This Guide will cover PZB,LZB as well as Sifa. CREATED BY The Basics: How to get things set up Brandschutztür **Breaker Switches** First things first we need to find and enable the switches for said systems. These are most commonly located in the engine room or electrical control panel just behind the drivers seat. Category: Gameplay Basics There may be some exceptions like on the ICE3, where the switches are inside a fuse box to the Languages: English Posted 16 Jan, 2023 @ 2:38am Updated 30 May @ 8:24am 1,310 Unique Visitors 55 Current Favorites

Install Steam login | language *

The Basics: How to get things set up

I got a Zwangsbremsung what did i do ...

PZB Conclusion: When to use each butty.

Store Page

Overview

Signals

LZB

Comments

Braking the right way

lower right of the drivers seat. When in doubt you can also use the hotkey Shift+Ctrl+Enter to enable them all from the drivers seat. Do keep in mind that enabling or restarting PZB while going faster than 45km/h

will prompt an emergency brake so best do that at the start. **Zugart O/M/U**

guide in and of itself, so to keep it simple:

ran without LZB.

on your HUD

worry of a random brake application.

The Zugart in really simple terms is used to determine a trains maximum speed and braking time. In the real world railway workers have to calculate the weight of the train as well as it's effective braking force to get a certain value that specifies your trains Zugart. But thats worthy of another

 Obere/Upper: Used on passenger trains or locomotive moves • Mittlere/Middle: Used for light-medium freight trains. Typically works for anything less than 1200t Untere/Lower: Used for heavy freight The PZB breaker will need to be restarted if you set a different Zugart while it is active

LZB: On or off?

LZB is Germanys cab signalling, allowing running speeds of over 160km/h. It's a mostly straight forward system that frees you from all the rules of PZB but if you don't feel like learning two systems at once I'd suggest running some medium speed passenger services, those can be safely

These right here underneath the speed display are your indicators. Just so you know what these indicators are that i will frequently mention in this guide. The most important ones also show up

Back to the drivers seat. What now?

Begin the Journey Proceed as normal and get going. Once the train has detected you're on the move the 85 and 70 will start alternating. This means you are in the restricted mode and are locked to 45km/h. IF and

only if you can see the next signal is a full clear you may press the middle PZB button to lift this restriction. Exiting restrictive is not possible with 1000 or 500hz active and releasing without making sure the next 500hz is off (i.e. the signal does not show red) is also grounds for an emergency brake. Up to speed Following speed limits you should soon reach your routes high speed zone. The table below may look a little intimidating at first but lets go over it step by step. 55 Untere Zugart (U) 70 Mittlere Zugart (M) 85 Obere Zugart (O) **PZB Overview**

Vmax 100 km/h 120 km/h 160 km/h 1000 Hz 1000 Hz 23s to get to 85 km/h 38s to get to 55 km/h 29s to get to 70 km/h 40 km/h (when passing magnet) Main signal stays red -> 500 Hz magnet active 25 km/h 35 km/h

65 km/h (when passing magnet) Restrictive mode 45 km/h 45 km/h 45 km/h Restrictive mode + 45 km/h 45 km/h 45 km/h active 1000 Hz Monitoring Restrictive mode + 25 km/h 25 km/h 25 km/h active 500 Hz Monitoring This table is your cheat sheet of how fast you are allowed to go. Focus on the first row for now. Let's assume you are running a passenger service and are using Zugart O. From the rightmost column we can read that your maximum permitted speed is 165km/h. Although i would suggest staying 160, as if you go over 165 even by 1km/h the train will apply emergency brakes. This application will have a red G and as such won't force you to a grinding halt, only below the permitted speed plus the time it takes for the brake pipe to recharge.

Signals Types of signals

the signal that tells you when to go or stop.

detailed explanation check out the linked guide.

United States.

Upcoming speed limits; which do i acknowledge?

the main signal.

On a side note..

Yellow inbound

flashing 85 indicator.

Red signal approach

The Signal is green again

Bypassing a red signal

40km/h.

with the Vsoll arrow.

Zwangsbremsung with the letter S

Recovering from an emergency stop

Zwangsbremsung put on you.

