

Type	Train Simulator Classic - Addon
Author	Benjamin Ebrecht
Version	1.0
Date	31.01.2025
Contact us	ebrecht@trainteam.berlin



Foreword

Dear customer,

Thank you for your interest in our product "ViererPack Vol. 1". With this AddOn you have purchased a very special realization.

With the "ViererPack", we are launching another product series where the name says it all: the distinguishing feature of this series will be the number four - in addition to four thematically focused scenarios, four new AI vehicles will also be included to enrich the fleet. This reduced scope compared to our complex "ScenarioPacks" not only reduces the development time for the next add-on, but in particular enables the presentation of very special chapters of railroad operations that might not have made it into one of our ScenarioPacks. The latter point was the decisive factor in launching this new series.

This add-on focuses on the class 423 as a third-party vehicle on the Berlin-Leipzig line: all four scenarios take place in 2009. In Berlin, the S-Bahn got into difficult waters that year. For this reason, the S21 line was temporarily revived to enhance the reduced S-Bahn service: Berliners were already familiar with this S-Bahn line, which was exceptionally operated with catenary alternating current vehicles, from 2006, when it provided additional capacity for the Football World Cup. Between Berlin Südkreuz and Gesundbrunnen, several Class 423 trainsets ran at irregular but very tight intervals. We bring this special time back to life in our "ViererPack Vol. 1".

As usual with our scenario packs, the scenarios are equipped with extensive AI traffic based on original timetables, station announcements and scenario-specific train destination displays on the platforms. In addition to a typical Berlin subway train series, the fleet is enriched by two quite rare representatives, the class 156 freight train locomotive in several versions and the ICE-S measuring train. The icing on the cake is a two-way excavator that can be used in scenarios - this is equipped with numerous functions and animations so that it can also be individually staged to suit your own scenarios.

We are planning further packages for the new "ViererPack" series, in which scenarios and AI vehicles will be thematically interlinked even more closely in some cases. It is therefore worth taking a regular look at our forum "www.trainteam.berlin/forum" or our Facebook page

<https://www.facebook.com/TrainTeamBerlin>. With this in mind, we hope you have at least as much fun with this add-on as we had creating it.

TrainTeamBerlin
Berlin, January 2025

Contents

Foreword 1

Contents..... 2

The team and acknowledgements 3

System requirements..... 4

Installation & configuration 4

RWA Class 423: Version „S21 Berlin“..... 5

AI vehicles..... 6

 ICE-S.....6

 Class 156.....7

 Two-way excavator8

 Subway type Hk.....10

 Freight wagons.....11

 Documentation of overarching functions of the AI vehicles12

Scenario objects 14

Scenarios 16

Further information..... 20

The team and acknowledgements

The team is proud to present and introduce itself at this point:

Software programming: TrainTeamBerlin
Distribution: TrainTeamBerlin

Benjamin Ebrecht	3d models, scripting, scenarios, manual
Nick Zimmermann	3d models
Michael Pabst	Scenarios
Ben Duven	Announcements

Furthermore, we would like to thank all other (partly anonymous) helpers and licensors who have contributed to the success of this addon! A very special thanks goes to all the tireless beta testers and courage speakers who have contributed to the attention to detail of this addon.

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):	Quad-core processor with 3 GHz
Random access memory (RAM):	8192 MB
Graphics card:	DirectX 10-capable or better, min. 2048 MB physical graphics memory
Hard disk space:	250 MB
Sound card:	Soundblaster or compatible gamer card
Software:	→ Train Simulator Classic → Route add-on "Berlin-Leipzig" (virtualTracks) → Vehicle add-on "Class 423" (RailWorksAustria) → ScenarioPack Vol. 3 (TrainTeamBerlin)

The add-on was developed for Train Simulator Classic.

Please note that the latest updates are required for the respective add-ons.

Installation & configuration

Installation:

To install the ViererPack Vol. 1, run the installation routine in exe format. Follow the instructions and install the package in your Railworks root directory, which is normally recognized automatically. This completes the installation.

Uninstallation:

If you want to remove "ViererPack Vol. 1" from your hard disk, select the menu item "Uninstall" in the Start menu folder Programs → TrainTeamBerlin → ViererPack Vol. 01 and follow the instructions. The add-on is now removed from your PC.

