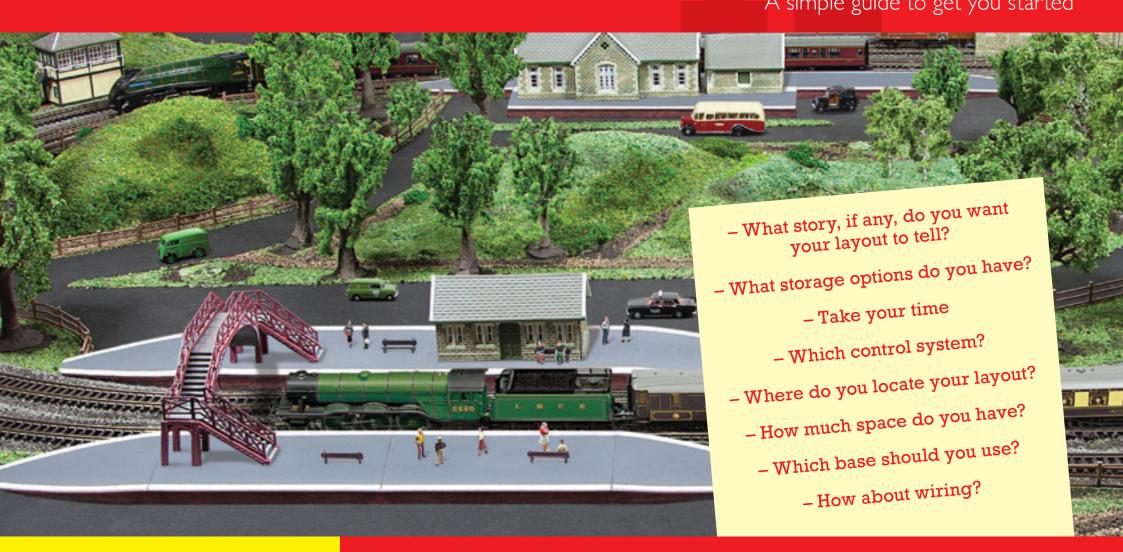


# Building your first Hornby TT:120 model railway

A simple guide to get you started



#### (HORNBY® W:120

## Welcome aboard

You are about to embark on a hobby that can last a lifetime, one that combines design and creativity with history and travel and can bring generations and families together.

The following is a simple guide to help you build your first Hornby TT:120 model railway. Within this guide you will find an array of advice and top tips gathered from Hornby and its loyal customers since its creation back in 1920.



Scan the QR code to go directly to hornby.com/HornbyTT120

### What's the Story?

Here are a just a few simple questions for you to ask yourself before embarking on this wonderful pastime:

- Firstly, are you building the layout for you or someone younger, or maybe it is for the whole family?
- Secondly, what type of layout do you want? Do you fancy a layout that centres on steam and historical locomotives? Or something more modern featuring models of the latest freight or passenger trains?
- Or, would you prefer to have a layout that caters for all genres and types, after all it is your layout and purely your decision alone as to what you run on it?

Whatever the case, take some time to explore the Hornby TT:120 website and just get a feel for what is already available and what will soon be arriving.

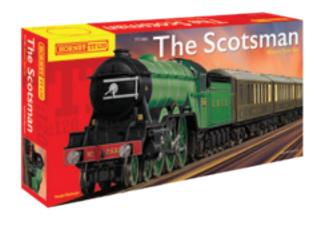


## **Storage Options**

One of the main advantages of the TT:120 range, is the size - 'TT' literally stands for 'TableTop', and '120' refers to the scale i.e. 1:120. Therefore, the TT:120 is ideal for people who wish to start with a compact, yet intricate layout that can be stored easily e.g., under a bed.

If you are working with a young person, it is probably best to start off with one of the Hornby TT:120 train sets and build your layout from there. However, before buying extra track and letting your imagination run away with itself, think where you will store the layout.

Of course, nothing is stopping you from adding more track and growing the layout and as the selection of TT:120 items is being continuously extended, over time you can design and create your very own, unique, model railway. There is an everincreasing range of Hornby TT:120 buildings available which are made from hand painted resin which can be just taken out of the box and placed on the layout and making things very much simpler and quicker.











137cm 54"



#### Beyond the Buffers P Beyond the Buffers

### Ask yourself

Having thought about what type of layout you wish to construct, now is the time to ask yourself a few more relevant questions:

- Are you the type of person who enjoys building things?
- Do you want the layout to tell a story or create a particular time and place; a snapshot in time so to speak?
- Or is it that you like to learn new things for yourself or as a teaching aid for your children or grandchildren?

