



MANUAL

Version 1.2 Build 20231215

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Introduction

About this manual

The share of meter gauge (1000 mm) and Cape gauge (1067 mm) in the total of all railways in the world was almost 15 percent by the end of the last century. Switzerland has an extensive rail network with meter gauge and in Germany we find, among other railways, the Harzer Schmalspurbahn, a tourist railway with a beautiful route in central Germany where many steam locomotives are active in high season, including the well-known BR 99.23-24. Wilbur Graphics has built this locomotive as an add-on for TS 20xx, in close collaboration with German developers, Michel R. (MR) and Frederick G. To see this locomotive at work we have created a short route in a mountainous landscape, the Bauernwaldbahn, with a matching range of meter gauge freight and passenger stock.

In this manual, Chapter 2 provides directions for installing the route, which comes complete with scenery and Wilbur Graphics and MR equipment objects. For certain scenery parts we expect that you already have the ELAP addon from DTG in your possession. In chapter 3 we give a brief description of the route and the yards you may encounter, followed in chapter 4 by an overview of the included WG and MR rolling stock. Chapter 5 discusses the applied 'subset' of the German signaling system with mechanical signals, and we conclude this manual with a summary of the available scenarios in Chapter 6.

In the appendix you can find the short operating instructions for the included WG and MR locomotives.





Installation

Download contents

The BWB by Wilbur Graphics will be made available as a .zip-file, containing the following items:

- Folder Manuals\Wilbur Graphics\BWB with German, Dutch and English language user manuals:

WG_BWB_Handbuch_V12.pdf
WG_BWB_Manual_V12.pdf
WG_BWB_Handboek_V12.pdf

- Install program WG_BWB_V11_build_20231215.exe

See the release notes.txt for the latest changes and improvements.

Installation

When started, the install .exe will prompt you to select and/or enter:

- Install procedure language (Dutch/English/French/German)
- Alternative install path (default is ../SteamApps/Railworks/etc.)
- Accepting an End User License Agreement (EULA)

...to continue the installation.

Please refer to the *release notes.txt* for the latest changes etc.

Other hints

- You need to be connected to the internet
- You need the activation code that you can find in your account
- If the activation does not succeed please switch off any software that might block the connection
- You DO NOT need to re-download the software if the installation fails, please fix any issues mentioned above and retry
- You need to first unpack the zipped files before commencing installation. If the installer can't find the Railworks folder please make sure that the Windows Registry correctly points to the Railworks folder. This situation normally only happens when you have manually moved your Steam environment to another PC or hard drive. You should then install Steam to the new location to fix the registry.

How to delete the Bauernwaldbahn

To remove the BWB from your system we advise you to delete the folder:

`b142c4b9-78ad-4a0f-bee5-53120759dbe7`

from the location:

```
C:\Program Files (x86)\  
Steam\steamapps\common\RailWorks\Content\Routes
```

Required : ELAP add-on

The route includes scenery objects from the 1950s that DTG no longer supplies as part of the package since the 2015 version. This mainly concerns travellers on the platforms, staff on the yards, etc., but is also important for rendering the terrain. Users who have come on board from this version can solve this by purchasing the DTG add-on European Loco and Asset Pack (ELAP), available for a small fee on the Steam website.



Settings and system specifications

When developing this route, the builders have relied on the hardware specifications that Train Simulator 2021 vendor, DoveTail Games, recommends:

Minimum system specifications:

OS	Windows® Vista / 7 / 8/ 10
Processor:	2.8 GHz Core 2 Duo (3.2 GHz Core 2 Duo recommended), AMD Athlon MP (multiprocessor variant or comparable processors)
Memory:	4 GB RAM (6 GB recommended)
Graphics:	512 MB with Pixel Shader 3.0 (AGP PCIe only)*
DirectX®:	9.0c
Hard Drive:	8 GB HD space
Sound:	Direct X 9.0c compatible

* Laptop versions of these chipsets may work but are not supported by TS 2021. The drivers for your video and sound cards may need to be updated.

Furthermore, we recommend our users to adopt the graphics settings of TS 2020 from the images below:





When using this add-on on heavier PCs with higher specifications than those indicated by DTG, you could consider deviating from these settings, but we have not tested our route under those conditions.

The storage capacity of this route does not exceed 2.5 GB. Nevertheless, it is recommended to minimize the number of parallel and background processes when driving scenarios on the route.

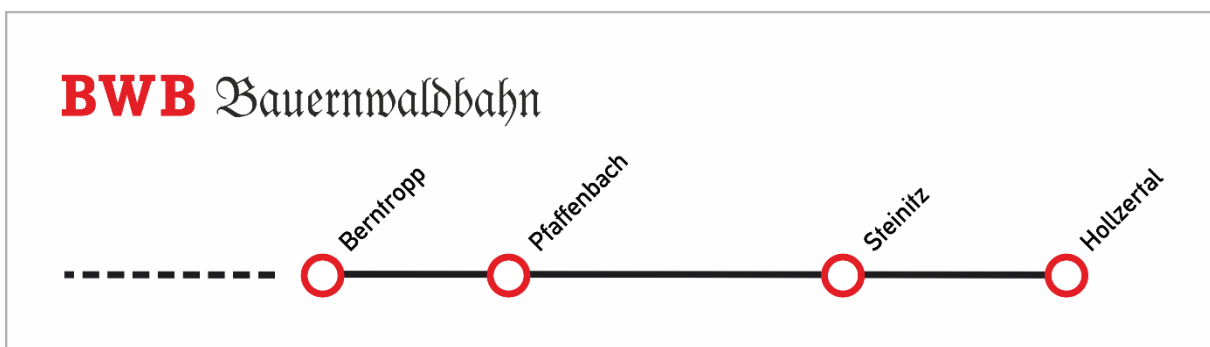
Attention (beginning) scenario developers!

