

Handbook Pro Train 3 120 x 180 2 5/03 3:28 pm Page 2





now available The first **hardware** for the Microsoft Train Simulator!

Put Complete Realism into your Train Simulator! This hardware has a USB connection and provides the most important cab control functions for the Microsoft Train Simulator and Trainz combined as a single desk top unit.

Levers and buttons combined with 28 function keys create the ultimate train-sim experience with your PC! The operator sees the current state of the cab at a glance, just like a real train. Handbook Pro Train 3 120 x 180 2 5/03 3:28 pm Page 1

ProTrain® 3 · Preface

PREFACE

Thank you very much for buying Pro Train® 3. We tried to do our best to create extremely realistic sceneries as well as locomotive and wagon materials. Unfortunately, some features, e.g. for the original locomotives, could not be implemented because the original version of the Microsoft Train Simulator does not imply or support these. For this reason, we cannot supply a working INDUSI/PZB/LZB. Also, the presentation of the built-in SIFA is intensely simplified. Furthermore, it is not possible to carry out a speed preselection for the locomotive 101/ICE. Here, the Microsoft[®] Train Simulator clearly sets limits. Nevertheless, we are absolutely sure that this Add-On will bring you as much fun using it as we had when we created it.

One remark to our activities: The containing activities have been created with great care. In order to make sure things run smoothly, please pay attention to the default settings for duration times and driving instructions. Let's say you just want to explore a certain route briefly. For this, it would be best, to apply the command "Strecken erkunden" / "Explore Route". If you do not use this command, your activity could presume you are at a different level of the game and/or intended events will not be performed or will be performed at a different time.

ProTrain® 3 · Important Information

Important Information

This software has been carefully developed, tested and produced. Because of the variety of different systems on the market, a proper running on every possible system can not be guaranteed. Therefore, we cannot assume liability for particular, incidental or indirect problems and damages caused by running this software on your computer. Consequently, there is no assertive or implicit guarantee for the applicability of certain features. The materials are only provided in the momentary form. Should you have any doubts, please do not install this software.

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| Producer and Project Manager: | Rolf Steinberg | Caps: | Matthias Gose |
|-------------------------------|--|------------------------------|--------------------------------|
| Object Design: | Rolf Steinberg Matthias Gose | Roll-Material, Route Design: | Matthias Gose Kamran Kiafar |
| | Gerd Pinter | Signal Technique: | Hagen Knop |
| | Sebastian Reddemann Alexander Lehmann | Track Construction: | Gerd Pinter |

Special thanks to Mr. Martin of the BWS-Gruppe Engelsdorfer Eisenbahnfreunde for footage of the E94!

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ProTrain® 3 · System Requirements / Installing / Uninstalling

System Requirements

To properly run ProTrain® 3, the following system components are recommended: Pentium III 500 MHz or faster 600 MB free hard disk space 128 MB RAM 3D graphic card with at least 32 bit colour satisfaction recommended Operating system Microsoft® Windows 98, ME, 2000 or XP Executable and installed original version of Microsoft® Train Simulator 1.0

INSTALLING

To install, put the ProTrain® 3 disc in your CD-ROM drive.

The setup program of ProTrain® 3 will be started automatically if the Autostart function in your operating system has been activated.

If your Autostart function has been de-activated, please proceed as follows:

From the Start menu, select "Run". Then, in the Run dialog box, type your appellation for your CD-ROM drive (e.g.: g:\disk1\setup\). The CD will be started. When you double-click on the field "install", the necessary files will be installed on your computer. After having started your Microsoft Train Simulator, the software automatically recognizes the ProTrain® 3 scenery. Please note that due to the high data volume longer loading times may occur.

UNINSTALLING

If you ever want to remove ProTrain® 3 from your computer, use the <Start>Programme>ProTrain3>Uninstall> option in the program folder. Please note that this option only works if you did not change the folder names during the initial installation.

Page

ProTrain® 3 · The Continuous Automatic Train-Running Controls

THE CONTINUOUS AUTOMATIC TRAIN-RUNNING CONTROL OF THE DB

The Continuous Automatic Train-running Control of the DB (LZB) was developed around 1960. The reason for this development had been to run the fast trains of the Bundesbahn with a speed of 200 km/h instead of the then maximum speed of 160 km/h. Because of the long braking distance of several kilometers, the existing signal was no langer adequate. The newly introduced LZB enabled a continuous data exchange via the supervisor and an information transfer into the cab. The railcar driver (Tfz) then was able to recognize the signal setting and further information along several block sections. He practically drove on electronic sight. During LZB-drives the Automatic Driving- and Braking Control (AFB) which is integrated in the locomotive control takes over the control over the locomotive. The Tfz can intervene at any time.

THE CONTINUOUS AUTOMATIC TRAIN-RUNNING CONTROL IN PRO TRAIN[®] 3

Unfortunately, the Microsoft® Train Simulator does not support the original Continuous Automatic Trainrunning Control of the DB. On the route Stuttgart – Munich there are some sections where higher speeds than 160 km/h are possible. Here we taught an old dog new tricks. In order to being able to stop the train in front of a stop signal in time, in the cabs of the ICE and the BR 101 you will receive a block section. This means you must reduce your speed to 160 km/h before you reach the next main signal. Should you fail to reduce your speed, a forced breaking will be initiated. The display of 160 km/h only appears in the cab but not on the signal. When you proceed the next pre-signal and this signal ist indicating "Please expect stop" or a speed advance notice = <100, you will have enough time to bring your train to a standstill or reduce the speed appropriately. Unfortunately, we cannot offer a different more elegant solution. We nevertheless think that this is an acceptable compromise. This special feature is only available for railcars which can drive faster than 160 km/h.

| Handbook | Pro | Train | 3 | 120 | х | 180 | i | 2: | ₩5/03 | 3:28 | pm | Page | 5 |
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ProTrain® 3 · Instruction Manual for the Locomotives

INSTRUCTION MANUAL FOR THE LOCOMOTIVES

The following keys are valied for all locomotives and control trailers:

| Extend/Running-in of current collector | Key P |
|--|---------------|
| Direction indicator forth | Key W |
| Direction indicator back | Key S |
| Regulator higher | Key D |
| Regulator lower | Key A |
| Increase train brakes | Key ′ |
| Decrease train brakes | Key ; |
| Increase locomotive brakes | Key] |
| Decrease locomotive brakes | Key [|
| Operate emergency brake | Backspace |
| Operate signal horns | Space bar |
| Windscreen wiper on/off | Key V |
| Sand caster on/off | Кеу Х |
| Turn-up headlights | Key H |
| Dim-down headlights | Shift + Key H |