Maybe you want to use a model railway as a stress release after a hard day's work - you would certainly not be alone, there are many people who use their model railway to 'lose' themselves and de-stress after a busy day.

Whatever you wish, do think things through and contemplate how you would like your layout to be.



# Take your time, it's not a race

Modelling railways is not necessarily associated with instant gratification but more the enjoyment attained from eventually obtaining that specific model that you want. This can be part of the joy and excitement of modelling railways.



Share your wish list, it helps friends and family know what you would like and makes you easier to buy for.

## Taking Control - digital and analogue

TT:120 is available with either analogue or digital control options – and the ability to convert from analogue to digital, if required.

#### **Analogue** (12v DC system)

Ideal for small layouts with a few sidings and a couple of circuits.

**'Pros'** The cost is less than that of a digital controller, giving you more money to spend on scenery etc.

**Cons** It is not possible to control more than one train on the same piece of track.



#### **Digital Cab Control** (DCC)

Ideal for a layout with numerous trains running on several circuits.

**'Pros'** Independent control of individual locomotives on the same length of track. You can control sound, lights and certain other features independently.

**'Cons'** The cost of DCC is slightly more than analogue, although arguably the benefits outweigh the cost

#### **Analogue to Digital Conversion**

Many new beginners will start with an analogue system and as their layouts develop and confidence grows will quite often convert their layout and locomotives to digital control. For further information on this, please visit **hornby.com/HornbyTT120** 











## **Space** – The Layout Frontier!

As previously mentioned, one of the main benefits of Hornby TT:120 is its size which makes is easy to store. However, once the size becomes greater, finding a place to store a layout can present more of a challenge. The following are a series of 'Pros' and 'Cons' of several potential locations and how to make the most of them.



#### Cellars & Basements

The cellar or basement of a house can for some be ideal. There is normally quite a sizeable space, although it is not uncommon for such an area to be a dumping ground for those household items that are no longer needed but possibly too precious to discard completely. Such an area may need to have the 'clutter' rearranged and stored tidily so that an ideal space can be created. What you then do with the space does depend on how large you envisage your layout to become. You may find that such an area will have support pillars and posts and be mindful of having continued access to services such as gas and electric meters, as well as water stop cocks.

**Pros** Cellars and basements layouts are not in the way of normal domestic activity which means that your modelling activity can remain undisturbed from one session to the next.

The cellar or basement could quite possibly be damp and that you may require the area to be heated keeping the moisture out of the environment. Also, the ceiling height may be an issue for taller modellers and then there is the possibility of poor lighting. All of the above can of course be overcome with a relatively small amount of expenditure.

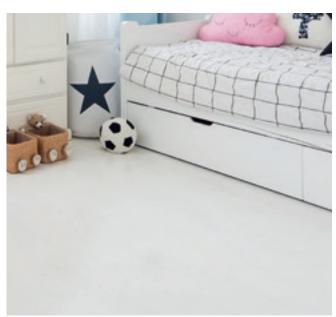
## Bedroom

This could be a spare room or a child's room, especially if the hobby is going to be shared between the parents and the children. This is a great location, however again you will have to consider the size of the layout compared to the area of the room. If it is being used as a bedroom, then consideration has to be given to the storage or positioning of the layout. If there is space under the bed, then that would make an ideal storage area for the right sized layout. Worthy of note is that undoubtedly there will be windows in the room that will normally require access if only to be opened, cleaned and the curtains drawn. Then there is the bedroom door and access to wardrobes and cabinet drawers to be considered. Such rooms are normally well lit and have ample power sockets and of course are usually heated. So, in many respects such a room is an ideal location for a layout.

**'Pros'** Bedrooms are usually heated, well lit, have adequate power sockets and by their very nature comfortable.

Depending on the size of the room, storage may be an issue, this being said, TT:120 is relatively small, however consideration must be given to the positioning of the doors, windows and normal bedroom furniture which will all need to be accessible.









#### Garage

Another classic location for a model railway layout is a garage. Nowadays many garages tend to be used as storage areas rather than a place to park the car overnight, however even if you do use the building as intended, a garage is another suitable building to house a layout. Similar to the basement or cellar, a garage is often used as a dumping ground for items, but with a modicum of reorganisation, plus some possibly overdue clearance, a space can be created for a layout either centered or along one or two walls in the shape of an 'L'. If however the garage is used to store a car, then providing on the construction of the garage, a layout can be suspended from the rafters and lowered via a pulley. Another alternative is to have the layout fixed and hinged to a wall which again can be lowered using pulleys. As previously stated, a small amount of space might be available in the shape of an 'L' along two walls which can provide enough space for an up and down layout.