Note: Please note that some vehicle folders are shared by several addons. Uninstalling this addon will remove all files associated with this addon. This may mean that if other TrainTeamBerlin addons are installed at the same time, they will need to be reinstalled once the uninstallation of this scenario pack is complete.

RWA Class 423: Version „S21 Berlin“



For realistic operation on the Berlin Südkreuz - Berlin Gesundbrunnen line, there are additional vehicle versions based on the add-on vehicles of the class 423 from the manufacturer RailworksAustria (RWA): the vehicles loaned to Berlin in 2006 and 2009 received corresponding software to be able to display appropriate train destinations. These versions for Stuttgart and Munich 423s with a set of Berlin train destinations will be added as part of our ViererPack.

When building your own scenarios, the folder RWAustria_2\ DB_Baureihe_423 has to be activated for these vehicles as usual.

There are consists included for the " Quick Drive" - the vehicles are listed together with the existing vehicles as "RWA DB BR423" and are available as version "Berlin S21".

The following train destinations can be displayed:

Translated with DeepL.com (free version)

S21	Hauptbahnhof
S21 Südkreuz	Berlin Hbf
S21 Hauptbahnhof	Bln-Gesundbrunnen
S21 Gesundbrunnen	Leerfahrt
S21 Berlin-Südkreuz	Betriebsfahrt
S21 Berlin Hbf	Nicht Einsteigen
S21 Bln-Gesundbrunnen	Probefahrt
Berlin-Südkreuz	Sonderfahrt

In 2006, the vehicles could be observed with a line display (e.g. "S21 Berlin-Südkreuz"), in 2009 without a line number (e.g. "Bln-Gesundbrunnen").

Everything else continues to behave as described by the manufacturer RWA in the manual for the BR423.

TrainTeamBerlin would like to thank RailworksAustria for the permission and support of the project.

AI vehicles

The vehicles presented below are designed as AI vehicles (AI = artificial intelligence) and are intended for computer-controlled traffic in scenarios. The traction units can NOT be driven by the player. The vehicles do not correspond to the technical and functional level of player vehicles, but some of them can also be used in player trainsets if required.

Please note that the detailed information given below is primarily relevant for scenario builders and requires a basic level of experience in using the simulator's editors.

ICE-S



→ To be unlocked in the scenario editor: **TrainTeamBerlin \ TTB_BR410_KI**

→ ICE-S train set with special measuring train equipment and original sound

→ Predefined Consist supplied

→ The pantograph position is set via DynamicNumbering - the last two characters of the vehicle number is a character combination - this can be used as follows:

- "p0" - pantograph lowered
- "p1" - pantograph raised

→ As a rule, it is sufficient to lift one pantograph in the train set, as the two power cars are connected to a power line through the whole trainset, unlike the ICE1 and ICE2 series trains. Usually, the pantograph of the pushing power car is lifted (see picture above)

→ The vehicle has the following additional functions (see documentation below):

- Attention horn on start
- Microphone greeting on approach
- Immediate triggering of the microphone
- Light horn

Class 156



- To be unlocked in the scenario editor: **TrainTeamBerlin \ TTB_BR156_KI**
- Set with 7 class 156 locomotives with matching sound
- Depending on the variant supplied, the specific vehicle number is set via DynamicNumbering
- The pantograph position is set via DynamicNumbering - the last position of the vehicle number is a character combination - this can be used as follows:
 - "p0" - pantograph lowered
 - "p1" - front pantograph 1 raised
 - "p2" - rear pantograph 2 raised (standard)

- delivered versions:

- TTB BR156 VR DB KI	traffic red, DB (large logo on side), NVR number
- TTB BR156 VR DB-Cargo KI	traffic red, DB, DB-Cargo logo on side, still without NVR number
- TTB BR156 VR DB-Cargo KI	traffic red, DB, Railion logo on the side, still without NVR-number
- TTB BR156 VR FWK KI	traffic red, FW Karsdorf (2023 state), NVR number
- TTB BR156 VR MEG KI	traffic red, MEG, EDV number on the front, MEG and NVR number on the side
- TTB BR156 VR MEG old KI	traffic red, MEG, MEG number on the front, MEG and NVR number on the side
- TTB BR156 VR MEG old KI	traffic red, MEG, still white DB contrast stripe, MEG-numbers on front and side

