AUTOMETER BPC-100
Operator Manual

BPC-100 Charging

The BPC-100 is the ultimate battery and battery pack charger with fast charge and full charge options for the professional.

Auto Meter Products Inc.

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CONGRATULATIONS!

You have purchased AutoMeter's BPC-100 Battery and Battery Pack Charging system designed to automatically provide a fast charge or full charge when needed. The system is fully automated with LCD readout menu for Battery Packs or Individual Batteries Instructions, charge results, and LED lights for unattended distance viewing. If you should have any questions about your charger or the charging procedures, please see the back cover for contact information.

BPC-100

Battery Voltages	12 Volt
Charge Sequence	Fast Charge and Full Charge Modes
CCA Range	300 – 1600
LCD	Backlit 1" x 2.5" 4 line x 16 characters
Maximum Current Output	70 AMPS @ 115 VAC Input 100 AMPS @ 230 VAC Input
Cooling	Internal Fan
Leads	6 Ft., 2 AGW, Fine Strand Copper w/ integrated remote sense wire.
Power Cord	14 AWG 8 FT
AC Power	115 VAC 13 AMPS 230 VAC 7 AMPS
Size	14"W X 11.5"D X 9.5H
Weight	24 lbs.

NOTE: If 230 VAC input power is desired, order optional 230 VAC NEMA 6-15P power cord model number AC-131.

LIMITED WARRANTY

12 MONTHS FROM DATE OF PURCHASE

The manufacturer warrants to the consumer that this product will be free from defects in material or workmanship for a period of twelve (12) months from the date of original purchase. Products that fail within this twelve (12) month warranty period will be repaired or replaced at the manufacturer's option to the consumer, when determined by the manufacturer that the product failed due to defects in material or workmanship. This warranty is limited to the repair or replacement of parts and the necessary labor by the manufacturer to effect the repair or replacement of the product. In no event shall the manufacturer be responsible for special, incidental or consequential damages or costs incurred due to the failure of this product.

Improper use, accident, water damage, abuse, unauthorized repairs or alterations voids this warranty. The manufacturer disclaims any liability or consequential damages due to breach of any written or implied warranty on its test equipment.

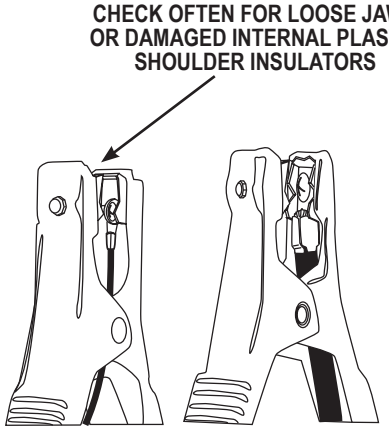
WARRANTY AND SERVICE INFORMATION

Original purchase date will be tracked by serial #. Please contact the call center if you have a warranty question/issue. Shipper damage incurred during return shipments is not covered under this warranty. It is the responsibility of the shipper (the customer returning the Test Equipment) to package the tester properly to prevent any damage during return shipment. Repair costs for such damages will be charged back to shipper (customer returning the Test Equipment). Protect the product By shipping in original carton or add plenty of over-pack cushioning such as crumpled up newspaper.

CARE AND MAINTENANCE

- Keep leads free of oil. Clean with warm, soapy water.
- Never insert an object into the fan vents. This can cause electrical and/or mechanical damage. Never cover the fan vents.
- Never attempt to open up or repair the tester. Repairs should only be done by an authorized repair center. **Note:** Doing so could void the warranty.
- Always be sure the tester is off and the clamps are removed from the battery before cleaning.

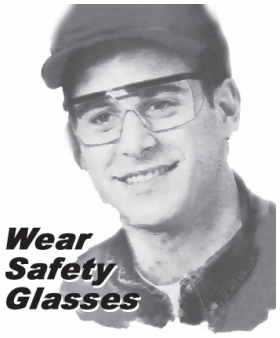
- Both jaws of each clamp must firmly engage the battery terminal. One copper jaw connects to the smaller gauge wire that reads the voltage and the other jaw connects to the larger current conducting cable.



