



DB Class 101 traffic red Pro-Line



Compatible with Train Simulator 2017



DB Class 101 traffic red with ABpmz IC coaches

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1 Information

1.1 DB class 101 - Functions available in the Simulation

The most important functions are summarised below (Not all functions are listed)

- ✓ Prototypical driving behaviour
- ✓ Complex regulation system with AFB and LZB
- ✓ Prototypical PZB90 V2.0
- ✓ Zeit-zeit SIFA
- ✓ Brake modes R-P-G
- ✓ Brake system with overcharging of the main air pipe pressure
- ✓ High braking for the locomotive brakes in brake mode R
- ✓ Delayed and smoothly regulated e-brake
- ✓ Selectable and preselectable Pantographs
- ✓ Pantograph sparks with sound
- ✓ Double formation and push pull formation
- ✓ Spoken system announcements
- ✓ Usable EBUa (very basic)
- ✓ Switchable instrument lights
- ✓ Reading lamp and cab light
- ✓ Wipers with interval control
- ✓ Standard TS2016 Effects
- ✓ TS2016 Camera positions
- ✓ vR ZZA and door system compatible
- ✓ SSTF like doors interlocking system
- ✓ Scenario save function compatible
- ✓ Rolling start compatible
- ✓ Realistic sounds optimized for EFX

1.2 Technical Data DB class 101

Manufacturer: Adtranz	Build Dates: 1996 – 1999
Type: Electric, rotary current	Wheel arrangement: Bo-Bo
Length / buffer: 19.10 m	Mass: 84 t
perm. Output: 6400 kW	Maximum speed: 220 km/h
	Maximum allowed speed: 200 km/h

2 The Locomotive



DB class 101 traffic red



DB class 101 cabview

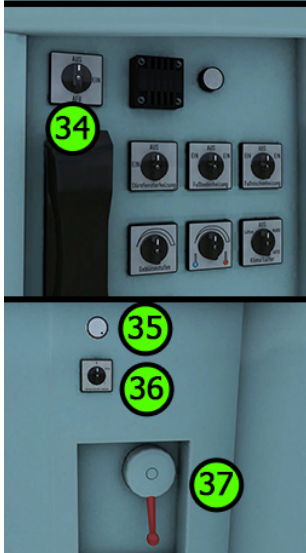


Apmz passenger coach



Bpmz passenger coach

3 Cab and Controls



- | | |
|------------------------------|------------------------------|
| 1 - Traction motor blowers | 19 - Sander |
| 2 - PZB command 40 | 20 - Release brakes |
| 3 - PZB release monitoring | 21 - Headlights |
| 4 - PZB acknowledge | 22 - Instrument light |
| 5 - Pantograph | 23 - Cab light / Desk light |
| 6 - Main circuit switch | 24 - EBUa on/off |
| 7 - Train voltage | 25 - EBUa day/night |
| 8 - Reverser | 26 - EBUa pages selection |
| 9 - Cruise control speed set | 27 - Brake cylinder pressure |
| 10 - Regulator | 28 - Brake pipe pressure |
| 11 - Doors lock | 29 - Even out brakepipe |
| 12 - Display | 30 - Train brake |
| 13 - Display on/off | 31 - Electric brake |
| 14 - Display day/night | 32 - Engine brake |
| 15 - Tractive effort gauge | 33 - Horn high/low |
| 16 - Speedometer | 34 - AFB on/off |
| 17 - LZB display | 35 - Desk light dim |
| 18 - Status indicators | 36 - Wipers |
| | 37 - Emergency brake |



4 How to drive

4.1 Pro-Line and general hints

We are happy to present you with a new locomotive from virtual Railroads in our Expert-Line / Pro-Line range. As usual, Expert-Line models are created for customers who are looking for better and more realistic models for TrainSimulator. Once again, we have enhanced functions integrated into the locomotive.

Important: This locomotive has push/pull equipment and is able to drive in double formation.

