wilbur graphics

trainsim assets

# NS Series 3700/3800 for TS Classic


# MANUAL

Version 2.1 build 20230518

# Table of Contents



## Disclaimer DoveTail Games Ltd.

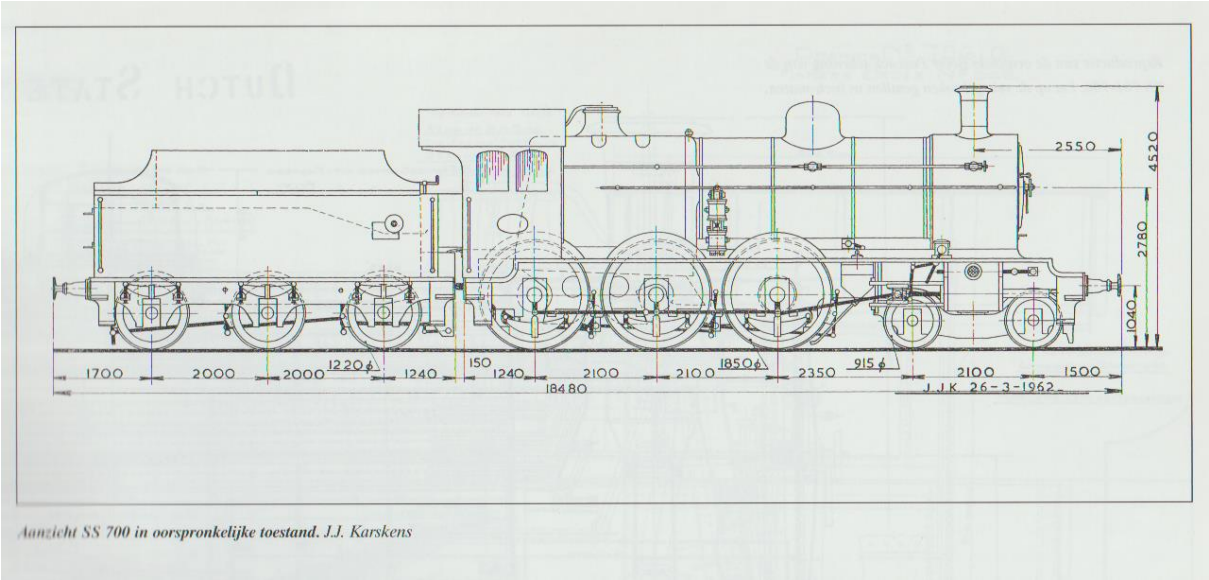
# Background

## NS series 3701-3820

After experiments with the 4-6-0 express train locomotives of the NBDS, the State Railways also decided to purchase 2C locomotives at the beginning of the last century. It immediately became clear that the SS had made a good choice with this series. In 1910 the first examples entered service as series SS 685-778. After the establishment of the NS in 1920, construction continued, so that the last locomotives were delivered in 1928. With their 1850 mm driving wheels, the machines could be used for both passenger and freight trains. During the war, 20 machines were lost, but the rest served NS until the end of the steam era. Loc 3737 has been preserved for posterity and is located in the Dutch national railway museum (Nederlands Spoorwegmuseum).

On 14 February 1956, locomotive NS 3785 drove an empties train in the Amsterdam CS yard (photo NS, Utrechts Archief).

# Technical Data



*Aanzicht SS 700 in oorspronkelijke toestand. J.J. Karskens*

| | |
|---|---|
| Wheel arrangement: | 2' C (4-6-0) |
| Max. speed: | 110 km/u |
| L.o.a.: | 18,48 m (3-axle tender) and 19,7 m (4-axle tender), resp. |
| Wheel base: | 15.28 m and 17,28m, resp. |
| Driver diameter: | 1.850 mm |
| Max. steam pressure: | 12 kg/cm2 |
| Water/coal capacity: | T3: 18 m3 / 6 ton; T4: 28m3 / 6 ton |
| Mass (incl. tender): | 115 (T3)/ 135 (T4)t |

# What is new in version 2.0?

In version 2.0, the following improvements have been made:

- Improved sound effects for bogies on rail welding and interchange streets
- DTG locomotive personnel replaced by NS locomotive staff
- Improved locomotive and cab sound effects and braking behaviour
- Shunting signals are operated with key combination CTRL+F9
- New textures and extra details
- Improved scripting
- Compressor must be activated to get the engine running

# What is new in version 2.1?

Version 2.1 includes the following improvements:

- Handbook is now also included in an English and German versions
- Improved support for QuickDrive sessions by increasing the number of preload consists.

