



## CERTIFICATE OF CALIBRATION

We hereby certify that this product has been calibrated and found to be in accordance with the applicable SPECIFICATIONS and MECO STANDARDS.

Accuracies of the standard equipment used in this calibration are traceable to the National Standards.

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SR. NO. : \_\_\_\_\_

CHECKED BY : \_\_\_\_\_

DATE : \_\_\_\_\_

MODEL NO. : \_\_\_\_\_

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## Battery Meter Model : BM63



### Instruction Manual

#### 1. AN INTRODUCTION

BM63 is a Lead acid storage battery meter. It is used to check the capacity condition of various car storage Battery, electric-driven bike storage battery and other Lead acid storage Battery.

The "OK", "WEAK", "BAD" are directly indicated on the meter dial, in order to check the quality of storage battery visually and quickly.

The meter is designed special one scale (10-20Ah) for electric-driven bike storage battery.

#### 2. SPECIFICATION

- Storage battery type : Lead acid storage battery
- Rating capacity : 2-500Ah
- Discharge current in measurement :  
About 10A / 2V storage battery  
30A / 6V storage battery  
60A / 12V storage battery
- Colour indication for capacity :  
RED : fully discharged, must be recharge at once.  
YELLOW : insufficient, recharge as possible.  
GREEN : enough, normal operating
- Storage battery rating voltage : 2V, 6V, 12V
- Electric-driven bike Battery rating capacity : 10Ah to 20Ah
- Measuring Time : < 3sec

### 3. TESTING PROCESS

Before testing, first time must be check the meter pointer whether at "0" position on the meter dial scale. If not, adjusting "0" position

By the 'ZERO" adjuster that is on below the meter dial.

#### 3.1 Measuring method :

First clip-on the "-" terminal of storage battery by the black clip of the meter, and then red test plug is touching the "+" terminal of battery,

In this time, the pointer of meter is deviated towards the right.

After observe the scale, remove the test lead from testing point at once.

When use the BM63, first time, observe the open voltage of storage battery, and then push the "TEST" switch to test battery capacity. The maximum measuring time do not over measuring time that showed in specification. If not, the meter will be damaged.

#### NOTE :

1. When testing, the discharging current is large (example: 12V Storage battery is consumed power up to 700W), so, must be shorten the Testing time as possible.
2. Do not use the meter as discharger for long time. If not, The plastic case will be melted easily under high temperature. (in that situation, our factory is not ensure the repair with free of charge.)

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When the pointer at red area, if user do not recharge the storage battery timely in short time (about 3-5 days), the storage battery is maybe scrapped.

New special scale for electric-driven car storage is designed on the dial.

The Specification of the large quantity of electric-driven bike battery is 10A-20Ah.

#### 3.3 Check the quality of storage battery at quick :

When measuring, if the pointer of meter indicates to red area rapidly, the battery should be recharged at once. Then test full recharge the battery again. If pointer still falls to red area rapidly, even fall to the other battery area.

For example: if test 12V storage battery, pointers fall to 6V area. It means ineffective the storage battery that has been damaged. If pointer fall to Yellow area rapidly. It means that the battery can be used as lower grade battery.

For the storage battery group, should test battery unit separately. Because the battery meter input voltage do not over 12V. The storage battery group for electric-driven bike consists of 3-5 pics 12V battery normally.

When measuring battery, every battery unit should be identical, if some battery unit is not identical, this battery unit must be changed or repaired.

### 4. NOTE OF USE

1. The meter is designed only for Lead acid storage battery, if you want measure other storage battery (Lithium ion storage battery or nickel (Ni)-hydrogen (H) storage battery), you can use "DC V" scale on dial of the meter.

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### 3.2 Distinguish method :

When use the meter for first time, at first you may check the new full charged storage battery that its specification has been known. The various dial scale indicate various capacity.

If battery capacity is 12V/60Ah, should observe 55-85Ah dial scale line, in this time, the pointer should indicate around 12V.

In normal condition, the pointer should indicate to the green area for full charged storage battery

#### NOTE :

For same specification storage battery of various makers, the indicated position of pointer is difference. After use the storage battery. for some time (about 300 time charge/discharge), full recharge this battery and then testing again. This time, the position of pointer has dropped Compare with new battery (deviated toward the left). The fact has proved that the capacity of storage battery is drop by degrees.

- The Green area means full battery electricity capacity. Use the battery normally.
- The Yellow area means battery electricity capacity is not enough, battery need recharged as possible.
- The Red area means that the battery is used up, battery must be recharged at once.

According to the various capacity of battery and manufacture technology of battery.

There are several scale lines of battery capacity in this meter, so, user can select scale line on the basis of rated capacity of battery.

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This scale is for testing storage battery voltage (not for battery capacity). You can read data directly. The higher voltage means that the battery is good.

2. The meter maximum test voltage is 12V; So, do not directly testing battery group that voltage is over 12V. For example : 24V storage battery for track or 36V/48V storage battery for electric-driven bike. In this condition, only test battery unit respectively.
3. The measuring time must fit the specification.
4. The meter do not used to test common battery.
5. When you test the battery of electric-driven bike, you should use the Special scale line.
6. When you use the meter first time, high temperature will cause smoke. It is normal.

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