

# ***BC-8000***

***BATTERY CHARGER/CAPACITY TESTER***

## ***OPERATIONS MANUAL***

***COFKO LLC.***

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## **UNPACKING**

As you unpack your new BC-8000 battery charger and capacity tester, inspect the tester for signs of shipping damage. If shipping damage is present, stop and contact the shipping company for damage claims information. The box should contain the *BC-8000, Operators Manual, USB Cable, DC Battery Cable, BC Report CD, Battery Disconnect (7017-2), and 2 Battery Adaptor Cables.*

***IMPORTANT:*** Save the shipping box and packaging material. They should be used to repack the tester if it needs to be shipped back for warranty or service.

## **INTRODUCTION**

Congratulations on acquiring your new BC-8000 battery charger and capacity tester. The BC-8000 has been designed to provide the operator with accurate battery charging and capacity testing and ease of operation.

The features of the BC-8000 are:

### **BC-8000 Capacity Tester:**

- Adjustable constant current load in 0.1 Ampere increments from 0.5 Ampere to 15 Ampere.
- Adjustable constant current load in 1.0 Ampere increments from 15 Ampere to 55 Ampere.
- Universal AC power input 90~264Vac (47 to 63Hz)
- 4 Line LCD display.
- 10mv voltage resolution.
- Over temperature protection.
- Audio warning when capacity test is complete or malfunction of the unit.
- USB 2.0 port for PC connection.
- Windows™ XP or Higher compatible **BC Report Utility** software for test data hardcopy print out.
- Real time internal clock with battery backup.

## **BC-8000 Charger:**

- Adjustable output voltage from 3.0 to 36.0 Vdc.
- Adjustable output amperes from 0.05 to 25 Adc.
- Constant voltage or constant current charge.
- Adjustable charge time from 1 to 999 minutes.
- Single or two step charge routine.
- Universal AC power input 90~264Vac (47 to 63Hz)
- 4 Line LCD display.
- 10mv voltage resolution.
- Over temperature protection.
- Audio warning when charge is complete.
- 1 year warranty.

Before operating your new BC-8000 , familiarize yourself with this operators manual and the unit.

Questions?

Call: (909) 705-6267 Mon.-Fri.8:00 A.M. to 5:00 P.M. PST or [support@cofko.com](mailto:support@cofko.com)

Thank you,

COFKO

Manual: BC-8000

Revision: C Date: 04/05/13

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## SAFETY NOTES

Your new BC-8000 battery charger/capacity tester has been designed with operator safety as a function of its design, construction, and operation. Understanding how to safely operate the BC-8000 is important. Failure to follow the operation and safety guidelines when using the BC-8000 can result in ***personal injury to the operator and damage to the BC-8000***. Always review the battery manufacturer's battery charging and capacity testing guidelines before charging or testing batteries.



Look for this symbol to identify Safety and Danger precautions. Be Alert- Your safety is involved! Personal injury or equipment damage can occur if guidelines are not followed.

### PRECAUTIONS:



#### Precautions:

- 1 **CAUTION:** Aircraft batteries are certified to have a certain minimum capacity for emergency operations in the event of an electrical generator system failure. Never “jump start” an aircraft that has a discharged or “dead” battery.
- 2 **WARNING: ELECTRIC SHOCK HAZARD.** Do not touch un-insulated portions of the connector or the battery terminals. A possibility of serious electrical shock exists. Do not lay tools or other metal objects on the battery as arcing or explosion could occur. Remove conductive jewelry before working around battery, charger, or test equipment.
- 3 **CAUTION: ELECTRIC BURN HAZARD.** Do not wear conductive rings, belt buckles, or other jewelry when working with batteries, chargers, or test equipment. Do not lay tools or other metal objects on the battery as arcing and severe burns could occur.
- 4 **WARNING:** Batteries on charge or discharge produce hydrogen gas, which can explode if ignited. Do not smoke, use an open flame, or cause sparking near a battery. Charge, service or test a battery only in a well ventilated area. The use of exhaust fans may reduce the risk of explosion.