**'Pros'** Garages tend to have high ceilings and include easy access.

"Cons" The difference in temperature range going from hot in the summer to cold in the winter. The lighting may not be adequate and the power outlets might also be limited. Once again with a degree of expense these negatives can be addressed.



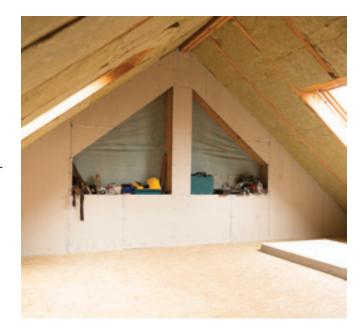
The attic is a favourite place to locate a model railway, certainly in the UK but in many respects an attic or roof area is very similar to that of the garage in as much as any layout will suffer from extreme temperature changes unless the space is suitably insulated. Again, these roof areas tend to be used as a dumping ground but like the garage and the basement space with a degree of organisation mixed with good housekeeping and an element of rubbish clearance, this can be a suitable option.

Unless already fitted, a floor and electrics for light and power will need to be added. Roof trusses may be an issue and these will have to be allowed for when positioning the layout baseboard, while at the same time taking into account the headroom. If you are lucky enough to have a house where trusses are not a problem, then maybe the attic is the place for your layout but access must be a consideration as it may include having to climb a ladder or steps which may not be that easy when carrying your latest model railway acquisition.

**'Pros'** The layout is out of the way and safe from inquisitive hands. Usually there would be plenty of storage area either underneath or to the side of the layout. A place of peace and quiet.

'Cons' Access may be a problem especially if it is a ceiling hatch rather than an internal stairway. Insulation must also be considered as it will become extremely hot in the summer and cold in the winter.





#### Garden shed

Many modellers invest in a garden shed to house their dream layout. It is not something that those new to the hobby would necessarily consider but something that one can aspire to later in the hobby building process. These sheds are available in various sizes and are normally supplied and assembled by the manufacturer. Power can be included during the build or installed later once it is known where the layout will be positioned and where the power points will be required. Obviously, these buildings would benefit from being properly insulated, as they will suffer from being hot in the summer and cold in the winter.

**'Pros'** Custom made to suit specific layout size and facilities.

**Cons** Requires suitable garden space and a healthy bank balance.



Please remember all the locations previously mentioned are just a general guide as to where you could position a layout. In simple terms, you can build a layout to any size, dimension and space that you have available, of course within reason.

Hornby TT:120 is particularly suited to this. A simple end-to-end layout can even be positioned on a window-sill, or indeed a book shelf. There are even some that have been incorporated into coffee tables or cake boxes - although operating such a layout does have its own challenges.

Just take your time, locate a suitable area and then start planning your layout, be it large or small but whatever the size, make it your own.







#### All about the base

For many the first experience of assembling a 'TT' train track is when one is set out on the floor or carpet (not recommended) during the first flush of excitement. Maybe the Hornby TT:120 train set has been given as a Christmas or birthday present, or quite possibly as an anniversary or retirement gift. On the other hand, it is more than possible that the set was purchased by the eventual user themselves as a good starting point to building their own model railway but whatever the case the track will require something a little more permanent for the trains to operate on. The following are a few options that you will hopefully find useful.

#### Baseboard

This is possibly the simplest of baseboards that can be used. Such baseboards are suitable for smaller layouts and small enough to slip under a child's bed. Arguably the most common sizes of baseboards are made up of sheets of plywood measuring either  $6' \times 4'$  or  $8' \times 4'$  but as this is 'TT' the baseboard can be much smaller such as has been mentioned earlier. The Hornby TT:120 Track Pack extended train set layout requires a board of  $54'' \times 40''$  ( $137 \text{cms} \times 102 \text{cms}$ ) but an even smaller baseboard can be used and still have room for an interesting layout. Sheets of plywood can be obtained from most timber merchants or major DIY stores who no doubt will be happy to cut the sheets to size. The thickness of plywood can vary but for ease of use it is recommended that the sheets are 12 mm in thickness.

To help prevent the board from warping it is recommended to screw and glue 2" x 1" battens around the whole bottom edge of the board with bracing pieces spaced across the centre every 15" or as appropriate depending on the size of the board. This framework will also provide some rigidity.

As suggested this type of baseboard can, depending on size be pushed under a bed, slid behind a wardrobe or propped up against a wall. When in use the baseboard can be placed on the floor, a suitable sized table, maybe an old table tennis table, or even on top of a bed. Folding legs can also be added at a later date or during construction but this depends greatly on the skill of the person doing the woodwork.

