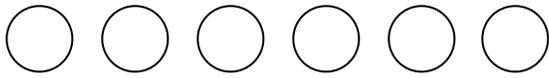


# Test Results for the First Batch of the LCR-Reader-R2 Tweezer-meter

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Siborg Systems Inc. reports test results for the new model in the LCR-Reader line, the R2. This LCR-meter offers a 0.1% basic accuracy and wide measurement ranges and a record high test frequency of 300 kHz.

**WATERLOO, ONTARIO (PRWEB) SEPTEMBER 29, 2020**

After one year since the release of their multi-functional [Digital Multimeter LCR-Reader-MPA](#) Siborg Systems Inc. presents the first test results for the new model of their best selling LCR-meter, the LCR-Reader-R1. The new model, the [LCR-Reader-R2](#), includes a basic accuracy of 0.1%, and features a record high 300 kHz test frequency. The new device is going to have a possibility of using adjustable 100 Ohm and 1 kOhm signal source resistance allowing a better in-circuit testing.

Devices in the LCR-Reader line of products have been well established in the last few years. All of them automatically determine the type of component and best test range and measure LCR and ESR values with a high accuracy



LCR-Reader-R2: the New member in the LCR-Reader family featuring 300 kHz test frequency

varying from 0.1 to 0.5 %. The devices only weigh around 1 oz. and are small enough to carry in a bag or pocket for on-field work. Similarly to [Smart Tweezers](#), LCR-Reader-MPA is easily navigated using the 4 way joystick-like button. Users can change basic test modes from the main display by pressing the button directionally; pressing down will enter the menus for more features and settings.

The new model [LCR-Reader-R2](#) combines advantages of LCR-Reader-MP and LCR-Reader-MPA due to the ability of switching the test signal source resistance from 100 Ohms as in MPA to 1 kOhm as in MP. The latter increases stability of measurements and works much better for in-circuit measurements. On the other hand, lower source impedance effectively increases the actual test signal applied to the component under test thus reducing the signal-to-noise ratio in some cases.

Another important feature of the device is its ability of using 300 kHz test frequency due to the more advanced CPU used. The higher frequency may allow to better measure sub 10 nH inductors.

The new device does not have some features of the previous model [LCR-Reader-MPA](#) and intended solely for LCR measurements. On the other hand, the new LCR-Reader-R2 allows using higher test frequency of 300 kHz and adjustable signal source resistance of 100 Ohms and 1 kOhms. These features are believed to improve measurement accuracy, especially of small capacitances and inductances and in-circuit measurements due to ability to use higher source resistance.

In the plots on the right, the first test results are presented showing consistency of measurement using three different new devices in a wide range of component impedances. As we can see, both resistance and capacitance are measured with accuracy similar or exceeding the results for LCR-Reader-MPA. In particular, for resistance and capacitance typical accuracy is better than 0.05 % and 0.1 % respectively. On the contrary, for inductances the accuracy is varying from 0.2 to 0.6 % which is slightly worse than that for LCR-Reader-MPA. Obviously and additional tune-up is required for the LCR-Reader-R2 firmware to increase the accuracy.

Features of LCR-Reader-R2 include:

- Automatic and manual LCR, ESR, LED/Diode measurements

- 0.1% Basic accuracy

- Automatic and manual Test Frequency, including 100, 120 Hz, 1, 10, 20, 30, 40, 50, 60, 75, 100 and 300 kHz

- Three test signal levels: 0.1, 0.5 and 1 Vrms.

- Automatic Test Signal Reduction to 0.1 V for in-circuit measurements

- Parasitic offset removal using easy Short/Open Calibration

- Measures components to a 0201 size (0.3 mm)

- Displays active and reactive impedance components

- Li-Ion battery and micro-USB charging port

- 1.5 oz. weight

- Backlit LCD display

- Gold-plated test leads

The following features are only available in LCR-Reader-MPA:

- AC/DC voltage measurements up to 15 V

- AC/DC Current measurements

- Oscilloscope Transient Voltage up to 100 kHz

- Frequency meter

Siborg Systems Inc. presents the new LCR-Reader-R2. This LCR-meter offers a record high test frequency of 300 kHz. The device shows higher measurement accuracy than previous models.

## Sine Wave Signal Generator

Included with every device is a pre-installed set of gold-plated tips, NIST traceable calibration certificate, Offset Calibration Board, and hard-shelled carrying case. Available accessories include spare ergonomic bent-tips, spare battery and the LCR-Reader Kelvin Probe Connector.

The LCR-Reader-MPA is available on [LCR-Reader Store](#) and Amazon sales channels.

Siborg also offers other test devices, including LCR-Reader-R1 and [Smart Tweezers](#) tweezer-based multimeters. A Bluetooth enabled version of [Smart Tweezers](#) and [LCR-Reader-MPA BT](#) are also available; these models allow users to send and receive test data from PC, Android and iOS.

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