- The vehicle has the following additional functions (see documentation below):
 - Attention horn on start
 - Microphone greeting on approach
 - Immediate triggering of the microphone
 - Light horn

Two-way excavator



- To be unlocked in the scenario editor: **TrainTeamBerlin \ TTB_Nebenfahrzeuge_KI**
- Two-way excavator with matching original sound
- The vehicle can operate as a "locomotive" on the tracks
- As soon as vehicles are coupled at the front/rear, a coupling rod is automatically attached to fit
- The vehicle can be moved to a selected static position, perform a continuous animation loop or carry out complex combined movements through programming.
 - There are 2 possible ways to control the animation:
 - o Input of parameters that are appended to the vehicle number
 - Are read out and processed at the start of the game
 - "_ROT=x": Rotation of the pulpit
 - "_POS=x": Position of the boom and the bucket
 - "_ANI=x": Selection of a continuous animation loop
 - "_MAT=x": Selection of the dredged material
 - o Setting values ("ControlValue") from the scenario script
 - Can be set and changed at any time during the course of the game
 - For example, the vehicle can drive to the destination in its initial position, swivel the boom up to 90 degrees when it reaches the destination ("SetRot" as a loop) and then start animation loop 1 ("SetAni").
 - "SetRot": Rotation of the pulpit
 - "SetPos": Position of the boom and the bucket
 - "SetAni": Selection of a continuous animation loop
 - "SetMaterial": Selection of the dredged material

Possible values for "Rotation": 0 - 360 (in degrees, clockwise rotation)

Possible values for "Position"

- 0: Outrigger folded in



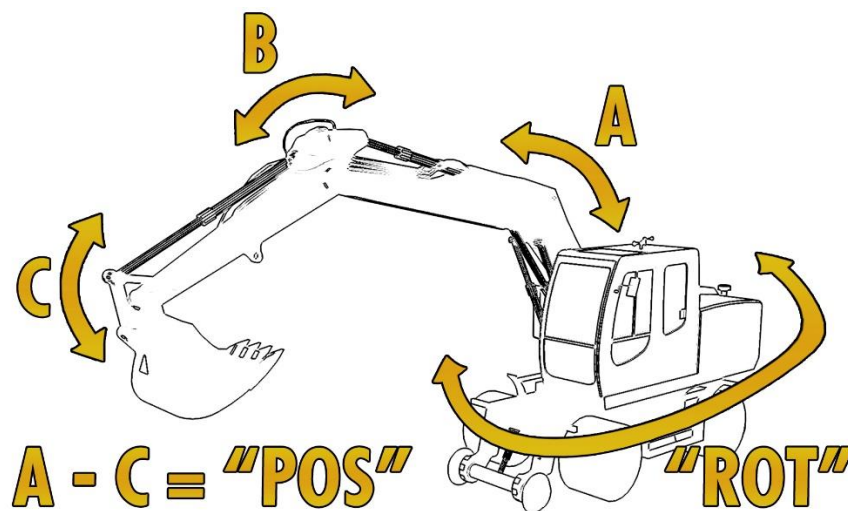
- 1: Shovel lying on the ground
- 2: Shovel standing on the ground
- 3: Bucket in the air, unloading position
- 4: Starting position normal (game start and start of Ani loop 1-4)
- 5: Starting position high (start position of ani loop 5-8)
- Harmonic movements are implemented between these states
- This means that an individualized motion sequence can be achieved by programming in scenario scripts and also switching between prefabricated

Possible continuous animation loops:

- Ani 01: pick up to the left of the ground in the direction of travel and unload onto a vehicle attached to the rear (e.g. Res676 flat wagon)
- Ani 02: pick up to the right of the ground in the direction of travel and unload onto a vehicle attached to the rear (e.g. Res676 flat wagon)
- Ani 03: pick up to the left of the ground in the direction of travel and unload onto a vehicle attached to the front (e.g. Res676 flat wagon)
- Ani 04: pick up to the right of the ground in the direction of travel and unload onto a vehicle attached to the front (e.g. Res676 flat wagon)
- Ani 05: pick up from the vehicle attached at the rear (e.g. flat wagon Res676) and unload on the ground on the left in the direction of travel
- Ani 06: pick up from the vehicle attached at the rear (e.g. flat wagon Res676) and unload on the ground on the right in the direction of travel
- Ani 07: pick up from the vehicle attached at the front (e.g. flat wagon Res676) and unload on the ground on the left in the direction of travel
- Ani 08: pick up from the vehicle attached at the front (e.g. flat wagon Res676) and unload on the ground on the right in the direction of travel

Possible materials that are dredged:

- 1: Gravel
- 2: Sand



Subway type Hk



- To be unlocked in the scenario editor: **TrainTeamBerlin \ TTB_B-WT_KI-Traffic**
- Berlin subway train set for AI deployment around Berlin-Gleisdreieck
- By appending the “_BT” parameter to the vehicle number, the manufacturer's advertising can be displayed on the side of the vehicle
- Resource-saving AI model without additional functionality
- Prefabricated tension braces enclosed

Train destination indicator can be set via DynamicNumbering

- Locomotive number contains a letter that preselects a train destination display
- available ads:

a -	U1 Breitenbachplatz
b -	U1 Fehrbelliner Platz
c -	U1 Krumme Lanke
d -	U1 Nollendorfplatz
e -	U1 Uhlandstraße
f -	U1 Warschauer Straße
g -	U15 Nollendorfplatz
h -	U15 Uhlandstraße
i -	U15 Warschauer Straße
j -	U2 Alexanderplatz
k -	U2 German Opera
l -	U2 Gleisdreieck
m -	U2 Olympiastadion
n -	U2 Pankow
o -	U2 Ruhleben
p -	U2 Theodor-Heuss-Platz
q -	U2 Zoologischer Garten
r -	U4 Innsbrucker Platz
s -	U4 Nollendorfplatz

Freight wagons



- To be unlocked in the scenario editor: **TrainTeamBerlin \ TTB_GW_st**
- Additional freight wagons that were built in a particularly resource-saving way
- Original sound integrated in different versions
- Automatically attached train end signs
- Numerous prefabricated train sets supplied
- 2 versions of each car:

"ST" wagon: static version without sound for sidings

"AI" trolleys: Trolleys with sound for rolling traffic

- available vehicles:

Res676 - 4-axle. Flat wagon with stanchions

DB railroad construction/yellow version in various loading versions

Documentation of overarching functions of the AI vehicles

In the following, various functions of AI vehicles are presented that are included in several vehicles of this package and may influence each other. Please note that this documentation is only relevant for scenario builders.

Attention whistle on start

Some vehicles can emit a warning whistle when starting from a standstill. This can occur randomly for each specific train in a scenario or can be triggered in every case or suppressed completely. The probability of occurrence can be influenced as follows:

- **Global probability of occurrence:** first, a probability can be defined that is used as the default value (also for different vehicle classes). This is defined in the file `..\RailWorks\Assets\TrainTeamBerlin\TTB_KI_Config\TTB_KI_Options.lua`. The value contained in `options.SHORT_HORN_AT_KICKOFF_PROBABILITY` is the probability of the engine emitting a warning whistle with the macrophone when starting up (values between 0 and 1).
- **Probability of occurrence per vehicle:** it is possible to overwrite the global default setting for a specific vehicle in a scenario. To do this, a parameter is attached to the vehicle in the assigned vehicle number, which is processed when the game starts. The parameter is `"_HSP=<x>"`, where `<x>` is replaced by a value between 0 and 1. Example: Extending a vehicle number "143_245" to "143_245_HSP=0.75" sets the probability of the attention whistle - only for this vehicle in the scenario - to 75% on departure, regardless of the default setting in the global settings file.