#### Custom built layouts and tables

For those who wish to have a layout permanently set up then the baseboard will require to have a more permanent structure. The thickness of the plywood can still be  $\frac{1}{2}$ " (12mm) as previously recommended or as it is a more permanent fixture the thickness can be increased to  $\frac{3}{4}$ " (20mm). Obviously this is where planning is very important as you will need to be certain where the layout is going to be positioned before you even start considering building the baseboards.

It is relatively straightforward to build a baseboard providing you have access to some basic tools including a drill, saw, screwdriver and a hammer. Care must always be taken when working with tools to wear appropriate safety goggles, plus care being taken when using sharp edged tools.

The obvious advantage of this type of table is that it can be built to your exact requirements including the size and height to suit you and the room. It also makes it easier for the plywood to be laid over the top and secured in position using screws rather than nails. Something you may like to consider and that is should you think you may need to move the layout and providing it is not too large would be the fitting of castors.

Do remember that if you lay two plywood sheets next to each other on the top of the table framework ensure that where the two pieces come together that there is a support piece of  $2 \times 1$  underneath so that you can screw the sheets in place on the edge. Failure to do this may over time result with the boards separating along the join and leaving a noticeable gap.

### Everything on the right track

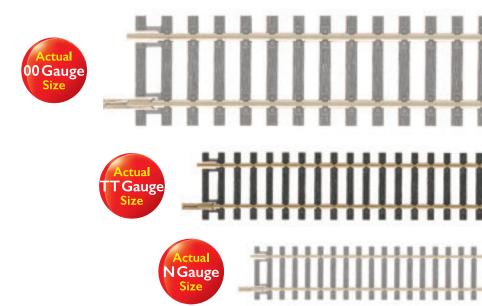
The scale of Hornby TT:120 model trains is 1:120 or approximately 2.54 mm to every 12 inches The model railway track that Hornby TT:120 locomotives run on has a gauge of 12mm, this being the distance between the inside faces of the running rails. This combination of scale and gauge is commonly referred to as 'TT:120'.

Hornby has an initial track selection of 20 elements increasing to 25 and when used correctly, these track sections will result in the creation of a model railway system to suit most users.

All Hornby curves are one of five standard radii: Ist Radius, 2nd Radius, 3rd Radius, 4th Radius and 6th Radius. For the more technically minded the 'radius' dimension is measured to the centre of the running rails and with this in mind it is always recommended that you allow an extra 10mm when calculating space requirements.

Parallel tracks, straight or curved are naturally spaced a standard distance apart (Approximately 43mm from track centre to track centre). This spacing allows adequate passing clearance between trains under all conditions and is known as 'Standard Track Centres'. Items such as points and crossings are all designed with these simple rules in mind so that you can create your own junctions knowing that the parts will fit together correctly.

Before finalising your layout, decide where it is convenient to position the power controller(s) for connection to a mains socket.











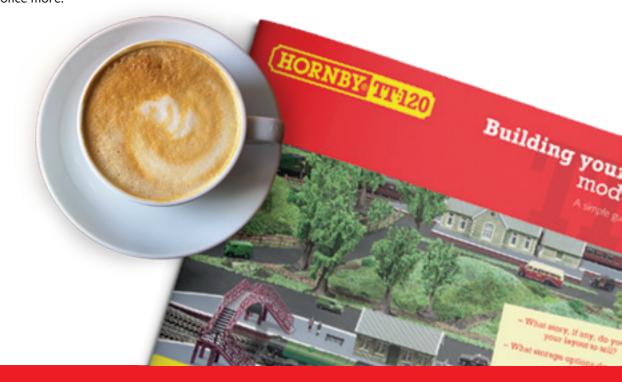




## FIVE basic things to remember

- If you are having a dedicated model railway room make sure you have prepared the room before installing your layout. Painting the walls, installing power and lighting is much simpler if you do not have to clamber over your layout and it is much safer as well.
- Some materials do work better than others. Plywood with bracing is much easier to use and more suitable than a fibre board or a similar insulation material. Also, do remember that you are building a model railway and not a room extension, therefore you do not require 4" x 4" (10mm x 10mm) legs to support your layout and for bracing as 2" x 2" (5mm x 5mm) would be fine for a small layout and 2" x 4" (5mm x 10mm) for something larger.
- Remember that you do not want to wire your layout more than once, so it is a good idea to colour code your wiring and use wire which is large enough to do the job adequately. Of course, on a small Hornby TT:120 layout you will be able to either turn the layout on its side or even face down which will make wiring much simpler. Hornby TT:120 has many advantages and being able to have a quite comprehensive layout in a small area is certainly one of them.