# Installation

## General

The *NS 3700 era 3* by Wilbur Graphics has been made available as .zip-file and contains apart from the `Readme_EN.txt` the following items:

- Folder `Manuals\Wilbur Graphics` with Dutch, German and English manuals:

```
WG_NS_3700_Handbuch_V2_1.pdf
WG_NS_3700_Manual_V2_1.pdf
WG_NS_3700_Handleiding_V2_1.pdf
```

- installer program `WG_NS_3700_V21_build_20230518.exe`

After launching the installer, you will be prompted to

- Language selection for the installer (Dutch/English/French/German)
- Accepting 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 may solve this by repeating the installation of Steam.

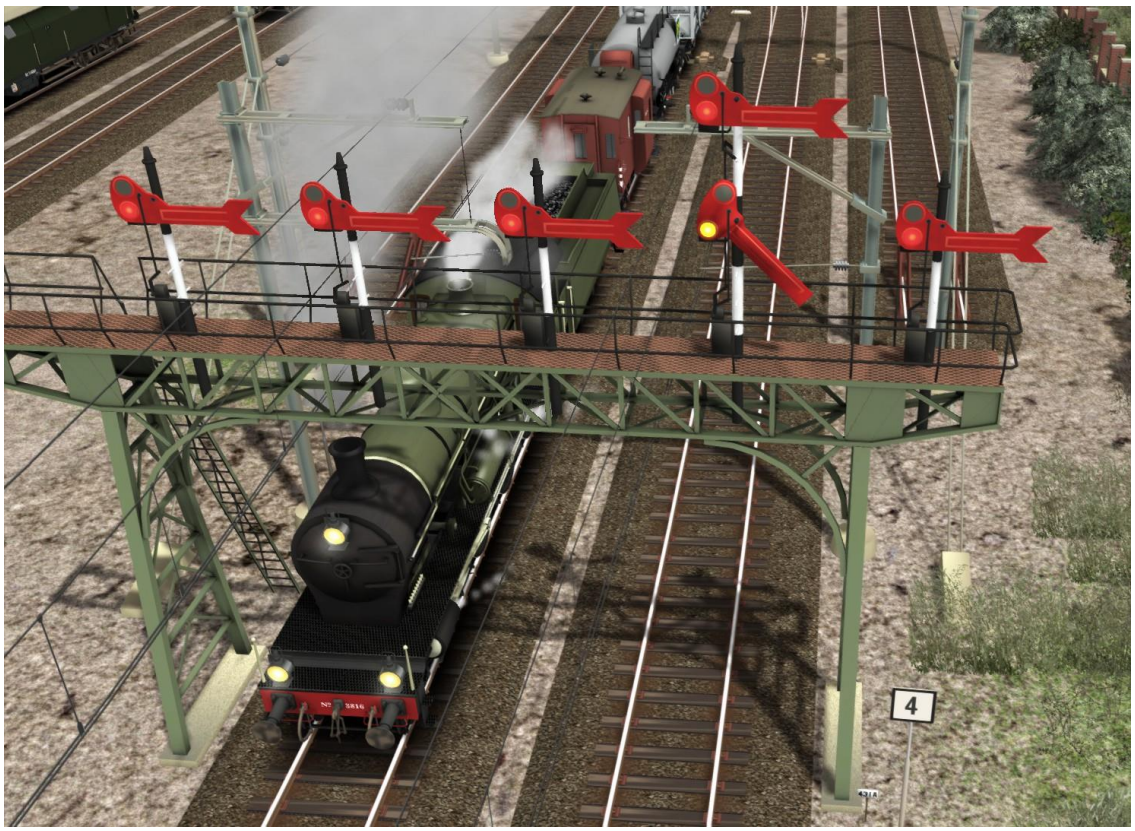
# Rolling stock

## TS Object Browser Index

| NS 3700 | Locos | Tender |
|---|---|---|
| **3737** | WG NS 3737 tp3 | WG NS 3737 T3 tp3 |
| **3784** | WG NS 3784 tp3 | WG NS 3784 T3 tp3 |
| **3816** | WG NS 3816 tp3 | WG NS 3816 T4 tp3 |
| **3820** | WG NS 3820 tp3 | WG NS 3820 T4 tp3 |

## Preloads

WG NS 3737 tp3 solo
WG NS 3784 tp3 solo
WG NS 3816 tp3 solo
WG NS 3820 tp3 solo
WG NS 3737 tp3 Express service
WG NS 3784 tp3 Coal train
WG NS 3816 tp3 Goods service
WG NS 3820 tp3 Local passenger