ProTrain® 3 · Available Consists

Available Consists

BR101 015-6 DB

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Lokzug nach Stuttgartengine PT3 Nahverkehr re Ploch PT3BR101 PT3_BR 101 IC Ersatzzug 6 Pt3_152_regio_14 Pt3_152_regio_15 PT3_BR101_DB_SOLO Pt3_br101_ic mit

Pt3_br 101 10 IC Wagen +

Pt3_br101 mit 9 ic wagen

Testlok Pt3_ic Pt3_testzug11

BR 101 079-2 BaWue

IC Gegenzug EC 1065

Lokzug Ulm

Pt3_br101_bawue_ic Pt3_br101_bawue_solo Pt3_br101_ic811 Pt3_br101 bawue mit 9 wagen

Pt3_containerzug1

BR 101 095-6 Italia

Ersatz EC 1065 euro city train PT3_BR101 Italia mit 8 IC

Pt3_br101_ic81 Pt3_br101 italia ic Pt3_br101 italy ohne engine train regional train single engine inter city train regional train regional train single engine inter city train with control car inter city train with control car inter city train with 9 cars single engine inter city train train with few passenger cars

inter city train with control car combination of different engines inter city train single engine inter city train 811 inter city train with 9 cars freight train

inter city train with 8 cars inter city train 81 single engine single engine

BR 145 079-0 DB

Bereitstellung Nahverkehr Nahverkehr bei Ulm Nahverkehr Stuttgart Pt3 nahverkehr 4 Wg E145

Pt3br145 Pt3_br 145 regionalzug mit

Pt3_152_regio_12 Pt3_152_regio_13 Pt3_br145_fzgtransport_32x

Pt3_br145_fzgtransport_7x

Pt3_br145 re 6 wagen

Pt3_br145_solo

BR 150 030-5

PT3_gueterzug fuer ec1065 Pt3_br150_alt güter Pt3_BR150_solo Pt3_DB150 alt 4

BR 150 139-4 DB

Pt3 gueterzug ulm ploch Pt3_150 db Pt3_br 150 db gueter Pt3_br 150 2 fach Pt3_br 150_gmfracht2 Pt3_containerzug2 Pt3_containerzug3 Pt3_fracht_150 Pt3_kfz

BR 152 133-5 DB Gueterzug von Ebersbach

regional train regional train regional train regional train with 4 cars single engine regional train with control car regional train regional train freight train with 32 car transport cars freight train with 7 car transport cars regional train with 6 cars single engine

freight train freight train single engine freight train with 4 cars

freight train single engine freight train 2 engines freight train freight train freight train freight train freight train

freight train

regional train with

single engine

all freight cars

availible in

ProTrain 3

freight train

single engine

freight train

a few cars

4 cars

regional train with

two et 425 trains

two et 425 trains

et 425 train

single engine

single engine

5 cars

ProTrain® 3 · Available Consists

Pt3_Br 152 regionalzug 5

PT3 BR152 Solo Pt3_frachtmischung

BR 152 084-0 Siemens

Pt3 Gueterz f EC 1065 Pt3_Br 152 Regionalzug 4

PT3_BR 152 Siemens Pt3_Br152 Selbstentlader Pt3_testzug 1

Et 425 - Vorn

Pt3_et425 2 fach Pt3 _et425 doppel1 Pt3 et 425 einfach

E94 E94 Solo

BR 194 131-9 Pt3 194 131-9 solo

BR 194 -158-6 Pt3 194 156-6 gueter Pt3 194-158-6 solo

freight train single engine

14 inter city cars with BR 101 at the end

10 inter city cars

13 inter city cars

6 inter city cars

Pt3 IC Steuerwagen (control car)

Pt3_ic14x_101

Pt3 ic steuerwagen 10 wagen Pt3_ic steuerwagen + 13 Pt3_ic steuerwagen + 6

PT3 ICE 1 Triebkopf vorn Pt3_ice 1 10 Wagen Pt3_ice 1 13 Wagen

Pt3_ice 1 14 Wagen Pt3 ICE1_komplett

ICE with 14 cars ICE with 14 cars

PT3 ICE 2 Triebkopf vorn (ICE 2 Engine) Pt3_ICE2_einfach engine

Pt3 ice2 volleinheit

PT3 ICE 2 Steuerwagen (control car) Pt3_ice2 einfach Steuerwagen ICE 2 with 6 cars

and engine Pt3_ice2 versuchsfahrt

Pt3 Regio Steuerwagen

Pt3_rb 6 wagen

Pt3_re6x_br145

ICE 2 with 6 cars and control car ICE 2 complete

ENGLISH

short ICE 2 train control car and 6

regional cars control car with 6 regional cars

(ICE 1 Train) ICE with 10 cars ICE with 13 cars

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UNDERSTANDING ACTIVITIES

You may find that the wording of the Activity description in a Train Simulator package, either in the manual or on-screen as the Activity Briefing, is not as clear as you would wish. To get a better idea of the set-up of an activity you can make use of the 'Train Simulator – Editors & Tools' facility that comes with Microsoft Train Simulator.

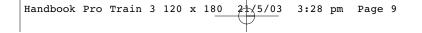
Open 'Train Simulator Editors and Tools' by clicking on the Icon on your Windows screen.



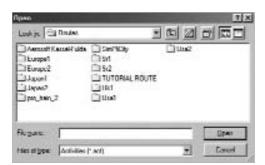
Click on the 'Activity Editor' tab to bring up the Editor window



Click on 'File' at the top left hand corner of the window, and then on 'Open'. A further window will open, allowing selection of the route required.



ProTrain® 3 · Understanding Activities

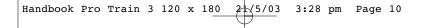


Double click on the appropriate folder, in this case 'pro_train_2'. A further window will open.

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Double click on 'Activities'. Yet another window will open, allowing the selection of the activity of interest.

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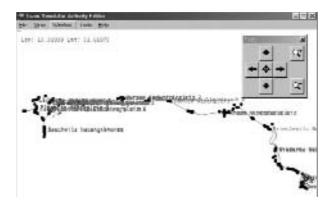


In this case, we will select 'computer', since this is one of the more complex in the Pro Train activities. Double click on this, which will bring up a map of the route. This may take a few moments, during which you will see a black rectangle. Be patient !

