ATD-5493
Wireless Battery System Tester

For Testing 6V & 12V Vehicle Batteries individually & in Battery Packs. Also for testing 6V, 12V, 24V and 36V Charging & Starter Systems

User Manual

Remote
Battery Module
Wireless to IR to USB cable and Adapter
INTRODUCTION

The ATD5493 Wireless Battery System Tester tests all 6V and 12V lead acid batteries individually or in parallel and series battery packs. The tester will display the battery or battery pack condition as % available capacity, rated capacity (i.e. CCA’s), state of charge voltage and good, marginal or replace status. The ATD5493 also tests 12V, 24V and 36V starter and charging systems including starter draw, alternator output (loaded/unloaded), and diode ripple. The ATD 5493 features a Radio wireless printer output for remote printout of the test results. Test results can be sent to a USB Adapter (included). The test data for the last test performed is stored in the memory and can be reviewed either when connected to a battery, or when disconnected from the battery at a later time.

Features:
- Patented conductance technology
- Displays % of capacity and CCA’s.
- Tests all 12V lead acid batteries including AGM and Gel
- Includes Wireless Local Transmitter
- Radio printer interface for remote printing
- USB adapter for PC printing (included)
- No conversion tables needed
- Test batteries from 100 CCA to 3500 CCA (battery pack)
- Tests 6/12/36V Starting/Charging Systems
- Tests both series and parallel batteries
- Tests Alternator Ripple
- Bad cell is detected and displayed
- Displays Multiple International Units
- Tests 6V batteries
- Custom Header with Company Name, Date and Time
- Loose lead detection
- Temperature Compensation
- RoHS compliant brass post adapters included
- Multiple language (English, Spanish, French)
- Reverse polarity protection
- Auto shutoff feature
- Made in USA

ATD5493 Controls

Local Transmitter
- Shows steady on when connecting to remote
- When blinking data is sending or receiving to/from remote
- Low Battery

To Setup in Utility Menu: Press MENU and hold down +.
OUT OF VEHICLE TEST

BATTERY TEST:

1. Connect the B600 Local Transmitter to the battery to be tested. The green Ready LED and the yellow Activity LED will blink. Note: make sure battery clips make contact with the lead battery post.

2. Press the MENU ON/OFF button to turn on the remote. “Techno Tools B600” will appear momentarily on the display and then the display will show WAITING TO CONNECT. When connected, the green LED will stop blinking and display will show IN VEHICLE TEST? PRESS NO (+).

3. The display will then prompt the user to SELECT BATTERY VOLTAGE. Press the + UP or - DOWN buttons to select the battery or battery pack voltage i.e. 6V, 12V, 24V to be tested.

4. Press ENTER ←: The display will show the battery's State of Charge (SOC) and display GOOD, LOW, BAD CELL REPLACE or SURFACE CHARGE*.

5. Press NEXT +: The display will prompt the user to select the units of the battery rating: CCA/SAE, EN, DIN, EIC or JIS. Press + UP or - DOWN to select desired units.

6. Press ENTER ←: The display will prompt the user to select the rated battery size. Press the + UP or - DOWN buttons to select the battery’s numerical rating i.e. 550 CCA.

7. Press ENTER ←: The display will show TESTING…… PLEASE WAIT for a few seconds. The display will then show the % available capacity** and the battery condition as GOOD, MARGINAL*** REPLACE, RECHARGE & RETEST or BAD CELL-REPLACE.

*Removing the surface charge may improve the test accuracy when testing MARGINAL batteries. To remove surface charge, load the battery for several seconds until the SOC voltage drops to 12.8V or less.

**If available capacity is 800 CCA’s or greater the Tester will prompt the user if the battery is an AGM type battery.

***For MARGINAL batteries the ATD5493 will prompt the user “TEMPERATURE ABOVE 32°F?”

PRIOR TO TESTING

Important: Use stud or post adapters (provided with the ATD5493) when connecting to side mount or Group 31 batteries outside of the vehicle. Or connect battery clips on the base of threaded stud when testing (see Fig. below). Make sure adapters are properly tightened. Connecting the tester directly to threaded studs or bolts will result in false readings. When connecting to batteries inside or outside of the vehicle, rock the clips back and forth to ensure a good connection. CHECK CONNECTION may show on the display if a poor connection is detected. Reset clips if necessary.

UTILITIES MENU OPTIONS

The utility menu allows the user to set up the Language, Date & Time, Company Name, address, and phone #: To enter the Utility Menu: press MENU and HOLD DOWN the NEXT + button.

