

### IMPORTANT SAFETY INFORMATION

#### TA12B Series

Please read this manual thoroughly before use and store in a safe place for future reference.  
**WARNING!**

When using the product, please pay attention to the following points to ensure an accurate Battery Cranking Power analysis of a 12V battery:

1. This product is designed only to perform analysis on 12V lead-acid batteries of vehicles under 6,000CC; tests performed on other batteries such as deep-cycle batteries, would give inaccurate results.
2. In the meantime, these conditions should be met for accurate results:
  1. Tests should be performed at around 25°C, temperature that is both too high or too low affects the accuracy.
  2. Battery should be fully charged.
  3. Before performing a test, turn off engine for at least half an hour; or wait for at least half an hour after battery is fully charged.
  4. Make sure the CCA value (EN, or JIS) input is correct.  
CCA value (EN, or JIS) is usually marked on the battery casing; if not, please look it up on the Internet with the model no.



For batteries without both model no. and CCA value (EN, or JIS) marked on casing, refer to the table below.

Engine displacement	CCA value range
0.8Liter~1.6Liter	300~400
1.6Liter~2.5Liter	400~600
2.5Liter~4.0Liter	600~750
4.0Liter and up	750~1000

High CCA value (EN, or JIS) read by the product indicates that the battery is performing well.

3. Tests should be at least 30 seconds apart.

### Features

1. Patented EMP technology. Alternating signals used to accurately analyze batteries.
2. Suitable for 12V automotive batteries such as AGM style, flooded lead acid...
3. APP available on both IOS and Android systems.
4. Multi-language UI, new languages can be added.
5. Saves up to 30 test results. Share one or all results with clients and friends via email, **other messenger apps, and/or social sites.**
6. Reverse polarity protection.
7. Safe and reliable. No damage on battery when multiple tests are performed.

### Instructions

#### A. Connect the clips or ring terminal to the battery posts

Open product by removing the lid, connect the red clip to **the positive battery post(+)**, and the black clip to **the negative battery post(-)**

1. A tone and blue LED light indicate that product is working.
2. Repeating tone indicates that battery is low, with voltage below 8V. Please remove product from battery and charge it first.
3. No tone or lit LED light indicates that battery is empty or damaged. Please remove product from battery and charge it first. (In the case of a damaged battery, charging would not be possible)

## B. APP instructions

1. Open App and select "Language"
2. Enter "License Plate Number", then refer to user manual (corresponding language) or video (English only) for more information.
3. Turn on Bluetooth on smart device, then connect to "AB Analyzer".
4. Click "Start" to enter testing page.
5. Select either "CCA" "EN" or "JIS".
6. Enter corresponding "CCA" "EN" or "JIS" values, then press "Start" button to start testing. Test time is between 3-5 secs.
7. Test results:  
(A) Cold Cranking Power

The most important function of car batteries is to start the engine. If they fail to do so, cars become scrap metal. Battery lives may vary between brands, quality, and usage. They usually last about 2 to 3 years. Cold cranking power is correlated to battery life.

The following are test results of a 2-year car battery.

### No Binding

Select No binding if you want to go ahead and use the device and App to test immediately.

### Binding

Most users will wish to Bind their device the first time they use it. Binding means to link your AB Analyzer device with the license plate number of the vehicle that device is attached to. Then, when connecting via Bluetooth, the App will display the license plate number associated with that device. If other AB Analyzer devices are also in use nearby, it makes it easy to identify which vehicle you are testing

If the App shows two AB Analyzer devices, there must be another vehicle with the AB Analyzer nearby. In this case: 1) Disconnect the other device or 2) Move the vehicle to another location 5-10 meters away from the other vehicle.

If you are using more than one AB Analyzer device, please connect and bind the devices one at a time, so you can easily identify which car is being tested. Attach the first device to the battery, and bind it using the App. Then, attach the second device, and bind it. And so on. After that, you can identify each device by the license plate number you entered for each one.