## NS 3737 / 3784

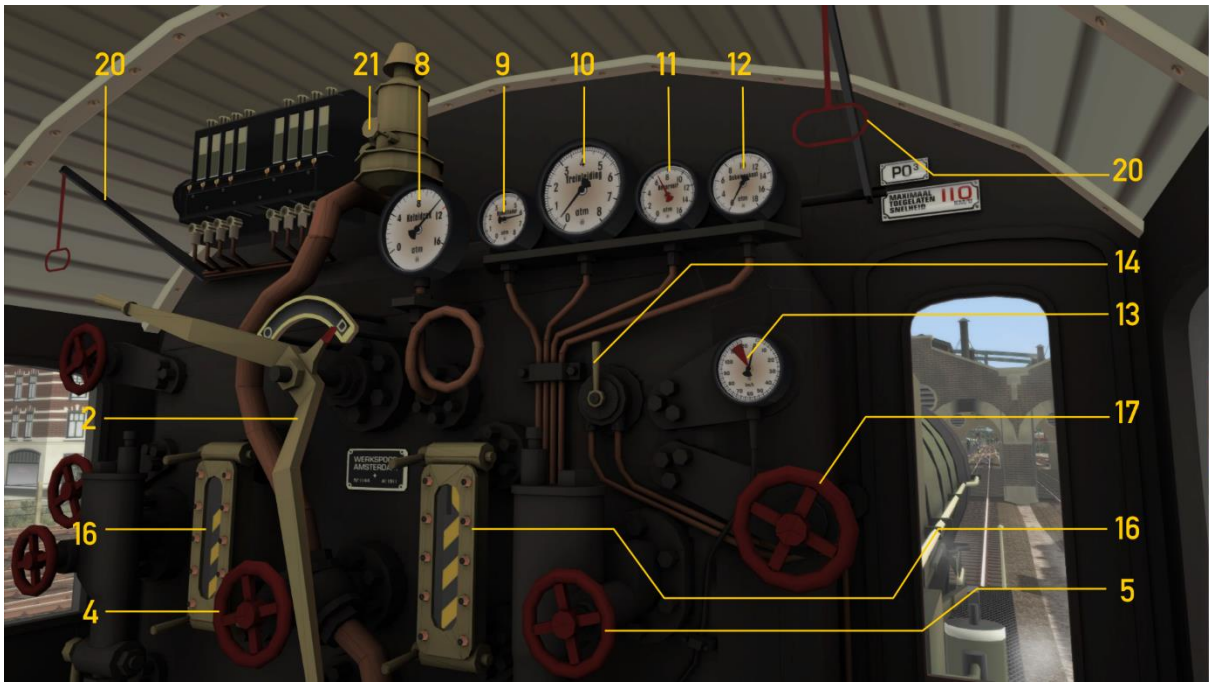
The 3737 and 3784 are shown in their post-WWII NS livery with steam dome in the same colour as the boiler, but with three-axle tender.