Setting up the Language:

The B600 will default to English. Press NEXT + to select the desired language and then press ENTER.

Setting up the Date and Time:

Press NEXT +. The display will show Date Time Setup. Press ENTER. The flashing cursor will blink over day month year format (dd/mm/yy). Scroll up or down to select the desired number.

Setting up the Company Name, address & phone #:

Press NEXT + to set up the Company Name. Scroll the alphabet letters until the first letter of the company is displayed. Press ENTER and proceed until the complete name address & phone # is displayed. Note: “Space” and “Apostrophe” characters are shown at the beginning or end of the alphabet.

Out of Vehicle Test

BATTERY TEST:

1. Connect the B600 Local Transmitter to the battery to be tested. The green Ready LED and the yellow Activity LED will blink. Note: make sure battery clips make contact with the lead battery post.

2. Press the MENU ON/OFF button to turn on the remote. “Techno Tools B600” will appear momentarily on the display and then the display will show WAITING TO CONNECT. When connected, the green LED will stop blinking and display will show IN VEHICLE TEST? PRESS NO (+).

3. The display will then prompt the user to SELECT BATTERY VOLTAGE. Press the + UP or - DOWN buttons to select the battery or battery pack voltage i.e. 6V, 12V, 24V to be tested.

4. Press ENTER ←: The display will show the battery's State of Charge (SOC) and display GOOD, LOW, BAD CELL REPLACE or SURFACE CHARGE*.

5. Press NEXT +: The display will prompt the user TEST BATTERY.

6. Press ENTER ←: The display will prompt the use to select the units of the battery rating: CCA/SAE, EN, DIN, EIC or JIS. Press + UP or - DOWN to select desired units.

7. Press ENTER ←: The display will prompt the user to select the rated battery size. Press the + UP or - DOWN buttons to select the battery’s numerical rating i.e. 550 CCA.

8. Press ENTER ←: The display will show TESTING…… PLEASE WAIT for a few seconds. The display will then show the % available capacity** and the battery condition as GOOD, MARGINAL*** REPLACE, RECHARGE & RETEST or BAD CELL-REPLACE.

*Removing the surface charge may improve the test accuracy when testing MARGINAL batteries. To remove surface charge, load the battery for several seconds until the SOC voltage drops to 12.8V or less.

**If available capacity is 800 CCA’s or greater the Tester will prompt the user if the battery is an AGM type battery.

***For MARGINAL batteries the ATD5493 will prompt the user “TEMPERATURE ABOVE 32°F?”
Connect the ATD 5493 Local Transmitter to the battery to be tested. The green Ready LED and the yellow Activity LED will blink. Press the MENU ON/OFF button to turn on the remote. “ATD 5493” will appear momentarily on the display and then the display will show WAITING TO CONNECT. When connected the green LED will stop blinking and the display will show IN VEHICLE TEST? PRESS YES (→). The display will then prompt the user to SELECT BATTERY/SYSTEM VOLTAGE. Press the + UP or - DOWN buttons to select the battery or battery pack voltage i.e. 6V, 12V, 24V, 36V to be tested.

NOTE: When testing the battery in the vehicle, make sure vehicle engine is not running and all accessory loads are off. If SURFACE CHARGE (SOC) is displayed, turn on accessory loads (lights, AC or heater) for 15 seconds with engine off.

Testing Battery Packs:
The ATD5493 tests battery packs when they are connected to the vehicle as though it is testing a single battery. When testing a battery pack, enter the battery voltage and rating of the pack as a single battery.

Batteries in parallel: For batteries connected in parallel, add the rated capacity of each single battery to determine the rated capacity of the pack. For example two 500 CCA batteries in parallel would have a rating 1,000 CCA (see figure below). The voltage of the pack remains the same regardless of the number of batteries in the pack. The ATD 5493 can test batteries in parallel up to 3500 CCA.

Batteries in series: A pack consisting of 2 single 12V batteries in series would have 24V. The rated capacity of the two 12V batteries in series is ½ the rating of the single battery. For example two 500 CCA 12V batteries in series would have a rating of only 250 CCA. The ATD 5493 can test two 12V batteries in series

IMPORTANT: The ATD 5493 determines the condition of the pack as whole but does not determine the condition of the individual battery in the pack. If the condition of the parallel pack is determined to be bad, disconnect the batteries from the pack and check each battery individually.

