Typ	Train Simulator Classic: Feature
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Preface

Dear friends of sophisticated rail simulation,

The topic of “train destination displays” has always been a concern for us in rail simulation, regardless of the name of the simulation platform. In the old MS Train Simulator, many things were static, and large numbers of vehicles were copied just so that they could be delivered with modified destination labels. In Train Simulator Classic (formerly “Railworks”), we have significantly more tools at our disposal to create a variety of different destination displays and also to change them during gameplay. But even here there are limitations.

In order to systematically exploit these limits, we have developed a system over the past few years to control vehicle-side destination displays in a standardized manner. This involves defining fixed “slots” for the most important destinations in the German local rail transport sector (local rail passenger transport, SPNV) in order to create certain conditions that allow vehicles to “understand” each other across different designs and types. The problem is also known in the real rail world in the context of push-pull train control and data transmission within trainsets. It would certainly be presumptuous to speak of a “standard” here, especially since the system is likely to undergo further dynamic development. The “regional package” system will serve as a guideline for further add-on development.

In addition, we would like to encourage all users and content creators to follow suit. This documentation is correspondingly detailed. Please do not hesitate to contact the team if you have any questions or suggestions.

TrainTeamBerlin
Berlin, December 2025

Inhaltsverzeichnis

Introduction

The **TTB regional package system** is a standardized system for vehicle-side train destination displays (ZZA) that is used in various TrainTeamBerlin vehicles. It enables the display of over 3,500 different train destinations throughout Germany and is compatible across all vehicles.

Field of application

The system is designed for German local transport vehicles and is primarily used in player-driveable vehicles. We are currently exploring the extent to which it can also be used on a larger scale in AI vehicles (computer-controlled traffic). Current areas of application:

- AI-Vehicles, including in ViererPack Vol. 2 (BR 112.1, BR 147, BR 648 etc.)
- Dosto control cars that can be driven by players (Types 760, 777, 778)
- Additional TTB vehicles in development

How to obtain the regional packages

The RegionalPakete system is not a standalone add-on for Train Simulator Classic, but rather a kind of standard according to which train destination displays for vehicles can be developed. This means that RegionalPakete will become part of vehicle development and will already be integrated there. This manual serves as documentation for all users who go beyond simply driving in the simulator and, for example, create scenarios or build their own vehicles.

Key features

- **More than 3.500 destination labels** planned in more than 50 regional packages throughout Germany
- **Standardized control** via standardized codes
- **Cross-vehicle compatibility possible** - different add-on vehicles can communicate with each other
- **Expandability without vehicle updates -** new packages can be added later if the vehicle is designed for this.
- **Multiple control methods** for maximum flexibility and gaming fun

Basic concept

The dilemma

There is a technical limitation in Train Simulator Classic: each “alphabet” of dynamically interchangeable textures can only have as many characters as there are individual characters available. Now, in the computer world, there are plenty of standardized character sets with hundreds of entries in some cases. Using the scenario editor, no more than just under 100 different characters can be attached to vehicle numbers. This would limit each “alphabet” for train destination displays to fewer than 100 displays.

The solution

The regional package system solves this limitation by dividing the data **into several thematic (regional) packages**, each containing just under 100 labels. Each package is given a unique name and covers a specific region with defined route combinations (line-destination combinations) as far as possible.

Example: For the Berlin-Brandenburg area, there are the VBB1, VBB2, and VBB3 packages, which together cover the entire VBB network.

Two-stage control

Each train destination is uniquely identified by **two values**:

1. **Regional package code** (e.g. *VBB2*)
2. **Destination code** within the package (e.g. -)

Example:
VBB2 + - = label „RB22 Potsdam Hbf"

