kaise

# BATTERY CHECKER

Instruction Manual

## SK-8550


KAISE CORPORATION

Thank you for purchasing "SK-8550 BATTERY CHECKER". To obtain the maximum performance of this instrument, read this Instruction Manual carefully, and take safe measurement.

## CONTENTS

## SAFETY PRECAUTIONS (strict observance is required)

This instruction manual contains the important contents to prevent harm to user or others and damage of property, and to use the instrument safely and correctly.
Read this manual carefully and obey the contents after having understand the following terms and symbols.

■Following symbols in this manual describe the harm and damage that would be caused by incorrect ueage.

| | |
|---|---|
| ⚠ **WARNING** | This symbol in this manual advises the user of an electrical shock hazard that could result in serious injury or even death. |
| ⚠ **CAUTION** | This symbol in this manual advises the user of an electrical shock hazard that could cause injury or material damages. |

■Caution marks that require your attention (equivalent marks have the same meanings.)

| | |
|---|---|
|  | This symbol shows the warnings and cautions. |
|  | This symbol shows the prohibited matters. |
|  | This symbol shows the matters that is forced to do. |

## SAFETY PRECAUTIONS (strict observance is required)

### ⚠ WARNING

**Take the measurement under well-ventilated environment.**
The hydrogen gas which stayed around battery catches fire from the spark that occurred when connecting the Battery Clips and might explode.

**Make sure that the shift lever is set to "Parking" position (set to "Neutral" for stick shift vehicle).**
The vehicle runs accidentally and could cause unexpected accident, electric shock, fire or damage to the instrument / vehicle.

**Make sure that the parking brake is applied.**
The vehicle runs accidentally and could cause unexpected accident, electric shock, fire or damage to the instrument / vehicle.

**Keep the instrument away from babies or children.**
Important to prevent any accident, injury, or electric shock hazard.

**Do not use this instrument with the hands or Battery Clips wetting.**
Accident, electric shock, fire, or damage to the instrument / vehicle may occur.

**Do not take the measurement around inflammables such as gasoline or oil.**
Fire or explosion may occur.

**Do not take the measurement for the battery which does not have enough battery fluid.**
It causes combustion and the explosion of the battery.

**Do not drive the vehicle keeping the instrument connected.**
Accident, electric shock, fire, or damage to the instrument / vehicle may occur.

**Do not work in the dark place.**
Accident, electric shock, fire, or damage to the instrument / vehicle may occur.

**Do not get the instrument wet.**
Fire or electric shock may occur.

**Do not use the faulty instrument that can recognize such as display trouble, switch failure.**
Stop using the instrument immediately and consult with your local dealer. Using the faulty instrument may cause the unexpected accident, fire, or electric shock.

**Do not touch the USB port with finger or insert the foreign objects in the USB port.**
Accident, electric shock, fire, or damage to the instrument may occur.

**Do not place this instrument in any place where it will be subjected to direct sunlight, high temperatures or the inside of the sun-heated vehicles.**
Fire, electric shock or damage to the instrument may occur.

**Do not touch the heated part of the engine such as exhausting parts.**
Important to prevent burn injury.

## SAFETY PRECAUTIONS (strict observance is required)

### ⚠ WARNING

**Be careful about your hands, gloves and clothes not to be caught in the engine belt or cooling fan.**
Important to prevent injury.

**Do not use the instrument if it is in the abnormal condition.**
Stop using the instrument immediately and consult with your local dealer when recognizing smoke, strange smell, or abnormal noise.
Using the faulty instrument may cause the accident, fire, or electric shock.

**Do not attempt to disassemble or modify the instrument.**
Fire, electric shock, or damage to the instrument may occur.

**Do not use the cables with which coating were damaged.**
Fire or electric shock may occur.

### ⚠ CAUTION

**Be careful not to get the battery fluid into eyes or not to attach it to skin and clothes.**
Loss of eyesight or injury may occur. If it gets into eyes, rinse immediately and submit to medical treatment.

**Be careful not to jam the fingers in the Battery Clip.**
It causes injury.

**Be careful about the instrument or the cables not to be caught in the engine belt or cooling fan.**
Short circuit or wire breaking may occur that could cause unexpected accident, electric shock, or damage to the instrument / vehicle.

**Be careful about the instrument or the cables not to touch the heated part of the engine such as exhausting parts.**
Important to prevent any accident, or damage to the instrument / vehicle.

**Connect the Battery Clips to the battery with the correct polarity.**
Reverse connection causes damage to the instrument.

**When testing the battery on vehicle, take the measurement after stopping the engine and turning off the power supply of all in-vehicle apparatuses.**
It causes injury or damage to the instrument.

**Disconnect this instrument from battery soon after finishing the test.**
It causes consumption of the battery and the ignition.

**Do not hit, thrust and make scratch on the LCD display part.**
It causes trouble or damage to the LCD.

**Do not use the other USB cable except the supplied one.**
Damage to the instrument or PC may occur.

## OPERATING PRECAUTIONS

- Do not apply the engine oil to the metal part of the Battery Clips or USB Plug to prevent contact failure.
- Do not apply engine oil, gasoline, antifreeze or battery fluid to the instrument to prevent any damage on its surface.
- Do not polish the case with the fluid that contains alcohol to prevent the cracking.
- Use this instrument under the environment of -10℃ to 50℃, 80%RH or less to obtain the accurate measurement. (Printer is operating at 0℃ to 50℃)
- Cables which coating are heat damaged might cause the short circuit. Do not use them and replace into the new ones.
- Disconnect this instrument from battery soon after finishing the test to prevent trouble of this instrument and running out of battery power.
- Do not touch the inside of the printer with finger to prevent trouble of this instrument.
- Do not put serious pressure on Printer Lever or Printer Cover to prevent trouble or damage to this instrument.
- If Date and Time are not able to set, built-in battery for backup is exhausted. Ask KAISE AUTHORIZED SERVICE AGENCY through your local dealer for repair service.
- Keep this instrument in supplied Carrying Case to avoid malfunction of the printer trouble by dust penetration.
- Insert battery cable deeply into the unit, and fix the screw tightly. Loose connection may cause the measurement failure.
- Keep clean the battery cable, connection plugs, and terminals. Dusts may cause the contact failure.
- Do not connect battery cable oppositely. This may damage the unit and the cable.
- Do not tighten the battery cable screw too strongly. This may damage the screw or contact part of the unit, and makes them unfixable.

### Cautions for Handling

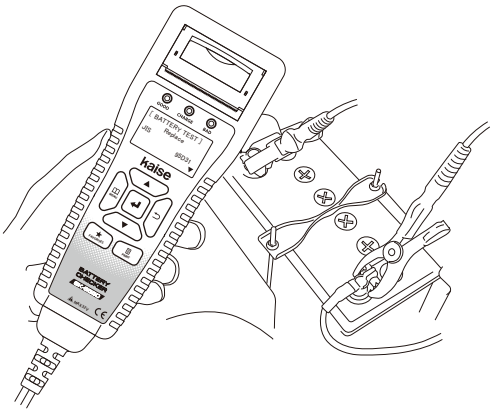
- **Do not apply mechanical shock.**
  The shock such as dropping or beating might damage the instrument and may cause the trouble.
- **Do not pull cables forcibly.**
  Pulling the cables forcibly, such as when removing the Battery Clips from the battery or USB Plugs from USB Port, may cause trouble such as the breaking of wire.

### Cautions for Safekeeping

- **Keep away the instrument from the following place.**
  - Dusty area
  - The place where has the water splash
  - The place where applies the hard shock
  - -20℃ or less, 60℃ or more, 70%RH or more
  - The place where has the condensation
  - The place where is exposed to direct sunlight

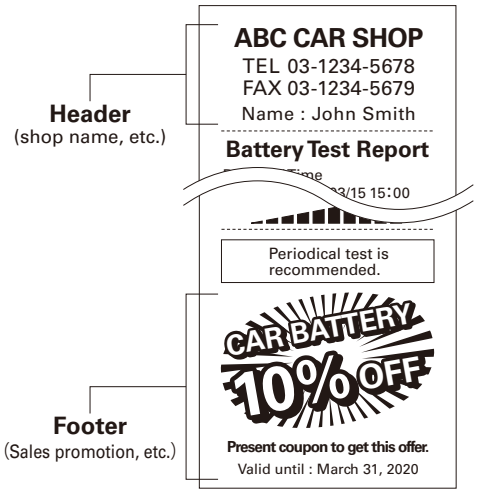
## FEATURES

- SK-8550 can test State of Charge (SOC), State of Health (SOH), Start Performance and Charging System of the car battery.




- Editable header / footer function that can print favorite names or pictures (shop name, etc.) on the printer paper.

※PC with Internet access is necessary.




- Can record frequently tested batteries as favorites list.

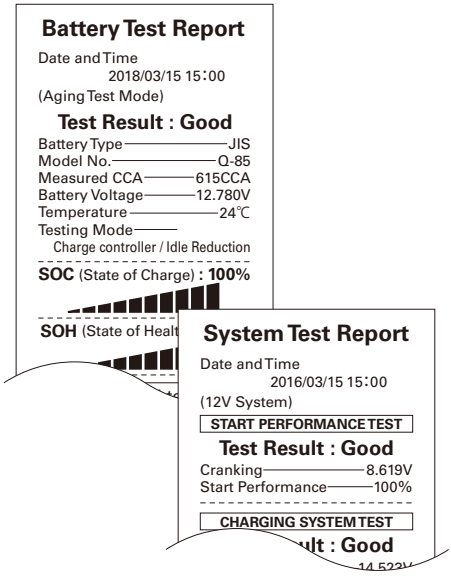
- Batteries for the vehicle equipped with charge control system or idle reduction system are testable.

- Auxiliary battery for hybrid car is testable.

- Unused Battery Test Mode.

- Detachable battery cable for easy replacement.

- Test result can be printed on site by built-in printer. English or Japanese selectable.




- Capable of saving the test results up to 359 data. Moreover, the test data can edit on PC as text data by using the supplied USB cable.

- The software is upgradeable by connecting supplied USB cable with PC.

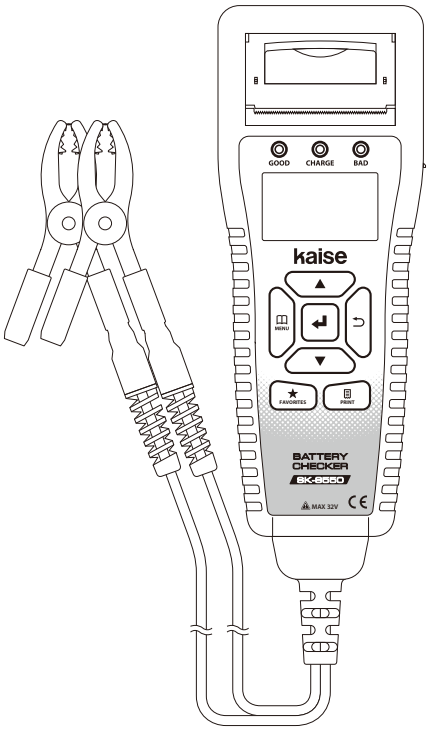
※PC with Internet access is necessary.

## UNPACKING AND INSPECTION (Check before use)

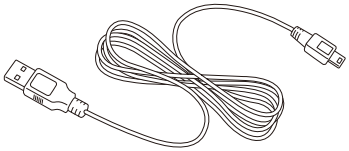
Confirm if the following items are contained in the package in good condition.
If there are any damages or missing items, ask your local dealer for replacement.

①Battery Checker…1 pce.

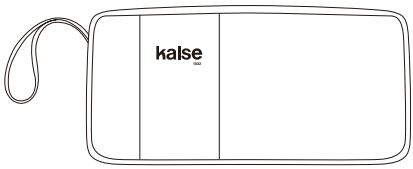
②800 Battery Cable…1 pce. (attached)



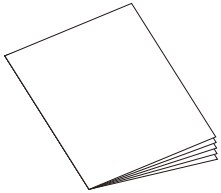

④USB Cable (934)…1 pce.



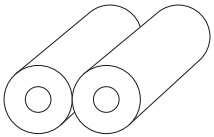
⑤Carrying Case (1032)…1 pce.



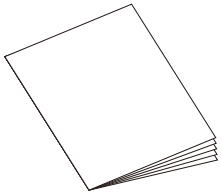

⑥Instruction Manual…1 pce.



③Printer Paper…2 rolls
(installed, and spare)



⑦Technical Guide Book…1 pce.



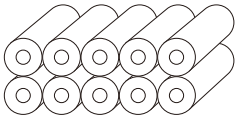
# UNPACKING AND INSPECTION (Check before use)

**Optional Accessories**

**Available Printer Paper** (10pcs per set)

- Parts number：851
- Paper width：approx. 57mm,
- length：approx. 5.8m
- Paper life per 1 roll
  Battery test : Approx. 50 tests
  System test : Approx. 55 tests

※with standard header, no footer

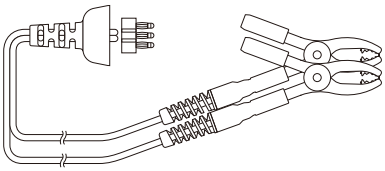


• Use above parts number when ordering.

**Battery Cable**

- Parts number：800

※Replaceable battery cable by one screwdriver.

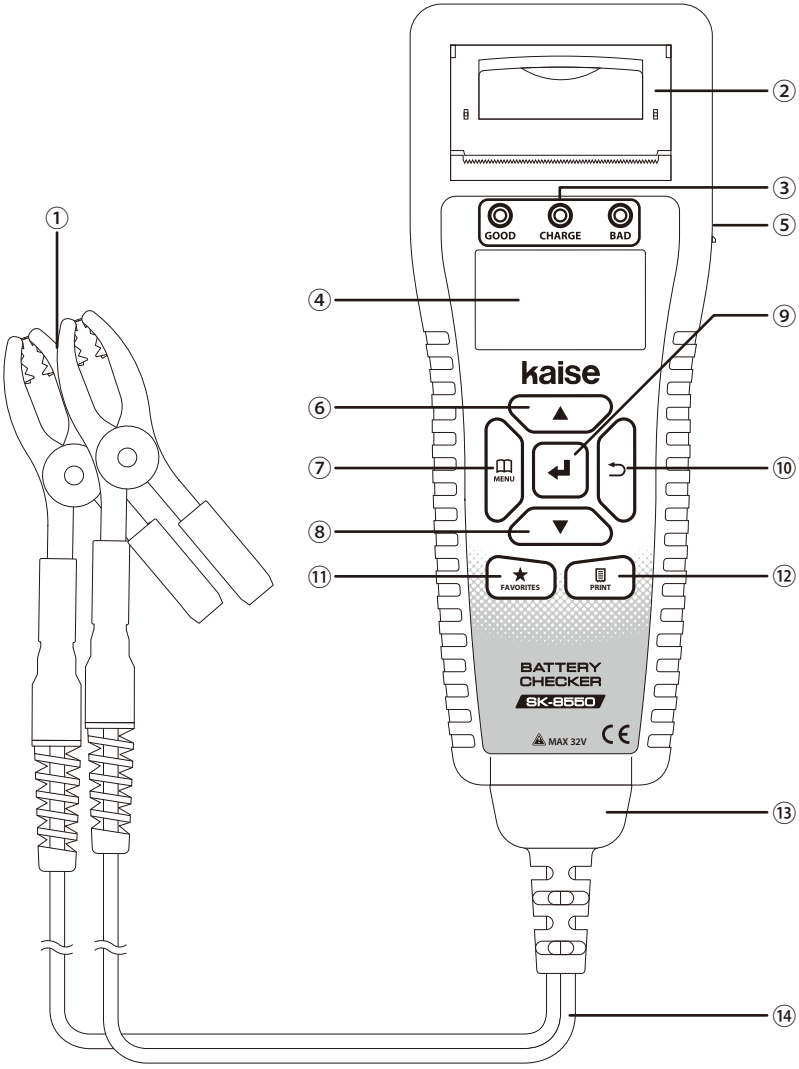


※If Date and Time are not able to set, internal backup battery is exhausted. Ask KAISE AUTHORIZED SERVICE AGENCY through your local dealer for repair service.

