



JYE Tech M181 LCR Meter User Manual

[Home](#) » [JYE Tech](#) » JYE Tech M181 LCR Meter User Manual 

JYE Tech M181 LCR Meter User Manual



Contents

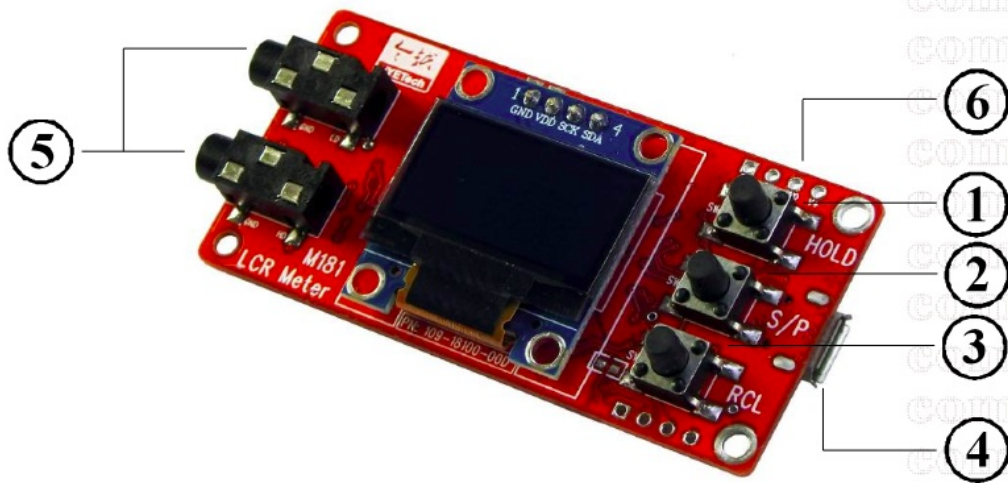
- [1 Product contents](#)
- [2 Get Started](#)
- [3 Basic Operations](#)
- [4 Zeroing](#)
- [5 Serial Data Output](#)
- [6 Firmware Upgrade](#)
- [7 Specifications](#)
- [8 Documents / Resources](#)
 - [8.1 References](#)
- [9 Related Posts](#)

Product contents

1. M181 LCR Meter
2. Measurement probes
3. USB cable

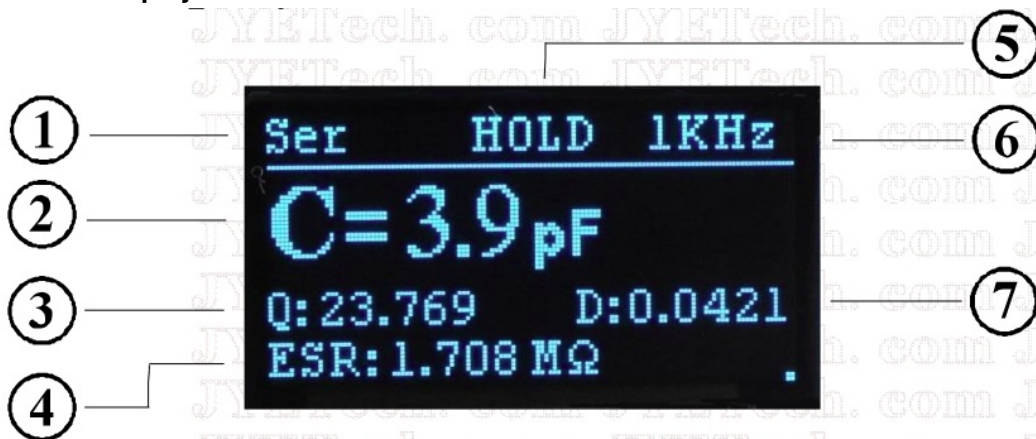
Get Started

Buttons and Connectors



1. HOLD button Freeze/de-freeze screen
2. P/S button – Select circuit modes
3. RCL button Select primary parameters
4. USB connector Power supply, data transfer, and firmware upgrade
5. Probe connectors Connecting measurement probes
6. Serial port J4LVTTTL level com port

Screen Displays



1. Circuit mode (serial or parallel)
2. Primary parameter
3. Secondary Q
4. Secondary ESR –
5. HOLD indicator
6. Measurement frequency
7. Secondary:D

Basic Operations

Power on and off

Power on :Connect the device to a USB power source with the USB cable

Power off: Disconnect the USB cable

Make measurements

1. Select the primary with the RCL button
2. Select a circuit mode with the P/S button
3. Connect the probes with the component to be measured. Read results on the screen.
4. Press the HOLD button can freeze the readings. Press the button again will de-freeze and measurements will resume.

