

AUTOMOBILE MULTI-TESTER

SAFETY NOTES

1. Do not use on AC voltage.
2. After you finish checking vehicle, make sure you have correctly restored all the connections which you disconnected.
3. Always follow the instructions and procedures indicated in the vehicle's service manual before attempting to disconnect any part or subsystem of the electrical circuit.
4. Use caution when using the device to perform measurement. Never touch any dangerous part of the vehicle with you hand for safety. Don't touch any live conductor with hand or skin.
5. Don't use the device around explosive gas, vapour or dust. Don't use it if it is damaged or the vehicle is being driven.
6. Before driving, make sure that the vehicle is safe and reliable.

FEATURES

This device can be used as follow :

1. Tests battery voltage
2. Checks the battery condition while starting the engine.
3. Checks interior and exterior lamps
4. Checks relays, power windows and electric motors.
5. LED light source.
6. It has a circuit breaker protected voltage source and a warning buzzer.
7. Power supply function can be selected.
8. Protects wires and components when testing shorted and overloaded circuits
9. Finds open and disconnected parts

10. There is magnet near the back side of the device, so you can attach the device on the vehicle for easy use. (Keep the device far away from any magnetism-sensitive part of vehicle.)

SPECIFICATIONS

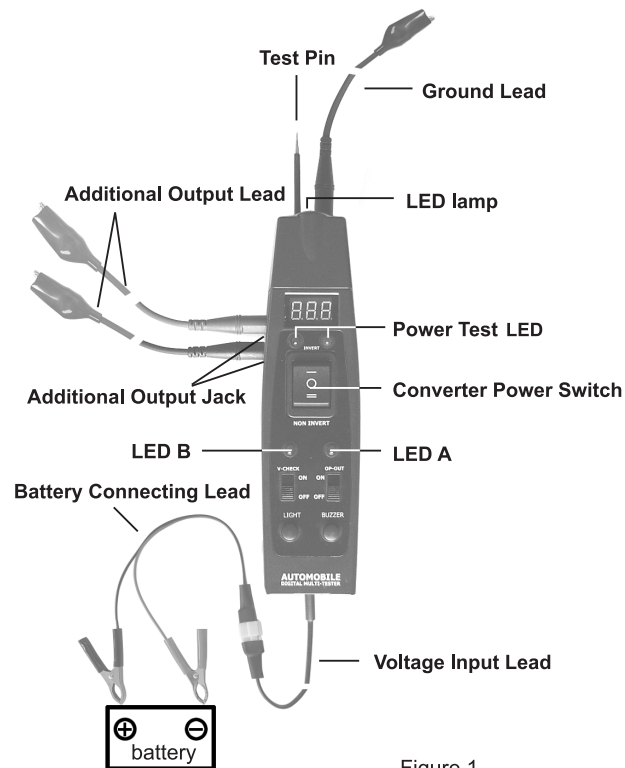


Figure 1

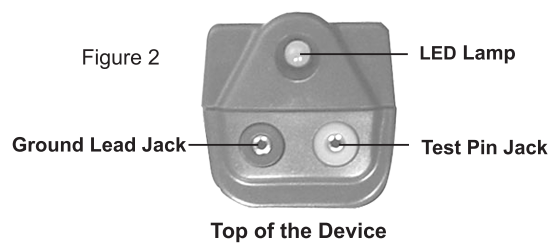


Figure 2

Top of the Device

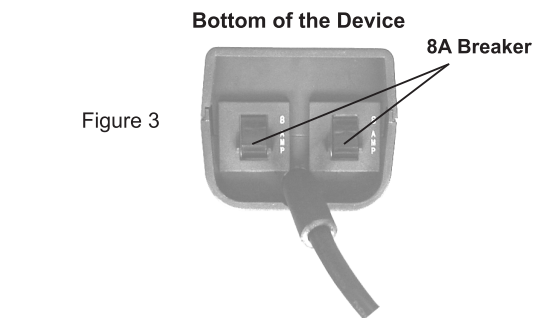


Figure 3

Bottom of the Device

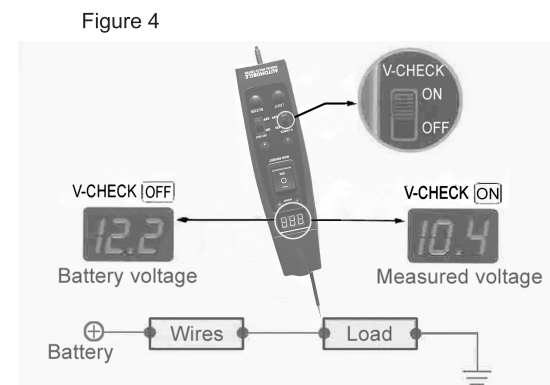


Figure 4

OPERATION INSTRUCTION



Figure 5

Refer to Figure1 and 5, connect the battery connecting lead and the voltage input lead together. Connect the red clip of the battery connecting lead to the positive terminal of the battery, connect the black clip to the negative terminal of the battery.

1. Set the V-CHECK switch in "OFF" position, the display shows the voltage of the battery (Figure 4).

Then press and hold down the "-" side of the converter power switch, the red power test LED lights, the built-in buzzer will sound discontinuously if the BUZZER button is ON. At the same time, the test pin outputs the voltage of the battery to provide a voltage source, and it is internally connected to the positive terminal of the battery.