※The following desiccant is enclosed in the package for maintenance of quality. Throw it away after opening the package.

# NAME ILLUSTRATION

**Front Side**



# NAME ILLUSTRATION

**①Battery Clips (Red•Black) :**

- Connect to the battery. Red to ⊕, black to ⊖.

**②Printer :**

- Print out the test result, test count report, and test-print paper.

**③LED Indicators :**

- GOOD (Green LED)：
  Lights up when battery test result is "Good".
- CHARGE (Yellow LED)：
  Lights up when the battery is weak and needs re-charging.
- BAD (Red LED)：
  lights up when battery test result is "Replace" or needs replacement.
  Flashes when battery test result is "Attention" or "Weak Start Power".

**④LCD**

**⑤USB Port :**

- Plug the USB Cable into this port when connecting to PC.

**⑥△ (UP SCROLL) Key :**

- Scrolls up the display / use for numerical settings.

**⑦🕮(MENU) Key：**

- Display the Menu screen.

**⑧▽ (DOWN SCROLL) Key :**

- Scrolls down the display / use for numerical settings.

**⑨↵(ENTER) Key :**

- Press this key to fix the settings.

**⑩⮌(BACK) Key :**

- Press this key to return to the previous screen.

**⑪★FAVORITES Key :**

- Press this key to add a battery to the favorites, or to open the favorites list.

**⑫🖹PRINT Key :**

- Press this key to print out the test result, test count report, and test-print paper.

**⑬Cable Connector :**

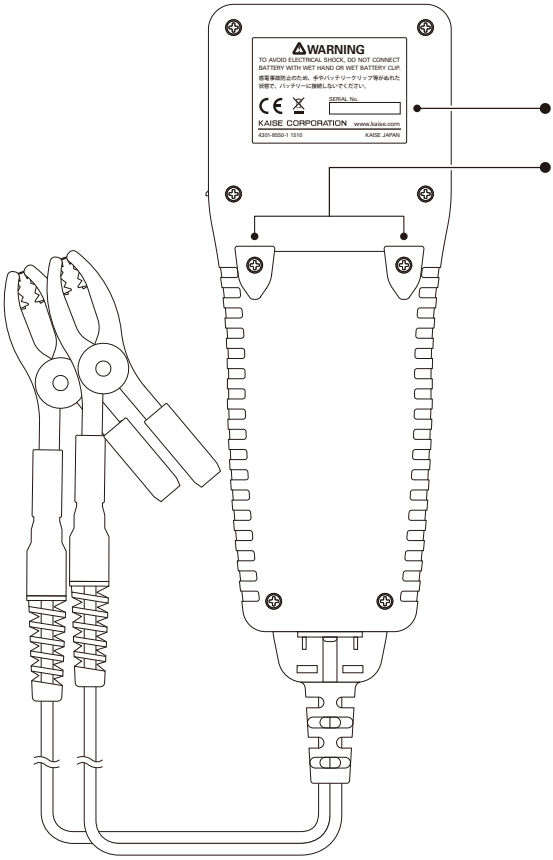
- Disconnect when changing the battery cable.

**⑭Battery Cable :**

- Cable to connect Battery Clip and the main unit.

# NAME ILLUSTRATION

**Rear Side**

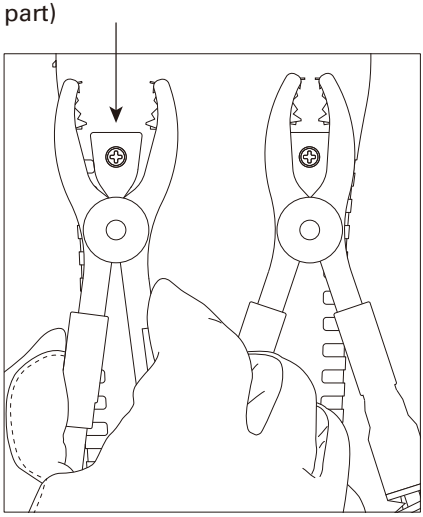



- Serial Number
- Battery Clip Holder

Clip Battery Clips here when not in use.

**How to clip :**

Open the battery clip widely and clip it to the holder in the plastic part of the clip. (Do not clip in the metal part)



**CAUTION**

- Do not clip in the metal part of the Battery clip. To prevent any damages of the Battery Clip and Clip Holder.

# SPECIFICATIONS

## 1. General Specifications

| | |
|---|---|
| **1. Lcd** | Dot presentation, 128×64dots |
| **2. Language** | English, Japanese (Default: English) |
| **3. Display Rate Of Voltage Measurement** | 1 time/second |
| **4. Led Indication** | Green：Lights up when battery test result is "Good"<br>Yellow：Lights up when battery is weak and needs re-charging<br>Red：Lights up when battery test result is "Replace"<br>Flashes when battery test result is "Attention" or "Weak Start Power" |
| **5. Printer** | Built-in |
| **6. Battery Cable Length** | Approx.70cm (Clip and Bush are not included) |
| **7. Power Supply** | Testing battery or USB connection |
| **8. Testing Voltage** | DC8V to 32V (Testing battery), DC5V (USB Connection) |
| **9. Testable Batteries** | 12V lead batteries<br>※For 24V battery, only Start-up Performance Test or Charging System Test are possible. |
| **10. Testable Battery Standards** | JIS, DIN, EN, SAE, BCI, CCA and Industrial Rating |
| **11. Testable Battery Performance** | CCA：100 to 1400, Industrial Rating：1.0mΩ to 50.0mΩ |
| **12. Measurable Tests** | 12V battery : Battery Test / Start Performance Test and Charging System Test<br>24V battery : Start Performance Test and Charging System Test |
| **13. Temperature Coefficient For Voltage Measurement** | Accuracy at 23℃±5℃×0.01/℃ |
| **14. Data Saving** | Test results can be saved to the internal memory up to 359 data.<br>※The data can be sent to PC via USB connection |
| **15. Software Update** | From web site via USB connection |
| **16. Operating Temperature & Humidity** | -10℃ to 50℃, less than 80%RH (in non-condensing) |
| **17. Storage Temperature & Humidity** | -20℃ to 60℃, less than 70%RH (in non-condensing) |
| **18. Safety Level** | CE marking approved　EN61326-1, EN61010-1 |
| **19. Dimension** | 248mm(H)×96mm(W)×50mm(D) ※Cable and Bush are not included |
| **20. Weight** | Approx. 670g　※Printer paper is not included |

※Specification and appearance are subject to change without notice.

## 2. Measurement Specifications (23℃±5℃, ＜80%RH in non-condensing)

### Battery Voltage

| Range | Accuracy | Resolution | Maximum Input |
|---|---|---|---|
| 16.000V | (8V to 16V)：±0.15%±3dgt | 1mV | Lower than 32V |
| 32.000V | (16V～32V)：±0.15%±3dgt | | |

※Overload indication : "Over voltage" is displayed.

### Temperature

| Range | Accuracy | Resolution | Maximum Input |
|---|---|---|---|
| -20℃ to 60℃ | ±3℃ | 1℃ | -20℃ to 60℃ |

※Accuracy is applied when measuring after leaving under constant temperature more than an hour.

# BEFORE USE

## 1. Technical Words

**• What is CCA?**

CCA stands for Cold Cranking Amperes. It is defined as the current a battery at 0℉ (-18℃) can discharge for 30 seconds and maintain at least 7.2V (for JIS, SAE and BCI). And it is defined as the current a battery at 0℉ (-18℃) can discharge for 10 seconds and maintain at least 7.5V (for EN and DIN). The battery which has the bigger CCA, the higher ability to start an engine, CCA is one of the criterion for selection of the battery.

**CCA definition of various standards**

| Standards | CCA Definition | Countries |
|---|---|---|
| JIS | The current discharge at 0℉ (-18℃) for 30 seconds and maintain at least 7.2V. | Japan |
| SAE | | USA |
| BCI | | USA |
| EN | The current discharge at 0℉ (-18℃) for 10 seconds and maintain at least 7.5V. | EU |
| DIN | | Germany |

**• What is SOH (State of Health)?**

SOH is the health condition of the battery, the state is expressed in percentage (%).

**Definition of SOH in this product:**

SK-8550 defines SOH 30% as the threshold of the battery replacement recommendation. Test result shows "Replacement is necessary" when measured SOH is 30% or less and test result of SOC is not "Charge/Retest".

※SOH(%) is calculated as the ratio of CCA standard value to CCA measured value.

※SOH(%) fluctuates due to the rate of deterioration and charging condition.

**• What is SOC (State of Charge)?**

SOC is the charging condition of the battery, the state is expressed in percentage (%).

**Definition of SOC in this product:**

SK-8550 defines as SOC 100% when the battery voltage is higher than 12.756V. (Higher than 13.056V for the battery for industry)

※SK-8550 does not show the exact measurement voltage when testing the battery just after an engine shutdown or just after charging. Test the battery after reducing the stimulated condition according to the procedure mentioned in page 14.

- **What is Ripple Voltage?**

Ripple Voltage is the feeble change of charging voltage which occurs when rectifying the generated voltage by diode. If diode is damaged, the ripple voltage fluctuated sharply and adversely affects battery and in-vehicle apparatus.

## 2. Language / Date & Time Settings

- Set date and time before using this instrument. (Refer to "5. Date and Time Setting" in page 53).
- Language changeable from English (default setting) to Japanese. (Refer to "6. Language Setting" in page 54).

Initial display shows the factory default settings.

## BATTERY TEST

# ⚠CAUTION

- This instrument forced to be restarted if the testing battery is extremely exhausted and cannot afford to supply the workable current.
- Test the battery in the state of the engine shutdown to obtain the accurate measurement.
- When testing 24V battery, test each 12V battery which is connected in series.
- When testing the battery on vehicle, test the parked car after turning off the power supply of all in-vehicle apparatuses which are using the electricity from battery and locking the car door to obtain the accurate measurement.
- Test result may change when testing the same battery repeatedly. Also, test result may change when testing the weak battery after using the printer.
- Test result may change, even when testing the same battery, depending on the battery condition or change the storage environment.
- Test results may be higher than usual just after driving. When testing the battery test of such a car, test it after doing the following procedure.
  - ・Turn on the headlights for approx. 20 seconds.
  - ・Turn off the headlights and test it more than 3 minutes after turning off the headlights.

  In case of the test result is "Charge/Retest" by turning on the headlights, shorten the time of turning on the headlights after re-charging the battery, and lengthen the time of intervals before testing.

  When you do not perform the procedure mentioned above or testing battery unit just after charging, test after an interval more than 2 hours.
- This instrument judges the battery condition with testing the basic use of the lead battery such as charge-discharge characteristics. Test result is not for judging whether the special control function can use for the vehicle or not.
- This instrument is for testing fundamental battery performance, charging and discharging ability, but not for judging the capability of actuating the special control function such as idle reduction system.
  For the batteries working with such funcitons, charging ability may be weakened in its using process. When the relevant functions cannot be activated, check the system details in the maintenance manual of the vehicle.
- The maximum CCA displayed with this unit is up to 1400CCA.

# BATTERY TEST

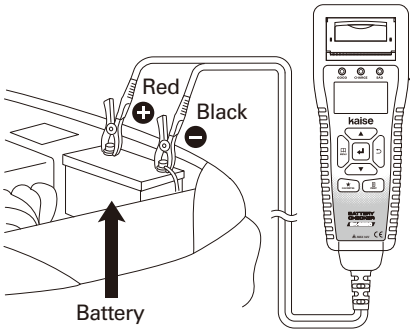
## Test Preparation

- Make visual inspection for the battery to be tested before connecting battery clips to the battery terminals.
- Replace the battery terminals if there is corrosion or crack occurs on the terminals.
- Connect the battery clips to the battery terminals tightly without loosening.
- Clean up the battery terminals and battery clips if there is greasy dirt.
- Do not test the battery which has any damages on its body or terminals. Replace immediately.
- As for the battery which battery fluid almost decreases to LOWER line, refill the purified water and make auxiliary charging.
- Replace the battery which battery fluid is discolored and decreases under the LOWER line.

### Test the SOC (State of Charge) and SOH (State of Health) of the battery.

①Connect Black and Red battery clips to minus ⊖ and plus ⊕ battery terminals.

※Connect them to the nearest part of the terminals is acceptable if the clips cannot catch the battery terminals. In this case, CCA may be measured lower than the actual value.

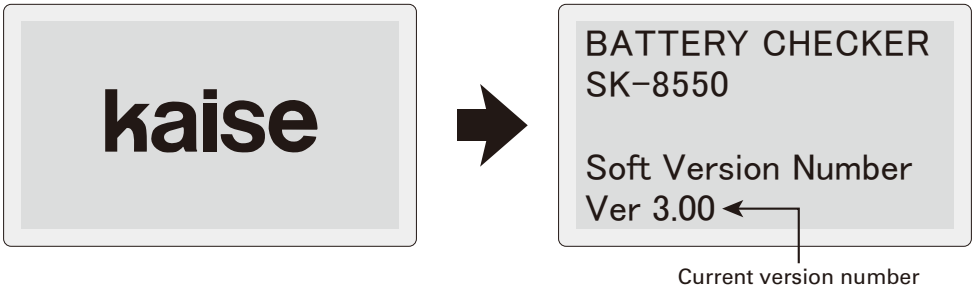



**CAUTION**

- Make sure to connect the battery clips tightly to battery terminals to obtain the accurate measurement.
- Clean up the battery terminals and the battery clips before testing to obtain the accurate measurement.

## BATTERY TEST

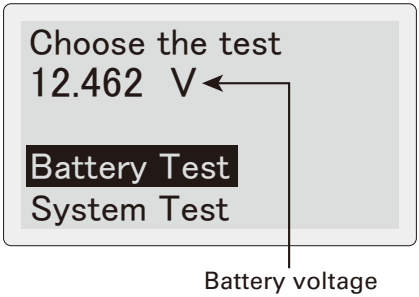
②The instrument turns on automatically and enters "Choose the test" screen (step ③) after displaying the model number / software version number.