2-12V batteries in parallel: add rated capacities of single battery. Pack is still 12V.

2-12V batteries in series: add 1/2 rated capacities of single battery. Pack is 24V.

STARTER TEST:

Note: Before the starter can be properly tested, make sure the battery or battery-pack SOC (state of charge) and battery condition tests GOOD and the engine is OFF.

To test the Starter, scroll to the starter test pressing the NEXT + button. The display will prompt the user TEST STARTER SYSTEM. To test the starter: Press ENTER →.

1. The display will prompt you to START ENGINE (ACCESSORIES OFF).
2. Crank* the engine and if it starts, turn engine off. The Tester will display one of the following messages:

STARTING SYSTEM NORMAL: The starter system is operating properly.

CHECK STARTER: The Starter is drawing excess current. Check starter and starter wires and connections for abnormally high resistance.

RETEST BATTERY & RETEST STARTER: The Micro LCD detected unusually low voltage at the battery during cranking indicating that the battery may need replacing. Retest the battery and retest starter.

*NOTE 1: The wireless Local Transmitter allows you to have the remote inside while cranking the engine.

NOTE 2: In Review mode the minimum starting voltage will be displayed.
REVIEWING TEST RESULTS

The ATD5493 remote stores the last test results in memory for review while connected to the test battery or at a later time when disconnected from the battery. The review prompt will only display if data is stored in the memory and has not been erased.

To review stored data, press and hold the MENU/ON-OFF button until the display reads “WAITING TO CONNECT,” then release the button. Wait approximately 15 seconds for the display to show REVIEW. Press enter to review test data stored in the tester.

Press NEXT + to review Starter Test data (if stored) and NEXT + to review Charging System Test.

Using the USB Adapter

Introduction

The USB adapter allows the user to download the stored test data in the ATD 5493 into your computer. Once the CD program is installed, the test data is stored in a Windows based program for immediate printing or saved in a file for future reference.
Installing the USB CD

System Requirements:
Windows XP Service Pack 2 Minimum (Home or Pro), Vista (Home or Pro), Windows 7* (Home or Pro) & 32 Bit System

1. Insert the CD into your CD-Rom
2. Follow the simple onscreen instructions. The software will prompt you through each step of the installation.
3. If the software does not start automatically:
   - Click START on the Windows Taskbar
   - Choose RUN
   - Type D:\setup.exe (where D is your CD-ROM drive
   - Click OK.

Note: The software installation requires Microsoft Framework 3.5. This will be automatically installed if required. In this case installation may take about 10 to 12 minutes to install although older systems may take longer.

4. When the installation finishes, connect the USB adapter to one of the USB ports on your computer. The computer will show the prompt “Found New Hardware”. Follow the directions in the new hardware Wizard to complete the driver installation.

5. When the new hardware installation is complete, double click on the Snap-on Software program to open the USB Adapter program.

Downloading Data Using the USB Adapter

Note: Set for Wireless (Radio) in Utility Menu for radio transmission

Click start>All Programs> USB Software to open the USB Adapter program.

1. The following screen will appear:

2. Turn on the ATD 5493 by pressing and holding the MENU/ON-OFF button until the display reads “WAITING TO CONNECT,” then release the button. Wait approximately 15 seconds for the display to show REVIEW. Press NEXT until the display shows PRINT.

3. Press ENTER ←. The display will show the message ALIGN PRINTER-IR ONLY however no alignment is necessary when using the ATD 5493 with the USB adapter. Note: The ATD5493 must be within approximately 5-20 feet from the USB adapter.

4. Press the ENTER ← button. The last data stored in the memory will begin downloading to the computer.

Using the USB Program

To set up shop name, address, and phone number on the print out, click on Setup. The following screen will appear:

This information will show at the top of the print out page each time the data is printed and only needs to be entered once.

When the data is recognized by the USB program, the following screen will appear:

Enter the customer, technician name, car make/model, etc. Click on OK. The data will automatically display in the appropriate columns. Note: If it is not necessary to track the customer, technician, or other information on this screen, leave blank and click OK without entering their names. The data will appear as below:

To view all columns scroll to the right using arrow keys or mouse wheel. To save the data, click on Save As. The data will be saved as a .btd file. To view the file at a later date, click on Load and select the file name desired. Note: to save and view all test data stored, keep all test data in the same file. Each new data downloaded will always be added to the next row. Note: To delete any row of data- Click mouse to highlight and press delete key on keyboard.