Release when:

Override when:

signal

work, on others it does. Thanks dovetail

Heres an important thing you should know:

To understand the rest we will need a quick crash course on the signals.

As with other countries germany typically has its signals split into main and distant signals.

In example 2 we can see a main signal with the red and white board attached to the pole. This is

Example 3 has the Ne2 sign attached. This identifies a distant signal, which tells you what the

next main signal is displaying. These also have a diagonal light pattern to better identify them at

night. Warning! If you see one of these Ne2 signs without a signal attached, this must be assumed as a caution aspect and be acknowledged with the left button. Example 1 combines these two into one.

Theres also a yellow and white variant but in TSW2 this acts the same as a main signal Reading the lights There is already a great steam guide touching up on the subject and as this guide centers around

Signalling guide (UK/DE/US) A Guide for Train Sim World® 2020

Explanation of the signalling systems used in the United Kingdom, Germany and the

the PZB system i'll give a brief rundown of the most common signal aspects and for a more

 Green is go Yellow indicates the next signal is red. Must be acknowledged. • Green and yellow means you must slow down for the next signal. By default this is 40Km/h

unless specified otherwise. <u>The distant signal of this aspect must be acknowledged but not</u>

 Red is not to be passed not even by a centimeter unless given permission by the dispatcher. • If there is additionally a white light that means the distance to the next signal is unusually short. • If there's just one white light with nothing else, that signal has been intentionally disabled for you, you may safely ignore it. If a signal has neither a colored board or an NE2 sign, that's a repeater. It mirrors what the next signal displays and is typically built in locations with poor visibility. Officially you don't have to

acknowledge these in TSW since they rarely ever have a magnet to them but if you want to have that extra bit of realism, do acknowledge each non-green repeater signal like the real drivers do.

This is often linked to your Zugart mode. There anything close to your 1000hz speed must be acknowledged, such as 90 or 80 when driving on O. Though these can be ignored if you're already below that upcoming limit. Exception applies to very low limits such as 40 must always be acknowledged. If you're unsure about a sign check if it has a magnet next to it. If it does chances are likely it expects something from you.

Braking the right way And here we are. The part where emergency brakes can happen left and right. So now that we know how to read the signals how do we actually respond to them? As you know the PZB system features 3 buttons, as seen in the guide thumbnail. From left to

right they are Override, Release and Acknowledge. I strongly recommend using hotkeys to

control these. They are set by default on delete, end and page down.

For this section you wanna mainly focus on your acknowledge key.

As you may have noticed the german signals have these little boxes lying next to the track. These are the magnets Iv'e been mentioning and once a signal turns yellow or red they activate for X your train to resonate with. Once the lead axle of your train has passed the magnet next to the yellow signal you have to acknowledge it by pressing and releasing the corresponding button. Note that it

time.

only registers once released again so don't hold it the entire

Hz

You will know it has worked if the 1000hz indicator lights up. (While TSW does not simulate minor faults, real drivers typically press the acknowledge button twice just to make sure it properly registered, do with that information as you will) 1000hz active Remember the table we went over earlier? Let's refer back to it now. Same process as before, we are running on Zugart O and just got a 1000hz activation. So we can read from this table that we have 23 seconds to slow down to 85km/h. You can also tell this by the

(Note that the flashing 85 is whats telling you to stay at 80, the 1000hz merely acts as a lock. So

But be careful. The 23 seconds can be misleading as the train will detect it if you are braking too

Because of that, do make sure to start braking as soon as you see the yellow on approach to

have that extra bit of time. And remember: <u>Better to brake a little too hard than too little</u>

Next up is the 500hz magnet, typically located a few hundred meters before a signal.

make sure to press release if you see it flashing and the signals ahead are clear again)

slowly, which can happen faster than you think when going high speeds.