TS problems: If more than one locomotive is coupled to your train, the brake pressure may be reduced or divided by the engines present in the consist. Please keep that in mind when using the brakes.

4.2 Start-Up Procedure

The class 101 is already set up when a scenario starts. But you can set up some systems if you need. For example, the PZB, LZB and SIFA. For further information about it consider the sections below.

4.3 Message and Help system

Messages:

The locomotive has a special message and help system to give you information about events and errors which occur. You can adjust the systems level with <Ctrl+[>

The system is switched on by default and has three levels: 1/only errors, 2/errors and further messages, 3/all messages and debug information for log-mate.

Messages which are necessary can't be switched off.

PZB/LZB Help system:

The locomotive has a special help system for the security systems PZB and LZB.

If you get an emergency brake due to incorrect operation you will get additional information in a message box.

4.4 Battery

Battery voltage:

Before you can start driving with the locomotive the battery needs to be switched on; you do this by pressing <Shift+B>. The battery can only be switched on when the locomotive is not moving and the reverser is set to 0 (zero). The battery is always fully charged. Normally the battery is switched on already at the begin of a scenario.

4.5 Pantograph and Main Switch

Pantograph selection:

Before raising a pantograph you need to choose one or two. Set the reverser to the off position and press <Shift+P> to cycle through the four available options *both down*, *Pantograph 1*, *Pantograph 2* and *raise both*. Please look at the messages especially when you choose both pantographs. Choosing a pantograph is only possible when the locomotive is standing still and all pantographs are lowered.

Raising and lowering the pantograph:

To raise the selected pantograph the reverser needs to be set to Forwards or Backwards position. To raise the pantograph, use the switch in the cab or press <P>. Raising and lowering a pantograph is possible when driving the locomotive. This might be necessary when you reach a neutral section.

Switching the Main Switch on or off:

After you have raised a pantograph you can turn on the main switch with the appropriate switch in the cab or with <Z>. The main switch can also be operated when the locomotive is being driven. Please keep in mind: the main switch will be set to off (tripped) when the pantographs are lowered or other disturbances happen. Normally you can switch on the main switch again without any problems if not you will be informed by messages why not.

4.6 Regulator

Automatic notching control:

With the regulator you select a desired tractive effort and the locomotive then will try to reach that selected value. If you run light engines or lighter trains, then select a lower tractive effort as on heavier trains.

Reverser lock:

The reverser is locked when:

- You used a brake while the reverser is not set to 0 (zero)
- An emergency brake application occurred
- A fault occurred
- The doors of the coaches are open

If the reverser is locked, you can't select a tractive effort value.

Unlocking the regulator:

To unlock the regulator the following requirements are needed:

- ✓ Set the regulator to 0 (zero)
- ✓ All brakes need to be released
- ✓ Check no emergency braking is active
- ✓ All faults are cleared
- ✓ The main switch is on
- ✓ The doors are closed

4.7 AFB (cruise control)

The locomotive is equipped with AFB (cruise control system). To switch on or off the system you need to follow the steps as described below:

Switching on whilst stationary:

Requirements:

- the locomotive was started up
- the regulator is set to 0 (zero)
- the train brake is applied
- the AFB VSoll-lever is set to 0 (zero)
- there is no active emergency braking applied

Now use the AFB switch or press <Shift+A> to switch on the AFB system. You will hear a speech 3 times, the AFB holding brake will be applied, the VZiel display on the speedometer gauge will light up with '000' and you will get a message on the right upper screen position. The AFB system now is ready to work. Set a speed you wish to reach and hold with the VSoll-lever. The VZiel display and the VSoll needle in the speedometer gauge will change and

display your actual setting. To start the run you need to release all brakes and set the regulator to a value higher than 0. The AFB will release the standing brake and will try to apply some power. You can easily change the speed while driving with the VSoll-lever. To prevent the system from wavering around the zero tractive effort between power and brake force, select a lower regulator value to smooth it out.

