



INSTRUCTIONS FOR

MOTORCYCLE DIGITAL BATTERY TESTER 12V

MODEL NO: **MC105**

Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions, and properly maintained, give you years of trouble free performance.

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.



Refer to
Instruction
Manual



Wear eye
Protection



Wear
Protective
Clothing



Wear
Protective
Gloves



Explosive
Material



Corrosive
Substance

1. SAFETY

DANGER! BE AWARE, LEAD-ACID BATTERIES GENERATE EXPLOSIVE GASES DURING NORMAL BATTERY OPERATION. FOR THIS REASON, IT IS VERY IMPORTANT TO READ AND FOLLOW THESE INSTRUCTIONS CAREFULLY, EACH TIME YOU USE THE BATTERY TESTER.

Follow these instructions and those published by the battery and vehicle manufacturers, and the maker of any equipment you intend to use in the vicinity of the battery. Remember to review warning marks on all products and on engines.

1.1. Personal Safety

- WARNING!** Wear approved eye protection. Wear appropriate Personal Protective Equipment. A full range of Personal Protective Equipment is available from your Sealey dealer.
- ✓ Remove personal metallic items such as rings, bracelets, necklaces and watches. A lead-acid battery can produce a short-circuit current high enough to melt or weld a ring, which would cause severe burns.
- ✓ Ensure that hands and clothing are clear of moving or hot engine parts. Remove ties and ensure that belts cannot become entangled.
- ✓ Ensure that there is another person within hearing distance and is able to come to your aid should a problem arise when working near a lead-acid battery.
- ✓ Have fresh water nearby in case battery acid contacts skin or clothing; flush affected area immediately. If acid enters eyes, flush immediately with clean running water for a minimum of 15 minutes, seek medical attention.
- * **DO NOT** smoke or allow a spark or flame in the vicinity of the battery or engine.

1.2. General Safety

- ✓ Familiarise yourself with the application, limitations and potential hazards of the tester. Also refer to the vehicle manufacturer's hand book. IF IN ANY DOUBT CONSULT A QUALIFIED ELECTRICIAN.
- ✓ Ensure that the tester is in good condition before use. If in any doubt do not use the unit and contact a qualified electrician.
- ✓ Only use recommended attachments and parts. To use unapproved items may be dangerous and will invalidate your warranty.
- ✓ Keep tools and other items away from the engine and ensure that you can see the battery and working parts of engine clearly.
- ✓ Determine the system voltage before using the tester.
- ✓ If the tester receives a sharp knock or blow the unit must be checked by a qualified service agent before using.
- ✓ Clean battery terminals before using the tester.
- ✓ Keep children and unauthorised persons away from the work area.
- * **DO NOT** disassemble the tester for any reason. The tester must only be checked by qualified service personnel.
- WARNING!** To prevent the risk of sparking, short circuit and possible explosion **DO NOT** drop metal tools in the battery area, or allow them to touch the battery terminals.
- * **DO NOT** cross-connect tester to battery. Ensure positive (RED) clamp is to positive terminal and negative (black) clamp is to negative terminal. If battery symbols cannot be distinguished, remember that the negative terminal is the one directly connected to the motorcycle frame.
- * **DO NOT** use the tester outdoors, or in damp, or wet locations and **DO NOT** use in the vicinity of flammable liquids or gases.
- ✓ Ensure there is effective ventilation to prevent a build-up of explosive gases.
- * **DO NOT** use the tester for a task for which it is not designed.
- ✓ When not in use, store the tester carefully in a safe, dry, childproof location.
- ✓ Modern vehicles contain extensive electronic systems. You are required to check with the motorcycle manufacturer, for any specific instructions regarding the use of this type of equipment on each vehicle.

