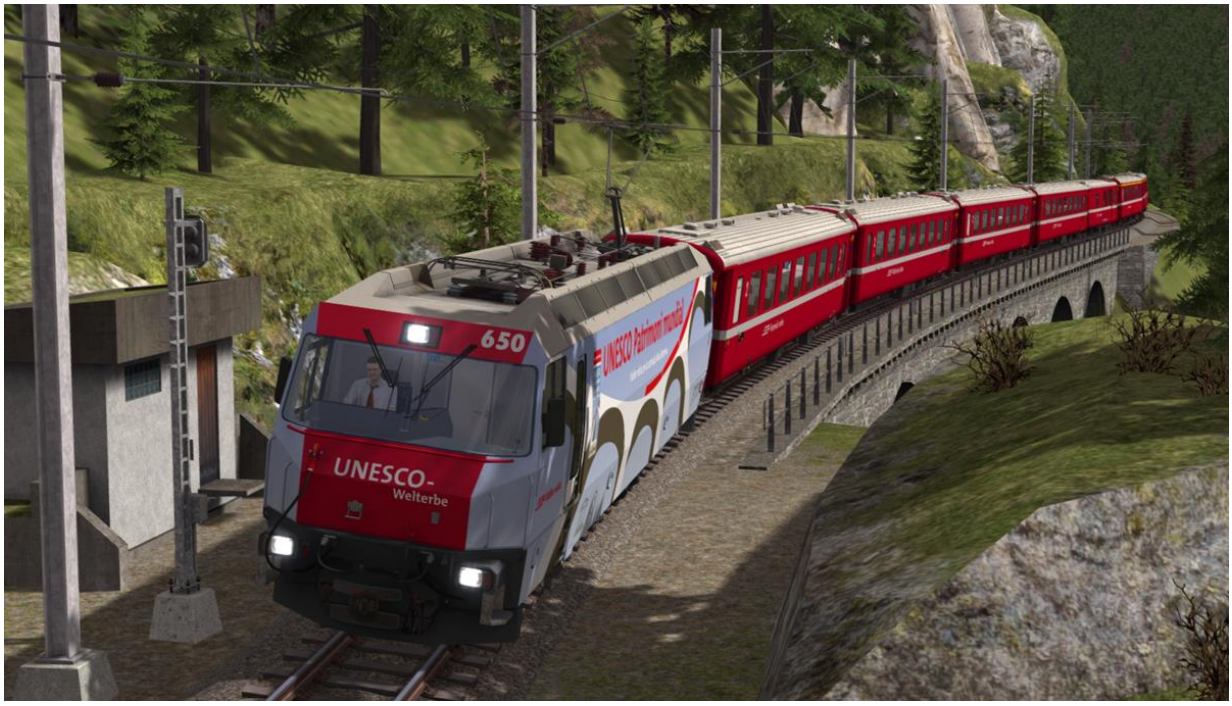
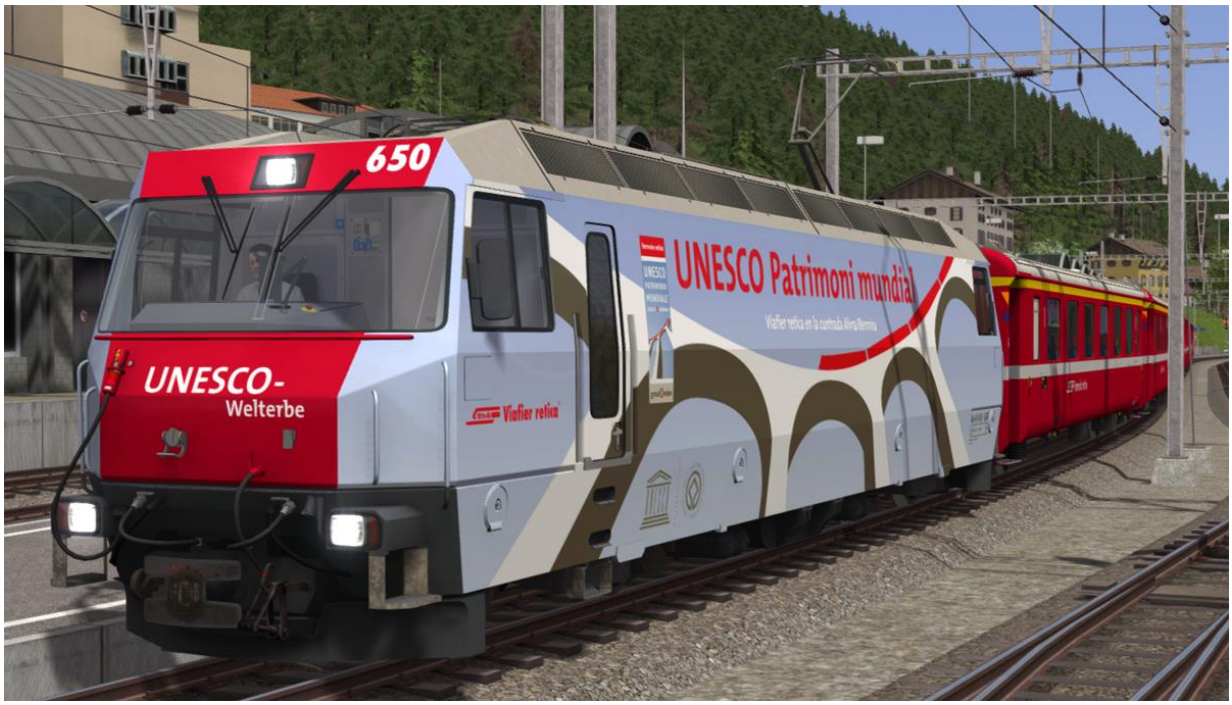
Train Simulator 2017