- It may be tempting to cram as much of your layout into the chosen space as possible, however remember you will need to have access to not only all parts of the layout for cleaning and putting back derailed trains but also access to windows, doors light fittings and power points. With all this in mind do leave ample space so you can access all areas without having to resort to extreme body twisting.
- Finally, remember building and operating a model railway is meant to be a relaxing and pleasant pastime, so if you feel things are not going to plan, stop and grab a cup of tea or coffee and return to the task at hand when your mind is clear and you can focus once more.





Scan the QR code to go directly to hornby.com/HornbyTTI20

## Wiring information that will not tie you in knots

Wiring a model railway layout is one of the most satisfying and fascinating parts of the hobby but for some beginners it may seem a little intimidating, however it is actually quite straightforward.

#### A few tips just to get you started:

DC (Direct Current) control is the traditional way to power a layout. Two wires go from the power controller to the track and by turning the control knob on the controller this will raise or lower the voltage to the track. By doing this the locomotive will either run faster or slower. If you change the polarity using a reversing switch on the controller the locomotive will reverse direction. It is a simple and reliable way to control a train but remember all locomotives on the same track will all move in unison unless you either place them in a siding (all Hornby TT:120 points are self-isolating), or you break your layout into sections using isolating sections but this can be done much later once you have mastered the basics.

DCC (Digital Command Control) also uses two wires but instead of the voltage rising and falling the track will always have a constant voltage going through the track. Unlike DC operated trains all DCC locomotives are fitted with what is called a decoder that picks up rapidly coded signals pulsed down the track from a Command Centre, a separate controller or a handheld device. The decoder in each locomotive is 'listening' to these pulses waiting for its name and number and to then obey the command. Simply put, think of a dog listening for its name and then doing what it is told to do. DCC will let you control more than one locomotive independently on the same track unlike the DC controlled layouts.

On a smaller layout, such as the Hornby TT:120 Track Pack design (see page 15), an extended train set layout that requires a board of 54" x 40" (137cms x 102cms), two wires from the power supply to the track would be enough, however on a much larger layout it may be necessary to add multiple connections to the layout so as to ensure smooth current flow but again that is normally for those layouts built by hobbyists and not really for a beginner. Keep it simple to begin with. Better to walk before you run!

Alternatively, the Hornby HM | DCC system uses free to download Bluetooth® app based technology where the control signals are passed through the air with just a transformer supplying a constant current being connected to the track. With the HM7000 system you can control your trains using a smartphone or tablet with each locomotive being fitted with a suitable digital decoder.











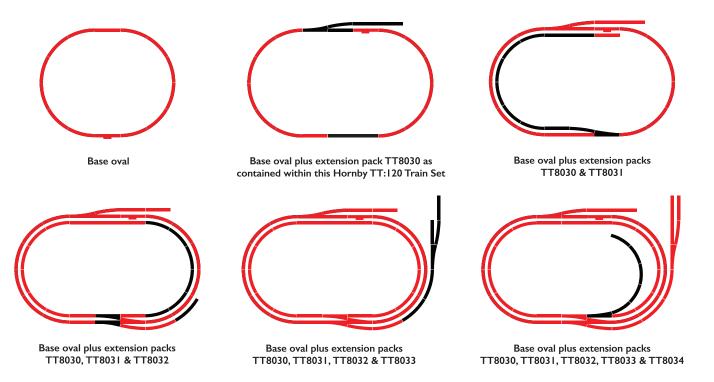




## Adding scenery to your layout

Placing scenery into your layout certainly adds a more pleasurable vista than just tracks laid on bare wood. For many a sceniced layout is an example of a 3D picture with movement, while for others it creates the right backdrop for their model railway. Of course, for those who are new to the hobby it may seem a little daunting but the greatest fear while adding scenery to a layout is fear itself. If you look at nature all is random so there is no right or wrong way to positioning a tree or hedgerow providing it does not interfere with the running of the trains. Experiment, start slowly by first defining the track bed and then moving out from there by adding ground cover (scatter), trees, hedges, roads and buildings. Remember this is not a race and for many creating the 'scene' is a most rewarding part of the hobby.

Keeping things simple is sound advice when building your first layout which is why the following focuses on utilising the Hornby TT:120 Track Extension Pack layout illustrated on both 'The Scotsman' and 'The Easterner' train set packs.



