



DB BR232 Diesel Locomotive

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1 History

1.1 DB BR232

Due to the political climate in the 1960s, the GDR had to stop development of their own diesel locomotives (V180), and import high powered engines from The Eastern Bloc.

First bought was the M62 (V200 / Class 120). This machine could only be used for freight trains because of it's maximum speed of 100 km/h, and lack of any ability to heat passenger trains. Consequently an additional machine with a higher speed limit and train heating supply was needed for passenger trains.

In 1970 Luhansk locomotive works introduced a newly developed locomotive type, most commonly known as Ludmilla, to the GDR. These machines needed a lot of changes to suit the needs of the GDR Reichsbahn. Several versions were introduced (Class 130 / 131), before finally giving the GDR the machine that they really needed. The class 132 with a max speed 120 km/h and an electric train supply to heat the passenger coaches in winter time. This class became the backbone of GDR diesel traction.

After reunion of both German countries in 1989 the Deutsche Bahn renumbered all Class 132 to DB BR232 and used them for non-electrical routes to drive freight and passenger trains.

Today only a few machines remain in service in with the national companies. A lot of them were sold to private railroad companies.

1.2 Technical Specification

Manufacturer	Lokomotivfabrik Lugansk
Type	Diesel-Electric
Construction	1970 - 1982
Wheel Arrangement	Co-Co
Length	20.82m
Weight	122t
Power Output	2,200kW
Max Speed	120 km/h

2 DB BR232 Locomotive

2.1 BR232 in DB Traffic Red



2.2 BR232 in DB Orient Red



2.3 BR232 in DB Railion



3 Cab Controls



- 1 - Regulator
- 2 - Reverser
- 3 - SIFA on/off - SIFA warning light
- 4 - Drive on/off
- 5 - Fuel pump on/off
- 6 - Starter
- 7 - SIFA Reset
- 8 - Dynamic brake on/off
- 9 - Force train brake release
- 10 - Horn
- 11 - Cablight
- 12 - Headlights
- 13 - Brake/Pipe pressures
- 14 - Motor power in kA
- 15 - Water temperature in °C
- 16 - Train brake
- 17 - Dynamic brake
- 18 - Engine brake
- 19 - Speedometer in km/h

3.1 Throttle

The throttle has 16 notches; notch 0 to 15.

The BR232 is a diesel-electric locomotive, with the throttle you control the diesel engine speed and with that the power of the machine.

Please note: the throttle is disabled / locked when...

- the train brake is or was active
- the dynamic brake is or was active
- SiFa initiates a brake application
- you initiate an emergency brake application with Backspace or the HUD
- the switch „Fahren“ (Drive) is „Aus“ (off)

To unlock the throttle again move it to notch 0 and eliminate all of the above remarked exceptions. Otherwise you can't apply power.

3.2 Brakes

The locomotive has three brake systems.

- Locomotive brake (straight air brake)
- Train brake (automatic train brake)
- Dynamic brake (electrical brake using traction motors)

The **locomotive brake** is only for the locomotive itself and should only be used for light engine movements, and to hold the train when starting on a gradient whilst the auto brake releases, and power builds up sufficiently to start the train moving. Otherwise it should be in the release position.

The **train brake** is a default German Knorr brake. To start driving the brake needs to be completely released. Consider the slow release rates.

The **dynamic brake** is off when you enter the cab. To activate the dynamic brake set switch (8) to position "Ein". The dynamic brake lever is then coupled to the train brake lever if both levers are in the position "Release" and the dynamic brake is switched on. To use the dynamic brake independently move only the dynamic brake lever.

Please note, that when using the HUD or a gamepad that the dynamic brake cannot

be used independently, they can however be used coupled. Also be aware that if using the HUD, rapid movement of the train brake lever can cause the brakes to uncouple.

Important! When train and dynamic brake are coupled the train brake has a totally different behavior. When braking at higher speeds with the train brake only the dynamic brake is used. When you exceed the 4.0 BAR brake pipe pressure the train brake will be used too. When driving with slower speeds than 40 km/h the train brake is used in normal operation even if the brakes are coupled. So you have to “play” with the brakes for smooth deceleration.

Button: “Bremse lösen” (release brakes)

The button „Bremse lösen“, to the right of the drivers desk, forces the release of the train brake without moving the lever. This is very useful when you have a SiFa or emergency brake application. Note that it only releases the automatic train brake and not the direct loco brake.

3.3 Wheelslip and Sander

The BR232 has a special system to prevent the wheels from spinning. An additional pneumatic sanding system that applies sand beneath the loco wheels to help prevent further wheel-slip. When you hear the nose bearing spinning, switch down the power and apply sand to control and prevent further wheel-slip. Listen to the additional locos in your consist too, because they can slip independently.

3.4 SiFa

The BR232 has a SiFa system. When you enter the cab the SiFa is deactivated by default. To switch on the vigilance system use the switch (3) which is positioned to the left of the SiFa warning light. Press down the switch and press key Q to confirm the initial SiFa test alert. The SiFa can only be switched on or off when the locomotive is standing still.

When SiFa is activated and you are driving, you will get a SiFa alert approx. every 30 seconds. Acknowledge the alert by pressing “Q”, number pad “Enter” or Joypad “A”. If you do not respond within 4 seconds you will get a second alert and an additional two seconds to respond. If after this you fail to respond, the SiFa will initiate a normal brake application. To continue driving, acknowledge the alert. The brakes will release automatically. To bring back the traction power you need to set the throttle to zero, to unlock it, and then you can drive further.

3.5 Additional key commands / gamepad / cab controls

V -- Wiper on/off	NUM -/+ -- Train brake
L -- Cablight on/off	SHIFT+W -- „Fahren“ Drive on/off
SHIFT+L -- Desk Lights on/off	SHIFT+S -- Dynamic brake on/off
SHIFT+7 -- SIFA on/off	„Anlasser“ Starter -- to start the motor
Q or NUM Enter or Gamepad A -- SIFA Reset	„Kraftstoffpumpe“ Fuel Pump -- on/off ...„aus“ to switch off the pump / motor ..„ein“ needs to be switched to start the motor with “Anlasser”
SPACE -- Horn	“Bremse lösen” -- release the train brake without moving the brake lever
X -- Sand	

4 Scenarios

4.1 Meet the BR232 Ludmilla

Nicknamed the Ludmilla, this tutorial guides you through it's operation.

- Rating: Easy
- Duration: 40 minutes
- Scenario Type: Standard

4.2 Army of Two

A consignment of military equipment is being transported north from local factories. The unusual nature of the cargo calls for unusual traction to haul it. Take to the controls of a BR232 Diesel Locomotive heading north to Augsburg.

- Rating: Medium
- Duration: 40 minutes
- Scenario Type: Standard

4.3 Hot under the Collar

Drive a freight service from Augsburg to Pasing. This seems to be an easy run, but you might expect some problems on your run.

- Rating: Hard
- Duration: 45 minutes
- Scenario Type: Standard and Career

5 Credits

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