RhB Enhancement Pack 1





1 The Ge 4/4 III Locomotive

1.1 Locomotive History

After the opening of the Vereina Tunnel there was an increase in traffic on the RhB network. In order to deal with this increase, the Rhaetian Railway ordered new electric locomotives based upon AC technology with GTO Thyristors. The Ge 4/4 III is the third class of Swiss locomotive and railcar classification type Ge 4/4 to be acquired by the Rhaetian Railway. Ge 4/4 indicates a narrow gauge electric adhesion locomotive with four driven axles. Their control technology corresponds almost completely with that of the SBB-CFF-FFS Re 460 class of locomotive.

The first locomotive was delivered in December 1993. A further eleven locomotives were delivered between 1994 and 1999.

1.2 Design & Specification

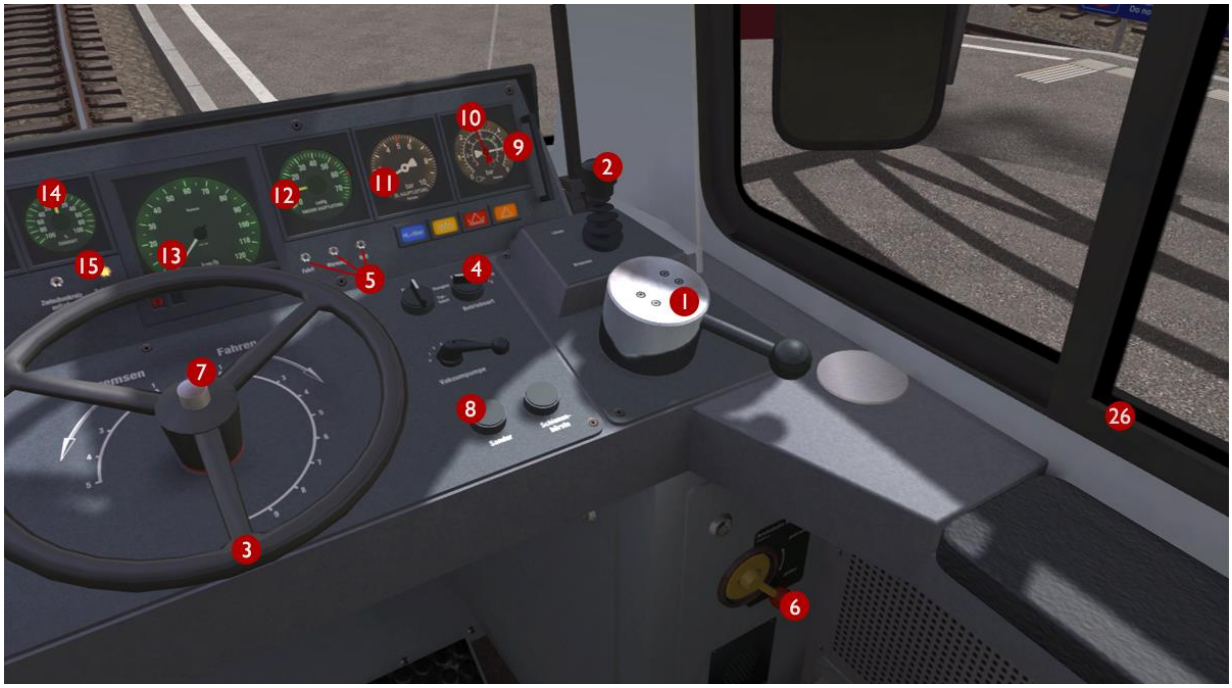
Number Range	**641 - 652**
Wheel Arrangement	Bo-Bo
Weight	62 tonnes
Length	16m
Width	2.8m
Power at Rail	3,200hp (2,400kW) at 80km/h
Max Speed	100km/h