Before starting, plan your layout. Decide how far you wish to extend the layout included in the Hornby TT:120 train set and the number of Track Pack Extension packs you wish to add. After that consider the scenic effects. Hornby SkaleScenics offers an extensive range of ground cover (scatter), trees, foliage and ballast for the track. It is recommended that you obtain a selection of the scenic material and in particular the track ballast remembering that you can always add more trees, fields, hedges and even buildings as time progresses. As has been said many times, a model railway is never finished and that probably applies more when it is the first layout.



Scan the QR code to go directly to hornby.com/HornbyTTI20





The Hornby TT:120 prepainted resin buildings range is being added to on a continuous basis and will eventually offer a wide selection of both domestic and railway type buildings which will add a real touch of realism and authenticity to your layout. Check out the latest information of Hornby TT:120 buildings on hornby.com/HornbyTT120







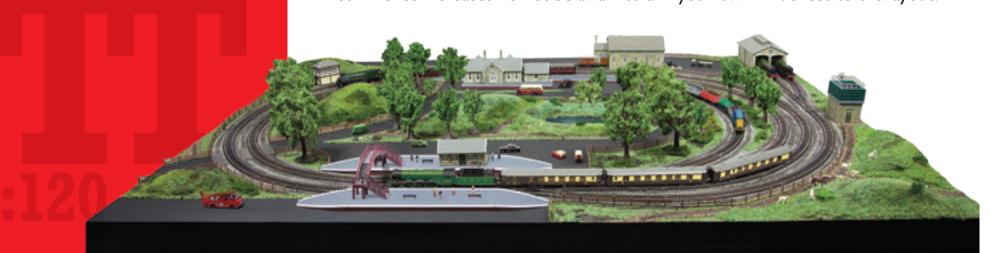






## Building a Hornby TT:120 layout

Continuing with the advice of keeping things simple, the following step-by-step instructions will take you through each stage of building you layout but as your confidence increases do not be afraid to add your own influences to the layout.

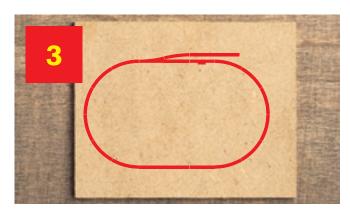




Lay your 54" x 40" (137cms x 102cms) baseboard onto a flat surface.



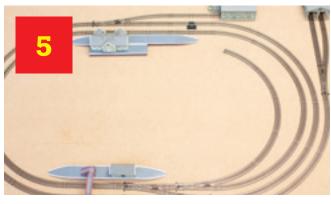
Locate the complete layout diagram on the Train Set pack which shows in stages the step-by-step progression of the Track Extension packs of 1, 2, 3, 4 and 5.



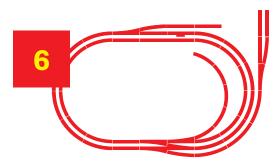
As the baseboard is  $54" \times 40"$  ( $137 \text{cm} \times 102 \text{cm}$ ) the following is a step-by-step guide to building the complete layout as illustrated on the set box but such is the design of the system you can stop adding Track Packs at any point without compromising the layout operating characteristics. With this in mind you can continue adding the remaining Track Packs as and when time and budgets allow.



The first stage of building your Hornby TT:120 layout is to mark on the baseboard where the track, roads and buildings will be positioned. Use the full colour image shown on the Hornby TT:120 train set as a guide.



You will first need to assemble the track circuit and then position the buildings. The trees, hedges and bushes can be positioned once the scenic material has been applied.



Base oval plus extension packs TT8030, TT8031, TT8032, TT8033 & TT8034

To assemble the circuit, it is best that you do so in stages, first starting with the track circuit included in the train set and then adding one Extension pack after another. Remember to add the Track Packs in sequence as shown on the back of the Train Set pack. There is no need to connect the track together at this stage just lay the track pieces in sequence as shown on the following diagrams which are also shown on the train set and Track Pack boxes.



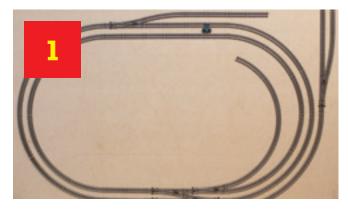
Having laid out the track you can now start to connect each piece one at a time. It is important that you take your time at this stage, making sure that each piece is correctly inserted into the track joiners (fishplates). Refer to the Top Tip below for checking that each piece of track is correctly connected.



Having connected all the track together you can now maneuver the assembled circuit into position. Make sure that the track has not come apart or become mis-shaped while being positioned.



## Laying the track



Once in position and ensuring the track is correctly joined together and has not become mis-shaped, plus ensuring the area to be ballasted corresponds with the track, you are now ready to pin the track into position.



Tools required: small hammer, small pair of long nose pliers (not essential).