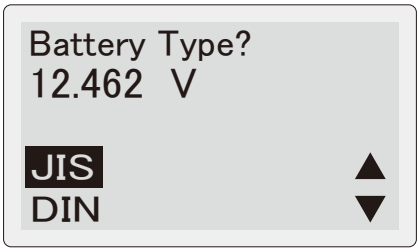

③Select Battery Test, press ↵(ENTER) Key.
※Display shows the connected battery voltage.

Press ★FAVORITES Key to open the Favorites List (see page 43).

- 🕮(MENU) Key :
  Move to MENU screen. (see page 48)




④Select the battery type to be tested. Select the battery type, and press ↵ (ENTER) Key.
※Battery test does not work when the battery voltage is higher than 13.6V. LCD shows WARNING.
※When the battery voltage is higher than 16V, LCD shows "OVER VOLTAGE" warning.
※When testing the batteries for industrial, golf cart, leisure boat, or deep-cycle, select "Input CCA" if the CCA is shown on the battery. Oherwise, choose "Industry".

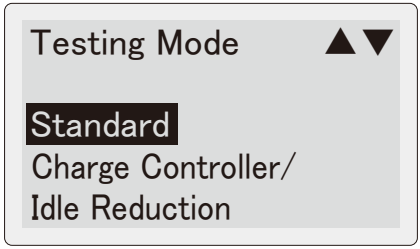


⑤Select testing mode.

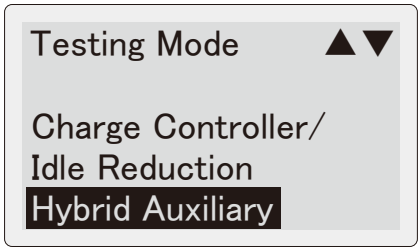
Select "Standard" for normal batteries. Select "Charge Controller / Idle Reduction" when testing following batteries ;

- Charge control / idle reduction compatible batteries
- Batteries in Charge control / idle reduction vehicles

※LCD shows "Industrial Rating" screen when selecting "Industry" at ④ in page 16.



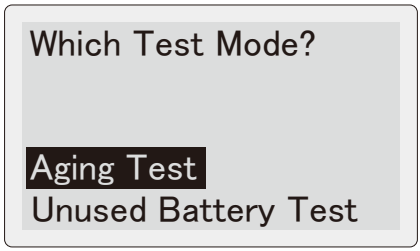

- When testing the auxiliary battery for hybrid car, select "Hybrid Auxiliary" and press ↵ (ENTER) Key.




⑥Select Test Mode.

Aging Test：
for deterioration check.

Unused Battery Test：
for condition check of unused battery

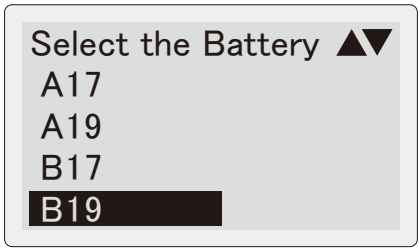


## BATTERY TEST

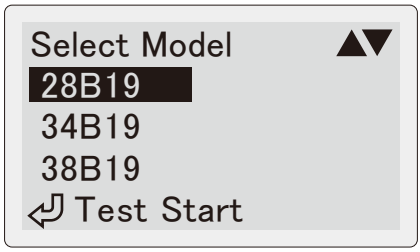
⑦The following screen is displayed depending on the selected battery standards.

● **"JIS"**

Select the battery group from the list, and press ↵ (ENTER) Key.
The list is classified by battery size or functions such as idle reduction or hybrid auxiliary.




Select battery number to be tested.
Press ↵ (ENTER) Key to start battery test.

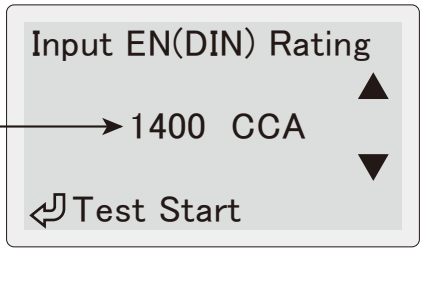



※Selected battery standard is retained.
※If knowing only battery size like B24, D31, etc., select JIS of the greatest specifications which is replaceable.

● **"EN(DIN)" / "SAE(BCI)" / "CCA input"**

Input the CCA rating using △(UP SCROLL) / ▽ (DOWN SCROLL) Keys.
Press ↵ (ENTER) Key to start battery test.

※Selected battery rating is retained.



## BATTERY TEST

● **"Industry"**

Select "YES" if you can input the industrial rating (internal resistance mΩ) and press ↵ (ENTER) Key.

When choosing "NO", battery test starts.

※Battery condition (good / bad) is not tested when choosing "NO".

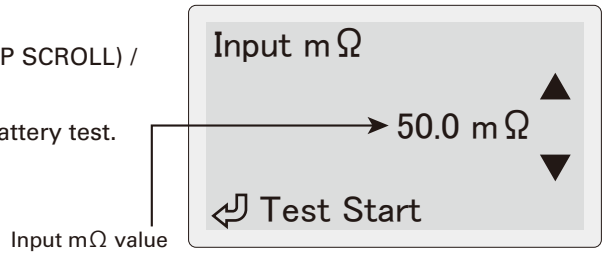

**CAUTION**

- Remove the all electric loads connected to the battery to be tested to obtain the accurate measurement.
- Battery test is effective for only 12V lead battery.
- Generally, industrial battery is recommended to be replaced when the internal resistance comes up to double of the unused battery. Based on this, SK-8550 judges "Bad" when the test result becomes double of the input industrial rating.

(**When selecting "YES"**)

Input mΩ value with using △(UP SCROLL) / ▽(DOWN SCROLL) Keys.

Press ↵ (ENTER) Key to start battery test.




※Input internal resistance (mΩ) value if it is available on the battery body or its manual. If not, test the new (full-charged) battery selecting "NO" in the above step to record the initial internal resistance. Input that value from the next testing.

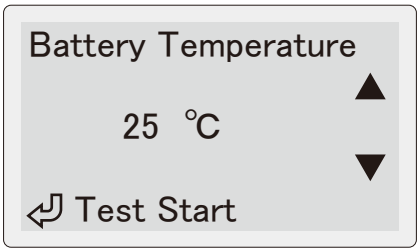
※Battery condition (good / bad) cannot be tested without inputting internal resistance (mΩ) value.

※Selected resistance value is retained.

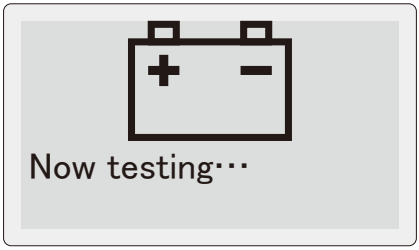
## BATTERY TEST

- **Input Battery Temperature**
  (when selecting manual temperature input in page 55, "8. Temperature Setting")

Input battery temperature in ℃ using
△(UP SCROLL) / ▽(DOWN SCROLL) Keys.
Press ↵ (ENTER) Key to start battery test.
※Input the temperatures of the battery fluid or ⊕ terminal.
※Selected temperature value is retained.




⑧"Now testing..." is shown on LCD during battery testing.




⑨Read the test result on LCD.
Scroll the display with △(UP SCROLL) / ▽(DOWN SCROLL) Keys.

**You can also check the results by LED.**

- Green lights up when test result is "Good".
- Green & Yellow lights up when the battery is fine but needs re-charging.
- Yellow lights up when re-charging and retest are needed.
- Red flashes when the test result is "Caution".
- Red lights up when battery replacement is needed.



※You can see following results on LCD.

- Battery test result
- Selected battery type
- Model (JIS only)
- SOH (State of Health)
- CCA value (Standard mΩ for Industry)
- Measured CCA (measured mΩ for Industry)
- Temperature
- SOC (State of Charge)
- Battery voltage
- Testing method
- Testing Mode
- Comment
- Favorite name (when choosing the test battery from favorites list)

## BATTERY TEST

- Press 🕮 (MENU) Key：Move to Menu screen in page 48.
- Press ★FAVORITES Key：Add a battery or CCA rating to the favorites list. (page 42)
- Press 🖹 PRINT Key：Move to Print screen in page 29.

※For the vehicle equipped with higher grade battery, start performance of engine may have no problem even if the judgment result is "Replace". In this case, battery replacement is recommended to prevent suddenly battery breakdown.

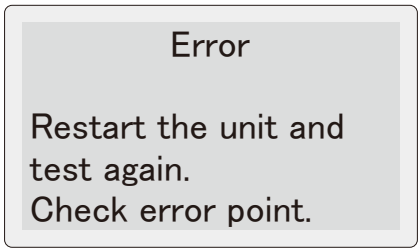
※The battery which is not charged for a long term may be judged "Replace" due to decreasing CCA by self-discharge even if it is a new battery. Keep the battery with periodical auxiliary charge to prevent deterioration by leaving with exhausted condition for a long term.

⑩Press ↵ (ENTER) Key.
Select "Yes" to finish the test and return to the battery type select screen (③ in page 16).


**CAUTION**

- Do not pull Battery Clips forcibly when detaching from the battery. It may damage the battery terminals.

※If the instrument displays right error message, disconnect battery clips from the battery and inspect following points.




①**Check for the battery and vehicle**
Make sure there are no dirt or abnormality on the battery terminals and terminal cables.

②**Check for SK-8550**
Make sure there are not any dirt or abnormality on the metal part of battery clips and clip cables.

※Battery may be damaged if keeping getting errors in spite of checking above.
When the error message is kept displaying or measurement error is displayed even if testing another battery, ask repair service to us, KAISE CORPORATION through your local dealer.

## CCA VALUE LIST (Battery Manufacturers and Their Models)

List to help you for checking the battery type either EN(DIN), SAE(BCI) or CCA Input and their CCA values.

●Find the battery number (model name) and check its battery type and CCA.
●Input the CCA printed on the battery if it is different from the listed one.

This publication CCA value is subject to change without notice.

**AC Delco**

**EN(DIN)**

| Model | CCA EN(DIN) |
|---|---|
| 20-55 | 630 |
| 20-55D | 525 |
| 20-60 | 500 |
| 20-66 | 500 |
| 20-70 | 650 |
| 20-72 | 700 |
| 20-80 | 780 |
| 20-90 | 850 |
| 20-92 | 600 |
| 20-100 | 800 |
| 20-110 | 1000 |
| 27-44 | 400 |
| 27-45H | 400 |
| 27-50P | 500 |
| 27-54H | 500 |
| 27-55 | 500 |
| 27-60P | 550 |
| 27-63H | 550 |
| 27-66 | 550 |
| 27-70P | 630 |
| 27-80 | 780 |
| 27-85 | 770 |
| 27-90 | 850 |
| 30-55 | 525 |
| 30-66 | 500 |
| 30-72 | 700 |

**SAE(BCI)**

| Model | CCA SAE(BCI) |
|---|---|
| 26-6MF | 550 |
| 34-6MF | 535 |
| 34-7MF | 700 |
| 58-5MF | 430 |
| 58-6MF | 560 |
| 58R-6MF | 585 |
| 65-6MF | 650 |
| 65-7MF | 850 |
| 75-6MF | 650 |
| 75-7MF | 735 |
| 78-6MF | 675 |
| 78H-6MF | 675 |
| 78-7MF | 770 |
| 78DT-7MF | 850 |
| 79-6MF | 880 |
| 86-7MF | 690 |
| 90-6MF | 600 |
| 101-6MF | 690 |
| DCD26L | 500 |
| DCD26R | 500 |
| 85BR60K | 610 |

**Voyager Marine**

| Model | CCA SAE(BCI) |
|---|---|
| M24MF | 400 |
| M27MF | 550 |
| M31MF | 625 |

**Deep cycle**

| Model | CCA SAE(BCI) |
|---|---|
| DC24 | 500 |
| DC27 | 580 |
| DC31 | 660 |
| 1111 | 750 |
| 1150 | 625 |
| 1151 | 625 |
| 31-901CT | 900 |
| 759 | 950 |

**BOSCH**

**PS-I Battery**

| Model | CCA EN(DIN) |
|---|---|
| PSI-4C | 360 |
| PSI-6C | 480 |
| PSI-6H | 600 |
| PSI-7C | 680 |
| PSI-7G | 640 |
| PSI-7H | 680 |
| PSI-1A | 760 |

**High TEC AGM Battery**

| Model | CCA EN(DIN) |
|---|---|
| HT-70-PN | 760 |
| HT-95-PN | 850 |

**Silver X**

| Model | CCA EN(DIN) |
|---|---|
| SLX-5K | 550 |
| SLX-4E | 460 |
| SLX-4K | 300 |
| SLX-4L | 300 |
| SLX-6C | 650 |
| SLX-6H | 610 |
| SLX-7C | 790 |
| SLX-7F | 730 |
| SLX-7H | 730 |
| SLX-8B | 810 |
| SLX-8C | 810 |
| SLX-1A | 910 |
| SLX-1B | 850 |

**Silver**

| Model | CCA EN(DIN) |
|---|---|
| SL-4C | 360 |
| SL-4D | 360 |
| SL-4E | 420 |
| SL-4K | 300 |
| SL-4L | 300 |
| SL-4P | 420 |
| SL-5D | 420 |
| SL-6C | 480 |
| SL-6H | 600 |
| SL-7C | 680 |
| SL-7F | 680 |
| SL-7G | 640 |
| SL-7H | 680 |
| SL-8B | 760 |
| SL-8C | 720 |
| SL-1A | 760 |
| SL-1B | 850 |

**US Power Max**

| Model | CCA SAE(BCI) |
|---|---|
| UPM-78DT | 830 |
| UPM-75 | 650 |
| UPM-65 | 750 |
| UPM-58 | 600 |
| UPM-58R | 600 |
| UPM-34 | 610 |

# CCA VALUE LIST (Battery Manufacturers and Their Models)

## ATLAS

### EN

| Model | CCA EN(DIN) |
|---|---|
| 572-20 | 610 |
| 571-13 | 640 |
| 544-59 | 390 |
| 4DLT | 890 |
| 543-17 | 410 |
| 554-57 | 480 |
| 562-19 | 540 |
| 568-18 | 550 |
| 580-43 | 640 |
| 585-15 | 720 |
| 600-38 | 850 |

### BCI

| Model | CCA SAE(BCI) |
|---|---|
| 78DT-600 | 600 |
| 58-560 | 560 |
| 75-550 | 550 |
| 78-600 | 600 |

### AGM

| Model | CCA SAE(BCI) |
|---|---|
| AGM-RD26 | 730 |
| AGM-YD26 | 750 |

## VARTA

### Ultra Dynamic

| Model | CCA SAE(BCI) |
|---|---|
| 570901076 | 760 |
| 595901085 | 850 |

### Silver Dynamic

| Model | CCA EN(DIN) |
|---|---|
| 552401052 | 520 |
| 554400053 | 530 |
| 561400060 | 600 |
| 563400061 | 610 |
| 563401061 | 610 |
| 574402075 | 750 |
| 577400078 | 780 |
| 585200080 | 800 |
| 600402083 | 830 |
| 610402092 | 920 |

