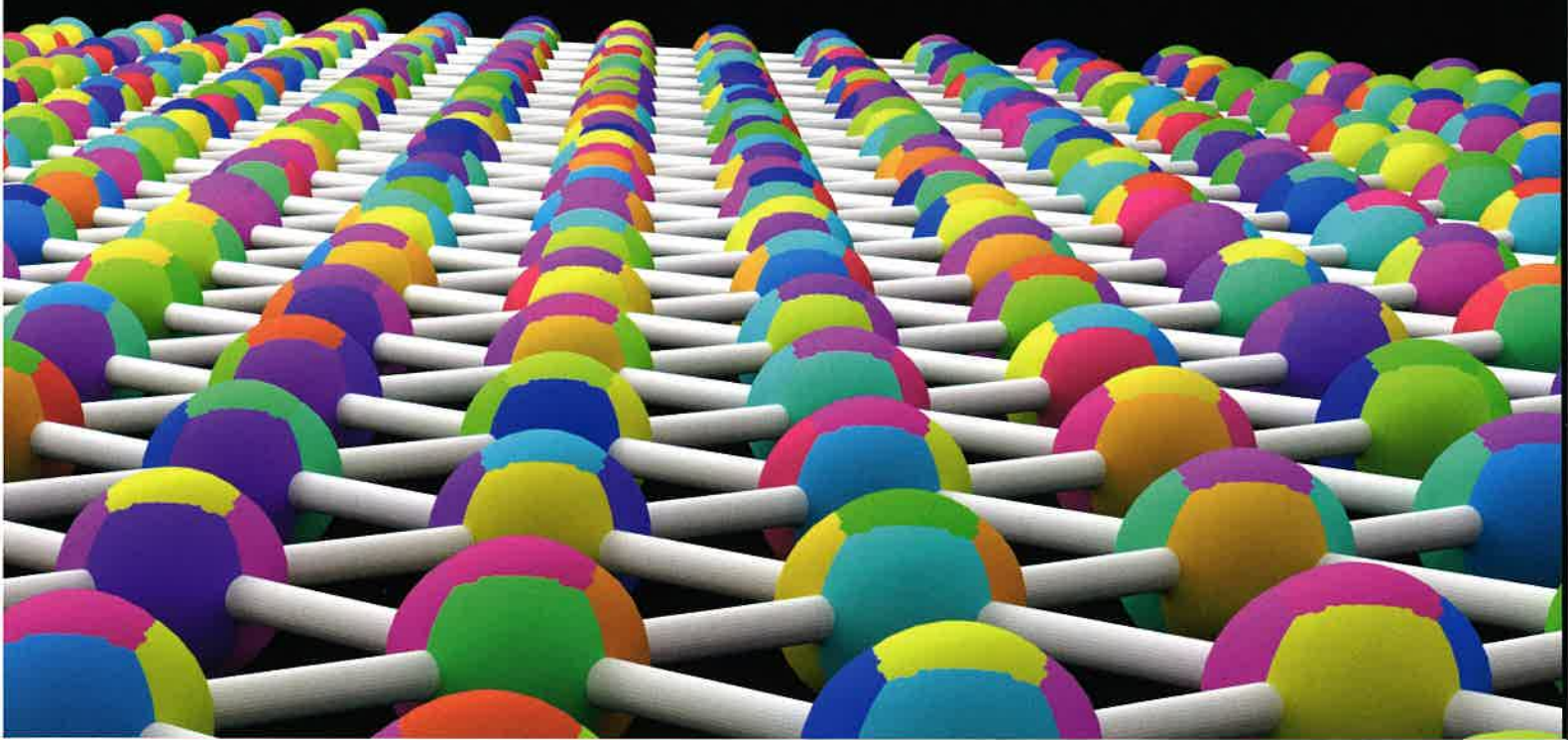


MALCOM

MALCOM COMPANY LIMITED



NEW

Reflow Checker Memory Unit with Substrate Vibration Monitor Model: RCX-V



[Features]

- Two Vibration modules on a PC board, measuring in a reflow oven.
- Check the status of a PC board when moving from machine to machine.
- Analyze defective soldering due to Vibration.
- Measure the vibration from the entrance to exit of a reflow oven.
- How variances in wind speed affects Vibration.