Switching on whilst driving:

Requirements:

- the regulator is set to 0 (zero)
- the AFB VSoll-lever is set to 200 (the maximum value)
- there is no active emergency braking applied

Now use the AFB switch or press the keys <Shift+A> to switch on the AFB system. You will hear a speech 3 times, the AFB standing brake will be applied, the VZiel display on the speedometer gauge will light up with '000' and you will get a message on the right upper screen position. Set a speed you wish to reach and hold with the VSoll-lever. The VZiel display and the VSoll needle in the speedometer gauge will change and display your actual setting. Set the regulator to the required value and the AFB system begins to do the work.

Switch off:

If you use the AFB switch or press the keys <Shift+A>, you will hear a speech 3 times, the VZiel display goes dark (if LZB is not running), the VSoll display moves to 0 (if LZB is not running) and you will get a message on the upper right screen position. After that you need to set the VSoll-lever to 0 (zero) position. Now reapply power with the regulator if needed.

While LZB is running:

The AFB system is able to control the speed whilst running in LZB mode. The procedures to switch on and off are the same as described above. Note, that you can't set a speed with the VSoll-lever that is above the actual LZB maximal speed. But you can set the VSoll-lever to its maximum value while under LZB control. The system reads out the maximum speed that can actually be set. Of course, you can set a speed below the actual LZB speed to travel slower than the line speed (maybe for LZB controlled freight trains).

Please note:

The AFB works a bit differently under LZB control than if you use it in manual driving mode. When running under LZB and the G is lit, then the AFB VSoll speed runs underspeed by 10-20kph to avoid exceeding the speed limit. While the G is lit there will be no power applied by the AFB system.

4.7 Brakes

The locomotive has three brake systems

- Engine brake (direct brake)
- Train brake (automatic brake)
- E-brake (electric rheostatic brake)

Engine brake:

when you enter the cab the loco brake is released. The brake is only used to brake the locomotive and not the train. You can use the brake when starting your train on a hill to prevent the locomotive from rolling back. When you take power, the loco brake should be released.

Train brake:

The train brake is used to brake the whole train. It is a notched brake and can be precisely controlled. Use the brake with care, according to the train weight and track conditions. When you apply tractive effort the train brake needs to be released.

E-brake:

If both the train brake and E-brake levers are in the release position, they are automatically coupled together when the train brake is used. To use the E-brake independently from the train brake simply decouple the lever by moving it separately.

Brake modes:

The locomotive has three different brake modes (you can maybe call them brake difficulties). They are named R, P and G. The main difference between these brake modes are the fill and release rates of the brake cylinder pressures. In mode R and P, the times are 4 seconds to fill, and 20 or 15 seconds to release the brakes. In brake mode R the high braking is active and will do an additive pressure to the locomotive brakes below 130kph to raise the brake force.

The brake mode G is the more interesting one for you, the virtual train driver. You will need to consider a good portion of thinking ahead. Fill rates of about 35 seconds and release rates of more than 90 seconds will attract your attention. This is especially true of long and heavy trains, which will react a lot slower than short and light weight trains. The longer the train, the longer the times become to fill and release brakes. Do not brake too hard or you will wait a long time before an already clear signal. Brake too weak and you will be thrown over a blocked signal or a 500Hz magnet which exists mostly to prevent the signal pass at danger. At the end you need to wait if you do a mistake with your braking style. For this brake mode you will need to get a good sense of timing as well as a feel for the release and fill rates.

To switch the brake mode, set the train brake to the emergency position and use the key command <Ctrl+Shift+;>. The brake modes get cycled through. This can only happen when the train is not moving.

Please note: It is possible to set the brake mode via the scenario script rather than by the player. If this happens the brake mode will be locked and will not be able to be manually switched by the player. If this happens, you will get a message box on the top right corner that informs you about it.