Binding also protects your confidential Journey data. You will be prompted to enter a password. When you bind your device to your smartphone App and password protect it, no-one else can connect to your AB Analyzer device and download your Journey data.

- a) Select Binding then select Nearby Devices. This will detect any devices with Bluetooth signals emitting in the surrounding area.
- b) Enter the license plate number of the vehicle you attached the AB Analyzer device to. Or select "Same as previous entry" if you entered that license plate number last time.
- c) When AB Analyzer appears in the list below, it will be automatically selected. There is no need to select it.
- d) Press Bind.
- e) Look at the Binded devices page. The vehicle's license plate is listed, it is now associated with that AB Analyzer device. That number will henceforth be used to identify that device.
- f) Select GO TEST. This will take you to the Home page where you can choose which test you want to perform.

**If you wish to move the device to another vehicle** - go to Binding, select Binded devices then select Unbind at the bottom of the page. This will end the link between that device and that license plate number.

**If you wish to Bind the device using a new smartphone or you have Unbinded and then try to Bind again**, you will need to first enter the old password before you can create a new one and complete the Binding process.

On the Home Page, select your test: Journey & Battery Monitor Live, Battery Health Test, Starter/Cranking Test, or Alternator/Charging Test. You can also view your Low Voltage Warning on this page.

### **Journey & Battery Monitor Live (TA12BD \ TA12BS ONLY)**

Allows you to see live updates on your battery voltage - view voltage graphs for each journey you take and determine if your alternator is charging your battery as it should be.

View your journey statistics: start/end times, Resting Battery Voltage, Lowest/Idle & Highest

Voltages, Journey duration & view Journey route and distance using Google Maps. 20-25 hours of journey data stored.

Journey will start when you turn on the vehicle engine, then press START and will stop when you turn off the vehicle engine. Where the engine is turned off less than 30 seconds after it has been turned on , Journey will not be recorded.

**1) On Home page, press Journey and Battery Monitor LIVE**

**2) If you wish to get full Google Maps route and distance info, ensure your phone's GPS function is turned on.**

**3) For GPS tracking to work, make sure your GPS locating method is set to "High accuracy" (find this in the Locating method section of your Location/GPS menu). If you don't do this, connection may fail. Please note that if Android phone GPS chip is not high quality, the route tracking may be less accurate and in some cases may not be able to connect**

**4) Press START, wait a few seconds for GPS to connect, then turn on your engine (waiting a few seconds also ensures your resting battery voltage is measured before your journey). Then start driving. In some very rare cases with Android phones, a wait of up to 15 seconds after pressing START may be required for GPS connection.**

**5) Journey start time and Live Journey Duration appear at the top. Below this is your LIVE voltage graph for your Journey. This graph shows if your alternator is charging your battery as it should be**

**6) When your journey is complete and your engine is turned off, the journey may not end automatically - if so, then press "End Journey" to end your journey and see your journey results data. (Note: if you press this button with engine still on, your journey may still continue.)**

The resting voltage is your battery's actual voltage. This is measured during the few seconds after you press the "START" button and before you turn on the engine. (For most accurate results, test after engine has been off for at least 30 minutes.)

If you don't connect via Bluetooth and use the App during your journey, or forget your phone, you will still get the Journey start/end times, duration and voltage information - this will be automatically recorded and stored on the device memory - you can transfer to the App via Bluetooth by going to Settings then Transfer Journey Data. The device can store up to 20-25 hours of Journey data.

See graph below showing how results are stored:

	Bluetooth On	Bluetooth On	Bluetooth Off
	GPS On	GPS Off	GPS On or Off
<b>Result</b>			<b>Data Stored</b>
Start/End time	✓™	✓	✓
Resting battery voltage	✓	✓	✗
Lowest idle voltage	✓	✓	✓
Highest Voltage	✓	✓	✓
Voltage graph	✓	✓	✓
Duration	✓	✓	✓
Distance	✓	✗	✗
Google Maps route	✓	✗	✗

**Please note: for Journey route and distance using Google Maps, please ensure your smartphone GPS Location function is turned on.**

**1) [View the graph for Battery Charge Check and Alternator Check.](#)**

**a) Alternator Check**

View the LIVE graph. If it shows voltage higher than 15V, your alternator may be overcharging and thus damaging your battery. If it shows voltage lower than 13.3V, please check your alternator - it may not be charging your battery as it should be.