- 5 **WARNING:** Batteries contain sulfuric acid which will cause burns. **DO NOT TOUCH EYES AFTER TOUCHING BATTERY.** Do not get acid in your eyes, or on your skin, or clothing. In the event of acid in the eyes, flush thoroughly with clean cool water for several minutes. Get professional medical attention. Refer to battery MSDS for additional information.
- 6 **WARNING:** Wear proper eye, face and hand protection at all times when working with batteries. Know the location and use of emergency eyewash and shower nearest the battery charging area.
- 7 **CAUTION:** To prevent damage to the connector, arc burns, or explosion, batteries should never be connected or disconnected while being charged or discharged. Batteries must be connected or disconnected only when the circuit is open. Insure the aircraft battery switch, external power source, or the charger/analyzer is in the "OFF" position before connecting or disconnecting the battery. Battery terminal protectors should be installed whenever the battery is not connected in the aircraft or to the test equipment.
- 8 **CAUTION:** Batteries contain hazardous materials. Know the location and proper use of emergency response materials. Refer to battery Material Safety Data Sheet (MSDS) for additional information.
- 9 **Caution / Warning:** Only constant potential charging may be done on the aircraft. DO NOT constant current charge a battery on the aircraft. There could be a serious risk of injury to personnel and / or damage to the aircraft or aircraft systems due to high voltage and generation of explosive gases when charging constant current.
- 10 **DANGER:** Never connect or disconnect BC-8000 main power connector with the switch on. Connecting or disconnecting the BC-8000 tester with charging or discharge current applied can cause a spark and possible battery explosion.
- 11 **DANGER:** Never charge or capacity test batteries without first inspecting all battery wires and connection for condition and tightness. Replace all defective wires and bad connections before charging or capacity testing batteries. Defective wiring and bad connections can cause overheating during charging or capacity testing batteries.
- 12 **DANGER:** never connect the BC-8000 to batteries with voltage or capacity currents outside the ratings of the tester. The BC-8000 is designed for 12 and 24 volt batteries. Connecting the tester to batteries with different voltages can permanently damage the tester and endanger the operator. Any questions that arise about the battery or tester ratings, call (909)705-6267.
- 13 **DANGER:** never obstruct the BC-8000 air intake or hot air exhaust openings. Obstructing either opening can cause the tester to overheat.

## ***BC Report Utility and Real Time Clock Setup***



**NOTE:** The ***BC Report Utility*** software ***MUST be installed on the computer*** used to connect to the BC-8000 first. ***Do not*** connect the USB communication cable to the BC-8000 until this is done.

- 1 Remove the ***BC Report Utility*** CD from the protective sleeve and place disk into the PC CD drive. The ***BC Report Utility*** will automatically start installing. (Manual installation can be done with commands: Start\Run\ d:\setup.exe
- 2 Windows Application Security Warning dialog box may prompt you about installing the ***BC Report Utility***. To continue installing the ***BC Report Utility***, click on the ***INSTALL*** button. The installation may take some time as Windows™ installs all the necessary software.
- 3 When prompted to install the Silicon Labs CP210x USB to UART bridge driver, click the ***INSTALL*** button to install all needed drivers. (C:\Program Files\Silabs\MCU\CP210x\ ) Note: The CP210x drivers are on the ***BC Report Utility*** CD disk.
- 4 After the ***BC Report Utility*** software installation is completed, remove the ***BC Report Utility*** CD disk from the drive and return to the protective sleeve. Now restart the PC .
- 5 The Windows™ desktop should now contain the ***BC Report Utility*** program icon. ***Set the BC-8000 power switch to the ON position***, then plug the USB cable supplied with the BC-8000 into a working USB port on the PC. Now plug the remaining USB cable end into the USB port located on the right side rear of the BC-8000. The PC may respond with an audio sound confirming a device has been found.
- 6 To run the ***BC Report Utility***, place the mouse pointer on the icon and press the left mouse button. This action will start the ***BC Report Utility*** program and display the program window.
- 7 Before updating the BC-8000 internal date and clock, check the computer date and time for proper setting and adjust if needed. This is the date and time the BC-8000 will use. Located in the lower middle of the BC-8000 Report window is the SET Date & Time button. To set the BC-8000 Date & Time place the mouse pointer on the Set Date & Time button and click the left mouse button. The status bar located in the lower left corner will display a series of messages showing the communications activity between the BC-8000 and the PC. The first message displayed is ***Searching for BC-8000***. Second message is ***Setting Date and Time***. And the final message will be ***Done***. With the date and time set, the BC-8000 is now ready to test batteries and print test result reports.