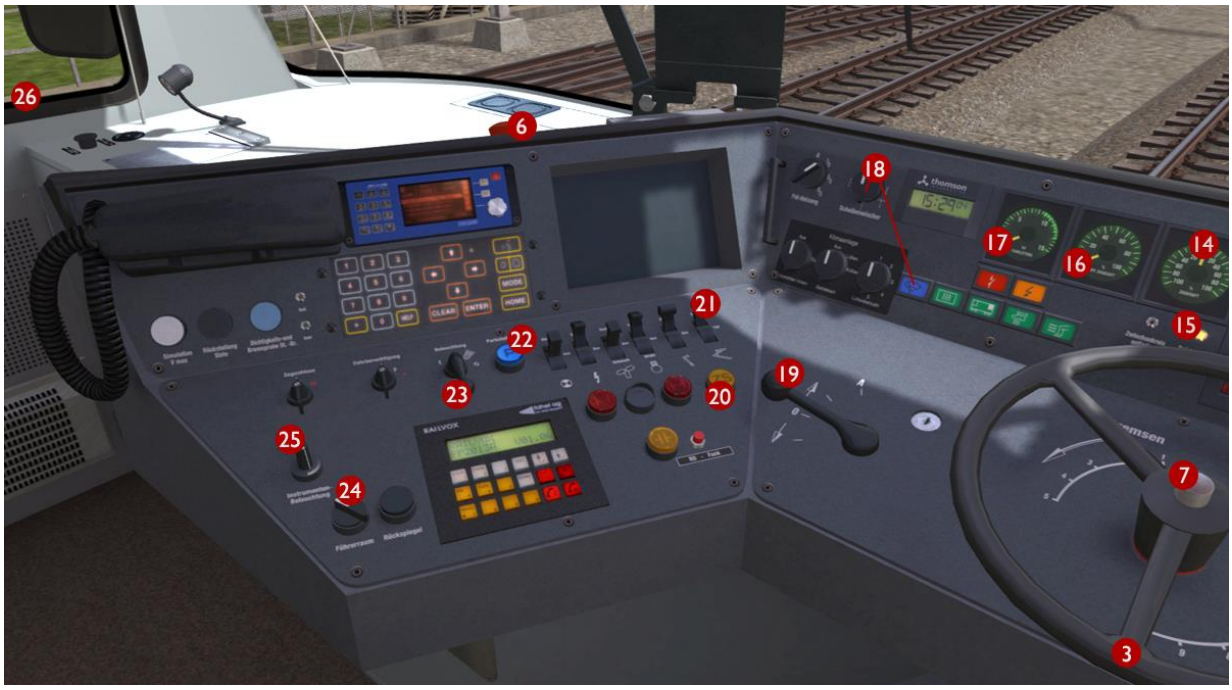
1.3 Cabin Controls - Refer to the illustrations on page 4