**b) Battery Charge Check**

If the Resting Battery Voltage (see on your Results page when your Journey ends) shows voltage below 12.5V, then your battery voltage is low - you need to charge your battery immediately (to check accurately - ensure engine off for 30 minutes or more). For this Check, your Bluetooth must be turned on and the App opened before your Journey. If you don't, there will be no Resting Battery Voltage in your results.

**2) [Results/History page shows your results. The results shown are:](#)**

- Your license plate number
- The start time of your journey.
- The end time of your journey.
- Resting Battery Voltage - The voltage of your battery when your vehicle is at rest, with engine off. This is for reference purposes - to show you the current level of charge in the battery.
- Lowest Idle Voltage The lowest voltage of your battery during your journey, measured when the engine is in idle condition (RPM at the minimum level with engine on).
- Highest Voltage The highest voltage your battery reached during your journey.
- The LIVE voltage graph, showing the voltage for your whole journey.
- The duration of your journey.

- The distance of your journey.
- Google Maps, showing the route of your journey. You can zoom into and out of this Google Maps display to see more detail about your Journey.

#### Export test results:

#### Exporting a single result:

Click the share  to share via email and other button messenger apps.

Transferring Journeys that have been automatically logged by the device (i.e. you didn't connect to Bluetooth during the journey):

Go to Settings, then "Transfer Journey Data". Enter your password that you created when you Binded your device. Press Confirm. Then all your Journey data will be transferred to your smartphone. You will now find this data in your Journey history.

Please note: pressing cancel (or losing the Bluetooth connection) after you have started the transfer will result in any data not yet transferred being lost.

#### Monthly Record:

View your journeys for the last 12 months. On the Journey Results/History page, select "Monthly Record". Scroll down to your chosen month, select the day you wish to see and view your Journey data for that day.

Below each month you can also see your total journey time and distance traveled for that month.

#### Low Voltage Warning

The Low Voltage Warning display shows you if your battery is charged enough right now. If the "Good" button is lit with green color, your battery charge is okay, greater than 12.5V. If the "Low Voltage Please Charge Immediately" button is lit with red color, your battery charge is low, less than 12.5V. You should then charge the battery as soon as possible.

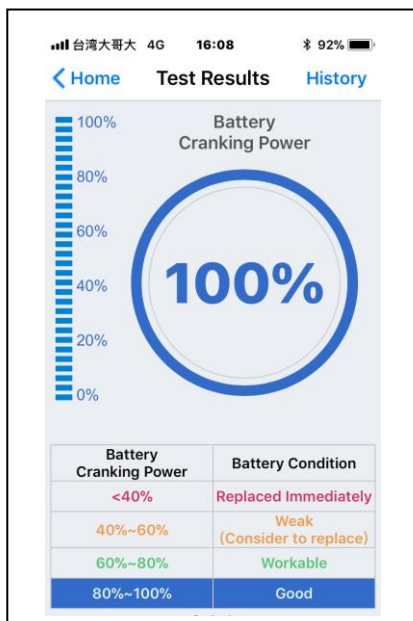
Voltage is automatically measured every 12 hours by the device. If Voltage is low (less than 12.5V), a notification appears in your smartphone. If you receive this notification, please charge your battery as soon as possible.

If you wish to turn off this notification, please go to the settings menu and uncheck Push Notification.