It goes without saying that users who build their own scenarios have their own responsibility for monitoring performance. When TS is running in its own window, you can easily take readings with the Windows Task Manager utility (shortcut CTRL + ALT + DEL). If desired, the frame rate of the sim can be made visible in the TS window with SHIFT + Z.

The route

Overview

This fictional route starts in Berntropp, where a side branch of the standard gauge network ends. This connection makes the transshipment of goods possible. The BWB mainly supplies logs on its meter gauge line, which could be transhipped here in the outside world. On the other hand, the connection justifies the transport of goods supplied by the bigger railway to the stations along the line. The main yard is Steinitz, where the BWB depot is located. The route ends just behind Hollzertal in a disused tunnel, which used to be the entrance to the part of the route that has since been closed.



Milestones

The route uses a kilometers milepost system, which values can be read from milestones along the line:

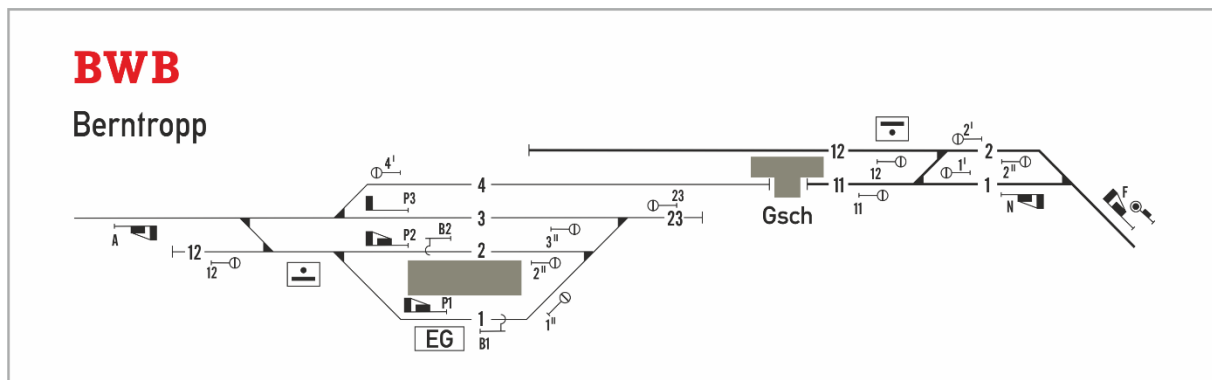
Km	Locatie
10	Berntropp
11	Pfaffenbach
13	
14	
15	Steinitz
16	
17	
18	
19	
20	Hollzertal

Station layouts

Introduction

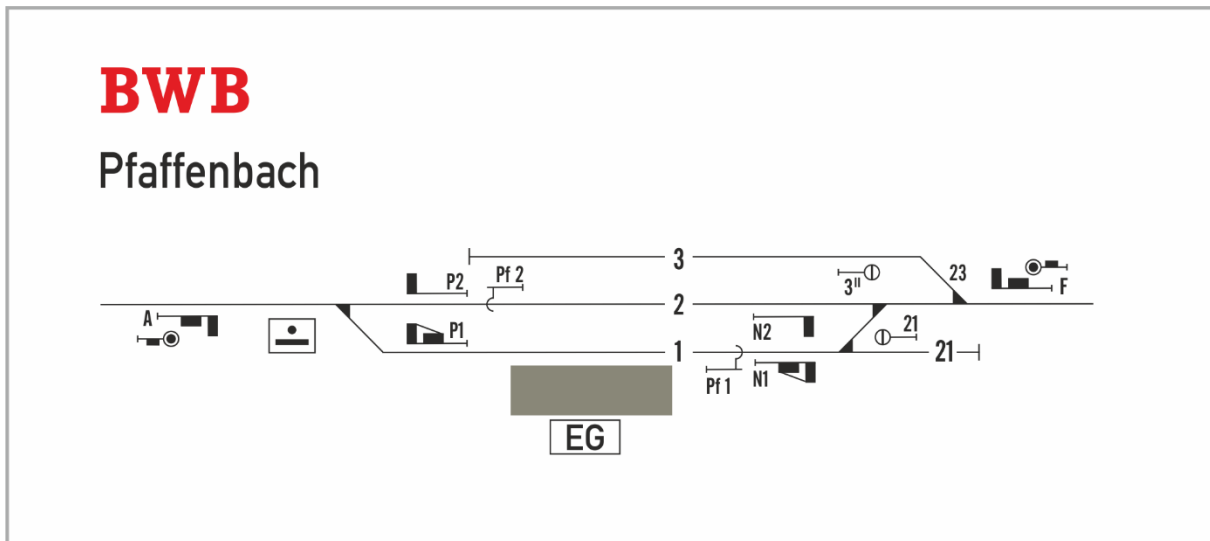
Schematics have been drawn up of all sidings in the route with references to the signal numbers and the numbering of sidings and platforms. For the numbering of the tracks, signals, etc., a link has been sought as much as possible with the standards used by the DB and DR in the second half of the last century.