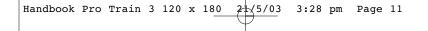


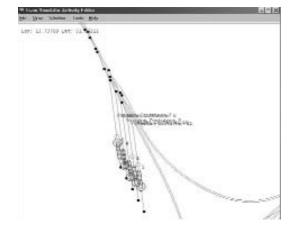
We now need to expand the map to allow us to see the area of interest. You will see on the map at about 2/3 the way down the right hand side a red circle. This indicates the start point for the activity, which is what we want to see.

The next stage is to activate the tool needed to expand and move the map. Click on 'Window' on the tool bar at the top of the screen, and then on 'Tools Window' to bring up the sub-window providing the means by which you can expand or contract the map, and move it up, down, to the left or to the right to keep the area of interest in the centre of the screen.



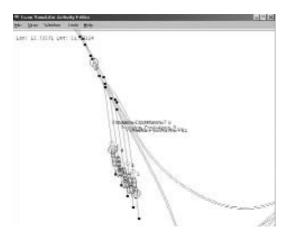
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Use the arrow keys to move the map, and the + and - keys to enlarge or compress the map, until the area of interest has been sufficiently enlarged to allow you to see how things are placed at the start of the activity.

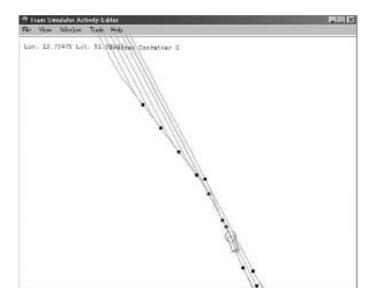
You will see the cars you have to pick up in this activity shown, together with the names of the sidings on which they are placed. The next step is to show the start position of the locomotive you are going to use.



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To do this, select 'Tools' at the top of the screen, and then 'Verify Starting State'. The position of the locomotive is then shown as a green outline at the appropriate position.

To add the icing on the cake, all that is necessary is to highlight the route your train is going to follow. To do this, click on 'View' at the top of the screen, and then on 'Selected Timetable Path'. This will now highlight the route in green, and you will be able to follow this to your final destination by use of the arrow keys as before.



All that is left to do is to make a note of the positions of the various cars, of the locomotive and of the sidings in which they are placed, and to return to Train Simulator to carry out the activity with a somewhat better understanding of the situation. Have fun!

CREATING A NEW CONSIST

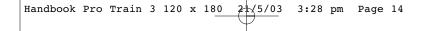
If you're interested in creating your own string of cars, called a consist, you can do so using the options in the Microsoft Train Simulator Editors & Tools. Select the Activity Editor from the Train Simulator Editors & Tools screen (see image below).

Don't panic about creating a new consist because they are easy to create. The following are basic instructions to help you create your consists.

First, open the **Start I Programs I Microsoft Games I Train Simulator I Train Simulator Editors & Tools**. You'll soon see the following window:



Click the [Activity Editor] button to open the Train Simulator Activity Editor dialog box. Don't panic — you're not actually creating or editing an Activity. You're only using the Activity Editor to create a consist.



When the Train Simulator Activity Editor dialog box opens, select the File 1 New... command.

This opens the Select a route dialog box where you're prompted to select a Route from the drop-down list. It doesn't matter which Route you select for this example. We've selected Marias Pass here.

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Click the [OK] button to continue. Next you will be asked to supply an Activity display name. (You can accept the "New Activity" default if you wish.) Again, since we're not editing or creating a new Activity, it won't matter what you type here for the name.

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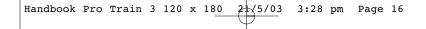
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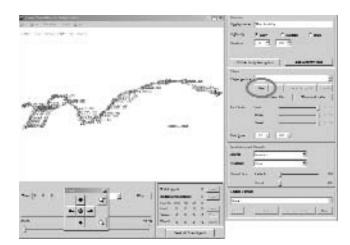
Click the [OK] button to continue. This opens the Train Simulator Activity Editor dialog box. The large area to the left displays the route you selected earlier.

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The Train Simulator Activity Editor dialog box.

We're interested in the four boxes on the right side of the dialog box (Activity, Player, Conditions and Hazards and Traffic Pattern). Locate the Player box in the Activity Editor dialog box Click the [New] button located under the Player Service drop-down menu . (It's circled in the following image if you're having a problem finding it.)





This opens the Service editor dialog box.

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Locate the Consist drop-down list near the center of the Service editor dialog box. Click the [New] button below this box (highlighed in the following image).

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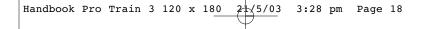




ENGLISH

This opens the Consist editor dialog box. The "Name:" box in the upper left (1) represents the file name you're using when saving the consist. The "Display name:" box (2) is the name of the consist that will appear in Train Simulator.

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For this example, I typed "Example Consist 1" in both boxes. I also selected the "Engines (Diesel)" option in the "Rolling Stock Types" drop-down list.



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Important Note:

The Rolling Stock was changed to Diesel to avoid a warning message. The route we selected doesn't have electricity. If you select an electric engine for a route that doesn't have electricity, you'll receive a message so indicating.

Adding engines

You can now add the cars to your consist. Click once on the desired engine in the Name column of the Rolling Stock window for a preview of the engine. Double-click the name of the train to add it to the consist. Alternatively, you can select an engine and drag the preview into the box at the bottom.

You've probably noticed that some real-life trains use engines that are backward or back-to-back. You can also do this in your consist. To reverse the direction of the train, right-click it once it has been placed in the box at the bottom.

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ProTrain® 3 · Creating A New Consists

Important Note:

- You will want to click the "Name" box (circled in the image). This will sort the train names alphabetically
- You will also want to stretch the Name box so you can read the longer train names. To stretch the box, place you mouse on the line to the right side of the box (shown with the arrow). When the mouse pointer changes, click and drag the line to the right and release.
- All the trains, passenger cars, freight cars and so on in The Engine Shed will start with "RY" so you can select them easily.
- Remember what engine you selected to lead the train. You will need to know this when selecting it in Train Simulator.

