

# The SBB CFF FFS Re 460 Version 3.0

QUICK GUIDE



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Swiss Trainsimulator Addons

# Quick guide

- ▶ These slides will take you through all the functions of the Re 460/465 Pack V 3.0 for TS 2019 by TrainworX





# Quick guide – Re 460



## Startup

1. Go into the cab (press 1)
2. Turn **KEY** switch to the right (Shift-S)
3. Push **PANTOGRAPH** switch (P)
4. Push **MAIN** switch (Z)
5. Switch OFF **Parkmode** (White Button with P)
6. Switch OFF **PMS** brakes (Ctrl-Shift-M)
7. Set **Tempomat** to desired speed (Y)

You will hear the mainswitch engage and a test sequence for the warning lights will be initiated.

The rear panto (default) will raise. You can switch to another panto by pressing **Shift-P** or **Ctrl-Shift-P** (Rear – Front – Both).

The engine is now ready for operation.



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## Startup

You can bypass the startup procedure by pressing:

**CTRL-SHIFT-S**

- Key On
- Panto Up
- Mains On
- Reverser Fwd
- Parkmode Off
- Vsoll / Tempomat at 40 km/h



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## Parkmode

When leaving the cabine shortly (for example to change the driving direction) or parking at the station , the '**Parkstellung**' can be engaged.

- Both Front and Tail have one white light on.
- Both Pantographs are UP.
- PMS brakes will be activated.





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## Lights

Lights will be in **AUTO** at start. The engine will try and set the correct lighting.

Press the green **LIGHTBUTTON** (H) to activate **MANUAL** lights.



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## High Beam and Cablights

Press the 'Blue High Beam' button (Ctrl-F) to switch on the **HIGH BEAM**.

There are several other lights in the cabine:

**CAB LIGHT** (I)

**INSTRUMENT LIGHTS** (i/ Shift-i)

**SCHEDULE LIGHT** (Ctrl-I)



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## Wipers

The wipers have several positions:

**WIPERSWITCH** (V / Shift-V)

Sequence:

**Off <-> Slow <-> Fast**

Switching the wipers off will 'Auto-park' them to the OFF position.





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## Brakes

Before driving make sure all brakes are off:

**Loco brake** ([ & ]) – default = off

**Train brake** (; & ') – default = off

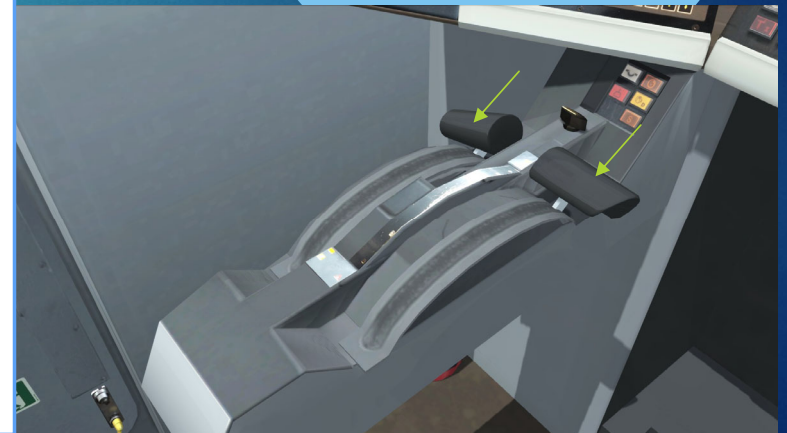
**PMS brake** (shift-M & shift-ctrl-M) – default = off

The trainbrake has 6 positions:

1. Abschlussstellung - Park
2. Fuellstellung – Fill/Prime
3. Fahrstellung - Drive
4. 1. Bremsstellung - Brake
5. 1. Vollbremsstellung – Suppression 1
6. 2. Vollbremsstellung – Suppression 2
7. Schnellbremsung - Emergencybrake



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## Brakes

The **PMS brakes** (Permanent Magnet Bremse) are large brake pads that are lowered on to the rails to arrest the engine.

Switch **ON** by pressing the red PMS button (Shift-M).  
Switch **OFF** by pressing the green PMS button (Shift-Ctrl-M).

It takes some time for the brakes to engage or loosen.





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## Reverser and Combined Throttle-Brake

To move **forward** push the Wendehelb up (W), to **reverse** pull down (S). The middle position (0) is **neutral**.

The **FAHRHEBEL** is a combined **throttle** and **dynamic brake**:

Push forward to **increase** throttle (A)

Pull backwards to **decrease** throttle (D)

Above the middle (zero) position is throttle, below the middle position is dynamic brake.



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## V-soll / Tempomat (Speedcontrol) (1)

The Re 460 has a so called '**V-soll**' control.

This lever will try to keep the speed of the train to the set speed which is shown by the 'dot' on the ETCS screen.

Moving the **V-soll lever** forward (**Y**) increases the desired speed. Pulling it back (**C**) decreases it.

It is always working together with the **Fahrhebel** (regulator). Without power the train will not reach V-soll. Too much power might overshoot the V-soll speed. It takes gentle handling to make it a smooth ride.





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## Mirrors, Sander, Horn

The **MIRRORS** can be deployed / closed by pressing Ctrl-S.