## EXIDE

### EA Series

| Model | CCA EN(DIN) |
|---|---|
| EA530 | 540 |
| EA602 | 600 |
| EA640 | 640 |
| EA722 | 720 |
| EA770 | 760 |
| EA1000 | 900 |

### Eco Power X

| Model | CCA EN(DIN) |
|---|---|
| EPX50 | 450 |
| EPX55 | 520 |
| EPX62 | 570 |
| EPX65 | 630 |
| EPX75 | 730 |
| EPX80 | 640 |
| EPX100 | 870 |

### For American Cars

| Model | CCA SAE(BCI) |
|---|---|
| EX78DT | 850 |
| EX75 | 730 |
| EX65 | 850 |
| EX58 | 540 |
| EX58R | 580 |
| EX34 | 630 |
| EX86 | 525 |
| EX36R | 650 |
| EX31 | 700 |

### Orbital Series

| Model | CCA SAE(BCI) |
|---|---|
| ORB34XCD | 750 |
| ORB78DT | 770 |
| ORB75DT | 690 |

### Gel Battery

| Model | CCA SAE(BCI) |
|---|---|
| G210 | 1100 |

## HEXA

| Model | CCA SAE(BCI) |
|---|---|
| 58-6MF | 585 |
| 58R6MF | 585 |
| 34-72 | 535 |
| 65-7MF | 650 |
| 75-6MF | 650 |
| 78-6MF | 675 |
| M24MF | 550 |
| M27MF | 570 |
| M31MF | 625 |

## Moll（モル）

### MOLL AGM

| Model | CCA EN(DIN) |
|---|---|
| 81070 | 760 |
| 81095 | 850 |

### m3 plus

| Model | CCA EN(DIN) |
|---|---|
| 83046 | 420 |
| 83056 | 500 |
| 83058 | 540 |
| 83071 | 590 |
| 83075 | 660 |
| 83085 | 710 |
| 83091 | 760 |
| 83095 | 800 |
| 83110 | 850 |

### Kamina

| Model | CCA EN(DIN) |
|---|---|
| 07715 | 360 |
| 54459 | 360 |
| 54464 | 360 |
| 54577 | 300 |
| 54579 | 300 |
| 55565 | 420 |
| 55559 | 420 |
| 56219 | 480 |
| 56638 | 510 |
| 57024 | 540 |
| 57414 | 680 |
| 57539 | 640 |
| 60038 | 850 |
| 60032 | 680 |
| 595203076 | 760 |
| 61042 | 800 |

## ODYSSEY

| Model | CCA SAE(BCI) |
|---|---|
| LB545 | 230 |
| LB680 | 280 |
| LB925 | 470 |
| LB1200 | 630 |
| LB1700 | 900 |

## OPTIMA

### Red Top

| Model | CCA SAE(BCI) |
|---|---|
| 1050S | 815 |
| 1050U | 815 |
| 925S | 730 |
| 925U | 730 |

### Yellow Top

| Model | CCA SAE(BCI) |
|---|---|
| D1400S | 975 |
| D1000S | 765 |
| D1000U | 765 |
| YT-925SL | 660 |
| YT-925U | 660 |
| YT-B24 | 460 |

### Blue Top

| Model | CCA SAE(BCI) |
|---|---|
| D1400M | 975 |
| D1200M | 845 |
| D900M | 765 |
| SLI-4.2L | 815 |

## GS YUASA

### EU Series

| Model | CCA EN(DIN) |
|---|---|
| 545-042 | 420 |
| 555-054 | 540 |
| 560-064 | 640 |
| 562-048 | 480 |
| 570-064 | 640 |
| 574-068 | 680 |
| 580-072 | 720 |
| 600-080 | 800 |

# GUIDES TO CHECK THE BATTERY CCA VALUES

**●EN-standard Batteries**

Check the model number shown as 9-digits numbers like "575121072".
Last 3 numbers mean 1/10 of its CCA value.
For example of the above number, CCA value should be "720 CCA" (072 x 10 = 720).

**●DIN-standard Batteries**

Check the model number shown as 5-digits numbers like "54459".
The second and third numbers mean 20Ah of the battery.
For example of the above number, it should be "44Ah".
Find the nearest Ah in the following table and input the "Standard-CCA" value.

**●Others**

For the batteries that do not have the above numbers, please check following points.

1) Check the last 3 numbers of the model number and try to input it as CCA value.
   Example 1: 048 → 480 CCA / Example 2: 570 → 570 CCA
2) Check if 20Ah is printed on the battery surface. If printed, find the nearest Ah in the following table and input the "Standard-CCA" value.
   ※Note : Be sure to check 20Ah not like 5Ah and others.

| 20Ah | Standard-CCA | Higher-CCA |
|---|---|---|
| 35 | 300 | 360 |
| 40 | 320 | 390 |
| 45 | 340 | 420 |
| 50 | 380 | 420 |
| 55 | 450 | 540 |
| 60 | 500 | 620 |
| 65 | 560 | 700 |
| 70 | 620 | 720 |
| 75 | 680 | 750 |
| 80 | 720 | 780 |
| 85 | 740 | 800 |
| 90 | 800 | 850 |
| 100 | 810 | 850 |
| 110 | 820 | 1000 |

※Values in this table are the reference only. For more accurate testing, ask the battery manufacturer for CCA value.

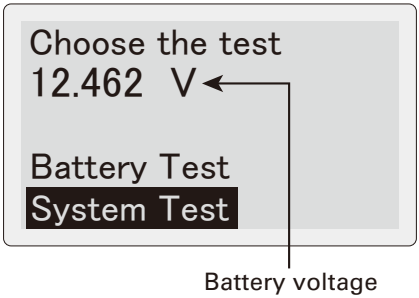
※Re-input the "Higher-CCA" value when the test result became higher than the "Standard-CCA" value.

## SYSTEM TEST

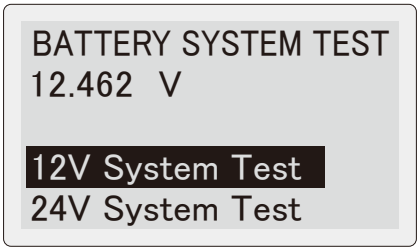
**Test the Start Performance (check the engine starting ability) and Charging System (checking generating condition of alternator.**

①Connect the instrument to the battery to be tested (see ① to ② in pages 15 to 16). Select System Test, press ↵(ENTER) Key.

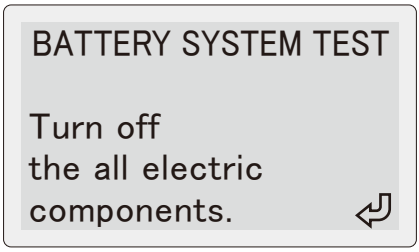
※Display shows the connected battery voltage.




②Select the battery to be tested either 12V or 24V. Press ↵ (ENTER) Key.

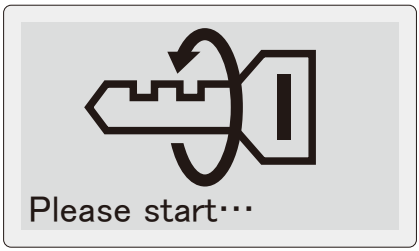


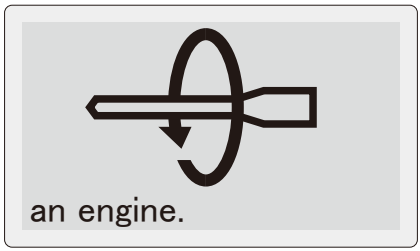

③Turn off the all electric components and press ↵ (ENTER) Key.



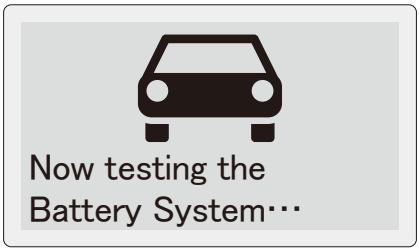
## SYSTEM TEST

④Start the engine when the instrument displays the following message.

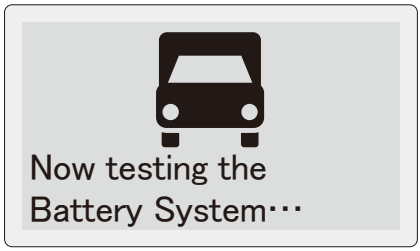



⑤System test takes about 30 second maximum. Follow the message on the screen.

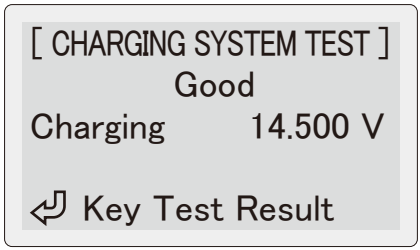



12V System




24V System

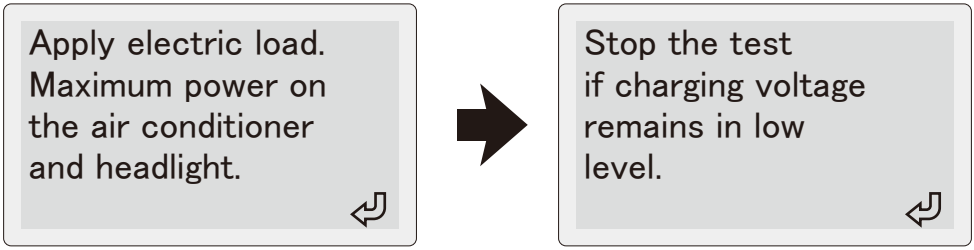
⑥Charging System Test screen is displayed as shown in right.
Press ↵ ENTER Key to fix the charging voltage which is varied depending on the generating condition of the alternator. Then, the instrument displays system test result as ⑦ in page 27.



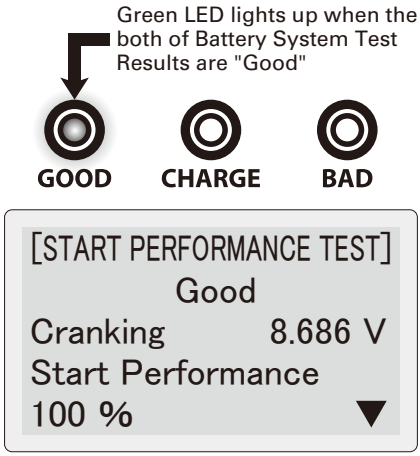
## SYSTEM TEST

※The instrument displays the following message when the charging voltage is less than 13V. When measuring the vehicle with charge control system, turn on some electric components to apply electric load to the battery.

※For 24V system test, the message is shown when the charging voltage is less than 26V.




⑦Test Result screen as shown in the right is displayed when finishing the system test.
You can scroll the screen with △ (UP SCROLL) / ▽ (DOWN SCROLL) Keys.




**You can also check the results by LED.**

- Green LED lights up when the all test results are "Good".
- Red LED flashes when engine starter system is weak.
- Red LED lights up when the whole charging system including starter system is weak.

※You can see following results on LCD.

- Start performance test result
- Starting voltage (cranking battery voltage)
- Start performance (the ability that battery starts an engine)
- Charging system test result
- Charging voltage (battery voltage at the time of charging)
- Ripple voltage (ripple voltage of diode)
- Comment

## SYSTEM TEST

- Press 🕮 (MENU) Key：Move to Menu screen in page 48.
- Press 🖹 (PRINT) Key：Move to PRINT screen in page 29.

※Though the lowest operatable / testing voltage of this instrument is 8V DC, the testing carries out normally even if the battery voltage drops lower than 8V DC during Start Performance Test.

※Start Performance Test is not applicable to check the starter motor condition.

※The message "Start Performance 0%" means that the tested battery almost has no power to start an engine. It does not mean the starting probability.

⑧Press ↵ (ENTER) Key.
Select "Yes" to finish the test and back to the test select screen (① in page 25).

## PRINT OUT

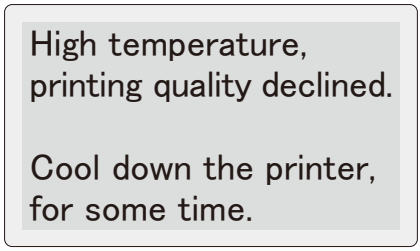
**Print out the Battery Test and System Test results from built-in printer.**

※Unclear printing or unstable operation of this instrument may occur when using weak battery for printing. In this case, save the test results in reference to "1. Save the Test Result" in page 48, then print them out with good battery or PC in reference to " PC Connection" in page 45.

①Press 🖹 (PRINT) Key in Battery Test result (⑨ in page 20) or System Test result (⑦ in page 27) screens to enter Print screen.

※If printing becomes dark by continuous printing, stop printing for a while for cooling down the printer thermal head.


※When the thermal head is too much heated, warning shown on LCD and printing stops. Leave the unit for a while for cooling down.



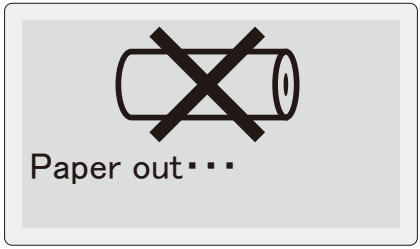

※The instrument displays right screen during printing. After finishing, go back to test result screen.

※Make sure to close printer cover to avoid any printing error.

※When paper jam occurs, open the printer cover and fix the paper.


※The instrument displays right screen when printer paper is almost empty or unset. Set new printer paper as per "1. Changing the Printer Paper in page 56.

※This screen may not be displayed depending on the sensor sensitivity.

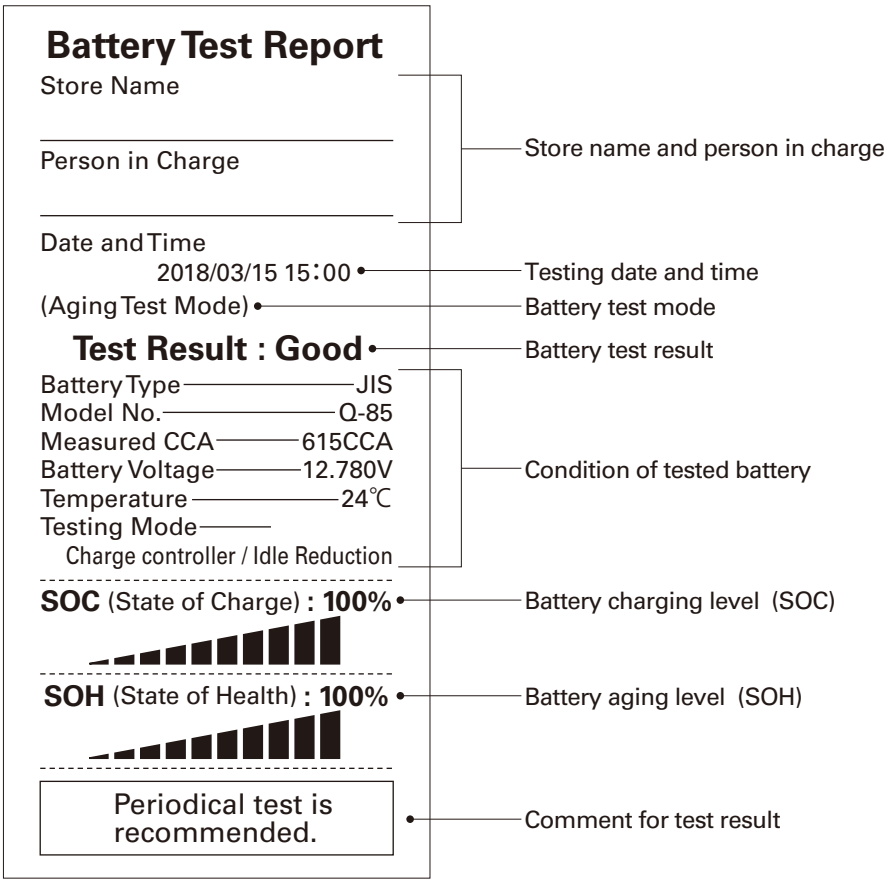


# PRINT OUT

### Printing Sample

※Saved data is printed out with a current setting language of this instrument.
(e.g.：The data saved in Japanese is printed in English if the present setting is "English".)

