Class 142
Diesel Multiple Unit

AP

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How to install

1) Locate where you have downloaded this pack and unzip it. Information on how to do this can be found *here*.

2) Go to the location where you have extracted the files from the .zip file.

3) Now find the .exe file called 'Class 142 Diesel Multiple Unit Pack'. Double-click this file.

4) Follow the steps and by the end of the process, this pack will have installed.

5) If you intend to use any of the included scenarios, make sure you have the freely available extra stock pack and relevant payware add-on packs listed on the product page installed so the scenarios function as intended.

Technical information

Manufacturer	BREL (British Rail Engineering Limited) & Leyland Bus
Years built	1985 - 1987
Number built	96 (142001 – 142096)
Formation	DMS + DMSL (2 car)
Engine	Cummins LTA10 230hp (originally Leyland TL11 205hp)
Transmission	Hydraulic Voith T211r (originally mechanical SGC)
Maximum speed	75mph (120km/h)
Coupling type	BSI
Length	51ft ½in / 15.55m (per car)
Height	12ft 8in / 3.86m
Width	9ft 2 ¼in / 2.8m
Weight	49.5 tonnes

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Liveries

Arriva (Unbranded) - *A U*

Arriva Trains Northern - *ATN*

Arriva Trains Wales - *ATW*

First Great Western - *FGW*

First Great Western (Blue Cab) - *FGW BC*

First Great Western (Northern) - *FGW N*

First North Western - *FNW*

Merseytravel - *MT*

Northern Rail - *NR*

Northern Rail (Blue Cab) - *NR BC*

