

12V Digital Battery
Analyzer Tester & Printer

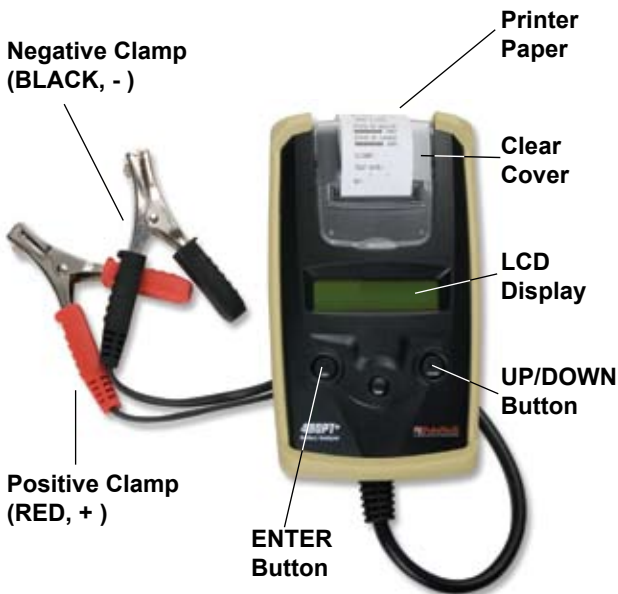
490PT+
Tests 12V Batteries
and
Charging Systems

 **PulseTech**[®]
Products Corporation

TEST PROCEDURES / OPERATING INSTRUCTIONS

IMPORTANT :

1. For testing 12 volt battery.
2. Suggested operation range 32°F (0°C) to 122°F (50°C) in ambient temperature.



WARNING:

1. Working in the vicinity of a lead acid battery is dangerous. Batteries generate explosive gases during normal battery operation. For this reason, it is of utmost importance, if you have any doubt, that each time before using your tester, please read these instructions very carefully.
2. To reduce risk of battery explosion, follow these instructions and those published by the battery manufacturer and manufacturer of any equipment you intend to use in the vicinity of the battery. Observe cautionary markings on these items.
3. Limit exposure of tester to rain or snow. Dry after exposure to moisture.

PERSONAL SAFETY PRECAUTIONS:

1. Someone should be within range of your voice or close enough to come to your aid when you work near a lead acid battery.
2. Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing or eyes.
3. Wear safety glasses and protective clothing.
4. If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters eye, immediately flood eye with running cold water for at least ten minutes and get medical attention immediately.
5. NEVER smoke or allow a spark or flame in vicinity of battery or engine.
6. Be extra cautious to reduce risk of dropping a metal tool onto the battery. It could spark or short-circuit the battery or other electrical parts and could cause an explosion.
7. Remove personal metal items such as rings, bracelets, necklaces and watches when working with a lead acid battery. It can produce a short circuit current high enough

to weld a ring or the like to metal causing a severe burn.

PREPARING TO TEST :

1. Be sure area around battery is well ventilated while battery is being tested.
2. Clean battery terminals. Be careful to keep corrosion from coming in contact with eyes.
3. Inspect the battery for cracked or broken case or cover. If battery is damaged, do not use tester.
4. If the battery is not sealed maintenance free, add distilled water in each cell until battery acid reaches level specified by the manufacturer. This helps purge excessive gas from cells. Do not overfill.
5. When testing batteries in parallel; you must always remove the paralleling cables.

OPERATION & USE :

BATTERY TEST - 490PT+

1. Before you test a battery in a vehicle, turn off the ignition, all accessories and loads.
2. Verify that 4 charged AA batteries are installed prior to use. Oxyride batteries are not recommended because of the initial 1.7 Volt output. If the 1.5V battery runs out of power, screen will show "REPLACE INTERNAL BATTERY" or "POWER LOW". Replace the four AA batteries before starting the test. Note that nothing will be seen on the display until the tester is connected to a vehicle battery.

3. Make sure the battery terminals are clean. Wire brush them if necessary. Clamp the black load lead to the vehicle negative battery terminal. Clamp the red load lead to the vehicle positive battery terminal. Place the clamp on the terminal.

4. Paper load: Open the clear cover. Insert paper to the paper feeding for auto running the paper into printer.

STEP 1: Connect the clamps to the tested battery.

STEP 2: Open the clear cover

STEP 3: Insert the paper roll 57MM(W)X30M(L) Part No. 350B701000 into the paper feeding.