1	Train Vacuum Brake	14	Train Braking Force Indicator
2	Parking Brake	15	Shunting Mode Indicator Lamp
3	Driving Control Wheel	16	Differential Traction Force Indicator
4	Driving Mode Switch	17	Catenary Voltage Indicator
5	ZSI Safety System Lamps	18	Wiper Switch and Left Wiper Enable Button
6	Emergency Brake	19	Reverser
7	Warning Horn	20	ZSI Acknowledge Button
8	Sander Button	21	Pantograph Raise / Lower Switch
9	Main Reservoir Pressure Needle	22	Parking Brake Indicator Lamp
10	Brake Cylinder Pressure Needle	23	Headlight Mode Selector Switch
11	Brake Pipe Pressure Needle	24	Cabin Lights Switch
12	Vacuum Brake Pressure Needle	25	Instrument Lights Dimmer Control
13	Speedometer KPH	26	Opening Cabin Windows

1.4 Additional Keyboard Controls

L – Toggle Cab Light On / Off	**V** – Toggle Wipers On / Off
I – Increase Instrument Lights	**SHIFT**+**V** – Enable Left Wiper
SHIFT+**I** – Decrease Instrument Lights	**E** – Increase Driving Mode
Q – ZSI Acknowledge	**SHIFT**+**E** – Decrease Driving Mode





Note: controls that are not identified above have no function even if they are animated.

1.5 **Driving Mode Switch**

This locomotive is equipped with automatic speed / regulator control. The Driving Control Wheel can operate in three different modes for regulator control:

1) Shunting (Rangier)

2) Speed Control (Strecke)

3) Speed Control Half Power (Leistung 1/2)

When the operation mode is set to Shunting the "Betriebsart Rangier" desk indicator (15) illuminates. This mode should be used for all shunting and coupling operations to enable slower speed control as it provides linear regulator control from the Driving Control Wheel.

When Speed Control is selected it converts the Driving Control Wheel to a speed select mode. In this mode the power is automatically controlled to accelerate the locomotive up to, and maintain the selected speed. This system is not connected to the brakes and cannot slow the train down, you must manually control the brakes.

Half Power mode operates the same as standard speed control but applies only fifty percent of the power. This mode should be used when travelling without wagons or coaches. It can also be useful while travelling downhill.

1.6 **Driving Control Wheel**

The wheel is divided into two zones - Bremsen and Fahren. The Bremsen zone controls the locomotive only brake in all operation modes. The Fahren zone operates differently depending on the current position of the Driving Mode Switch as explained above. Power and locomotive brakes are both off while the wheel is in the centre position.

1.7 **ZSI-90 Safety System**

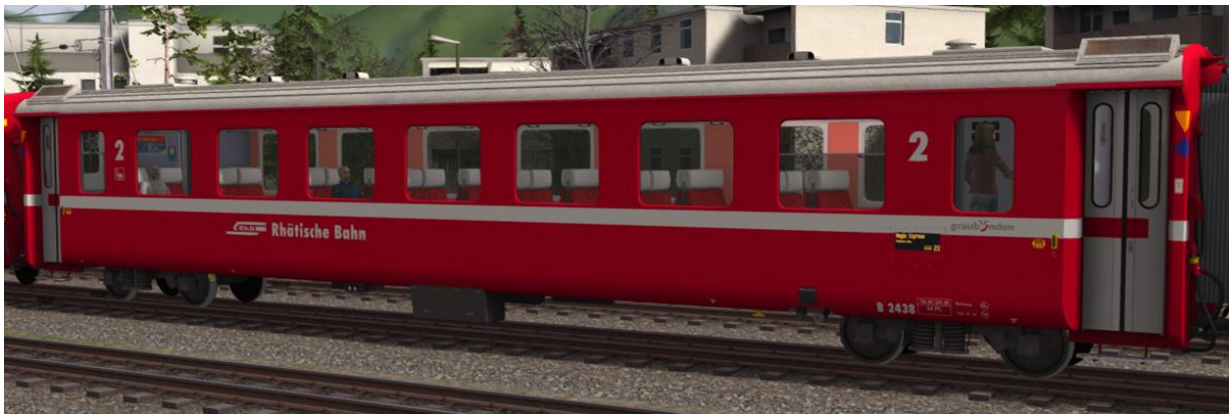
You are alerted by the ZSI safety system when you pass a distant signal (Vorsignal) that is displaying a warning. The ZSI Acknowledge Button and ZSI Warning Lamp will start to flash accompanied by an audio beep. You must press the ZSI Acknowledge Button immediately otherwise the emergency brakes will be applied automatically. Once pressed there will be five further lamp and audio alerts to remind you that you are driving under a distant signal caution. ***A ZSI alert will also be activated when you pass a main signal displaying Aspect 6 (Short Journey – Expect Obstruction)***.