Refer to the table again. Here we can see that if we do not pass this magnet at 65 or lower we will get braked out. So if you got the 1000hz from a fully yellow signal be sure to get down to 500hz speeds before the red signal approach. Once the 1000hz indicator goes out there is a short deadzone until the 500hz. That's your last chance to slow it down to the right speed. If the signal is still red, the 500hz will light up and you will have to start braking immediately. Once again you can read off the table beneath what speeds the 500hz will (generally) leave you alone and let you **slowly** approach the red. Congratulations you have properly braked your train without any emergency applications.

mode. You can tell by the alternating 70 & 85. Normally under 1000 or no Hz, this caps you at 45km/h but under the influence of a 500hz magnet you should keep it down to 20. Exceeding 25 will have you stopped. Once you have no more hertz indicators you can press the release button to lift restrictive and return to schedule. Still do remember that you may get another caution aspect soon. If you were on approach for a red but it turned green by the time you got there, you can also press release if you got clear visual on the signal with no 1000hz indicators active. As mentioned earlier, releasing without checking for clear will get you shot down by the 500hz magnet.

A red signal has an active 2000hz magnet that will always stop your train. However if you are

given permission to bypass this signal by the dispatcher you may use the PZB override button to

ignore the 2000hz magent. Hold this button until your front axle has completely passed the red

indicator merely means bypassing only works when <40kmh. On some trains it doesn't seem to

signal at which point the "Befehl 40" indicator will(or should) shortly light up, by itself the

While under 1000 or 500Hz coming to a stop or driving below 10Km/h will apply restrictive

Shunting and Replacement Signals A 2000Hz Magnet will always be active if there's a red light anywhere on the signal, even if it's displaying a permissive aspect. The following aspects will need usage of PZB Override: -Sh1: Two diagonal white lights as seen on the dwarf signals. Whenever you are not receiving movement authority by main signals and instead over Sh1, you are shunting. This would officially

-Zs1: Three white lights in an A-Shape or one flashing white light. Override and proceed at line

speed <u>as long as the signal is not capable of displaying a distant aspect, otherwise drive at max</u>

-Zs7: Three yellow lights in a V-Shape. Drive on sight until the next signal, then drive the length

restrict you to 25km/h and you may turn off PZB for the duration of shunting.

of your train past the next signal, however 400m minimum. Adjust speed as per conditions. i.e. 40 for clear weather, 15 for night or unsightly weather, 5 for both. The latter two are barely ever seen in TSW but if you're planning on playing other more in depth simulators then here you go. I got a Zwangsbremsung what did i do wrong? Zwangsbremsung with the letter G G stands for Geschwindigkeitsüberschreitung/Speeding. This is usually triggered by either

most commonly by failing to acknowledge a signal/sign or getting caught by a speed trap. Speed traps can be identified by the group of closely packed magnets somewhere along the track. If they shoot you down you were either going too fast or missed an upcoming limit change. On locomotives with an MFA (screen) you can read up on what it was that caused the application. If it reads "WT nicht rechtzeitig betätigt" you failed to acknowledge something. This also handily

Once your train has come to a complete stop you may recover the train by pressing the release button to drop the emergency brakes. Then wait for a couple of seconds for your brake pipe to

recharge and you are good to go again. Just don't forget about any speed restrictions the

exceeding your designated Zugart limit or if running with LZB you failed to slow down

S stands for Selbstauslösung or self trigger. This can happen through various means but

displays if you are currently in a restricted mode and how much you're allowed to go.

PZB Conclusion: When to use each button **Acknowledge when:** Passing a full yellow or yellow/green distant signal Passing triangle shaped signs warning you of upcoming speed limits close or under your 1000hz speed limit (refer to signals guide for more detail) • Passing a signal-less distant sign (Ne2) • Optional for the realism: When passing a repeater with a non-green aspect

• Given permission to pass a red signal. Hold all the way until the lead axle has fully passed the

LZB Once you've figured out PZB and want to start piloting some of those high speed engines LZB will be your best friend. If you have driven the french or british high speed rails before you will

The B stands for Bereit/Ready, indicating it is active and ready to go

know about the built in speed limitor. Same principle here.

These 3 Icons represent the LZB system.

slowing down in a few seconds. Secondly the

optimal brake path. On trains with AFB this is all

autopilot but on trains without it make sure to

Vsoll needle will start ticking down for the

Exiting LZB

Sifa

makes perfect.