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Adding cars

To add passenger and freight cars, use the Rolling Stock Types drop-down menu to choose Cars (Passenger) or Cars (Freight). Add these cars the same way you added the engines. ENGLISH

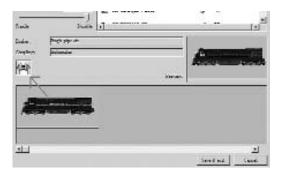
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Rearranging cars

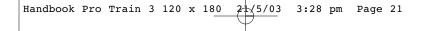
If you get cars out of order in your consist, move them to a new location in the consist by dragging them in the bottom box. Place your mouse pointer on one, hold the left mouse button down and drag the train to the location you want it.

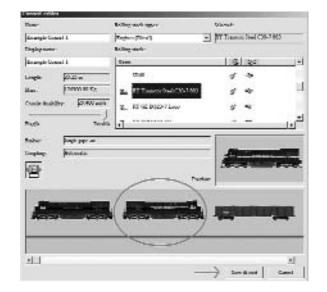
Deleting cars

To delete an engine or car, select it and drag it to the white icon above the box at the bottom as shown by the arrow in the image.



When you've setup your train, click the [Save and Exit] button in the bottom right corner. All the cars used in this example are new cars from the The Engine Shed but you can use use any cars you like — both default cars and the new ones from the The Engine Shed in your consists.





Important Note: Remember to change the direction of an engine as shown, add it to he consist and right-click one time.

When you're done, click the [Cancel] button in the Service editor dialog box to close the Train Simulator Activity Editor. If you want to make another consist, click the [New] button again. Otherwise, select the File I Exit Editor command. Close the Editor Tools and exit.

Now you're ready to drive your new train in Train Simulator. Open the Train Simulator as usual and select Drive A Train from the menu.



Now you will need to select your Route from the top left window (number 1). Select any Route you wish but remember that electric engines need an electrified route to work.

After you select the Route, make certain the Activities menu (number 2) is set to Explore Route. All Activities are created using a specific train and consist so you can only drive the new trains with Explore Route selected.

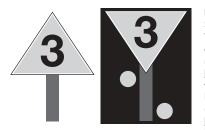
Next, select the Locomotive and Consist. Click the down-arrow at the end of the Locomotive menu and select the train you used in your consist (this is why it is important to remember which one you selected). A new train probably won't have other consists for it. In any event, click the down-arrow at the end of the Consist menu and select the consist you saved (our example used Example Consists 1).



Now click the [Start] button in the lower left corner and you are on your way!

SIGNALS

In this manual you will only find the descriptions for the non-place bound additional signals such as beginning or end of slow-running sections, reduction of maximum speed etc. These are subject to changes and/or additions. All speed limits indicated with signals (valid for all signal types) are valid in the following station area and/or switch area. The switch area ends at the last switch. After the last switch, the normal speed limit is valid. The speed limits for the routes are indicated with the signals LF4 and LF5 in the TS. Let's start with the first signal:



LF1 Signal for the Beginning of a Slow-running Section

These signals indicate the beginning, respectively the end of a slow-running track section. In this section, the maximum speed may not be exceeded.

Daytime Signal: A topsy-turvy yellow triangular signal with a white border shows a black number. In case of limited space, the top of the triangle may show upward.

Nighttime Signal: Two illuminated or reflective yellow lights in askew upward showing direction. In case of

limited space, the lights are positioned approximately 15 m in front of the daytime signal. The shown number indicates that the tenfold speed value in km/h is permitted. This speed limit is in effect until the last vehicle has left the section.



LF2 Beginning of the Slow-running Section

A rectangular edgewise yellow signal with a white border and a black "A" in the centre. This signal is positioned at the beginning of a slow-running section either immediately on the right hand side or, for double-tracked trains driving against the usual direction of motion, immediately on the left hand side of the according track.



LF3 End of the Slow-running Section

A rectangular edgewise white signal with a black "E" in the centre. This signal is positioned at the end of a slow-running section either immediately on the right hand side, or for double-tracked trains driving against the usual direction of motion, immediately on the left hand side of the according track.



ProTrain® 3 · Signals

LF6 Please expect a permanent slow-running section

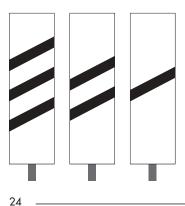
A yellow triangle with a white and black border and a black number. This signal only exists on former DDR-routes and announces a slow-running section and indicates that the tenfold speed value in km/h is permitted. You can only find this signal on main routes immediately in front of the signal LF7 (brake distance).

LF7 Beginning of a permanent slow-running section

a white rectangular with a black border and a black number. This signal also only exists on former DDR-routes and indicates a permanent slow-running section where only the tenfold speed of the indicated speed is permitted. This signal, too, can only be found on main routes and is valid when the setting is HP1.

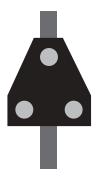
NE2

A white rectangular on the narrow side with a black border and two black triangles facing each other Marker for a pre-signal, respectively a signal with pre-signal function. This pre-signal indicates that the signal has pre-signal function, which means it announces a following main signal. Pre-signal repeaters are not having a pre-signal sign. The pre-signal sign can also be found without a pre-signal (mainly on ancillary routes or on the opposite track on SFB-routes). Then proceed as if there would be a pre-signal indicating a warning. This could also mean that an Indusi is activated permanently.



NE3

A white rectangular sign with one, two or three angular strips. Please expect a pre-signal. Due to the high importance of pre-signals (sometimes they are even more important than main signals), they will be indicated separately. The sign with one stripe appears 100 m before a pre-signal. Two stripes indicate a pre-signal in 175 m and three stripes stand for a pre-signal in 250 m.

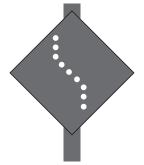


ZS1

Three white lights in form of an "A" or a white blinking light. At the signal HPO or the disturbed light main signal proceed without written order. This signal can be found on the masts of main signals. The signal ZS1 is given when a main signal ist not able to indicate normal traffic. The signal tower prevents traffic. In order to ensure further operation, the operator at the signal tower guides the traffic manually and enables the cab driver to proceed at the disturbed main signal. This could happen, when

- a lamp on this signal is out of order
- a switch is secured but not responding
- a malfunction on the route block equipments (damage cable e.g.)
- an actually available track is indicated as occupied
- there is no regular indicated route

For the train driver this means, the supervisor will check whether the route is free or the switches are in the correct position (which is not necessarily the straight position). For entry- and inter signals, the speed is limited to 40 km/h until reaching the next stop or signal. Concerning exit signals, this speed limit is only valid in the coming switch area. The Signal ZS1 is working via a counting and explanation operation device which lasts for 90 seconds. The driver can activate this signal when approaching it. In case, the signal extinguishes before the driver has passed, he has to operate the train by sight.

