



# DIGITAL BATTERY TESTER **MANUAL**



**BT2400HD**

# DIGITAL BATTERY TESTER

## IMPORTANT

Suggested operation range 0°C (32°F) to 50°C (122°F) in ambient temperature.

**WARNING:** This product can expose you to chemicals including arsenic, which is known to the State of California to cause cancer.

For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

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, you 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. **DO NOT** expose the tester to rain or snow.

## 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.

# DIGITAL BATTERY TESTER

## MAIN FEATURES

Matson BT2400HD is a heavy-duty hand-held battery and electrical system tester powered by DHC.

This model is the ideal tester for motorcycles, cars, trucks and heavy vehicles. With 24V battery and battery pack support, it can test a wide range of applications.

- Tests all 6V, 12V & 24V lead-acid starting batteries
- 12V/24V starting/charging system tester
- Tests alternator output and charging system output
- Tests Internal Resistance (in Ohms)
- Vehicle rego and VIN input for records/reporting
- Built-in infrared temperature sensor for accurate and instant temperature compensation.
- Intuitive Graphical User-Friendly Interface
- PC Connectivity (download, export results & firmware updates)
- Print out test results
- Optional Amp clamp & Voltage probe

## 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. If necessary to remove battery from vehicle to test, always remove ground terminal from battery first. Make sure all accessories in the vehicle are off to ensure you do not cause any arcing.

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## SPECIFICATIONS

<b>Application</b>	6V Battery Tests
	12V Battery (single, parallel pack, and series pack) Tests
	12V Series Pack Test (up to two batteries)
	12 Parallel Pack Test (up to six batteries)
	12V/24V Cranking/Charging System Tests
	Internal Resistance Tests
<b>Supported Battery Types</b>	Flooded, AGM Flat Plate, AGM Spiral Plate, EFB, VRLA/GEL
<b>Supported Battery Ratings</b>	CCA/SAE, EN, EN2, IEC, JIS, DIN, CA/MCA
<b>Operating Range</b>	25 to 6,000 CCA(SAE)
<b>Voltage Range</b>	1V to 32V
<b>Sensor Array</b>	Temperature Sensor
<b>Wired Connection</b>	USB Type-A
<b>Firmware Update</b>	Yes (via PC Software)
<b>PC Software</b>	Yes
<b>Test Code and Test Counter</b>	Yes (with support to recall and print test results of the last 7 days)
<b>Printer</b>	2-inch thermal printer
<b>Display</b>	Coloured TFT-LCD (240x320)
<b>Input Device</b>	6-key keypad (up, down, left, right, enter, back)
<b>Clamp-Cable Set Length</b>	4.5 metres (approx. 14.7 feet)
<b>Detachable Cable</b>	Yes
<b>Internal Battery Support</b>	AA Alkaline/NiMH batteries
	18650 Li-Ion batteries
<b>Voltage Probe</b>	Supported (sold separately)
<b>Amp Clamp</b>	Supported (sold separately)
<b>Dimensions (L x W x H)</b>	285 x 140 x 75 mm
<b>Operating Languages</b>	English, French, Spanish, German, Italian, Portuguese, Polish, Dutch, Turkish (more languages possible)

## OPERATION & USE

**Note:** Each time you connect the tester to a battery, the tester will run a quick cable verification to ensure a proper connection through the output cables to sensors in the clamp jaws. If the connection checks out OK, the tester will proceed to the Home Screen. If the connection is poor, the display will show "CHECK CABLE". In this case, check cable connections for visible signs of damage, as you may need to re-connect the clamps to the battery or replace the cable end.

## PAPER REPLACEMENT

- A. Open the paper roll cover.



- B. Place a new paper roll in the compartment. Make sure the thermal side is upside placed as shown.



- C. Pull a short length of paper from the compartment and press down the cover to close.



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## PRECAUTIONS FOR USING THE INTEGRATED PRINTER:

To prevent from overheating the integrated printer, it is not recommended to constantly and repeatedly printing the same test result.

The printer should be rested for at least 1 minute if the print has been working for 2 minutes constantly.

Please avoid extremely operating the printer by constantly and repeatedly printing the same test result.

According to general usage scenarios, it takes about 10~20 seconds to print out a single result based on the type of the test that is performed.

And the next test is usually completed 20~30 seconds later or more after printing the previous result.