Press and hold down the "=" side of the converter power switch, the green power test LED lights, the test pin is internally connected to the negative terminal of the battery. In addition, the built-in buzzer will sound discontinuously if the "BUZZER" button is ON. (This sound is different from the sound mentioned in the last paragraph.)

2. Set the V-CHECK switch in "ON" position, the LED B lights. The display shows the voltage of the test pin connection, and the converter power switch is disabled (Figure 4).
3. Set the OP-OUT switch in "OFF" position, the two additional output jacks are disabled. Set the OP-OUT switch in "ON" position, the LED A lights, the two additional output jacks are internally connected to the positive terminal of the battery, so any of the two additional output jacks can be used to provide positive voltage, and the ground lead should be used together.
4. Press the **LIGHT** button to turn on the LED lamp for use in dark environment.

NOTE:

1. The ground lead is internally connected with the negative terminal of the battery all the time. You can use it if necessary.
2. If the polarity connection of the battery connecting lead is reversed (or wrong), the built-in buzzer will sound continuously as an alarm. You should correct the connection.
3. When the current of the load is more than 8A or the load is shorted, the breaker(s) at the bottom of the device will trip. Please wait about 30 seconds, and then restore the breaker(s) with finger.

EXAMPLES

1. Checking the Battery Voltage in Driving Cab (Figure 6)

Connect the voltage input lead and the cigarette lighter jack power cable together, insert the cigarette lighter plug of the cigarette lighter jack power cable to the cigarette lighter jack. Set the V-CHECK switch in "OFF" position, the display shows the voltage of the vehicle battery, which is connected with the cigarette lighter. Start the engine and read the display to know the battery condition while starting the engine.



Figure 6

Cigarette Lighter Jack Power Cable

2. Measuring the Voltage of A Battery Directly

Connect the battery connecting lead and the voltage input lead together. If necessary, you can use the extension battery cable together for a longer connection.

Connect the red clip of the battery connecting lead to the positive terminal of the battery to be tested, connect the black clip to the negative terminal of the battery.

Set the V-CHECK switch in "OFF" position, read the reading on the display.



Figure 7

3. Checking Vehicle's Interior / Exterior Lamps and the Continuity of the Lamps' Wiring

Connect the battery connecting lead to the voltage input lead. Connect the red clip of the battery connecting lead to the positive terminal of the battery to be used as power source, connect the black clip to the negative terminal of the battery.

Set the V-CHECK switch in "OFF" position, connect the black alligator clip of the ground lead to one wire of the lamp

to be tested, connect the test pin to another wire of the lamp. Press the "-" side of the converter power switch, the lamp under test should light, otherwise the lamp wiring is open or the lamp is bad.

NOTE: Before test, disconnect the lamp to be tested from the vehicle's electric system.



Figure 8

4. Testing Power Windows and Electric Motors

NOTE: Before test, disconnect the motor to be tested from the vehicle's electric system.

Connect the battery connecting lead and the voltage input lead together. Connect the red clip of the battery connecting lead to the positive terminal of the battery to be used as a power source, connect the black clip of the battery connecting lead to the negative terminal of the battery.

Set the V-CHECK switch in "OFF" position, connect the black alligator clip of the ground lead to one wire of the motor to be measured, connect the test pin to another wire of the motor.

Press and hold down the "-" side of the converter power switch. The motor should run, otherwise the motor is bad or its wire is open.



Figure 9

5. Checking Relays (Figure 10)

Connect the battery connecting lead and the voltage input lead together, connect the red clip of the the battery connecting lead to the positive terminal of the battery to be used as a power source, connect the black clip to the negative terminal of the battery.

Set the V-CHECK switch in "ON" position, and set OP-OUT switch in "ON" position. Set up the connection as described in Figure 10. If the display shows the voltage value of the battery, the relay is good.

Note: The rated voltage of the relay to be tested should be similar to the output voltage of the battery used.

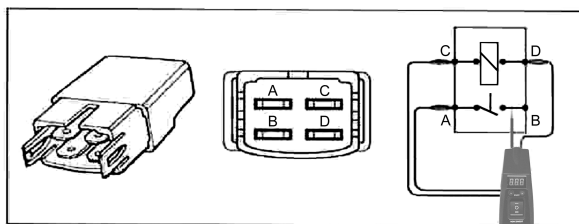


Figure 10

INSTRUCTION FOR SOME PARTS

Cigarette lighter plug

Cigarette Lighter Jack Power Cable

Additional Output Lead

Extension Battery Cable

Test Pin

Battery Connecting Lead

Extension Test Pin Lead
(It can be connected to the test pin jack)

Test Pin Lead
(It can be used to replace the test pin if necessary. It can also be connected to the extension test pin lead for a longer connection.)

TECHNICAL SPECIFICATIONS

Input Voltage: DC 9 ~ 35V

Max. Protection Current: 8A

Operating Temperature: 0°C ~ 40°C, <75%RH

Storage Temperature: -10°C ~ 50°C, <85%RH

Dimensions: 195 × 53 × 45mm

Weight: about 250g (only main body)

NOTE: If the device can not work, the cause may be that the breaker(s) has tripped. Pressing the breaker(s) may solve the problem.

Make sure you are familiar with the device before performing measurement.

DISPOSAL OF THIS ARTICLE

Dear Customer,
If you at some point intend to dispose of this article, then please keep in mind that many of its components consist of valuable materials, which can be recycled. Please do not discharge it in the garbage bin, but check with your local council for recycling facilities in your area.

