

# Eloc NS Series 1100

- post 1970



# MANUAL

Version 2.1 build 20230830

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## Background

### NS series 1100 – post 1970 livery

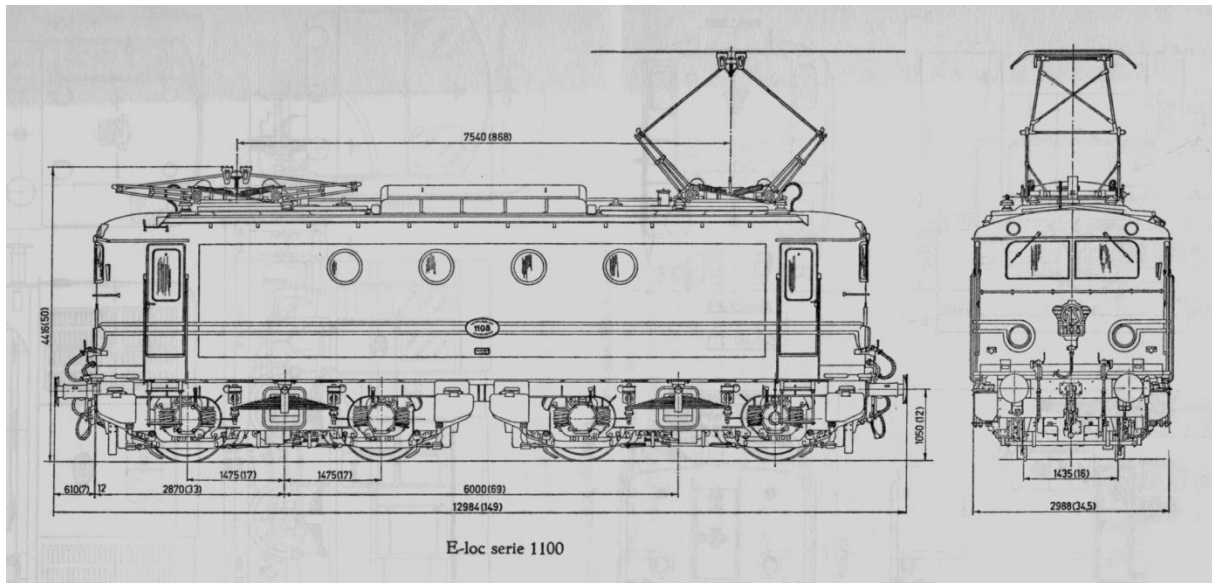
When the electrification of the NS network was resumed after the war, the need arose for a large series of mixed service electric locomotives. To meet this in the short term, 60 locomotives of the SNCF series 8100, which was in production at the time and which would appear in the Netherlands as the NS 1100 series in 1950, was ordered from Alstom in France. The first machine in the series made a test drive between Laroche and Dijon and reached a speed of 135 km/h. The last unit was delivered in 1952.

The series 1100 is a four-axle locomotive, with the body resting on two bogies. The draw and buffing gear is attached to the trucks and not, as usual, to the frame. From their home MPD in Maastricht, the machines could be seen all over the Netherlands. They could be found not only for local passenger services, but also pulling freight trains and in international services. The type was rather unpopular with their drivers due to their moderate running characteristics, so the maximum speed of the 1100s was soon limited to 110 km / h.



The first engines of the series were delivered in a turquoise livery. However, that color scheme turned out to be very sensitive to dust and dirt and was quickly replaced by 'Prussian blue'.

