Class 180
(Adelante)

Release Version 1.0

1 Background

1.1 Class 180 (Adelante)

The Alstom Class 180 "Adelante" train sets came about as a result of First Great Western wanting to increase the frequency of their express service from London Paddington to South Wales. This required high speed rolling stock that was not available at the time. FGW ordered 14 train sets from Alstom in the late 1990s to the tune of 74.5 million pounds. The first train set was unveiled 18 April 2000 but did not enter main line testing until December of 2000 following a series of issues. They continued to be problematic, missing their intended introduction of May 2001. They eventually started main line service for FGW in December 2001. After continued recurring problems, FGW handed back the units to the leasing company in March 2009 after which they were assigned to other companies including Grand Central.

1.2 Design & Specification

Builder	Alstom, Birmingham
Unit Weight	252.5t
Vehicle Length	23.71m (77ft 7in) (driving cars) / 23.03m (75ft 5in) (intermediate cars)
Vehicle Width	2.80m (9ft 2in)
Number Built	14 Train sets
Vehicle Power	3,750hp (2,796kW)
Top Speed	125mph (201km/h)
Brake Types	Air/Hydrodynamic
Transmission	Diesel Hydraulic

2 Rolling Stock

2.1 DMSL A (B)

2.2 MFL (F)

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2.3 MSL (E)

2.4 MSLRB (C)

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2.5 DMSL B (D)

3 Driving the Class 180 (Adelante)

3.1 Cab Controls

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1	Brake and Throttle Control (A/D)	2	Reverser (W/S)
3	Master Key	4	Emergency Brake (Backspace)
5	Engine Start/Stop (Z)	6	Headlight Control (H)
7	Hazard	8	Vehicle Overspeed
9	Signal Bell	10	Brake Gauge
11	Open/Close Coupling Hatch (Ctrl + C)	12	Speedometer
13	DRA	14	Speed Set
15	Instrument Lights (I)	16	AWS Reset (Q)
17	Horn (Spacebar/B)	18	Cab Light Switch (L)
19	Windscreen Wipers (V)	20	DSD Reset Pedal (Numpad Enter)
21	AWS Sunflower	22	Clipboard Light/Dimmer Switch
23	Glare Panel	24	Fan

3.2 Locomotive Keyboard Controls
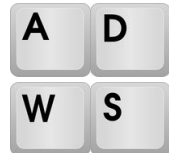
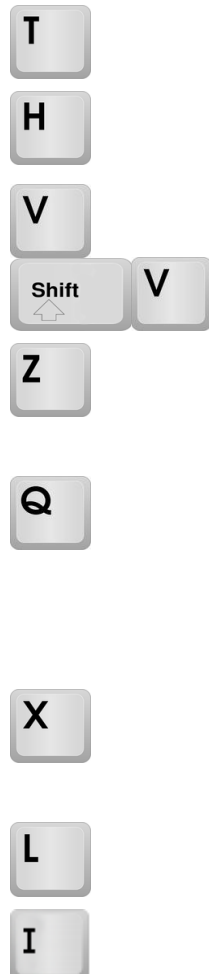| Key Equivalent	Action
A D	Increase or Decrease Brake and Throttle Control.
W S	Move Reverser control Forward or Backward.

3.3 General Keyboard Controls

| Key Equivalent	Action
T	**Load/Unload** passengers or freight.
H	**Headlights.** Repeatedly pressing will cycle through headlight states where appropriate.
V / Shift V	**Windscreen Wipers**. Cycle through the Windscreen Wiper states: Intermittent, Slow, And Fast.
Z	**(Expert) Engine Stop/Start**. By default engines will already be running at the start of a scenario. Press this button to stop and then again to restart the engine.
Q	**(Expert) Alerter.** The Alerter is a system used on some trains to ensure that the driver has seen a signal. If the Alerter sounds (a black/yellow striped symbol is shown on the Driver's display), this must be acknowledged by pressing the Alerter button or the emergency brakes will be applied.
X	**(Expert) Sander**. Causes sand to be laid on the rails next to the wheels to assist with adhesion. Press and hold to activate sander, let go to stop.
L	**Cab Light.** Toggle the Cab light on and off.
I	**Instrument Light.** Toggle the Instrument Light on and off.
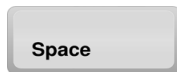
Key Equivalent	Action
Space	**Horn.** Sound the horn's low tone.
B	**Horn.** Sound the horn's high tone.
? /	**Handbrake.** Toggle the train Handbrake on and off.
Ctrl D	**DSD.** Enable or Disable the Driver Safety Device.
Enter	**DSD Pedal.** Acknowledge and reset the Driver Safety Device. (Numpad).
Ctrl 5 **Ctrl 6**	**Destination Board.** Cycle through destinations on the display boards.
Ctrl C	**Coupling Hatch.** Raise and lower the Coupling Hatch.
Ctrl Shift C	**Couple manually.**