CONTENTS

SAFETY

- Carefully read all operating instructions before using the BPC-100.
- Wear eye protection when working around batteries.
- The BPC-100 is equipped with a 8ft power cord. An extension cord should not be used unless necessary. Use of improper extension cord could result in a risk of fire and electric shock. If an extension cord must be used.
  a. Make sure that pins on plug of extension cord are the same number, size, and shape as those of the plug on charger.
  b. Make sure that extension cord is properly wired and in good electrical condition. Never use an extension cord that is more than 50ft and follows the specifications of the following chart.



Length	Cord Size AWG
25 FT	16
50 FT	12

Make sure the extension cord and receptacle are properly grounded.

- Be sure each charge is completed before removing clamps to prevent arcing and potential explosion from battery gases. Never remove load clamps while charging.
- Keep sparks flames or cigarettes away from batteries.
- Provide adequate ventilation to remove car exhaust.
- In extremely cold temperatures, check for frozen electrolytic fluid before applying charge. Do not attempt to Charge a battery under 20^{O}F. Allow the battery to warm to room temperature before testing or charging.
- Connection to 24 volts will dangerously overload the circuitry.
- ***Warning!*** Never attach the BPC-100 to a battery that is connected to any other tester or charging unit. Damage may result.

WARNING!

This device is only to be used on 12V electrical systems. Not for use on high voltage electrical systems.

CAUSE OF BATTERY FAILURE

- **Incorrect Application:** Wrong size battery may have inadequate cold cranking Amp rating for original vehicle specifications.
- **Incorrect Installation:** Loose battery hold-downs cause excessive vibration, which can result in damage to the plates.
- **Improper Maintenance:** Low electrolytic fluid and corrosion on battery connections, can greatly reduce battery life and affect battery performance.
- **Age of Battery:** If the date code on the battery indicates it is fairly old, the failure may be due to natural causes.
- **Overcharging:** Overcharging caused by a high voltage regulator setting or incorrect battery charging can cause excessive gassing, heat and water loss.
- **Undercharging:** Undercharging caused by a faulty charging system or low voltage regulator setting can cause lead sulfate to gradually build up and crystallize on the plates greatly reducing the battery's capacity and ability to be recharge.

REVIEW / PRINT

From the menu select REVIEW/PRINT using the +/- keys.

```
 CHARGE     11.9V
>REVIEW RESULTS
 SETUP
 ABOUT
```

```
#290 12V BATT.
CHARGED
12.60V CHRG 100%
USE +/-.          ↓
```

Press 'N' to return to the main menu.

ABOUT THE BPC-100

Select ABOUT from the main menu. The following is displayed.

```
 CHARGE
 REVIEW RESULTS
 SETUP
>ABOUT
```

```
    BPC-100
  VERSION 1.4
  SER#: 10001
COPYRIGHT 2022
```

Press 'N' to return to the main menu.

SETUP

The charger factory default settings are English, F (Temp), CCA, 925 CCA. To change the settings use the setup menu's below.

```
 CHARGE    11.9V ↑
 REVIEW RESULTS
>SETUP
 ABOUT          ↓
```

Scroll Down to Setup, Select setup by pressing Y

```
>SET LANGUAGE:
 ENGLISH.
 USE +/-.
 'Y' TO SELECT
```

Choose between Spanish or English Language.

```
>SET TEMPERATURE
 SCALE: F.
 USE +/-.
 'Y' TO SELECT
```

Select the temp in Fahrenheit or Centigrade.

```
>DEFAULT BATTERY
 RATING: CCA
 USE +/-.
 'Y' TO SELECT
```

Select the rating from CCA, MCA, CA, AH, EN.

```
>SET DEFAULT CCA
 AS: 925
 USE+/-
 Y TO SELECT
```

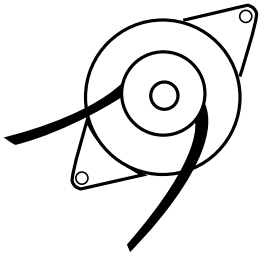
You can also select the default rating to be the last entered CCA value or a particular amount such as 925 CCA.