Otherwise, individual data can be saved as a separate file as long as no new data is added and saved to that file.
Printing the Data on your PC Printer

To print the data using your PC printer, click on print button. The last entry will print. To print a different entry, click on the row to highlight. The data will print out on standard 8 1/2 x 11 size computer paper.

TRANSMITTING/ RECEIVING ERROR MESSAGES

1. If remote is turned on when local transmitter is not connected the display will show:
   “WAITING TO CONNECT”
2. If remote is temporarily out of range or signal is momentarily weak the display will show:
   “SYNCING”
   “PLEASE WAIT”
3. If local transmitter becomes disconnected or remote cannot sync after several unsuccessful attempts and reconnection is not possible, the display will show:
   “WAITING TIME OUT”
   “GOODBYE”

AUTO SHUTOFF

If the tester is left on while in a user select mode (other than SOC) the ATD5493 will automatically shutoff after 3 minutes from the last user entry. This will conserve battery life in case the tester is left on inadvertently.

REPLACING THE INTERNAL 9V BATTERY

1. The ATD5493 will alert the user when the voltage of the internal battery is low and needs to be replaced. When this occurs, the display shows REPLACE INTERNAL BATTERY. This message will also display if no battery is installed.
2. To replace battery: Remove screw at back of tester and lift up the battery cover. Insert the 9V battery into the battery compartment noting the polarity label inside. (See figure below).

NOTE: To properly test the Electrical System (Full Test) the test sequence should be Battery Test, Starter Test, and then Charging System Test. The battery must be in good condition to properly test the Starter and Charging system. Therefore, the Starter Test Data and/or Charging Test Data may not show on the printout if either test is skipped.
PART# | PART DESCRIPTION
---|---
PRT5493-01 | BRASS POST ADAPTER FEMALE SET
PRT5493-02 | BRASS POST ADAPTER MALE SET
PRT5493-03 | CARRYING CASE
PRT5493-04 | LOCAL TRANSMITTER MODULE
PRT5493-05 | WIRELESS TO IR TO USB MINI CABLE

PRODUCT SPECIFICATIONS

<table>
<thead>
<tr>
<th>Details</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model #</td>
<td>ATD 5493</td>
</tr>
<tr>
<td>Name</td>
<td>Electrical System Analyzer</td>
</tr>
<tr>
<td>Battery Size Range</td>
<td>100 CCA to 3500 CCA</td>
</tr>
<tr>
<td>DC Voltage: Range/Accuracy</td>
<td>3.0V to 49.9V +/- 2% reading</td>
</tr>
<tr>
<td>LCD Display</td>
<td>2 line-16 character</td>
</tr>
<tr>
<td>mA Range (Parasitic drain test)</td>
<td>5 mA to 1.000 mA</td>
</tr>
<tr>
<td>Power Supply</td>
<td>9V (Internal Battery)</td>
</tr>
<tr>
<td>Cable Length (Local Transmitter)</td>
<td>2 Ft.</td>
</tr>
<tr>
<td>Wireless Signal</td>
<td>900MHz (Custom Protocol)</td>
</tr>
<tr>
<td>Weight, lbs</td>
<td>1.5 lbs</td>
</tr>
<tr>
<td>Warranty</td>
<td>2 years</td>
</tr>
<tr>
<td>Wireless Range</td>
<td>Approx. 50 Ft. (depending on the environment)</td>
</tr>
</tbody>
</table>

USB ADAPTER Specifications

- Normal dist. from Tester to Adapter: 18” to 20 ft (depending on environment)
- USB Cable: Mini USB
- USB cable length: 36”
- Operating Temperature: 32°F to 120°F
- Weight: .25 LBS

RETURN FOR REPAIR POLICY

Every effort has been made to provide reliable, superior quality products. However, in the event your instrument requires repair, forward unit to Service Center freight prepaid to the address below with return address, phone number and/or email address.

TECHNO TOOLS
SERVICE CENTER
2651 W 81st Street
Hialeah, FL 33016
1-800-222-0956

WARRANTY POLICY

The ATD 5493 Battery System Tester is warranted to be free of defects in materials and workmanship for a period of two years from the date of purchase. This warranty applies to all repairable instruments that have not been tampered with or damaged through improper use including unauthorized opening of the unit. Please ship warranty units that require repair freight prepaid to Service Center along with proof of purchase, return address, phone number and/or email address.

![CEC Declaration of Conformity 2007](image)