The Talyllyn Railway

A Freeware (Donation) Route built for Microsoft's Train Simulator
combined with Talyllyn Locomotives & Rolling Stock

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Route Version 2.0.0

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Some of the Talyllyn Locomotives & Rolling Stock models are made available as part of this release by kind permission of their author, Kevin Martin.

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NOTE:

1. The software supplied on this CD is provided "as is" and any expressed or implied warranties including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose are disclaimed. In no event shall the TALYLLYN RAILWAY COMPANY OR ITS CONTRIBUTORS be liable for any direct, indirect, incidental, special, exemplary, or consequential damages (including, but not limited to, procurement of substitute goods or services; loss of use, data, or profits; or business interruption) however caused and on any theory of liability, whether in contract, strict liability, or tort (including negligence or otherwise) arising in any way out of the use of this software, even if advised of the possibility of such damage.

2. Please do NOT contact the Talyllyn Railway for any support, questions or issues arising from this Add-On Microsoft Train Simulator route. They do not have any expertise in this matter and will be unable to give any help. For all questions and support for this Add-On route, please contact the author via email at msts.talyllyn@btinternet.com.

3. You will need a copy of Microsoft's Train Simulator program installed on a suitable PC in order to run this Add-On route.

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Welcome

Thanks for your interest in my all new version of the Talyllyn Railway route for Microsoft Train Simulator (MSTS).

I chose to model my favourite Welsh Narrow Gauge Railway, the Talyllyn, after seeing Kevin Martin's excellent MSTS locos of the Talyllyn Railway some years ago and produced my first version back in 2002.

While the original route gained some encouraging feedback, I always knew that it could be improved and enhanced with further detail and with that in mind, I started to gather the information needed to produce a brand new version late in 2003. That included a weekend's visit to the Talyllyn for two days of trackside access armed with digital camera and video camera taking hundreds of photos up and down the line.

This route is supplied as "freeware" with a charge only being made to cover the production and distribution of CDs. However in recognition of the help and endeavours of the Talyllyn Preservation society, I am including an additional £2 to be passed direct to the society as a donation for every copy of the route purchased. I hope that you agree and support me in these sentiments.

About This Version

This new version has been built from scratch going back to raw map source data to construct the typical Talyllyn terrain. As before, the route is modelled to support 2x scale modelling of features, objects and rolling stock and so necessitated doubling the contour distances and heights by a factor of two to obtain a life-like scale effect.

Other enhancements for this version include :-

- Implementation of the "Distant Mountain" MSTS feature that gives a realistic feel to the Talyllyn mountains and valley.

- Full 2x scaled terrain in X,Y & Z axes.

- Custom built objects taken from the actual Talyllyn route

- Over 90% photorealistic texturing from photographing actual Talyllyn objects.

- Custom terrain textures created with the aid of Digital Rail's Mosaic tool.

- Enhanced Talyllyn locomotives and rolling stock specifically for this version release.

- All locos and rolling stock are stored specifically referenced to be part of this new route (prefixed by Tr2)

- Improved locomotive sounds.

- An Introductory Train Ride is also included for those who just like to sit & ride!

- A set of activities to let you explore the route and to challenge your skills in MS Train Simulator

I hope that you find these and the other new features enhance your enjoyment of running trains along this most famous of Welsh Narrow Railways - "One of the Great Little Trains of Wales"

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Installation

Pre-requisites

The Talyllyn Railway route does NOT require you to have any of the standard MSTS routes installed for the route to successfully run. All objects are installed as part of the route.

However, in order for the loco cab and sound aliases to work as part of the enhanced locos and rolling stock, you DO require to have the following standard MSTS rolling stock installed :-

- Flying Scotsman
- Dash9
- 380
- Khia31

Installing The Route

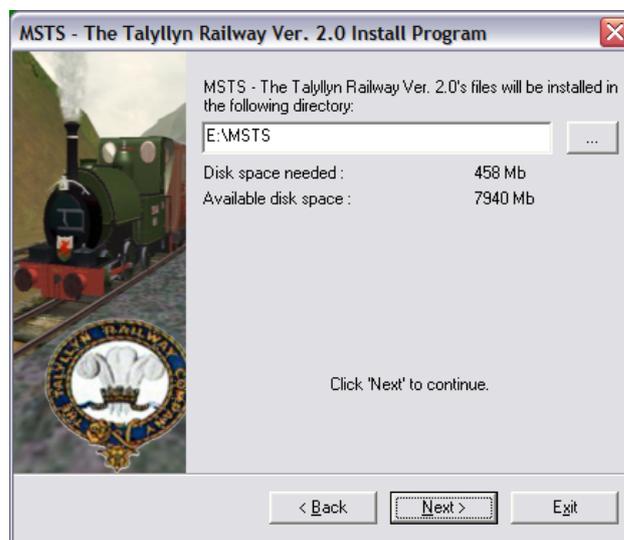**I suggest you make a backup of your MSTS folders if you are unsure as to what you are attempting to do!!**

There is a single Self-Installation which will install the Route, the new Locomotives & Rolling Stock and Sample Activities to the correct locations within MSTS automatically after determining the location of the main MSTS folder as stored in the Windows Registry.