Macrophone greeting on approach

Some vehicles can emit an acoustic greeting with the macrophone when approaching. This can occur randomly for each specific train in a scenario or can be triggered in every case or suppressed completely. The probability of occurrence can be influenced as follows:

- **Global probability of occurrence:** first, a probability can be defined that is used as the default value (also for different vehicle series). This is defined in the file `..\RailWorks\Assets\TrainTeamBerlin\TTB_KI_Config\TTB_KI_Options.lua`. The value `options.HORN_ON_APPROACH_PROBABILITY` contained therein is the probability with which the engine emits a greeting with the macrophone when approaching (values between 0 and 1).
- **Probability of occurrence per vehicle:** it is possible to overwrite the global default setting for a specific vehicle in a scenario. To do this, a parameter is attached to the vehicle in the assigned vehicle number, which is processed when the game starts. The parameter is `"_HAP=<x>"`, where `<x>` is replaced by a value between 0 and 1. Example: Extending a vehicle number "143_245" to "143_245_HAP=0.75" sets the probability of the whistle to greet - only for this vehicle in the scenario - to 75% when approaching, regardless of the

default setting in the global settings file.

Immediate triggering of the macrophone

The macrophone can be triggered immediately for a specific vehicle in the scenario, too:

- **Short attention whistle:** the attention whistle can be triggered at any time in the scenario for a specific scenario by setting the ControlValue "**TriggerHornShort**" to 1. This is only possible via a scenario script and requires basic knowledge of scenario building. Example: the command **SysCall ("143_245:SetControlValue", "TriggerHornShort", 0, 1);** immediately triggers the attention whistle for the vehicle with the number "143_245" in the scenario.
- Longer greeting or warning signal with the macrophone: same procedure as for the attention whistle, but the ControlValue "**TriggerHornGreeting**" is set to 1.

Light horn

It is possible for the vehicles to emit a greeting with the headlights (light horn). Unfortunately, it is currently not technically possible to trigger this automatically when approaching AI vehicles. The headlight flasher must therefore always be triggered manually.

To do this, the "**TriggerLightHorn**" ControlValue is always set to a value greater than 0. This is only possible via a scenario script and requires basic knowledge of scenario building.

The following headlight flasher modes are implemented:

- 1: Fade in high beam long
- 2: Fade high beam 2x briefly
- 3: Fade high beam long + short
- 4: Switch off dimmed signal long
- 5: Switch off dimmed signal 2x briefly
- 6: Switch off dimmed signal long + short

If the ControlValue **TriggerLightHorn** is set to a value between 0 and 1, one of the greeting modes is selected at random. During the day, the high beam is preferably used, while at night the peak signal is primarily switched off to avoid glare.

A specific greeting mode can be forced by setting a value from 1 - 6.

Example: the command **SysCall ("143_245:SetControlValue", "TriggerLightHorn", 0, 0.5);** immediately triggers the light horn for the vehicle with the number "143_245" in the scenario.

Scenario objects



- To be unlocked in the scenario editor: **TrainTeamBerlin \ TTB_Scenarios**
- Set with numerous objects and equipment objects defined as "signal"
- All objects available in the scenario editor
- Lf signs:
 - Compilation of signal boards for signaling a slow speed zone
 - Lf1 panel is set as a signal and the code number is entered in the signal flyout
 - Start and end panel (signals Lf2 and Lf3) available as normal objects
- PZB magnets
 - Additional PZB magnets can be installed where operationally required
 - For example, the pre-announcement of a La (signal Lf1) can be safeguarded
 - Set provides "dynamic" signals (dependent on the next signal state) as well as permanently active magnets with different frequencies
 - Magnets are placed as signals in the scenario
- GPA - Speed test section
 - GPAs monitor the speed of the passing train and trigger an alarm if necessary.
 - PZB emergency braking off
 - GPA is to be placed as a signal in the scenario in the same way as the PZB magnets
 - the speed to be monitored (in km/h) must be entered in the signal flyout
 - Works with all vehicles that evaluate a 2000Hz PZB influence
 - also works with the latest version of TTB PlusPack vehicles

→ Construction site objects

- Numerous construction site objects are used to design temporary construction sites along the route

- With the help of the "construction site tracks" as "train sets", which can be placed on the tracks existing tracks can be hidden or made impassable on the construction site. Prefabricated consists are available for these. There are different versions with fences and with/without ballast. Note: there are separate end pieces separate end pieces for the "train sets", which are attached to them manually.