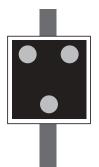


ZS6

An angular white light strip with vertically bent ends. The route is leading in the opposite track. This signal only appears on routes where track switching operations are possible. On these routes the operation in both driving directions is possible. Due to the fact that there could be different regulations for both tracks (e.g. speed limits), the transition or proceeding on the opposite track will be indicated with this signal.

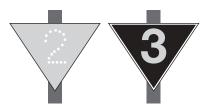
ProTrain® 3 · Signals

ENGLISH



ZS7 / ZS11

Three yellow lights in form of a "V". Proceed at the signal HPO or the disturbed light main signal without written instruction. Proceed by sight. At the signal ZS1, the supervisor requires a check whether the route is free. When a disturbed message is indicated, this has to be done by sight and could cause problems at large signal towers. Therefore, the signal ZS7 is used. It enables the train driver to proceed at the appropriate main signal. Until the next main signal, the driver has to operate the train by sight. Driving by sight means, the driver must be able to stop in time in front of occurring obstacles. A maximum speed of 40 km/h is permitted when driving by sight. In extreme cases that means the cab driver has to drive as slowly as walking speed. Sometimes the cab driver can refuse to proceed due to weather conditions or when he would not be able to stop in time. In case the timetable, the speed booklet or either a LF-Signal or a ZS3-signal are indicating a lower speed, this speed is valid. This signal can already be seen when the train hs passed.



ZS3V Expect Speed Indication

Form Signals: A yellow number on a triangular black signal with a yellow border

Light Signals: The indicated number means that the tenfold value in km/h. can be expected as driving speed. At the following main signal, a higher speed can be permitted than indicated on the ZS3V signal.



ZS3

Beginning with this signal, the speed indicated in the signal may not be exceeded in the following switch section.

Form Signals: A white number in a triangular black signal with a black border. Normally, this triangle is topsy-turvy. In case of limited space, the top of the triangle may direct upward.

Light Signals: a white luminescent number. For both signals, the indicated number means that the tenfold value in km/h is permitted as driving speed.

Handbook Pro Train 3 120 x 180 5/03 3:28 pm Page 27

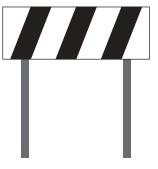
ProTrain® 3 · Signals

NF4

The main signal is not positioned immediately on the right hand side or above the track. A rectangular, a chessboard resembling sign. The chessboard-like sign is positioned immediately on the right hand side, or for trains driving against the usual direction of motion, immediately on the left hand side of the track on a level with the main signal.

NE5

Marker for the stopping position of the train for regularly scheduled trains. This signals looks either like a vertical white rectangle with a black border and a black "H" in the middle or like a vertical black rectangle with a white "H" in the middle. This signal also may contain additions such as "Short train" of "Train length specifications in meter".



NE6

Please expect a stopping point. A horizontal white signal with three black askew vertical strips, positioned askew to the tracks. This signal indicates a stopping point, which can not be detected easily due to local conditions. The signal is positioned immediately on the right hand side, or for trains driving against the usual direction of motion, immediately on the left hand side of the track. The distance is the usual braking distance on main lines and 150 m on smaller lines.

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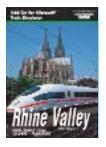
Munich/Stuttgart • Stuttgart/Munich