Change frequency

Holding down the RCL button for 2 seconds will toggle the frequency between 1KHz and 100Hz

Zeroing

Open zeroing

1. Keep the probes open (do not connect to anything)
2. Hold down the HOLD button for 2 seconds

Note: Open zeroing improves the accuracy of high impedance measurements by removing the impact of stray parameters.

Short zeroing

1. Firmly keep the probes be shorted
2. Hold down the HOLD button for 2 seconds.

Note: Short zeroing improves the accuracy of low impedance measurements by removing the impact of stray parameters

Serial Data Output

The measurement readings are output serially from the port J4 (LVTTTL level) and the USB virtual comport.

Note: A driver for the CH340 USB-Uart converter is required to received the data through the virtual comport.

Serial transmission format:

The serial data are transmitted in 8N1 format at a baudrate of 115200bps.

Serial Data Format

1. For each measurement one data line is output. Each data line consists of multiple fields.
2. All the data fields are ASCII strings separated by commas.
3. All the numbers are in decimal base.
4. All impedances are in the unit of ohm (Ω) with 3-digit fractions
5. Capacitance is in the unit of micro-farad (F) with 7-digit fractions.
6. Inductance is in the unit of micro-henry (H) with 1-digit fraction.
7. Impedance angle is in the unit of degree ($^{\circ}$) with 3-digit fractions.
8. Q and D with 4-digit fractions.
9. A data line is terminated with one CR character (0x0D) and one LF character (0x0A).

The table below shows the format of a data line.

Field #	Definitions	Remarks
1	"Rs", "Rp", "Cs", "Cp" "Ls", or "Lp"	Primary and circuit mode
2	Primary reading	
3	Q	Secondary Readings
4	D	
5	ESR	
6	1z1	Primitive measurements
7	e (impedance angle)	
8	Rs	
9	Xs	
10	CR(OxOD) and LF (OxOA)	Line end marks

Firmware Upgrade

Tools required

1. Flash Loader Demonstrator from ST This application can be downloaded at https://www.st.com/en/development_tools_flasher_stm32.html
2. USB cable with micro-USB plug

Steps:

1. Download and install Flash Loader Demonstrator to a PC.
2. Download and install a driver for CH340 USB-Uart converter.
3. Download the firmware to be upgraded from www.jvetech.com.
4. Short the jumpers Jp1 and Jp2 with solder.
5. Connect the M181 meter to the PC with a USB cable.
6. Start Flash Loader Demonstrator. For the details of how to use this tool please refer to "WAVE2: How to upgrade firmware"wp-content/uploads/dim_uploads/ WAVE2_HowTo Upgrade Firmware.pdf).

Note:


- Select "STM32_Med-density_128K" at the pull down list for Target.
 - Do not do global erase to the chip. Otherwise critical data will be lost.
7. After the firmware has been written, disconnect the USB cable and remove the shorts on JP1 and JP2.
 8. Power up the meter again, Check if the firmware has been correctly upgraded.

Specifications

Display	
Primary	R. C. L
Secondary	Q, D, ESR
Circuit Mode	Serial, parallel
Measurement ranges and accuracy	
R. Z	0.12 – 10MΩ
C	1pF – 10000 μ F
	1μH – 20H
	-90°-90
	About 1%
Measurement conditions	
Frequency	100Hz, 1KHz
Voltage	0.6Vpp
Miscellaneous	
Connection	Kalvin 4-wire
Ranging	Fully automatic
Zeroing	Open, short
Serial data output	Yes
P.S. voltage	5V
P.S. current	100mA @ 5V
Dimensions	66 x 32 x 19mm (2.6"x1.26"x0.75")
Weight	23g (76g with probes)



Documents / Resources

	JYE Tech M181 LCR Meter [pdf] User Manual M181 LCR Meter, M181, LCR Meter, Meter
---	---

References

- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

This website is an independent publication and is neither affiliated with nor endorsed by any of the trademark owners. The "Bluetooth®" word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. The "Wi-Fi®" word mark and logos are registered trademarks owned by the Wi-Fi Alliance. Any use of these marks on this website does not imply any affiliation with or endorsement.