Northern Rail (Dot Matrix Destination Display) - *NR DM*

Northern Spirit - *NS*

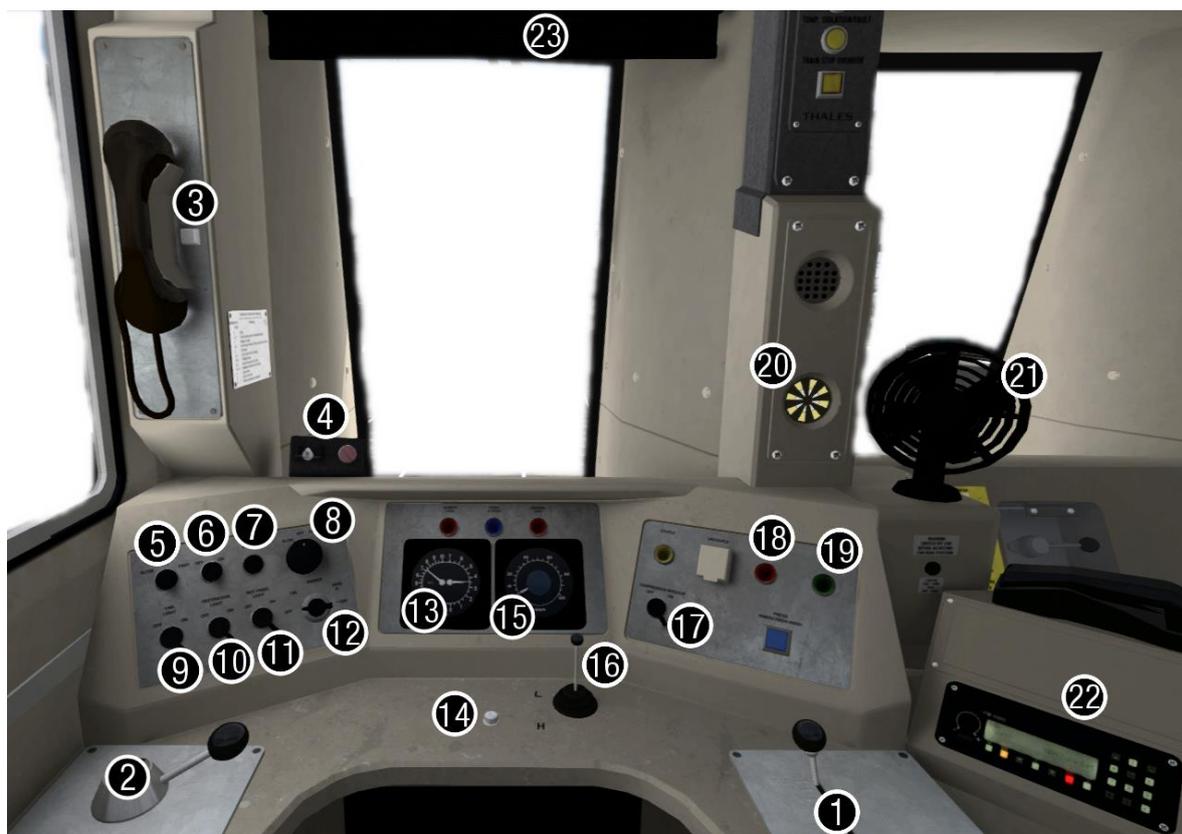Northern Spirit (Arriva) - *NS A*

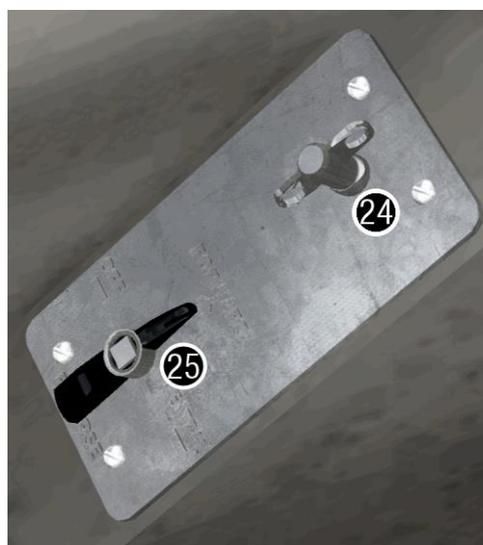Northern Spirit (Unbranded) - *NS U*

British Rail Provincial - *PVL*

Regional Railways - *RR*

Cab guide

1 - Throttle
2 - Brake handle
3 - PA phone
4 - DRA (Driver Reminder Appliance)
5 - Cab heater switch (slow/fast)
6 - Heated screen switch
7 - Driver to guard buzzer
8 - Windscreen wiper switch (slow/fast)
9 - Cab light switch
10 - Destination display light switch
11 - Instrumental panel light switch
12 - Headlight switch (tail/marker/day/night)
13 - Brake pressure gauge
14 - AWS reset button
15 - Speedometer (mph)
16 - Horn (low/high)
17 - Compressor speed up switch
18 - Engine stop button
19 - Engine start button
20 - AWS sunflower display

21 - Fan
22 - NRN Radio
23 - Driver's blind
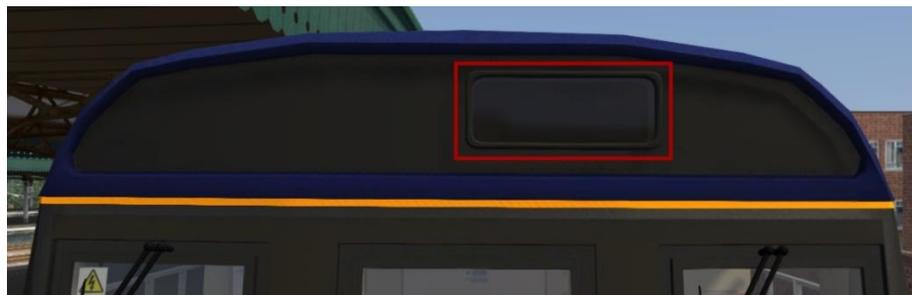24 - Master key
25 - Reverser

Keyboard controls

Non-standard keyboard controls are listed below:

E -	Master key
X -	Engine stop
B -	Low tone horn
Space -	High tone horn
N -	Driver to guard buzzer
V -	Driver wiper ON (slow/fast)
Shift+V -	Driver wiper OFF
C -	Guard wiper ON
Shift+C -	Guard wiper OFF
P -	Passenger saloon lights ON
Shift+P -	Passenger saloon lights OFF
U -	Cab light ON/OFF
I -	Instrument panel light ON/OFF
L -	Destination blind light ON/OFF
O -	Guard (vestibule) light ON/OFF
F -	Compressor speed up ON/OFF
K -	Fan ON/OFF
R -	DRA (Driver Reminder Appliance) ON/OFF
F8 -	Destination blind UP
F7 -	Destination blind DOWN

