# Berlin-Leipzig

## Add-on für Train Simulator 2016

virtualTracks.net

# Content

# 0. Authors and copyrights

The following people have contributed to this software as authors:

| | |
|---|---|
| Route Construction: | Jan Bleiß |
| Manual: | Jan Bleiß |
| Signals: | Mathias Gundlach & Signal Team |
| LZB: | Railtraction.eu |
| Vehicles KI: | Benjamin Ebrecht (TTB) (S-Bahn 481, IC-cars, double-decker coaches) |
| | Sebastian Riemann (T4Dmod Leipzig) |
| | virtualRailroads (various freight wagons) |
| 3D objects: | Andreas Rambow (TSC) (diesel gas station) |
| | Holzlaender (Distance markers) |
| | VECTORVISION (model Leipzig Hbf) |
| | Manfred Winkler (train destination signs) |
| Signs: | VERSYSTEM |
| Scenarios: | Jan Bleiß |
| Beta Test: | Jan Bleiß |
| | Benjamin Ebrecht |
| | Kevin Proft |
| | Nils Hofmann |
| | Rene Schenner |
| | Sebastian Helbig |

In particular, Roman Glos contributed during beta testing by undertaking an intense investigation and correction of the complete signalling system.

A special thanks to Norbert Rieger (passed away in February 2014), who gave us permission to use the DB tracks for Train Simulator 2014 that he developed for the Microsoft Train Simulator. We honour his memory by keeping his work alive.

For the 3D design, textures from www.cgtextures.com were used, among others.

# 1. Features.

195 km double-track, electrified main line with:

- Curve super elevation,
- 3D catenary,
- 46 stations/stops faithfully modelled on the original.
- 18 km S-Bahn Berlin with AI-rolling of TTB.
- IC car and RE160-double decker car by TTB,
- Leipzig subnet tram (lines 1, 9, 16) with T4Dmod-Leipzig as AI,
- 2600 different 3D models,
- Own 3D vegetation,
- Faithful scenery replica,
- Enchanting night effects,
- 9 scenarios plus QD scenarios.

# 2. Berlin - Leipzig bidirectional route with track history.

If you drive through the German railway land today, one discovers to the left and right of the tracks much that points to the past. There are stretches where there are many, and some where this is not usually the case. And with each passing year the traces of the past are increasingly erased. Who cares about what's out there when we rush by at 200 km/h, dashing quickly from one city to the other. I want to invite you to take a closer look along the Berlin-Leipzig route.

The traces of the past have been deliberately kept alive in our add-on. Though in the real world things gradually disappear. In the real world, you can't fix everything in one day with such an add-on. Things disappear in a very short time; what was there yesterday, is gone today. We think of the interlocking whole: you once had an image of a track, the mind and soul of rail operations, before electronics made them empty relics.

In Berlin-Leipzig, we find them still to the left and right of the tracks. Thus, the add-on applies between 2006 and 2015. Today things are already gone, which still existed of 2006. More on that point:

In Berlin, the track began at Anhalter Bahnhof at Askanischer Platz with its huge, majestic concourse. The Second World War and the ensuing political conditions made this broken building and the tracks useless. The destruction caused by World War II bombs were followed in 1959 by an explosion, resulting in the portal that still stands today as a sad reminder of past splendour. Today, our trains go west past the former Anhalter Bahnhof.

The big roundhouse of the hitchhiker station serves the Museum of Transport and Technology as a support and presentation space for its historical treasures. In addition to the shed is a steel water tower, which we can see if we leave the north-south tunnel and look left out the window.

The lawn of the Anhalter Bahnhof retreated up to the southern section on Priesterweg from which heralds a steely water tower. We pass it when we leave Berlin Südkreuz just before branching to Dresdner Bahn.

The Anhalter railway was interrupted most recently when the Wall was built in 1961, only the S-Bahn went to Lichterfelde Süd. Immediately south of there, the urban area of Berlin comes to an end. Until Großbeeren there was little railway traffic in the former GDR.

In Großbeeren we reach and cross outer ring of Berlin, a ring railway, which led and still leads around the city of Berlin. The interlocking "Ghd" central switching point for the Genshagener Heide station and railway facilities to Ludwigsfelde, is today as an empty building that testifies to its the former importance. Travel and primarily freight trains to Halle, Leipzig, Erfurt came here from Schönefeld ( in the add-on we can drive up branch this stretch at least as far as Selchow).

On the right we pass the automotive plant in Ludwigsfelde, extending from the Berlin outer ring until Birkengrund Station. Immediately afterwards, we take the A10 motorway, the "Berliner Ring" and reach Ludwigsfelde, whose old station built in 1880 is listed today as a historic building that recounts of the earlier days of the Anhalt line.