The **SANDER** (X) is located on the left control arm. It can be used to increase traction on slippery tracks.

The **HORN or TYPHON** (B) is located on the right control arm.



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## Wachsamkeitskontrolle

The Re 460 has a **deadmans safety** system which is like a distance-distance **SIFA**. When the system is switched on (Shift-7) it is in '**Schnellgang**' (fast mode). This is used during shunting. A warning will sound after **50 meter**. To prevent this the driver needs to press the **pedal** (Space) before that or quickly after the warning. If the driver fails to press the pedal an **emergency braking** will occur after **100 meter**.

When the speed is over 20 kmh the system goes into '**Langsamgang**' (slow mode). Now the warning sounds after **1600 meter**. The driver must move the Throttle or Trainbrake or press the pedal (Space) before 1800 meter is travelled.

When speed is over 100 kmh the system will switch to time mode. The warning comes after 30 sec. and an E-brake will occur after 35 sec.

Failing to correctly operate the Wachsamkeitskontrolle causes An audible **warning** and eventually an **emergency stop**.



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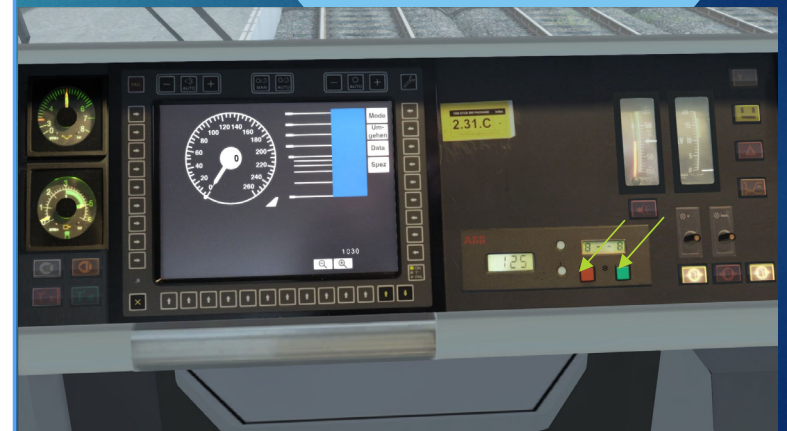


## ZUB (AWS) Zugsicherung

PZB is not used in Switzerland. The engine does have a ZUB safety system however. This TS engine has an **emulated ZUB system**.

To activate the ZUB system you need to **activate the PMS brakes first!** Then press the **green ZUB button** after starting up your engine. A test sequence will now start which at the end creates a brake test. Press the **red ZUB button** to release and activate the system.

After pressing the red ZUB button, release the brakes and re-engage the main switch to prepare for driving.



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## ZUB (AWS) Zugsicherung

When passing a signal which shows a limited speed the **ZUB light** lights up and a **buzzer** sounds. The driver needs to turn the **Zugsicherung knob** (Q) to override the warning and slow down.

When passing a **red signal** the **emergency brake** is applied instantly except when the **'manoever'** mode (Ctrl-M) is active.

When reaching **overspeed** the system also warns you by sounding an alarm which can be reset with the **ZUB button** again **after slowing down**.





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## ZUB (AWS) Zugsicherung

The ZUB display shows the next speedlimit when lower than the current limit. You need to watch the signals carefully to stay within the limits.

The system also calculates a brakecurve when the route permits. The correct working of speedwarnings and brakecurves is highly dependant on the route and will not always work correctly.

There are no routes with ZUB magnets (yet) so this system uses a mix of trackspeeds and signals.



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## Entpannung (Reset alerts)

When there is a malfunction of some sort the '**Entpannung**' light goes on.

Also in most cases a warning will be shown on the LCD screen. This will tell you why the security system kicked in.

To clear the warning state press the **Entpannung** button. The system will be reset.





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## Manoever mode

When **shunting** or needing to **pass a red light** at low speed, the driver can switch off the Zugsicherung temporarily by engaging the '**Manoever**'mode (Ctrl-M).

When active the Manoever light comes on and the **speedlimit** is now 40 Km/h. It is now possible to pass a red signal without causing an emergencybrake.

On passing a red signal in this mode the **ZUB buzzer** and light will sound 3 times.



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## Winter effects

When driving in the **winter season** there will be electric **arcing** where the Panto touches the overhead catenary wire. This will happen automatically when in motion.

There will also be a **simulated snow swirl** when you reach some speed.

These effects can be **switched off** by pressing **Ctrl-Shift-A**





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## Schedules

You can activate the iPad to show various (Swiss) schedules.

Slide the iPad screen Left-Right or Press 'F' and 'Shift-F' to activate and change.

1. Pfäeffikon – Bilten
2. Bilten – Flums
3. Walenstadt – Chur
4. Landquart – Murg
5. Murg – Landquart
6. Siebnen – Waedenswill
7. St. Margrethen – St. Gallen
8. St. Gallen – St. Margrethen
9. Erstfeld – Goeschenen
10. Goeschenen - Erstfeld



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- ▶ Have fun driving the Re 460!

If you have any further questions please press the green HELP tab on my website:

[WWW.TRAINWORX.NL](http://WWW.TRAINWORX.NL)

The Re 460 pack is available in the webshop:

<https://www.mersel.nl/product/sbb-cff-ffs-re-460/>