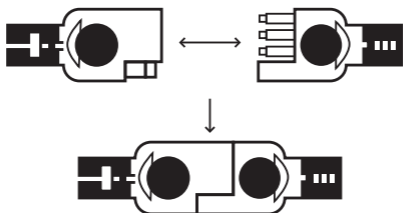
In this case, the printer will always be cooled down enough and ready for printing the result of the second test.

If the integrated printer does start to get warm, please have it rested for a while and cooled down before using the printing function again.

## HOW TO REPLACE CABLE END:

1. Detach the clamp lead when the replacement is necessary.
2. Make sure the new clamp lead is well connected.

\*NOTE that do not detach the cables unless necessary to make sure the pins are not rusted or corroded by the acid liquid.



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## INSTALL / REPLACE THE INTERNAL BATTERIES

The BT2400HD operates on 6 x AA Alkaline batteries  
(Rechargeable NiMH AA's & 18650 Lithium Batteries also supported)

## REPLACE / INSTALL THE AA ALKALINE BATTERIES

1. Unscrew the battery cover to access the battery tank.



2. Pull the strap up to remove the AA batteries and install new ones (Always keep the strap under the batteries).



3. Close the battery cover and tighten the screw.



\*AA Alkaline batteries are included in the package.

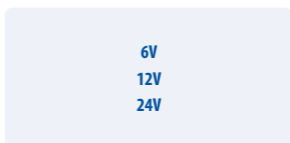
# DIGITAL BATTERY TESTER

## 6V, 12V, AND 24V BATTERY TEST

1. Select "Battery Test" from the main menu.



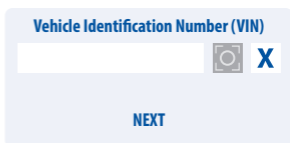
2. Select "6V/12V/24V Battery Test".



3. Select battery voltage.

4. Vehicle Identification Number (VIN) options

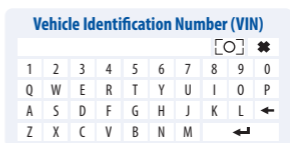
a) To proceed **without** entering the VIN, Press the "NEXT" button.



b) Invalid VIN screen will appear. Select "YES" to continue. Select "NO" to return to VIN Screen



c) To manually enter the VIN, move the cursor to VIN input box, and press ENTER to open the virtual keyboard. Type in the VIN and select the enter key ↵ to close the virtual keyboard. Select the "NEXT" button to proceed.



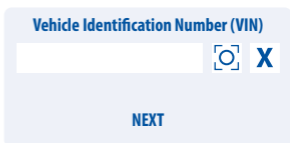


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- d) To scan VIN with an external scanner (not supplied), plug in the external scanner via USB-A port and select the "SCAN" button. (default)

**NOTE** - BT2400HD only supports scanners using the "USB HID-KBW" communication protocol.

Universal Barcode scanner not supplied by Tridon.



5. Select "SETUP" to edit the battery testing criteria. (Testing criteria will be stored after each test, select "START" to reuse previous settings.)
6. Select battery type. (available types: FLOODED, AGM FLAT, AGM SPIRAL, VRLA/GEL, EFB.)
7. Select rating. (available ratings: CCA/SAE, DIN, EN, EN2, IEC, JIS, CA/MCA)
8. Select capacity. Available capacity range:
  - 25 to 3000 CCA/SAE
  - 25 to 2830 EN
  - 25 to 2710 EN2
  - 25 to 1985 IEC
  - JIS (by battery type)
  - 25 to 1685 DIN
  - 25 to 3600 CA/MCA
9. Confirm battery position by selecting the YES/NO option of "TEST IN VEHICLE?".
10. The tester will then check if the user would like to proceed to an In-Vehicle Test.
  - If YES, the tester will automatically proceed to the system test after the battery test is completed.
  - If NO, the tester will perform only the battery test.
11. Temperature compensation. Aim the temperature sensor at the battery and press ENTER.
12. Test result will be presented after test is completed, use directional keys to review the test result. Select "PRINT" to print test result. Select "DONE" to return to the main menu.

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## SURFACE CHARGE

If the BT2400HD detects a surface charge, a pop-up notification will ask the user to turn on loads/headlights for 15 seconds to eliminate the surface charge.