The next signal is a clear and you want to lift the speed restrictions

• The LZB Ende indicator starts flashing (more on that below)

Entering LZB If you see a wire running in the center of the rails thats how you know you've entered the LZB zone. Secondly you will hear an audible buzzer sound and the Ü symbol lighting up standing for Übertragung/Transmission. The LZB is now in effect.

While this is active PZB is entirely disabled and you do not have to pay attention to restrictions or

pointing at the best current speed. Use this in combination with the AFB, that automatically locks

signals for the time being. Instead the LZB will be your helper in driving at the right speed. On

your UI this will appear as a blue needle and on the analogue screen as a red "Vsoll" needle

onto the Vsoll needle, and you essentially got your train running on autopilot.

Adhering the speed limits Once you need to slow down the yellow bar in the center of your speed gauges will begin counting down the distance. Thats distance until you need to be the speed of the red numbers 2000 underneath your speed display. The LZB helps -1000 - 750 - 500 you in this field as well. First the G indicator will light up, informing you the train will have to start

follow that needle closely. The G will start flashing if it does not like your rate of slowing down.

Once the LZB route comes to an end the Ende indicator will start flashing and you will get

another buzzer sound. Confirm this by pressing the PZB release button and it will turn into a solid

light. The second buzzer confirms you've exited the LZB zone and are back on PZB restrictions. Do note that on some trains like the ICE3 you may need to restart the AFB system to regain power on the throttle lever. This is due to train drivers often leaving the AFB at maximum throughout LZB routes and this serves as a reminder to put it back down. Conclusion: LZB+Sifa B Indicator=LZB ready Ü Indicator= LZB active PZB is disabled with the Ü indicator While in LZB simply follow the blue needle on the speed UI, upcoming speed changes are additionally marked with the speed and distance on UI and analog display Once Ende starts flashing confirm it using the release PZB button

with some other locomotives this does not reset itself when interacting with other controls so it can feel quite needy at times. I'd recommend setting up an easily accessible hotkey such as the spacebar. One exception with this safety feature is that unlike with the PZB you can cancel the brake application by resetting the pedal. ..assuming your brake pipe can recharge fast enough. End Hope this guide helped in understanding the complicated mess that is the Indusi PZB 90.

Remember: its always better to brake off a little too hard than too little, if you're on the fence

about acknowledging something, just do it, no penalty to it. And have that cheat sheet ready.

Start ideally with the modern commuters and work your way up to the high speed lines. Practise

Do note the AFB (cruise) probably has to be reset when exiting LZB for you to apply power again

The german dead mans pedal system. Will need to be reset every 30 seconds and will first remind you visually, then via sound and finally with a nice emergency brake. Unlike Sifa

Good luck, engineer. May you drive that ICE with confidence.

6 Comments **ЗАМНАЧ ЛОУТАБА** 19 Mar @ 7:07am Great guide, thank you! If it's not so hard for you, can write on which routes in game are using LZB? Was looking into it, but could find only info about SKA, HMA and RT, which is embarassingly small count Riley 25 Jan @ 12:01am

Thank you so much, Works perfect now

gilglu 2 Apr, 2023 @ 3:29pm

BÄNDE AN DIE HÄNDE [GER] 14 Dec, 2024 @ 11:04am Ey ich kanns leider nich liken weil ich das Spiel nur auf Epic besitze, aber dieser Artikel hat mir so fett weitergeholfen was die PZB angeht, einfach danke bro gilglu 21 May, 2023 @ 12:30am Brandschutztür [author] 21 May, 2023 @ 12:00am

> Excuse the late response but the reason you are getting braked off could be because you did not properly acknowledge the signal. Once the front axle of your train has passed the

more details about proper operation, including the "what did i do wrong?" section.

Some geospatial data on this website is provided by geonames.org.

Privacy Policy | Legal | Steam Subscriber Agreement | Cookies

magnet you have 4 seconds to press and release the ball shaped acknowledge button. Once the 1000hz pops up thats when you know it worked. I've also updated the guide with some

For some reason I get emergency brakes at yellow signals even when following the guide.

© Valve Corporation. All rights reserved. All trademarks are property of their respective owners in the US and other countries.