Structure and logic

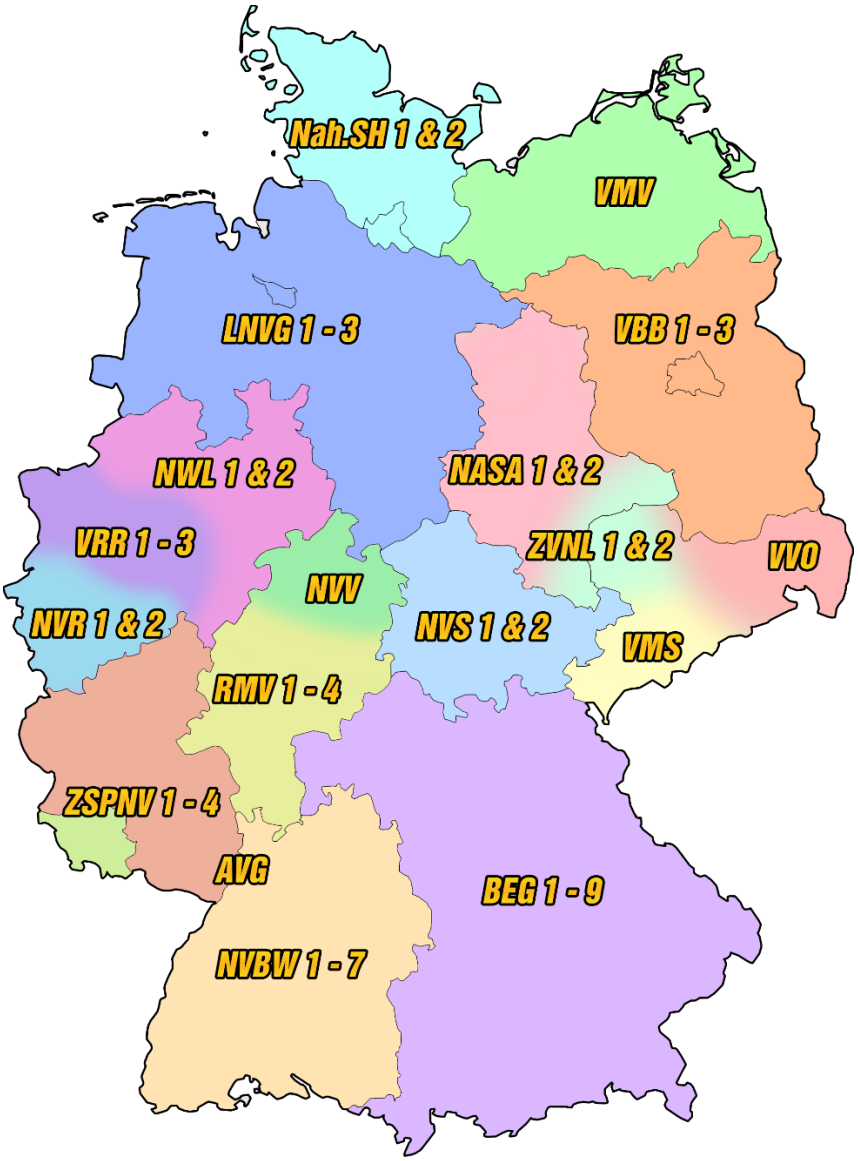
Package structure

Each regional package is named after the responsible transport association or authority:

Table 1: Example networks for line-destination combinations of individual regional packages.

Region	Pakete	Beispiele
Berlin/Brandenburg	VBB1 – VBB3	Networks Prignitz and Netz Elbe-Spree
Mecklenburg-Vorpommern	VMV	S-Bahn Rostock, Rügen Island
Nordhessen	NVV	Net Kurhessenbahn, RegioTram Lines Kassel

The rough distribution of packages across Germany can be seen on the following map.



Picture 1: Distribution of regional packages.

Target slot logic

Line-specific target slots are defined within the packages:

- The same destinations may occur multiple times (different lines)
- Some historical/discontinued lines and candidates for reactivation are included
- Some special destinations such as the “Biberbahn,” “Baumblüten-Express,” etc.

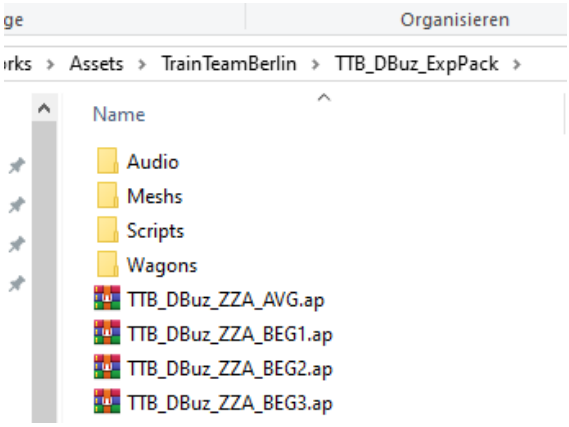
Fixed slots in all packages:

- Empty destination sign
- „Sonderzug"
- „Nicht einsteigen"
- „RegionalBahn“
- „RegionalExpress“
- „Ersatzzug“

Technical implementation

File system:
/Assets/TrainTeamBerlin/TTB_TRAXX3_KI/
- TTB_Traxx3_ZZA_VBB1.ap
- TTB_Traxx3_ZZA_VBB2.ap
- TTB_Traxx3_ZZA_VMV.ap

The destination displays of a regional package are compressed into a compact .ap archive. This prevents clutter in the file system and allows the vehicle script to quickly and automatically detect which packages are installed.



Picture 2: Screenshot of a vehicle folder containing multiple regional packages.

An overview of the target slots for the available regional packages can be found in the appendix to this documentation.

Control

The regional package system offers four different control methods:

1. By player-controlled vehicles

In passenger vehicles such as the Dosto control car, the ZZA is controlled via the IBIS system:

- IBIS data contains the appropriate regional package and destination codes for each train route
- Appropriate switching of the destination display when new IBIS data is entered

2. Parameters in vehicle number

For AI vehicles and train sets without a controlling locomotive, parameters can be attached directly to the vehicle number:

Syntax

<Fahrzeugnummer>_RP=<RegionalPackage-Code>_ZZA=<DestinationCode>

Examples (see also Destination Slots in Appendix)

Example 1: RB22 to Potsdam Hbf
Vehicle number: 112_108-6_RP=VBB2_ZZA=-

Example 2: RE1 to Frankfurt (Oder)
Vehicle number: 143_245-7_RP=VBB1_ZZA=9

Example 3: S1 to Warnemünde
Vehicle number: 147_013-5_RP=VMV_ZZA=X

Note: The parameters are read at the start of the game and automatically removed from the vehicle number so that the serial number retains its standardized length for dynamic display.

Note: In the scenario editor, the result **is not yet visible** after appending the parameters to the vehicle number, but only when the game starts.

3. ConsistMessage-API

For add-on developers: The TDD can be controlled via ConsistMessages, even by third-party locomotives.

API Functionality

ConsistMessage-Argument	Function
„SetRp=<r>“	*Select the regional package with the abbreviation <r> and change the train destination according to the currently selected destination code.*
„SetZza=<z>“	*Select the destination slot <z> and change the train destination according to the currently selected regional package.*
„SetZzaUp“	*Switches to the next destination within the regional package.*
„SetZzaDown“	*Switches back one destination within the regional package.*

For all regional package controls, messages within the train formation must be sent with the **ID 2020020801**.

Code Example

```lua
-- Set Regional package to VBB2 setzen
Call( "SendConsistMessage" ,2020020801, "SetRp=VBB2", 1 );

-- Set Destination Code to "-" (RB22 Potsdam Hbf)
Call( "SendConsistMessage" ,2020020801, "SetZza=-", 1 );

-- Switch to next destination sign
Call( "SendConsistMessage" ,2020020801, "SetZzaUp", 1 );
```

4. Scenario-Script

For advanced scenario builders: The TDD can be controlled at runtime using **Lua scripts**.

Advantages:

- Dynamic switching possible during gameplay
- Can also be used for AI trainsets
- Enables complex scenario logic

Basic principle:

Vehicles equipped with regional packages have two control values in the vehicle blueprint: **SetZzaRegionalPackage** and **SetZzaCode**. Both are 0 during the game, but can be set by the scenario script to effect a switch.

To do this, the IDs of the packages must be used instead of the regional package abbreviations (e.g., “VBB1”), and the numerical representation of the slots must be used instead of the destination codes (see appendix).

Code Example : *Setting the TDD for a train consisting of a locomotive and two cars via scenario script.*

```lua
-- Vehicle numbers of the trainset
local vehicleNumbers = {}
vehicleNumbers[1] = "112_108-6" -- Engine
vehicleNumbers[2] = „50_80_25-04_137-9“ -- Wagon
vehicleNumbers[3] = „50_80_36-33_018-3“ – Control car

for i=1, 3 do
-- Set TDD to “RB13 B.-Jungfernheide“: RP „VBB2“, TDD „M“
-- Change regional package
SysCall( vehicleNumbers[i] .. ":SetControlValue", "SetZzaRegionalPackage", 0, 4 )  -- VBB2
-- Set destination code (numerical)
SysCall(trainId .. ":SetControlValue", "SetZzaCode", 0, 13 ) – Slot 13 = “M”
end
```

The control can be linked to any triggers and conditions available in the scenario script.