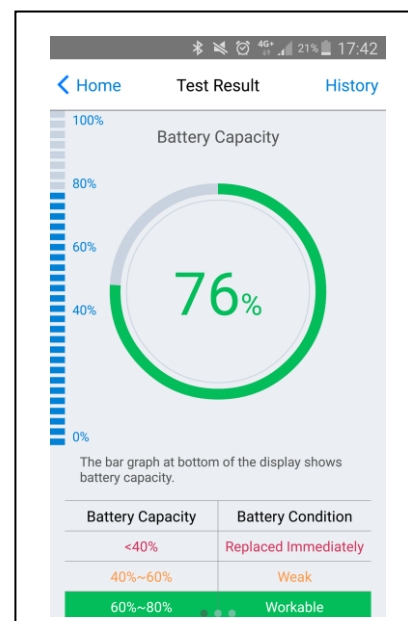
## Battery Health Test

1. Enter "License Plate Number" or select "Same as previous entry" if you're testing the same vehicle that you did last time you used the App.
2. Turn on Bluetooth on smart device, then connect to "AB Analyzer".
3. Click "Start" to enter testing page.
3. Select "CCA", "EN" or "JIS".
4. Press Enter, then input your battery's "CCA", "EN" or "JIS" value (normally written on the battery casing). If you can't find this value, find the battery model number then select your vehicle type: Cars & Boats, or Motorcycles. From this table, select your model number e.g. 55B24RS. This will automatically enter the correct CCA value. If you can't find the model number in the table, please look it up on the internet and find the CCA, EN or JIS value. For batteries without either CCA (or EN or JIS) value or model no. marked on the battery casing, refer to the table in section B.4, above, or press the information button on this page to see the table.
5. Press "Start" button to start testing. Test time is between 3-5 secs.

