

DT-570

SOLDERING IRON CHECKER

Thank you for purchasing the HOZAN DT-570 SOLDERING IRON CHECKER. With proper care and handling, this fine instrument will provide years of trouble-free operation. Please read this entire instruction manual carefully before attempting to place this instrument in service. Please keep this instruction manual available for reference.

Identification of parts and contents

Diagram labels:

- Jack
- Display
- Mode selector
 - Ω : Ground resistance measurement
 - mV : Leakage current voltage measurement
- Sensor plate
- Battery lamp
- Power switch

Accessories

- 2-pin conversion adapter
- Ground cord with plug
- 9V Laminated (6F22) battery

The battery is not warranted in its life since just a testing battery.

Utilize this device to check soldering irons' condition and keep it good always through measuring leakage current voltage and ground resistance of them.

This is applied exclusively to soldering irons which have grounding circuits.

Specifications

Leakage voltage	Resolution	0.1 mV
	Measurement range	0 to 199.9 mV
	Accuracy	$\pm(5\%rdg + 1 dgt)$
Ground resistance	Resolution	0.1 Ω
	Measurement range	0.1 to 199.9 Ω
	Accuracy	$\pm(5\%rdg + 1 dgt)$
Max. readout	199.9 count (Burnout: 1)	
Sampling rate	2 times/sec.	
Power supply	9V Laminated (6F22) battery \times 1	
Battery life	Approx. 20 hours (continuous use) (with a "low voltage" warning)	
External dimensions	71(W) \times 31(H) \times 125(D) mm (not including the protruding part)	
Weight	300g	

Warning and caution symbols

These symbols are used throughout the instruction manual to alert the user to potential safety hazards as follows :

⚠ Warning ... Notice when incorrect handling could cause the user's death or serious injury.

⚠ Caution ... Notice when incorrect handling could cause injury to the user or material damage.

Even if the instructions do not have **⚠ Caution** mark, there are some possibilities for a

Precautions

⚠ Caution

1. The sensor plate is extremely sensitive to shock. Do not press the tip of the soldering iron unnecessarily against the sensor plate when measuring.
2. Precise measurement can not be performed if the sensor plate fixing screws are loose. Make sure that the sensor plate is fixed securely prior to use.

Preparation

1 Load a battery.

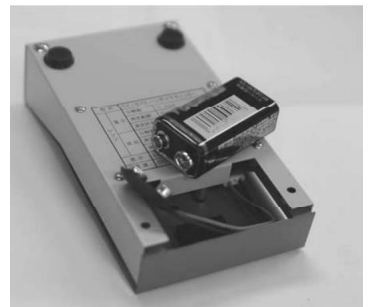
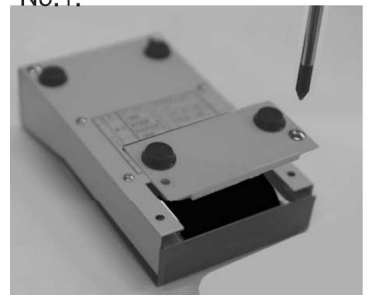
Open the lid of the battery compartment located on the bottom of the unit.

When remove the lid, binding with the body and the front panel could be loosened together, but they will not fall apart unless loosen the other screws.

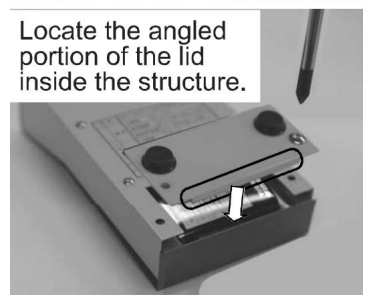
Connect a 6F22 battery to the terminals correctly.

Return the lid to its former state.

Use a Phillips screwdriver No.1.



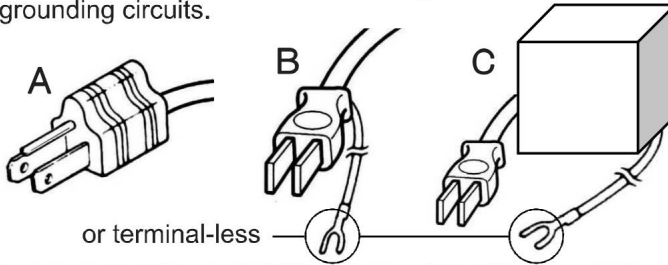
Locate the angled portion of the lid inside the structure.