NEW

Reflow Checker Memory Unit with Wireless LAN Connection Model: RCX-R



[Features]

- You can change the device settings while checking the temperature profile.
- Check the temperature profile in real time on a PC.
- Increase efficiency of studying temperature profiles.
- The built-in memory function avoids losing data.
- Complies with wireless LAN standards.

Compact Reflow Checker Model: RCP-200



[Features]

- Compact design, High heat resistance, Excellent performance, and Data direct transfer to a PC.
- Malcom's unique Heat Resistant Micro Connectors enable 6 points measurement.
- The GOLD color surface reduces radiant heat, increasing heat resistance.

REFLOW CHECKER & FLOW PROFILER

Malcom offers you New Concept Measurement System of Reflow Oven & Flow Soldering.

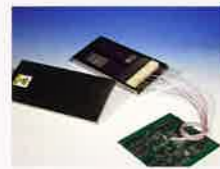
Reflow Checker (Modular Type) RCX series

Add your choice of Module to RCX-1 memory unit



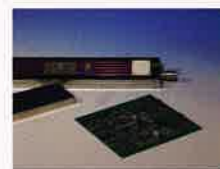
RCX-S Reflow Checker Memory Unit (6 channels)

- Thermocouple error check function is equipped.
- Memorize up to 20 profiles, making it possible for continuous measurement of some production lines.
(Please fully cool down RCM-S memory unit before next measurement.)
- AAA batteries are available.
- Built-in Battery monitor function.



RCX-T Reflow Checker Memory Unit with Additional 6 channels

- Add RCX-T Reflow Checker Memory Unit with Additional 6 channels to RCX-S Reflow Checker Memory Unit (6 channels), providing 12 points measurement.
- Can be used as 12 channels to study profiles, for evaluation, trial and daily production, employed as 6 channels.



RCX-O Reflow Checker Memory Unit with O₂ Concentration Monitor

- Measure O₂ Concentration of the important point on a PC board.
- Take measurement in the same reflow conditions as that of during production.
- The measurement range is selectable. (50 ppm~5,000 ppm or 1,000 ppm~10,000 ppm)



RCX-C Reflow Checker Memory Unit with Observation Monitor

- A Removal Camera is directly mounted on a PC board, which offers viewing from various points.
- Monitoring from upper, side & diagonal are also possible with a Imaging Mirror.



RCX-W Reflow Checker Memory Unit with Air Velocity Monitor

- A wind speed sensor mounted on a PC board measures wind speed of the important point.
- Take measurement in the same reflow conditions as that of during production.
- Measure wind speed from upper or side directions.

Flow Profiler Model: FCX-50

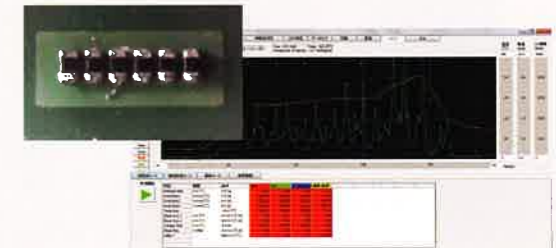


Best choice of Flow Soldering management for lead-free solder

[Features]

- Long thermocouples are unnecessary.
Easy creation of temperature profile for a solder bath.
- Thermocouple 0.1 φ is optimum for flow soldering, realizing quick response.
- Dedicated software [TAM-60] analyzes Solder Temperature and Dip Time from various angles.

TMR System Program Model: TMR-1



TMR system management software, built-in Temperature Profile Prediction function.

[Features]

- Simultaneously display Profiles and Data of Temperature, Wind Speed, O₂ Concentration, and Camera image on the same screen.
- Temperature Profile Prediction function offers easy creation of reflow oven set conditions.
- The OK range and etc. on a profile screen enables to see the test results easily.

Easy Attachment Thermocouple



[Features]

- Easy attachment thermocouple offers simplified attachment work and enhance accuracy of temperature measurement.
- Attachment by a smaller amount of solder or adhesive is possible by a small copper plate welded to the tip of thermocouple.
- Everyone can attach thermocouple to PC board with ease.