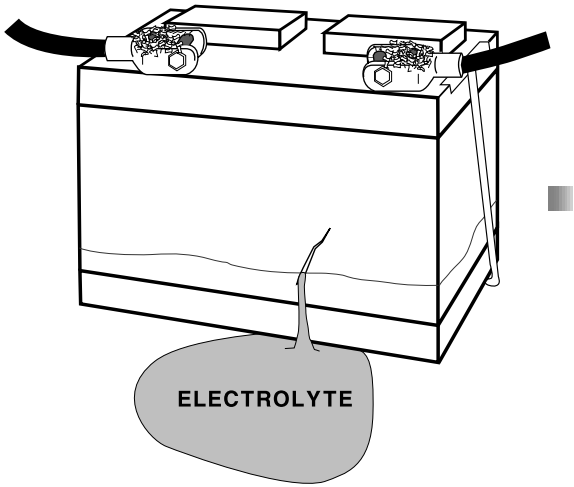
INSPECTION

Valid electrical system testing depends on all the components being in good operating condition. In addition, the battery MUST have sufficient charge for testing. Carefully perform the following before attempting any electrical diagnosis.

VISUAL CHECK

- **Inspect Belts** for cracks, glazed surface and fraying. Tighten loose belts.





- **Inspect Battery** for terminal corrosion, loose or broken posts, cracks in the case, loose hold-downs, low electrolyte level, moisture, and dirt around the terminals.

- **Inspect Starting System** Check starter, solenoid, and regulator for loose connections, loose mounts, and frayed or cracked wires.
- **Important Note**
  A damaged battery must be replaced before proceeding.

WHAT TO EXPECT

…from your BPC-100 Charger

During the charge sequence the BPC-100 will indicate the estimated and maximum times remaining to complete the charge. Actual charge time may vary depending on ability of the battery to accept a charge. The LCD screen makes it possible to view the BPC-100 charging status.

The LCD provides easy menu instructions and charge results.

The BPC-100 will automatically charge a 12V battery or battery pack (up to 8 batteries in a parallel) in a Fast Charge mode or Full Charge mode.

Fast Charge Mode: Quickly charges the battery or battery pack up to a level that it can be put back into service, and the remaining charge will be put back into the battery or battery pack by the vehicles charging system.

Full Charge Mode: Provides a full charge to the battery or battery pack.

Charge Time Estimate: The charger will estimate the time it will take to charge based on the rating of the battery, type of battery and the state of charge. It will calculate the charge and how much current the battery is taking to determine the time required to complete the charge. This calculation is based on new batteries, so older batteries make take longer to charge. The charger will recalculate the estimated time if it reaches 0, and the battery still requires more charging. The charger will stop charging when the max time reaches 0.

Voltmeter: When a battery is correctly connected, the charger will display the battery voltage in the upper right corner of the Main Menu screen. This provides an instant display of the battery's voltage to estimate state of charge. When no battery is connected, this area of the screen will be blank.

```
>CHARGE
 REVIEW RESULTS
 SETUP
 ABOUT
```

Main Menu with no battery connected.

```
>CHARGE    11.9V
 REVIEW RESULTS
 SETUP
 ABOUT
```

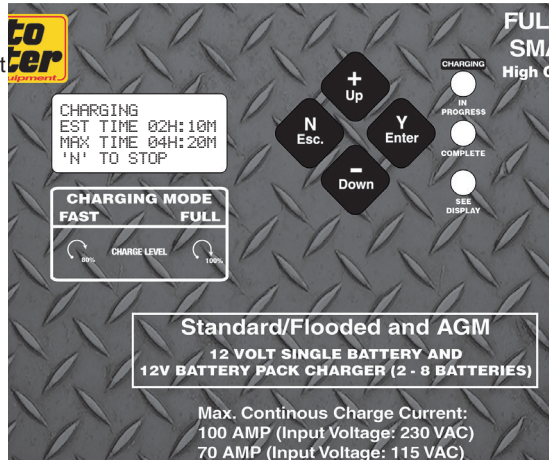
Main Menu with battery connected.

CHARGE SEQUENCE cont.

AUTOMATED CONDITIONS

The LED indicators will show the status during a fully automated Charge sequence. This makes it possible to view the status and final results at a distance.