Please note that vehicles with LED headlights and modern vehicle control modules might not be able to eliminate surface charge within 15 seconds and the pop-up may continue. Turn on more loads and repeat the process if this problem persists.

## BATTERY TEST RESULTS

### 1. Good & Pass

The battery is good and capable of holding a charge.

### 2. Good & Recharge

The battery is good but needs to be recharged.

### 3. Caution

The battery may be serviced but decrease the capability of starting the engine gradually. The battery may fail under extreme climate conditions. There may be a poor connection between the vehicle and the battery affect the charging function. Please pay attention to the battery for replacement consideration and charging system checking.

### 4. Recharge & Retest

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

### 5. Bad & Replace

The battery will not hold a charge. It should be replaced immediately.

### 6. Bad Cell & Replace

The battery has at least one cell short circuit. It should be replaced immediately.

### 7. Load Error

The tested battery is bigger than 3000CCA/SAE 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.

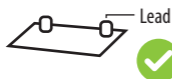
## 24V PACK TEST

(TWO 12V BATTERIES IN SERIES CONNECTION.)

NOTE:

Pack CCA limit 3000 CCA / SAE

1. Identify a good connecting point.
  - Preferred: lead terminals or lead adaptors.
  - Acceptable: jump posts or fastening nuts.
  - Avoid (can cause incorrect results): stainless steel threaded posts.



2. Clean the connecting point. Clamps should be in contact with bare metal.
3. Connect the BT2400HD on to the output terminals of the battery pack. (Red clamp on positive terminal, black clamp on negative terminal.)
4. Select "Battery Test" from the main menu.
5. Select "24V Pack Test (12V Series)".
6. Enter VIN number. (same input method as 6V/12V/24V Battery Test)
7. Set battery testing criteria. (same input method as 6V/12V/24V Battery Test)

### 24V battery pack CCA selection

- Enter the CCA of one battery only.
- If the battery CCA capacity is not the same the CCA value is the lowest value.

### Example - 24V CCA calculation

The test CCA value for a 24V PACK TEST is equal to the CCA value of one battery.

If the batteries in the pack do not have the same capacity, the CCA value of the smallest capacity battery in the pack should be used.

Example - Two x 12 volt, 600 CCA (cold cranking amp) batteries in SERIES will give you 24 Volts and 600 CCA. In this case, the test CCA value is 600CC, not 1200CCA.

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8. Temperature compensation. Aim the temperature sensor at the battery and press ENTER.
9. Pack performance will be displayed after pack testing is complete.
  - If "PACK PERFORMANCE OK", user can choose if to proceed to individual battery test.
    - If "YES", the tester will proceed to item 10.
    - If "NO", test ends here, and pack test result will be displayed.
  - If "REDUCED PACK PERFORMANCE", the tester will proceed to item 10 automatically to identify the problem battery.
10. Individual battery test.
  - Connect to battery 1 and test.
  - Connect to battery 2 and test.
11. Test result will be presented after test is completed, use directional keys to review the test result. Select "PRINT" to print test result. Select "DONE" to return to the main menu.

## 24V PACK TEST RESULT

### Pack Performance OK

- The pack meets the performance standard set by the user.

### Reduced Pack Performance

- One or more batteries might not meet their performance standard or require a service, follow on screen instructions to test battery 1 and battery 2 individually.

### BAD CONNECTION

- The two batteries might not be connected properly. A retest is recommended after checking the following items:
  1. The terminals are clean.
  2. The connecting cable is fastened properly and torqued up to specification.
  3. The connecting cable is not damaged, severely bent, or broken.
- Pack result will not be displayed.

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## 12V PACK TEST

(TWO TO SIX 12V BATTERIES IN PARALLEL CONNECTION.)

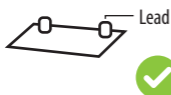
NOTE:

Single battery CCA limit: 3000 CCA/SAE

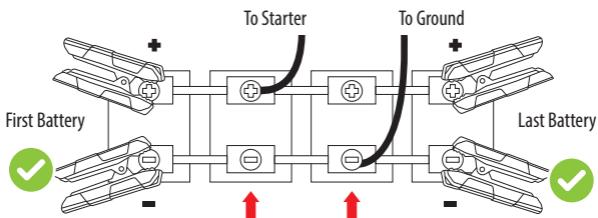
Pack CCA limit: 6000 CCA/SAE

1. Identify a good connecting point.

- Preferred: lead terminals or lead adaptors.
- Acceptable: jump posts or fastening nuts.
- Avoid (can cause incorrect results): stainless steel threaded posts.



