

X-Gauge

For the smart® fortwo (gasoline/petrol), 2001 to 2006
For the smart® fortwo cdi (diesel), 2004 to 2006

The **X-Gauge** is a sophisticated electronic module with a 128x64-pixel graphic display that replaces the original module inside the cockpit clock of a smart® fortwo (city-coupé) perfectly. It can not only tell time, but also date, battery voltage, inside temperature and a number of engine parameters in real-time (see list below). These parameters are retrieved from the car's engine control unit (ECU) through the on-board diagnostic (OBD) interface. The module can also display and clear diagnostic trouble codes that the ECU might have stored.

X-Gauge

displays these parameters in real-time:

- . Time * not applicable with cdi
- . Date
- . Battery Voltage [V]
- . Inside Temperature [°C, °F]
- . Number of Trouble Codes
- . Fuel System Status*
- . Calculated Load Value [%]
- . Engine Coolant Temperature [°C, °F]
- . Short Term Fuel Trim [%]
- . Long Term Fuel Trim [%]
- . Intake Absolute Pressure [bar, psi]
- . Engine RPM [rpm]
- . Vehicle Speed [km/h, mph]
- . Ignition Timing Advance [°]
- . Intake Air Temperature [°C, °F]
- . Air Flow Rate [g/s, lb/min]
- . Absolute Throttle Position [%]
- . Secondary Air Status*
- . Oxygen Sensor 1 Voltage [V]
- . Oxygen Sensor 2 Voltage [V]
- . Current Mileage [l/100km, mpg]
- . Average Mileage [l/100km, mpg]
- . Maximum Vehicle Speed [km/h, mph]
- . Acceleration [s]
- . Turbo Cool-Down Timer [s]
- . Pulse Rate of the 4 ABS-Sensors [pps]*
- . Gear Selection (manual & auto mode)
- . Gearbox Temperature [°C, °F]

Languages

- English
- Deutsch
- Français
- Italiano
- Español

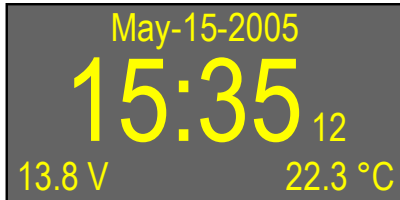


The **X-Gauge** is delivered as a kit that includes module, cables, connectors, faceplate, user manual and an installation guide which illustrates the step-by-step procedure for replacing the cockpit clock module with the **X-Gauge** module. Besides the original 3-wire hookup from the clock, there are two additional wires that get plugged into the diagnostic connector under the dashboard. All functions of the **X-Gauge** are controlled through the same two buttons that were already used for adjusting the clock.



There are 5 display modes that can be selected. Changing from one mode to another can be done at any time.

Display Mode: Time



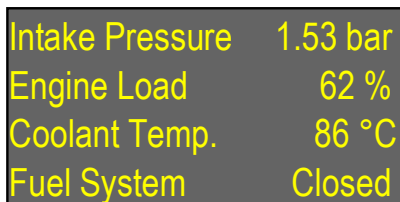
This mode shows the parameters *Date*, *Time*, *Battery Voltage* and *Inside Temperature*. No communications with the ECU are taking place. This mode is also activated for the duration of 30 seconds while the ignition is turned off and either one of the two buttons is pushed.

Display Mode: Main



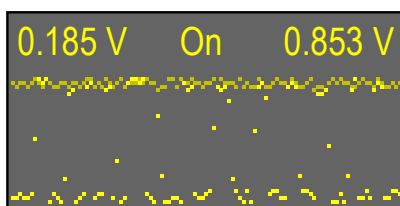
Up to 7 parameters can be displayed concurrently in this mode. Which parameter is displayed at which display location is freely selectable. The screen shot on the left shows *Fuel System Status* (top left), *Average Fuel Consumption* (top center), *Coolant Temperature* (top right), *Intake Absolute Pressure* (center), *Battery Voltage* (bottom left), *Time* (bottom center) and *Inside Temperature* (bottom right).

Display Mode: Text



This display mode shows descriptions and corresponding values of up to 4 parameters. Assignment of parameters to display lines is freely selectable. Description can be chosen to be either in English, German, French, Italian or Spanish, and parameter values can be represented in English or metric units.

Display Mode: Graphic



Values of up to 2 parameters are plotted as x-y graphs that are scrolling from right to left. The second graph is plotted with a darker color than the first one so that the two can be easily distinguished. The example on the left shows the voltages of oxygen sensors 1 and 2 (while fuel system operates in closed loop mode). Updating (scrolling) of the graphs can be turned on/off at any time. Graphs are kept in memory when turned off even if display mode gets changed or if ignition is turned off, so that they can be redisplayed at a later time.

Display Mode: Trouble Codes



Confirmed and pending diagnostic trouble codes (DTCs) are repeatedly retrieved from the ECU and displayed while this display mode is active. Top line shows the number of confirmed/pending codes stored by the ECU, bottom line indicates the type of code currently displayed. Trouble codes can be cleared from the ECU via a menu position of the user interface.