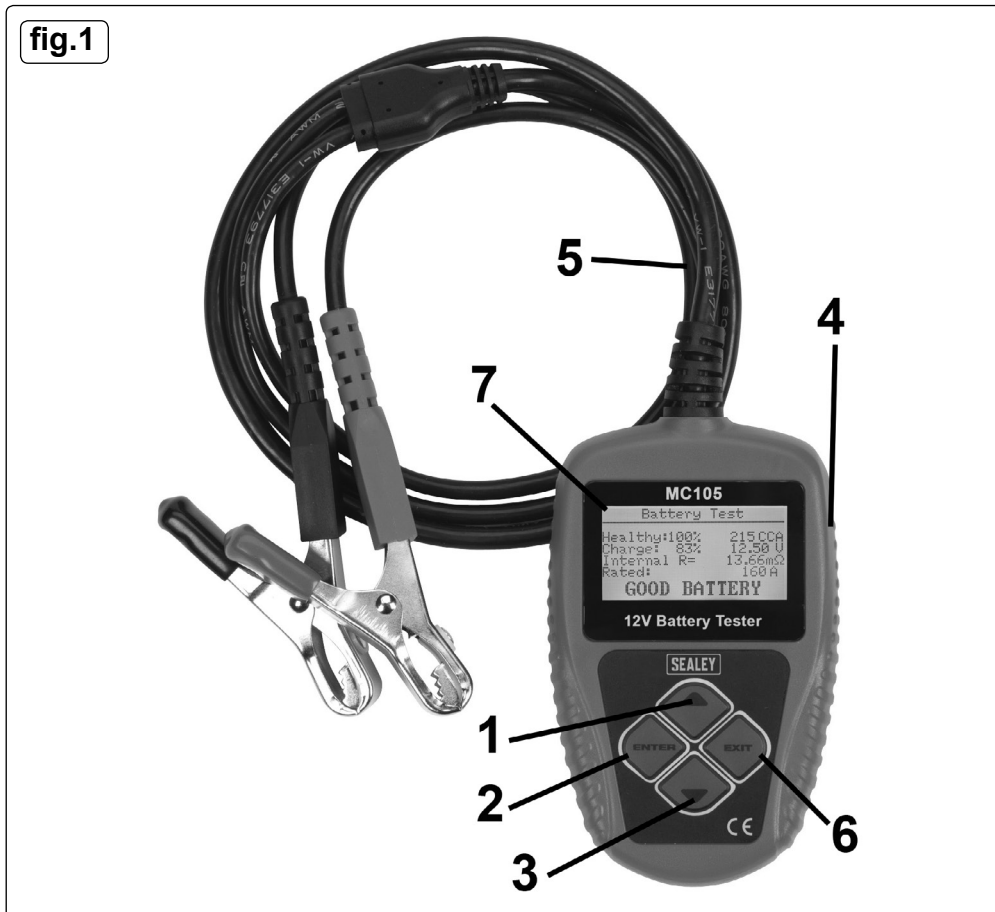
2. INTRODUCTION

Compact device which accurately tests the motorcycle's battery. Just key in the battery rating from the top of the battery and results are displayed on an LCD screen. Includes a facility to print results via PC. No internal battery and will test batteries with a residual charge of just 8V. Supplied with PC software and instruction manual in storage pouch.

3. SPECIFICATION

Model No.: MC105
Rated Battery Voltage: 12V.
Rating Systems: CCA,BCI,CA,DIN,EN,GB,IEC,MCA,SAE.
Test Ranges: 20-300 CCA*CCA.
..... 20-300 CCA*BCI.
..... 20-300 CCA*CA.
..... 20-300 CCA*DIN.
..... 20-300 CCA*EN.
..... 20-300 CCA*GB.
..... 20-300 CCA*IEC.
..... 20-300 CCA*MCA.
..... 20-300 CCA*SAE.
..... By Battery Type JIS.
PC Compatibility: Windows 7,8,10.
Languages:..... English, Danish, Norwegian, Polish, Romanian.
*CCA-Cold Cranking Amps.
Operating Temperature 0 to 50°C
Storage Temperature -20 to 70°C

4. FEATURES



- 4.1. Up Key.
- 4.2. Enter Key.
- 4.3. Down Key.
- 4.4. Mini-USB Socket (in side of the product) Connect to computer via USB cable.
- 4.5. Battery connection cables with clips.
- 4.6. Exit Key.
- 4.7. LCD display.

5. OPERATION

5.1. Connecting the tester

- 5.1.1. Before testing make sure the battery terminals are really clean as grease and dust could lead to errors in the test results.
- 5.1.2. If the battery is still fitted to a motorcycle, make sure that all the electronics are off, and that the ignition is turned off.
- 5.1.3. The red clip is connected to the positive electrode and the black clip is connected to the negative electrode.
- 5.1.4. Ensure that the clips have a firm, secure grip on the battery terminals.
- 5.1.5. If the tester has a poor connection it will not be able to boot up. If this happens clean the battery terminals.