### 6. Test results:

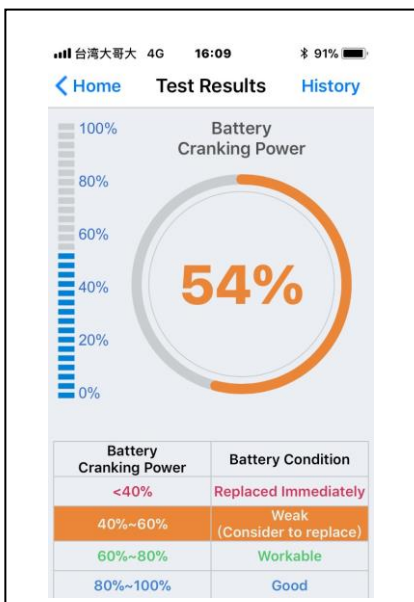


0-6 months,  
about 80% -  
100%, Battery  
Condition:  
Good

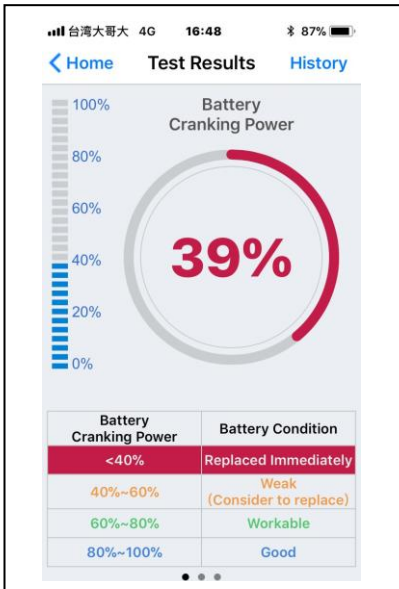


6-18 months,  
about 60% -  
80%, Battery  
Condition:  
Acceptable





18-24 months, about 40% - 60%, Battery Condition: Weak, consider replacing



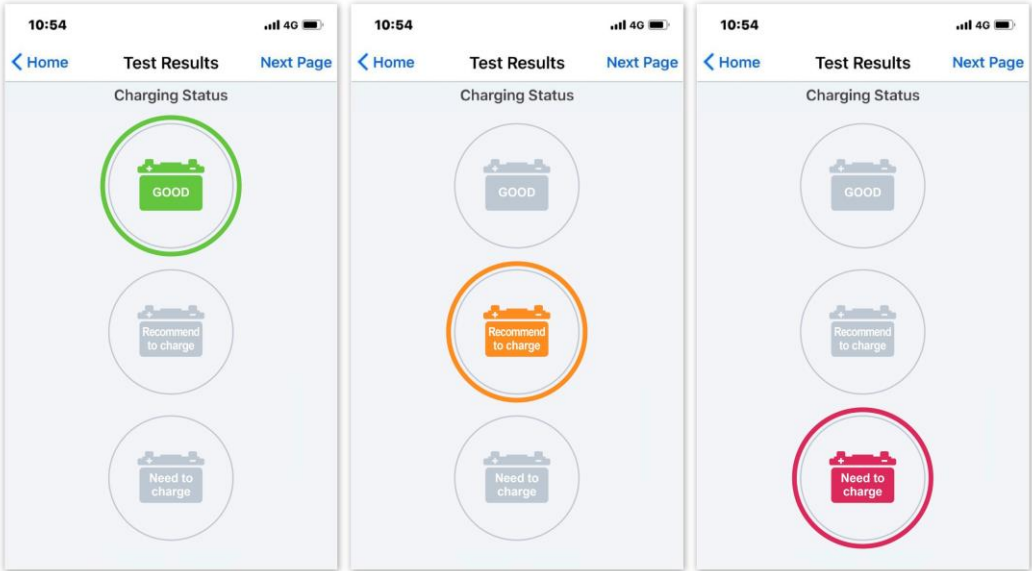
24 months and up, below 40%, Battery Condition: It could fail at any time, replace it immediately.

**Note :** Batteries are greatly affected by temperature. At room temperature, 26°C (80°F), if battery CCR is 100%, it'll drop to 40% at 0°C (32°F). TA12B series can test the battery at any temperature, and therefore can provide important information to avoid a battery failure on the road.

**(B) Charging Status**

The fuller the batteries, the more they can send power to headlights, stereo system, dashboard, etc. A freshly charged battery has a voltage of 14.4V, but after sitting for half an hour or more, the voltage drops to 13.2V. Old batteries can also be charged to a voltage of 13.2V, but die faster. Like old phones, they can be charged fully, but discharge very quickly.

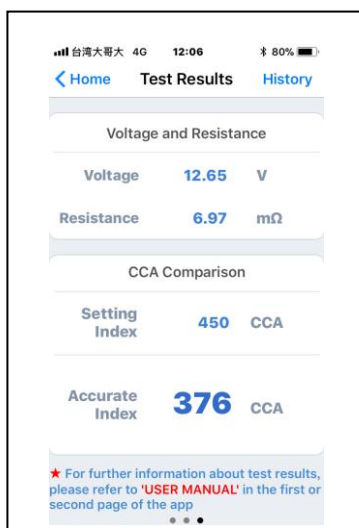
The picture below is an example of the charging status page when using the product.



- At 12.5V or higher, you'll see a green light, indicating "Good" charging status
- Above 12.1V and below 12.5V shows orange light, indicating "Recommend to charge".
- 12.1V or below shows red light, indicating "Need to charge".
- If below 10V, the battery should be replaced. (there are 6 cells in a battery, each provides 2V)

**Note :** Cars usually come with a generator, which charges the battery while driving. However, if the car is rarely used or used for mostly short distance drives, it might result in a poorly charged battery. In such cases, go for a longer drive on a highway or charge the battery at home.

### (C) Testing results and comparison



1. **Voltage: 12.65V => Battery condition is Good. If the voltage is lower than 12.1V, charge immediately; if lower than 10V, the battery should be replaced. (There are 6 cells in a battery, each provides 2V)**
2. **Resistance: 6.97Ω => Ω (ohms) is used to measure resistance. Usually the lower the value, the better the battery condition.**
3. **CCA(or EN or JIS) value => The CCA value marked on the battery, inputted as a reference.**
4. **CCA(or EN or JIS) tested value => The actual CCA value picked up by AB Analyzer. Usually the higher the CCA, the better the battery condition.**

### Information on "Test Results"

1. **When testing brand new batteries, the tested CCA value might be higher than the CCA value marked on them, since manufacturers mark the average value instead of the highest. Usually after 2-3 months of use, the tested CCA value will be lower than the marked value. All batteries are subjected to the aforementioned changes.**

2. Battery Cranking Power and charging status are not directly related. For example, after putting a new battery in a car that has been sitting for 1 to 2 months without being driven (or rarely driven), due to self-discharge, the test result might indicate that the "Battery Cranking Power" is 92%, but "charging status" would say 'Need to charge'.

