

Typ	Train Simulator 2013 - AddOn
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Preamble

Dear consumer,

we thank you for your interest in our AddOn „Railworks Class 294 PlusPack“. The present AddOn is an eminently special implementation.

After the effort of the earlier PlusPacks we improved another Railworks default loco to a new quality level. This time we enhance the class 294 diesel shunting and route locomotive. We are convinced to have improved the driving pleasure another time.

The class 294 got a completely new soundscape. These sounds are much more accurate and demonstrate the capabilities of the simulator: for example flanging in curves and specific controlled outputs. 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 (German abbreviation for: Sicherheitsfahrshalter). The combined joystick regulator and brake control is programmed as well as the gear box and the shunting mode of this loco. So you get another full working train control system in the expert mode.

In addition we added a new soundscape and retextured freight coaches. In combination with our previous AddOns we are now able to enhance all Railworks German default wagons. A special feature of this package is a completely new built freight wagon and three AI trainsets for the route Augsburg-Munich which affect the atmosphere of this route in an enduring way.

There are six scenarios for the routes Munich-Augsburg, Köblitzer Bergland and Köln - Düsseldorf. You will hear the popular acoustic announcements in every scenario.

We are planning to create further German Train Simulator AddOns. So it's worthwhile to have a look at our website and forum <http://www.trainteamberlin.de/forum> periodically. In this sense, we wish you as much pleasure with this AddOn as we had while creating it.

Best regards

TrainTeamBerlin
Berlin, in April 2013



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The Team And Acknowledgements

The team is free to introduce itself at this place::

Software: TrainTeamBerlin

Distribution: Halycon Media and TrainTeamBerlin

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

On top we want to sincere thank all other (partly anonymous) helpers who supported us creating this software. One or more textures on 3D models used in this AddOn have been created with images from CGTextures.com. These images may not be redistributed by default, please visit www.cgtextures.com for more information.

System Requirements

Processor (CPU):	DualCore 3 MHz
Memory (RAM):	4096 MB
Graphic board:	DirectX 10-ready or better, 1024 MB Graphic memory
Hard disk memory:	500 MB free
Sound board:	Soundblaster or compatible Gamer card
Software:	Train Simulator 2013 Addon DLC "European Community Asset Pack" (automatically installed if you had a former version of TS2013)

This AddOn has been developed with Train Simulator 2013 .

Installation & Configuration

You have to execute the file setup.exe to install „Railworks Class 294“. 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. After copying the necessary files two additional setup programs for "Microsoft Visual C++ 2012 Redistributable (x86)" and Microsoft DirectX components will be executed. For installing these files it may be necessary to have an active internet connection for downloading DirectX components. With this you finished the installation.

Advice: We recommend using the class 294 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 294 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 "BR294 Konfiguration" which you can find in you windows start menu: Programs → TrainTeamBerlin → Railworks BR294 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 (e.g. after a forced update by Steam).

Uninstallation:

If you want to uninstall "Railworks BR294 PlusPack ", just run the uninstall routine which you can find in the start menu: Programs → TrainTeamBerlin → TrainTeamBerlin → Railworks BR294 PlusPack → Deinstallation.

Features

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

Joystick control / Gear box:

We totally changed the control elements for brake and regulator of the Class 294 and made it as realistic as possible. At first one has to know that the locomotive is driven in normal mode by using the joystick in the cab view. There are no additional brake valves, the direct driver's brake valve ('loco brake') is disabled. It is only used in cases of disruptions in reality.

The control joystick has got the following notches:

- Increase power (+)
- Hold power
- Middle position (Decrease power / Release brake)
- Hold Brake
- Increase brake (+)

The notches marked with (+) are the ones that have to be manually hold because the joystick will otherwise fall back into one lower notch automatically (Hold power / Hold brake). This means that you will have to press down the keys **A** and **D** as long as you want to increase power or brake. If you use the mouse for controlling your loco, you have to use the left mouse click multiple times in these notches. We recommend to use the keyboard control for an optimal play experience.