Berntropp



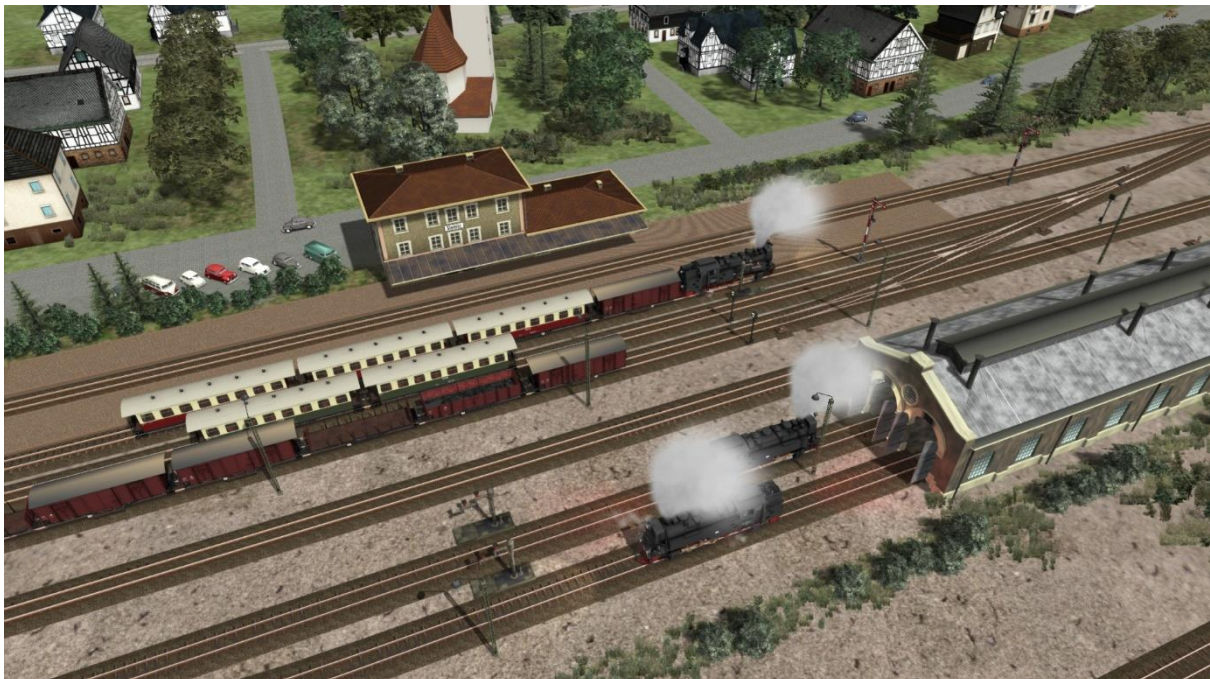
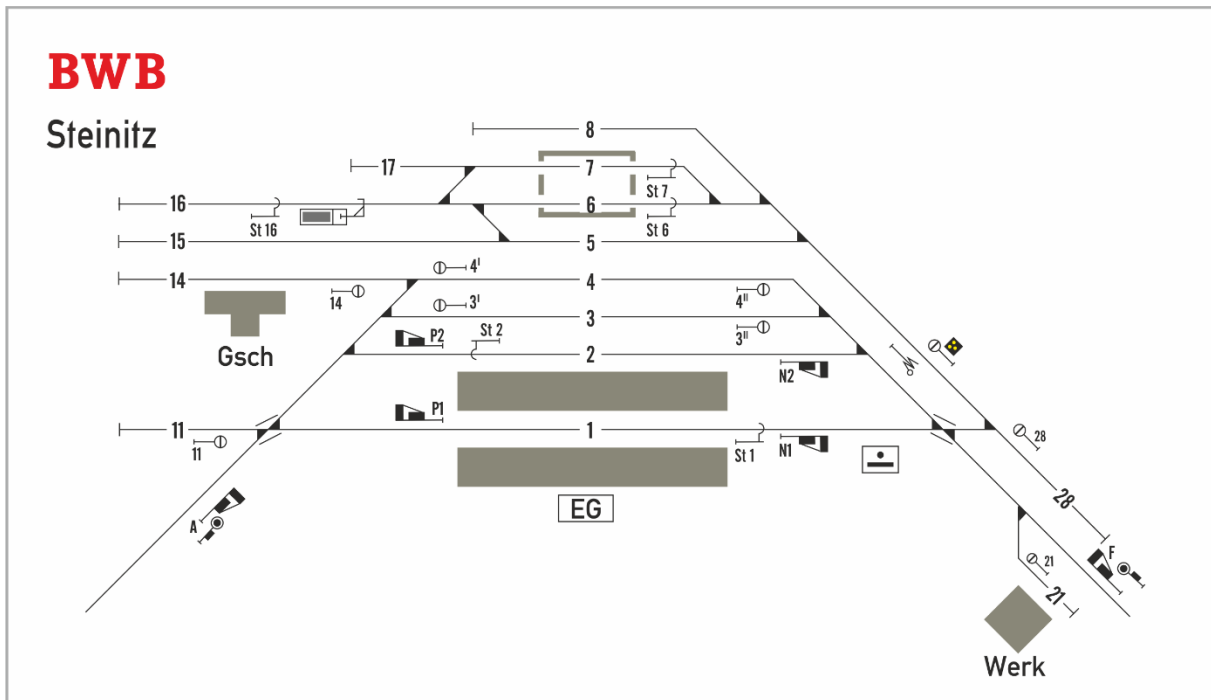
Berntropp, leaving goods train.