8 If any difficulties are experienced with communications between the BC-8000 and the PC, check cable connections first and review **BC Report Utility** installation second. Lastly make sure the PC USB port drivers are installed and working. Review your Windows™ software help menu for guidelines in checking USB ports.

## **BC-8000 OPERATION**



**NOTE:** Before capacity testing a battery, ***review all testing procedures as required by the battery manufacturer.*** Failure to do so can result in inaccurate test date.



**NOTE:** Before capacity testing a battery, **RECHARGE THE BATTERY FOLLOWING THE**

### **MANUFACTURER'S RECHARGING GUIDELINES.**



**NOTE:** **Before putting the BC-8000 into service the REAL TIME clock must be set.** See instruction in the **BC Report Utility** section. Failure to do so will result in incorrect printed time on test reports. Make sure the power switch is in the **OFF** position. Connect the male end of the power cord into the AC power outlet. Now connect the **gray** BC-8000 battery connector to the battery to be tested.



**DANGER:** Never attempt to connect the BC-8000 charger/capacity tester to a battery using anything but the proper connector. ***Doing so can damage the tester, battery, or cause injury to the operator.*** Capacity testing data will be invalid if incorrect connections are made. Place the **OFF/ON** power switch to the **ON** position. The BC-8000 LCD display will flash tester model and software version.



**NOTE:** If ***Replace Clock Coin Battery*** is displayed on screen, remove case top and install new coin battery. Replacement battery number is 3V #CR2032. Use **BC Report Utility** software to update date and time after battery replacement. See **BC Report Utility** Software section for instructions.

## BATTERY CHARGING



**DANGER** The BC8000 battery charger is a fully adjustable battery charger. The BC8000 will follow the operator settings during the battery recharge cycle ! Always consult the battery manufacturer's recharge guidelines before starting a recharge cycle. ***If the battery being recharged is subjected to improper settings, serious damage or injury can occur to the operator and the BC8000.*** Critical settings such as maximum recharge voltage, recharge amperes, and recharge time must follow the battery manufacturer's guidelines. Always remove the battery from the aircraft before starting a recharge cycle. SAFETY FIRST !



**DANGER** The BC-8000 should not be used to recharge Lithium Batteries. Contact Cofko technical support for any further questions.

1. With MODE? CHARGE selected, press the **NEXT** button to advance the display menu.
2. Using the **UP** or **DOWN** buttons, select charge steps. The BC-8000 will charge the battery using a single step or two step charge mode. Single step charging is typical used to charge lead-acid batteries using constant potential charging. Two step charging is used in constant current charging of nickel cadmium batteries. Press the **NEXT** button to advance the display menu.
  - a. If single step was selected above, enter the battery recharge time using the **UP** or **Down** buttons to increase or decrease charge time. Charge time is in minutes with 60 minutes equaling 1 hour charge time. *Tip: Holding down the UP or DOWN buttons will rapid advance the number selection.* Press the **NEXT** button to advance the display menu.
  - b. The BC-8000 display will now ask for a CHARGE VOLTS? selection. Single step charging requires only one charge volts selection. Recharge voltage can be adjusted from 3.0 to 36.0 volts. Use the **UP DOWN** buttons to set the charge voltage. This voltage is the maximum voltage the BC-8000 will output to the battery. Consult with the battery manufacturer for proper recharge voltage settings. Note: *The charge voltage selection must always be greater than the batteries rated voltage.* Press the **NEXT** button to advance the display menu.