High braking:

On disc brake locomotives there is a system that uses more pressure to brake the loco itself at lower speeds. Disc brakes are not as efficient as block brakes at lower speeds, so they need more pressure to be effective. Below 130km/h the system activates automatically and de-activates if you come back above 160km/h. There is a indicator on the desk that will show you the actual state of the system. It is called "Hohe Abbremsung" and is colored red. The system works automatically, but be aware that due to the additional pressure applied, the locomotive brakes will release more slowly than usual. Release the brakes earlier to prevent too much reduction in speed. The high braking is active only in brake mode R.

Air pipe overcharging, Time reservoir and pressure equalisation:

A feature of locomotives equipped with a Knorr self-regulating brake lever system is that you can overcharge the air pipe with more than 5BAR pressure. It is used to release brakes that are dragging, but if you do it too often you may cause a brake system fault where you can't release the brakes anymore. That happens when the pressure in the equalizing reservoir grows too high. Normally the over pressure releases very slowly over time, but not if the

pressure is too high in the whole system. If you reach that state, you have two options to get the system working again. First one is to simply wait until the pressure is back to a normal pressure, which means the pressure in the equalizing reservoir needs to be zero. The second option is to even up the pressures manually. For that you can use the button 'Angleicher' (even up) to speed up the equalizing reservoir air release a bit. In real life the process also involves releasing the excess pressure on the whole train, it is not possible to replicate this in TS. The over pressure is shown on the brake pipe pressure gauge while pressing the even pipe pressure button.

4.8 Wheel-slip and Sanding

The locomotive is equipped with an automatic wheel-slip protection brake. You normally don't need to get involved with that.

If you pull a heavy train it is very difficult to prevent the wheels from slipping. If you do not reduce the power, the wheels will keep slipping. To master difficult situations like climbing up a hill with a heavy train you can use the sander. Use the switch in the cab or press <X> to switch on the sander.

4.9 FML (Traction motor blowers)

The traction motor blowers on this locomotive are used in automatic mode normally. In that mode the blowers come alive at a specific traction motor temperature and turn off below that value. You can also switch them on or off manually. Use the key commands <Shift+F> and <Ctrl+F>.

5 SiFa, PZB and LZB (Train protection systems)

5.1 SiFa (vigilance alarm)

The locomotive has a working Zeit-Zeit-Sifa (vigilance alarm) which can be activated or deactivated with <Shift+7> or <Shift+NumpadEnter>. The purpose of the SIFA is to keep the driver vigilant at all times and to allow the locomotive to come quickly and safely to a stop should the driver become incapacitated or otherwise not be in proper control of the train.

If you switched on the SIFA you have to press the space bar every 30 seconds to reset the timer.

If you forget to reset the SIFA timer, the SIFA lamp will light up on the desk to remind you to press the SIFA button. If you miss this, after 2 seconds you will get a warning speech that will last for a further 2 seconds after which the train will begin braking automatically and give you an emergency warning speech. You can stop the brakes each time with a press on the SIFA pedal to reset the timer. It's not a real emergency braking.

The SIFA will pause if you switch to an outside view. So you can have it switched on even if you want to explore the route. Upon returning to the cab view the SIFA timer will reset its 30 second countdown and resume as normal.

5.2 PZB 90 V2.0 (point based train protection & control system)

The locomotive has a realistic built in PZB90 system used in Germany for the speed control of trains. We have now overhauled the whole function with better prototypical replication.

Use <Shift+8> to switch PZB on or off.

Change the train PZB mode with <Ctrl+8>.

After switching on or changing the mode the PZB will start a self-test. The PZB can only be switched on or off and the train mode could only be changed when the train is not moving and the reverser is set to V.