## Technical data



Wheel arrangement:	Bo-Bo
Continuous power:	1900 kW (2500 pk)
Max. speed:	110 km/u
L.o.a.:	12.984 m
Wheel base:	8.95 m
Trucks w/b:	2.95 m
Distance between bogie pivots:	6.0 m
Wheel radius:	0.625 m
Mass:	83 t





# Installation tips

## General

Wilbur Graphics *NS 1100 tp4* (post 1970) comes as a .zip file and includes the following items in addition to a `Readme_EN.txt`:

- Map Manuals\Wilbur Graphics with English and Dutch user manuals:

```
WG_NS_1100_tp4_Handbuch_V2_0.pdf
WG_NS_1100_tp4_Manual_V2_0.pdf
WG_NS_1100_tp4_Handleiding_V2_0.pdf
```

- installare `WG_NS_1100_tp4_V20_build_20230715.exe`

After launching the installer, you will be prompted to

- Select a language for the installer (Dutch/English/French/German)
- Accept the License Terms (EULA)

See the `release notes.txt` for the latest changes and improvements.

## Other tips

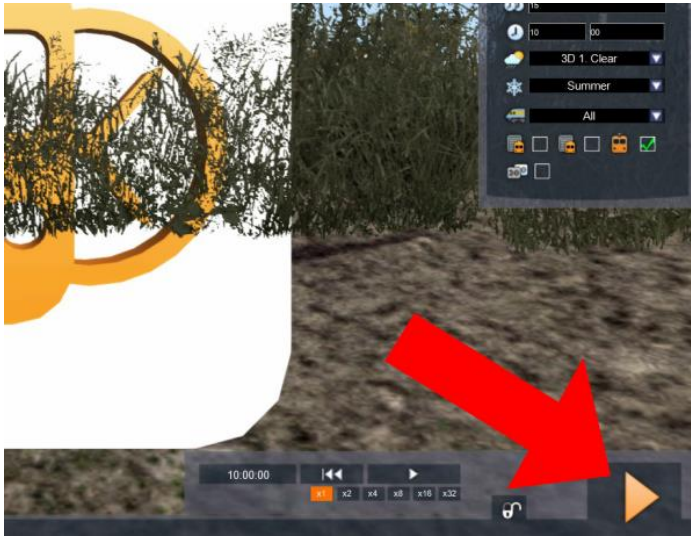
- The .zip file must be fully unpacked before you can begin the installation.
- If the installation software cannot find the Railworks folder on your system, the reference to this folder in the Windows registry may no longer be valid. This situation occurs if you have moved the Steam environment to another computer or disk drive. You solve this by repeating the installation of Steam.

## Retro Canvas Route

After installing this release, the following window may appear at the start of a scenario ('Broken Consist'):



You can solve this simply by clicking on the EDIT box. TS Classic now starts the Scenario Editor. The following screen will then be displayed:



All you have to do is click the DRIVE button, at the bottom right corner of the screen. The SE will request a confirmation:



Click YES and the scenario will just start now as well as in future.

# Rolling stock

## NS 1100 (post 1970)



## TS Object Browser Index

Scenario Editor	Folder	Object ID
WG NS 1123 tp4	Rollend mat	WG_NS_1123
WG NS 1134 tp4	Rollend mat	WG_NS_1134
WG NS 1143 tp4	Rollend mat	WG_NS_1143
WG NS 1134 tp4 (unpow.)	Rollend mat	WG_NS_1100_tp4_dummy