2. Clean the connecting point. Clamps should be in contact with bare metal.
3. Connect the BT2400HD to the terminals of the first **or** last battery.  
(Red clamp on positive terminal, black clamp on negative terminal.)



Not recommended, connection at these locations may provide an inaccurate test result.

4. Select "Battery Test" from the main menu.
5. Select "12V Pack Test (12V Parallel)".
6. Enter VIN. (same input method as 6V/12V/24V Battery Test)

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7. Select the number of batteries connected in parallel. (available from 2 to 6 batteries)
8. Set individual battery testing criteria. (same input method as 6V/12V/24V Battery Test)

## 12V battery pack CCA selection

- Enter the CCA of one battery only, (the lowest CCA if they are not all the same)
- The BT2400HD will calculate the total CCA value for the test based on how many batteries were selected in point 7 of the instructions.

### Example - 12V CCA calculation

The test CCA value for a 12V PACK TEST is equal to the total CCA value of all batteries in the pack when added together.

Example - Two x 12 volt, 600 CCA (cold cranking amp) batteries in PARALLEL will give you 12 Volts and 1200 CCA. In this case, the test CCA value is 1200CC, not 600CCA.

9. Temperature compensation. Aim the temperature sensor at the battery and press ENTER.
10. Pack performance will be displayed after pack testing is complete.
  - If "GOOD PACK", test ends here, and pack test result will be displayed.
  - If "CHECK PACK", the tester will proceed to item 11 automatically to identify the problem battery.
11. Follow on-screen instructions to test batteries in sequence.
12. Test result will be presented after test is completed, use directional keys to review the test result. Select "PRINT" to print test result. Select "DONE" to return to the main menu.

## 12V PACK TEST RESULTS

### 1. GOOD PACK

The pack meets the performance standard set by the user.

### 2. CHECK PACK

One or more batteries might not meet their performance standard or require a service, follow on screen instructions to test battery individually.

\*Disconnect the battery pack ONLY when the tester displays "SEPARATE PACK" on the screen.

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## 12V & 24V SYSTEM TEST:

1. Select "SYSTEM TEST" from the main menu.
2. Enter or scan the VIN of the vehicle.  
\*The VIN input method is the same as VIN input of the battery test.
3. Turn off loads and start engine.

Battery Test	System Test	IR Test
V/A Meters	Setting	History

System Test >>

Cranking Test  
Turn off loads  
Start engine

System Test >>

Cranking Result Normal  
Cranking Voltage 10.78V  
Lowest Voltage 9.09V

System Test >>

Cranking Result

<<NEXT>>

4. Use directional keys to review cranking test result.
5. Select NEXT to proceed to charging test.
6. Check "Is it a diesel engine?" by selecting YES / NO.

\*If YES, the BT2400HD will ask the user to rev the engine for 40 seconds before proceeding to idle & load on test.

\*If NO, the BT2400HD will proceed with the idle & load on test directly.

System Test >>

Is it a diesel engine?  
YES/NO

System Test >>

Alt. Idle Test  
Make sure all loads are off  
<<NEXT>>

System Test >>

Alt. Idle Test Normal  
Idle Voltage 13.87V  
<<NEXT>>

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7. Select NEXT when idle test is completed and move on to the ripple & load on test.
8. Turn on loads and rev engine for 15 seconds.  
(The BT2400HD will countdown 15 seconds).

**System Test >>**

Ripple Test  
Turn on loads.  
<<NEXT>>

**System Test >>**

Rev the engine up  
to 2,500rpm for  
15 seconds.

9. Once completed, the ripple & load test results are displayed.

**System Test >>**

Ripple Test Normal  
Ripple Voltage 0.12V  
<<NEXT>>

**System Test >>**

Alt. Idle Test Normal  
Idle Voltage 13.93V  
<<NEXT>>

10. Select NEXT to review the complete system test results including the cranking, idle, ripple, & load on test results.
11. Use directional keys to switch between 4 different pages of the system test results.
12. Select PRINT if you would like to print out the system test result.