- Red "CHARGING" in progress light indicates battery is being charged.
- Green "CHARGING COMPLETE" light indicates battery has been charged.
- Amber "SEE DISPLAY" light indicates additional information is displayed on the screen.




```
C#20 12V BATT.
BATT. CHARGED
12.98V CHRG 100%
```

Normal Charge. Press 'Y' or 'N' to go back to menu.

```
C#20 12V BATT.
POSSIBLE BAD BAT
10.28V CHRG 0%
'Y' FOR  MORE
```

Possible Bad Battery. The battery failed to accept a charge.

CHARGE SEQUENCE cont.

If the battery temp is below 20°F the following message will appear

```
THE BATTERY
IS TOO COLD TO
SAFELY CHARGE
'Y' TO CONTINUE
```

```
THE BATTERY
NEEDS TO WARM
BEFORE CHARGE
'Y' TO CONTINUE
```

The unit will go back to main menu.

```
ENTER RATED CCA
OF A SINGLE BATT.
USE +/-. 925
'Y' TO CONTINUE.
```

The initial battery rating displayed will be either the default rating or the last entered rating will be displayed (this setting can be changed at setup). Adjust the rating of a single battery using the +/- keys. Press 'Y' to continue.

```
CHOOSE BATT TYPE
STARTING STANDRD
USE +/-,
'Y' TO CONTINUE
```

Press the (+Up) or (-Down) key to cycle through the battery types. Press 'Y' when it matches the type of battery you are charging.

BATTERY TYPE OPTIONS:
STARTING STANDRD
STARTING AGM
DEEP CYCLE AGM
DEEP CYCLE STANDRD

```
CHOOSE CHRG TYPE
  FAST CHARGE
USE +/-.
'Y' TO CONTINUE
```

Press the (+ Up) or (- Down) key to choose FAST CHARGE or FULL CHARGE. Press 'Y' to continue.

Summary Screen

```
>STARTING STANDRD
 TEMP. 70°F FAST
 RATED CCA = 925
  'N' OR 'Y'
```

Confirm that the inputs are correct. Press 'Y' if they are correct. The charge will start. Press 'N' to re-enter temp, battery rating, battery type, or charge type.

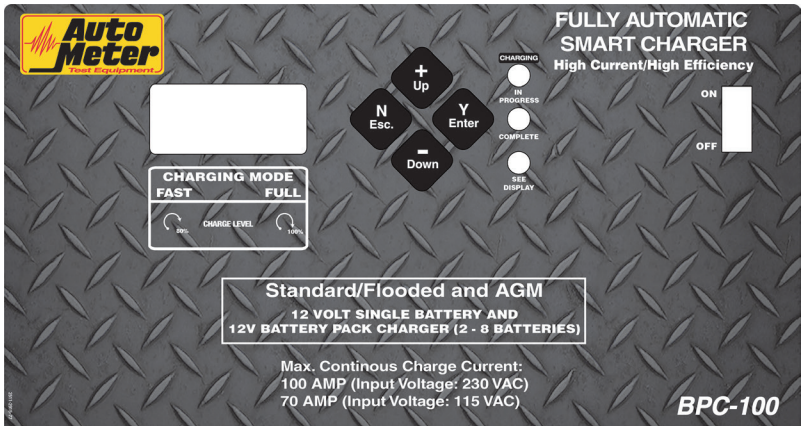
```
CHARGING
EST TIME 02H:10M
MAX TIME 04H:20M
'N' TO STOP
```

After a short time, the display will indicate the estimated time and maximum time to complete the charge. You can press 'N' at any time to stop the charge.
The estimated time is calculated based on the battery type, rating, batteries beginning state of charge, temperature, and the number of batteries in the pack. This calculation assumes newer batteries are being charged. Older batteries may take longer to charge. Max time is the absolute maximum time the charger will charge the batteries

CONTROLS AND FUNCTIONS

1. AC On/Off Switch
LCD turns on when AC switch is on.

2. LCD
Displays menus and charge results.



3. KEYS
When each key is pressed a beep sounds to assure contact has been made.
Y Enter Key:
This key selects the main or next menu. It also selects the cursor line item and answers *yes* to a charge progression.
+Up Key:
This key moves the cursor up in order to select a menu line item. It also increments a value.
-Down Key:
This key moves the cursor down in order to select a menu line. It also decrements a value.
N Esc Key:
This key cancels a charge or progression. It also returns to the previous menu.