Features

- Original bench seats or Chapman high backed seats where appropriate
- Original or LED headlights where appropriate
- Detailed internal & external audio
- Accurate physics
- Cold start option with all power off
- Working master key
- Prototypical reverser function
- AWS self-test
- AWS audible outside when guard's (right-hand) window is open
- Semi-functional compressor speed-up
- Working DRA
- Engine temperature linked to exhaust smoke, ignition starting time & audio
- Independent driver and guard wipers
- Dynamic passengers - passengers board and leave the train when the doors are open. Also, all passengers alight when the destination blind/display is changed to 'Not In Service'.
- Wheel slip / lock with in cab indicators, speedometer needle is affected appropriately
- Cab instrument lighting
- User-operable saloon lights
- Driver and guard cab lights
- Prototypical headlights with 5 position rotary switch
- [Working manual destination blind](#)
- [Functional electronic destination display with correct route numbers](#)
- Guard/driver buzzer
- Operable sun blinds
- Opening cab windows
- TSX headlight and rain effects
- Realistic numbers for each livery

Manual destination blind

Where your class 142 has a manual destination blind fitted, you can change it by scrolling down with 'F7' or scrolling up with 'F8'. To help with scrolling when in the cab, a pop-up box will display on the top-right of your screen telling you which destination is being displayed. Please note that to save time, the destination blind scrolls at both ends of the unit. Below is a list of the destinations available:

Special	Huddersfield
Not In Service	Hull
Barry Island	Lancaster
Bishop Auckland	Leeds
Bridgend	Middlesborough
Bristol	Newcastle
Cardiff Central	Oxford
Carlisle	Paddington
Darlington	Pontypridd
Didcot	Preston
Edinburgh Waverley	Reading
Exeter St. Davids	Saltburn
Glasgow Central	Swansea
Glasgow Queen Street	York

Electronic destination display

Both the MT (Merseytravel) and NR DM (Northern Rail) variants have an electronic destination display fitted which can be controlled by use of the destination computer located on the top-left of the driver's side:

To set a destination, make sure the master key is inserted (key E), enter one of the three-code digits on the next page by clicking the relevant buttons and clicking the enter button. Alternatively, you can control the computer by pressing ctrl+desired key.

Electronic destination display codes

100	Alderley Edge	153	Manchester Airport
101	Altrincham	154	Manchester Oxford Road
102	Burnley	155	Manchester Piccadilly
103	Barrow in Furness	156	Manchester Victoria
104	Burton on Humber	157	Marple
105	Bishop Auckland	158	Meadowhall
106	Blackburn	159	Metro Centre
107	Blackpool North	160	Middlesborough
108	Blackpool South	161	Millom
109	Bolton	162	Morecambe
110	Bradford Forster Square	163	New Mills Central
111	Bradford Interchange	164	Newcastle
112	Broad Green	165	Newton le Willows
113	Bryn	166	Ormskirk
114	Buxton	167	Preston
115	Carlisle	168	Rochdale
116	Castleford	169	Rose Hill
117	Chassen	170	Salford Crescent
118	Chathill	171	Saltburn
119	Chester	172	Scarborough
120	Chinley	173	Scunthorpe
121	Cleathorpes	174	Selby
122	Clitheroe	175	Sellafield
123	Colne	176	Shaw and Crompton
124	Crewe	177	Sheffield
125	Darlington	178	Shepley
126	Depot	179	Sorry Not In Public Use
127	Disley	180	Southport
128	Doncaster	181	Special
129	Durham	182	St. Annes on Sea
130	Earlestown	183	St. Helens Central
131	Ellesmere Port	184	St. Helens Junction
132	Goole	185	Stalybridge
133	Greenbank	186	Stockport
134	Greenfield	187	Stoke on Trent
135	Hadfield	188	Sunderland
136	Halifax	189	Teesside Airport
137	Harrogate	190	Todmorden
138	Hazelgrove	191	Wakefield Kirkgate
139	Helsby	192	Wakefield Westgate
140	Heysham	193	Warrington Bank Quay
141	Huddersfield	194	Warrington Central
142	Hunts Cross	195	Whitby
143	Huyton	196	Whitehaven
144	Ilkley	197	Wigan North Western
145	Irlam	198	Wigan Wallgate
146	Kirkby	199	Wilmslow
147	Knutsford	200	Workington
148	Lancaster	201	York
149	Leeds		
150	Lincoln		
151	Liverpool Lime Street		
152	Macclesfield		

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Setting up the driver's cab

Please follow the steps below to find out how to prepare your class 142 from a 'cold' start. If you enter the unit, and the engine is switched on, please follow steps 1 to 3 and then skip to step 6:

1) Insert the master key by pressing 'E' on the keyboard.