3. After 2 or 3 years of regular use, batteries deteriorate, and the cranking power decreases. However, when fully charged, results of "Battery Cranking Power" might indicate 55%, but "charging status" might be "Good charge".

Like your cell phone batteries, after a couple years, performance drops, and even though they can still be fully charged, the discharge cycle shortens. It's recommended that the battery be changed.

## 8. History

Click the "History" button on top right corner

(1) Up to 30 test results are stored, when over 30, old results will be replaced by newer ones.

(2) Each test results contain the following information:

- a. Testing result (1 – 30)
- b. Date and time
- c. License plate number of test car
- d. Battery capacity
- e. Charging status
- f. Voltage
- g. Resistance
- h. Enter "CCA" "EN" or "JIS" value
- i. Tested "CCA" "EN" or "JIS" value

(3) Export test results

- a. Exporting a single result

Click the share button  to share via email and other messenger apps.

- b. Exporting all results

Click the "Export" button on top right corner to share via email and other messenger apps.

### C. Extra information

1. TA12B series can only be connected to one smart device at a time. To connect it to a different device, please turn off Bluetooth on the connected smart device, then connect to the second device.
2. To delete test result history, please go to “settings,” select delete history. You’ll be prompted to confirm your action, simply press okay to complete the deletion.
3. **If clips are removed from the battery posts, connection will break in 3 seconds.**  
**(1) To test the same battery, simply re-connect clips to the battery posts to carry on testing.**  
**(2) To test another battery, connect the clips then press the “Reconnect” button to allow APP to scan for new device, then enter new license plate number.**
4. To change language on your current device , please go to home page, “settings” , then select desired language.
5. User interface might appear different on Android devices, but it doesn’ t affect test results.
6. As regulated by the international environmental protection act, a recycle symbol is printed on the plastic casing.

### **Starter/Cranking Test(TA12BC \ TA12BD \ TA12BS ONLY)**

Allows you to fully test the ability of your battery to start the vehicle by measuring the cranking voltage. Too low a value indicates a starting system problem.

1. Select CHECK button to confirm your engine is off and clips are connected correctly, then select START.
2. A pop-up box appears. Wait a few seconds while the test is prepared, then press “OK”.
3. Start your vehicle engine.

The device will test the Starter/Cranking System and then the results will quickly appear.

4. The Test Result/History page shows your results. The results shown are:
  - Your license plate number
  - Live (pre-start) Voltage - this is the voltage of your battery measured before you started your engine.
  - Starter/Cranking Ability - this percentage is calculated using a special formula to show the ability of your battery to start your engine.

- **Starter/Cranking Voltage** - Voltage greater than 9.6V indicates your battery has good ability to start your engine. Voltage less than 9.6V indicates your Starter/Cranking system may have a problem:
  - a) The battery may be aging
  - b) The wiring, connections or starter may be causing the problem.

**Export test results:**

**Exporting a single result:**

Click the share  to share via email and other button messenger apps.

### **Alternator/Charger Test(TA12BC, TA12BD,TA12BS ONLY)**

Allows you to fully test your alternator's ability to charge vehicle battery and other electronic accessories.

1. Start your vehicle engine.
2. Make sure all electronic devices are off e.g. air conditioning, radio.
3. Select START.
  - (a) The device will test the Alternator/Charging System when the engine is in idle condition (RPM at the minimum level with engine on).
  - (b) Push the accelerator to increase the RPM to 2000 for 8 seconds.

The device will test the Alternator/Charging System and then the results will quickly appear.