Preparation

2

This device can be used for soldering irons which have grounding circuits.



Soldering irons which have no grounding circuits are not applicable.



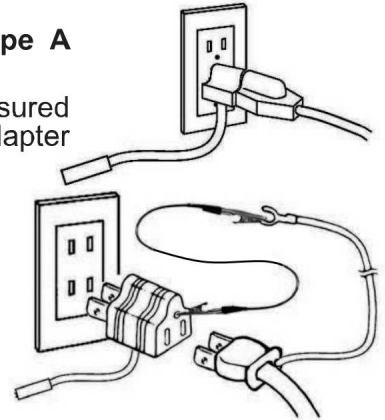
Connecting

When soldering irons which have power plugs type A (illustration A above) :

Connect the power plug of the soldering iron to be measured to the 2-pin adapter provided, and connect the 2-pin adapter to the wall outlet.

When soldering irons which have power plug type B or C (illustration B or C above) :

Connect similarly as when plugs type A after connecting the soldering iron's ground terminal and the 2-pin adapter's cavity using an alligator clip and such.



3

If the soldering iron to be measured has temperature control function, set it to maximum temperature.

Operation

1

Connect the plug of one side of the ground cord with plug provided to the jack on the top of the unit.

2

Select the desired mode, mV (leakage current voltage measurement) or Ω (ground resistance measurement), by mode selector.

3

Depress the power switch.

Be sure that the BATTERY lamp does not illuminate. If it illuminates or the display shows no letters, change the battery to a new one.

4

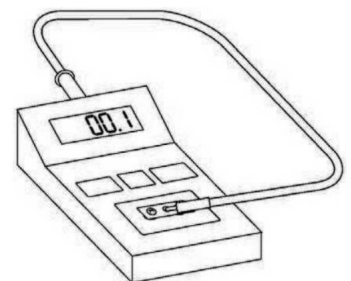
Apply the plug of the other side of the ground cord with plug connected with the jack to the sensor plate. The numbers indicated on the display will get closer to lower value gradually and be stable. Record that value.

When mV mode, let the read value... [V₁]

When Ω mode, let the read value... [R₁]

These values are the basic points of your using environment.

If the ground cord with plug is not connected, strange numbers will displayed. But this in not malfunction.



Operation

5 Connect the plug of the ground cord with plug which is connected with the DT-570 to the socket of the 2-pin adapter.

6 Turn on the soldering iron and wait until the tip is heated. Then tin the tip with a small amount of solder.

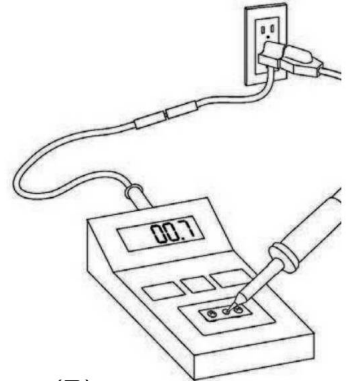
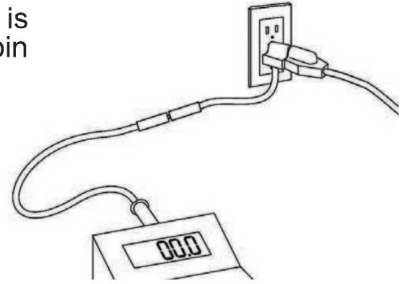
7 Apply the soldering iron's tip to the center of the sensor plate and heat the solder on the sensor plate until it is melted enough.

8 Wait until the displayed value is stable, and record it.
Read the value when the temperature of the soldering iron reaches the highest temperature; read while heating enough if the soldering iron has no temperature control function.

When mV mode, let the read value... [V₂]
When Ω mode, let the read value... [R₂]

9 Find the leakage current voltage (V) and the ground resistance (R) through the formula below.

Leakage current voltage $V=V_2-V_1$ (unit : mV)
Ground resistance $R=R_2-R_1$ (unit : Ω)



Maintenance and Calibration

- The sensor plate is a consumable. Replace when the value R₁ becomes large.
[Replacement part : DT-570-1 Sensor plate]
- The sensor plate will be worn using rather lead-free solder than lead solder.
- Wipe gently flux and such stuck on the painted surface of the unit using alcohol. Do not use thinner, naphtha or such.
- We attach a calibration certificate to DT-570-TA. Please ask HOZAN through your dealer to re-calibrate after using a definite period.
Refer to your dealer for that expense and details.

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