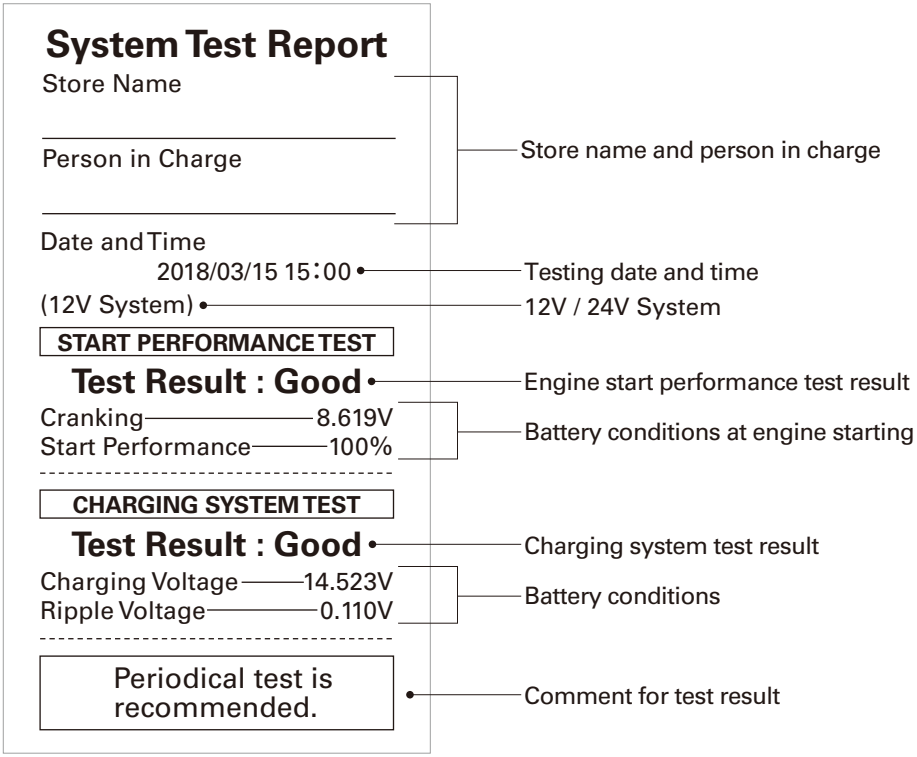
■Battery Test




You can add “Header” and “Footer” on the printing paper. For details, refer to “Header / Footer Function” from page 32.

# PRINT OUT

■System Test



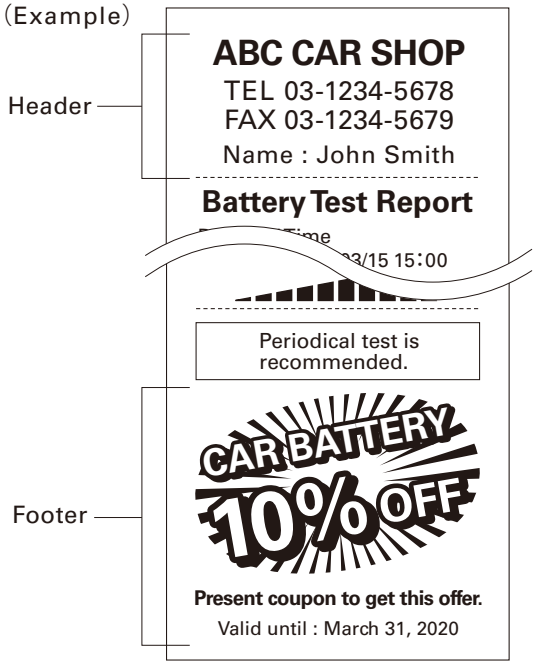

You can add “Header” and “Footer” on the printing paper. For details, refer to “Header / Footer Function” from page 32.

## HEADER / FOOTER FUNCTION

**You can add "Header" and "Footer" on the printing paper.**

※PC and Internet access are required.

(Example)




See the below procedures to make "Header" and "Footer" like the left example.

- **Header** : Characters
- **Footer** : Template coupon & Characters

### 1. Download "Header/Footer Editor Application"

Kaise Corporation is not liable for any direct or indirect damage, problem, prejudice or conflict caused by use of "Header/Footer Editor Application".

①Access to the following URL via PC.

SK-8550 User Login URL
https://www.kaise.com/sk8550ex/e_car_sk8550ex.html

You can also access through :
Kaise Website (https://www.kaise.com/NewEnglish.htm) → Products → Automotive Testers → SK-8550 Battery Checker → "User Login" banner

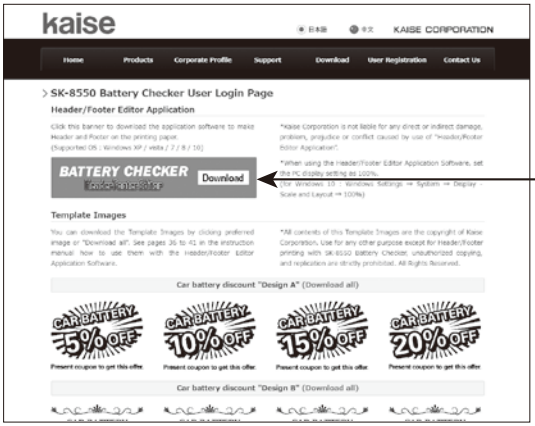
②Login with the following user name and password.

※The above User Name and Password are in common with the all SK-8550 users.

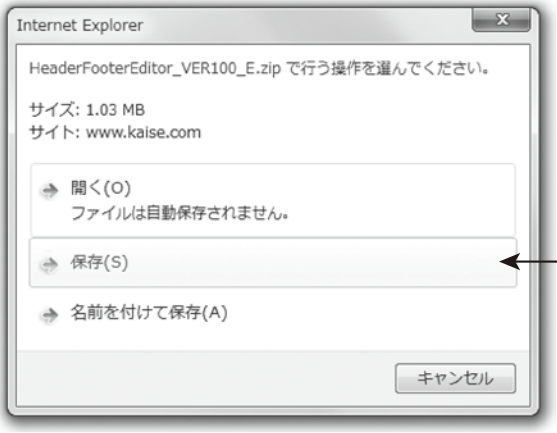

※Be sure to write uppercase and lowercase letters correctly as written above.

※The above login window may differ depending on the internet browser.

③Enter "SK-8550 Battery Checker User Page". Click the below "Download" banner to download the software "Header/Footer Editor Application" enable to install the Header and Footer into the SK-8550.



④Click “Save” when the below download windows is shown.
※The window may differ depending on the internet browser.




⑤Unzip downloaded ZIP file（HeaderFooterEditor_VERXXX_E）, then copy the inside folder（HeaderFooterEditor_VERXXX_E）to desktop.


⑥Downloading of “Header/Footer Editor Application” is finished. Be sure to keep saving the copied desktop folder（HeaderFooterEditor_VERXXX_E）.

# HEADER / FOOTER FUNCTION

## 2. Download Template Images

①Enter “User Login Page”, and click the below template Image “CAR BATTERY 10% OFF”.

※You can download the all images in the same group.

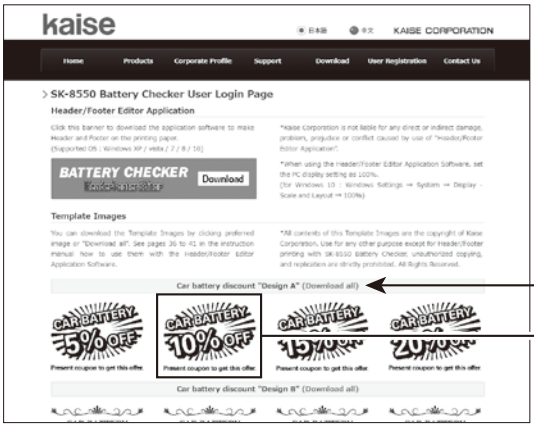
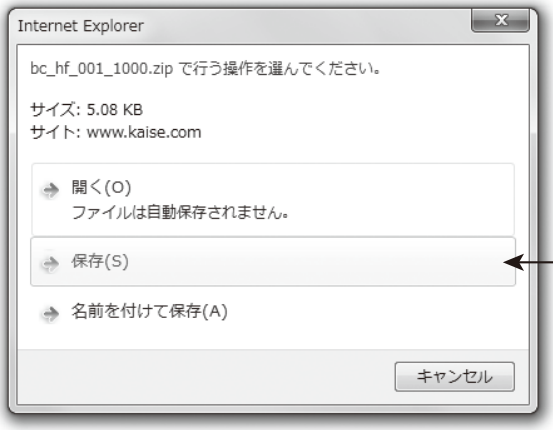



Image group download.

Click this image “CAR BATTERY 10% OFF”.

②Click “Save” when the below download windows is shown.

※The window may differ depending on the internet browser.




Click “Save”.

## HEADER / FOOTER FUNCTION

③Unzip the downloaded ZIP file（bc_hf_001_1000）. Copy the inside BMP file to "Image folder" in "HeaderFooterEditor_XXX" folder which is downloaded in the page 34.


Template image ZIP file

Unzip and copy to "Image folder" in "HeaderFooterEditor_XXX" folder

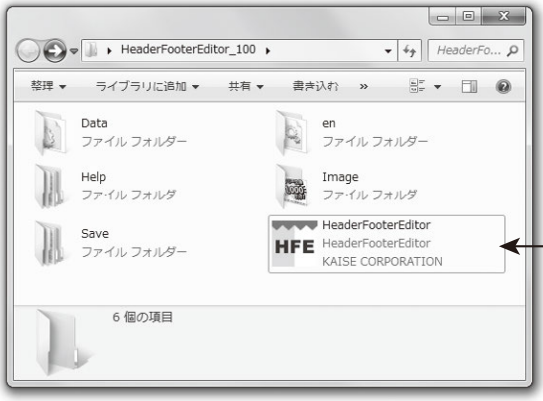
Be sure to save the downloaded template images or original image data in the above "Image folder".

## 3. Editing Header/Footer

①Connect SK-8550 and PC with USB cable (see page 45).

※This connection is needed to activate “Header/Footer Editor Application”.

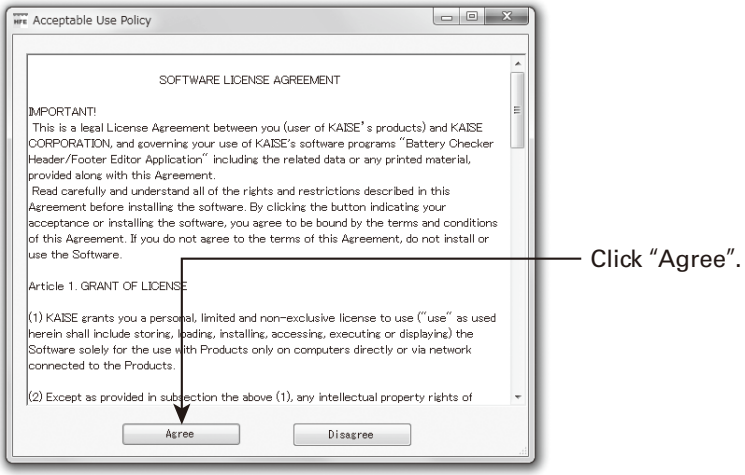
②Open “HeaderFooterEditor_XXX” downloaded in the page 34.
Then, open HeaderFooterEditor file inside.



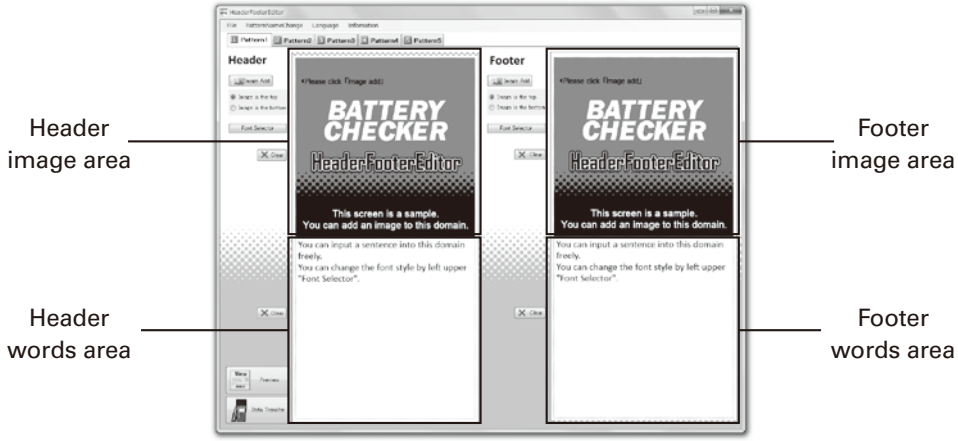

Header/Footer Editor Application folder

③Software License Agreement window is displayed. Click “Agree” if you can agree to the terms of service.

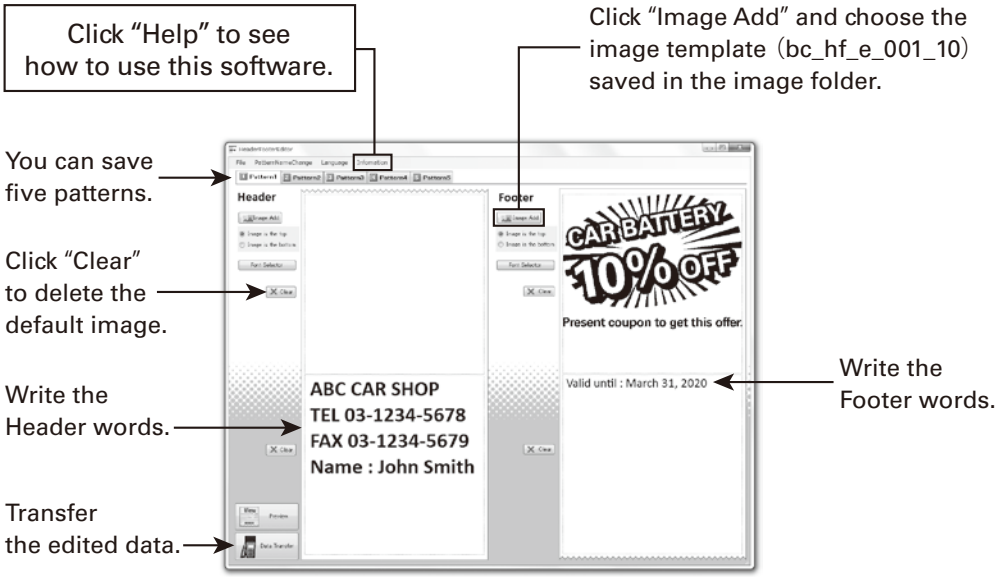
※In case of “Disagree”, you cannot use this software application.



