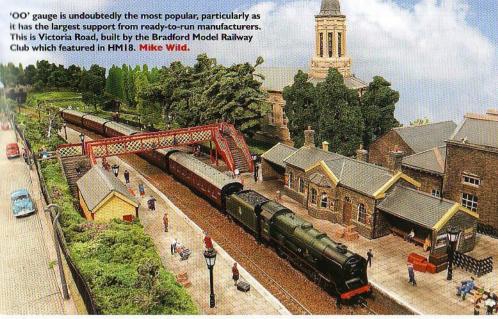
### **'00-9'**

Southwold Railway.

Scale: 4mm: Ift Gauge: 9mm ('N' gauge) Notes: One of the

most popular narrow gauge

'N' gauge is becoming popular again now that
Bachmann and Dapol are producing high quality readyto-run locomotives and rolling stock. This tiny 2ft square layout
was built by Chris Singer and shows the true potential of minimum
space modelling in 'N'. This layout featured in HM14. Mike Wild.



scales, 'OO-9' equates to a gauge of 2ft 3in, making it ideal for models of many British narrow gauge railways, including the Talyllyn and Corris (which are spot-on gauge-wise), Welshpool & Llanfair, and with small compromises for gauge, the Ffestiniog, Welsh Highland, Vale of Rheidol, and Lynton & Barnstaple railways. 'OO-9' effectively uses 'N' gauge track with 'OO' scale models and. like 'OO', is modelled to 4mm scale. A good range of track and components is available, and while most rolling stock is in kit form, many of the locomotives use standard 'N' gauge chassis, making that most difficult of tasks easier. The wide range of 4mm scale scenic components and buildings makes a layout very feasible.

### **'0-16.5'**

Scale: 7mm: Ift Gauge: 16.5mm

Notes: With a similar range of possibilities to 'OO-9' as far as prototypes is concerned, perhaps the main attraction

of 'O-16.5' is that it allows 7mm: Ift models to be used in much smaller spaces than their standard gauge equivalents. Use of 'OO' scale chassis makes locomotives fairly straightforward, while the large scale means that a vast amount of detail can be included on layouts.

### **Other scales**

There are other scales that attract modellers. To begin with, there are finescale equivalents of 'N' (2mm finescale) and 'OO' (Protofour, sometimes known as 'P4'). Both of these scales are built to extreme levels of accuracy, with track and rolling stock almost invariably having to be built from kits or from scratch. Some fabulous models

in both scales have been built, but the attention to detail demanded of them means they tend to be for the most dedicated modellers.

Other niche scales include 'S' (4.76mm: Ift with 22.2mm track gauge), and in narrow gauge, 'G', which uses 45mm gauge track, but whose scale is entirely up to the modeller! In this latter scale. most scratch build, often with the aim of running live steam locomotives, but there are also a number of ready-to-run models for this scale including LGB and Bachmann Aristocraft products. There are others still, including finescale and 'coarse' variants of 'O' and Gauge I, and if you're prepared to build your own track, a myriad of narrow gauges. The choice is yours...

### HERRIT WERSITES

USEFUL WEBSITES	
Double O Gauge Association	www.doubleogauge.com
N Gauge Society	www.ngaugesociety.com
3mm Society	www.3mmsociety.org.uk
EM Gauge Society	www.emgs.org
Gauge O Guild	www.gauge0guild.com
Association of Large Scale Railway Modellers	www.alsrm.org.uk

# FREQUENTLY ASKED QUESTIONS

There are many questions to be asked and answered for model railway builders. Here **MIKE WILD** answers some of the most common questions received by the *Hornby Magazine* editorial team.

Can I run Bachmann or Heljan locomotives on Hornby track?

Yes. Any locomotive produced ready-to-run for 'OO' gauge will operate on Hornby track and equally on Peco or Bachmann track. All ready-to-run 'OO' models are gauged to 16.5mm, the same gauge as the track produced by Hornby, Bachmann, Peco and others.

Can I couple Bachmann, Heljan and Hornby rolling stock together?

Yes. The standard British coupling system for 'OO'

gauge ready-to-run models is a tension lock device. Newer models have a smaller version of this while some older models have a larger, more bulky, version. All types of tension lock coupling produced for ready-to-run 'OO' models can be coupled together, although trains generally run better when they feature the same type of coupling throughout.

What is the minimum recommended curve radius for ready-to-run locomotives?

The minimum curve radius recommended for

most 'OO' gauge ready-to-run models is 20in, or second radius. Some less detailed models will cope with first radius curves, but as a general rule second radius is the minimum. In the ideal world the greater the curve radius the better the trains will run. In 'N' gauge the minimum curve radius available is 9in, but again second radius curves of 10.5in will allow better running characteristics and most readyto-run 'N' gauge models are designed with 10.5in radius curves as the minimum.

What is the steepest gradient that model locomotives can cope with?

Gradients are a difficult subject with model railways due to problems with adhesion. They depend on the length of train you plan to operate and also the type of locomotives. For example there is no point asking an 0-6-0T to haul a 12 coach train up a gradient, but for a small space layout with a short gradient and short trains the climb can be steeper than that on a main line setting with longer trains.