Pfaffenbach



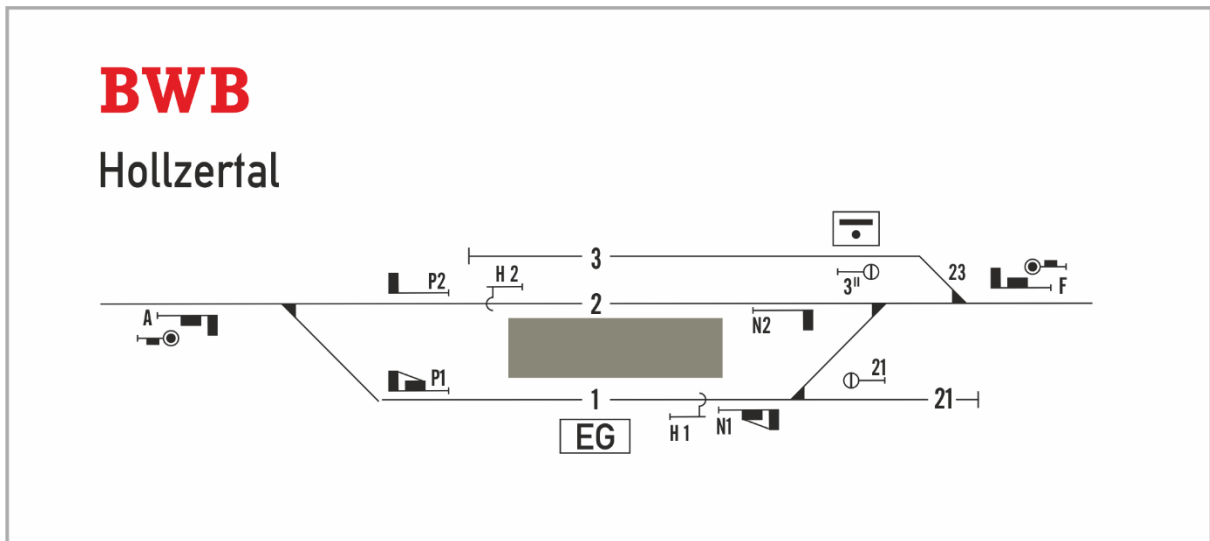
The BWB has been built as single track, so trains have to cross in station yards.

Steinitz



Steinitz yard with BWB depot.

Hollzertal



Preserved engine 99 222 shunting in Hollzertal yard.

Rolling Stock

After installation of the Bauernwaldbahn, the following rolling stock will be available for use in the scenarios:

Locomotives



HSBTS

Object Browser	Folder:	Object name
[BR 99.23-24] DR 99 247	HSBTS\ Fahrzeuge	99 247DR
[BR 99.23-24] DR 99 242	Fahrzeuge	DR 99 242
[BR 99.23-24] DR 99 244	Fahrzeuge	DR 99 244
[BR 99.23-24] DR 99 231	Fahrzeuge	DR 99 231
[BR 99.23-24] DR 99 235	Fahrzeuge	DR 99 235

Wilbur Graphics

Object Browser	Folder: Wilbur Graphics\	Asset name
WG DR 99 7222-5	Rollmat_HSB	WG_DR_99_7222_5
WG DR 99 7245-6	Rollmat_HSB	WG_DR_99_7245_6
WG HSB 99 222	Rollmat_HSB	WG_HSB_99_222
WG HSB Ko II 199012	Rollmat_HSB	WG_HSB_Ko_II_199012
WG BWB Ko II 199012	Rollmat_HSB	WG_BWB_Ko_II_199012



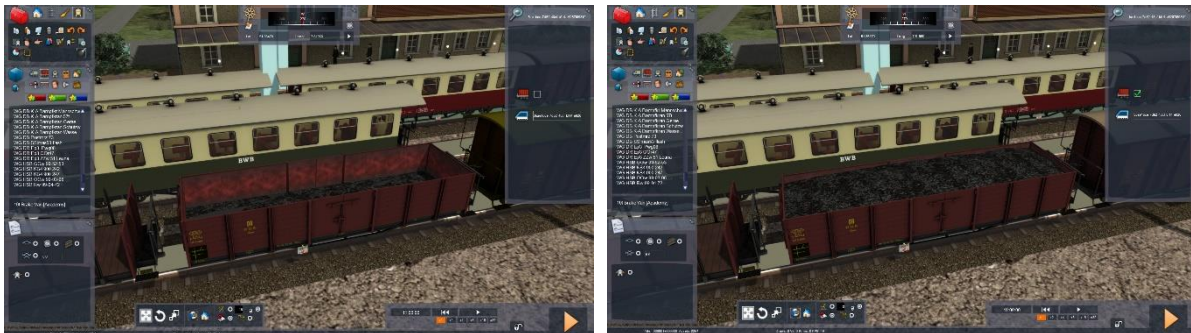
Coaches

Object Browser	Folder: Wilbur Graphics\	Asset name
WG HSB KB4 900 242	Rollmat_HSB	WG_HSB_KB4_900_242
WG HSB KB4 900 247	Rollmat_HSB	WG_HSB_KB4_900_247