**Test Report >>**

Cranking Test Normal  
Cranking Voltage 10.78V  
Lowest Voltage 9.09V

**Test Report >>**



**Test Report >>**

Idle Voltage 13.87V  
Load Voltage 13.93V  
<PRINT> <DONE>

**Test Report >>**

Ripple Test Normal  
Ripple Voltage 0.12V  
<PRINT> <DONE>



## CRANKING TEST RESULTS:

### 1. Cranking Volts Normal

The system is showing normal draw.

### 2. Cranking Volts Low

The cranking voltage is below normal limits, troubleshoot the starter with manufacturers recommended procedure.

### 3. Cranking Volts Not Detected

The cranking voltage is not detected.

## IDLE TEST RESULTS:

### 1. Charging System Normal When Testing at Idle

The system is showing normal output from the alternator. No problem is detected.

### 2. High Charging Volts When Testing at Idle

The voltage output from the alternator to the battery exceeds the normal limits of a functioning regulator. Check to ensure there is no loose connection and the ground connection is normal.

If there is no connection issue, replace the regulator. Since most alternators have the regulator built-in, this will require you to replace or service the alternator. The normal high limit of a typical automotive regulator is 14.7 volts +/- 0.05. Check manufacturer specifications for the correct limit, as it will vary by vehicle type and manufacturer.

### 3. Low Charging Volts When Testing at Idle

The alternator is not providing sufficient current to the battery. Check the belts to ensure the alternator is rotating with engine running.

If the belts are slipping or broken, replace the belts and retest. Check the connections from the alternator to the battery. If the connection is loose or heavily corroded, clean or replace the cable and retest. If the belts and connections are in good condition, replace or service the alternator.

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## RIPPLE TEST RESULTS:

### 1. Ripple Detected Normal

Diodes function well in the alternator / starter.

### 2. No Ripple Detected

Ripple is not detected.

### 3. Excess Ripple Detected

One or more diodes in the alternator are not functioning or there is stator damage. Check to ensure the alternator mounting is sturdy and that the belts are in good shape and functioning properly. If the mounting and belts are good, replace or service the alternator.

## LOAD ON TEST RESULTS:

### 1. Charging System Normal When Load On Testing

The system is showing normal output from the alternator. No problem detected.

### 2. Charging System High When Load On Testing

The voltage output from the alternator to the battery exceeds the normal limits of a functioning regulator.

Check to ensure there are no loose connections and that the ground connection is normal. If there are no connection issues, replace the regulator. Since most alternators have the regulator built-in, this will require you to replace or service the alternator.

### 3. Charging System Low When Load On Testing

The alternator is not providing sufficient current for the system's electrical loads and the charging current for the battery. Check the belts to ensure the alternator is rotating with the engine running. If the belts are slipping or broken, replace the belts and retest.

Check the connections from the alternator to the battery. If the connection is loose or heavily corroded, clean or replace the cable and retest. If the belts and connections are in good working condition, replace or service the alternator.

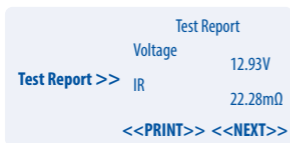
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## IR TEST (INTERNAL RESISTANCE TEST)

1. Select IR TEST from the main menu.
2. Use the clamps to connect with the battery directly.



3. Measure the battery temperature by aiming the temperature sensor to the battery.
4. Once the IR test is completed, the BT2400HD will display the voltage & internal resistance value on the result page.

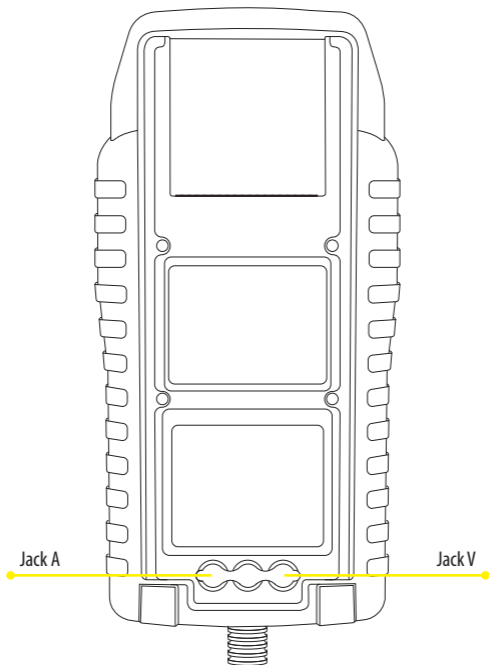


5. Select DONE to return to main menu or select PRINT to print out the IR test result.

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## AMP CLAMP & VOLT PROBE INSTRUCTION GUIDE

(DC/AC CURRENT & DC VOLTAGE MEASUREMENT)



- Optional voltage probe: MAX 40VDC (Base on the black clamp)
- Optional current clamp: MAX 600A (1A/1mV)

Note: Please use only the AMP clamp & Volt probe provided by DHC Specialty Corp.

