TrainTeamBerlin

Type	Railworks 3 - Addon
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Version	1.0
Date	28.02.2012
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1. Preamble

Dear consumer,

we thank you for your interest in our addon „Railworks Class 101 PlusPack". The present addon is an eminently special implementation.

It's our first product for the simulator "Railworks 3". After a long phase of adjustment to the new platform we decided to enhance the default class 101. This way we are going to create a felicitous cadre of rolling stock. But it's a good way to demonstrate several new features in praxis too.

The class 101 has a completely new soundscape as well as the german InterCity and InterRegio coaches. These sounds are much more accurate and demonstrates the capabilities of the simulator. That are amongst others chirring in curves and cab voice outputs.
After all railworks provides terrific scripting facilities. So we are able to present a couple of new features like a simplified version of the german train control system PZB which replaces the railworks default pseudo-PZB. We intentional simplified this system - it's the first step to a full-featured PZB. On top we programmed a completely working implementation of the SiFa. So you get another full working train control system in the expert mode.

There are six scenarios for the routes Seebergbahn, Hagen - Siegen (we provide German graphic schedules for both routes) und Köblitzer Bergland - you"ll hear the popular acoustic announcements in every scenario.

We are planning to create further german railworks addons - so it's worthwhile to have a look at our website periodically.

In this sense, we wish you as much pleasure with this addon as we had while creating it.

TrainTeamBerlin, February 2012

2. Content

3. The team and acknowledgements

Software: TrainTeamBerlin
Distribution: Halycon Media and TrainTeamBerlin

Benjamin Ebrecht	Sound, Scripting, Repaints, Scenarios, Manual
Maik Goltz	Sound, Scripting
Ronald Jacobi / Halycon	Sound
Partrick Polzin	Modelling, Scripting, Quality management
Eckhard Frädrich	Investigation, Quality management, Manual

On top we want to sincere thank all other (partly anonymous) helpers who supported us creating this software.

4. System requirements

For using „Railworks BR101 PlusPack" you will need at minimum the following system configuration:

DualCore Processor: 2 GHz or higher
Min. 2048 MB RAM
Graphics card with 512MB memory
About 100MB free hard disc space
Gamer sound card
Train Simulator 2012 (Railworks 3), at minimum in version 11.0b

5. Installation & Configuration

You have to execute the file setup.exe to install „Railworks BR101 PlusPack". The automatic install routine is opening. Follow the instructions and install the addon in your railworks main folder. This is detected automatically in most cases. With this you finished the installation.

Advice: We recommend to use the class 101 in active status just in the railworks expert mode (you'll have to activate it in the railworks option menu). **Don't** drive the class 101 using the **CabDriver** (F4) - Use only keyboard and mouse (for clicking on the control elements in the cab).

Configuration:

Please note that all new configurations and definitions are integrated in the rail vehicles automatically. If you like to deactivate it and run the railworks default sound again, you won't need to uninstall the whole addon: Just open "BR101 Konfiguration" which you can find in you windows start menu: Programs → TrainTeamBerlin → Railworks BR101 PlusPack. Run it and click on "Deaktivieren."
It's possible to reactivate all new features again with a click on "Aktivieren" in the same program.

Uninstallation:

If you want to uninstall " Railworks BR101 PlusPack ", you'll first have to be sure that all new features are deactivated. For this, run "BR 101 Konfiguration" located in your windows start menu: Programs → TrainTeamBerlin → TrainTeamBerlin → Railworks BR101 PlusPack. Make sure that the actual state is "deaktiviert".

After this you only need to run the uninstall routine. You can find a link in the same start menu folder.

6. Features

Besides a really accurate sound we provide some special features with this PlusPack.

Pantograph control:

You know that railworks is controlling both pantographs of a loco by it's own. Railworks raises the rear pantograph every time you change the direction. We implemented a more flexible and manual pantograph control:

The player has now the check on both pantographs independently. You can raise and drop the front pantograph by pressing **Shift + P**, the rear pantograph is controlled with **P**. It's clear that you have to raise at minimum one of both pantographs for making the loco able to move. But it's no problem as well to use the class 101 with both pantographs raised. This can make sense while shunting. On top it's possible to simulate an accurate pantograph control driving a double traction regime: Then you'll have to raise the front panto of the leading loco and the rear panto of the second one.
In AI traffic the Class 101 raises the rear panto in most cases independent of direction changes. In AI double traction regimes the front pantograph of the leading loco is raised. If the loco is marked as a "defect" vehicle in the scenario editor, both pantos are dropped.