- c. The BC-8000 will now ask for CHARGE AMPS? selection. The BC-8000 recharge current can be adjusted from 0.05 to 25 amperes. Consult the battery manufacturer's recharge guidelines for proper settings. Never set the recharge amperes to a value outside the recharge specifications. Press the **NEXT** button to advance the display menu.
  - d. The BC-8000 will display the message START CHARGING? Press NEXT. Pressing the next button will start the battery charging cycle. With the charger running the BC-8000 display will show all the entered settings under the CHARGING heading on the left side of the display. The arrow displayed will point to the setting that is active at that moment of the charge cycle. On the right side of the display all the current charging readings are displayed under the ACTUAL heading. Upon completion of the charge cycle the audio buzzer will beep signaling the charge is done. Note: *The charge cycle can be stopped at any time by pressing the **NEXT** button.*
3. If two step charge was entered above the BC-8000 will display CHARGE Step 1 Time?
- a. Enter the first step charge time using the UP or DOWN buttons. The time can be adjusted from 1 minute to 999 minutes. Press the **NEXT** button to advance the display menu.
  - b. The BC-8000 will display CHARGE Step 1 Volts? Use the UP or DOWN button to adjust the value from 3.0 to 36.0volts. Press the **NEXT** button to advance the display menu.
  - c. Now enter the first step charge current setting using the UP or DOWN button. The charge current can be adjusted from 0.05 to 25 amperes. Press the **NEXT** button to advance the display menu.
  - d. The BC-8000 will display CHARGE Step 2 Time? Use the UP or DOWN button to adjust the charge time value from 1 minute to 999 minutes. Press the **NEXT** button to advance the display menu.
  - e. The BC-8000 will display CHARGE Step 2 Voltage? Using the UP or Down buttons the step 2 voltage can be adjusted from 12.5 to 36.0 volts. Press the **NEXT** button to advance the display menu.
  - f. Now enter the second step charge current setting using the UP or DOWN button. The charge current can be adjusted from 0.05 to 25 amperes. Press the **NEXT** button to advance the display menu.
  - g. The BC-8000 will display the message START CHARGING? Press NEXT. Pressing the next button will start the battery charging cycle. With the charger running the BC-8000 display will show all the entered settings under the flashing CHARGING/Step 1 heading on the left side of the display. The arrow displayed will point to the setting that is active at that moment of the charge cycle. On the right side of the display all the current charging readings are displayed under the ACTUAL heading. Upon completion of the charge cycle the BC-8000 will turn off the charge and turn on the audio beeper to signal the charge cycle is done. Note: *The charge cycle can be stopped at any time by pressing the **NEXT** button.*

## **DISCHARGE BATTERY**

1. With the BC-8000 displaying MODE? Press the UP or DOWN button to select DISCHARGE. Press the **NEXT** button to advance the display menu.
2. With the BC-8000 now displaying DISCHARGE Volts? select the battery voltage 12 or 24 using the UP or DOWN buttons. Press the **NEXT** button to advance the display menu.
3. Now select the End Point Voltage (EPV) voltage. When the selected EPV voltage is reached, the BC-8000 will terminate the discharge test. Press the **NEXT** button to advance the display menu.
4. The BC-8000 will display DISCHARGE MAX. AMPS? Press the UP or DOWN button to set the discharge current. Do not set the discharge current to a value greater than the C1 rating of the battery. Press the **NEXT** button to advance the display menu.
5. Now enter the maximum discharge run time. This is the time in minutes the discharge test will run if the EPV voltage is not reached. Press the **NEXT** button to advance the display menu.
6. With the BC-8000 displaying PRESS NEXT TO START, press the next button to start the discharge test. The discharge can be stopped at anytime by pressing the **NEXT** button.