5.2. Product Set Up

- 5.2.1. Connect tester as above.
- 5.2.2. Press enter to scroll to Main Menu.

Main Menu
1. Quick Test
2. Battery in Vehicle
3. Out of Vehicle
4. Review Data
5. Print Data
6. System Setup

- 5.2.3. Press Down key to scroll down to System Setup, press enter.

System Setup
1. Language
2. Contrast
3. Tool Information

- 5.2.4. Select Language, press enter.

Main Menu
1. English
2. Danish
3. Norwegian
4. Polish
5. Romanian

- 5.2.5. Select Language required, press enter.
- 5.2.6. Reselect System Setup, select contrast.
- 5.2.7. Use Up and Down button to select contrast value, press enter to save selection and return to previous menu.
- 5.2.8. Select Tool information by pressing enter, press exit to return to main menu.

5.3. Quick Test

- 5.3.1. The Quick test can check the following: Voltage, CCA electronic resistance, rated CCA, Charging value, health value. Input the AH value which is marked on the battery label.
- 5.3.2. Press up/down key to select the Quick test, press enter to confirm.

Main Menu
1. Quick Test
2. Battery in Vehicle
3. Out of Vehicle
4. Review Data
5. Print Data
6. System Setup

- 5.3.3. Input the rated battery capacity- xxAH. In general , the battery capacity for 12V motorcycles is below 30AH.

Input AH value
8 A-H
Please input A-HR value on the battery label.

- 5.3.4. Press enter key to start test. The test result will show one of these as below. Battery test result has 1 of 5 outcomes as below:

Good Battery

Healthy:96%	110CCA
Charge:98%	12.54V
Internal R=24.66mΩ	
Rated:125A	
GOOD BATTERY	

There is no problem with the battery and is ok to use.

Good Recharge

Healthy:78%	80CCA
Charge:30%	11.20V
Internal R=37.2mΩ	
Rated:125A	
GOOD, RECHARGE	

Good battery but low current, recharge before use.

Replace

Healthy:46%	40CCA
Charge:80%	12.68V
Internal R=88.1mΩ	
Rated:125A	
REPLACE	

Battery is near end or at end of life, replace battery.

Bad Cell, Replace

Healthy:0%	0CCA
Charge:20%	10.64V
Internal R=100.2mΩ	
Rated:125A	
BAD CELL, REPLACE	

Battery interior damaged, bad cell or short circuit, replace battery.

Charge, Retest

Healthy:39%	100CCA
Charge:20%	12.08V
Internal R=80.1mΩ	
Rated:125A	
CHARGE - RETEST	

Unstable battery, recharge, retest. If the same test result appear after recharge and retest, the battery is damaged, replace battery.

5.4. Battery in motorcycle or battery out of motorcycle

Press Up/Down key to select battery location (in or out of motorcycle) then press Enter to confirm. (In motorcycle means battery is connected to motorcycle).

Main Menu
1. Quick Test
2. Battery in Motorcycle
3. Out of Motorcycle
4. Review Data
5. Print Data
6. System Setup

5.4.4.1. Battery Test in motorcycle

Select battery in motorcycle and press Enter key, to display this menu:

Test in Motorcycle
1. Battery Test

When the surface charge has been detected by the tester, it prompts 'SURFACE CHARGE, TURN LIGHTS ON.'

Turn lights on as prompted to eliminate the battery surface charge, the tester will then display the following message in a sequence:

Battery Test
1. Check surface charge. Turn lights on.
2. Leave headlights on for 10 seconds.
3. Turn headlights off.

The tester detects if the surface charge has been eliminated. Turn lights off as prompted, then press the Enter key. The tester will return to the automatic test procedure.

Select battery type

After the battery charge status has been selected, the tester will prompt to select the battery type i.e. Regular Flooded, AGM Flat Plate or AGM Spiral, Gel or EFB battery.

Battery Type
1. Regular Flooded.
2. AGM Flat Plate.
3. AGM Spiral.
4. GEL.
5. EFB.

Press Up/down key to select battery type, then press OK to confirm.

Battery system standard and rating

The battery tester will test each battery according to the selected system and rating. Use the Up/down key to select according to the actual system standard and rating marked on the battery. Refer to fig.2 below.