Use the following keys to control the PZB:

- = PZB Befehl40 / Command40
- <End> = PZB Frei / Free
- <Page down> = PZB Wachsam / Acknowledge

Important: The use of the PZB Wachsam / Acknowledge switch is different to earlier vR locomotives with PZB. The use of the switch will be registered by the PZB system when the switch is releasing! That is a prototypical behaviour and different to earlier PZB systems installed in vR locomotives or other vehicles with PZB equipped. You can switch and hold PZB Wachsam / Acknowledge switch when you pass a 1000Hz magnet, but need to release the switch within 4 seconds to avoid an emergency brake.

PZB help system:

The help system will assist you when you have no experience with the PZB.

It tells you in a message box why you have an emergency brake application when it occurs. An additional yellow needle on the speedometer gives you information about the target speed. You can switch the help system on or off with <Ctrl+[>.

5.3 Overview of PZB 90

The PZB 90 system is used to ensure that trains are running at correct speeds in certain controlled sections (for example, leading up to signals) and also to ensure that no train can pass a signal at danger.

There are three types of train controlled via the PZB system, these are described as:

Zugart O	Obere (Upper)	Light trains / Passenger trains
Zugart M	Mittlere (Medium)	Heavy trains / Freight trains
Zugart U	Untere (Lower)	Very heavy trains / Freight trains

When you enable PZB with Shift+8 it will start up ready for a Zugart O train.

Zugart can be read in the vR Message window to the right in the cab.

You can use <Ctrl+8> or <Ctrl+Shift+NumpadEnter> to cycle between the train types until you have the one most appropriate for your train. The key differentiators are the maximum speed and the ability to stop, so a long slow heavy freight train should be a Zugart U, for example.

In the descriptions below, the process that is followed is exactly the same regardless of the train type selected, what differs is the speed limits that are enforced.



PZB is implemented by means of three kinds of magnets that are placed on the track; these are described as 500Hz, 1000Hz and 2000Hz. These magnets are only powered if their associated signal is set at a non-clear aspect, if the aspect is clear ('green / green') then the magnets have no effect on the train.

For some controlled element, such as a signal, each of the magnets will be placed in the following order:

- 1000Hz - at some remote point on the track such as the distant signal
- 500Hz - usually 250m before the main signal being checked
- 2000Hz - placed at the signal itself

For this description, a **Zugart O** train is assumed.

Note: In the speed limit descriptions below the line limit always overrides that given in the description. For example, if the description says that you must be below 85km/h and the line limit is 60km/h then this takes precedence.

1000Hz Magnet

A passing train will first meet the 1000Hz magnet and the 1000Hz lamp will light on the PZB display after pressing PZB Wachsam / key Page Down while passing the signal.

On the Train Simulator HUD, the exclamation point indicator will light up with a wasp black/yellow pattern, but there is no audible indicator. The driver now has four seconds within which to press the PZB Wachsam button (Page Down). Failure to do this will result in emergency brakes being applied.

Having acknowledged the 1000Hz magnet, the driver now has 23 seconds to drop their speed to 85km/h (Note: A different Zugart (M or U) has a different speed) or emergency brakes will apply.

After the train has passed 700m from the 1000Hz magnet the 1000Hz lamp will go out and at this point the driver *may* choose to press PZB Frei (End) to get out of the speed restriction if, and only if, they can clearly see that the controlled signal is now showing a clear aspect. If the driver presses PZB Frei and then runs over an active 500Hz magnet the train assumes the driver has made a mistake and will apply emergency brakes.

500Hz Magnet

On passing the 500Hz magnet, the train must not be exceeding 65km/h or the emergency brakes will be applied. The 500Hz lamp on the PZB display will light up. The train now has 153 meters to reduce speed to 45km/h.

The 45km/h speed limit is now in force for the next 250m. It is not possible to release from this with the PZB Frei button.

2000Hz Magnet

If the train passes an active 2000Hz magnet then it will always apply its emergency brakes as the only time this can happen is if the train is passing a signal at danger.

Other notes

If, while under the control of a 1000Hz or 500Hz magnet, the train stops or spends more than 15 seconds at less than 10km/h the enforced speed limit will be reduced by a further 20km/h and this is then called a restrictive speed limit. This is indicated on the PZB display by the speed indicators (the top row) alternating between two lamps (70 and 85).