④"Header/Footer Editor Application" is activated.




⑤Follow the below steps to make the same Header and Footer as shown in the page 32.




⑥Save the edited Header/Footer data.

⑦Click "Data Transfer" to send the data to SK-8550. Follow the instructions on screen.

⑧After data transfer, re-connect SK-8550 and PC. Follow the instructions on screen.

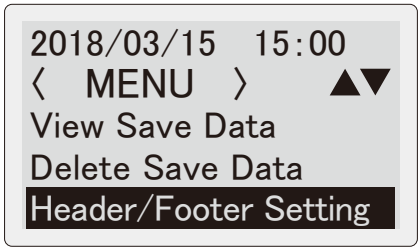
⑨When "USB Connect ···" is displayed, disconnect PC from SK-8550.

## 4. Header/Footer Setting

**Set Header/Footer for the SK-8550 printing.**

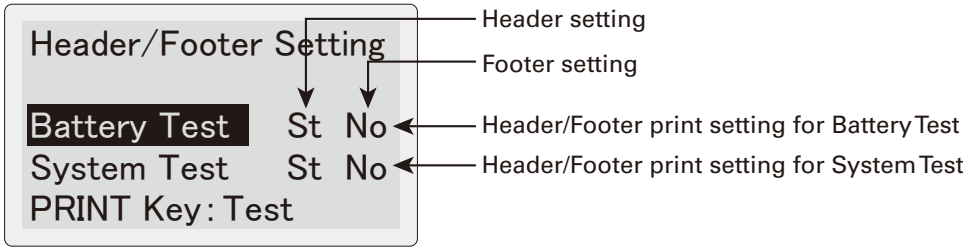
①Connect SK-8550 to the battery to turn on.

②Press 🕮MENU Key when "Choose the test" screen is displayed. MENU screen on the right is displayed. Choose Header/Footer Setting.




③Header/Footer Setting screen is displayed as below, with print settings for each of Battery Test and System Test.

The following steps show the sample how to set Header/Footer for Battery Test printing. Choose Battery Test, and enter.




**St**：Standard (Print default setting image)

**No**：No print (No Header/Footer printed)

**1**：Pattern 1 (Header/Footer saved as Pattern 1 is printed)

**2**：Pattern 2 (Header/Footer saved as Pattern 2 is printed)

**3**：Pattern 3 (Header/Footer saved as Pattern 3 is printed)

**4**：Pattern 4 (Header/Footer saved as Pattern 4 is printed)

**5**：Pattern 5 (Header/Footer saved as Pattern 5 is printed)

**Te**：Test result（Can print variable Footer depending on the test result.

※See page 41. Only effective for Battery Test result.

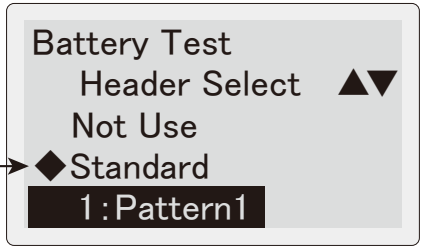
Refer to "Help" in "Header/Footer Editor Application" how to save the patterns.

**Tips for Header/Footer!**

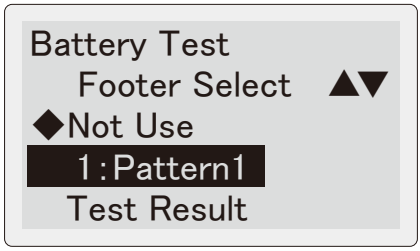
You can print the mechanic name easily by setting each of their names for Pattern 1 to 5.

④Header Select screen is displayed.
Choose the Pattern name saved in page 38.

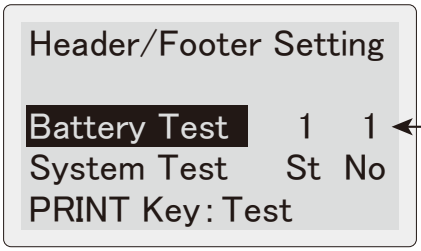
◆ mark = current setting




⑤Footer Select screen is displayed Choose the Pattern name saved in page 38.




⑥Return to the "Header/Footer Setting" screen. Confirm the selected pattern names are displayed.
Set the System Test Header/Footer printing in the same way, if needed.




Selected pattern names are displayed.

⑦Header/Footer Settings are finished. Run the trial Battery Test to check if the Header and Footer can be printed correctly.

※You can print test print paper by pressing PRINT Key.

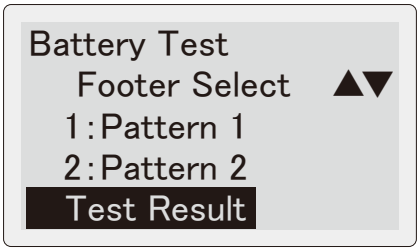
## 5. Variable Footer Setting

You can print variable Footer depending on the test result. (up to 5 patterns)

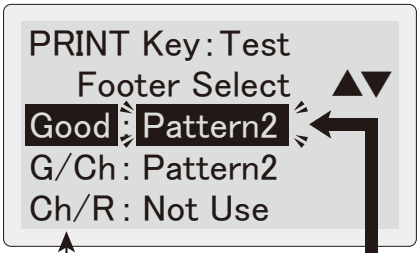
※This function is not available for Header.

※Only effective for Battery Test. Not available for System Test.

①Choose "Test Result" on Battery Test-Footer Select screen in ⑤ of page 40.




②Variable Footer Setting screen is displayed. Choose the print pattern name for each test result (blinking→choose→ stop blinking). Choose Finish in the last page to finish the setting.




**■Test Result names**

Good : Good
G/Ch : Good/Charge
Ch/R : Charge/Retest
Atte : Attention
Bad : Replace

**Tips for Variable Footer!**

When printing the coupon on the footer, changing the contents as per the test result is recommended. Refer to following examples.


**Present coupon to get this offer.**
Valid until : March 31, 2020

**Good or Good/Change**


**Present coupon to get this offer.**
Valid until : March 31, 2020

**Attention or Replace**

# FAVORITES FUNCTION

**You can bookmark the frequently-test battery as "Favorites". This function is useful for easy battery setting when testing.**

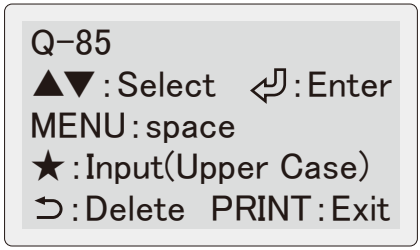
## 1. Add Battery to Favorites

①Press ★ FAVORITES Key on Battery Test Result screen in page 20.
Choose "YES", then go to the screen ②.

※This screen is not displayed when choosing the testing battery from Favorites List in page 43.

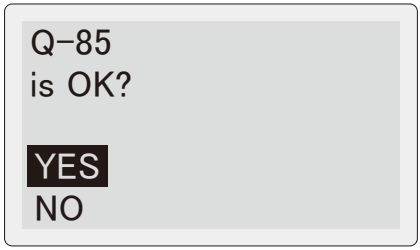

②You can change the battery name as you like. Use below keys for editing.

△▽(UP/DOWN SCROLL) Key —— Choose
↵(ENTER) Key ———— Decide
MENU Key ———— Space
★ FAVORITES Key ———— Change Input
(Uppercase letter → Lowercase letter → Numeral →Symbol → Digit → return to Uppercase letter)
⮌(BACK) Key— ———— Delete
PRINT Key ———— Finish




③Press PRINT Key to display the confirmation screen.
Choose "YES" to complete.

※Up to 50 batteries can be stored in the Favorites list.

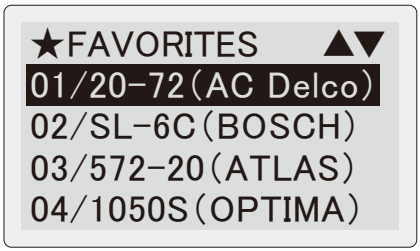


## FAVORITES FUNCTION

**Tips for the Favorites!**

For EN(DIN), SAE(BCI), or industrial batteries, adding the frequently-test CCA or mΩ rating to the favorites list is useful to skip their input.

※In the below examples, their names are changed for easy choosing.



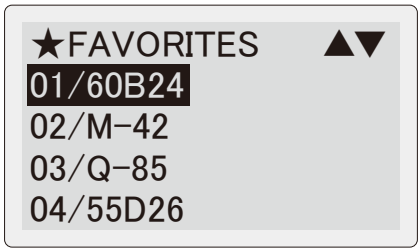

**Example for EN(DIN) or SAE(BCI)**


**Example for industrial battery**

### 2. Choosing from Favorites List

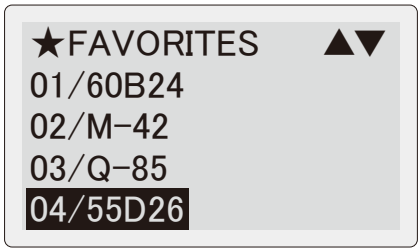
①Press ★ FAVORITES Key on "Choose the test" screen in ③ or page 16. Favorites List screen is displayed.

※"No data found." is displayed when no battery is listed.




②Choose the battery name to be tested. After choosing, screen moves to "Testing Mode" screen.

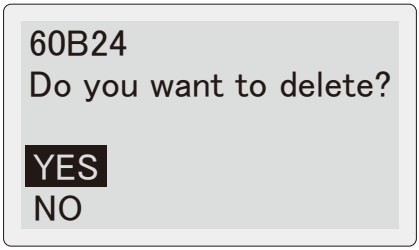
※When choosing JIS battery with Idle Reduction or Hybrid Auxiliary settings, the screen moves to "Which Test Mode?" screen.



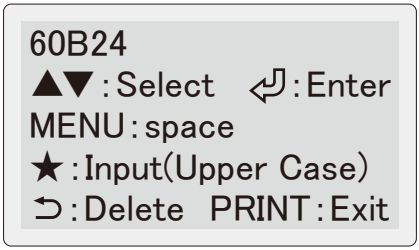
### 3. Favorites Menu

①Press 🕮MENU Key to open Favorites Menu screen.

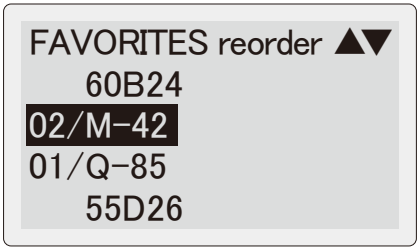

②Delete : You can delete the selected battery in the Favorites List.




③Rename : You can change the selected battery name in the Favorites List.
Refer to ② of page 42 how to change the name.



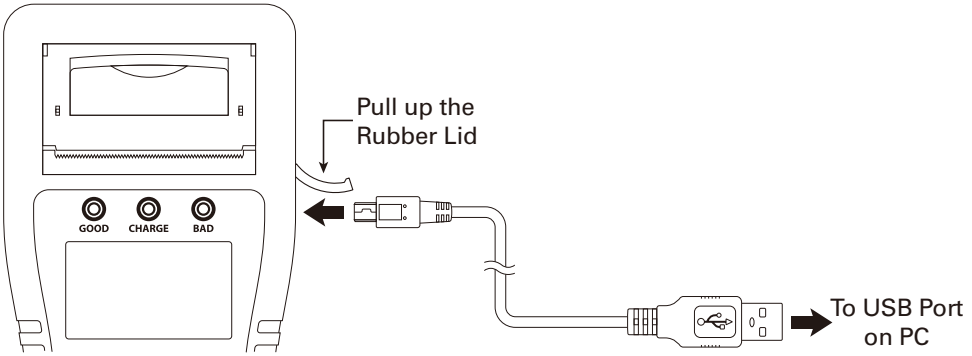

④Reorder : You can sort Favorites List. Choose the batteries in order you want to display and decide.
After deciding the all listed batteries, start sorting and return to the Favorites List screen.



## PC CONNECTION

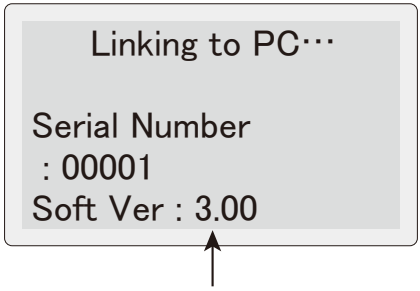
**SK-8550 can connect to PC via privided USB cable. You can send test data to PC in text format.**

①Insert the provided USB cable to the USB port on the right side of the unit and connect another side to PC.




②The instrument turns on automatically when connecting to active PC. Messages as shown in the right are displayed.

※Internal memory is recognized as mass-storage device (kaise SK-8550 USB Device) when PC connection is completed.
※If your PC does not recognize the SK-8550, try to use another USB port or to connect through commercially available USB hub.
※It may take time to recognize the devise.




**CAUTION**

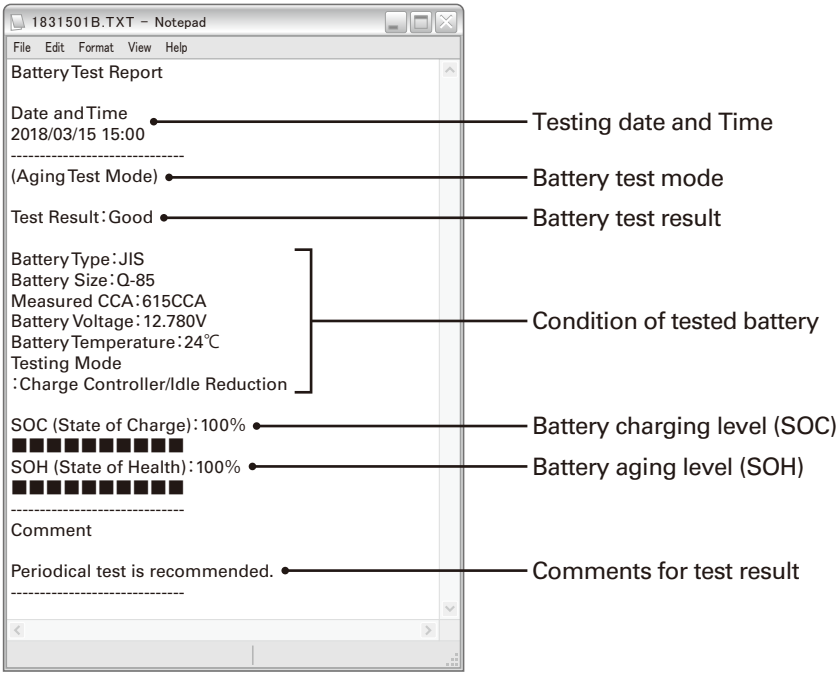
- Detach USB Cable after completing USB removing process from PC to prevent unexpected trouble.