Recommended product for this next stage – TT8025 Track Pins.



Starting with the point that was included in the train set layout, locate the pin hole situated in the middle of one of the sleepers on the straight section of the point and place a pin in the hole. (Please note some track pieces have more than one hole. It is not necessary to use every hole. One pin per track will be sufficient)



Holding the pin carefully with either the thin nosed pliers or by fingertips, gently tap the nail into the baseboard so that the head of the pin is not quite touching the sleeper.



Gradually moving in a clockwise direction, pin each piece of track down in turn. Having completed the outer oval you can now pin down the inner oval after which move on to the outer sidings and finally the inner siding. Remember not to knock the pins in too far. Allow the head of the pins to not quite touch the sleeper. Once again, please make sure before pinning the track pieces down that they are correctly aligned and properly connected.



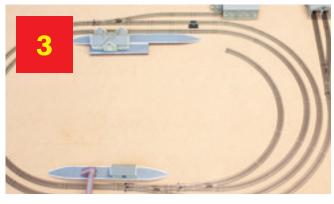
## Placing the buildings



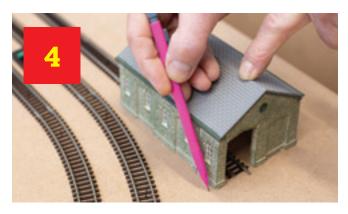
Place and mark where you will be positioning the buildings. Care must be taken to ensure that there is sufficient clearance between the track and the building so that the locomotive and rolling stock can pass without hitting the structure.



Special care must be taken when positioning the platforms. Allow plenty of room for locomotives, coaches and wagons to pass freely.



Use the images of the layout included in these instructions and as shown above to position the buildings.







Draw around the buildings and write in the centre the name of the structure. Once completed remove all buildings from the baseboard.



## Laying the ballast



Choose the colour ballast you require for the track. The ballast shown is SkaleScenics R7169 Gneiss.



Spread the ballast evenly along the track beds as shown allowing a small margin along each side of the track.



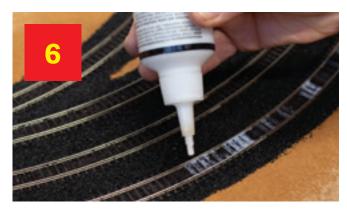
Using a small brush gradually smooth the ballast out along the track ensuring you go in between the sleepers but not totally covering them.



Using a stiff piece of card or plastic strip smooth out the edges of the ballast along the side of the track as shown.



Next fill a spray bottle with warm soap water and spray the mixture along a small section of track.



Fill a thin nosed dispenser with a 50/50 mix of PVA glue and water and careful spread the glue mixture over the ballast. The previously applied warm soapy water will assist in the glue spreading evenly and soaking into the ballast.

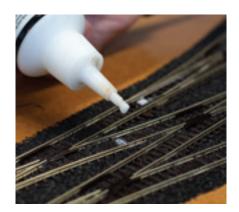


Care must be taken when applying ballast in and around points. Ensure no ballast falls in between any moving parts of the point.



#### **!! ATTENTION !!**

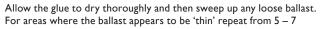
Lay the ballast very carefully around points to allow them to function freely.

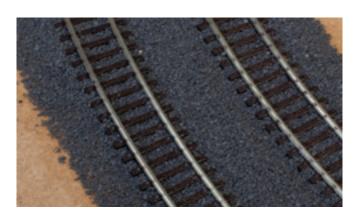


















# HORNBY® SKALE SCENICS



Hornby's comprehensive range of SkaleScenics offers a variety of scenic materials including trees and bushes, plus a large selection of ground cover (scatter) representing a broad selection of varied vegetation in numerous colours and textures. Adding different colours and textures of 'scatter' to a field or garden can add depth as well as a pleasing effect and prevents a model railway looking too uniform.

## Adding scenic materials



Having successfully applied the track ballast you can now start to add the SkaleScenics scenery.



The layout shown in this 'How to..' instruction booklet illustrates how to make small hills and undulations.



There are several methods that can achieve this. The illustrations shows some old packing being cut up and glued into place. Alternatively, paper can be screwed up into shape and glued down using a PVA glue.



After the glue has dried the area can then be covered with strips of R7273 SkaleRoc.











Having made sure the surface is dry the area can be painted and scenic ground cover applied.













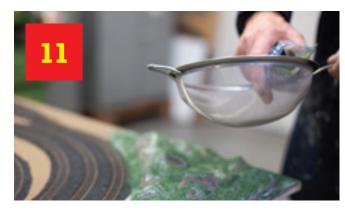
Once again SkaleScenics offers a wide selection of scenic material to bring depth and colour to your model railway. Remember to take your time and if you are not keen with the effect don't worry just go over the area again with another colour, this can only bring a real feel of the countryside to your model railway.