Appendix: Regional packages and Destination codes

The following pages provide an overview of the regional packages, control codes, and target assignments.

Name	ID	Abbr.	Target count	Description
KTV	01	RWKB	88	Köblitzer Bergland / Brennitzer Linienstern
VMV	02	VMV	88	Mc Pomm
VBB	03	VBB1	88	V.a. RE
VBB	04	VBB2	86	V.a. RB-EMU
VBB	05	VBB3	86	V.a. RB-DMU
NASA	06	NASA1	88	
NASA	07	NASA2	84	
VVO/ZVOE	08	VVO	88	Inkl. S Dresden
VMS	09	VMS	88	
ZVNL	10	ZVNL1	88	V.a. S-Leipzig und RB vor MDSB
ZVNL	11	ZVNL2	76	V.a. MDSB
NVS	12	NVS1	88	Thüringen Teil 1
NVS	13	NVS2	88	Thüringen Teil 2
NahSH	14	NahSH1	88	
NahSH	15	NahSH2	88	HVV/Nah.SH2, u.a. inkl. AKN
LNVG	16	LNVG1	88	inkl. RS Bremen
LNVG	17	LNVG2	~~88~~	
LNVG	18	LNVG3	88	inkl. S Hannover
NVV	19	NVV	86	Kassel & Umgebung inkl. RegioTram
RMV	20	RMV1	88	Mit S-Bahn Frankfurt
RMV	21	RMV2	88	
RMV	22	RMV3	88	
RMV	23	RMV4	47	
ZNWL	24	NWL1	88	
ZNWL	25	NWL2	86	
VRR	26	VRR1	82	Inkl. S-Bahn Rhein-Ruhr
VRR	27	VRR2	88	
VRR	28	VRR3	87	
NVR	29	NVR1	88	Mit S-Bahn Köln
NVR	30	NVR2	84	
ZSPNV	31	ZSPNV1	88	
ZSPNV	32	ZSPNV2	88	
ZSPNV	33	ZSPNV3	84	
ZSPNV	34	ZSPNV4	86	Inkl. ZPS
AVG	35	AVG	88	Stadtbahn Karlsruhe
NVBW	36	NVBW1	88	AVG, S-Bahn Rhein-Neckar, R-S-Bahn Ulm
NVBW	37	NVBW2	88	
NVBW	38	NVBW3	88	
NVBW	39	NVBW4	75	
NVBW	40	NVBW5	88	
NVBW	41	NVBW6	88	

NVBW	42	NVBW7	55	Mit S-Bahn Stuttgart
BEG/M	43	BEG1	88	
BEG	44	BEG2	88	
BEG	45	BEG3	88	Mit S-Bahn Nürnberg
BEG	46	BEG4	88	
BEG	47	BEG5	88	
BEG	48	BEG6	88	Mit S-Bahn München
BEG	49	BEG7	88	
BEG	50	BEG8	88	
BEG	51	BEG9	86	
SDZ	52	SDZ	0	*Museumsbahnen / Sonderzüge, die noch nicht bedacht sind (bspw. S21 Berlin)*
FV	53	SPFV	0	*Fernverkehr (soweit mit Regio-Fahrzeugen/ZZA oder relevant für dieses System)*