The same applies to the reception building in Trebbin. At the entrance to the Trebbin station you can see a modern looking interlocking "Tn" tower, which up to 2006 was directing traffic at the station until an electronic interlock took over. The signal box has been demolished.

The switch box that divided east of the Luckenwalder goods station faced the same fate, having once served the town and the region, but reduced today to a great wasteland. We remember it because we have left the "Ld" switch box standing.

South of Luckenwalde we pass through the former military area Zinna - here there used to be the Forst Zinna Station and the Kloster Zinna stop. At the Forst Zinna Station on 19th January 1988, a serious railway accident occurred in which the D716 with 211 006 at the top with 120 km/h brakes ran into a tank that was left lying on the railroad tracks. There were 6 deaths, including two drivers in the cab of the 211, and 33 injured. At the barracks, we are reminded of this by a few ruins and watchtowers. At the point where the "sinking" watchtower stands, the train wreck occurred.

When we enter in Jüterbog, the remnants of the old railway operation can be seen on the left hand side - roundhouse, social building and water tower, which in the course of the German Unity Transport Project 8 - which belongs to the Anhalter Bahn - was not needed and disappeared. In Jüterbog we also see old interlocking systems: the "JB" and "B3" switch box towers, both no longer in operation.

The next old railway buildings don't come up until Wittenberg. The large reception building was demolished in 2015 to make way for the Falkenberg-Roßlau platform. To improve transfers, a new reception building will be added on the side of the bus station.

Rather inconspicuous is the branch of the Pratau line behind the Elbe bridge. It once led to Torgau and Pretzsch and was a branch to Eilenburg. It's a beautiful route, that runs first along the Elbaue and then through the Dübener Heide past Bad Schmiedeberg, Bad Duben, and took the author several years. Today the branch line to Pretzsch ekes out a rather sad existence, passenger traffic has been cancelled.

Also not visible, though recognizable along the course of the track: behind Pratau there was once a test track for the Deutsche Reichsbahn: since the route ran a straight distance of 23 km, it was suitable for high-speed testing. On 11th October 1972 the steam locomotive 18 201 reached 182.5 km/h and has since become the fastest operating steam locomotive in the world (now 02 201).

Apparently we meet the past again in Bergwitz: first the old block location, the newly renovated Post 107, which used to be switch box and barrier posts, and on the left hand side, the old briquette factory.

The reception building of the following stations, wich the exception of Burgkemnitz, carry on a sad existence, unused, vandalized, waiting to be reused or demolished. A nondescript old house right of the route in Gräfenhainichen was once a switch box for the station.

The station building in Burgkemnitz was renovated in 2009 and now houses ticketing, a bistro and commercial offices.

In Muldenstein we see three large chimneys to the left of the old railway line. They once belonged to the first German power plant, which produced electricity exclusively for electric traction train. The chimneys fell in 2010, but stand as a proud monument at least in the add-on.

In the past, when one reached Bitterfeld, the eye fell to the west upon the huge chemical combine on the railway line. Here above all chlorine chemistry was operated. A large train yard was set against the chemical plant. Typically, you first felt Bitterfeld coming in your nostrils. When the air was very damp, green demolition sparks of electric locomotives fell to the ground. The copper of the contact lines reacted with chlorine in the air to form copper chloride, which was responsible for these green sparks.

Today the train yard is a solar power plant, the chemical plant was turned into a huge business park. The air is clear again, that sparks bluish.

Behind Bitterfeld we leave the Anhalter Bahn, which further leads to Halle/Saale and continues on the route Dessau-Leipzig. In Delitzsch the station building of the upper station falls behind the lower station located southwest along the route Cottbus-Halle/Saale. This beautiful old building is now put to cultural use and so remains - restored and listed as a historic building.

As we come to Leipzig we are first welcomed by the old Neuwiederitzsch signal box. In the Leipzig-Mockau station, the B1 and W2 switch boxes still work. At the entrance to the Leipzig Central Station, we are greeted behind the Berlin bridge by the disused switch box command "B10", followed by marshalling "R9" and the disused Leipzig West depot. Directly behind the Leipzig West depot was the big signal box tower "B3", which dominated the station. This fell victim to the construction of the Leipzig City Tunnel, it was simply in the way of new routes.

Equally striking and well-known was the dispatch building on track 12/13. It was demolished in 2014 because it in the way of the ICE-railway platform extension as part of the German Unity Transport Project 8. At that time, I began a discussion in the Forum rail-sim.de about whether the building should be preserved. If it bothers you, you can get rid of it using the track editor.

Now we have reached Leipzig central station. A historic train station dating back to 1905, once Europe's largest railway terminus, divided into Prussian and Saxon railway stations, and affected by deconstructions since 1995 but still exceeding the Frankfurt, Munich, Zurich and East Paris stations (in terms of number of tracks).

