

## EV-617 Electric Vehicle (Ev) Powertrain Training System

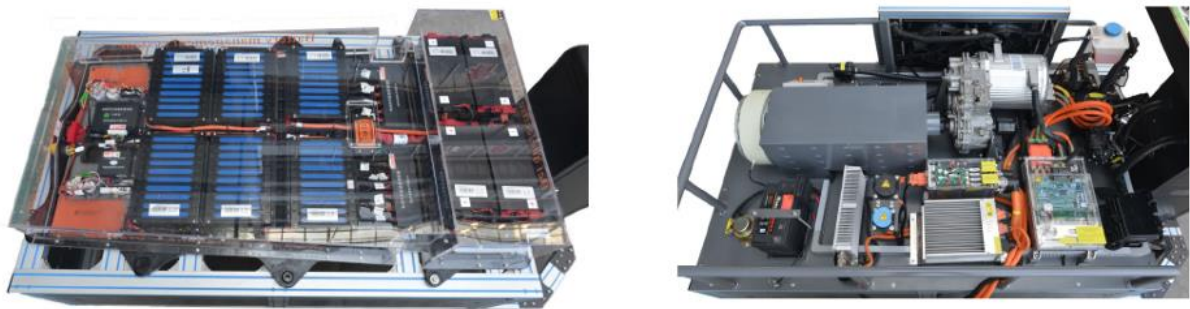


### Description

This comprehensive EV powertrain training system is designed based on the actual vehicle BAIC EV200 for teaching purpose. Its main system components include: power battery and

# AUTOMOTIVE

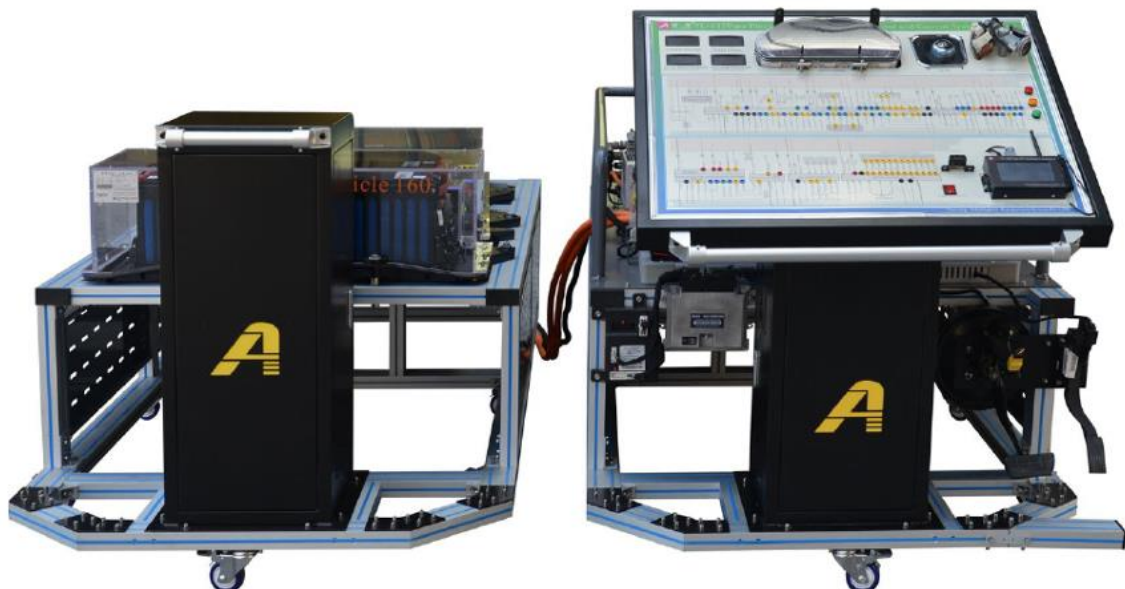
management system, permanent magnet synchronous drive motor, drive motor controller, high voltage control unit, PTC controller, DC/DC controller, on-board charging controller, fast charge interface, slow charge interface, auxiliary battery, cooling system, electric vacuum assist system and braking system, are all parts of the original car's actual working system. Teaching aids are integrated into the full system, which consist of panel schematic diagram, digital voltmeter, detection and diagnosis terminal points, intelligent fault assessment system, transparent viewing area of components and removable platform.



YL-617-I (Battery Management)



YL-617-II (Powertrain)



## Features

- The equipment bench frame maximizes the viewable layout area of the various parts of the actual car, which allows students to learn more conveniently and systematically.

- The negative terminal of the auxiliary power supply is equipped with a main power switch, which can be turned on/ off at any time.
- Potentially dangerous parts, such as drive motor, drive wheel are covered with protection net guard. Round guardrails are installed on all sides of the operational area to prevent accident access.
- The main control panel is laser printed with circuit schematic diagram. Panel is a 4mm high-strength composite aluminium-plastic board.
- The panel is installed with measurement terminals. Multimeter and diagnostic instruments can be connected to measure various dynamic and static value related to the electric vehicle drive motor and control system in real time.
- Equipped with OBDII diagnostic socket and an automotive scan tool can be connected to perform electronic control system fault code reading, fault code clearing, data stream reading and waveform analysis.
- Optionally equipped with Intelligent fault assessment module, which consists of an Intelligent Answering Device. This device can work offline or online, through wireless network connection to send and receive the data between the teacher computer and the student computer. A 5-inch TFT true colour screen displays colourful Interactive interface. Various system faults are injected into the system using fault relay board and students should troubleshoot and solve the problems accordingly.

## Training Scope

- Location of each main component and their connection
- PDM disassembly and assembly practice, component structure recognition
- Disassembly and assembly of inverter, and recognition of the structure and components
- Disassembly and assembly of drive motor, recognition of parts
- Learning of high-voltage management system and motor control principles
- Disassembly and assembly of high-voltage batteries, and understanding of the structure of components
- Disassembly and assembly of maintenance plugs, structure recognition
- Disassembly and assembly of high-voltage lines, structural cognition
- High-voltage wiring current and voltage test
- Control principle of high voltage battery and BMS

## System Components

Sr. No.	Component	Qty
1	Power battery and management system	1
2	Permanent magnet synchronous drive motor	1
3	Permanent magnet synchronous drive motor controller	1
4	High voltage control unit	1
5	PTC controller	1
6	DC/DC controller	1
7	On-board charging controller	1
8	Fast charge interface	1
9	Slow charge interface	1
10	Auxiliary battery	1
11	Cooling system	1
12	Electric vacuum assist system	1
13	Braking System	1
14	Energy recovery system	1
15	Drive motor stand	1
16	Panel and control console	1
17	Intelligent fault assessment module (Option)	1