Introduction

Congratulations! You have purchased the TrainworX Re 620 pack (V5.0). Please take the time to read this manual before driving off in your new engine. This V5 add-on is a major upgrade which makes it compatible with Rivet Games Gotthardbahn. I hope you like the product and have many hours of fun with it. This add-on is officially licensed by SBB CFF FFS in Bern Switzerland. For more information and updates please visit : www.trainworx.eu and follow / like our Facebookpage : https://www.facebook.com/TrainworXforTrainsimulator

Special thanks

I want to express special thanks to some people without whom this product never would have seen the light. First off all many thanks to Chris Longhurst (www.christrains.com) who has helped numerous times during the building process. Thanx Chris! Secondly I want to thank Bruno Lämmli (http://www.lokifahrer.ch/) for his consults on Re 4/4 details and controls. Bruno made it possible to make the cab and controls as near as possible to the original engine. Merci Bruno! And last but not least I need to thank my testers: Fredi Stierli, Henk van Willigenburg and Leandro Ragaz. These guys have helped me by testing (and positively criticizing) my work time and time again. On ZUB I worked closely together with Rivet's Alan Thompson and also received a lot of help from the guys at 'Freunde der Re 6/6' https://www.facebook.com/groups/21646419753/. Special thanks to Michel Huber for his help with the ZUB system Danke Schön!

Installation

The zip file contains an installer for Trainsimulator 20XX, this manual and EULA. Please read the EULA carefully before installing this software. This software is PAYWARE and may not be redistributed in any way or form without written consent from the author (TrainworX).

1. Unpack the zip file
2. Start the installer : TwX_RE620_vXX.exe_installer.exe. The XX is the current version.
3. Your new assets will now be installed in the 'TrainworX' assets folder and the manual in the Manuals folder.
4. If you want to use these engines in your scenario please make sure you activate 'TrainworX-TwX_RE620' in the assets box (on the right)

Notes for installation

- *You need to be connected to the internet*
- *You need the activation code that you can find in your account (xxxxxx-xxxxxx-xxxxxx-xxxxxx-xxxxxx-xxxxxx)*
- *If the activation does not succeed please switch off any software that might block the connection*
- *You DO NOT need to re-download the software if the installation fails, please fix above and retry*
- *You need to first unpack the zipped files before commencing installation*
- *If the installer can't find the Railworks folder please make sure that the Windows Registry correctly points to the Railworks folder. This situation normally only happens when you have manually moved your Steam environment to another PC or Harddrive. You should always install Steam to the new location to fix the registry.*

Included versions

This pack includes **14** versions of the Re 6/6 and 620:

Re 6/6 11604 'Faido'

Re 6/6 11613 'Rapperswil' green

Re 6/6 11613 'Rapperswil' red

Re 6/6 11613 'Rapperswil' red weathered

Re 6/6 11622 'Suhr' red

Re 6/6 11626 'Zollikofen' with Ae 6/6 striping

Re 6/6 11646 'Bussingny' with old lights

Re 6/6 11183 'Amsteg-Silenen' red

Re 620 003 'Schweiz' Railadventure

Re 620 026 'Zollikofen' SBB Cargo

Re 620 042 'Monthey' SBB Cargo

Re 620 042 'Monthey' SBB Cargo weathered

Re 620 087 'Bischofszell' SBB Cargo

Re 620 088 'Linthal' Xrail

NOTE: The 11622 –and 620 042 are also available as AI traffic with front panto raised. These can be used in (AI) double traction consists as front engine.

NOTE: If the Re 620 or 6/6 have (RG) added to their name, the version is Rivet Games compatible.

Controls

The pack comes with a fully functional Cab. This is the original Re 6/6 cab (no ETCS). **A quick guide is included with this install, please read it!** The cabs are not always correct for the engine number. Below you can find an explanation of the controls:

Nr.	English	German
1	Left Wiper	Wischer links
2	Right Wiper	Wischer rechts
3	Trainbrake	Zugbremse
4	Enginebrake	Locobremse
5	Sander	Sand
6	Speedometer	Geschwindigkeitsanzage
7	ZUB display	ZUB anzeige
8	ZUB (AWS) Red button	ZUB Taste Rot
9	Servicelights	Dienstbeleuchtung
10	Compressor	Kompressor
11	Main switch	Hauptschalter
12	Panto up/down	Pantograf ab/zu
13	Highbeam	Fernlicht
14	Warninglight wheelslip	Schleuderlampe
15	Light 'Stufenschalter'	Stufenschalterlampe
16	ZUB Manouver switch (overrule AWS, max speed 40km/h)	Manoever Schalter
17	Instrumentlights	Instumentenlicht
18	Reverser	Wendeschalter
19	Horn	Zugpfiff
20	Combined Regulator/Dynamic brake	Fahrhebel (Rekuperations Bremse)
21	AWS acknowledgement (ZUB)	ZUB sicherungs freigabe
22	Frontlight switch 1 (White-Off-Red-Off)	Stirnlicht 1 (Weiss-Aus-Rot-Aus)
23	Frontlight switch 2 (White-Off-Red-Off)	Stirnlicht 2 (Weiss-Aus-Rot-Aus)
24	Frontlight switch 3 (White-Off-Red-Off)	Stirnlicht 3 (Weiss-Aus-Rot-Aus)
25	Cablight	Fuehrerstandlampe
26	Schedulelight	Fahrplanlampe
27	Shades	Rollos
28	Handbrake	Handbremse
29	Control Current	Steuerstrom
30	Vigilancepedal	Wachsamkeitskontrollepedal
32	Mirror pedal	Spiegel Pedal
35	ZUB (AWS) Green Button	ZUB Taste Gruen
39	ZUB warninglight	ZUB warnungslampe