Spiral Viscometer PCU-200 series



World Standard for Solder Paste Quality Control,
JIS, IEC, ANSI Standard

- [Features]
- Patented Spiral-Pump sensor provides quick, easy, and repeatable measurements.
 - Continuous measurement of newtonian and non-newtonian fluids with constant shear rate and shear time.
 - Automatic control of measurement according to JIS standard (PCU-203 & 205) regardless of operator skill.
 - Built-in printer allows logging of acquired measurements.

Spiral Viscometer Model: PC-10



World Standard for Solder Paste Quality Control
[Features]

- Measure a variety of Low Viscosity to High Viscosity fluids.
- Malcom's Unique Spiral Pump Sensor is employed, enables for continuous measurement of non-Newtonian fluid reproducibly.
- Dedicated software easily tests Flow Characteristic.

Solder Paste Softener



Model: SPS-2000

World's First, built-in temperature monitoring system makes solder paste in the best condition, regardless of difference of the temperature at the time of operation start, room temperature, viscosity of solder paste.

- [Features]
- High speed revolution, approx.1000rpm, softens solder paste in a short time.
 - Built-in auto-balance system adjusts the balance automatically depending on solder paste weight.

Vacuum Mixing System (Syringe Type) Model: SY-8V



World's First, uniformly stir phosphor and silicone removing air bubbles as they are in syringes.

- [Features]
- Variable angle rotation method makes materials with different specific gravity stirred uniformly.
 - 5~1800cc size syringe is usable.
 - A built-in vacuum system removes submicron bubbles.



SPIRAL VISCOMETER

Spiral Viscometer Model: PCU-02V



Malcom's Unique Spiral Sensor enables to measure Viscosity and Thixotropy with 0.2cc, Small Amount of Sample. JIS Standard

- [Features]
- PCU-02V is a optimum device for Expensive Materials Testing & Analysis.
 - Measure materials having high Thixotropy with good repeatability. (constant Shear rate & time)

Spiral Viscometer Model: PM-2A



A hand-held Spiral Viscometer with Spiral Sensors.

- [Features]
- Continuously measure high thixotropic fluid with high repeatability (constant shear rate & time)
 - Easy-to-see digital display
 - Wide measurement range.
 - Equipped a temperature sensor.

MIXING SYSTEM

Solder Paste Softener



Model: SPS-1•SPS-2

- [Features]
- Soften solder paste as it is in a commercially available container, no longer concerned about oxidation and humidity.
 - Automated operation assured gentle softening, and unlike hand mixing, provides even consistency.
 - 10~20 minutes operation enables to use even solder paste immediately after taking out from a refrigerator.

Dip Tester Model: DS-10 / DS-10P



[Features]

- Dip Tester for Selective Wave Soldering is launched.
- Equipped with a New Dip Time Sensor, providing more accurate measurement.
- Transfer data to a PC by USB, creating temperature profile.
- Dedicated software realizes high level management of flow soldering.

SPECIFIC GRAVITY CONTROLLER

Solder-Paste Print Inspection System Model: TD-7A



Automated Table-Top Inspection System for measuring Paste Height, Width, Area and Volume.

- [Features]
- Active Slit-Laser scans the board, and displays a full 3D image.
 - Multi-colored LED illuminates using 16 million colors, making it possible to measure various kinds of PC Boards accurately.
 - Gerber data program allows for speedy data inspection.

Solder Impurity Checker Model: STA-2



Quality Control of Flow Soldering using Lead Free Solder

- [Features]
- Follow RoHS Directive (WEEE : Directical on Waste from Electrical and Electronic Equipment, Pb mixed rate is under 0.1 %)
 - Pb measurement accuracy is +/- 150 PPM.
 - Control Pb mixed rate in lead free solder.

Flux Controller Model: MS-9C



Automated control of Specific Gravity and Level of Flux.

- [Features]
- Specific Gravity, Level, Temperature sensors, and Bob automatically control flux.
 - 1/1000 digit display of Specific gravity and flux temperature are shown on the digital display.
 - The exclusive features of MS-9C are 1/10000 digit display of Specific gravity, built-in Moisture compensation circuit (0% conversion) and RS-232C output connector.

Specific Gravity Controller Model: MD-9900



Continuously observe the specific gravity of liquid.

- [Features]
- Upper and lower limit contact output.
 - Temperature sensor allows for temperature compensation of value of specific gravity.

**Table Top Module Reflow Oven
Model: RDT-250C**



Observe the state of soldering through wide glass windows from the direction of the front and the back.