Regional package: VBB1

A	RE5 Falkenberg (Elster)	**a**	RE3 Wünsdorf-Waldstadt
B	RE5 Lutherstadt Wittenberg	**b**	RE3 Berlin Gesundbrunnen
C	RE5 Rostock Hbf	**c**	RE3 Berlin Südkreuz
D	RE5 Stralsund Hbf	**d**	RE3 Berlin Hbf
E	RE5 Neubrandenburg	**e**	RE9 Berlin Schönefeld Flughafen
F	RE5 Jüterbog	**f**	RE9 Flughafen Berlin-Brandenburg BER
G	RE5 Halle (Saale)	**g**	RE9 Berlin Südkreuz
H	RE5 Berlin Gesundbrunnen	**h**	RE9 Berlin Hbf
I	RE5 Berlin Südkreuz	**i**	RE7 Belzig
J	RE5 Berlin Hbf	**j**	RE7 Berlin Ostbahnhof
K	RE4 Luckenwalde	**k**	RE7 Berlin Wannsee
L	RE4 Ludwigsfelde	**l**	RE7 Dessau
M	RE4 Jüterbog	**m**	RE7 Wünsdorf Waldstadt
N	RE4 Wismar	**n**	RB22 Michendorf
O	RE4 Wittenberge	**o**	RB22 Potsdam Hbf
P	RE4 Lutherstadt Wittenberg	**p**	RB22 Berlin Schönefeld
Q	RE4 Falkenberg (Elster)	**q**	RB Lutherstadt Wittenberg
R	RE4 Rathenow	**r**	RB Leipzig Hbf
S	RE4 Stendal	**s**	RB Bitterfeld
T	RE4 Schwerin Hbf	**t**	RE2 Wittenberge
U	RE4 Berlin-Spandau	**u**	RE2 Ludwigslust
V	RE4 Berlin Hbf	**v**	RE2 Schwerin Hbf
W	RE4 Berlin Südkreuz	**w**	RE2 Bad Kleinen
X	RE3 Stralsund Hbf	**x**	RE2 Wismar
Y	RE3 Schwedt (Oder)	**y**	RE6 Berlin Gesundbrunnen
Z	RE3 Elsterwerda	**z**	RE6 Berlin Jungfernheide
0	RE1 Magdeburg Hbf	**:**	RE6 Berlin-Spandau
1	RE1 Burg (bei Magdeburg)	**;**	RE6 Hennigsdorf
2	RE1 Wusterwitz	**@**	RE6 Neuruppin Rheinsberger Tor
3	RE1 Brandenburg Hbf	**!**	RE6 Neuruppin West
4	RE1 Potsdam Hbf	**„**	RE6 Pritzwalk
5	RE1 Berlin Zoologischer Garten	**$**	RE6 Wittstock (Dosse)
6	RE1 Berlin Hbf	**%**	RE6 Wittenberge
7	RE1 Berlin Ostbahnhof	**&**	RB55 Hennigsdorf
8	RE1 Fürstenwalde (Spree)	**(**	RB55 Velten
9	RE1 Frankfurt (Oder)	**)**	RB55 Kremmen
+	RE1 Eisenhüttenstadt	**?**	[derzeit leeres Schild]
-	RE1 Cottbus	**{**	[derzeit leeres Schild]
*	RE2 Cottbus	**}**	[derzeit leeres Schild]
/	RE2 Lübbenau (Spreewald)	**[**	Nicht Einsteigen
=	RE2 Lübben (Spreewald)	**]**	Ersatzzug
_	RE2 Königs Wusterhausen	<	Sonderzug
#	RE2 Berlin Ostkreuz	>	[leeres Schild]
‘	RE2 Berlin Ostbahnhof	|	RB
~	RE2 Berlin Zoologischer Garten	\	RE
.	RE2 Berlin-Spandau	^	Usedom-Express
,	RE2 Nauen	`	DB Regio Nordost

