

电容电感频率表作套件 HU-053



Capacitance and inductance frequency meter kit

关于售后服务:

1. 售后时间: 上午 10 点—12 点, 下午 13 点—18 点 (周一到周六)

2. 可通过微信扫一扫, 查看图文说明书 (带图片说明)

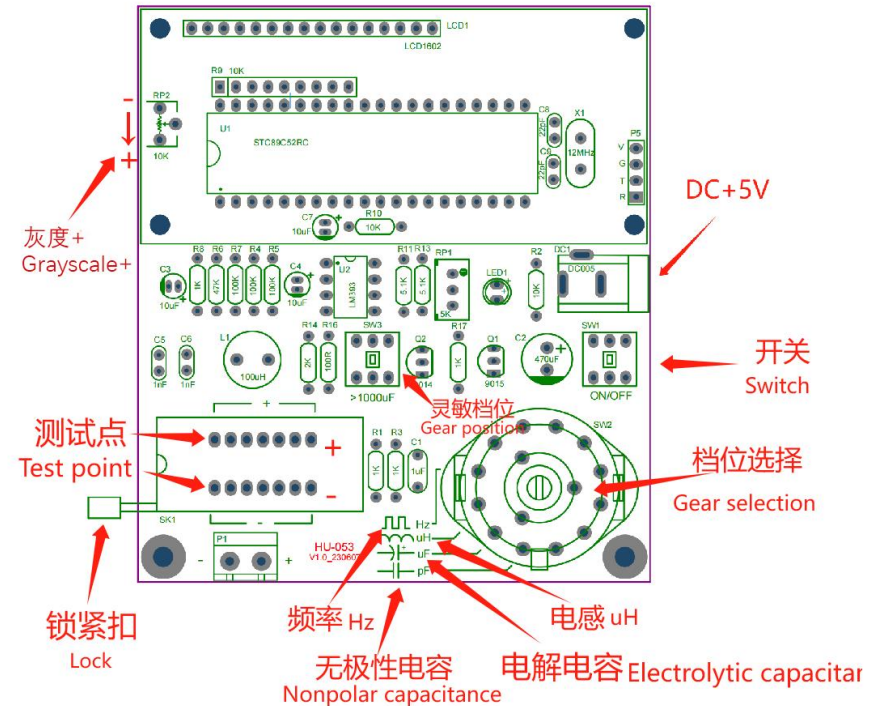
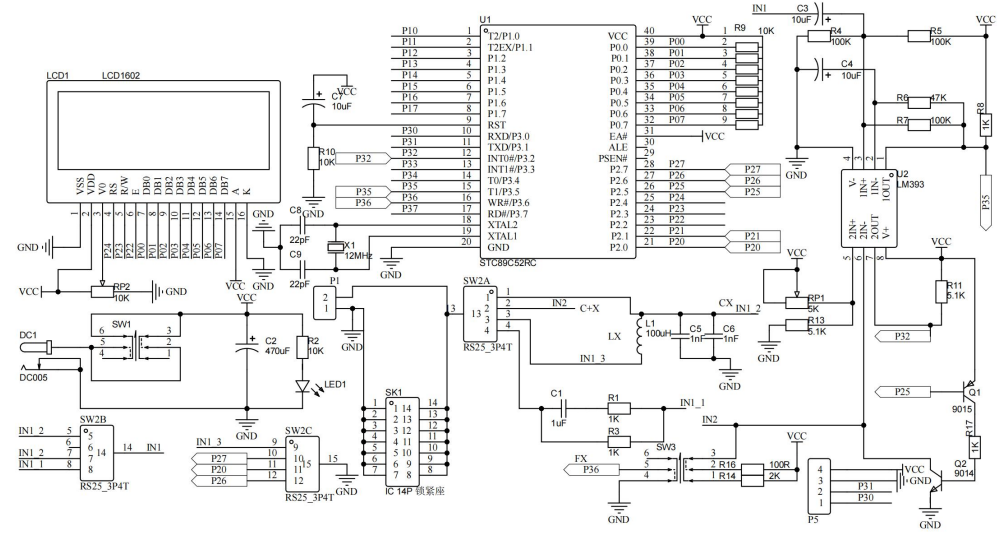
HU-053 电容电感频率表套件

Detailed installation tutorial can be obtained by scanning QR code on mobile Phone.