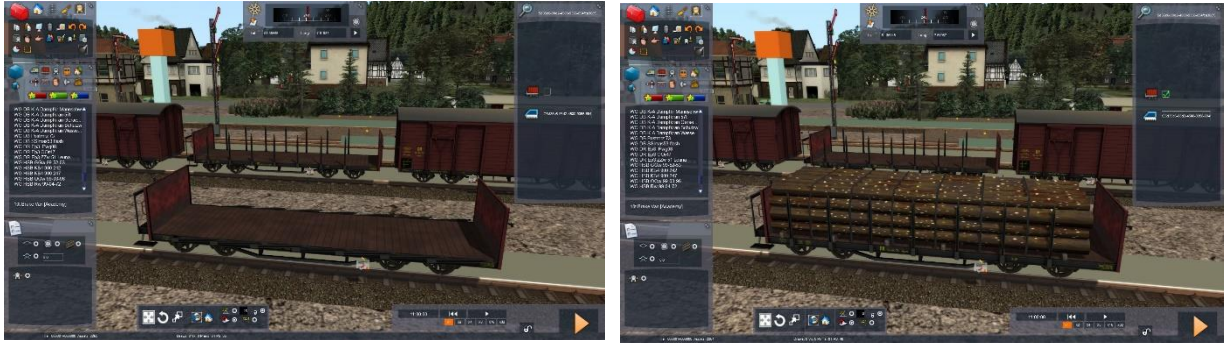


Waggons

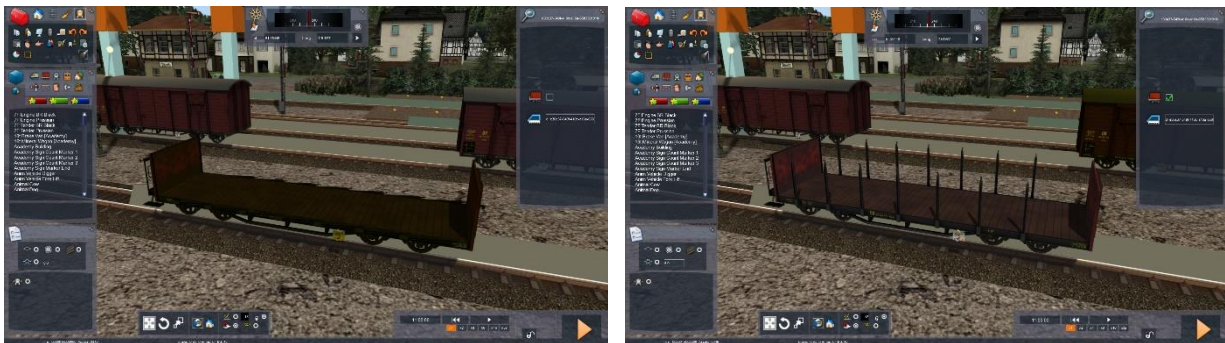
Object Browser	Folder: Wilbur Graphics\	Asset name
WG HSB GGw 99-52-53	Rollmat_HSB	WG_HSB_GGw_99_52_53
WG HSB OOw 99-03-96	Rollmat_HSB	WG_HSB_OOw_99_03_96
WG HSB Rw 99-04-72	Rollmat_HSB	WG_HSB_Rw_99_04_72
WG HSB Rw 99-04-73	Rollmat_HSB	WG_HSB_Rw_99_04_73



Using the Scenario Editor the Rw 99-04-72 can be loaded with logs, and has no movable stanchions. The stanchions of the 73 are initially 'flat', but can be placed upright by ticking the check mark in the loading window.



The Rw 99-04-72 can be used either empty or loaded with logs.



If desired, the 'empty' version Rw 99-04-73 can appear with lowered or raised stanchions in scenarios.

Signalling

Introduction

In this chapter of this manual you will find an explanation of the mechanical signals of the DB and DR, as they were in use between 1950 and 1990. Although the light signals gradually replaced the arm signals during this period, the general picture of the railways in Germany was still often determined by the classic signals until the 1950s and 1960s. This add-on for TS is therefore completely protected with this type of signals.

It can be noted that many other signals and signal aspects have been in use with German railways. For a realistic application of the mechanical German signals we have made a selection that will be described here.

Aspects

Categories

The classic German signaling system has six basic signal aspects, which will now be discussed first. These can be placed in a variety of configurations, which we have organized into the following categories:

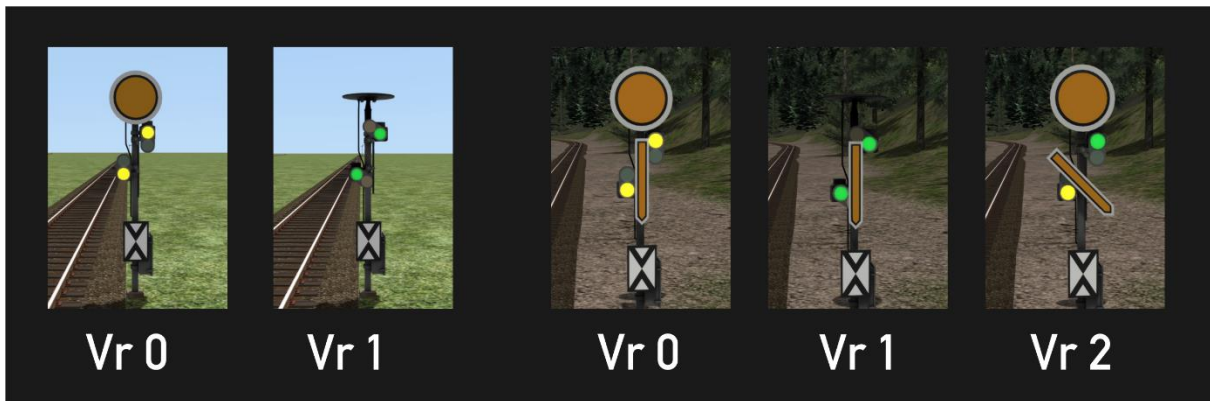
1. Home and distant signals
2. Shunting signals
3. Other signals and signs

Home and distant signals



Home signal are used to protect a danger point (level crossing, points) or as a block signal. Home signals can also be used as exit or entry signals in station yards. These signals have three models:

- with one arm (two aspects: Hp 0 – Stop or Hp 1 – Proceed)
- with two arms (three aspects: Hp 0, Hp 1 or Hp 2 – Proceed with speed restriction (40 km/u)
- with two linked arms (two aspects: Hp 0 or Hp2)



A home signal is always preceded by a distant signal, which indicates which signal aspect the home signal is currently showing.