**NOTE:** *If the cooling fan fails to start and no cooling air is felt at the rear of the tester, stop the discharge by repressing the NEXT button. The BC-8000 must be serviced before operating again.*



**NOTE:** If incorrect battery voltage is selected the BC-8000 display will inform the operator.

## **CAPACITY TEST BATTERY**

1. With MODE? Displayed on the BC-8000 display, select CAPACITY by pressing the UP or DOWN button. Press the **NEXT** button to advance the display menu.
2. Now select the battery voltage 12 or 24 volts by pressing the UP or DOWN button. Press the **NEXT** button to advance the display menu.
3. Push the **NEXT** button . Select the End Point Voltage (EPV) cutoff. The default EPV is 20 volts for 24 volt battery and 10 volts for a 12 volt battery. The BC-8000 allows for EPV adjustment from the default values. For a 24 volt battery the EPV can be lowered to 18 volts. For 12 volt batteries the EPV can be lowered to 9 volts. Check with your battery manufacturer for specified EPV points. Press the **NEXT** button to advance the display menu.
4. With CAPACITY C1 AMPS? Displayed, select the battery manufacturer C1 (one hour) battery discharge amperage rate by pressing the **UP** or **DOWN** buttons. Press the **NEXT** button to advance the display menu.
5. The BC-8000 will display CAPACITY START TEST? To start the test, press the **NEXT** button again. If you wish to stop the test before the End Point Voltage (EPV) is reached, press the **NEXT** button and the BC-8000 will stop testing. ***If testing is stopped before EPV is reached the battery must be recharged following the battery manufacturer's recharge procedures*** before retesting.
6. After pressing the **NEXT** button to start the test, the BC-8000 cooling fan motor will start and the LCD display will show the C1% reading, battery voltage, flash *Testing / EPV voltage setting*, and test amperage. *Note: While the BC-8000 is testing or at the conclusion of the test, pressing the **UP** button will display the test run time in minutes. The LCD will display **TM: 60.2'** (The symbol ' indicates minutes)*
7. Upon reaching the EPV the BC-8000 test will stop. The cooling fan motor will stop and the audio warning beeper will beep. The display will show C1% battery capacity. Test amperage and Pass or Failed is displayed.



If the **BC-8000 COOLING FAN MOTOR FAILS TO START** press the **NEXT** button stopping the test. Place the **OFF/ON** switch to the **OFF** position and return the BC-8000 for service.

“Passing” is based upon a battery capacity of 85% or greater of its C1 rating.

“Failing” is a battery with less than 85% of its C1 rating.

**Before returning the battery to service follow the battery manufacturer's recharging procedure.**

### **BC-8000 Report Printing**

1. **Disconnect the BC-8000 from the test battery.** Place the **OFF/On** power switch to the **ON** position. Connect the USB cable from the PC to the BC-8000 USB port located in the rear of the tester. Start the PC and run the **BC Report Utility** software located on the Windows™ desktop.
2. With the **BC Report Utility** window active on the desktop, type the battery serial number into the **Battery Serial Number** box. Make sure the data source is **From BC-8000** by highlighting the indicator circle.
3. Place the mouse cursor on the **Load Data** button and press the left mouse button. The status bar in the lower left corner of the **BC Report Utility** window will display program activity and status messages as data is transferred.
4. To print the report, place the mouse cursor on the Print Report button and press the left mouse button. The Windows™ print preview window will appear showing the report available to print. Place the mouse cursor on the printer icon and press the left mouse button.