| 0 90 Stuttgart 3.5 90 Stuttgart 4.8 130 Esslingen 12.5 140 Esslingen 12.5 100 22.1 12.5 100 23.3 22.1 100 Plochingen 22.5 100 Sussen 36.2 140 Sussen 41.1 120 Sussen 42.2 90 Goppingen 42.4 90 Sussen 50 120 Sussen 51.2 150 Sussen 52.9 140 Austant 66, 7 110 Amstetten 75.5 110 Amstetten 85.794.5 70 Ulm 85.794.5 70 Gunzburg 61 70 Gunzburg 62.8 160 Gunzburg 73.5 110 Neu-Ulm 84.5 130 Gunzburg 63.8 16 | Distance | Velocity long distance track | Velocity short distance track | City |
|---|-----------|---------------------------------|----------------------------------|---------------------|
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| 83,2 110 Neu-Ulm 82,7 160 Günzburg 62 130 Günzburg 53,8 160 Günzburg 53,8 130 Günzburg 48,2 120 Mindelattheim 48,5 160 Jettingen 48,5 160 Jettingen 48,5 160 Jettingen 42,8 140 Jettingen 40,7 130 Jettingen 30,7 130 Jettingen 34,4 120 Jettingen 27,7 160 Dinkelscherben 26,9 LZB max. 200 Augsburg-Oberhausen 0,9 100 Augsburg 61,3 90 Augsburg 55 LZB max. 200 Augsburg 56 LZB max. 200 Augsburg 56 LZB max. 200 Augsburg 55 LZB max. 200 Augsburg 56 LZB max. 200 Augsburg 56 <td< td=""><td>85,7/94,5</td><td>/0</td><td></td><td>Ulm</td></td<> | 85,7/94,5 | /0 | | Ulm |
| 82,7 160 62 130 60,3 160 59,8 160 53,8 130 52,8 150 49,2 120 48,8 120 48,8 120 48,8 120 43,9 140 42,8 140 42,8 140 40,7 130 39 150 35,7 130 39,7 130 29,1 1660 27,7 180 26,9 LZB max. 200 68 160 4,7 130 29,1 160 27,7 180 26,9 UZB max. 200 61,3 90 57,3 80 56,7 80 56 160 56 160 57,3 80 56 120 (main track left) 140 (main track rig | | | | Nau Illin |
| 53.8 130 52.8 150 49.2 120 48.8 120 48.5 160 43.9 140 42.8 140 40.7 130 39 150 35.7 130 30,7 130 22,1 160 26,9 LZB max. 200 6.8 160 4,7 130 1,5 130 1,5 130 6,7,3 80 57.3 80 55. LZB max. 200 24,4 LZB max. 200 24,5 140 (main track right [S-Bahn]) 9,2 150 (main track left) 140 140 (main track right [S-Bahn]) 9,2 150 (main track left) 140 140 (main track right [S-Bahn]) | 83,2 | | | Neu-Uim |
| 53.8 130 52.8 150 49.2 120 48.8 120 48.5 160 43.9 140 42.8 140 40.7 130 39 150 35.7 130 30,7 130 22,1 160 26,9 LZB max. 200 6.8 160 4,7 130 1,5 130 1,5 130 6,7,3 80 57.3 80 55. LZB max. 200 24,4 LZB max. 200 24,5 140 (main track right [S-Bahn]) 9,2 150 (main track left) 140 140 (main track right [S-Bahn]) 9,2 150 (main track left) 140 140 (main track right [S-Bahn]) | 82,7 | | | |
| 53.8 130 52.8 150 49.2 120 48.8 120 48.5 160 43.9 140 42.8 140 40.7 130 39 150 35.7 130 30,7 130 22,1 160 26,9 LZB max. 200 6.8 160 4,7 130 1,5 130 1,5 130 6,7,3 80 57.3 80 55. LZB max. 200 24,4 LZB max. 200 24,5 140 (main track right [S-Bahn]) 9,2 150 (main track left) 140 140 (main track right [S-Bahn]) 9,2 150 (main track left) 140 140 (main track right [S-Bahn]) | 60.3 | | | |
| 53.8 130 52.8 150 49.2 120 48.8 120 48.5 160 43.9 140 42.8 140 40.7 130 39 150 35.7 130 30,7 130 22,1 160 26,9 LZB max. 200 6.8 160 4,7 130 1,5 130 1,5 130 6,7,3 80 57.3 80 55. LZB max. 200 24,4 LZB max. 200 24,5 140 (main track right [S-Bahn]) 9,2 150 (main track left) 140 140 (main track right [S-Bahn]) 9,2 150 (main track left) 140 140 (main track right [S-Bahn]) | 59.8 | | | Günzburg |
| 52.8 150 49.2 120 48.8 120 48.9 160 43.9 140 42.8 140 40.7 130 39 150 35.7 130 39.7 130 29.1 160 27.7 180 26.9 LZB max. 200 68 160 4.7 130 29.1 160 27.7 180 26.9 LZB max. 200 68 160 4.7 130 1.5 130 0.9 100 62/0 90 57.3 80 56 160 57.3 80 56 12B max. 200 24.4 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) 9.2 150 (main track left) 140 (main track right [S-Bahn]) 9.2 150 (main trac | 53.8 | | | Gunzburg |
| 49,2 120 Mindelattheim 48,8 120 Mindelattheim 48,5 160 Jettingen 43,9 140 Jettingen 42,8 140 Jettingen 40,7 130 Jettingen 39 150 Jettingen 35,7 130 Jettingen 30,7 130 Jettingen 29,1 160 Dinkelscherben 26,9 LZB max. 200 Jettingen 44,7 130 Jettingen 1,5 130 Jettingen 1,5 130 Jettingen 61,3 90 Jettingen 55 LZB max. 200 Augsburg-Oberhausen 56 LZB max. 200 Jettingen 24,4 LZB max. 200 140 (main track right [S-Bahn]) 18,7 LZB max. 200 140 (main track right [S-Bahn]) 9,2 150 (main track left) 140 (main track right [S-Bahn]) 18,7 130 140 (main track right [S-Bahn]) 8 130 Pasing | 52.8 | 150 | | |
| 48.8 120 Mindelattheim 48.5 160 Mindelattheim 48,5 160 Jettingen 43,9 140 Jettingen 42,8 140 Jettingen 40,7 130 Jettingen 39 150 Jettingen 35,7 130 Jettingen 34,4 120 Jettingen 30,7 130 Jettingen 26,9 LZB max. 200 Dinkelscherben 6,8 160 Augsburg-Oberhausen 4,7 130 Augsburg-Hochzoll 61,3 90 Augsburg-Hochzoll 66,7 80 Augsburg-Hochzoll 56 LZB max. 200 Augsburg-Hochzoll 56 LZB max. 200 Augsburg-Hochzoll 56 LZB max. 200 140 (main track right [S-Bahn]) 9.2 150 (main track left) 140 (main track right [S-Bahn]) 9.2 150 (main track left) 140 (main track right [S-Bahn]) 8 130 Ha (main track r | 49.2 | | | |
| 43.9 140 42.8 140 40.7 130 39 150 35,7 130 34,4 120 30,7 130 29,1 160 27,7 160 26,9 LZB max. 200 6,8 160 4,7 133 1,5 130 1,5 130 62/0 90 61,3 90 57,3 80 56 LZB max. 200 55 LZB max. 200 24,4 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) Matching 9,2 150 (main track left) 140 (main track right [S-Bahn]) Olching 8 130 7,8 130 | | | | Mindelaltheim |
| 42,8 140 Jettingen 40,7 130 Jettingen 39 150 Jettingen 35,7 130 Jettingen 34,4 120 Jettingen 30,7 130 Jettingen 29,1 160 Jettingen 29,1 160 Jettingen 29,1 160 Jettingen 26,9 LZB max. 200 Dinkelscherben 6,8 160 Jettingen 4,7 130 Jettingen 1,5 130 Jetingen 61,3 90 Augsburg-Oberhausen 0,9 100 Augsburg-Hochzoll 56 160 Augsburg-Hochzoll 56 160 Augsburg-Hochzoll 56 LZB max. 200 Augsburg-Hochzoll 56 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) 18,7 LZB max (left) 140 (main track right [S-Bahn]) 8 130 Height (Imain track right [S-Bahn]) | | 160 | | |
| 40,7 130 C 39 150 35,7 130 34,4 120 30,7 130 30,7 130 29,1 160 Dinkelscherben 27,7 160 26,9 LZB max. 200 6,8 160 4,7 130 Augsburg-Oberhausen Augsburg-Oberhausen 0,9 100 Augsburg Augsburg 61,3 90 57,3 80 Augsburg-Oberhausen 56 LZB max. 200 Augsburg Augsburg-Oberhausen 55 LZB max. 200 Augsburg Augsburg 56 LZB max. 200 Hath track left) 140 (main track right [S-Bahn]) 18,7 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) Olching 9,2 150 (main track left) 140 (main track right [S-Bahn]) Alaching Olching 8 130 140 (main track right [S-Bahn]) Pasing | 43,9 | | | |