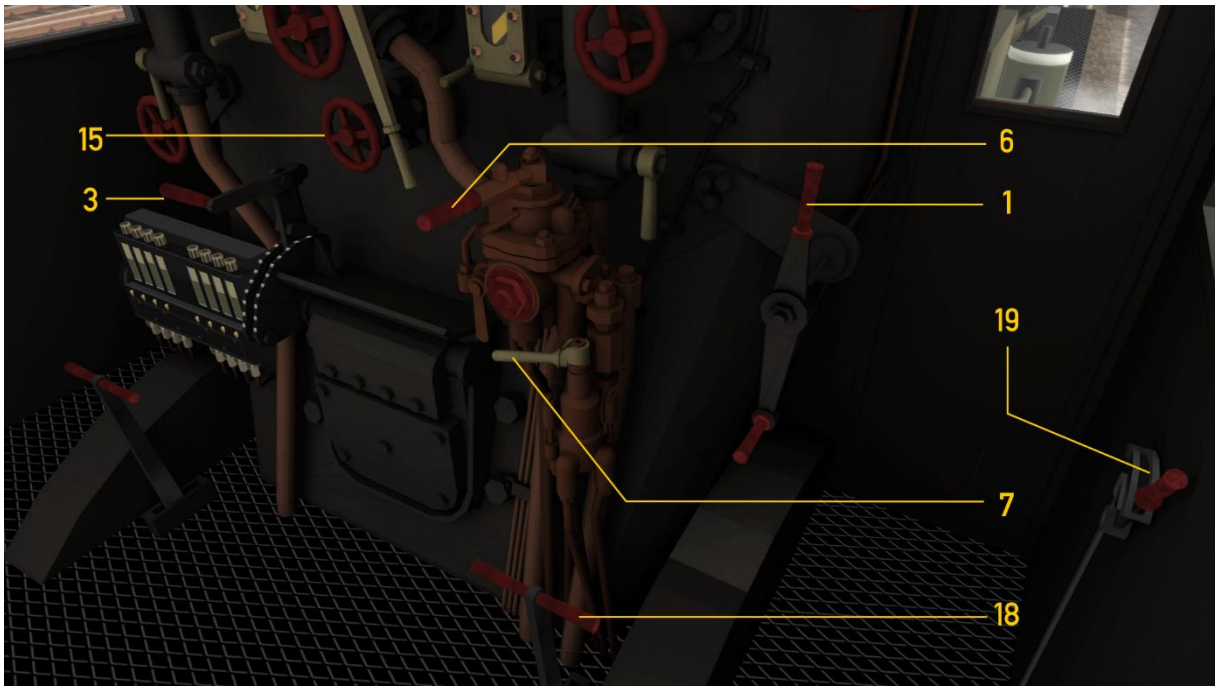
## NS 3816 / 3820

Some 3700s drove a 4-axle tender, such as the 3816 and the 3820.

# Operation

## Cab Layout




| | | | | | |
|---|---|---|---|---|---|
| 1 | Reverser | W S | 13 | Speedo | |
| 2 | Regulator | A D | 14 | Sander | X |
| 3 | Firebox door lever | F | 15 | Blower | |
| 4 | Injector | | 16 | Water gauges | |
| 5 | Injector | | 17 | Compressor | CTRL+9 |
| 6 | Train brake | ; ‘ | 18 | Dampers | M/ SHIFT+M |
| 7 | Engine brake | [ ] | 19 | Cylinder cocks | C |

| | | | | | |
|---|---|---|---|---|---|
| 8 | Manometer | | 20 | Whistle | SPATIEBALK |
| 9 | Brake cylinder pressure | | | Whistle (short) | N |
| 10 | Brake pipe pressure | | 21 | Cab light | CTRL + F11 |
| 11 | Main reservoir pressure | | | Front/rear lights | H / SHIFT +H |
| 12 | Steam chest pressure | | | Shunting lights | CTRL + F9 |

The cab layout in this TrainSimulator version follows the TS Classic standard for steam locomotives (expert mode) and therefore deviates from reality on parts (no Hasler self-registering speedometer, for example). The operation of front and rear signals is TS-compliant. The 3700s had no electrical installation and the signal lighting consisted of kerosene lamps. These can be 'switched' on and off in the familiar way with the H-button. Shunting signals are operated with the hotkey CTRL+F9 and are automatically extinguished when train signals are switched on. When shunting, a white lamp is also shown on the tender.  For driving in darkness, a kersosine lamp can be lit to read the meters (CTRL+F11).

# Manual firing

As with the other steam locomotives for TS Classic, manual firing requires some experience. We therefore recommend that you turn on the 'auto fireman' in the gameplay settings, so that the sim takes care of the firing. If you want to take on the challenge of firing yourself, try to keep the following settings after pulling up from a standstill:

- reverser 10-20%
- regulator 45-65% (depending on train weight)
- coal 75-80%
- water 80-90%
- throttle valves open
- booster on (optional, normally not needed)
- cylinder valves closed


This screen print shows the HUD during a test drive. Coals are shovelled onto the fire (the fire door is open) and the injectors are running (to keep the water level in the boiler at the same level). The right circle gauge shows the boiler pressure. A green background is good, a red background indicates decreasing boiler pressure.


Now three minutes have passed. Speed has been increased to 103 km/h, but boiler pressure has remained at the same level (while pulling a six coaches train).

The safety valves respond to a boiler pressure of over 12 bar, unless steam is consumed at that time because the regulator is open. With a closed regulator, safety valves open up again.

# Scenario settings

In TS, the stocks of coal and water are also part of the simulation. Players can set coal and water launch values using the TS Scenario Editor, as will be explained now. After tender and locomotive have been placed on the track in the usual way, you must select the tender with a double left mouse click. Then a settings window appears at the top right corner:


You can move the orange squares by clicking on the desired levels. Coal and any water level animations follow the orange squares. In this example, the level of coal has been significantly reduced.

# Colophon/Credits

**Development and Production:**
© Wilbur Graphics, Henk van Willigenburg ( www.wilburgraphics.com )

**Tips and advice**:
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TrainworX (Paul Mersel)
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