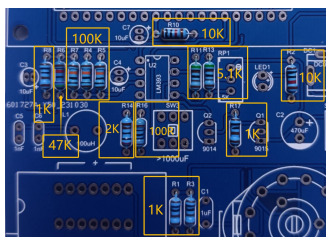
I. 元件清单 BOM

序号	名称	Name	标号/Label	数量/Number	备注/Note
1	独石电容 105	Monolithic capacitor 105	C1	1	无极性 Nonpolarity
2	瓷片电容 102	Chip capacitance 102	C5, C6	2	
3	瓷片电容 22pF	Chip capacitance 22pF	C8, C9	2	
4	3mm 红发红 直插LED	3mm red red plug-in LED	LED1	1	引脚: 长正短负 Pin length: Long + and short-
5	直插电解电容 470uF	DIP E-capacitor 470uF	C2	1	
6	直插电解电容 10uF	DIP E-capacitor 10uF	C3, C4, C7	3	
7	5.5*2.1MM DC电源插座	5.5*2.1MM DC power socket	DC1	1	
8	LCD1602液晶屏 5V 黄	LCD1602 screen 5V yellow	LCD1602	1	
9	1*16单排母座 2.54mm	1*16 single row bus 2.54mm	LCD1	1	
10	1*16P排针 2.54mm	1*16P stitch 2.54mm	LCD1602	1	
11	5mm 蓝色接线端子 2P	5mm blue terminal 2P	P1	1	
12	直插三极管 9015	DIP triode 9015	Q1	1	缺口方向 Notch direction
13	直插三极管 9014	DIP triode 9014	Q2	1	
14	工字电感 100uH	I-inductance 100uH	L1	1	无极性 Nonpolarity
15	直插电阻 100Ω	DIP resistor 100Ω	R16	1	
16	直插电阻 1k	DIP resistor 1K	R1, R3, R8,	4	
17	直插电阻 2K	DIP resistor 2K	R14	1	
18	直插电阻 5.1K	DIP resistor 5.1K	R11, R13	2	
19	直插电阻 10k	DIP resistor 10K	R2, R10	2	
20	直插电阻 47K	DIP resistor 47K	R6	1	
21	直插电阻 100K	DIP resistor 100K	R4, R5, R7	3	
22	9脚直插排阻 10K	9 Pin DIP insertion 10K	R16	1	
23	滑动变阻器 5K	Sliding rheostat 5K	RP1	1	
24	立式可调电阻 10K	Vertical potentiometer 10K	RP2	1	
25	直插自锁开关	DIP self-locking switch	SW1, SW3	2	
26	换挡位旋转开关	Shift position rotary switch	SW2	1	
27	直插无源晶振 12MHz	DIP passive crystal 12MHz	X1	1	
28	主控芯片STC89C52RC	Main control chip STC89C52RC	U1	1	
29	测试座	Test stand	SK1	1	
30	驱动芯片 LM393P	Driver chip LM393P	U2	1	
31	IC座 直插 8P	DIP iC seat 8P	U1	1	
32	IC座 直插 40P	DIP iC seat 40P	U2	1	
33	黄色自锁开关帽	Yellow self-locking switch cap	SW1, SW3	2	
34	蓝色旋转开关帽	Blue rotary switch cap	SW2	1	
35	USB转DC电源线	USB to DC power cable		1	
36	外壳	shell		1	
37	螺丝包	Screw bag		1	
38	电路板	PCB		1	
39	说明书	Manual		1	

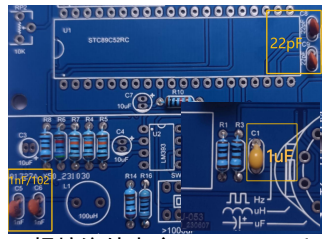
II. 电路原理&元件分布图 Schematic&Component map



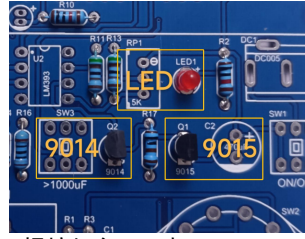
详细焊接&外壳组装步骤请扫描二维码查看图文教程。For detailed welding & shell assembly steps, please scan the QR code to view the graphic tutorials.



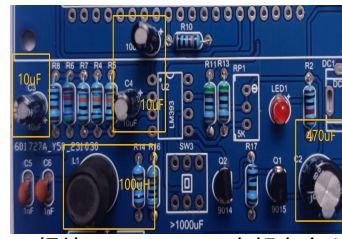
1. 焊接直插电阻 1K、2K、5.1K、10K、47K、100K、100Ω。
Welding resistance in line 1K, 2K, 5.1K, 10K, 47K, 100K, 100Ω.



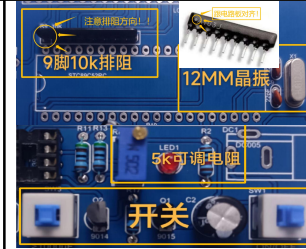
2. 焊接瓷片电容 1nF、22pF 和 105/1uF 独石电容。Welding chip capacitors 1nF, 22pF and 105/1uF monolithic capacitor.



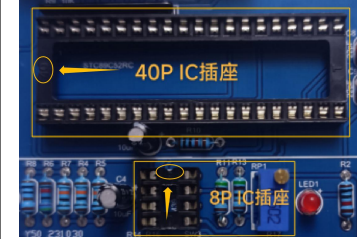
3. 焊接红色 LED 灯、9014、9015 三极管。
Welding red LED light, 9014, 9015 triode.



4. 焊接 10uF、470uF 电解电容和 100uH 工字电感。
Welding 10uF, 470uF electrolytic capacitors and 100uH I-inductors.