Regional package: VBB2

A	RB10 Nauen	**a**	RB32 Ludwigsfelde
B	RB10 Berlin-Spandau	**b**	RB32 Flughafen BER Terminal 1-2
C	RB10 Berlin-Charlottenburg	**c**	RB32 Oranienburg
D	RB10 Berlin Schönefeld Flughafen	**d**	RB37 Beelitz Stadt
E	RB10 Berlin Hbf	**e**	RB37 Potsdam-Rehbrücke
F	RB10 Berlin Südkreuz	**f**	RB37 Berlin-Wannsee
G	RB11 Frankfurt (Oder)	**g**	RB49 Cottbus
H	RB11 Eisenhüttenstadt	**h**	RB49 Senftenberg
I	RB11 Guben	**i**	RB49 Ruhland
J	RB11 Cottbus	**j**	RB49 Elsterwerda
K	RB13 Wustermark	**k**	RB49 Falkenberg (Elster)
L	RB13 Berlin-Spandau	**l**	FEX Berlin-Charlottenburg
M	RB13 Berlin Jungfernheide	**m**	FEX Berlin Südkreuz
N	RB14 Nauen	**n**	FEX Berlin Hbf
O	RB14 Berlin-Spandau	**o**	FEX Berlin Gesundbrunnen
P	RB14 Berlin Zoologischer Garten	**p**	FEX Flughafen BER Terminal 1-2
Q	RB14 Berlin Friedrichstraße	**q**	RE8 Finsterwalde
R	RB14 Berlin Schönefeld Flughafen	**r**	RE8 Elsterwerda
S	RB14 Flughafen BER Terminal 1-2	**s**	RE8 Wünsdorf-Waldstadt
T	RB14 Königs Wusterhausen	**t**	RE8 Berlin Südkreuz
U	RB14 Lübbenau (Spreewald)	**u**	RE8 Berlin Hbf
V	RB14 Senftenberg	**v**	RE8 Flughafen BER Terminal 1-2
W	RB14 Ruhland	**w**	RE8 Berlin Ostbahnhof
X	RB19 Berlin Gesundbrunnen	**x**	RE8 Berlin Zoologischer Garten
Y	RB19 Berlin Hbf	**y**	RE8 Berlin-Spandau
Z	RB19 Berlin Schönefeld Flughafen	**z**	RE8 Nauen
0	RB19 Lübbenau (Spreewald)	**:**	RE8 Wittenberge
1	RB19 Senftenberg	**;**	RE8 Ludwigslust
2	RB20 Potsdam Hbf	**@**	RE8 Schwerin Hbf
3	RB20 Hennigsdorf	**!**	RE8 Bad Kleinen
4	RB20 Oranienburg	**„**	RE8 Wismar
5	RB21 Berlin Friedrichstraße	**$**	RE9 Berlin Hbf
6	RB21 Potsdam Griebnitzsee	**%**	RE9 Berlin-Gesundbrunnen
7	RB21 Potsdam Hbf	**&**	RE9 Angermünde
8	RB21 Wustermark	**(**	RE9 Szczecin Główny
9	RB22 Berlin Friedrichstraße	**)**	[derzeit leeres Schild]
+	RB22 Potsdam Griebnitzsee	**?**	[derzeit leeres Schild]
-	RB22 Potsdam Hbf	**{**	RB Müncheberg
*	RB22 Berlin Schönefeld Flughafen	**}**	RB Buckow
/	RB22 Flughafen BER Terminal 1-2	**[**	Nicht Einsteigen
=	RB22 Königs Wusterhausen	**]**	Ersatzzug
_	RB23 Potsdam Hbf	<	Sonderzug
#	RB23 Michendorf	>	[leeres Schild]
‘	RB24 Eberswalde	|	RB
~	RB24 Berlin Lichtenberg	\	RE
.	RB24 Lübbenau (Spreewald)	^	Kulturzug
,	RB24 Senftenberg	`	Baumblüten-Express

Regional packages: Assigning target codes to numerical control (scenario scripts)

A	1	**a**	48
B	2	**b**	49
C	3	**c**	50
D	4	**d**	51
E	5	**e**	52
F	6	**f**	53
G	7	**g**	54
H	8	**h**	55
I	9	**i**	56
J	10	**j**	57
K	11	**k**	58
L	12	**l**	59
M	13	**m**	60
N	14	**n**	61
O	15	**o**	62
P	16	**p**	63
Q	17	**q**	64
R	18	**r**	65
S	19	**s**	66
T	20	**t**	67
U	21	**u**	68
V	22	**v**	69
W	23	**w**	70
X	24	**x**	71
Y	25	**y**	72
Z	26	**z**	73
0	27	**:**	74
1	28	**;**	75
2	29	**@**	76
3	30	**!**	77
4	31	**„**	78
5	32	**$**	79
6	33	**%**	80
7	34	**&**	81
8	35	**(**	82
9	36	**)**	83
+	37	**?**	84
-	38	**{**	85
*	39	**}**	86
/	40	**[**	87
=	41	**]**	88
_	42	<	89
#	43	>	90
‘	44	|	91
~	45	\	92
.	46	^	93
,	47	`	94