1.8 **Running Number**

The locomotive supplied with this pack is number 650 and is branded with a Unesco design.

2 EWII Type Passenger Coaches

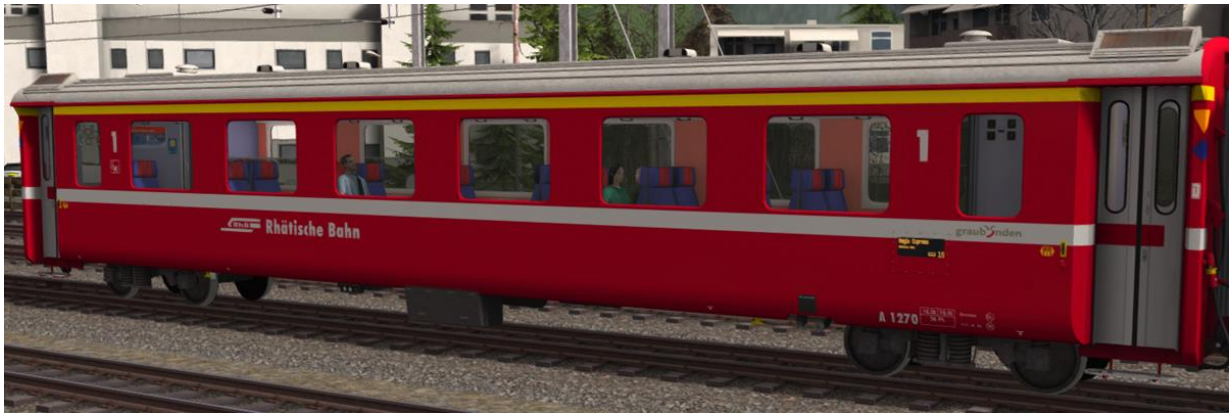
2.1 Second Class (B) Coach with Passenger View