# 3. System Requirements

For the add-on, the following conditions must be met:

PC with Windows on XP, Vista, 7, 8, 8.1, 10 works on the Train Simulator 2014
installed Train Simulator 2016

In any case, the use of a 64-bit operating system is recommended, the computer should have at least 6 GB of memory.

# 4. Scenarios

As in Berlin-Wittenberg there are two versions of the scenarios: the standard version with rolling stock from the ELAP and from the add-on as well as an "A" variant with additional rolling stock. I've chosen the ICE2 of RSC, 120 EL, 151 EL and the 112 EL from virtualRailroads. A few words on the choice of the ICE: the ICE should have LZB, the ICE2 does have it (the ICE T as well). But the ICE T by DTG has this totally exaggerated tilting technology, which I didn't want virtual drivers to have to deal with. The “A” variant of all scenarios is downloadable here: http://www.virtualtracks.net/downloads/vt-berlin-leipzig-a-scenarios.zip .

1 Autumn Leaves

A trip through an autumn morning with the IC/ICE from Gesundbrunnen to Leipzig main station with stops at Wittenberg. The ICE1703 is in the 2015 summer timetable, the travel times are moderate for the engine driver. A special feature, a planned RB overhaul between Bitterfeld and Delitzsch is not to be missed. (90 minutes)

2 Night Flight

The starting point for the journey into the night with the ICE1602 from the summer timetable 2015 is the Leipzig Central Station. The trip goes to Gesundbrunnen with stops in Bitterfeld, Wittenberg and Berlin-Südkreuz and Berlin Hauptbahnhof. (90 minutes)

3 S-Bahn to Bitterfeld

Starting at the Leipzig City Tunnel, the trip to Bitterfeld takes place on a beautiful spring morning. (30 minutes)

4 S-Bahn to Leipzig

The same train as in Scenario 3 returns to Leipzig. (30 minutes)

5 From Elster to Elbe

Also from the 2015 summer timetable, the regional train line 57 goes from Leipzig Central Station to Lutherstadt Wittenberg stopping at all intermediate stations. The timetable is very tight and will not tolerate any errors. In addition, a snow front moves through and wet tracks prevent rapid braking. (60 minutes)

6 from Elbe to Elster

Fortunately the snowfall is over, but it is it now really cold. The trip turns back. The schedule is as ruthless as on the outward journey. Those who are not sure of the PZB, can simply let themselves be switched. (70 minutes)

7 empty train to Leipzig

A train with empty coal cars is going to Leipzig. Experience has shown that freight trains frequently have to stop in order let make faster trains go by. (130 minutes)

8 RB to Schönefeld

In the summer timetable 2015: the RB19 from Berlin-Gesundbrunnen to Senftenberg via Schönefeld Airport. We already let them go to the BBI. (30 minutes)

9 RB from Schoenefeld

The same journey back to Berlin-Gesundbrunnen. (30 minutes)

# 4a Important hint for scenario creators.

In stations Delitzsch, Radis, Niedergörsdorf the distance between entry intermediate and/or exit signals is less 1000 meters. These signals have an additional Zs3. If you plan to let the player train stop there, please use the Zs3-triggers, delivered together with this add-on, to slow down the speed of the train at the entry and the following intermediate signals.

# 5. Signal book

| Abbreviations | Meaning | Image |
|---|---|---|
| Bue 4 | **“Whistle”** Use the locos horn for about 3 seconds. Not using the horn gives a penalty of 20 points in career scenarios. |   |
| El 1 | **"Switch-off"** of the main switch of the traction unit. In train simulator has only function together with virtual Railroads “Expert Line” locos. These locos have the possibility to switch on and off the main switch. Please read the relating parts in virtual Railroads loco manuals. |  |

El 2

**"Switch-on"** of the main switch of the E-locomotive again. Only function together with virtual Railroads “Expert Line” locos.

El 3

Expect the signal "Pantographs down". In breaking distance follows EL4, where pantographs have to be lowered.

El 4 "Pantographs down" When passing the signal, all bow collectors of the train must be lowered.