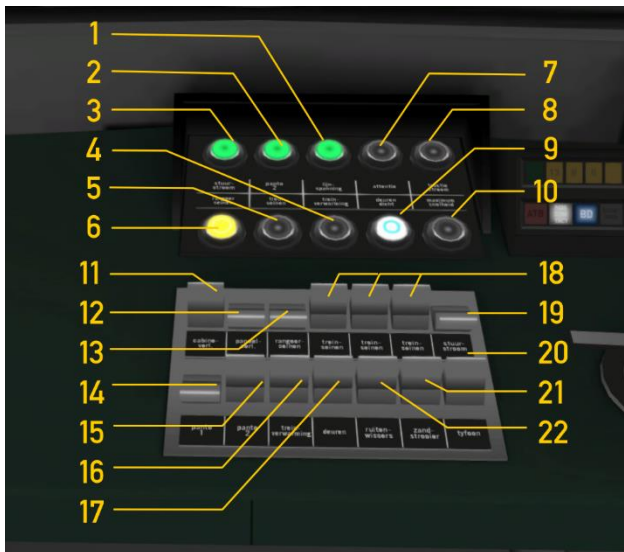
## Preloads

WG NS 1123 light engine/ losse loc  
 WG NS 1134 light engine/ losse loc  
 WG NS 1143 light engine/ losse loc  
 WG NS 1123 w/m 4 axel/as Goods/Gwgns  
 WG NS 1123 w./met 16 Sgns  
 WG NS 1134 w./met 6 NS ICR A/Bpmz/BD  
 WG NS 1143 w/m Goods/Gwgns mix

# Operation



## Indicator lights and Faiveley-block

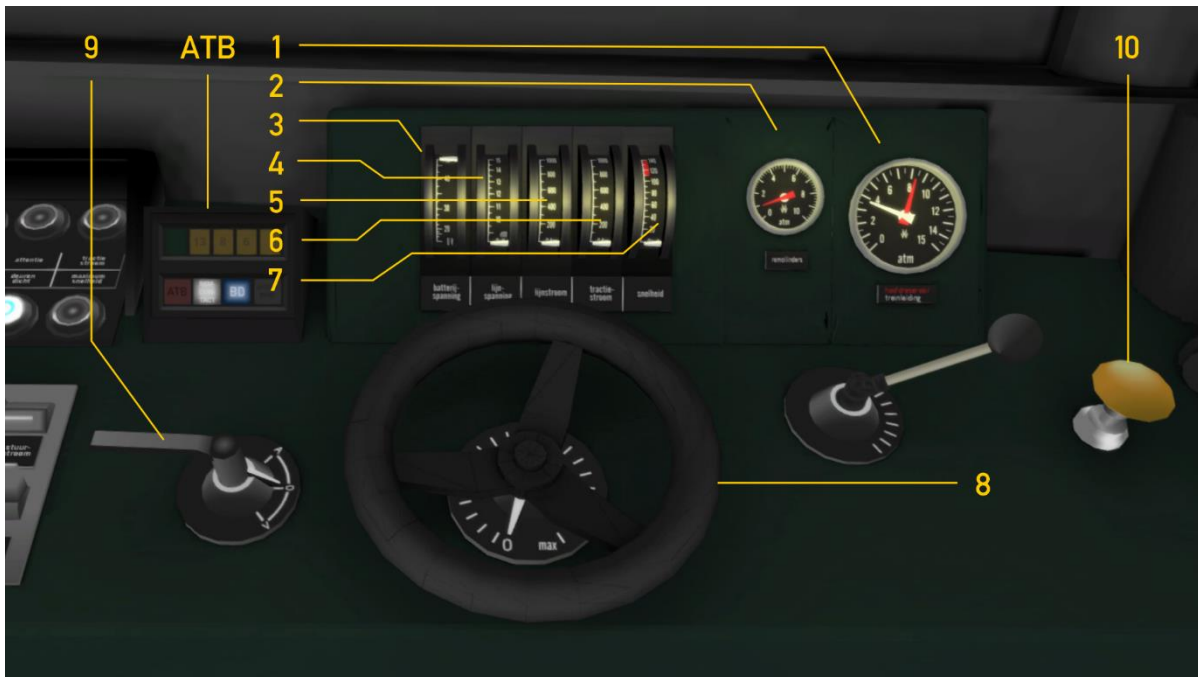


Switch 17 (doors open/close) only responds to keyboard shortcut T or clicking the *Load/Unload* button in the HUD.

