

# MCA-900 II

## Digital Thermometer Instruction manual

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The 2<sup>nd</sup> edition

JAPAN BONKOTE CO., LTD.



**BONKOTE**<sup>®</sup>

# Contents

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<b>1. Preface</b> .....	2
<b>2. Notes for safety</b> .....	2
<b>3. Specification</b> .....	3
(A) Name and Function	
(B) General Specification	
(C) Display	
<b>4. How to use</b> .....	4
(A)-1 Iron tip sensor unit (SAT-1)	
(A)-2 Replacement sensor (SC-006)	
(A)-3 How to measure iron tip temperature	
(B) Dip sensor (SC-007)	
(C) Surface sensor (SC-008)	
<b>5. Explanation of each function</b> .....	6
(A) Data hold function	
(B) MAX hold function	
(C) Selecting resolution function	
<b>6. Replacement of battery</b> .....	7
<b>7. Calibration</b> .....	7
<b>8. Guarantee and After sale service</b> .....	7
(A) Guarantee	
(B) After sales service	

## 1. Preface

Thank you very much for purchasing Digital thermometer MCA-900II.

For using this machine properly, please read through this instruction manual before use. Also, keep this instruction manual after read.

## 2. Notes for safety

Notes for safety should be followed completely for using this machine safely.



### Caution

- To avoid electrical shock, do not use this thermometer to measure temperature of the parts on a circuit.
- To avoid damage or fire, do not use this thermometer for measurement in microwave ovens, or microwave hearth.

### ----- Notes -----

- Using this machine near heating equipment, battery consumption will be faster than using it with normal temperature, also it will have cause of damage and plastic melting of the body part.
- Refrain from the place where would be direct sunshine for Display.
- Considering condensation, be careful to use this machine in environment that has rapid temperature change.
- Working environment for this machine is 0~40°C, and under 80%RH.

### ----- Sensor -----



### Important

- Optional thermocouple sensor (K type) is necessity for measurement.

### ----- Maintenance -----



### Warning

- For removing stain on the body, use a dried soften cloth or the cloth which is squeezed completely after soaked in neutral detergent. Do not use cloth that has much moisture. Using volatile solvent like alcohol, thinner and benzene is prohibited.

### 3. Specification

#### (A) Name and Function

	①	Display
	②	POWER button ON/OFF
	③	HOLD button Holding measured value
	④	MAX button Holding highest measured value
	⑤	0.1°/1° button Selecting a display resolution
	⑥	Soft case

#### (B) General specification

Resolution	0.1°C (0 ~ 199.9°C) / 1°C (whole measurement range)
Measurement range	0 ~ 1000°C
Sensor	Thermocouple K
Measurement accuracy	± (0.3 % rdg + 2°C) (23°C ± 5°C body only)
Display	3.5 Digit LCD Display
Power source	DC9V (Battery 006P 1pcs)
Battery life	250hrs (at continuous use of a brand new alkaline battery )
Working environment	0 ~ 40°C / under 80 % RH
Dimension	80W x 48D x 156H mm (including a soft case)
Weight	305 g (including a battery)

#### (C) Display

	188.8	Temperature display
	°C	degree Celsius
	D-H	Holding measured value
	MAX	Holding highest value
	+ -	Low battery indication
	OL	Un-indicatable

## 4. How to use

### (A)-1 Iron tip sensor unit (SAT-1)



- ① Connect the iron tip sensor unit (SAT-1) to MCA-900 II after confirmation of the polarity.
- ② Turn on the power switch. Approximate the room temperature will be indicated at the display of MCA-900 II.
- ③ Preparation is done. Measurement is ready.

### (A)-2 Replacement sensor (SC-006)



Impurities of solder dust and flux will be stained to iron tip sensor (SC-006). Keep SC-006 clean in order to measure the temperature accurately.

Replacement standard is about 300 times measurement. (It is depends on each condition.)

Replacement method is just pull it out and insert the new one.

Please make sure to put into correct pole. Red color paint is + pole.

### (A)-3 How to measure iron tip temperature



- ① Put small amount of solder on the iron tip to measure the temperature.
- ② Place the iron tip on the center of the sensor. (Refer to the left photo) Make sure to place the tip on the almost same area of the sensor every time.
- ③ When you measure the temperature more than once, follow the above order and

start measurement at the room temperature.

- ④ The measurement time is approximately 3 seconds per time in order to get the accurate value.

**(B) Dipping sensor (SC-007)**



※ Measurement range Room temperature ~ + 800°C

- ① Connect the dipping sensor to MCA-900 II after confirming the polarity.
- ② Turn on the power switch. Approximate the room temperature will be indicated at the display of MCA-900 II.
- ③ Preparation is done. Measurement is ready.

**(B) Surface sensor (SC-008)**



※ Measurement range Room temperature ~ + 500°C

- ① Connect the dipping sensor to MCA-900 II after confirming the polarity.
- ② Turn on the power switch. Approximate the room temperature will be indicated at the display of MCA-900 II.
- ③ Preparation is done. Measurement is ready.

## 5. Functions

### (A) Data hold function

- ① Push 『HOLD』 key, **D·H** is turned on and indicated value is hold.
- ② Push 『HOLD』 key again, **D·H** is turned off and release the function.

### (B) MAX hold function

- ① Push 『MAX』 key, **MAX** is turned on and highest measured value is indicated and hold.
- ② Push 『MAX』 key again, **MAX** is turned off and release the function.

### (C) Select resolution

- ① Push 『0.1°C/1°C』 key to select resolution at display.

※ Indication range of 0.1°C resolution is 0~199.9°C,  
The value other than it, **OL** will be indicated on a display.  
For soldering work, we recommend 1°C resolution .

## 6. Replacement of battery

When battery is consumed,  will be indicated at display.

Please replace to a new battery (006P:9V) with following order.  
A consumed battery cannot measure the temperature accurately.

- ① Take the main body out from the soft case.
- ② Open the stand for lengthwise.
- ③ Remove screws (3pcs) with a cross-head screwdriver.
- ④ Take out the operation part from the bottom case.  
Make sure not to touch other parts.
- ⑤ Replace to a new battery (Make sure correct electrode pole)
- ⑥ Assemble with opposite order.

## 7. Calibration

Optional calibration service is available, and we recommend to implement it once a year. Calibration certification, Calibration test reports and Traceability sheet come with the calibration. If you have Calibration requests service, please contact your dealer or us.

## 8. Guarantee and after sales service

### (A) Guarantee

Our products are shipped after sever factory tests & inspections.

But if you find malfunction or defects due to problems in workmanship or transportation, please contact with your dealer or us. The guarantee period of your system is one year after your purchase, except for replacement parts.

### (B) After sales service

When you think your system does not work properly, read this manual again to check. If still troubles are not solved, please contact your dealer or us.

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