| 39 150 35,7 130 34,4 120 30,7 130 29,1 160 27,7 160 26,9 LZB max. 200 6,8 160 4,7 130 1,5 130 0,9 100 62/0 90 61,3 90 57,3 80 56 160 55 LZB max. 200 61,3 90 57,3 80 56,7 80 56 160 55 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) Malching 0lching 140 (main track right [S-Bahn]) 9,2 150 (main track left) 140 (main track right [S-Bahn]) 8 130 40 (main track right [S-Bahn]) 7,8 130 Pasing | 42,8 | | | Jettingen |
| 35,7 130 34,4 120 30,7 130 29,1 160 27,7 160 26,9 LZB max. 200 6.8 160 4,7 130 1,5 130 0,9 100 62/0 90 61,3 90 57,3 80 56 LZB max. 200 24,4 LZB max. 200 (main track left) 18,7 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) 9,2 150 (main track left) 140 (main track right [S-Bahn]) 8 130 7,8 130 | 40,7 | 130 | | |
| 34,4 120 30,7 130 29,1 160 27,7 160 26,9 LZB max. 200 6.8 160 4,7 130 1,5 130 0,9 100 62/0 90 61,3 90 56,7 80 56 160 55 LZB max. 200 24,4 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) 9,2 150 (main track left) 140 (main track right [S-Bahn]) 8 130 7,8 130 | 39 | | | |
| 30,7 130 29,1 160 27,7 160 26,9 LZB max. 200 6,8 160 4,7 130 1,5 130 0,9 100 62/0 90 61,3 90 57,3 80 56 160 55 LZB max. 200 24,4 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) Malching 9,2 150 (main track left) 140 (main track right [S-Bahn]) Olching 8 130 7,8 130 | 35,7 | | | |
| 29,1 160 Dinkelscherben 27,7 160 Dinkelscherben 26,9 LZB max. 200 Dinkelscherben 6,8 160 Augsburg-Oberhausen 1,5 130 Augsburg-Oberhausen 0,9 100 Augsburg-Oberhausen 61,3 90 Augsburg 57,3 80 Augsburg-Hochzoll 56 LZB max. 200 Augsburg-Hochzoll 55 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) 18,7 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) 9,2 150 (main track left) 140 (main track right [S-Bahn]) 8 130 Pasing | 34,4 | | | |
| 26,9 LZB max. 200 6.8 160 4,7 130 1,5 130 0,9 100 62/0 90 61,3 90 57,3 80 56 LZB max. 200 56 LZB max. 200 24,4 LZB max. 200 (main track left) 18,7 LZB max. 200 (main track left) 9,2 150 (main track left) 140 (main track right [S-Bahn]) 0,5 140 (main track right [S-Bahn]) 8 130 7,8 130 | 30,7 | | | |
| 26,9 LZB max. 200 6.8 160 4,7 130 1,5 130 0,9 100 62/0 90 61,3 90 57,3 80 56 LZB max. 200 56 LZB max. 200 24,4 LZB max. 200 (main track left) 18,7 LZB max. 200 (main track left) 9,2 150 (main track left) 140 (main track right [S-Bahn]) 0,5 140 (main track right [S-Bahn]) 8 130 7,8 130 | 29,1 | | | Dipkolechorben |
| 6.8 160 4,7 130 1,5 130 0,9 100 62/0 90 61,3 90 56,7 80 56 160 55 LZB max. 200 24,4 LZB max. 200 (main track left) 18,7 LZB max. 200 (main track left) 9,2 150 (main track left) 140 (main track right [S-Bahn]) 8,5 140 (main track right [S-Bahn]) 8,5 130 7,8 130 | 26.9 | | | Dirikeiserierberi |
| 4,7 130 1,5 130 0,9 100 62/0 90 61,3 90 57,3 80 56 160 55 LZB max. 200 24,4 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) Malching 9,2 150 (main track left) 140 (main track right [S-Bahn]) Olching 8 130 7,8 130 | 6.8 | | | |
| 1,5 130 Augsburg-Oberhausen 0,9 100 Augsburg-Oberhausen 62/0 90 Augsburg 61,3 90 Augsburg 57,3 80 Augsburg-Hochzoll 56 160 Augsburg-Hochzoll 55 LZB max. 200 140 (main track right [S-Bahn]) Malching 18,7 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) Olching 9,2 150 (main track left) 140 (main track right [S-Bahn]) Olching 8,5 140 (main track right [S-Bahn]) Pasing Pasing | 4.7 | | | |
| 0.9 100 0 0 62/0 90 Augsburg 61,3 90 Augsburg 57,3 80 Augsburg-Hochzoll 56,7 80 Augsburg-Hochzoll 55 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) Malching 18,7 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) Olching 9,2 150 (main track left) 140 (main track right [S-Bahn]) Olching 8,5 140 (main track left) 140 (main track right [S-Bahn]) Olching 7,8 130 Pasing Pasing | | | | Augsburg-Oberhausen |
| 62/0 90 Augsburg 61.3 90 Augsburg 57.3 80 Augsburg 56,7 80 Augsburg-Hochzoll 56 LZB max. 200 Augsburg-Hochzoll 24,4 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) Malching 18,7 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) Olching 9,2 150 (main track left) 140 (main track right [S-Bahn]) Olching 8,5 110 (main track left) 140 (main track right [S-Bahn]) Pasing 7,8 130 Pasing Pasing | | | | |
| 61.3 90 57.3 80 56,7 80 55 LZB max. 200 24,4 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) 18,7 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) 9,2 150 (main track left) 140 (main track right [S-Bahn]) 8,5 140 (main track right [S-Bahn]) 8,5 130 | | | | Augsburg |
| 57,3 80 Augsburg-Hochzoll 56,7 80 Augsburg-Hochzoll 56 LZB max. 200 Augsburg-Hochzoll 24,4 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) Malching 18,7 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) Olching 9,2 150 (main track left) 140 (main track right [S-Bahn]) Olching 8,5 140 (main track left) 140 (main track right [S-Bahn]) Pasing | 61,3 | 90 | | |
| 56,7 80 Augsburg-Hochzoll 56 160 160 55 LZB max. 200 140 (main track right [S-Bahn]) Malching 24,4 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) Malching 18,7 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) Olching 9,2 150 (main track left) 140 (main track right [S-Bahn]) Olching 8,5 140 (main track left) 140 (main track right [S-Bahn]) Pasing 7,8 130 Pasing Pasing | 57,3 | | | |
| 55 LZB max. 200 All All All All Matching 24,4 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) Matching 18,7 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) Olching 9,2 150 (main track left) 140 (main track right [S-Bahn]) Olching 8,5 140 (main track left) 140 (main track right [S-Bahn]) Pasing 8 130 Pasing | 56,7 | | | Augsburg-Hochzoll |
| 24,4 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) Malching 18,7 LZB max. 200 (main track left) 140 (main track right [S-Bahn]) Olching 9,2 150 (main track left) 140 (main track right [S-Bahn]) Olching 8,5 140 (main track right [S-Bahn]) 140 (main track right [S-Bahn]) Pasing 8 130 140 (main track right [S-Bahn]) Pasing | | | | |
| 7,8 130 Pasing | | LZB max. 200 | | NA statis |
| 7,8 130 Pasing | 24,4 | LZB max. 200 (main track left) | 140 (main track right [S-Bahn]) | |
| 7,8 130 Pasing | 18,7 | LZB max. 200 (main track left) | 140 (main track right [S-Bahn]) | Uiching |
| 7,8 130 Pasing | 9,2 | 140 (main track left) | 140 (main track right [S-Bahn]) | |
| 7,8 130 Pasing | 0,0 | 140 (main track left) | 140 (main track right [S-Bann]) | |
| 0 rasing | | 130 | | Pasing |
| | 0 | 100 | | Munich |