## DC/AC CURRENT MEASUREMENT

1. Install the 9V battery.
2. Connect Clamp Meter to the jack A on BT2400HD.
3. Press the button ZERO. Make sure the display reads zero.
4. Press the trigger to open the transformer jaws and clamp one electrical wire.
5. Make sure the clamp jaw is perfectly closed.
6. Select V/A METERS from the main menu.
7. Read the displayed value.
8. Select "Record Max" and then select "Stop Recording", the BT2400HD will display the max current recorded during the recording period.

## DC VOLTAGE MEASUREMENTS

**\*Do not test more than 60V, it may damage the tester.**

1. Connect Red Test Lead to the jack V on BT2400HD.
2. Use the test lead to touch a point within the network of the battery.
3. Select V/A METERS from the main menu.
4. Read the displayed value.
5. Select "Record Max" and then select "Stop Recording", the BT2400HD will display the max voltage recorded during the recording period.

Battery  
Test

System  
Test

IR  
Test

V/A  
Meters

Setting

History

V/A Meters >>

Voltmeter

--.--V

Ammeter

-- A

<<Record MAX>>

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## SETTINGS

Enter **SETTING** from the main menu and then select the item you would like to adjust or proceed. Such as backlight, language, date & time, customized information, and cable diagnosis. Or simply check the version of the BT2400HD.

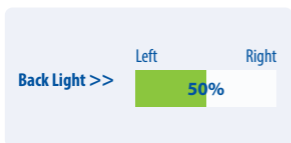


Setting >>

1. BACKLIGHT
2. LANGUAGE
3. DATE&TIME
4. INFORMATION
5. CABLE DIAGNOSIS

## BACKLIGHT

1. Select **BACKLIGHT** and use directional keys to adjust the brightness of the display.
2. Press **ENTER** to confirm the setting and return to setting menu.  
Or press **BACK** key to discard the change and return to the setting menu.



## LANGUAGE

1. Enter LANGUAGE to select the language desired.
2. Press ENTER to confirm the setting and return to setting menu. Or press BACK key to discard the change and return to the setting menu.

Language >>

1. ENGLISH
2. ITALIAN
3. DEUTSCH
4. ESPANOL
5. FRANCAIS
6. PORTUGUES

## ADJUST DATE & TIME

1. Select DATE & TIME to adjust the time.
2. Use directional keys to adjust and press ENTER to proceed to the next item.
3. Once completed, press BACK to return to the setting menu.

Date & Time >>

Date  
Time

## INFORMATION

1. Enter INFORMATION to enable / disable, edit or erase the customized print out info.
2. Press BACK to return to the setting menu.

Info >>

Printout      No  
Edit  
Erase information

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## VERSION

1. Select "VERSION" to check the current firmware version, serial number of the BT2400HD.

```

FW version
  BT2400HD_WW_V00.X
Version >>
  Serial number
    202101010003
  
```

## CABLE DIAGNOSIS

1. Select "CABLE DIAGNOSIS" to perform self diagnosis of the cable set.
2. An instruction will be popped up on the screen.
  - 2.1. Connect the BT2400HD to a battery with a voltage above 12.4V. And make sure its posts are clean.
  - 2.2. Press ENTER to start.
3. Select START to start the cable diagnosis and check the result.

```

Cable
Diagnosis >>
  Guide:
  Clamp on a battery over
  12.4V and make sure its
  posts are clean.
  Press ENTER to start.
  <<START>>
  
```

```

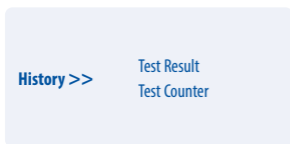
Cable
Diagnosis >>
  Printout
  Negative          GOOD
  <<DONE>>
  
