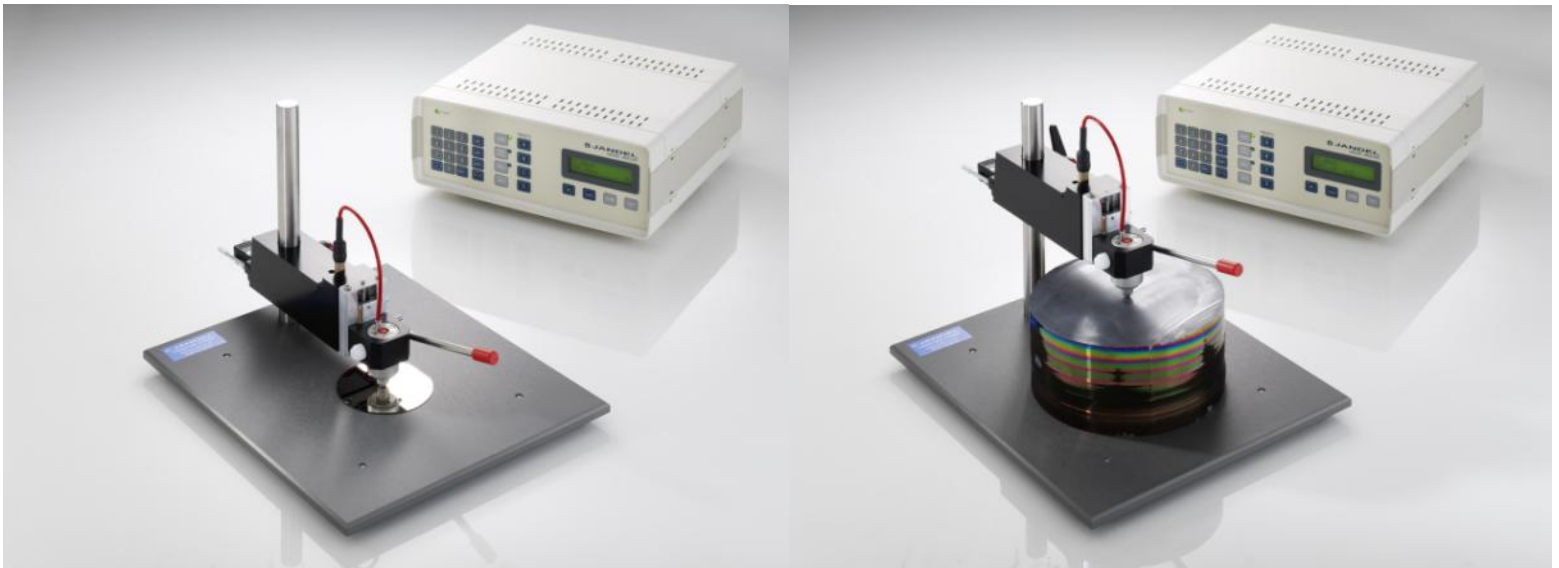


JANDEL ENGINEERING LTD.

General Purpose Four-Point Probing System Multi Height Probe with RM3-AR Test Unit



The Multi Height Probe combined with the RM3-AR Test Unit is our most popular combination for use in measuring a wide range of materials and sample sizes.