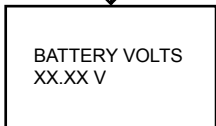
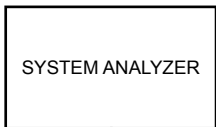
HOW TO REPLACE A PAPER JAM

STEP 1: Open the clear cover

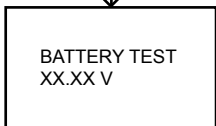
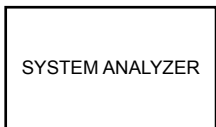
STEP 2: Pull the paper slowly and straightly from the paper roll in the chamber

5. You will view the following screens:

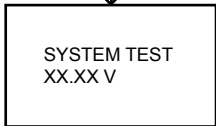
Testing Cont.



Press "Enter" to do battery test.



Press "UP/DOWN" to select battery or system test.



Press "Enter" to do system test.

6. Press the "UP/DOWN" key to select battery test. Press "ENTER" button.

7. Press the "UP/DOWN" key to select the battery type:

- a. FLOODED CELL
- b. AGM FLAT PLATE
- c. AGM SPIRAL
- d. GEL

BATTERY TYPE
AGM FLAT PLATE

Press "ENTER" to confirm choice.

8. Press the "UP/DOWN" key to input the battery capacity of CCA. Press "ENTER" to begin the test.

SET CAPACITY
XXXX CCA

9. Press the "UP/DOWN" key to select battery fully charged or not if tester asks. Press "ENTER" to confirm choice.

IS THE BATTERY
CHARGED? YES

10. When the test is completed, the display shows the actual volts and the actual CCA or %. {Press the "UP/DOWN" key to select SOH (STATE OF HEALTH) or SOC (STATE OF CHARGE)}.

One of three results will be displayed:

GOOD & PASS :

The battery is good & capable of holding a charge.

GOOD & PASS
XX.XX V XXXX CCA

GOOD & CHARGE :

The battery is good but needs to be recharged.

GOOD & CHARGE
XX.XX V XXXX CCA

CHARGE & RETEST :

Battery is discharged, the battery condition cannot be determined until it is fully charged. Recharge & retest the battery.

CHARGE & RETEST
XX.XX V XXXX CCA

LOAD ERROR :

The tested battery is bigger than 2000 CCA or 200AH. Or the clamps are not connected properly. Please fully charge the battery and retest after excluding both previous reasons. If reading is the same, the battery should be replaced immediately.

11. Press the "UP/DOWN" key to select result printing: YES or NO. Press "ENTER" to confirm your choice.

12. NO: Press "ENTER" return to step 5 or remove the test clamps from the battery posts after completion of testing batteries to end test.

PULSETECH PRODUCTS CORPORATION

1-Year Limited Warranty

What Does This Warranty Cover? This warranty covers any defects in workmanship or materials in the product under normal use and service.

How Long Does The Coverage Last? This warranty runs for one (1) year from the date of purchase.

What Will PulseTech Do? PulseTech will, at its option, repair the unit or replace the unit with a remanufactured unit at no charge.

What Does This Warranty Not Cover? This warranty applies only to the product and does not cover any other equipment, static damage, water damage, overvoltage, dropping of the unit or damage resulting from extraneous causes. The warranty is void if the owner attempts to disassemble the unit or modify the cable assembly. In addition, PulseTech will not be responsible under this warranty if PulseTech determines that (1) upon examination that the unit's failure was (A) caused by misuse, neglect, accident, alteration, or abnormal condition of operating or handling (including the failure to install the product in accordance with PulseTech's instructions and observe the warnings on the product and the instruction manual), or other conditions beyond the control of PulseTech or (B) damaged in transit to PulseTech, or (2) the owner is not the original purchaser that purchased the product through an authorized PulseTech dealer or distributor. IN NO EVENT SHALL PULSETECH BE LIABLE FOR ANY DIRECT, SPECIAL, INDIRECT, CONSEQUENTIAL, INCIDENTAL, PUNITIVE OR EXEMPLARY DAMAGES, EXPENSES, LOST SAVINGS OR LOST PROFITS OR ANY OTHER DAMAGES OF ANY KIND FROM ANY BREACH OF THIS WARRANTY OR OTHERWISE. Some states, provinces or countries do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.

How To Get Service? Send the product postage prepaid with proof of purchase (sales receipt) within the warranty period to the authorized reseller where the product was purchased or contact PulseTech directly by calling 1-800-580-7554.

How Does State, Province or Country Law Apply? This warranty gives you specific legal rights, and you may also have other rights which vary from state to state, province to province or country to country.

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