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3.4 TMS System

The 180 features a TMS system to the left of the Driver. This provides information to the Driver about the trainset. By default you will be greeted by a login screen for the system. Using the keypad entry below, enter a five digit number sequence to access the overview screen. If you are presented with a "Cab Not in Service" screen then you will need to ensure the Master Key is engaged.

Once logged in, the TMS gives the Driver information about on board systems, engine status and door status.

3.5 Speed Set

The Speed Set control in the Class 180 is a driving assist system and is meant to help maintain the speed of the train. Whilst active, the system will increase or decrease the application of the regulator in an attempt to keep the train travelling at the speed the train was moving when the Speed Set was activated.

As Speed Set is a simple assist system it has a lower priority over other controls. This means that if the throttle, brake or reverser controls are used the Speed Set will be deactivated and full manual control will be returned to the driver.

For safety purposes, if Speed Set is unable to maintain the intended speed or if the speed of the train exceeds the target speed, the system will sound an alarm to alert the driver and disable itself requiring the driver to take action to resolve the issue. The system disables itself if the speed falls 5mph below the target speed or exceeds it by 1mph.

Warning
Speed Set is not an automated driving system, it is meant only to provide additional acceleration to maintain speed. Speed Set will not apply brakes or cause an emergency brake application of the speed exceeds the speed limit.

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4 Using Custom Numbering

4.1 Assigning Destinations and Numbering

When placing a Class 180 (Adelante) in custom scenarios you may want to change the vehicle number, set number or destination board. All of these properties are controlled by editing the rail vehicle number which is accessed by double clicking the rail vehicle when editing a scenario within the scenario editor.

In order to display a specific destination, the correct value must be entered into the vehicle properties window. This number consists of a 13 digit value containing both letters and numbers.

The 13 digit value is arranged like so: **DUUUUUUVVVVVN**

D   = the Destination code (See the Destination List below).
UUUUUU = the Unit number displayed on the front of the driving vehicle.
VVVVV   = the Vehicle number displayed on the side of the coach.
N   = the Name plate displayed on the side of the driving vehicle.

Example: **D**18010550905**B** (Where 'D' is for 'London King's Cross' and 'B' is 'The Yorkshire Artist Ashley Jackson).

Only coaches B and D contain nameplates digits

4.2 Coach List

B | Coach B - DMSL A
C | Coach C - MSLRB
D | Coach D - DMSL B
E | Coach E - MSL
F | Coach F - MFL

4.3 Destination List

A | Not In Service   **B** | Sunderland
C | Bradford Interchange   **D** | London King's Cross

4.4 Name Plate List

A | No Nameplate   **B** | The Yorkshire Artist Ashley Jackson
C | Hart of the North   **D** | James Herriot

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6 Scenarios

For driving tutorials, please visit the Academy from the main TS2015 menu screen

6.1 [180] A Grand Day Out: Part 1

Grand Central are looking to add some new services running between Peterborough and London Kings Cross, in the form of Class 180's. Today you are required to run a trial service the full length. For now, you will make a stop at Stevenage where some engineers will run a few tests.

Duration: 40 Minutes
Difficulty: Easy

6.2 [180] A Grand Day Out: Part 2

With the tests completed everything is in order allowing you to continue this trial run service to London Kings Cross.

Duration: 30 Minutes
Difficulty: Medium

6.3 [180] The Stowaway

You are in charge of taking 180112 "James Herriot" to Bounds Green Depot from Kings Cross. It's a very wet and windy evening but on such a short journey what could possibly go wrong?

Duration: 20 Minutes
Difficulty: Hard

7 Acknowledgements

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Dovetail Games QA Department

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