



LCR-Reader[®]-MPA BT



Bluetooth Data Acquisition Tool

- ✓ Detailed component test setup on computer
- ✓ One click automatic Pass/Fail report
- ✓ Send test data to computer
- ✓ Export data to spreadsheet



SIBORG
SYSTEMS INC



LCR-MPA-BT Logger

The main feature is being able to instantly grant a Pass/Fail upon testing. Users are able to set a list of components with an individual test profile for each component, and a specific set of test settings including tolerance for the primary and secondary impedance values, test frequency, signal level and equivalent circuit.

These values are used when measuring components; the program will determine whether a component falls within the specified tolerance range. A green/red visual representation is giving a quick way to identify components and sort accordingly.

LCR-Reader-MPA-BT Data logger v1.1

RLCD RD U Brightness Hold Sound Default Disconnect Auto

Multi Component Test

Test Profile LCR Test 1

Create Open Save as

1.0 Vrms A 10 kHz Z 76.187 Ω
 Q^A 57.000 D 0.0170
 L^A 1.2124 mH Q 57.000
 S θ 89.000°

Connecting...
Connected

Reference Value

Write Delete Add L 5% Q 5%
 1 L1 1.2 mH 57

Output Control

Initial position 1 Write interval 0.5s Start Export to Excel Clear

Position	Name	Primary	Secondary	Mode	Frequency	Level	Test	Prim %	Sec %
1	L1	L 1.2157 mH	Q 52.000	S	10 kHz	1.0 Vrms	Pass	1.31	-4.00
2	C1	L 1.3538 mH	R 22.347 Ω	S	10 kHz	1.0 Vrms	Fail	77.02	1.718E05
3	R1	R 0.9784 Ω		S	1 kHz	1.0 Vrms	Pass	-0.16	



LCR-MPA-BT Logger

Users can set a list of components (BOM) with their types, values, tolerances and specific test conditions. Once this is done, the test is extremely simple. Select a component from the list and connect the component to the LCR-Reader-MPA test leads. It instantly shows the measured values and indicates Pass/Fail status by the color in the main display area and in the Test column of the measurement result table. This greatly improves efficiency of component identification.

Reference Value							
Write	Delete	Add	L ▾	2% ▾	R ▾	OFF ▾	
1	↕	L1 ▾	3.14	mH ▾	10000	Ω ▾	

To select a component from the list, use the arrow buttons at the bottom left of the Reference Value window on the left. The selected reference type, values and tolerances will be shown on the screen.

LCR-MPA-BT Logger



The screenshot displays the LCR-MPA-BT Logger interface. It features several control panels and a central measurement display. The 'Test Level' panel is set to 1.0Vrms. The 'Test Frequency' panel is set to Auto. The 'Secondary parameter' panel is set to Auto. The 'Primary parameter' panel is set to Auto. The 'Circuit Mode' panel is set to Auto. The central display shows the following measurement results:

A 1.0 Vrms	A 10 kHz	Z >20.00 MΩ
R _P ^A >20.00 MΩ		D 0.0290
C _P ^A 0.4092 pF		Q 35.000
		θ -88.350°

The main display window is shown on the left indicating the “Clickable” test setting areas: test frequency, signal level and the equivalent circuit.

When an area is clicked on, a pop-up window appears allowing to change the respective parameter.

The measurement result is also shown in this window and the Test column Blue/Red color indicates the Pass/Fail status respectively.



Single/Multiple Component Testing

“Single Component Test Mode”, is preferable when a repeatable test of the same type of component is required. Users set the reference value and test parameters from the previously created Test Profile using arrow buttons in the Reference Value window. Press the ‘space bar’ of the keyboard to perform a measurement.

Each measurement is then recorded into a separate row below the main display with each press of the space bar. The program grants a Pass/Fail: the main display will turn green/red respectively, as well as the Test column of the table.

LCR-Reader-MPA-BT Data logger v1.1

RLCD RD U Brightness Hold Sound Default Disconnect Auto

Single Component Test
Test Profile LCR Test 1
Create
Open
Save as

1.0 Vrms A 10 kHz Z >20.00 MΩ
R_p >20.00 MΩ D 0.0200
C_p 0.4243 pF Q 50.000
E -88.850°

Connecting...
Connected

Reference Value
Write Delete Add L 5% R 5%
1 L1 22 mH 58 Ω

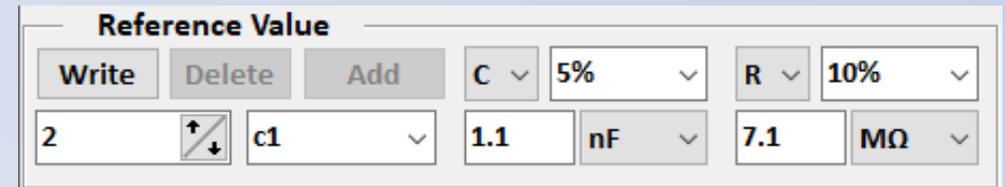
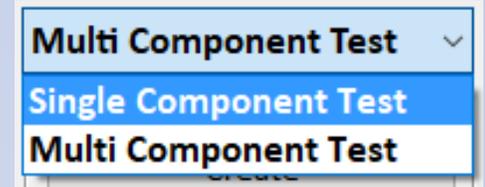
Output Control
Initial position 8 Write interval 0.5s Start Export to Excel Clear