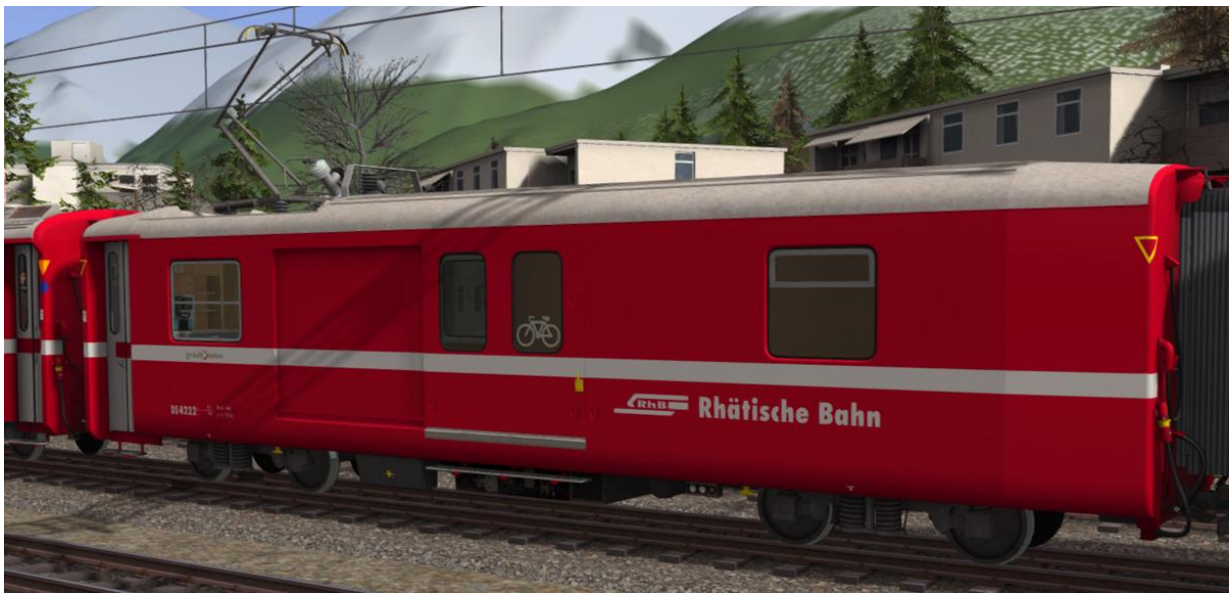
This coach includes a passenger view. This view is accessible during a scenario by pressing "5" on the keyboard or by selecting the Passenger View button on the F4 HUD as shown below:

If there are multiple vehicles with passenger views in the train then you can move between passenger views using the Next Vehicle and Previous Vehicle buttons as shown below:

2.2 First Class (A) Coach



2.3 **Baggage Coach**



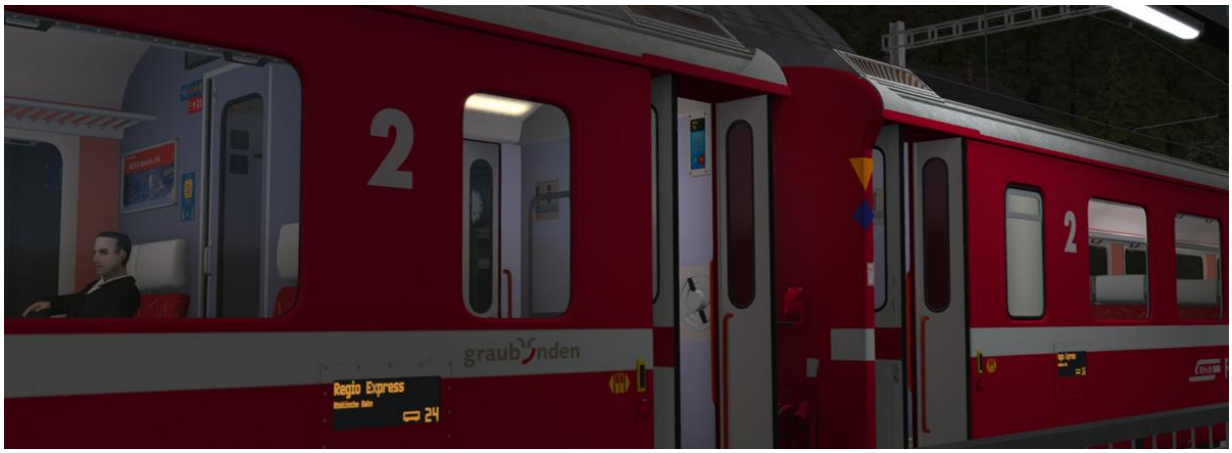
The baggage coach features a dynamic pantograph that is compatible with our Albula Line route that is available to purchase separately. When run on our Albula Line, the pantograph will raise and lower with the overhead catenary wires in the same way as the Ge 4/4 iii locomotive does. The baggage coach can be placed anywhere in a train in either orientation as it will automatically calculate when to move the pantograph.

When used in an AI train the pantograph will remain down in the stowed position.

2.4 **Interior Coach Lighting and Opening Windows**

Interior lighting is activated by illuminating the locomotive headlights. If the locomotive headlights are turned off then the coach lighting is deactivated and any open windows are closed.