When starting the simulation, the brake is applied and the joystick in the "Hold brake" notch.

On top the loco has got a gear box that allows the selection of a route gear and a shunting gear. When starting the motor for the first time, the route gear is engaged and you have a maximum speed of 80km/h. With key **E** you can change into the shunting gear with a maximum speed of 40km/h. Changing back from the shunting gear into the route gear works with the key combination Shift + **E**.

Summary:

Shunting gear → Max Speed 40km/h (internal gear 2, c.f. HUD)

Route gear → Max speed 80km/h (internal gear 3, c.f. HUD)

Changing from Route gear to Shunting gear: **E**

Changing from Shunting gear into Route gear: Shift + **E**

Shunting mode

The class 294 has got a radio control which can be used with a mobile control unit in reality. So the driver can be shunter at the same time. He's called "Lokrangierführer (LrF) in German.

We implemented a shunting mode as well. You can activate this by using key **[5]** for changing into the buffer beam perspective. You can use several perspectives after changing into this mode, just changing back into the cab with key **[1]** will change back into "normal" mode. You can check whether the shunting mode is active or not by looking at the shunting indicator light at the top of the outer cab wall - it's lightning when the shunting mode is active.

In the shunting mode the power will be barred at 25km/h like in reality.

Changing in shunting mode: **[5]**

Changing in "normal" mode: **[1]**

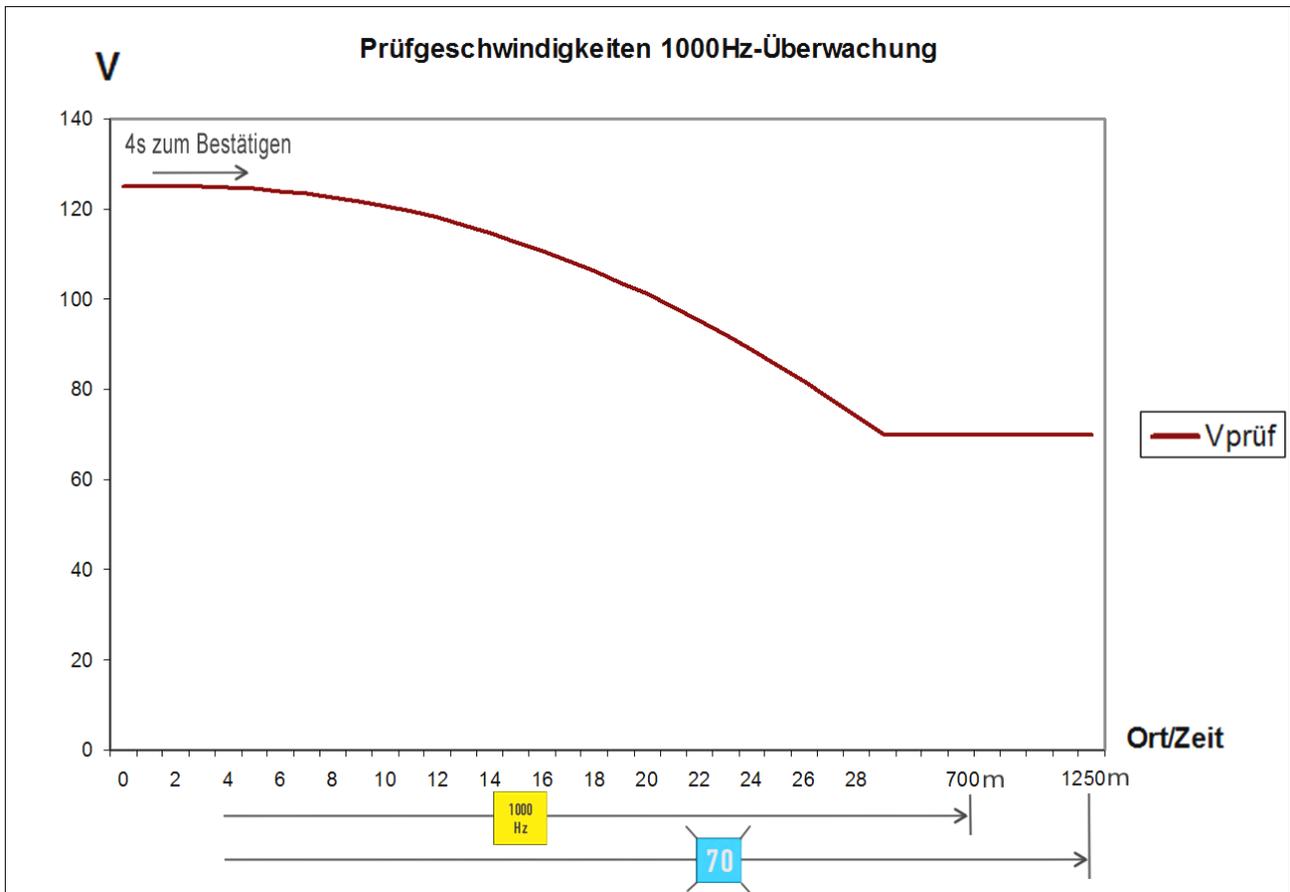
Simplified PZB:

Railworks contains a very pseudo implementation 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 151 in train mode M. In the following we explain the functionality of our implementation:

There is a 1000Hz monitoring in this version of the class 151. This means that distant signals showing a stop or expected speed reduction below 100 km/h **have to be acknowledged 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 emergency 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 70 kilometres per hour within 29 seconds** - otherwise a forced braking will be triggered. Afterwards there is a monitoring of a **constant speed of 70km/h as far as you travelled 1250 meters** since you passed the active 1000Hz magnet. The following diagram shows the functionality of our 1000Hz monitoring graphically:



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 70km/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 70km/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 151. 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" (dead man's handle) 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 151 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 151. 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 deaktivation	Ctrl + Shift + Y
SiFa aktiviation	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.

Munich - Augsburg

TTB 03: Local freight train from Weilheim

Class: Class 294 DB AG

Rating: middle

Season / Weather: Summer/foggy, showers

Time: 10:42

Period: 0:30 Stunden

Description: You start at Mering and take a local freight train coming from Weilheim. Drive into the Mering station area and wait for a crossing and an overtaking train. Then drive with a max speed o 80km/h to Augsburg. From the station Haunstetter Straße your maximum speed is 40km/h. Stopt your train in Augsburg on track 16 and uncouple your loco. Drive forwards behind the double slip switch andback via track 15. You'll need Strg + TAB. Drive back until you are behind the switch behind the double slip switch, change the direction and drive back to track 16 using TAB. Couple ONLY the three Eanos wagons and the four two axle Ktmm wagons. With this train you have to go back to Haunstetter Straße. Stop at the station, let a worker of the Localbahn get into the cab and follow his instructions on shunting the train to the "Ringbahnhof".

The following time table shall be a guidance for you:

Mering	an	10:45
	ab	10:48
Mering St. Afra	dch	10:50
Kissing	dch	10:53
Augsburg-Hochzoll	dch	10:57
Augsburg-Haunstetter Str.	dch	11:00
Augsburg Gleis 16	an	11:04
	ab	11:09
Augsburg-Haunstetter Str.	an	11:13
Augsburger Localbahn Ringbbhf	an	11:17

TTB 04: Line blockade

Class: Class 294 DB AG

Rating: middle

Season / Weather: Spring / clear

Zeit: 16:24

Dauer: 1:00 Stunden

Description: You start in Munich. At first you have to get your train in Pasing. Then you'll bring it to Geltendorf. Because of a line blockade you have to take a detour via Mering and the Ammersee track.