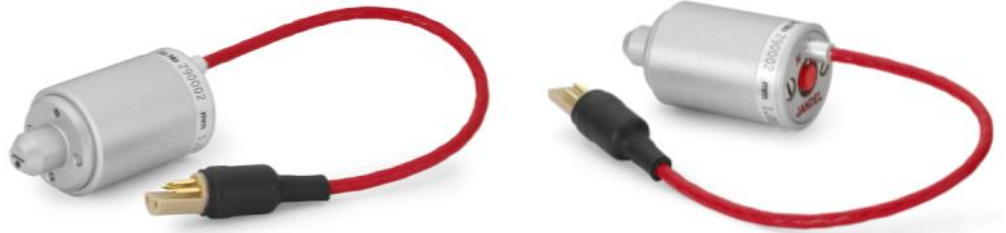
The probe portion of the system, the Multi Height Probe, comprises a hard anodized aluminum base 25cm wide, 29cm deep and 0.8cm thick. A 19mm diameter stainless steel column 20cm high screwed to the base supports the probe head raising and lowering mechanism incorporating the vertical slide, operating lever shaft, and micro-switch. The vertical slide carries the probe-head, secured by a clamp screw. The probe-head is positioned so that the micro-switch does not pass current until the probes have made contact, lost motion ensures that the current is switched off before the probes are raised. The probe arm can be easily positioned on the vertical shaft to various heights to allow probing onto either flat materials or large or thick materials. For example, a shallow dish containing LN₂ could be placed on the base plate and the arm could be positioned to allow the probe to be lowered onto a sample submerged in liquid nitrogen. Materials up to 10" x 10" x 6" tall can be positioned under the probe arm. If necessary, a taller vertical post can be supplied for use in measuring taller items. The Multi Height Probe can withstand temperature up to 150C. The Cylindrical probe head, one of which is included with the Multi Height Probe, can withstand temperatures from 77K up to 120C in it's standard configuration. A modification to the Cylindrical probe will allow it to withstand temperatures from 77K up to 200C in an oven, somewhat higher if used on a hotplate. The Multi Height Probe is limited to a 150°C temperature limit in an oven, but can be used with a hot plate at higher temperatures if certain precautions are taken.

Optionally, at no additional charge, the Multi Height Probe can be supplied with four mounting holes so that it can easily be upgraded in the future to add the [25mm travel X-Y sample stage with 76mm \(~3"\) diameter vacuum hold-down sample chuck](#). The addition of the X-Y stage converts the Multi Height Probe into the [Multi Height Microposition Probe](#).

The system incorporates the Jandel Cylindrical probe head which is built to high standards of quality and accuracy. A brochure regarding the Cylindrical probe can be found here: <http://www.fourpointprobes.com/jandelcylindrical.pdf>

Information regarding the constructions and specifications of the Jandel Cylindrical probe can be seen here: http://www.fourpointprobes.com/cylindrical_app_notes.pdf

One Jandel Cylindrical probe is included with the Multi Height Probe



The RM3-AR Test Unit is a specialty electronics instruments designed specifically for the four point probe measurement. It features high accuracy, an excellent range, and many features which simplify the four point probing measurement. The following are features of the RM3-AR Test Unit:

The measurement range of the RM3-AR Test Unit is from 1 milliohm-per-square (10^{-3}) up to 5×10^8 ohms-per-square with 0.3% accuracy. The volume resistivity range is from 1 milliohm-cm (10^{-3}) up to 10^6 ohms-cm.

- The RM3-AR includes PC control software which can be used for data logging (storing data in the CSV format) and measurement conversion to ohms-per-square or ohms-cm.
- The RM3-AR reads-out directly in ohms-per-square (or toggle to millivolts) without requiring the use of the software or a PC.
- The RM3-AR has onboard non-volatile memory so that up to 50 measurements can be stored internally and then downloaded and saved all at one time using the software. Alternately, each measurement can be saved to a PC as it is made.
- The RM3-AR has an auto-range button that can be used to automatically determine the optimum input current for a given material without using the trial and error method.
- The RM3-AR has forward (FWD) and reverse (REV) buttons to reverse the direction of current flow. A common way to determine if a measurement is valid is to reverse the direction of current flow and then check to see if the forward and reverse voltage readings correlate well, i.e., the values should be similar, but with the reverse current voltage being a negative value.

