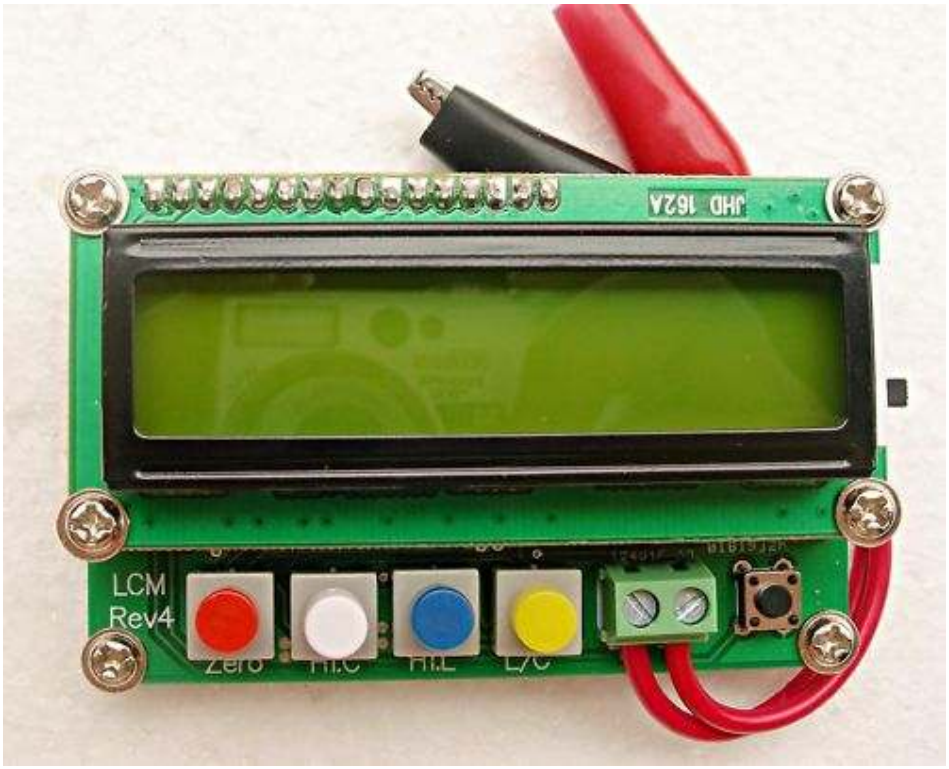
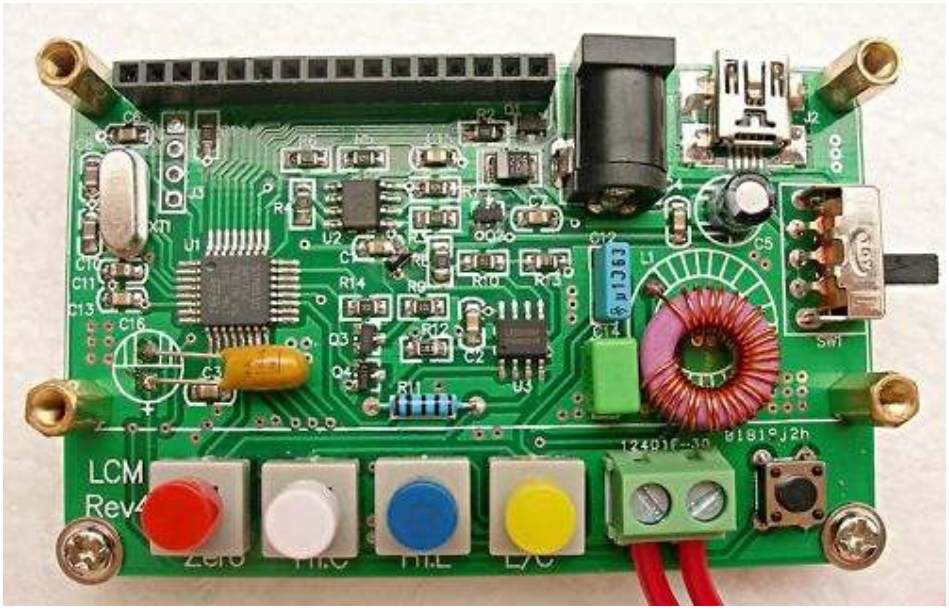
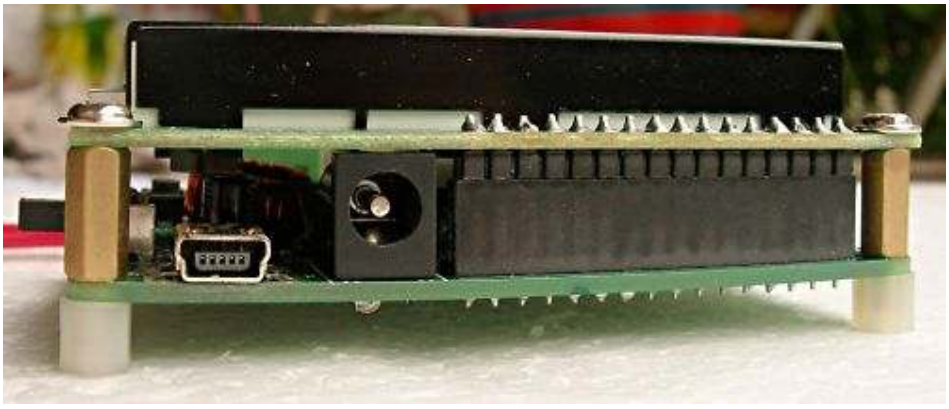