NOTE: This self installer program does NOT write ANY data to the windows registry – it simply looks for and reads the main installation path for your MSTS folder.

If you already have a copy of version 1.5 of the route it is safe to install this new version without re-moving the old one as a brand new route folder, called Talyllyn, will be created.

If you wish to install the route after reading this document, use the autorun CD menu or simply double-click on the file called ***Tr2CD001.exe***, which is in the root directory of the CD.

The route files will be installed to your standard MSTS Routes folder after the Self Installer has checked your Registry entry for the main MSTS folder location as installed on your machine.

You can amend the path if you find it to be incorrect or wish to install this route to a temporary set of folders.

Follow the Instructions within the Installer.

After installation has finished, you should now have a new route in the Routes folder called TALYLLYN and a new set of consists and rolling stock identified by the TR2 prefix in your CONSISTS and TRAINSET folders.

The Talyllyn Railway Route Ver 2.0.0 Release

Brief History of the Talyllyn Railway

The route is modelled upon the actual route of the Talyllyn Railway at Tywyn, North Wales.

"The World's First Volunteer Preserved Railway – 1951"

Founded in 1865 when it carried slate from the nearby quarry at Bryn Eglwys, the Talyllyn Railway worked continuously from that time until 1951 when the Preservation Society took it over on the death of the owner, Sir Haydn Jones.

The railway was in a precarious state by then with only one locomotive in steam (Dolgoch) and the five original coaches, the track disappearing under mounting vegetation and a "make do and mend" attitude from the few permanent staff employed by the railway.

The Preservation Society struggled to maintain a summer service with the decrepit 90 year old locomotive while starting to slowly relay the line in that first year. Dolgoch earned her reputation of "The Old Lady" during this period before two younger locomotives from the nearby defunct Corris Railway could be purchased and made fit to run on the Talyllyn.

The Railway now has 6 working steam locomotives.

>   *No 1 – Talyllyn*
>
>   *No 2 – Dolgoch*
>
>   *No 3 – Sir Haydn*
>
>   *No 4 - Edward Thomas*
>
>   *No 6 – Douglas (currently in the guise of Duncan – from the Thomas The Tank Engine stories)*
>
>   *No 7 – Tom Rolt*

Nos 1 & 2 are the original 1865 engines albeit much restored and rebuilt after 1955.

All passenger trains are steam hauled along the 7.5 miles of North Wales countryside.

The MSTS Talyllyn Route

The route faithfully (or as close as I could get !) models the Talyllyn Railway route that runs from Tywyn on the mid-Wales coast up the Dysynni valley to the Nant Gwernol ravine. The line is 7.5 miles long in reality but because of the 2x scaling used in this MSTS build the distance will be shown as 15 miles as seen in the simulator.

A detailed description of the MSTS Talyllyn route can be found here.

Accurate track gradients have been used throughout the route and a diagram of the actual gradient profile can be viewed here

Note there are very few coloured light signals on the Talyllyn. Those that are there are mainly located at Tywyn (Wharf) & Abergynolwyn. The passing loops are controlled by line tokens and blockmen. I have chosen not to implement any of these light signals due to the peculiar nature of signalling within MSTS which I believe would produce some un-realistic events (as far as Talyllyn operation goes). I will be attempting to add this feature in a later enhancement release.

You will notice some artistic license in the track layout, especially at Wharf and Pendre - MSTS's point radii etc mean that I cannot faithfully reproduce the real layout. The new station building at Tywyn has been constructed from artwork and artistic texturing as the building has only just recently been finished and I have had no opportunity to get photographs needed for realistic texturing. One for the near future, I hope!

Textures are in place to allow full seasonal working along with night-time operations !

Running The Route

Framerates (Shift-Z)

I believe that framerates may be the real issues some users will have when running the Talyllyn route. You will find that the framerates vary dramatically depending on which way you are viewing the route from. Viewing along the line (front view) will be the worst with respect to low framerates and looking across the track (side-on to the train) the best. I typically have rates varying from 12 fps to 45 fps on these angles, with full detail on.