SPECIFICATIONS:

- Superior Current Source
- 10nA to 100mA (99.999mA) current source selectable in steps to 5 decimal place resolution
- Current set numeric keypad
- 4 default preset current programs (user programmable) **Superior Inbuilt DVM**
- Input Impedance 1,000,000,000,000 ohms
- Input Bias current 4pA
- DVM 1300mV range and 130mV range
- 130mV accuracy
- 0.2% +/- 5uV resolution (10uV or 1uV) range
- 1300mV accuracy 0.2%+/-100uV resolution
- 100uV Ohms/Square
- Rapid Zeroing null function for DVM

FEATURES:

- 28 Key high quality Keypad
- 16x2 line LCD Display for simultaneous indication of Set Current and either Ohms/Sq or mV
- Auto-Ranging capability to determine the optimum input current based upon the material being measured.
- Intuitive operation
- Microprocessor controlled
- Reduced Footprint
- Robust Attractive ABS Case
- Accurately measures down to 10's of milliohms/square without external meter
- 4mm socket facility to connect an external meter
- RS232/USB connectivity for control and for collecting data in CSV format

- Automatic compliance voltage limit protects your sample which reduces maximum voltage as higher currents are set 5-40V
- Warning messages when compliance limit is reached, or DVM input exceeded
- Self test facility
- Flash upgradeable software
- CE Marked
- AD/DA converters and amplifiers for the DVM and setting the Current source and DVM, are Burr Brown 110V or 240V operation (selectable)

Downloads:

[Instruction manual \(476K PDF file\) for the Multi Height Probe](#)

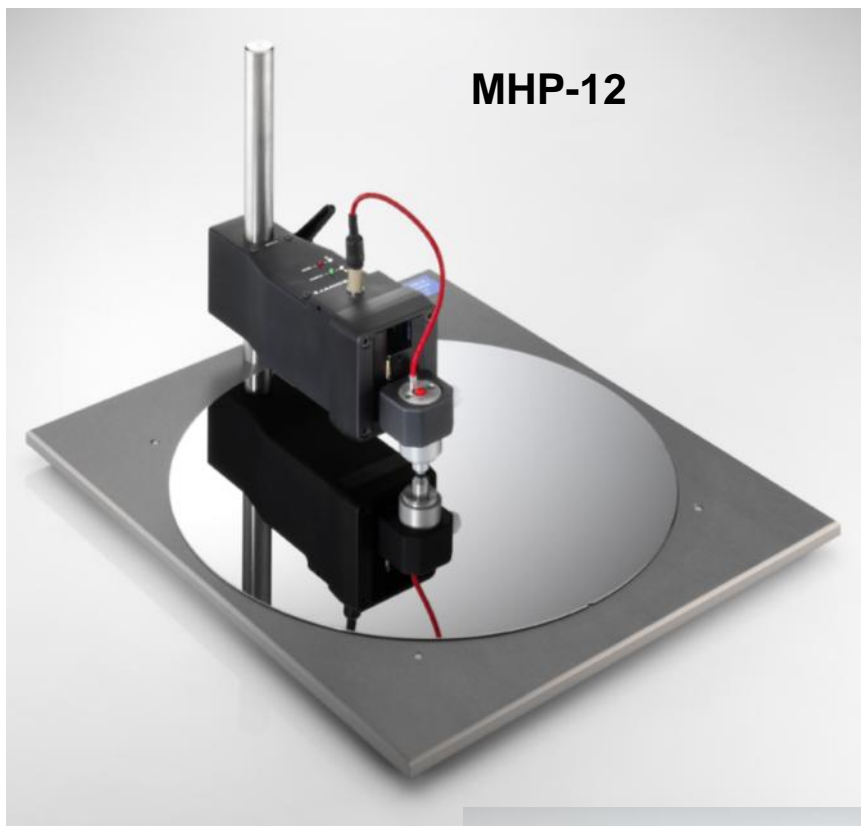
[A high resolution image of the Multi Height Probe](#)

[Instruction manual \(688K PDF file\) for the RM3-AR Test Unit](#)

Click here to request a price quotation for the Multi Height Probe combined with the RM3-AR Test Unit:

sales@bridgetec.com

Click here to visit the web page for the [Multi Height Probe combined with the RM3-AR Test Unit](#)



MHP-12

Multi Height Probe with Optional Large Base Plate for Probing Substrates up to 12" x 12"

Same Price as 10" x 10" sample Base Plate.

Shown with Optional AFPP Motorized Z Motion Arm

Jandel RM3-AR Test Unit

