



HAKKO 191
THERMO METER

INSTRUCTION MANUAL

1. Specifications

① Body

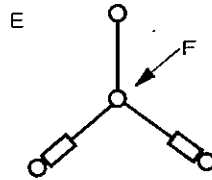
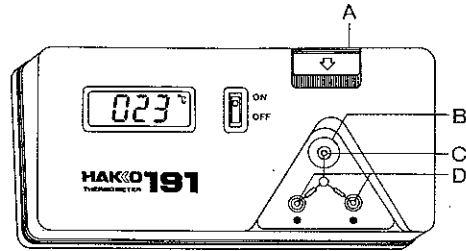
	Centigrade Type	Fahrenheit Type
No.	191	191B
Resolution	1°C	1°F
Range of Measurement	100°C—600°C	0°F—1200°F
Applied Sensor	K(CA) Thermocouple	
Precision	±3°C (in 300°C—500°C range)	±6°F (in 572°F—932°F range)
Display	a) 3.5—digit Liquid Crystal Display b) Battery Alarm <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> c) Burn out <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
Power Supply	006P, 9V Dry Battery	
Battery Life	More than 150 hours	
Outer Dimensions	160(W) × 45(H) × 80(D) mm 6.3 × 1.8 × 3.1 in	
Weight	Approx. 200g (0.441 lbs.)	
Environmental Temperature Range	0°C—40°C 0°F—104°F	

② Accessories

- 10 Sensors
- 006P 9V Dry Battery
- Ring Plate

①

2. Name of Parts

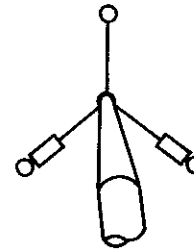


- A. Slide Button
- B. Ring Plate
- C. Slide Pole
- D. Terminal
- E. Sensor
- F. Measuring Point

3. Operating Instruction

- ① Open the battery case on the back of the unit and insert the battery. Be sure the battery is properly aligned.
- ② Attach the ring plate to the slide pole.
- ③ Attach the red side of the sensor to the red terminal and blue side to the blue terminal. Push the slide button and attach the remaining to the terminal.
- ④ Turn the power switch on and check the display. When the display indicates room temperature, it's ready for use.

⑤



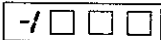
Place fresh solder on the tip and apply the tip to the point to be measured. The temperature will be displayed in 2 to 3 seconds.

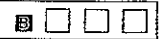
- ⑥ Turn the unit off while it is not use.

4. Precaution

- ① The sensors are made of very thin (0.2φ) CA wire. Handle them with care. Do not apply heavy pressure or they will break.
- ② The body is made of plastic. Do not touch the body with the soldering tip.
- ③ The measuring point is coated with a special metal alloy which will wear away after repeated measurements, resulting in inaccurate readings. Replacing the sensor with a new one will restore the measuring accuracy. The sensor has a useful life of approximately 50 readings.
- ④ Use alcohol to remove any flux adhering to the terminal. Do not use thinner or benzene.

③

⑤ If the display shows  the sensor is burned out. An indefinite number will be displayed in the last three places. Replace the sensor with a new one.

⑥ If the display shows  the battery is dead.

The battery must be replaced to a new one.

5. Replacement Parts / Option

● Replacement Parts

Sensors (10 units)

No.	Name	
191-211	Sensor	10pcs.

● Option

No.	Name
A1310	* Temperature Probe

* For measuring the temp. of solder in the soldering pot. Remove the temp. sensor and connect to the terminal. (Place the red end on the side with the red dot, and blue end on the other side of the terminal.) Dip the tip of probe into the solder.

*Specifications subject to change without notice.



HAKKO CORPORATION

HEAD OFFICE

TEL: +81-6-6561-3225 FAX: +81-6-6561-8466
<http://www.hakko.com> E-mail: sales@hakko.com

OVERSEAS AFFILIATES

U.S.A.: AMERICAN HAKKO PRODUCTS, INC.

TEL: (661) 294-0090 FAX: (661) 294-0096

Toll Free (800)88-HAKKO

^{4 2 5 5 6}
<http://www.hakko.usa.com>

HONG KONG: HAKKO DEVELOPMENT CO., LTD.

TEL: 2811-5588 FAX: 2590-0217

<http://www.hakko.com.hk>

E-mail: info@hakko.com.hk

CHINA: HAKKO DEVELOPMENT CO., LTD.

TEL: (020)8135-0112, 8135-0113 FAX: (020)8135-0181

<http://www.hakko.com.hk>

E-mail: hakko@public.guangzhou.gd.cn

TAIWAN: HAKKO DEVELOPMENT CO., LTD.

TEL: (02)8512-4588 FAX: (02)8512-4258

E-mail: hakko110@ms31.hinet.net

SINGAPORE: HAKKO PRODUCTS PTE., LTD.

TEL: 6748-2277 FAX: 6744-0033

<http://www.hakko.com.sg>

E-mail: sales@hakko.com.sg

MALAYSIA: HAKKO PRODUCTS SDN BHD

MALAYSIA HEAD OFFICE

TEL: (03)5569-5223 FAX: (03)5569-5221

E-mail: hakkold@tm.net.my

PENANG BRANCH

TEL: (04)507-0988 FAX: (04)507-0999

E-mail: hakkopg@tm.net.my

JOHOR BAHRU BRANCH

TEL: (07)236-7766 FAX: (07)237-4655

E-mail: hakkobj@tm.net.my

PHILIPPINES: HAKKO PHILS TRADING CO., INC.

TEL: (02)825-5404, 826-6165 FAX: (02)829-3769

E-mail: hakkophil@pacific.net.ph

INDONESIA: P.T. HAKKO PRODUCTSTAMA INDONESIA

JALAN LAKSAMANA BINTAN

TEL: (778)466-580 FAX: (778)466-581

E-mail: hakkobtm@talkom.net

JAKARTA BRANCH

TEL: (21)532-4083 FAX: (21)532-4082

E-mail: hakkoid@cbn.net.id