Once the magnet lamp goes out you can press PZB Frei (END) to get out of the restrictive speed limit.

Befehl40 ('Order 40km/h')

The Befehl40 button (DEL) allows a special case that instructs the train to *ignore* a 2000Hz (red signal) magnets that it comes across. You are put in to an enforced speed limit of 40km/h while this is active, exceeding this limit will cause the emergency brakes to apply.

To pass the red signal press and hold DEL for PZB Befehl40 until the Befehl40 light lights up.

Type of Train	Normal Monitoring		Restrictive Monitoring	
	1000Hz	500Hz	1000Hz	500Hz
O (Obere)	165km/h -> 85km/h in 23 seconds	65km/h -> 45km/h in 153m	45km/h constant	45km/h -> 25km/h In 153m
M (Mittlere)	125km/h -> 75km/h in 26 seconds	50km/h -> 35km/h in 153m	45km/h constant	25km/h constant
U (Untere)	105km/h -> 55km/h in 34 seconds	40km/h -> 25km/h in 153m	45km/h constant	25km/h constant

Further Reading

You can find more recommended reading about the German PZB90 system at these links:

- <http://www.marco-wegener.de/technik/pzb90.htm>
- <http://www.sh1.org/eisenbahn/rindusi.htm>

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5.4 LZB (continuous line based protection & control system):

Function of the implemented LZB:

The LZB in this locomotive is near fully implemented. To switch on the LZB system, first make sure that PZB has been switched on, and then press <Shift+6> or <Ctrl+NumpadPlus>. The LZB then will activate itself if you enter an LZB enabled line.

The LZB end procedure is also implemented near prototypical. LZB end will be signaled in the cab with the LZB 'Ende' lamp within the MFA lamps and needs to be acknowledged within 10 seconds or the emergency brakes will be applied and bring you to a stop.

Known problems:

The LZB system do not care about the trains maximal speed set for the consist it hauls. The maximum speed of the locomotive of 220kph will be the always displayed maximum speed under LZB control, even if you are only allowed to drive 80kph. There are two situations where the max speed is set to lower values on the LZB systems. The first situation is a PZB train mode set to U which allows you only to drive with a max speed of 105kph. The second situation is the brake mode G which sets the max speed to 90kph, even under LZB control.

6 Additional Systems

6.1 Door control and train heating

The locomotive has a door control system that could be used with different passenger wagons created by virtualRailroads. If you open the doors the T lamp on the desk will turn off and you will get a beep sound. The doors will close automatically and then you need to set the door lock switch back to zero to unlock the regulator. You can use the keys <Shift-T> for that as usual on our add-ons.

When the doors are open the regulator is locked and it may be necessary to engage the loco brake to prevent the train from rolling.

6.2 Destination board control

The locomotive can handle coaches with the vR destination board system.

The locomotive itself has no destination boards, but those on the coupled coaches can be switched with <0> and <Shift+0> (zero).

6.3 Observation

Voltage maximum:

The maximum voltage the locomotive can handle is 600A. With activated ZDS the maximum is reduced to 300A. This locomotive regulates the usable power by itself, and you don't need to get involved with it, but the reduced voltage reduces the possible tractive effort you can reach.

6.4 AI Pantograph selection

There are some special functions for the locomotive when it is used as an AI machine.

If you write scenarios by yourself you can now decide which pantograph should be raised when the locomotive is used as an AI vehicle. Type in the listed code after the locomotives number in the editor fly out ID field:

- SA00 = no pantograph is raised (please use the TSs own dead engine system for it)
- SA10 = pantograph No. 1 is raised
- SA01 = pantograph No. 2 is raised
- SA11 = both pantographs are raised

You can see the result of the preselection in the editor right after entering it into the numbering field.