- available "normal" objects for construction site design:

- | | |
|--|---|
| - Excavator | - 2 different spoil containers |
| - Bulldozer | - 2 different spoil containers |
| - Roller | - Cable drum individually and 4x on pallets |
| - Scaffolding | - Piles of sand and gravel |
| - Construction crane large and small | - Foiled concrete parts |
| - Concrete mixer, mobile on two wheels | - Accessories |

Scenarios

In this section, we would like to introduce you to the tasks provided. We will list the basic data of each scenario and provide further information that may be helpful for the smooth running of the program and thus for solving the task.

Some of the scenarios in this add-on have longer stops and turnaround times at stations. These can be shortened using the fast-forward function. Please also note the "Further information" below.

[TTB VP 01] BR423 01: Ride into the sunset

Vehicle: RWA BR423

Difficulty: easy

Season / Weather: Summer, clear

Time: 21:15

Duration: 0:35 hours

Description: We are in the middle of summer 2009 and Berliners are groaning not only because of the weather: an initially relatively minor derailment of a BR481 in May is causing repercussions. A few days ago, the Federal Railway Authority significantly shortened the inspection intervals for the vehicles. The S-Bahn is unable to cope with this sudden maintenance backlog and has to thin out its operations. What will go down in history as the "S-Bahn crisis" has only just begun: an "emergency timetable" has been published these days - except on the Ring, there is only an S-Bahn every 20 to 40 minutes, and on some sections lines are canceled altogether. If only Berliners knew that the "really bad end" awaits them in the fall...

For railroad enthusiasts, the "S-Bahn crisis" has a side effect that is the focus of this add-on: additional regional trains are running on some sections - for example, the "S21" Gesundbrunnen-Südkreuz through the north-south mainline tunnel, which was first established for the 2006 Football World Cup, is being reintroduced as a replacement for missing rides in the S-Bahn tunnel. Since July 20, borrowed units from the Munich and Stuttgart S-Bahn trains have once again been running every 15 minutes on the S21. Take over a unit in Gesundbrunnen on this quiet evening, drive it to Südkreuz and back again after waiting for the turnaround time.

Berlin Gesundbrunnen	21:15-21:16
Berlin Central Station	21:22
Berlin Potsdamer Platz	21:25
Berlin Südkreuz	21:29-21:37
Berlin Potsdamer Platz	21:42
Berlin Central Station	21:46
Berlin Gesundbrunnen	on 21:52

Note: The turnaround time can be shortened by using the fast-forward function in the game. You can find out how to use this under "Further information" further down in the manual.

[TTB VP 01] BR423 02: First shift

Vehicle: RWA BR423

Difficulty: easy

Season / Weather: Summer, clear

Time: 03:58

Duration: 1:15 hours

Description: Since the 20.th of Juli are some loaned units of S-Bahn Munich and Stuttgart every 15 minutes as S21 on the way. You're driving this morning a double-unit of Munich without passengers to Südkreuz. Then you will drive to Gesundbrunnen and again there and back. After that trips you will get your first breakfast. Your trip starts short before Gesundbrunnen and you still have to switch the lights on, then you should to hurry up to come to Suedkreuz just in time.

Berlin Südkreuz	04:07-04:10
Berlin Potsdamer Platz	04:14
Berlin Hbf	04:20
Berlin Gesundbrunnen	04:29-04:33
Berlin Hbf	04:40
Berlin Potsdamer Platz	04:43
Berlin Südkreuz	04:48-05:00
Berlin Potsdamer Platz	05:05
Berlin Hbf	05:09
Berlin Gesundbrunnen	an 05:14

The train of the player drives mostly like in the times in the original time table. Also the Ai trains. Excepted single locos und freight trains. At some stations you to hurry, at other stations you have much of time. But you should have to think about, The „S21“ had to find their time between the regular time tables.

Depending on the scenario and timetable, there are waiting and stopping times in this scenario. After all, the Trainsdriver also needs time, e.g. to change cabs when turning, or perhaps to quickly fulfil a human need (yes, the one who drinks a lot of coffee in the morning...).