Rear pantograph	P
Front pantograph	Shift + P

Simplified PZB:

Railworks contains a very pseudo implementatin of the german train safety system " punktförmige Zugbeeinflussung" - shortly called PZB.
We programmed a PZB more related to reality. But we first want to suggest that this implementation is not complete as well. The equipment of railworks default routes and german cabs set limitations, so we constrain the implementation to the 1000Hz monitoring without possibility to free from monitoring and no restrictive mode. Certainly we adapted the forced braking on active 2000Hz magnets. We simulate the class 101 in train mode O. In the following we explain the functionality of our implementation:

There is a 1000Hz monitoring in this version of the class 101. This means that distant signals showing a stop or expected speed reduction below 100 km/h **have to be confirmed in the first 4 seconds with key Q** after driving over an active 1000Hz magnet located at the distant signal. If you fail to do this a forced braking will be triggered.

Furthermore you have to lower your speed after passing an active 1000Hz magnet. There is a continuous speed curve which is used for controlling your actual speed. You must lower your speed **below 85 kilometers per hour within 23 seconds** - otherwise a forced braking will be triggered. Afterwards there is a monitoring of a **constant speed of 85km/h as far as you travelled 1250 metere**s since you passed the active 1000Hz magnet. The following diagram shows the functionality of our 1000Hz monitoring graphically:

TrainTeamBerlin 2011
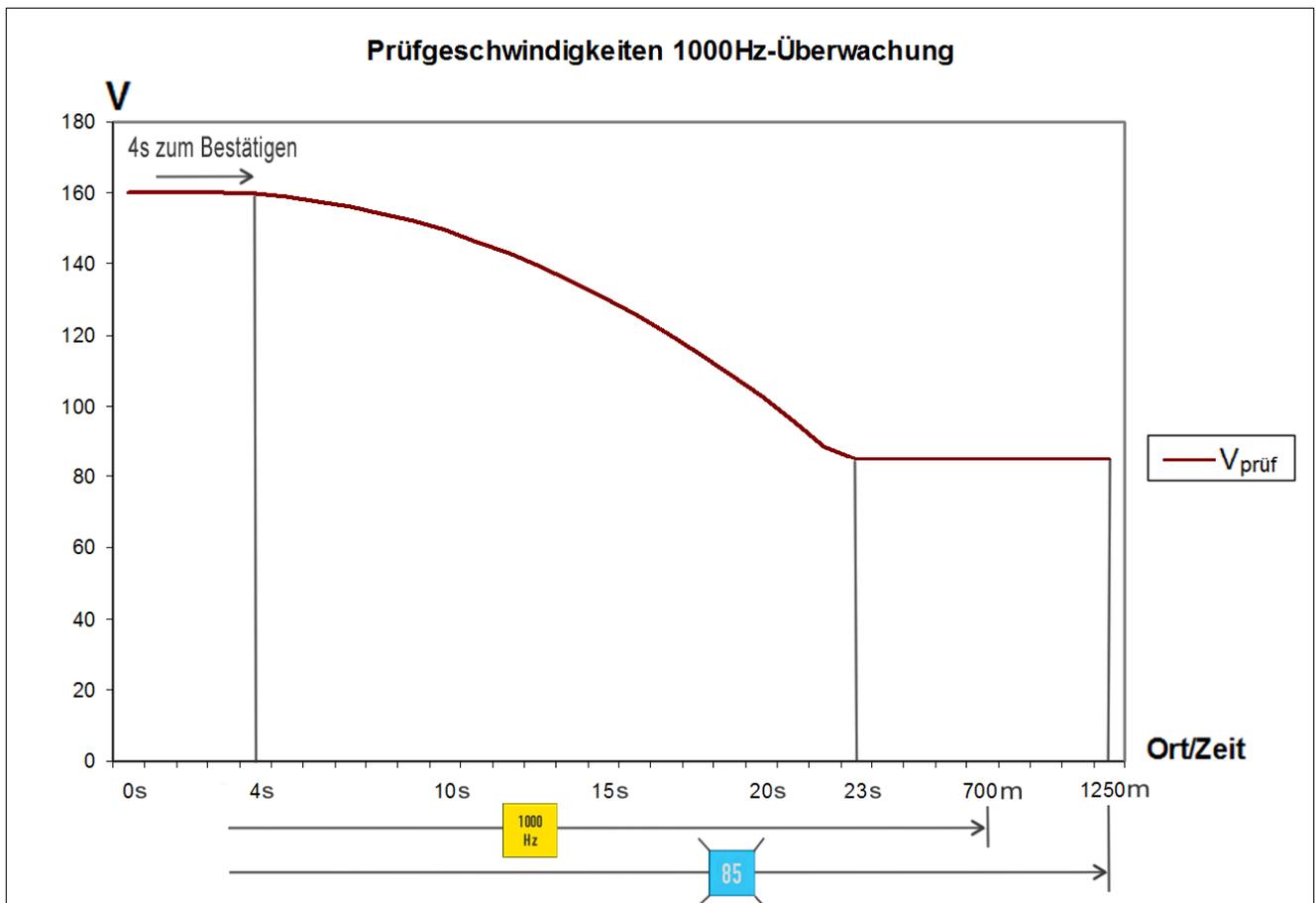
Further Information:

If you get a PZB forced braking your train will be stopped until it stands. Finally you have to **confirm the forced braking with key Q**. Then you can accelerate again. After a 1000Hz monitoring forced braking the 1000Hz monitoring will be continued.

After confirming a 1000Hz monitoring the yellow 1000Hz indicator will light up until you travelled 700m since passing the active 1000Hz magnet. After this there is a possibility to free from monitoring. This possibility is **not implemented** in our simplified PZB. The indication speed of 85km/h must be kept until you travelled 1250m since passing the active 1000Hz magnet.

The restrictive mode **isn't implemented** as well. In reality lowering the speed under 10km/h respectively stopping the train while an active 1000Hz monitoring will let you fall in the restrictive mode which lowers the indication speed to 45km/h. This restriction is not programmed by us, so you still have to keep the indication speed of 85km/h.

On top the passing of red signals (active 2000Hz magnet) is checked. If you have no permission to pass it (oral permission or signal Ra12 - key TAB respectively Shift + TAB in railworks) a forced braking will be triggered.

Advice: The functionality of the PZB is initial **active**. You are able to deactivate the PZB while driving the class 101. Just press **Ctrl + Shift + Q**. The deactivation will be acknowledged with the acoustic output "PZB deaktiviert". It's possible to reactivate the PZB by pressing **Shift + Q**. This is acknowledged with an acoustic output as well.

PZB acknowledge	Q
PZB deaktivation	Ctrl + Shift + Q
PZB aktiviation	Shift + Q

Safety brake system SiFa:

The so called "SiFa" is a safety system of locos and motor train sets which ensure that the driver is capable of acting and can do his job. Otherwise the train will be slowed down automatically. We implemented the missing SiFa in railworks for the class 101 which works like the time-time SiFa in reality.

This means that after 26 seconds of moving the train with 15 km/h or above the SiFa indicator will light up. After 4 seconds more an acoustic warning "SiFa" appears. Then there are **8 seconds** left for pressing **the key Y** for confirming the SiFa. If you fail do this, a forced braking will be triggered. At any time the forced braking can be interrupted by pressing the Y-key so you can prevent the train from stopping.

Please note that after accelerating the train over the threshold speed of 15km/h an additional confirming is required.

Advice: The functionality of the SiFa is initial **active**. You are able to deactivate the SiFa while driving the class 101. Just press **Ctrl + Shift + Y**. The deactivation will be acknowledged with the acoustic output "SiFa deaktiviert". It's possible to reactivate the SiFa by pressing **Shift + Y**. This is acknowledged with an acoustic output as well.

Sifa	Y
Sifa deactivation	Ctrl + Shift + Y
Sifa activation	Shift + Y

Second Horn

In the times of MS Train Simulator the usage of an second horn sound (a short an one long sound) was established. The usage of both was controlled by the train speed. Railworks provides different possibilities. So we decided to use two different key combinations for both horn sounds. You can use the following ones:

Horn short	Space
Horn long	Shift + Space

Scenarios:

We want to present you the six scenarios in this block of the manual. We'll show the main data for each scenario and give hints which are maybe useful for successfully complete them.