# PC CONNECTION

③Access to the memory of this instrument by PC operation to copy and paste the data to the PC. Data format is "text" which is suitable for print out from PC.

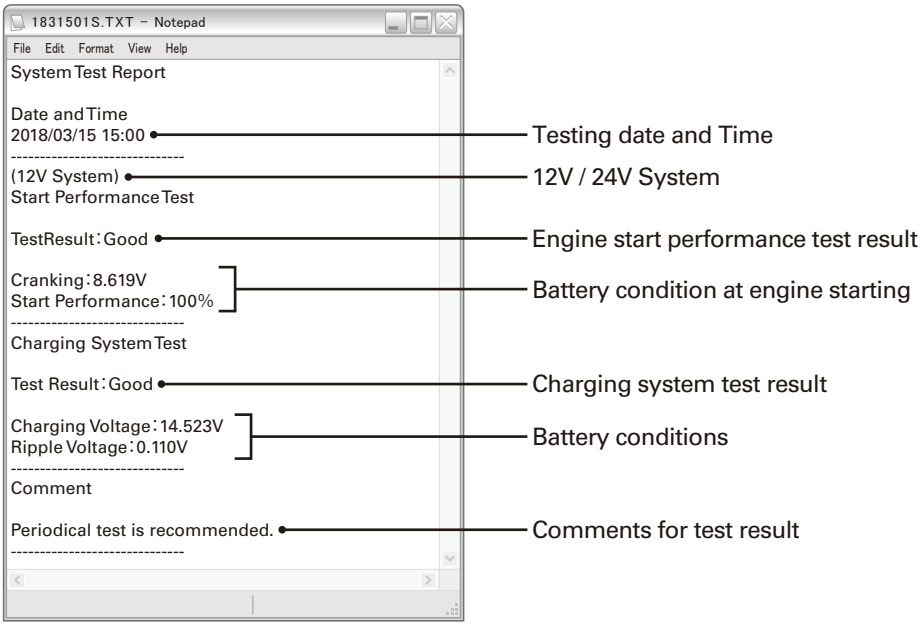
(Example of PC display)

**■Battery Test**



# PC CONNECTION

## ■System Test




※Test data are displayed in the language used for data saving.

④Detach USB Cable after completing "Safety Remove Hardware" process from PC.

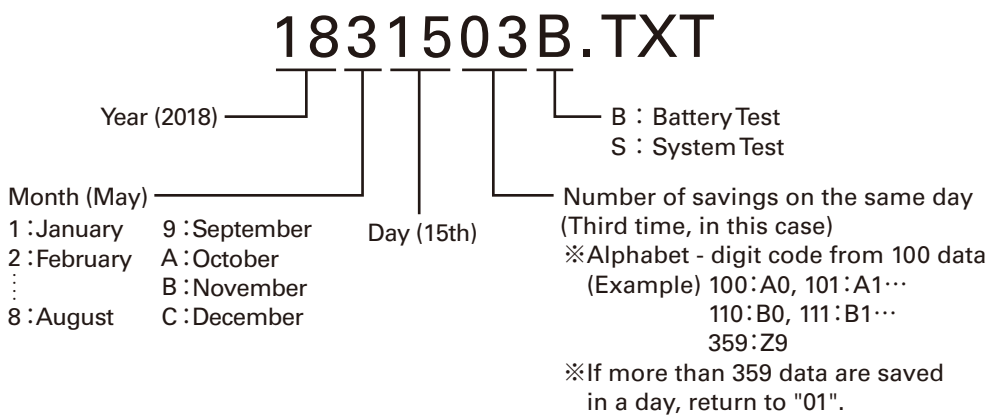
# MENU

## 1. Save the Test Result

**Save the results of Battery Test and System Test up to 359 data.**

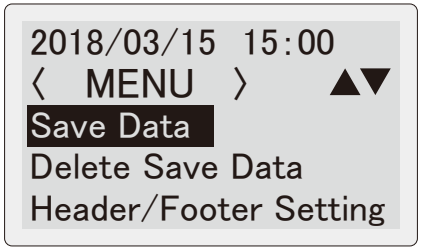
※Each data is saved with following file name.

■Example of file name (In case of the third time on the same day, May 15th, 2018)



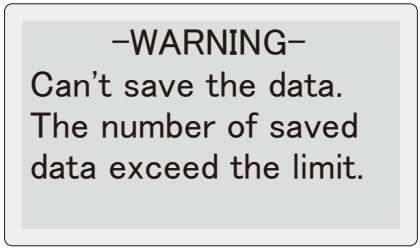

※Saved date and time reflect the date and time settings of this instrument. Make sure to set them correctly in reference to "5. Date and Time Setting" in page 53.

①Press 🕮 (MENU) Key in Battery Test result (⑨ in page 20) or System Test result (⑦ in page 27) screens enter Menu screen. Select "Save Data" and press ↵ (ENTER) Key.

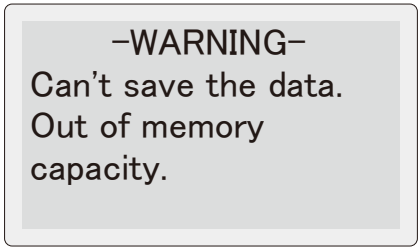



②Select "YES" and press ↵ (ENTER) Key to save the test data.

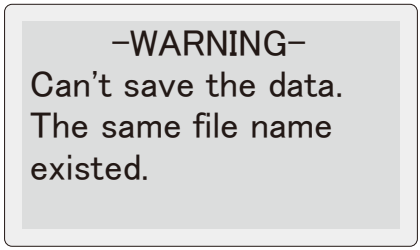
※Up to 359 data can be saved to the internal memory. The instrument displays this WARNING if the saved data exceeds 359. Delete unnecessary data in reference to "3. Delete the Saved Data" in page 51



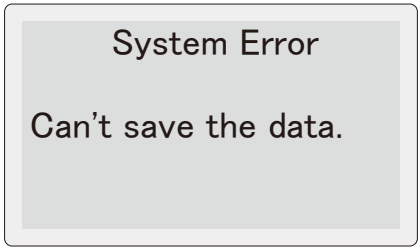

※The instrument displays this WARNING when the memory capacity shortage. Delete unnecessary data in reference to "3. Delete the Saved Data" in page 51 to make the storage capacity.




※The instrument displays this WARNING when the same data already exists. Delete the relevant in reference to "3. Delete the Saved Data" in page 51.
※File name consists of the saving date. Refer to "Example of file name" in page 48 for details.



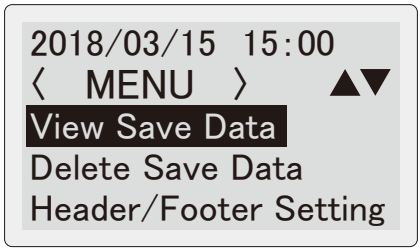

※The instrument displays this message when the system error occurs. Stop test and format the removable disk in reference to "3. Formatting the Removable Disk" in page 59.
※All of the saved data are deleted after formatting removable disk.



## 2. View the Saved Data

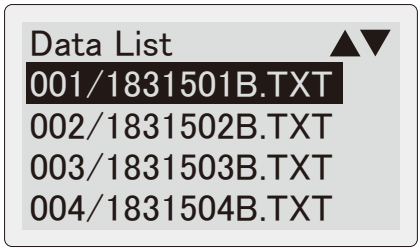
**Recall the saved data to see on the screen.**

①Press 🕮 (MENU) Key in "Choose the Test" screen (③ in page 16) to enter Menu screen. Select "View Save Data" and press ↵ (ENTER) Key.




②Select the data that you want to see, and press ↵ (ENTER) Key.

※If there is no saved data, "No data found" is displayed.



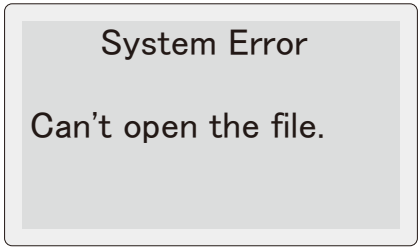

③Saved data are displayed as shown in the right. Scroll the data by △ (UP SCROLL) / ▽ (DOWN SCROLL) Keys.

※Press 🖹PRINT Key to print the displaying saved data. For details, see "PRINT OUT" in page 29.

※Saved data is displayed in a current setting language of this instrument.
(e.g.:If English is set now, every data saved in Japanese are displayed in English.)


※The instrument displays this message when the system error occurs.
Stop test and format the removable disk in reference to "3. Formatting the Removable Disk" in page 59.

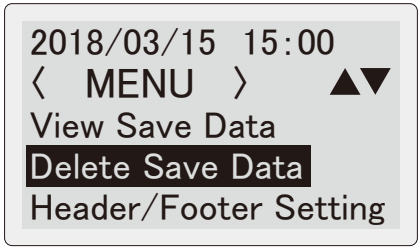
※All of the saved data are deleted after formatting removable disk.



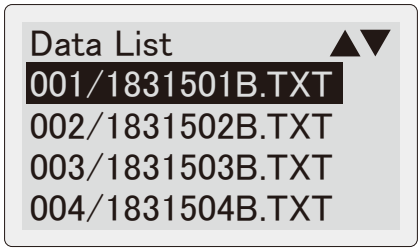
## 3. Delete the Saved Data

**Saved data can be deleted in the following procedures.**

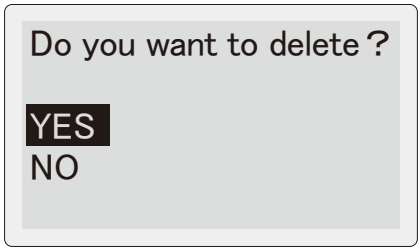
①Press 🕮 (MENU) Key in "Choose the Test" screen (③ in page 16) or test result screens (⑨ in page 20 / ⑦ in page 27) to enter Menu screen.
Select "Delete Save Data" and press ↵ (ENTER) Key.



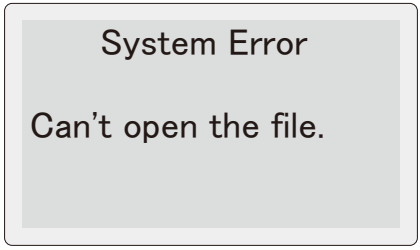

②Select the data to delete from the data list, and press ↵ (ENTER) Key.
※If there is no saved data, "No data found" is displayed.




③Select "YES" and press ↵ (ENTER) Key to delete the test data.




※When system error occurs, the message as shown in the right is displayed. Stop testing and format Removable Disk in reference to "3. Formatting the Removable Disk" in page 59.
※All saved data are deleted after formatting removable disk.

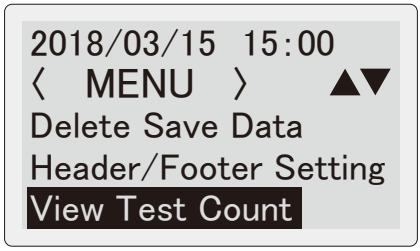


Refer to page 39 for the Header and Footer settings.

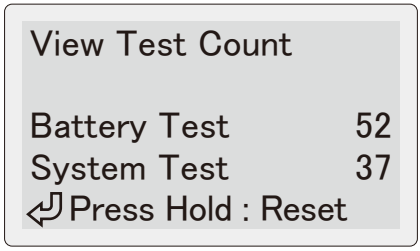
## 4. Test Count Display

**You can see the test count history stored in the internal memory.**

①Press 🕮 MENU Key when displaying the Battery Test screen (③ in page 16) or Test Result screen (⑨ in page 20, ⑦ in page 27) to open MENU screen.
Enter "View Test Current".

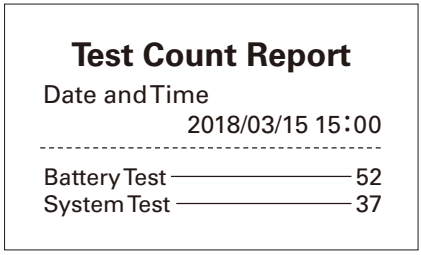



②Test count history is displayed on the screen. (Deleted test counts are excluded.)




**■Print Out**

Press 🖷 PRINT Key to print out the Test Count Report.

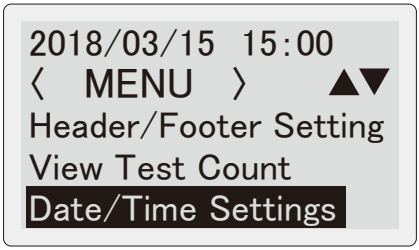



**■Reset Test Count**

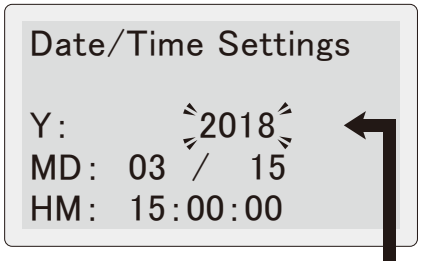
Press and hold ↵ Key to display the reset screen in the right.
Choose "YES" to delete the test count history.

## 5. Date and Time Setting

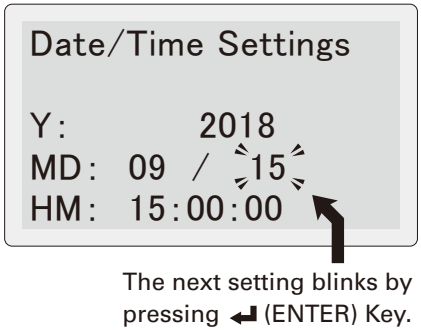
①Press 🕮 (MENU) Key in "Choose the Test" screen (③ in page 16) or test result screens (⑨ in page 20 / ⑦ in page 27) to enter Menu screen.
Select "Date/Time Settings" and press ↵ (ENTER) Key.



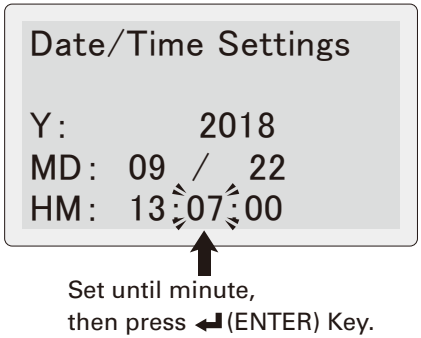

②Date/Time Setting screen is displayed.
(Year (Y) is blinking)




③Set "Year" with using △ (UP SCROLL) / ▽ (DOWN SCROLL) Keys and press ↵ (ENTER) Key. Then "Month" starts to blink. Set "Month" and press ↵ (ENTER) Key, Set the "Day" in the same way.

