

## **Smart Tweezers LCR-meter and LCR-Reader are Reviewed by the Institute of Automation and Electrometry of the Russian Academy of Sciences**

*Novosibirsk based Institute of Automation and Electrometry of the Russian Academy of Sciences compared Smart Tweezers LCR-meter and LCR-Reader to two other known LCR-meters, Tesla BM591 and BK Precision MIC-4090D.*

Novosibirsk, Russia ([PRWEB](#)) February 28, 2014 -- [Siborg Systems Inc](#) from Waterloo, Ontario, Canada approached Novosibirsk based Institute of Automation and Electrometry of the Russian Academy of Sciences to compare measurement results of Smart Tweezers, LCR-Reader, Tesla BM591 and MIC-4090D LCR-meters.

[Smart Tweezers LCR-meter](#) and its successor LCR-Reader are world renowned LCR-meters that give an simple solution to the old problem of trouble-shooting and testing Surface Mount Devices.

Surface-mount technology (SMT) is lately a mainstream method for electronic manufacturing where the components are attached directly to the surface of printed circuit boards (PCBs). Usually such components are called Surface Mount Devices (SMD). Typically SMT components are too small to be labeled and therefore, one can easily lose track of parts and their values.

In order to solve this problem [Smart Tweezers LCR-meter](#) and its successor LCR-Reader were developed. These nearly pen-size devices quickly evaluate passive SMT components (Resistors, Capacitances and Inductances) using only one hand. Currently Smart Tweezers is a recognized professional LCR-meter that automatically determines the type of component as well as the proper range and signal frequency for the optimum measurement. The results are shown on a small graphics display where the component type, measurement results, and test conditions are presented.

"Although the main advantage of [Smart Tweezers](#) type of devices is a quick and highly accurate identification of SMT components as small as 0.3 mm," says Michael Obrecht, R&D director at Siborg. "It can also be used for conventional through-hole type components and therefore we decided to compare ST5 and LCR-Reader to conventional old-style LCR-meters."

"In our work we use both through-hole devices and SMDs. Therefore we wanted to check if [LCR-Reader](#) and ST5 would be able to handle both type of components. I liked Smart Tweezers from the very first glance but it had is a relatively high price and I was very happy to see a more affordable LCR-Reader " says Valentin Litvintsev, Team Lead at the Institute of Automation and Electrometry of the Russian Academy of Sciences, Novosibirsk, "We used two legacy LCR-meters, working horses in our lab, Tesla BM591 and BK Precision MIC-4090D to make the comparison. The results are presented in the table on the right."

About Siborg Systems Inc:

Established in 1994, Siborg Systems Inc. is a source of engineering software and hardware tools for semiconductor and electronics industry. Located in the city of Waterloo, Ontario, Canada, it enjoys being part of the local world-renowned high-tech community.

About Institute of Automation and Electrometry:

The Institute was founded in 1957 among the first institutions of the Siberian Branch of the Russian Academy of Sciences.

Research directions of the Institute comprise optics and laser physics, including physical processes in gaseous and condensed media induced by a radiation, nonlinear phenomena at the interaction of the radiation with structured materials; fundamental as well as applied research and development in the field of laser and optical technologies; architecture, system solutions, mathematical models and software for data processing and computing systems of recognition, analysis and representation of information and control systems for complex dynamic processes.

The Institute is the publisher of "Avtometriya", which is published in English in the U.S.A. under the name of "Optoelectronics, Instrumentation and Data Processing".

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