El 5 " Pantographs up"

El 6 "Stop for vehicles with raised bow collector" (End of the catenary)

Hp 0 “Stop”

| | | |
|---|---|---|
| Hl 1 | "Drive at full speed" |  |
| Hl 3a | "Drive at 40 km / h then at full speed" |  |
| Hl6a | "Drive at 40 km / h then at 100 km / h" |  (green light flashes) |

Hl 7 "Reduce speed limit to 40 km/ h"

(yellow light flashes)

Hl 9a "Drive at 40 km / h then at 40 km / h"

(upper yellow light flashes)

Hl 10 "Expect stop"

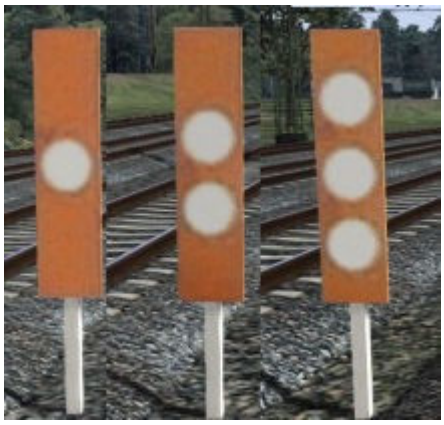
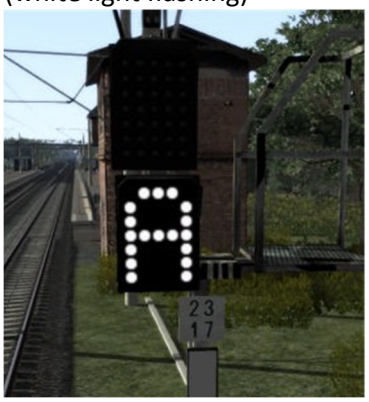
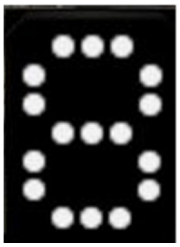
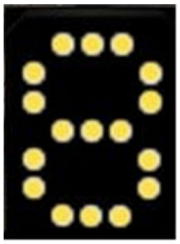
| | | |
|---|---|---|
| Hl 12a | "Drive at 40 km / hr, expect stop" |  |
| Hl 13 / Hp0 | “Stop” |  |
| Ks 1 | "Free drive" |  |
| Ks 1 + Zs 3 | "Free drive with (display x 10) km / h" The indicated (numbers x 10 in Km / h) speed must not be exceeded in the subsequent turnout area following the signal. |  |

| | | |
|---|---|---|
| Ks 1 flashing + Zs 3 + Zs 3v | "Free drive, drive at (yellow indicator x 10) km / h expected" (possibly in combination with Zs3!) Zs3 signal is to be expected (with the displayed speed) |  (green light flashing) |
| Ks 2 | "Expect stop" (possibly in combination with Zs3) |  |
| Lf 1 | "Slow drive disc" There is a temporary speed restriction area (usually brake distance) in which one cannot drive faster than (number x 10) km / h |  |
| Lf 2 | "Start panel" - Beginning of the temporary speed restriction area |  |

| | | |
|---|---|---|
| Lf 3 | "End panel" - End of the temporary speed restriction |   |
| Lf 6 | "Speed announcement board" A speed signal (Lf 7) is expected, slow down to the number displayed in the signal x 10 km / h |   |
| Lf 7 | "Speed board" The speed indicated in the signal (number x 10) must not be exceeded from this signal onwards. |   |
| Ne 2 | "Advance signal board " Marking of the location of a distant signal |  |

| | | |
|---|---|---|
| Ne 3 | "Advance signal board" An advanced signal is expected in 100, 175, 250 meters |  |
| Ne 4 | "Checkerboard" The main signal is, by way of derogation from the rule, at a different location. (In the picture, the main signal applying to the track is on the left) |  |
| Ne 5 | "Stop sign" Marking of the stopping point of top of the train for trains stopping as scheduled. |   |
| Ne 6 | "Stopping point board" A stopping point is to be expected |  |

| | | |
|---|---|---|
| Ra 10 | "Yard limit sign" Shunting is not possible from the signal onwards. |   |
| Sh 0 | “Stop, driving ban” |  |
| Sh 1 | "Driving ban lifted" |   |
| Sh 2 | “Safety stop” |  |

| | | |
|---|---|---|
| So 19 | "Main signal board" A main signal can be expected. |  |
| Zs 1 | "Substitute signal" Signal indicating "Stop" or which is disrupted should be ignored without written order. (A flashing white light) |  (white light flashing) |
| Zs 2 | "Direction indicator" The driveway leads in the direction shown |  |
| Zs 3 | "Speedometer" The indicated (numbers x 10 in Km / h) speed not be exceeded in the turnover area from the signal onwards. |  |
| Zs 3v | "Advance speed indicator“ Signal Zs3 is to be expected (with the displayed speed) |  |

| | | |
|---|---|---|
| Zs 6 | "Opposite track indicator" The track leading to the adjacent continuous main track |   |
| Zs 7 | "Caution signal" Drive past the signal which is either disrupted or displays Hp 0 if there is no written order. Continue on sight. |  |

# 6. References

[1] Die Signale der Deutschen Bahn Signalbuch (SB) DS/DV301 gültig vom 10.Dezember 2006