Start your loco, drive "backwards" to Pasing and get your train. Pay attention - your shunting speed is 25kmh. Couple your train at Pasing on track 32 after driving to its front via track 31. Then have a look at your timetable and drive to Kissing. There you have to change the direction another time (the turning points will help you). Drive back to Mering and to the Ammersee track. Be always in time!

<i>München Lokleis</i>	<i>ab</i>	<i>16:24</i>
<i>München Pasing Rbf</i>	<i>an</i>	<i>16:32</i>
	<i>ab</i>	<i>16:37</i>
<i>München Pasing Pbf</i>	<i>dch</i>	<i>16:39</i>
<i>Olching</i>	<i>dch</i>	<i>16:49</i>
<i>Mammendorf</i>	<i>dch</i>	<i>16:58</i>
<i>Althegnenberg</i>	<i>dch</i>	<i>17:05</i>
<i>Mering</i>	<i>dch</i>	<i>17:09</i>
<i>Kissing</i>	<i>an</i>	<i>17:14</i>
	<i>ab</i>	<i>17:19</i>
<i>Mering</i>	<i>dch</i>	<i>17:24</i>

Im Köblitzer Bergland

TTB 07: On the way home

Class: Class 294 DB AG

Rating: medium

Season / Weather: Summer / Foggy, showers

Time: 16:19

Period: 1:10 hours

Description: You take a Class 294 at Hosvenn. The last tank wagons are now loaded. Get all wagons first and complete the train. You have to switch all manual junctions yourself. At first, go to track 7 and then back getting the two tank wagons from the ramp. Bring them to the rest of the train on track 5. Then drive to the other end of the train, pull the wagons to the end of the track and pull it to the team car on track 2. Couple at the end of the team car after driving via 1 and 7. Drive the completed train to Altenburg and stop your train at the track without stop. There are some crossing trains.

Hosvenn	ab	16:40
Wildervenn	dch	'46
Wildau	an	'52
	ab	'54
Marienbaum	an	17:04
	ab	'05
St Rudolf	dch	'12
Rudolf Bach	dch	'16
Köblitz West	dch	'18
Köblitz Hbf.	dch	'20
Altenburg	an	'27

TTB 08: The Assembler

Class: Class 294 DB AG

Rating: medium

Season / Weather: Summer / showers

Time: 16:19

Period: 0:55 hours

Description: You take a class 294 in Wildau. Start the motor and drive into the station area (you'll need TAB). When two crossing trains passed, you go to Marienbaum. Drive through this station crossing a special train and go to the siding. Take the wood loaded wagons, first from track 2 and then from track 1. Switch manual junctions yourself. Drive this train to St. Rudolf and note that there is an active PZB 1000Hz magnet when leaving the siding.

In St. Rudolf you change your direction on track 2 and push your train backwards (with a max speed of 25km/h) to the siding to track 2. Then get the closed Gbs freight wagons from track 4 and bring the train to Altenburg. Place your train on the track without stop and shut down the engine. Your shift ends there. Be always in time!

Wildau	ab	16:52
Marienbaum	dch	17:00
Marienbaum Hilzverlade Awanst		'02 - 09
St. Rudolf	an	'16
St. Rudolf Sägewerk Awanst		'18 - 26
St Rudolf	ab	'27
Rudolf Bach	dch	'31
Köblitz West	dch	'33
Köblitz Hbf.	dch	'35
Niederkirch	dch	'38
Aktenburg Bach Hp	dch	'40
Altenburg	an	'43

Köln - Düsseldorf

TTB 07: Henkel train from Langenfeld

Class: Class 294 DB AG

Rating: medium

Season / Weather: Spring / clear

Time: 07:50

Period: 0:45 hours

Description: You start in Düsseldorf Reisholz. Bring your loco behind the switch behind the exit signal. Then change your direction and drive backwards through the shunting area and gon on to Langenfeld. You may have to wait a moment in front of the exit signal letting a city train pass. You drive behind the city train - so be careful and pay attention for red signals and active PZB magnets! In Langenfeld you get the wagon train from track 6. Bring it to Cologne Kalk North where you stop your train. There's enough time to shut down the engine before the scenario ends.