4. The Test Result/History page shows your results. The results shown are:

- Your license plate number
- Idle/Live Voltage - this is the voltage of your battery measured when the engine is in idle condition (RPM at the minimum level with engine on).
- High RPM Voltage - this is the voltage measure when increased the RPM to 2000 for 8 seconds. Voltages between 13.3V and 15V indicate your Alternator/Charging System is okay. Voltages lower than 13.3V or higher than 15V indicates a problem with your system.

a) Voltages below 13.3V are too low - check line connection between alternator and battery, and check wiring and alternator.

b) Voltages above 15V are too high - check the regulator, if the regulator is external. If the regulator is built-in, replace the alternator assembly.

## Specs

Functions	Battery Cranking Power Charging Status Voltage Resistance CCA, EN, JIS conversion Shareable test results
Power source	12V car battery(battery being tested)
Top diameter	71mm
Bottom diameter	80mm
Height	156mm
Weight	230g (7.4oz)
Cable length	200mm
Clip length	88mm
Clip width	55mm
Max. clip angle when spread	35°

## Information

### A. What is CCA value?

CCA is a rating used in the battery industry to define a battery's ability to start an engine in cold temperatures. The rating refers to the number of amps a 12V battery can deliver at 0°F for 30 seconds while maintaining a voltage of at least 7.2 volts. For example, if a 12V battery has a CCA rating of 600, it means that it delivers 600 amps at 0°F for 30 seconds while maintaining a voltage of at least 7.2 volts. The higher the CCA rating, the greater the starting power of the battery.

### B. How temperature affects batteries?

In cold weathers, the fluidity of electrolyte decreases, slowing down the reaction with battery plates, resulting in inefficient charges. Therefore, when starting an engine in cold weathers, the motor runs slower. This is not due to an empty battery. Simply increase the temperature and the power will be regained.

°F	°C	Cranking power from battery	Cranking power required
80°F	26.7°C	100%	100%
32°F	0.0°C	65%	165%
0°F	-17.8°C	40%	250%
-20°F	-28.9°C	25%	350%

### C. Battery capacity

Battery capacity is measured in Amp Hours(AH) or Watt Hours(WH)

#### 1. AH:

Generally, a 20-continuous discharge is used to measure battery capacity. Calculation: discharge a fully charged battery with a fixed amp load at 80°F for over 20 hours. After 20 hours, a 6V battery have the voltage of 5.25V; and a 12V battery, 10.5V. Multiply amp by 20, and the result will be the battery capacity. Eg. A 12V battery, after discharging with a 6 amp load for over 12 hours, has a voltage of 10.5V, the battery has the battery capacity of  $6 \times 20 = 120$  AH.

#### 2. When measuring battery capacity in WH:

Watt hours(WH) is the product of voltage and AH. Eg. A 12V, 120AH battery has a 1440 WH. ( $12V \times 120AH = 1440$  WH)

### D. Battery functions

There are 4 main functions of a battery

- (1) To provide power to the motor and ignition system when starting up
- (2) When the generator fails to produce enough power, car batteries provide power for accessories
- (3) When the generator produces enough power, extra power is stored in batteries, also known as being charged
- (4) To stabilize voltage of the electric system, keeping car parts undamaged during voltage swings while engine speed

changes.

### E. Battery malfunction factors

#### (1) Sulfation :

When discharging, the build-up of lead sulfate crystals on the plates decreases the efficiency of a battery, eventually resulting in a dead battery.

#### (2) Low electrolyte:

Low electrolyte level exposes the plates in air, which facilitates the sulfate crystal build-up. As a result the battery won't be able to be charged.

**(3) Internal short**

**Internal short can be caused by lead powder build-up as a result of broken/worn battery separators.**

**(4) High self-discharge**

**High self-discharge results in decreasing current, voltage, and specific weight of a battery. After being fully charged, still produces no power. In such cases, charge with low amp load over a period of 36 hours.**

**Warning**

**This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.**

**1 Year Warranty**

**We offer a 1-year limited from the date of purchase against defects and workmanship that are not results from misuse or abuse.**

**This warranty does not include products subjected to electronic or physical damage. We do not offer warranty to any products outside the aforementioned ones.**







[www.anvpower.com.tw](http://www.anvpower.com.tw)

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FACEBOOK: Like us on facebook <https://www.facebook.com/anvpower>.