Digest of velocity for ProTrain® 3

| Distance | Velocity long distance track | Velocity short distance track | City |
|--------------------------------------|---|--|---------------------|
| 0 | 130 | | Munich |
| 7,8 | 130 | | Pasing |
| 8 | 130 (main track right) | 140 (main treat left [C Dehn]) | Fasiliy |
| 0.5 | 150 (main track right) | 140 (main track left [C Dahn]) | |
| 8,5 | LZB max. 200 (main track right) LZB max. 200 (main track right) LZB max. 200 (main track right) | 140 (main track left [S-Bahn]) 140 (main track left [S-Bahn]) (main track left [S-Bahn]) (main track left [S-Bahn]) | |
| 9,2 | LZB max. 800 (main track right) | (main track left [S-Bann]) | 01.11 |
| 18,7 | LZB max. 200 (main track right) | (main track left [S-Bahn]) | Olching |
| 24,4 | LZB max. 200 | | Malching |
| 55 | 160 | | |
| 56 | 80 | | |
| 56,7 | 80 | | Augsburg Hochzoll |
| 57,3 | 90 | | |
| 61,3 | 100 | | |
| 62/0 | 100 | | Augsburg |
| 0,9 | 130 (right 4 tracks [main tracks]) | 70 | |
| 1,5 | 130 (right 4 tracks [main tracks]) | 70 | Augsburg-Oberhausen |
| 4,7 | 160 | | ragebarg obornation |
| 6,8 | LZB max. 200 | | |
| 26.0 | 160 | | |
| 26,9 27,7 | 160 | | Dinkelscherben |
| 29,1 | | | Dirikeischerben |
| 29,1 | 130 | | |
| 30,7 | 120 | | |
| 34,4 | 130 | | |
| 35,7 | 150 | | |
| 39 | 130 | | |
| 40,7 | 140 | | |
| 42,8 | 140 | | Jettingen |
| 43,9 | 160 | | - |
| 48,5 | 120 | | |
| 48,8 | 120 | | Mindelaltheim |
| 49,2 | 150 | | |
| 52,8 | 130 | | |
| 53.8 | 160 | | |
| 53,8 59,8 | 160 | | Günzburg |
| 60,3 | 130 | | Gunzburg |
| 62 | 160 | | |
| 82,7 | 110 | | |
| | | | Navi I IIm |
| 83,2 | 110 | | Neu-Ulm |
| 84 | 70 | | |
| 85,7/94,5 | 70 | | Ulm |
| 93,5 | 110 | | |
| 87,5 | 140 | | |
| 80,9 | 110 | | |
| 75 | 110 | | Westerstetten |
| 66,7 | 110 | | Amstetten |
| 66,4 | 70 | | |
| 61 | 70 | | Geislingen |
| 60 | 80 | | Ŭ |
| 59,1 | 110 | | |
| 58,1 | 140 | | |
| 55,9 | 150 | | |
| 51,2 | 120 | | |
| 50 | 120 | | Süssen |
| 49,4 | 150 | | Cubbon |
| 43,9 | 110 | | |
| 53.2 | 90 | | |
| 12.4 | 100 | | |
| 42,4 | 120 | | Gönningen |
| 42,2 | | | Göppingen |
| 42,4 42,2 41,1 36,2 32,9 | 140 | | |
| 36,2 | 160 | | |
| 32,9 | 150 | | |
| 28,7 | 140 | | |
| 26,8 | 110 | | |
| 23,9 | 100 | | |
| 22,5 | 100 | | Plochingen |
| 22,1 | 90 | | - |
| 20,8 | 120 | | |
| 20 | 150 | | |
| 13,5 | 150 | | Esslingen |
| 12,1 | 140 | | goii |
| 7,3 | 130 | | |
| 4,8 | 100 | | |
| 3,5 | 90 | | |
| 0 | | | Stuttgart |
| | | | oluliyari |

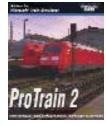
THE PRO TRAIN LEGEND



Enjoy one of the most beautiful areas in Germany – the Rhine Valley on a train ride from Cologne to Frankfurt on both banks of the Rhine. Ride past the cities of Cologne, Bonn, Mainz, Koblenz, Wiesbaden and Frankfurt in original trains. Let the Deutsche Eck, the Loreley and the Rhine-Mosel junction impress you.

Try many interesting activities.

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- Typical oncoming traffic
- Original terrain
- Signals and contact wires
 Realistic driver's cab and
- Realistic driver's cab and interior view
- Animated objects
- Interesting activities



The Pro Train 2 route takes you from Dresden to Leipzig and to many places in between as well. Superb trackwork that must be seen to be believed. Despite the unrivalled quality of Pro Train 2 its overriding "must-have" is that you can journey through Pro Train 2 with its vastly populated scenery without changing the ever-precious framerates.

Features:

- Engine Series E101, E143, E112, diesel engine series 232
- IC engines with the appropriate cars
- Double-decker wagons for the short distance tracks and several freight wagons
- All stations along the track
- S-Bahn system of Leipzig
- All important signals

Awarded 99% by Matt Peddlesden from UK TrainSim.



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- Well-detailed locos & rolling stock
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