***TIP: A paperless report copy can be obtained by using a print driver that will create a PDF file. These drivers are available for sale or freeware and install in the Windows™ printer devices. This report format allows BC-8000 test reports to be sent electronically by means of e-mail attachments .***

5. To print a BC-8000 battery test report that has been already down loaded, use the **From Disc** function to print the report. Change the file source **From BC-8000** to **From Disc**. The data file uses the file extension .tdf. The file name is a combination of battery serial number, date, and time and can be found in the Concord file located at C:\Concord\BC-8000. Place the mouse cursor on the **Load Data** button and press the left mouse button. The Open test data file window will open on the desktop. Choose the data file that is to be printed by selecting the file with the left mouse button. Click **Open** at the bottom of the window. Place the mouse cursor on the **Print Report** button and press the left mouse button. The Print Preview window will become active on the disk top. To print report, left mouse click the printer icon.

## **BC-8000 CARE**

Your BC-8000 battery charger and capacity tester should be treated as precision test equipment, misuse will shorten its ability to perform accurate battery testing. Some simple guidelines of care will insure years of trouble free operation.

1. Do not drop the BC-8000 or expose it to rough handling.
2. Do not expose the BC-8000 to water or fluids of any kind.
3. Do not operate the BC-8000 in a closed up area.
4. Do not connect the BC-8000 to batteries of improper voltage ratings.
5. Do not operate the BC-8000 with the air intake or exhaust outlet blocked or restricted.
6. Do not carry the BC-8000 by the main power cable.
7. Do not operate the BC-8000 near flammable materials.
8. Do not expose the BC-8000 to direct sunlight during operation.
9. Do not expose the BC- 8000 to any other heat sources.
10. Always contact the technical support for questions on BC-8000 safety and operation.

E-mail [support@cofko.com](mailto:support@cofko.com)

**REMEMBER SAFETY FIRST!**

**TECHNICAL DATA**

**BC-8000 SPECIFICATIONS:**

**CAPACITY TESTER**

Maximum Battery Input Voltage

..... 28.0VDC

Minimum Battery Input Voltage

..... 9.0VDC

Maximum Operating Altitude<sup>1</sup>

..... 6500ft(1981.2m)

End Point Voltage (EPV)<sup>2</sup>

12V Battery EPV

..... 10VDC IEC

24V Battery EPV

..... 20VDC IEC

Constant Current Load

..... 0.5Adc to 15Adc 0.1A steps (+ - 1.5%)

..... 15Adc to 55Adc 1A steps (+ - 1%)

Operational Temperature<sup>3</sup>

..... 59°F or higher



**BATTERY CHARGER**

AC Input Voltage

..... 90~264VAC 1 Phase

AC Input Frequency

..... 47-63 Hz

DC Output Voltage Maximum

..... 36VDC

DC Output Minimum

..... 3.0VDC

DC Output Current Maximum

..... 25ADC

DC Output Current Minimum

..... 0.050ADC

Case Length

..... 12 in(30.5cm)

Case Width

..... 9 in(22.9cm)

Case Height

..... 16 in(40.6cm)

Weight

..... 19 lbs(8.62kg)

PC Communication Port

..... USB 2.0

BC REPORT Utility Software

..... Windows™ XP or Higher

Operation Temperature Range

..... -20 to 50 Deg. C

1. Consult factory for testing above maximum altitude rating.
2. Consult battery manufacturer for End Point Voltage (EPV).
3. Based upon 24 hour battery temperature stabilization in a 59°F or higher environment before testing battery. Consult battery manufacturer for capacity testing at higher or lower temperatures.

## **BC-8000 LIMITED WARRANTY**

### **STATEMENT OF WARRANTY**

COFKO LLC warrants to the original purchaser (end user) of the BC-8000 that it will be free of defects in workmanship and materials. This warranty is void if COFKO LLC finds that the BC-8000 has been subjected to improper care, abnormal operation, or modification.

### **WARRANTY PERIOD:**

The warranty period covers the original purchaser (end user) from the date of shipping.

1 Year: Covers each BC-8000 for workmanship, material, and labor.

### **TO OBTAIN WARRANTY COVERAGE:**

You are required to notify COFKO LLC, of any defects within the warranty period. Written notification is recommended.

### **WARRANTY REPAIRS:**

If upon inspection COFKO LLC confirms the existence of a defect covered by this warranty, the defect will be corrected by repair or replacement at COFKO LLC option.

