**FN-1010** and **FG-100B**
equipped with communication function.
Pioneer **the future** of soldering with advanced
**IoT technology**

IoT

HAKKO

**FN-1010**
**FG-100B**



**Improve traceability!**

**Minimize human error!**

**Optimize soldering conditions**


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# FN-1010

**IoT capable soldering station**

FN-1010 can control tip temperature more strictly and precisely.
It also can collect and visualize the information of manual soldering.




AUTO HOLD function

# FG–100B

**Thermometer**

It will automatically notify the completion of measurement.
It can minimize individual differences in the measurement process.

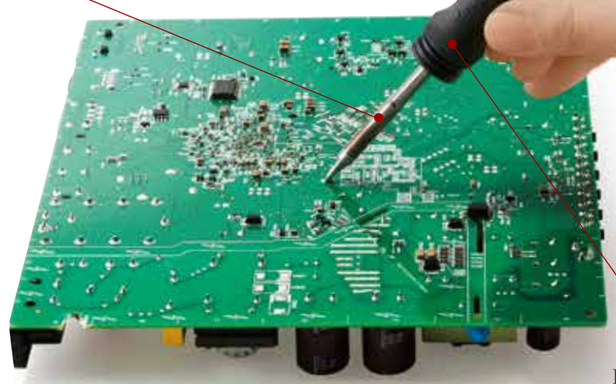
# FH-210

**User-friendly iron holder with safety design**

- Tip cleaner that prevents solder balls
- Tip replacement without heat resistant pad

**Possible to collect a variety of information of manual soldering**

Informaiton such as tip shape, serial number, number of loads, and total time of power supplied, can be collected.



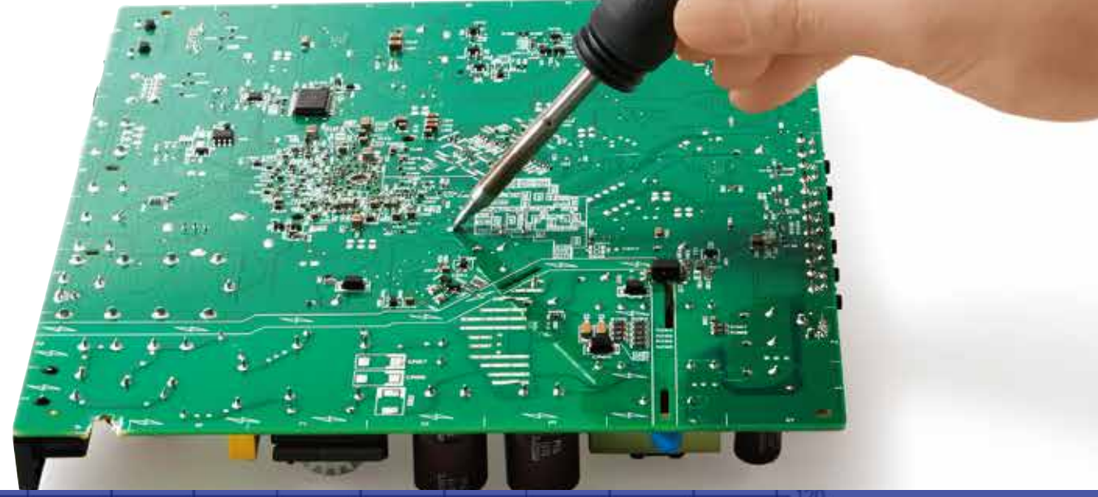
**Free fall detection**

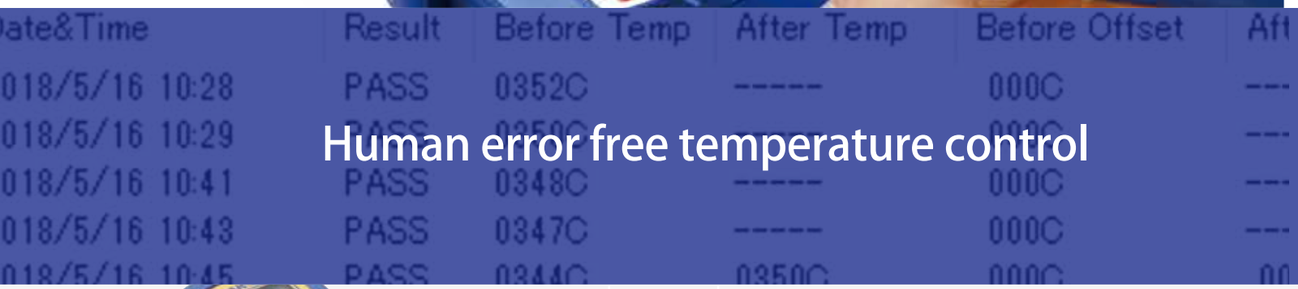
Built-in motion sensor detects free fall and cuts the power