Shunting signals



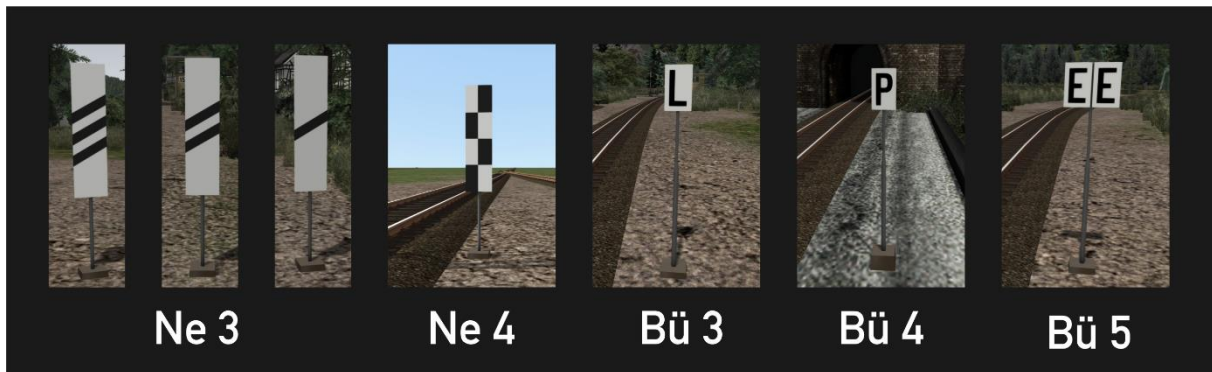
Yard sidings that are not protected by main signals are provided with shunting signals, which have two signal aspects: Sh 0 - Stop or Sh1 - Proceed. We come across the signal Sh2 on sidings that cannot be used or can only be used under certain circumstances, for example on entrances to works sidings or tracks that are temporarily out of service, e.g. for maintenance. Sh 0 is also used as a closing signal on buffer stops.

Signal Zs 7 actually belongs to the family of light signals, but is used in our route as yard entry signal and tells the driver: 'Drive on sight'.



When shunting, engines may use a main line section under restrictions. The shunting consist may not pass the Ra 10 board. Ra 11 indicates that a train driver here has to wait for an order from the traffic controller to continue driving. This command is given in our route with two white lights. A point setting can be read from the point lantern: Wn 1 for straight and Wn2 for left or right, shown here for an electric and a manual turnout, respectively.

Other signs



To warn a train driver that he is approaching a distant signal, beacons are placed along the track at successive 250 m, 175 m and 100 m before the signal. If there is not enough space on a yard to place a signal on the right side of the track, Ne 4, the 'chessboard' indicates that the signal is placed on the left side. The L and P signs instruct the driver to use the bell and whistle respectively, e.g. for a level crossing. The bell must be turned off when passing signal Bü 5.

Scenarios

Settings

The following TS gameplay settings are recommended for playing scenarios:



It is then assumed that you are firing the steam locomotives in the scenarios yourself. If desired, you can of course also enable this 'Auto Fireman' option. The meter gauge stock couplings in the BWB work automatically and do not respond to whether or not a tick is placed on the *Auto Coupling* option.

Overview

[NL] 00 Materieelshow	FR	
[NL] 01 Reizigersdienst Hollzertal_Berntropp	ST	P
[NL] 02 Goederendienst in de sneeuw	ST	G
[NL] 03 Gemengde trein naar Berntropp	ST	P
[NL] 04 Goederendienst in de herfst	ST	G
[NL] 05 Winterse reizigerstrein	ST	P
00 Rolling stock show	FR	
01 Passenger service Hollzertal-Berntropp	ST	P
02 Freight service in winter	ST	G
03 Mixed service to Berntropp	ST	P
04 Goods service in autumn	ST	G
05 Winter passenger service	ST	P

TT = Timetabled, ST = Standard Scenario, FR = Free Roam
 P = Passenger service, G = Freight service

Because TS always shows English text elements for Dutch users, we have created separate versions of our scenarios for these customers, in which the English text building blocks have been replaced by Dutch translations, recognizable by the prefix [NL].

00 Rolling stock show



Rolling stock show in Steinitz station yard.

Getting familiar with BWB engines and wagons. All engines have been fired up and can be mounted for a drive along the route or for shunting activities.

01 Passenger service Hollzertal-Berntropp

Today you drive an introductory service with the 99 7222 from Hollzertal to Berntropp. The passenger train is waiting for you on track 1. Note: You must turn on the air pump before you can drive away (CTRL + 0). You will stop at all stations on the way. Your shift ends in Berntropp.

02 Freight service in winter

In this scenario you drive a second introductory ride with an empty rolling stock train in the opposite direction. You are already coupled up so when the home signal shows CLEAR you may depart. Note: You must turn on the air pump before you can drive away (CTRL + 0). No interim stops have been scheduled. Your shift ends in Hollzertal.

03 Mixed service to Berntropp

On this rainy summer morning your duty is to drive the 99 244. You will run a short mixed goods/passenger train from Steinitz to Berntropp and back again. The fireman has already built up the fire. You will now back up to the coaling stage where you can replenish the fuel bunker. After that you drive to track 2 where you will couple your engine to the waiting train. You will drive uphill to Berntropp, where you must run-round the engine before you can bring your train back to Steinitz. Have a good trip!

04 Goods service in autumn

You are on your 99 231 in Hollzertal on this beautiful autumn evening and will now bring a goods train to Berntropp. Just wait until the passenger service has left the station, after which you are cleared for shunting by the dispatcher. Your train is standing on track 3. In Pfaffenbach you will have to wait for an oncoming train. Have a good trip!