[Features]

- Malcom's unique matrix heater control using upper hot air heaters enables for Δt 5°C.
- Obtain ideal trapezoidal profile for lead free soldering.
- Low power consumption provides excellent cost-performance benefits.

**TABLE TOP MODULE
REFLOW OVEN/SIMULATOR**

**Compact Reflow Oven
Model: RDT-165CP**



Reflow Oven for Cell-based production with Excellent Cost Performance.

[Features]

- 10 patterns profile settings can be saved, transferring by USB using the dedicated software.
- Max. 10 heating stage settings create your desired temperature profile.
- Its low price and compact size allow the RDT-165CP to be efficiently utilized in many workspaces

**Reflow Simulator
Model: SRS-1C**



Reproducing the temperature profile of Reflow oven, observe the state of soldering from top, front and back of the device.

[Features]

- Realize the temperature profile of lead free soldering with ease.
- The soldering state can be observed from three sides of the device.
- Micro parts such as 0402 size are also available.
- The dedicated software analyzes the temperature profile data.

NEW

**Video Camera Capture System
Model: VDM-3**



[Features]

- Freely lay out the movie sizes and data position display items of two video cameras, when playing the video.
- Display data and graph (Measurement time, Temperature, and Wetting force) taken from SP-2, RDT-250C, SRS-1C as well as CCD camera image.
- Built-in scale function for measuring a displayed object.
- Two CCD cameras simultaneously display both their images from two different angles on a same screen.

**Solder-Paste Tackiness Tester
Model: TK-1S**



Compliant to JIS, IEC & IPC standard

[Features]

- Measure the adhesive strength of materials such as solder paste. Measurement items: Tackiness, Load and Insertion Depth
- There are three insertion methods, making it possible to measure under the conditions closer to the actual mounting manner.
- It is useful to feed back the difference of the tackiness obtained by changing the set conditions to the production site in a timely manner.

**Solder-Paste Wetting Tester
Model: SP-2**



Compliant to JIS & IEC standard

[Features]

- The SP-2 is an optimum device to evaluate wettability of lead free solder. (Solder paste, Component, & Temperature conditions)
- Observe all wetting processes from glass windows.
- Wetting Balance Measuring Method, Micro Wetting Balance Measuring Method, and Quick Heating Method are possible. (option)
- Simulate the temperature profile, the same as the actual reflow process or the optimal profile. (Pre-heat function and powerful heater are built-in.)
- The wettability evaluation of micro chip components, such as 1005 or 1603 size, is possible. (Electro-balance sensor detects minuter components.)
- Dedicated software automatically analyzes test results of wetting time, wetting force and etc.

WETTING TESTER

**Dip Wetting Tester
Model: SWB-2**



Compliant to JIS, ISO, IEC, IPC & MIL standard

[Features]

- Automate the process of from flux application to end of measurement, providing reduction of the variation caused by operator skill.
- Automate the process of from flux application to end of measurement, providing reduction of the variation caused by operator skill.
- 0402 size and etc. of Micro components are also available. (Optional Chip Placement System is necessary.)
- Change Solder and Flux with ease.
- Dedicated software analyzes data on a PC screen. (option) Wetting Balance Measuring Method

**Oxygen Analyzer
Model: OAS-1**



Measure wide range of O₂ concentration in N₂ atmosphere.

[Features]

- Requires no calibration work by reference gas before use.
- Equip communication output port (RS-232C) for PC connection as a standard feature.

Standard List of Malcom Products

ISO9001-2000

Spiral Viscometer (PCU-200•PC-10)

JIS Z3284-3
IEC 61189-5
IPC J-STD-005
IPC-TM-650 2.4.34.2/2.4.34.3

Solder-Paste Wetting Tester (SP-2)

JIS C60068-2-83
JIS Z3284-4
IEC 60068-2-83

Spiral Viscometer (PCU-02V)

JIS Z3285

Wetting Tester (SP-2 & SWB-2)

JIS C60068-2-69
JIS Z3198-4
ISO 9455-16
IEC 60068-2-69
IPC J-STD-003
IPC-TM-650 2.4.14.2
MIL STD 883 2022.2

Solder-Paste Tackiness Tester (TK-1S)

JIS Z3284-3
IEC 61189-5
IPC J-STD-005
IPC-TM-650 2.4.44



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