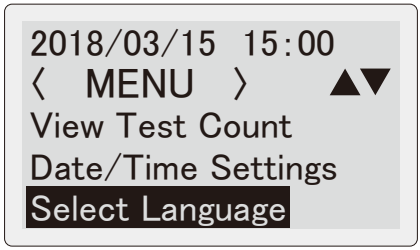



④Set Time (HM) until minute. Press ↵ (ENTER) Key. Date/Time Settings are fixed with resetting "Second" to 00 and return to Menu Screen (previous Step ①).



## 6. Language Setting

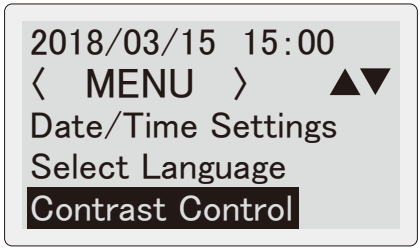
①Press 🕮 (MENU) Key in "Choose the Test" screen (③ in page 16).
Select "Select Language" and press ↵ (ENTER) Key.




②Select preferred language and press ↵ (ENTER) Key.
Language is fixed and return to Menu screen.


## 7. Contrast Adjustment

①Press 🕮 (MENU) Key in "Choose the Test" screen (③ in page 16) or test result screens (⑨ in page 20 / ⑦ in page 27) to enter Menu screen.
Select "Contrast Control" and press ↵ (ENTER) Key.

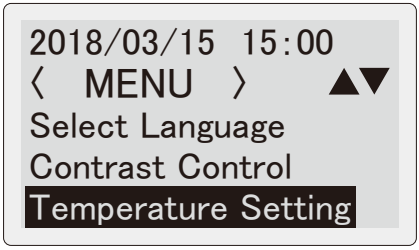



②Adjust LCD contrast in the range of 0 - 30 with △ (UP SCROLL) / ▽ (DOWN SCROLL) Keys.
Press ↵ (ENTER) Key to fix the contrast and return to Menu screen.

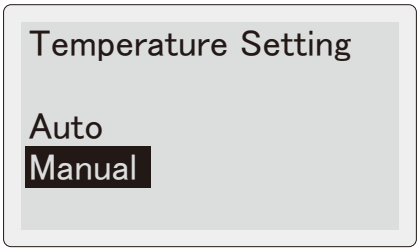
## 8. Temperature Setting

Set the battery tempearture input mode in Battey Test.
Default setting is "Auto". You can change it to "Manual" if necessary.

①Press 🕮 (MENU) Key in "Choose the Test" screen (③ in page 16) to enter Menu screen. Select "Temperature Setting" and press ↵ (ENTER) Key.



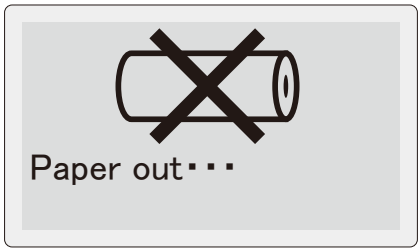

②Select "Manual" if you prefer to input the battery temperature manually in Battery Test (see page 20).
Press ↵ (ENTER) Key to return to Menu screen.
※Default setting is "Auto".

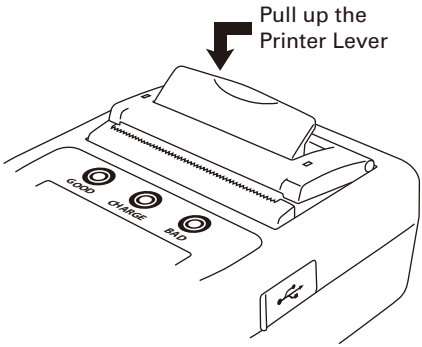


# MAINTENANCE

## 1. Changing the Printer Paper

The instrument displays this screen when the printer paper is running out or unset. Set the new one in the following procedure.



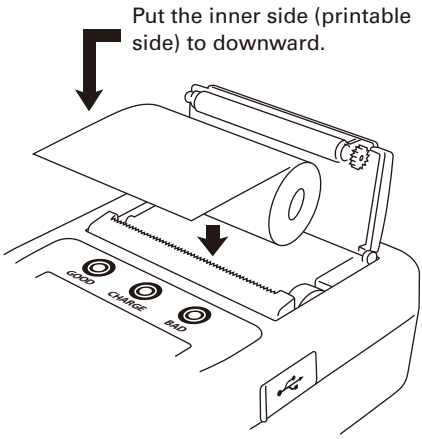




①Pull up printer lever as shown in the right. printer cover lifts up.

※**Do not pull up / open the printer lever or printer cover forcibly to avoid any damage to the instrument.**

②Open the printer cover and remove old printer paper.

③Prepare the new paper. Peel off the fixing seal, and put it into the printer compartment. Be sure to put the inner side (printable side) to downward as shown in the right.



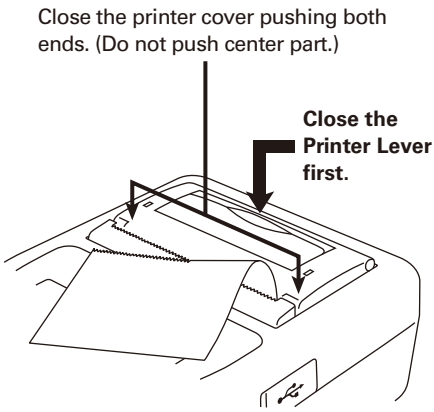

④Pull the paper forward so that it extends past the serrated edge of the paper slot.

**CAUTION**

- Do not pull up / open the printer lever or printer cover forcibly to avoid any damage to the instrument.
- Be sure to put the printer paper facing the inner side (printable side) to downward. Cannot print on the reverse side.

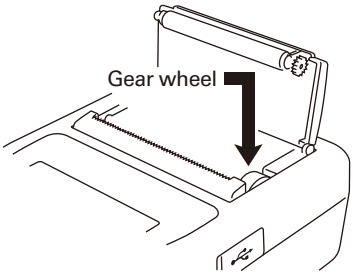
⑤Close the printer lever, then close the printer cover with putting it over the pulled out paper. Cut off the extra paper.

※Be sure to push the both ends of printer cover when closing. Pushing center part may damage the cover or the printer module.




## ⚠ CAUTION

- To avoid any trouble or damage to the printer module, be sure to close the printer lever first when closing printer cover.
- Be sure to push the both ends of printer cover when closing. Pushing center part may damage the cover or the printer module.
- To prevent discoloration, do not place the printer paper under in any place where it will be subjected to direct sunlight or high temperatures / humidity.
- Keep this instrument in the supplied carrying case to avoid malfunction of the printer trouble by dust penetration.
- Be careful not to put the dust in the printer compartment to prevent any malfunction of the printer.
- Be sure not to reach the dust into the gear wheel part to prevent printer trouble.
- Do not keep this instrument in the dusty area to prevent printer trouble.

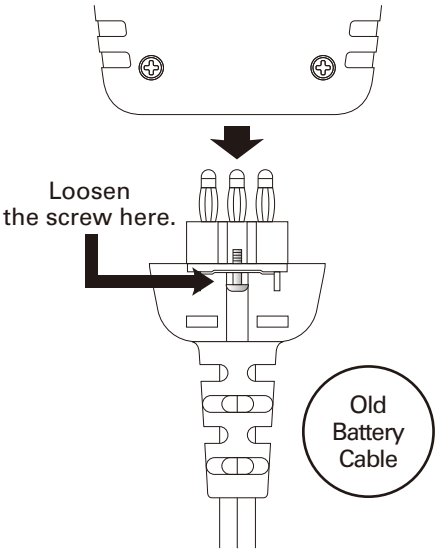


## 2. Changing Battery Cable

You can replace the Battery Cable at your side in case of damaging the battery clip or cable. (Model No. 800 Battery Cable)

①Loosen the screw on the back of the cable connector.

②Pull out the connector from the unit.



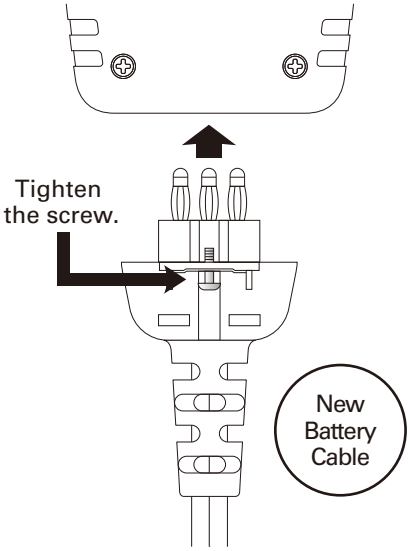

③Insert the new Battery Cable deeply into the unit. Tighten the screw.

※Insert the battery cable deeply into the unit, and fix the screw tightly. Loose connection may cause the measurement failure.

※Keep clean the battery cable, connection plugs, and terminals. Dusts may cause the contact failure.

※Do not connect battery cable oppositely. This may damage the unit and the cable.

※Do not tighten the battery cable screw too strongly. This may damage the screw or contact part of the unit, and makes them unfixable.

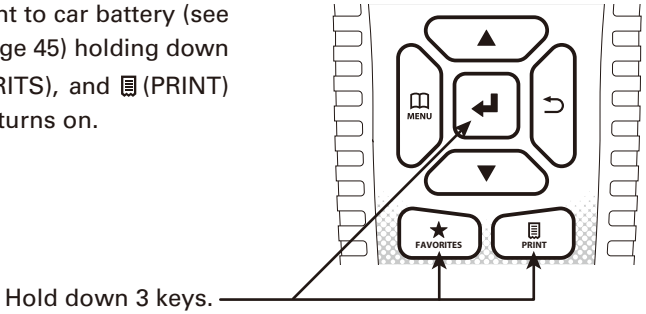


## 3. Formatting the Removable Disk

**CAUTION**

- All of the saved data are deleted after formatting removable disk.

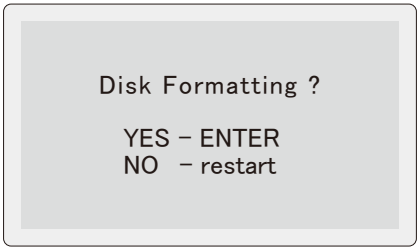
①Connect the instrument to car battery (see page 15) or PC (see page 45) holding down ↵ (ENTER), ★(FAVORITS), and (PRINT) Keys. The instrument turns on.




②The instrument displays this message. Press ↵ (ENTER) Key to start formatting the removable disk.

※Turn off the instrument to quit the formatting.

※The instrument also displays this screen when the removable disk is fragmented. Format the disk in the same way.




③The instrument displays this message after formatting is done. Turn off the instrument.

## 4. DMP Folder

When measurement error occurs during the battery test process, the instrument creates DMP folder in the removable disk to save the internal error data.
You do not need to delete this.


DMP Folder

## 5. Periodical Check and Calibration

Periodical check and calibration is necessary to make safety measurements and to maintain the specified accuracy. The recommended check and calibration term is once a year and after the repair service. This service is available at KAISE AUTHORIZED SERVICE AGENCY through your local dealer.

## 6. Software Version Update

- You can update the internal software from our website (https://www.kaise.com/NewEnglish.htm) when it is available. Download the file in reference to the loading procedures.

## 7. Others

- If the metal part of the battery clip is soiled, wipe it off with soft cloth to obtain the accurate measurement.
- If Date and Time are not able to set, internal backup battery is exhausted. Ask KAISE AUTHORIZED SERVICE AGENCY through your local dealer for repair service.

# ABOUT KAISE WEBSITE

## 1. SK-8550 Product Page

Product information, Data sheet (PDF), Instruction manual (PDF), and Technical information (PDF) are available.

SK-8550 Product Page URL
https://www.kaise.com/e_car_sk8550.html

You can also access through:
Kaise Website (https://www.kaise.com/NewEnglish.htm) → Products → Automotive Testers → SK-8550 Battery Checker

## 2. SK-8550 User Login Page

You can download "Header/Footer Editor Application" and template images.

SK-8550 User Login URL
https://www.kaise.com/sk8550ex/e_car_sk8550.html

You can also access through: SK-8550 Product page → "User Login" banner

# TROUBLE SHOOTING & REPAIR

If there are any failure with this instrument, check the following trouble shoots before asking repair service. Ask KAISE CORPORATION AUTHORIZED SERVICE AGENCY through your local dealer when there are any questions or troubles with this instrument.

| Symptoms | Possible Causes and Necessary Treatments |
|---|---|
| **Cannot turn on the instrument** | • Battery Clips are connected in the wrong polarity.<br>→ Connect Black clip to minus ⊖, and red clip to plus ⊕ battery terminals.<br>• Battery voltage goes down to 8V or lower.<br>→ Recharge the battery.<br>• Weak connecting of battery cable or USB cable.<br>→ Insert their plugs deeply.<br>• Metal parts of battery clips or battery terminals have problems.<br>→ Make them clean and check if there are not damaged.<br>• Battery cable is damaged (disconnected).<br>→ Replace with the new battery cable. |
| **Cannot save, view and delete data** | • System error is occurring.<br>→ Format the Removable Disk in reference to "3. Formatting the Removable Disk" in page 59. |
| **Instrument freezes with English letters on LCD** | • Removable disk is fragmented.<br>→Format the disk in reference to "3. Formatting the Removable Disk" in page 59. |
| **Printer does not work** | • Printer paper is set in reverse.<br>→ Place the paper correctly in reference to "1. Changing the Printer Paper"in page 56.<br>• Printer is jammed.<br>→ Open the printer cover and fix the paper jam. |
| **Date / Time are not saved** | • Backup battery (built-in) is exhausted.<br>→ Ask KAISE AUTHORIZED SERVICE AGENCY through your local dealer for repair service. |

# TROUBLE SHOOTING & REPAIR

| Symptoms | Possible Causes and Necessary Treatments |
|---|---|
| **LCD displays Measurement Error** | • Metal part of the battery clip or battery terminal is soiled.<br>→ Remove it cleanly.<br>• There in an abnormality in the battery.<br>→ Check visually the appearance of the battery; dirt of the terminal, abnormality of the terminal cable, etc.<br>• Battery cable is damaged (disconnected).<br>→ Replace with the new battery cable. |

# WARRANTY

SK-8550 is warranted in its entirety against any defects of material or workmanship under normal use and service within a period of one year from the date of purchase of the original purchaser. Warranty service is available at **KAISE AUTHORIZED SERVICE AGENCY** through your local dealer. Their obligation under this warranty is limited to repairing or replacing SK-8550 returned intact or in warrantable defect with proof of purchase and transport charges prepaid. **KAISE AUTHORIZED DEALER** and the manufacturer, **KAISE CORPORATION**, shall not be liable for any consequential damages, loss or otherwise. The foregoing warranty is exclusive and in lieu of all other warranties including any warranty of merchantability, whether expressed or implied.

This warranty shall not apply to any instrument or other article of equipment which shall have been repaired or altered outside of **KAISE AUTHORIZED SERVICE AGENCY**, nor which have been subject to misuse, negligence, accident, incorrect repair by users, or any installation or use not in accordance with instructions provided by the manufacturer.

**KAISE AUTHORIZED DEALER**


kaise

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