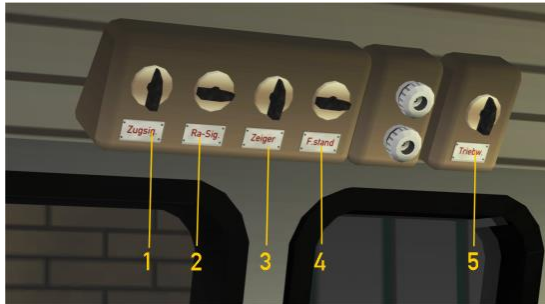
05 Winter passenger service



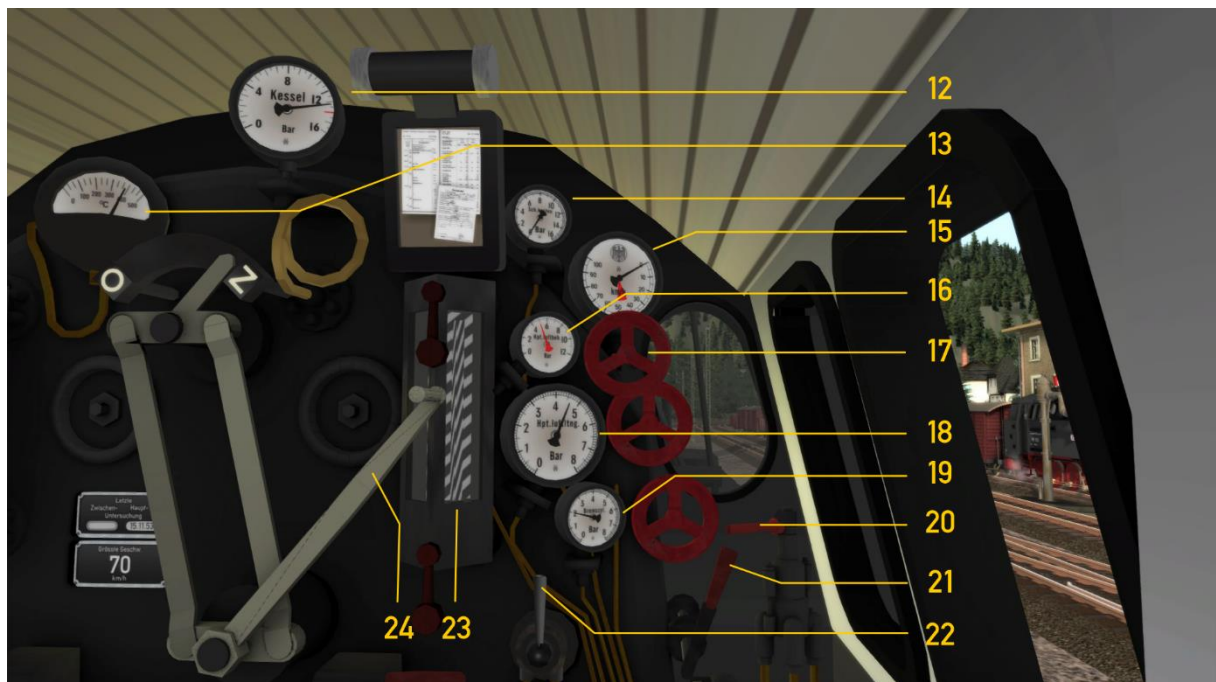
On this winter day you will drive a passenger service to Hollzertal. Ready the loc and have the passengers board the train. After that, you must await the arrival of an oncoming train. Have a good trip!

Appendix

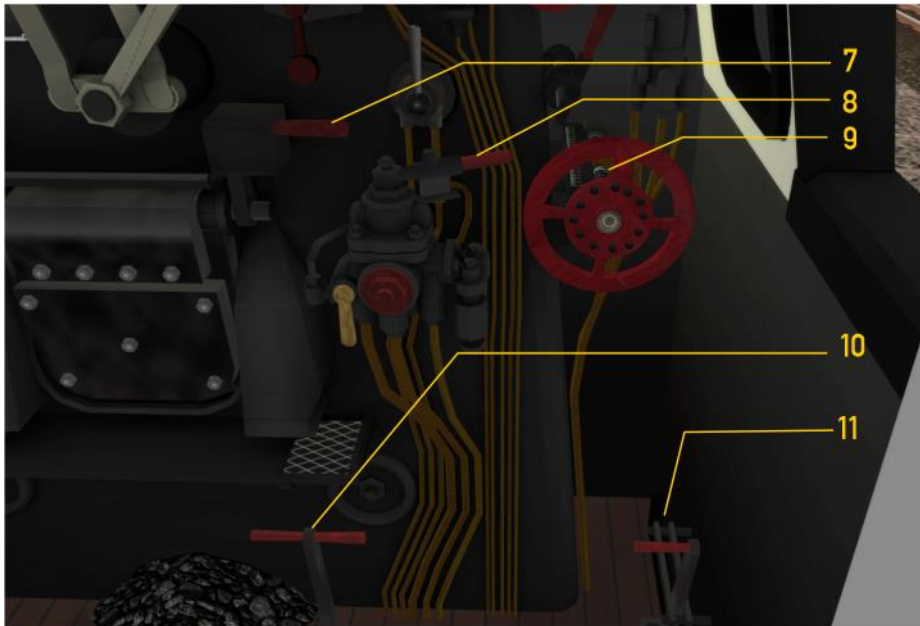
Cab lay-out WG BR 99



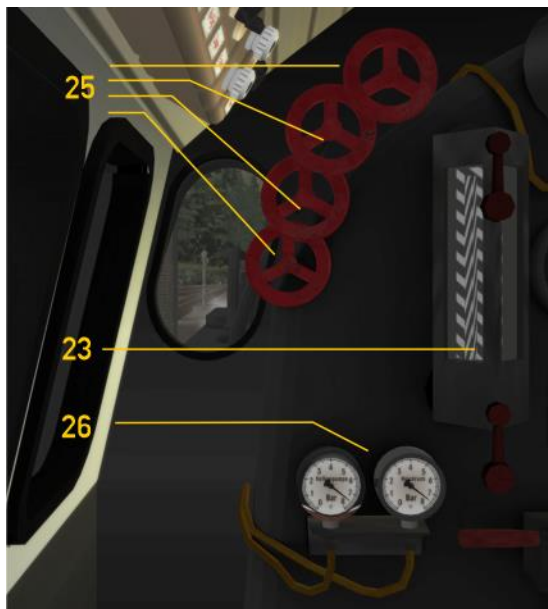
1	Train signals	H/SHIFT+H		
2	Shunting signals	CTRL + F9		
3	Gauges	CTRL + F11		
4	Cab	CTRL + F12		
5	Link movement	CTRL + F10		