Hagen - Siegen

TTB 01: InterRegio 2411

Loco: 101 037 "Buffet"
Difficulty: middle
Season / Weather: summer / cloudy
Time: 16:21
Duration: 1:10 hours

Description: You take over an InterRegio at Hagen central station. Drive this train on schedule to Siegen stoping in Werdohl, Finnentrop und Altenhundem.

TTB 02: Retriever in misery

Loco: 101 047 "Feuerwehr"
Difficulty: simple
Season / Weather: Summer / cloudy
Time: 9:43
Duration: 0:40 hours

Description: This Scenario is split up in two parts. It's your job to take a class 101 in Siegen and to haul a defect InterRegio from Altenhundem to Siegen.
The frist part begins in Siegen. You take the loco 101 047 in the yard and have to wait for a regular train until you get a green signal. Then you have to drive as fast as possible to Altenhundem. You'll need the TAB key for passing the entrance signal of Altenhundem. Part one is finished when you couple the defect train.
In the second part you'll drive the trains set to Siegen. The InterRegio will end there, open the doors for letting all passengers leave the train. Then you uncouple all coaches at the platform track and haul the defect loco to the yard. For this you'll need the TAB key.

Im Köblitzer Bergland *(Payware addon route)*

TTB 01: Eurocity to Amsterdam

Loco: Class 101 PEP
Difficulty: middle
Season / Weather: Winter / Snow
Time: 18:35
Duration: 0:25 hours

Description: Your EuroCity train stands in front of the entrance signal of Altenburg central station. Get the permission to pass it with the TAB key and bring the train on schedule to Bad Rinckenburg. The scenario will end behind Bad Rinckenburg at full speed. Please note that the rails are slippery. Wheelslip can be detected acousticly. You have to handle it by taking back the regulator and then activate the sander.

TTB 02: InterRegio to Frankfurt

Loco: 101 070 "Adler Mannheim"
Difficulaty: simple
Season / Weather: Autumn / cloudy
Time: 14:28
Duration: 0:25 Stunden

Description: Your InterRegio stand ready for departure in Bad Rinckenburg. Bring the train to Altenburg central station with stop in Köblitz central station. The scenario ends in the exit of Altenburg. A simple scenario without problems.

Seebergbahn

TTB 01: Loco Change

Loco: 101 101 "Europe"
Difficulty: simple
Season / Weather: Autumn / cloudy, showers
Time: 17:42
Duration: 0:25 hours

Description: Shortly the IR2573 will approach in Seeberg. This train has a direction change here. So the leading loco will uncouple and drive into the yard. It's your job to wait for the shunting permission (17:43:20) and drive forwards to the turning point. Then drive backwards and couple the coaches. Bring the train on schedule towards Neustadt (the scenario ends near Dissen).

TTB 02: Replacement loco

Loco: 101 102 "Azubi"
Difficulty: middle
Season / Weather: Spring / clear
Time: 16:18
Duration: 0:20 hours

Description: There is a regional train ready for departue in Seeberg. Unfortunately, its loco breathe it's last. So it's your job to couple the train (turning point is located near "Nach Seeberg Tal 2") and bring the regional train to Almsfeld with stop in Brechte and Ecten. There you let the passengers leave the train. A colleague will bring the train to the yard.

Graphic schedules

You can find graphic schedules in pdf format for the routes Seebergbahn and Hagen - Siegen in the folder ..\Railworks\TTB-Material\BR101-PlusPack\. You can print them and use it for solving our scenarios.

Both files are linked in the windows start menu, too: Programs → TrainTeamBerlin → TTB BR101 Pluspack

Known problems:

→ The acoustic announcements of the 6 provided scenarios are played at wrong times when you save and reload the scenarios. We recommend to play the scenarios at a stretch.

Further advices:

→ We strongly recommend to use an EAX capable sound card for an optimal audio pleasure. According to your hardware you should activate EAX in railworks settings. The option "Force software mixing" can cause sound problems and should be deactivated in such cases. The following adjustments are approved:
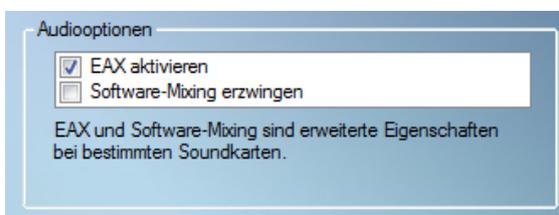
→ You can use our support forum http://www.trainteamberlin.de/forum for further questions.