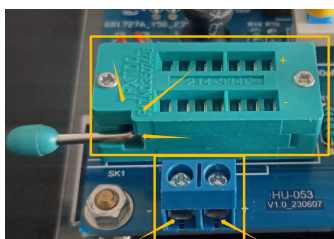
5. 焊接 9 脚 10K 排阻、5K 可调电阻、自锁开关和 12mm 晶振。注意排阻方向。Welding 9-pin 10K exclusion, 5K adjustable resistance, self-locking switch and 12mm crystal oscillator. Note the exclusion direction.



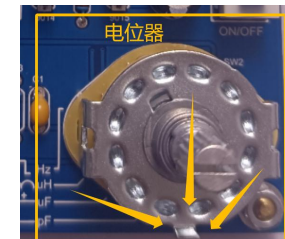
6. 焊接 40P、8P 的芯片插座，注意插座的缺口位置。Weld 40P, 8P chip socket, pay attention to the socket gap position.



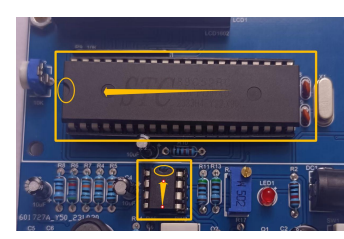
7. 焊接 16P 排母和 10K 立式可调电阻。
Welding 16P busbar and 10K vertical adjustable resistance.



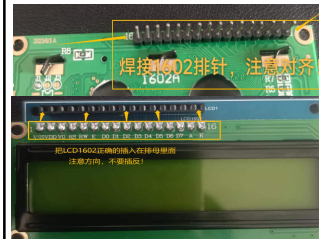
8. 焊接 2P 接线端子、锁紧座，注意端子和锁紧座方向。Weld the 2P terminal and lock seat, paying attention to the direction of the terminal and lock seat.



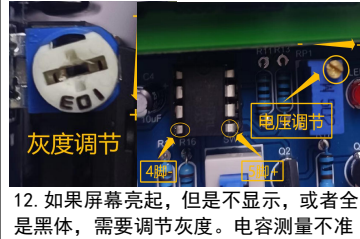
9. 焊接电位器，注意方向。Welding potentiometer, note the direction.



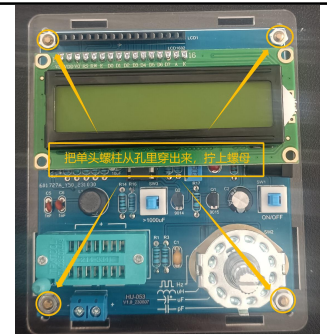
10. 注意芯片的缺口位置，把芯片正确的插入芯片底座。Pay attention to the notch position of the chip and insert the chip correctly into the chip base



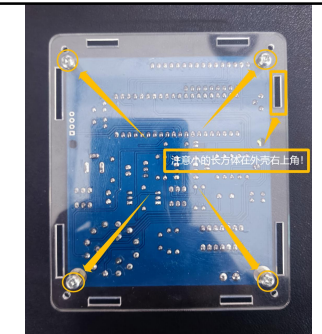
11. 焊接排针，注意对齐，不要焊歪，把屏幕插入在排母里面，注意不要插反。Weld the row pins, alignment, do not weld crooked, insert the screen inside the row, do not insert backwards.



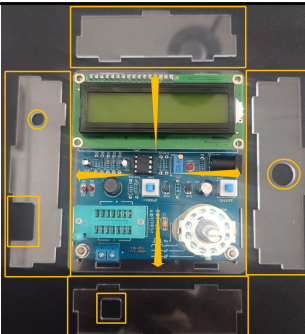
12. 如果屏幕亮起，但是不显示，或者是全黑体，需要调节灰度。电容测量不准确，我们需要测量芯片 4 脚 5 脚电压，提前调节电位器，调整到 3.16V 左右。If the screen lights up, but does not show, or is all black body, need to adjust the gray level. Capacitance measurement is not accurate, we need to measure the chip 4 pin 5 pin voltage, adjust the potentiometer in advance, adjust to about 3.16V.



1. 单头铜柱、M3 螺母固定电路板。
Single head copper column, M3 nut fixed circuit board.



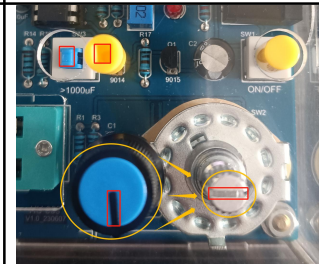
2. 用 M3 螺丝固定在底部外壳，注意小的长方体在外壳右上角!!! Attach to the bottom shell with M3 screws, notice the small cuboid in the upper right corner of the shell!!!



3. 注意每块外壳的位置，不要放错! 按位置插入即可! Pay attention to the position of each shell, do not misplace! Insert according to the position!



4. 把 M2 螺丝拧到外壳底部，并用 M2 螺母拧紧。
Screw the M2 screw to the bottom of the housing and tighten with the M2 nut.



5. 把按键帽插入对应位置，注意缺口方向! 电位器旋转到水平状态，旋帽朝下，插入即可。Insert the button cap into the corresponding position, pay attention to the notch direction! The potentiometer is rotated to a horizontal state, with the cap facing down, and inserted.



焊接组装完成展示图