# FN-1101

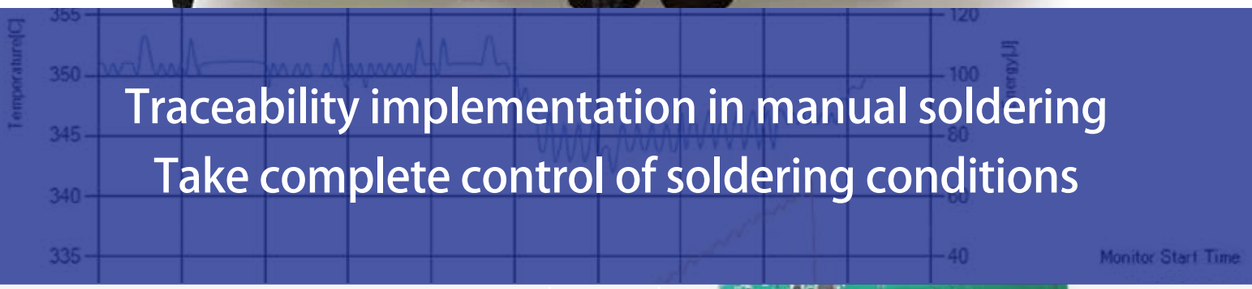
**T36 series soldering tip equipped with memory chip and soldering iron equipped with motion sensor**

The memory chip can collect and record information of manual soldering in real time.
The motion sensor detects when an iron is dropped and cuts the power for safety purposes.




# Human error free temperature control




# Traceability implementation in manual soldering
# Take complete control of soldering conditions

**1**

### Measure tip temperature

Tip temperature measurement can be completed automatically by using AUTO HOLD or MAX HOLD function of FG-100B.

**2**


### Send measurement result

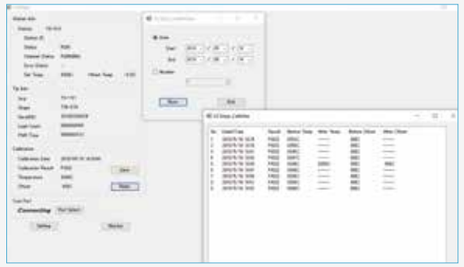
Measurement result can be sent to FN-1010 through infrared.

**3**


### Automatic calibration & off-set

Automatically determine whether or not measurement result falls in the range, which needs to be pre-set. If in the range, it will go back to operation mode, and if out of the range, it will automatically calculate off-set value and make the off-set.

**4**

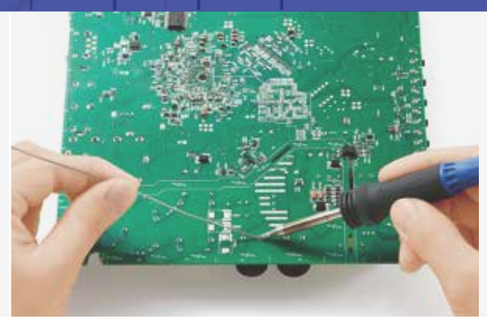


### Automatically record results of temperature measurement, calibration and off-set

When measurement result falls in the range, it will recorded as "PASS".
The measurement result along with off-set value will be also recorded.

### Collect information of manual soldering

- Tip shape
- Serial number
- Number of loads
- Total time of power supplied
- Set temperature
- Amount of energy supplied
- Type  of solder alloy (Lead-Free/Leaded)



**1**

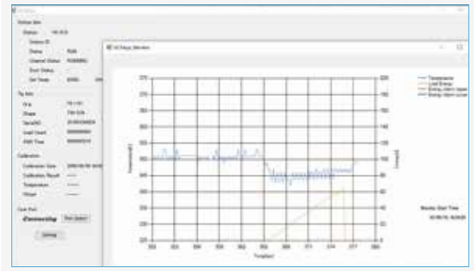
### Colllect and save information in real time

Digitize energy supplied from soldering tip during soldering operation


**2**

### Visualize and control soldering process

It is now possible to visualize and control invisible factors of soldering
Collected information can be utilized to optimize soldering conditions



