The information in this booklet only applies to virtual trains

Train Simulator | **Train Crew Manual**

Class 150/2 Diesel Multiple Unit

Drivers Operational Handbook

thomson INTERACTIVE

OOCEE

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Technical Information

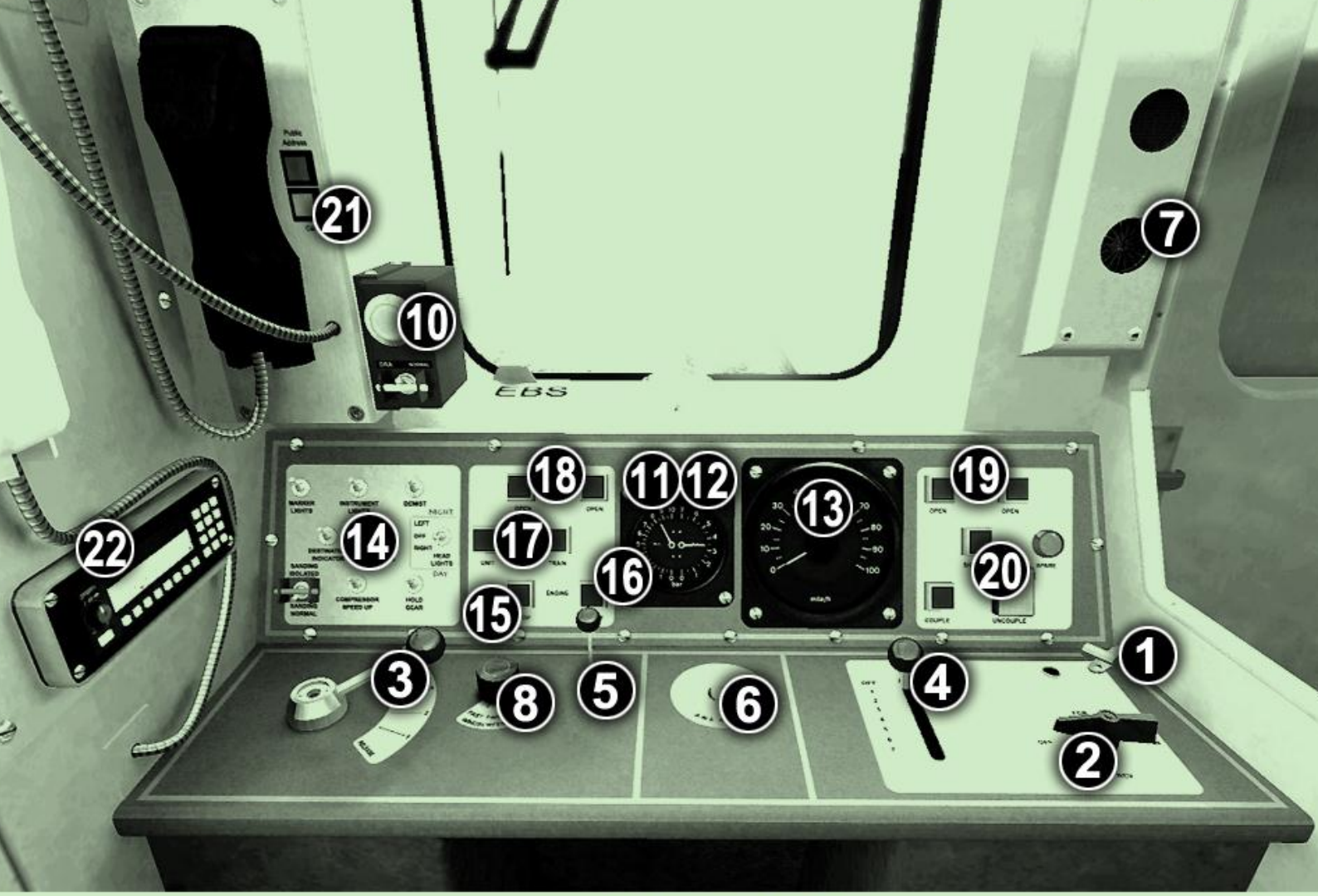
These units were all built as two-car sets, numbered 150201-150285. Each unit is formed of two driving motor vehicles, one of which contains a lavatory. Individual vehicles are numbered as follows:

57201-57285 – Driving Motor Standard (DMS)

52201-52285 – Driving Motor Standard Lavatory (DMSL)

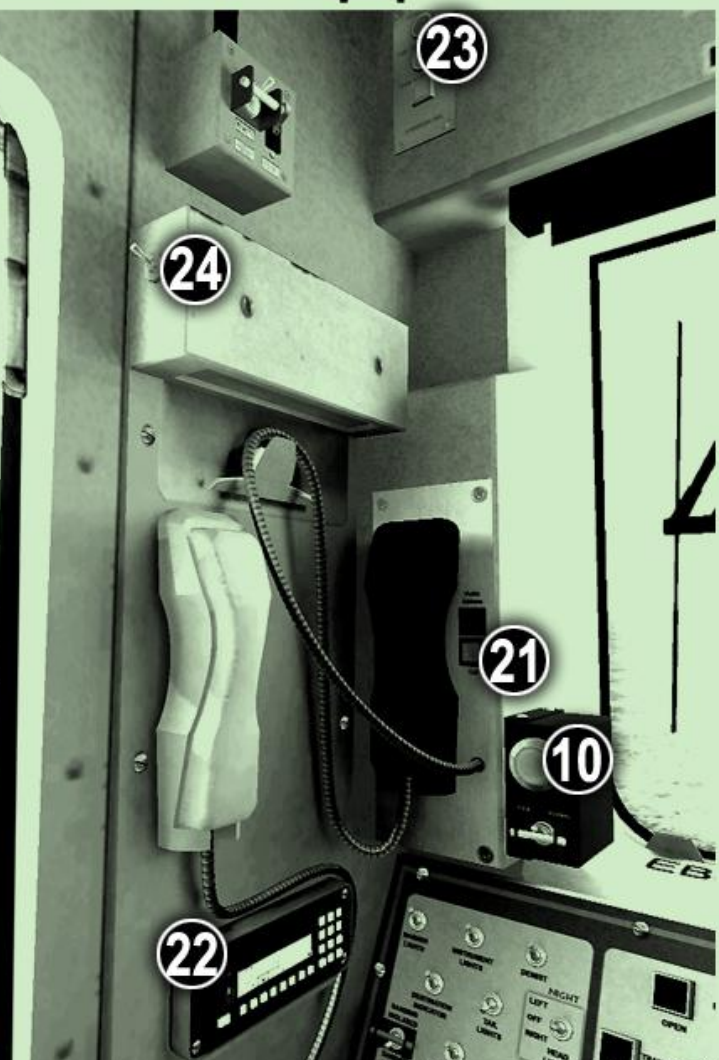
The vehicles are powered by 285hp NT855-R5 diesel engines through Voith T211r hydraulic automatic transmission. The units have a top speed of 75mph (121km/h) in regular service.

Maximum speed	75 mph (121 km/h)
Weight DMS	36.5 tonnes
Weight DMSL	37.5 tonnes
Engine(s)	285hp NT855-R5 diesel engine (1 per vehicle)
Transmission	Voith Hydraulic T211r (2 axles driven per car)
Coupling system	BSI