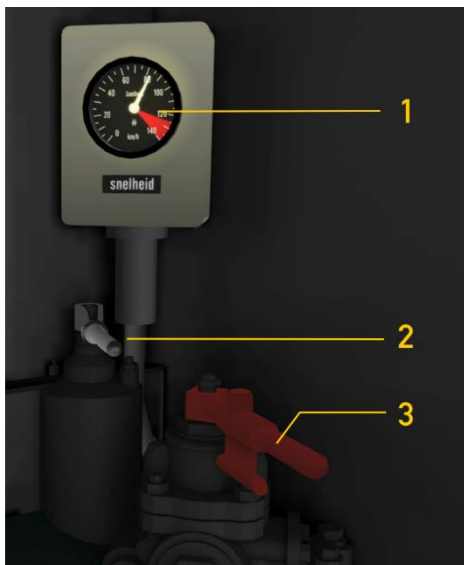
1	Catenary tension	12	Panel lights switch	CTRL+F11
2	Second panto risen	13	Shunting signals switch	CTRL+F9
3	Control current	14	Pantograph up/down	P
4	Train heating	15	Panto 2 setting switch	
5	Trainsignals	16	Train heating switch	
6	Shunting signals	17	Doors open	T
7	DVD Warning light	18	Train signals switch	H SHIFT+H
8	Maximum current	19	Control current switch	CTRL+0
9	Doors closed	20	Typhoon	SPACE BAR or N
10	Maximum speed reached	21	Sander	X
11	Cab lights	22	Wipers	V



## Levers and gauges



1	Brake pipe/main reservoir	6	Rotator current truck 2	
2	Brake cylinders	7	Speedo	
3	Control current tension	8	Controller	A / D
4	Catenary tension	9	Reverser	W / S
5	Rotator current truck 1			



1	Speedor
2	Engine brake
3	Train brake

The cab layout in this TrainSimulator version follows the TS Classic standard for electric locomotives (expert mode) and therefore differs partly from reality. Operating front and rear signals is TS-compliant. These can be switched on/off in the familiar way with the H-key. When shunting signals are switched on, a white lamp is displayed at both the front and rear.

*Control current is disabled by default.* If the player forgets to turn it on when setting the locomotive in motion, a warning message will appear.

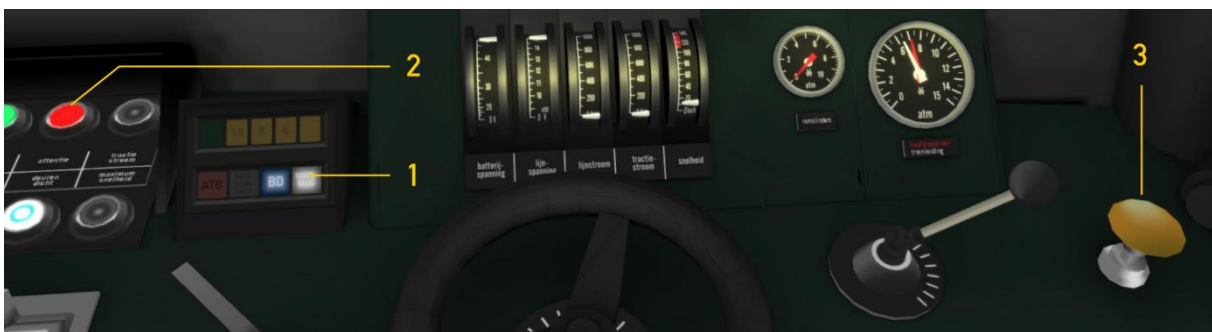
Lamp 20 lights up at amperages above 600 A. When the player clicks the unload/load button (hotkey T) with a passenger train along the platform, lamp 9 turns off. At speeds above 110 km/h, lamp 10 lights up.



## Driver's Vigilance Device and ATB

In this version, our NS 1700 is equipped with two optional safety features, the deadman's button (DVD) and a near-perfect simulation of the Netherlands Railways Automatic Train Control – First Generation (ATB-EG or ATB). Both systems monitor the player's actions when acting as driver (Mc). The DVD's function is to stop the train if the Mc should lose consciousness. The ATB takes the same action if the Mc does not respond to the commands of the signals along the line. The player can decide for himself which systems will be activated in the game. Both features can be switched on simultaneously if desired.