When interior lighting is active, windows are also randomly opened based on an intelligent system that takes season, time of day and weather conditions in to account. If it is cold, wet or late at night then windows will be closed. However, if it is a pleasant day then each coach in the train will have different windows opened by varying amounts at random.



2.5 **EWII Destination and Coach Number Displays**

If you wish to make use of the coaches in your own scenarios, it is possible to customise the Destination Display and Coach Number during the creation of a scenario.

In order to display a specific destination and coach number, the correct value must be entered into the vehicle properties window. This number consists of a 7 digit value containing both numbers and a letter. This is possible with EWII A and B coach variants. It is not used for the baggage coach as this does not feature LED screens.

The 7 digit value is arranged like so: **VVVVCCD**

VVVV = the Vehicle number (the white number displayed on the side of the coach)
CC = the Coach number (the two digit coach number displayed on the LED screens)
D = the Destination (the destination text displayed on the LED screens)

Example shown above: 242510T *(where "T" is for Thusis) – see valid destinations below:*

A **Bergün/Bravuogn** (Northbound Stops)
B **Bergün/Bravuogn** (Southbound Stops)
C **Chur**
D **Davos**
E **Filisur** (Northbound Stops)
F **Filisur** (Southbound Stops)
G **Brig**
N **Samedan**
S **St. Moritz**
T **Thusis**
W **Regio Express**
X **Reserved**
Z **Zermatt**

U **Blank Display –** *This will also remove passengers from the interior*

These destinations have been provided for creating scenarios on our Albula Line route that is available to purchase separately.

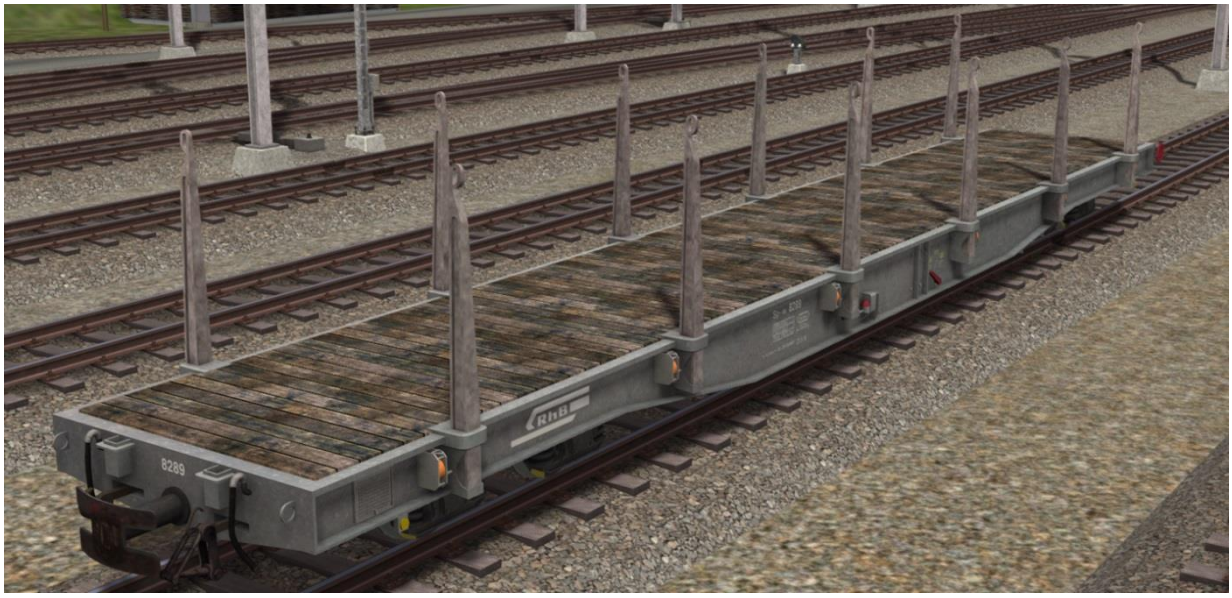
3 Wagons

3.1 **Za Tank Wagons**

The Za Tank Wagons include a passenger view (Handbrake Platform View). This view is accessible during a scenario by pressing "5" on the keyboard or by selecting the Passenger View button on the F4 HUD as shown below:

If there are multiple vehicles with passenger views in the train then you can move between passenger views using the Next Vehicle and Previous Vehicle buttons as shown below:

3.2 **Sp-w Flatbed Wagons**



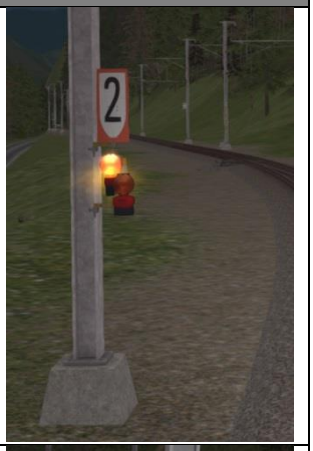
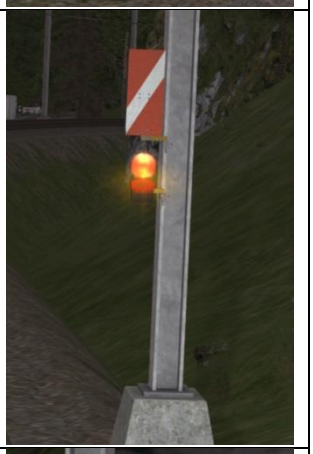
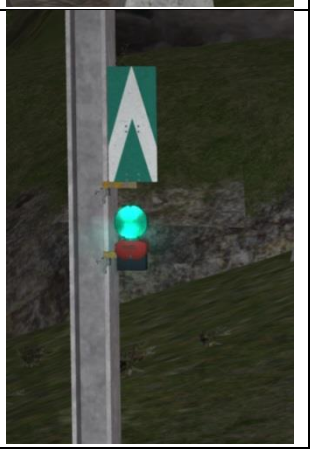
3.3 **Animated Handbrakes**

All supplied wagons feature animated handbrake levers that can be viewed operating when you apply and release vehicle handbrakes using the F4 HUD.

4 Temporary Speed Restrictions

4.1 **Temporary Speed Signs**

Temporary speed restrictions are imposed when track maintenance or construction is taking place for example. There are three main types of trackside signs installed to provide the driver with enough advanced warning to reduce the train speed. These are explained below:

Advance Speed Warning Sign	The specified number on this sign ×10 indicates the permissible speed in km/h that must be achieved before reaching the Speed Restriction Commencement Sign.	
Speed Restriction Commencement Sign	This marks the start of the speed restriction. Your train must have reduced speed to that advised at the previous Advance Speed Warning Sign before passing this sign.	
End of Speed Restriction Sign	This sign indicates that the driver can return to the normal line speed prior to the speed restriction once the rear wagon or coach has passed this sign.	

4.2 **Flashing Lamps**

All speed restriction signs have flashing lamps fitted with light detectors. When light levels fall in the evening the lamps are automatically switched on. In the morning these lamps turn off when light levels increase and signs are visible during the day.

The signs included with this pack have seasonal activation times preset as follows:

Season	Evening Switch On	Morning Switch Off
Spring	17:30	07:15
Summer	20:30	05:45
Autumn	18:45	07:45
Winter	15:45	08:30

4.3 **Temporary ZSI Safety System Magnets**

A temporary magnet is installed prior to the Advance Speed Warning Sign. The distance between the magnet and the sign is determined by the permissible speed on the approach to the sign and the sighting distance at each location.

When the locomotive travels over the magnet a ZSI Safety System Warning is triggered in the same way as when you pass a distant signal (Vorsignal) that is displaying a warning. The ZSI Acknowledge Button and ZSI Warning Lamp will start to flash accompanied by an audio beep. You must press the ZSI Acknowledge Button immediately otherwise the emergency brakes will be applied automatically. Once pressed there will be five further lamp and audio alerts to remind you that you are driving under a caution.

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6 Acknowledgements

We would like to thank the Rhaetian Railway for their assistance in developing this product and for permission to use their branding.

We also wish to thank the Dovetail Games third party partner team and beta testers for their help and support.

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