**3**

# T36 series soldering tip equipped with memory chip

Unit : mm

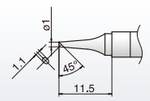
**T36-B**


A

**T36-B2**

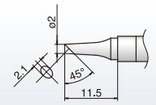

B

**T36-BC1**



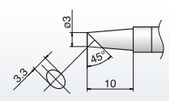

C

**T36-BC2**



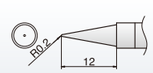

B

**T36-BC3**



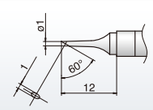

D

**T36-BL**



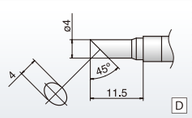

B

**T36-C1**



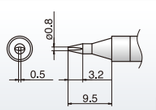

C

**T36-C4**



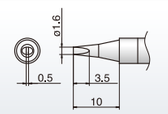

D

**T36-D08**



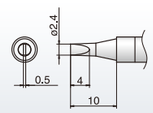

A

**T36-D16**



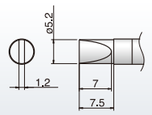

A

**T36-D24**



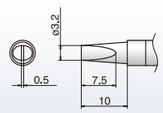

A

**T36-D52**



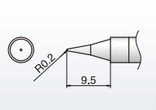

E

**T36-DL32**



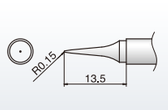

E

**T36-I**



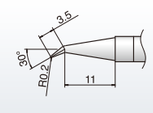

A

**T36-ILS**



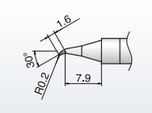

C

**T36-J02**



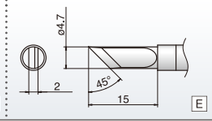

B

**T36-JS02**




A

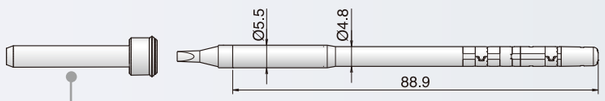
**T36-K**




E

## Nozzle assemblies for $N_2$ Soldering Iron

Nozzle assemblies make the optional iron FN-1102 capable with $N_2$ System.




**Nozzle assemblies**

A B5233 B B5234 C B5235 D B5236 E B5237

# FN-1010 ESD SAFE

## Packing List

**IoT Capable Soldering Station**

- Station
- Soldering Iron FN-1101
- Iron holder FH-210
- Tip cleaner FT-401 (with cleaning wire)
- Power cord
- Instruction manual

## Specification

| | |
|---|---|
| Model No. | FN-1010 |
| Power consumption | 100 W |
| Temperature range | 50 to 450℃ |
| Temperature stability | ±3℃ at idle temperature |

**Station**

| | |
|---|---|
| Output voltage | AC 21V |
| Dimensions | 104 (W) × 138 (H) × 152 (D) mm |
| Weight | 1.9 kg |

**Soldering Iron**

| | |
|---|---|
| Power consumption | 95 W (21 V) |
| Heating element | Composite heater |
| Cord length | 1.2 m |
| Total length* | 180 mm (with 2.4D tip) |
| Weight* | 32 g (with 2.4D tip) |

* Total length and weight exclude cord.
* Delivered with the resistance set to 2 Ω or less and the leak voltage set to 2 mV or less.

# FG-100B

## Packing List

**FG-100B Thermometer with Auto-measurement function**

- Unit
- 006P 9V Dry battery (For trial)
- Sensor (qty 10)
- Instruction manual

## Specification

| | |
|---|---|
| Model No. | FG-100B |
| Power supply | 006P 9V dry battery (alkaline cell recommended) |
| Temperature resolution | 1℃ |
| Temperature measurement range | 0 to 700℃ |
| Temperature precision | ±3℃ (300 to 600℃), ±5℃ (in other ranges) |
| Temperature sensor* | K (CA) type thermocouple |
| Display | LCD : 3 1/2 digits |
| Operating environment | Ambient temperature/humidity range : 0 to 40℃, 20 to 90%RH (without condensation) |
| Environmental conditions | Applicable rated pollution degree 2 (According to IEC/UL 61010-1) |
| Dimensions** | 68 (W) × 140 (H) × 38 (D) mm |
| Weight*** | 125 g |

* The temperature sensor (No. 191-212 or No. 191-212C) can only be used to measure temperature below 500℃. To measure higher temperature, use an applicable temperature probe.
* Dimensions exclude protrusions.
* Weight excludes battery

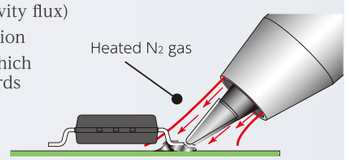
## Option


$N_2$ Soldering Iron
No. FN-1102

### $N_2$ System

Heated $N_2$ gas discharged from the tip end produces three effects. As a result, solderability increases, which allows you to enjoy the following advantages.

- Compatible with no-clean soldering (low-activity flux)
- Reduces soldering time
- Reduces tip oxidation
- Solve the insufficient heat supply problems which may occur during soldering of multilayer boards
- Relieves loads applied to heat-sensitive parts
- Reduces cracking of multilayer ceramic capacitors by thermal shock





Interface Card (USB type, with cable)
No. B5210

Interface Card (RS232C type, with cable)
No. B5211

Interface Card (LAN type)
No. B5212