12	Manometer	19	Brake cylinder pressure	
13	Pyrometer	20	Engine brake	
14	Steam chest pressure	21	Whistle	SPACE/N
15	Speedometer	22	Sander	X
16	Main reservoir pressure	23	Boiler water level	
17	Air pump on/off	24	Regulator	A / D
18	Train brake pipe pressure			

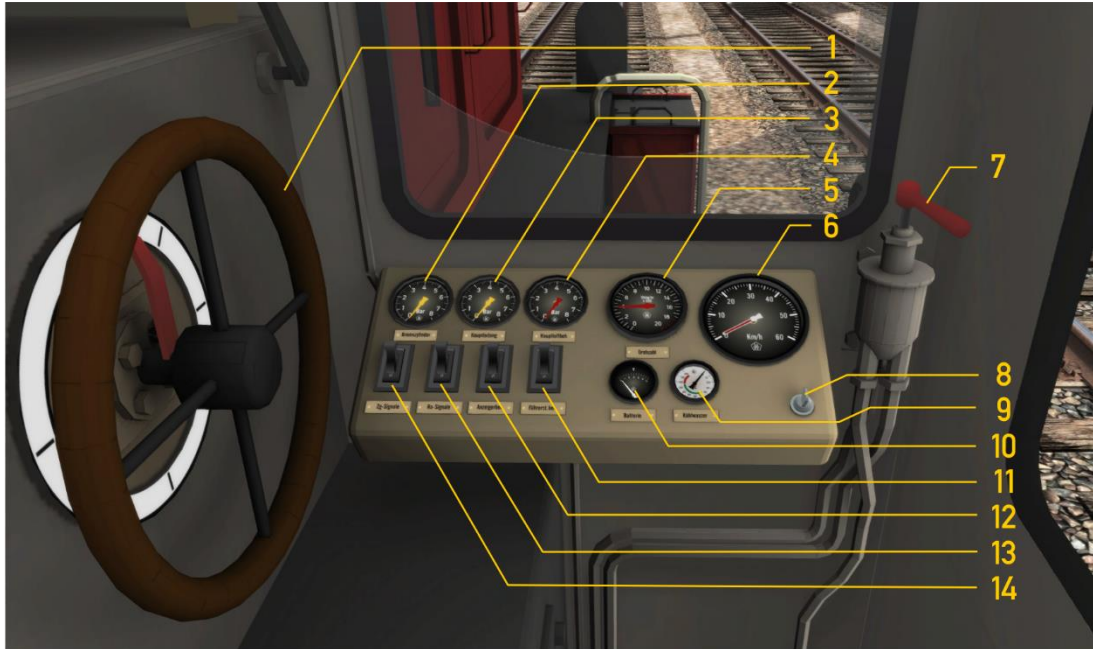


7	Firedoor handle	F / SHIFT + F
8	Train brake	; / '
9	Reverser	W / D
10	Dampers	M / SHIFT + M
11	Cylinder cocks open/close	C / SHIFT + C

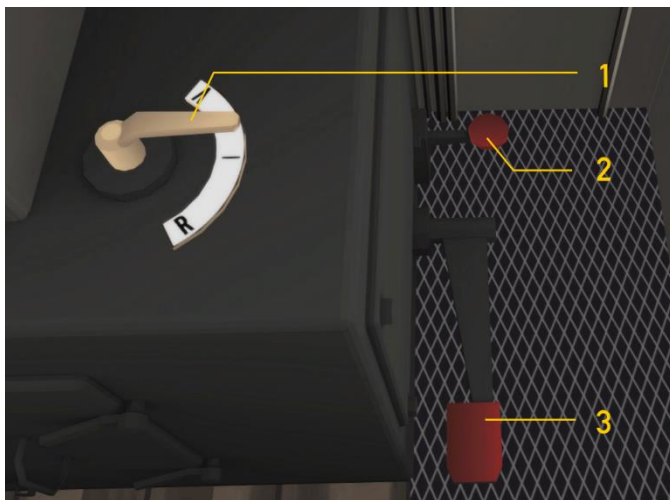


23	Boiler water level
25	Injector hand wheels
26	Feed water pressures

Cab lay-out HSB 199 012 (Kö II)



1	Power wheel	A / D
2	Brake cylinder pressure	
3	Train brake pipe pressure	
4	Main reservoir pressure	
5	RPM	
6	Speedometer	
7	Train brake handle	; /'
8	Control current on/off	Ctrl + 0
9	Cooling fluid temperature	
10	Battery voltage	
11	Cab lights on/off	Ctrl + F11
12	Panel lights on/off	Ctrl + F12
13	Shunting signals on/off	Ctrl + F9
14	Train signals on/off	H/ Shift + H



1	Reverser	W / S
2	Whistle pedal	SPACE
3	Engine brake handle	[/]



Now let us take a closer look at the settings of the automatic power transmission. These can only be changed if both the reverser and the power wheel have been set to their zero (neutral) positions, while the loco is at a standstill. Out of three settings you may select: 0 = neutral, 1 = slow (up to ca. 15 km/h), 2 = fast (up to ca. 45 km/h). Selection can be done by three different methods. Either by the mouse (HUD or handle H1) or with shortcut E. Settings 1 and 2 will be locked and unlocked automatically by handle H2.



Colophon and credits

Route and loco design/production:

© Wilbur Graphics, Henk van Willigenburg (www.wilburgraphics.com)

HSBTS/WG Steam loco BR99.23-24:

© Wilbur Graphics, Michel R. & Frederick G.

WG steam loco sounds:

© Michel R.

Trees, vegetation and characters:

Dovetail Games (DTG): TrainSim Academy

Tips and advices:

ChrisTrains.com

TrainworX (Paul Mersel)

Ton van Schaik

Reinhart190953

Scenarios:

© Michel R.

Wilbur Graphics (Henk van Willigenburg)

Testing:

Ton van Schaik, René 't Hooft

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