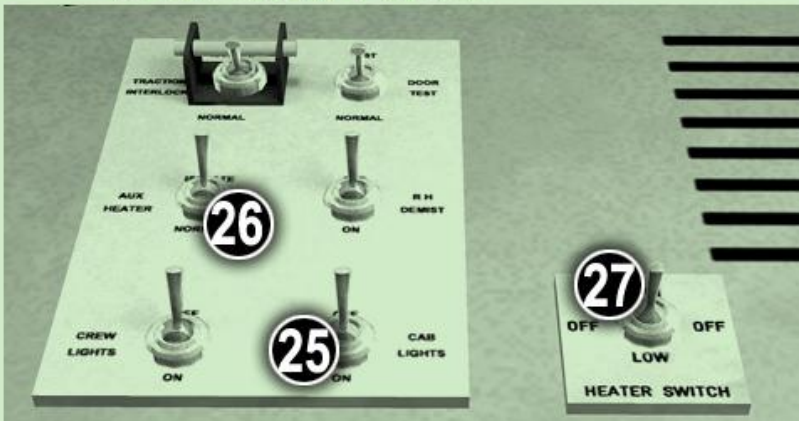
Drivers Desk

Left Wall Equipment



Second Man's Desk

Rear Wall Panel



Drivers Cabin Controls

1. Master Key (to unlock desk)
2. Reverser
3. Brake Handle
4. Throttle
5. Horn
6. AWS Reset
7. AWS Sunflower Display
8. Driver's Wiper Control (two speed)
9. Second Man's Wiper Control (two speed)
10. DRA (Driver's Reminder Appliance) - disables throttle when applied
11. Main Reservoir Pressure Gauge
12. Brake Cylinder Pressure Gauge
13. Speedometer (MPH)
14. Lighting and Compressor Panel
    a. Headlights Switch (Day and Night)
    b. Tail Lights
    c. Marker Lights
    d. Destination Indicator Light
    e. Instrument Lights
    f. Compressor Speed-up (available when reverser in Neutral)
15. Engine Stop Button
16. Engine Start Button
17. Transmission Fault Indicators
18. Doors Open Left Indicators
19. Doors Open Right Indicators
20. Guard Signal Button
21. Cab Call Button
22. NRN Radio
23. AWS/TPWS Brake Demand Indicator
24. Clipboard Light Switch
25. Main Cab Light Switch
26. Aux Heater
27. Cabin Heater

Original Units

Refurbished Units

Exterior Lighting and Destination Screen

1 Destination Screen
2 Headlight Day
3 Headlight Night
4 Marker Lights (to be used in conjunction with the headlights)
5 Combined Marker and Tail Lights (refurbished units only)
6 Tail Lights

Keyboard Controls

Y – DRA

C – SIGNAL

B – LO HORN

V and SHIFT+V – Wipers

Z and CTRL+Z – Engine Start/Stop Controls

N – Instrument lights

SHIFT+M – Clipboard light

M – Main Cab lights

H – Headlights

J – Tail Lights

K – Marker Lights

L – Destination Light

F7 – Destination Scroll Reverse

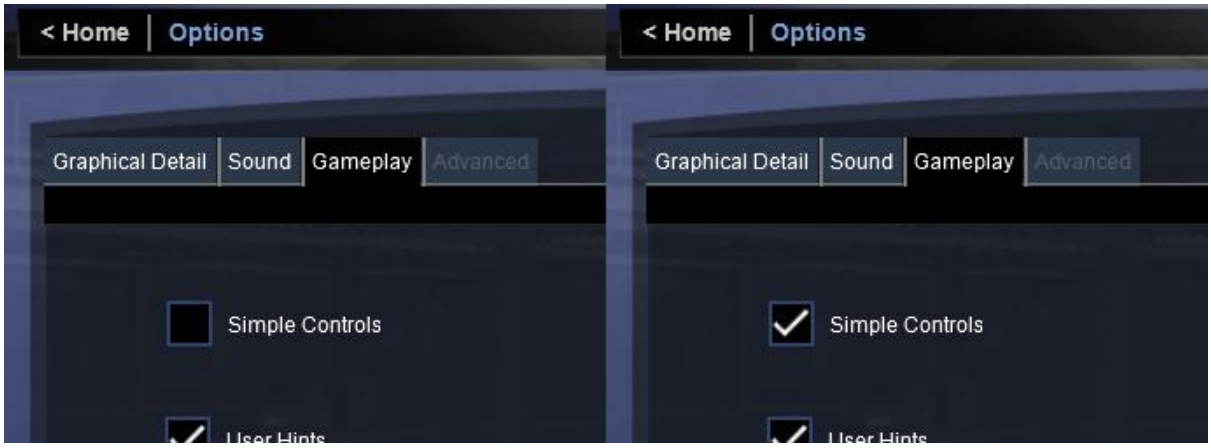
F8 – Destination Scroll Forward

E – Master Key

Compatibility

TS2012 Simple Controls

(Selectable from the Game Options screen under Gameplay Tab)