You can improve the fps by adjusting to a ¾ view which seems to give an optimal fps.

Alternatively, you can reduce your detail level to 7 or below and this will remove a large proportion of the lineside bushes which should help the framerates.

There is some debate as to whether the "star" form of bushes and trees are the main cause of low framerates. I have simplified and streamlined the bushes that I use to give an optimum fps but in keeping with the "look & feel" of the line, I have decided to keep with this type of format. My thanks to Kevin Martin for helping me optimise the shapes.

Trackwork & Points (Switches for our American cousins !)

All the points on this route are manually operated allowing you maximum flexibility when using the Explore Route option. When running activities, in most cases the correct track path will be set for you by the activity. Where this is not the case, you will be clearly told in the briefing that you are to set the points manually.

Passing Trains

A lot of the activities include the opportunity for passing trains when in the loops. To allow this to happen, I have made sue of the "double reverse point" trick which in 95% of the cases works fine. I have found however, that there are one or two circumstances (not necessarily repeatable) where this trick does not work and does not clear the track path for the computer controlled (AI) train to pass your train.

When this happens, you will see that the AI train appears to wait ahead of you at the passing loop entrance for an excessively long time. By turning on the Path Indicator (F8) you will be able to confirm whether the path is still set for your train or set for the passing loop.

To resolve this stalemate, it is necessary to select reverse gear, and open the regulator to move your train very slightly backwards! This fooled the "automatic dispatcher" into thinking the path is clear and the AI train is cleared through the passing loop.

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All these passing opportunities are well defined in the briefings and Warning Messages are displayed advising you where and when to stop. It is advisable to enter these loops slowly when you know a passing train is imminent, so as to allow you time to apply the brakes when the Stop Here message is displayed.

Hazards

As on the actual line, straying sheep are a continual hazard. Keep a watchful eye out for these during your runs up the line and sound you whistle when appropriate.

There are also trackside workmen on the loose !! Watch out for these on your journeys.

Water & Coaling

The Talyllyn locos require watering during the trips up the line so I recommend that you make use of the watering facilities at Dolgoch, the main stop over station on the way up the line, to replenish the tanks. Both the old and new water tanks are operational at the station.

The Talyllyn locos each have unique watering points – the saddle tanks locos are in the centre of the tanks over the boilers, Dolgoch's water point is at the rear of the cab, Douglas (Duncan)'s water point is between the main driving wheel frames and Tom Rolt has obvious side tanks with entry point near the front. The MSTS access settings have been deliberately set wide as an aid.

(Use the 'T' key when aligned with the water column hose with your locos water tank)

There are watering facilities at Wharf station and at Pendre, outside the main loco shed. The Pendre column can be accessed from either the main running line or the loco shed line.

The only coaling point available is at Wharf Station.

The Talyllyn Rolling Stock

I have included a full set of Talyllyn rolling stock (at least, all those produced by myself or Kevin Martin) and re-defined all of these to be associated with this release of the route. This means that you may find stock is duplicated if you already have some of the Talyllyn stock that is available from the web, but all the new associated stock is clearly labelled and stored with the TR2 prefix so that you cannot get confused. All activities available as part of this version 2.0 route make use of the new rolling stock.

The version 2 rolling stock have been enhanced with new sounds, performance parameters and in some cases, new 3D models.

In particular, Talyllyn & Dolgoch have been modified to include the new air pumps for the braking systems now used by the Talyllyn Railway and also have been re-textured to give an improved look. The original coaches that form the vintage train, have also been re-textured and look excellent. My thanks to Kevin Martin for the time and effort that he's put into these improvements specifically for inclusion in this all new release of the Talyllyn Route.

Sir Haydn & Edward Thomas have also had buffers added to them to giving them an 1953 authentic look to them as the Talyllyn added buffers to the locos soon after buying them from the defunct Corris Railway.

The accuracy of Kevin's locos is excellent and he deserves much credit for the quality of the locos he produces. He also produces locos & rolling stock from the Ffestiniog Railway and these are freely available from the Ffestiniog website.

I am also indebted to Stuart Williamson for his permission to alias and distribute his GWR and 2 Cylinder sound sets as part of this enhancement package. They greatly improve the effect of these narrow gauge locomotives models.