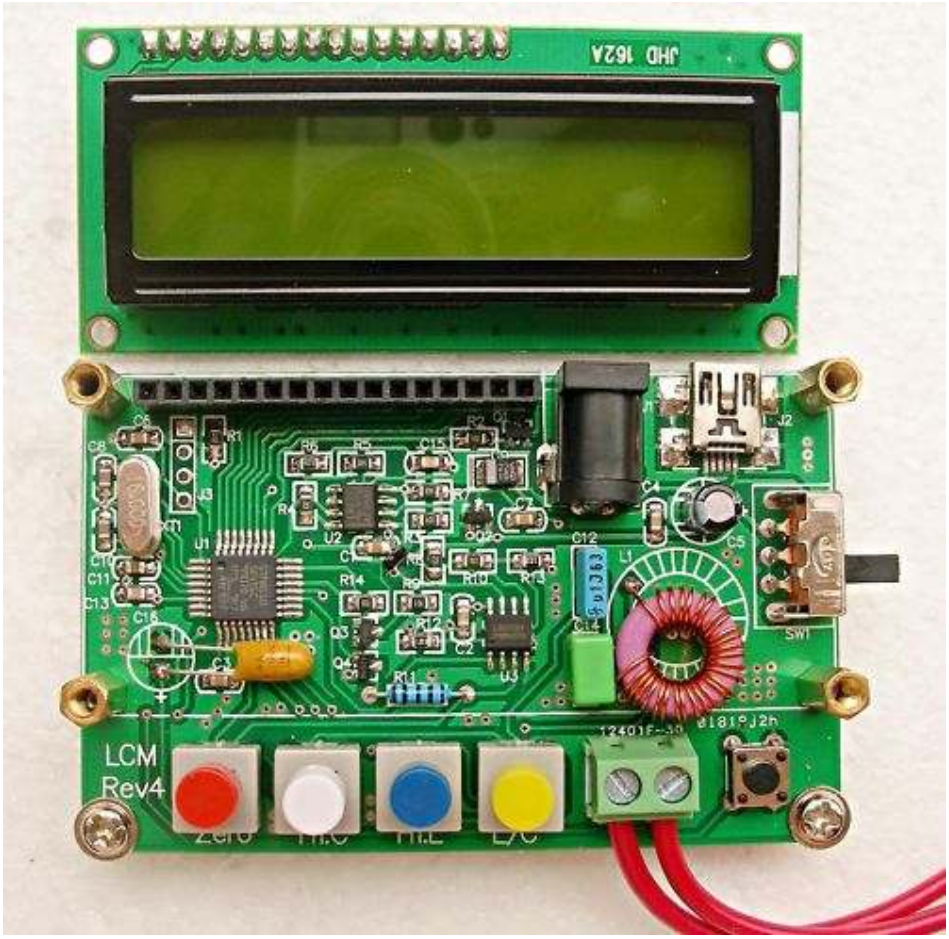
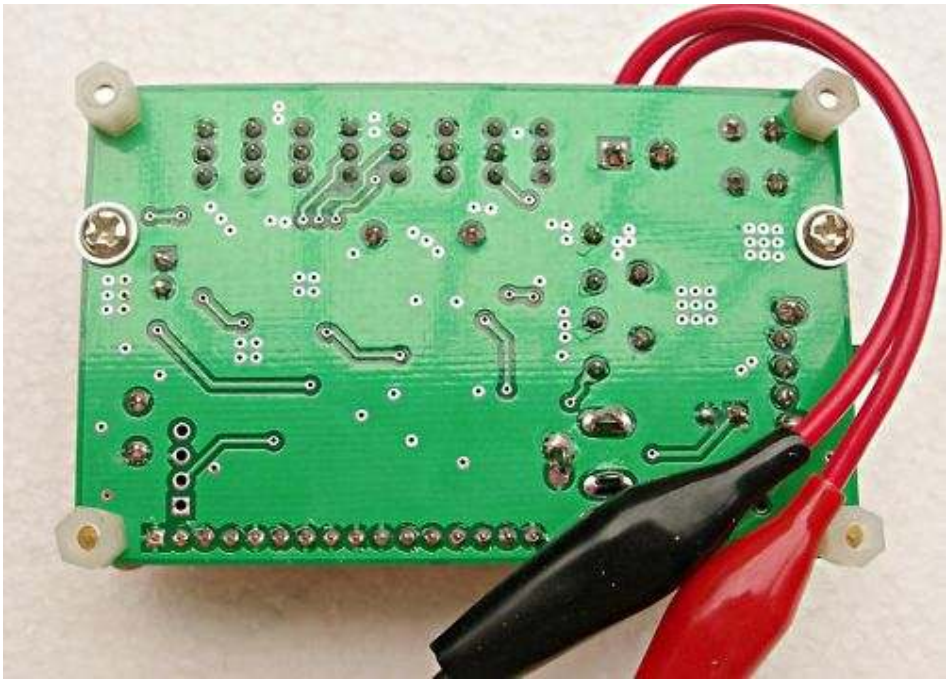
High-precision L/C Inductance Capacitance meter