Youtube: <https://www.youtube.com/channel/UC6eclD-wrPmFh33my4TIVcA>

UL / cULus / CB / CE / TUV / ISO 9001:14001 High quality charger & booster manufacturer!

## GS Battery Standard TYPE

New Battery Type	Old Battery Type	CCA	New Battery Type	Old Battery Type	CCA
26A19R	12N24-4	201	55D26R(H)	N50Z	290
36B20R	NS40Z	260	65D26R(H)	NS70	370
36B20RS	NS40ZS	260	80D26R(H)	-	490
36B20L	NS40ZL	260	80D26L(H)	-	490
36B20LS	NS40ZLS	260	75D31R	N70Z	380
55D23R	-	320	95D31L	-	565
55D23L	-	320	95D31R(H)	-	565
65D23R	-	370	95D31L(H)	-	565
65D23L	-	370	95E41R	N100	475
75D23R	-	465	115E41R	-	610
75D23L	-	465	130E41L	-	680
46B24R(H)	NS60	295	115F51	N120	575
46B24RS(H)	NS60S	295	150F51	N120Z	765
46B24L(H)	NS60L	295	145G51	N150	685
46B24LS(H)	NS60LS	295	145G51L	N150L	685
48D26R(H)	N50	250	190H52	N200	765
48D26L(H)	N50L	250	210H52	-	910

## YUASA Battery Standard TYPE

New Model	Model	C.C.A	New Model	Model	C.C.A
26A19L	12N24-3	201	55D23R	-	355
26A19R	12N24-4	201	55D26L	N50ZL	290
28B19L	-	190	55D26R	N50Z	290
34B19L	NS40ZAL	240	65D23R	-	370
34B19L(S)	NS40ZAL(S)	240	65D26R	NS70	370
34B19R(S)	NS40ZA(S)	240	65D26L	-	415
36B20L	NS40ZL	260	65D31L	N70L	340
36B20R	NS40Z	260	65D31R	N70	340
36B20R(S)	NS40Z(S)	260	75D23L	-	465
46B24L	NS60L	295	75D23R	-	465
46B24L(S)	NS60L(S)	295	75D31R	N70Z	380
46B24R	NS60	295	80D26L	-	490
46B24R(S)	NS60(S)	295	80D26R	NX110-5	490
48D26L	N50L	250	95D31R	NX120-7	565
48D26R	N50	250	95D31L	-	620
55B24R(S)	-	370	115D31L	-	650
55B24L(S)	-	435	95E41R	N100	475
55D23L	-	320	115E41R	NS120	610

## JIS Battery Model Convert Chart

Type (New)	Type (Old)	CCA	Type (New)	Type (Old)	CCA
36B20LS	NS40ZLS	320	65D31R	N70	460
36B20RS	NS40ZS	320	65D31L	N70L	460
36B20L	NS40ZL	320	75D31R	N70Z	540
36B20R	NS40Z	320	75D31L	N70ZL	540
32C24L	N40L	350	95D31R	NX120-7	640
32C24R	N40	350	95D31L	NX120-7L	640
46B24LS	NS60LS	350		N90	500
46B24RS	NS60S	350		N90L	500
46B24L	NS60L	350	95E41R	N100	700
46B24R	NS60	350	95E41L	N100L	700
55B24LS		350	105E41R	N100Z	750
55B24RS		350	105E41L	N100ZL	750
55B24L		350	115E41R	NS120	800
55B24R		350	115E41L	NS120L	800
55D23L		450	115F51	N120	840
55D23R		450	145F51	NS150	900
75D23L		500	145G51	N150	950
75D23R		500	165G51	NS200	1050
48D26R	N50	400	190H52	N200	1100
48D26L	N50L	400		US-6TN	800
55D26R	N50Z	460		US-6TL	800
55D26L	N50ZL	460			
65D26R	NS70	540			
65D26L	NS70L	540			