6.5 Double formation and push pull system

The push pull and double formation system implemented in this package is only usable within the package contents. You may put other vR coaches between the locomotives and it

will work, but don't try to control other ZDS locomotives with it. It will not work. It is possible to remotely activate a BR120EL from our lineup with the key command listed in below.

On scenario start the ZDS system activates automatically if there are two locomotives. Otherwise you can switch it on using the key command <Shift+9>. That is needed if you are coming from a BR101s cab where it is not activated. First switch it on in the first BR101 and then seat the driver in the second loco within 60 seconds and switch it on in the second locomotive too.

6.6 EBUa

We implemented a basic functionality to give you the ability to have a working EBUa that is based on simple pages and chapters like a book. The EBUa is pre-equipped with 3 plans for the delivered scenarios in this package. To flip the pages or the plans you need to use the in-cab mouse controls on the EBUa systems surrounded soft-buttons. There is also a cab camera position for it by pressing <Right arrow> once from the normal position.

7 Key Layout

Function	Key	Key
Battery Isolating Switch on/off	Shift	B
ZDS/ZWS on / off	Shift	9
Pantograph Selection	Shift	P
Pantograph up / down		P
Main circuit switch on / off		Z
Regulator		A / D
Reverser		W / S
Traction motor blower	Shift / Ctrl	F
Cruise control speed set	(Shift)	Y
Cruise control on / off	Shift	A
Brake mode selection	Ctrl+Shift	;
Train brake		; / `
E-brake		< / >
Engine brake		[/]
Emergency brake		Backsp (←)
Sander		X
SIFA on/off	Shift Shift	NumpadEnter 7
SIFA Reset		Q or Numpad Enter
PZB on/off	Ctrl Shift	NumpadEnter 8
PZB train mode cycling	Shift+Ctrl	NumpadEnter
PZB Acknowledge		Page down
PZB Release monitoring		End
PZB Command 40		Del
PZB system information	Ctrl+Shift	8
LZB on/off	Ctrl Shift	NumpadPlus 6
Horn high		Space
Horn low		B
Doors lock	Shift	T
Wipers	(Shift)	V
Cab light / Desk light	(Shift)	L
Instrument lights		I
ZZA up		0
ZZA down	Shift	0
Help system on or off	Shift	[
Message level	Ctrl	[
Speech announcement system test (takes time)	Ctrl+Shift	7

8 Included scenarios

8.1 [BR 101 PL] EC 115 to Klagenfurth

On this cold and snowy winter morning you take the EC 115 on its way from Cologne to Koblenz.

Duration: 60 Minutes

Difficulty: Medium

8.2 [BR 101 PL] IC 2226 to Kiel

At Koblenz you take the Intercity 2226 from Regensburg on its way to Kiel. You will bring it from Koblenz to Cologne Central Station.

Duration: 55 Minutes

Difficulty: Easy

8.3 [BR 101 PL] ICE 558 replacement service to Bonn

On this warm summer afternoon in the tight Cologne rail traffic you take over the replacement service for the ICE 558 to Bonn Main Station.

Duration: 30 Minutes

Difficulty: Hard

9 Hints for scenario creators

Please place the locomotives so that cab 1 points into the driving direction. This will prevent a false detection of the driving direction for placing the driver and raising the correct pantograph.

This Expert-Line is able to follow the save and resume function of TS2017. All the important system states are saved, so you can save your scenario and resume it later. Please note that some system values are not stored like an active PZB monitoring.

You can set the brake mode from scenario scripting and force that mode so the user can't change it. The control name is 'BrakeMode' and accepts the values 1, 2 and 4. The values represent the brake modes: 1=R, 2=P and 4=G. Fire only once and wait until 4 seconds after scenario start to set it up. Use a message window and fire an event to do so. The forced brake mode is scenario save function and rolling start compatible and will remain after a resume.

10 Credits

We say Thank You to all people who helped realizing this package.

Your virtualRailroads Team