CCA: Cold cranking amps (shown in fig.2), specified by SAE and BCI, is the most frequently used value for starting a vehicle at 0°F (-18°C).

BCI: Battery Council International Standard.

MCA: Marine Cranking Amps Standard, effective starting current value at 0°C.

CA: Cranking Amps standard, effective starting current value at 0°C.

JIS: Japan Industrial Standard, displayed on the battery as a combination of the numbers and letters e.g. 55D23, 80D26.

DIN: German Auto Industry Committee Standard.

IEC: Internal Electro technical Commission Standard.

EN: European Automobile Industry Association Standard.

SAE: Society of Automotive engineers Standard.

GB: China National Standard.

Select Input
CCA

Rating range as following:

Measure Standard	Measure Range
CCA	20-300
BCI	20-300
CA	20-300
MCA	20-300
JIS	26A17-500D20
DIN	20-200
IEC	20-200
EN	20-300
SAE	20-300
GB	20-200

Input correct test standard and rating, press Enter key. The tester begins the test, 'TESTING' is displayed.

Setting Rate
500 CCA

It takes approximately 3 seconds to display the battery test result.

Battery Test Result

Battery test Result has 1 of 5 outcomes:

Good Battery

Healthy: 96%	110CCA
Charge 98%	12.54V
Internal R=	24.66mΩ
Rated:	125A
GOOD BATTERY	

The battery is OK to use.

Good, Recharge

Healthy: 78%	80CCA
Charge 30%	11.20V
Internal R=	37.2mΩ
Rated:	125A
GOOD RECHARGE	

The battery is good but has low current, recharge before using.

Replace

Healthy: 46%	40CCA
Charge 80%	9.68V
Internal R=	88.1mΩ
Rated:	125A
REPLACE	

The battery is near to, or has already reached the end of its useful life, replace battery.

Bad cell, replace

Healthy:0%	0CCA
Charge:20%	10.64V
Internal R=	100.2mΩ
Rated:	125A
BAD CELL - REPLACE	

Battery has interior damage, a bad cell or a short circuit, replace battery.

Charge, Retest

Healthy:39%	100CCA
Charge:20%	12.08V
Internal R=	80.1mΩ
Rated:	125A
CHARGE - RETEST	

Unstable battery, recharge, retest. If the same test result appears after recharge and retest, the battery is damaged, replace battery.

Note: If a 'Replace' result resulted from an 'In motorcycle mode', it may be that the motorcycle battery cable is not connected properly. Remove the battery cables and retest as Out of motorcycle mode, before making a decision to replace the battery.

Note: After testing to Exit, press the Exit key to exit to the Startup interface.

5.4.4.2. Battery out of motorcycle test

OUT-OF MOTORCYCLE means the battery connection to the motorcycle is removed.

Choose the battery out of motor cycle test option from the Main Menu.

Main Menu
1. Quick Test
2. Battery in Motorcycle
3. Out of Motorcycle
4. Review Data
5. Print Data
6. System Setup

Select Battery Type

After the battery charge status is selected, the tester will prompt to select the battery type, i.e. Regular Flooded, AGM Flat Plate or AGM Spiral, Gel and EFB battery.

Press Up/Down key to select battery type.

Press OK key to confirm.

Battery Type
1. Regular Flooded.
2. AGM Flat Plate.
3. AGM Spiral.
4. GEL.
5. EFB.

Battery System and Standard Rating

The tester will test each battery according to the selected system and rating.

Use Up/Down key to select the actual standard and rating marked on the battery, see fig.2, following Battery Standard descriptions and Rating Range chart.

Select Input
CCA

Input correct test standard and rating, press enter, tester starts to test, 'TESTING' is displayed, see below.

Setting Rate
500
CCA

It takes around 3 seconds to display the battery test result.

Battery Test Result

Battery Test Result has one of 5 outcomes:

Good Battery

Healthy: 96%	110CCA
Charge 98%	12.54V
Internal R=	24.66mΩ
Rated:	125A
GOOD BATTERY	

The battery is OK to use.

Good Recharge

Healthy: 78%	80CCA
Charge 30%	11.20V
Internal R=	37.2mΩ
Rated:	125A
GOOD RECHARGE	

Good battery but low current, recharge before use.