LCM
Rev4



Description:

Features:

- Based on the L/C resonance principle.
- High speed microcontroller's precision computation.
- Measuring range below 1uH and 1pF

1. C files .....Capacitance (0.01pF-10μF)
2. L files .....Inductance (0.001uH-100mH)
3. HL files .....Big inductance (0.001mH-100H)
4. HC files ……Big capacitance (1μF – 100mF)

All files position are automatic measuring ranges, it is easy to operate.

Specification is as follows:

1. Technique data：

Item		Parameter
Capacitance Accuracy	0.01pF-1pF	5%
	1pF-1μF	1%
	1μF-10μF	5%
Min Capacitance Resolution（C Files）		0.01pF
Large capacitance measuring range	1μF – 100 mF	5%
Min Capacitance Resolution（Large C Files）		0.01μF
Inductance Accuracy	0.001uH-1uH	5%
	1uH-100mH	1%
Min Inductance Resolution（L Files）		0.001uH
Big Inductance Accuracy	100mH-1H	1%
	1H-100H	5%
Min Resolution of Big Inductance （HL Files）		0.001mH
Frequency	L Files、C Files	Abt. 500kHz
	HL, HC Files	Abt. 500Hz
Measuring mode		LC Resonance
Display mode		1602 LCD
Display digit		4
Interface		Mini USB & 5.5DCϕ Socket
Supply Voltage		5V

Function of four buttons:

Red: Reset [Zero]
White: Big Capacitance HiC Choice (with self-locking)
Blue: Big Inductance HiL Choice (with self-locking)
Yellow: L/C(with self-locking)
Black: Function button [Frequency]

Details as follows: (Press "1", Release "0")

Hi.L	Hi.C	L/C	Corresponding function
0	0	0	Small Capacitance(C)
0	0	1	Small Inductance(L)
0	1	0	Large Capacitance(HC)
1	0	1	Big Inductance (HL)
1	0	0	Error，please modify
0	1	1	Error，please modify

Interface: Mini USB & 5.5DC Socket (inner: positive pole, outer:ϕ negative pole)

2. Direction for use

- **Switch on the L/C Meter**
- **Chose the corresponding files, inductance: Lx, capacitance: Cx, big inductance: HL, big capacitance: HC.**

Display as follows (testing terminal open loop) :

- **Inductance：MEASURE Lx OVER RANGE**
- **Capacitance：MEASURE Cx 0.00pF**
- **Big inductance：MEASURE Hi.L OVER RANGE**
- **Big Capacitance：MEASURE Hi.Cx 0.00pF**

Display as follows(testing terminal short circuit):

- **Inductance：MEASURE Lx 0.000uH**
- **Capacitance：MEASURE Cx OVER RANGE**
- **Big inductance：MEASURE Hi.L 0.000mH**
- **Big Capacitance：MEASURE Hi.Cx OVER RANGE**

When testing terminal open loop the measured value of capacitance is not "0", or witch of the inductance is not "0" as the testing terminal short circuit, you can reset to "0" by ways of capacitance model and inductance model, as follows:

(a) Capacitance model

Press red button as testing terminal open loop, it displays "CALCULATING…", keep pressing for one second, when "CALCULATING…OK" displayed, resetting to "0" is finished, and "0.00pF" is displayed.
At the time of resetting to "0", when"CALCULATING…OK" appeared, please keep pressing for 2 to 3 seconds, and the parameter written to "<DATA SAVED>" will be prompted, then release. Then capacitance can be mesured.

(b) Inductance model

Press red button as testing terminal short circuit, it displays "0.000uH" or "0.000mH", and then at the time of resetting to "0", when"CALCULATING…OK" appeared, please keep pressing for 2 to 3 seconds, and the parameter written to "<DATA SAVED>" will be prompted, then release. Then inductance can be mesured.

- **Please press black function button as results displayed, and corresponding frequency will be displayed.**

4. Note:

- **Please reset to “0” before testing a capacitance or an inductance, or errors may be appeared. Even if “0” displayed before measuring, resetting to “0” is needed.**
- **At the time of resetting to “0”, when“CALCULATING…OK” appeared, please keep pressing for 2 to 3 seconds, and the parameter written to “<DATA SAVED>” will be prompted, then release.**
- **Resetting to “0” is forbidden as components are being measured. If you do it, please shut down immediately and restart, then reset to “0”.**
- **Forbid to measure a capacitance which is not discharged, otherwise it may damage the mainframe.**

5. Package content

1. **L/C Meter**
2. **A mini USB Line**