Use US international keyboard setting

Keyboard controls:

KeyMapping SBB CFF FFS Re 620 - CreativeworX

Function	Funktion	Group			QWERTY	AZERTY	Action	Aktion
AWS/ZUB	Zugbeeinflussung	Safety			Q	Q	Acknowledge	Betätigung
AWS/ZUB	Zugbeeinflussung	Safety		Shift	Q	Q	Free from restriction	Freigabe
Cabinelight	Fuehrerstandlampe	Lights			L	L	Forward-ON	Vorwärts-EIN
Combined Throttle D-Brake	Fahrschalter (Rekuperationsbremse)	Drive			A	A	Forward	Vorwärts
Combined Throttle D-Brake	Fahrschalter (Rekuperationsbremse)	Drive			D	D	Backward	Rückwärts
Compressor	Kompressor	Electric		Shift	Apostrophe (')	Ä	ON-AUTO-OFF	EIN-AUTO-AUS
Driving Current	Steuerstrom	Electric		Shift	S	S	ON-OFF	EIN-AUS
Emergency Brake	Notbremse	Brakes			Backspace	Backspace	ON	EIN
Enginebrake	Rangier(Zug)bremse	Brakes			Hook right (])	+~	Increase	Mehr
Enginebrake	Rangier(Zug)bremse	Brakes			Hook left ([)	Ü	Decrease	Weniger
Handbrake	Feststellbremse	Brakes			Slash (/)	-	ON-OFF	EIN-AUS
Highbeam	Fernlicht	Lights			F	F	ON-OFF	EIN-AUS
Horn	Pfeife	Safety			B	B	ON	EIN
Instrumentlight	Instrumentenlicht	Lights			I	I	Forward-ON	Vorwärts-EIN
Main Switch	Hauptschalter	Electric			Z	Z	ON-OFF	EIN-AUS
Panto	Pantograph	Electric			P	P	Up-Down	Oben-Unten
Panto Arcing Override	Pantograph Blitz	Electric	Ctrl	Shift	A	A	OFF-ON	AUS-EIN
Frontlight 1	Stirnlicht 1	Lights	Ctrl		1	1	Turn CW	Linksherum
Frontlight 1	Stirnlicht 1	Lights	Ctrl	Shift	1	1	Turn CCW	Rechtsherum
Frontlight 2	Stirnlicht 2	Lights	Ctrl		2	2	Turn CW	Linksherum
Frontlight 2	Stirnlicht 2	Lights	Ctrl	Shift	2	2	Turn CCW	Rechtsherum
Frontlight 3	Stirnlicht 3	Lights	Ctrl		3	3	Turn CW	Linksherum
Frontlight 3	Stirnlicht 3	Lights	Ctrl	Shift	3	3	Turn CCW	Rechtsherum
Rearview mirror	Spiegel	Safety	Ctrl		S	S	Deploy/Fold	Aus/Einklappen
Reverser	Wendeschalter	Drive			W	W	Forward	Vorwärts
Reverser	Wendeschalter	Drive			S	S	Backward	Rückwärts
Sander	Zand	Drive			X	X	ON	EIN
Servicelights***	Dienstbeleuchtung	Lights			H	H	Forward-ON	Vorwärts-EIN
Servicelights	Dienstbeleuchtung	Lights		Shift	H	H	Backward-OFF	Rückwärts-AUS
Train Brake	Zugbremse	Brakes			Numpad +	Numpad +	Increase	Mehr
Train Brake	Zugbremse	Brakes			Numpad -	Numpad -	Decrease	Weniger
Vigilance safetly acknowlegement	Wachsamkeitskontrolle Betätigung	Safety			Space	Space	Acknowledge	Betätigung
Wiper Left	Wischer Links	Safety			C	C	OFF-SLOW-FAST	EIN-AUS
Wiper Left	Wischer Links	Safety	Ctrl		C	C	FAST-SLOW-OFF	EIN-AUS
Wiper Right	Wischer Rechts	Safety			V	V	OFF-SLOW-FAST	EIN-AUS
Wiper Right	Wischer Rechts	Safety	Ctrl		V	V	FAST-SLOW-OFF	EIN-AUS
Zug-Manoever	Zug-Manoever	Safety	Ctrl		M	M	ON-OFF	EIN-AUS