```



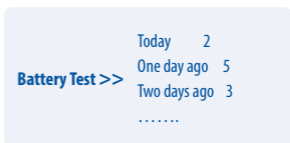
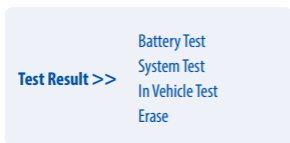
## HISTORY

### History-Test Result

1. Select "HISTORY" and then enter "TEST RESULT" to review the test results within the last 7 days.

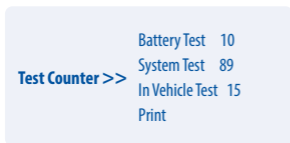


2. Select between test types & days for reviewing.
3. Select "ERASE" will clear all the test records that saved in BT2400HD.



### Test Counter

4. If the "TEST COUNTER" is selected. The user may review the number of the tests that have been performed. Or print out the counter if needed.



# DIGITAL BATTERY TESTER

## GLOSSARY

### What is a GEL battery?

A gel battery is a lead-acid electric storage battery that:

- is sealed using special pressure valves and should never be opened.
- is completely maintenance-free.
- uses thixotropic gelled electrolyte.
- uses a recombination reaction to prevent the escape of hydrogen and oxygen gases normally lost in a flooded lead-acid battery (particularly in deep cycle applications).
- is non-spillable, and therefore can be operated in virtually any position. However, upside-down installation is not recommended.
- Connections must be retorqued and the batteries should be cleaned periodically.

### What is an AGM battery?

An AGM battery is a lead-acid electric storage battery that:

- is sealed using special pressure valves and should never be opened.
- is completely maintenance-free.\*
- has all of its electrolyte absorbed in separators consisting of a sponge-like mass of matted glass fibers.
- uses a recombination reaction to prevent the escape of hydrogen and oxygen gases normally lost in a flooded lead-acid battery (particularly in deep cycle applications).
- is non-spillable, and therefore can be operated in virtually any position. However, upside-down installation is not recommended.
- Connections must be retorqued and the batteries should be cleaned periodically

### What is a VRLA battery?

Valve Regulated Lead Acid Battery – This type of battery is sealed Maintenance Free with a “Bounce” Valve or Valves that opens when a preset pressure is realised inside the battery and lets the excess gas pressure out. Then the valve resets itself.

## **What is a SLI battery?**

These initials stand for Starting, Lighting and Ignition, which are the three basic functions which a battery has to perform on all normal vehicles. Batteries given this description will have been specifically designed for service on cars and trucks within a voltage controlled electrical system. Those SLI batteries which are intended for heavy haulage vehicles fitted with large diesel motors may often be called COMMERCIAL batteries. They have to be much more powerful and more robust than batteries intended for cars.

## **What is STATE OF HEALTH?**

References the remaining battery capacity as a percentage (%) compared with the original marked battery capacity.

## **What is STATE OF CHARGE?**

References the battery voltage as a percentage (%) compared with the battery voltage when fully charged.

## **What is CCA (COLD CRANKING AMPS)?**

The current in amperes which a new fully charged battery can deliver for 30 seconds continuously without the terminal voltage falling below 1.2 volts per cell, after it has been cooled to 0°F and held at that temperature. This rating reflects the ability of the battery to deliver engine starting currents under winter conditions.

## **What is AMPERE-HOUR?**

The unit of measurement of electrical capacity. A current of one ampere for one hour implies the delivery or receipt of one ampere-hour of electricity. Current multiplied by time in hours equals ampere-hours.



# DIGITAL BATTERY TESTER

## TERMS AND CONDITIONS OF WARRANTY

Products developed and sold by Tridon Australia Pty Ltd come with a guarantee for the reasonable life of the product, for the purpose it is commonly used. This is in addition to the rights of the consumer under the Australian Consumer Law. To be considered for warranty please take the product with proof of purchase to the store where you purchased the product or contact Tridon Australia.

**The warranty is given by:**

**Tridon Australia, 21-25 Derby St, Silverwater, NSW 2128.**

**Tel: 1300 362 263.**

**Email: [mail@tridon.com.au](mailto:mail@tridon.com.au)**

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage incurred if the product fails when used for the purpose for which it was intended. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Tridon Australia will bear costs associated with claiming legitimate warranties. Proof of expenses incurred must be submitted to Tridon Australia Pty Ltd.