The Signals in the simulation don't work correct all the time. Something is wrong or not displayed. So, here you get some hints for this scenario:

- Don't use the TAB-Key!
- At the beginnig there is a Vmax=40 Km/h valid. At the end of the station you will see Hp0!
- When you drive without passengers through Hbf and Potsdamer Platz Vmax= 100 km/h is valid.
- During the first ride to Gesundbrunnen, at the last signal before Gesundbrunnen you see 60 Km/h. But right is Vmax=40 Km/h because you will change the track.
- Above all, always it is important to mind the signals. The HUD shows often wrong values.

Have a good trip and have fun. Kind regards, Zahnabst.

[TTB VP 01] BR423 03: Early service

Vehicle: RWA BR423

Difficulty: easy

Season / Weather: Summer, Rain

Time: 08:52

Duration: 0:35 hours

Description: this summer day does not live up to its name: it rains almost continuously, at times even very heavily. You have already completed a few laps on the S21. There are still two outward and return journeys to go before the end of the day. Well then: open the doors and get the train to Berlin Gesundbrunnen on schedule. Adapt your driving style to the weather conditions - braking distances are also longer for the 423 when the track is wet.

Berlin Südkreuz	08:52-08:53
Berlin Potsdamer Platz	08:57
Berlin Central Station	09:01
Berlin Gesundbrunnen	09:05-09:15
Berlin Central Station	09:22
Berlin Potsdamer Platz	09:24
Berlin Südkreuz	on 09:27

Note: The turnaround time can be shortened by using the fast-forward function in the game. You can find out how to use this under "Further information" further down in the manual.

[TTB VP 01] BR423 04: Nice weather ride

Vehicle: RWA BR423

Difficulty: easy

Season / Weather: Summer, clear

Time: 16:13

Duration: 0:45 hours

Description: It's a late summer's day in 2009: after an initial period of chaos, the S-Bahn has issued a new set of timetables and is ramping up operations again. The S21 additional service between Südkreuz and Gesundbrunnen remains in place for the time being. Take your double set from Südkreuz to Gesundbrunnen and back again on this beautiful sunny day. The S21 timetables, which were drawn up at short notice, mean that there are many a limping cycle and waiting times in front of signals - after all, this line was planned around existing long-distance and regional services. This will also be noticeable in the operating schedule. Release the doors now and prepare for the train's departure.

In Gesundbrunnen you have quite a generous turnaround time. First, your colleague takes the 423 train from track 4 to Südkreuz. You will then continue at 16:43. In any case, the break time is enough to stretch your legs and watch the train a little. Alternatively, you can shorten it by using the fast-forward function.

Berlin Südkreuz	16:13-16:15
Berlin Potsdamer Platz	16:19
Berlin Central Station	16:22
Berlin Gesundbrunnen	16:26-16:43
Berlin Central Station	16:48
Berlin Potsdamer Platz	16:51
Berlin Südkreuz	at 16:57

Note: The turnaround time can be shortened by using the fast-forward function in the game. You can find out how to use this under "Further information" further down in the manual.

Further information

→ Note: You can start the Train Simulator with the start parameter `EnableAsyncKeys` start parameter - this allows you to use the time-lapse function in the game. This can be used, for example, to shorten longer station stops.

As soon as TrainSimulator has been started with the **EnableAsyncKeys** start option, the key combinations **Ctrl + Shift + 1** to **Ctrl + Shift + 5** are available to set the sequence speed from single to five times. Use the combination **Ctrl + Shift + 5** to speed up the game to five times playback speed and then **Ctrl + Shift + 1** to slow it back down to normal playback speed.

If you are not sure how to enter the start parameter **EnableAsyncKeys** (without a preceding hyphen!) entered in a shortcut, you can also do this directly in Steam by going to "Show game library" under "Games" in the main menu. In list on the left-hand side you will find Train Simulator Classic („Train Simulator“). Right-click on it and select "Properties" from the menu. "Properties" from the menu. The properties window opens with the "General" tab. Here you will find the "start options" section. You can enter the start parameter into the contained text field: Enter **EnableAsyncKeys** (without the hyphen in front!). You can now start Train Simulator from Steam and use the fast-forward function in the game.

→ If you have any further questions, please visit the support forum of the development team at <https://www.trainteamberlin.de/forum> is at your disposal.