Düsseldorf Reisholz	ab	7:54
Langenfeld	ab	8:11
Köln kalk Nord	an	8:33

TTB 08: Transfer

Class: Class 294 DB AG

Rating: medium

Season / Weather: Spring / Snow

Time: 08:12

Period: 0:45 hours

Description: In the Düsseldorf depot you take a class 294 with a group of defect wagons that have to be transferred to Cologne Deutzerfeld. At first push the wagons with a max speed of 25km/h backwards to D-Volksgarten. Then you go forwards on the city train track to Cologne. You drive in the back of a city train until you reach Langenfeld. Pay attention for red signals and active PZB magnets. On the Cologne Deutzerfeld track 6 you change direction and push the wagons to Deutzerfeld track 64. Max shunting speed is 25km/h. Bring your loco to track 21 in front of the turntable, you'll have to switch one manual junction. You can shut down the motor when you arrived.

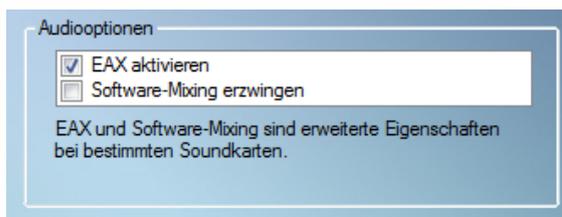
Bw Düsseldorf	ab	8:12
D-Volksgarten	ab	8:17
D-Reisholz	dch	8:22
D-Benrath	dch	8:25
Langenfeld	dch	8:34
Lev-Rheindorf	dch	8:38
Lev-Küppersteg	dch	8:40
Bayerwerk	dch	8:44
K-Stammheim	dch	8:45
K-Mülheim	dch	8:50
K-Deutz		8:55 - 8:56
K-Deutzerfeld	an	8:58

Known problems:

→ We strongly recommend to go to the railworks start menu and activate the "30FPS Lock" option. Please be sure that you use railworks with graphic options that produce a smooth gaming experience. Otherwise it's possible that several functions won't work properly - for example the acoustic outputs may be played too early / too late and/or the animations may be not synchronized with the sound.

Further advices:

→ We strongly recommend using 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.

FAQ:

Question: There is a railworks update via steam. What should I take care of?

Answer: If the rolling stock enhanced by us are updated via Steam, it's possible that the new soundscape and/or the new features won't work properly. In this case, you have to open the "Konfiguration" (start menu -> all programs -> TrainTeamBerlin -> BR101 Pluspack) and click on "Deaktivieren" and after it on "Aktivieren". Now our implementation is restored.

Question: I want to download an update for a PlusPack on myHalycon. But I don't find my registration key anymore.

Answer: At first we want to advise you of always backing up your installation files and registration keys. If you loose you key, it won't be a problem. Just open the installation program again and click through it until you are asked for the key. The key will appear automatically in this window if the addon is still installed. If the addon is no longer installed, you can contact the support via E-Mail.

Question: I can't see the cab lits of PlusPack locos, neither the SiFa nor the PZB, when I start a scenario with a PlusPack loco. I can hear warning sounds and forced brakings work.

Answer: A handfull of Railworks users reported this problem since the update to Train Simulator 2013 (respectively another TS2013 update). They're not reliable reproducable and explainable. It showed up that the follwing approaches can be helpful:

1. Quit the affected scenario and restart it.
2. Start another scenario, quit it and then start the effected PlusPack scenario using the affected loco.

We will report if this problem can be solved in a solid way.

Question: I can't raise the pantograph of a PlusPack-loco but the machine is able to drive.

Answer: There was a Steam update for TS2013 again. Please handle this situation like described in the first entry of this FAQ.