

The MT-BVR from **EXXOTEST**[®] scale model is a training simulator for discovering of robotized gearbox functionality.

OBJECTIVES

- Study the operation of the robotized gearbox and the laws of change both in automatic and in manual modes (interdictions, obligations, anti-stalling protection, and protection against engine over-speeding...).
- Study the electro-mechanical actuators like the clutch operating control, the gear change control (selection and change).
- Measure and interpret the signals by means of a breakdown simulating box situated before the ECU (inductive signal, Hall Effect, recopy signal ...).
- Diagnose, with the manufacturer's equipment connected to the EOBD socket, a fault in the system (anomaly caused by the breakdown simulating box).



DESIGN



This simulator consists of an aluminium frame on caster wheels with a manual gearbox mounted on a metal frame.

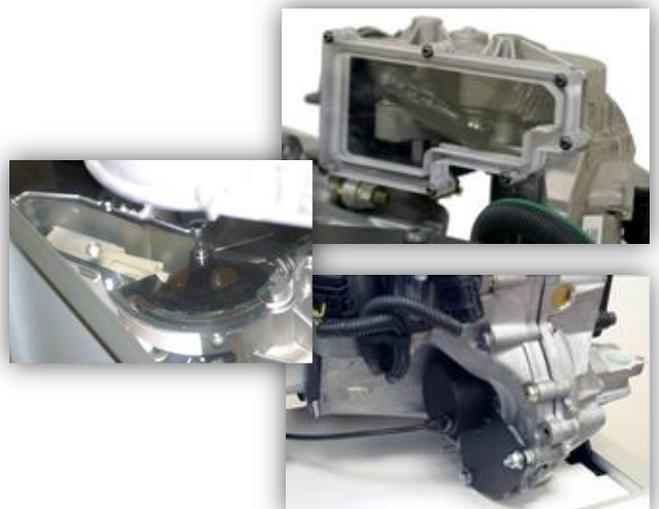
The gearbox is driven by a 220V engine so as to dynamically see the operation of the electro-mechanical actuators (clutch and gear change actuators).

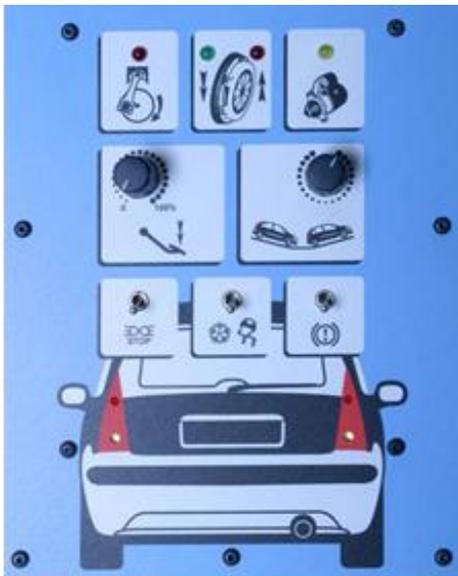
It also has a control panel, the vehicle's controls, buttons and a lever for changing gear.

By means of an integrated breakdown simulation box, you can access measuring points, which are protected by fuses.

The real elements are:

- The gearbox with its clutch and mechanism.
- The gearbox ECU.
- The AUTO mode button.
- The CAN network and the EOBD socket.
- The 2 electromagnetic actuators (clutch and gear change)
- A 12 V battery situated at the bottom, on the aluminium frame.
- The control panel and the gear lever.





The elements assembled by **EXXOTEST®**:

- An aluminium frame on caster wheels.
- A 12 V charger with cut-out switch installed at the bottom of the frame.
- A 220V cable extension for the power supply.
- A control panel with:
 - stop lights, hand brake,
 - accelerator potentiometer and charge simulation of the vehicle,
 - visualisation of clutch status (leds) starter motor action and engine turning.
- A measuring terminal panel with protection fuses, shunting of all the channels of the gearbox ECU and added sensors.
- The gearbox is powered by a 220V regulated engine placed under the box.

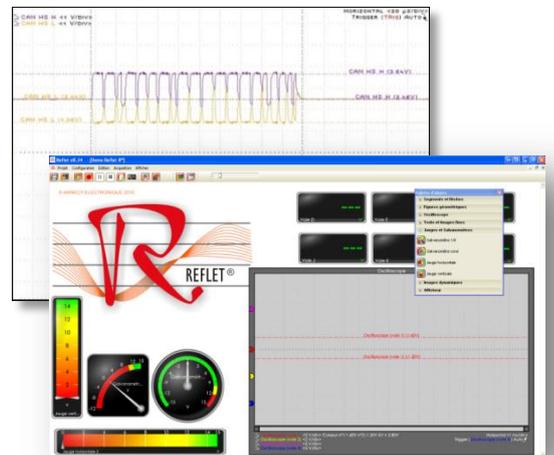
EQUIPMENT

The **REFLET®** is a measurements logging system specifically designed for automotive applications. It allows real-time playback and recording, curves tracing, and more. **REFLET®** also provides a 3D instruments interface and dynamic visualization of 3D objects. The **REFLET®** software is delivered with the **MT-BVR** teaching model.

As an option you can use with this teaching model our acquisition system dedicated to automotive **REFLET®** that allows to use:



- USB connection,
- 4 traces analog and digital oscilloscope module,
- 2D tools interface,
- 3D instruments interface, dynamic visualization of 3D object - **EXXOTEST®** innovation.



OTHER

- Size: 1200 X 600 X 1280 mm
- Net weight: 129 Kg
- Brut weight: 199 Kg
- Warranty: 2 years

Find all **EXXOTEST®** products on the Internet: www.exxotest.com