The maximum gradient we would recommend would be ½in per Ift, so a gradient to climb 6in in height will require

Planning a model railway takes time and consideration. This is Hornby Magazine's Bay Street Mk II in the early stages of construction showing the development of the locomotive shed. Mike Wild.

I 2ft of running line. However, if you have more space a gradient of 1/4in per I ft would be better, although this would then require 24ft to climb 6in. There are products available for gradients including spirals from White Rose Model Works which allow a gain in height in comparatively small space.

What is the smallest baseboard size for a continuous run 'OO' layout?

The smallest size of baseboard possible for a 'OO' layout is 6ft x 4ft where a continuous run is desired. However, if an end-to-end shunting layout is planned it could be as small as 3ft x 1ft.

What is the smallest baseboard size for a continuous run 'N' layout?

A continuous run 'N' gauge layout can be built in 2ft x 2ft, but again smaller layouts are possible if you which to build an end-to-end shunting layout. In the past we have seen 'N' gauge layouts built in box files and other small containers.

What is the difference between 'HO' and 'OO' scales?

'HO' and 'OO' scales use the same track gauge of 16.5mm, but whereas 'HO' scale is modelled to 3.5mm: Ift, 'OO' scale is 4mm: Ift. Technically this means that the track used for 'OO' gauge ready-to-run models is incorrect, as it should be wider for 4mm scale. In visible terms locomotives produced to 'HO' scale are smaller than 'OO' versions.

What is the difference between code 75 and code 100 'OO' gauge track?

### THE ERA SYSTEM

The era system has been developed by Bachmann as a guide to the period in which locomotives and rolling stock operated. Many locomotives spanned several eras, often with different liveries, but even by placing models into these categories they could be seen working outside of the time period indicated. This table lists the nine eras selected by Bachmann – a system which has also been adopted by Hornby Magazine.

■ Era I 1804-1875 — Pioneering

■ Era 2 1875-1922 - Pre-Grouping 1

■ Era 3 1923-1947 – The Big Four: GWR 2, SR 3, LMS 4 and LNER 5

■ Era 4 1948-1956 – British Railways Steam Era (early crest)

■ Era 5 1957-1966 – British Railways (late crest)

■ Era 6 1967-1971 – British Rail Corporate (pre-TOPS 6)

■ Era 7 1971-1982 – British Rail Corporate Blue (post-TOPS 6)

■ Era 8 1982-1994 — British Rail Sectorisation

■ Era 9 1995 onwards – Post privatisation

### NOTES

- **1.** The pre-grouping era preceded the grouping of Britain's railway into four main operators.
- 2. GWR: Great Western Railway
- 3. SR: Southern Railway
- 4. LMS: London Midland and Scottish Railway
- 5. LNER: London North Eastern Railway
- 6. TOPS Total Operations Processing System adopted when British Rail introduced a computerised numbering system in 1971 for its locomotives and rolling stock. Locomotives were renumbered into classes which formed the first two digits of each number.

The difference between these two track specifications is the size of the rail. Code 75 track has a finer and more realistic rail profile than code 100 and more readily resembles real railway track. However, code 75 does require finer wheel profiles than code 100 and while all modern models will happily run on code 75 track earlier models have deeper flanges on the wheels meaning that they will need code 100 track.

What is the difference between code 55 and code 80 'N' gauge track?

Code 55 track has a finer profile than code 80 'N'

gauge track offering a more realistic finish to a model railway in this scale. However, due to the design of code 55 track both types can be joined together directly without the need for special rail joiners.

What benefits does flexible track hold over set track?

Flexible track does exact what it says on the tin. It can be shaped to create flowing curves and long straights and, in the long run, is cheaper than set track for those building larger layouts. Virtually all exhibition layouts will use some form of flexible track.



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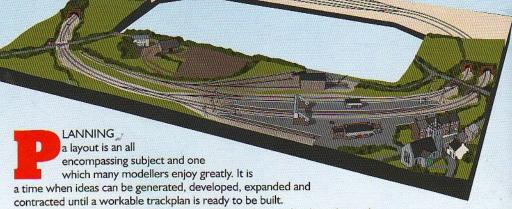
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# #10 Whort straight Length 38mm



In this specially produced 48 page book *Hornby Magazine's* editorial team have set about designing 15 model railway trackplans to suit everywhere from a small box room to a single garage to suit the needs of the majority of modellers.

Some are more complex than others, some require a full room, some only a portion of it, but all offer great potential for both model railway operation and scenic development. Highlights amongst these are a 6ft  $\times$  4ft 'N' gauge layout featuring a double track main line, branch line and goods yard, a  $12ft \times 8ft$  terminus for the modern modeller and a  $16ft \times 9ft$  double level layout featuring two separate circuits linked together by a gradient.

Whatever space you have available we are sure you will find a plan within this book to suit your requirements and even if the exact plan offered isn't what you want, those suggested can always be adapted and developed further for your own project.



### PUBLISHED BY IAN ALLAN PUBLISHING

**By the makers of** *Homby Magazine*. PO Box 945, Peterborough, PE1 9ER