Position	Time	Primary	Secondary	Mode	Frequency	Level	Test	Prim %	Sec %
3	17.09.20 12:57:49	L 21.351 mH	R 58.260 Ω	S	1 kHz	1.0 Vrms	Pass	-2.95	0.45
4	17.09.20 12:57:50	L 21.353 mH	R 58.240 Ω	S	1 kHz	1.0 Vrms	Pass	-2.94	0.41
5	17.09.20 12:57:51	L 21.357 mH	R 61.883 Ω	S	1 kHz	1.0 Vrms	Fail	-2.92	6.69
6	17.09.20 12:58:14	R 0.9866 Ω		S	1 kHz	1.0 Vrms	Fail	-100.00	-98.30
7	17.09.20 12:58:24	C 903.84 μF	R 0.0850 Ω	S	120 Hz	1.0 Vrms	Fail	-91.15	-99.85



Setting Single Component Test

- Select "Single Component Test"
- Select component from the list using the arrow buttons in the Reference Value window
- Press the keyboard space bar to make the measurement. The result is written into the table on the next line and includes the time stamp and the Pass/Fail status.
- Review test data and/or export to a spreadsheet



Position	Time	Primary	Secondary	Mode	Frequency	Level	Test	Prim %	Sec %
3	17.09.20 12:57:49	L 21.351 mH	R 58.260 Ω	S	1 kHz	1.0 Vrms	Pass	-2.95	0.45
4	17.09.20 12:57:50	L 21.353 mH	R 58.240 Ω	S	1 kHz	1.0 Vrms	Pass	-2.94	0.41
5	17.09.20 12:57:51	L 21.357 mH	R 61.883 Ω	S	1 kHz	1.0 Vrms	Fail	-2.92	6.69
6	17.09.20 12:58:14	R 0.9866 Ω		S	1 kHz	1.0 Vrms	Fail	+100.00	-98.30
7	17.09.20 12:58:24	C 903.84 μF	R 0.0850 Ω	S	120 Hz	1.0 Vrms	Fail	-91.15	-99.85



Multiple Component Test Mode

Multiple Components Test Mode is preferable when a complete printed circuit board is being tested. In this case when the file with the preset Test Profile is opened using the Open button, the complete list of components is shown on the screen.

The user selects the row that holds the required component settings by using the arrow buttons in the Reference Value window or by clicking on the respective component number in the table.

Measurements are recorded into the same line, overriding data with each press of the space bar.

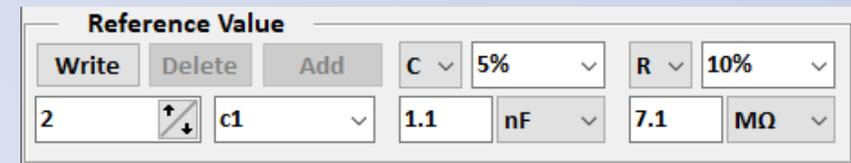
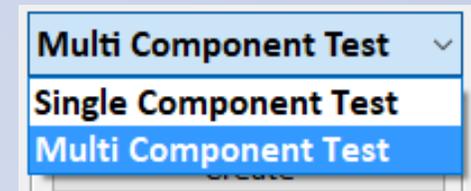
The screenshot shows the LCR-Reader-MPA-BT Data logger v1.1 software interface. The main display area is a red box showing test results for a component: 1.0 Vrms, A 10 kHz, Z >20.00 MΩ, R_p >20.00 MΩ, D 0.0070, C_A 0.4278 pF, Q 142.00, and θ -89.600°. The interface includes buttons for RLCD, RD, U, Brightness, Hold, Sound, Default, Disconnect, and Auto. A 'Multi Component Test' dropdown menu is set to 'Test Profile LCR Test 1'. Below this are buttons for 'Create', 'Open', and 'Save as'. The 'Reference Value' section has buttons for 'Write', 'Delete', and 'Add', along with dropdowns for 'L', 'R', 'L1', '22', 'mH', '57', and 'Ω'. The 'Output Control' section has 'Initial position' set to 1 and 'Write interval' set to 0.5s. A 'Start' button and an 'Export to Excel' button are also present. At the bottom, a table displays test results for four components:

Position	Name	Primary	Secondary	Mode	Frequency	Level	Test	Prim %	Sec %
1	L1	L 21.514 mH	R 57.153 Ω	S	1 kHz	1.0 Vrms	Pass	-2.21	0.27
2	C1								
3	R1								
4	R1	R 0.9839 Ω		S	1 kHz	1.0 Vrms	Pass	-1.61	



Setting Multiple Component Test Mode

- Select the "Multiple Component Test" mode from the drop down; Open file with required Test Profile
- Select a row, designate the Reference Values and press "Write". Each value is shown in a row
- Click the desired row with the values to test against Press the space bar and make the measurement
- Review data; the 'Test' column will turn Red/Green to indicate Fail/Pass
- Users can delete or override a component row



Position	Name	Primary	Secondary	Mode	Frequency	Level	Test	Prim %	Sec %
1	L1	L 21.514 mH	R 57.153 Ω	S	1 kHz	1.0 Vrms	Pass	-2.21	0.27
2	C1								
3	R1								
4	R1	R 0.9839 Ω		S	1 kHz	1.0 Vrms	Pass	-1.61	



LCR-Reader-MPA Features

- Automatic and Manual LCR, ESR, LED/Diode measurements
- 0.1% Basic accuracy
- AC/DC Voltage and Current measurements
- Oscilloscope transient voltage up to 100 kHz
- Frequency meter
- Sine wave Signal Generator up to 100 kHz
- Super Cap DC test mode up to 1 F
- Automatic and Manual Test Frequency including 100, 120 Hz, 1, 10, 20, 30, 40, 50, 60, 75, and 100 kHz
- Automatic Test Signal reduction to 0.1 V for in-circuit measurements



LCR-Reader[®]-MPA

All-in-One Digital Multimeter

Available from the LCR-Reader Store
Amazon Marketplaces in USA, Canada
UK and Europe