Although the Class 150 has many advanced features we are pleased to advise that support for Simple Controls has been included. When using simple mode the driver's desk throttle lever acts like a combined throttle brake controller with neutral at the centre position. The reverser switch provides two positions – forward and reverse only.

RailWorks 2 HUD (Heads-Up-Display)

The Class 150 does operate with the TS2012 HUD when using either Simple Controls or the standard mode of control with some exceptions. The wipers, headlights and taillights are only selectable with either the keyboard or by interacting with the cabin switches and buttons with the mouse. When using the standard mode of control ***you MUST set up the cabin by unlocking the desk with the master key before using the HUD*** (see page 9)

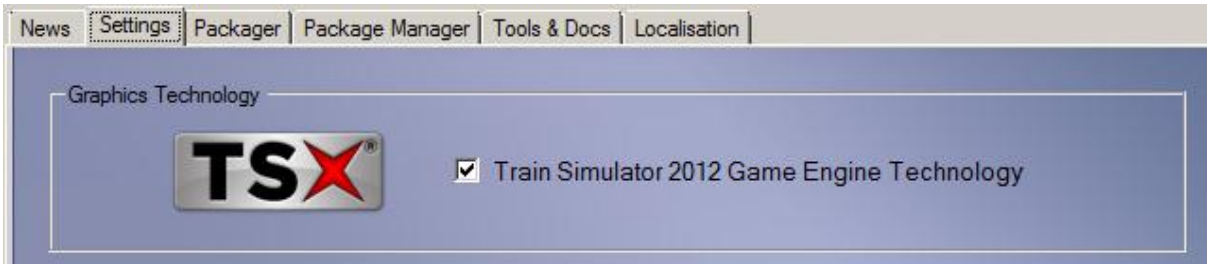
Coupling with other Diesel Multiple Units

The Class 150 can be coupled in multiple with the Thomson Interactive Class 170 and the Oovee Class 156. Multiple units from other developers may respond correctly but have not been tested.

Features

The Class 150 has been designed to make full use of the new Train Simulator 2012 features and effects. The train will continue to function with the TSX Game Engine Technology turned off in the settings options but will not provide some of the advanced features such as:

- Weather glass effects
- External headlight and taillight glows
- Interior cabin and instrumentation lighting

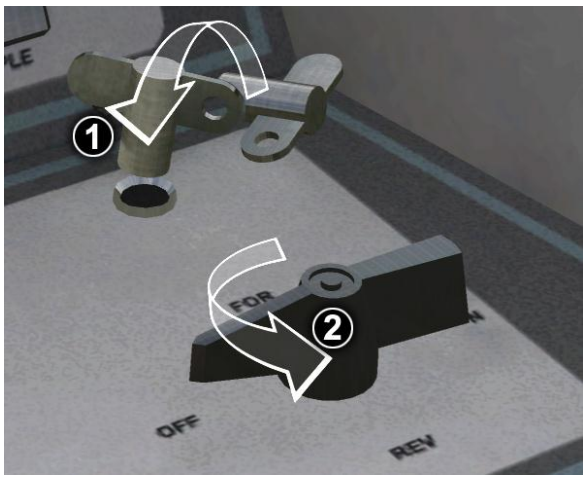


With TSX Game Engine Technology enabled the full feature list includes:

- Master Key to unlock drivers desk with AWS self-test routine
- Fully functional destination blind (operates during game-play)
- Prototypical headlight operations
- Prototypical independent two speed windscreen wiper operations
- Notched brake system with faithful pressure readings
- Accurate simulation physics based on real Class 150 timings
- Animated cab accessories such as windows, glare screens and arm rests
- External audio levels vary with cab window positions
- Functional wheel slip and transmission fault indicators
- High quality audio with stereo cab sound effects
- Semi-functional “compressor speed up” feature
- Highly immersive cab environment with functional cabin and clipboard lights
- Weather glass effects
- Realistic RPM, torque converter and fluid coupling simulation
- Driver to guard buzzer
- Drivers Reminder Appliance (DRA)
- Automatic engine shut down (after a time out period of 5 minutes real time)
- NRN radio test call feature

Setting up the Driver's Cabin (Unlocking the Desk)

When entering the driver's cabin it is necessary to unlock the desk and set up the cabin before you set off. ***It is not possible to drive the train using the standard HUD until the desk has been unlocked and the reverser lever position selected.***



Step 1 Either drag the Master Key in to the lock using the mouse or press "E" on the keyboard to unlock the desk. ***(Master Key cannot be removed again until the Reverser is returned to the OFF position)***

Step 2 Turn the Reverser to the desired direction of travel (Forward or Reverse) using the mouse, HUD or keyboard.

Step 3 Cancel the AWS warning sound by pressing the AWS Reset button with the mouse, HUD or press "Q" on the keyboard.

Step 4 Ensure the DRA is off (red light not illuminated) by pressing the DRA Button with the mouse or pressing "Y" on the keyboard.

Step 5 If the engine is not running then start it by pressing the Engine Start Button with the mouse or pressing "Z" on the keyboard.

Step 6 Select the correct running lights as described on pages 5 & 6, and if running at night switch on the instrumentation lights and destination blind light.

Now you are ready to proceed and can operate the train using the cabin controls, the keyboard or the HUD

Note that the reverser cannot be operated with the standard HUD

Driving Guidelines

The following steps are recommended driving techniques in order to operate the Class 150 correctly and realistically.

Step 1 Complete the tasks explained on page 9.

Step 2 Insure that the reverser lever is set in the forward or reverse position.

Step 3a Move the brake lever to the "**step 1**" position.

Step 3b If the passenger doors are open, wait for them to close and listen for the signal buzzer from the guard (two rapid buzzing sounds).

Step 4a Apply the power by moving the throttle lever to any notch between "**2 and 5**".

Step 4b Listen to the engine and wait for the engine to build up RPM. Send a signal back to the guard by pressing the green "**signal**" button twice.

Step 5 Release the brakes fully by moving the brake lever from "**step 1**" to the "**release**" position. The train will begin to move.

Step 6 Once you believe the train has attained sufficient grip you may increase the power by moving the throttle level to any notch position between "**5 and 7**".

If wheel slip occurs the two transmission fault lights will illuminate and the engine power will return to idle (600RPM). This is called "Wheel Slip Protection" or WSP for short. Move on to step 7 should this occur.

Step 7 **WSP detected -** To recover from WSP detection you should return the throttle lever to the off position and wait for the transmission fault lights to turn off.

Step 8 Once the transmission fault lights have extinguished you should gradually apply the power by moving the throttle lever in an incremented advancement until grip has fully re-attained. Should WSP be detected again, you may go back to step 7 and repeat the process.

Liveries

This table contains a list of the liveries included with this pack, 7 in total.

Name	Colours
Anglia Railways	Turquoise and white
Arriva	Light blue and white
First Great Western	Blue, purple and pink
ScotRail (2000)	White, purple and green
Regional Railways	Two blue shades and grey
Northern Rail	Dark blue and purple
London Midland	Light green and blue

Acknowledgements

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- Martin Steele – National Express East Anglia - Driver Manager

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Thank you for purchasing this add-on.

Class 150 Pack contents --- v1.1.0 – Manual updated.

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