2) Move the reverser to the neutral position by pressing 'W' on the keyboard twice.

3) Cancel the AWS warning sound by pressing 'Q' on the keyboard.

4) Start up the engine by holding down 'Z' on the keyboard until the engine stopped light extinguishes.

5) If you are set to be in passenger service, press 'P' on the keyboard to turn on the saloon lights. Remember to also do this in the rear car.

6) Set your headlights by pressing the 'H' key until you reach your desired setting. Remember to also set the tail lights in the rear car.

7) Move the reverser to your desired direction of travel by pressing either 'W' on the keyboard for forward or 'S' for reverse.

8) Turn off the Driver Reminder Appliance (DRA) by pressing 'R' on the keyboard

You should now be able to move off by using the brake handle and throttle. For more information, please see the 'Driving guide' section.

Driving guide

The following steps should allow you to drive the class 142 in a realistic and safe manner:

1) If the passenger doors are open, wait for them to close and listen out for the guard buzzing you twice which means you are ready to depart. Buzz back twice by using the 'N' key on the keyboard to confirm this.

2) Move the brake handle to the 'step 1' position.

3) Apply power by moving the throttle to anywhere between notch 2 and 5.

4) Move the brake handle to the release position.

5) As soon as you are satisfied that the train has sufficient grip, increase power by moving the throttle.

In wet or icy conditions, it is possible that the 'Gearbox Local' light will illuminate and the speedometer show a wildly inaccurate reading which means you are experiencing wheel slip. Please see step 6 below on how to deal with this:

6) If you experience wheel slip whilst accelerating, return the throttle to the off position until the 'Gearbox Local' light extinguishes and then gradually reapply power at a notch you believe will not result in further wheel slip.

   OR

   If you experience wheel slip whilst braking, return the brake handle to release until the 'Gearbox Local' light extinguishes and then reapply the brakes at a step you believe will not result in further wheel slip.

Numbering

When placing a class 142 in the scenario editor, you are able to control whether it is started up/warm or shut down/cold, what destination it displays (electronic display and AI trains only) and vehicle/unit number. Please see below for an explanation:

Example number:

120814208055730

Key:
0 or 1 - Shut down/cold = **0**. Started up/warm = **1**.
xxx - Any three digit destination code from the [list](#) above
1420xx - Unit number
55xxx - Vehicle number

Scenarios

APC142: 08:11 Newcastle - Saltburn
Route = Newcastle to York
Track covered = Newcastle – Darlington
Traction = Northern Spirit 142066
Year = 1999
Duration = 40 minutes

APC142: 11:00 Newcastle - York
Route = Newcastle to York
Track covered = Northallerton - York
Traction = Regional Railways 142076
Year = 1999
Duration = 35 minutes

APC142: 15:37 York - Newcastle
Route = Newcastle to York (Modern)
Track covered = York - Newcastle
Traction = Regional Railways 142082
Year = 2000
Duration = 1 hour 35 minutes

APC142: 14:12 Bristol Parkway - Weston-super-Mare
Route = Bristol to Exeter
Track covered = Bristol Temple Meads - Weston-super-Mare
Traction = First Great Western 142029
Year = 2010
Duration = 40 minutes

APC142: 5Z42 12:29 Exeter - Newton Heath
Route = Bristol to Exeter
Track covered = Exeter Depot - Bristol Temple Meads
Traction = First Great Western (N) 142009, 142068 & 142063
Year = 2011
Duration = 1 hour 35 minutes

APC142: 2H97 18:18 Carlisle - Leeds
Route = Settle to Carlisle
Track covered = Carlisle - Settle
Traction = Northern Rail 142048
Year = 2012
Duration = 1 hour 40 minutes

Credits

We would like thank the following individuals for their contribution to this add-on:

Beta Testers: Simon Hall, Thomas Harrison, Ally Mcmurdo, Geoff Harrison, Alan Hutchinson & Darren Porter

Authenticity Consultant: Ally Mcmurdo

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