### **WARRANTY COST:**

The purchaser must bear the cost of shipping the BC-8000 to COFKO LLC as well as the return shipping cost.

### **IMPORTANT WARRANTY LIMITATIONS:**

1. COFKO LLC will not accept responsibility for repairs made without authorization.
2. COFKO LLC shall not be liable for consequential damages (such as lost business, etc.) caused by a defect or reasonable delay in correcting a defect to the BC-8000.
3. COFKO LLC liability under this warranty shall not exceed the cost of correcting the defective BC-8000.

This written warranty is the only expressed warranty covering the BC-8000. All warranties implied by law such as Warranty of Merchantability are limited to the duration of this limited warranty of the BC-8000. Check your local legal rights for further rights you may have.

**BC-8000 NOTES**

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10. \_\_\_\_\_

**COFKO LLC.**

5517 RIVERVIEW DR.  
RIVERSIDE, CA. 92509  
(909) 705-6267

Support@COFKO.com

**CERTIFICATION OF FACTORY CALIBRATION**

EQUIPMENT: BATTERY CHARGER/CAPACITY TESTER  
MODEL#: BC-8000  
Application : Automatic battery charger/capacity tester for 12/24 volt Lead-Acid aircraft batteries with C1 test ratings between 0.5 to 55 ampere-hour

Specification:

- Universal AC Powered: 90~264vac (47 to 63Hz)
- Operation Voltage Range : 28VDC to 9VDC
- Operator Selected Battery Voltage: 24-12Vdc
- Operator Selected C1 amperage level: 0.5 - 55Adc
- Operator Selected Test Amperage Steps: 0.1Adc steps 0.5A to 15Adc;1Adc steps 15A to 55Adc.
- (16X4) LCD Information Display.
- Displayed Voltage Resolution 10mv
- Cutoff Voltage 12V Battery 10.00Vdc (IEC 60952-1) +/-100mv
- Cutoff Voltage 24V Battery 20.00Vdc (IEC 60952-1) +/-100mv
- Displayed Battery Capacity (C1) Percent %
- Displayed Pass or Fail Battery Condition
- Windows™ Compatible Test Data Print Utility (BC Report Utility)
- Charger Output Voltage: 3.0 to 36VDC (+/- 0.05Vdc)
- Charger Output Current: 0.05 to 2.50ADC (+/- 0.005Adc)
- Charger Output Current: 2.6 to 25ADC (+/- 0.05Adc)
- Maximum Charge Time: 999 minutes
- Single or Two Step Charging

Notes:	Calibrated with NIST traceable equipment.			
Test Equipment	Manufacturer:	Model:	Serial#	Control#
Volt Meter #1	HP	3456A	2015A01818	12617
Volt Meter #2	HP	3455A	1622A11888	12618
Frequency Counter	HP	5316A	2632A10545	12693
Shunt	Deltec	WB 100 100	NA.	137317MLQA5

Product: Automatic Battery Charger/Capacity Tester  
Model: BC-8000  
Calibration Due: Once A Year  
Shipped Condition: Calibrated within Specified Tolerance \_\_\_\_\_ - Passed  
Procedure: CF1\_FINALCAL

*COFKO LLC. CERTIFIES THAT THE ABOVE LISTED TEST EQUIPMENT MEETS OR EXCEEDS ALL SPECIFIED TOLERANCES. THE TESTER STATED ABOVE HAS BEEN CALIBRATED WITH NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY(NIST) TRACEABLE EQUIPMENT LISTED ABOVE.*

DATE MANUFACTURED: \_\_\_/\_\_\_/\_\_\_ S/N: \_\_\_\_\_<sup>1</sup>  
SIGNATURE: \_\_\_\_\_

-----  
Date of First Use: \_\_\_/\_\_\_/\_\_\_ Signature: \_\_\_\_\_

1. BC-8000 serial number location- **Rear of case.**