### Driver's vigilance device



This system expects the Mc to click the vigilance button (3) or press the numeric ENTER key at least once every half minute. When 30 seconds pass without any of these actions, a buzzer will sound and a flashing red light (2) will appear on the steering table. From that moment on, the Mc has five seconds to respond. Failing this, the DVD will trigger an emergency brake action. Controls will be locked until after the train has come to a complete stop.

Switching the DVD on and off is done with the key combination CTRL + NUM ENTER. When lamp 1 is lit, the DVD is active.

### ATB

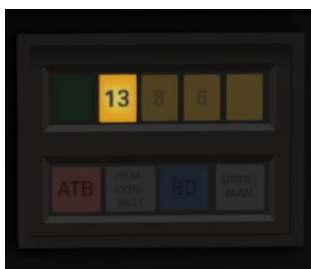
This safety feature is made up of three components. The first part is tasked with detecting speed limits that will be encountered on the train path while driving, within a distance of 1000-1200 meters. The values found are converted into one of five limits: 40, 60, 80, 130 or 140 km/h. A second system automatically monitors the Mc's reactions to a detected speed limit. The last part is formed by the ATB panel that provides communication with the Mc by lamps and bell signals.



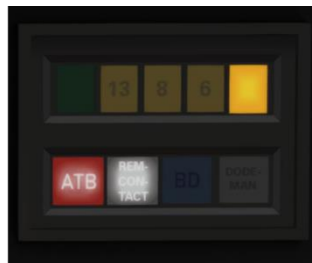
Apart from the DVD lamp that we have already encountered above, in this panel we find eight lamps that alone or in combination can display the different states that the ATB can assume. When ATB is not active, lamp 8 (BD = out of service) lights up. Lamp 7 (brake contact) is shown when the Mc applies the train brakes – even when the ATB is switched off.

We apply the U key to turn the ATB on or off. When the ATB is switched on, lamp 8 extinguishes and the speed limit that is currently in force is shown by one of the lights 1 to 5. At the same time, a bell sound is rung.

When the ATB is switched off, this bell sounds five times in quick succession.



We will now explain the operation of the activated ATB by means of an example. In the left image we are driving at a speed of 125 km/h. Then, in the right picture, a 40 km/h speed limit has been detected. A bell sound ('ting') can be heard and lamp 5 lights up.



The Mc applies the brakes and the brake contact lamp 7 is shown (left picture). When a speed of less than the assigned 40 km/h is reached (with an upper margin of 5 km), three bell signals sound shortly after each other ('ting ting ting').

If the Mc does not respond to a speed reduction command within 5 seconds, an alarm bell will ring for 3 seconds. Within this period of time, the Mc can still prevent an ATB intervention by applying the train brake. If this condition is not met, an emergency brake will be triggered. The ATB lamp 6 lights up, as does the brake contact lamp. At the same time, the train brake is set to the highest position while the controller and the reverser are pressed into their 'neutral' positions. Only after the train has come to a complete stop will these controls be released again.

The functions of this 'Wilbur Graphics' ATB are controlled by a script, which is fed with information that is supplied by the game while driving a train. These data come from home signals, track speed limits and/or from speed signs, depending on the tracks, signals and speed signs being used in the route. In the real world, the ATB looks at the distant signals. As a result, the simulated ATB can indicate a higher restriction than a local speed limit. When driving Timetable and Career scenarios, you should therefore also pay attention to the limits that TS shows in the HUB. Another difference with reality is the possibility to drive a scenario without DVD and/or ATB.



## Colophon/Credits

### Development and production:

© Wilbur Graphics, Henk van Willigenburg ( [www.wilburgraphics.com](http://www.wilburgraphics.com) )

### Tips and advice:

ChrisTrains.com

TrainworX (Paul Mersel)

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### Testing:

Ton van Schaik

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<https://www.facebook.com/wilburgraphicspage/>

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