Notes:

- Press Shift-F to browse through the schedules
- The controls on the right side of the cab are also functional (Horn/Schedulelight/Cablight)

First steps

After entering the cabine you should at least take the following steps to get moving:

A) Autostart
Press **Crtl-Shift-S** to get your train ready:
- BV Hahn
- Reverser forward
- Controlcurrent
- Panto
- Main
- 15Kv
- Engine brake loose
- Deadmans safety system (Wachsam) on. Switch OFF with Shift-7

   Manually loosen trainbrakes and activate ZUB system

B) Manual start
1. Brake valve / BV Hahn open (**Shift-B**)
2. Reverser forward (or reverse)
3. Steuerstrom ON (**Shift-S**)
4. Panto UP (**P**). Toggle panto front/rear with **Shift-P**.
5. Mainswitch ON (**Z**)
6. Locobrake OFF (**[**), (default 70% on)
7. Trainbrake to 'Quick Release' **(; or ')**
8. Activate ZUB if you want

ZUB 121 System

The swiss ZUB safetysystem is simulated in this engine and reacts to the magnets on routes that have these. The system is compatible with Rivet Games's ZUB magnets. On routes wihout ZUB magnets the system will not work. The basic TS AWS system will be used instead. If you don't activate ZUB, default AWS is used. This makes it possible to drive on routes without ZUB magnets.

Activating ZUB

The ZUB system will be inactive by default. To activate it please follow the following steps:

Manually:

- Start up the engine as descibed in 'First Steps'
- Press the green button on the ZUB panel
- A test sequence will now run which ends with a simulated brake test and the red ZUB button will light up.
- Press the red ZUB button to quit the test and activate the system
- Now set the trainbrake to 'release' and re-engage the main switch

ZUB 121 will now be active.

ZUB function

The system will 'listen' to ZUB magnet information and show info on the ZUB display.

When a restricted speed is sent by a warningsignal (Vorsignal), the system will calculate a braking-curve to get to the desired speed at the next main signal (Hauptsignal). A buzzer will sound if you go over the speedcurve. Slowing down quits the buzzer. Disrespecting speedlimits will eventually cause a forced brake (Zwangsbremsung).

Driving faster than the current speedlimit will cause a buzzer to sound at +5 kmh and a forced brake at +15 kmh.

Reset a warning by turning the ZUB switch to the right (**_Q_**).

When the next main signal shows stop (halt) the braking curve is calculated to a full stop at the signal. If the signal turns green (or something else than stop), you can free yourself from the braking curve by turning the ZUB switch to the left (Shift-Q). You can drive max. 40 Km/h now until you pass the next signal.

Please note that the system is a simulation and is not exactly as in reality. We will keep working to improve it where we can but are also limited by the game engine and track.

Manöver

Pressing the 'Manöver' switch (**Ctrl-M**) will make it possible to pass red signals without SPAD or Emergency brake. You have to stay under 40 Km/h (warning). This is normally used when shunting. This is not available when country is set to D.

Wachsamkeitskontrolle

The SBB has a 'sifa' type vigilance system called 'wachsamkeitskontrolle'. This system is distance based under 100 km/h (not time based as German sifa is). Switch the system on/off by pressing **_Shift-7_**.

Speed under 20 kmh:

After 50 Meters : Audible warning

After 100 Meters : Emergencybrake with buzzer

Speed over 20 and under 100 kmh:

After 1600 Meters : Visual warning

After 1800 Meters : Emergencybrake with buzzer

Speed over 100 kmh:

The system switches to time-based measurement. Audible warning after 30 seconds. Emergencybrake after 35 seconds.

The system is reset by pressing the **_spacebar_** (Acknowledge) or by moving the regulator or trainbrakehandle.

Mirrors

The mirrors can be opened by pressing the small pedal below the SIFA pedal (**Ctrl-S**).

Winter effects

When the season is set to 'Winter' the Panto's will have an arcing effect where it touches the catenary and there will be simulated snow swirl. You can switch this off (active engine) by pressing ***Ctrl-Shift-A***.

Stufenschalter

The 'Fahrhebel' is controlling a step-switch (Stufenschalter) which regulates the power. It will take some 'getting used to' but is very close to reality. The Re 620 has 32 steps (stufen). You will hear the step-switch going through its positions. **M** will slowly increase power till 2400 amps. **+ (plus)** quickly to 2150 amps and **++ (double plus)** quickly to max power (3440 amps). The **dot** will freeze the current step, **- (minus)** will decrease power. The dynamic brake (Rekuperationsbremse) will electronically decrease the engines speed by using the same step-switch in reverse polarity up to 2250 Amps (22 steps). The **+ (plus)** increases brake, the **dot** will freeze the position and the **– (minus)** will loosen the brake.

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