Replace

Healthy: 46%	40CCA
Charge 80%	9.68V
Internal R=	88.1mΩ
Rated:	125A
REPLACE	

The battery is near to or has already reached the end of its useful working life, replace battery.

Bad Cell, Replace

Healthy: 0%	0CCA
Charge 20%	10.64V
Internal R=	100.2mΩ
Rated:	125A
BAD CELL REPLACE	

Battery has interior damage, a bad cell or short circuit, replace battery.

Charge, Retest

Healthy: 39%	100CCA
Charge 20%	12.08V
Internal R=	80.1mΩ
Rated:	125A
CHARGE - RETEST	

Unstable battery, recharge, retest. If the same test result appears after recharge and retest, the battery is damaged, replace battery.

5.5. Review Data

5.5.1. Choose Review Data function.

Main Menu
1. Quick Test
2. Battery in Motorcycle
3. Out of Motorcycle
4. Review Data
5. Print Data
6. System Setup

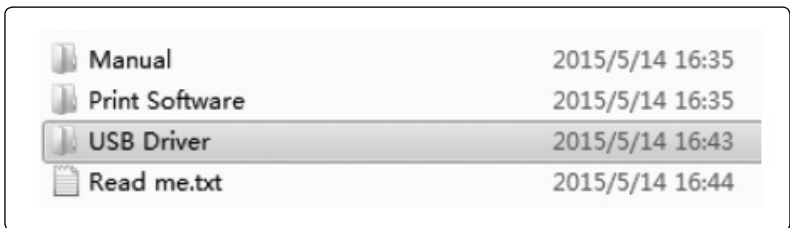
Check the history of the battery testing result.

Healthy: 96%	110CCA
Charge 98%	12.54V
Internal R=	24.66mΩ
Rated:	125A
GOOD BATTERY	

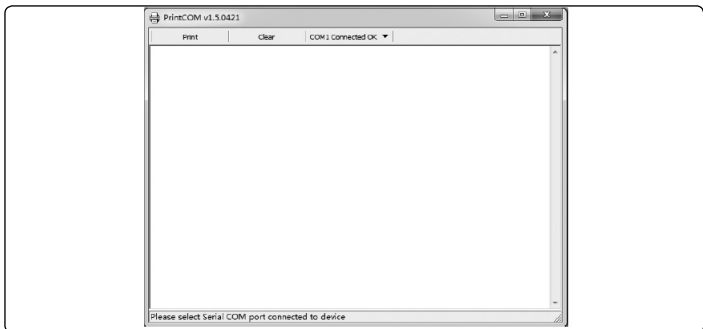
5.6. **Print Data**

5.6.1. Before choosing the print data function, it is necessary to connect the tester to the computer via USB cable. Then insert the CD.

5.6.2. First install the USB driver



5.6.3. Then open the print software.

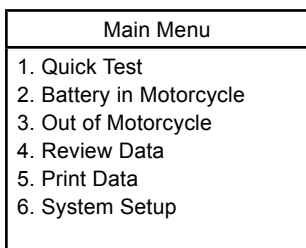


5.6.4. Choose the COM port no.

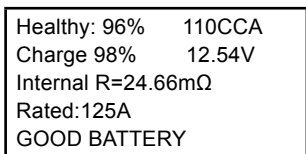


If there is some data history in the print software, clear it.

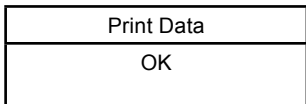
5.6.5. Choose Print Data from the menu.



5.6.6. Once the data is transferred to the computer, the print software will show the information.



5.6.7. The tester will display:



5.6.8. Press exit to return.

5.7. **System Setup**

Refer to section 5.2 above.

6. MAINTENANCE

6.1. Keep Battery Tester, leads, disc and instructions clean and store in a dry, childproof location.

Environmental Protection



Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment.

When the product becomes completely unserviceable and requires disposal, drain off any fluids (if applicable) into approved containers and dispose of the product and the fluids according to local regulations.

WEEE Regulations



Dispose of this product at the end of its working life in compliance with the EU Directive on Waste Electrical and Electronic Equipment (WEEE). When the product is no longer required, it must be disposed of in an environmentally protective way. Contact your local solid waste authority for recycling information.

NOTE: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

IMPORTANT: No liability is accepted for incorrect use of this product.

WARRANTY: Guarantee is 12 months from purchase date, proof of which will be required for any claim.



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