The enhanced ENG & WAG files are all down to me, I'm afraid. I have attempted to refine the parameters in these files to obtain a more realistic narrow gauge railway response but these are no way reflective of actual Talyllyn loco or wagon performances. What actual data I could obtain did not seem to fit the MSTS performance parameters so in the end I resigned myself to getting a better effect rather than trying to reproduce reality.
At least the engines don't run along doing 80 mph now !!

The Sample Activities

All of the activities included have been prepared by me and while I am not an expert in writing MSTS activities, I hope there is enough variety in these to challenge some of you.

Activity Name	Brief Description
Brynglas To Abergynolwyn	Take the scheduled train service to Abergynolwyn. Pick up the train at Brynglas and run up the line to Abergynolwyn. Wait for down services to pass at Brynglas, Quarry Siding and Abergynolwyn.
Abergynolwyn to Nant Gwernol (return)	Take Duncan up to Nant Gwernol from Abergynolwyn. Run round the train and return the train to Abergynolwyn in time to pass the up service pulled by Talyllyn.
Track Maintenance	Drive the Diesel, No8 Merseysider, in preparing a goods maintenance train late in the autumn evening before pulling the train to Brynglas siding for the night, ready for work in the morning. Return to Pendre that evening with the Corris Brake Van ready for the crew to use next morning.
Have A Go Weekend 1	A volunteer "Have A Go" weekend finds you driving steam loco No1 Talyllyn with a "passenger" train up the line to Brynglas before returning to Pendre. You have to avoid the scheduled services and return the loco to the shed for the night, watered and ready for the morning.
Prepare for Departure	Take control of No4 Edward Thomas and prepare as special passenger train for a run from Wharf up the line.
Winter Run – Wharf to Nant Gwernol	Run the Quarryman train with No 1, Talyllyn up the line from Wharf to Nant Gwernol in the winter snow. You have to keep to time to avoid holding up the down services at the passing loops.
Rescue Train	It's a late summer evening but Edward Thomas has failed at Rhydyronen Station after an early evening run to Dolgoch. Some passengers have left at Rhydyronen but some need to return to Wharf. Take Merseysider up the line to rescue the train, returning the train to Wharf. To finish, return the rolling stock to Pendre for the night.
Nant Gwernol to Tywyn	Take train from Nant Gwernol through to Wharf station at Tywyn. Pass three UP services at Brynglas, Quarry Siding and Abergynolwyn.

Please feel free to create more activities and share these with other users by posting them to the web.

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Patches To The Route

I will be releasing patches and updates to this route as opportunity permits.

You will find all patches available as downloads from www.uktrainsim.com. Membership is free but I would recommend a premium membership to allow free access to downloads at any time.

Alternatively you can try my own small website to be found at www.btinternet.com/~spontin/msts/mststr.html or the main Talyllyn Railway website at www.talyllyn.co.uk .

Thanks To ....

I have to thank Kevin Martin for his help and encouragement in all aspects of the construction and testing of this route and of course for his model locos in the first place.

Also, I would be lost without Mick Trist's TS Terraform Utility (TSTF). This formed the basis of the terrain in this route and produced a far better effort that I could have ever done manually.

I also think MSTS route builders would be lost without the help and tools provided by Paul Gausden. In particular, Paul's Shape File Manager and Shape File Viewer are two tools that have been indispensable to me. I must also thank Paul for his help and advice in getting some of the more intricate animation hazards working for me.

I also have to thank Martin Soilleux-Cardwell for his help in Beta testing the route and coming up with a list of suggestions and improvements.

Also, I freely acknowledge the rights of the other MSTS scenery object contributors, whose examples I have used in this route, for their originality and copyright and their permission to use their models in this route.

Some of the contributors (in no particular order) are :-

Terry Thornton

Paul Gausden

Ian Jenkins & Jonathon Powell (for their HoW153 model)

Brian Bere-Streeter

Kerr McIntosh

John Milligan

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There were others who I tried to contact to obtain permission but their email addresses were out of date. If they spot their work and would like specific recognition, then drop me an email and I will happily update this read me file.

Thanks are also due to the Talyllyn Railway and staff for their help in allowing me access to the line for photography and supply of additional information and photographs that I couldn't gather on my visit.

Feedback

Please let me know what you think - good and bad ! and keep me informed of any problems or suggestions for additions to this route by emailing me at msts.talyllym@btinternet.com.

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The Talyllyn Railway

Please visit the Talyllyn Railway website at :-

http://www.talyllyn.co.uk/

for more information on the railway in general.

If you have liked what you've seen here, why not visit the real thing ?

You'll enjoy a wonderful day out and a warm, friendly welcome by all the railway staff members and we are always looking for more members and volunteers to help run the railway.