Use the above image as a guide to the areas requiring coverage.



Paint the area you wish to scenic one small section at a time with either thinned down PVA wood glue or better still the R7183 SkaleScenics Grass Glue. Make sure that you leave the areas where the buildings will be positioned free from the material. For a more pleasing effect you can if you wish paint and then sprinkle the scatter material a few millimetres over the building outlines. This will give the impression, when the buildings are added that the 'grass' etc. grows right up to the walls.

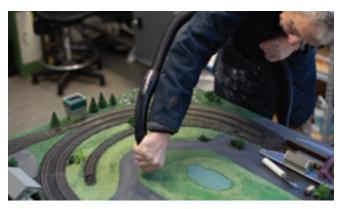




To aid with achieving an even coverage you may find using a domestic cooking sieve useful to obtain an even coverage but if one is not available carefully sprinkle the material over the glued area using your fingertips. Remember to do a small area at a time. Should you prefer to use the SkaleScenics Static grass material then it is strongly recommended that you invest in the SkaleScenics Static Grass Puffer Bottle applicator to obtain some truly pleasing and realistic effects. Again, remember to do a small area at a time. There is no need to rush.





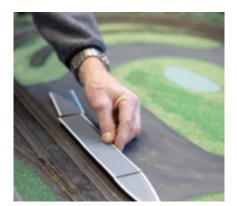




Having completed your scenic work and have allowed the glue to dry tip the layout onto a piece of newspaper and collect up the residual material or alternatively use a small dustpan and bush. Similar to the ballast material, if you find areas where the scatter material has not adhered or you wish to increase the density, go over the area once more with the glue and sprinkle additional material onto that area. Alternatively, you can use the static grass applicator which certainly does add a pleasing and realistic 'rough' grass effect.









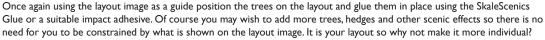
Once the glue has dried and you are satisfied with the overall scenic finish you can now add the buildings to the layout. All you need do is position the buildings over the areas marked and you are nearly there. You can lightly glue the buildings in place if you wish for them to be permanent but just check before doing so that those buildings next to the track such as platforms have enough clearance so that your locomotives and rolling stock can go past them with ease. Alternatively, if you are storing your layout under a bed with restricted height you may need to have the buildings removable so they can be stored elsewhere ready for the next railway session.

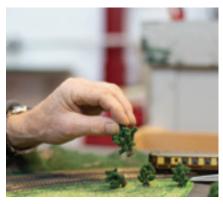


## Adding the trees and foliage

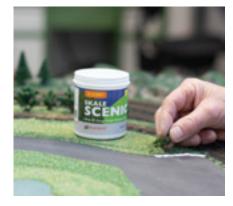








Should you wish the trees to be removable, for example when storing the layout under a bed where height is limited, it is recommended that you carefully cut the bases off the trees, drill a suitable sized hole in the baseboard and push the trunks of the trees into their respective locating holes.



For bushes and hedgerows, once again SkaleScenics have a wide selection to choose from. Lichen and foliage material both make excellent bushes. By separating the lichen and foliage into varied sized pieces, then gluing them into position using PVA or the SkaleScenics R7183 Grass Glue and allowing to dry, you can quickly cover gardens, hedgerows and the sides of the roads with a realistic canopy of different coloured pieces of vegetation.

## Fitting the fencing







Currently there is no Hornby TT:120 fencing available, however it is possible by removing the top bars from the Hornby R537 Lineside Fencing pack to create suitable sized fencing. Once glued in position using a good impact adhesive the fencing can be 'decorated' quite effectively with SkaleScenics Lichen or Foliage to represent climbing brambles, bushes, ivy etc. which all adds a touch of realism to your layout.



For added detail there are TT:120 vehicles available from Oxford Diecast (see **oxforddiecast.co.uk**) which can be added to the layout for even greater effect.





Therefore, to sum up, consider how large you want your layout to be and balance this with your budget. Decide how you wish to control your layout, either DCC or DC analogue keeping in mind that you can start with DC and then in time convert to DCC. Above all remember that you are not painting a room or building a patio but creating a pastime where there really is no end to what you can achieve and of course the only time constraints are those that you impose on yourself. Many seasoned modellers never finish their layouts but continually change, upgrade and rebuild, such is the joy of the hobby. It is a neverending story.

















#### **Useful Information**





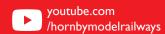
















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