4. Battery Charge Sequence
Indicating charge in progress, charge complete, or see display for additional information.

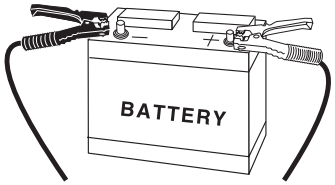
USB Port on the left side.
Factory use only.

HOOK UP

1. Turn on the AC switch. The LCD will indicate "BPC-100" if the unit is properly plugged into an AC outlet. For your safety, make sure the AC receptacle is properly grounded.

Note: The BPC-100 is equipped with a 8ft power cord. Never use an extension cord smaller than 12 gauge or longer than 50ft. Make sure the extension cord and receptacle are properly grounded.

Connect Black Clamp to Negative (-) Terminal



Connect Red Clamp to Positive (+) Terminal

AC Power Connections:

This charger has an input power requirement of 100 – 240 VAC / 50 – 60 Hz, and is supplied with a 115 VAC, 15A power cord with a NEMA 5-15P plug. When the charger has an input power of 115 VAC, the maximum charger output current will be 70A.

An optional 230 VAC 15 A power cord with a NEMA 6-15P plug is available for separate purchase PN AC-131 if 230 VAC operation is desired. The maximum charger output will be 100 A.

Choose the appropriate power cord for the power you have available, and plug it into the back of the charger.

Compatible Battery and Battery Pack Configurations:

This charger is designed to charge a single 12 V lead acid battery (Including flooded and AGM types), and 12 V battery packs ranging from 2 to 8, 12 V batteries connected in parallel.

Connecting the Charger Clamps to the Battery or Battery Pack:

The charger is supplied with heavy duty high current clamps and cables. The clamps must be connected to corrosion free, and clean, lead or brass battery terminals, or post adapters securely tightened onto the battery terminal. **DO NOT CONNECT THE BATTERY CLAMPS TO THREADED STEEL BATTERY POSTS OR STEEL BATTERY TERMINAL NUTS**. The added electrical resistance of the steel could cause the connection to overheat and damage the battery and/or charger clamps.

When charging a battery pack, connect the positive charger clamp to the battery pack connection where the large starter cable attaches. Connect the negative charger clamp to the battery pack where the main chassis ground cable attaches. This connection location will provide the most efficient electrical path to charge the battery pack.

CHARGE SEQUENCE

2. If the BPC-100 displays one of the following messages check your connections.

```
REVERSED BATTERY
CONNECTIONS!

DISCONNECT NOW
```

Red = (+) Positive and Black = (-) Negative

```
 CHECK BATTERY
 CONNECTIONS!

 'N' TO CANCEL
```

Make sure the terminals are clean and the connection is secure. If the "Check Battery Connections" remains the connections are not secure. If you are sure of a solid connection replace the battery.

From the menu select CHARGE using the +/- keys.

```
>CHARGE   11.9V
 REVIEW RESULTS
 SETUP
 ABOUT
```

Then press 'Y' Enter to continue.

```
ARE YOU CHARGING
A BATTERY PACK

'Y' OR 'N'
```

If you are charging a battery pack press 'Y'. If you are charging a single battery press 'N'.

```
HOW MANY BATTS
ARE IN THE PACK
USE +/-     2
'Y' TO SELECT
```

If you are charging a battery pack tell the BPC-100 how many batteries are in the pack using the '+' and '-' keys, Press 'Y' to enter. The BPC-100 can charge up to 8 batteries in a pack.

Use the +(Up) and -(Down) keys to enter the approximate battery temperature. The -(Up) and +(Down) keys increment & decrement in units of 10. **Press 'Y' to continue.**

```
>ENTER BATTERY
 TEMP.     70F
 USE +/-
'Y' TO CONTINUE
```

If the battery temperature is above 120°F the following message will appear.

```
THE BATTERY
IS TOO HOT TO
CHARGE SAFELY
'Y' TO CONTINUE
```

```
THE BATTERY
NEEDS TO COOL
BEFORE CHARGING
'Y' TO CONTINUE
```

The unit will go back to main menu.